

VIBRACORE LOG							
PROJECT: NORTH BOCA RATON BORROW AREA (1994)				CORE NO: NBR - 15			
COORDINATES:		DATE: SEPT. 21, 1994		WATER DEPTH: 57.0 Ft NGVD			
N = 740657		START TIME: 0810		DRILLER: EXMAR			
E = 807853		END TIME: 0843		CLIENT REP : M. ANDREWS			
CORE DIAMETER: 3.0"		ELEV.	DEPTH	LEGEND	DESCRIPTION	SAMP NO.	REMARKS
LENGTH OF BARREL: 20.0'		57.0'	0.0				
PENETRATION DEPTH: 16.0'		58.0'		-		1	2.27 Phi
LENGTH RECOVERED: 15.7'				-		1.0'	0.21 mm
PERCENT RECOVERED: 98 %				-			2.2 % SILT (SP)
LENGTH RETAINED : 15.7'				-			1.85 Phi
SUPPORT VESSEL: SEAWARD EXPLORER		61.0'		-		2	0.28 mm
POSITIONING: DGPS				-		4.0'	2.1 % SILT (SP)
MOTOROLA LGT 1000 / OMNISTAR DGPS			5.0	-	GRAY, MEDIUM QUARTZOSE SAND WITH GRAY & BLACK CALCAROUS SHELL HASH		CUT
WEATHER:				-			
WIND:				-			
DIR: VAR.				-			
SPEED: 0-5 Kt		65.0'		-		3	1.73 Phi
WAVES:				-		8.0'	0.38 mm
DIR: SE				-			2.5 % SILT (SP)
HEIGHT: 1-2 Ft			10.0	-	GRAY, MEDIUM QUARTZOSE SAND WITH GRAY & BLACK CALCAROUS SHELL HASH		CUT
CURRENT:				-			
DIR: NORTH				-			
SPEED: MODERATE				-			
ANALYSIS BY: MDA				-			
ANALYSIS METHOD:				-			
VISUAL LOGGING				-			
MECHANICAL SIEVE			15.0	-			
SAND				-			
SHELLS				-			
CORAL FRAG.			73.0'	-			
SHELL HASH			16.0'	-			
ROCK				-			
			20.0	-			

NOTE: MEAN WAS CALCULATED USING MOMENT METHOD
 NOTE: COORDINATE SYSTEM - FLORIDA STATE PLANE NAD 1927
 NOTE: CORE WEIGHTED COMPOSITE 0.28 mm

COASTAL PLANNING & ENGINEERING, INC

GRADATION ANALYSIS REPORT
N. BOCA RATON VIBRACORE 9-94
TESTED BY: MDA ON: 11-14-94

SAMPLE NO.: NBR15 S#1
SAMPLE ELEV. (FT. NGVD): -58.0
SAMPLE DEPTH (FT.): -1.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 70.42
SAMPLE WEIGHT AFTER WASH (GRAMS): 68.94

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.0	16.000	.00	.00	100.00
5/16	-3.0	8.000	.00	.00	100.00
5	-2.0	4.000	.00	.00	100.00
7	-1.5	2.800	.19	.27	99.73
10	-1.0	2.000	.48	.68	99.32
14	-0.5	1.400	.98	1.39	98.61
18	0.0	1.000	1.48	2.10	97.90
25	0.5	.710	2.70	3.83	96.17
35	1.0	.500	5.46	7.75	92.25
45	1.5	.355	8.77	12.45	87.55
60	2.0	.250	18.67	26.51	73.49
80	2.5	.180	37.94	53.88	46.12
120	3.0	.125	61.38	87.16	12.84
170	3.5	.090	68.57	97.37	2.63
200	3.75	.075	68.85	97.77	2.23
230	4.0	.063	69.64	98.89	1.11
PAN			70.40	99.97	.03

PHI(5): .65 PHI(16): 1.63 PHI(25): 1.95
PHI(50): 2.43 PHI(75): 2.82 PHI(84): 2.95
PHI(95): 3.38

SIEVE LOSS(g): .02 SILT/CLAY: 2.23%
SKEWNESS: -.826 KURTOSIS: 1.287

GRAPHIC METHOD

MEAN (PHI): 2.21 SORTING: .66
MEAN (mm): .22 MEDIAN (mm): .19
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.27 SORTING: .82
MEAN (mm): .21

