

The country rock here is a fine-grained dark igneous rock with crystals of iron sulphides scattered through it. The work done at the shaft discloses a quartz vein split into two branches near the surface but joining at a depth of some 15 feet. The south branch is from 6 to 12 inches wide, the other from 12 to 18 inches, and these, after uniting, appear to pinch out at 30 feet in depth. The quartz on the dump was sampled and on assay gave \$52 in gold and one ounce in silver.

On *July 18th* camp remained at Canyon City, the day being spent in inspecting claims on Horseshoe mountain, under the guidance of a local prospector, H. B. Thorn, who kindly offered his services.

#### MINERAL BELT.

It is apparent from the locations that have been made, some of which will be described later, that there is a mineralised belt extending from the Kettle river valley at about Canyon City, in a westerly direction across country to the headwaters of the West Fork of this stream, passing through Beavertell and Carmi and probably continuing in the same line at least as far as the Osyoos valley.

Although the actual contact could not be found, it was noted that just about this point there was a change in the general formation, in passing southward, from the fine-grained igneous rocks of the upper Kettle river to altered sedimentaries, and still further south to quite unaltered sedimentaries, while at Rock creek there was an occurrence of coal formation.

The values so far found are chiefly in gold, in association with iron sulphides, usually arsenical. Some galena has been discovered and where found is quite high in precious metals, but as it is usually associated with iron sulphides it is not very clear just where the values are carried, not that it matters much from a practical standpoint.

Copper and zinc sulphides also occur as associated minerals, but not in quantities to be of value as such alone. The geological conditions along this belt seem very favourable for the occurrence of mineral, and such superficial work as has been done indicates that the ore found carries good gold values, so that taken altogether the section is well worth the serious attention of the prospector.

#### HORSESHOE MOUNTAIN CAMP.

This claim, owned by Messrs. Waddell and Sullivan, is situated on  
 Montana. Horseshoe mountain, at an altitude of about 3,800 feet, and some two miles  
 Mineral Claim. from Kettle river. It is reached by a trail from Canyon City. Here a  
 tunnel has been driven in for 70 feet to the east, with a winze, which has  
 been run in on about 6 feet of black shaley material occurring between two slip walls in a fine-grained igneous country rock. These walls have a strike nearly E. and W., with a dip of from 30° to 50° to north, and the filling between them, as is also the country rock to a lesser extent, is mineralised with iron sulphides, while irregularly distributed through this filling are lenses of quartz of varying sizes, carrying chiefly iron sulphides, but occasionally copper pyrites, galena and zinc blende. The values found are said to have been chiefly in gold and silver. Samples were taken of the material on the dump, and upon assay gave \$8 in gold and 6 oz. in silver per ton.

In an open cut, some 100 feet to the south, there is shown in a parallel ledge about 24 inches of quartz, which did not carry any particular mineralisation, and which, upon assay, gave traces of gold and  $\frac{1}{2}$  oz. per ton of silver.

In a further open cut, apparently on a third ledge, also parallel, there is a quartz lead about 24 inches wide, somewhat shattered, associated with calcite and having mineralisation as in the tunnel. It was noted, however, that the country rock was here somewhat different, being a very fine-grained, acid, igneous rock.

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This property, owned by Messrs. Waddell & Sullivan, is situated on  
 4th of July Horseshoe mountain, at an altitude of 3,850 feet, or about 1,350 feet above  
 Mineral Claim. the valley of the Kettle river, and distant therefrom some 3 miles in a north-  
 westerly direction from Canyon City. This altitude is about the average  
 height of the plateau referred to as lying between the valley of the main Kettle river and that  
 of the West fork. The summit of Horseshoe mountain resembles an elevated range of low,  
 rounded hills rising out of the general level of the plateau.

There was found on this property a tunnel running about north for 30 feet, at which point,  
 and extending across it, there was a winze filled with water, so that it was impracticable to  
 proceed further. The tunnel, it could be seen, however, continued some distance further,  
 deflecting to the east.

The country rock is here of igneous origin, fine-grained and probably a diabase. Very  
 little mineral was visible in the tunnel as far as it could be inspected, but on the dump there  
 was a quantity of pyrrhotite said to have been found in the winze. A sample of this was  
 taken and gave values of \$2.50 in gold per ton.

The *Kingston Hill* properties, owned by Mr. Robert Wood, were noted, but the work had  
 been done here in open pits 10 feet deep, and was of such a character that no idea could be  
 formed of the value of the property.

This group consists of the following mineral claims, viz.—*Oro Fino*,  
 O. K. Group. *O. K.*, *Ivanhoe*, *Liberty*, and *Tip Top Fraction*. It was located in 1897 by  
 H. B. Thorn and C. Matheson, in what is locally known as Triple Lake camp.  
 The property is situated on bare, rolling hills, and while it has received considerable surface  
 prospecting the work is as yet too superficial to allow any definite idea to be formed as to  
 value of the deposits.

On this group there appears to be a contact between the granite and the fine-grained  
 igneous rock (probably diabase) already mentioned, which is accompanied with a shattering of  
 the latter, following the line of what appears to be a hornblende dyke, and a subsequent  
 formation of numerous quartz stringers, together with the deposition by replacement of con-  
 siderable masses of pyrrhotite with some arsenical pyrites. This shattered zone has a strike  
 about N. 60° W. magnetic, and would appear to have a width of about 100 feet.

The development work consists of large, shallow open pits or trenches. The first pit is  
 12 feet deep, showing a considerable quantity of pyrrhotite and quartz in the shattered  
 mineralised zone. Selected samples of this give \$11 in gold per ton, but the average value  
 would be nearer \$5 per ton. The second pit is about 10 feet deep and shows stripped a  
 considerable mass of pyrrhotite. In the third pit, which is about 100 feet from the last  
 mentioned, there is, apparently, a continuation of the ore body therein exposed.

On the *Ivanhoe*, one of this group, there had been exposed a quartz vein, from 10 to 12  
 inches wide where tested, which carried free gold and which on panning gave numerous colours.  
 A sample was taken of this quartz and yielded on assay \$14.40 per ton in gold, with a trace  
 of silver.

This claim is situated on the eastern brow of Horseshoe mountain, and  
 Mogul is owned by R. Roberts *et al.*, of Greenwood. The country rock here is  
 Mineral Claim. granite, in which there evidently occurs a quartz vein, but of what width  
 could not be determined from visible surface workings, and the shaft could  
 not be descended for any distance.

The shaft referred to, which has been rather irregularly sunk, is some 8 x 12 feet in cross-  
 section, and, as near as could be measured, is 40 feet deep. It was stated, but could not be  
 verified, that in the bottom the ore was about 7 feet wide, consisting of quartz with iron pyrites