



42A12NE0603 2.2653 LOVELAND

TEXASGULF CANADA LTD.  
REPORT ON GEOPHYSICAL WORK  
IN  
LOVELAND TOWNSHIP  
N.T.S. - 42-A-12

APR 14 1978  
PROJECTS UNIT

CLAIMS: Loveland 16 - P-499227-231 and Loveland 25 - P-499232-235

INTRODUCTION:

Geophysical surveys consisting of Proton Precession magnetometer and Horizontal Loop electromagnetic traverses were conducted over four of five claims located in the south-east part of Loveland Township. This claim group, Loveland 16 is situated directly northeast of the junction of Enid Creek and the Kamiskotia River. The fifth claim P-499231 only was traversed by magnetometer.

Similarly, Loveland 25, was only surveyed by magnetometer. This group of four contiguous claims is located one mile west and two miles north of the southeast corner of the township, just to the southwest of Enid Creek.

Both claim groups were accessed by helicopter. Because of some difficult hills on the Loveland 25 group, electromagnetic surveying on this property was delayed until the summer.

PREVIOUS WORK:

Although claims have been previously staked on the Loveland 16 ground no previous work has been filed on the claim group.

The Loveland 25 claims have been covered by various geophysical

APRIL 11, 1978

W.A. GASTEIGER

surveys and a great deal of drilling both by the Tilmac Group in 1957 and by Hollinger Mines in the 60's.

The main search target has been a weak Cu-Ni mineralization that occurs at surface outcroppings and in a number of drill holes. Of nine diamond drill holes by Tilmac the best intersections appear to be in Hole A-7 which intersected thirty feet of 0.52 Ni and 0.47 Cu and further down the hole another twelve feet of 0.85 Ni and 0.75 Cu. All these holes were collared within a radius of about three hundred feet.

Hollinger Mines drilled eighteen holes in the general vicinity of the present claim group with the majority of these located in the showing area. Again low grade Cu-Ni values were encountered. No mineralization was encountered in holes testing targets away from the showing area.

PRESENT SURVEYS:

The present surveys were conducted on lines oriented east-west and spaced at one hundred metre intervals. Magnetic readings were taken at standard twenty metre stations. Electromagnetic values were read using a one hundred and sixty metre coil spacing and were taken at forty metre stations.

On the Loveland 25 grid, the magnetic trends are dominated by two north-south highs located at approximately twenty metres east of the base line and at 320 east. These correspond to known diabase dikes. The mineralized area and drilling occurs in the area of erratic magnetics at about 400 east at Lines 0, 100N and 200N. The erratic highs appear to be due to magnetite and pyrrhotite in gabbroic rocks. The remainder of the map is of fairly low magnetics and from drilling it seems the most common rocks in this area are intermediate volcanics such as andesites.

The Loveland 16 magnetic map shows the same general trends, generally low, flat background magnetics dominated by a high intensity linear anomaly crossing the southwest corner of the claim group. The background trends are also more or less north-south with a zone of slightly lower than background susceptibility extending approximately 200 metres east of the diabase dike. This could be lower susceptibility felsic volcanics in contact with intermediate volcanics to the east.

The electromagnetic survey is in general fairly uniform and uninteresting. On a number of profiles, the high frequency in-phase response shows an anomalous response when approaching the west edge of the grid. Although a good in-phase to quadrature ratio is indicative of a good conductor the lack of response on the low frequency seems to discount this. These responses appear to be a result of the "current-gathering" phenomenon in which poor bedrock conductors such as shears in contact with poorly conductive overburden are enhanced at large coil spacings and high frequencies.

RECOMMENDATIONS AND CONCLUSIONS:

The Loveland 16 property is of no interest and should be dropped when assessment work expires.

The Loveland 25 claims have been thoroughly drilled in the vicinity of the showing. Because of this the only hope for further mineralization would be to attempt to delineate any extensions to the mineralized zone. To this end, further investigation should entail detailed magnetics and Induced Polarization in the vicinity of the showing. Detailed line cutting would also be required. Induced Polarization would be more suitable than electromagnetics as previous E.M. has been unsuccessful.

April 11, 1978

*William Gasteiger*  
W.A. Gasteiger



GEOPHYSICAL - GEOLOGICAL TECHNICAL DATA



42A12NE0603 2.2653 LOVELAND

900

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 Loveland  
Claim Holder(s) Texasgulf Canada Ltd.  
P.O. Box 175, Suite 5000, Commerce Court, Toronto, Ont.  
Survey Company as above M5L 1E7  
Author of Report W.A. Gasteiger  
Address of Author P.O. Box 1140, Timmins, Ontario  
Covering Dates of Survey July/77 to April/78  
(linecutting to office)  
Total Miles of Line Cut 9 Km.

MINING CLAIMS TRAVERSED  
List numerically

P	499227	✓
(prefix)	(number)	
P	499228	✓
P	499229	✓
P	499230	✓

**SPECIAL PROVISIONS CREDITS REQUESTED**

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

ENTER 20 days for each additional survey using same grid.

