

PROJECT NUMBER 334469.SA.FE BORING NUMBER

SB-5

SHEET 1 of

3

SOIL BORING LOG

DRILLING CONTRACTOR: Prosonic/Boart Longyear NAME OF DRILLER: J. Asua DRILLING METHOD/EQUIPMENT: SR 120 Track-Mounted Rotasonic SIZE/TYPE OF BIT: 4X6" OVERBURDEN THICKNESS: DEPTH DRILLED INTO ROCK N/A TOTAL DEPTH OF BORING: 88 ft-bgs	PROJEC	PROJECT : Memphis Depot - Microcasm Study LOCATION : Memphis, Tennessee ELEVATION:							
DRILLING METHODIC COUPLINET: SITE TASK									
DEPTH DELLED INTO ROCK NA									
DEPTH ELCOY SURFACE T	OVERBL								
SAMPLE NITERIAL_(FT) PENETRATION TEST ATTYPE ATTYPE ATTYPE ATTYPE ATTAINS ATTYPE ATTAINS ATTYPE ATTAINS ATTYPE ATTAINS ATTAINS									
						SOIL DESCRIPTION	COMMENTS		
### PITYPE REBUIL'S MOSITURE CONTENT, RELATIVE DENSITY, DRILLING FUNDERS, AND INTRUMENTATION.		SAMPLE INT							
0-3									
10				#/TYPE					
10									
10 _ 8-13					(IV)	WIINERALOGT.	РІБ (рріп)		
10 _ 8-13	_								
10 _ 8-13	_	0-3	0/3	C-1	N/A	No Recovery	Ν/Δ		
10	_								
10	_						_		
10							_		
10	₅ –						_		
10 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15 18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0 16 18-23 3.8 / 5 C-6 N/A SILT, brown, dry 0.0 17 18-23 3.8 / 5 C-6 N/A SILT, brown, dry 0.0 17 18-23 3.8 / 5 C-7 N/A SILT, brown, dry 3.1 17 18 18 18 18 18 18 18 18 18 18 18 18 18	5 —		- / -	0.0	21/2		_		
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15		3-8	5/5	0-2	N/A	SILT, brown, dry	0.0		
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15	-						-		
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15	_								
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15	_						-		
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15]		
- 8-13 5 / 5 C-3 N/A SILT, brown, dry 0.0 15	10						_		
15 _	10	0.40	E / E	0.0	N1/A		-		
20 _		8-13	5/5	C-3	N/A	SILT, brown, dry	0.0		
20 _	_						-		
20 _	_								
20 _	_						_		
20 _	_]		
20 _	15 -						_		
20 _	13	10.10	- / -	0.4	21/2		_		
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	_	13-18	5/5	C-4	N/A	SILT, brown, dry	0.0		
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	_						_		
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	_								
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	_						-		
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	_								
18-23 3.8 / 5 C-5 N/A SILT, brown, dry 0.0	20 -						-		
25 _ 23-28		10.00	20/5	C E	NI/A		_		
25 _	_	10-23	3.6 / 3	U-5	IN/A	SILT, brown, dry	0.0 _		
23-28 3.9 / 5 C-6 N/A SILT, brown, dry 3.1 SILT, brown, dry SILT, brown, dry SILT, brown, dry 10.0 Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 0.0 SANDY SILT, reddish brown,									
23-28 3.9 / 5 C-6 N/A SILT, brown, dry 3.1 SILT, brown, dry SILT, brown, dry SILT, brown, dry 10.0 Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 0.0 SANDY SILT, reddish brown,	_						_		
23-28 3.9 / 5 C-6 N/A SILT, brown, dry 3.1 SILT, brown, dry SILT, brown, dry SILT, brown, dry 10.0 Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 0.0 SANDY SILT, reddish brown,	_						1		
23-28 3.9 / 5 C-6 N/A SILT, brown, dry 3.1 SILT, brown, dry SILT, brown, dry SILT, brown, dry 10.0 Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 0.0 SANDY SILT, reddish brown,]		
23-28 3.9 / 5 C-6 N/A SILT, brown, dry 3.1 SILT, brown, dry SILT, brown, dry SILT, brown, dry 10.0 Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 0.0 SANDY SILT, reddish brown,	25 -								
SILT, brown, dry SILT, brown, dry SILT, brown, dry SILT, brown transitioning to reddish brown, moist Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained	_	23-28	39/5	C-6	N/A	0117			
30	_	20 20	5.5 / 5		13//1	SIL I , Drown, dry	3.1		
30	_]		
30	_						-		
30	_								
28-33 4 / 5 C-7 N/A SILT, brown transitioning to reddish brown, moist 10.0 — Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 35 — 33-38 3.8 / 5 C-8 N/A	_					SILT, brown, dry]		
28-33 4 / 5 C-7 N/A SILT, brown transitioning to reddish brown, moist 10.0 — Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained SANDY SILT, reddish brown, fine grained 35 — 33-38 3.8 / 5 C-8 N/A	30 -						┨		
Transition begins @ 32 feet bgs SANDY SILT, reddish brown, fine grained	_	28-33	4/5	C-7	N/A	Oll T. Is assess to a self-self-self-self-self-self-self-self-			
SANDY SILT, reddish brown, fine grained	_	_0 00	., 5		1,7,1	SIL1, prown transitioning to reddish brown, moist	10.0		
						Transition begins @ 32 feet bgs			
35 _ 33-38 3.8 / 5 C-8 N/A 0.0	_					SANDY SILT, reddish brown, fine grained	-		
35 _ 33-38 3.8 / 5 C-8 N/A 0.0	_						-		
35 0.0						SANDY SILT, reddish brown, fine grained]		
	35 -	33-38	3.8 / 5	C-8	N/A		0.0		
	_					SANDY SILT, reddish brown, fine grained			
	_						_		



