

REPORT ON
GEOPHYSICAL SURVEYS
ON PROPERTY OF

PARLIAMENT MINES LTD.
PELLY RIVER, YUKON TERRITORY

BY

A. C. A. Howe & Associates Ltd.

TORONTO, ONTARIO
REPORT NO. 31

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SUMMARY

Magnetic and Electromagnetic Surveys have been carried out over the Pelly River, Yukon property of Parliament Mines Ltd.

Two zones of anomalous electromagnetic conditions have been outlined. Two one line anomalies have also been detected.

The magnetic survey shows anomalously high magnetic conditions in the north west part of the property.

Follow-up work consisting of geochemical surveying and geological mapping is recommended. The cost of this work is estimated at \$7,200.00.

PROPERTY

The property consists of twenty-seven contiguous claims designated PlX 1--PlX 27 inclusive. The claims are shown on Mineral Claim Sheets 105K-2 and 105K-3, Department of Northern Affairs and Natural Resources, Canada.

LOCATION AND ACCESS

The claim group is located immediately north of Buttle Creek and approximately two miles south of Pelley River and some thirty miles northwest of the Ross River Trading Post, Yukon Territories.

The co-ordinates are approximately $133^{\circ} 00' W$ and $62^{\circ} 06' N$.

Ross River Trading Post is accessible by means of the Canol Road, from the Alaska Highway east of Whitehorse approximately 140 miles. The property can be reached by helicopter from Ross River.

TOPOGRAPHY

The property overlies a rolling topography with elevations ranging from 2500 to 3500 feet.

HISTORY

To the writer's knowledge, there has been no previous work done on the property.

REGIONAL GEOLOGY

The area is described by L. H. Green in G.S.C. paper 65-19, 1964, and the geology is shown on G.S.C. Tay River Geological Sheet No. 13-1961.

The area is underlain by rocks classed as Palaeozoic and consists of quartzose granulite, skarn, quartz sericite schist, hornfels and phyllite, chlorite schist, altered andesite and minor crystalline limestone.

The rocks in the area have a general northwest-southeast strike and chloritization and shearing are reported to be common.

These rocks have been intruded by granite rocks such as quartz-monzonite and granodiorite of probably Cretaceous Age.

GEOLOGY OF THE PROPERTY

The G.S.C. geological map 12-1961 indicates that the property is underlain by rocks designated unit (7).

A large granitic mass lies just south of the property.

An assumed fault trends northwesterly along the southwest side of the property.

ECONOMIC GEOLOGY

Mineralization consisting of pyrite, galena and sphalerite has been discovered in the Vangorda Creek and Swim Lake Areas. The mineralization occurs in sericite schists and phyllites (unit 7) usually near a granite contact.

Kerr Addison have discovered two lead-zinc sulphide deposits, one at Vangorda Creek 12 miles northwest of Parliament Mines Limited and one at Swim Lake 6 miles northeast of Parliament Mines Limited. Dynasty Explorations have discovered a similar type of deposit at 21 miles northwest of Parliament Mines Limited.

SURVEYS COMPLETED

Lines spaced at 400' intervals with stations every 100' were cut and the claim group was surveyed using a Crone Geophysics Ltd. J.E.M. unit, using the 'shoot back' method, 200' coil separation.

The Magnetic Survey was carried out using a Sharpe MF 1 fluxgate magnetometer. Field readings were taken to the nearest 10 gammas. Diurnal variation corrections were made and are reported to the nearest 5 gammas.

Technical details of the instruments used are included in Appendix I.

RESULTS OF SURVEYS

The Electromagnetic Survey indicated two areas of anomalous responses, and two one-line anomalies.

The two areas are located as follows; Area 1: 2400' to 3400' north of base line, lines 36 E to 48 E inclusive, Area 2: 2600' to 3200' north of base line, lines 20 W to 36 W inclusive.

The one-line anomalies are located at 700' S line 32 E and 800' S line 8 W. The two anomalous areas may be caused by conductive fault structures or possibly by disseminated sulphides. The one line anomalies are distinct but weak responses. These could also be due to conductive faults or narrow sulphide bands.

