

DRILLING LOG		DIVISION	INSTALLATION	SHEET 1
1. PROJECT McFaddin Sand Search Jefferson County, TX			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION JCVC-15-18			10. COORDINATE SYSTEM/DATUM Texas South Central	HORIZONTAL NAD 1983
3. DRILLING AGENCY American Vibracore Services, Inc.			11. MANUFACTURER'S DESIGNATION OF DRILL ☐ AUTO HAMMER Alpine Pneumatic Vibracore ☐ MANUAL HAMMER	
4. NAME OF DRILLER Brian McCord			12. TOTAL SAMPLES	
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	
8. TOTAL DEPTH OF BORING 20.0 Ft.			16. ELEVATION TOP OF BORING -26.8 Ft.	
			17. TOTAL RECOVERY FOR BORING 19.4 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR KM	

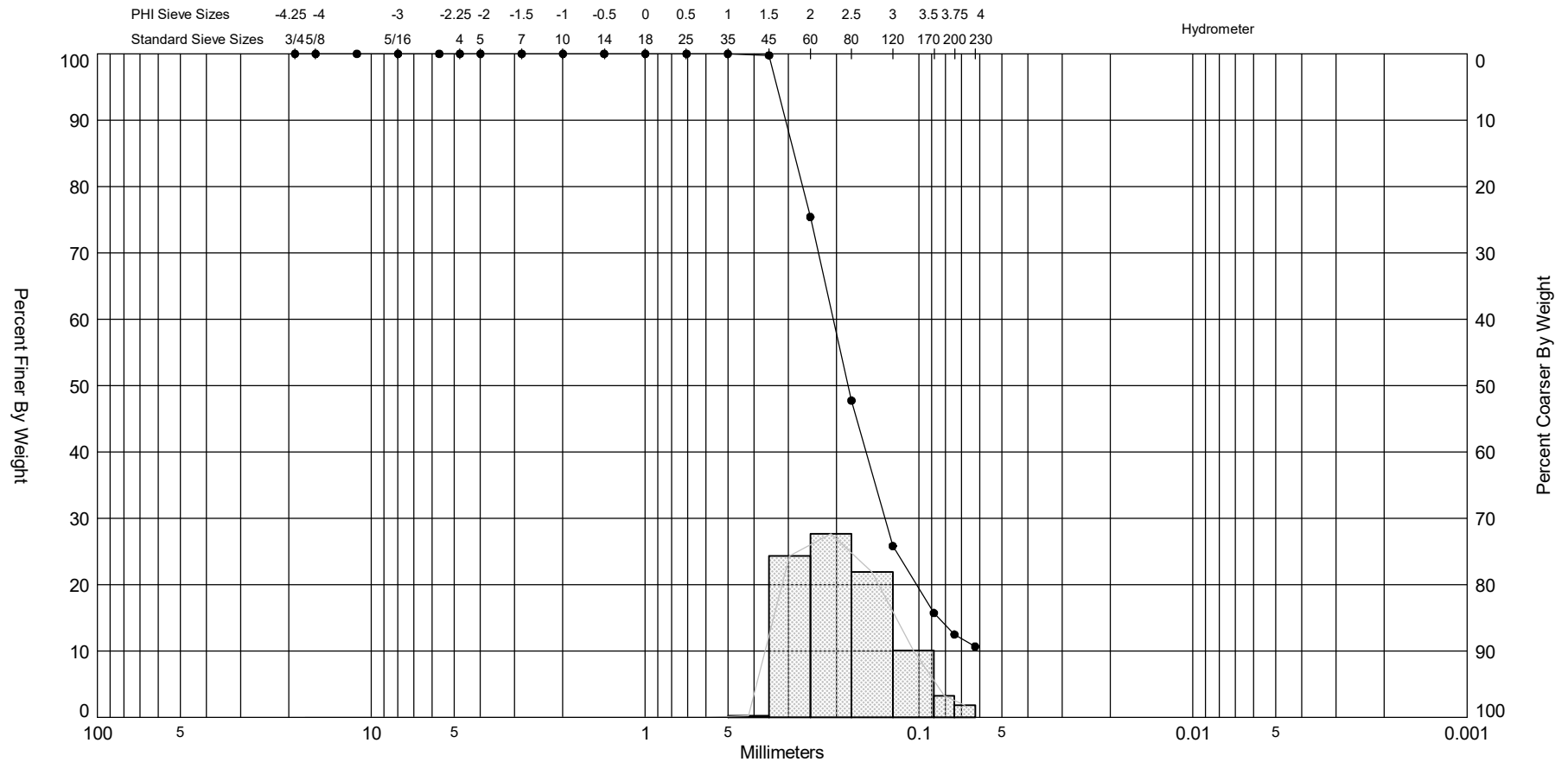
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-26.8	0.0					
			CLAY, trace sand, trace shell hash, sand distributed in sandy pockets up to 0.25", 1" carbonate rock fragment pocket at 1.5', brown (10YR-5/3), (CL).		T1	Sample #T1, Depth = 1.8' Ave. Field Vane (tsf): 0.33
-30.4	3.6					
-31.3	4.5		Sandy CLAY, light brownish gray (2.5Y-6/2), (CL).		1	Sample #1, Depth = 4.0' Mean (mm): 0.10, Phi Sorting: 0.79 Fines (230): 60.83% (CL)
-32.3	5.5		CLAY, 0.5" carbonate rock fragment pocket at 5.1', light olive brown (2.5Y-5/3), (CL).		T2	Sample #T2, Depth = 5.0' Ave. Field Vane (tsf): 0.40
-33.0	6.2		Clayey SAND, fine grained, quartz, olive brown (2.5Y-4/3), (CL).		2	Sample #2, Depth = 5.8' Mean (mm): 0.11, Phi Sorting: 0.85 Fines (230): 48.78% (CL)
-33.7	6.9		CLAY, little sand, olive brown (2.5Y-4/3), (CL).		3	Sample #3, Depth = 6.5' Mean (mm): 0.10, Phi Sorting: 1.01 Fines (230): 88.26% (CL)
-34.4	7.6		SAND, fine grained, quartz, some silt, 0.5" silty pocket at 7.2', brown (10YR-4/3), (SM).		4	Sample #4, Depth = 7.2' Mean (mm): 0.10, Phi Sorting: 0.35 Fines (230): 31.51% (SM)
-35.3	8.5		SAND, fine grained, quartz, little silt, (3" x 2") clayey pocket at 8.1', (0.75" x 0.25") rock fragment at 8.1', olive brown (2.5Y-4/3), (SM).		5	Sample #5, Depth = 7.9' Mean (mm): 0.11, Phi Sorting: 0.37 Fines (230): 52.25% (CL)
			Sandy CLAY, dark grayish brown (2.5Y-4/2), (CL).		6	Sample #6, Depth = 11.0' Mean (mm): 0.11, Phi Sorting: 0.37 Fines (230): 21.57% (SC)
-40.0	13.2					
-41.5	14.7		SAND, fine grained, quartz, some clay, 2" clayey pocket at 14.1', dark grayish brown (2.5Y-4/2), (SC).		7	Sample #7, Depth = 13.7' Mean (mm): 0.14, Phi Sorting: 0.57 Fines (230): 3.99% (SP-SM)
-42.7	15.9		SAND, fine grained, quartz, trace silt, (1" x 3") clayey pocket at 15.4', dark grayish brown (2.5Y-4/2), (SP-SM).		8	
-43.4	16.6		Sandy CLAY, dark grayish brown (2.5Y-4/2), (CL).		6	
			SAND, fine grained, quartz, trace silt, 0.25" clayey pocket at 17.6', dark grayish brown (2.5Y-4/2), (SP-SM).		8	
-46.2	19.4					
-46.8	20.0		No Recovery.			
			End of Boring			

