

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=546954.38 Y=770155.11		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-00-32		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 11:10		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE - 32.5 FT		
9. TOTAL DEPTH OF HOLE 18.2 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
-32.5	0					
	1				1	Sample #1, Depth = 1.5' Mean (mm): 0.48, Phi Sorting: 1.09 Silt: 0.98% (SP)
	2					
	3					
	4				2	Sample #2, Depth = 4.5' Mean (mm): 0.36, Phi Sorting: 1.02 Silt: 1.16% (SP)
	5		SAND, fine grained, some shell hash/shell fragment, gray (5Y-6/1), (SP). Shell fragment @ 6.7-7.1'.			
	6					
	7					
	8				3	Sample #3, Depth = 8.0' Mean (mm): 0.34, Phi Sorting: 0.99 Silt: 2.13% (SP)
	9					
-42.5	10					
	11		fine grained, little shell hash/shell fragment, gray (5Y-6/1), (SP).		4	Sample #4, Depth = 11.0' Mean (mm): 0.34, Phi Sorting: 1.04 Silt: 2.24% (SP)
-45	12					
	13					
	14		SAND, fine grained, little shell hash/shell fragment, gray (5Y-6/1), (SP).		5	Sample #5, Depth = 14.0' Mean (mm): 0.34, Phi Sorting: 1.14 Silt: 2.72% (SW)
	15					
-49.2	16					
	17		SAND, fine grained, calcareous, some shell hash, light gray (5Y-7/1), (SP).			
-51	18					
	19		CARBONATE CLASTS, fine grained sand (calcareous) predominant, light gray (5Y-7/1), (GP).			
-52.7	20					
	21		Note: End of Boring			Note:
	22		1) Soils are field visually classified in accordance with the Unified Soil Classification System.			This column contains laboratory data.
	23					
	24					

PROJECT: Captiva Island Sand Study

HOLE NUMBER:

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-32#1
 Date: 1/1/2001
 By: ID



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

Elevation:	-34	Feet	Easting:	546954.38	State Plane	1983
Reference:	NGVD 29		Northing:	770155.11	FLA West	Feet

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

Dry Wt.	87.92	Percent Silt:	0.98
Wash Wt.	87.06		

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	0.580	0.660	0.580	0.660
7	-1.500	2.828	0.950	1.081	1.530	1.740
10	-1.000	2.000	1.280	1.456	2.810	3.196
14	-0.500	1.414	2.660	3.025	5.470	6.222
18	0.000	1.000	4.610	5.243	10.080	11.465
25	0.500	0.707	9.920	11.283	20.000	22.748
35	1.000	0.500	15.390	17.505	35.390	40.253
45	1.500	0.354	19.030	21.645	54.420	61.897
60	2.000	0.250	22.040	25.068	76.460	86.965
80	2.500	0.177	8.920	10.146	85.380	97.111
120	3.000	0.125	1.540	1.752	86.920	98.863
170	3.500	0.088	0.100	0.114	87.020	98.976
200	3.750	0.074	0.030	0.034	87.050	99.010
230	4.000	0.063	0.010	0.011	87.060	99.022
Pan	Pan	0.053	0.860	0.978	87.920	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.70	0.20	0.56	1.23	1.76	1.94	2.40

Median phi:	1.23	Median mm:	0.43
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.01	0.50	0.90	-0.35	1.06
Moment	1.06	0.48	1.09	-0.35	1.66

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-32#2
 Date: 1/1/2001
 By: ID



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

Elevation:	-37	Feet	Easting:	546954.38	State Plane	1983
Reference:	NGVD 29		Northing:	770155.11	FLA West	Feet

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

Dry Wt.	87.61	Percent Silt:	1.16
Wash Wt.	86.60		

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	0.210	0.240	0.210	0.240
10	-1.000	2.000	1.150	1.313	1.360	1.552
14	-0.500	1.414	1.820	2.077	3.180	3.630
18	0.000	1.000	2.460	2.808	5.640	6.438
25	0.500	0.707	4.460	5.091	10.100	11.528
35	1.000	0.500	8.370	9.554	18.470	21.082
45	1.500	0.354	15.760	17.989	34.230	39.071
60	2.000	0.250	26.780	30.567	61.010	69.638
80	2.500	0.177	20.390	23.274	81.400	92.912
120	3.000	0.125	4.810	5.490	86.210	98.402
170	3.500	0.088	0.300	0.342	86.510	98.744
200	3.750	0.074	0.050	0.057	86.560	98.802
230	4.000	0.063	0.010	0.011	86.570	98.813
Pan	Pan	0.053	1.020	1.164	87.590	99.977

