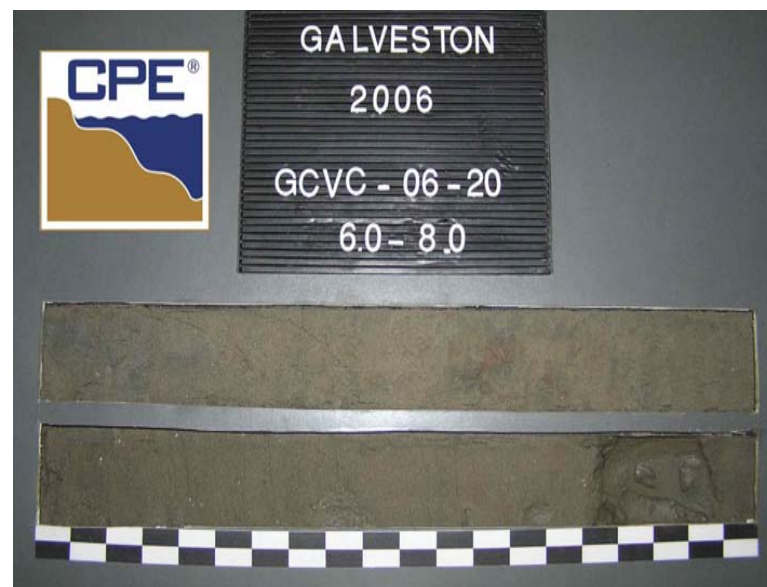
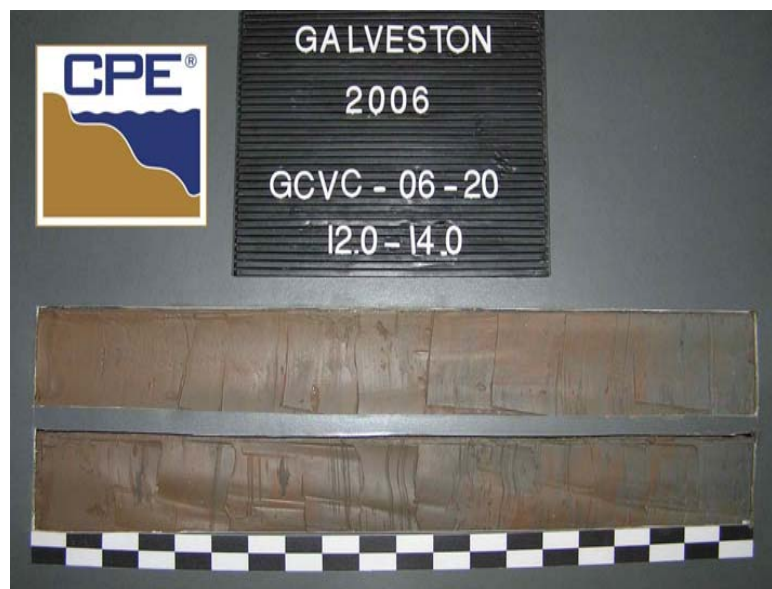
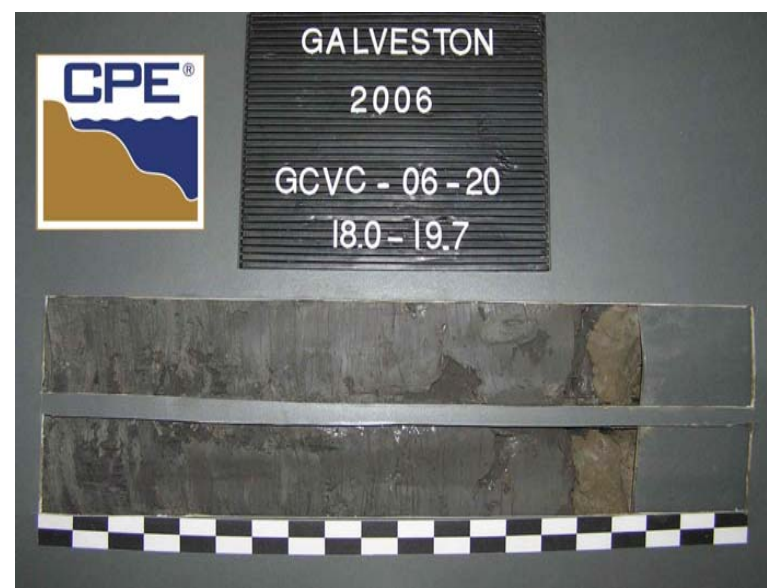








DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT Texas Geotechnical Sand Search Galveston County Texas			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION GCVC-06-20			10. COORDINATE SYSTEM/DATUM Texas South Central	
3. DRILLING AGENCY Alpine Ocean Seismic Survey, Inc.			11. MANUFACTURER'S DESIGNATION OF DRILL ☐ AUTO HAMMER ☐ MANUAL HAMMER	
4. NAME OF DRILLER Charles Dill			12. TOTAL SAMPLES DISTURBED UNDISTURBED (UD)	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			13. TOTAL NUMBER CORE BOXES	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			14. ELEVATION GROUND WATER	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.			15. DATE BORING 10-08-06 15:24 STARTED COMPLETED 10-08-06 15:26	
8. TOTAL DEPTH OF BORING 19.8 Ft.			16. ELEVATION TOP OF BORING -14.0 Ft.	
			17. TOTAL RECOVERY FOR BORING 19.7 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR ML	

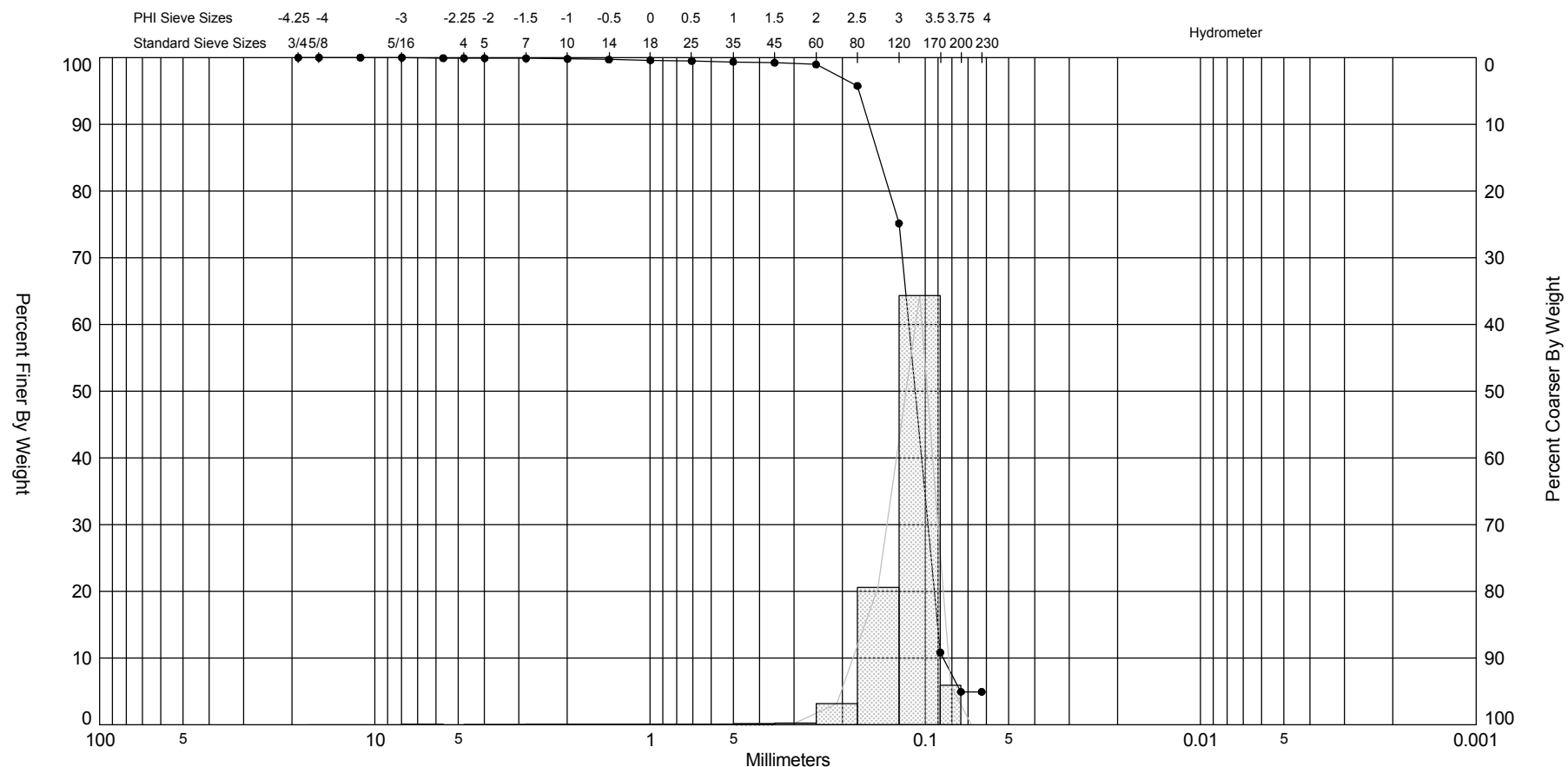
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-14.0	0.0					
-17.5	3.5		SAND, fine grained, quartz, trace shell hash, trace silt, (0.5"x 0.5") shell fragments @ 0.8'; 3.0" shell hash pocket @ 1.2', gray (5Y-5/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.12, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 4.93% (SP)
-19.9	5.9		Shelly SAND, fine grained, trace silt, (1.0"x 2.0") shells @ 4.3', 4.8' and 5.7'; (1.0"x 1.0") shell @ 5.0'; (3.0"x 1.0") shell @ 5.1', gray (5Y-6/1), (SW).		3	Sample #3, Depth = 4.5' Mean (mm): 1.40, Phi Sorting: 2.91 Shell Hash: 50%, Fines (230): 1.57% (SW)
-22.8	8.8		SAND, fine grained, quartz, trace shell hash, trace silt, gray (5Y-5/1), (SP-SM).		2	Sample #2, Depth = 7.5' Mean (mm): 0.11, Phi Sorting: 0.26 Shell Hash: 0%, Fines (230): 3.28% (SP-SM)
-31.9	17.9		CLAY, stiff to soft; dark yellowish brown (10YR-4/6) to dark gray (5Y-4/1), (CL).			
-33.7	19.7		CLAY, stiff, black (5Y-2.5/1), (CL).			
-33.8	19.8		No Recovery.			
			End of Boring			

