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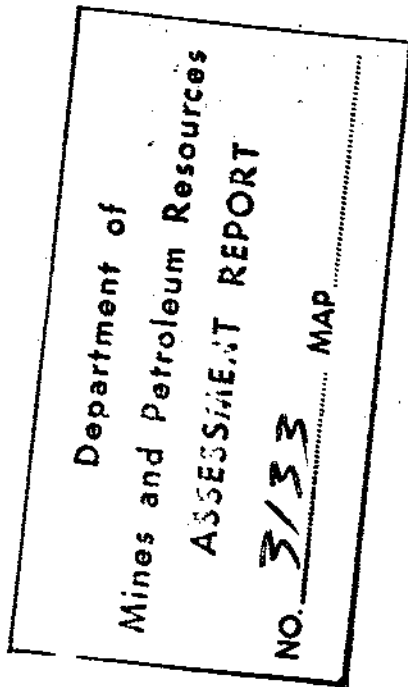
PRELIMINARY GEOLOGIC RECONNAISSANCE REPORT

ON THE

MT. HAYES GROUP OF CLAIMS

VANCOUVER MINING DISTRICT, BRITISH COLUMBIA

<u>Claim Record Numbers</u>	<u>Date Recorded</u>	<u>Claim Holder</u>
17440 thru 17455	28 July 1970	D. C. Wing, FMC No. 95722
17472 thru 17487	28 July 1970	D. C. Wing, FMC No. 95722
17527 thru 17536	18 Aug. 1970	D. C. Wing, FMC No. 95722



Center of the Claim Group
is at

Latitude 50° 22' North
Longitude 124° 54' West

92 K / 7W

Report Prepared By
R. C. Vickers, PhD

30 June 1971

This report is submitted as fulfillment of Assessment Work Requirements on the above listed claims (total 42 claims) for the first period ending one year from the recording thereof, such work having been accomplished during the period 12 July thru 12 August, 1970.

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- ~~X~~ Plate 1 - Geologic Reconnaissance Map of the Mt. Hayes Group of Claims, Vancouver Mining District, British Columbia. (in pocket)

PRELIMINARY GEOLOGIC RECONNAISSANCE REPORT ON THE MT. HAYES
GROUP OF CLAIMS, VANCOUVER MINING DISTRICT, BRITISH COLUMBIA

by

Dr. R. C. Vickers

INTRODUCTION

During June, 1970, the author, accompanied by D. C. Wing, prospector, conducted a one-day field examination of reported occurrences of copper (chalcopyrite) in the Mt. Hayes area. Several small pieces of chalcopyrite-bearing float were found and it was decided to stake the area and conduct an exploration program to determine the distribution and source of the float.

LOCATION, GENERAL FEATURES AND ACCESSIBILITY

The Mt. Hayes area is about 120 miles north of Vancouver, B. C., on the mainland about 15 miles east of Campbell River, B. C. The claim group is at latitude 50° 22' North and longitude 124° 54' West and consists of 42 contiguous claims covering the summit and northeast side of Mt. Hayes, about 1½ miles from deep tidewater of Ramsay Arm.

The claims consist of the following: (see Plate 1)

<u>Claim Record Number</u>	<u>Date Recorded</u>	<u>Claim Holder</u>
17440 thru 17455	28 July 1970	D. C. Wing, FMC No. 95722
17472 thru 17487	28 July 1970	Same as above
17527 thru 17536	18 Aug. 1970	Same as above

Elevations on the claims range from about 1,000 feet to about 5,000 feet at the summit of Mt. Hayes. Timber has been removed from the lower elevations (claims nos. 17441, 17442, 17444 and 17446) since the airphoto shown in Plate 1 was taken. The upper part of Mt. Hayes above 3,500 feet is mainly rock exposures and talus.

The claim area is accessible from Quatum Bay by following a logging road on the south side of the Quatum river valley a distance of about 2 miles to a junction with another road (washed out in several places) that leads up a tributary stream about 2 miles to the first

copper showings (see Plate 1). Travel to Quatum Bay can be either by float plane or boat from Campbell River, a distance of about 15 miles.

