



411055W9550 SHKSPRE 10 A1 SHAKESPEARE

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63 2211
June 7, 1968

REPORT FOR BROULAN REEF MINES LIMITED COVERING AN ELECTROMAGNETIC AND MAGNETIC SURVEY ON THEIR SHAKESPEARE TOWNSHIP CLAIMS, SUDBURY MINING DIVISION, ONTARIO.

LOCATION AND ACCESS

The claims are located on the eastern portion of Concession V, Shakespeare Township. Access is provided by all weather road from the town of Webbwood north to Agnew Lake, then by boat or over the ice to the claim group near Stump Bay.

INSTRUMENTS USED

The electromagnetic survey used a Crone Geophysics Limited RADEM, unit # R-51, utilizing the Seattle Washington transmitter station with a frequency of 18.6 kilocycles. Readings were taken using the standard dip angle measurement method and recording in degrees. Accuracy of the readings is $\pm 1^\circ$. A reading of 13° N means that the conductor is located towards the north of the station as indicated by the arrow on the instrument face.

The magnetometer used was a McPhar M-500 instrument. Readings are obtained directly in gammas with an accuracy of ± 15 gammas. The instrument measures the vertical component of the earth's magnetic field and is a standard hand-levelled, fluxgate type instrument.

PREVIOUS WORK

The claim group contains an old copper showing which occurs along a ridge of high ground. This ridge forms a point into Agnew Lake adjacent to Stump Bay. The most extensive previous exploration of the showing was carried out by Noranda Mines Limited in 1955 and 1956. Noranda completed a vertical loop EM survey (1000 cps) and followed this up with extensive trenching and the drilling of six holes. The mineralized zone was traced out over a total length of 1700 ft.

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A grid was cut under the direction of Paul Paquette of Broulan Reef Mines, operating out of his office located in Espanola. The grid was extended onto the ice of Agnew Lake, covering areas where the ice was safe to travel. The survey grid was cut during the late fall and early winter of 1967. A total of 5½ miles of grid was laid out on the Broulan Reef claims. On both the magnetometer and electromagnetic surveys stations were read every 50 ft. Both surveys were carried out under the direction of Paul Paquette. The magnetometer was operated in November and December of 1967; normal survey procedures of establishing base stations and application of drift corrections were carried out. The EM survey was started on January 5 and completed by January 23, 1968.

INTERPRETATION

Magnetometer Survey

A magnetic high of 200 to 1000 gammas flanks both sides of the mineralized zone, the mineralization itself occurring primarily in a magnetic low. It would appear that the silicification and associated mineralization drove the magnetite towards the edges of the mineralized zone. This is confirmed by the lack of magnetite in the silicified portions of the drill core. Similar magnetic patterns should be looked for within this area.

RADEM Electromagnetic Survey

The conductors have been marked in red pencil on the maps, solid line for definite conductors, dashed for indicated. Conductor "A" is the mineralized zone as previously outlined by Noranda's trenching and drilling program. The zone stops abruptly between lines 6W and 10W and thus does not extend into the lake. Towards the east end the conductor has been traced to Line 34E. After Line 10E the zone tends to swing towards the south and must weaken considerably in conductivity, since the Noranda vertical loop survey failed to detect the zone east of this point. The RADEM conductor, however, does continue to occupy a magnetic low zone flanked by magnetic highs. Thus the RADEM conductor in this eastern portion probably represents a continuation of the silicified zone which has a much reduced sulphide content.

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RADEM Electromagnetic Survey (Cont'd)

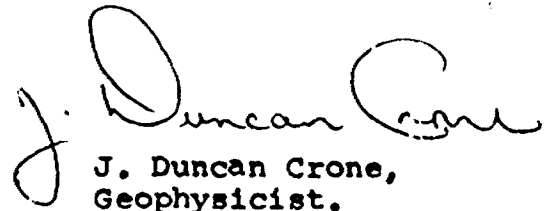
Conductor "B" follows the shoreline and most likely represents a clay edge.

