



INTRODUCTION

Project Ivanhoe Group No. 31 consists of 49 contiguous claims - nos. S121263 to S121264 incls., S121269 to S121274 incls., S121276 to S121~~283~~^{5121414 To 5121427 incls} incls. ^A, S121432 and S121522 to S121539 - located in the southeast corner of Carty Township and adjoining section of Ivanhoe Township, a distance of 11 miles approximately southwest of Foleyet, Ontario. The claims were staked in April and recorded in March, 1964.

Exploration was carried out during the period September 9, 1964 to February 28, 1965. During September a grid totalling 13.7 miles of line was cut and magnetometer and horizontal loop electromagnetic surveys ^{completed.} In October a vertical loop electromagnetic survey and geological mapping were completed. Four holes totalling 1221 feet were drilled in January and February. Drilling was suspended on February 28 and no further work has been done.

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

The work involved in the surveys has been applied to Claims S121273[✓], S121274[✓], S121418[✓], S121419[✓], S121420[✓], S121421[✓], S121422[✓], S121423[✓], S121522[✓], S121523[✓], S121527[✓], S121528[✓], S121529[✓], S121530[✓], S121536[✓], S121537[✓], S121538[✓] and S121539[✓]. Enough of the diamond drilling has been applied to these claims to bring the total up to 60 days per claim and the remainder applied to hold an additional group of claims for one year.

Small sections of the picket line grid and thus, the survey area fall outside the boundaries of the above claims. Allowance has been made for this and no credits claimed for that portion of the work.

Access to the claims is by Highway 101 southwest from Foleyet, the highway passing through the west section of the claims groups.

MAGNETOMETER SURVEY

The magnetometer survey was done with a Sharpes Fluxgate model M. F. 1 magnetometer with a scale constant of 20 gammas per scale division. Approximately 860 stations were read at 100 foot intervals along all the picket lines with fill-in readings at 50-foot intervals in areas of high magnetic attraction. Diurnal readings on permanent base stations were taken at approximately one-hour intervals.

All readings were corrected and plotted as shown on the accompanying map.

ELECTROMAGNETIC SURVEY

Two electromagnetic surveys were done. The lines were covered with a horizontal loop 300-foot cable Ronka unit. Approximately 650 readings being taken at 100-foot intervals along all picket lines with fill-in readings at 50-foot intervals in areas of high conductivity.

At a later date the H. E. M. conductors were checked with a Sharpes S. E. 200 vertical loop instrument using the fixed transmitter method in order to accurately locate the conductors. The north-west section of the grid was covered by the parallel line method in an attempt to locate the missing airborne conductor. Approximately 144 readings were taken in the parallel line survey and 446 in the detail portion of the survey.

All results have been plotted as shown on the accompanying map.

GEOLOGICAL MAPPING

Detailed geological mapping of the grid was completed and all outcrops and claim posts located with respect to the nearest picket

line. A separate map was not warranted so the work has been done shown on the magnetometer survey plan.

DIAMOND DRILLING

Four holes as follows were drilled:

NO.	CO-ORDINATES	BEARING	DIP	CORE SIZE	LENGTH
65-4	5700N, 32700E	South	45°	A - 1 1/8"	354'
65-5	8720N, 52700E	South	45°	"	358'
65-6	5740N, 50700E	South	45°	"	206'
65-7	17700S, 10700E	East	45°	"	<u>304'</u> 1221'

RESULTS OF SURVEYS

The magnetometer survey located a number of sharp lensy anomalies most of which form definite trends. The main series of highs is folded from an east-west trend of claims S121418 and S121423 to a north-south strike in Claims S121537 and S121538 and a S 45°E trend in claims S121539 and S121421.

Magnetic relief ranges from 6500 gammas below background to 4500 gammas above.

The horizontal loop electromagnetic survey outlined one long folded conductor coinciding with the folded magnetic anomaly. Sections of the zone show very strong conductivity.

The vertical loop electromagnetic survey traced one strong conductor coinciding with the H. E. M. conductor and folded magnetic anomaly. Indications of other shorter and weaker conductors were found in sections of the grid but these were not checked out in detail.

The work in the northwest section of the grid failed to locate the airborne survey conductors indicated in that area.

The geological mapping located scattered outcrops mainly in

the central portion of the grid. These have been mapped as granite and andesite. The four drill holes all intersected well bedded granite and hornblende gneisses.

