

BEAR CREEK MERCURY CO. (formerly Plattner Mine)

Bear Creek District
Crook County

Owner: Jos. A. Werner, Box 299, Prineville; lessee.
Mrs. Plattner, owner.

Location: 1 mile west of Bear Creek highway (No.27), in sections 18-19, T. 18 S., R. 17 E.W.M., about 3 1/2 miles south of Prineville, Crook County, Oregon.

Area: 15 unpatented claims.

History: The mine was first located in 1931 by Mrs. Plattner, work being started in February of that year. About ~~50~~ half a flask was produced. In 1939 the property was leased by Werner, who since then has retorted 15 flasks. A new furnace was built in April, 1940, and one run has been made since that time.

Geology: The Bear Creek area is composed of rocks making up the Clarno formation (Eocene). The Clarno is composed of andesites, basalts, and rhyolites being superposed in that order: with frequent interbeds of tuff especially in the rhyolitic members. The Bear Creek section is probably near the base of the Clarno, as the rocks are predominantly porphyritic grey and dark gray andesites, with one prominent red tuff interbed which cuts across the country in a north-south direction west of Bear Creek, and appears in the lower tunnel on the Plattner property. East-west and north-south major fractures have ~~broken the rocks~~ permitted extensive silicifying solutions to alter and replace the country rock for continuous distances of as much as a mile and widths up to several tens of feet. These silicified "dikes" have withstood erosion to a greater extent than the unaltered rock, and consequently stand out ~~as~~ as topographic ridges. They are nearly always bounded ~~by well-defined fault planes~~ on both sides by well-defined fault planes. In places two dikes intersect or join, or a major dike splits.

(as they are locally called)

(see Plate No 1)

The Plattner "dike" strikes north-south over much of its course. About a quarter-mile north of the main tunnel it joins the "Castle dike" coming in from the S.40°E., and at this junction most of the development work on the north end of the property has been done. North of this junction the dike strikes 10 to 25° west of north. fault

The west side of the dike is bounded by a ~~dike~~ dipping 70° west; the east side by a less well-defined fault dipping 65 to 75° to the east. Most of the ore so far taken out lies in the hanging wall against the west fault, at or just south of the intersection of the two dikes.

There are numerous other faults, most of them striking parallel to the main fault; but dipping at all angles from 50° up to vertical and in both directions, as can be seen on Plate 2. Ore is largely along these faults, in a ^{light} grey mega-porphyrific andesite, which is in fault contact at several places with a dense dark gray finely porphyritic andesite. Calcite is dominant along the fractures, with quartz, often finely pulverized, subordinate in most and prominent in a few of the breaks.

Detailed Notes to accompany maps # 1 & 2.

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2. Open cut and shallow shaft exposing faults, slightly mineralized, striking N.30°W. dipping 75° E.; and N.35° W. dipping 85° E.; and lying about 25 feet apart. Extensively silicified, quartz and jasper. Said to pan Hg. Country rock a tuff-agglomerate.

3. Open cut exposes low grade ore composed of a quartz-breccia, completely cemented. Fault strikes N.30° W, dips 70° W.

4. Main fault on east side of dike exposed in open cut. Strikes N. 30° W. and dips 75° E. Several small vertical faults contain white comminuted quartz powder.

(to the N.80°E.)

8. Tunnel at #8 runs 55 feet to cut the west fault. Here a drift goes S.15°E to a face at 20 feet; and another runs N.10°W. 15 feet to winze and stope, and another ^{thence} 45 feet to face. The winze is over 30 feet deep, and flattens slightly as it goes down. Ore shows in a narrow seam in the bottom. The stope is to the surface, and ~~about~~ from 10 to 20 feet long. From the intersection of the drift, the tunnel is now being driven in an attempt to cut the east fault. It runs N.80°E. 30 feet, N.85°E for 40 feet, and S.70° E. 20 feet to the face. The last portion of the tunnel is in a soft but tough tuffaceous material, entirely ^{lacking in} mineralization. About 20 feet of backs remains above the end of this tunnel. West dipping veins cut the tunnel at two places, one of them with 6" of quartz.

7.

Tunnel at #7 runs 25 feet N.85°E. to the main fault zone, and drifts have been cut N.10°W. and S.10°E. for 20 and 30 feet.

All above ~~on~~ the north drift, ~~striking~~ ~~it~~ has been stoped to the surface. Numerous intersecting faults so complicate matters that no definite structural pattern could be worked out. Ore occurs along the fractures and in the "birdseye" gray porphyritic andesite for short distances. No ore was visible at the time of the visit.

~~XXXXXXXXXXXXXXXXXXXX~~ Lack of time prevented mapping of the south workings of the property, although they were hurriedly visited.

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Bear Creek Quarry

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The ore bodies that have been worked out in the north workings are extremely irregular and discontinuous. Probably they are so small that they are uneconomic, in relation to the amount of work done to reach them; especially as they do not seem to have been of very high grade.

Ore from the south workings seems to have been of low grade with only minor exceptions. For the amount of work done here, the results have been negligible. Further geologic work should be done here.

It was recommended that the following would be that best way to develop (if further work is to be done, which is of doubtful worth):

- (1) Continue winze in drift in #8. Ore shows here, and ore has been taken out of fair grade. It is possible that further ore may be developed on this proven shoot.
- (2) An ore shoot extending below water-level appears in the south workings. Ore has been stoped above this level, but little has been done below.

In other words, follow the ore! Mostly down!

I have yet to see anything very encouraging in the Bear Creek District. Further more detailed geologic work on the Platner might be of value, but so far, indications are not encouraging.

John Eliot Allen