

NBMG OFR 83-11

See also 83-12 for
geochemical results.

ALUM DISTRICT

U. of 96B

Item 22

0230 0001

The Alum mining district is located approximately 7 miles due west of the Weepah district and 11 miles north of Silver Peak on a low divide between Clayton Valley and Big Smoky Valley in north-central Esmeralda County, Nevada. Access to the district is along fair dirt roads east and north from State Highway 47. Entry into the district from the north is not recommended. The road connecting the Alum district to the Weepah district is washed out.

The district was discovered about 1868 during the extensive exploration of Esmeralda County (Spurr, 1906). In 1921, the Western Chemical Co. erected an alum-sulfur treatment plant, and although the deposit was worked intermittently, no production was ever reported (Lincoln, 1923). Activity in the district was reported in 1939 and again in 1967, but again, neither attempt was successful. At the time of examination (Spring, 1983), no recent activity was noted at the property or in the general vicinity.

The Alum district has only one property, the Alum Pure/Sulfur Pure Patented Claims. The workings explore an elongated dike-like mass of hydrothermally altered rhyolite intruding gently folded, argillically altered sedimentary Tertiary rhyolite tuffs (Spurr, 1906). The older workings, which consist of several inclined shafts, were destroyed by open pitting during subsequent activity.

Native sulfur crystals, deposited by the sublimation of ascending sulfuric vapors, coat fractures and cracks and are disseminated throughout the altered rhyolite. Closely associated with the sulfur, in veins and streamers as much as several inches thick, is ordinary potassium alum kaolinite and minor gypsum seams. The veins pinch, split and widen throughout the deposit. Locally, the alum veins follow remnant sheeting in the rhyolite and iron oxides stain the deposit.

REFERENCES - Alum District

- Albers, J. P. and Stewart, J. H. (1972) Geology and mineral deposits of Esmeralda County, Nevada: NBMG Bulletin 78.
- Duncan, L. (1921) Recovery of potash alum and sulfur at Tonopah: Chemical and Metallurgical Engineering, v. 24, p. 529.
- Lincoln, F. C. (1923) Mining districts and mineral resources of Nevada: Nevada Publications Co., Reno.
- Spurr, J. E. (1904) Alum deposits near Silver Peak quadrangle, Nevada: USGS Bulletin 225, p. 111.
- _____ (1906) Ore deposits of the Silver Peak quadrangle, Nevada: USGS Professional Paper 55.
- Stewart, J. H., and Carlson, J. E. (1976) Cenozoic rocks of Nevada: NBMG Map 52.
- Young, G. J. (1914) Potash salts and other salines in the Great Basin Region: U.S. Department of Agriculture Bulletin 61.