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Term #11
81SILVERTON DISTRICT

LOCATION

The Silverton district is located in the central Pancake Range north of Black Rock Summit on U.S. Highway 6 about 85 miles northeast of Tonopah. The mines in the district are confined to a small area on the southeastern flank of the range in the southeastern part of Township 8 North, Range 54 East. This is a much more restricted definition of the district than used by Kral (1951) who included Silverton with the Currant district, centered on the White Pine-Nye County line some 40 miles to the east, or by Kleinhampl and Ziony (1984) who grouped Silverton and the entire Pancake Range for 40 miles to the north into one mining area which they called the Pancake Range mining area.

HISTORY

Silver was discovered in this district in about 1921 by Hale C. Tognoni, a company was immediately organized, a shaft was sunk, high-grade stringers were mined, and the ore was shipped to Tonopah (Kral, 1951). Small amounts of silver ore were produced from the district in 1930-37, and in 1953 (Kleinhampl and Ziony, 1984). When the district was visited in early 1986, evidence of recent road building and drilling were seen.

GEOLOGIC SETTING

The Silverton mining area is underlain by Paleozoic sedimentary rocks and Tertiary volcanic rocks which outcrop as numerous slivers and discontinuous blocks and plates bounded by both steep and low-angle faults (Kleinhampl and Ziony, 1984). Ekren and others (1976) show the Silverton area to be within and near the eastern boundary of their Williams Ridge-Hot Creek Valley caldron complex. The district falls inside of the eastern margin of the large complex and outside of the eastern margin of the Lunar Lake caldera which lies southwest of Silverton. The complex outcrop pattern of the Paleozoic and Tertiary rocks in the mining district can be perhaps explained by what Kleinhampl and Ziony (1984) refer to as caldron-margin tectonics; blocks of caldera wall have slid under gravity into the collapsed interior moat area of the caldera to form imbricated masses of Paleozoic and Tertiary strata. Silicic dikes and sills were than injected along the weak zones of the caldera margin. Locally, welded tuffs, dikes, and fault zones in the Paleozoic rocks are bleached, jasperized, and argillized.

ORE DEPOSITS

At the Silverton Mine, the major property in the district, argentite, cerargyrite, and native silver occurs in small veinlets in Devonian carbonate strata near a major north-south trending fault (Kleinhampl and Ziony, 1984). The vein material, consisting of quartz and calcite, is highly oxidized and is coated with argillic gouge. At the Blackbird antimony prospect, about one mile northeast of the Silverton Mine, minor stibnite and barite occur in a 2 to 3 foot thick quartz vein cutting silicified rhyolite. A few hundred feet to the southwest, a thinner vein (4 inches to 16 inches thick) in rhyolite contains solid stibnite in places.

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GEOCHEMICAL RELATIONSHIPS

No gold was detected in ore samples taken from this district. Silver was very high in samples from the Silverton Mine and was associated low barium and moderately high antimony. Arsenic was not detected in the Silverton Mine samples and all base metal values in those samples were low. Samples taken from prospects to the northeast of the Silverton Mine, including those at the Blackbird antimony prospects, were low in silver, high in arsenic, mostly very high in antimony, generally high in barium, and low in base metals. In contrast to volcanic-hosted ores in other nearby mining districts located in caldera settings, the Silverton district ores were all low in molybdenum.

SELECTED REFERENCES

- Ekren, E. B., Bucknam, R. C., Carr, W. J., Dixon, G. L., and Quinlivan, W. D. (1976) East-trending structural lineaments in central Nevada: USGS PP 986.
- 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.
- Lawrence, E. F. (1963) Antimony deposits of Nevada: NBMG Bull. 61.