

<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>10. SIZE AND TYPE OF BIT</b> 3"		
<b>2. LOCATION</b> (Coordinates or Station) X= 9681778 Y= 778679		<b>11. DATUM FOR ELEVATION SHOWN</b> (TBM or MSL) NGVD		
<b>3. DRILLING AGENCY:</b> ALPINE SEISMIC		<b>12. MANUFACTURER'S DESIGNATION OF DRILL</b> ALPINE PNEUMATIC		
<b>4. HOLE NO.</b> (As shown on drawing title and file number) DB-99-16		<b>13. TOT NO. OF OVERBURDEN SAMPLES TAKEN</b> disturbed: 0.0 undisturbed: 0.0		
<b>6. NAME OF DRILLER</b> ROB SUSKO		<b>14. TOTAL NO. OF CORE BOXES</b> 1		
<b>6. DIRECTION OF HOLE</b> VERTICAL		<b>16. ELEVATION GROUND WATER</b>		
<b>7. THICKNESS OF BURDEN</b> 0.0 FT		<b>16. DATE HOLE</b> Started Completed 4/20/99 4/20/99		
<b>8. DEPTH DRILLED INTO ROCK</b> 0.0 FT		<b>17. ELEVATION TOP OF HOLE</b> -55 ft.		
<b>9. TOTAL DEPTH OF HOLE</b> 18.3' FT		<b>18. TOTAL CORE RECOVERY FOR BORING</b> 96%		
		<b>19. SIGNATURE OF GEOLOGIST</b> IBRAHIM DREMALI		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS		
-55	0					SP		
	1		SAND, fine grained, trace shell hash, <1" whole shell at -64.3', Gray (5Y-6/1) (SP)		1	Sample #1, Depth = 2.0' 0.16 mm, 0.46 phi sorting 1.42% silt		
	2						2	Sample #2, Depth = 6.0' 0.16 mm, 0.49 phi sorting 1.42% silt
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10						3	Sample #3, Depth = 10.0' 0.12 mm, 0.57 phi sorting 2.0% silt
	11							
	12							
	13							
	14						4	Sample #4, Depth = 14.0' 0.16 mm, 0.59 phi sorting 2.52% silt
	15							
-71	16							
	17		fine-grained, trace shell hash, Light Gray (5Y-7/1) (SP) from -71.0' to -73.3'		5	Sample #5, Depth = 17.0' 0.18 mm, 0.66 phi sorting 2.11% silt		
-73.3	18							
	19		End of Boring					
	20							
	21							
	22							
	23							
	24							

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

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

SAMPLE NO.: DB99-16 S#1  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 2.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 219.99  
SAMPLE WEIGHT AFTER WASH (GRAMS): 217.08

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	0.07	0.03	99.97
7	-1.50	2.800	0.09	0.04	99.96
10	-1.00	2.000	0.17	0.08	99.92
14	-0.50	1.400	0.28	0.13	99.87
18	0.00	1.000	0.57	0.26	99.74
25	0.50	0.710	0.97	0.44	99.56
35	1.00	0.500	1.83	0.83	99.17
45	1.50	0.355	3.81	1.73	98.27
60	2.00	0.250	12.39	5.63	94.37
80	2.50	0.180	55.18	25.08	74.92
120	3.00	0.125	183.89	83.59	16.41
170	3.50	0.090	216.39	98.36	1.64
200	3.75	0.075	216.86	98.58	1.42
230	4.00	0.063	218.40	99.27	0.73
PAN			219.97	99.99	0.01

PHI (5): 1.92            PHI (16): 2.27            PHI (25): 2.50  
PHI (50): 2.71        PHI (75): 2.93            PHI (84): 3.01  
PHI (95): 3.39

SIEVE LOSS (g): 0.02            SILT/CLAY: 1.42%  
SKEWNESS: -0.162                KURTOSIS: 1.403

GRAPHIC METHOD

MEAN (PHI): 2.66                                SORTING: 0.37  
MEAN (mm) : 0.16                                MEDIAN (mm): 0.15  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.66                                SORTING: 0.46  
MEAN (mm) : 0.16

DATA FILE NAME: DB99-16#1.TAB

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

SAMPLE NO.: DB99-16 S#2  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 6.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 181.49  
SAMPLE WEIGHT AFTER WASH (GRAMS): 179.12

