REPORT ON

MAGNETOMETER AND VLF-EM SURVEYS

MALLARD TOWNSHIP, ONTARIO

FOR

COMINCO LIMITED

by

COLEX EXPLORATION INC.

February 4, 1988

I. INTRODUCTION

Linecutting followed by Magnetometer and VLF-EM surveys were carried out over 36 claims in Mallard Township during the period from October 12 to December 11, 1987.

II. LOCATION, ACCESS AND OWNERSHIP

The property is located in the north central part of Mallard Township, Sudbury District, Ontario. The claims are numbered P997961 to 997996 inclusive. The claims are beneficially owned by Cominco Ltd.

Access is by way of a bush road which runs north from a well used former logging road joining Highway 144 to Highway 129. This bush road runs north to Rush Lake from the former logging road about 25 miles east of Sultan or 8 miles north of Ramsay, both of which villages are also on the C.P.R. main line.

The property can be reached by boat from the Opeepeesway River bridge, or following a road east of the bridge north and then by claim lines to the property.

III. PREVIOUS EXPLORATION

No evidence of previous exploration was seen however, the area has undoubtedly been prospected in the past, adjoining as it does, a known gold occurrence on the property to the south.

IV. GENERAL GEOLOGY

The general geology of Mallard Township has been mapped by G.M. Siragusa (Report 248, map 2504, Ontario Geological Survey) and prior to that by H.C. Rickaby (Ann. Report Vol 43 part 3 Ont. Dept of Mines). The claims are underlain by mafic to felsic volcanic rocks intruded by mafic to felsic bodies particularly on the east side. The intrusive rocks appear to be associated with a large granitic intrusive in the north-eastern part of Mallard Township.

V. MAPPING PROCEDURE

A baseline was laid out at an azimuth of 135°. Cross-lines were cut perpendicular to the baseline every 120 metres. The picket lines were cut by chain saw, chained and picketed every 25 metres.

Magnetometer readings were taken with a Scintrex MP-2 proton precession magnetometer. Control was provided by CMG magnetometer recorder model MR10 using a Barringer GM-122 magnetometer as a base station. This gives a magnetometer reading every 30 seconds, printed on a continuous paper tape from which corrections can be made to the field readings.

A VLF-EM survey was run with a Geonics EM-16 instrument set to the signal from Cutler, Maine (24.0 KHz). Readings were taken at 12.5 metre intervals on the crosslines and at 10 metre intervals on the baseline for both surveys.

VI. DISCUSSION OF RESULTS

Magnetometer

There is a strong magnetic trend which follows approximately along the baseline. This is probably an iron formation. East of the baseline, in the southern part , the magnetics are fairly complex with a number of high to low magnetic readings in smaller areas. This area is probably underlain by mafic intrusive or volcanic rocks.

The area to the west of the baseline and the north-east part of the grid are less complex, magnetically. These areas are probably underlain by volcanics with some iron formation bands, or local magnetite concentrations.

VLF-EM

There are a large number of VLF-EM cross-overs of varying strength. A geological or soil map should be consulted to help in defining those which may be bedrock conductors, and those which might be caused by a topographic effect.

VII. CONCLUSIONS AND RECOMMENDATIONS

The magnetometer survey has outlined one extensive iron formation band and several smaller or possible smaller ones. As well there are a number of VLF-EM cross-overs, all in a known gold bearing area.

Conclusions and Recommendations (Continued)

The property should be covered by a geological survey, followed by diamond drilling of the still unexplained anomalies.

Respectfully submitted,

February 4, 1988 R.A. MacGregor, P. Eng.

C E R T I F I C A T E

I, Robert A. MacGregor certify:

1. I am a Mining Engineer residing at 28 Ford Street, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 20 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 have knowledge of the field work covered by this report.

Feb 4/83
Date

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

R. A. MacGregor

Lud.
2.1102

Ministry of Northern Development and Mines

Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

D W Mi

41009NW0004 2.11103 MALLARD

900

W8806·097

2.11103

MALLARD

Type of Survey(s)
MAG and VLF - EM

Claim Holder(s)
COMINCO LTD.

Prospector's Licence No.
A 10043

Address
2200 - 120 ADELAIDE ST. W. - TORONTO, ONTARIO M5H 1T1

Survey Company
COLEX EXPLORATION INC.

Date of Survey (from & to)
12 | 10 | 87 (Day | Mo. | Yr.) — 11 | 12 | 87 (Day | Mo. | Yr.)

