

DRILLING LOG		DIVISION South Atlantic	INSTALLATION Howards Mill, N. C.	SHEET 1 OF 6 SHEETS
1. PROJECT Howards Mill Lake		10. SIZE AND TYPE OF BIT 1 3/8" ID. S.S. 4"x5 1/2"		
2. LOCATION (Coordinates or Station) Sta 29+77 33' RT Baseline Site 3		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY Mobile District		12. MANUFACTURER'S DESIGNATION OF DRILL Falling 314		
4. HOLE NO. (As shown on drawing title and file number) 3-8		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4
5. NAME OF DRILLER Bowden		14. TOTAL NUMBER CORE BOXES		11
6. DIRECTION OF HOLE <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		406.8 11 June 73
7. THICKNESS OF OVERBURDEN 13.5'		16. DATE HOLE		STARTED 11 June 73 COMPLETED 13 June 73
8. DEPTH DRILLED INTO ROCK 78.5'		17. ELEVATION TOP OF HOLE		420.0± Est.
9. TOTAL DEPTH OF HOLE 92.0'		18. TOTAL CORE RECOVERY FOR BORING 96 %		
		19. SIGNATURE OF INSPECTOR: Merritt Geologist: Siesen		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY Moisture	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc. if significant)	BLOWS PER FOOT g
			CL - Red & tan silty clay (Lab. Class. Samp. 1, CL)	9.6%	1	1 3/8" splitspoon to 13.5'	24
	5'		(" " " 3, CH)	17.0%	3		48
			(" " " 4, CL)	22.0%	4		65
	10'		(" " " 7, CL)	23.4%	7	Note: Scale change @ 10.0' Refusal @ 12.5'	33
	12'					Change to rock bit 12.5'-13.5'	27
393.3			ML - Gray silt w/decomposed rock			Change to 4"x5 1/2" Dia bit w/triple tube barrel @ 13.5' 52/0.5'	44
W.T. 13.2			TOP OF ROCK 12.5'				
6/11/73	14'		Volcanic wacke, saprolite, white to tan to pink, very soft heavy Mn staining, high quartz gravel content	79		Pull 1 13.5'-14.9' Run 1.4' Rec 1.1' CL 0.3' Core washed away	
	16'			Net	Box 1	Pull 2 14.9'-18.6' Run 3.7' Rec 3.4' CL 0.3'	
	18'			97		Carry over 0.2' to next pull 0.1' washed away	
NOTE: Soils field classified in accordance with the Unified Soil Classification System.			Continued on sheet 2	112		BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/140 lb. hammer falling 30".	

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE		Hole No.		
PROJECT		INSTALLATION		SHEET 2		
Howards Mill Lake		Howards Mill, N. C.		OF 6 SHEETS		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
a	b	c	d	e	f	g
	18'		Volcanic wacke saprolite, tan, soft w/quartz gravel		Box	Pull 2 Continued
	20'			100	1	Pull 3 18.6'-20.7' Run 2.1' Rec 2.3' CG 0.2' Pick up 0.2' from previous pull
	22'			91		Pull 4 20.7'-21.8' Run 1.1' Rec 1.0' CL 0.1'--washed away
	24'		Quartz gravel concentration	17		Pull 5 21.8'-24.2' Run 2.4' Rec 0.4' CL 2.0' soft core washed away
	26'		Tan w/white to gray zones, highly jointed w/close spaced high & low angle joints, Mn stained	95	2	Pull 6 24.2'-25.2' Run 1.0' Rec 1.0' CL 0.0' Pull 7 25.2'-27.2' Run 2.0' Rec 1.9' CL 0.1' Core washed away
	28'			100		Pull 8 27.2'-29.3' Run 2.1' Rec 2.1' CL 0.0'
	30'		Volcanic wacke, tan, very highly weathered, very badly broken, soft	100		Pull 9 29.3'-31.9' Run 2.6' Rec 2.6' CL 0.0'
	32'		Saprolite 29.3'-31.3' Saprolite 31.9'-33.9'		Box	
	34'			100	3	Pull 10 31.9'-34.9' Run 3.0' Rec 3.0' CL 0.0'
			Continued on sheet 3			

1 SHEETS
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23
rock
13.5'
27
44
5'
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Top washed

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE		Hole No.				
PROJECT		INSTALLATION		SHEET				
Howards Mill Lake		Howards Mill, N. C.		3 OF 6 SHEETS				
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
a	b	c	d	e	f	g		
	34'		Volcanic wacke, tan, very highly weathered badly broken w/45° & high & low angle joints, highly Mn stained, soft w/saprolite zones		Box	Pull 10 Continued		
				100	3	Pull 11 34.9'-35.7' Run 0.8' Rec 0.8' CL 0.0'		
	36'			96		Pull 12 35.7'-38.5' Run 2.8' Rec 2.7' CL 0.1'		
						Loss due to washing, core barrel inner sleeve not used below 35.7'		
	40'			93	4	Pull 13 38.5'-42.5' Run 4.0' Rec 3.7' CL 0.3' Loss due to washing		
	42'					Pull 14 42.5'-43.4' Run 0.9' Rec 0.9' CL 0.0'		
	44'					Pull 15 43.4'-47.9' Run 4.5' Rec 4.5' CL 0.0'		
	46'							
	48'							
	50'							
						100	Box	
					Soft to moderately hard	98	5	Pull 16 47.9'-52.0' Run 4.1' Rec 4.0' CL 0.1' Loss due to washing
					Continued on sheet 4			

