

DRILLING LOG		DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT		DELRAY BEACH		
2. LOCATION		(Coordinates or Station) X= 966163 Y= 767433		
3. DRILLING AGENCY:		ALPINE SEISMIC		
4. HOLE NO.		(As shown on drawing title and file number) DB-99-13		
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		19.5' 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		-46.0 ft.		
18. TOTAL CORE RECOVERY FOR BORING		99%		
19. SIGNATURE OF GEOLOGIST		IBRAHIM DREMALI		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-46	0					SP
	1		SAND, fine-grained, trace shell hash, □1" shell fragment at -50.0' Light Gray (5Y-7/1) (SP)		1	Sample #1, Depth = 2.0' 0.25 mm, 1.04 phi sorting 3.65% silt
	2				2	Sample #2, Depth = 4.0' 0.27 mm, 1.13 phi sorting 1.11% silt
-50.9	5		fine-grained, little shell hash, Light Gray (5Y-7/1) (SP) from -50.9' to -65.6'		3	Sample #3, Depth = 6.0' 0.21 mm, 0.69 phi sorting 1.46% silt
	6				4	Sample #4, Depth = 9.5' 0.25 mm, 0.81 phi sorting 1.76% silt
	12				5	Sample #5, Depth = 13.0' 0.21 mm, 0.72 phi sorting 1.46% silt
	17				6	Sample #6, Depth = 17.0' 0.20 mm, 0.77 phi sorting 1.69% silt
-65.6	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:
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GRADATION ANALYSIS REPORT
DELRAY BEACH VIBRACORES 1999
TESTED BY: RW ON: 8/99

SAMPLE NO.: DB99-13 S#1
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 2.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 249.16
SAMPLE WEIGHT AFTER WASH (GRAMS): 240.16

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	0.73	0.29	99.71
5	-2.00	4.000	1.55	0.62	99.38
7	-1.50	2.800	2.61	1.05	98.95
10	-1.00	2.000	5.16	2.07	97.93
14	-0.50	1.400	8.69	3.49	96.51
18	0.00	1.000	13.44	5.39	94.61
25	0.50	0.710	21.56	8.65	91.35
35	1.00	0.500	36.34	14.59	85.41
45	1.50	0.355	50.84	20.40	79.60
60	2.00	0.250	84.80	34.03	65.97
80	2.50	0.180	163.14	65.48	34.52
120	3.00	0.125	228.09	91.54	8.46
170	3.50	0.090	239.98	96.32	3.68
200	3.75	0.075	240.06	96.35	3.65
230	4.00	0.063	244.64	98.19	1.81
PAN			249.16	100.00	0.00

PHI(5): -0.10 PHI(16): 1.12 PHI(25): 1.67
PHI(50): 2.25 PHI(75): 2.68 PHI(84): 2.86
PHI(95): 3.36

SIEVE LOSS(g): 0.00 SILT/CLAY: 3.65%
SKEWNESS: -0.720 KURTOSIS: 1.401

GRAPHIC METHOD

MEAN (PHI): 1.90 SORTING: 0.87
MEAN (mm) : 0.27 MEDIAN (mm): 0.21
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.00 SORTING: 1.04
MEAN (mm) : 0.25

DATA FILE NAME: DB99-13#1.TAB

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

SAMPLE NO.: DB99-13 S#2
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 4.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 202.08
SAMPLE WEIGHT AFTER WASH (GRAMS): 199.95

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	1.09	0.54	99.46
7	-1.50	2.800	2.23	1.10	98.90
10	-1.00	2.000	6.57	3.25	96.75
14	-0.50	1.400	10.91	5.40	94.60
18	0.00	1.000	15.92	7.88	92.12
25	0.50	0.710	23.94	11.85	88.15
35	1.00	0.500	37.07	18.34	81.66
45	1.50	0.355	49.95	24.72	75.28
60	2.00	0.250	75.04	37.13	62.87
80	2.50	0.180	128.80	63.74	36.26
120	3.00	0.125	187.08	92.58	7.42
170	3.50	0.090	199.67	98.81	1.19
200	3.75	0.075	199.83	98.89	1.11
230	4.00	0.063	200.96	99.45	0.55
PAN			202.05	99.99	0.01

