

2.3077



42A15SW0152 2.3077 EVELYN

010

RECEIVED

OCT 23 1979

MINING LANDS SECTION

AIRBORNE MAGNETIC SURVEY

of

ROSARIO RESOURCES CANADA LTD. CLAIMS

in Tully, Little and Evelyn Twps.

District of Cochrane

Porcupine Mining Division

by

R.S. Middleton

Rosario Resources Canada Ltd.

410 - 55 Yonge St.

TORONTO, Ontario, M5E 1J4.

October 10, 1979

INTRODUCTION

A detailed airborne magnetic survey was flown over Rosario's claim holdings in Tully, Little and Evelyn Twps. in order to help map the bedrock geology features. Stratigraphy in the area can be defined by magnetic features associated with ultramafic flows. A total of 179 line miles was flown over the area and 57.91 line miles actually covered the claims.

Location

The property is located 20 miles northeast of the centre of TIMMINS in Con. I and II of Tully Twp. between lots 2 and 9 as well as in the southeast corner of Little Twp. and the northwest corner of Evelyn Twp. (see location map).

Property and Assessment Credit Distribution

All of the claims are held by Rosario Resources Canada Ltd. and are listed as follows:

<u>Tully Twp.</u>	<u>Days Credit</u>
P. 522287	27.25 days
P. 522288	27.25 days
P. 522289	27.25 days
P. 522290	27.25 days
P. 522291	27.25 days
P. 522393	27.25 days
P. 522394	27.25 days
P. 522395	27.25 days
P. 522396	27.25 days
P. 522397	27.25 days
P. 522398	27.25 days
P. 522399	27.25 days
P. 522400	27.25 days
P. 522401	27.25 days
P. 522402	27.25 days
P. 522403	27.25 days
P. 522404	27.25 days
P. 522405	27.25 days
P. 522406	27.25 days
P. 522407	27.25 days
P. 522408	27.25 days
P. 522409	27.25 days
P. 522410	27.25 days
P. 522411	27.25 days
P. 522412	27.25 days
P. 522413	27.25 days
P. 522414	27.25 days
P. 522415	27.25 days
P. 522416	27.25 days
P. 522417	27.25 days
P. 522418	27.25 days
P. 522419	27.25 days
P. 522420	27.25 days
P. 522421	27.25 days
P. 522422	27.25 days
P. 522423	27.25 days
P. 522424	27.25 days
P. 522425	27.25 days

<u>Tully Twp.</u>	<u>Days Credit</u>
P. 522426	27.25 days
P. 522427	27.25 days
P. 522428	27.25 days
P. 522429	27.25 days
P. 522430	27.25 days
P. 522431	27.25 days
P. 522432	27.25 days
P. 522433	27.25 days
P. 522434	27.25 days
P. 522435	27.25 days
P. 522436	27.25 days
P. 522437	27.25 days
P. 522438	27.25 days
P. 522439	27.25 days
P. 522440	27.25 days
P. 522441	27.25 days
P. 522442	27.25 days
P. 522443	27.25 days
P. 522444	27.25 days
P. 522445	27.25 days
P. 522446	27.25 days
P. 522447	27.25 days
P. 522448	27.25 days
P. 522449	27.25 days
P. 522450	27.25 days
P. 522451	27.25 days
p. 522452	27.25 days
P. 522453	27.25 days
P. 522454	27.25 days
P. 522455	27.25 days
P. 522456	27.25 days
P. 522457	27.25 days
P. 522458	27.25 days
P. 522459	27.25 days
P. 522460	27.25 days
P. 522461	27.25 days
P. 522462	27.25 days
P. 522463	27.25 days
P. 522464	27.25 days
P. 522465	27.25 days
P. 522466	27.25 days
P. 522467	27.25 days
P. 522468	27.25 days
P. 522473	27.25 days
P. 522477	27.25 days

Evelyn Twp.

P. 522284	13.7 days
P. 522285	13.7 days

Little Twp.

P. 522283	13.7 days
P. 522286	13.7 days
P. 525797	24.8 days
P. 525798	24.8 days
P. 525799	24.8 days
P. 525800	24.8 days

Total 91 claims

Tully 56.54 miles x 40 = 2,261.60 ÷ 83 claims = 27.25 days/claim

Little/Evelyn 13.7 miles x 40 = 54.80 ÷ 4 claims = 13.7 days/claim

Little 2.48 miles x 40 = 99.2 ÷ 4 = 24.8 days/claim

Survey Dates and Platform

The survey was flown on March 2, 1979 by Questor Surveys Ltd. using a Britten-Norman Trilander C-GOXZ operating from the TIMMINS airport.

SURVEY PROCEDURE AND INSTRUMENTATION

The survey was flown at an approximate terrain clearance of 400 feet on lines spaced 1/10th mile apart and the lines were N 30° E. A normal S - pattern flight path using 1 mile turns was used. Flight path recovery was accomplished by comparison of the prints of the 35 mm film obtained by an on-board downward looking camera with a photo mosaic in order to locate fiducial points. These points are approximately 4,500 feet apart. The photo mosaic base maps are uncontrolled mosaics constructed from Ontario Department of Lands and Forests 1" = 1/4 mile photographs. The mosaics were reproduced at a scale of 1" = 400 feet on stable transparent film.

The survey crew consisted of a pilot, navigator and instrument operator who logged the flight details and monitored the instruments.

The magnetometer sensor was mounted on a boom attached to the nose section of the aircraft. A Sonotek P.M.H. 5,000 Proton magnetometer was used. Radar altimeters were used for vertical altitude control. The outputs of the magnetometer and altimeter and fiducial time marks were recorded by means of a galvanometer type recorder on light sensitive paper. The magnetometer had a sensitivity of 1 gamma and a range from 20,000 gammas to 100,000 gammas. The magnetometer sensor head was energized for 1.15 seconds while the precession frequency was being recorded and converted to gammas. Therefore magnetic readings are taken every 1.3 seconds.

Digital recording of the magnetic data was also done using Sonotek equipment and this information was actually used to generate the maps presented in the back of this report. Machine contouring was done utilizing modified programs available on a commercial basis at Data Plotting Ltd., Don Mills, Ontario. The maps were produced on a flat bed plotter by Data Plotting Ltd. and the flight path recovery was digitized and merged with the digital magnetic data using Data Plotting's software packages.

GEOLOGY and Interpretation

The bedrock on the property consists of ultramafic flows which are associated with the high intensity east-west trending magnetic highs on the maps. Basic geological data is available on ODMNA map P. 699. The magnetic low areas and low gradient areas are associated with metasediments and felsic meta volcanics whereas the moderate gradient areas are underlain by tholeiite basalts.

The area flown contains numerous bands of ultramafic flows (repetition possibly due to folding) which can be used as stratigraphic markers.

Conclusions

Ground electromagnetic surveys using Max Min III horizontal loop (800' coil separation) and vertical loop surveys will be required to map conductive zones associated with the metasediments stratigraphically above the ultramafic flows and in this way favourable gold horizons situated between the ultramafics and conductive horizons. In addition base metal targets should be sought in the areas of felsic metavolcanics and in the metasediments.

Respectfully submitted,


R.S. Middleton
Exploration Manager

RSM/lyd

References

Ontario Department of Mines and Northern Affairs (1971) Tully Twp.
Data Series 1" = ¼ mile P. 699



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.

MINING CLAIMS

Type of Survey(s) Magnetic
Township or Area Tully
Claim Holder(s) ROSARIO RESOURCES CANADA LTD
410 - 55 Yonge St. TORONTO
Survey Company Questor Surveys Ltd.
Author of Report R. S. Middleton
Address of Author 410 - 55 Yonge St. TORONTO
Covering Dates of Survey March 2, 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

See attached list
(prefix) (number)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

- Geophysical
- Electromagnetic _____
- Magnetometer _____
- 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 27.25 Electromagnetic _____ Radiometric _____
RM (enter days per claim)

DATE: October 15 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. L.D. Qualifications 2,706 + 7

Previous Surveys
File No. Type Date Claim Holder

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 83

If space insufficient, attach list

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) Magnetic

Instrument(s) Sonatek

(specify for each type of survey)

Accuracy 1%

(specify for each type of survey)

Aircraft used Britton - Norman TRISLANDER

Sensor altitude 400 - 450 ft terrain clearance (on board)

Navigation and flight path recovery method 35mm strip film onto air photo mosaic

Aircraft altitude 400 - 450 ft. Line Spacing 520 feet

Miles flown over total area 179 Over claims only 56.54

$56.54 \times 40 = 2261.6 \div 83 = 27.25$

CLAIM NO.

DAYS CREDIT

CLAIM NO.

DAYS CREDIT

Tully

Tully

522287

27.25 days

522409

27.25 days

288

27.25 days

410

27.25 days

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27.25 days

CLAIM NO.

DAYS CREDIT

CLAIM NO.

DAYS CREDIT

Tully

"
Tully

522437

27.25 days

522463

27.25 days

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27.25 days

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

mosaic

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

$$1.37 \times 40 = 54.8 \div 4 = 13.7$$



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) Magnetic
Township or Area Little Twp.
Claim Holder(s) ROSARIO RESOURCES CANADA
410 - 55 Yonge St. TORONTO
Survey Company QUESTOR SURVEYS Ltd.
Author of Report R. S. Middleton
Address of Author 410 - 55 Yonge St.
Covering Dates of Survey March 2/79
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

P. 525 797 ✓
(prefix) (number)
P. 525 798 ✓
P. 525 799 ✓
P. 525 800 ✓

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

- Geophysical
- Electromagnetic _____
- Magnetometer _____
- 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 24.8 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: October 15/79 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications 2, 706

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 4

If space insufficient, attach list

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

Magnetic
Sonotek
(specify for each type of survey)

Accuracy _____

18
(specify for each type of survey)

Aircraft used _____

Britton Norman TRISLANDER

Sensor altitude _____

400 - 450

Navigation and flight path recovery method _____

35mm strip film into air photos
no scales

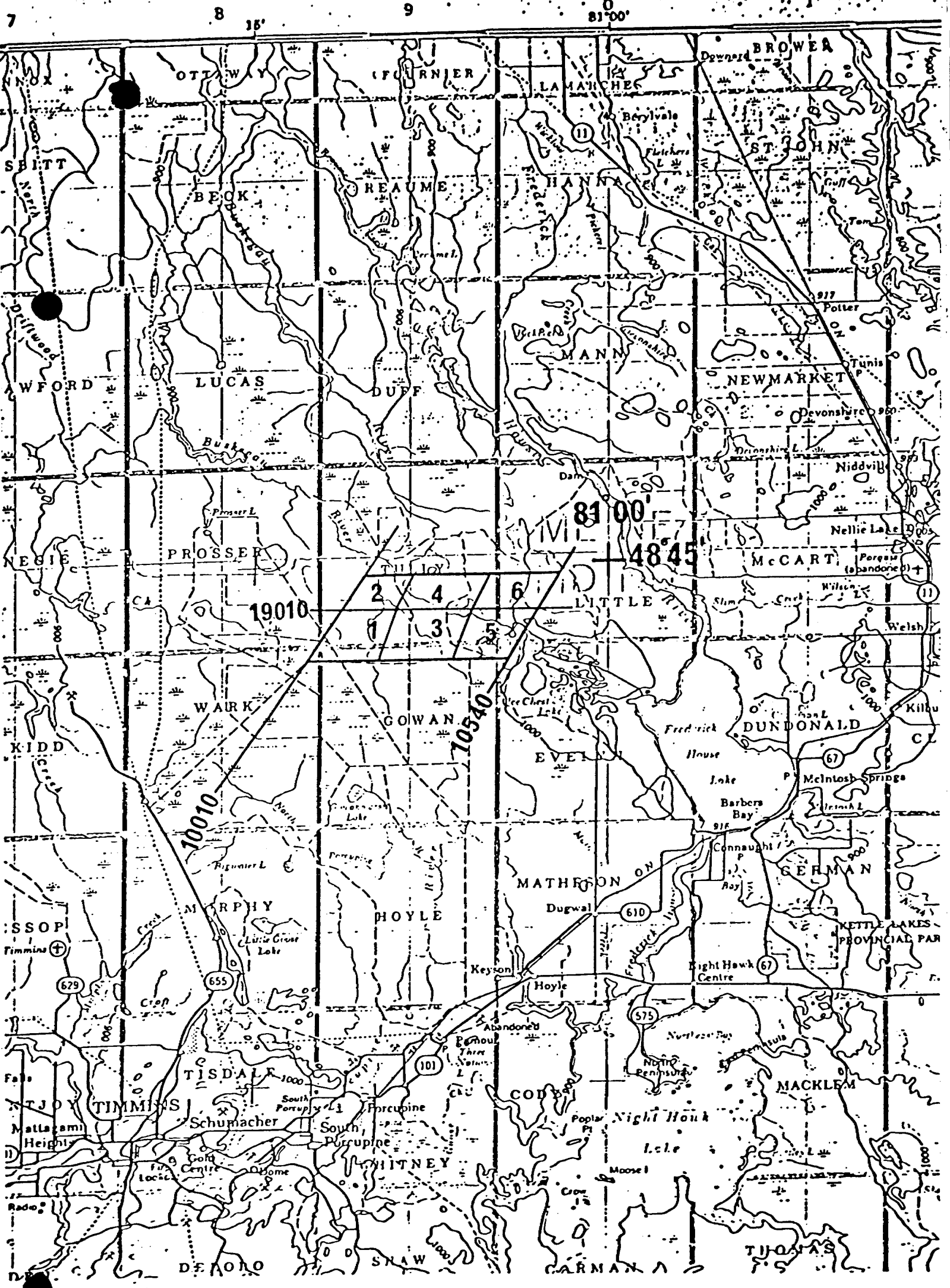
Aircraft altitude _____ Line Spacing _____

400 - 450 ft. 520 ft.

