



**INTRACOASTAL WATERWAY
MAINTENANCE DREDGING
ST. LUCIE COUNTY REACH I, FLORIDA**

APPENDIX D
Geotechnical Information



July 30, 2015

Taylor Engineering, Inc.
10151 Deerwood Park Blvd.
Bldg 300, Suite 300
Jacksonville, FL 32256
Attn: Bill Aley

**Re: St Lucie Reach 1
Ft Pierce, Florida
Geotechnical Investigation**

American Vibracore Services, Inc. is pleased to submit this report regarding the completion of the vibracore field work and lab analysis phases of this project.

Overview

American Vibracore Services, Inc. (AVS) under contract from Taylor Engineering, Inc., conducted vibracore sampling operations in Reach 1 of the ICWW, Ft Pierce Florida on July 1, 2015. A total of 5 cores were collected at locations determined by client. Cores were then analyzed per the proposal and FDEP guidelines, and a report of the findings was prepared.

Vibracore Equipment

AVS's 28 foot shallow draft Carolina Skiff vessel was used as a work platform for vibracore operations. AVS's electronic coring machine was used to take vibracore samples at each core location. At location VB-5, standard penetration testing was used to supplement the investigation due to rock refusal with the electric vibracore.

Core Processing and Laboratory Testing

All cores collected from the project were transported to a US Army Corps of Engineers certified lab, where they were split, logged, photographed, sampled, and preserved. Laboratory testing was conducted in the form of grain size analysis, calcium carbonate content, post calcium carbonate grain size analysis, visual shell content, and Munsell color designation.

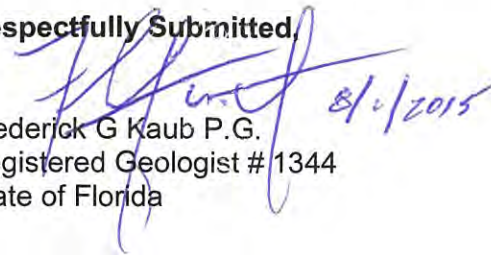
Reporting

The vibracore logs, photo-documentation, and laboratory analysis results (in gINT format) are all contained in this report.

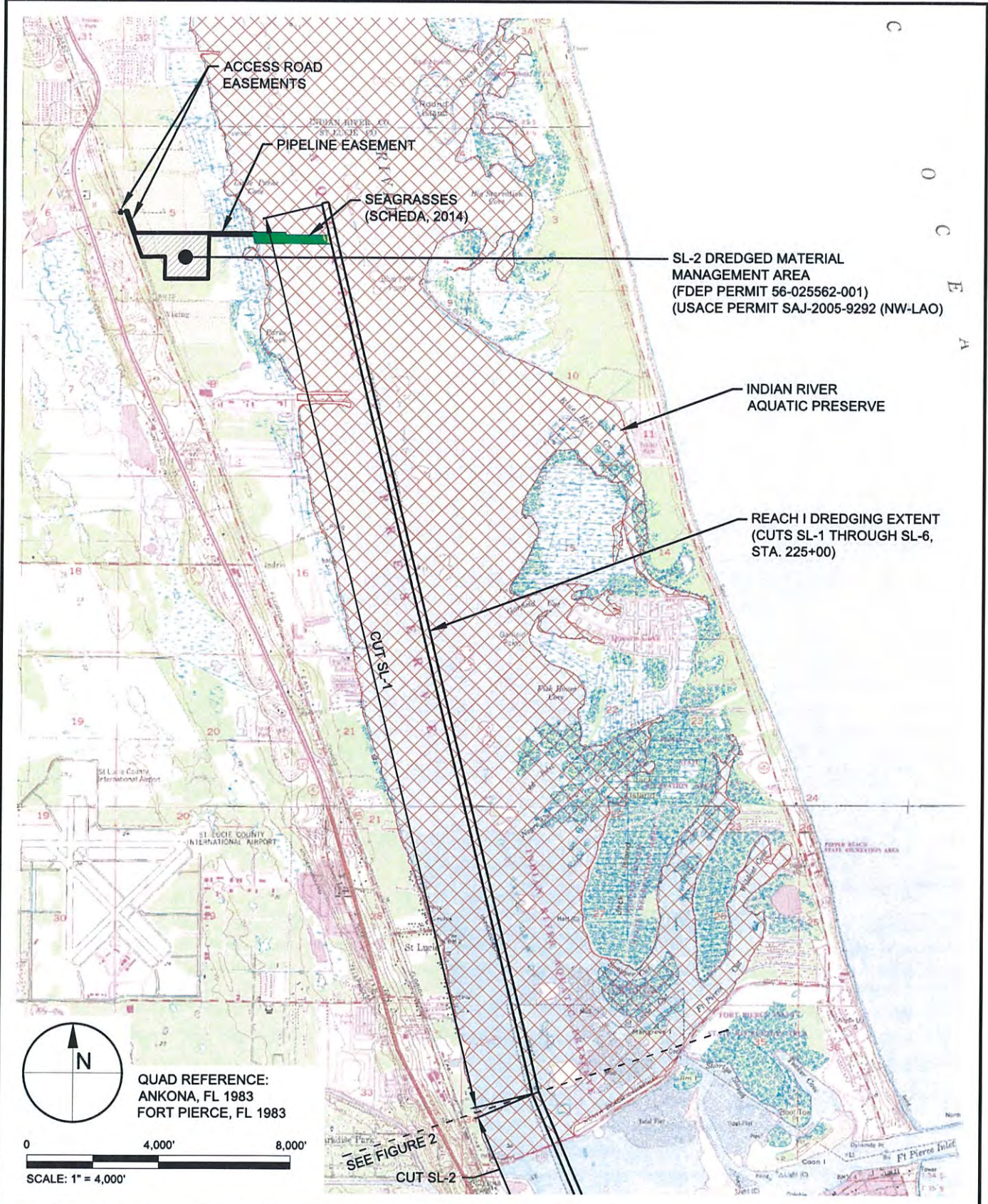
Closing

We appreciate the opportunity to be of service to Taylor Engineering on this project and look forward to a continued relationship.

Respectfully Submitted,


Frederick G Kaub P.G.
Registered Geologist # 1344
State of Florida

CATHY SHELL X:\S\PROJECTS\2014-027 FIND ST. LUCIE REACH 1 DREDGING\PERMIT\2014-027-P-OVERVIEW.DWG 12/22/2014 11:43:01 AM



TAYLOR ENGINEERING INC.
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 1
PROJECT OVERVIEW (1 OF 2)
FIND ST. LUCIE COUNTY REACH I DREDGING
ST. LUCIE COUNTY, FLORIDA

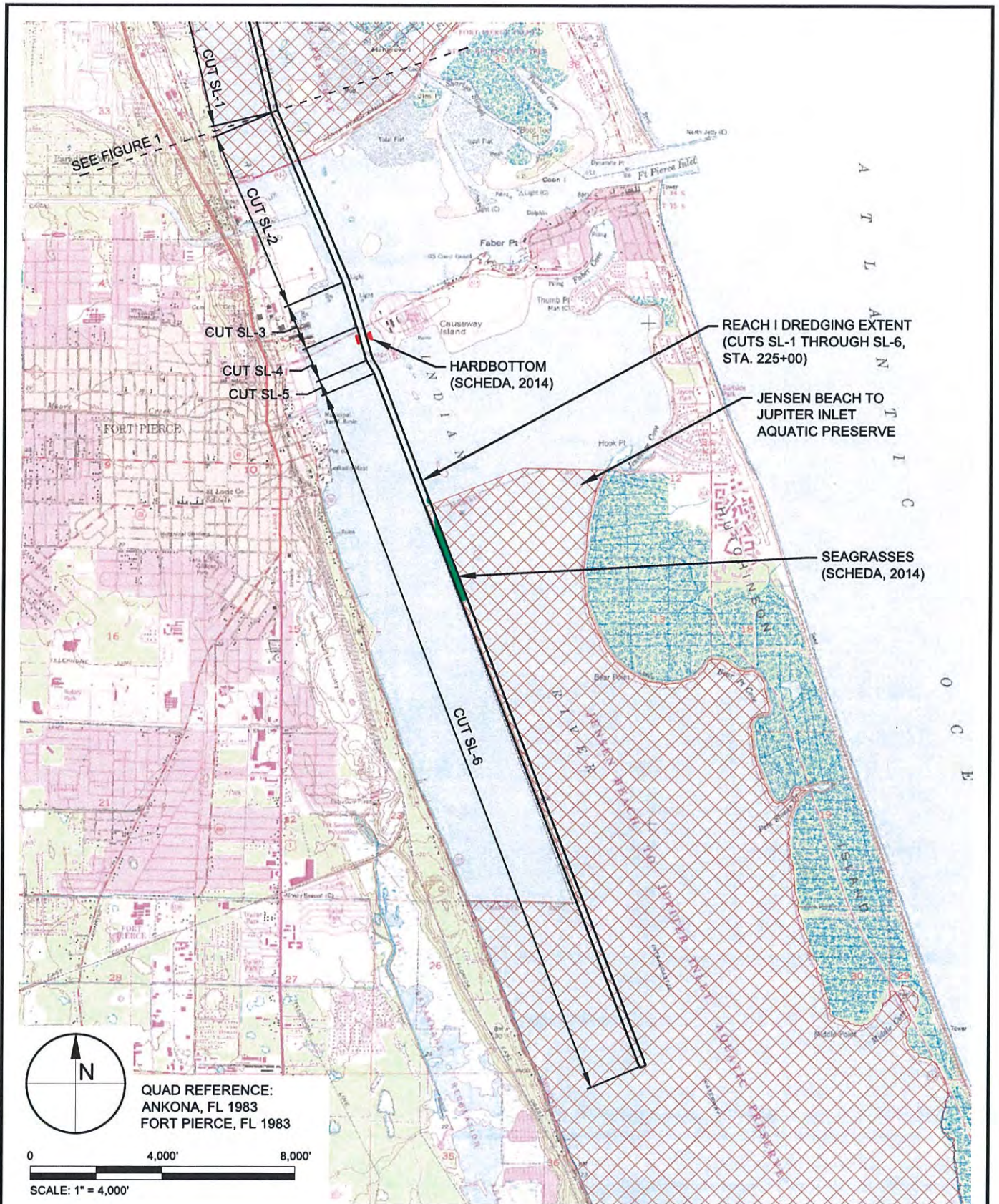
PROJECT	DRAWN BY	SHEET	DATE
C2014-027	CAS	1 OF 22	12-18-14

SEAL

LORI S. BROWNELL P.E. # 60025

DATE

CATHY SHELL X:\US9\PROJECTS\2014-027 FIND ST LUCIE_REACH1_PERMIT_DREDGING\PERMITC2014-027-P-OVERVIEW.DWG 12/22/2014 11:43:03 AM



TAYLOR ENGINEERING INC.

10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 2
PROJECT OVERVIEW (2 OF 2)
FIND ST. LUCIE COUNTY REACH I DREDGING
ST. LUCIE COUNTY, FLORIDA

PROJECT	DRAWN BY	SHEET	DATE
C2014-027	CAS	2 OF 22	12-18-14

SEAL

LORI S. BROWNELL P.E.# 60025

DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

Vibracore Logs



Boring Designation VB-1

DRILLING LOG		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
1. PROJECT St. Lucie Reach 1 St. Lucie County Florida				9. SIZE AND TYPE OF BIT 3.0 In.			
2. BORING DESIGNATION VB-1				10. COORDINATE SYSTEM/DATUM Florida State Plane East		HORIZONTAL VERTICAL MLLW	
3. DRILLING AGENCY				11. MANUFACTURER'S DESIGNATION OF DRILL Vibracore		☐ AUTO HAMMER ☐ MANUAL HAMMER	
4. NAME OF DRILLER BM				12. TOTAL SAMPLES		DISTURBED UNDISTURBED (UD)	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED				13. TOTAL NUMBER CORE BOXES		14. ELEVATION GROUND WATER	
6. THICKNESS OF OVERBURDEN 0.0 Ft.				15. DATE BORING		STARTED 07-01-15 COMPLETED 07-01-15	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.				16. ELEVATION TOP OF BORING -11.0 Ft.		17. TOTAL RECOVERY FOR BORING 8.2 Ft.	
8. TOTAL DEPTH OF BORING 11.0 Ft.				18. SIGNATURE AND TITLE OF INSPECTOR FK			
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS	
-11.0	0.0						
-13.4	2.4		Sand and shell, pale brown (10YR-6/3); visual shell 30%, (SW).		S-1 RS-1	Sample #S-1, Depth = 2.0' Sample #RS-1, Depth = 2.1'	
-14.8	3.8		Sand and shell, gray (10YR-6/1), (SW).				
-15.1	4.1		Sand and trace shell, very pale brown (10YR-7/4), (SW).		S-2	Sample #S-2, Depth = 4.0'	
-15.6	4.6		Sand (fine), light gray (10YR-7/1); visual shell 40%, (SW).				
-15.9	4.9		Shell hash, gray (10YR-7/1), (SW).				
-16.3	5.3		Sand (fine), light gray (10YR-7/2), (SW).				
-16.7	5.7		Shell hash, very pale brown (10YR-6/1), (SW).		S-3 RS-2	Sample #S-3, Depth = 6.0' Sample #RS-2, Depth = 6.1'	
-18.0	7.0		Sand and trace shell, dark gray (10YR-4/1) visual shell 20%, (SW).				
-19.2	8.2		Sand, dark gray (10YR-4/1) visual shell 10%, (SP).		S-4	Sample #S-4, Depth = 8.0'	
			End of Boring				

FLORIDA DEP ROSS ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/31/15

Boring Designation VB-2

DRILLING LOG		DIVISION		INSTALLATION		SHEET 1 OF 1 SHEETS	
1. PROJECT St. Lucie Reach 1 St. Lucie County Florida				9. SIZE AND TYPE OF BIT 3.0 In.			
2. BORING DESIGNATION VB-2				10. COORDINATE SYSTEM/DATUM Florida State Plane East		HORIZONTAL VERTICAL MLLW	
3. DRILLING AGENCY				11. MANUFACTURER'S DESIGNATION OF DRILL Vibrocure		☐ AUTO HAMMER ☐ MANUAL HAMMER	
4. NAME OF DRILLER BM				12. TOTAL SAMPLES		DISTURBED UNDISTURBED (UD)	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED				13. TOTAL NUMBER CORE BOXES		14. ELEVATION GROUND WATER	
6. THICKNESS OF OVERBURDEN 0.0 Ft.				15. DATE BORING		STARTED 07-01-15 COMPLETED 07-01-15	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.				16. ELEVATION TOP OF BORING -9.0 Ft.		17. TOTAL RECOVERY FOR BORING 9.3 Ft.	
8. TOTAL DEPTH OF BORING 13.0 Ft.				18. SIGNATURE AND TITLE OF INSPECTOR FK			
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS	
-9.0	0.0						
			Sand, light gray (10YR-7/1); visual shell 10%, (SP).		S-1 RS-1	Sample #S-1, Depth = 2.0' Sample #RS-1, Depth = 2.1'	
-13.3	4.3				S-2	Sample #S-2, Depth = 4.0'	
-13.5	4.5		Sand and shell, light brown, gray (10YR-6/2); visual shell 30%, (SW).				
			Sand and shell, light brownish gray (10YR-6/2), (SW).				
-15.0	6.0				S-3	Sample #S-3, Depth = 6.0'	
-15.2	6.2		Sand and shell, light brownish gray (10YR-6/2); visual shell 20%, (SW).		RS-2	Sample #RS-2, Depth = 6.1'	
-15.3	6.3		Shell hash, light brownish gray (10YR-6/2), (SW).				
-16.6	7.6		Sand and trace shell, dark gray (10YR-4/1), (SW).				
			Sand and shell, dark gray (10YR-4/1); visual shell 35%, (SW).		S-4	Sample #S-4, Depth = 8.0'	
-18.3	9.3						
			End of Boring				