PHI(5): -0.59 PHI(16): 0.82 PHI(25): 1.51
PHI(50): 2.24 PHI(75): 2.70 PHI(84): 2.85
PHI(95): 3.19

SIEVE LOSS(g): 0.03 SILT/CLAY: 1.11%
SKEWNESS: -0.926 KURTOSIS: 1.311

GRAPHIC METHOD

MEAN (PHI): 1.70 SORTING: 1.02
MEAN (mm): 0.31 MEDIAN (mm): 0.21
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.91 SORTING: 1.13
MEAN (mm): 0.27

DATA FILE NAME: DB99-13#2.TAB

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

SAMPLE NO.: DB99-13 S#3
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 6.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 180.86
SAMPLE WEIGHT AFTER WASH (GRAMS): 178.33

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	0.06	0.03	99.97
7	-1.50	2.800	0.17	0.09	99.91
10	-1.00	2.000	0.64	0.35	99.65
14	-0.50	1.400	1.18	0.65	99.35
18	0.00	1.000	2.18	1.21	98.79
25	0.50	0.710	4.06	2.24	97.76
35	1.00	0.500	9.16	5.06	94.94
45	1.50	0.355	17.50	9.68	90.32
60	2.00	0.250	44.23	24.46	75.54
80	2.50	0.180	106.88	59.10	40.90
120	3.00	0.125	165.73	91.63	8.37
170	3.50	0.090	178.06	98.45	1.55
200	3.75	0.075	178.22	98.54	1.46
230	4.00	0.063	179.57	99.28	0.72
PAN			180.84	99.99	0.01

PHI(5): 0.99 PHI(16): 1.71 PHI(25): 2.01
PHI(50): 2.37 PHI(75): 2.74 PHI(84): 2.88
PHI(95): 3.25

SIEVE LOSS(g): 0.02 SILT/CLAY: 1.46%
SKEWNESS: -0.430 KURTOSIS: 1.257

GRAPHIC METHOD

MEAN (PHI): 2.24 SORTING: 0.58
MEAN (mm) : 0.21 MEDIAN (mm): 0.19
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.28 SORTING: 0.69
MEAN (mm) : 0.21

DATA FILE NAME: DB99-13#3.TAB

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

SAMPLE NO.: DB99-13 S#4
 SAMPLE ELEV. (FT. NGVD):
 SAMPLE DEPTH (FT.): 9.5
 SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 209.77
 SAMPLE WEIGHT AFTER WASH (GRAMS): 206.17

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	0.26	0.12	99.88
7	-1.50	2.800	0.57	0.27	99.73
10	-1.00	2.000	1.24	0.59	99.41
14	-0.50	1.400	2.57	1.23	98.77
18	0.00	1.000	4.83	2.30	97.70
25	0.50	0.710	9.55	4.55	95.45
35	1.00	0.500	21.87	10.43	89.57
45	1.50	0.355	41.39	19.73	80.27
60	2.00	0.250	85.96	40.98	59.02
80	2.50	0.180	147.46	70.30	29.70
120	3.00	0.125	197.64	94.22	5.78
170	3.50	0.090	205.97	98.19	1.81
200	3.75	0.075	206.08	98.24	1.76
230	4.00	0.063	207.94	99.13	0.87
PAN			209.76	100.00	0.00

PHI(5): 0.54 PHI(16): 1.30 PHI(25): 1.62
 PHI(50): 2.15 PHI(75): 2.60 PHI(84): 2.79
 PHI(95): 3.10

SIEVE LOSS(g): 0.01 SILT/CLAY: 1.76%
 SKEWNESS: -0.451 KURTOSIS: 1.077

GRAPHIC METHOD
 MEAN (PHI): 1.98 SORTING: 0.74
 MEAN (mm) : 0.25 MEDIAN (mm): 0.22
 NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD
 MEAN (PHI): 2.02 SORTING: 0.81
 MEAN (mm) : 0.25

DATA FILE NAME: DB99-13#4.TAB

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

SAMPLE NO.: DB99-13 S#5
 SAMPLE ELEV. (FT. NGVD):
 SAMPLE DEPTH (FT.): 13.0
 SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 224.06
 SAMPLE WEIGHT AFTER WASH (GRAMS): 220.97

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	0.05	99.95
7	-1.50	2.800	0.34	0.15	99.85
10	-1.00	2.000	0.70	0.31	99.69
14	-0.50	1.400	1.62	0.72	99.28
18	0.00	1.000	3.07	1.37	98.63
25	0.50	0.710	6.07	2.71	97.29
35	1.00	0.500	13.87	6.19	93.81
45	1.50	0.355	26.11	11.65	88.35
60	2.00	0.250	61.80	27.58	72.42
80	2.50	0.180	133.20	59.45	40.55
120	3.00	0.125	207.67	92.68	7.32
170	3.50	0.090	220.60	98.46	1.54
200	3.75	0.075	220.78	98.54	1.46
230	4.00	0.063	222.43	99.27	0.73
PAN			224.06	100.00	0.00

