

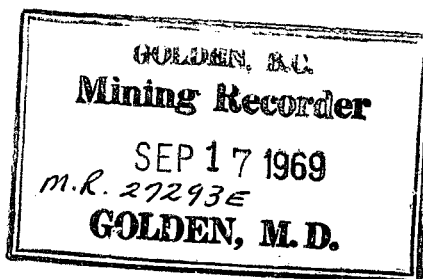
2051

INTERPRETATION OF GEOPHYSICAL SURVEYS
YORNOG GROUP
BEN ABLE CREEK 82K08E
FOR
DRESSER MAGCOBAR CANADA

BY

A. C. A. HOWE INTERNATIONAL LIMITED

A. C. A. HOWE, P. ENG. (BC)



REPORT NO. 230

TORONTO, ONTARIO.
OCTOBER 20, 1969.

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MAPS	At rear

- #1 J.E.M. Crone Method: 1"=100'
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- #3 Vertical Loop E.M. Survey: 1"=100'
- #4 SE 300 Vertical Loop: 1"=50'
- #5 *Linecutting in Green Bush For Geophysical Grid*
APPENDIX 1" = 200'

Crone J.E.M. Dual Frequency unit
SE 300 Dual Frequency Electromagnetic Transceiver

MAPS

- #6 - 1" = 50 miles
- #7 - 1" = 1 mile
- #8 - 1" = 1500 feet

*At Rear
(Addendum)*

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 2051A MAP

INTRODUCTION

A portion of the Yornoc claim group on Ben Able Creek was covered by two electromagnetic surveys.

Crone J.E.M. method and SE 300 Vertical Loop Surveys were done during August 1969.

DESCRIPTION OF SURVEYS

Both surveys were run on control lines spaced at 100' intervals with stations established every 100'. Detailed investigations were made in local areas with lines cut at 50' intervals and readings taken at 50' stations along the lines.

CRONE J.E.M. SURVEY

Base A Portion:

The base line originated at Base A and was extended 400' west and 700' west towards Base B. The survey was run on lines spaced at 100' and determinations of the resultant electromagnetic field made at regular 100' stations. One intermediate line, 1+50 E was established.

One weak anomaly (3°) was indicated centered on station 1+50 S/line 1+00 E: - The anomaly was also detected

at 1+50 S/line 1+50 E.

CONCLUSIONS AND RECOMMENDATIONS

The zone is open to the west. Lines 0+00 to 4+00 W should be extended 400' south and additional J.E.M. Surveying be done to delineate the westward extension of the zone indicated on line 1+00 E.

Base B Portion:

5 Lines were run parallel to the base line extending between Base A and Base B and one line (21+00 E) surveyed to 15+00 S.

CONCLUSIONS AND RECOMMENDATIONS

There are no significant anomalies in the area surveyed. Additional work in the grid area is not warranted.

SE 300 ELECTROMAGNETIC SURVEY

Base A Portion:

The Vertical Loop Electromagnetic Survey was run both north and south of the base line. Direction of receiver travel is north in the Base A Portion of the grid (in line method). No definite anomalous conditions were located.

Variations in tilt angles are attributed to influence of topography rather than conductive bodies.

CONCLUSIONS AND RECOMMENDATIONS

On the basis of the results of the SE 300 Survey no additional work can be recommended.

Base B Portion:

The Vertical Loop Electromagnetic Survey was run in two travel directions.

One survey plotted at 1"=50' was done with the receiver travelling north (in line method). Variations in tilt angles are attributed to topography.

The second survey was done using fixed transmitting stations as noted on the map. Two transmitter locations were used and the polarity of readings adjusted to permit data from each station to be easily compared. Variations in the tilt angles are attributed to topography rather than conductive zones.

Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED


A. C. A. Howe, P. Eng. (BC)

DATED AT TORONTO, ONTARIO THIS 20th DAY OF OCTOBER, 1969.

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

Methods of operation. J.E.M. (shoot back)

(Ref. Interpretation Theory in Applied Geophysics Grant &

West - McGraw Hill - Page 448.)

SE-300

DUAL FREQUENCY ELECTROMAGNETIC TRANSCIVER

The SE-300 Electromagnetic Unit has embodied in its design many new features. It consists of two identical transceiver units which permits ground to be surveyed at twice the normal operational rate. They also provide maximum operational efficiency. The dual frequency feature provides discriminatory information regarding the conductivity of subsurface conductors and aids in resolving overburden from bedrock effects.

A unique receiver circuitry extends the useful separation of the transceiver to 1200 feet, providing greatly increased effective depth penetration. The SE-300 is designed in such a manner that one can purchase as an additional accessory, a phase measuring device, without inter-connecting cables, which provides additional conductor discrimination.



S P E C I F I C A T I O N S

FREQUENCY RANGE: 400 cps. and 1600 cps. (other frequencies optional).

FREQUENCY STABILITY: Better than $\pm 2\%$ over extended periods at normal ambient temperatures.

FREQUENCY TRACKING: Receiver versus transmitter. Better than 1% over temperatures from -40°F to 104°F .

TRANSMITTER OUTPUT: Approx. 150 NI at 1600 cps. and approx. 180 NI at 400 cps. Higher outputs optional.

SEPARATION: Up to 1200 feet using 1600 cps. deflection is $\pm 5^{\circ}$.
600 feet using 400 cps. deflection is $\pm 5^{\circ}$.

RECEIVER SENSITIVITY: 50 Millimicrovolts.

BATTERY: 2 x No. 731 Eveready lantern batteries or NEDA 918.

BATTERY LIFE: Approximately 10 days.

WEIGHT: Coil — $8\frac{1}{2}$ lbs., 3.85 Kg.
Receiver — 2 lbs., .90 Kg.
Transmitter — $20\frac{1}{2}$ lbs., 9.3 Kg.

ADDENDUM TO A.C.A. HCWE REPORT NO. 230

TITLED

INTERPRETATION OF GEOPHYSICAL SURVEYS

YORNOC GROUP

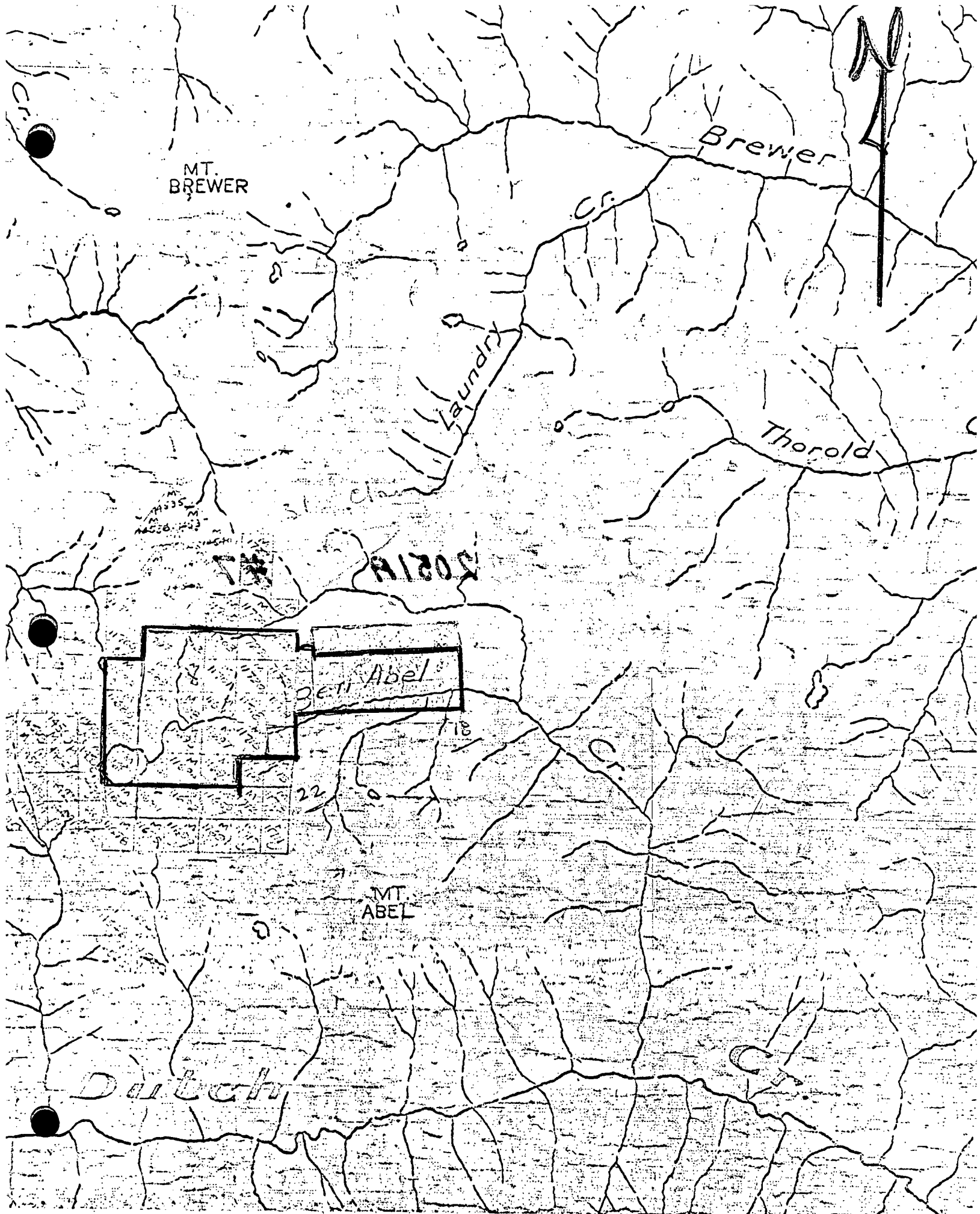
BEN ABLE CREEK

PROPERTY CO-ORDINATES: APPROXIMATELY $50^{\circ} 18' N$

$116^{\circ} 15' W$

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NO. 2051A MAP #6



MT. BREWER

Brewer

Laundry

Thorold

YORNDOC

Beth Abel

MT. ABEL

Dutch

YORNDOC GROUP

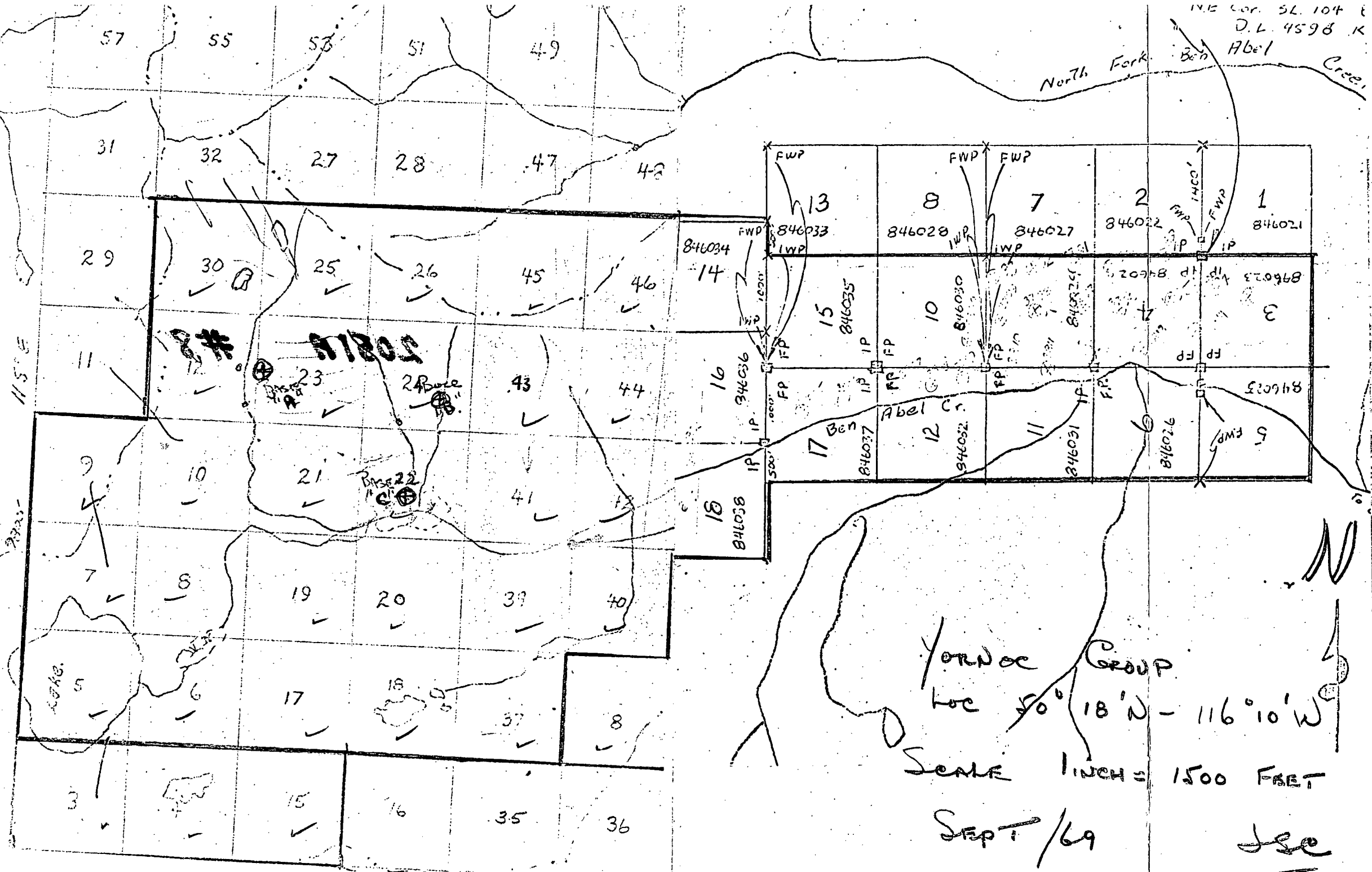
SCALE 1 INCH = 1 MILE.

