



42B01NW0092 63.1546 IVANHOE

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KEEVIL MINING GROUP LTD.

PROJECT IVANHOE

CLAIMS S123503 -04 -05 -08 -09 -10 -11 -12 -13

IVANHOE TOWNSHIP

REPORT ON THE

GEOLOGY AND GEOPHYSICAL SURVEYS

May 7, 1965

*H. D. McLeod*

H. D. McLeod



## INTRODUCTION

Project Ivanhoe Group No. 17 consists of fourteen contiguous claims of which nine as follows were covered by the surveys:

S123503 -04 -05 -08 -09 -10 -11 -12 -13

The claims are located in the northeast part of Ivanhoe Township, Sudbury Mining Division, a distance of six miles south of Foleyet, Ontario. The claims were staked and recorded in May, 1964, the present recorded owner being R. Michael Butler, Suite 1000, 11 Adelaide St. W., Toronto, Ontario.

The work outlined in this report was done by Geophysical Engineering and Surveys Ltd. personnel under the direct supervision of the writer. The magnetometer survey was done by D. Maloney, Haileybury, Ontario. The electromagnetic survey was started by D. Maloney and completed by A. McClemens, 83 Algonquin Blvd. E., Timmins, Ontario. The geological mapping was done by A. Matulich, graduate geologist, 216 Way Avenue, Timmins, Ontario. The field work was completed during the period September 18, 1965 to January 14, 1965.

Access to the claims is by trail either from the Muskego River to the east or a gravel logging road to the west. The road joins the park access road running south along the east shore of Ivanhoe Lake.

## SURVEY METHODS

Line Cutting - A grid totalling approximately five miles of line was cut from a base line oriented N 70°W. Picket line spacing is 400 feet.

Magnetometer Survey - The magnetometer survey was done with a Sharpes flyxgate model M. F. 1 magnetometer having a constant of 20 gammas per scale division. Readings were taken at 100-foot intervals along

all of the picket lines with fill-in readings at 50-foot intervals in areas of strong magnetic relief. Diurnal readings at one to 1 1/2 hour intervals were taken on permanent base stations. The results were plotted, corrected and contoured as shown on the accompanying map.

Approximately 250 stations were read.

Electromagnetic Survey - The vertical loop electromagnetic survey was done with a Sharpes S. E. 200 unit fitted with a special amplifier and batteries in order to increase the range to 400 feet. A reconnaissance survey of all the lines was done first using the parallel line method. In this method readings are taken at 100-foot intervals along all picket lines with the transmitter and receiver set up at the same footage on adjacent lines. The transmitter-receiver spacing thus is 400 feet.

All indicated conductors were then checked and accurately located by the fixed transmitter method. In this method the transmitter is set up on a cross-over and readings are taken on the adjacent line or lines at 50-foot intervals. In this way the conductor is traced from line to line and located within 25 feet on every line.

Approximately 230 stations were read during the reconnaissance survey and 150 during the detail survey.

Geology - The entire grid area was carefully scouted for outcrops and any located were accurately tied in to the nearest picket line. At the same time the lake, some topography and all claim posts were located with respect to the picket lines. A separate geological map was not warranted since no outcrop was located. Instead the details of topography have been added to the magnetometer survey map.

## RESULTS OF SURVEYS

Magnetometer - A few small sharp high anomalies were outlined in the central part of the grid area. Two of these appear to form a trend striking almost parallel to the base line, however this is not definite.

Magnetic relief ranges up to 1,750 gammas above background.

Electromagnetic - Two long parallel conductors lying 900 feet apart were located and traced for distances of 2,200 and 3,200 feet respectively. Both extend beyond the grid system to the east and one extends to the west. Both anomalies are good features with sections of strong conductivity. Magnetic correlation is possible in places but not certain since the conductors lie almost parallel to the lines. The profiles suggest deep overburden.

Geology - No outcrops were located within the grid area. Outcrops some distance to the south, west and north of the claims suggest that the area is underlain by basic volcanics.

