



41P14NW0030 2.935 SOTHMAN

010

SECTION

AN ELECTROMAGNETIC SURVEY
IN
NURSEY TOWNSHIP
And Adjoining Areas in Sothman Township

Toronto, Ontario.
July 6, 1972.

R. H. Clayton, M.Sc., P. Eng.
Watts, Griffis and McQuat Limited

LOCATION AND ACCESS

The claims are situated near the northwest corner of Sothman Township and the northeast corner of Nursey Township. An all-weather road passes north-south about 2 miles east of the property and goes north to Timmins, east to Matachewan and south to Shining Tree. A bush road passes through the property to the Grassy River (Kapiskong Lake), which is approximately the western boundary of the property. Edlestone Lake is in the northeast part of the property.

CLAIMS SURVEYED

Nine claims were surveyed.

Nursey Township: 295996, 295997, 295998, 295999, 296000,
296006, 328044, 328048

Sothman Township: 296005

RECORDED HOLDER

The recorded holder is R. H. Clayton, 608 - 45 Dunfield Avenue, Toronto 295, Ontario, Licence Number A 40701.

SUBMITTING PARTY

The field work and report are by Watts, Griffis and McOuat Limited, Consulting Geologists and Engineers, Suite 911, 159 Bay Street, Toronto 1, Ontario.

DATES

The survey was carried out between December 13, 1971 and March 28, 1972.

PREVIOUS WORK

63-139 Preliminary Report on the Property of Sirola Gold Mines Limited, Sothman and Nursey Townships, D. E. Sirola, 1947.

This report describes a dip-needle survey and geological mapping. The claims surveyed largely coincide with the Nursey claims of the present group. One showing is described as:

"- a very strong gossan zone striking N 60° E, and dip appears to be vertical, Random samples from the showing assayed as high as \$4.20 in gold. Sphalerite, chalcopyrite and pyrite are minerals sparingly distributed through the samples assayed".

63A-24 Geologic Report on the Property of Sirola Gold Mines Limited, Sothman and Nursey Townships, D. E. Sirola, 1948.

This report describes further work on the property. There is some confusion over two showings, one at approximately 2800 S, 6500 W on the present grid, the other at 1200 S, 5000 W. It seems probable that the above quotation refers to the latter location.

GEOLOGY

It appears that the claims are underlain by Keewatin volcanic rocks consisting of andesites and rhyolites in roughly equal proportions. In the southwestern part of the Nursey claims these rocks are apparently overlain by flat-lying Cobalt sediments consisting mainly of conglomerate with some arkose.

WORK CARRIED OUT

Linecutting

Picket lines were cut east-west at 400-foot intervals, tied in with baselines north-south at 1,000-foot intervals.

Geophysics

A vertical loop electromagnetic survey was carried out over the whole of the claim group using the parallel method (moving transmitter). The instrument used was a Scintrex S.E. 250 with a frequency of 1,000 cycles per second. Dip angles from the horizontal were measured in the conventional way. Since this instrument has only one frequency, an estimate of conductivity was made by estimating the out-of-phase component insofar as the reading of the dip angle has to be made from a minimum rather than a clear null. This component is theoretically a function of the sine of the dip angle, so that there should be a clear null with zero dip angle.

The scale of measurement used is as follows:

1. Clear null
2. Null not quite clear
3. Weak but definite minimum
4. Strong minimum
5. Very strong minimum
6. Difficult to find a minimum.

One to three could be caused by massive sulphides, four to six indicates disseminated sulphides or other medium to poor conductors. Spurious dip angles caused by orientation errors usually have a rating of one.

Some lines were surveyed using the Scintrex S.E. 300 unit. This is similar to the S.E. 250 but has frequencies of 400 and 1,600 Hz.

A total of 13.6 miles of line was cut and chained. There were 536 stations and 536 readings were taken.

RESULTS AND CONCLUSIONS

There are a number of weak to moderate anomalies.

