

DRILLING LOG		DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT		DELRAY BEACH		
2. LOCATION		(Coordinates or Station) X=967,054 Y=778,460		
3. DRILLING AGENCY:		ALPINE SEISMIC		
4. HOLE NO.		(As shown on drawing title and file number) DB-99-2		
5. NAME OF DRILLER		ROB SUSKO		
6. DIRECTION OF HOLE		VERTICAL		
7. THICKNESS OF BURDEN		0.0 FT		
8. DEPTH DRILLED INTO ROCK		0.0 FT		
9. TOTAL DEPTH OF HOLE		18.4' FT		
10. SIZE AND TYPE OF BIT		3"		
11. DATUM FOR ELEVATION SHOWN		(TBM or MSL) NGVD		
12. MANUFACTURER'S DESIGNATION OF DRILL		ALPINE PNEUMATIC		
13. TOT NO. OF OVERBURDEN SAMPLES TAKEN		disturbed: 0.0 undisturbed: 0.0		
14. TOTAL NO. OF CORE BOXES		1		
15. ELEVATION GROUND WATER				
16. DATE HOLE		Started Completed 4/20/99 4/20/99		
17. ELEVATION TOP OF HOLE		-33.5 ft.		
18. TOTAL CORE RECOVERY FOR BORING		96%		
19. SIGNATURE OF GEOLOGIST		IBRAHIM DREMALI		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-33.5	0					SP
	1		SAND, fine-grained, little shell hash, Gray (5Y-5/1) (SP)		1	Sample #1, Depth = 1.0' 0.25 mm, 0.78 phi sorting 1.86% silt
-35.9	2					
-36.4	3		fine grained, trace shell hash, Gray (5Y-5/1) (SP) from -35.9' to -36.4'		2	Sample #2, Depth = 2.6' 0.21 mm, 0.67 phi sorting 2.33% silt
	4				3	Sample #3, Depth = 3.5' 0.25 mm, 0.75 phi sorting 1.74% silt
	5		fine-grained, trace shell hash, Gray (5Y-5/1) (SP) from -36.4' to -41.1'			
	6				4	Sample #4, Depth = 5.8' 0.22 mm, 0.71 phi sorting 1.47% silt
-41.1	7					
-42.1	8		fine-grained, trace shell hash, Gray (5Y-5/1) (SP) from -41.1' to -42.1'		5	Sample #5, Depth = 8.0' 0.30 mm, 0.84 phi sorting 1.07% silt
	9					
	10				6	Sample #6, Depth = 10.0' 0.24 mm, 0.81 phi sorting 1.10% silt
	11					
	12					
	13		fine-grained, trace shell hash, 0.5" coral fragment at 43.4', Gray (5Y-5/1) (SP) from -42.1' to -51.9'			
	14					
	15				7	Sample #7, Depth = 14.0' 0.23 mm, 0.62 phi sorting 1.16% silt
	16					
	17					
-51.9	18					
	19		End of Boring			
	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.: DB99-2 S#1
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 1.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 259.77
SAMPLE WEIGHT AFTER WASH (GRAMS): 255.01

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	0.17	0.07	99.93
7	-1.50	2.800	0.55	0.21	99.79
10	-1.00	2.000	1.69	0.65	99.35
14	-0.50	1.400	3.46	1.33	98.67
18	0.00	1.000	6.23	2.40	97.60
25	0.50	0.710	11.51	4.43	95.57
35	1.00	0.500	25.62	9.86	90.14
45	1.50	0.355	50.61	19.48	80.52
60	2.00	0.250	113.94	43.86	56.14
80	2.50	0.180	198.04	76.24	23.76
120	3.00	0.125	248.09	95.50	4.50
170	3.50	0.090	254.82	98.09	1.91
200	3.75	0.075	254.94	98.14	1.86
230	4.00	0.063	257.35	99.07	0.93
PAN			259.75	99.99	0.01

PHI(5): 0.55 PHI(16): 1.32 PHI(25): 1.61
PHI(50): 2.09 PHI(75): 2.48 PHI(84): 2.70
PHI(95): 2.99

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.86%
SKEWNESS: -0.470 KURTOSIS: 1.150

GRAPHIC METHOD

MEAN (PHI): 1.93 SORTING: 0.69
MEAN (mm): 0.26 MEDIAN (mm): 0.23
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.97 SORTING: 0.78
MEAN (mm): 0.25

DATA FILE NAME: DB99-2#1.TAB

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

SAMPLE NO.: DB99-2 S#2
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 2.6
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 260.71
SAMPLE WEIGHT AFTER WASH (GRAMS): 254.74

