HOLE NO. DB-99-5

DRILLING LOG	DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT	DELRAY BEACH	10. SIZE AND TYPE OF BIT	3"
2. LOCATION (Coordinates or Station)	X= 966,605 Y= 775,388	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	NGVD
3. DRILLING AGENCY:	ALPINE SEISMIC	12. MANUFACTURER'S DESIGNATION OF DRILL	ALPINE PNEUMATIC
4. HOLE NO. (As shown on drawing title and file number)	DB-99-5	13. TOT NO. OF OVERBURDEN SAMPLES TAKEN	disturbed: 0.0 undisturbed: 0.0
5. NAME OF DRILLER	ROB SUSKO	14. TOTAL NO. OF CORE BOXES	1
6. DIRECTION OF HOLE	VERTICAL	15. ELEVATION GROUND WATER	
		16. DATE HOLE Started	4/20/99
		Completed	4/20/99
7. THICKNESS OF BURDEN	0.0 FT	17. ELEVATION TOP OF HOLE	-33.2 ft.
8. DEPTH DRILLED INTO ROCK	0.0 FT	18. TOTAL CORE RECOVERY FOR BORING	98%
9. TOTAL DEPTH OF HOLE	19.0' FT	19. SIGNATURE OF GEOLOGIST	IBRAHIM DREMALI

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-33.2	0					
-34.1	1		SAND, fine-grained, trace shell hash, Gray (5Y-6/1) (SP)		1	SP Sample #1, Depth = 0.5' 0.27 mm, 0.83 phi sorting 1.07% silt
-35.4	2		fine to medium-grained, little shell hash, Gray (5Y-6/1) (SP) from -34.1' to -35.4'		2	Sample #2, Depth = 2.0' 0.39 mm, 1.34 phi sorting 1.08% silt
	3					
	4		fine-grained, trace shell hash, Gray (5Y-6/1) (SP) from -35.4' to -39.9'		3	Sample #3, Depth = 4.0' 0.25 mm, 0.74 phi sorting 1.21% silt
	5					
-39.9	6					
	7		fine to medium-grained, little shell hash, Gray (5Y-6/1) (SP) from -39.9' to -41.2'		4	Sample #4, Depth= 6.8' 0.37 mm, 1.16 phi sorting 1.08% silt
	8					
	9				5	Sample #5, Depth = 9.0' 0.32 mm, 0.95 phi sorting 1.07% silt
	10					
	11					
	12					
	13		fine-grained, trace shell hash, Gray (5Y-6/1) (SP) -41.2' to -52.2'			
	14					
	15				6	Sample #6, Depth = 14.0' 0.20 mm, 0.55 phi sorting 1.68% silt
	16					
	17					
	18					
-52.2	19					
	20		End of Boring			
	21					
	22					Note: Soils are classified in accordance with the Unified Soils Classification System.
	23					
	24					

PROJECT: Delray Beach	HOLE NUMBER:

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

SAMPLE NO.: DB99-5 S#1
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 0.5
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 179.13
SAMPLE WEIGHT AFTER WASH (GRAMS): 177.30

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	0.05	0.03	99.97
7	-1.50	2.800	0.12	0.07	99.93
10	-1.00	2.000	0.50	0.28	99.72
14	-0.50	1.400	1.44	0.80	99.20
18	0.00	1.000	3.69	2.06	97.94
25	0.50	0.710	10.63	5.93	94.07
35	1.00	0.500	27.08	15.12	84.88
45	1.50	0.355	47.33	26.42	73.58
60	2.00	0.250	84.97	47.43	52.57
80	2.50	0.180	132.39	73.91	26.09
120	3.00	0.125	168.97	94.33	5.67
170	3.50	0.090	177.07	98.85	1.15
200	3.75	0.075	177.22	98.93	1.07
230	4.00	0.063	178.17	99.47	0.53
PAN			179.13	100.00	0.00

PHI(5): 0.38 PHI(16): 1.04 PHI(25): 1.44
PHI(50): 2.05 PHI(75): 2.53 PHI(84): 2.75
PHI(95): 3.07

SIEVE LOSS(g): 0.00 SILT/CLAY: 1.07%
SKEWNESS: -0.377 KURTOSIS: 1.014

GRAPHIC METHOD
MEAN (PHI): 1.86 SORTING: 0.85
MEAN (mm) : 0.28 MEDIAN (mm): 0.24
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 1.91 SORTING: 0.83
MEAN (mm) : 0.27