FLORIDA DEP ROSS ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/31/15

Boring Designation VB-3

DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT St. Lucie Reach 1 St. Lucie County Florida 			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION VB-3			10. COORDINATE SYSTEM/DATUM Florida State Plane East	
3. DRILLING AGENCY			11. MANUFACTURER'S DESIGNATION OF DRILL Vibracore	
4. NAME OF DRILLER BM			12. TOTAL SAMPLES	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			13. TOTAL NUMBER CORE BOXES	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			14. ELEVATION GROUND WATER	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.			15. DATE BORING 07-01-15	
8. TOTAL DEPTH OF BORING 12.0 Ft.			16. ELEVATION TOP OF BORING -8.0 Ft.	
			17. TOTAL RECOVERY FOR BORING 7 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR FK	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-8.0	0.0					
			Sand and shell, grayish brown (10YR-6/2); visual shell 20%, (SW).		S-1 RS-1	Sample #S-1, Depth = 2.0' Sample #RS-1, Depth = 2.1'
-12.5	4.5				S-2	Sample #S-2, Depth = 4.0'
-13.6	5.6		Sand, gray (10YR-6/1); visual shell 25%, (SW).		S-3 RS-2	Sample #S-3, Depth = 5.5' Sample #RS-2, Depth = 5.6'
-15.0	7.0		Sand and shell, gray, with rock fragments to 1" (10YR-5/1); visual shell 20%, (SW).		S-4	Sample #S-4, Depth = 7.0'
			End of Boring			

FLORIDA DEP ROSS ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/31/15

Boring Designation VB-4

DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT St. Lucie Reach 1 St. Lucie County Florida 			9. SIZE AND TYPE OF BIT 3.0 In. 10. COORDINATE SYSTEM/DATUM HORIZONTAL VERTICAL Florida State Plane East MLLW	
2. BORING DESIGNATION VB-4		LOCATION COORDINATES N:1133526.16 E:878260.57		11. MANUFACTURER'S DESIGNATION OF DRILL Vibracore ☐ AUTO HAMMER ☐ MANUAL HAMMER
3. DRILLING AGENCY		CONTRACTOR FILE NO.		12. TOTAL SAMPLES DISTURBED UNDISTURBED (UD)
4. NAME OF DRILLER BM			13. TOTAL NUMBER CORE BOXES	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			DEG. FROM VERTICAL BEARING	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			14. ELEVATION GROUND WATER	
7. DEPTH DRILLED INTO ROCK 0.0 Ft.			15. DATE BORING STARTED COMPLETED 07-01-15 07-01-15	
8. TOTAL DEPTH OF BORING 12.0 Ft.			16. ELEVATION TOP OF BORING -8.0 Ft. 17. TOTAL RECOVERY FOR BORING 7.9 Ft. 18. SIGNATURE AND TITLE OF INSPECTOR FK	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-8.0	0.0					
-11.4	3.4		Sand and shell, light brownish gray (10YR-6/2); visual shell 20%, (SW).		S-1 RS-1	Sample #S-1, Depth = 1.0' Sample #RS-1, Depth = 1.1'
-13.4	5.4		Sand and shell, dark grayish brown, mottled with very dark gray clay lenses (10YR-3/1); visual shell 20%, (SW).		S-2 RS-2	Sample #S-2, Depth = 3.0' Sample #S-3, Depth = 5.0' Sample #RS-2, Depth = 5.1'
-15.9	7.9		Clayey sand, very dark gray (10YR-3/1); visual shell 15%, (SW).		S-4	Sample #S-4, Depth = 7.0'
			End of Boring			

FLORIDA DEP ROSS ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/31/15

Boring Designation VB-5

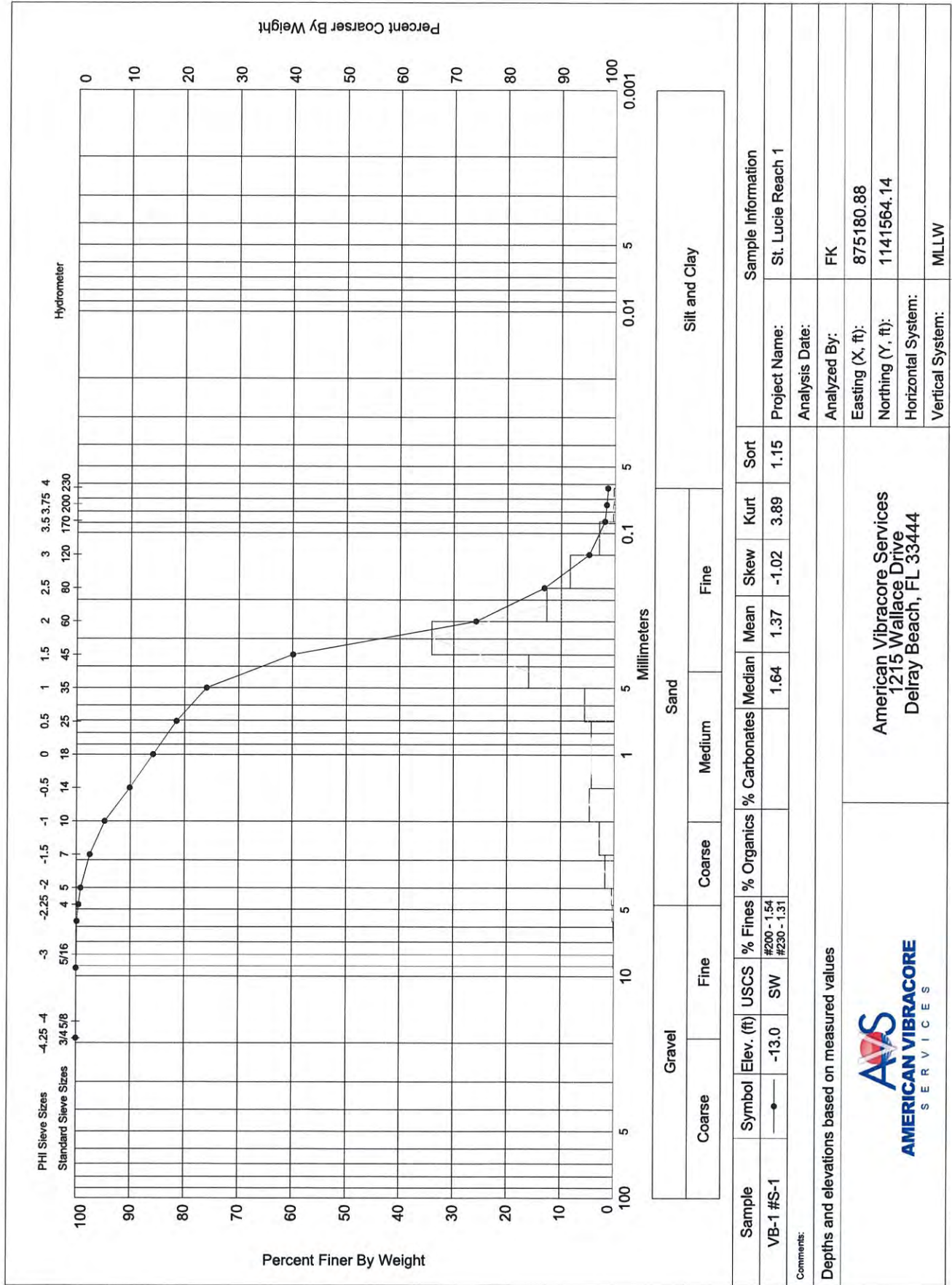
DRILLING LOG		DIVISION	INSTALLATION	SHEET 1 OF 1 SHEETS
1. PROJECT St. Lucie Reach 1 St. Lucie County Florida			9. SIZE AND TYPE OF BIT 3.0 In.	
2. BORING DESIGNATION VB-5			10. COORDINATE SYSTEM/DATUM HORIZONTAL VERTICAL Florida State Plane East MLLW	
3. DRILLING AGENCY			11. MANUFACTURER'S DESIGNATION OF DRILL ☐ AUTO HAMMER ☐ MANUAL HAMMER Vibracore	
4. NAME OF DRILLER BM			12. TOTAL SAMPLES DISTURBED UNDISTURBED (UD)	
5. DIRECTION OF BORING ☒ VERTICAL ☐ INCLINED			13. TOTAL NUMBER CORE BOXES	
6. THICKNESS OF OVERBURDEN 0.0 Ft.			14. ELEVATION GROUND WATER	
7. DEPTH DRILLED INTO ROCK 4.0 Ft.			15. DATE BORING STARTED COMPLETED 07-01-15 07-01-15	
8. TOTAL DEPTH OF BORING 11.0 Ft.			16. ELEVATION TOP OF BORING -10.0 Ft.	
			17. TOTAL RECOVERY FOR BORING 11 Ft.	
			18. SIGNATURE AND TITLE OF INSPECTOR FK	

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-10.0	0.0					
-11.7	1.7		Sand and shell, light brownish gray (10YR-6/2); visual shell 15%, (SW).		S-1 RS-1	Sample #S-1, Depth = 1.5' Sample #RS-1, Depth = 1.6'
-13.3	3.3		Sand and shell, gray (10YR-6/1); visual shell 20%, (SW).		S-2	Sample #S-2, Depth = 3.0'
-17.0	7.0		Sand and rock fragments, grayish brown (10YR-5/2); visual shell 20%, (GW).		S-3 RS-2	Sample #S-3, Depth = 4.5' Sample #RS-2, Depth = 4.6'
-21.0	11.0		Rock, light gray (10YR-7/2) Standard penetration testing refusal at 9' and 11'; N = 50+, (GW).		S-4	Sample #S-4, Depth = 6.5'
			End of Boring			

