

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-06-04 #1

Analysis Date: 05-26-06

Analyzed By: AU

Easting (ft):

914,035

Northing (ft):

1,086,185

Coordinate System:

Florida State Plane East

Elevation (ft):

-36.0 NAVD 88

USCS:

SW

Munsell:

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

Comments:

Dry Weight (g):

86.29

Wash Weight (g):

84.83

Pan Retained (g):

0.07

Sieve Loss (%):

0.08

Fines (%):

#200 - 2.09
#230 - 1.86

Organics (%):

Carbonates (%):

Shell Hash (%):

14

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

2.20

2.55

2.20

2.55

5/16"

-3.00

8.00

2.38

2.76

4.58

5.31

3.5

-2.50

5.66

2.61

3.02

7.19

8.33

4

-2.25

4.76

0.97

1.12

8.16

9.45

5

-2.00

4.00

1.28

1.48

9.44

10.93

7

-1.50

2.83

2.26

2.62

11.70

13.55

10

-1.00

2.00

2.90

3.36

14.60

16.91

14

-0.50

1.41

4.54

5.26

19.14

22.17

18

0.00

1.00

5.90

6.84

25.04

29.01

25

0.50

0.71

9.98

11.57

35.02

40.58

35

1.00

0.50

13.76

15.95

48.78

56.53

45

1.50

0.35

15.38

17.82

64.16

74.35

60

2.00

0.25

14.85

17.21

79.01

91.56

80

2.50

0.18

3.98

4.61

82.99

96.17

120

3.00

0.13

0.60

0.70

83.59

96.87

170

3.50

0.09

0.44

0.51

84.03

97.38

200

3.75

0.07

0.46

0.53

84.49

97.91

230

4.00

0.06

0.20

0.23

84.69

98.14

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.37

1.78

1.52

0.80

-0.29

-1.14

-3.06

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.38

0.77

1.56

-0.97

3.44

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
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FL 33431
ph (561) 391-8102
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Project Name: St. Lucie Vibracores

Sample Name: SLVC-06-04 #2

Analysis Date: 05-27-06

Analyzed By: AS

Easting (ft):

914,035

Northing (ft):

1,086,185

Coordinate System:

Florida State Plane East

Elevation (ft):

-38.9 NAVD 88

USCS:

SW

Munsell:

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

Comments:

Dry Weight (g):

85.22

Wash Weight (g):

83.82

Pan Retained (g):

0.03

Sieve Loss (%):

0.01

Fines (%):

#200 - 1.85
#230 - 1.70

Organics (%):

Carbonates (%):

Shell Hash (%):

6

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	2.56	3.00	2.56	3.00
5/16"	-3.00	8.00	0.08	0.09	2.64	3.09
3.5	-2.50	5.66	0.63	0.74	3.27	3.83
4	-2.25	4.76	0.21	0.25	3.48	4.08
5	-2.00	4.00	0.32	0.38	3.80	4.46
7	-1.50	2.83	1.07	1.26	4.87	5.72
10	-1.00	2.00	1.27	1.49	6.14	7.21
14	-0.50	1.41	2.69	3.16	8.83	10.37
18	0.00	1.00	3.84	4.51	12.67	14.88
25	0.50	0.71	5.73	6.72	18.40	21.60
35	1.00	0.50	8.61	10.10	27.01	31.70
45	1.50	0.35	12.48	14.64	39.49	46.34
60	2.00	0.25	24.07	28.24	63.56	74.58
80	2.50	0.18	16.84	19.76	80.40	94.34
120	3.00	0.13	2.43	2.85	82.83	97.19
170	3.50	0.09	0.58	0.68	83.41	97.87
200	3.75	0.07	0.24	0.28	83.65	98.15
230	4.00	0.06	0.13	0.15	83.78	98.30