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	0.04	0.02	99.98
7	-1.50	2.800	0.19	0.10	99.90
10	-1.00	2.000	0.31	0.17	99.83
14	-0.50	1.400	0.50	0.28	99.72
18	0.00	1.000	0.70	0.39	99.61
25	0.50	0.710	1.06	0.58	99.42
35	1.00	0.500	1.89	1.04	98.96
45	1.50	0.355	3.42	1.88	98.12
60	2.00	0.250	11.15	6.14	93.86
80	2.50	0.180	53.30	29.37	70.63
120	3.00	0.125	150.78	83.08	16.92
170	3.50	0.090	178.69	98.46	1.54
200	3.75	0.075	178.91	98.58	1.42
230	4.00	0.063	180.20	99.29	0.71
PAN			181.48	99.99	0.01

PHI (5): 1.87                      PHI (16): 2.21                      PHI (25): 2.41  
PHI (50): 2.69                      PHI (75): 2.92                      PHI (84): 3.03  
PHI (95): 3.39

SIEVE LOSS (g): 0.01                      SILT/CLAY: 1.42%  
SKEWNESS: -0.160                      KURTOSIS: 1.202

GRAPHIC METHOD

MEAN (PHI): 2.64                      SORTING: 0.41  
MEAN (mm) : 0.16                      MEDIAN (mm): 0.15

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.64                      SORTING: 0.49  
MEAN (mm) : 0.16

DATA FILE NAME: DB99-16#2.TAB

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

SAMPLE NO.: DB99-16 S#3  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 10.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 156.13  
SAMPLE WEIGHT AFTER WASH (GRAMS): 153.41

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	0.01	0.01	99.99
7	-1.50	2.800	0.03	0.02	99.98
10	-1.00	2.000	0.26	0.17	99.83
14	-0.50	1.400	0.51	0.33	99.67
18	0.00	1.000	0.83	0.53	99.47
25	0.50	0.710	1.21	0.77	99.23
35	1.00	0.500	1.85	1.18	98.82
45	1.50	0.355	3.36	2.15	97.85
60	2.00	0.250	9.11	5.83	94.17
80	2.50	0.180	25.27	16.19	83.81
120	3.00	0.125	26.04	16.68	83.32
170	3.50	0.090	152.46	97.65	2.35
200	3.75	0.075	153.00	98.00	2.00
230	4.00	0.063	154.59	99.01	0.99
PAN			156.10	99.98	0.02

PHI(5): 1.89            PHI(16): 2.49            PHI(25): 3.05  
PHI(50): 3.21            PHI(75): 3.36            PHI(84): 3.42  
PHI(95): 3.48

SIEVE LOSS(g): 0.03            SILT/CLAY: 2.00%  
SKEWNESS: -1.126            KURTOSIS: 2.120

GRAPHIC METHOD

MEAN (PHI): 2.90            SORTING: 0.46  
MEAN (mm) : 0.13            MEDIAN (mm): 0.11  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 3.04            SORTING: 0.57  
MEAN (mm) : 0.12

DATA FILE NAME: DB99-16#3.TAB

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

SAMPLE NO.: DB99-16 S#4  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 14.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 174.32  
SAMPLE WEIGHT AFTER WASH (GRAMS): 170.88

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	0.15	0.09	99.91
10	-1.00	2.000	0.35	0.20	99.80
14	-0.50	1.400	0.67	0.38	99.62
18	0.00	1.000	1.08	0.62	99.38
25	0.50	0.710	1.79	1.03	98.97
35	1.00	0.500	3.26	1.87	98.13
45	1.50	0.355	5.94	3.41	96.59
60	2.00	0.250	16.00	9.18	90.82
80	2.50	0.180	47.35	27.16	72.84
120	3.00	0.125	131.22	75.28	24.72
170	3.50	0.090	169.18	97.05	2.95
200	3.75	0.075	169.92	97.48	2.52
230	4.00	0.063	171.98	98.66	1.34
PAN			174.32	100.00	0.00

PHI(5): 1.64            PHI(16): 2.19            PHI(25): 2.44  
PHI(50): 2.74            PHI(75): 3.00            PHI(84): 3.20  
PHI(95): 3.45

SIEVE LOSS(g): 0.00            SILT/CLAY: 2.52%  
SKEWNESS: -0.380            KURTOSIS: 1.335

GRAPHIC METHOD

MEAN (PHI): 2.64            SORTING: 0.51  
MEAN (mm) : 0.16            MEDIAN (mm): 0.15  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.65            SORTING: 0.59  
MEAN (mm) : 0.16

