

009825

COPPER KING

by

M.S. Hedley

*Original Plan*  
766  
925/10E  
925/NE-24  
1939

REFERENCES:

Annual Reports of the Minister of Mines,  
British Columbia, 1898, 1924, 1929, 1930  
1935.

This property of nine Crown-granted claims and fractions is owned by Baroness Sartorio of Kamloops and is under option to James T. McKelvie and brothers of Grand Forks. It is 16 miles west of Kamloops and adjoins the highway on the north-side of Cherry Creek. The workings on the Copper King are at an elevation of about 2,000 feet, 300 feet higher in elevation than the highway.

The ground is broken by bluffs and rises steeply from the valley to the workings, north-westerly of which the rise is gradual to Roper Hill. The country is dry and timber scarce. A short section of road leads from the mine ore-bin to the highway, and 1½ miles westerly another short section leads to the mill. Shipments are made from Cherry Creek siding on the Canadian Pacific Railway.

Mineralization is in a body of quartz-diorite that extends from Cherry Creek at this point to Kamloops Lake. It is intrusive into rocks of the Nicola series which are exposed to the south. The rock is somewhat variable as to grain and colour and in the workings it is commonly reddish and medium in texture.

Magnetite and epidote occur in bands and patches and there is some carbonate veining, but these minerals do not

appear to be related to the copper mineralization. Chalcopyrite and bornite occur in films, disseminations and rare veinlets in the quartz-diorite; tetrahedrite is rare.

The property was staked in 1897 and a 25-foot vertical shaft was sunk, which in later sinking was reported to have passed out of the "vein" matter. During the next three years the lower adit-level was driven and an intermediate level was driven from the shaft. Production prior to 1929 amounted to 1036 tons, containing an average of 0.115 oz. gold per ton; less than 10 oz. in silver per ton, and 6.15 per cent copper. These figures are believed to represent the entire tonnage, almost all of which was shipped in 1904.

In 1929 H.R. Graham of Kamloops shipped four cars of ore, a total of 163 tons, which averaged 0.601 oz. gold per ton; 1.3 oz. silver per ton, and 5.45 per cent copper; this ore was taken from the old stope above the intermediate level. Another shipment of 141 tons in 1929 averaged 0.15 oz. gold per ton; 1.3 oz. silver per ton, and 2.3 per cent copper.

In 1937 McKelvie Brothers of Grand Forks optioned the property and during the next year carried the old stopes to the surface, drove a second raise and stoped above a small sub-level. Ore shipped to the Tacoma smelter in 1938 amounted to 712 tons with an average content of 0.557 oz. gold per ton; 0.98 oz. silver per ton, and 5.12 per cent copper. The 35-ton

mill from the Jenny Long property near Stump Lake was purchased and put in operation late in 1938 and 15 tons of concentrates shipped to the smelter. During 1939 245 tons of concentrates were shipped which averaged about 21 per cent copper; 3 oz. silver per ton, and 1.5 oz. gold per ton. Thirty-six tons of ore were also shipped.

The workings are somewhat complex, as reference to the plan and section will show. The adit-level is nearly 600 feet in total length, with an additional 50 feet or more of crosscuts. An intermediate level, 59 feet above the face of the adit, was driven from the original shaft a total length of 130 feet or more, and a connecting raise was driven from the adit. A second raise connects with a short sub-level 27 feet above the adit and mining has been conducted entirely above this sub-level.

The ore-zone, as determined by current mining practice, is as much as 30 feet wide and 130 feet long, with problematical extensions. It is neither a vein nor a shear-zone but rather a locus of deposition of bornite and chalcopyrite as disseminated grains, tiny veinlets and rarely as fracture-fillings as much as several inches in width, all in relatively unaltered quartz-diorite. Tetrahedrite is sparingly present in fractures and may belong to a later generation. A prominent near-vertical fracture or series of fractures runs longitudinally through the workings in a direction about north 20 degrees east, but is only locally mineralized and does

not appear to have served as a channel-way of more than minor importance. A few fractures at large angles to these do not appear to have produced displacement.

Microscopic examination of the quartz-diorite shows the red colour to be due to much fine iron-oxide dust; of two thin sections studied one showed marked sericitization of the feldspars and the other extremely little, although both were from the ore-zone. Disseminated sulphide, whether chalcopyrite or bornite, suggests an original constituent of the rock, and veinlets of these minerals commonly show no continuity or connection with one another. Walls of the ore-zone are assay boundaries and continuations are uncertain.

Only a local and minute amount of mineralization is to be seen in the adit-level, but the possibility of finding ore on that level is not disproved. Ore stoped from the sub-level, consisting principally of a stringer of bornite, has no relation to the main central break which formerly was considered to be the "vein". There is a seemingly northward rake to this mineralization that may provide mineable ground somewhat east of the north-eastermost point reached by the adit.

At mid-December there was a crew of seven men at the prospect and the mill was operating about two weeks a month.