



41P11NW0437 2.665 CONNAUGHT

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ACTIVE MINES LTD.

NOV 9 1971

Connaught Township Property

Magnetic and Electromagnetic Surveys

PROJECTS
SECTION

INTRODUCTION

Active Mines Ltd. owns a group of 13 claims located in Connaught Township, Larder Lake Mining Division, Ontario. During September and October of 1971 the claims were surveyed magnetically and electromagnetically.

The line cutting, geophysical surveying, and data plotting were done by Mr. John D. Ferguson, of 307 Oriole Parkway, Toronto. The plotted data were interpreted by the writer.

PROPERTY & LOCATION

The property consists of 13 mining claims numbered as follows:

L293126 to L293129 inclusive and
L293375 to L293377 inclusive and
L279215 to L279220 inclusive

The property is reached by aircraft from Sudbury (85 miles) or Timmins (56 miles) to the campsite on Burn Lake. Access for heavy equipment is possible from Highway 560 southwest of Shining Tree via the Ontario Hydro powerline northward to Wire Lake; thence eastward through the bush to Burn Lake.

GENERAL GEOLOGY

The general and economic geology of the Active property has been described by the writer in an earlier report. It is sufficient to say that the property is underlain by Timiskaming sediments at the north, Keewatin volcanics to the south and east, while the central part is overlain by a relatively thin layer of flat lying Gowganda conglomerate.

An airborne electromagnetic survey of Connaught Township in the fall of 1970 by Amex Exploration, Inc. located two electromagnetic conductors on the Active claim. These conductors and the zone of copper mineralization on the neighbouring Coniston Copper Mines Ltd. claims have prompted the geophysical exploration of the Active claims.

SURVEY RESULTS AND INTERPRETATION

Magnetic Survey

The magnetic results seem to be an accurate reflection of the geological nature of the underlying rocks. The northern part of the property which is underlain by ancient Timiskaming sediments shows the strongest magnetic variation. Here, there is a distinct magnetic banding conformable to the strike of the formations. The southeast portion of the property, which is underlain by Keewatin volcanics shows slight magnetic banding. The Gowganda Formation is magnetically low, and for the most part, shows magnetic variations of less than 25% from the norm. The odd zone of strong magnetic intensity is very localized. Nowhere on the property are there magnetic indications of beds rich in magnetite iron formation nor is there any suggestion of a basic intrusive.

2100

The strongest magnetism is localized at 2011 N on line 24 W. Here a reading of over 13000 gammas is indicative of the presence of magnetite. The high reading is localized within a band of modest magnetic intensity whose length is about 900 feet with a width from 50 to 100 feet. An electromagnetic conductor is co-existent. There is a strong dipole effect adjoining the magnetic anomaly on the north side.

None of the other magnetic effects warrant comment in their own right. Some are of interest when considered in association with the electromagnetic results.

Electromagnetic Survey

A substantial number of electromagnetic conductive zones were located. Some of these are definitely associated with sulphide minerals while others require further investigation before they can be classed as drill targets. There are 6 EM conductive zones warranting individual description.

Conductor A

This conductor coexists with the best magnetic anomaly located on the property and already described. The anomaly is detectable over a strike length of 1200 feet. Within this strike length sulphides, chiefly pyrite, have been found at 3 separate locations. At 2100 N on line 24 W a black rhyolite formation contains minor disseminations of chalcopyrite and pyrite. This conductor is

definitely a diamond drill target since most of the area is overburdened.

Conductor B

This is a double, echeloned conductor lying some 600 feet southeast of Conductor A. The two may be offset by a north-south fault. Conductor B lies under swamp and has no measurable magnetic association. Pyrite has been found at the extreme west end of the conductor which is about 1200 feet long.

Conductor C

This is an extremely strong conductor which extends east-west right across the north boundary of the property. It is probably a graphitic shear zone.

Conductor D

This conductor at 3300 S on line 12 W was not detected on the adjacent lines, unquestionably because the lines do not extend far enough to the north. It is a medium intensity conductor and has good magnetic associations. Though not immediately classifiable as a drill target, the anomaly does warrant further investigation geophysically.

