



010

KEEVIL MINING GROUP LTD. *Gr 14*

PROJECT IVANHOE

CLAIMS S123407 -08 -09 -10 -11, S123414 -15 -16 -17
-18, S123546, S123550, S123551 -52, S123380 -81,
Keith, Muskego and Ivanhoe Townships

REPORT ON THE
GEOLOGY AND GEOPHYSICAL SURVEYS

March 22, 1965

H. D. McLeod P. Eng.

H. D. McLeod



INTRODUCTION

Project Ivanhoe Group No. 14 consists of thirty seven contiguous claims of which sixteen as follows were covered by the surveys:

S123407 -08 -09 -10 -11 -14 -15 -16 - 17 - 18

S123546 -50 -51 -52

S123380 -81

The claims are located about the common corner of Keith, Muskego, Foleyet and Ivanhoe Townships, Sudbury Mining Division, a distance of three miles approximately to the southeast of Foleyet, Ontario. The recorded owner of the claims is R. Michael Butler, Suite 1000, 11 Adelaide St. W., Toronto, Ontario. The claims were staked and recorded in May, 1965.

The work outlined in this report, with the exception of the horizontal loop electromagnetic survey was done by Geophysical Engineering & Surveys Ltd. personnel under the direct supervision of the writer. The H. E. M. survey was done by Tri-J Mineral Surveys Ltd., South Porcupine, Ontario. These results were turned over to the Company in the form of notes only and plotting was done by G. E. & S. L. personnel. The V. E. M. and magnetometer surveys were done by D. Maloney. The geology was done by A. Matulich and M. D. Kierans, graduate geologists. The field work was completed during the period August 14 to Oct 30, 1964.

Access to the claims group is by float aircraft onto Muskego Lake which crosses the western portion of the group.

SURVEY METHODS

Line Cutting - A grid totalling approximately 12 miles of line was cut from two base lines. The west base line extends 4,000 feet N 82°W from Muskego Lake and the east base line 8,800 feet S 60°E from the east shore of the lake. Lines were cut at 400-foot

intervals a distance of 1,500 feet to the south of the west base line and 1,000 feet to the north and to the south of the east base line.

Magnetometer Survey - The magnetometer survey was done with a Sharpes fluxgate model M. F. 1 magnetometer having a constant of 20 gammas per scale division. Readings were taken at 100-foot intervals along all ~~of~~ 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 corrected, plotted and contoured as shown on the accompanying map.

Approximately 550 stations were read.

Electromagnetic Survey - The horizontal loop electromagnetic survey was done with a Ronka 300-foot cable instrument. Readings were taken at 100-foot intervals along all picket lines with fill-in readings at 50-foot intervals in anomalous areas. The results were plotted and contoured as shown on the accompanying map.

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. The survey was done over the H. E. M. conductors only using the fixed transmitter method. In this method the transmitter is set up on a known cross over and readings taken with the receiver at 50-foot intervals on the adjacent line or lines. The conductor is thus traced from line to line and located within 25 feet on every line.

Approximately 500 readings were taken during the H. E. M. survey and 372 during the V. E. M. 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. So little outcrop was located that a separate map was not warranted. The data has been plotted on the magnetometer survey map.

RESULTS OF SURVEYS

Magnetometer - One sharp linear high-low anomalous area was located in the eastern part of the area. Magnetic relief here ranges from 2,650 gammas below background to 2,000 gammas above background. The remainder of the area contains scattered broad weak magnetic anomalies ranging to 400 gammas above background.

Electromagnetic - The H. E. M. survey outlined a number of short lensy conductors, the strongest coinciding with the strong magnetic anomaly. The remainder are relatively poor conductors or, if good, are very small in size.

The V. E. M. survey extended the main H. E. M. indications into two long conductors with relatively short sections of excellent conductivity. In general, however, the indications are weak. A third conductor was located crossing Muskego Lake but, again, is a weak indication.