Miles flown over total area _____ Over claims only _____

179 2.98

$2.48 \times 40 = 99.2 \div 4 = 24.8$



AIRBORNE SURVEY

6 Master Sheets of Magnetic Survey

Scale: 1" = 400'
 Spacing: 1/10 Mile
 Mileage: 179.1

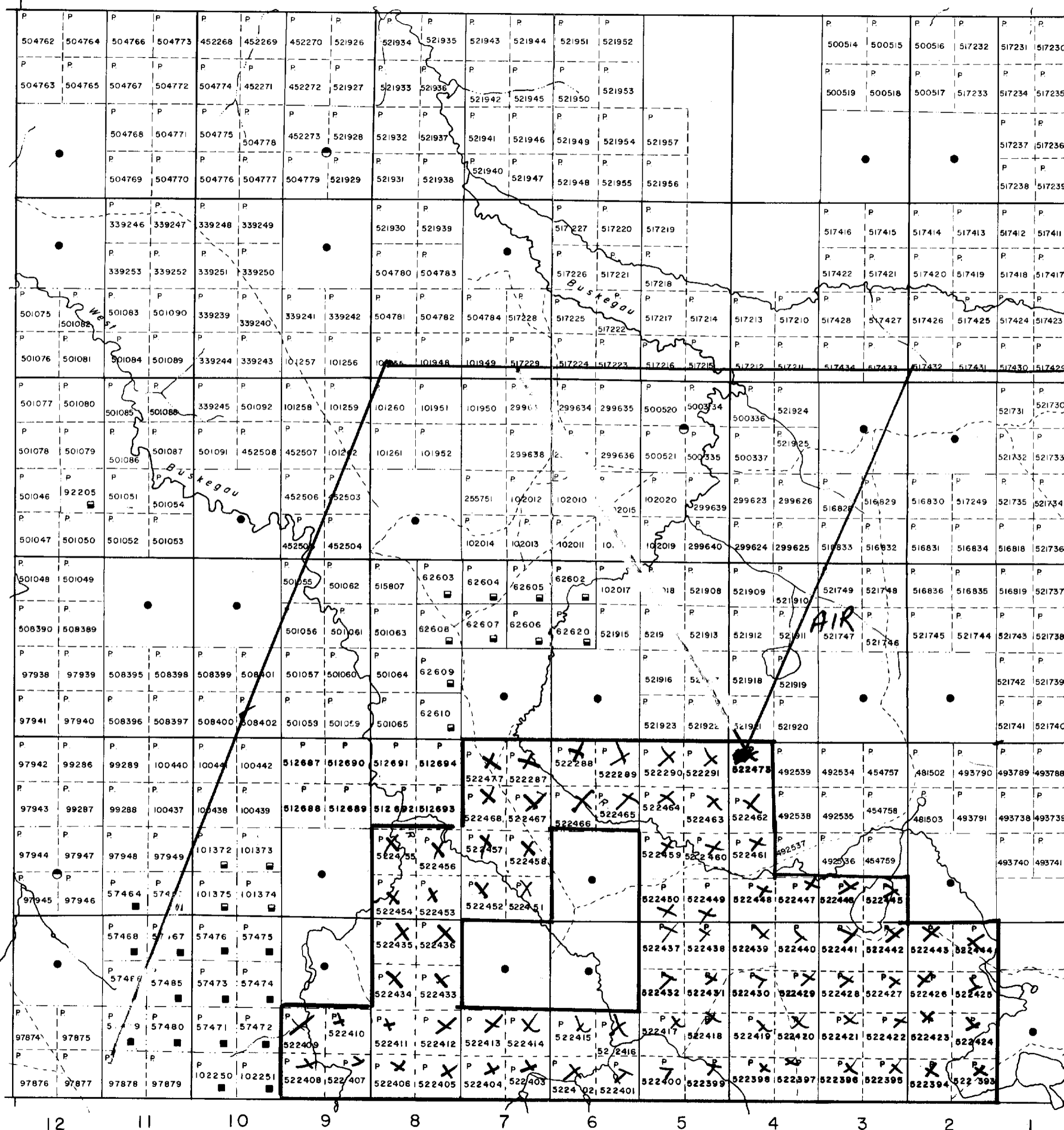
NOTES

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

DATE OF ISSUE
OCT 24 1979
SURVEYS AND MAPPING
BRANCH

DUFF Tp. M.466

PROSSER Tp. M.571



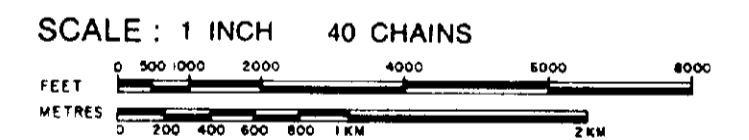
GOWAN Tp. M.285

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
TOWNSHIPS, BASE LINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

- | TYPE OF DOCUMENT | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS | |
| SURFACE RIGHTS ONLY | |
| MINING RIGHTS ONLY | |
| LEASE SURFACE & MINING RIGHTS | |
| SURFACE RIGHTS ONLY | |
| MINING RIGHTS ONLY | |
| LICENCE OF OCCUPATION | |
| CROWN LAND SALE | CS |
| ORDER-IN-COUNCIL | OC |
| RESERVATION | |
| CANCELLED | |
| SAND & GRAVEL | |



ACRES	HECTARES
40	16

TOWNSHIP 2.3077

TULLY

DISTRICT
COCHRANE
MINING DIVISION
PORCUPINE

Ministry of Natural Resources
Ontario Surveys and Mapping Branch

Date Nov. 1978 Plan No. **M.607**
Whitney Block
Queen's Park, Toronto



42A155W0152 2.3077 EVELYN

Mann Twp.

THE TOWNSHIP
OF 2.3077

LITTLE

DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
ROADS	—
IMPROVED ROADS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—

NOTES

Area reserved to H.E.P.C. for water power purposes shown thus: —

Flooding rights lands bordering the Frederick House River.

400' Surface Rights Reservation around all Lakes and Rivers.

DATE OF ISSUE

OCT 24 1979

SURVEYS AND MAPPING
BRANCH

PLAN NO. — M. 535

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

Tully Twp.

McCart Twp.

VI

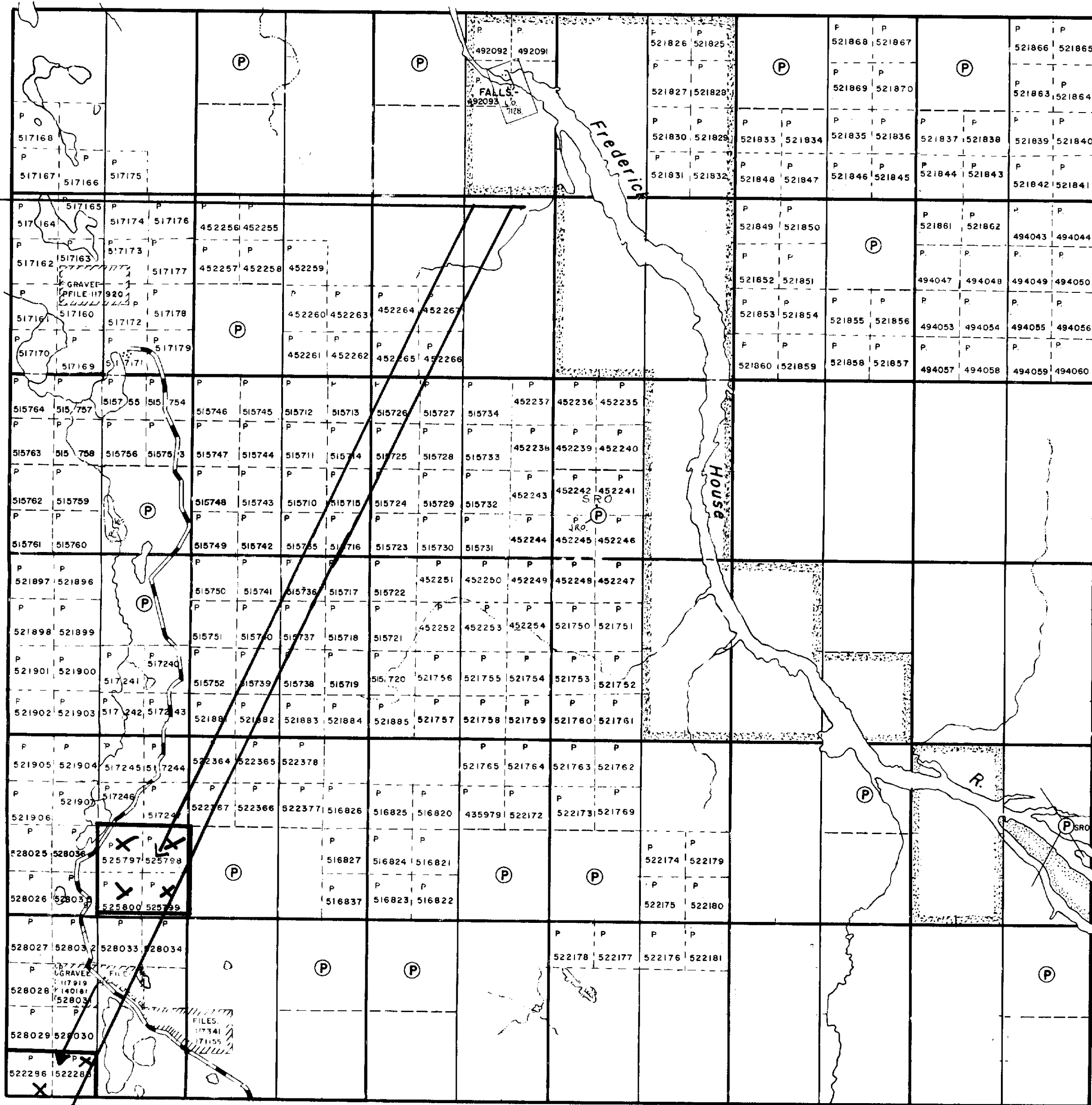
V

IV

III

II

I



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

Evelyn Twp.



42A155W0152 2.3077 EVELYN

Little Twp.

THE TOWNSHIP
OF 2.3077
EVELYN

DISTRICT OF
COCHRANE
PORCUPINE
MINING DIVISION

SCALE: 1-INCH= 40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (S) or C.S.
- LEASES (L)
- 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

NOTES

This township lies within the Municipality of CITY of TIMMINS.

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order No.	File	Date	Disposition
(1)	W.25/75 134839	4/6/75	S.R.O.
(2)	W.19/78 198543	10/4/78	S.R.O.

DATE OF ISSUE

OCT 24 1979

SURVEYS AND MAPPING
BRANCH

400' Surface rights reservation around all lakes & rivers.

Flooding Rights Reserved to 903' Contour to H.E.P.C. Around Frederick House Lake.

PLAN NO.- M-277

ONTARIO
MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

Gowan Twp.

Dundonald Twp.