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NO. **2051A** MAP **#7**

NE Cor. SL 104 &
D.L. 4598 K
Abel

North Fork Ben Abel Creek



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NO. **2051A** MAP **#8**

BASE 'A'

Base B

True North
Magnetic Declination
22° EAST

J.E.M. Crone Information

- ↑ — Traverse Direction
- — Plotted Results
- 200 Ft — Spacing between Help and Chief
- 1800 cps — High Frequency used
- Scale 1/4 Inch = 1 degree

DRESSER MINERALS
DIVISION OF
DRESSER INDUSTRIES LTD.
BEN ABEL CREEK DISTRICT
YOR NOC CLAIM GROUP

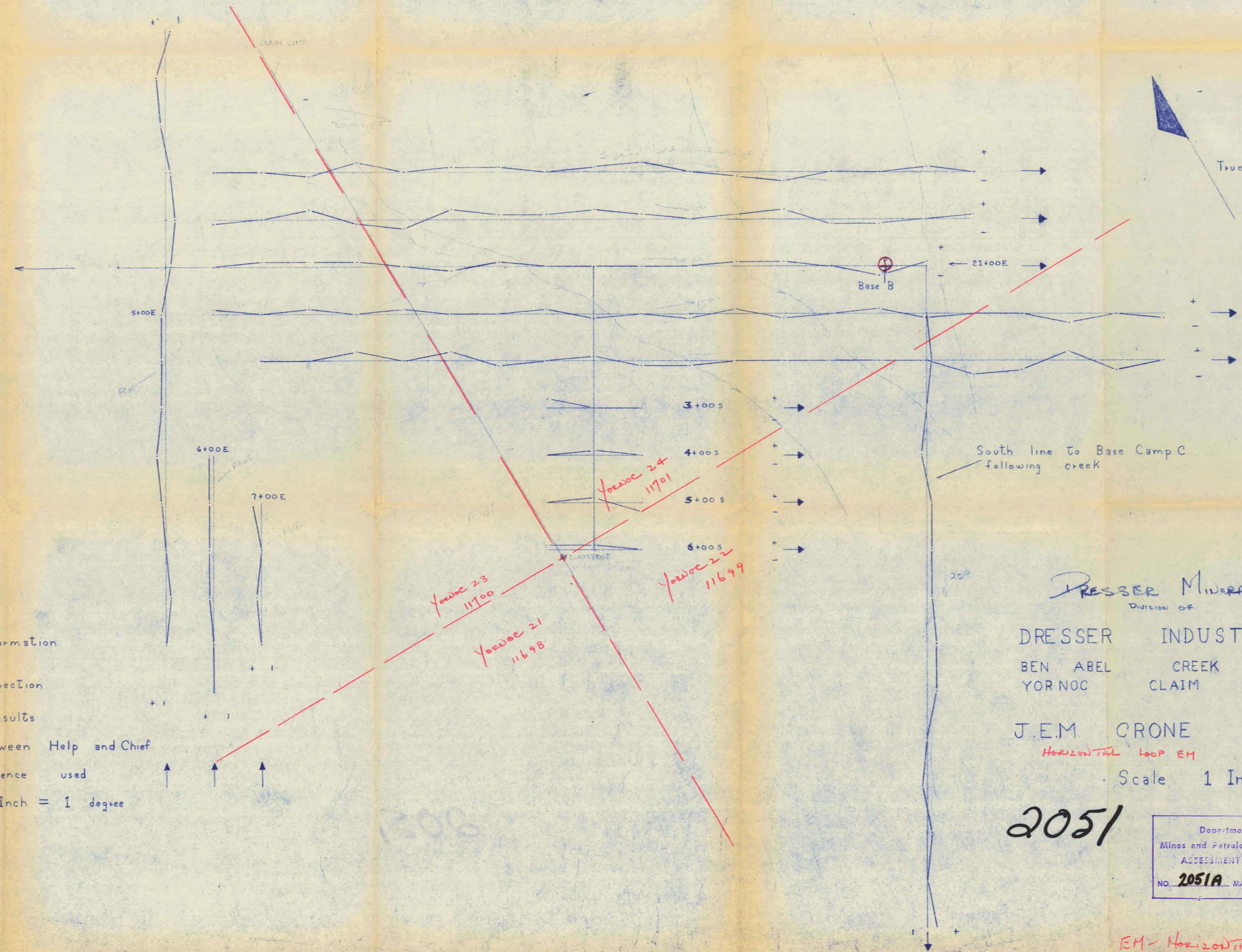
J.E.M. CRONE METHOD
HORIZONTAL LOOP EM
Scale 1 Inch = 100 Ft

