AEROMAGNETIC SURVEY

LITTLE TWP.

INTRODUCTION

An aeromagnetic survey was carried out over claims held by Amax Potash Ltd. in Little Twp., Ontario (Fig. 1) to aid in understanding bedrock geology in an area of heavy overburden and to detect possible sulphide mineralization.

The claims for which 20 days assessment credit are requested are P308103, -104, -105, -106, -107, -108, -109, -110, -111, -112, -113, -114, and -115; and P301369 and 301370 in the NE quadrant of Little Twp. (Fig. 2).

SURVEY SPECIFICATIONS

The aeromagnetic survey was flown in March 1971 by Geoterrex using a Geometrics G-803 proton precession mag. installed in their Otter survey aircraft, CF-AYR. Flight line spacing was a nominal 1/8 mile; mean terrain clearance was 150 feet. The value of the total magnetic field was recorded at 0.5 second intervals with a sensitivity of 2 gammas. A total of 7.70miles were flown over the claims in question.

The magnetic data were recorded in digital form on a paper-type printer (Hewlett-Packard Model 5050-B) and also displayed in analogue form on a Hewlett-Packard Model 680 six-inch rectalinear strip recorder. Full-scale deflection on the analogue recorder was 2000 gammas, with automatic stepping incorporated.

AMAX POTASH LTD
7 KING ST. E
TORONTO, ONTARIO

APRIL 18, 1972

PERSONNEL

The following Geoterrex personnel were involved with this survey:

A. Field Operation:

Pilot	J. Whiteduck, Maniwaki, Ont.
Navigator	R. Bolivar, Ottawa, Ont.
Operator	R. Stone, Ottawa, Ont. R. Youngberg, Ottawa, Ont.
Data Compilers	G. McKnight, Ottawa, Ont. W. Couwenberghs, Ottawa, Ont. P. Stone, Ottawa, Ont.
Geophysicist	B. Anderson, Ottawa, Ont.
Aircraft Engineer	W. McFadden, New Brunswick.

B. Office Compilation:

Data	D. Sarazin, Ottawa, Ont.
Drafting	M. Dostaler, Ottawa, Ont.
Geophysics	E. Waddington, Ottawa, Ont. R. Dowse, Ottawa, Ont. D.M. Wagg, Manotick, Ont.

Overall supervision of the survey for Amax was supplied by J. Roth.

DATA PRESENTATION

The recorded flight lines were plotted on the photomosaic at a scale of 1"=1/4 mile. The recorded values of the total magnetic field were plotted along the flight lines and then contoured at an appropriate scale. The contoured results, together with the flight lines and the claims for which assessment credit is requested, comprise Fig. 2.

GENERAL GEOLOGY

In general the bedrock geology is obscured by a substantial thickness of Pleistocene overburden, possibly averaging 100 to 125 feet thick. No outcrops are recorded in the immediate vicinity. From extrapolation of geology encountered in the O'Brien drilling to the north, and from the results of the Van Gulf drilling to the east, Archaean volcanic rocks, predominantly felsic in composition, are inferred to underlie the property. The nearest outcrop is on the Fredrickhouse River at the High Falls damsite. Here a syenite is observed intruding mafic volcanics.

Published geology for the Little & Mann Twps. include ODM maps P-139, P-140 and P-698.

SUMMARY OF PREVIOUS WORK

No previous exploration work is recorded in the ODM files for these claims. On adjacent ground to the east Inco is known to have drilled two DDHs encountering peridotite. Recently drilling by Van Gulf immediately to the east encountered narrow graphitic horizons in a generally felsic environment. To the north, Dominion Gulf drilled four holes into peridotite. Also to the north O'Brien Gold Mines drilled a graphitic horizon occurring in a felsic pyroclastic setting. Approximately two miles to the NW, Jonsmith Mines encountered sections of subeconomic Cu-Zn-Ag mineralization in a graphitic horizon.

DISCUSSION OF RESULTS

The magnetic results over the claims in Little Gp. 1 were relatively flat. A weak (150 gammas) NW-trending magnetic high was detected. This may reflect minor magnetite in a particular volcanic unit, or possibly pyrrhotite mineralization.

To the north the serpentinized ultramafics stand out with strong magnetic relief. This is only a portion of the large ultramafic complex, whose general magnetic aspect can be seen in the GSC aeromagnetic sheet 2337G.

