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REPORT
on the
BULLION CLAIM
CARIBOO MINING DIVISION
MAP SHEET M93A/12E HYDRAULIC

for

PROPHECY DEVELOPMENT LTD.

BY:

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December 13 1983

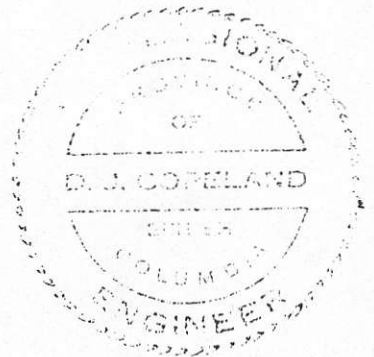


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I. SUMMARY AND CONCLUSIONS

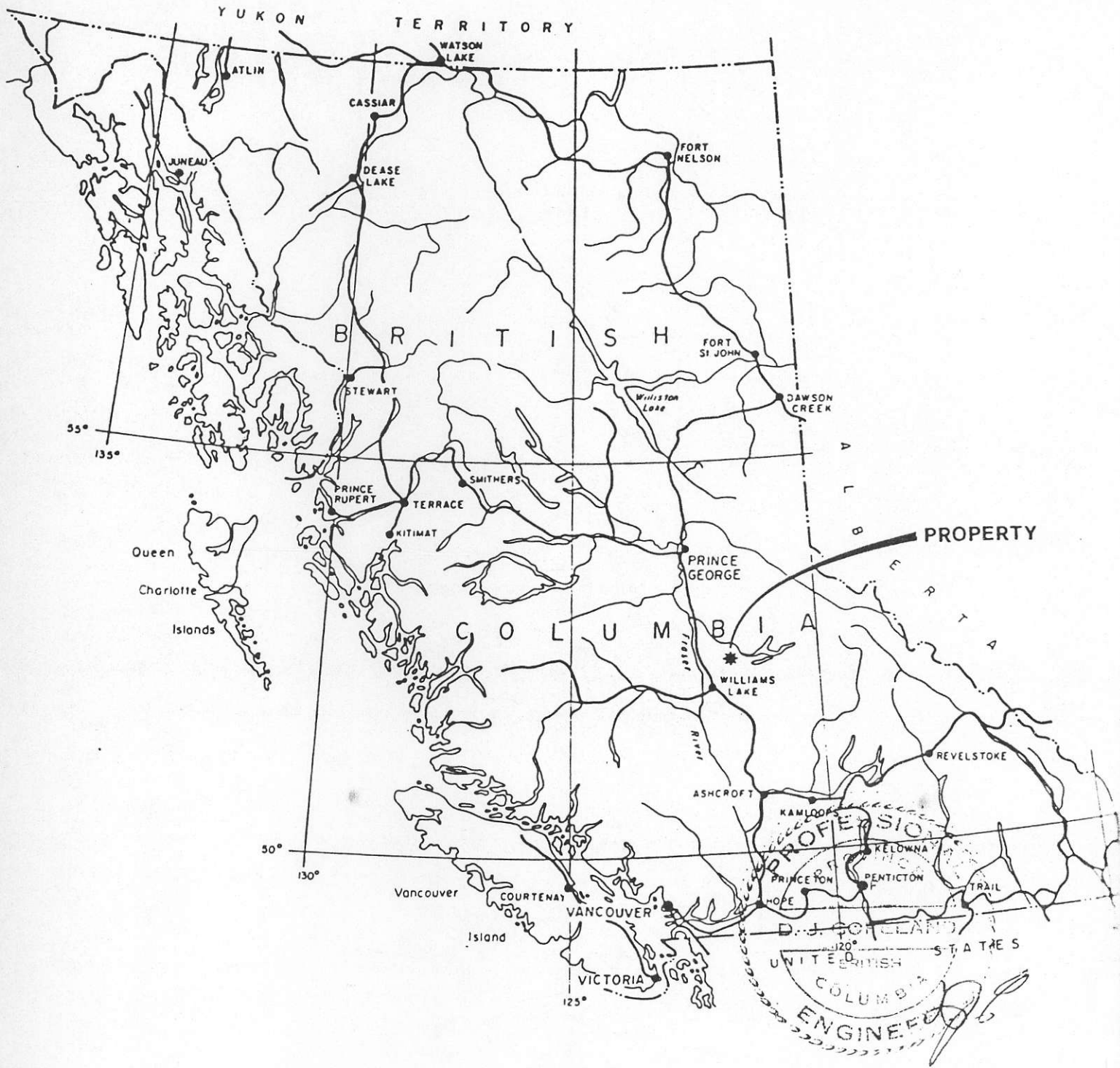
The Bullion claim group is located geologically in the Quesnel Trough and slightly north and east of the Cariboo-Bell and Quesnel River mineral deposits where proven reserves of copper-gold mineralization are presently being evaluated.

