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REPORT ON GEOPHYSICAL SURVEYS ON MINING CLAIMS MR - 45570 AND MR - 45571, ENGLISH TOWNSHIP, ONTARIO

INTRODUCTION:

Electromagnetic and magnetometer surveys were carried out over the two mining claims during Jan. 29 and Feb. 9, 1968. These two claims form part of a larger group presently held under option to Cyprus Exploration Corporation Ltd., Toronto, from Mr. Frank Boychuk of Timmins, Ont. The surveys discussed in this report were carried out by S. W. Evans, Mining Geologist.

A geological map and magnetometer report was completed in the fall of 1967 on a portion of the property and submitted for assessment purposes previously. This geological report included the land area of MR - 45571 adjacent to the west shore of Muskasenda Lake.

PROPERTY AND LOCATION:

The two mining claims MR - 45570 and MR - 45571 are located in the north west sector of English Townships, Montreal River Mining Division, District of Sudbury, Ont. With the exception of a small portion of claim MR - 45571 and a few small islands the claims are covered by waters of Muskasenda Lake. The locale is 29 air miles south of South Porcupine, Ont. During the summer the area can be reached by road from South Porcupine or Matatchewan. Both road distances are

Property and Location: (cont'd.)

approximately 50 miles.

GENERAL GEOLOGY:

A comprehensive geological report and map entitled "Preliminary Geology on Part of the Boychuk Property, English and Beemer Townships, Montreal River Mining Division, District of Sudbury, Ontario" by S. W. Evans and dated Jan. 3, 1968, was recently submitted for assessment work on the property. This program included the land area of claim MR - 45571 where the rock types include hornblende gabbro, quartz diorite, and metavolcanics mainly represented by green chlorite schists. This Precambrian assemblage is Archaean in age. It is postulated that a major structural lineament striking north-south (approx.) underlies Muskasenda Lake.

EXPLORATION AND DEVELOPMENT SUMMARY:

With the exception of the geological work done on the western portion of claim MR - 45571, there is no record of any previous work on the claims, other than the geophysical coverage presently under discussion in this report.

SURVEY METHODS AND INSTRUMENT DATA:

The linegrid established for control of the geological program was extended to cover the two claims (MR-45570,

Survey Methods and Instrument Data: (cont'd.)

MR - 45571). A tieline with the same bearing as the baseline was located at 12+00 E. of the main baseline and picket lines at 400 foot intervals were established on the ice of Muskasenda Lake. The chainage interval along the lines was 100 feet. The additional linecutting involved 1.4 miles of line, not previously reported.

a) Magnetometer Survey:

A limited survey on acreage to the south had been in progress. In order to tie the magnetometer work at this location to the work on the two claims the magnetic base of the southern area survey was carried north along the baseline and control stations established on L 88 N at 0+00 and 2+00 East.

A Sharpe MF - 1, fluxgate magnetometer with a sensitivity of 20 gammas (per scale division) on the 1000 gamma range, reads the vertical component of the earth's magnetic field.

The instrument was set at 500 gammas on the central base station L 56 N, 0+00 and this base was eventually carried into our survey area. An arbitrary background of 2000 gammas was assigned, and added to all readings. Control readings were taken along the baseline and the tieline at 12+00 E and diurnal corrections applied where indicated.

b) Electromagnetic Survey:

A Sharpe SE - 600, horizontal loop unit with a 200

Survey Methods & Instrument Data: (cont'd.)

b) Electromagnetic Survey:

foot coil separation was utilized for this survey. This horizontal loop survey measures both the in-phase and out-of-phase components of the secondary field. The frequency of the unit is 1600 cycles per second. The in-phase reading is expressed in percentages of 100 with less than 100 being in the negative range. Out-of-phase readings are expressed as negative or positive in 1% gradations from 0. In the absence of secondary fields the in-phase and out-of-phase readings should balance at 100% and 0% respectively.

An electrical conductor caused by sulphide mineralization will result in a curve going from positive readings through zero to negative and back again to positive. The ratio between the in-phase and the out-of-phase readings over a conductor is an indication of the conductivity of the material. There is a greater deviation of the in-phase component than the out-of-phase component over a good conductor. A poor conductor will produce the opposite effect.

Secondary currents produced in swamps and lakes usually result in out-of-phase deviation with little or no response of the in-phase component.

GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION:

a) Electromagnetic Survey:

The electromagnetic survey results are plotted on

Geophysical Survey Results and Interpretation:(cont'd)

a) Electromagnetic Survey:

the accompanying plan on a scale of 200 feet to the inch.

