





<b>Granularmetric Report</b> Depths and elevations based on measured values				 <b>COASTAL TECH</b> Coastal Geology & Sediments Laboratory  1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Project Name: Bonita Beach							
Sample Name: C-14 #1							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">685,466</div>		Northing (ft): <div style="text-align: center;">754,243.2</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-11.2 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: <div style="text-align: center;">Wet - 5Y-5/2 Dry - 5Y-7/1</div>		Comments:			
Dry Weight (g): <div style="text-align: center;">156.97</div>	Wash Weight (g): <div style="text-align: center;">142.19</div>	Pan Retained (g): <div style="text-align: center;">0.37</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 10.07 #230 - 9.66	Organics (%): <div style="text-align: center;">1.20</div>	Carbonates (%): <div style="text-align: center;">14.20</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.77	0.49	0.77	0.49	
3.5	-2.50	5.66	1.24	0.79	2.01	1.28	
4	-2.25	4.76	0.53	0.34	2.54	1.62	
5	-2.00	4.00	0.43	0.27	2.97	1.89	
7	-1.50	2.83	1.40	0.89	4.37	2.78	
10	-1.00	2.00	1.87	1.19	6.24	3.97	
14	-0.50	1.41	3.17	2.02	9.41	5.99	
18	0.00	1.00	2.72	1.73	12.13	7.72	
25	0.50	0.71	2.00	1.27	14.13	8.99	
35	1.00	0.50	1.55	0.99	15.68	9.98	
45	1.50	0.35	1.15	0.73	16.83	10.71	
60	2.00	0.25	1.61	1.03	18.44	11.74	
80	2.50	0.18	6.69	4.26	25.13	16.00	
120	3.00	0.13	83.72	53.34	108.85	69.34	
170	3.50	0.09	29.30	18.67	138.15	88.01	
200	3.75	0.07	3.02	1.92	141.17	89.93	
230	4.00	0.06	0.65	0.41	141.82	90.34	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.39	3.15	2.82	2.58	2.50	-0.75	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.43	0.19	1.28	-2.59	9.21		

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Project Name: Bonita Beach				1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Sample Name: C-14 #2							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <b>685,466</b>		Northing (ft): <b>754,243.2</b>		Coordinate System: <b>Florida State Plane West</b>		Elevation (ft): <b>-13.2 NAVD 88</b>	
USCS: <b>SW-SM</b>		Munsell: Wet - 5Y-5/2 Dry - 5Y-7/1		Comments:			
Dry Weight (g): <b>169.86</b>	Wash Weight (g): <b>158.31</b>	Pan Retained (g): <b>0.33</b>	Sieve Loss (%): <b>0.02</b>	Fines (%): <b>#200 - 7.52</b> <b>#230 - 7.01</b>	Organics (%): <b>1.60</b>	Carbonates (%): <b>11.50</b>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.84	0.49	0.84	0.49	
4	-2.25	4.76	0.41	0.24	1.25	0.73	
5	-2.00	4.00	0.35	0.21	1.60	0.94	
7	-1.50	2.83	1.44	0.85	3.04	1.79	
10	-1.00	2.00	2.46	1.45	5.50	3.24	
14	-0.50	1.41	4.16	2.45	9.66	5.69	
18	0.00	1.00	3.50	2.06	13.16	7.75	
25	0.50	0.71	2.08	1.22	15.24	8.97	
35	1.00	0.50	1.32	0.78	16.56	9.75	
45	1.50	0.35	1.13	0.67	17.69	10.42	
60	2.00	0.25	1.69	0.99	19.38	11.41	
80	2.50	0.18	7.45	4.39	26.83	15.80	
120	3.00	0.13	99.96	58.85	126.79	74.65	
170	3.50	0.09	27.42	16.14	154.21	90.79	
200	3.75	0.07	2.87	1.69	157.08	92.48	
230	4.00	0.06	0.86	0.51	157.94	92.99	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.29	3.01	2.79	2.58	2.50	-0.64	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.45	0.18	1.17	-2.54	8.83		

