

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 = 549034.40 Y= 769396.74		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD		
3. DRILLING AGENCY: Alpine Ocean Seismic Survey Inc.		12. MANUFACTURER'S DESIGNATION OF DRILL		
4. HOLE NO. (As shown on drawing title and file number) CIVC-00-34		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN		
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 16:02		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -33.5 FT		
9. TOTAL DEPTH OF HOLE 16.9 ft		18. TOTAL CORE RECOVERY FOR BORING 100%		
		19. SIGNATURE OF GEOLOGIST		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-33.5	0					
-35.1	1		SHELLY SAND, gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.51, Phi Sorting:1.27 Silt: 0.41% (SW)
	2					
	3		some shell hash, gray (5Y-6/1), (SP).		2	Sample #2, Depth = 4.5' Mean (mm):0.35, Phi Sorting:1.16 Silt: 1.39% (SW)
-38.6	4					
	5					
-39.8	6		SHELLY SAND, gray (5Y-6/1), (SP).		1	
	7					
	8				3	Sample #3, Depth = 8.0' Mean (mm): 0.29, Phi Sorting:1.01 Silt: 1.14% (SP)
	9					
	10		SAND, some shell hash, gray (5Y-6/1), (SP).			
	11					
	12				4	Sample #4, Depth = 12.0' Mean(mm): 0.29, Phi Sorting: 1.07 Silt: 1.68% (SP)
-47.5	13					
	14		SHELLY SAND, gray (5Y-7/1), (SP).		5	Sample #5, Depth = 14.0' Mean(mm): 0.20, Phi Sorting:0.83 Silt: 3.50% (SP)
-49.5	15		SAND, some shell hash, light gray (5Y-7/1), (SP).			
	16					
	17		CARBONATE CLASTS, in silty sand, white (5Y-8/1), (GM). Expansion from 16.9'.			
-52.7	18					
	19					
	20		End of Boring			
	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-00-34#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-34.5	Feet	Easting:	549034.40	State Plane	1983
Reference:	NGVD 29		Northing:	769396.74	FLA West	Feet

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

Dry Wt.	87.94	Percent Silt:	0.41
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	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.900	1.023	0.900	1.023
7	-1.500	2.828	1.170	1.330	2.070	2.354
10	-1.000	2.000	2.430	2.763	4.500	5.117
14	-0.500	1.414	4.490	5.106	8.990	10.223
18	0.000	1.000	6.650	7.562	15.640	17.785
25	0.500	0.707	9.280	10.553	24.920	28.338
35	1.000	0.500	12.930	14.703	37.850	43.041
45	1.500	0.354	16.910	19.229	54.760	62.270
60	2.000	0.250	17.290	19.661	72.050	81.931
80	2.500	0.177	12.990	14.771	85.040	96.702
120	3.000	0.125	2.380	2.706	87.420	99.409
170	3.500	0.088	0.140	0.159	87.560	99.568
200	3.750	0.074	0.010	0.011	87.570	99.579
230	4.000	0.063	0.010	0.011	87.580	99.591
Pan	Pan	0.053	0.360	0.409	87.940	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.02	-0.12	0.34	1.18	1.82	2.07	2.44

Median phi:	1.18	Median mm:	0.44
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.91	0.53	1.07	-0.35	0.96
Moment	0.96	0.51	1.27	-0.32	1.52

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-34#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-38	Feet	Easting:	549034.40	State Plane	1983
Reference:	NGVD 29		Northing:	769396.74	FLA West	Feet

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

Dry Wt.	87.10	Percent Silt:	1.39
Wash Wt.	85.89		

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	0.520	0.597	0.520	0.597
5	-2.000	4.000	0.630	0.723	1.150	1.320
7	-1.500	2.828	0.660	0.758	1.810	2.078
10	-1.000	2.000	0.920	1.056	2.730	3.134
14	-0.500	1.414	1.520	1.745	4.250	4.879
18	0.000	1.000	2.330	2.675	6.580	7.555
25	0.500	0.707	4.680	5.373	11.260	12.928
35	1.000	0.500	7.570	8.691	18.830	21.619
45	1.500	0.354	11.010	12.641	29.840	34.259
60	2.000	0.250	21.400	24.569	51.240	58.829
80	2.500	0.177	25.600	29.392	76.840	88.220
120	3.000	0.125	8.460	9.713	85.300	97.933
170	3.500	0.088	0.470	0.540	85.770	98.473
200	3.750	0.074	0.100	0.115	85.870	98.588
230	4.000	0.063	0.010	0.011	85.880	98.599
Pan	Pan	0.053	1.210	1.389	87.090	99.989

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.48	0.68	1.13	1.82	2.27	2.43	2.85

Median phi:	1.82	Median mm:	0.28
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.46	0.36	0.94	-0.61	1.19
Moment	1.53	0.35	1.16	-0.56	1.90

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-34#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-41.5	Feet	Easting:	549034.40	State Plane	1983
Reference:	NGVD 29		Northing:	769396.74	FLA West	Feet

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

Dry Wt.	97.31	Percent Silt:	1.14
Wash Wt.	96.21		

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	0.400	0.411	0.400	0.411
5	-2.000	4.000	0.510	0.524	0.910	0.935
7	-1.500	2.828	0.580	0.596	1.490	1.531
10	-1.000	2.000	0.570	0.586	2.060	2.117
14	-0.500	1.414	1.130	1.161	3.190	3.278
18	0.000	1.000	1.950	2.004	5.140	5.282
25	0.500	0.707	3.190	3.278	8.330	8.560
35	1.000	0.500	5.400	5.549	13.730	14.110
45	1.500	0.354	9.450	9.711	23.180	23.821
60	2.000	0.250	20.730	21.303	43.910	45.124
80	2.500	0.177	37.740	38.783	81.650	83.907
120	3.000	0.125	13.590	13.966	95.240	97.873
170	3.500	0.088	0.870	0.894	96.110	98.767
200	3.750	0.074	0.060	0.062	96.170	98.828
230	4.000	0.063	0.020	0.021	96.190	98.849
Pan	Pan	0.053	1.110	1.141	97.300	99.990

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.07	1.10	1.53	2.06	2.39	2.50	2.90

Median phi:	2.06	Median mm:	0.24
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.70	0.31	0.80	-0.81	1.42
Moment	1.77	0.29	1.01	-0.72	2.17

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-34#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-45.5	Feet	Easting:	549034.40	State Plane	1983
Reference:	NGVD 29		Northing:	769396.74	FLA West	Feet

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

Dry Wt.	86.92	Percent Silt:	1.68
Wash Wt.	85.46		

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	0.450	0.518	0.450	0.518
7	-1.500	2.828	0.270	0.311	0.720	0.828
10	-1.000	2.000	0.890	1.024	1.610	1.852
14	-0.500	1.414	1.340	1.542	2.950	3.394
18	0.000	1.000	1.980	2.278	4.930	5.672
25	0.500	0.707	3.140	3.613	8.070	9.284
35	1.000	0.500	4.440	5.108	12.510	14.393
45	1.500	0.354	6.960	8.007	19.470	22.400
60	2.000	0.250	18.790	21.618	38.260	44.017
80	2.500	0.177	31.010	35.676	69.270	79.694
120	3.000	0.125	14.950	17.200	84.220	96.894
170	3.500	0.088	1.050	1.208	85.270	98.102
200	3.750	0.074	0.160	0.184	85.430	98.286
230	4.000	0.063	0.020	0.023	85.450	98.309
Pan	Pan	0.053	1.460	1.680	86.910	99.988

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.15	1.10	1.56	2.08	2.43	2.62	2.94

Median phi:	2.08	Median mm:	0.24
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.72	0.30	0.85	-0.79	1.45
Moment	1.80	0.29	1.07	-0.74	2.19

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-34#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-47.5	Feet	Easting:	549034.40	State Plane	1983
Reference:	NGVD 29		Northing:	769396.74	FLA West	Feet

