



41010NE0048 2.2251 CUNNINGHAM

2.2251

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TEXASGULF CANADA LIMITED  
REPORT ON GEOPHYSICAL WORK PROJECTS UNIT  
IN  
CUNNINGHAM TOWNSHIP  
CLAIMS: P-443159 - P-443167

October, 1976

W. A. Gasteiger

TEXASGULF CANADA LIMITED  
REPORT ON GEOPHYSICAL WORK  
IN  
CUNNINGHAM TOWNSHIP  
CLAIMS: P-443159 - P-443167

Geophysical surveys consisting of horizontal loop electromagnetic and proton precession magnetometer traverses were conducted over a group of nine contiguous claims in Cunningham Township. The claim group covers the showing known as the Ridout-Cunningham Prospect.

PREVIOUS WORK:

A great deal of previous exploration work has been done on the property. In 1928-29, Ridout-Cunningham Mines did trenching and diamond drilling. Further diamond drilling was performed by Page-Harley Mines Limited in 1952 and 1953, and by Maneast Uranium Mines Limited in 1956.

The best intersection contained 1.63% Pb and 5.02% Zn over 60 feet. However, the mineralization seems to be very inconsistent

PRESENT SURVEYS:

Lines were cut at 300 foot intervals in a north-south direction.

MAGNETIC SURVEY:

The magnetic response is dominated by a east-west trending

iron formation that passes through claims P-443159, P-443164, P-443165. This zone contains a number of bands with varying magnetic susceptibilities (i.e. cherts, massive magnetite, graphitic and pyritic sediments). The economic mineralization of interest lies within this formation. The best intersections occur in the area of Line 300W at approximately 100N to 200N. Between Lines 300W and 600W the iron formation seems to have been faulted northward approximately 300 feet. In the east end of the property the zone of high magnetics thickens. This is probably due to folding of the iron formation.

The high magnetics on the south half of claim P-443166 is associated with a peridotite. Most of the remainder of the property is underlain by gabbro. There are various amounts of intermediate to felsic volcanics in close association with the iron formation.

#### HORIZONTAL LOOP:

All the horizontal loop conductors are within or close to the iron formation. As with the magnetics, the E.M. response is very strong but highly erratic. Conductors fade out or thicken very quickly, sometimes they are directly on magnetic highs, other times they are some distance to one side.

The conductivity of nearly all responses is good to excellent. On Lines 2400E and 2700E, there are zones of poor conductivity to approximately 1,000 south. This again is due to the thickening of the iron formation.

For the most part, the iron formation contains two main strongly conductive zones. The economic mineralization is within the south conductor.

CONCLUSIONS AND RECOMMENDATIONS:

Most of the iron formation has been trenched by the previous owners of the property. It appears that the only encouragement that they received was in the area of concentrated drilling.

The mineralized zone requires a systematic program of drilling to accurately define the limits of economic mineralization. A first step should be the cutting of 100 foot lines from 600E to 600W, followed by detailed magnetic and 100 foot coil-spaced horizontal loop surveys. This may reveal a more definite relationship between the geophysical responses and the zone containing base metal mineralization.

October, 1976

*William Gasteiger*  
W. A. Gasteiger



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900

File 2.2251

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.

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PROJECTS UNIT.

Type of Survey(s) Geophysical  
Township or Area Cunningham Township  
Claim Holder(s) Texasgulf Canada Limited  
P.O. Box 175, Suite 5000, Commerce Court, Toronto  
Survey Company Same as Above M5L 1E7  
Author of Report W. A. Gasteiger  
Address of Author P.O. Box 1140, Timmins, Ontario  
Covering Dates of Survey Dec./75 - Oct. /76  
(linecutting to office)  
Total Miles of Line Cut 10.6

MINING CLAIMS TRAVERSED  
List numerically

- P. S. 443159  
(prefix) (number)
- P. S. 443160
- P. S. 443161
- P. S. 443162
- P. S. 443163
- P. S. 443164
- P. S. 443165
- P. S. 443166
- P. S. 443167

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	DAYS per claim
Geophysical	
-Electromagnetic	20
-Magnetometer	40
-Radiometric	
-Other	
Geological	
Geochemical	

ENTER 40 days (includes line cutting) for first survey.  
ENTER 20 days for each additional survey using same grid.