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.62

2.24

2.01

1.56

0.67

0.08

-1.79

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.12


0.46


1.38

-1.75

6.41

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-06-04 #3							
Analysis Date: 06-06-06							
Analyzed By: JF							
Easting (ft): <div style="text-align: center;">914,035</div>		Northing (ft): <div style="text-align: center;">1,086,185</div>		Coordinate System: <div style="text-align: center;">Florida State Plane East</div>		Elevation (ft): <div style="text-align: center;">-42.5 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: Wet - 2.5Y-4/1 Dry - 5Y-5/1 Washed - 5Y-5/1		Comments:			
Dry Weight (g): <div style="text-align: center;">97.35</div>	Wash Weight (g): <div style="text-align: center;">93.60</div>	Pan Retained (g): <div style="text-align: center;">0.10</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 5.12 #230 - 3.94	Organics (%):	Carbonates (%):	Shell Hash (%): <div style="text-align: center;">5</div>
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	1.17	1.20	1.17	1.20	
7/16"	-3.50	11.31	0.81	0.83	1.98	2.03	
5/16"	-3.00	8.00	0.10	0.10	2.08	2.13	
3.5	-2.50	5.66	0.65	0.67	2.73	2.80	
4	-2.25	4.76	0.57	0.59	3.30	3.39	
5	-2.00	4.00	0.50	0.51	3.80	3.90	
7	-1.50	2.83	1.06	1.09	4.86	4.99	
10	-1.00	2.00	1.56	1.60	6.42	6.59	
14	-0.50	1.41	3.32	3.41	9.74	10.00	
18	0.00	1.00	5.08	5.22	14.82	15.22	
25	0.50	0.71	9.81	10.08	24.63	25.30	
35	1.00	0.50	14.57	14.97	39.20	40.27	
45	1.50	0.35	15.70	16.13	54.90	56.40	
60	2.00	0.25	17.09	17.56	71.99	73.96	
80	2.50	0.18	7.97	8.19	79.96	82.15	
120	3.00	0.13	4.13	4.24	84.09	86.39	
170	3.50	0.09	5.06	5.20	89.15	91.59	
200	3.75	0.07	3.20	3.29	92.35	94.88	
230	4.00	0.06	1.15	1.18	93.50	96.06	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.78	2.72	2.06	1.30	0.49	0.04	-1.50	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.12	0.46	1.47	-0.94	4.96		

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-06-04 #4							
Analysis Date: 06-07-06							
Analyzed By: DA							
Easting (ft): 914,035		Northing (ft): 1,086,185		Coordinate System: Florida State Plane East		Elevation (ft): -43.9 NAVD 88	
USCS: SW-SC		Munsell: Wet - 2.5Y-4/1 Dry - N-5/0 Washed - N-5/0		Comments:			
Dry Weight (g): 87.23	Wash Weight (g): 82.45	Pan Retained (g): 0.24	Sieve Loss (%): 0.02	Fines (%): #200 - 7.65 #230 - 5.77	Organics (%):	Carbonates (%):	Shell Hash (%): 7
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	0.53	0.61	0.53	0.61	
5/16"	-3.00	8.00	0.41	0.47	0.94	1.08	
3.5	-2.50	5.66	1.76	2.02	2.70	3.10	
4	-2.25	4.76	0.61	0.70	3.31	3.80	
5	-2.00	4.00	0.99	1.13	4.30	4.93	
7	-1.50	2.83	2.11	2.42	6.41	7.35	
10	-1.00	2.00	3.07	3.52	9.48	10.87	
14	-0.50	1.41	5.23	6.00	14.71	16.87	
18	0.00	1.00	5.69	6.52	20.40	23.39	
25	0.50	0.71	9.91	11.36	30.31	34.75	
35	1.00	0.50	12.52	14.35	42.83	49.10	
45	1.50	0.35	11.45	13.13	54.28	62.23	
60	2.00	0.25	12.04	13.80	66.32	76.03	
80	2.50	0.18	5.92	6.79	72.24	82.82	
120	3.00	0.13	2.36	2.71	74.60	85.53	
170	3.50	0.09	3.13	3.59	77.73	89.12	
200	3.75	0.07	2.82	3.23	80.55	92.35	
230	4.00	0.06	1.64	1.88	82.19	94.23	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	2.72	1.96	1.03	0.07	-0.57	-1.99	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.84	0.56	1.54	-0.37	3.18		