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

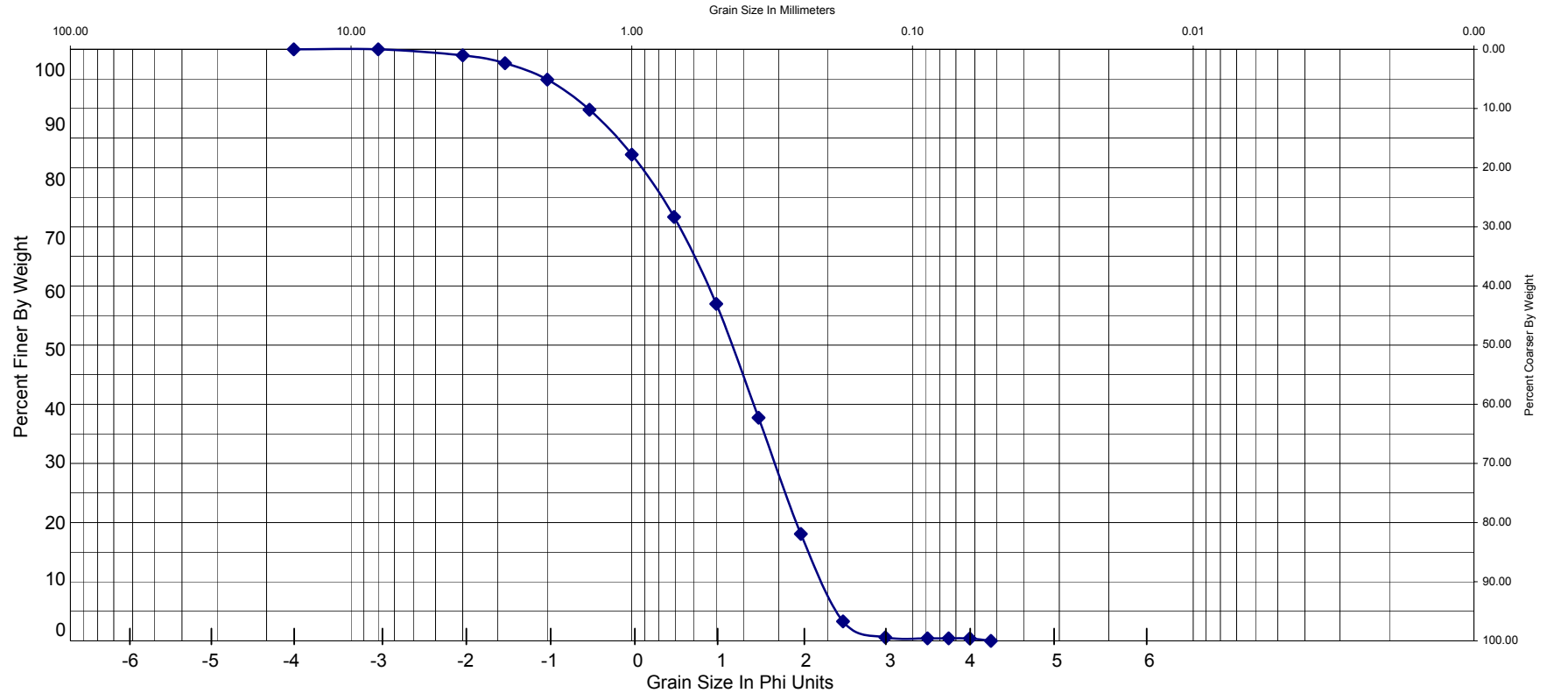
Dry Wt.	87.05	Percent Silt:	3.50
Wash Wt.	84.00		

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	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.420	0.482	0.420	0.482
7	-1.500	2.828	0.420	0.482	0.840	0.965
10	-1.000	2.000	0.390	0.448	1.230	1.413
14	-0.500	1.414	0.610	0.701	1.840	2.114
18	0.000	1.000	0.730	0.839	2.570	2.952
25	0.500	0.707	0.940	1.080	3.510	4.032
35	1.000	0.500	1.300	1.493	4.810	5.526
45	1.500	0.354	2.420	2.780	7.230	8.306
60	2.000	0.250	8.680	9.971	15.910	18.277
80	2.500	0.177	34.050	39.115	49.960	57.392
120	3.000	0.125	29.760	34.187	79.720	91.580
170	3.500	0.088	3.740	4.296	83.460	95.876
200	3.750	0.074	0.500	0.574	83.960	96.450
230	4.000	0.063	0.040	0.046	84.000	96.496
Pan	Pan	0.053	3.050	3.504	87.050	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
0.82	1.89	2.09	2.41	2.76	2.89	3.40

Median phi:	2.41	Median mm:	0.19
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	2.28	0.21	0.64	-0.38	1.57
Moment	2.32	0.20	0.83	-0.56	2.26



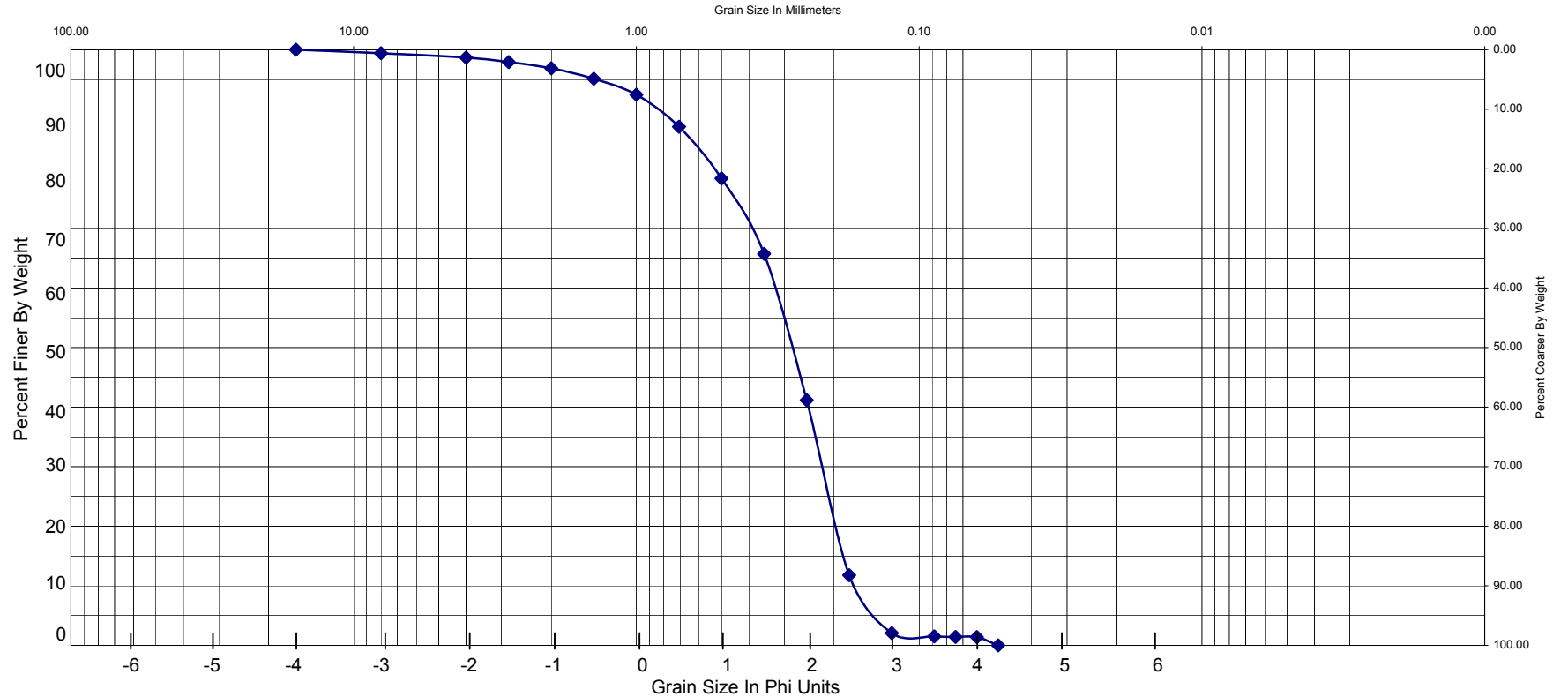
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-34#1	1.0		SW	0.41	0.44	0.51	-0.32	1.52	1.27	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