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Project Name: Bonita Beach							
Sample Name: C-14 #3							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">685,466</div>		Northing (ft): <div style="text-align: center;">754,243.2</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-14.7 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: Wet - 5Y-4/1 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">156.72</div>	Wash Weight (g): <div style="text-align: center;">143.62</div>	Pan Retained (g): <div style="text-align: center;">0.48</div>	Sieve Loss (%): <div style="text-align: center;">0.07</div>	Fines (%): #200 - 9.09 #230 - 8.72	Organics (%): <div style="text-align: center;">2.60</div>	Carbonates (%): <div style="text-align: center;">50.00</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	4.15	2.65	4.15	2.65	
5/16"	-3.00	8.00	1.78	1.14	5.93	3.79	
3.5	-2.50	5.66	2.84	1.81	8.77	5.60	
4	-2.25	4.76	3.21	2.05	11.98	7.65	
5	-2.00	4.00	2.70	1.72	14.68	9.37	
7	-1.50	2.83	7.86	5.02	22.54	14.39	
10	-1.00	2.00	10.72	6.84	33.26	21.23	
14	-0.50	1.41	17.08	10.90	50.34	32.13	
18	0.00	1.00	11.46	7.31	61.80	39.44	
25	0.50	0.71	5.72	3.65	67.52	43.09	
35	1.00	0.50	3.37	2.15	70.89	45.24	
45	1.50	0.35	2.18	1.39	73.07	46.63	
60	2.00	0.25	2.49	1.59	75.56	48.22	
80	2.50	0.18	6.46	4.12	82.02	52.34	
120	3.00	0.13	36.70	23.42	118.72	75.76	
170	3.50	0.09	21.12	13.48	139.84	89.24	
200	3.75	0.07	2.61	1.67	142.45	90.91	
230	4.00	0.06	0.58	0.37	143.03	91.28	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.31	2.98	2.22	-0.83	-1.38	-2.67	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.85	0.55	2.16	-0.37	1.77		

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Project Name: Bonita Beach				1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Sample Name: C-14 #4							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">685,466</div>		Northing (ft): <div style="text-align: center;">754,243.2</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-17.7 NAVD 88</div>	
USCS: <div style="text-align: center;">SM</div>		Munsell: Wet - 5Y-4/1 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">152.71</div>	Wash Weight (g): <div style="text-align: center;">129.48</div>	Pan Retained (g): <div style="text-align: center;">0.53</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 17.34 #230 - 15.56	Organics (%): <div style="text-align: center;">3.00</div>	Carbonates (%): <div style="text-align: center;">47.50</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	3.21	2.10	3.21	2.10	
7/16"	-3.50	11.31	2.20	1.44	5.41	3.54	
5/16"	-3.00	8.00	4.08	2.67	9.49	6.21	
3.5	-2.50	5.66	4.77	3.12	14.26	9.33	
4	-2.25	4.76	2.33	1.53	16.59	10.86	
5	-2.00	4.00	2.82	1.85	19.41	12.71	
7	-1.50	2.83	4.58	3.00	23.99	15.71	
10	-1.00	2.00	2.98	1.95	26.97	17.66	
14	-0.50	1.41	8.52	5.58	35.49	23.24	
18	0.00	1.00	9.65	6.32	45.14	29.56	
25	0.50	0.71	6.61	4.33	51.75	33.89	
35	1.00	0.50	3.90	2.55	55.65	36.44	
45	1.50	0.35	4.73	3.10	60.38	39.54	
60	2.00	0.25	2.04	1.34	62.42	40.88	
80	2.50	0.18	2.99	1.96	65.41	42.84	
120	3.00	0.13	22.86	14.97	88.27	57.81	
170	3.50	0.09	32.12	21.03	120.39	78.84	
200	3.75	0.07	5.84	3.82	126.23	82.66	
230	4.00	0.06	2.72	1.78	128.95	84.44	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.94	3.41	2.74	-0.36	-1.43	-3.23	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.08	0.47	2.37	-0.65	2.09		