

389

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15th November 1961.

Mr. Neil H. McDiarmid,
Peel Resources Limited, N. P. L.
408 Imperial Bank Building,
Vancouver 2, B. C.

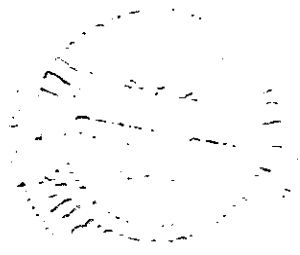
Dear Sir:

Herewith please find enclosed my geophysical
and geochemical report to cover the recent survey made
on your mineral claims in the Nicola Mining Division, near
Merritt, British Columbia.

Respectfully submitted,


Franklin L. C. Price, P. Eng.

FP/na
enc.



GEOPHYSICAL AND GEOCHEMICAL REPORT

PEEL GROUP "A"

- (Peel No. 1 - 10 inclusive)
- (Peel No. 1 & 2 Fractions)

April - Sept. 1961

**Franklin L. C. Price, P. Eng.
Vancouver, Canada**

November 15, 1961.

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 389 MAP

DOMINION OF CANADA) IN THE MATTER OF THE PEEL NO. 1
 Province of British Columbia) TO NO. 10 MINERAL CLAIMS AND
 To Wit:) PEEL NO. 1 & 2 FRACTIONAL CLAIMS

I, FRANKLIN PRICE, agent for Peel Resources Limited, of the City of Vancouver, Province of British Columbia, Free Miner Licence No. 23578 G, do solemnly declare that the following expenditures have been made on Mineral Claims Peel No. 1 to 10 inclusive and Fractional Claims Peel No. 1 and No. 2:--

Labour	\$2,442.96
U.I.C. and W.C.B.	244.29
Maps	<u>7.50</u>
Total	<u>\$2,694.75</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act".

Declared before me at the city :)
 of Vancouver, in the Province of)
 British Columbia, this)
 day of 196)
)

 A Commissioner for taking Affidavits)
 within British Columbia.

**EXPENDITURES INCURRED ON PEEL 1 - 42 GROUP
1961**

David R. Morgan, Geologist	May 2-12, 15-24 June 1, 2, 8, 12-23, 26-30 July 1-5, 11-28 Aug 1-16, 21-29 Sept. 1-15	\$1,885.52
Ruben Fast, Foreman	April 7, 17, 18, 19, 24 May 3, 4, 6-10 June 2-7, 12-17, 19-22, 22-30 July 4-13, 18-27 Aug 7, 10-12, 14, 19-22, 28-31 Sept 1, 2, 9, 10, 15-17, 22-27	\$1,303.81
W. R. Hoy, Junior Geologist	Aug 10-31 Sept 1-7	312.70
John L. Kovach, Labourer	May 22, 23, 29 June 1-19, 22-29	365.94
Lloyd Schmautz, Labourer	June 6-22, 26, 29, 30 July 1-15	413.11
James Samson, Labourer	June 20-30 July 1-31 Aug 11-31	743.94
John E. Dodd, Labourer	July 1-28 Aug 1-19 Sept 5-7, 9, 10, 15-17, 22-27, 29	806.00
Thomas C. Warren, Labourer	July 20-21	35.22
Allen P. Hodgson, Labourer	July 22-31 Aug 11-31	363.90
Lloyd Hodgson, Labourer	July 18-31 Aug 10-31	422.30
Franklin Price, Engineer in Charge	3 days @ \$35 per day	<u>105.00</u>
	TOTAL	\$6,757.44

INTRODUCTION AND SUMMARY :

A detailed magnetometer survey and geochemical survey was carried out during the summer of 1961 on a group of 42 claims that adjoin the Craigmont property and is located 10 miles northwest of Merritt, British Columbia.

This survey was done in the interests of Peel Resources Limited to appraise the mineral possibilities of the group.

The field work was completed in September and the final results correlated and mapped by the 1st of October, 1961.

The survey did not locate any anomalous areas from either magnetometer or the geochemical results.

LOCATION :

The group is known as the "PEEL" Claims. The group had been located several years ago as the "Doe" group and had been under the control of Craigmont Mines. They are located about one-half mile north of Jackson Lake and adjoin the present Craigmont holdings. The group lies to the east of and adjoins the present Torwest holdings.

The topography is moderately even with a gentle slope to the east with elevations from 4800 feet at the western boundaries to 4500 feet on the east. Most of the area is covered with typical small mountainous jackpine. The area is situated within the central dry belt of British Columbia.