The granite gneiss is a medium-grained grey to pink mixture of quartz, feldspar and hornblende, the hornblende gneiss a grey to black rock composed of 50% or more black hornblende in a grey to white matrix of feldspar and quartz. Narrow pegmatite dikes are present in all the drill holes.

The outcrops mapped as granite obviously are granite gneiss. Those mapped as fine-grained andesite probably are fine black dikes, as have been seen in outcrops to the north of the grid.

The formations are folded into an anticline with axis striking approximately east-west. The evidence for this is mainly in the trends of the geophysical anomalies, however, the diamond drilling results support this structure. Strike of the formations in the northeast part of the area is east-west and the dip 45° to 50° to the north. In claims S121537 and S121538 the formations swing to a north-south strike and dip 45° west. To the south the strike changes to S 60° E, the dip unknown but probably southwest. Geophysical trends in the northwest section of the grid indicate a N 45° E strike. Dips are believed to be to the west.

The main anomaly trend is caused by pyrite, pyrrhotite and disseminated magnetite in a hornblende gneiss horizon. The magnetic anomalies not drilled are believed to be caused by disseminated magnetite in the gneisses.

SUMMARY & CONCLUSIONS

Diamond drilling of geophysical anomalies revealed that they are caused by pyrite, pyrrhotite and disseminated magnetite. Since values are low no further work is recommended.

Use one type of survey only



42B02SE0005 63.1438 CARTY

900

Assessment Work Breakdown

1. Type of Survey Electromagnetic
2. Township or Area Carty Township
3. Mining claim numbers S121273, S121274, S121418, S121419, S121420, S121421,
S121422, S121423, S121522, S121523, S121527, S121528, S121529,
S121530, S121536, S121537, S121538, S121539
4. Number of miles of line cut 13.7
- * 5. Type of instrument used Ronka 300 foot cable H. E. M., Sharpes S. E. 200 V. E. M.
- * 6. Scale constant or sensitivity.....
- * 7. Number of stations established 1240
8. Summary of days worked (details on reverse side)
Total technical (include consultants, draughting etc.) 171
Total line-cutting 171
Total man-days (technical plus line-cutting) 342
Assessment days credit per claim 19
9. Dated March 6/65 Signed A. D. McLeod

* Complete only if applicable

Complete list of names, addresses and dates on reverse side

Assessment Work Breakdown

- 1. Type of Survey Magnetometer
- 2. Township or Area Carty Township
- 3. Mining claim numbers S121273, S121274, S121418, S121419, S121420, S121421, S121422, S121423, S121522, S121523, S121527, S121528, S121529, S121530, S121536, S121537, S121538, S121539.
- 4. Number of miles of line cut 13.7
- * 5. Type of instrument used Sharpes Fluxgate Model M. F. 1 magnetometer
- * 6. Scale constant or sensitivity 20 gammas per scale division.
- * 7. Number of stations established 860