Geophysical 20 DAYS per claim

-Electromagnetic for

-Magnetometer \_\_\_\_\_

-Radiometric \_\_\_\_\_

-Other \_\_\_\_\_

Geological \_\_\_\_\_

Geochemical \_\_\_\_\_

**AIRBORNE CREDITS** (Special provision credits do not apply to airborne surveys)  
Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: April 12/78 SIGNATURE: William Gasteiger  
Author of Report or Agent

Res. Geol. L.D. Qualifications 2.1798

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 4

OFFICE USE ONLY

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 153 Number of Readings 153
Station interval 40 metres Line spacing 100 metres
Profile scale 1cm = 10%
Contour interval

MAGNETIC

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

ELECTROMAGNETIC

Instrument Apex Parametrics Max Min II
Coil configuration Horizontal Loop
Coil separation 160 Metres
Accuracy + - 1%
Method: [ ] Fixed transmitter [ ] Shoot back [x] In line [ ] Parallel line
Frequency 1777 Hz and 444 Hz (specify V.L.F. station)
Parameters measured Secondary In-Phase and quadrature response as a per cent of the primary field.

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



Ministry of Natural Resources

File 2.7653

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 Loveland
Claim Holder(s) Texasgulf Canada Ltd.
P.O. Box 175, Suite 5000, Commerce Court, Toronto, Ont
Survey Company As Above M5L 1E7
Author of Report W.A. Gasteiger
Address of Author P.O. Box 1140, Timmins, Ontario
Covering Dates of Survey July, 1977 - April 1978
Total Miles of Line Cut 9 Km.

MINING CLAIMS TRAVERSED
List numerically
Table with columns for prefix and number, containing entries like P 499227, P 499228, P 499229, P 499230, P 499231.

SPECIAL PROVISIONS
CREDITS REQUESTED
Table with columns for method and days per claim, including 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: April 12/78 SIGNATURE: William Gasteiger
Author of Report or Agent

Res. Geol. Qualifications 2.1798

Previous Surveys
Table with columns for File No., Type, Date, Claim Holder.

OFFICE USE ONLY

If space insufficient, attach list

TOTAL CLAIMS 5

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 427 Number of Readings 449
Station interval 20 metres Line spacing 100 metres
Profile scale
Contour interval 50 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Precession Magnetometer
Accuracy - Scale constant +/- 1 gamma
Diurnal correction method Base stations established at intersections of base line and cross lines by looping along base line. Check in usually less than 1 hour.
Base Station check-in interval (hours)
Base Station location and value Base station - 200S on BL, Value: 59899

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





GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 376 Number of Readings 394
Station interval 20 metres Line spacing 100 metres
Profile scale
Contour interval 50 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Precession Magnetometer
Accuracy - Scale constant + 1 gamma
Diurnal correction method Base stations established at intersections of base line and cross lines by looping along base line; check in usually less than 1 hour.
Base Station check-in interval (hours)
Base Station location and value Base Station - 800N on Baseline, Value 59611

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

Thorburn Twp. (M.601)

2.2653

THE TOWNSHIP OF

LOVELAND

DISTRICT OF COCHRANE

PORCUPINE 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 —
- CANCELLED C.

NOTES

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

This township lies within the Municipality of CITY of TIMMINS.

