

RYE PATCH DISTRICT

LOCATION

The Rye Patch district is located in the Humboldt Range, Pershing County, Nevada in Twps. 29, and 30N, Rges. 33 and 34E. It is accessible via dirt roads from U.S. Interstate 80.

HISTORY

According to Johnson (1977), the district was organized in 1862. The Rye Patch group of silver mines produced over \$600,000 worth of ore in the period 1864-81. There has been only minor production from the Rye Patch mines in subsequent years. A few tons of antimony ore was mined from stibnite veins in Panther Canyon.

Tungsten was discovered in the district in Wright Canyon in 1918, but no significant production resulted until the Oreana Mine was developed in 1934. The Oreana Mine produced 18,600 units of WO_3 from 1935-42. Minor tungsten production is also reported from the Rye Patch Agnes Mine. Uranium mineralization occurs at the Stalins Present prospect in Rocky Canyon, but no ore has been mined.

GEOLOGIC SETTING

The Rochester Rhyolite forms the bedrock in the eastern part of the Rye Patch district. It is overlain by the Prida Formation which is present in the western part of the district and contains most of the districts ore deposits. Both of these units are intruded by a granitic stock centered on Rocky and Wright Canyons. The Prida Formation is intruded by diabase sills.

ORE DEPOSITS

The Rye Patch group of mines is located in the lower member of the Prida Formation, approximately 100 meters from the contact with the Rochester Rhyolite. The deposits occur as quartz cemented, stockwork breccias in carbonaceous, shaly limestone. The brecciation, in part of hydrothermal origin, occurs along a north to northwest trending fault zone. Ore minerals present include pyrite, sphalerite, and minor galena and tetrahedrite. Reportedly scheelite, jamesonite and acanthite are also present in the ores.

The Rye Patch Agnes or Shortino Mine is located in carbonaceous shale and limestone of the Prida Formation adjacent to a granitic intrusive body. Scattered lenses of quartz occur in brecciated shale and shaly limestone. A north-trending fault zone, dipping shallowly to the west, cuts through the mineralization zone. Reportedly the mine produced some tungsten ore in 1954 and some silver ore in 1917-18. Beryllium is reported to occur in silicated limestone adjacent to the granite contact.

The Oceana Mine produced significant amounts of scheelite from pegmatitic, quartz-fluorite-beryl-scheelite-muscovite bodies that occur in

diabase sills in the Prida Formation and in Prida limestone. The beryl is usually green in color and crystals range in size from microscopic to several centimeters in length. Reportedly, native antimony is locally present in the ore.

The Panther Canyon antimony mine produced four tons of antimony ore according to Lawrence (1963). Lawrence described the antimony mine as occurring in a diabase dike cutting lower Prida limestone adjacent to the contact with rhyolite of the Koipato Group. However, during the course of this investigation, another antimony deposit was found in Panther Canyon, approximately 1/2 mile east of the workings described by Lawrence. At this locality, two quartz veins occur in Rochester Rhyolite. Ore vein trends N30E and dips 45°SE. It contains abundant stibnite and antimony oxides and is up to 1/2 meters thick. The other vein trends N50°W and dips 35°SW. The vein contains bands of tourmaline, pyrite, sphalerite and jamesonite. The veins are explored by several adits. An old road, now inaccessible to vehicles, leads to the deposits.

At the mouth of Panther Canyon, a tungsten prospect is located in limestone of the Prida Formation. Scheelite occurs in quartz veins up to 30 cm thick, parallel to bedding in the limestone. The quartz contains scheelite, pyrite and a fine-grained dark gray sulfide of lead and bismuth.

GEOCHEMISTRY

Samples from the Rye Patch mines are anomalous in silver, boron, cadmium, copper, and are highly anomalous in lead, antimony and zinc. At the Rye Patch Agnes Mine, the sample collected contained anomalous barium, chrome, molybdenum, antimony, vanadium (.2%) and zinc. In addition, tungsten and beryllium are present in the deposit.

The Oreana Mine is anomalous in tungsten, beryllium and fluorine.

The Panther Canyon antimony deposit contains in addition to antimony, anomalous arsenic, silver, copper, lead and zinc. The ore contains 0.2 ppm gold. The quartz vein is anomalous in silver, boron, bismuth, cadmium, copper, lead, antimony and zinc and contains 0.85 ppm gold.

The tungsten prospect in Panther Canyon, in addition to tungsten, is anomalous in silver, bismuth, cadmium, copper, molybdenum, lead, vanadium and zinc.

SELECTED REFERENCES

- Johnson, M. G. (1977) Geology and mineral deposits of Pershing County, Nevada: Nevada Bureau of Mines and Geology Bulletin 89, p. 115.
- Lawrence, E. F. (1963) Antimony deposits of Nevada: Nevada Bureau of Mines and Geology Bulletin 61, p. 241.
- Wallace, R. E., Tatlock, D. B., Silberling, N. J., and Irwin, W. P. (1969) Geologic map of the Unionville Quadrangle, Pershing County, Nevada: U.S. Geologic Survey Map GQ820.