The magnetically anomalous area extends from line 12 W to line 48 W and lies in the area between stations 900 N and 1800 N. The magnetic body appears to dip steeply to the south-west. This body may indicate an intrusive dyke or possibly a body of magnetic sulphides.

CONCLUSIONS AND RECOMMENDATIONS

The areas of geophysical anomalies should be checked to determine whether the cause may be attributed to sulphide mineralization.

A program of geochemical sampling in the anomaly areas and geological mapping of the property is recommended.

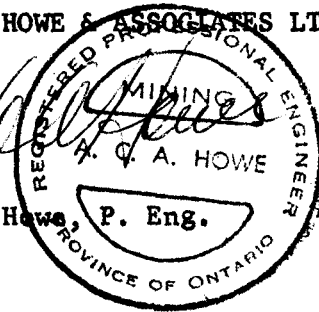
The cost of this work is estimated as follows:

Geochemical survey (THM C _x method)	\$2,000.00
Geological mapping of property	3,000.00
Mobilization	1,000.00
Supervision and Contingency	<u>1,200.00</u>
TOTAL	<u>\$7,200.00</u>

Respectfully submitted,

A. C. A. HOWE & ASSOCIATES LTD.,

A. C. A. Howe P. Eng.



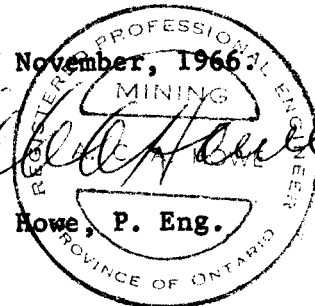
CERTIFICATE

I, A. C. A. Howe, of the City of Toronto, in the County of York, Province of Ontario, hereby certify that:

1. I am a Mining Engineer with offices at 826-159 Bay Street, Toronto, Ontario.
2. I am a graduate of London University, England, B.Sc. in 1949.
3. I am a member of the Association of Professional Engineers of Ontario, and of British Columbia.
4. I have no interest, direct or indirect, in either the property or securities of Parliament Mines Ltd., nor do I expect to receive any such interest.
5. This report is based on the results of Geophysical Surveys carried out under my direction and supervision during the month of September, 1966.

DATED at Toronto, Ontario, this 18th day of November, 1966.

A. C. A. Howe, P. Eng.



T E C H N I C A L D E T A I L S

Crone J.E.M. Dual Frequency Unit

Each coil is a combined transmitter - receiver

Frequencies - High 1800 C.P.S.

- Low 480 C.P.S.

