



42A13SE0382 2.251 MAHAFFY

010

QUESTOR SURVEYS LIMITED

AIRBORNE ELECTROMAGNETIC SURVEY REPORT

AREA 1969-44

TIMMINS AREA

ONTARIO

PREPARED FOR

HOLLINGER MINES LIMITED

APRIL 1970

QUESTOR SURVEYS LIMITED  
TIMMINS, ONTARIO



42A135E0382 2.251 MAHAFFY

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## INTRODUCTION

This report contains our interpretation of the results of an airborne electromagnetic and magnetic survey flown in the Timmins Area of Ontario on February 21st to March 28th, 1970. A brief description of the equipment and the survey procedure are also included, together with some recommendations for ground follow-up.

The survey totalled 2312 line miles and was performed by Questor Surveys Limited. The survey aircraft was a Super Canso CF JMS and the operating base was Timmins, Ontario.

## SURVEY AREA

The area outline is shown on a 1:250,000 map at the end of this report. This is a part of the National Topographic Series sheet number 42A.

A line spacing of 1/8 mile was used.

## EQUIPMENT

The aircraft was equipped with the Mark V INPUT airborne E.M. system and an AM-101 Precession magnetometer. An APN-1 radio altimeter was used for vertical control. The outputs of these instruments, together with fiducial timing marks were recorded by means of a galvanometer type recorder using light sensitive paper. A 35mm continuous strip camera was used to record the actual flight path.

## SURVEY PROCEDURE

Terrain clearance was maintained as close to 400 feet as possible, with the E.M. "bird" at approximately 150 feet above the ground. A normal S-pattern flight path using approximately one mile turns was used. The equipment operator logged the flight details and monitored the instruments.

### MAP COMPILATION

The base maps are uncontrolled mosaics constructed from 1" = 1/4 mile Ontario Department of Lands & Forests photographs. These mosaics were reproduced at a scale of 1" = 1/4 mile on stable transparent film from which white prints can be made.

Flight path recovery was accomplished by comparison of the prints of the 35mm film with the mosaic in order to locate the fiducial points. These points are approximately one mile apart.

### DATA PRESENTATION

The symbols used to designate the anomalies are shown in the legend on each map sheet, and the anomalies on each line are lettered in alphabetical order in direction of flight. Their locations are plotted with reference to the fiducial numbers on the visicorder record. A sample record is included at the end of this report identifying the method used to correct for the position of the E.M. "bird" and identifies the parameters recorded on each channel.

Each symbol shows the number of channels on which the anomaly was recorded, and a surrounding circle indicates that a coincident magnetic anomaly has been observed. The value of the magnetic anomaly in gammas is shown as a number beside the anomaly letter. If a magnetic anomaly is recorded within 1000 feet on either side of a conductor, its location and value are also shown as illustrated in the legend.

Occasionally a question mark may be shown alongside the anomaly symbol. This may occur when the response is very weak and there is some doubt as to whether or not it is caused by turbulence or compensation noise caused by large changes in the position of the "bird" relative to the aircraft.

All the anomaly locations, magnetic correlations, and the amplitudes of channel number 4 are listed on the data sheets accompanying the final maps.

## RESULTS

The INPUT system will respond to conductive overburden and near surface horizontal conducting layers in addition to bedrock conductors. Differentiation is based on the rate of transient decay, magnetic correlation and anomaly shape together with the conductor pattern and topography.

Power lines sometimes produce spurious anomalies but these can be identified by reference to the monitor channel. Railroad and pipeline responses are recognized by studying the film strips.

In the Canadian Shield, the most common bedrock conductors are graphites and formational sulphides. These quite commonly occur in long trends having multiple conducting zones with or without magnetic correlation depending upon the presence or absence of magnetite or pyrrhotite. The possibility of a commercial sulphide body occurring within one of these zones cannot be ruled out, but it is extremely difficult to recommend any particular location unless some change in anomaly character or structure can be recognized.

Graphite or carbonaceous material exhibits a wide range of conductivities. When long conductors without magnetic correlation are located on or parallel to known faults or photographic linears, graphite is most likely to be the cause.

Contact zones can often be predicted when anomaly trends coincide with the lines of maximum gradient along a flanking magnetic anomaly. It is unfortunate that graphite can also occur as relatively short conductors, and produce attractive looking anomalies. With no other information than the airborne results, these must be examined on the ground.

Serpentinized peridotites often produce anomalies with a character that is fairly easy to recognize. The conductivity which is probably caused in part by magnetite, is fairly low so that the anomalies often have a fairly large response on channel number 1, they decay rapidly; and they have strong magnetic correlation.

INPUT E.M. anomalies over massive magnetites show a relationship to the total Fe. content. Below 25-30% very little or no response at all is obtained, but as the percentage increases the anomalies become quite strong, with a characteristic rate of decay which is usually greater than that produced by massive sulphides.

Commercial sulphide orebodies are rare, and those that respond to airborne survey methods usually have medium to high conductivity. Limited lateral dimensions are to be expected and many have magnetic correlation caused by magnetite or pyrrhotite. Provided that the ore bodies do not occur within formational conductive zones as mentioned above, the anomalies caused by them will usually be recognized on an E.M. map as priority targets.

The notes in the following sections are intended to give as much information as possible about the origin of the anomalies using the combined information from all the data available. They may be used to select priority targets, but the final assessment must be based on ground results.

#### INTERPRETATION AND RECOMMENDATIONS

A brief discussion follows on the majority of the conductors in the areas. They are not listed in any priority with regard to ground investigation. Interference from the radar transmitter has affected the results in blocks E and G and conductors could possibly exist in this area which were not picked up.

Weak anomalies may be significant because of the amount of overburden which is known to exist in the Timmins area.

#### WEST SHEET      1969-44A

1.            Intercepts 21A and 23D are both well defined, good conductivity responses indicating a good conductor of

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#### WEST SHEET      1969-44A

1.            Intercepts 21A and 23D are both well defined, good conductivity responses indicating a good conductor of short strike length. Ground work is recommended on this conductor and the weaker conductor directly to the north.

2. Ground work is recommended on this conductor comprised of well defined, good conductivity anomalies. Sulphides at depth could possibly be the cause.

3. Intercept 20A is a weak but definite, good conductivity bedrock response on the flank of a 130 gamma magnetic high. Ground work is recommended.

4. A graphitic or formational sulphide zone is the probable cause of the long conductor. Possibly a portion of the zone could be investigated near intercept 10B which is a good conductivity response.

5. Ground work should be done on this conductor. Intercept 10C is similar to that which could result from massive sulphides.

6. Good conductivity is exhibited by the anomalies of these two conductors. Ground work is recommended.

7,8,9,10. A ground electromagnetic survey should be done to resolve the various conductors in this area and to further evaluate these zones. Moderate conductivity is exhibited by most of the responses in this area.

#### EAST SHEET

11. These two anomalies are weak responses which may be caused from a bedrock source. A reconnaissance ground electromagnetic survey is recommended in an effort to detect the conductors.

12. These broad low conductivity anomalies are typical of conductive overburden. No ground work is recommended.

13. Similar recommendations are given to this zone as those of zone 11.

14 & 15. Both of these conductors appear to be bedrock effects.



24. This weak bedrock conductor could possibly be caused by sulphides at depth. A reconnaissance electromagnetic survey is recommended.

25. This is a superficial effect so no recommendations are given.

26. These weak responses could indicate a bedrock conductor at depth.

27. A low priority rating is given to these anomalies in the area. The conductors are marginal bedrock responses.

28. A high priority is given to this conductor. The anomalies are not strong but good conductivity is exhibited by the intercepts. There is magnetic correlation with two of the intercepts.

29,30,31. These three conductors are composed of weak responses but the conductivity indicates that the source of the conductors is in bedrock. Ground work is suggested on all three zones.

32,33,34. A portion of each of these zones should be investigated with ground geophysical techniques. The anomalies are not strong but the conductivity suggests sulphides and/or graphite at depth. On zone 32 intercepts 73A and 74A should be checked, on zone 33 intercepts 84B and 85B need attention while in zone 34 intercepts 80B, 81D, 82B and 83B should be investigated.

35,36,37. These short weak conductors are marginal bedrock responses. A low priority is given with regard to ground investigation.

38. The direct magnetic correlation with the weak but moderate conductivity conductor suggests the presence of pyrrhotite. Ground work is recommended.

