

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=545890.55 Y=771934.60		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-00-27		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 8/11/00 11:36		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -31.5 ft		
9. TOTAL DEPTH OF HOLE 15.0 FT		18. TOTAL CORE RECOVERY FOR BORING 89.6%		
		19. SIGNATURE OF GEOLOGIST ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-31.5	0					
	1				1	Sample #1, Depth = 1.5' Mean (mm): 0.49, Phi Sorting: 1.06 Silt: 0.70% (SP)
	2					
	3					
	4		SHELLY SAND, fine grained, gray (5Y-6/1), (SP). 2.5" whole shell @ 0.9-1.1'.		2	Sample #2, Depth = 4.5' Mean (mm): 0.43, Phi Sorting: 1.10 Silt: 1.09% (SP)
	5					
	6					
-38.5	7					
	8				3	Sample #3, Depth = 8.0' Mean (mm): 0.39, Phi Sorting: 0.96 Silt: 1.13% (SP)
	9					
	10		SAND, fine grained, some shell hash, gray (5Y-6/1), (SP).		4	Sample #4, Depth = 12.0' Mean (mm): 0.28, Phi Sorting: 0.84 Silt: 2.25% (SP)
	11					
	12					
-44.7	13					
	14		SAND, fine grained, some shell hash, gray (5Y-6/1), (SP).		5	Sample #5, Depth = 14.5' Mean (mm): 0.26, Phi Sorting: 1.37 Silt: 5.87% (SW-SM)
-46.4	15		Expansion			
-47.7	16					
-48.2	17		CARBONATE CLASTS, sand (calcareous), little shell fragments, gray (5Y-6/1), (GP).			
	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-00-27#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-32.8	Feet	Easting:	545890.55	State Plane	1983
Reference:	NGVD 29		Northing:	771934.60	FLA West	Feet

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

Dry Wt.	97.80	Percent Silt:	0.70
Wash Wt.	97.13		

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	0.770	0.787	0.770	0.787
7	-1.500	2.828	0.960	0.982	1.730	1.769
10	-1.000	2.000	1.480	1.513	3.210	3.282
14	-0.500	1.414	2.800	2.863	6.010	6.145
18	0.000	1.000	5.680	5.808	11.690	11.953
25	0.500	0.707	10.030	10.256	21.720	22.209
35	1.000	0.500	17.670	18.067	39.390	40.276
45	1.500	0.354	25.480	26.053	64.870	66.329
60	2.000	0.250	22.370	22.873	87.240	89.202
80	2.500	0.177	8.320	8.507	95.560	97.710
120	3.000	0.125	1.440	1.472	97.000	99.182
170	3.500	0.088	0.100	0.102	97.100	99.284
200	3.750	0.074	0.010	0.010	97.110	99.294
230	4.000	0.063	0.000	0.000	97.110	99.294
Pan	Pan	0.053	0.680	0.695	97.790	99.990

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.70	0.20	0.58	1.19	1.69	1.89	2.34

Median phi:	1.19	Median mm:	0.44
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.98	0.51	0.88	-0.36	1.12
Moment	1.03	0.49	1.06	-0.36	1.70

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-27#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-35.8	Feet	Easting:	545890.55	State Plane	1983
Reference:	NGVD 29		Northing:	771934.60	FLA West	Feet

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

Dry Wt.	81.83	Percent Silt:	1.09
Wash Wt.	80.94		

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	0.180	0.220	0.180	0.220
7	-1.500	2.828	0.830	1.014	1.010	1.234
10	-1.000	2.000	1.310	1.601	2.320	2.835
14	-0.500	1.414	2.310	2.823	4.630	5.658
18	0.000	1.000	3.180	3.886	7.810	9.544
25	0.500	0.707	6.780	8.285	14.590	17.830
35	1.000	0.500	11.500	14.054	26.090	31.883
45	1.500	0.354	15.740	19.235	41.830	51.118
60	2.000	0.250	24.420	29.842	66.250	80.961
80	2.500	0.177	11.740	14.347	77.990	95.307
120	3.000	0.125	2.750	3.361	80.740	98.668
170	3.500	0.088	0.160	0.196	80.900	98.863
200	3.750	0.074	0.030	0.037	80.930	98.900
230	4.000	0.063	0.010	0.012	80.940	98.912
Pan	Pan	0.053	0.890	1.088	81.830	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.62	0.39	0.76	1.47	1.90	2.11	2.49