VI

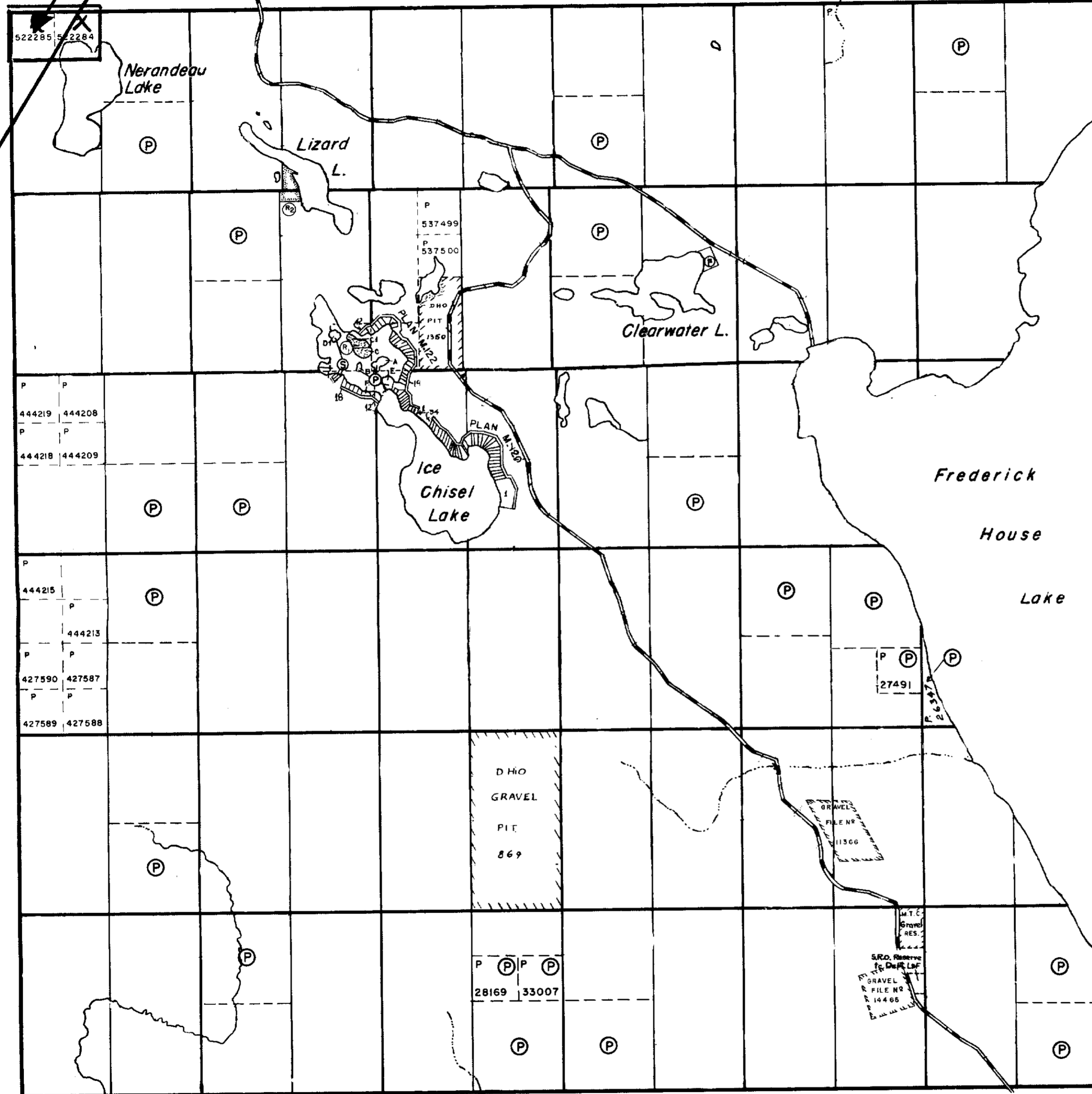
V

IV

III

II

I



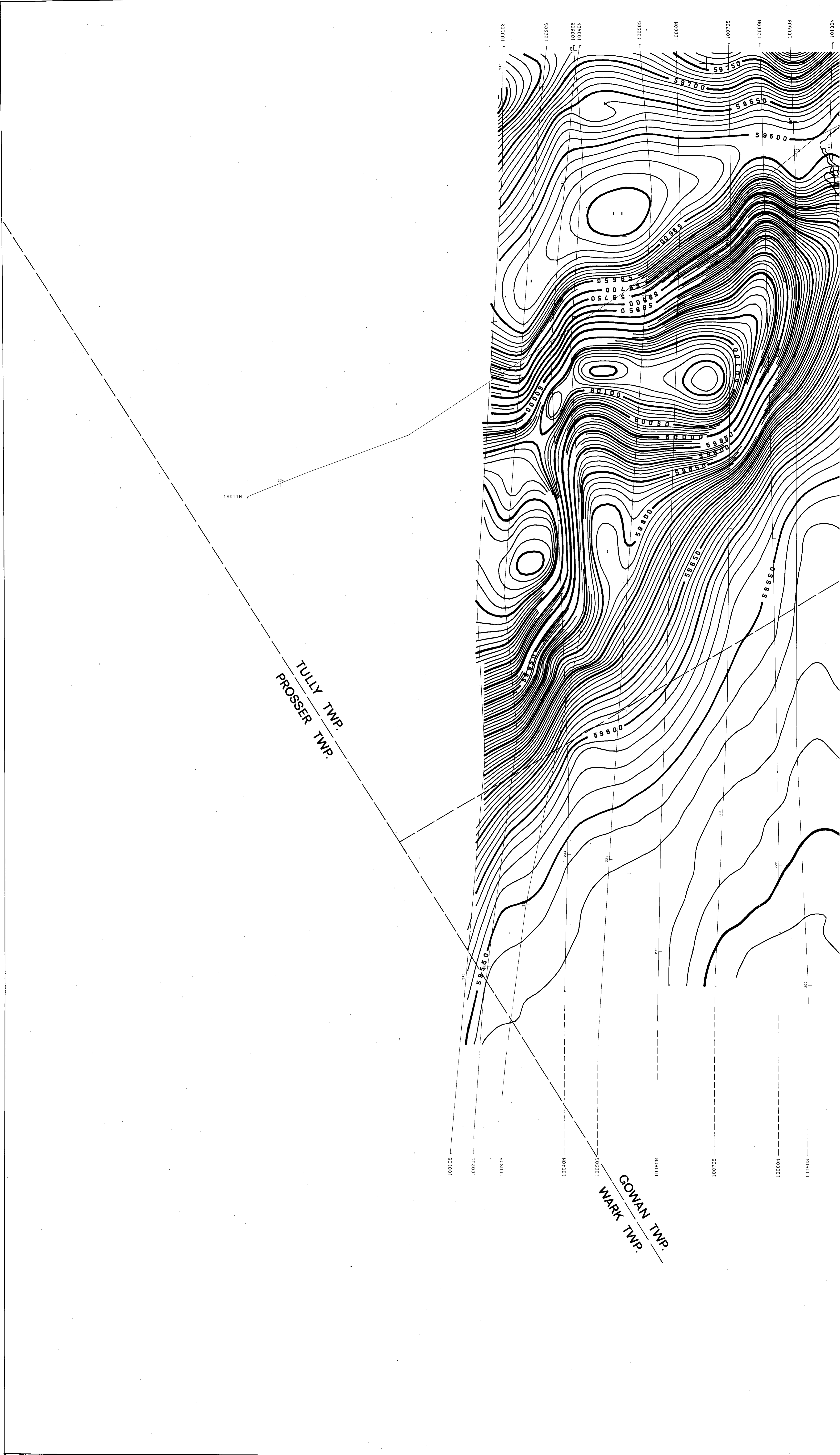
12 11 10 9 8 7 6 5 4 3 2 1

Matheson Twp.



42A155W0152 2.3077 EVELYN

220

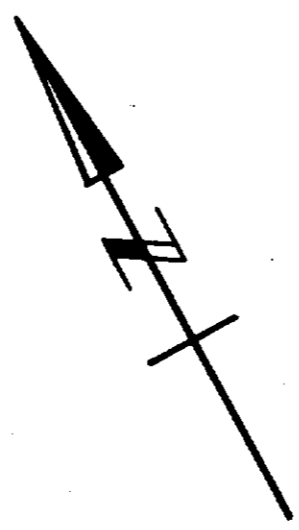
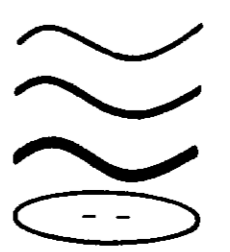


TULLY TOWNSHIP AREA

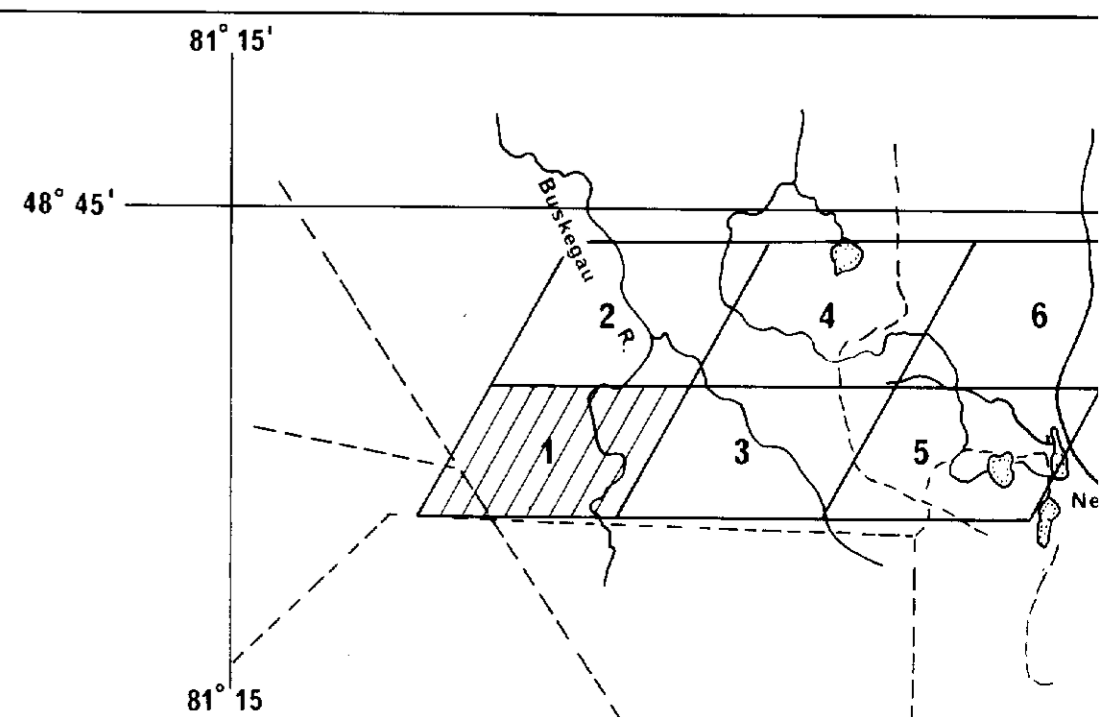
Map 1416 Scale 1" = 400 feet 20076

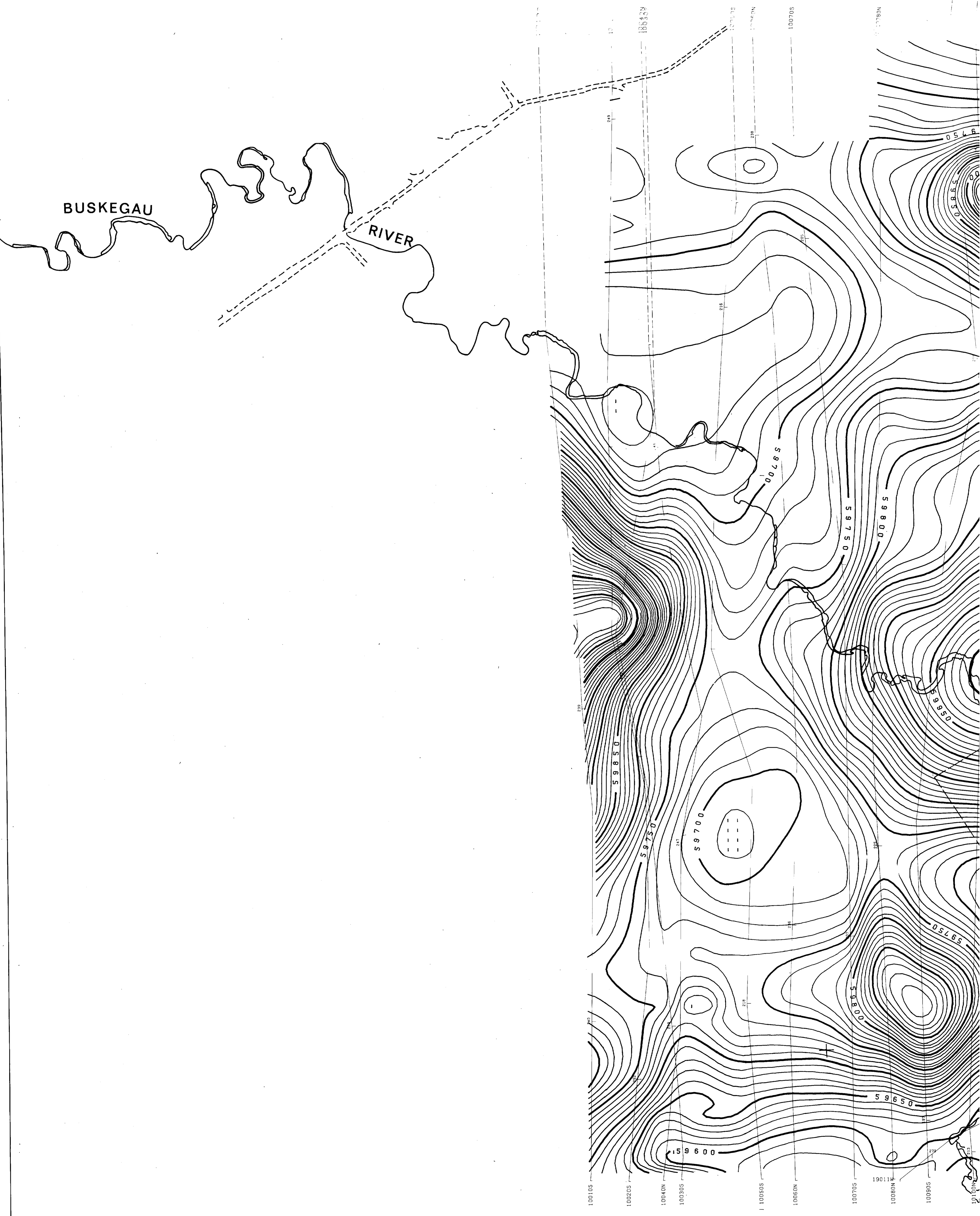
ISOMAGNETIC INTERVAL
(TOTAL FIELD)

