HARMONY DISTRICT

LOCATION

The Harmony district constists of mines and prospects at the northwest end of the Sonoma Range, about 8 km southeast of the town of Winnemucca. The properties are located along Thomas Creek, Water Canyon, and Harmony Canyon.

HISTORY

The first locations were made in this district in 1863; however, there is no record of production during that period (Vanderburg, 1938, p. 27). Considerable development work was done in 1918 on the Wolverine-Red Rose group of claims in Harmony Canyon (probably the Harmony Mine on the topographic map). The only known production from these workings has been 3.5 carloads of copper ore with gold and silver values (Vanderburg, 1938). The Plymouth (Gayer-Moo) mercury property was originally purchased from the Southern Pacific Railroad in 1941. Six pounds of mercury were reportedly extracted from 600 pounds of ore (Bailey and others, 1984).

GEOLOGIC SETTING

The rock units exposed in the Harmony mining district consist of Cambrian Harmony Formation, Ordovician Valmy Formation, and Tertiary quartz latite dikes and plugs. The Valmy Formation has been thrust over the Harmony, and is complexly faulted internally. Elongate quartz latite dikes are generally north-trending, and cut both the Valmy and Harmony. The Harmony consists of arkosic sandstone with considerable interbedded shale and small amounts of gritty conglomerate and limestone. The Valmy Formation consists of interbedded chert, quartzite, greenstone, sandstone, and argillite (Gilluly, 1967).

ORE DEPOSITS

Quartz and quartz-calcite veins which cut Valmy and Harmony Formations contain copper, lead, and zinc sulfide and oxide minerals as well as silver and gold. The upper portions of these veins are commonly entirely oxidized to gossan. At the Wolverine-Red Rose group (probably the Harmony Mine) Vanderburg (1938, p. 27) reports that oxidized and sulfide copper minerals (chalcopyrite, malachite, azurite), pyrite, and limonite occur in a series of at least three veins from 4 to 7 feet wide. One vein trends N20°E, 50°SE. The gangue is quartz, calcite, and county rock. The Old Bull Mine in Thomas Canyon is reported (Willden, 1964, table 25) to explore a N65°E, 80°SE vein. Sphalerite and galena occur in pieces of unoxidized ore observed on dumps, and cerrusite and limonite were noted in oxidized samples. Willden (1964) reports that four samples gave a weighted average of 1.4% lead, 22.1% zinc, and 0.67 oz silver per ton, over an average width of 1.5 feet.

At the Gayer-Moo property, very sparse cinnabar occurs with limonite and sparse quartz vein matter in a rhyolite dike that cuts quartzite and grit of the Harmony Formation. The property is near a thrust fault which separates upper plate Valmy Formation from lower plate Harmony Formation (Gilluly, 1967).

SELECTED REFERENCES

Bailey, E. H. and others (1984) Quicksilver deposits of Nevada: Unpublished manuscript, Nevada Bureau of Mines and Geology.

Gilluly, James (1967) Geologic Map of the Winnemucca quadrangle, Pershing and Humboldt Counties, Nevada: U. S. Geological Survey Map GQ-656.

Vanderburg, W. O. (1938) Reconnaissance of mining districts in Humboldt County, Nevada: U. S. Bureau of Mines Information Circular 6995.

Willden, Ronald (1964) Geology and mineral deposits of Humboldt County, Nevada: Nevada Bureau of Mines and Geology Bulletin 59.