



32D13NE0870 2.9688 HEPBURN

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Fenton Scott Man

17 Malabar Place, Don Mills, Ontario M3B 1A4
416-444-1717

REPORT ON
AIRBORNE GEOPHYSICAL SURVEYS
HEPBURN AND SARGEANT TOWNSHIPS
ONTARIO

FOR

SILVER SCEPTRE RESOURCES Ltd

by

H.FERDERBER GEOPHYSICS

RECEIVED

JAN 14 1987

DON MILLS, ONTARIO
JANUARY 9, 1987

FENTON SCOTT, P.ENG.
MINING LANDS SECTION

INTRODUCTION

An airborne geophysical survey was carried out over a claim group in Hepburn and Sargeant Townships, Cochrane District of Ontario, by H.Ferderber Geophysics.

Data was collected on VLF and magnetometer responses. The survey was flown from a base at Timmins, Ontario.

PURPOSE OF SURVEY

The survey was designed to provide data which would:

1. Permit an interpretation of geological structures through recording variations in the magnetic mineral content of the formations underlying the areas.
2. Identify potentially economic mineral concentrations which may have marked variations in accessory magnetic minerals.
3. Identify linear structures, such as major shear zones, which may result in current concentrations of VLF signals. Such structures may contain economic minerals, notably precious metals.
4. Identify shallow, potentially valuable metallic sulfide deposits whose lower electrical resistances give resultant secondary VLF-EM fields.

Survey Area

The survey covered a claim block in Hepburn and Sargeant Townships, Cochrane District, Ontario. The unpatented mining claims included in the survey are shown in an attached pocket.

EQUIPMENT

The aircraft used in the survey was a Cessna 172 owned and operated by H.Ferderber Geophysics. The sensors for geophysical data were mounted in modified wing tip installations.

Magnetometer The instrument used was a GEM GSM - 18 proton precession type. The sensitivity of the device was set at 2 gammas at a 1 second sampling rate. Analogue was recorded on papertape on board.

VLF - EM System The instrument used was a Herz Totem 2 A. The total field and vertical resultant field was recorded on analogue tape. The line transmitter station for this survey was Annapolis, Maryland, and the orthogonal transmitter was Seattle, Washington.

SURVEY METHOD

The aircraft was flown at a terrain clearance of 300 feet and 500 feet. Navigation consisted of reference to an air mosaic, with manual fiducials recorded on the mosaic simultaneously with the geophysical tapes.

Line directions were North-South, and line spacing was one-twelfth mile (440 feet).

DATA PRESENTATION

Flight lines, fiducial points, and geophysical responses are shown on three sets of maps produced from air photo mosaics at a scale of 1/15. 840 (quarter mile). These maps also show the outlines of the claim group.

Vertical Gradient Magnetic Airborne profiles from surveys at elevations of 300 feet and 500 feet were compared. The differences between the total field at the two elevations are expressed on the contoured gradient plans with intervals of 0.5, 2.5, and 12.5 nanoteslas per meter.

Magnetic Contour Maps Correction of the aeromagnetic data for diurnal variation was by reference to a cross-line. The corrected profiles were then reduced to appropriate field strength intervals, and presented as contours at 20 gamma intervals.

VLF - EM Maps The axes of conductivity were selected on each analogue tape, and transferred to the mosaics with reference to fiducial points. These axes are further discriminated between those conductors showing a variation on total field strength, and those whose position only relates to "crossover" points on the resultant vertical field geometry.

At each conductor axis is shown the "peak to peak" amplitude of the resultant field geometry, together with a measure of the so-called "quadrature" or variable field strength at 90° to the primary field direction.

MAGNETOMETER SURVEY

A northeast striking magnetic feature crossing the claim group is interpreted as ultramafic intrusions along a regional fault structure.

An easterly striking magnetic high in the southeast quarter of the claims may be related to similar ultramafic sills.

The northeast striking high through the northeast corner of the claims reflects the magnetite content of a diabase dyke.

VLF - EM SURVEY

A total of 21 VLF conductor indications were selected from the airborne survey results.

The majority of these are unrelated, apparent surficial features, and may reflect bedrock structures.

1. Fair VLF conductor
2. Interpreted overburden
3. Isolated
4. Interpreted overburden
- 5 & 6. Isolated, on strike
7. Coincides with magnetic high - serpentine ?
- 8 & 11 Isolated, on strike
- 9 Isolated
10. Partially crosscutting, interpreted as bedrock

- 12. Bedrock
- 13,14 & 15. Isolated
- 16. Isolated
- 17. Questionable, on magnetic high
- 18 & 19. Isolated, on strike
- 20. Isolated

A handwritten signature in cursive script, likely reading "R. H. Smith", is written in the lower right quadrant of the page.