PHI(5): 0.83 PHI(16): 1.64 PHI(25): 1.92
 PHI(50): 2.35 PHI(75): 2.73 PHI(84): 2.87
 PHI(95): 3.20

SIEVE LOSS(g): 0.00 SILT/CLAY: 1.46%
 SKEWNESS: -0.547 KURTOSIS: 1.193

GRAPHIC METHOD

MEAN (PHI): 2.18 SORTING: 0.62
 MEAN (mm) : 0.22 MEDIAN (mm): 0.20
 NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.23 SORTING: 0.72
 MEAN (mm) : 0.21

DATA FILE NAME: DB99-13#5.TAB

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

SAMPLE NO.: DB99-13 S#6
SAMPLE ELEV. (FT. NGVD):
SAMPLE DEPTH (FT.): 17.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 178.76
SAMPLE WEIGHT AFTER WASH (GRAMS): 175.94

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	0.38	0.21	99.79
7	-1.50	2.800	1.04	0.58	99.42
10	-1.00	2.000	2.04	1.14	98.86
14	-0.50	1.400	3.29	1.84	98.16
18	0.00	1.000	4.38	2.45	97.55
25	0.50	0.710	5.65	3.16	96.84
35	1.00	0.500	8.78	4.91	95.09
45	1.50	0.355	15.56	8.70	91.30
60	2.00	0.250	36.73	20.55	79.45
80	2.50	0.180	94.40	52.81	47.19
120	3.00	0.125	165.28	92.46	7.54
170	3.50	0.090	175.57	98.22	1.78
200	3.75	0.075	175.74	98.31	1.69
230	4.00	0.063	177.24	99.15	0.85
PAN			178.75	99.99	0.01

PHI(5): 1.01 PHI(16): 1.81 PHI(25): 2.07
PHI(50): 2.46 PHI(75): 2.78 PHI(84): 2.89
PHI(95): 3.22

SIEVE LOSS(g): 0.01 SILT/CLAY: 1.69%
SKEWNESS: -0.627 KURTOSIS: 1.274

GRAPHIC METHOD

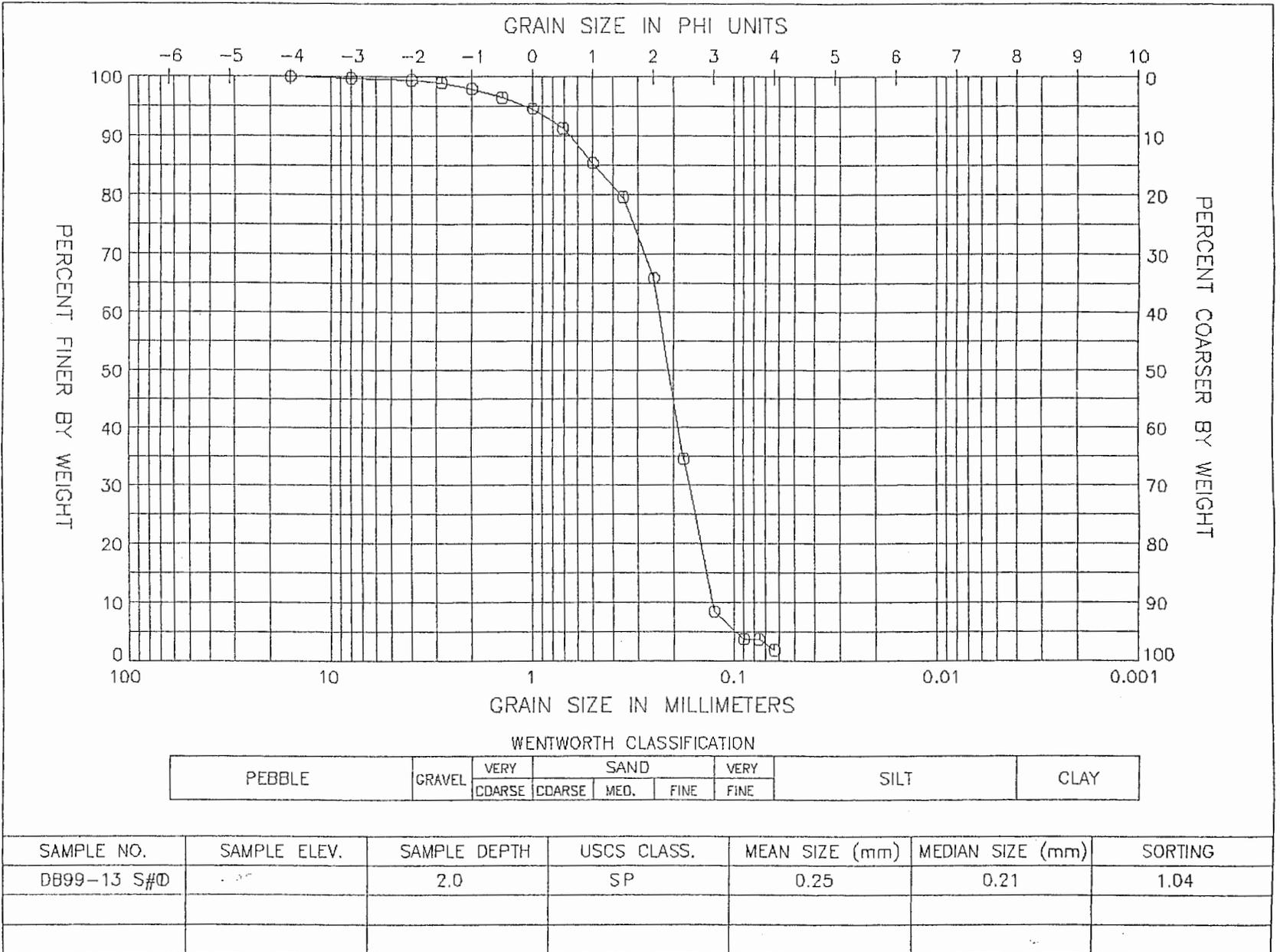
MEAN (PHI): 2.28 SORTING: 0.54
MEAN (mm) : 0.21 MEDIAN (mm): 0.18
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

