



Department of Energy
Yucca Mountain Site Characterization
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WBS 1.2.7
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PRELIMINARY FIELD COMPOSITE BOREHOLE LOG

For your information, enclosed is a copy of the Preliminary Field Composite Borehole Log for borehole UZN-27 which was developed by the Drilling Support and Sample Management Department of Technical and Management Support Services. Drilling of the borehole was completed on April 30, 1992.

If you need additional information regarding the log, please contact Uel S. Clanton at (702) 794-7943.

RSED:USC-3646


Carl P. Gertz
Project Manager

Enclosure:
Preliminary Field Composite
Borehole Log

HYDROLOGY DOCUMENT NUMBER 700

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT PRELIMINARY FIELD COMPOSITE BOREHOLE LOG

BORE HOLE ID: USW UZN-27

STUDY PLAN NO.: 8.3.1.2.2.1

CORE SIZE: HQ/2.25"

DRILL DATES: 04/21/92 to 4/30/92

GROUND ELEVATION: 4810 (est.)

GROUND COORDINATES: 559,500 E 772,420 N

TOTAL DEPTH: 202.4 ft

ANGLE FROM VERT.: NA

BEARING: NA



ALLUVIUM



NON-WELDED



PARTIALLY WELDED



DENSELY WELDED



BEDDED TUFF



VITROPHYRE

LOG FINAL DATE:
5/10/92

geology by Drilling Support Division, Drilling Support and Sample Management Dept., T&MSS

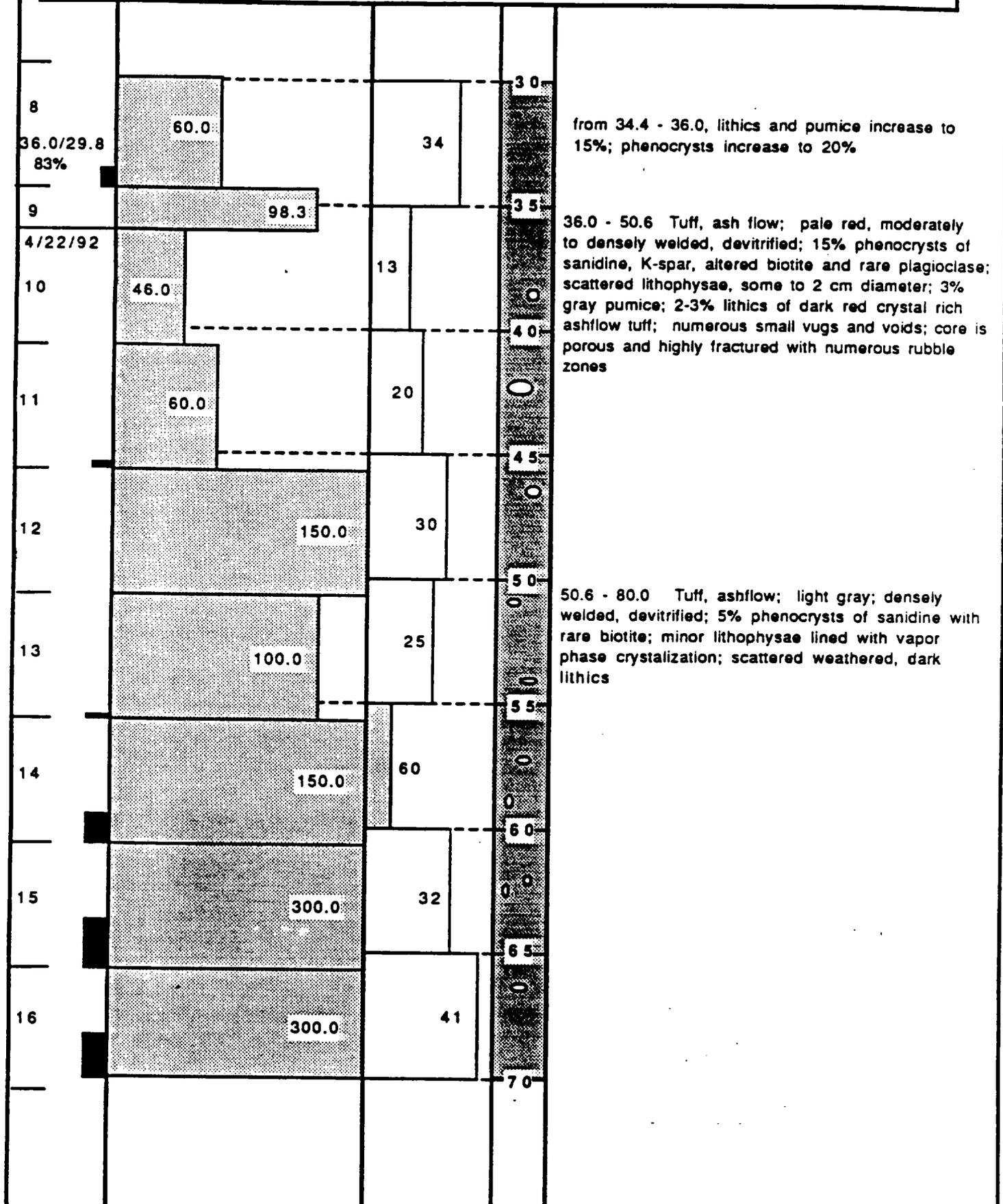
RUNS/DATES/ RECOVERY	CORE LOSS	DRILLING RATE (ft/hr) BIT RECORD		FRAC FREQ (X/5 FT)		DEPTH STRAT COL	LITHOLOGY/REMARKS	
		0	10	20	0			50
		20	70	120	50			100
4/21/92 DC 1						0.0 - 2.6 Alluvium; tan to dark red; derived from densely welded ash-flow tuff		
1		Bit No. 23	200	29		5	Alluvium/Tiva Canyon Contact @ 2.6	
2			230	30		10	2.6 - 16.5 Tuff, ashflow; pale red to gray-pink, moderately welded, devitrified; 10-15% phenocrysts of sanidine with minor biotite and sphen	
3			300	51		15		
4			240			20	16.5 - 24.1 Tuff, ashflow; pale red, moderately vitric; 10-15% lithophysae with associated vapor-phase silica; 10-15% phenocrysts of sanidine and minor biotite; 7% pumice	
5			200	68		25		
6			136	54		30	from 16.5 - 17.5 and 19.6 - 21.1, brecciated zones, recemented with calcite	
7			79.0	29		30	24.1 - 36.0 Tuff, ashflow; pale red, moderately to densely welded, devitrified; 15% phenocrysts of sanidine and biotite; <2% pumice; 5-10% lithophysae with associated vapor-phase mineralization	
8						30		

**YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
PRELIMINARY FIELD COMPOSITE BOREHOLE LOG (cont.)**

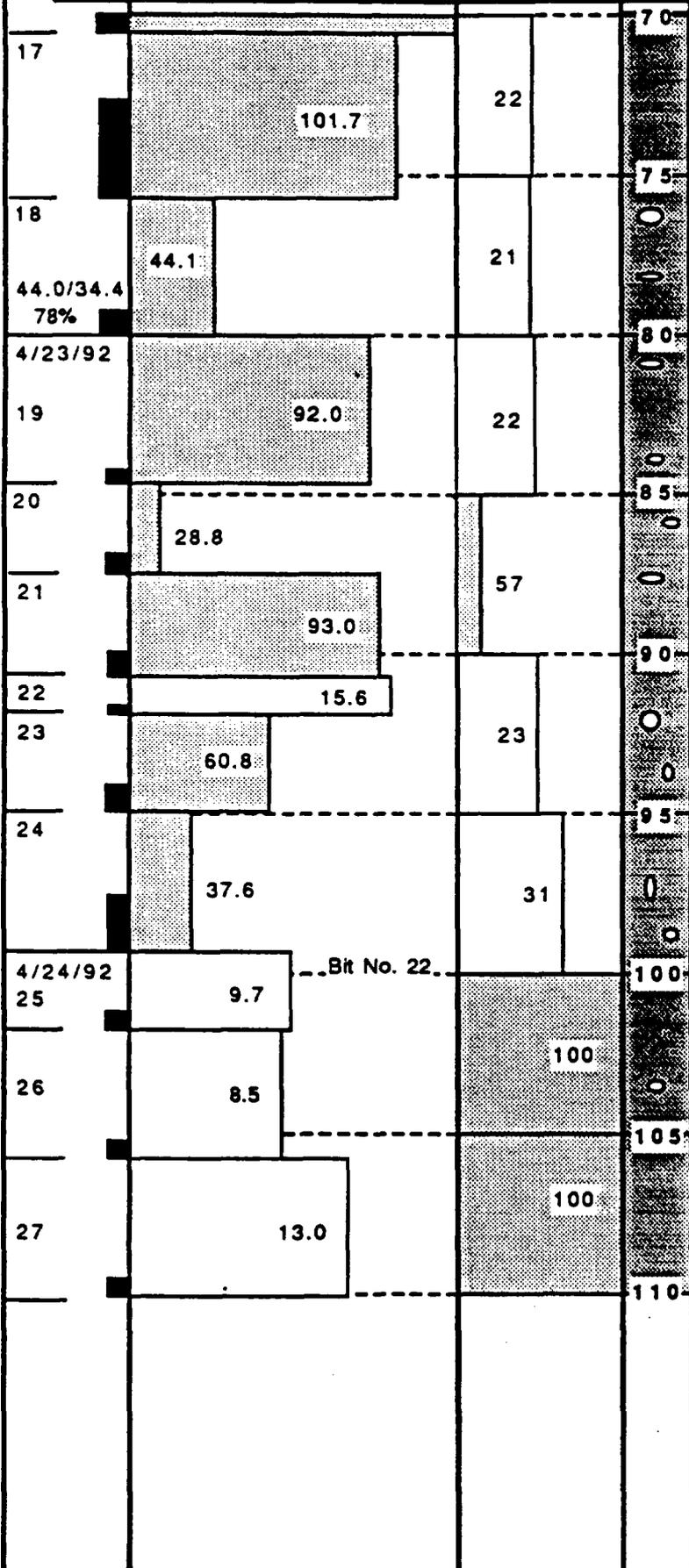
USW UZN- 27

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geology