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PRELIMINARY GEOLOGICAL REPORT
SPANISH LAKE AREA
CARIBOO MINING DIVISION, B.C.

Vancouver, B.C.
March 14, 1979.

Clive W. Ball, P. Eng.
Consulting Geologist

REGIONAL GEOLOGY

Early geological reports deal principally with the Barkerville and Quesnel River Districts as for example Geol. Survey Summary Reports by B.R. McKay 1918 and G.S.C. Memoirs 149 and 181 by W.L. Uglow and G. Hanson respectively.

Later reports around 1922 and 1932 deal almost exclusively with descriptions of gold placer properties. Published Bulletins by the B.C. Department of Mines have been closely studied but do not throw any light on the geology of the area under considerations.

The most valuable reference is the Quesnel Lake map sheet with geology by R.B. Campbell, 1959 - 1963 and 1979.

This map was published in 1978 and the writer has consulted with Dr. Campbell regarding the salient features of the geology.

It is important to bear in mind that field traverses were widely spaced - access was difficult at times and time spent on the map sheet was not of sufficient duration as to provide great detail. The map is on a scale of 1:125,000 or approximately 2 miles to 1 inch.

The writer has selected an area 30 miles by 30 miles square in order to delineate the regional geology as mapped by R.B. Campbell (See Figure 1).

Predominant rock units are of Triassic age with some sediments and intrusions of upper Triassic and Turassic age.

Argillites, greenstones, sandstones, conglomerates, phyllites and cherts are very common in addition to some relatively unaltered volcanic flows and sediments and breccias of andesitic and basaltic composition.

Possibly the most interesting units are the intrusive rocks which include syenite, monzonite and diorite.

Small nepheline syenite intrusives are mineralized with copper and have been mapped on Viewland Mountain, Shiko Lake, south of Kwun Lake, Cariboo Bell (Mount Polley) and Gibbons Creek. It is noted that a belt of such intrusions trend north-west to south-east following the grain of the sedimentary and volcanic rocks. It would appear that the intrusives follow a major N.W. trending series of strong faults.

Prevailing dips of the sediments are to the north-east at moderate angles with some reversals indicating some degree of folding along north-west axes.

Dr. Campbell has mapped a series of north-south, north-east and east-west faults in the Likely area and these offset the rock formations quite pronouncedly.

The Mariner II claims and the western portion of the Ron claim groups are traversed by a transition zone intermediate between the black slaty argillite around Spanish Lake and the fine grained greenstones on Spanish Mountain. Mr. R.E. Legg has suggested that intrusive igneous rock probably alaskite occurs on the Mariner II claims.

Respectfully submitted,

Vancouver, B.C.

March 14, 1979

Clive W. Ball, P. Eng.

Consulting Geologist.

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PRELIMINARY REPORT ON THE "MARINER II" PROPERTY

NORMAN W. STACEY

OCTOBER 1976

- LOCATION:** Approximately 52°35' N by 121°26' E, the property is on the north-west slope of Spanish Mountain, 13 kilometers east-south-east of Likely, in the Cariboo Mining Division of British Columbia. Access is easy along a formed, gravel road to Spanish Lake, and the area abounds with partially overgrown 4 W.D. logging tracks.
- OBJECT:** The lapse of the Mariner C Mineral Claims and relatively recent logging operations having vastly improved immediate access to the area, re-examination for favourable structure and/or lithology for primary gold, or other potentially economic mineralization was desirable.
- FIELD WORK:** On September 10th, 11th and 12 N. Stacey, J. McMillan and M. Neilson, carried out general reconnaissance of the Spanish Mountain area, visual inspection of old workings, and selective sampling of a smaller area culminating in staking by M. Neilson of a 4 unit mineral claim, to be known as Mariner II Mineral Claims.
- GEOLOGY:** The claimed area has approximately 5% outcrop. Country rock is schistose, mafic, argillite and light grey-brown, medium to fine grained, quartzite with minor areas of porphyritic rhyolite. Of major interest are several massive, white quartz veins. In the lower portion of the claimed area, a 2m to 4m quartz blow, striking approximately 050° and steeply dipping, is flanked by at least two, thinner, subparallel veins. In the upper, more southerly portion 10 cm to 80 cm quartz veins striking approximately 090° and dipping 5° to 10° south, are extensively faulted and warped, and appear younger. Sulphide mineralization abounds in all rocks from the western end of Spanish Lake to the summit of Spanish Mountain. Sulphide occurs as well formed crystals (to 1 cm²) in the country rock and as crystals and veins in the quartz veins.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. _____

