

DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT McFaddin Sand Search Jefferson County, TX			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION JCVC-15-27			10. COORDINATE SYSTEM/DATUM Texas South Central	
3. DRILLING AGENCY American Vibracore Services, Inc.			11. MANUFACTURER'S DESIGNATION OF DRILL Alpine Pneumatic Vibracore	
4. NAME OF DRILLER Brian McCord			☐ AUTO HAMMER ☐ MANUAL HAMMER	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			12. TOTAL SAMPLES DISTURBED UNDISTURBED (UD)	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			13. TOTAL NUMBER CORE BOXES	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.			14. ELEVATION GROUND WATER	
8. TOTAL DEPTH OF BORING 20.0 Ft.			15. DATE BORING 01-27-15 15:10	
			16. ELEVATION TOP OF BORING -24.7 Ft.	
			17. TOTAL RECOVERY FOR BORING 19.5 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR DA	

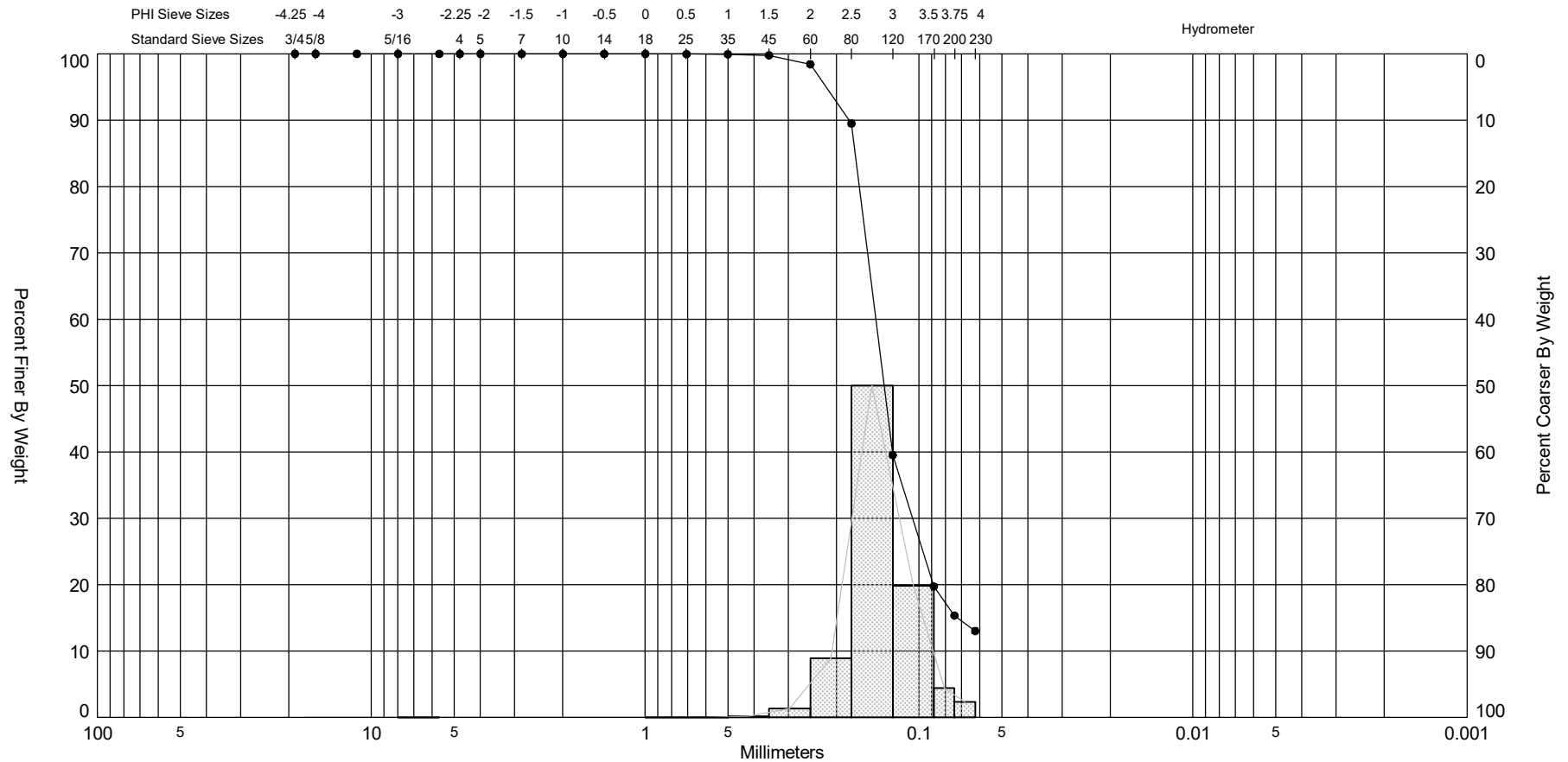
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-24.7	0.0					
-26.3	1.6		Sandy CLAY, trace organics, trace shell hash, organics distributed in pockets up to 0.25", light olive brown (2.5Y-5/4), (CL).		T1	Sample #T1, Depth = 0.9' Ave. Field Vane (tsf): 0.33
-28.3	3.6		CLAY, some sand, olive brown (2.5Y-4/4), (CL).		1	Sample #1, Depth = 2.6' Mean (mm): 0.09, Phi Sorting: 0.36 Fines (230): 72.40% (CL)
-28.8	4.1		SAND, fine grained, quartz, some silt, olive brown (2.5Y-4/4), (SM).		2	Sample #2, Depth = 3.9' Mean (mm): 0.10, Phi Sorting: 0.32 Fines (230): 21.58% (SM)
-29.8	5.1		Sandy CLAY, olive brown (2.5Y-4/4), (CL).		3	Sample #3, Depth = 4.6' Mean (mm): 0.11, Phi Sorting: 0.60 Fines (230): 55.57% (CL)
-39.3	14.6		SAND, fine grained, quartz, trace clay, trace organics, clay and organics distributed in pockets up to 0.25", (2.75" x 2.0") rock fragment at 12.9', olive brown (2.5Y-4/4), (SP-SC).		4	Sample #4, Depth = 9.7' Mean (mm): 0.14, Phi Sorting: 0.39 Fines (230): 8.91% (SP-SC)
-42.6	17.9		CLAY, some sand, sandy pockets at 15.8' (4.8" x 3") and 17.5' (3.6" x 3"), very dark gray (2.5Y-3/1), (CL).		5	Sample #5, Depth = 15.5' Mean (mm): 0.15, Phi Sorting: 0.76 Fines (230): 67.82% (CL)
-44.2	19.5		CLAY, (2.4" x 3") sandy pocket at 19.2', very dark gray (2.5Y-3/1), (CL).		T2	Sample #T2, Depth = 18.7' Ave. Field Vane (tsf): 0.35
-44.7	20.0		No Recovery.			
			End of Boring			

