



42A12SE0410 2.3210 GODFREY

010

TEXASGL.....
REPORT OF GEOPHYSICAL WORK
GODFREY TOWNSHIP
NTS - 42-A-12/5

REC'D 04 1980
MINING LANDS SECTION
RECEIVED
FEB 01 1980
MINING LANDS SECTION

INTRODUCTION:

Geophysical surveys consisting of proton precession magnetometer, very low frequency (V.L.F.) electromagnetic, and horizontal loop electromagnetic traverses were conducted over portions of forty-seven contiguous claims situated in the north-west quarter of Godfrey Township.

The property is divided into three parts as shown in Figure #1. The original Godfrey 51 grid contains nineteen claims and has previously had complete magnetic coverage. Present work consisted of V.L.F. and horizontal loop surveys over a portion of this older grid. Godfrey 51 North and Godfrey 51 South are both fourteen claim groups and have both had complete coverage with magnetic and V.L.F. methods. Godfrey 51 South also had partial coverage with horizontal loop.

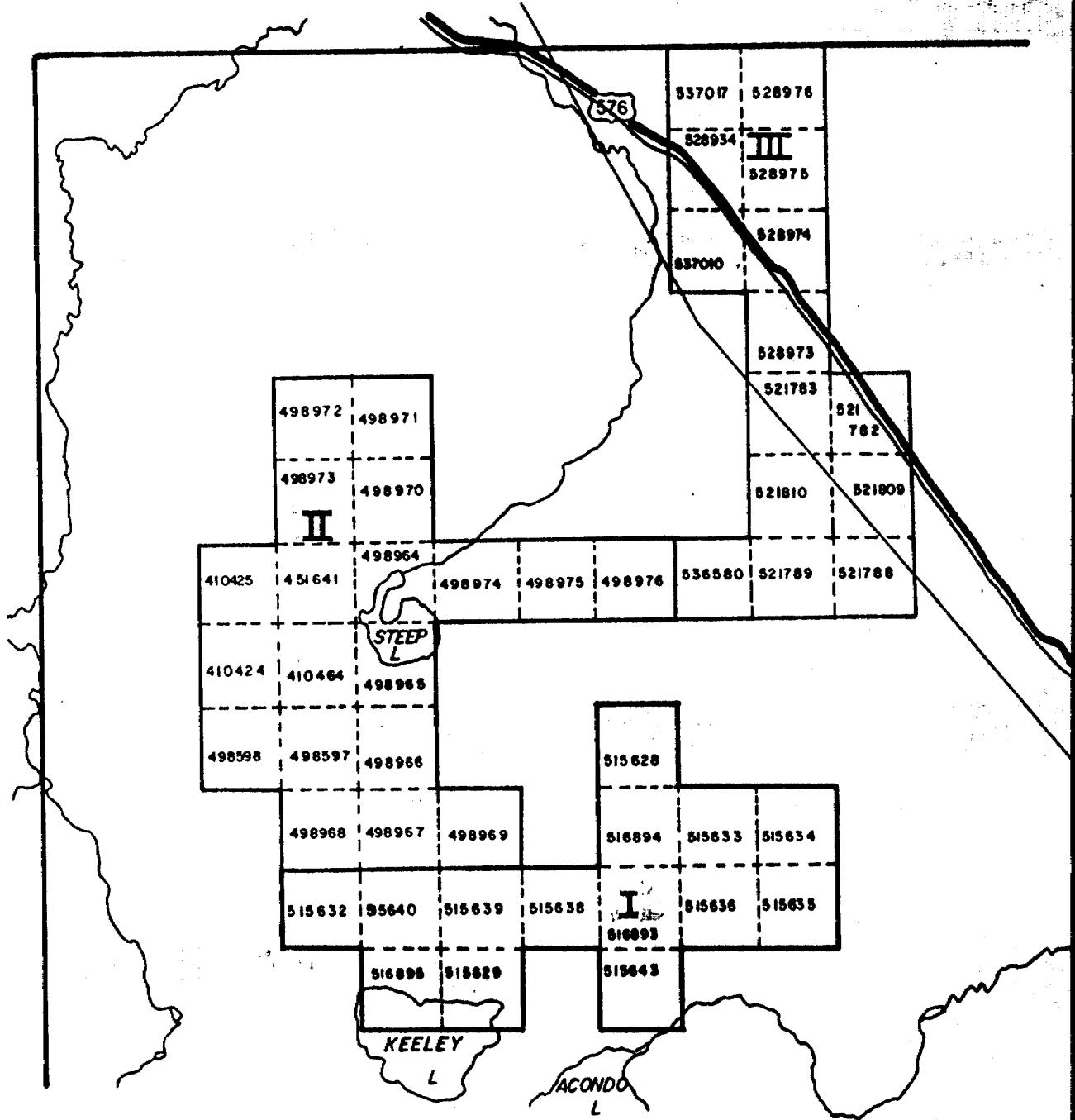
PREVIOUS WORK:

The original Godfrey 51 grid has been previously worked by Mespi Mines, Consolidated Brewis and Noranda Mines. Mespi Mines and Noranda performed geophysical surveys and Consolidated Brewis and Mespi did a fair amount of diamond drilling, especially in the vicinity of the boundary line between claims P-410424 and P-410646 where there is a sulphide occurrence. Hollinger Mines previously worked the Godfrey 51 North and South area. This work consisted of geophysical work, as well as some geochemistry and drilling. Some drilling was done in the vicinity of a zinc showing in the north-west corner of claim P-521809.

Jamieson

Twp.

Twp.
Turnbull



I Godfrey 51 South 14 claims

II Godfrey 51 Original grid 19 claims

III Godfrey 51 North 14 claims

TEXASGULF Inc.		
Minerals Exploration Division		Timmins, ONTARIO
GODFREY 51 Godfrey Twp.		
LOCATION MAP		
SCALE : 1" = 2640'		Data by : WG
Drawn by : DEL	Project No : 242	NTS : 42-A / 12

SURVEY RESULTS:

The present surveys were conducted on east-west lines. Lines were cut at 60 metre intervals with stations established every 20 metres. On claims P-410464 and P-410424 some of the lines are at odd spacings which is due to old lines cut in British units, re-chained metrically.

V.L.F. SURVEY:

As much as possible of the property was run with a V.L.F. instrument. Since most of the sulphide occurrences in the Kam Kotia area are small and not very conductive, it is more likely that a method that employs fairly high frequencies (\approx 20,000Hz) such as V.L.F. will find these types of conductors than horizontal loop which uses lower frequencies.

As can be seen from the V.L.F. maps, one of the problems with this method is that numerous spurious conductors such as bedrock-overburden interfaces, shear zones and swamps give as good or better responses than sulphide zones.

Any crossovers on the V.L.F. map that were very weak or were obvious bedrock-clay interfaces were not marked as conductors. Similarly the strong power line anomalies in Godfrey 51 North have been ignored. This screening procedure left approximately four or five conductive zones that may be a result of sulphides.

Conductor "A" on claim P-410464 of the original Godfrey 51 grid (Sheet 2) is in close proximity to the mineralized zone drilled by Consolidated Brewis. However, it is also close to a bedrock edge and is probably partially due to the clay-bedrock edge.

Conductor "B" on the same sheet appears to occur in an outcrop area and warrants some prospecting. On Sheet #3 of the original Godfrey 51 grid conductor "C" may be a legitimate bedrock source. A very small gossan is in close proximity to this conductor. The readings on this sheet are very erratic. This is the result of very wet, swampy ground interspersed with outcrops.

Conductor "D" on claim P-515639 of the west half of Godfrey 51 South is the most interesting of the outlined conductive zones. This three line anomaly has a strike length of 150 metres and has good magnetic correlation. There is no coincident horizontal loop response; therefore the zone must be poorly conductive or have little depth extent.

In the east half of Godfrey 51 South, conductor "E" has been marked mainly because it is the most continuous and noticeable conductive feature on the map. There is no evidence of a horizontal loop response; therefore considering the strike length of this zone, the conductivity must be very poor. There is no obvious bedrock overburden interface; thus it is likely a major bedrock contact zone or a bedrock depression.

MAGNETIC SURVEY:

Magnetic traverses were conducted only on Godfrey 51 North and Godfrey 51 South. The dominant magnetic features are the north-south trending magnetic high that cross all the map sheets. These represent diabase dikes. For the most part, the remainder of the map sheets are fairly flat magnetically, indicative of the low magnetic susceptibility acid volcanics that predominate.

There are occasional isolated circular magnetic highs. These may represent small basic intrusives. The previously mentioned magnetic high coincident with anomaly "D" may represent pyrrhotite mineralization.

One interesting feature is a magnetic low that runs E-W on the north half of the Godfrey 51 North grid. This magnetic low can be seen to be cutting diabase dikes at Line 1140S, 3+40W; Line 960S, 20E; and Line 900S, 1+60E. This seems to represent a major fault. The magnetic lows occurring where magnetic highs should be seems to be a result of reading off the ends of the diabase dikes.

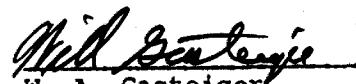
HORIZONTAL LOOP SURVEY:

The original Godfrey 51 claim group was partially covered with a 160 metre coil spacing. Two hundred metre coil spacing was used on parts of Godfrey 51 South. Two frequencies were used on both surveys. No conductive zones were detected.

CONCLUSIONS AND RECOMMENDATIONS:

Geophysics has given little indication of any substantial massive sulphide deposits. V.L.F. zone "D" appears to be the best of a poor bunch of sulphide targets. A seismic refraction profile should be run over the zone and if bedrock depths are shallow a back-hoe should be used to reveal the source of the conductivity.

January 30, 1980


W. A. Gasteiger



Ministry o

GEOPHYSICAL - GE
TECHNICAL

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 Godfrey Twp.
 Claim Holder(s) Texasgulf Canada Ltd.
 Suite 5000, Commerce Court, Toronto, Ontario
 cc: 571 Moneta Ave., Timmins, Ontario
 Survey Company Same as above
 Author of Report W. A. Gasteiger
 Address of Author 571 Moneta Avenue, Timmins, Ontario
 Covering Dates of Survey June/79 - Jan/80
 (linecutting to office)
 Total Miles of Line Cut 106 Kilometers

SPECIAL PROVISIONS	
CREDITS REQUESTED	
ENTER 40 days (includes line cutting) for first survey.	Geophysical DAYS per claim --Electromagnetic 20 --Magnetometer --Radiometric --Other Geological Geochemical
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: Jan 31/80 SIGNATURE: Neil Gasteiger
 Author of Report or Agent

Res. Geol. Qualifications 2. 1798

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

MINING CLAIMS TRAVESED
List numerically

P-451641
 P-498597 P-536580
 (prefix) (number)
 P-498598 P-537010

 P-498964 P-537017
 P-498965
 P-498966
 P-498967
 P-498968
 P-498969
 P-498970
 P-498971
 P-498972
 P-498973
 P-498974
 P-498975
 P-498976
 P-515628
 P-515629
 P-515632
 P-515633
 P-515634
 P-515635
 P-515636
 P-515638
 P-515639
 P-515640
 P-515643
 P-516893
 P-516894
 P-515895
 P-521782
 P-521783
 P-521788
 P-521789
 P-521809
 P-521810
 P-528934
 P-528973
 P-528974
 P-528975
 P-528976

If space insufficient, attach list

TOTAL CLAIMS 44

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations	5456	Number of Readings	5456
Station interval	20 metres	Line spacing	60 metres
Profile scale	1cm = 10 ³		
Contour interval			

MAGNETIC

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

ELECTROMAGNETIC

Instrument Crone Radem
 Coil configuration Vertical Receiver Coil
 Coil separation Infinite
 Accuracy $\pm 1^\circ$
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency Annapolis Maryland
 Parameters measured Dip angle of ^{total} (specify V.L.F. station)
 secondary field in degrees

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 _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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Type of Survey(s) Geophysical

Township or Area Godfrey

Claim Holder(s) Texasgulf Canada Ltd.
P.O. Box 175, Suite 5000, Commerce Court, Toronto, Ontario
cc: 571 Moneta Ave., Timmins, Ontario

Survey Company Same as above

Author of Report W.A. Gasteiger

Address of Author 571 Moneta Ave., Timmins, Ontario

Covering Dates of Survey June /79 - Jan/80
(linecutting to office)

Total Miles of Line Cut 78 Kilometers

<u>SPECIAL PROVISIONS</u>	<u>DAYS</u>
<u>CREDITS REQUESTED</u>	<u>per claim</u>
ENTER 40 days (includes line cutting) for first survey.	Geophysical
	--Electromagnetic _____
	--Magnetometer 40
	--Radiometric _____
	--Other _____
ENTER 20 days for each additional survey using same grid.	Geological _____
	Geochemical _____

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Jan 31 / 80 SIGNATURE: W.A. Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications 2/1798

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

MINING CLAIMS TRAVERSED
List numerically

P-521782	(prefix)	(number)
P-521783		
P-521788		
P-521789		
P-521809		
P-521810		
P-528934		
P-528973		
P-528974		
P-528975		
P-528976		
P-536580		
P-537010		
P-537017		
P-515628		
P-515629		
P-515632		
P-515633		
P-515634		
P-515635		
P-515636		
P-515638		
P-515639		
P-515640		
P-515643		
P-516893		
P-516894		
P-516895		

If space insufficient, attach list

TOTAL CLAIMS 28

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations	4314	Number of Readings	4314
Station interval	20 metres	Line spacing	60 metres
Profile scale			
Contour interval	100 gammas		

MAGNETIC

Instrument Geometrics G-816 Proton Precession Magnetometer
 Accuracy - Scale constant ± 1 gamma
 Diurnal correction method Magnetic field strength established
 Base Station check-in interval (hours) .. along baseline by reading 60 metre loops
 Base Station location and value with 20 meter stations
Baseline values subsequently used to correct survey data. Base station on
line oN, 0+00. Value = 59794 gammas.