DATA FILE NAME: A:VC15S#1.TAB

GRADATION ANALYSIS REPORT
N. BOCA RATON VIBRACORE 9-94
TESTED BY: MDA ON: 11-14-94

SAMPLE NO.: NBR15 S#2
SAMPLE ELEV. (FT. NGVD): -61.0
SAMPLE DEPTH (FT.): -4.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 70.23
SAMPLE WEIGHT AFTER WASH (GRAMS): 68.80

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.0	16.000	.00	.00	100.00
5/16	-3.0	8.000	.00	.00	100.00
5	-2.0	4.000	.00	.00	100.00
7	-1.5	2.800	.11	.16	99.84
10	-1.0	2.000	.44	.63	99.37
14	-0.5	1.400	.85	1.21	98.79
18	0.0	1.000	1.29	1.84	98.16
25	0.5	.710	2.45	3.49	96.51
35	1.0	.500	6.86	9.77	90.23
45	1.5	.355	15.31	21.80	78.20
60	2.0	.250	39.52	56.27	43.73
80	2.5	.180	60.12	85.60	14.40
120	3.0	.125	67.87	96.64	3.36
170	3.5	.090	68.70	97.82	2.18
200	3.75	.075	68.74	97.88	2.12
230	4.0	.063	69.46	98.91	1.09
PAN			70.18	99.93	.07

PHI(5): .62 PHI(16): 1.26 PHI(25): 1.55
PHI(50): 1.91 PHI(75): 2.32 PHI(84): 2.47
PHI(95): 2.93

SIEVE LOSS(g): .05 SILT/CLAY: 2.12%
SKEWNESS: -.272 KURTOSIS: 1.223

GRAPHIC METHOD

MEAN (PHI): 1.84 SORTING: .61
MEAN (mm): .28 MEDIAN (mm): .27
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.85 SORTING: .71
MEAN (mm): .28

DATA FILE NAME: A:VC15S#2.TAB

GRADATION ANALYSIS REPORT
N. BOCA RATON VIBRACORE 9-94
TESTED BY: MDA ON: 11-14-94

SAMPLE NO.: NBR15 S#3
SAMPLE ELEV. (FT. NGVD): -65.0
SAMPLE DEPTH (FT.): -8.0
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 79.59
SAMPLE WEIGHT AFTER WASH (GRAMS): 77.64

SIEVE SIZE	PHI SIZE	MESH SIZE (mm)	RETAINED (GRAMS)	RETAINED (%)	PASSED (%)
5/8	-4.0	16.000	.00	.00	100.00
5/16	-3.0	8.000	.00	.00	100.00
5	-2.0	4.000	.00	.00	100.00
7	-1.5	2.800	.40	.50	99.50
10	-1.0	2.000	1.13	1.42	98.58
14	-0.5	1.400	1.84	2.31	97.69
18	0.0	1.000	2.86	3.59	96.41
25	0.5	.710	5.04	6.33	93.67
35	1.0	.500	10.63	13.36	86.64
45	1.5	.355	20.12	25.28	74.72
60	2.0	.250	49.21	61.83	38.17
80	2.5	.180	71.93	90.38	9.62
120	3.0	.125	76.92	96.65	3.35
170	3.5	.090	77.49	97.36	2.64
200	3.75	.075	77.58	97.47	2.53
230	4.0	.063	78.57	98.72	1.28
PAN			79.56	99.96	.04

PHI(5): .26 PHI(16): 1.11 PHI(25): 1.49
PHI(50): 1.84 PHI(75): 2.23 PHI(84): 2.39
PHI(95): 2.87

SIEVE LOSS(g): .03 SILT/CLAY: 2.53%
SKEWNESS: -.551 KURTOSIS: 1.442

GRAPHIC METHOD

MEAN (PHI): 1.69 SORTING: .64
MEAN (mm): .31 MEDIAN (mm): .28
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.73 SORTING: .79
MEAN (mm): .30

