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SUMMARY:

The following report is based on a two day examination of the five veins which comprise this property, the principal ones having been measured and sampled. The general conclusions reached are, (1) all the veins are small and there is not much liklihood of finding on the property any veins much larger than those already exposed. Narrowness of veins seems to be a regional characteristic. (2) The veins are, however, exceedingly high grade and situated within easy reach of tidewater so that great size is not essential to their successful exploitation. (3) The veins are fairly numerous and judging from the number already exposed by the limited amount of work accomplished, it is safe to expect that others will be found as surface and underground work is extended. (4) The veins strike in three different directions but mainly in two, one of which is parallel to and the other at right angles to the main valley in which they occur and it is a reasonable expectation that intersections of the veins will be found and that at these ore shoots will be found, perhaps larger than any so far discovered. (5) Of the present known veins, two are much more interesting than the others, one known as the "main" vein, situated 1500 feet hight than the camp, and the "river" vein situated near the camp. Immediate prospecting should be confined to these veins and particularly the main vein. (6) A large amount of cheap water power is available on the property. (7) This property is not in its present raw state sufficiently proven to warrant any large expenditures on mining equipment or transportation facilities but some further development work along lines suggested later is warranted.

Location and Accessibility:

The property consists of twelve claims as shown on the accompanying map and is situated about twelve miles from the head of Kutze Inlet. This is a small bay extending easterly about six miles from Graham reach about one hundred miles south of Prince Rupert and three hundred and fifty miles north of Vancouver. It is eight and one quarter miles from the main camp and railway of the Detroit Western Mining Company's copper mine which is three miles from the head of Kutze Inlet and connected with tidewater by a railway. The Hunter camp is at an elevation of nine hundred and fifty feet but the veins extend up to as high as twenty-seven hundred feet. A good trail about eight and one quarter miles in length connects the Hunter camp with that of the Detroit Western.

GEOLOGY:

The deposit occurs in a highly metamorphosed inclusion in the Coast Range batholith. The latter is an immense formation occupying almost the entire coast region of British Columbia and composed mainly of quartz diorite and granodiorite. The inclusion is much smaller but of unknown dimensions and in its present high state of metamorphism consists mainly of hornblende with a little quartz and felspar. Both the inclusion and the neighboring portions of the batholith are cut by an unusually large number of pegmatite and aplite dykes. These are without exception much earlier in origin than the ore veins. While the veins are mainly confined to the inclusion it is the writer's opinion that similar veins might with almost equal probability occur in the batholith away from the inclusion. The ore veins are narrow and consist of quartz, ankerite, a little chalcopyrite and pyrite, the latter carrying all the gold values which are usually high, ranging from one or two up to ten or twelve ounces per ton. In its mineral content and its geological associations this deposit closely resembles the Surf Inlet and Surf Point gold mines which are situated in the same general region.

The accompanying plan shows the relative positions and attitudes of the various veins which will be described in the order in which they are numbered on the plan.

Number 1 Vein:

Number 1 or Camp vein is situated near the river just a few hundred feet upstream from the camp. Two sections of it have been traced by open cuts, one along the east bank of the river and the other about 350 feet to the northeast. The river section was partly covered by sediments deposited during recent floods and it could not therefore be mapped with the same detail as the other section. The river section is, however, traceable at intervals for about 150 feet. The best exposure is in a thirty foot cut at the north end of the section a short distance east of the river. Here the quartz vein strikes No. 22 degrees E., dips 65 degrees S.E. and varies from one to six inches in width. The average is not more than two inches and the sulphide content about five percent. A sample across the vein where it is five inches wide and contains nearly forty percent pyrite and chalcopyrite gave $34.40 per ton. The wall rocks are slightly bleached but contain little or no pyrite. At a point sixty feet along the vein to the south it

is exposed in the river bed for thirty feet. Here it is split for a short distance into two veins separated by a horse of slightly altered country rock. The west vein averages for six feet about six inches in width and contains about twenty-five percent pyrite, while the east branch is exposed for only one foot and is five inches wide but seems to be over forty percent pyrite. The remaining portion of the river section of Number 1 vein is very poorly exposed but pieces of ore obviously taken from it vary from three inches to six inches in width with a fair proportion of pyrite in large scattered crystals. The north section of Number 1 vein 350 feet to the northeast is exposed by a series of deep open cuts at close intervals. This section is shown in Plan 2 in which the sulphide band is indicated in red. The rock adjoining the vein is altered for a width on each side from one to ten inches and in places contains disseminated pyrite. As indicated on the plan the vein varies from two to fifteen inches in width and the sulphide band from nothing to eight inches. Sample I. was taken from the best section of the vein across seven inches of vein matter with about ninety-five percent sulphides and gave $208.40 per ton. Sample II. consisted of mineralized wall rock taken across ten inches and four inches from the vein and showed a value of $6.80 per ton. A sample of similar mineralized wall rock from the same place showed a gold content of $4.80 per ton. This sampling indicates that the vein has a maximum width of vein, gangue and altered wall rock of seventeen inches which will average $90.20 per ton. Sample number III. consisted of pure sulphide picked from broken ore and showed a gold content of $198.80 per ton.

