from NBMG OFR 83-9
See also 83-10 for geochemical results.

(107)
Item 3

0550 0003

BEOWAWE DISTRICT

The main mining activity in the Beowawe district is centered near Beowawe, a town located at the northern end of Crescent Valley in Eureka County, Nevada. The district also encompasses some small prospects located 3 miles east of town and mines and prospects located in the Dry Hills, a low ridge which extends out into Crescent Valley 12 miles southeast of Beowawe.

The geology of the Beowawe district is characterized by both active and inactive hot spring systems. Most of the commodities produced from the district are genetically related to these hydrothermal systems. More than 132 flasks of mercury were produced from the Red Devil Mine between 1929 and 1932. The mine is located in the low hills about 1 mile south of town. Although there are other mercury prospects in the area, the Red Devil Mine is the largest underground mine in the district, consisting of several thousand feet of underground workings. A sulfur deposit was explored in 1966(?) by Southwestern Exploration Company on the extreme southwest tip of the Dry Hills. At that time a "small tonnage of fairly high-grade material had been sorted out" (Papke, 1966), but the amount of production, if any, is not known. For almost twenty years, several companies have pursued the development of geothermal energy from venting geysers located 6 miles west of town. Recent plans by NORNEV Demonstration Geothermal Co. to build a 10-megawatt binary geothermal power plant at the site have temporarily been put on hold (Garside, in press).

The Sansinena barite mine located about 2 miles east of town has produced about 30,000 tons of barite through May, 1980.

The oldest rocks exposed in the district are cherts, shales, and argillites of the Ordovician Vinini and Valmy Formations (Stewart and Carlson, 1976). The rocks are host to several of the mineral occurrences in the district, including barite at the Sansinena Mine and mercury at the Red Devil Mine. Tertiary volcanic rocks overlie the sediments locally. Above the Sansinena Mine and in the western

portion of the Dry Hills the flows are andesitic or basaltic in composition. Upper Paleozoic detrital and carbonate rocks compose the west-central portion of the Dry Hills. These rocks are overlain by felsic tuffs and flows of Cenozoic age (Muffler, 1964) and intruded by rhyodacite to granodiorite plutonic rocks of Early Cretaceous age (Spengler, et al, 1979). Active hot springs are located at "The Geysers" west of Beowawe, on a ranch near Beowawe and along the western margin of Hot Springs Point. The hot springs are located along major northeast-striking range-front faults.

The mercury deposit at the Red Devil Mine is well described by Bailey and Phoenix (1944) and Roberts (1967). The deposit will not be redescribed in this report. However, it is interesting to note that there is revived interest in the area surrounding the deposit beacause of the association of some gold deposits with mercury and hot spring environments. During our examination of the district in June, 1982, the area surrounding the mine site was staked by Cheveron Resources Co. in June,1981. Their Rag claims extend eastward and include a prospected area in siliceous sediments about 3 miles northeast of Beowawe. The prospects explore a low-angle fault in black siliceous shales and cherts of the Ordovician Vinini Formation. The thrust zone is silicified, iron-stained and dips about 15° to the north. Breccia from the dump (sample 177) contains fragments of cherts and coarse-crystalline barite. The fragments are cemented by quartz, barite and iron-oxides. A select sample from a small pit nearby contained a trace amount of gold and 0.20 oz. Ag (Southern Pacific Co., 1964). The sample was taken from a limonite zone along a quartzite-andesite contact.

The sulfur deposit at the extreme south-western tip of the Dry Hill is characterized by intense hydrothermal alteration. Bulldozer cuts expose an altered rock face upto 50' high which contains abundant native-sulfur distributed irregularly throughout (Papke, 1966). The host rocks were probably originally an andesite or basalt but are now completely altered to a punky mixture of silica, clays,

iron-oxides and sulfur. The altered rock reportedly contains minor amounts of cinnabar and antimony also. During 1981, Homestake Mining Co. (?) built several drill roads and holes above the sulfur deposit along the south-western edge of the Dry Hills. The holes were drilled in rubbly, brecciated and silicified outcrops of Ordovician cherts, shales and quartzites. Cuttings found on the drill road (sample 175) consist of siliceous sediments with finely crystalline pyrite deposited on fracture surfaces and disseminated throughout. The cuttings may also contain some mercury minerals. Active hot springs along the western margin of the Dry Hills are presently forming calcareous sinter (Garside and Schilling, 1979). The hot springs and sulfur deposit are located along the trace of two range-front faults which intersect at the tip of the Dry Hills.

Barite veins hosted by a quartz latite intrusive (?) are prospected in the northern part of the Dry Hills. Several veins of good quality barite are explored by shallow workings on the White Knob claims in sections 9 and 10, T30N, R50E (Papke, in preparation).

The history of the development of the Beowawe geysers area is described by Garside and Schilling, 1979. Much of the area is covered by an expansive siliceous sinter deposit which reportedly contains 300 ppm tungsten and high beryllium (Garside and Schilling, 1979).

The Sansinena barite mine consists of two open pits developed in cherts, argillites and shales of the Ordovician Vinini Formation. The bedding of the sediments is horizontal or shallowly south dipping. Barite occurs in two units which together total about 26' in thickness. The host rocks are notably iron-stained and cut by high-angle iron-filled fissures. The mine showed recent signs of activity during our examinations in 1980 and 1982.

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