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.26	0.73	1.11	1.68	2.11	2.31	2.69

Median phi:	1.68	Median mm:	0.31
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.43	0.37	0.84	-0.48	1.20
Moment	1.48	0.36	1.02	-0.49	1.85

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-32#3
 Date: 1/1/2001
 By: ID



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

Elevation:	-40.5	Feet	Easting:	546954.38	State Plane	1983
Reference:	NGVD 29		Northing:	770155.11	FLA West	Feet

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

Dry Wt.	89.62	Percent Silt:	2.13
Wash Wt.	87.72		

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	0.500	0.558	0.500	0.558
10	-1.000	2.000	0.700	0.781	1.200	1.339
14	-0.500	1.414	1.400	1.562	2.600	2.901
18	0.000	1.000	2.200	2.455	4.800	5.356
25	0.500	0.707	4.680	5.222	9.480	10.578
35	1.000	0.500	8.570	9.563	18.050	20.141
45	1.500	0.354	14.050	15.677	32.100	35.818
60	2.000	0.250	30.590	34.133	62.690	69.951
80	2.500	0.177	19.590	21.859	82.280	91.810
120	3.000	0.125	4.970	5.546	87.250	97.356
170	3.500	0.088	0.380	0.424	87.630	97.780
200	3.750	0.074	0.060	0.067	87.690	97.846
230	4.000	0.063	0.010	0.011	87.700	97.858
Pan	Pan	0.053	1.910	2.131	89.610	99.989

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.07	0.78	1.15	1.71	2.12	2.32	2.79

Median phi:	1.71	Median mm:	0.31
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.51	0.35	0.82	-0.40	1.22
Moment	1.54	0.34	0.99	-0.37	1.76

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-32#4
 Date: 1/1/2001
 By: ID



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

Elevation:	-43.5	Feet	Easting:	546954.38	State Plane	1983
Reference:	NGVD 29		Northing:	770155.11	FLA West	Feet

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

Dry Wt.	99.21	Percent Silt:	2.24
Wash Wt.	97.00		

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	0.440	0.444	0.440	0.444
7	-1.500	2.828	0.540	0.544	0.980	0.988
10	-1.000	2.000	0.770	0.776	1.750	1.764
14	-0.500	1.414	1.420	1.431	3.170	3.195
18	0.000	1.000	2.790	2.812	5.960	6.007
25	0.500	0.707	4.810	4.848	10.770	10.856
35	1.000	0.500	8.970	9.041	19.740	19.897
45	1.500	0.354	16.780	16.914	36.520	36.811
60	2.000	0.250	29.740	29.977	66.260	66.788
80	2.500	0.177	23.870	24.060	90.130	90.848
120	3.000	0.125	6.090	6.138	96.220	96.986
170	3.500	0.088	0.640	0.645	96.860	97.631
200	3.750	0.074	0.100	0.101	96.960	97.732
230	4.000	0.063	0.020	0.020	96.980	97.752
Pan	Pan	0.053	2.220	2.238	99.200	99.990

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.18	0.78	1.15	1.72	2.17	2.36	2.84

Median phi:	1.72	Median mm:	0.30
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.50	0.35	0.85	-0.41	1.21
Moment	1.55	0.34	1.04	-0.41	1.81

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-32#5
 Date: 1/1/2001
 By: ID



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

Elevation:	-46.5	Feet	Easting:	546954.38	State Plane	1983
Reference:	NGVD 29		Northing:	770155.11	FLA West	Feet