32D13NE0870 2.9688 HEPBURN

900

February 20, 1987

Your File: 431/86
Our File: 2.9688

Mining Recorder
Ministry of Northern Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

RE: Notice of Intent dated January 30, 1987
Geophysical (Electromagnetic & Magnetometer)
Surveys on Mining Claims L 868301, et al,
in Hepburn and Sargeant Townships

The assessment work credits, as listed with the above-mentioned
Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and
so indicate on your records.

Yours sincerely,

J.C. Smith, A/Manager
Mining Lands Section
Mineral Development and Lands Branch
Mines and Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

DK/mc

cc: M. Mills, H. St. Louis
B. Ottereyes Sr.
D. Ragogna, J. Dallaire
c/o Silver Sceptre Resources Ltd
1900 BCED Building
999 West Hastings Street
Vancouver, B.C.
V6C 2W2

Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

Fenton Scott
17 Malabar Place
Don Mills, Ontario
M3B 1A4

H. Ferderber Geophysics Ltd
169 Perreault Avenue
Val d'Or, Quebec
J9P 2H1

Resident Geologist
Kirkland Lake, Ontario

Encl.



Recorded Holder
M. MILLS, E. ST. LOUIS, B. OTTEREYES SR., D. RAGOGNA & J. DALLAIRE

Township or Area
HEPBURN AND SARGEANT TOWNSHIPS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ 30 _____ days Magnetometer _____ 30 _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input checked="" type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	<p>See Attached List</p>

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.

M. Mills
H. St. Louis
B. Ottereyes Sr.
D. Regina Ragona
J. D. Daire Dallaire

M21297
M21084
K19908
M21981
M21384

29688

LIST OF MINING CLAIMS

L868301	L868325	L871344	L871418
L868302	L868326	L871352	L871419
L868303	L868327	L871353	L871420
L868304	L868328	L871368	L871421
L868305	L868329	L871369	L871422
L868306	L868330	L871384	L871423
L868307	L868331	L871385	L871424
L868308	L868332	L871401	L871425
L868309	L868333	L871402	L871426
L868310	L868334	L871403	L871427
L868311	L868335	L871404	L871428
L868312	L868336	L871405	L871429
L868313	L868337	L871406	L871430
L868314	L868338	L871407	L871431
L868315	L868339	L871408	L871432
L868316	L868340	L871409	L871433
L868317	L868341	L871410	L871434
L868318	L868342	L871411	L871435
L868319	L868343	L871412	L871436
L868320	L868344	L871413	L871437
L868321	L871312	L871414	L871438
L868322	L871313	L871415	L871439
L868323	L871328	L871416	L871440
L868324	L871329	L871417	L871441

L871442	L871469	L872043	L872070
L871443	L871470	L872044	L872071
L871444	L871471	L872045	L872072
L871445	L871472	L872046	L872073
L871446	L871473	L872047	L872074
L871447	L871474	L872048	L872075
L871448	L871475	L872049	L872076
L871449	L871476	L872050	L872077
L871450	L871477	L872051	L872078
L871451	L871478	L872052	L872079
L871452	L871479	L872053	L872080
L871453	L871480	L872054	L872081
L871454	L871481	L872055	L872082
L871455	L871482	L872056	L872083
L871456	L871483	L872057	L872084
L871457	L871484	L872058	L872085
L871458	L871485	L872059	L872086
L871459	L871490	L872060	L872087
L871460	L871491	L872061	L872088
L871461	L871492	L872062	L872089
L871462	L871493	L872063	L872090
L871463	L871494	L872064	L872091
L871464	L871495 ~	L872065	L872092
L871465	L872039	L872066	L872093
L871466	L872040	L872067	
L871467	L872041	L872068	
L871468	L872042	L872069	



2 9688

Jan 16
Room 6610, Whitney Block
Queen's Park
Toronto, Ontario
M7A 1W3
416/965-4888

Mining Act

In the matter of mining claims:

L 868301, et al, in the
Townships of Sargeant and Hepburn.
on Report of Work No.431/86.

M. Mills, E. St. Louis, D. Ragona J. Dallaire

On consideration of an application from the recorded holder, _____
under Section 77 Subsection 22 of the Mining Act, I hereby order that the time for filing reports and plans in support of
Airborne Geophysical (Electromagnetic & Magnetometer) assessment work recorded on October 14, 19 86
be extended until and including January 16, 19 87.

