

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= 546197.49 Y= 770870.12		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-00-28		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN Disturbed: 0.0 Undisturbed: 0.0		
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 8/11/00 Completed 13:33		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -33.5 ft		
9. TOTAL DEPTH OF HOLE 15.6 ft		18. TOTAL CORE RECOVERY FOR BORING 100%		
		19. SIGNATURE OF GEOLOGIST ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-33.5	0					
	1				1	Sample #1, Depth = 1.0' Mean (mm): 0.53, Phi Sorting: 1.17 Silt: 0.43% (SW)
-37	2		SHELLY SAND, fine grained, gray (5Y-5/1), (SP).			
	3					
	4				2	Sample #2, Depth = 6.0' Mean (mm): 0.44, Phi Sorting: 0.99 Silt: 1.25% (SP)
	5					
	6					
	7					
	8				3	Sample #3, Depth = 8.0' Mean (mm): 0.37, Phi Sorting: 0.94 Silt: 1.29% (SP)
	9		SHELLY SAND, fine grained, gray (5Y-5/1), (SP).			
	10					
	11					
	12					
	13				4	Sample #4, Depth = 11.0 Mean(mm) : 0.35, Phi Sorting : 1.04 Silt: 2.23% (SP)
	14					
-49.1	15					
	16		Expansion			
-51	17		CARBONATE CLASTS, silt/clay size to 2.5", light gray (5Y-7/1), (GM).		5	Sample #5, Depth = 16.0 Mean(mm) : 0.15 Phi Sorting : 1.07 Silt:15.04% (SM)
	18		End of Boring			
	19					
	20					
	21		Note: 1) Soils are field visually classified in accordance with the Unified Soil Classification System.			Note: This column contains laboratory data.
	22					
	23					
	24					

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-28#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-34.5	Feet	Easting:	546197.49	State Plane	1983
Reference:	NGVD 29		Northing:	770870.12	FLA West	Feet

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

Dry Wt.	75.95	Percent Silt:	0.43
Wash Wt.	75.62		

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	1.590	2.093	1.590	2.093
7	-1.500	2.828	1.020	1.343	2.610	3.436
10	-1.000	2.000	1.590	2.093	4.200	5.530
14	-0.500	1.414	2.820	3.713	7.020	9.243
18	0.000	1.000	3.870	5.095	10.890	14.338
25	0.500	0.707	6.170	8.124	17.060	22.462
35	1.000	0.500	12.280	16.169	29.340	38.631
45	1.500	0.354	21.260	27.992	50.600	66.623
60	2.000	0.250	19.050	25.082	69.650	91.705
80	2.500	0.177	5.310	6.991	74.960	98.697
120	3.000	0.125	0.610	0.803	75.570	99.500
170	3.500	0.088	0.020	0.026	75.590	99.526
200	3.750	0.074	0.020	0.026	75.610	99.552
230	4.000	0.063	0.010	0.013	75.620	99.566
Pan	Pan	0.053	0.330	0.434	75.950	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.13	0.10	0.58	1.20	1.67	1.85	2.24

Median phi:	1.20	Median mm:	0.43
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.85	0.55	0.95	-0.62	1.27
Moment	0.93	0.53	1.17	-0.61	1.99

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-28#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-39.5	Feet	Easting:	546197.49	State Plane	1983
Reference:	NGVD 29		Northing:	770870.12	FLA West	Feet

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

Dry Wt.	75.01	Percent Silt:	1.25
Wash Wt.	74.07		

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	0.100	0.133	0.100	0.133
7	-1.500	2.828	0.560	0.747	0.660	0.880
10	-1.000	2.000	0.730	0.973	1.390	1.853
14	-0.500	1.414	1.820	2.426	3.210	4.279
18	0.000	1.000	2.900	3.866	6.110	8.146
25	0.500	0.707	6.580	8.772	12.690	16.918
35	1.000	0.500	11.830	15.771	24.520	32.689
45	1.500	0.354	17.720	23.624	42.240	56.312
60	2.000	0.250	21.890	29.183	64.130	85.495
80	2.500	0.177	8.120	10.825	72.250	96.320
120	3.000	0.125	1.670	2.226	73.920	98.547
170	3.500	0.088	0.110	0.147	74.030	98.694
200	3.750	0.074	0.010	0.013	74.040	98.707
230	4.000	0.063	0.020	0.027	74.060	98.734
Pan	Pan	0.053	0.940	1.253	75.000	99.987

