

92I/7W

56°120', S.W.

CRAIGMONT MINES LTD. N.P.L.

NO  
DEPOSIT

Geophysical Report on  
MAGNETOMETER SURVEY OF BUCK GROUP

50171-118

Date of Survey: April 9-19, 1958.  
Supervision & Report by: C.C.Rennie, P. Eng.  
April 21st, 1958.

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# 203

CRAIGMONT MINES LTD. (N.P.L.)

MAGNETOMETER SURVEY OF BUCK GROUP

EXPENSES INCURRED

Labour - Line Cutting and magnetometer Readings 3 men for 9 days at \$15.00/day/man	\$405.00
Calculations and map preparation	15.00
Report preparation and supervision	70.00
	<hr/>
	\$490.00
	<hr/>

The above expenses do not include transportation of personnel nor rental on equipment used.

CCR/  
April 21, 1958.

C. C. Rennie  
C.C. Rennie, P.Eng.  
Geological Engineer.

CRAIGMONT MINES LTD. N.P.L.

Geophysical Report on

MAGNETOMETER SURVEY OF BUCK GROUP

Claims: Buck Nos. 1, 2, 3 and 4.  
Location: 12 miles north of Lower Nicola,  
B. C. (50°<sub>00'</sub>, 120°<sub>00'</sub> S W)

Date of Survey: April 8 - 19, 1958.

Supervision and Report by: C.C. Rennie, P.Eng.

April 21st, 1958.

REPORT ON

MAGNETOMETER SURVEY OF BUCK GROUP

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CRAIGMONT MINES LTD. N. P. L.

Report on

MAGNETOMETER SURVEY of the BUCK GROUP

Purpose of the Survey.

The survey was carried out to determine if there were any magnetic anomalies on the BUCK group of mineral claims, resulting from the presence or absence of magnetic minerals, such as magnetite, in the bedrock on these claims. The area of the claims is entirely covered with overburden, making surface geological analysis impossible.

The survey was intended to be of reconnaissance nature only, to be followed later by a more detailed survey if any anomalies were indicated.

General Geology of the Area.

Reference: G. S. C. Memoir 249, "Geology and Mineral Deposits of Nicola Map-Area, B. C." by W. E. Cockfield, and Geological Map 886A which accompanies the Memoir.

The claims are entirely covered with overburden, which consist of granitic rocks presumably transported from the Guichon Batholith. Minor amounts of malachite have been seen in several pieces of float rock. The geology of the surrounding area suggests that the claims would be underlain by granitic rocks of the Guichon Batholith. However there was some possibility that inclusions or septums of Nicola series rock might be present, surrounded by granitic rock, as is the case at the Aberdeen mine on adjacent property.

The Guichon Batholith is considered to be of Jurassic age while the Nicola series is Upper Triassic age. No younger rocks are known to occur in the immediate area.

Anomalous magnetic highs or lows as guides in the search for copper ore could indicate two types of mineralization known to occur in relation to the Guichon Batholith. The Highland Valley type of copper mineralization is characterized by areas of magnetic lows resulting from the absence or breakdown of the accessory mineral magnetite. The Craigmont type of contact mineralization is characterized by strong magnetic highs due to the presence of concentrations of magnetite with which the copper mineralization is associated.

#### Equipment

The magnetometer used for this survey was manufactured by the Radar Exploration Co., Toronto, and bears Serial No. 37. The scale constant on this torsion type instrument is 22.6 gammas per division of the micrometer scale. This instrument, which is very light and portable, requires no locking of the motion before being moved to the next station. With practice an operator can take readings at 100 foot intervals every two minutes or in excess of 200 readings per day. This instrument has no auxiliary magnets but has a range between 11,000 and 33,000 gammas.

#### Method of Survey

As marked on the plan, Appendix 2, a picketed base line was chopped out and measured with a steel tape into 200 foot intervals. This base line strikes N 71° W. A 3,300 foot tie line was chopped out, bearing N 19° E, and a check line chopped out across the reading lines.

Lines bearing N 19° E and originating at the base line stations were marked at 100 foot intervals throughout their length. The readings were taken

by two men, one operating the instrument, the other recording the station, reading and time, while the third man completed the line cutting.

The Radar magnetometer is oriented with a compass so that the side marked "N" faces directly toward magnetic north. The instrument is carefully levelled and a reading taken from the micrometer scale after the micrometer knob has been turned so that the pointer coincides directly with the cross-hairs.

Consecutive readings were taken at the base stations before the readings were taken at the line points in order that base checks for diurnal variation would be provided.

#### Calculation and Plotting.

The calculation and plotting of the notes were done by W. S. Pentland under the direction of the writer.

No diurnal variation was applied but a small correction was applied to reconcile one day's check readings with the previous day's work.

The instrument has a scale constant of 22.6 gammas per scale division. This has been checked with a calibration coil and found to have altered very little. No constant has been subtracted from the readings other than those mentioned above so that the calculated readings represent the true measure of the vertical magnetic forces present.