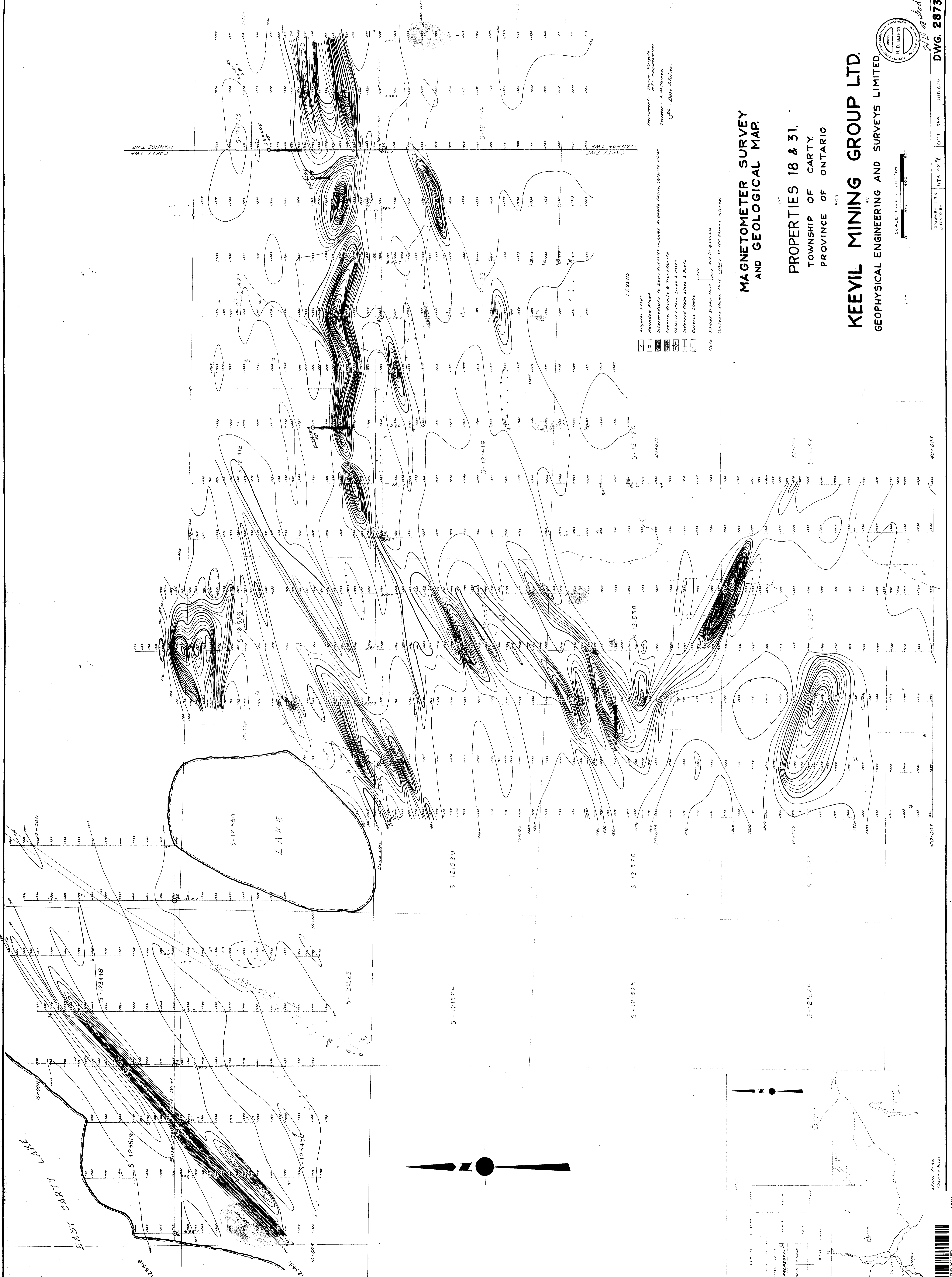
8. Summary of days worked (details on reverse side)

Total technical (include consultants, draughting etc.)	90	$22.5 \times 7 = 157.5$
Total line-cutting	90	+ 17.5
Total man-days (technical plus line-cutting)	180	$175 \div 18$
Assessment days credit per claim	10	9.7 allow (10)

9. Dated March 6/65 Signed J. D. m. Lead

* Complete only if applicable

Complete list of names, addresses and dates on reverse side



LEGEND

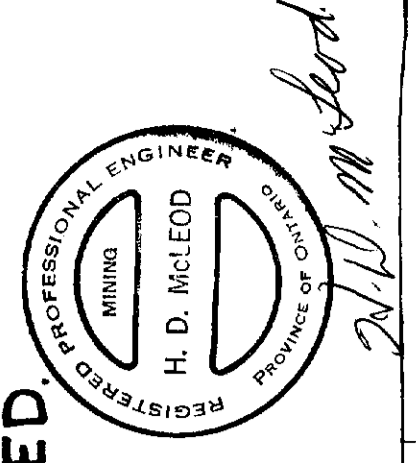
- Angular Floor
- Revised Floor
- Intermediate to Basic Foliation
- Granite, Granite & Gneiss
- Observed Contour Lines & Data
- Interpolated Contour Lines & Data
- Outcrop Limits

Note: Polled shown thus 100 are in gamma
Contours shown thus 1000 are at 100 gamma interval

**MAGNETOMETER SURVEY
AND GEOLOGICAL MAP**

OF
PROPERTIES 18 & 31.
TOWNSHIP OF CARTY,
PROVINCE OF ONTARIO.