The property is reach from Merritt by driving west to Lower Nicola, then north along the Aberdeen road through Craigmont Mines to a newly constructed tractor road that was built the length of the claims. The last several miles of the road is passable for 4-wheel drive vehicles only.

METHOD OF SURVEY :

The work was started with the construction of a tractor road that was completed from the Craigmont Mines road near Jackson Lake to the north end of the claims. The new road was made to run as near north as the topography would allow.

A transit survey was then made to establish a north-south base line the length of the claims. Cross lines were marked along this base every 300 feet. The cross lines were then completed with the use of a Brunton-type transit and stations were marked every 100 feet along the cross lines.

The cross lines were then cut clear of brush to allow proper marking of the stations and access for the magnetometer.

A. Method of Magnetometer Survey :

The magnetometer survey was carried out with an instrument made by the Radar Exploration Co. of Toronto, having a scale constant of 17.4 gammas per division of the vernier scale.

The field work on this survey was under the direction of Mr. Ruben Fast. His field notes were written directly onto the magnetometer calculation sheet. (Specimen attached to this report.) In the field three columns on this report were completed - the station, the instrument reading, and the time.

The field notes were turned in daily and office calculations were made to compute the value, the diurnal and to balance the line.

Office work and calculations were under the direction of Mr. David Morgan, B. C., a graduate in geology from the University of British Columbia.

The final value from each station was then plotted at its respective position on the map. Mapping was done by Mr. Morgan.

B. Method of Geochemical Survey :

The method used in this survey was the rubeanic acid test for copper soils designed and developed by Drs. H. V. Warren and R. E. Delavault of the Geology Department of the University of British Columbia. This method has been used with success on this type of soil and thus was selected over other methods.

The field procedure of this type of a survey is quite simple and may be done by one man. The work was carried out at the same time as the magnetometer survey and the head chainman took the soil samples. Samples were taken every 100 feet along the blazed cross lines at marked stations. The top few inches of the soil was cleared away and the sandy soil was selected just below the leached surface. A samples consisted of

a few ounces of soil. The sample was placed in a clean paper sack that was marked with the station number. At the end of each working day the samples were transported to the field office for analysis.

Each soil sample is checked by the rubeanic acid test method for the parts per million of copper content. The test is only relative and the local background must be taken into account of any given area. The test is made by selecting a measured amount of soil, i. e. one-half a teaspoonful, and placing it in a small test tube. The soil is then mixed with a buffer solution of acetic acid. The resulting solution is then filtered onto rubeanic acid reaction paper. The copper ions in solution react very quickly with the rubeanic acid and make a dark black stain on the paper. The sizes of the black stains are then correlated and the results plotted on the map at the point of the station site.

GEOLOGY : *

REGIONAL GEOLOGY :

The claims are situated 14 miles northwest of Merritt in the Interior Plateau of British Columbia. The main geological features are provided by the Nicola Group, the Guichon Batholith and the Spences Bridge group.

The Nicola Group of Upper Triassic age is the oldest in the area and consists of basalts, andesites, tuffs, tuffaceous sediments, limestones and impure limestones. This group of rocks was intruded during early Mesozoic time by the Guichon Batholith which is associated with, though probably a little older than, the main body of the Coast Intrusions which lie about 15 miles to the west. The typical rock type of the Guichon Batholith is granodiorite.

The type exposure of the Nicola Group occurs on the southwest shore of Nicola Lake. A large body of Nicola Group rocks lies to the north of this lake and forms the eastern boundary of the Guichon Batholith. There are patches of Nicola Group rocks to the north, northeast and northwest of the batholith. If any rocks of Nicola age lie to the west of the batholith they are obscured by rocks of the Spences Bridge group which are younger than both the Nicola and Guichon Batholith rocks and can not therefore be expected to have benefited from the copper bearing solutions which have in many places been associated with the Guichon intrusives.

The Peel 1 - 42 Group of claims lie at the southern extremity of the Guichon Batholith near its intrusive contact with a small but important exposure of rocks of the Nicola Group.

It is on this contact that the Craigmont orebody was discovered. The southern boundary of the claim group lies about one mile northwest of this orebody.

GEOLOGY OF PEEL 1 - 42 CLAIM GROUP :

The entire claim group appears to be underlain by granodiorite and quartz diorite rocks of the Guichon Batholith. Composition is typically 75% Feldspar, 15% Hornblende and Biotite, and 10% Quartz.

