

331

GEOPHYSICAL REPORT

ON

MOLLY AND B.E. GROUPS

(50° 120° S.E.)

FOR

SPOKANE SYNDICATE LTD.

Covering work done during the period

September 13 - October 15, 1960

under the direction of

C. F. MILLAR, P. Eng.

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 331 MAP

REPORT ON MAGNETOMETER SURVEY

MOLLY AND B. E. CLAIM GROUPS,

SPOKANE SYNDICATE LTD.

October 17, 1960.

1. INTRODUCTION

A meeting of the shareholders of Spokane Syndicate was held on September 9, 1960, with regard to the assessment work pending on the Molly and B.E. claim groups, near Merritt, B. C. The shareholders decided that the work should be geophysical in nature, and the writer was given the task of carrying out said work.

2. SUMMARY OF WORK DONE

A magnetometer survey was conducted over two adjacent groups of mineral claims, situated approximately eight miles north of Lower Nicola, B. C., during the period September 13 - October 15, 1960. This work was budgeted to cover the yearly assessment due on the claims, total of \$3,300. Payroll books and expense receipts covering this expenditure are on file in the office of Spokane Syndicate Ltd., 717 West Pender Street, Vancouver, B.C.

A certain amount of preliminary survey work was necessary before actual magnetometer readings could be started. The limited budget made it impossible to take magnetometer readings at close spacings over the total property area, partially due to the added expense of the preliminary survey. It was therefore decided that it would be better to take magnetometer readings at relatively wide-spread intervals over the whole property rather than close-spaced intervals over a small portion of the total area. Widely-spaced intervals would indicate regional geological features and would thus help determine areas for future concentrated work, and would indicate any large anomalies of Craigmont proportions if they did exist.

3. COST OF WORK DONE

See Appendix "A"

4. PRELIMINARY SURVEY

The preliminary chain and transit survey was made by a B. C. Land Surveyor and accomplished two things:

1. The boundaries of the claim groups were located.
2. A base line and sidelines for the magnetometer survey were established.

5. MAGNETOMETER SURVEY

Points were established along the baseline at 500 foot intervals, and from these points sidelines were run parallel to each other out to the property boundaries. Magnetometer readings were taken at 200 foot intervals along these sidelines. Points from which the magnetometer readings were taken were surveyed by pace and compass. The usual method of operation was to start at a known point on the baseline, work out one sideline to the boundary of the property, turn a right angle and cross to the next sideline, then work back along this next sideline and tie in at the baseline again.

Check readings were taken daily to note the variation from time to time in the magnetic background. A few readings were also taken over limited portions of the Craigmont Mine - three miles south of the property, and the Aberdeen Mine - three miles north of the property, for comparison purposes.

The magnetometer used was a Sharpe A-3, on rental from Eldrico Geophysical Sales, 633 Hornby Street, Vancouver, B. C.

6. RESULTS

The results of the work done are given on two maps, the first showing the location of the claim groupings and the second showing magnetometer readings and equigamma contours over the area surveyed.

The equigamma contours on the Molly and B.E. groups show a variation from 53,500 to 55,500 gammas. The highest readings were obtained in the central-western portion of the map area. Bedrock exposures are relatively common in the areas of highest readings and these show bedrock to be granite slightly mineralized with thin epidote veinlets. The only other bedrock exposures are on Tyner Creek, where a wide area of copper mineralization occurs in granite, and near the west bank of Guichon Creek in the central-eastern portion of the map area, also showing granite. A large area of volcanic rocks has been mapped * on the east side of Guichon Creek, with the contact between the granite and volcanic rocks somewhere near the creek bed. No clear-cut indications of two different bedrock types can be seen in the equigamma contours, and consequently it is likely that granite underlies the whole map area.

The Craigmont orebody showed a well defined magnetic anomaly over a width of 450 feet and maximum intensity of 70,500 gammas where measured. The geology of this deposit could be summarized as a concentration of iron and copper mineralization caused mainly by a favourable chemical environment, a contact between two different rock types, granite and volcanic tuffs.

* G.S.C. Memoir 249, 1948.

6. RESULTS - (Continued)

It was hoped that the magnetometer survey on the Molly and B.E. groups would indicate different rock types, however the results are inconclusive in this regard.

