

DRILLING LOG		DIVISION: South Atlantic		INSTALLATION: Jacksonville District		SHEET 1 of 1	
1. PROJECT		CENTRAL BOCA SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"			
(Coordinates or Station)				11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
2. LOCATION		X=963805.79 Y=729991.05		MLW			
3. DRILLING AGENCY: Alpine Ocean Seismic Survey Inc.				12. MANUFACTURER'S DESIGNATION OF DRILL		ALPINE PNEUMATIC VIBRACORE	
4. HOLE NO. (As shown on drawing title and file number)		CIVC-00-18		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN		Disturbed: 0 Undisturbed: 0	
5. NAME OF DRILLER		JAMES COLE		14. TOTAL NO. OF CORE BOXES			
6. DIRECTION OF HOLE		VERTICAL		15. ELEVATION GROUND WATER			
7. THICKNESS OF BURDEN 0.0 FT				16. DATE HOLE		Started Completed	
				3/22/01		16:36	
8. DEPTH DRILLED INTO ROCK N/A				17. ELEVATION TOP OF HOLE -64.1 ft			
9. TOTAL DEPTH OF HOLE 14.2 FT				18. TOTAL CORE RECOVERY FOR BORING 94%			
				19. SIGNATURE OF GEOLOGIST		MW/ID	

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-64.1	0		SAND, fine to medium grained, trace shell hash, gray (5Y-5/1), (SP).		2	
-65.1	1					
	2					
	3		SAND medium to fine grained, little shell hash, gray (5Y-5/1), (SP). 0.5" coral @ 2.4', 1.5" coral @ 3.3', 1" shell @ 3.7', two 0.5" and two 1" coral fragments @ 5.2'.		1	Sample #1, Depth = 2.0' Mean (mm): 0.26, Phi Sorting: 1.23 Silt: 2.51% (SW)
-69.3	4					
	5					
	6		SAND fine to medium grained, trace shell hash, gray (5Y-5/1), (SP).		2	Sample #2, Depth = 6.0' Mean (mm): 0.28, Phi Sorting: 1.34 Silt: 5.01% (SW-SM)
-71.8	7					
	8		SAND medium to fine grained, little shell hash, trace shell fragments, gray (5Y-5/1), (SP). 1.5" coral @ 8.6', two 1" shell fragments @ 8.7', one 1" shell and one 1" coral @ 8.8', 1.5" shell @ 9.2', 3.5" coral @ 9.3'-9.6'.		3	Sample #3, Depth = 8.0' Mean (mm): 0.30, Phi Sorting: 1.57 Silt: 4.99% (SW)
-73.7	9					
	10					
	11		CARBONATE CLASTS, gray (5Y-6/1) GP.			
-77.4	12					
	13					
-78.3	14		No Recovery			
	15		End of Boring			
	16					
	17					
	18					
	19					
	20					
	21		Note:			Note:
	22		1) Soils are field visually classified in accordance with the Unified Soil Classification System.			1) This column contains laboratory data.
	23					2) Samples are taken from a 3" section of the core, centered on the sample depth.
	24					

PROJECT: Central Boca Sand Study	HOLE NUMBER:
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# Gradation Analysis Report

Proj Name: Central Boca  
 Sample: CBVC-01-18#1  
 Date: 4/18/01  
 By: ID

COASTAL PLANNING & ENGINEERING, INC.

2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: -66.10 Feet      Easting: 963805.79      State Plane 1983  
 Reference: NGVD      Northing: 729991.05      FLA East Feet

USCS: SW      Munsel Dry: 5Y 6/1      Munsel Wet: 5Y 5/1  
 Comments: 0

Dry Wt. 62.96      Percent Silt: 2.51  
 Wash Wt. 61.46

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
3/4	-4.250	19.027	0.000	0.000	0.000	0.000
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.250	9.514	0.000	0.000	0.000	0.000
4	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.180	0.286	0.180	0.286
7	-1.500	2.828	0.430	0.683	0.610	0.969
10	-1.000	2.000	0.870	1.382	1.480	2.351
14	-0.500	1.414	1.140	1.811	2.620	4.161
18	0.000	1.000	1.210	1.922	3.830	6.083
25	0.500	0.707	2.190	3.478	6.020	9.562
35	1.000	0.500	3.220	5.114	9.240	14.676
45	1.500	0.354	4.080	6.480	13.320	21.156
60	2.000	0.250	8.730	13.866	22.050	35.022
80	2.500	0.177	17.630	28.002	39.680	63.024
120	3.000	0.125	18.210	28.923	57.890	91.947
170	3.500	0.088	3.400	5.400	61.290	97.348
200	3.750	0.074	0.070	0.111	61.360	97.459
230	4.000	0.063	0.070	0.111	61.430	97.570
Pan	Pan	0.053	1.510	2.398	62.940	99.968