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

MCFADDIN_COMPOSITE_20181008.GPJ 11/19/18

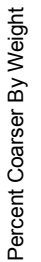
Granularmetric Report Depths and elevations based on measured values				 APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102			
Project Name: McFaddin NWR Beach Ridge Restoration							
Sample Name: JCVC-15-18 COMP							
Analysis Date: 11-19-18							
Analyzed By: KM							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft):	
USCS: SM		Munsell:		Comments: COMPOSITE			
Dry Weight (g): 100.00	Wash Weight (g): 100.00	Pan Retained (g): 10.64	Sieve Loss (%): 0.03	Fines (%): #200 - 12.48 #230 - 10.67	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	0.00	0.00	0.00	0.00	
35	1.00	0.50	0.00	0.00	0.00	0.00	
45	1.50	0.35	0.23	0.23	0.23	0.23	
60	2.00	0.25	24.36	24.36	24.59	24.59	
80	2.50	0.18	27.67	27.67	52.26	52.26	
120	3.00	0.13	21.92	21.92	74.18	74.18	
170	3.50	0.09	10.10	10.10	84.28	84.28	
200	3.75	0.07	3.24	3.24	87.52	87.52	
230	4.00	0.06	1.81	1.81	89.33	89.33	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.49	3.04	2.46	2.01	1.82	1.60	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.43	0.19	0.58	0.53	2.49		

MCFADDIN_COMPOSITE_20181008.GPJ 11/19/18



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

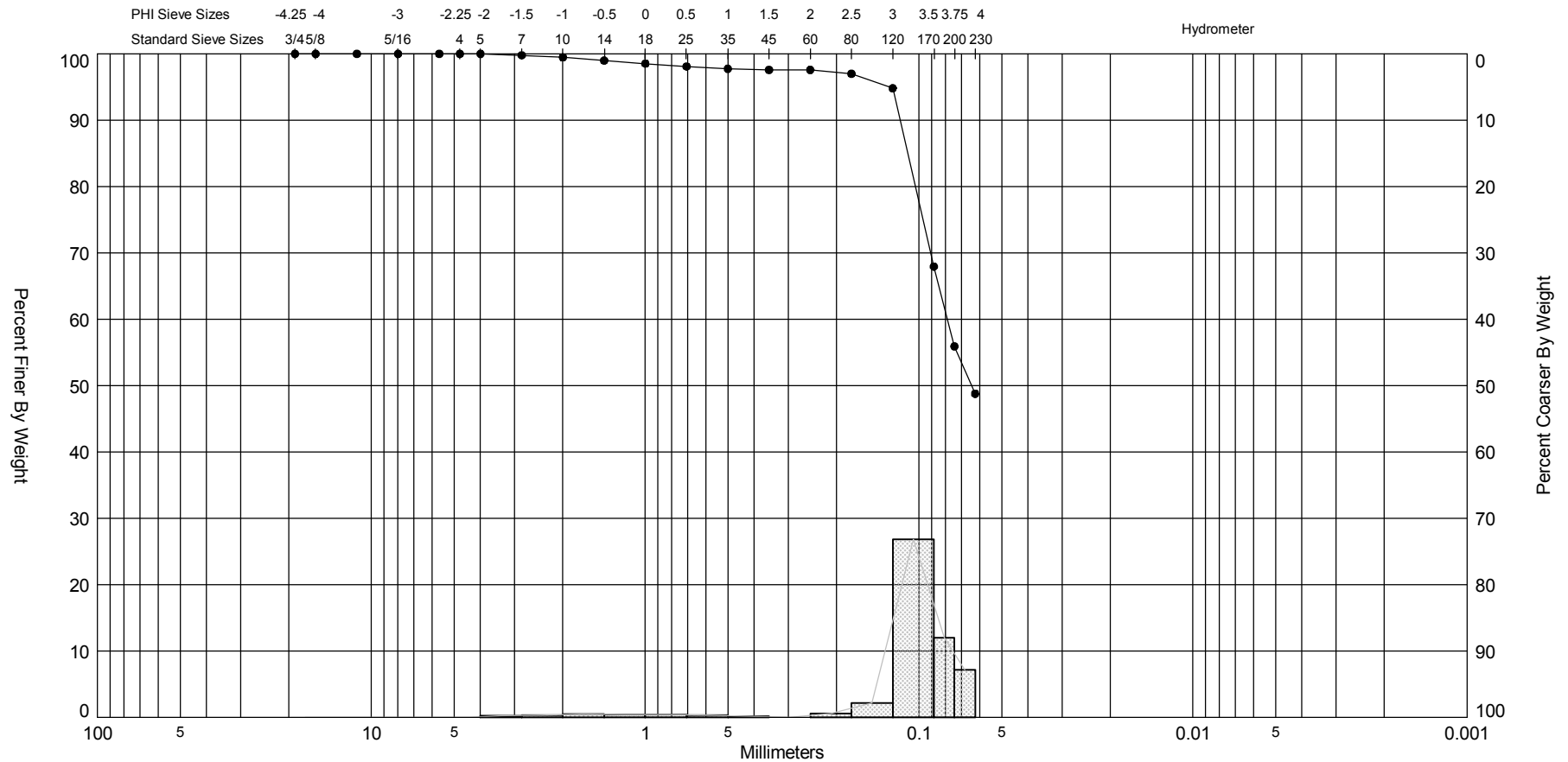
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCV-15-18 COMP	—●—		SM	#200 - 12.48 #230 - 10.67			2.46	2.43	0.53	2.49	0.58	Project Name:	McFaddin NWR Beach Ridge Restoration
Comments: COMPOSITE												Analysis Date:	11-19-18
Depths and elevations based on measured values												Analyzed By:	KM
							APTIM 2481 NW Boca Raton Blvd. Boca Raton, FL 33431 ph (561) 391-8102					Easting (X, ft):	3,477,249
												Northing (Y, ft):	13,786,252
												Horizontal Datum:	NAD 1983
												Vertical Datum:	NAVD 88



