



42L06NE0025 2.4168 MAUN LAKE

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REPORT  
ON  
GEOLOGICAL SURVEYS  
SOUTH ATLANTIC VENTURES LTD  
O'SULLIVAN-MAUN LAKE AREAS  
THUNDER BAY MINING DIVISION  
ONTARIO

**RECEIVED**  
SEP 30 1981  
MINING LANDS SECTION

Penetang, Ontario.

September 10, 1981.

REPORT  
ON  
GEOLOGICAL SURVEYS  
SOUTH ATLANTIC VENTURES LTD  
O'SULLIVAN-MAUN LAKE AREAS  
THUNDER BAY MINING DIVISION  
ONTARIO

INTRODUCTION

During July, August and September of 1981, geological mapping at a scale of 1 inch to 200 feet was completed on two claim groups held by South Atlantic Ventures Ltd, in the O'Sullivan Lake area and Maun Lake area, Thunder Bay Mining Division, Ontario.

Pre-existing picket line grids cut in 1980 at 400 foot line spacings, served as control. Copper-silver-gold mineralized outcrops are present on each of the groups and rock outcrop is relatively abundant except in some of the swamp covered low lying areas. Carbonated porphyrys which carry small quantities of gold are present on the O'Sullivan Lake group.

PROPERTY

The properties consist of two separate claim groups totalling 33 unpatented claims. Property "A" includes 21 claims totalling 840 acres and property "B" consists of 12 claims covering approximately

480 acres. The groups are precisely described as follows:-

Property "A"

Claim No.

|           |           |
|-----------|-----------|
| TB 539726 | TB 539520 |
| TB 539727 | TB 539521 |
| TB 539728 | TB 539522 |
| TB 539729 | TB 539523 |
| TB 539730 | TB 539524 |
| TB 539731 | TB 554092 |
| TB 539732 | TB 554093 |
| TB 539733 | TB 554094 |
| TB 539751 | TB 554095 |
| TB 539752 | TB 554096 |
| TB 539753 |           |

Property "B"

Claim No.

|           |           |
|-----------|-----------|
| TB 539714 | TB 539720 |
| TB 539715 | TB 539721 |
| TB 539716 | TB 539722 |
| TB 539717 | TB 539723 |
| TB 539718 | TB 539724 |
| TB 539719 | TB 539725 |

South Atlantic Ltd, owns 100% interest in the claims.

LOCATION AND ACCESS

The properties are situated on the north shore of the north east arm of O'Sullivan Lake, approximately twenty miles north west of Nakina and fifty-five miles due north of Geraldton. A gravel road connecting Cavel, on the C.N.R., 15 miles west of Nakina, passes close to the west shore of O'Sullivan Lake. From this point it is 9 miles to the property by boat.

HISTORY AND PREVIOUS WORK

Considerable drilling has been done on both properties since

the original mineralized discoveries were made in 1946. In recent years geophysical surveys were conducted over the properties, indicating anomalous zones under overburden covered areas. Drilling and trenching had been initiated on the property to test these new areas when the writer was carrying out the geological mapping program.

#### TOPOGRAPHY AND ROCK EXPOSURE

In general, rock exposure is fairly good, possibly representing 20% of the surface area. However, extensive low lying swamp areas have no outcrop.

#### GENERAL GEOLOGY

The properties are underlain mainly by rocks of volcanic origin consisting predominantly of basic to intermediate type massive or pillowed lavas. Rarely very narrow bands of volcanic rocks of rhyodacite to rhyolitic composition are present. These older rocks are intruded by small dikes of quartz porphyry, quartz-feldspar porphyry's and by larger bodies of granodiorite. The youngest rocks consist of diabase dike.

#### MINERALIZATION

On group "A" pyrrhotite, pyrite, and chalcopyrite with fairly good silver values and low gold values are associated with sheared, carbonated pillow lavas in the central part of the group.

Low gold values occur in pyritized, schistose, carbonated quartz-feldspar porphyry on a small point on claim TB 39730.

On group "B", interesting amounts of chalcopyrite along with

minor pyrite and pyrrhotite occur in sheared and brecciated pillowed andesite. Fair values in silver are also associated with the mineralization.

The mineralized zone is intruded by a series of north-south trending quartz-feldspar porphyry dikes. No mineralization was observed in these dikes.

Shearing and faulting is prominent in much of the region.

Overburden is glacial drift composed of sand gravel and boulders.

The following rock formations are encountered in the area.

5. Diabase dikes
4. Granodiorite, granite and quartz monzonite
3. Quartz and quartz-feldspar porphyry, sheared carbonated
2. Rhyolite and rhyodacite sheared, massive, brecciated, carbonated
1. Andesite, massive, pillowed, sheared, and carbonated

#### ROCK DESCRIPTIONS

Andesites are massive or pillowed. They are generally fine grained, pale green on the weathered surface but dark grey-green on the fresh surface. The massive andesites tend to be coarser grained and porphyritic in texture.

Rhyodacite and rhyolite rocks are difficult to distinguish and are not mapped as separate units. They are silicified and frequently mineralized. They occur as minor bands. The colour is pale green to pale grey.

Quartz eye porphyrys consist of quartz phenocrysts up to 1/8"

in diameter in a fine felsic matrix. They are buff to light green in colour.

Quartz-feldspar porphyry consists of up to 25% white feldspar phenocrysts up to 1/8" in dark grey matrix. Quartz phenocrysts<sup>s</sup> are smaller and much less prominent.

