

## WASHIKI DISTRICT

## LOCATION

The Washiki mining district is a small district in the southern Sonoma Range in northeastern Pershing County. The Midway Group Mine and associated properties are located in Bacon Canyon (S1 and 2, T33N, R38E). Two km to the east, in S6, T33N, R39E, is the Gold Summit Mine. The Washoke Canyon mines are located in lower Washoke Canyon, near the corner of S5, 6, 7, and 8, T32N, R39E. The Mammoth fluorspar prospect is located in S12, T33N, R38E. Manganese deposits are located in Grand Trunk Canyon (probably S32, T33N, R39E) according to Ferguson and others (1984). The Washiki district adjoins the Black Diablo district on the east. Washoke Canyon may have once been called Grandpap Canyon, and the mines there may have been called the Washiki group (Johnson, 1977, p. 101). This portion of the district has sometimes been called the Grandpap district.

## HISTORY

The gold mines in the Washiki district were discovered in about 1906, and C. F. Carpenter was one of the original locators and perhaps the original discoverer (Vanderburg, 1936). Based on the geology described in Vanderburg, these mines are probably those in Washoke Canyon. The mines were worked intermittently until 1942. Production records are incomplete, but indicate that the mines produced gold, silver, and lead valued at a few hundred to a few thousand dollars per year when worked (Johnson, 1977, p. 101). Development in the district consists of shallow shafts and open cuts. The earliest known claims on the Mammoth fluorspar prospect were located in 1952.

## GEOLOGIC SETTING

The rocks exposed in the district consist of Pennsylvanian and Permian Pumpernickel and Havallah Formations (Havallah sequence), and Cambrian Harmony Formation, Ordovician Valmy Formation, and Jurassic granodiorite. The Pumpernickel, Havallah, and Valmy Formations consist primarily of deep-marine rocks, including chert, argillite, greenstone, and quartzite. The Harmony Formation is predominantly feldspathic quartz sandstone and conglomerate, with minor argillite and limestone. The rocks are cut by thrust and high-angle normal faults (see Johnson, 1977, pl. 1).

## ORE DEPOSITS

The Midway Group Mine in Bacon Canyon consists of spotty milky vein quartz, pyrite, and arsenopyrite? along a N10°W, high(?) -angle shear zone in Valmy Formation (Sonoma Range Formation of Ferguson and others, 1951). The wallrock, locally bleached near the vein, appears to be meta-andesite. Presumably, the vein and other mineralized structures were worked for gold. No information is available on the Gold Summit Mine 2 km to the east



of the Midway Group Mine. Workings there are in a small plug of Tertiary quartz latite (Gilluly, 1967).

Vanderburg (1936, p. 49-50) describes workings along quartz veins in granitic rocks in the district; these apparently correspond with the properties examined during this study in Washoke Canyon (Waho claims). Johnson tentatively (and probably incorrectly) correlated the properties described by Vangerburg (1936) with the Midway Group Mine. In Washoke Canyon, the main workings are along a  $N50^{\circ}-65^{\circ}W$ ,  $55^{\circ}-75^{\circ}NE$  zone of faulting and iron staining. The zone is about 100 m long and 0.5 to 2 m wide. In this zone, the porphyritic biotite granodiorite wallrock is bleached, iron-stained, cut by narrow shears, and contains very rare quartz vein matter. According to Vanderburg (1936) bunches of ore occur in narrow quartz veins and the values are said to be chiefly in gold with some silver and lead. The best values are said to be associated with the lead. Ore mined in 1934 at one lease averaged \$12.09 in gold and \$1.60 in silver per ton; high grade ore mined at another lease averaged 2.5 oz of gold and 15 oz of silver per ton, and 8% lead. Some recovery of gold values was by crushing and amalgamation.

The Mammoth fluorspar prospect, located about 2 km north of Clearwater Canyon, occurs predominantly in greenstone of the Ordovician Valmy Formation. Some impure limestone is also present locally (Papke, 1979, p. 59). Spotty fluorite occurs in a dolomite-calcite vein which trends  $N10^{\circ}W$ ,  $45^{\circ}-60^{\circ}W$ . The vein is 0.3 to 3 m thick, and contains a few fluorite-rich pods in several places. The ore is very vuggy, and contains irregular botryoidal fluorite masses; fluorspar veinlets occur in the greenstone wallrock near the vein. Some other similar veins are present in the vicinity of the main vein (Papke, 1979, p. 59).

Manganese deposits are reported from rocks of the Havallah sequence in Grand Trunk Canyon (Ferguson and others, 1951). These deposits are probably the Pink Lady claims described by Iverson and Holmes (1954, p. 1, 7-9). They report that the ore occurs as a blanket deposit of mixed manganese oxides, manganese silicate, and silica in a thinly bedded shale. The principal constituents are reported to be silica and rhodenite with minor amounts of black manganese oxides.

#### SELECTED REFERENCES

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- Iverson, H. G. and Holmes, D. T. (1954) Concentration of oxide and silicate manganese ores from the vicinity of Winnemucca, Pershing County, Nevada: U. S. Bureau of Mines Report of Investigations 5022.



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Vanderburg, W. O. (1936) Reconnaissance of mining districts in Pershing County, Nevada: U. S. Bureau of Mines Information Circular 6902.