- 10 GAMMA CONTOUR LINE
- 50 GAMMA CONTOUR LINE
- 500 GAMMA CONTOUR LINE
- MAGNETIC DEPRESSION
- FLIGHT ALTITUDE 400' ABOVE TERRAIN



230








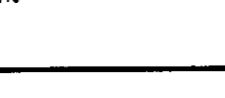
BUSKEGAU

RIVER

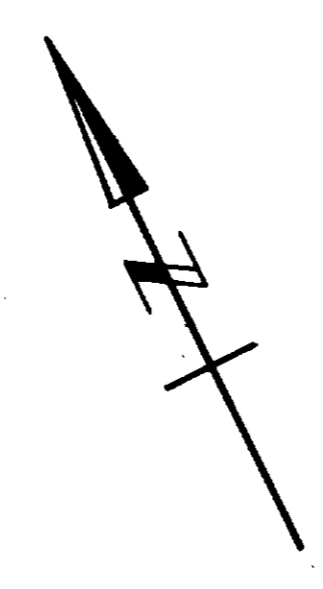
TULLY TOWNSHIP AREA

Map 2 of 6 Scale = 1"=400'feet 2007b

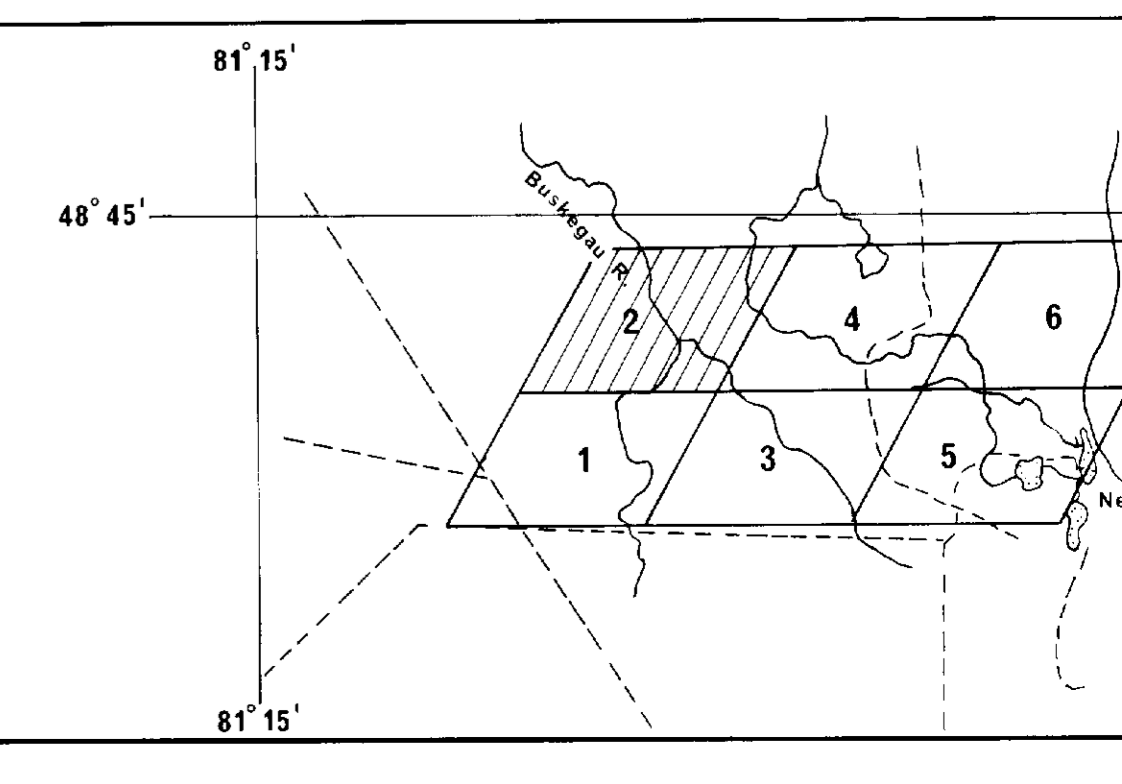
ISOMAGNETIC INTERVAL
(TOTAL FIELD)

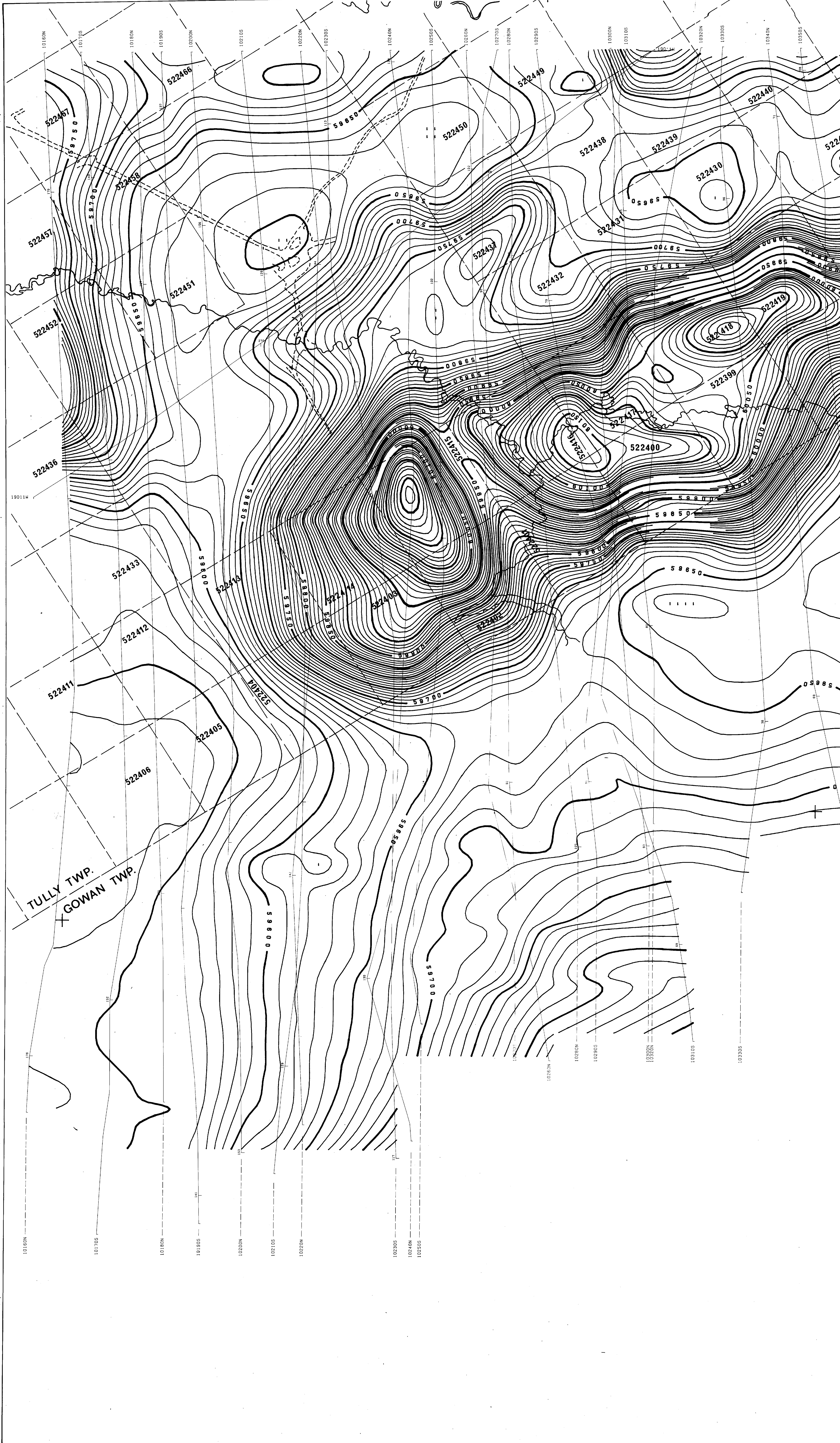
- 10 GAMMA CONTOUR LINE 
- 50 GAMMA CONTOUR LINE 
- 500 GAMMA CONTOUR LINE 
- MAGNETIC DEPRESSION 

FLIGHT ALTITUDE 400' ABOVE TERRAIN



240



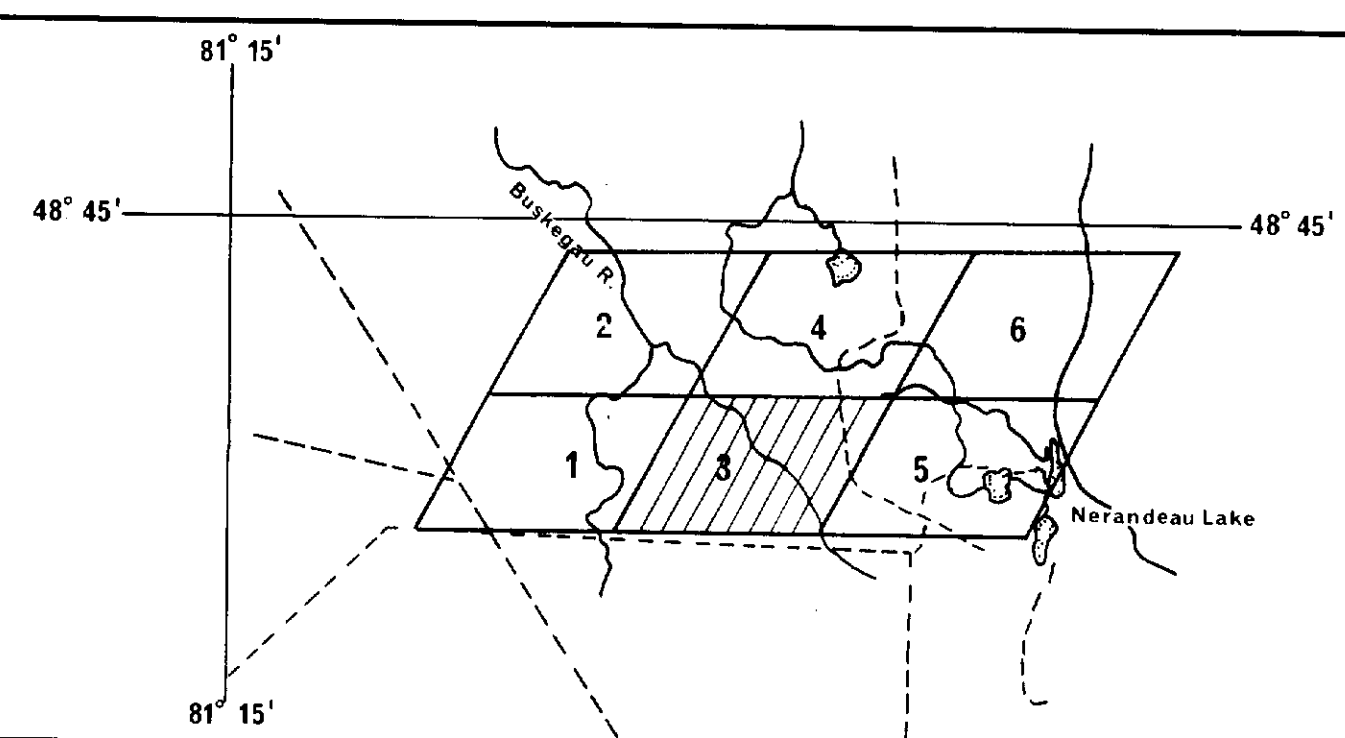
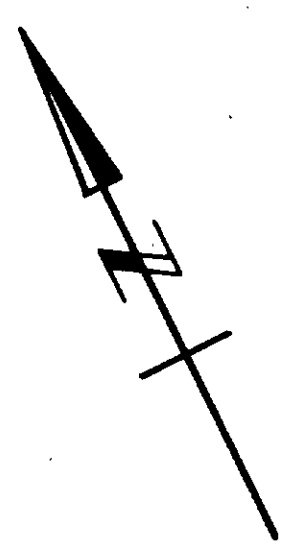
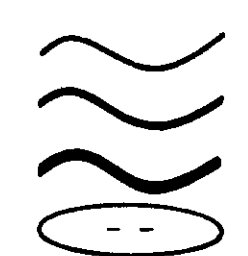