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	0.04	99.96
7	-1.50	2.800	0.24	0.09	99.91
10	-1.00	2.000	0.71	0.27	99.73
14	-0.50	1.400	1.60	0.61	99.39
18	0.00	1.000	2.81	1.08	98.92
25	0.50	0.710	5.44	2.09	97.91
35	1.00	0.500	11.46	4.40	95.60
45	1.50	0.355	23.06	8.85	91.15
60	2.00	0.250	67.41	25.86	74.14
80	2.50	0.180	161.31	61.87	38.13
120	3.00	0.125	239.63	91.91	8.09
170	3.50	0.090	254.34	97.56	2.44
200	3.75	0.075	254.64	97.67	2.33
230	4.00	0.063	257.66	98.83	1.17
PAN			260.68	99.99	0.01

PHI(5): 1.07 PHI(16): 1.71 PHI(25): 1.97
PHI(50): 2.34 PHI(75): 2.72 PHI(84): 2.87
PHI(95): 3.27

SIEVE LOSS(g): 0.03 SILT/CLAY: 2.33%
SKEWNESS: -0.284 KURTOSIS: 1.216

GRAPHIC METHOD

MEAN (PHI): 2.25 SORTING: 0.58
MEAN (mm): 0.21 MEDIAN (mm): 0.20
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.26 SORTING: 0.67
MEAN (mm): 0.21

DATA FILE NAME: DB99-2#2.TAB

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

SAMPLE NO.: DB99-2 S#3
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 3.5
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 265.56
SAMPLE WEIGHT AFTER WASH (GRAMS): 261.05

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	0.40	0.15	99.85
7	-1.50	2.800	0.81	0.31	99.69
10	-1.00	2.000	1.68	0.63	99.37
14	-0.50	1.400	3.03	1.14	98.86
18	0.00	1.000	4.86	1.83	98.17
25	0.50	0.710	8.99	3.39	96.61
35	1.00	0.500	22.01	8.29	91.71
45	1.50	0.355	46.28	17.43	82.57
60	2.00	0.250	112.78	42.47	57.53
80	2.50	0.180	202.49	76.25	23.75
120	3.00	0.125	252.36	95.03	4.97
170	3.50	0.090	260.77	98.20	1.80
200	3.75	0.075	260.93	98.26	1.74
230	4.00	0.063	263.27	99.14	0.86
PAN			265.55	100.00	0.00

PHI(5): 0.66 PHI(16): 1.42 PHI(25): 1.65
PHI(50): 2.11 PHI(75): 2.48 PHI(84): 2.71
PHI(95): 3.00

SIEVE LOSS(g): 0.01 SILT/CLAY: 1.74%
SKEWNESS: -0.435 KURTOSIS: 1.152

GRAPHIC METHOD

MEAN (PHI): 1.98 SORTING: 0.64
MEAN (mm): 0.25 MEDIAN (mm): 0.23
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.01 SORTING: 0.75
MEAN (mm): 0.25

DATA FILE NAME: DB99-2#3.TAB

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

SAMPLE NO.: DB99-2 S#4
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 5.8
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 247.86
SAMPLE WEIGHT AFTER WASH (GRAMS): 244.43

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	0.11	0.04	99.96
7	-1.50	2.800	0.33	0.13	99.87
10	-1.00	2.000	0.75	0.30	99.70
14	-0.50	1.400	1.55	0.63	99.37
18	0.00	1.000	2.92	1.18	98.82
25	0.50	0.710	6.48	2.61	97.39
35	1.00	0.500	15.36	6.20	93.80
45	1.50	0.355	32.12	12.96	87.04
60	2.00	0.250	83.83	33.82	66.18
80	2.50	0.180	167.37	67.53	32.47
120	3.00	0.125	231.29	93.31	6.69
170	3.50	0.090	244.00	98.44	1.56
200	3.75	0.075	244.22	98.53	1.47
230	4.00	0.063	246.11	99.30	0.70
PAN			247.86	100.00	0.00

PHI(5): 0.83 PHI(16): 1.57 PHI(25): 1.79
PHI(50): 2.24 PHI(75): 2.64 PHI(84): 2.82
PHI(95): 3.16

SIEVE LOSS(g): 0.00 SILT/CLAY: 1.47%
SKEWNESS: -0.387 KURTOSIS: 1.116

GRAPHIC METHOD

MEAN (PHI): 2.13 SORTING: 0.62
MEAN (mm): 0.23 MEDIAN (mm): 0.21
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.15 SORTING: 0.71
MEAN (mm): 0.22

DATA FILE NAME: DB99-2#4.TAB

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

SAMPLE NO.: DB99-2 S#5
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 8.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 241.13
SAMPLE WEIGHT AFTER WASH (GRAMS): 238.59

