

# 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-06-25 #1

Analysis Date: 06-19-06

Analyzed By: RS

Easting (ft):

912,929

Northing (ft):

1,092,262

Coordinate System:

Florida State Plane East

Elevation (ft):

-36.7 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/2

Dry - 2.5Y-5/2

Washed - 2.5Y-5/2

Comments:

Dry Weight (g):

89.63

Wash Weight (g):

88.08

Pan Retained (g):

0.01

Sieve Loss (%):

0.11

Fines (%):

#200 - 1.94  
#230 - 1.86

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	0.38	0.42	0.38	0.42
3.5	-2.50	5.66	0.21	0.23	0.59	0.65
4	-2.25	4.76	0.00	0.00	0.59	0.65
5	-2.00	4.00	0.15	0.17	0.74	0.82
7	-1.50	2.83	0.60	0.67	1.34	1.49
10	-1.00	2.00	0.68	0.76	2.02	2.25
14	-0.50	1.41	1.72	1.92	3.74	4.17
18	0.00	1.00	3.10	3.46	6.84	7.63
25	0.50	0.71	7.72	8.61	14.56	16.24
35	1.00	0.50	14.62	16.31	29.18	32.55
45	1.50	0.35	24.02	26.80	53.20	59.35
60	2.00	0.25	24.99	27.88	78.19	87.23
80	2.50	0.18	8.05	8.98	86.24	96.21
120	3.00	0.13	1.10	1.23	87.34	97.44
170	3.50	0.09	0.37	0.41	87.71	97.85
200	3.75	0.07	0.19	0.21	87.90	98.06
230	4.00	0.06	0.07	0.08	87.97	98.14

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.43

1.94

1.78

1.33

0.77

0.49

-0.38

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.18

0.44

0.87

-1.35

7.1

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-06-25 #2

Analysis Date: 06-22-06

Analyzed By: DA

Easting (ft):

912,929

Northing (ft):

1,092,262

Coordinate System:

Florida State Plane East

Elevation (ft):

-39.7 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/1

Dry - 2.5Y-5/1

Washed - 2.5Y-5/1

Comments:

Dry Weight (g):

123.71

Wash Weight (g):

119.78

Pan Retained (g):

0.22

Sieve Loss (%):

0.13

Fines (%):

#200 - 4.52  
#230 - 3.49

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	1.07	0.86	1.07	0.86
5/16"	-3.00	8.00	0.13	0.11	1.20	0.97
3.5	-2.50	5.66	0.25	0.20	1.45	1.17
4	-2.25	4.76	0.11	0.09	1.56	1.26
5	-2.00	4.00	0.19	0.15	1.75	1.41
7	-1.50	2.83	0.64	0.52	2.39	1.93
10	-1.00	2.00	1.15	0.93	3.54	2.86
14	-0.50	1.41	2.25	1.82	5.79	4.68
18	0.00	1.00	3.31	2.68	9.10	7.36
25	0.50	0.71	6.92	5.59	16.02	12.95
35	1.00	0.50	12.04	9.73	28.06	22.68
45	1.50	0.35	18.27	14.77	46.33	37.45
60	2.00	0.25	30.78	24.88	77.11	62.33
80	2.50	0.18	24.00	19.40	101.11	81.73
120	3.00	0.13	7.95	6.43	109.06	88.16
170	3.50	0.09	5.17	4.18	114.23	92.34
200	3.75	0.07	3.89	3.14	118.12	95.48
230	4.00	0.06	1.28	1.03	119.40	96.51

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.71

2.68

2.33

1.75

1.08

0.66

-0.44

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.58

0.33

1.17

-1.25

6.74

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-06-25 #3

Analysis Date: 06-19-06

Analyzed By: DA

Easting (ft):

912,929

Northing (ft):

1,092,262

Coordinate System:

Florida State Plane East

Elevation (ft):

-40.5 NAVD 88

USCS:

SW

Munsell:

Wet - 2.5Y-4/1

Dry - 2.5Y-5/1

Washed - 2.5Y-5/1

Comments:

Dry Weight (g):

91.12

Wash Weight (g):

88.76

Pan Retained (g):

0.12

Sieve Loss (%):

0.08

Fines (%):

#200 - 3.86

#230 - 2.81

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

0.72

0.79

0.72

0.79

3.5

-2.50

5.66

0.30

0.33

1.02

1.12

4

-2.25

4.76

0.12

0.13

1.14

1.25

5

-2.00

4.00

0.23

0.25

1.37

1.50

7

-1.50

2.83

0.36

0.40

1.73

1.90

10

-1.00

2.00

0.87

0.95

2.60

2.85

14

-0.50

1.41

1.88

2.06

4.48

4.91

18

0.00

1.00

2.65

2.91

7.13

7.82

25

0.50

0.71

5.37

5.89

12.50

13.71

35

1.00

0.50

9.92

10.89

22.42

24.60

45

1.50

0.35

15.00

16.46

37.42

41.06

60

2.00

0.25

26.26

28.82

63.68

69.88

80

2.50

0.18

12.71

13.95

76.39

83.83

120

3.00

0.13

4.51

4.95

80.90

88.78

170

3.50

0.09

4.31

4.73

85.21

93.51

200

3.75

0.07

2.40

2.63

87.61

96.14

230

4.00

0.06

0.96

1.05

88.57

97.19

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.64

2.52

2.18

1.66

1.01

0.61

-0.48

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.5

0.35

1.14

-0.97

5.7

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-06-25 #4

Analysis Date: 06-20-06

Analyzed By: DA

Easting (ft):

912,929

Northing (ft):

1,092,262

Coordinate System:

Florida State Plane East

Elevation (ft):

-42.2 NAVD 88

USCS:

SW

Munsell:

Wet - N-4/0

Dry - 2.5Y-5/1

Washed - 2.5Y-5/1

Comments:

Dry Weight (g):

94.00

Wash Weight (g):

91.74

Pan Retained (g):

0.04

Sieve Loss (%):

0.11

Fines (%):

#200 - 2.78  
#230 - 2.55

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

0.00

0.00

0.00

0.00

5/16"

-3.00

8.00

0.46

0.49

0.46

0.49

3.5

-2.50

5.66

0.84

0.89

1.30

1.38

4

-2.25

4.76

0.55

0.59

1.85

1.97

5

-2.00

4.00

0.62

0.66

2.47

2.63

7

-1.50

2.83

2.04

2.17

4.51

4.80

10

-1.00

2.00

3.89

4.14

8.40

8.94

14

-0.50

1.41

6.51

6.93

14.91

15.87

18

0.00

1.00

6.59

7.01

21.50

22.88

25

0.50

0.71

10.86

11.55

32.36

34.43

35

1.00

0.50

13.95

14.84

46.31

49.27

45

1.50

0.35

14.73

15.67

61.04

64.94

60

2.00

0.25

18.51

19.69

79.55

84.63

80

2.50

0.18

7.64

8.13

87.19

92.76

120

3.00

0.13

2.33

2.48

89.52

95.24

170

3.50

0.09

1.36

1.45

90.88

96.69

200

3.75

0.07

0.50

0.53

91.38

97.22

230

4.00

0.06

0.22

0.23

91.60

97.45

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.95

1.98

1.76

1.02

0.09

-0.49

-1.48

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.8

0.57

1.25

-0.59

3.3

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-06-25 #5

Analysis Date: 06-20-06

Analyzed By: DA

Easting (ft):

912,929

Northing (ft):

1,092,262

Coordinate System:

Florida State Plane East

Elevation (ft):

-43.3 NAVD 88

USCS:

SW

Munsell:

Wet - N-4/0

Dry - 2.5Y-5/1

Washed - 2.5Y-5/1

Comments:

Dry Weight (g):

85.16

Wash Weight (g):

82.24

Pan Retained (g):

0.15

Sieve Loss (%):

0.13

Fines (%):

