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KEEVIL MINING GROUP LTD.

TIMMINS AREA - 705

PROPERTY 143 - TISDALE TOWNSHIP

Claims P69504-05-06-07

REPORT ON THE  
MAGNETOMETER SURVEY

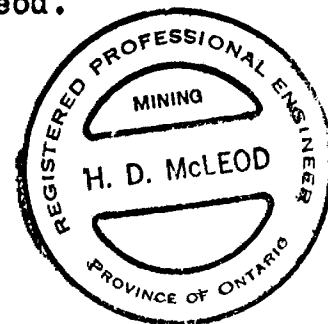
REPORT No. 65P

N.T.S. 42 A/11

May 13, 1966

*H. D. McLeod P. Eng.*

H. D. McLeod.



## SUMMARY, CONCLUSIONS & RECOMMENTATIONS

Keevil Mining Group Ltd. Property no. 143, Tisdale Township was tested by a ground magnetometer survey. An electromagnetic survey was planned but could not be completed due to interference from nearby power lines. During the survey it was found that the A. E. M. conductor had been drilled by the Canadian Nickel Co.

The strong A. E. M. conductor has been tested on the property and also was drilled at a point  $1\frac{1}{2}$  miles to the west of the property. In both cases it was found to be caused by barren graphitic inter-flow sediments.

No further work is recommended on the claims.

## ACCOMPANYING MAPS

(1) Drawing 3032 - "Magnetometer Survey".

## INTRODUCTION

Keevil Mining Group Limited Property no. 143 consists of four contiguous claims comprising the S $\frac{1}{2}$  lot concession VI in Tisdale Township, Porcupine Mining division. The claims were purchased in June 1964 on the basis of an A. E. M. conductor located by a survey flown in April 1964. The present recorded owner is Keevil Mining Group Limited, Suite 1000, 11 Adelaide St. W., Toronto, Ontario.

Exploration work, consisting of line cutting and a magnetometer survey, was completed during the period August 17, 1964 to November 2, 1965.

The work was done by Geophysical Engineering and Surveys Limited personnel under the direct supervision of the writer. The magnetometer survey was done by A. McClemens, 83 Algonquin Blvd. E., Timmins, Ontario.

## LOCATION & ACCESS

The claims are located in the north central part of Tisdale Township, a distance of 4 miles to the northeast of Timmins, Ontario. Approximate co-ordinates are 48° 32' north 81° 17' west.

Access is by a bush road east from the Texas Gulf Sulphur access highway through the Hollinger gravel pits.

## SURVEY METHODS

### Line Cutting

A grid of north-south lines at 200-foot intervals was cut from a base line established along the south boundary of the lot.

Approximately 7 $\frac{1}{2}$  miles of line were cut.

### Magnetometer Survey

The magnetometer survey was done with a Sharpe Fluxgate Model

M. F. 1 magnetometer having a constant of 20 gammas per scale division. Readings were taken at 100-foot intervals along all the picket lines with fill-in readings at 50-foot intervals in areas of high magnetic relief. Diurnal readings were taken at 1 to 1½ hour intervals on permanent base stations. The results were corrected, plotted and contoured as shown on the accompanying map.

Approximately 545 readings were taken.

### RESULTS OF THE SURVEY

The magnetometer survey outlined one strong linear anomaly striking N 70° E across the south part of the property and extending both to the east and west. This has a maximum intensity of 2700 gammas above background. The remainder of the claims area is featured by low magnetic relief broken by two weak north-south linear trends.

### GEOLOGY

Outcrops of basic volcanic flows are present in the southeast corner of the claims. These contain pillows striking N 70° E and facing north. The Canadian Nickel Co. drill hole is reported to have intersected basic flows with an interflow graphitic slate zone carrying minor pyrite.

The high magnetic anomaly is interpreted to be a peridotite sill and the north-south anomalies to be diabase dikes.



42A13SE0400 63.1545 MAHAFFY

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KEEVIL MINING GROUP LTD.

TIMMINS AREA - 705

Claims P61387-88-93-94-95-96, MAHAFFY TWP.

REPORT ON THE  
GEOPHYSICAL SURVEYS

REPORT No. 54P

N. T. S. 42 A/11

March 16, 1966

*H. D. McLeod P. Eng.*

H. D. McLeod, P. Eng.



## SUMMARY, CONCLUSIONS & RECOMMENDATIONS

Keevil Mining Group Ltd. Mahaffy Property no. 136, acquired on the basis of a conductor located by an airborne survey flown in May 1964, was tested by ground magnetometer and electromagnetic surveys.

Three linear weak magnetic anomalies and one weak conductor were located. The conductor coincides with one of the magnetic anomalies.

One drill hole to test the conductor is recommended.

## ACCOMPANYING MAPS

- |      |         |      |   |                               |
|------|---------|------|---|-------------------------------|
| (1.) | Drawing | 2983 | - | "Vertical Loop E. M. Survey". |
| (2.) | Drawing | 2984 | - | "Magnetometer Survey".        |

## INTRODUCTION

Keevil Mining Group Ltd. Mahaffy Property no. 136 consists of six contiguous claims, numbered P61387, P61388, P61393, P61394, P61395 and P61396, purchased in May 1964 on the basis of a conductor located by an airborne survey flown in the same month. The claims are presently recorded in the name of Keevil Mining Group Ltd., Suite 1000, 11 Adelaide St. W., Toronto, Ontario.

Exploration work consisting of line cutting, a magnetometer survey and a vertical loop electromagnetic survey, was completed during the period October 30, 1964 to June 22, 1965. The electromagnetic survey was repeated when it was learned that the original survey was run with a faulty instrument.

The work was done by Geophysical Engineering and Surveys Ltd. personnel under the direct supervision of the writer. The original surveys were done by A. McClemens, Timmins, Ontario, the second E. M. <sup>Survey</sup> by A. MacDonnell, 83 Algonquin Blvd. E, Timmins, Ontario.

## LOCATION & ACCESS

The claims are located in the central part of Mahaffy Township, Porcupine Mining Division, a distance of 26 miles approximately to the northwest of Timmins, Ontario. Approximate co-ordinates are  $48^{\circ} 50'$  north,  $81^{\circ} 31'$  west.

Access to the claims is by helicopter from Timmins, Ontario.

## SURVEY METHODS

### Line Cutting

Lines were cut at 400-foot intervals from a base line oriented  $N 60^{\circ} W$ . Approximately 5 miles of line were established.

### Magnetometer Survey

The magnetometer survey was done with a Sharpe Fluxgate Model M. F. 1 magnetometer having a constant of 20 gammas per scale division. Readings were taken at 100-foot intervals along all the picket lines with fill-in readings at 50-foot intervals in areas of high magnetic relief. Diurnal readings were taken at 1 to 1½ hour intervals on permanent base stations. The results were corrected, plotted and contoured as shown on the accompanying map.

Approximately 260 readings were taken.

### Electromagnetic Survey

The electromagnetic 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 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 600 readings were taken.

## RESULTS OF SURVEYS

### Magnetometer Survey

The magnetometer survey outlined three magnetic trends striking N 60° W across the claims. These are broad weak anomalies with magnetic relief to a maximum of 330 gammas above background.



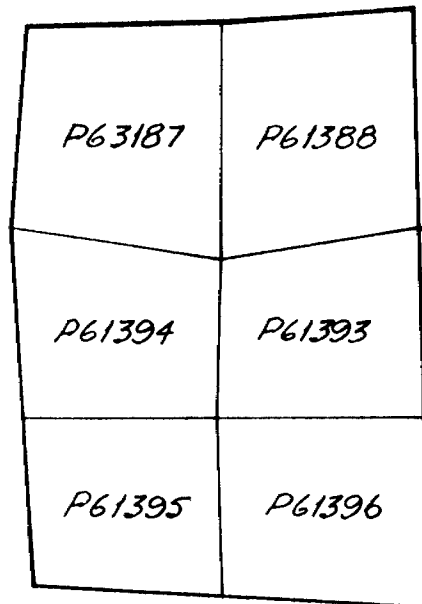
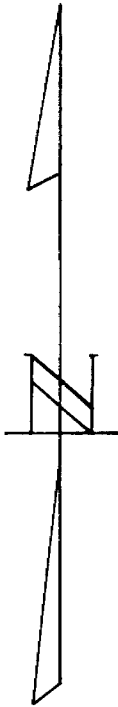
### Electromagnetic Survey

● The electromagnetic survey located one conductor. This was traced from the east boundary of the claims a distance of 1200 feet in a N 60° W direction. It is a weak but persistent feature with poor conductivity but coincides with one of the weak magnetic anomalies.