1986.12.09

Date

Signature of Director, Land Management Branch

Copies: M. Mills, E. St. Louis
D. Ragona J. Dallaire
c/o Silver Sceptre Resources Ltd
1900 BCED Building
999 West Hastings Street
Vancouver, B.C.
V6C 2W2
Mining Recorder
Kirkland Lake, Ontario

Fenton Scott
17 Malabar Place
Don Mills, Ontario
M3B 1A4

H. Ferderber Geophysics Ltd
169 Perreault Avenue
Val d'Or, Quebec
J9P 2H1

PR3

002.M

HEPBURN TWP

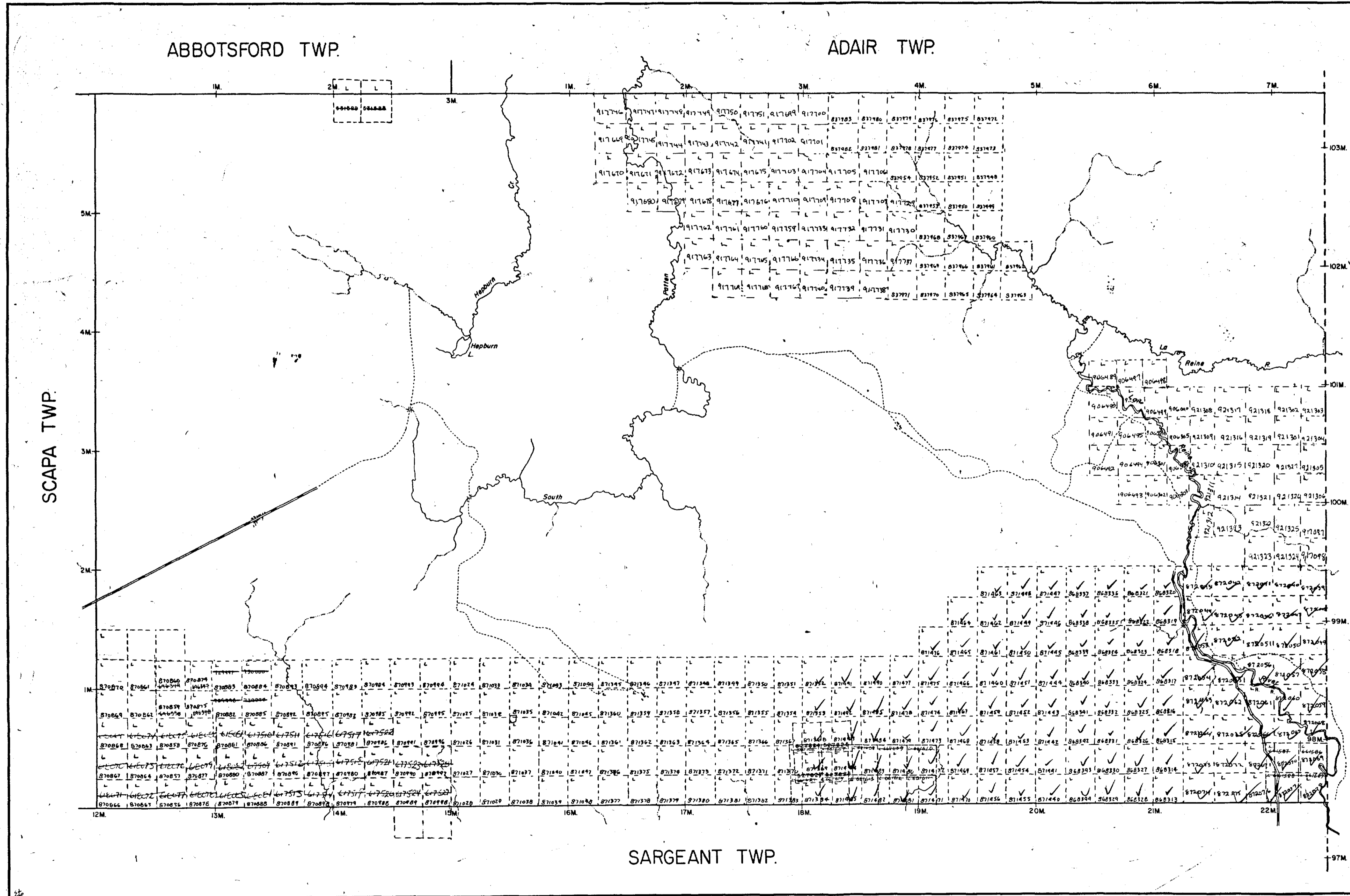
002.M

ABBOTSFORD TWP.

ADAIR TWP.

SCAPA TWP.

SARGEANT TWP.



THE TOWNSHIP OF
OF SEP 26 1886
HEPBURN

DISTRICT OF COCHRANE
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

NOTES

400' surface rights reservation around all lakes and rivers.

PLAN NO. M.500

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

002.M

HEPBURN TWP

002.M



ABBOTSFORD TWP.

ADAIR TWP.