DATA FILE NAME: DB99-5#1.TAB

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

SAMPLE NO.: DB99-5 S#2
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 2.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 135.69
SAMPLE WEIGHT AFTER WASH (GRAMS): 134.30

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	0.30	0.22	99.78
5	-2.00	4.000	2.25	1.66	98.34
7	-1.50	2.800	4.52	3.33	96.67
10	-1.00	2.000	8.87	6.54	93.46
14	-0.50	1.400	15.89	11.71	88.29
18	0.00	1.000	22.85	16.84	83.16
25	0.50	0.710	33.31	24.55	75.45
35	1.00	0.500	46.18	34.03	65.97
45	1.50	0.355	58.15	42.86	57.14
60	2.00	0.250	79.16	58.34	41.66
80	2.50	0.180	107.39	79.14	20.86
120	3.00	0.125	130.02	95.82	4.18
170	3.50	0.090	134.15	98.87	1.13
200	3.75	0.075	134.23	98.92	1.08
230	4.00	0.063	134.96	99.47	0.53
PAN			135.67	99.99	0.01

PHI(5): -1.24 PHI(16):-0.08 PHI(25): 0.52
PHI(50): 1.73 PHI(75): 2.40 PHI(84): 2.65
PHI(95): 2.98

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.08%
SKEWNESS: -0.633 KURTOSIS: 0.921

GRAPHIC METHOD
MEAN (PHI): 1.21 SORTING: 1.36
MEAN (mm) : 0.43 MEDIAN (mm): 0.30
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 1.36 SORTING: 1.34
MEAN (mm) : 0.39

DATA FILE NAME: DB99-5#2.TAB

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

SAMPLE NO.: DB99-5 S#3
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 4.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 93.41
SAMPLE WEIGHT AFTER WASH (GRAMS): 92.31

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	0.03	0.03	99.97
10	-1.00	2.000	0.41	0.44	99.56
14	-0.50	1.400	0.77	0.82	99.18
18	0.00	1.000	1.48	1.58	98.42
25	0.50	0.710	3.49	3.74	96.26
35	1.00	0.500	8.63	9.24	90.76
45	1.50	0.355	18.16	19.44	80.56
60	2.00	0.250	43.37	46.43	53.57
80	2.50	0.180	72.27	77.37	22.63
120	3.00	0.125	89.03	95.31	4.69
170	3.50	0.090	92.22	98.73	1.27
200	3.75	0.075	92.28	98.79	1.21
230	4.00	0.063	92.85	99.40	0.60
PAN			93.41	100.00	0.00

PHI(5): 0.61 PHI(16): 1.33 PHI(25): 1.60
PHI(50): 2.06 PHI(75): 2.46 PHI(84): 2.68
PHI(95): 2.99

SIEVE LOSS(g): 0.00 SILT/CLAY: 1.21%
SKEWNESS: -0.376 KURTOSIS: 1.134

GRAPHIC METHOD
MEAN (PHI): 1.94 SORTING: 0.68
MEAN (mm) : 0.26 MEDIAN (mm): 0.24
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 1.97 SORTING: 0.74
MEAN (mm) : 0.25

DATA FILE NAME: DB99-5#3.TAB

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

SAMPLE NO.: DB99-4 S#4
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 6.8
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 217.00
SAMPLE WEIGHT AFTER WASH (GRAMS): 214.75

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	1.34	0.62	99.38
5	-2.00	4.000	2.12	0.98	99.02
7	-1.50	2.800	3.71	1.71	98.29
10	-1.00	2.000	7.24	3.34	96.66
14	-0.50	1.400	14.13	6.51	93.49
18	0.00	1.000	23.20	10.69	89.31
25	0.50	0.710	41.20	18.99	81.01
35	1.00	0.500	68.43	31.53	68.47
45	1.50	0.355	94.12	43.37	56.63
60	2.00	0.250	135.88	62.62	37.38
80	2.50	0.180	182.26	83.99	16.01
120	3.00	0.125	210.11	96.82	3.18
170	3.50	0.090	214.57	98.88	1.12
200	3.75	0.075	214.65	98.92	1.08
230	4.00	0.063	215.82	99.46	0.54
PAN			216.99	100.00	0.00

