

ATLAS EXPLORATIONS LIMITED

(N. P. L.)

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

GEOLOGICAL SURVEY

NOV 27 1968

Resident Geologist
Whitehorse, Y. T.

GEOPHYSICAL REPORT

ELECTROMAGNETIC AND MAGNETIC SURVEYS

PHIL MINERAL CLAIM GROUP

NTS 105G 15

61° 55' north
130° 31' west

May 20 - June 14, 1968

by:

John S. Brown
Atlas Explorations Limited

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D. C. Hillman
RESIDENT GEOLOGIST

Approved as to cost in the amount
of \$ 22,150

H. S. Beaman
RESIDENT MINING ENGINEER

Accepted as representation
under Section 53(4) Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

2215

ELECTROMAGNETIC AND MAGNETIC SURVEYS
PHIL MINERAL CLAIM GROUP

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Electromagnetic and Magnetic
Geophysical Surveys,

Phil Mineral Claim Group

INTRODUCTION

In August, 1967, an independant prospector, G. Lishy, discovered sphalerite mineralization in an exposure about one-half mile south of the PAY Mineral Claims. Lishy staked the ZN 1 and ZN 2 Mineral Claims over this area which was subsequently optioned by Atlas Explorations. In order to cover adjoining ground as well as to tie the ZN Claims to the PAY Property, the PHIL 1 to PHIL 42 Mineral Claims were staked in early September, 1967.

During August, 1967 a bulldozer trench exposed part of the Lishy showing as well as a related zone of alteration, access routes for travel to the ZN and PHIL Properties were also established from the PAY camp on Fortin Lake.

A further exploration program of the PHIL Group was planned for the 1968 field season to fully evaluate the area by electromagnetic, magnetic and geochemical soil sampling surveys. It was hoped that the known zone of mineralization could be extended and that diamond drill targets be outlined for testing at the same time as drilling was to be carried out on the adjacent PAY Group. As outcrop on the PHIL Property is limited to one main drainage system cutting through the claims, geologic mapping was impossible and emphasis had to be put on geophysical and geochemical methods for exploration.

LOCATION AND ACCESS

The PHIL 1 to 42 Mineral Claims are located near the southeast end of Fortin Lake (NTS 105 G) and are adjacent to the south boundary of the PAY Group.

Access to the property was gained by aircraft equipped with floats based at Ross River, some 64 miles west of Fortin Lake. Landing facilities were made available at a base camp on the PAY Claims about 3 miles north of the PHIL Claims on the east shore of Fortin Lake. Access to the Phil Camp was provided by bombardier from the Pay Camp.

GEOLOGY

The discovery of high grade zinc and associated copper mineralization by Lishy, one half mile south of the Pay Group, emphasized the regional potential of the Pay Property. The Lishy showing, ZN Group, consists of a 4 foot wide zone of massive sphalerite, assaying 48 percent zinc and 4 percent lead. The mineralization is either a vein or replacement in carbonate (X) altered lustrous phyllite. A bulldozer trench in the area of the showing exposed narrow sections of lead and copper mineralization in an altered phyllite zone grading up to 6.9 percent lead and 0.49 percent copper. The significance of the Lishy showing is that it was not previously detected and possibly could not be detected by reconnaissance geo chemical soil sampling, and furthermore that mineralization does not occur in the host dolomite unit such as found on the main Pay zone.

Geologic traverses were made on the PHIL Group between June 1 and June 10, 1968 by K. Kirkland, geologist for Atlas Explorations Ltd. All outcrops found on the claim group occur at or very near 'Phil' Creek. With the exception of the Lishy showing, all outcrops consisted of thinly to moderately foliated grey phyllite, the foliation usually striking 120° to 140° and dipping moderately to the southwest. No mineralization was observed in these phyllites although quartz veining was usually present.

SURVEY METHOD

Linecutting: All lines were cut by employees of Atlas Explorations during the period May 20th to June 4th, 1968. Survey control was maintained by chain and picket methods with occasional checks by compass on line bearings. The survey grid established consisted of a central 8000 foot baseline with crosslines of 6000 feet total length every 800 feet, 100 foot stations were established on all grid lines.

