

The State of Wyoming.
Office of State Geologist,
Cheyenne.

October 9, 1905.


Mr. F. E. Brown,
Sec'y. Northwestern C. N. Co.,
Omaha, Nebr.

My dear Sir:-

Herewith I hand you brief report on the showings made in the Batchelder Mine at the time of my examination on September 28th, and would say that I consider the Batchelder a good proposition for development, also that you have a first class show to make a mine. It is a matter of regret that more of the work has not been done on the ore, but I think you are now headed in the right direction and would urge that in the future, as I have endeavored to emphasize in my report, that your prospecting work be done on the best shoot of ore that you open up.

Hoping you will be able to make a go of this work and can carry out your plans for the economical development of the Batchelder, I am,

Very truly yours,


State Geologist.

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GEOLOGICAL SURVEY OF WYOMING

The State of Wyoming.
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REPORT
ON
THE PATCHHOLDER MINE
AT
DILLON, CARBON COUNTY, WYOMING.

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SITUATION.

This mine is situated in Section 18, Township 14 North, Range 86 West, near Dillon, Carbon County, Wyoming. The property consists of two groups viz. the "Patchholder Group", 8 claims, and the "Eclipse Group", 6 claims, comprising about 300 acres of land, held by location and discovery under the laws of the United States and the State of Wyoming.

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ORGANIZATION.

These properties are held by the North Western Copper Mining Company, incorporated under the laws of the State of Wyoming for \$100,000.00, divided into 1,000,000 shares, par value ten cents each.

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GEOLOGY.

The general geological formation of the Dillon vicinity, where these properties are located, consists of a series of bands or sheets of schists, quartzites and diorites (or gabbro rocks) which have a general trend or direction easterly and westerly, and the general or usual dip shown by the outcrops is towards the south, but in many cases the dip

varies locally and a break or change in the dip of a dyke or sheet is often noted, especially where it has "broken over" on an exposed outcrop.

The ores of the Encampment district are usually copper-iron sulphides, chalcopyrite and bornite being the forms most common and are the commercial ores of the district. The surface ores show an oxidized iron ore, usually stained with copper carbonates, green and blue, and usually show some of the rarer forms of copper oxides, but all these forms give place, at a varying depth, to the sulphide forms noted above.

THE HATCHER GROUP.

This group is situated on the crest of the main ridge west of the Ferris-Haggarty mine, and the formation consists of a series of quartzite, schist and diorite or gabbro bands or dykes which have a general east and west trend in common with the general formation of this vicinity.

The ore showing is in or near the contact of a gabbro-schist contact and both these formations show considerable alteration and change, the principal change being a replacement of the rock minerals by lime and silica, and a filling of the cracks and fissures by these minerals, which in many cases gives a different appearance to the rocks and might be mistaken for a different formation or class of rocks.

The principal mineral showing is in a quartz vein at the point where the main work has been done and enough has been shown by these workings to indicate a permanent vein or body of ore, although its full extent has not been developed.

W O R K I N G S .

These consist of a main shaft sunk on an incline following the dip of the formation, substantially timbered and one hundred feet deep. At the bottom of this shaft a drift has been run east for a distance of about 350 feet and four crosscuts made in the foot and hanging walls at intervals, but with the exception of the first cross-cut north at the shaft, none of them have been in ore.

The latter work has reached a length of about 60 feet and in the face, at the time of examination, showed copper sulphides, but this dipped north and it is here remarked that other stringers cut in this rock had the same dip and did not dip with the formation, or to the south. Ore of good grade was cut near the shaft but not followed.

The work on the ore consists of a series of tunnels and drifts at a point under or north of the main shaft, together with several winzes and crosscuts, making about 1000 feet of workings on the property.

In these latter workings the ore shows for nearly the whole length of the drifts and the conditions noted indicate that the work has been done on the top of an ore shoot or vein.

At a point in the old main tunnel or drift the ore shows along the drift with an easterly and westerly trend and a strong dip to the north and several winzes sunk in this ore confirm this dip to the depth of the present work, but at a point south of this main drift in a crosscut to the present inclined shaft the ore lies practically flat and at the south end shows a dip to the south, but in a shallow winze at the latter point the ore practically stops, and the whole work indicates that the real dip of this ore is to the north instead of the south and it is recommended that this fact be given all due consideration in developing the property.

The present workings have only indicated the ore in this property and it is recommended that the present north crosscut at the bottom of the inclined shaft be pushed north with all speed until it proves conclusively, the ore at that depth and a connection established between the ore in the old workings and this crosscut. The distance to be driven may only be estimated, owing to lack of an accurate map of the workings, but is given at about 50-60 feet. Change in dip of vein will increase or reduce this as it flattens or straightens, and when this ore is cut it should be followed in a raise to the tunnel above and in sinking to a depth sufficient to determine its full extent and indicate the course of future work.

It is also recommended that the ore cut in the drift at foot of shaft be followed and its extent known up, and until these works are accomplished no permanent works should be undertaken as upon their showings on the ore will depend the location and direction of future work.

O R E S .

The ores already shown in the Batchelder consist of copper sulphides in a quartz vein, the latter showing a width up to two feet and indicates a commercial body of ore with development.

The upper works show all the characteristics of the commercial ores of the district, having the oxidized minerals of both iron and copper already described.

Some of the ores in these works have shown a remarkably high value in copper, but it is evident that the final and permanent grade of ore in the mine will be lower and the ore ^{will} be a copper sulphide ore suitable for concentration, similar to the ores of the Ferris-Haggarty mine.

EQUIPMENT.

At present the property is equipped with horse whin, properly housed, and this is sufficient until the development herein outlined has been completed and the proper point for permanent hoisting and other works has been determined. There are two cabins, blacksmith shop, stable etc. on the property sufficient for present work.

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It is considered that the Hatchelder property merits a full development of the present showings and that there is every indication that these ores are part of or connected with commercial bodies of copper ores.

It is strongly recommended and urged that all future work be done on the ore following the richest and best showing, until such amount is opened up on the dip, trend and grade of the ore fully determined to a point that will require the location and installation of a permanent working plant.

Respectfully Submitted,

Henry C. Beecher
State Geologist.

Date of Examination

September 28, 1905.