

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-06-11 #1

Analysis Date: 05-30-06

Analyzed By: AU

Easting (ft):

914,906

Northing (ft):

1,081,296

Coordinate System:

Florida State Plane East

Elevation (ft):

-35.7 NAVD 88

USCS:

SW

Munsell:

Wet - N-4/1

Dry - 5Y-5/1

Washed - 5Y-6/1

Comments:

Dry Weight (g):

86.49

Wash Weight (g):

85.44

Pan Retained (g):

0.02

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.41
#230 - 1.24

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

0.25

0.29

0.25

0.29

3.5

-2.50

5.66

0.59

0.68

0.84

0.97

4

-2.25

4.76

0.05

0.06

0.89

1.03

5

-2.00

4.00

0.20

0.23

1.09

1.26

7

-1.50

2.83

0.47

0.54

1.56

1.80

10

-1.00

2.00

0.89

1.03

2.45

2.83

14

-0.50

1.41

1.94

2.24

4.39

5.07

18

0.00

1.00

2.85

3.30

7.24

8.37

25

0.50

0.71

6.58

7.61

13.82

15.98

35

1.00

0.50

12.36

14.29

26.18

30.27

45

1.50

0.35

18.50

21.39

44.68

51.66

60

2.00

0.25

26.90

31.10

71.58

82.76

80

2.50

0.18

9.82

11.35

81.40

94.11

120

3.00

0.13

2.29

2.65

83.69

96.76

170

3.50

0.09

1.16

1.34

84.85

98.10

200

3.75

0.07

0.42

0.49

85.27

98.59

230

4.00

0.06

0.15

0.17

85.42

98.76

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.67

2.05

1.88

1.46

0.82

0.50

-0.52

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.27

0.41

0.97

-1.23

6.32

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

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

Sample Name: SLVC-06-11 #2

Analysis Date: 05-30-06

Analyzed By: JF

Easting (ft):

914,906

Northing (ft):

1,081,296

Coordinate System:

Florida State Plane East

Elevation (ft):

-39.5 NAVD 88

USCS:

SW-SM

Munsell:

Wet - 10Y-4/1
Dry - 5Y-6/1
Washed - 5Y-6/1

Comments:

Dry Weight (g):

79.46

Wash Weight (g):

77.02

Pan Retained (g):

0.29

Sieve Loss (%):

0.06

Fines (%):

#200 - 5.87
#230 - 3.50

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 | 0.12 | 0.15 | 0.12 | 0.15 |
| 3.5 | -2.50 | 5.66 | 0.19 | 0.24 | 0.31 | 0.39 |
| 4 | -2.25 | 4.76 | 0.08 | 0.10 | 0.39 | 0.49 |
| 5 | -2.00 | 4.00 | 0.10 | 0.13 | 0.49 | 0.62 |
| 7 | -1.50 | 2.83 | 0.32 | 0.40 | 0.81 | 1.02 |
| 10 | -1.00 | 2.00 | 0.47 | 0.59 | 1.28 | 1.61 |
| 14 | -0.50 | 1.41 | 0.57 | 0.72 | 1.85 | 2.33 |
| 18 | 0.00 | 1.00 | 0.87 | 1.09 | 2.72 | 3.42 |
| 25 | 0.50 | 0.71 | 1.85 | 2.33 | 4.57 | 5.75 |
| 35 | 1.00 | 0.50 | 3.30 | 4.15 | 7.87 | 9.90 |
| 45 | 1.50 | 0.35 | 4.77 | 6.00 | 12.64 | 15.90 |
| 60 | 2.00 | 0.25 | 8.77 | 11.04 | 21.41 | 26.94 |
| 80 | 2.50 | 0.18 | 15.62 | 19.66 | 37.03 | 46.60 |
| 120 | 3.00 | 0.13 | 15.48 | 19.48 | 52.51 | 66.08 |
| 170 | 3.50 | 0.09 | 15.56 | 19.58 | 68.07 | 85.66 |
| 200 | 3.75 | 0.07 | 6.73 | 8.47 | 74.80 | 94.13 |
| 230 | 4.00 | 0.06 | 1.88 | 2.37 | 76.68 | 96.50 |