ELECTROMAGNETIC

Instrument _____
 Coil configuration _____
 Coil separation _____
 Accuracy _____
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency _____
 Parameters measured _____
 (specify V.L.F. station)

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 _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL TECHNICAL DATA STATEMENT

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Type of Survey(s) Geophysical
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P.O. Box 175, Suite 5000, Commerce Court, Toronto, Ont
cc: 571 Moneta Ave., Timmins, Ontario
 Survey Company Same as above
 Author of Report W. A. Gasteiger
 Address of Author 571 Moneta Avenue, Timmins, Ontario
 Covering Dates of Survey June/79 - Jan/80
 (linecutting to office)
 Total Miles of Line Cut 38 kilometers

SPECIAL PROVISIONS
CREDITS REQUESTED

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

ENTER 20 days for each
additional survey using
same grid.

	DAYS per claim
Geophysical	
- Electromagnetic	<u>20</u>
- Magnetometer	
- Radiometric	
- Other	
Geological	
Geochemical	

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

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

DATE: Jan. 31/80 SIGNATURE: Neil Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications 2. 1798

Previous Surveys

File No.	Type	Date	Claim Holder
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MINING CLAIMS TRAVERSED
List numerically

P-451641	(prefix)	(number)
P-498597		
P-498598		
P-498964		
P-498970		
P-498972		
P-498973		
P-498974		
P-498975		
P-498976		
P-515628		
P-515629		
P-515632		
P-515633		
P-515634		
P-515635		
P-515636		
P-515638		
P-515639		
P-515640		
P-515643		
P-516893		
P-516894		
P-516895		
P-498971		

If space insufficient, attach list

TOTAL CLAIMS 25

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1147 Number of Readings 1147
Station interval 40 metres Line spacing 60 metres or 120 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 MAXMIN II
Coil configuration Coplanar
Coil separation 160 metres and 200 metres
Accuracy $\pm 1\%$
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 444 & 1777 Hz
(specify V.L.F. station)
Parameters measured In phase and quadrature of secondary field as percentage of primary field.

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____
Elevation accuracy _____

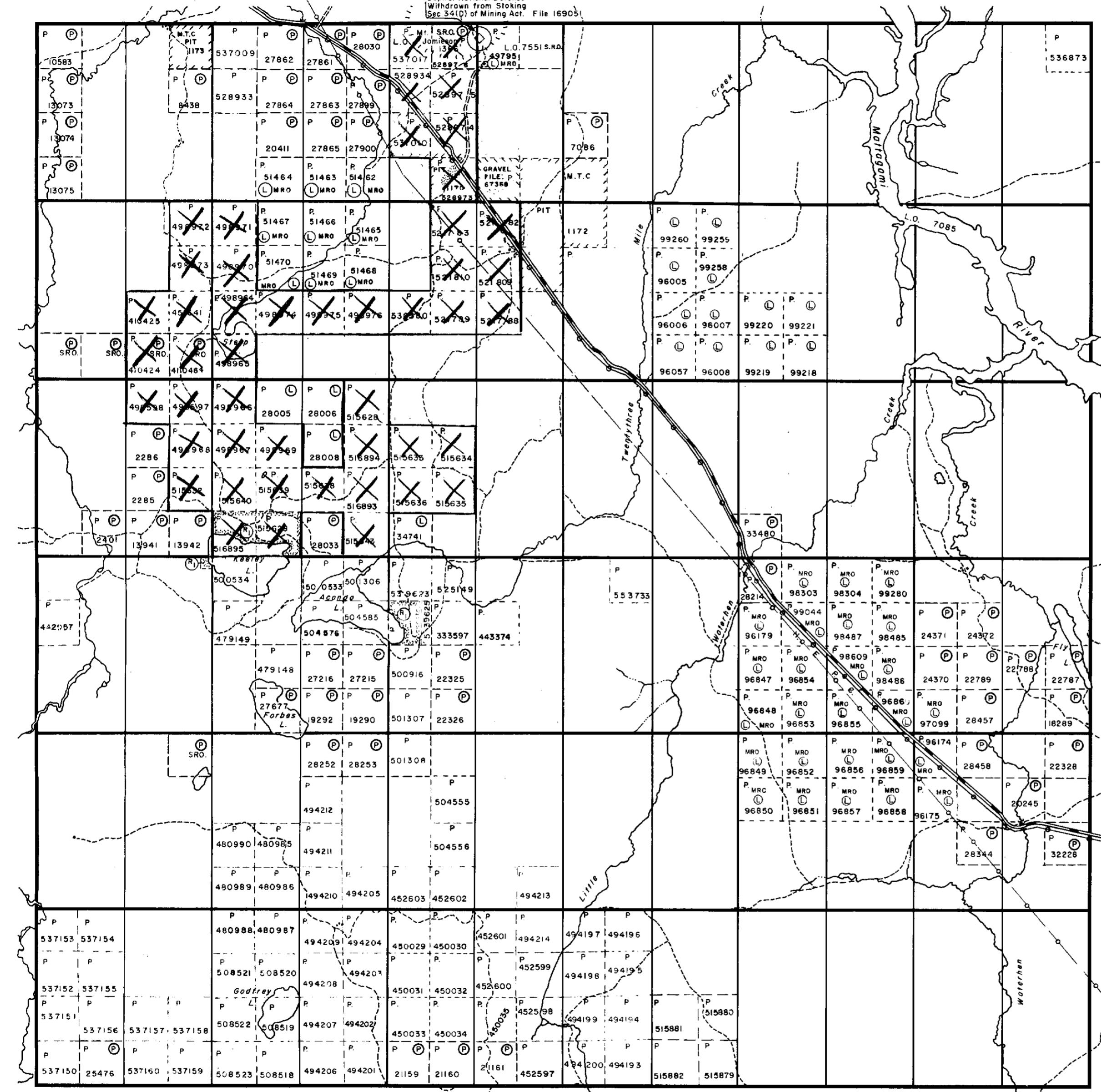
INDUCED POLARIZATION

RESISTIVITY

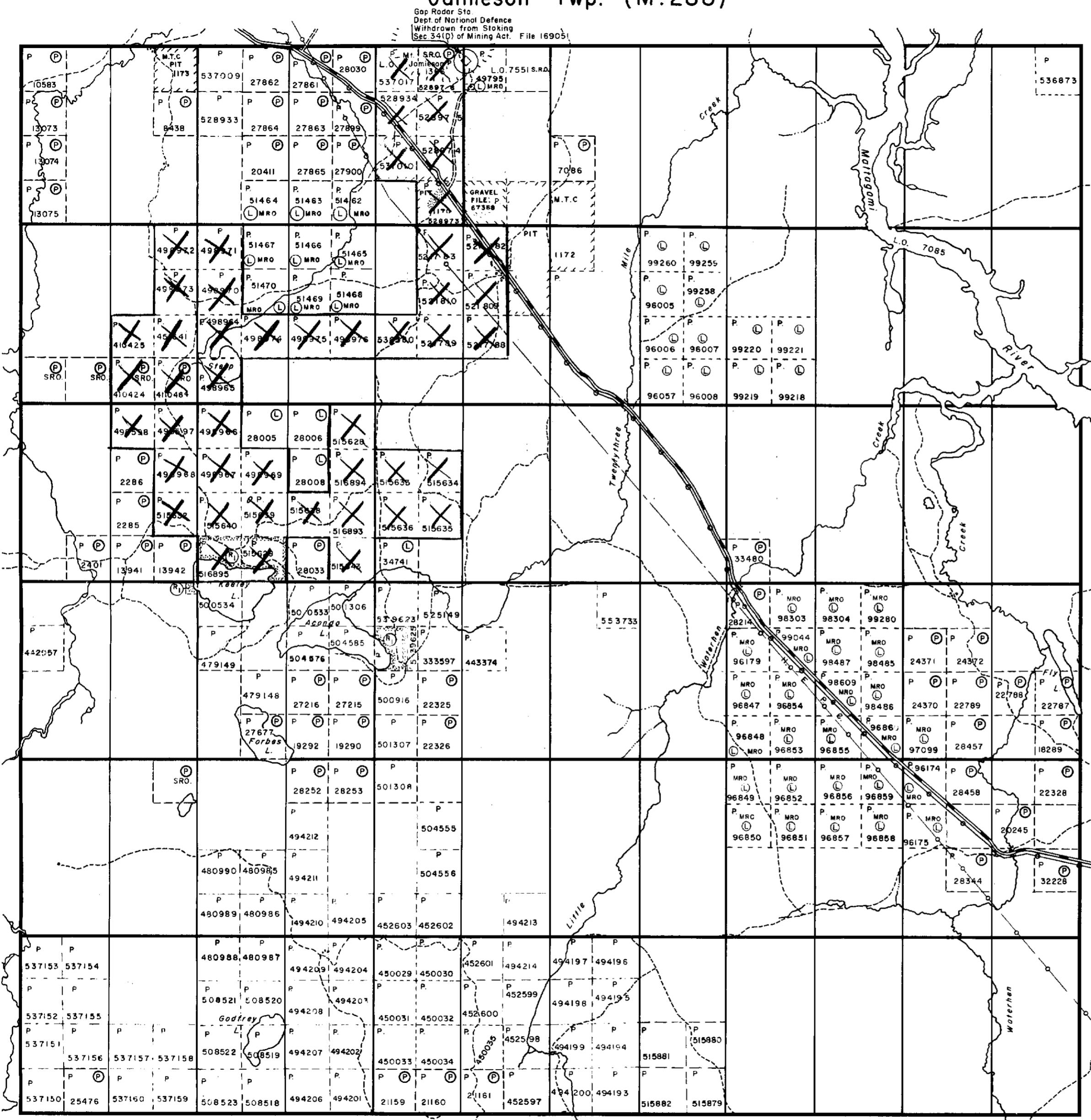
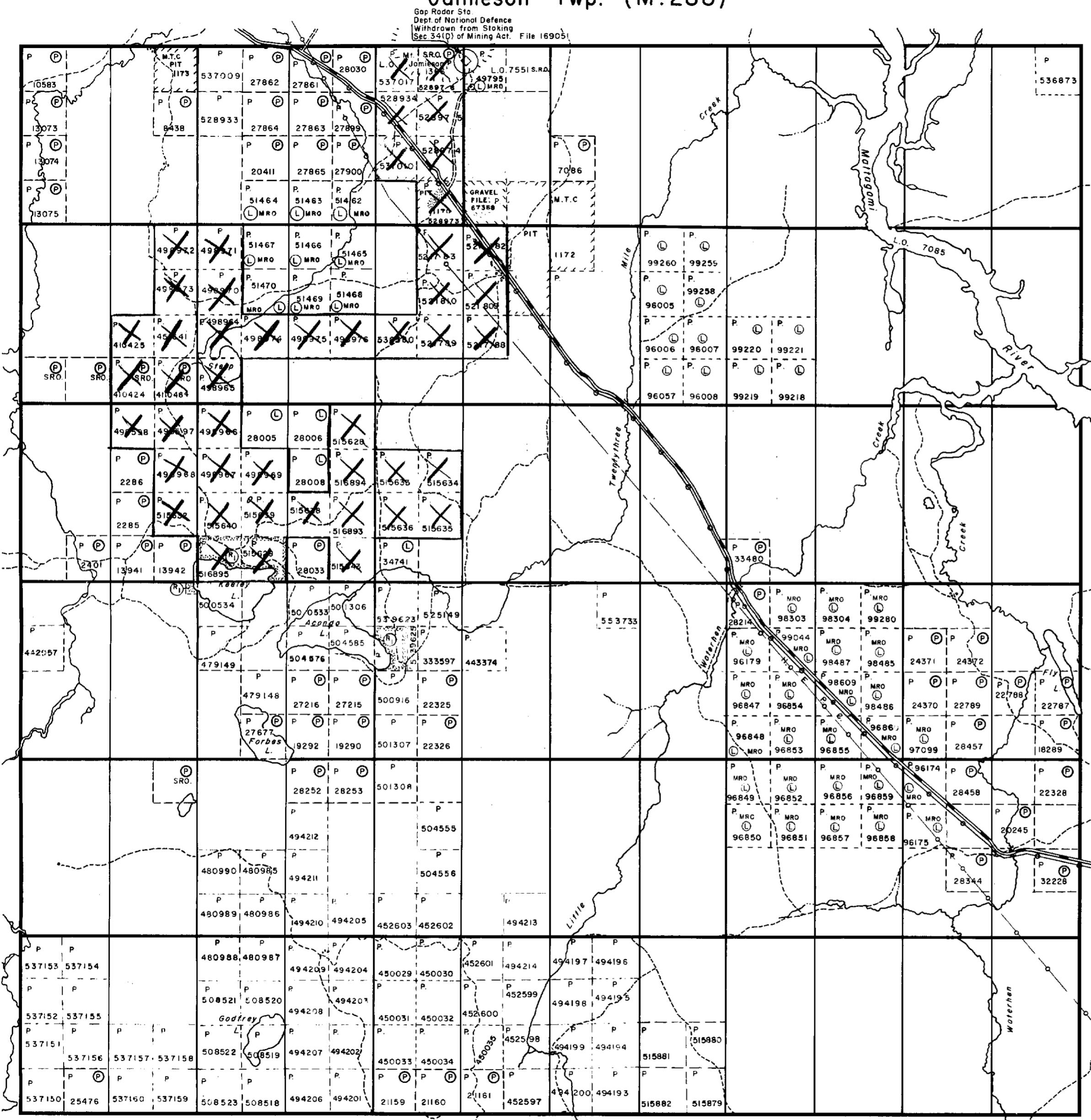
Instrument _____
Method Time Domain Frequency Domain
Parameters - On time _____ Frequency _____
- Off time _____ Range _____
- Delay time _____
- Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

Jamieson Twp. (M.288)

Gap Radar Sta
Dept. of National Defence
Withdrawn from Staking
Sec 34(1) of Mining Act. File 16905



Turnbull Twp. (M.316)



12 11 10 9 8 7 6 5 4 3 2 1

Bristol Twp. (M.264)



THE TOWNSHIP
OF

2.3210

GODFREY

DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

(P)	C.S.
(L)	Loc.
(L.O.)	L.O.
(M.R.O.)	M.R.O.
(S.R.O.)	S.R.O.
—	ROADS
—	IMPROVED ROADS
—	KING'S HIGHWAYS
—	RAILWAYS
—	POWER LINES
—	MARSH OR MUSKEG
X	MINES
—	CANCELLED
(S.R.O.)	PATENTED S.R.O.