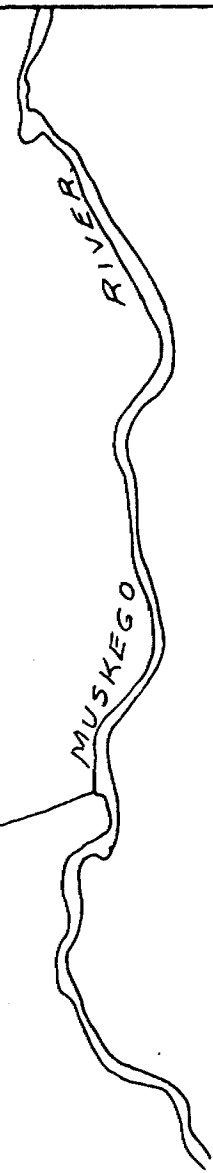
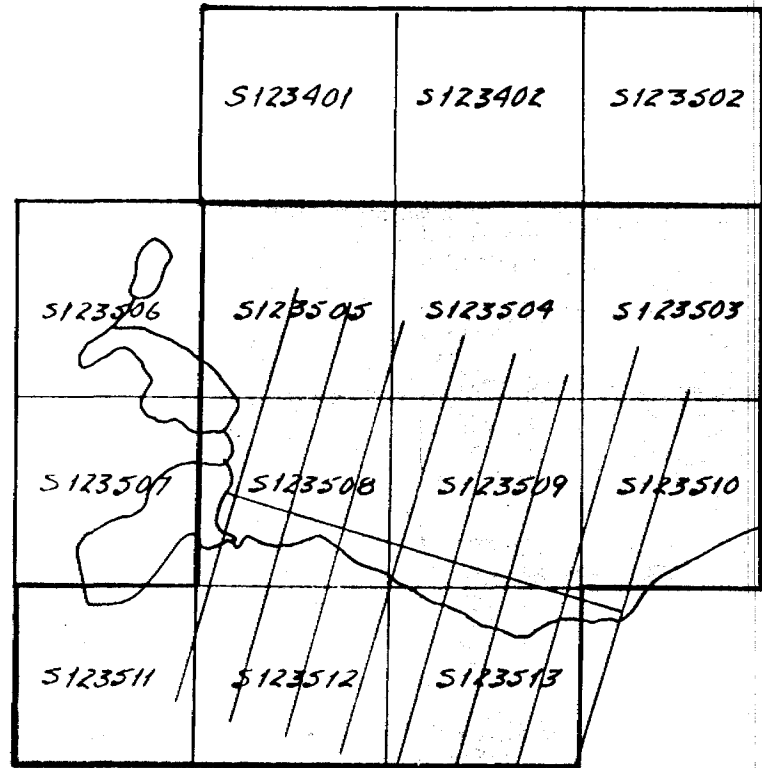
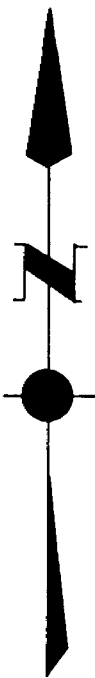
Strike of the formations as indicated by the V. E. M. conductors appears to be N 40<sup>o</sup> E to N 60<sup>o</sup> E.

## CONCLUSIONS AND RECOMMENDATIONS

A vertical loop electromagnetic survey has outlined two strong conductors. A magnetometer survey has located anomalies but none that definitely correlate with the conductors.

The picket line grid is poorly oriented with respect to the strike of formations as indicated by the conductors.