39. A low priority is given to this weak, fair conductivity conductor.

16. This short bedrock conductor flanking a longer conductor exhibits moderate conductivity. Ground work is suggested.

17. This long conductor is associated with high magnetics which indicate a gabbro intrusive. Ground work is suggested on a portion of this zone, preferably around intercept 69A which is a strong, good conductivity anomaly.

18. The anomalies of this zone are strong, good conductivity intercepts coincident with the peak of a high magnetic feature which may reflect the gabbro in the area. Ground work is recommended.

19. The conductivity and strength varies along this long conductive zone which may be caused by graphite. Ground work is suggested to cover intercepts 69B and 70C which are both well defined good conductivity responses.

20. This conductor is similar to zone 19 and should be given the same considerations as zone 19. Ground work is suggested on intercepts 69C and 70B.

21. This zone appears to be on strike with zone 20 and it probably has the same cause. The anomalies are weak but definite bedrock responses which exhibit good conductivity. Ground work is recommended.

22. Poor to moderate conductivity is exhibited by the anomalies in this zone. Ground work is recommended, but on a low priority rating.

23. The strike of this zone is confirmed by the government aeromagnetic map. The anomalies are not well defined and indicate moderate conductivity. A low priority rating is given to this bedrock conductor.

The remainder of the anomalies in the south are in the vicinity of a built up area. A visual examination is recommended on these anomalies to see if they are caused by cultural features.

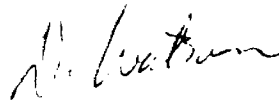
1969-44G

1 & 2 These anomalies are assumed to be caused by overburden effects and as a result no recommendations are given.

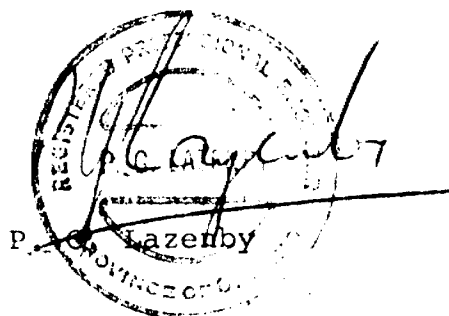
3. This is a low priority ground target. The anomalies are poor conductivity responses.

4. This is an overburden effect.

5. This weak response could possibly be due to bedrock source. A reconnaissance survey is recommended.



D. Watson



Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
1							
2	A 957.51	3		50X			Shoulder Mag
3	A 145.29	3		-			
4	A 077.59	3		-			
5	A 318.20	5	.10	-			
	B 319.99	5	.08	-			
6	A 013.05	6	.12	-			
	B .21	6	.10	-			
	C 015.32	4	.05	-			
7	A 148.64	5	.06		148.45	235X	
8	A 133.03	4	.10		132.90	175X	
	B .75	4	.10		133.80	120X	Shoulder Mag
9	A 252.66	4		15X			Shoulder Mag
	B 253.68	5			253.80	75X	
	C 254.47	4		250X			
10	A 967.97	6	.18		968.15	400X	
	B 968.66	6	.20	-			
	C 969.29	6	.20		969.20	350X	
	D 970.87	6	.30	3500X			
11	A 081.37	5	.10		081.55	300X	8½ sub fids.
	B 082.14	5	.08		082.30	30X	
	C .91	4	.03		082.75	400X	
12	A 063.19	5	.20		063.25	4000X	
	B 064.92	3		30X			Shoulder Mag.
	C 065.63	3		-			8½ sub fids.
13	A 307.06	3		-			
14	A 027.05	5	.10	-			
	B 029.12	4	.10	1500X			
	C .29	4	.08	100X			Shoulder Mag
15	A 010.23	3		-			7½ sub fids.
	B 012.50	5	.20		012.40	1500X	

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Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
16	A 128.15	5	10	-			
	B 129.55	3			129.70	4000	
	C 130.29	4	20	--			
17	A 259.65	4	05	-			
	B 80	4	05	-			
	C 261.71	3		-			
	D 262.11	3		-			
18	A 971.88	5	10	-			
	B 972.13	4	05		972.25	4500	Shoulder Mag
	C 49	4	05	-			
	D 60	4	05	-			
	E 974.32	4	06	500			Shoulder Mag
	F 980.27	3		2150			
19	A 092.86	3		500	093.05	3700	
	B 093.77	5	15		093.65	800	
	C 095.47	5	20	4000			
	D 85	5	10	-			
20	A 059.43	5	10		059.85	1300	Shoulder Mag
	B 060.88	5	10				
	C 062.65	5	20		062.70	25000	
	D 063.00	5	12	-			
21	A 245.42	6	20		245.50	4000	
	B 62	3			245.50	4000	
	C 300.80	2		3500			
	D 301.56	5	05		301.65	500	
	E 303.43	3			303.55	52000	
22	A 192.22	4	10	400			
	B 193.60	5		2650			
23	A 999.55	5	15	-			
	B 991.55	4	05	-			Not plotted Same as 22A
	C 998.15	4	10		998.20	3000	
	D 30	5	15		998.20	3000	
24	A 030.15	4	05		030.25	35000	
	B 031.38	3					
	C 50	3					
	D 96	4	10				
25	A 112.48	3		1500			
	B 114.32	4	10	-			

Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
25 A	280.12	3		-			
B	.30	4	.05	-			
26 A	109.27	4	.05	-			Sub Aid E. 9. 1/2 space
B	.86	3			109.70	100%	Shoulder Mag
27 A	982.35	4	.05	70%			Shoulder Mag
B	986.83	5	.15	-			
27 A	096.36	3		-			
B	097.27	3			097.45	40%	
28 A	040.72	3			040.90	40%	
B	044.44	5	.10	-			
29 A	286.84	4	.05	-			
30 A	628.93	4	.06	-			
B	629.87	5	.12		630.00	57%	
31 A	744.13	4	.06	-			
B	745.13	4	.02	-			
32 A	925.17	5	.15	-			
33 A	007.73	5	.20	-			
B	008.03	4	.10	-			
C	009.22	4	.05	-			
34 A	030.83	5	.08	-			
B	031.96	5	.10	-			
C	032.30	4	.05	-			
35							
36							
37 A	652.68	4	.05	-			
38 A	625.42	3	.02	-			
39							
40							
41							

Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
42	A 033.16	3			033.30	100X	
43							
44	A 893.26	3		-			
	B 898.06	3		-			
45	A 659.43	3		-			
46	A 603.30	4	.10	-			
47	A 711.94	5	.06	-			
48	A 951.04	5	.12	-			
49	A 084.15	4	.05	-			Not plotted Same as 50A
50	A 745.98	4	.06				Mag U/S Same as 49A
51	A 679.7	4	.18	-			
52							
53	A 711.18	4	.05		711.30	100X	Shoulder Mag
54	A 593.70	4	.10	-			
	B 598.40	4	.06	-			
55							
56	A 957.62	4	.02				Mag U/S
	B 960.98	3					Mag U/S
57	A 980.23	3			980.10	150X	
	B 59	3			980.75	90X	
	C 86	3			980.75	90X	
	D 981.77	4	.05	100X			
58	A 804.68	2		110X			E sub Fids
	B 805.89	3			806.00	150X	
	C 806.20	3			806.00	150X	
59	A 687.77	5	.12		687.85	100X	Shoulder Mag
	B 688.03	4	.05	-			

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Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
60	A	568.32	4	.08	-		
	B	575.57	5	.14		575.70	500 $\times$ Shoulder Mag
	C	87	5	.06		575.70	500 $\times$ Shoulder Mag
61	A	863.10	4	.15	2000 $\times$		
	B	32	4	.12	-		
	C	58	4	.10	-		
62	A	843.60	5	.30	-		
	B	844.12	4	.10	-		
	C	43	4	.15	2300 $\times$		
63	A	265.33	4	.05	-		
	B	271.79	3			271.85	50 $\times$
	C	272.17	5	.10	-		
	D	45	3		-		
	E	68	4	.10		272.75	2500 $\times$
64	A	445.10	4	.10		444.95	110 $\times$ Shoulder Mag
	B	447.30	6	.25		447.35	2500 $\times$
	C	67	5	.15	-		
	D	88	5	.15	-		
	E	454.28	6	.13	40 $\times$		
	F	62	4	.05	-		
	G	93	4	.05	-		
	H	455.26	5	.10		455.15	20 $\times$ S.M.
	J	47	3	.02		455.60	80 $\times$
	K	456.12	5	.10		456.30	50 $\times$
65	A	148.41	5	.10	-		
	B	150.27	6	.25	2500 $\times$		
	C	69	6	.10	-		
	D	91	6	.12	-		
	E	157.32	6	.20	50 $\times$		
	F	93	4	.05		158.10	15 $\times$
	G	158.27	5	.10		158.10	15 $\times$
	H	159.18	4	.05		159.35	70 $\times$
66	A	465.43	4	.08		465.30	15 $\times$
	B	470.32	4	.10	-		
	C	471.60	5	.10	-		
	D	80	5	.10	-		
	E	472.22	6	.20	2640 $\times$		



