

397

CRAIGMONT MINES LIMITED

(NON-PERSONAL LIABILITY)

MINE OFFICE

MERRITT, B. C. CANADA

19 January 1962

The Mining Recorder,  
MERRITT, B.C.

Dear Sir:

The preparation of the attached report entitled "Magnetometer Survey of the Willy Claims" and the necessary field work of line cutting and magnetometer surveying was carried out under the direct supervision of the undersigned Professional Engineer.

Yours truly,

*C. C. Rennie*

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

CCR/plr

921/aw

*C. C. Rennie*

CRAIGMONT MINES LIMITED (N.P.L.)MAGNETOMETER SURVEY OF THE WILLY GROUPEXPENSES INCURRED

<u>LABOUR:</u>	Line cutting and chaining with four man crew. 132 man days at \$15.00/man/day	\$1,980.00
	Magnetometer readings with two man crew. 48 man days at \$15.00/man/day	720.00
	Calculations and map preparation 7 man days at \$15.00/man/day	105.00
<u>EQUIPMENT:</u>	Line clearing using a D7 Cat. 96 hours at \$14.50/hour	1,392.00
<u>SUPERVISION:</u>	Supervision of survey and map preparation and report compilation by W.S. Pentland under direct supervision of C.C. Rennie, P. Eng. 3 days at \$35.00/day	105.00
		<u>4,302.00</u>



W. S. Pentland,  
Geologist.

CRAIGMONT MINES LIMITED (N.P.L.)

GEOPHYSICAL REPORT

ON THE

MAGNETOMETER SURVEY OF THE WILLY GROUP

OF

CRAIGMONT MINES LIMITED PROPERTY

CLAIMS: Willy 1 - 8 inclusive, Willy 1, 2, 3, 5 and 6 FRS.

LOCATION: Approximately 12 miles northwest of Merritt, B.C.  
(Lat. 50°, Long. 121°).

DATE OF SURVEY: May 26 - Sept 13, 1961.

SUPERVISION: By C. C. Rennie, P. Eng. Final Map and Report  
preparation by W. S. Pentland, Geologist.

Date: 19 January 1962.

REPORT ON  
MAGNETOMETER SURVEY OF THE WILLY GROUP

<u>TABLE OF CONTENTS</u>	Page
Purpose of Survey	4
Location of the Claims	4
General Geology of the Area	4
Line Preparation	5
Equipment	5
Method of Survey	5
Calculation and Plotting	5
Interpretation of the Results	5
Conclusions	6
Appendix - Plan of Magnetometer Readings	

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. <u>397</u> MAP.....</p>
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CRAIGMONT MINES LIMITED (N.P.L.)

REPORT ON

MAGNETOMETER SURVEY OF THE WILLY GROUP

PURPOSE OF THE SURVEY:

The survey was performed in search of magnetic anomalies resulting from concentrations of magnetite which might be associated with copper mineralization. It was also hoped that some geological information would be obtained as different rock types contain varying quantities of accessory magnetite and this effect could be reflected through the overburden.

LOCATION OF THE CLAIMS:

The Willy Group of mineral claims is comprised of the Willy 1 - 8 inclusive and the Willy 1, 2, 3, 5 and 6 fractions. These thirteen claims lie approximately twelve miles northwest of Merritt, B.C. and immediately northeast of the Promontory Hill Forestry lookout.

A jeep road runs north-south along the approximate location line of the Willy 3 - 8 mineral claims with access from the Promontory Hill road and also the Craigmont mill site. A second jeep road, also joining the mill site area with the Promontory Hill road, passes immediately south of the Willy 1 claim.

GENERAL GEOLOGY OF THE AREA:

REF. Geology of the Promontory Hills - B.C. Minister of Mines Report 1960.

Geological mapping indicates that the area is underlain entirely by the Upper Triassic Nicola series of rocks. It is possible that diorite dykes of the Cretaceous Guichon batholith, which outcrops a short distance north of the Willy claims, may intrude the Nicola rocks in the vicinity of the Willy 7, 8 and 2 Fr. mineral claims.

