

REPORT ON

GEOLOGICAL SURVEY

HEARST & McFADDEN TOWNSHIPS

ONTARIO

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R.A. MacGregor, P. Eng.

January 6, 1984

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MINING LANDS SECTION

REPORT ON GEOLOGICAL SURVEY

HEARST AND MCFADDEN TOWNSHIPS, ONTARIO

I. INTRODUCTION

A geological survey was carried out during July to November 1983 over lines cut in the winter of 1980. Results are shown on the enclosed plan.

II. LOCATION, ACCESS AND OWNERSHIP

The claims covered by the survey are located in the south east part of Hearst Township, and south west part of McFadden Township.

There are forty claims numbered L511686 to 511692; L523353 to 523355; L523451 to 523456; L532821 to 532827; L532831 to 532835; L548643 to 548653 all inclusive and L523194 recorded in the names of R.A. MacGregor, 134 Palace Drive, Sault Ste. Marie, Ontario and Superior Northwest Inc., Box 1110, Sault Ste. Marie, Ontario.

Access to the property is obtained by travelling south from Larder Lake, Ontario about 4 miles on Highway 624 and then following seasonal road for about 2 miles to the old Martin-Bird Mine. The claims may be reached from here by following geophysical lines and trails to the south-east.

III. PREVIOUS EXPLORATION

There was probably considerable prospecting in the past when the Martin-Bird mine to the northwest was in operation during the 1930's. Some pits were noted during the survey, but parts of the area have been logged over, and grown up to dense brush or covered by a tangle of brush and dead balsam trees since that time. Nothing is known of the previous work.

Previous Exploration (Continued)

About 3/4 of a mile to the north-east is the Martin-Bird Mine on which underground work was carried out and ore grade material reportedly developed during the 1930's. Lac Minerals Limited is currently continuing development work on this property.

Adjoining the claims to the west is a block of claims owned by Combined Larder Mines Ltd. They also own a second block of claims which adjoins to the south and also the west on which development work was carried out including the sinking of some shallow shafts before 1910. Recently some stripping and geophysical surveys have been carried out, but nothing is known of past or current results.

IV. TOPOGRAPHY

The major part of the claims are covered by swamp or Pleistocene drift. Rocky hills rising steeply out of the swamp from 10 to 50 feet above the surrounding swamp have rock exposure around the edges or on the higher parts with small cliff faces. Even in these higher areas the rock is obscured by moss or drift up to several feet thick. Swamp areas are covered by a dense growth of tag alders, small black spruce, tamarack and cedar with some balsam in the drier parts. Most of the creeks are flooded by beaver ponds. Higher ground was covered by balsam which has died allowing a dense underbrush to grow up among the fallen dead trees. Traversing and locating outcrop is very difficult in this terrain.

V. SURVEY PROCEDURE

A grid line was laid out across the property with a base line running about S 40 $^{\rm O}$ E across the property.

V. Survey Procedure (Continued)

Crosslines were cut perpendicular to the baseline at 400-foot intervals. The picket lines were marked with fluorescent red paint for easier observation. Trial lines were run east and west from the picket lines by pace and compass in search of poorly exposed outcrop. All outcrops were noted in a field book as to rock type and distance from picket lines. This information was then plotted on a 1" = 400' scale plan.

VI. GEOLOGY

The general geology of Hearst and the west part of McFadden Township have been described by J.E. Thomson (1). A later survey of McFadden Township and Rattray Township to the south was carried out in 1978 by Z.L. Mandziuk (2).

The claims are underlain by a volcanic-sedimentary sequence of rocks cut by small to medium sized intrusions of felsic to mafic composition. Some small areas are overlain by later sedimentary rocks.

The rocks appear to have an approximate north-south trend, but are folded around the nose of a porphyry intrusion in the south-west part of the claims.

The volcanic rocks are basic fine to medium grained, green to dark green in colour. Pillow lavas are the predominate group.

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⁽¹⁾ O.D.M. Report Vol. 56 part 8 1947

⁽²⁾ O.G.S. Report 204, 1980

Geology (Continued)

In places the volcanics have been altered to chlorite schist with carbonatization. The best example of this is on claim L548644.