Conductor "C" is similar in many respects to Conductor "A" and is probably due to sulphides. A reported showing at the shoreline on Claim 35600 may occur on the extrapolation of this conductor. Further work should be done to follow this conductor eastward. The Noranda vertical loop survey did not adequately cover this area to detect this conductor.

Conductor "D" is weak and does not appear to merit further follow-up.

Conductor "E" is also weak and of restricted length. Although related to a magnetic high it does not appear of sufficient length or strength to merit further follow-up.

Respectfully submitted,


J. Duncan Crone,
Geophysicist.

JDC:src
Enclosures



SPECIAL PROVISION
ASSESSMENT WORK DETAILS

NAMES AND ADDRESSES

Chief Line Cutter or Contractor Paul Pagette; Box 1487; Espanola; Ontario
Party Chief Paul Pagette; Box 1487; Espanola; Ontario
Consultant J. Duncan Crane; 979 Lakeshore Rd. East; Port Credit; Ontario.

COVERING DATES

Line Cutting October 1; 1967 to November 15; 1967
Field and Office January 8; 1968 to January 29; 1968

INSTRUMENT DATA

Make, Model and Type Crone Geophysics Ltd. - RADEM # R-51
Scale Constant or Sensitivity Dip Angle VLF Field Seattle Washington ± 1°
or provide copy of instrument data from Manufacturer's brochure
Total Number of Stations Within Claim Group 456
Number of Miles of Line cut Within Claim Group 5 1/2 miles

