

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=558980.0 Y=837630.0		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-00-04		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 17:22		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -28.0 FT		
9. TOTAL DEPTH OF HOLE 20.0 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					
-31	1		SAND, medium grained, some shell hash/ shell fragments/whole shells, gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.5' Mean (mm): 0.45, Phi Sorting: 1.11 Silt: 3.40% (SW)
-33	2		SAND, medium grained, some shell hash/ shell fragments/whole shells, gray (5Y-6/1), (SP).		2	Sample #2, Depth = 4.0' Mean (mm): 0.44, Phi Sorting: 1.05 Silt: 2.47% (SP)
-34.8	3		SAND, medium grained, some shell hash/ shell fragments/whole shells, gray (5Y-6/1), (SP).		3	Sample #3, Depth = 6.0' Mean (mm): 0.35, Phi Sorting: 1.66 Silt: 5.76% (SW-SM)
-37.8	4		CALCAREOUS SAND with little calcareous silt/clay, little shell hash/ shell fragments, gray (5Y-5/1), (SM).		4	Sample #4, Depth = 8.0' Mean (mm): 0.38, Phi Sorting: 2.48 Silt: 16.62% (SM)
-40.7	5		CARBONATE CLASTS, ranges from fine sand sized to 2.5", pale olive (5Y 6/3) to dark gray (5Y-4/1), (GP).			
-47.5	6		SILTY CLAY, calcareous, pale yellow (5Y-7/3) to white (5Y-8/1), (ML-CL).			
-48	7		Expansion			
	8		End of Boring			
	9		Note: 1) Soils are field visually classified in accordance with the Unified Soil Classification System.			Note: This column contains laboratory data.
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Gradation Analysis Report

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



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

Elevation:	-29.5	Feet	Easting:	560136.77	State Plane	1983
Reference:	NGVD 29		Northing:	835970.95	FLA West	Feet

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

Dry Wt.	90.66	Percent Silt:	3.40
Wash Wt.	87.58		

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	0.440	0.485	0.440	0.485
5	-2.000	4.000	0.890	0.982	1.330	1.467
7	-1.500	2.828	0.910	1.004	2.240	2.471
10	-1.000	2.000	1.150	1.268	3.390	3.739
14	-0.500	1.414	2.010	2.217	5.400	5.956
18	0.000	1.000	3.590	3.960	8.990	9.916
25	0.500	0.707	7.150	7.887	16.140	17.803
35	1.000	0.500	11.750	12.961	27.890	30.763
45	1.500	0.354	21.860	24.112	49.750	54.875
60	2.000	0.250	29.250	32.263	79.000	87.139
80	2.500	0.177	6.960	7.677	85.960	94.816
120	3.000	0.125	1.170	1.291	87.130	96.106
170	3.500	0.088	0.320	0.353	87.450	96.459
200	3.750	0.074	0.110	0.121	87.560	96.581
230	4.000	0.063	0.010	0.011	87.570	96.592
Pan	Pan	0.053	3.080	3.397	90.650	99.989

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.72	0.39	0.78	1.40	1.81	1.95	2.57

Median phi:	1.40	Median mm:	0.38
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.12	0.46	0.89	-0.52	1.30
Moment	1.17	0.45	1.11	-0.46	1.93

Gradation Analysis Report

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



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

Elevation:	-32	Feet	Easting:	560136.77	State Plane	1983
Reference:	NGVD 29		Northing:	835970.95	FLA West	Feet

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

Dry Wt.	82.49	Percent Silt:	2.47
Wash Wt.	80.46		

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	0.470	0.570	0.470	0.570
7	-1.500	2.828	0.390	0.473	0.860	1.043
10	-1.000	2.000	0.840	1.018	1.700	2.061
14	-0.500	1.414	1.980	2.400	3.680	4.461
18	0.000	1.000	4.280	5.189	7.960	9.650
25	0.500	0.707	7.420	8.995	15.380	18.645
35	1.000	0.500	10.840	13.141	26.220	31.786
45	1.500	0.354	20.590	24.961	46.810	56.746
60	2.000	0.250	24.680	29.919	71.490	86.665
80	2.500	0.177	6.560	7.952	78.050	94.618
120	3.000	0.125	1.540	1.867	79.590	96.484
170	3.500	0.088	0.720	0.873	80.310	97.357
200	3.750	0.074	0.100	0.121	80.410	97.478
230	4.000	0.063	0.030	0.036	80.440	97.515
Pan	Pan	0.053	2.040	2.473	82.480	99.988

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.45	0.35	0.74	1.36	1.80	1.96	2.60

