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Item #5

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CLIFFORD DISTRICT

LOCATION

The Clifford district is confined to a small area surrounding the Clifford Mine in the northeast quarter of Section 3, Township 3 North, Range 49 East, Nye County. The district includes a small hill which lies at the edge of Stone Cabin Valley about two miles northwest of the margin of the northern Kawich Range. Workings of the Clifford Mine cover most of the hill; the workings are about one and three quarters miles south of U.S. Highway 6 and can easily be seen from the highway.

HISTORY

Silver was discovered at Clifford in December 1905. There was considerable activity in the camp during 1906 and 1907 and the population peaked in 1908 (Paher, 1970). The camp declined after that date. Western Gold Corporation acquired the Clifford properties in 1925 and the mines were operated intermittently by the company and by lessees until 1946 (Kral, 1951). The district is credited with slightly over \$500,000 in production (Kleinhampl and Ziony, 1984). There has been some exploration activity at Clifford in the past few years and new claim staking was noted in the district in October 1985.

GEOLOGIC SETTING

Much of the bedrock in the Clifford district is concealed by alluvium and gravel derived from the Kawich Range. Outcrops are Tertiary volcanic rocks, chiefly rhyolitic pyroclastic rocks and andesite. The pyroclastic material is chiefly ash-flow tuff and breccia (Kleinhampl and Ziony, 1984). The district lies along a major fault that bounds the resurged Kawich caldera as shown by Ekren and others (1976). Mapping in the area by Gardner and others (1980), however, places the Clifford district well to the north and outside of the caldera.

ORE DEPOSITS

The account by Ferguson (1916) remains the best description of the Clifford deposit, and it is summarized below.

Most of the work in the district was done on oxidized ores near surface. The hill at Clifford is covered with small shafts and irregular inclines where rich streaks were followed for short distances. A 200-foot shaft on the western point of the hill reached the sulfide zone, but is reported to have disclosed no definite orebodies. The ore of the shallow workings consists of heavily iron-stained tuff cut by small quartz veins that contain small irregular masses of limonite. The richer ore contains cerargyrite and some minute threads of native silver; some cerargyrite occurs in minute veinlets of light-brown jarosite. Rare specks of a silver sulfide mineral and pyrite occur in some oxidized ore and free gold can be obtained by panning the richer ore.

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Sulfide ore, exposed by the shaft mentioned by Ferguson (1916), occurs along a sheared fault contact between andesite and rhyolitic agglomerate. The andesite is highly pyritized along the contact but most of the ore was within the agglomerate. The richer ore consisted of agglomerate with less pyrite but cut by small drusy quartz veins, the vugs of these veins contained small crystals of stephanite, pyrrargyrite, and proustite Ferguson, (1916). The wall rocks at the mines are highly silicified.

GEOCHEMICAL RELATIONSHIPS

Ore samples collected from the Clifford Mine dumps contained moderate to high silver values (50 and 1000 ppm) and high gold values (5.2 and 16 ppm) associated with anomalous arsenic and moderately anomalous barium. Antimony values were low (14 and 40 ppm) and all other base metal values were low. The gold values obtained, equivalent to 0.15 and 0.47 ounces per ton gold, were very high and corroborate Ferguson's observation that the richer ores contained free gold.

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