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-06-04 #5

Analysis Date: 05-27-06

Analyzed By: AS

Easting (ft):

914,035

Northing (ft):

1,086,185

Coordinate System:

Florida State Plane East

Elevation (ft):

-44.9 NAVD 88

USCS:

SM-SC

Munsell:

Wet - 5Y-5/1

Dry - 5Y-7/1

Washed - 5Y-7/1

Comments:

Dry Weight (g):

74.52

Wash Weight (g):

49.71

Pan Retained (g):

0.77

Sieve Loss (%):

0.27

Fines (%):

#200 - 40.51

#230 - 34.59

Organics (%):

Carbonates (%):

Shell Hash (%):

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	0.05	0.07	0.05	0.07
4	-2.25	4.76	0.00	0.00	0.05	0.07
5	-2.00	4.00	0.00	0.00	0.05	0.07
7	-1.50	2.83	0.18	0.24	0.23	0.31
10	-1.00	2.00	0.33	0.44	0.56	0.75
14	-0.50	1.41	0.51	0.68	1.07	1.43
18	0.00	1.00	0.62	0.83	1.69	2.26
25	0.50	0.71	0.74	0.99	2.43	3.25
35	1.00	0.50	0.74	0.99	3.17	4.24
45	1.50	0.35	0.98	1.32	4.15	5.56
60	2.00	0.25	1.42	1.91	5.57	7.47
80	2.50	0.18	2.68	3.60	8.25	11.07
120	3.00	0.13	5.58	7.49	13.83	18.56
170	3.50	0.09	15.14	20.32	28.97	38.88
200	3.75	0.07	15.36	20.61	44.33	59.49
230	4.00	0.06	4.41	5.92	48.74	65.41