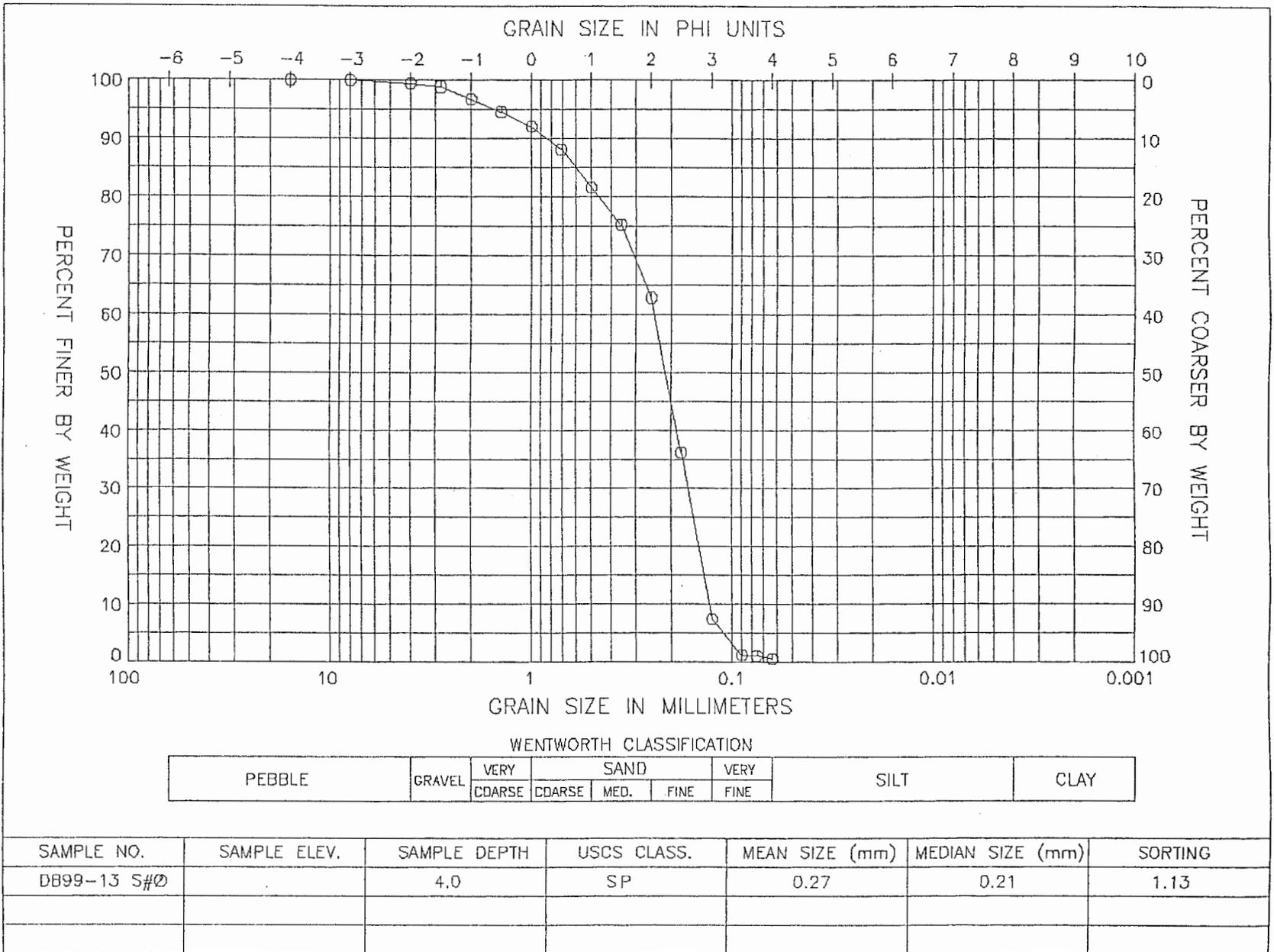
MEAN (PHI): 2.30 SORTING: 0.77
MEAN (mm) : 0.20