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE		420.0±		Hole No. 3-8			
PROJECT			INSTALLATION			SHEET 4			
Howards Mill Lake			Howards Mill, N. C.			OF 6 SHEETS			
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)			
a	b	c	d	e	f	g			
368.6	50'		Volcanic wacke, tan, highly weathered, soft, very badly broken	98	Box 5	Pull 16 Continued			
	52'		TOP OF FIRM ROCK 51.4' Volcanic wacke, conglomeratic gray-green, aphanitic w/many rounded clasts 1/4" to 1/2", bedding thin--irregular--about 30°, moderately weathered, hard to very hard		100	Box 6	Pull 17 52.0'-55.2' Run 3.2' Rec 3.2' CL 0.0'		
	54'		Badly broken, highly weathered 54.2'-56.3' and 58.3'-61.2' soft	Pull 18 55.2'-56.3' Run 1.1' Rec 1.1' CL 0.0'					
	56'			Pull 19 56.3'-59.3' Run 3.0' Rec 3.0' CL 0.0'					
	58'			100					
	60'			100			Pull 20 59.3'-62.9' Run 3.6' Rec 3.4' CL 0.2'		
	62'			94			Box 7	0.2' washed away	
	64'			100		Box 8	Pull 21 62.9'-66.4' Run 3.5' Rec 3.5' CL 0.0'		
66'			100						
			From 65.8', gray, moderately hard & weathered						
			Continued on sheet 5						

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE 420.0±		Hole No. 3-8		
PROJECT Howards Mill Lake			INSTALLATION Howards Mill, N. C.		SHEET 5 OF 6 SHEETS	
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	66'	△	Volcanic wacke, gray, aphanitic to coarse grained, moderately weathered, moderately hard, badly broken w/20°-45° joints, Mn stained	100	Box 8	Pull 21 Continued
	68'	△				Pull 22 66.4'-70.1' Run 3.7' Rec 3.7' CL 0.0'
	70'	△	ML silt 73.0' to 73.1'	100		Pull 23 70.1'-74.7' Run 4.6' Rec 4.6' CL 0.0'
	72'	△				
	74'	△	Volcanic wacke, conglomeratic gray, aphanitic to very coarse grained, clasts up to 2", slightly to moderately weathered	100	Box 9	Pull 24 74.7'-83.5' Run 8.8' Rec 8.8' CL 0.0'
	76'	△	Badly broken & shattered 74.7'-77.0' w/ML silt layers			
342.0	78'	△	Volcanic wacke, gray, aphanitic to medium grained, bedding about 30°, quartz stringers along bedding, slightly to moderately weathered to 78.0'	100	Box 10	Pull 25 83.5'-92.0' Run 8.5' Rec 8.5' CL 0.0'
	80'	△	TOP OF SOUND ROCK 78.0' Slightly weathered below 78.0', machine breaks & 30° angle partings on bedding slightly stained			
	82'	△	Continued on sheet 6			

DRILLING LOG (Cont Sheet)		ELEVATION TOP OF HOLE		Hole No.		
PROJECT		INSTALLATION		SHEET		
Howards Mill Lake		Howards Mill, N. C.		6 OF 6 SHEETS		
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
a	b	c	d	e	f	g
	82'	△ △	Volcanic wacke, gray, aphanitic to medium grained, bedding about 30°, quartz stringers along bedding, slightly weathered to fresh, moderately hard to hard		Box	Pull 25 Continued
	84'	△ △			10	
	86'	△ △	High angle joint intersecting 2 low angle joints @ 86.3' & 86.7', very slightly Fe stained	100	Box	
	88'	△ △			11	
	90'	△ △				
328.0	* 92'	△ △	Bottom of cored hole 92.0' Bottom of logged hole 92.0'			

ROBBINS, NC (7.5' QUAD)
N352915-W793431



MD-C-1-73

MD-C-2-73

1456

1462

1419

1496

1474

1479

1470

1479

1478

BR 345

1470

Bellview Ch

Creek

DEEP

RIVER

CREEK

BEAR

Sewage Disposal

Collins Chapel

North Moore Sch

Pleasant Hill Ch

Buffalo

Cem

Sandpit

TRAIL

JEEP

BM 399

437

450

428

BM 470

368

476

478

465

450

300

350

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