

<b>DRILLING LOG</b>		<b>DIVISION:</b> South Atlantic	<b>INSTALLATION:</b> Jacksonville District	<b>SHEET</b> 1 of 1
1. PROJECT CAPTIVA ISLAND SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"		
2. LOCATION (Coordinates or Station) X=562615.30 Y=831498.19		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD		
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-00-11		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN Disturbed: 0 Undisturbed: 0		
5. NAME OF DRILLER MAURIZIO ROSSI		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 8/10/00 Completed 11:51		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -27.6 FT		
9. TOTAL DEPTH OF HOLE -19.6 FT		18. TOTAL CORE RECOVERY FOR BORING 100%		
		19. SIGNATURE OF GEOLOGIST SK/ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-27.6	0					
	1		SAND, fine grained, trace silt/clay (calcareous), trace shell hash/ shell fragments, gray (5Y-5/1), (SP-SM).		1	Sample #1, Depth = 1.0' Mean (mm): 0.17, Phi Sorting: 1.65 Silt: 21.61% (SM)
-30.2	2					
	3		fine grained, some shell hash/shell fragments & whole shells, gray (5Y-6/1), (SP). 2.5" whole shell @ 3.4'-3.6'.		2	Sample #2, Depth = 3.0' Mean (mm): 0.47, Phi Sorting: 3.24 Silt: 18.58% (SM)
-31.7	4					
	5					
	6					
	7		CARBONATE CLASTS, ranges from fine sand sized to 1", yellow (5Y-7/6) to white (5Y-8/1), (GP).			
	8					
	9					
-37.6	10					
	11					
	12		SAND (calcareous), predominantly sand size clasts with gravel size common, little calcareous silt/clay, white (5Y-8/1), (GM).			
-42.7	13					
	14					
	15					
	16		SILTY SAND, little calcareous silt/clay, pale yellow (5Y-7/3), (SM).			
-45.7	17					
	18					
	19		SILTY CLAY (calcareous), little sand (calcareous), white (5Y-8/1), (ML-CL).			
-47.2	20					
	21		End of Boring			
	22		Note: 1) Soils are field visually classified in accordance with the Unified Soil Classification System.			Note: This column contains laboratory data.
	23					
	24					

# Gradation Analysis Report

Proj Name: Captiva Island  
 Sample: CIVC-00-11#1  
 Date: 1/1/2001  
 By: ID



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

Elevation:	-28.6	Feet	Easting:	562615.30	State Plane	1983
Reference:	NGVD 29		Northing:	831498.19	FLA West	Feet

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

Dry Wt.	63.65	Percent Silt:	21.61
Wash Wt.	50.07		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.000	0.000	0.000	0.000
7	-1.500	2.828	0.250	0.393	0.250	0.393
10	-1.000	2.000	0.800	1.257	1.050	1.650
14	-0.500	1.414	1.360	2.137	2.410	3.786
18	0.000	1.000	1.440	2.262	3.850	6.049
25	0.500	0.707	1.980	3.111	5.830	9.159
35	1.000	0.500	2.260	3.551	8.090	12.710
45	1.500	0.354	3.200	5.027	11.290	17.738
60	2.000	0.250	5.780	9.081	17.070	26.819
80	2.500	0.177	3.200	5.027	20.270	31.846
120	3.000	0.125	7.310	11.485	27.580	43.331
170	3.500	0.088	15.680	24.635	43.260	67.965
200	3.750	0.074	5.500	8.641	48.760	76.606
230	4.000	0.063	1.130	1.775	49.890	78.382
Pan	Pan	0.053	13.750	21.603	63.640	99.984

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.23	1.33	1.90	3.14	3.70	4.06	4.19

Median phi:	3.14	Median mm:	0.11
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.50	0.18	1.35	-0.69	1.01
Moment	2.58	0.17	1.65	-0.58	1.78

# Gradation Analysis Report

Proj Name: Captiva Island  
 Sample: CIVC-00-11#2  
 Date: 1/1/2001  
 By: ID



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

Elevation:	-30.6	Feet	Easting:	562615.30	State Plane	1983
Reference:	NGVD 29		Northing:	831498.19	FLA West	Feet