Median phi:	1.47	Median mm:	0.36
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.17	0.45	0.90	-0.51	1.11
Moment	1.21	0.43	1.10	-0.46	1.76

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-27#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-39.3	Feet	Easting:	545890.55	State Plane	1983
Reference:	NGVD 29		Northing:	771934.60	FLA West	Feet

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

Dry Wt.	99.39	Percent Silt:	1.13
Wash Wt.	98.28		

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	0.290	0.292	0.290	0.292
7	-1.500	2.828	0.710	0.714	1.000	1.006
10	-1.000	2.000	0.850	0.855	1.850	1.861
14	-0.500	1.414	1.740	1.751	3.590	3.612
18	0.000	1.000	2.930	2.948	6.520	6.560
25	0.500	0.707	6.080	6.117	12.600	12.677
35	1.000	0.500	12.210	12.285	24.810	24.962
45	1.500	0.354	22.650	22.789	47.460	47.751
60	2.000	0.250	30.660	30.848	78.120	78.599
80	2.500	0.177	16.600	16.702	94.720	95.301
120	3.000	0.125	3.280	3.300	98.000	98.601
170	3.500	0.088	0.210	0.211	98.210	98.813
200	3.750	0.074	0.030	0.030	98.240	98.843
230	4.000	0.063	0.020	0.020	98.260	98.863
Pan	Pan	0.053	1.120	1.127	99.380	99.990

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.26	0.64	1.00	1.54	1.94	2.16	2.49

Median phi:	1.54	Median mm:	0.34
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.31	0.40	0.80	-0.46	1.20
Moment	1.36	0.39	0.96	-0.47	1.81

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-27#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-43.3	Feet	Easting:	545890.55	State Plane	1983
Reference:	NGVD 29		Northing:	771934.60	FLA West	Feet

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

Dry Wt.	98.02	Percent Silt:	2.25
Wash Wt.	95.82		

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	0.130	0.133	0.130	0.133
7	-1.500	2.828	0.210	0.214	0.340	0.347
10	-1.000	2.000	0.360	0.367	0.700	0.714
14	-0.500	1.414	0.740	0.755	1.440	1.469
18	0.000	1.000	1.250	1.275	2.690	2.744
25	0.500	0.707	2.700	2.755	5.390	5.499
35	1.000	0.500	5.190	5.295	10.580	10.794
45	1.500	0.354	10.120	10.324	20.700	21.118
60	2.000	0.250	33.160	33.830	53.860	54.948
80	2.500	0.177	30.680	31.300	84.540	86.248
120	3.000	0.125	10.440	10.651	94.980	96.899
170	3.500	0.088	0.690	0.704	95.670	97.603
200	3.750	0.074	0.130	0.133	95.800	97.735
230	4.000	0.063	0.010	0.010	95.810	97.745
Pan	Pan	0.053	2.210	2.255	98.020	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
0.41	1.25	1.56	1.93	2.32	2.46	2.91

Median phi:	1.93	Median mm:	0.26
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.79	0.29	0.68	-0.34	1.34
Moment	1.83	0.28	0.84	-0.42	1.93

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-27#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-45.8	Feet	Easting:	545890.55	State Plane	1983
Reference:	NGVD 29		Northing:	771934.60	FLA West	Feet