FLORIDA DEP ROSS ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/31/15

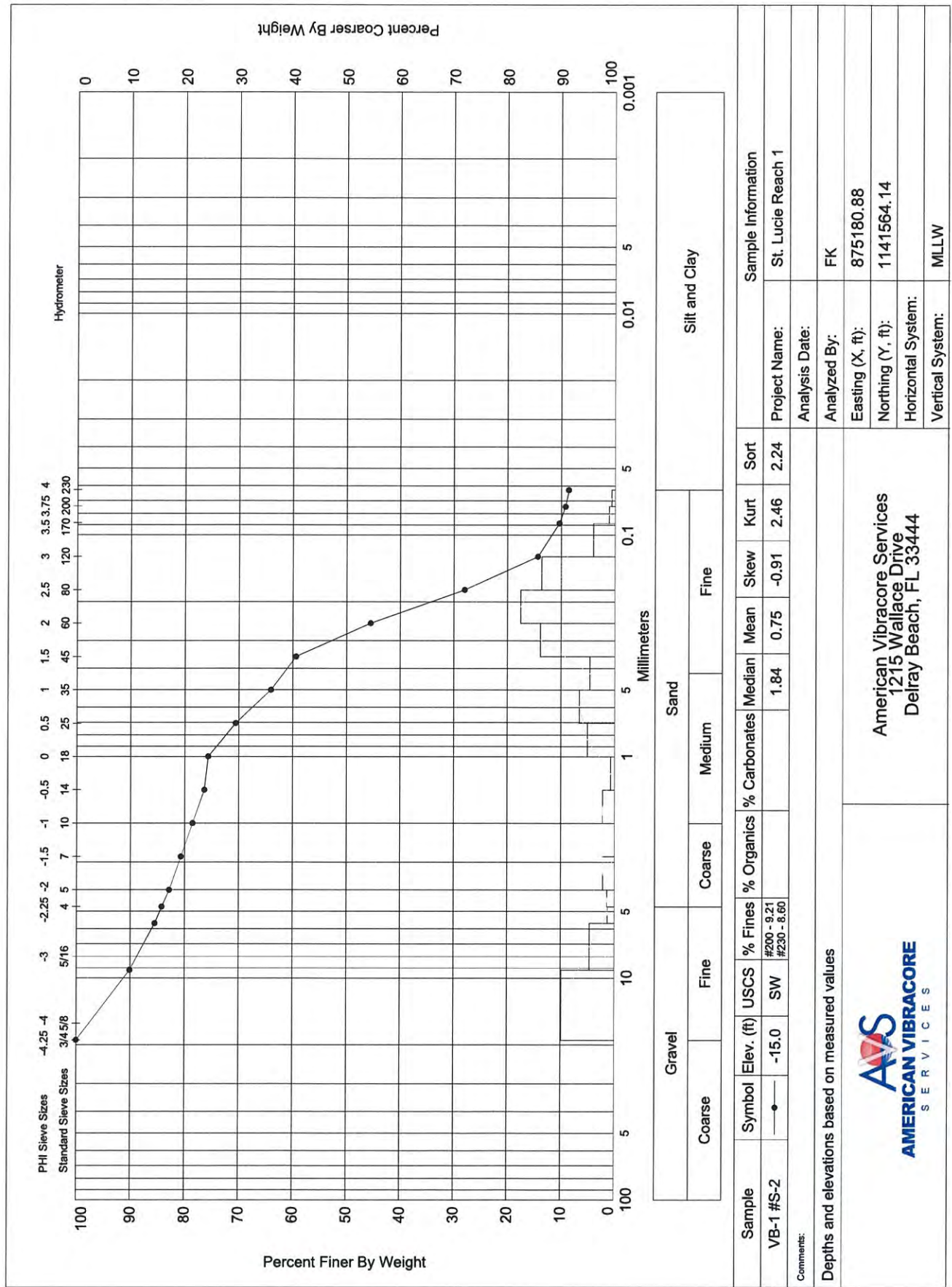
Sieve Graphs

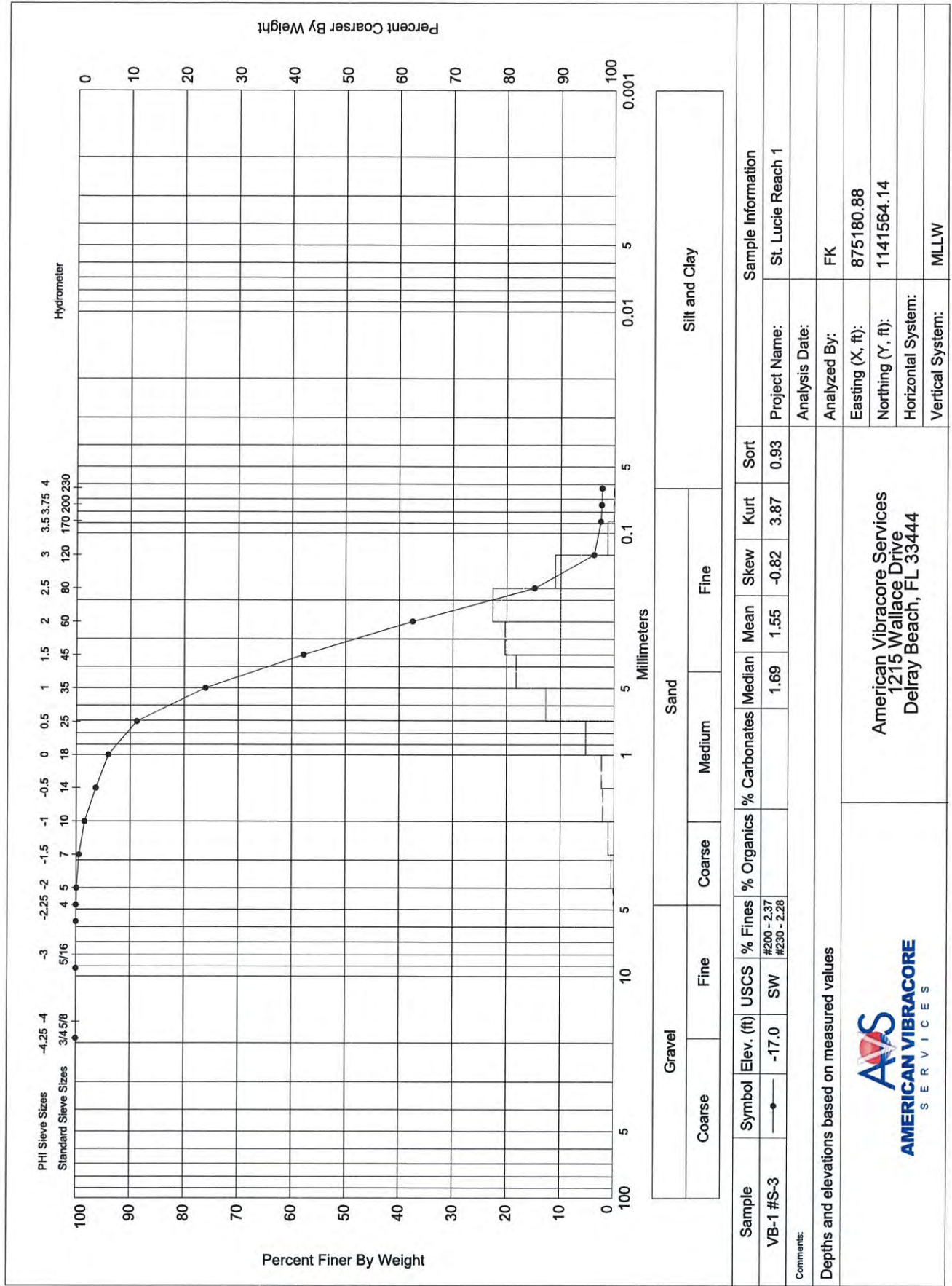


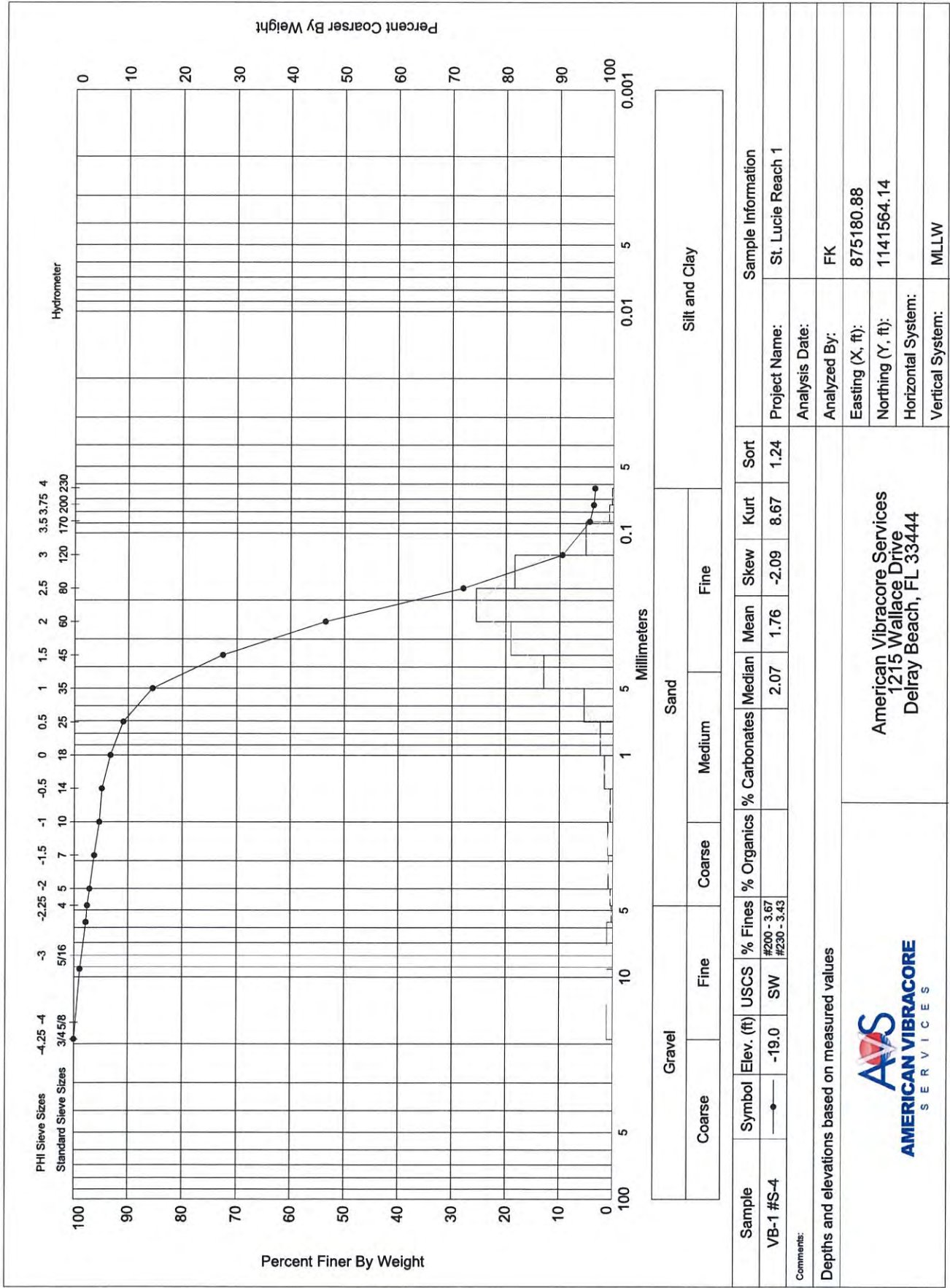


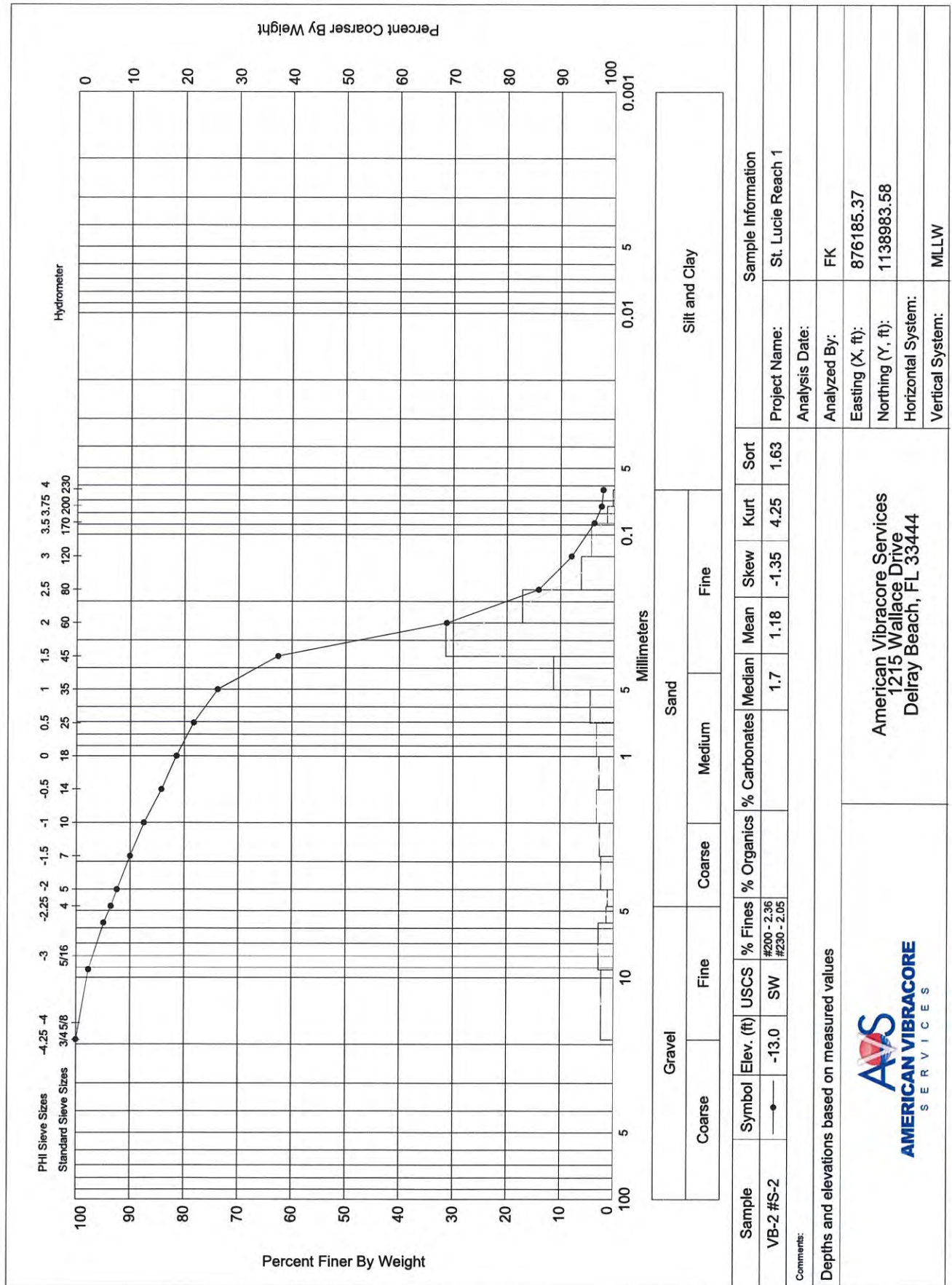
American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name:	St. Lucie Reach 1
Analysis Date:	
Analyzed By:	FK
Easting (X, ft):	875180.88
Northing (Y, ft):	1141564.14
Horizontal System:	
Vertical System:	MLLW







