



Site Description

Vya

(updated 2010)

Geologic setting:

Geothermal features:

Twin Spring: Twin Spring is a large, seep-fed warm pool in central Vya. Locals estimate the flow rate to be 250,000 gallons/day from a 30 x 40m source area. At the source, H₂S outgassed erratically amid hundreds of individual upwelling zones. UNR samplers encased the flow in one such upwelling area, and measured a temperature of 21.5°C. White sage and short grasses surround the pond, with algae and water bugs in the seep zone. Location coordinates in NAD83 are 41.59063 N, 119.86027 W. Geothermometer values are moderate, at 63.3°C (Na-K-Ca-Mg) and 81.2°C (chalcedony).

Hills Warm Spring: Hills Warm Spring, a 31.9°C pool, is located southwest of two basaltic buttes in Long Valley. The valley floor is unconsolidated rhyolite ash, as is the surface of Hills Warm Spring which liquefies with any pressure (stepping into the pool is dangerous). UNR samplers suctioned upwelling water above the main spring orifice (4cm diameter) through a 3m extended tube. Eight additional orifices were visible from the sampling point, varying in diameter from 1 to 4 cm. Active bubbling episodes produced strong H₂S odor every few minutes. The Hills Warm Spring source pool is 20 x 30m wide, ringed in sawgrass and 2m high reeds, and outflows into a 300m long grassy zone. Additional seeps reported nearby were dry or otherwise not apparent. Location coordinates in NAD83 are 41.73055 N, 119.78315 W. Geothermometer values are low, at 82.9°C (Na-K-Ca-Mg) and 64.5°C (chalcedony).

Two kilometers NW of Hills Warm Spring, a warm seep (24.0°C) was sampled at its grassy topographic high. The pool covered a 25 x 40m area, with the main upwelling zone 2 x 3m. The flow-encasing sample tube ran clear in 30 minutes in the silty ash mud. The spring coordinates are 41.74552 N, 119.79445 W (NAD83). Geothermometer values are low, at 54.1°C (Na-K-Ca-Mg) and 67.3°C (chalcedony). Three warm pools ~150m east of the warm spring ranged from 20-22°C. Each pool was <0.5m deep with no subsurface structure or directionality to the flow, owing in part to cow trampling.



Site Description

A small, clear pool northeast of Alkali Lake (16.4°C) contains thick algal structures, large water bugs, and tall thin grasses. UNR samplers used an extended sample cup to reach the upwelling zone. Location coordinates are 41.76172 N, 119.83547 W (NAD83). Geothermometer values are low, at 60.5°C (Na-K-Ca-Mg) and 62.6°C (chalcedony).

A final unnamed cold spring (16.6°C) was sampled near the basalt-capped hills west of Alkali Lake, 12 km north of Vya. The spring was piped into a stock trough with thick algal growth. Water outflow was rapid at an estimated 60 L/min. Location coordinates are 41.71015 N, 119.88358 W (NAD83). Geothermometer values are moderate, at 58.8°C (Na-K-Ca-Mg) and 86.5°C (chalcedony).

Leasing information: