

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=541280.75 Y=791829.90		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-00-20		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 16:05		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -43.8 FT		
9. TOTAL DEPTH OF HOLE 19.6 FT		18. TOTAL CORE RECOVERY FOR BORING 96.9%		
		19. SIGNATURE OF GEOLOGIST ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-43.8	0					
	1		SAND, fine grained, some shell hash/shell fragments, gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.45, Phi Sorting: 1.17 Silt: 1.56% (SW)
-47.3	2					
-48	3					
	4		medium grained, little shell hash/fragments, gray (5Y-6/1), (SP).			
	5				2	Sample #2, Depth = 4.5' Mean (mm): 0.16, Phi Sorting: 1.14 Silt: 13.98% (SM)
	6					
	7		SAND, fine grained, trace shell hash, light gray (5Y-7/1), (SP).		3	Sample #3, Depth = 7.5' Mean (mm): 0.28, Phi Sorting: 1.95 Silt: 15.17% (SM)
	8					
-53	9					
	10		CARBONATE CLASTS, ranges from fine sand sized to 2.5" carbonate fragments, predominantly calcareous sand, light gray (5Y-7/1), (GM-GC).			
-55.1	11					
	12		SAND, fine grained, calcareous, trace shell hash, gray (5Y-6/1), (SP).			
-56.6	13				4	Sample #4, Depth = 13.0' Mean (mm): 0.31, Phi Sorting: 1.54 Silt: 5.99% (SW-SM)
	14					
	15				5	Sample #5, Depth = 16.0' Mean (mm): 0.24, Phi Sorting: 1.24 Silt: 8.51% (SW-SM)
	16		SAND, medium grained, calcareous, light gray (5Y-7/1), (SP).			
	17					
-62.8	18					
	19		End of Boring			
	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-00-20#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-44.8	Feet	Easting:	541280.75	State Plane	1983
Reference:	NGVD 29		Northing:	791829.90	FLA West	Feet

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

Dry Wt.	79.34	Percent Silt:	1.56
Wash Wt.	78.10		

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	0.300	0.378	0.300	0.378
10	-1.000	2.000	0.960	1.210	1.260	1.588
14	-0.500	1.414	3.040	3.832	4.300	5.420
18	0.000	1.000	6.500	8.193	10.800	13.612
25	0.500	0.707	10.460	13.184	21.260	26.796
35	1.000	0.500	9.420	11.873	30.680	38.669
45	1.500	0.354	9.270	11.684	39.950	50.353
60	2.000	0.250	22.970	28.951	62.920	79.304
80	2.500	0.177	12.080	15.226	75.000	94.530
120	3.000	0.125	2.820	3.554	77.820	98.084
170	3.500	0.088	0.230	0.290	78.050	98.374
200	3.750	0.074	0.030	0.038	78.080	98.412
230	4.000	0.063	0.010	0.013	78.090	98.425
Pan	Pan	0.053	1.240	1.563	79.330	99.987

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.55	0.09	0.43	1.48	1.93	2.15	2.56

Median phi:	1.48	Median mm:	0.36
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.15	0.45	0.99	-0.44	0.86
Moment	1.16	0.45	1.17	-0.24	1.35

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-20#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-48.3	Feet	Easting:	541280.75	State Plane	1983
Reference:	NGVD 29		Northing:	791829.90	FLA West	Feet

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

Dry Wt.	87.04	Percent Silt:	13.98
Wash Wt.	75.00		

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	1.070	1.229	1.070	1.229
5	-2.000	4.000	0.470	0.540	1.540	1.769
7	-1.500	2.828	0.170	0.195	1.710	1.965
10	-1.000	2.000	0.230	0.264	1.940	2.229
14	-0.500	1.414	0.290	0.333	2.230	2.562
18	0.000	1.000	0.530	0.609	2.760	3.171
25	0.500	0.707	0.910	1.045	3.670	4.216
35	1.000	0.500	1.440	1.654	5.110	5.871
45	1.500	0.354	2.690	3.091	7.800	8.961
60	2.000	0.250	7.950	9.134	15.750	18.095
80	2.500	0.177	17.810	20.462	33.560	38.557
120	3.000	0.125	29.060	33.387	62.620	71.944
170	3.500	0.088	9.820	11.282	72.440	83.226
200	3.750	0.074	2.040	2.344	74.480	85.570
230	4.000	0.063	0.360	0.414	74.840	85.983
Pan	Pan	0.053	12.160	13.971	87.000	99.954