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

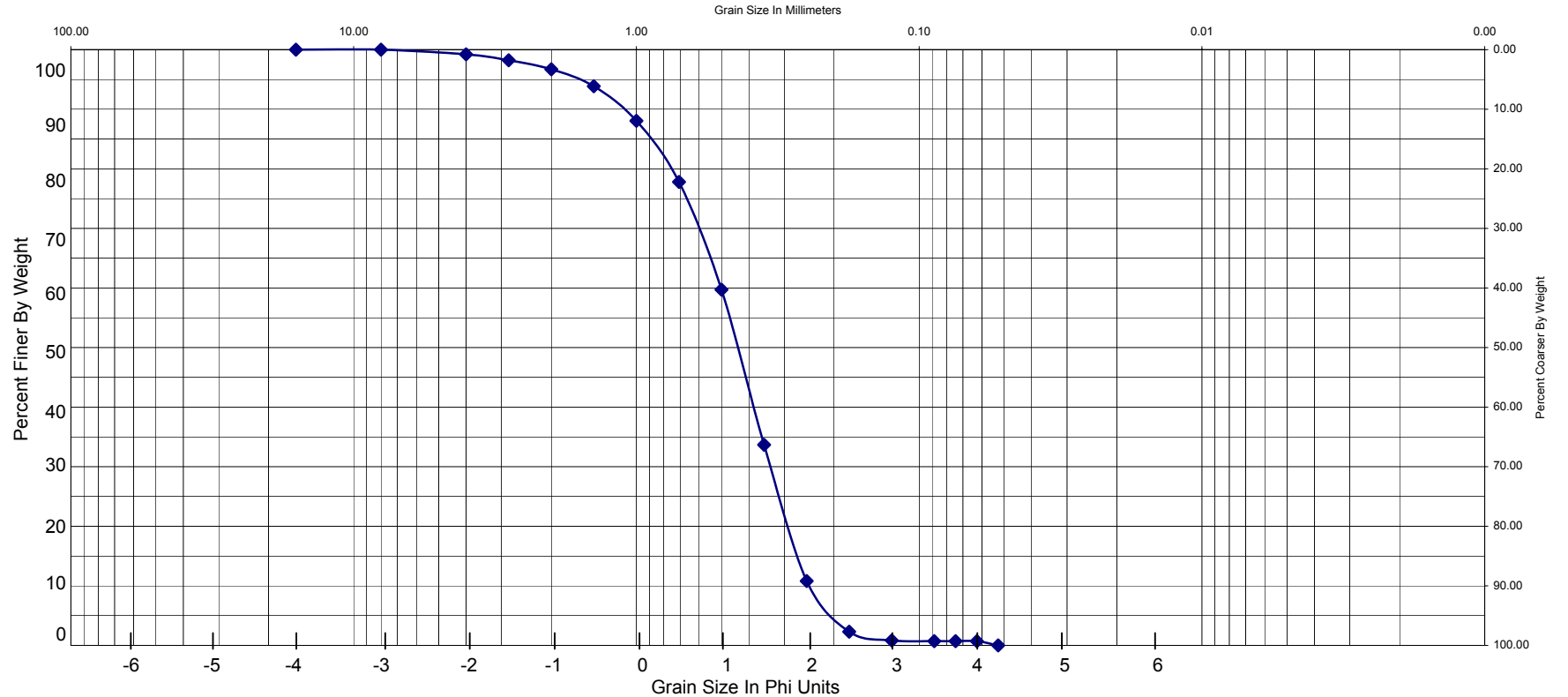
Dry Wt.	97.20	Percent Silt:	5.87
Wash Wt.	91.50		

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	0.270	0.278	0.270	0.278
5	-2.000	4.000	0.570	0.586	0.840	0.864
7	-1.500	2.828	0.560	0.576	1.400	1.440
10	-1.000	2.000	0.850	0.874	2.250	2.315
14	-0.500	1.414	1.490	1.533	3.740	3.848
18	0.000	1.000	2.000	2.058	5.740	5.905
25	0.500	0.707	3.260	3.354	9.000	9.259
35	1.000	0.500	5.970	6.142	14.970	15.401
45	1.500	0.354	9.720	10.000	24.690	25.401
60	2.000	0.250	20.900	21.502	45.590	46.903
80	2.500	0.177	26.450	27.212	72.040	74.115
120	3.000	0.125	16.320	16.790	88.360	90.905
170	3.500	0.088	2.630	2.706	90.990	93.611
200	3.750	0.074	0.420	0.432	91.410	94.043
230	4.000	0.063	0.080	0.082	91.490	94.126
Pan	Pan	0.053	5.710	5.874	97.200	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.22	1.03	1.48	2.06	2.53	2.79	4.04

