

DRILLING LOG		DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT CAPTIVA ISLAND SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"		
2. LOCATION (Coordinates or Station) X=561398.49 Y=834410.51		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-00-02		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 Completed 8/7/00 16:00		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -28.0 FT		
9. TOTAL DEPTH OF HOLE 19.1 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
-28	0					
	1		SAND, medium grained, some shell hash/shell fragments/whole shells, gray (5Y-5/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.60, Phi Sorting: 1.78 Silt: 4.52% (SW)
-30.7	2					
	3		SAND, medium grained, little shell hash/shell fragments, gray (5Y-6/1), (SP).		2	Sample #2, Depth = 3.3' Mean (mm): 0.21, Phi Sorting: 1.42 Silt: 9.05% (SW-SM)
-32.3	4					
	5		SHELLY SAND, some silt, gray (5Y-5/1), (SM).		3	Sample #3, Depth = 4.5' Mean (mm): 0.35, Phi Sorting: 2.44 Silt: 19.78% (SM)
	6				4	Sample #4, Depth = 6.3' Mean (mm): 0.59, Phi Sorting: 3.02 Silt: 18.03% (SM)
-34.6	7					
	8					
	9		SILTY SAND, some shell fragments and shell hash, gray (5Y-5/1), (SM).			
	10					
	11					
-40	12					
	13					
	14					
	15		SILTY CLAY, calcareous, hard & compact, pale yellow (5Y-7/3) to white (5Y-8/1), (ML-CL).			
	16					
	17					
	18					
-47.1	19					
-47.4	20		Expansion			
	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-00-2#1
 Date: 1/1/2001
 By: ID



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

Elevation: -29 Feet Easting: 561398.49 State Plane 1983
 Reference: NGVD 29 Northing: 834410.51 FLA West Feet

USCS: SW Munsel Dry: 5Y-7/1 Munsel Wet: 5Y-6/1
 Comments: 0

Dry Wt. 69.43 Percent Silt: 4.52
 Wash Wt. 66.29

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	2.640	3.802	2.640	3.802
7	-1.500	2.828	2.110	3.039	4.750	6.841
10	-1.000	2.000	3.350	4.825	8.100	11.666
14	-0.500	1.414	5.580	8.037	13.680	19.703
18	0.000	1.000	6.930	9.981	20.610	29.685
25	0.500	0.707	7.100	10.226	27.710	39.911
35	1.000	0.500	7.960	11.465	35.670	51.375
45	1.500	0.354	10.650	15.339	46.320	66.715
60	2.000	0.250	12.820	18.465	59.140	85.179
80	2.500	0.177	4.710	6.784	63.850	91.963
120	3.000	0.125	1.740	2.506	65.590	94.469
170	3.500	0.088	0.500	0.720	66.090	95.189
200	3.750	0.074	0.170	0.245	66.260	95.434
230	4.000	0.063	0.010	0.014	66.270	95.449
Pan	Pan	0.053	3.140	4.523	69.410	99.971

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -1.80 -0.73 -0.24 0.94 1.72 1.97 3.35

Median phi: 0.94 Median mm: 0.52

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.74	0.60	1.46	-0.19	1.08
Moment	0.74	0.60	1.78	-0.01	1.63

Gradation Analysis Report

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



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

Elevation: -31.3 Feet Easting: 561398.49 State Plane 1983
 Reference: NGVD 29 Northing: 834410.51 FLA West Feet

