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Box 448,
Merritt, B. C.
December 31, 1958.


The Mining Recorder,
MERRITT, B. C.

Dear Sir:

The geophysical survey of the Hank No. 4 Group of claims, and other adjoining Hank claims, described in the report by J. C. Foweraker, was carried out under the general supervision of the undersigned.

I am satisfied that the survey was properly performed and that the maps and report were carefully prepared.

Yours truly,



C. C. RENNIE, P. Eng.
Geologist.

CCR:juc

GEOPHYSICAL REPORT

DIP NEEDLE AND MAGNETOMETER SURVEY

ON HANK NO. 4 GROUP OF CLAIMS

AND ADJOINING HANK CLAIMS

Claims: Hank Nos. 1-4, 11-27.
Location: 10 miles northwest of Merritt, B.C. (50° 120' S.W.)
Date of Survey: 28th September - 12 December, 1958.
Maps by: J. C. Foweraker and C. Beaulieu.
Report by: J. C. Foweraker
Supervision by: C. C. Rennie, P. Eng.

December 31st, 1958.

GEOPHYSICAL REPORT

DIP NEEDLE AND MAGNETOMETER SURVEY
ON HANK NO. 4 GROUP OF CLAIMS
AND ADJOINING HANK CLAIMS

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GEOPHYSICAL REPORTDIP NEEDLE AND MAGNETOMETER SURVEY
ON HANK NO. 4 GROUP OF CLAIMS
AND ADJOINING HANK CLAIMS1. EXPENSES INCURRED FOR ASSESSMENT.

Item

| | | |
|----|---|------------------|
| 1. | Labour line cutting and chaining and taking of dip needle readings | |
| | 2 men for 22 days @ \$15.00/man/day | \$ 660.00 |
| 2. | Labour line cutting and chaining and taking of magnetometer readings | |
| | 2 men for 3 days @ \$15.00/man/day | 90.00 |
| 3. | Calculations on results, and plotting of results, of magnetometer and dip needle readings, on preliminary maps. | |
| | 1 man for 2 1/2 days @ \$15.00/man/day | 37.50 |
| 4. | Supervision of the programme, and preparation of report and maps. | |
| | 1 man for 3 1/2 days @ \$15.00/man/day | <u>52.50</u> |
| | Total | <u>\$ 840.00</u> |

The above expenses do not include such items as transportation of personnel, rental of equipment, etc.

GEOPHYSICAL REPORT

DIP NEEDLE AND MAGNETOMETER SURVEY ON HANK NO. 4 GROUP OF CLAIMS AND ADJOINING HANK CLAIMS

2. INTRODUCTION

An option was negotiated on the 19th August 1958 for the property consisting of the Hank Nos. 1-36 mineral claims, from William Taylor of Vancouver, by Centennial Mines Ltd., and Magnum Copper Ltd. By the terms of the option agreement assessment work was guaranteed by the companies on all of the 36 Hank mineral claims.

This report is primarily concerned with the eight claims known as the Hank No. 4 Group, consisting of Hank Nos. 19-26 mineral claims. Adjoining Hank claims also covered by the survey are Hank Nos. 1-4, 11-18, and 27 mineral claims.

3. LOCATION & ACCESS

The Hank mineral claims (see location map inset, Appendix 1.) lie about ten miles to the north west of Merritt, B. C. on the southern slopes of Promontory Hill. The northern corner of the property comes within 3500 feet of the Forestry Look-out Station on the summit of Promontory Hill. The property also lies to the south east of Indian Reserve No. 9.

From Merritt the main road to Spences Bridge is followed to the Forestry Look-out gravel road junction, some 1 1/2 miles west of Lower Nicola. The Look-out road is then followed for a further 6 miles to the junction with the 1 1/2 mile access road leading to the claims.

4. EQUIPMENT

Dip Needle:

The Sharpe D2 dip needle was used throughout on the dip needle survey.

Magnetometer:

The vertical force variometer (hereafter referred to as the magnetometer in this report) made by Hilger and Watts, was used to investigate the areas of interest found from the dip needle survey. The instrument has a scale value per division of 30 gammas; short, medium and long auxiliary magnets are attached for high readings.

