

COPYCOPYMR  
95-1

RECONNAISSANCE REPORT ON THE  
COPPER BULLION PROSPECT  
RUA COVE, KNIGHT ISLAND, ALASKA

KX  
95-98  
95-99INTRODUCTION:

The Copper Bullion Group contains two patented claims (Copper Bullion Nos 1 and 2), and sixteen unsurveyed claims (Bullion Nos. 1 to 16) at Rua Cove, Knight Island, Prince William Sound, Alaska (See Plates 1 and 2).

The owners of the group are Mr. Snyder of Minneapolis and Mr. W. A. Dickey of Seattle. Mr. Dickey and his son showed the property to me early in August, 1922.

PHYSICAL FEATURES:

Physical features, including handling by gravity, timber, and climate, are favorable. Water power, from 200 to 800 H P according to the season of the year, is cheaply available from the lake and stream on the property. A small plant and compressor, sufficient to run two drills, are already installed.

TRANSPORTATION:

The vessels, of the two steamship companies operating in Alaska, make stops at any harbor on Knight Island, where they can handle sufficient tonnage to pay them to stop. However Rua Cove is not a harbor, and affords no real protection from the prevailing storms. The alternative harbor possibilities (See Plate I) will require a very careful investigation, before any decision can be reached. The distance to Puget Sound is nearly 1500 miles along the present route of travel used by the steamship lines.

#### GENERAL GEOLOGY:

On Plate 1 I have copied the geology as worked out by U.S. Grant and D.F. Higgins in Bulletin 443, U.S. Geological Survey. They put the Rua Cove rocks in the Orca Group (Mesozoic) of greenstones and sedimentaries. The altered sedimentary rock in the workings of the prospect (See Plate 3) is principally chert. My classification of the igneous intrusions as granite, syenite porphyry, and fine grained diorite is subject to change by investigation with thin sections. These igneous intrusions are very irregular.

#### ORE DEPOSITS:

The main outcrop and the only one that looks interesting is the big outcrop on the Copper Bullion No. 1 Claim (See Plates 2 and 3). The cuts were not in proper shape to sample as Dickey had concentrated his work in the tunnel. I decided that a careful sampling of the new work in the tunnel and a few samples to check the owners' samples in the old part of the tunnel would be my best program.

The U.S. Mineral Surveyor, Rolfes, who surveyed two of the claims for patent, took a general sample across 107 feet in the cut about 250 feet above the tunnel level. Rolfes told me this sample averaged 1.84% copper. Storm took a number of assays in the surface cuts (Page 6 of Storm's Report) when the cuts were fresh. However, Storm told me that, in the light of later experience, he considered his whole report entirely too optimistic and his conclusions unsound. The report was written before he had much practical experience.

Apparently the tunnel, near the face, is in about the same territory as just beyond the highest open cut. My samples between the two faults near the face of the tunnel show a forty foot width of 1.61% copper 70 cents in gold and silver. This is the favorable territory Dickey has been anxious to reach for some years.

The proportion of pyrrhotite and chalcopyrite is very variable and the property is a difficult one to sample. The only shoot underground, where the values are consistent for any great distance (considering the low grade), is the shoot between the two faults near the face of the tunnel. Dickey claims the syenite porphyry in the face of the tunnel to be a bulge in the intrusion and says he is now twenty feet beyond it in his best ground.

The outcrops I saw beyond the main outcrop were on the Copper Bullion No. 2 Claim. No work has been done on them and they are either very weak or very small with lots of country rock. This extension zone is very rough country and has never been thoroughly prospected.

DEVELOPMENT:

The development consists of the open cuts and tunnel shown on Plate 3. No ore can be said to be developed but there is evidently a fair tonnage of near-ore averaging  $1\frac{1}{2}\%$  copper and 50 cents in gold and silver. There is every evidence of a large tonnage of rock averaging  $1\%$  copper and 30 cents in gold and silver.

TERMS:

\$400,000.00 is the price asked with two years to work before the first payment. An alternative proposition is a royalty of ten to twenty cents a ton to the owners with a guarantee to develop on a big scale.

CONCLUSIONS:

I believe by careful management and the application of the best metallurgical methods, this property might be made to just about break even. In my opinion, the property is not attractive, even though a very large body of  $1\frac{1}{2}\%$  copper rock be developed. The chances for making

a profit on this grade in rock heavily pyrrhotized are not as good as the chances that a loss will be registered.

In the Beatson Mine at Latouche a fair profit is made on ore as low as 1.75% copper, but there is not so much iron in the Beatson ore as at Rua Cove. Unless something should occur, that would make the heavy pyrrhotite mineralization an asset instead of a drawback, I do not see any hope for this property. Dickey hopes to uncover a good grade ore shoot, but it seems to me that the ground near the face of the tunnel is as favorable as it is probable he will find.

Respectfully submitted,

/s/ Harry Townsend

