QUANTUMGEOPHYSICS

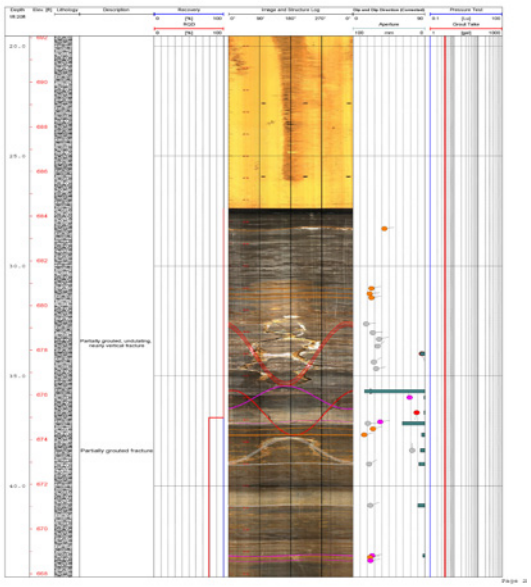
Downhole Geophysical Logging

In the same way that surface geophysics allows us to look beneath the ground surface, Quantum Geophysics (Quantum) conducts downhole geophysical logging to look beyond the sidewalls of an existing well or a borehole.

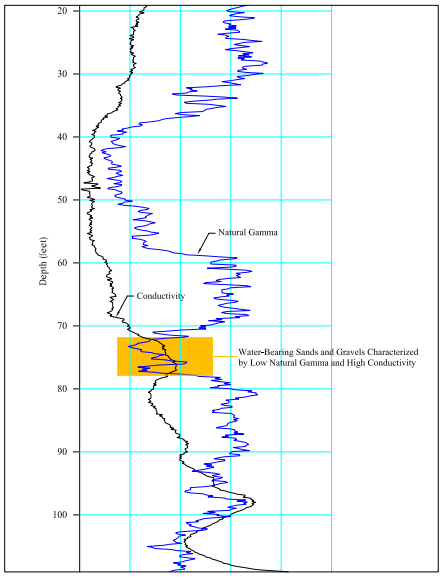
To perform borehole logging, sensors or sondes that measure different physical properties of the formation around the boring are lowered down the hole to record continuous data. A multi-conductor cable on a motorized winch controls the sonde and transmits data back up the hole to a computer and graphic display. Often, multiple logs are recorded for a single boring, each measuring a different property, to allow us to gather more complete knowledge of subsurface conditions.

Quantum operates a Mount Sopris MGX II digital logger, a GeoVision borehole video camera system, and a Robertson Micrologger televiewer system to perform downhole geophysical logging.

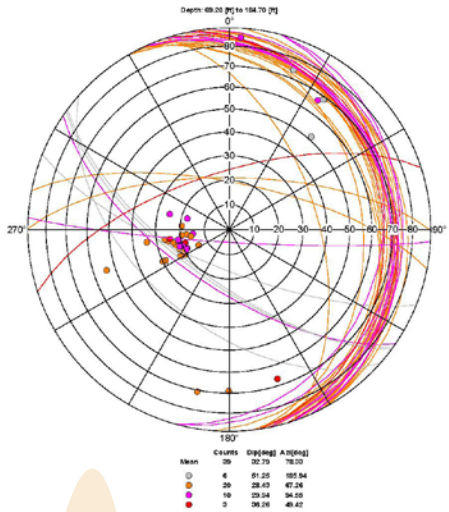
Heat Pulse flowmeter testing



Televiewer log



Downhole geophysical logs showing location of water-bearing sands and gravel



Stereonet plot of televiewer data

Quantum uses downhole geophysical logging to:

- Delineate soil stratification
- Identify well construction details
- Locate water bearing zones
- Identify potential contaminants
- Evaluate hydraulic conductivity
- Determine fracture orientation.