The sediments consist largely of fine grained grewackes with some coarser arkosic interbeds. Due to extensive drift cover, even in areas of outcrop, it is difficult to trace any individual bed. Interbedded with the greywacke is a black graphitic argillite or tuff. Geophysical surveys indicate that this same graphitic material probably underlies some of the drift areas.

Intrusives consist of feldspar porphyries, lamprophyre and associated basic syenite and some diorite and gabbro dykes. The feldspar porphyries range from coarse grained with reddish feldspar phenocrysts to 3mm in a dark green fine grained matrix to a fine grained greenish to grey rock. They may be extrusive flows. A distinctive coarse grained porphyry with white feldspar phenocrysts to 5 mm in a reddish finer grained matrix occurs on line 72 SE at 36 to 38 SW as a steep cliff face. To the north east the porphyry is silicified finer grained and mineralized with pyrite. Relationships between the fine and coarse grained phases is obscured by extensive overburden.

Lamprophyres are characterized by uneven weathering and black biotite. They occur mainly as dykes cutting both syenites and greywackes. In larger outcrops they appear to grade into basic syenites.

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Geology (Continued)

In the eastern part of the property, mainly from the township boundary east there are a number of basic syenite intrusions associated with lamprophyre. Carbonatization appears to be associated with these intrusions. Relationships are obscured by the extensive overburden in the east section of the property.

There is one outcrop of Huronian greywackes of the Cobalt series in the east part of the property. These greywackes are more massive than the older greywackes, usually finer grained and weather to a lighter colour. Huronian sediments are known to outcrop further to the north of the property. The large drift covered area in the north of the east part of the property may well be underlain by Huronian sediments.

VII. CONCLUSIONS

The geological survey shows a volcanic-sedimentary sequence of rocks intruded by feldspar porphyries and basic syenites. The geological setting is similar to that of the Martin-Bird property to the north-west on which ore grade material has been reported.

Some samples taken during the survey show anomalous amounts of gold. The most favourable areas for further prospecting are the silicified porphyries, particularly along the contacts with the sediments, and areas of carbonatization.

Respectfully submitted

January 6, 1984

Robert A. MacGregor, P. Eng.

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CERTIFICATE

- I, Robert A. MacGregor, certify:
- I am a Mining Engineer residing at 134 Palace Drive, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 17 years.
- 2. I am a member of the Association of Professional Engineers of the Province of Ontario and a member of the Canadian Institute of Mining and Metallurgy.
- 3. I attended Queen's University for two years in the Mining-Geology course.
- 4. I personally carried out or supervised the field work on the subject claims.

Jan 6/87
Date

R.A. MacGregor

Ministry of Natural Resources

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

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AND				Date Certified	10, On	Cersified b	v Signature)	,
a)				Jan.	17/84	1/4	land	1877

OFFICE USE ONLY



Type of Survey(s) GEOLOGICAL

Township or Area Hearst & McFadden Twps

Ministry of Natural Resources

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.

	(-)-	N.A.	1.101	Gregor
		Super	ior	Northwest Inc.
Survey Con	npany	Colex	Ex	plorations Inc.
Author of I	Report	R.A.	Mac	Gregor
Address of	Author	134 P	ala	ce Dr., S.S. Marie, Ont
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TOTAL CLAIMS_

GEOPHYSICAL TECHNICAL DATA

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

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Number of Stations_		Number o	f Readings	
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Instrument				
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INDUCED POLARIZATION



Geotechnical Report Approval

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Approved	Wish to see again with corrections	Date	Signature	
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Instica Comple	M. Anderson Jan 26,84
Assessed	
Approved Reports of Work sent out	·. ·
Notice of Intent filed	· · · · · · · · · · · · · · · · · · ·
Approval after Notice of Intent sent out	
Duplicate sent to Resident Geologist	

Duplicate sent to A.F.R.O.

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1984 01 19

Your File: 373

Our File: 2.6277

Mr. George J. Koleszar Mining Recorder Ministry of Natural Resources 4 Government Road East P.O. Box 984 Kirkland Lake, Ontario P2N 1A2

Dear Sir:

We have received reports and maps for a Geological survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 511686 et al in the Townships of Hearst and MacFadden.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

J.R. Morton Acting Director Land Management Branch

Whitney Block, Room 6643 Queen's Park Toronto, Ontario M7A 1W3 Phone: (416)965-1380

A. Barr:mc

cc: R.A. MacGregor 134 Palace Drive Sault Ste. Marie, Ontario P6B 5H5 FROM THE DESK OF

Robert A. MacGregor Jan. 12/84 Hen siss -Please find enclosed 7 copies each of Reporton Geological Survey Heart & Mc Fadden Sups. V Magnetometer & VLF EM Survey - Mc Elroy Jup.

