

Report
on the
GOLDEN FLEECE MINE
by
T. A. Rickard
1904
Hinsdale County, Colorado
Lake Mining District

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COLORADO SCHOOL OF MINES
GOLDEN, COLORADO

Report furnished by W. I. Holmes

REPORT

OF

T. A. RICKARD

1. I herewith submit the results of my recent inspection of the GOLDEN FLEECE MINE. At the outset it was necessary to get an idea of the conditions which had determined the occurrence of ore. Fortunately, I found ample data.

The so-called "fault" is no fault at all -- that is, not a break or dislocation of the rocks. On the contrary, it marks the division between the layers of fine-grained breccia and an overlying body of very coarse breccia. There is no smooth plane or "wall" or defined parting between these two formations, but only sudden transition, which, seen at a distance, is very marked. It may be termed a "contact."

2. These layers of breccia, and, consequently, the "contact" between them, existed long before the ore was deposited. The fracture now occupied by the vein, passed easily through the finer-grained breccia, because the force of fracturing was insufficient to overcome the resistance of the hard fragments contained in the latter. As a consequence, the energy was scattered along the "contact," the vein fracture ceased at the "contact", and the ore bodies did not penetrate the coarse breccia, save as a scattering confined to the vicinity of the "contact."

At the 300 level the ore body occurring in the fine-grained breccia was notably wider immediately at the "contact," and, in examining the outcrop of the vein, which stands above the surface I noticed that it was difficult to decide upon the exact line of separation between the coarse and the fine breccia, because the mineralization extended from the latter into the former, so as to obscure the divisional plane.

3. This "contact" dips at an angle of 28 degrees into the hill, that is, Westward; the surface sloped at an angle of 32 degrees in the opposite direction; the vein itself cuts across these two planes at a high angle, dipping slightly to the south.

4. The original bonanza ore body occurred within the triangle formed by the third level, the surface and the "contact," and more particularly within the ground between the "contact" and the branch vein, the Ilma, which comes in from the Northeast, and the plane of which is nearly parallel to that of the "contact." These three, the surface, the "contact," and the Ilma vein, were the factors which primarily determined the place of the original bonanza. The explanation of the part played by each would require a treatise on ore deposition, such as is beyond the present purpose.

5. This original bonanza yielded ore valued at a million and a half dollars. It extended from near the surface to a short distance below the third level.

The deeper levels have found some small bodies of similar ore, and a good deal of money has been obtained from isolated bunches all the way along down to the main tunnel, or tenth level, about 700 feet

below the third level. Several larger bodies of low-grade ore have also been encountered in the lower workings.

I It must be remembered that all the lower workings are vertically under the original bonanza ore body and the "Contact" at the third level. As the "contact" dips West, it becomes farther away from daylight. Therefore, the present workings must be continued farther West before favorably situated territory will be penetrated.

6. The work now in progress, that is, the extension of the seventh level, is, in my opinion, to be commended, because it will serve as a means of further exploring the "contact" at that horizon.

Future work should be concentrated on the exploration of this part of the property. The main tunnel will very much facilitate this plan of operation. When the seventh level has intersected the "contact," one or more raises should be put up on any ore encountered, and intermediate drifts should be run Westward to the "contact," so as to thoroughly test the ground.

7. It is my opinion that the facts warrant the expenditure required for the thorough exploration of the vicinity of the "contact" and the past history of the mine and the geological conditions, as now determined, both encourage this view.

Yours faithfully,

(Signed) T. A. RICKARD, E.M.

May 10th, 1904.

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