#200 - 4.79

#230 - 3.73

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

0.15

0.18

0.15

0.18

3.5

-2.50

5.66

0.24

0.28

0.39

0.46

4

-2.25

4.76

0.33

0.39

0.72

0.85

5

-2.00

4.00

0.17

0.20

0.89

1.05

7

-1.50

2.83

0.48

0.56

1.37

1.61

10

-1.00

2.00

0.92

1.08

2.29

2.69

14

-0.50

1.41

1.84

2.16

4.13

4.85

18

0.00

1.00

2.58

3.03

6.71

7.88

25

0.50

0.71

5.58

6.55

12.29

14.43

35

1.00

0.50

9.08

10.66

21.37

25.09

45

1.50

0.35

13.72

16.11

35.09

41.20

60

2.00

0.25

24.60

28.89

59.69

70.09

80

2.50

0.18

14.23

16.71

73.92

86.80

120

3.00

0.13

2.75

3.23

76.67

90.03

170

3.50

0.09

2.00

2.35

78.67

92.38

200

3.75

0.07

2.41

2.83

81.08

95.21

230

4.00

0.06

0.90

1.06

81.98

96.27

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.73

2.42

2.15

1.65

1.00

0.57

-0.48

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.47

0.36

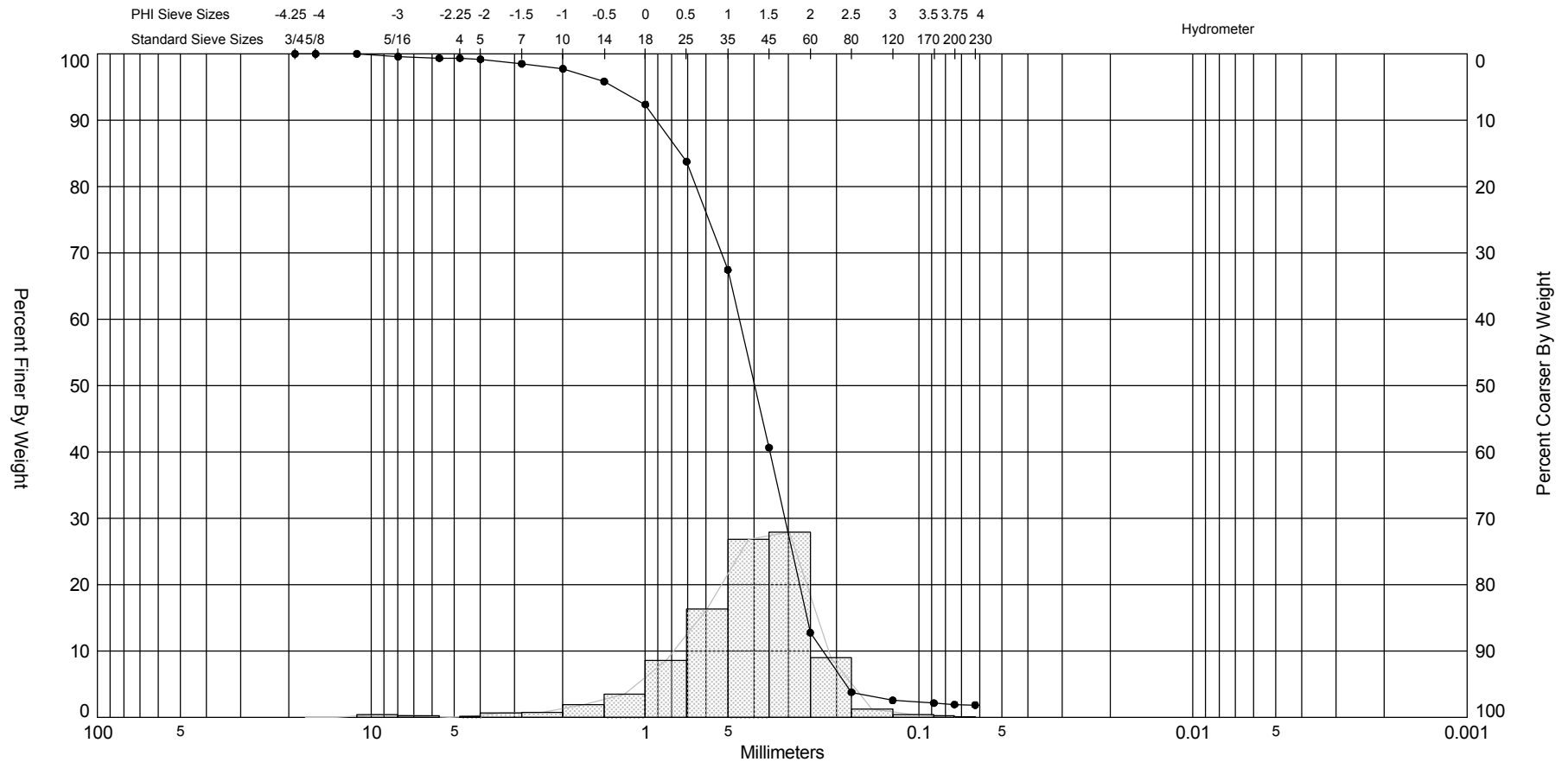
1.07

-0.79


5.03

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

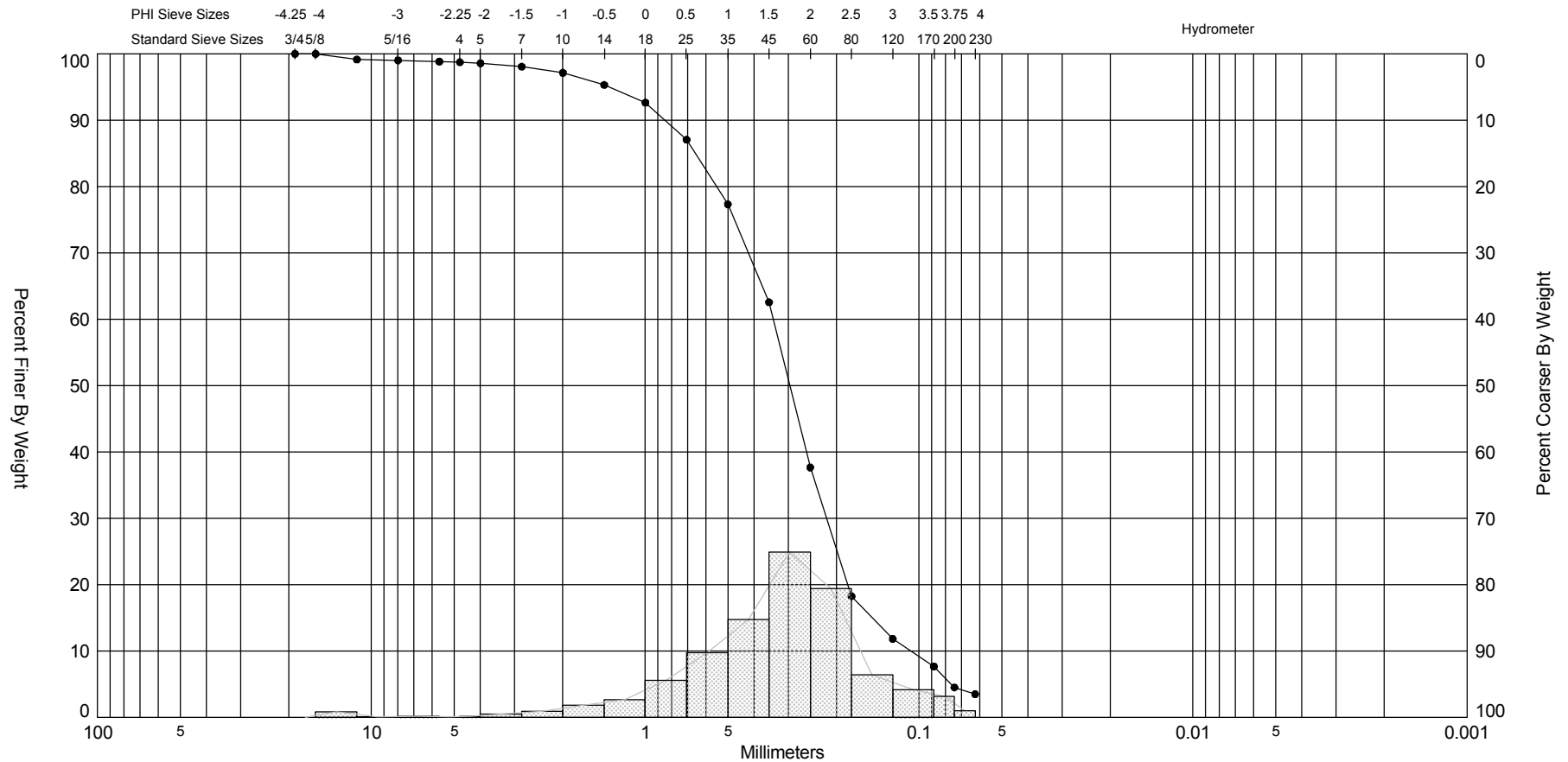
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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-06-25 #1	—●—	-36.7	SW	#200 - 1.94 #230 - 1.86			1.33	1.18	-1.35	7.1	0.87	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-19-06
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):	912,929
												Northing (Y, ft):	1,092,262
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