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.63

3.16

2.83

1.29

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

3

0.13

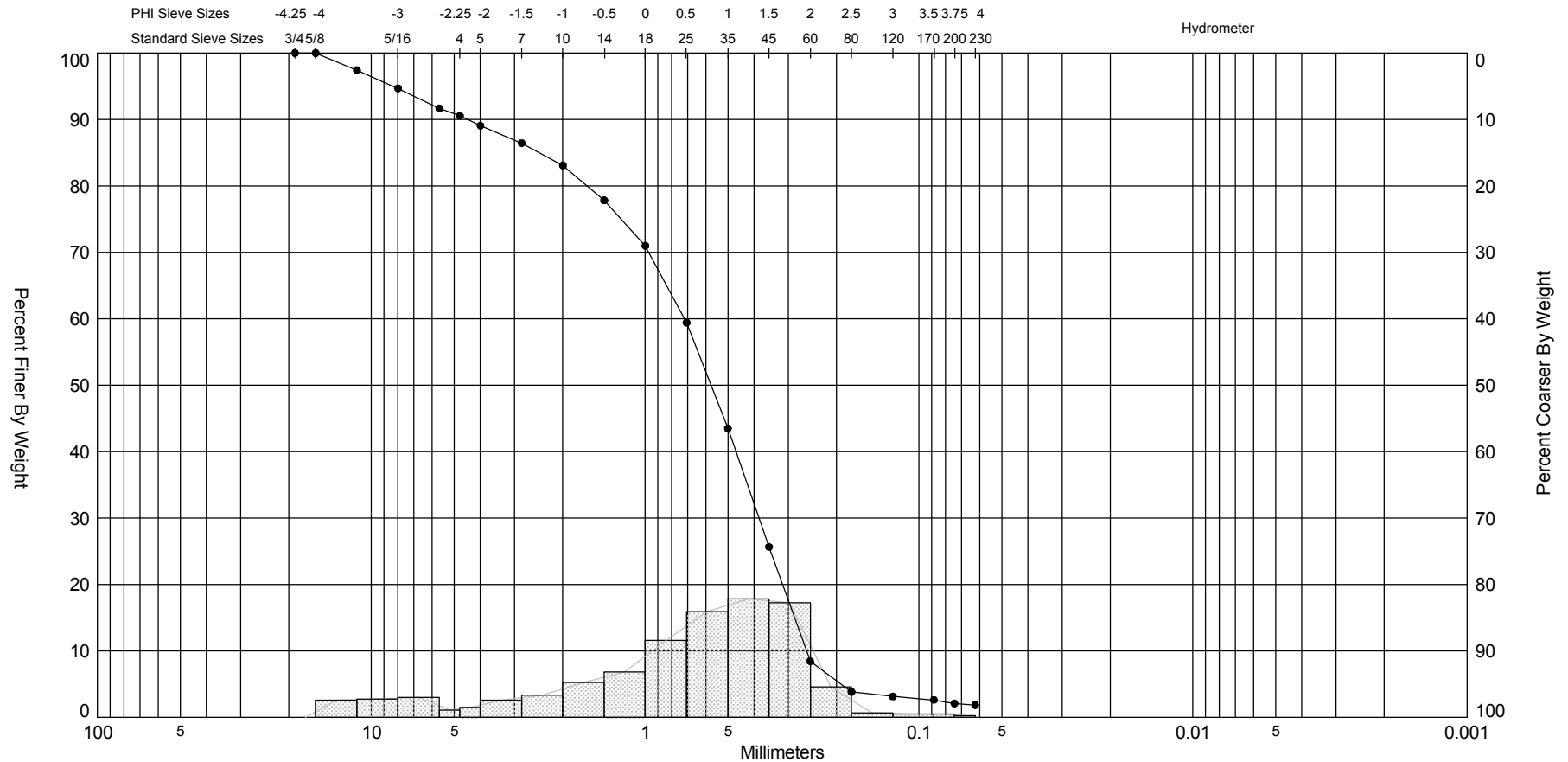
1.03

-2.39


9.07

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

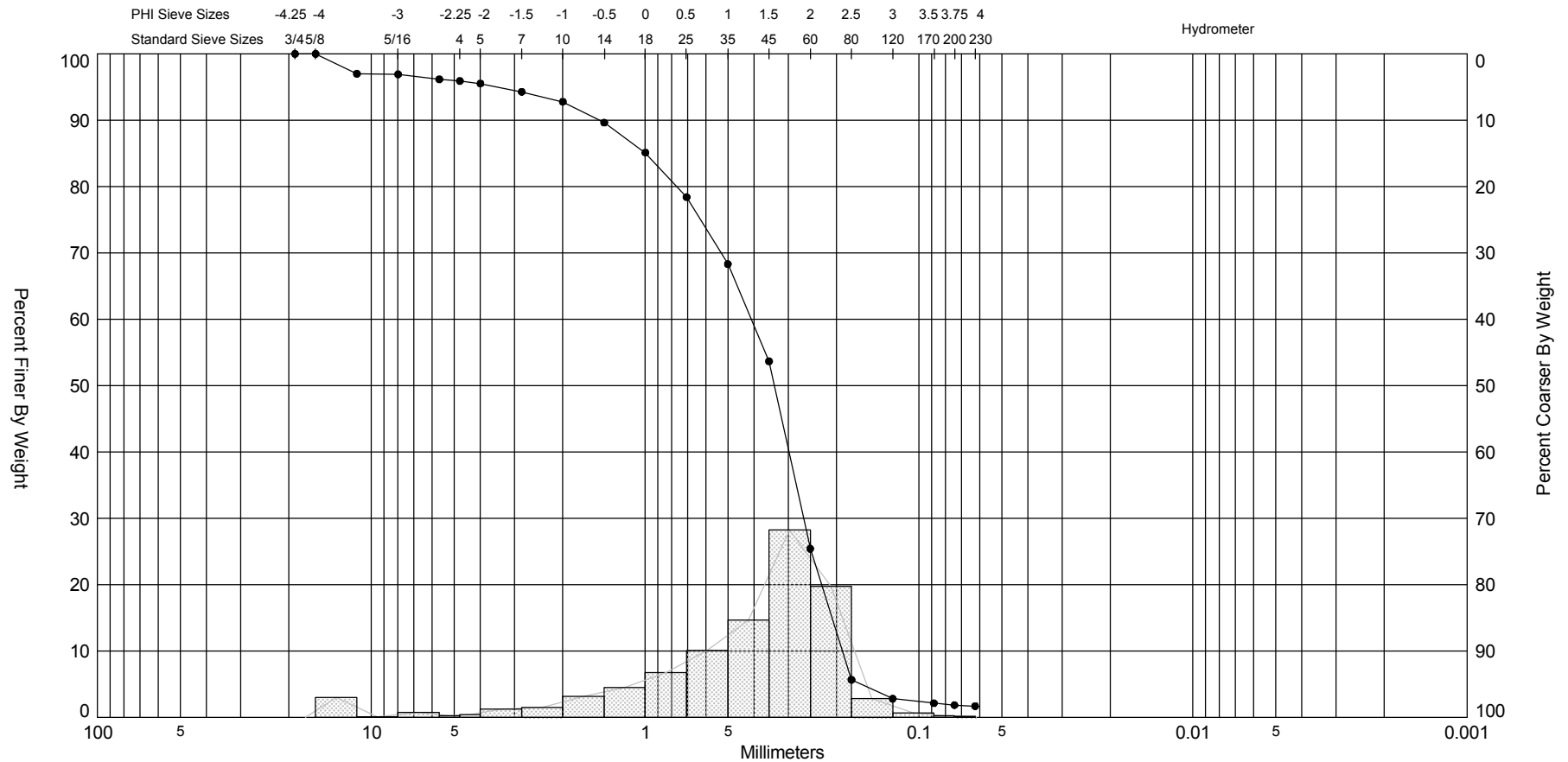
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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-06-04 #1	—●—	-36.0	SW	#200 - 2.09 #230 - 1.86			0.8	0.38	-0.97	3.44	1.56	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-26-06
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):	914,035
												Northing (Y, ft):	1,086,185
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

