

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: St. Lucie Vibracores

Sample Name: SLVC-06-10 #1

Analysis Date: 05-30-06

Analyzed By: JF

Easting (ft):

914,492

Northing (ft):

1,080,875

Coordinate System:

Florida State Plane East

Elevation (ft):

-34.4 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/1
Dry - 5Y-5/1
Washed - 5Y-5/1

Comments:

Dry Weight (g):

86.42

Wash Weight (g):

85.43

Pan Retained (g):

0.03

Sieve Loss (%):

0.02

Fines (%):

#200 - 1.41
#230 - 1.20

Organics (%):

Carbonates (%):

Shell Hash (%):

2

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	0.40	0.46	0.40	0.46
3.5	-2.50	5.66	0.26	0.30	0.66	0.76
4	-2.25	4.76	0.11	0.13	0.77	0.89
5	-2.00	4.00	0.17	0.20	0.94	1.09
7	-1.50	2.83	0.45	0.52	1.39	1.61
10	-1.00	2.00	0.75	0.87	2.14	2.48
14	-0.50	1.41	1.65	1.91	3.79	4.39
18	0.00	1.00	3.30	3.82	7.09	8.21
25	0.50	0.71	7.95	9.20	15.04	17.41
35	1.00	0.50	14.42	16.69	29.46	34.10
45	1.50	0.35	20.45	23.66	49.91	57.76
60	2.00	0.25	22.60	26.15	72.51	83.91
80	2.50	0.18	9.06	10.48	81.57	94.39
120	3.00	0.13	2.01	2.33	83.58	96.72
170	3.50	0.09	1.10	1.27	84.68	97.99
200	3.75	0.07	0.52	0.60	85.20	98.59
230	4.00	0.06	0.18	0.21	85.38	98.80

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.63

2.00

1.83

1.34

0.73

0.42

-0.42

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.21


0.43


0.95

-1.03

6.24

GRANULARMETRIC REPORT ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06

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: St. Lucie Vibracores							
Sample Name: SLVC-06-10 #2							
Analysis Date: 05-26-06							
Analyzed By: JF							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
914,492		1,080,875		Florida State Plane East		-37.9 NAVD 88	
USCS:		Munsell: Wet - 5GY-5/1 Dry - 5Y-5/1 Washed - 5Y-5/1		Comments:			
SW							
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%): #200 - 3.81 #230 - 3.02	Organics (%):	Carbonates (%):	Shell Hash (%):
85.90	83.41	0.10	0.01				1
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	0.20	0.23	0.20	0.23	
4	-2.25	4.76	0.14	0.16	0.34	0.39	
5	-2.00	4.00	0.06	0.07	0.40	0.46	
7	-1.50	2.83	0.24	0.28	0.64	0.74	
10	-1.00	2.00	0.42	0.49	1.06	1.23	
14	-0.50	1.41	0.65	0.76	1.71	1.99	
18	0.00	1.00	1.19	1.39	2.90	3.38	
25	0.50	0.71	3.32	3.86	6.22	7.24	
35	1.00	0.50	7.22	8.41	13.44	15.65	
45	1.50	0.35	12.77	14.87	26.21	30.52	
60	2.00	0.25	23.76	27.66	49.97	58.18	
80	2.50	0.18	13.70	15.95	63.67	74.13	
120	3.00	0.13	8.22	9.57	71.89	83.70	
170	3.50	0.09	7.82	9.10	79.71	92.80	
200	3.75	0.07	2.91	3.39	82.62	96.19	
230	4.00	0.06	0.68	0.79	83.30	96.98	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.66	3.02	2.55	1.85	1.31	1.01	0.21	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.84	0.28	1	-0.64	4.74		