Conductor E

This conductor is similar to Conductor D except that it is weaker and extends across 3 lines for a distance of approximately 1200 feet. Again, further investigation is needed.

Conductor F

Conductor F has no associated magnetic anomalies but it does possess a very strong conductivity in the eastern part of its 1600 foot length. Again further substantiation is required before the conductor can be classed as a drill target.

About 6 other conductive zones were located during the survey whose exploration value is at present indeterminate. As the exploration of the property proceeds, it will be possible to classify all of the conductors more accurately.

CONCLUSIONS AND RECOMMENDATIONS

1. A magnetic and electromagnetic survey has been completed over the Active claims on lines 400 feet apart with readings at 50 foot intervals.
2. Conductor A is classifiable as a diamond drill target for the following reasons.
 - (a) There is good conductivity for a length of 1200 feet.
 - (b) There is fair magnetic association.
 - (c) Although most of the zone is overburdened, sulphides, including minor chalcopyrite, have been found at 3 separate points along the strike of the conductor.
3. Conductor B is a less attractive drill target but the sulphide pyrite has been found at one location on the conductor, most of which lies within a swamp.
4. All of the other conductors require further substantiation before they can be classed as first grade drill targets. Since soil samples have been collected (and are being analyzed) over most of the property, a re-classification of some of the conductive zones is likely in the near future. Other conductors, particularly those occurring in swampy areas, should be checked by large, more sophisticated electromagnetic units.

My report is respectfully submitted.

October 20, 1971.

H. G. Harper

H. G. Harper, P.Eng., F.G.A.C.

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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 Geophysical (geochemical to come)
Township or Area Connaught
Claim holder(s) John S. Grant on trust for Active Mines Limited
Author of Report H. Grant Kasper P. Eng.
Address 314 Hendon, Willowdale, Ont
Covering Dates of Survey Sept 8/71 to Oct 20/71
(linecutting to office)
Total Miles of Line cut 17

MINING CLAIMS TRAVERSED
List numerically

L	293126
(prefix)	(number)
L	293127
L	293128
L	293129
L	293375
L	293376
L	293377
L	279215
L	279216
L	279217
L	279218
L	279219
L	279220

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

ENTER 40 days (includes line cutting) for first survey.
ENTER 20 days for each additional survey using same grid.

Geophysical
-Electromagnetic 40
-Magnetometer 20
-Radiometric _____
-Other _____
Geological _____
Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Nov 8/71 SIGNATURE: H.G. Kasper
Author of Report

PROJECTS SECTION

Res. Geol. Kirkland Lake Qualifications E.3.1058
Previous Surveys L.D.

Checked by Jm date Feb 10/72

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

TOTAL CLAIMS 13

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS EM-1037 EM 3274
Number of Stations MAG-1559 Number of Readings MAG 1559
Station interval BOTH - 50'
Line spacing 400'
Profile scale or Contour intervals 1" = 30% - EM 1000 GAMMAS - MAG
(specify for each type of survey)

