

Saratoga, Wyoming
August 1, 1944

Subject: LEAD-ZINC prospect.

Purpose: To examine available mine workings and to determine the geologic occurrence and, if possible, extent of the ore.

Locator: Mr. M. E. McKillip, Box 3034, Saratoga, Wyoming.

Location: This property is approximately 19 miles southwest of Saratoga, Wyoming, near the head of Spring Creek in the Hayden Division of the Medicine Bow National Forest. The National Forest boundary is about 1 1/4 miles east of the property. This places the claims in either Sec. 24 or 25 of T. 15 N., R. 86 W., Carbon County, Wyoming. The mine workings themselves are on the "Meta" claim which was patented by Mr. M.B. McKillip about 1908. Four claims adjoining the "Meta" have been located but not patented.

History

The mine has been leased out to independent operators several times. Within the last ten years, according to Mr. McKillip, 6 or 7 carloads of ore have been shipped to Salt Lake City. Estimating 30-35 tons per carload this would imply a total production of some 200 tons. The ore was stated by Mr. McKillip to run 27-54% Pb, about 8% Zn, and to run from \$20.00 to \$22.00 combined Au and Ag per ton.

Mr. McKillip stated that at the surface the vein varied in thickness from 6 inches to 6 feet, was nearly vertical on the outcrop, and remained so down to a depth of 40 feet. Below this level in the shaft the vein appeared to dip about 60° southward and continued to do so to where the shaft was bottomed at about 100 feet. Again on the word of Mr. McKillip 4 feet of ore was reported in the bottom of the shaft by the Engineer in charge of pumping during the latest phase of activity of the mine.

Observations

The shaft is about 100 feet deep, 6 x 8 feet in cross-section and in fairly good condition at present. It is now water-filled to within perhaps 60 feet of

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the collar. The head frame and visible timbering are still sound.

In addition to the shaft there are at least three shallow tunnels, all caved in part, which were driven about N-S into the hillside to cross-cut the vein. Short drifts have been put out from both sides of the tunnel immediately west of the shaft. These short, near-surface, drifts or trenches extend out about 25 feet east and west of the cross-cutting tunnel. No vein matter was seen in these workings as the entire upper part of the vein was mined out and the bottoms of the shallow drifts brush and rock-filled. These shallow drifts are from 4 to 6 feet in width and, allowing for some waste, would suggest a conservative vein width of from 3 to 4 feet.

The vein itself, judging from the alignment of cross-cutting trenches with the shaft collar and shallow drifts abovementioned, strikes within 5-10 degrees of an E-W direction. As indicated above it was nearly vertical at the surface but at a depth of about 40 feet in the shaft took a 60° dip to the south. The vein matter has been introduced into a rather coarse-textured, massive, dark colored Pre-Cambrian quartz-biotite schist or gneiss. However, somewhat finer-textured gray or greenish, more micaceous schist fragments are abundant on the dump. The strike of the country rock near the shaft ranges from E-W to N. 85° E and the dip is about 20-25 degrees northward. Hence at the surface at least the strike of the vein and the country rock are nearly parallel, but the dip of the vein is at an appreciable angle to the foliation.

Mineralogically the ore is rather complex. It consists essentially of massive galena (probably argentiferous), anglesite (?), cerussite (?), some sphalerite, chalcopyrite, pyrite, azurite, malachite, crysacolla (?), hematite, limonite, calamine (?), and smithsonite (?) in a gangue chiefly of quartz but in places containing barite. Other more obscure oxidation products after the primary sulphides are no doubt present in small quantity. It is evident from this mineral assemblage that the workings are still in the oxidized zone. What the vein contents would be at lower depths is problematical.

The ore is rather drusy and shows abundant evidence of strong brecciation of both gangue minerals and country rock. Massive ore shows the presence of completely chloritized schist xenoliths partly replaced by sulphides and gangue.

Conclusions

In general the "Meta" mine appears to be a favorable prospect provided the vein thickness persists and if the primary mineralization content holds up at depth.

A short adit driven into the hillside to crosscut the vein some distance below the bottom of the shaft would provide effective drainage and at the same time open up considerable ground from which it would be possible to remove ore without difficulty.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John C. May". The signature is stylized with a large, sweeping initial "J" and a distinct "M" at the end.