DATA FILE NAME: A:VC15S#3.TAB

GRAIN SIZE IN PHI UNITS

PERCENT FINER BY WEIGHT

PERCENT COARSER BY WEIGHT

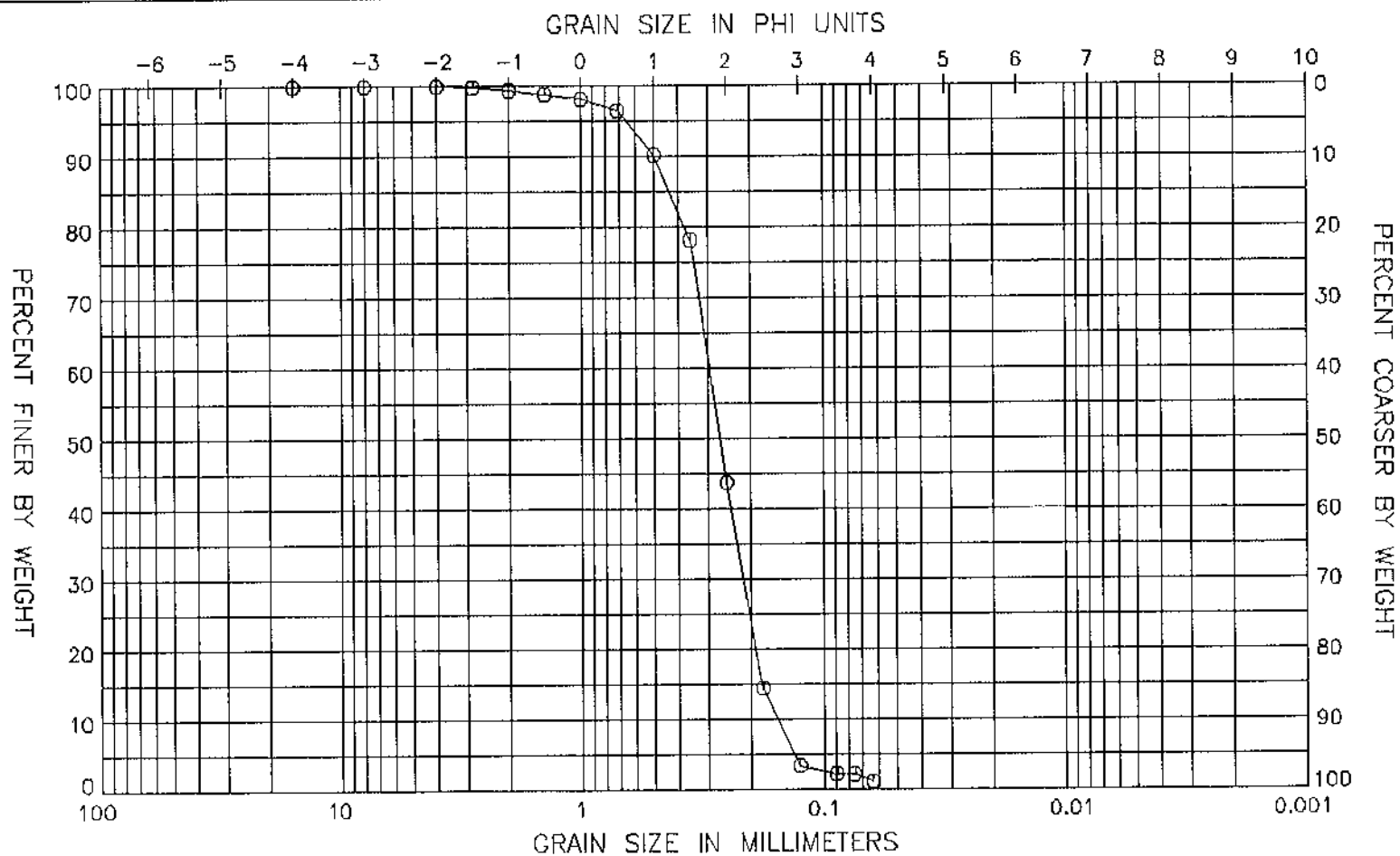
GRAIN SIZE IN MILLIMETERS

Grain Size (mm)	Grain Size (Phi)	Percent Finer (%)	Percent Coarser (%)
100	-6	100	0
75	-5	100	0
60	-4	100	0
47.5	-3	100	0
37.5	-2	100	0
30	-1.5	100	0
25	-1	100	0
20	-0.85	100	0
15	-0.7	100	0
12.5	-0.55	100	0
10	-0.425	100	0
7.5	-0.355	100	0
6	-0.275	100	0
4.75	-0.2	100	0
3.75	-0.15	100	0
3	-0.106	100	0
2.5	-0.085	100	0
2	-0.075	95	5
1.5	-0.063	90	10
1.18	-0.053	85	15
0.85	-0.044	75	25
0.75	-0.04	70	30
0.6	-0.033	50	50
0.425	-0.025	15	85
0.3	-0.018	5	95
0.25	-0.016	5	95
0.2	-0.013	5	95
0.15	-0.011	5	95
0.125	-0.01	5	95
0.106	-0.009	5	95
0.085	-0.008	5	95
0.075	-0.0075	5	95
0.063	-0.0063	5	95
0.053	-0.0053	5	95
0.044	-0.0044	5	95
0.0375	-0.00375	5	95
0.03	-0.003	5	95
0.025	-0.0025	5	95
0.02	-0.002	5	95
0.015	-0.0015	5	95
0.0125	-0.00125	5	95
0.0106	-0.00106	5	95
0.0085	-0.00085	5	95
0.0075	-0.00075	5	95
0.006	-0.0006	5	95
0.00425	-0.000425	5	95
0.003	-0.0003	5	95