Numerous outcrops exist along the south side of the group on the Willy 1 - 4 and 5 Fr. Scattered outcrops are found along the north side with the large central section remaining covered with overburden and heavy windfall.

Rock types consist of feldspathic, lithic, vitric and quartz tuffs, greywackes, limestone, argillite and andesite flows or dykes. These are intruded by large quartz porphyry dykes.

Disseminated and platy pyrite is very common in nearly all the rock types. No copper mineralization has been found on the claims.

LINE PREPARATION:

Approximately twenty miles of magnetometer, base and tie lines, were required for the survey. The lines covering the Willy 1 to 4 claims were chopped out by hand. Some ten miles of line covering the remaining claims were pushed through with a D7 Caterpillar. This latter area had been burned off resulting in very heavy windfall. To obtain satisfactory lines for geophysical surveys at an equivalent cost and saving in time bulldozing was done in preference to chopping out the lines by hand.

EQUIPMENT:

A Watts Vertical Force Variometer was used for the survey. The scale constant on this instrument is 30 gammas per division and readings may be taken to one half scale division with accuracy. Auxiliary magnets provide for a maximum range of  $\pm 15000$  gammas.

The instrument requires two men during operation who can record an average of 100 readings per day.

METHOD OF SURVEY:

An east-west base line was established through the Willy 1- 4 and 5 Fr. mineral claims and north-south lines turned off at 200 foot intervals. Line stations were chained in at 100 foot intervals and marked with four foot cedar laths showing the line number and station footage north or south. A tie line was run across the north end of the group.

Permanent and daily base stations were established for control of diurnal and instrument variation.

CALCULATION AND PLOTTING:

The calculations and plotting was done by N. Tribe under the direction of the writer.

Each day's readings were copied from the field book onto a standard form and the diurnal variation calculated and applied from base station readings. A datum correction for the auxiliary magnets, when used, was also applied. Finally a field correction to bring each day's readings into line with previous readings was calculated and applied.

The final calculated readings were plotted on 200 scale and contoured at 200 gamma intervals.

INTERPRETATION OF THE RESULTS:

Readings on the Willy Group range from - 645 gammas to + 3115 gammas for a maximum range of 3760 gammas. The general variation however, is approximately 1500 gammas ranging from + 700 gammas to + 2200 gammas. Background appears to be about + 900 gammas.

The failure to outline any zones of high intensity, i.e. several thousand gammas above background, indicates that no large concentrations of magnetite mineralization exist within at least two hundred feet of surface.

The results, however, do indicate trends which may well be reflections of the bedrock and which may be of considerable value when correlated with additional geological information.

The broad zone of magnetic 'highs' on the Willy 7, 8 and 2 Fr. mineral claims is believed due to an embayment of Guichon batholith dioritic rocks into the Nicola rocks. Andesite dykes of high magnetic susceptibility, which are common along the southern contact zone of the Guichon batholith and the Nicola rocks, have been mapped in this area.

Two elongated zones of approximately 900 gammas above background trend northeasterly across the Willy 7 and Willy 1 Fr. claim respectively and appear to be a definite reflection of bedrock.

A fourth zone of higher magnetic intensity also trends northeast through the Willy 2 claim to the Willy 1 Claim. This anomaly is ascribed to topography as the zone corresponds to a ridge top with a steep slope to the southeast.

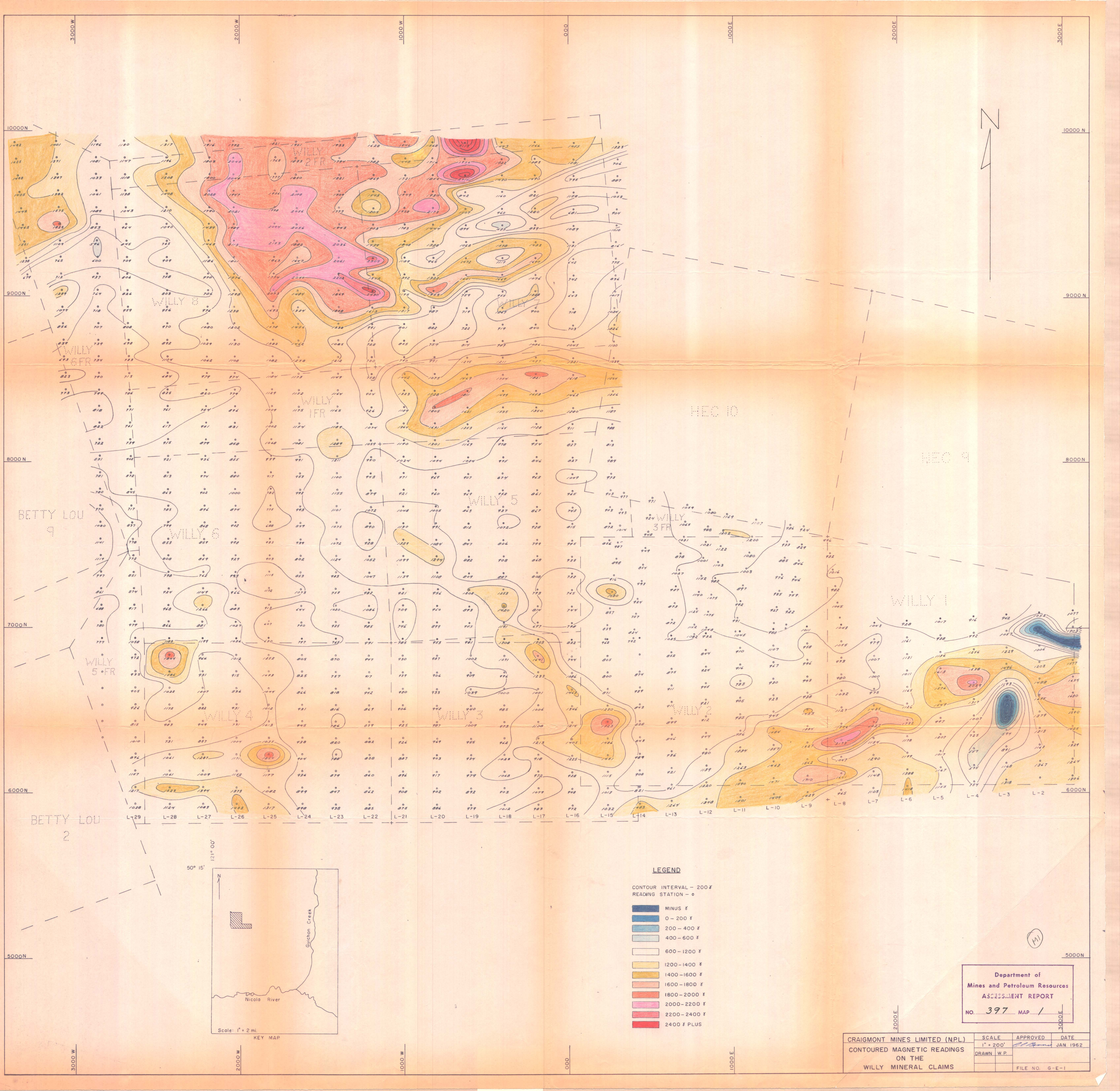
The zone of intermittent 'highs' running northwesterly through the Willy 2, 3 and 5 Claims corresponds to a large quartz porphyry dyke of moderate magnetic susceptibility.

CONCLUSIONS:

1. No large concentrations of magnetite, with the correspondingly possible copper-magnetite orebody, are indicated near surface.
2. The two northeasterly trending zones of moderate magnetic intensity on Willy 7 and Willy 1 Fr. Claims appear to be the most interesting and require additional work to determine their origin.
3. Further geological information obtained by mapping, trenching and diamond drilling is required to properly evaluate the magnetometer results.