THE TOWNSHIP OF HEPBURN
DISTRICT OF COCHRANE
LARDER LAKE MINING DIVISION

SCALE: 1 INCH=40 CHAINS

LEGEND

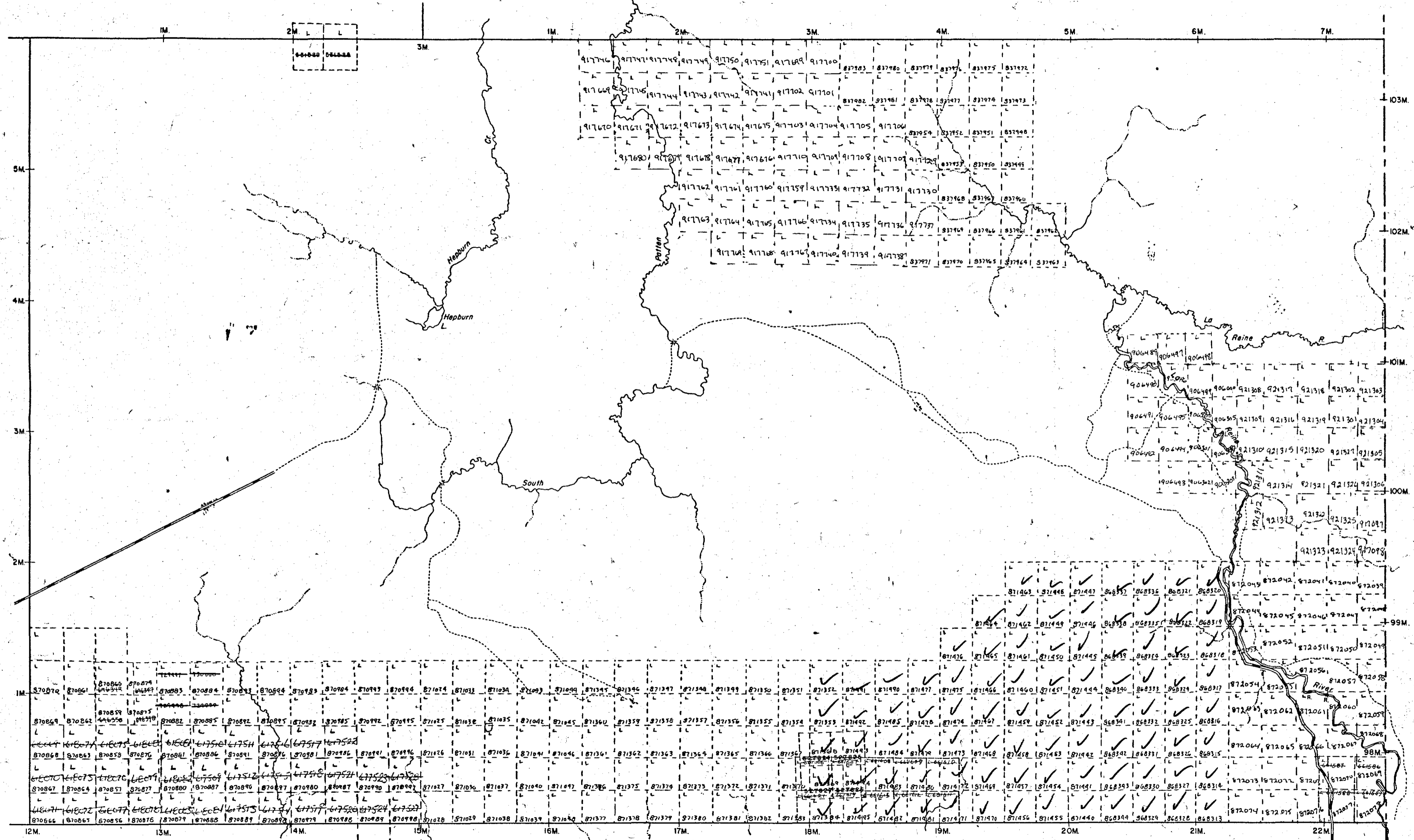
- PATENTED LAND ⊙
- CROWN LAND SALE C.S.
- LEASES ⊖
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS ———
- IMPROVED ROADS ———
- KING'S HIGHWAYS ———
- RAILWAYS ———
- POWER LINES ———
- MARSH OR MUSKEG ———
- MINES ———
- CANCELLED ———

NOTES

400' surface rights reservation around all lakes and rivers.

PLAN NO. M.500

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



SCAPA TWP.

PROVINCE OF QUEBEC

SARGEANT TWP.