Magnetometer Survey:

Instrumentation The entire survey was carried out with a hand held Jaylander flux gate magnetometer. The instrument has a sensitivity of 10 gammas on its lowest range and is described by its manufacturer as being self orienting and compensated for drift.

Survey Method The grid base line was run prior to cross line survey

Survey Method (Con't) in order that base stations could be established at crossline intersection points. Readings were corrected for drift and diurnal variation by conventional 'looping' methods, to establish base station values. Readings were taken at each base station prior to cross line surveys as well as at the completion of each cross line in order that adequate control was maintained for magnetic readings over the entire grid.

Data Presentation Maps were prepared (1:800) of the grid plan and corrected gamma values as well as magnetic profiles. The values were not contoured due to low intensity change.

Electromagnetic Survey:

Instrumentation

A Crone JEM unit was used for the electromagnetic survey. The instrument is an application of the 'shootback' method where each of two coils are used to transmit and receive in sequence. High and low frequencies (1800 and 480 cps) were used for each station surveyed.

Survey Method

A horizontal loop 'in-line' configuration was used on all grid lines. For this method dip angles are measured in the vertical plane passing through the axis of the coils. The coils, when operated, are tilted 15 degrees from a coaxial alignment. The sum of the dip angles, obtained at each recording interval contains no significant errors, due to accidental misalignment of coils in rough terrain.

Data Presentation

Maps to scale of 1:800 have been prepared of the grid plan showing high and low frequency dip angle values as well as resultant dip profiles.

GEOPHYSICAL RESULTS

Magnetometer Survey - All magnetic profiles are generally flat and of low gradients. Background has been determined as 1800 gammas and a peak value of 2080 gammas was obtained on line 8N station 11E. Low intensity, uniform profiles were recorded between Lines 40S and 16 S, west of the baseline. Magnetics in the vicinity of the main creek generally reflect lower intensity values, however a comparison of results from each line over the creek does not reveal any definite magnetic characteristics. Irregular profiles were recorded to the north and east of the 'low' area between Lines 40S and 16S.

Electromagnetic Survey - The overall survey is generally composed of low-intensity negative resultant dip angles, all dip angle values are within the - 3 to + 3 degree range and can hardly be considered anomalous. Within a few areas, dips as high as -6 degrees were recorded. Exceptionally 'flat' electromagnetic response was noted between Lines 16S to 40S and west of the baseline.

INTERPRETATION OF RESULTS

The magnetic results appear to reflect the underlying phyllites and metasediments noted through geologic mapping of the grid, although outcrop is limited, no significant response was obtained over known units of phyllite and sericite schist. An area of low magnetics coincident with flat non-conductive electromagnetic results could represent a near surface intrusive plug related to the Fortin stock, float boulders of granodiorite were found close to that portion of the grid (Line 16 to 40S and west of the baseline). The irregular magnetics bordering the 'low' area may define a contact zone of alteration and are coincident with alteration noted near the Lishy showing. In the vicinity of the showing there are no magnetic results indicating the presence of

sulphide mineralization. Negative dip angles coupled with positive dips recorded on approaching the conductor are found along most lines crossing the main creek, this response is also recorded near the Lishy showing. It is not definite, due to the low amplitude of all readings whether these responses reflect conductive wet overburden areas near the creek or fault zones represented topographically by the creeks location. If the creek does reflect a fault zone, a weak northerly trending conductor over the Lishy showing could be interpreted as a cross fault related to the mineralization and alteration found there.

CONCLUSIONS AND RECOMMENDATIONS

Magnetic and electromagnetic results over the Phil Grid do not provide any conclusive evidence as to possible extensions of the Lishy showing and its related geology.

It is recommended that geochemical soil sampling be relied upon to provide evidence of possible sulphide mineralization in this area. From the geophysical results it can only be said that both magnetics and electromagnetics reflect underlying metasediments of uniform southwesterly dipping attitudes and that within the southwest sector of the grid a near surface intrusive plug may be present.