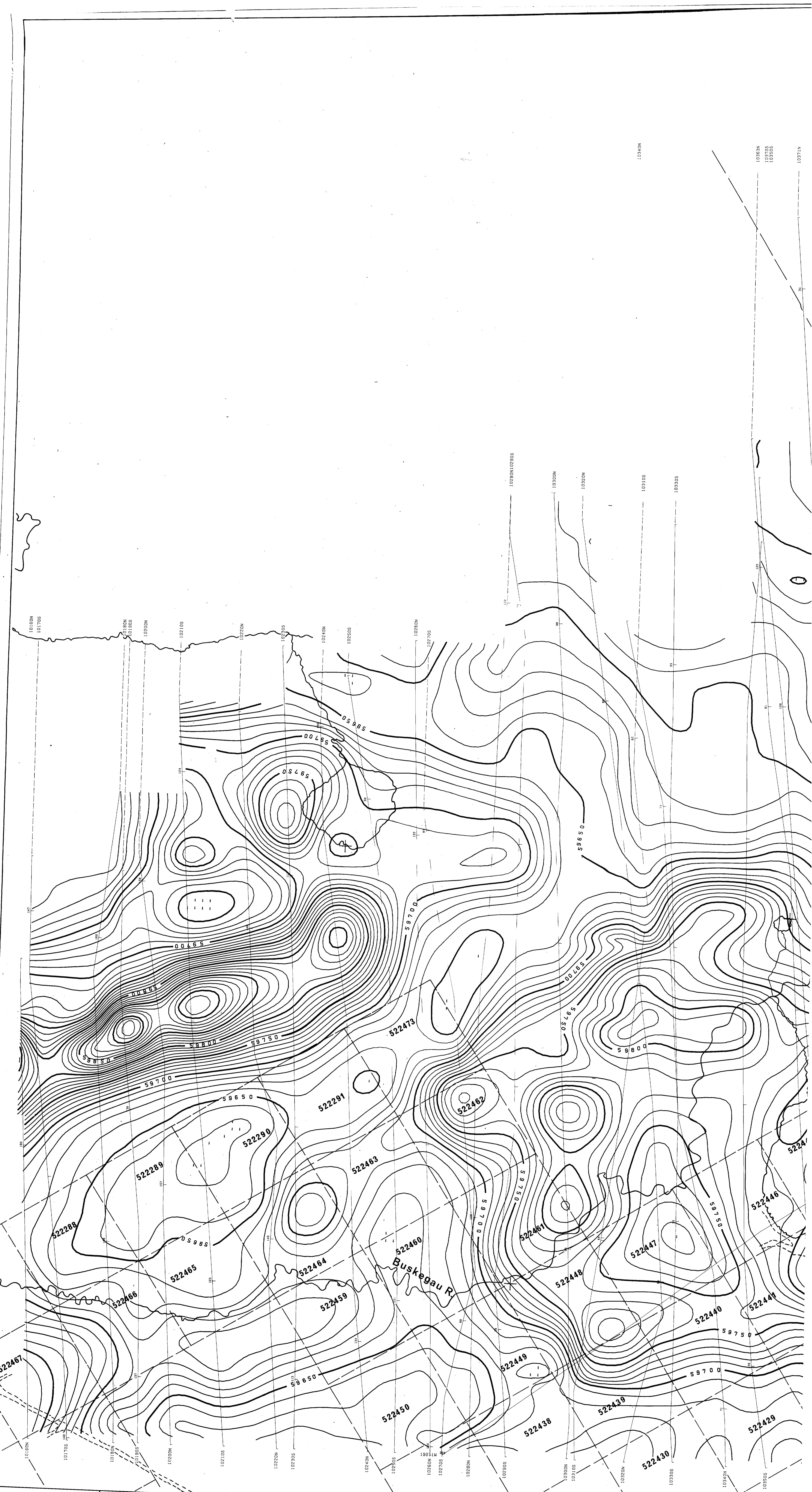
TULLY TOWNSHIP AREA

Map 3 of 6 Scale 1"=400 feet 2007E

**ISOMAGNETIC INTERVAL
(TOTAL FIELD)**

- 10 GAMMA CONTOUR LINE
- 50 GAMMA CONTOUR LINE
- 500 GAMMA CONTOUR LINE
- MAGNETIC DEPRESSION





TULLY TOWNSHIP AREA

Map 4 of 6 Scale - 1" = 400 feet 20076

ISOMAGNETIC INTERVAL

(TOTAL FIELD)

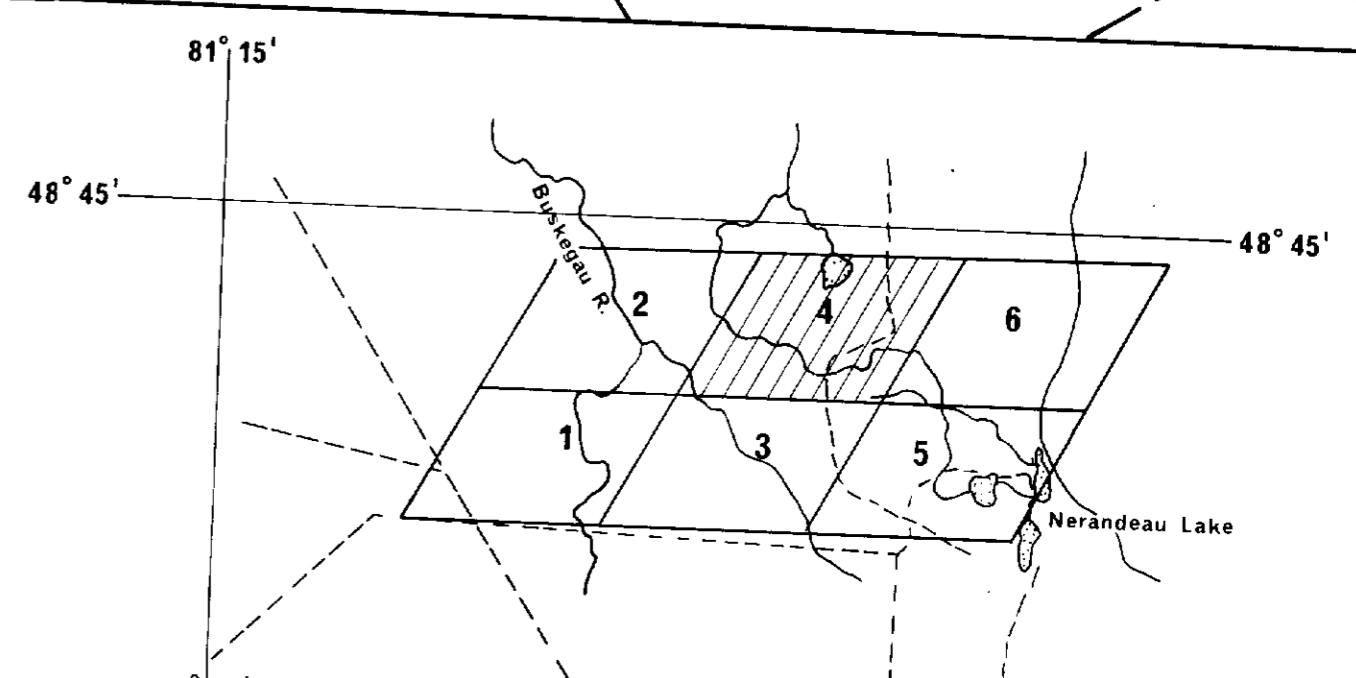
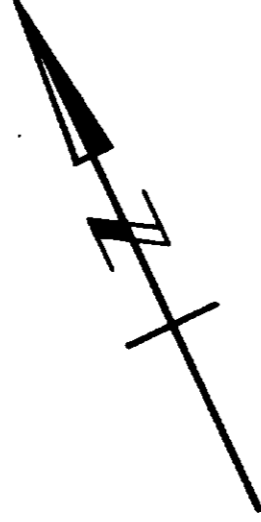
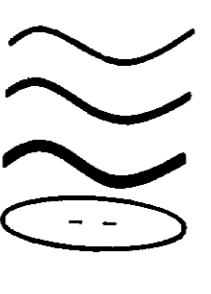
10 GAMMA CONTOUR LINE