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

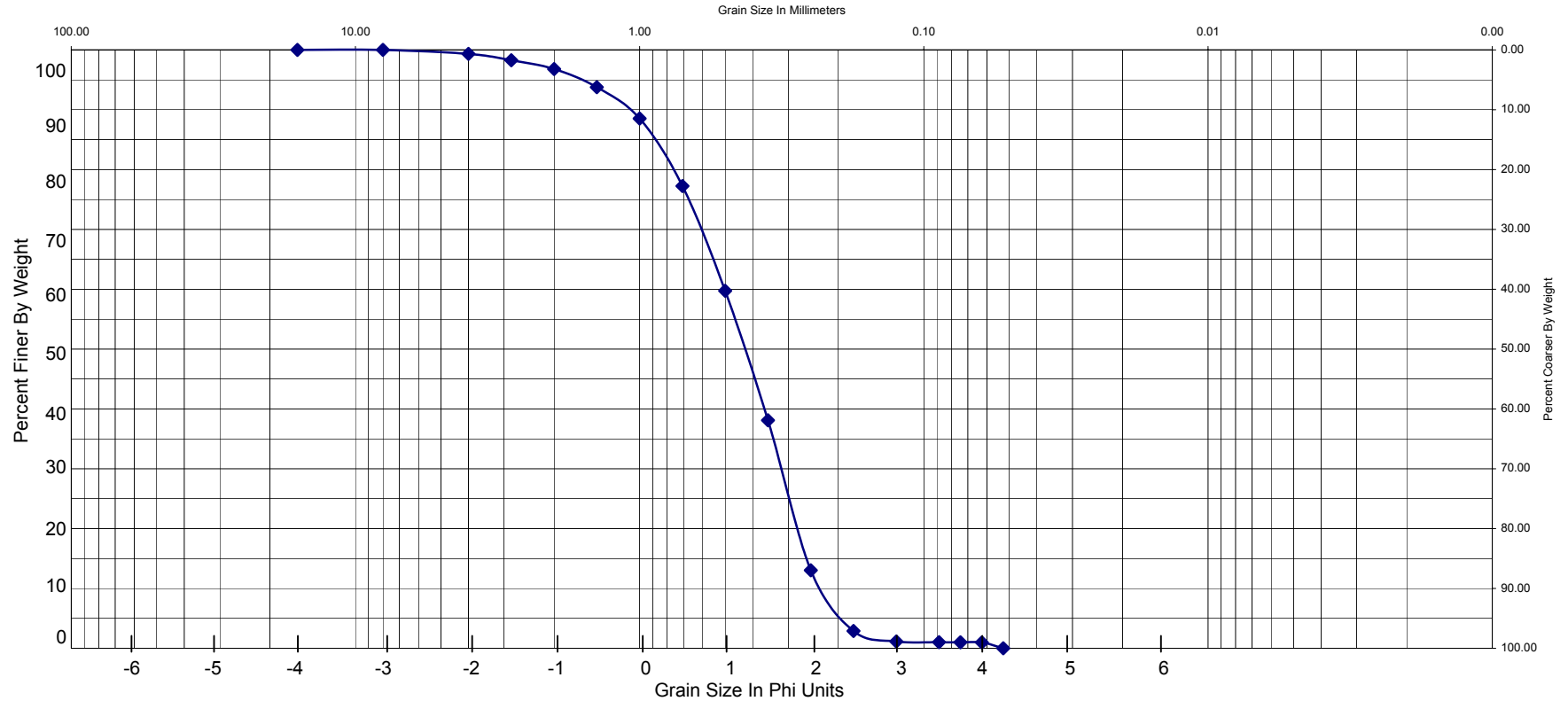
Dry Wt.	92.52	Percent Silt:	2.72
Wash Wt.	90.01		

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	0.670	0.724	0.670	0.724
7	-1.500	2.828	0.740	0.800	1.410	1.524
10	-1.000	2.000	1.050	1.135	2.460	2.659
14	-0.500	1.414	1.800	1.946	4.260	4.604
18	0.000	1.000	2.480	2.681	6.740	7.285
25	0.500	0.707	4.410	4.767	11.150	12.051
35	1.000	0.500	7.300	7.890	18.450	19.942
45	1.500	0.354	10.500	11.349	28.950	31.291
60	2.000	0.250	27.160	29.356	56.110	60.646
80	2.500	0.177	25.400	27.454	81.510	88.100
120	3.000	0.125	7.730	8.355	89.240	96.455
170	3.500	0.088	0.590	0.638	89.830	97.093
200	3.750	0.074	0.130	0.141	89.960	97.233
230	4.000	0.063	0.020	0.022	89.980	97.255
Pan	Pan	0.053	2.520	2.724	92.500	99.978