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.41	0.45	0.76	1.37	1.82	1.97	2.44

Median phi:	1.37	Median mm:	0.39
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.16	0.45	0.81	-0.37	1.10
Moment	1.20	0.44	0.99	-0.35	1.71

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-28#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-41.5	Feet	Easting:	546197.49	State Plane	1983
Reference:	NGVD 29		Northing:	770870.12	FLA West	Feet

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

Dry Wt.	76.46	Percent Silt:	1.29
Wash Wt.	75.47		

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	0.140	0.183	0.140	0.183
7	-1.500	2.828	0.430	0.562	0.570	0.745
10	-1.000	2.000	0.560	0.732	1.130	1.478
14	-0.500	1.414	1.050	1.373	2.180	2.851
18	0.000	1.000	2.030	2.655	4.210	5.506
25	0.500	0.707	4.040	5.284	8.250	10.790
35	1.000	0.500	8.590	11.235	16.840	22.025
45	1.500	0.354	16.700	21.841	33.540	43.866
60	2.000	0.250	24.330	31.821	57.870	75.687
80	2.500	0.177	14.060	18.389	71.930	94.075
120	3.000	0.125	3.180	4.159	75.110	98.234
170	3.500	0.088	0.290	0.379	75.400	98.614
200	3.750	0.074	0.050	0.065	75.450	98.679
230	4.000	0.063	0.010	0.013	75.460	98.692
Pan	Pan	0.053	0.990	1.295	76.450	99.987

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.10	0.73	1.07	1.60	1.99	2.23	2.61

Median phi:	1.60	Median mm:	0.33
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.41	0.38	0.78	-0.38	1.20
Moment	1.45	0.37	0.94	-0.38	1.75

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-28#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-44.5	Feet	Easting:	546197.49	State Plane	1983
Reference:	NGVD 29		Northing:	770870.12	FLA West	Feet

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

Dry Wt.	78.38	Percent Silt:	2.23
Wash Wt.	76.64		

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	0.190	0.242	0.190	0.242
7	-1.500	2.828	0.560	0.714	0.750	0.957
10	-1.000	2.000	0.840	1.072	1.590	2.029
14	-0.500	1.414	1.230	1.569	2.820	3.598
18	0.000	1.000	1.850	2.360	4.670	5.958
25	0.500	0.707	4.060	5.180	8.730	11.138
35	1.000	0.500	7.400	9.441	16.130	20.579
45	1.500	0.354	12.250	15.629	28.380	36.208
60	2.000	0.250	26.220	33.452	54.600	69.661
80	2.500	0.177	16.640	21.230	71.240	90.891
120	3.000	0.125	4.840	6.175	76.080	97.066
170	3.500	0.088	0.430	0.549	76.510	97.614
200	3.750	0.074	0.100	0.128	76.610	97.742
230	4.000	0.063	0.010	0.013	76.620	97.755
Pan	Pan	0.053	1.750	2.233	78.370	99.987

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.20	0.76	1.14	1.71	2.13	2.34	2.83

Median phi:	1.71	Median mm:	0.31
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.49	0.36	0.85	-0.43	1.26
Moment	1.53	0.35	1.04	-0.41	1.83

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-28#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-49.5	Feet	Easting:	546197.49	State Plane	1983
Reference:	NGVD 29		Northing:	770870.12	FLA West	Feet