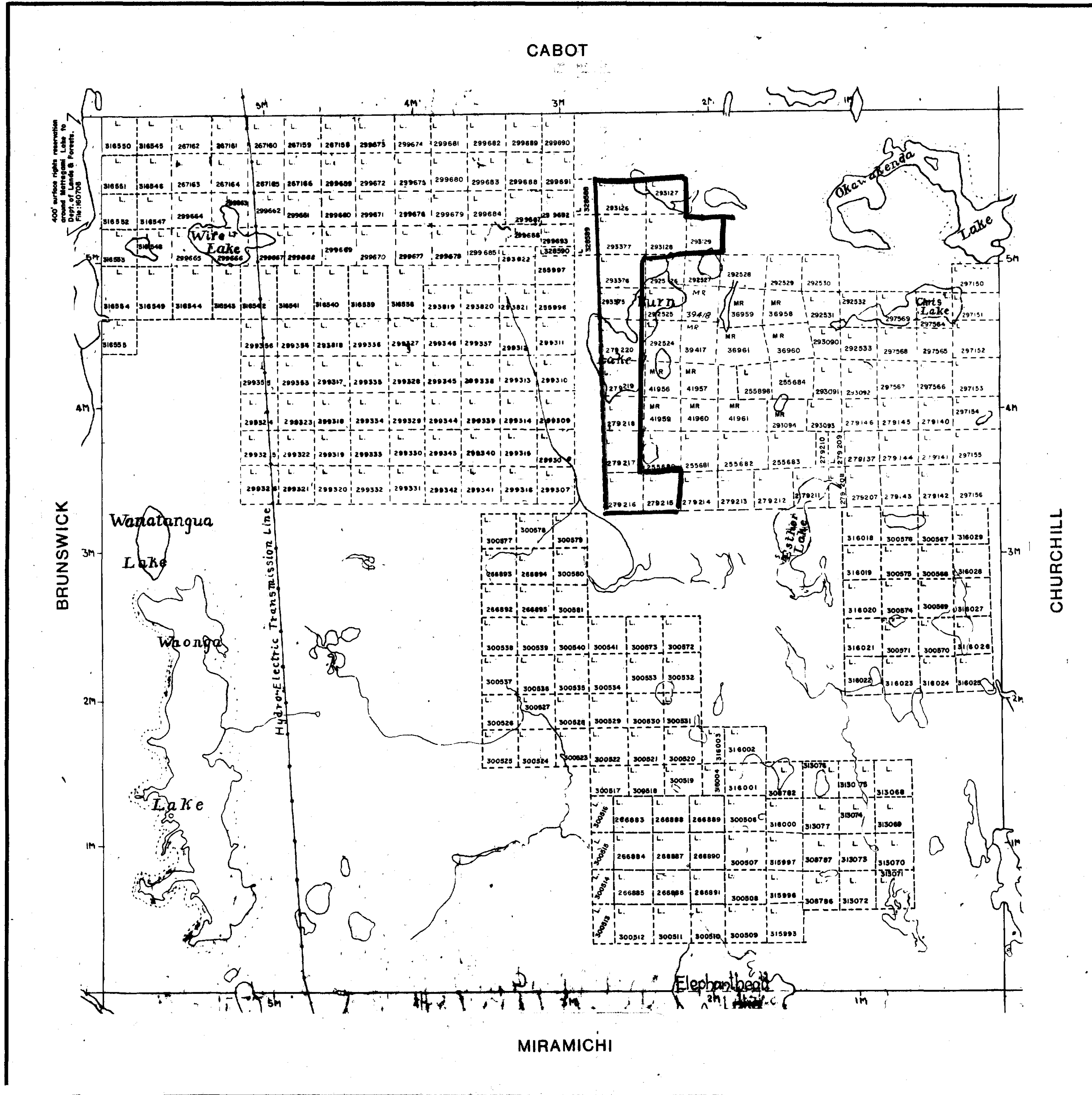
MAGNETIC
Instrument McPARR 500 A
Accuracy - Scale constant 20 GAMMAS PER SCALE DIVISION
Diurnal correction method BASE STN. + AUX. BASE STNS. (INDICATED ON MAP)
Base station location L 8 W - 2200 S

ELECTROMAGNETIC
Instrument ROUNDA EM 16
Coil configuration ONE VERTICAL & ONE HORIZONTAL
Coil separation CONSTANT
Accuracy ± 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 17.80 KHz CUTLER MAINE
(specify V.L.F. station)
Parameters measured VERTICAL IN PHASE & VERTICAL OUT OF PHASE

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 _____



NOTES

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

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DATE OF ISSUE

NOV 17 1971

ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

LEGEND

PATENTED LAND	⊙ or *
PATENTED FOR SURFACE RIGHTS ONLY	⊙
LEASE	⊙
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	17
ROADS	—
TRAILS	---
RAILWAYS	—+—
POWER LINES	—+—+—
MARSH OR MUSKEG	~
MINES	*