DATA FILE NAME: DB99-13#6.TAB

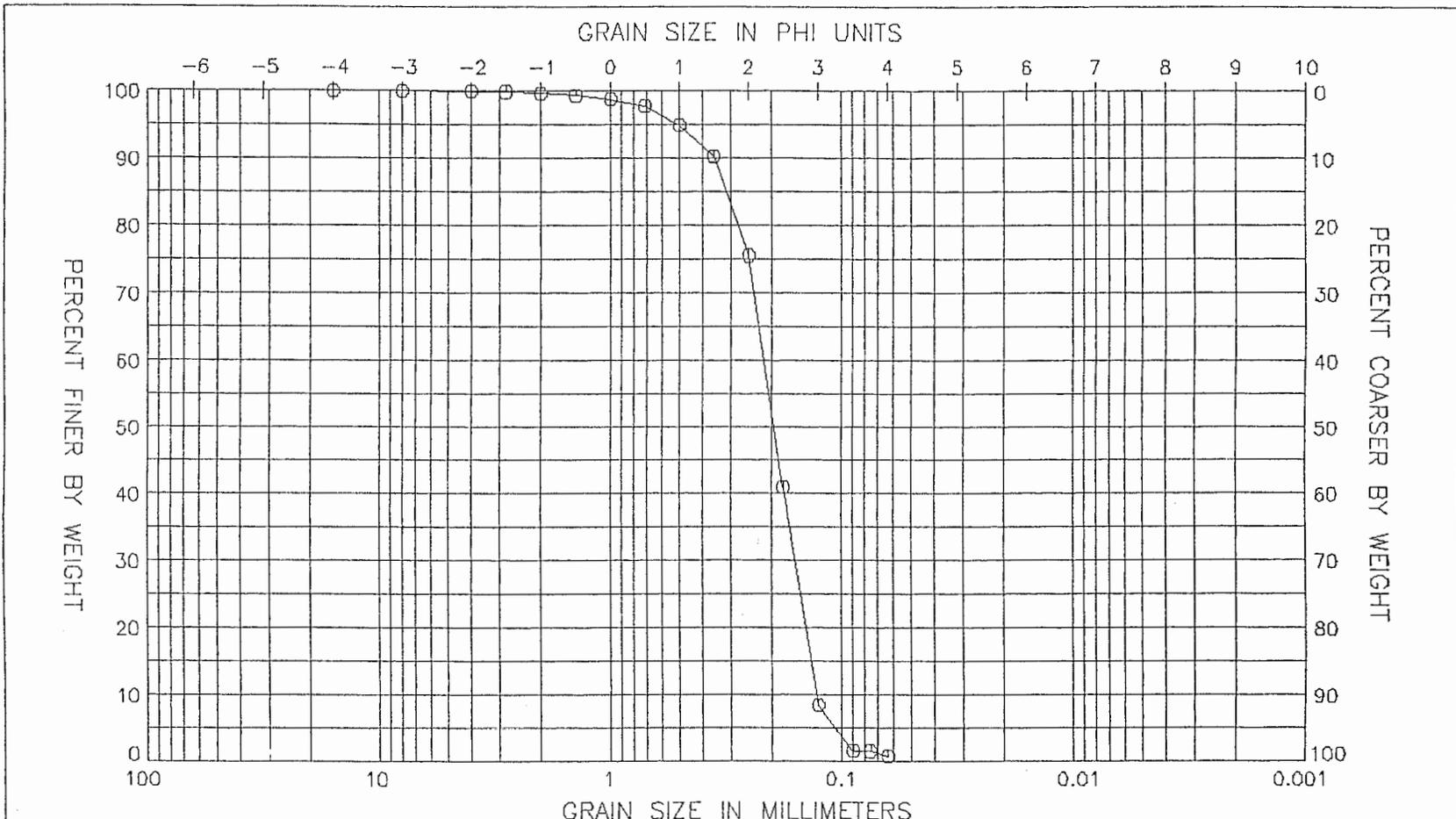
GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999

