Hole No. INSTALLATION DIVISION DRILLING LOG OF 4 SHEETS South Atlantic Howards Mill. N. 10. SIZE AND TYPE OF BIT 1 3/8" ID S.S. 4"x5 1/2"

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

Dia Bit PROJECT Howards Mill Lake LOCATION (Coordinates or Station) Site 2 MSL 12. MANUFACTURER'S DESIGNATION OF DRILL Sta 3+06 5' LT Baseline Failing 314 Mobile District
HOLE NO. (As shown on drawing title and file number) UNDISTURBED DISTURBED 13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 14. TOTAL NUMBER CORE BOXES S. NAME OF DRILLER 15. ELEVATION GROUND WATER 379.3 Parker 22 April STARTED 6. DIRECTION OF HOLE 16. DATE HOLE 23 March 73 19 March 73 VERTICAL DINCLINED 17. ELEVATION TOP OF HOLE 395.3 7. THICKNESS OF OVERBURDEN 28.0' 18. TOTAL CORE RECOVERY FOR BORING 45.0' B DEPTH DRILLED INTO ROCK 19. SIGNATURE OF INSPECTOR : Merritt 9. TOTAL DEPTH OF HOLE 73.0' Geologist : Siesen REMARKS
(Drilling time, water lose, depth of weathering, etc., if eignificant)
20 40 60 80 100 S CORE CLASSIFICATION OF MATERIALS BOX OR ELEVATION DEPTH LEGEND NO. Maismire CL - Red & tan silty clay (SAD Lab. Class. Samp. 1, CH) 24.1% 1 Undisturbed sample 2.0'-4.0' ML - Tan & gray silt w/decomposed rock 10' -(SAD Lab. Class. Samp. 2, ML) 22.2% Undisturbed sample 10.0'-11.5' 15' V.T. 16.b' 19.6% 4/22/73 (SAD Lab. Class. Samp. 3, ML) 20' (SAD Lab. Class. Samp. 4, MH) 18.5% Change to 4"x5 1/2" core barrel 25' @ 28.0' 50/0.5 88/0.5 TOP OF ROCK 28.0' 367.3 Sericite schist, light Pull 1 28.0'-32.2' Box 36 gray, fine grained Run 4.2' Rec 1.5' 1 Continued on sheet 2 BLOWS PER FOOT: Number required to drive 1 3/8" ID splitspoon w/140 lbs. hammer falling 30". NOTE: Soils field classified in accordance with the Unified Soil Classification System. 66

	roc	(Cont S	heet) ELEVATION TOP OF HOLE	5.3			Hole No. 2-3	
Hows	ards M	ill Lal	ce	INSTALLATION HOWARDS MILL, N. C. SHEET 2 OF 4 SHEET				
LEVATION	DEPTH	LEGEND	CLASSIFICATION OF	MATERIALS		BOX OR SAMPLE NO.		
a	30' =		Sericite schist, tan to gray, fine grained, near horizontal bedding, highly weathered, soft, badly broken on bedding planes				Pull 1 Continued CL 2.7' Core washed away Note: Scale change @ 30.0' Pull 2 32.2'-35.4' Run 3.2' Rec 2.9' CL 0.3' Core washed away 33.5'-33.9' to SAD Lab	
			Light gray, slightly weathered below 32.2'		91	Box 1		
	36'		Very soft, badly from 32.2' to 43.		100		Pull 3 35.4'-38.3' Run 2.9' Rec 2.9' CL 0.0'	
	38'				0			
							Pull 4 38.3'-41.8' Run 3.5' Rec 3.5' CL 0.0'	
	40'_				100	Box 2		
	42'_		Soft to moderately slightly to moderately weathered		100		Pull 5 41.8'-43.7' Run 1.9' Rec 1.9' CL 0.0'	
351.6	=	1/1/1/1	TOP OF FIRM ROCK	43.7'	1			
	44'		Soft on bedding pomoderately hard as bedding, 30° angle	cross	100	Box 3	Pull 6 43.7'-46.5' Run 2.8' Rec 2.8' CL 0.0'	
	-	724	Continued on shee	67				

RILLING	LOG	(Cont S	heet) ELEVATION TOP OF HOLE			Hole No.	2-3
Howard:	- M411	Leke	INSTALLATION Howards	M111. N	c.		SHEET 3
ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)		BOX OR SAMPLE NO.	(Drilling time, w	ARKS pater loss, depth of ,, if significant)
-	46' -	18.10	Sericite schist, light gray	7. 100	ſ	Pull 6 Conti	nued
	48'		fine grained, 30° bedding, slightly weathered, moderately hard across bedding, soft on bedding planes, broken on bedding (machine breaks), 0.2'-0.5' pieces of core	Net 87	Box 3	Pull 7 46.5' Run 4.5' Rec CL 0.8' 0.6' Ground 0.2' Carry c next pull	2 3.7'
	52!			100	Вох	Pull 8 51.0' Run 3.2' Rec CL 0.0' Pick up 0.2' previous pul Carry over (next pull	from
	56'_			96	4	Pull 9 54:2' Run 4.6' Rec CL 0.2' Pick up 0.2' previous pul 0.2' Ground Carry over 0	from
	58 <u>' -</u>			Te		next pull	
	60'			96	Box 5	Pull 10 58.8 Run 4.5' Rec CL 0.2' Pick up 0.2' previous pul 0.2' ground	from .1
	=		Continued on sheet 4				
	Ξ		68				