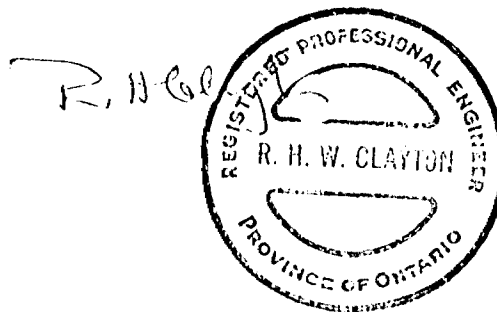
One of these is in the southwest corner on Claim 328048 and trends 330° . It corresponds to one of the locations of the gossan described by Sirola (see Previous Work). The other is on Claims 295999 and 296000 and trends 020° . It corresponds to the other location given by Sirola.

It is of interest that these two anomalous zones are not parallel to the general trend. A number of minor anomalies on the property have a trend of 040° , which is the general trend of the large anomalous zone on adjoining properties southeast of Edlestone Lake.

RECOMMENDATIONS

Detailed geologic mapping is recommended as a first step.

Respectfully submitted,



Toronto, Ontario.
July 6, 1972.

R. H. Clayton, M.Sc., P. Eng.
Watts, Griffis and McQuat Limited

GEOPHYSICAL - GEOLOG
TECHNICAL DATA



900

JUL 11 1972

PROJECTS
SECTION

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.

Type of Survey Vertical Loop Electromagnetic
Township or Area NURSLEY & SOTHMAN TOWNSHIPS
Claim holder R. H. Clayton c/o Watts Griffiths
& Mc Ouat, 911-159 Bay St., Toronto
Author of Report R. H. Clayton c/o Watts Griffiths
Address & Mc Ouat Ltd., 911-159 Bay St., Toronto
Covering Dates of Survey December 13, 1971 - March 28, 1972
(linecutting to office)
Total Miles of Line cut 13.6

MINING CLAIMS TRAVERSED	
List numerically	
(prefix)	(number)
L.	295996
	295997
	295998
	295999
	296000
	296006
	328044
	328048
	296005
TOTAL CLAIMS <u>9</u>	

SPECIAL PROVISIONS CREDITS REQUESTED	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	- Electromagnetic	<u>40</u>
ENTER 20 days for each additional survey using same grid.	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE June 10, 1972 SIGNATURE: R. H. Clayton
Author of Report or Agent

PROJECTS SECTION
Res. Geol. _____ Qualifications On this file
Previous Surveys 23-139 days needs different
equipment & etc.
Checked by _____ date _____
GEOLOGICAL BRANCH _____
Approved by _____ date _____
GEOLOGICAL BRANCH _____
Approved by _____ date _____

OFFICE USE ONLY

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 536 Number of Readings 536
Station interval 100 feet
Line spacing 400 feet
Profile scale or Contour intervals 1" = 20'
(specify for each type of survey)

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base station location _____

ELECTROMAGNETIC

Instrument Scintrex S.E. 250
Coil configuration Vertical loop
Coil separation 400 feet
Accuracy 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 1000 cycles per second
(specify V.L.F. station)
Parameters measured Dip angle