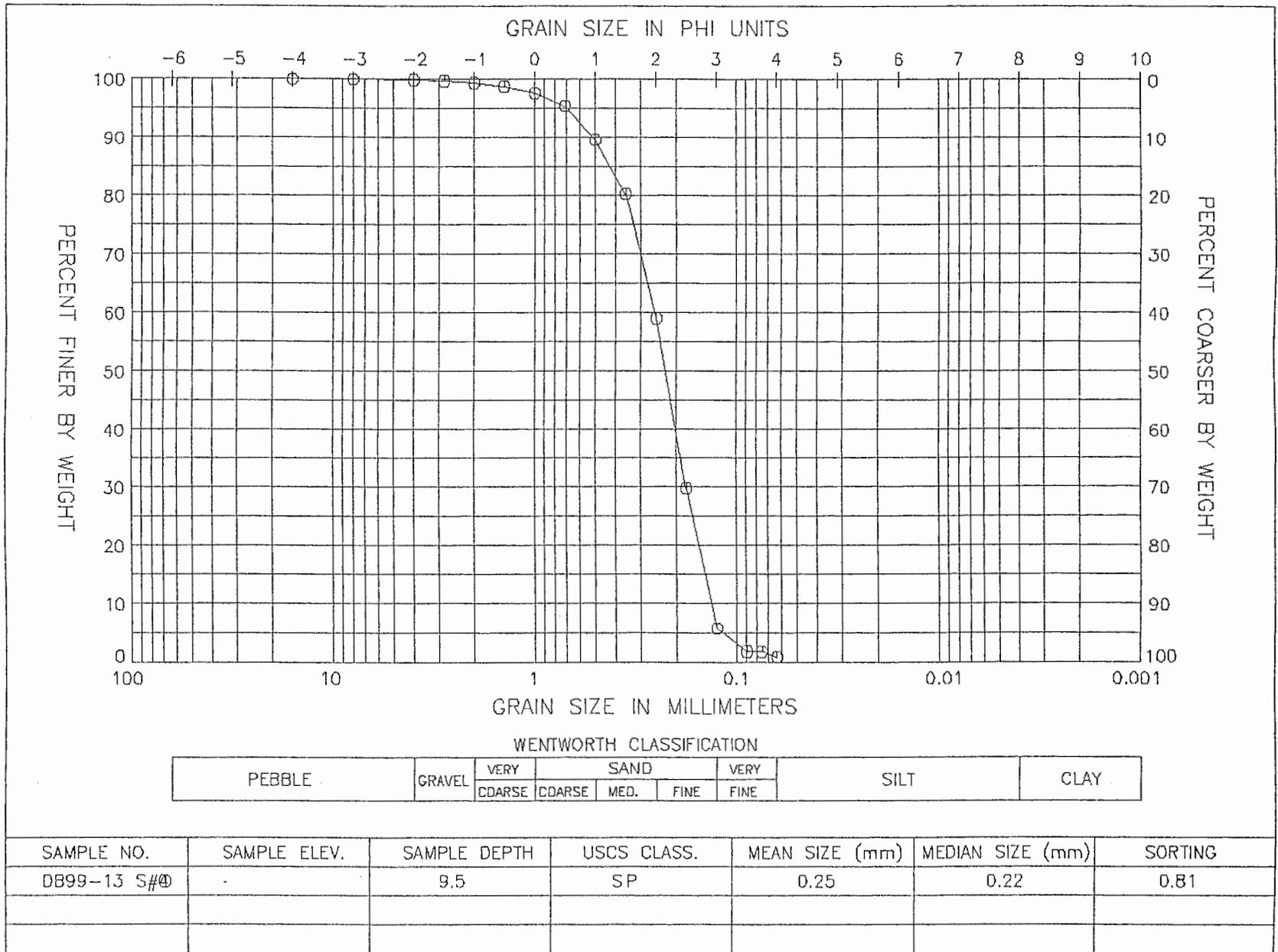


WENTWORTH CLASSIFICATION

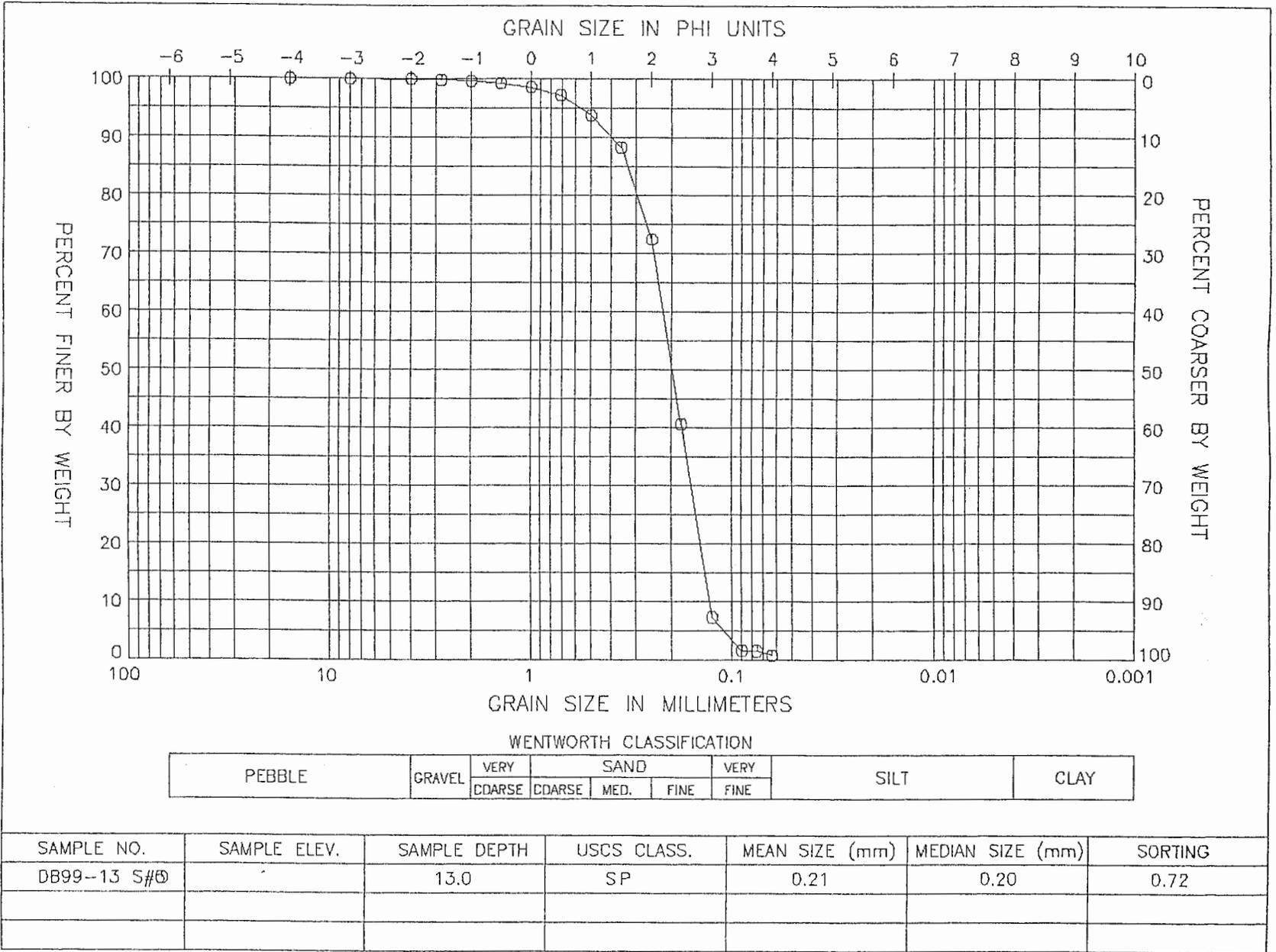
PEBBLE	GRAVEL	VERY	SAND			VERY	SILT	CLAY
		COARSE	COARSE	MED.	FINE	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
DB99-13 S#(1)		6.0	SP	0.21	0.19	0.69