The claim appears to cover polymictic volcanic breccia, basalts, and tuffs, but little detailed geology has been completed to confirm the lithology.

The claims geology certainly seems to fit the exploration model of being part of a volcanic pile associated with plutonism.

To this end an initial exploration program of geochemistry, geophysics, and detailed geology is recommended at an estimated cost of \$74,900.00.

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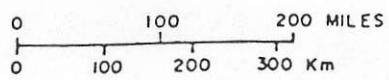


PROPHECY DEVELOPMENTS LTD.

PROPERTY LOCATION MAP

CARIBOO MINING DIVISION

BRITISH COLUMBIA



Drawn: J. Yu	Checked: J. Yu	Plan No.
Scale: As shown	Date: 1983-11-10	I

II. INTRODUCTION

The Bullion claim consisting of 16 units, and 4 claims is located one-half kilometer east of Hydraulic and is owned by Prophecy Developments Ltd.

Attention to this area was initiated by work on the Cariboo-Bell mineral occurrence and more recently by new discoveries at Maud Creek, Quesnel River and Eureka.

A property visit was made to the claim by the author on October 28, 1983.

This report reviews the property geology, the ore deposition model, and makes recommendations for additional work.

III. LOCATION AND ACCESS

The Bullion claim is located at Prior Lake, one-half kilometer east of Hydraulic. The geographic coordinates at the centre of the claims are:

51° 37' 00" N latitude by 122° 41' 30" W longitude.

Access is from Williams Lake, the central supply centre with air, rail and highway links to Vancouver and Edmonton, via Highway 97 to Likely, however 8 kilometers west of Likely one passes Hydraulic, and one-half kilometer east of Hydraulic on Highway 97 one reaches the Bullion claim group.

The claims are located in an area of intense exploration being conducted by well seasoned companies such as Asamera, E. & B. Explorations, Noranda, Gibraltar, Carolin Mines Ltd. and Archer-Cathro.

IV. PHYSICAL FEATURES

The claims cover moderately gentle, partially logged terrain with elevations ranging from 855 m to 1095 m towards Polley Lake. Prior Lake is located in the south-east quarter of the claim block.

Heavy snowfalls in winter and frequent summer rains are typical of the precipitation of the area.