GEOLOGY: Surface weathering of all rocks is extensive, the (continued) sulphides frequently oxidised, but of shallow depth. No free gold was recovered, though one small speck was seen in a limonite pseudomorph after pyrite, in quartz float near the major, lower quartz vein. Several pyrite and/or chalcopyrite rich specimens were collected and some tested for auriferous content.

PREVIOUS WORKINGS: Major work appeared on the lower quartz veins which had been longitudinally trenched. Later work was evident of bulldozer-trenching the upper quartz veins, ponding a central water-course, probable working and/or bulk sampling of alluvium and colluvium. A collapsed, 1 m high, horizontal shaft exists in the upper claimed area, and slag covered with heavy overgrowth in the south-eastern claim unit, indicates further underground workings. One definite drillsite was established, two further probable sites were evident.

CONCLUSIONS The claimed area covers the intersection of the 050° and 090° trending quartz veins (covered in heavy secondary growth), and the evident old workings. The 4 units cover the primary area of interest, but further work may reveal extensions or repetitions of quartz veins necessitating further staking.

The low auriferous content of the assayed samples should not be taken as indicative of the property, as these were randomly selected, to test the uniformity of pyrite in the major lithologies.

- RECOMMENDATIONS:**
1. An extensive literature search should be undertaken. This would include published information, as well as an attempt to obtain any previous reports on the property.
 2. Clearing of several old trenches and some new trenching to expose and establish accurate trends of the quartz veins is necessary.
 3. The property should be visited with a previously involved party to establish the exact locality and extent of previous workings.
 4. A base-map, preferably a mosaic, is necessary. Lithologic mapping on a scale of 1:10,000 is most desirable, covering major lithology distribution, with particular emphasis on the quartz veins.

RECOMMEND- 5. Systematic grab-sampling and assaying of the
ATIONS: varying units should be undertaken to establish
(continued) background values for Au, Ag, Cu, Pb and Zn.

6. Selective channel sampling of freshly exposed quartz veins should follow.

ADDITIONAL NOTES ON MARINER II PROPERTY

OCTOBER 15, 1977
NORMAN W. STACEY

- PROGRESS:
1. A most successful literature search has been undertaken, by M. Neilson, and the existence of a report established, which may save considerably on selective sampling if a copy can be obtained.
 2. Extensive work on clearing trenches and opening new outcrop has been done. These will shortly be examined by myself.
 3. A visit to the property with a previously involved party to examine and discuss previous workings is imminent.
 4. A suitable base map has proved difficult, but work is under way on modifying our own.
 5. Systematic lithology sampling has been started, with localities recorded.

The possibility of placer gold on the property, and supplementary work in this direction, has been discussed.

GENERAL TESTING LABORATORIES

DIVISION SUPERINTENDENCE COMPANY (CANADA)

1001 EAST PENDER ST., VANCOUVER, B.C., CANADA, V6A
PHONE (604) 254-1647 TELEX 04-507514 CABLE SUPEF

TO:

MR. NORMAN STACEY
2960 West 41st Ave.,
Vancouver, B.C.

CERTIFICATE OF ASSAY

No.: 7609-2154 DATE: Sept. 23/76

by certify that the following are the results of assays on:

Cre

MARKED	GOLD	SILVER	YXX	XX	XXK	XXX	XX	XXX
	OZ/ST	OZ/ST						
	GR/MT	GR/MT						
<u>E-6275</u>								
951 I	0.012							
952 I	0.010							
953 I	0.002							
954 I	0.018							

REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST
PULPS AND REJECTS WILL BE STORED FOR A MAXIMUM OF ONE YEAR.

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TO THE FEE CHARGED.

L. WONG

PROVINCIAL ASSAYER

PY

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weigh

MEMBER American Society For Testing Materials • The American Oil Chemists' Society • Canadian Testing Assoc.

ATTACHMENT #1

SKETCH MAP OF MARINER II CLAIM # 257 (9)
MAP REF 93A/11BW