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Area Timmins Area

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Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
67	A 244.5A	3			244 40	20x	
	B 247.12	5	.10	-			
	C 28	5	.05		247 40	2000x	
	D .83	3		-			
	E 248.02	4	.12	-			
	F .14	3		-			
	G 249.02	4	.05	40x			
	H 254.52	4	.08	-			
	J 256.27	2			256 45	20x	Shoulder Mag
68	A 382.75	3			382 95	125x	
	B 385.28	4	.10	-			
	C .43	4	.05		385.50	3000x	
	D 386.03	3		-			
	E 23	5	.15	-			
	F 394.3A	3		-			
69	A 555.48	6	.50		555 60	3700x	
	B 556.22	6	.16		556 15	120x	Shoulder Mag
	C .47	6	.20	-			
	D 557.15	6	.20	170x			Distorted
70	A 431.29	4	.10		431 20	200x	
	B 59	5	.28	-			
	C 98	5	.13	-			
	D 432.44	6	.66	-			
	E 60	5	.20		432 65	3150x	
71	A 288.70	6	.50	2000x			
	B .92	6	.20	-			
	C 289.49	5	.20	-			
	D .80	4	.05	-			
	E .99	4	.05	-			
	F 296.44	3			296.35	40x	
72	A 531.29	3	.04	-			
	B 52	3	.08	-			
	C 538.83	6	.21		538.70	420x	
	D 539.13	4	.06	-			
	E .62	6	.47	2000x			Shoulder Mag
	F 539.86	6	.15	1500x			
	G 540.81	4	.10	-			
	H 541.21	3	.02		541.30	300x	

Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks
					Location	Value	
73	A	128.87	4	.08	50X		
	B	135.12	5	.10	500X		
	C	37	5	.10	-		
	D	.82	6	.70	2000X		
	E	136.02	6	.30		136.20	500X
	F	74	3		-		
	G	137.19	4	.05		137.00	400X
	H	.53	3		-		
74	A	165.38	4	.05	40X		
	B	167.11	5	.06		166.95	130X
	C	171.52	5	.20	-		
	D	172.08	6	.70	2000X		
	E	.30	6	.50		172.45	700X Shoulder Mag
	F	.92	3		-		
75	A	220.97	3			220.90	30X
	B	227.37	4	.10		227.50	2000
75P.U.	A	231.38	3		-		
	B	233.41	4	.10	-		
	C	.70	5	.30	-		
	D	.91	6	.60	2500X		
	E	234.12	6	.15		234.30	1000X
76	A	366.23	3		20X		
	B	373.10	5	.15		373.20	500X
77	A	322.77	4	.10	-		
	B	323.07	4	.10	1500X		
	C	.34	3		-		
	D	325.22	4	.10	-		
	E	331.58	4	.05	-		
78	A	411.78	4	.05		411.95	465X
	B	414.07	4	.10	-		
	C	419.18	4	.08		419.10	35X
	D	420.64	5	.05	-		
79	A	300.99	3		-		
	B	302.23	3			302.40	30X
80	A	189.53	4	.20	20X		
	B	196.27	5	.15	-	196.35	150X

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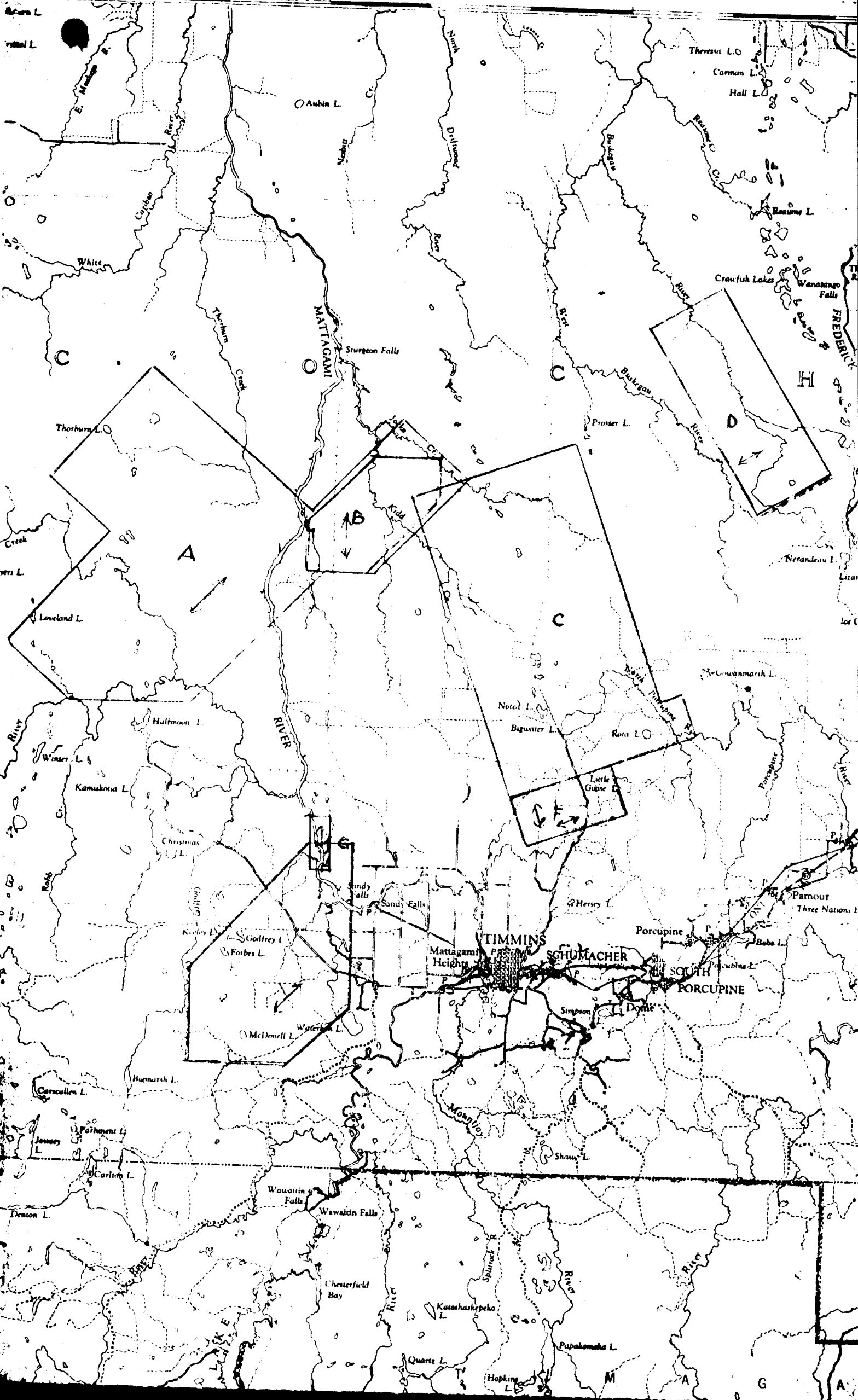
Area Timmins Area