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: St. Lucie Vibracores							
Sample Name: SLVC-06-10 #3							
Analysis Date: 06-08-06							
Analyzed By: da							
Easting (ft): 914,492		Northing (ft): 1,080,875		Coordinate System: Florida State Plane East		Elevation (ft): -39.7 NAVD 88	
USCS: SM		Munsell: Wet - 5GY-5/1 Dry - 2.5Y-5/2 Washed - 2.5Y-5/1		Comments:			
Dry Weight (g): 86.42	Wash Weight (g): 77.76	Pan Retained (g): 0.39	Sieve Loss (%): 0.08	Fines (%): #200 - 14.35 #230 - 10.55	Organics (%):	Carbonates (%):	Shell Hash (%): 1
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	0.25	0.29	0.25	0.29	
3.5	-2.50	5.66	0.00	0.00	0.25	0.29	
4	-2.25	4.76	0.04	0.05	0.29	0.34	
5	-2.00	4.00	0.03	0.03	0.32	0.37	
7	-1.50	2.83	0.11	0.13	0.43	0.50	
10	-1.00	2.00	0.35	0.40	0.78	0.90	
14	-0.50	1.41	0.52	0.60	1.30	1.50	
18	0.00	1.00	0.66	0.76	1.96	2.26	
25	0.50	0.71	1.48	1.71	3.44	3.97	
35	1.00	0.50	3.00	3.47	6.44	7.44	
45	1.50	0.35	4.33	5.01	10.77	12.45	
60	2.00	0.25	8.19	9.48	18.96	21.93	
80	2.50	0.18	10.45	12.09	29.41	34.02	
120	3.00	0.13	14.62	16.92	44.03	50.94	
170	3.50	0.09	20.60	23.84	64.63	74.78	
200	3.75	0.07	9.39	10.87	74.02	85.65	
230	4.00	0.06	3.28	3.80	77.30	89.45	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.71	3.51	2.97	2.13	1.69	0.65	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.56	0.17	1.06	-1.56	6.79		

Granularmetric Report

Depths and elevations based on measured values



Coastal Planning & Engineering
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FL 33431
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Project Name: St. Lucie Vibracores

Sample Name: SLVC-06-10 #4

Analysis Date: 05-30-06

Analyzed By: AU

Easting (ft):

914,492

Northing (ft):

1,080,875

Coordinate System:

Florida State Plane East

Elevation (ft):

-41.1 NAVD 88

USCS:

SW

Munsell:

Wet - N-4/0

Dry - N-4/0

Washed - N-5/0

Comments:

Dry Weight (g):

82.27

Wash Weight (g):

79.04

Pan Retained (g):

0.09

Sieve Loss (%):

0.09

Fines (%):

#200 - 4.78

#230 - 4.14

Organics (%):

Carbonates (%):

Shell Hash (%):

5

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	0.48	0.58	0.48	0.58
5/16"	-3.00	8.00	0.64	0.78	1.12	1.36
3.5	-2.50	5.66	1.20	1.46	2.32	2.82
4	-2.25	4.76	0.57	0.69	2.89	3.51
5	-2.00	4.00	0.99	1.20	3.88	4.71
7	-1.50	2.83	2.76	3.35	6.64	8.06
10	-1.00	2.00	3.59	4.36	10.23	12.42
14	-0.50	1.41	5.90	7.17	16.13	19.59
18	0.00	1.00	6.31	7.67	22.44	27.26
25	0.50	0.71	8.55	10.39	30.99	37.65
35	1.00	0.50	9.59	11.66	40.58	49.31
45	1.50	0.35	8.02	9.75	48.60	59.06
60	2.00	0.25	9.94	12.08	58.54	71.14
80	2.50	0.18	9.19	11.17	67.73	82.31
120	3.00	0.13	6.12	7.44	73.85	89.75
170	3.50	0.09	3.12	3.79	76.97	93.54
200	3.75	0.07	1.38	1.68	78.35	95.22
230	4.00	0.06	0.53	0.64	78.88	95.86

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.72

2.61

2.17

1.04

-0.15

-0.75

-1.96

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.83

0.56

1.57

-0.44

2.76

GRANULARMETRIC REPORT ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06

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: St. Lucie Vibracores

Sample Name: SLVC-06-10 #5

Analysis Date: 05-30-06

Analyzed By: AU

Easting (ft):

914,492

Northing (ft):

1,080,875

Coordinate System:

Florida State Plane East

Elevation (ft):

-43.0 NAVD 88

USCS:

SM

Munsell:

Wet - 5Y-5/1
Dry - 5Y-6/1
Washed - 5Y-6/1

Comments:

Dry Weight (g):

91.41

Wash Weight (g):

83.58

Pan Retained (g):

0.04

Sieve Loss (%):

1.24

Fines (%):

#200 - 15.54
#230 - 9.84

Organics (%):

Carbonates (%):

Shell Hash (%):

