

# 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-06-23 #1

Analysis Date: 06-23-06

Analyzed By: RS

Easting (ft):

913,141

Northing (ft):

1,097,794

Coordinate System:

Florida State Plane East

Elevation (ft):

-35.6 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/2

Dry - 2.5Y-6/2

Washed - 2.5Y-6/2

Comments:

Dry Weight (g):

83.29

Wash Weight (g):

81.82

Pan Retained (g):

0.04

Sieve Loss (%):

0.04

Fines (%):

#200 - 2.00  
#230 - 1.84

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	0.14	0.17	0.14	0.17
3.5	-2.50	5.66	0.40	0.48	0.54	0.65
4	-2.25	4.76	0.13	0.16	0.67	0.81
5	-2.00	4.00	0.37	0.44	1.04	1.25
7	-1.50	2.83	0.80	0.96	1.84	2.21
10	-1.00	2.00	1.37	1.64	3.21	3.85
14	-0.50	1.41	2.42	2.91	5.63	6.76
18	0.00	1.00	3.82	4.59	9.45	11.35
25	0.50	0.71	7.95	9.54	17.40	20.89
35	1.00	0.50	14.34	17.22	31.74	38.11
45	1.50	0.35	20.79	24.96	52.53	63.07
60	2.00	0.25	19.99	24.00	72.52	87.07
80	2.50	0.18	6.30	7.56	78.82	94.63
120	3.00	0.13	1.54	1.85	80.36	96.48
170	3.50	0.09	0.78	0.94	81.14	97.42
200	3.75	0.07	0.48	0.58	81.62	98.00
230	4.00	0.06	0.13	0.16	81.75	98.16

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.60

1.94

1.75

1.24

0.62

0.24

-0.80

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.08

0.47

0.99

-0.94

5.14

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

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Project Name: St. Lucie Vibracores

Sample Name: SLVC-06-23 #2

Analysis Date: 06-12-06

Analyzed By: DA

Easting (ft):

913,141

Northing (ft):

1,097,794

Coordinate System:

Florida State Plane East

Elevation (ft):

-38.1 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/2  
Dry - 5Y-5/1  
Washed - 5Y-5/1

Comments:

Dry Weight (g):

111.53

Wash Weight (g):

108.75

Pan Retained (g):

0.07

Sieve Loss (%):

0.22

Fines (%):

#200 - 3.08  
#230 - 2.77

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

0.91

0.82

0.91

0.82

5/16"