The claim area, especially the higher elevations, can be most easily reached by helicopter from Campbell River (Okanagan Helicopters Ltd.). Several helicopter landing sites are present on the claims.

DESCRIPTION OF WORK ACCOMPLISHED

Previous work in the area had shown the presence of several pieces of float containing disseminated chalcopyrite found along the road cut mainly on claims 17444 and 17446. The purpose of the first work was to try to determine the limits and distribution of the copper-bearing float. A prospecting team consisting of D. C. Wing and Dave Curry were employed to traverse the entire claim area in the search for additional float or outcrops of copper-bearing rock. This team operated on the claims from July 12 through August 12, 1970, spending a total of 40 man days on the claims. This work was under the direct supervision of the author who also spent a total of nine days on the property during the same period. Traversing the claims between the showings on the lower road and the summit of Mt. Hayes proved to be extremely hazardous and time-consuming because of the rugged topography (numerous vertical rock walls) and at times dense undergrowth.

During this work many additional pieces of copper-bearing float were found in the vicinity of the end of the logging road (Locality A, Plate 1), an outcrop of disseminated chalcopyrite in slightly silicified quartz diorite was found at Locality C and additional chalcopyrite-bearing float was found at Localities B and C.

The location of the claims were plotted on the enlarged photo shown in Plate 1 (Scale 1" = 1,000 feet) and the location of the copper-bearing float and areas of outcrop of silicified and pyritized quartz diorite were also shown.

RESULTS OF ANALYSES

The following table summarizes the results of significant analytical data:

<u>Sample Locality and Number</u>	<u>Copper Percent</u>	<u>Remarks</u>
<u>Locality A</u>		
RA-1	0.11	Highly silicified and pyritized float containing disseminated fine-grained chalcopyrite.
RA-2	0.50	Same as above
RA-3	0.03	200 ft. chip sample of silicified and pyritized quartz diorite outcrop along road.
RA-4	0.01	100 ft. chip sample of silicified and pyritized quartz diorite outcrop along road.
<u>Locality B</u>		
B-1	0.50	Silicified and pyritized float containing disseminated fine-grained chalcopyrite. Copper content visually estimated. One small grain of molybdenite also identified.
<u>Locality C</u>		
C-1	0.50	Disseminated chalcopyrite in fresh-appearing quartz diorite float in talus.
B-46	0.22	4 ft. chip sample of disseminated chalcopyrite in fracture zone in slightly silicified and pyritized diorite.
<u>Locality D</u>		
D-1	1.53	Chalcopyrite in silicified float. No pyrite observed. Silver 1.03 oz. per ton.
<u>Locality E</u>		
E-1	0.05	Silicified and pyritized grab sample of outcrop.

Assays by Skyline Labs, Inc., Denver, Colo., Root & Simpson, Denver, Colo., Chemex Labs Ltd, North Vancouver, B. C. and Crest Laboratories Ltd, Vancouver, B. C.

GEOLOGY AND INTERPRETATION OF RESULTS

The Mt. Hayes group of claims is underlain mainly by medium-grained quartz diorite of the Coast Range batholith. Near the summit of Mt. Hayes on claim no. 17485 above Locality C, basaltic volcanic rocks were observed above the diorite and in float but the author was unable to examine the contact in detail because of the near-vertical topography.

The principal features concerned with the occurrence of copper are the widespread areas of intense silicification and pyritization of the diorite and chloritic-type alteration of the diorite. Only the larger areas of the silicification and pyritization are shown on Plate 1, but while traversing the claims in the vicinity of the localities shown on the map, many isolated bedrock exposures of pyritized diorite were observed between the altered areas shown on Plate 1. Extensive trenching would be necessary to confirm their extent and continuity.

