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KEEVIL MINING GROUP LTD.

PROJECT IVANHOE

Claims S121329-30-33-34-35-36-37-38-39-41-42,

BELFORD TOWNSHIP, ONTARIO

REPORT ON THE

ELECTROMAGNETIC SURVEY

REPORT No. 55P

N. T. S. 42 B/10

February 11, 1966

H. D. McLeod P. Eng.

H. D. McLeod, P. Eng.



INTRODUCTION

Keevil Mining Group Limited Project Ivanhoe Group no. 1 consists of fourteen contiguous claims of which eleven - numbered S121329-30, S121333-34-35-36-37-38-39 and S121341-42 - were covered by the electromagnetic survey. The claims were staked and recorded in March 1964 and are presently registered in the name of R. M. Butler, Suite 1000, 11 Adelaide St. W., Toronto, Ontario.

The electromagnetic survey was done in two stages: a preliminary survey during the period October 7-12, 1964 and a detailed survey during the period April 3-17, 1965. The work was done by Geophysical Engineering and Surveys Limited personnel under the direct supervision of the writer. The operator for both surveys was A. MacDonnell, 83 Algonquin Blvd. E., Timmins, Ontario.

LOCATION & ACCESS

The claims are located in the east central part of Belford Township, Sudbury Mining division, a distance of 46 miles to the northwest of Timmins, Ontario. Approximate co-ordinates are $48^{\circ} 39'$ north, $82^{\circ} 20'$ west.

SURVEY METHODS

Line Cutting

Lines were cut in both directions at 400-foot intervals from a base line oriented $N 60^{\circ} E$. Approximately 9 miles of line was cut.

Electromagnetic Survey

The preliminary vertical loop electromagnetic survey was done with a fixed loop instrument. It became apparent that the resolution of the conductors was poor so the survey was abandoned.

The second vertical loop survey was done with a Sharpe S. E. 200 V. E. M. unit fitted with an amplifier and special batteries in order

to increase the range to 600 feet. A reconnaissance survey of the lines was done using the parallel line method. In this method readings are taken at 100-foot intervals along every line with the transmitter located at the same station on an adjacent line. The transmitter-receiver interval thus is the line spacing or, in this case, 400 feet.

All crossovers and indicated crossovers are then checked by the detail or fixed transmitter method. In this method the transmitter is set up on an indicated crossover and readings taken at 50-foot intervals along a portion of the adjacent line or lines. In this way the conductors are traced from line to line and accurately located on every line.

Approximately 1190 readings were taken.

RESULTS OF THE SURVEY

The electromagnetic survey has outlined six conductors of varying length in various parts of the survey area. All are relatively weak features with poor to fair conductivity and no magnetic correlation in most cases. The conductor in claims S121333 and S121334 has possible magnetic correlation.

GEOLOGY

No outcrops are present on or adjacent to the claims. Two holes drilled in the fall of 1964 intersected slates and a talc-carbonate rock in one case and andesite and rhyolite flows in the other case.

Strike of formations would appear to be parallel to the conductors or N 70° W to N 80° W with local variations.

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

Keevil Mining Group Limited Project Ivanhoe group no. 1 was tested by vertical loop electromagnetic surveys.