Silt and Clay

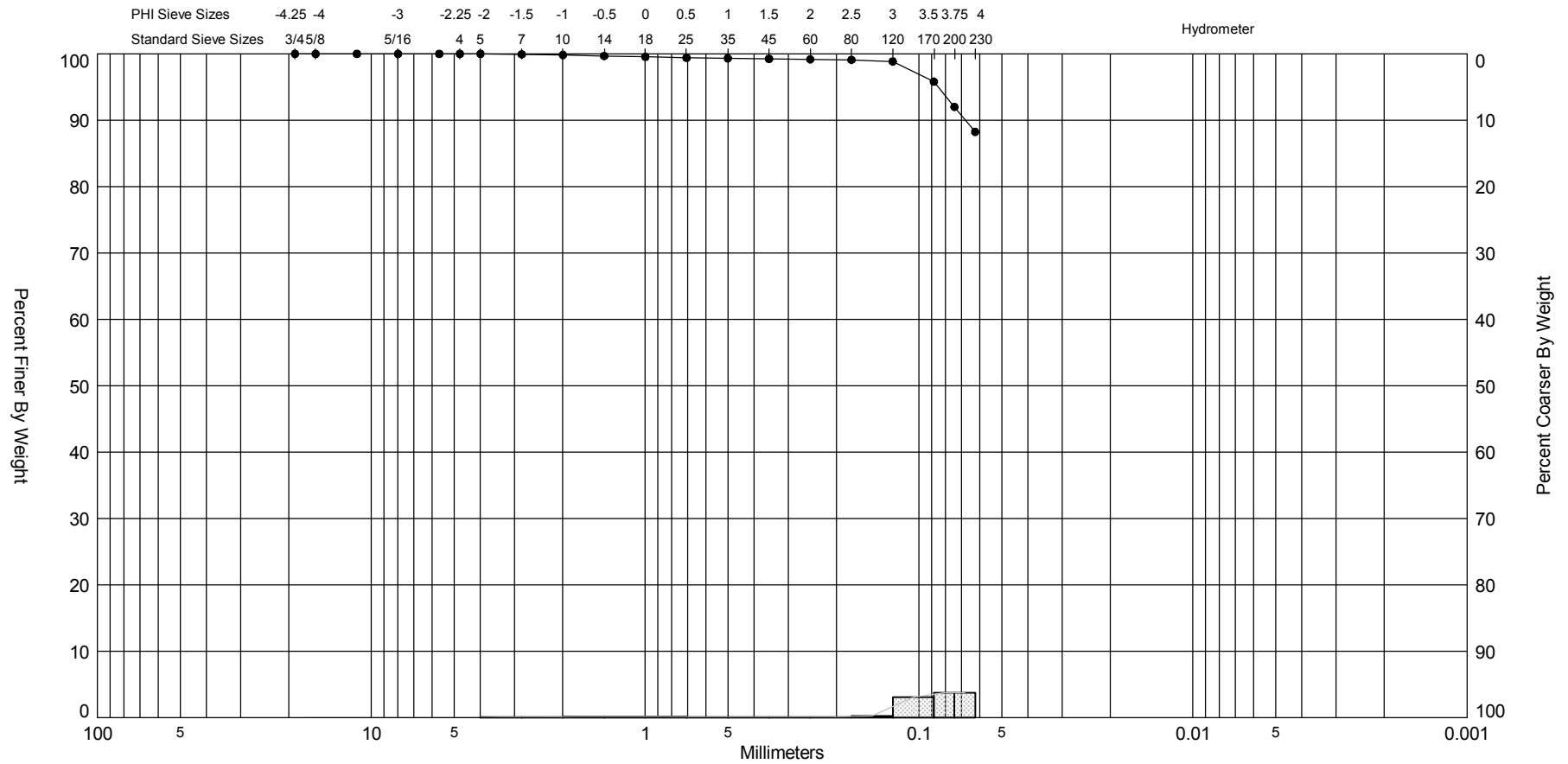


CB&I
Coastal Planning & Engineering, Inc.
2481 NW Boca Raton Blvd.
Boca Raton, FL 33431
ph (561) 391 8102