USCS: SW-SM Munsel Dry: 5Y-7/1 Munsel Wet: 5Y-6/1
 Comments: 0

Dry Wt. 76.01 Percent Silt: 9.05
 Wash Wt. 69.14

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	0.070	0.092	0.070	0.092
7	-1.500	2.828	0.280	0.368	0.350	0.460
10	-1.000	2.000	0.750	0.987	1.100	1.447
14	-0.500	1.414	1.550	2.039	2.650	3.486
18	0.000	1.000	2.060	2.710	4.710	6.197
25	0.500	0.707	2.220	2.921	6.930	9.117
35	1.000	0.500	2.640	3.473	9.570	12.590
45	1.500	0.354	3.600	4.736	13.170	17.327
60	2.000	0.250	8.240	10.841	21.410	28.167
80	2.500	0.177	17.790	23.405	39.200	51.572
120	3.000	0.125	20.470	26.931	59.670	78.503
170	3.500	0.088	8.480	11.156	68.150	89.659
200	3.750	0.074	0.830	1.092	68.980	90.751
230	4.000	0.063	0.140	0.184	69.120	90.935
Pan	Pan	0.053	6.880	9.051	76.000	99.987

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -0.22 1.36 1.85 2.47 2.93 3.25 4.11

Median phi: 2.47 Median mm: 0.18

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.19	0.22	1.13	-0.48	1.64
Moment	2.25	0.21	1.42	-0.47	2.12

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-2#3
 Date: 1/1/2001
 By: ID



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

Elevation: -32.5 Feet Easting: 561398.49 State Plane 1983
 Reference: NGVD 29 Northing: 834410.51 FLA West Feet

USCS: SM Munsel Dry: 5Y-7/1 Munsel Wet: 5Y-6/1
 Comments: 0

Dry Wt. 72.22 Percent Silt: 19.78
 Wash Wt. 58.07

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	2.260	3.129	2.260	3.129
7	-1.500	2.828	3.130	4.334	5.390	7.463
10	-1.000	2.000	3.910	5.414	9.300	12.877
14	-0.500	1.414	5.140	7.117	14.440	19.994
18	0.000	1.000	4.590	6.356	19.030	26.350
25	0.500	0.707	5.510	7.629	24.540	33.980
35	1.000	0.500	5.120	7.089	29.660	41.069
45	1.500	0.354	4.370	6.051	34.030	47.120
60	2.000	0.250	4.980	6.896	39.010	54.016
80	2.500	0.177	4.120	5.705	43.130	59.720
120	3.000	0.125	7.070	9.790	50.200	69.510
170	3.500	0.088	5.710	7.906	55.910	77.416
200	3.750	0.074	1.560	2.160	57.470	79.576
230	4.000	0.063	0.460	0.637	57.930	80.213
Pan	Pan	0.053	14.280	19.773	72.210	99.986

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -1.78 -0.78 -0.11 1.71 3.35 4.05 4.19

Median phi: 1.71 Median mm: 0.31

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.48	0.36	2.11	-0.14	0.71
Moment	1.52	0.35	2.44	-0.13	1.21

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-2#4
 Date: 1/1/2001
 By: ID



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

Elevation: -34.3 Feet Easting: 561398.49 State Plane 1983
 Reference: NGVD 29 Northing: 834410.51 FLA West Feet