The overburden coverage naturally varies in such a large claim group, but in general there is about 10 to 15% outcrop. The outcrop occurs typically in ridges bounded by fairly sharp and continuous draws which run in three principal directions:

North 60° West (Southern and southwestern part of property)

North (Central and northern part of property)

North 45° East (Central and northeastern part of property).

STRUCTURE :

The major structural features appear to be the fracture systems revealed by the draw lineations mentioned above. The most important of these fracture groups seems to be the set striking North 60° West.

This group lies parallel to an important looking break which runs northwest from the northern part of the Craigmont property through the Paystin zone, northwest to Jackson Lake and for about another mile and a half into the Torwest property. This fracture set is sub-parallel to the southern boundary of the batholith and also to the strike of the contact along which the Craigmont orebody is developed.

A less important fracture set runs due north from the Paystin but horse-tails out about half a mile north of the Paystin zone near the common boundary point of Craigmont Mines, Friday Mines and Peel Resources.

ECONOMIC GEOLOGY :

Three types of orebody were considered as possibilities on the property:

1. A fault slice body: This could have been formed by the down-faulting of a slice of Nicola Group rocks which could have been mineralized either before the down-faulting or after. The orebody in the Aberdeen Mine was of this type, and it is interesting to note that its strike was north 60° west.
2. A roof pendant body: This could have been formed by the mineralization of a down fold in the Nicola Group which would have been exposed by erosion as a roof pendant.

3. An explosion breccia body : This could have been formed by an explosion which brecciated a small part of the intrusive in a way which is not yet understood, and formed a diorite breccia host rock for mineralizing solutions. The Trojan and Bethlehem orebodies are thought to have been formed in this way.

Any of the three above types could have been concealed by the overburden on the property, however, as a result of the survey, the likelihood of any of these types of orebodies existing on the property does not seem good.

Either of the first two types of orebody which would involve the presence within the intrusive country rock of a mass of Nicola volcanics or sediments, would have produced some variation in magnetic intensity and would have shown up in the magnetometer readings. Nicola rocks would have been revealed then whether they were barren or mineralized. The geochemical testing would have shown whether any such body was appreciably mineralized with copper.

The third type considered does not in general give sharp magnetic anomalies, but would probably have shown up in the geochemical survey results.

* Geology by David R. Morgan

QUALIFICATIONS OF RUBEN FAST AS GEOPHYSICAL OPERATOR :

Mr. Ruben Fast is a qualified magnetometer operator and prior to joining Neil H. McDiarmid and his associated companies, was employed for three years by Underhill and Underhill, working at various locations throughout British Columbia as an instrument operator.

Mr. Fast was employed by N. H. McDiarmid in December, 1958 and received instructions, not only from the writer, but from Mr. R. E. Renshaw, Geologist, on the use of a Radar Magnetometer and also a Sharp magnetometer.

In Mr. Fast's training, in addition to the usual instructions, he was also instructed on field maintenance and able to make minor adjustments for seasonal or daily diurnal if the case was necessary.