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.43	0.75	1.22	1.82	2.26	2.43	2.91

Median phi:	1.82	Median mm:	0.28
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.50	0.35	0.92	-0.59	1.32
Moment	1.57	0.34	1.14	-0.56	1.97

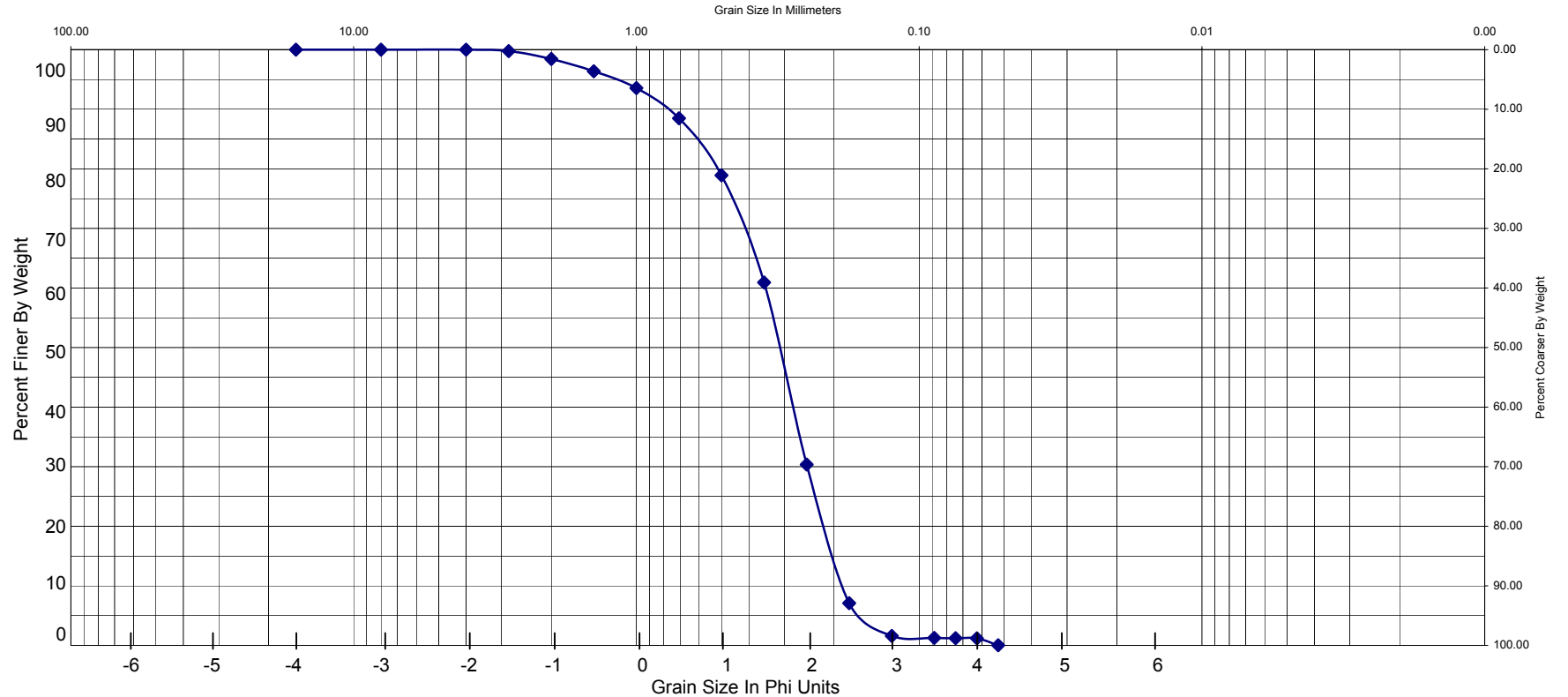


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-32#1	1.5		SP	0.98	0.43	0.48	-0.35	1.66	1.09	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546954.38 Feet
													Northing (Y): 770155.11 Feet
													Sample Elevation: -34 NGVD 29
													Coord. System: State Plane 1983 FLA West