-3.00

8.00

0.73

0.65

1.64

1.47

3.5

-2.50

5.66

1.38

1.24

3.02

2.71

4

-2.25

4.76

0.75

0.67

3.77

3.38

5

-2.00

4.00

0.61

0.55

4.38

3.93

7

-1.50

2.83

1.68

1.51

6.06

5.44

10

-1.00

2.00

2.89

2.59

8.95

8.03

14

-0.50

1.41

4.60

4.12

13.55

12.15

18

0.00

1.00

5.80

5.20

19.35

17.35

25

0.50

0.71

11.54

10.35

30.89

27.70

35

1.00

0.50

18.48

16.57

49.37

44.27

45

1.50

0.35

21.58

19.35

70.95

63.62

60

2.00

0.25

22.60

20.26

93.55

83.88

80

2.50

0.18

9.85

8.83

103.40

92.71

120

3.00

0.13

3.04

2.73

106.44

95.44

170

3.50

0.09

1.19

1.07

107.63

96.51

200

3.75

0.07

0.46

0.41

108.09

96.92

230

4.00

0.06

0.35

0.31

108.44

97.23

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.92

2.01

1.78

1.15

0.37

-0.13

-1.65

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.89


0.54

1.27

-1.12

4.85

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

<b>Granularmetric Report</b> Depths and elevations based on measured values				 <b>Coastal Planning &amp; Engineering</b> 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-06-23 #3							
Analysis Date: 06-12-06							
Analyzed By: JG							
Easting (ft): <b>913,141</b>		Northing (ft): <b>1,097,794</b>		Coordinate System: <b>Florida State Plane East</b>		Elevation (ft): <b>-43.1 NAVD 88</b>	
USCS: <b>SP</b>		Munsell: Wet - 2.5Y-4/2 Dry - 5Y-5/1 Washed - 2.5Y-5/1		Comments:			
Dry Weight (g): <b>125.21</b>	Wash Weight (g): <b>120.59</b>	Pan Retained (g): <b>0.14</b>	Sieve Loss (%): <b>0.14</b>	Fines (%): <b>#200 - 4.77</b> <b>#230 - 3.96</b>	Organics (%):	Carbonates (%):	Shell Hash (%): <b>0</b>
<b>Sieve Number</b>	<b>Sieve Size (Phi)</b>	<b>Sieve Size (Millimeters)</b>	<b>Grams Retained</b>	<b>% Weight Retained</b>	<b>Cum. Grams Retained</b>	<b>C. % Weight Retained</b>	
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	0.03	0.02	0.03	0.02	
7	-1.50	2.83	0.14	0.11	0.17	0.13	
10	-1.00	2.00	0.11	0.09	0.28	0.22	
14	-0.50	1.41	0.62	0.50	0.90	0.72	
18	0.00	1.00	1.03	0.82	1.93	1.54	
25	0.50	0.71	2.76	2.20	4.69	3.74	
35	1.00	0.50	6.84	5.46	11.53	9.20	
45	1.50	0.35	14.66	11.71	26.19	20.91	
60	2.00	0.25	35.19	28.10	61.38	49.01	
80	2.50	0.18	39.93	31.89	101.31	80.90	
120	3.00	0.13	11.06	8.83	112.37	89.73	
170	3.50	0.09	4.38	3.50	116.75	93.23	
200	3.75	0.07	2.50	2.00	119.25	95.23	
230	4.00	0.06	1.02	0.81	120.27	96.04	
<b>Phi 5</b>	<b>Phi 16</b>	<b>Phi 25</b>	<b>Phi 50</b>	<b>Phi 75</b>	<b>Phi 84</b>	<b>Phi 95</b>	
3.72	2.68	2.41	2.02	1.57	1.29	0.62	
<b>Moment</b>	<b>Mean Phi</b>	<b>Mean mm</b>	<b>Sorting</b>	<b>Skewness</b>	<b>Kurtosis</b>		
<b>Statistics</b>	1.93	0.26	0.75	-0.52	4.97		

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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-06-23 #4

Analysis Date: 06-22-06

Analyzed By: RS

Easting (ft):

913,141

Northing (ft):

1,097,794

Coordinate System:

Florida State Plane East

Elevation (ft):

-46.4 NAVD 88

USCS:

SW-SM

Munsell:

Wet - N-4/0

Dry - N-4/0

Washed - N-5/0

Comments:

Dry Weight (g):

130.71

Wash Weight (g):

125.41

Pan Retained (g):

0.70

Sieve Loss (%):

0.07

Fines (%):

#200 - 6.70

#230 - 4.68

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	0.76	0.58	0.76	0.58
3.5	-2.50	5.66	0.21	0.16	0.97	0.74
4	-2.25	4.76	0.24	0.18	1.21	0.92
5	-2.00	4.00	0.11	0.08	1.32	1.00
7	-1.50	2.83	0.40	0.31	1.72	1.31
10	-1.00	2.00	0.67	0.51	2.39	1.82
14	-0.50	1.41	1.10	0.84	3.49	2.66
18	0.00	1.00	1.67	1.28	5.16	3.94
25	0.50	0.71	4.08	3.12	9.24	7.06
35	1.00	0.50	9.40	7.19	18.64	14.25
45	1.50	0.35	16.24	12.42	34.88	26.67
60	2.00	0.25	26.38	20.18	61.26	46.85
80	2.50	0.18	29.28	22.40	90.54	69.25
120	3.00	0.13	13.61	10.41	104.15	79.66
170	3.50	0.09	8.39	6.42	112.54	86.08
200	3.75	0.07	9.44	7.22	121.98	93.30
230	4.00	0.06	2.64	2.02	124.62	95.32