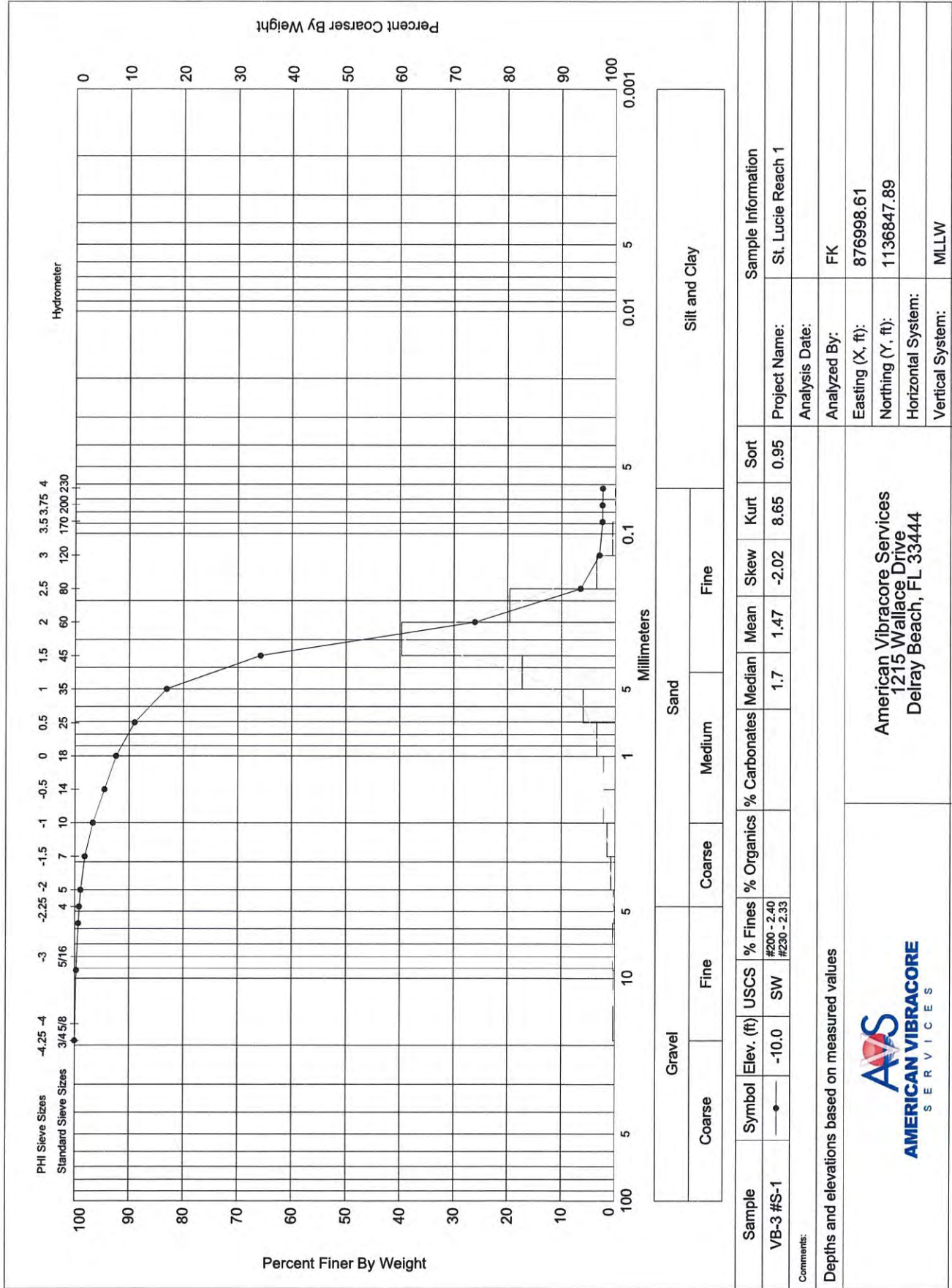


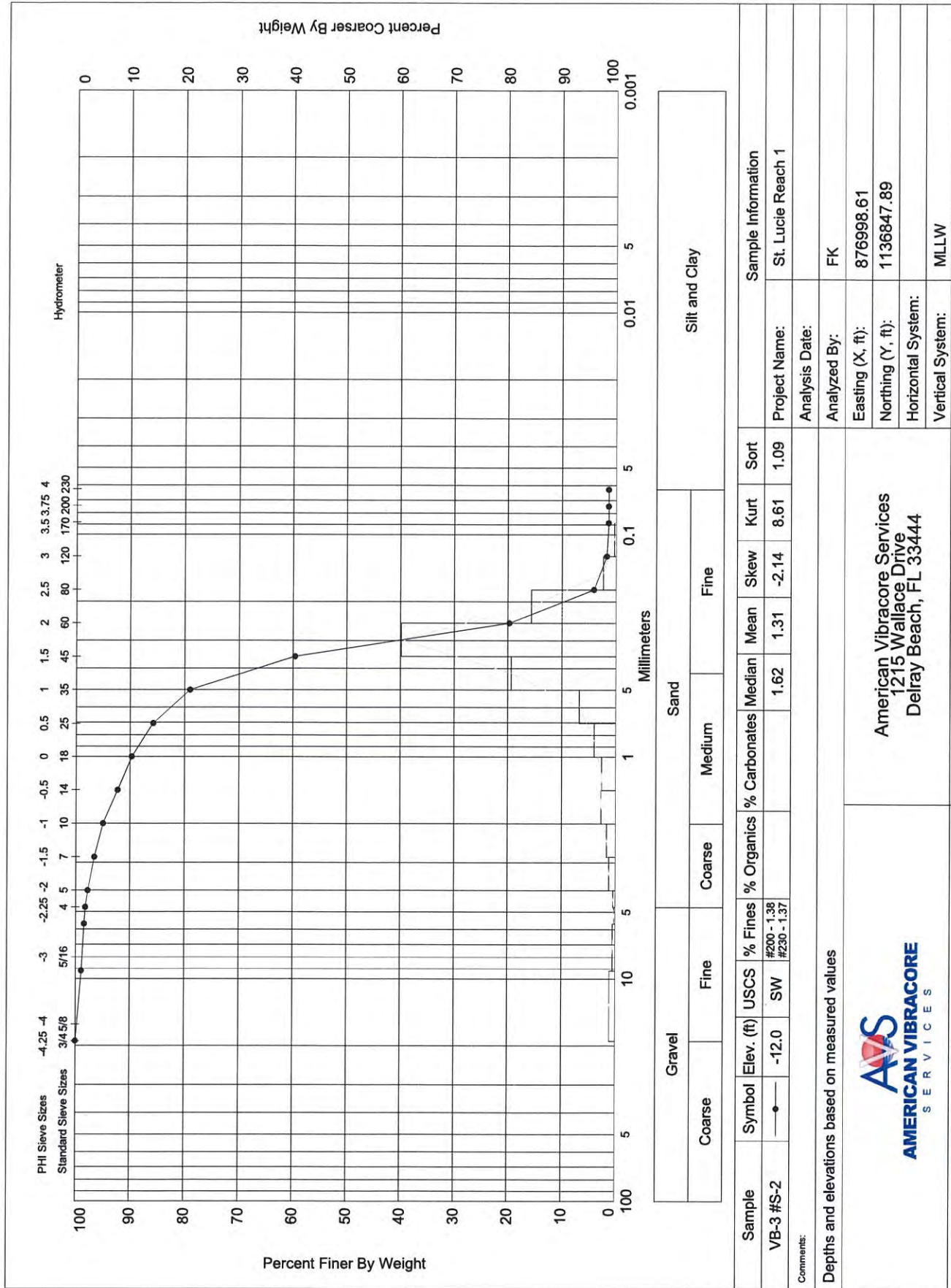


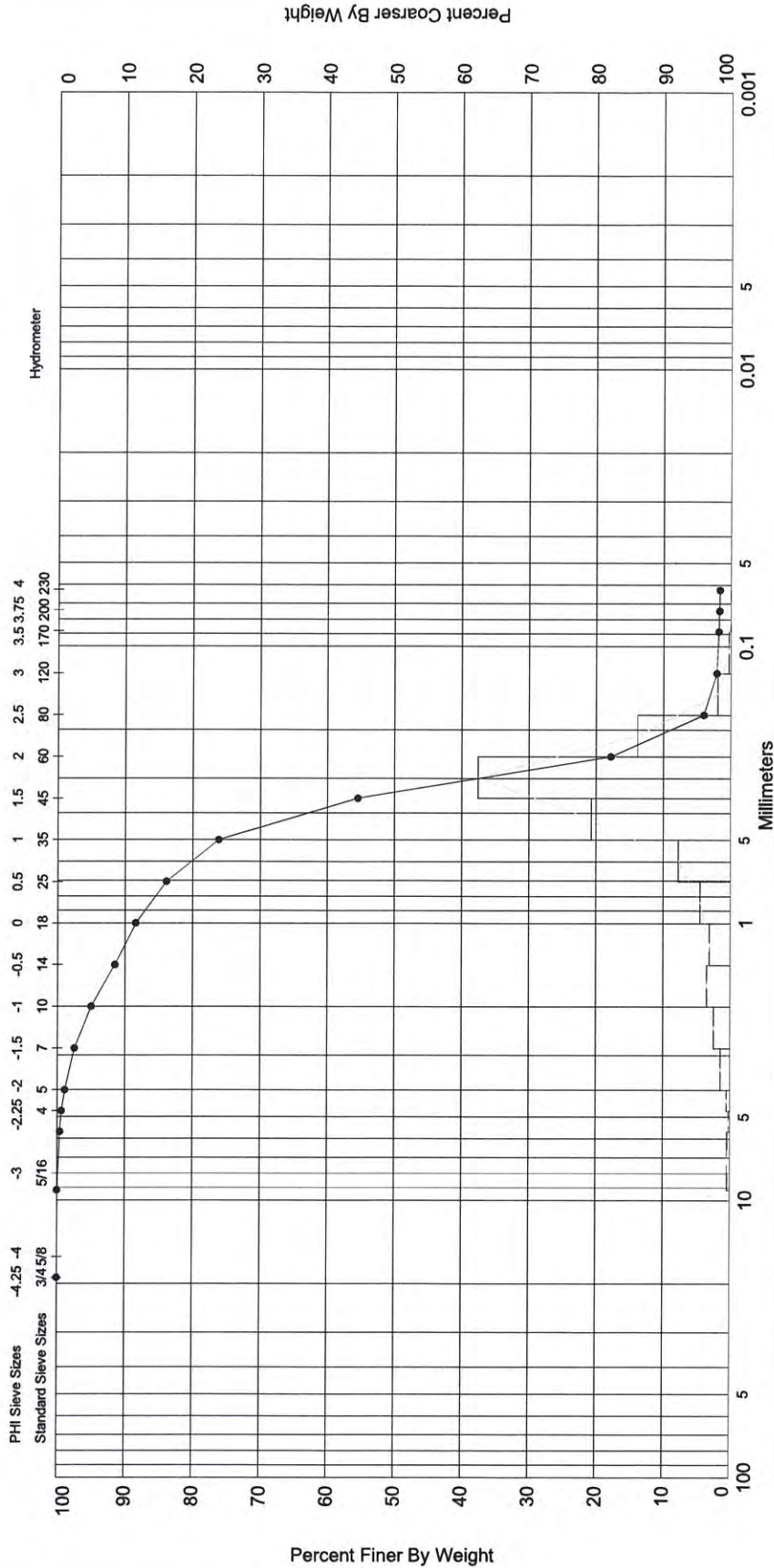
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information
VB-2 #S-3	—●—	-15.0	SW	#200 - 2.33 #230 - 2.28			1.44	1.22	-0.58	3.68	1.07	St. Lucie Reach 1
Comments:												
Depths and elevations based on measured values												
				American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444								
Analyzed By: FK												876185.37
Easting (X, ft):												1138983.58
Northing (Y, ft):												
Horizontal System:												
Vertical System:												MLLW



Sample	Symbol	Elev. (ft)	USCS	% Fines #200 - 2.24 #230 - 2.13	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-2 #S-4	—●—	-17.0	SW				1.26	0.92	-1.2	4.19	1.47	Project Name:	St. Lucie Reach 1
Comments:												Analysis Date:	
Depths and elevations based on measured values												Analyzed By:	FK
												Easting (X, ft):	876185.37
												Northing (Y, ft):	1138983.58
												Horizontal System:	
												Vertical System:	MLLW







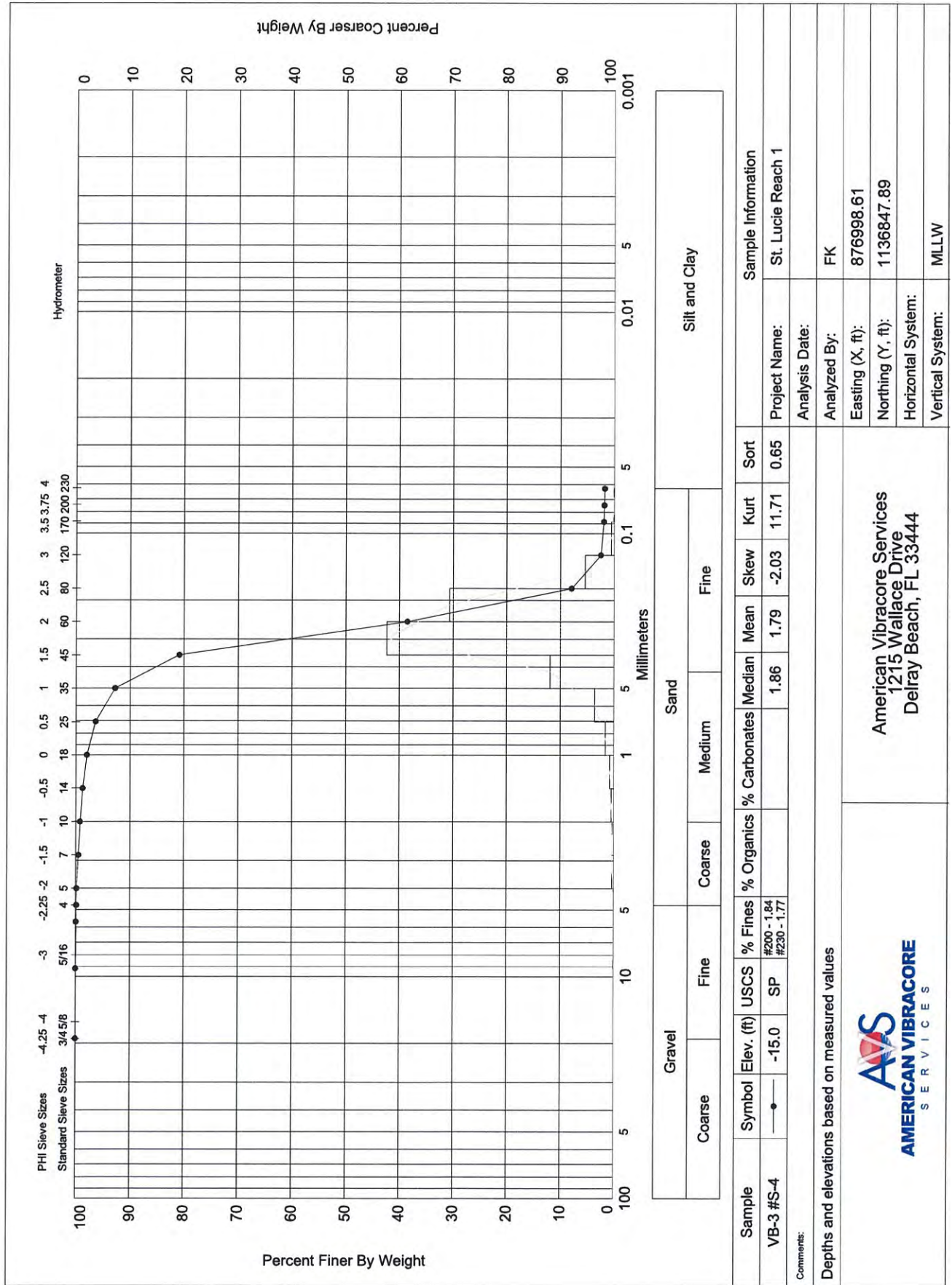
Gravel		Sand			Silt and Clay		
Coarse	Fine	Coarse	Medium	Fine			

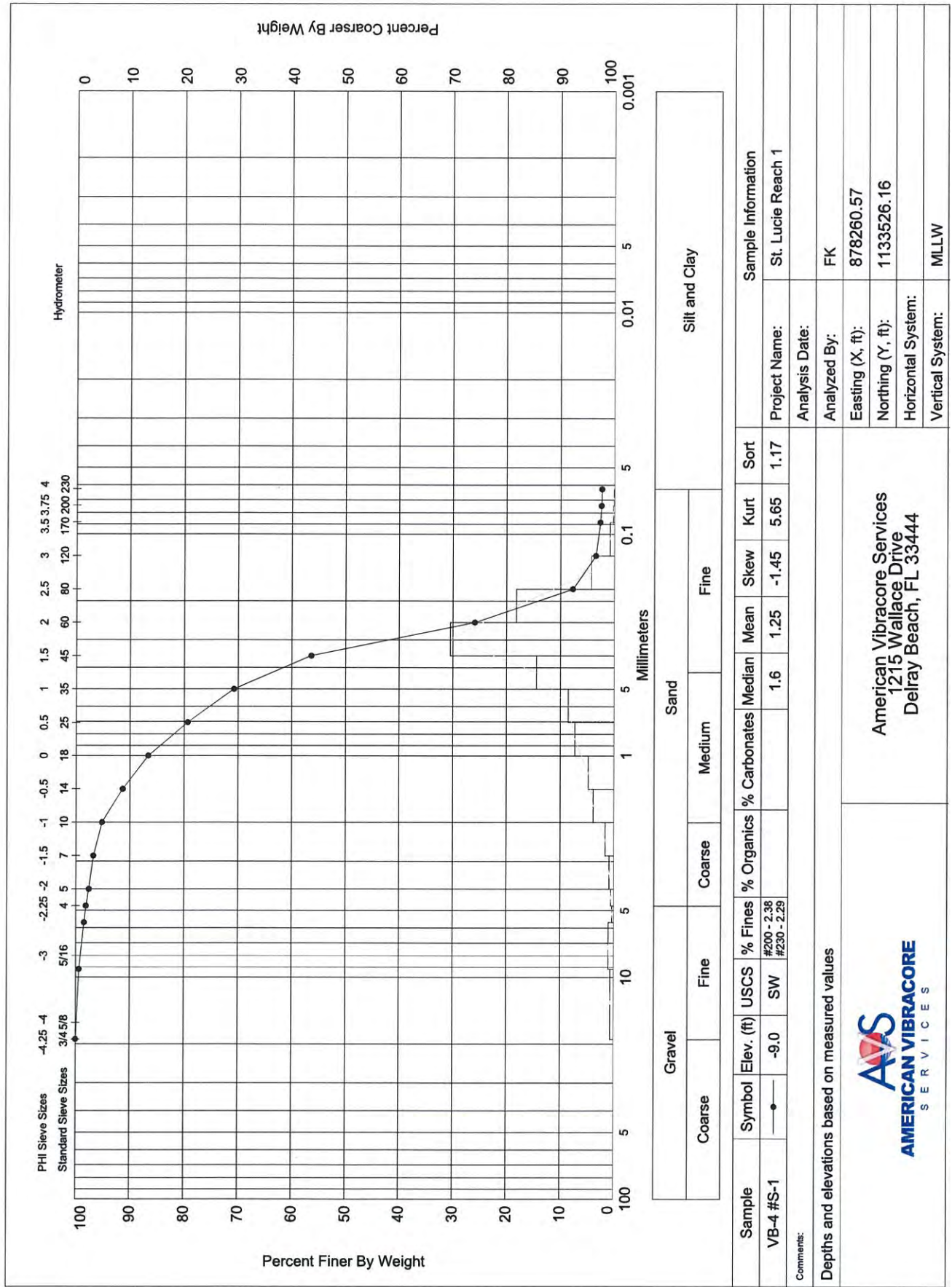
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-3 #S-3	●	-13.5	SW	#200 - 1.69 #230 - 1.63			1.57	1.27	-1.52	5.39	1.01	Project Name:	St. Lucie Reach 1

Comments:

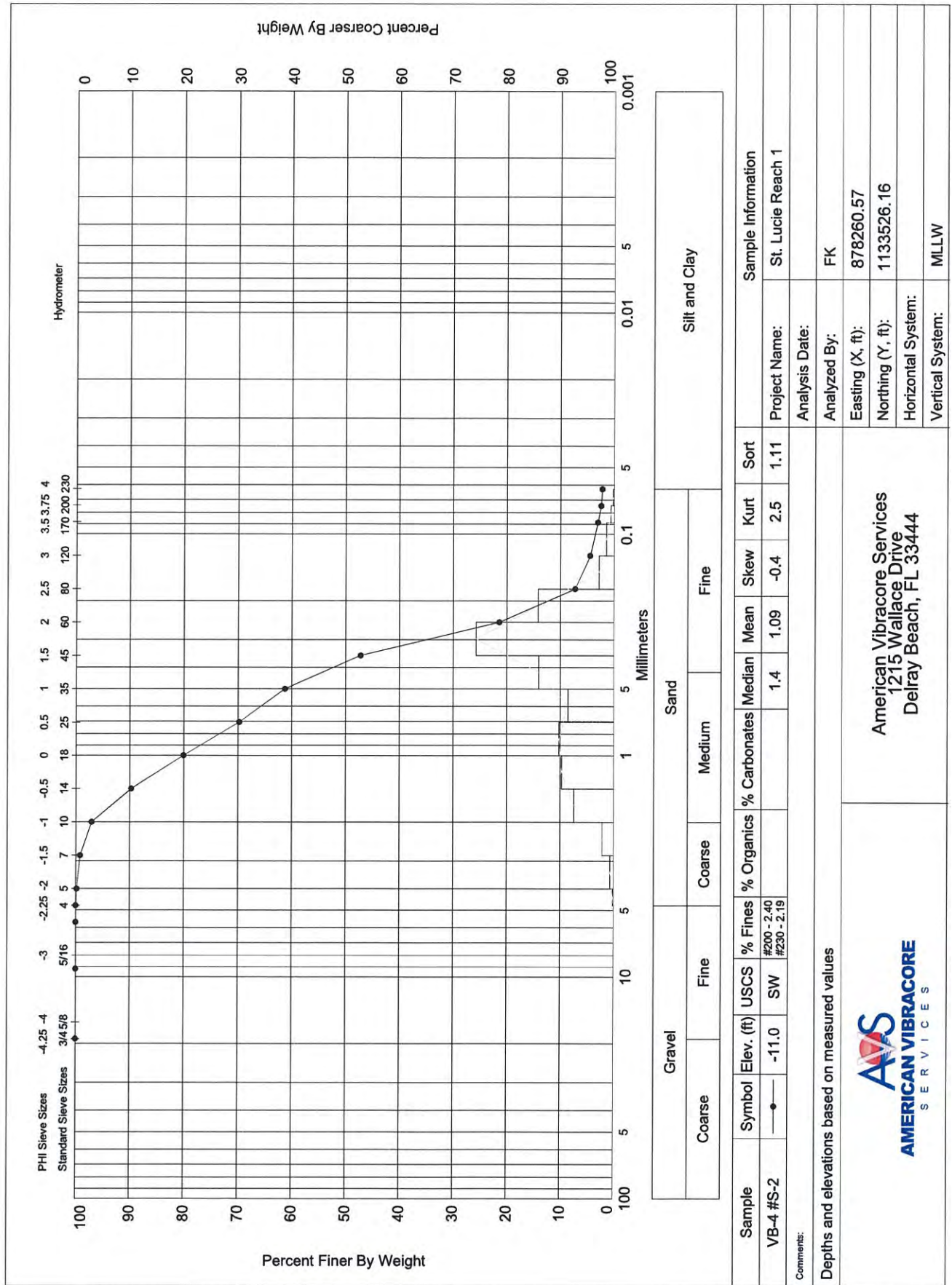
Depths and elevations based on measured values