**used only with summer resort locations or when space is limited*

TOWNSHIP OF

CONNAUGHT

Calaim Map.
DISTRICT OF

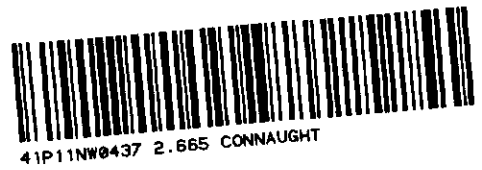
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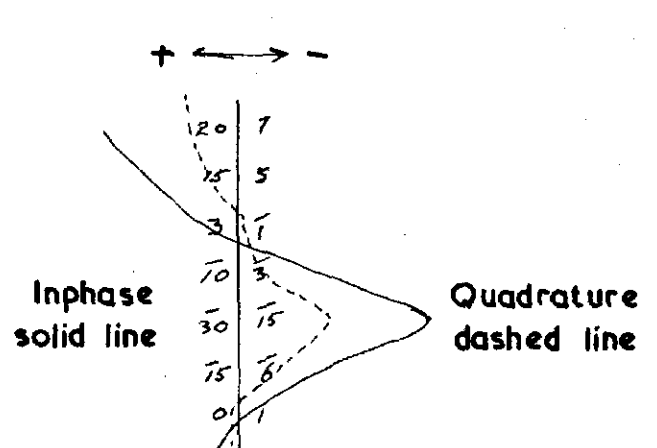
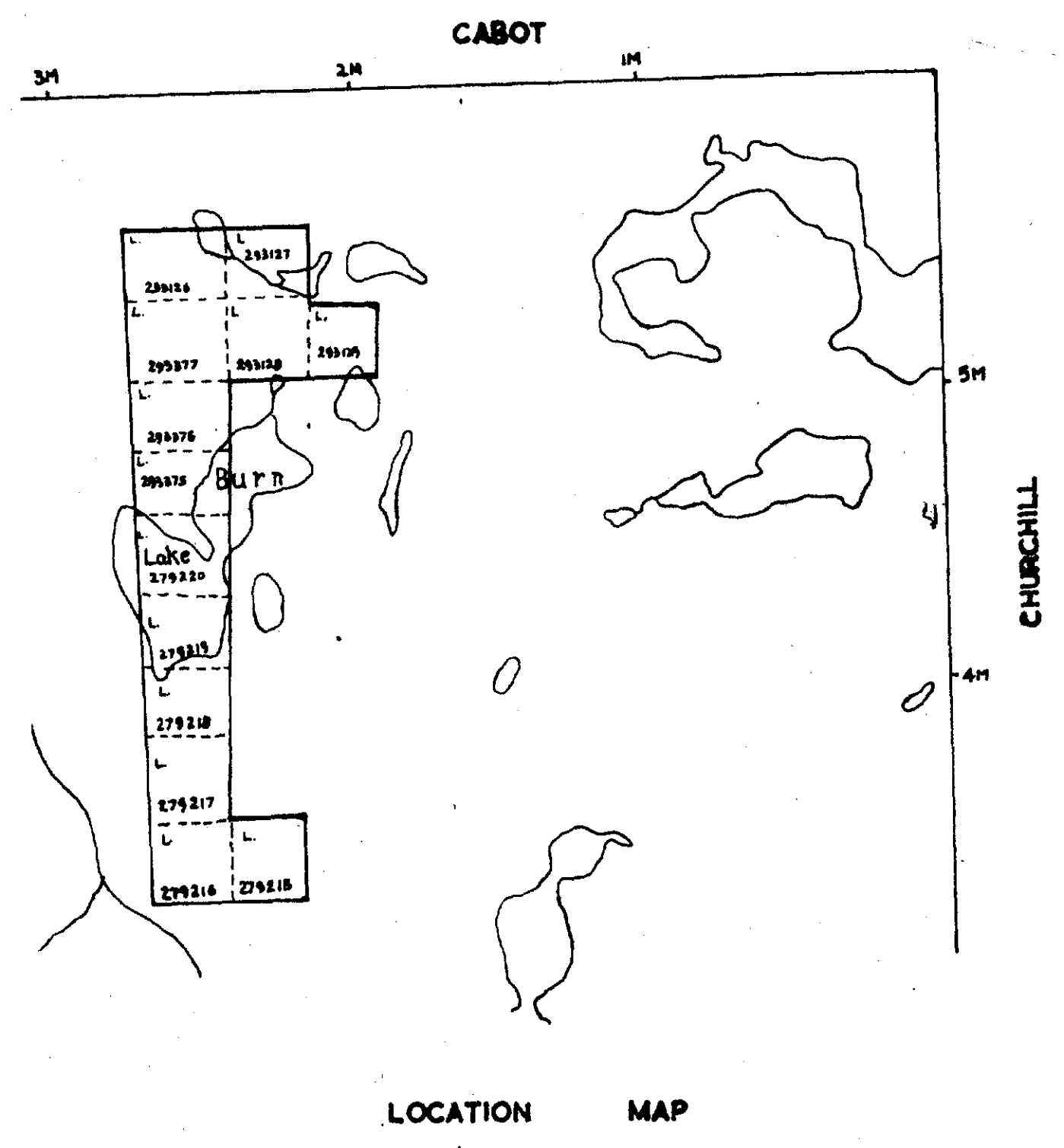
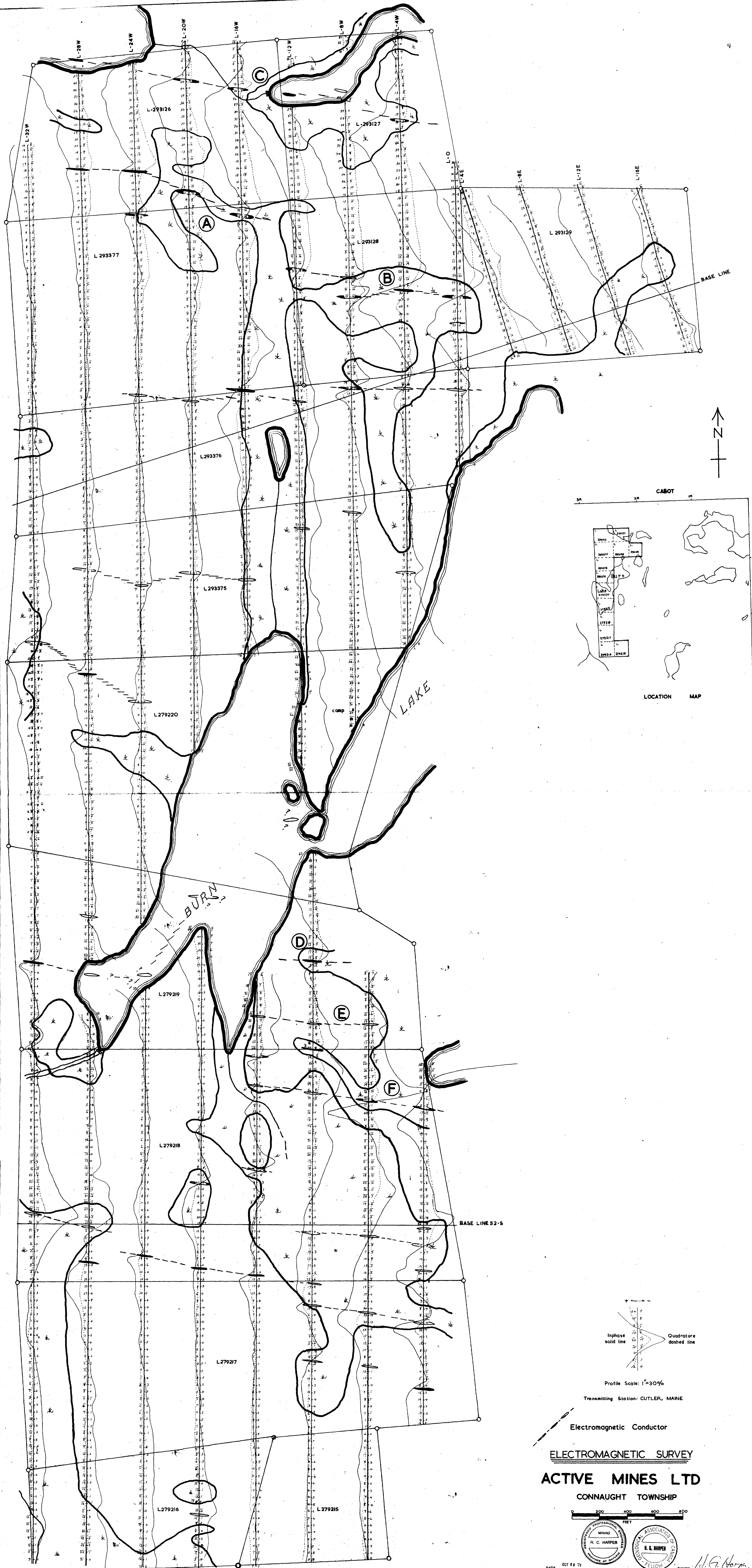
LARDER LAKE
MINING DIVISION