5. GENERAL DESCRIPTION OF THE METHODS OF SURVEY

An east-west picket-base line 6600 feet long was established from the south-east corner peg of the Indian Reserve No. 9. Cross lines were turned off by a right angle turning board along this line. Four cross lines were cut and chained and picketed south to the southern property boundary of the Hank Group of claims; they were 4E, 24E, "Railway Belt Line", and 154W/N. From the Indian Reserve south-east corner peg, cross line 4E intersected the base line at 400 feet east; cross line 24E at 2400 feet east, "Railway Belt Line" at 4150 east, and 154 W/N at 6600 feet east. The purpose of the north south cross lines was to control the east west dip needle traverses. The cross lines were chained and picketed every hundred feet.

Readings with the Sharpe dip needle were taken on east west chain and compass traverses between the cross lines and also 2000 feet traverse lines were made west of the 4E cross line. The distances between the traverse lines is 400 feet approximately.

The magnetometer survey was confined to two areas of interest found in the dip needle survey. Prior to the commencement of the magnetometer survey, a base control station was established on the Domino Group control station and survey readings could be related to this. C. Beaulieu carried out the magnetometer readings under the supervision of J. C. Poweraker.

In the magnetometer survey of the magnetic anomaly on Hank No. 25, 27 mineral claims, readings were taken every 100 feet on north-south cross lines 28E, 32E, 36E, 40E, the "Railway Belt Line" and a short line 150 feet to the east of the Railway Belt Line. Magnetometer readings, on the magnetic anomaly on Hank Nos. 14 and 16 mineral claims, were taken on east-west lines every 50 feet for 200 feet on either side of the 24E crossline. This anomaly extended for only 400 feet and the grid system needed was comparatively small.

6. CALCULATIONS AND PLOTTING METHODS

Dip Needle:

The dip needle readings were compiled on the preliminary map as the survey progressed. The final plan showing all the dip needle results, together with approximate mineral claims and group boundaries (see Appendix 1.), was compiled on the completion of the survey.

Magnetometer:

Diurnal corrections were applied to the magnetometer readings, and auxiliary magnets were used where necessary during the survey and the corrective formula $\frac{2K}{d} \cdot 10$ applied.

Results of the readings converted to gamma values are shown on maps (Appendix 2 and 3) accompanying this report.

7. FACTORS WHICH PRODUCE VARIATIONS IN VERTICAL MAGNETIC INTENSITY

(See C. C. Rennie's Geophysical Report on Magnetometer Survey Hec Group - South 12 miles N.W. of Merritt, B. C., June 17th, 1958)

1. A concentration of magnetic minerals, possibly with associated valuable minerals.
2. A variation in the amount of accessory magnetite in granite or volcanic bedrock.
3. A variation in the amount of magnetite distributed through or connected with the overburden.
4. A variation in depth of non-magnetic overburden or caprock over bedrock having a constant vertical magnetic intensity.
5. Variations in amounts of magnetic minerals in adjacent bands of volcanic and sedimentary rock, such as may be expected in the Nicola formations which would produce elongated magnetic highs and lows parallel to the form strike. These variations are not expected to be great.
6. Any combination between variations in magnetic minerals in the rock and variations in the thickness of the overlying magnetic or non-magnetic overburden or cap rock

Because of the many possible combinations stated above, there is the considerable possibility of either being misled by anomalies not resulting from worthwhile mineralization or of not detecting bodies of interest.

8. RESULTS OF THE GEOPHYSICAL SURVEY

(1) Dip Needle.

In an area at the northern end of the "Railway Belt Line" on claims 25 and 27 a series of readings mainly between ± 5 and ± 10 were recorded on the dip needle. The highest reading recorded here was ± 15 . 3000 feet to the south west, in the Salt Lake depression area, 'lows' of up to 20 were recorded on the dip needle.

On line 24E at 5900 feet south of the base line in claims 14 and 16, ± 3 and ± 5 readings were recorded. To the south, south-west of this area on claims 16 and 18 lows of up to 18 were recorded on the dip needle.

(2) Magnetometer survey in areas of interest found from the dip needle survey.

Gamma values of up to $\pm 11,081$ gammas were recorded in a magnetometer survey of the anomalous area on Hank No. 25 and 27 and Domino No. 14 mineral claims. In the south east corner of Domino No. 14 mineral claim a positive anomaly of 4087 gammas was recorded. To the south of the Domino boundary on line 36E readings of 4285 gammas were recorded. To the south east, on line 40E, there is a continuation of this anomalous trend, and readings of up to 9647 gammas were recorded on the adjacent Railway Belt Line, 150 feet further to the east. There is a short drop off in positive gamma values to the east of this line, and negative readings of -8975 gammas were recorded 150 feet east of the Railway Belt Line. To the west of line 40E the positive anomalous trend is continued on line 36E, and 400 feet to the south west again on line 32E, there were readings as high as 11081 gammas recorded. Random field readings taken to the west of line 32E showed a dropping off in gamma values again.