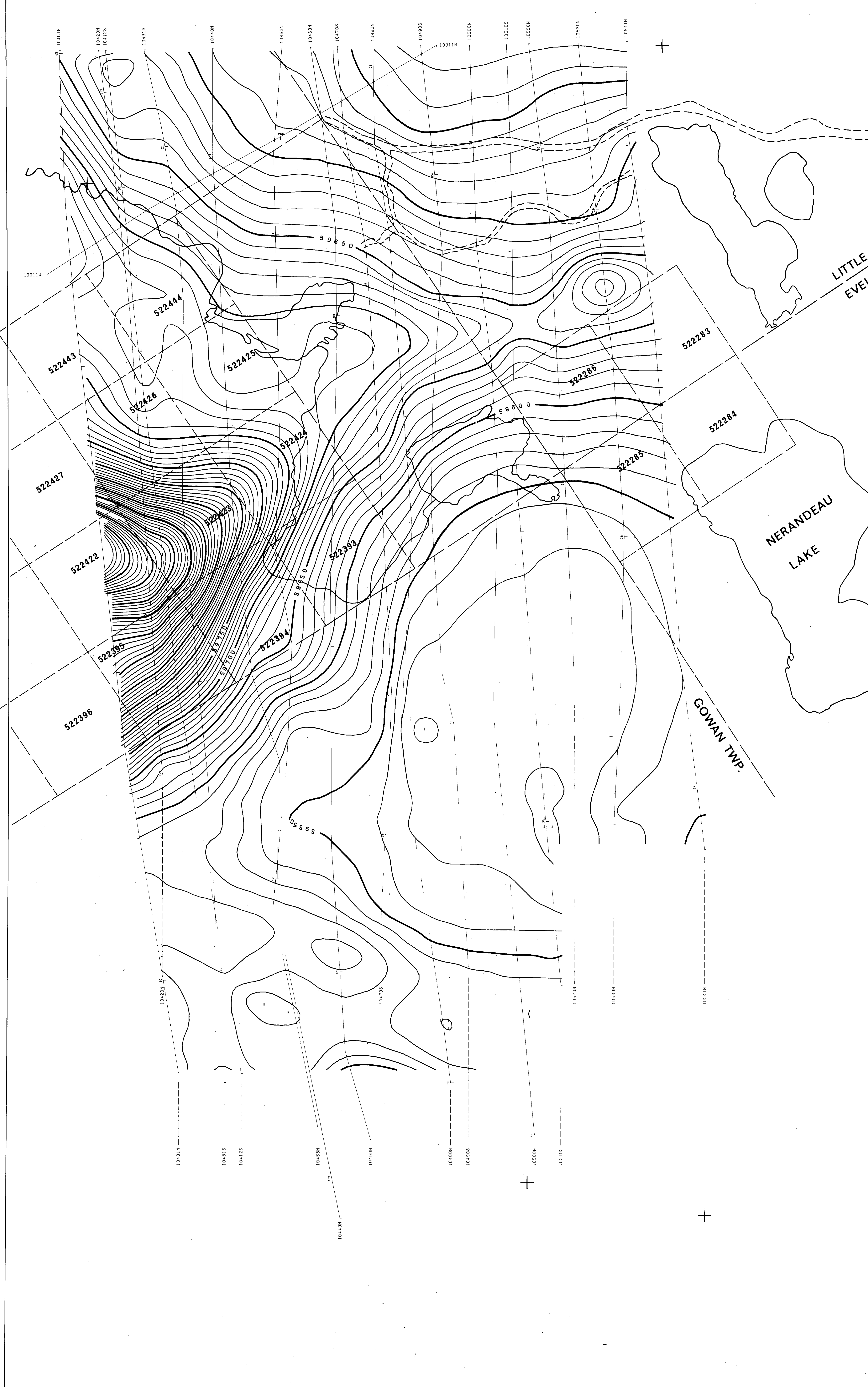
50 GAMMA CONTOUR LINE

500 GAMMA CONTOUR LINE

MAGNETIC DEPRESSION

FLIGHT ALTITUDE 400' ABOVE TERRAIN



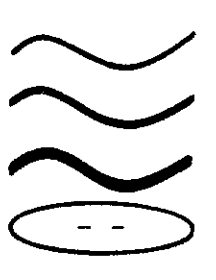


TULLY TOWNSHIP AREA

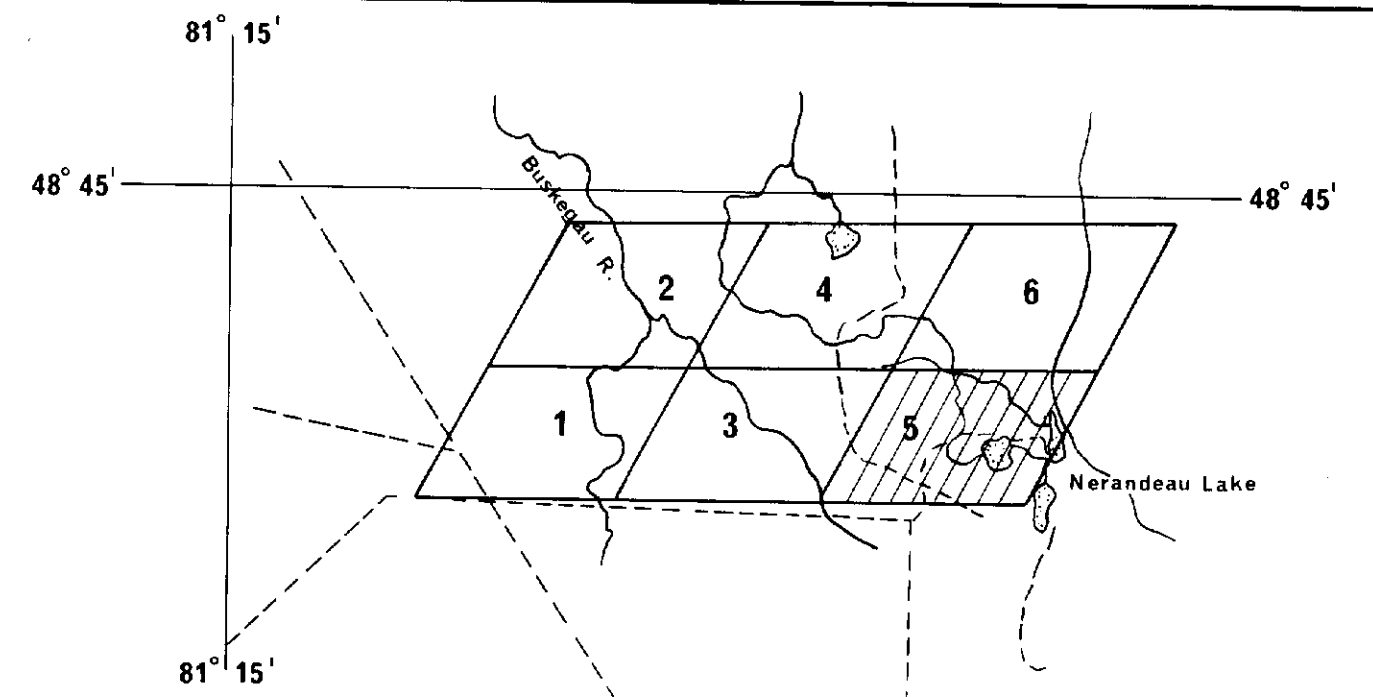
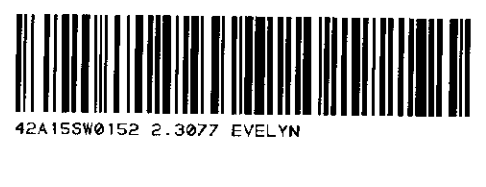
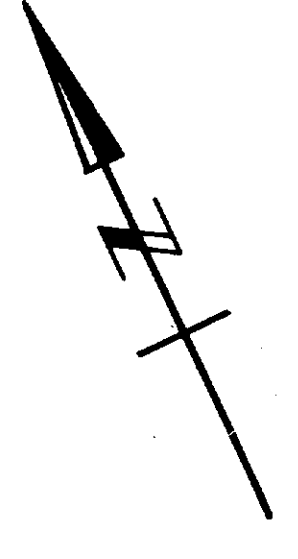
Map 5 of 6 Scale - 1" = 400 Feet 20076

ISOMAGNETIC INTERVAL
(TOTAL FIELD)

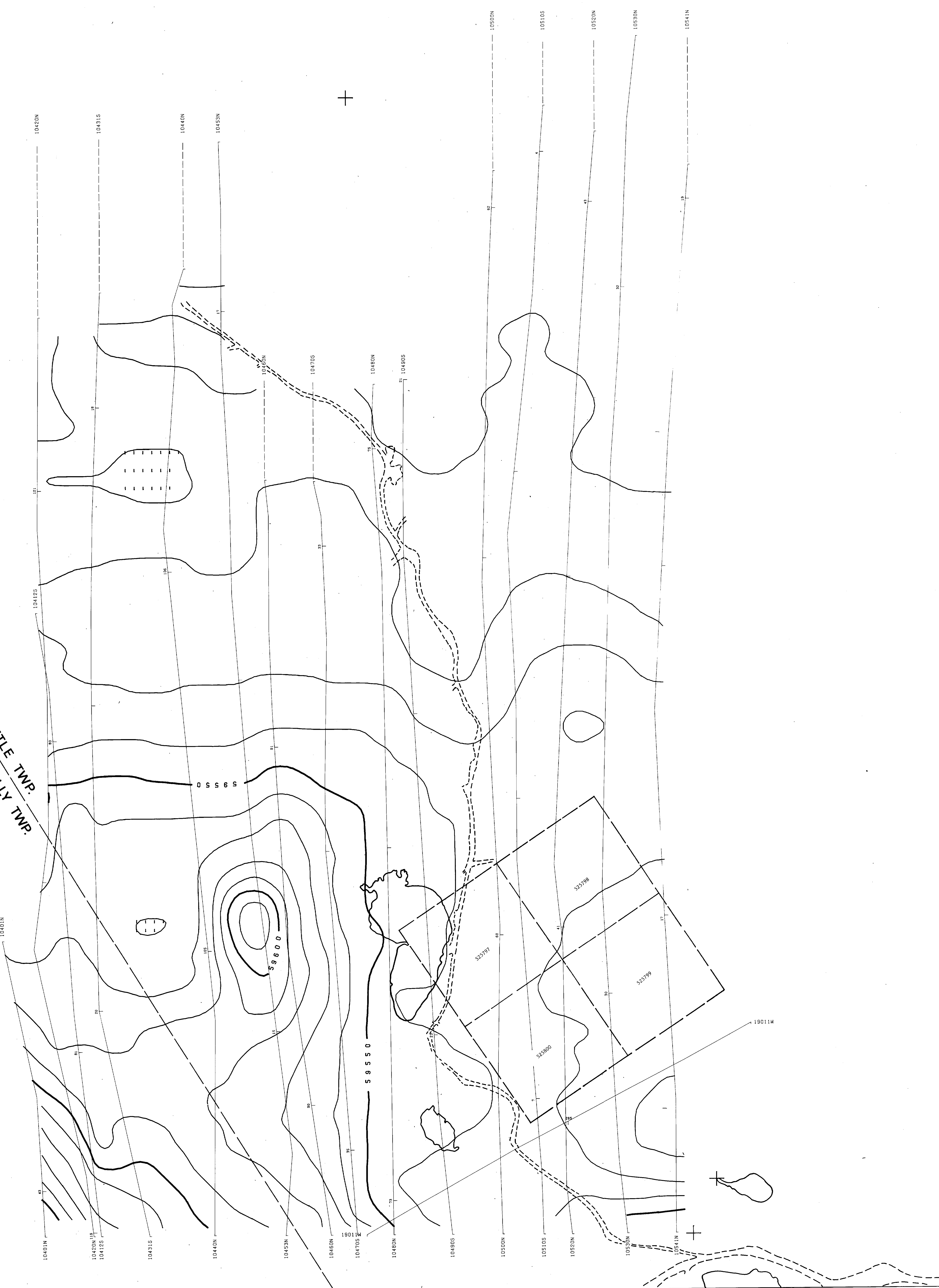
- 10 GAMMA CONTOUR LINE
- 50 GAMMA CONTOUR LINE
- 500 GAMMA CONTOUR LINE
- MAGNETIC DEPRESSION



FLIGHT ALTITUDE 400' ABOVE TERRAIN



LITTLE TWP.
TULLY TWP.



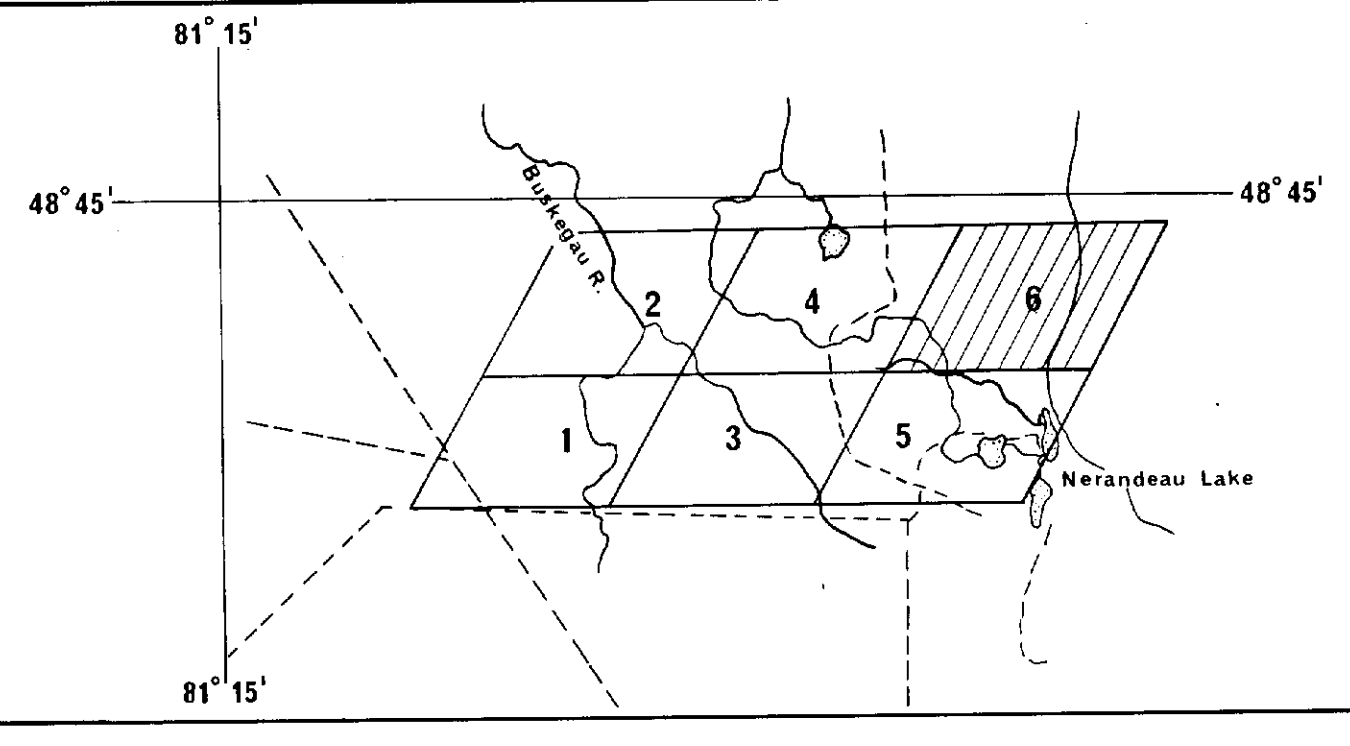
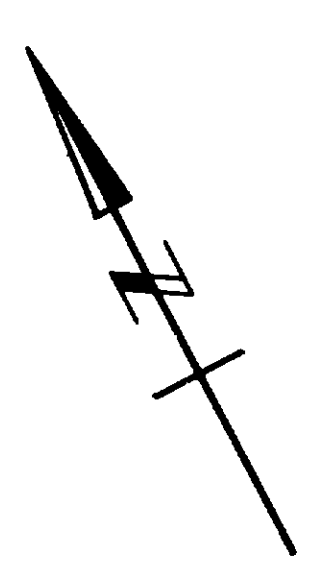
TULLY TOWNSHIP AREA