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.96

3.34

2.78

2.07

1.43

1.07

0.17

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.95

0.26

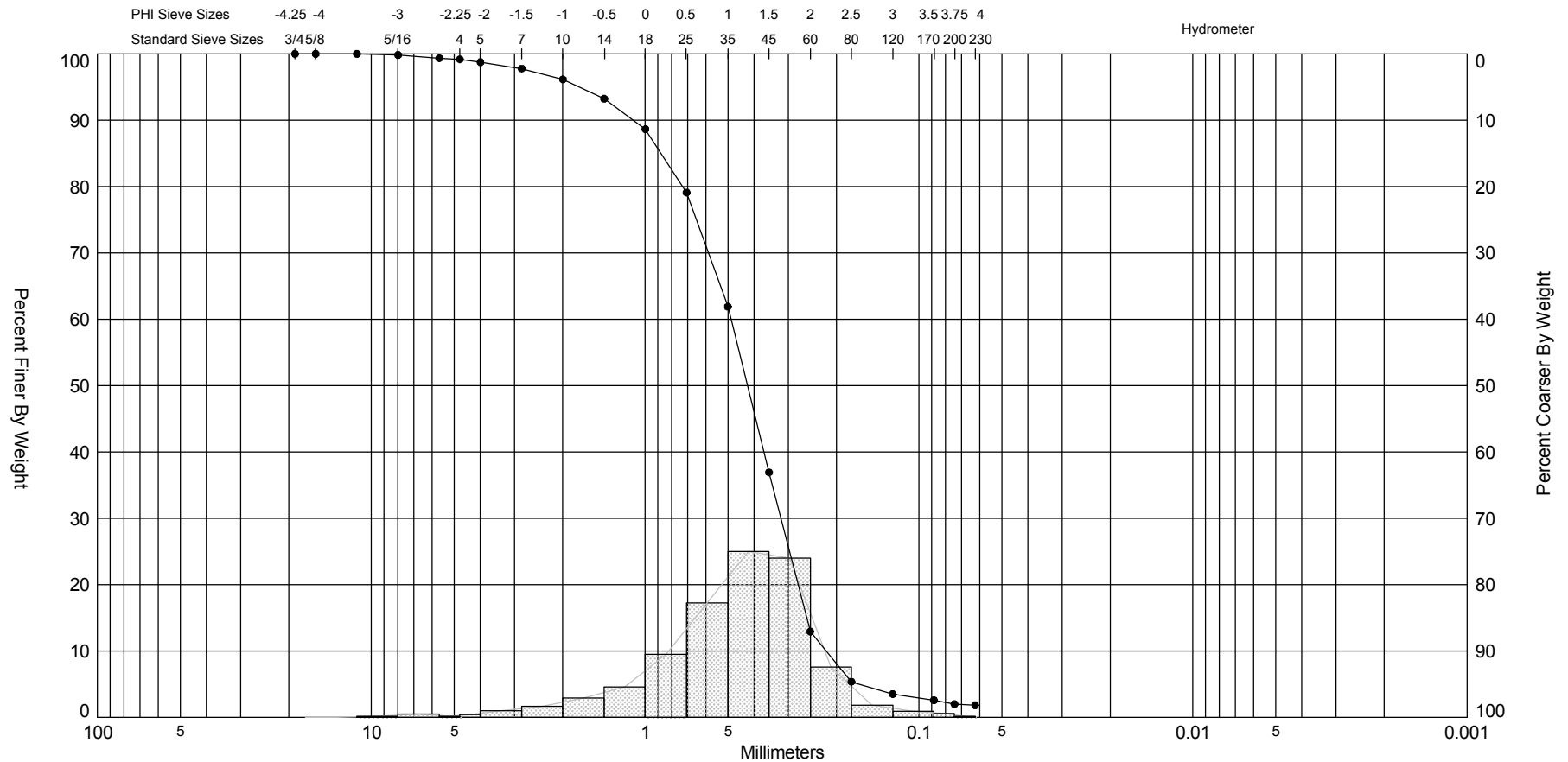
1.12

-1.09


6.2

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

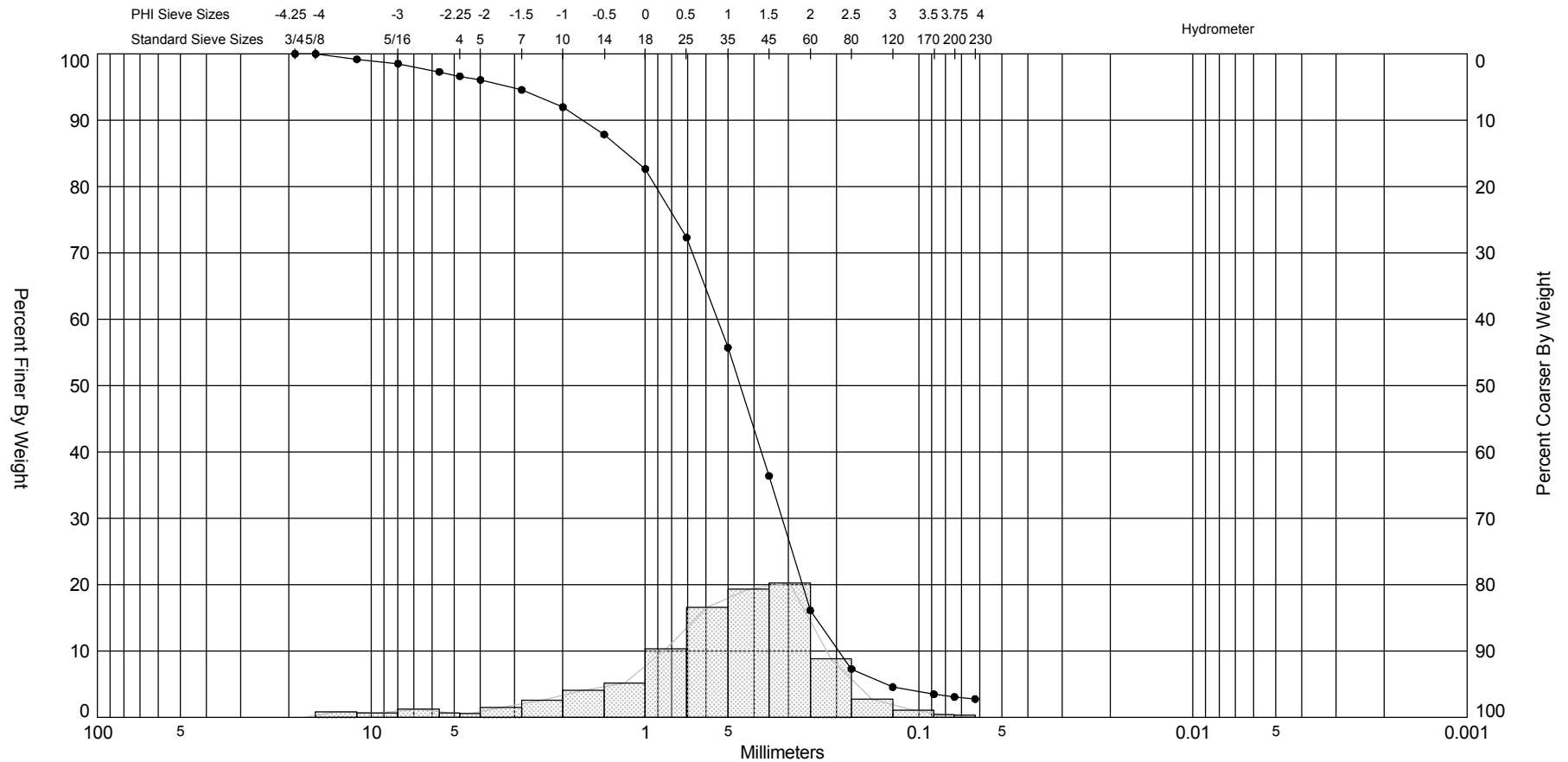
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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-06-23 #1	—●—	-35.6	SW	#200 - 2.00 #230 - 1.84			1.24	1.08	-0.94	5.14	0.99	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-23-06
Depths and elevations based on measured values												Analyzed By:	RS
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	913,141
												Northing (Y, ft):	1,097,794
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