FLORIDA DEP ROSS GALVESTON VIBRACORES, 2006.GPJ FL DEP ROSS.GDT 12/14/06

Granularmetric Report Depths and elevations based on measured values				 Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116			
Project Name: Texas Geotechnical Sand Search							
Sample Name: GCVC-06-20 #1							
Analysis Date: 10-21-06							
Analyzed By: JG							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,212,267		13,594,924		Texas South Central		-16.0 MLLW	
USCS:		Munsell:		Comments:			
SP		Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.96	87.82	1.19	0.15	#200 - 4.93 #230 - 4.93			0
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	0.07	0.08	0.07	0.08	
4	-2.25	4.76	0.00	0.00	0.07	0.08	
5	-2.00	4.00	0.02	0.02	0.09	0.10	
7	-1.50	2.83	0.01	0.01	0.10	0.11	
10	-1.00	2.00	0.07	0.08	0.17	0.19	
14	-0.50	1.41	0.09	0.10	0.26	0.29	
18	0.00	1.00	0.10	0.11	0.36	0.40	
25	0.50	0.71	0.10	0.11	0.46	0.51	
35	1.00	0.50	0.11	0.12	0.57	0.63	
45	1.50	0.35	0.12	0.13	0.69	0.76	
60	2.00	0.25	0.25	0.27	0.94	1.03	
80	2.50	0.18	2.91	3.20	3.85	4.23	
120	3.00	0.13	18.76	20.62	22.61	24.85	
170	3.50	0.09	58.51	64.32	81.12	89.17	
200	3.75	0.07	5.37	5.90	86.49	95.07	
230	4.00	0.06	0.00	0.00	86.49	95.07	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.99	3.46	3.39	3.20	3.00	2.79	2.52	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.1	0.12	0.44	-5.49	55.71		

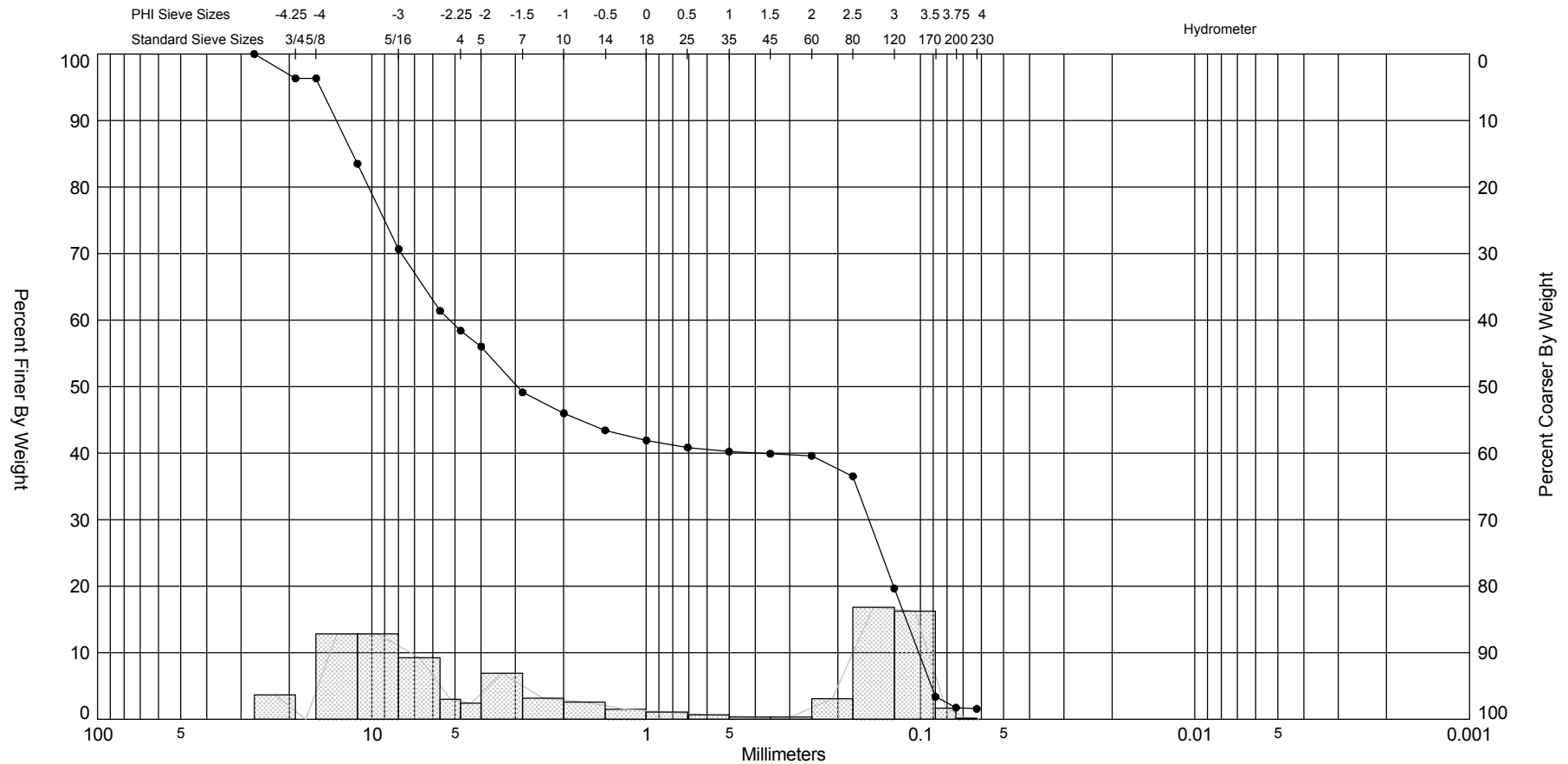
Granularmetric Report Depths and elevations based on measured values				 Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116			
Project Name: Texas Geotechnical Sand Search							
Sample Name: GCVC-06-20 #3							
Analysis Date: 10-30-06							
Analyzed By: JG				Coordinate System:		Elevation (ft):	
Easting (ft):		Northing (ft):					
3,212,267		13,594,924		Texas South Central		-18.5 MLLW	
USCS:		Munsell:		Comments:			
SW		Wet - 5Y-6/1 Dry - 5Y-6/2 Washed - 5Y-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
94.04	92.88	0.32	0.00	#200 - 1.74 #230 - 1.57			50
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
1"	-4.75	26.91	0.00	0.00	0.00	0.00	
3/4"	-4.25	19.03	3.44	3.66	3.44	3.66	
5/8"	-4.00	16.00	0.00	0.00	3.44	3.66	
7/16"	-3.50	11.31	12.07	12.83	15.51	16.49	
5/16"	-3.00	8.00	12.08	12.85	27.59	29.34	
3.5	-2.50	5.66	8.72	9.27	36.31	38.61	
4	-2.25	4.76	2.79	2.97	39.10	41.58	
5	-2.00	4.00	2.25	2.39	41.35	43.97	
7	-1.50	2.83	6.48	6.89	47.83	50.86	
10	-1.00	2.00	2.95	3.14	50.78	54.00	
14	-0.50	1.41	2.41	2.56	53.19	56.56	
18	0.00	1.00	1.44	1.53	54.63	58.09	
25	0.50	0.71	0.99	1.05	55.62	59.14	
35	1.00	0.50	0.60	0.64	56.22	59.78	
45	1.50	0.35	0.28	0.30	56.50	60.08	
60	2.00	0.25	0.29	0.31	56.79	60.39	
80	2.50	0.18	2.90	3.08	59.69	63.47	
120	3.00	0.13	15.86	16.87	75.55	80.34	
170	3.50	0.09	15.30	16.27	90.85	96.61	
200	3.75	0.07	1.55	1.65	92.40	98.26	
230	4.00	0.06	0.16	0.17	92.56	98.43	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.45	3.11	2.84	-1.56	-3.17	-3.53	-4.17	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	-0.49	1.40	2.91	0.21	1.31		

