



An example of composite geophysical and lithological logs from Handcart Gulch wells. Optical televiwer image (OBI) shows surface deposits/bedrock interface and sinusoidal traces of open fractures in WP4 (all other logs from shallow HCBW1 next to the trunk stream). Fracture orientations derived from the acoustic televiwer image (ABI) plotted on an equal area projection are consistent with outcrop and regional fracture orientations. Heat-pulse flow meter (HPFM data shown as FLOW) indicates flow direction and magnitude in the well and does not correlate with fracture orientation or fracture intensity. Inflow does correlate with temperature and conductivity. Lithology and hydrothermal alteration log data are also shown for HCBW1 shallow bedrock well (red layered material is ferricrete, green diagonal pattern is amphibolite; P = propylitic alteration and A = quartz-sericite-pyrite or argillic alteration).

Source: USGS 2010