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	0.30	0.12	99.88
7	-1.50	2.800	1.14	0.47	99.53
10	-1.00	2.000	3.06	1.27	98.73
14	-0.50	1.400	5.83	2.42	97.58
18	0.00	1.000	9.53	3.95	96.05
25	0.50	0.710	16.76	6.95	93.05
35	1.00	0.500	36.89	15.30	84.70
45	1.50	0.355	70.06	29.05	70.95
60	2.00	0.250	139.70	57.94	42.06
80	2.50	0.180	205.35	85.16	14.84
120	3.00	0.125	234.48	97.24	2.76
170	3.50	0.090	238.36	98.85	1.15
200	3.75	0.075	238.54	98.93	1.07
230	4.00	0.063	239.83	99.46	0.54
PAN			241.11	99.99	0.01

PHI(5): 0.17 PHI(16): 1.03 PHI(25): 1.35
PHI(50): 1.86 PHI(75): 2.31 PHI(84): 2.48
PHI(95): 2.91

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.07%
SKEWNESS: -0.443 KURTOSIS: 1.166

GRAPHIC METHOD

MEAN (PHI): 1.69 SORTING: 0.73
MEAN (mm): 0.31 MEDIAN (mm): 0.27
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.75 SORTING: 0.84
MEAN (mm): 0.30

DATA FILE NAME: DB99-2#5.TAB

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

SAMPLE NO.: DB99-2 S#6
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 10.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 223.27
SAMPLE WEIGHT AFTER WASH (GRAMS): 220.90

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	1.50	0.67	99.33
5	-2.00	4.000	2.18	0.98	99.02
7	-1.50	2.800	2.50	1.12	98.88
10	-1.00	2.000	3.31	1.48	98.52
14	-0.50	1.400	3.98	1.78	98.22
18	0.00	1.000	4.77	2.14	97.86
25	0.50	0.710	6.55	2.93	97.07
35	1.00	0.500	11.33	5.07	94.93
45	1.50	0.355	22.69	10.16	89.84
60	2.00	0.250	81.11	36.33	63.67
80	2.50	0.180	174.66	78.23	21.77
120	3.00	0.125	216.28	96.87	3.13
170	3.50	0.090	220.75	98.87	1.13
200	3.75	0.075	220.82	98.90	1.10
230	4.00	0.063	222.05	99.46	0.54
PAN			223.25	99.99	0.01

PHI(5): 0.98 PHI(16): 1.61 PHI(25): 1.78
PHI(50): 2.16 PHI(75): 2.46 PHI(84): 2.65
PHI(95): 2.95

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.10%
SKEWNESS: -0.378 KURTOSIS: 1.189

GRAPHIC METHOD

MEAN (PHI): 2.07 SORTING: 0.52
MEAN (mm) : 0.24 MEDIAN (mm): 0.22
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.05 SORTING: 0.81
MEAN (mm) : 0.24

DATA FILE NAME: DB99-2#6.TAB

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

SAMPLE NO.: DB99-2 S#7
SAMPLE ELEV. (FT. NGVD)
SAMPLE DEPTH (FT.): 14.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 192.56
SAMPLE WEIGHT AFTER WASH (GRAMS): 190.40

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	0.11	0.06	99.94
10	-1.00	2.000	0.38	0.20	99.80
14	-0.50	1.400	0.68	0.35	99.65
18	0.00	1.000	1.28	0.66	99.34
25	0.50	0.710	2.80	1.45	98.55
35	1.00	0.500	8.93	4.64	95.36
45	1.50	0.355	22.84	11.86	88.14
60	2.00	0.250	70.71	36.72	63.28
80	2.50	0.180	140.96	73.20	26.80
120	3.00	0.125	183.88	95.49	4.51
170	3.50	0.090	190.23	98.79	1.21
200	3.75	0.075	190.33	98.84	1.16
230	4.00	0.063	191.46	99.43	0.57
PAN			192.56	100.00	0.00

