



32D12SW0103 2.2896 HARKER

010

REPORT ON A GEOLOGICAL SURVEY

MATHESON CLAIMS

HARKER-1

PROJECT 839-08

NTS: 32-D-5/12

AMAX MINERALS EXPLORATION

Timmins, Ontario
October 1978

S. Gentleman
R. J. Roussain

SUMMARY

A group of eight (8) mining claims were staked by Amax in the north central part of Harker township on March 11, 1978.

The claims were acquired to cover a series of untested electromagnetic conductors defined by Canadian Johns-Manville.

In August 1978, a geological mapping-prospecting survey was carried out to search for outcrop and any evidence of previous drilling. No outcrop or evidence of drilling other than that reported by Canadian Johns-Manville was located on the property.

INTRODUCTION

The eight claim group covers a series of vertical loop electromagnetic conductors detected by Canadian Johns-Manville in a programme completed in 1973 under the Mineral Exploration Assistance Programme sponsored by the Ontario Government.

In August 1978, a geological-prospecting survey was carried out over the eight (8) claims recorded in the name of Amax Potash Limited.

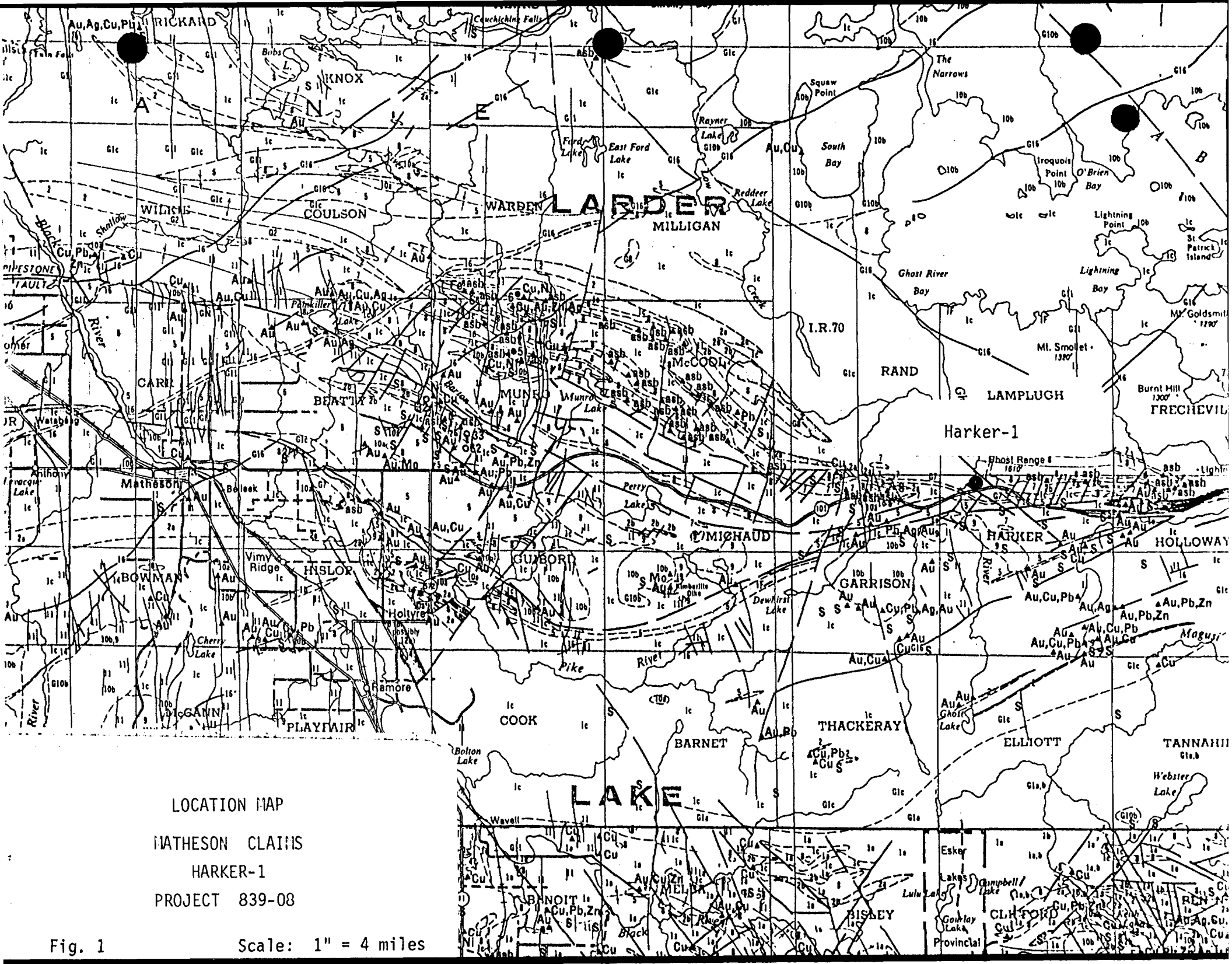
This report describes the methods and results of the geological prospecting survey.