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
0.74	1.88	2.17	2.67	3.13	3.58	4.16

Median phi:	2.67	Median mm:	0.16
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.61	0.16	0.94	-0.15	1.45
Moment	2.62	0.16	1.14	-0.28	1.89

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-20#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-51.3	Feet	Easting:	541280.75	State Plane	1983
Reference:	NGVD 29		Northing:	791829.90	FLA West	Feet

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

Dry Wt.	84.62	Percent Silt:	15.17
Wash Wt.	71.80		

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	3.300	3.900	3.300	3.900
7	-1.500	2.828	0.750	0.886	4.050	4.786
10	-1.000	2.000	0.850	1.004	4.900	5.791
14	-0.500	1.414	2.070	2.446	6.970	8.237
18	0.000	1.000	2.940	3.474	9.910	11.711
25	0.500	0.707	4.470	5.282	14.380	16.994
35	1.000	0.500	5.500	6.500	19.880	23.493
45	1.500	0.354	6.480	7.658	26.360	31.151
60	2.000	0.250	10.670	12.609	37.030	43.760
80	2.500	0.177	13.520	15.977	50.550	59.738
120	3.000	0.125	16.170	19.109	66.720	78.847
170	3.500	0.088	3.890	4.597	70.610	83.444
200	3.750	0.074	1.030	1.217	71.640	84.661
230	4.000	0.063	0.090	0.106	71.730	84.767
Pan	Pan	0.053	12.830	15.162	84.560	99.929

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.40	0.40	1.10	2.19	2.90	3.60	4.17

Median phi:	2.19	Median mm:	0.22
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.79	0.29	1.64	-0.43	1.27
Moment	1.85	0.28	1.95	-0.42	1.79

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-20#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-56.8	Feet	Easting:	541280.75	State Plane	1983
Reference:	NGVD 29		Northing:	791829.90	FLA West	Feet

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

Dry Wt.	96.69	Percent Silt:	5.99
Wash Wt.	90.92		

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	2.190	2.265	2.190	2.265
7	-1.500	2.828	1.100	1.138	3.290	3.403
10	-1.000	2.000	1.300	1.345	4.590	4.747
14	-0.500	1.414	1.490	1.541	6.080	6.288
18	0.000	1.000	2.060	2.131	8.140	8.419
25	0.500	0.707	2.750	2.844	10.890	11.263
35	1.000	0.500	5.630	5.823	16.520	17.086
45	1.500	0.354	14.410	14.903	30.930	31.989
60	2.000	0.250	28.280	29.248	59.210	61.237
80	2.500	0.177	22.080	22.836	81.290	84.073
120	3.000	0.125	7.290	7.540	88.580	91.612
170	3.500	0.088	1.930	1.996	90.510	93.608
200	3.750	0.074	0.260	0.269	90.770	93.877
230	4.000	0.063	0.040	0.041	90.810	93.919
Pan	Pan	0.053	5.790	5.988	96.600	99.907

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.92	0.91	1.26	1.81	2.30	2.50	4.04

Median phi:	1.81	Median mm:	0.29
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.67	0.32	1.15	-0.26	1.96
Moment	1.70	0.31	1.54	-0.23	2.33

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-20#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-59.8	Feet	Easting:	541280.75	State Plane	1983
Reference:	NGVD 29		Northing:	791829.90	FLA West	Feet