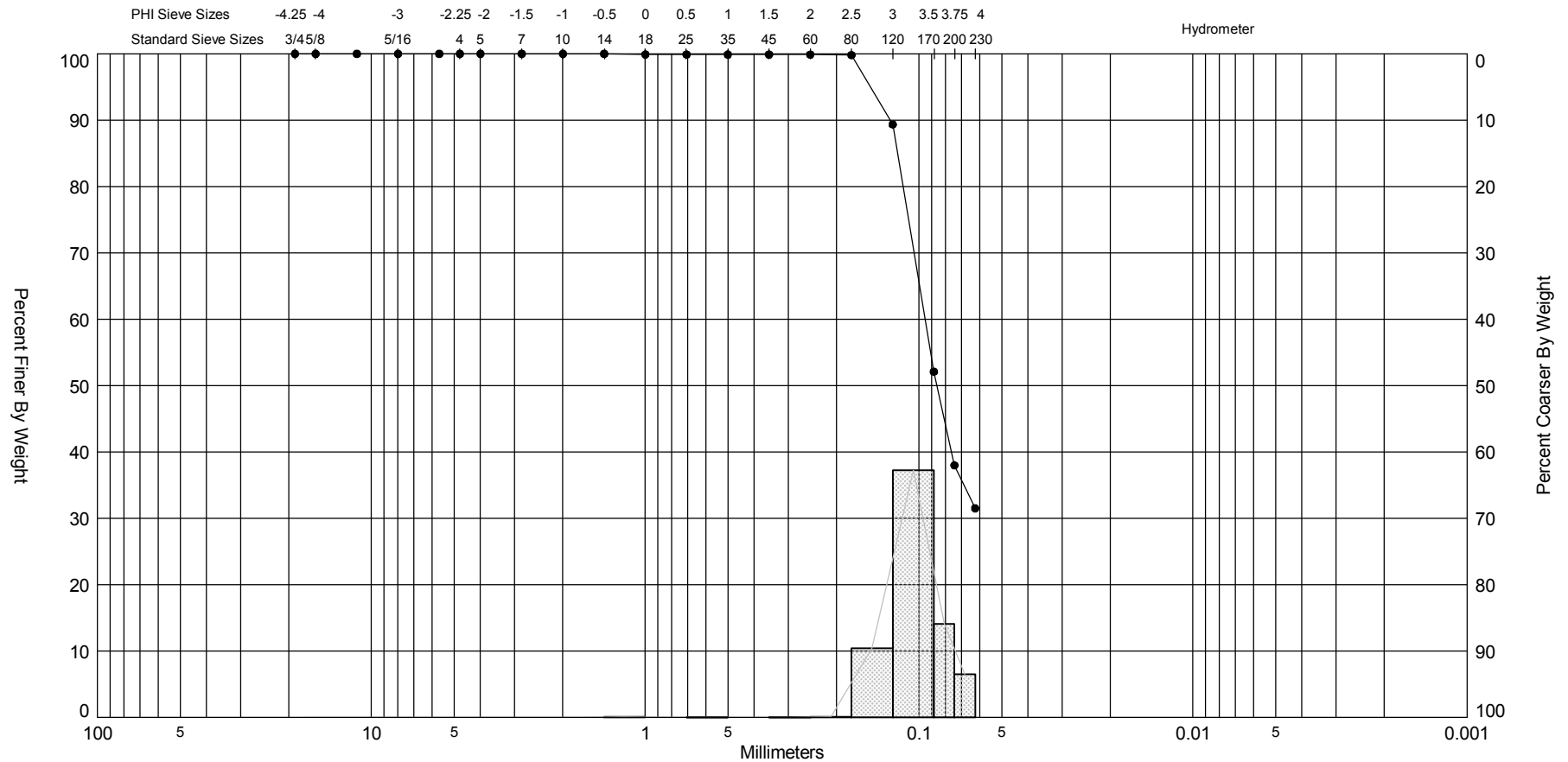
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

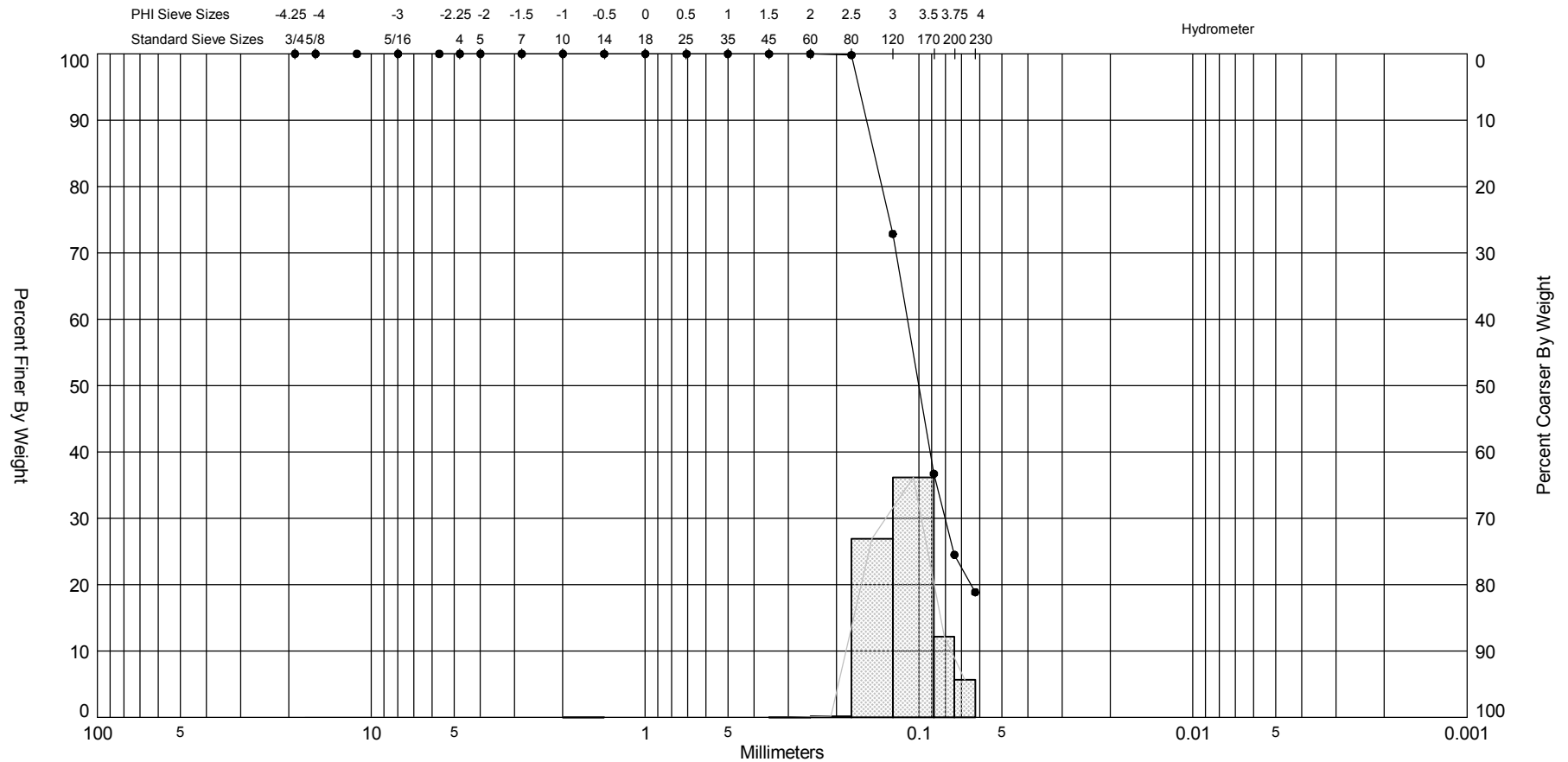
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-18 #2	—●—	-32.6	CL	#200 - 55.91 #230 - 48.78			3.96	3.23	-3.77	18.24	0.85	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-26-15
Depths and elevations based on 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):	3,477,249
												Northing (Y, ft):	13,786,252
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