COASTAL PLANNING & ENGINEERING, INC.
2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431

Easting (X):	549034.40 Feet
Northing (Y):	769396.74 Feet
Sample Elevation:	-34.5 NGVD 29
Coord. System:	State Plane 1983 FLA West

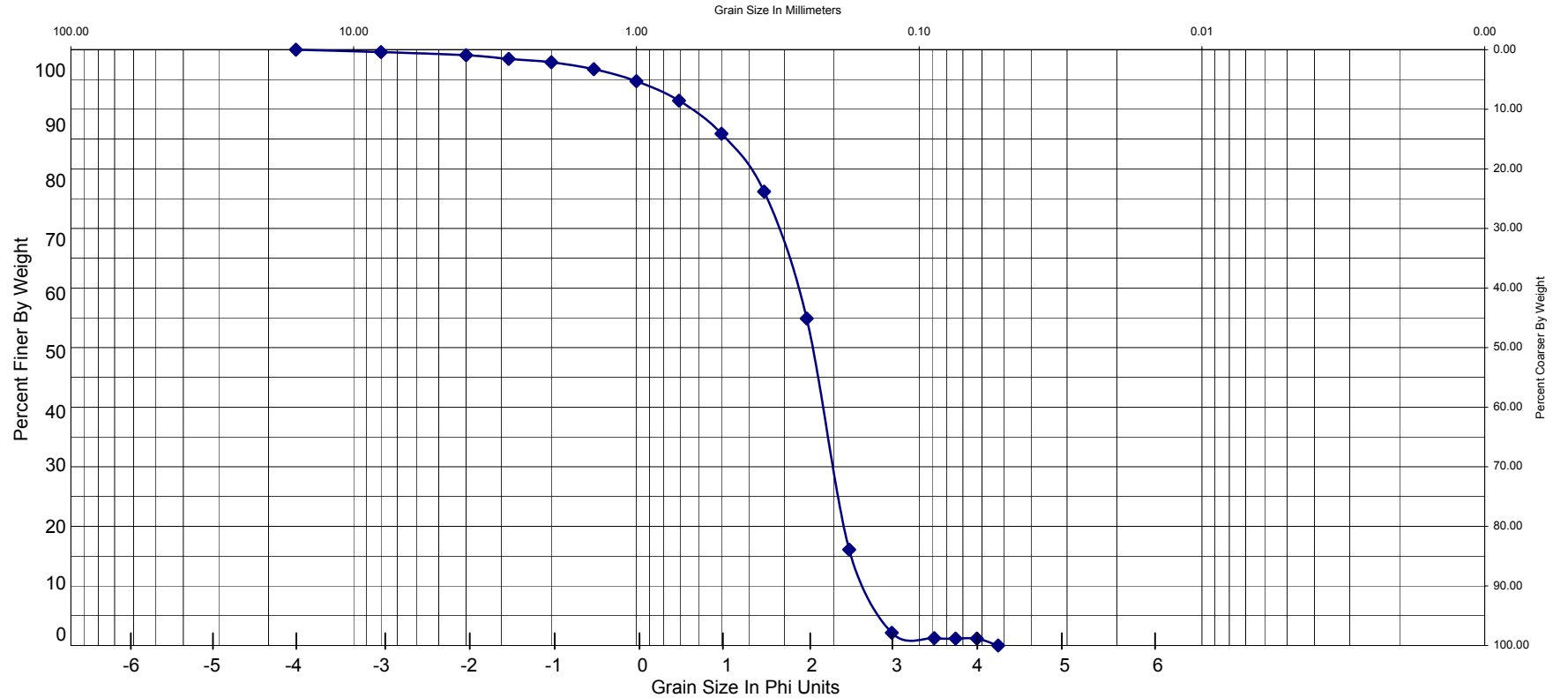


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-34#2	4.5		SW	1.39	0.28	0.35	-0.56	1.9	1.16	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 549034.40 Feet
													Northing (Y): 769396.74 Feet
													Sample Elevation: -38 NGVD 29
													Coord. System: State Plane 1983 FLA West