NOTES

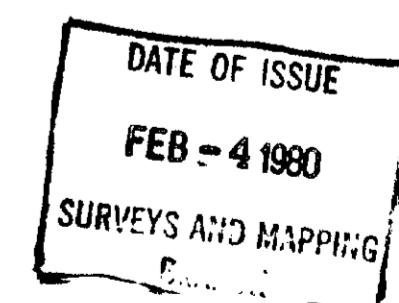
400' surface rights reservation along the shores of all lakes and rivers.

Flooding rights on either side of the Mattagami to H.E.P.C.

This township lies within the Municipality of CITY of TIMMINS.

Reservations:

(R) — Reserved for recreational purposes under Sec. 3 PLA.
File 188543.




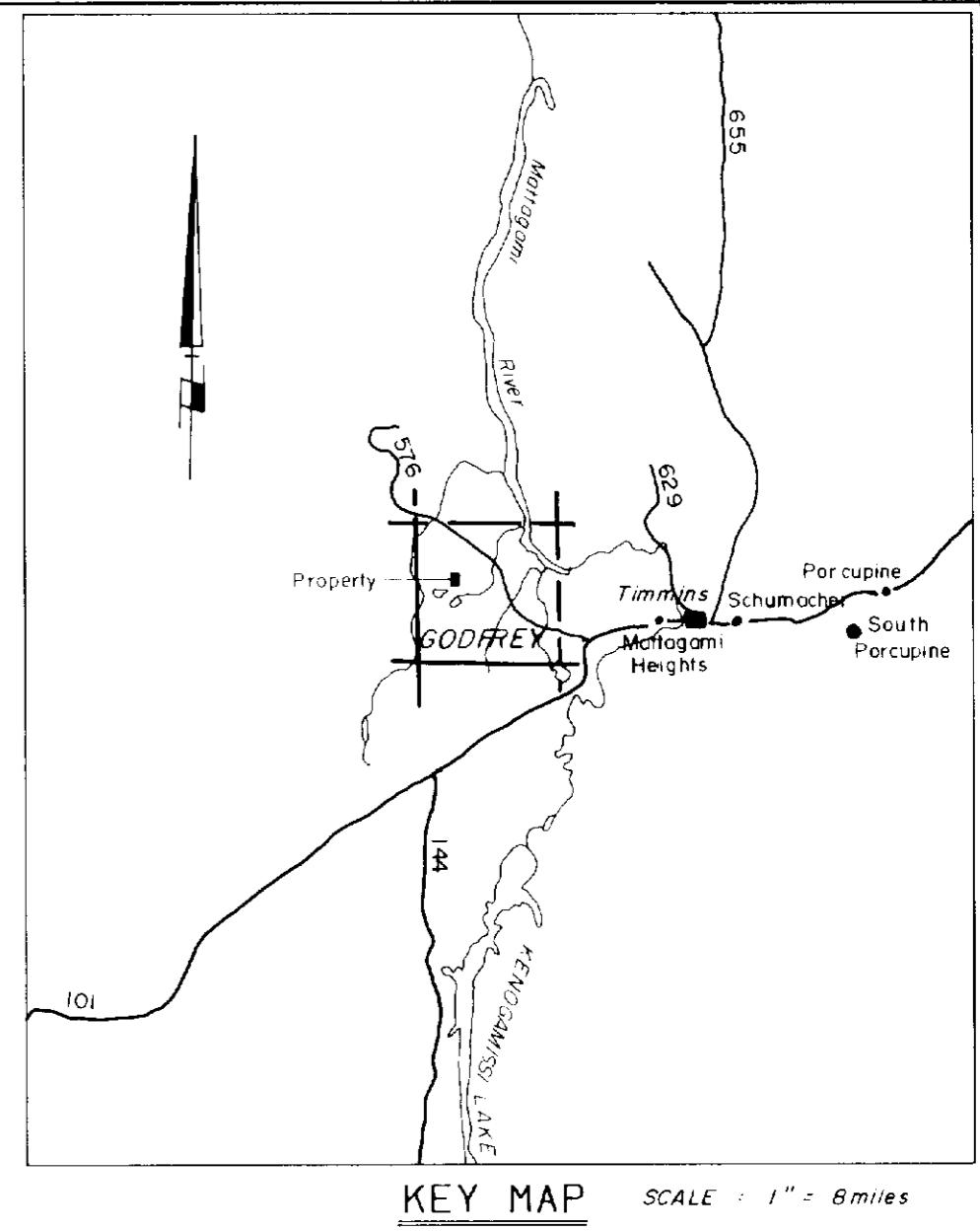
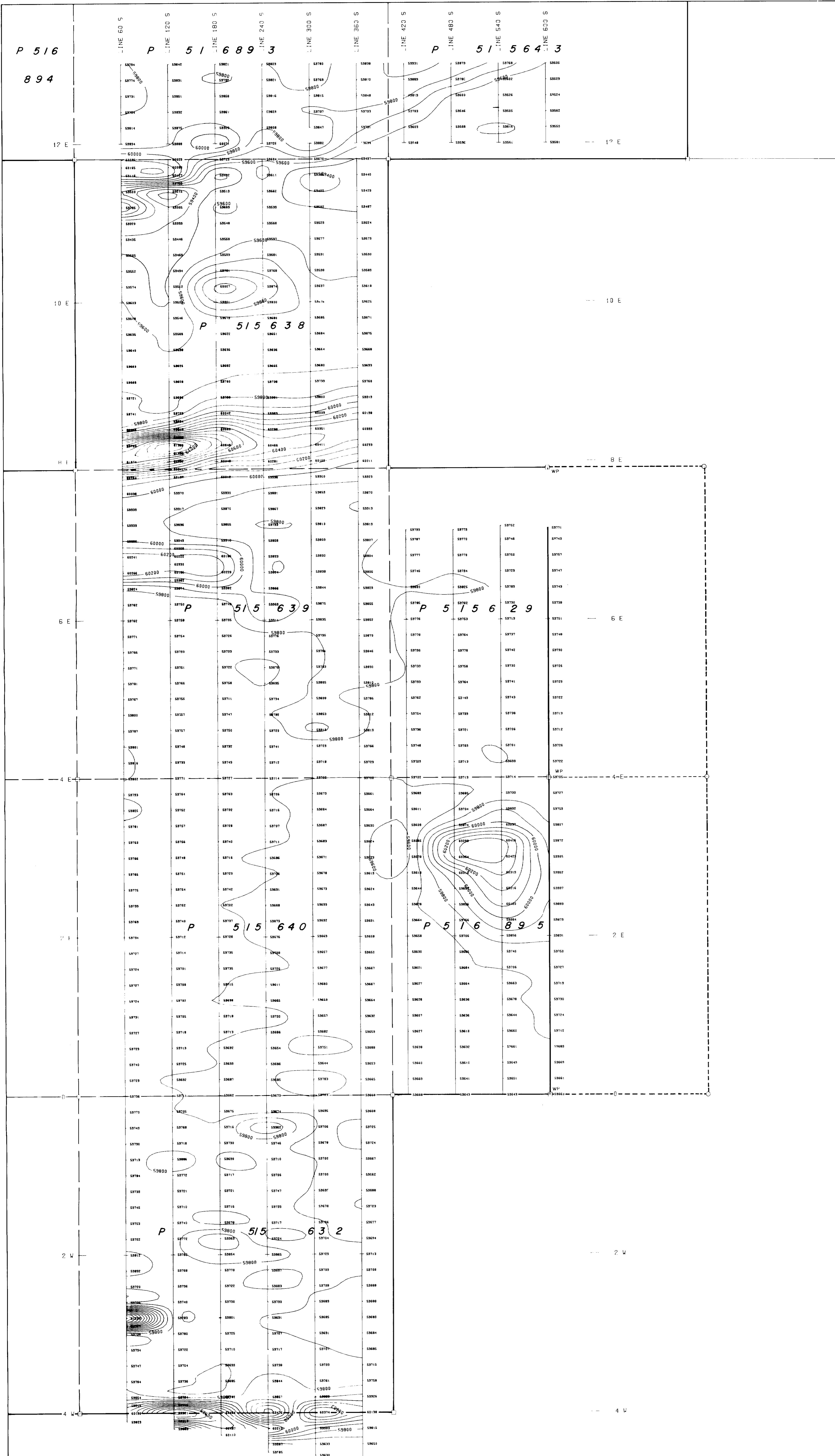
PLAN NO. M.284