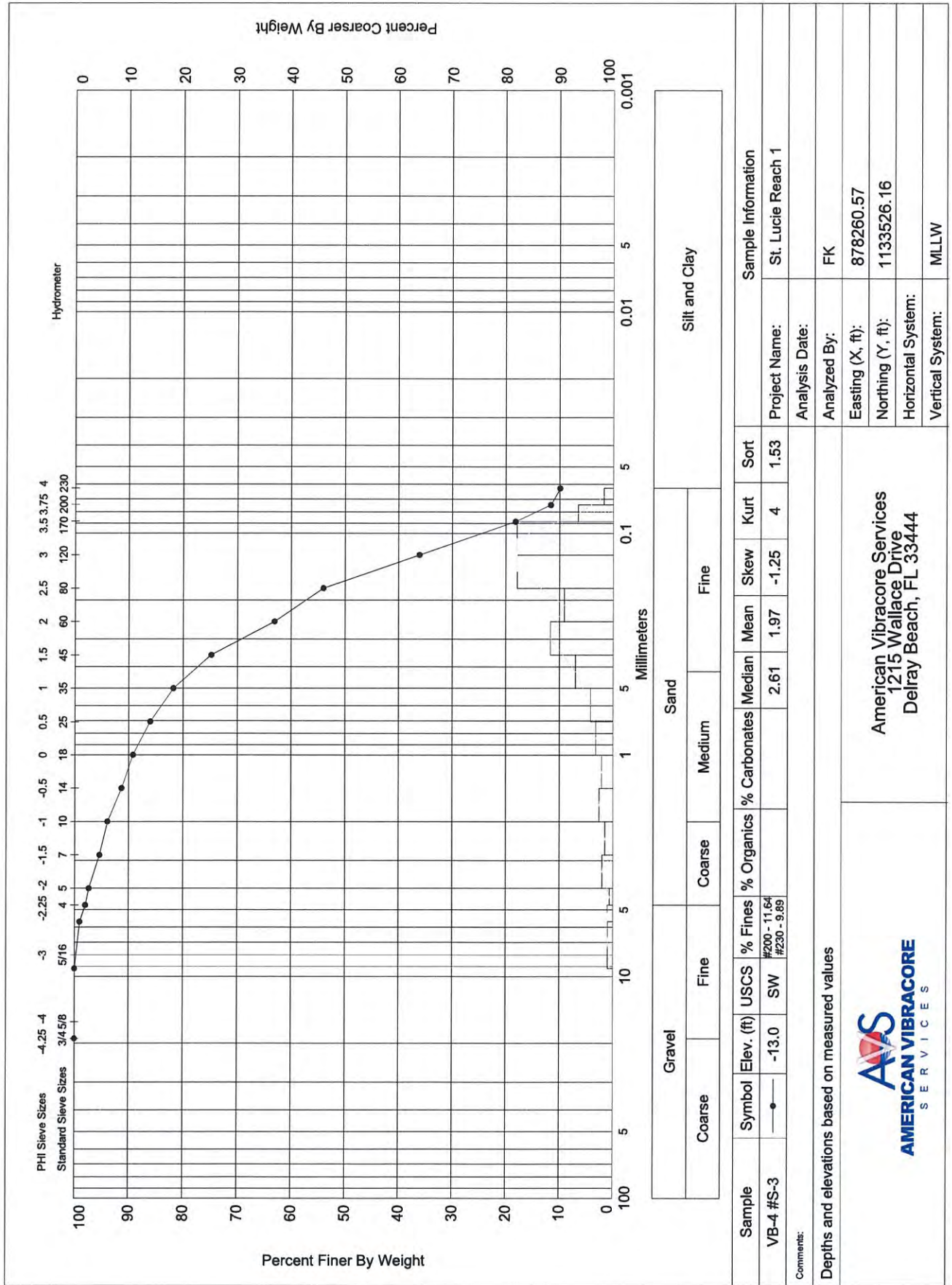
 AMERICAN VIBRACORE SERVICES												Analysis Date:	FK
												Analized By:	876998.61
												Easting (X, ft):	1136847.89
												Horizontal System:	MLLW
												Vertical System:	





Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-4 #S-1	—●—	-9.0	SW	#200 - 2.38 #230 - 2.29			1.6	1.25	-1.45	5.65	1.17	Project Name:	St. Lucie Reach 1
Comments:												Analysis Date:	
Depths and elevations based on measured values												Analized By:	FK
 American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444												Easting (X, ft):	878260.57
												Northing (Y, ft):	1133526.16
												Horizontal System:	
												Vertical System:	MLLW



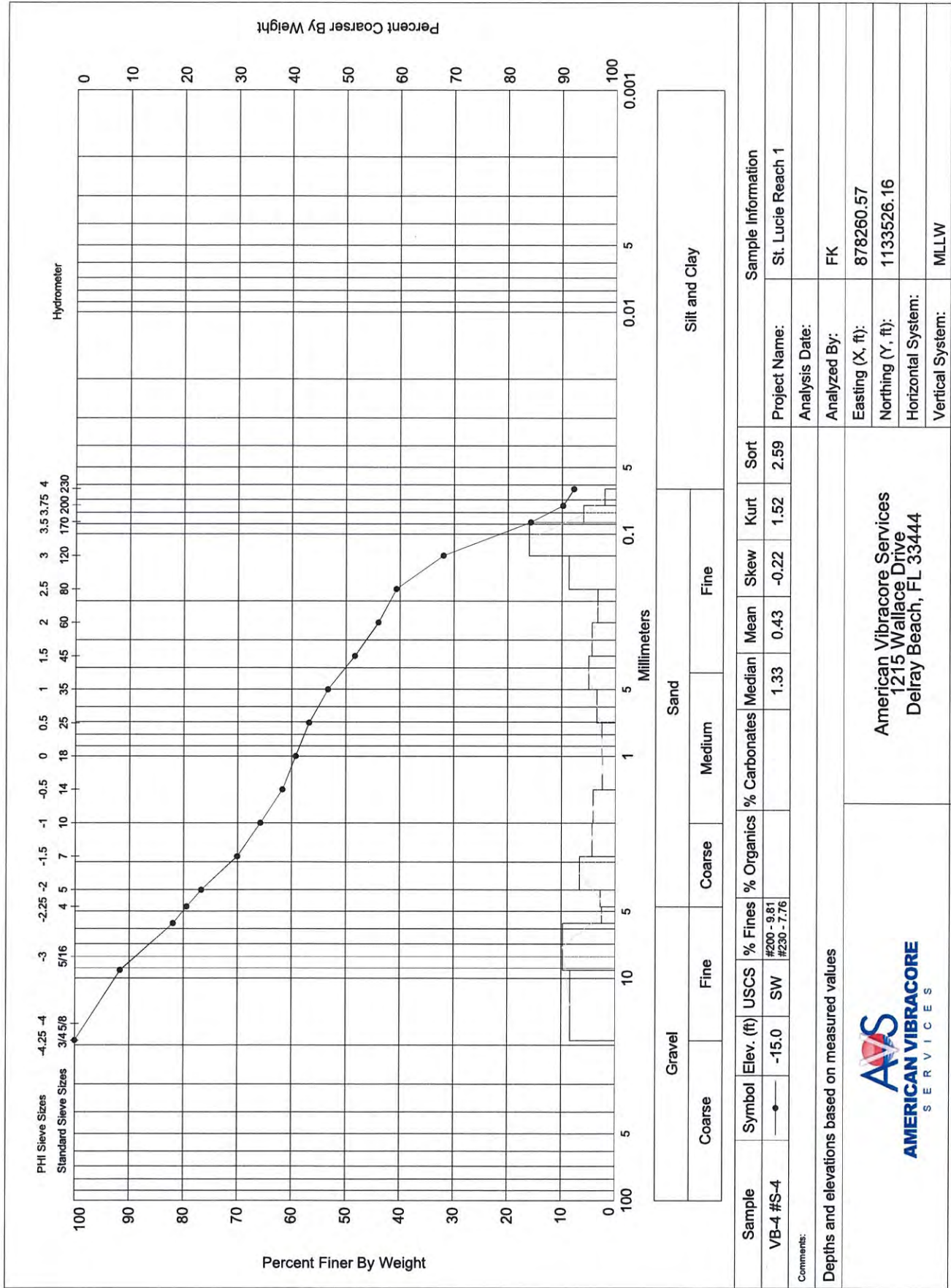


Gravel		Sand			Silt and Clay	
Coarse	Fine	Coarse	Medium	Fine		

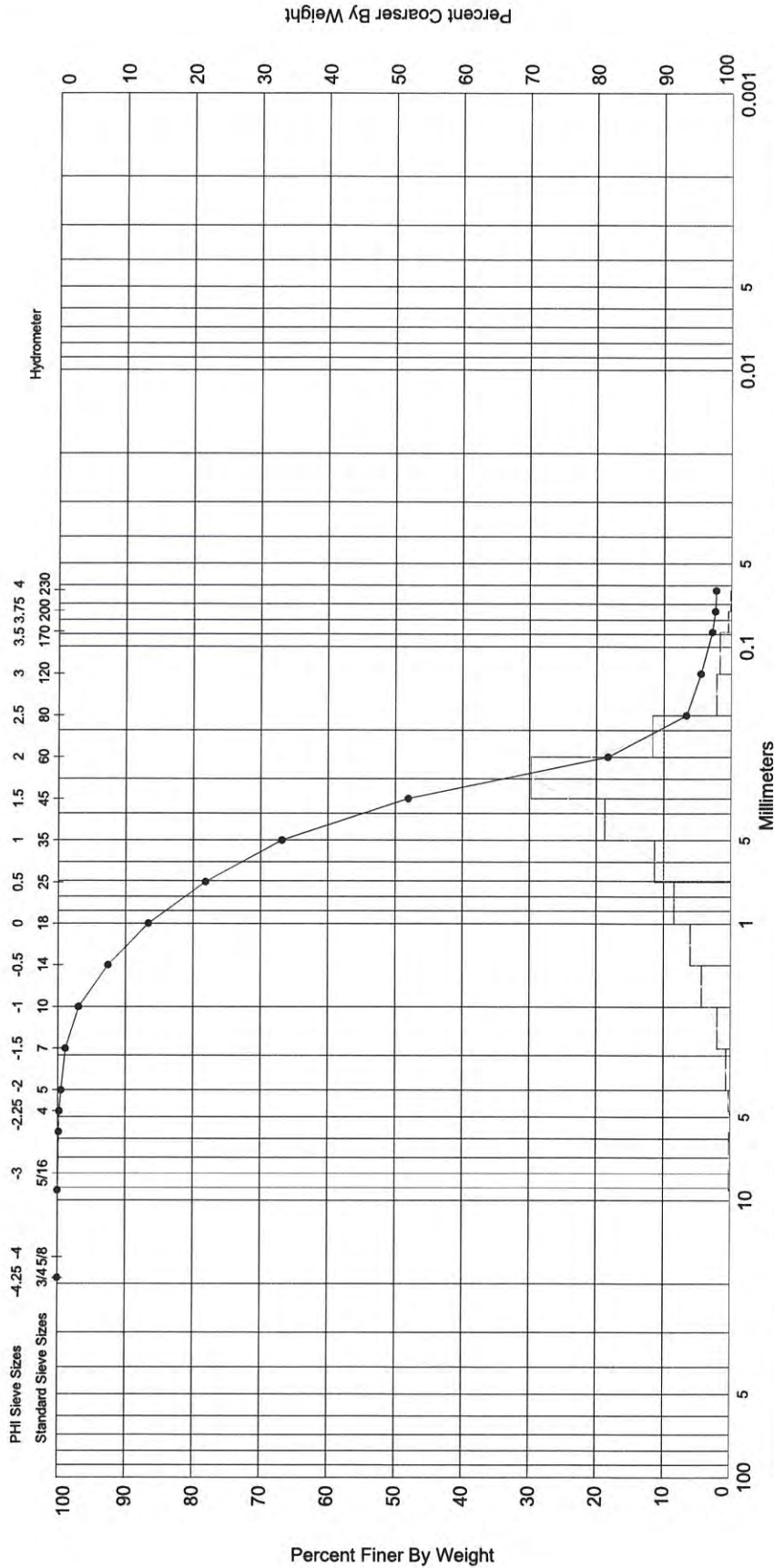
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Mean	Skew	Kurt	Sort	Sample Information	
VB-4 #S-3	—●—	-13.0	SW	#200 - 11.64 #230 - 9.89			2.61	-1.25	4	1.53	Project Name:	St. Lucie Reach 1
Comments:											Analysis Date:	
Depths and elevations based on measured values											Analyzed By:	FK
											Easting (X, ft):	878260.57
											Northing (Y, ft):	1133526.16
											Horizontal System:	
											Vertical System:	MLLW



