Groundwater samples

EM flowmeter-station measurements show slight upward flow. Measurements show flow ranging from 0.0 to 0.1 gal/min (between 500 and 550 ft BLS). Caliper, neutron, and density traces suggest area’s groundwater flow concentrated at boundaries between basalt flows. A 1-ft sediment layer was described in core with the boundary top near 503 ft BLS. Flowmeter measurements were taken under ambient conditions.

Groundwater thief sample collected near 573 ft BLS.

Two massive basalt flows starting near 580 ft BLS. Basalt flows were about 30 and 40 ft thick, respectively.

Groundwater thief sample collected near 710 ft BLS.

Sediment layer (about 5 ft in thickness) described as silt mixed with clay.

EM flowmeter-station measurements suggest upward flow ranging from 1.0 to 3.1 gal/min. EM flow suggests groundwater is moving out of fractures below about 925 ft and moving into fractures above 900 ft.

Groundwater thief sample collected near 965 ft BLS.

EM flowmeter-station measurements suggest upward flow ranging from 0.7 to 1.2 gal/min with flow tapering off near the bottom.

Sediment layer described as silt with clay starts near 1,044 ft BLS. Drilling halted near 1,048 ft BLS.

EXPLANATION

Definition of terms

- AM/Be source: Americium/Beryllium-241 Source
- API: American Petroleum Institute
- BLS: Below land surface
- Cal(R): Right-side caliper
- Cal(L): Left-side caliper
- Cps: Counts per second
- Deg F: Degrees Fahrenheit
- Den(SS): Short-spaced density
- Den(LS): Long-spaced density
- Down log: Data collected trolling tool down borehole
- Em起來: Electromagnetic (EM) flow
- Flow rate: Gallons per minute
- Gamma: Natural gamma radiation
- GW sample: Groundwater thief samples
- In: Inches
- Sp: Specific conductance
- Temp: Temperature
- Up log: Data collected trolling tool up borehole
- µS/cm: Microsiemens per centimeter
- mV: Millivolts
- Ohm·m: Ohm-meter
- Resistivity: Resistivity
- Sp: Spontaneous potential

Geophysical and Lithologic Logs for Borehole USGS 136, Advanced Test Reactor Complex, Idaho National Laboratory, Idaho

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2012

U.S. Department of the Interior
U.S. Geological Survey
Prepared in cooperation with the U.S. Department of Energy (DOE/ID-22220)

Scientific Investigations Report 2012–5230
Geophysical and Lithologic Logs—Appendix B, Figure B1

Twining, B.V., and others, 2012, Completion Summary for Borehole USGS 136
Prepared in cooperation with the U.S. Department of Energy (DOE/ID-22220)