



52J02SE8769 2.336 SQUAW LAKE

010

MAGNETIC SURVEY

on the

STURGEON GROUP

of

AMAX EXPLORATION INC.

Patricia Mining Division, Ontario

by

SHIELD GEOPHYSICS LIMITED

RECEIVED

MAR 17 1971

PROJECTS
SECTION

Timmins, Ontario,

April 28, 1970.

P. T. George, P.Eng.,

Consulting Geologist.

INTRODUCTION

During the period March 2 to April 6, 1970, a magnetometer survey was completed on the Sturgeon Group of Amax Exploration Inc., 1302 - 7 King Street East, Toronto, Ontario, by Shield Geophysics Limited.

A Scintrex MF-1-100 fluxgate magnetometer was used for the survey. Approximately 1840 readings were taken on 20.5 miles of picket lines.

The property consists of 25 contiguous, unpatented mining claims numbered as follows: Pa 210260 to 210284 inclusive.

LOCATION AND ACCESS

The property is located on the south shore of Sturgeon Lake in the Patricia Mining Division approximately 55 air miles east of Sioux Lookout, Ontario.

Access to the property is via float or ski-equipped aircraft from Sioux Lookout.

PREVIOUS WORK

No previous work has been recorded with the Ontario Department of Mines regarding the property.

GEOLOGY OF THE PROPERTY

The regional geology and the geology of the property are generally outlined on Ontario Department of Mines Map 2169 which has been reproduced in Figure 1.

The following geological legend applies to Figure 1:

1. a Mafic metavolcanic rocks and derived schists and gneisses
b Metavolcanic rocks with some metasediments
2. a Felsic metavolcanic tuffs, agglomerates, and flows

3. a Metasedimentary rocks and derived schists
4. a Gabbroic, metagabbroic and metadioritic intrusive rocks
5. a Gneissic to schistose felsic intrusive rocks
b Massive felsic intrusive rocks
6. Syenitic intrusive rocks .

The property is underlain by Archean metavolcanic rocks that have been intruded by rocks of granitic composition.

MAGNETIC SURVEY RESULTS

The results of the magnetic survey are presented on the map attached to this report (in pocket). Instrument data and survey techniques are presented in Appendix I.

The property may be divided into three sectors on the basis of the magnetic results. The central part of the property displays a magnetic background of approximately 4,000 gammas and a magnetic relief of 15,600 gammas. The north part of the property has low magnetic relief and a magnetic background of 3,100 to 3,200 gammas. The south part of the property has a magnetic background of 3,200 to 3,400 gammas and has low magnetic relief.

INTERPRETATION

The following interpretation is based on the magnetic results, the known geology, and the data available to the writer regarding adjacent properties.

The central part of the property is underlain by mafic metavolcanic rocks that have been intruded by granitic rocks that underlie the south part of the property. The metavolcanic rocks have east-northeasterly strikes and near vertical dips. The local,

narrow elongated magnetic highs within the mafic metavolcanic rocks may represent thin intravolcanic iron formations. Felsic metavolcanic rocks underlie the northwest edge of the property.

A fault having a northwesterly strike direction crosses the property. There has been approximately 800 feet of right-hand, strike-slip displacement on the zone and it is probable that the northeast side has moved up a considerable distance.

CONCLUSIONS

The magnetic survey has effectively outlined the major lithological units that underlie the property. The north half of the property is dominantly underlain by mafic metavolcanic rocks, whereas the south part of the property is underlain by felsic intrusive rocks.

A fault having a northwesterly strike trend crosses the central part of the property.

RECOMMENDATIONS

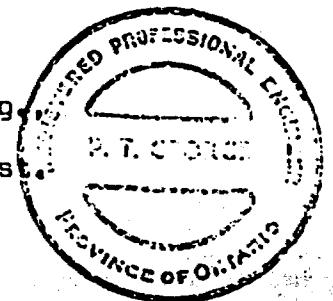
It is recommended that no further work be carried out on the property at the present time unless airborne electromagnetic conductors are known to be present on the property. To date no base metal mineralization of economic significance has been located in the mafic metavolcanic rocks in the Sturgeon Lake area.

Respectfully submitted,
SHIELD GEOPHYSICS LIMITED,

P. T. George

P. T. George, P.Eng.
Consulting Geologist.

Timmins, Ontario,
April 28, 1970.