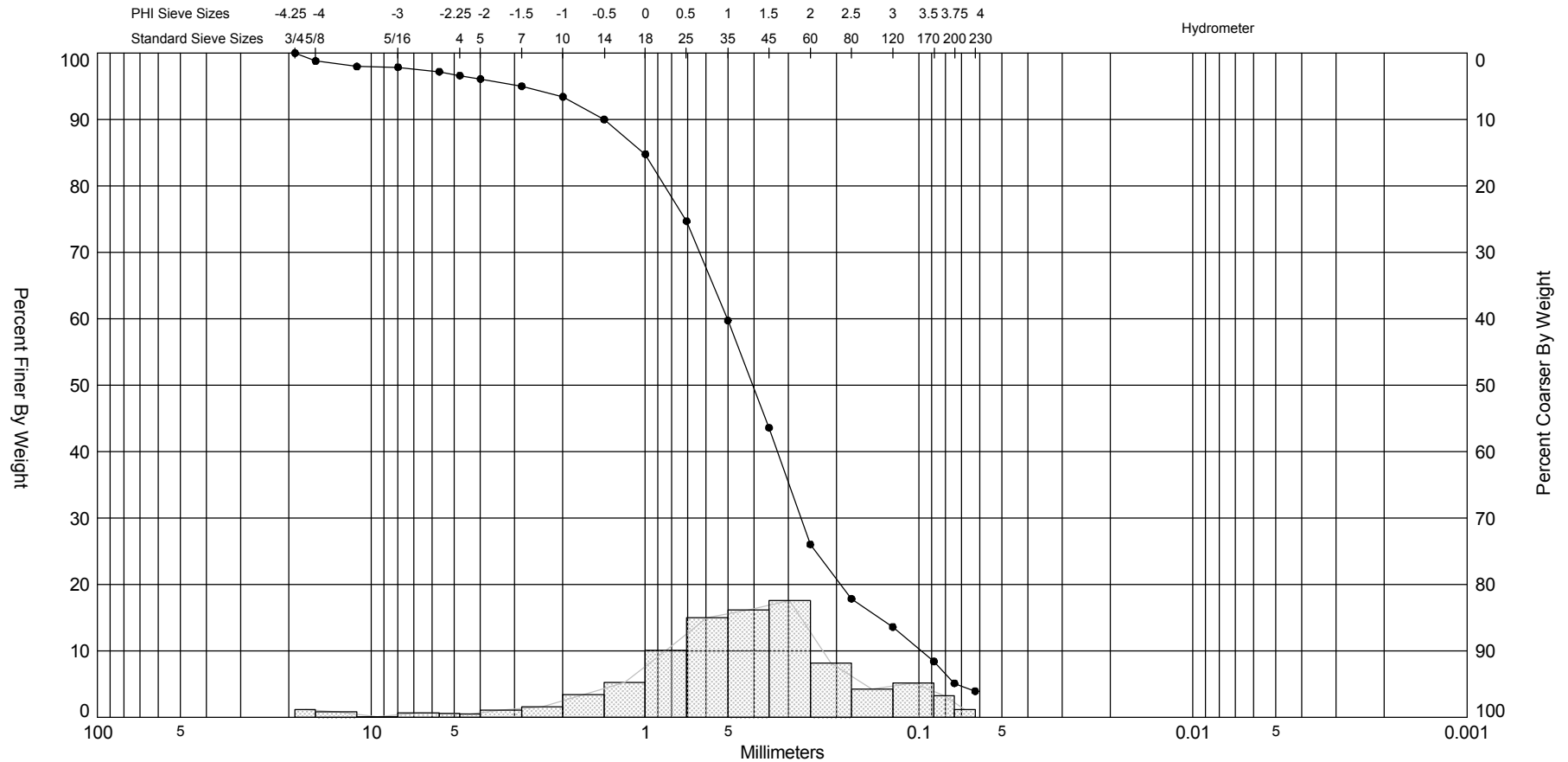
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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-06-04 #2	—●—	-38.9	SW	#200 - 1.85 #230 - 1.70			1.56	1.12	-1.75	6.41	1.38	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-27-06
Depths and elevations based on measured values												Analyzed By:	AS
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,035
												Northing (Y, ft):	1,086,185
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