A small granite, quartz monzonite granodiorite stock intrudes the northwestern sector of group "B". It is massive, medium grained and light coloured.

#### RECOMMENDATIONS

It is recommended that trenching and diamond drilling be carried out on the properties to determine if the anomalous zone detected under overburden and lake covered areas are of economic significance. It is also recommended that either an Induced Polarization or Pulse E.M, survey be conducted over the mineralized zone on group "B" to determine if the mineralization can be traced under the overburden covered areas.

Respectfully submitted

*E. W. Bazinet*  
E. W. Bazinet, P. Eng.  
Designated Consulting  
Engineer and Geologist.





Ministry of Natu

GEOPHYSICAL - GEOLOGICAL  
TECHNICAL DATA



42L06NE0025 2.4168 MAUN LAKE

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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.

RECE

SEP 30

MINING LANI

Type of Survey(s) Geological  
Township or Area O'Sullivan Lake and Maun Lake areas  
Claim Holder(s) E. W. Bazinet & G. H. Coyne

Survey Company E. W. Bazinet Mining & Exploration Ltd.  
Author of Report E. W. Bazinet, P. Eng.  
Address of Author SS3, Site 6, Comp.20 Penetang.  
Covering Dates of Survey July, August, September 1981  
(linecutting to office)  
Total Miles of Line Cut \_\_\_\_\_

| MINING CLAIMS TRAVERSED |                  |
|-------------------------|------------------|
| List numerically        |                  |
| TB 539726.              | <sup>3/4</sup> ✓ |
| (prefix) (number)       |                  |
| TB 539727.              | <sup>3/4</sup> ✓ |
| TB 539728.              | <sup>3/4</sup> ✓ |
| TB 539729.              | all water        |
| TB 539730.              | <sup>3/4</sup> ✓ |
| TB 539731.              | ✓                |
| TB 539732.              | <sup>1/4</sup> ✓ |
| TB 539733.              | ✓                |
| TB 539751.              | <sup>1/4</sup> ✓ |
| TB 539752.              | <sup>1/2</sup> ✓ |
| TB 539753.              | ✓                |
| TB 539520.              | ✓                |
| TB 539521.              | ✓                |
| TB 539522.              | ✓                |
| TB 539523.              | ✓                |
| TB 539524.              | ✓                |
| TB 554092.              | all water        |
| TB 554093.              | <sup>3/4</sup> ✓ |
| TB 554094.              | all water        |
| TB 554095.              | all water        |
| TB 554096.              | all water        |
| TOTAL CLAIMS _____      |                  |

If space insufficient, attach list

| <u>SPECIAL PROVISIONS</u>                                 | <u>CREDITS REQUESTED</u> | <u>DAYS</u><br>per claim |
|---|--------------------------|--------------------------|
| ENTER 40 days (includes line cutting) for first survey.   | Geophysical              |                          |
|   | --Electromagnetic _____  |                          |
|   | --Magnetometer _____     |                          |
|   | --Radiometric _____      |                          |
|   | --Other _____            |                          |
| ENTER 20 days for each additional survey using same grid. | Geological _____         | 20                       |
|   | Geochemical _____        |                          |

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)  
Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: Sept. 15, 1981 SIGNATURE: E. W. Bazinet  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 63,2086

| <u>Previous Surveys</u> |      |      |              |
|-------------------------|------|------|--------------|
| File No.                | Type | Date | Claim Holder |
|                         |      |      | L.D          |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |
|                         |      |      |              |