Results of the survey area indicate almost a complete absence of any real secondary field conductors. Weak out-of-phase readings prevail and are probably the result of wet overburden effects underlying Muskasenda Lake.

b) Magnetometer Survey:

There are no abrupt magnetic changes on these two claims. The increase in readings from 2500 gammas to 2700 gammas in the western part of the area verify our geological information that the western part of the two claims is predominantly gabbro. The structural trend is north east and the relatively low areas (less than 2550 gammas) follow this trend.

CONCLUSIONS AND RECOMMENDATIONS:

There are no electromagnetic conductors indicated, although the depth penetration of the SE 600 unit with a 200 foot coil separation may be a limiting factor of the results obtained. The magnetometer survey also resulted in normal readings.

It is recommended that the work completed to date be applied for assessment requirements and that no further

Conclusions and Recommendations: (cont'd.)

work be contemplated until results on adjoining claims can be considered, at which time a reassessment could be undertaken and consideration given to a survey with deeper penetration abilities.

Respectfully submitted,

S. W. Evans, B.A.Sc., P.Eng.,
Mining Geologist.

Toronto, Ontario,
February 21, 1968.

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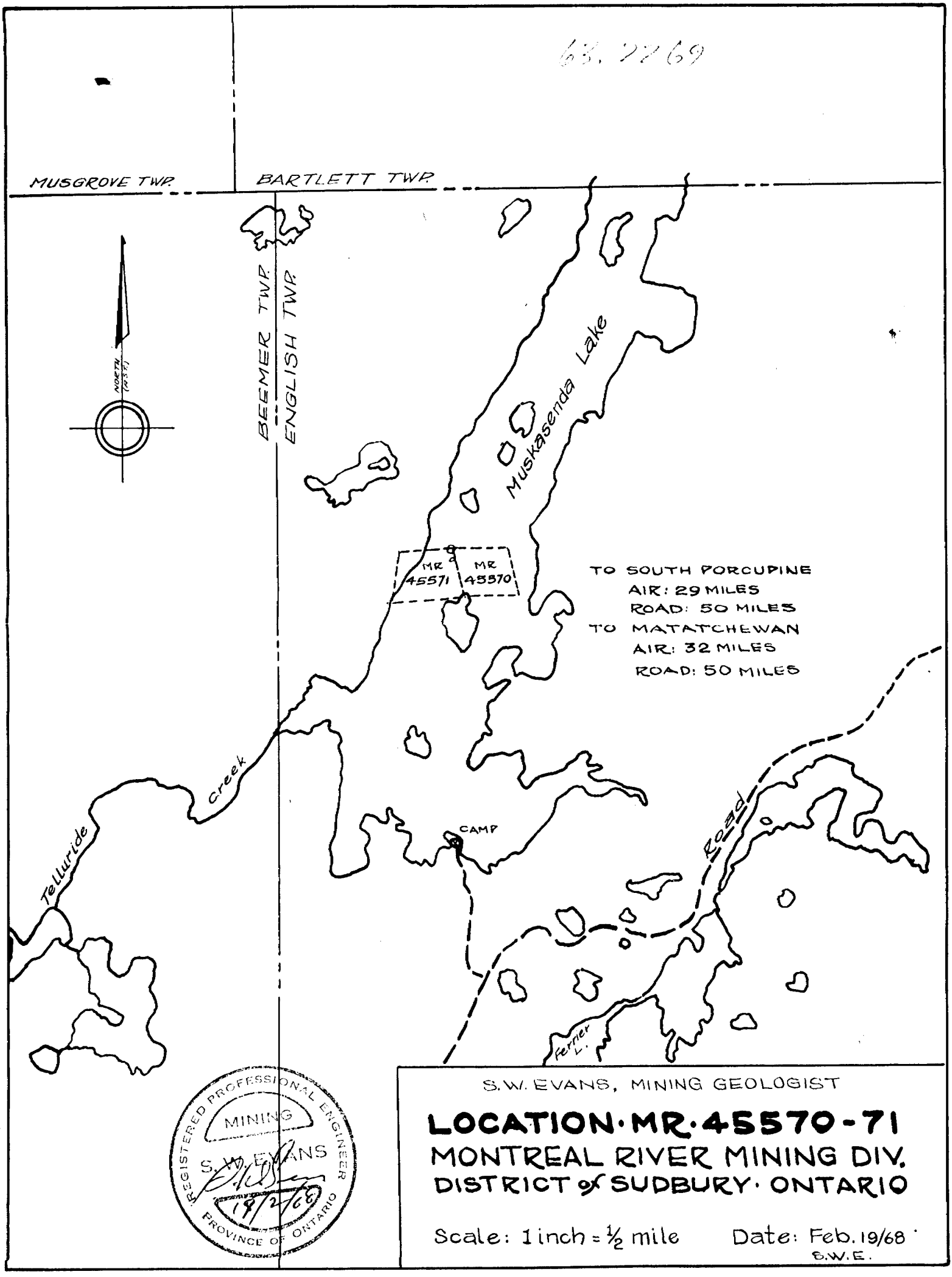
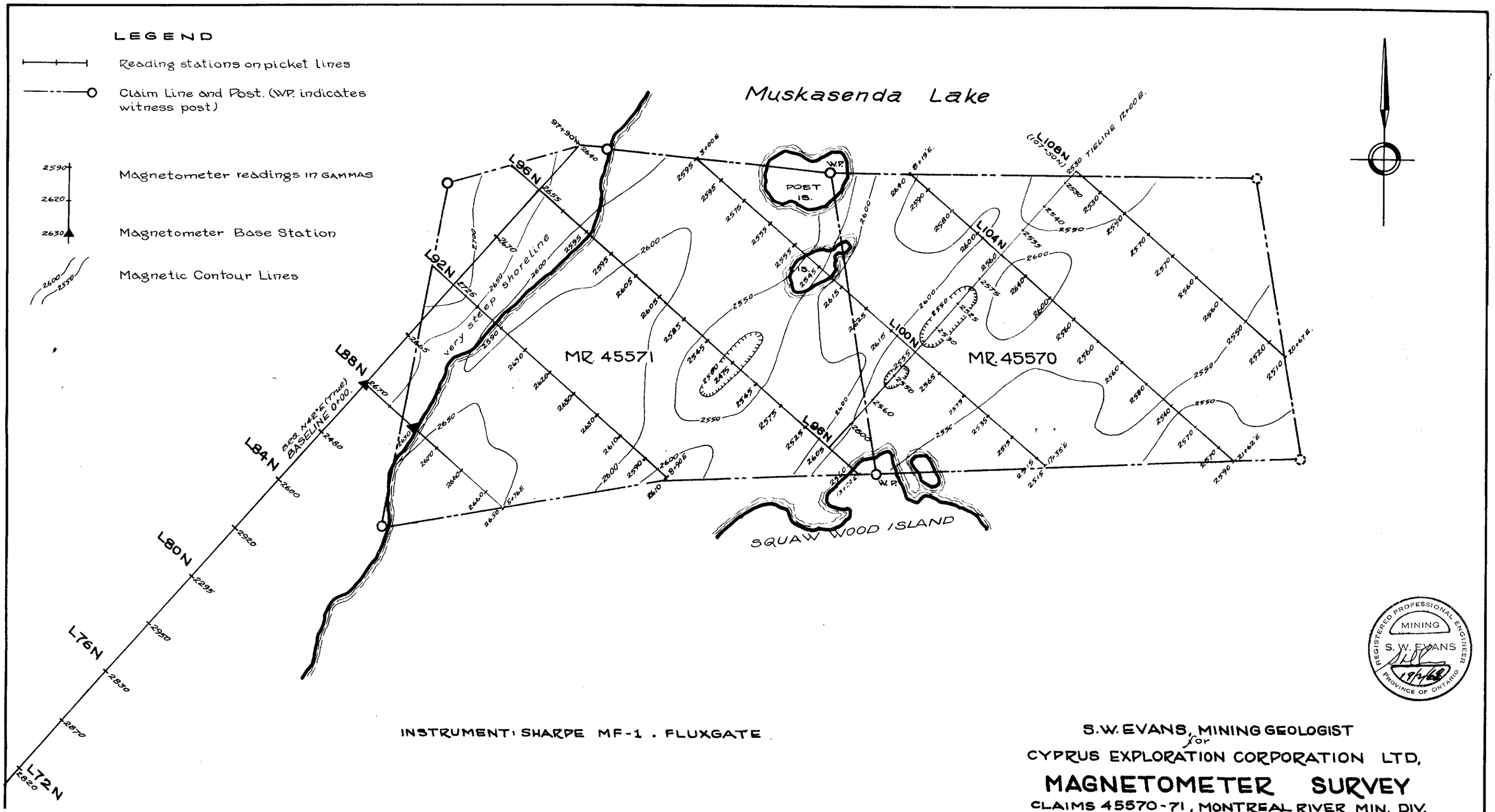


S.W. EVANS, MINING GEOLOGIST

LOCATION · MR · 45570 - 71
MONTREAL RIVER MINING DIV.
DISTRICT of SUDBURY · ONTARIO

Scale: 1 inch = ½ mile Date: Feb. 19/68

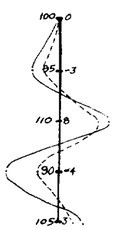
S.W.E.



LEGEND

Reading stations on picket lines

Claim Line and Post. (W.P. indicates witness post.)