LOUISIANA JEFFERSON COUNTY 2015 VCS.GPJ JPBRAZIL.GDT 6/4/15

MCFADDIN_COMPOSITE_20181008.GPJ 11/19/18

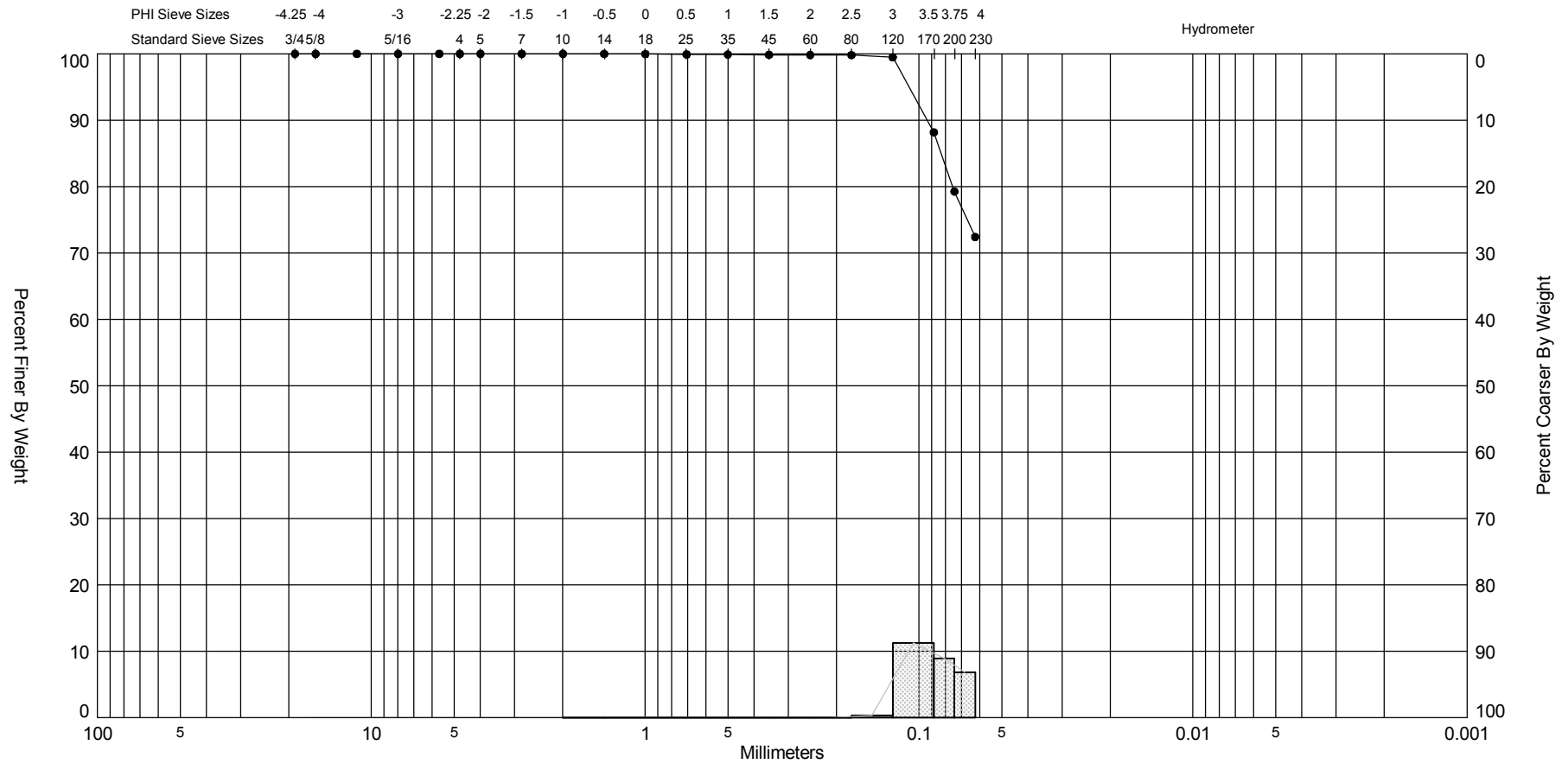
Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102			
Project Name: McFaddin NWR Beach Ridge Restoration							
Sample Name: JCVC-15-27 COMP							
Analysis Date: 10-05-18							
Analyzed By: BF							
Easting (ft): 3,479,805		Northing (ft): 13,789,593		Coordinate System: Texas South Central		Elevation (ft):	
USCS: SC		Munsell:		Comments: COMPOSITE			
Dry Weight (g): 100.00	Wash Weight (g): 100.00	Pan Retained (g): 12.95	Sieve Loss (%): 0.08	Fines (%): #200 - 15.35 #230 - 13.03	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.01	0.01	0.01	0.01	
4	-2.25	4.76	0.00	0.00	0.01	0.01	
5	-2.00	4.00	0.00	0.00	0.01	0.01	
7	-1.50	2.83	0.00	0.00	0.01	0.01	
10	-1.00	2.00	0.00	0.00	0.01	0.01	
14	-0.50	1.41	0.00	0.00	0.01	0.01	
18	0.00	1.00	0.00	0.00	0.01	0.01	
25	0.50	0.71	0.03	0.03	0.04	0.04	
35	1.00	0.50	0.02	0.02	0.06	0.06	
45	1.50	0.35	0.16	0.16	0.22	0.22	
60	2.00	0.25	1.34	1.34	1.56	1.56	
80	2.50	0.18	8.94	8.94	10.50	10.50	
120	3.00	0.13	49.96	49.96	60.46	60.46	
170	3.50	0.09	19.81	19.81	80.27	80.27	
200	3.75	0.07	4.38	4.38	84.65	84.65	
230	4.00	0.06	2.32	2.32	86.97	86.97	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.71	3.37	2.90	2.65	2.56	2.19	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.87	0.14	0.41	-0.3	8.41		