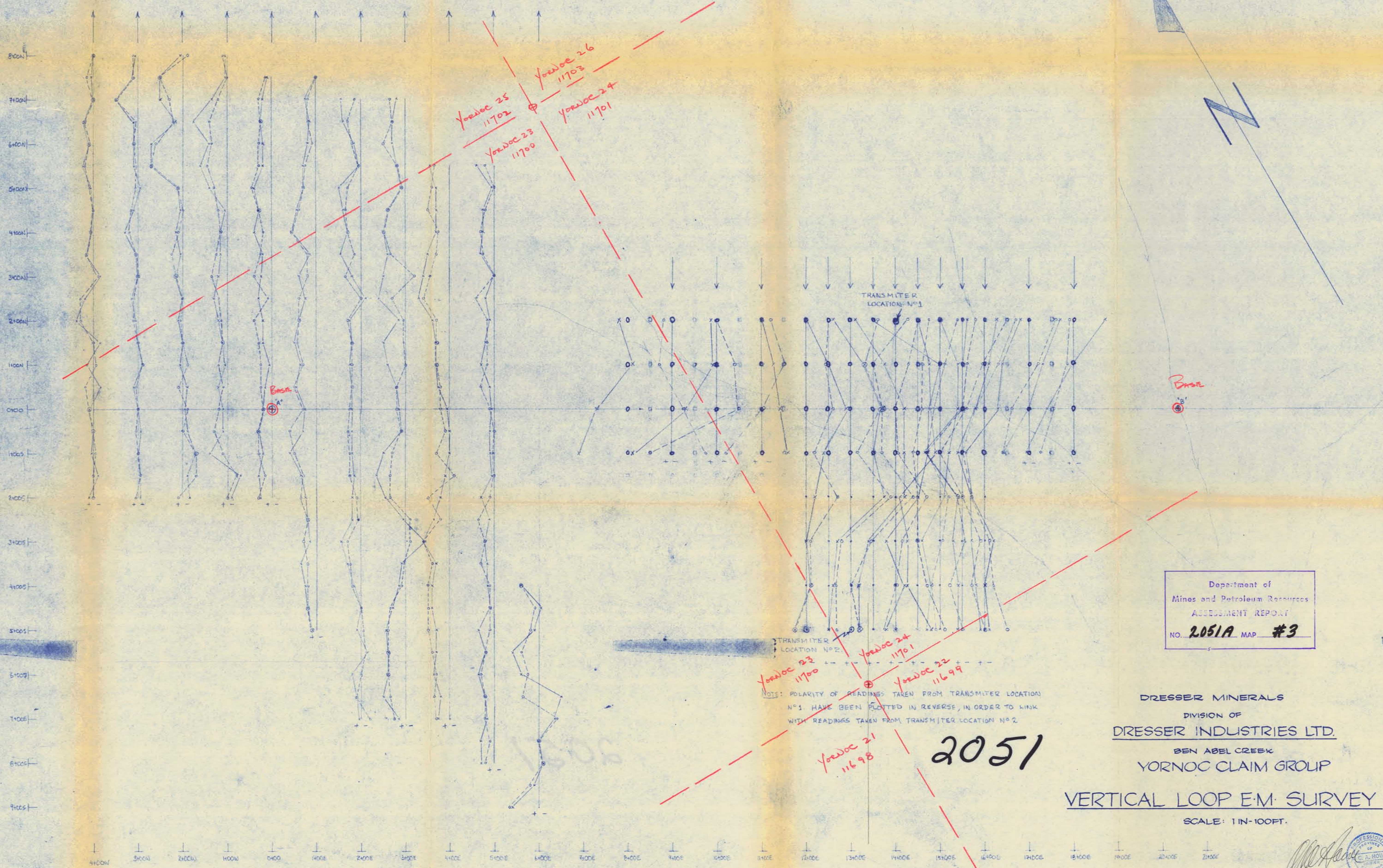
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NO. 2051A MAP #2