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

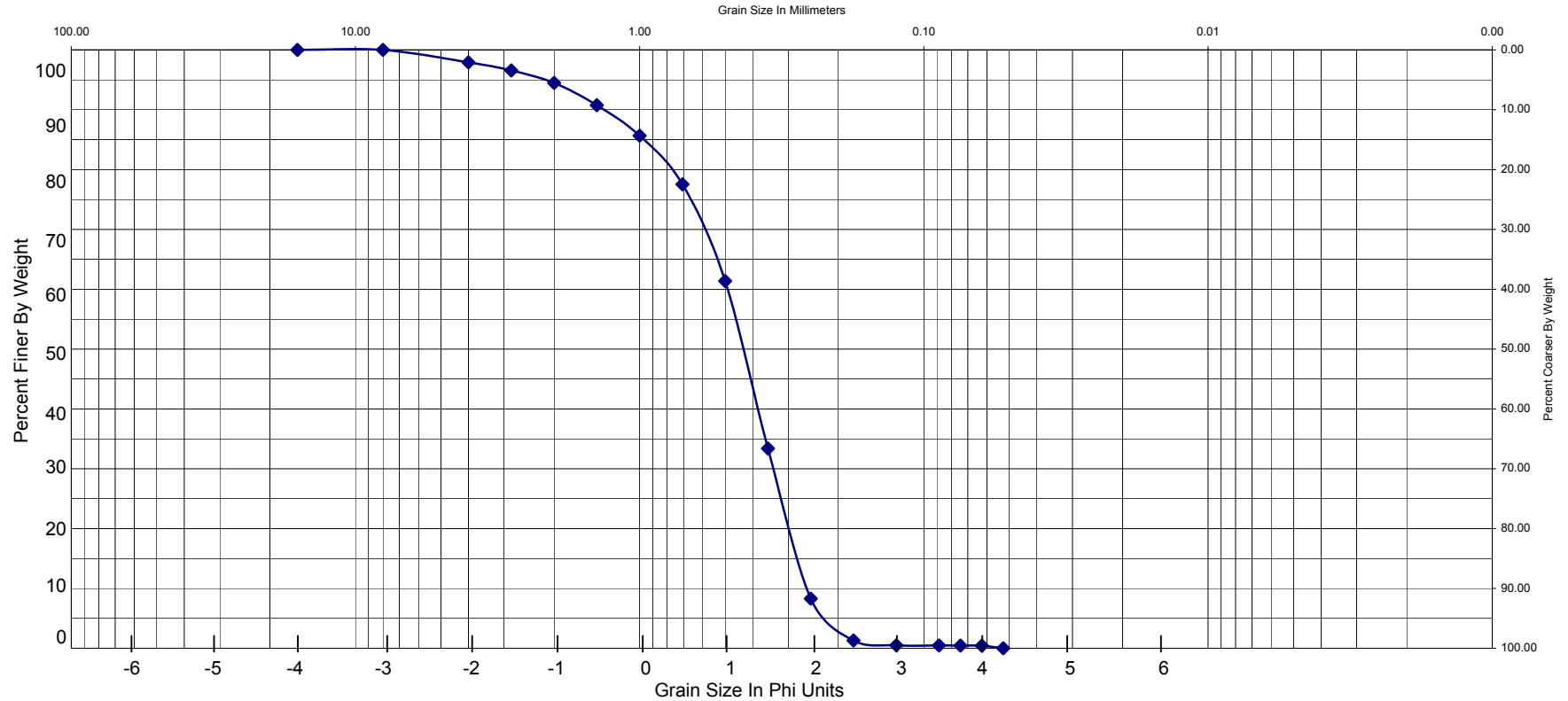
Dry Wt.	76.53	Percent Silt:	15.04
Wash Wt.	65.05		

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	0.080	0.105	0.080	0.105
7	-1.500	2.828	0.210	0.274	0.290	0.379
10	-1.000	2.000	0.160	0.209	0.450	0.588
14	-0.500	1.414	0.280	0.366	0.730	0.954
18	0.000	1.000	0.500	0.653	1.230	1.607
25	0.500	0.707	0.830	1.085	2.060	2.692
35	1.000	0.500	1.570	2.051	3.630	4.743
45	1.500	0.354	2.310	3.018	5.940	7.762
60	2.000	0.250	4.930	6.442	10.870	14.204
80	2.500	0.177	16.150	21.103	27.020	35.306
120	3.000	0.125	25.740	33.634	52.760	68.940
170	3.500	0.088	9.500	12.413	62.260	81.354
200	3.750	0.074	2.150	2.809	64.410	84.163
230	4.000	0.063	0.600	0.784	65.010	84.947
Pan	Pan	0.053	11.510	15.040	76.520	99.987