C E R T I F I C A T E

I, Peter T. George, residing at 391 John Street, Timmins, Ontario,
a consulting geologist with office at 26 Pine Street South,
Timmins, Ontario, do hereby certify that:

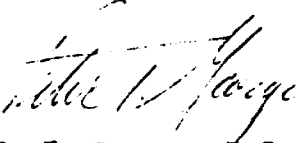
I attended Queen's University, Kingston, Ontario, and graduated
with an Honours B.Sc. degree in Geological Sciences in 1964 and
I have completed two years of post graduate studies at Queen's
University, Kingston, Ontario.

I am a Member of the Geological Association of Canada.

I am a Professional Engineer registered with the Association of
Professional Engineers of the Province of Ontario.

I have no interest either directly or indirectly in the shares
or securities of Amax Exploration Inc.

Timmins, Ontario,
April 28, 1970.

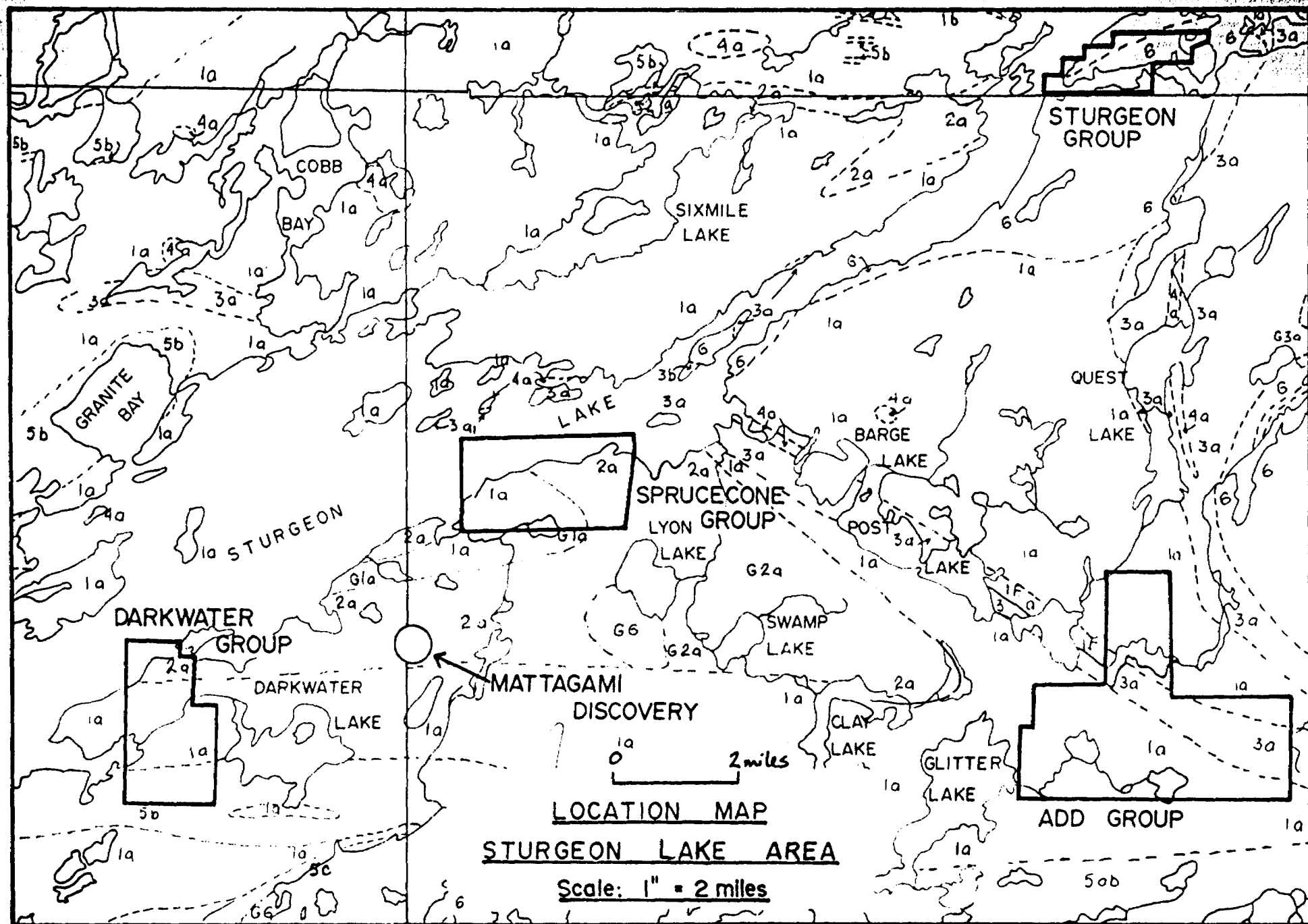

P. T. George, P.Eng.,
Consulting Geologist.

A P P E N D I X

SURVEY METHOD AND INSTRUMENT DATA

MAGNETOMETER SURVEY

A Sharpe M.F.-1 fluxgate magnetometer was used in the magnetic survey. This instrument measures the vertical component of the earth's magnetic field in gammas. Base stations for determining the magnetic diurnal variations were established along the main base line at 100 foot intervals using a tripod mounted Scintrex M.F.-1-100 fluxgate magnetometer. Magnetic readings were taken at 50 foot intervals, along the cross lines where the magnetic gradient is greater than 200 gammas in 100 feet. Otherwise readings were taken at 100 foot intervals.





TECHNICAL ASSESSMENT WORK CREDITS

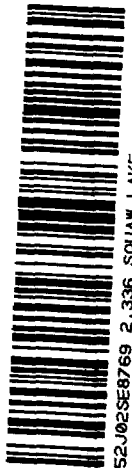
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Recorder Holder .. Amex. Exploration, Inc.
Township or Area .. Squaw Lake Area

Type of Survey and number of Assessment Days Credits per claim

GEOPHYSICAL Airborne Ground
Magnetometer40.....days
Electromagneticdays
Radiometricdays
.....
GEOLOGICAL.....days
GEOCHEMICAL.....days
SECTION 84 (14).....days