USCS: SM Munsel Dry: 5Y-7/1 Munsel Wet: 5Y-6/1
 Comments: 0

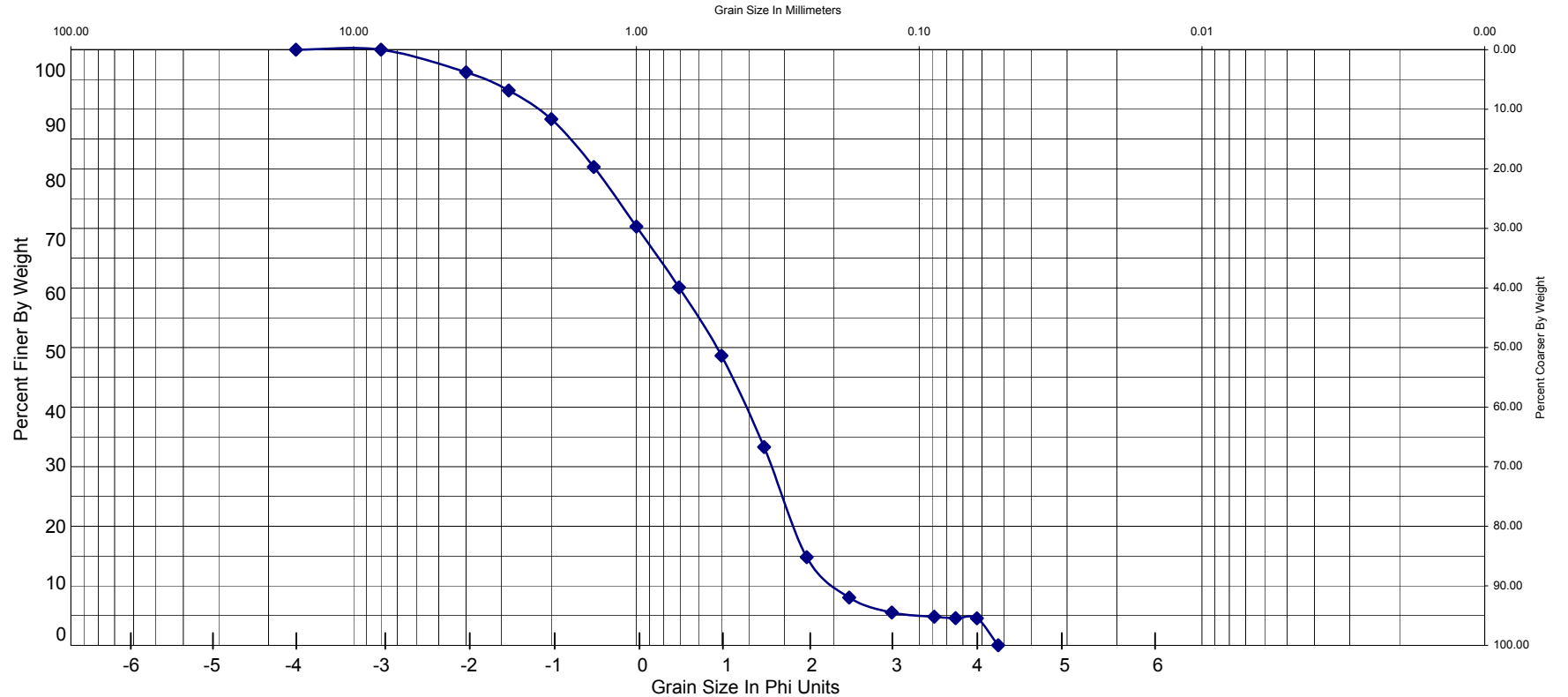
Dry Wt. 70.92 Percent Silt: 18.03
 Wash Wt. 58.15

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	1.600	2.256	1.600	2.256
5	-2.000	4.000	12.570	17.724	14.170	19.980
7	-1.500	2.828	6.950	9.800	21.120	29.780
10	-1.000	2.000	3.880	5.471	25.000	35.251
14	-0.500	1.414	3.250	4.583	28.250	39.834
18	0.000	1.000	2.280	3.215	30.530	43.049
25	0.500	0.707	1.840	2.594	32.370	45.643
35	1.000	0.500	2.130	3.003	34.500	48.646
45	1.500	0.354	3.090	4.357	37.590	53.003
60	2.000	0.250	6.510	9.179	44.100	62.183
80	2.500	0.177	6.730	9.490	50.830	71.672
120	3.000	0.125	4.340	6.120	55.170	77.792
170	3.500	0.088	2.290	3.229	57.460	81.021
200	3.750	0.074	0.520	0.733	57.980	81.754
230	4.000	0.063	0.140	0.197	58.120	81.951
Pan	Pan	0.053	12.780	18.020	70.900	99.972

PHI 5 PHI 16 PHI 25 PHI 50 PHI 75 PHI 84 PHI 95
 -2.85 -2.22 -1.74 1.15 2.77 4.03 4.18

Median phi: 1.15 Median mm: 0.45

	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.86	0.55	2.63	-0.13	0.64
Moment	0.76	0.59	3.02	-0.04	1.11

