

94D Prop. Submitted  
New Wellington  
Mines, McConnell Creek, BC.

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**GEOLOGICAL REPORT**

**ON THE**

**MARMOT MINERAL CLAIMS**

**IN THE**

**OMINECA MINING DIVISION**

**FOR**

**NEW WELLINGTON MINES LTD.**

**BY**

**W. G. STEVENSON, P. ENG.**

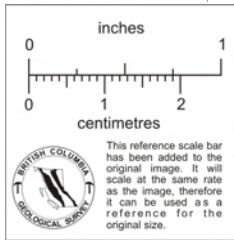
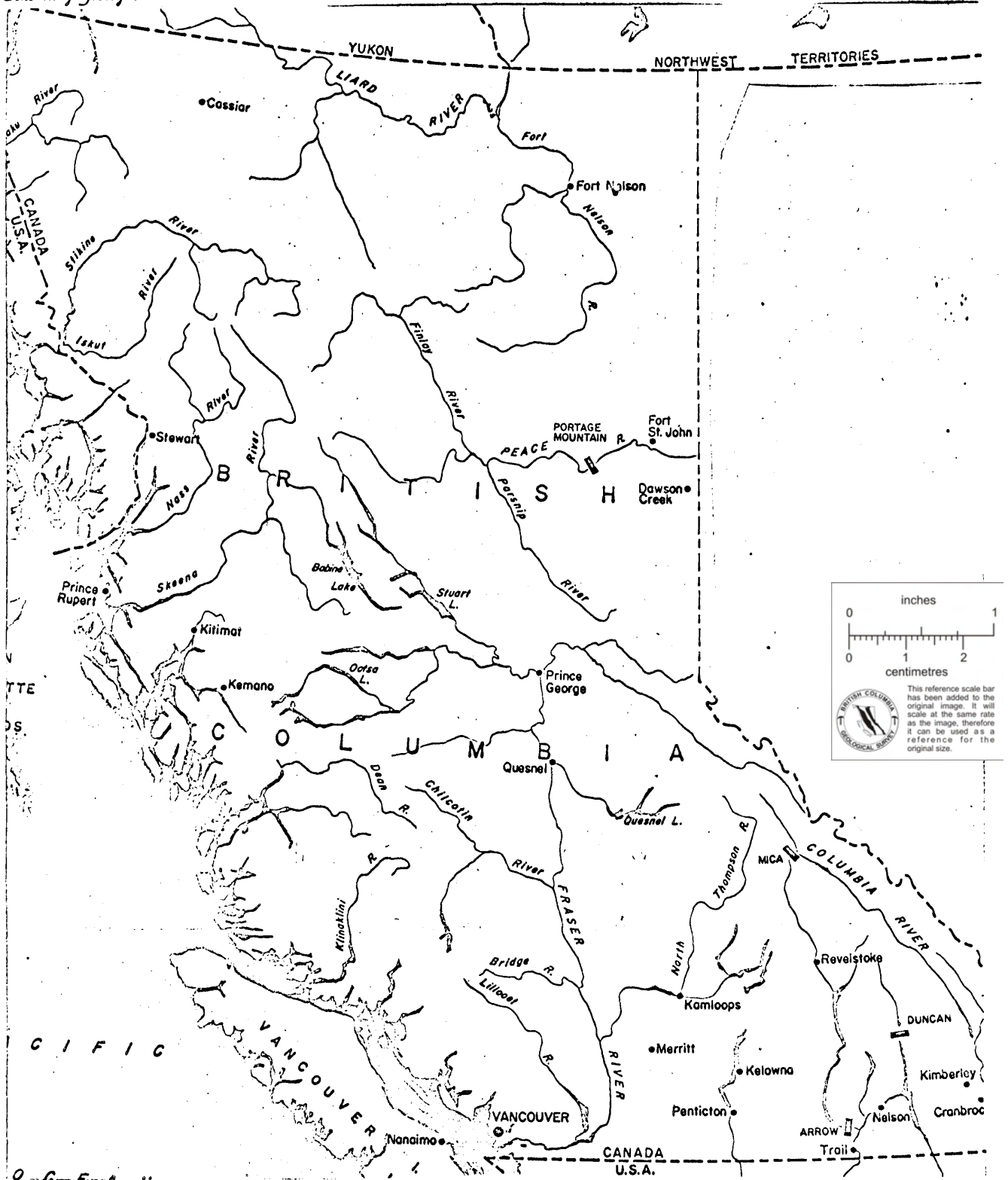
**Vancouver, B. C.**

**September 28, 1966**

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WILLIAM G. STEVENSON, P. Eng.