by Drilling Support Division, Drilling Support and Sample Management Dept., T&MSS



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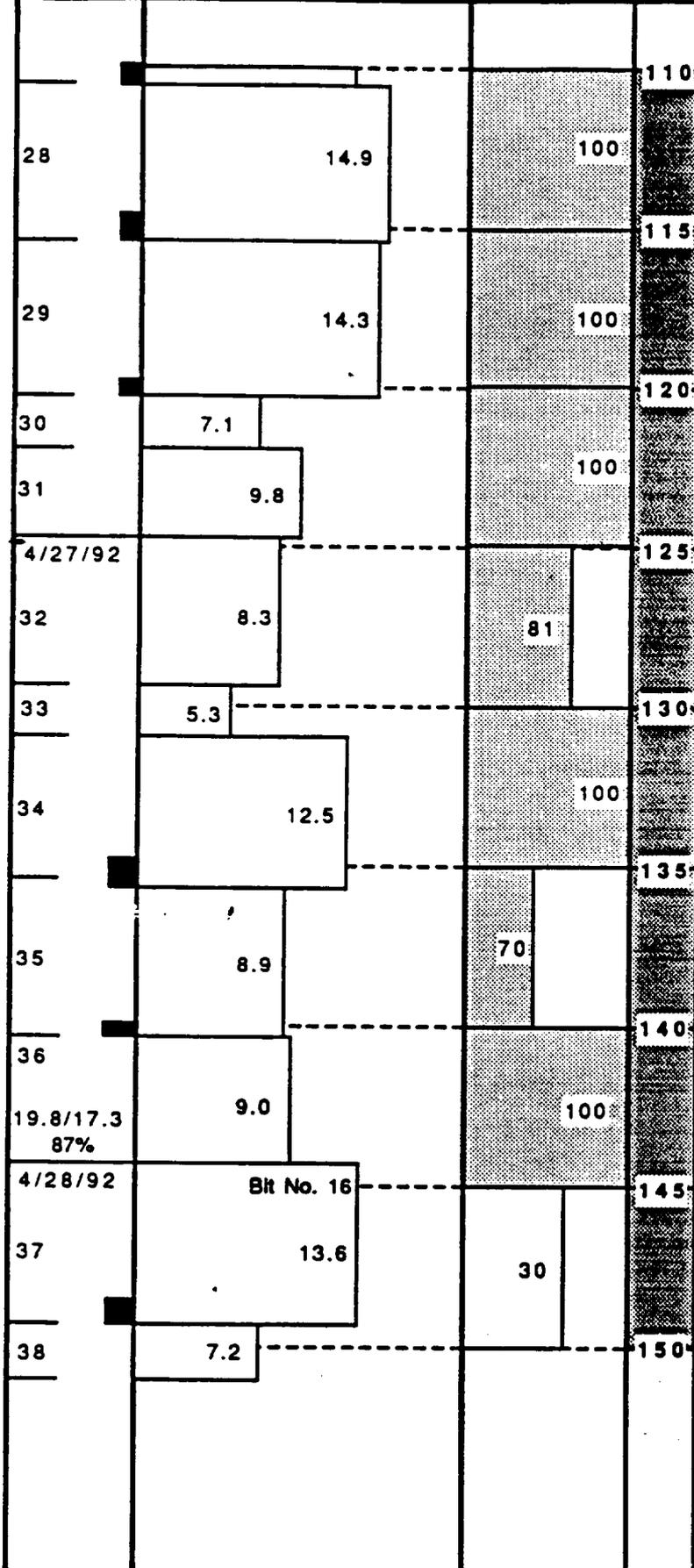


