

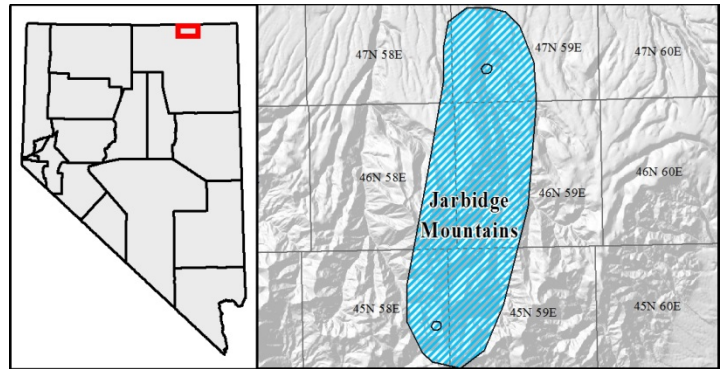
Site Description

Jarbidge Mountains

(updated 2014)

Geologic setting:

The Jarbidge Mountains are located within the northeastern portion of Elko County, Nevada. The small mountain range is located between the Copper Mountains to the west and the Snake mountains to the east and southeast.



Basement rocks of the Jarbidge quadrangle include schist, quartzite, hornfels, and limestones. These are intruded by a Cretaceous quartz monzonite stock. The basement rocks are displaced along pre-Cretaceous faults. Cambrian and Precambrian rocks are thrust over and upon Paleozoic sedimentary rocks. The early Tertiary volcanics and conglomerates are displaced along normal faults represented by the Copper Creek fault, which dips gently east. The Jarbidge Rhyolite (Miocene) and all older formations are displaced along three sets of faults that dip steeply: one set strikes northward, one northeast, and one northwest. These three sets of faults are locally mineralized (Smith, 1976). The oldest exposures are sedimentary deposits such as limestones and shale towards the western portion of the area (Scott, 1910).

Geothermal features:

Gray Rock Mine: The Great Basin Groundwater Geochemical Database lists a measurement of 26.7°C in an abandoned mineshaft well in the Gray Rock Mine (Sec. 24, T45N, R58E).

Robinson Hole Hot Spring / Murphy Hot Spring / Kitties Hot Hole: (Sec. 29, T47N, R59E) The first acknowledged proprietor was Kittie Wilkins, who diverted river water to create the Kittie's Hot Hole soaking pool (1885). Patrick Murphy developed a small resort on the property in the early 1900's and renamed it Murphy Hot Spring, followed by Harry Showalter, who added a swimming pool and changing rooms. The resort has since been renamed "Desert Hot Springs Resort" (Swint, 2000). A water sample taken in 1957 had a surface temperature of 53°C and geothermometers of 159.9°C (Na-K-Ca, Fournier, 1981) and 125°C (quartz) but this was considered a poor analysis. A water temperature of 39°C was obtained by a USGS sample in 1998 (Great Basin Groundwater Geochemical Database).

Leasing information:

N/A

Bibliography:

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

Scott, W., 1910; Jarbidge, Nevada, Mining and Scientific Press pg 613.

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[Smith, R. M., 1976, Mineral Resources of Elko County, Nevada: USGS Open File Report No. 76-56, 194 p.](#)

Swint, M., 2000, Hot Spring Heaven: SWAviator Online Edition, April/May 2000, <<http://www.swaviator.com/html/issueAM00/hotspringsAM00.html>> Accessed January 21, 2014.