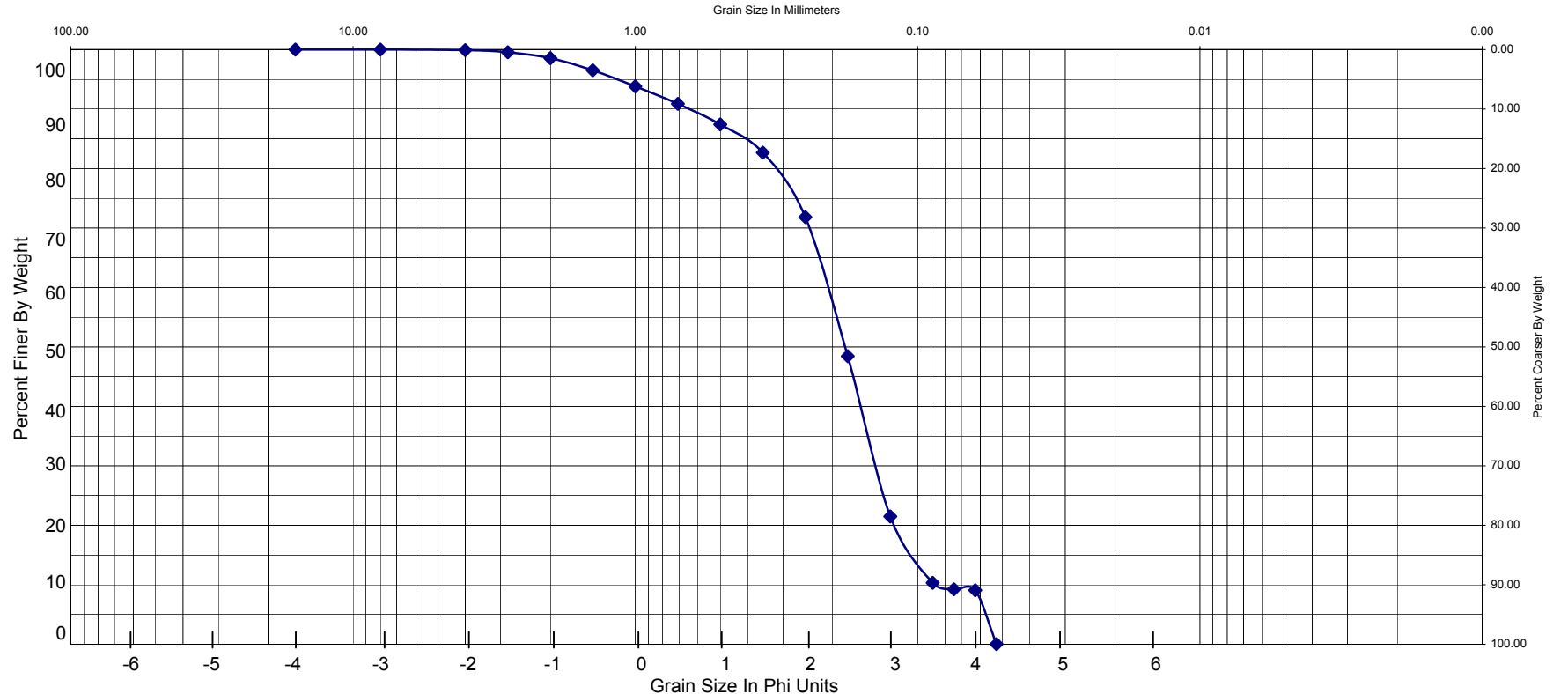


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-2#1	1.0		SW	4.52	0.52	0.6	-0.01	1.63	1.78	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 561398.49 Feet
													Northing (Y): 834410.51 Feet
													Sample Elevation: -29 NGVD 29
													Coord. System: State Plane 1983 FLA West