Median phi:	2.06	Median mm:	0.24
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.94	0.26	1.09	-0.20	1.67
Moment	1.96	0.26	1.37	-0.10	2.04

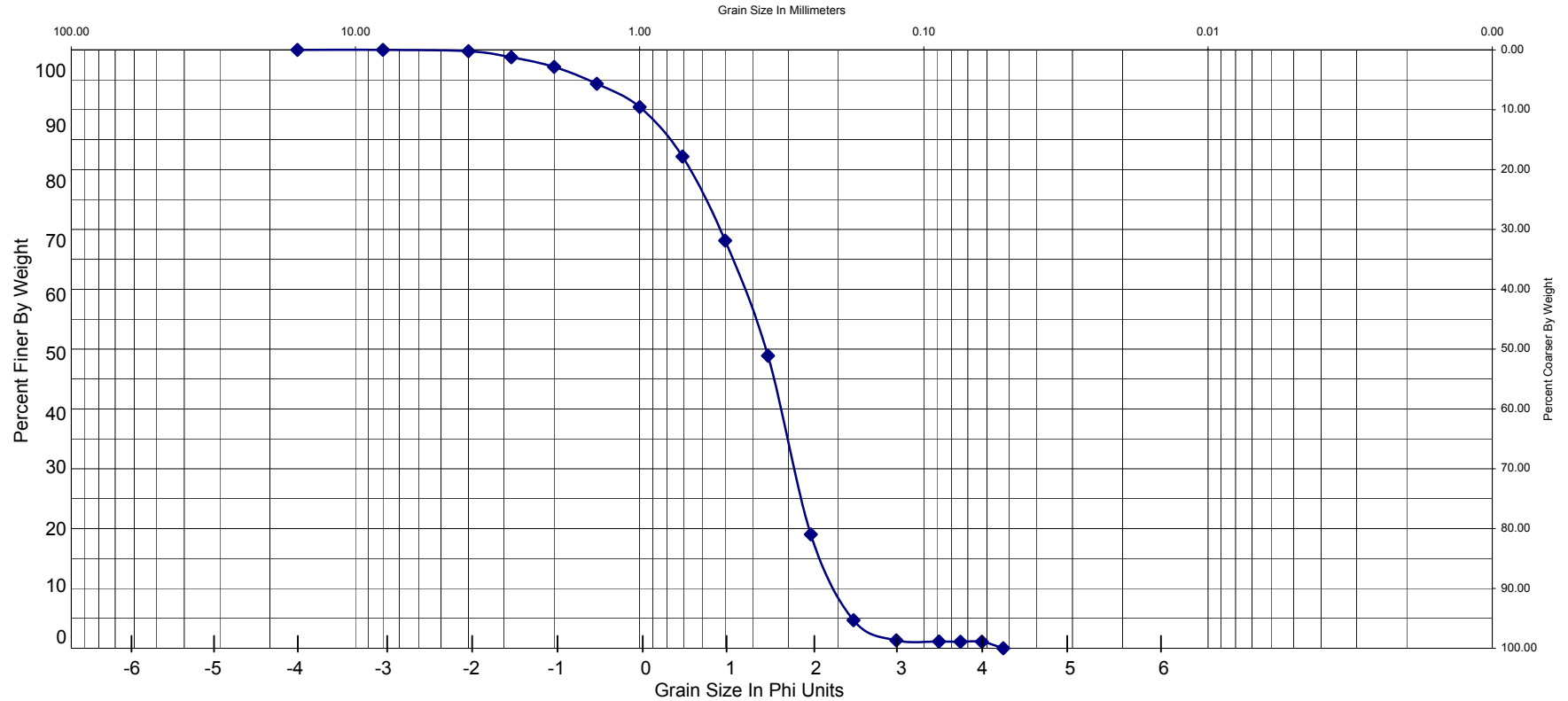


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-27#1	1.5		SP	0.70	0.44	0.49	-0.36	1.7	1.06	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 545890.55 Feet
													Northing (Y): 771934.60 Feet
													Sample Elevation: -32.8 NGVD 29
													Coord. System: State Plane 1983 FLA West