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.84

3.46

3.23

2.59

1.91

1.50

0.34

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.36

0.19

1.09

-1.49

6.42

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

Granularmetric Report

Depths and elevations based on measured values



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

Sample Name: SLVC-06-11 #3

Analysis Date: 05-30-06

Analyzed By: JF

Easting (ft):

914,906

Northing (ft):

1,081,296

Coordinate System:

Florida State Plane East

Elevation (ft):

-41.5 NAVD 88

USCS:

SW-SC

Munsell:

Wet - 10Y-4/1
Dry - 5Y-5/1
Washed - N-6/0

Comments:

Dry Weight (g):

83.25

Wash Weight (g):

79.34

Pan Retained (g):

0.25

Sieve Loss (%):

0.02

Fines (%):

#200 - 6.21
#230 - 5.03

Organics (%):

Carbonates (%):

Shell Hash (%):

11

| 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 | 2.15 | 2.58 | 2.15 | 2.58 |
| 5/16" | -3.00 | 8.00 | 0.12 | 0.14 | 2.27 | 2.72 |
| 3.5 | -2.50 | 5.66 | 1.83 | 2.20 | 4.10 | 4.92 |
| 4 | -2.25 | 4.76 | 0.66 | 0.79 | 4.76 | 5.71 |
| 5 | -2.00 | 4.00 | 1.02 | 1.23 | 5.78 | 6.94 |
| 7 | -1.50 | 2.83 | 3.99 | 4.79 | 9.77 | 11.73 |
| 10 | -1.00 | 2.00 | 8.03 | 9.65 | 17.80 | 21.38 |
| 14 | -0.50 | 1.41 | 10.60 | 12.73 | 28.40 | 34.11 |
| 18 | 0.00 | 1.00 | 8.51 | 10.22 | 36.91 | 44.33 |
| 25 | 0.50 | 0.71 | 6.98 | 8.38 | 43.89 | 52.71 |
| 35 | 1.00 | 0.50 | 4.47 | 5.37 | 48.36 | 58.08 |
| 45 | 1.50 | 0.35 | 2.75 | 3.30 | 51.11 | 61.38 |
| 60 | 2.00 | 0.25 | 2.75 | 3.30 | 53.86 | 64.68 |
| 80 | 2.50 | 0.18 | 3.65 | 4.38 | 57.51 | 69.06 |
| 120 | 3.00 | 0.13 | 7.63 | 9.17 | 65.14 | 78.23 |
| 170 | 3.50 | 0.09 | 9.47 | 11.38 | 74.61 | 89.61 |
| 200 | 3.75 | 0.07 | 3.48 | 4.18 | 78.09 | 93.79 |
| 230 | 4.00 | 0.06 | 0.98 | 1.18 | 79.07 | 94.97 |

