



42A126E0272 63.1289 GODFREY

010

REPORT ON THE CONDUCT OF AN AIRBORNE
GEOPHYSICAL SURVEY IN THE MINING DISTRICT OF COCHRANE

During the period April 24 to April 29, 1964, Hunting Survey Corporation carried out flying operations on a combined magnetometer and electromagnetometer survey over parts of the townships of Robb, Turnbull, Godfrey, Carscallen and Bristol.

The work was carried out under contract to Mespil Mines Limited.

The location of the area surveyed is shown on a map accompanying this report.

Two data men were stationed in Timmins to give preliminary information to the client.

Final plotting and preparation of maps were carried out in Hunting's Toronto office.

FLYING SPECIFICATIONS

Flying was carried out by a Beechcraft 18 with a crew of four, i.e. pilot, instrument operator, electronic technician and aircraft engineer.

The technician and engineer did not accompany the aircraft on all survey flights.

Traverses were flown in an East-West direction at an average spacing of 660 feet.

Terrain clearance was maintained between 450 and 500 feet, where safety would permit.

Seventy traverses were flown over the area, for a total of 618 linear miles.

INSTRUMENTATION

The following instruments were operated during the survey:

1. Gulf magnetometer.
2. Hunting Survey Corporation - Canadian Applied Research Limited dual frequency electromagnetometer measuring the phase displacement of the resultant field with respect to applied field; for frequencies of 400 and 2,300 cycles per second.
3. Modified APN-1 radio altimeter.
4. C.A.R.L.-H.S.C. 35mm discrete frame positioning camera.
5. A four channel curvilinear recorder, showing from top to bottom:
 - (1) Altimeter record and camera fiducial pulses.
 - (2) Magnetometer profile showing variations in the strength of the earth's magnetic field, sensitivity 100 gammas per centimeter across a four centimeter channel.
 - (3) Phase angle of the resultant field with respect to a 2,300 cycle applied field, sensitivity 2° per centimeter across a four centimeter channel.
 - (4) Phase angle of the resultant field with respect to a 400 cycle applied field, sensitivity 1° per centimeter across a four centimeter channel.

6. A two pen rectilinear recorder with a five inch recording width, showing:

(1) In red ink the terrain clearance record and camera fiducial pulses.

(2) In black ink the variations in strength of the earth's magnetic field, sensitivity 100 gammas per inch.

NOTE: A pulse was shown on the altimeter record, co-incident with every tenth exposure of the 35mm camera.

This served to relate the records to the terrain over which they were made.

The magnetometer and E.M. detectors were located in separate "birds" towed behind and below the aircraft.

MAPS AND DATA COMPILATION

Navigation mosaics were prepared on a scale of 1 inch to 2,640 feet utilizing "Overthrust" mosaics available to the contractor.

For preparation of base maps, uncontrolled mosaics were made on a scale of 1 inch to 1,320 feet, utilizing photographs obtained from the Department of Lands and Forests (Year 1961 photography).

Flight path was established by visual comparison of the 35mm film with the above mentioned mosaics.

Base maps were traced from these mosaics also, showing recognizable planimetric features.

Township boundaries shown on the base maps were positioned by reference to Ontario Department of Mines claim maps.


A map was compiled showing:

- (a) flight traverses and
- (b) magnetic contours referred to an arbitrary datum.

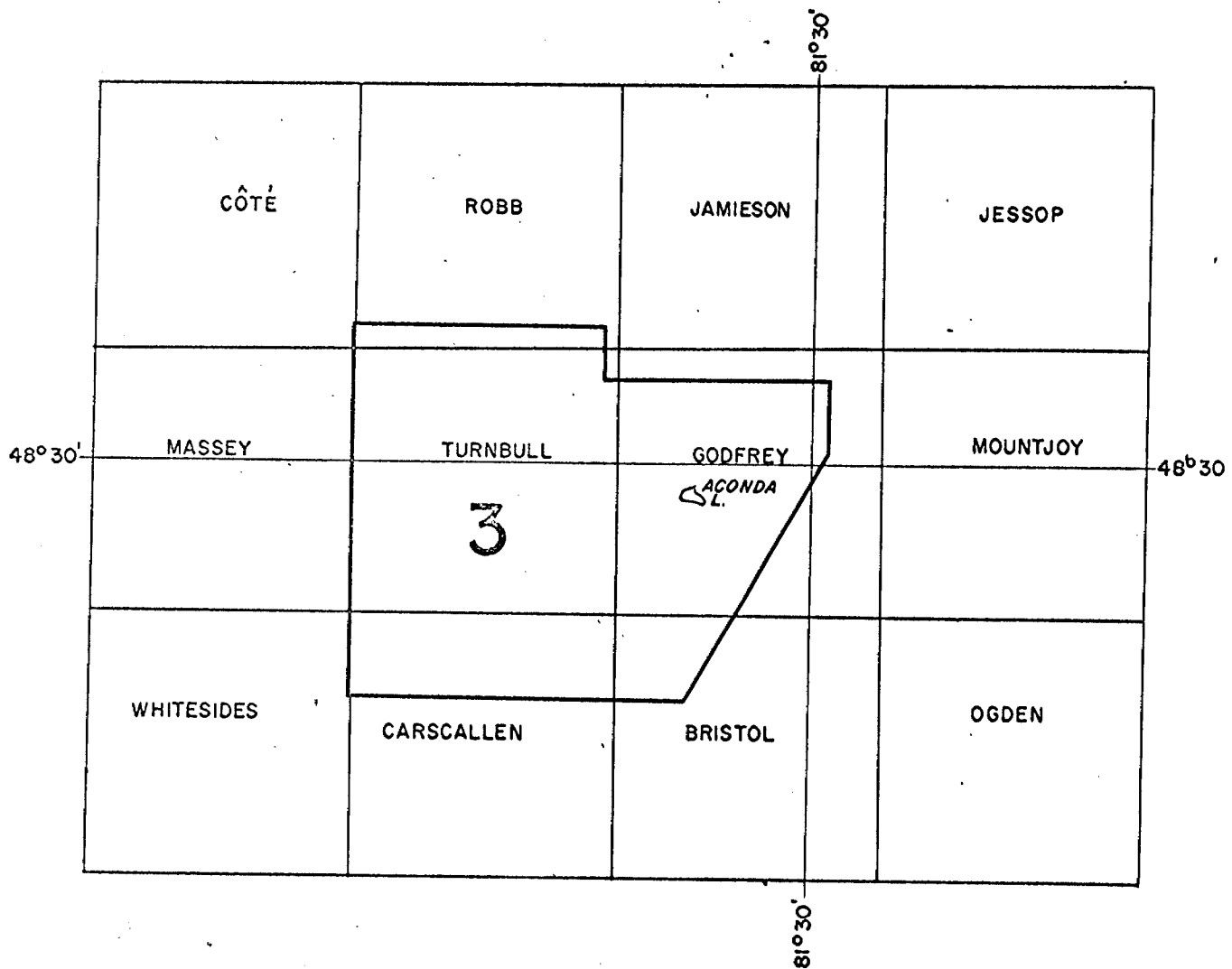
Contour interval was 20 gammas.

A second map was prepared showing:

- (a) flight traverses.
- (b) extent and location of the peak of the observed low frequency anomalies.
- (c) extent of residual low frequency anomalies.
- (d) the phase angle of observed high and low frequency anomalies read at peak values.
- (e) the phase angle of residual high and low frequency anomalies read at peak values.
- (f) value and location of magnetic peaks and lows, referred to on arbitrary datum.


R. N. Parkinson P. Eng.

HUNTING SURVEY CORPORATION LIMITED



SCALE: 1 Inch to 4 Miles



List of Claims located in Turnbull, Godfrey, Robb, Carscallen and Bristol Townships, on which airborne electromagnetic and magnetic surveys are to apply as 40 days assessment credit on each claim.

TURNBULL TOWNSHIP

<u>Claim Nos.</u>	<u>Claim Nos.</u>
1. P-53345 to 53398 incl.	1. P-54973 & 54974
2. P-53539 to 53545 "	2. P-54929 to 54933 incl.
3. P-53549 to 53558 "	3. P-54938 to 54944 "
4. P-53567	4. P-52216 to 52233 "
5. P-53764 to 53766 "	5. P-53591 to 53596 "
6. P-53830 to 53845 "	6. P-52730 to 52737 "
7. P-54095 to 54097 "	7. P-52759 to 52772 "
8. P-54551	8. P-51644 to 51648 "
9. P-53658 to 53666 "	9. P-52452 to 52455 "
10. P-53775 to 53784 "	10. P-52940
11. P-53793 to 53801 "	11. P-52941
12. P-54833	12. P-52946
13. P-54857 to 54873 "	13. P-52948
14. P-54878 to 54892 "	14. P-52952 to 52955 "
15. P-54637 to 54641 "	15. P-52962 to 52969 "
16. P-53785 to 53792 "	16. P-52575
17. P-54926 to 54928 "	17. P-52987 & 52988
18. P-54947 & 54948	

*Cancelled Dec 5, 1962
Re: 55192*

GODFREY TOWNSHIP

<u>Claim Nos.</u>	<u>Claim Nos.</u>
1. P-57186 to 57191 incl.	1. P-51862 to 51864 incl.
2. P-57334 to 57341 "	2. P-51895 to 51897 "
3. P-57555 to 57564 "	3. P-54338
4. P-58994 to 59000 "	4. P-51927
5. P-57342 & 57343	5. P-51928
6. P-64424 to 64428 "	6. P-52164 to 52167 "
7. P-58446	7. P-52248 to 52250 "
8. P-58644 to 58678 "	8. P-54975
9. P-58832 to 58849 "	9. P-54978
10. P-54925	10. P-52448 to 52451 "
11. P-52945	11. P-28005 & 28006 LEASED
12. P-53531 to 53538 "	12. P-28008 LEASED
13. P-53559 to 53566 "	13. P-51462 to 51470 "
14. P-53569 & 53570	14. P-53611 to 53616 "
15. P-53649 to 53657 "	15. P-53634 to 53643 "
16. P-54856	16. P-53671 to 53673 "
17. P-55864 to 55867 "	17. P-53802 to 53804 "
18. P-53674 to 53680 "	18. P-53814 to 53816 "
19. P-53955 to 53957	

ADDENDUM

- 2 -

List of Claims located in Turnbull, Godfrey, Robb, Carscallen and Bristol Townships, on which airborne electromagnetic and magnetic surveys are to apply as 40 days assessment credit on each claim.

ROBB TOWNSHIP

Claim Nos.

10 P-54773 to 54782 incl. ✓
11 P-54875 to 54877 " ✓
10 P-54957 to 54972 " ✓

38

Claim Nos.

10 P-53597 to 53599 incl. ✓
11 P-54934 to 54937 " ✓

CARSCALLLEN TOWNSHIP

Claim Nos.

10 P-57220 to 57224 incl. ✓
11 P-55649 to 55673 incl. ✓
11 P-52947 ✓
11 P-52961 ✓
11 P-55954 to 55956 " ✓
11 P-54362 to 54364 " ✓

38

Claim Nos.

10 P-55591 to 55599 incl. ✓
11 P-52942 to 52944 incl. ✓
11 P-52949 to 52951 " ✓
11 P-55027 to 55030 " ✓
11 P-53546 & 53547 ✓

21

BRISTOL TOWNSHIP

Claim Nos.

10 P-54347 to 54361 incl. ✓
11 P-55025 & 55026 ✓

17

Claim Nos.

10 P-58814 to 58831 incl. ✓

ADDENDUM NO. 2

List of Claims located in Godfrey, Turnbull and Robb Townships on which airborne electromagnetic and magnetic surveys are to apply as 40 days assessment credit on each claim.

GODFREY

Claim Nos.

P-51586 ✓

Claim Nos.