OFFICE USE ONLY

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

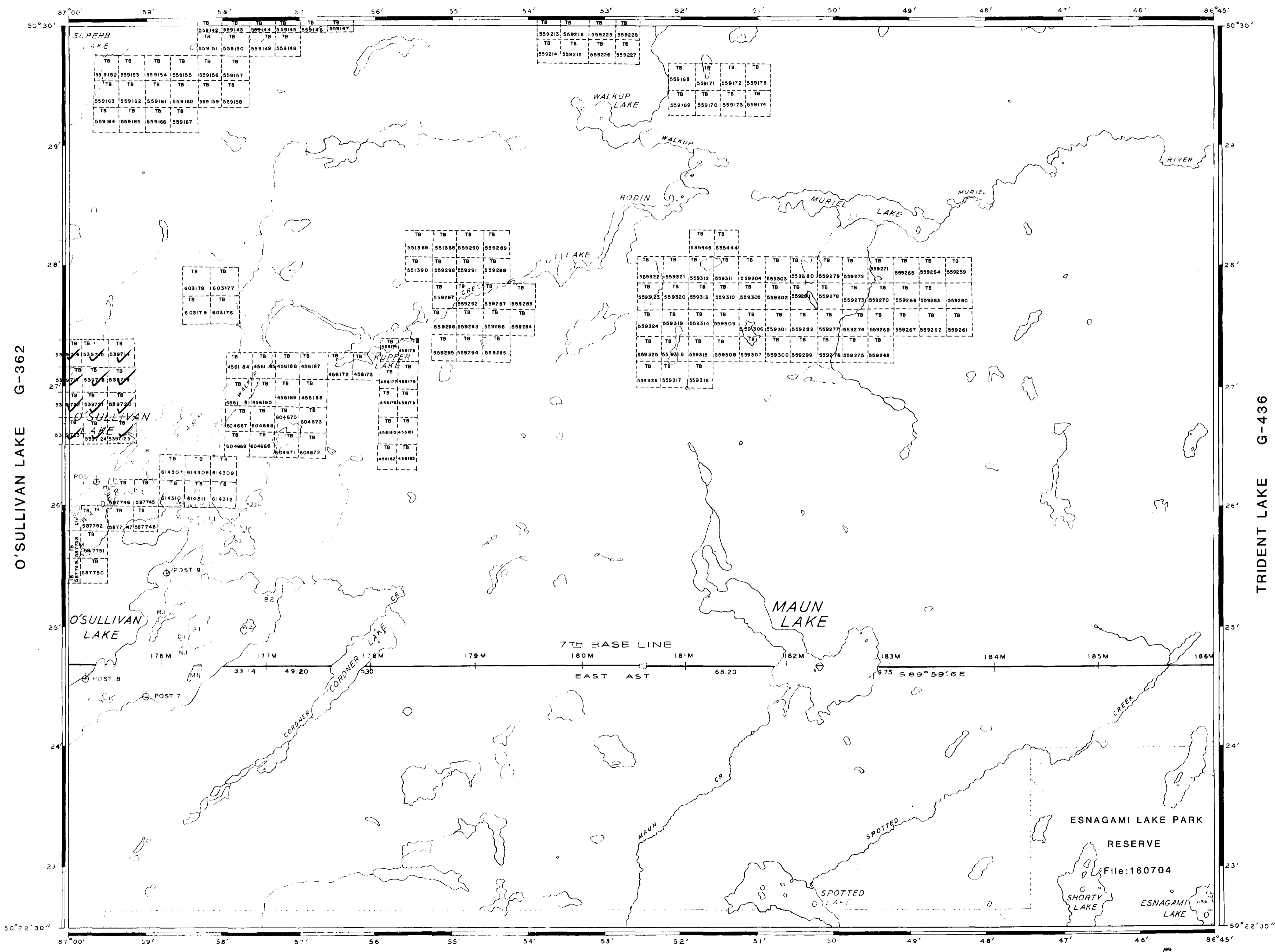
Instrument \_\_\_\_\_
Method [ ] Time Domain [ ] Frequency Domain
Parameters - On time \_\_\_\_\_ Frequency \_\_\_\_\_
- Off time \_\_\_\_\_ Range \_\_\_\_\_
- Delay time \_\_\_\_\_
- Integration time \_\_\_\_\_
Power \_\_\_\_\_
Electrode array \_\_\_\_\_
Electrode spacing \_\_\_\_\_
Type of electrode \_\_\_\_\_



TB 539714 • ✓  
TB 539715 • ✓  
TB 539716 • ✓  
TB 539717 • ✓  
TB 539718 • ✓  
TB 539719 • ✓  
TB 539720 • ✓  
TB 539721 • ✓  
TB 539722 • ✓  
TB 539723 • ✓  
TB 539724 • ✓  
TB 539725 • ✓

31  
10  
539714

TERRIER LAKE G-429



DATE OF ISSUE  
**OCT 30 1981**  
 Ministry of Natural Resources  
 TORONTO

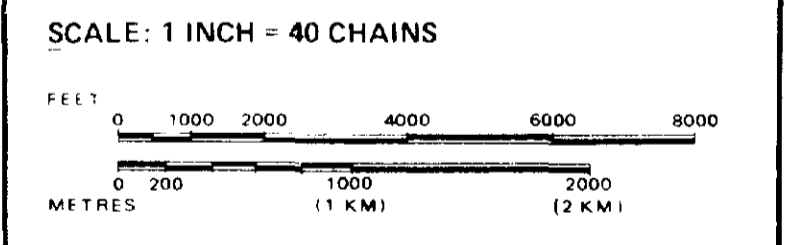
LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- TOWNSHIPS, BASE LINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
- LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT                | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS | ●      |
| " SURFACE RIGHTS ONLY           | ○      |
| " MINING RIGHTS ONLY            | ◐      |
| LEASE, SURFACE & MINING RIGHTS  | ◑      |
| " SURFACE RIGHTS ONLY           | ◒      |
| " MINING RIGHTS ONLY            | ◓      |
| LICENCE OF OCCUPATION           | ◔      |
| ORDER-IN-COUNCIL                | OC     |
| RESERVATION                     | ⊙      |
| CANCELLED                       | ⊖      |
| SAND & GRAVEL                   | ⊗      |

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 390, SEC. 83, SUBSEC. 1.



AREA **2,4168**  
**MAUN LAKE**  
 M.N.R. ADMINISTRATIVE DISTRICT  
**GERALDTON**  
 MINING DIVISION  
**THUNDER BAY**  
 LAND TITLES / REGISTRY DIVISION  
**THUNDER BAY**