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

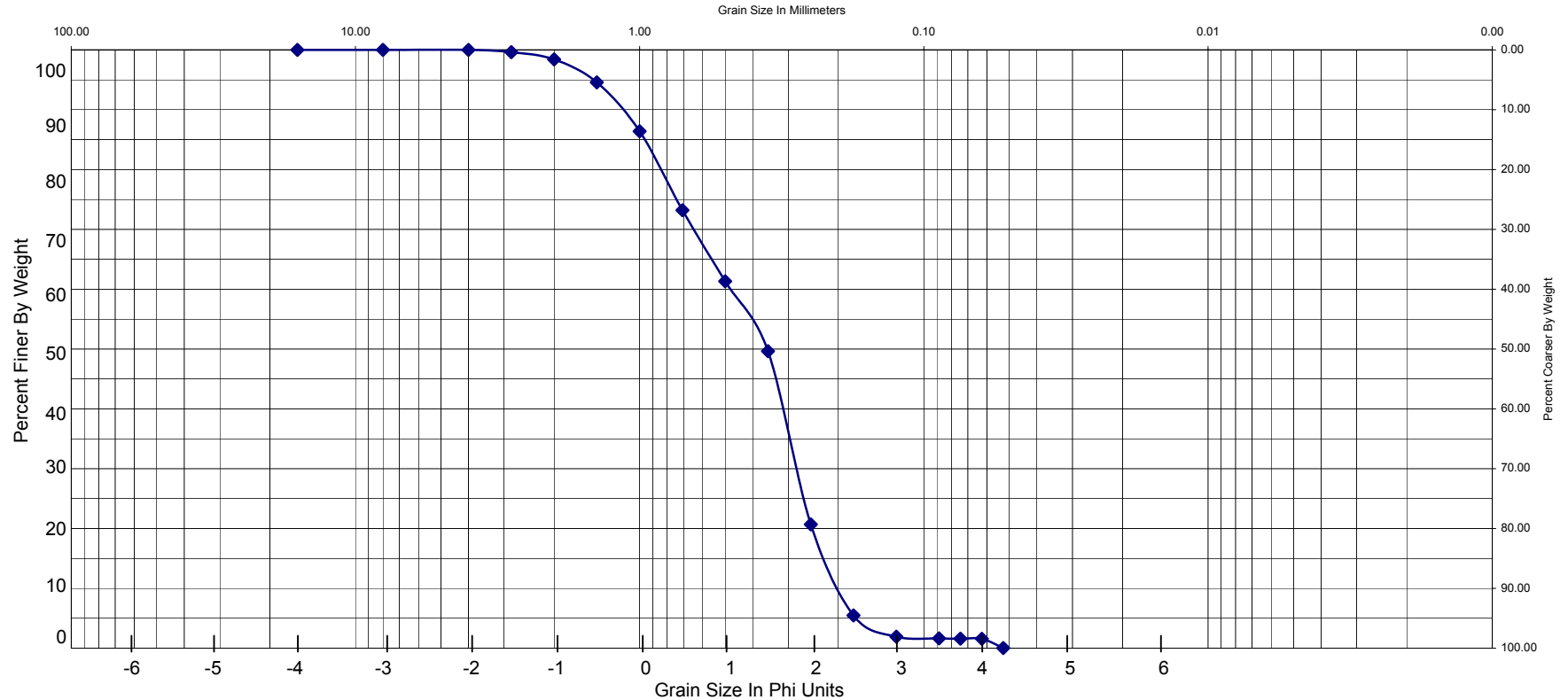
Dry Wt.	96.41	Percent Silt:	8.51
Wash Wt.	88.23		

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	1.040	1.079	1.040	1.079
7	-1.500	2.828	0.550	0.570	1.590	1.649
10	-1.000	2.000	0.960	0.996	2.550	2.645
14	-0.500	1.414	0.560	0.581	3.110	3.226
18	0.000	1.000	0.720	0.747	3.830	3.973
25	0.500	0.707	2.380	2.469	6.210	6.441
35	1.000	0.500	4.790	4.968	11.000	11.410
45	1.500	0.354	10.290	10.673	21.290	22.083
60	2.000	0.250	29.250	30.339	50.540	52.422
80	2.500	0.177	23.930	24.821	74.470	77.243
120	3.000	0.125	10.770	11.171	85.240	88.414
170	3.500	0.088	2.490	2.583	87.730	90.997
200	3.750	0.074	0.360	0.373	88.090	91.370
230	4.000	0.063	0.040	0.041	88.130	91.412
Pan	Pan	0.053	8.200	8.505	96.330	99.917