P-63491 to 63502 inc. ✓

13

TURNBULL

P-60688 to 60701 inc. ✓

P-60724 to 60741 inc. ✓

P-60706 to 60723 inc. ✓

50

TURNBULL

P-52575 should be No. P-55142

ROBB

P-54945 & 54946 ✓

P-52739 ✓

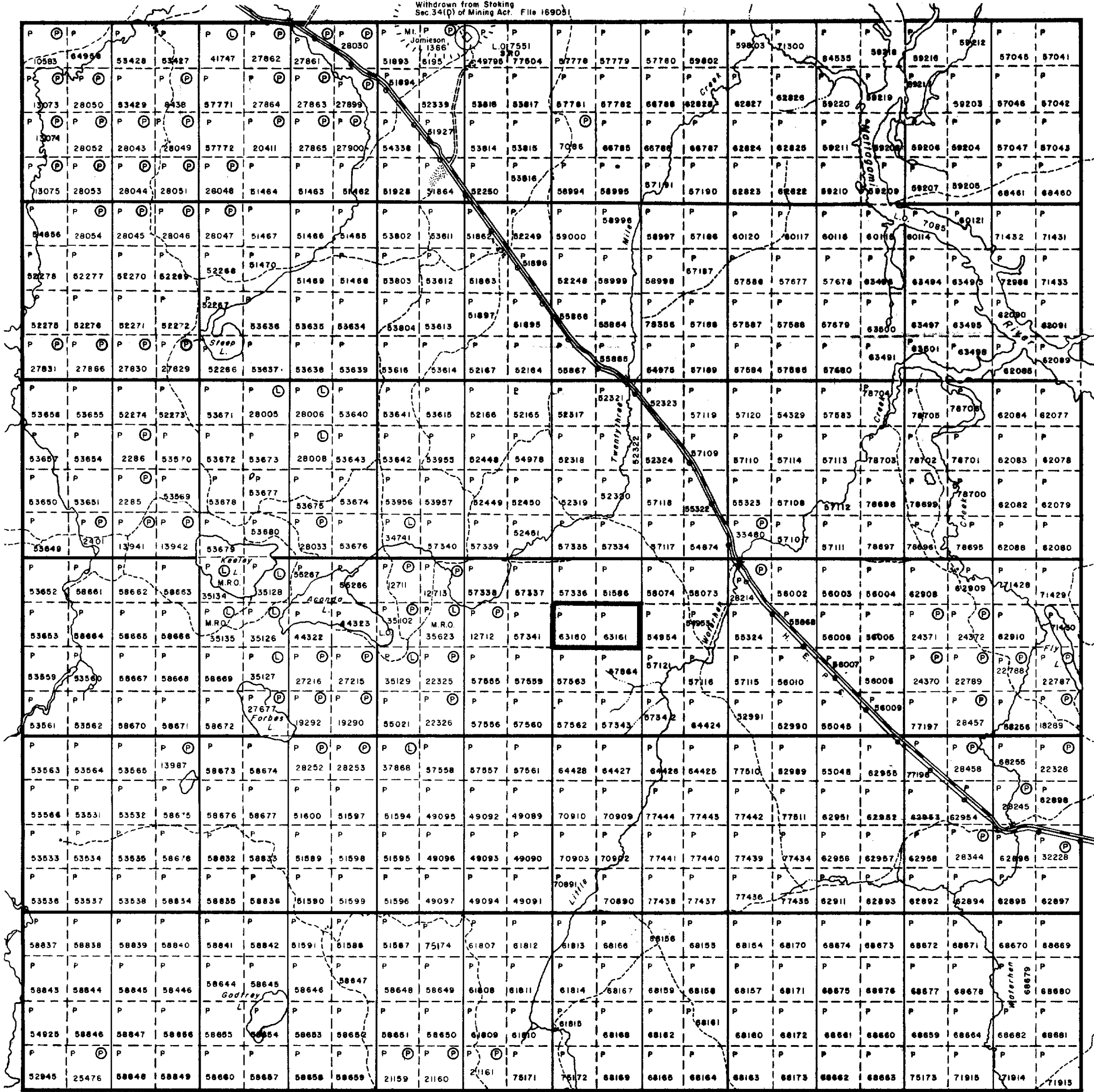
P-52741 ✓

4

661

Jamieson Twp. (M.288)

Gap Radar Sta.
Dept. of National Defence
Withdrawn from Staking
Sec.34(P) of Mining Act. File 169051



Turnbull Twp. (M.316)

Mountjoy Twp. (M.302)

THE TOWNSHIP OF

GODFREY

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.
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 around all lakes and rivers.

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

DATE OF ISSUE

MAY 20 1965

ONTARIO DEPT. OF MINES

PLAN NO. M.284

DEPARTMENT OF MINES

— ONTARIO —



42A125E0272 63.1289 GODFREY

Bristol Twp. (M.264)

Robb Twp. (M.306)

THE TOWNSHIP OF
OF

TURNBULL

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.
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	X
CANCELLED	C

NOTES

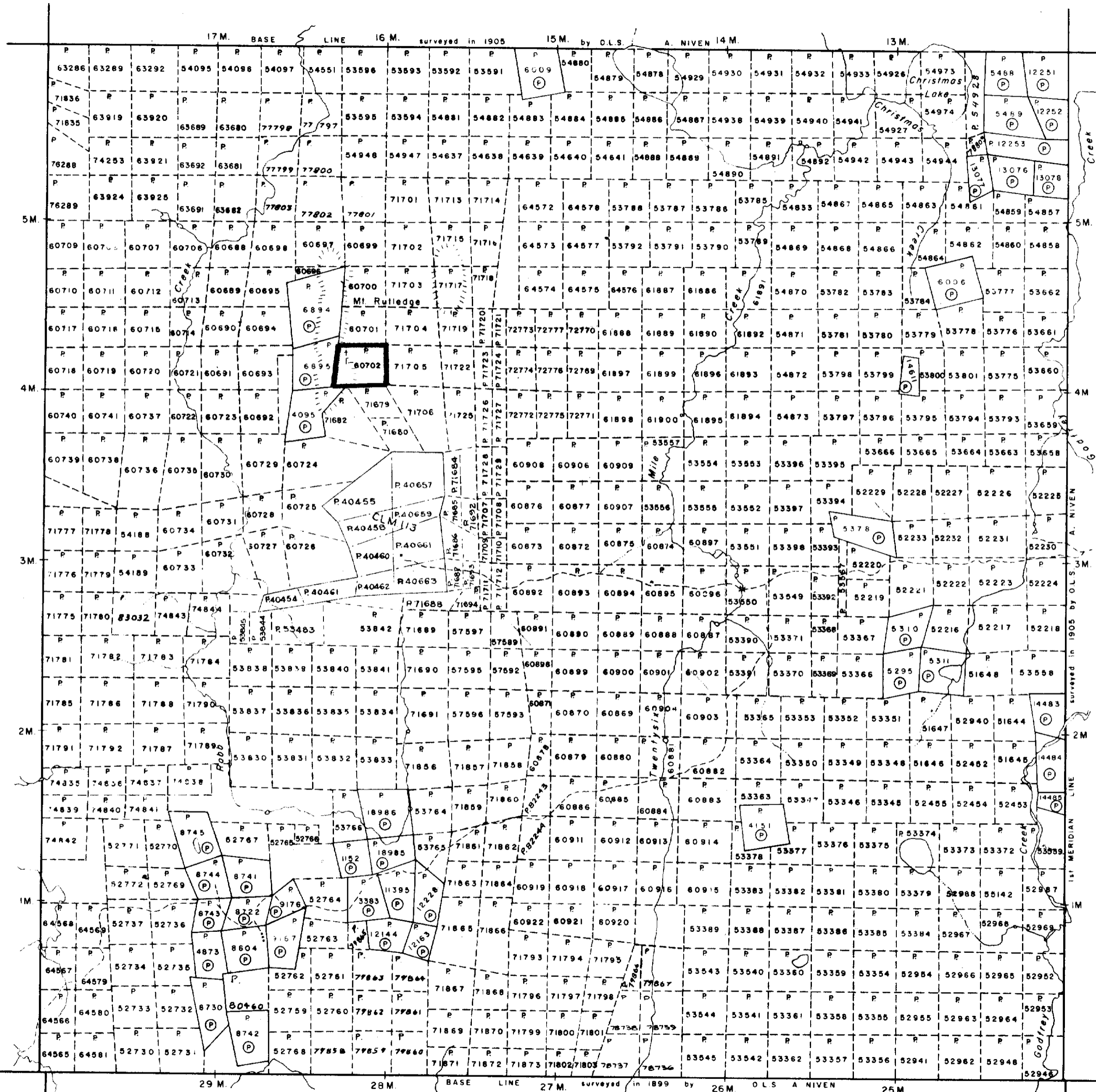
400' Surface Rights Reservation around
all lakes and rivers.

