

The State of Wyoming.

Office of State Geologist,

Cheyenne.

MR 1904-49

## GEOLOGICAL SURVEY OF WYOMING

Cheyenne, Wyo. Aug. 13, 1904.

The Echo Copper M. &amp; M. Co.,

Chicago, Ill.

Gentlemen:-

Herewith I hand you brief report upon the surface showings etc. of the Echo Group of your company and hope it may aid you in opening up the property, which I believe is one of the best prospects in the Dillon vicinity.

Very truly yours,



State Geologist.

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L O C A T I O N A N D E X T E N T.

The Echo Group of Claims is situated near the head of the North Fork of Battle Creek about one half mile north of the town of Dillon in Southern Carbon County, Wyoming and in close proximity to the famous Ferris-Hagarty Copper Mine, the largest copper producer in Wyoming.

The legal description of the claims, namely the Echo, Little Daisy and MonteVista, is given as part of Sections 9 and 16, T. 14 N., R. 66 W. and the Blizzard Claim lies in Section 15, same township and range, a mile east of the main group and the whole comprises about 83 acres of land.

O W N E R S A N D T I T L E.

The Echo Group is owned by the Echo Copper Mining and Milling Company, incorporated under the laws of Wyoming for \$1,000,000.00, divided into 1,000,000 shares of the par value of \$1.00 each.

The claims are held by location and discovery under the laws of the United States and the State of Wyoming.

F O R M A T I O N.

In the vicinity of the Echo Group, the geological formation consists of broad bands of mica schist, quartzite and diorite, all having

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the same general easterly and westerly trend or direction and a dip to the south of about 40 to 45 degrees.

THE FERRIS-HAGGARTY MINE.

The Ferris-Haggarty Mine, which lies about 1500 feet south of the proposed workings on the Echo Group, has been demonstrated to be a contact deposit of copper ores lying between schist and quartzite, and the present ore shoot which has produced all the copper taken from the mine to date has been shown to be about 250 feet long and twenty feet wide but has not been developed to its full extent below the tunnel level.

The outcrop or surface rock of the mine is a light, porous brown or yellow oxide of iron or limonite, sometimes showing some copper stains but frequently these latter are absent. This oxidized or leached condition gave place with depth to the usual sulphide ores of copper and iron chalcopyrite and bornite.

THE ECHO GROUP.

This group is practically undeveloped, aside from considerable surface prospecting and several shallow shafts, but on the south side of the Monte Vista Claim, an open cut has shown a condition similar to that noted in the Ferris-Haggarty outcrop. Here the cut showed a contact between the schist and quartzite with a layer of soft oxidized iron material lying between them.

The quartzite band which underlies the ore at the Ferris-Haggarty Mine is evidently the same that shows on the Monte Vista Claim as overlying the schist and possible including ore, in other words the



Hagarty Mine is on a Contact on the south side of the quartzite and the Monte Vista shows a contact on the north side of the same quartzite, with a similar surface material as an indication of ore.

This condition fully warrants the further development of these claims and it is strongly recommended that the present open cut be enlarged and the extent of the contact mineralization determined and a shaft sunk on this contact following the dip of the ore. In no case leave the ore.

The location of the present open cut is considered the most favorable point for a shaft as it is on the end of a small point or knoll, above the bed of the creek and there is ample room and fall for dumps and site for possible works later when the property is developed and economical surface and treatment works are required.

The property is heavily timbered and fuel, construction lumber etc. may be had on the ground for the cutting and making. Water for steam and other purposes may be had from Battle Creek or springs and constant supply secured for all requirements.

It is also recommended that steps to patent the group be taken as soon as possible and the absolute title secured in the usual manner.

The Plizzard Claim is undeveloped but some showings of mineral have been made which justify its being held and patented when the time comes, but for the present the main work should be confined to the Monte-Vista showing as above outlined.

It is considered that this group presents one of the best prospects for development yet noted in the district and the proper

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development of the showings here made should show a considerable amount of ore, as all the conditions of ore occurrence shown in the successful mines of the region are found here.

Respectfully Submitted,



State Geologist.

Date of Examination

August 2, 1904.