Geology - One outcrop only was located within the survey area, this in the east section. It is strongly sheared and carbonated andesite, the shearing striking east - west and dipping 85° to the north.

Outcrop to the east of the area shows a series of andesite flows with narrow horizons of sediments and intruded by porphyry dykes to be striking in this direction. These rocks could possibly underlie much of this section.

The conductors with coincident magnetics probably indicate graphitic sediments with pyrrhotite and possibly magnetite mineralization. Strike of formations as indicated by the

geophysics is east - west, in the east section changing to N 60°W in the central part and then to N 75°W in the west part of the area. Dips are probably steep to the north.

CONCLUSIONS & RECOMMENDATIONS

Magnetometer and electromagnetic surveys have outlined strong conductors with magnetic correlation. Geological mapping failed to explain the geophysical results.

A drilling program consisting of a minimum of one hole into each of the main conductors is recommended. Further drilling would depend on the results of the initial program.

THE MINING ACT

Assessment Work Credits

Name: R. Michael Butler

Townships: Keith, Muskego and Ivanhoe

Geological - 12 days credit for each of mining claims

S 123407 to 123411 inclusive
123414 to 123418 inclusive
123546
123550 to 123552 inclusive
123380, 123381

Geophysical - 9 days magnetometer credit for each of mining claims

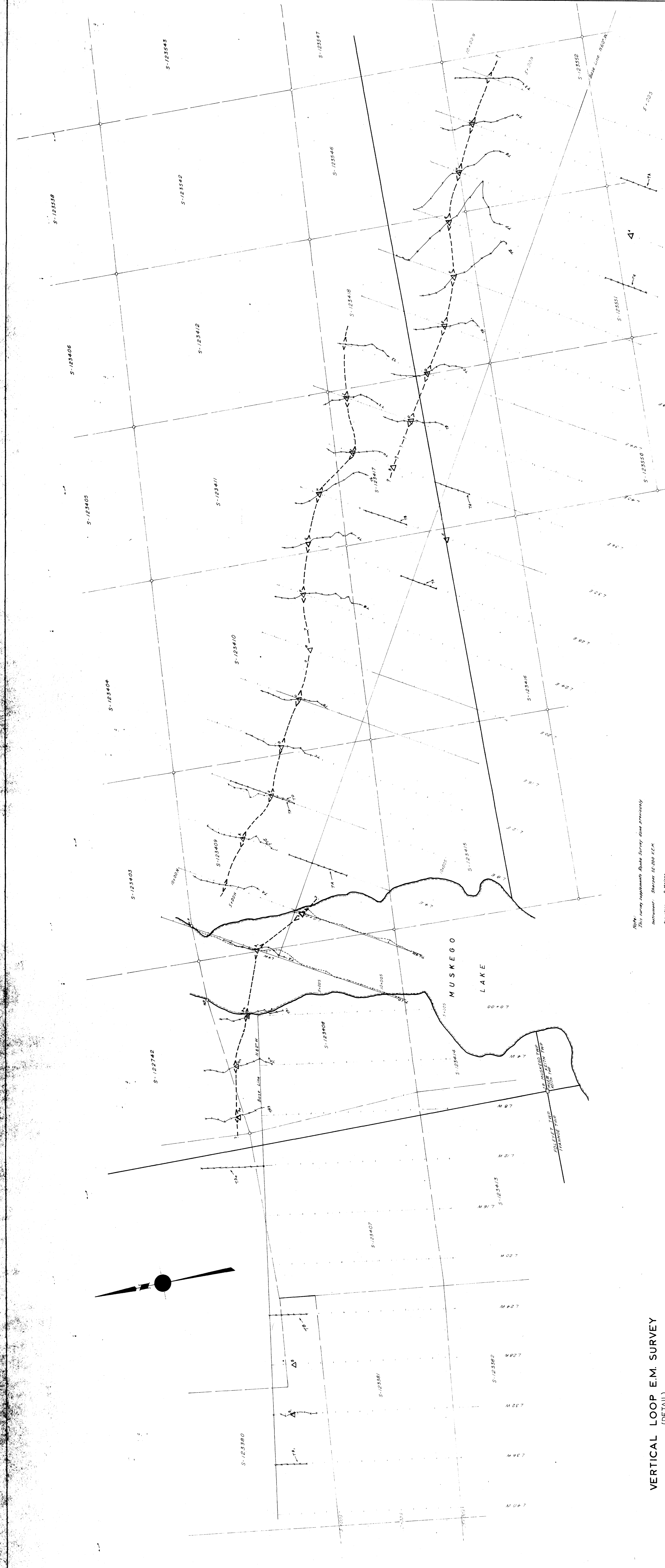
S 123407 to 123411 inclusive
123414 to 123418 inclusive
123546
123550 to 123552 inclusive
123380, 123381

