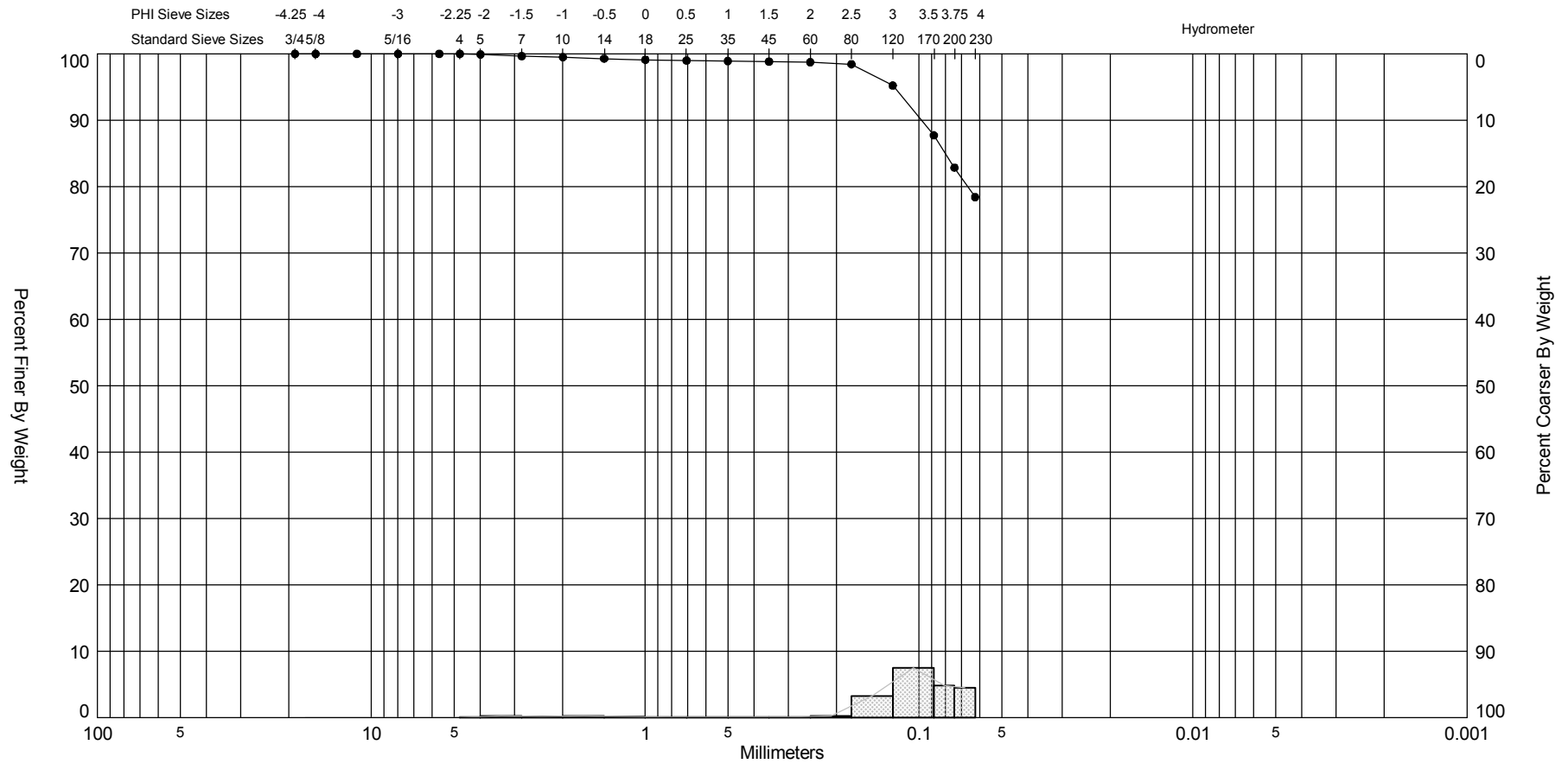
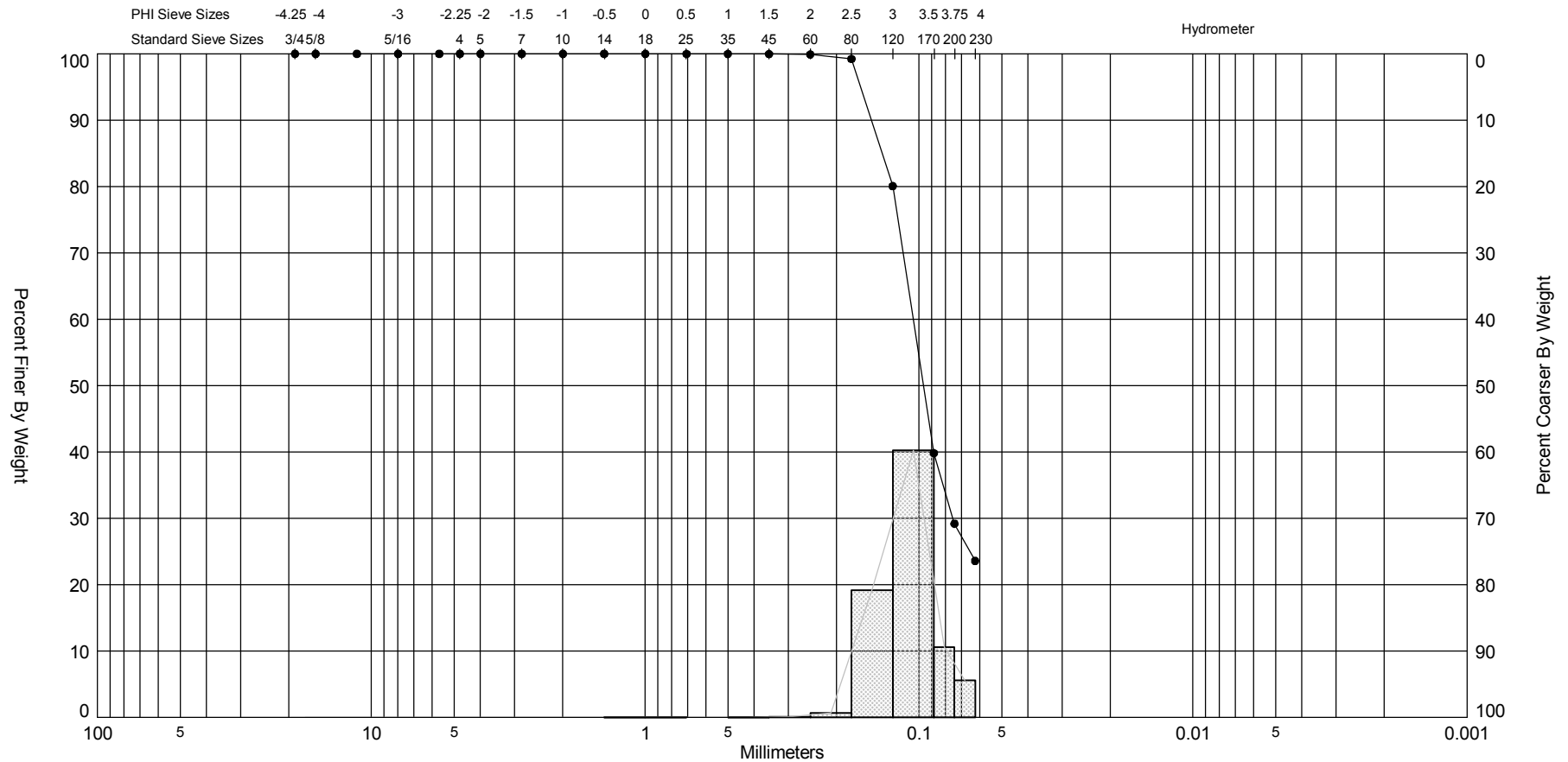


DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT McFaddin Sand Search Jefferson County, TX			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION JCVC-15-10			10. COORDINATE SYSTEM/DATUM Texas South Central	
3. DRILLING AGENCY American Vibracore Services, Inc.			11. MANUFACTURER'S 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 01-26-15 16:05 COMPLETED 01-26-15 16:11	
