

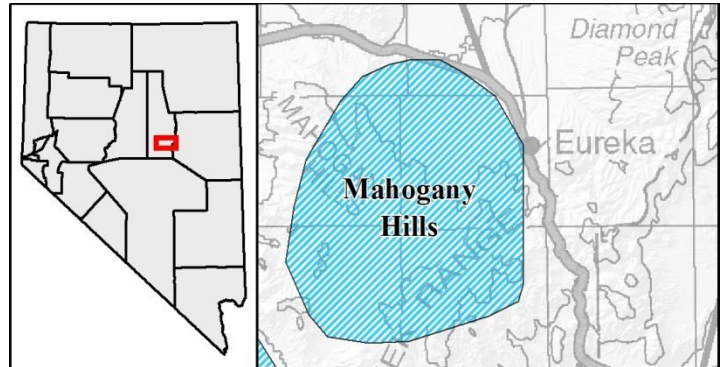
Site Description

Mahogany Hills

(Updated 2014)

Geologic setting:

Mahogany Hills is located in Eureka County west of the city of Eureka. This geothermal cluster is located in the northern end of the Fish Creek Range, the Mountain Boy Range, and the eastern portion of the Mahogany Hills. The Mountain Boy Range is composed largely of limestone and dolostone ranging from Ordovician through Upper Devonian in age. Oceanic sedimentary units were emplaced resulting from the Antler orogeny during the Paleozoic. These east-west compressive forces lead to the development of generally north-south folding and north-south-trending thrust faults to the east of the Mountain Boy Range. Several younger normal faults are also present in the region and separate the down-dropped Mountain Boy Range from the Fish Creek Range. These faults were believed to have been formed during the Quaternary and are associated with east west extension (Helgeson, J., 1993). The Mahogany Hills and other mountain ranges found within southern Eureka County are underlain with sedimentary rocks of Paleozoic age that comprise pre-orogenic sediments of Cambrian and Mississippian age. Volcanic rocks are also found throughout the area and are of Mesozoic age, with other intrusive rocks found throughout the county (Roberts and Montgomery, 1967).



Geothermal features:

Five temperature gradient wells were drilled in the Mahogany Hills area by Amax in 1978. They are classified hot heat flow wells, with thermal gradient measurements of 152°C/km to 175°C/km (Blackwell and Richards, 2008).

Leasing information:

N/A

Bibliography:

Blackwell, D.D., and Richards, M., 2008, Southern Methodist University (SMU) AMAX database: <<http://www.smu.edu/geothermal/georesou/nevada.htm>> Accessed January 21, 2014.

Helgeson, J.M., 1993. Structure and Stratigraphy of the Mountain Boy Range, Eureka County, Nevada, Master's Thesis, Oregon State University, 84 p.

Roberts, R.J., Montgomery, K.M., and Lehner, R.E., 1967, Geology and Mineral Resources of Eureka County, Nevada: Nevada Bureau of Mines and Geology Bulletin 64, 152 p.