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ANNUAL REPORT OF THE MINISTER OF MINES
FOR 1936.

Part F -- Special Report
by B. T. O'Grady.

BRETT GOLD MINES LIMITED. The property of this syndicate, in the Yale Mining Division, consists of nine mineral claims held by location. The group is situated on the southern side of Fifteenmile creek, westerly from Jessica station on the Kettle Valley railway which is located along the western side of the valley of the Coquihalla river.

The topography is shown in 100-foot contours on Geological Survey of Canada Publication No. 1988, "Coquihalla River Area". The workings, at elevations of from 2,325 to 2,600 feet, are situated on ground sloping from 35 to 40 degrees towards the creek. At lower altitudes the general steep slope is interrupted by benches, Jessica being at 1,300 feet elevation. The area is well-wooded, the trees including some large hemlock and cedar, and the underbrush is fairly dense. The new camp, at 2,310 feet elevation, is reached by trail, 2 miles in length, roughly estimated, from Jessica. Of this the lower half-mile length, starting from the railway, has been widened to tractor road width.

The property is largely underlain by serpentine, which, a few hundred feet south-westerly from the principal workings, contacts with flaggy chert and intercalated schist of the Cache Creek series assigned to the Pennsylvanian. A diorite dyke, apparently about 100 feet wide, is exposed at points along the trail at approximately 2,100 feet elevation. In succession below this there are outcrops of andesite, serpentine, and diorite, the ground being covered at lower altitudes. The workings develop a series of sheared fractures and talcose seams in serpentine, strikes being north-westerly with variable, generally steep, south-westerly dips. In this area the serpentine is intersected by diorite dykes and by a "white rock" the composition and possible origin of which is discussed at length by C.E. Cairnes in Geological Survey of Canada Summary Report 1929, Part A, page 194-A.

Mineralization noted, of erratic distribution, consists chiefly of free gold in thin polished films on smooth "slickensided" surfaces of talc or talcose serpentine. Rare gold occurrences have also been found associated with chalcocite in stringers or small nodular masses of the "white rock" where it is composed partly of coarsely crystalline diopside and contains a little yellowish garnet.

Former references to the property are contained in the publications above referred to, under Fifteenmile group, and in the Annual Report of the Minister of Mines for 1929 under Pacific Mines, Ltd. The group was acquired by the Brett Gold Mines Ltd. in 1930.

Surface workings include a large amount of ground-sluicing, the bottoms of most of these excavations being covered with soil or debris, with serpentine bedrock exposed in places. The lower adit, at 2,325 feet elevation, is driven south 32 degrees west for 193 feet, its inner end being below a ground-sluiced area, now caved. Above the adit, 70 feet from the portal and at 2,375 feet elevation, there is a large excavation exposing a zone 4 feet wide of vertical shearing in serpentine, with which seams and spots of the "white rock" are associated. A sample across 3 feet assayed a trace in gold and silver. This shearing was not traced in the adit below where there is much lagging to a point 97 feet in from the portal. At this point there are two branches, identified for reference as C and D, which are driven respectively south 30 degrees east for 27 feet and south 85 degrees west for 17 feet. "B" branch, 133 feet in from the portal, extends west for 63 feet and "A" branch, 141 feet in from the portal, is driven south 52 degrees east for 15 feet. In the area containing the four branches there are flat-lying irregular patches and lenses of the "white rock" up to 2 feet in width, no definite mineralization being noted in this material, some of which is included in the two sample sections to be specified. Extending diagonally along "A" branch there is a shear striking south 35 degrees east and dipping 85 degrees south-westerly. A sample across 3.5 feet in the face assayed: Gold, 0.02 oz. per ton; silver, trace. In the face of "B" working there is a shear striking north 50 degrees west and dipping 75 degrees south-westerly, where a sample across 3.3 feet assayed: Gold, trace; silver, 0.2 oz. per ton. In the face of "C" branch the serpentine, containing fine talc seams, is sheared over a width of 6 feet, the strike being south-easterly with flat south-westerly dip. In the face of "D" branch fine talc seams, without definite shearing, dip south-westerly at from 60 to 65 degrees.

In the main adit, 136 feet in from the portal, a shear is intersected which strikes north 50 degrees west and dips 75 degrees south-westerly, where a sample across 3.5 feet assayed a trace in gold and silver. A grab sample from a pile of about 20 tons of sorted "slickensided" serpentine and "white rock" at the portal assayed: Gold, 0.2 oz. per ton; silver, trace; and a selected sample from the same place assayed: Gold, 0.48 oz. per ton; silver, 0.1 oz. per ton. Here also there were numerous specimens showing thin films of free gold.

The upper adit portal, at 2,515 feet elevation, is about 250 feet south-easterly from the lower adit portal. It is driven south 60 degrees west for 175 feet to a point where caving at a water course prevented further entry. Directly above this adit, at 2,585 feet elevation, and 100 feet from the portal, a trench exposes sheared, crushed serpentine containing parallel talc seams, the strike being north 55 degrees west with south-westerly dip of 50 degrees. A sample here, across 1.5 feet, assayed a trace in gold and silver.

This showing underlies a syenite dyke, a medium to fine-grained phenocrystalline rock, exposed over a width of 2.5 feet, but evidently wider. This shearing was not traced in the adit below which, however, is largely lagged up. South-easterly from the last-mentioned trench, along the contour of the steep hill-side, there are three closely spaced caved trenches and beyond these, at 2.595 feet elevation, and about 200 feet from the original point specified, the rock has been faced up for a new adit. Here the serpentine is crushed and largely altered to talc adjacent to a decomposed dyke. Its contact with cherty rocks lies 30 feet westerly from the adit. Summarizing conditions, the continuity of specific shears is not apparent and mineralization is generally indefinite.

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