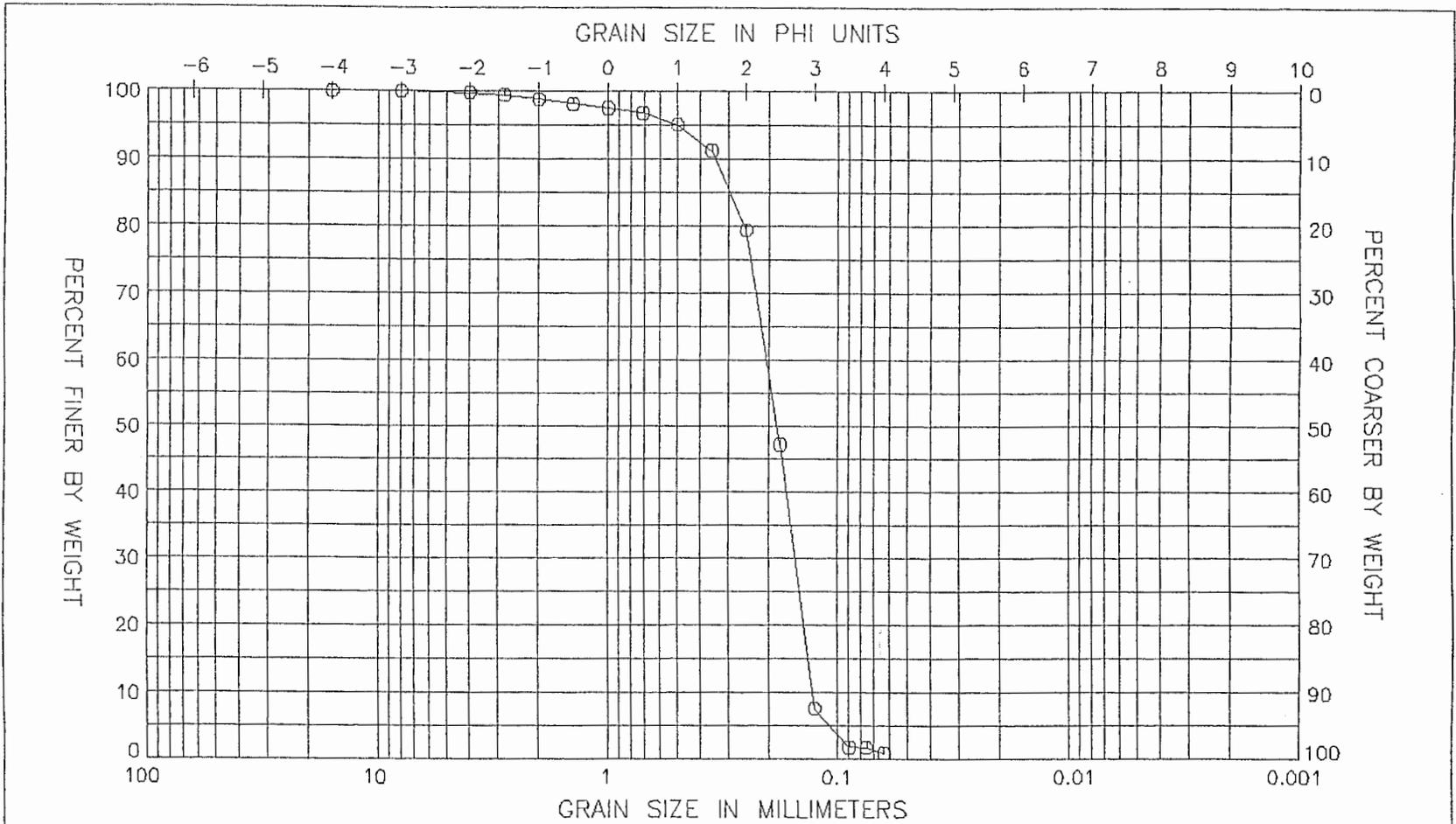
GRAIN SIZE DISTRIBUTION CURVE
 DELRAY BEACH VIBRACORES 1999



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
DB99-13 S#6		17.0	SP	0.20	0.18	0.77