PHI(5): 1.03 PHI(16): 1.58 PHI(25): 1.76
PHI(50): 2.18 PHI(75): 2.54 PHI(84): 2.74
PHI(95): 2.99

SIEVE LOSS(g): 0.00 SILT/CLAY: 1.16%
SKEWNESS: -0.302 KURTOSIS: 1.037

GRAPHIC METHOD

MEAN (PHI): 2.10 SORTING: 0.58
MEAN (mm) : 0.23 MEDIAN (mm): 0.22

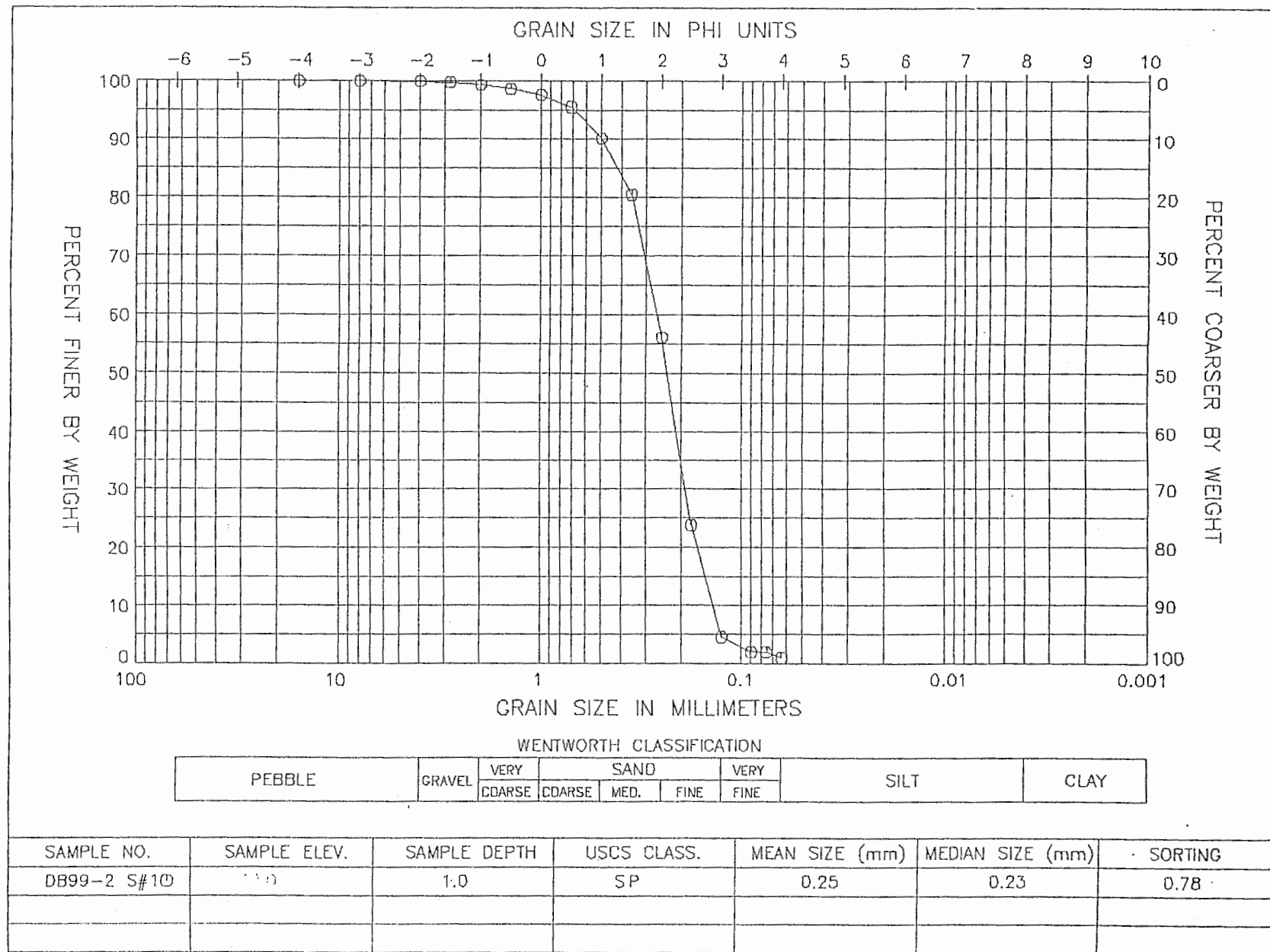
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

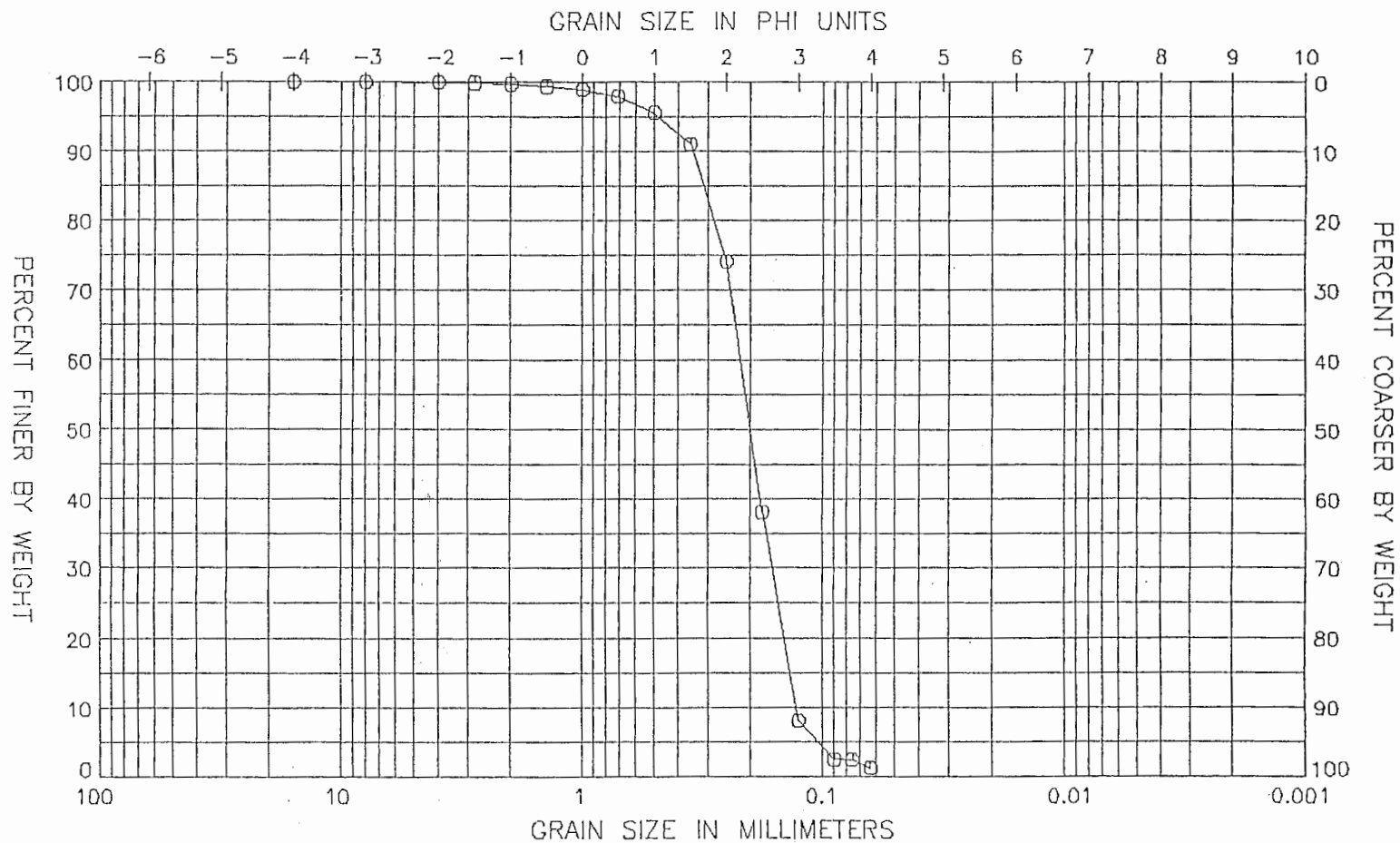
MEAN (PHI): 2.12 SORTING: 0.62
MEAN (mm) : 0.23

DATA FILE NAME: DB99-2#7.TAB

GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



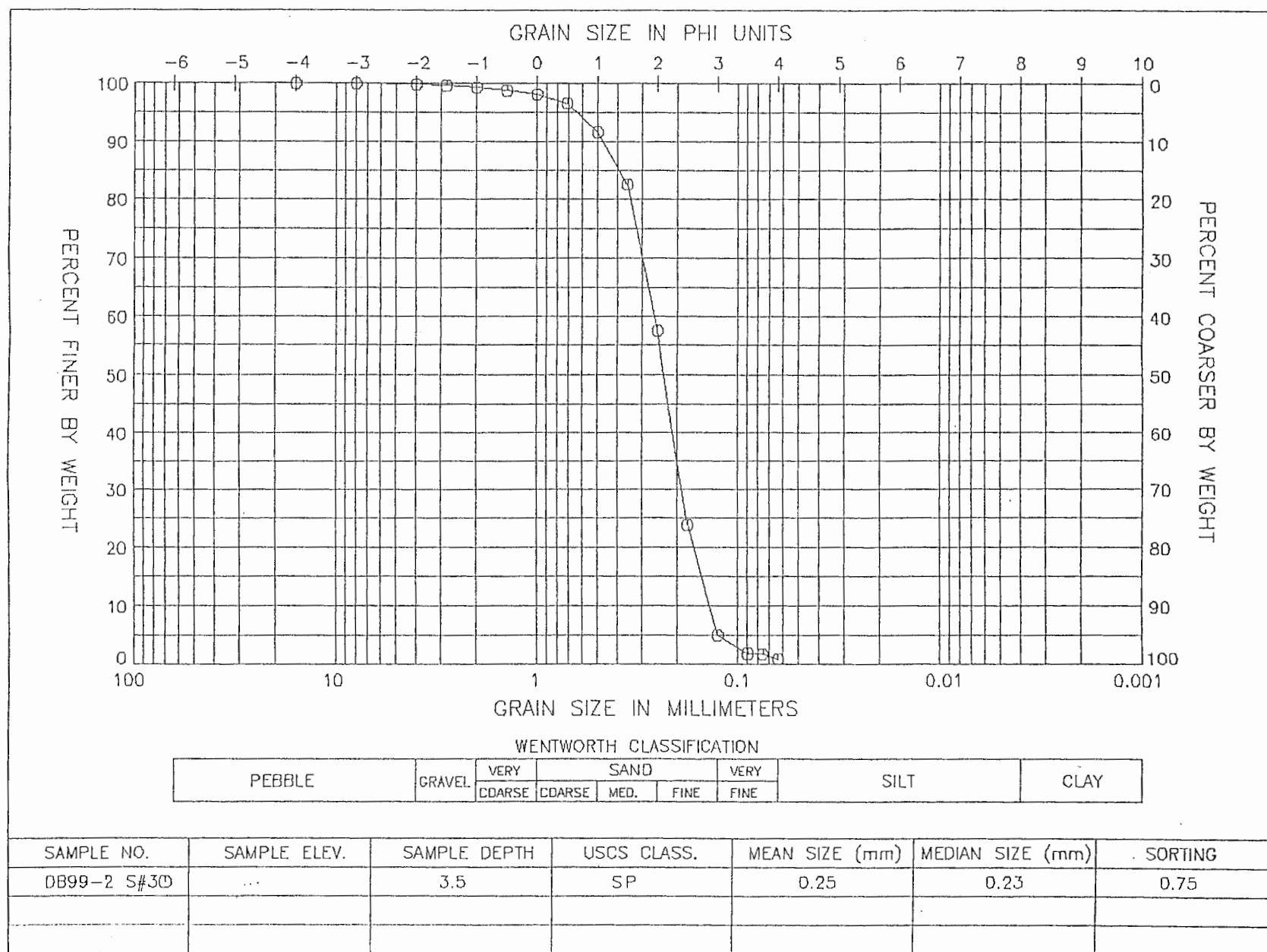
GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



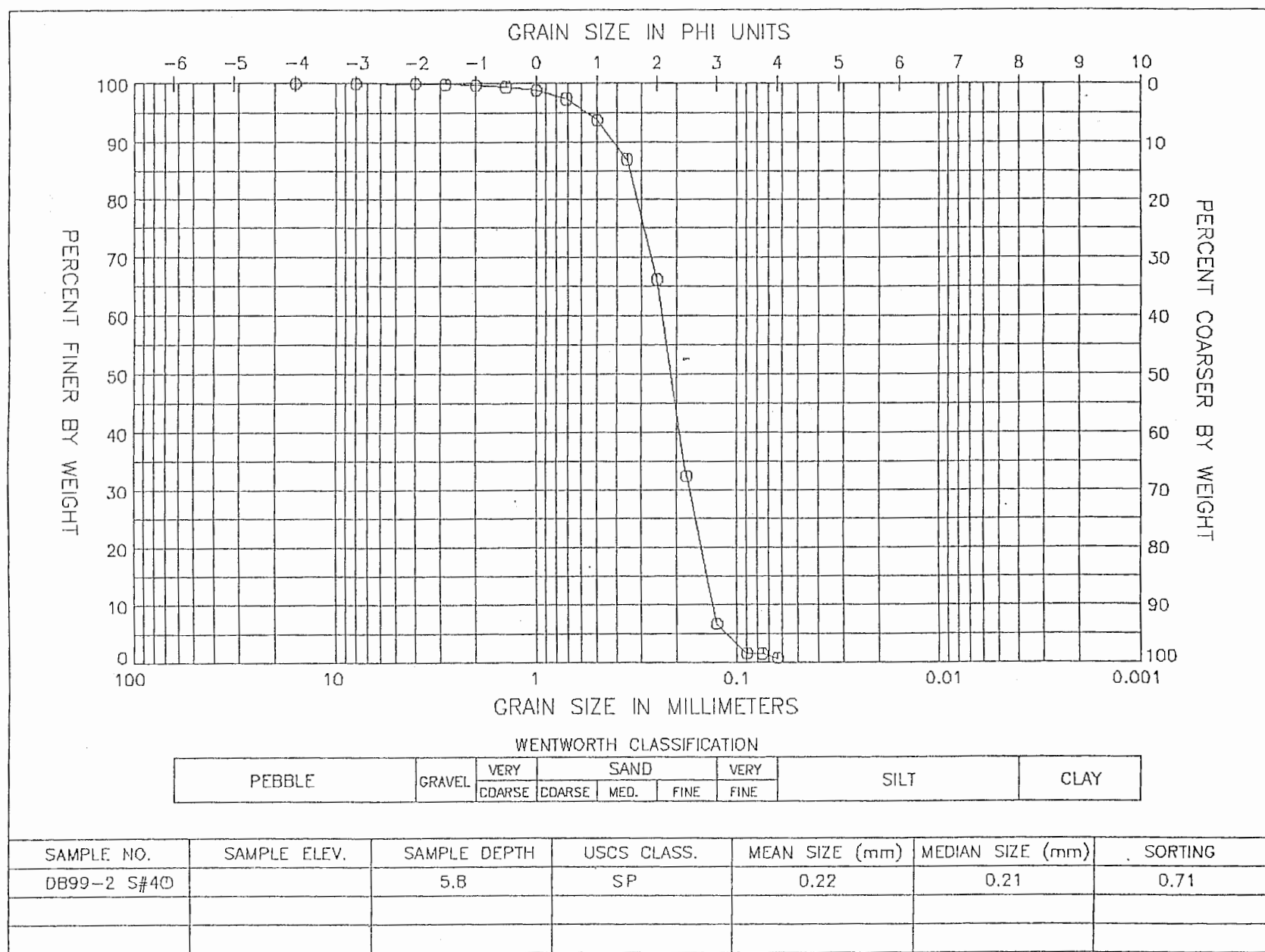
WENTWORTH CLASSIFICATION						
PEBBLE	GRAVEL	VERY	SAND		VERY	SILT
		COARSE	COARSE	MED. FINE	FINE	
						CLAY

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-2 S#20	0.0	2.6	SP	0.21	0.20	0.67

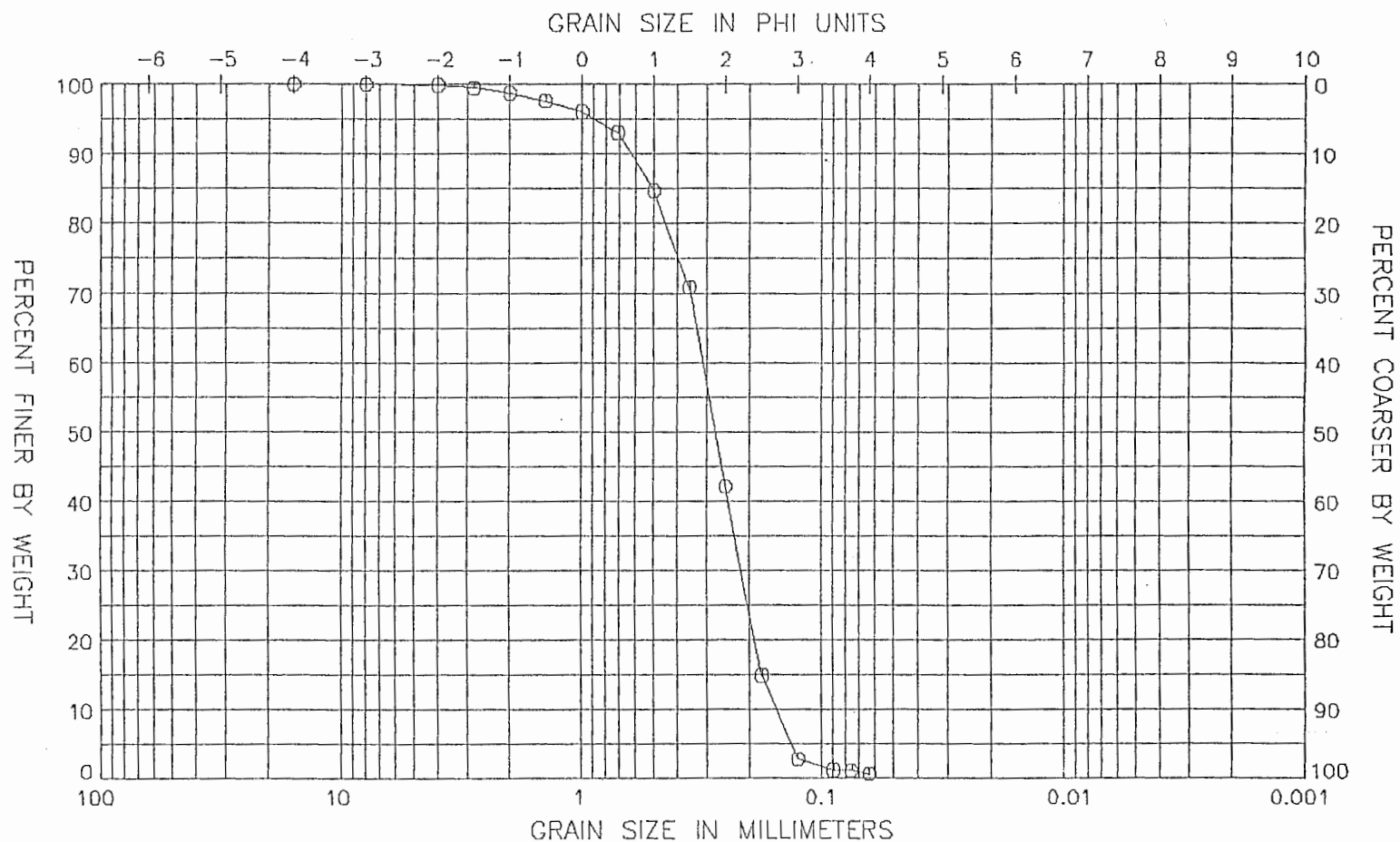
GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999