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

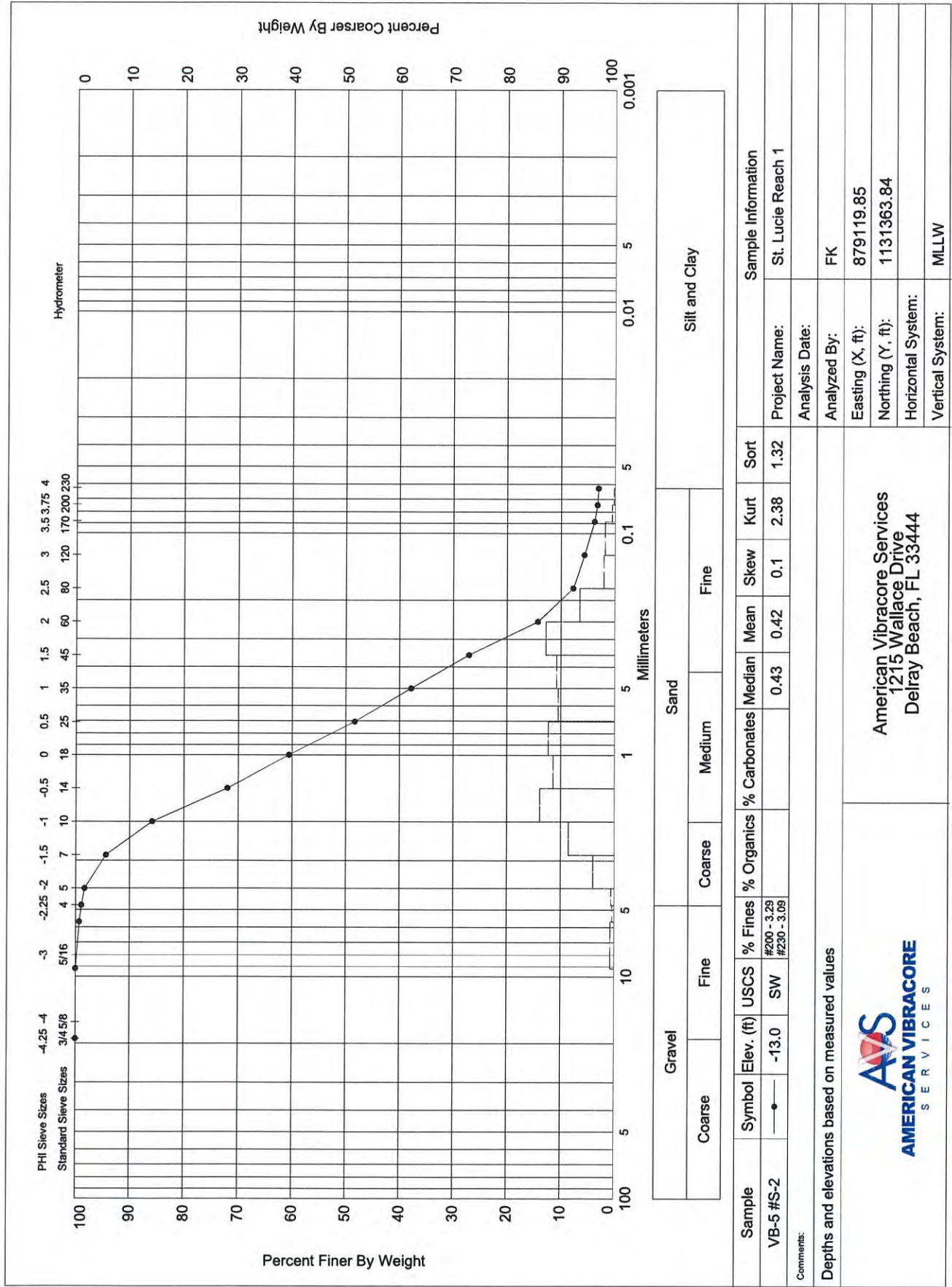


Gravel		Sand			Silt and Clay	
Coarse	Fine	Coarse	Medium	Fine		

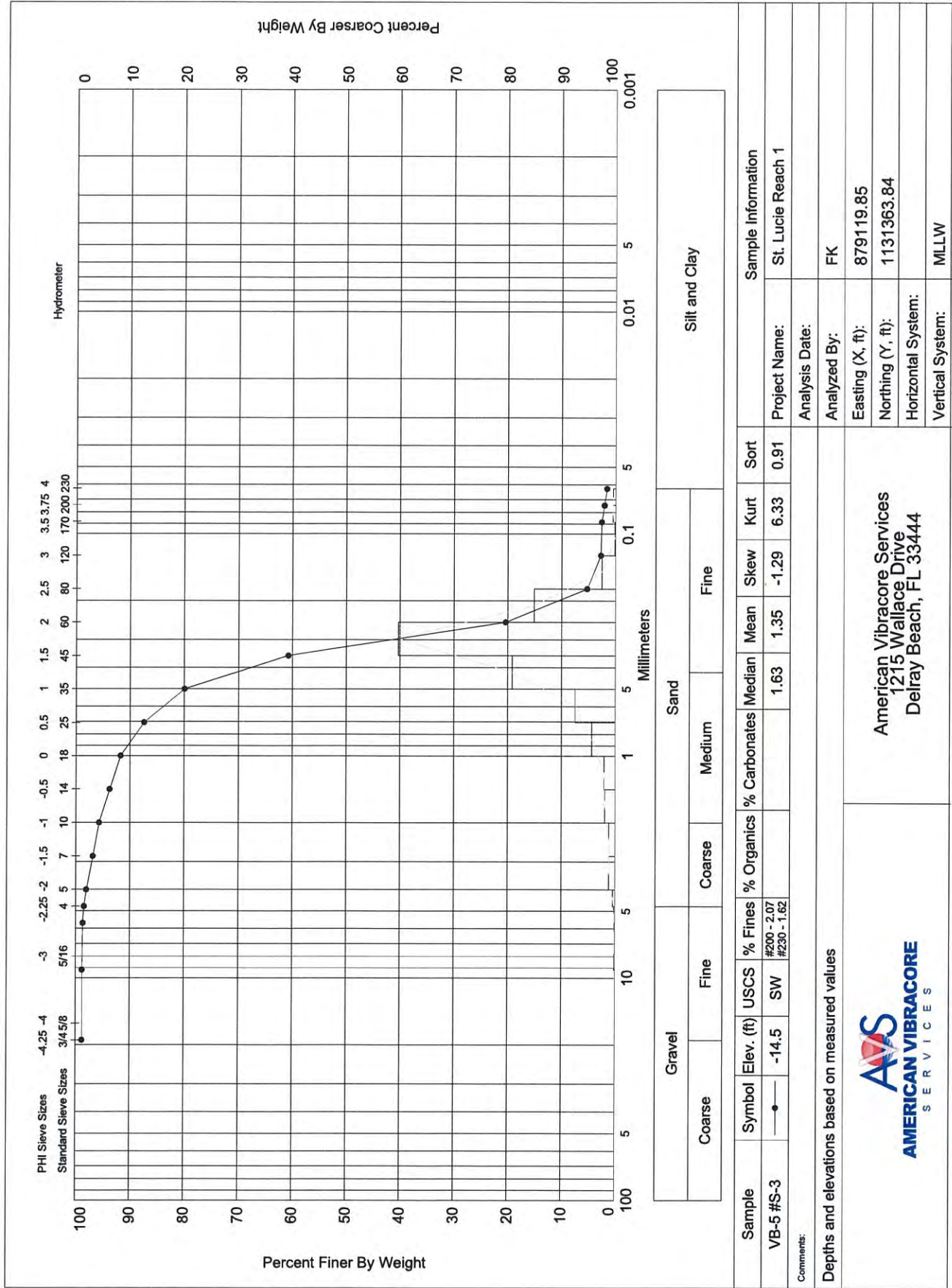
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information								
VB-5 #S-1	—●—	-11.5	SW	#200 - 2.37 #230 - 2.24			1.45	1.19	-0.73	3.7	1.01	Project Name:	St. Lucie Reach 1							
Comments:												Analysis Date:								
Depths and elevations based on measured values												Analyzed By:	FK							
 AMERICAN VIBRACORE SERVICES												American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444					Easting (X, ft):	879119.85		
																	Northing (Y, ft):	1131363.84		
																	Horizontal System:			
																	Vertical System:	MLLW		

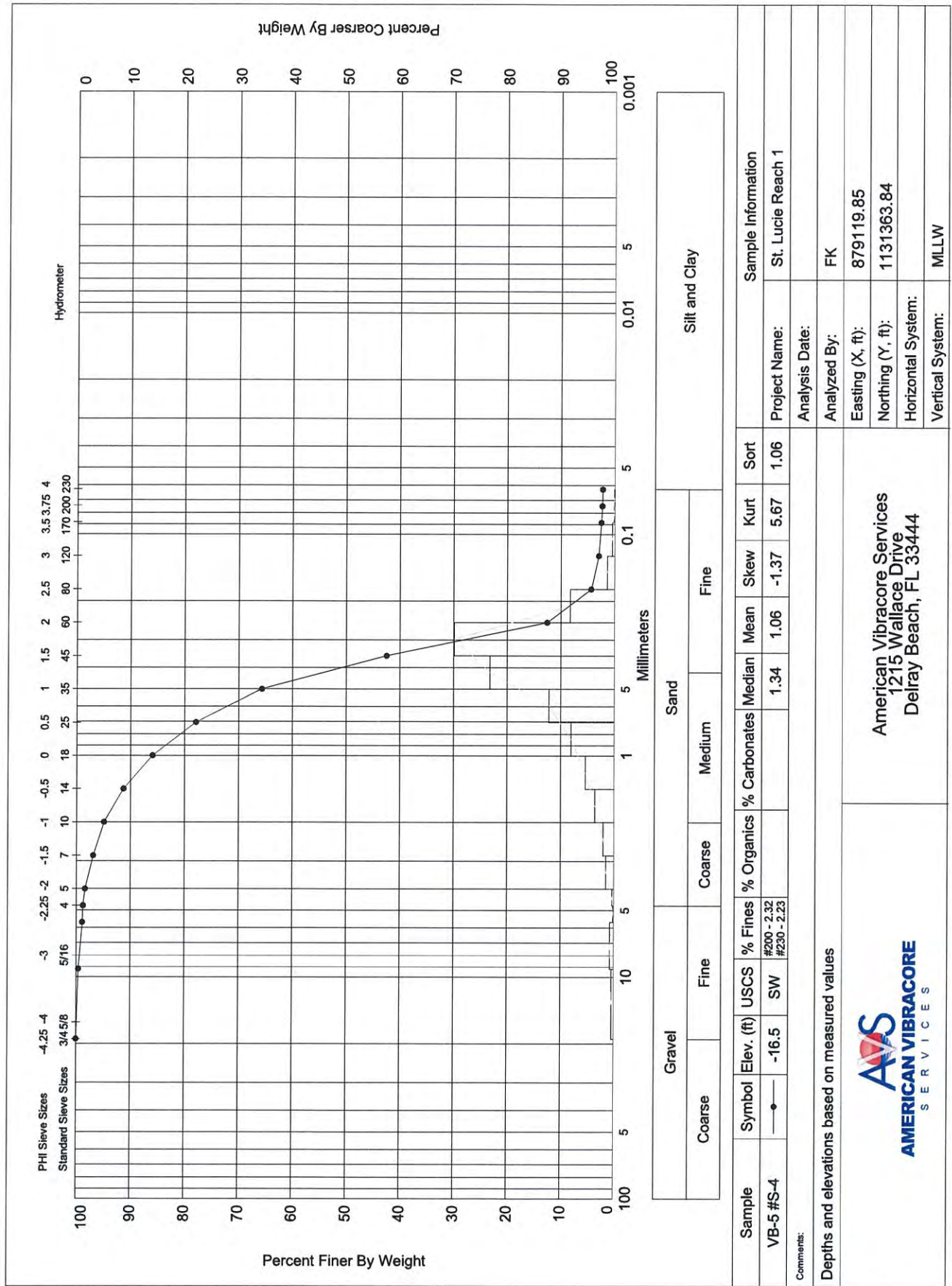


American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
VB-5 #S-2	—●—	-13.0	SW	#200 - 3.29 #230 - 3.09			0.43	0.42	0.1	2.38	1.32
Comments:											
Depths and elevations based on measured values											
						American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444					
						Project Name:					
						St. Lucie Reach 1					
						Analysis Date:					
						Analyzed By:					
						FK					
						Easting (X, ft):					
						879119.85					
						Northing (Y, ft):					
						1131363.84					
						Horizontal System:					
						Vertical System:					
						MLLW					





Sample	Symbol	Elev. (ft)	USCS	% Fines #200 - 2.32 #230 - 2.23	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-5 #S-4	—●—	-16.5	SW				1.34	1.06	-1.37	5.67	1.06	Project Name:	St. Lucie Reach 1
Comments:												Analysis Date:	
Depths and elevations based on measured values												Analyzed By:	FK
 American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444												Easting (X, ft):	879119.85
												Northing (Y, ft):	1131363.84
												Horizontal System:	
												Vertical System:	MLLW



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Sieve Reports



Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-1 #S-1

Analysis Date:

Analyzed By: FK

Easting (ft):

875180.88

Northing (ft):

1141564.14

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/3

Comments:

Dry Weight (g):

174.70

Wash Weight (g):

172.51

Pan Retained (g):

0.09

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.54

#230 - 1.31

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

0.22

0.13

0.22

0.13

4

-2.25

4.76

0.53

0.30

0.75

0.43

5

-2.00

4.00

0.72

0.41

1.47

0.84

7

-1.50

2.83

2.89

1.65

4.36

2.50

10

-1.00

2.00

4.81

2.75

9.17

5.25

14

-0.50

1.41

8.05

4.61

17.22

9.86

18

0.00

1.00

7.53

4.31

24.75

14.17

25

0.50

0.71

7.59

4.34

32.34

18.51

35

1.00

0.50

9.73

5.57

42.07

24.08

45

1.50

0.35

28.03

16.04

70.10

40.13

60

2.00

0.25

59.53

34.08

129.63

74.20

80

2.50

0.18

22.14

12.67

151.77

86.87

120

3.00

0.13

14.58

8.35

166.35

95.22

170

3.50

0.09

5.09

2.91

171.44

98.13

200

3.75

0.07

0.57

0.33

172.01

98.46

230

4.00

0.06

0.41

0.23

172.42

98.69

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.99

2.39

2.03

1.64

1.03

0.21

-1.05

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.37

0.39

1.15

-1.02

3.89

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-1 #S-2

Analysis Date:

Analyzed By: FK

Easting (ft):

875180.88

Northing (ft):

1141564.14

Coordinate System:

Florida State Plane East

Elevation (ft):

-15.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-7/4

Comments:

Dry Weight (g):

82.30

Wash Weight (g):

76.13

Pan Retained (g):

0.44

Sieve Loss (%):

0.57

Fines (%):

#200 - 9.21

#230 - 8.60

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

8.14

9.89

8.14

9.89

3.5

-2.50

5.66

3.81

4.63

11.95

14.52

4

-2.25

4.76

1.05

1.28

13.00

15.80

5

-2.00

4.00

1.13

1.37

14.13

17.17

7

-1.50

2.83

1.78

2.16

15.91

19.33

10

-1.00

2.00

1.76

2.14

17.67

21.47

14

-0.50

1.41

1.82

2.21

19.49

23.68

18

0.00

1.00

0.58

0.70

20.07

24.39

25

0.50

0.71

4.14

5.03

24.21

29.42

35

1.00

0.50

5.43

6.60

29.64

36.01

45

1.50

0.35

3.79

4.61

33.43

40.62

60

2.00

0.25

11.43

13.89

44.86

54.51

80

2.50

0.18

14.44

17.55

59.30

72.05

120

3.00

0.13

11.21

13.62

70.51

85.67

170

3.50

0.09

3.27

3.97

73.78

89.65

200

3.75

0.07

0.94

1.14

74.72

90.79

230

4.00

0.06

0.50

0.61

75.22

91.40

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.94

2.61

1.84

0.06

-2.21

-3.72

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.75

0.59

2.24

-0.91

2.46

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-1 #S-3

Analysis Date:

Analyzed By: FK

Easting (ft):
875180.88Northing (ft):
1141564.14

Coordinate System:

Florida State Plane East

Elevation (ft):
-17.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-4/1

Comments:

Dry Weight (g):

140.50

Wash Weight (g):

137.32

Pan Retained (g):

0.01

Sieve Loss (%):

0.01

Fines (%):

#200 - 2.37
#230 - 2.28

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

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

0.12

0.09

0.12

0.09

7

-1.50

2.83

0.62

0.44

0.74

0.53

10

-1.00

2.00

1.47

1.05

2.21

1.57

14

-0.50

1.41

2.87

2.04

5.08

3.62

18

0.00

1.00

3.27

2.33

8.35

5.94

25

0.50

0.71

7.39

5.26

15.74

11.20

35

1.00

0.50

17.91

12.75

33.65

23.95

45

1.50

0.35

25.64

18.25

59.29

42.20

60

2.00

0.25

28.56

20.33

87.85

62.53

80

2.50

0.18

31.78

22.62

119.63

85.15

120

3.00

0.13

15.55

11.07

135.18

96.21

170

3.50

0.09

1.74

1.24

136.92

97.45

200

3.75

0.07

0.25

0.18

137.17

97.63

230

4.00

0.06

0.12

0.09

137.29

97.72

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.95

2.47

2.28

1.69

1.03

0.69

-0.20

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.55

0.34

0.93

-0.82

3.87

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-1 #S-4

Analysis Date:

Analyzed By: FK

Easting (ft):

875180.88

Northing (ft):

1141564.14

Coordinate System:

Florida State Plane East

Elevation (ft):

-19.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-4/1

Comments:

Dry Weight (g):

163.90

Wash Weight (g):

158.42

Pan Retained (g):

0.14

Sieve Loss (%):

0.00

Fines (%):

#200 - 3.67

#230 - 3.43

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

1.77

1.08

1.77

1.08

3.5

-2.50

5.66

1.81

1.10

3.58

2.18

4

-2.25

4.76

0.39

0.24

3.97

2.42

5

-2.00

4.00

0.74

0.45

4.71

2.87

7

-1.50

2.83

1.39

0.85

6.10

3.72

10

-1.00

2.00

1.52

0.93

7.62

4.65

14

-0.50

1.41

0.78

0.48

8.40

5.13

18

0.00

1.00

2.61

1.59

11.01

6.72

25

0.50

0.71

3.88

2.37

14.89

9.08

35

1.00

0.50

8.88

5.42

23.77

14.50

45

1.50

0.35

21.24

12.96

45.01

27.46

60

2.00

0.25

31.31

19.10

76.32

46.56

80

2.50

0.18

41.84

25.53

118.16

72.09

120

3.00

0.13

30.14

18.39

148.30

90.48

170

3.50

0.09

8.37

5.11

156.67

95.59

200

3.75

0.07

1.21

0.74

157.88

96.33

230

4.00

0.06

0.40

0.24

158.28

96.57

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.44

2.82

2.58

2.07

1.41

1.06

-0.64

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.76

0.30

1.24

-2.09

8.67

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-2 #S-1

Analysis Date:

Analyzed By: FK

Easting (ft):

876185.37

Northing (ft):

1138983.58

Coordinate System:

Florida State Plane East

Elevation (ft):

-11.0 MLLW

USCS:

SP

Munsell:

Wet - 10YR-7/1

Comments:

Dry Weight (g):

222.20

Wash Weight (g):

219.14

Pan Retained (g):

0.00

Sieve Loss (%):

0.01

Fines (%):

