

Bullsnake prospect, Mountain Pass District

16N 13E Sec. 12 SBM 35.4806000020 -115.5225400000

The Bullsnake REE prospect is 2,900 feet east of the Mountain Pass Mine. It is hosted by PreCambrian mixed granitic gneiss complex (pCgb) (Evans, 1971).

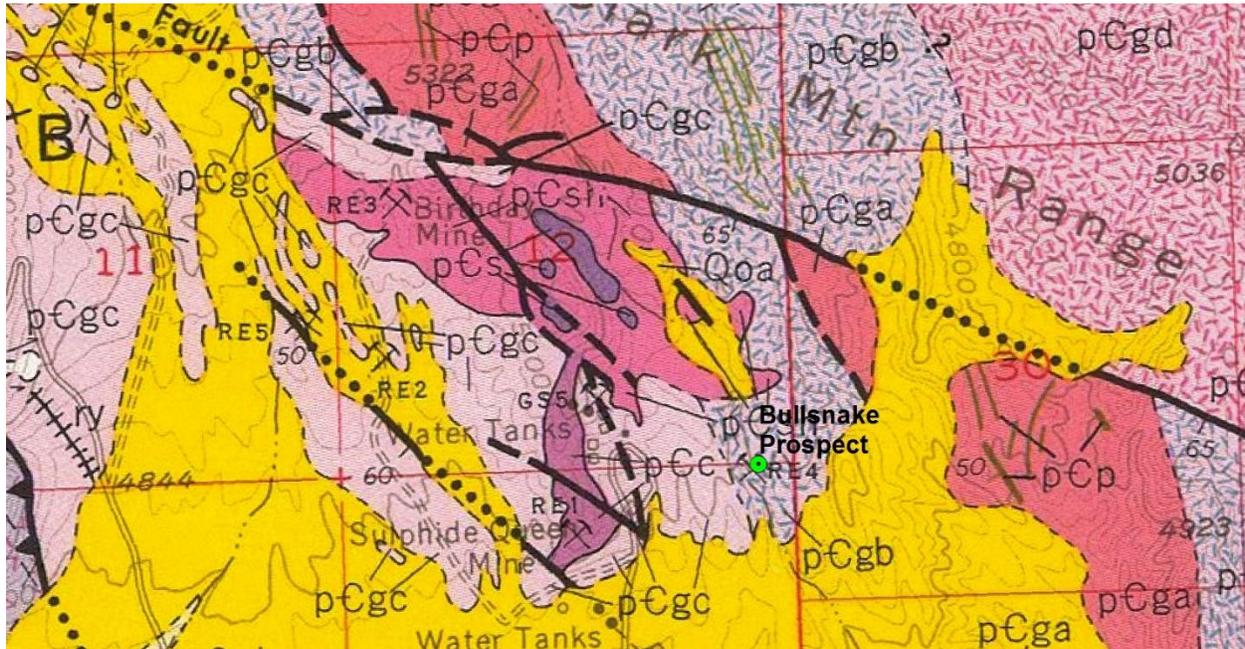


Figure 1. Geology of the Bullsnake Prospect and surrounding area. From Evans, 1971.

Known rare-earth and thorium mineral occurrences north of Highway 91 [now I-15] are concentrated along the southwest side of the shonkinite-syenite stock in both gneiss and the intrusive body. Many of the veins in this area, between the Birthday shaft and the **Bullsnake prospect**, contain rare earths and are somewhat radioactive. Tiny brownish-red grains of thorite have been found in several deposits, and a little galena is present in some. The large carbonate body southwest of the old Sulphide Queen gold mine is the greatest concentration of rare-earth metals known in the district, although parts of some thin veins, such as the original discovery vein near the Birthday shaft, are equally rich or richer. The area west of the Birthday shaft and the Sulphide Queen carbonate body is a broad, gently sloping surface largely covered by gravels and alluvium. Bedrock is exposed in some areas, and in these exposures 10 or more prospect pits have been dug. Some of these pits are in unmineralized gneiss; others expose shear zones along which the gneiss is chloritized and cut by many veinlets of calcite, quartz, hematite, and goethite. Some of the shear zones are radioactive. Carbonate veins exposed in this area are a few inches to 2 feet thick, but no large bodies were noted. In the area north of the highway and east of the **Bullsnake prospect** and Mexican Well, faults and silicified fault zones, locally stained by copper carbonates, have been prospected by several pits, but no rare-earth or thorium minerals have been found in this area (Olson and others, 1954, p. 32). At the north end of the workings at the **Bullsnake prospect** (Hewett, 1957, fig. 19, reproduced below), a shonkinitic dike 2 feet thick, striking northwest, is exposed in a trench. The radioactivity of this dike is about twice background. South of the dike, a carbonate vein in a branching shear zone is exposed in several small pits. The largest pit has been dug on

a vein of silicified, hematitic carbonate rock 4 feet thick, dipping 70° W., which narrows to 1 or 2 inches in thickness about 30 feet both north and south of the pit. Thin lenses of similar carbonate rock occur to the south along both branches of the shear zone. Hematite and thorite make up about 10 percent of the vein, quartz 45 percent, calcite 35 percent, and bastnaesite 10 percent. (From Olson and others, 1954, p 58).