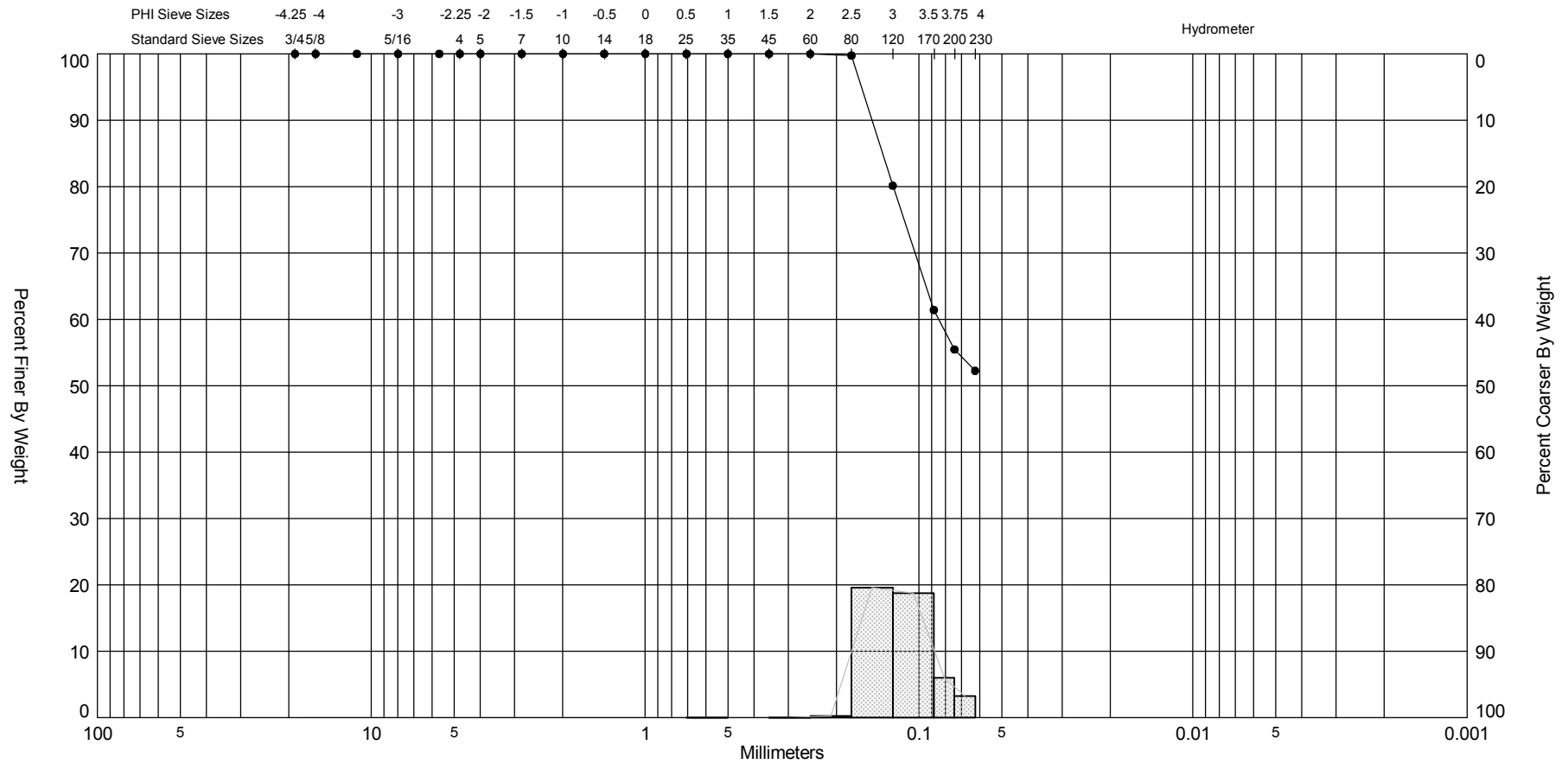
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-18 #3	—●—	-33.3	CL	#200 - 92.02 #230 - 88.26				3.32	-3.28	13.51	1.01	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-26-15
Depths and elevations based on measured 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):	3,477,249
												Northing (Y, ft):	13,786,252
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88