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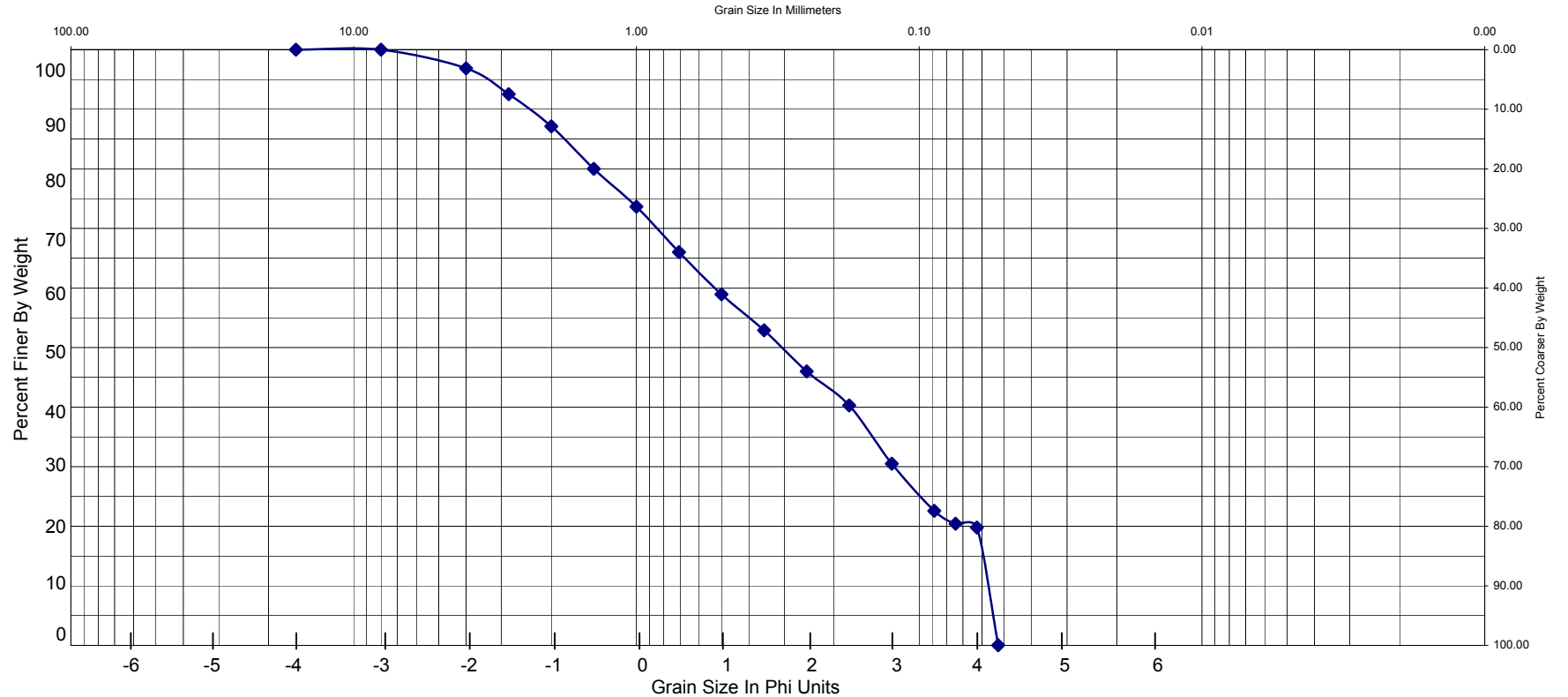
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-2#2	3.3		SW-SM	9.05	0.18	0.21	-0.47	2.12	1.42	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID




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Easting (X):	561398.49 Feet
Northing (Y):	834410.51 Feet
Sample Elevation:	-31.3 NGVD 29
Coord. System:	State Plane 1983 FLA West