Ministry of Natural Resources  
 Land Management Branch  
 Ontario

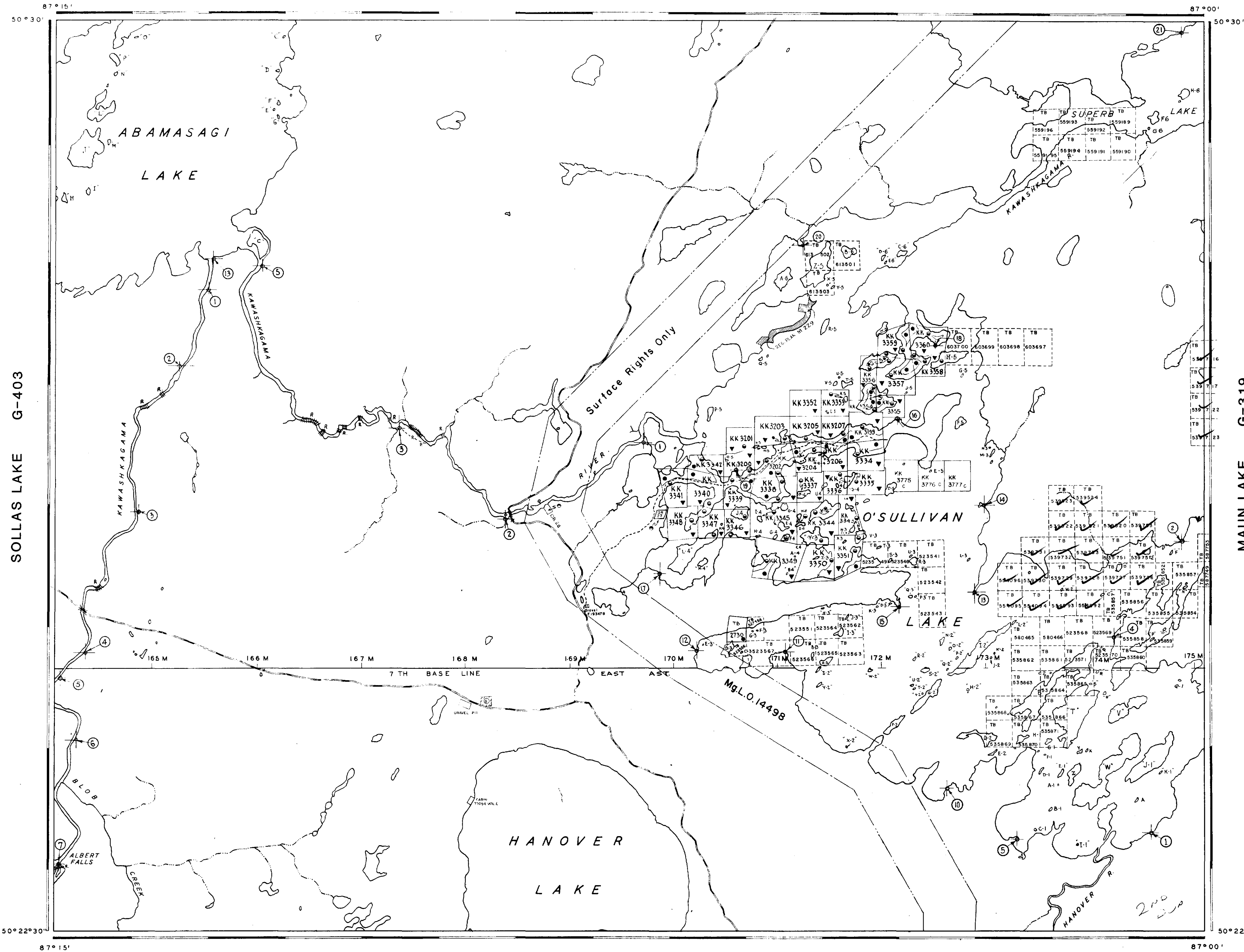
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REFERENCES

BOSTON LAKE G-208

REFERENCES



DATE OF ISSUE  
**OCT 30 1981**  
 Ministry of Natural Resources  
 TORONTO

LEGEND

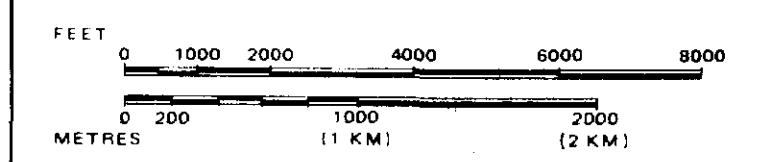
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

| TYPE OF DOCUMENT                | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS | ●      |
| " SURFACE RIGHTS ONLY           | ○      |
| " MINING RIGHTS ONLY            | ◐      |
| LEASE, SURFACE & MINING RIGHTS  | ■      |
| " SURFACE RIGHTS ONLY           | □      |
| " MINING RIGHTS ONLY            | ◑      |
| LICENCE OF OCCUPATION           | ○      |
| ORDER-IN-COUNCIL                | OC     |
| RESERVATION                     | ⊙      |
| CANCELLED                       | ⊖      |
| SAND & GRAVEL                   | ⊕      |

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1912, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS



AREA 2.4168

**O'SULLIVAN LAKE**

M.N.R. ADMINISTRATIVE DISTRICT  
**GERALDTON**  
 MINING DIVISION  
**THUNDER BAY**  
 LAND TITLES / REGISTRY DIVISION  
**THUNDER BAY**