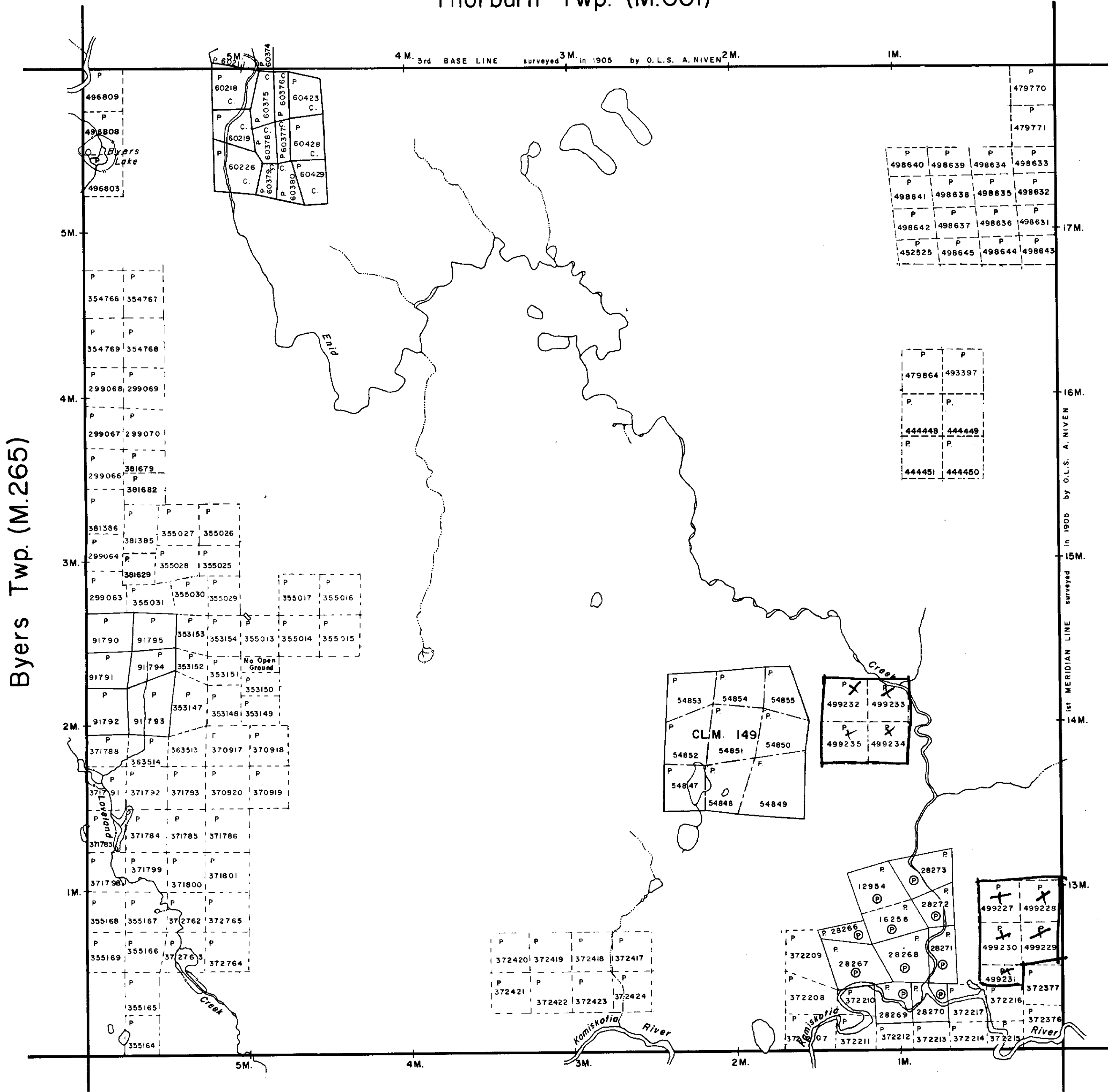
DATE OF ISSUE

APR 17 1978

SURVEYS AND MAPPING BRANCH

PLAN NO. M-293

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH



Byers Twp. (M.265)

Macdiarmid Twp. (M.294)

Robb Twp. (M.309)