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
0.21	1.21	1.55	1.96	2.45	2.80	4.10

Median phi:	1.96	Median mm:	0.26
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.06	0.24	0.99	0.21	1.76
Moment	2.04	0.24	1.24	0.21	2.10

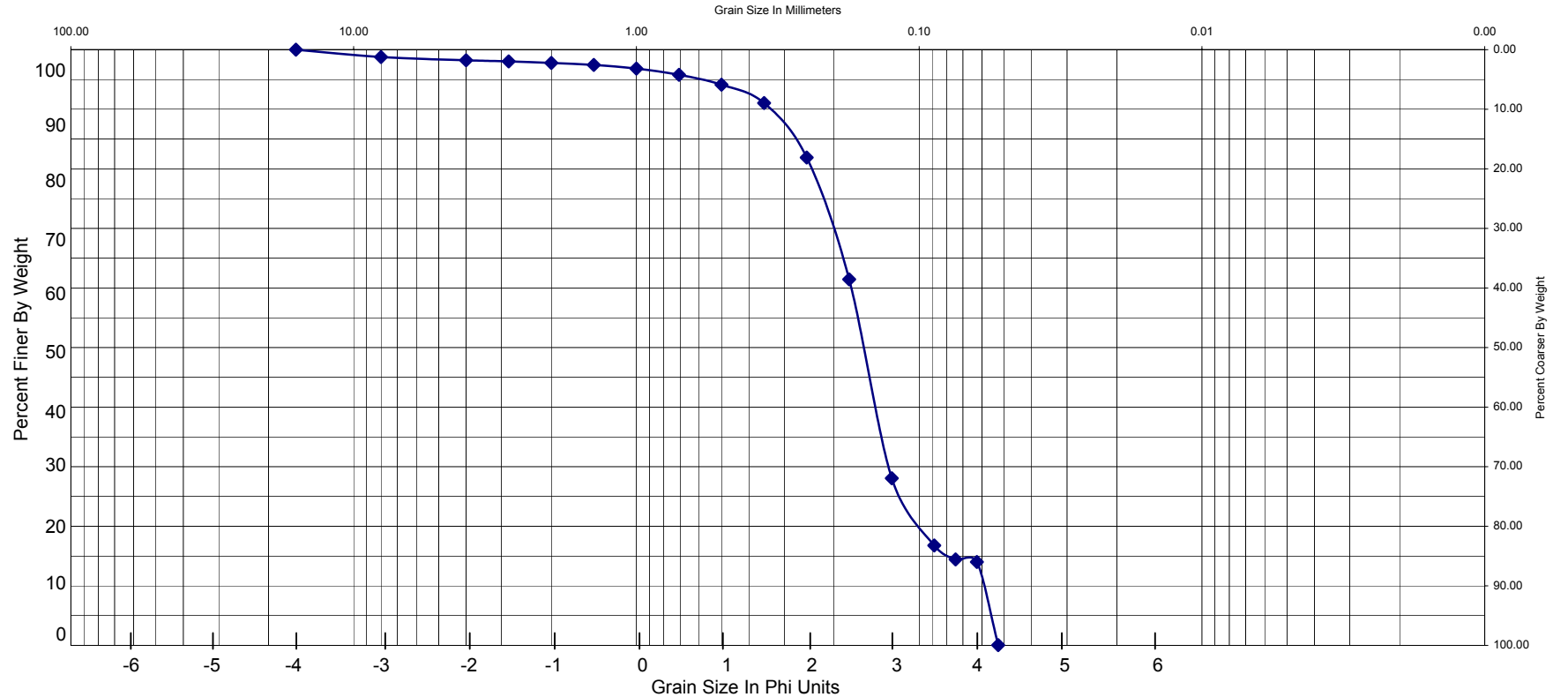


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-20#1	1.0		SW	1.56	0.36	0.45	-0.24	1.35	1.17	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 541280.75 Feet
													Northing (Y): 791829.90 Feet
													Sample Elevation: -44.8 NGVD 29
													Coord. System: State Plane 1983 FLA West