Consulting Geologist



Index Map showing location of

MARMOT MINERAL CLAIMS  
NEW WELLINGTON MINES LTD.  
OMINECA MINING DIVISION

British Columbia  
Scale 1" = 100 miles

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## INTRODUCTION

During August 1966 I spent two days examining a property in the Omineca Mining Division in Central British Columbia which was held by New Wellington Mines, Ltd. This examination had as its objective the up-dating of information pertaining to this property which was contained in a report dated May 4, 1966, by Dr. Allan Fawley, Consulting Geologist for New Wellington Mines, Ltd.

## LOCATION AND ACCESSIBILITY

This property is located in a remote area, 185 miles north-westerly from Fort St. James and 8 miles south of McConnel Creek at approximately  $56^{\circ} 45'$  north latitude and  $126^{\circ} 30'$  west longitude. The claims are centered over a ridge which encompasses Menard Basin.

Access can be gained by road to Usilika Lake thence by Cat Road to the property 65 miles northwesterly. An alternate means of access is by float plane to Thorn Lake, thence by trail 10 miles southeasterly to the property.

## CLAIMS TITLE

New Wellington Mines, Ltd. have acquired a block of 101 contiguous mineral claims in the Omineca Mining Division of B. C. These claims are called the Marmot No. 1 - 101 record numbers 37027 - 37127, inclusive, shown on B. C. Mineral Map No. 59 - M. They were staked and the records in the Mining Recorder's office show they are held in

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CLAIMS TITLE (Cont'd.)

the name of Mr. James Tough, Apt. 605, 700 Chilco Street, Vancouver, B. C. These claims were recorded on April 1, 1966, and are valid until March 31, 1967.

TOPOGRAPHY

The claim group is centered over a mountainous region with elevations from 5000' up to and in excess of 7000'. Most of the Claim Block is above timber line and vegetation is sparse even in the lower elevations.

HISTORY

Mr. W. D. Savage, prospector from Vancouver, has, periodically, over the past 20 years held mineral claims over the mineralization exposed in Menard Basin. Early in 1966 under his direction, a block of mineral claims were staked over this mineralization and title to these claims was subsequently acquired by New Wellington Mines Ltd. During 1966 a camp was established in Menard Basin, a dozer trail put in to the divide toward the west and a series of dozer cuts were put down.

This area was mapped during 1941 - 1945 by personnel from the Geological Survey of Canada. During 1965 Mr. G. L. Holbrooke, Consulting Geologist from Toronto, visited the property and has written a report.

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### REGIONAL GEOLOGY

Many of the mountain ranges in the central part of British Columbia have a northwesterly trend which coincides with the direction of the major faulting, the direction of major folding and the axis of igneous intrusives.

One of the main intrusives in Central B. C. is called the Omineca Batholith. This intrusive body is exposed on the surface over a width of approximately 20 miles. It can be traced northwesterly as a single body for 100 miles and it probably continues for an additional 50 miles, as evidenced by outcrops of isolated intrusive masses along this same trend. This intrusive mass is bounded on the southwest by a fault of major proportions. This fault is called the Pinchi toward the southeast and the Omineca toward the northwest.

A thick and complex series of volcanic rocks outcrops in this area and extends over a very large part of central British Columbia.

These volcanic formations are called the Asitka group of Pennsylvanian Age, the Takha group of jurrassic age and various Basaltic flows of tertiary age. There are, in addition, a series of flat-lying variously colored sediments in this area some of which contain coal measures.

### LOCAL GEOLOGY

The geology of this area has been described by Lord, of the Geological Survey of Canada in 1948; Holbrook, Consulting Geologist, in 1965; and by Fawley, Consulting Geologist, in 1966.

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LOCAL GEOLOGY (Cont'd.)

I have prepared an enlargement of a part of the map published by the Geological Survey of Canada which includes the area of the claim block. I have incorporated a number of modifications on this map and a copy is attached to this report.

A large part of the property is masked by post mineral glacial debris and alluvium.

The most abundant rock type in this area is a blue-black, fine to medium-grained volcanic, which is part of the Takla Formation of Mesozoic Age. It has a thickness in excess of 20,00'. This formation is extremely complex with a wide variation in composition, texture, mode of origin and attitude.

Three granitic plutons, all part of the Omineca Batholith which are intrusive into the volcanic rocks, were mapped. The rocks from these were essentially fresh, unaltered granite and quartz diorite void of any recognizable copper mineralization.

While I was on the property I collected a suite of 39 Rock specimens from widely spaced locations. These were submitted to Professor R. M. Thompson of the University of B. C. for study, and his description of these specimens is attached as an appendix to this report. This information has been used to assist in an interpretation of the geology of this area.