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
1.04	2.04	2.26	2.72	3.24	3.73	4.17

Median phi:	2.72	Median mm:	0.15
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.74	0.15	0.90	0.01	1.30
Moment	2.74	0.15	1.07	-0.19	1.75

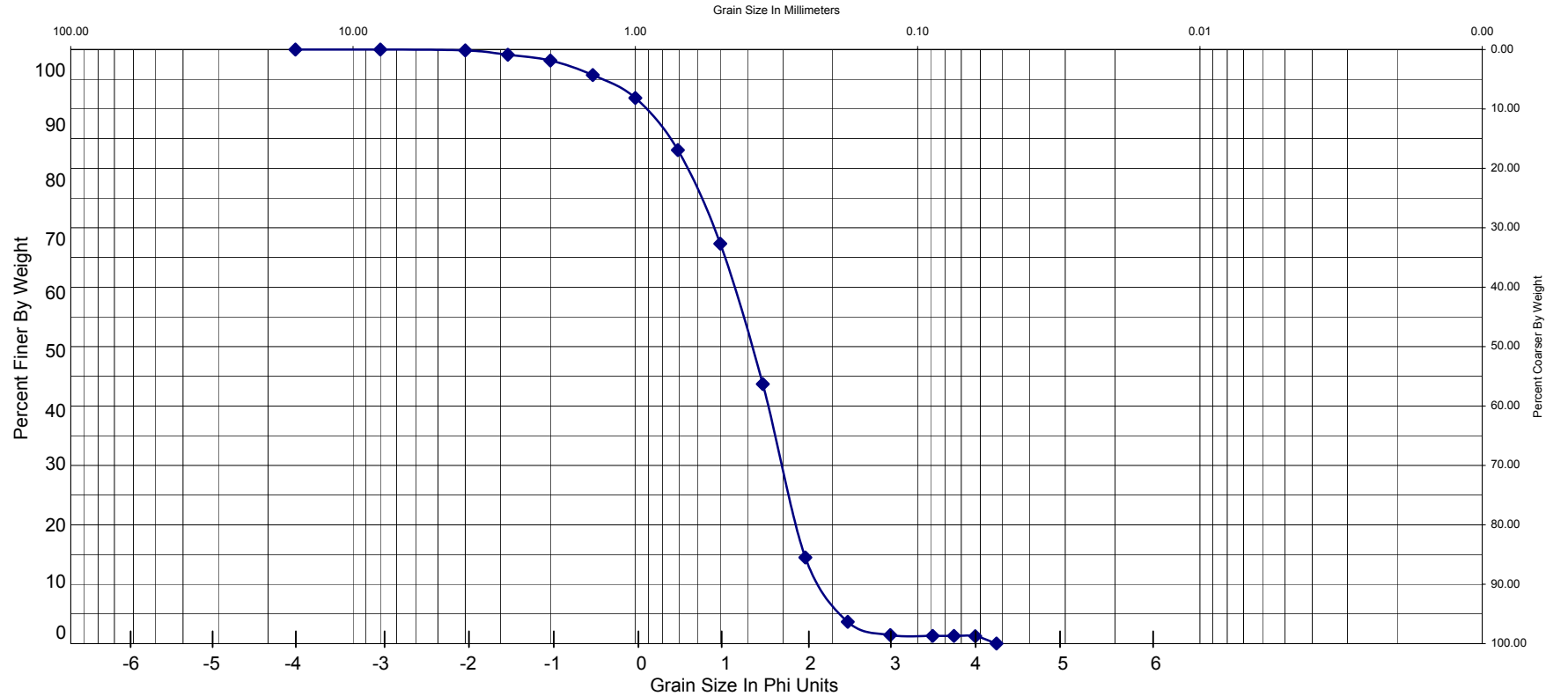


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-28#1	1.0		SW	0.43	0.44	0.52	-0.61	1.99	1.17	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546197.49 Feet
													Northing (Y): 770870.12 Feet
													Sample Elevation: -34.5 NGVD 29
													Coord. System: State Plane 1983 FLA West



