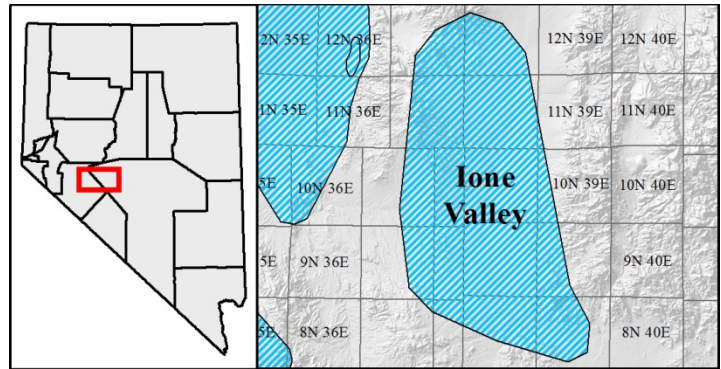


Site Description

Ione Valley (updated 2014)

Geologic setting:

Ione Valley is located approximately 80 kilometers to the northwest of Tonopah, Nevada and lies between the Pactolus Hills towards the west and the Toiyabe Range towards the east. The region is made up of north trending bedrock ranges and alluvial valleys. Pre-Tertiary rocks of varying lithology characterize the area. Paleozoic marine sediments are found in the east and central area with marine sediments interbedded with metavolcanic rocks. Plutonic rocks crop out throughout the area but are found in small numbers. They have been dated and are pre-Cenozoic and Cretaceous in age with one outcrop being dated as Jurassic (Kleinhampl and Ziony, 1985).



Geothermal features:

The Garside dataset (1994) listed a ‘warm spring’ at Sec. 12, T8N, R38E, but a 2008 NBMG sampling trip found only a small water seep with a maximum temperature of 16.4°C so no geochemical sample was taken (Great Basin Groundwater Geochemical Database).

Temperature gradient holes drilled by AMAX Geothermal in 1984 produced bottom-hole temperatures of 15.7°C to 19°C (Blackwell and Richards, 2008).

Borehole temperature logs from Phillips Petroleum Company thermal gradient wells drilled in 1979 were 18°C and 20°C, and a uranium prospect borehole recorded a bottom-hole temperature of 25.7°C. Further drilling in 1980 indicated cool temperatures from 5.5°C to 23.7°C throughout the valley (Sass, 1999).

Leasing information:

No geothermal leases have been offered in this area since 2007.

Bibliography:

Blackwell, D.D., and Richards, M., 2008, Southern Methodist University (SMU) AMAX database: <<http://www.smu.edu/geothermal/georesou/nevada.htm>> Accessed January 23, 2014.

Garside, L., 1994, Nevada Low-Temperature Geothermal Resource Assessment, Nevada Bureau of Mines and Geology, University of Nevada, Reno, Open-File Report 94-2.

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

Site Description

Kleinhampl, F. J., and Ziony, J., 1985, Geology of Northern Nye County, Nevada, Nevada Bureau of Mines and Geology Bulletin 99A.

Sass, J.H., Priest, S. S., Blanton, A.J., Sackett, P.C., Welch, S. L, and M.A. Waters, 1999, Geothermal Industry Temperature Profiles from the Great Basin (online version 1.0): U.S. Geological Survey Open-File Report 99-425, <<http://pubs.usgs.gov/of/1999/of99-425/webmaps/home.html>>.