DATA FILE NAME: DB99-16#4.TAB

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

SAMPLE NO.: DB99-16 S#5  
SAMPLE ELEV. (FT. NGVD):  
SAMPLE DEPTH (FT.): 17.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 181.07  
SAMPLE WEIGHT AFTER WASH (GRAMS): 177.96

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	0.04	99.96
7	-1.50	2.800	0.26	0.14	99.86
10	-1.00	2.000	0.77	0.43	99.57
14	-0.50	1.400	1.39	0.77	99.23
18	0.00	1.000	2.20	1.21	98.79
25	0.50	0.710	3.30	1.82	98.18
35	1.00	0.500	5.43	3.00	97.00
45	1.50	0.355	10.42	5.75	94.25
60	2.00	0.250	27.14	14.99	85.01
80	2.50	0.180	70.42	38.89	61.11
120	3.00	0.125	156.38	86.36	13.64
170	3.50	0.090	176.76	97.62	2.38
200	3.75	0.075	177.25	97.89	2.11
230	4.00	0.063	179.02	98.87	1.13
PAN			181.05	99.99	0.01

PHI(5): 1.36                      PHI(16): 2.02                      PHI(25): 2.21  
PHI(50): 2.62                      PHI(75): 2.88                      PHI(84): 2.98  
PHI(95): 3.38

SIEVE LOSS(g): 0.02                      SILT/CLAY: 2.11%  
SKEWNESS: -0.511                      KURTOSIS: 1.234

GRAPHIC METHOD

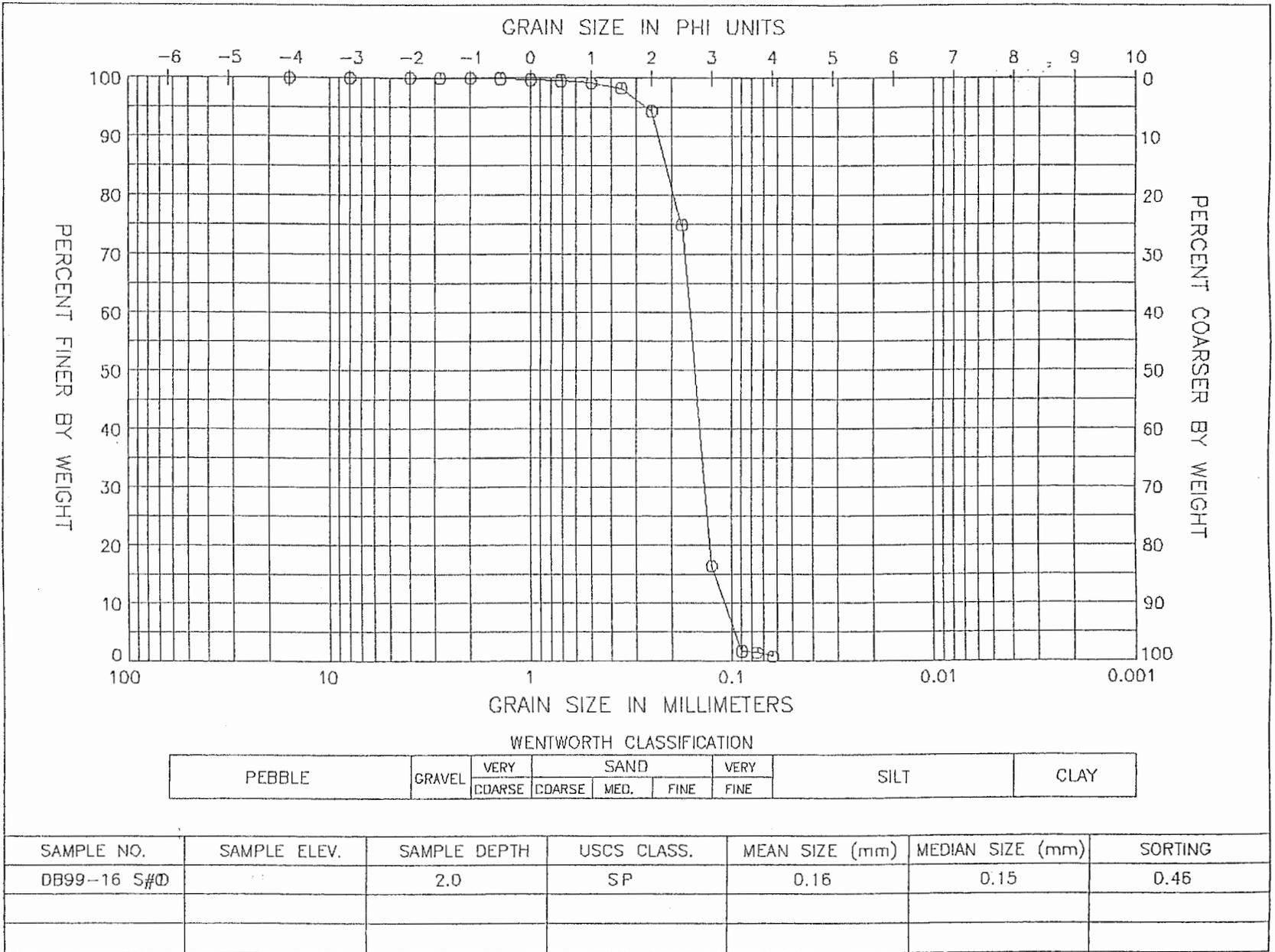
MEAN (PHI): 2.47                      SORTING: 0.48  
MEAN (mm) : 0.18                      MEDIAN (mm): 0.16  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