3

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	0.28	0.31	0.28	0.31
3.5	-2.50	5.66	0.71	0.78	0.99	1.09
4	-2.25	4.76	0.17	0.19	1.16	1.28
5	-2.00	4.00	0.37	0.40	1.53	1.68
7	-1.50	2.83	1.16	1.27	2.69	2.95
10	-1.00	2.00	1.73	1.89	4.42	4.84
14	-0.50	1.41	2.00	2.19	6.42	7.03
18	0.00	1.00	1.49	1.63	7.91	8.66
25	0.50	0.71	1.41	1.54	9.32	10.20
35	1.00	0.50	1.09	1.19	10.41	11.39
45	1.50	0.35	0.62	0.68	11.03	12.07
60	2.00	0.25	0.65	0.71	11.68	12.78
80	2.50	0.18	0.63	0.69	12.31	13.47
120	3.00	0.13	1.79	1.96	14.10	15.43
170	3.50	0.09	40.14	43.91	54.24	59.34
200	3.75	0.07	22.96	25.12	77.20	84.46
230	4.00	0.06	5.21	5.70	82.41	90.16

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.75

3.66

3.39

3.11

3.01

-0.96

Moment
Statistics

Mean Phi
2.83

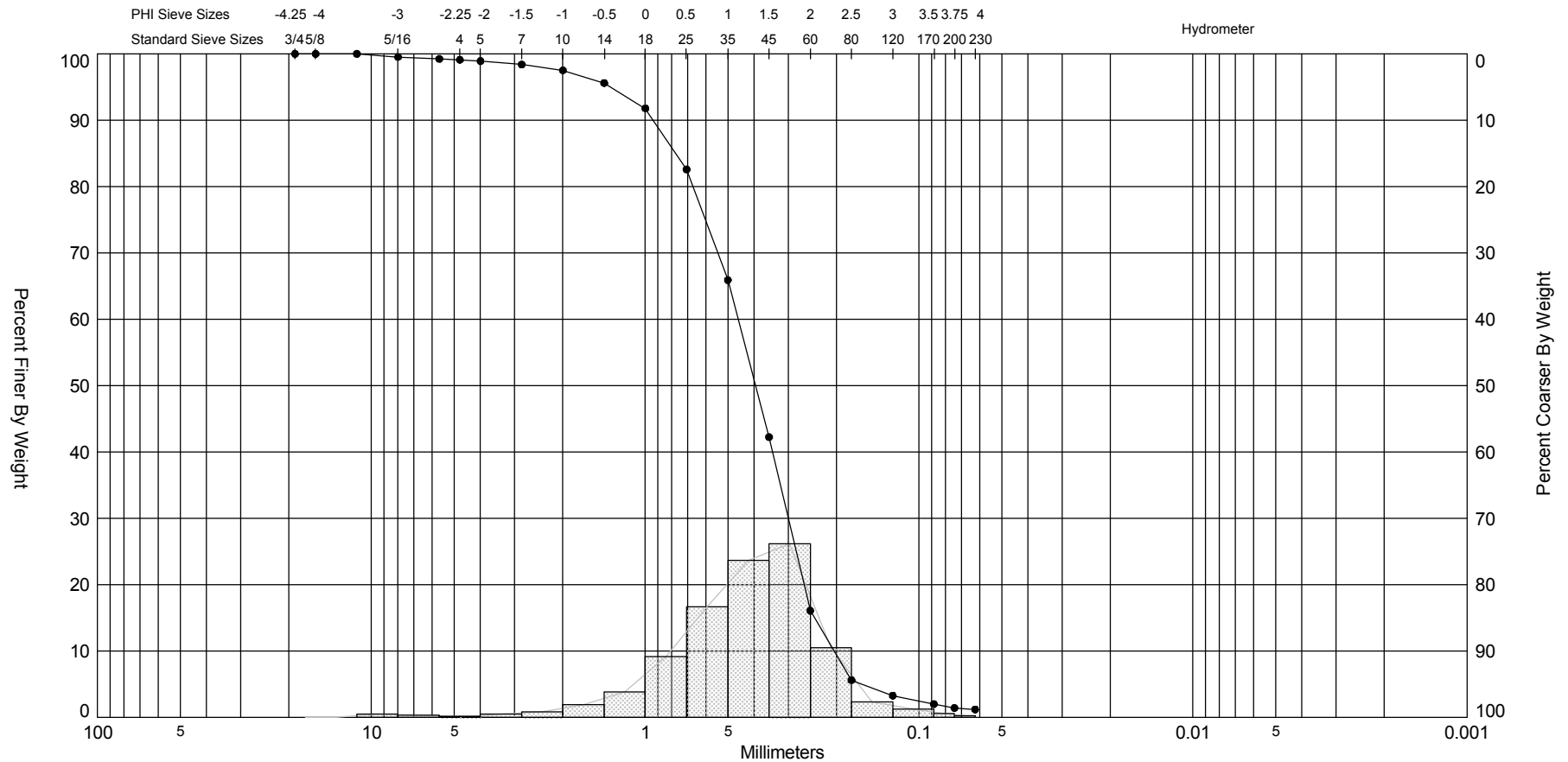
Mean mm
0.14

Sorting
1.49


Skewness
-2.33

Kurtosis
7.32

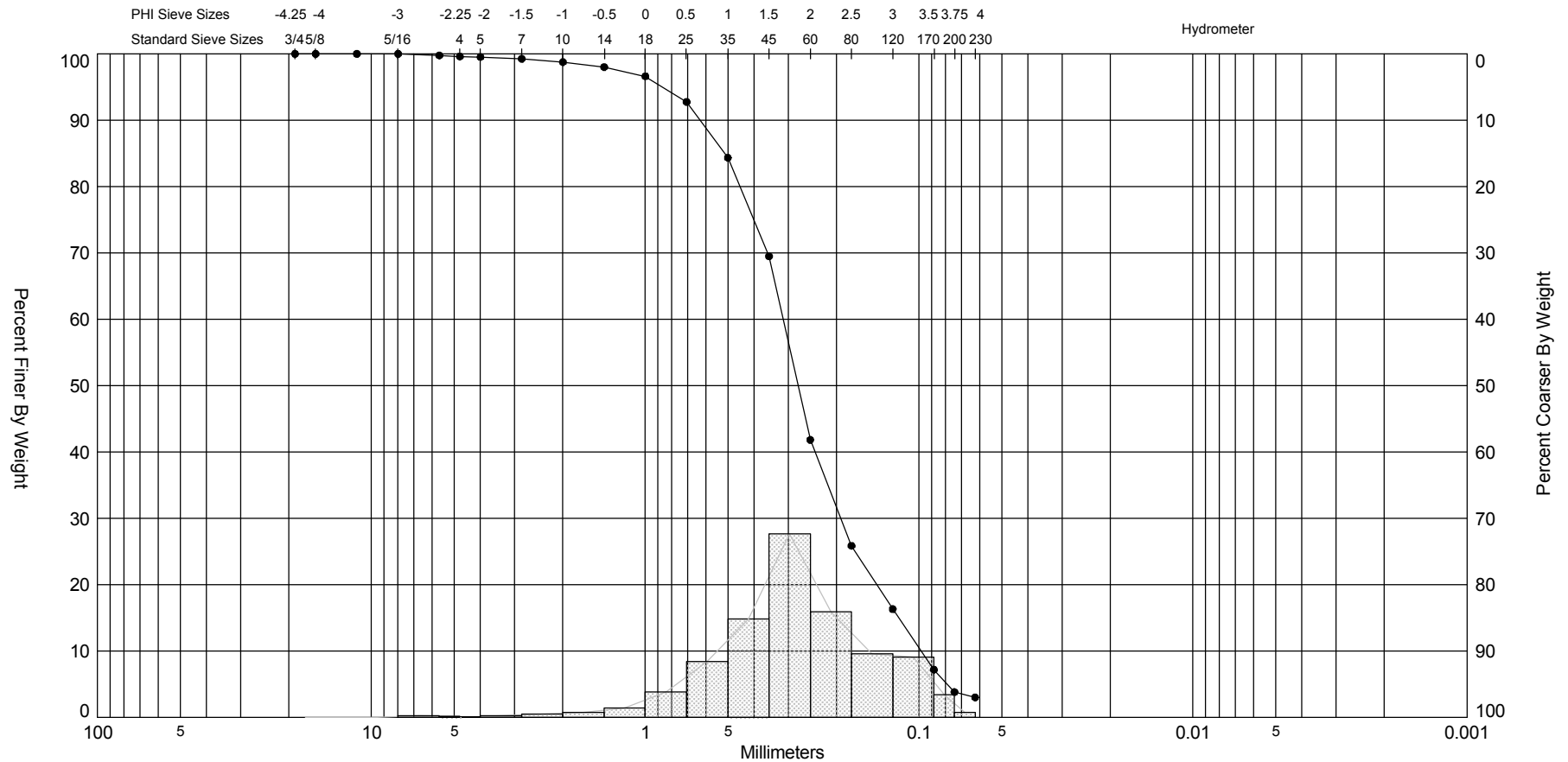
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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	
SLVC-06-10 #1	—●—	-34.4	SW	#200 - 1.41 #230 - 1.20			1.34	1.21	-1.03	6.24	0.95	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-30-06
Depths and elevations based on measured values												Analyzed By:	JF
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,492
												Northing (Y, ft):	1,080,875
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06





Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

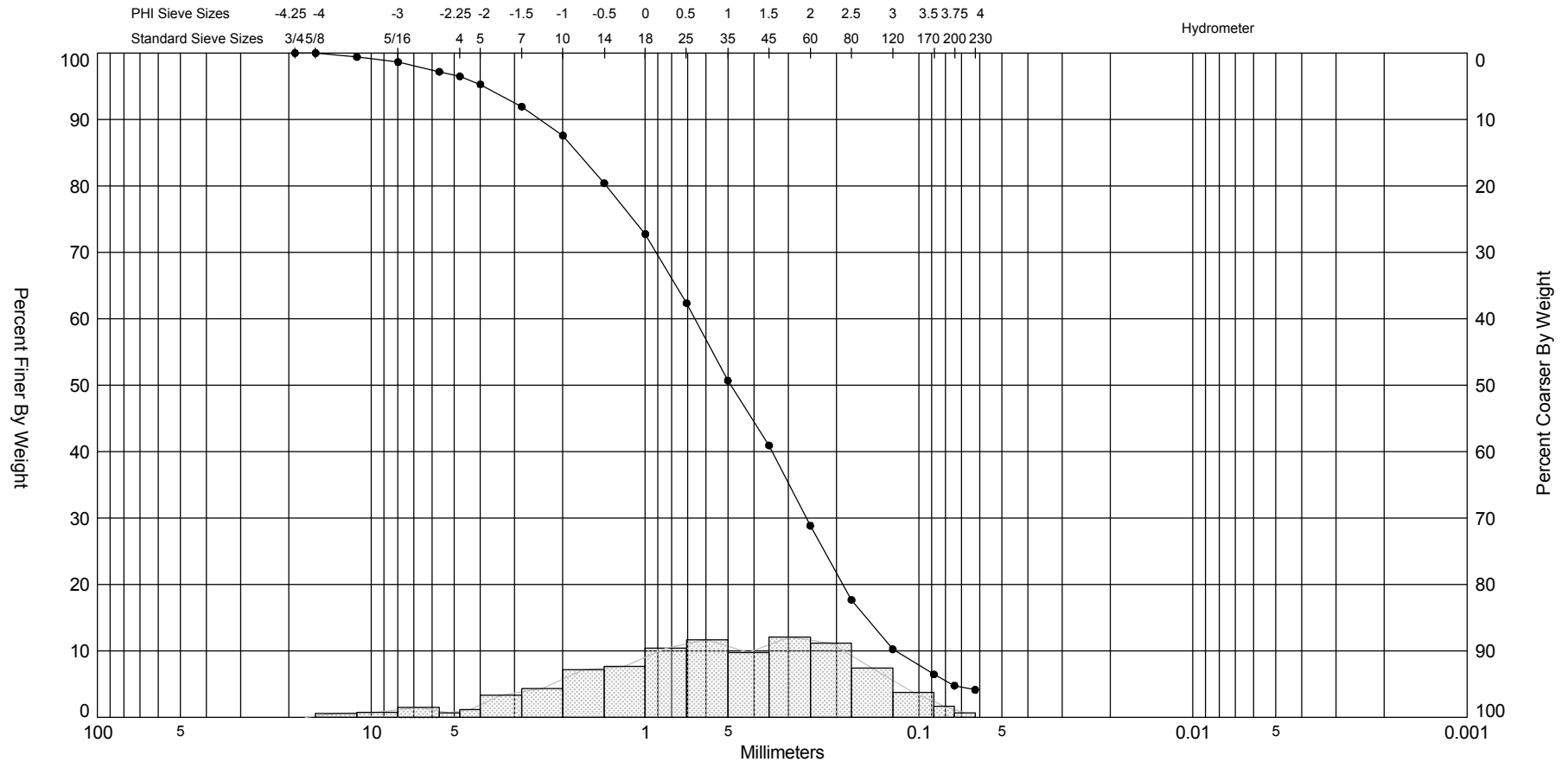
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-10 #2	—●—	-37.9	SW	#200 - 3.81 #230 - 3.02			1.85	1.84	-0.64	4.74	1	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-26-06
Depths and elevations based on measured values												Analyzed By:	JF
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,492
												Northing (Y, ft):	1,080,875
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88