PHI 5      PHI 16      PHI 25      PHI 50      PHI 75      PHI 84      PHI 95  
 -0.28      1.10      1.64      2.27      2.71      2.86      3.28

Median phi: 2.27      Median mm: 0.21

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.85	0.28	0.98	-0.75	1.37
Moment	1.94	0.26	1.23	-0.71	2.13

# Gradation Analysis Report

Proj Name: Central Boca  
Sample: CBVC-01-18#2  
Date: 4/18/01  
By: ID

COASTAL PLANNING & ENGINEERING, INC.

2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: -70.10 Feet      Easting: 963805.79      State Plane 1983  
Reference: NGVD      Northing: 729991.05      FLA East Feet

USCS: SW-SM      Munsel Dry: 5Y 6/1      Munsel Wet: 5Y 5/1  
Comments: 0

Dry Wt. 60.44      Percent Silt: 5.01  
Wash Wt. 57.48

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
3/4	-4.250	19.027	0.000	0.000	0.000	0.000
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.250	9.514	0.000	0.000	0.000	0.000
4	-3.000	8.000	0.060	0.099	0.060	0.099
5	-2.000	4.000	0.210	0.347	0.270	0.447
7	-1.500	2.828	0.500	0.827	0.770	1.274
10	-1.000	2.000	0.410	0.678	1.180	1.952
14	-0.500	1.414	0.850	1.406	2.030	3.359
18	0.000	1.000	1.670	2.763	3.700	6.122
25	0.500	0.707	2.820	4.686	6.520	10.788
35	1.000	0.500	5.000	8.273	11.520	19.060
45	1.500	0.354	7.690	12.723	19.210	31.784
60	2.000	0.250	11.330	18.746	30.540	50.529
80	2.500	0.177	14.900	24.653	45.440	75.182
120	3.000	0.125	9.750	16.132	55.190	91.314
170	3.500	0.088	2.050	3.392	57.240	94.705
200	3.750	0.074	0.160	0.265	57.400	94.970
230	4.000	0.063	0.060	0.099	57.460	95.069
Pan	Pan	0.053	2.970	4.914	60.430	99.983

PHI 5      PHI 16      PHI 25      PHI 50      PHI 75      PHI 84      PHI 95  
-0.20      0.81      1.23      1.99      2.50      2.77      3.79

Median phi: 1.99      Median mm: 0.25

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.83	0.28	1.09	-0.22	1.29
Moment	1.84	0.28	1.34	-0.10	1.78

# Gradation Analysis Report

Proj Name: Central Boca  
Sample: CBVC-01-18#3  
Date: 4/18/01  
By: ID

COASTAL PLANNING & ENGINEERING, INC.

2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation: -72.10 Feet Easting: 963805.79 State Plane 1983  
Reference: NGVD Northing: 729991.05 FLA East Feet

USCS: SW Munsel Dry: 5Y 6/1 Munsel Wet: 5Y 5/1  
Comments: 0

Dry Wt. 65.32 Percent Silt: 4.99  
Wash Wt. 62.16

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
3/4	-4.250	19.027	0.000	0.000	0.000	0.000
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.250	9.514	0.000	0.000	0.000	0.000
4	-3.000	8.000	0.400	0.612	0.400	0.612
5	-2.000	4.000	0.250	0.383	0.650	0.995
7	-1.500	2.828	1.050	1.607	1.700	2.603
10	-1.000	2.000	1.450	2.220	3.150	4.822
14	-0.500	1.414	1.900	2.909	5.050	7.731
18	0.000	1.000	1.750	2.679	6.800	10.410
25	0.500	0.707	2.860	4.378	9.660	14.789
35	1.000	0.500	4.120	6.307	13.780	21.096
45	1.500	0.354	5.810	8.895	19.590	29.991
60	2.000	0.250	12.000	18.371	31.590	48.362
80	2.500	0.177	15.950	24.418	47.540	72.780
120	3.000	0.125	11.600	17.759	59.140	90.539
170	3.500	0.088	2.720	4.164	61.860	94.703
200	3.750	0.074	0.190	0.291	62.050	94.994
230	4.000	0.063	0.090	0.138	62.140	95.132
Pan	Pan	0.053	3.170	4.853	65.310	99.985