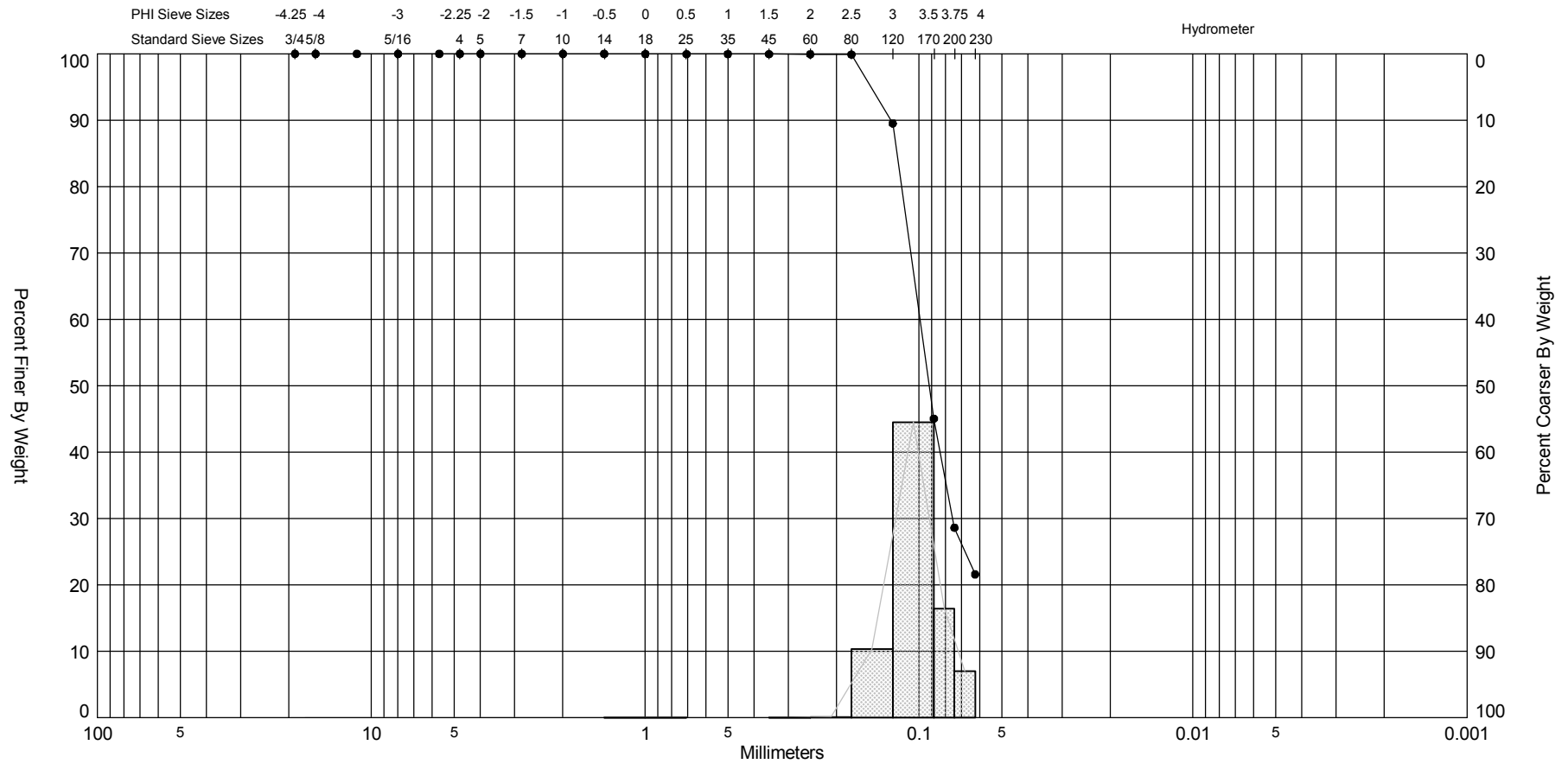
MCFADDIN_COMPOSITE_20181008.GPJ 11/19/18



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

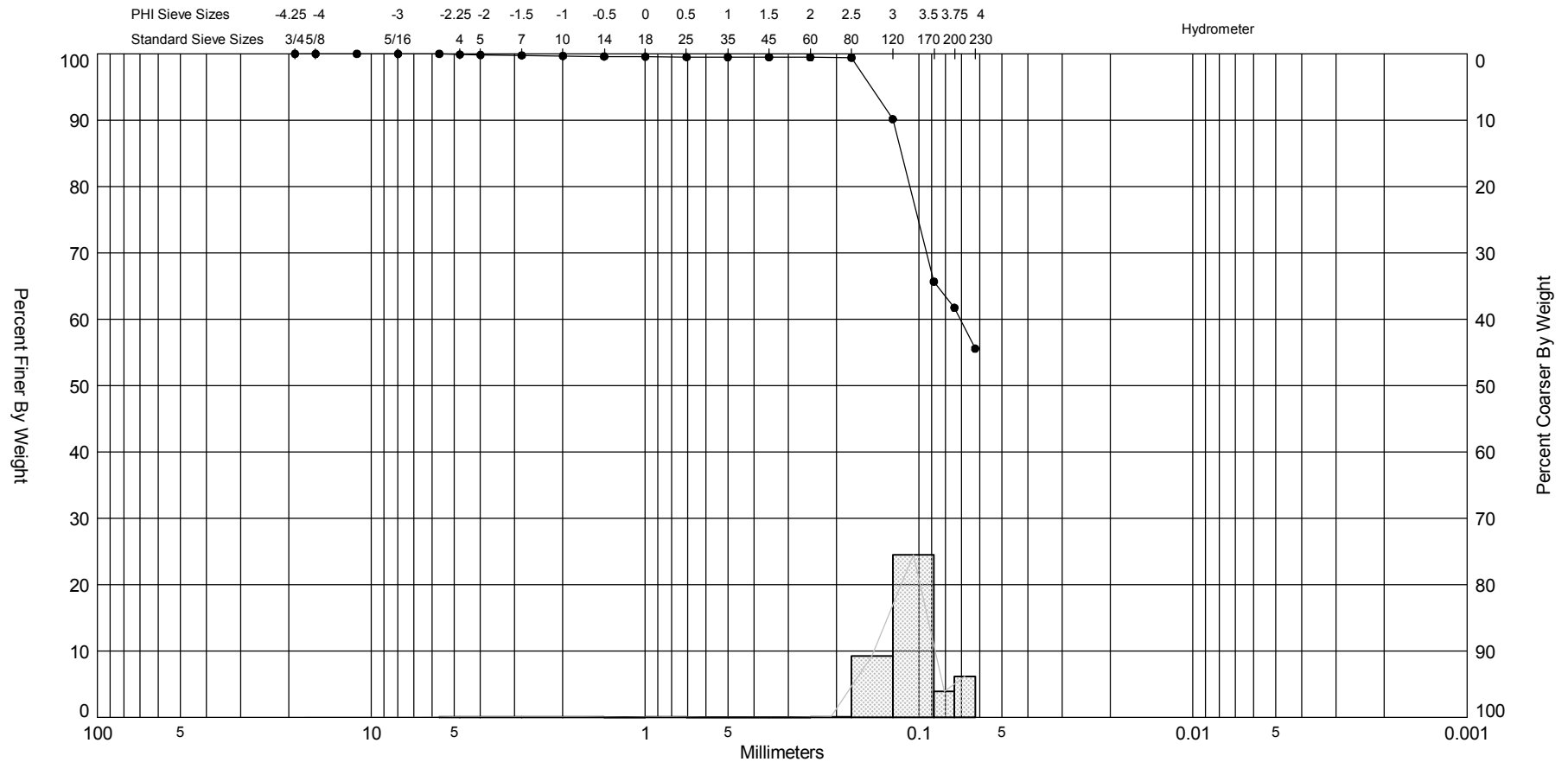
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-27 COMP	—●—		SC	#200 - 15.35 #230 - 13.03			2.9	2.87	-0.3	8.41	0.41	Project Name:	McFaddin NWR Beach Ridge Restoration
Comments: COMPOSITE												Analysis Date:	10-05-18
Depths and elevations based on measured values												Analyzed By:	BF
							APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102					Easting (X, ft):	3,479,805
												Northing (Y, ft):	13,789,593
												Horizontal Datum:	NAD 1983
												Vertical Datum:	NAVD 88