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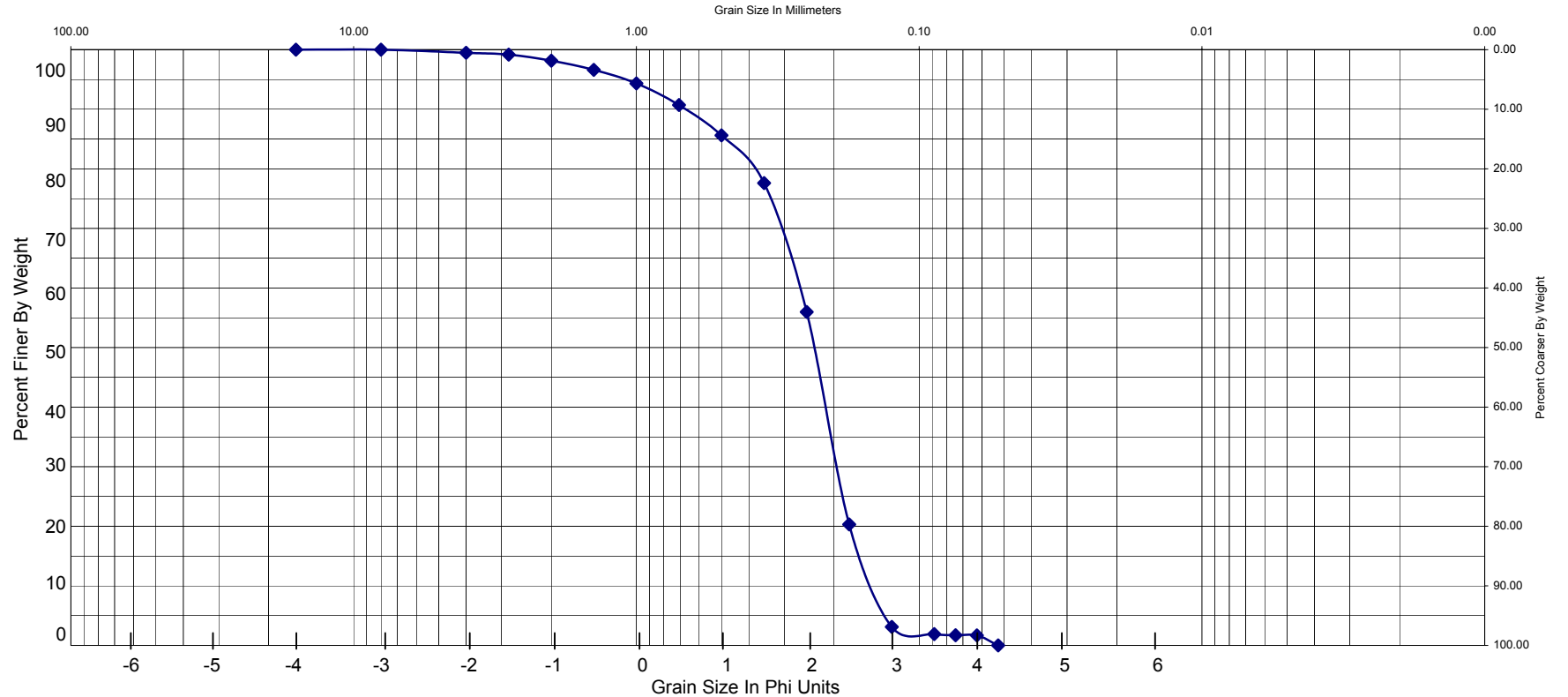


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-34#3	8.0		SP	1.14	0.24	0.29	-0.72	2.17	1.01	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 549034.40 Feet
													Northing (Y): 769396.74 Feet
													Sample Elevation: -41.5 NGVD 29
													Coord. System: State Plane 1983 FLA West



