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I N T E R I M
REPORT
ON
BONANZA COPPER-IRON

Nanaimo

MINING DIVISION

Jas. J. McDougall
Geologist

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INTERIM REPORT

on

BONANZA COPPER-IRON

FOR PERIOD ENDING FEBRUARY 23rd, 1961

by

James J. McDougall

Our crew of four men including two drillers and two prospectors are continuing work started at Bonanza Lake last month. The writer has made two short visits to the property since and Earl Dodson, geologist, has been on the property for the last week.

The crew are boarding at the Kokish Logging Camp and use our jeep for transportation to the property. This arrangement can probably continue for at least another ten days. Following this roadwork followed by logging will commence just south of the present drill set up. We may be able to continue work for an additional ten days until the fallers reach our present location. Thus the lower portion of the property will be shut off to us until sometime in June or July. We will make arrangements to lift the drill to the top of the hill using Highland Helicopters as one of their machines will be available for piece-meal work at this time.

Drilling using our BX equipment has been slow because of the difficulty in driving casing through about 20 feet of overburden containing troublesome small boulders of granite. The property is practically all drift covered and as we are not allowed to use a bulldozer until logging is

complete no alternative to casing exists.

Drilling to date consists of about 600 feet in seven holes one of which was abandoned. This has taken place from convenient set-ups along the roadcut south of the original exposure. One more hole is planned for this section and the drill will be moved to other selected set ups on the roadcut north of the outcrop. This seems advisable at this time as the road, which will soon become the main supply route to the Nimpkish Valley, will be heavily gravelled in the near future and the meagre outcrop presently available buried again.

As expected, results to date are totally inconclusive. We are just beginning to get the geological picture necessary to efficiently test this property and drilling of the required intersections at depth may have to be postponed until summer.

"A" deposit, which we shall term the mineralized zone in which packsack drilling was originally done has been tested for 150 feet along strike to the south and is presently being drilled 100 feet farther along. It appears to be a veinlike replacement by magnetite and chalcopyrite along an irregular garnet skarn zone marking the contact between underlying amygdaloidal lavas and overlying finer grained volcanics. Quartz diorite parallels the north-south zone at a short distance to the west but its contact has not yet been determined.

"A" Zone, so far tested to depths of only 50 feet, may be faulted north of the main outcrops and the impressive

but yet untested zones of massive chalcopyrite exposed on the bank of the roadcut (50 ft. east of "A" Zone) be merely a repetition. However until such is proven we shall term this second the "B" Zone. It was not picked up in easterly directed holes probing the "A" Zone but the lengths of these holes were insufficient to be conclusive.

In the vicinity of the early drilling deposit "A" is more or less veinlike or tabular and dips to the west (downhill) at 40 to 45°. (The cross section included in the Bonanza Report was based on packrack drill hole attitudes since found to be erroneously recorded and should be discarded). Drill holes #1 and #2 collared in mineralization after penetrating 10 feet of overburden and do not give true values of grade or size in this area. Hole #1 (east at -30°) thus returned values of 2.24% copper and 3.3 oz of silver across 5 feet and #2 (vertical) 1.41% copper and 0.5 oz of silver through 11 feet. Hole #4 (east at -30°) fifty feet farther to the south cut 7 feet (which contained at least 14" of massive chalcopyrite) and returned values of 6.85% copper and 1.3 oz of silver across this width. A vertical hole (#5) cut 11 feet of mineralized material containing mostly magnetite and assayed 0.29% copper. Hole #6, like #3, was directed to the west for needed geological information and was not intended to cut mineralization. Hole #7, east at -40° 100 feet south of #5 reportedly cut only 7 feet of magnetite in the zone and this contained a very low copper content. Hole #8 is being drilled parallel to #7 but 100 feet south of it to establish the granitic contact and to test the likely possib-

ility that copper values decrease toward the intrusive.

The metallic content of the basic amygdaloidal lavas underlying the ore zone is interesting and as far as the writer is concerned marks yet another good example of a nearby copper source. Disseminated chalcopyrite and pyrrhotite occur throughout these volcanics and commonly replace calcite as fillings in the amygdules. Assays representative of at least 100 ft. thicknesses of such material give results varying between 0.05 and 0.20% copper, 12-15% iron and 0.2-0.5^{oz}/silver.

Future plans call for drilling the extension of Zone "A" north along the road cut as far as practical and at the same time testing Zone "B" and the widespread garnet float area behind and north of it. Deeper drilling required to test both zones at 100 to 150 foot depths will have to be done from a downhill line paralleling the present one. This along with any checks to be made of geochemical or geological anomalies in the same general area will have to be delayed until summer.

Results of the self-potential surveying have not yet been studied. However it is obvious that once away from the roadcut where the method worked extremely well such difficulty has been encountered. Several foot thicknesses of moss prevent proper ground contact and this combined with a probable moderate potential generated by the tree roots tend to give sporadic results. Nevertheless several high readings obtained well away from the present zone may have significance and the work will be continued.

Soil Sampling carried out before the S.P. is run has resulted in a total of about 50% moderate positives. This may be due to a higher copper background caused by the unusually high metallic content of much of the country rock as described. Nevertheless these highs will be contoured and where such anomalies coincide with those of the S.P. extra interest will be paid.

Magnetometer work is progressing in conjunction with the other picket line surveys and may occasionally add a third type of evidence to help locate copper deposits. However the magnetite content is extremely variable and this should be borne in mind.

Unfortunately our work in the area is about a year premature as the logging company now plans to build a road this summer on top of the mountain in the vicinity of other known mineralized outcrops. Such roadcuts would take much of the guesswork out of our geophysical surveys and this upper area should not be abandoned until such surveys are made.

Mr. McIver, owner of the main property, seems willing to offer us a commital-date extension in light of the enforced closure of the lower area and negotiations are proceeding. Mr. McIver would also like to deal with us on a "Prospector Participation Basis" involving an unstaked mineral occurrence of possible interest which he has knowledge of. Time available is too short to stake the property himself and we will negotiate with him on this.

A further report will be prepared when results

warrant it and an up-to-date map enclosed at that time.

Vancouver, B. C.

February 23, 1961

JJM

James J. McDougall,
Geologist