Map 6 of 6 Scale - 1" = 400 Feet 20076

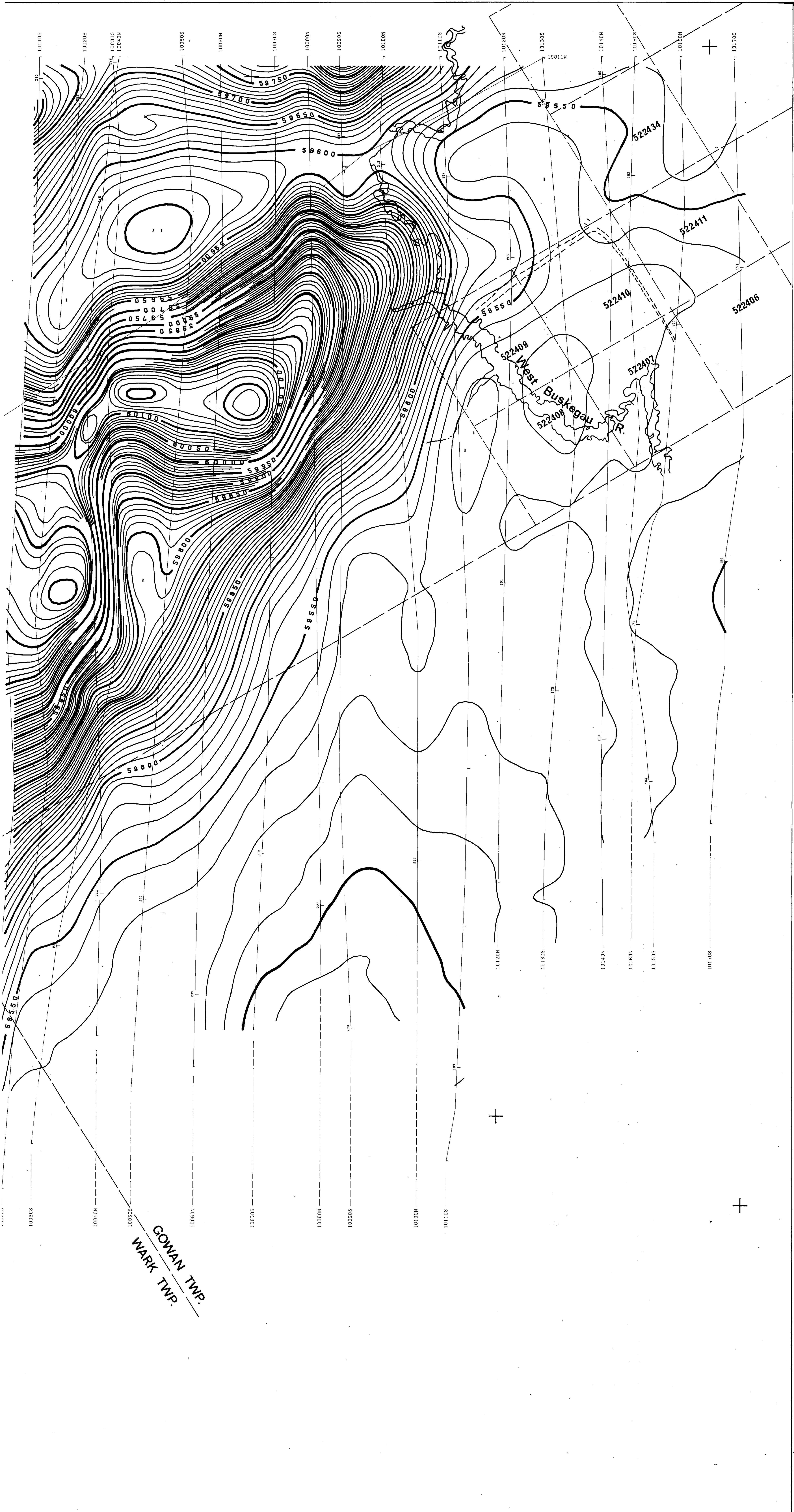
ISOMAGNETIC INTERVAL

(TOTAL FIELD)

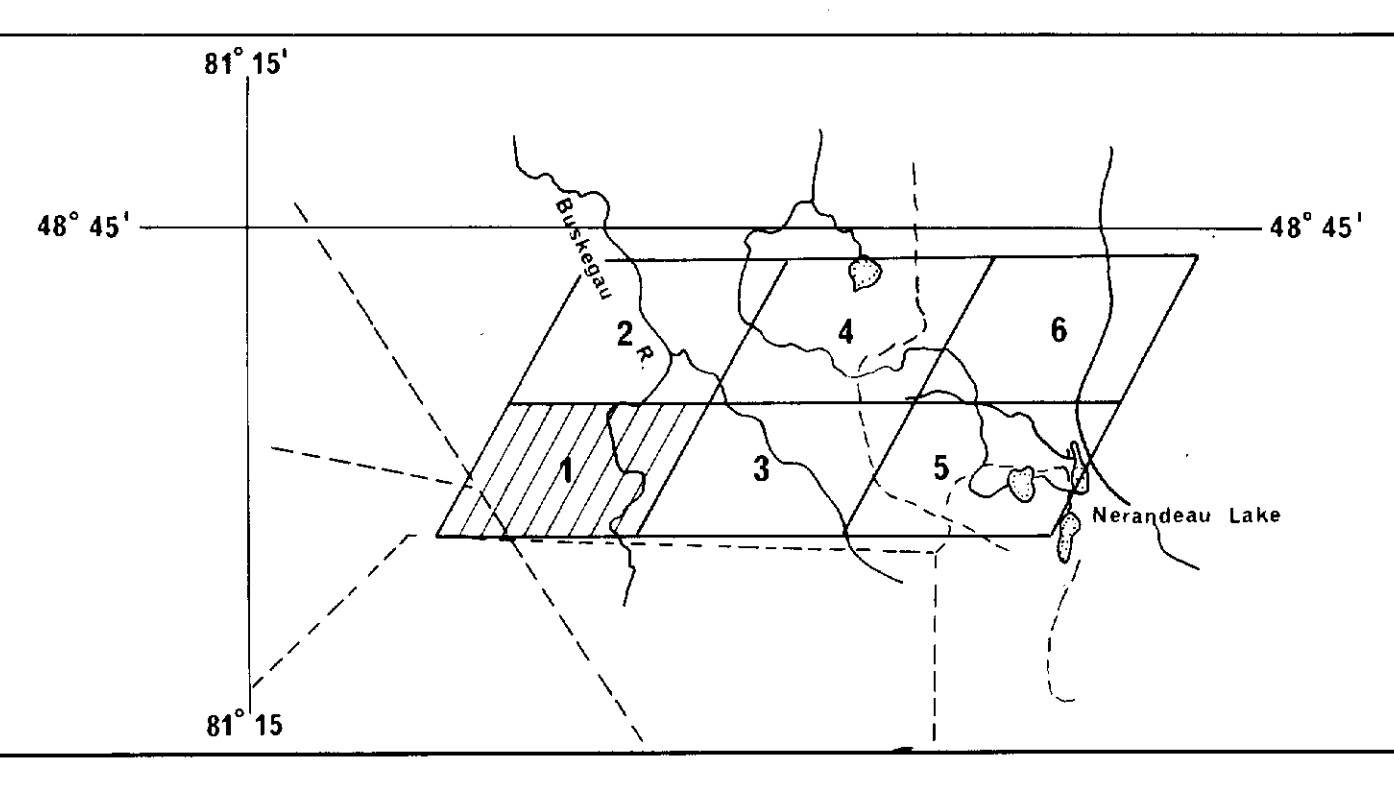
- 10 GAMMA CONTOUR LINE
- 50 GAMMA CONTOUR LINE
- 300 GAMMA CONTOUR LINE
- MAGNETIC DEPRESSION
- FLIGHT ALTITUDE 400' ABOVE TERRAIN