PHI(5): -0.74 PHI(16): 0.32 PHI(25): 0.74
PHI(50): 1.67 PHI(75): 2.29 PHI(84): 2.50
PHI(95): 2.93

SIEVE LOSS(g): 0.01 SILT/CLAY: 1.08%
SKEWNESS: -0.529 KURTOSIS: 0.970

GRAPHIC METHOD
MEAN (PHI): 1.34 SORTING: 1.09
MEAN (mm) : 0.40 MEDIAN (mm): 0.31
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 1.43 SORTING: 1.16
MEAN (mm) : 0.37

DATA FILE NAME: DB99-5#4.TAB

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

SAMPLE NO.: DB99-5 S#5
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 9.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 191.07
SAMPLE WEIGHT AFTER WASH (GRAMS): 189.20

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	0.83	0.43	99.57
5	-2.00	4.000	1.52	0.80	99.20
7	-1.50	2.800	2.08	1.09	98.91
10	-1.00	2.000	4.87	2.55	97.45
14	-0.50	1.400	7.99	4.18	95.82
18	0.00	1.000	10.90	5.70	94.30
25	0.50	0.710	17.49	9.15	90.85
35	1.00	0.500	33.17	17.36	82.64
45	1.50	0.355	60.40	31.61	68.39
60	2.00	0.250	122.31	64.01	35.99
80	2.50	0.180	170.41	89.19	10.81
120	3.00	0.125	186.04	97.37	2.63
170	3.50	0.090	188.90	98.86	1.14
200	3.75	0.075	189.03	98.93	1.07
230	4.00	0.063	190.08	99.48	0.52
PAN			191.02	99.97	0.03

PHI(5): -0.23 PHI(16): 0.92 PHI(25): 1.27
PHI(50): 1.78 PHI(75): 2.22 PHI(84): 2.40
PHI(95): 2.86

SIEVE LOSS(g): 0.05 SILT/CLAY: 1.07%
SKEWNESS: -0.638 KURTOSIS: 1.331

GRAPHIC METHOD
MEAN (PHI): 1.54 SORTING: 0.74
MEAN (mm) : 0.34 MEDIAN (mm): 0.29
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 1.62 SORTING: 0.95
MEAN (mm) : 0.32

DATA FILE NAME: DB99-5#5.TAB

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

SAMPLE NO.: DB99-5 S#6
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 14.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 178.05
SAMPLE WEIGHT AFTER WASH (GRAMS): 175.28

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	0.00	0.00	100.00
7	-1.50	2.800	0.05	0.03	99.97
10	-1.00	2.000	0.35	0.20	99.80
14	-0.50	1.400	0.58	0.33	99.67
18	0.00	1.000	0.85	0.48	99.52
25	0.50	0.710	1.48	0.83	99.17
35	1.00	0.500	3.34	1.88	98.12
45	1.50	0.355	8.50	4.77	95.23
60	2.00	0.250	40.38	22.68	77.32
80	2.50	0.180	113.94	63.99	36.01
120	3.00	0.125	166.20	93.34	6.66
170	3.50	0.090	174.92	98.24	1.76
200	3.75	0.075	175.05	98.32	1.68
230	4.00	0.063	176.64	99.21	0.79
PAN			178.02	99.98	0.02

