



## Site Description

### Quinn River Crossing

(updated 2010)

**Geologic setting:** Dyke Hot Springs, 11 km west of Quinn River Crossing, hosts hydrothermally-altered, gold-and-silver enriched quartz veins. The north-trending veins, part of the Leonard Creek mining district, are “commonly narrow, highly oxidized, almost always iron stained, usually brecciated, and sometimes gossan like” (Bonham et al., 1985). Records are limited, though, for ore production near the hot springs.

Several mid-century mercury prospects are located ~8 km south of Quinn River Crossing, in the NE Jackson Mountains. The northern Jackson Mountains contain folded, faulted Permian volcanics, clastic sediments, and shaly limestone. These sequences are overlain by Cretaceous sediments and bimodal Tertiary volcanics (rhyolite and basalt), intruded by mafic and silicic dikes. Most ore is associated with northerly-trending diabase dikes (Willden, 1964; Bonham et al., 1985).

#### Geothermal features:

**Dyke Hot Springs** ([Map](#)): Dyke Hot Spring is about 18 km south of Howard Hot Spring in Sec. 25, T43N, R30E. It lies at the southern end of a fault which forms the eastern boundary of the Pine Forest Range. Temperatures up to 70°C have been reported (Sinclair, 1962a). The estimated thermal aquifer temperatures are 128 and 137°C, though these are from mixed waters, and may be significantly below the true thermal-aquifer temperature. A trace of travertine was reported (Mariner and others, 1974).

**Howard Hot Spring:** Water temperatures at Howard Hot Spring (Secs. 4,5, T44N, R3 IE) are usually reported to be 48-58°C, though Sinclair (1962a) listed a temperature of 73°C. Mariner and others (1983) reported the temperature as 56°C. Waring (1965) and Stearns et al. (1937) described several hot springs with insufficient location data; these may refer to Howard Hot Spring. Siliceous sinter is present, according to Hose and Taylor (1974), and the silica geothermometer yields a reservoir temperature of 128°C. Mariner and others (1983, p. 105) estimated reservoir temperatures of 71°C and 80°C using the silica and Na-K-Ca geothermometers, respectively.

**Jackson Mountains:** A warm spring has been reported in the NE Jackson Mountains (and shown on USGS 15' Topo Map \_\_\_\_). UNR field workers found the roads impassable in 2008, and the spring remains unconfirmed.



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Leasing information: Howard Hot Springs, a former Sierra Geothermal Power property, reverted to RAM Power during SGP's acquisition by RAM in 2010. No information is available on this 2,234 acre project.

### Bibliography:

Bonham, H.F., Jr., Garside, L.J., Jones, R.B., Papke, K.G., Quade, J., and Tingley, J.V., 1985, A mineral inventory of the Paradise-Denio and Sonoma-Gerlach Resource Areas, Winnemucca District, Nevada, Nevada Bureau of Mines and Geology Open File Report 85-3, 473 p.

Willden, R., 1964, Geology and mineral deposits of Humboldt County, Nevada, Nevada Bureau of Mines and Geology Bulletin 59, 154 p.