A series of magnetometer readings were taken on Hank claims 14 and 16, at 5900 feet south, on line 24E. Positive gamma values of up to 6708 gammas were recorded here. The general anomaly area was 400 feet long and 200 feet wide, measured on the 800 gamma contour.

9. GENERAL CONCLUSIONS AND RECOMMENDATIONS ON THE RESULTS OF THE DIP NEEDLE AND THE MAGNETOMETER SURVEYS

The results of the dip needle and magnetometer surveys are discouraging except for an anomaly on Hank Nos. 25, 27 and Domino No. 14 mineral claims. The size of this anomaly, measured on the 10,000 gamma contour, is not, on the results of this survey, as large as the anomaly on Hank No. 30 mineral claim. Although no detailed grid system was cut on the Hank No. 25 and 27 mineral claim anomaly, no gamma values of over 12000 gammas were recorded. The detailed surface and subsurface investigations on areas recording 20,000 gammas and over failed to find any mineralization of interest on the Hank No. 30 mineral claim anomaly.

The discouraging results obtained from drilling this large neighbouring anomaly do not justify the additional expense of continuing the present exploration programme on the Hank No. 4 Group.

J. C. Foweraker

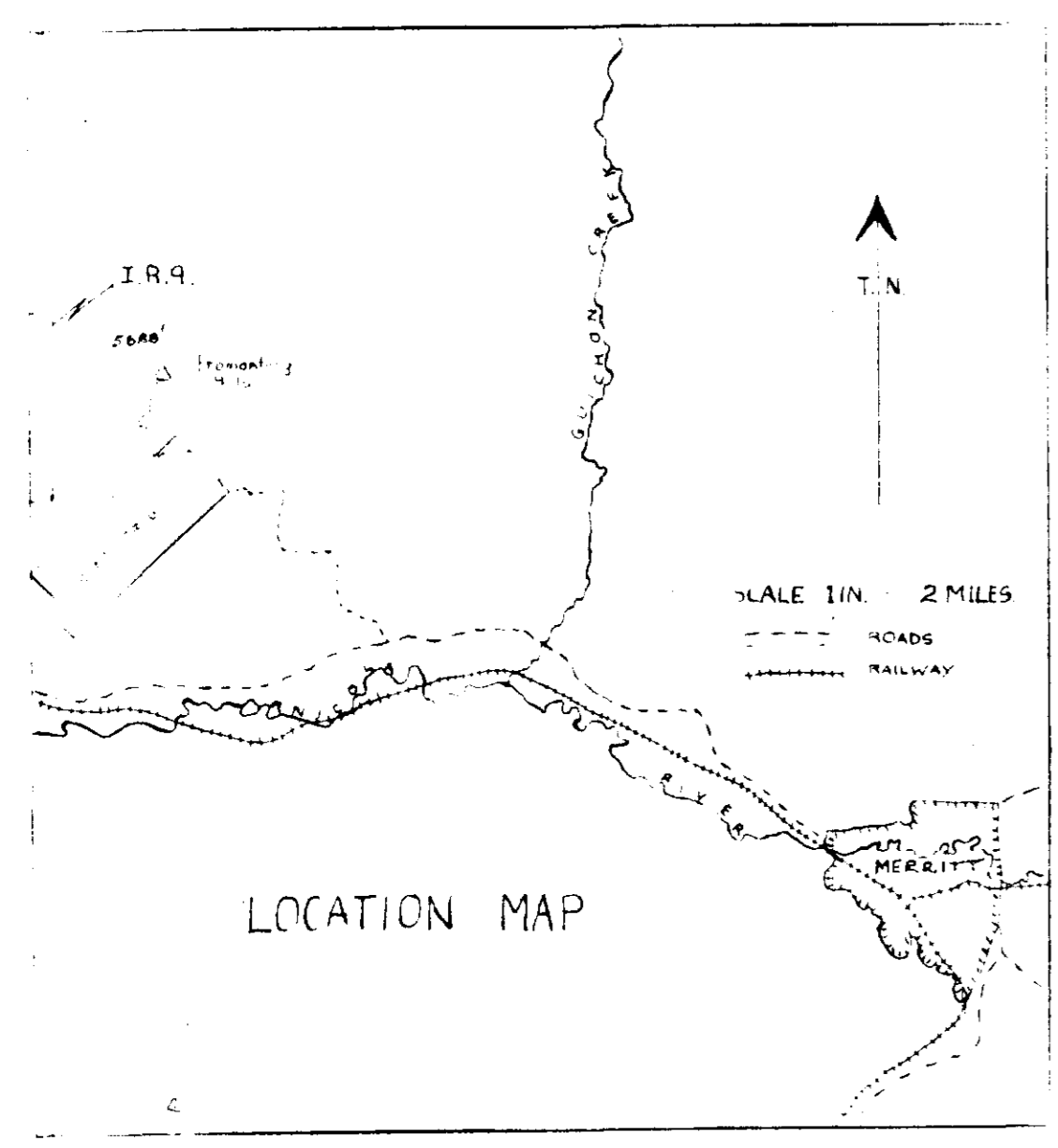
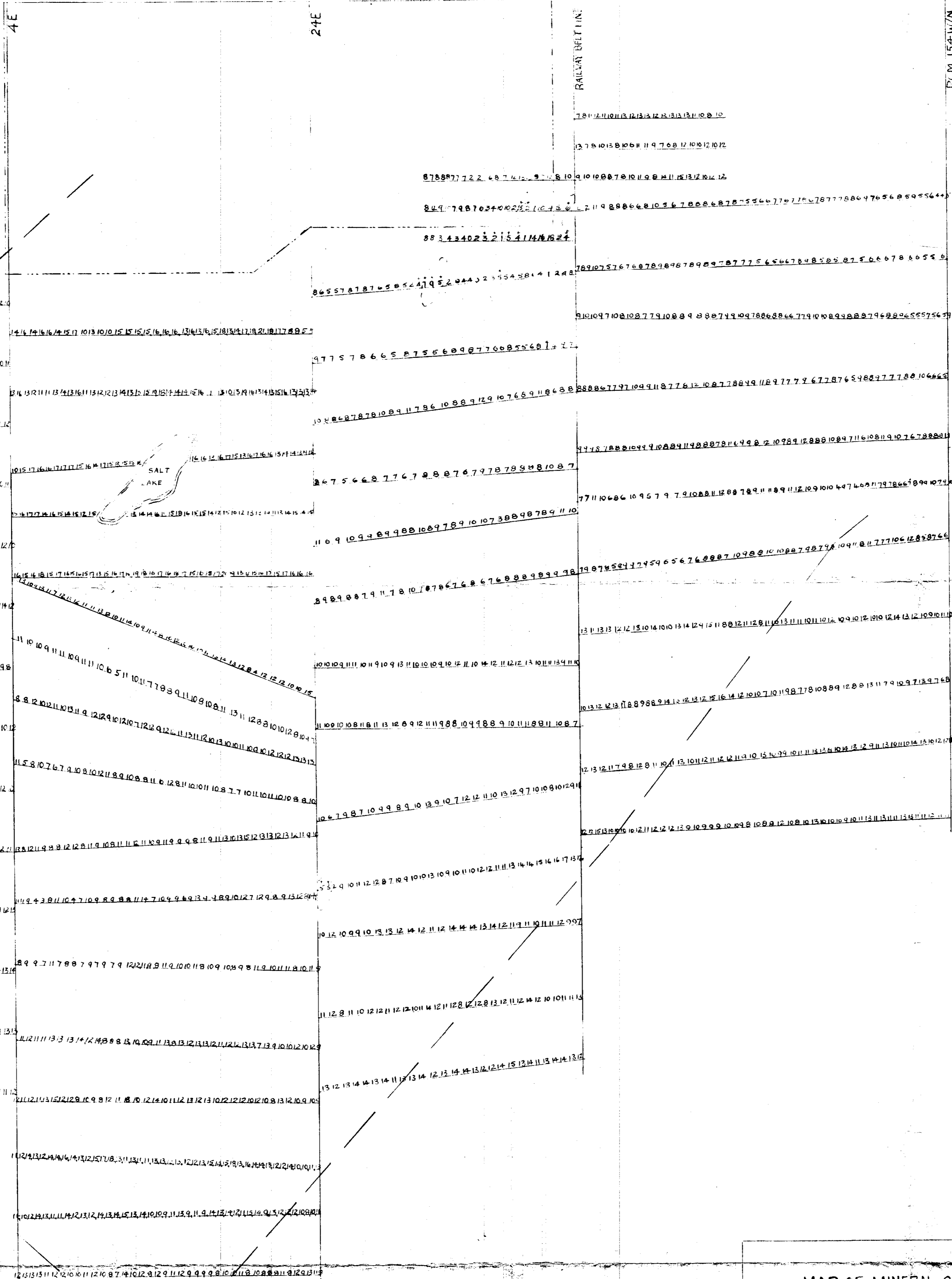
J. C. FOWERAKER,
Geologist.

