

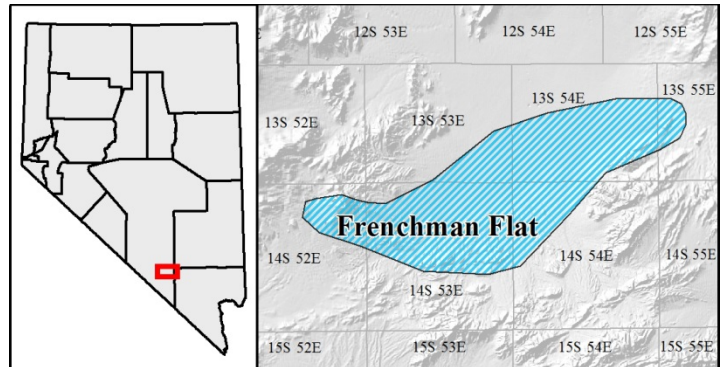
Site Description

Frenchman Flat

(updated 2014)

Geologic setting:

Frenchman Flat is located in southern Nevada within Nye County and is approximately 65 kilometers to the northwest of Las Vegas. The Ranger Mountains lie to the east and Skull Mountain lies to the west of the flat. Frenchman Flat lies within the National Test Site. The geology of the area is underlain by a large variation of rocks that range in age from Precambrian to Quaternary. The rocks found in the area have been identified as being gneissic granite and quartz monzonite and quartz biotite schist. Tertiary volcanic and tuffaceous clastic rocks cover a large portion of the central and northern portions of southern Nye County (Cornwall 1972).



Geothermal features:

The east side of Frenchman Flat hosts a U.S. Geological Survey Test Well (Test Well 75-73 (3), T13S, R55E, about 17 miles east of Mercury, NV). This well was tested in 1964 to a sample depth of 14 meters. Results indicated the host rocks of the aquifer are Paleozoic carbonate rock. The water temperature was 37.8°C, and Na-K-Ca geothermometer temperature came to 67.5°C, while quartz (no steam) was 70.4°C and chalcedony was 38.6°C (Schoff and Moore, 1964; Great Basin Groundwater Geochemical Database).

The west side of Frenchman Flat hosts another warm well, USW Well 160 (Sec. 3, T14S, R52E). This well was sampled in 1975 with a temperature of 65°C, Na-K-Ca values of 69.02°C, quartz (no steam) 88.27°C, and chalcedony 57°C. Another test in 1980 produced a water temperature of 64°C, Na-K-Ca temperature of 59.5°C, quartz (no steam) at 89.4°C, and chalcedony at 58.6°C (Great Basin Groundwater Geochemical Database).

Leasing information: N/A

Bibliography:

Cornwall, H.R., 1972, Geology and Mineral Deposits of Southern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 78.

Great Basin Groundwater Geochemical Database, Nevada Bureau of Mines and Geology: <<http://www.nbmg.unr.edu/Geothermal/GeochemDatabase.html>>.

[Schoff, S.L and Moore, J.E., 1964, Chemistry and movement of ground water, Nevada Test Site, U.S. Geological Survey, Trace Element Inv. Report TEI-838.](#)

U.S. Geological Survey, 2005, National Water Information System, U.S. Geological Survey, Downloaded from <http://waterdata.usgs.gov/nwis>, August 2005.