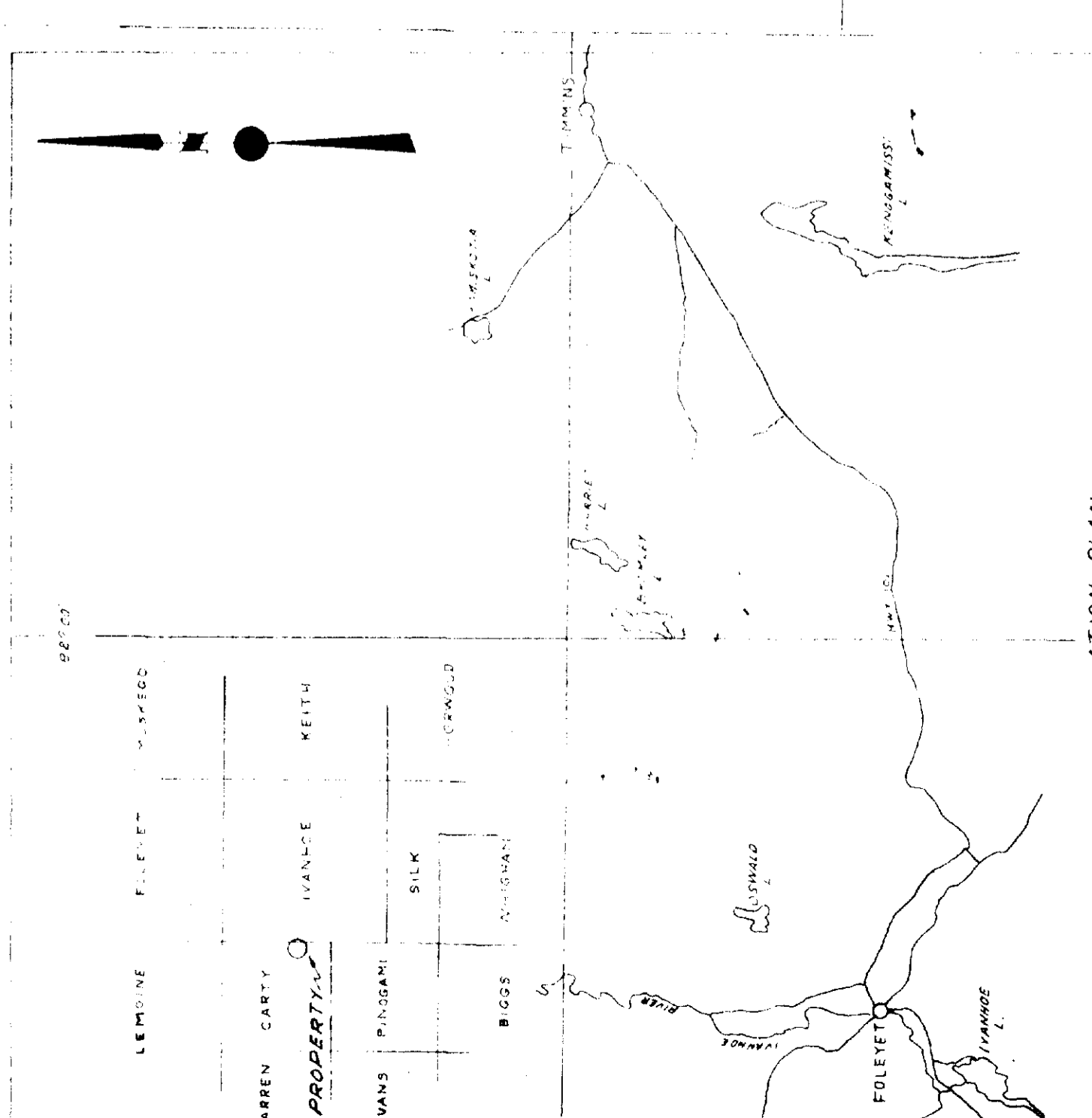
KEEVIL MINING GROUP LTD.
GEOLOGICAL ENGINEERING AND SURVEYS LIMITED

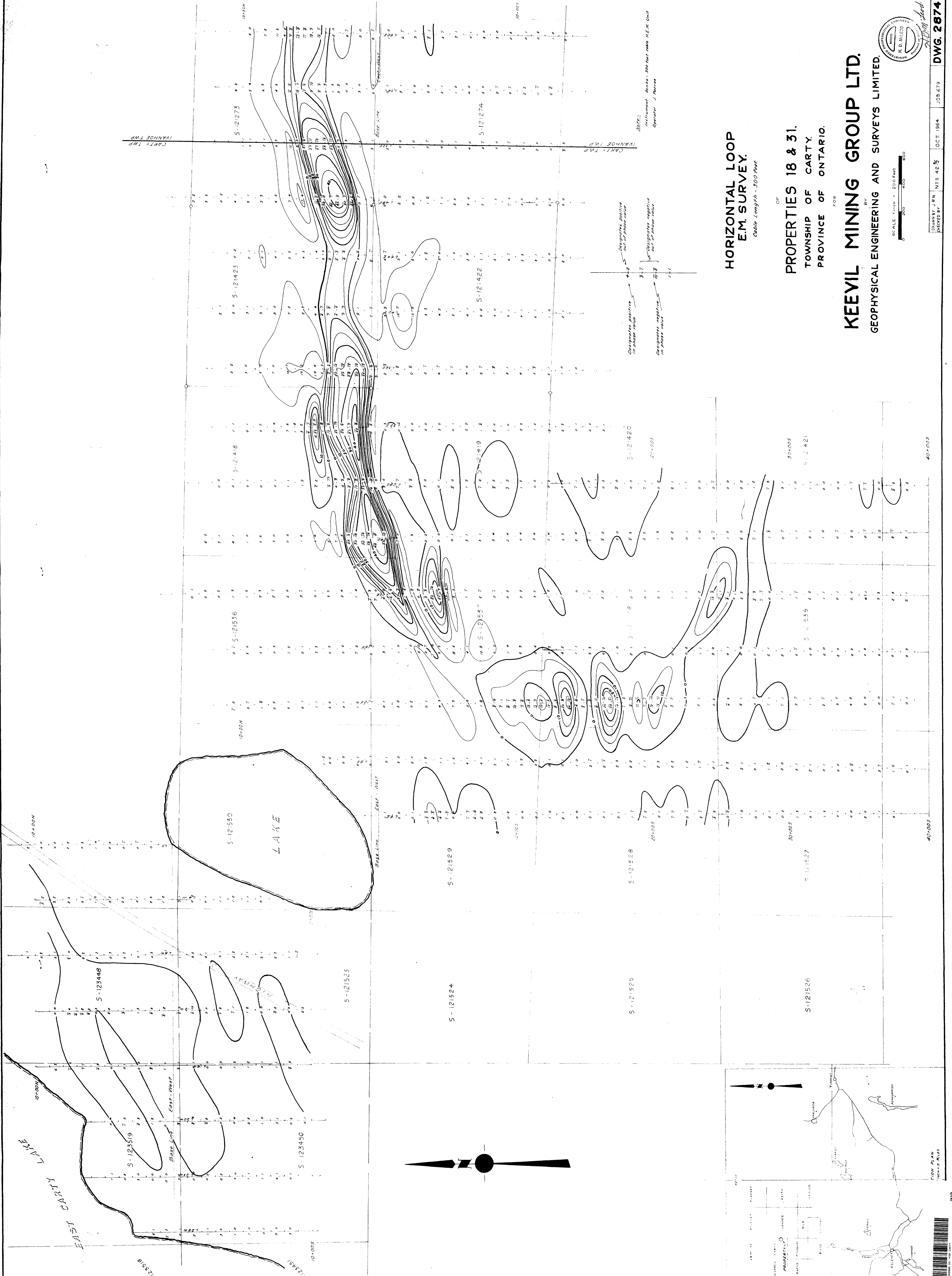


SCALE 1" = 200 FEET
200 400 600

CHECKED BY: [Signature]
DATE: OCT. 1964
JOB NO. 679

DWG. 2873





**HORIZONTAL LOOP
E.M. SURVEY.**
Cable Length - 300 Feet

OF
PROPERTIES 18 & 31.
TOWNSHIP OF CARTY,
PROVINCE OF ONTARIO.