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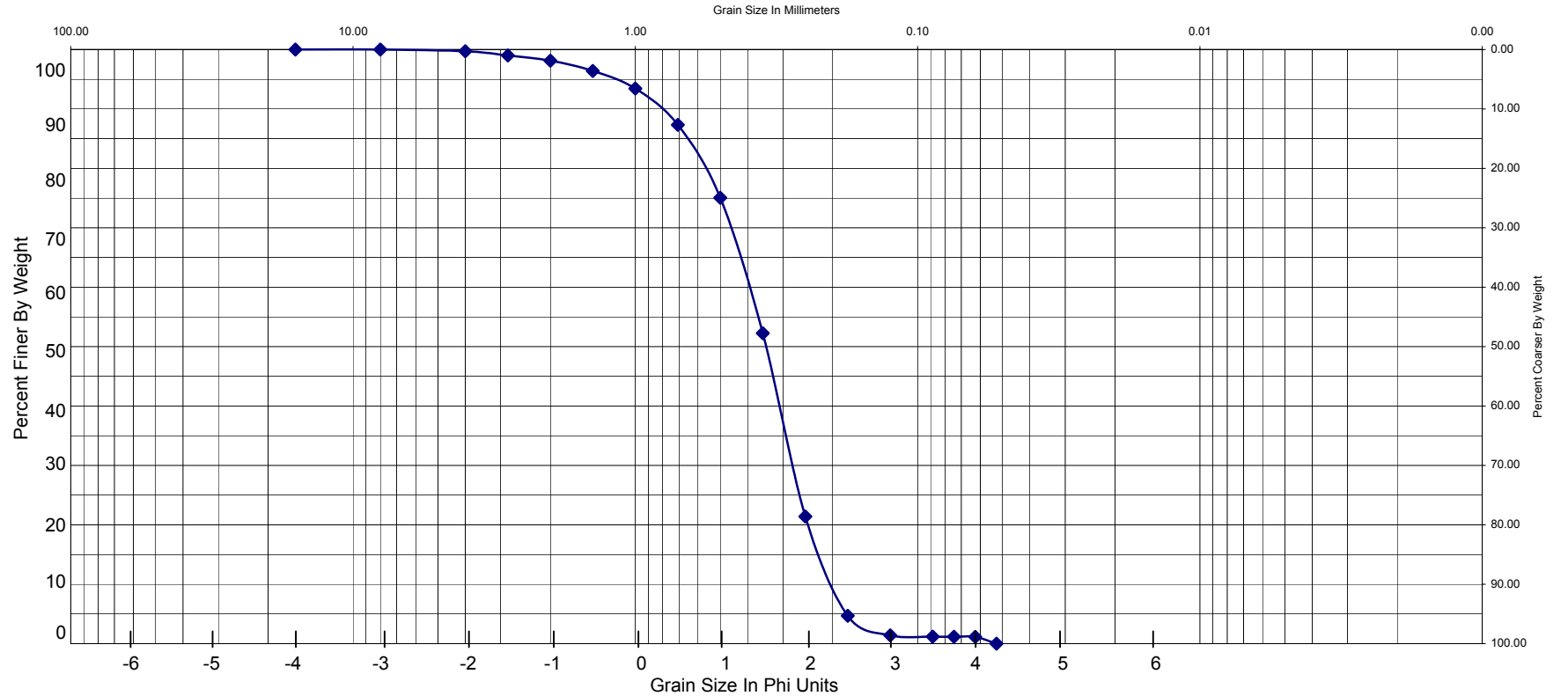
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-27#2	4.5		SP	1.09	0.36	0.43	-0.46	1.76	1.1	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	545890.55 Feet
Northing (Y):	771934.60 Feet
Sample Elevation:	-35.8 NGVD 29
Coord. System:	State Plane 1983 FLA West