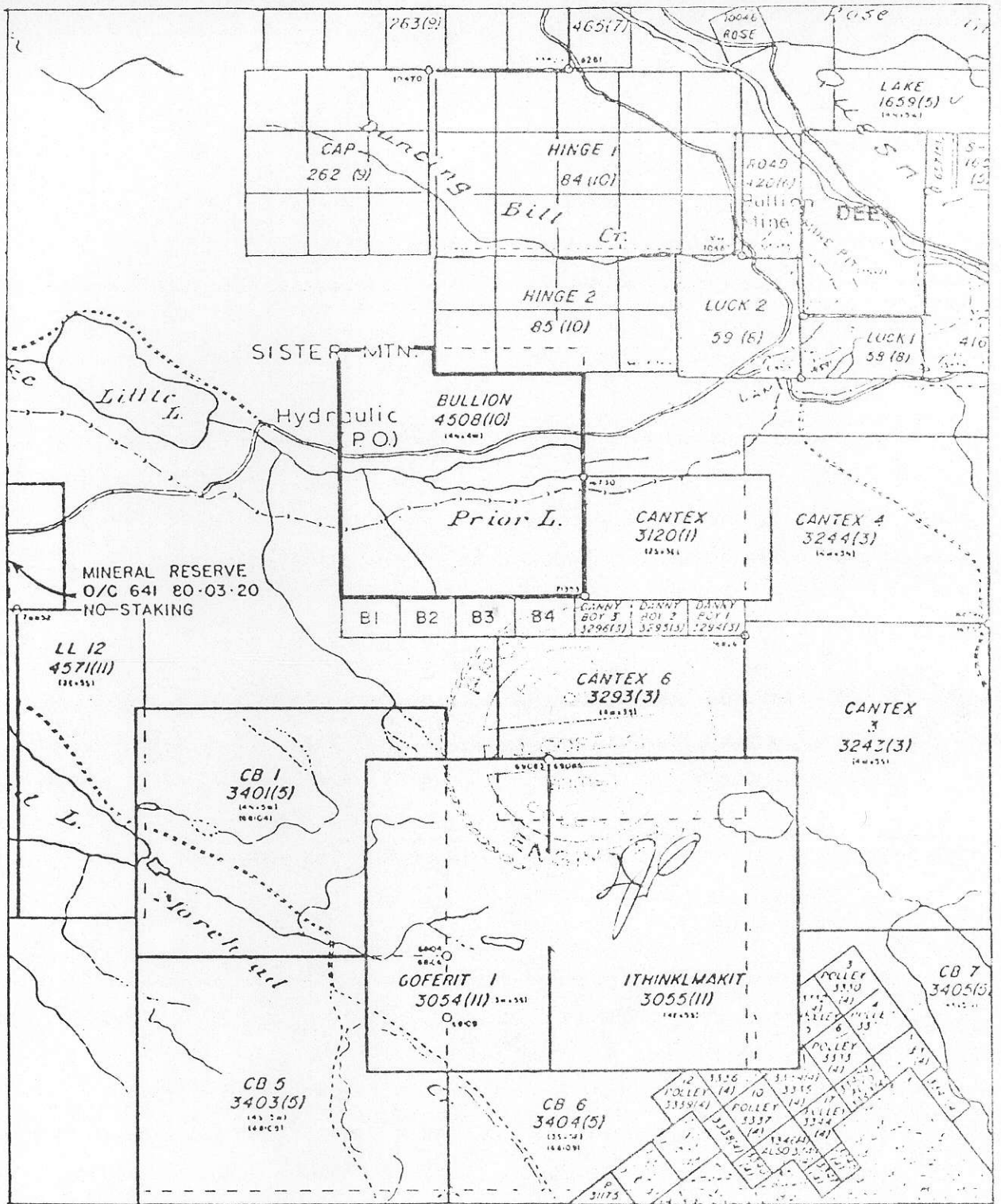
V. CLAIMS

Prophesy Developments Ltd. has purchased all the interest in the Bullion claim, Record No. 5320 and four two post claims, B#1 to B#4 with the following record numbers:

	<u>Record Number</u>
B#1	- 5397
B#2	- 5398
B#3	- 5399
B#4	- 5400

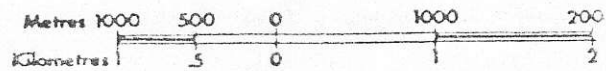
The location posts were inspected in the field and are in order, the transfers of ownership were not examined at the Ministry of Mines.





PROPHECY DEVELOPMENTS LTD.

CARIBOO LAND DISTRICT, B.C.



VI. GENERAL GEOLOGY

The Quesnel Lake area in south central British Columbia forms part of the Quesnel Trough, a Mesozoic tectonic feature occurring between the Omineca Crystalline Belt to the east and the oceanic-deposited rocks of the Cache Creek Group to the west. The Quesnel Trough forms the western margin of the southern part of the Columbian Orogen.

The Quesnel Lake area is underlain by about 7,000 metres of Upper Triassic - Lower Jurassic volcanic and sedimentary rocks which have been intruded by comagmatic felsic plutons. The volcanic and sedimentary rocks comprise an Upper Triassic basalt sequence of green and grey alkali olivine basalt and alkali basalt which are analcite-bearing towards the top, and which grade up into maroon basalts of the same composition as the underlying rocks. Overlying the basaltic sequence is a sequence of felsic breccias derived by phreatic eruption and submarine laharc activity.

Intruding the volcanic and sedimentary sequences are small syenite and monzonite stocks whose associated volcanics and intrusive margins are hosts to copper-gold deposits. Felsic volcanism, plutonism and ore deposition were essentially coeval events during the Lower Jurassic period.