Input to transmitter: - 0.6 x 12 Watts

Receiver sensitivity - 1800 C.P.S. approx. 0.10 microvolt

- 480 C.P.S. approx. 0.10 microvolt

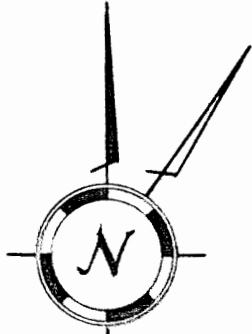
D E S C R I P T I O N O F M E T H O D

CRONE GEOPHYSICS LIMITED, J.E.M. UNIT

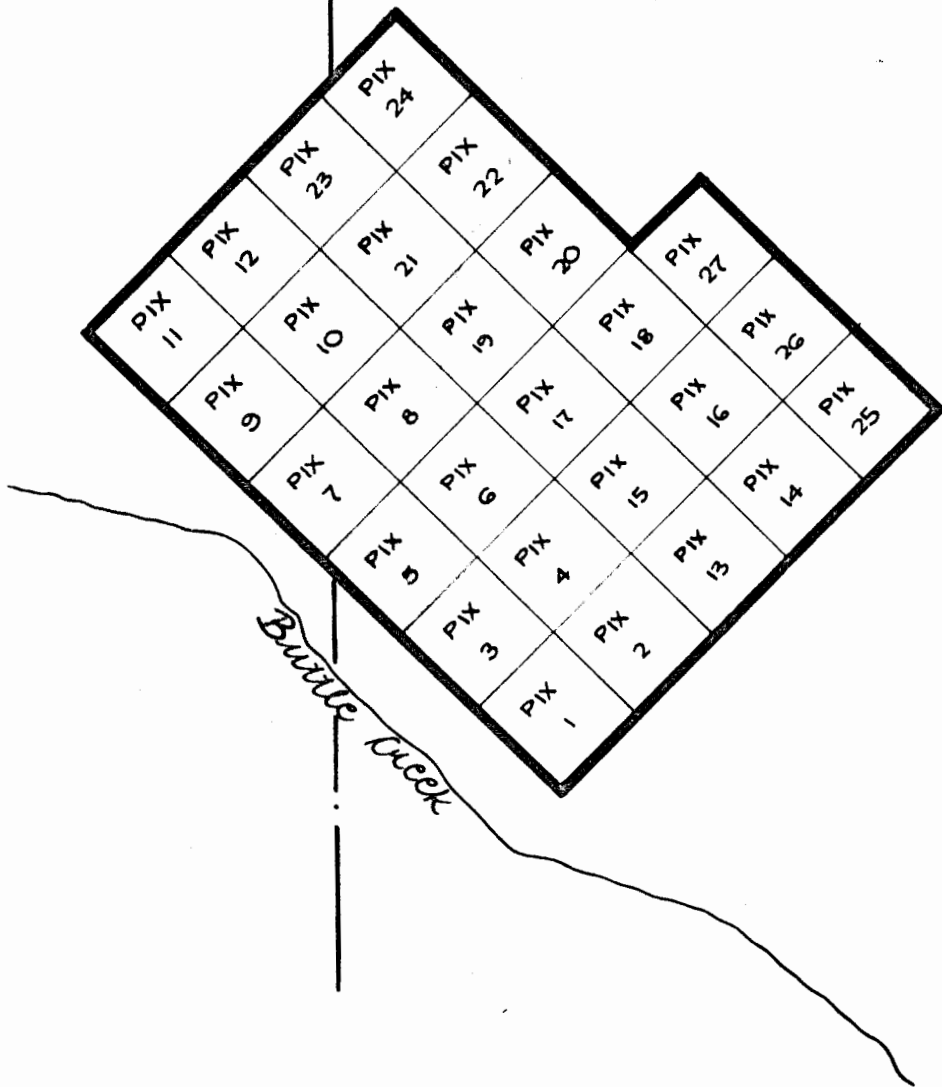
The method used is generally known as the "Shoot Back" technique, since both coils are capable of transmitting and receiving. At each station the operators alternatively transmit and receive. The final reading, plotted at the point midway between the two coils, is the resultant of the two dip angles recorded by the operators.

The high frequency signal (1800 C.P.S.) is used throughout the Survey except where anomalous conditions appeared to exist; in this case several check stations are read on the low (480 C.P.S.) frequency. A positive resultant generally occurs over the axis of a vertical or near vertical conductor with negative resultants at the edges of the conductor.

(Ref. Interpretation Theory in Applied Geophysics, -- Grant & West McGraw - Page 448; Crone Geophysics J.E.M. instruction manual)



