

41104NE0022 0019 FOSTER

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GEOLOGICAL REPORT ON FOSTER TOWNSHIP  
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DISTRICT OF SUDBURY  
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PROVINCE OF ONTARIO  
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**Montreal, Quebec**  
**December 6th, 1956.**  
MONTREAL, QUEBEC  
December 6th, 1956.

**Submitted by:**  
**Cyril Muromcew, A.B.**  
*Cyril MUROMCEW, A.B.*  
**Cyril Muromcew, A.B.**



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GEOLOGICAL REPORT ON  
POSTER TOWNSHIP HOLDINGS  
DISTRICT OF SUDBURY  
PROVINCE OF ONTARIO  
MAY TO SEPTEMBER  
1 9 5 6

INTRODUCTION

A geological and geophysical survey was carried out in the Township of Poster from May 2 until September 15, 1956, covering a total of 54 claims, claim Nos. 92141-92190 and 92278-92281.

The purpose of this survey was to map and examine by geophysical and geological means the intruded bodies of diorite in quartzite and graywacke, believed to contain concentrations of sulphides of economic interest.

The ground magnetometer survey served to outline in detail the position and shape of any ore bodies which may possibly have an anomalous magnetic intensity.

Diamond drilling and extensive trenching by power tools was done to provide sub-surface and sample information.

LOCATION AND ACCESSIBILITY

The Township of Poster, in the District of Sudbury, Province of Ontario, lies about forty miles west

of the City of Sudbury and approximately eight miles east of the Town of Espanola. The Town of Espanola possesses a well-developed railroad siding of the Canadian Pacific Railway with numerous loading facilities.

The property consisting of 54 claims is located south of Lakes Elizabeth and Augusta and west of Lake Panache. In the south, it borders on St. Leonard Lake.

This area can be reached by car and truck on a gravel road leading from Espanola to the Government Dock on West Bay of Lake Panache.

A branch of the Manitoulin Railway traverses the area, 4 miles southwest of the property.

#### MAPPING

The Lake Elizabeth-Lake Augusta area was mapped on a scale of one inch to 400 feet covering the total of 30 claims, Nos. 92141-92170. Certain parts were mapped on a scale of one inch to 40 feet as shown on Sheet No. 2 of the Foster Township geological maps. The control for the survey was provided by a base line bearing  $43^{\circ}$  mag. starting 400 feet north of  $8\frac{1}{2}$  mile point along the road from Espanola to West Bay of Lake Panache. This base line continued north between Lakes Elizabeth and Augusta for 5200 feet. At points 0 plus 00, 3 plus 00, 23 plus 00, and 33 plus 00, along the base line, perpendicular lines were cut and chained thus establishing the relation of the base line to the shore lines of Lake Elizabeth, Lake Augusta and

Big Fish Lake. Pace and compass traverses were run at 400 intervals on both sides of the base line and perpendicular to it. The position of all drill holes and trenches in relation to the base line was established by chain and Brunton with necessary correction for elevation.

See Sheet No. 1 Foster Township Geological Maps.

#### GENERAL GEOLOGY

The consolidated rocks in the Township of Foster consist of Pre-Cambrian sediments and basic intrusives.

According to Jas. E. Thompson\* (Vol. LXI, Part 4, 1952) the main sedimentary group (Huronian) may be regarded as a single unit. Collins and Quirke, however, classify these sediments as Pre-Huronian, dividing them into Sudbury and Bruce series.

The general strike of the sedimentary rocks in this area is approximately  $70^{\circ}$  with dips ranging from vertical to  $60^{\circ}$  NW. In the area south of Lake Elizabeth and Lake Augusta and north of St. Leonard Lake, the silicified and feldspathitic quartzites, interbedded with graywackies, form prominent light-coloured ridges, bare of vegetation, sympathetic with the strike of the general structure. The valleys between these ridges are often swampy and contain numerous small bodies of water. These sedimentary rocks have been intruded by diorite of at least

two different ages. However, the age relationship is obscure.

The basic intrusives in this area will be considered as follows:-

- I. Massive diorite intrusion along the south and southeast shore of Lake Elizabeth, approximately parallel to the shore line. Contains in parts sufficient quartz to be regarded as quartz diorite.
- II. A belt of diorite intrusions, about 2000 feet south of Lake Elizabeth and Lake Augusta with an east-west trend, in places cutting across the general structure of the invaded sedimentary rocks.
- III. Small basic intrusives in the area south of Lake Elizabeth. These are fine-grained lenses of diorite, probably younger than the above two, brecciated and contorted, with serpentine along slip surfaces. Most contain some sulphide mineralization. The general trend was found to be about  $45^{\circ}$  mag. This area was divided into three parts: "A", "B", "C" (see sheet No. 2 on geological maps) and was surveyed in this order.

Area "A"

A belt of diorite intrusives, bearing approximately  $45^{\circ}$  mag. over 400 feet long, and up to 30 feet wide, was located about 800 feet south of the south-east shore of Lake Elizabeth. The long axis of these bodies was found to be sympathetic with the general strike of the host rock, though the rocks in the immediate vicinity of the

the intrusives were strongly twisted and contorted, forming in parts "en echelon" pattern. The diorite in this area is fine to very fine-grained with some quartz veins cutting across it. No wall rock alteration was noted. Most bodies of diorite contain finely disseminated sulphides, predominantly pyrite with associated minor amounts of pyrrhotite and chalcopyrite.

Drilling and trenching disclosed a certain amount of sulphides. There is a possibility that the concentration will increase in depth. Drill holes and trenches together with the <sup>NO</sup> assay results are plotted on sheet No. 2 of the Foster Township geological map.