- 10 days electromagnetic credit for each of mining claims

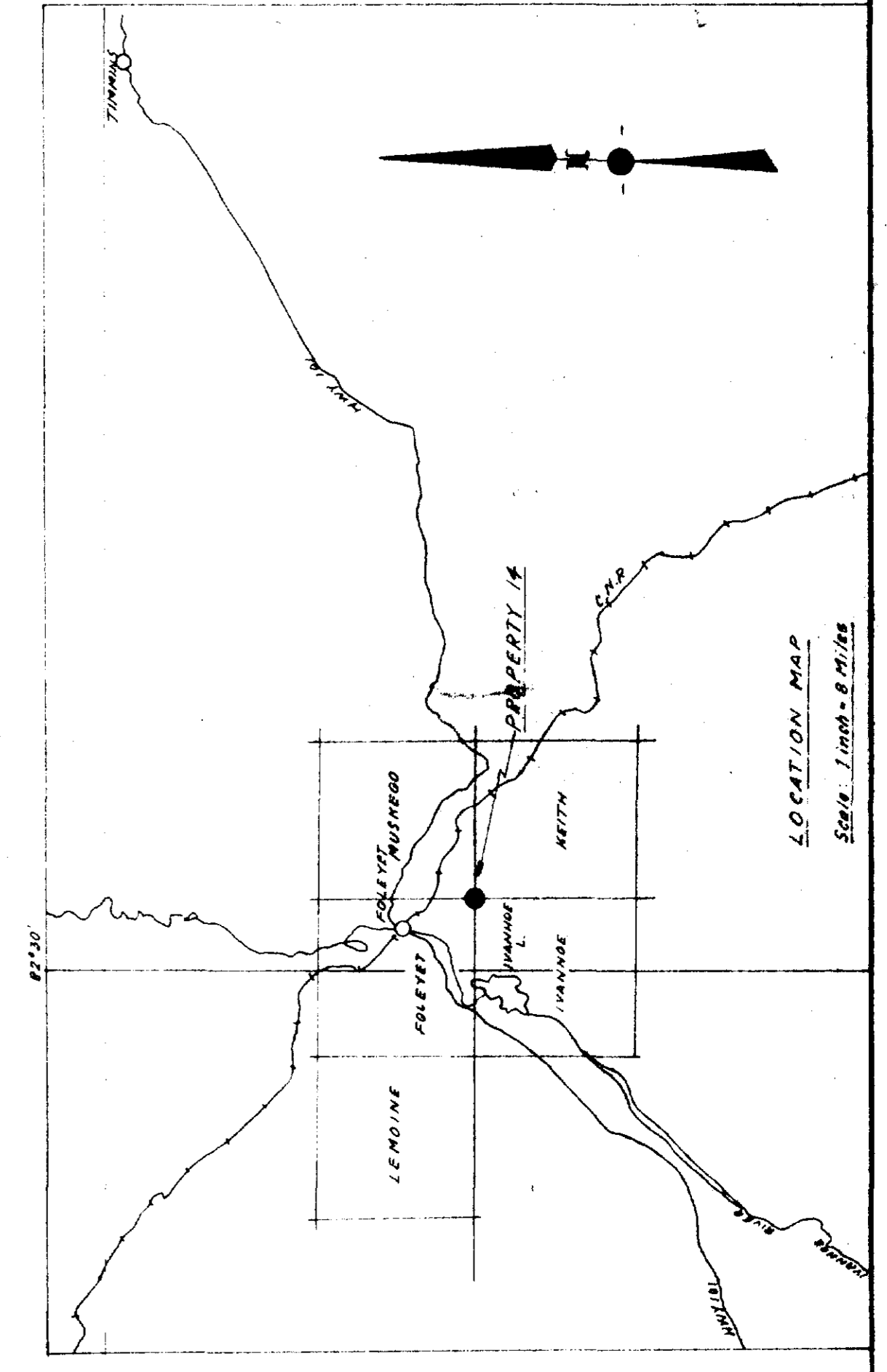