Specimens of silicified and pyritized outcrops and float were examined with a hand lens (20x) to determine the presence or absence of chalcopyrite. Although visible chalcopyrite was found in place at only one locality (Locality C, Sample B-46), many samples of float containing as much as 1.53 percent copper were found. Most of the samples of float were completely silicified and several appeared to be micro-brecciated. In general the chalcopyrite was fine grained, some of which was invisible to the naked eye. In several samples, chalcopyrite was the only visible sulphide present.

The abundance of chalcopyrite-bearing float, especially on claims nos. 17444 and 17446, suggests that additional bedrock sources of the chalcopyrite-bearing material should be found immediately up-slope. Although much of this area is covered with heavy vegetation and up to six feet of glacial debris, soil sampling may be effective in outlining areas for test pitting or trenching to bedrock. Detailed chip-channel sampling of all pyritized outcrops should be done to determine the distribution of the copper values.

The work done thus far suggests that this extensive silicification and pyritization was followed by a period of brecciation and introduction of copper sulphides. Some 'ore grade material' is present in the float and further more detailed work would be necessary before any assumption is made concerning the size or grade of the mineralized bodies.

DECLARATION OF ACTUAL COSTS

The following costs were incurred for the benefit of the claims during the period 12 July thru 12 August, 1970.

Airphoto enlargements and reproductions	\$ 499.23
Analyses	274.95
Helicopter Service to Claims	
23 July	\$287.50
24 July	175.00
30 July	129.16
4 Aug.	<u>187.50</u>
	779.16
Boat & Float Plane service to Quatun Bay	87.00
Camp Food and Supplies	265.00
Wages:	
D. C. Wing, 20 days @ \$50.00 per day	1,000.00
Dave Curry, 20 days @ \$30.00 per day	600.00
R. C. Vickers, geologist, 9 day @ \$125/day	1,125.00
	<hr/>
Total	\$4,630.34

Declared before me at the *City*
of *Manusman* in the
Province of British Columbia, this *2nd*
day of *July* 1971

R. C. Vickers

G. Chalups

A Commissioner for the Affidavit Act of British Columbia or
A Notary Public in and for the Province of British Columbia.