Respectfully submitted,

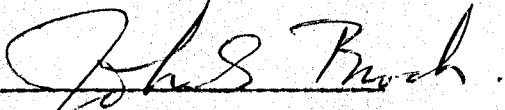


John S. Brock
Operations Manager,
Atlas Explorations Limited

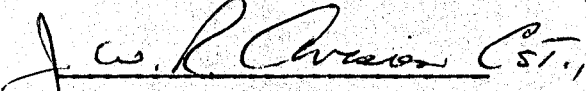
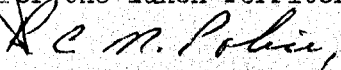
Appendix (ii)

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, John S. Brock, Operations Manager, Atlas Explorations Limited, do hereby swear that to the best of my knowledge and belief, the statement 'Summary of Costs', Appendix (i) as presented in this report 'Electromagnetic and Magnetic Surveys Phil Mineral Claims', is both correct and true.


John S. Brock

Dated this 16 day of SEPT. 1968
at Ross River, Yukon


Commissioner of Oaths in and
for the Yukon Territory


Appendix (iii)

PERSONNEL

John S. Brock	Operations Manager	Ross River, Yukon
Keneth K. Kirkland	Geologist	8371 13th Ave., Burnaby 3, B.C.
Norman Newsom	Field Assisstant	201, 1666 W 12th, Vancouver, B.C.
Jon Harper	Field Assisstant	C/O Box 250, Squamish, B.C.

GEOLOGY OF PHIL MINERAL CLAIMS

Overburden on the Phil Claims is extensive thus limiting the possibilities of any detailed geologic mapping.

The only exposures occurred in a major creek which crosses the grid area and passes close to the main showing. Of all outcrops mapped the most abundant rock type is a dark gray, finely foliated phyllite. Some outcrops were composed of lighter gray more sericitic phyllite. These rocks are very similar to those mapped southwest of Pay Mountain (6 miles east of Phil Group) and are considered to be middle-upper Cambrian in age.

The phyllites on the Phil Group have an average attitude of 120° and are dipping moderately to the southwest. No mineralization was found in any of the phyllite outcrop.

The main showing consists of a 2 to 3 foot wide quartz-sphalerite vein which appears to lie along a conformable shear forming the contact between an underlying dark gray phyllite and overlying quartz sericite schist. The vein is composed mainly of sphalerite (40 to 50%) and of quartz with minor amounts of galena and brecciated fragments of the underlying phyllite. An occasional quartz vein with minor amounts of sphalerite can be found cutting the underlying schist.

The schist, light creamy yellow to brown in colour, contains a high percentage of quartz. The quartz occurs mainly as narrow lenses 1 to 6 inches in width and less commonly as veins. In most instances, these lenses and veins are slightly mineralized with chalcopyrite, galena and sphalerite.

From an examination report by:

