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REPORT

ON

GEOPHYSICAL SURVEYS

ON THE

REID-MAHAFFY OPTIONS

REID & MAHAFFY TOWNSHIPS

TIMMINS AREA

PORCUPINE MINE DIVISION

ONTARIO

FOR

CHANCE MINES LIMITED

## I INTRODUCTION

A magnetic survey was carried out over a group of twenty-four (24) unpatented mining claims in the western portion of Reid and Mahaffy Townships. These results were made available to Scope Mining & Exploration Consultants Limited in order to aid in an interpretation of a

vertical-loop dip angle electromagnetic survey they had completed over the same group of claims. The overburden is very heavy and likely in excess of 100 feet. Little is known of the bedrock geology.

#### II PROPERTY LOCATION AND ACCESS

The property is comprised of twenty-four (24) unpatented mining claims as follows:

P-58566 to P-58589 inclusive (24 claims)

The claims are located in a strip two claims wide and twelve claims long in a north-south direction approximately paralleling Thorburn Creek in Reid and Mahaffy Townships.

Access to the property was gained from Timmins. This access route is north from Timmins fifteen miles along a road on the east side of the Mattagami River, across the river by boat, and then 3-1/2 miles westward along the Reid-Mahaffy boundary to the property.

### III GEOPHYSICAL SURVEYS

The area is heavily covered with glacial clay likely to depths in excess of 100 feet. Magnetic and vertical-loop electromagnetic surveys were carried out over

the property on grid lines spaced at 400 foot intervals running in an east-west direction (with the exception of one detailed area).

#### Magnetic Survey

The magnetic survey was carried out by the field staff of Chance Mines Limited and presented on maps prepared by Scope Mining & Exploration Consultants Limited on the same scale as the electromagnetic survey. The station interval was extended to 200 feet because of the very heavy overburden. An Askania torsion-wire magnetometer was employed with a scale constant of 220 gammas per degree and a readability of 5 gammas.

The results of this survey are presented in profile form plotted from a base on the traverse line with a positive direction to the north.

## Electromagnetic Survey

The electromagnetic survey was carried McPHAR DUAL FREQUENCY
out employing a vertical-loop dip angle survey technique. The transmitter was in a fixed location as indicated by the triangle and the traverses run with the receiver along adjacent lines recording the dip angles. These results are

for two frequencies, 1000 CPS and 5000 CPS, and are plotted in solid and broken profile lines. The conductor axes are marked according to the legend and the zones are labelled alphabetically.

# Discussion of Geophysical Results

#### Sheet 3:

There is one prominent magnetic feature that continues on from Line 10 S through to Line 52 + 90 N and beyond to Line 16 N (north grid). From the magnitude of the readings, this magnetic feature is considered to be a large basic or ultrabasic intrusive of considerable aerial extent. The southern part of Thorburn Creek is considered to lie along the extension of the Mattagami River fault.

#### Zones Q and R

These two electromagnetic zones represent a poorly conductive feature on the east flank of the magnetic high. They could arise from shearing associated with the Mattagami River fault or local conductors developed by shearing within the ultrabasic body (interpreted from the magnetics). Neither of

these zones warrant diamond drilling on their own merit but geologic conditions may be such that it is desirable to test them. In this case an initial hole is recommended to cut the conductor at 13 + 00 W on Line 32 N (south grid). Any additional drilling of these zones should await the results of such a test.

#### Conductive Zone S

This roughly parallels Thorburn Creek as it swings westward towards the north end of the grid (south grid). It is an extremely poor conductor and occurs within the magnetic high. This very likely arises from shearing in the ultrabasic body (interpreted from the magnetics).

## Sheet 4:

The only magnetic feature on this sheet is the large feature described under Sheet 3, and extending onto the lower portion of the north grid. The remainder of the north grid has unusually flat magnetic relief.

A detailed grid was placed with traverse lines in the north-south direction between Lines 8 N and 32 N because of the dip angles obtained in the

reconnaissance survey.