DATE OF ISSUE
MAY 26 1965
ONTARIO DEPT. OF MINES

PLAN NO. M-316

DEPARTMENT OF MINES

— ONTARIO —



Massey Twp. (M.296)

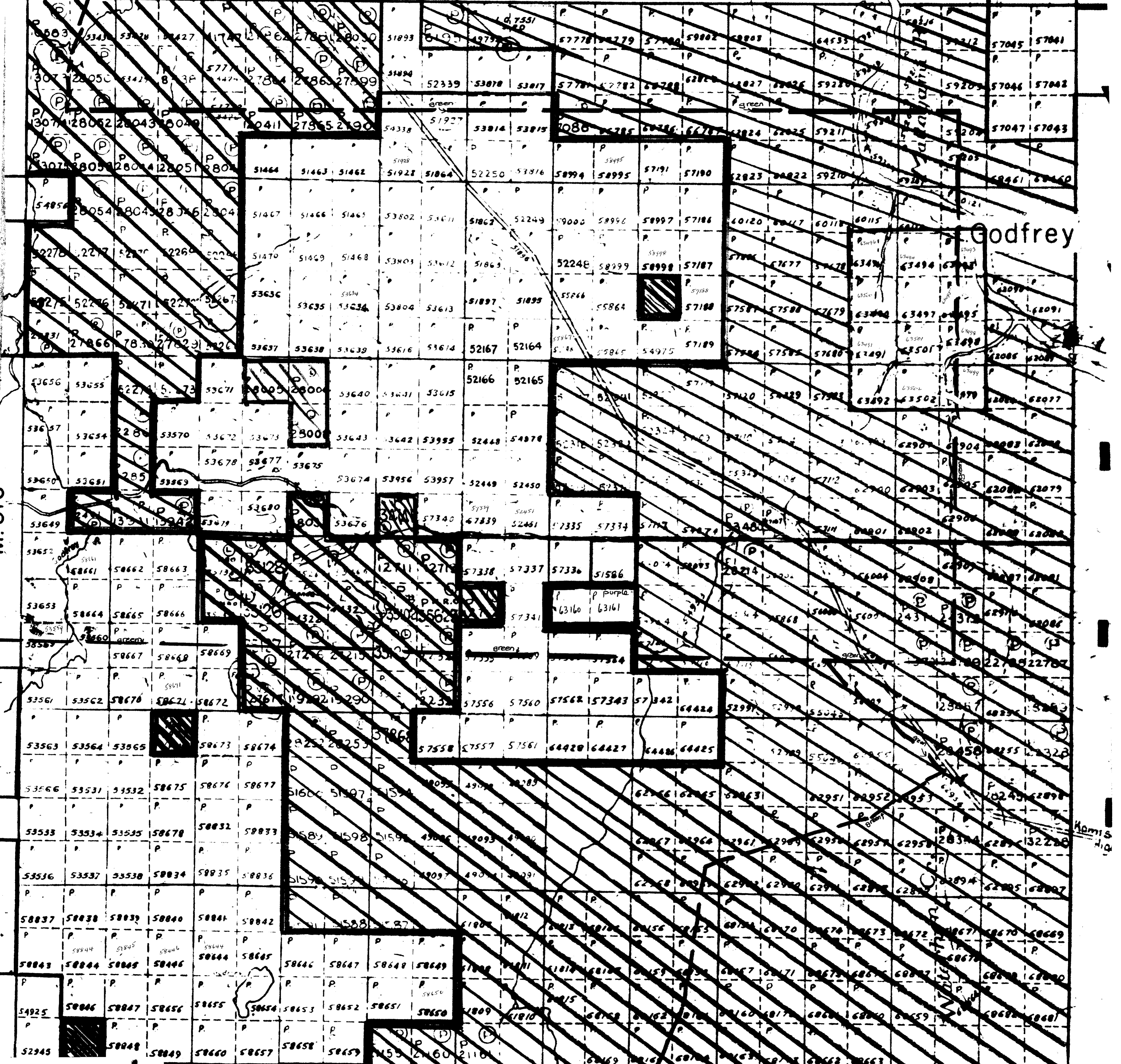
Godfrey Twp. (M.284)

Carscallen Twp. (M.267)