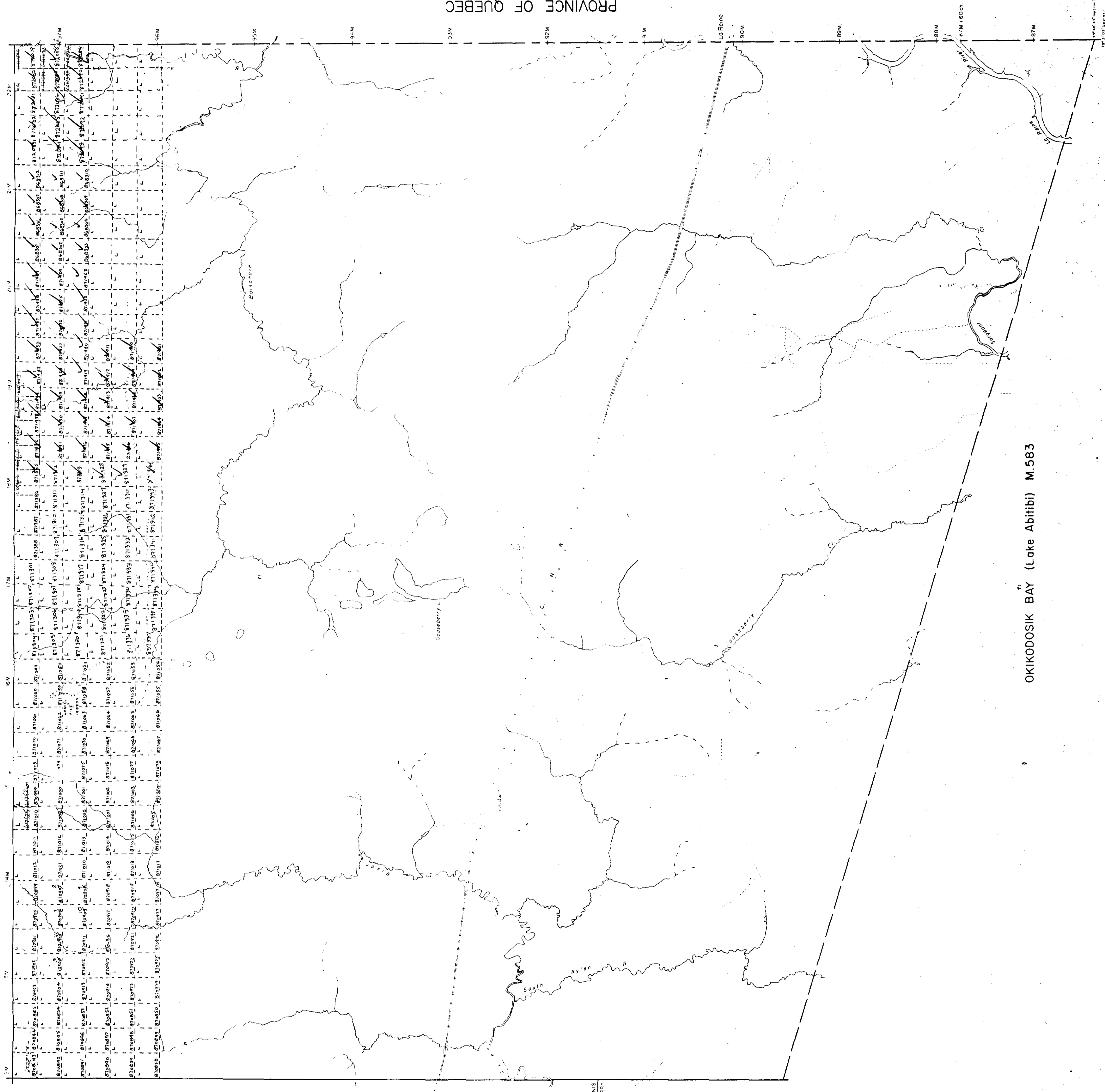


NOTES

400 blocks of this area were surveyed by A. Be. C. S. J. on 10th Dec 1962 signed by N. S. J. C. S. J. on 10th Dec 1962 annulled by the Act of the P. L. C. Lands Act Jan 4, 1963

NORTHEAST BAY (Lake Abitibi) M.421

72 OF BONAS
73 OF BERRY



PROVINCE OF QUEBEC

LEGEND

- HIGHWAY AND ROUTE NO.
- 1/4 IN. ROADS
- THAT. 2
- SURVEYED LINES
- MINING CLAIMS PARCELS ETC
- UNDEVELOPED LINES
- PARCELS FUNDAMENTAL
- MINING CLAIMS ETC
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERMANENT STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

SYMBOL

- PATENT SURFACE & MINING RIGHTS
- SURFACE RIGHTS ONLY
- MINING RIGHTS ONLY
- LEASE SURFACE & MINING RIGHTS
- SURFACE RIGHTS ONLY
- MINING RIGHTS ONLY
- LICENSE OF OCCUPATION
- CROWN LAND SALE
- ORDER IN COUNCIL
- RESERVATION
- CANCELLED
- SAND & GRAVEL

SCALE: 1 INCH = 40 CHAINS

AGRES HECTARES

40 16

TOWNSHIP **SARGEANT** JAN 13 1966

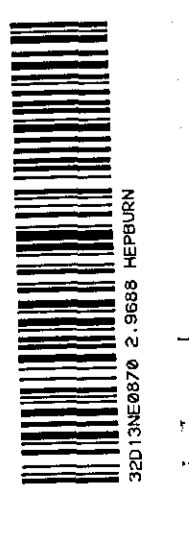
DISTRICT COCHRANE

MINING DIVISION LARDER LAKE

Ministry of Natural Resources
Surveys and Mapping Branch

Ontario
QUEBEC DISTRICT TOWNSHIP
M.582

OKIKODOSIK BAY (Lake Abitibi) M.583



NOTES

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

The subdivision of the south part of Sargeant TP by A Bell (O.L.S.) as shown on plan dated Oct 3, 1912 signed by N.J. Slater (O.L.S.) has been wholly annulled under section II subsection I of the Public Lands Act Jan 4, 1963