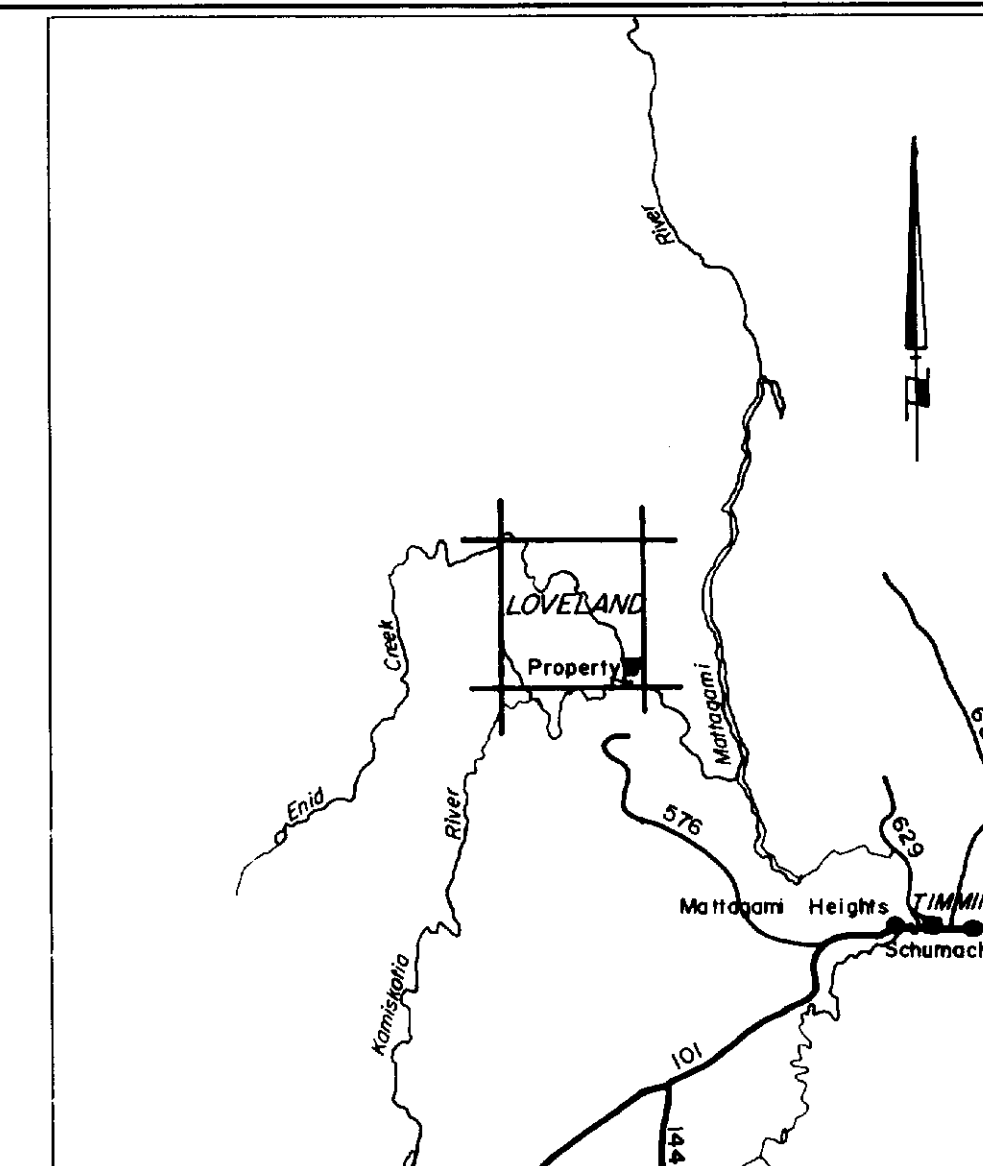


MACDIARMID

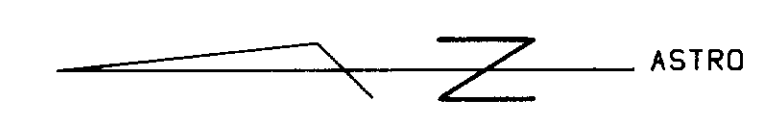
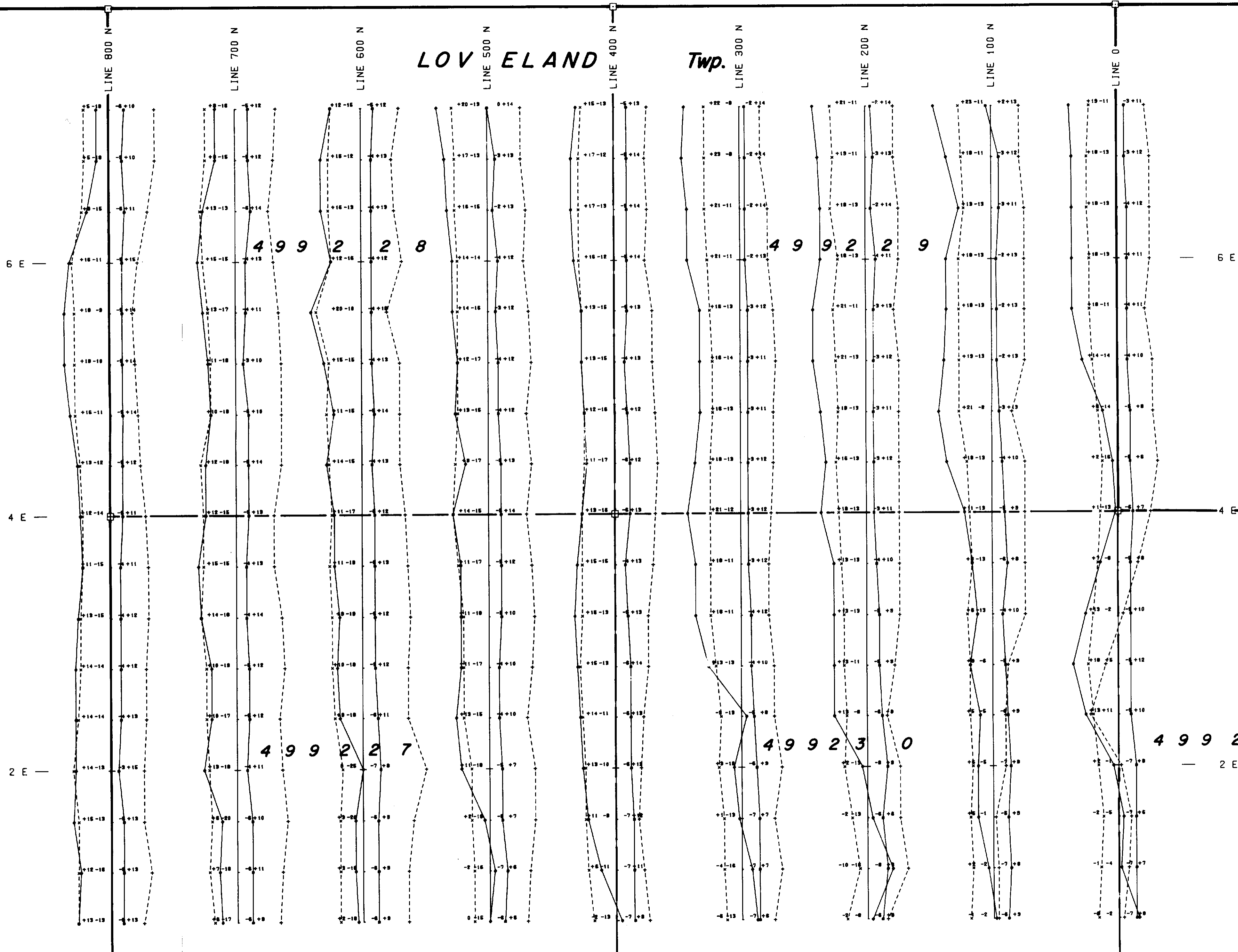
Twp.