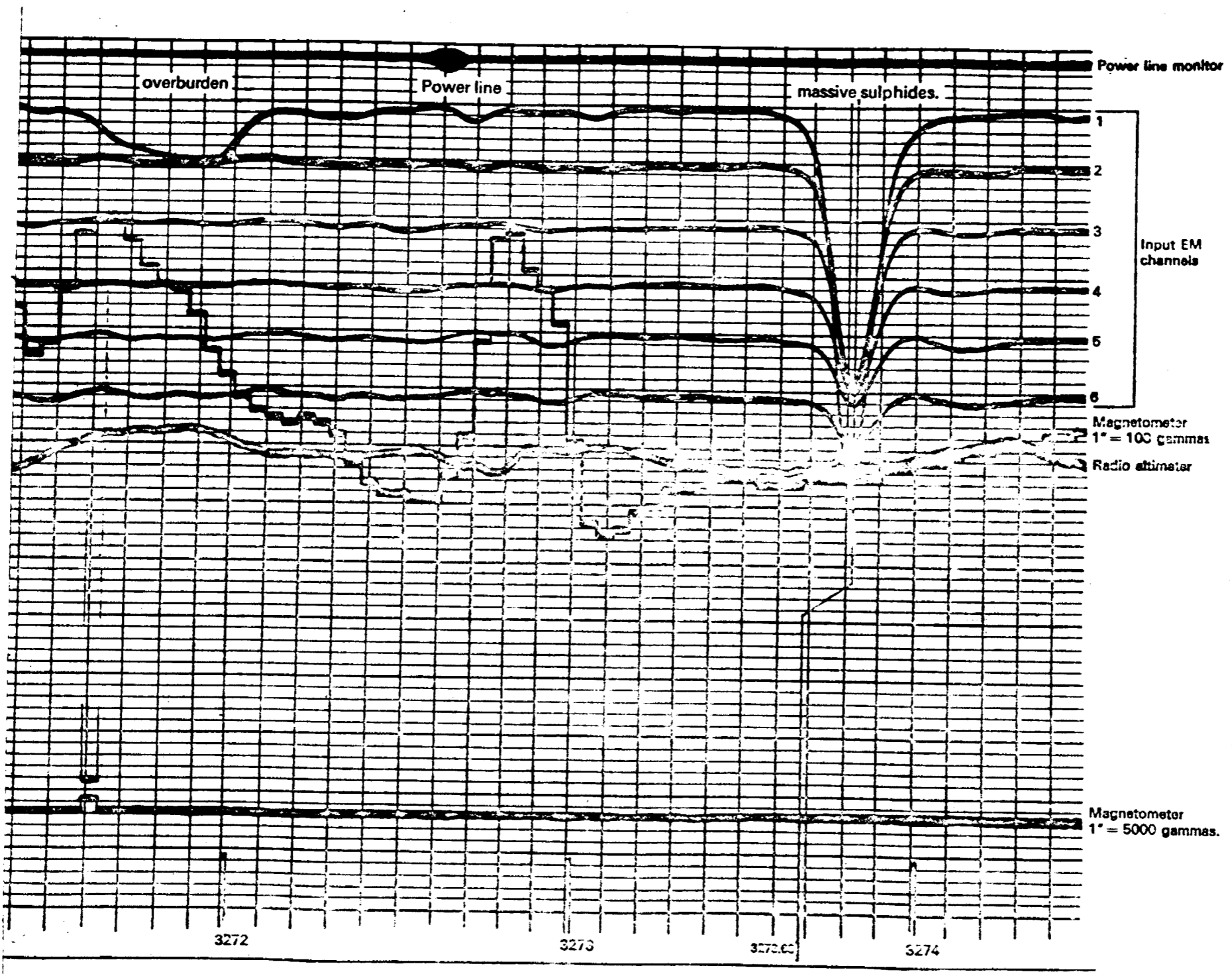
File No. 1969-41A

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Anomaly Number	Fiducial	Number of Channels	Channel 4 Amplitude	Direct Magnetic Correlation	Flanking Magnetic Peak		Remarks	
					Location	Value		
81	A	115.80	3			115.95	308	
	B	121.87	3			121.80	108	
	C	122.43	5	.15		122.50	258	
	D	123.23	5	.10		128.35	2008	
82	A	212.85	5	.15	-			
	B	213.62	5	.10	-			
83	A	355.38	4	.08		355.50	158	
	B	356.13	4	.10	-			
84	A	496.79	5	.08	-			
	B	497.53	6	.16	-			
	C	499.69	4	.20	-			
85	A	341.47	3		-			
	B	342.24	5	.10	-			
	C	344.32	4	.15	-			
86	A	513.43	3?		-			
	B	514.18	4	.10	108			
	C	516.46	5	.20	-			
87	A	504.74	3?		-			
	B	507.33	4	.16	-			
	C	510.03	3			510.95	108	
	D	87	5	.10	-			
88	A	198.98	3		-			
	B	201.26	4	.05	-			
	C	52	2		-			
	D	203.77	4	.10		203.60	1208	
89	A	111.22	3		-			
	B	111.43	3					
	C	113.77	4	.10		113.60	1508	









ONT



42A13SE0382 2.251 MAHAFFY

900

DEPARTMENT OF MINES AND NORTHERN AFFAIRS

THE MINING ACT

AIRBORNE GEOPHYSICAL CERTIFICATE

To the Mining Recorder at Timmins:

This is to certify that Hollinger Mines Ltd., has met the requirements of Section 84(a) of The Mining Act with respect to the following 82 mining claims in the Townships of Carscallen, Jamieson, Loveland, Reid and Thorburn:

- P. 256526 to 33 inclusive
- 256536 to 55 inclusive
- 256566 to 75 inclusive
- 278446 to 50 inclusive
- 292324 to 32 inclusive
- 299613 to 22 inclusive
- 301352 to 54 inclusive
- 301358 to 64 inclusive
- 301382 to 91 inclusive

January 21st, 1971.

Allan F. Lawrence  
Minister of Mines.