These assays, together with others taken by Joseph T. Mandy, indicate a gold content in the sulphides of about ten ounces per ton. Assuming this to be an average value of the sulphides and an average of ten inches of wall rock to carry $6.00 per ton and spreading the values over a tunnel width of say five feet, would indicate a shoot of ore in these cuts of roughly thirty-three feet in length of about $15.00 ore. The average value of the remaining portion of the vein cannot be estimated in this way because the sulphides are disseminated. It is fair to assume however, that the disseminated portions will be lower in value and that the whole section would not average more than $12.00 per ton. While five feet would be a minimum tunnel width stoping could be carried on over only three

feet which would raise the value of the ore to about $20.00 per ton and this could be conveniently sorted to a very high grade product. Notwithstanding these favorable factors and taking into account the fact that the vein could be developed only by sinking with probably a considerable amount of pumping entailed, this is not as impressive a body of ore as the exceedingly high assays would at first suggest. Providing however, these values were proven to persist to sufficient depths to constitute a block of 20,000 or 30,000 tons of ore it could, in junction with the main vein be profitably mined.

Vein Number 2:

This vein crosses the river near vein Number 1 striking in a N. 40 degrees E. direction and dipping 78 degrees S.E. On the east side of the river it is traced for thirty feet averaging five inches in width and carrying a two inch streak of very white pyrite. Pieces of ore on the dump were from six to eight inches thick and contains from one percent to two percent pyrite. The vein extends across the river and is exposed on the west side for ten or twelve feet. It contains a lens of pyrite five feet in length and five inches in width at its thickest part. The pyrite of this vein contains much less gold than that of vein Number 1 and is therefore of little commercial value.

Vein Number 3.

This vein generally known as the Main vein is about 3,000 feet southwest of the camp and from 1000 to 1500 feet higher. It is exposed in a narrow steep canyon, much of it being under water. It is exposed almost continuously for 1500 feet. It varies from six to eighteen inches in width and consists of quartz, ankerite and pyrite. Some sections contain only small quantities of disseminated pyrite while two sections contain a streak of solid pyrite from one to sixteen inches in width. As in vein Number 1 the pyrite carries high gold values. A sample, number V., of the disseminated type of ore taken across thirty-six inches indicated a gold content in this material of $17.20 per ton. A sample across sixteen inches in the big shoot gave $99.30 per ton. In the main vein there are two shoots of ore near the upper end of the vein. The lower of these is shown in Plan III. and a sample of it across thirty inches made up of fifteen inches altered wall rock, twelve inches of quartz and three inches of pyrite gave $36.80 per ton.

The upper shoot of the main vein is about forty-five feet in length and contains two large pyrite lenses as shown in plan IV. Two samples of the upper of these two lenses across sixteen and seventeen inches respectively gave $99.30 and $40.45 per ton in gold. This is the most promising showing on the property and the logical point at which to start underground development work. There is a strong probability that these shoots will have a greater vertical than lineal dimension and that also the length may increase somewhat in depth. There is a reasonable chance of developing a body of ore in this vein which could be mined at a nice profit, particularly if the Camp vein also was found to be of commercial size.

Vein Number 4.

This vein, known also as the South Vein, is situated 2,000 feet south of number 3 but in a similar steep rocky canyon. It is exposed over a length of several hundred feet but for the main part is too narrow and poorly mineralized to be of much interest. Near the lower end, however the vein reaches a width of ten to fourteen inches and contains a two inch streak of sulphides over a length of ten feet. A sample across this section, including ten inches of quartz and two inches of sulphide gave $30.40 per ton in gold. This is good ore and though the lens is too small to be of commercial value there is a possibility of discovering in this vein other similar or perhaps larger lenses of ore.

Vein Number 5.

This is known as the cross vein and occurs at the foot of a falls near the southwest corner of the Grizzly claim. It was only recently discovered and has been traced only for a length of twenty feet. It strikes in a nearly due north direction and therefore nearly at right angles to the other veins in this vicinity. It is twelve to fifteen inches in width and contains scattered lumps of pyrite. A sample across twelve inches of vein including about two percent sulphide gave only $1.20 per ton in gold. Further work on this vein will undoubtedly show up a much greater length than that now shown and may also reveal more richly mineralized sections than that sampled.

REcommendations:

I would suggest that a small amount of money be spent on developing the main vein by driving a drift tunnel on this vein at a point

about fifty feet vertically below the big lens of ore. The ore from the workings should be preserved and it is possible that some means of shipping it could be devised such as a combination of raw hiding and horse packing. This might more than pay for the work and if the vein improved in width and maintained its values in depth, as is highly probable, much further work would be warranted and a sufficient ore reserve built up which would ultimately warrant the installation of hydroelectric power and milling and shipping facilities.

(Signed) "V. DOLMAGE".

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