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BOCA RATON, FLORIDA 33431

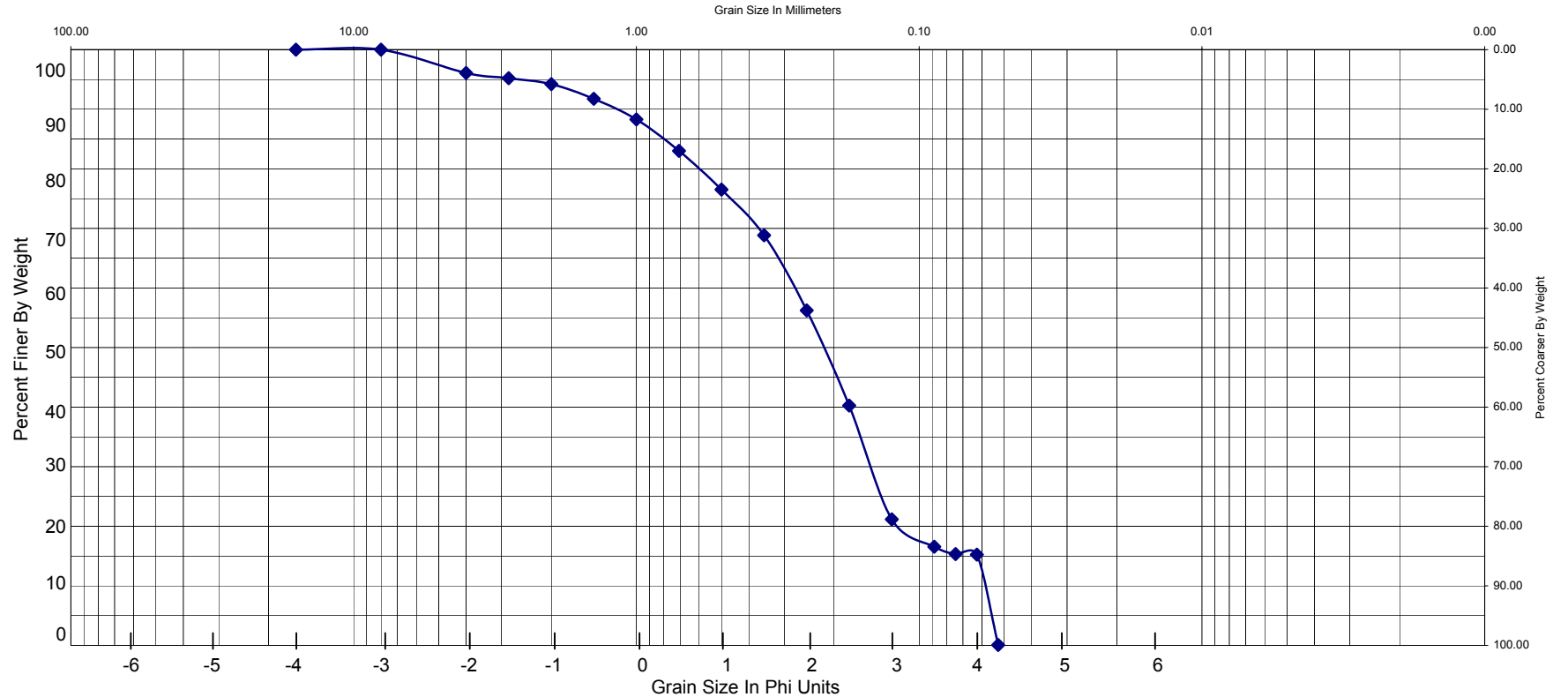


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-20#2	4.5		SM	13.98	0.16	0.16	-0.28	1.89	1.14	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 541280.75 Feet
													Northing (Y): 791829.90 Feet
													Sample Elevation: -48.3 NGVD 29
													Coord. System: State Plane 1983 FLA West