102.M

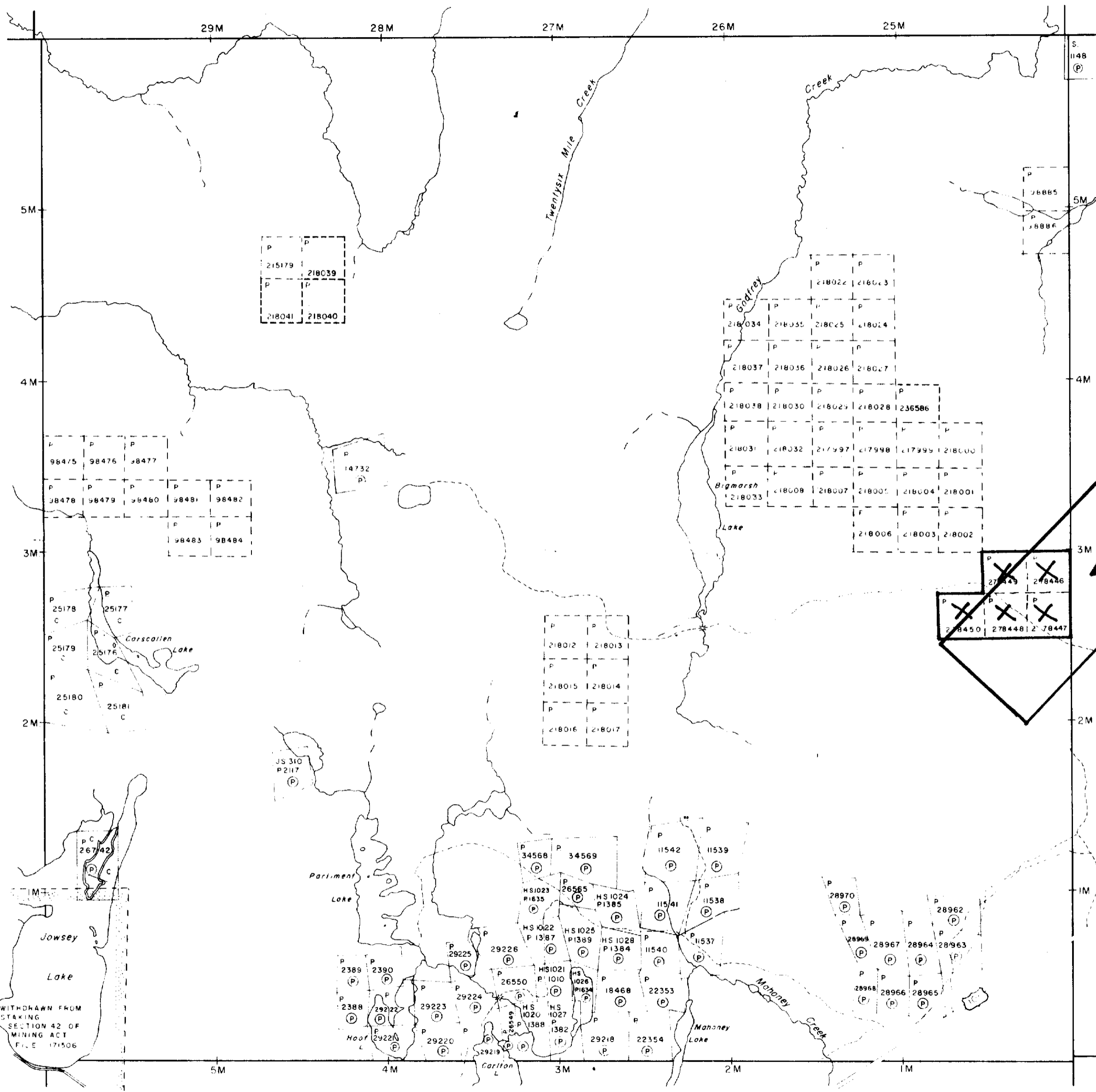
CVBCLVLEIENI TWP

10001

Turnbull Twp - M.316

Whitesides Twp - M.318

Denton Twp - M.273



THE TOWNSHIP  
OF  
**"Claim Map"**  
**CARSCALLEN**

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**

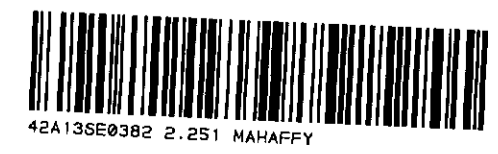
400' Surface Rights Reservation around all lakes and rivers.

**DATE OF ISSUE**  
JAN 4 1971  
**DATE OF ISSUE**  
ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

PLAN NO. **M.267**

**ONTARIO**  
**DEPARTMENT OF MINES**  
**AND NORTHERN AFFAIRS**





# GEARY

M.482

2.251

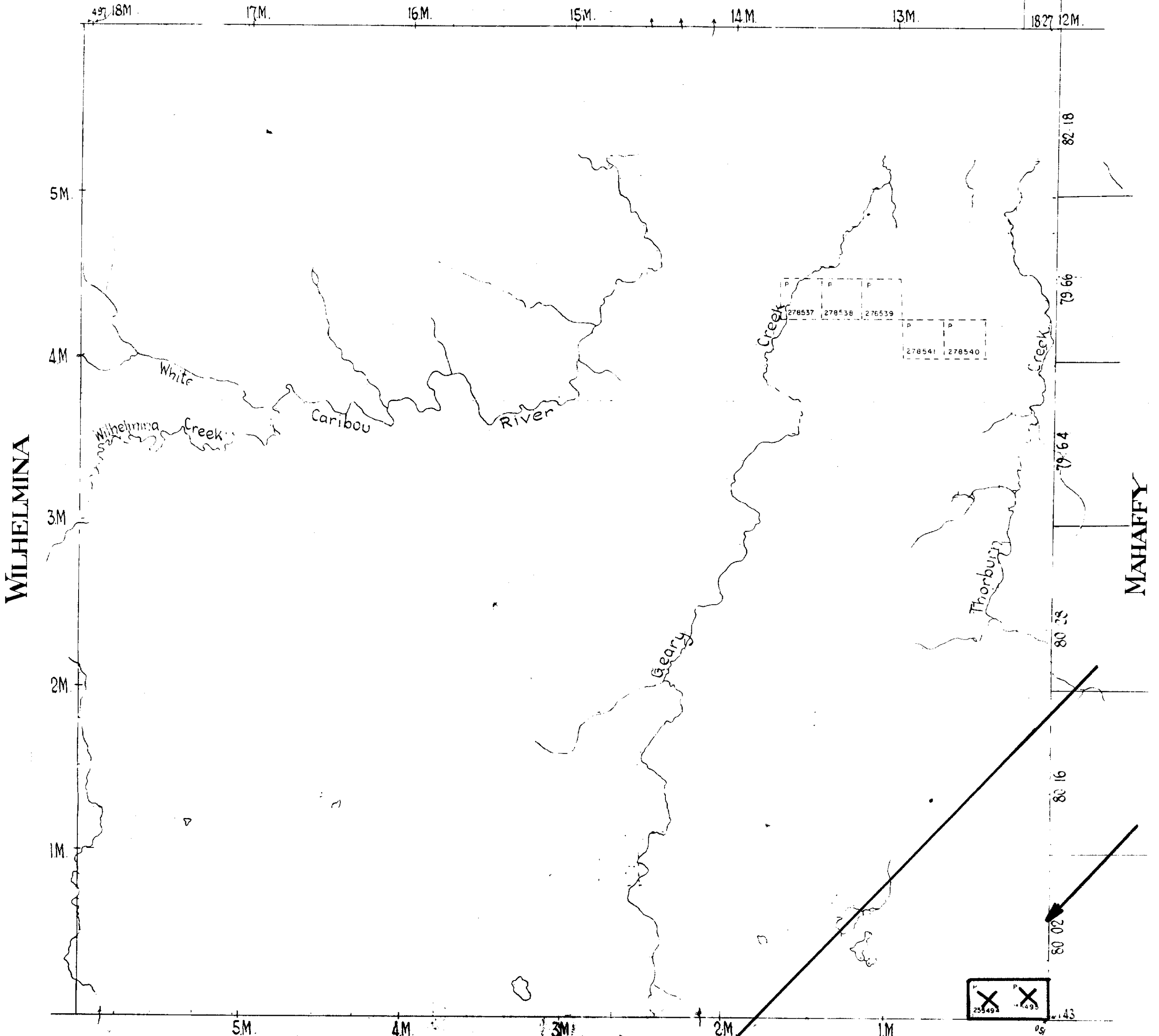
PORCUPINE MINING DIVISION  
DISTRICT OF COCHRANE

"Claim Map"

Scale - 40 Chains = 1 Inch

NORTH AST

KINGSMILL



**LEGEND**

- CANCELLED
- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LEASE OR OCCUPATION
- MINING RIGHTS ONLY

- C
- C.S.
- Loc.
- L.D.
- M.R.D.
- S.P.



42A13SE0382 2.251 MAHAFFY

5' surface rights reservation around all lakes and rivers.

