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Item #18

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JETT DISTRICT

LOCATION

The Jett mining district is located in the southeastern Toiyabe Range and includes the area between Broad Creek and Peavine Canyon, southeast of Arc Dome. The mines and prospects of the district are scattered in Townships 9, 10, and 11 North, Range 42 East, Nye County. This is the area commonly included within the Jett district (Kral, 1951), and not the much larger area of Kleinhampl and Ziony (1984), that incorrectly included portions of the adjacent Twin River district.

HISTORY

Ore was discovered in the district in 1875 by John Davenport. The district was organized the following year but active operations did not begin until 1880. (Thompson and West, 1881). These first operations were probably in the northern part of the district, near the mouth of Jett Canyon. Other discoveries were made in 1876 in what Thompson and West (1881) refer to as the Toiyabe District. These later discoveries were probably in the Wall Canyon or the Boyd Canyon areas in the southern part of the district. There is no recorded production from this early activity, the ores were reported to have been shipped to Eureka, Austin, and Jefferson, and the production was no doubt credited to those districts. Some mining was done in the 1920's on silver-base metal deposits at the mouth of Jett Canyon. Antimony was discovered near the head of Wall Canyon in 1915, and small amount of the metal were produced from the deposit in 1915-1918, 1936-1943, 1947-1953, and 1957-1958. The Horse Canyon mercury deposit was discovered in 1937, and mercury was mined from it in periods of high mercury prices up to the 1960's. Total production from the Jett district, through 1965, is in excess of \$100,000 (Kleinhampl and Ziony, 1984).

Both Kral (1951) and Kleinhampl and Ziony (1984), relate that the Jett district was discovered in 1865 and state that it was then known as the Argentore or Silver Point district. Silver Point is in the Toquima Range, across Smoky Valley to the east of Jett, and is in the Round Mountain district.

GEOLOGIC SETTING

The Jett mining district is located within a triangular-shaped block of Paleozoic sedimentary rocks which are bordered on the north and west by Tertiary volcanic rocks and on the east by alluvium. The northern border of the Paleozoic rock outcrop is formed by the margin of a caldera roughly centered on Arc Dome, the western border falls along the margin of the inferred Peavine caldera which lies west of the Jett district, and the eastern border is formed by the range-front fault which separates the Toiyabe Range from Great Smoky Valley. The volcanic rocks fill the central portions of the calderas and some extra-caldera flows cover the pre-Tertiary rocks in parts of the district.

The Paleozoic rocks are shale, slate, and limestone of the Gatecliff Formation and Masket Shale; calcareous shale, calcareous siltstone, and limestone of the

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Gold Hill Formation; and calcareous siltstone and quartzite of the Pablo Formation. Small bodies of serpentinite, spatially associated with the late Paleozoic clastic rock, crop out in the area of Pablo Canyon and Horse Canyon. Small outcrops of granite porphyry and quartz monzonite are scattered in the district. Perhaps the most prominent of these is the large dike that crosses Jett Canyon near its mouth. This dike contains mineralized quartz veins and is parallel to the margin of the large caldera which forms the northern edge of the district. The volcanic rocks bordering the district to the north and west are rhyolitic to rhyodacitic welded ash flow tuffs of the Toiyabe Quartz Latite and some younger rhyolite flows.

ORE DEPOSITS

There are four major mining areas within the Jett district. Two of these, the Gibraltar Mine at the mouth of Jett Creek and the Last Chance Mine at the head of Wall Canyon, lie along a southeast-trending arc that parallels the ring-fracture zone of the Arc Dome/Toiyabe Dome caldera. The third area is near the mouth of Boyd Canyon and the fourth is at the head of Horse Canyon.

The Gibraltar silver-lead-zinc mine is the probable location of the Centennial, Seventy-six and Idelwild properties mentioned in Thompson and West (1881), the site of the earliest work in the district. Workings are along a wide, silicified shear zone that cross-cuts at a slight angle the large quartz latite dike that extends northeast along the range front near the mouth of Jeff Canyon. The shear zone is 40-50 feet wide and contains clots and disseminations of galena, sphalerite, and pyrite with quartz.

At the Last Chance or Wall Canyon antimony mine, stibnite occurs with white quartz and calcite along a northeast-trending vein in carbonaceous shale and limestone. Small serpentinite lenses outcrop in the mine area. The serpentinite contains small amounts of the nickel mineral garnierite which occurs as pale green streaks and disseminations through the rock.

The Dollar antimony-silver mine, near the mouth of Boyd Canyon shows evidence of pre-1900 activity, and may be the site of the Toiyabe district discoveries described by Thompson and West (1881). At this property, stibnite, and possibly tetrahedrite, occur with quartz along a northeast-trending shear zone which forms the contact between a silicified limestone and shale.

The Horse Canyon mercury mines is at the head of Horse Canyon in the southern part of the range. At the mine, cinnabar occurs as clots and fracture coatings on silified rocks in a wide breccia zone along a northwest-trending shear structure that generally separates Tertiary welded tuffs, on the southwest, from Paleozoic sedimentary rocks, on the northeast. The sedimentary rocks are brecciated and silicified and pipe-like breccias cut through exposures seen on pit faces. The wide shear zone is inferred to be a caldera-margin structure of the Peavine Caldera which is centered to the southwest of the Jett district. Recent exploration in this area was probably for precious metals associated with the mercury mineralization.

Other, smaller mineral occurrences in the district include the Valley Claims, a silver-antimony property located in the side canyon south of the dam in Jett Canyon, and a tungsten prospect (not found) located in this same general area.

GEOCHEMICAL RELATIONSHIPS

At the Gibraltar property, silver and trace amounts of gold occur with very high amounts of lead, zinc, cadmium, and bismuth; very low antimony; and no detectable arsenic. Ore from the other major property in this part of the district, the Valley Claim, contained silver, gold, lead, zinc, and cadmium in similar amounts, but contained high antimony and arsenic also. Two of the samples from the Last Chance antimony mine contained detectable gold as well as antimony. Silver and arsenic values were low in these samples, and they contained no cadmium or bismuth. Samples of serpentinite from Last Chance contained anomalous chrome and nickel values. Mercury ore from the Horse Canyon Mine was found to contain trace amounts of silver, but no gold, antimony, or arsenic were detected.

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