6271 89

DEPT. OF NATURAL RESOURCES
WITHDRAWN FROM STAKING
SEC 34(D) OF THE M.C. ACT
FILE 169081



Godfrey

Komis
Hq



627189

Christmas

17M

16M

15M

14M

13M

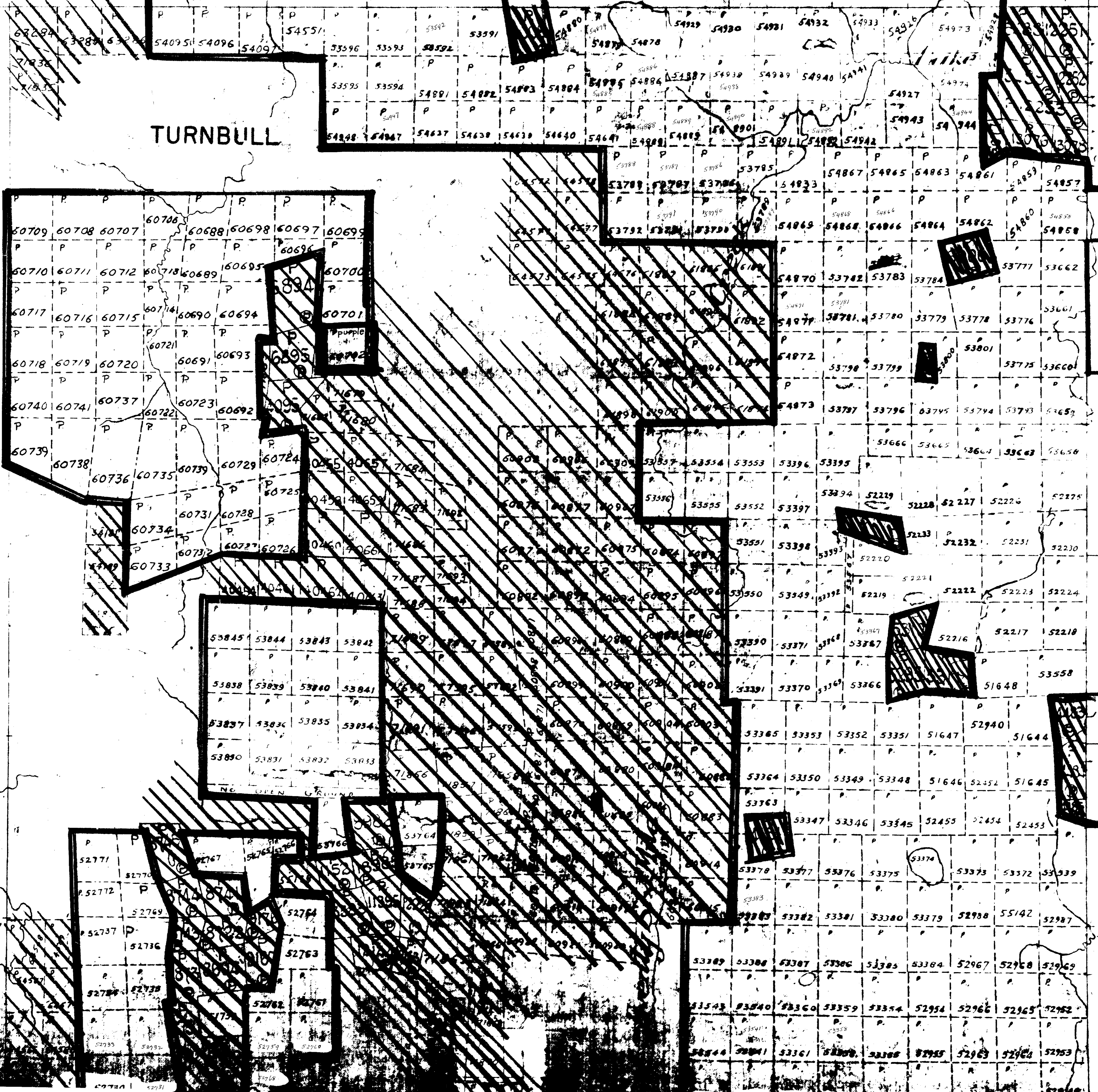
TURNBULL

5M

4M

2M

1M



Robb

5898/5851
5763/6424
5876/5976
5877/5877

55238	55236	55231
55247	55242	55234
55246	55243	55233
55245	55244	55232
55208	55202	55203
55229	55201	55204
55200	55205	55206

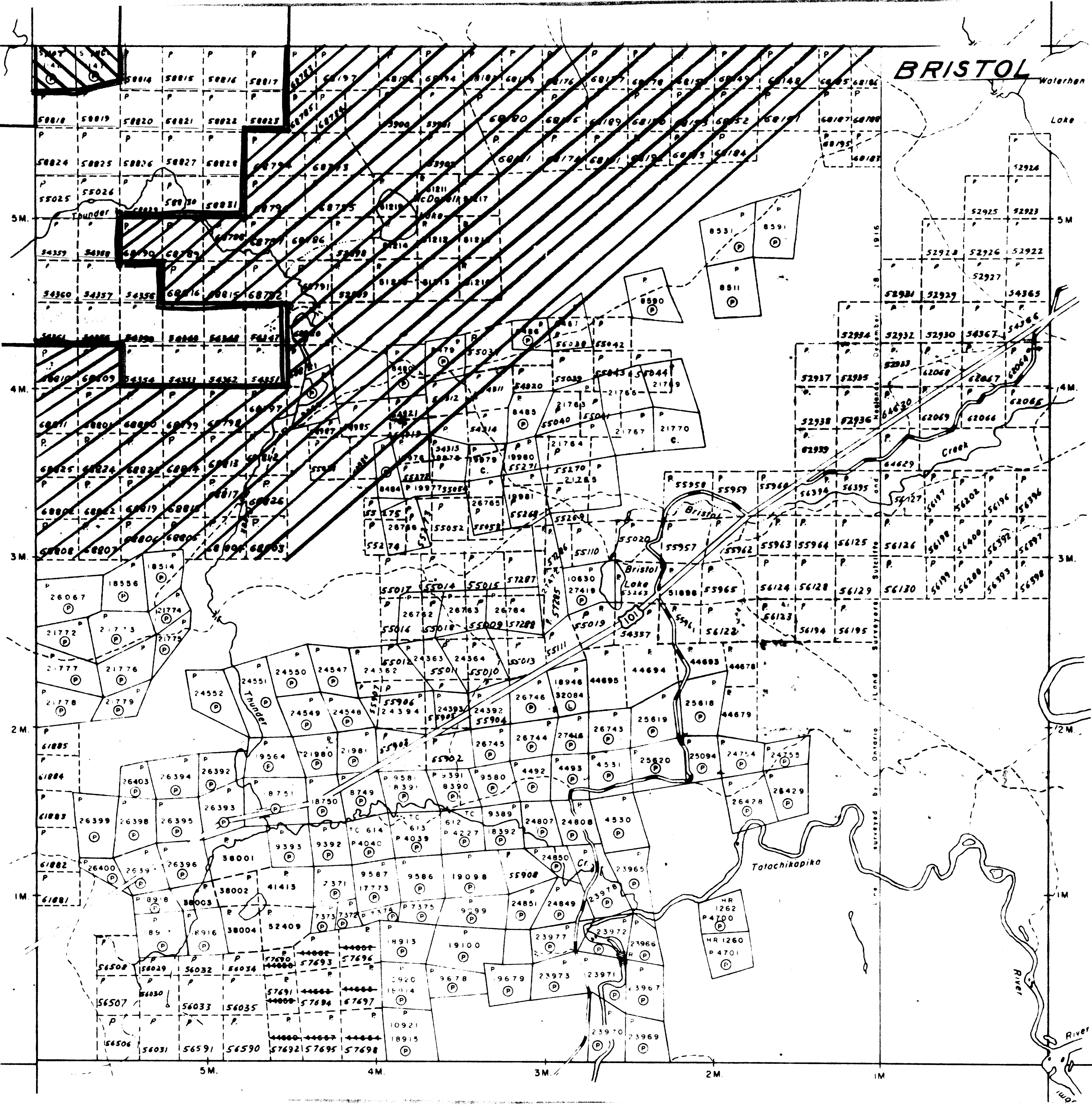
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54785	54777	54776	54773	