Median phi:	1.36	Median mm:	0.39
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.16	0.45	0.86	-0.35	1.17
Moment	1.20	0.44	1.05	-0.25	1.70

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-4#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-34	Feet	Easting:	560136.77	State Plane	1983
Reference:	NGVD 29		Northing:	835970.95	FLA West	Feet

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

Dry Wt.	69.13	Percent Silt:	5.76
Wash Wt.	65.17		

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	0.170	0.246	0.170	0.246
5	-2.000	4.000	1.190	1.721	1.360	1.967
7	-1.500	2.828	1.130	1.635	2.490	3.602
10	-1.000	2.000	1.140	1.649	3.630	5.251
14	-0.500	1.414	2.130	3.081	5.760	8.332
18	0.000	1.000	2.930	4.238	8.690	12.571
25	0.500	0.707	4.400	6.365	13.090	18.935
35	1.000	0.500	5.370	7.768	18.460	26.703
45	1.500	0.354	6.460	9.345	24.920	36.048
60	2.000	0.250	18.200	26.327	43.120	62.375
80	2.500	0.177	17.040	24.649	60.160	87.024
120	3.000	0.125	4.170	6.032	64.330	93.057
170	3.500	0.088	0.630	0.911	64.960	93.968
200	3.750	0.074	0.150	0.217	65.110	94.185
230	4.000	0.063	0.020	0.029	65.130	94.214
Pan	Pan	0.053	3.980	5.757	69.110	99.971

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.08	0.27	0.89	1.76	2.26	2.44	4.03

Median phi:	1.76	Median mm:	0.29
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.49	0.36	1.32	-0.36	1.53
Moment	1.51	0.35	1.66	-0.08	1.97

Gradation Analysis Report

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



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

Elevation:	-36	Feet	Easting:	560136.77	State Plane	1983
Reference:	NGVD 29		Northing:	835970.95	FLA West	Feet

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

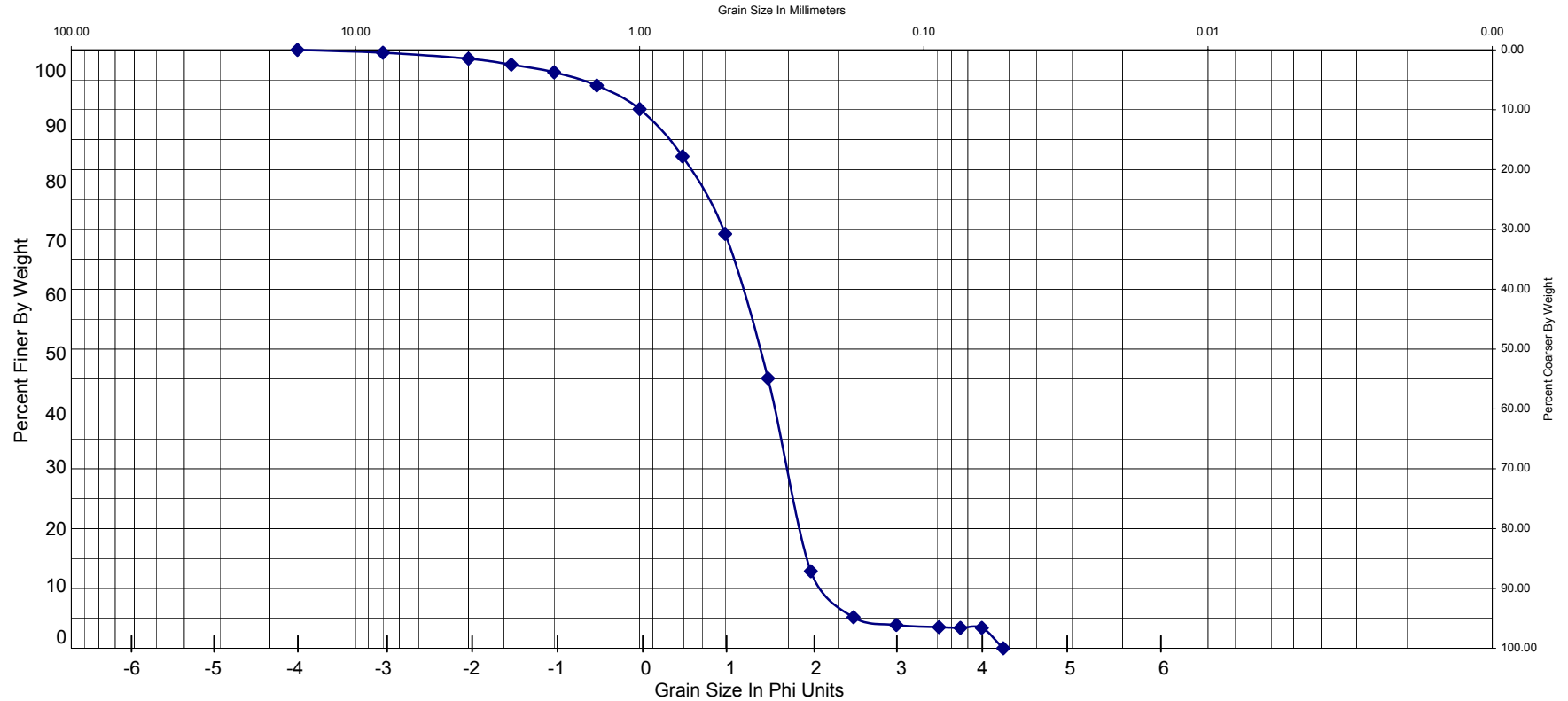
Dry Wt.	76.42	Percent Silt:	16.62
Wash Wt.	63.76		