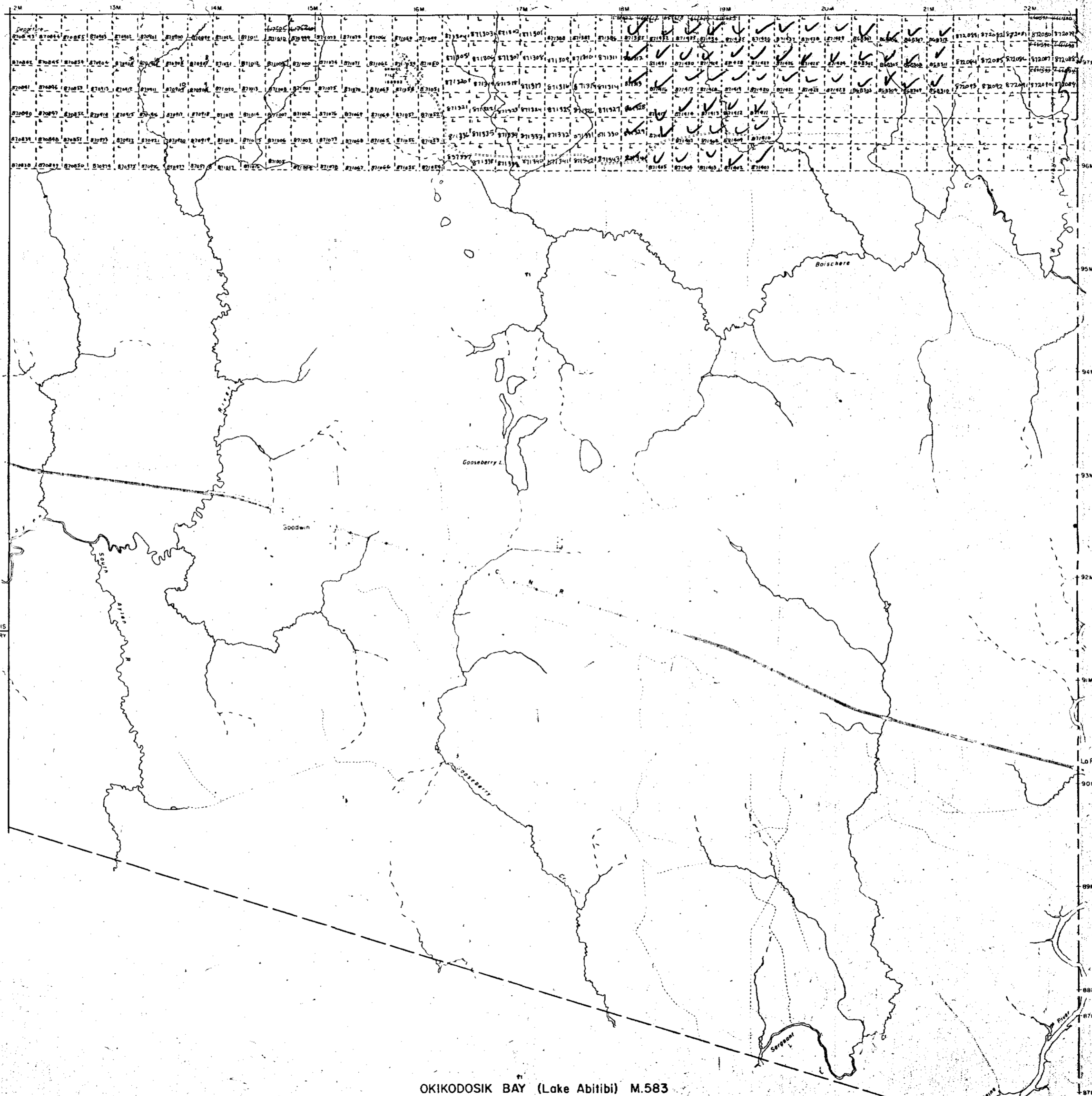
HEPBURN TP. M.500

NORTHEAST BAY (Lake Abitibi) M.421

TP OF BONIS
TP OF BERRY

OKIKODOSIK BAY (Lake Abitibi) M.583

PROVINCE OF QUEBEC



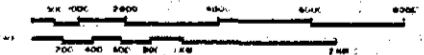
LEGEND

- HIGHWAY AND ROUTE NO.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- TOWNSHIP'S 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 | |
| ORDER IN COUNCIL | |
| RESERVATION | |
| CANCELLED | |
| SAND & GRAVEL | |