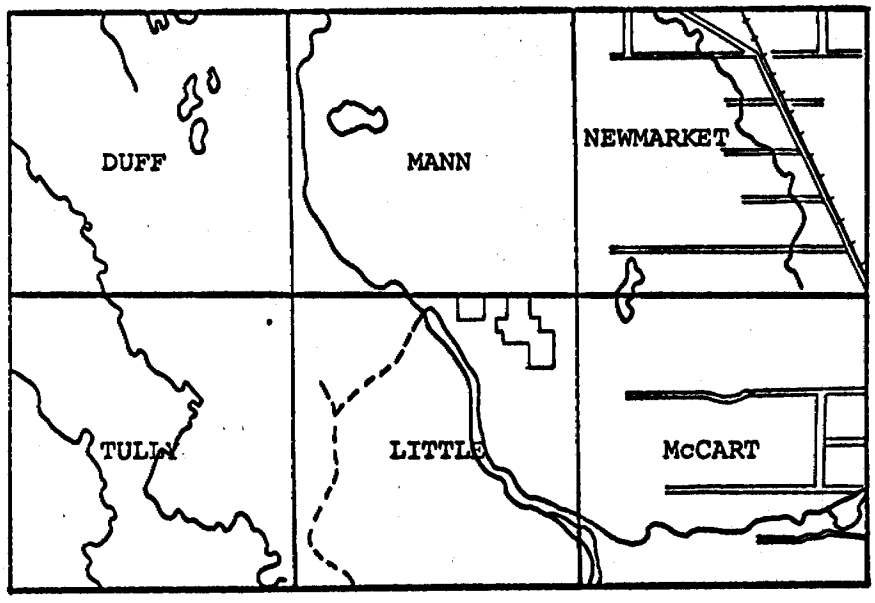
Significant NW-SE faulting is inferred both from the aeromagnetic data and from the alignment of the Fredrickhouse River.

SUMMARY & CONCLUSIONS

The aeromagnetic survey carried out over Little Group 1 has defined a weak magnetic anomaly in an area of inferred felsic volcanic rocks. The graphitic horizon drilled by Jonsmith Mines and found to contain subeconomic base metal mineralization may extend to the SE under this property.

Jeremy Roth
Geophysicist

LOCATION MAP



Scale: 1" = 4 Miles

Fig. 1.

900

GEOPHYSICAL – GEOLOGIC TECHNICAL DATA STATEMENT

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: Airborne Magnetometer
Township or Area: Little Township
Claim holder(s): Amax Potash Limited
7 King St. E., Toronto 210, Ont.
Author of Report: J. Roth
Address: 7 King St. E., Toronto 210, Ont.
Covering Dates of Survey: March 1971 (linecutting to office)
Total Miles of Line cut: ----------

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

DAYS per claim

Geophysical
--Electromagnetic
--Magnetometer
--Radiometric
--Other
Geological
Geochemical

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

Magnetometer 20 Electromagnetic ____ Radiometric ____ (enter days per claim)

DATE: April 18, 1972 SIGNATURE: Jeremy Roth
Author of Report

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	301369
P	301370
P	308103
P	308104
P	308105
P	308106
P	308107
P	308108
P	308109
P	308110
P	308111
P	308112
P	308113
P	308114
P	308115

If space insufficient, attach list

TOTAL CLAIMS 15

OFFICE USE ONLY

PROJECTS SECTION

Res. Geol. ____ Qualifications This

Previous Surveys L D

Checked by ____ date ____

GEOLOGICAL BRANCH

Approved by ____ date ____

GEOLOGICAL BRANCH

Approved by ____ date ____

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations _____ Number of Readings _____

Station interval _____

Line spacing _____

Profile scale or Contour intervals _____

(specify for each type of survey)

MAGNETIC

Instrument _____

Accuracy - Scale constant _____

Diurnal correction method _____

Base station location _____

_____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: ☐ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency _____