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

Magnetometer Electromagnetic Radiometric  
(enter days per claim)

DATE: Nov. 15 /76 SIGNATURE: W. A. Gasteiger  
Author of Report or Agent

L.D.

Res. Geol. L.D. Qualifications 2.1798

Previous Surveys

File No.	Type	Date	Claim Holder
2.1837	E.M.A. Mag.	1975	Roy H. Newman
	different values		

TOTAL CLAIMS 9

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Mag: 736 Mag: 788
Number of Stations E.M. 598 Number of Readings E.M. 598
Station interval 100' (50' detail) Line spacing 300'
Profile scale E.M. 1" = 50%
Contour interval Mag: 500 gammas

MAGNETIC

Instrument McPhar + M-700
Accuracy - Scale constant - gammas
Diurnal correction method Magnetic field strength established along the base line by reading 300'
Base Station check-in interval (hours) loops with 100' stations. Baseline values subsequently used to correct survey data.
Base Station location and value At base line on 2400W, 610 gammas

ELECTROMAGNETIC

Instrument Geonics E.M. - 17
Coil configuration Horizontal Loop
Coil separation 200'
Accuracy + 2%
Method: [ ] Fixed transmitter [ ] Shoot back [x] In line [ ] Parallel line
Frequency 1600 Hz. (specify V.L.F. station)
Parameters measured In phase and quadrature components at secondary field as a percent of transmitted 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

Swayze Twp. M. 1150

THE TOWNSHIP  
OF 2.2257  
**CUNNINGHAM**

DISTRICT OF  
SUDBURY

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	Ⓞ
PATENTED FOR SURFACE RIGHTS ONLY	Ⓞ