PHI(5): 1.51 PHI(16): 1.81 PHI(25): 2.03
PHI(50): 2.33 PHI(75): 2.69 PHI(84): 2.84
PHI(95): 3.17

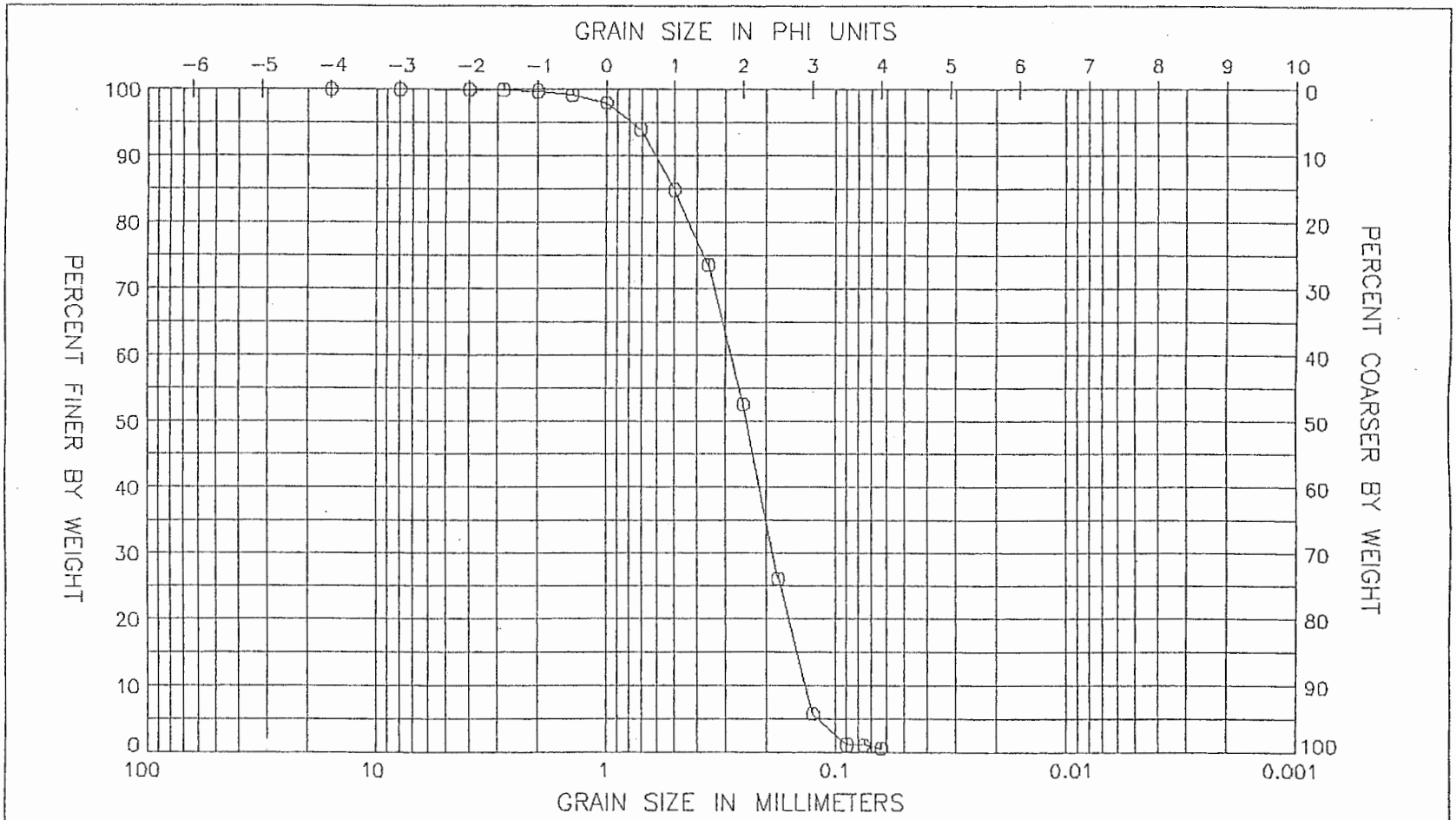
SIEVE LOSS(g): 0.03 SILT/CLAY: 1.68%
SKEWNESS: 0.014 KURTOSIS: 1.033

GRAPHIC METHOD
MEAN (PHI): 2.33 SORTING: 0.51
MEAN (mm) : 0.20 MEDIAN (mm): 0.20
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
MEAN (PHI): 2.31 SORTING: 0.55
MEAN (mm) : 0.20