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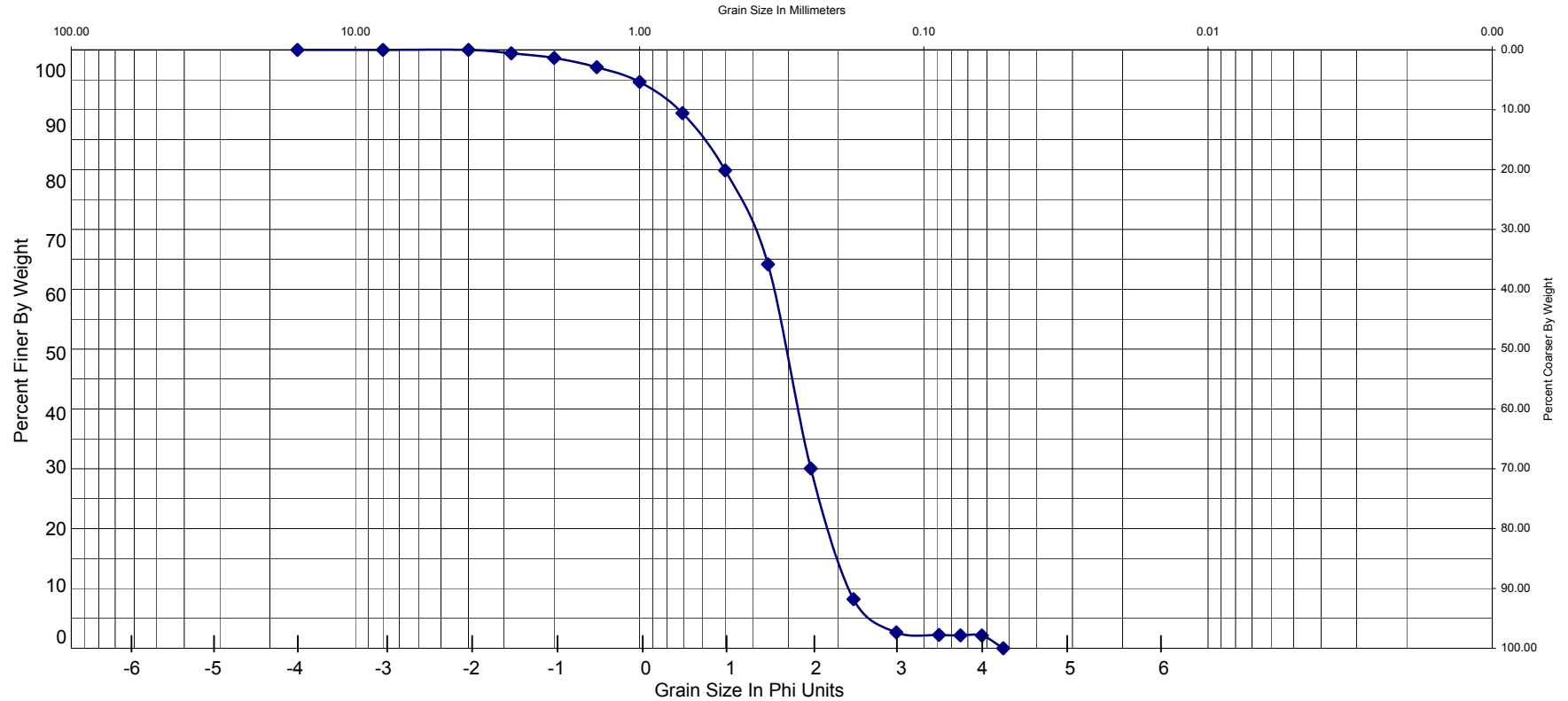


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-32#2	4.5		SP	1.16	0.31	0.36	-0.49	1.85	1.02	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 546954.38 Feet
													Northing (Y): 770155.11 Feet
													Sample Elevation: -37 NGVD 29
													Coord. System: State Plane 1983 FLA West



