

NYE COUNTY NUCLEAR WASTE REPOSITORY PROJECT OFFICE

CUTTINGS SAMPLE LOG

Borehole ID: NC-GWE-PV-5 Drill Depth From: 0 to 200 Page: 1 of 2

Driller: Bill Nelson/Ray Wilson Start Date/Time: 05/20/2010 @ 0842 End Date/Time: 06/04/2010 @ 0935

Drilling Equip./Method: Ford Bucket/Auger and Speedstar 50k/Conventional Air-Foam Sampling Equip. Method: Auger to 19.6 ft/Cyclone from 19.6 to 200 ft.

DEPTH (FEET)	Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES
10	13	(0-200 ft) Clay (CL): Moderate yellowish-brown (10YR 5/4), no sand, no gravel, high plasticity, dense, reacts strongly to HCl acid, slightly moist, moderately hard at 0.5 ft.		Qal	Slightly moist from surface to 12 ft, drills easily.
	30	@ 7 ½ ft: Appearance of calcium carbonate cement. @ 10 ft: Clay changes color to yellowish-gray (5Y 8/1) and becomes softer.			Becomes softer.
	35	@ 12 ft: Moisture increases.			Moisture increases.
20	30	Stays the same.			Set surface casing at 20 ft.
	2	@ 20 ft: No gravels, no sand.			Drilling with air foam @ 19.6 ft. Fines will be lost in the foam, all samples will be wet.
	2				
30	2				
	1	@ 35 ft: Strongly cemented clay; 25% up to ¼ inch in size, some fragments are hard as caliche.			
	1				
40	3	@ 45 ft: Caliche fragments 2% up to ½ inch in size.			
	2				
	4				
50	2	@ 60 ft: Caliche fragments increase to 20%.			
	3	@ 65 ft: Caliche fragments decrease to <2%.			
	1	@ 70 ft: No caliche fragments, strongly cemented clay fragments (<5%) up to ¼ inch.			
60	2				
	3				
	4	@ 80 ft: Samples have strongly cemented clay fragments (±2%). This material is very uniform and the only visible changes are variations in the amount of strongly, cemented clay fragments all the way down to 200 ft (T.D.).			
70	4				
	4				
	2			Driller reports sandy layer at 99 ft.	
90	2		Qal		

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CONTINUATION

Borehole ID: NC-GWE-PV-5 Drill Depth From: 0 to 200 ft Page: 2 of 2

DEPTH (FEET)	Drilling Time (min/5 ft)	DESCRIPTION OF LITHOLOGY-PETROLOGY	GRAPHIC LOG	LITHOLOGIC UNIT	NOTES	
110	3			Qal		
	4					
120	3					
	4	@ 115 ft: 2% clay fragments.				
130	3					
	3	@ 125 ft: 1% clay fragments.				
140	4	@ 130 ft: 2% clay fragments.				
	2					
150	2					
	4					
160	2					
	3					
170	4					
	3	@ 170 ft: 1% clay fragments.				
180	2					
	2	@ 180 ft: 2% clay fragments.				
190	4					
	2	@ 190 ft: 1% clay fragments.				
200	2	TD			Qal	