

<b>DRILLING LOG</b>		<b>DIVISION:</b> South Atlantic	<b>INSTALLATION:</b> Jacksonville District	<b>SHEET</b> 1 of 1
<b>1. PROJECT</b>		DELRAY BEACH		
<b>2. LOCATION</b>		(Coordinates or Station) X= 965937 Y= 766926		
<b>3. DRILLING AGENCY:</b>		ALPINE SEISMIC		
<b>4. HOLE NO.</b>		(As shown on drawing title and file number) DB-99-26		
<b>5. NAME OF DRILLER</b>		ROB SUSKO		
<b>6. DIRECTION OF HOLE</b>		VERTICAL		
<b>7. THICKNESS OF BURDEN</b>		0.0 FT		
<b>8. DEPTH DRILLED INTO ROCK</b>		0.0 FT		
<b>9. TOTAL DEPTH OF HOLE</b>		18.1' FT		
<b>10. SIZE AND TYPE OF BIT</b>		3"		
<b>11. DATUM FOR ELEVATION SHOWN</b>		(TBM or MSL) NGVD		
<b>12. MANUFACTURER'S DESIGNATION OF DRILL</b>		ALPINE PNEUMATIC		
<b>13. TOT NO. OF OVERBURDEN SAMPLES TAKEN</b>		disturbed: 0.0 undisturbed: 0.0		
<b>14. TOTAL NO. OF CORE BOXES</b>		1		
<b>15. ELEVATION GROUND WATER</b>				
<b>16. DATE HOLE</b>		Started Completed 4/20/99 4/20/99		
<b>17. ELEVATION TOP OF HOLE</b>		-47.8ft.		
<b>18. TOTAL CORE RECOVERY FOR BORING</b>		99%		
<b>19. SIGNATURE OF GEOLOGIST</b>		IBRAHIM DREMALI		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-47.8	0		SAND, fine grained, trace shell hash, Gray (5Y-6/1) (SP)			SP
	1				1	Sample #1, Depth = 1.0' 0.23 mm, 0.76 phi sorting 1.35% silt
-50.3	2					
	3					
	4					
	5					
	6		fine-grained, trace shell hash, Gray (5Y-6/1) (SP) from -50.3' to -57.3'		2	Sample #2, Depth = 7.0' 0.21 mm, 0.67 phi sorting 1.5% silt
	7					
	8					
-57.3	9					
	10		fine-grained, trace shell hash, Gray (5Y-6/1) (SP) from -57.3' to -59.5'		3	Sample #3, Depth = 10.5' 0.33 mm, 0.87 phi sorting 0.98% silt
-59.5	11					
	12					
	13					
	14		fine-grained, trace shell hash, Gray (5Y-6/1) (SP) from -59.5' to -65.9'		4	Sample #4, Depth = 14.0' 0.20 mm, 0.62 phi sorting 2.28% silt
	15					
	16					
-65.9	17					
	18		End of Boring			
	19					
	20					
	21					
	22					
	23					
	24					

Note: Soils are classified in accordance with the Unified Soils Classification System.

PROJECT: Delray Beach

HOLE NUMBER:

GRADATION ANALYSIS REPORT  
DELRAY BEACH VIBRACORES 1999  
TESTED BY: RW ON: 8/99

SAMPLE NO.: DB99-26#1  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 1.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 112.23  
SAMPLE WEIGHT AFTER WASH (GRAMS): 110.78

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.00	16.000	0.00	0.00	100.00
5/16	-3.00	8.000	0.00	0.00	100.00
5	-2.00	4.000	0.08	0.07	99.93
7	-1.50	2.800	0.17	0.15	99.85
10	-1.00	2.000	0.34	0.30	99.70
14	-0.50	1.400	0.85	0.76	99.24
18	0.00	1.000	1.70	1.51	98.49
25	0.50	0.710	3.98	3.55	96.45
35	1.00	0.500	9.45	8.42	91.58
45	1.50	0.355	18.44	16.43	83.57
60	2.00	0.250	42.29	37.68	62.32
80	2.50	0.180	76.87	68.49	31.51
120	3.00	0.125	104.23	92.87	7.13
170	3.50	0.090	110.68	98.62	1.38
200	3.75	0.075	110.72	98.65	1.35
230	4.00	0.063	111.46	99.31	0.69
PAN			112.20	99.97	0.03

PHI(5): 0.65	PHI(16): 1.47	PHI(25): 1.70
PHI(50): 2.20	PHI(75): 2.63	PHI(84): 2.82
PHI(95): 3.19		

SIEVE LOSS(g): 0.03	SILT/CLAY: 1.35%
SKEWNESS: -0.420	KURTOSIS: 1.115

GRAPHIC METHOD

MEAN (PHI): 2.07	SORTING: 0.67
MEAN (mm): 0.24	MEDIAN (mm): 0.22
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD	