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95  
-0.97 0.60 1.22 2.03 2.56 2.82 3.74

Median phi: 2.03 Median mm: 0.24

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.64	0.32	1.27	-0.54	1.44
Moment	1.71	0.30	1.57	-0.45	1.97

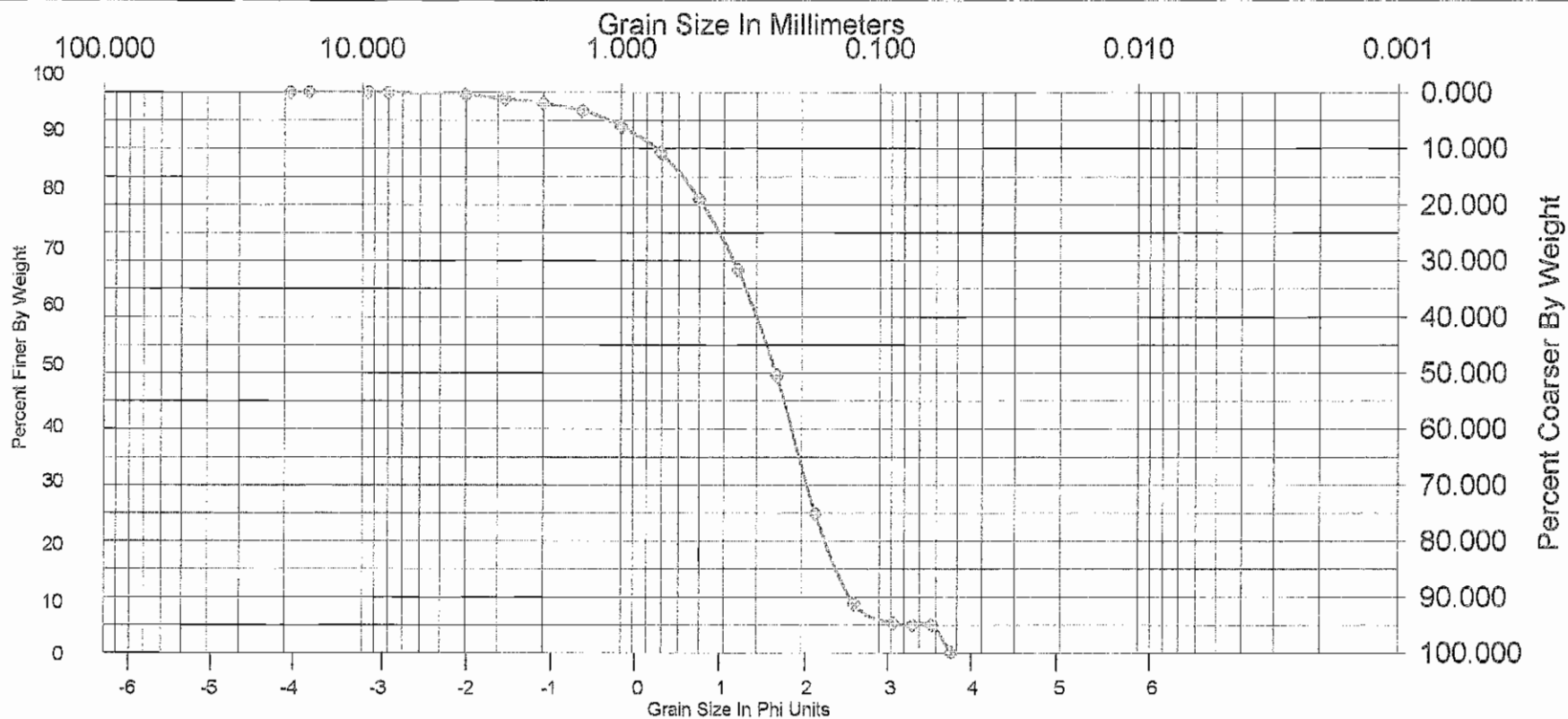


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information	
CBVC-01-18#1	2.0		SW	2.51	0.21	0.26	-0.71	2.13	1.23	NA	NA	NA	Project Name:	Central Boca
													Sample Type:	VibraCores
													Collection Date:	4/18/01
													Analysis By:	ID
													Easting (X):	963805.79 Feet
													Northing (Y):	729991.05 Feet
													Sample Elevation:	-66.1 NGVD
													Coord. System:	State Plane 1983 FLA East