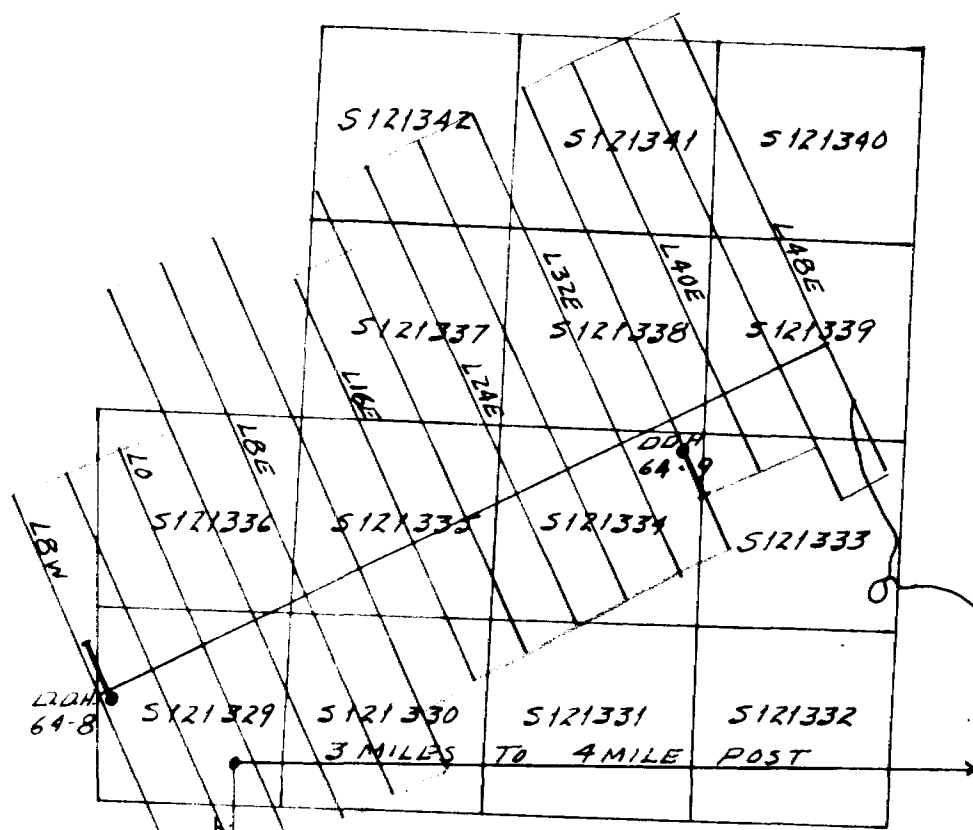
Six conductors with poor magnetic correlation were outlined.

Diamond drilling in September of 1964 on the basis of the preliminary electromagnetic survey failed to adequately test the anomalies outlined by the subsequent detailed survey.

Four drill holes to test the more highly conductive sections of the anomalies are recommended.

ACCOMPANYING MAPS

(1.) Drawing 2921 - "Vertical Loop E. M. Survey".



BELFORD
WATSON TWP.

PROJECT IVANHOE
PROPERTY 1.

SCALE: 1" = 1/4 MILES. JAN. 1965

INTRODUCTION

Project Ivanhoe, Group #1 consists of fourteen contiguous claims numbers S121329 to S121342 inclusive, located in the south-east part of ~~the~~ Belford Township, fifty miles approximately north west of Timmins, Ontario. The claims were staked in February, 1964 and recorded in March, 1964.

Exploration work was carried out on during the period June 2 to October 6, 1964. Work consisted of a 9.2 mile grid of picket lines, a magnetometer survey, a vertical loop electromagnetic survey of part of the grid and two diamond drill holes totalling 697 feet. This report will deal with the magnetometer survey only.

The work was done by Geophysical Engineering and Surveys Ltd. personnel under the direct supervision of the writer.

It will be noted that portions of the picket line system and survey lie outside the claims group. Allowance has been made for this and no assessment credits claimed for that work.

Access to the claims group is by helicopter from Timmins, More difficult access is by float-type aircraft to Alpha Lake some three miles to the south, thence by portage to the Ivanhoe River, by canoe some three miles down the Ivanhoe River to a point one mile to the south of the claims.

MAGNETOMETER SURVEY

The magnetometer survey was made over the entire grid. Approximately 475 stations were read at 100 foot intervals on all picket lines. Diurnal readings at one hour intervals were taken at permanent base stations. All readings were corrected and plotted as shown on the accompanying map.

The survey was done with a Sharpes Fluxgate Model M. F. 1 magnetometer.

INTERPRETATION

Magnetic relief is low, the north one-half of the area having no significant anomalies. One trend to 600 gammas above background strikes S 80^o W across claims S121339, S121333 and S121334. A second anomaly with a maximum of 1200 gammas relief lies on claim S121329 and apparently has the same relief.

No outcrop is present on or near the claims to aid in interpretation. Hole 64-8 intersected slates and a talc-carbonate rock, probably an altered basic intrusive. This hole was drilled to the north of the magnetic anomaly in claim S121329.

Hole 64-9 intersected rhyolites with no apparent explanation for the magnetic anomaly it crossed.

SUDBURY ONT
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MAR 4 1966
CANADA
20 CENTS

Box 4, Sudbury



ONTARIO DEPARTMENT of MINES

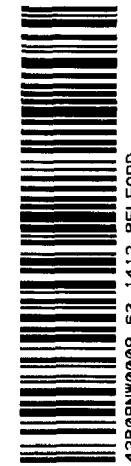
RETURN AT POINT OF MAILING

Mr. D.P. Douglass,
Deputy Minister,
Ontario Department of Mines,
Parliament Buildings,
TORONTO, Ontario.