SCALE : 1 INCH = 40 CHAINS (1/2 MILE)

DR. N G	PLAN NO. M 730
DATE 12/70	

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

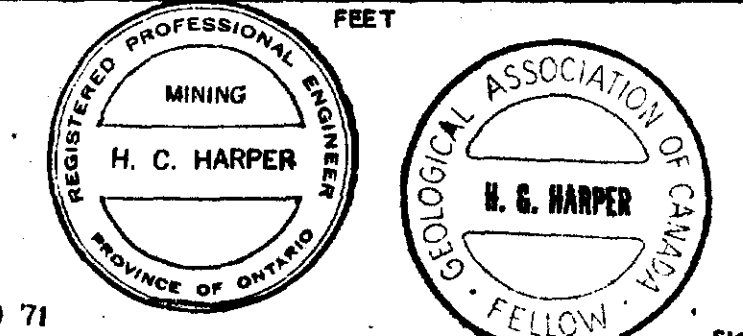




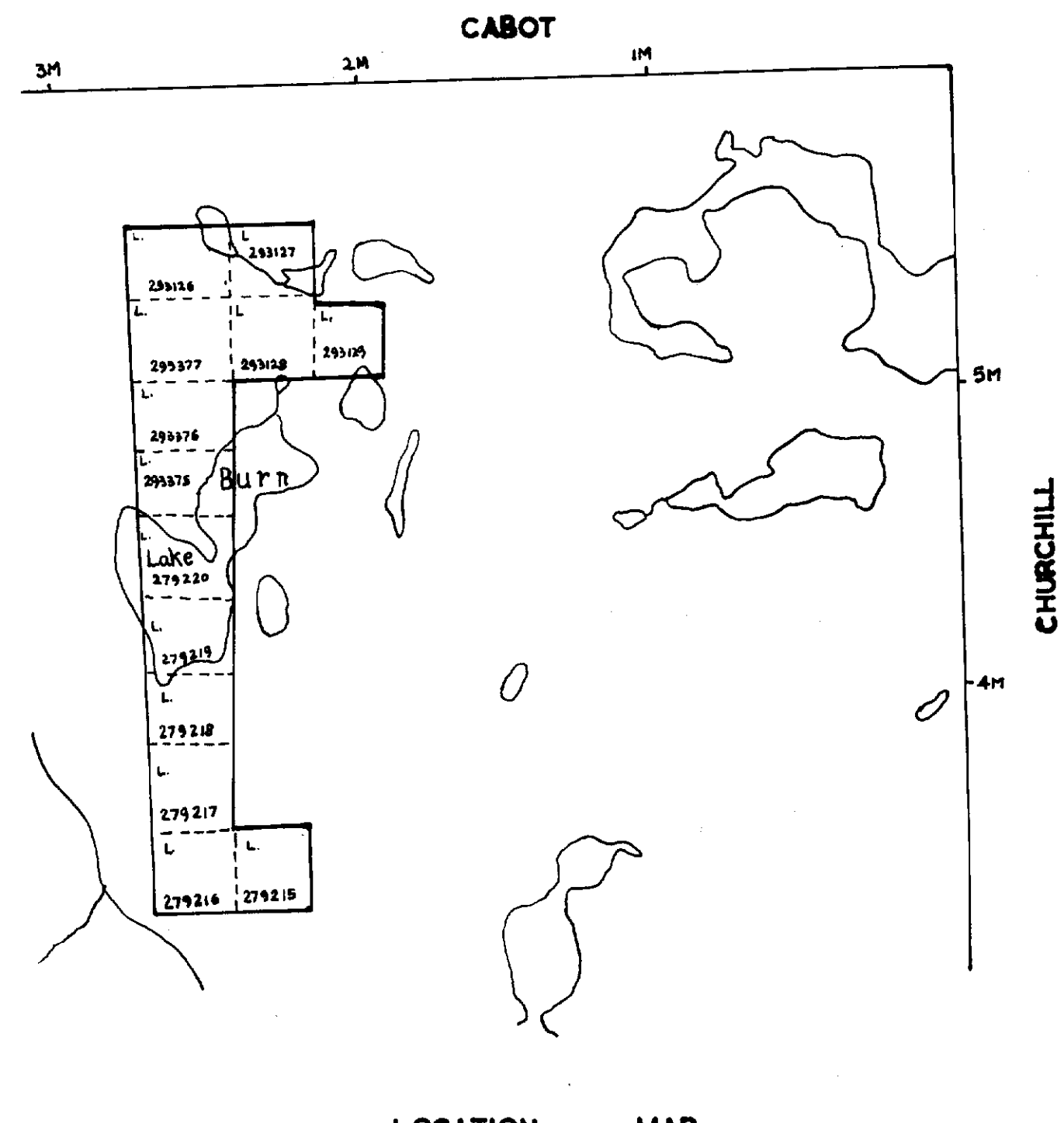
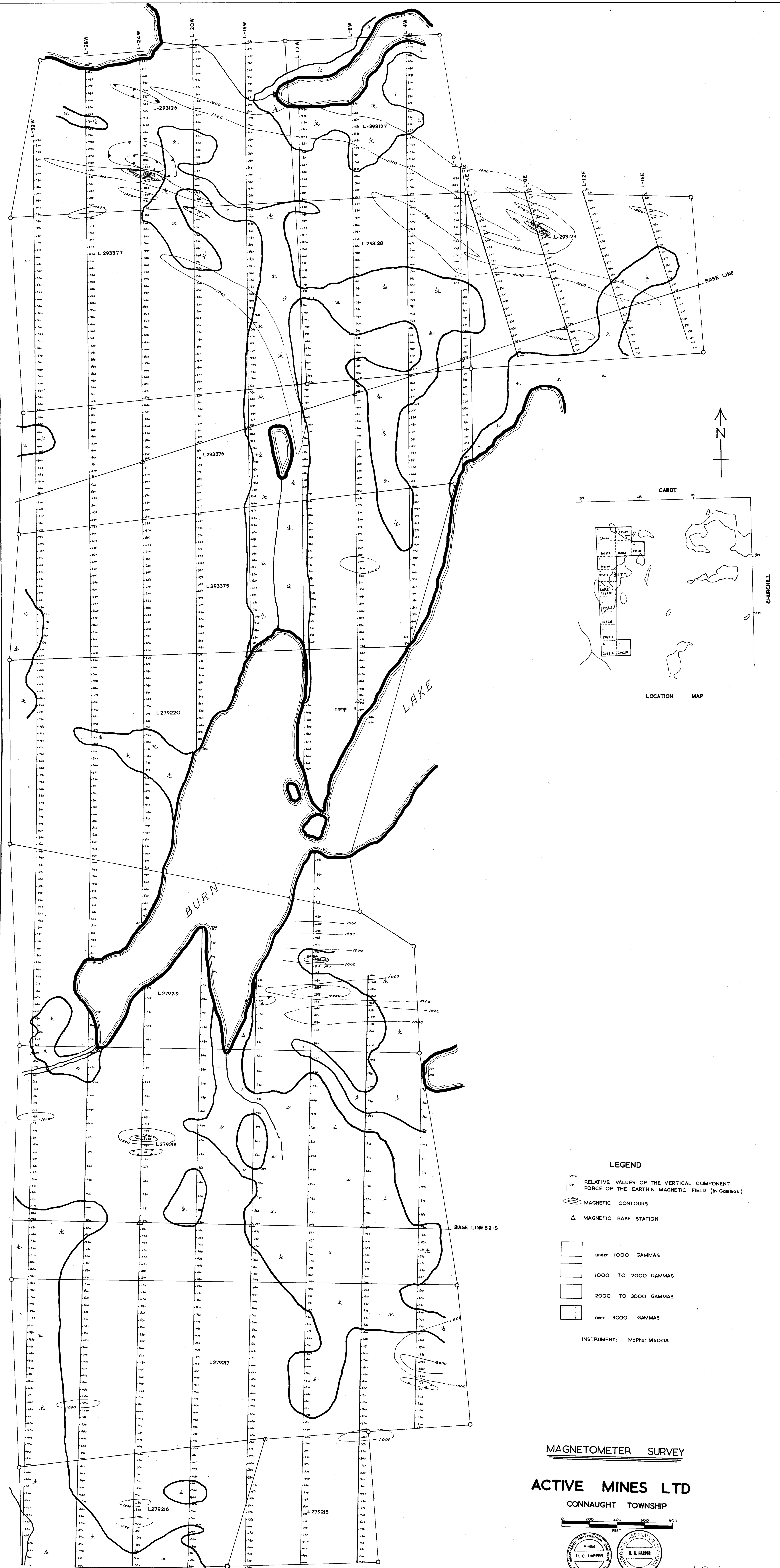
Profile Scale: 1"=300'
 Transmitting Station: CUTLER, MAINE