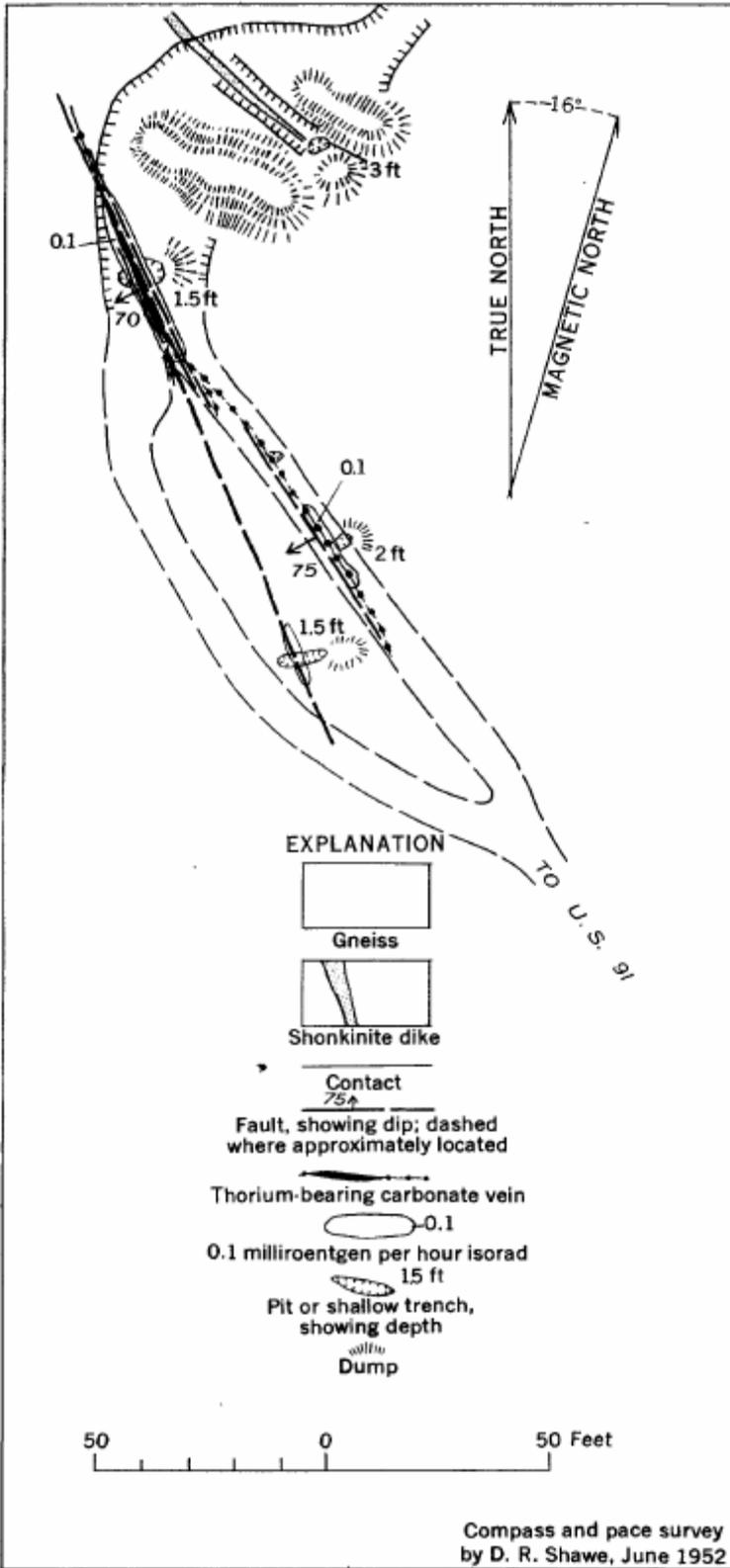


Figure 2. Compass and pace survey of Bullsnake Prospect. From Olson and others, 1954, p 58