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Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

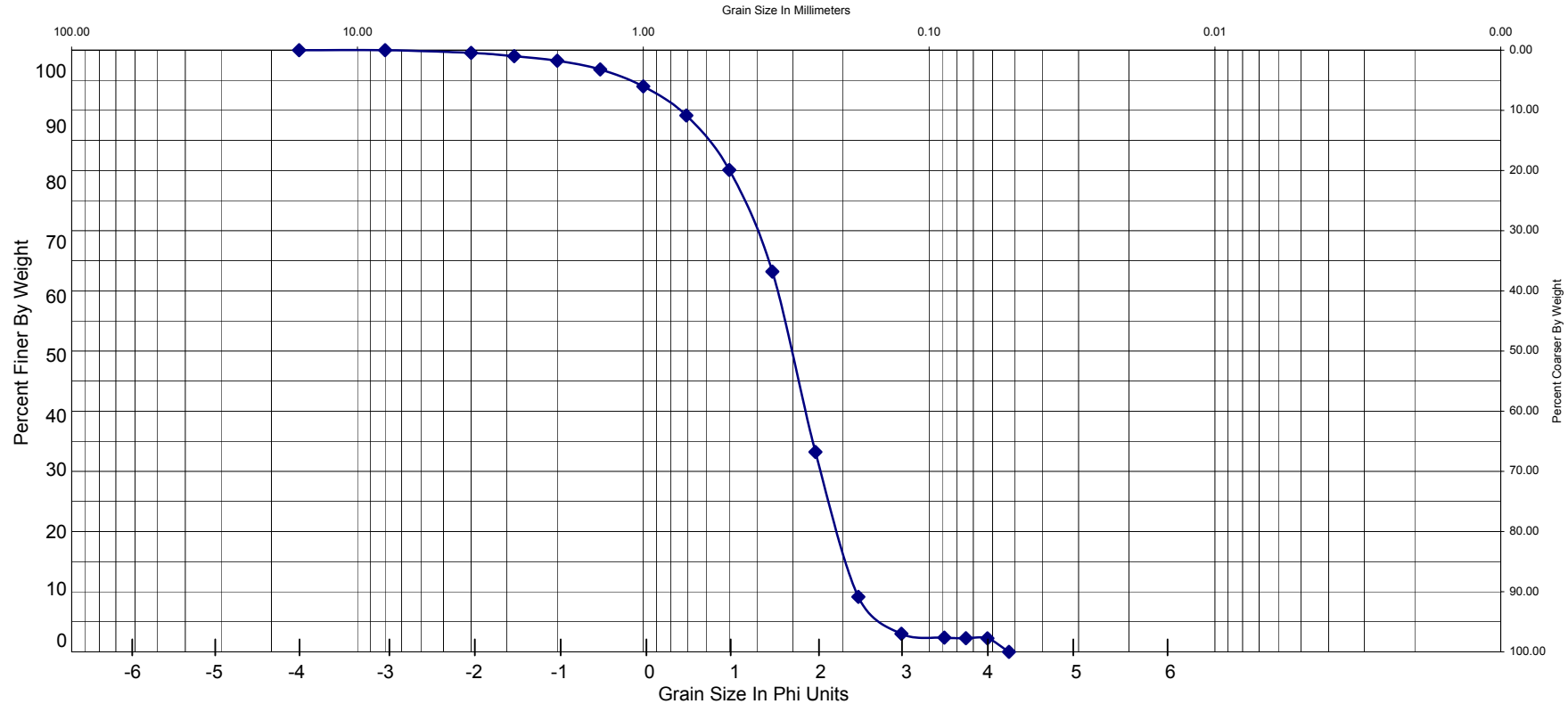
Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-32#3	8.0		SP	2.13	0.31	0.34	-0.37	1.76	0.99	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	546954.38 Feet
Northing (Y):	770155.11 Feet
Sample Elevation:	-40.5 NGVD 29
Coord. System:	State Plane 1983 FLA West