EM - Horizontal Loop
BASE "B" AREA





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NO. **2051A** MAP **#3**

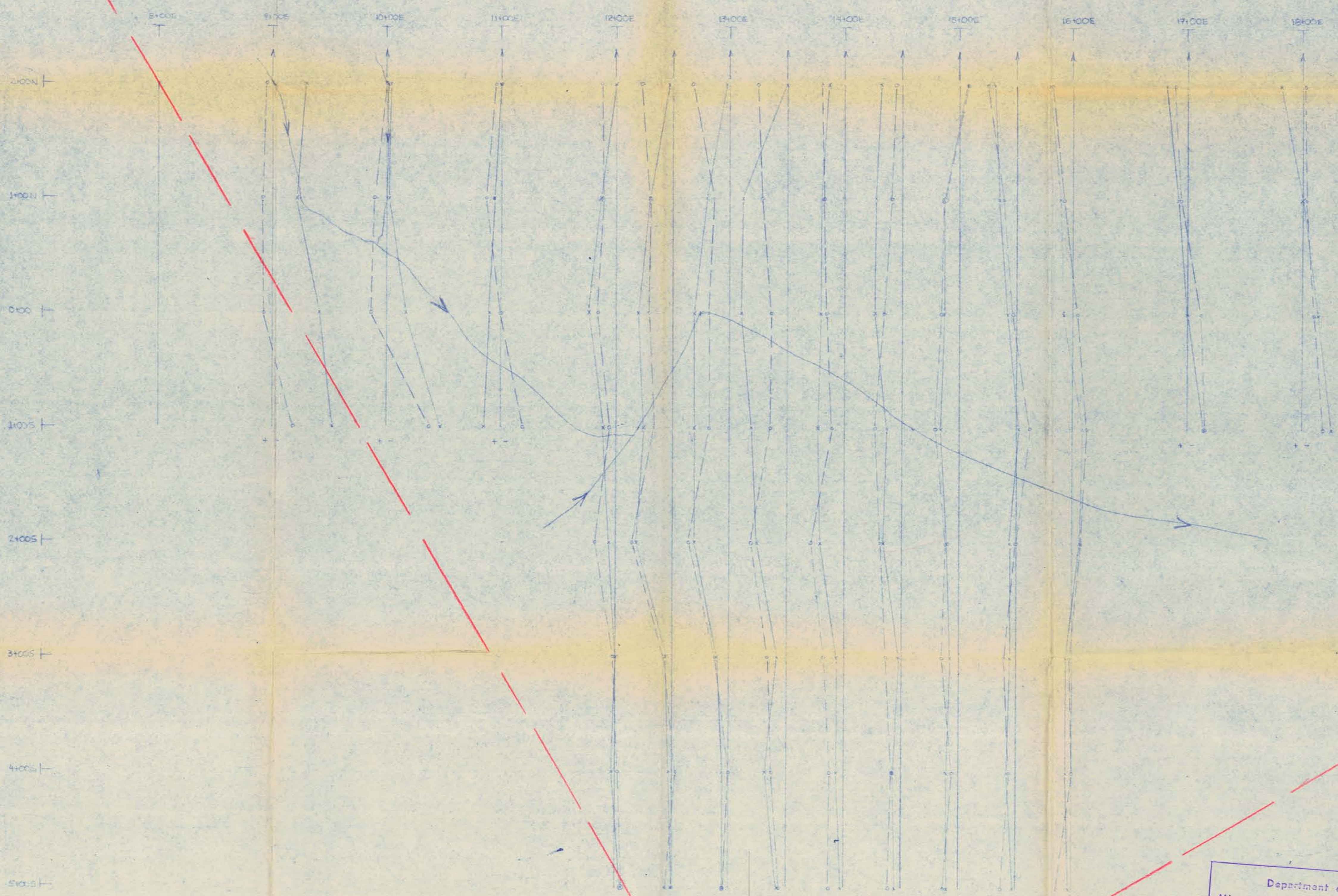
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DIVISION OF
DRESSER INDUSTRIES LTD.
BEN ABEL CREEK
YORNOC CLAIM GROUP
VERTICAL LOOP E.M. SURVEY
SCALE: 1 IN = 100 FT.

NOTE: POLARITY OF READINGS TAKEN FROM TRANSMITTER LOCATION NO. 1 HAVE BEEN PLOTTED IN REVERSE, IN ORDER TO LINK WITH READINGS TAKEN FROM TRANSMITTER LOCATION NO. 2.

[Signature]
PROFESSIONAL
ENGINEER
C. A. HOWE
1970

Expiry Date October 20, 1970
SEPT. 10/69

Base "A" Area



5000
4000
3000
2000
1000
0
1000
2000
3000
4000
5000

8+00E 9+00E 10+00E 11+00E 12+00E 13+00E 14+00E 15+00E 16+00E 17+00E 18+00E

Magnetic declination 27°E

⊕ BASE 'B'

Readings plotted such that V_{00} is equal to 10

Yor. No. 23
11700

Yor. No. 24
11701

Yor. No. 22
11699

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NO. 2051A MAP #4

DRESSER MINERALS LTD
BEN ABL PROPERTY
SE-300 VERTICAL LOOP

0 50 100 150
FEET

— HIGH FREQUENCY CURVE (1600 CPS)
- - - LOW FREQUENCY CURVE (480 CPS)

POSSIBLE "B" AREA.