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

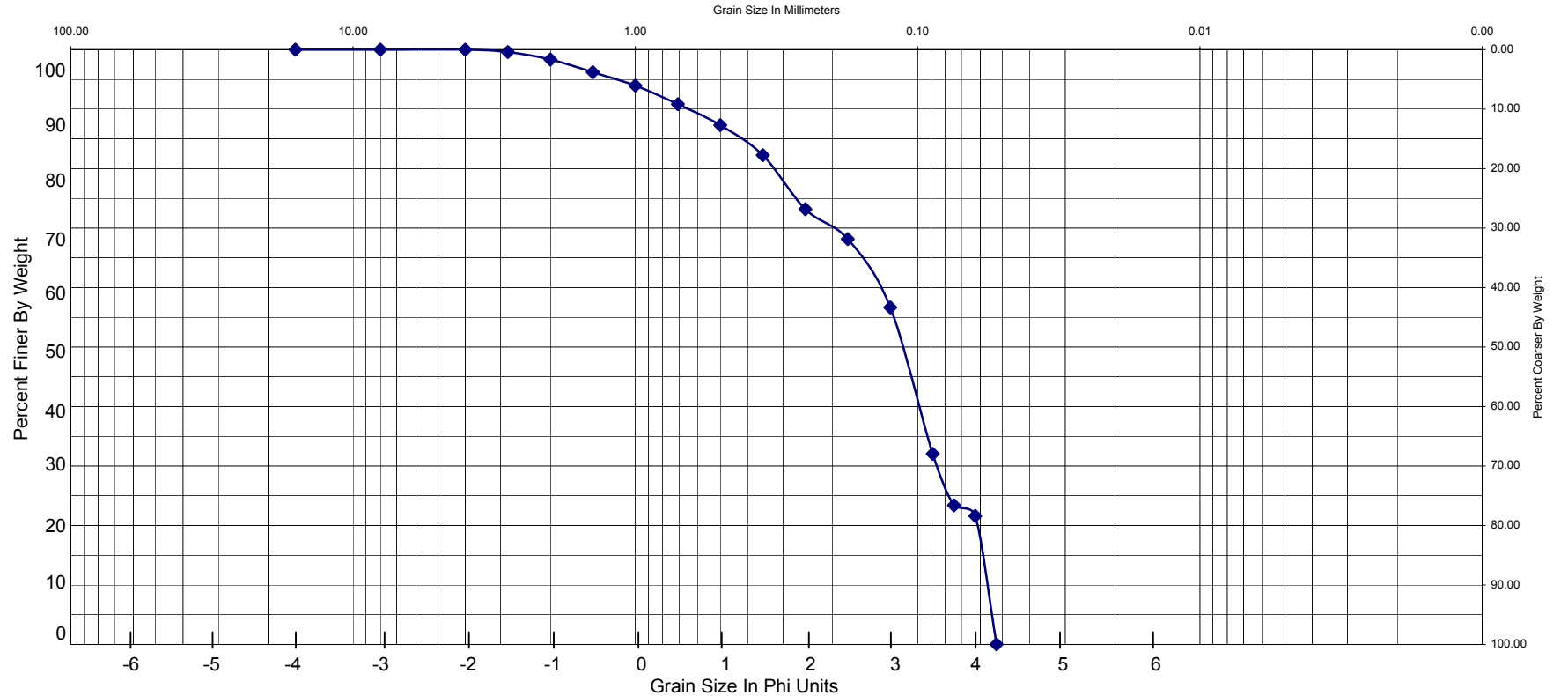
Dry Wt.	73.69	Percent Silt:	18.58
Wash Wt.	60.02		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	2.830	3.840	2.830	3.840
5/16	-3.000	8.000	5.270	7.152	8.100	10.992
5	-2.000	4.000	3.790	5.143	11.890	16.135
7	-1.500	2.828	2.250	3.053	14.140	19.188
10	-1.000	2.000	2.420	3.284	16.560	22.473
14	-0.500	1.414	2.740	3.718	19.300	26.191
18	0.000	1.000	2.660	3.610	21.960	29.801
25	0.500	0.707	2.770	3.759	24.730	33.560
35	1.000	0.500	2.800	3.800	27.530	37.359
45	1.500	0.354	2.580	3.501	30.110	40.860
60	2.000	0.250	2.710	3.678	32.820	44.538
80	2.500	0.177	3.340	4.533	36.160	49.070
120	3.000	0.125	7.730	10.490	43.890	59.560
170	3.500	0.088	11.760	15.959	55.650	75.519
200	3.750	0.074	3.290	4.465	58.940	79.984
230	4.000	0.063	1.060	1.438	60.000	81.422
Pan	Pan	0.053	13.690	18.578	73.690	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-3.84	-2.03	-0.66	2.54	3.48	4.03	4.18