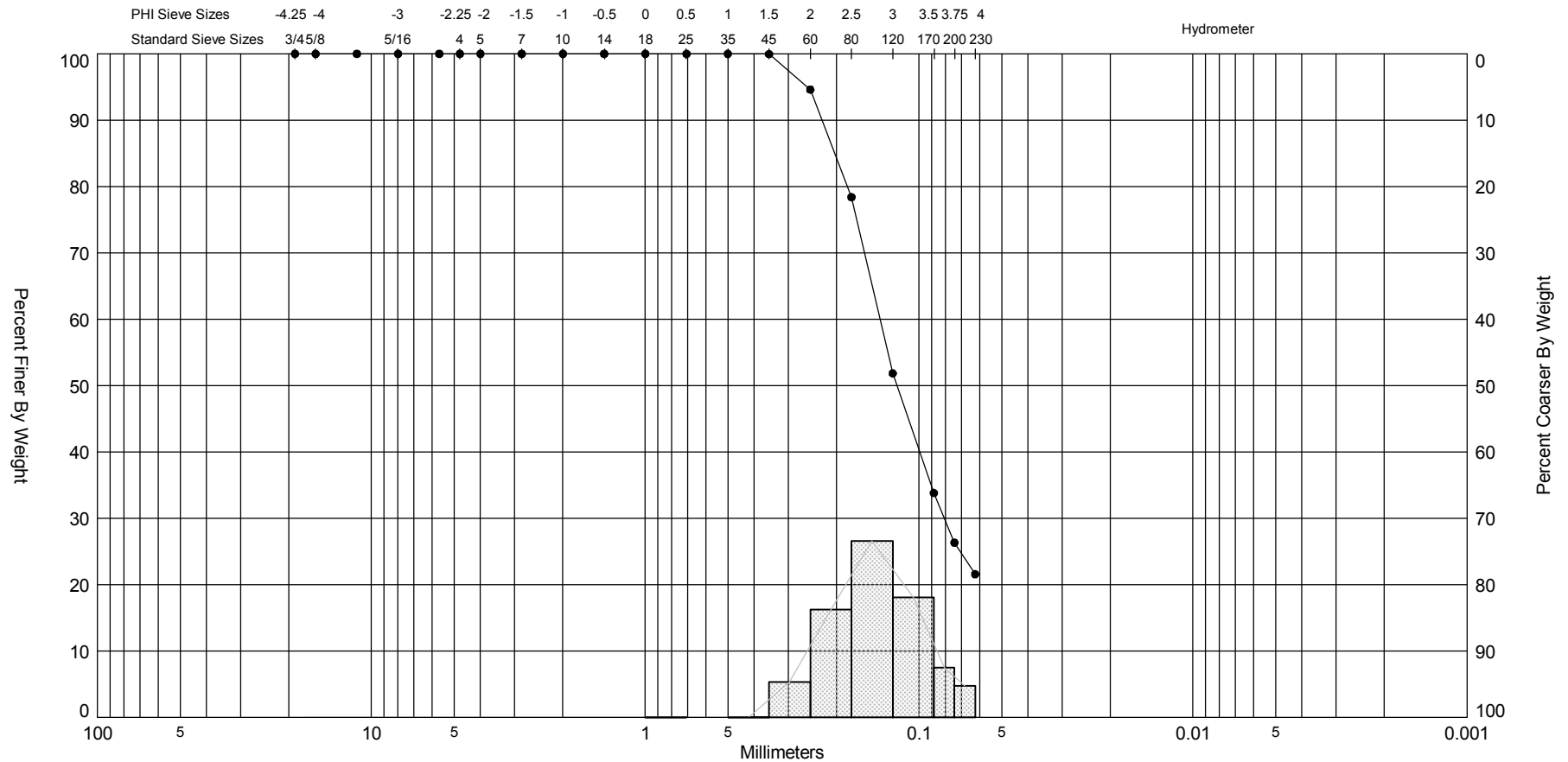
Gravel		Sand			Silt and Clay	
Coarse	Fine	Coarse	Medium	Fine		

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-18 #5	—●—	-34.7	SM	#200 - 24.51 #230 - 18.87			3.32	3.18	-0.21	6.08	0.37	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-26-15
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):	3,477,249
												Northing (Y, ft):	13,786,252
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