Special Provision Man days

Mining Claims
PA. 210260 to 84 Inclusive



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NOTICE OF INTENT TO BE ISSUED

- Credits have been reduced because of partial coverage of claims.
- Credits have been reduced because of corrections to work dates and figures of applicant.
- NO CREDITS have been allowed for the following mining claims as they were not sufficiently covered by the survey:

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40;

SPECIAL PROVISION

ASSESSMENT WORK DETAILS

MAGNETIC

Type of Survey _____

A separate form is required for each type of survey

Chief Line Cutter or Contractor Shield Geophysics Limited, 26 Pine St. S., Timmins, Ontario

Party Chief R. Draper, Name Address

Consultant P. T. George Name Address

COVERING DATES Line Cutting March 2 - 20, 1970 Name Address

Field Geology or Geophysics March 23 - April 6, 1970

Office April 20 - 28, 1970

INSTRUMENT DATA Make, Model and Type Scintrex MF-1-100 fluxgate magnetometer

Scale Constant or Sensitivity + 1 gammas

Or provide copy of instrument data from Manufacturer's brochure.

Total Number of Stations Within Claim Group 1840 Number of Miles of Line cut Within Claim Group 20.5

ASSESSMENT WORK CREDITS REQUESTED Geological Survey _____ Days per Claim

Geophysical Survey 40 Days per Claim

MINING CLAIMS TRAVERSED

- PA 210260, 210261, 210262, 210263, 210264, 210265, 210266, 210267, 210268,
- 210269, 210270, 210271, 210272, 210273, 210274, 210275, 210276, 210277,
- 210278, 210279, 210280, 210281, 210282, 210283, 210284

TOTAL 25 claims

DATE April 27, 1970 SIGNED [Signature]

Special provision credits do not apply to Radiometric Surveys.

AREA CODE — 416
TELEPHONE — 365-6918



WHITNEY BLOCK
QUEEN'S PARK
TORONTO 182, ONT

DEPARTMENT OF MINES AND NORTHERN AFFAIRS
MINING LANDS BRANCH

June 23rd, 1971.

Mr. W. A. Buchan,
Mining Recorder,
Court House,
Sioux Lookout, Ontario.