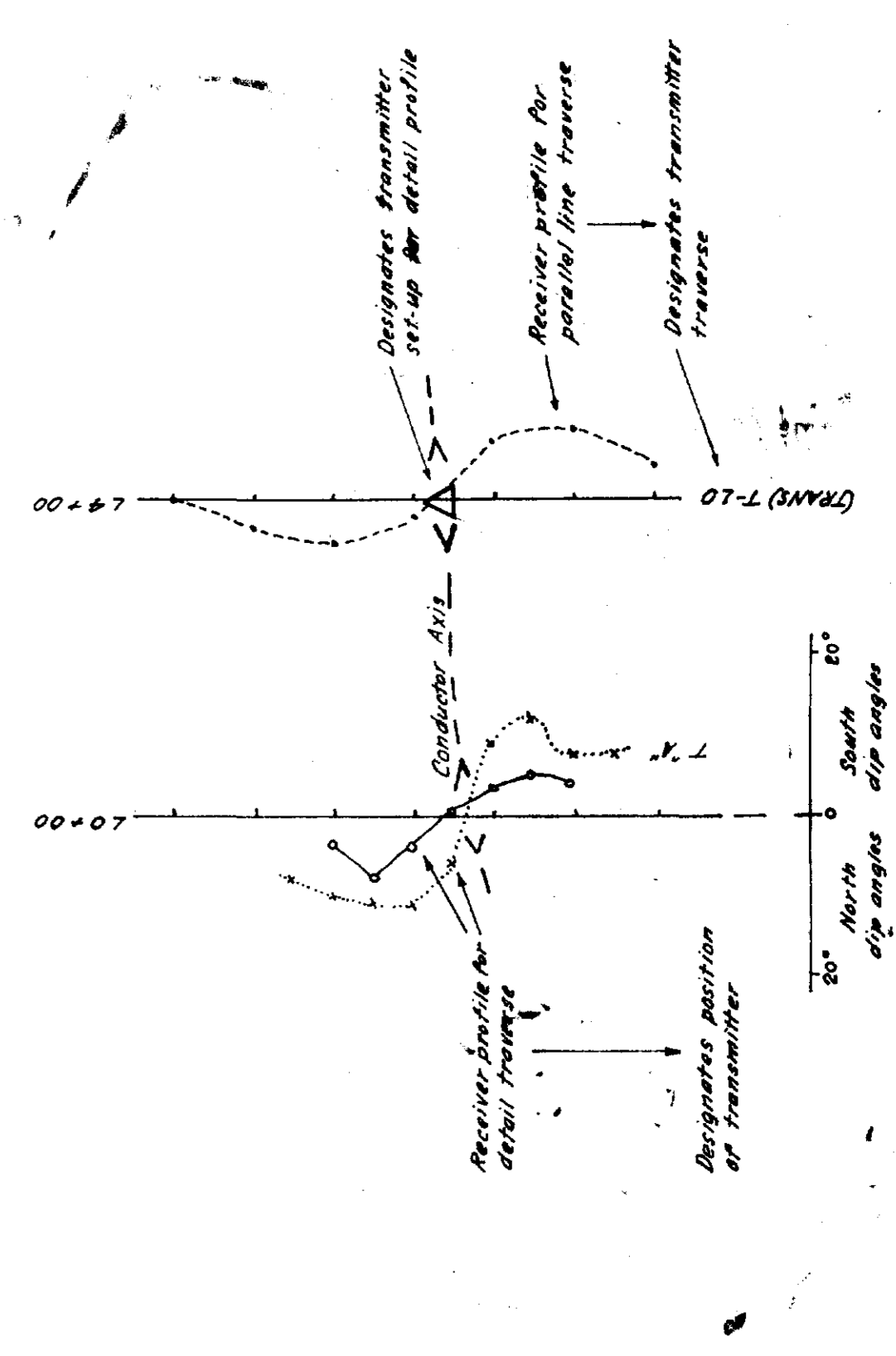
S 123407, 123408, 123414, 123415,
123550, 123381