R. Darney, Atlas Explorations Limited,
August, 1968

FORTIN
LAKE

PAY

PAL

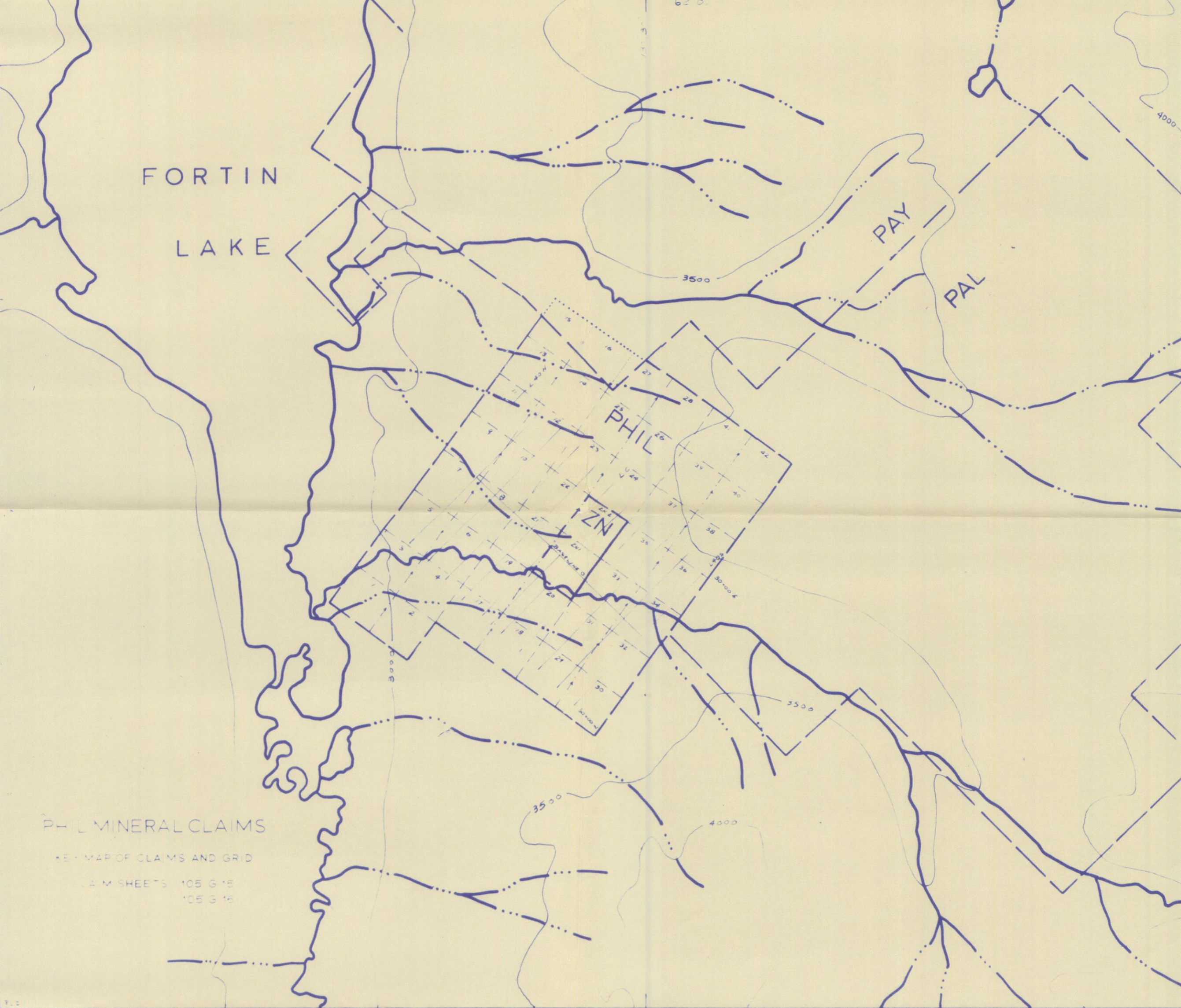
PHIL

IZN

PHIL MINERAL CLAIMS

KEY MAP OF CLAIMS AND GRID

CLAIM SHEETS 105 G 15
105 G 16



39 40
37 38

25 26
23 24

37 38
35 36

22 23
21 20

35 36
33 34

33 34
31 32

31 32
29 30

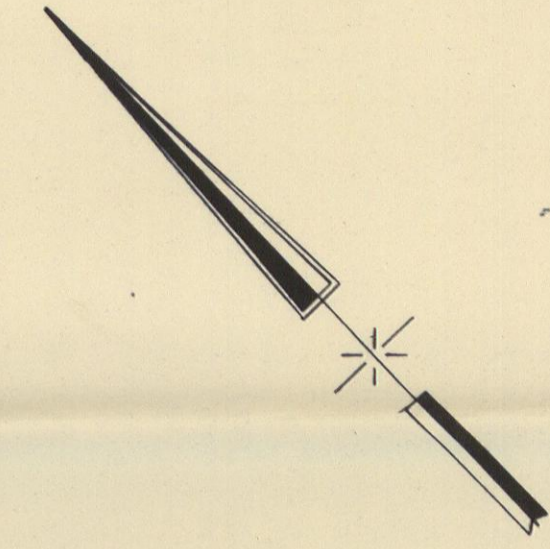
19 20
17 18

3 4
1 2

L40N L32N L24N L16N LBN Tote road to Pelly Lakes L0 L8S L16S L24S L32S L40S

Tote road to Fortin Lake

28E
24E
20E
16E
12E
8E
4E
BASE LINE 0
4W
8W
12W
16W
20W
24W
28W



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PHIL MINERAL CLAIMS GEOLOGY MAP SCALE 1"=400'

LEGEND

- 2c SERICITIC PHYLLITE - light-medium grey, fine grained with well developed foliation. Up to 15% segregated quartz.
- 2b PHYLLITE - dark grey, fine grained, foliated. Up to 50% segregated quartz, both interbedded and cross cutting
- L Altered sericitic schistose rock with quartz veining controlling mineralization.