MINES DATA SHEET 20, 1978

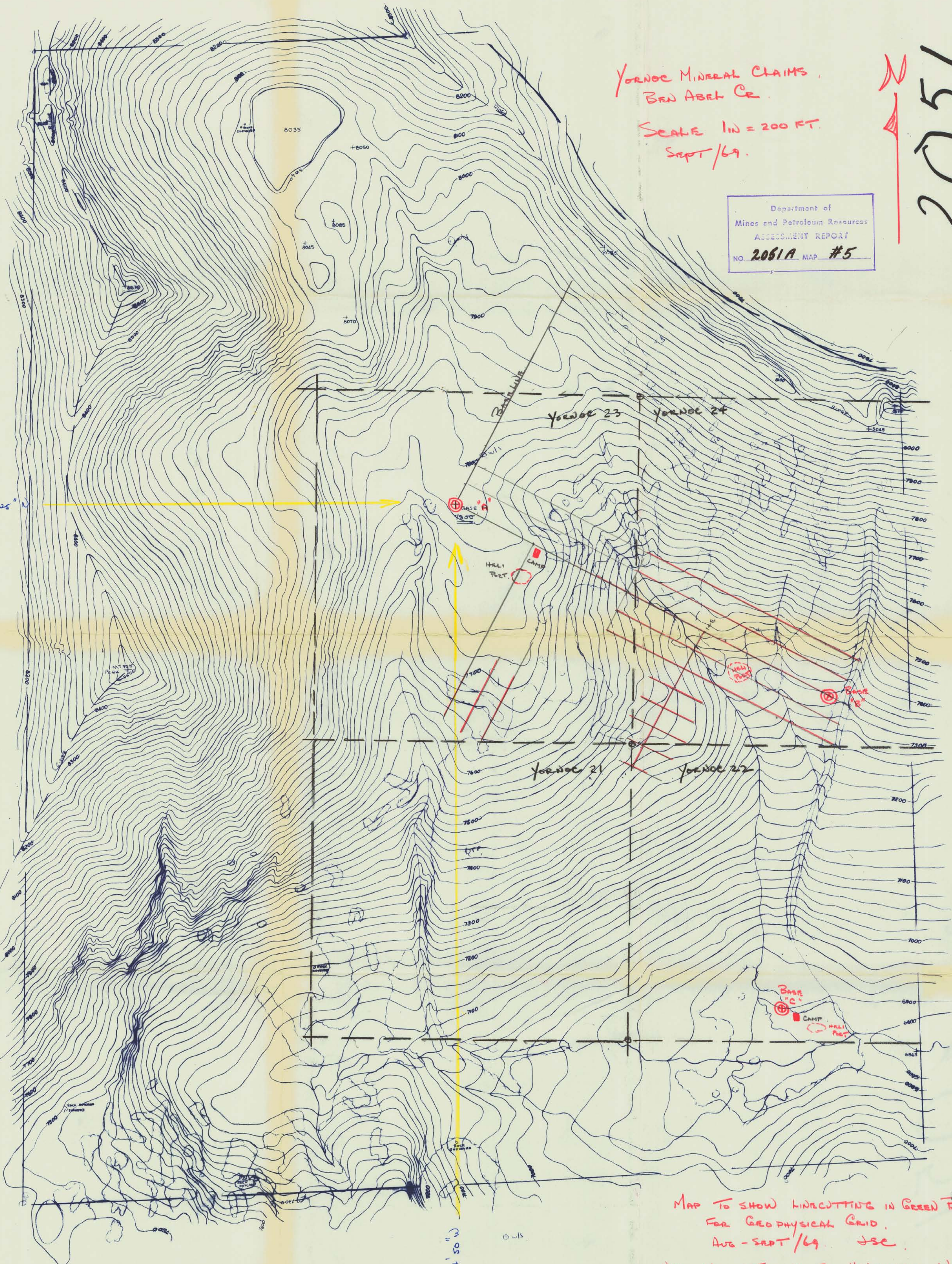
YORNOC MINERAL CLAIMS
BRN ABRIH CR.

SCALE 1" = 200 FT.
SEPT/69.

