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31M04SW0050 63.2790 STRATHCONA

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DIGHEM SURVEY

COPPERFIELDS CLAIMS

TEMAGAMI, ONTARIO

BY

DIGHEM LIMITED

April 23, 1970.
Toronto, Ontario.

D. C. Fraser

S U M M A R Y

A total of 1175 line-miles were flown in the Temagami area of Ontario, of which 27 line-miles were over Copperfields Mining Corporation claims. The survey was flown in the interval February 12 to March 4, 1970.

The deep penetration channel seldom had noise in excess of 2 ppm. The photomosaic anomaly map contains both anomaly locations and interpretations.

INTRODUCTION

A DIGHEM survey of 1175 line-miles was flown over claims owned by Copperfields Mining Corporation during February and March of 1970, in the Temagami area of Ontario. The equipment provided five channels of EM data at 918 hz, and radioaltitude. The channels and noise levels were:

<u>Channel</u>		<u>Time Constant</u>	<u>Scale ppm/mm</u>	<u>Noise ppm</u>
1	horizontal null coil quadrature	1 sec	4	4
2	vertical null coil quadrature	1 sec	4	4
3	maximum-coupled coil inphase	1 sec	4	4
4	maximum-coupled coil quadrature	1 sec	4	4
5	maximum-coupled coil inphase	4 sec	2	2
6	radioaltitude			

The quoted noise levels are valid for wind speeds up to 20 mph. Higher winds may cause the system to be grounded because excessive bird swinging produced control difficulties in piloting the helicopter. The swinging results from the 50 square feet of area which is presented by the bird to broadside gusts. The DIGHEM system nevertheless can be flown under wind conditions that ground all other continuous wave AEM systems.

The survey was flown in a north-south direction at a line-spacing of 1/8th mile, using the FH-1100 helicopter CF-DAL. Ancillary equipment consisted of a Bonzer radioaltimeter, Traid sequence camera, MFE 6-channel hot pen recorder, and a 60 hz monitor. The DIGHEM equipment was constructed by Barringer Research Limited, and is described in a brochure appended to the rear of this report.

DATA PRESENTATION

The data in the vicinity of the claims is presented on a sheet compiled from an uncontrolled photomosaic. The anomalies are interpreted according to the conductivity-thickness in mhos of an oblique-striking vertical dike model. Generally, only bedrock conductors are shown because the multiple EM channels usually allow surface (e. g. , swamp) conductors to be eliminated by interpretation. Consequently, all anomalies generally can be considered to represent bedrock conductors and, as such, could reflect ore regardless of their conductivity-thicknesses. However, conductors may be placed into three categories for sake of comparison from area to area, i. e. ,

<u>conductivity-thickness (mhos)</u>	<u>conductor quality</u>
≤ 9	fair
10 - 29	good
≥ 30	excellent

The mho values are independent of flying height or depth of burial apart from the averaging of the response of a conductor over a greater portion of the body as height increases. Weak responses from deeply buried conductors are not confused with weak responses from shallow conductors because the former will have larger mho values.

The attached data sheet provides a tabulation of the anomalies in ppm and mhos.

ASSESSMENT WORK

Assessment credits of 20 days per claim are required to keep the 54 claims (see listing appended to the rear) in good standing. The 27 line-mile survey over the claims was characterized by exceptionally good navigational control due to the large number of recognizable geographical features, so that 1/8 mile line-spacing was maintained fairly accurately. In addition, data well outside the claim boundaries is provided to allow a better appreciation of the survey information within the claims themselves.

As a point of interest, the four anomalies on lines 14-17 represent the massive pyrite zone of the Temagami mine of Copperfields Mining Corporation Limited.

Only one anomaly was obtained within the claim area, on line 49. It will be prospected next winter.

Respectfully submitted,



D. C. Fraser,
Chief Geophysicist

DCF/ap

Drawing #3908 accompanies this report, illustrating claim locations, flight lines and anomalies.

CLAIM LISTINGS

TEMAGAMI GROUPS

T-61806	L-228549
T-61807	L-228550
	L-228551
T-61884	L-228552
T-61885	L-228553
T-61886	L-228554
T-61887	L-228555
T-61888	L-228556
T-61889	L-228557
T-61890	L-228558
	L-228559
L-104371	L-228560
L-104372	L-228561
L-104373	L-228562
L-104374	L-228563
L-104375	L-228564
L-104376	L-228565
L-104377	L-228566
L-104378	L-228567
L-104379	L-228568
L-104807	

O'CONNOR GROUPS

L-209055	L-209064
L-209056	L-209066
L-209057	
L-209058	L-209067
L-209059	L-209068
L-209060	L-209069
L-209061	
L-209062	T-54899
L-209063	

Cynthia Twp.