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SHEET 2 of

SOIL BORING LOG

PROJECT : Memphis Depot - Microcasm Study LOCATION : Memphis, Tennessee ELEVATION:						
DRILLING CONTRACTOR: Prosonic/Boart Longyear NAME OF DRILLER: J. Asua						
DRILLING METHOD/EQUIPMENT: SR 120 Track-Mounted Rotasonic SIZE/TYPE OF BIT : 4X6"						
OVERBURDEN THICKNESS :					D INTO ROCK N/A	TOTAL DEPTH OF BORING : 88 ft-bgs
WATER LEVELS: XXX ft-bgs			as		6 / END: 12/19/06	LOGGER: David Nelson (ATL)
	ELOW SURFA		,	STANDARD	SOIL DESCRIPTION	COMMENTS
	SAMPLE INT	ERVAL (F1)	PENETRATION		
		RECOVER	,	TEST	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
			#/TYPE	RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
				6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
				(N)	MINERALOGY.	FID (ppm)
_					CILTY CAND fine grained	_
_	33-38	3.8 / 5	C-8	N/A	SILTY SAND, fine grained	0.0
						5.5
_					SILTY SAND, brownish red, fine grained	-
_						-
40					SILTY SAND, brownish red, fine grained	
_	38-43	2.3 / 5	C-9	N/A		0.0
_					SAND, reddish yellow to light yellow, fine grained, well sorted	0.0
_						_
_					@42 feet bgs, with pebbles	-
_						_
_					CAND File II G	_
45 -					SAND, light yellow, fine grained, well sorted With pebbles, subangular	-
TO	40.40	4 / 5	0.40	NI/A	with pebbles, subangulai	_
_	43-48	1/5	C-10	N/A		0.0
-						-
_					SAND, tan transitioning to dark yellow, medium grained	_
_					Poorly sorted, with pebbles (10%), subangular	-
_						-
					SAND, dark yellow, fine to medium grained, with pebbles	
50						
_	48-53	2/5	C-11	N/A	SAND, fine to coarse grained, reddish yellow, poorly sorted	0.0
_					With 20% pebbles (< 1/2 inch width), subangular	_
-					SAND, fine grained, light yellow, well sorted	-
_					orano, into granica, light yellow, well sorted	
_					SAND, fine to medium grained, light yellow, well sorted	-
-						-
55					SAND, fine to medium grained, light yellow, well sorted	_
_	53-58	4/5	C-12	N/A		0.0
_					@ 56 feet bgs, three inch GRAVELLY SAND layer	0.0
_					SAND, fine to medium grained, yellow, well sorted	_
_					@ 57 feet bgs, four inch SANDY GRAVEL layer (1/4 to 1 in) SAND, fine to medium grained, golden yellow, well sorted	-
		1			SAND, fine to medium grained, light brownish yellow, well	
_					sorted, with pebbles, subangular	_
60 -						-
	58-63	3/5	C-13	N/A		
_	30-03	3/5	0-13	IN/A	SAND, fine to medium grained, brownish yellow, poorly sorted	0.0
_					With pebbles, subangular	-
_						
_					SAND, fine to coarse grained, light brown / white, poorly	_
_					sorted, with pebbles, subangular	-
o					·	_
65						-
_	63-68	3.8 / 5	C-14	N/A		4.7
_					SAND, fine to coarse grained, light brown / white, poorly]
_					sorted, with pebbles, subangular	
_		<u></u>				
_						_
_	68-73	3.7 / 5	C-15	N/A	SAND, fine to coarse grained, yellowish red, poorly sorted	2.4
70					With pebbles (1/2 to 1 1/2 inch width), subangular	



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SOIL BORING LOG

PROJECT : Memphis Depot - Microcasm Study LOCATION : Memphis, Tennessee ELEVATION:						
				Prosonic/Boart Longyear		NAME OF DRILLER : J. Asua
DRILLING CONTRACTOR : DRILLING METHOD/EQUIPMENT:				SR 120 Track-Mounted Rotasonic		SIZE/TYPE OF BIT : 4X6"
OVERBURDEN THICKNESS :				DEPTH DRILLED INTO ROCK N/A		TOTAL DEPTH OF BORING : 88 ft-bgs
	LEVELS :			START: 12/19/06 / END: 12/19/06		LOGGER: David Nelson (ATL)
	ELOW SURFA		<i>y</i> -	STANDARD	SOIL DESCRIPTION	COMMENTS
	SAMPLE INT	. ,)	PENETRATION		
		RECOVER		TEST	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
			#/TYPE	RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
				6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
				(N)	MINERALOGY.	FID (ppm)
- - - -	68-73	3.7 / 5	C-15	N/A	SAND, fine to medium grained, reddish yellow to golden Poorly sorted, with pebbles (decreasing with depth), subangular	2.4
 75 <u></u> 	73-78	3.6 / 5	C-16	N/A	SAND, fine grained, tan to golden, well sorted SAND, fine grained, brownish red, well sorted	13.2
80 - - - - -	78-83	4.8 / 5	C-17	N/A	SAND, fine grained, brownish red, well sorted @ 80 feet bgs, with pebbles SAND, fine to coarse grained, yellow, with pebbles, subangular WATER TABLE @ 81 FEET BGS	Not recorded No FID below water table
85 - - 85 - - -	83-88	5/5	C-18	N/A	SAND, fine to coarse grained, brownish yellow With pebbles, subangular SAND, fine to coarse grained, brownish yellow CLAY (@ 85 feet bgs) Light gray with hints of light yellow, stiff, plastic, wet BORING TERMINATED @ 88.0 FEET BGS.	- - - - - - - -