A map, Appendix 2, was prepared and belts of equal magnetic intensity were contoured.

#### Interpretation of the Magnetometer Survey Results.

The variation of vertical intensity reaches a maximum of only 700 gammas over the whole area. Contouring of points of equal magnetic intensity in this area does not produce any significant pattern either in magnetic highs

or magnetic lows.

The factors which could produce this variation in vertical magnetic intensity are:-

1. A variation in magnetic minerals associated with valuable minerals.
2. A variation in the amount of accessory magnetite in granitic bedrock.
3. A variation in the amount of magnetite distributed through, or concentrated in, the overburden.
4. A variation in depth of non magnetic overburden over bedrock having a constant vertical magnetic intensity.

Conclusions.

Conclusions drawn from this magnetometer survey are:


1. It is doubtful if the slight variation in magnetitic intensity is a response to variation in magnetic minerals associated with valuable mineralization. Therefore, one or a combination of the three latter factors mentioned above must apply.
2. A detailed or more precise magnetometer survey is not justified by the results of the reconnaissance survey.
3. Some malachite stained float in the area may be suggestive of copper mineralization not associated with the presence or absence of magnetic minerals. Now that a grid of lines has been laid out on the ground an electromagnetic survey could be carried out at small expense to check for conductors.
4. The Four Buck claims, entirely covered with overburden, and producing only small variations in magnetic intensity are of limited future interest.

APPENDIX;

1. Sample of Survey Notes.
2. Plan of Magnetometer Readings.

Respectfully submitted,

CCR/  
April 21st, 1958.

  
C. C. Rennie, P. Eng.  
Geological Engineer.



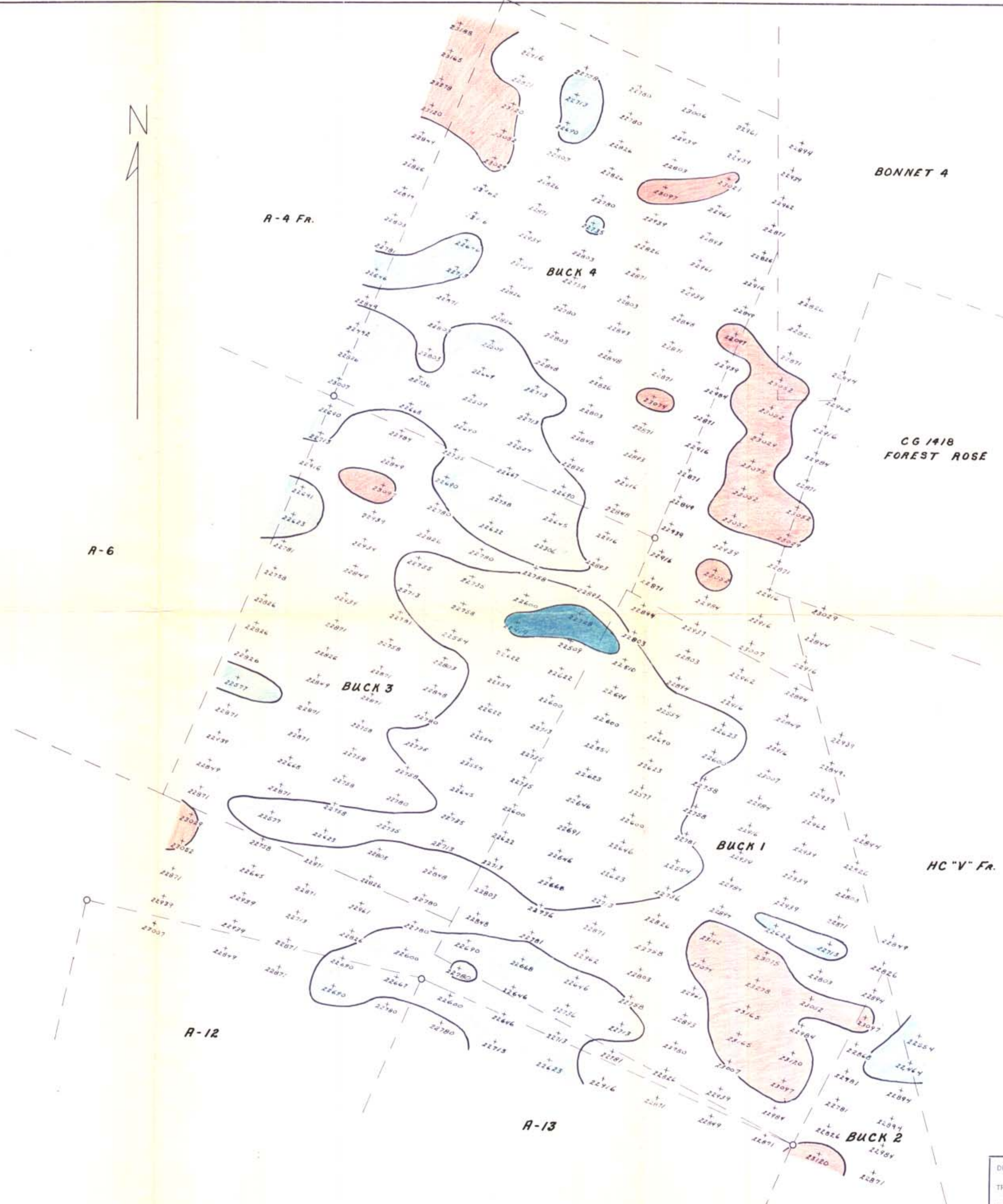
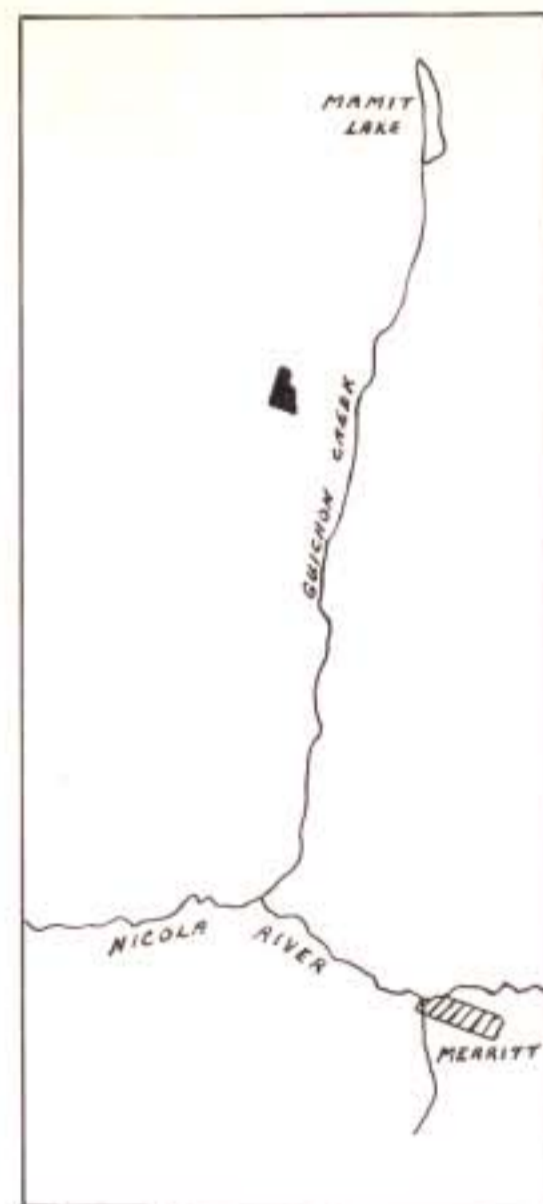
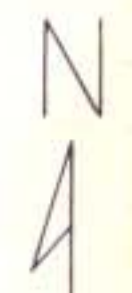
DATE: April 18 / 50