Area "B"

The area "B" is located approximately 1500 feet west of area "A". A base line was out starting at the Espanola West Bay road, bearing  $43^{\circ}$  mag. for 1800 feet. This base line intersects line 0 plus 00 at 16 plus 00 feet. (see Sheet No. 1 on Foster Township Map)

Few small bodies of diorite were located along this line. The diorite intrusions in area "B" are strongly brecciated and contorted, with numerous slickensides. The slip surfaces are well serpentized with "smears" of sulphides which indicates that the movement occurred after the period of mineralization. The sulphide mineralization is slightly heavier than in area "A", predominantly pyrrhotite, pyrite and chalcopyrite, with minor traces of molybdenite and sphalerite. These sulphides are finely disseminated

in fine-grained diorite with small veinlets unevenly distributed throughout the rock.

#### Area "C"

Area "C" is located south of the southwestern end of Lake Elizabeth. Numerous "burns" attracted the attention of prospectors. Stripping and trenching revealed a belt of diabase, azimuth  $60^{\circ}$ , with numerous quartz veins intruded between diorite and quartzite. This body of diabase contains finely disseminated sulphides, predominantly pyrite, pyrrhotite and some chalcopyrite. No appreciable concentration was noted. Some of the quartz veins ranging from  $\frac{1}{2}$ " to 5" in width also contained some sulphides.

#### STRUCTURAL GEOLOGY

One major fault was noted along the northwest shore of Lake Augusta bearing approximately  $30^{\circ}$  mag., hereon referred to as the Lake Augusta Fault. The fault, with pronounced tension cracks, is easily seen along the shore line. It appears to continue south towards St. Leonard Lake as there is a linear depression along the strike of this fault. The amount of movement along the fault could not be determined. There are indications of two parallel faults NW and SE of the Lake Augusta Fault. These faults are believed to be the cause of the minor movements in the diorite bodies. These movements, being of a post-mineralisation age, have no effect on the concentration of sulphides due to structural control in this area. Two other possibilities may also be considered.



The major faults in this area may have been caused by the crustal movement due to the diorite intrusion. The second, and in the writer's opinion, a more remote possibility is that the diorite intrusion followed a zone of weakness caused by faulting, i.e. the faults would have occurred prior to the intrusion.

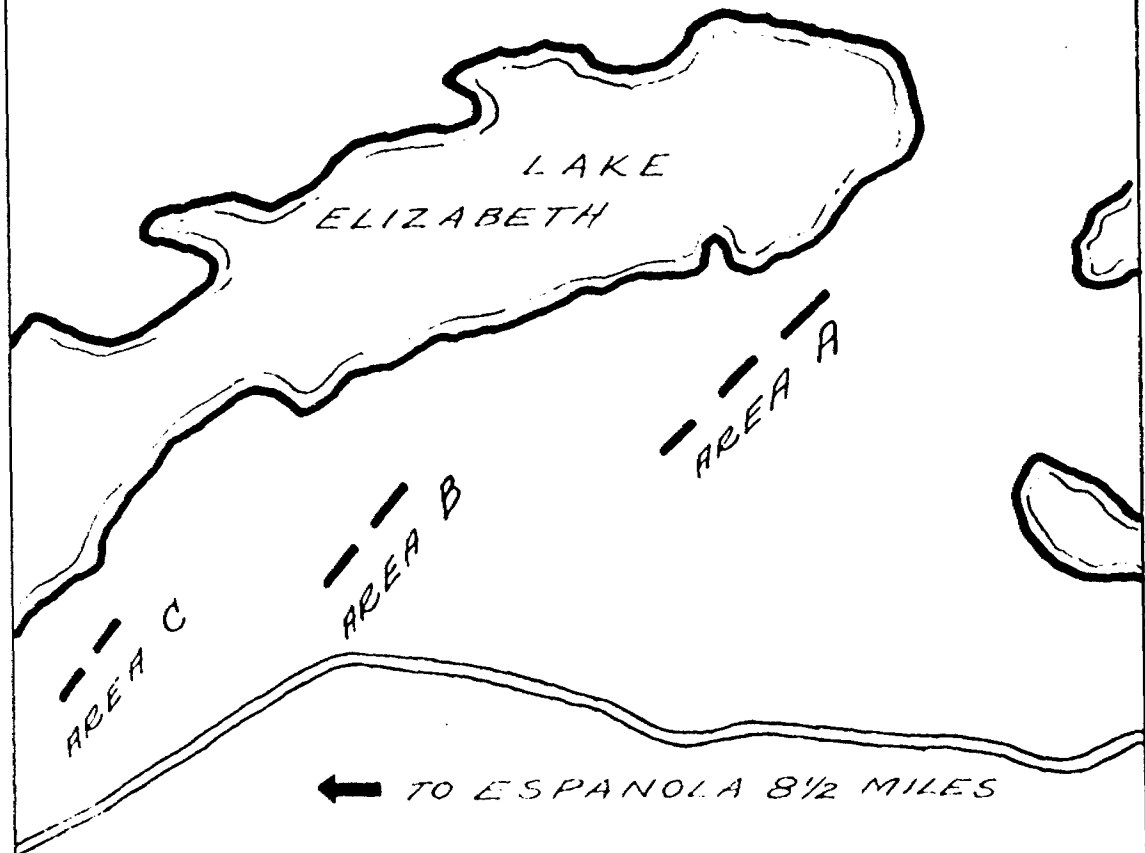
No reliable evidence has been found to give any of the above theories a substantial support.

### CONCLUSIONS

Exploratory shallow drilling and trenching performed to date revealed what appear to be three zones of sulphide mineralization south of Lake Elizabeth. The sulphide mineralization is mostly in the form of fine grains and small veinlets, disseminated throughout the rock.

From the evidence so far collected, the writer believes that there is a possibility of a sulphide concentration within these areas and recommends further drilling in the order of 3000-5000 feet.

# FOSTER TOWNSHIP DISTRICT OF SUDBURY



MAP SHOWING DESIGNATION  
OF AREAS

Cyril M. ...

