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KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

1.H.S. F.M.K.V G.M.Hy Glen Hogg From W.M.Sirola То R.D.S. Subject ORWILL CLAIMS - MCLEOD COPPER LTD., (93-D) Date 14 September 1972 Kleena Kleene Area, B.C. M.D.R. J.H.F. E.C.J

This property was brought to our attention by Steve Mieznik of B.C. Telephone Company in July of this year, and the claims were examined by John Lund and Werner Gruenwald on July 24th.

The examination was prompted by Mieznik's information to the effect that sampling of the property by Bralorne many years ago, had indicated a grade of 0.08 oz Au across 180 feet, and a more recent sampling by a Williams Lake geologist had confirmed this grade.

In his examination, John Lund found that there were a number of lenses or stringers of arsenopyrite concentrated near the axis of a sharp fold in diorite or dioritized volcanics (?). These lenses varied from $2\frac{1}{2}$ " to 48" in thickness and were separated by unmineralized diorite. Careful sampling of the crest of this fold gave 0.143 oz Au across 16.4 feet.

Mr. D.C. Wing, President of McLeod Copper, accompanied John and Werner and while they were working, he drilled a series of ten packsack holes at irregular intervals over a total width of 100 feet of exposed diorite. Again, the best concentration of gold values was near the axis of the fold and these average 0.117 across 15 feet. The remainder were in the order of 0.005 or less.

This is a rather typical case of other people getting higher assays than we are able to get in our sampling. In the light of the values encountered, no further action is recommended.

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W.M. Sirola

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ORWILL CLAIMS, KLEENA KLEENE, B.C.

(51[°] 57' 06"; 125[°] 13' 00") 93D

Introduction

The Orwill property consists of 16 claims located $9\frac{1}{2}$ miles west of the Kleena Kleene Post Office and $2\frac{1}{2}$ miles north west of Kleena Kleene river. The claims are held by option by McLeod Copper Ltd of Vancouver.

An examination was made on 24th July 1972 by the writer and Werner Gruenwald accompanied by the President of McLeod Copper, Mr. D.C. Wing. Two days were spent on the property sampling the showing and taking soil samples. Weather during the visit was mild and pleasant.

Topography and Access

Topography is moderate, slopes vary from $8^{\circ} - 18^{\circ}$ with few precipitous rock bluffs. Outcrops are not abundant, however, scattered exposures can be seen in creek bottoms and bald knobs - the latter mainly at higher elevations. Elevation at the showing is about 3500 feet. Slopes are lightly timbered with very little underbrush.

The claims can be reached by 7 miles of tractor road that leads from a small farm $4\frac{1}{2}$ miles west of Kleena Kleene. This road was not passable with the 4-wheel drive pickup because of high water in the creeks. There is a helicopter pad on the property about 250 feet from the showing. Road construction would be relatively easy in this type of terrain and the tractor road could readily be made passable for any 4-wheel drive vehicle. See map 1 for location.

Geology

The area is underlain mainly by quartz diorite which is part of the coast range intrusive complex. Within this complex are remnants of older, probably Jurassic, volcanic and sedimentary rocks. These latter rocks have been severely metamorphosed making field identification difficult.

On the claim group the rocks are granodiorite to quartz diorite in composition. Two small remnants of hornfelsed rock occur to the west of the showing. These are marked by a "rusty" appearance which is caused by the oxidation of pyrite and to a lesser extent, pyrrhotite.

Mineralization is in the quartz diorite. It occurs as lenses of massive arsenopyrite, arsenopyrite and/or stibnite with associated pyrite, chalcopyrite and occasionally pyrrhotite. These lenses occur on the crest of a south easterly plunging drag fold that is on the hanging, side of a north westerly trending fault. The south side has been uplifted giving a reverse movement to the fault. See map 2 for geology.

<u>Geology</u> (continued)

There are at least 4 lenses visible separated by relatively barren sections of rock. The lenses vary from 2.5 inches to 10 inches in thickness and extend for a maximum width of 12 feet. Of the 16.4 foot chips sampled down the trace of the axial plane, the lenses constituted 27.5 inches. The following assays were obtained from chip samples taken down the trace of the fold axis.

Assays

	Width	<u>Au oz</u>
Upper lense	7"	0.27
Upper interlens sect.	42"	Tr,
2nd lense	2.5"	0.04
2nd interlens sect.	48"	0.05
3rd lense	8 11	0.63
3rd interlens sect.	48"	0.005
4th lense	10"	0.13
4th interlens sect.	32"	0.02

Average across the 16.4' is 0.143 oz Au.

A series of samples were taken with a packsack drill at intervals across 100 feet on the showing. A 2 foot section of drill core was taken at each sample site and assayed for gold. It should be pointed out that when a lense of arsenopyrite-stibnite was intersected, there was very little core recovered of the lens material. The drill samples do however, give an accurate assessment of the gold within the rock itself and point clearly to the concentration of better values within the folded zone. Maximum width to this zone of greater than 0.1 oz Au is about 20 feet. Average grade across <u>15 feet</u> is <u>0.117 oz Au</u>. Average weighted assay of drill core and chip samples over 15 foot width and 16.4 feet height is <u>0.13 oz Au</u>. For assays and sample locations see sample plan Map 3.

Geochemistry

Three lines of soil samples were taken with a line spacing of 100 feet and sample interval of 25 feet. Lines were laid out to follow a possible north westerly continuation of the mineral zone. Samples were tested for As. Because of variable thickness of overburden, results of sampling are not entirely interpretable. Values were in the 2 to 6 ppm range with 3 isolated values of 8, 10, and 15 ppm. There does appear to be a West North West trend to higher values. This direction is along topographic contours and could indicate a structural direction. Map 4 shows said location.

Summary and Conclusions

Mineralization occurs in lenses in the crest of a drag fold in quartz diorite. The lenses are separated by relatively barren rock. Chip samples across 16.4 feet down the trace of the axial plane averaged <u>0.143 oz Au</u>. The gold-bearing lenses constitute about 14% of the sample (27.5"). Drill core samples taken across 100 feet with 2 feet of core drilled at each sample site, assayed 0.049 oz Au. Four samples (drill core) across the fold (15 feet in length) assayed 0.117 oz Au

Summary and Conclusions (continued)

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Average of all samples in the fold zone is 0.13 oz Au. It is possible that an average grade of 0.2 Au could be developed across 6 to 10 feet.

The gold is associated mainly with arsenopyrite but also occurs in lenses of massive stibnite. No free gold was noted.

Structurally the deposit is in folded quartz diorite which has a layered appearance. If the folded rock is of igneous origin, I would not expect the structure to continue either laterally or vertically for greater than several tens of feet. The possibility of increasing grade, size and incidence of mineralized lenses would not be great. If the quartz diorite was formed by dioritization of volcanic rock, the structure could be more persistent. The uniform texture of the rock, however, suggests igneous origin. In any case, I would not expect the values to increase significantly because of the wide spacing between gold bearing lenses.

In conclusion, the deposit could be of interest at \$100.00 gold but not at the present gold price. I recommend that we take no further interest in the property at this time, and advise the owners accordingly.

John C. Lund, P. Eng.