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Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

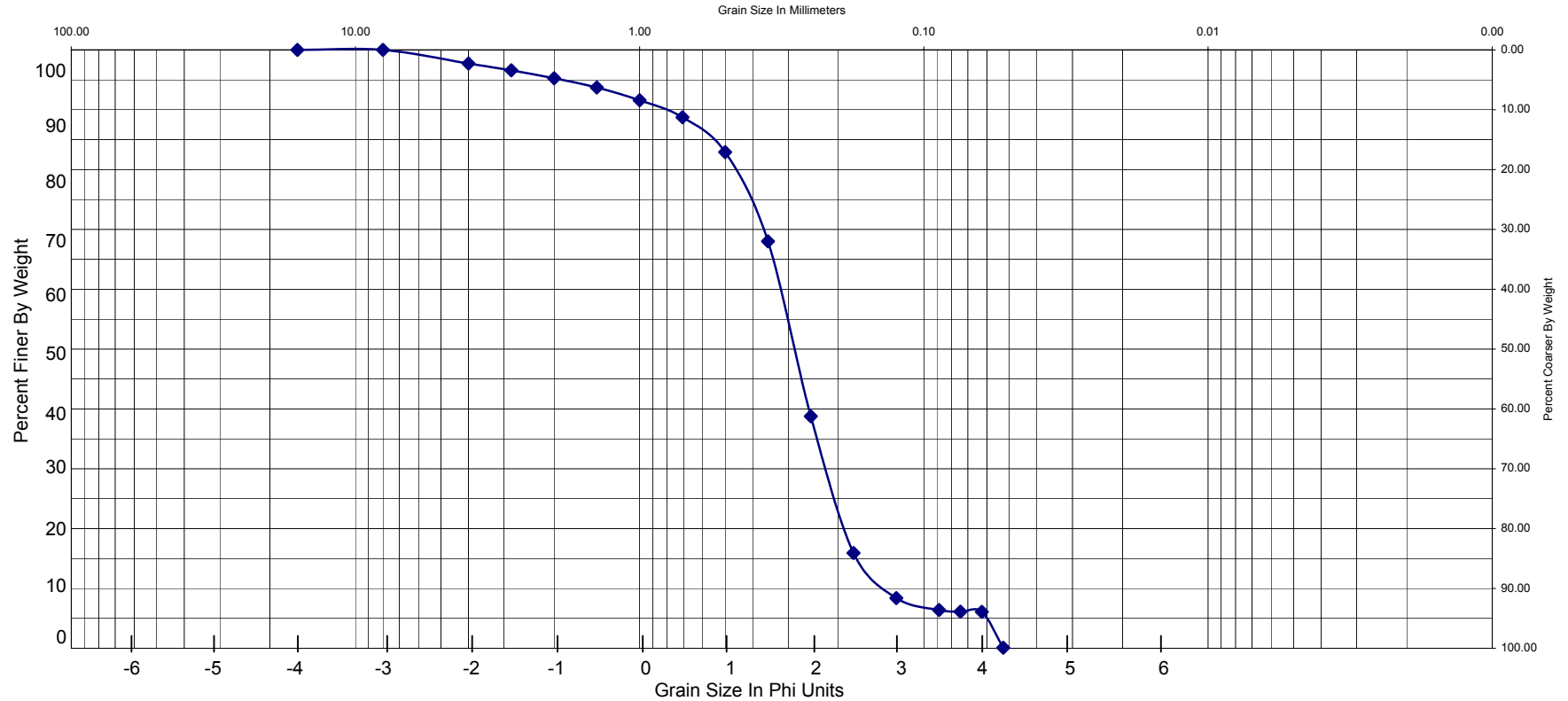
Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-20#3	7.5		SM	15.17	0.22	0.28	-0.42	1.79	1.95	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	541280.75 Feet
Northing (Y):	791829.90 Feet
Sample Elevation:	-51.3 NGVD 29
Coord. System:	State Plane 1983 FLA West