Promise.

JAN 17 1084

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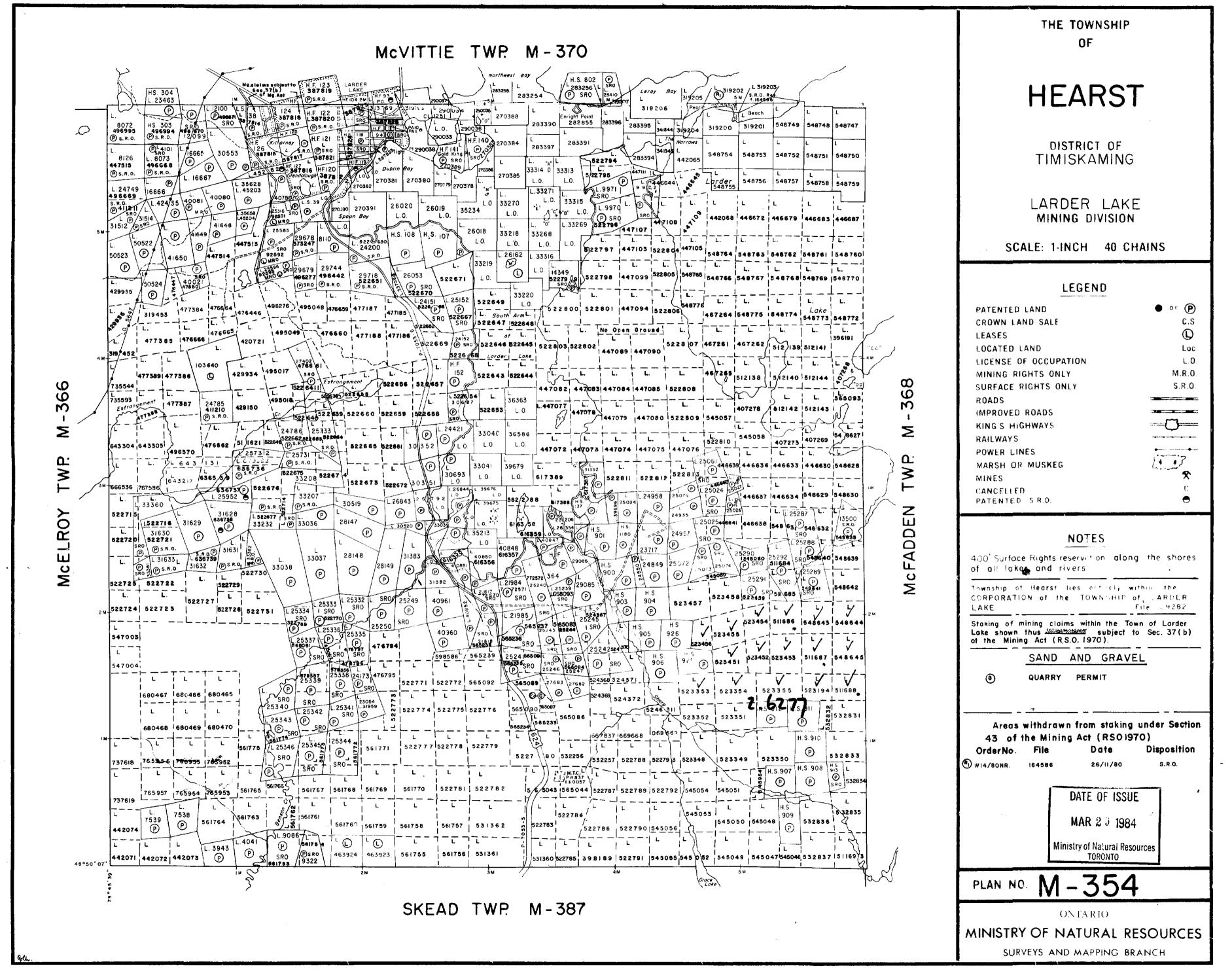
"Expenditures" section may be entered in the "Expend. Days Cr." columns. Do not use shaded areas below