Approximately half of the specimens have been identified as volcanic, mainly Basalt with the composition of some of the volcanics approaching Andesite. Several of the remaining specimens are very

LOCAL GEOLOGY (Cont'd.)

probably volcanic though sufficiently altered to make positive identification impossible. Six of the specimens were identified as intrusives and the remaining specimens were ore minerals of copper. The location where most of the specimens were collected is shown on the attached maps.

MINERALIZATION

The mineralization which is presently considered to be of importance is copper, with minor amounts of silver and gold. This economic mineralization is essentially chalcopyrite, chalcocite and Bornite. This is found in fissures associated with iron gossion zones or disseminated through one or more of the various types of volcanic rocks.

The mineralized veins reported on by Mr. Holbrook are, in the most part, narrow, irregular and widely spaced. I would not expect them to be continuous along strike or to depth. I collected samples from four of these veins over widths up to 6 feet and the assay results varied from 0.1 to 1.2 ounces silver; 0.06 - 1.15% copper and with consistent gold content of 0.02 ounces. The location of these samples is shown on the attached maps. As these veins are widely spaced and the intervening ground is unmineralized they could not alone be expected to support a profitable mining operation. Copper mineralization has been recognized over an extensive area and some of this occurs disseminated through the enclosing rock.

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MINERALIZATION (Cont'd.)

The geological controls that localize this mineralization are not well understood. It would seem to me however that certain of these volcanic horizons which contain the disseminated copper are intrusive porphyry, associated with intersecting fault or fissure zones.

While I was on the property I collected two samples from an area where I recognized disseminated copper mineralization. The first, shown on Map B, assayed 1.10% copper and the second approximately one mile southeasterly, shown on Map A, assayed 0.65% copper.

The northern sample was taken along a vague fault structure that appears to confine the mineralization to a width of four feet. The second sample was collected over a width of 25 feet and talus slope, masked the extent or controlling structure.

CONCLUSIONS

1. Copper mineralization has been recognized in this area over an extensive area well beyond the limits of the claim block.
2. I did not recognize any copper mineralization in the granitic-textured intrusive plutons which are assumed to be a continuation of the Omineca Batholith.
3. The mineralization which I recognized on the property is associated with volcanic rocks, probably both intrusive and extrusive.
4. The veins which were the objective of the exploration program are narrow and irregular and I would not expect them to be

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CONCLUSIONS (Cont'd.) - No. 4

continuous either along strike or at depth. These are crosscutting structures and do not conform to the attitude of the volcanic layering.

5. With the exception of the northwesterly trending veins most of the geological controls that have localized the copper mineralization are indistinct and vague.

6. The extent or grade of the disseminated mineralization is not known and additional geological and geophysical work will be required to make this determination.

RECOMMENDATIONS

1. It is my recommendation that a contour map, drawn to a scale of 1" = 1000', be prepared from the existing photographic coverage.

2. With this map as a guide these claims should be geologically mapped and systematically sampled.

3. I would recommend that a detailed geophysical survey be accomplished over this claim block. Some of the copper mineralization is low grade and disseminated. It would appear to me that an induced polarization survey would be the most useful. The electromagnetic geophysical recommended by your consulting geologist, shall be accomplished.

4. While I was on the property I made a number of recordings with a Sharpe D-2 dip needle. The variation was such on this instrument that I believe a survey with a more delicate magnetic

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RECOMMENDATIONS (Cont'd.) - No. 4

instrument would provide information which could be used to assist with an interpretation of the geology.

5. I would make a concerted effort to obtain geological maps and other data that have been collected by companies and individuals who have been working in this area.

6. I would compile all of the appropriate costs and expenses and present them to the Mining Recorder to validate these claims for an additional year.

Respectfully submitted:

  
W. G. Stevenson

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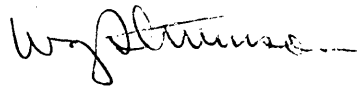
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C E R T I F I C A T E

I, William G. Stevenson, do hereby certify:

1. That I am a Consulting Geological Engineer with offices at Suite 509 Stock Exchange Bldg., 475 Howe Street, Vancouver, B. C.
2. That I am a graduate of University of Utah, 1946, with a Bachelor of Science degree.
3. That I am a registered Professional Engineer in the Association in British Columbia.
4. That I have practised my profession for twenty years.
5. That I have no direct, indirect or contingent interest in the Marmot Claims, or in the securities of New Wellington Mines Ltd.
6. That this report, dated September 28, 1966 is based on a study of the Geological Publications and as a result of an examination conducted August 1966.

Dated in Vancouver, British Columbia this twenty-eight day of September, 1966.



W. G. Stevenson, P. Eng.

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