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH






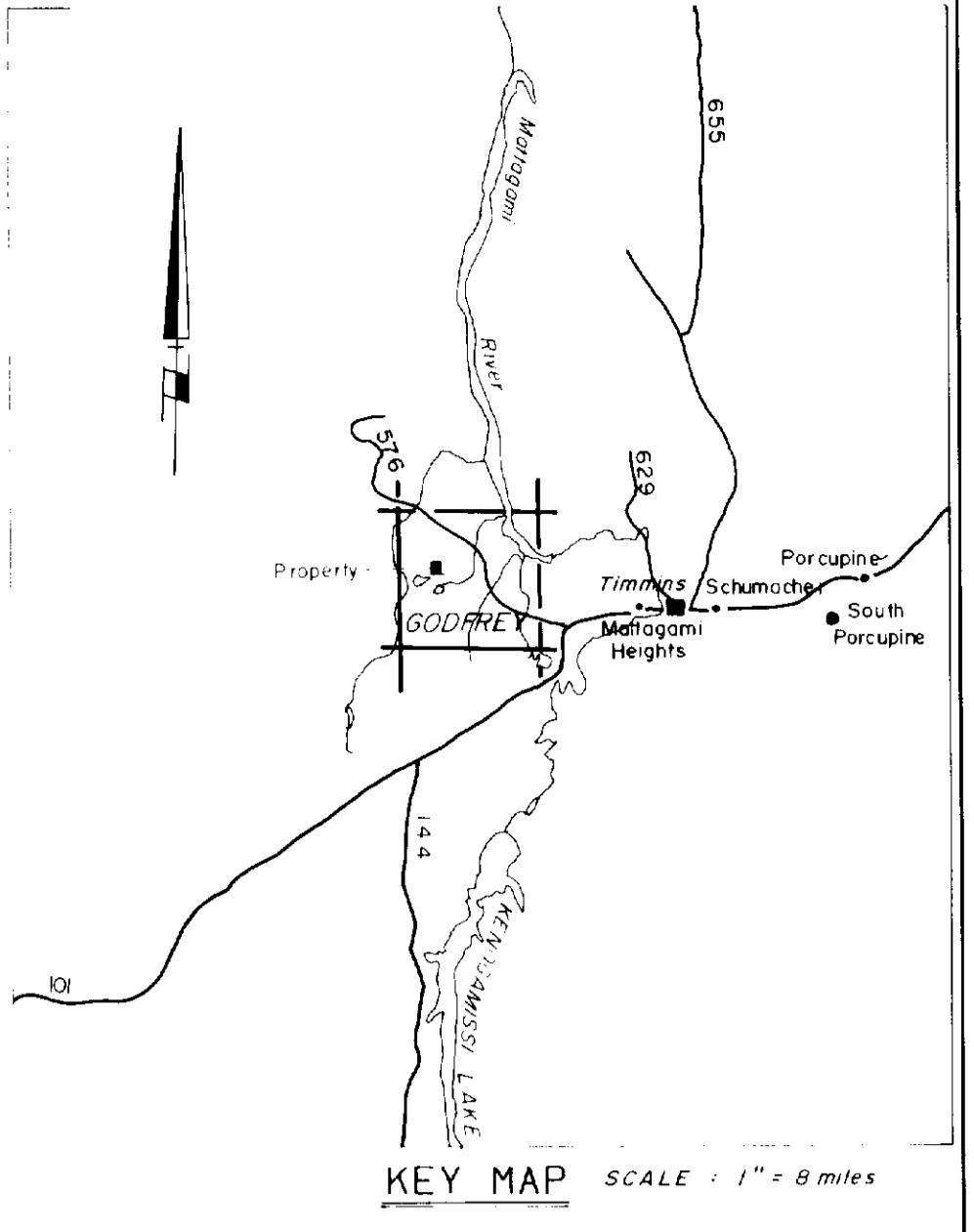
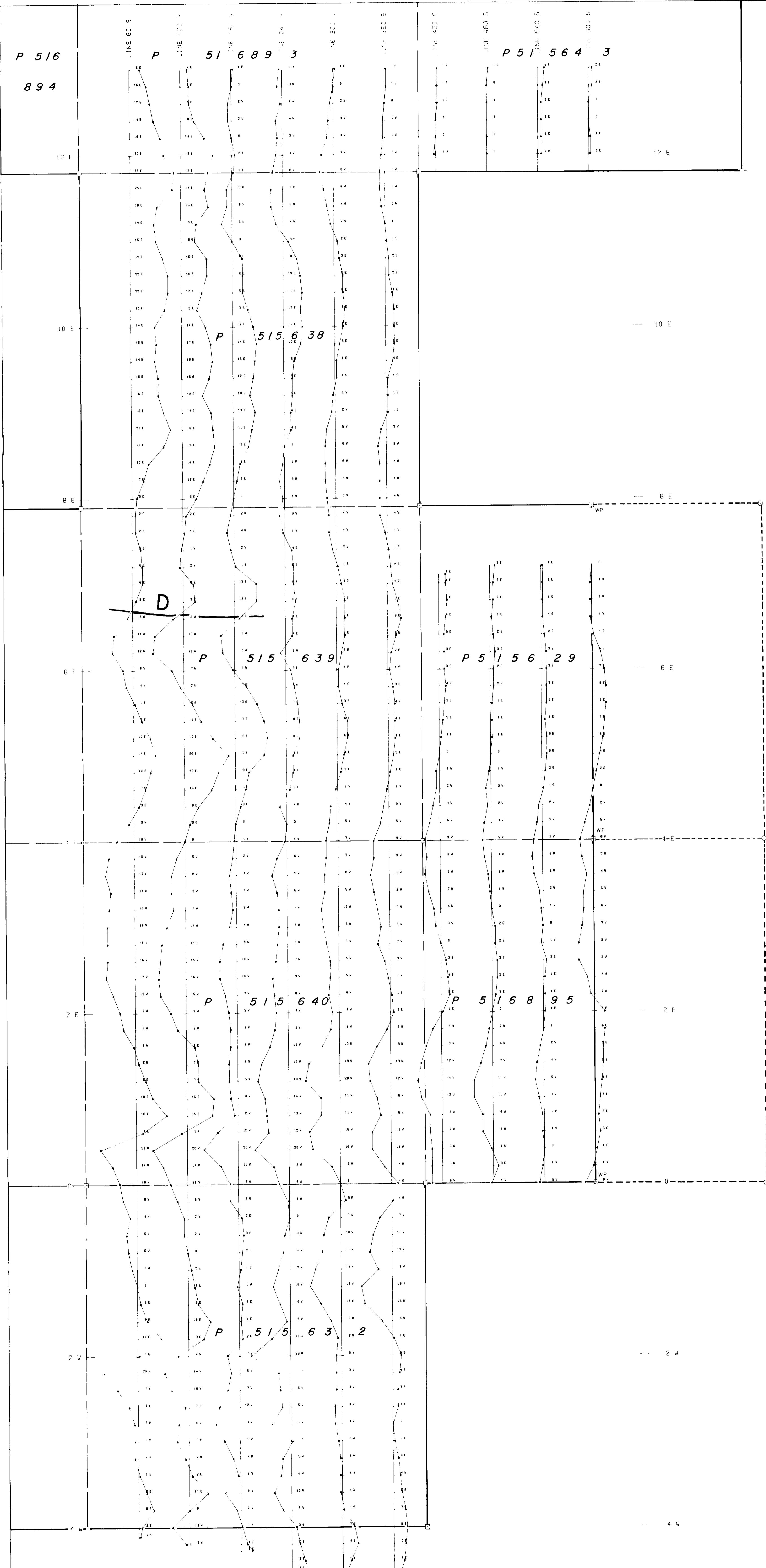
LEGEND

INSTRUMENT : GEOMETRICS GB16
TYPE : PROTON PRECISION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

0 40 80 120 160 200
METRES (1:2000)

TEXASGULF CANADA LTD.	
MAGNETIC SURVEY	
GODFREY 51 SOUTH	
WEST HALF	
NTS: 42A12	PROJ. #242
WORK BY	DATE
1980	





LEGEND

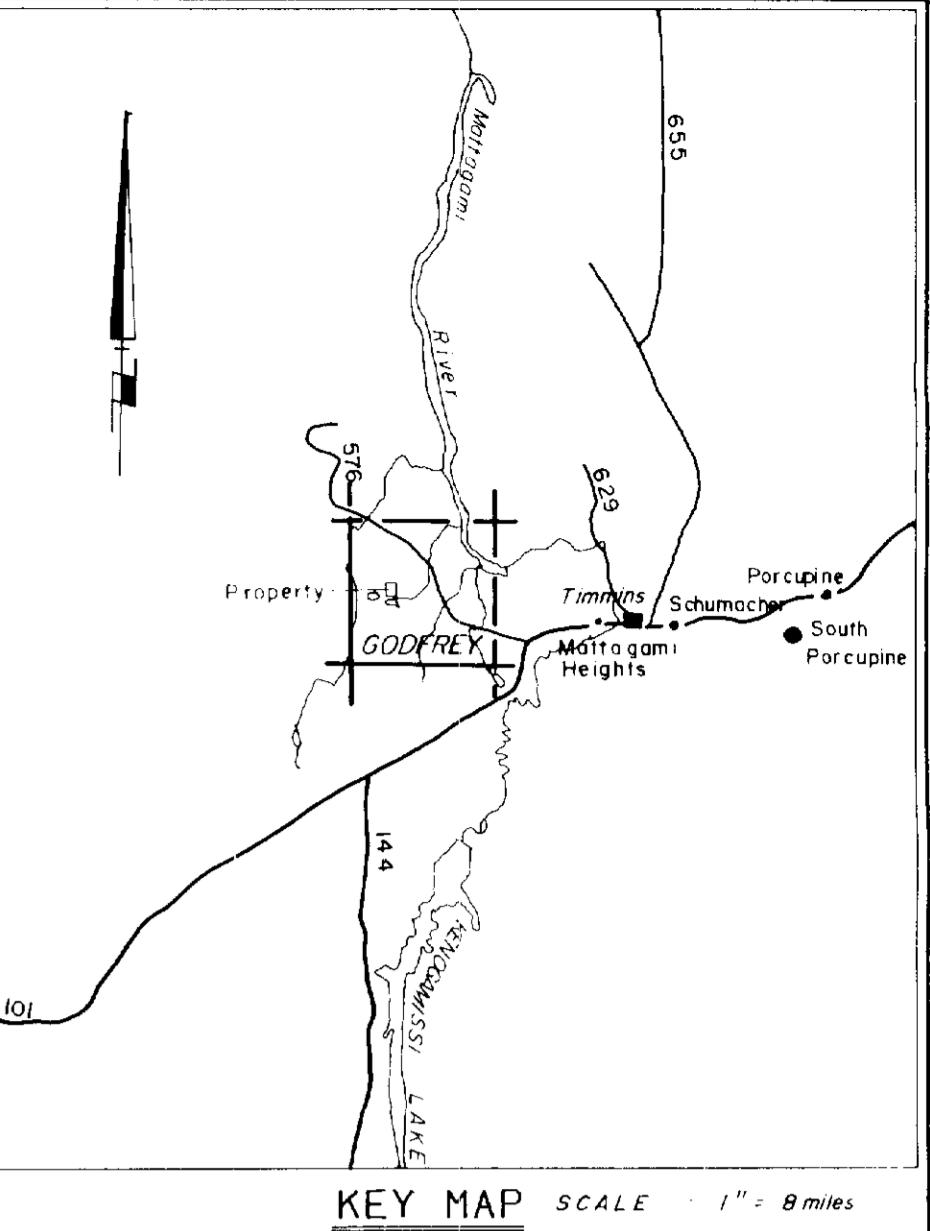
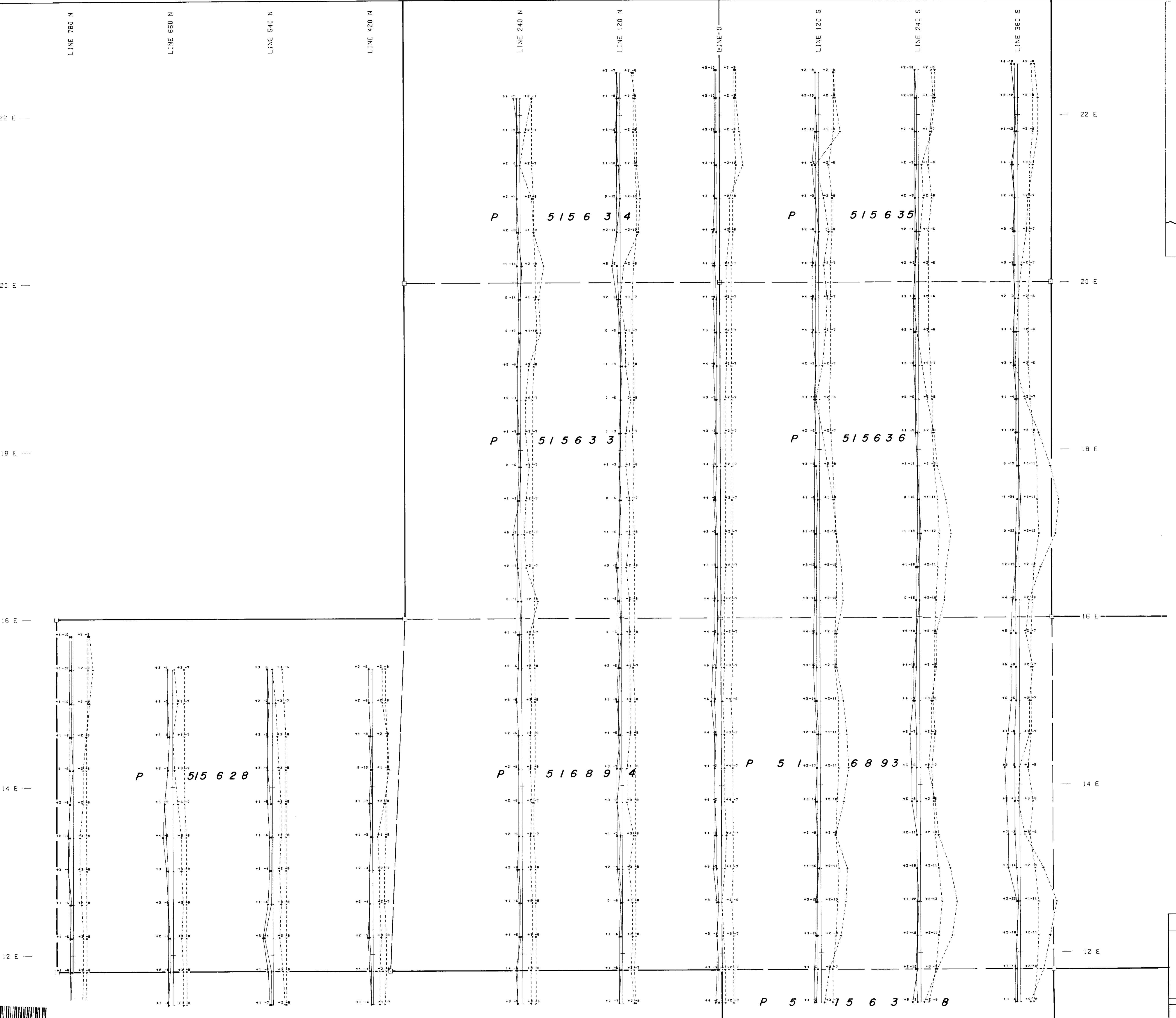
DIP ANGLE (DEGREES)