The Aberdeen Mine gives a poorly defined magnetic anomaly over a very narrow width - less than 20 feet wide and maximum intensity of 59,000 gammas where measured. The geology of the Aberdeen deposit could be summarized as a concentration of iron and copper mineralization caused mainly by a favourable physical environment - a shear zone in granite. The small size and questionable magnetic properties of this type of deposit would easily cause a similar deposit to be missed by the magnetometer work done to date on the Molly and B.E. groups.

In both the Craigmont and Aberdeen orebodies, the predominant mineral is specular hematite. Thus the mineralization is similar, only the features controlling the mineralization differ. Both orebodies have noticeable magnetic anomalies, they differ only in size in this regard.

7. SUMMARY AND CONCLUSIONS

Measured against the readings obtained over the Craigmont and Aberdeen Mines, it is apparent that no magnetic anomalies of intensity equal to these known orebodies have been found to date on the Molly and B.E. groups of claims. However this does not preclude the economic possibilities of the property since:

- a. The readings were taken over relatively wide spaced intervals and may have missed something.
- b. Copper does not necessarily accompany magnetic anomalies in this area.

8. RECOMMENDATIONS

A geological report by the late B. W. MacDougall, P. Eng., dated November 1959 describes the property as having considerable merit - being situated between two known mines and having copper mineralization outcroppings near Tyner Creek which assayed 2.9% Cu.

It is recommended that future work be of a geophysical nature. More magnetometer work, or else one of the electrical methods, is suggested. The reasons for choosing such work are the comparative scarcity of outcrops and the relatively great (estimated to average 100 feet and be over 300 feet in some places) thickness of gravel in most areas.

8. RECOMMENDATIONS

The presence of widespread copper mineralization beside Tyner Creek is a hopeful sign that there may be considerable ore nearby, probably of the Aberdeen type of deposit. Closely spaced magnetometer readings, say 50 feet apart, in a zone running uphill from this occurrence, are recommended as being the best choice for future work. Future work should also include completing a magnetometer survey in the south easterly portion of the map area, which was not done in this assessment period.

Respectfully submitted,

Chester F. Millar

C. F. Millar, P. Eng.

EVIDENCE OF EXPENDITURE INCURRED

SPOKANE SYNDICATE LTD.

Assessment work on Molly and B. E. claim groups, during the period September and October, 1960.

<u>NAME</u>	<u>TITLE</u>	<u>TIME</u>	<u>RATE</u>	<u>WAGES</u>	<u>EXPENSES</u>	<u>TOTAL</u>
C. F. Millar	Engineer	4½ days	\$25.00	\$112.50	\$313.70	\$ 426.20
C. F. Millar	Engineer	6½ days	50.00	325.00	360.82	685.82
A. D. Ross	B. C. L. S.	13½ "	50.00	675.00	27.20	702.20
M. N. Slack	Instrument Man	185 hrs.	2.00	370.00	45.09	415.09
H. Krudsen	Chain Man	174½ "	2.00	349.00	75.73	424.73
D. Maxey	Assistant	13 days	22.50	292.50	10.60	303.10
W. McGuinness	Axeman	59½ hrs.	2.00	119.00	45.50	164.50
E. Chase	Axeman	52 "	2.00	104.00	77.00	<u>181.00</u>
Total Expenditure						<u><u>\$3,302.64</u></u>

I declare that the above expenditure was necessary to complete the work done and that the amounts of money shown are accurately recorded and that receipts are available proving such expenditures.

[Handwritten signature]
[Handwritten signature]
 Gold Ore
[Handwritten signature]
 Oct. 21/60

Charles F. Whelan

 C. F. Millar, P. Eng.,
 for Spokane Syndicate Ltd. (N.P.L.)



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OF THE PROVINCE OF BRITISH COLUMBIA**