MOMENT METHOD

MEAN (PHI): 2.09	SORTING: 0.76
MEAN (mm): 0.23	

DATA FILE NAME: DB99-26#1.TAB

GRADATION ANALYSIS REPORT  
DELRAY BEACH VIBRACORES 1999  
TESTED BY: RW ON: 8/99

SAMPLE NO.: DB99-26#2  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 7.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 99.70  
SAMPLE WEIGHT AFTER WASH (GRAMS): 98.28

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.00	16.000	0.00	0.00	100.00
5/16	-3.00	8.000	0.00	0.00	100.00
5	-2.00	4.000	0.12	0.12	99.88
7	-1.50	2.800	0.18	0.18	99.82
10	-1.00	2.000	0.37	0.37	99.63
14	-0.50	1.400	0.59	0.59	99.41
18	0.00	1.000	0.99	0.99	99.01
25	0.50	0.710	1.49	1.49	98.51
35	1.00	0.500	3.77	3.78	96.22
45	1.50	0.355	10.67	10.70	89.30
60	2.00	0.250	29.71	29.80	70.20
80	2.50	0.180	63.07	63.26	36.74
120	3.00	0.125	92.94	93.22	6.78
170	3.50	0.090	98.07	98.37	1.63
200	3.75	0.075	98.20	98.50	1.50
230	4.00	0.063	98.96	99.26	0.74
PAN			99.68	99.98	0.02

PHI(5): 1.09 PHI(16): 1.64 PHI(25): 1.87  
PHI(50): 2.30 PHI(75): 2.70 PHI(84): 2.85  
PHI(95): 3.17

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.50%  
SKEWNESS: -0.284 KURTOSIS: 1.040

GRAPHIC METHOD

MEAN (PHI): 2.21 SORTING: 0.60  
MEAN (mm) : 0.22 MEDIAN (mm): 0.20  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.22 SORTING: 0.67  
MEAN (mm) : 0.21

DATA FILE NAME: DB99-26#2.TAB

GRADATION ANALYSIS REPORT  
DELRAY BEACH VIBRACORES 1999  
TESTED BY: RW ON: 8/99

SAMPLE NO.: DB99-26#3  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 10.5  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 97.38  
SAMPLE WEIGHT AFTER WASH (GRAMS): 96.45

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.00	16.000	0.00	0.00	100.00
5/16	-3.00	8.000	0.00	0.00	100.00
5	-2.00	4.000	0.10	0.10	99.90
7	-1.50	2.800	0.21	0.22	99.78
10	-1.00	2.000	0.97	1.00	99.00
14	-0.50	1.400	2.39	2.45	97.55
18	0.00	1.000	4.49	4.61	95.39
25	0.50	0.710	8.86	9.10	90.90
35	1.00	0.500	20.88	21.44	78.56
45	1.50	0.355	41.36	42.47	57.53
60	2.00	0.250	64.64	66.38	33.62
80	2.50	0.180	83.78	86.03	13.97
120	3.00	0.125	94.53	97.07	2.93
170	3.50	0.090	96.36	98.95	1.05
200	3.75	0.075	96.43	99.02	0.98
230	4.00	0.063	96.91	99.52	0.48
PAN			97.38	100.00	0.00

PHI(5): 0.04 PHI(16): 0.78 PHI(25): 1.08  
PHI(50): 1.66 PHI(75): 2.22 PHI(84): 2.45  
PHI(95): 2.91

SIEVE LOSS(g): 0.00 SILT/CLAY: 0.98%  
SKEWNESS: -0.219 KURTOSIS: 1.034

GRAPHIC METHOD

MEAN (PHI): 1.57 SORTING: 0.83  
MEAN (mm): 0.34 MEDIAN (mm): 0.32  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.59 SORTING: 0.87  
MEAN (mm): 0.33

DATA FILE NAME: DB99-26#3.TAB

GRADATION ANALYSIS REPORT  
DELRAY BEACH VIBRACORES 1999  
TESTED BY: RW            ON: 8/99

SAMPLE NO.: DB99-26#4  
SAMPLE ELEV. (FT. NGVD): -  
SAMPLE DEPTH (FT.): 14.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 93.77  
SAMPLE WEIGHT AFTER WASH (GRAMS): 91.67

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.00	16.000	0.00	0.00	100.00
5/16	-3.00	8.000	0.00	0.00	100.00
5	-2.00	4.000	0.00	0.00	100.00
7	-1.50	2.800	0.09	0.10	99.90
10	-1.00	2.000	0.26	0.28	99.72
14	-0.50	1.400	0.43	0.46	99.54
18	0.00	1.000	0.68	0.73	99.27
25	0.50	0.710	1.23	1.31	98.69
35	1.00	0.500	2.67	2.85	97.15
45	1.50	0.355	6.34	6.76	93.24
60	2.00	0.250	21.53	22.96	77.04
80	2.50	0.180	55.81	59.52	40.48
120	3.00	0.125	86.00	91.71	8.29
170	3.50	0.090	91.52	97.60	2.40
200	3.75	0.075	91.63	97.72	2.28
230	4.00	0.063	92.71	98.87	1.13
PAN			93.77	100.00	0.00