LOVELAND

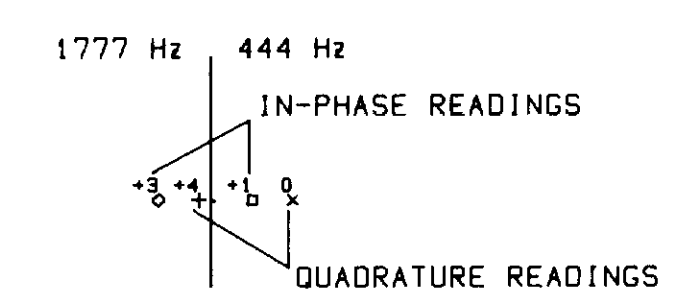
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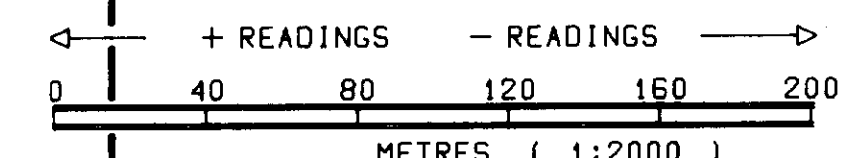
KEY MAP Scale: 1" = 8 miles



LEGEND



INSTRUMENT : APEX PARAMETRICS MAXMIN II  
 FREQUENCY : 444 Hz AND 1777 Hz  
 COIL SPACING : 160 METERS  
 PROFILE SCALE : 1 CM = 10% ( 444 Hz )  
 : 1 CM = 10% ( 1777 Hz )