LINE: N° 1

Stations reading North from base station.

STAT	READ	VALUE	TIME	DIUR	V - D	VI - C	REMARKS
Base 1	1018	23007	10:21				
+100N	1015	22939	10:24				
+200N	1012	22871	10:25				
+300N	1020	23052	10:26				
+400N	1019	23029	10:27				
+500N	1012	22871	10:29				
+600N	1011	22849	10:30				
+700N	1015	22939	10:31				
+800N	1012	22871	10:33				note: No diurnal correction applied since diurnal variation is negligible.
+900N	999	22577	10:35				
+1000N	1010	22826	10:36				
+1100N	1010	22826	10:38				
+1200N	1010	22826	10:40				
+1300N	1007	22758	10:42				
+1400N	1008	22781	10:44				
+1500N	1001	22623	10:45				
+1600N	1004	22691	10:46				
+1700N	1014	22916	10:47				
+1800N	1005	22713	10:48				
+1900N	1004	22690	10:50				
+2000N	1018	23007	10:52				
+2100N	1010	22826	10:54				
+2200N	993	22442	10:55				
+2300N	1011	22849	10:56				
+2400N	1002	22646	10:57				
+2500N	1008	22781	10:59				
+2600N	1009	22803	11:00				
+2700N	1013	22894	11:02				
+2800N	1010	22826	11:03				
+2900N	1011	22849	11:04				
+3000N	1023	23120	11:06				
+3100N	1030	23276	11:07				
+3200N	1025	23165	11:09				
+3300N	1026	23188	11:10				





LEGEND

- 23000 T +
- 22750 T - 23000 T
- 22500 T - 22750 T
- 22250 T - 22500 T

A MAP SHOWING  
 THE  
 MAGNETIC VALUES AND CONTOURED RESULTS  
 ON THE  
 BUCK MINERAL CLAIMS  
 NEAR  
 MERRITT, B.C.  
 IN THE  
 NICOLA MINING DIVISION

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Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 203 #1  
 MAP #1