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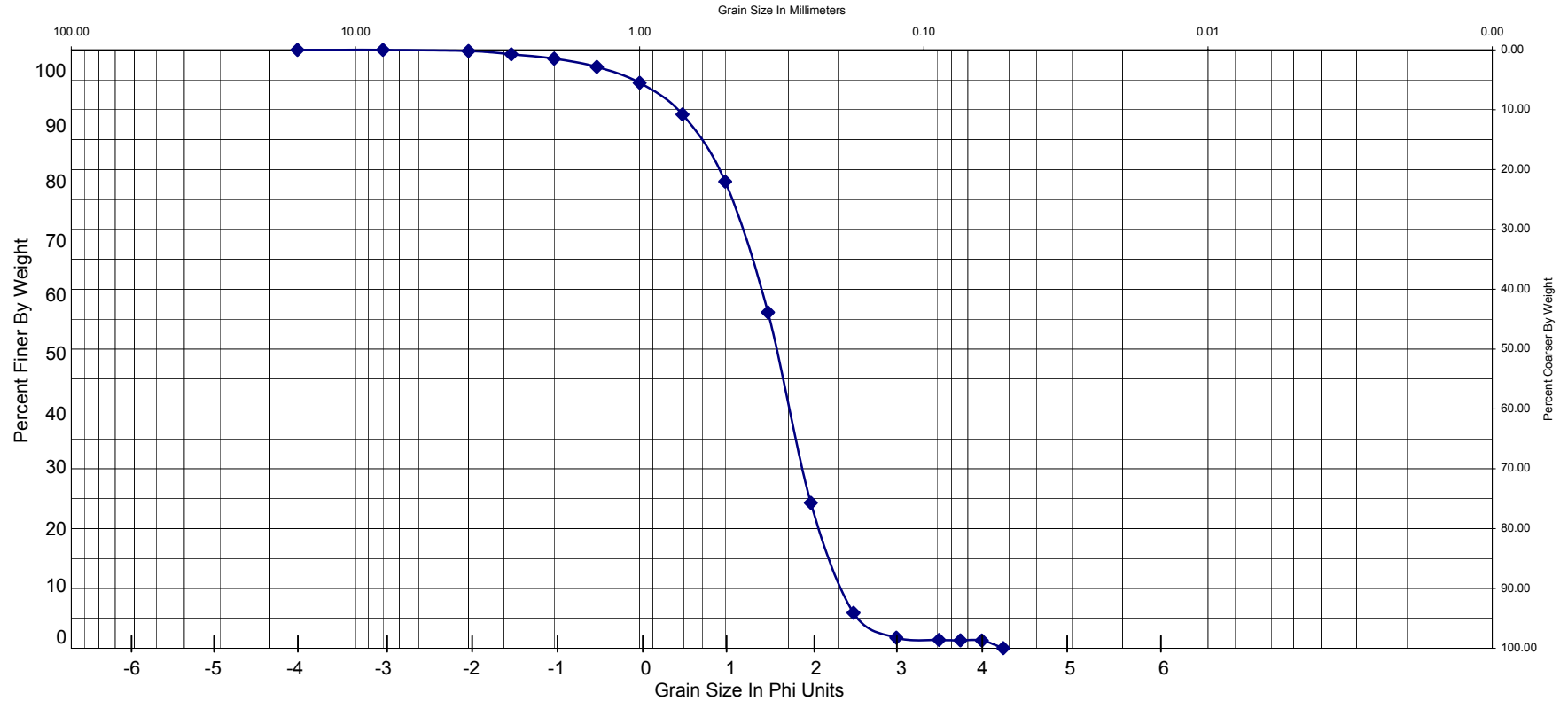
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-28#2	6.0		SP	1.25	0.39	0.44	-0.35	1.71	0.99	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	546197.49 Feet
Northing (Y):	770870.12 Feet
Sample Elevation:	-39.5 NGVD 29
Coord. System:	State Plane 1983 FLA West