Re: Mining Claims PA. 210260 et al,
Squaw Lake Area, File No. 2.336

Dear Sir:

The Geophysical (Magnetometer) assessment work credits as shown on the attached list have been approved as of the date above. Please inform the recorded holder and so indicate on your records.

Yours very truly,

Fred W. Matthews,
Supervisor,
Projects Section.

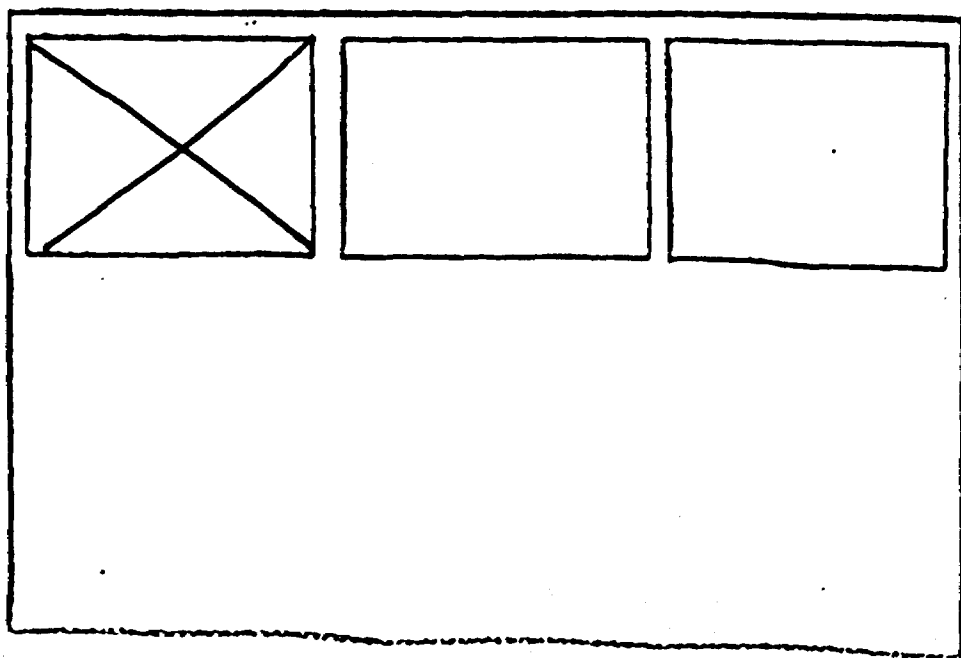
- c.c. Amax Exploration, Inc.,
7 King Street E.,
Toronto 1, Ontario.
- c.c. Mr. P.T. George,
Shield Geophysics Ltd.,
26 Pine St., S.,
Timmins, Ontario.
- c.c. Mr. H. L. King,
Resident Geologist,
808 Robertson Street,
Kenora, Ontario. ✓