Total Miles of line Cut
27.85

Name and Address of Author (of Geo-Technical report)
R.A.MacGREGOR 28 FORD ST., SAULT STE MARIE, ONTARIO

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	40
	Geophysical - Magnetometer	20
For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here.	Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
MAY 16 1988
MINING LANDS SECTION
TORONTO OFFICE

RECEIVED
APR 27 1988
MINING LANDS SECTION

RECEIVED
APR 19 1988

Expenditures (Prior to Performance of Work)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	997961		P	997984	
	997962			997985	
	997963			997986	
	997964			997987	
	997965			997988	
	997966			997989	
	997967			997990	
	997968			997991	
	997969			997992	
	997970			997993	
	997971			997994	
	997972			997995	
	997973			997996	
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	997978				
	997979				
	997980				
	997981				
	997982				
	997983				

RECORDED
APR 19 1988

Total number of mining claims covered by this report of work: 36

For Office Use Only

Total Days Cr. Recorded: 2160

Date Recorded: April 19, 1988

Date Approved as Recorded: 10 May 88

Mining Recorder: [signature]

Branch Director: [signature]

Date: April 14/88

Recorded Holder or Agent (Signature): [signature]

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
R.C.La Roche - 860 Sherbrooke St. Peterborough, Ontario, K9J 2R4

Date Certified: April 14 /88

Certified by (Signature): [signature]

1362 (85/12)

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	▼
ORDER-IN-COUNCIL	OC
RESERVATION	◔
CANCELLED	●
SAND & GRAVEL	◔

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

AREAS WITHDRAWN FROM DISPOSITION

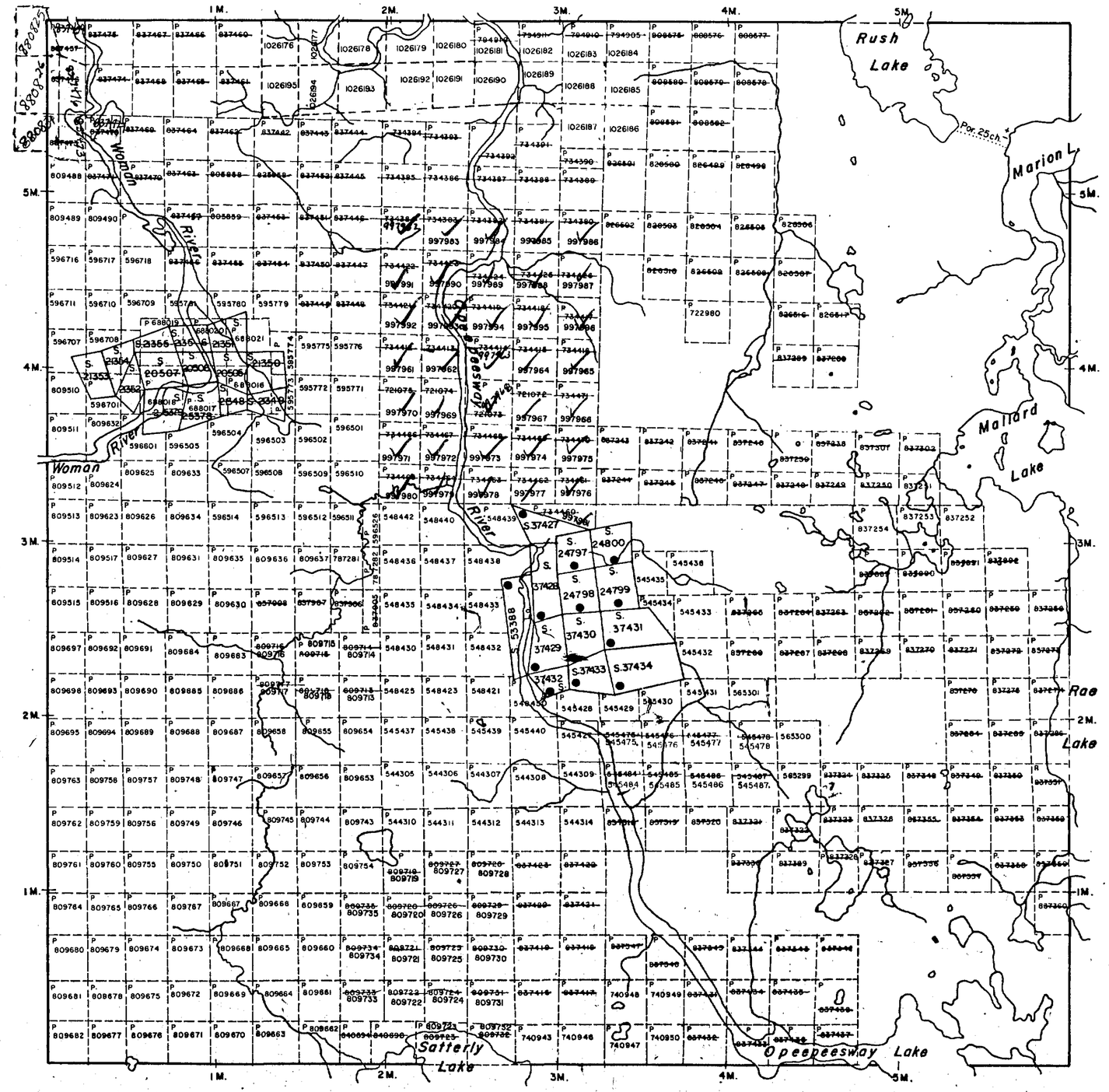
M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

MARION TWP.