54937	54936	54935	54934
54875	54876	54877	54877
54957	54958	54959	54959

51805 51802 51803 51804 51805 51806
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51951 51952 51953 51954 51955 51956
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51999 52000



240 17 M 16 M 15 M 14 M 13 M 2000

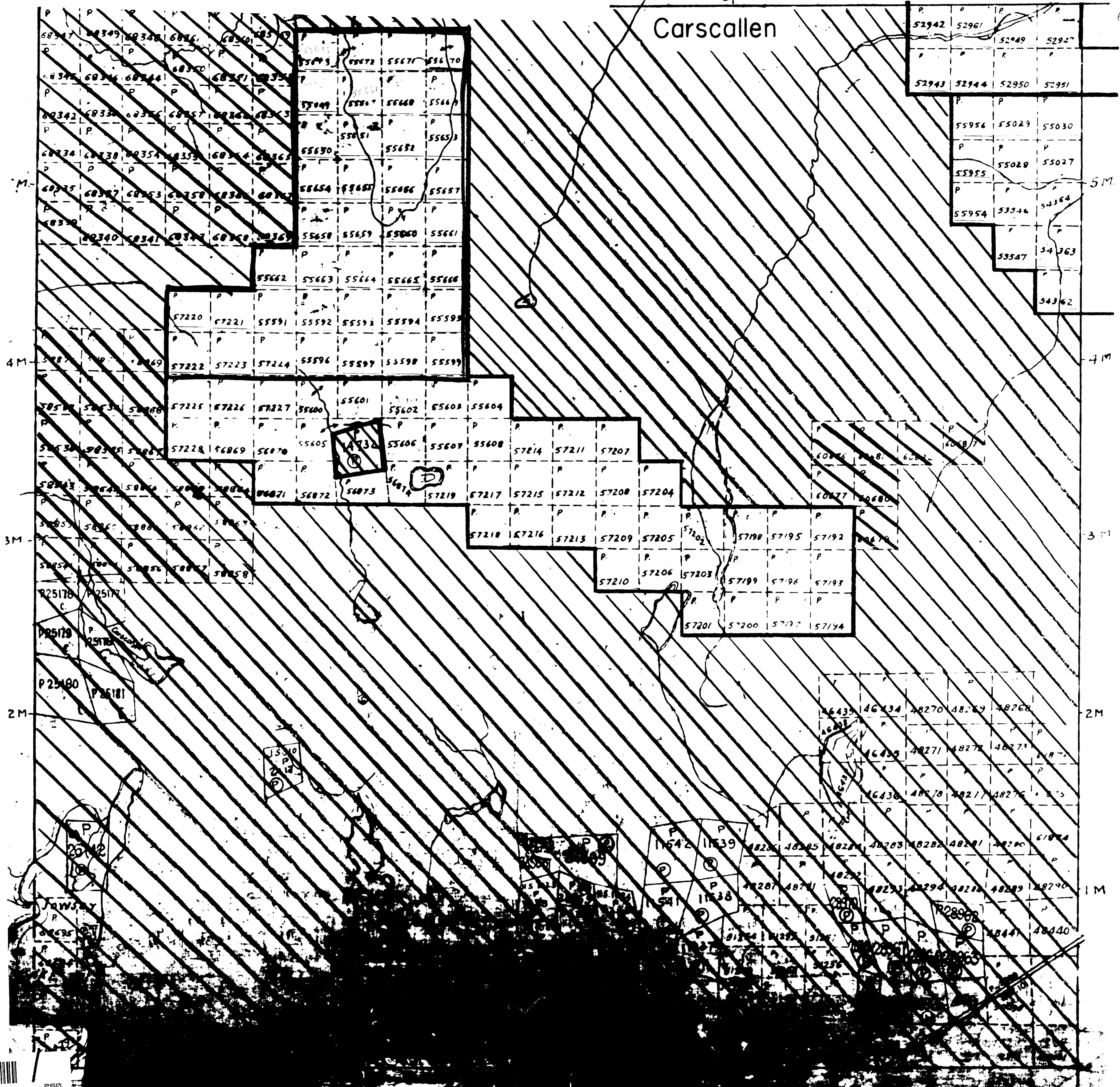


BRISTOL



63.1289

Carscallen



P	P	P	P
52942	52961	52949	52947
P	P	P	P
52943	52944	52950	52951
P	P	P	P
55956	55029	55030	
P	P	P	
55955	55029	55027	
P	P	P	
55954	53346	54364	
P	P	P	
53547	54363		
P	P		
		54362	

