Site Description

Caliente

(updated 2012)

Geologic setting: Caliente Hot Springs, the namesake for the town Caliente, lie along a fault in Tertiary volcanic rocks (Adams, 1944; Hardman and Miller, 1948; Phoenix, 1948a). Several Caliente geothermal features appear to be associated with faults (Trexler et al., 1980), and a near-vertical limestone unit may act as local control for rising thermal fluids in the sub-surface (Flynn and Larson, 1983). Caliente is thought to be part of a caldron complex. Gold prospects at the northern end of the city, as well as the hot springs, are probably related to regional volcanism (Tingley, 1984).

Geothermal features: Geothermal test wells drilled in 1883 had reported temperatures of 80°C in a pumped well and 97°C in a nearby monitoring well, both at depths of less than 30 m (Flynn and Larson, 1983). The highest temperature reported in a producing well is 67°C, at the Agua Caliente Trailer Park (Trexler et al., 1980). The second highest is 62.8°C, in the Wallis Health well near Caliente Hospital (Sanders and Miles, 1974). The city of Caliente's North Well (NE¼ Sec. 7, T4S, R67E) is 39.6 m deep and has water temperatures of 25.5°C at 7.6 m, 32.2°C at 30.5 m, and 53.3°C at the bottom (Phoenix, 1948a). The Caliente Public Utility No. 4 well (SW¼ Sec. 5, T4S, R67E) is also 39.6 m deep and has a temperature of 40°C (Rush, 1964). Another well "near Caliente Hot Springs" has a temperature of 57.2°C (Smith, 1958).

There are several examples of direct geothermal heating in Caliente: (1) Caliente Hot Springs Motel fills bathing pools with geothermal water, (2) Agua Caliente Trailer Park supplies individual homes with hot water, and (3) Lincoln County Hospital was heated by 39°C well water, but resumed electric heating once the well cooled to 28°C. The hospital plans to use the lower-temperature fluids for heating and cooling via heat-pump. Finally, (4) the city swimming pool used geothermal heat until it was damaged in winter 1992.

A grant from the Rural Development Administration to the City of Caliente funded the study of local geothermal resources. A nearby perlite processing plant was proposed as a user for plant process heat. If more funding is found, the city plans to provide heat to the hospital, swimming pool, and eventually an elementary school and youth training facility (Glen Van Roekel, oral commun., 1994).

Site Description

Caliente Hot Springs: The Caliente Hot Springs in Sec. 8 and SW¼ Sec. 5, T4S, R67E have reported temperatures of 37.7-62°C (Waring, 1965; Sanders and Miles, 1974; Reed et al., 1983). The springs no longer flow, with much of the water traveling underground into Caliente Creek. However, a 250,000-L swimming pool can be filled in 4 hours with a small pump lifting water only 2.1 m (Smith, 1958).

Leasing information:

N/A

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