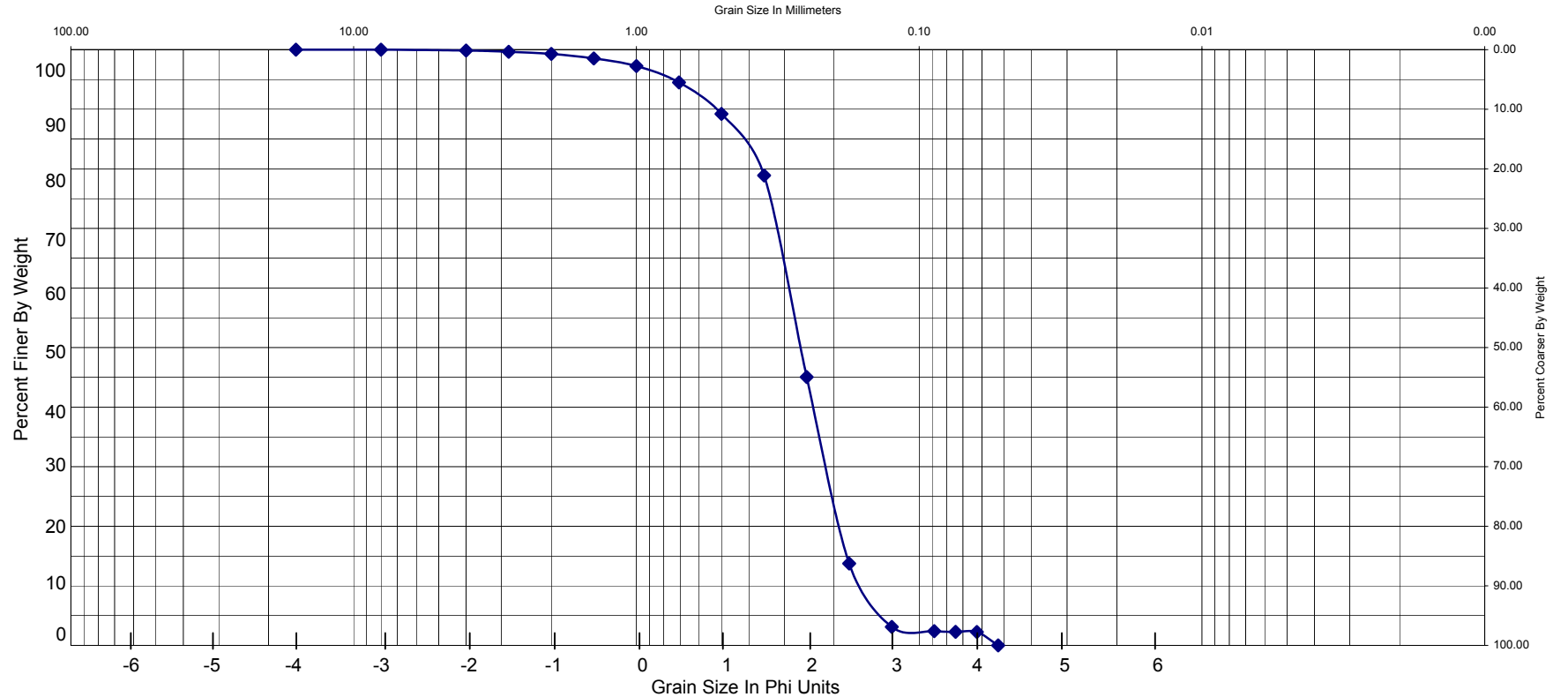


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-27#3	8.0		SP	1.13	0.34	0.39	-0.47	1.81	0.96	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 545890.55 Feet
													Northing (Y): 771934.60 Feet
													Sample Elevation: -39.3 NGVD 29
													Coord. System: State Plane 1983 FLA West