#### Zone T

Occurs striking east northeast close to the northern boundary of the ultrabasic intrusive (interpreted from the magnetics). This is an extremely poor, broad, multiple conductor zone. Sampling of this zone should only be on the basis of geology and after some of the stronger zones to the south have been tested.

#### Zone U and V

These two zones occur on the strike projection of those of the southern grid and strike approximately north-south. Of the two zones, Zone V is the more interesting since there is a suggestion of a conductor lying at a peculiar attitude. On the basis of geophysical results alone, it is not recommended that this zone be diamond drilled but if a drill hole is located in this general area to obtain geologic information, it is recommended that it be located on Line 48 N at 16 W and drilled in an easterly direction.

#### V CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey located one large magnetic high that was interpreted as a large ultrabasic intrusive. Weak electromagnetic conductors paralleling the interpreted location of the Mattagami River fault suggests local shearing in the area striking approximately north-south. One conductor strikes east north-east across the north grid and suggests some local shearing around the contact of this interpreted ultrabasic.

It is recommended that diamond drilling be undertaken only on the basis of obtaining geologic information. None of the geophysical results are strong enough to warrant diamond drilling. If diamond drilling is undertaken, it would be useful to locate the hole so that it would intersect not only the interpreted ultrabasic intrusive but also Zone S which lies within its boundaries. A second hole might be located on Line 32 N to intersect Zone R which appears to lie near the contact and likely not far from the Mattagami River fault.