LOCATION AND ACCESS

The claim group is located in the Larder Lake Mining Division immediately east of the five (5) mile post on the north boundary of Harker township.

Harker township is situated approximately 25 miles east of the village of Matheson.

Access to the property is made simple in that Highway 101 traverses the southern boundary of the claim group and logging roads cut through it.



LOCATION MAP

MATHESON CLAIMS

HARKER-1

PROJECT 839-08

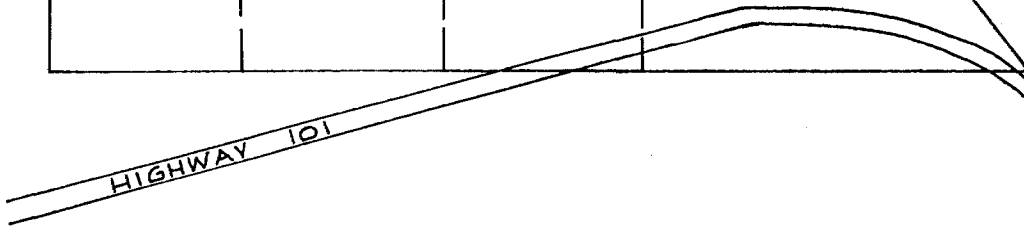
Fig. 1

Scale: 1" = 4 miles

5M

LAMPLUGH TWP.
HARKER TWP.

506260	506261	506262	506263
506267	506266	506265	506264



5M

CLAIM MAP

PROJECT 839-08

HARKER-1

Harker Township

1" = 1/4 mile

NTS: 32-D-5, 12

Fig. 2.

TOPOGRAPHY AND RESOURCES

The area of the claim group has been clear cut with only scrub timber and slash remaining. A tangle of thick alder growth occupies both banks of the Ghost River which bisects the claim group.

Topography is generally flat, low lying ground drained by a number of small creeks that empty into the Ghost River.

PREVIOUS WORK

Observed in Field:

The only evidence of past exploration activity are the lines, claims and diamond drill hole set-up left by Canadian Johns-Manville during their programme in 1973.

Assessment Files:

Information on file in the Resident Geologist's office in Kirkland Lake indicates that the only work carried out on the present Amax claim group was by Canadian Johns-Manville.

Hunch Mines, however, carried out a programme on lands north and west of the Amax claims, involving magnetic surveys and diamond drilling, 6 holes, in a search for asbestos in the early 1960's.

Prior to any of the above activity, the west portion of the block was held by Dale Gold Mines in 1950, when the area was under active exploration for gold.

Canadian Johns-Manville completed magnetic and vertical loop electromagnetic surveys on their property in conjunction with a larger programme involving exploration of the ultramafic belt for asbestos.

One of the VEM conductors detected was diamond drilled by hole number H-74-1, revealing the conductor to be caused by graphite and sulphides within a sequence of volcanoclastic rocks.

SURVEY METHOD

Traverses were made on the property by S. Gentleman and S. MacDonald along the claim boundaries and across the central portion of the claims. The grid established by Canadian Johns-Manville was also used for control.