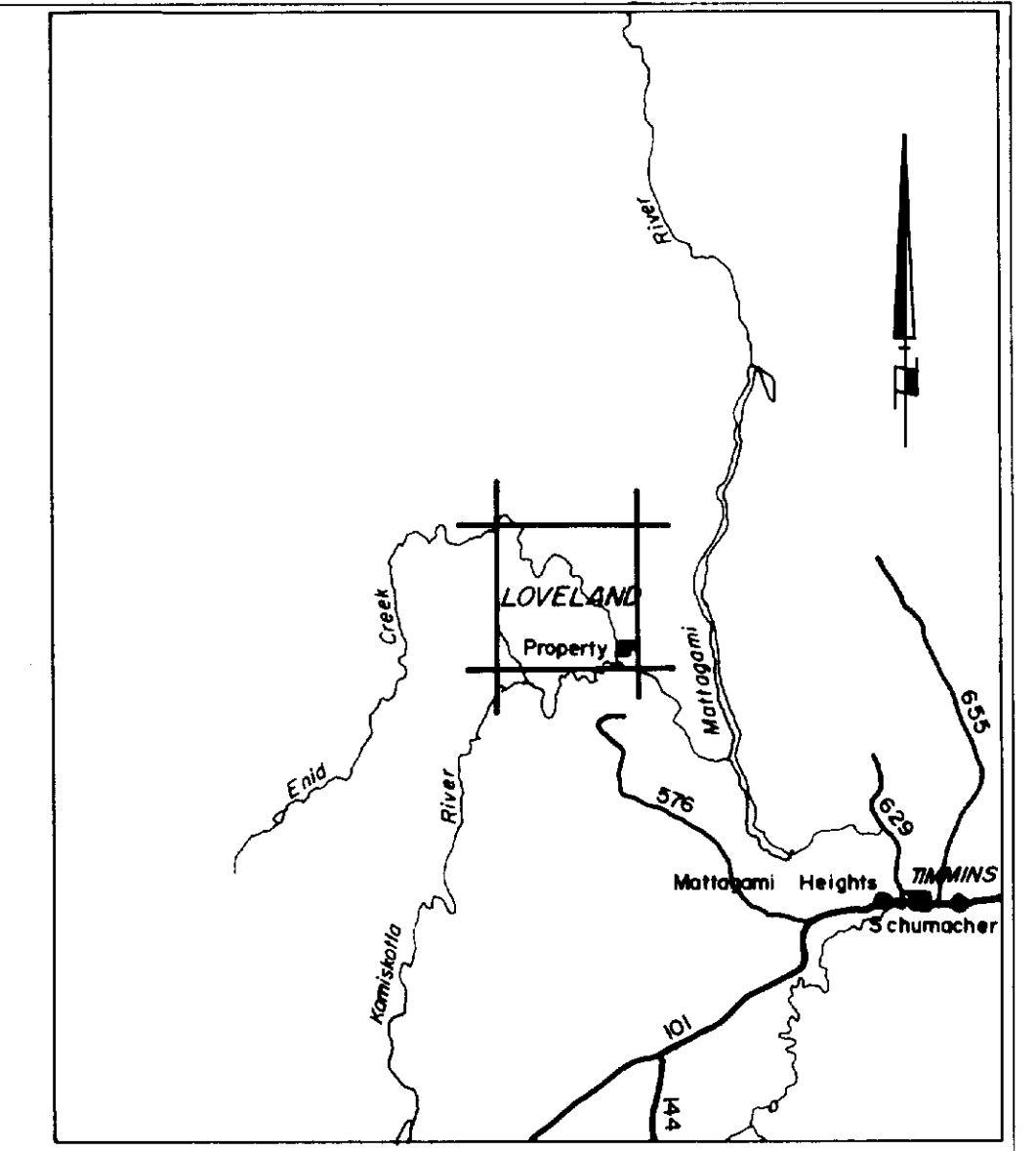
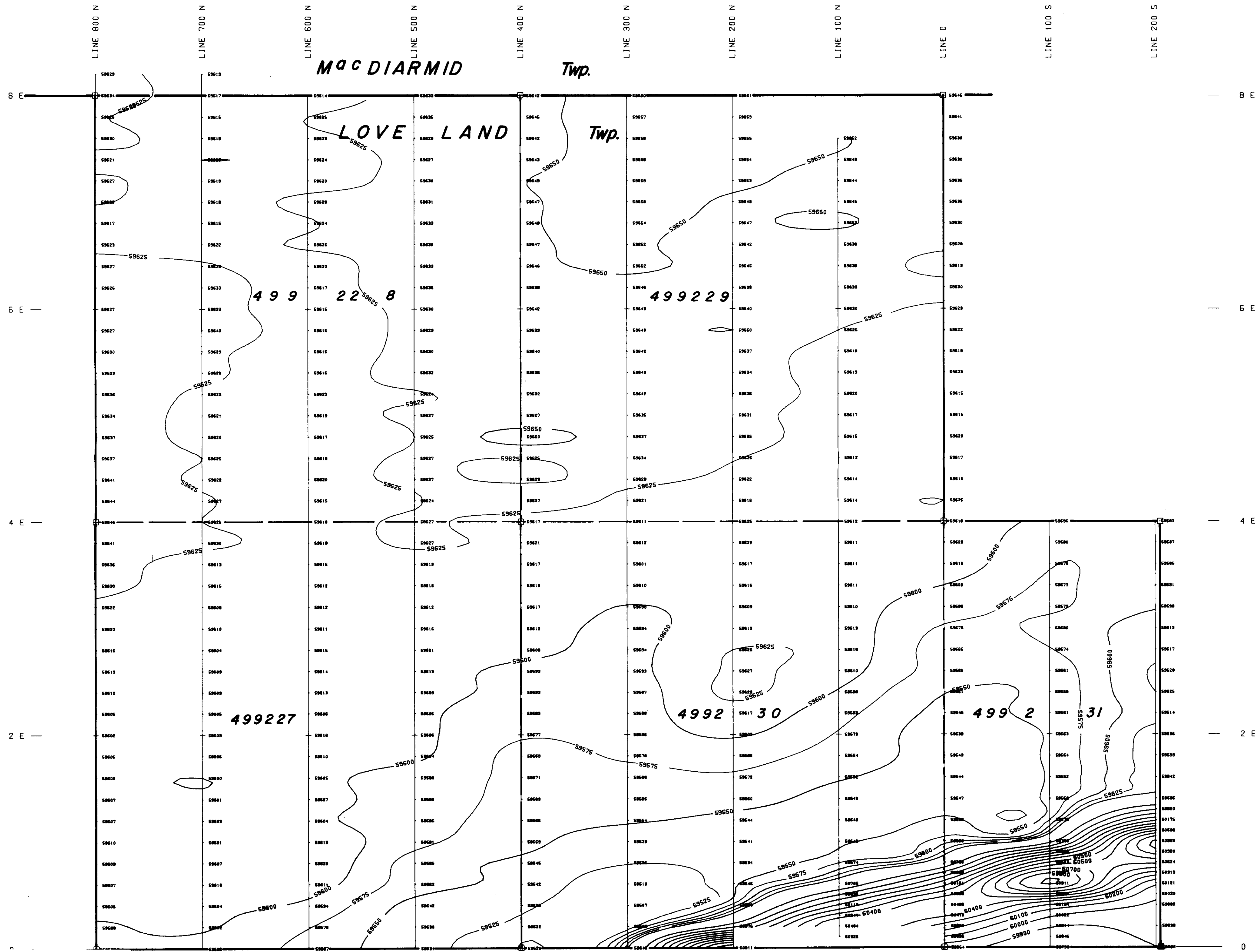