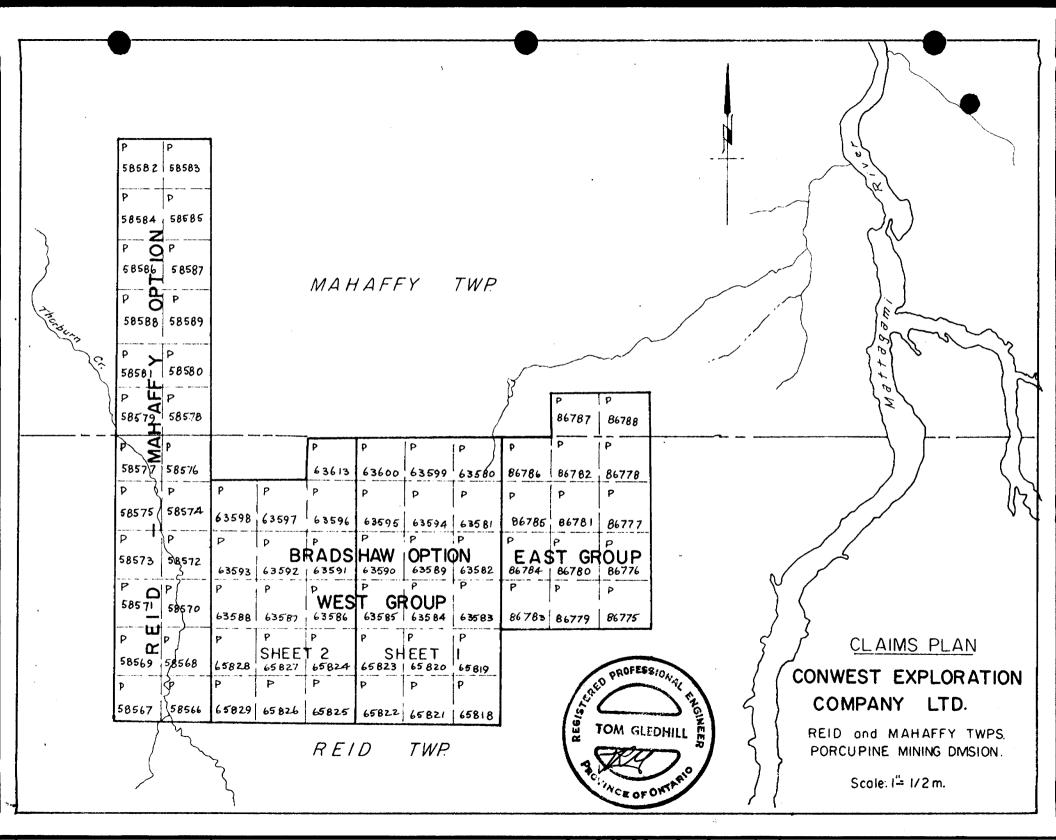
Respectfully submitted,

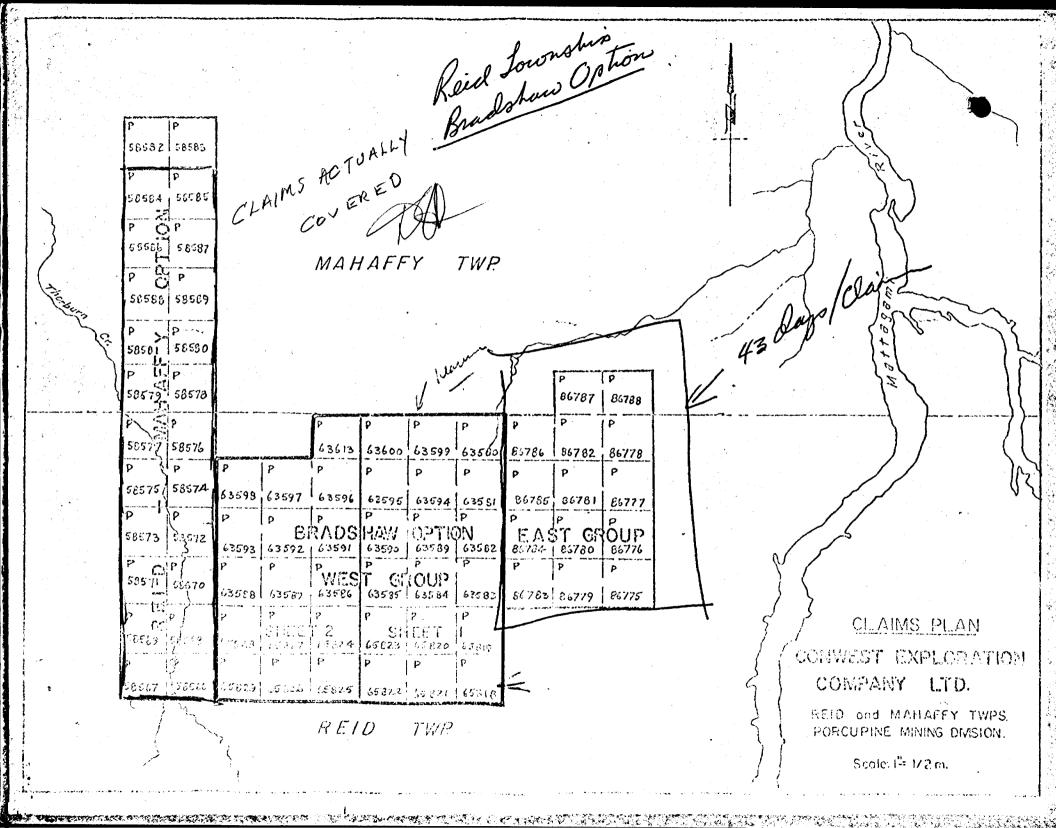
SCOPE MINING & EXPLORATION CONSULTANTS LIMITED

T. R. Gledhill, P. Eng., Geophysicist

Hedlilt

May 12, 1966











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127 THIRD AVENUE TIMMINS, ONTARIO

ONTARIO
DEPARTMENT OF MINES

June 28th, 1966

Mr. R. V. Scott, Director, Mining Lands Branch, Ontario Department of Mines, Parliament Buildings, Toronto 2, Ontario

Dear Sir:

## Re: Mining Claims P-58566-89 incl.

An assessment work credit of 43.1 days, geophysical, was recorded on each of the above mining claims on June 24th.

These claims are recorded in the name of Chance Mining and Exploration Company Limited, Suite 1001, 85 Richmond Street West, Toronto 1, Ontario.

