

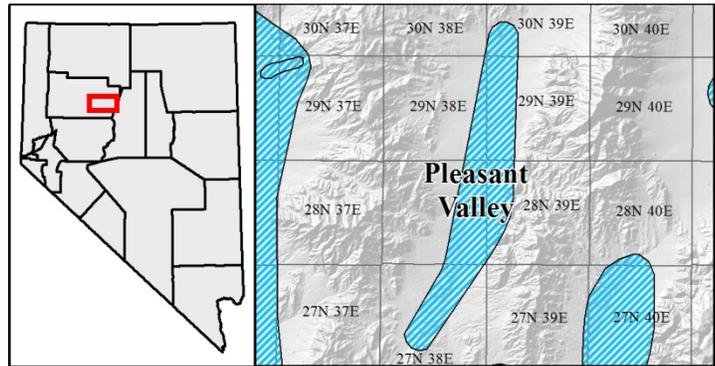
Site Description

Pleasant Valley

(updated 2014)

Geologic setting:

Pleasant Valley is located within Pershing County in central Nevada between the Tobin Range to the east and the East Range towards the west. The Tobin range is located in the actively extending Basin and Range province with several tilted normal fault blocks (Gonsior 2006). A large normal-faulting earthquake occurred in 1915 along the west-dipping fault system on the east side of the Tobin Range, rupturing the surface along four segments over ~60km. The scarps have average displacements of 2-3m (Jackson and Leeder, 1994).



The Tobin Mountains host a mercury district, the Mount Tobin District, southeast of Pleasant Valley. There, the Havallah sequence is unconformably overlain by Triassic-era clastics, carbonates, and volcanics. Mercury deposits are primarily found along north-trending, steeply-dipping fault zones, within Triassic sediments. Golconda Canyon and Little Miller Basin are the two main mercury sources.

Geothermal features:

Coyote Spring: Coyote Spring is a warm spring at the northern end of Pleasant Valley (Sec. 30, T30N, R39E), measured in 1977 at 22°C by the U.S. Geological Survey NWIS database (U.S. Geological Survey, 2005). Geothermometers indicated low estimated reservoir temperatures of 67°C (Na-K-Ca) and 61°C (chalcedony).

Paris Well: A warm well is located in the middle of the valley (Sec. 2, T27N, R38E). The temperature has been measured consistently at 21°C to 22°C from 1952 to 1981 (U.S. Geological Survey, 2005). In 1963, geothermometers indicated low estimated low reservoir temperatures: 66°C (Na-K-Ca) and 59°C (chalcedony) (Cohen and Everett, 1963).

Leasing information:

BLM lease was given in 2009 to TGP Developed Company LLC on a 3,811 acre piece of land.

Bibliography:

[Cohen, P., and Everett, D.E., 1963, A brief appraisal of the ground-water hydrology of the Dixie-Fairview Valley area, Nevada, Nevada Dept. of Conservation and Natural Resources, Ground-water Resources-Reconnaissance Series Report 232.](#)

Gonsior, Z.J., 2006, The Timing and Evolution of Cenozoic Extensional Normal Faulting in the Southern Tobin Range, Pershing County, Nevada, Oregon State University.

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Jackson, J. and Leeder, M., 1994, Drainage systems and the development of normal faults: an example from Pleasant Valley, Nevada: *Journal of Structural Geology*, v. 16, no. 8, p.1041-1059.

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