Granularmetric Report Depths and elevations based on measured values				 Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116			
Project Name: Texas Geotechnical Sand Search							
Sample Name: GCVC-06-20 #2							
Analysis Date: 10-21-06							
Analyzed By: JG							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,212,267		13,594,924		Texas South Central		-21.5 MLLW	
USCS:		Munsell:		Comments:			
SP-SM		Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.97	88.78	0.70	0.09	#200 - 5.82 #230 - 3.28			0
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	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.00	0.00	0.00	0.00	
5	-2.00	4.00	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.00	0.00	0.00	0.00	
10	-1.00	2.00	0.00	0.00	0.00	0.00	
14	-0.50	1.41	0.00	0.00	0.00	0.00	
18	0.00	1.00	0.00	0.00	0.00	0.00	
25	0.50	0.71	0.01	0.01	0.01	0.01	
35	1.00	0.50	0.00	0.00	0.01	0.01	
45	1.50	0.35	0.02	0.02	0.03	0.03	
60	2.00	0.25	0.04	0.04	0.07	0.07	
80	2.50	0.18	0.54	0.59	0.61	0.66	
120	3.00	0.13	12.44	13.67	13.05	14.33	
170	3.50	0.09	63.46	69.76	76.51	84.09	
200	3.75	0.07	9.18	10.09	85.69	94.18	
230	4.00	0.06	2.31	2.54	88.00	96.72	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.83	3.50	3.43	3.26	3.08	3.01	2.66	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.23	0.11	0.26	-0.75	7.33		