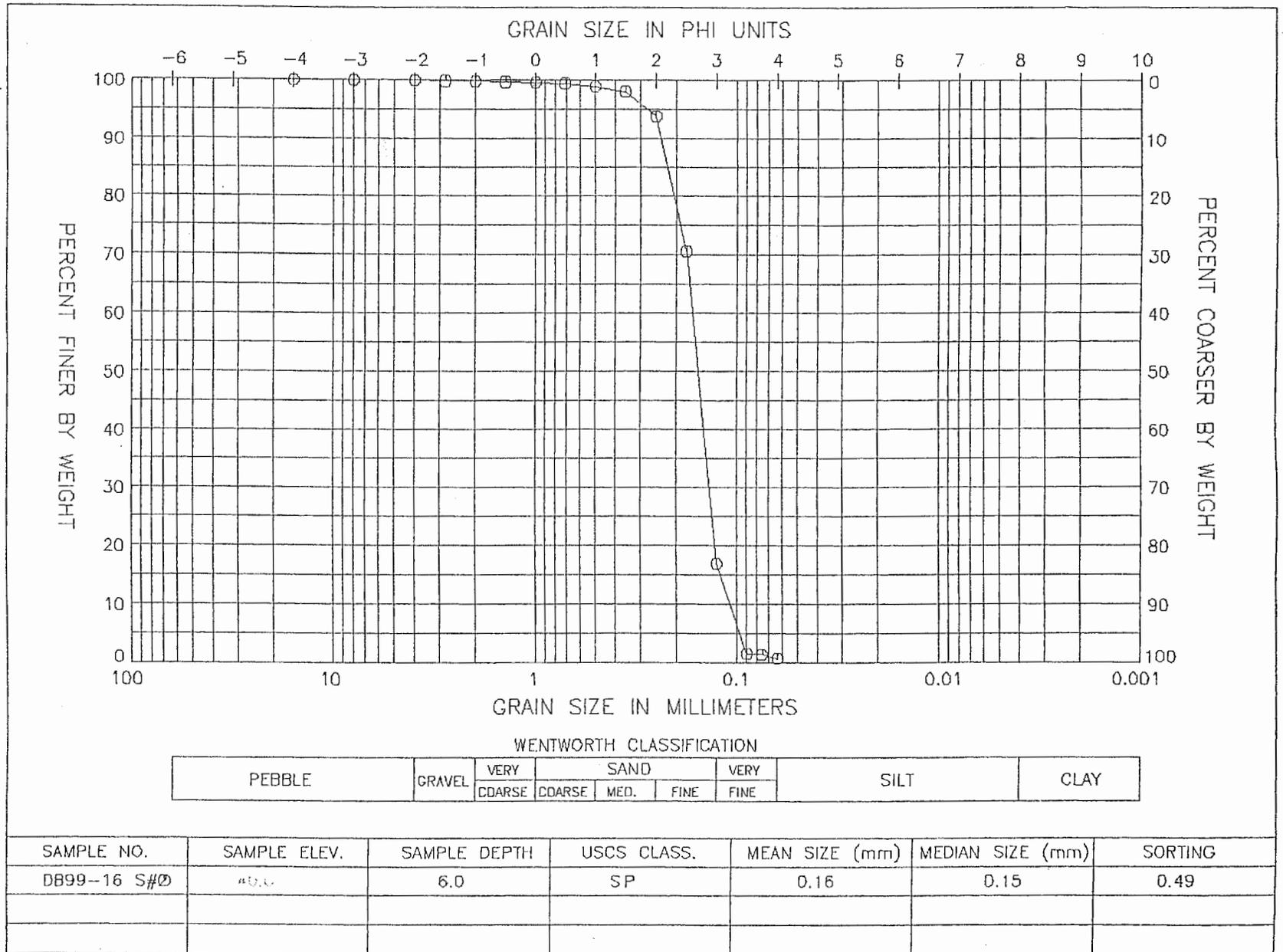
MEAN (PHI): 2.48                      SORTING: 0.66  
MEAN (mm) : 0.18