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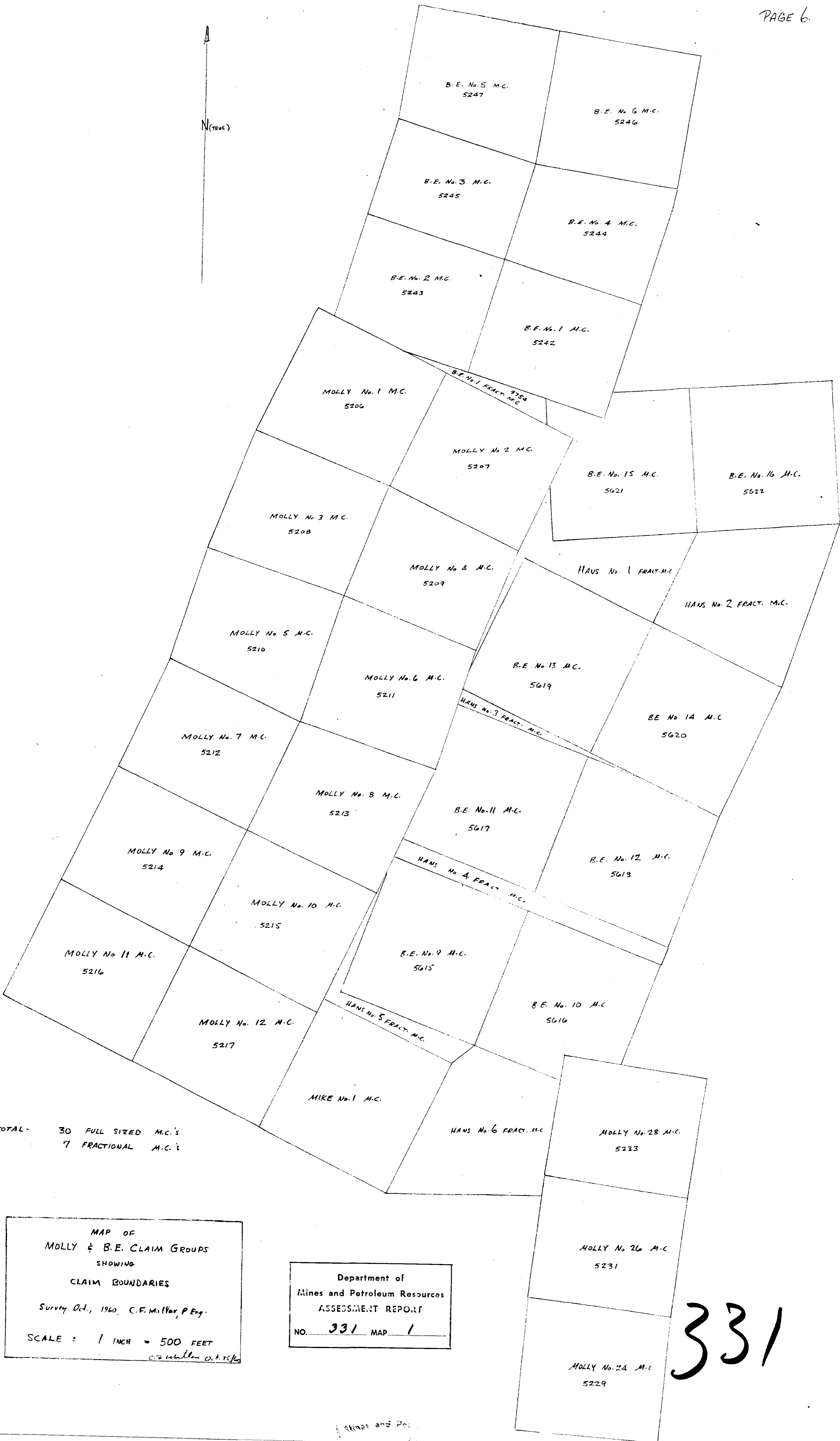
October 25th, 1960

TO WHOM IT MAY CONCERN:

This is to certify that Mr. Chester F. Millar
is a registered member of this Association in good
standing, with non-resident fees paid to December 31st,
1960. Mr. Millar was registered as a Professional
Engineer in 1958.