ASSESSMENT WORK CREDITS REQUESTED

Geological Survey ~~---~~ Days per Claim
Geophysical Survey 20 Days per Claim

MINING CLAIMS TRAVERSED

S - 133409 S - 133411 S - 133412 S - 133417
S - 133420 S - 133574

TOTAL 6

DATE June 7; 1968

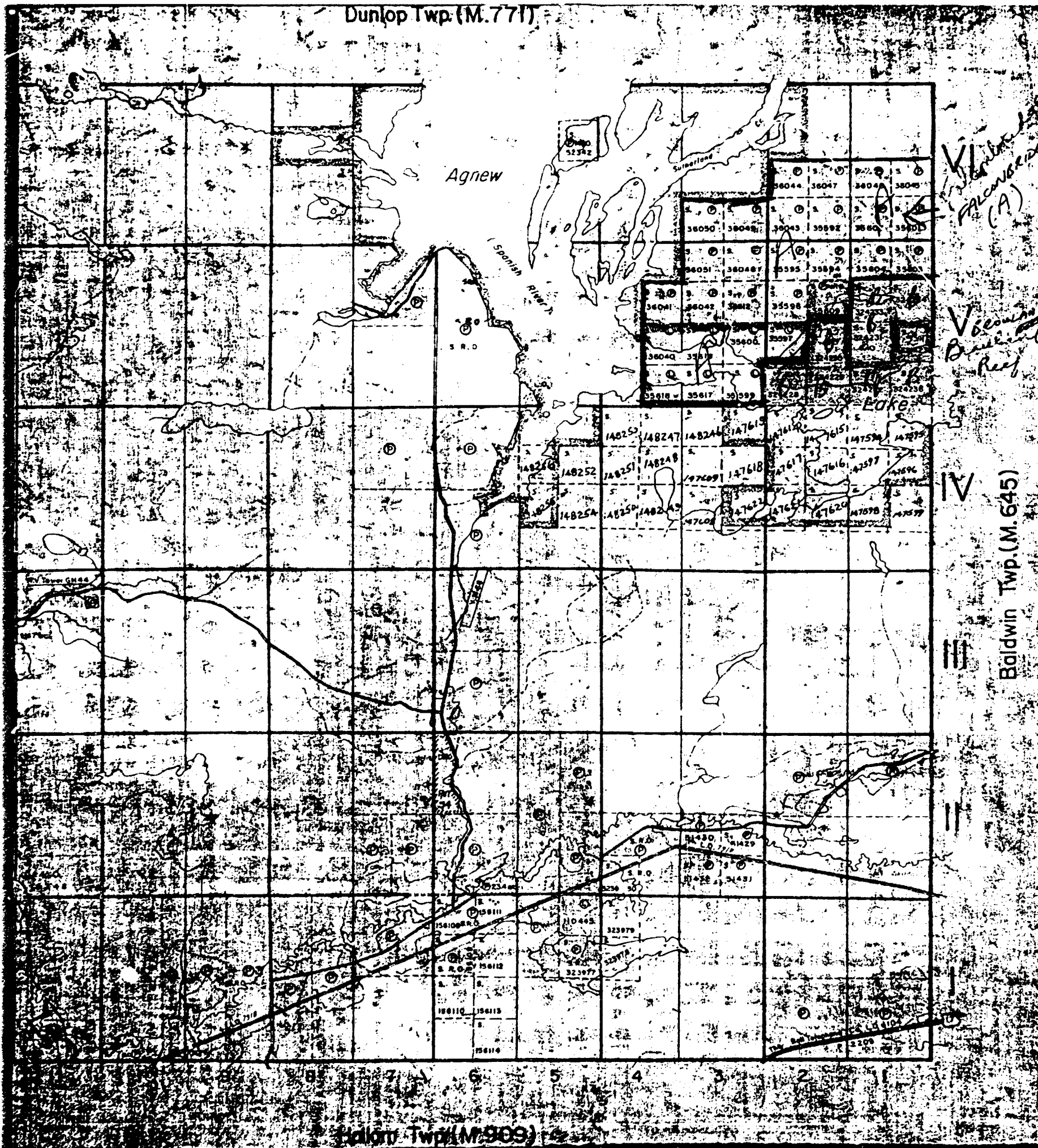
SIGNED J. Duncan Crane

A separate form is required for each type of survey

NOTE:

PLEASE SEE BALWIN-0038 FOR
ADDITIONAL INFORMATION RE.
BROULAN REEF MS LTD AND FILE 63.2211.

Dunlop Twp. (M. 771)



SHAKESPEARE

DISTRICT OF
SUDBURY

SUDBURY
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS

LEGEND

- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LICENSE OF OCCUPATION
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

NOTES

- 400' SURFACE RIGHTS RESERVATION AROUND ALL LAKES AND RIVERS.
- AREA SHOWN THUS: W.P.L. No. 69 MINING CLAIMS WITHIN THIS AREA ARE FOR MINING RIGHTS ONLY.
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MINING LANDS
DATE OF ISSUE
APR 4 1923
MINISTRY
OF NATURAL RESOURCES