NOTES

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

DATE OF ISSUE

NOV 16 1976

SURVEYS AND MAPPING  
BRANCH

PLAN NO.- **M.744**

ONTARIO  
MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

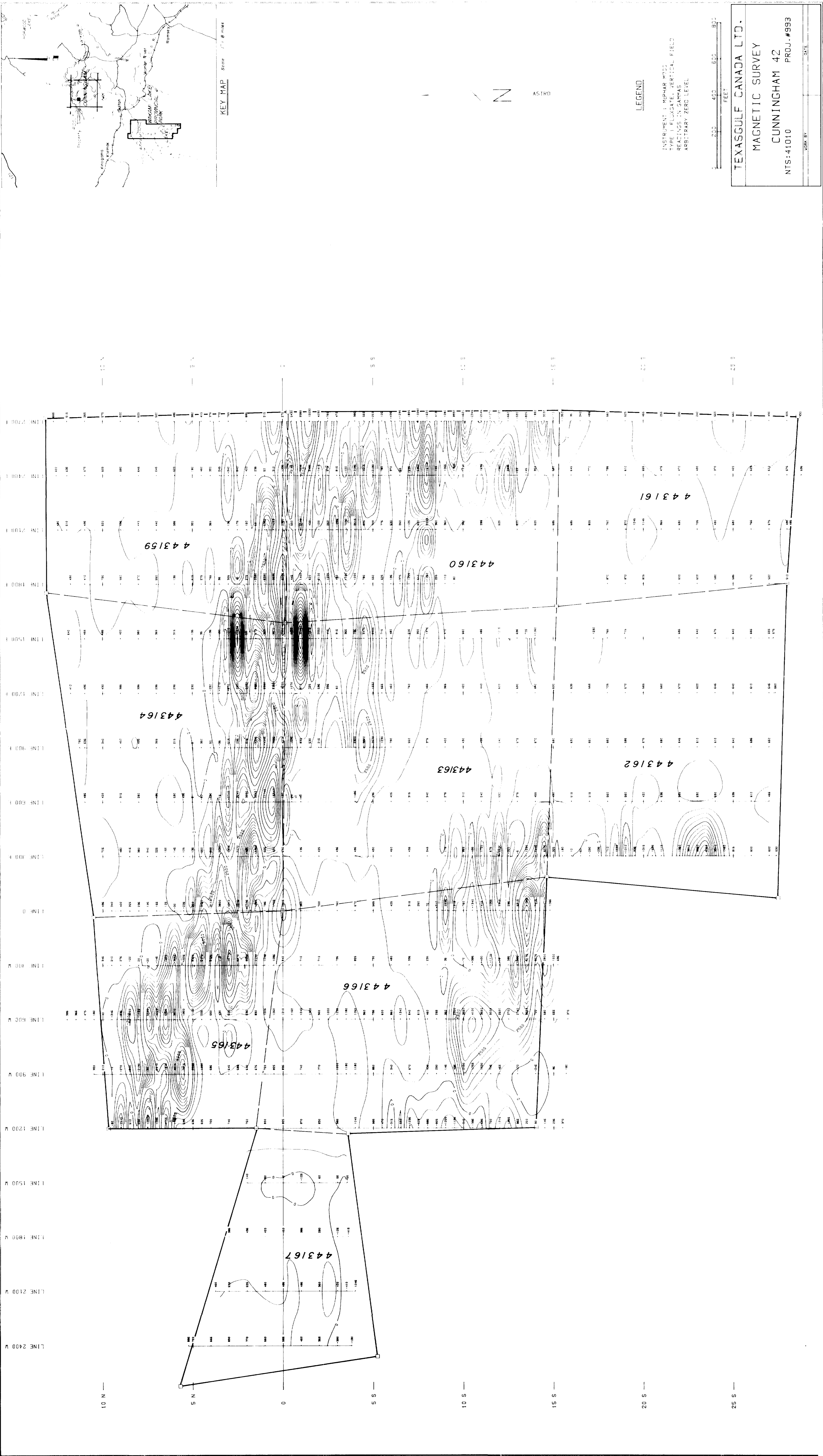
Greenlaw Twp. M. 895

Garnet Twp. M. 829

Blamey Twp. M. 668

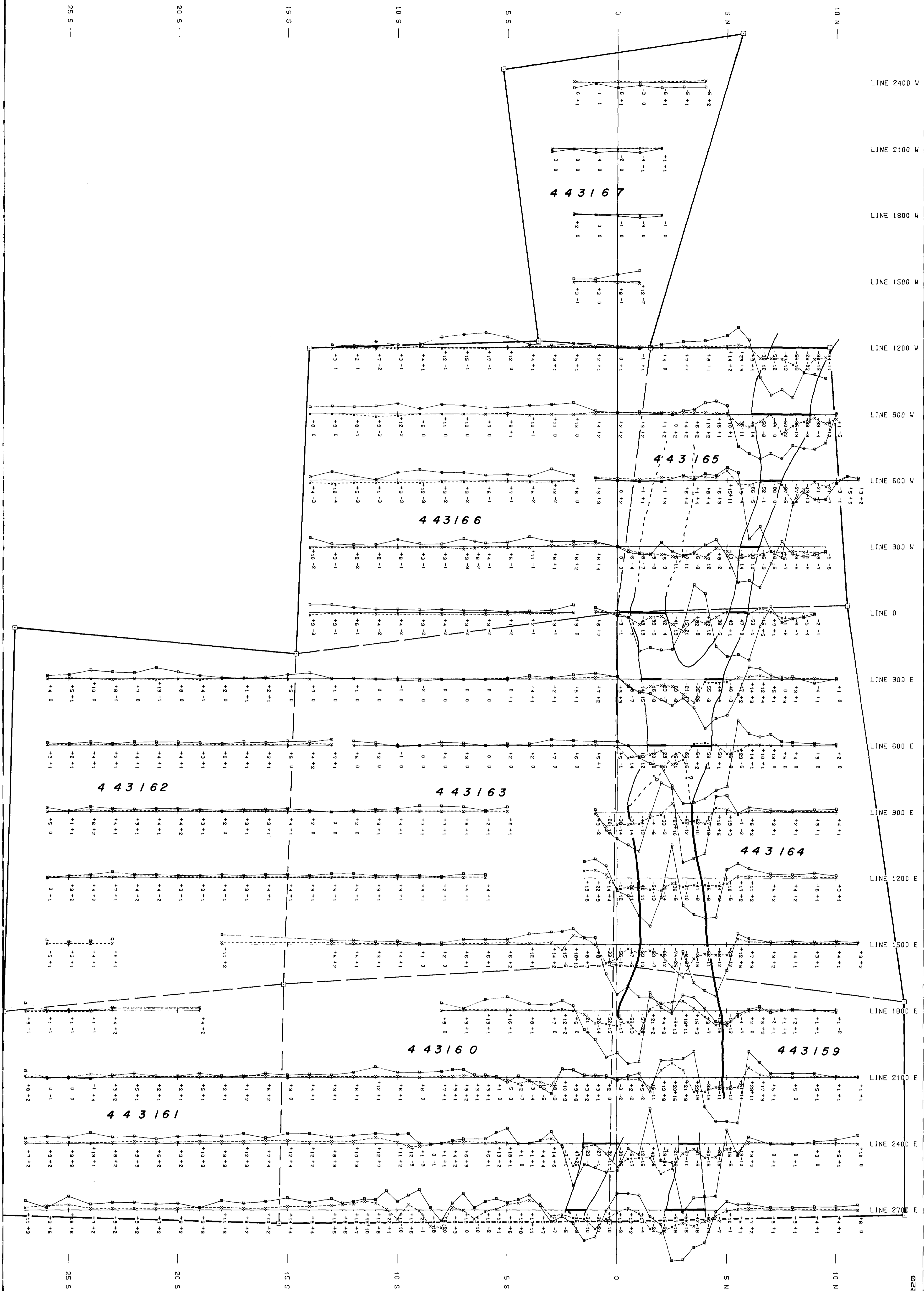


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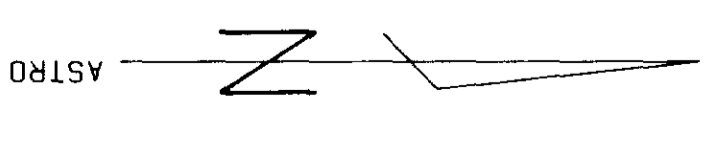