Ministry of Natural Resources  
 Land Management Branch  
 Ontario

Date JULY, 1981  
 Number **G-362**



HANOVER LAKE G-266

SOUTH ATLANTIC VENTURES LTD  
 THUNDER BAY MINING DIVISION  
 ONTARIO






GEOLOGICAL SURVEY

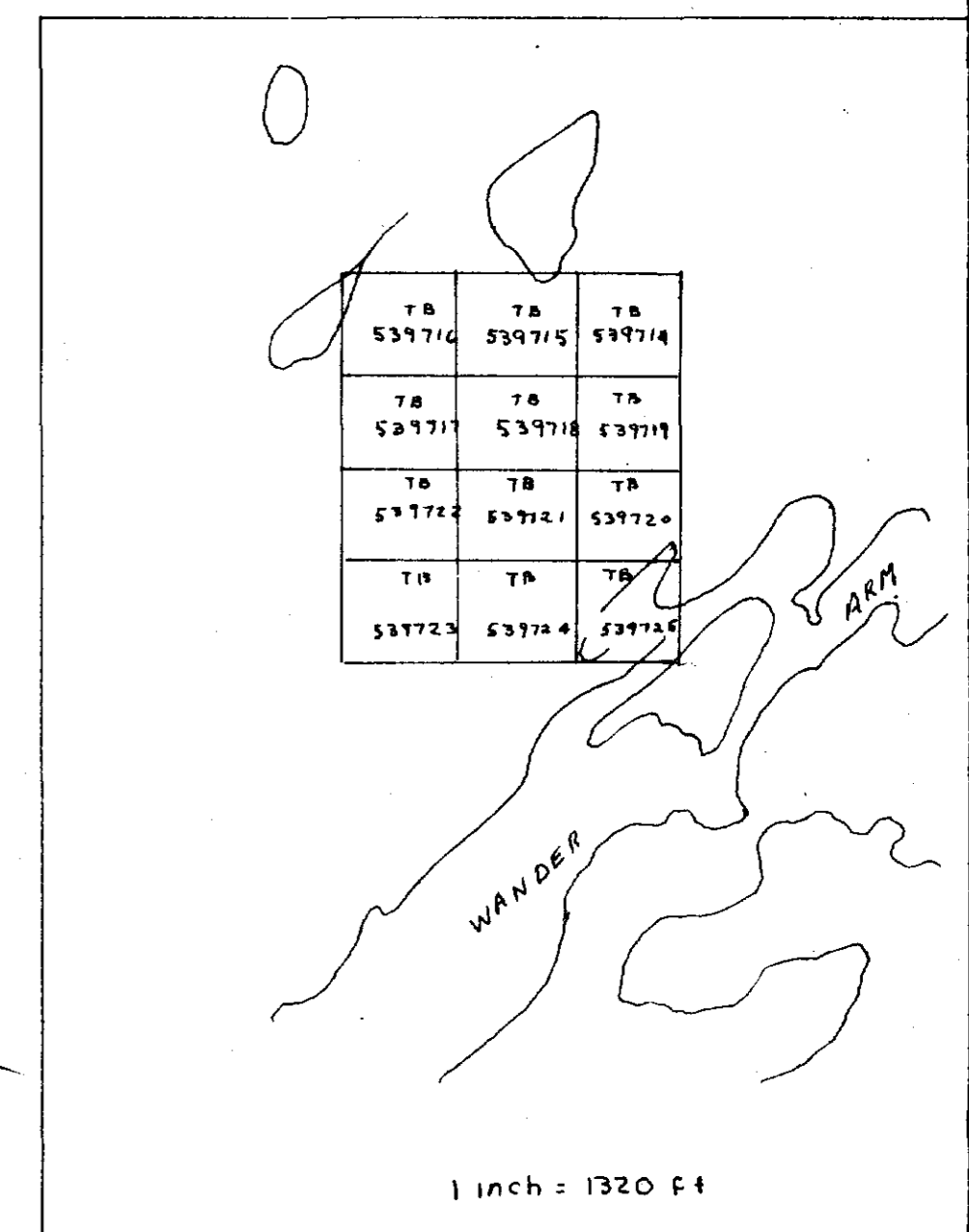
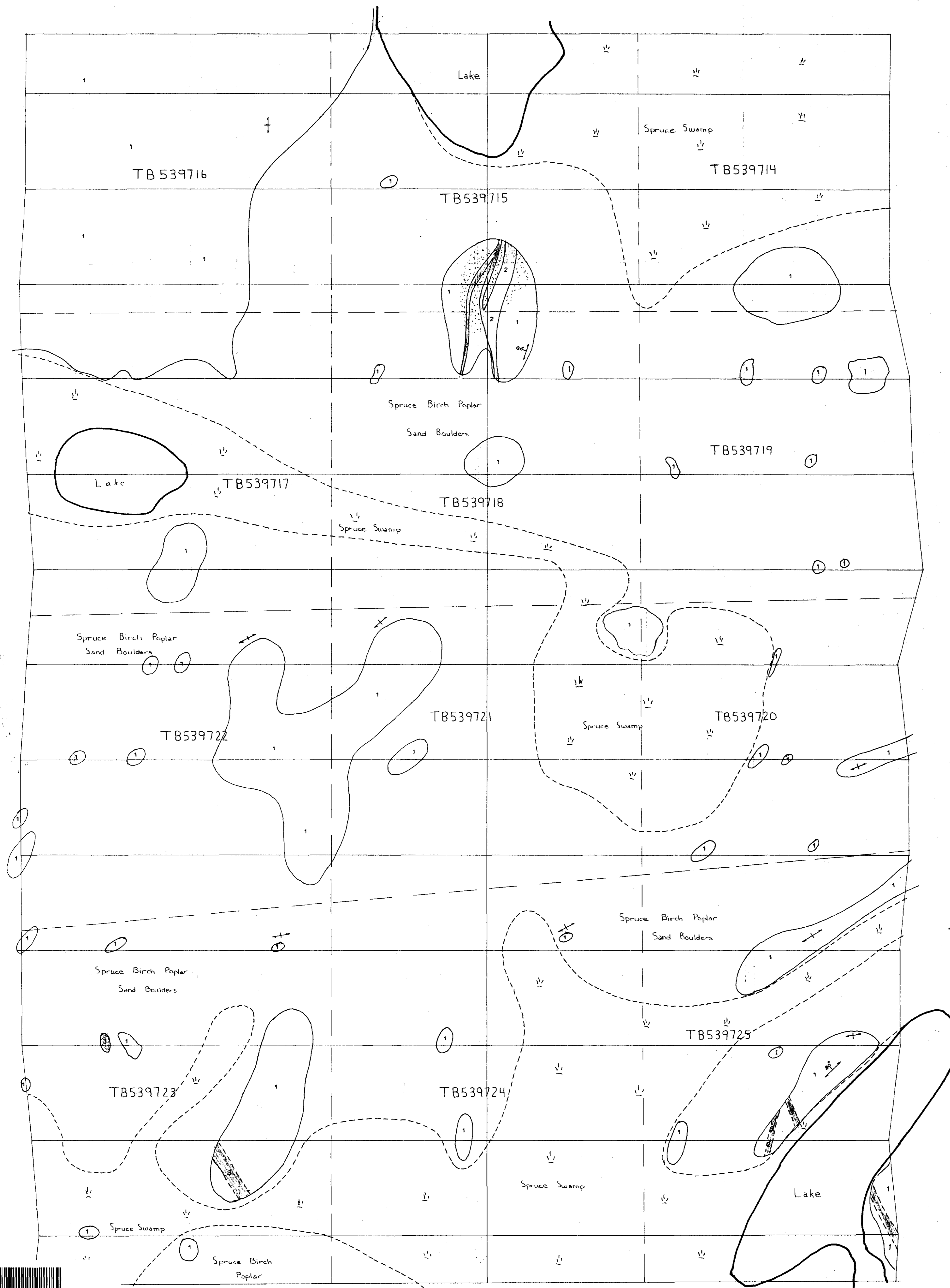
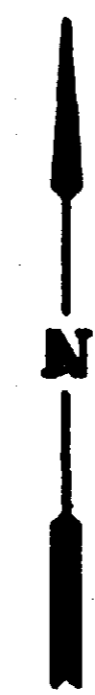