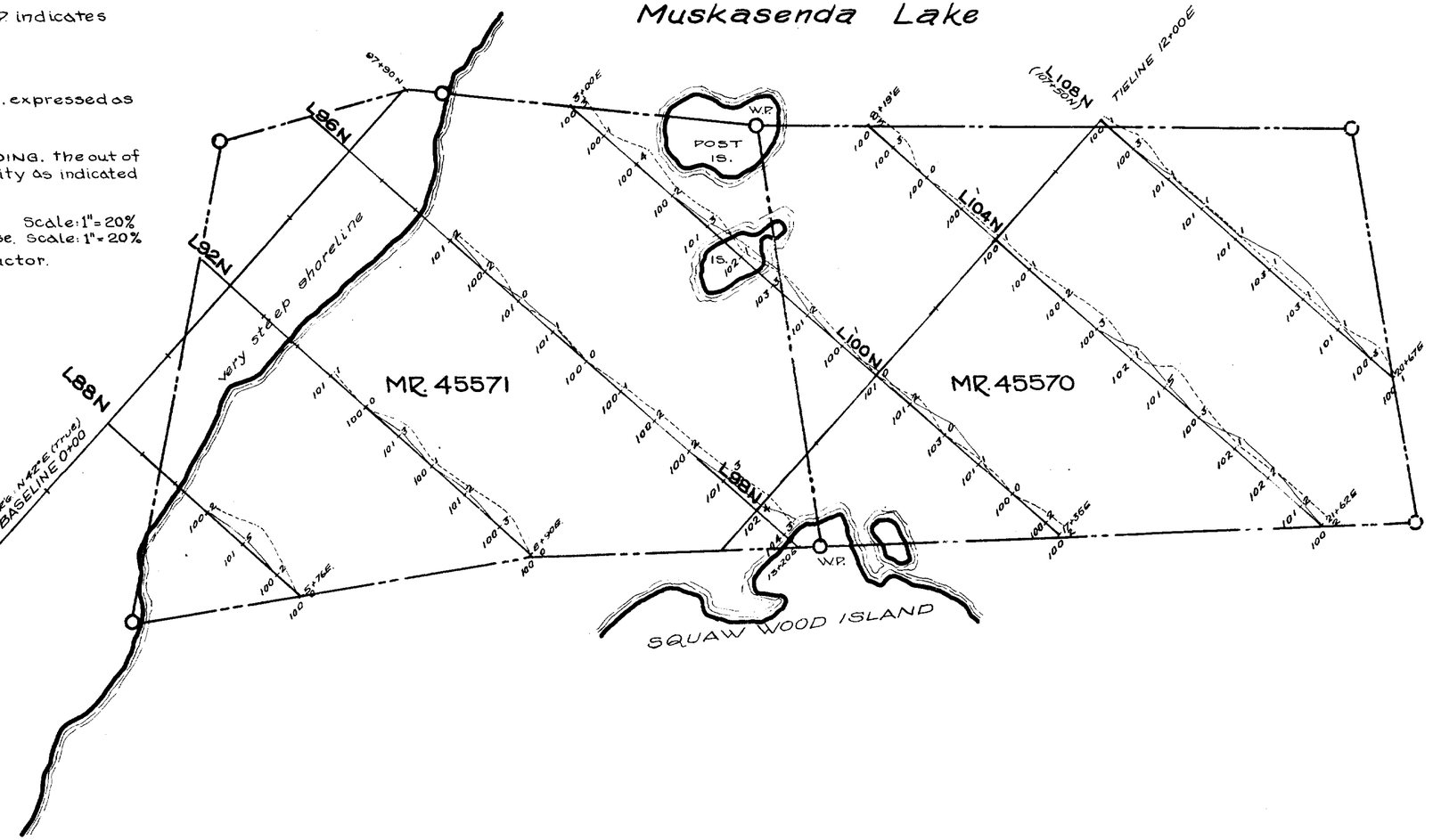


I.P. : IN-PHASE READING. expressed as percentage of 100.

O.P. : OUT-OF-PHASE READING. the out of phase component (%) polarity as indicated

Profile : in-phase. Scale: 1" = 20%
Profile : out-of-phase. Scale: 1" = 20%

Electrical conductor.



INSTRUMENT: SHARPE SE-600 . HORIZONTAL LOOP.
200' COIL SEPARATION.

REGISTERED PROFESSIONAL ENGINEER
MINING
S. W. EVANS
19/2/68
PROVINCE OF ONTARIO

S.W. EVANS, MINING GEOLOGIST
for
CYPRUS EXPLORATION CORPORATION LTD.

ELECTROMAGNETIC SURVEY

CLAIMS 45570-71 MONTREAL RIVER MIN. DIV.
ENGLISH TWP. ONTARIO

Scale: 1 inch = 200 feet.

Date: Feb. 15, 1968
Drawn by: S.W. EVANS