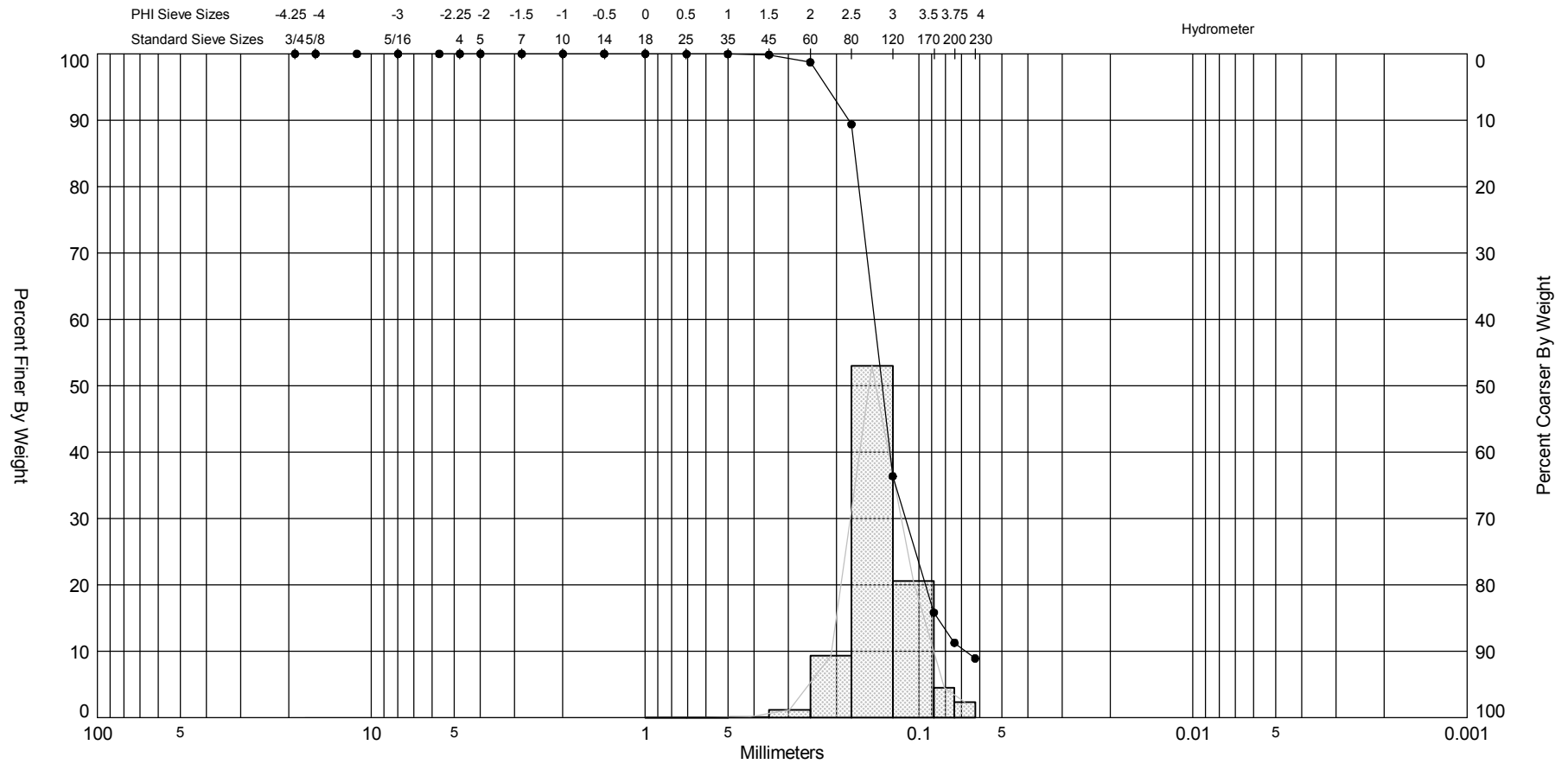
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-27 #2	—●—	-28.6	SM	#200 - 28.62 #230 - 21.58			3.44	3.32	-0.73	9.4	0.32	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-20-15
Depths and elevations based on measured values												Analyzed By:	GS
							CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102					Easting (X, ft):	3,479,805
												Northing (Y, ft):	13,789,593
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