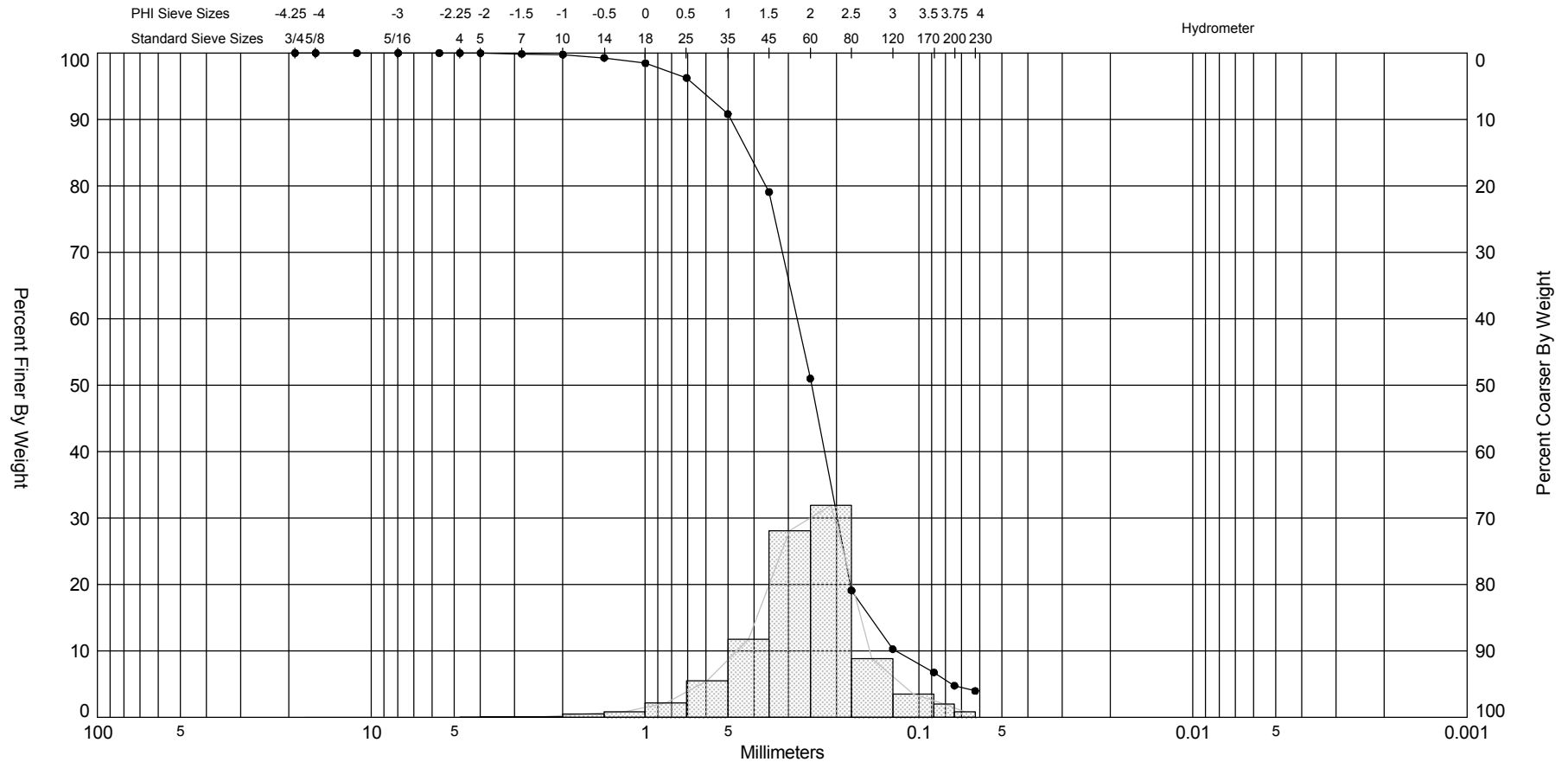
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06





Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

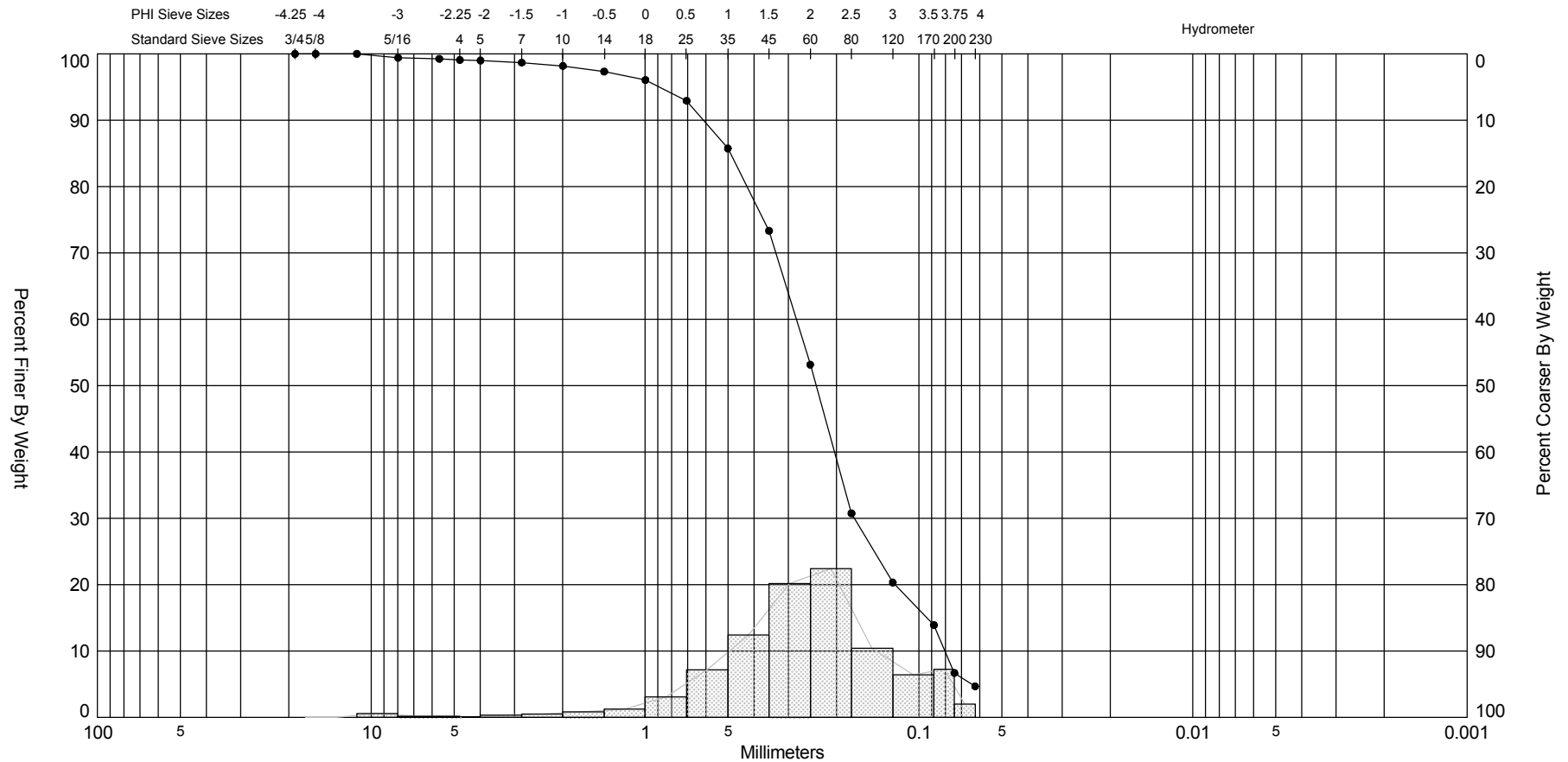
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-23 #2	—●—	-38.1	SW	#200 - 3.08 #230 - 2.77			1.15	0.89	-1.12	4.85	1.27	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-12-06
Depths and elevations based on measured 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):	913,141
												Northing (Y, ft):	1,097,794
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

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




Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-23 #3		-43.1	SP	#200 - 4.77 #230 - 3.96			2.02	1.93	-0.52	4.97	0.75	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-12-06
Depths and elevations based on measured values												Analyzed By:	JG
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	913,141
												Northing (Y, ft):	1,097,794
												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-06-23 #4	—●—	-46.4	SW-SM	#200 - 6.70 #230 - 4.68			2.07	1.95	-1.09	6.2	1.12	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-22-06
Depths and elevations based on measured values												Analyzed By:	RS
						Coastal Planning & Engineering 2481 NW Boca Raton Blvd, Boca Raton FL 33431 ph (561) 391-8102 fax (561) 391-9116						Easting (X, ft):	913,141
												Northing (Y, ft):	1,097,794
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88