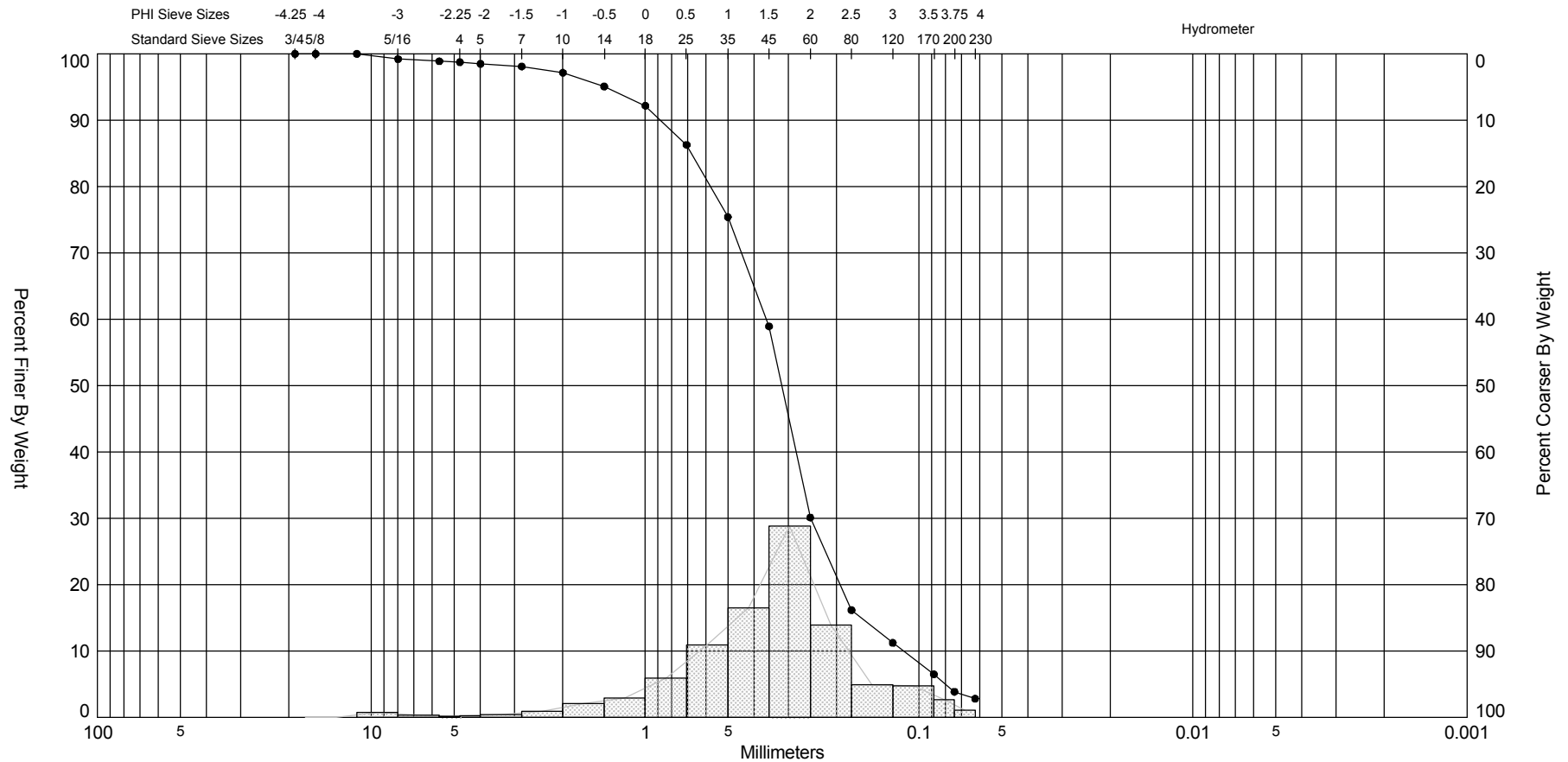
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