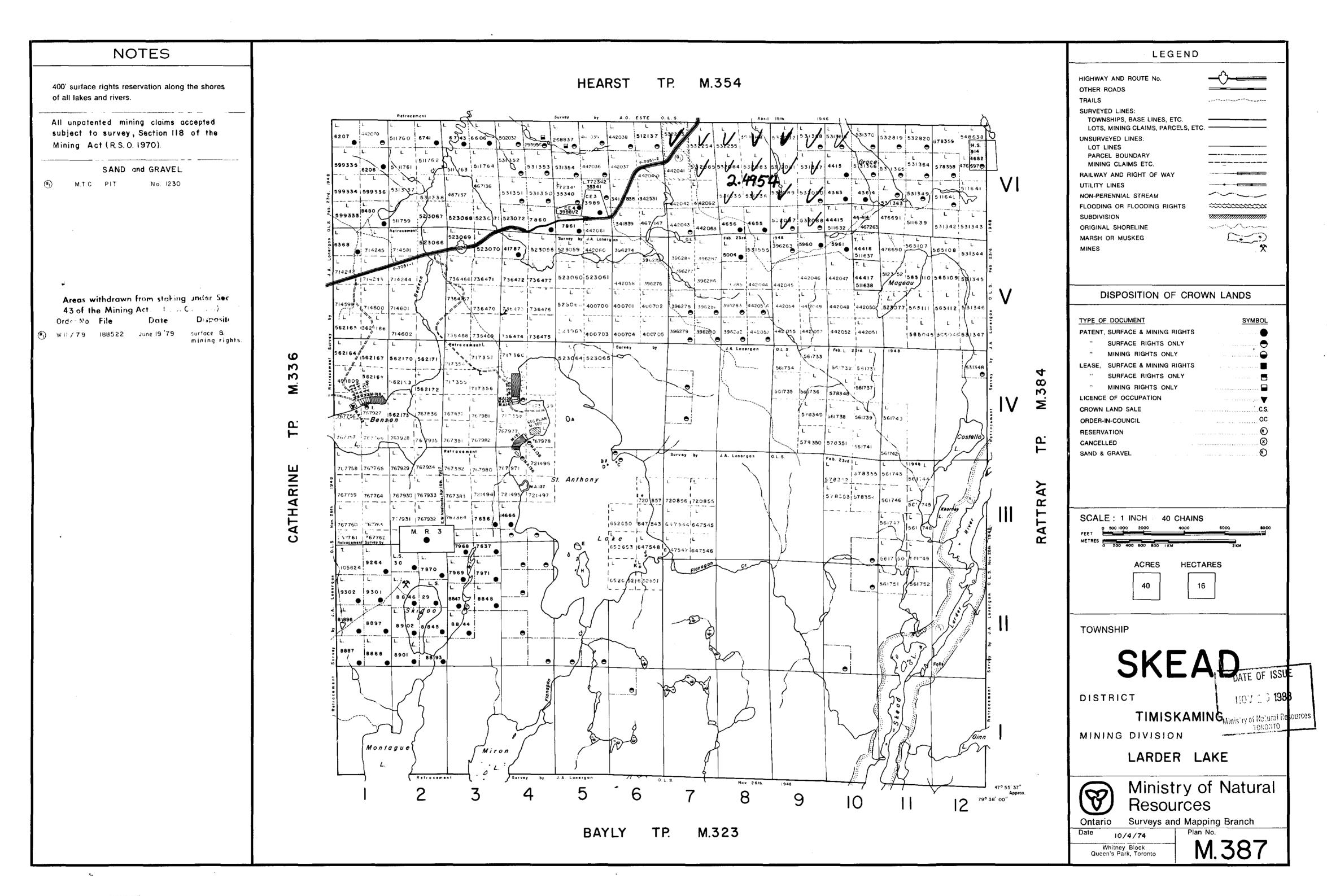
Certified by Signature

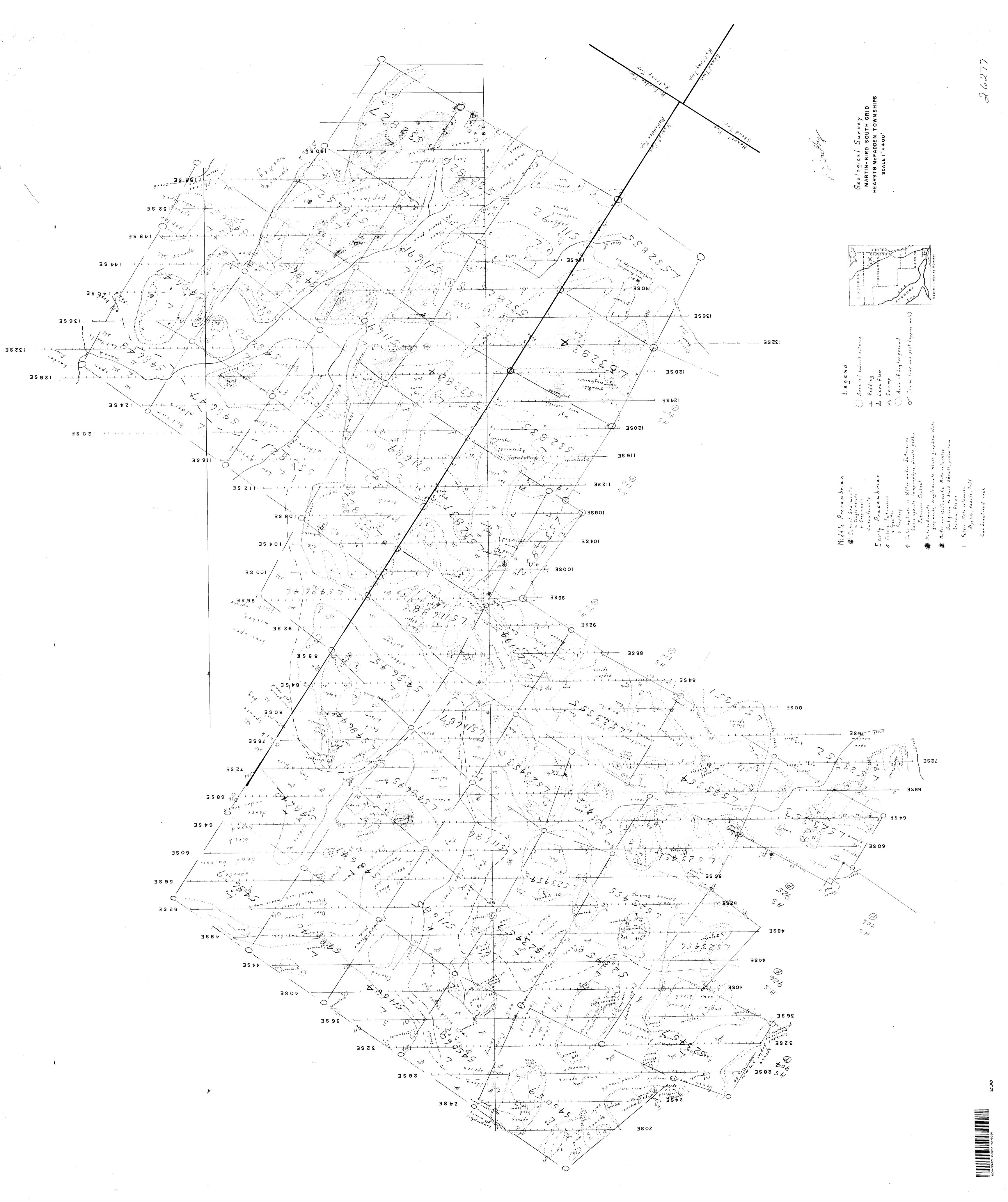
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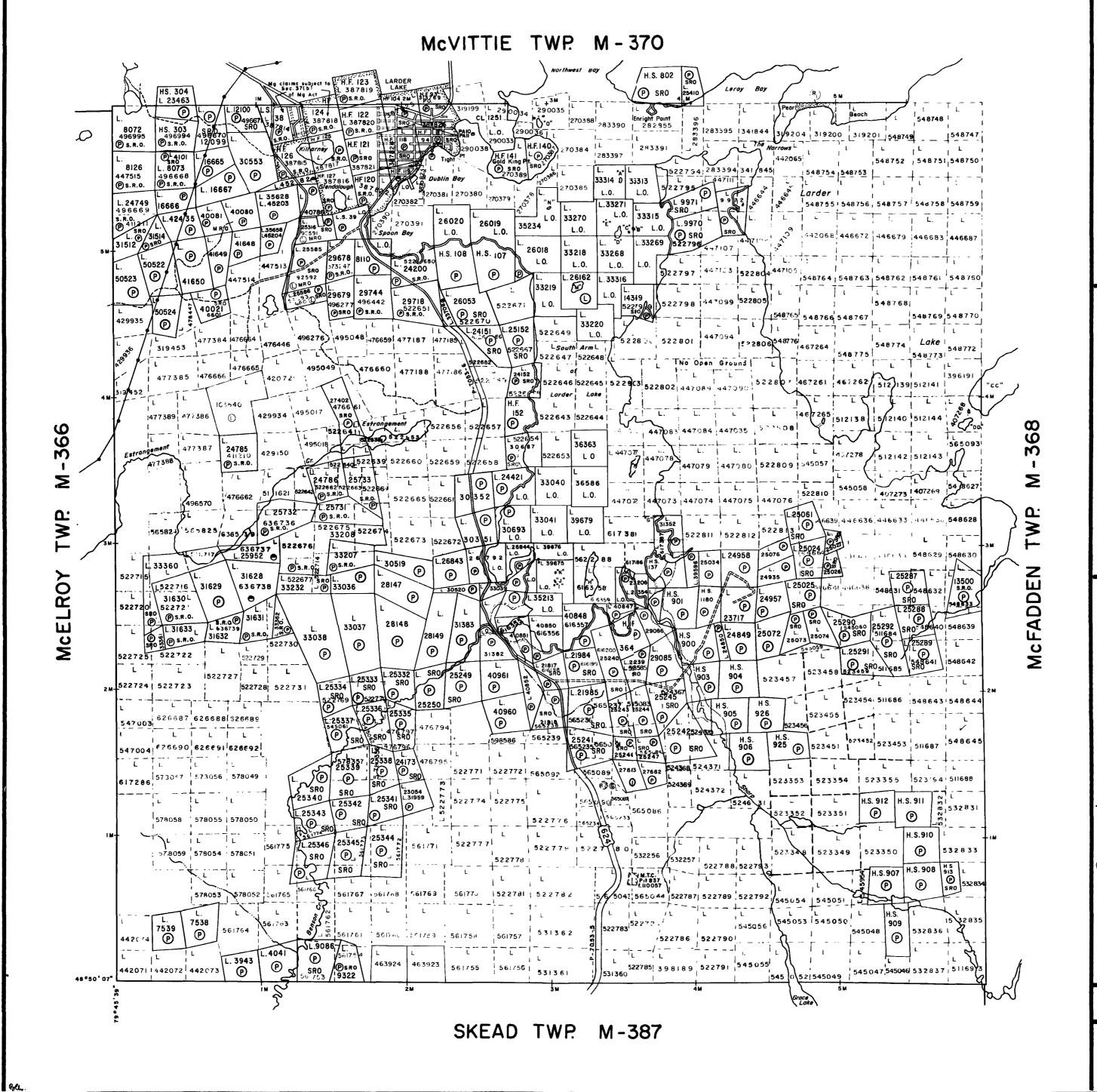
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Type 6. Survey(s)			-	· · · · · · · · · · · · · · · · · · ·	Township			
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R.A. MacGreg	or						's Licence No. 5070	
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THE TOWNSHIP OF

HEARST

DISTRICT OF TIMISKAMING

LARDER LAKE 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 MARSH OR MUSKEG MINES CANCELLED PATENTED S.R.O.

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

Township of Hearst lies entirely within the CORPORATION of the TOWNSHIP of LARDER LAKE. File: 129282.

Staking of mining claims within the Town of Larder Lake shown thus (1997) subject to Sec 37(b) of the Mining Act (RSO 1970).

SAND AND GRAVEL

QUARRY PERMIT

Areas withdrawn from staking under Section
3 of the Mining Act (RSD 1970)
44. 30. File Date Disposition

(R) W 14/80 NR 1645

26/II/80 SRO

DATE OF ISSUE JAN 29 1982

Ministry of Natural Resources TORONTO

PLAN NO. M - 354

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