Ontario Government 1:15,000 scale air photos numbers 2.71-4822-15, 146, 144 were used for control while mapping.

GENERAL GEOLOGY

The Harker township claims are underlain by rocks of Archean age, primarily volcanic flow rocks, pyroclastics and intercalated sedimentary units.

Intruding the sedimentary-volcanic sequence are dykes and sills of diorite, gabbro, granite and quartz and feldspar porphyrys.

The Porcupine-Destor fault, a prominent east-west structure, is interpreted to pass immediately south of the claim group.

PROPERTY GEOLOGY

No outcrop was observed on the property. The claims are covered with glacial lacustrine clays and outwash sand and gravels.

The only clue to the composition of the rocks under the claim group is the drill hole completed by Canadian Johns-Manville situated in the south-west corner of Amax claim L-506263.

The Canadian Johns-Manville hole intersected a sequence of intercalated volcanoclastics, felsic tuffs and basic volcanic flow rocks. This geological sequence is similar to a number of outcrops lying east and west of the claim group in Holloway and Garrison townships.

Extensive drilling by Canadian Johns-Manville and Hunch Mines in the area surrounding the claim group was directed at magnetic anomalies caused by ultramafic intrusives (or Komatiitic ultramafic flows).

It is presumed that the claims are underlain by volcanic flow rocks, intercalated with felsic to intermediate volcanoclastics and tuffs.