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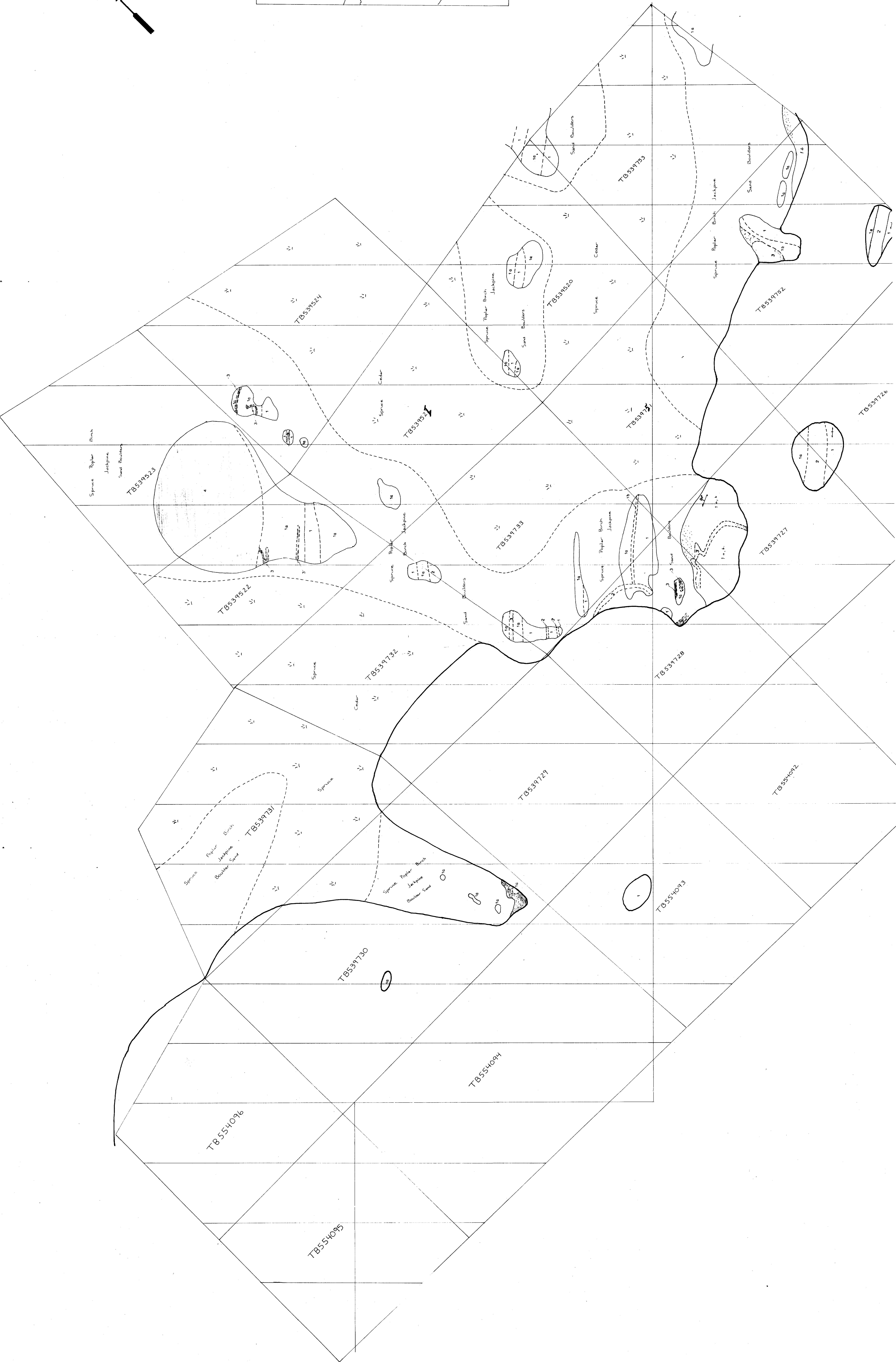
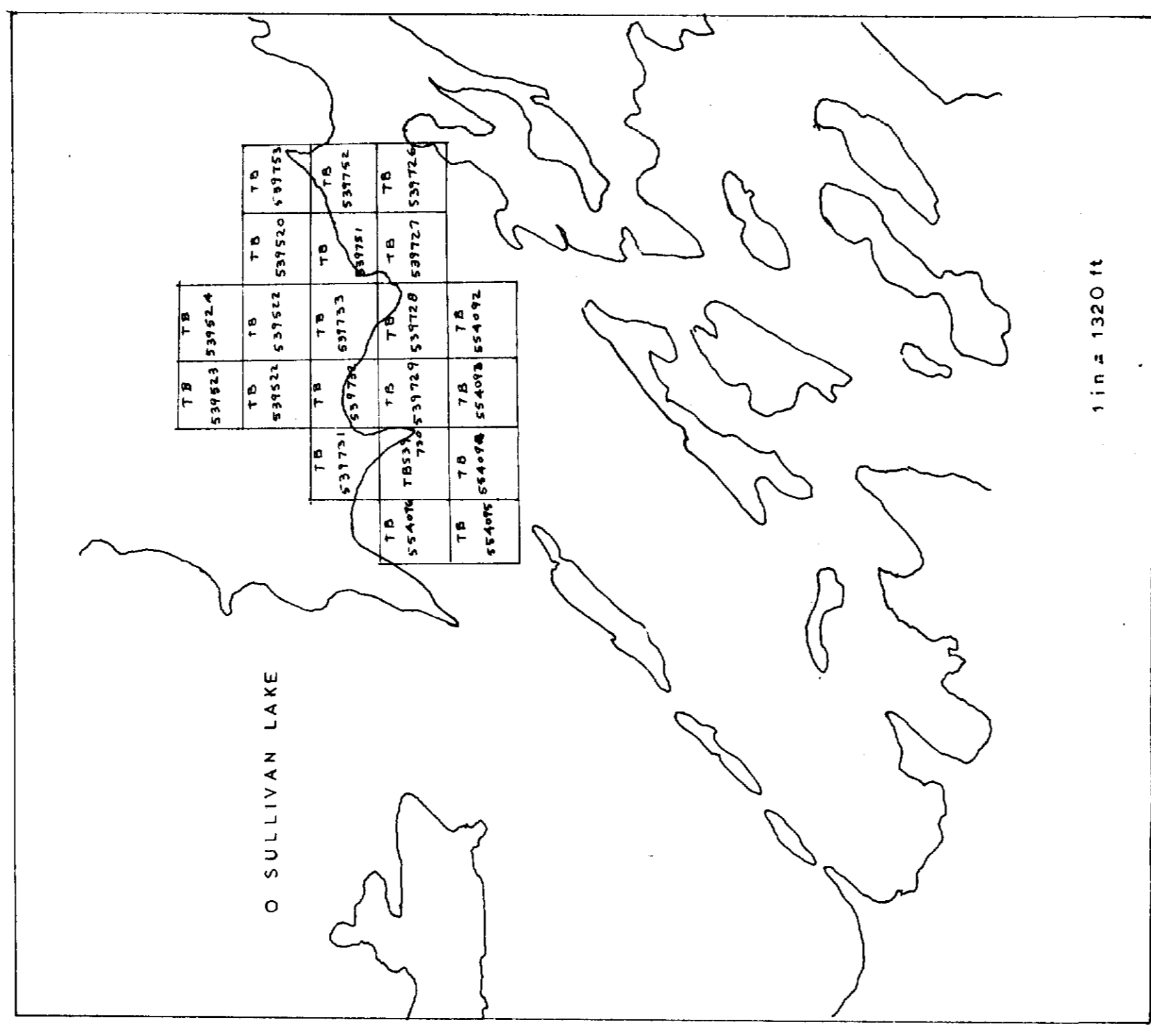
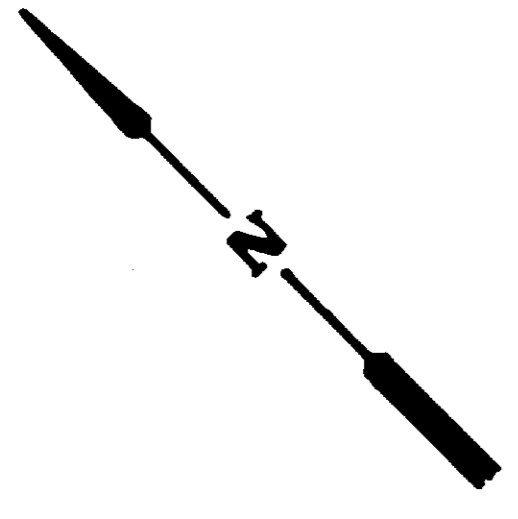
SEPT 1981

