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BOTTLE CREEK DISTRICT

LOCATION

The Bottle Creek district is located in the northeastern part of the Jackson Mountains. It can be reached from Winnemucca via U.S. Route 95 north for about 30 miles then on to State Route 140, going west, for about 30 miles. The district lies south of this highway approximately 8-10 miles. All the mines and prospects are located on the Bottle Creek 15 minute topographic map.

HISTORY

According to Bailey and Phoenix cinnabar float was known in the district as early as 1928, but the lodes were not discovered until 1936. Production from the district from late 1936 through 1943 yielded 4,544 flasks of quicksilver, with more than 3,000 flasks coming from a single diabase dike on which the Blue Can and McAdoo mines are located. By the end of 1943 activity in the district was nil. Renewed activity occurred in the mid 1950's, and from 1956 to 1958 two flat lying ore bodies in a basalt flow were mined by open-pit methods at the Red Ore Mine resulting in a production of about 1,000 flasks of mercury. Interest in the district declined again after 1958 but picked up again in the mid to late 1960's when the price of quicksilver reached all time highs of \$800 to \$1,000 per flask. Production records are very sketchy for this period but indications are that very little production resulted. There has been very little interest in the district for mercury since the early-mid 1970's. There has been some interest shown in recent times as a potential area for gold exploration. Rytuba reports that total production for the district has been around 5,900 flasks of mercury.

GEOLOGICAL SETTING

The rocks of the area include complexly folded and faulted sedimentary and volcanic rocks of pre-Tertiary age. These include Permian volcanic rocks which grade upward into clastic sedimentary rocks, mafic volcanic rocks, and shaly limestone of Permian or Triassic age which are overlain by Early Cretaceous conglomerate, siltstone and sandstone. There is an extensive section of Tertiary rocks in the district. These consist of an earlier series of basalt and rhyolite flows, tuffs and tuffaceous sediments which were later intruded by mafic dikes and, still later, intruded by silicic plugs and dikes.

ORE DEPOSITS

Most of the production has come from ore bodies lying in or along one of several northerly trending diabase dikes, but some production has come from ore localized along shear zones and high-angle normal faults in rhyolite and rhyolitic tuff. The ore bodies in the diabase have been

comparatively small but of high-grade, some of the early production in the district running over 100 pounds of mercury per ton.

Three mines out of thirteen recognized mines and prospects in the district have produced the majority of mercury in the district. They are: the Blue Can Mine, recorded production of 1,733 flasks; the McAdoo Mine with a recorded production of 1,671 flasks; and the Red Ore Mine with a recorded production of 1,433 flasks. Coming in a distant fourth is the White Peaks Mine with a recorded production of 773 flasks. The remainder of the mines and prospects have either produced nothing or generally less than 10 flasks. Two exceptions to this statement are the Birthday Mine with a production of 270 flasks and the Niebuhr Mine with a production of 40 flasks.

The Blue Can Mine typifies those mines associated with diabase dikes. This mine initially consisted of nine claims and connected with the workings of the McAdoo Mine to the north. Early in the history of the property a 50-ton Gould rotary furnace was installed. It was this furnace which roasted the ore that produced most of the mercury from this property. By 1944 most of the ore had been mined and processed and there has been no recorded production since this time.

According to Bailey and Phoenix the mine was developed by a 135-foot shaft and connecting drifts on the 32, 47, 86, 110, and 135 foot levels. Underground workings total more than 2,000 feet, with about half making up the 86-foot level. All the stopes lay above the two lowest levels.

Bailey and Phoenix state that the ore bodies were localized in fractured parts of a north-striking diabase dike which dips westward and intrudes argillically altered pre-Tertiary and Tertiary sequences of sediments, tuffs and flows. They divided the ore bodies into two groups—an eastern group, in which the ore was localized along a 3 to 15-foot wide diabase dike that extends from the surface to a few feet below the 86-foot level. The cinnabar is confined to the dike and adjacent wallrocks. Then they had a western group of deposits in which ore was localized along an apex between a vertical dike and a heavy layer of clay or gouge which dips at a low angle to the east. In this setting high-grade cinnabar almost completely replaced a diabase dike.

The Red Ore Mine represents a second type of deposit found within the district. The property consists of eight claims located in the southwestern part of the district. Initial discovery was made in 1937 at which time a few flasks were recovered. But it wasn't until 1956 that the major ore bodies were developed and mined. From 1956 to 1958 over 1,000 flasks of mercury were produced from a mill located on the White Peaks Mine. This mill consisted of a 70-ton gravity-flotation concentrator and a retort.

Two ore bodies were developed by open-pit mining. They had a maximum thickness of 15 feet and occurred in tuffs and an altered basalt flow which were cut by numerous calcite veins. The cinnabar occurred as veinlets, often in association with calcite. Orpiment locally occurred in "white" veins, and opaline silica veins up to two inches wide were sometimes present. Argillic alteration is present and is most intense along a steeply dipping, northerly trending fault which defines the west boundary of the pit. The open pit has a depth of 70 feet and a length of about 400 feet.

A third type of deposit is exposed at the Niebuhr Mine. This mine was developed along a fault striking N55°E and dipping 65°SE in a brecciated and silicified rhyolite. Cinnabar occurs as coatings and disseminations in

the sheared rhyolite. Workings are not very extensive, consisting of a 60-foot inclined shaft and several open cuts. An open cut 1,400 feet northwest of the shaft exposed cinnabar in a fault zone developed in phyllite.

Current activity has been restricted to gold exploration and as of 1984 NASSAU Exploration of Reno had a block of claims which covered the ridges on the west side of the district. Some drilling has been done and rumor has it that minor gold mineralization was encountered.

Approximately 14 miles north of the Bottle Creek district, and about 4 miles north of State Route 140 in Sand Canyon, is an isolated mercury property called the Red Arrow. Lacking a better place to put it, it was decided to include it under the Bottle Creek district. The workings are shown on the Quinn River Crossing 15 minute topographic map. Nothing is known about the history of the property. The workings set on two knobs about 1/4 mile apart. On the southernmost knob there is an open stope, through to the surface which connects to an adit that was collared on the east side of the hill. The adit is caved at the mouth. The remains of a 2-pipe Rossi retort is located just below the mouth of the caved adit. On the northern most knob there is a series of three trenches on the east side. These trenches are approximately 100 to 150 feet long by about 15 feet in width. In the southwest corner of the most northern trench is a shaft. It is not known how deep the shaft is. There are a few dozen cuts in between these two knobs.

The workings appear to be in a mixture of rhyolite and andesite. In places the rhyolite looks like a dike and in other places the andesite looks like a dike. It appears from the extent of the workings and calcine material around the retort that there has been some production from the property, possibly 25 flasks or so (?).

The area was newly staked in 1983 by Asarco. It is thought that they are looking for gold.

SELECTED REFERENCES

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