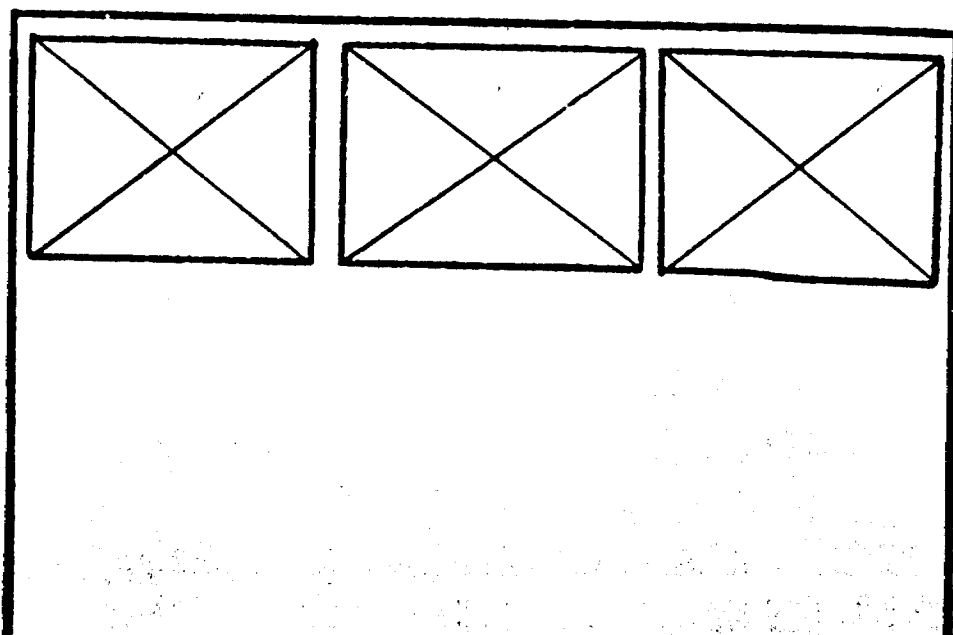
PLAN NO. M. 1104

ONTARIO

SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

SHAKESPEARE 0010-A1, #1-3

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



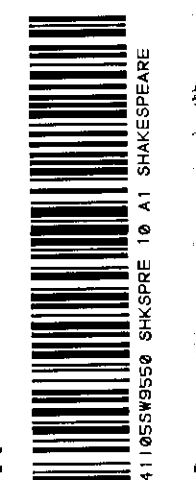
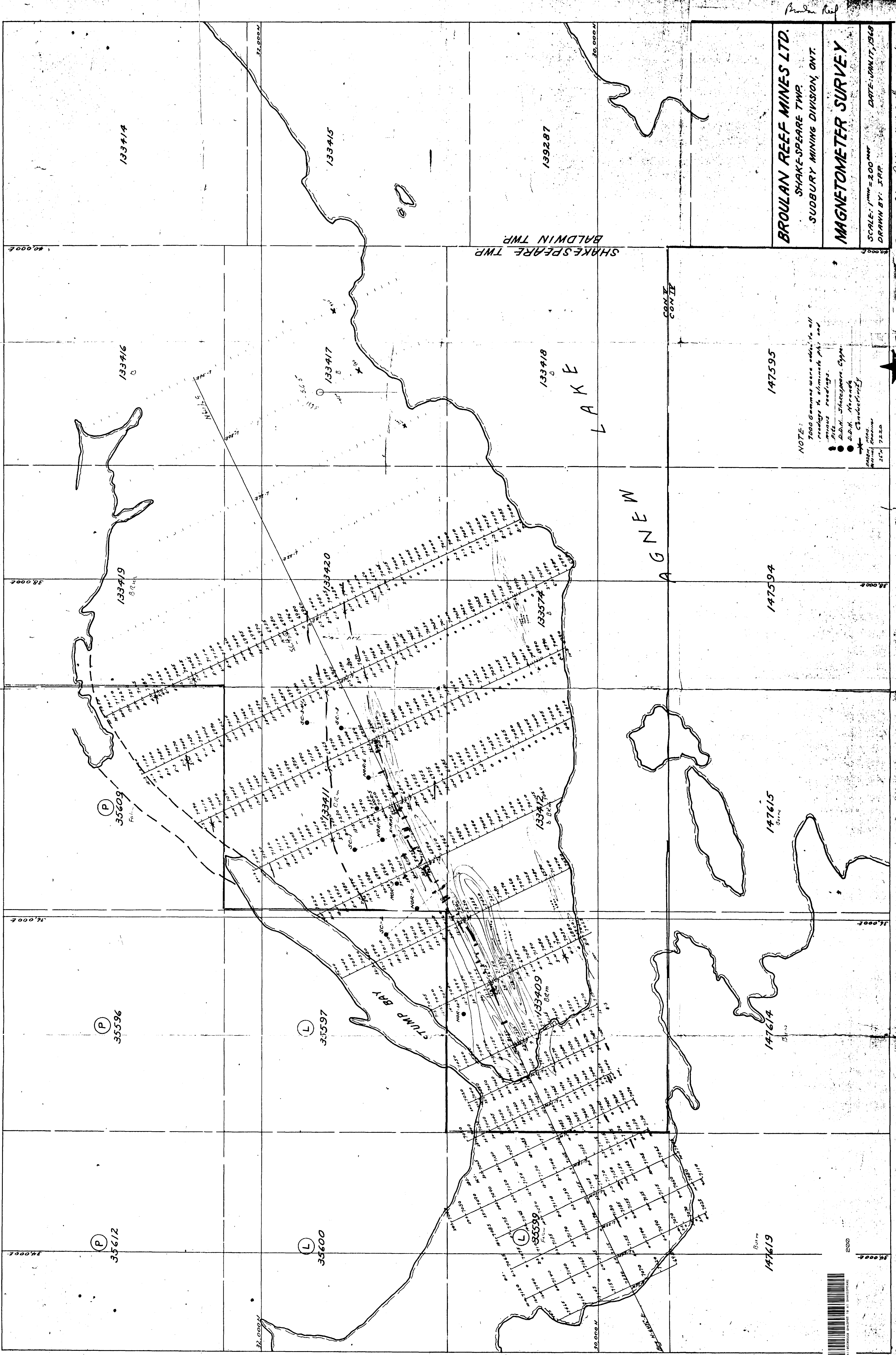
Proton Ref

BROULAN REEF MINES LTD.
SHAKESPEARE TWP.
SUDBURY MINING DIVISION, ONT.
MAGNETOMETER SURVEY

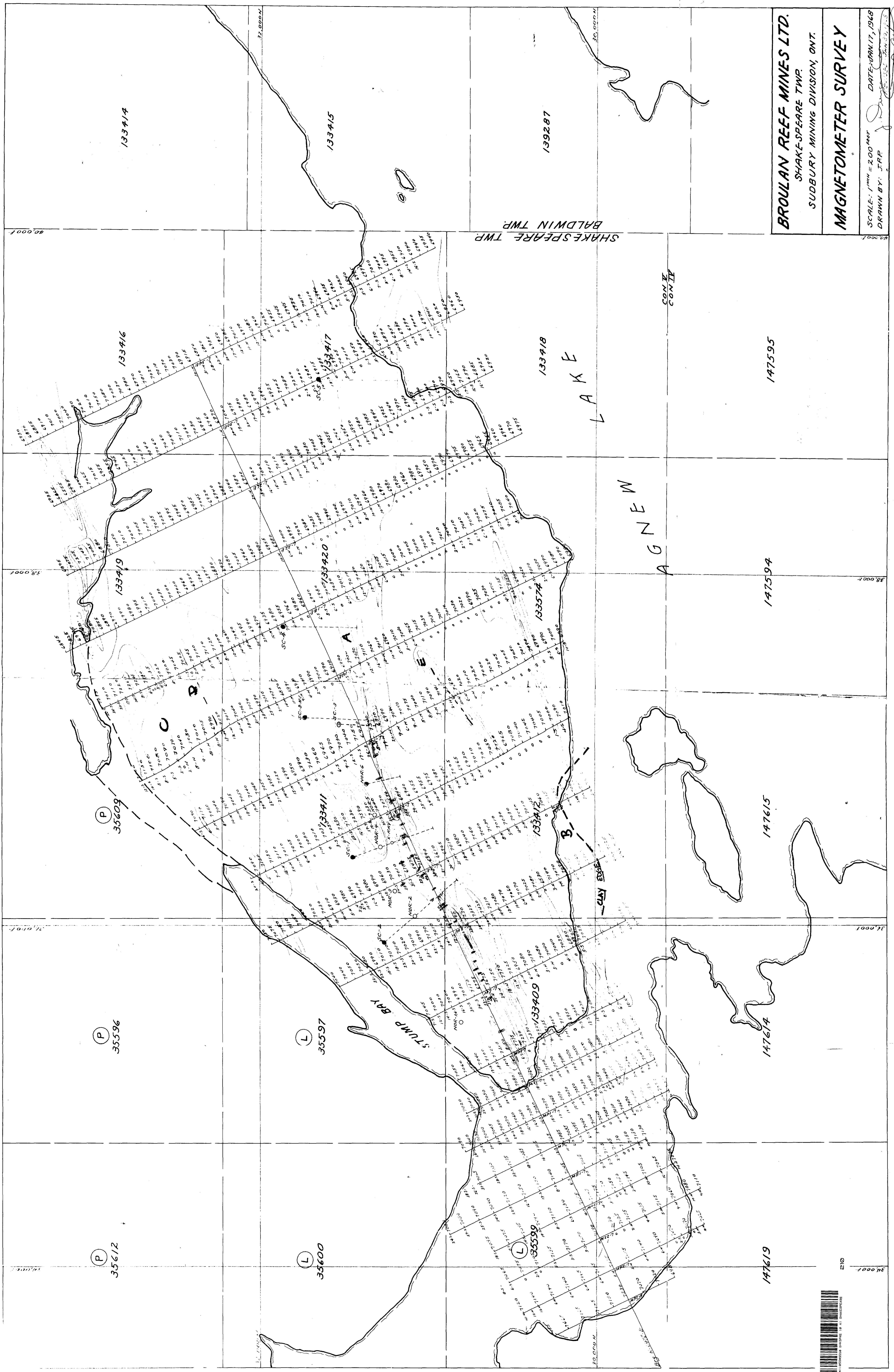
SCALE: 1" = 200 M
DRAWN BY: J.P.P.
DATE: JAN 17, 1968

