CALICO HILLS AREA

The Calico Hills area is located north of Jackass Flats approximately 6 miles north of the Cane Springs road on the Nevada Test Site. Most of the surface exposures within the hills are composed of highly altered and brightly colored tuffs that have been bleached and iron stained leaving vivid shades of orange and red. According to Maldonado and others (1979) the Calico Hills are part of a dome, elongate in a northeastern direction. The extensive radial fracturing along the margins are attributed to the doming and to high angle basin-and-range faulting. The oldest rocks within the structure are Devonian dolomites (Devils Gate Formation) that were thrust over argillites and quartzites of the Mississippian Eleana Formation. This assemblage is overlain unconformably by rhyolite flows and tuffs of Miocene age. The central core of the structure has been intruded by small rhyolite plugs that form small resistant knobs of brecciated and or highly silicified material (Orkild 1970, and McKay 1964).

Three shafts and five prospects are located on the western margin of the dome structure and all are in limestones and dolomites of the Devonian Devils Gate Formation. These upper plate rocks are highly fractured and are crosscut by quartz and calcite veins. The mine workings are along vein filled fractures. These veins display gossans on outcrop and consist of quartz which carries chalcopyrite, pyrite, malachite, azurite and other minor sulfides. No buildings or mine structures in this area are intact and the underground workings are not accessible. The complete absence of roads may be a measure of the age of these mines.

Prospects in the central and southeastern parts of Calico Hills area are associated with brucite and minor barite mineralization and are along contact zones. Surface examinations and assays from these sites revealed no anomalous mineralization. A 2500 foot hole was drilled in 1978 along the southwestern side of the dome. The drilling was done in an attempt to characterize an intrusive that had been delineated by geologic, aeromagnetic, and regional gravity data. The principal objective of this project was to identify a large homogeneous rock mass having the right characteristics for a high level nuclear repository. The drill hole penetrated argillites for the first 1360 feet and was in marble thereafter. Both units were determined to be in Mississippian Eleana Formation. The intrusive was not found.