DATA FILE NAME: DB99-5#6.TAB

GRAIN SIZE DISTRIBUTION CURVE
DELRAY BEACH VIBRACORES 1999

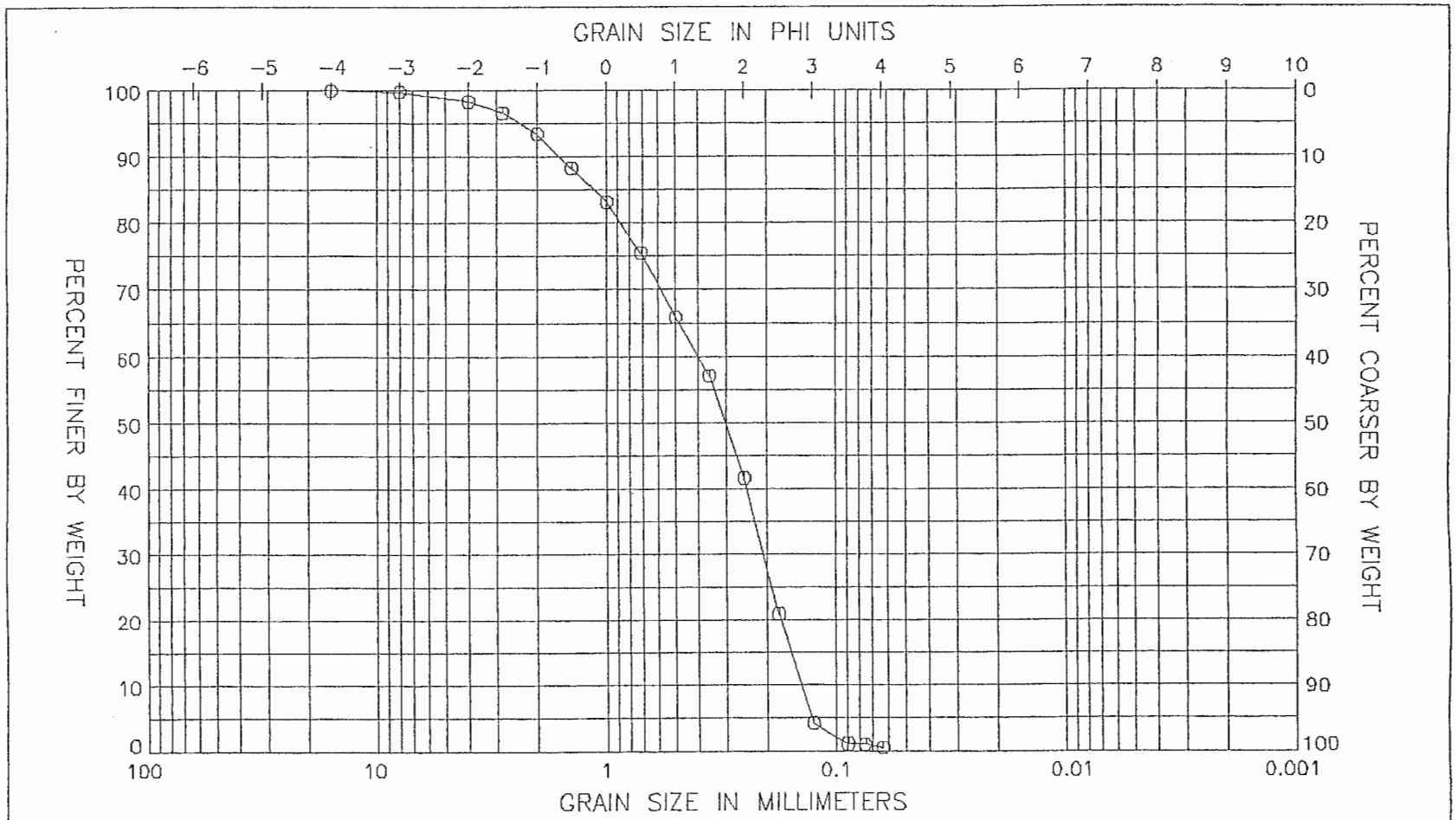


WENTWORTH CLASSIFICATION

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

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-5 S#10		0.5	SP	0.27	0.24	0.83