P	P	P	P	P	P	P	P
57220	57221	55591	55592	55593	55594	55595	
P	P	P	P	P	P	P	
57222	57223	57224	55596	55597	55598	55599	

P	P	P	P	P	P	P	P	P	P
57225	57226	57227	55600	55601	55602	55603	55604		
P	P	P	P	P	P	P	P	P	P
57228	56869	56870	55605	55606	55607	55608			

P	P	P	P	P	P	P	P	P	P
57214	57211	57207							
P	P	P	P	P	P	P	P	P	P
57210	57216	57213	57209	57205	57202	57198	57195	57192	56870

P	P	P	P	P	P	P	P	P	P
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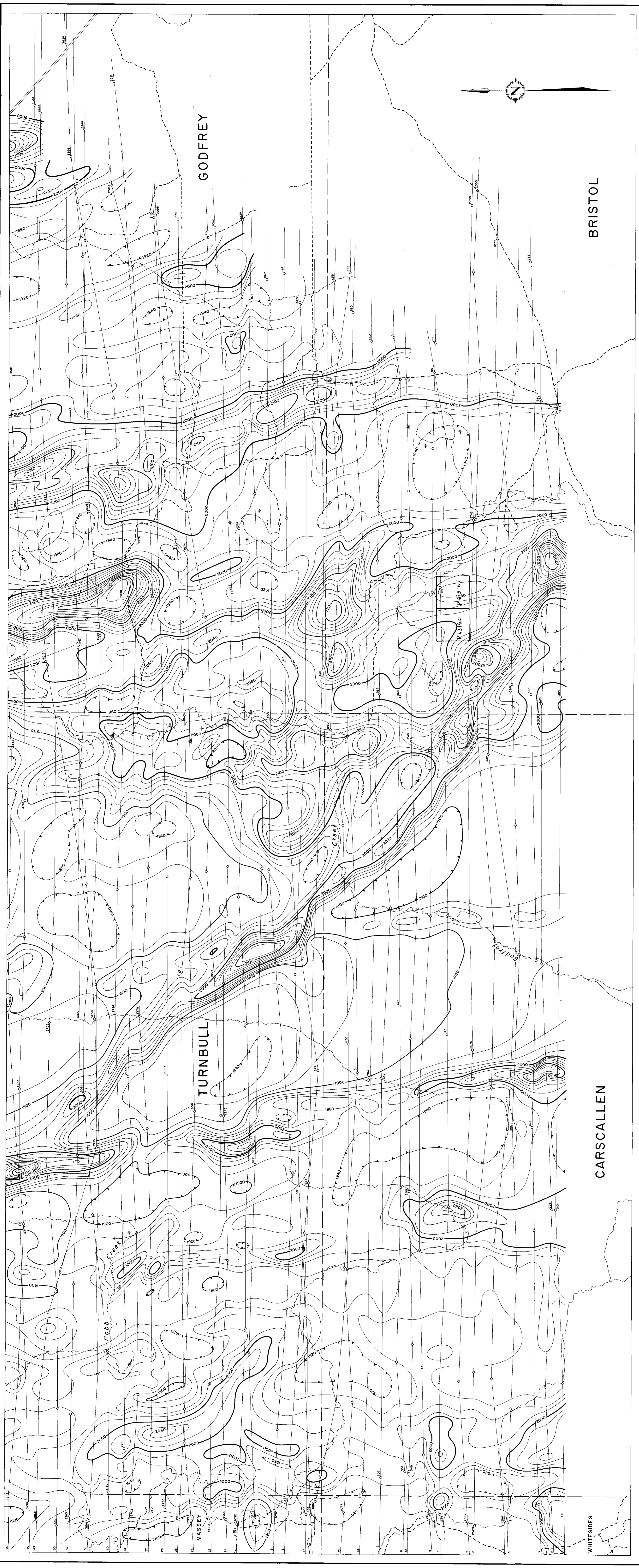
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46436	48270	48271	48276						

P	P	P	P	P	P	P	P	P	P
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P	P	P	P	P	P	P	P	P	P
11541	11538	48287	48281	48282	48283	48284	48285	48289	48290
P	P	P	P	P	P	P	P	P	P
11540	11537	48286	48288	48289	48290	48291	48292	48293	48294

63.1287

MESPI MINES LIMITED
AIRBORNE GEOPHYSICAL SURVEY

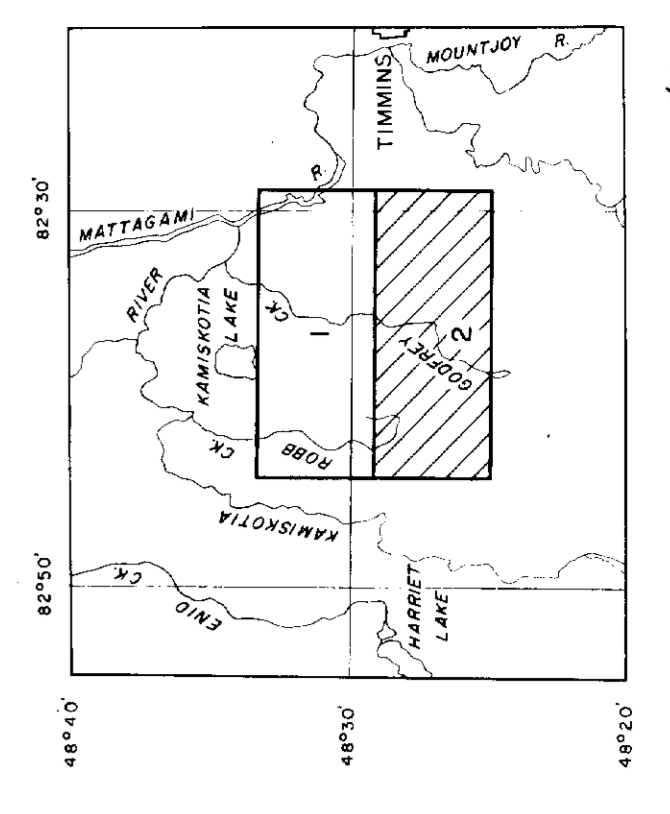
AREA NO 3



CONTOUR INTERVAL 20 GAMMA
 MEAN FLIGHT LINE SPACING 600 FEET
 MEAN TERRAIN CLEARANCE 450 FEET
 500 GAMMA CONTOUR
 400 GAMMA CONTOUR
 20 GAMMA CONTOUR
 MAGNETIC LOW
 FIDUCIAL POINTS
 FLIGHT LINES