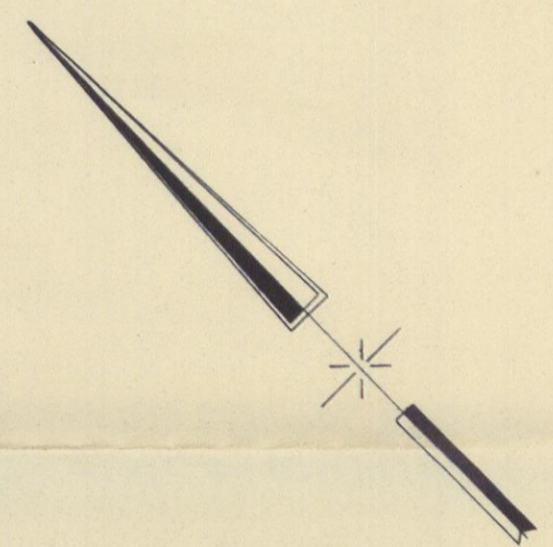
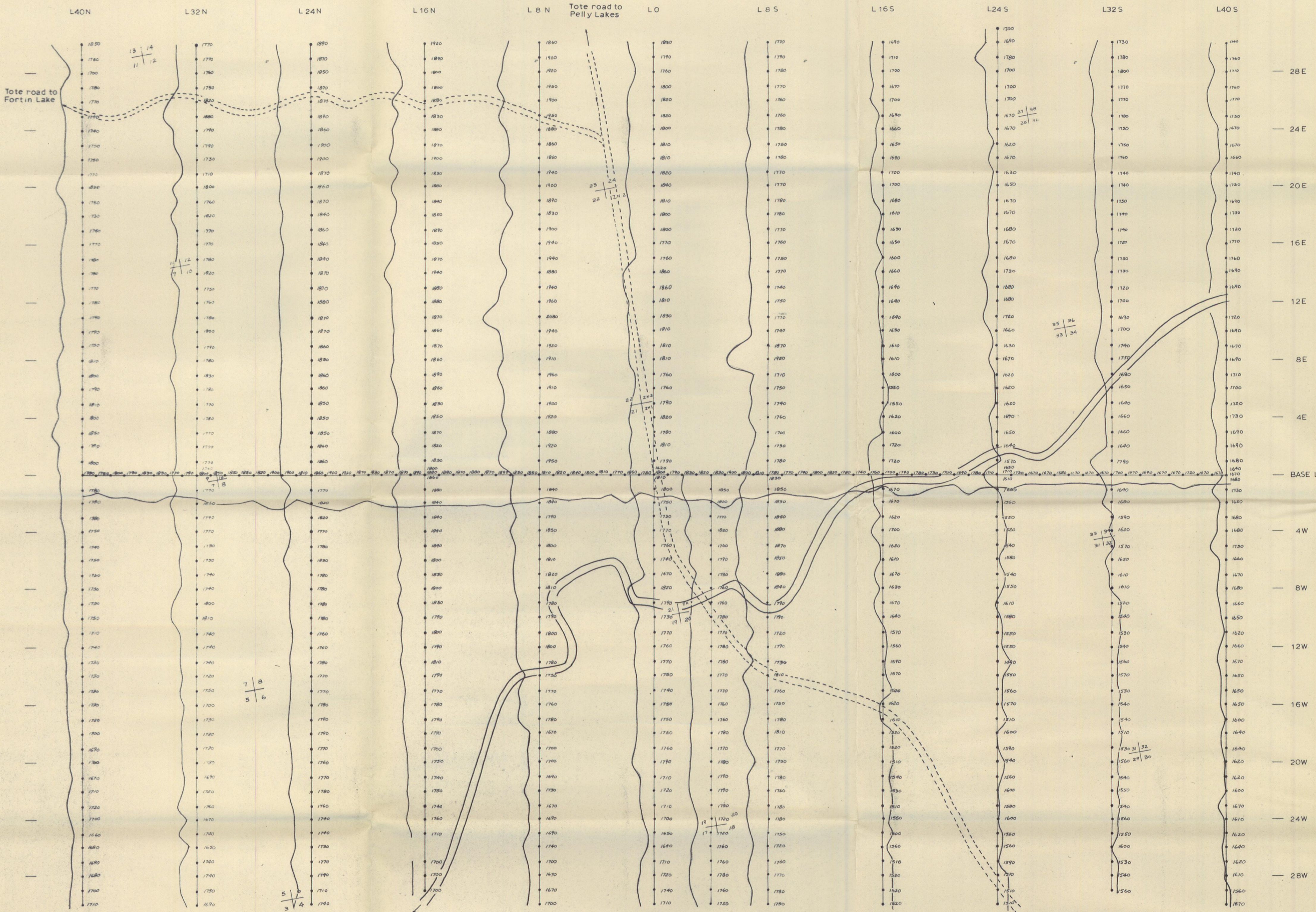
SYMBOLS