SCALE: 1 INCH = 40 CHAINS



ACRES HECTARES

40 16

TOWNSHIP: JAN 13 1986

SARGEANT

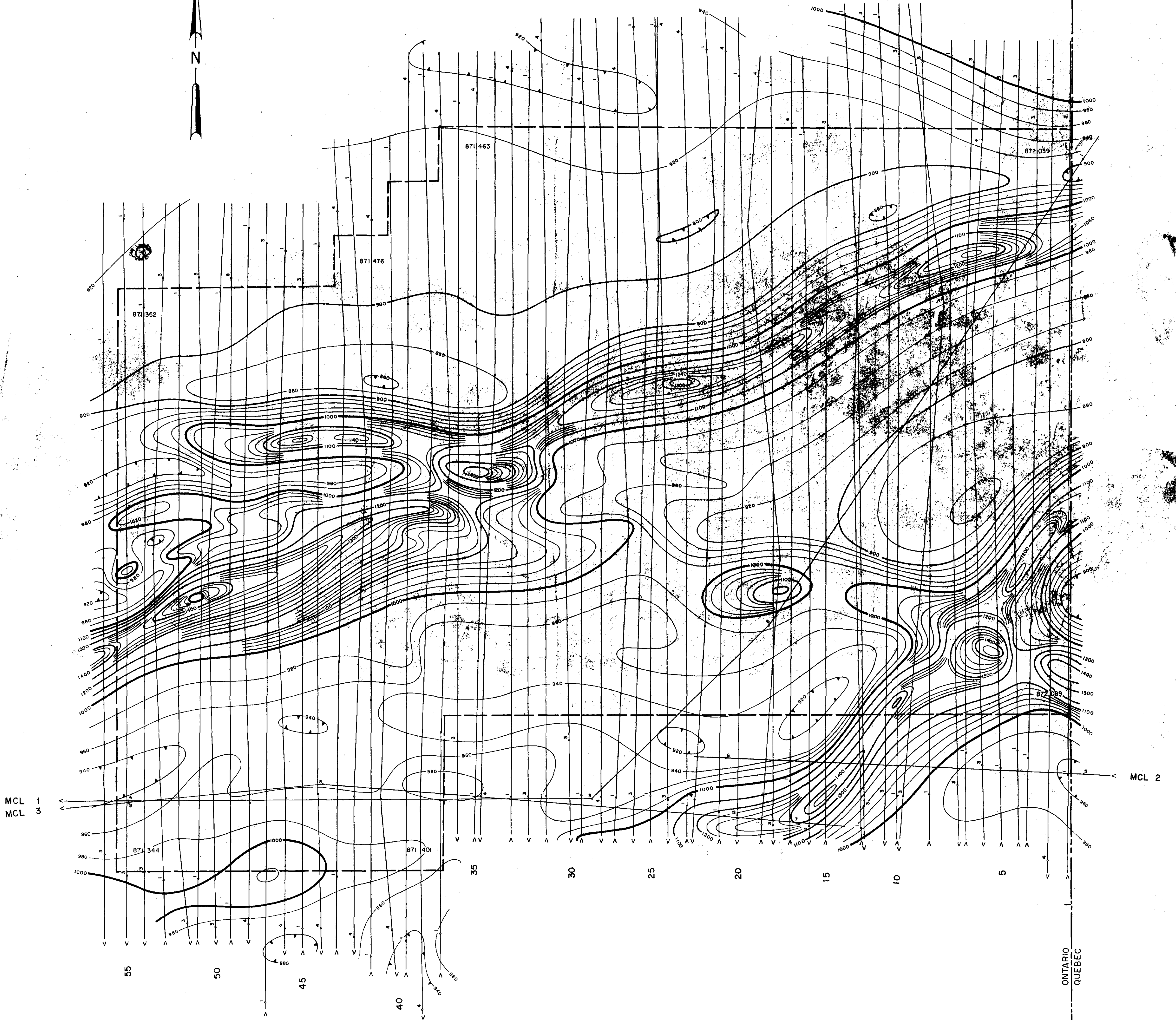
DISTRICT COCHRANE

MINING DIVISION LARDER LAKE

Ministry of Natural Resources
Ontario, Surveys and Mapping Branch

Date: MAY 1973 Plan No.: M.582





RECEIVED

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H. FERDERBER GEOPHYSICS LTD.