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	0.600	0.785	0.600	0.785
5	-2.000	4.000	3.890	5.090	4.490	5.875
7	-1.500	2.828	3.220	4.214	7.710	10.089
10	-1.000	2.000	3.290	4.305	11.000	14.394
14	-0.500	1.414	4.420	5.784	15.420	20.178
18	0.000	1.000	4.700	6.150	20.120	26.328
25	0.500	0.707	5.030	6.582	25.150	32.910
35	1.000	0.500	5.240	6.857	30.390	39.767
45	1.500	0.354	4.910	6.425	35.300	46.192
60	2.000	0.250	7.000	9.160	42.300	55.352
80	2.500	0.177	7.780	10.181	50.080	65.533
120	3.000	0.125	8.960	11.725	59.040	77.257
170	3.500	0.088	3.630	4.750	62.670	82.007
200	3.750	0.074	0.800	1.047	63.470	83.054
230	4.000	0.063	0.230	0.301	63.700	83.355
Pan	Pan	0.053	12.700	16.619	76.400	99.974

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-2.17	-0.86	-0.11	1.71	2.90	4.01	4.17

Median phi:	1.71	Median mm:	0.31
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.37	0.39	2.18	-0.22	0.86
Moment	1.38	0.38	2.48	-0.17	1.33

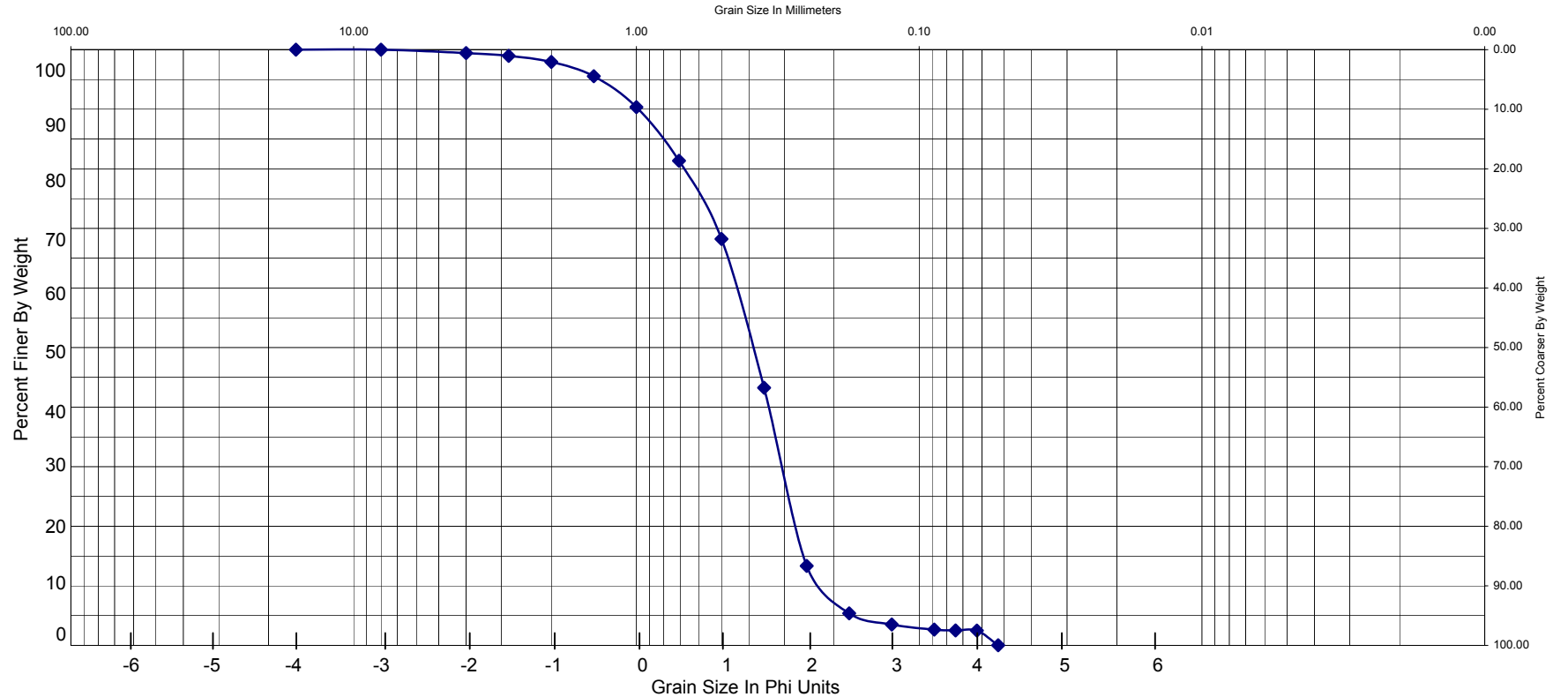


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-4#1	1.5		SW	3.40	0.38	0.44	-0.46	1.93	1.11	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 560136.77 Feet
													Northing (Y): 835970.95 Feet
													Sample Elevation:-29.5 NGVD 29
													Coord. System: State Plane 1983 FLA West



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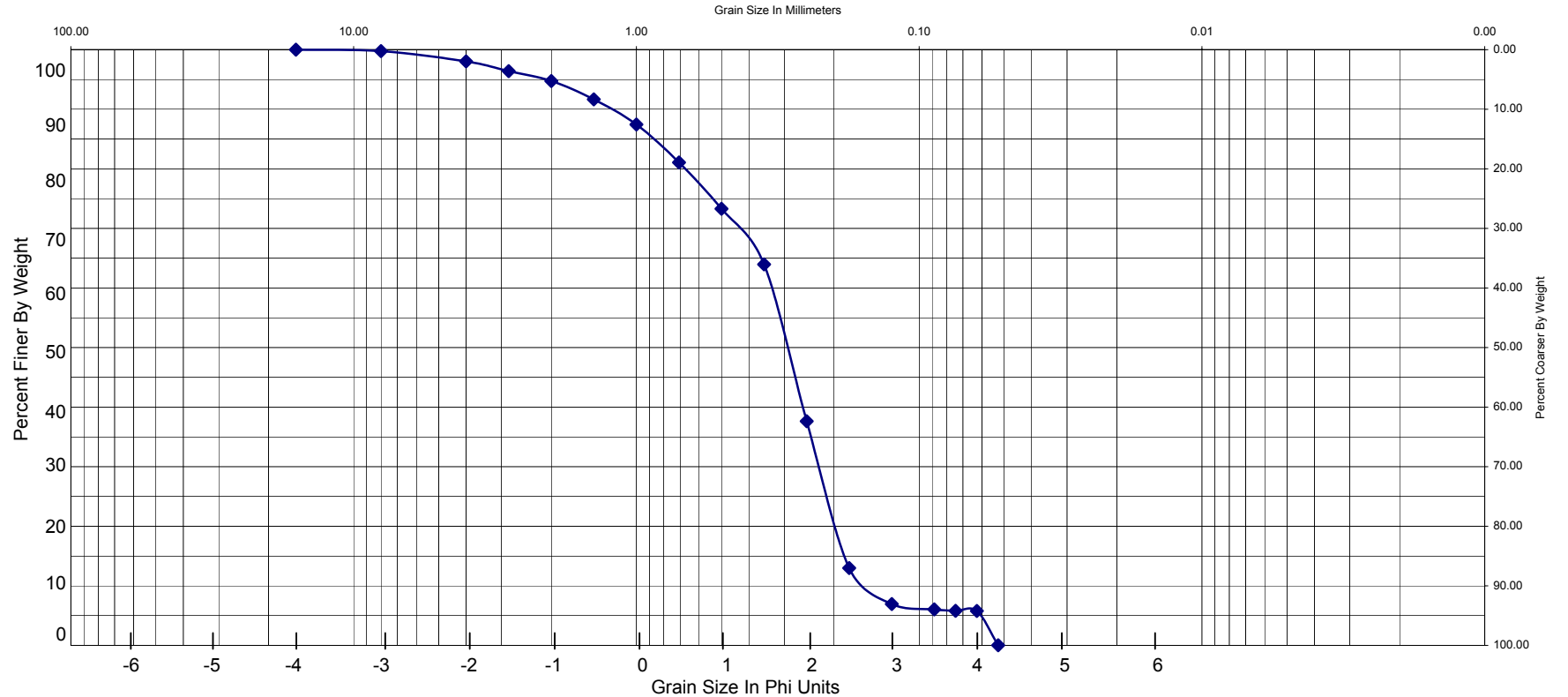