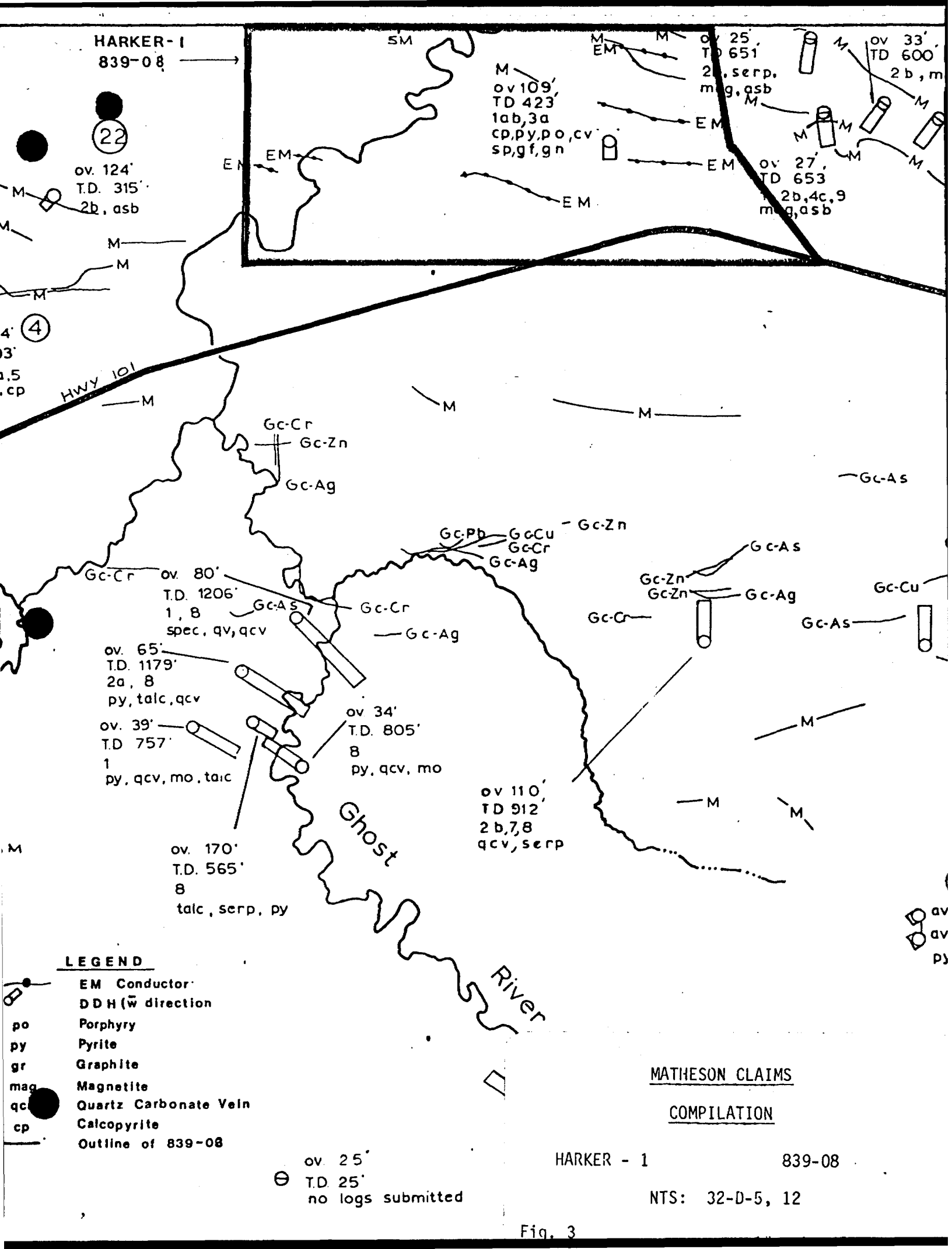


TABLE OF FORMATIONS

CENOZOIC

- Recent - stream deposits and peat
- Pleistocene - sand, gravel and clay

PRECAMBRIAN

- Keweenawan - Mafic Intrusives
 - Quartz diabase
- Matachewan - Mafic Intrusives
 - diabase
- Early Precambrian - Basic and Ultrabasic Intrusive
 - diabase, gabbro, peridotite, dunitite and pyroxenite
 - Felsic Volcanics
 - Felsic tuff and breccias and rhyolite
 - Mafic Volcanics
 - andesite, basalt (flow breccia, pillowed and massive)
 - Sediments
 - greywacke, argillite, siltstone, quartzite
- Metamorphic Rocks - Carbonate rock - altered ultra-mafic

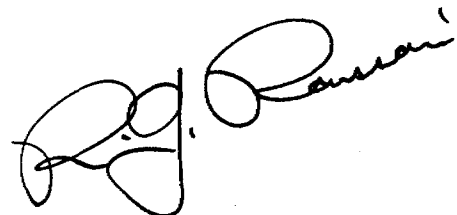
CONCLUSIONS AND RECOMMENDATIONS

There are no outcrops on the property and the conductors are not exposed.

It is concluded that the conductors outlined by Canadian Johns-Manville in their surveys are due to a bedrock source and are related to a stratigraphically controlled geological unit similar to that intersected by Canadian Johns-Manville in drill hole H-74-1.

Detail lines of horizontal loop and magnetics should be completed to further evaluate the conductors previously detected by Canadian Johns-Manville.

Timmins, Ontario
October 1978



S. Gentleman
R. J. Roussain

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

Instrument _____
Accuracy – Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

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 _____
Method Time Domain Frequency Domain
Parameters – On time _____ Frequency _____
– Off time _____ Range _____
– Delay time _____
– Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

LAMPLUGH TWP. M-358

THE TOWNSHIP
OF
2.2896
HARKER

DISTRICT OF
COCHRANE

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	● or (P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	—
IMPROVED ROADS	—
KING'S HIGHWAYS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—
MINES	✕
CANCELLED	c.
PATENTED S.R.O.	●