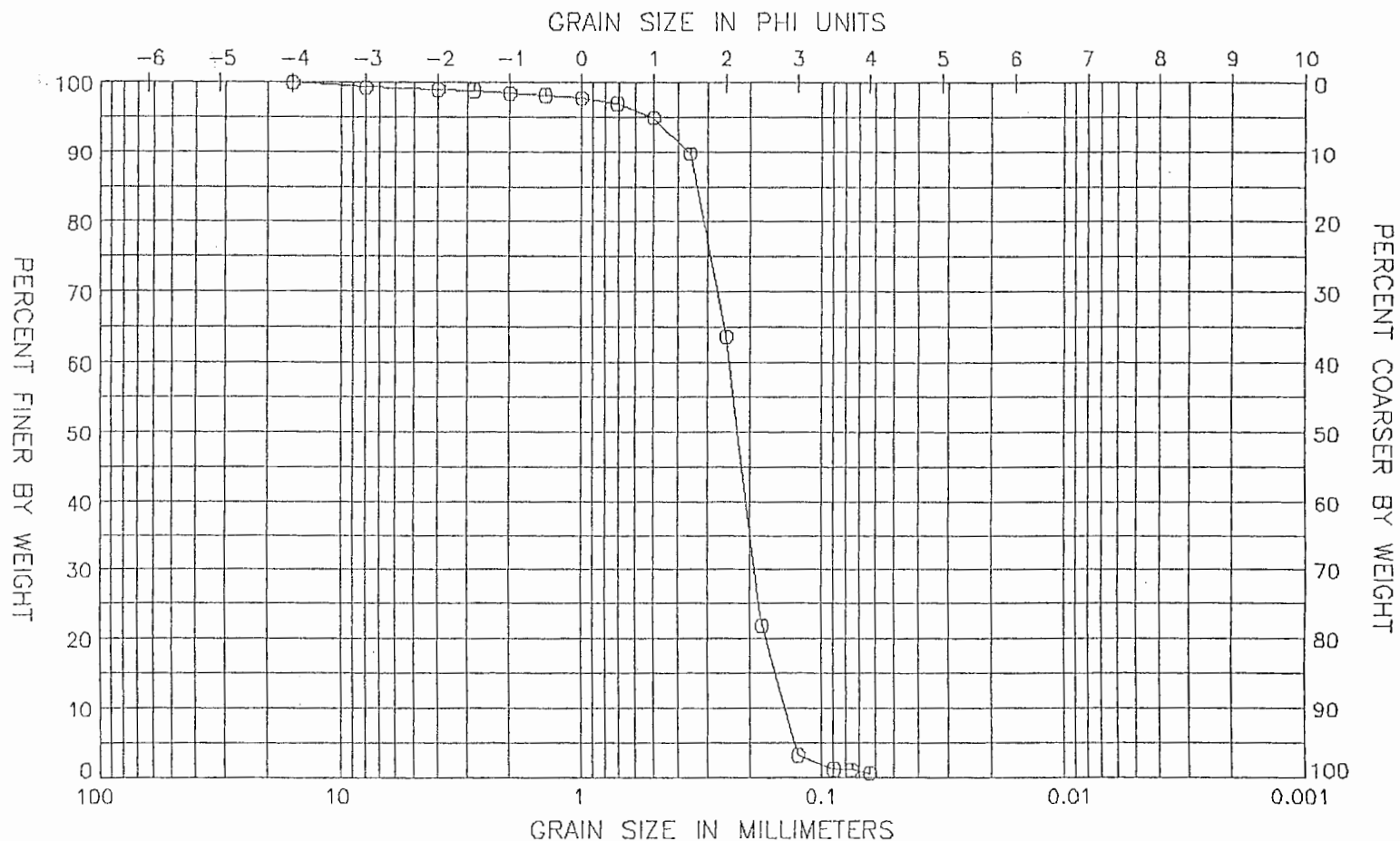


WENTWORTH CLASSIFICATION

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
DB99-2 S#50	1.0	8.0	SP	0.30	0.27	0.84

GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



WENTWORTH CLASSIFICATION

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
DB99-2 S#60		10.0	SP	0.24	0.22	0.81

GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999