from 75.6 - 80.0, increase in size of lithophysae to 4 cm diameter

80.0 - 99.3 Tuff, ash flow; medium light grey, densely welded, devitrified; 2% phenocrysts of sanidine with minor biotite; 5% lithophysae with vapor-phase crystallization; rare white pumice with flattening ratios of 5:1; rare lithics

99.3 - 144.2 Tuff, ashflow; light gray, densely welded, devitrified; trace phenocrysts of sanidine and biotite; scattered pumice; scattered lithophysae with vapor-phase mineralization

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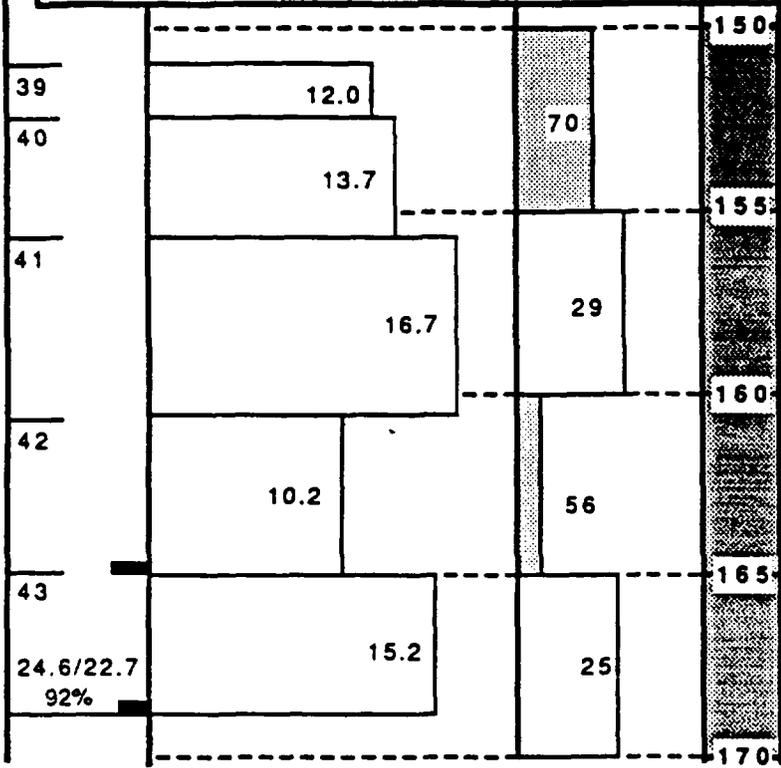


144.2 - 202.4 TD Tuff, ashflow; light brown-gray; minor biotite and sanidine phenocrysts; 5% pumice; some spherical lithophysae lined with vapor phase minerals

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
 PRELIMINARY FIELD COMPOSITE BOREHOLE LOG (cont.)

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**YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT
PRELIMINARY FIELD COMPOSITE BOREHOLE LOG (cont.)**

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4/29/92	25.2			170
45	20.0	50		175
46	13.0	100		180
47	9.7	70		185
48	15.8	12		190
49	11.0	80		195
50	17.6			200
51	21.4	100		
52	24.0	40		

TOTAL DEPTH @ 202.4 ft

Bit Information:

Bit No. 16: RR: L89739, 10 airways

Bit No. 22: 1S18321, 6 stones per carat, 8 airways

Bit No. 23: Stratapak, SN2522556, 1/4" - 5/16" PDC, 15 cutters, 20 stones per carat