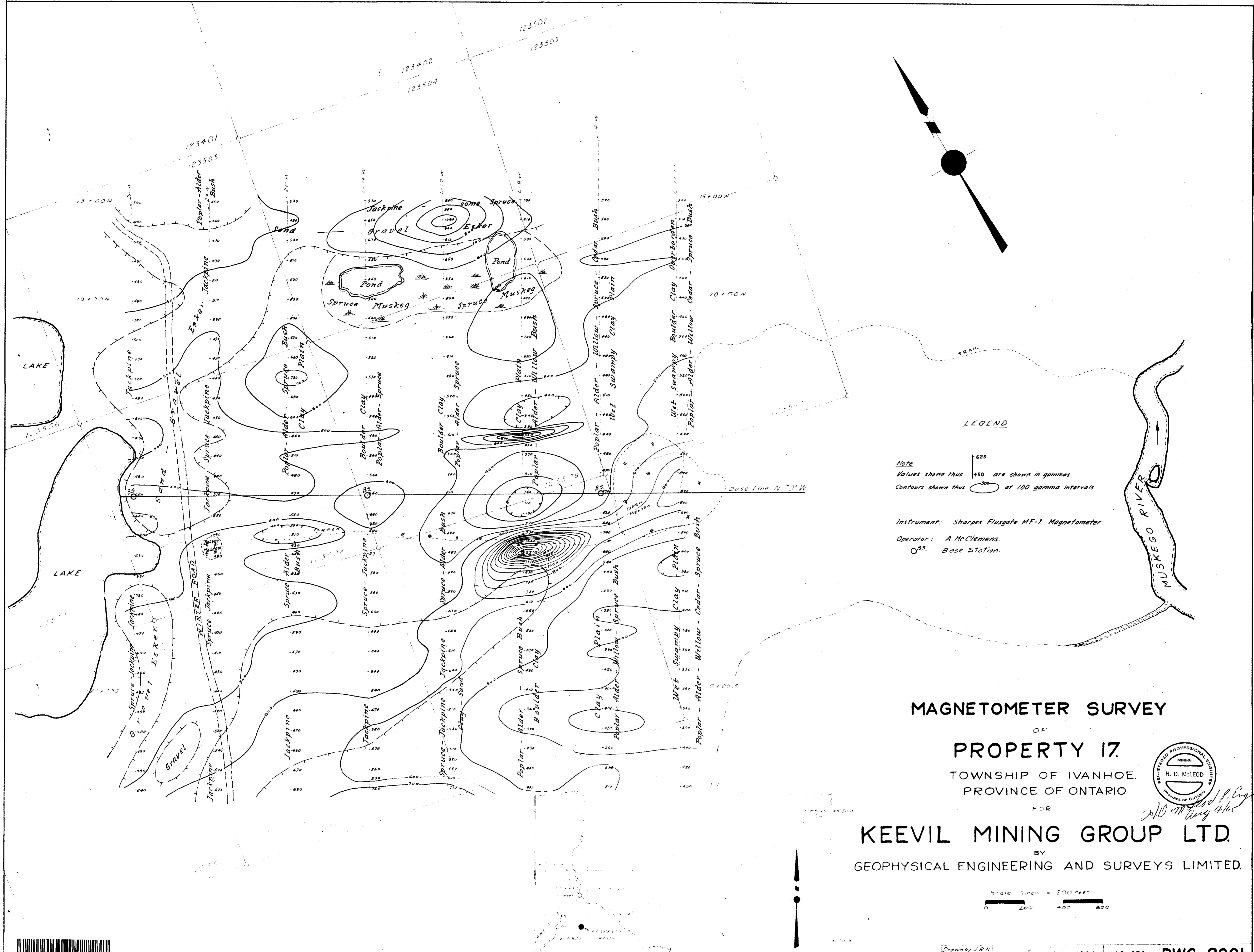
Additional magnetometer and possibly electromagnetic surveys from a base line oriented parallel to the conductors is recommended. Following this diamond drilling of the conductors is recommended.



8M.  
IVANHOE TOWNSHIP  
KEITH TOWNSHIP  
7M.

PROJECT IVANHOE  
GROUP 17.

SCALE: 1" = 1/4 MILES MAY, 1965.



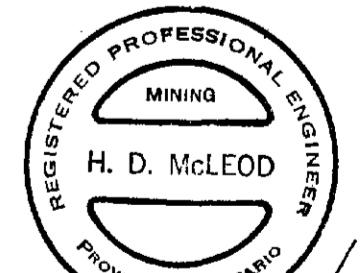
**LEGEND**

Note:  
 Values shown thus 450 are shown in gammas.  
 Contours shown thus 500 at 100 gamma intervals

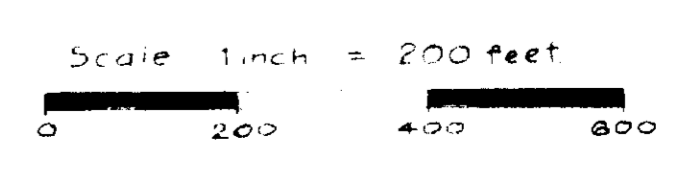
Instrument: Sharpes Fluxgate MF-1 Magnetometer  
 Operator: A. McClemons  
 BS Base Station

