

district. Somewhat auriferous silver-lead ores, and siderite-bearing quartz veins are found in this belt also.

The Badshot, one of the best known groups of claims, is situated on the west side of Gainer creek in the south base of the first "lime-dike." The veins occur in the "dike." The bluish limestone is shot through with veins and stringers of quartz and somewhat ferruginous calcite, generally having a low dip northward. The Badshot vein, several feet wide, dips into the mountain at an angle of about 28 deg. north. Its outcrop along the side of the dyke is plainly visible. The vein-matter consists of somewhat decomposed calcite, quartz, galena, and tetrahedrite. An incline shaft, about 70 feet deep, has been sunk in the vein. A galena vein 18 inches in width and said to run \$5 in gold, 225 oz. in silver, and 75 per cent lead, has also been opened up. Galena and tetrahedrite were the only metallic minerals seen in this ore. Badshot claim.

Some ore was shipped during the summer from the Mohican, opposite the Badshot on the east side of Gainer creek. On the Ophir-Lade group situated in this belt, the quartzose ore is said to carry high values in free gold.

#### TROUT LAKE DISTRICT.

Some mineralization has taken place in the Trout lake valley. Quartz veins somewhat mineralized, occur near the Beaton wagon road. A rather strong vein of mineralized quartz occurs on the Lake shore below Abrahamson creek. On the mountain slopes southwest of the valley, isolated groups of claims have been staked, practically along the whole length of the valley, some of them furnishing very promising-looking samples. From the position and number of these locations, this may be considered to form a third mineral belt. That the locations have not been more numerous may perhaps be explained by the difficulties in the way of prospecting, due to the vegetation and to lack of facilities for getting supplies into this part of the district. Trout lake mineral belt.

The Lucky Boy claim on the shoulder of the hill south of Trout creek, about three miles from Trout Lake city, is being developed and is shipping some ore. Several open cuts and one or two inclines have been run on the main vein, which varies from a few inches to several feet wide. In the main stope it pitches south-westward at rather a high angle. But for the most part it is almost horizontal, with perhaps a slight south-westerley dip, cutting almost at right angles the formation, (schist or altered silicified phyllites), which dips north-eastward at an angle of about 85 degrees. There are several parallel fissures which are not so well mineralized. Some inclusions of country rock occur in Lucky Boy mine.

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these and there is evidence of replacement. The quartz is somewhat drusy, and the ore often occupies these druses or occurs scattered through the quartz, in kidney or almond-shaped masses, or as small veinlets. The ore consists of galena, tetrahedrite, zinc-blende, calcopyrite, pyrite and a little native silver. On the surface it weathers to lead and copper carbonates. On the Horse Fly, adjoining the Lucky Boy, the ore occurs in limestone. On the Ruffed Grouse, Copper Chief and Willow Grouse claims, some distance above the Lucky Boy, the same minerals occur. The sulphides reticulate through the quartz as if formed later, or collected by concentration, so that in places it resembles brecciated ore, with the fragments cemented by sulphide. Pyrite is here more plentiful, and masses of pyrrhotite and some molybdenite also occur. The relationship of the metallic minerals to one another is interesting. The galena is found both in and surrounding tetrahedrite; the blende encloses both. Chalcopyrite encloses and forms veins in the foregoing, and pyrite and galena form the matrix for the others. The order of development would seem to be: galena, tetrahedrite, chalcopyrite and pyrite, galena, blende, but from the way in which the chalcopyrite surrounds and eats into the tetrahedrite, it looks as if it was formed by alteration of the latter, and from the frequency with which it occurs as a thin seam between tetrahedrite and pyrite, as if the action of the iron sulphide on the tetrahedrite might have induced this reaction. The practical bearing of this lies in the fact that since the tetrahedrite was one of the first formed minerals, there is firmer ground for our belief that the rich mineral will continue at depth. Work was progressing on the Ethel mine on the north-west side of Glacier creek.

Tetrahedrite.

Some good showings of ore are said to occur on claims up Five-mile and Canyon creeks, but the season was too short to allow of a trip being made to them. Some ore was being packed to Trout lake from the American mine at the head of American creek, a claim located on the central mineral belt. The claims on the Trout lake district enjoy the great advantage of being near transportation facilities, permitting a lower grade ore to be shipped. The cost of freight and smelting ore delivered on Trout lake is from \$16 to \$18 per ton.

#### THE POPLAR CREEK DISTRICT.

Poplar creek  
riet.

The basin of the Lardeau river, below Trout lake, is now usually referred to as Poplar creek district, since the excitement and rush into the district this summer was caused by discoveries about the mouth of Poplar creek. The district is not altogether new to prospectors; some of the most highly-prized claims, such as the Goldsmith-