### GEOLOGY

No outcrops are present on or adjacent to the claims and no diamond drilling has been done in the vicinity. Drill holes some distance to the north and northeast intersected basic volcanics and gabbro.

The claims are probably underlain by basic volcanics with interflow sediments.



MAHAFFEY TWP.  
CRAWFORD TWP.

CON. IV  
CON. III

KEEVIL MINING GROUP LTD.  
TIMMINS AREA-705  
PROPERTY 136- MAHAFFEY  
TOWNSHIP

MARCH 1966



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## ABSTRACT

In the spring of 1964 two properties of Keevil Mining Group Limited (Nos. 136 and 143) were investigated as part of a larger area by a combined E.M. and magnetometer survey.

Both properties contain interesting E.M. anomalies and additional work is recommended.

The results are described in a four page report and are shown by four drawings that are bound into the report.

AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

FOR

KEEVIL MINING GROUP LIMITED

PROPERTY 136, MAHAFFY TOWNSHIP

PROPERTY 143, TISDALE TOWNSHIP

TIMMINS AREA, ONTARIO

INTRODUCTION

In the spring of 1964 Geophysical Engineering and Surveys Limited commissioned Canadian Aero Mineral Surveys Limited to fly various parts of the Timmins district.

The properties discussed in this report were flown as part of a larger survey. This report has been assembled for assessment credits on the properties and recommendations contained herein have been given previously to the company.

PROPERTY, LOCATION AND ACCESS

Property No. 136 consists of six unpatented claims, P-61387, 88, 93, 94, 95, and 96 in the central part of Mahaffy Township. The claims can be reached via a 30 mile Abitibi logging road that leaves No. 11 Highway about three miles west of Smooth Rock Falls and a two mile canoe trip south on the Mattagami River.

Property 143 consists of four unpatented mining claims, P-69504 to 7 inclusive located in the south half of lot 7, concession six. The claims are accessible by a secondary road that runs north from Timmins along a hydro line and a branch road that

cuts off near the boundary of lots 8 and 9, concession 6, a total distance of about five miles.

## GEOLOGY

### Property No. 136

There are no known outcrops on the property. The closest outcrop is an acid intrusive about one mile to the south-east.

### Property No. 143

The geology of the area is shown in detail on O.D.M. Map of Tisdale Township, Northwest Quarter. Several outcrops of intermediate volcanics are mapped in the extreme southeast corner of the property and ground magnetics indicate a linear basic intrusive just to the north of the volcanics and striking west south-west across the property.

## GEOPHYSICAL SURVEY

A description of Canadian Aero's geophysical equipment is given in Appendix II.

On property 136 the flight lines were in a N 30° E direction while on property 143 they were in a north-south direction. Line spacing was approximately 1/8 mile and mean terrain clearance was 150 feet.

The results of the E.M. and Magnetic surveys are shown on the bound-in four maps.

#### DISCUSSION OF RESULTS

##### Property No. 136

###### (a) Magnetic

The magnetics indicate that the geologic trends are west northwest and that the property is not underlain by basic intrusives.

###### (b) Electromagnetic

A strong E.M. anomaly was picked up on two lines on claim P-61393.

##### Property No. 143

###### (a) Magnetic

The south one-third of the property has high magnetic values, peaking in the southwest corner with readings 1100 gammas above background. It is thought that basic intrusives are responsible for the magnetic anomaly.

###### (b) Electromagnetic

A wide irregular E.M. anomaly was located on two lines on claim P-69504. The anomaly should be tested by ground E.M. and gravity.

RECOMMENDATIONS AND CONCLUSIONS

Property 136

The property contains a good conductor and merits further work. The conductor should be located and outlined on the ground by ground E.M. and tested by diamond drilling.

Property 143

The property contains a complicated but interesting E.M. anomaly and it should also be tested by ground geophysics and drilled if ground geophysics does not indicate it to be graphite.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED



E.G. Thompson.

Toronto, Ontario  
May 7, 1965



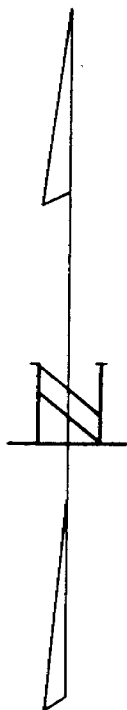
May 7/65

LOT 8

LOT 7

LOT 6

MURPHY TWP  
TISDALE TWP



P69504

P69506

P69505

P69507

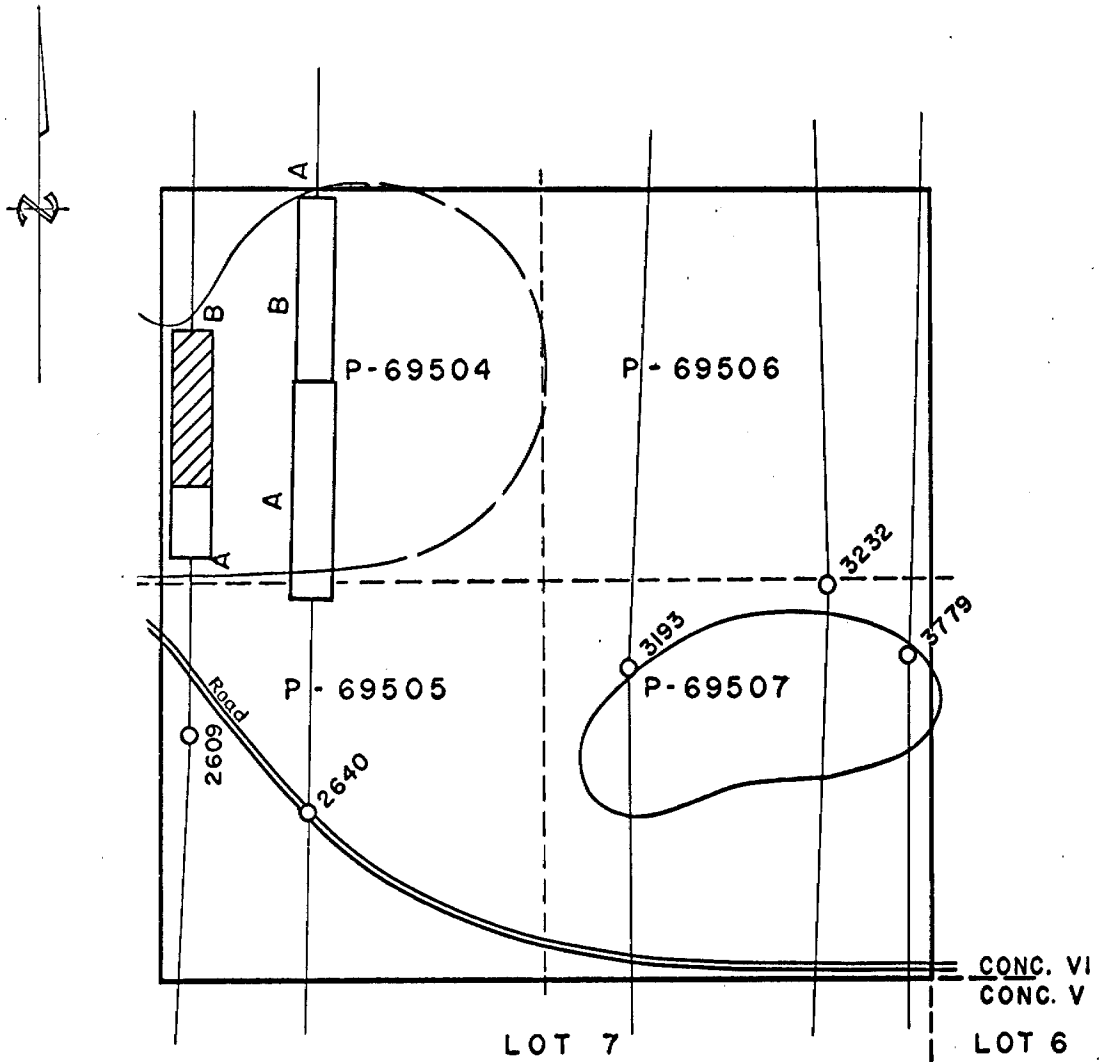
CON. VI  
CON. V

KEEVIL MINING GROUP LTD.  
TIMMINS AREA - 705  
PROPERTY 143 - TISDALE TWP

SCALE: 1" = 1320'



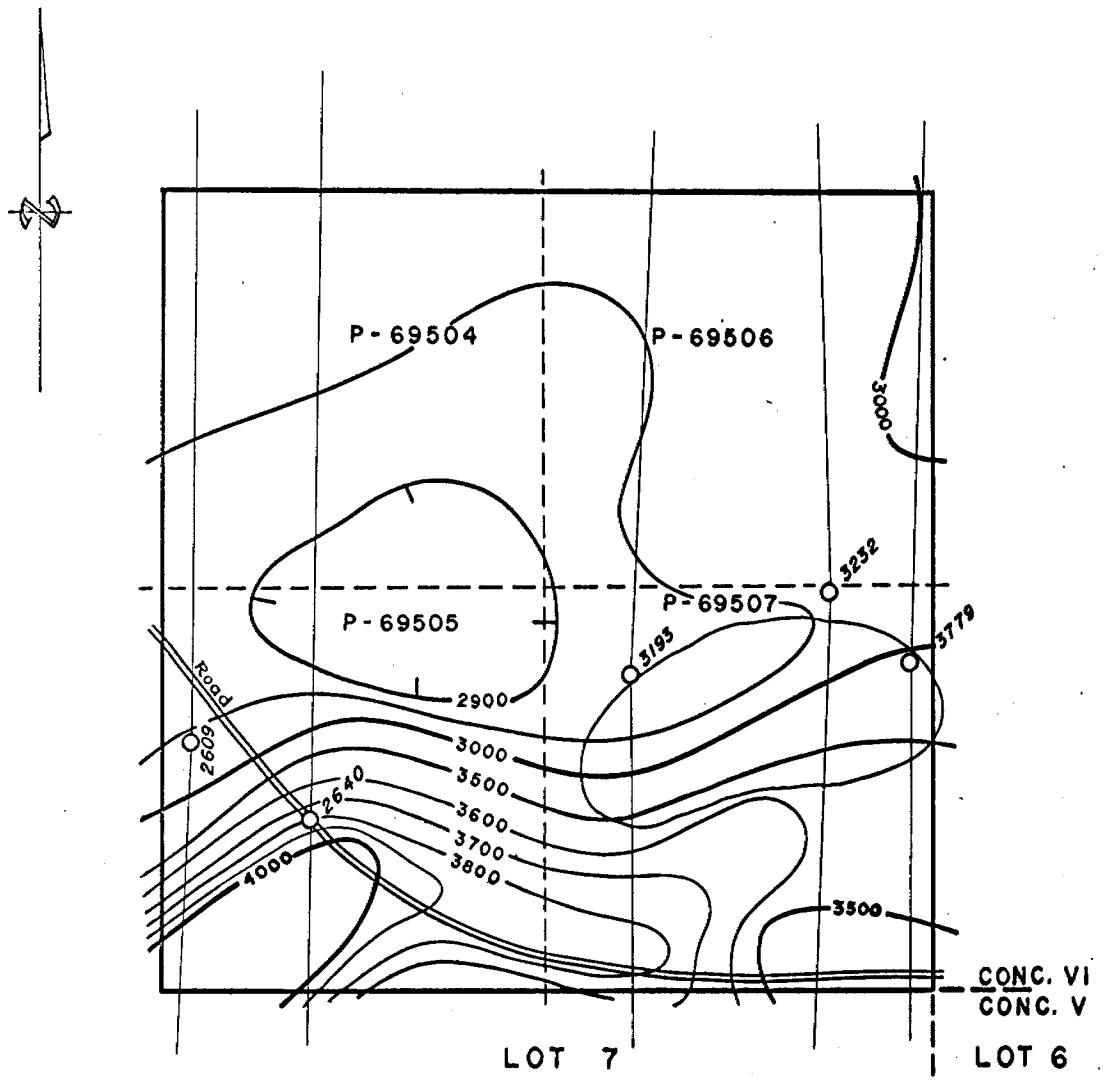
No. MILES FLOWN - 2.54



AIRBORNE  
ELECTROMAGNETIC SURVEY  
PROPERTY No. 143  
TISDALE TWP, ONTARIO  
TIMMINS AREA,  
FOR  
KEEVIL MINING GROUP LIMITED  
BY  
CANADIAN AERO MINERAL SURVEYS LTD