DATA FILE NAME: DB99-16#5.TAB

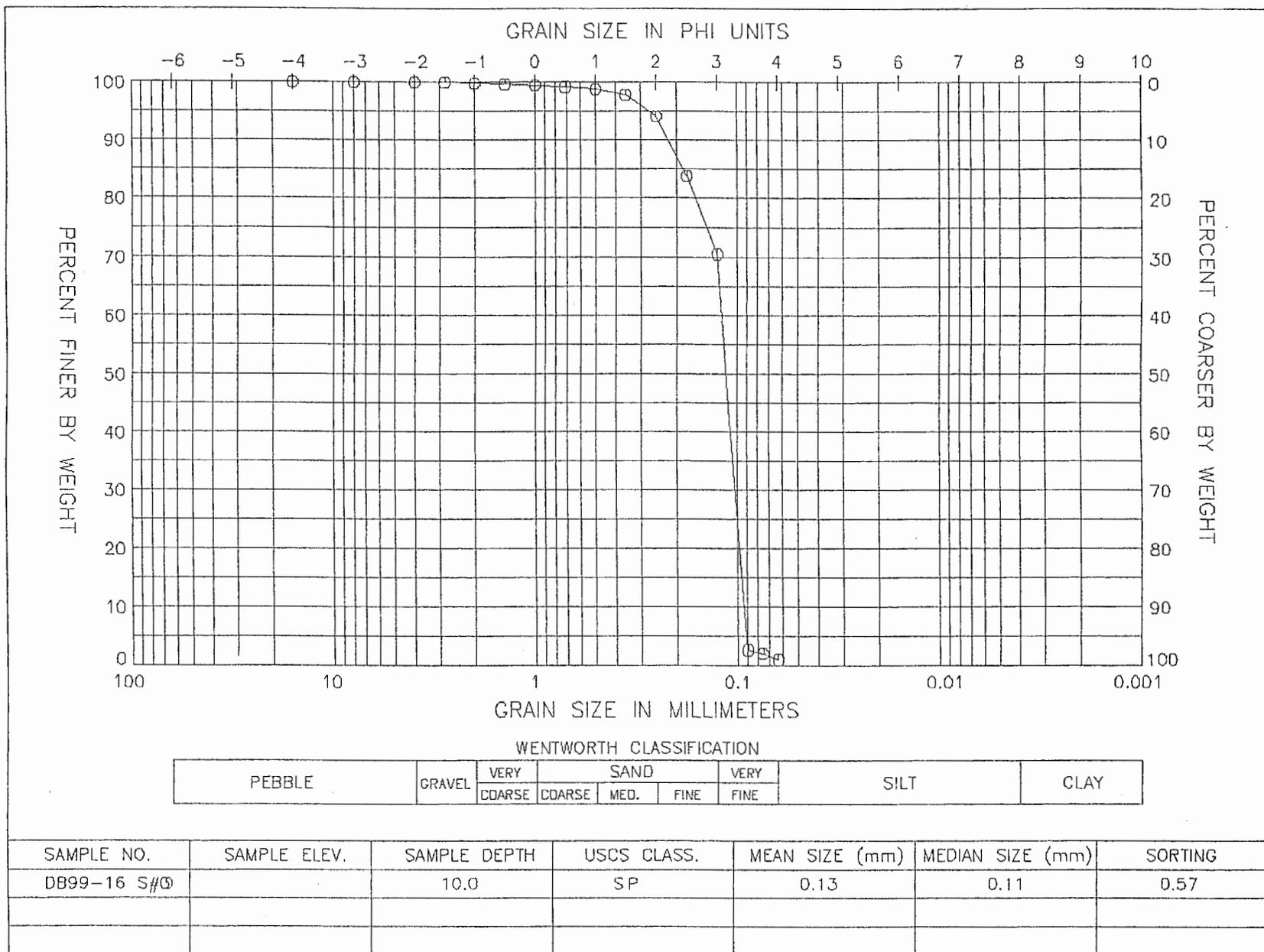
GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999