— W DIPS E DIPS —————

INSTRUMENT : CRANE RADEM
STATION : ANNAPOLIS, 21.4 KHz
PROFILE SCALE : DIP ANGLE 1 CM = 10°

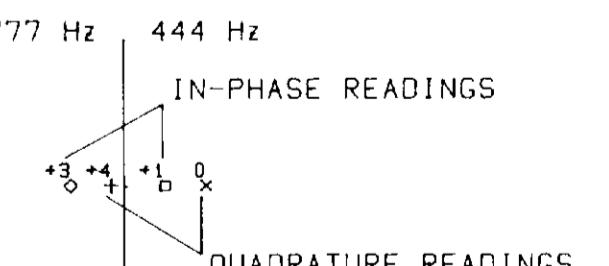
0 40 80 120 160 200
METRES 1:2000

TEXASGULF CANADA LTD.	
V L F SURVEY	
GODFREY 51 SOUTH	
WEST HALF	
NTS: 42A12	PROJ. #242
WORK BY	DATE
1980	



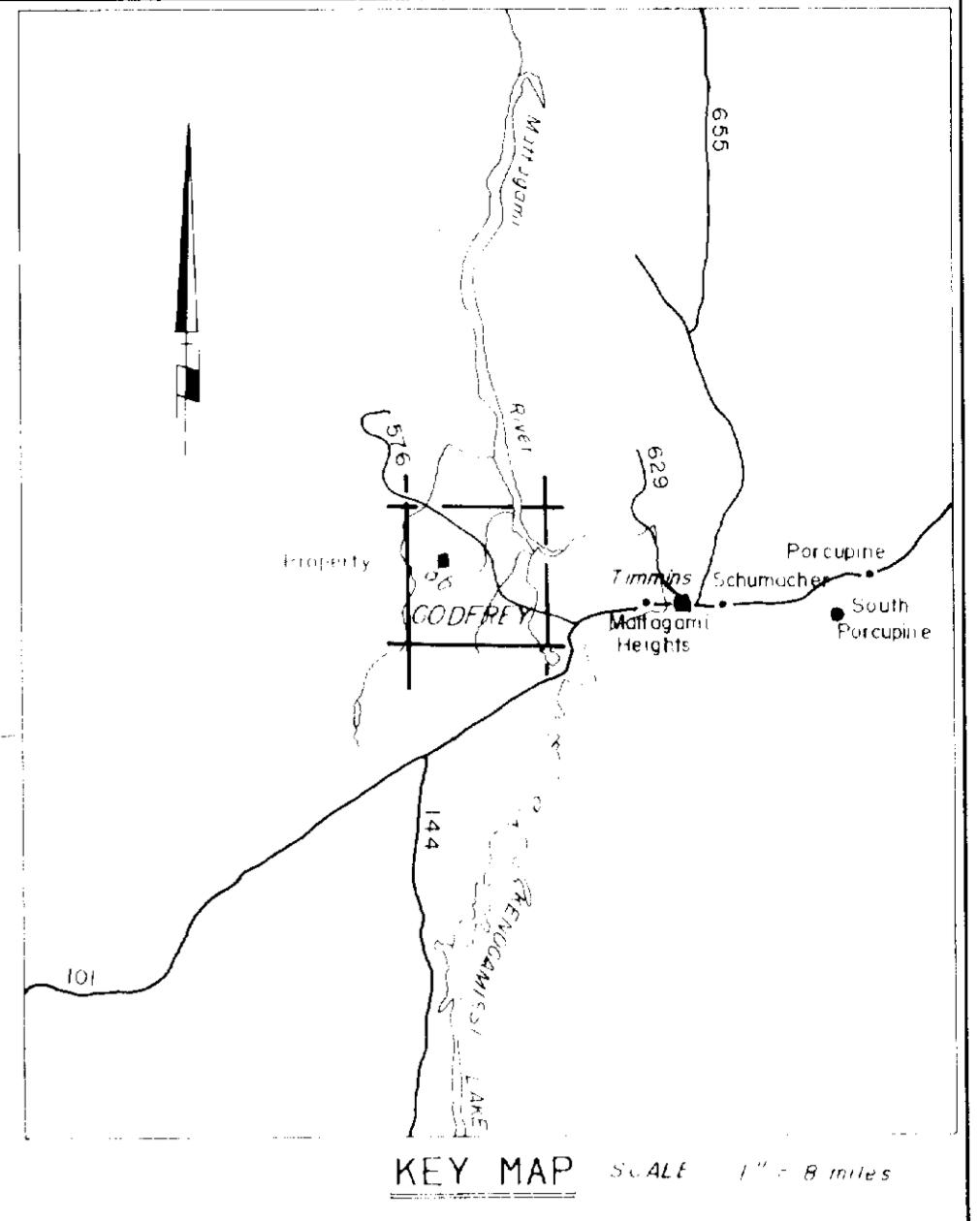
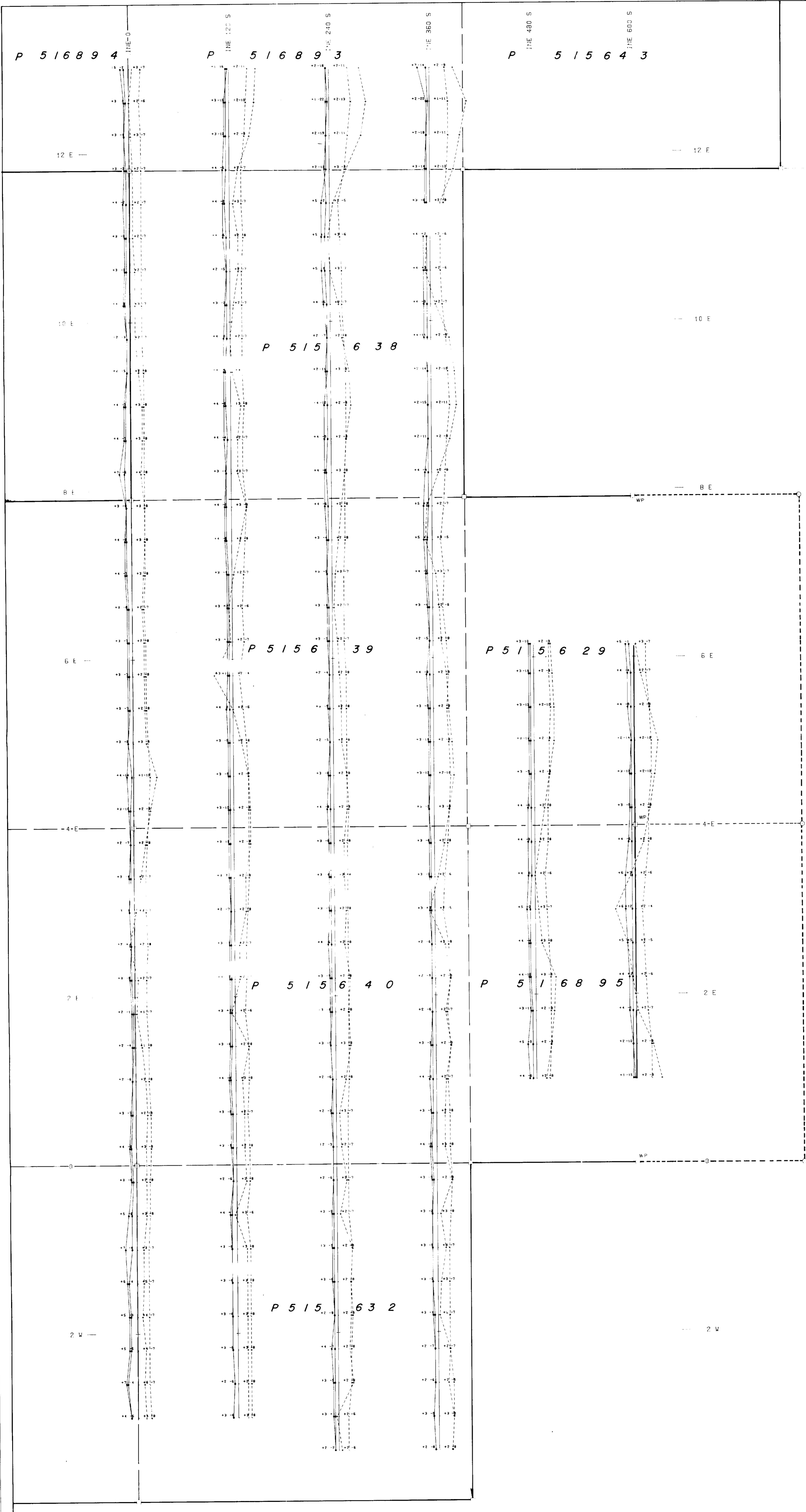
ASTRO

LEGEND

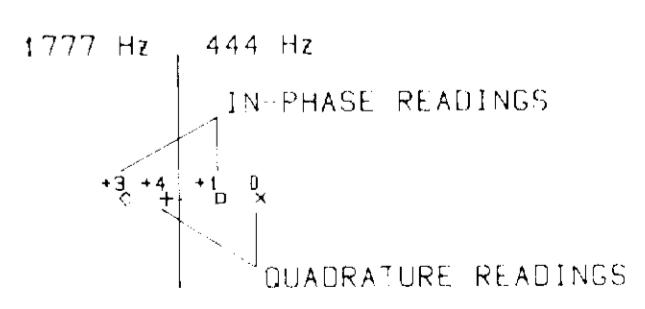


INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz AND 1777 Hz
COIL SPACING : 200 METERS
PROFILE SCALE : 1 CM = 10% (444 Hz)
: 1 CM = 10% (1777 Hz)
+ READINGS - READINGS -
0 40 80 120 160 200
METRES (1:2000)

TEXASGULF CANADA LTD.	
HORIZONTAL LOOP SURVEY	
GODFREY 51 SOUTH	
EAST HALF	
NTS: 42A12	PROJ. #242
WORK BY	DATE
1980	



LEGEND



INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz AND 1777 Hz
COIL SPACING : 200 METERS
PROFILE SCALE : 1 CMP 10% I 444 Hz
I 1 CMP 10% I 1777 Hz