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-4#2	4.0		SP	2.47	0.39	0.44	-0.25	1.7	1.05	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 560136.77 Feet
													Northing (Y): 835970.95 Feet
													Sample Elevation: -32 NGVD 29
													Coord. System: State Plane 1983 FLA West



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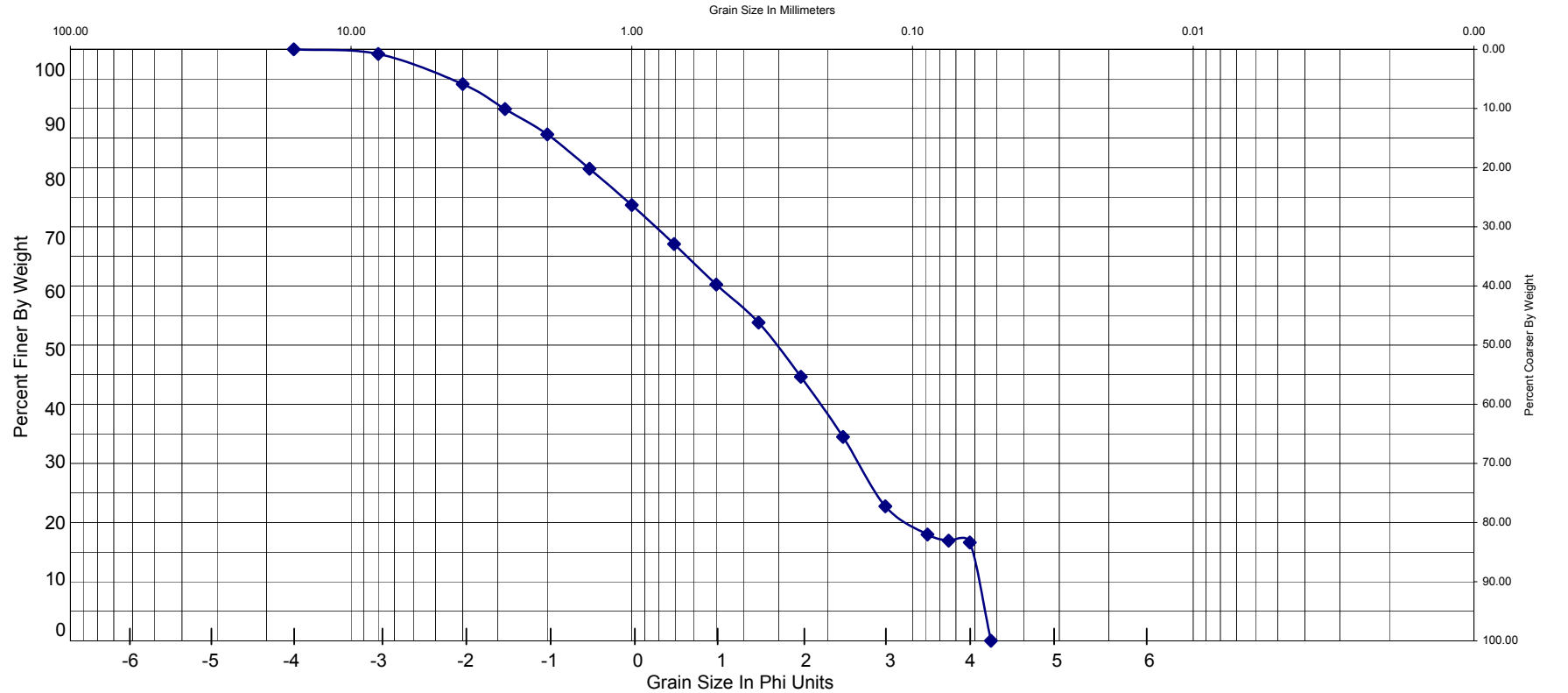


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-4#3	6.0		SW-SM	5.76	0.3	0.35	-0.08	1.97	1.66	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 560136.77 Feet
													Northing (Y): 835970.95 Feet
													Sample Elevation: -34 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-00-4#4	8.0		SM	16.62	0.31	0.38	-0.17	1.33	2.48	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 560136.77 Feet
													Northing (Y): 835970.95 Feet
													Sample Elevation: -36 NGVD 29
													Coord. System: State Plane 1983 FLA West



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