



Site Description

Fairview Valley

(updated 2010)

Geologic setting: Fairview Valley experienced fault displacement along its eastern margin during the Dixie Valley – Fairview Peak earthquakes of 1954. Most faults occur at the bedrock – alluvium interface. The maximum slip components are reportedly 4-m near Fairview Peak (strike-slip) and 4-m in Bell Flat (dip-slip) (Slemmons, 1957).

The transition zone between southern Dixie Valley and Fairview Valley hosts a 10-km left step-over, and is of interest for geothermal fluid convection (Makhemthong et al., 2008). Two known geothermal occurrences, Elevenmile Canyon and Pirouette Mountain, are evidence of local dilatational strain in southern Dixie Valley. This strain field, which facilitates deep fluid convection, may occur in Fairview Valley too; additional studies are needed.

Geothermal features: The NWIS database (U.S. Geological Survey, 2005) records two wells in Fairview Valley, each with mid-range reservoir temperatures (estimated by geothermometry). USNR Well H-4, measuring 17°C, has geothermometer values of 65.5°C (Ca-Na-K; Fournier, 1981) and 90.4°C (chalcedony; Fournier, 1981). NWIS Well 124 N16 E33 03B 1 has similar values at 90.8°C (Ca-Na-K) and 90.4°C (chalcedony), but no measured temperature.

In April 2006, UNR staff found access restricted to southern Fairview Valley near the Fallon Naval Reservation. The hot spring in T15N R33E Sec 34 could not be sampled. Little Bell Flat Well was accessible, but the flow valve was not operational (Penfield et al., 2011).

Bell Flat: An AMAX gradient hole, 84-95, was drilled in NE Bell Flat (T13N R34E Sec 17CC) with a bottom temperature of 82°C at 80m. The uncorrected temperature gradient measures 713°C/km. In western Bell Flat (T13N R33E Sec 30BB), AMAX gradient hole 84-93 is cooler, measuring 19°C at 35m depth.

Leasing information:

N/A



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Bibliography:

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