			16. ELEVATION TOP OF BORING -25.7 Ft.	
			17. TOTAL RECOVERY FOR BORING 19.8 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
-25.7	0.0					
-27.3	1.6		CLAY, trace carbonate rock fragments, trace shell hash, (3" x 1") very soft clay pocket at top of core, carbonate rock fragments up to 0.25", light brownish gray (2.5Y-6/2), (CL).		T1	Sample #T1, Depth = 0.8' Ave. Field Vane (tsf): 0.42
					T2	Sample #T2, Depth = 4.0' Ave. Field Vane (tsf): 0.48
			CLAY, trace carbonate rock fragments, carbonate rock fragments up to 1", yellowish brown (10YR-5/4), (CL).		T3	Sample #T3, Depth = 8.0' Ave. Field Vane (tsf): 0.54
-36.3	10.6					
-39.2	13.5		CLAY, some sand, trace carbonate rock fragments, (1" x 0.25") shell fragment at 10.7', carbonate rock fragments up to 0.25", greenish gray (10Y-6/1), (CL).		1	Sample #1, Depth = 12.0' Mean (mm): 0.11, Phi Sorting: 1.03 Fines (230): 78.41% (CL)
-41.2	15.5		SAND, fine grained, quartz, some silt, 0.5" clayey pocket at 14.0', dark grayish brown (2.5Y-4/2), (SM).		2	Sample #2, Depth = 14.5' Mean (mm): 0.11, Phi Sorting: 0.35 Fines (230): 23.59% (SM)
-42.0	16.3		CLAY, some sand, dark grayish brown (2.5Y-4/2), (CL).		3	Sample #3, Depth = 15.9' Mean (mm): 0.37, Phi Sorting: 2.61 Fines (230): 75.15% (CL)
-45.5	19.8		SAND, fine grained, quartz, some clay, trace silt, clay distributed in laminae, (3" x 1") clayey pockets at 16.6', 16.9' and 17.9', dark grayish brown (2.5Y-4/2), (SC).		4	Sample #4, Depth = 18.4' Mean (mm): 0.15, Phi Sorting: 0.55 Fines (230): 22.47% (SC)
-45.7	20.0		No Recovery.			
			End of Boring			

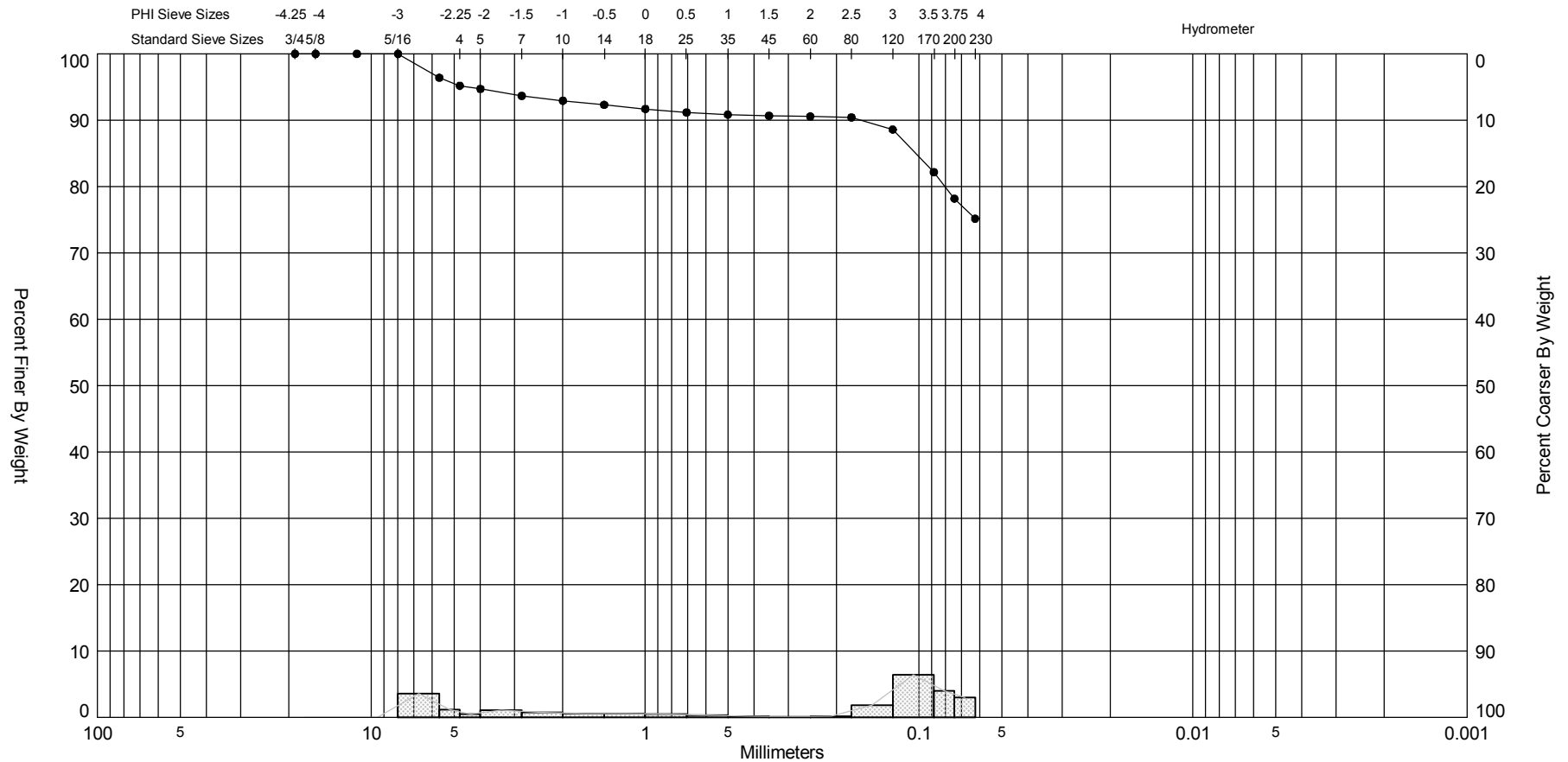
LOUISIANA JEFFERSON COUNTY 2015 VCS.GPJ JPBRAZIL.GDT 6/4/15