SCALE: 1" = 1/8 MILE

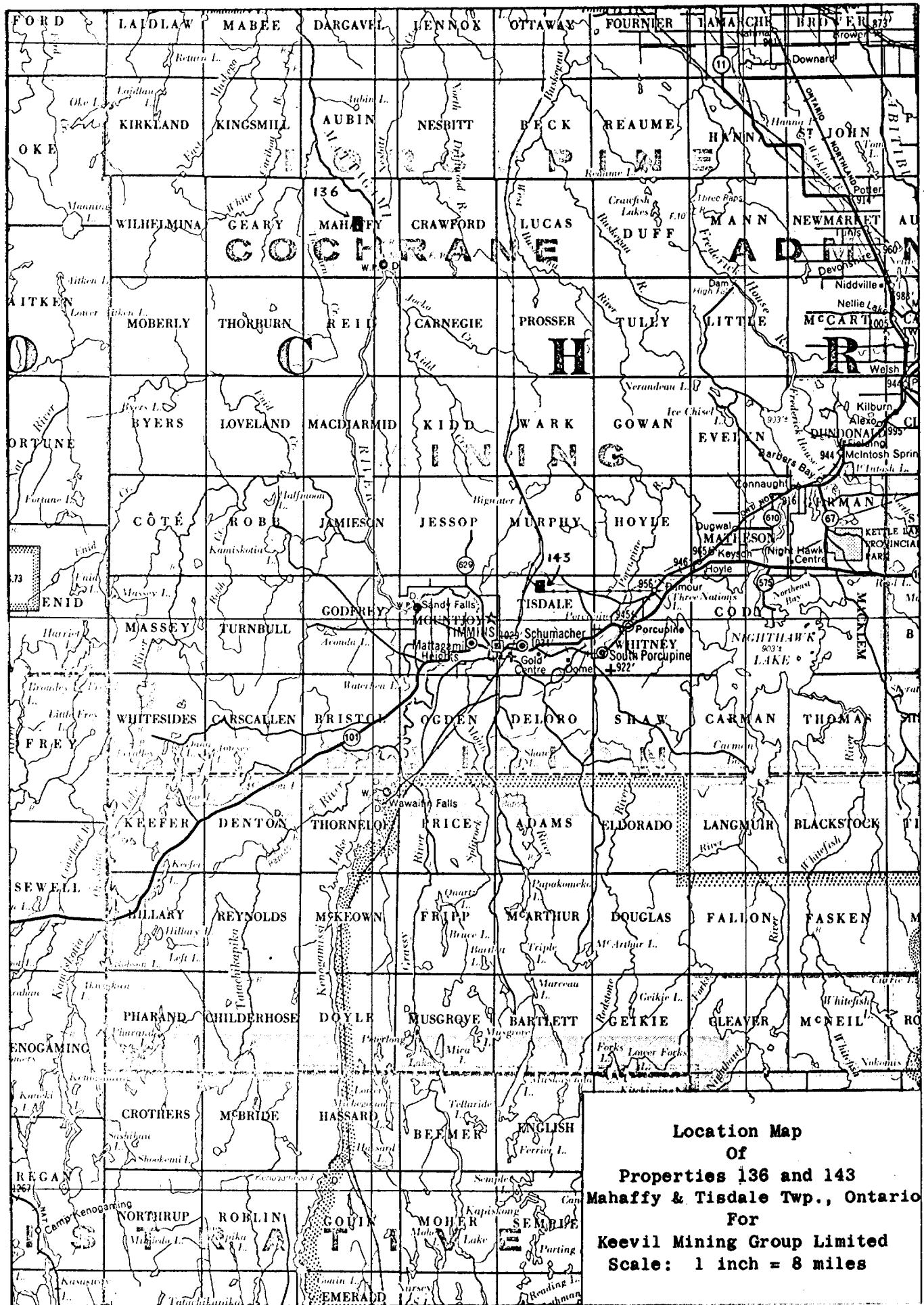
*2017*  
*July 1965*



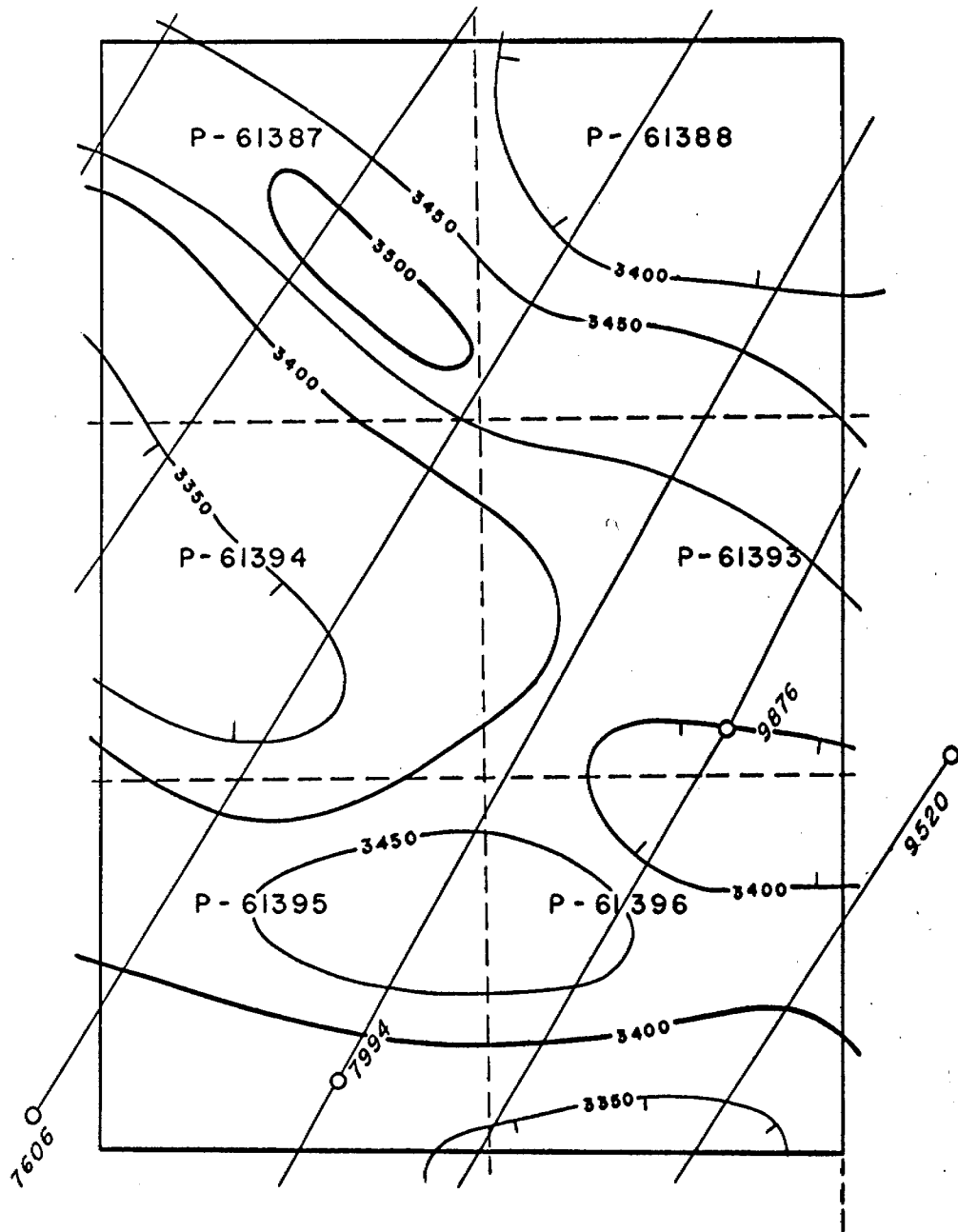
AIRBORNE  
MAGNETOMETER SURVEY  
PROPERTY No. 143  
TISDALE TWP, ONTARIO  
TIMMINS AREA,  
FOR  
KEEVIL MINING GROUP LIMITED  
BY  
CANADIAN AERO MINERAL SURVEYS LTD

SCALE : 1" = 1/8 MILE

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*[Handwritten date: May 7/65]*



No. MILES FLOWN - 2.70



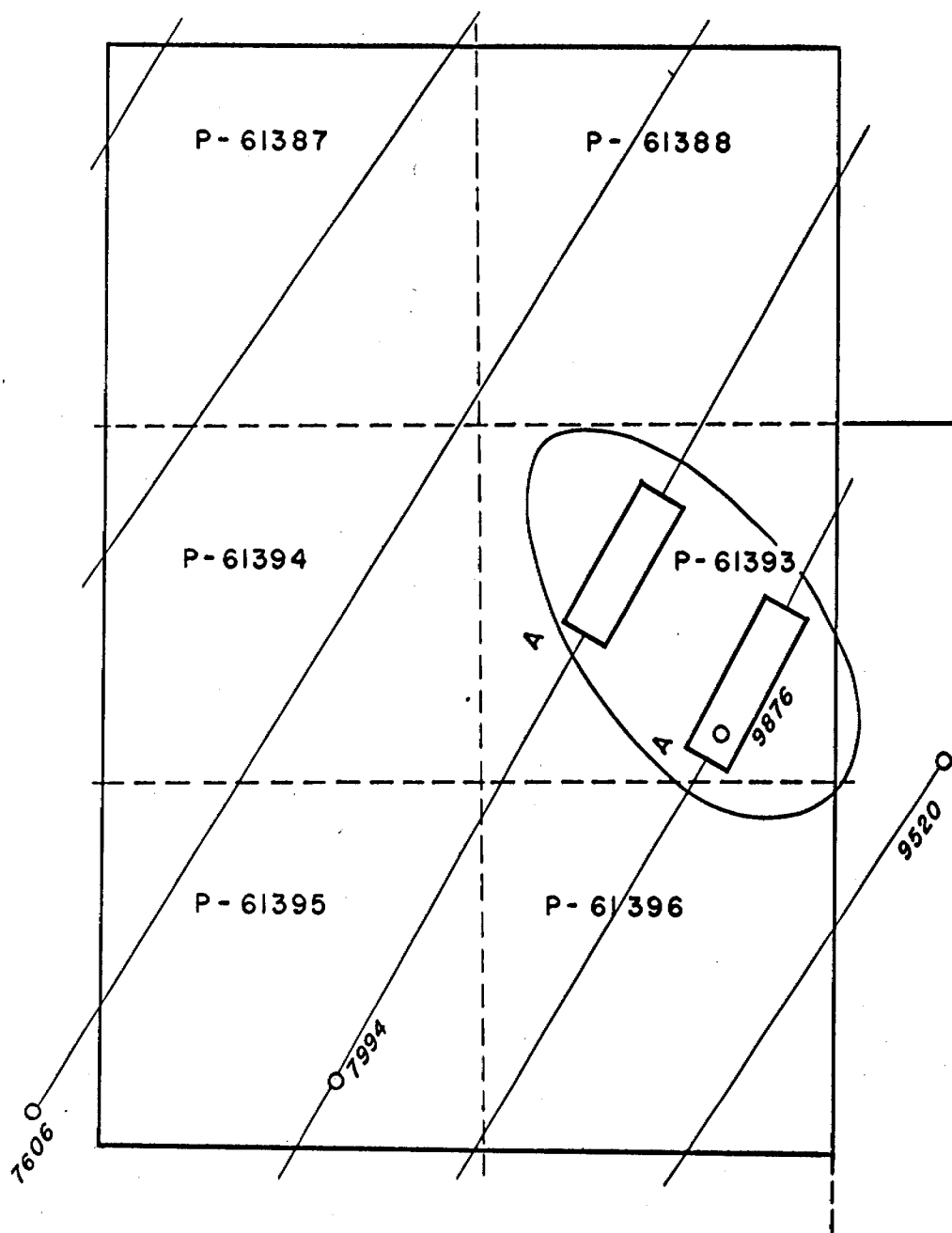
AIRBORNE  
MAGNETOMETER SURVEY  
PROPERTY No. 136  
MAHAFFY TWP, ONTARIO  
TIMMINS AREA,  
FOR  
KEEVIL MINING GROUP LIMITED  
BY  
CANADIAN AERO MINERAL SURVEYS LTD