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

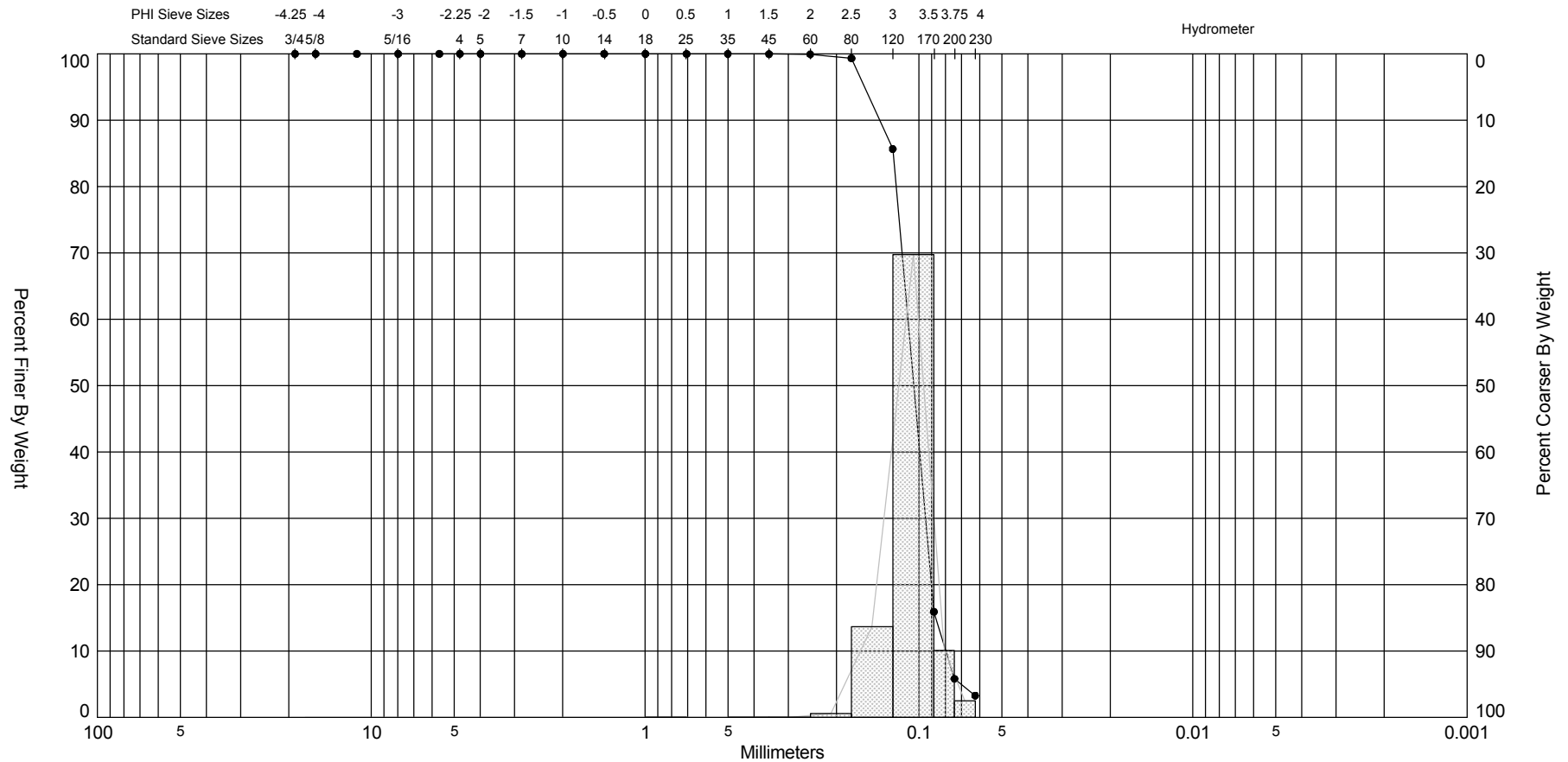
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
GCVC-06-20 #1		-16.0	SP	#200 - 4.93 #230 - 4.93			3.2	3.1	-5.49	55.71	0.44	Project Name:	Texas Geotechnical Sand Search
Comments:												Analysis Date:	10-21-06
Depths and elevations based on measured values												Analyzed By:	JG
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	3,212,267
												Northing (Y, ft):	13,594,924
												Horizontal System:	NAD 1983
												Vertical System:	MLLW



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
GCV-06-20 #3	—●—	-18.5	SW	#200 - 1.74 #230 - 1.57				-0.49	0.21	1.31	2.91	Project Name:	Texas Geotechnical Sand Search
Comments:												Analysis Date:	10-30-06
Depths and elevations based on measured values												Analyzed By:	JG
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	3,212,267
												Northing (Y, ft):	13,594,924
												Horizontal System:	NAD 1983
												Vertical System:	MLLW

SIEVE ANALYSIS GALVESTON_VIBRACORES_2006.GPJ FL DEP ROSS.GDT 12/14/06



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
GCVC-06-20 #2	—●—	-21.5	SP-SM	#200 - 5.82 #230 - 3.28			3.26	3.23	-0.75	7.33	0.26	Project Name:	Texas Geotechnical Sand Search
Comments:												Analysis Date:	10-21-06
Depths and elevations based on measured values												Analyzed By:	JG
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	3,212,267
												Northing (Y, ft):	13,594,924
												Horizontal System:	NAD 1983
												Vertical System:	MLLW