GRAIN SIZE DISTRIBUTION CURVE
DELRAY BEACH VIBRACORES 1999

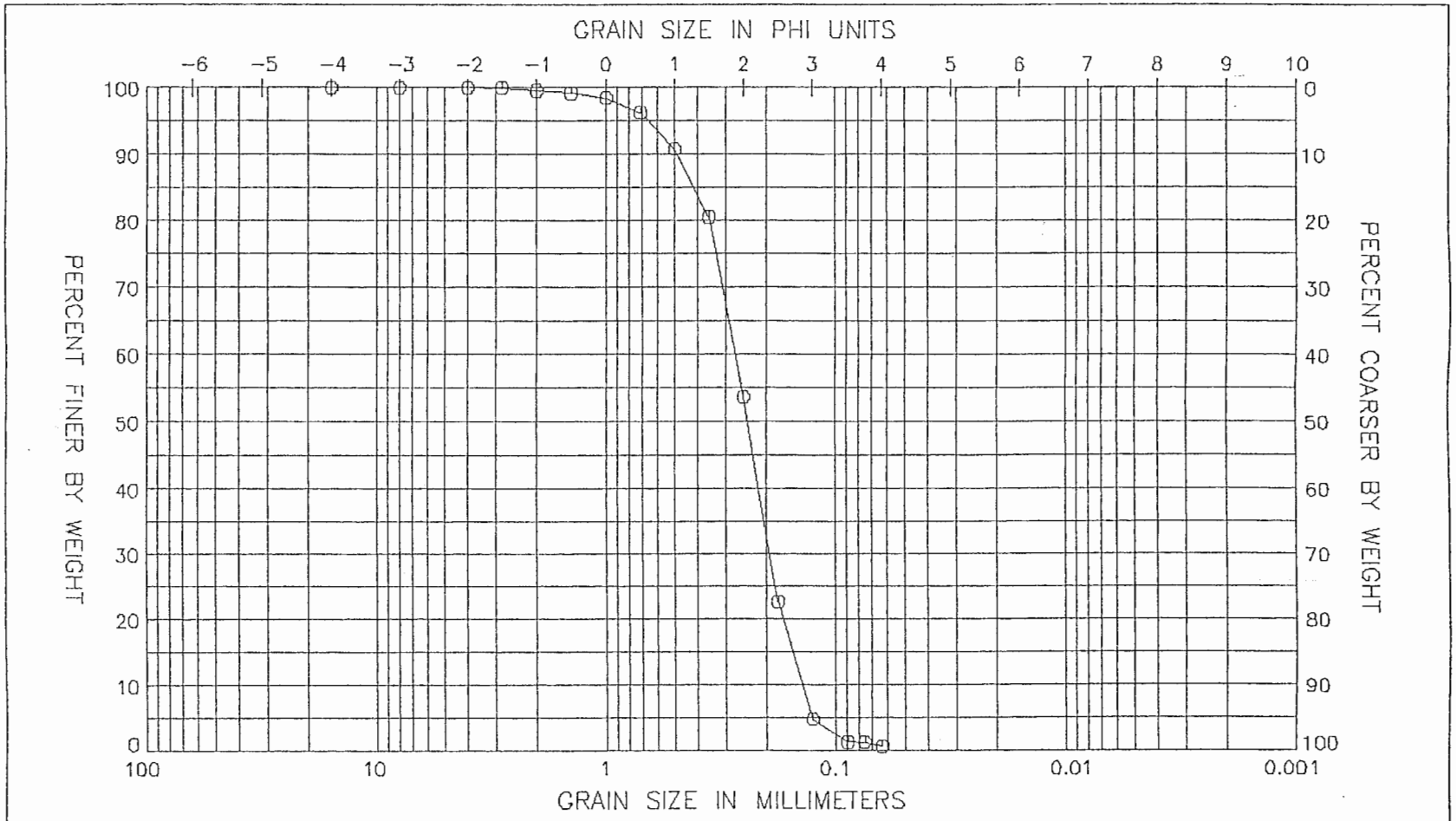


WENTWORTH CLASSIFICATION

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

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-5 S#20		2.0	SP	0.39	0.30	1.34