0.0025	-0.00025	5	95
0.002	-0.0002	5	95
0.0015	-0.00015	5	95
0.00125	-0.000125	5	95
0.00106	-0.000106	5	95
0.00085	-0.000085	5	95
0.00075	-0.000075	5	95
0.0006	-0.00006	5	95
0.000425	-0.0000425	5	95
0.0003	-0.00003	5	95
0.00025	-0.000025	5	95
0.0002	-0.00002	5	95
0.00015	-0.000015	5	95
0.000125	-0.0000125	5	95
0.000106	-0.0000106	5	95
0.000085	-0.0000085	5	95
0.000075	-0.0000075	5	95
0.00006	-0.000006	5	95
0.0000425	-0.00000425	5	95
0.00003	-0.000003	5	95
0.000025	-0.0000025	5	95
0.00002	-0.000002	5	95
0.000015	-0.0000015	5	95
0.0000125	-0.00000125	5	95
0.0000106	-0.00000106	5	95
0.0000085	-0.00000085	5	95
0.0000075	-0.00000075	5	95
0.000006	-0.0000006	5	95
0.00000425	-0.000000425	5	95
0.000003	-0.0000003	5	95
0.0000025	-0.00000025	5	95
0.000002	-0.0000002	5	95
0.0000015	-0.00000015	5	95
0.00000125	-0.000000125	5	95
0.00000106	-0.000000106	5	95
0.00000085	-0.000000085	5	

WENTWORTH CLASSIFICATION						
PEBBLE	GRAVEL	SAND			SILT	CLAY
		COARSE	MED.	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
NBR15 S#1 O	-58.0	-1.0	SP	0.22	0.19	0.66