MAW LAKE

LEGEND

-  Diabase
-  Quartz-feldspar porphyry
-  Chalcopyrite, pyrite, pyrrhotite
-  Undifferentiated basic & intermediate lavas pillowed, brecciated, sheared
-  Strike & dip of schistosity

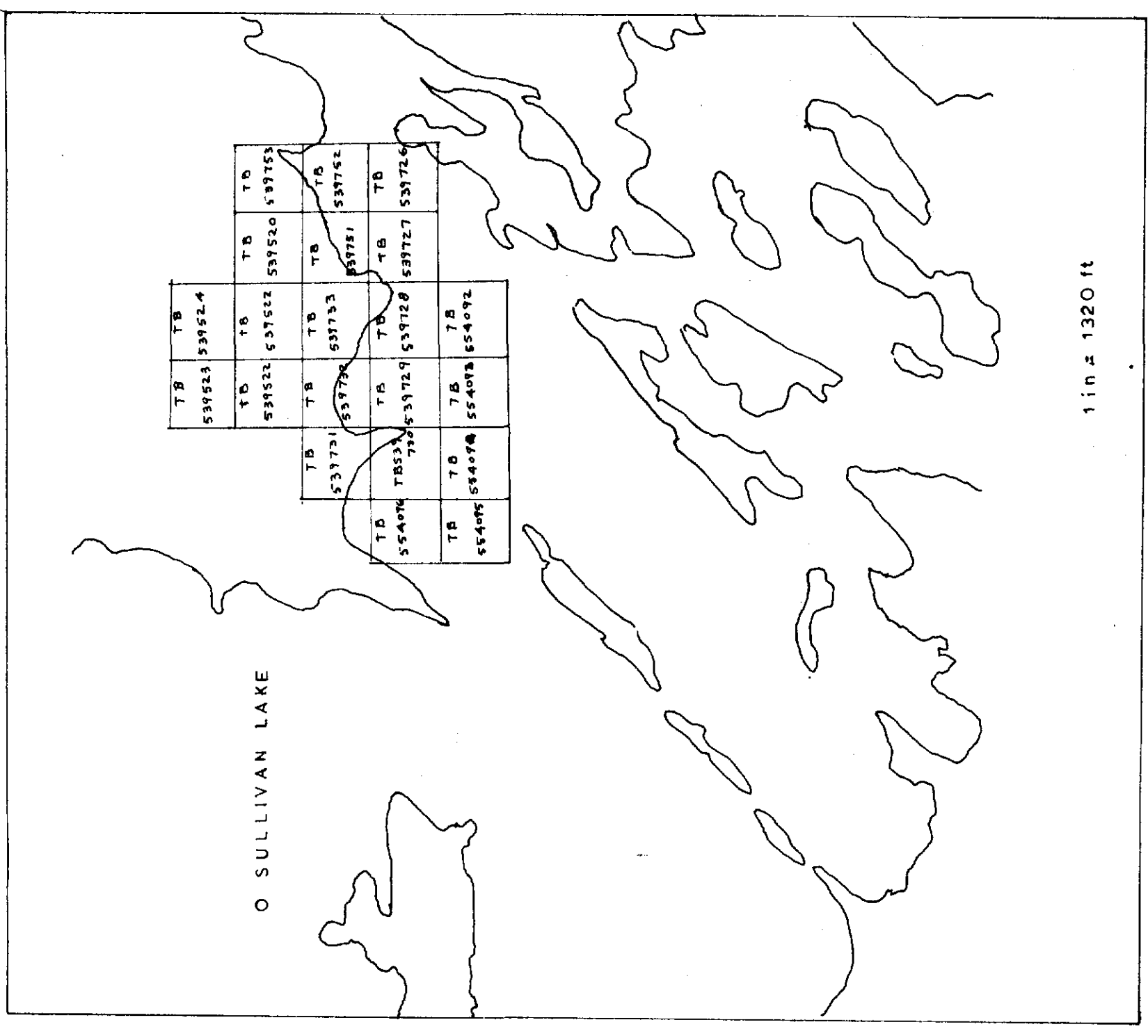




SOUTH ATLANTIC VENTURES LTD  
THUNDER BAY MINING DIVISION  
ONTARIO  
O'SULLIVAN LAKE

GEOLOGICAL SURVEY  
SCALE 1 in = 200 ft  
SEPT 1981

- LEGEND
- Granodiorite
  - Quartz-feldspar porphyry
  - RHYOLITE
  - Andesite (a) pillowe (b) carbonated
  - Mineralized
  - Strike & dip of schistosity



SOUTH ATLANTIC VENTURES LTD  
 THUNDER BAY MINING DIVISION  
 ONTARIO  
 O SULLIVAN LAKE

GEOLOGICAL SURVEY  
 SCALE 1 in = 200 ft  
 SEPT 1981

- LEGEND
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  - Andesite (a) pillowed (b) carbonates
  - Mineralized
  - Strike & dip of schistosity