BENTON TWP.

ERIC TWP.

OSWAY TWP.

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, 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 OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

ACRES	HECTARES
40	16

TOWNSHIP OF

MALLARD

DISTRICT OF

SUDBURY

MINING DIVISION

PORCUPINE

Received Sept 15, 1986

Ontario

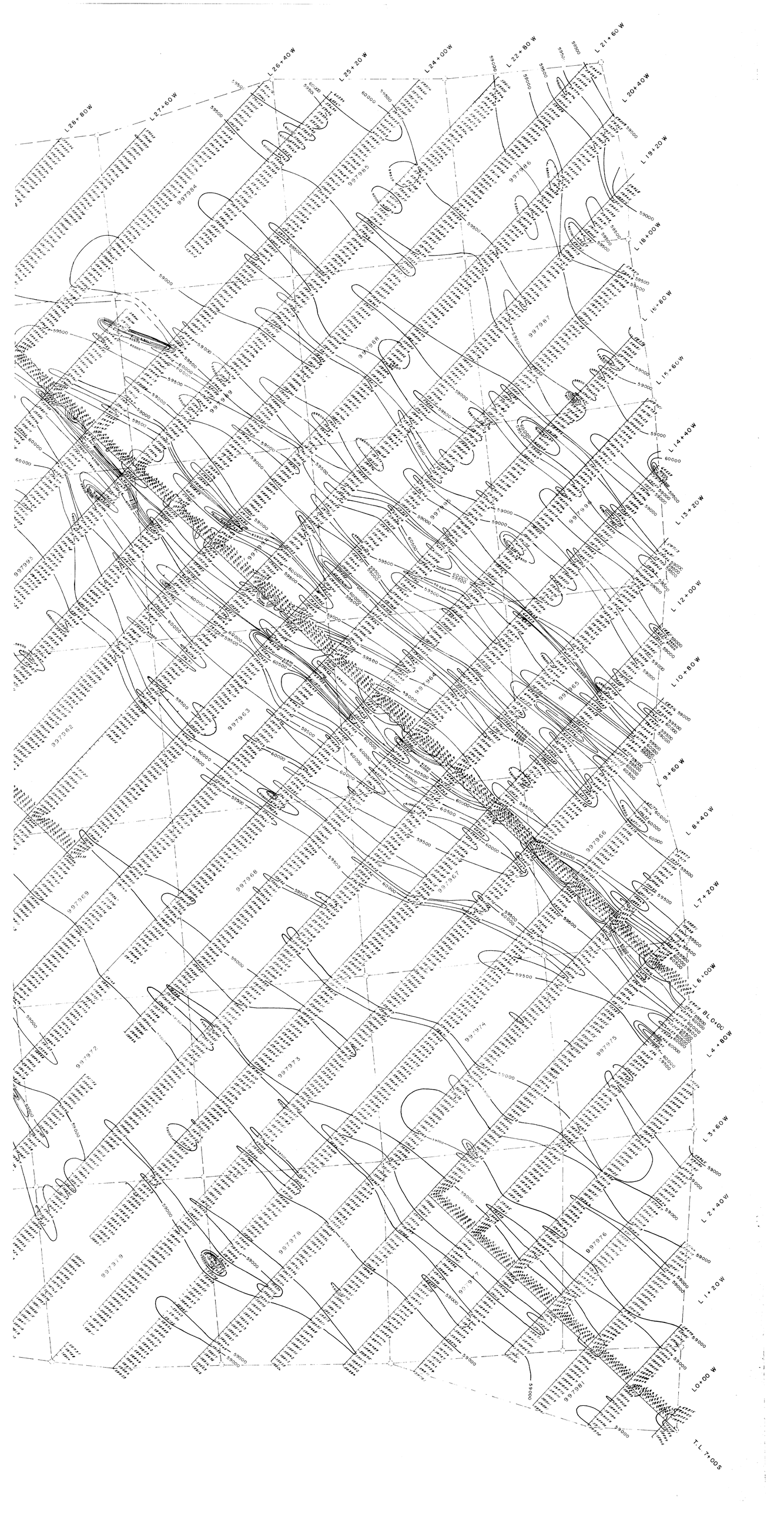
Ministry of Natural Resources

Ministry of Northern Development and Mines

Date	Plan No.
JULY 1986	G-1171

National Topographic Series

CK GE Sept 16/86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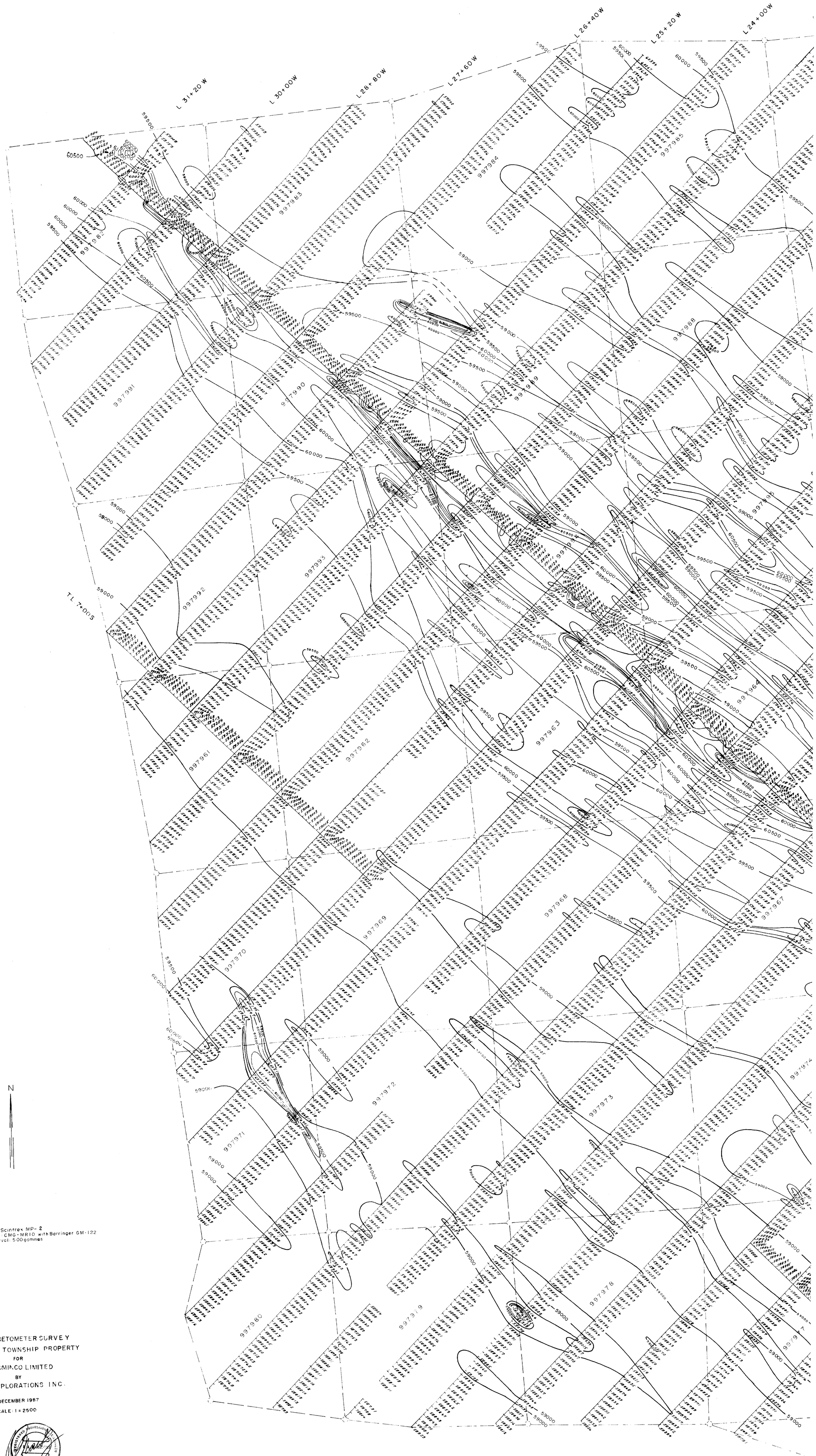

Instrument: Scintrex MP- 2
Base Station: CMG-MR10 with Barringer GM-122
Contour Interval: 500 gammas

MAGNETOMETER SURVEY
MALLARD TOWNSHIP PROPERTY
FOR
COMINCO LIMITED
BY
COLEY EXPLORATIONS INC.

DECEMBER 1987

SCALE: 1 = 2500

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

2.11103

N

Instrument: Geonics EM-16
Transmitter: Cutler, Maine(NAA)-24.0KHz
Reading Direction North 15° East

In-Phase: ——————
Quadrature: - - - - - -

Plotting Scale: 1 in. = ±20% (+ to North)

VLF-EM SURVEY
MALLARD TOWNSHIP PROPERTY
for
COMINCO LIMITED
by
COLEX EXPLORATIONS INC.

December 1987
Scale: 1 = 2500

REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

2.11103