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Item 2

ANTELOPE DISTRICT

The Antelope mining district is located on the western slope of the Roberts Mountains, Eureka County and is accessible along good dirt roads from Nevada Highway 21 from the east and from U.S. Highway from the south.

The district was discovered in the late 1880's during the period of early operations at nearby Eureka, and while the area was prospected during that time, no significant production was reported. The district has recently experienced a surge of surface and subsurface exploration, probably due to the recent increase in gold and silver prices.

The Roberts Mountains were the first site where the Roberts Thrust Fault was identified and described. Merriam and Anderson (1942) state that major low angle thrust faulting occurred over a minimum distance of 16 km when the Ordivician Vinini Formation overrode lower Paleozoic carbonates. The thrust fault is a thick breccia zone separating the siliceous volcanic rocks of the Vinini Formation from the lower Paleozoic carbonates. The Roberts Mountain Thrust Fault has been tentatively dated as Late Devonian and Early Mississippian (Stewart, 1980). Winterer (1968) suggests that early Cretaceous doming, possibly from a hidden intrusive, arched the Roberts Mountains into a 30 km wide, north trending anticline. The upper part then eroded, by normal means, and by low angle gravity slides, which carried the upper and lower plate blocks as far as 15 km radially from the structural high. Lenses of the autochthonous rock interlayered between the allochthonous rocks, resulting in eastern assemblages overlaying western assemblages. The lenses range from blebs of a few meters to units kilometers long and hundreds of meters thick. Outliers of the lower plates can be found overlapping the upper plate. The thinly bedded siliceous rocks often show intense deformation and folding. Later Alaskite stocks and rhyolitic plugs intruded and lava flows and tuffs covered the area. Normal faulting broke the thrust plate and volcanics into blocks (Anderson, Merriam, 1942).

J. Tingley + P. Smith (1982) Mineral Inventory of Eureka-Shoeshone Resource Area: NBMG OFR ~~82-10~~ 83-3/83-4

Most of the mineralization in the district occurs in or near the windows in the Roberts Thrust plate, and at the contacts between individual slide blocks. Sulfide-bearing quartz, calcite, and barite veins occur along fault and shear zones which cut both upper and lower plate rocks. Silicification of the carbonates is associated with these fault zones.

The Belmont Mine is the largest of the older workings, consisting of two main shafts with several hundred feet of underground workings, surrounding trenches and prospect pits, and the remains of a stamp mill and ore chute. The workings have recently been drilled and sampled. The principle ores produced were argentiferous galena and sphalerite which occur with pyrite and bornite. The sulfides occur as replacement deposits in limestone and, along with crystalline calcite, cement the fault breccia. The mine is in one of the Roberts Mountain windows and mineralization follows an east trending shear zone in the lower plate Devonian Devil's Gate Limestone and the Nevada Formation. On either side of Dry Canyon Road leading to the Belmont Mine, the DCEX Claims have been extensively drilled and sampled. These recent workings are in the black shales and cherts of the Vinini Formation.

At the Big Scoop Mining Project, a small barite deposit is currently being mined (open pit) by the Big Scoop Mining Company from Battle Mountain. Disseminated and crystalline vein barite along with wad gangue occurs in the Devil's Gate Limestone. A small amount of iron staining was observed. The ore zone is controlled by local faulting and shearing. There is a base camp in the drainage below with new heavy equipment and living quarters. The ore was being crushed at the mouth of Dry Canyon.

The Blue Eagle Prospect is a minor working in a highly oxidized shear zone in the Vinini Formation. The total workings were two parallel N85W trending trenches, each 25 feet long and 15 feet deep, with a few outlying prospect pits. Stibnite cements the breccia and replaces light to dark grey, shaley quartzite. Crystalline

barite occurs as gangue. Minor gossan along with pyrite was observed. The stibnite had been oxidized to stibiconite. There appears to have been no work on this prospect for at least 25 years.

The Lander Barite Mine (Elizonda Claims, Wildfire), owned by Jose Goyeneche, is located 2 miles east of the junction of Three Bar Ranch Road and the Jackass Creek Road and is currently being mined for barite. The barite is finely disseminated in a cherty unit of the Vinini Formation. The chert is slightly calcareous and contains minor shales and gossan. The barite was high graded at a specific gravity of 4.4 and is currently being mined at a specific gravity of 3.8. The main workings are along a northeast trending, 10-15 foot wide, highly altered shear zone.

The Carter Mine, a reported oil shale deposits in the Vinini Creek area, was not located.

Selected References:

Lawrence, E. F. (1963) Antimony deposits of Nevada, NBMG Bull. 61.

Merriam, C. W., and Anderson, C. A. (1942) Reconnaissance of the Roberts Mountain, G.S.A. Bull. v. 53, no. 12, p. 21.

Roberts, R. J., et al. (1967) Geology and Mineral resources of Eureka County, Nevada. NBMG Bull. 64.

Stewart, J. E. (1980) Geology of Nevada, a discussion to accompany the geologic map of Nevada, NBMG Special Publication No. 4.

U.S. Bureau of Mines (Millett) MILS files.

U.S.G.S. Roberts Creek Mountain Quadrangle, 15' series (1949).

Vanderburg, W. O. (1938) Reconnaissance of mining district, in Eureka County, U.S.B.M. I.C. 7022.

Winterer, E. L. (1968) Tectonic erosion in the Roberts Mountains, Nevada. Journal of Geology, V76, #3, p. 347-357.