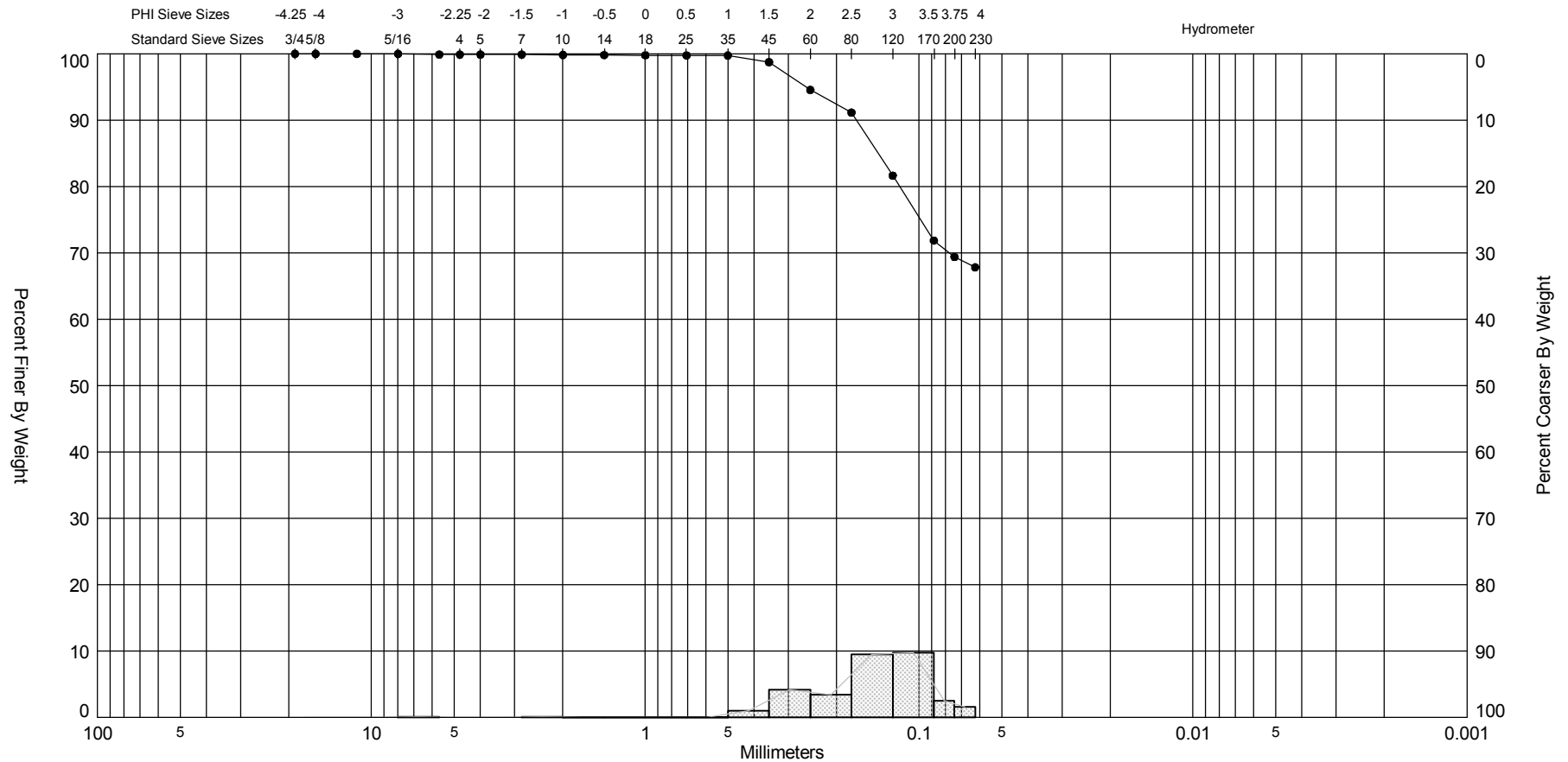
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-27 #3	—●—	-29.3	CL	#200 - 61.72 #230 - 55.57				3.21	-5.18	44.21	0.6	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-20-15
Depths and elevations based on measured values												Analyzed By:	GS
							CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102					Easting (X, ft):	3,479,805
												Northing (Y, ft):	13,789,593
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



