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EXCEPT FOR
RECOMMENDATIONS

Kootenay Group
Moresby island

Queen Charlotte Mining Division.

Location. This property comprises the Victoria, Skidegate, Meaford, and Hazelton mineral claims and is owned by E. C. Stevens of Skidegate, Queen Charlotte islands. It is located on the north shore at the head of the south arm of Kootenay inlet, west coast of Moresby island, Queen Charlotte islands.

History. The property is partly a restaking of ground formerly covered by the old Blue Mule group and referred to under that heading in the Annual Reports for the years 1920, 1922 and 1923. In 1922 the old Blue Mule owners after carrying out some stripping and open-cutting made a remarkably creditable axe-hewn construction of a 100-foot flume, a 14½-foot water-wheel with 8-foot drive-pulley, counter-shafts and pulleys, 4 ore-bins, suitable housing, and installed a Ross amalgamating mill. Some gold was re-covered with this equipment but the poor quality of material in the mill, frequent breakages and absence of spare parts produced sufficient grief to discourage these hard-working operators and the operations ceased.

Accessibility. Kootenay harbour south arm is a sheltered deep-water harbour in which large vessels could anchor and is located about 30 miles south of the western entrance to Skidegate channel. The locality is best reached by launch from Queen Charlotte City a port of call for the Canadian National Vancouver-Prince Rupert coastwise steamer. The launch trip from Queen Charlotte City consumes about a day dependent on the state of the tide in the narrows, and for comfort and safety should be undertaken in a dependable craft with the selection of favourable weather.

An alternative over-land route to the property is by small launch from Queen Charlotte City to the head of Sewell inlet off Selwyn inlet on the east coast of Moresby island., a distance of 60 miles. This water journey by launch would occupy a day but is not prone to the sometimes turbulent sea conditions of the west coast. A comfortable cabin is located at the head of Sewell inlet. George Newbauery of Queen Charlotte City conducts an efficient and reasonably-priced boat service to any point on the islands. From Selwyn inlet there is a good trail to Tasoo harbour, a distance of 5 miles. From Tasoo harbour a trail of varying character and sometimes hard to locate, leads to Kootenay harbour a distance of about 9 miles,. Low divides of 75 feet and 200 feet respectively and extensive swamps are crossed between Selwyn inlet and Tasoo, and Tasoo and Kootenay. With weather conditions right however, the west coast route is preferable.

The showings are located between elevation 450 feet and 800 feet and a good cabin is situated at elevation 450 feet, close to the workings, and about one mile from the beach. A lower cabin at the beach is in some disrepair and overgrown with brush but with a little work could be made habitable. A good foot-trail leads from the beach to the cabin at the showings.

Topography

Gently undulating low-lying ridges to about 200 feet elevation, with swamp and muskeg declivities border the shore-line for a breadth of about half a mile. Northerly of this the mountain slope gradually steepens to a general slope of about 47° with intervening bluffs to the crest of the ridge at about 2500 feet elevation.

Geology. The frontal low-lying area is composed of vertical standing interbedded dark and banded limestones and shales. Abutting on these and occupying the steep mountain slope is a complex of greenish, probably andesitic, lavas with some purple tuff areas. At around elevation 800 feet a fairly definite band of purple tuffaceous rocks strikes through in a north-easterly direction and is exposed in places as a prominent bluff along its contact with the southerly situated lavas. The showings so far discovered are confined to the green lava belt of about half a mile in width lying between the limestones on the south and the purple tuffs on the north. The vein structures strike north-easterly and parallel with the green lava belt. This fact is important in indicating favourable ground and rock type for exploration and the location of additional veins.

Veins. The mineral occurrence consists of brecciated and reticulated quartz veins varying in width from 6 inches to over 5 feet. Between the quartz reticulations the included rock has generally been subjected to pronounced siliceous replacement. Narrowing and swelling of widths and stringering out into the silicified wall rock with a subdued accentuation of the walls is characteristic of the vein structures. The veins are sparsely mineralized in places with pyrite and chalcopyrite with some native gold. The gold is sometimes comparatively coarse and visible but is generally too fine to be detected by the naked eye. From some sections of the veins where gold is not visible it can be panned from the finely crushed quartz.