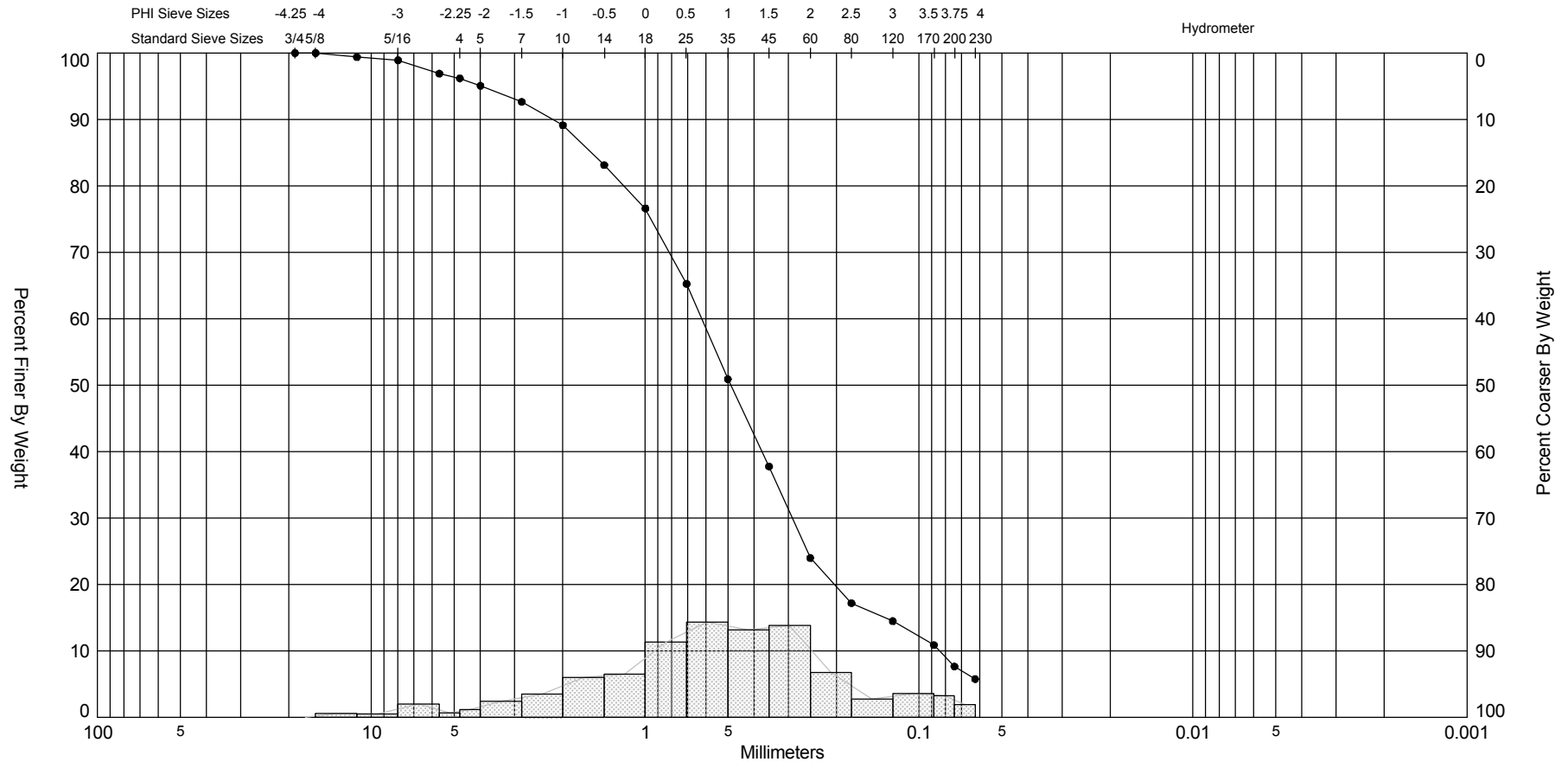
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

