

ATHENS DISTRICT

LOCATION

The Athens district is located in the southern Pactolus Hills, western Nye County. The district includes the old camps of Athens and Pactolus and extends from the Nye-Mineral County line north for 10 miles along the Pactolus Hills. The mines of the district are grouped in two general areas, one around the Warrior Mine in the southern part of Township 9 North, Range 37 East, and another around Pactolus camp in the northern part of that township and the southern portion of Township 10 North, Range 37 East.

HISTORY

According to Kral (1951) the earliest work in the district was done at Pactolus where high-grade gold ore was discovered about 1903. Activity in this area continued only to about 1907. The Warrior property, in the southern part of the district, was discovered in about 1912 and some work was done there in 1915. Most of the activity at the Warrior property, however, was during the period 1934-1946 when ore shipments were made to the Dayton Consolidated custom mill at Silver City (Kral, 1951). Total recorded production from the district is \$71,635 (Kleinhampl and Ziony, 1984).

There has been considerable exploration in this district in the past few years. Among others, Utah International worked in the Pactolus area in the mid-1970's and Cominco American was drilling there in early 1986. Other companies were active in the Warrior Mine area in 1986, and recent claim staking was in evidence there.

GEOLOGIC SETTING

Triassic limestone of the Luning Formation and Mesozoic granitic crop out in the area south of the Warrior Mine in the southern edge of the district. The Luning Formation has been contact metamorphosed near the granite-contacts. These older rocks are faulted against and unconformably lapped by Tertiary volcanic rocks on the north (Kleinhampl and Ziony, 1984). The Tertiary volcanic rocks consist of silicic welded tuffs, andesitic to basaltic lavas, and some lacustrine deposits.

Steep normal faults trending northwest to north-northwest cut all of the units present in the district, but are more frequent in the welded tuff and older rocks.

ORE DEPOSITS

Mine workings at the Warrior Mine explore a northwest-trending shear zone that cuts bleached welded tuff. Samples of vein material from the mine dump were highly oxidized, but were reported to contain visible flecks of galena (Kleinhampl and Ziony, 1984). To the south of the Warrior Mine, workings reportedly for both gold and mercury were developed in the same welded tuff unit as at the Warrior. These workings are along silicified shear zones which cut argillically altered welded tuff. Stockworks quartz veins are exposed along the zones along with some quartz-sulfide breccia.

At Pactolus, gold-bearing quartz veins occupy northeast-trending shear zones in argillized, silicified rhyolitic welded tuff. Gougy shear zones contain limonitic patches and seams and quartz veins. The veins commonly are parallel, are up to two feet thick, and display open centers and comby, banded quartz (Kleinhampl and Ziony, 1984). Other than linonite-stained quartz, no other minerals were noted. Gold reportedly occurs as free gold in these deposits.

GEOCHEMICAL RELATIONSHIPS

Samples taken at Pactolus, in the northern part of the district, contained low to moderate silver values, no detectable gold, and high arsenic and antimony. Samples from the Warrior Mine area, to the south, contained only trace silver, no gold, no antimony, and very low to moderate arsenic. Base metal values were very low in both areas.

SELECTED REFERENCES

- Kleinhampl, F. J., and Ziony, J. I. (1984) Mineral resources of northern Nye County, Nevada: NBMG Bull. 99B.
- Kral, V. E. (1951) Mineral resources of Nye County, Nevada: NBMG Bull. 50.