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	
JCVC-15-27 #4	—●—	-34.4	SP-SC	#200 - 11.28 #230 - 8.91			2.87	2.87	0.11	4.32	0.39	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-20-15
Depths and elevations based on measured values												Analyzed By:	GS
						CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102						Easting (X, ft):	3,479,805
												Northing (Y, ft):	13,789,593
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



Granularmetric Report Depths and elevations based on measured values				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Project Name: McFaddin Sand Search							
Sample Name: JCVC-15-27 #1							
Analysis Date: 02-20-15							
Analyzed By: GS							
Easting (ft): 3,479,805		Northing (ft): 13,789,593		Coordinate System: Texas South Central		Elevation (ft): -27.3 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-4/4 Dry - 2.5Y-7/3 Washed - 2.5Y-8/2		Comments:			
Dry Weight (g): 124.42	Wash Weight (g): 41.27	Pan Retained (g): 6.70	Sieve Loss (%): 0.17	Fines (%): #200 - 79.27 #230 - 72.40	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.01	0.01	0.01	0.01	
18	0.00	1.00	0.04	0.03	0.05	0.04	
25	0.50	0.71	0.05	0.04	0.10	0.08	
35	1.00	0.50	0.03	0.02	0.13	0.10	
45	1.50	0.35	0.05	0.04	0.18	0.14	
60	2.00	0.25	0.03	0.02	0.21	0.16	
80	2.50	0.18	0.04	0.03	0.25	0.19	
120	3.00	0.13	0.44	0.35	0.69	0.54	
170	3.50	0.09	14.02	11.27	14.71	11.81	
200	3.75	0.07	11.10	8.92	25.81	20.73	
230	4.00	0.06	8.55	6.87	34.36	27.60	
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.							
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
				3.91	3.62	3.20	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.5	0.09	0.36	-3.8	36.42		

Granularmetric Report Depths and elevations based on measured values				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Project Name: McFaddin Sand Search							
Sample Name: JCVC-15-27 #2							
Analysis Date: 02-20-15							
Analyzed By: GS							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
3,479,805		13,789,593		Texas South Central		-28.6 NAVD 88	
USCS:		Munsell: Wet - 2.5Y-4/4 Dry - 10YR-7/6 Washed - 10YR-8/3		Comments:			
SM							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
108.99	90.42	4.83	0.12	#200 - 28.62 #230 - 21.58			
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	0.03	0.03	0.03	0.03	
25	0.50	0.71	0.01	0.01	0.04	0.04	
35	1.00	0.50	0.00	0.00	0.04	0.04	
45	1.50	0.35	0.00	0.00	0.04	0.04	
60	2.00	0.25	0.01	0.01	0.05	0.05	
80	2.50	0.18	0.05	0.05	0.10	0.10	
120	3.00	0.13	11.30	10.37	11.40	10.47	
170	3.50	0.09	48.49	44.49	59.89	54.96	
200	3.75	0.07	17.90	16.42	77.79	71.38	
230	4.00	0.06	7.67	7.04	85.46	78.42	
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.							
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.88	3.44	3.16	3.06	2.74	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.32	0.10	0.32	-0.73	9.4		