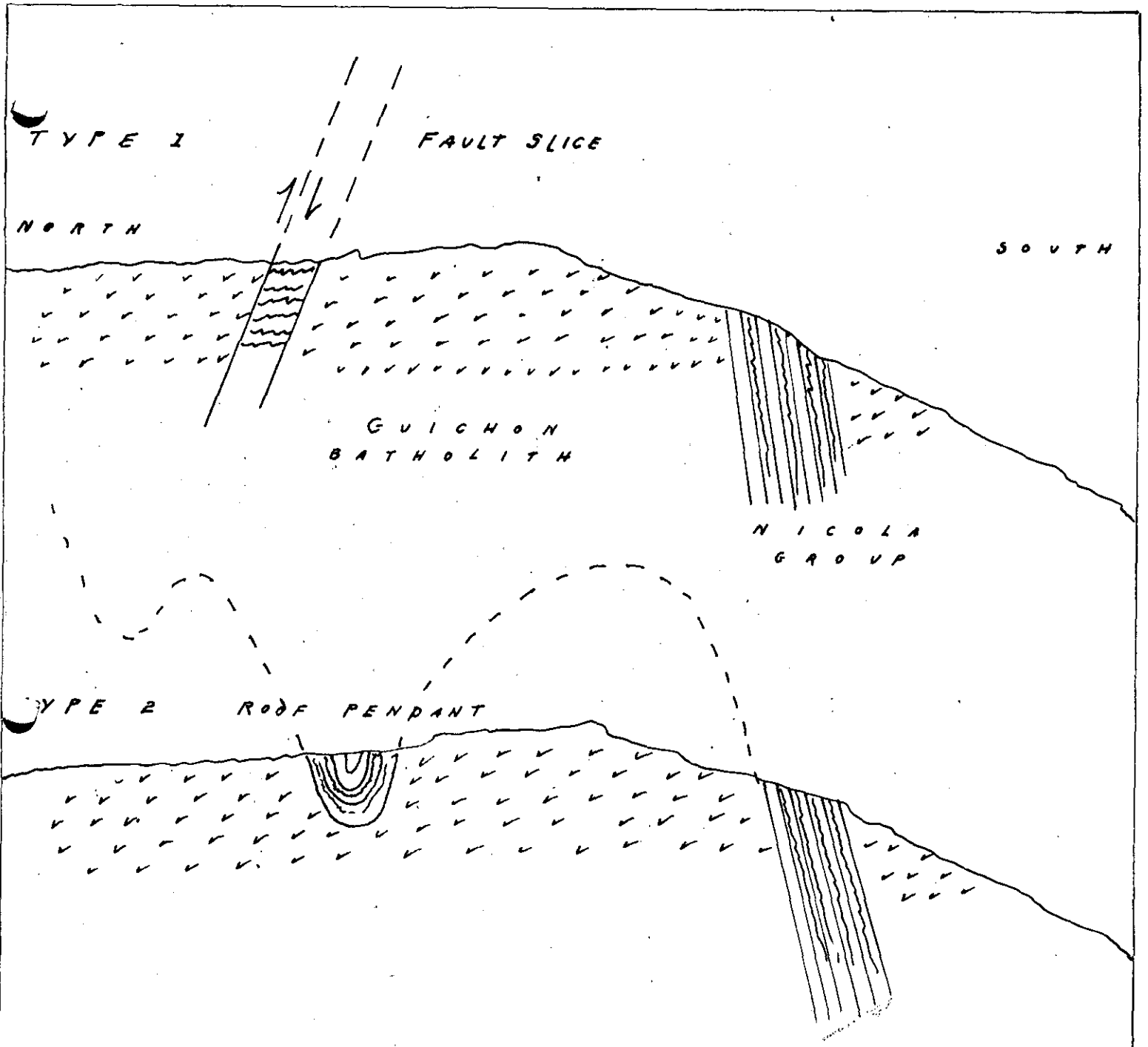
In the three years that Mr. Fast has been with N. H. McDiarmid and associated companies, he has been running a Radar machine in the Merritt Batholith area as well as at Greenwood, Nelson, and other mining areas of southern British Columbia.

DATE:

LINE:

STAT	READ	VALUE	TIME	DIUR	V - D	VI - C	REMARKS
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MAGNETOMETER NOTES SPECIMEN



HYPOTHETICAL NORTH - SOUTH VERTICAL SECTIONS THROUGH THE PROMONTORY HILL AREA TO SHOW TWO OF THE TYPES OF ORE ZONE POSSIBILITIES ON THE PEEL 1 - 42 GROUP.

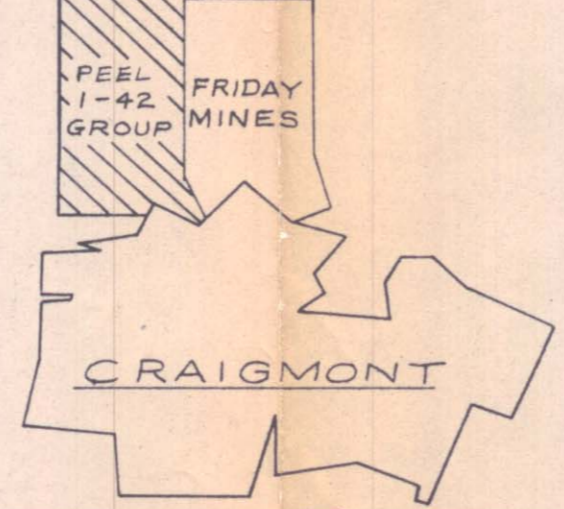


389 (M)

LEGEND

MAGNETIC VALUES	GEOCHEMICAL VALUES
Background 10,000 δ	Background
11,000 Gammas	Trace
11,500 Gammas	Medium
12,000 Gammas	Good

LOCATION



PEEL RESOURCES LTD
(SOUTH SHEET)

MAGNETOMETER AND GEOCHEMICAL SURVEY OF PEELI-42 CLAIM GROUP
MERRITT AREA, B.C.

Scale: 1 inch to 200 feet
Date: August 1961.
By: D.R. Morgan. *approved [Signature]*