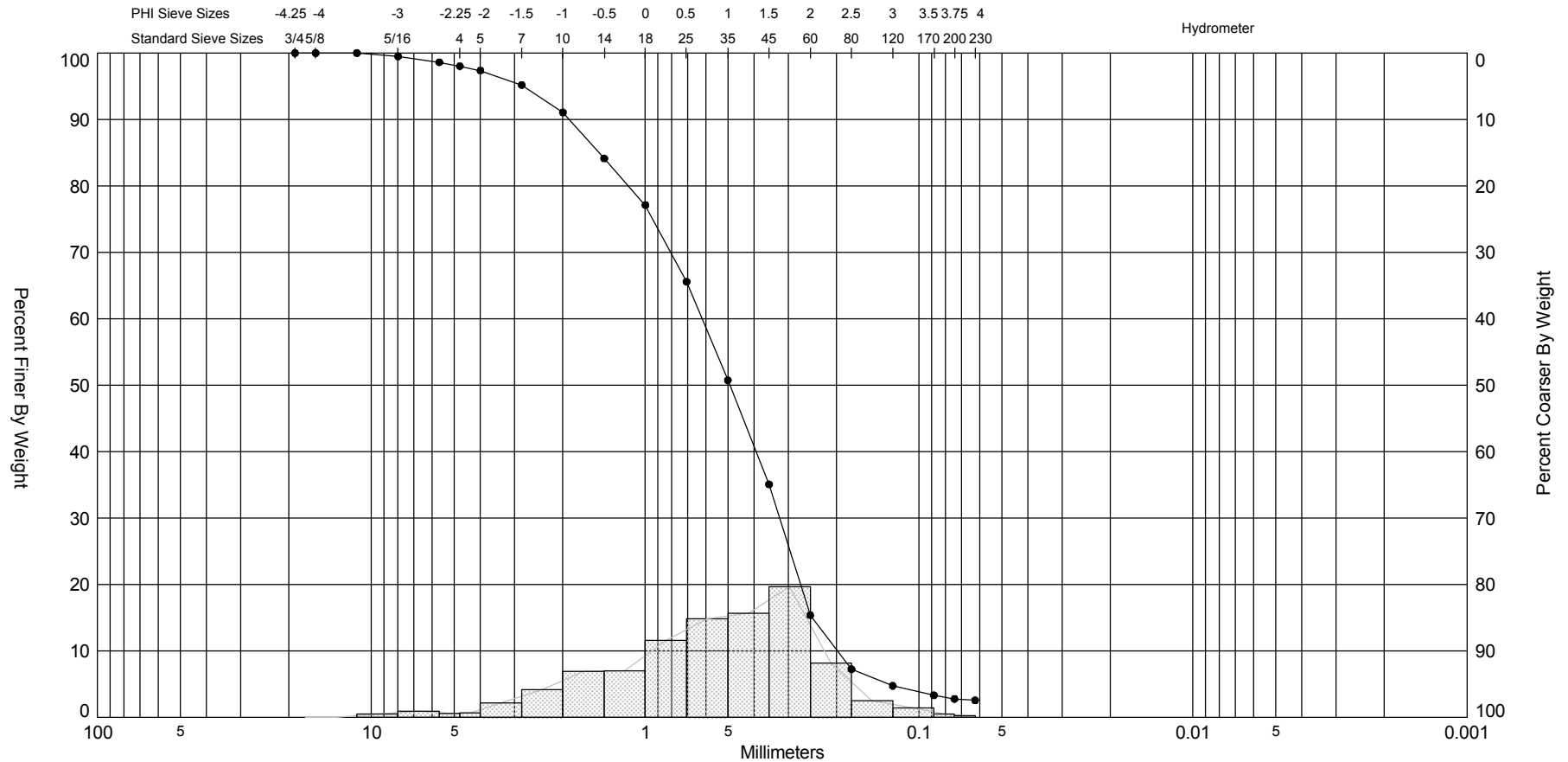
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
SLVC-06-25 #2	—●—	-39.7	SW	#200 - 4.52 #230 - 3.49			1.75	1.58	-1.25	6.74	1.17	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-22-06
Depths and elevations based on measured 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):	912,929
												Northing (Y, ft):	1,092,262
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88