Granularmetric Report Depths and elevations based on measured values				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Project Name: McFaddin Sand Search							
Sample Name: JCVC-15-27 #3							
Analysis Date: 02-20-15							
Analyzed By: GS							
Easting (ft): 3,479,805		Northing (ft): 13,789,593		Coordinate System: Texas South Central		Elevation (ft): -29.3 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-4/4 Dry - 10YR-7/3 Washed - 10YR-8/2		Comments:			
Dry Weight (g): 123.99	Wash Weight (g): 57.57	Pan Retained (g): 2.18	Sieve Loss (%): 0.24	Fines (%): #200 - 61.72 #230 - 55.57	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.12	0.10	0.12	0.10	
5	-2.00	4.00	0.09	0.07	0.21	0.17	
7	-1.50	2.83	0.07	0.06	0.28	0.23	
10	-1.00	2.00	0.10	0.08	0.38	0.31	
14	-0.50	1.41	0.10	0.08	0.48	0.39	
18	0.00	1.00	0.05	0.04	0.53	0.43	
25	0.50	0.71	0.06	0.05	0.59	0.48	
35	1.00	0.50	0.02	0.02	0.61	0.50	
45	1.50	0.35	0.02	0.02	0.63	0.52	
60	2.00	0.25	0.03	0.02	0.66	0.54	
80	2.50	0.18	0.06	0.05	0.72	0.59	
120	3.00	0.13	11.48	9.26	12.20	9.85	
170	3.50	0.09	30.37	24.49	42.57	34.34	
200	3.75	0.07	7.89	3.94	50.46	38.28	
230	4.00	0.06	4.63	6.15	55.09	44.43	
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.							
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
				3.31	3.13	2.74	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.21	0.11	0.6	-5.18	44.21		

Granularmetric Report Depths and elevations based on measured values				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Project Name: McFaddin Sand Search							
Sample Name: JCVC-15-27 #4							
Analysis Date: 02-20-15							
Analyzed By: GS							
Easting (ft): 3,479,805		Northing (ft): 13,789,593		Coordinate System: Texas South Central		Elevation (ft): -34.4 NAVD 88	
USCS: SP-SC		Munsell: Wet - 2.5Y-4/4 Dry - 2.5Y-6/4 Washed - 10YR-7/3		Comments:			
Dry Weight (g): 118.03	Wash Weight (g): 108.50	Pan Retained (g): 0.88	Sieve Loss (%): 0.08	Fines (%): #200 - 11.28 #230 - 8.91	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.03	0.03	0.03	0.03	
35	1.00	0.50	0.01	0.01	0.04	0.04	
45	1.50	0.35	0.12	0.10	0.16	0.14	
60	2.00	0.25	1.33	1.13	1.49	1.27	
80	2.50	0.18	11.04	9.35	12.53	10.62	
120	3.00	0.13	62.57	53.01	75.10	63.63	
170	3.50	0.09	24.27	20.56	99.37	84.19	
200	3.75	0.07	5.35	4.53	104.72	88.72	
230	4.00	0.06	2.80	2.37	107.52	91.09	
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.							
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.50	3.28	2.87	2.64	2.55	2.20	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.87	0.14	0.39	0.11	4.32		

Granularmetric Report Depths and elevations based on measured values				 CB&I Coastal Planning & Engineering, Inc. 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391 8102			
Project Name: McFaddin Sand Search							
Sample Name: JCVC-15-27 #5							
Analysis Date: 02-20-15							
Analyzed By: GS							
Easting (ft): 3,479,805		Northing (ft): 13,789,593		Coordinate System: Texas South Central		Elevation (ft): -40.2 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-3/1 Dry - 2.5Y-5/1 Washed - 2.5Y-7/1		Comments:			
Dry Weight (g): 150.98	Wash Weight (g): 49.38	Pan Retained (g): 0.68	Sieve Loss (%): 0.09	Fines (%): #200 - 69.38 #230 - 67.82	Organics (%):	Carbonates (%):	Shell Hash (%):
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	0.16	0.11	0.16	0.11	
4	-2.25	4.76	0.00	0.00	0.16	0.11	
5	-2.00	4.00	0.00	0.00	0.16	0.11	
7	-1.50	2.83	0.00	0.00	0.16	0.11	
10	-1.00	2.00	0.07	0.05	0.23	0.16	
14	-0.50	1.41	0.05	0.03	0.28	0.19	
18	0.00	1.00	0.03	0.02	0.31	0.21	
25	0.50	0.71	0.04	0.03	0.35	0.24	
35	1.00	0.50	0.03	0.02	0.38	0.26	
45	1.50	0.35	1.49	0.99	1.87	1.25	
60	2.00	0.25	6.33	4.19	8.20	5.44	
80	2.50	0.18	5.17	3.42	13.37	8.86	
120	3.00	0.13	14.36	9.51	27.73	18.37	
170	3.50	0.09	14.73	9.76	42.46	28.13	
200	3.75	0.07	3.76	2.49	46.22	30.62	
230	4.00	0.06	2.35	1.56	48.57	32.18	
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.							
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
				3.34	2.88	1.95	
Moment	Mean Phi	Mean mm	Sorting	Skewness		Kurtosis	
Statistics	2.76	0.15	0.76	-1.92		12.6	





