

Some surface prospecting was in progress during the season on mineralized areas and zones on the Siwash and other claims on the Big Missouri ridge north of the Portland group, but no conclusive results were obtained. The Big Missouri claims and the thirty odd claims held and prospected to some extent in the season of 1910 by the Golden Crown Mining Company were all idle, the bond on them held by that Company having been thrown up. The Martha Ellen and three other claims held under bond in 1919 by the Salmon Glacier Mining Company and situated farther to the north immediately above the Salmon glacier, were also idle although very satisfactory results had been obtained from the small amount of surface prospecting done. A trench across a mineralized zone on the Martha Ellen, roughly sampled for 17 feet, yielded 0.57 ounce gold to the ton, 3.76 ounces silver, and 4.64 per cent lead. The zone has a width of over 50 feet and the most highly mineralized portion is not included in the sampling, as a deep transverse pit filled with ice and water prevented access to it. Still farther to the north, between Mt. Dillsworth and the Salmon glacier, are the Fortynine and numerous other claims, all staked on oxidized zones and areas, but with little work done on them.

The Silver Flat, on a hill north of Silver lake, affords an example of a narrow lead confined between nearly vertical fissures. The lead has a width of from 2 to 3 feet and consists of quartz and silicified country rock carrying some galena, chalcopyrite, sphalerite, and pyrite. Assays of \$21 to the ton in gold, silver, and lead are reported.

SUMMARY.

Characterizing the region generally it may be stated that it contains a large number of mineral deposits ranging in size from small stringers to wide zones and irregular lenses often 50 feet and more across, all traversing the more or less schistose massive and fragmental greenstones of the Bear River formation. The deposits plainly follow lines of fissuring and shear zones in some instances, and probably do so in all cases. With the exception of some narrow quartz stringers they all belong to the replacement class, and in origin and the irregular and hazy outlines of some of the masses resemble contact metamorphic deposits, but the characteristic non-metallic minerals which accompany these were seldom observed and are nowhere present in quantity.

The gangue is invariably the more or less completely silicified country rock, and the common metallic minerals are pyrite, occasionally pyrrhotite, galena, sphalerite, and chalc-