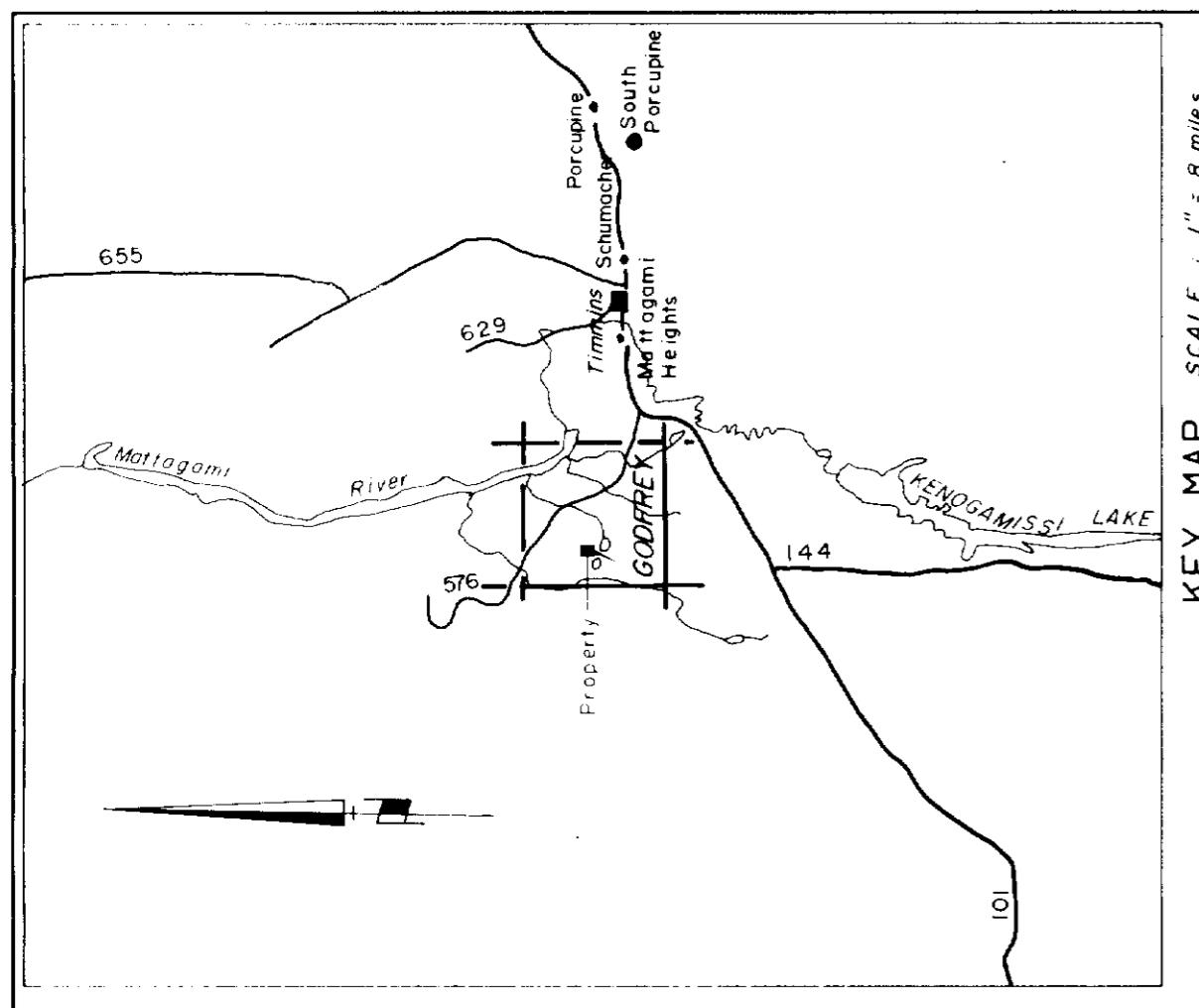
+ READINGS -- READINGS --

0 40 80 120 160 200
METRES 1:2000

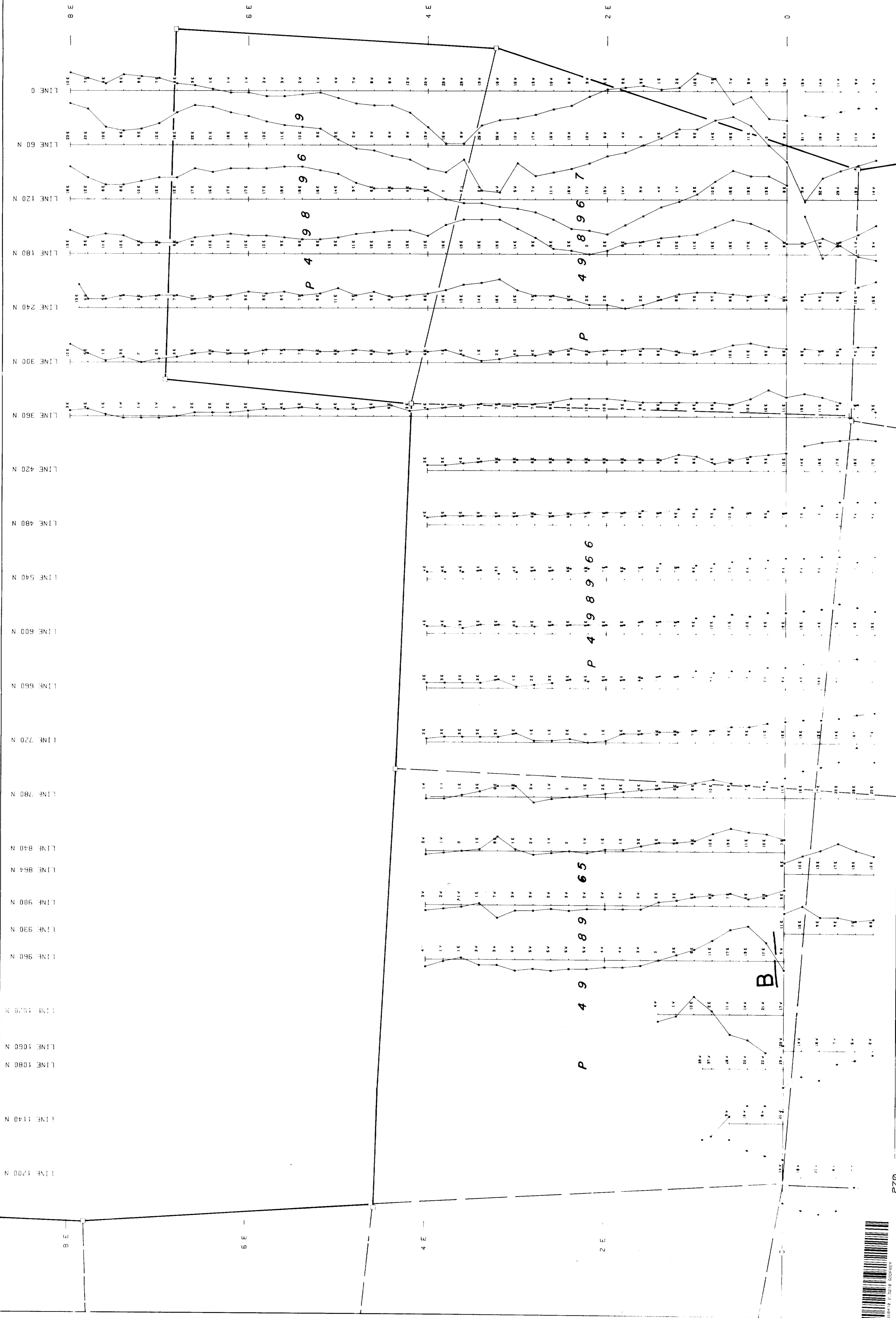
TEXASGULF CANADA LTD.
HORIZONTAL LOOP SURVEY
GODFREY 51 SOUTH
WEST HALF
NTS:42A12 PROJ. #242
WORM BY DATE
1980

Neil Benting





KEY MAP



LEGEND

ASTRO
DIP ANGLE (DEGREES)
W DIPS
E DIPS
METRES (1:2000)

INSTRUMENT : CRONE RADAR

STATION : ANNAPOLIS 21.4 KHz
PROFILE SCALE : CIP ANGLE 1 CHM 10°

→ W DIPS ← E DIPS

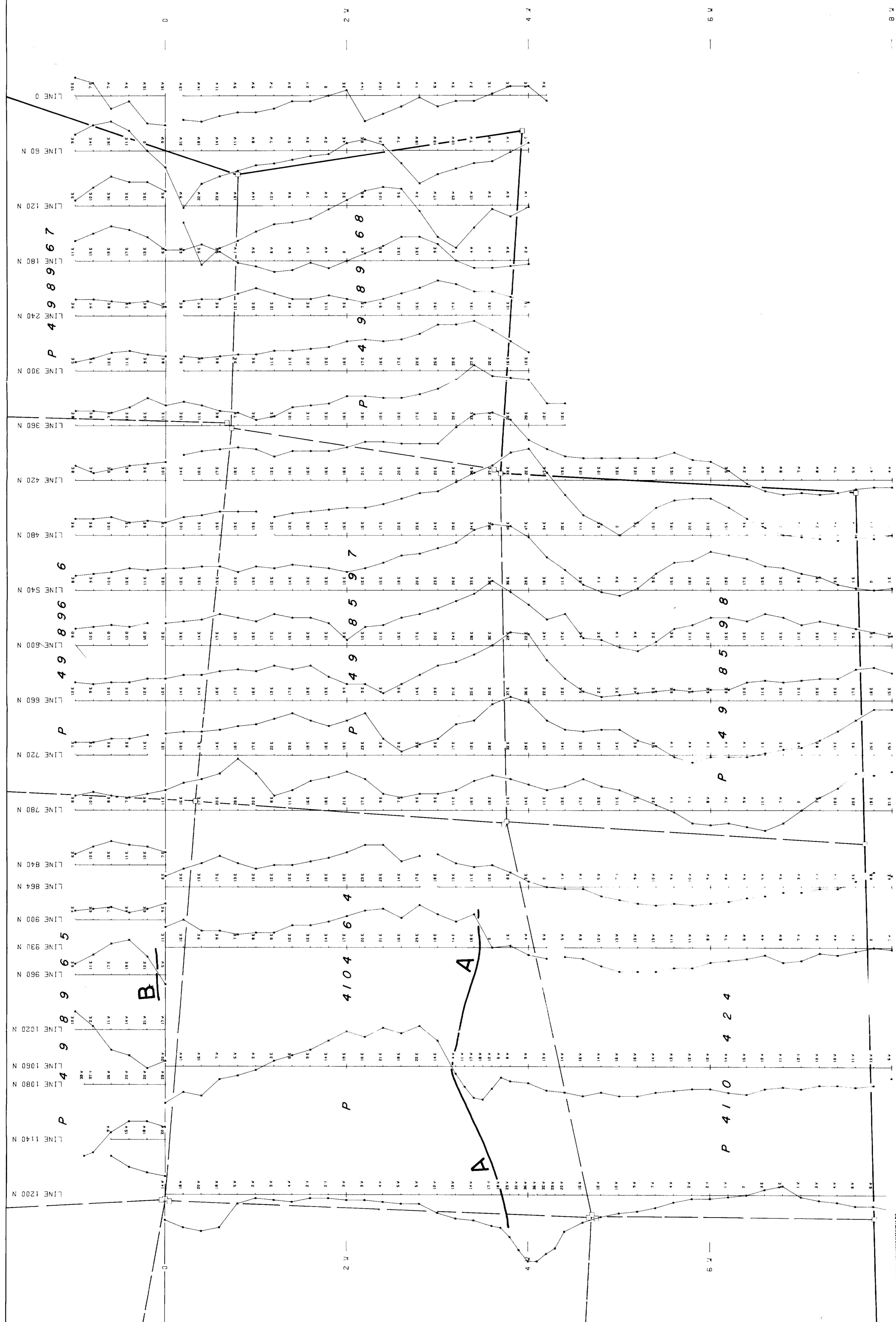
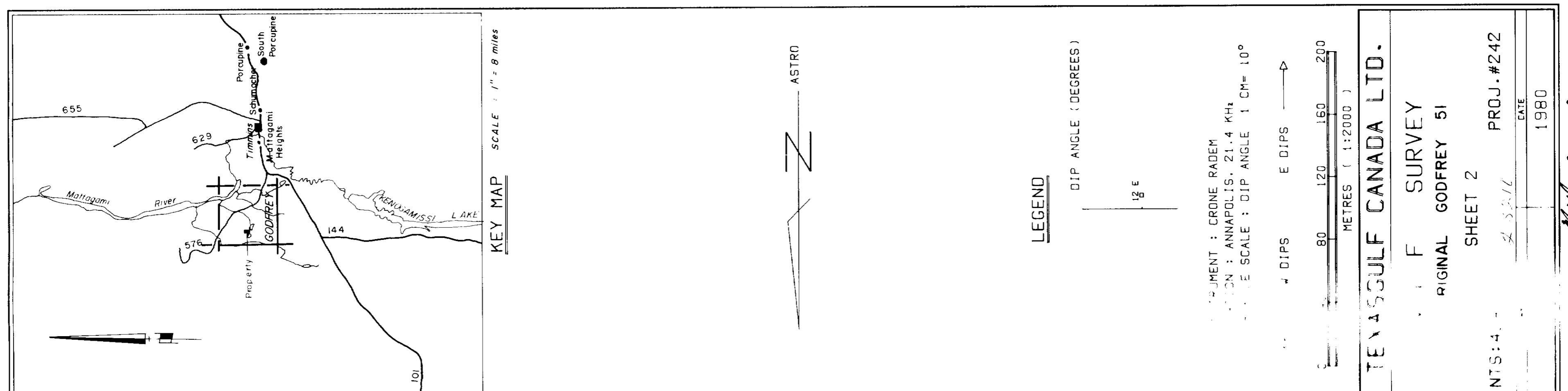
0 40 80 120 160 200

TEXASGULF CANADA LTD.
VLF SURVEY
ORIGINAL GODFREY 51
SHEET 1
NTS:42A12
2.32/L PROJ. #242
DRAFT BY

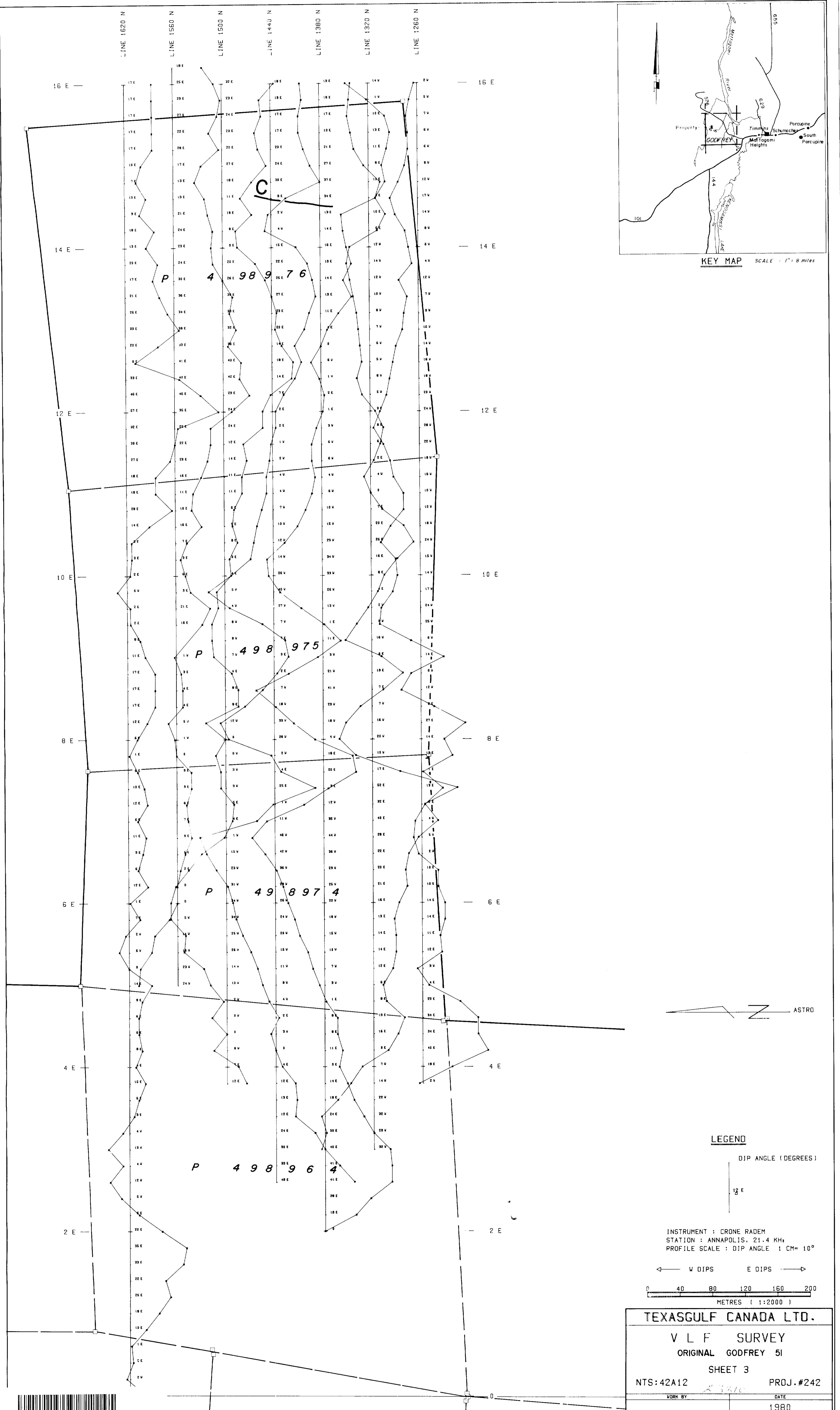
1980

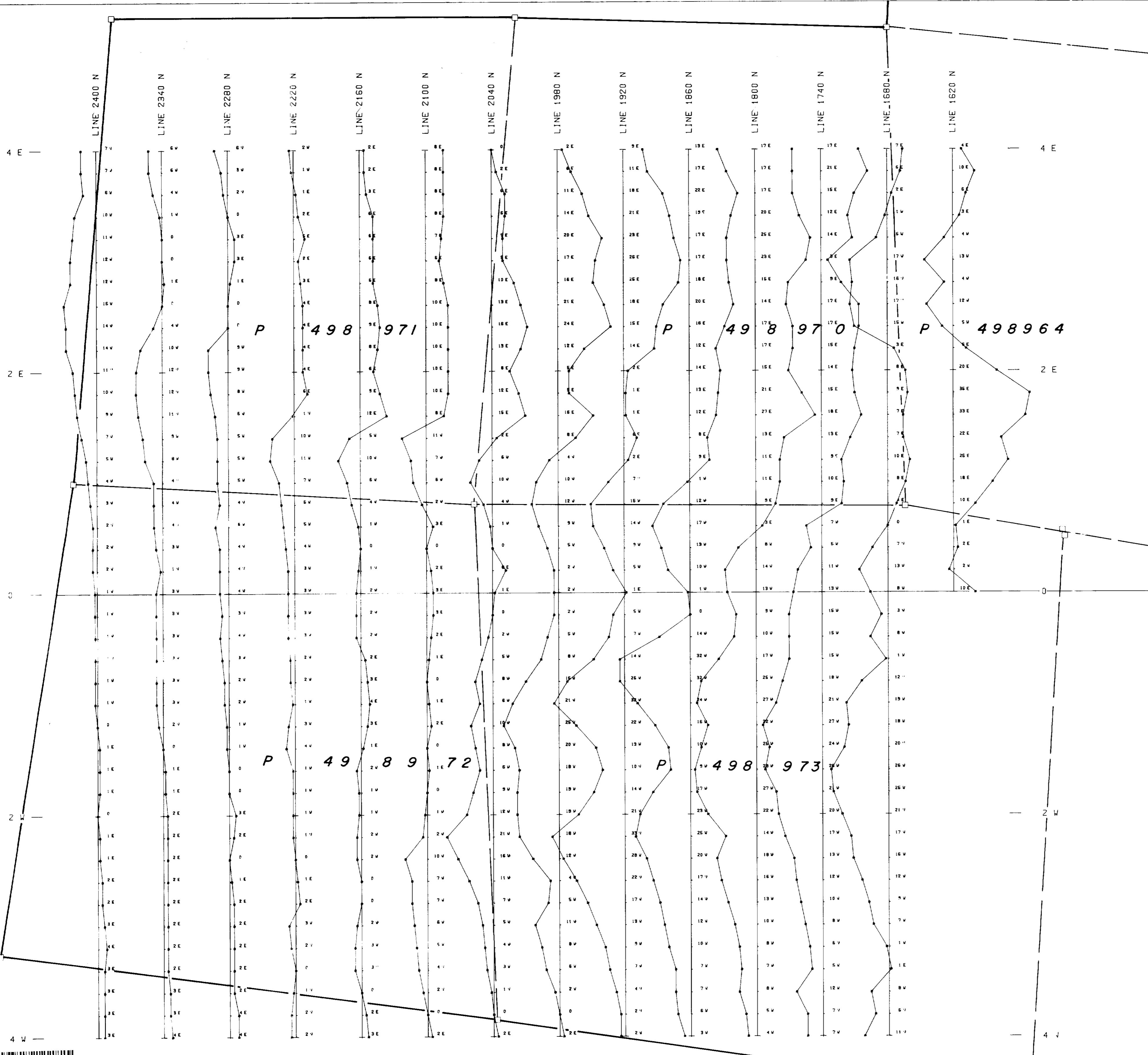
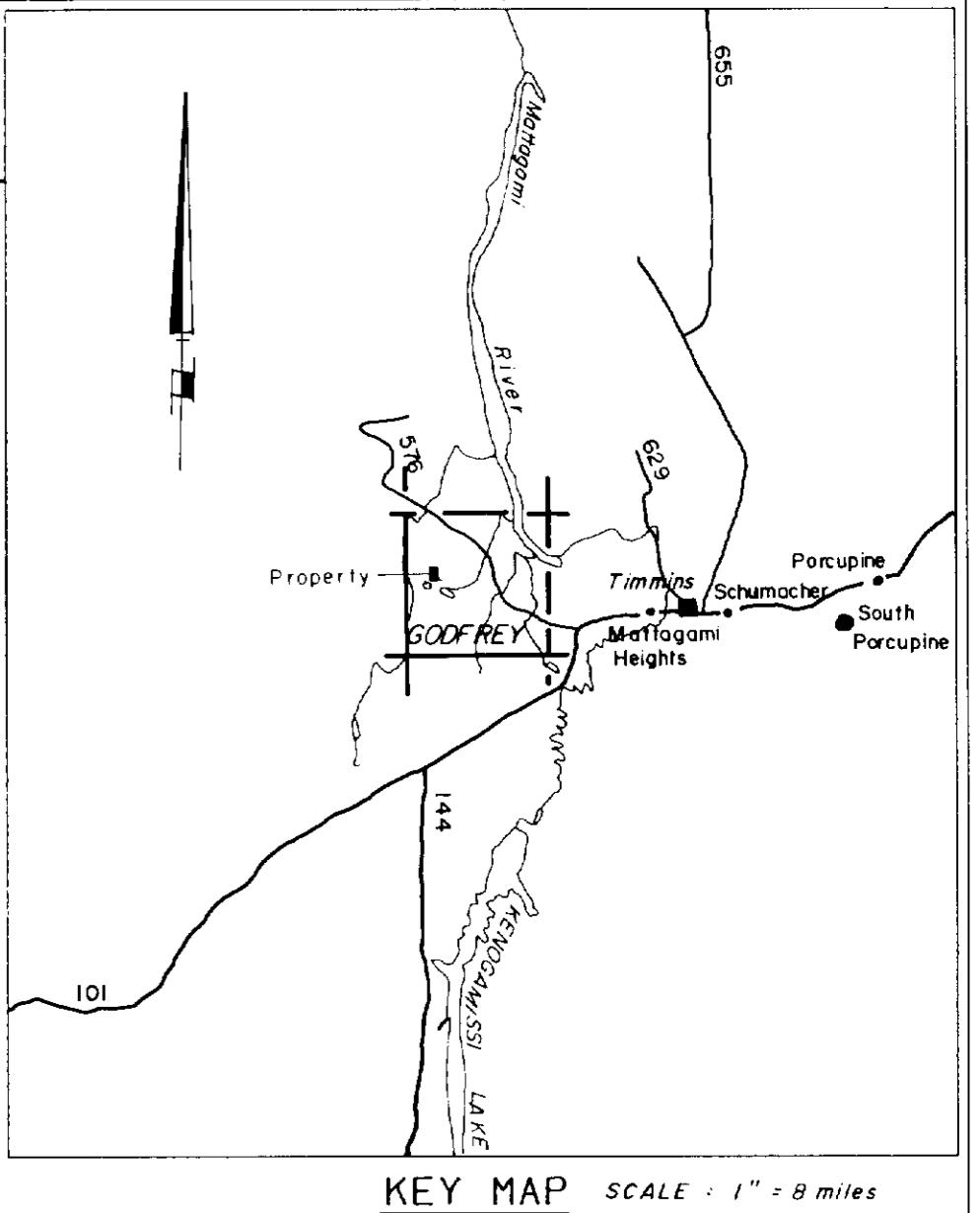


270



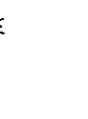
280





LEGEND

DIP ANGLE (DEGREES)



INSTRUMENT : CRONE RADEM
STATION : ANNAPOLIS, 21.4 KHz
PROFILE SCALE : DIP ANGLE 1 CM = 10°

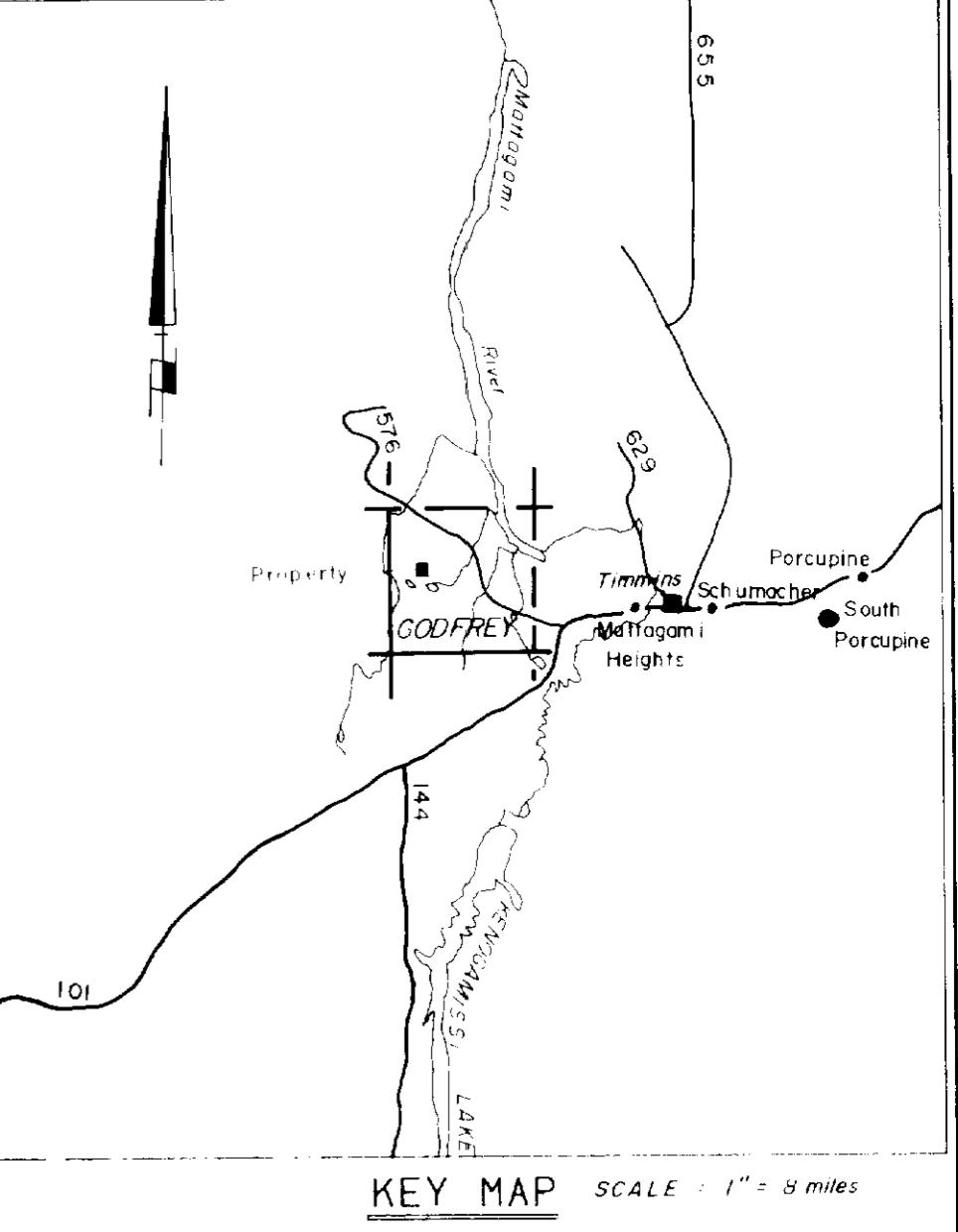
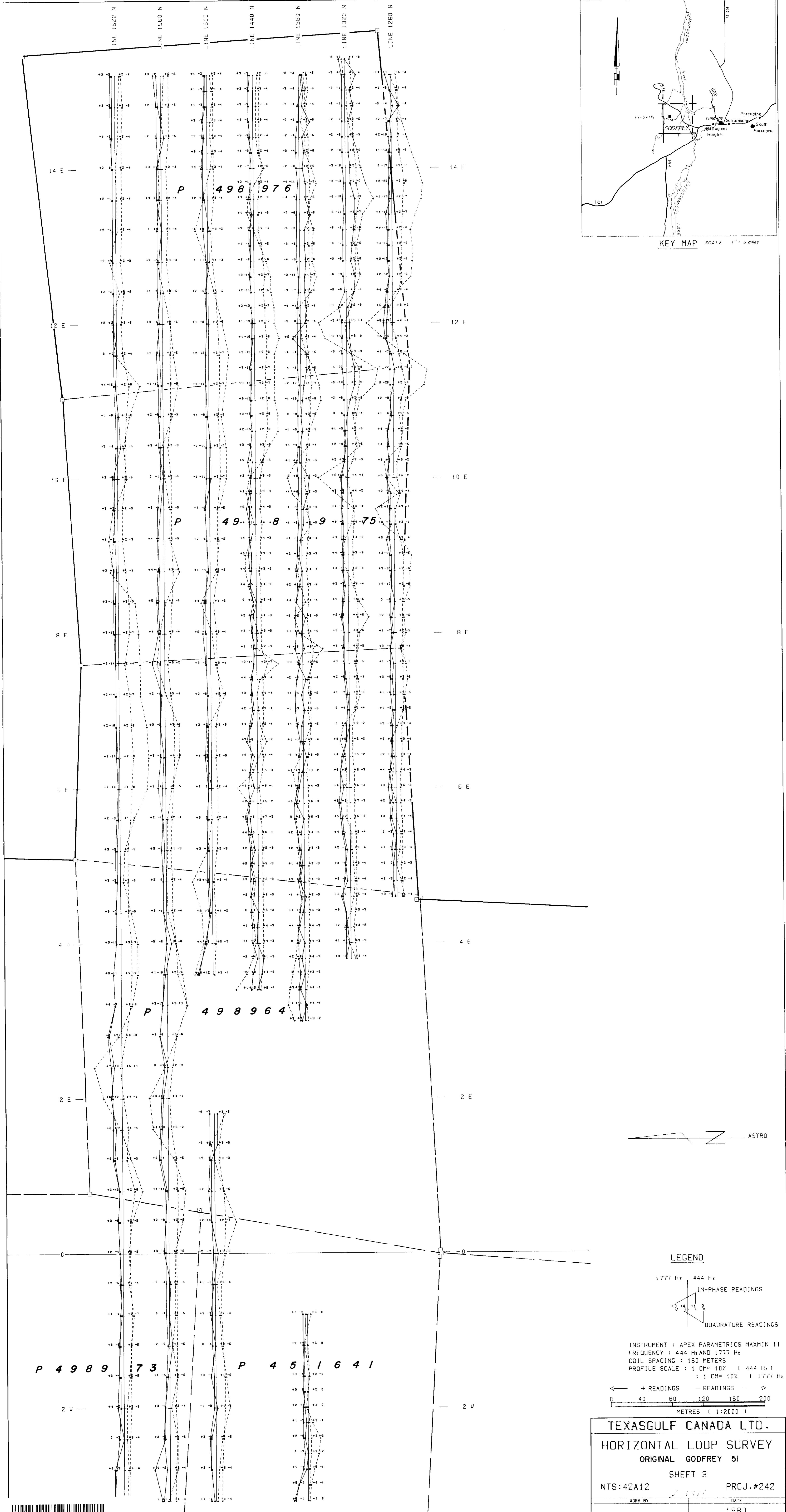
← W DIPS → E DIPS →