SCALE: 1" = 1/8 MILE

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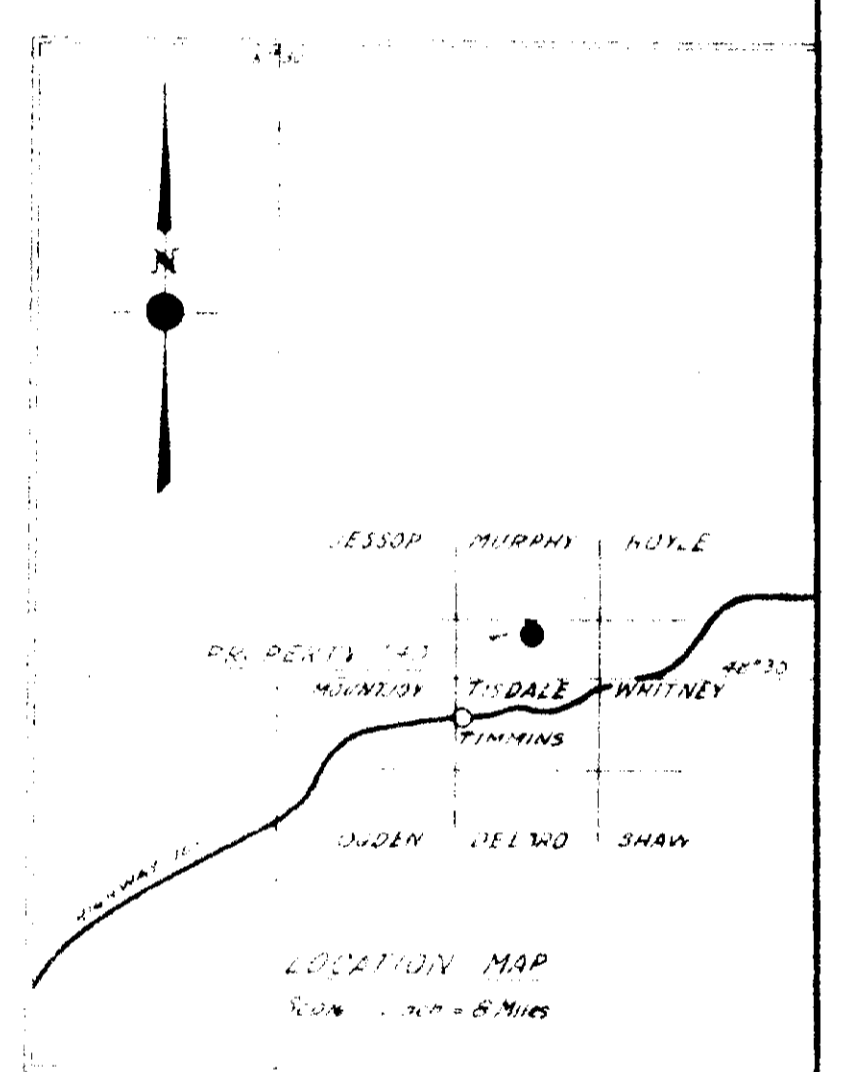
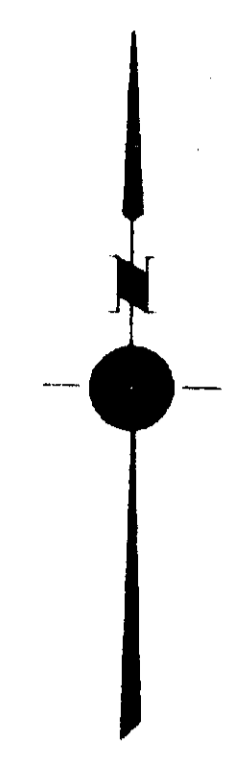
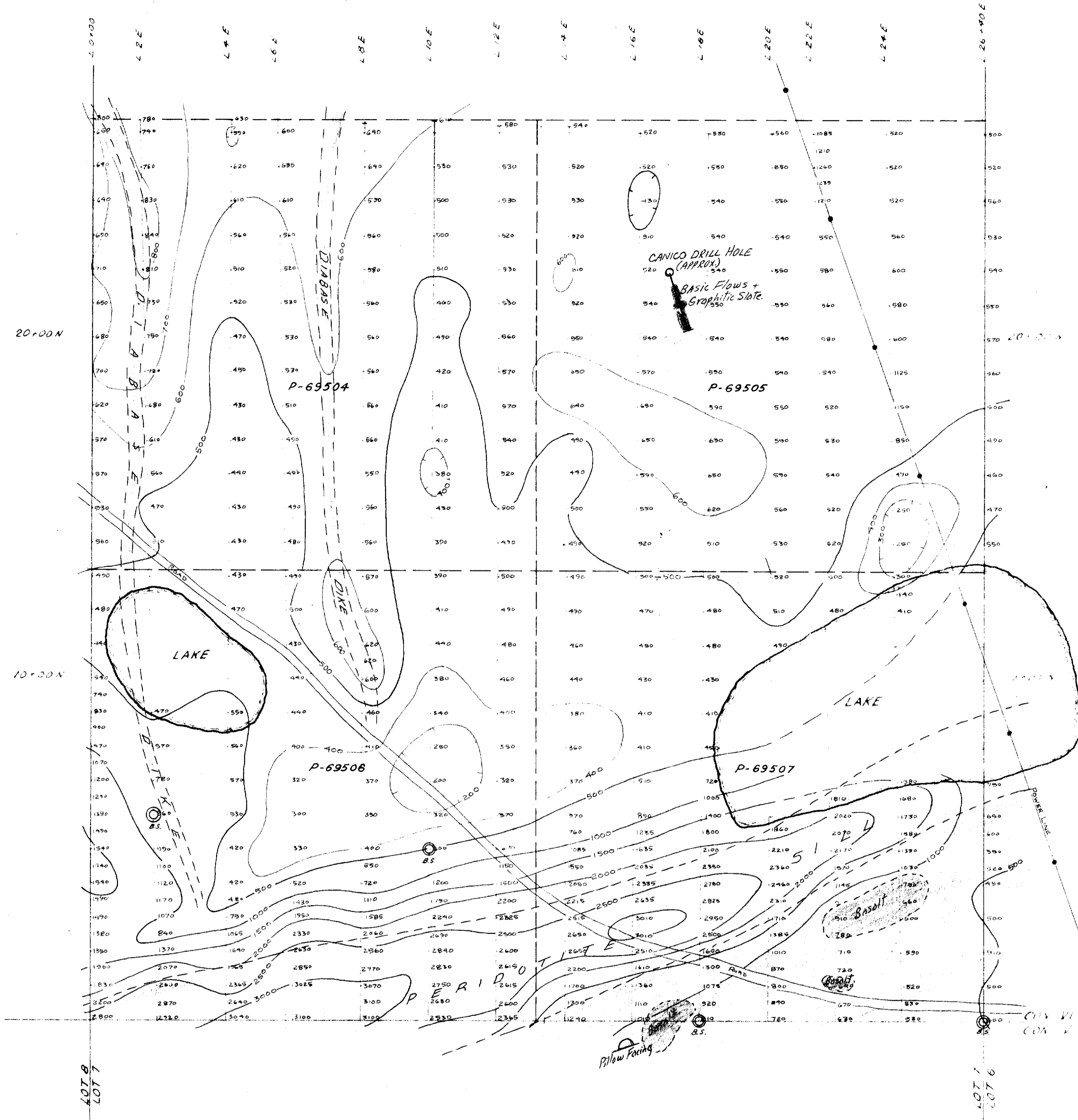
*May 7/65*

No. MILES FLOWN - 2.70



AIRBORNE  
ELECTROMAGNETIC SURVEY  
PROPERTY No. 136  
MAHAFFY TWP, ONTARIO  
TIMMINS AREA,  
FOR  
KEEVIL MINING GROUP LIMITED  
BY  
CANADIAN AERO MINERAL SURVEYS LTD

SCALE: 1" = 1/8 MILE



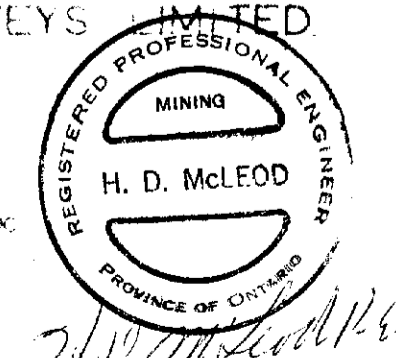
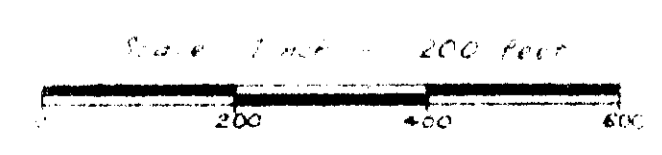
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 Contours shown thus  $\text{---}500\text{---}$  are at 100 gamma intervals  
 Instrument: Sharpes Flurgate Magnetometer Model MF-1  
 Operator: A. McClellens  
 (C) Base Station

MAGNETOMETER SURVEY  
 of  
 PROPERTY 143.  
 TOWNSHIP OF TISDALE,  
 PROVINCE OF ONTARIO.

**KEEVIL MINING GROUP LTD.**

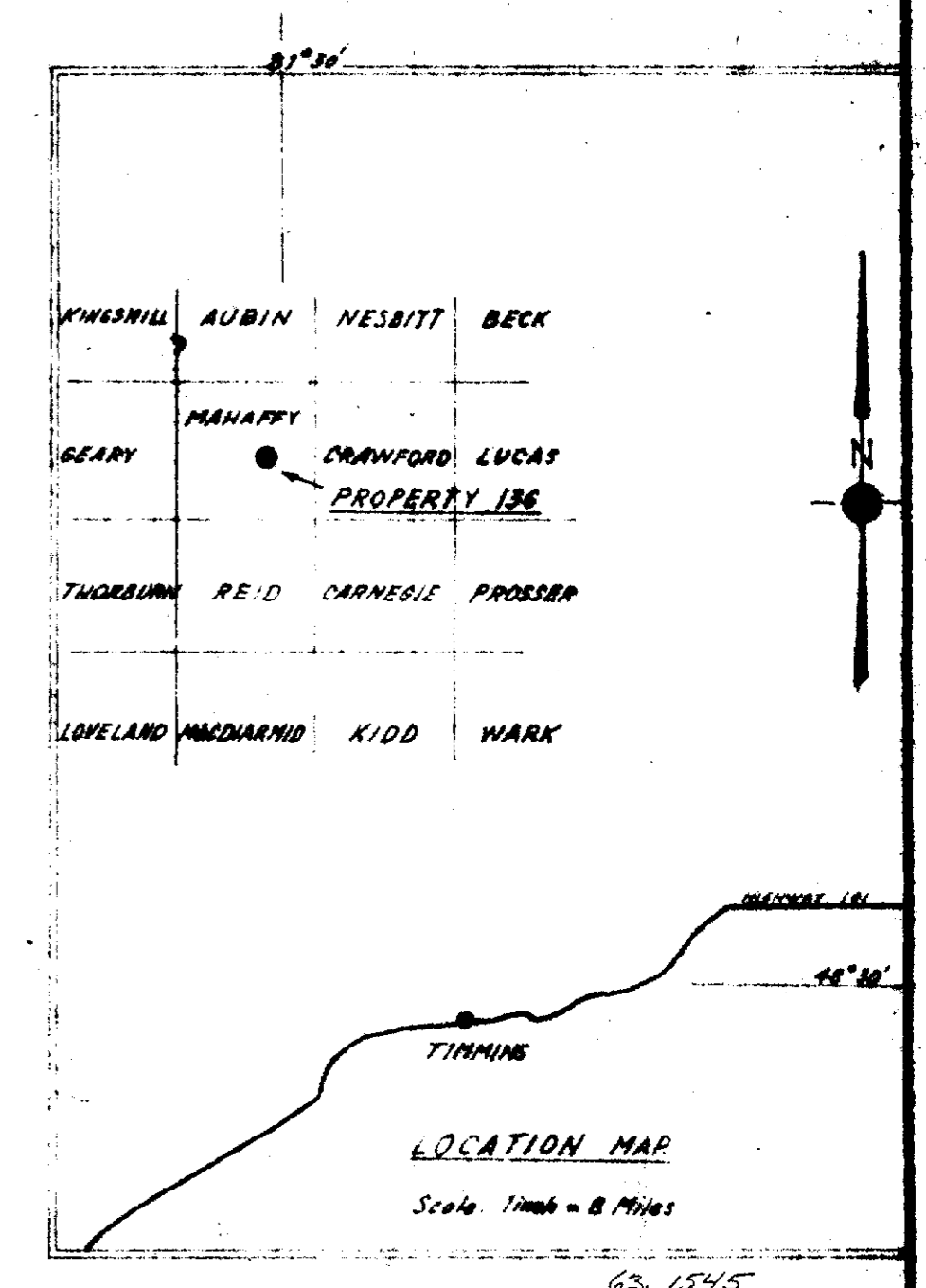
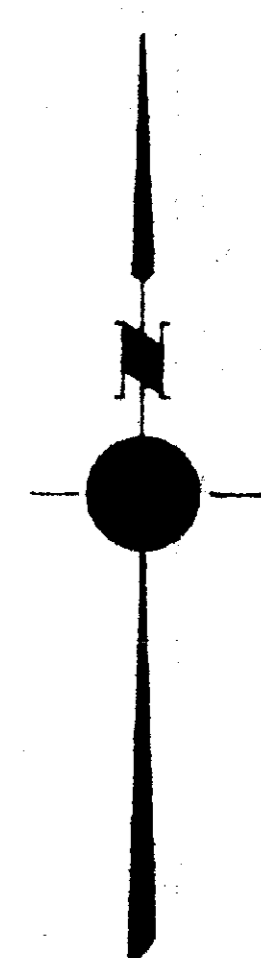
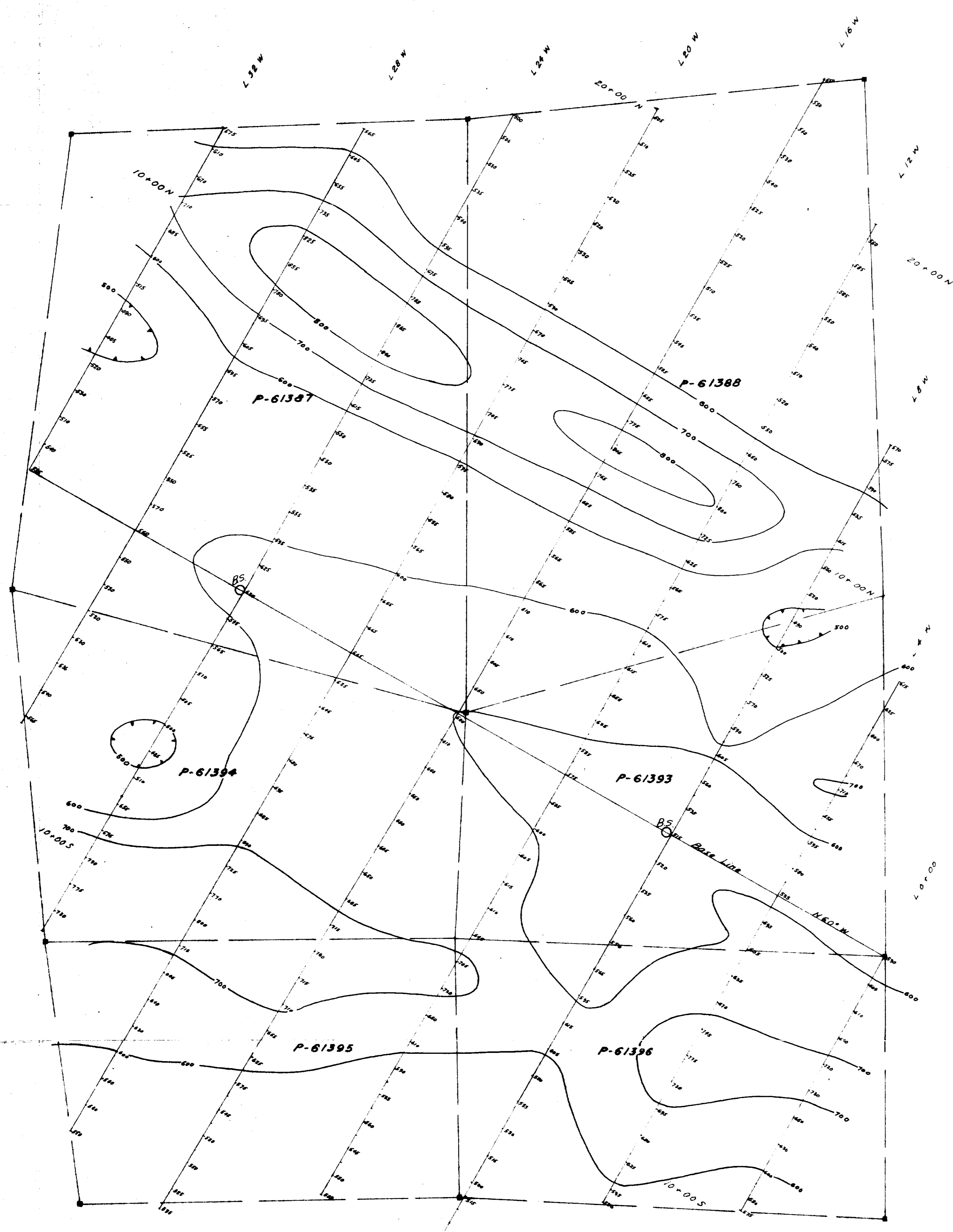
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED



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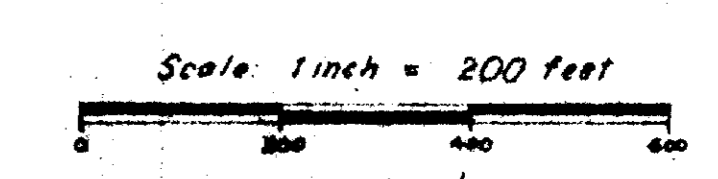
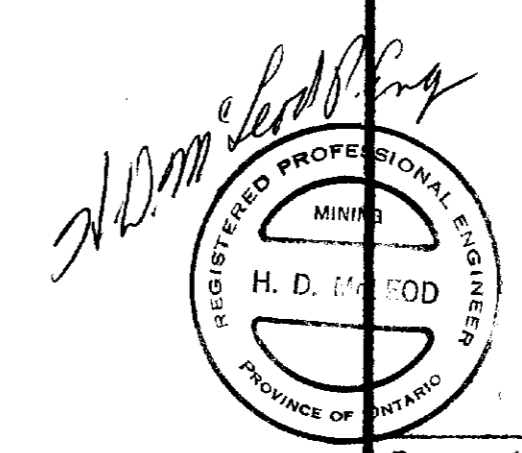
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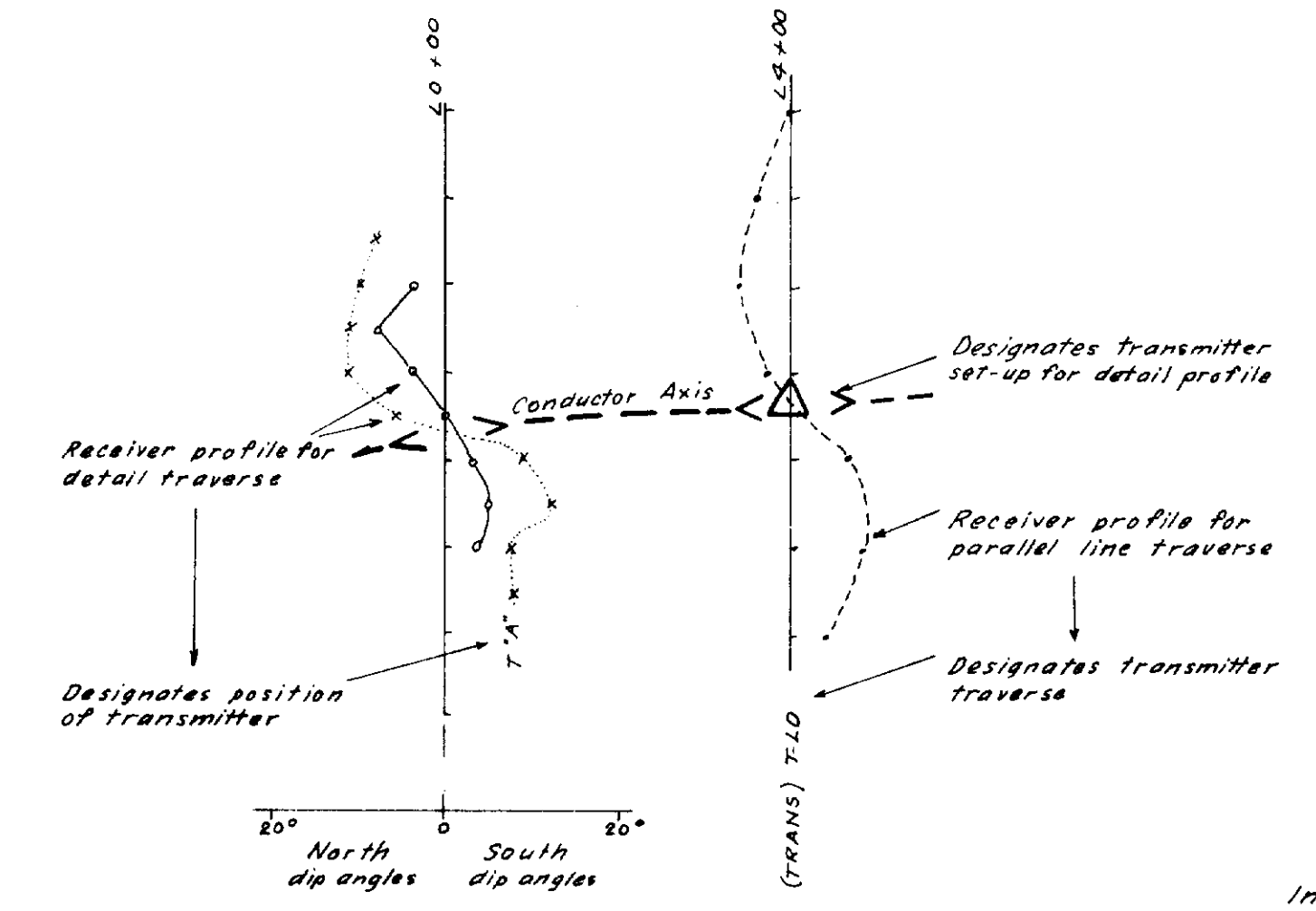
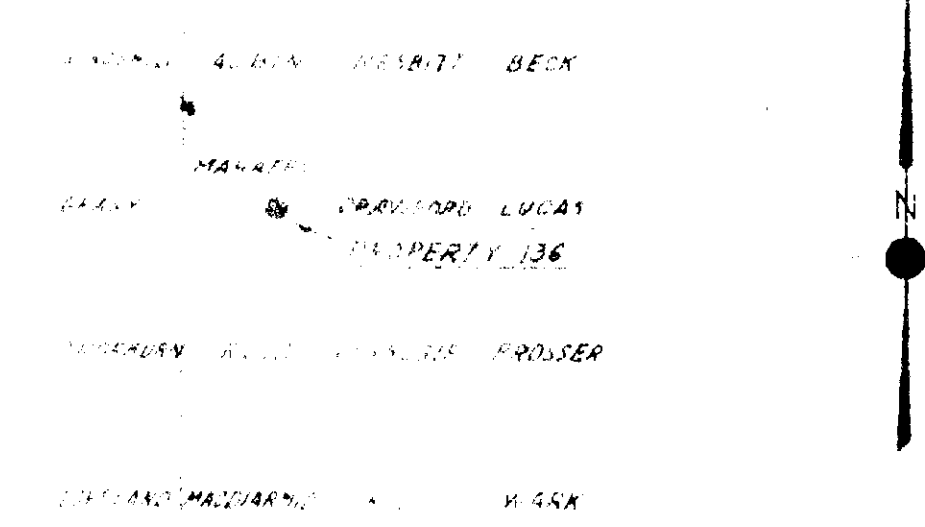
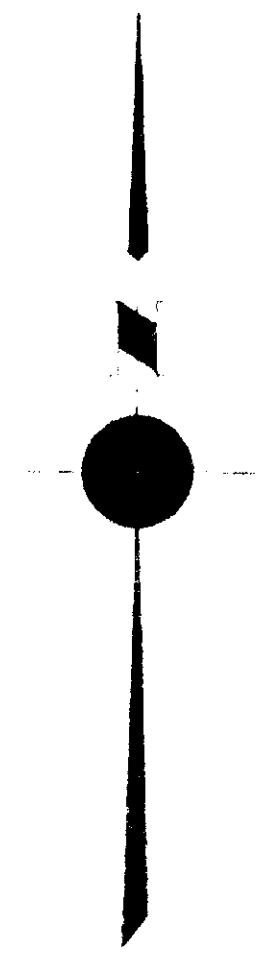
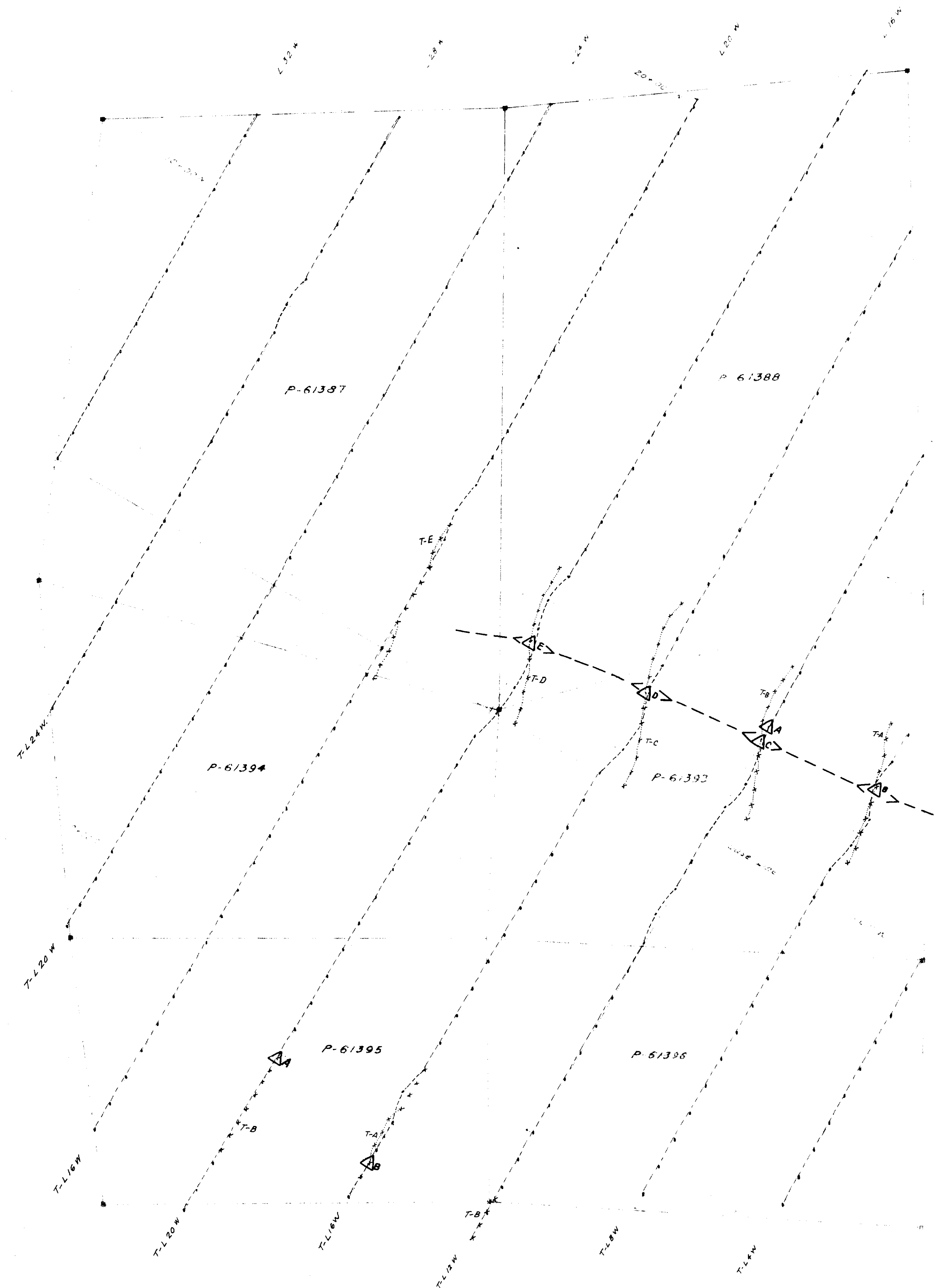
Note:  
 Values shown thus 630 are in gammas  
 580  
 Contours shown thus 600 are at 100 gamma intervals  
 Instrument: Sharpe Model MF-1 Fluxgate Magnetometer  
 Operator: A. McClemons  
 BS. Base Station.