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






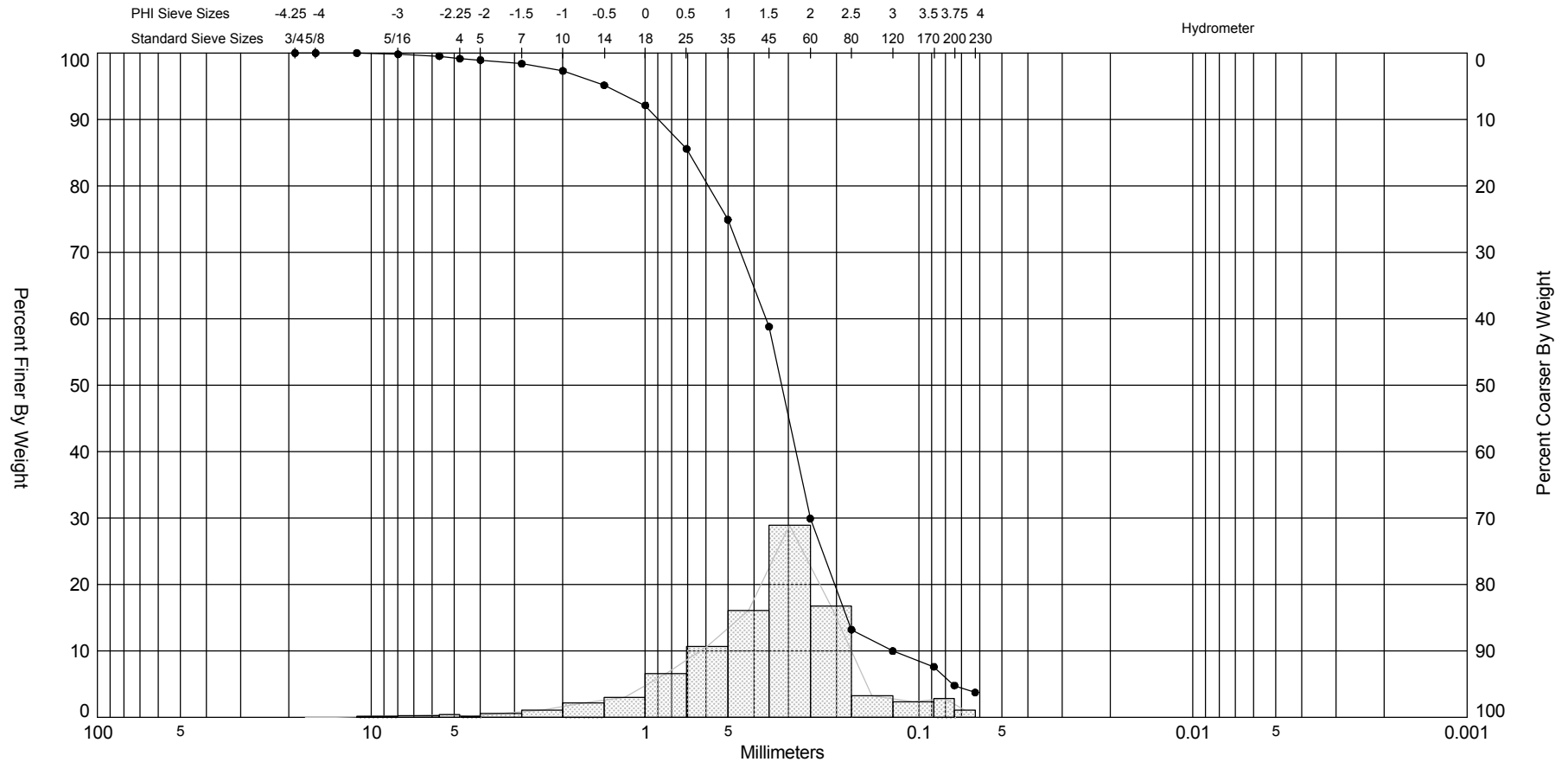
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




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-06-25 #4	—●—	-42.2	SW	#200 - 2.78 #230 - 2.55			1.02	0.8	-0.59	3.3	1.25	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-20-06
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):	912,929
												Northing (Y, ft):	1,092,262
												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-06-25 #5	—●—	-43.3	SW	#200 - 4.79 #230 - 3.73			1.65	1.47	-0.79	5.03	1.07	Project Name:	St. Lucie Vibracores
Comments:												Analysis Date:	06-20-06
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):	912,929
												Northing (Y, ft):	1,092,262
												Horizontal System:	NAD 1983
												Vertical System:	NAVD 88