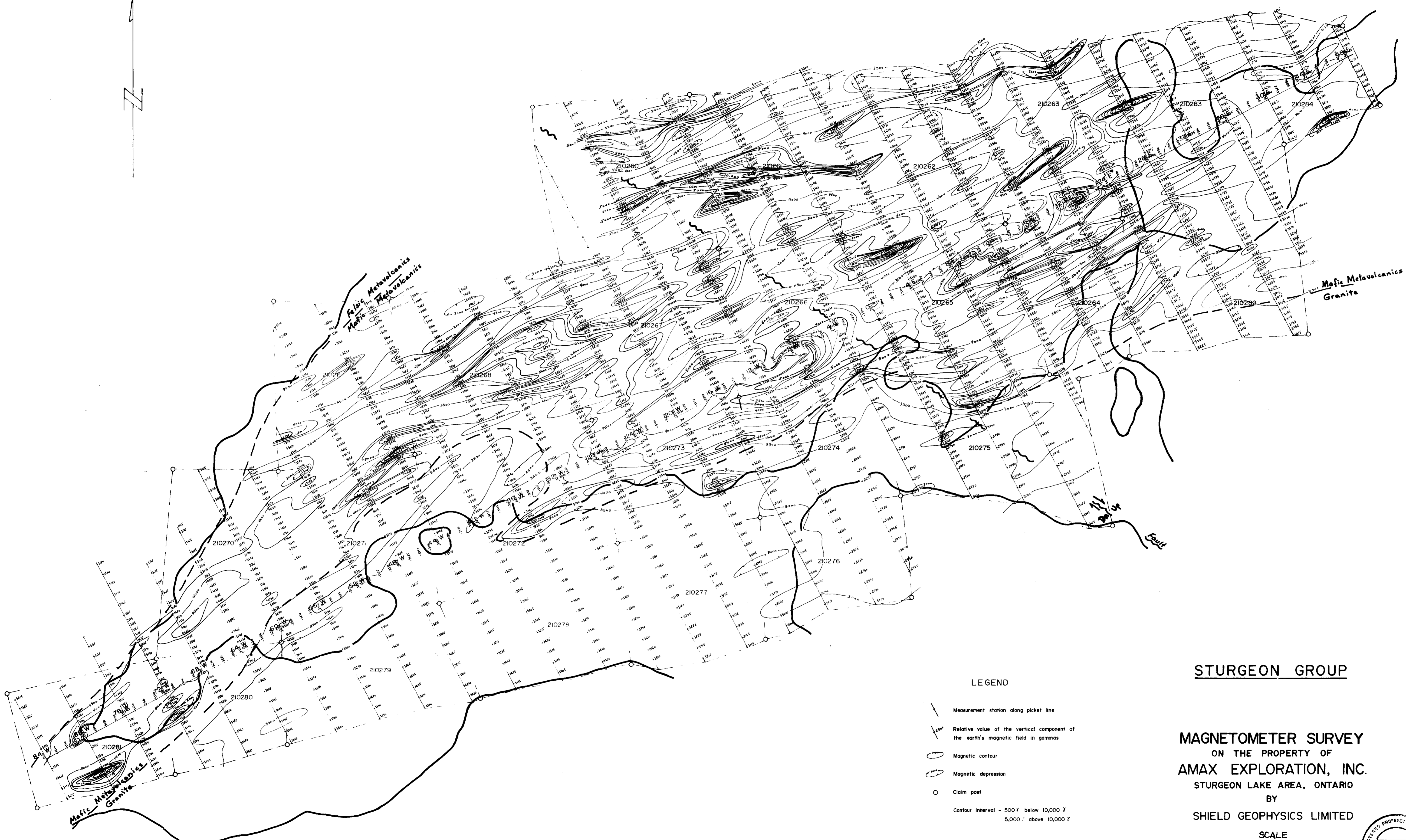
FWM/mr

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

52J/02SE-0019-A1, #1

LOCATED IN THE MAP
CHANNEL IN THE FOLLOWING
SEQUENCE (X)





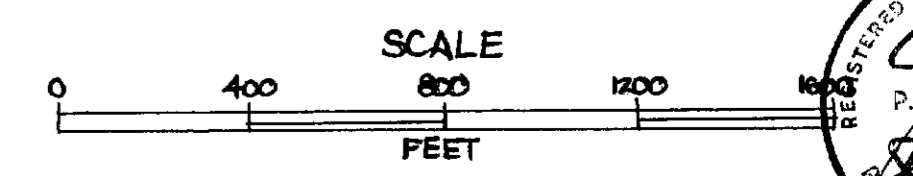
LEGEND

- Measurement station along picket line
 - Relative value of the vertical component of the earth's magnetic field in gammas
 - Magnetic contour
 - Magnetic depression
 - Claim post
- Contour interval - 500 γ below 10,000 γ
5,000 γ above 10,000 γ

INSTRUMENT: Sharpe M.F.-1 fluxgate magnetometer

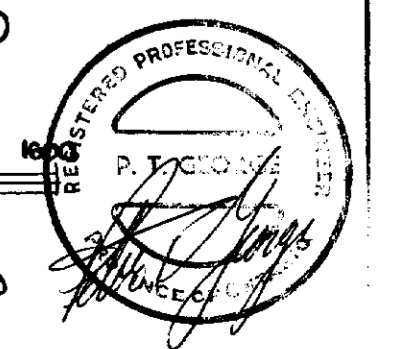
STURGEON GROUP

MAGNETOMETER SURVEY
ON THE PROPERTY OF
AMAX EXPLORATION, INC.
STURGEON LAKE AREA, ONTARIO
BY
SHIELD GEOPHYSICS LIMITED



APRIL

1970



52J/02SE-0019-A1 #1