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

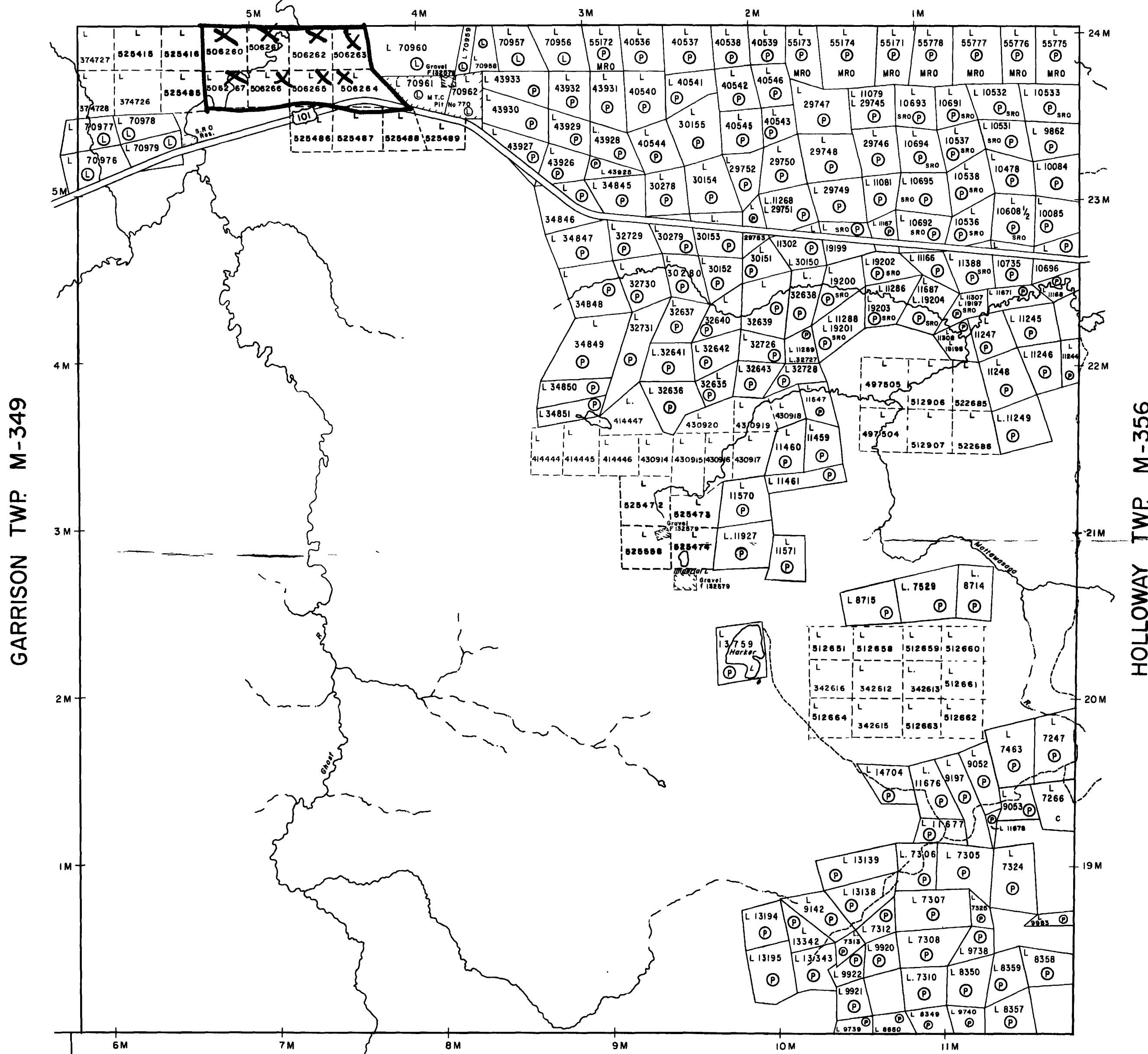
DATE OF ISSUE

FEB 13 1979

SURVEYS AND MAPPING
BRANCH

PLAN NO. **M-353**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



GARRISON TWP. M-349

HOLLOWAY TWP. M-356

ELLIOTT TWP. M-347





TWP LINE (POSITION APPROX)



LAMPLUGH TWP
HARKER TWP

- LEGEND**
- Creek
 - Diamond Drill Hole
 - Claim post located
 - Claim post non-located
 - Air photo numbers:
2.71-4822-15, 146, 144.

SLASH

AMAX EXPLORATION INC.
GEOLOGICAL SURVEY
Matheson Project 839
HARKER - 1, 839 - 08
N.T.S.: 52-D-5, 12

SCALE: 1" = 400 FT.
1:50,000
DATE