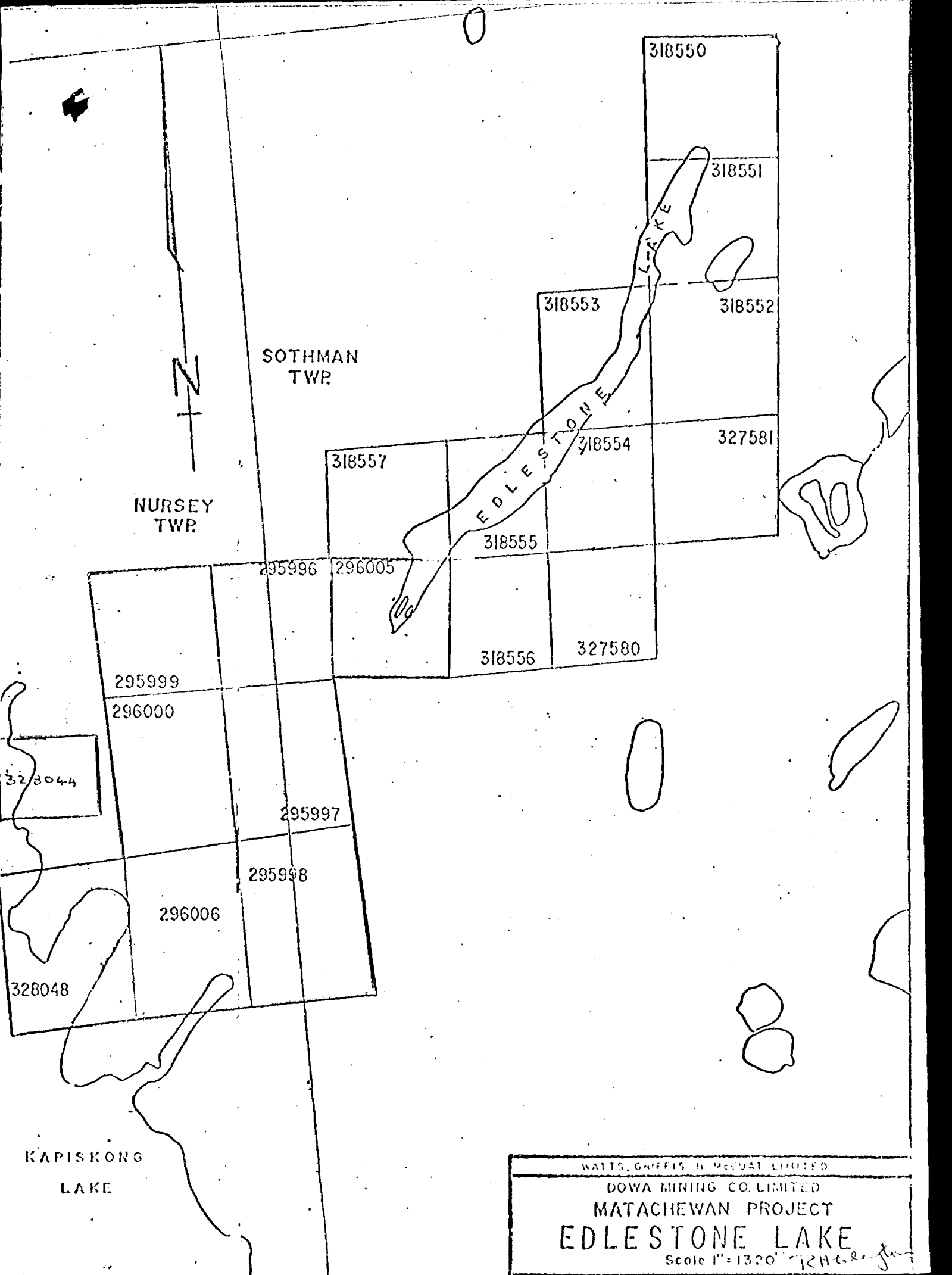
GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION - RESISTIVITY

Instrument _____
Time domain _____ Frequency domain _____
Frequency _____ Range _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____



N

SOTHMAN
TWR.

NURSEY
TWR.

EDLESTONE
LAKE

KAPISKONG
LAKE

318550

318551

318552

318553

327581

318557

318554

318555

295996

296005

318556

327580

295999

296000

323044

295997

295998

296006

328048

WATTS, GRIFFIS & McQUAT LIMITED
DOWA MINING CO. LIMITED
MATACHEWAN PROJECT
EDLESTONE LAKE
Scale 1" = 1320'

Semple Twp. - M. 1100









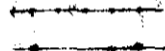

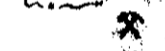




THE TOWNSHIP OF
OF
SOTHMAN

DISTRICT OF
SUDBURY

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.

Flooding Rights - L.O. No. 7191, File No. 1162, volume No. A.