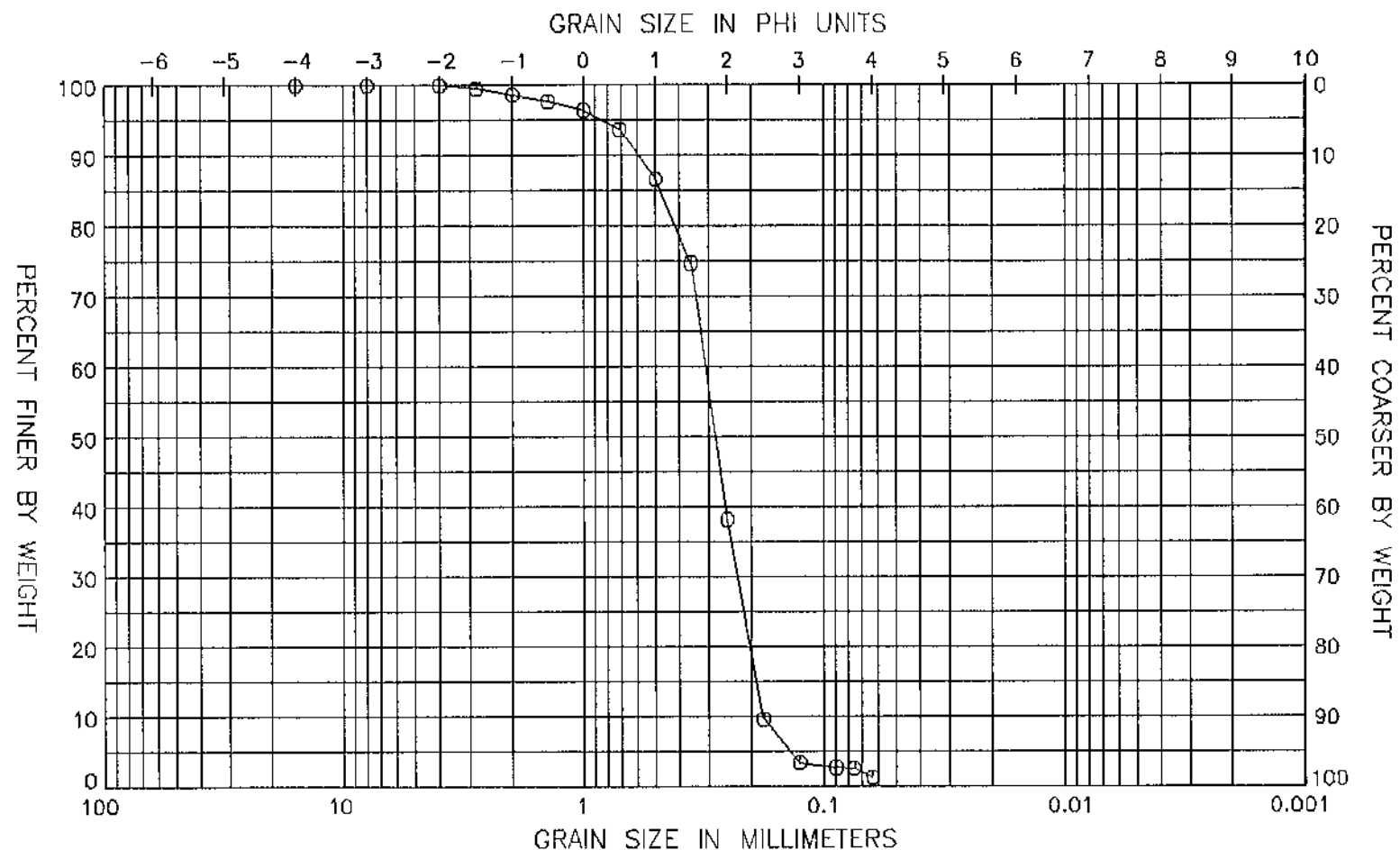
GRAIN SIZE DISTRIBUTION CURVE
N. BOCA RATON VIBRACORE 9-94



WENTWORTH CLASSIFICATION						
PEBBLE	GRAVEL	SAND			SILT	CLAY
		COARSE	MED.	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
NBR15 S#2 ①	-61.0	-4.0	SP	0.28	0.27	0.61

GRAIN SIZE DISTRIBUTION CURVE
N. BOCA RATON VIBRACORE 9-94



WENTWORTH CLASSIFICATION						
PEBBLE	GRAVEL	SAND			SILT	CLAY
		COARSE	MED.	FINE		

SAMPLE NO.	SAMPLE ELEV.	SAMPLE DEPTH	USCS CLASS.	MEAN SIZE (mm)	MEDIAN SIZE (mm)	SORTING
NBR15 S#3 0	-65.0	-8.0	SP	0.31	0.28	0.64