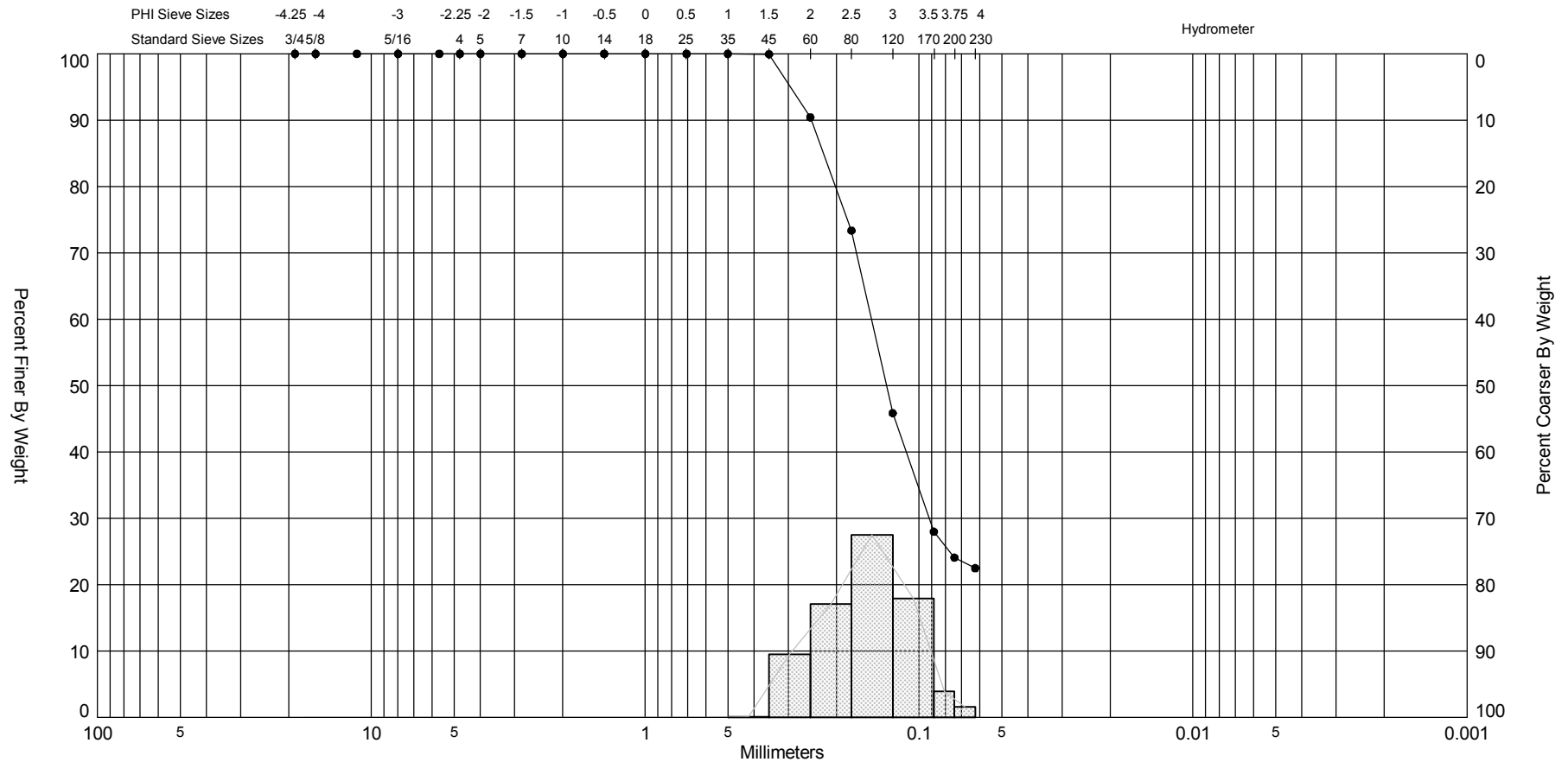




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
JCVC-15-10 #2	—●—	-40.2	SM	#200 - 29.20 #230 - 23.59			3.37	3.21	-0.34	4.92	0.35	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-23-15
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):	3,481,808
												Northing (Y, ft):	13,789,611
												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-15-10 #4	—●—	-44.1	SC	#200 - 24.07 #230 - 22.47			2.92	2.7	-0.09	2.34	0.55	Project Name:	McFaddin Sand Search
Comments:												Analysis Date:	02-23-15
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):	3,481,808
												Northing (Y, ft):	13,789,611
												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-15-10 #1							
Analysis Date: 02-23-15							
Analyzed By: GS							
Easting (ft): 3,481,808		Northing (ft): 13,789,611		Coordinate System: Texas South Central		Elevation (ft): -37.7 NAVD 88	
USCS: CL		Munsell: Wet - 10Y-6/1 Dry - 5Y-7/1 Washed - 2.5Y-8/1		Comments:			
Dry Weight (g): 97.45	Wash Weight (g): 22.37	Pan Retained (g): 1.25	Sieve Loss (%): 0.06	Fines (%): #200 - 82.87 #230 - 78.41	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	0.09	0.09	0.09	0.09	
7	-1.50	2.83	0.23	0.24	0.32	0.33	
10	-1.00	2.00	0.16	0.16	0.48	0.49	
14	-0.50	1.41	0.21	0.22	0.69	0.71	
18	0.00	1.00	0.18	0.18	0.87	0.89	
25	0.50	0.71	0.12	0.12	0.99	1.01	
35	1.00	0.50	0.08	0.08	1.07	1.09	
45	1.50	0.35	0.07	0.07	1.14	1.16	
60	2.00	0.25	0.10	0.10	1.24	1.26	
80	2.50	0.18	0.28	0.29	1.52	1.55	
120	3.00	0.13	3.15	3.23	4.67	4.78	
170	3.50	0.09	7.31	7.50	11.98	12.28	
200	3.75	0.07	4.73	4.85	16.71	17.13	