JCF:juc

J. C. Foweraker

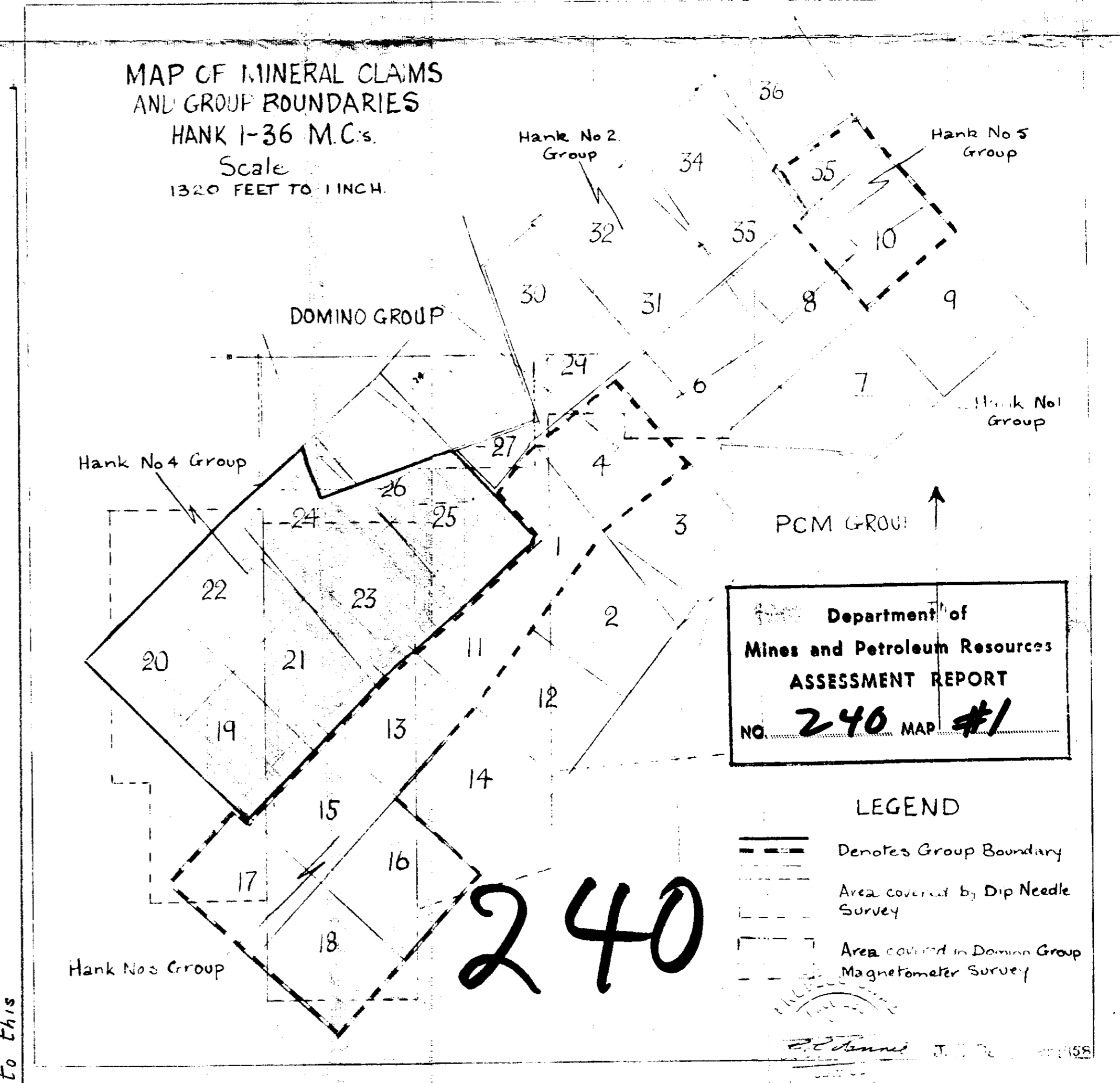
I. R. N° 4
south east corner 244

BASE LINE



PLAN SHOWING
DIP NEEDLE RESULTS
HANK MINERAL CLAIMS
NICOLA MINING DIVISION
BY J.C. FOWERAKER & C. CHAULIEU
Scale 40 Feet to 1 Inch
LEGEND
--- Denotes Property Boundary