PHI(5): 1.27            PHI(16): 1.79            PHI(25): 2.03  
PHI(50): 2.37            PHI(75): 2.74            PHI(84): 2.88  
PHI(95): 3.28

SIEVE LOSS(g): 0.00            SILT/CLAY: 2.28%  
SKEWNESS: -0.169            KURTOSIS: 1.153

GRAPHIC METHOD

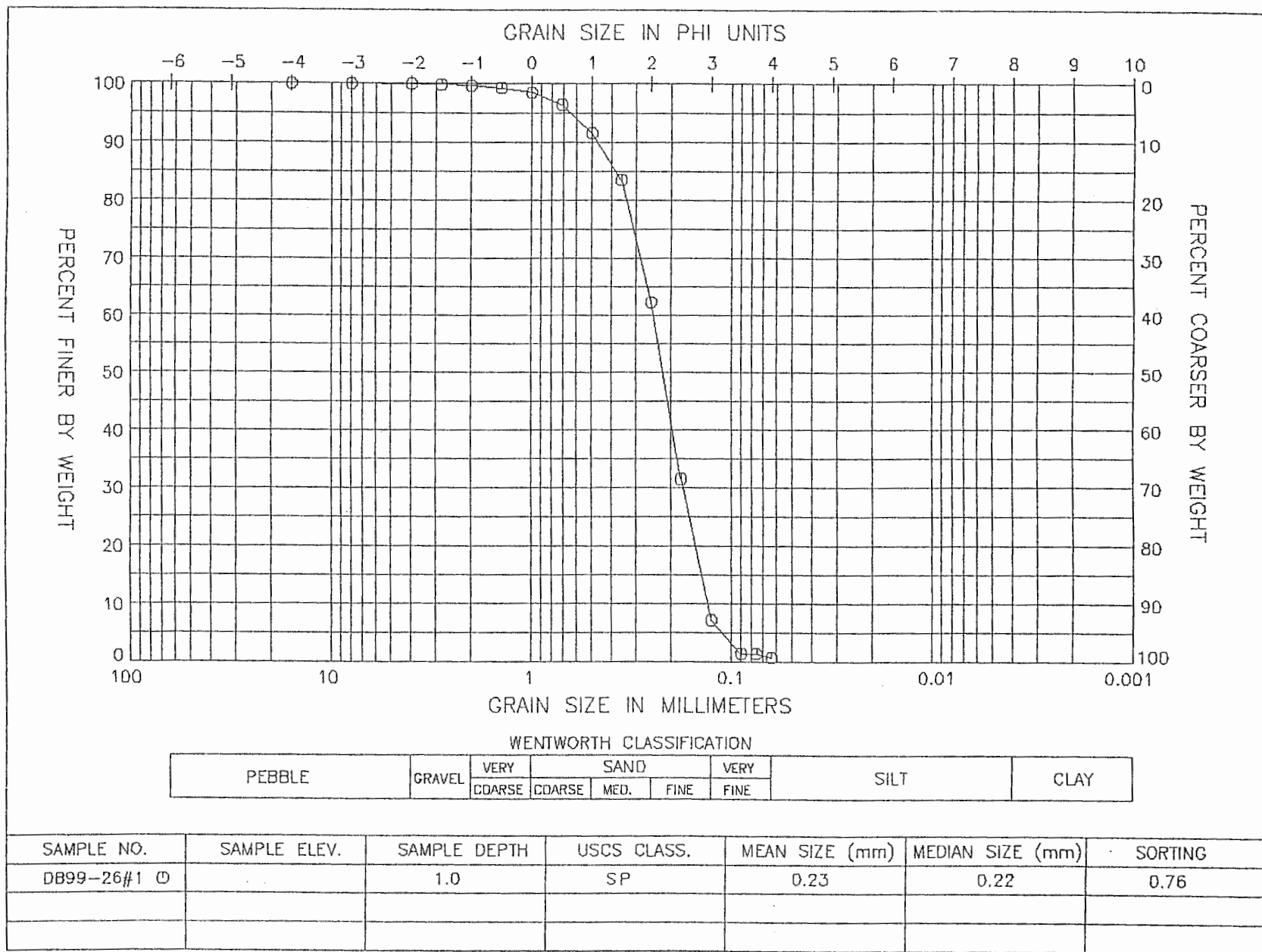
MEAN (PHI): 2.32            SORTING: 0.55  
MEAN (mm) : 0.20            MEDIAN (mm): 0.19  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.31            SORTING: 0.62  
MEAN (mm) : 0.20

