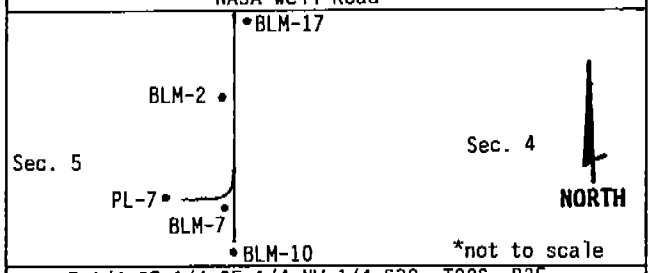
LITHOLOGIC LOG

LOCATION MAP:



SE 1/4 SE 1/4 SE 1/4 NW 1/4 S32 T20S R3E

SITE ID: NASA-WSTF LOCATION ID: PL-7 (Westbay Well)

SITE COORDINATES (ft.):

N 224176.88 E 402274.51

GROUND ELEVATION (ft. MSL): 4519.12 (BC)

STATE: NEW MEXICO COUNTY: DOÑA ANA

DRILLING METHOD: Air Foam Rotary

DRILLING CONTR.: Larjon Drilling Co.

DATE STARTED: 10-13-92 DATE COMPLETED: 12/17/92

FIELD REP.: Canavan, Menzie, Kirby, Egan, Contaldo

COMMENTS: Drilled mud rotary (9 7/8") and reamed (16½") 0'-80'. Installed 80' of 14" surface casing. Drilled 80'-804' with air foam 9 7/8" borehole. Reamed 80'-675' to 13". Alluvium 0'-804'. No bedrock encountered.

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
			Timed by driller	Cuttings 0'-804' every 5'	0'-804' Alluvium (Santa Fe Group): Color of washed samples is medium dark to dark gray (N3-N4). Unwashed samples are tan to reddish brown where color is imparted by the clay content. Cuttings range in size from .05" to .5" in diameter and average .10". Samples consist of both natural gravel to sand grains and cuttings broken from cobble and possibly boulder size materials. Cuttings are angular chips and flakes while gravels are rounded to subangular grains. The unit can be described as an unconsolidated to moderatley consolidated pebble to boulder conglomerate. Sedimentary rock types present are micritic limestone, brown limonitic fine-grained sandstone, grayish green to brick red laminated to non-laminated siltstone. Limestones dominate the upper section while volcanics increase in abundance with depth. Volcanic rock types present include grayish purple, white and gold rhyolite porphyries, greenish gray epidotized to reddish purple andesite porphyry, red to pink coarse grained granite, a variety of quartzite, and microcrystaline quartz and striated feldspar mineral fragments.
5			24		
10			10		
15			82		
20			44		
25			48		
30			44		
35			17		
40			65		
45			62		
50			40		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
50			40		
55			34		
60			16		
65			25		
70			49		
75			43		
80			50		80'-170' Cuttings are fine, and average ≤ .10" in diameter.
85			6		
90			4		
95			6		
100			6		
105			7		
110			15		
115			11		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
115			11		
120			18		
125			10		
130			7		
135			6		
140			10		
145			6		
150			6		
155			3		
160			4		
165			6		
170			4		
175			3		175'-195' Cuttings are becoming progressively rounded and larger in diameter.
180			3		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
180			3		
185			3		
190			3		
195			4		
200			3		200'-250' Cuttings range from .05"-.2" in diameter.
205			4		
210			3		
215			5		
220			4		
225			6		
230			3		
235			4		
240			3		
245			4		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
245			4		
250			4		250'-310' Cuttings are a uniform .10" in diameter and are subangular to subrounded.
255			8		
260			7		
265			12		
270			6		
275			14		
280			6		
285			7		
290			6		
295			7		
300			8		
305			7		305'-310' Andesite becomes apparent in sample.
310			13		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
310			13		310'-315' Cuttings up to .5" in diameter present in sample.
315			8		315'-340' Samples consist of rounded to subangular gravel grains .2"-.4" in diameter.
320			7		
325			7		325'-330' Andesite is becoming more prevalent in volcanic fraction. Light purplish gray hornblende andesite and dark red-purple andesite with prominent white plagioclase phenochrysts are present.
330			5		
335			6		
340			6		340'-385' Cutting size is less than 0.1" to 0.3" and average less than 0.1".
345			6		
350			5		
355			4		
360			7		
365			9		
370			10		
375			9		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
375			9		
380			11		
385			5		385'-460' Increase in average cutting size to 0.1". Cuttings are angular to subrounded.
390			8		
395			7		
400			8		
405			7		
410			9		
415			7		
420			7		
425			8		
430			6		
435			7		
440			6		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
440			6		
445			9		
450			4		
455			5		
460			8		460'-495' Cuttings are subangular to rounded formation grains .2" - .5" in diameter.
465			5		
470			5		
475			5		
480			5		
485			5		
490			7		
495			4		495'-510' Cuttings range from less than .1" to .4" in size and are angular to rounded.
500			6		
505			4		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
505			4		
510			6		510'-520' Formation gravel comprises cuttings. Grains are subangular to rounded and are .2"-.5" in diameter.
515			3		
520			4		
525			4		
530			6		
535			2		535'-540' Cuttings are .05"-.15" in diameter.
540			3		
545			3		
550			3		
555			3		
560			7		
565			6		565'-804' Volcanic-Rich Alluvium - Alluvium is volcanic-rich, comprised predominantly of greenish grey reddish purple and black andesite and andesite porphyry. A variety of rhyolites are also present.
570			4		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
570			4		
575			3		
580			2		
585			4		
590			4		590'-685' Cuttings range from < .1" - .5" in diameter.
595			5		
600			9		
605			10		
610			11		
615			5		
620			5		
625			6		
630			4		
635			5		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
635			5		
640			5		
645			5		
650			6		
655			4		
660			5		
665			3		
670			9		
675			10		
680			8		
685			14		
690			10		
695			16		
700			6		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
700			6		
705			5		
710			14		
715			16		
720			11		
725			14		
730			5		
735			8		
740			9		
745			9		
750			16		
755			17		
760			12		
765			5		

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Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
				Cuttings (cont'd)	
765			5		
770			2		
775			4		
780			4		
785			6		
790			4		
795			5		
800			13		
805					TD = 804'
810					
815					
820					
825					
830					