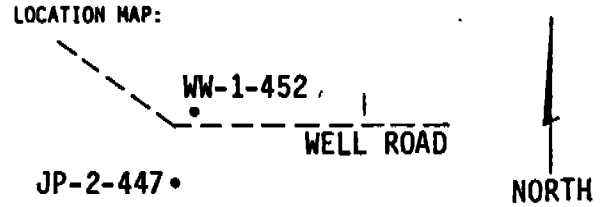
LITHOLOGIC LOG

LOCATION MAP:



SE 1/4 SE 1/4 SE 1/4 SE 1/4 S 31 T 20S R 3E

SITE ID: NASA-WSTF LOCATION ID: WW-1-452

SITE COORDINATES (ft.):

N 227994.74 E 397803.86

GROUND ELEVATION (ft. MSL): 4455.09 (BRASS CAP)

STATE: NEW MEXICO COUNTY: DOÑA ANA

DRILLING METHOD: AIR-FOAM ROTARY

DRILLING CONTR.: LARJON

DATE STARTED: 5 JANUARY 1988 DATE COMPLETED: 21 JANUARY 1988

FIELD REP.: COOPER, KASZUBA

COMMENTS: 7 7/8" PILOT HOLE 0'-100'. 14 1/2" BOREHOLE 0'-100'. 9 7/8" BOREHOLE 100'-488'. TOTAL DEPTH = 488'. TOP OF BEDROCK: NOT REACHED.

LOCATION DESCRIPTION:

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				0'-488' cuttings	0'-5' SURFICIAL SILTY CLAY Moderate orange pink (5YR 8/4) silty clay. Sample is silt-size powder.
5					5'-488' ALLUVIUM (Santa Fe Group) Unwashed sample is moderate orange pink (5YR 8/4). Washed sample has varied colors due to different lithologies of cuttings but has an overall color of medium gray (N5) to dark gray (N3). Average cutting size is 0.1 to 0.2 inches and ranges from 0.02 to 1.0 inches. Cuttings are mostly angular and blocky, with some flakes present, and are poorly sorted. The lithology is a poorly to moderately consolidated pebble to cobble conglomerate containing clasts of light gray (N7) to grayish black (N2) micritic limestone with < 10% allochems; white (N9) and red and white mottled rhyolite with iron staining; light olive gray (5Y 3/2) andesite with some pyroxene alteration to epidote; transparent bluish white (5B 9/1) to light bluish gray (5B 7/1) quartzite with cuttings containing iron staining; moderate reddish orange (10R 6/6) to moderate reddish brown (10R 4/6) granite; moderate red (5R 4/6) to moderate reddish brown (10R 4/6) siltstone (Abo); traces of light gray (N7) to grayish black (N2) chert; moderate orange pink (5YR 8/4) clay varying from < 10% to 50% of sample, clay often forms balls when samples are washed.
10			begin drillograph		
15			5		
20			3		
25			3		25'-30' Significant decrease in cutting size.
30			4		30'-50' Increase in cutting size.
35			3.5		
40			2.5		
45			3		
50			3		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description	
50	++++vvv:/=		3		50'-70'	Decrease in cutting size.
55	++++vvv:/=		7		55'-60'	Individual grains of epidote, probably crushed or broken up andesite cuttings.
60	+++vvv==:/		4			
65	+++vvv==:/		4			
70	+++vvv=:/o		5		70'-100'	Slight increase in cutting size.
75	vvv+++:/o=		3			
80	vvv+++:/o=		4.5			
85	vvv+++:/o=		3.5			
90	vvv+++:/o=		4.5			
95	vvv+++:/o=		4			
100	vvv+++:/o=		3.5			
105	vvv++:/o==		-		105'-235'	Clay content increases significantly.
110	vv+++:/o==		2.25			
115	vv+++:/o==		2.25			

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description	
115			2.25			
120			2.25			
125			2.25			
130			2.25		130'-140'	Decrease in average size of cuttings to ≤0.1 inches.
135			2.25			
140			2.25		140'-170'	Increase in average size of cuttings to 0.1-0.2 inches.
145			2.25			
150			2.25			
155			2			
160			2			
165			2			
170			2		170'-235'	Decrease in average size of cuttings to ≤0.1 inch.
175			2			
180			2			

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
180			2		
185			2		
190			2		
195			2		
200			2		
205			2		
210			2		
215			2.25		
220			2.25		
225			2.25		
230			2.25		
235			2		235'-250' Increase in average size of cuttings to 0.1-0.2 inches. Clay content decreases significantly.
240			2		
245			2		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
245			2		
250			2		250'-310' Samples collected at 10' intervals (poor circulation to surface).
					250'-390' Decrease in average size of cuttings to ≤0.1 inches, cuttings more angular. Alluvium either richer in cobbles and boulders or more consolidated.
255			1.75		
260			1.75		
265			1.75		
270			1.75		
275			2		
280			2		
285			3		
290			3		
295			2.5		
300			2.5		
305			2.5		
310			2.5		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
310			2.5		310'-485' Resume 5' sample interval.
315			3		
320			7.5		
325			6.5		
330			4		
335			4.5		
340			7.5		
345			9.5		
350			4		
355			2.5		
360			2.5		
365			6.5		
370			14.5		
375			6		

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Depth	Visual %	Lith	Drilling Time Scale:	Sample Type and Interval	Lithologic Description
375			6		
380			6		
385			7		
390			13		390'-488' Decrease in average size of cuttings to <0.1 inches, cuttings angular. Alluvium either richer in cobbles and/or boulders or more consolidated.
395			6		
400			17		
405			14		
410			10		
415			9		
420			9		
425			10		
430			6		
435			6		
440			7		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
440			7		440'-450' Penetration rates decrease significantly, pressure gauges suggest ground water encountered.
445			20		
450			20		
455			3		
460			8.5		
465			10.5		
470			7		
475			4		
480			12		
485			7		484'-488' Slough plugs bit, bit stuck.
					Total Depth = 488'.
490					
495					
500					
505					