GROUND MAGNETOMETER SURVEY

A ground magnetometer survey was carried out on 24 claims, Nos. 92165 to 92188, from May 3 to June 2, 1956.

METHOD OF SURVEY AND CONTROL

A base line bearing  $90^{\circ}$ , 10,500 feet long, was cut approximately along the III and IV concession line, terminating at West Bay of Lake Panache. Along this base line north-south oriented lines were cut at 400 feet intervals. These lines, with pickets at 100 feet intervals, were not of uniform length due to numerous swamps and shallow bodies of water in this area.

Ground magnetometer readings were taken at 100 foot intervals along the north-south lines. Three daily check readings were taken at established base stations; more frequent checks were taken at temporarily established substations as the survey progressed.

The instrument used for this survey was a ground magnetometer, manufactured by the Radar Exploration Company of Toronto, with a reading constant of 18.8.

CONCLUSIONS

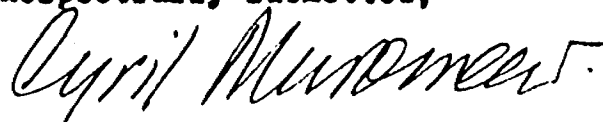
The ground magnetometer survey disclosed an east-west trending belt of magnetic anomalies approximately 1000 feet wide in the vicinity and roughly parallel to concession line III and IV. The highest magnetic intensity was found on or in the immediate vicinity of the diorite

intrusives. The magnetometer readings were found to be ranging from 900 to 2400 gammas, 1200 gammas being the assumed base level. Corrections were made for diurnal variations which were on the average 25 gammas.

A careful surface examination of outcrops within the anomalous belt disclosed a certain amount of magnetite in the diorite bodies. Also some sulphide mineralization was observed in the form of finely disseminated pyrite. The presence of magnetite accounts for the high magnetic intensity in this area.

The magnetometer survey and surface examination failed to give any indication of a mineral concentration of economic interest.

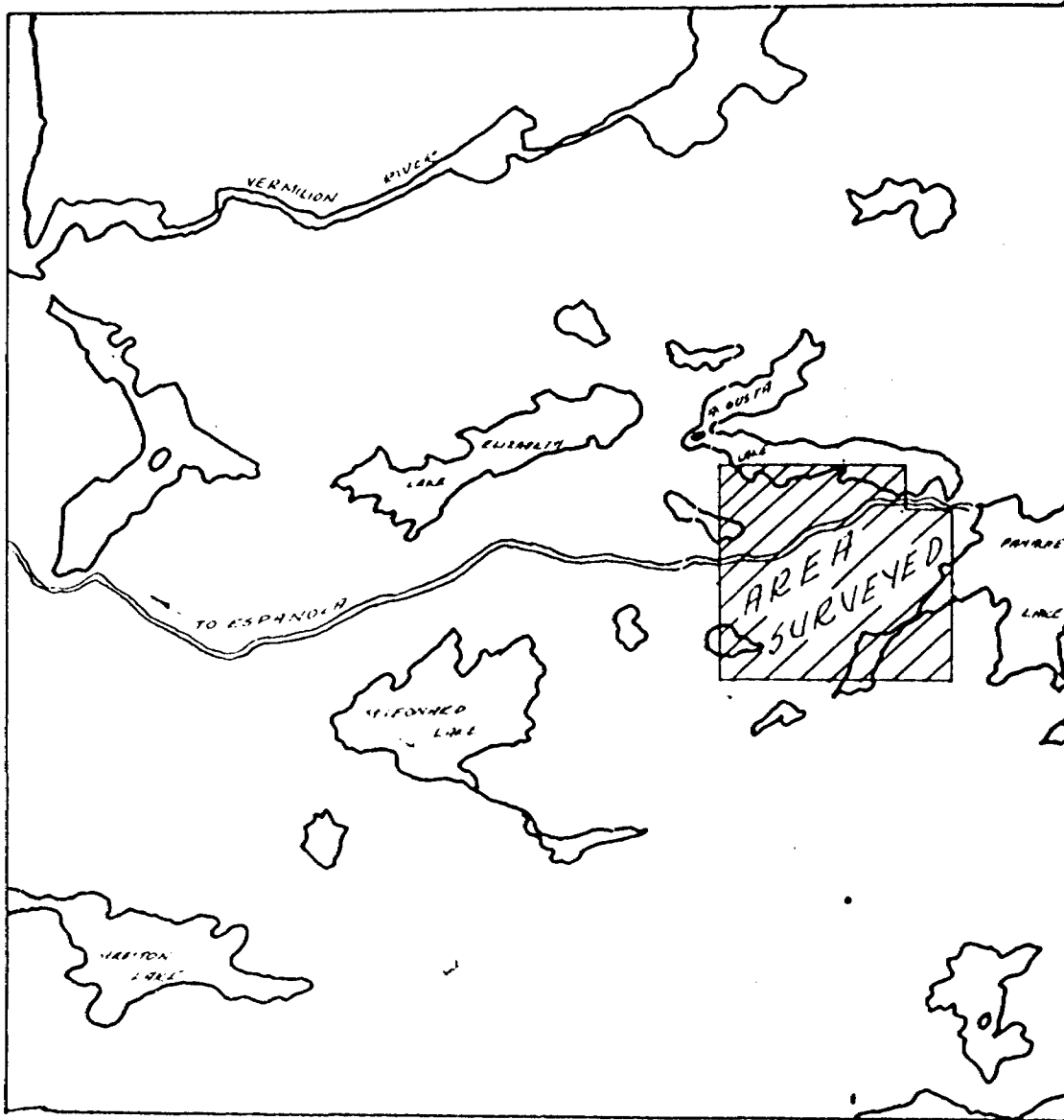
Respectfully submitted,



CYRIL MUROMCEW, A.B.

Montreal, Quebec

December 6th, 1956.



