

FROM OFFICE.

REPORT ON

THE COPPER GEM PROSPECT

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MINE.

Owned by The Fremont Copper Mining Company.

Principal office, Fremont, Nebraska.

BIOLOGICAL SURVEY OF WYOMING

Officers:

President, F.M. Healy, Fremont, Nebraska.

Vice President, D.S. Baker, Fremont, Nebraska.

Secretary, Thos. Carrol, Fremont, Nebraska.

Treasurer, J.H. Knowles, Fremont, Nebraska.

Location, On Dunkard creek, Purgatory Gulch, 8 miles from Encampment, Wyo.

in UPPER PLATTE Mining District, Carbon County, Wyoming.

Name and address of Superintendent, Not Given

Number of lode Claims, Five, containing about 100 acres.

Names of lode Claims, Copper Gem, Missing Link, Anderson, Brown Dick and Wonder.

Placer Claims, None located. acres.

Mill Sites, None located. acres.

Total number of acres in group, about 100 acres.

Title, By location and discovery, location work done on each claim.

Lien or encumbrance, None filed.

Title guaranteed by Not insured.

Nearest railroad station Walcott on U.P.R.R. Distance, 50 miles, in a northerly direction.

Reached by Wagon road via Saratoga and Riverside and Purgatory gulch road to point below claims. Some grading would be necessary in Dunkard gulch and at points along the road for heavy hauling.

Altitude at railroad station, about 7000 feet above sea level.

Altitude at main workings, " 8200 " " " "

Character of country rock Granite and micaceous schist.

Character of walls, Not definitely determined but evidently granite and an altered silicious schist.



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This group is as yet only a prospect and but little has been done to determine its value.

The principal work has been done on the Missing Link claim in an inclined shaft sunk from the bottom of a 20' vertical shaft on a vein or lead dipping northerly at an angle of 48 degrees; this inclined shaft has reached a depth of 109 feet, driven in vein matter with a highly mineralized streak of soft claylike talc or gouge matter varying from an inch <sup>or</sup> two to over a foot in thickness. The gouge carries small values in gold but is of small importance at the present time except by its high percentage of the iron oxides, hematite in various forms, it indicates a mineralized condition that is found in connection with the copper deposits of this district.

Some small copper values are noted in the vein matter as malachite or green carbonate of copper staining the rock at intervals but is not in quantity or continuous at the depth yet attained.

The depth of the wash on the claims renders prospecting difficult but enough was seen to indicate the present strong lead lies on the contact between two different formations and this fact together with its highly mineralized character is considered very much in its favor as it is noted in nearly all the successful properties of the district showed a similar condition at the surface, gave place to occurrences of iron sulphides and finally to copper sulphides at a varying depth but usually at or near the level of permanent underground water.

It is considered that this lead would be best developed by continuing the present inclined shaft on the dip of the lead as it slopes into the hill and gaining depth and solidity rapidly. It is noted that the depth to be gained from a tunnel from Dunkard creek would be comparatively slight and while it would be useful in handling any large amount of water that might be encountered, would be of no immediate advantage.

It will be necessary for permanent work to re-timber the present shaft and catch up the loose ground in a substantial manner, also to extend the incline to the surface on the angle of dip, doing away with the present inconvenient change in direction of hoisting and the work pushed in a workmanlike manner. The present horse whim may be used to advantage for some distance further but a small hoist suitable for a



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depth of at least 500 feet would be necessary in a short time to do profitable work.

Dunkard creek divides the claims into two natural divisions for prospecting and it is suggested that the work on the claims on the south side of the creek, viz, the Brown Dick and Wonder would be best prospected by tunnel from a convenient point on the creek and give good results as the dip of the leads is apparently towards the north.

The leads on the above two claims show strong mineralization and some good ore is noted at different points which should be followed up and developed as soon as conditions permit.

The topographical conditions of this group are favorable for economical development as the work can be centralized and directed from a common steam plant and office.

Dunkard creek furnishes water for all immediate purposes and other desirable rights may be secured in the vicinity when required.

Timber may be secured in quantity in the vicinity for all purposes required and at reasonable rates.

It is considered that this group offers a good field for development and with fair prospects for profitable returns.

Respectfully Submitted.

*Henry C. Beeler*

State Geologist of Wyoming.

Date of Examination.

August 24th, 1901.