- Bedding
- Foliation
- Cat Trench
- Outcrop
- Outline of outcrop area



39 40
37 38

25 26
23 24



ATLAS EXPLORATIONS LIMITED
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 SHELDON REGION
 PHIL MINERAL CLAIMS
 GROUND MAGNETOMETER SURVEY
 VALUES & PROFILE MAP

INSTRUMENT: JALANDER
 OPERATOR: N. NEWSOM

DRAWN BY: R. DARNEY
 DATE: SEPT. 3, 1966

400 0 400 800
 scale in feet

PROFILE SCALE 1/10" = 50gammas

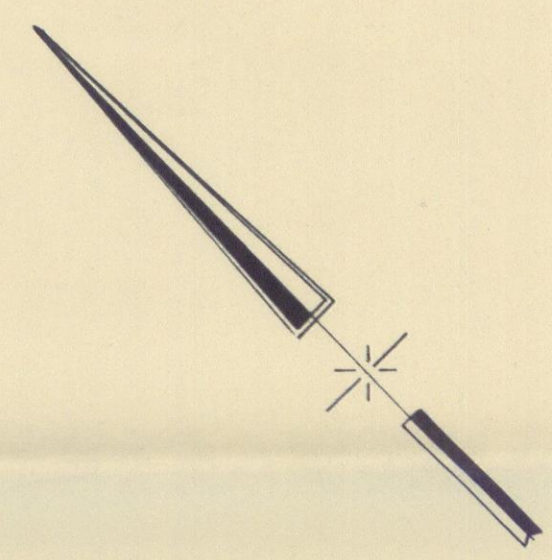
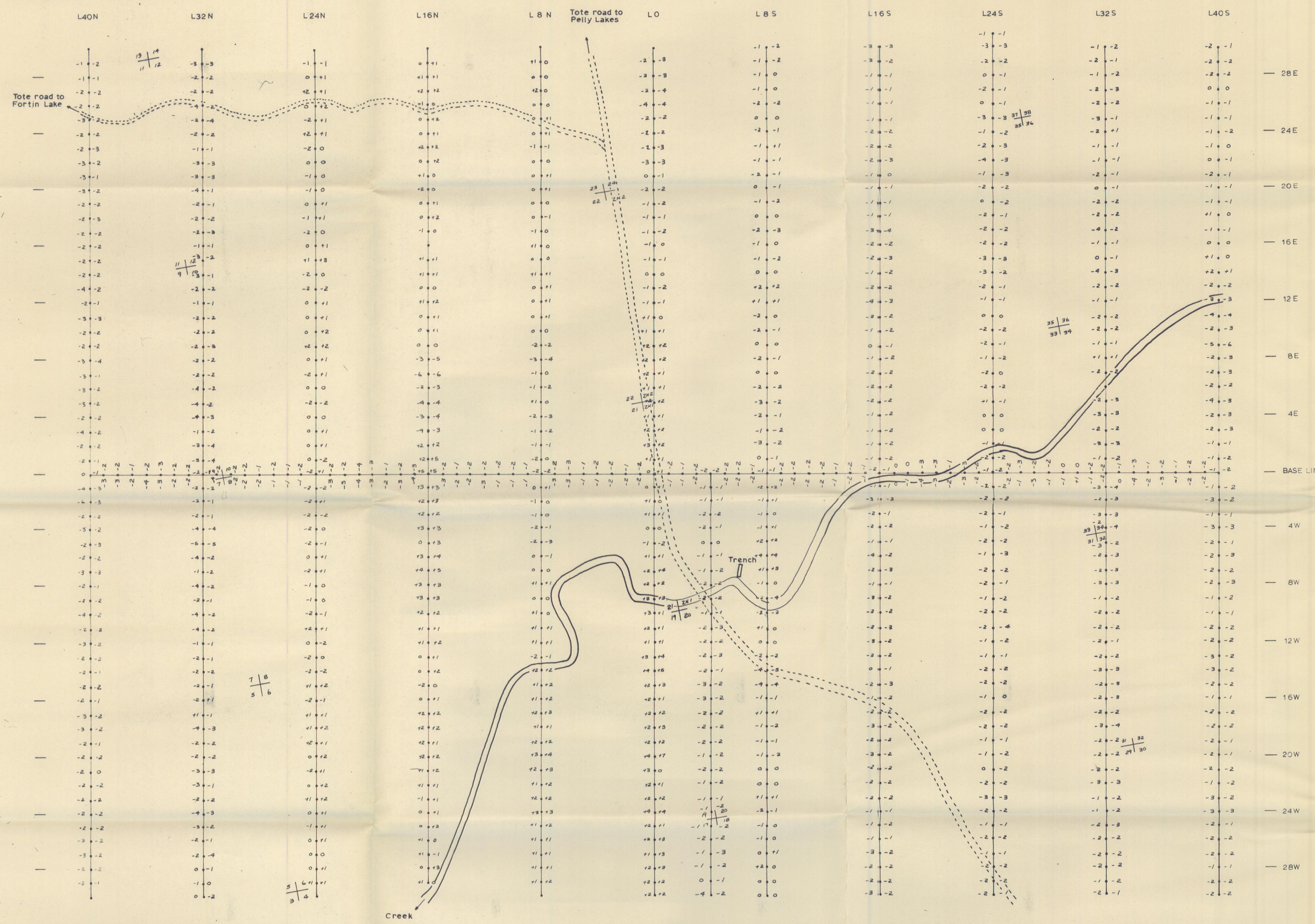
3 4
1 2