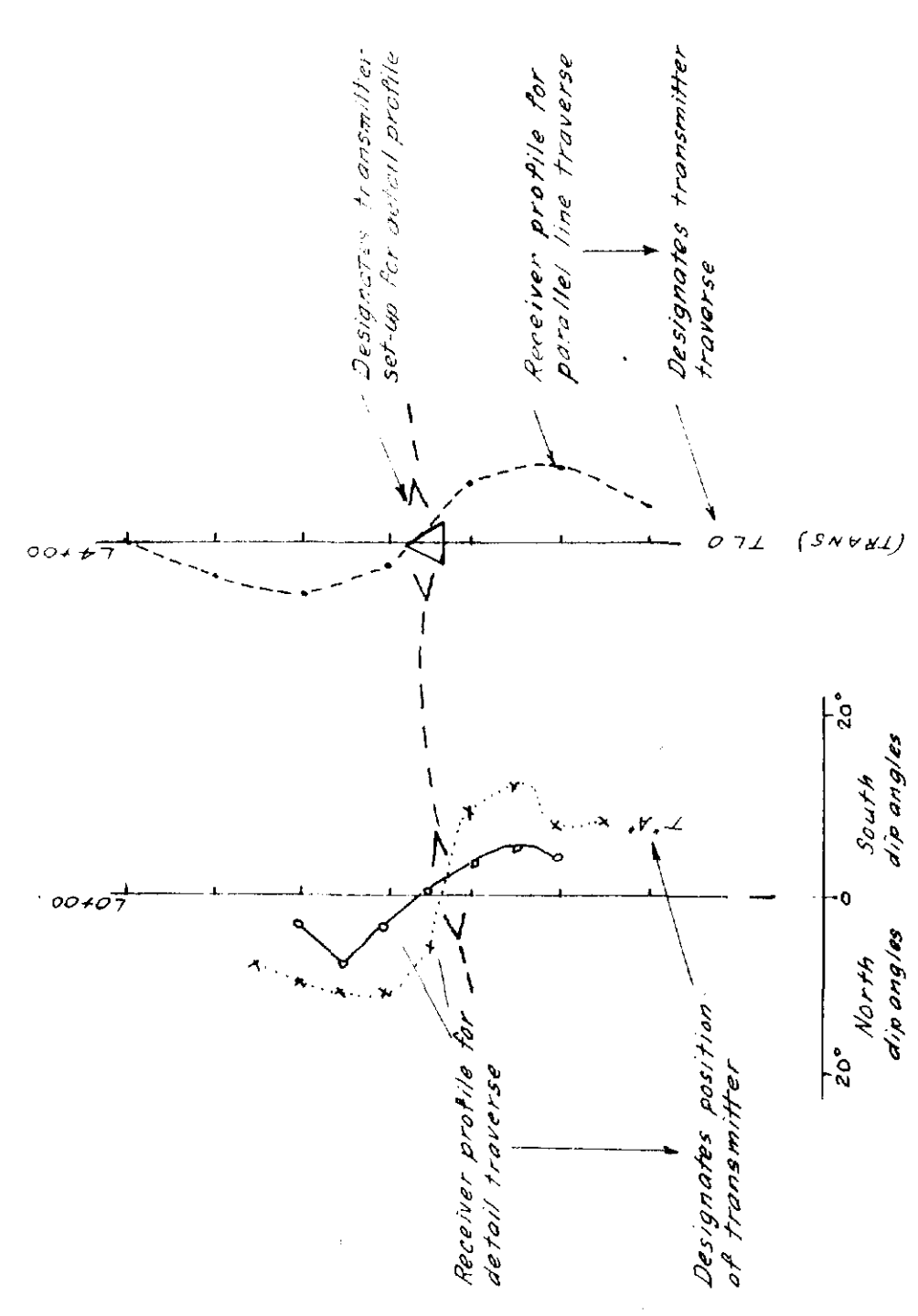
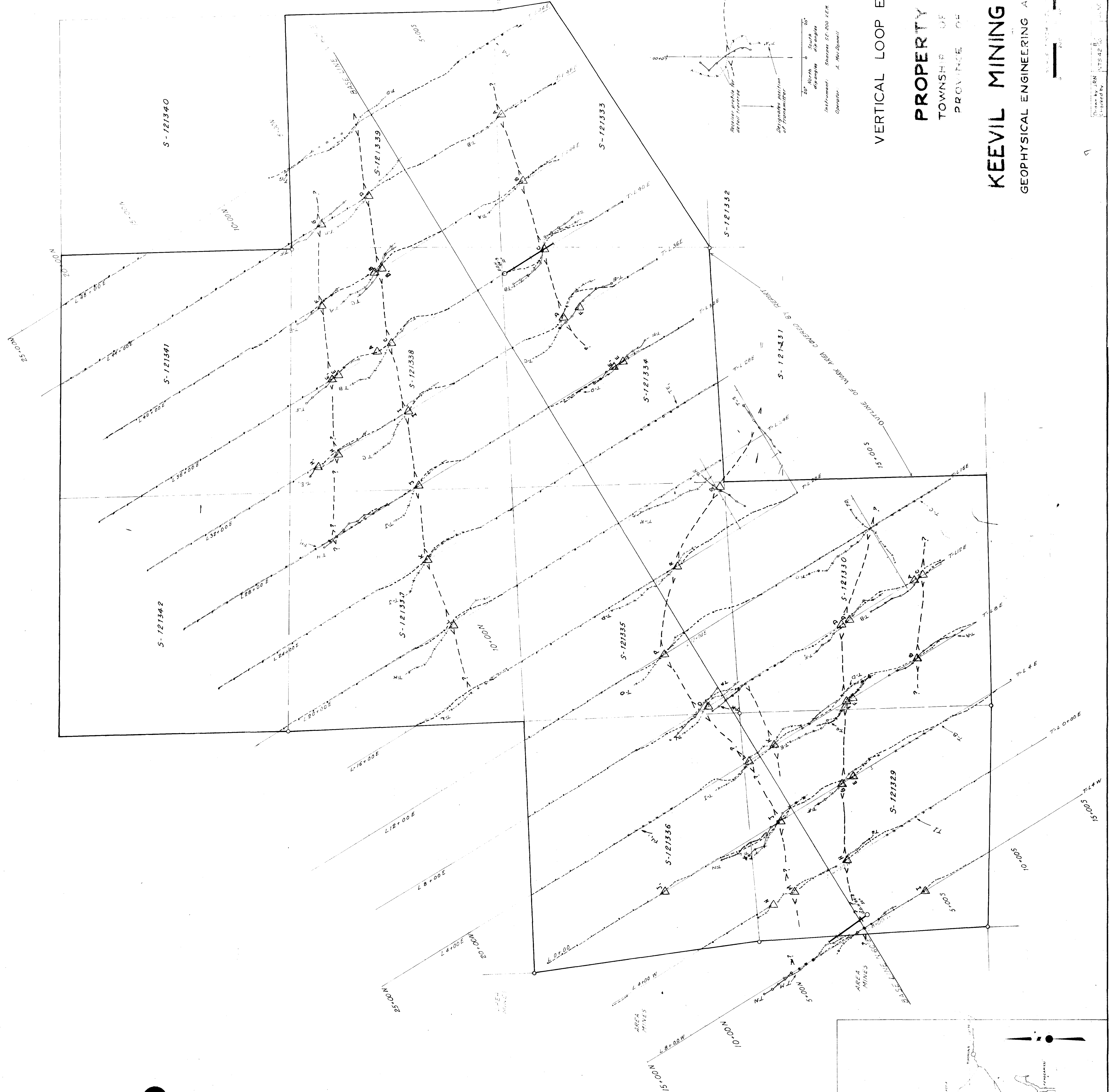
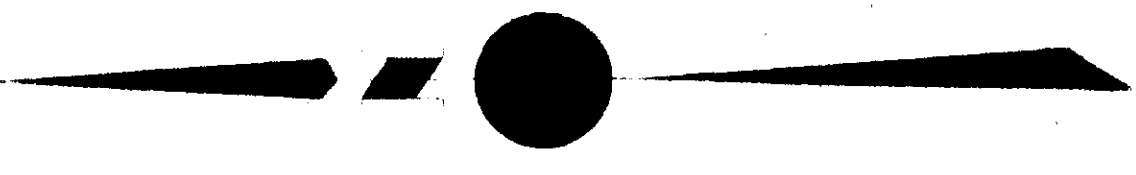


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VERTICAL LOOP EM SURVEY.

PROPERTY I
 TOWNSHIP OF BELFORD
 PROVINCE OF ONTARIO
KEEVIL MINING GROUP LTD.
 GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