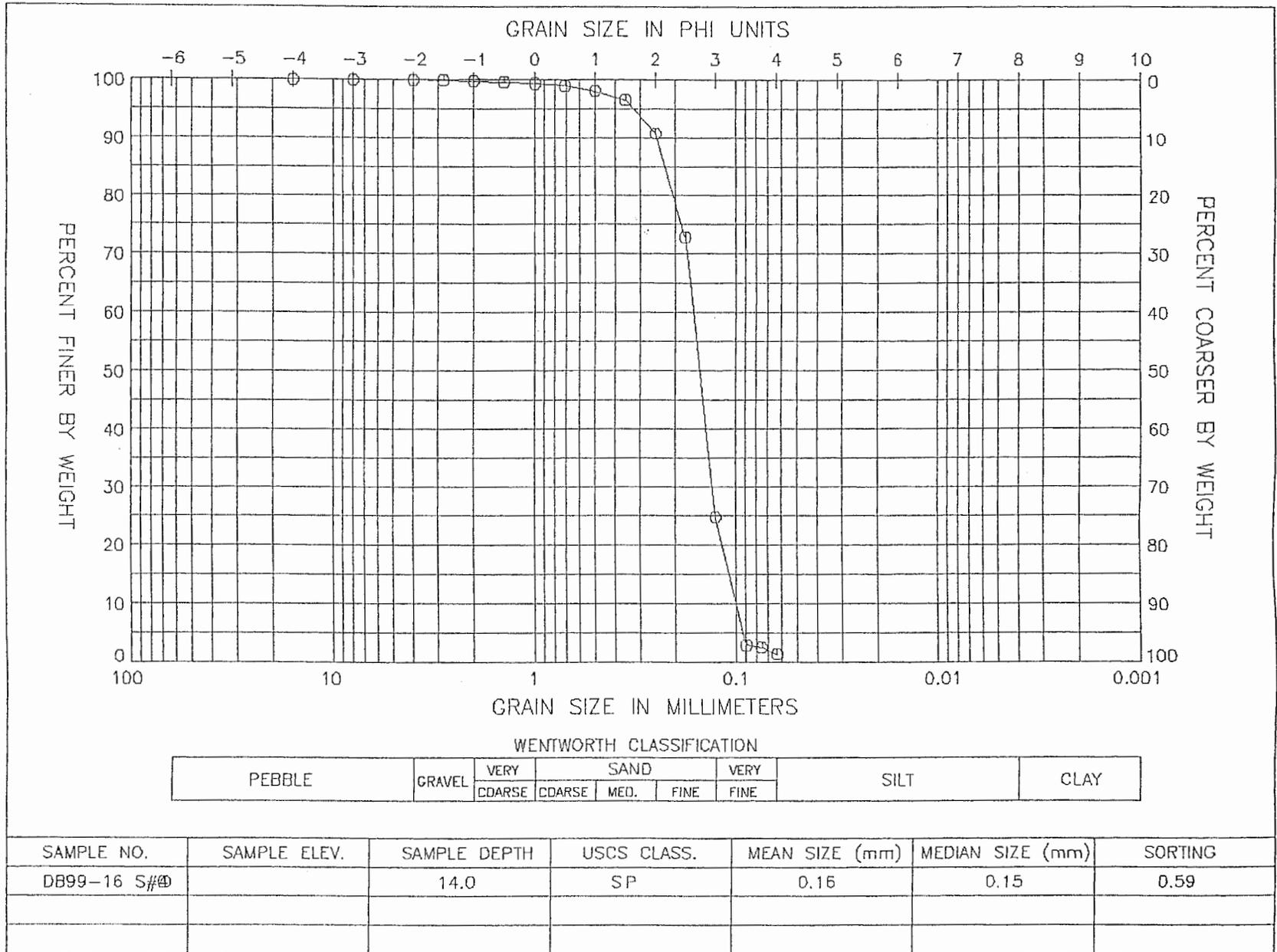
GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE  
 DELRAY BEACH VIBRACORES 1999