X Claims over 6 months  
filing period

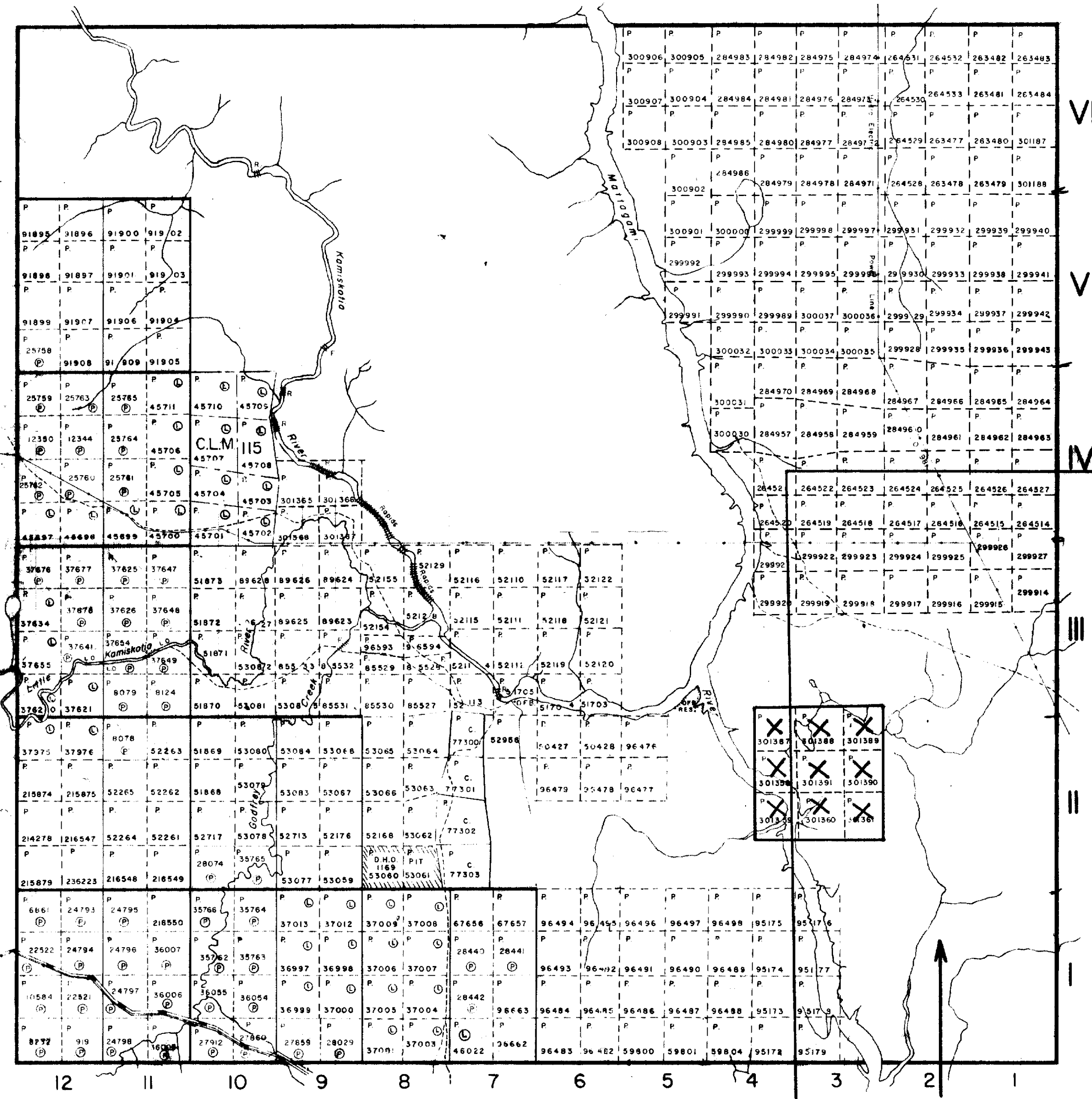
88S.M

88S.M

Macdiarmid Twp. - M. 294

Robb Twp. - M. 309

Jessop Twp. - M. 289



THE TOWNSHIP  
 OF  
**"Claim Map"**  
**JAMIESON**

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 around  
 all lakes and rivers.

Flooding rights to areas along Mattagami  
 River to H.E.P.C. - L.O 7085

**DATE OF ISSUE**

JAN 4 1971

ONT. DEPT. OF MINES  
 AND NORTHERN AFFAIRS

PLAN NO. - **M.288**

**ONTARIO**  
 DEPARTMENT OF MINES  
 AND NORTHERN AFFAIRS

Godfrey Twp. - M. 284

Bob K

88S.M

88S.M



Fhorburn Twp. (M.60I)
















THE TOWNSHIP  
OF  
**Claim Map**  
**LOVELAND**

DISTRICT OF  
COCHRANE

PORCUPINE  
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

**LEGEND**

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER LINES 
- WASH OR MUSKES 
- MINES 
- CANCELLED 

**NOTES**

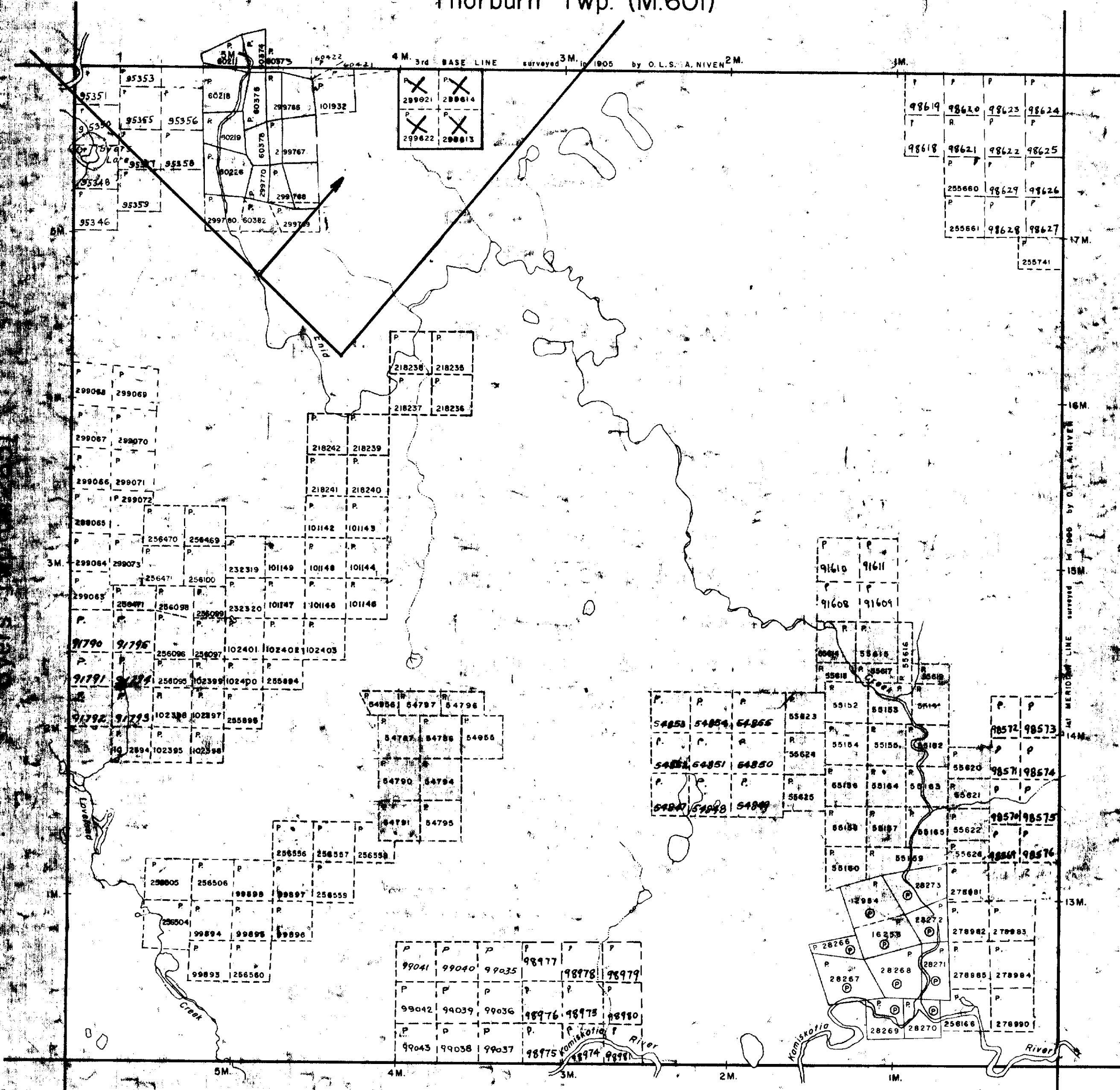
400' Surface Rights Reservation around all lakes and rivers.

DATE OF ISSUE  
JAN 4 1971  
ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

PLAN NO. M-293

ONTARIO  
DEPARTMENT OF MINES  
AND NORTHERN AFFAIRS

Macdonald Twp. (M.294)



Robb Twp. (M.309)