DATA FILE NAME: DB99-26#4.TAB

GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE IN PHI UNITS

PERCENT FINER BY WEIGHT

PERCENT COARSER BY WEIGHT

GRAIN SIZE IN MILLIMETERS

WENTWORTH CLASSIFICATION

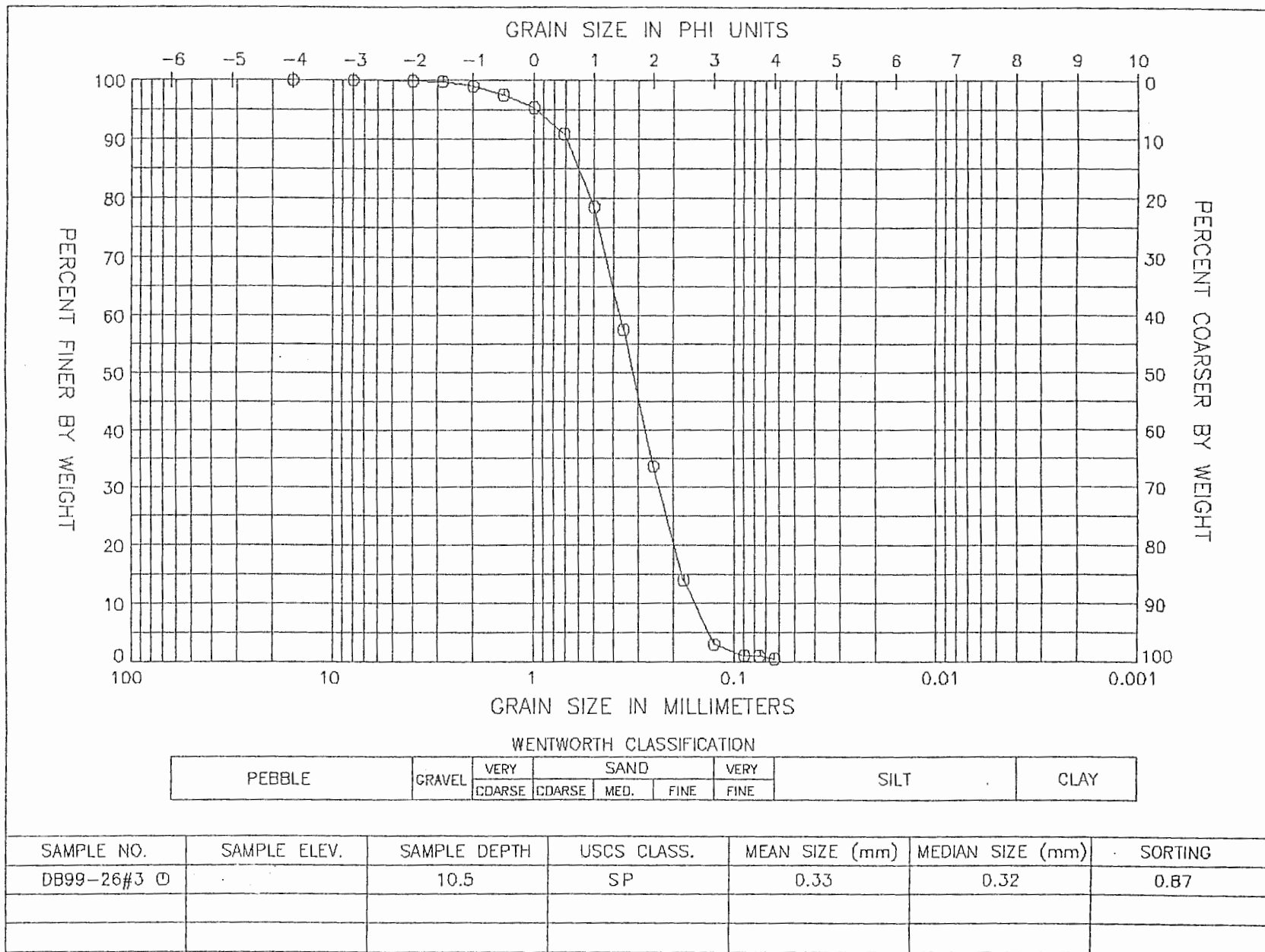
PEBBLE	GRAVEL	SAND				SILT	CLAY
		VERY COARSE	COARSE	MED.	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-26#2 $\odot$		7.0	SP	0.21	0.20	0.67

PEBBLE	GRAVEL	VERY	SAND			VERY	SILT	CLAY
		COARSE	COARSE	MED.	FINE	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-26#2 ①		7.0	SP	0.21	0.20	0.67

GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999





GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999