SHAKESPEARE - 0010-A1-1 R.L. 1-1529

NOTE:
7000 Gauss were added to all readings to eliminate plus and minus readings.
Pits - Shakespear, Cym
D.D.H. - Shakespear
Conductivity
Magnetic contours
1:4 7220



200
147619



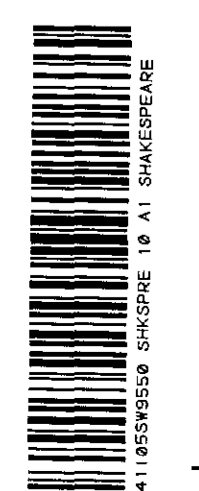
BROULAN REEF MINES LTD.
 SHAKE-SPEARE TWP.
 SUDBURY MINING DIVISION, ONT.
MAGNETOMETER SURVEY

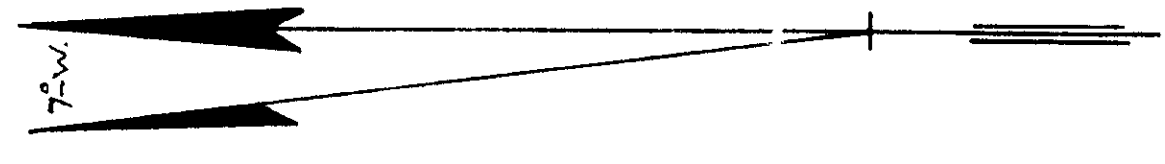
SCALE: 1" = 200' MET
 DRAWN BY: J.R.P.
 DATE: JAN. 17, 1968

SHAKE-SPEARE 0010-A1, #2

SHAKE-SPEARE TWP.
 BALDWIN TWP.

CON. II
 CON. II





SYMBOLS

- Contour Line
- Pocket Line
- RaDEM Reading
- Diamond Drill Hole
- Trench
- Claim Number
- Lake Shore

CONDUCTOR
INDICATED CONDUCTOR

BROULAN REEF MINES LTD.
SHAKESPEARE TWP.
SUDBURY MINING DIVISION, ONT.

RADEM SURVEY

SCALE: 1 inch = 200 feet
DRAWN BY: J.E.B. DATE: APR. 25, 1968

SHAKESPEARE - 0010-A1 #3