- 23 days electromagnetic credit for each of mining claims

S 123409 to 123411 inclusive
123416 to 123418 inclusive
123546
123551, 123552,
123380



Note: This survey supplements Bath Survey done previously.
 Instrument: Sargent SE-100 K.C.K.
 Operator: D. Nelson

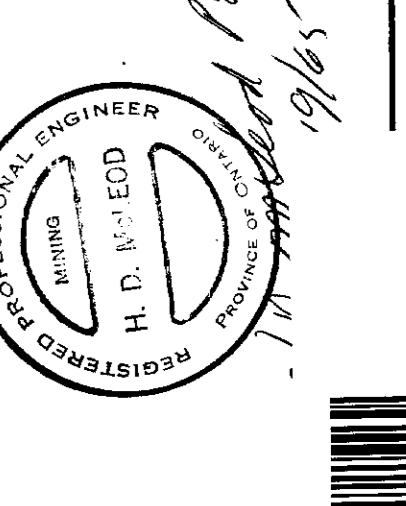


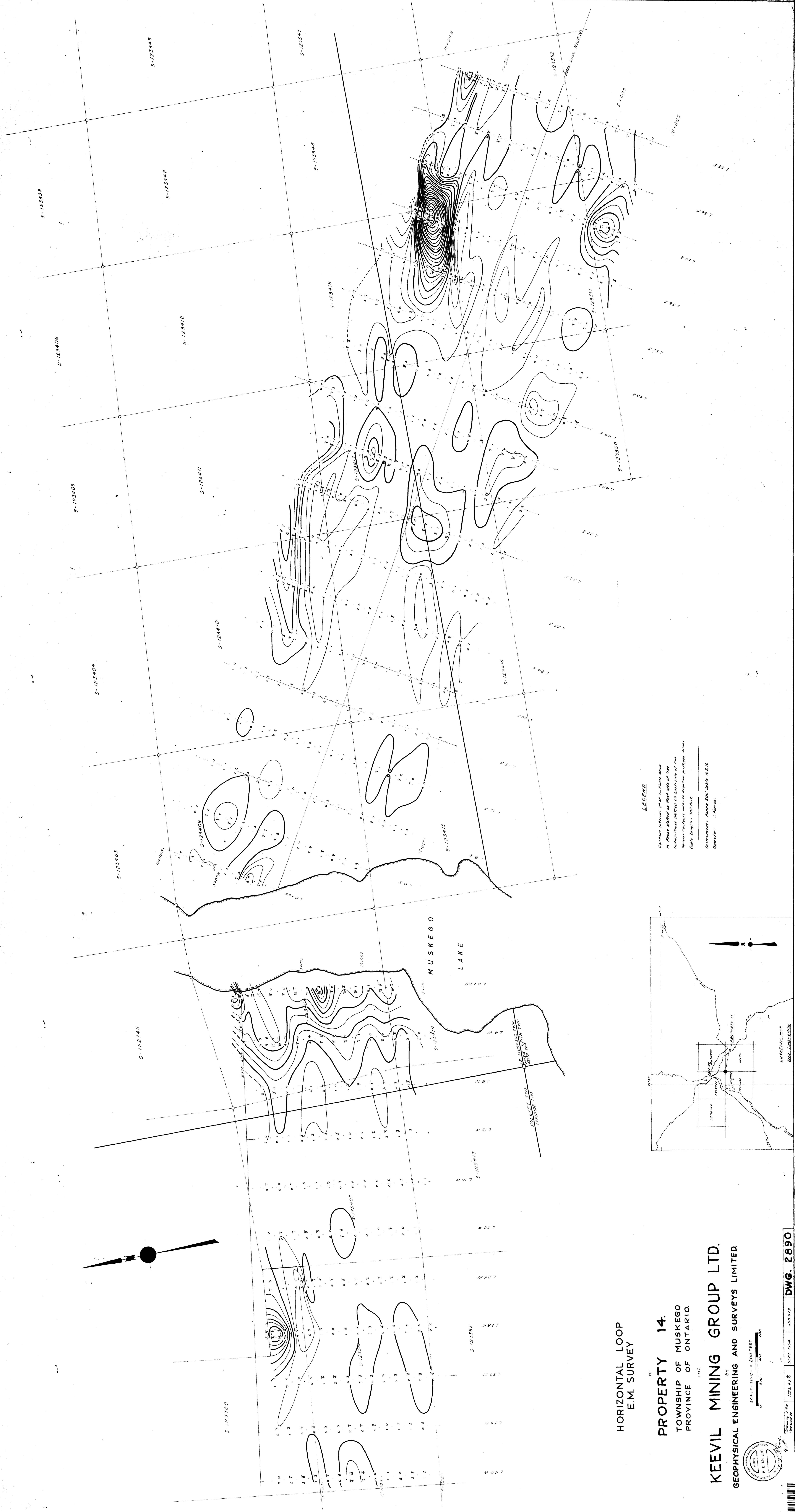
VERTICAL LOOP E.M. SURVEY
 (DETAIL)

PROPERTY 14.
 TOWNSHIP OF MUSKEGO
 PROVINCE OF ONTARIO
 FOR
 KEEVIL MINING GROUP LTD.
 BY
 GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 200 FEET