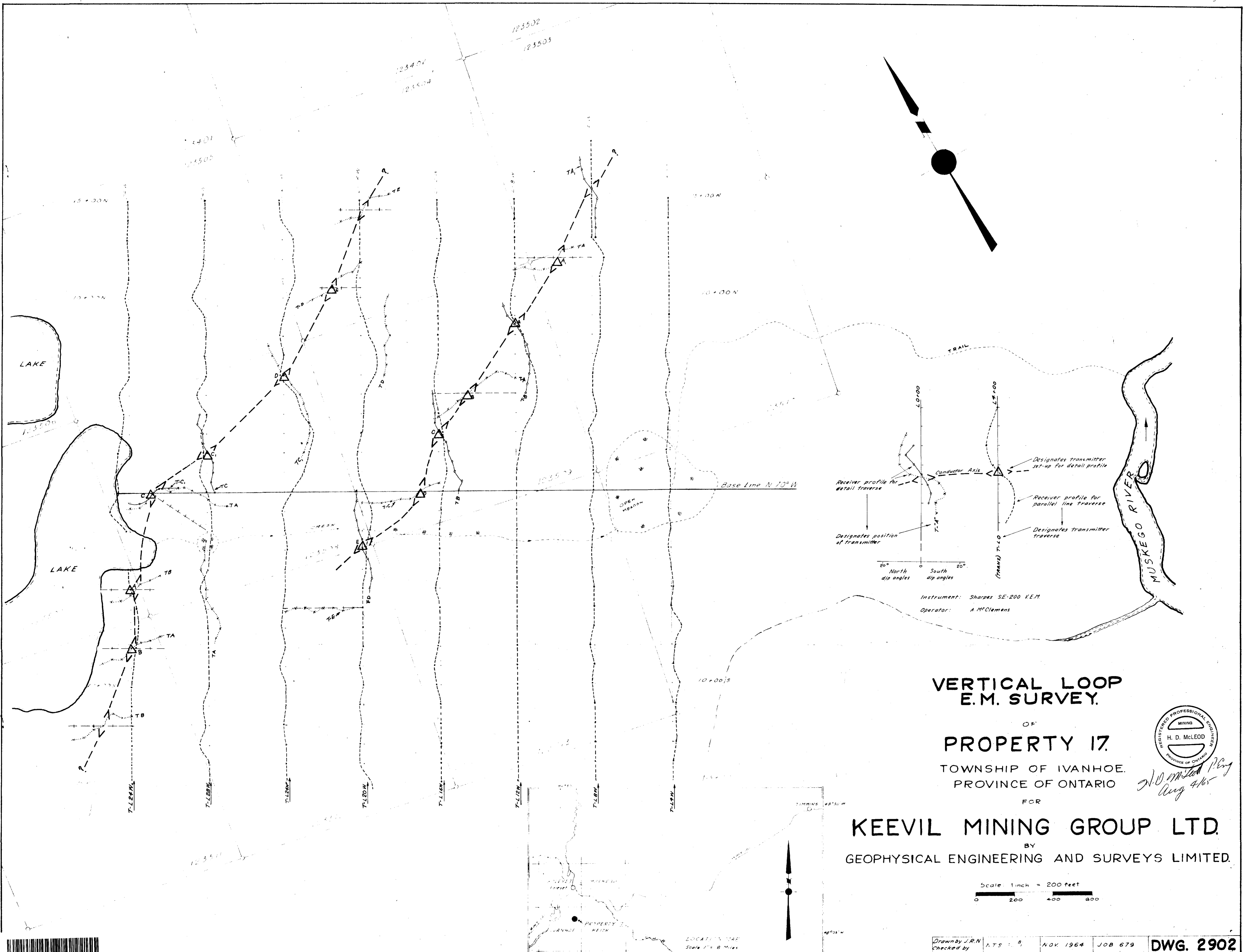
**MAGNETOMETER SURVEY**

OF  
**PROPERTY 17.**  
 TOWNSHIP OF IVANHOE,  
 PROVINCE OF ONTARIO



FOR  
**KEEVIL MINING GROUP LTD.**  
 BY  
 GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED.





**VERTICAL LOOP  
E.M. SURVEY.**

OF  
**PROPERTY 17.**  
TOWNSHIP OF IVANHOE.  
PROVINCE OF ONTARIO



*H.D. McLeod P. Eng.  
Aug 4/65*

FOR  
**KEEVIL MINING GROUP LTD.**  
BY  
**GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED.**

Scale: 1 inch = 200 feet  
0 200 400 800

Drawn by J.R.N. Checked by A.T.S. : B. NOV. 1964 JOB 679 **DWG. 2902**