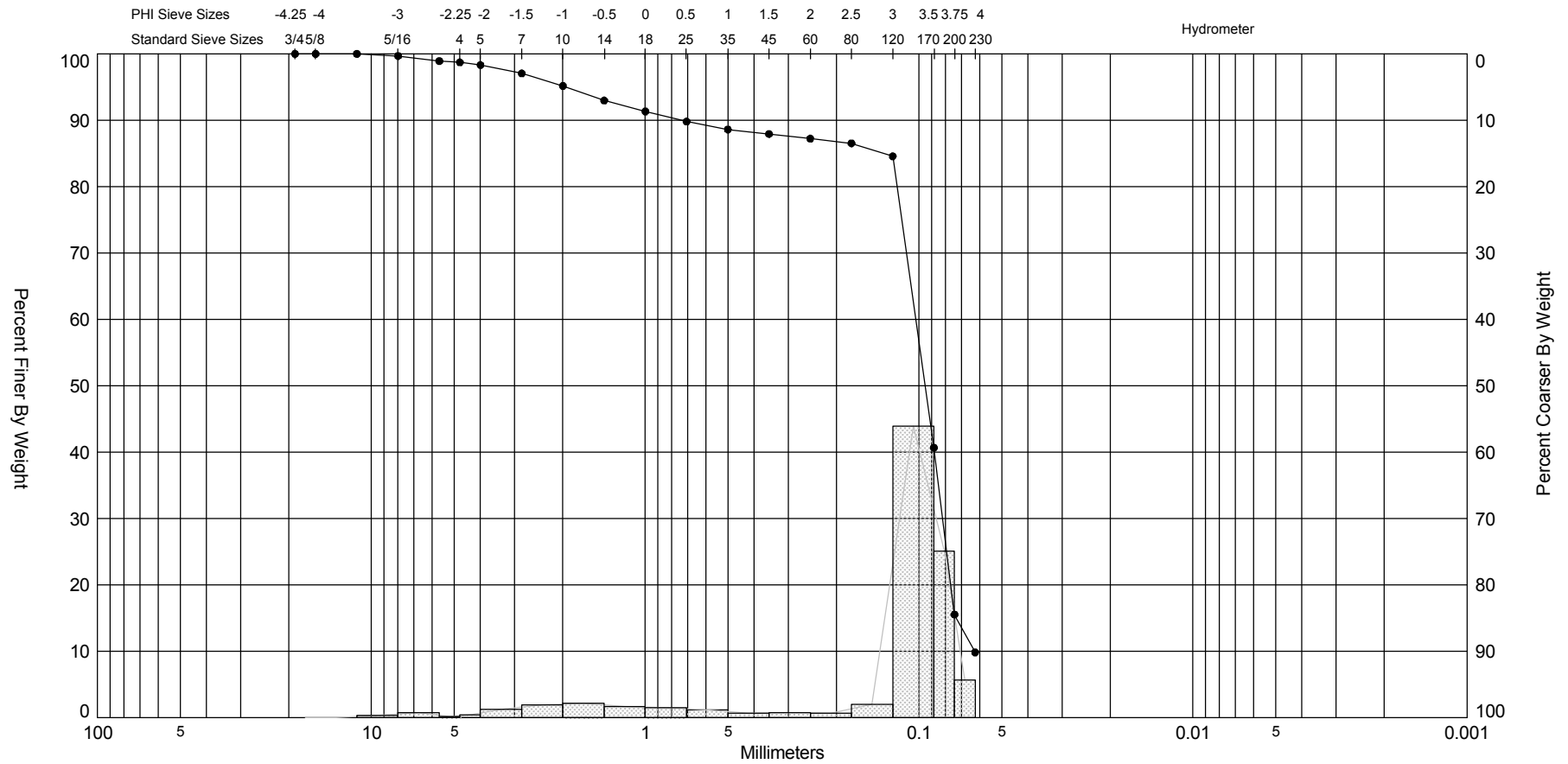
Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-10 #3		-39.7	SM	#200 - 14.35 #230 - 10.55			2.97	2.56	-1.56	6.79	1.06	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-08-06
Depths and elevations based on measured values												Analyzed By:	da
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,492
												Northing (Y, ft):	1,080,875
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88


SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06



SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06



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	
SLVC-06-10 #5	—●—	-43.0	SM	#200 - 15.54 #230 - 9.84			3.39	2.83	-2.33	7.32	1.49	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-30-06
Depths and elevations based on measured values												Analyzed By:	AU
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,492
												Northing (Y, ft):	1,080,875
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88