(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

_____

Base station value and location _____

_____

Elevation accuracy _____

INDUCED POLARIZATION - RESISTIVITY

Instrument _____

Time domain _____ Frequency domain _____

Frequency _____ Range _____

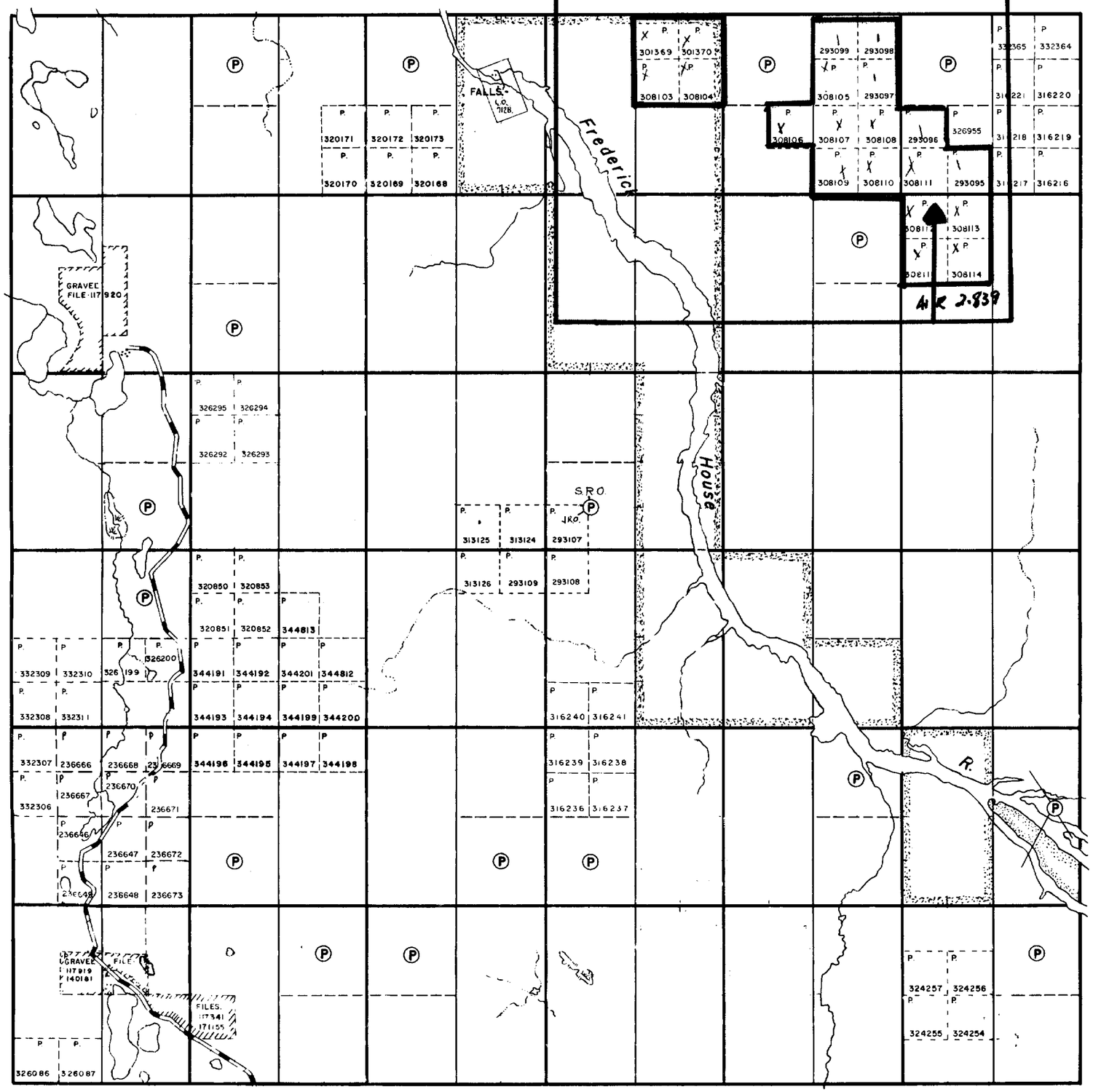
Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

Mann Twp.



Tully Twp.

McCart Twp.

Evelyn Twp.

THE TOWNSHIP OF LITTLE

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
ROADS	
IMPROVED ROADS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	

NOTES

Area reserved to H.E.P.C. for water power purposes shown thus:

Flooding rights lands bordering the Frederick House River.

400' Surface Rights Reservation around all Lakes and Rivers.

2.839

DATE OF ISSUE

MAY [illegible] 1972

ONT. DEPT. OF MINES AND NORTHERN AFFAIRS

PLAN NO. — M. 535

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

42A15SW0026 2.839 LITTLE

200

Hanna Twp.

Duff Twp.

Newmarket Twp.

VI

V

IV

III

II

I

12 11 10 9 8 7 6 5 4 3 2 1

Little Twp.

Gevonshire

Pickerel

House

River

GRAVEL PIT FILE 44185

WPR

AIR 2.839

THE TOWNSHIP OF

MANN

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
ROADS	
IMPROVED ROADS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
WATER POWER RESERVE	W.P.R.