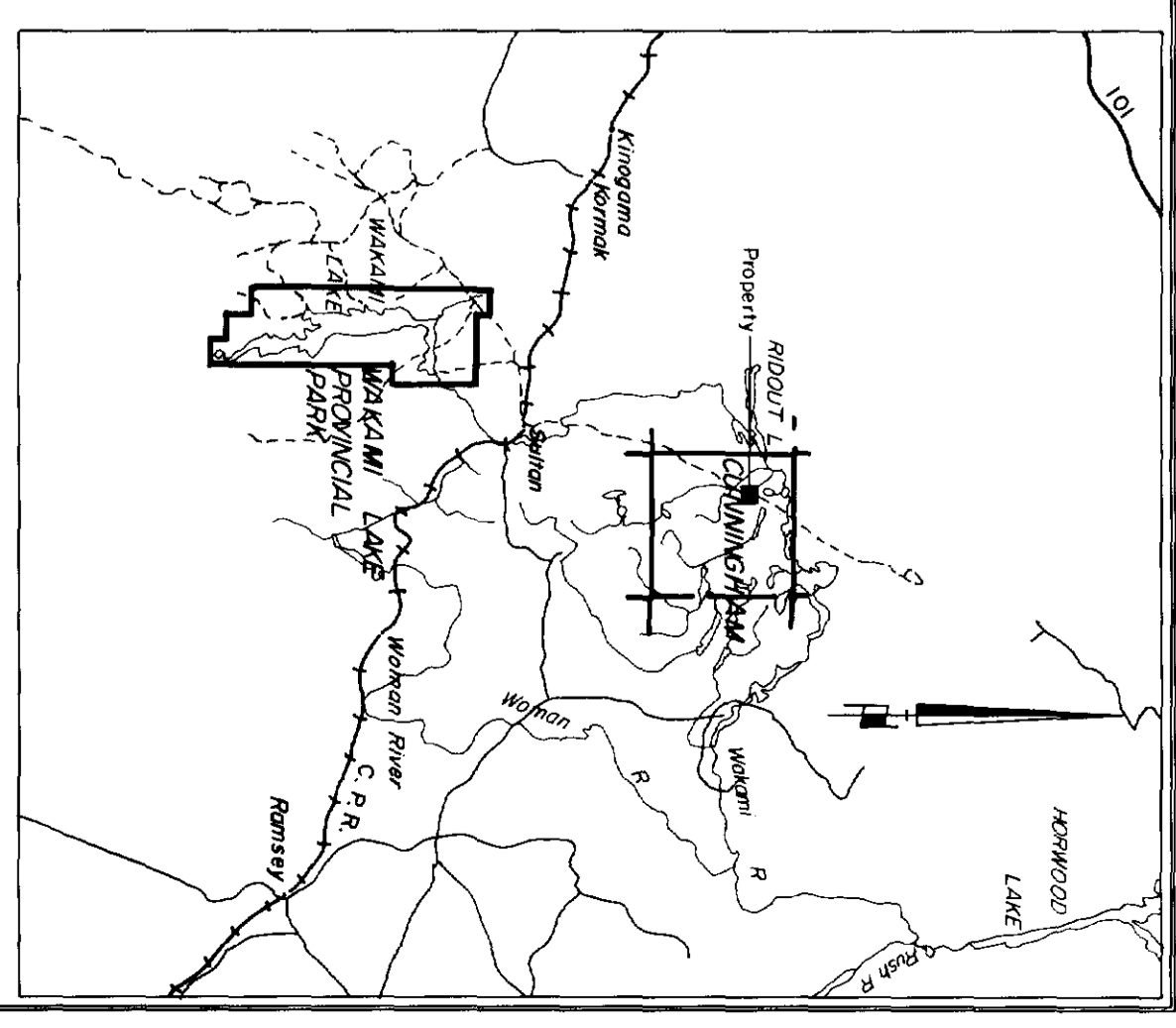


TEXASGULF CANADA LTD.  
 MAGNETIC SURVEY  
 CUNNINGHAM 42  
 NTS:41010  
 PROJ.#993  
 WORK BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_





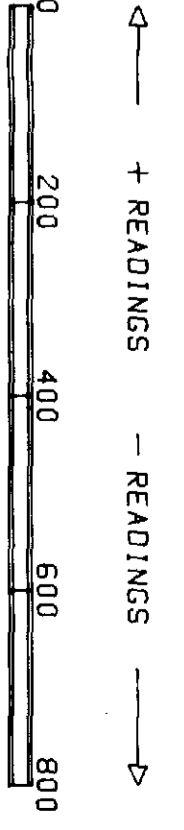
LINE 2400 W  
 LINE 2100 W  
 LINE 1800 W  
 LINE 1500 W  
 LINE 1200 W  
 LINE 900 W  
 LINE 600 W  
 LINE 300 W  
 LINE 0  
 LINE 300 E  
 LINE 600 E  
 LINE 900 E  
 LINE 1200 E  
 LINE 1500 E  
 LINE 1800 E  
 LINE 2100 E  
 LINE 2400 E  
 LINE 2700 E



**LEGEND**

- 1600 HZ
- IN-PHASE READINGS
- QUADRATURE READINGS

INSTRUMENT : GEONICS EM 17  
 FREQUENCY : 1600 HZ  
 COIL SPACING : 200 FEET  
 PROFILE SCALE : 1" = 50'



0 200 400 600 800  
 FEET

**TEXASGULF CANADA LTD.**  
 HORIZONTAL LOOP SURVEY  
 CUNNINGHAM 42  
 NTS: 41010  
 PROJ. #993

WORK BY	DATE
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*M. Cunningham*