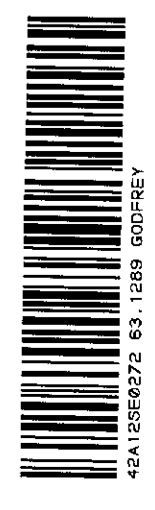
TIMMINS AREA, ONTARIO
 MAGNETOMETRIC MAP
 SCALE
 1 inch to 1320 Feet
 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000
 FEET

Flown and Compiled by
 HUNTING SURVEY CORPORATION LIMITED
 TORONTO, CANADA
 1964



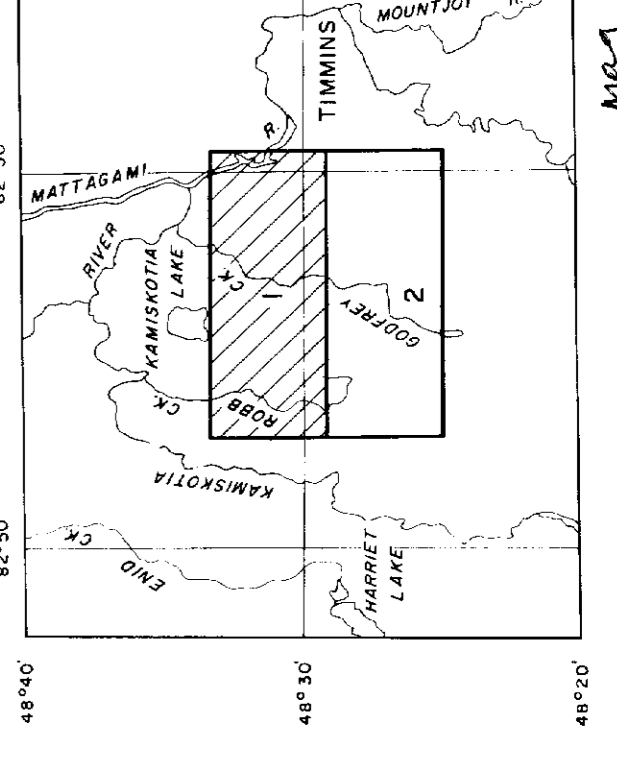
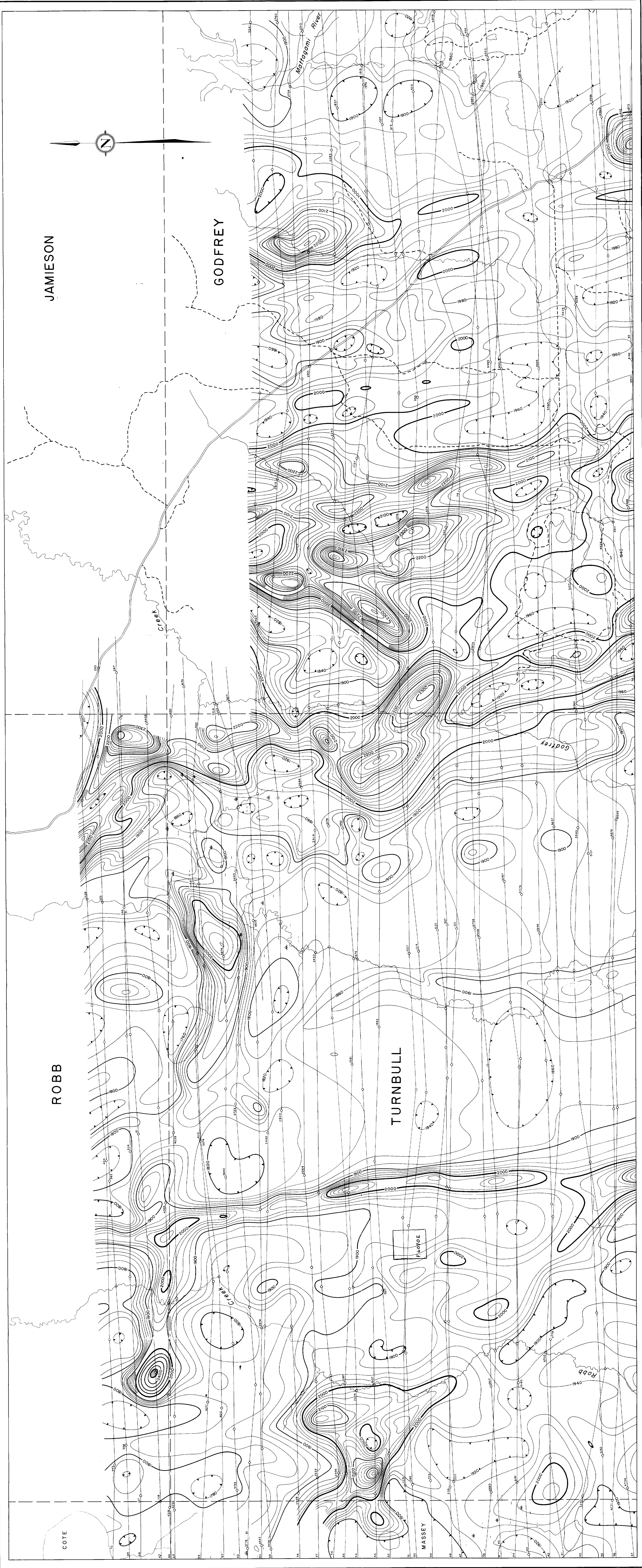
63.1287

SHEET NO 2
(42)8
63.1287



MESPI MINES LIMITED
AIRBORNE GEOPHYSICAL SURVEY

AREA NO 3



TIMMINS AREA, ONTARIO
MAGNETOMETRIC MAP

- CONTOUR INTERVAL..... 20 GAMMA
- MEAN FLIGHT LINE SPACING..... 660 FEET
- MEAN TERRAIN CLEARANCE..... 490 FEET
- 500 GAMMA CONTOUR.....
- 100 GAMMA CONTOUR.....
- 20 GAMMA CONTOUR.....
- MAGNETIC LOW.....
- FIDUCIAL POINTS.....
- FLIGHT LINES.....

Flown and Compiled by
HUNTING SURVEY CORPORATION LIMITED
TORONTO, CANADA
1964

SCALE
1 inch to 1320 FEET