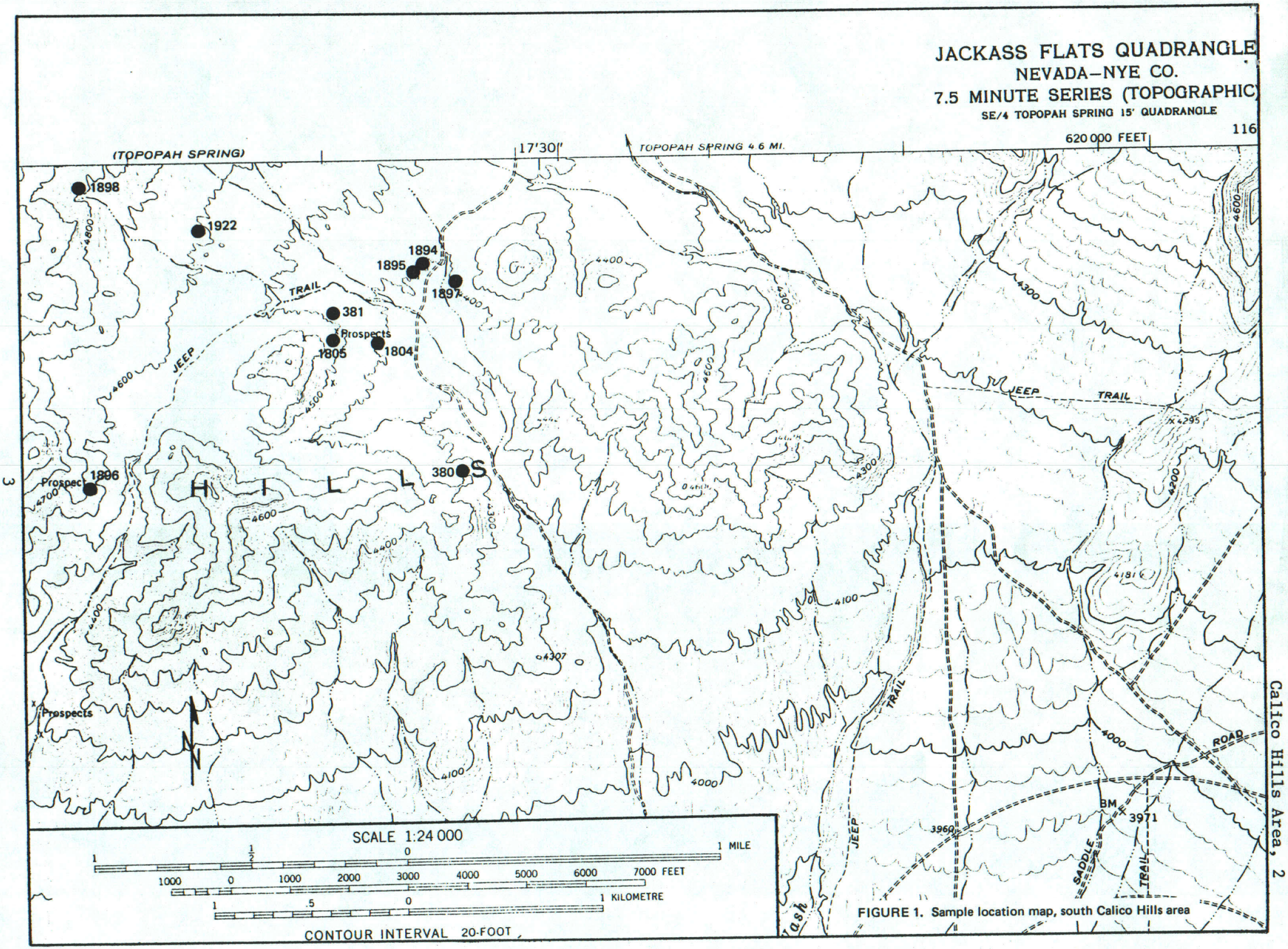

FIGURE 1. Sample location map, south Calico Hills area

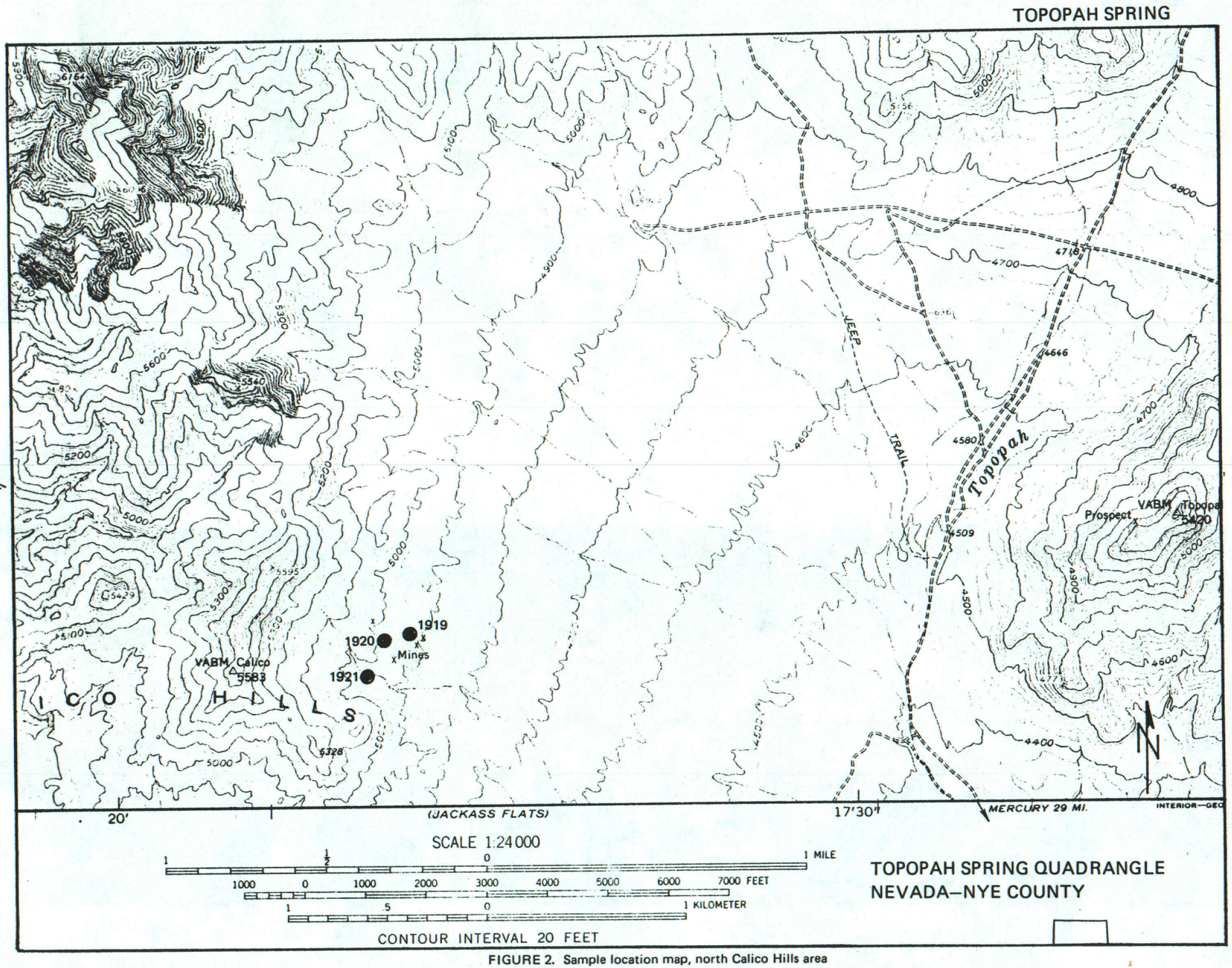

FIGURE 2. Sample location map, north Calico Hills area

Selected References

Cornwall, H.R. (1972) Geology and Mineral Deposits of Southern Nye County, Nevada: Bull. 77.

Maldonado, F., et al. (1979) Preliminary geologic and geophysical date of the UE 25a-3 exploratory drill hole, Nevada Test Site, Nevada: USGS Open-File Report 81-522.

McKay, E. J., et al. (1964) Geology of the Jackass Flats Quadrangle, Nye County, Nevada: USGS Map GQ 368, scale 7 1/2'.

Orkild, P.P., et al. (1970) Geologic map of the Topopah Spring quadrangle, Nye County, Nevada: USGS Map GQ849, scale 7 1/2".