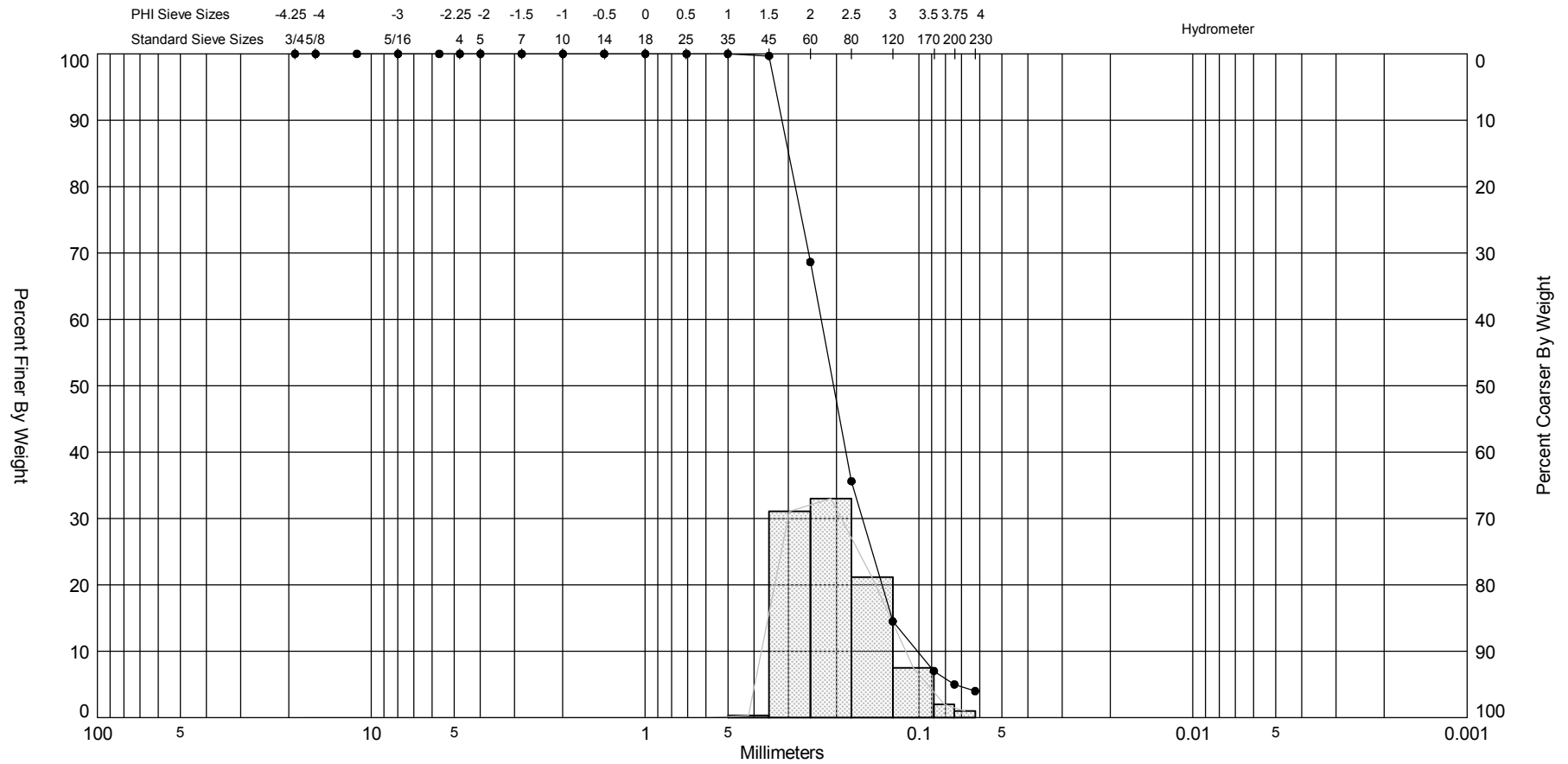
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-18 #6	—●—	-37.8	CL	#200 - 55.46 #230 - 52.25				3.13	0.28	2.59	0.37	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-26-15
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):	3,477,249
												Northing (Y, ft):	13,786,252
												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-15-18 #7	—●—	-40.5	SC	#200 - 26.34 #230 - 21.57			3.05	2.84	-0.05	2.37	0.57	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-25-15
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):	3,477,249
												Northing (Y, ft):	13,786,252
												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-15-18 #8	—●—	-44.9	SP-SM	#200 - 5.00 #230 - 3.99			2.28	2.32	0.7	2.9	0.53	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-26-15
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):	3,477,249
												Northing (Y, ft):	13,786,252
												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-15-18 #1							
Analysis Date: 02-26-15							
Analyzed By: GS				Coordinate System:		Elevation (ft):	
Easting (ft):		Northing (ft):					
3,477,249		13,786,252		Texas South Central		-30.8 NAVD 88	
USCS:		Munsell: Wet - 2.5Y-6/2 Dry - 2.5Y-7/3 Washed - 2.5Y-8/1		Comments:			
CL							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.54	42.47	9.16	0.24	#200 - 70.16 #230 - 60.83			
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	0.07	0.08	0.07	0.08	
7	-1.50	2.83	0.11	0.13	0.18	0.21	
10	-1.00	2.00	0.18	0.21	0.36	0.42	
14	-0.50	1.41	0.20	0.24	0.56	0.66	
18	0.00	1.00	0.16	0.19	0.72	0.85	
25	0.50	0.71	0.16	0.19	0.88	1.04	
35	1.00	0.50	0.12	0.14	1.00	1.18	
45	1.50	0.35	0.09	0.11	1.09	1.29	
60	2.00	0.25	0.14	0.17	1.23	1.46	
80	2.50	0.18	0.17	0.20	1.40	1.66	
120	3.00	0.13	0.63	0.75	2.03	2.41	
170	3.50	0.09	11.45	13.54	13.48	15.95	
200	3.75	0.07	11.74	13.89	25.22	29.84	
230	4.00	0.06	7.89	9.33	33.11	39.17	
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	
				3.66	3.50	3.10	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.39	0.10	0.79	-4.5	25.58		

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-15-18 #2															
Analysis Date: 02-26-15															
Analyzed By: GS				Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):					
3,477,249		13,786,252		Texas South Central		-32.6 NAVD 88									
USCS: CL		Munsell: Wet - 2.5Y-4/3 Dry - 2.5Y-6/3 Washed - 2.5Y-7/2		Comments:											
Dry Weight (g): 70.71		Wash Weight (g): 39.88		Pan Retained (g): 3.60		Sieve Loss (%): 0.10		Fines (%): #200 - 55.91 #230 - 48.78		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	0.15	0.21	0.15	0.21									
10	-1.00	2.00	0.23	0.33	0.38	0.54									
14	-0.50	1.41	0.33	0.47	0.71	1.01									
18	0.00	1.00	0.32	0.45	1.03	1.46									
25	0.50	0.71	0.31	0.44	1.34	1.90									
35	1.00	0.50	0.25	0.35	1.59	2.25									
45	1.50	0.35	0.12	0.17	1.71	2.42									
60	2.00	0.25	0.00	0.00	1.71	2.42									
80	2.50	0.18	0.41	0.58	2.12	3.00									
120	3.00	0.13	1.55	2.19	3.67	5.19									
170	3.50	0.09	18.99	26.86	22.66	32.05									
200	3.75	0.07	8.51	12.04	31.17	44.09									
230	4.00	0.06	5.04	7.13	36.21	51.22									
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									
			3.96	3.37	3.20	2.96									
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis										
Statistics	3.23	0.11	0.85	-3.77	18.24										

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-15-18 #3							
Analysis Date: 02-26-15							
Analyzed By: GS							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft): -33.3 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-4/3 Dry - 2.5Y-6/3 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 71.49	Wash Weight (g): 9.94	Pan Retained (g): 1.47	Sieve Loss (%): 0.10	Fines (%): #200 - 92.02 #230 - 88.26	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	0.04	0.06	0.04	0.06	
10	-1.00	2.00	0.08	0.11	0.12	0.17	
14	-0.50	1.41	0.10	0.14	0.22	0.31	
18	0.00	1.00	0.10	0.14	0.32	0.45	
25	0.50	0.71	0.11	0.15	0.43	0.60	
35	1.00	0.50	0.05	0.07	0.48	0.67	
45	1.50	0.35	0.06	0.08	0.54	0.75	
60	2.00	0.25	0.05	0.07	0.59	0.82	
80	2.50	0.18	0.06	0.08	0.65	0.90	
120	3.00	0.13	0.17	0.24	0.82	1.14	
170	3.50	0.09	2.19	3.06	3.01	4.20	
200	3.75	0.07	2.70	3.78	5.71	7.98	
230	4.00	0.06	2.69	3.76	8.40	11.74	
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	
						3.55	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.32	0.10	1.01	-3.28	13.51		