File 2.935

DATE OF ISSUE
JUL 11 1977
ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

PLAN NO. M-1121

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

Nursey Twp. - M. 1031

Holiday Twp. - M. 910

Kemp Twp. - M. 966

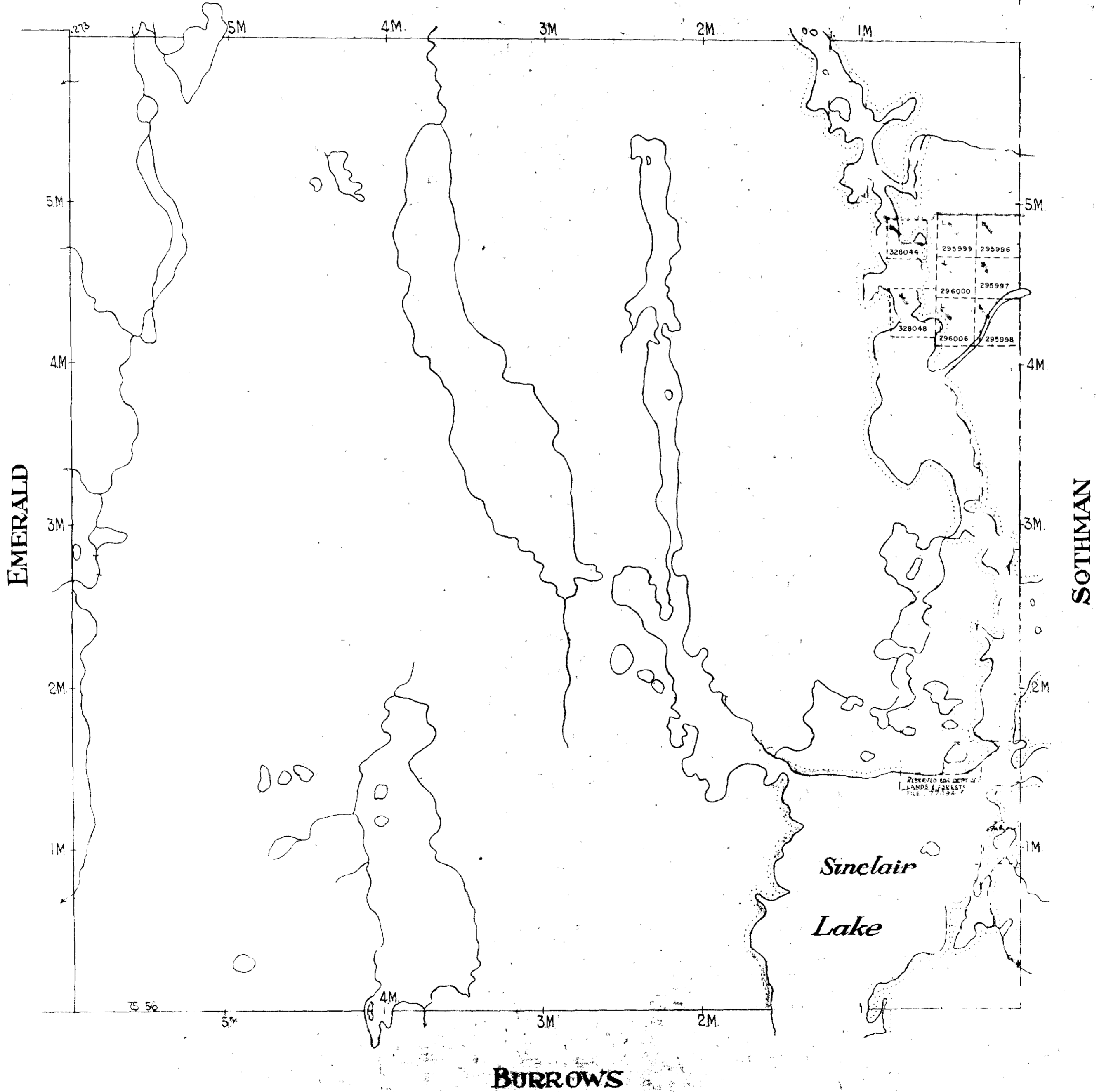


41P14NW030 2.935 SOTHMAN

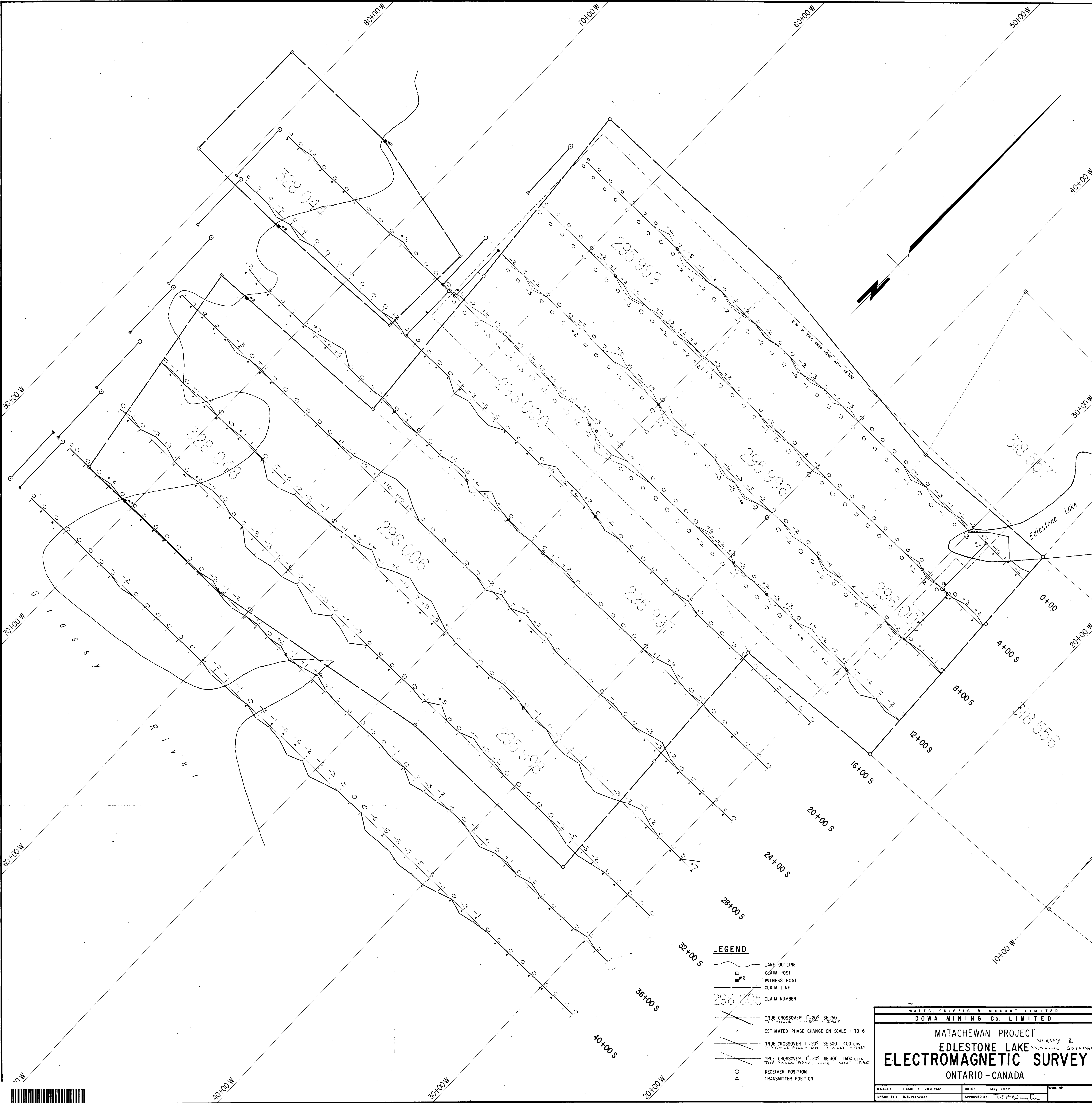
DISTRICT OF SUBURB
LARDER LAKE MINING DIVISION
SCALE - 40 CHAINS - 1 INCH

NORTH AST.

MOHER



41P14N0030 2.935 SOTHMAN



- LEGEND**
- LAKE OUTLINE
 - CLAIM POST
 - WITNESS POST
 - CLAIM LINE
 - CLAIM NUMBER
 - TRUE CROSSOVER 1"=20° SE 250
DIP ANGLE + WEST - EAST
 - TRUE CROSSOVER 1"=20° SE 300 400 c.p.s.
DIP ANGLE ABOVE LINE + WEST - EAST
 - TRUE CROSSOVER 1"=20° SE 300 1600 c.p.s.
DIP ANGLE ABOVE LINE + WEST - EAST
 - RECEIVER POSITION
 - TRANSMITTER POSITION

WATTS, GRIFFIS & MCGOAT LIMITED		
DOWA MINING Co. LIMITED		
MATACHEWAN PROJECT		
EDLESTONE LAKE		
NURSEY & SOTLMAN		
ELECTROMAGNETIC SURVEY		
ONTARIO - CANADA		
SCALE: 1 inch = 200 feet	DATE: May 1972	DWG. NO.
DRAWN BY: B.S. Patrocin	APPROVED BY: [Signature]	