Median phi:	2.54	Median mm:	0.17
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.98	0.51	2.73	-0.72	0.79
Moment	1.10	0.47	3.24	-0.42	1.36



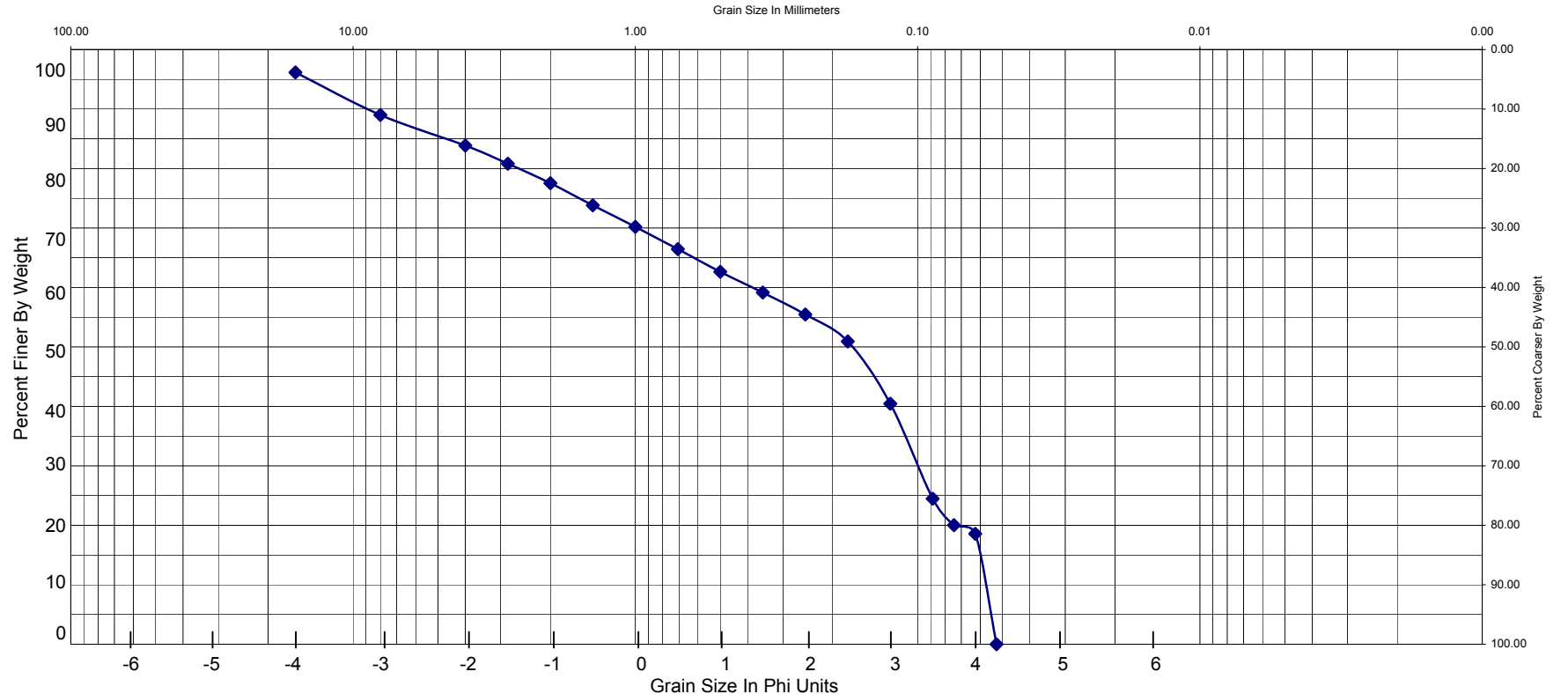
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-11#1	1.0		SM	21.61	0.11	0.17	-0.58	1.78	1.65	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID




**COASTAL PLANNING & ENGINEERING, INC.**  
**2481 N. W. BOCA RATON BLVD.**  
**BOCA RATON, FLORIDA 33431**

Easting (X):	562615.30 Feet
Northing (Y):	831498.19 Feet
Sample Elevation:	-28.6 NGVD 29
Coord. System:	State Plane 1983 FLA West



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
◆ CIVC-00-11#2	3.0		SM	18.58	0.17	0.47	-0.42	1.36	3.24	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	562615.30 Feet
Northing (Y):	831498.19 Feet
Sample Elevation:	-30.6 NGVD 29
Coord. System:	State Plane 1983 FLA West