105K-3
105K-2

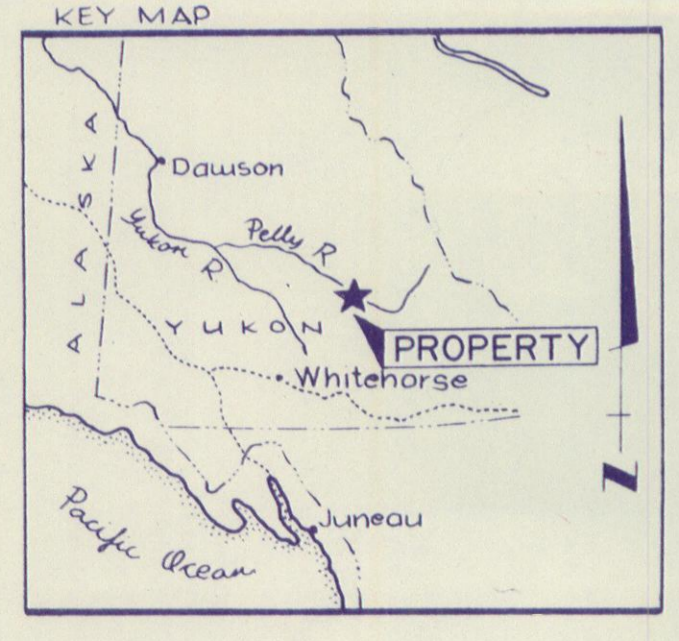
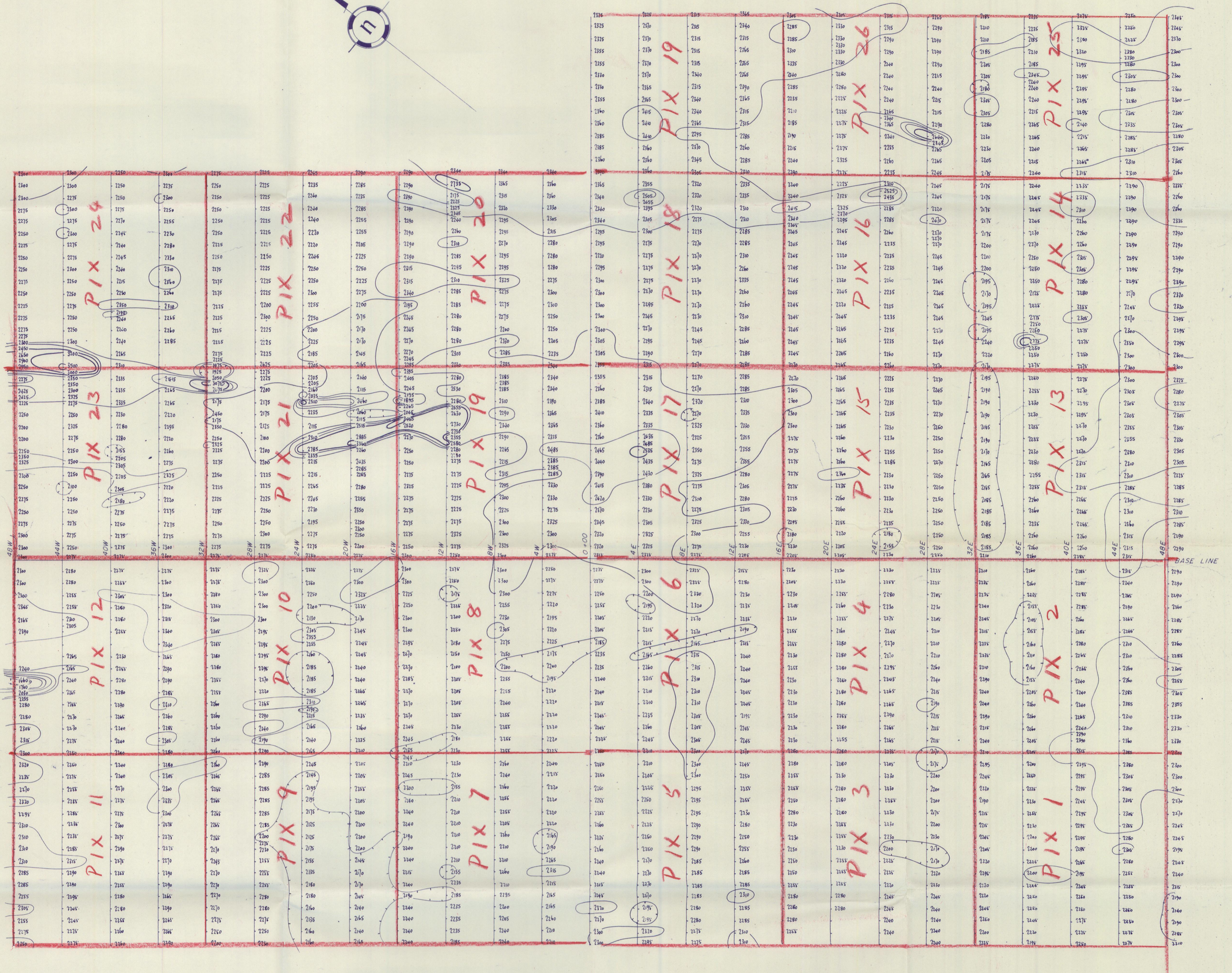
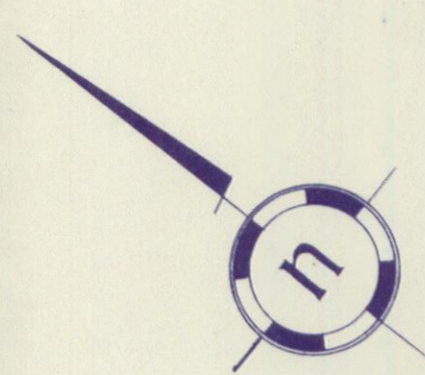


