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MAY 15 1972

PROJECTS  
SECTION

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AMAX POTASH LIMITED

MAGNETOMETER SURVEY

MANN TOWNSHIP

ONTARIO

## INTRODUCTION

Page 1.

This report discusses a ground magnetometer survey executed on claims held by Amax Potash Limited in Mann Township, Ontario. The property, for which 40 days assessment credit is requested, comprises eight (8) contiguous claims numbered P313111, -112, -113, -117, -118, -119, -120 and -121 located in the southeastern part of Mann Township in Lot 5 Conc. II and Lot 5 & 6 Conc. I.

## SURVEY DESCRIPTION

A cut-line grid on the above property was established by Ingamar Explorations Ltd. under the supervision of Maurice Hibbard, 362 7th Ave., Timmins, Ontario during the period June 5 thru June 22, 1971. The base line orientation is approximately N85°W. Picket lines were cut at an interval of 400 feet, with a nominal orientation N5°E. A total of 7.70 miles of line were cut over the claims.

The magnetometer survey was performed during July, 1971 by R.G. Shirley of Amax Potash Ltd. using an Askaniz magnetometer model Gf2 Serial #600-457. This instrument measures the vertical component of the magnetic field and has a sensitivity of 225 gammas per scale division, with a repeatability of ±5 gammas.

Following establishment of base stations along the base line, the cross lines were read at 100 foot station interval. Reading along the cross lines were corrected for instrument drift and diurnal variations utilizing the values along the baseline. Overall accuracy of the survey is judged to be within ±10 gammas. A total of 365 stations were occupied on the above claims.

## DATA PRESENTATION

The cut-line grid, along with the corrected magnetometer readings converted into gammas, are plotted in Fig. 2 at a scale of 1" = 400 feet. The magnetic data has been contoured at 100 gamma intervals. The claim boundaries and numbers for which assessment credit is requested are also shown.

## GEOLOGY

In general the bedrock geology of Mann Township is largely obscured by Pleistocene overburden, which reaches thickness of up to 150 feet in this area. Exploration work by other companies, limited outcrop exposures and aeromagnetic data indicate that the southwestern third of the Township is underlain by NW-trending volcanics, with a high proportion of felsic pyroclastic and flow units. A large, complexly folded ultramafic complex dominates the rest of the township. NW faulting is suggested from the aeromagnetic data and from the alignment of the Frederickhouse River.

On the property itself, one outcrop occurs along the northern boundary. Here a large exposure of gabbro is observed in contact with peridotite to the north and with felsic volcanics to the south.

Published geology of the area includes ODM maps P-14 and P-698.

The northern claims were originally held by Cunigold Mines who performed a geological survey. Subsequently Jonsmith Mines in 1965 carried out magnetometer and horizontal loop surveys here and drilled two DDHs. One DDH encountered a graphitic zone in a felsic environment. The other DDH encountered only felsic volcanics. No previous exploration is known for the remainder of the claims.

Immediately to the northwest, on the property of Jonsmith Mines, a graphitic horizon containing subeconomic Cu-Zn-Ag mineralization was outlined by drilling. To the southeast O'Brien Gold Mines also drilled a graphitic fragmental horizon, but without significant base-metal values.

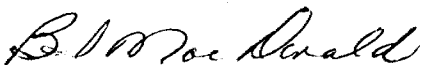
DISCUSSION OF RESULTS

Over most of the survey area the magnetic relief was quite subdued. However along the southeast, east and northeast boundaries of the property, an anomalous feature with intensities of 1500 to 7000 gammas was detected. This most likely reflects the edge of the (folded?) ultramafics. Although not apparent at this scale, from the regional aeromagnetic data NW-trending faulting is inferred to occur in the southern claims.

SUMMARY & CONCLUSIONS

A ground magnetometer survey, carried out to assist in evaluation of 8 claims in Mann Township, has defined the contact of the volcanics with a limb of an ultramafic complex. The graphitic horizon which was drilled by Jonsmith Mines to the north and by O'Brien Gold Mines to the southeast and which occurs near this contact, may be inferred to extend onto this property.

BIM:ms

  
B.I. MacDonald.