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.25

2.82

0.34

-0.86

-1.28

-2.47

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.57

0.67

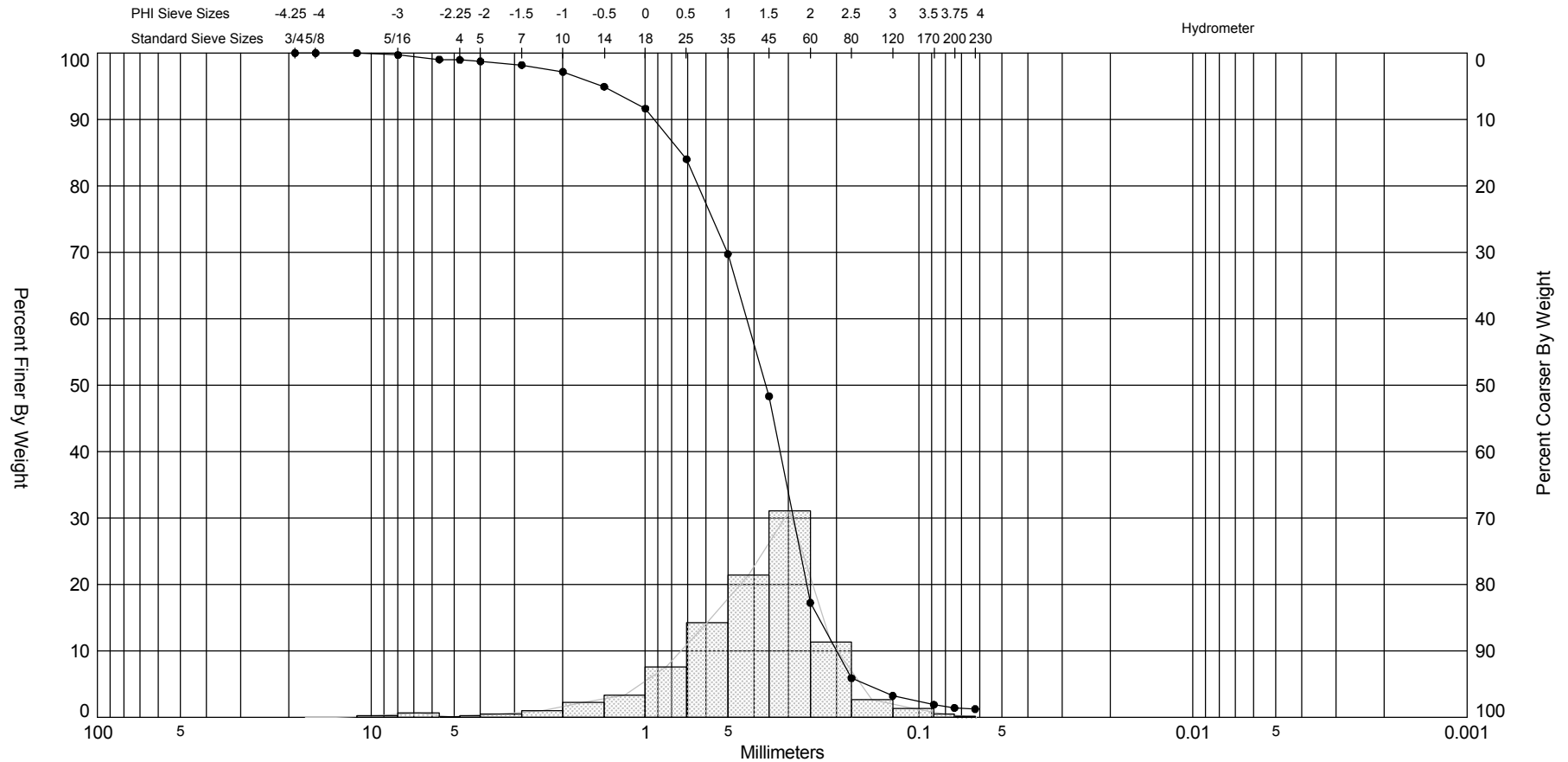
1.98

0.01


2.01

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

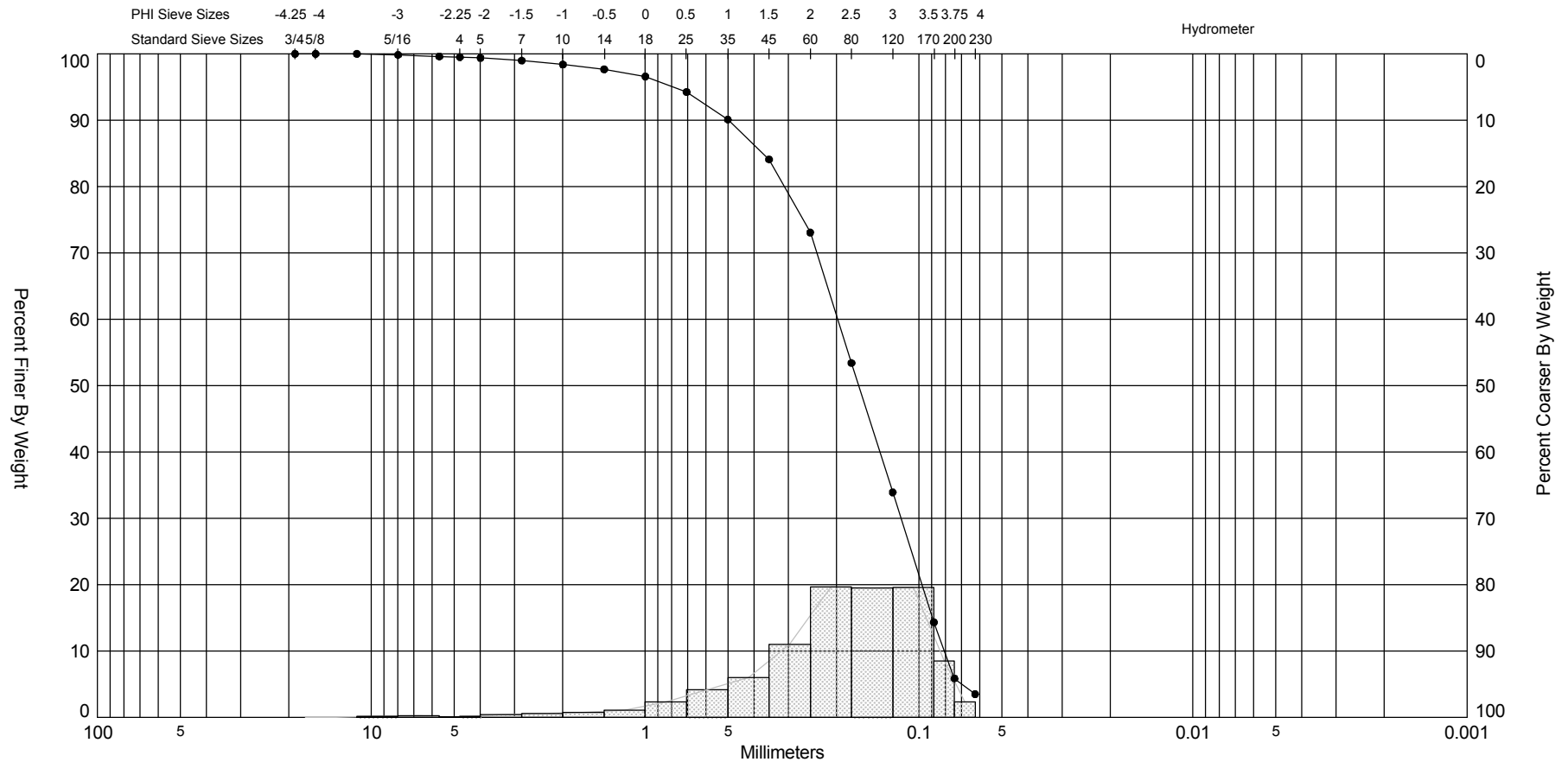
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




| 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-06-11 #1 | —●— | -35.7 | SW | #200 - 1.41 #230 - 1.24 | | | 1.46 | 1.27 | -1.23 | 6.32 | 0.97 | 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): | 914,906 |
| | | | | | | | | | | | | Northing (Y, ft): | 1,081,296 |
| | | | | | | | | | | | | Horizontal System: | NAD 1983 |
| | | | | | | | | | | | | Vertical System: | NAVD 88 |