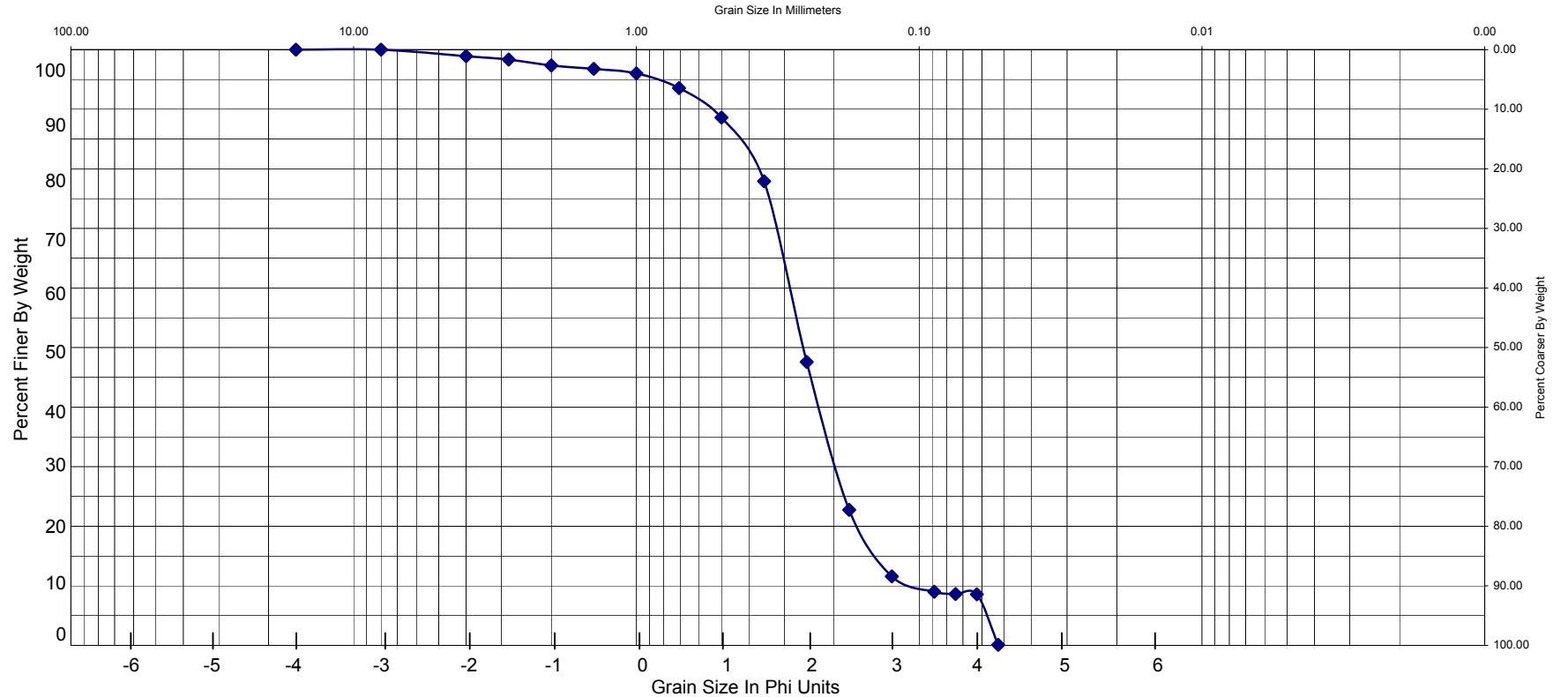


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-20#4	13.0		SW-SM	5.99	0.29	0.31	-0.23	2.33	1.54	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 541280.75 Feet
													Northing (Y): 791829.90 Feet
													Sample Elevation: -56.8 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-00-20#5	16.0		SW-SM	8.51	0.26	0.24	0.21	2.1	1.24	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 541280.75 Feet
													Northing (Y): 791829.90 Feet
													Sample Elevation: -59.8 NGVD 29
													Coord. System: State Plane 1983 FLA West



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