**TEXASGULF CANADA LTD.**  
**HORIZONTAL LOOP SURVEY**  
**LOVELAND 16**  
 NTS:42A12 PROJ.#953

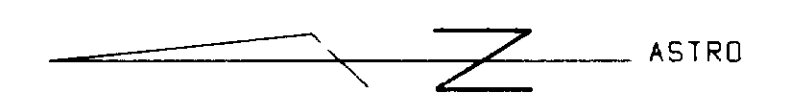
WORK BY	DATE
	1978



William Bestiger

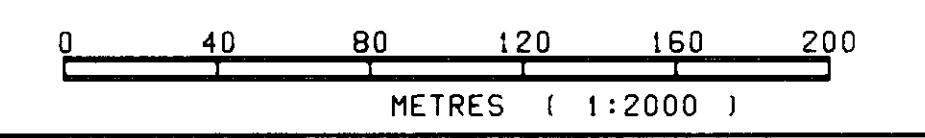


KEY MAP Scale: 1" = 8 miles



**LEGEND**

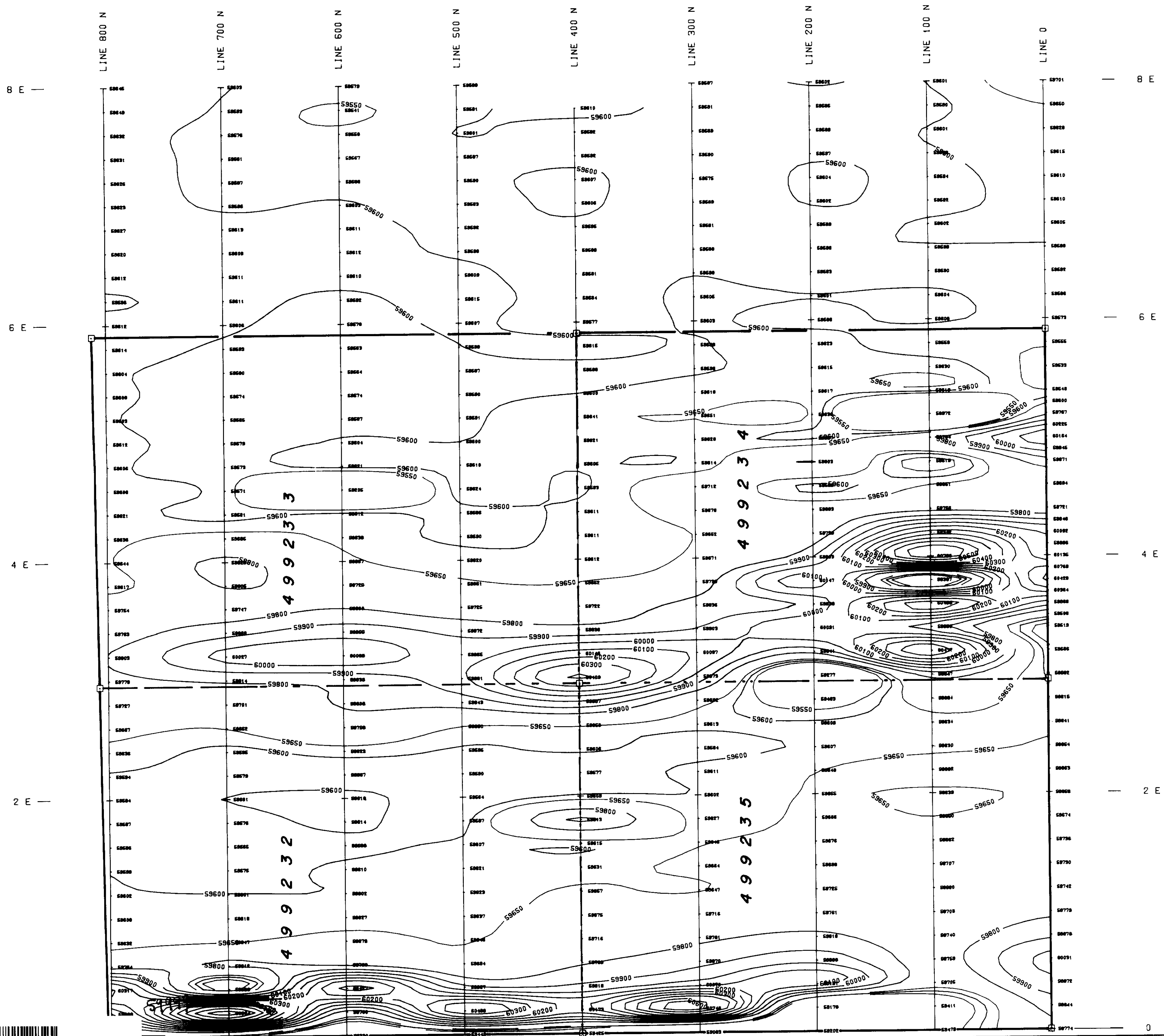
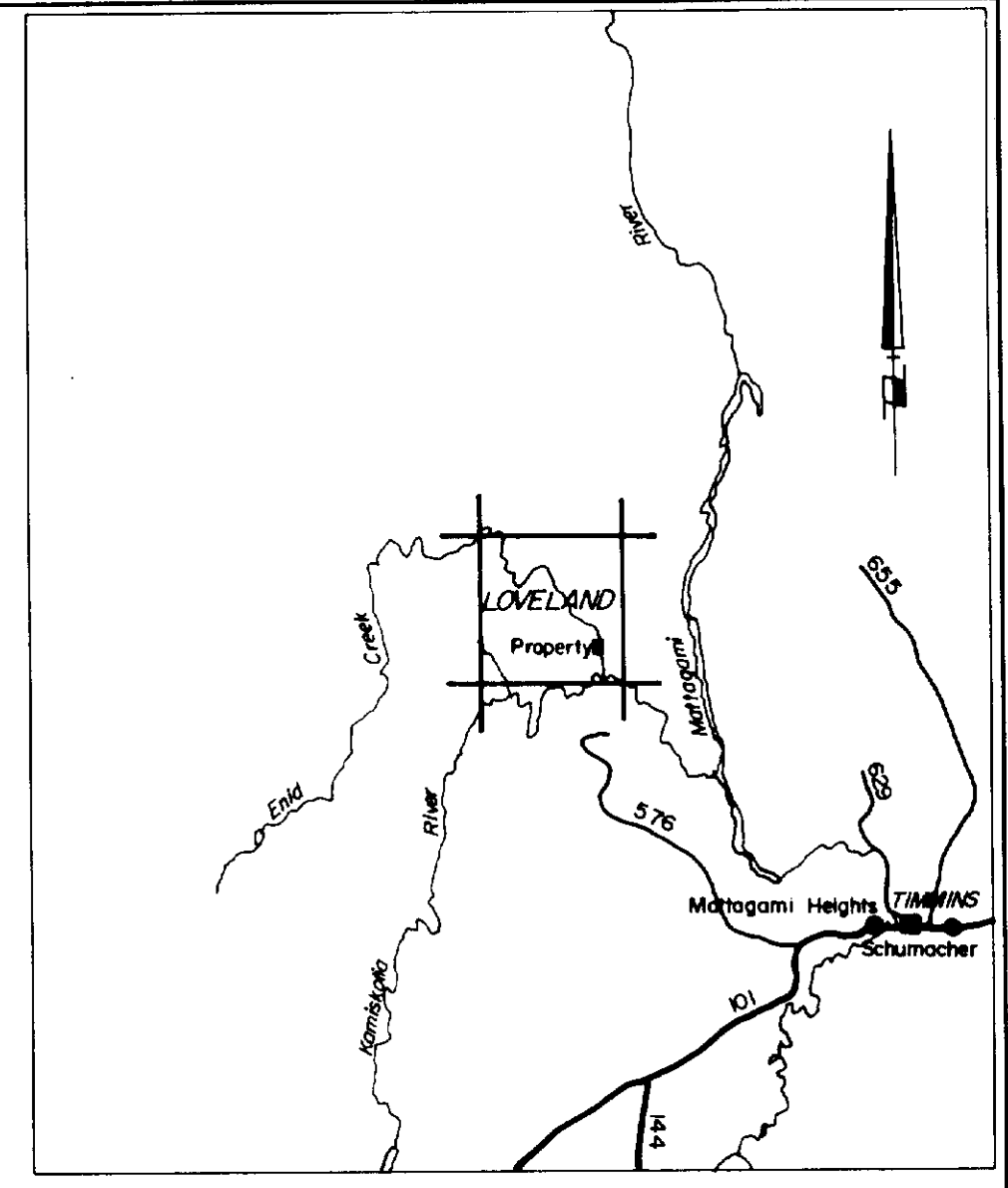
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 TYPE : PROTON PRECESSION, TOTAL FIELD  
 READINGS IN GAMMAS  
 ▲ MAGNETIC BASE STATION



<b>TEXASGULF CANADA LTD.</b>	
MAGNETIC SURVEY	
LOVELAND 16	
NTS:42A12	PROJ.#953
WORK BY	DATE
	1978



*William Smith*



ASTRO

**LEGEND**

INSTRUMENT : GEOMETRICS G816  
 TYPE : PROTON PRECESSION, TOTAL FIELD  
 READINGS IN GAMMAS  
 ▲ MAGNETIC BASE STATION



<b>TEXASGULF CANADA LTD.</b>	
MAGNETIC SURVEY	
LOVELAND 25	
NTS:42A12	PROJ.#953
WORK BY	DATE
	1978



*William Swartz*