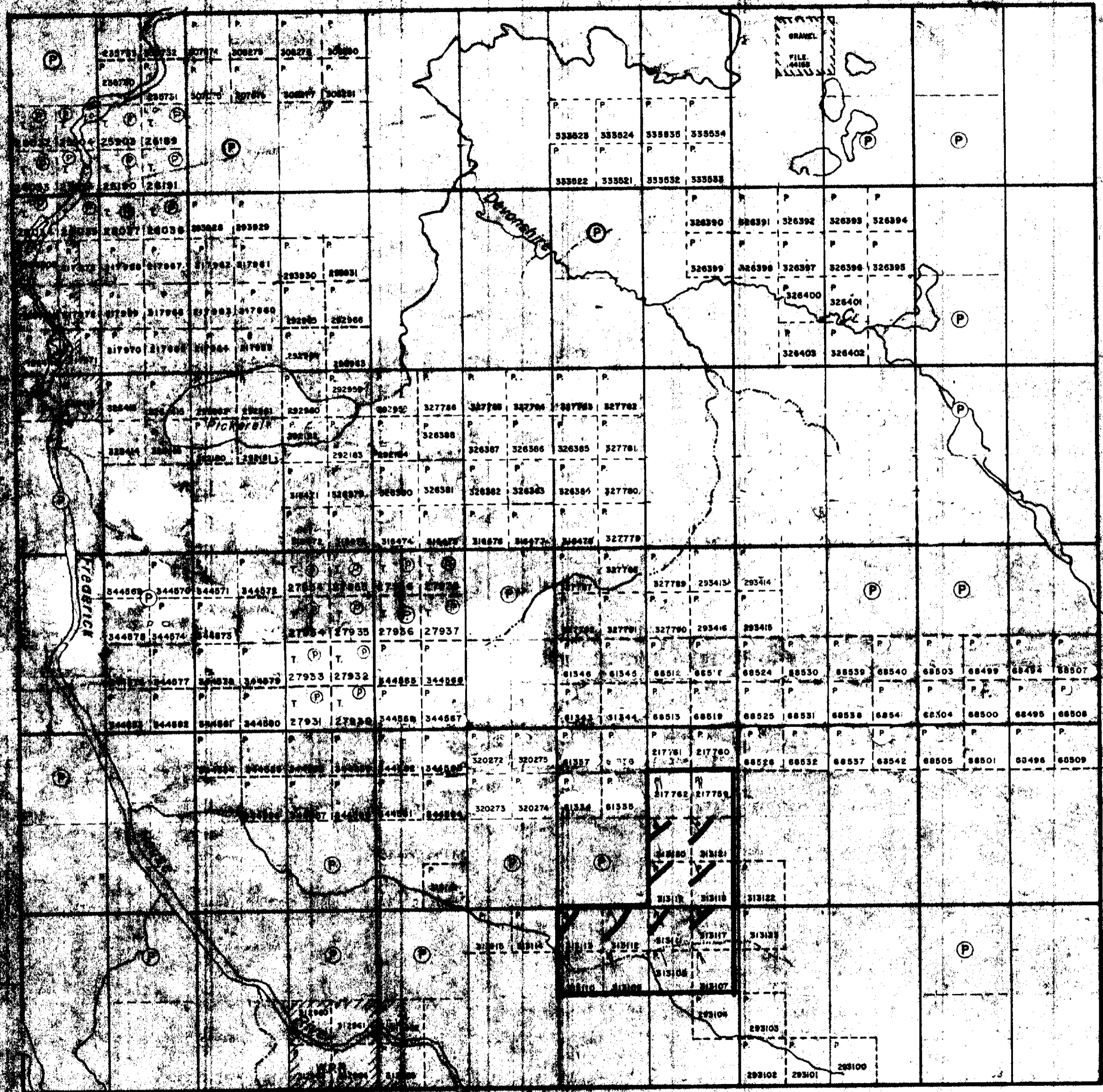
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Hanna Twp.

Little Twp.



VI

V

IV

III

II

I

Newmarket Twp.

THE TOWNSHIP OF

**MANN**

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LICENSE OF OCCUPATION
- ROADS
- IMPROVED ROADS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- WATER POWER RESERVE

NOTES

400' Surface Rights Reservation  
oil Lakes and Rivers

Water Power Reserve shown thus

2.866

PLAN NO. - M 54

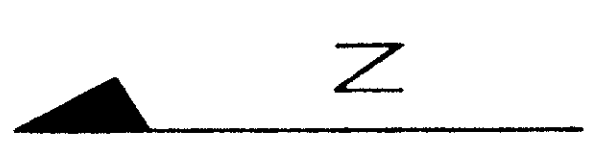
ONTARIO  
DEPARTMENT OF MINES  
AND NORTHERN AFFAIRS



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**LEGEND:**

INSTRUMENT: Askania Magnetometer  
Serial No. NR 600457

DATE: July, 1971

AMAX POTASH LTD.  
**MAGNETOMETER SURVEY**  
**MANN TOWNSHIP**  
SCALE: 1" = 400'  
TIMMINS AREA, ONTARIO

N.T.S. NO. 424/4.15 PROJECT NO. 414

TO ACCOMPANY REPORT BY *S. Macdonald* DATE: *1972*

7-866