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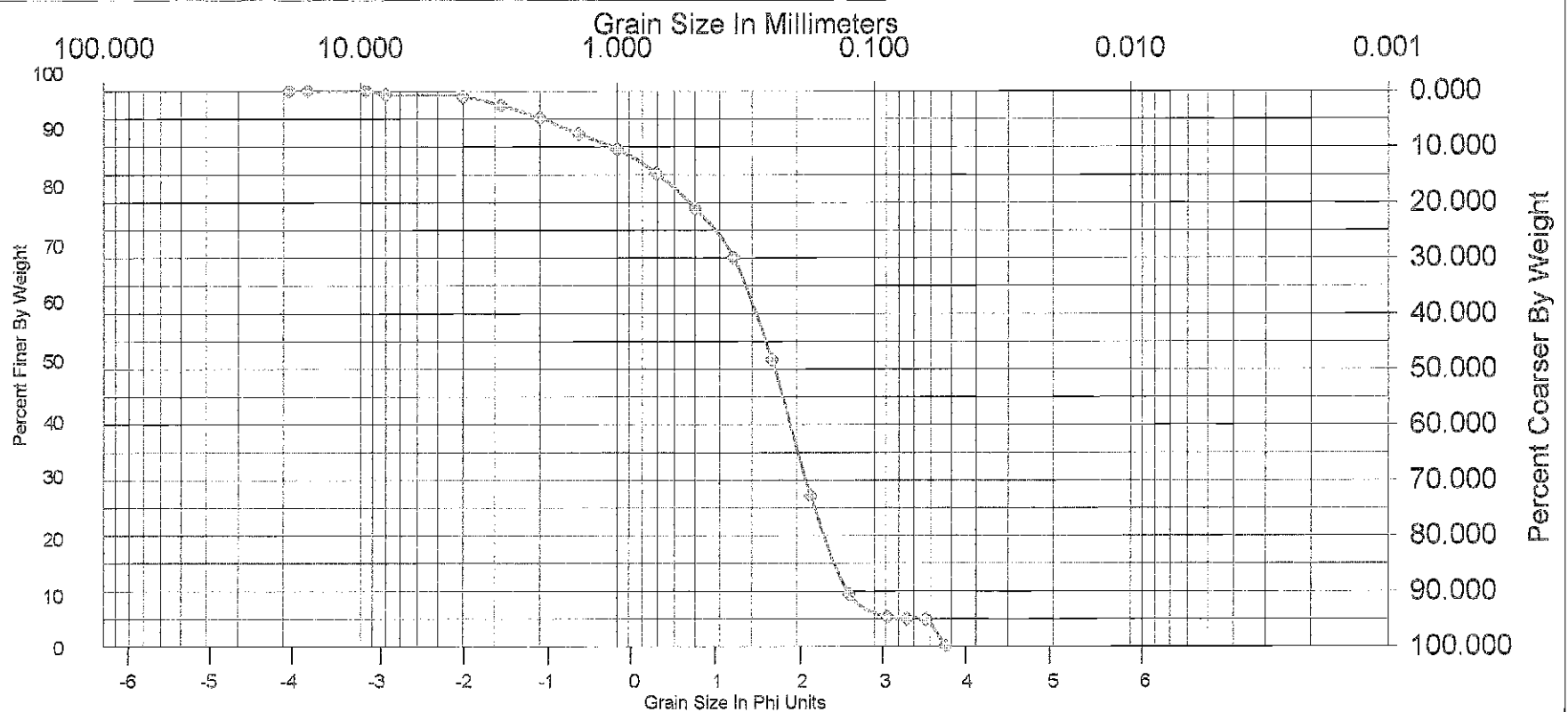


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information	
CBVC-01-18#2	6.0		SW-SM	5.01	0.25	0.28	-0.1	1.78	1.34	NA	NA	NA	Project Name:	Central Boca
													Sample Type:	VibraCores
													Collection Date:	4/18/01
													Analysis By:	ID
													Easting (X):	963805.79 Feet
													Northing (Y):	729991.05 Feet
													Sample Elevation:	-70.1 NGVD
													Coord. System:	State Plane 1983 FLA East

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Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information	
CBVC-01-18#3	8.0		SW	4.99	0.24	0.31	-0.45	1.97	1.57	NA	NA	NA	Project Name:	Central Boca
													Sample Type:	VibraCores
													Collection Date:	4/18/01
													Analysis By:	ID
													Easting (X):	963805.79 Feet
													Northing (Y):	729991.05 Feet
													Sample Elevation:	-72.1 NGVD
													Coord. System:	State Plane 1983 FLA East

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