

GILKESON CLAIMS.

Wallowa Range
Greenstone
Copper Belt

THE GREENSTONE COPPER BELT

There are three large exposures of greenstone in the drainage area of lower Powder valley, only one of which is of much importance, as mining territory. The one west of North Powder has been mentioned in the discussion of the Bald Mountain-Elkhorn Region. The other is nearly surrounded by the most northerly bend of Powder river and is commonly known as Farley hills. No description of either of these greenstone areas will be attempted. The third area extends from Medical Springs south and east some 20 miles.

This latter greenstone belt makes up much of the middle drainage area of the various creeks which flow southward from the Wallowa range into Powder river, of which Goose and Balm creeks are the most important streams when considering the prospects of the region. As examples of the two types of copper deposits found

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in this area two prospects which are apparently the leading ones, will be described. They are the Gilkeson group with its chalcocite deposits and the Poorman group which contains chalcopyrite. These two properties are only three miles apart.

GILKESON'S CLAIMS

These claims are located on upper Clover Creek in Sec. 24, T 7 S, R 42 E. The region in which these claims are located is made up of low hills, some of which are capped with basalt and many of which are partially forested. The older rocks are the typical greenstones. Surface alteration has made it difficult to determine their exact character but many of them are undoubtedly amygdaloidal with calcite filling. One of these flows near Copper

WALLOWA R.
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Butte, which apparently makes up the horizon of economic interest, has been very badly shattered. In fact the whole flow seems to have been sheared in a very irregular manner. Although it probably can not be called a shear zone, still this shattering serves the same purpose since it permitted easy access for the circulating waters to do their work of deposition.

In many of the joint cracks cuprite and chalcocite have been deposited. Some of the chalcocite stringers are as much as one inch in thickness. Chalcocite is also found disseminated in many places in the shattered greenstone. The exact thickness of this flow which contains chalcocite and cuprite could not be determined. It appears to be flat lying and from 60 to 70 feet thick. The upper part is highly amygdaloidal, while the lower part, as shown in a shallow shaft, is dense in character. The development work has not been of such a nature as to give even an approximate idea of the amount of metal available. A few short tunnels and shallow shafts have been made on the richer stringers. Surface crosscuts and crosscutting raises would best determine how much of the flow contains copper.

This property known under the various names of Gilkeson, Copper Butte, and Copper Queen had at one time a small furnace constructed upon it. The slag rich in copper from this small furnace can still be found nearby. It is reported that about 100 tons of 12 per cent copper was shipped in early days and some copper ore of lower grade is seen upon the dumps. If this is a flat deposit, as before intimated, the development, which was done before the idea of disseminated copper in shattered zones became as well understood, was evi-

dently done in an attempt to determine whether the ore went down or not. Shafts and other development soon reached the dense part of the flow, which proved disappointing, and development has languished even until now.