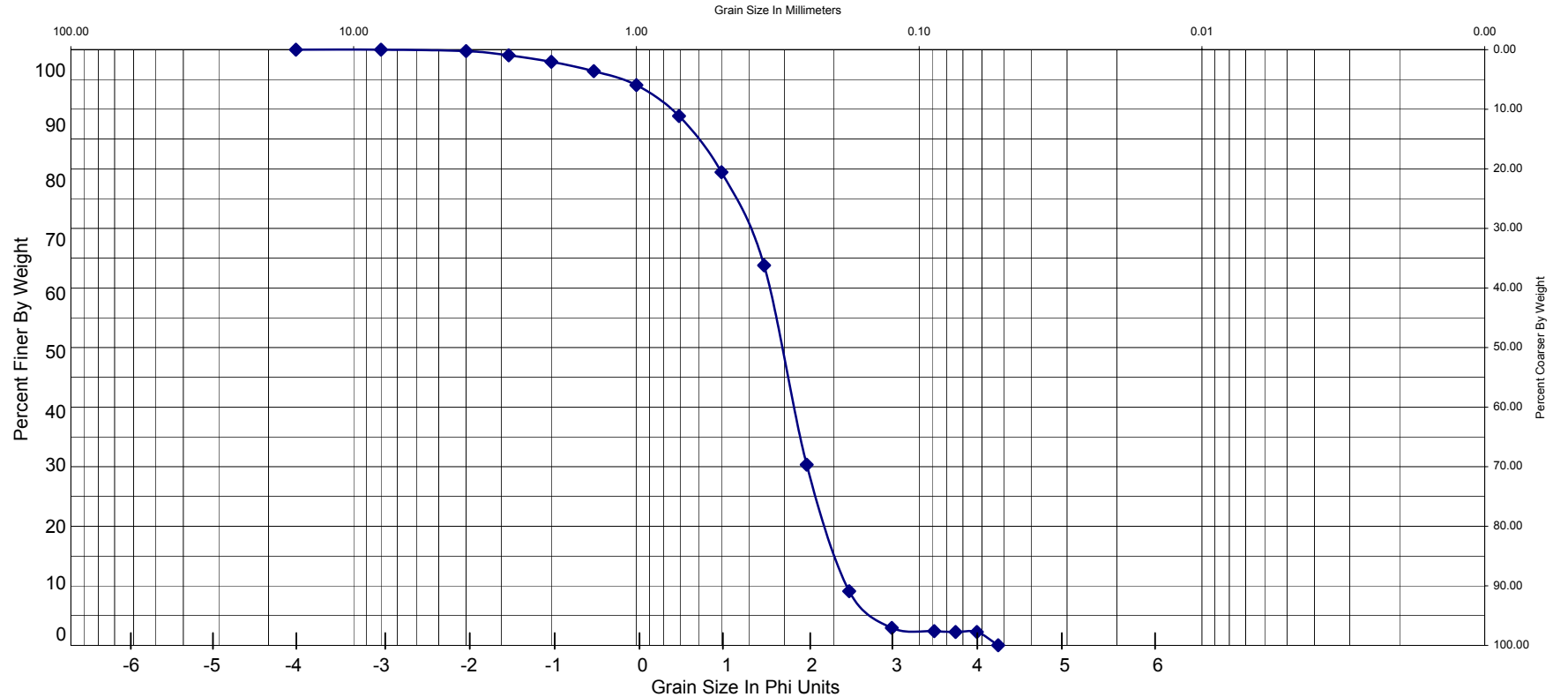


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-28#3	8.0		SP	1.29	0.33	0.37	-0.38	1.75	0.94	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546197.49 Feet
													Northing (Y): 770870.12 Feet
													Sample Elevation: -41.5 NGVD 29
													Coord. System: State Plane 1983 FLA West