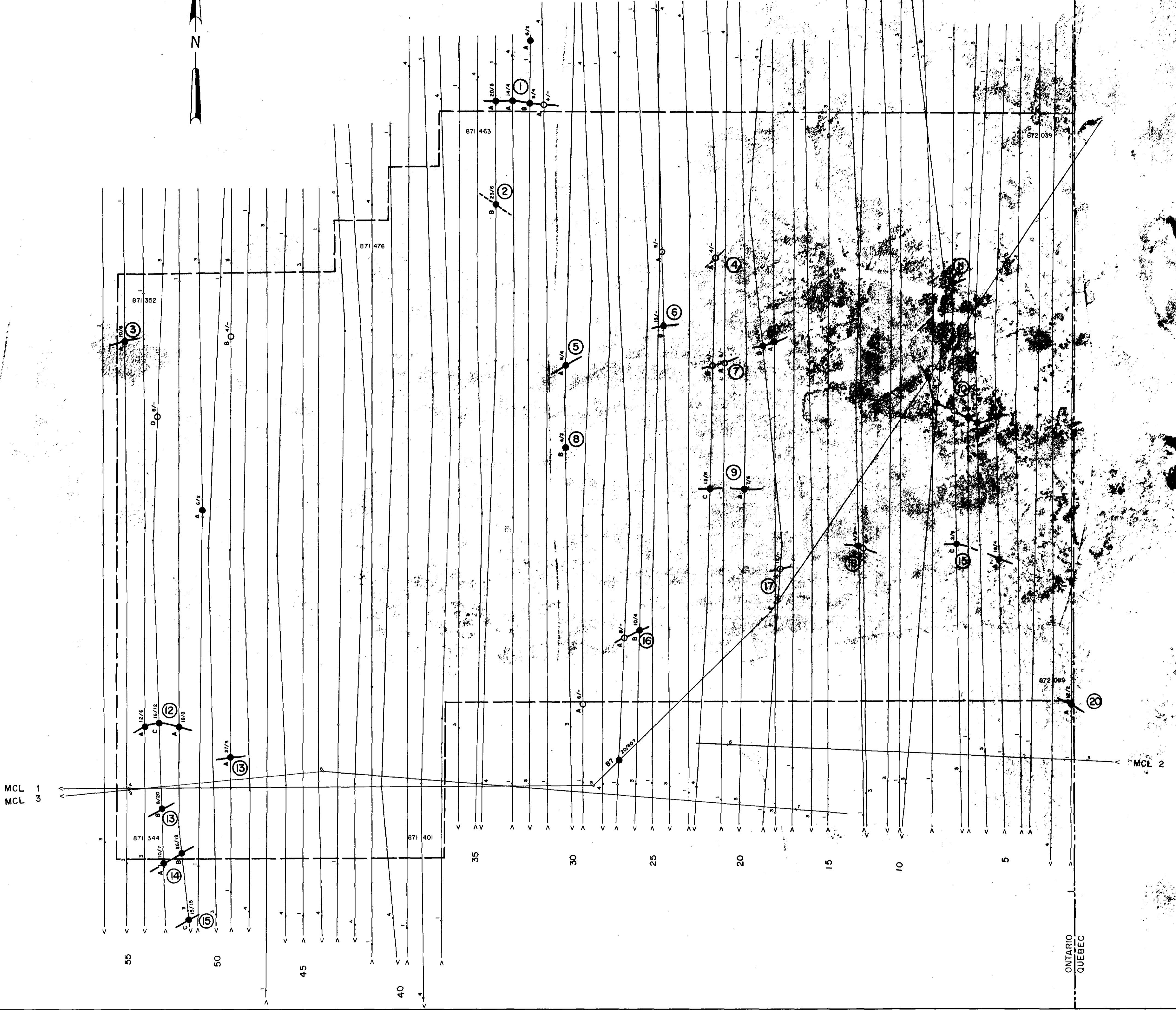
HEPBURN and SARGEANT TWPS, ONTARIO

SILVER SCEPTRE RESOURCES LTD.
AIRBORNE MAGNETIC SURVEY

INTERPRETED BY: F. SCOTT N.T.S. 32 D / 13 DATE: NOV-1986

SCALE: 1" = 1320' 0 1000 2000 3000 FEET PLATE 1M

LEGEND
 CONTOUR INTERVAL 20 GAMMAS
 500 GAMMA
 100 GAMMA
 20 GAMMA
 MAGNETIC LOW
 BASE VALUE 56,000 GAMMAS
 FLIGHT ALTITUDE 300'



250

H. FERDERBER GEOPHYSICS LTD.

HEPBURN and SARGEANT TWPS, ONTARIO

SILVER SCEPTRE RESOURCES LTD.

AIRBORNE V.L.F.-EM SURVEY

Station NLK & NAA

INTERPRETED BY:	NTS	DATE
F. SCOTT	32 D / 13	NOV.-1986

SCALE 1" = 1320'

FEET 0 1000 2000 3000

PLATE 1V

LEGEND

- CONDUCTOR AXIS
- CONDUCTOR AXIS WITH QUADRATURE FIELD

"Peak to Peak" Amplitude Field Shape Resultant

Field Distortion at 90° to Primary Field Direction

Note: These Factors Indicate Field Direction Only

Line Transmitter Seattle (NLK) 24.8 kHz
 Ortho Transmitter Cutler (NAA) 24.0 kHz

INTERPRETATION

- OVERBURDEN RESPONSE
- BEDROCK RESPONSE