

KITSAULTE COPPER CAMP, SKEENA, B.C.

The following notes on mining properties situated in Kitsaulte copper camp, Alice arm, Observatory inlet, Skeena mining division, have been taken from a report made to the Provincial Department of Mines, Victoria, B.C., by Mr. D. G. Forbes, who was commissioned by the department to make an investigation of mining properties and conditions in the camp under notice:

"Near the headwaters of the Kitsaulte river and on its west bank, some 16 miles in a direct line from Alice arm, Observatory inlet, a considerable number of mineral claims have, during the last two years, been located at elevations ranging from 700 to 3,500 ft. above sea-level. The trail at present followed to these properties is about 22 miles in length and is impassable for horses after the first five miles. These claims have nearly all been located on a mineralized zone in quartzite interspersed with diabase intrusions. This zone has a probable width of 5,000 ft., and the prospectors state it can be traced on the surface for more than four miles. It forms the backbone of a spur of the mountain range in which the Kitsaulte river has its source, and lies between that river and Evendsen creek. The mineralized belt is bounded on the south-west side by red porphyry and on the north-east side by slates. The ore occurs in a quartz gangue, sometimes in the quartzite and at other times bounded by diabase, but does not appear to have regular walls; although its limits are fairly well defined when it occurs in diabase rock. The mineralization is chalcopyrite and pyrite, the latter being predominant in the quartzite and the former scarce. The mountain is heavily covered with decayed vegetation and standing timber of poor quality, and there are very few exposures of rock in place.

"Red Point Mineral Claim.—This claim was one of the first located in the district. The surface has been broken away, leaving a series of bluffs from 50 to 75 ft. high, extending about one-third of the width of the claim. In these bluffs, which are heavily stained with iron, two bodies of ore, consisting of chalcopyrite and pyrite in a quartz-gangue, have been located about 350 ft. apart. Examination of these bluffs can only be made by going down on a rope, after the overhanging vegetation has been removed, and they have not been thoroughly prospected. The attention of the owners has been devoted chiefly to stripping and making trails in connection with the two exposures of ore mentioned, and very little actual work has yet been done to determine the value and extent of the ore-bodies.

The first of these discoveries was made in what is known as No. 1 Bluff, at an elevation of 1,700 ft. above sea-level, and shows from 14 to 16 ft. of siliceous ore near the top of the bluff. It appears to dip to the east into a sag in the bluff, but has not been found at a lower elevation. A sample was taken from this exposure, and assayed: Copper, 5.9 per cent.; silver, 2.5 oz., and gold, \$6 to the ton. No effort has been made to follow this ore.

"At No. 2 Bluff more work has been done than at the first discovery. At an elevation of 1,750 ft. the face of the bluff has been stripped for 38 ft., disclosing irregular bodies of diabase rock alternating with siliceous ore. A tunnel has been driven 15 ft. into the face of the bluff in ore, and now shows at the face 2 ft. of ore, from which a sample was taken which assayed: Copper, 4.6 per cent.; silver, 0.6 oz., and gold, 80 cents to the ton.

"From the above-mentioned point the bluff is nearly vertical for about 60 ft., and shows ore in many places where it has been broken. At an elevation of 2,025 ft. an exposure of ore 20 ft. wide has been laid bare at the top of the bluff, from which a sample was taken as an average across the face, and this assayed: Copper, 8.5 per cent.; silver, 1.3 oz., and gold \$7.60 to the ton. One hundred ft. back from the face of the bluff a cut 6 ft. deep, 5 ft. wide and 20 ft. long has been excavated across the ore, the eastern half of the cut showing the best ore. A sample was taken from the eastern half of this cut, and it assayed: Copper, 4 per cent.; silver, 1.4 oz., and gold, \$9.20 to the ton. A sample taken from the western half assayed: Copper, 0.7 per cent.; silver, 0.2 oz., and gold, \$1.20 to the ton.

"One hundred and seventy-five ft. from the face of the bluff the surface soil and the standing and fallen timber had been cleared off and the quartz exposed again, but had not been broken into. This body of quartz has a strike of N. 45° W. (magnetic), and has been traced farther up the hill toward the Red Point Extension claim. It does not appear to have any distinct walls, and, as far as development has gone, appears to be vertical.

"Red Point Extension.—On this claim no work has been done, but a natural exposure in a small bluff shows ore 10 ft. wide, from which a sample was taken, assaying: Copper, 3.1 per cent.; silver, 0.6 oz., and gold, 80 cents to the ton.

"Combination Mineral Claim.—On this claim two exposures of ore have been located about 150 ft. apart. No. 1 cut shows 7 ft. 6 in. of quartz containing chalcopyrite and pyrite, with a parting in the centre of 18 in. of vein matter. Sufficient excavation has not been made to expose the limits of this ore; it has an apparent strike of S. 33° W. A sample was taken from the western half, and it assayed: Copper, 3.9 per cent.; silver, 2.2 oz., and gold, 60 cents to the ton. Sample taken from the eastern half of this outcrop assayed: Copper, 1.9 per cent.; silver, 1.2 oz., and gold, 60 cents to the ton.

"Cut No. 2 in the side of the mountain shows 5 ft. of very much oxidized ore, apparently on the foot-wall side; the ore dips slightly to the south, its strike being S. 36° W. The elevation is 2,125 ft. above sea-level. A tunnel has been driven about 30 ft. below this cut, which found ore; at a distance of 34 ft. 6 in. from the portal 15 ft. of mixed ore was passed through, the tunnel being then continued for 17 ft. in country rock. A drift was started on the west side of the tunnel on the best ore, and followed a slip for 33 ft., the face of the drift being in diabase. At a distance of 17 ft. from the tunnel in this drift a small crosscut was driven 10 ft. to the north-west, the face of this crosscut being still in ore. The ore on the dump at this tunnel was sampled, and gave upon assay: Copper, 5 per cent.; silver, 2.8 oz., and gold, 80 cents to the ton.

"The ore in this tunnel is very irregular in value, in places being much mixed with country rock; the drift to the west and the small crosscut are almost entirely in solid ore. The ore cut in the crosscut appears to dip to the south at about 80 deg. Its strike was not determined. More exploration work is necessary to determine the limits and value of this deposit; the ore exposed is, however, sufficient to fully warrant a further expenditure on the property."

Summary.

After adding brief information of a number of other mineral claims in the vicinity, Mr. Forbes gives a summary, as under: