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Borehole UF-25 WT66 was completed in June, 1983 to a total depth of 1256 feet. The hole was rotary drilled using air foam consisting of air, detergent, and water (Muller and Kibler, 1985). Depth on the plot is measured along hole, and has not been corrected for deviation. Hole deviation is as great as 5.0 degrees at 1250 feet. (Plate 21 in Nelson and others, 1991): at a measured depth of 1250 feet, the computed true vertical depth is 1248.2 feet, and the computed horizontal offset is 53.9 feet.

Original logs in columns 1-3, acquired on June 28, 1983, were described and presented by Nelson and others, 1991. UE-25 WT#6 was drilled for the purpose of monitoring water levels; the static water level is indicated by a cyan bar in column 1 (Robison, 1984).

Porosity and water content computed from the dielectric and density logs are shown in column 4 as phtidil and phidwiel, using a method described by Nelson, 1993. Porosity and water content computed from the epithermal neutron and density logs are shown in column 5 as phitnep and phiwepn (Nelson, 1994). Green hatching between the porosity and water content curves denotes air-filled porosity. Red hatching appears where water content exceeds porosity, often indicating the presence of zeolitic minerals.

Saturation (swdiel in column 4, swenp in column 5) is computed as the ratio of water content to porosity. It has been nulled in zones flagged as zeolzone. The flags physzone and zeolzone (green and red bars in column 5) denote the presence of abundant lithophase and extensive alteration, respectively. Their depth extent is taken from inspection of the green and red hatch areas in columns 4 and 5 and from consideration of other logs, especially resistivity, rild.

Stratigraphic tops and degree of welding, given in column 6, and the geologic description, in the text column, are from R. Spengler, U.S. Geological Survey, written communication, 1995. The degree of welding (weldng) increases to the right, in accordance with the geologic description.

Plots of individual fractures, (tvndaz, column 1), observed on television logs are plotted to show the azimuth of the dip of each fracture. The same data are plotted as fracture density (tvnfrct) in column 6.

EXPLANATION OF CURVES AND SYMBOLS

Column 1	
CAL	Caliper in cm, black curve.
BIT	Bit size in cm, black dash line.
SWL	Static water level, vertical cyan bar.
CTC	Gamma ray in API units, red curve.
TVNDZ	Dip azimuth of fractures, from television, red squares.
	Undetermined azimuth is coded as 380 or 390 degrees.

Column 2	
DBC	Density in g/cc, red curve.
DBCBOUND	Density bound in g/cc, red dash curve.
RHOG	Grain density in g/cc, green curve.

Column 3	
ENP	Epithermal neutron in counts/sec. red curve.
ENPBND	Epithermal bound, red dash curve.
RILO	Induction resistivity in ohm-m. blue dot curve.
DIEL	Dielectric permittivity, ratio, green curve.

Column 4	[fractional volume of whole rock, increasing to left]
PHIWIDIEL	Water content, from DIEL and D8CBOUND logs, cyan curve.
PHITDIEL	Porosity, from DIEL and D8CBOUND logs, red curve. (green hatch where PHITDIEL > PHIWIDIEL, red hatch where PHITDIEL < PHIWIDIEL).
SWDIEL	Water saturation, ratio of PHITDIEL to PHITDIEL, green curve.

column 5	[fractional volume of whole rock, increasing to left]
PHIWENP	Water content, from ENPBD and DBCBOUND logs, cyan curve.
PHITENP	Porosity, from ENPBD and DBCBOUND logs, red curve. (green hatch where PHITENP > PHIWENP, red hatch where PHITENP < PHIWENP).
GWENP	Water saturation, ratio of PHIWENP to PHITENP, green curve.
PHYZONE	Lithophysal zone, picked from logs, green bar.
ZEOLZONE	Zeolitic zone, picked from logs, red bar.

Column 6	
TOPS	Stratigraphic boundaries, black ticks.
WELDNG	Degree of welding from core inspection, black slant.
TVNFRC	Number of fractures per 10 feet, from television, re

NOTES

Date of last computation: May 1996
Plot Date: May 1996
Scientific Notebook: SN-0092

REFERENCES

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