GRAIN SIZE DISTRIBUTION CURVE
DELRAY BEACH VIBRACORES 1999

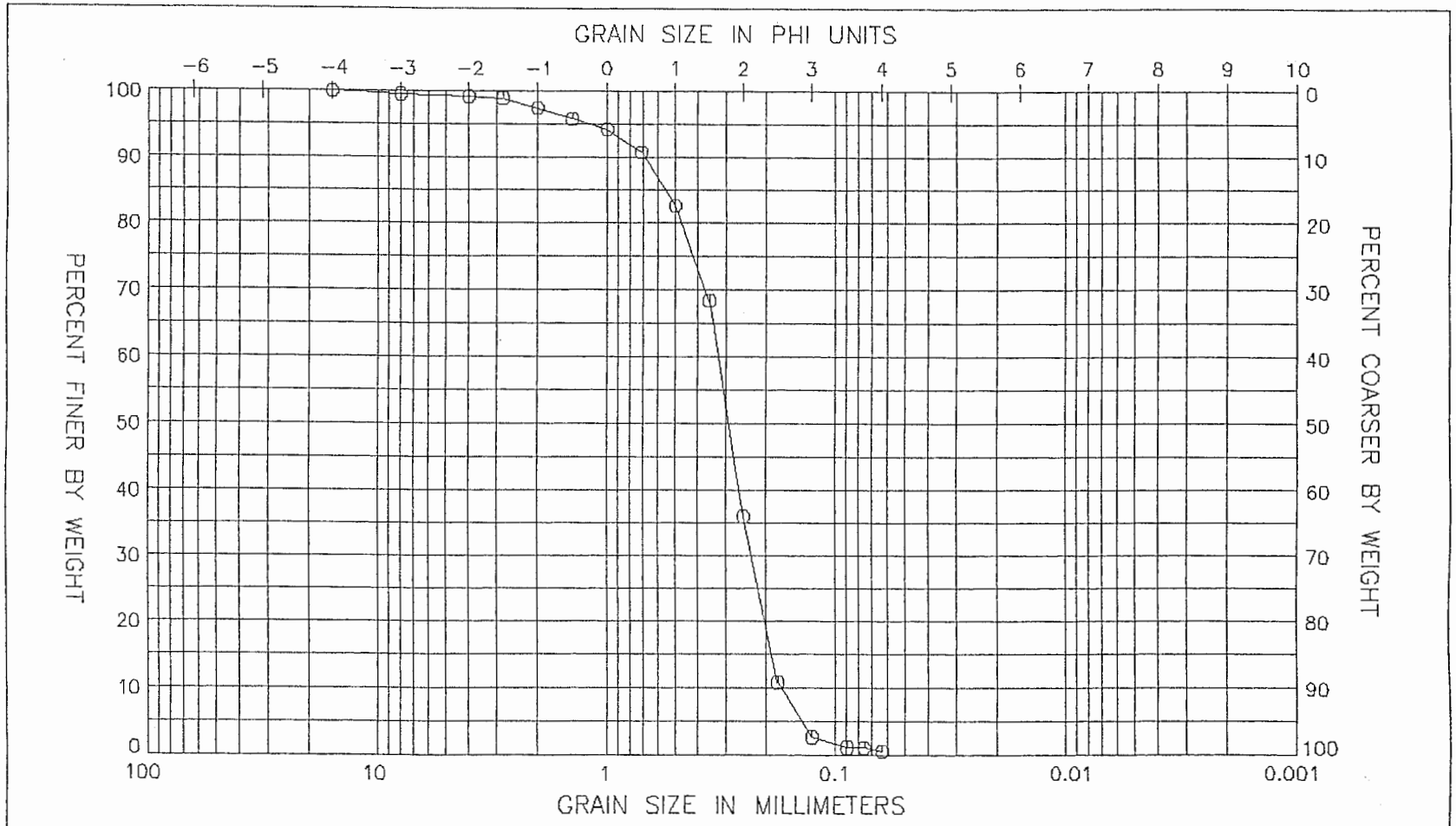


WENTWORTH CLASSIFICATION

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

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-5 S#30		4.0	SP	0.25	0.24	0.74