MAGNETOMETER SURVEY  
 OF  
 PROPERTY 136  
 TOWNSHIP OF MAHAFFY,  
 PROVINCE OF ONTARIO  
 FOR  
**KEEVIL MINING GROUP LTD.**  
 BY  
 GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED



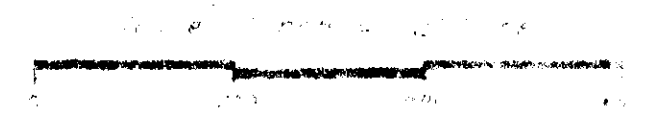
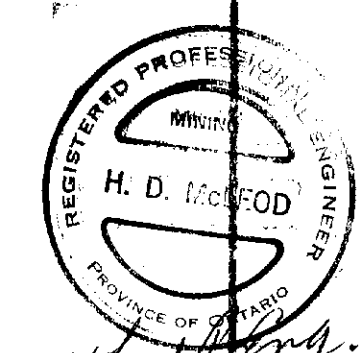
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 Checked by





Instrument: Sharpe SE-200 V.E.M.  
Operator: A MacDannell.

VERTICAL LOOP E.M. SURVEY  
PROPERTY 136  
TOWNSHIP OF MAHAFFY,  
PROVINCE OF ONTARIO  
KEEVIL MINING GROUP LTD.  
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED



63-1545