Overlying the Upper Triassic - Lower Jurassic rocks, are shallow water sedimentary rocks of mainly mid-Jurassic age. The provenance of these rocks was the Paleozoic Cache Creek Group to the west of the Quesnel Trough.

The chemical compositions of the rocks of the Quesnel Lake area are characteristic of alkalic volcanic suites such as those of Hawaii and the Lesser Antilles. Although similar to basalts forming at accreting plate margins, and in the intraplate environment, work by various researchers suggests these basalts are more typical of those formed at consuming plate margins.

The copper-gold deposits seem to be associated with two stages of development, the high level prophylic basalts and the deeper seated margins of the alkalic stocks.

VII. ECONOMIC GEOLOGY

The region surrounding the property has had little consistent exploration until recently, although placer gold exploration and production has been conducted since the 1880's.

The only activity prior to 1964 is a Ministry of Mines report for 1933 that mentions the P. Shaw property, located some five kilometers southeast of Kangaroo Mountain. Several quartz veins in andesitic rocks were found and contained values in gold and silver.

In the early forties a series of deposits consisting of gold bearing quartz veins were developed. These include the likes of Cariboo Gold Quartz and Mosquito Creek. These are veins and bedded pyritic deposits in faults and fractures in the Paleozoic Cariboo series consisting of black argillites, quartzites, and schists.

These rocks and deposits are all part of the Omineca Crystalline Belt which lies just east of the Quesnel Trough.

During the early 1960's a distinctly different type of ore deposit was found in the form of the Cariboo-Bell and several similar deposits have been found since then.

(a) Cariboo-Bell

This deposit, currently being developed by E. & B. Explorations is located on the west slope of Polley Mountain beside Polley Lake, some 56 km. northeast of Williams Lake.

This deposit occurs in an alkalic intrusive complex in the Quesnel Trough, a 35 km. wide northwesterly trending volcanic-sedimentary sequence of Early Mesozoic age.



The alkalic complex is centrally located in the trough at Bootjack Lake. Rocks of upper Triassic age consist of volcanoclastics, flows and aquagene tuffs, which are represented by green augite trachy-basalt flows, feldspathic crystal and lapilli tuff and polymictic volcanic breccias.

These are all suggestive of a developing volcanic centre in a marine environment.

The intrusive complex is a multiple laccolith about six km. long by two - three km. wide consisting of several lithological phases. The phases consist of syenodiorite, monzonite porphyry, intrusion breccia and pyroxenite-gabbro.

The most important rock type is the crackle breccia, as the copper-gold mineralization is found in this unit in fractures, networks of veinlets, pods and drusy cavities.

The gold occurs in the chalcopyrite as inclusions and also as free particles.

The grade of mineralization is directly proportional to the intensity of brecciation and to date, proven reserves are given as 100 million tons grading .39 oz/ton combined gold and copper.

(b) Quesnel River

This deposit is being developed by Dome Mines and is situated on the Quesnel River some 10 km. northwest of Likely, some 60 km. northeast of Williams Lake.

This deposit is also found in the main volcanic belt of the Quesnel trough and has an associated stock.

The volcanics, although not as clearly understood, are an assemblage of basaltic tuffs, lapilli tuffs, and trachybasalts. The volcanics near the stock are extensively propylitized and contain pyrite varying from 2% to 15%. The propylitized volcanics also carry gold mineralization.

In areas where the basalts are breccias, i.e., basalt fragments surrounded by tuff, the epidote ground mass can run 4 or 5 grams of gold.

The intrusive complex here is considered to be a stock as opposed to a laccolith as at Cariboo-Bell. This intrusive shows zoning, the interior being monzo-diorite and the outer edge becoming a hornblende porphyry diorite. The hornblende prophyry contains extensive pyrite and chalcopyrite which both in turn have associated gold. to date, the first phase of drilling has indicated approximately one million tons of ore grading .20 oz/ton of gold.

(c) Eureka

This propsect located 110 km. east northeast of Williams Lake near Horsefly is being drilled by Amoco Canada Petroleum.

Work to date has indicated that gold values are being found in another series of polymictic volcanics.