The reports and maps are forwarded direct to the Department.

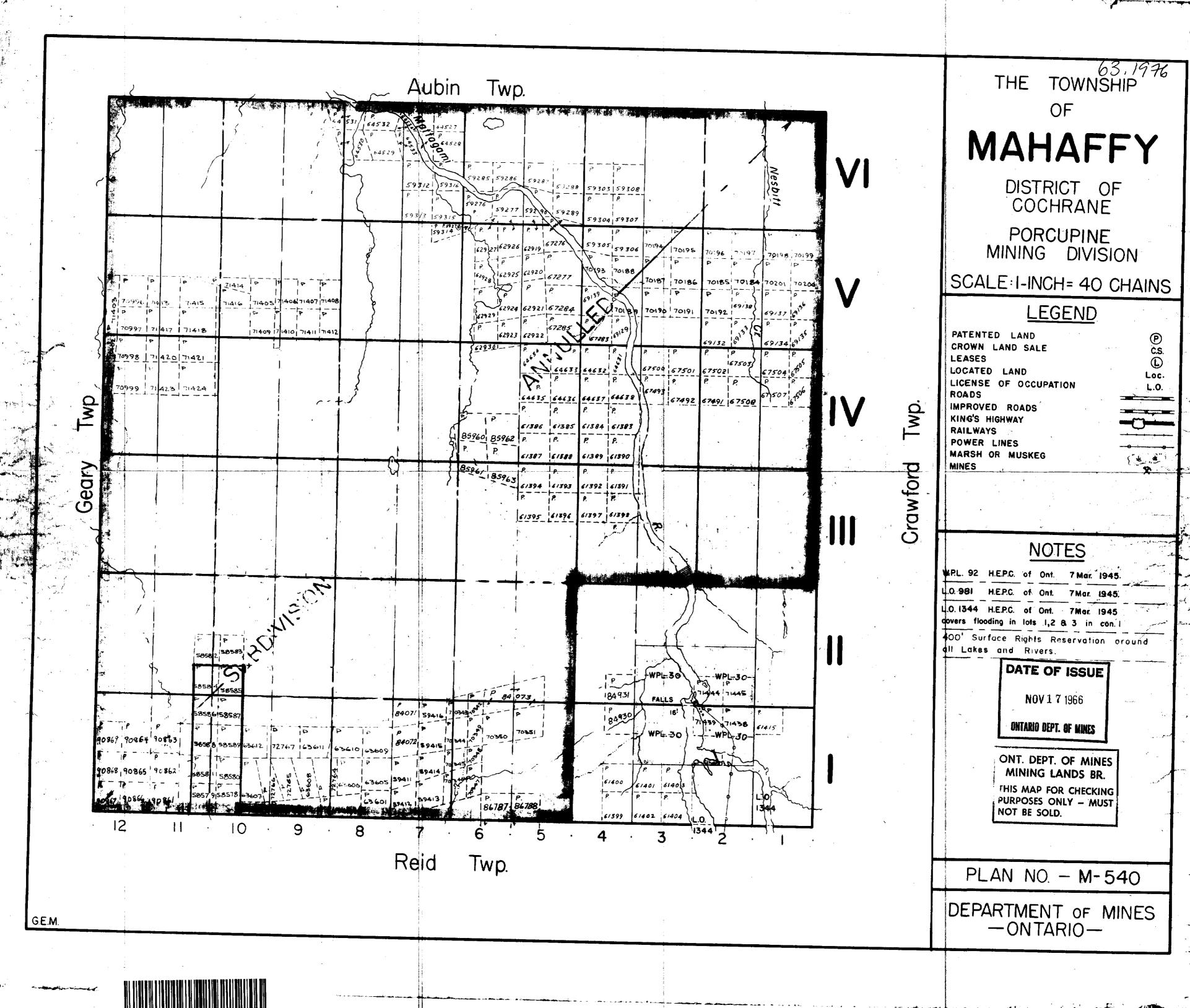
Yours very truly,