SUB-MINING RECORDER

STATEMENT OF QUALIFICATIONS OF THE AUTHOR

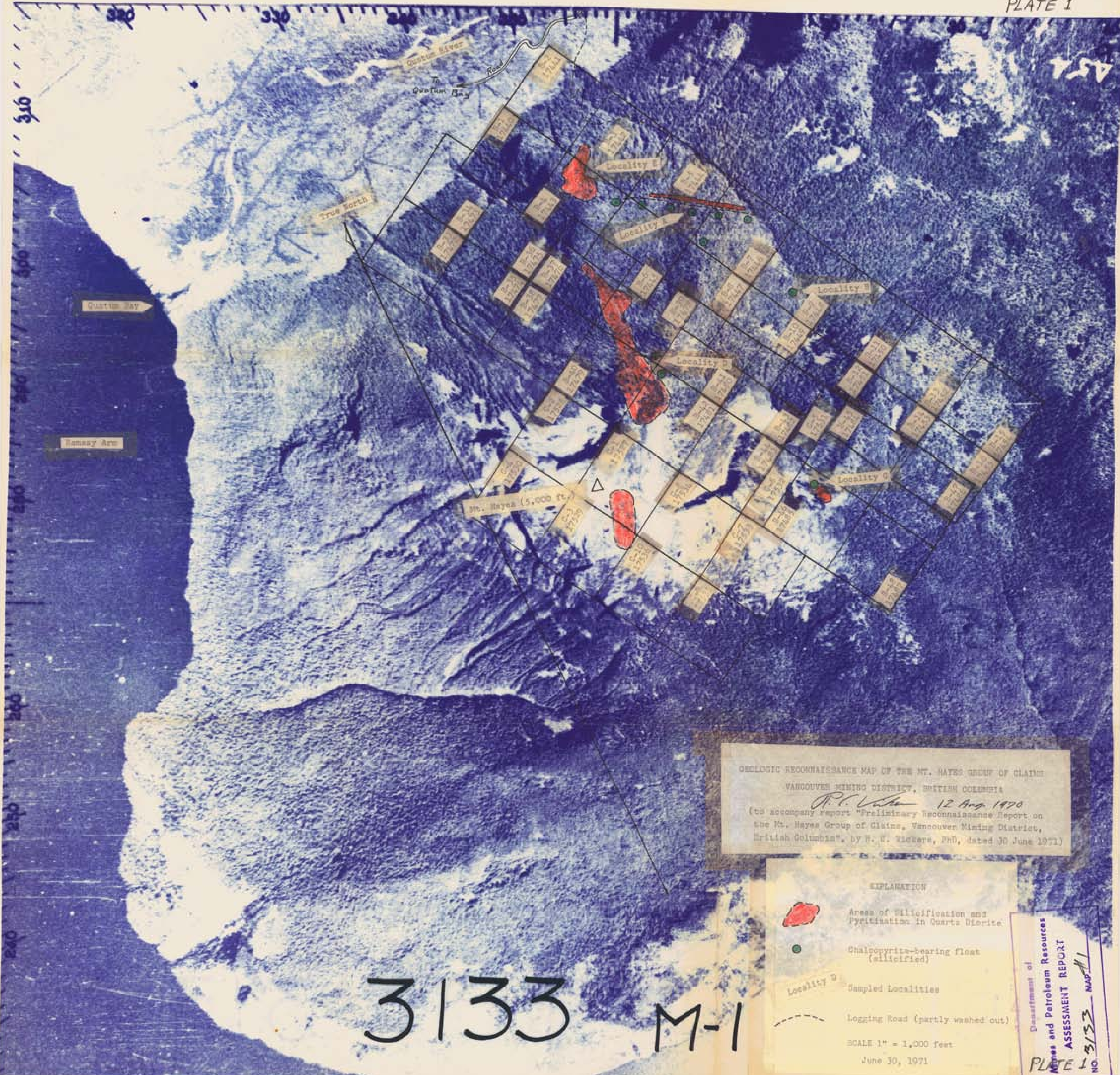
Rollin C. Vickers, the author of this report, graduated from Cornell University, Ithaca, New York, with a Bachelor of Arts degree (geology) in 1950. He received the degree of Master of Science (geology) from Syracuse University, Syracuse, New York, in 1952, and the degree of Doctor of Science (economic geology and mining) from the University of Wisconsin in 1957. From 1952 until 1956 he was employed by the U. S. Geological Survey as a geologist and project chief in field studies and mapping of uranium and other mineral deposits. He worked as a minerals specialist with the Turkish government during 1957 and was a consultant to mining companies from 1958 to the present. Dr. Vickers is the author of several published geologic reports, is a member of the American Institute of Mining Engineers and was a former Registered Professional Engineer of Colorado. He resides at 927 2nd Avenue East, Williston, North Dakota, 58801.

Respectfully submitted,






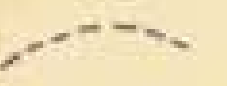
Rollin C. Vickers

30 June 1971



GEOLOGIC RECONNAISSANCE MAP OF THE MT. HAYES GROUP OF CLAINS
 VANCOUVER MINING DISTRICT, BRITISH COLUMBIA
R. L. Vukobratovic 12 Aug. 1970
 (to accompany report "Preliminary Reconnaissance Report on
 the Mt. Hayes Group of Clains, Vancouver Mining District,
 British Columbia", by F. G. Vickers, PhD, dated 30 June 1971)

EXPLANATION

-  Area of Silicification and Pyritization in Quartz Diorite
-  Chalcopyrite-bearing float (silicified)
-  Localities D - Sampled Localities
-  Logging Road (partly washed out)

SCALE 1" = 1,000 feet
 June 30, 1971

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3133 MAP 1
 PLATE 1

3133 M-1