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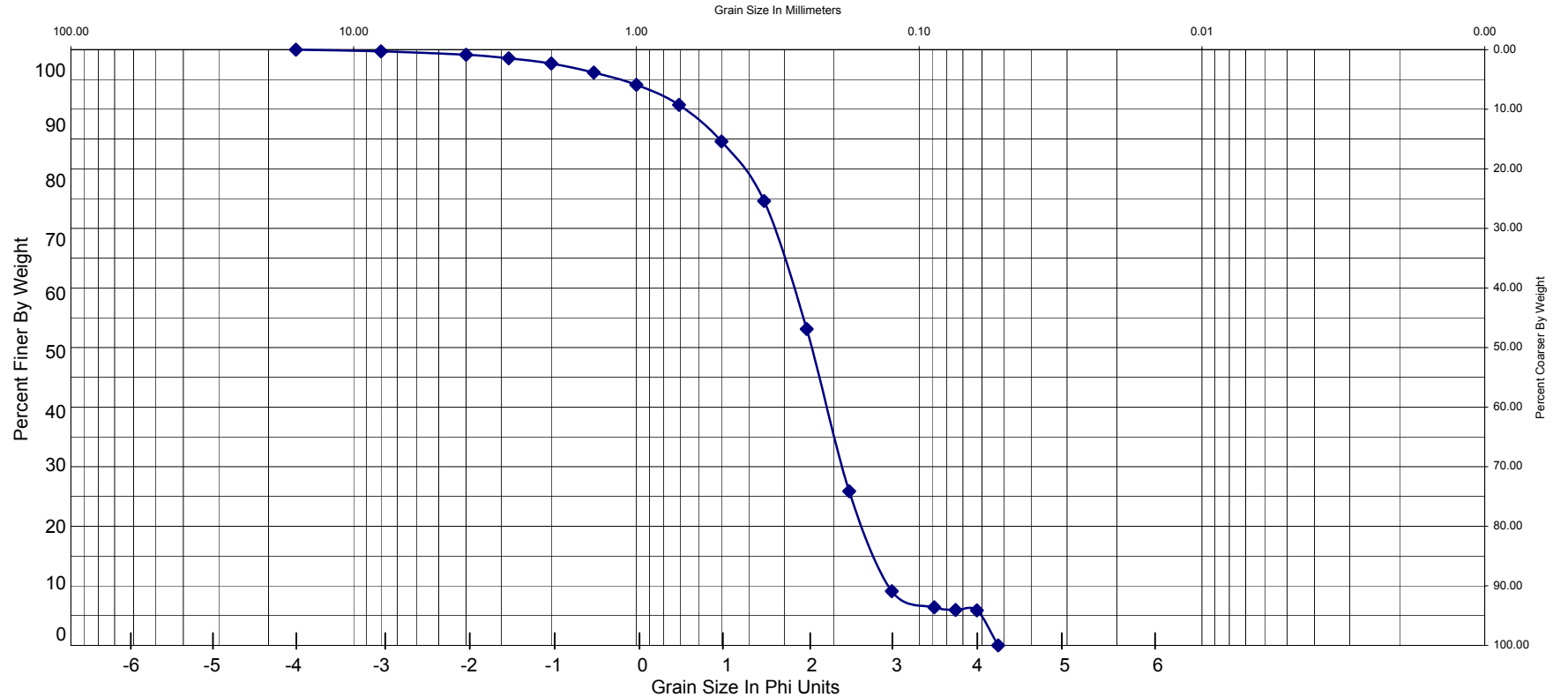


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-27#4	12.0		SP	2.25	0.26	0.28	-0.42	1.93	0.84	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 545890.55 Feet
													Northing (Y): 771934.60 Feet
													Sample Elevation: -43.3 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-00-27#5	14.5		SW-SM	5.87	0.24	0.26	-0.1	2.04	1.37	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 545890.55 Feet
													Northing (Y): 771934.60 Feet
													Sample Elevation: -45.8 NGVD 29
													Coord. System: State Plane 1983 FLA West



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