--- Area covered in Domino Group Magnetometer Survey
December 30th 1958

Inset map required only please



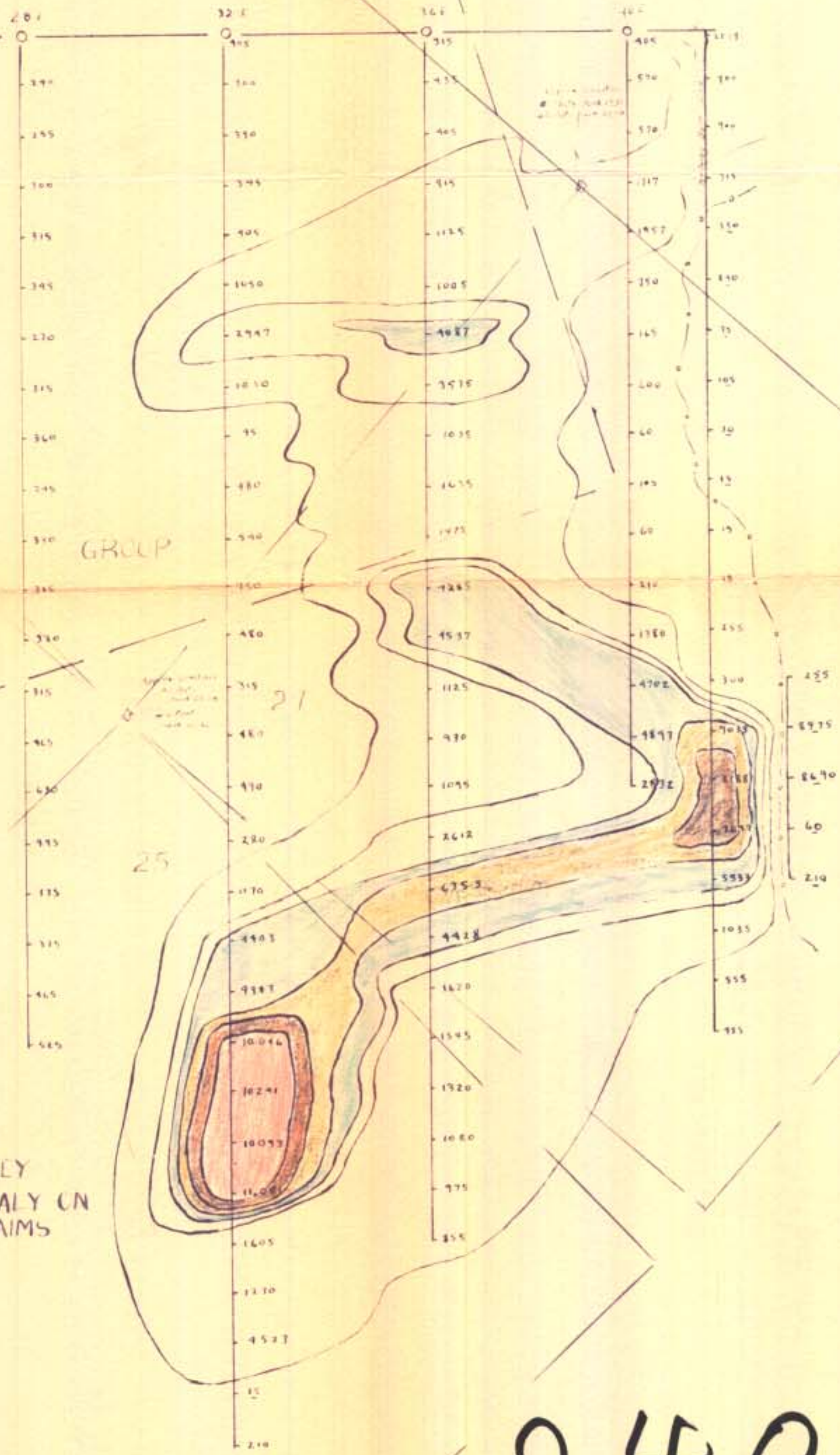
Department of
 Mines and Petroleum Resources
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 NO. **240** MAP **#2**

MAGNETOMETER SURVEY
 MAP OF MAGNETIC ANOMALY ON
 HANK NOS 25, 27 MINERAL CLAIMS

BY C. BEAULIEU
 SCALE 200 FT TO 1 IN
 LEGEND

- 10,000 X
- 8,000 X
- 6,000 X
- 4,000 X
- 2,000 X
- 0 X

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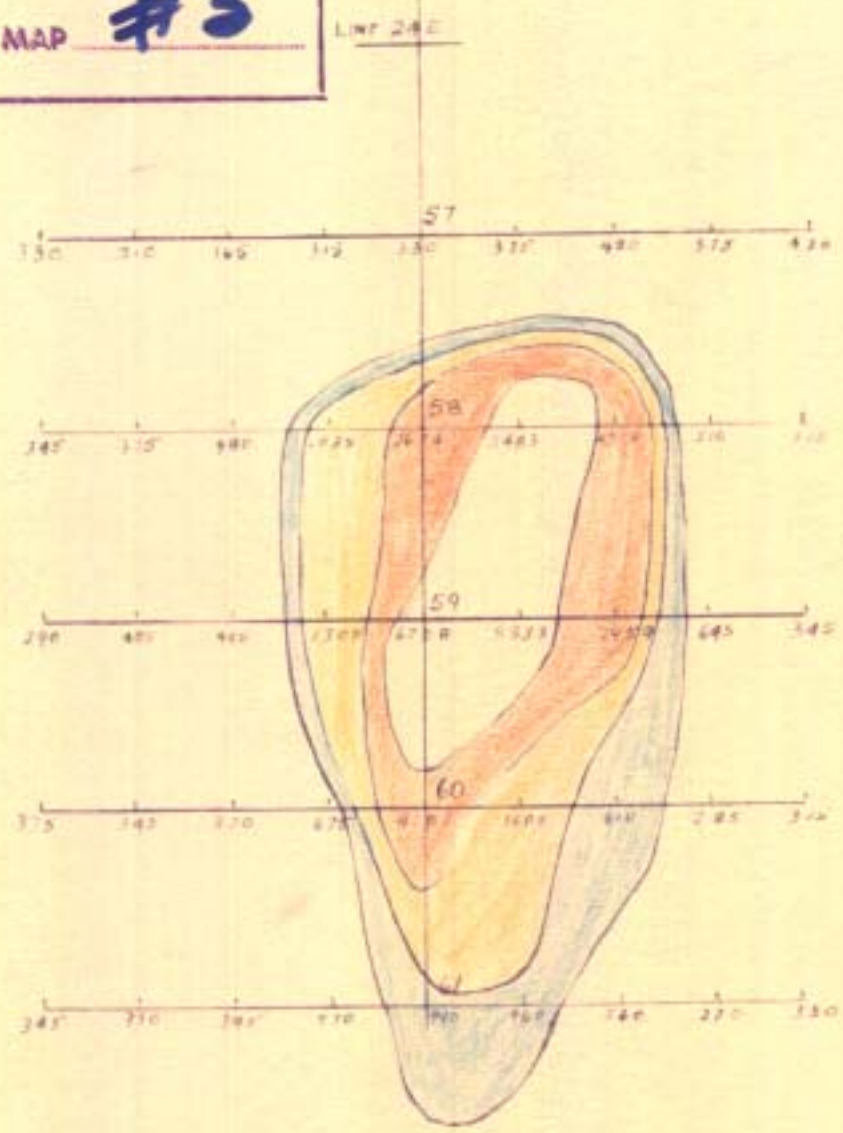
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C.B. AND S.L.F. DECEMBER 1958

APPENDIX 2.

Department of
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MAGNETOMETER SURVEY
 MAP OF MAGNETIC ANOMALY ON
 HANK NOS 14, 16 MINERAL CLAIMS

BY C. BEAULIEU

SCALE 100 FT TO 1 IN

LEGEND

- 5000 γ
- 2000 γ
- 1000 γ
- 800 γ

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