#200 - 1.45

#230 - 1.39

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

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

0.03

0.01

0.03

0.01

5

-2.00

4.00

0.31

0.14

0.34

0.15

7

-1.50

2.83

0.50

0.23

0.84

0.38

10

-1.00

2.00

0.29

0.13

1.13

0.51

14

-0.50

1.41

0.44

0.20

1.57

0.71

18

0.00

1.00

0.31

0.14

1.88

0.85

25

0.50

0.71

0.51

0.23

2.39

1.08

35

1.00

0.50

3.04

1.37

5.43

2.44

45

1.50

0.35

19.69

8.86

25.12

11.31

60

2.00

0.25

88.20

39.69

113.32

51.00

80

2.50

0.18

77.38

34.82

190.70

85.82

120

3.00

0.13

23.73

10.68

214.43

96.50

170

3.50

0.09

3.91

1.76

218.34

98.26

200

3.75

0.07

0.63

0.28

218.97

98.55

230

4.00

0.06

0.14

0.06

219.11

98.61

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.93

2.47

2.34

1.99

1.67

1.56

1.14

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.98

0.25

0.57

-1.64

13.47

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report				 American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444			
Depths and elevations based on measured values							
Project Name: St. Lucie Reach 1							
Sample Name: VB-2 #S-2							
Analysis Date:							
Analyzed By: FK							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
876185.37		1138983.58		Florida State Plane East		-13.0 MLLW	
USCS:		Munsell:		Comments:			
SW		Wet - 10YR-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
127.40	125.03	0.12	0.09	#200 - 2.36 #230 - 2.05			
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	
3/8"	-3.20	9.19	2.94	2.31	2.94	2.31	
3.5	-2.50	5.66	3.57	2.80	6.51	5.11	
4	-2.25	4.76	1.71	1.34	8.22	6.45	
5	-2.00	4.00	1.43	1.12	9.65	7.57	
7	-1.50	2.83	3.04	2.39	12.69	9.96	
10	-1.00	2.00	3.33	2.61	16.02	12.57	
14	-0.50	1.41	4.10	3.22	20.12	15.79	
18	0.00	1.00	3.53	2.77	23.65	18.56	
25	0.50	0.71	4.07	3.19	27.72	21.76	
35	1.00	0.50	5.64	4.43	33.36	26.19	
45	1.50	0.35	14.37	11.28	47.73	37.46	
60	2.00	0.25	39.95	31.36	87.68	68.82	
80	2.50	0.18	21.79	17.10	109.47	85.93	
120	3.00	0.13	7.83	6.15	117.30	92.07	
170	3.50	0.09	5.39	4.23	122.69	96.30	
200	3.75	0.07	1.70	1.33	124.39	97.64	
230	4.00	0.06	0.40	0.31	124.79	97.95	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.35	2.44	2.18	1.70	0.87	-0.46	-2.53	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.18	0.44	1.63	-1.35	4.25		

GRANULARMETRIC REPORT: ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-2 #S-3

Analysis Date:

Analyzed By: FK

Easting (ft):

876185.37

Northing (ft):

1138983.58

Coordinate System:

Florida State Plane East

Elevation (ft):

-15.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

140.50

Wash Weight (g):

137.32

Pan Retained (g):

0.00

Sieve Loss (%):

0.01

Fines (%):

#200 - 2.33

#230 - 2.28

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

2.17

1.54

2.17

1.54

3/8"

-3.20

9.19

0.00

0.00

2.17

1.54

3.5

-2.50

5.66

0.42

0.30

2.59

1.84

4

-2.25

4.76

0.26

0.19

2.85

2.03

5

-2.00

4.00

0.31

0.22

3.16

2.25

7

-1.50

2.83

2.29

1.63

5.45

3.88

10

-1.00

2.00

1.88

1.34

7.33

5.22

14

-0.50

1.41

3.08

2.19

10.41

7.41

18

0.00

1.00

5.39

3.84

15.80

11.25

25

0.50

0.71

11.47

8.16

27.27

19.41

35

1.00

0.50

22.57

16.06

49.84

35.47

45

1.50

0.35

23.00

16.37

72.84

51.84

60

2.00

0.25

21.95

15.62

94.79

67.47

80

2.50

0.18

28.56

20.33

123.35

87.79

120

3.00

0.13

12.00

8.54

135.35

96.33

170

3.50

0.09

1.57

1.12

136.92

97.45

200

3.75

0.07

0.31

0.22

137.23

97.67

230

4.00

0.06

0.07

0.05

137.30

97.72

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.92

2.41

2.19

1.44

0.67

0.29

-1.08

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.22

0.43

1.07

-0.58

3.68

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-2 #S-4

Analysis Date:

Analyzed By: FK

Easting (ft):

876185.37

Northing (ft):

1138983.58

Coordinate System:

Florida State Plane East

Elevation (ft):

-17.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-4/1

Comments:

Dry Weight (g):

162.20

Wash Weight (g):

158.83

Pan Retained (g):

0.06

Sieve Loss (%):

0.02

Fines (%):

#200 - 2.24
#230 - 2.13

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

2.23

1.37

2.23

1.37

3.5

-2.50

5.66

5.93

3.66

8.16

5.03

4

-2.25

4.76

1.34

0.83

9.50

5.86

5

-2.00

4.00

1.15

0.71

10.65

6.57

7

-1.50

2.83

3.67

2.26

14.32

8.83

10

-1.00

2.00

3.91

2.41

18.23

11.24

14

-0.50

1.41

5.61

3.46

23.84

14.70

18

0.00

1.00

6.44

3.97

30.28

18.67

25

0.50

0.71

12.04

7.42

42.32

26.09

35

1.00

0.50

23.15

14.27

65.47

40.36

45

1.50

0.35

29.66

18.29

95.13

58.65

60

2.00

0.25

28.03

17.28

123.16

75.93

80

2.50

0.18

24.27

14.96

147.43

90.89

120

3.00

0.13

8.82

5.44

156.25

96.33

170

3.50

0.09

1.99

1.23

158.24

97.56

200

3.75

0.07

0.32

0.20

158.56

97.76

230

4.00

0.06

0.18

0.11

158.74

97.87

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.88

2.27

1.97

1.26

0.43

-0.34

-2.51

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.92

0.53

1.47

-1.2

4.19

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-3 #S-1

Analysis Date:

Analyzed By: FK

Easting (ft):

876998.61

Northing (ft):

1136847.89

Coordinate System:

Florida State Plane East

Elevation (ft):

-10.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

143.50

Wash Weight (g):

140.19

Pan Retained (g):

0.02

Sieve Loss (%):

0.01

Fines (%):

#200 - 2.40
#230 - 2.33

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

0.41

0.29

0.41

0.29

3.5

-2.50

5.66

0.53

0.37

0.94

0.66

4

-2.25

4.76

0.24

0.17

1.18

0.82

5

-2.00

4.00

0.36

0.25

1.54

1.07

7

-1.50

2.83

1.09

0.76

2.63

1.83

10

-1.00

2.00

2.10

1.46

4.73

3.30

14

-0.50

1.41

3.08

2.15

7.81

5.44

18

0.00

1.00

3.07

2.14

10.88

7.58

25

0.50

0.71

4.89

3.41

15.77

10.99

35

1.00

0.50

8.53

5.94

24.30

16.93

45

1.50

0.35

24.84

17.31

49.14

34.24

60

2.00

0.25

56.94

39.68

106.08

73.92

80

2.50

0.18

28.17

19.63

134.25

93.55

120

3.00

0.13

5.03

3.51

139.28

97.06

170

3.50

0.09

0.77

0.54

140.05

97.60

200

3.75

0.07

0.01

0.01

140.06

97.60

230

4.00

0.06

0.10

0.07

140.16

97.67

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.71

2.26

2.03

1.70

1.23

0.92

-0.60

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.47

0.36

0.95

-2.02

8.65

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-3 #S-2

Analysis Date:

Analyzed By: FK

Easting (ft):
876998.61

Northing (ft):
1136847.89

Coordinate System:

Florida State Plane East

Elevation (ft):

-12.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

150.90

Wash Weight (g):

148.83

Pan Retained (g):

0.00

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.38

#230 - 1.37

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

1.63

1.08

1.63

1.08

3.5

-2.50

5.66

0.75

0.50

2.38

1.58

4

-2.25

4.76

0.35

0.23

2.73

1.81

5

-2.00

4.00

0.65

0.43

3.38

2.24

7

-1.50

2.83

1.82

1.21

5.20

3.45

10

-1.00

2.00

2.44

1.62

7.64

5.06

14

-0.50

1.41

4.03

2.67

11.67

7.73

18

0.00

1.00

3.91

2.59

15.58

10.32

25

0.50

0.71

5.96

3.95

21.54

14.27

35

1.00

0.50

10.20

6.76

31.74

21.03

45

1.50

0.35

29.26

19.39

61.00

40.42

60

2.00

0.25

60.13

39.85

121.13

80.27

80

2.50

0.18

23.62

15.65

144.75

95.92

120

3.00

0.13

3.55

2.35

148.30

98.28

170

3.50

0.09

0.51

0.34

148.81

98.61

200

3.75

0.07

0.01

0.01

148.82

98.62

230

4.00

0.06

0.01

0.01

148.83

98.63

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.47

2.12

1.93

1.62

1.10

0.63

-1.02

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.31

0.40

1.09

-2.14

8.61

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-3 #S-3

Analysis Date:

Analyzed By: FK

Easting (ft):
876998.61Northing (ft):
1136847.89

Coordinate System:

Florida State Plane East

Elevation (ft):
-13.5 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/1

Comments:

Dry Weight (g):

223.00

Wash Weight (g):

219.37

Pan Retained (g):

0.00

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.69

#230 - 1.63

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

0.94

0.42

0.94

0.42

4

-2.25

4.76

0.48

0.22

1.42

0.64

5

-2.00

4.00

1.10

0.49

2.52

1.13

7

-1.50

2.83

3.14

1.41

5.66

2.54

10

-1.00

2.00

5.51

2.47

11.17

5.01

14

-0.50

1.41

7.84

3.52

19.01

8.52

18

0.00

1.00

6.87

3.08

25.88

11.61

25

0.50

0.71

10.06

4.51

35.94

16.12

35

1.00

0.50

17.29

7.75

53.23

23.87

45

1.50

0.35

46.21

20.72

99.44

44.59

60

2.00

0.25

83.82

37.59

183.26

82.18

80

2.50

0.18

30.84

13.83

214.10

96.01

120

3.00

0.13

4.28

1.92

218.38

97.93

170

3.50

0.09

0.62

0.28

219.00

98.21

200

3.75

0.07

0.24

0.11

219.24

98.31

230

4.00

0.06

0.13

0.06

219.37

98.37

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.46

2.07

1.90

1.57

1.03

0.49

-1.00

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.27

0.41

1.01

-1.52

5.39

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-3 #S-4

Analysis Date:

Analyzed By: FK

Easting (ft):

876998.61

Northing (ft):

1136847.89

Coordinate System:

Florida State Plane East

Elevation (ft):

-15.0 MLLW

USCS:

SP

Munsell:

Wet - 10YR-5/1

Comments:

Dry Weight (g):

207.60

Wash Weight (g):

203.95

Pan Retained (g):

0.03

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.84

#230 - 1.77

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

0.15

0.07

0.15

0.07

4

-2.25

4.76

0.14

0.07

0.29

0.14

5

-2.00

4.00

0.08

0.04

0.37

0.18

7

-1.50

2.83

0.68

0.33

1.05

0.51

10

-1.00

2.00

0.66

0.32

1.71

0.82

14

-0.50

1.41

0.94

0.45

2.65

1.28

18

0.00

1.00

1.60

0.77

4.25

2.05

25

0.50

0.71

3.30

1.59

7.55

3.64

35

1.00

0.50

7.47

3.60

15.02

7.24

45

1.50

0.35

24.73

11.91

39.75

19.15

60

2.00

0.25

87.93

42.36

127.68

61.50

80

2.50

0.18

63.55

30.61

191.23

92.11

120

3.00

0.13

11.26

5.42

202.49

97.54

170

3.50

0.09

1.10

0.53

203.59

98.07

200

3.75

0.07

0.19

0.09

203.78

98.16

230

4.00

0.06

0.14

0.07

203.92

98.23

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.77

2.37

2.22

1.86

1.57

1.37

0.69

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.79

0.29

0.65

-2.03

11.71

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #S-1

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-9.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

178.40

Wash Weight (g):

174.33

Pan Retained (g):

0.01

Sieve Loss (%):

0.00

Fines (%):

#200 - 2.38

#230 - 2.29

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

1.08

0.61

1.08

0.61

3.5

-2.50

5.66

1.68

0.94

2.76

1.55

4

-2.25

4.76

0.63

0.35

3.39

1.90

5

-2.00

4.00

0.94

0.53

4.33

2.43

7

-1.50

2.83

1.46

0.82

5.79

3.25

10

-1.00

2.00

2.83

1.59

8.62

4.83

14

-0.50

1.41

6.87

3.85

15.49

8.68

18

0.00

1.00

8.43

4.73

23.92

13.41

25

0.50

0.71

12.95

7.26

36.87

20.67

35

1.00

0.50

15.27

8.56

52.14

29.23

45

1.50

0.35

25.71

14.41

77.85

43.64

60

2.00

0.25

54.37

30.48

132.22

74.11

80

2.50

0.18

32.47

18.20

164.69

92.32

120

3.00

0.13

7.62

4.27

172.31

96.59

170

3.50

0.09

1.45

0.81

173.76

97.40

200

3.75

0.07

0.40

0.22

174.16

97.62

230

4.00

0.06

0.16

0.09

174.32

97.71

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.81

2.27

2.02

1.60

0.75

0.18

-0.98

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.25

0.42

1.17

-1.45

5.65

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #S-2

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-11.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

183.20

Wash Weight (g):

179.38

Pan Retained (g):

0.19

Sieve Loss (%):

0.00

Fines (%):

#200 - 2.40

#230 - 2.19

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

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

0.33

0.18

0.33

0.18

7

-1.50

2.83

1.16

0.63

1.49

0.81

10

-1.00

2.00

3.87

2.11

5.36

2.93

14

-0.50

1.41

13.50

7.37

18.86

10.29

18

0.00

1.00

17.75

9.69

36.61

19.98

25

0.50

0.71

18.71

10.21

55.32

30.20

35

1.00

0.50

15.68

8.56

71.00

38.76

45

1.50

0.35

25.74

14.05

96.74

52.81

60

2.00

0.25

47.21

25.77

143.95

78.58

80

2.50

0.18

25.98

14.18

169.93

92.76

120

3.00

0.13

5.16

2.82

175.09

95.57

170

3.50

0.09

2.58

1.41

177.67

96.98

200

3.75

0.07

1.14

0.62

178.81

97.60

230

4.00

0.06

0.38

0.21

179.19

97.81

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.90

2.19

1.93

1.40

0.25

-0.21

-0.86

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.09

0.47

1.11

-0.4

2.5

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #S-3

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-3/1

Comments:

Dry Weight (g):

151.20

Wash Weight (g):

137.41

Pan Retained (g):

1.16

Sieve Loss (%):

0.00

Fines (%):

#200 - 11.64

#230 - 9.89

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

1.46

0.97

1.46

0.97

4

-2.25

4.76

1.60

1.06

3.06

2.02

5

-2.00

4.00

0.94

0.62

4.00

2.65

7

-1.50

2.83

3.00

1.98

7.00

4.63

10

-1.00

2.00

2.25

1.49

9.25

6.12

14

-0.50

1.41

3.91

2.59

13.16

8.70

18

0.00

1.00

3.19

2.11

16.35

10.81

25

0.50

0.71

4.85

3.21

21.20

14.02

35

1.00

0.50

6.36

4.21

27.56

18.23

45

1.50

0.35

10.57

6.99

38.13

25.22

60

2.00

0.25

17.72

11.72

55.85

36.94

80

2.50

0.18

13.73

9.08

69.58

46.02

120

3.00

0.13

27.04

17.88

96.62

63.90

170

3.50

0.09

27.08

17.91

123.70

81.81

200

3.75

0.07

9.90

6.55

133.60

88.36

230

4.00

0.06

2.65

1.75

136.25

90.11

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.58

3.31

2.61

1.48

0.74

-1.38

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.97

0.26

1.53

-1.25

4

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #S-4

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-15.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-3/1

Comments:

Dry Weight (g):

140.50

Wash Weight (g):

130.99

Pan Retained (g):

1.37

Sieve Loss (%):

0.01

Fines (%):