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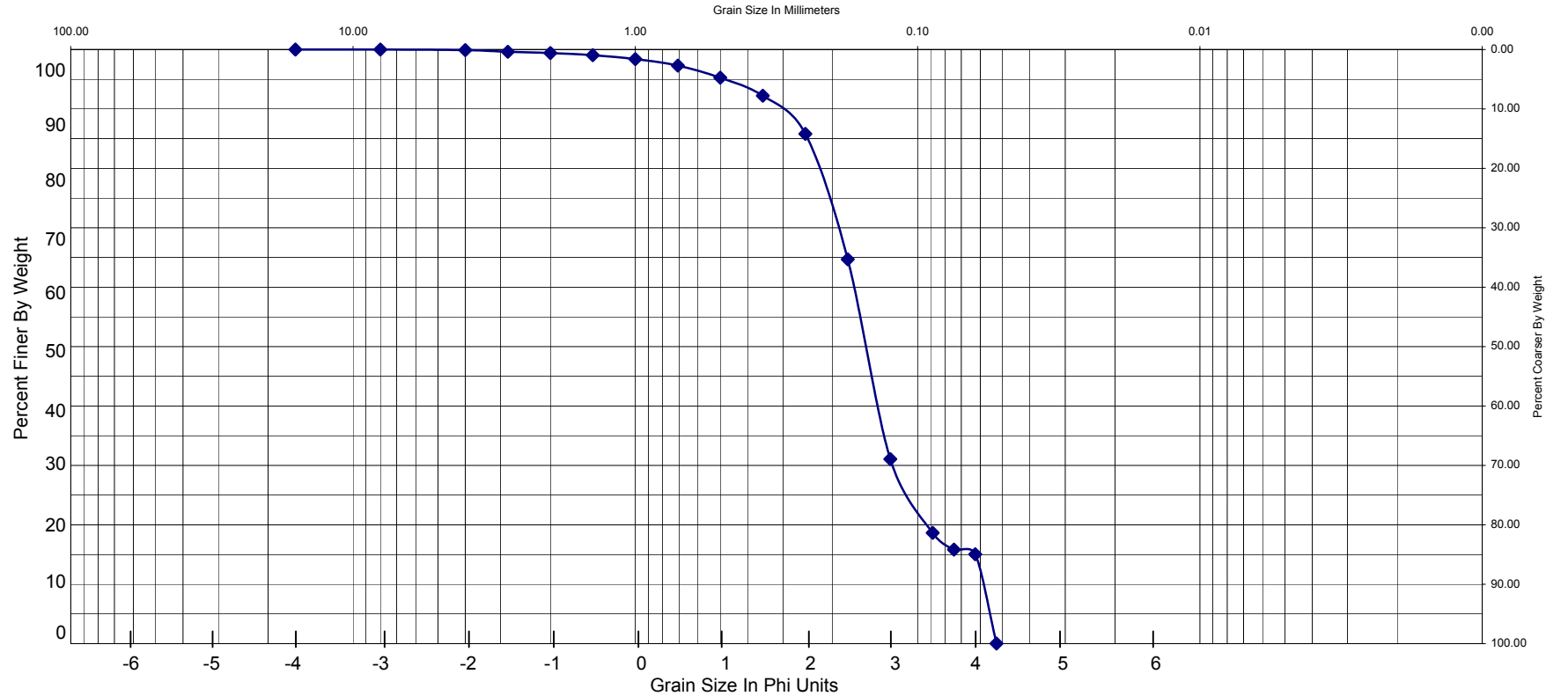


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-28#4	11.0		SP	2.23	0.31	0.35	-0.41	1.83	1.04	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546197.49 Feet
													Northing (Y): 770870.12 Feet
													Sample Elevation: -44.5 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-00-28#5	16.0		SM	15.04	0.15	0.15	-0.19	1.75	1.07	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	546197.49 Feet
Northing (Y):	770870.12 Feet
Sample Elevation:	-49.5 NGVD 29
Coord. System:	State Plane 1983 FLA West