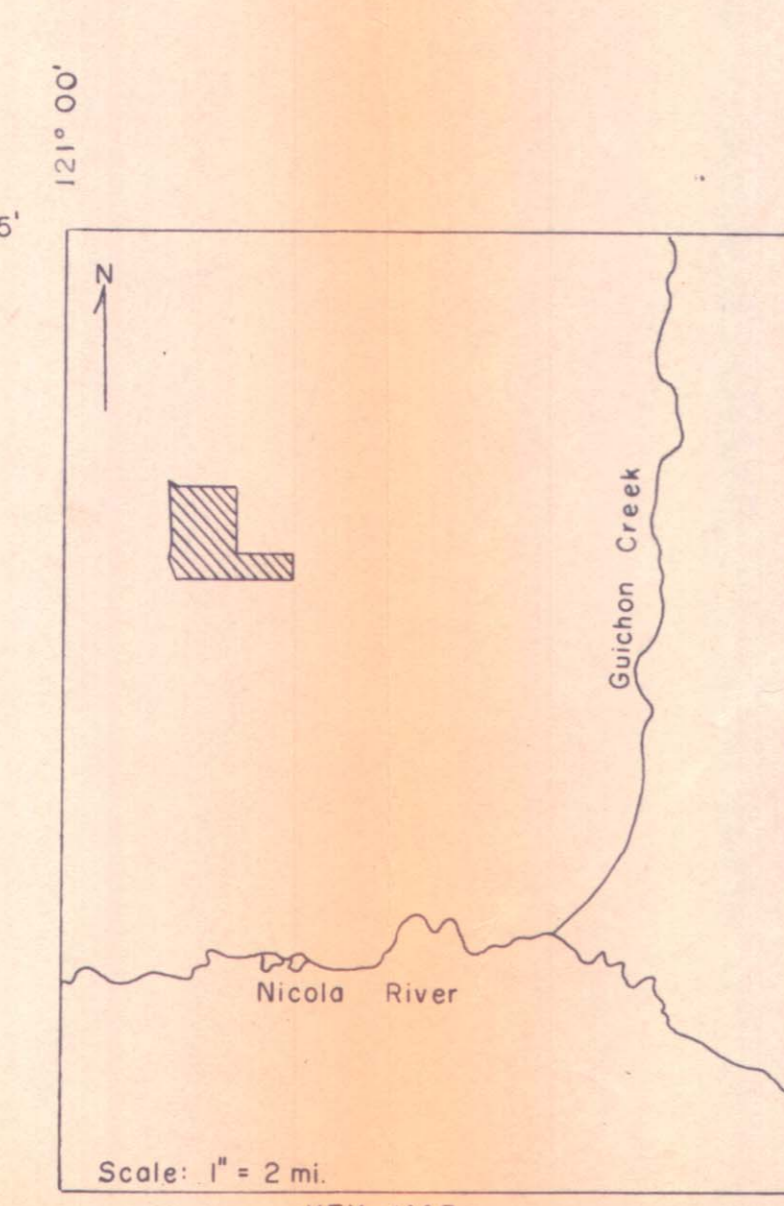
*W. S. Pentland*

W. S. Pentland,  
Geologist.



BETTY LOU 9

BETTY LOU 2



**LEGEND**

CONTOUR INTERVAL - 200 f  
READING STATION - o

Blue	MINUS f
Light Blue	0 - 200 f
Medium Blue	200 - 400 f
Dark Blue	400 - 600 f
White	600 - 1200 f
Light Yellow	1200 - 1400 f
Yellow	1400 - 1600 f
Orange	1600 - 1800 f
Red-Orange	1800 - 2000 f
Red	2000 - 2200 f
Dark Red	2200 - 2400 f
Black	2400 f PLUS

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 397 MAP 1

CRAIGMONT MINES LIMITED (NPL)	SCALE	APPROVED	DATE
CONTOURED MAGNETIC READINGS ON THE	1" = 200'	<i>[Signature]</i>	JAN 1962
WILLY MINERAL CLAIMS	DRAWN W.P.		
			FILE NO. G-E-1