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-15-18 #4							
Analysis Date: 02-26-15							
Analyzed By: GS							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft): -34.0 NAVD 88	
USCS: SM		Munsell: Wet - 10YR-4/3 Dry - 10YR-7/2 Washed - 2.5YR-7/3		Comments:			
Dry Weight (g): 73.38	Wash Weight (g): 50.98	Pan Retained (g): 0.72	Sieve Loss (%): 0.00	Fines (%): #200 - 37.98 #230 - 31.51	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	0.07	0.10	0.07	0.10	
25	0.50	0.71	0.00	0.00	0.07	0.10	
35	1.00	0.50	0.01	0.01	0.08	0.11	
45	1.50	0.35	0.00	0.00	0.08	0.11	
60	2.00	0.25	0.01	0.01	0.09	0.12	
80	2.50	0.18	0.05	0.07	0.14	0.19	
120	3.00	0.13	7.66	10.44	7.80	10.63	
170	3.50	0.09	27.35	37.27	35.15	47.90	
200	3.75	0.07	10.36	14.12	45.51	62.02	
230	4.00	0.06	4.75	6.47	50.26	68.49	
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	
			3.54	3.19	3.07	2.73	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.3	0.10	0.35	-1.65	17.76		

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-15-18 #5							
Analysis Date: 02-26-15							
Analyzed By: GS							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft): -34.7 NAVD 88	
USCS: SM		Munsell: Wet - 2.5Y-4/3 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 80.68	Wash Weight (g): 67.24	Pan Retained (g): 1.75	Sieve Loss (%): 0.05	Fines (%): #200 - 24.51 #230 - 18.87	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	0.02	0.02	0.02	0.02	
18	0.00	1.00	0.00	0.00	0.02	0.02	
25	0.50	0.71	0.00	0.00	0.02	0.02	
35	1.00	0.50	0.00	0.00	0.02	0.02	
45	1.50	0.35	0.00	0.00	0.02	0.02	
60	2.00	0.25	0.01	0.01	0.03	0.03	
80	2.50	0.18	0.12	0.15	0.15	0.18	
120	3.00	0.13	21.74	26.95	21.89	27.13	
170	3.50	0.09	29.17	36.16	51.06	63.29	
200	3.75	0.07	9.84	12.20	60.90	75.49	
230	4.00	0.06	4.55	5.64	65.45	81.13	
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	
		3.74	3.32	2.96	2.79	2.59	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.18	0.11	0.37	-0.21	6.08		

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-15-18 #6							
Analysis Date: 02-26-15							
Analyzed By: GS							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft): -37.8 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/1		Comments:			
Dry Weight (g): 75.06	Wash Weight (g): 37.31	Pan Retained (g): 1.29	Sieve Loss (%): 0.24	Fines (%): #200 - 55.46 #230 - 52.25	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	0.00	0.00	0.00	0.00	
35	1.00	0.50	0.01	0.01	0.01	0.01	
45	1.50	0.35	0.00	0.00	0.01	0.01	
60	2.00	0.25	0.01	0.01	0.02	0.02	
80	2.50	0.18	0.17	0.23	0.19	0.25	
120	3.00	0.13	14.72	19.61	14.91	19.86	
170	3.50	0.09	14.05	18.72	28.96	38.58	
200	3.75	0.07	4.47	5.96	33.43	44.54	
230	4.00	0.06	2.41	3.21	35.84	47.75	
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	
				3.14	2.90	2.62	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.13	0.11	0.37	0.28	2.59		

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-15-18 #7							
Analysis Date: 02-25-15							
Analyzed By: GS				Coordinate System:		Elevation (ft):	
Easting (ft):		Northing (ft):					
3,477,249		13,786,252		Texas South Central		-40.5 NAVD 88	
USCS:		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2		Comments:			
SC							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.54	69.15	1.22	0.05	#200 - 26.34 #230 - 21.57			
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	0.03	0.03	0.04	0.04	
60	2.00	0.25	4.62	5.34	4.66	5.38	
80	2.50	0.18	14.04	16.22	18.70	21.60	
120	3.00	0.13	22.98	26.55	41.68	48.15	
170	3.50	0.09	15.62	18.05	57.30	66.20	
200	3.75	0.07	6.46	7.46	63.76	73.66	
230	4.00	0.06	4.13	4.77	67.89	78.43	
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	
		3.82	3.05	2.56	2.33	1.96	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.84	0.14	0.57	-0.05	2.37		

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-15-18 #8							
Analysis Date: 02-26-15							
Analyzed By: GS							
Easting (ft): 3,477,249		Northing (ft): 13,786,252		Coordinate System: Texas South Central		Elevation (ft): -44.9 NAVD 88	
USCS: SP-SM		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 86.07	Wash Weight (g): 82.89	Pan Retained (g): 0.24	Sieve Loss (%): 0.01	Fines (%): #200 - 5.00 #230 - 3.99	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	0.00	0.00	0.00	0.00	
35	1.00	0.50	0.00	0.00	0.00	0.00	
45	1.50	0.35	0.26	0.30	0.26	0.30	
60	2.00	0.25	26.73	31.06	26.99	31.36	
80	2.50	0.18	28.42	33.02	55.41	64.38	
120	3.00	0.13	18.19	21.13	73.60	85.51	
170	3.50	0.09	6.42	7.46	80.02	92.97	
200	3.75	0.07	1.75	2.03	81.77	95.00	
230	4.00	0.06	0.87	1.01	82.64	96.01	
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	
3.75	2.96	2.75	2.28	1.90	1.75	1.58	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.32	0.20	0.53	0.7	2.9		