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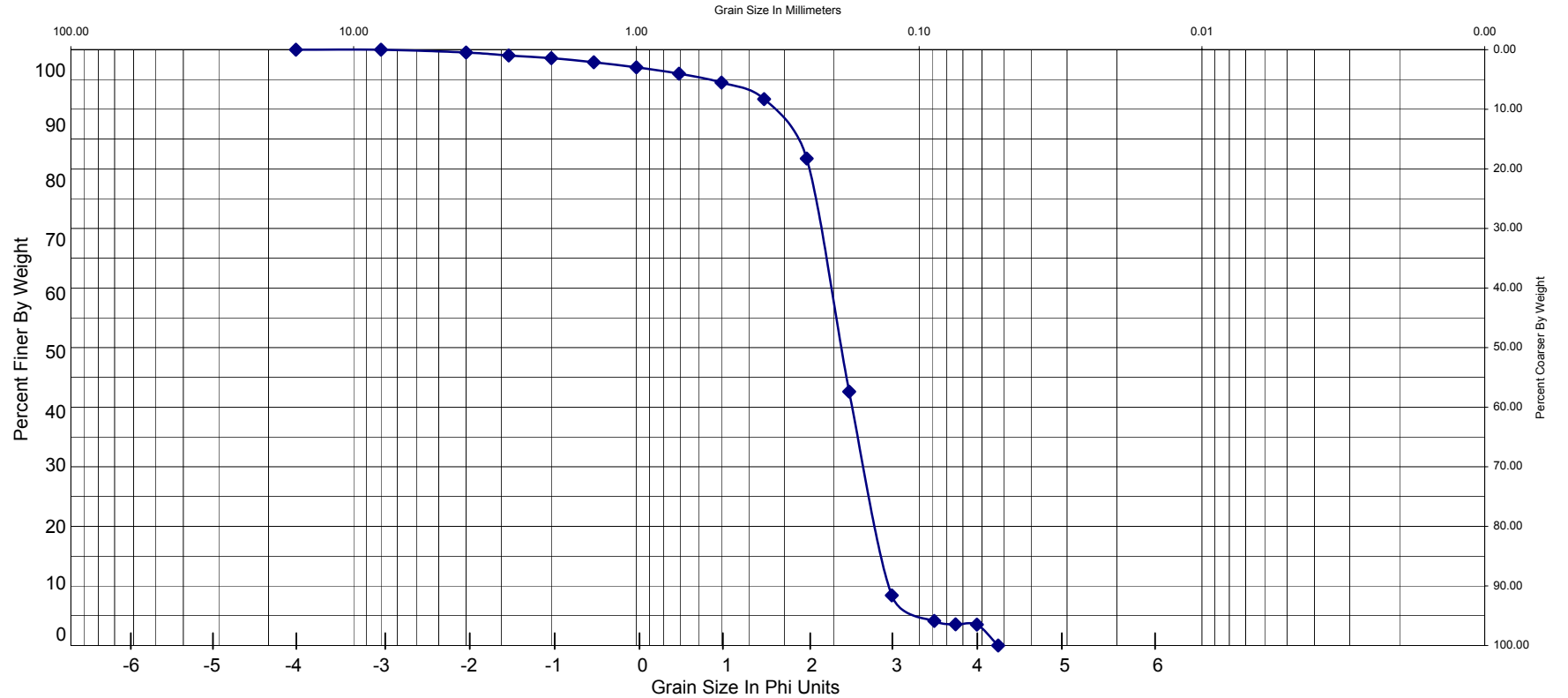


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-34#4	12.0		SP	1.68	0.24	0.29	-0.74	2.19	1.07	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 549034.40 Feet
													Northing (Y): 769396.74 Feet
													Sample Elevation: -45.5 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-00-34#5	14.0		SP	3.50	0.19	0.2	-0.56	2.26	0.83	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 549034.40 Feet
													Northing (Y): 769396.74 Feet
													Sample Elevation: -47.5 NGVD 29
													Coord. System: State Plane 1983 FLA West



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