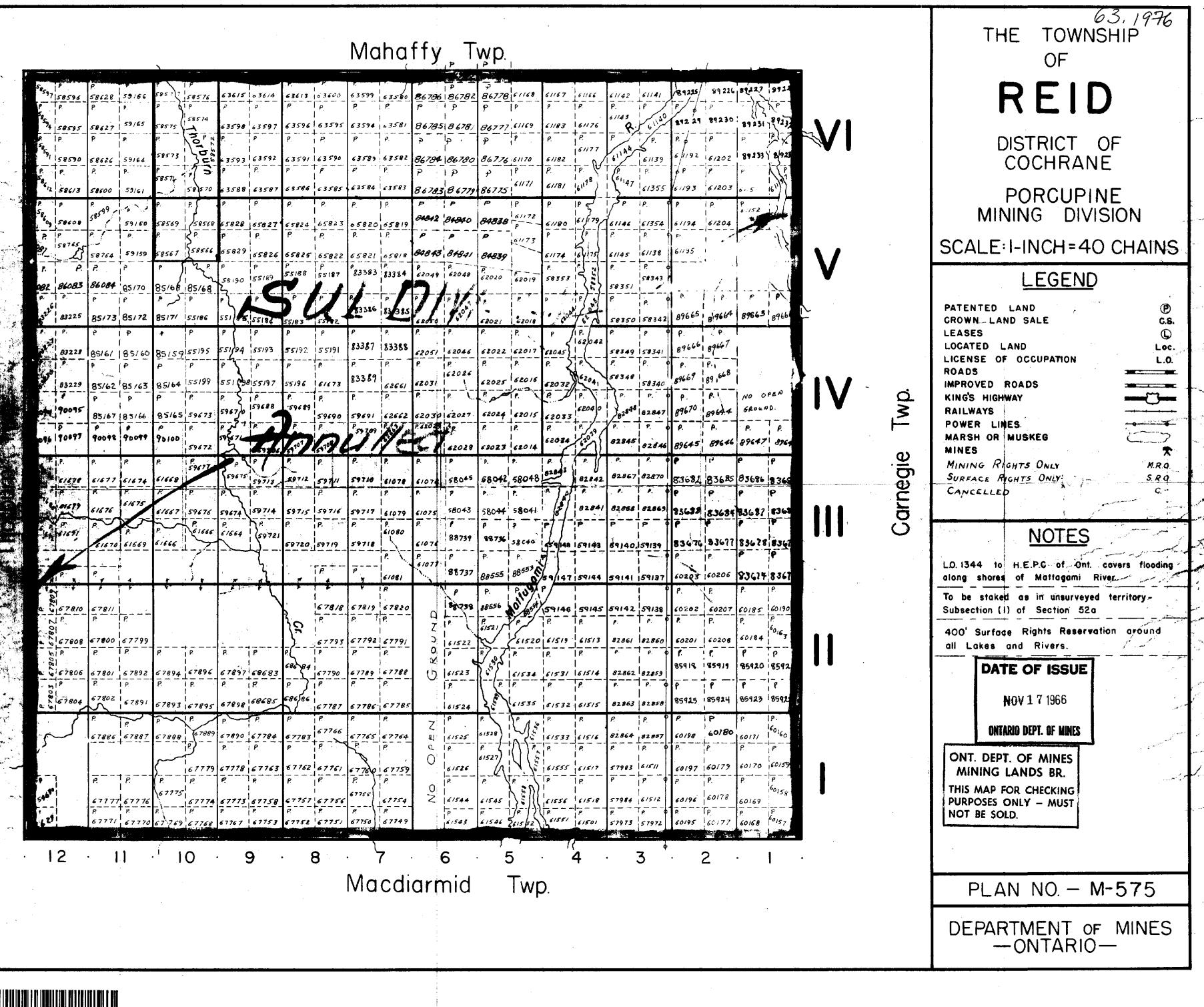
R. J. Simick,

Acting Mining Recorder.

/jt







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