FOSTER TOWNSHIP

DISTRICT OF SUDBURY

GROUND MAGNETOMETER SURVEY

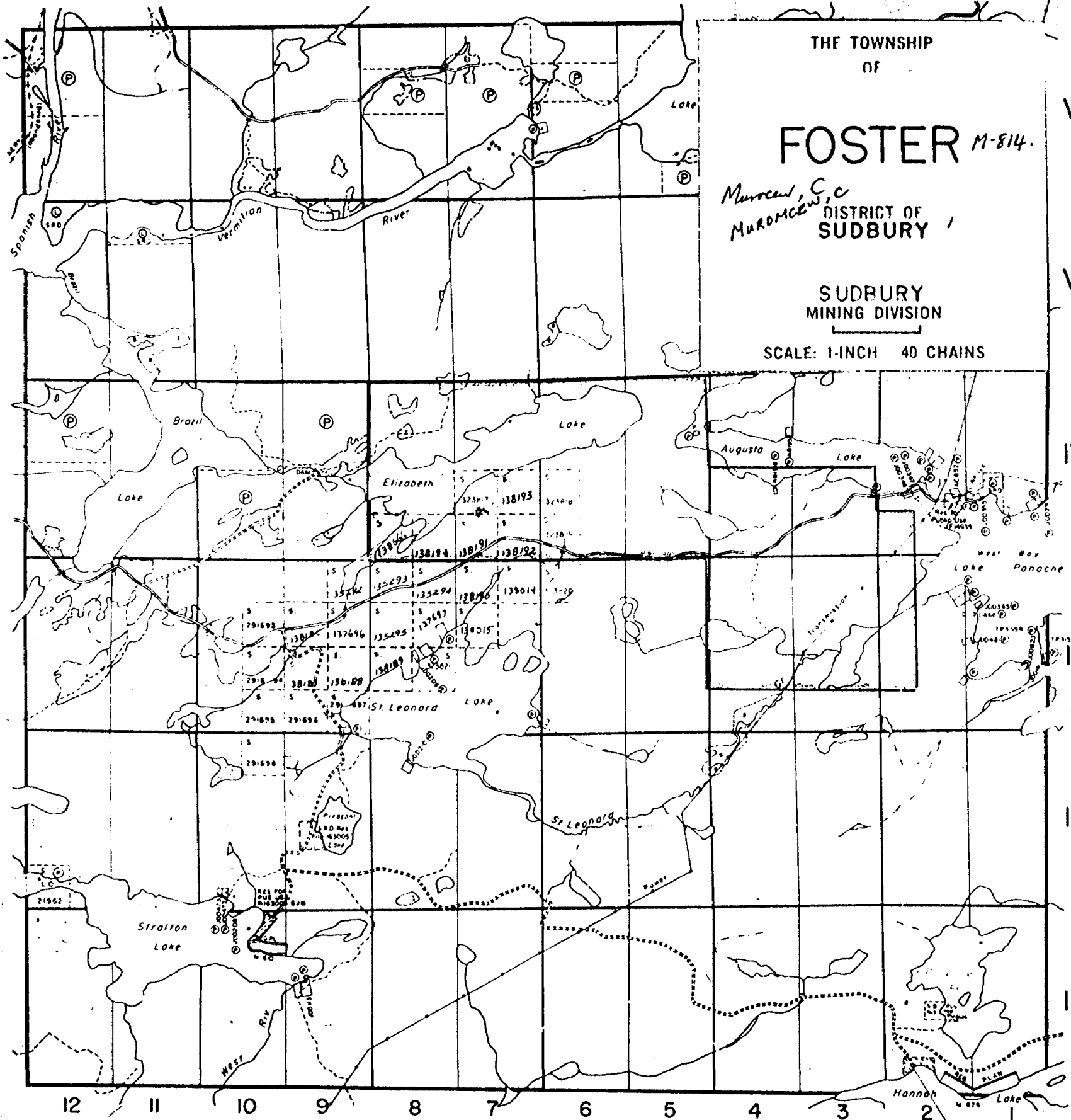
Scale  1 INCH TO 1 MILE

CM.

Nairn Twp. - M.883

Merritt Twp. - M.863

Truman Twp. - M.1164



THE TOWNSHIP  
OF

FOSTER M-814.

Murrow, C. C.  
MURROW, C. C.  
DISTRICT OF  
SUDBURY

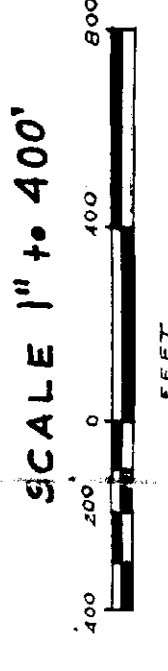
SUDBURY  
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

Curtin Twp. - M.745

S.R.O. WITHDRAWN FROM  
STAKING UNDER SEC. 42  
OF THE M.G. ACT.  
FILE 163005

**FOSTER TOWNSHIP**  
DISTRICT OF SUBURRY



- LEGEND**
- OS SILICIFIED QUARTZITE AND QUARTZ VEINS
  - D QUARTZ AND QUARTZ DIORITE SOME SERPENTINIZATION
  - Q QUARTZITE
  - QG QUARTZITE AND ESPANOLAR BENTONITE

- SYMBOLS**
- Geological boundary, approx. and assumed
  - Fault defined and assumed
  - Strike and indicated dip
  - Strike and vertical dip
  - Areas of outcrops
  - Lines and engraving
  - Concession and lot lines
  - Trench or pit
  - Drill hole
  - Swamp or muskeg
  - Gravel road
  - Area covered by manufactured survey claim not on Map.

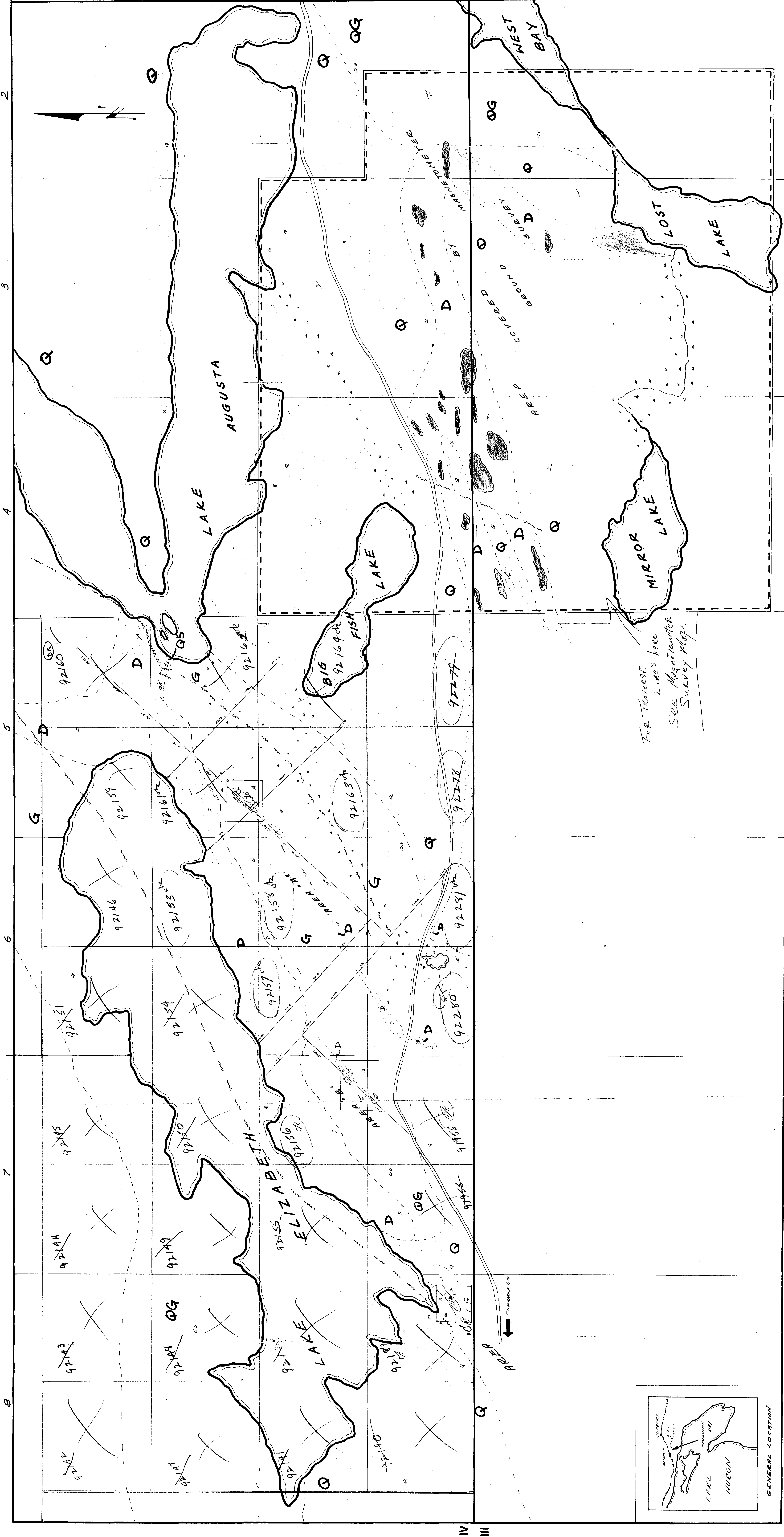
NOTE

FOR DETAILS SEE SHEETS #2 & #3

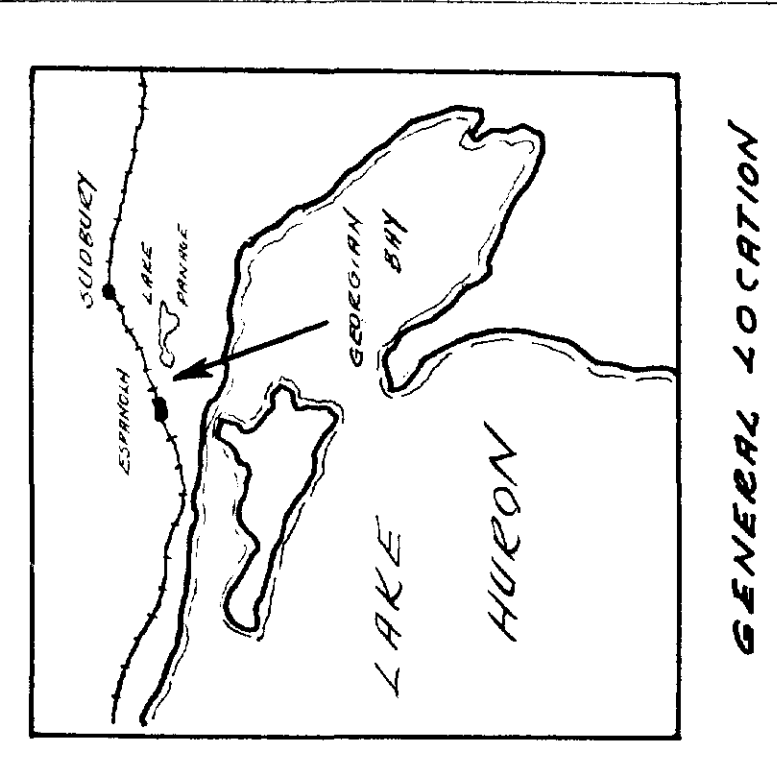
SHEET #1

SURVEY BY: C. Munnick  
DRAWN BY: C. Munnick

APRIL - AUGUST, 1976

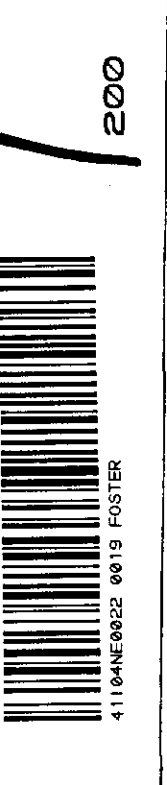


For Traverse Lines here See Magnetometer Survey Map.



**BELLECHASSE**  
MINING CORPORATION LIMITED

FOSTER-0019, #1





**FOSTER TOWNSHIP**  
DISTRICT OF SUBURRY

SCALE  
1 INCH TO 40 FT.



**LEGEND**

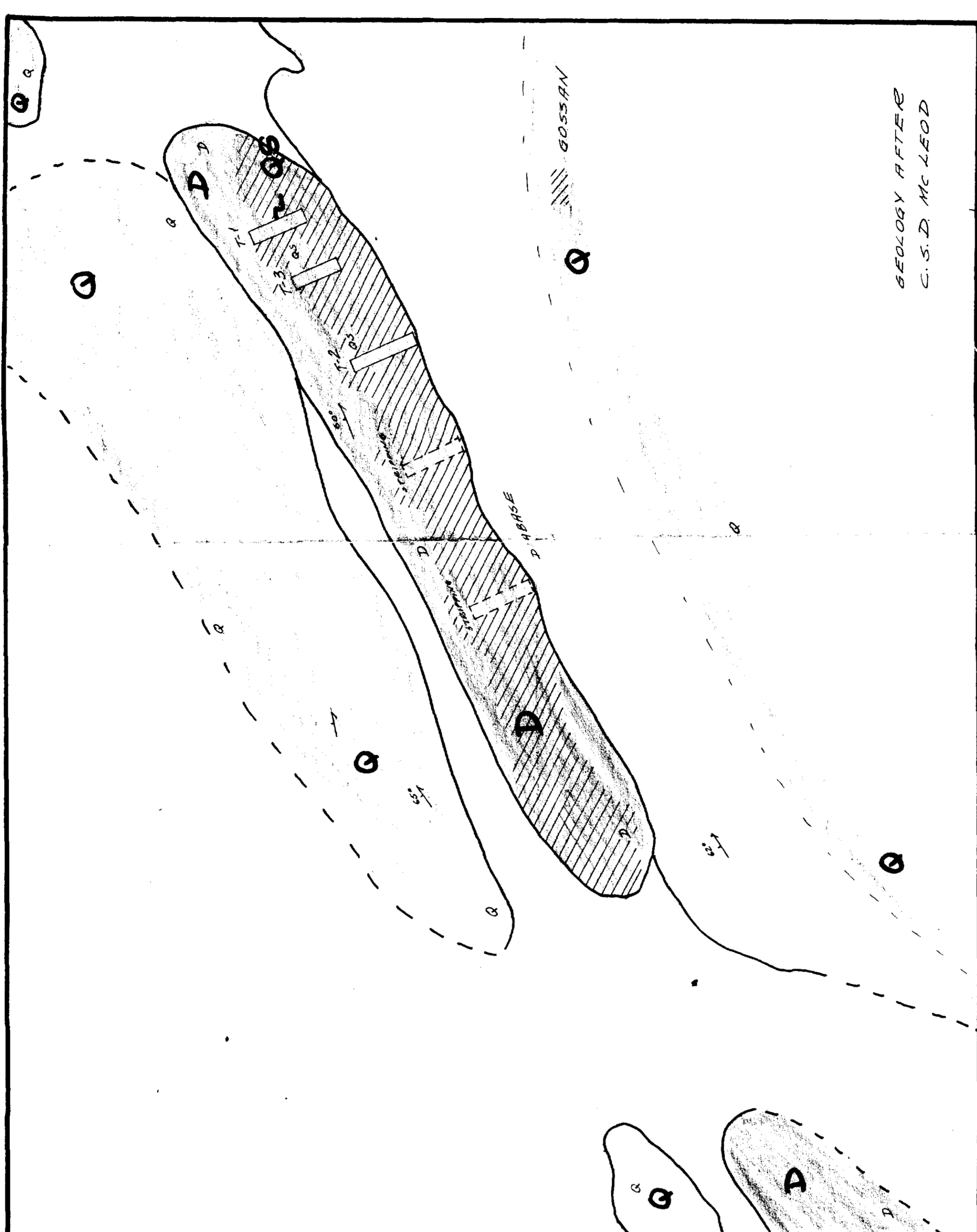
- OS SILENCIFIED QUARTZITE & QUARTZ VEINS
- D DOBITE & QUARTZ DIORITE ZONE SERPENTINIZATION
- Q QUARTZITE
- G G'S PANOLA GRANITIC

- BIOLOGICAL BOUNDARY APPROX.
- AREAS OF DEFINED OUTCROPS
- SHEARED ZONE
- STRIKE & INDICATED DIP
- STRIKE & VERTICAL DIP
- JOINTS
- DRILL HOLE VERTICAL & INCLINED
- TRENCH
- LINE & CHAINAGE
- SWAMP OR MUCKS