M 503

REID TWP. - M.575

THE TOWNSHIP OF  
"Claim Map"  
MACDIARMID

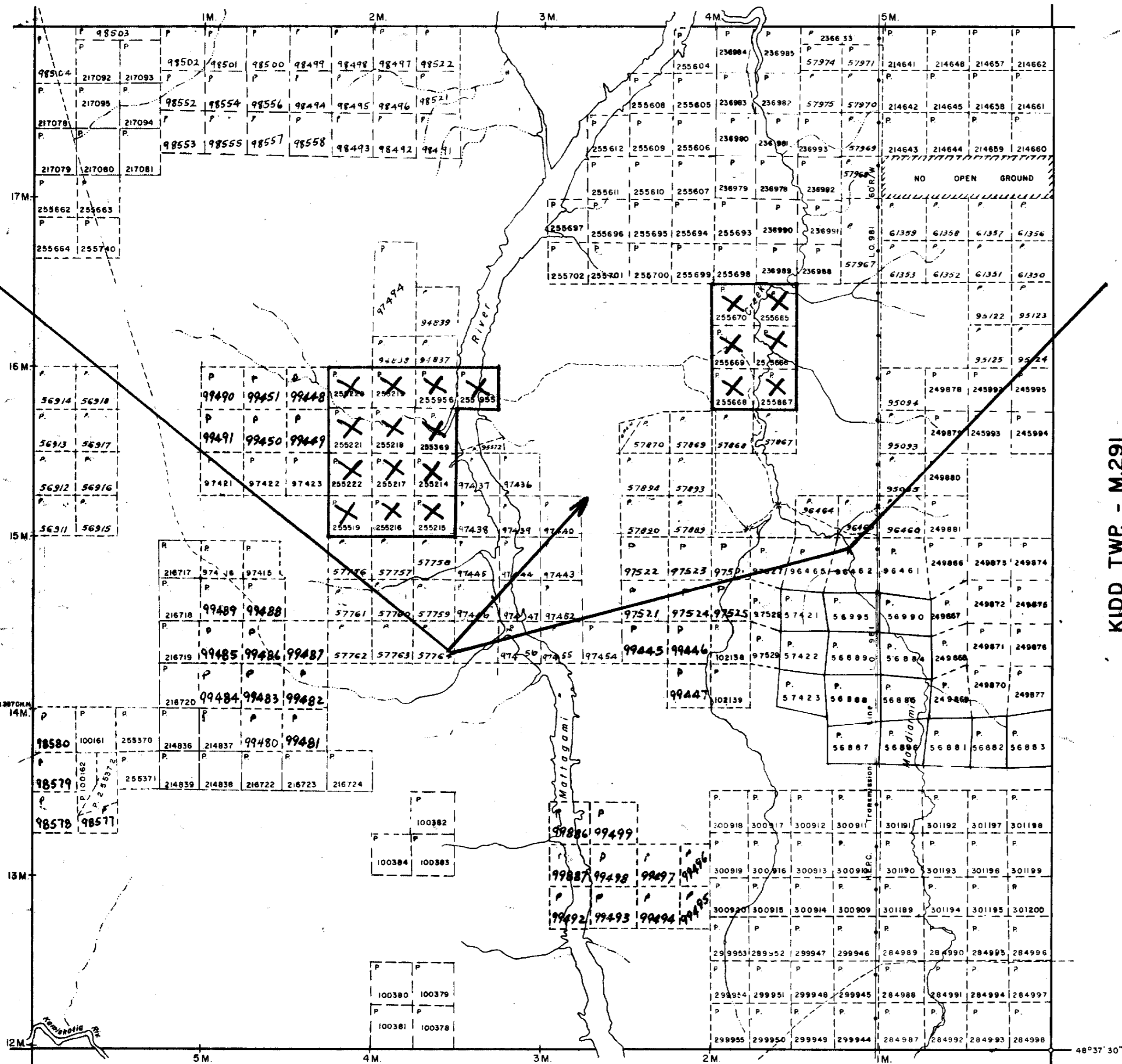
DISTRICT OF  
COCHRANE

PORCUPINE  
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LOVELAND TWP. - M.293

KIDD TWP. - M.291



LEGEND

- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LICENSE OF OCCUPATION
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

- C.S.
- Loc.
- L.O.
- M.R.O.
- S.R.O.

NOTES

400' surface rights reservation around all lakes and rivers.

Flooding rights to areas along Mattagami River reserved to H.E.P.C. - L.O. 7085.

*X Claims over 6 months filing period*

DATE OF ISSUE  
JAN 4 1971  
ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

PLAN NO. M.294

ONTARIO  
DEPARTMENT OF MINES  
AND NORTHERN AFFAIRS

JAMIESON TWP. - M.288



THE TOWNSHIP 2.251  
OF  
**"Claim Map"**  
**REID**

DISTRICT OF  
**COCHRANE**

**PORCUPINE**  
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS

**LEGEND**

- PATENTED LAND (P)
- CROWN LAND SALE (CS)
- 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 MUSKIEG
- MINES
- CANCELLED

**NOTES**

400' surface rights reservation around all lakes and rivers.

Subdivision of this twp into lots and concessions annulled Aug 19, 1953

Flooding rights to areas along Mattagami River reserved to HEPC. - L.O 7085

*X Claims over 6 months  
filing period*

DATE OF ISSUE  
**JAN 4 1971**  
ONT. DEPT. OF MINES  
AND NORTHERN AFFAIRS

PLAN NO **M.575**

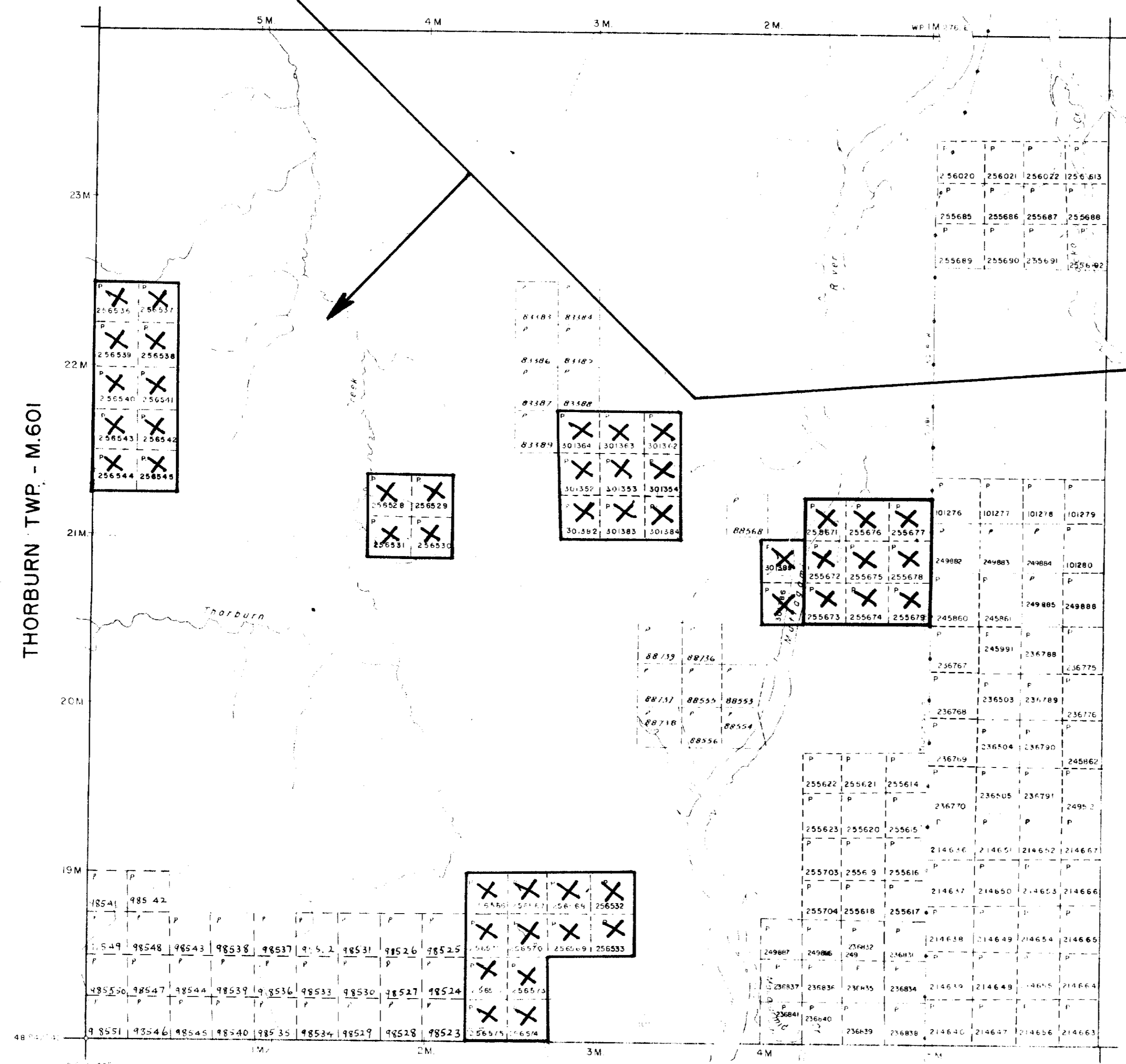
**ONTARIO**  
**DEPARTMENT OF MINES**  
**AND NORTHERN AFFAIRS**