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

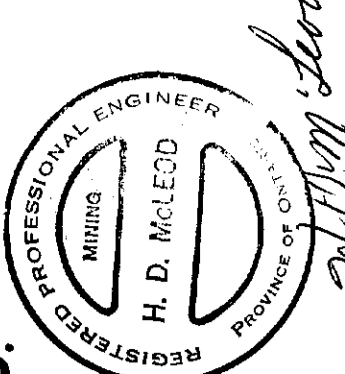
SCALE 1 inch = 200 Feet
0 200 400 600

TOWN PLAN
1/4 Sec 18 & 31

DRAWN BY J.R.N. NTS 42 1/2
CHECKED BY J.A.B. NTS 42 1/2

OCT. 1964 JOB 679

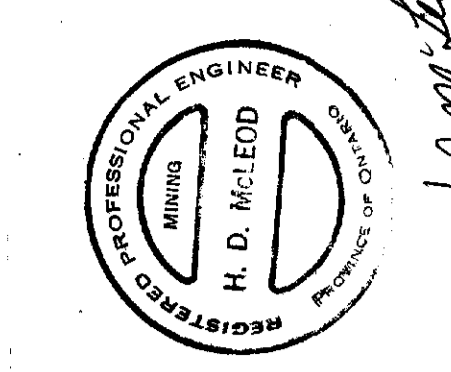
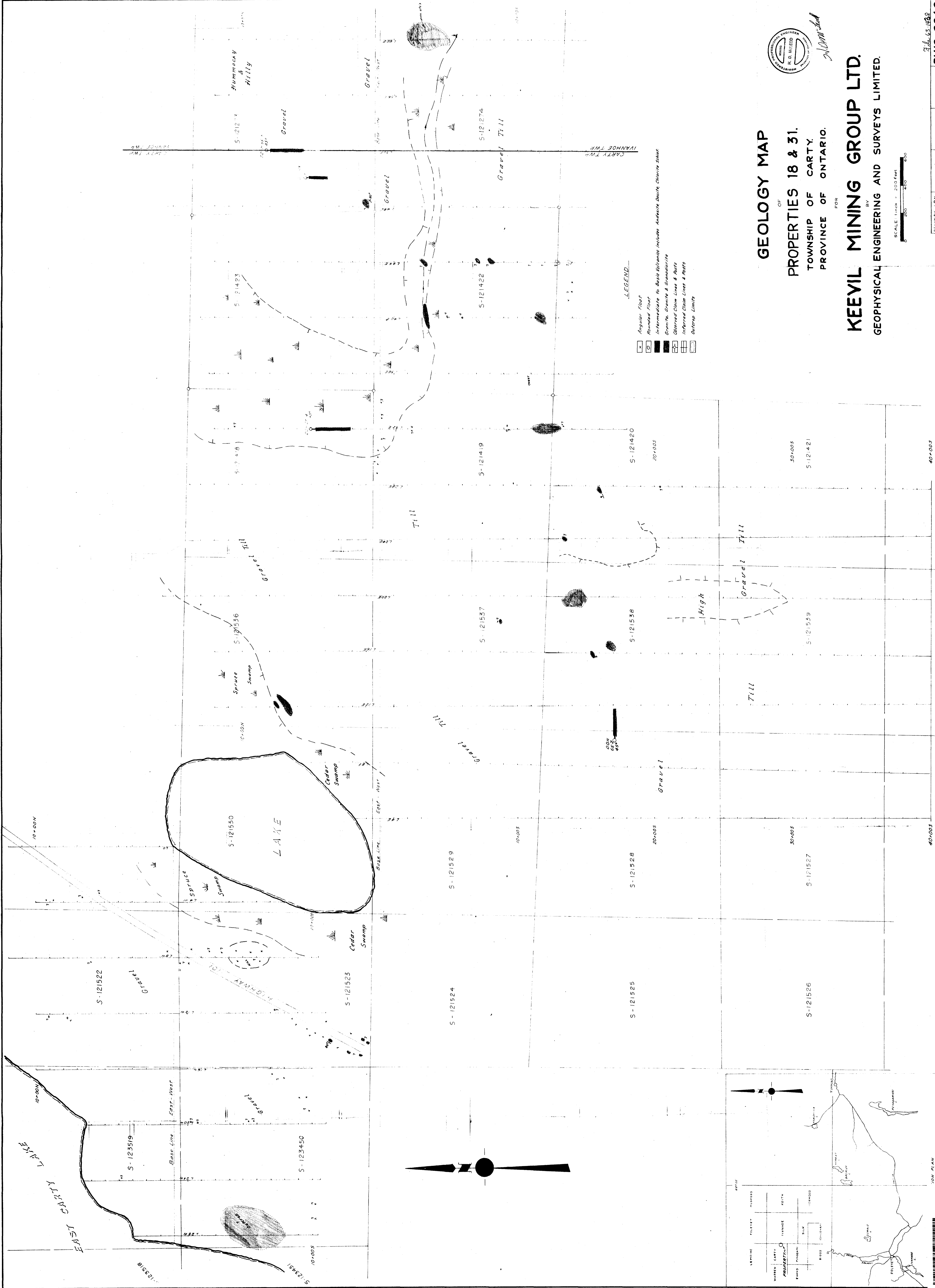
DWG. 2874



300 Feet
Instrument - Ameco - 500 foot cable H.E.M. Unit
Operator - J. Abner

Designates positive
in phase value
Designates negative
out of phase value
Designates positive
out of phase value
Designates negative
in phase value

BIG



GEOLOGY MAP
 OF
PROPERTIES 18 & 31.
 TOWNSHIP OF CARTY,
 PROVINCE OF ONTARIO.

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

SCALE: 1 inch = 200 feet
 0 200 400 600