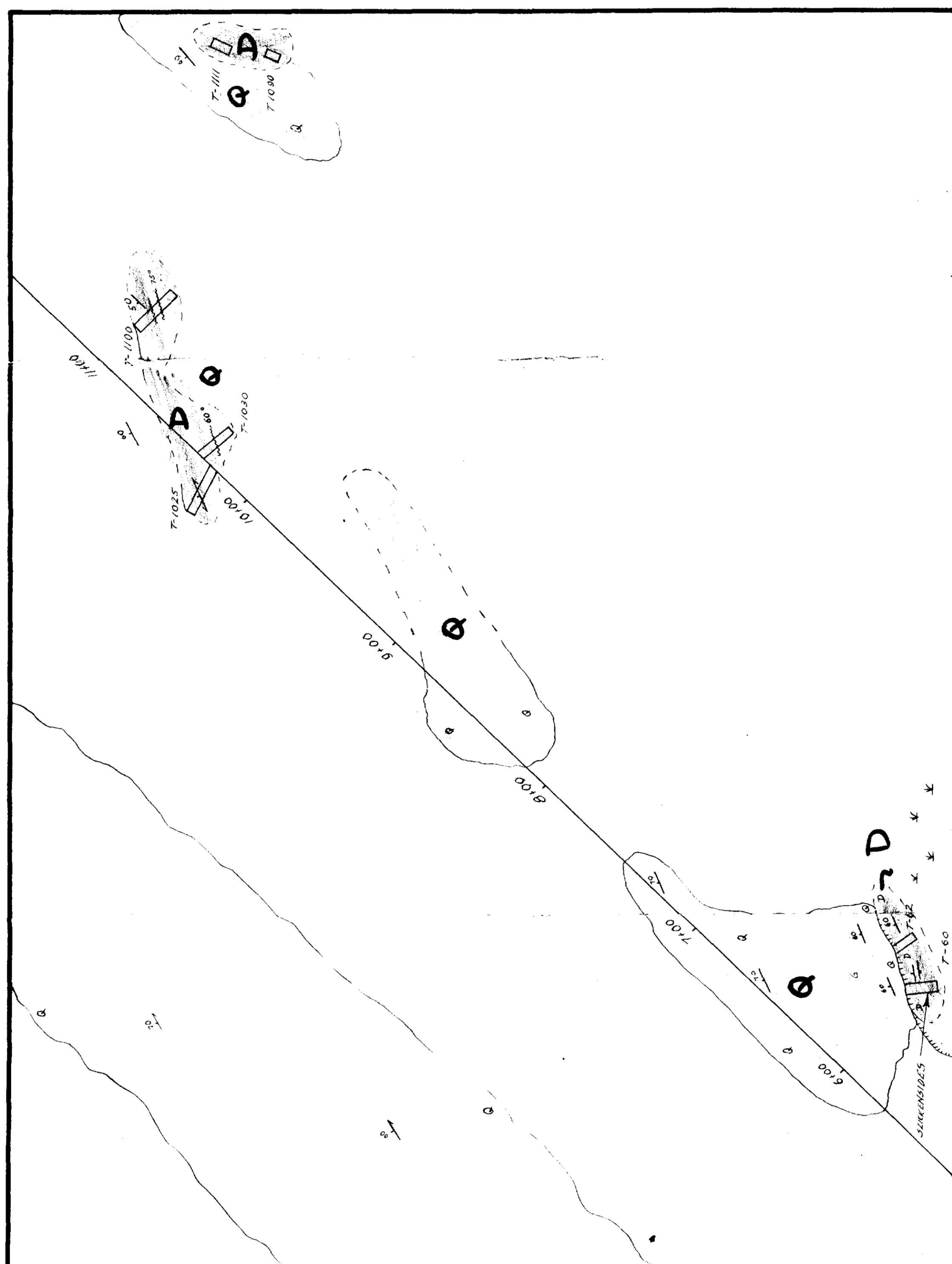
HUGONIAN  
BRUCE L. HENNING

SURVEY BY: C. MANNING  
DRAWN BY: C. MANNING

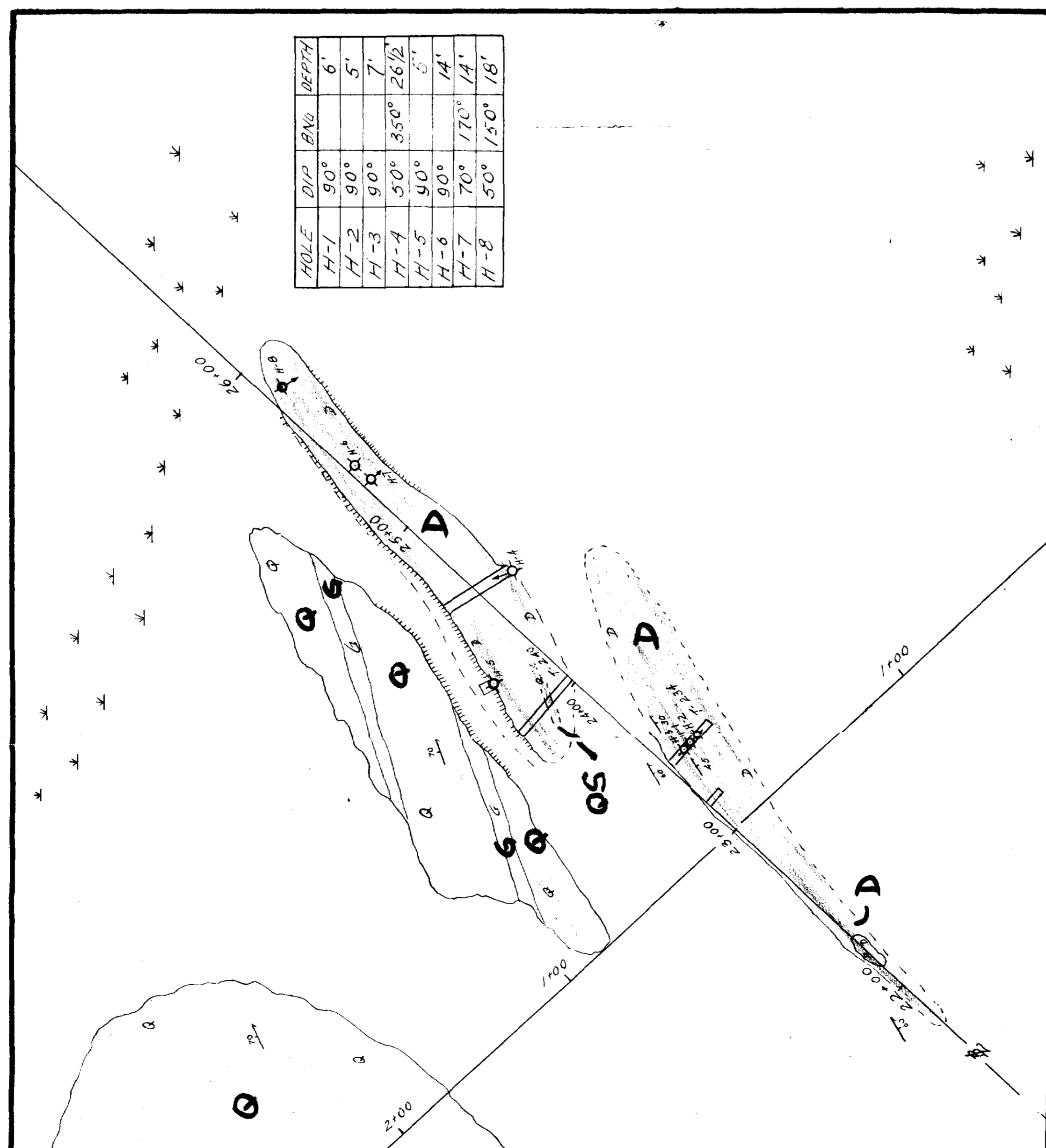
FOSTER 0019 #2



AREA "C"



AREA "B"



AREA "A"

**BELLECHASSE**  
MINING CORPORATION LIMITED





# FOSTER TOWNSHIP DISTRICT OF SUDBURY

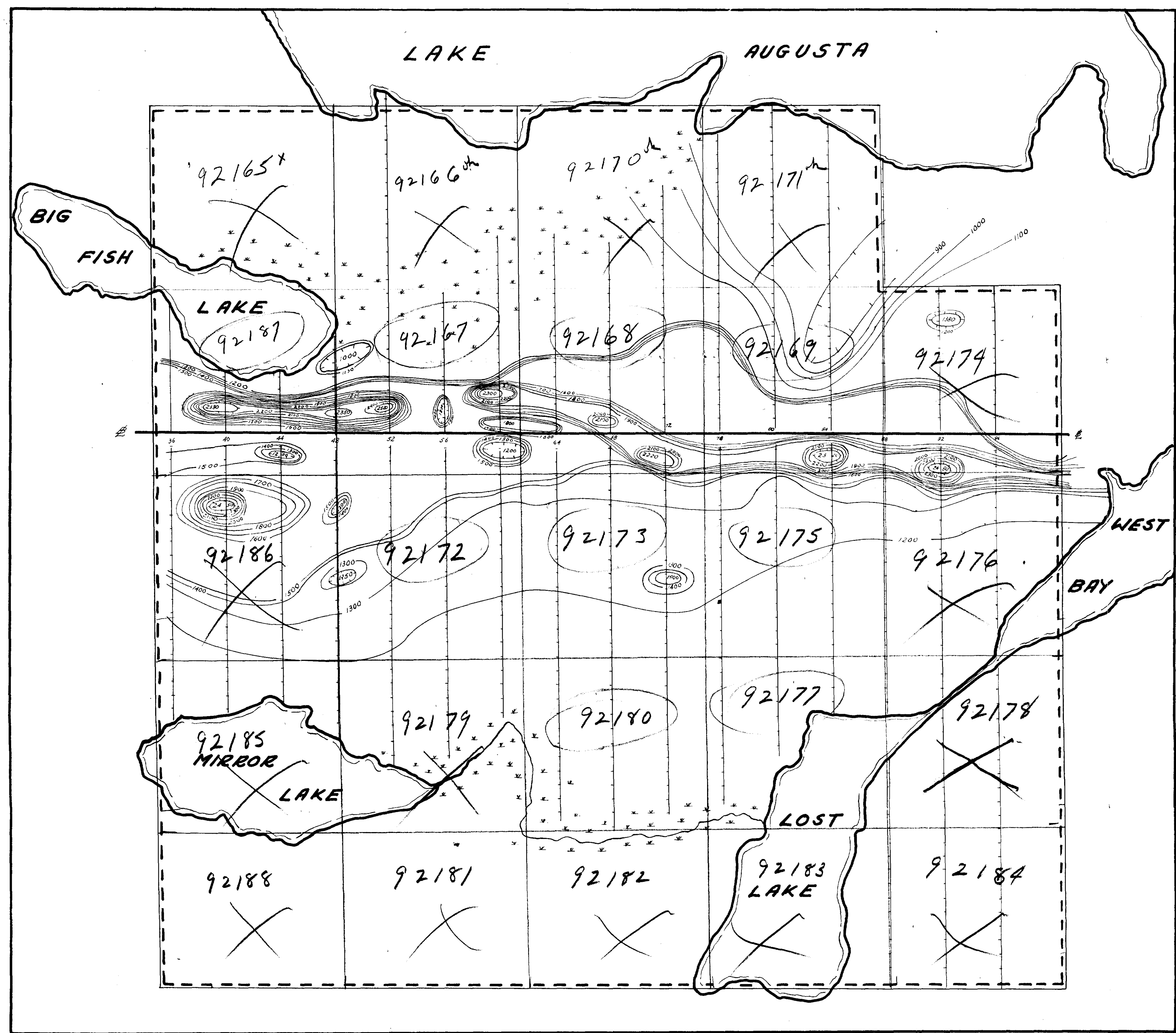
## GROUND MAGNETOMETER SURVEY

Scale: 1 INCH TO 400 FEET



### LEGEND

- 100 GAMMA CONTOURS
- MAGNETIC HIGH
- MAGNETIC LOW
- LINE & CHAINAGE
- SWAMP & MUSKEG



— BELLECHASSE —  
MINING CORPORATION LIMITED

MAGNETOMETER OPERATOR: C. Maromeau  
DRAWN BY: C. Maromeau

FOSTER-0019, # 3.