VIII. EXPLORATION MODEL

One of the characteristic features of the Quesnel Trough alkalic porphyry systems is that they occur in volcanic piles which were mainly formed in a submarine environment. Volcanism, plutonism and ore deposition were essentially synchronous, and therefore, the ore deposits formed while the volcano was still mostly submarine. In this respect, the environment of volcanism and plutonism was similar to that of Kuroko-type ore-forming environments. The important difference between the environments of formation of the two types of deposits seems to be that in the Quesnel Trough alkalic porphyry deposits, metal-rich solutions did not ascend through the volcanic pile to as far as the sea water-rock interface.

It is suggested then, that phreatic explosive activity occurred periodically in a sea water hydrothermal system associated with an alkalic felsic intrusion in a submarine volcanic pile. As a consequence, rocks formed by the reaction of sea water with the volcanic rocks, were incorporated as fragments, along with fragments of

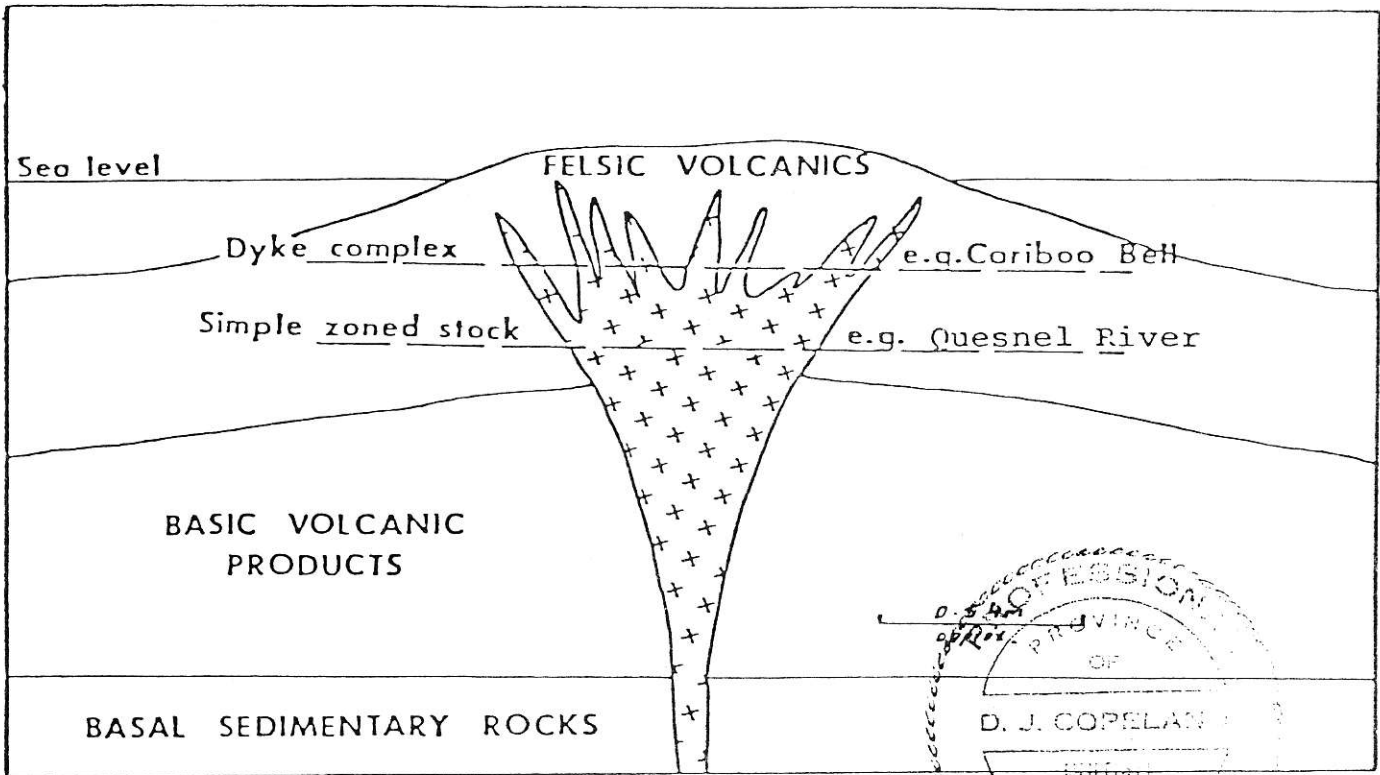


Fig. shows possible environments within the volcanic pile for ore deposition.

unaltered rocks, in the debris thrown out around the volcanic vents. Subsequently, or perhaps at the same time, this material slumped downslope, mixing with the debris from previous explosive eruptions, flows, and the normal erosion products of the edifice, to form the laterally extensive aprons of laharic deposits around the volcanic centre.

Solutions were then circulating through the rock at the same time as ore was being deposited, as indicated by the spatial relationships of ore and alteration zones, it can be concluded that the ore deposits were forming at the same time as volcanic activity in the region. Furthermore, fragments of syenite and monzonite, similar to rocks comprising the Polley Stock, occur in the breccias. Therefore, the emplacement of the stock must also have been occurring at this time. As well, ore occurs in the stock and is central to the zoned alteration pattern, and therefore the Polley Stock is the probable source of metals and heat in the ore-forming hydrothermal system.

In summary then, the evidence indicates that magmatism, ore formation, wall rock alteration, breccia formation, and slumping of breccias to form laharic flow deposits, were essentially synchronous and causally related processes. In other words, there appears not to have been any significant pause between the three events - volcanism, emplacement of the stock and ore deposition.

IX. PROPERTY GEOLOGY

At this time, the geology and mineralogy of the Bullion Group of claims has not been well defined, but their location in the Quesnel Trough, and the presence of polymictic volcanics suggests that the claims warrant further investigation. Also, the claims have the same regional geology as the Cariboo-Bell deposit, 5 kilometers south and as the Quesnel River deposit of Dome Mines which is only 8 kilometers to the north west.

Two traverses were carried out; one along the highway and the other in the southern section of the property from east to west.

Along the highway extensive purple-maroon basalts are seen. They are very vesicular and analcite rich. Some of the basalts were seen to contain zeolite. Also seen were volcanic breccias. These are very similar to those classed as laharic at the Cariboo-Bell. The breccia can be considered poorly sorted and unstratified. A variety of clasts and fragments were observed, including trachyte, monzonite, basalt and felsic volcanics. Between these two units is wedged a lense or giant inclusion of sandstone. Time did not permit detailed examination of the contact areas to determine if this block is in place.

At the west end of the claim block, massive felsic volcanics occur. Compositionally the rocks can be considered trachyte.

The second traverse, from east to west, again encountered the polymictic laharic breccia. This time clasts of felsic volcanics and possibly syenodiorite were seen.

The dominant rock type seen especially to the west, was the altered basalts. The basalts were seen to contain feldspar phenocrysts and were extensively hematite stained.

This area, although not mapped in detail, certainly contains the same type of volcanic assemblages surrounding the Quesnel River and Cariboo-Bell deposits and therefore warrants further exploratory work.

X. RECOMMENDATIONS

The geology of the claims show that they lie within the Quesnel Trough and that they are underlain by altered polymictic volcanics and contain some fragments of a stock or laccolith.

Based on this data, the claims fit the exploration model and detailed surveys consisting of geochemistry, geophysics and geology are recommended for the Bullion Group.

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An additional phase II program is warranted contingent upon the success of the phase I program.

The phase I program should have the geochemistry survey done on a grid of 100 metres by 100 metres and the initial magnetometer work can be run on the same grid, but with readings taken at 50 meter intervals.

The geologic mapping should be tied to the established grid and this work must precisely locate and determine the different geological rock types.



XI. COST ESTIMATE

Phase I

Geologist - 1 month	\$	4,000
Geochemist - sampler - 1½ month		4,000
Room & board - 80 man days @ \$40/day		3,200
Geochemistry & assaying		4,000
Truck, fuel and transportation		5,000
Field equipment and supplies		1,000
Magnetometer survey		5,000
Consulting - 4 days		1,600
Contingencies @ 10%		<u>2,780</u>
TOTAL	\$	<u>30,580</u>

Phase II

Geologist - 2 months	\$	8,000
Geochemist - sampler - 2 months		5,000
Geophysicist - EM-16 survey - 1 month		3,000
Room & board - 150 man days @ \$40/day		6,000
Geochemistry & assaying		6,000
Truck, fuel and transportation		6,000
Cat trail construction		3,500
Field equipment		1,000
Consulting & reporting		2,400
Contingencies @ 10%		<u>4,090</u>
TOTAL	\$	<u>44,990</u>

Total Phase I	\$	30,580
Total Phase II	\$	<u>44,990</u>
TOTAL PROGRAM	\$	<u>75,570</u>

APPENDIX A

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