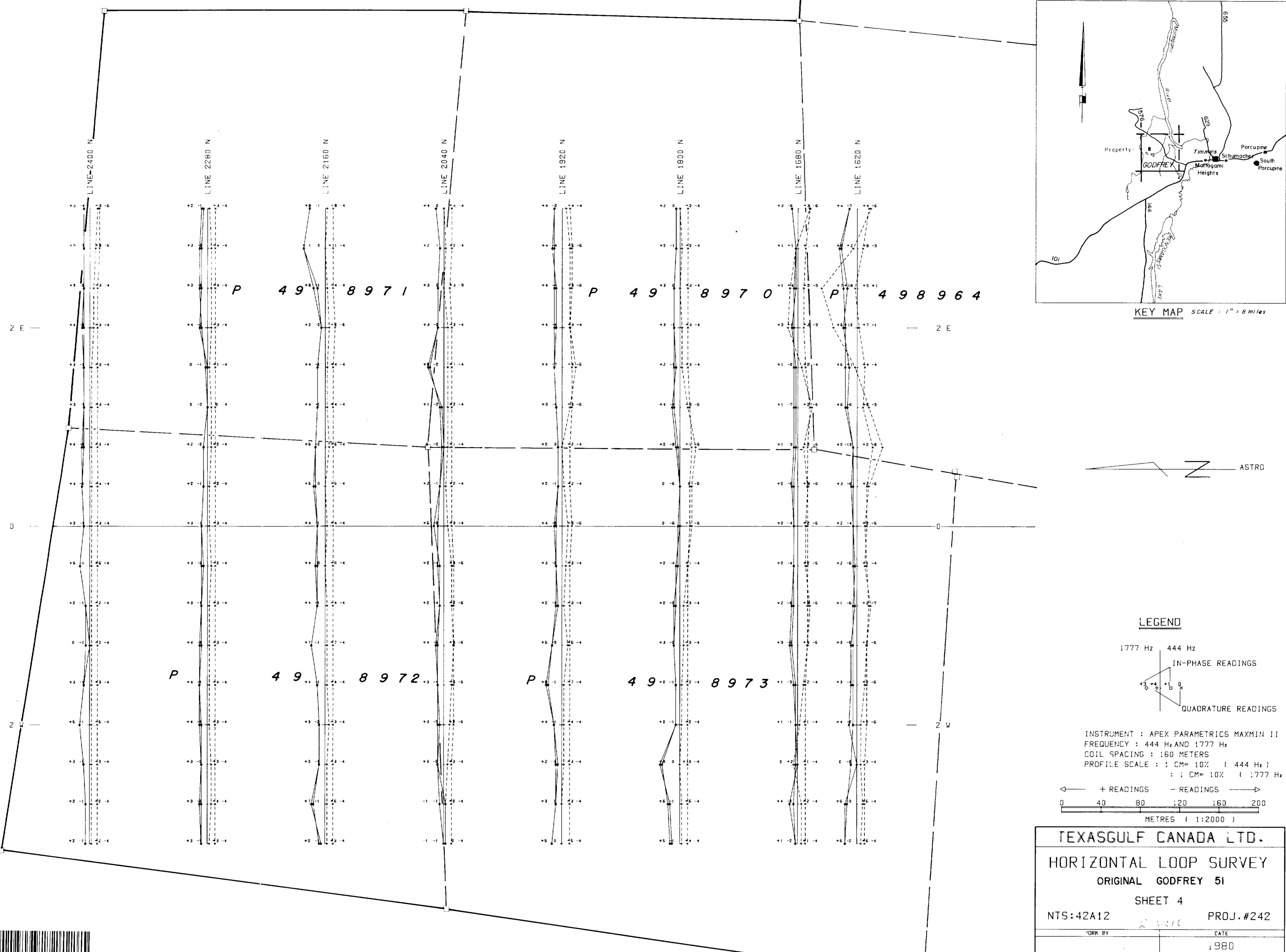
0 40 80 120 160 200
METRES (1:2000)

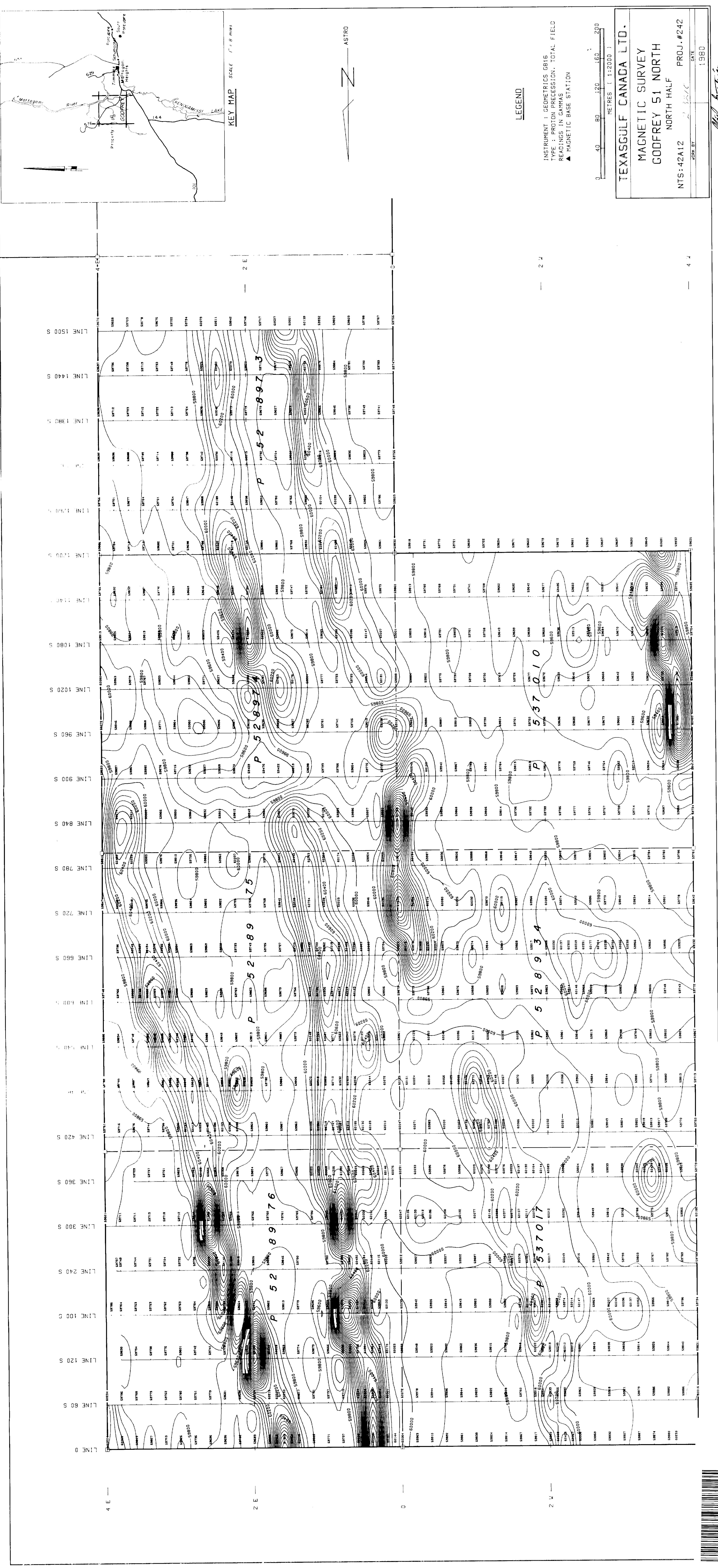
TEXASGULF CANADA LTD.	
VLF SURVEY	
ORIGINAL GODFREY 5I	
SHEET 4	
NTS: 42A12	PROJ. #242
WORK BY	2 3210
DATE	
1980	

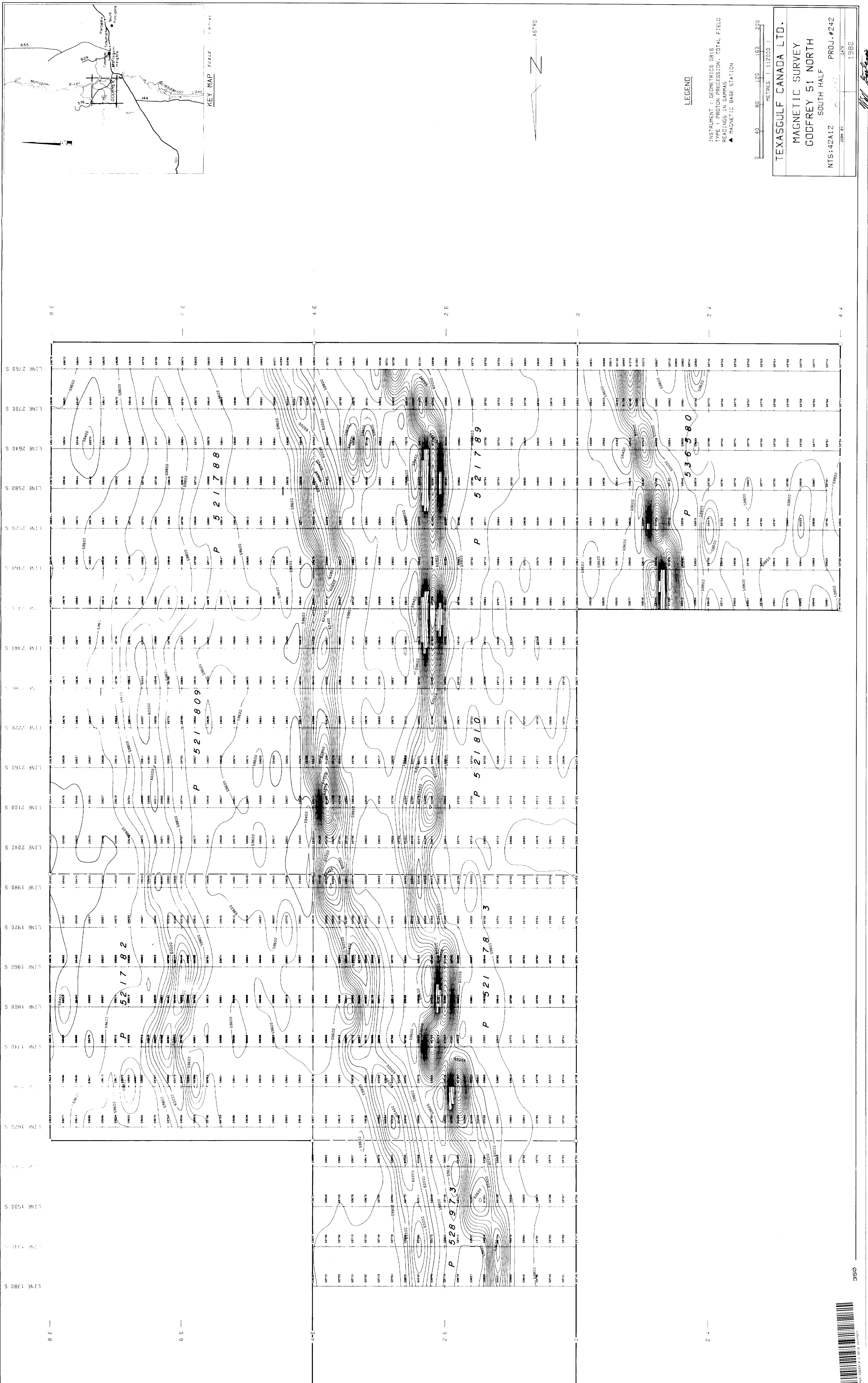












Mid Lutago