DATE: 1964
 SHEET: 1064
 JOB: 873
 DWG. 2889



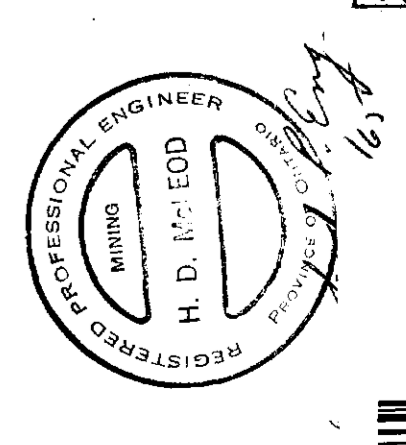


HORIZONTAL LOOP
E.M. SURVEY

PROPERTY 14.
TOWNSHIP OF MUSKEGO
PROVINCE OF ONTARIO

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

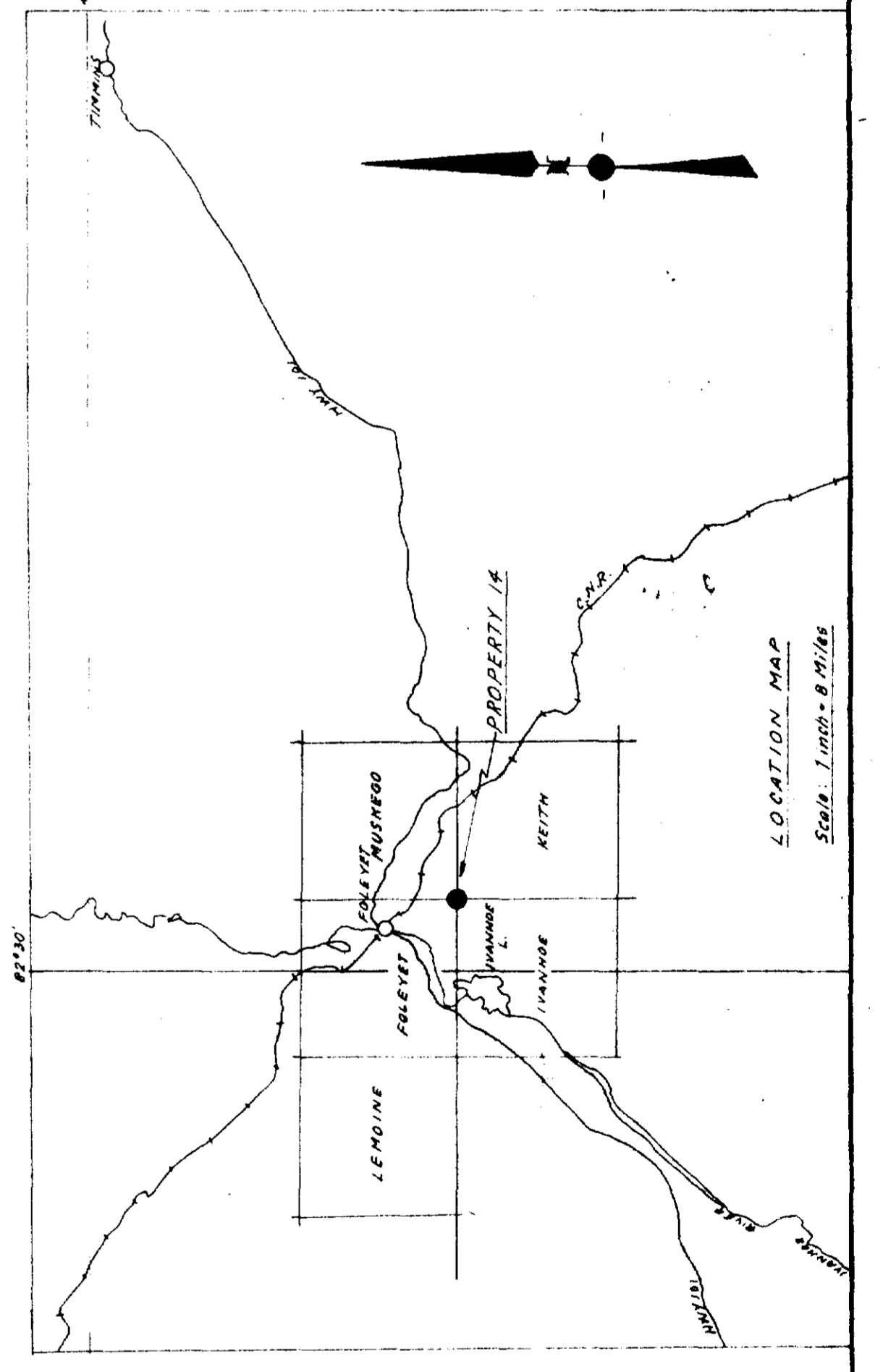
SCALE 1 INCH = 200 FEET

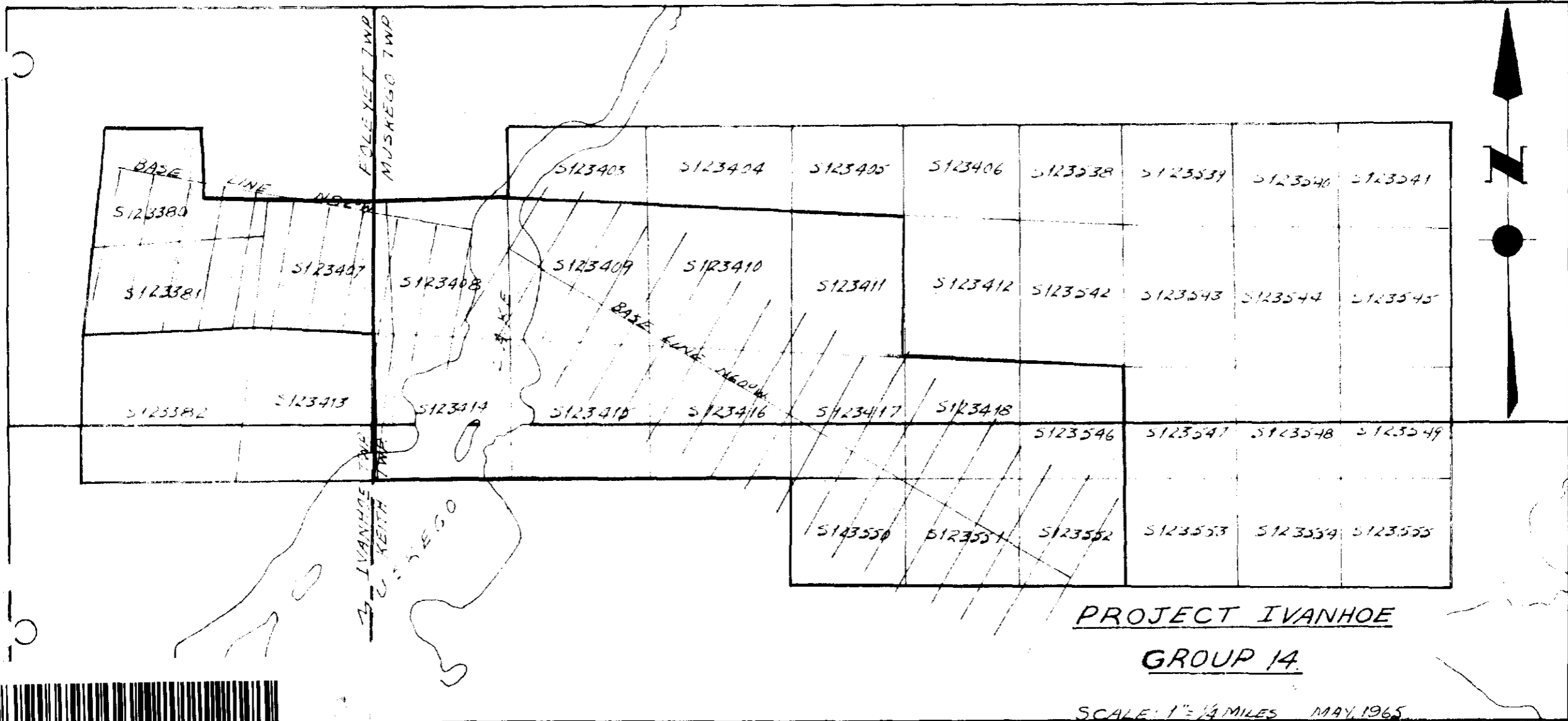


PROPERTY 14, N75 42 E, SEP. 1964 JOB 679 DWG. 2890

LEGEND

Contour Interval 2' at 100 Feet Rise
In Places Shaded on West-side of Line
Contour Lines Shaded on East-side of Line
Minor Contours indicate Negative in Place Values
Contour Length - 500 Feet
Instrument: Auto 200 Cont. H.E.M.
Operator: J. Harris.





PROJECT IVANHOE
GROUP 14.

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



42B01NW0025 63.1527 MUSKEGO