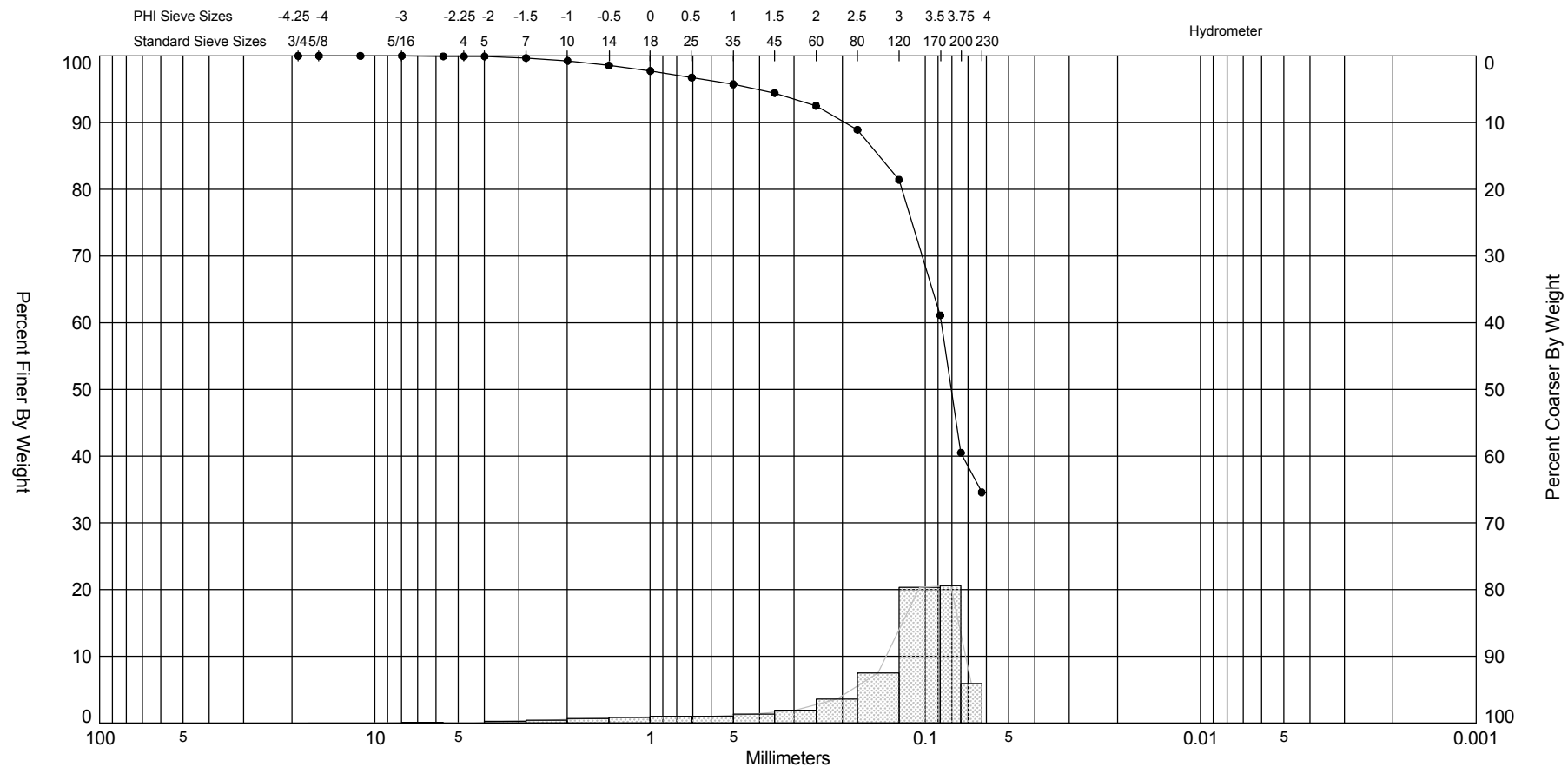
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-04 #3	—●—	-42.5	SW-SM	#200 - 5.12 #230 - 3.94			1.3	1.12	-0.94	4.96	1.47	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-06-06
Depths and elevations based on 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):	914,035
												Northing (Y, ft):	1,086,185
												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-06-04 #4	—●—	-43.9	SW-SC	#200 - 7.65 #230 - 5.77			1.03	0.84	-0.37	3.18	1.54	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-07-06
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):	914,035
												Northing (Y, ft):	1,086,185
												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-06-04 #5		-44.9	SM-SC	#200 - 40.51 #230 - 34.59			3.63	3	-2.39	9.07	1.03	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	05-27-06
Depths and elevations based on measured values												Analyzed By:	AS
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	914,035
												Northing (Y, ft):	1,086,185
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88