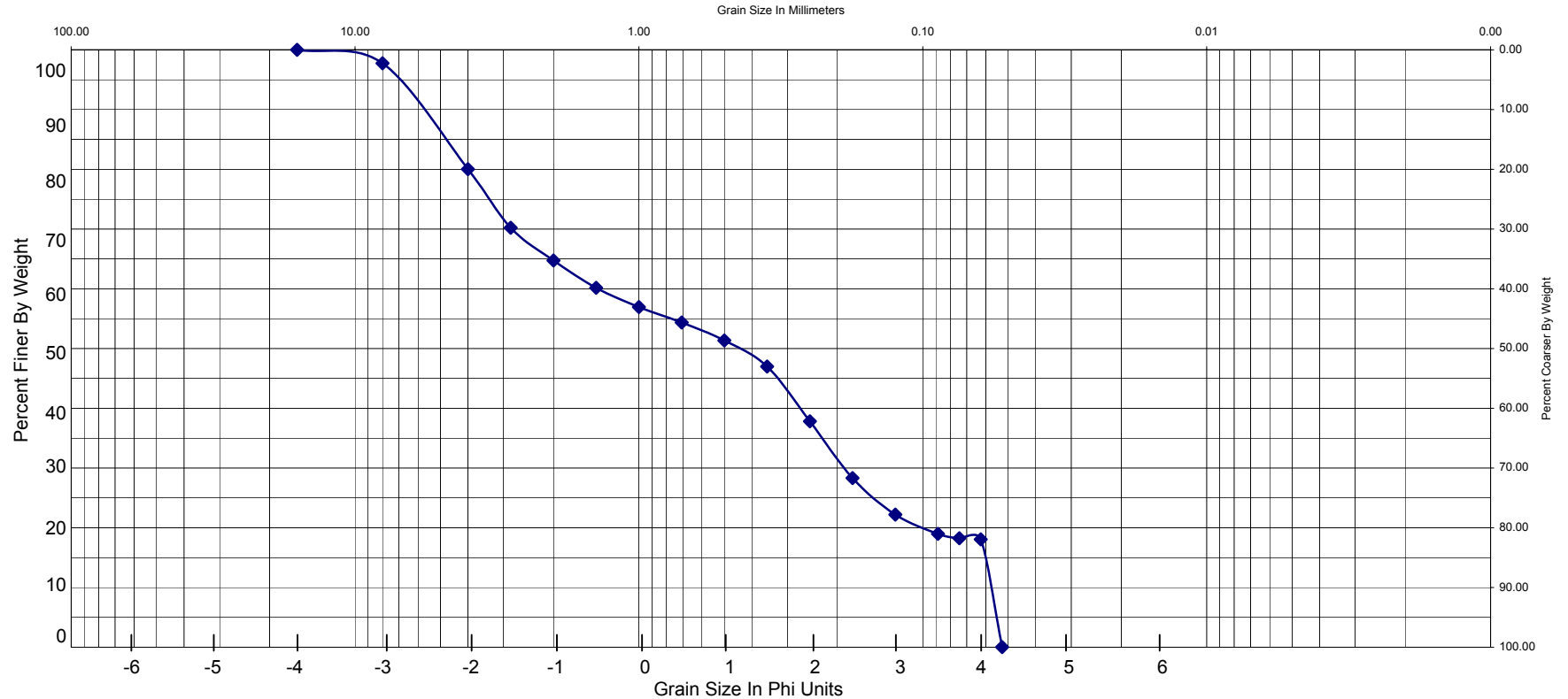
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-2#3	4.5		SM	19.78	0.31	0.35	-0.13	1.21	2.44	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	561398.49 Feet
Northing (Y):	834410.51 Feet
Sample Elevation:	-32.5 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-00-2#4	6.3		SM	18.03	0.45	0.59	-0.04	1.11	3.02	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	561398.49 Feet
Northing (Y):	834410.51 Feet
Sample Elevation:	-34.3 NGVD 29
Coord. System:	State Plane 1983 FLA West