Electromagnetic Conductor

ELECTROMAGNETIC SURVEY
ACTIVE MINES LTD
 CONNAUGHT TOWNSHIP



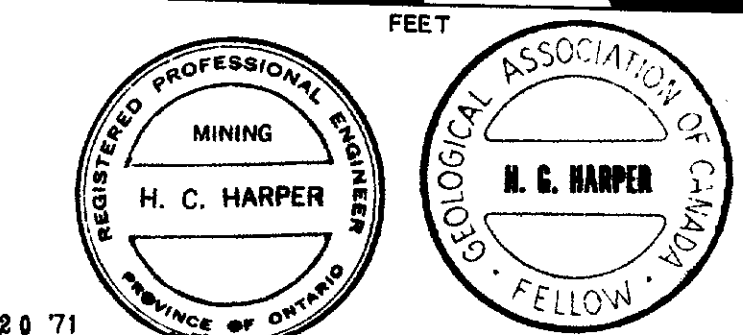
DATE: 07 10 71
 SIGNED: H. G. Harper
 2.665



- LEGEND**
- RELATIVE VALUES OF THE VERTICAL COMPONENT FORCE OF THE EARTH'S MAGNETIC FIELD (In Gammas)
 - MAGNETIC CONTOURS
 - MAGNETIC BASE STATION
 - under 1000 GAMMAS
 - 1000 TO 2000 GAMMAS
 - 2000 TO 3000 GAMMAS
 - over 3000 GAMMAS
- INSTRUMENT: McPhar M500A

MAGNETOMETER SURVEY

ACTIVE MINES LTD
CONNAUGHT TOWNSHIP



DATE OCT 26 '71

SIGNED *H. C. Harper*

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