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NO. 2051A MAP #5

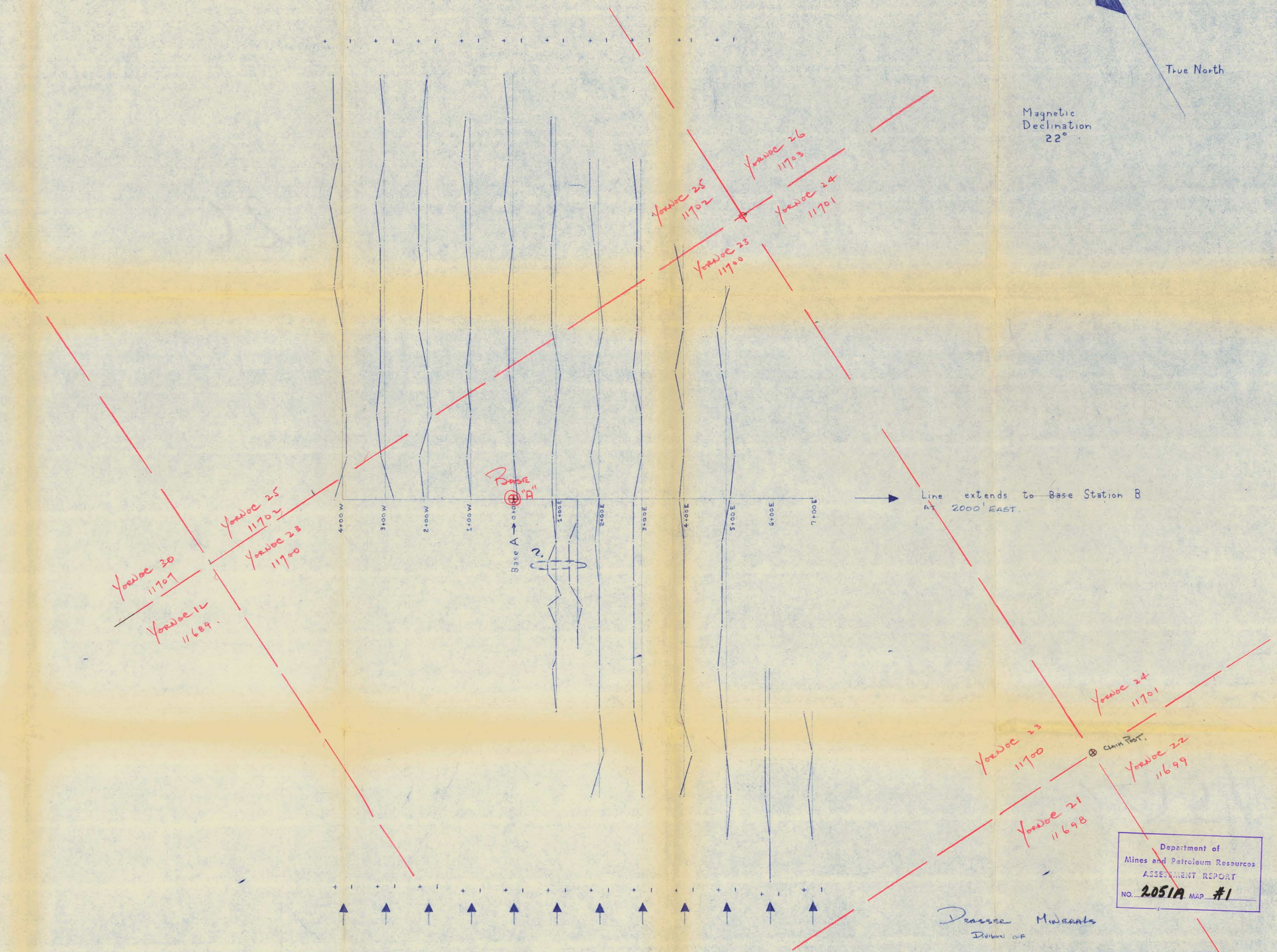
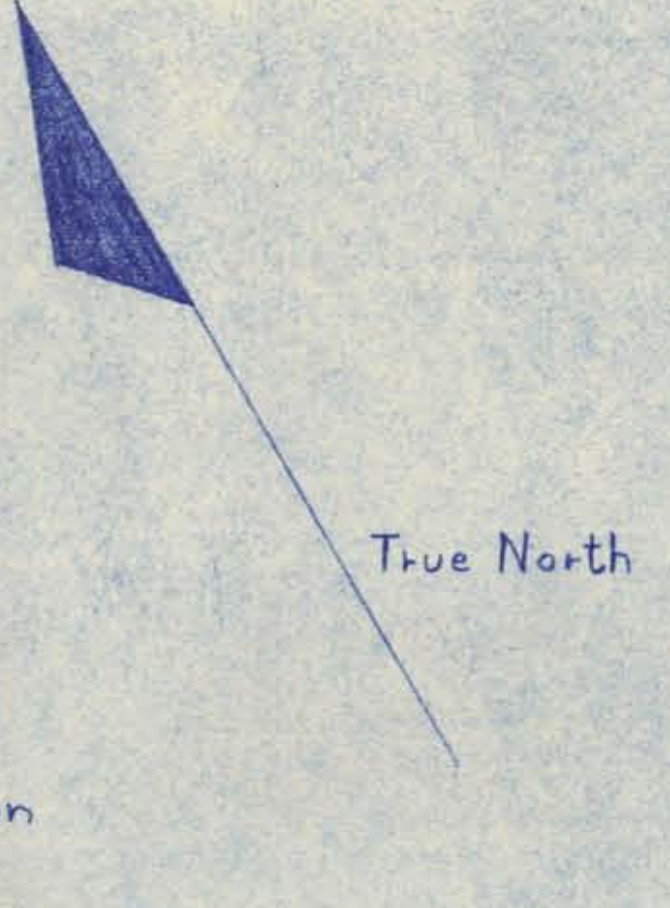
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50° 19' 28"



116° 14' 50"

MAP TO SHOW LINECUTTING IN GREEN BUSH
FOR GEOPHYSICAL GRID.
AUG-SEPT/69. JSC.
NB ALSO TERRAIN FOR HELICOPTER WORK.
J.P. Barker
GEOLOGIST - PRANSIE MINERALS



J. E. M. INFORMATION

- ↑ — Traverse Direction
- — Plotted Results
- 200 Ft — Spacing between Helper and Chief
- 1800cps — High Frequency used
- Scale 1/2 Inch = 1 degree

2051

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 BEN ABEL CREEK DISTRICT
 YORNOC CLAIM GROUP

J.E.M. CRONE METHOD
 Horizontal Loop

Scale 1 Inch = 100 Feet

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Densite Measurements
 Done at

Horizontal Loop - EM
 Base "A" Area