17 18

21 30

39 40
31 38

25 26
23 24

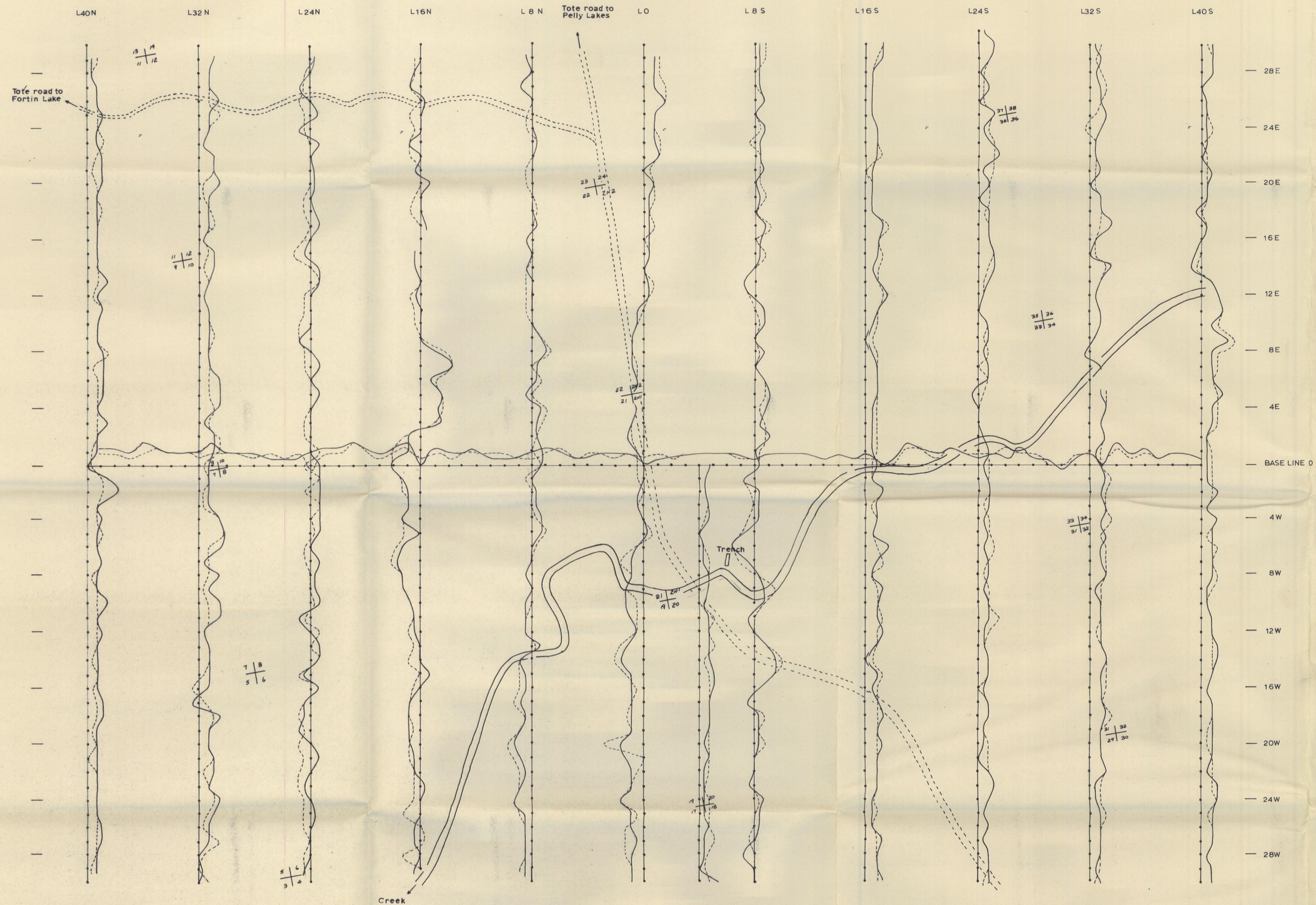


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 ROSS RIVER (Y.T.)
 SHELDON REGION
 PHIL MINERAL CLAIMS
 GROUND ELECTROMAGNETIC SURVEY
 VALUES MAP

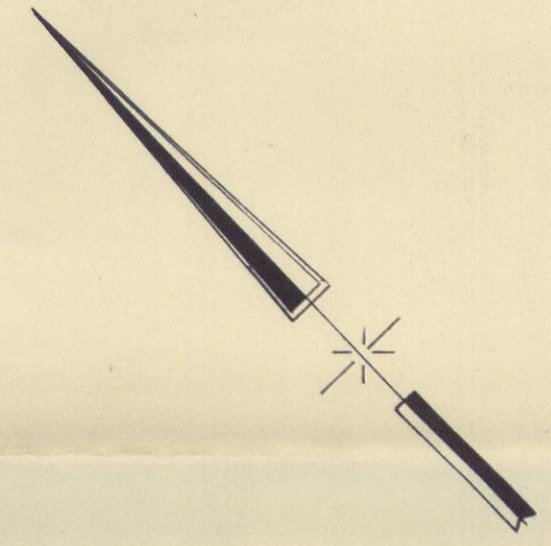
INSTRUMENT - CRONE JEM
 OPERATORS - N. NEWSOM & J. HARPER
 1800 cps 480 cps

0 400 800
 scale in feet

DRAWN BY - R. DARNEY
 DATE - SEPT. 3, 1968



— 28E
 — 24E
 — 20E
 — 16E
 — 12E
 — 8E
 — 4E
 — BASE LINE 0
 — 4W
 — 8W
 — 12W
 — 16W
 — 20W
 — 24W
 — 28W



ATLAS EXPLORATIONS LIMITED
 ROSS RIVER (Y.T.)
 SHELDON REGION
PHIL MINERAL CLAIMS
 GROUND ELECTROMAGNETIC SURVEY
PROFILE MAP

INSTRUMENT : CRONE JEM
 OPERATORS : N. NEWSOM & J. HARPER
 1800 cps 480 cps
 PROFILE SCALE 1/10" = 1° dip angle scale in feet

DRAWN BY : R. DARNEY
 DATE : SEPT. 3 1968