NOTES

400' Surface Rights Reservation on all Lakes and Rivers.

Water Power Reserve shown thus ////////

DATE OF ISSUE

MAY 2[illegible] 1972

ONT. DEPT. OF MINES AND NORTHERN AFFAIRS

2.839

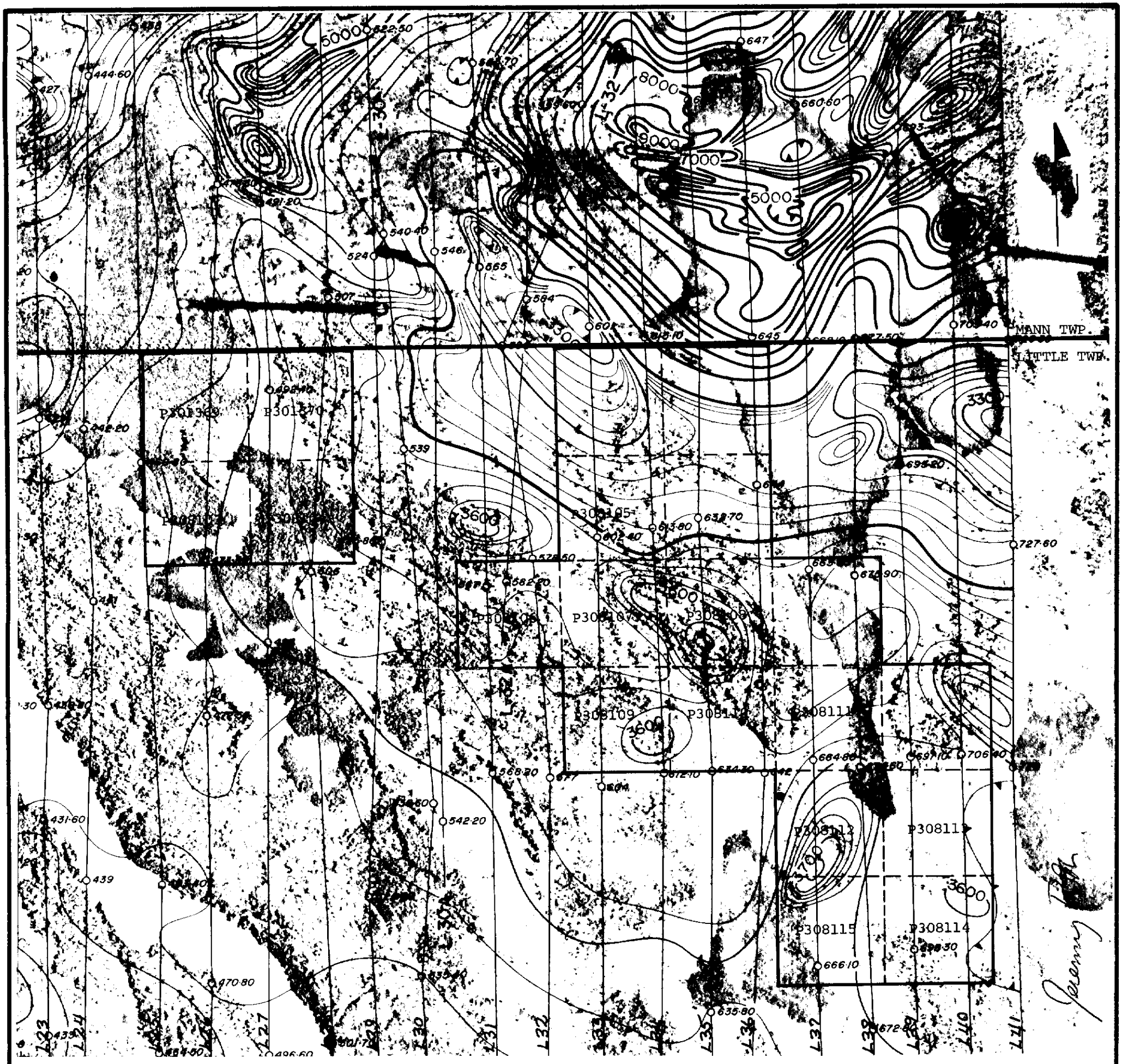
PLAN NO — M 541

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

42A15SW0026 2.839 LITTLE

210

GEM



AMAX POTASH LTD.

AEROMAGNETIC SURVEY

LITTLE TOWNSHIP - GROUP 1

Scale: 1" = ¼ Mi.