Open-cutting and stripping has exposed possibly five parallel main veins striking north-east and dipping steeply south in about a 350-foot breadth of territory. These veins have been traced for distances of from 100 to 400 feet and at their extremities are covered by overburden. Between the main veins two smaller subsidiary veins 12 and 18 inches wide with relative quartz stringers are also exposed, but not traced. In appraising the number of veins exposed however, it must be born in mind

that cross-faulting may have occurred and although no exposures proving this have as yet been made, the character of some of the exposures suggest this possibility.

Workings & Values. At elevation 600 feet near the west end of the Meaford claim a sample representing a well-defined quartz vein 12 to 14 inches wide with sparse specks of chalcopyrite exposed in the face of an old open-cut, assayed: Gold 0.64 oz. to the ton; silver 0.3 oz. to the ton. The attitude of the continuation of this vein outcropping along the west bank of a small creek is suggestive of cross-faulting.

About 50 feet easterly of this cut and on the east side of the creek a sample of an outcrop of quartz with sparse specks of chalcopyrite and close to fine visible gold, assayed: Gold, trace; silver, trace.

At elevation 700 feet and about 400 feet north-easterly, stripping and open-cutting exposes a width of 5.2 feet of reticulated and brecciated quartz in which two or three fine specks of gold were visible. A chip sample of this exposure assayed: Gold, 0.44 oz. to the ton. At elevation 800 feet and about 200 feet north-east of this exposure some quartz stringers and pyritized semi-silicified sheared material outcrops in an amygdaloidal breccia close to the foot of a falls and adjacent to the contact of purple tuff. Whether or not this represents the continuation of the last exposure is not clear. These exposures line up fairly well with the vein exposed in the old open-cut at elevation 600 feet and it is possible they are outcroppings of the same vein structure.

From close to the upper cabin at elevation 450 feet and along a distance of about 300 feet north-east to elevation 560 feet a vein is stripped in six places showing a width varying from 12 inches to about 5 feet. The two large cuts at the lower or south-westerly end are the workings from which the ore was drawn for the old mill operation. In the lowest cut at elevation 450 feet a brecciated and reticular quartz-replacement vein-structure 5 feet wide is exposed striking N 50° E (mag) and dipping 85° south. A sample across 2 feet in this cut assayed: Gold, 0.22 oz. to the ton. Assays of \$24 and \$26 in gold are stated by the owner to have been obtained from this cut. Free gold was not observed at this locality but pannings from finely-crushed material from the vein showed colours.

At about 200 feet easterly of this showing and at elevation 525 feet a prominent quartz outcrop 2 feet to 4 feet is exposed for 100 feet along the face of a bluff. This does not line up with the previously described showing and is possibly a separate vein.

About 250 feet easterly of this and between elevations 415 feet and 550 feet three veins from 2 to 3 feet in width are exposed crossing a creek-bed. Continuity of these in

both directions on the creek-banks is obscured by deep overburden. The correlation of these with vein exposures to the south-west is uncertain.

Conclusion. It is considered that this property is decidedly worthy of intensive exploration. There is a good probability that stripping will result in extending the continuity of the known veins and also result in discovery of additional veins. The north-easterly striking belt of green lavas lying between the limestones and the purple tuffs should be intensively prospected down-hill towards the limestone contact and also towards the north-east as far as it extends, and offers a promising area for further discoveries.

The gold values in the known veins indicated by sampling and panning and the mode of occurrence of the gold, are attractive. Should appreciable shoots of pay values be found to occur the type of mineralization suggests simple and low-cost extraction. The topographical conditions and the attitude of the known veins lend themselves to low-cost mining operations. The easy accessibility of the property is also an attractive feature, and should a permanent operation be found warranted water-power could be procured from the harnessing of the Kootenay river about 3 miles distant. Timber for mining and building purposes is procurable on the ground. All major conditions are conducive to a low-cost mining operation.

Recommendation. In considering the appraisal of this property it should be remarked that the character of the gold mineralization is such that the usual methods of hand-sampling, unless extremely closely spaced, could return very misleading results. The indications however, are such as to certainly warrant intensive exploration of the occurrence and the accurate appraisal of values in it. It is suggested that this should be initiated by diamond-drilling, further stripping and open-cutting and if indicative results from this warrant it, continued by the installation of a 10 to 20 ton capacity blanket and amalgamating pilot mill for the primary purpose of sampling and valuation. With the inauguration of such an exploratory campaign some return would be realized at the outset from gold recovery which would at least assist in defraying the cost of further exploration and development.

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