

MR14-1

REPORT NUMBER 120

OF

THE STATE GEOLOGIST'S OFFICE

UPON THE

Lode claims, Mountain View, Liberty and Crebin  
situated

In Sec. 7, T. 6 N., R. 5 E. Wind River,

owned by

Carl Lundblade and Alfred Johnson.

Examined June 13 & 14, 1914,

By L. H. Trumbull.

State Geologist.

#### LOCATION.

The claims in question are located in Sec. 7, T. 2.6 N., R. 3 E., Wind River Meridian, about 25 miles by wagon road southwest from Thermopolis, a station upon the Burlington Railroad.

#### TOPOGRAPHY.

This section lies almost exactly upon the crest of the Owl Creek Mountains, the little creeks draining the claims being tributaries of Cottonwood Creek which flows to the Big Wind River, but the little streams flowing from the north side of the section from Willow Creek which flows to Owl Creek and then to the Big Horn River. The altitude is about 7,500 feet at the shaft, while the altitude at Thermopolis is 4,000 feet.

#### GENERAL GEOLOGY.

The Owl Creek Mountains are the remaining portion of a vast anticline thrown up at the close of the Cretaceous period. Along the sides of this anticline the sedimentary rocks of the various older geologic periods are all exposed, beginning with Cambrian against the central igneous core. The igneous (i.e. granites and diorites) rocks and the crystalline schists are exposed at the crest of the range for a distance of about 20 miles and a width of about four miles. The claims examined lie near the eastern end of this

igneous-crystalline schist core.

#### LOCAL GEOLOGY.

The claims are all on the granite-diorite core of the range, but the stratified Cambrian and Carboniferous rocks reach up the southern slope of the mountains almost to the claims, touching the section upon which they are located. The granites and diorites lie in roughly parallel bands a few feet wide dipping at nearly 90 degrees and striking east and west. Reading of the strike varied 10 degrees either way from due east and west. In the immediate locality no Algonkian schists were found, the rocks all being granites diorites or ~~also~~ igneous rocks. No porphyry or other intrusive was seen on the surface.

At numerous places float from quartz veins is observed on the surface. This usually shows the honey-comb structure left where metallic sulphids have been oxidized and leached away. The claims are located upon one of these oxidized quartz veins. It can not be followed on the surface for any appreciable distance. Two or more trenches on the surface a few feet each way from the shaft show the characteristic quartz gossan.

#### DEVELOPMENTS.

The developments consist of one nearly vertical shaft located on the very crest of an abrupt hill.

The surface drops away rapidly in all directions and on two sides quickly reaches the drainage lines some hundred and fifty lower than the shaft collar.

The shaft is cribbed solid for about 25 feet, but below this point timber is not required except as a support to ladders, skidway, etc. A depth of about 120 feet has been reached and practically no water makes at this depth.

#### VEIN STRUCTURE.

As exposed by the shaft, the vein shows itself to consist of quartz lenses in a decomposed basic rock which is now really a serpentine. That it may have been originally is not certain, possibly a very basic diorite. This lies against a smooth contact surface of a pink granite which forms the foot wall of the vein. The hanging wall is not so well defined and is probably rather indefinitely marked by shear planes in the serpentine, rather than a contact with a distinctly different rock.

The amount of quartz varies, in some places being half the vein filling and in others much less.

#### MINERALIZATION.

The minerals showing in the quartz at the surface are oxides and carbonates of iron and copper. In the shaft these occur as sulphids with but little oxidations showing on exposed surfaces and along cracks. The mineralization is not heavy, it being necessary to search to find the

sulphids in the quartz, but occasional pieces two inches thick by several inches in the other dimensions can be found. The values in gold, if any, are not known.

#### TREATMENT METHODS.

This ore will probably have to be concentrated before shipping, if future exploration shows workable bodies of ore. The grade of the material shown in the shaft is too low to mine. No assays have been made, nor were samples, for assay, taken, as it is evident that the material now opened is very low grade. Specimens of solid sulphid can however be found, but assays of these, would, of course, mean nothing.

#### CONCLUSION.

Nothing in the general geology or in the local geology or mineralogy, as shown on the surface or in the shaft, warrants one in believing that large minable bodies of copper ore will be found in the vicinity. Small ore shoots of exceeding rich ore may, however, be encountered under the conditions present.

*June 19, 1914.*