/jmd

(J.A. Merchant, P. Eng.)
Registrar

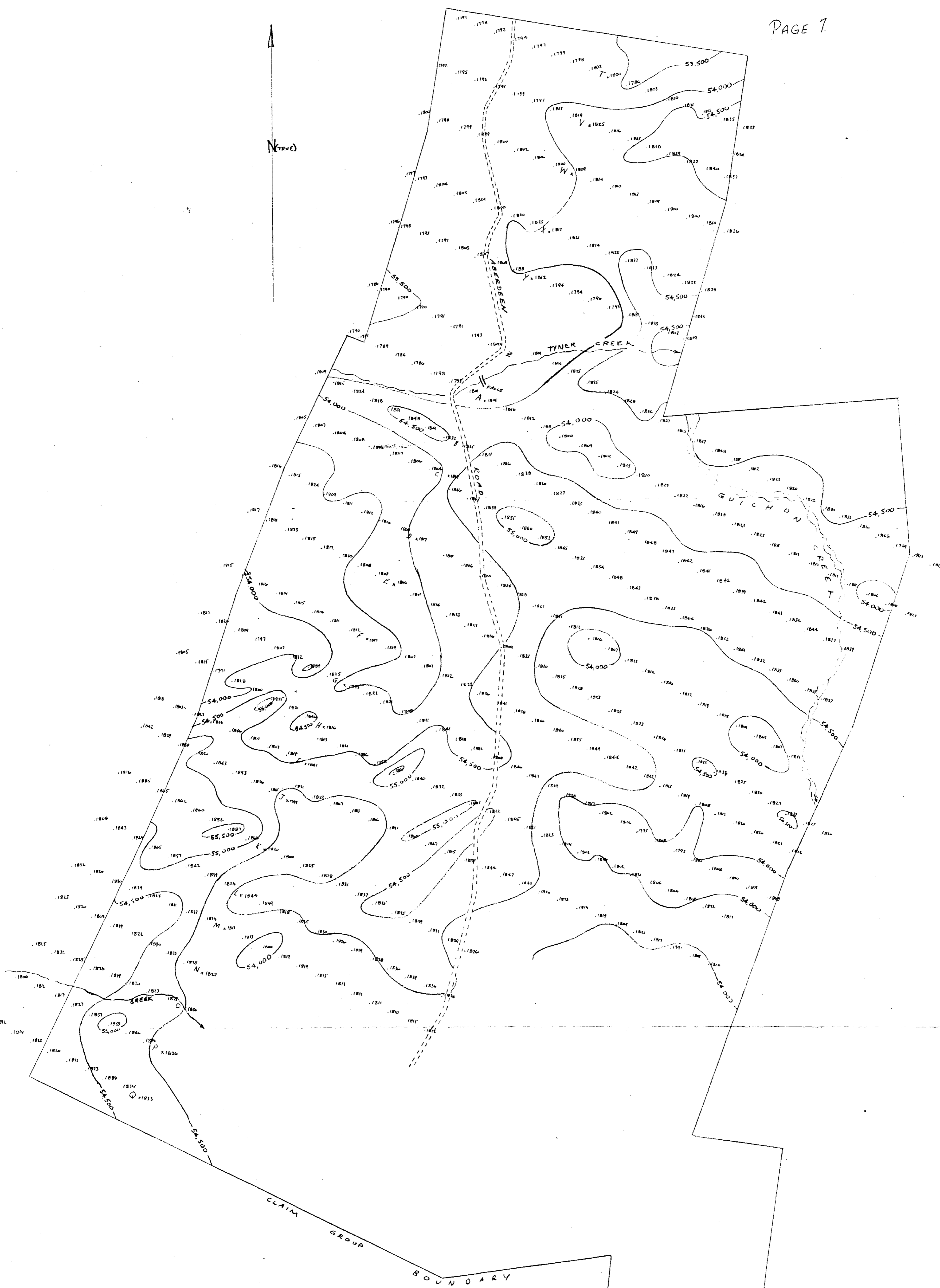


TOTAL - 30 FULL SIZED M.C.'s
 7 FRACTIONAL M.C.'s

MAP OF
 MOLLY & B.E. CLAIM GROUPS
 SHOWING
 CLAIM BOUNDARIES
 Survey Oct., 1960, C.F. Miller, P. Eng.
 SCALE : 1 INCH = 500 FEET
 C.F. Miller O.P. 15/60

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MAP OF
MOLLY & B.E. CLAIM GROUPS
SHOWING
MAGNETOMETER READINGS
AND
EQUIPOTENTIAL CONTOURS

Survey Oct., 1960; C.F. Miller, P. Eng
C.F. Miller, Oct. 1960

SCALE: 1 INCH = 500 FEET

Department of
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ASSESSMENT REPORT
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