

The lead is a conspicuous landmark, appearing at a distance as a big red band across the face of the steep mountain side.

Near the Red Mountain the Windfall claim, owned by Geo. Cahill *et al*, has a large showing of ore on which a tunnel has been driven.

Between the Windfall and the Nickel Plate, Jos. McDermott and E. Tenlesen have recently uncovered a fair sized vein running \$40 in gold on their claim, the Edwin Fraction.

Adjoining the Nickel Plate group on the north is the Humming Bird group of four claims, owned by J. J. Marks. A 25-ft. shaft has been sunk and several open cuts made, close to the Nickel Plate line, exposing a large body of ore giving assays as high as \$28 in gold. Sufficient work has not been done as yet to satisfactorily determine either the extent or grade of this promising showing.

On the Snowflake group, also belonging to Mr. Marks, a tunnel has been driven 190 feet on a vein of arsenical iron from which good assays are obtained.

Probably the most attractive of the undeveloped properties in the camp is the Golden Zone group owned by Marks, Brodhagen and Murphy and situated four and a half miles north of the Nickel Plate mine. The claims in this group were located on a 4-ft. vein of white quartz running \$5 to \$15 in gold and silver. In tracing this lead by shallow shafts and open cuts the locators discovered what at first appeared to be two separate veins running in the same direction and differing from the white quartz in that they carried great quantities of arsenical iron. Later work, however, would indicate that the largest of these arsenical showings is in reality a continuation of the white quartz vein, the lead having widened to fully 20 feet and improved greatly in grade. The smaller vein is clearly a parallel one and at its eastern end assays from \$30 to \$120 in gold and \$1.60 in silver, for a width of 4 feet averaging between \$80 and \$90. The two veins are within 70 feet of each other. The arsenical showings are over 1,000 feet from the outcrop of the white quartz vein where first discovered.

The arsenical iron in these veins is of an extremely massive fine-grained nature and throws off a peculiar greenish stain which seems characteristic of this iron where it carries high gold values in Camp Hedley. When decomposed on the surface it is almost blood red in colour, and a small quantity of this oxidized material washed in a gold pan shows a long string of fine colours. A sample of this oxidized ore taken from the 20-ft showing assayed \$87 in gold. Work has been confined principally to the surface, the deepest shaft being down 50 feet on ore running \$10 to the ton. This sinking was done before the finding of the richer ore further along the vein.

There is plenty of water for the operation of a large stamp mill close to the property and the building of a road six or seven miles to connect with the Nickel Plate road from Penticton would render it possible to bring in machinery.

Four miles east of the Nickel Plate the Blue Diamond group of four claims has been staked by Jno. Lodge and W. McDonald on a 2½-ft. quartz vein in

granite and porphyry. The ore shows ozurite, melachite and chalcopyrite and is said to run between \$60 and \$70 in gold and silver. A tunnel has been driven 90 feet on the vein. The property is one of considerable promise and has the advantage of being within a few hundred yards of the Nickel Plate wagon road.

Between the Blue Diamond and the Nickel Plate are the Boston and Pittsburg claims, owned by the Stumps estate. The Boston has a lead bearing pyrrhotite and arsenical iron which is 150 feet wide and carries \$12.50 in gold. This property was bonded in May, 1902 by M. K. Rodgers for \$30,000 and about \$10,000 was spent on it, but the disappearance of the owner caused some difficulty and the bond was not taken up. A continuation of the Boston vein is found on the Greenwood claim adjoining, which belongs to D. Woods. The Greenwood ore averages \$15 in gold.

Some distance south of the Boston and east of the Nickel Plate, T. J. Gorman has recently discovered a 40-ft. vein of arsenical iron on the Eldorado group. This ore resembles closely that of the Nickel Plate, native gold being visible in some specimens of it. The group was located some years ago on a showing of pyrrhotite carrying a little yellow copper and giving assays as high as \$14.30 in gold. The recent find of arsenical pyrites greatly increases value of the property.

The Yorkshire Boy adjoining the Eldorado group has a 6-ft. vein of pyrrhotite and yellow copper assaying from \$2 to \$52. It is owned by A. Aberdeen.

Southwest of the Nickel Plate group the Horsefly claim, owned by Wollaston and Arundel, has a 5-ft. vein of arsenical iron assaying \$24 in gold which has been exposed mainly by open cutting. This lead pans gold freely on the surface.

Up the Similkameen River a few miles from the Nickel Plate Mountain and on the opposite side, H. C. Pollock has located the Maple Leaf group on two white quartz veins carrying gold in arsenical iron. One lead has a 2-ft paystreak running \$20 to \$30 in gold, and the other has two paystreaks assaying somewhat higher. Both veins are between 6 and 8 feet wide. A 55-ft. tunnel has been driven with the object of cutting one of the veins at depth.

NOTES ON THE SEPARATION OF GOLD, SILVER AND PLATINUM.*

(By H. Carmichael, Assayer to the Government of
British Columbia.)

As I had occasion to examine a number of black sands for the platinum group of metals, I made a careful search amongst the leading text-books on assaying and analysis for methods which would aid me; the records of the different chemical societies were also examined, but the data obtained from these sources were of the most meagre description and n :

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