THE TOWNSHIP OF "Claim Map" JOAN

DISTRICT OF NIPISSING

LARDER LAKE 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
- KINGS HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

NOTES

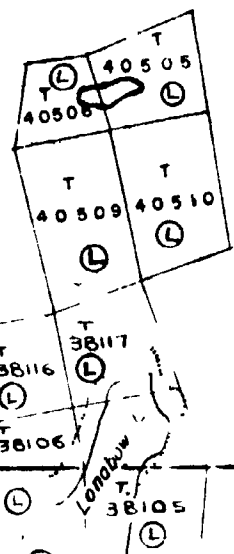
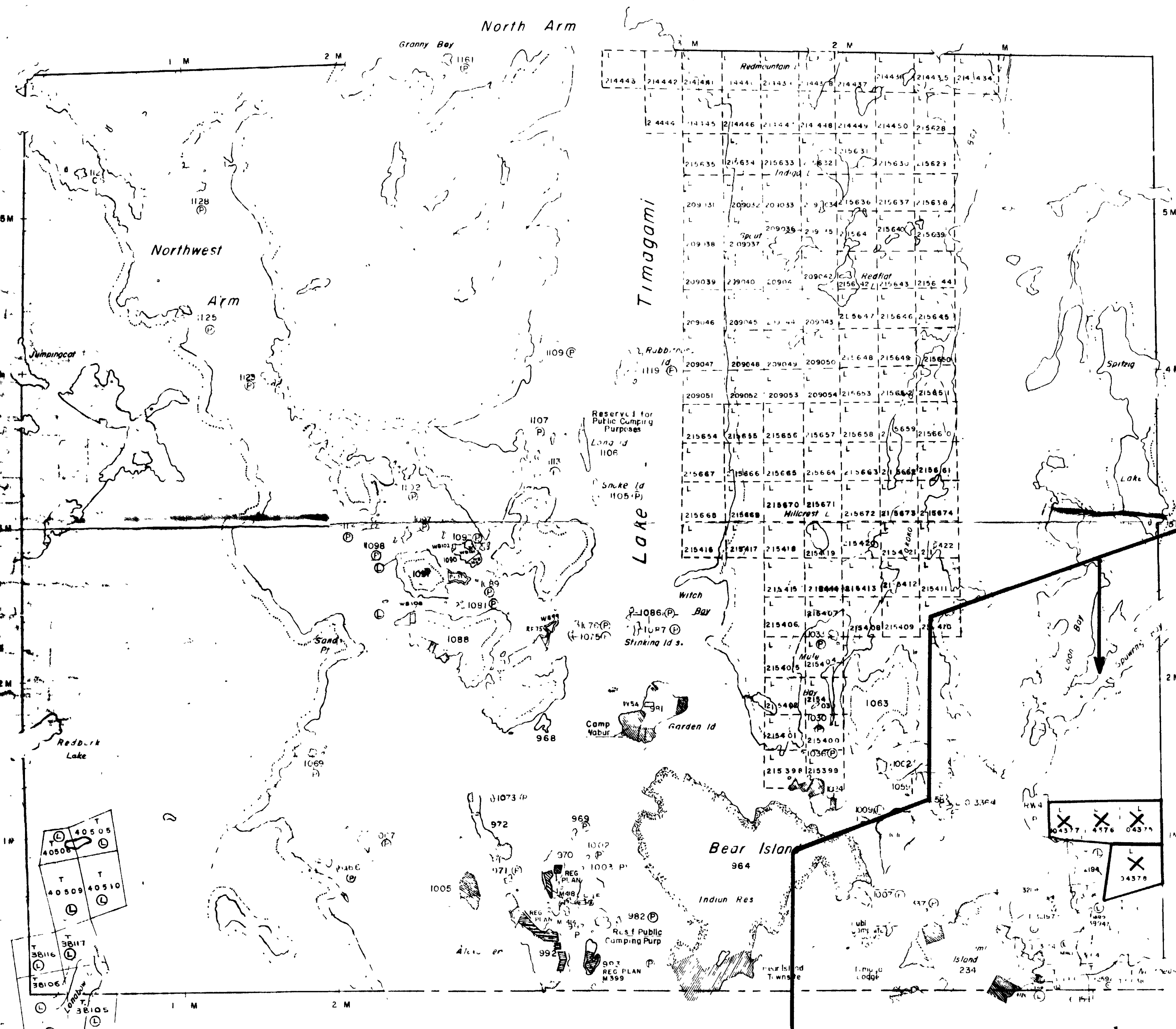
400' Surface Rights Reservation around all Lakes and Rivers.

All Timagami islands withdrawn from staking under Sect. 39 Sub 3 of the Mining Act - O.C. - 19 Dec. 1911. File. 94351 Vol 2

Summer Resorts Shown Thus [Symbol]

And For Status Please Contact Dept. of Lands & Forests

For Flooding Of Gull Lake And Longbow Lake See File 46194



NO - M.

ENT O

CHAMBERS TWP. M-447

THE TOWNSHIP
"Claim Map"
BRIGGS

DISTRICT OF
NIPISSING

LARLER LAKE
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	Ⓢ

NOTES

THIS TWP IS IN THE
TIMAGAMI PROVINCIAL FOREST

400' Surface rights reservation around all lakes and rivers.

Islands in Lake Timagami not open for staking.

DATE OF 1921
MAY 11 1911
MAY 17 1911

PLAN NO. M-428

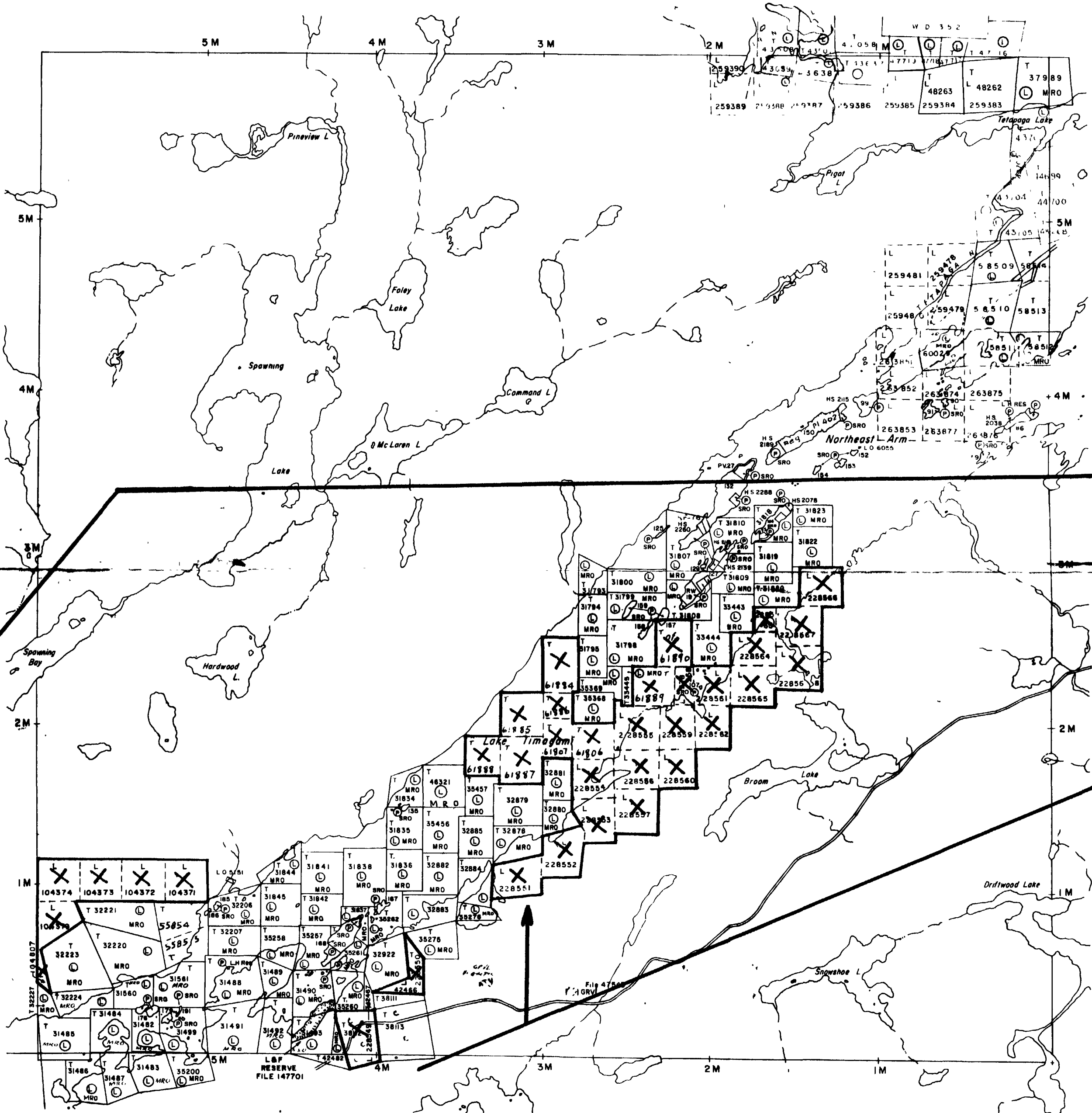
DEPARTMENT OF MINES

— ONTARIO —

JOAN TWP. M.513

STRATHCONA TWP. M-595

YATES TWP. M.616



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Strathy Twp. M.596

THE TOWNSHIP
OF
"Claim Map"
STRATHCONA

DISTRICT OF
NIPISSING

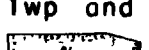
LARDER LAKE
MINING DIVISION

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	Ⓢ

NOTES

- 400' Surface Rights Reservation around all Lakes and Rivers
- Sand and gravel in this township reserved until further notice
- For status of Island in this Twp and summer resort locations shown thus  please contact Dept of Lands & Forests
- Islands In Lake Timagami Not Open for Staking

DATE OF ISSUE:

NOV 12 1970

FOR INFO:

PLAN NO. **M.595**

DEPARTMENT OF MINES

— ONTARIO —

Briggs Twp. M. 428

Riddell Twp. M.578

Law Twp. M.529