Claims location map

PARLIAMENT MINES LTD.
PELLY RIVER AREA, YUKON TERRITORY

SCALE: 1IN TO 1/2 MILE

A.C.A. HOWE & Assoc., Mar '66.



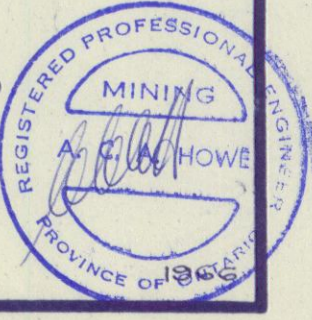
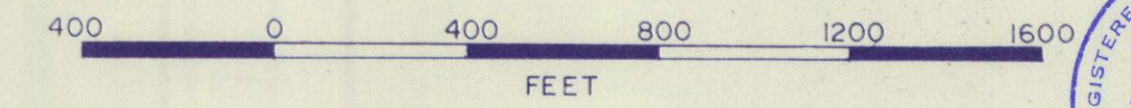
- SYMBOLS
- Measurement station along picket line.
 - Relative value of the vertical component of the earth's magnetic field in gammas
 - Magnetic contour, interval 100 gammas below 2500 γ, 500 above
 - Magnetic depression

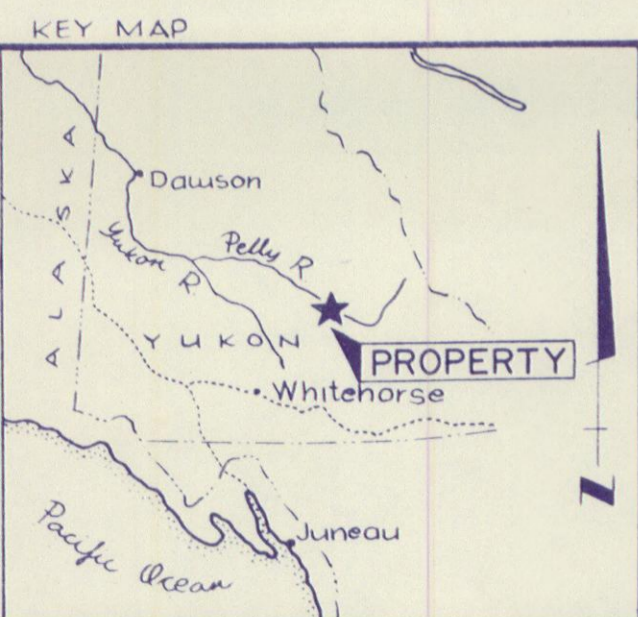
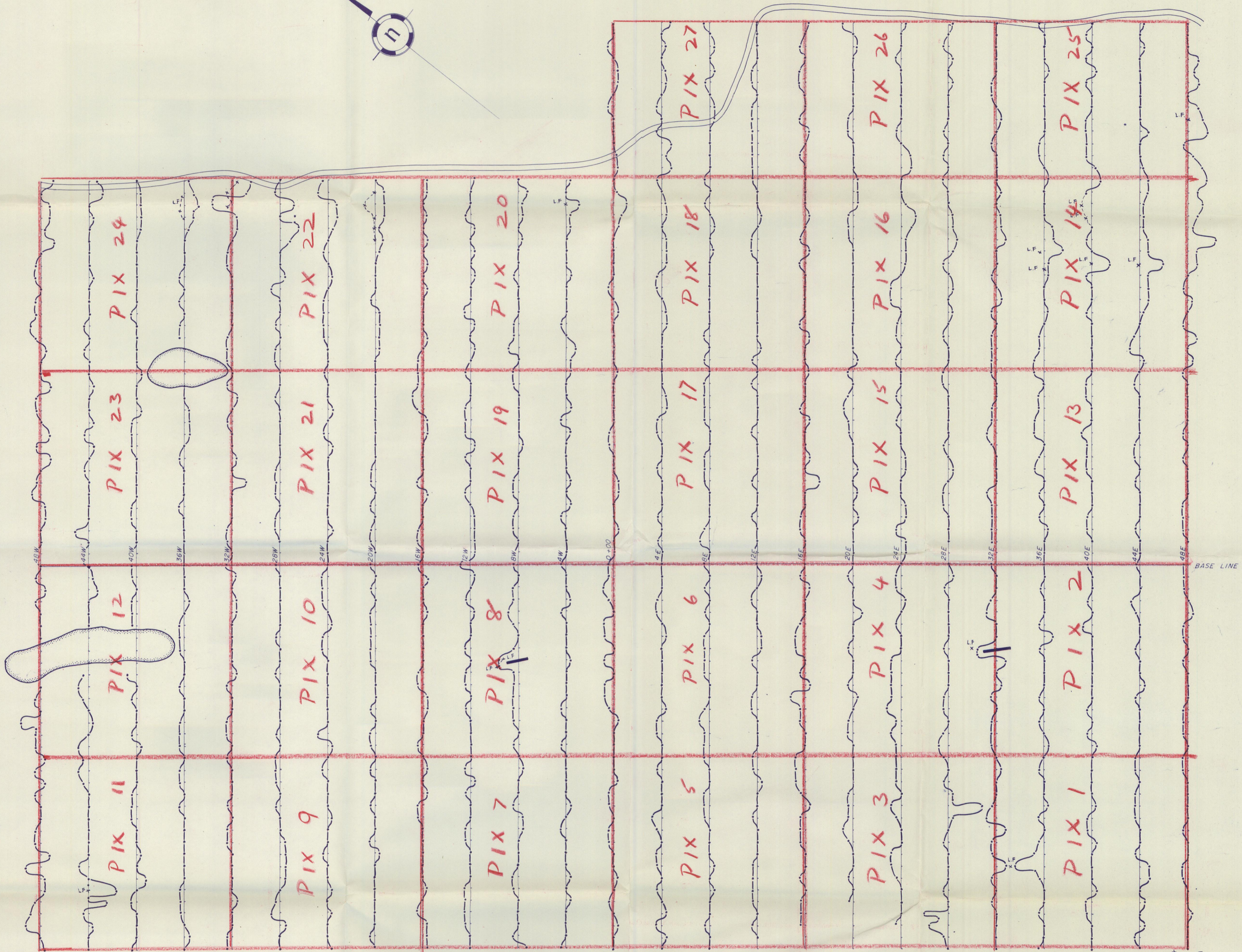
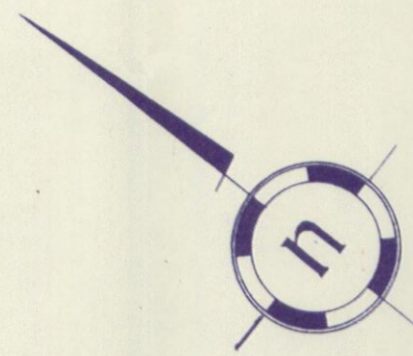
INSTRUMENT: SHARPE M.F.1 FLUXGATE MAGNETOMETER

PARLIAMENT MINES LTD.
PELLY RIVER AREA, YUKON TERRITORY

MAGNETOMETER SURVEY

A.C.A. HOWE & ASSOCIATES LTD.
TORONTO & VANCOUVER, CANADA





SYMBOLS

- Low freq
 - High freq
 - Measurement station picket line
 - Dip angle profile [Positive dips are plotted left of line. Negative dips are plotted right of line.
 - Scale of profile 1 in. = 10° of tilt
 - Indicated conductor
- INSTRUMENT Crone J.E.M. dual frequency 1800 cps & 480 cps
Shootback method 400' coil separation.

PARLIAMENT MINES LTD.
PELLY RIVER AREA, YUKON TERRITORY

ELECTROMAGNETIC SURVEY

A.C.A. HOWE & ASSOCIATES LTD.
TORONTO & VANCOUVER, CANADA