230	4.00	0.06	4.35	4.46	21.06	21.59	
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	
					3.69	3.01	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.15	0.11	1.03	-3.3	14.59		

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-15-10 #2							
Analysis Date: 02-23-15							
Analyzed By: GS							
Easting (ft): 3,481,808		Northing (ft): 13,789,611		Coordinate System: Texas South Central		Elevation (ft): -40.2 NAVD 88	
USCS: SM		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 89.74	Wash Weight (g): 70.23	Pan Retained (g): 1.61	Sieve Loss (%): 0.07	Fines (%): #200 - 29.20 #230 - 23.59	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	0.01	0.01	0.01	0.01	
25	0.50	0.71	0.01	0.01	0.02	0.02	
35	1.00	0.50	0.00	0.00	0.02	0.02	
45	1.50	0.35	0.01	0.01	0.03	0.03	
60	2.00	0.25	0.06	0.07	0.09	0.10	
80	2.50	0.18	0.60	0.67	0.69	0.77	
120	3.00	0.13	17.20	19.17	17.89	19.94	
170	3.50	0.09	36.11	40.24	54.00	60.18	
200	3.75	0.07	9.53	10.62	63.53	70.80	
230	4.00	0.06	5.03	5.61	68.56	76.41	
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	
		3.94	3.37	3.06	2.90	2.61	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	3.21	0.11	0.35	-0.34	4.92		

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-15-10 #3							
Analysis Date: 02-23-15							
Analyzed By: GS							
Easting (ft): 3,481,808		Northing (ft): 13,789,611		Coordinate System: Texas South Central		Elevation (ft): -41.6 NAVD 88	
USCS: CL		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 89.91	Wash Weight (g): 23.42	Pan Retained (g): 0.80	Sieve Loss (%): 0.29	Fines (%): #200 - 78.18 #230 - 75.15	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	3.24	3.60	3.24	3.60	