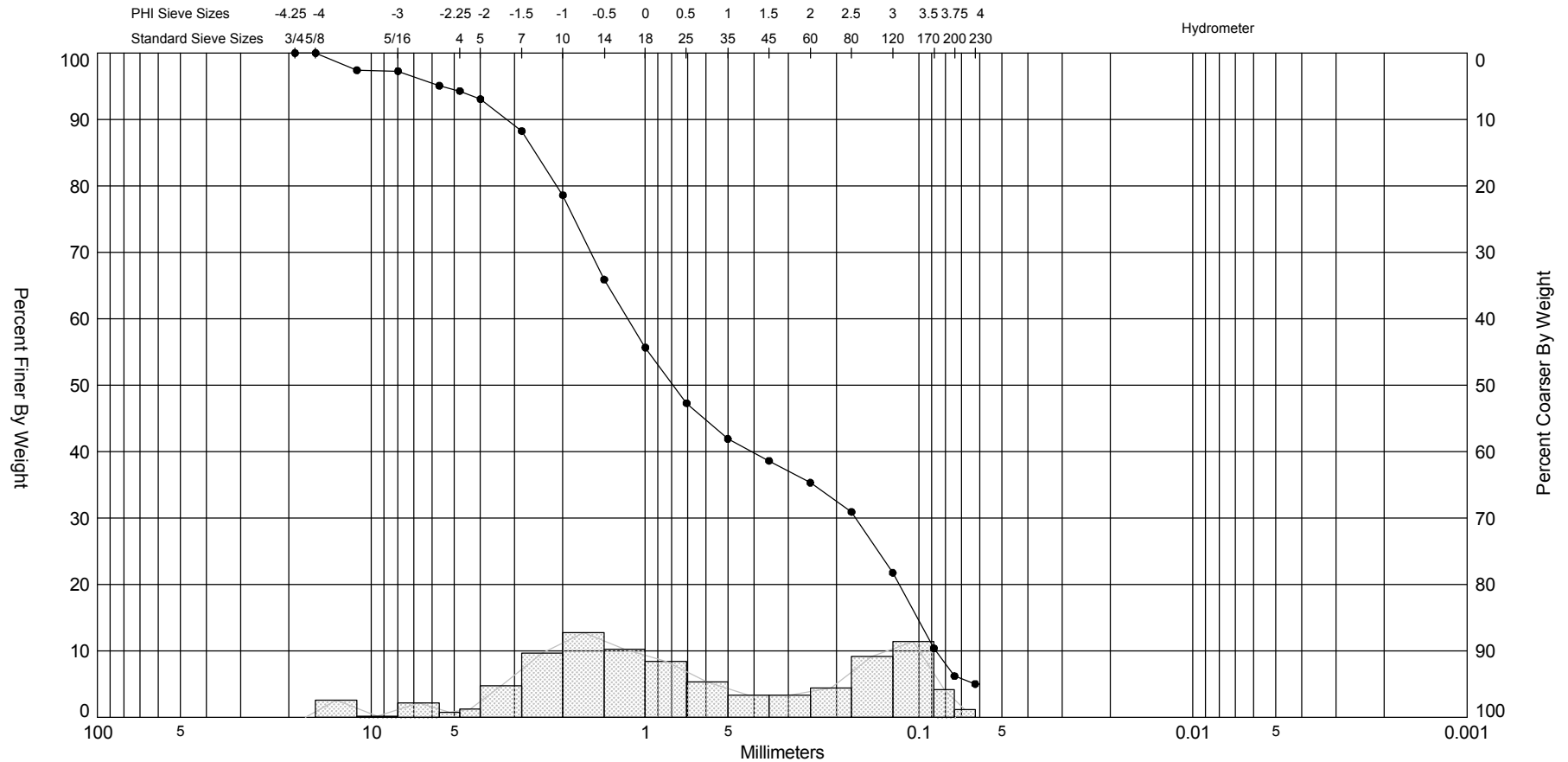
SIEVE ANALYSIS ST LUCIE VC.GPJ FL DEP ROSS.GDT 6/28/06




| 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-06-11 #2 | —●— | -39.5 | SW-SM | #200 - 5.87 #230 - 3.50 | | | 2.59 | 2.36 | -1.49 | 6.42 | 1.09 | 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): | 914,906 |
| | | | | | | | | | | | | Northing (Y, ft): | 1,081,296 |
| | | | | | | | | | | | | 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-06-11 #3 | —●— | -41.5 | SW-SC | #200 - 6.21 #230 - 5.03 | | | 0.34 | 0.57 | 0.01 | 2.01 | 1.98 | 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): | 914,906 |
| | | | | | | | | | | | | Northing (Y, ft): | 1,081,296 |
| | | | | | | | | | | | | Horizontal System: | NAD 1983 |
| | | | | | | | | | | | | Vertical System: | NAVD 88 |