GRAIN SIZE DISTRIBUTION CURVE
DELRAY BEACH VIBRACORES 1999

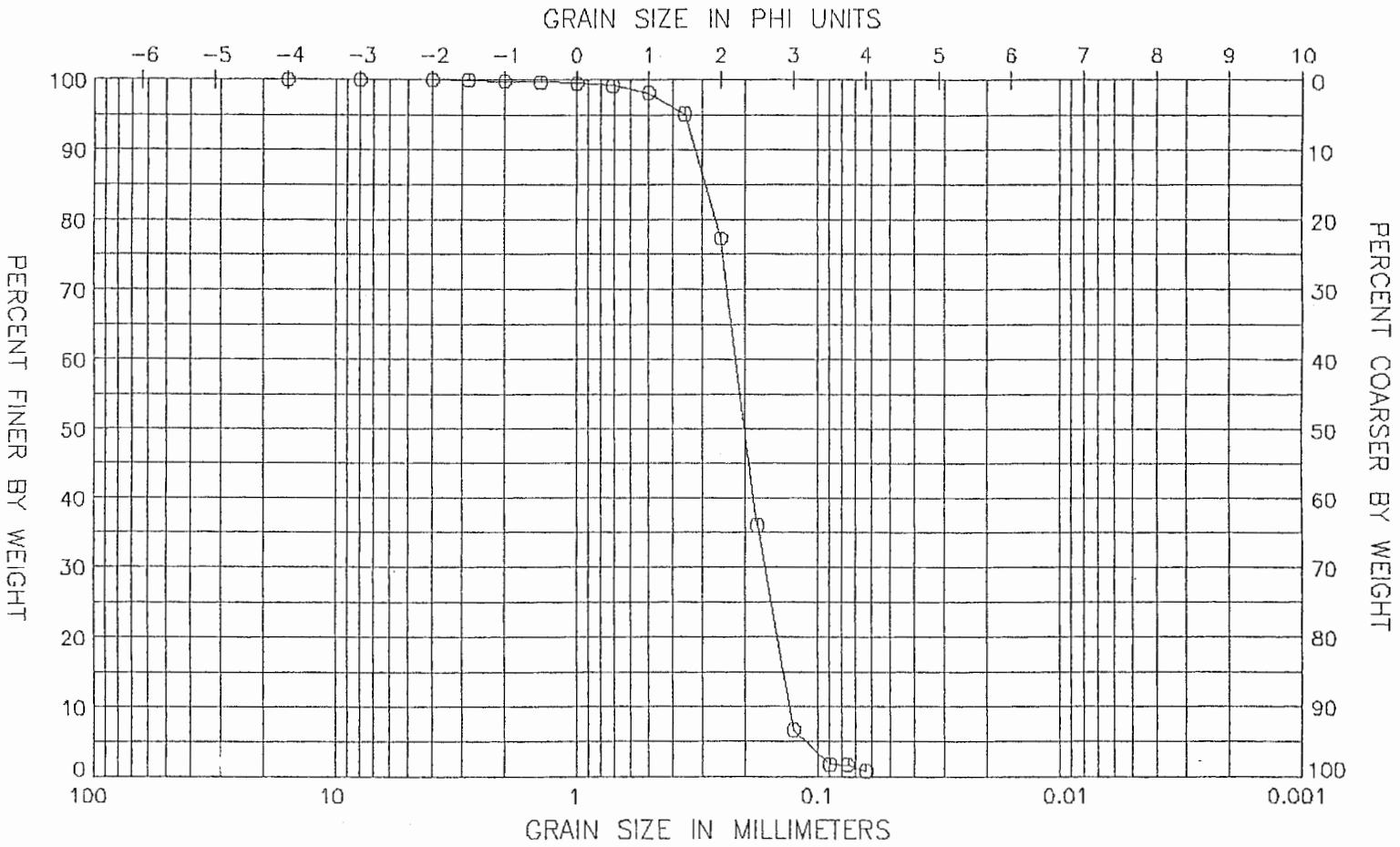


WENTWORTH CLASSIFICATION

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

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-5 S#5①		9.0	SP	0.32	0.29	0.95

GRAIN SIZE DISTRIBUTION CURVE
DELRAY BEACH VIBRACORES 1999



WENTWORTH CLASSIFICATION

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

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-5 S#60		14.0	SP	0.20	0.20	0.55