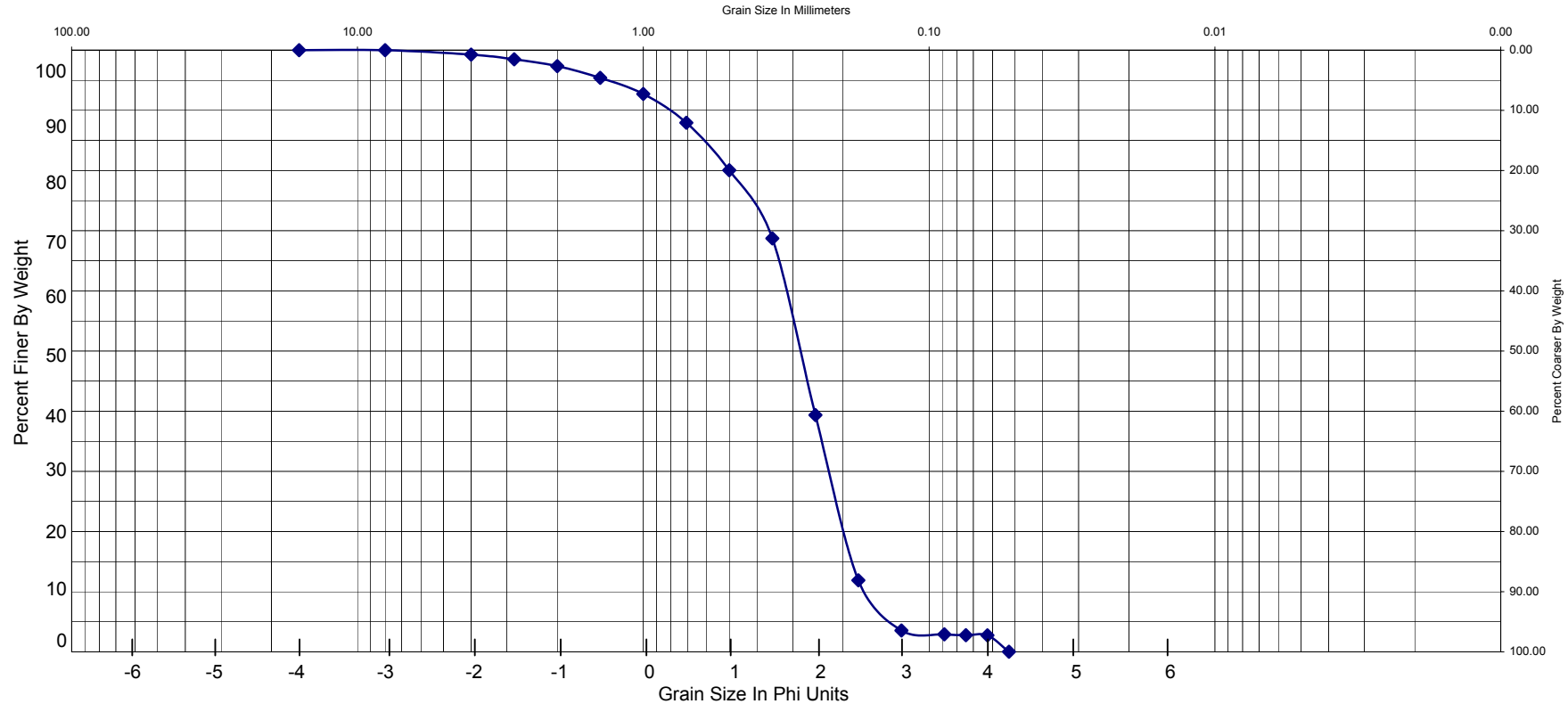
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-32#4	11.0		SP	2.24	0.3	0.34	-0.41	1.81	1.04	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID




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Easting (X):	546954.38 Feet
Northing (Y):	770155.11 Feet
Sample Elevation:	-43.5 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-00-32#5	14.0		SW	2.72	0.28	0.34	-0.56	1.97	1.14	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



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Easting (X):	546954.38 Feet
Northing (Y):	770155.11 Feet
Sample Elevation:	-46.5 NGVD 29
Coord. System:	State Plane 1983 FLA West