4	-2.25	4.76	1.08	1.20	4.32	4.80	
5	-2.00	4.00	0.44	0.49	4.76	5.29	
7	-1.50	2.83	0.94	1.05	5.70	6.34	
10	-1.00	2.00	0.65	0.72	6.35	7.06	
14	-0.50	1.41	0.56	0.62	6.91	7.68	
18	0.00	1.00	0.56	0.62	7.47	8.30	
25	0.50	0.71	0.48	0.53	7.95	8.83	
35	1.00	0.50	0.29	0.32	8.24	9.15	
45	1.50	0.35	0.16	0.18	8.40	9.33	
60	2.00	0.25	0.11	0.12	8.51	9.45	
80	2.50	0.18	0.13	0.14	8.64	9.59	
120	3.00	0.13	1.63	1.81	10.27	11.40	
170	3.50	0.09	5.78	6.43	16.05	17.83	
200	3.75	0.07	3.59	3.99	19.64	21.82	
230	4.00	0.06	2.72	3.03	22.36	24.85	
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	
					3.36	-2.15	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.45	0.37	2.61	-0.65	1.63		

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-15-10 #4							
Analysis Date: 02-23-15							
Analyzed By: GS							
Easting (ft): 3,481,808		Northing (ft): 13,789,611		Coordinate System: Texas South Central		Elevation (ft): -44.1 NAVD 88	
USCS: SC		Munsell: Wet - 2.5Y-4/2 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2		Comments:			
Dry Weight (g): 105.89	Wash Weight (g): 82.79	Pan Retained (g): 0.60	Sieve Loss (%): 0.09	Fines (%): #200 - 24.07 #230 - 22.47	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	0.05	0.05	0.05	0.05	
60	2.00	0.25	10.07	9.51	10.12	9.56	
80	2.50	0.18	18.08	17.07	28.20	26.63	
120	3.00	0.13	29.14	27.52	57.34	54.15	
170	3.50	0.09	18.93	17.88	76.27	72.03	
200	3.75	0.07	4.13	3.90	80.40	75.93	
230	4.00	0.06	1.69	1.60	82.09	77.53	
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	
		3.69	2.92	2.45	2.19	1.76	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.7	0.15	0.55	-0.09	2.34		