MAHAFFY TWP. - M.540

THORBURN TWP. - M.601

CARNEGIE TWP. - M.441

MACDIARMID TWP. - M.294



# THORBURN

PORCUPINE MINING DIVISION  
DISTRICT OF COCHRANE

M.601

2.251

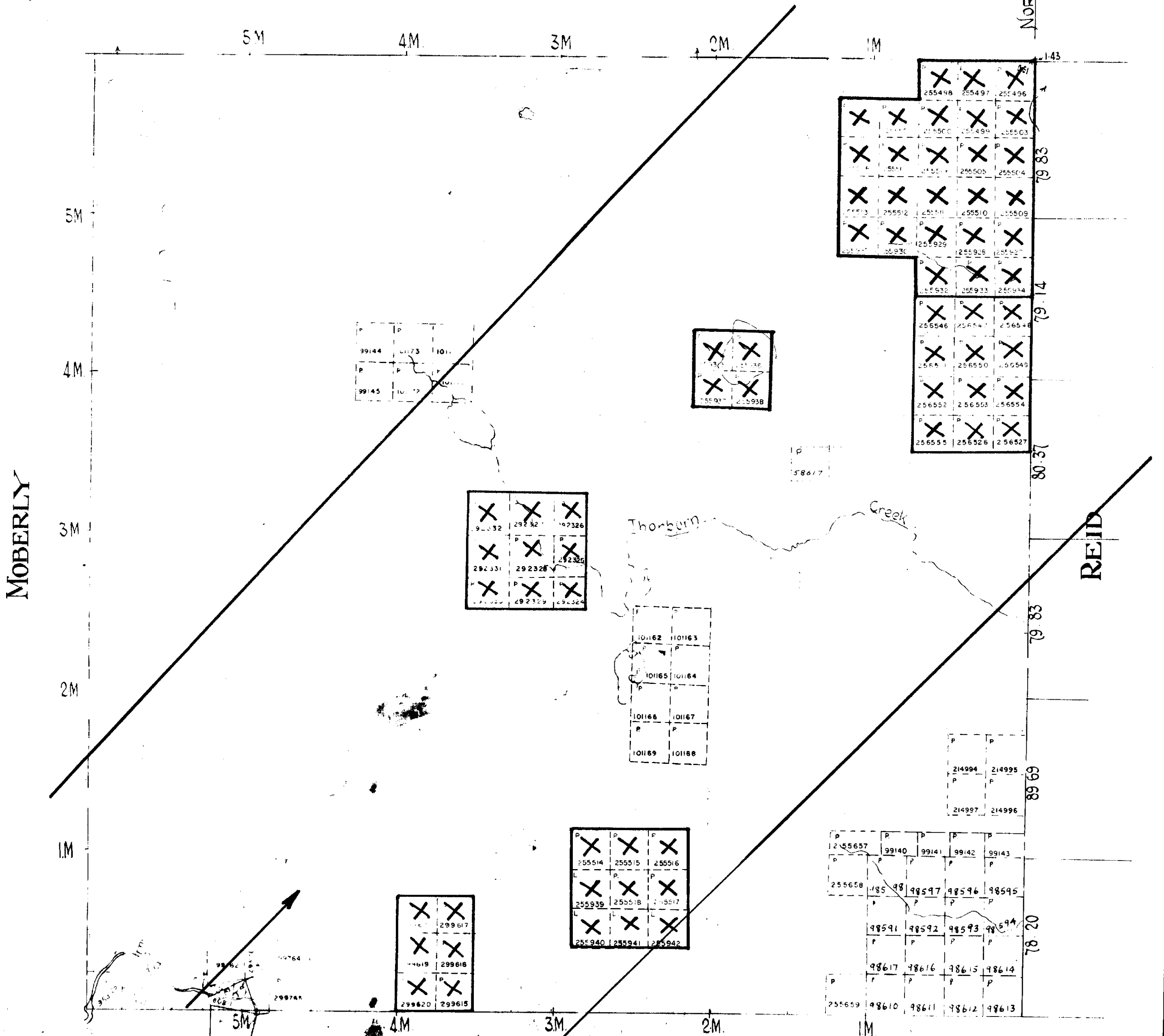
"Claim Map"

Scale - 40 Chains = 1 Inch

NOTE

400' Surface Rights Reservation  
around all Lakes and Rivers.

GEARY

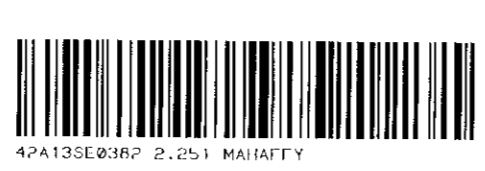


X Claims over 6 months  
filing period 100-M



42A135E0302 2.251 MAHAFFY





280

*M. Cayent*

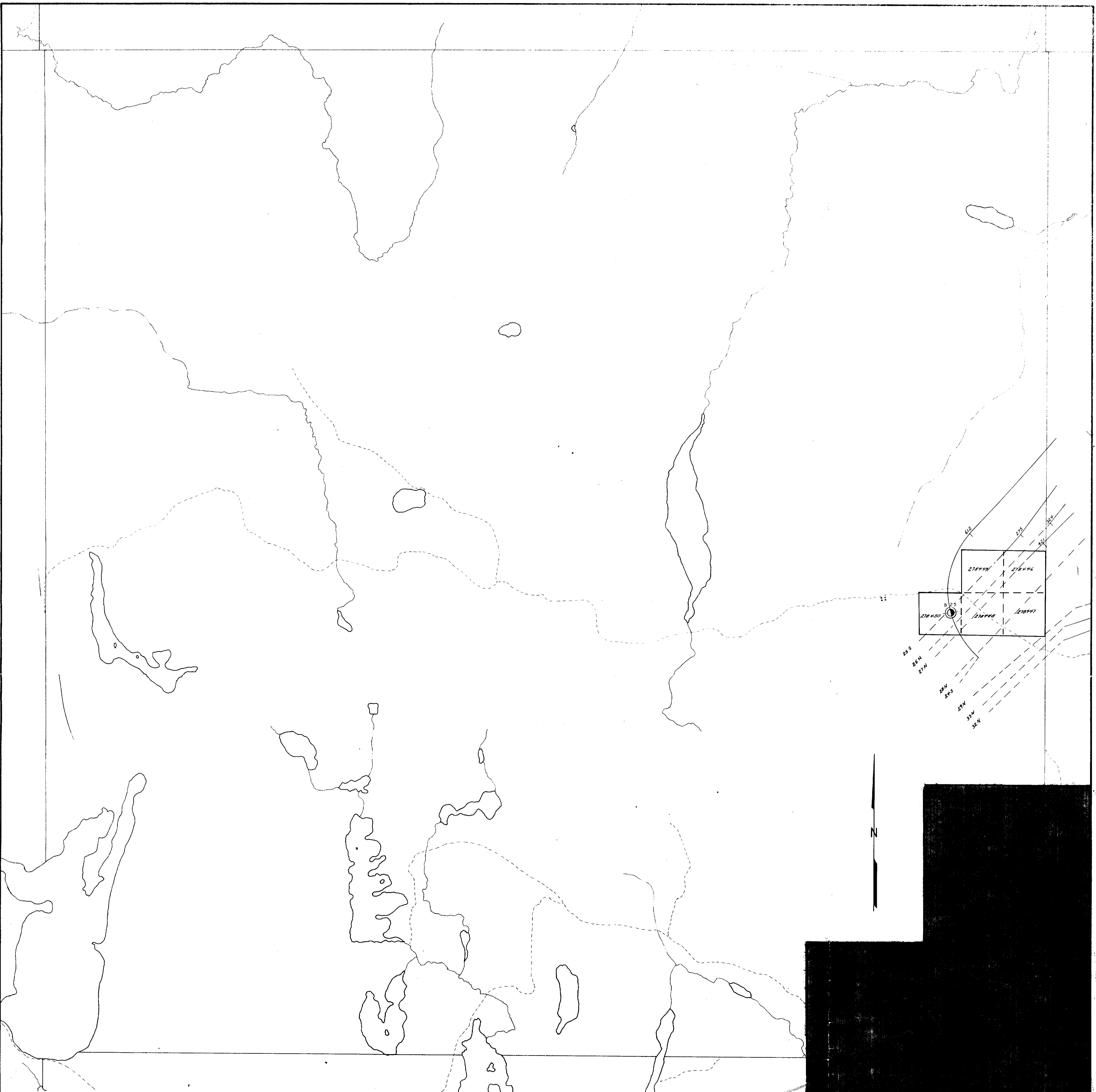


QUESTOR SURVEYS LIMITED  
 10000th St. N. Unit 100  
 Edmonton, Alberta T6E 2E2

TIMMINS AREA

1/1/71





42A135E9382 2.251 MAHAFFEY