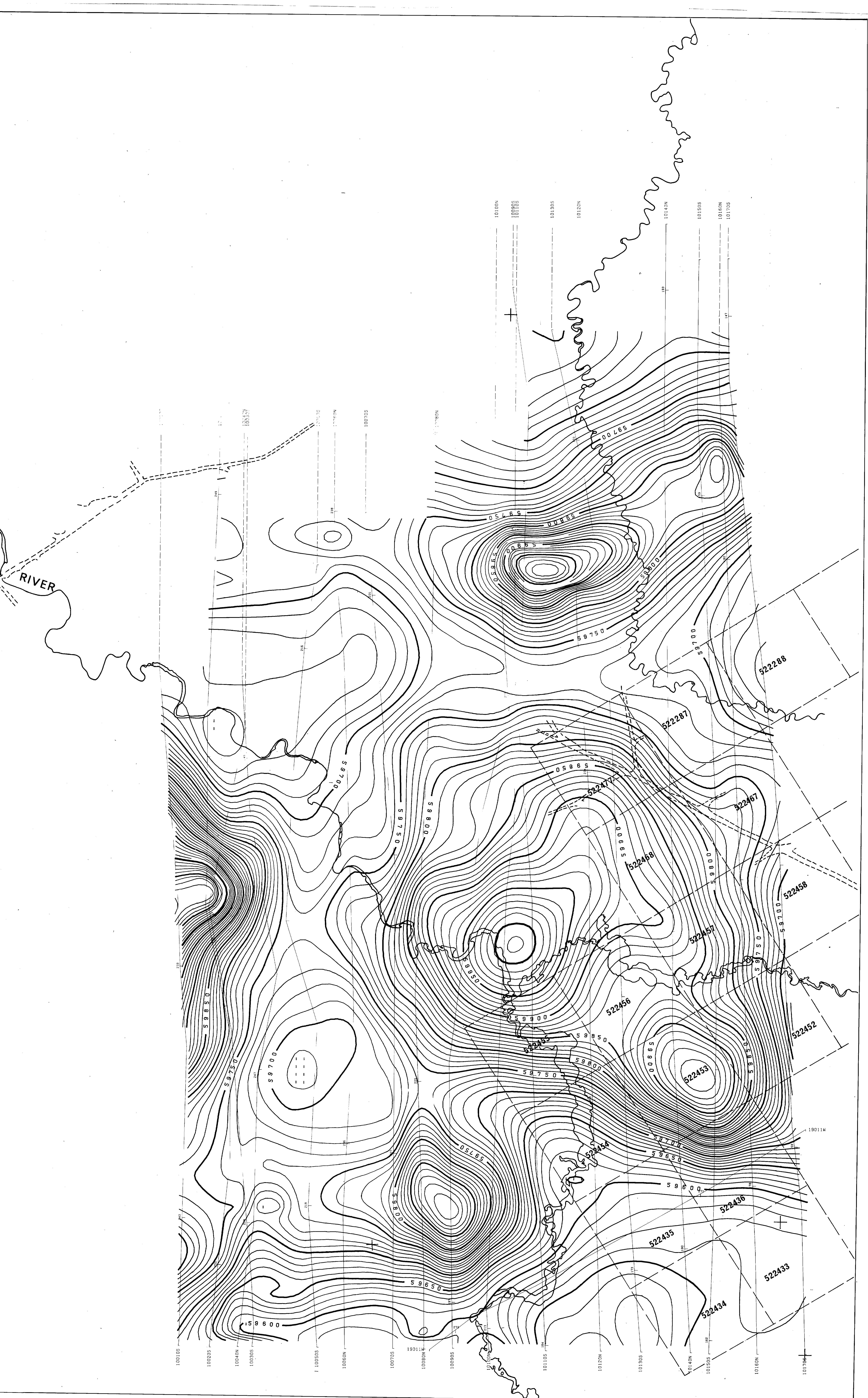


280

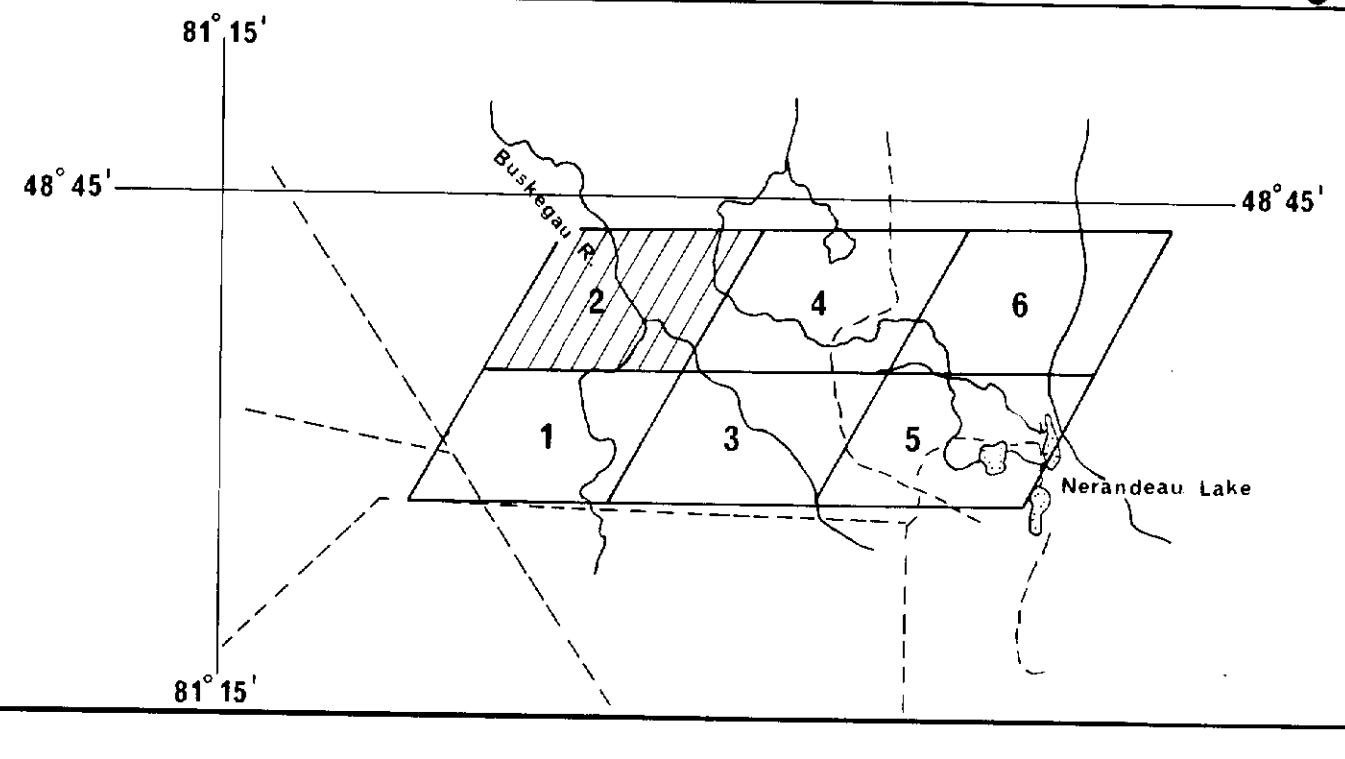


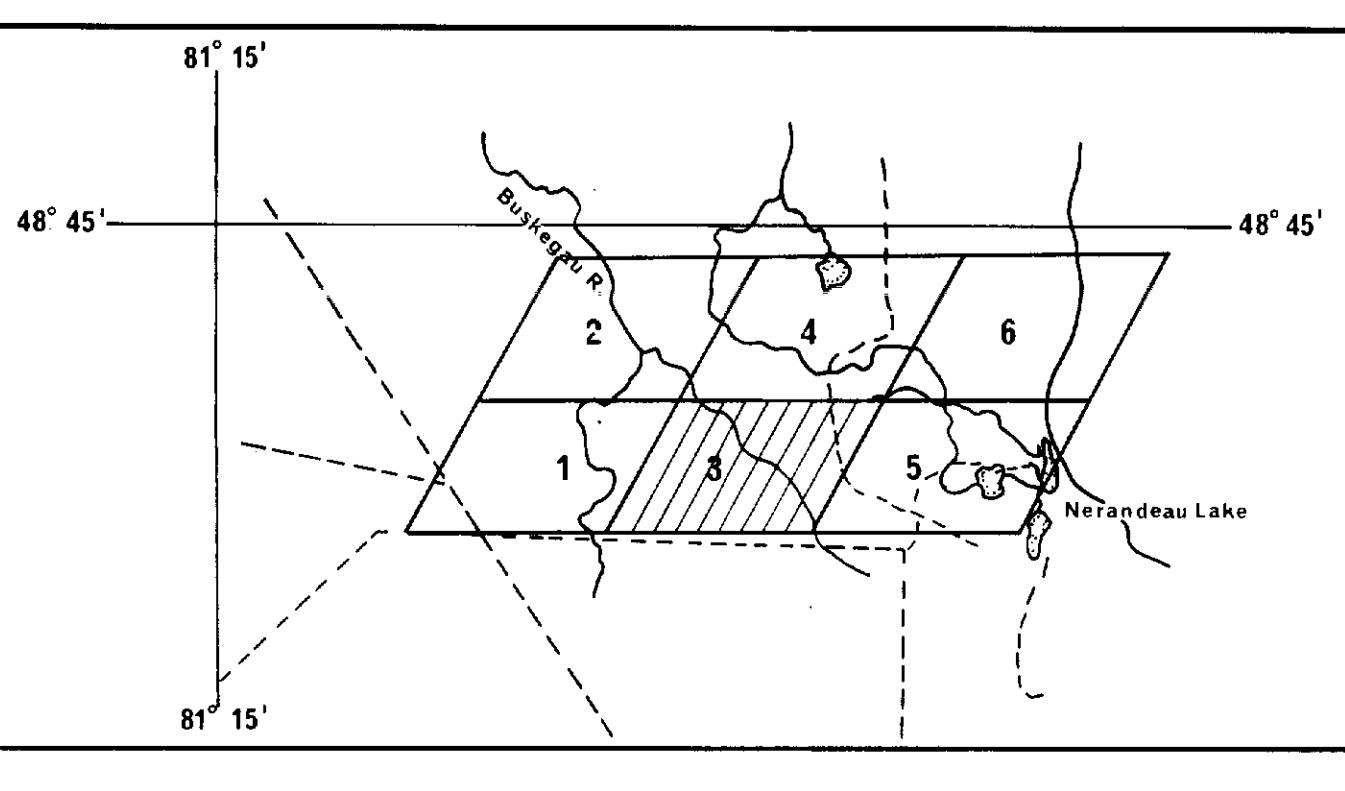
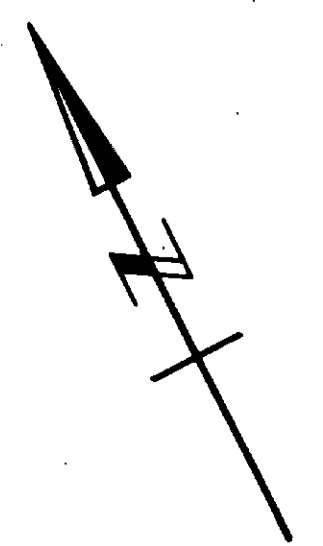
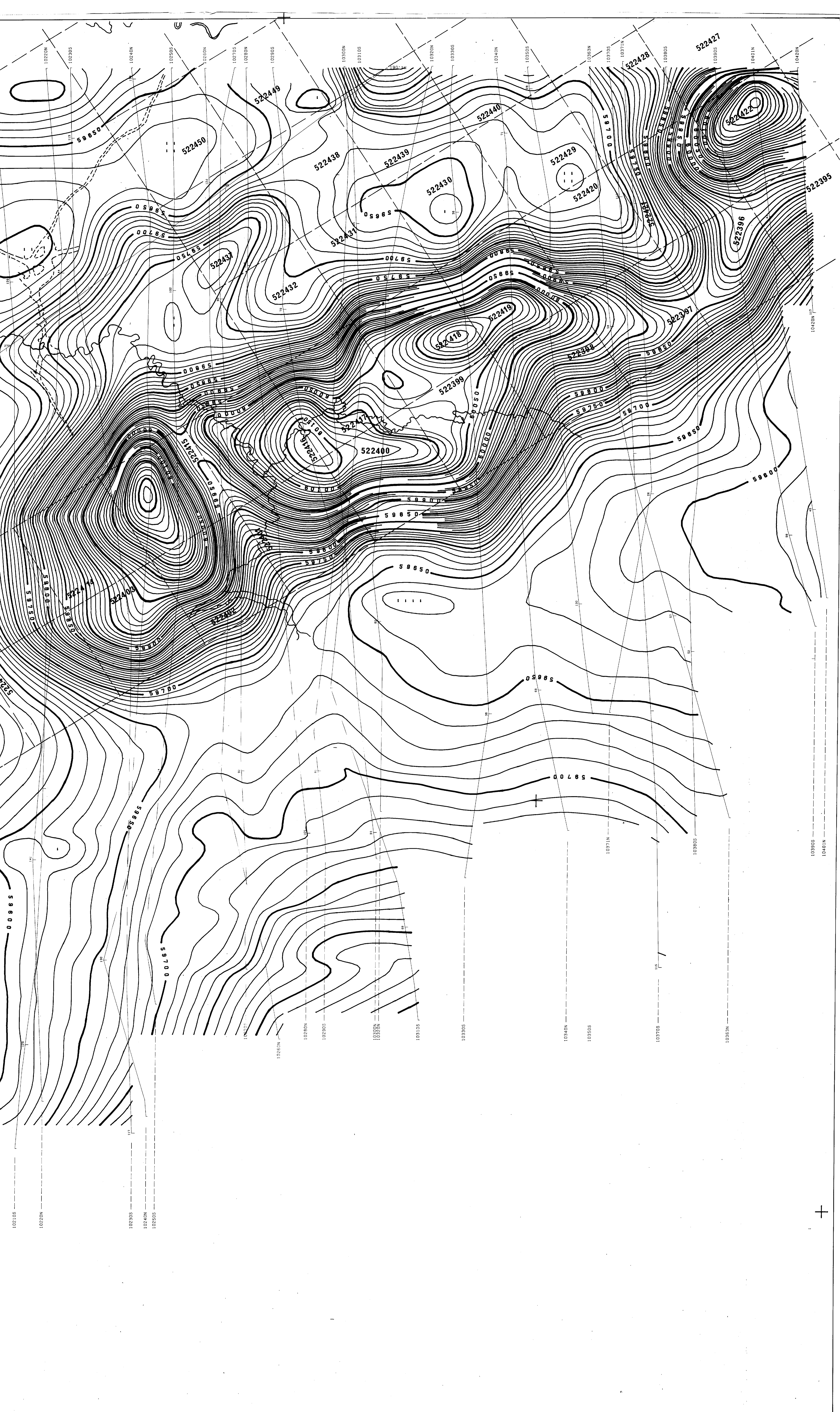
GOWAN TWP.
WARK TWP.

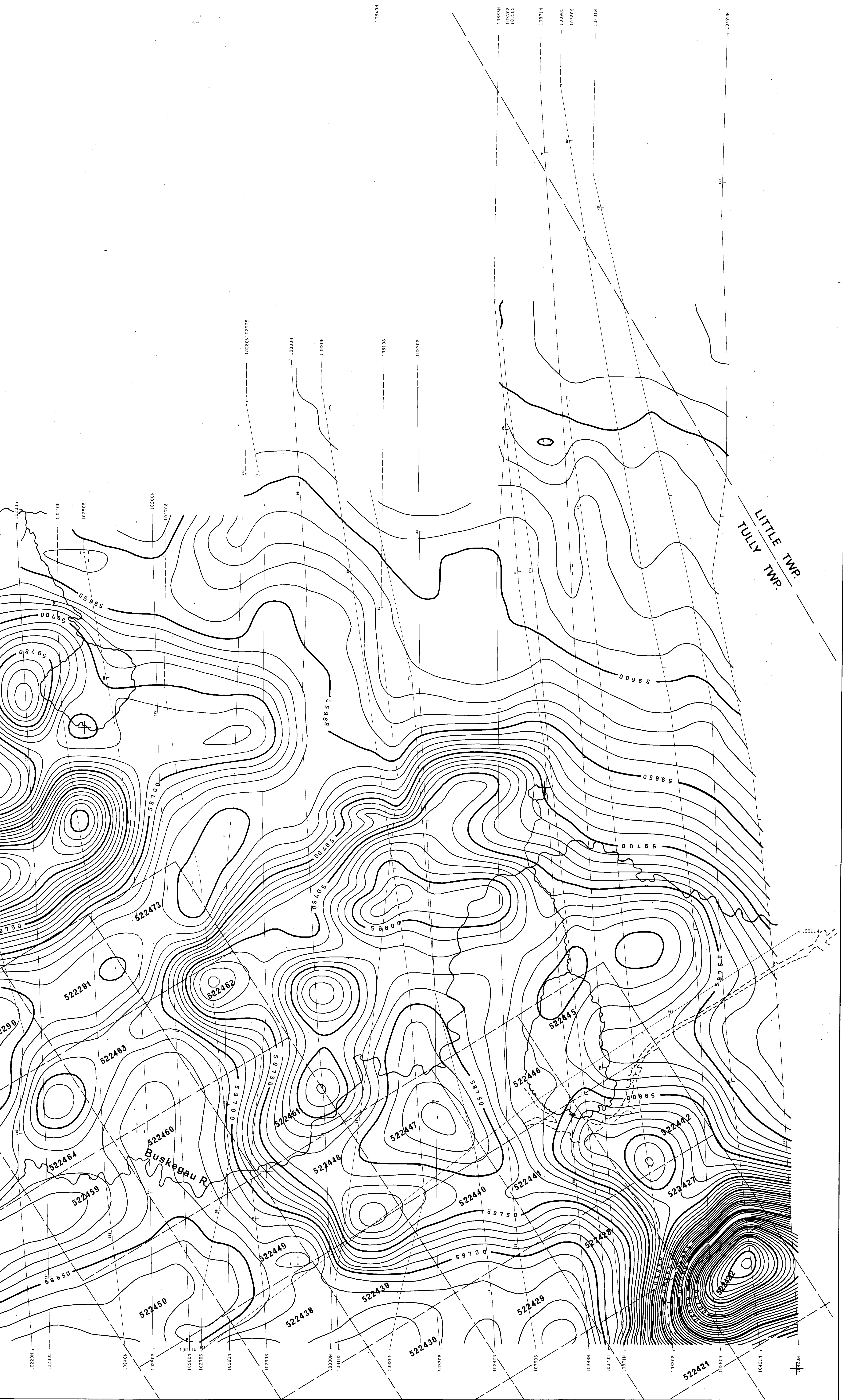




RIVER







LITTLE TWP.
TULLY TWP.