ELEVATION TOP OF HOLE 395.3 DRILLING LOG (Cont Sheet) Hole No. INSTALLATION SHEET 4 PROJECT Howards Mill, N. C. OF 4 SHEETS Howards Mill Lake % CORE BOX OR SAMPLE NO. REMARKS CLASSIFICATION OF MATERIALS (Drilling time, water loss, depth of weathering, etc., if significant) ELEVATION DEPTH LEGEND (Description) 62' Pull 10 Continued Sericite schist, gray, fine 96 Carry over 0.2' to grained, 30° bedding, siliceous layers on bedding next pull Box planes, slightly weathered Pull 11 63.3'-68.0' to fresh, soft to very hard, Run 4.7' Rec 4.7' broken on bedding planes CL 0.0' (0.1'-0.5' pieces) Pick up 0.2' from Net previous pull 100 Carry over 0.2' to next pull 67.5'-68.0' to SAD Lab 68' Box Pull 12 68.0'-73.0' Run 5.0' Rec 5.0' 6 CL 0.0' Left 0.2' in hole Net 96 Fresh, hard w/many machine breaks (0.1'-0.8 pieces of core) w/some vertical Box machine breaks 7 322.3 Bottom of drilled hole 73.0' Bottom of logged hole 72.8' 69

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TABLE __ Classification of material, mineral composition, and texture description and remarks regarding petrographic testing.

246/1 Hole 1-3 35.3-35.6 ft. depth	Phyllite	30 Sericite 30 Quartz 20 Chlorite 10 Kaolinite 5 Feldspar 3 Pyrite 2 Other	Silvery grey, satin lustered, foliated, fine grained, fresh, phyllite. Chlorite, sericite, and cryptocrystal line quartz bands occur parallel to shearing. Pyrite disseminations and local lensoid units, parallel to schistosity range up to 3mm size and constitute the largest grain size.
35.3-35.6 ft. depth		20 Chlorite 10 Kaolinite 5 Feldspar 3 Pyrite	line quartz bands occur parallel to shearing. Pyrite disseminations and local lensoid units, parallel to schistosity range up to 3mm size and constitute the
ft. depth		10 Kaolinite 5 Feldspar 3 Pyrite	disseminations and local lensoid units, parallel to schistosity range up to 3mm size and constitute the
		5 Feldspar 3 Pyrite	schistosity range up to 3mm size and constitute the
		3 Pyrite	
			largest grain size.
246/2	Meta-Felsite	25 Quartz	Yellowish-greenish grey, cataclastic textured, altered
Hole 1-6	Tuff	25 Epidote	fesite tuff. Epidote is a widespread alteration pro-
42.2-42.7	(Cataclasite)	20 Sericite	duct of feldspar phenocrysts and imparts the yellowish
ft. depth		20 Chlorite	color to the rock. Granulated epidote and relic feld-
			spar particles are rotated with "augen" structure.
			Local lensoid units of quartz are highly granulated
		2 Other	with crush trails. Chlorite and sericite are highly sheared and foliated in the groundmass.
246/3	Sericite	40 Sericite	Silvery grey, very fine grained, foliated, soft,
Hole 2-3	Schist	20 Chlorite	schistose sericite schist. The rock is highly sheared
33.5-33.9		10 Kaolinite	parallel to schistosity. Trace smounts of pyrophyllite
ft. depth		18 Quartz	occurs locally along slickenside surfaces. Pyrite
			occurs as disseminations and in local discontinuous
			stringers parallel to schistosity.
	42.2-42.7 ft. depth 246/3 Hole 2-3	Hole 1-6 42.2-42.7 ft. depth 246/3 Hole 2-3 33.5-33.9 Tuff (Cataclasite) Sericite Schist	Hole 1-6 42.2-42.7 (Cataclasite) 20 Sericite 21 Chlorite 5 Feldspar 3 Calcite 2 Other 246/3 Sericite 40 Sericite Hole 2-3 33.5-33.9 Label Cataclasite) 10 Kaolinite

Project Howards Mill Lake, N. C. Reg'n No. __SAMEO-75-189 W.O. NO. __8097_

