

of the cut and to widen at the bottom. The country rock is a fine-grained porphyrite. The strike of the fissure is S. 40° E., and some claims have been staked on what is believed to be a continuation of this fissure, on the opposite bank of the creek, the ore being of similar character. A sample of the galena gave the following assay:— Gold, 0.02 oz.; silver, 30.0 oz.; lead, 70.3 %.

AMERICAN CREEK.

American creek, an important tributary of Bear river, joins the latter **Red Cliff Group.** some thirteen miles from the head of Portland canal. A considerable number of mineral claims have been staked on either side of the creek, many of which were only located this year. At the junction just mentioned a small stream flows in from the north-west, named Lydden creek, after one of the early prospectors; half a mile up this creek and 400 feet above Bear river, a group of five claims, known as the *Red Cliff* group, has been located. The names of the claims are *Mount Lyell*, *Red Cliff*, *Little Pat Fraction*, *Montrose* and *Waterloo*, owned by the Red Cliff Mining Company, of Vancouver, B. C., A. D. McPhee being Superintendent at the mine. Lydden creek flows along the base of a bare mountain, which rises with a slope of 55° to a height of about 5,000 feet. On the face of this mountain are easily seen numerous mineral stains having a general trend up and down the mountain. On the strongest of these mineral stains the *Red Cliff* claim was located, and a few shots disclosed a showing of copper gold ore; this has been further prospected by a tunnel in the same place and running directly into the mountain. The tunnel is 400 feet above Bear river and about 160 feet above Lydden creek; it has been driven 57 feet directly into the mountain, the course being S. 35° W. mag. A crosscut of 17 feet was made to the right to cut through a horse which was supposed to come in, but this has been stopped and the tunnel has been pushed 12 feet farther into the hill and is still being run, the total distance from daylight in a direct line being 67 feet.

The tunnel and stripping which has been done show up a body of solid ore, which appears to be some 8 feet wide, but it has not been cut through in any place in the tunnel, the roof and left side being in good ore all the way, the right side of the tunnel being mineralized with iron pyrites without copper, but carrying low gold values. Some shots put in 100 feet above the tunnel show up ore the same as that noted below.

The ore body appears to occur in the form of a vein or veins in a greenstone country rock, the vein matter being a dark igneous rock matter interbanded and crisscrossed with small quartz veinlets, the whole being mineralized with iron and copper pyrites; in some places the copper pyrites is in solid bands, five or six inches thick. The assays on this ore vary from 6 to 18 % copper, 0.3 to 1.8 oz. gold and 1.0 oz. of silver, the iron pyrites unmixed with copper pyrites carrying 0.3 oz. in gold, while selected specimens give much higher values.

The walls of the vein are tight; there is little evidence of any movement and none of any secondary deposits or enrichment. There are about 225 tons of ore on the dump.

The position of the present tunnel on the slope of the mountain renders work unsafe for eight or nine months in the year, on account of snow-slides, so the company has surveyed and intends to run a long working tunnel 387 feet lower down the hill, under the ore body that has been proved, which will render the working of the mine possible at all seasons of the year.

To the north-west of the *Red Cliff* is the *Little Pat Fraction*, on which there is a considerable surface showing, which has not yet been touched. Farther to the north-west the *Montrose* claim has been deeply cut by Lydden creek, and in this cut there is an exposure of ore similar to that seen on the *Red Cliff*, not showing so much copper but carrying high gold values. A mineralised face of some 25 feet square has been uncovered by surface work.