#200 - 9.81

#230 - 7.76

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

11.71

8.33

11.71

8.33

3.5

-2.50

5.66

13.68

9.74

25.39

18.07

4

-2.25

4.76

3.52

2.51

28.91

20.58

5

-2.00

4.00

3.86

2.75

32.77

23.32

7

-1.50

2.83

9.28

6.60

42.05

29.93

10

-1.00

2.00

6.06

4.31

48.11

34.24

14

-0.50

1.41

5.74

4.09

53.85

38.33

18

0.00

1.00

3.42

2.43

57.27

40.76

25

0.50

0.71

3.50

2.49

60.77

43.25

35

1.00

0.50

4.84

3.44

65.61

46.70

45

1.50

0.35

6.96

4.95

72.57

51.65

60

2.00

0.25

6.17

4.39

78.74

56.04

80

2.50

0.18

4.66

3.32

83.40

59.36

120

3.00

0.13

12.24

8.71

95.64

68.07

170

3.50

0.09

22.66

16.13

118.30

84.20

200

3.75

0.07

8.42

5.99

126.72

90.19

230

4.00

0.06

2.88

2.05

129.60

92.24

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.49

3.21

1.33

-1.87

-2.65

-3.62

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.43

0.74

2.59

-0.22

1.52

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #S-1

Analysis Date:

Analyzed By: FK

Easting (ft):

879119.85

Northing (ft):

1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-11.5 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

177.70

Wash Weight (g):

173.72

Pan Retained (g):

-0.02

Sieve Loss (%):

0.01

Fines (%):

#200 - 2.37

#230 - 2.24

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

0.31

0.17

0.31

0.17

4

-2.25

4.76

0.10

0.06

0.41

0.23

5

-2.00

4.00

0.48

0.27

0.89

0.50

7

-1.50

2.83

1.11

0.62

2.00

1.13

10

-1.00

2.00

3.45

1.94

5.45

3.07

14

-0.50

1.41

7.73

4.35

13.18

7.42

18

0.00

1.00

10.67

6.00

23.85

13.42

25

0.50

0.71

14.96

8.42

38.81

21.84

35

1.00

0.50

20.16

11.34

58.97

33.19

45

1.50

0.35

33.36

18.77

92.33

51.96

60

2.00

0.25

52.85

29.74

145.18

81.70

80

2.50

0.18

20.72

11.66

165.90

93.36

120

3.00

0.13

3.82

2.15

169.72

95.51

170

3.50

0.09

2.97

1.67

172.69

97.18

200

3.75

0.07

0.79

0.44

173.48

97.63

230

4.00

0.06

0.24

0.14

173.72

97.76

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.88

2.10

1.89

1.45

0.64

0.15

-0.78

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.19

0.44

1.01

-0.73

3.7

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #S-2

Analysis Date:

Analyzed By: FK

Easting (ft):

879119.85

Northing (ft):

1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.0 MLLW

USCS:

SW

Munsell:

Wet - 10YR-6/1

Comments:

Dry Weight (g):

145.80

Wash Weight (g):

141.35

Pan Retained (g):

0.05

Sieve Loss (%):

0.00

Fines (%):

#200 - 3.29
#230 - 3.09

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

0.00

0.00

0.00

0.00

3.5

-2.50

5.66

1.00

0.69

1.00

0.69

4

-2.25

4.76

0.60

0.41

1.60

1.10

5

-2.00

4.00

0.83

0.57

2.43

1.67

7

-1.50

2.83

5.77

3.96

8.20

5.62

10

-1.00

2.00

12.44

8.53

20.64

14.16

14

-0.50

1.41

20.23

13.88

40.87

28.03

18

0.00

1.00

16.59

11.38

57.46

39.41

25

0.50

0.71

17.94

12.30

75.40

51.71

35

1.00

0.50

15.25

10.46

90.65

62.17

45

1.50

0.35

15.71

10.78

106.36

72.95

60

2.00

0.25

18.64

12.78

125.00

85.73

80

2.50

0.18

9.55

6.55

134.55

92.28

120

3.00

0.13

2.98

2.04

137.53

94.33

170

3.50

0.09

2.69

1.84

140.22

96.17

200

3.75

0.07

0.78

0.53

141.00

96.71

230

4.00

0.06

0.30

0.21

141.30

96.91

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.18

1.93

1.58

0.43

-0.61

-0.93

-1.58

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

0.42

0.75

1.32

0.1

2.38

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #S-3

Analysis Date:

Analyzed By: FK

Easting (ft):

879119.85

Northing (ft):

1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-14.5 MLLW

USCS:

SW

Munsell:

Wet - 10YR-5/2

Comments:

Dry Weight (g):

226.00

Wash Weight (g):

222.36

Pan Retained (g):

0.02

Sieve Loss (%):

0.00

Fines (%):

#200 - 2.07
#230 - 1.62

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

2.71

1.20

2.71

1.20

3/8"

-3.20

9.19

0.00

0.00

2.71

1.20

3.5

-2.50

5.66

0.35

0.15

3.06

1.35

4

-2.25

4.76

0.45

0.20

3.51

1.55

5

-2.00

4.00

0.97

0.43

4.48

1.98

7

-1.50

2.83

2.67

1.18

7.15

3.16

10

-1.00

2.00

2.60

1.15

9.75

4.31

14

-0.50

1.41

4.35

1.92

14.10

6.24

18

0.00

1.00

4.60

2.04

18.70

8.27

25

0.50

0.71

9.90

4.38

28.60

12.65

35

1.00

0.50

16.85

7.46

45.45

20.11

45

1.50

0.35

43.37

19.19

88.82

39.30

60

2.00

0.25

91.08

40.30

179.90

79.60

80

2.50

0.18

34.20

15.13

214.10

94.73

120

3.00

0.13

5.73

2.54

219.83

97.27

170

3.50

0.09

0.34

0.15

220.17

97.42

200

3.75

0.07

1.15

0.51

221.32

97.93

230

4.00

0.06

1.02

0.45

222.34

98.38

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.55

2.15

1.94

1.63

1.13

0.72

-0.82

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.35

0.39

0.91

-1.29

6.33

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #S-4

Analysis Date:

Analyzed By: FK

Easting (ft):
879119.85

Northing (ft):
1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-16.5 MLLW

USCS:

SW

Munsell:

Wet - 10YR-5/2

Comments:

Dry Weight (g):

206.30

Wash Weight (g):

201.69

Pan Retained (g):

-0.08

Sieve Loss (%):

0.04

Fines (%):

#200 - 2.32
#230 - 2.23

Organics (%):

Carbonates (%):

Shells (%):

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

3/8"

-3.20

9.19

0.87

0.42

0.87

0.42

3.5

-2.50

5.66

1.45

0.70

2.32

1.12

4

-2.25

4.76

0.29

0.14

2.61

1.27

5

-2.00

4.00

0.72

0.35

3.33

1.61

7

-1.50

2.83

3.12

1.51

6.45

3.13

10

-1.00

2.00

4.14

2.01

10.59

5.13

14

-0.50

1.41

7.39

3.58

17.98

8.72

18

0.00

1.00

11.09

5.38

29.07

14.09

25

0.50

0.71

16.59

8.04

45.66

22.13

35

1.00

0.50

25.18

12.21

70.84

34.34

45

1.50

0.35

47.88

23.21

118.72

57.55

60

2.00

0.25

61.64

29.88

180.36

87.43

80

2.50

0.18

17.01

8.25

197.37

95.67

120

3.00

0.13

2.84

1.38

200.21

97.05

170

3.50

0.09

0.98

0.48

201.19

97.52

200

3.75

0.07

0.33

0.16

201.52

97.68

230

4.00

0.06

0.17

0.08

201.69

97.77

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.46

1.94

1.79

1.34

0.62

0.12

-1.03

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.06

0.48

1.06

-1.37

5.67

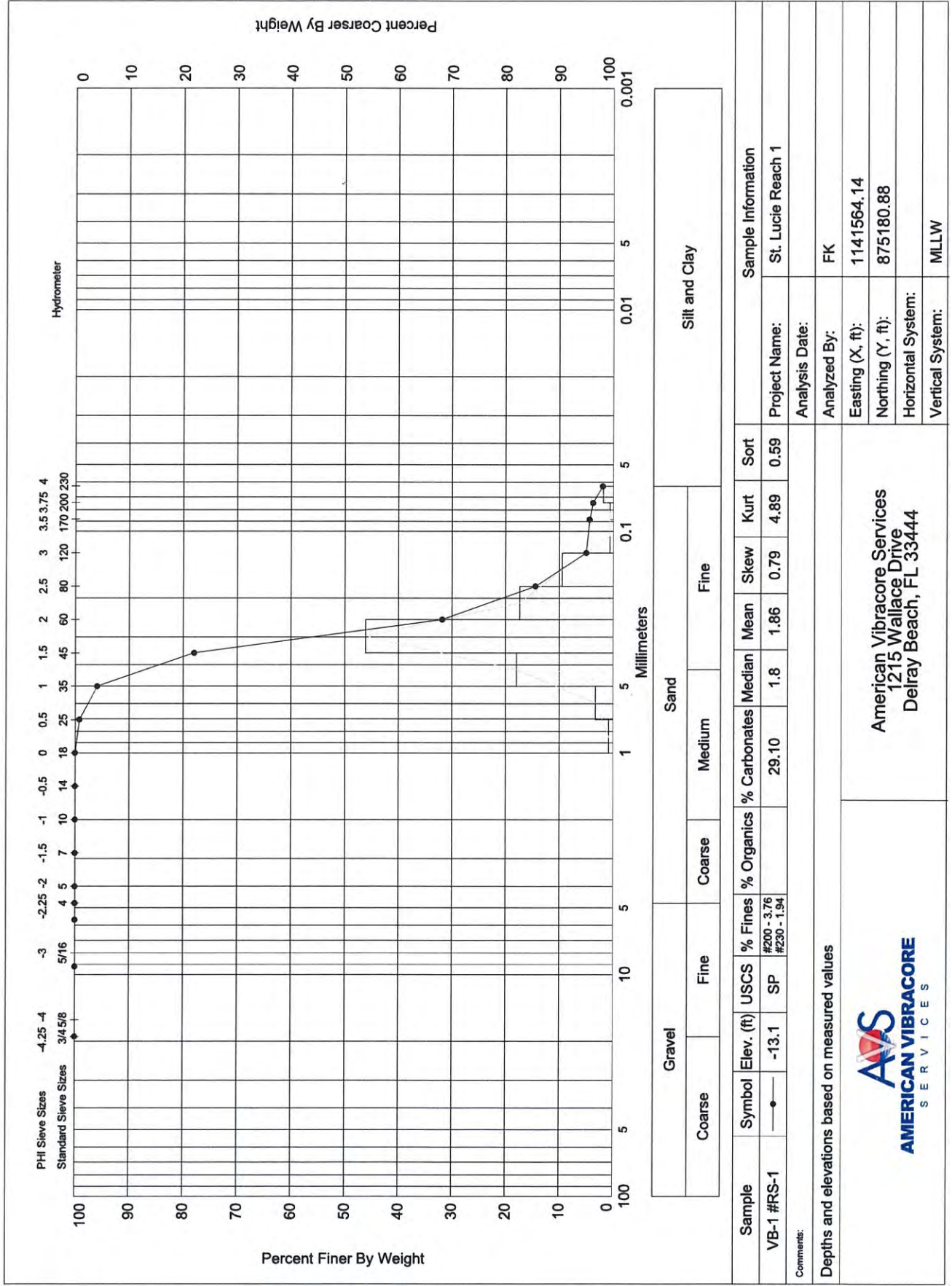
GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Post-CC Sieve Graphs

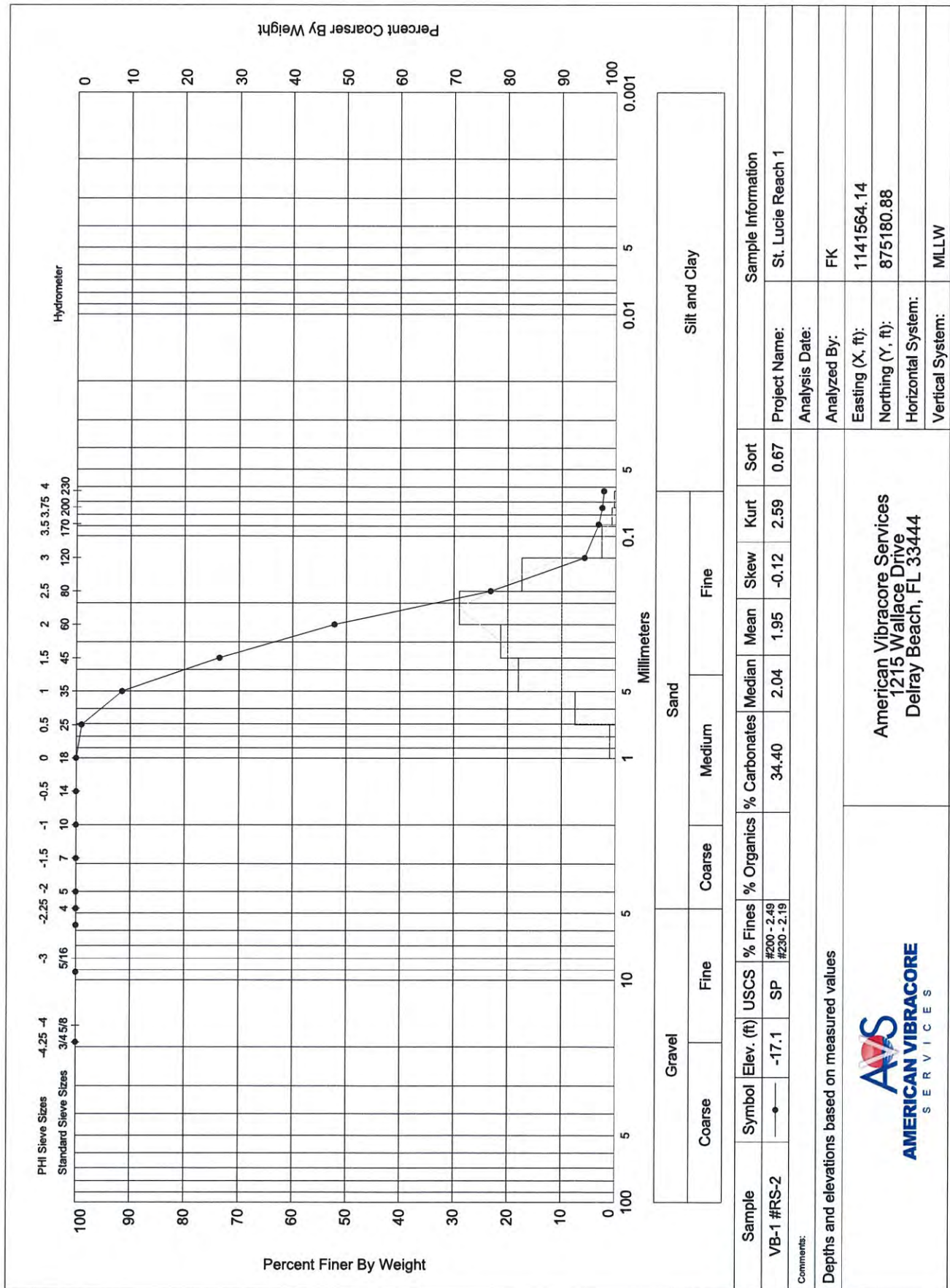


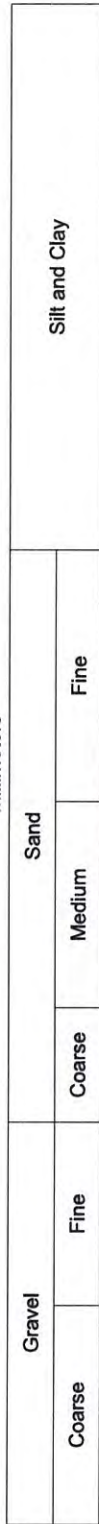


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information			
VB-1 #RS-1	—●—	-13.1	SP	#200 - 3.76 #230 - 1.94		29.10	1.8	1.86	0.79	4.89	0.59	Project Name:	St. Lucie Reach 1		
Comments:												Analysis Date:			
Depths and elevations based on measured values												Analyzed By:	FK		
												Easting (X, ft):	1141564.14		
												Northing (Y, ft):	875180.88		
												Horizontal System:			
												Vertical System:	MLLW		

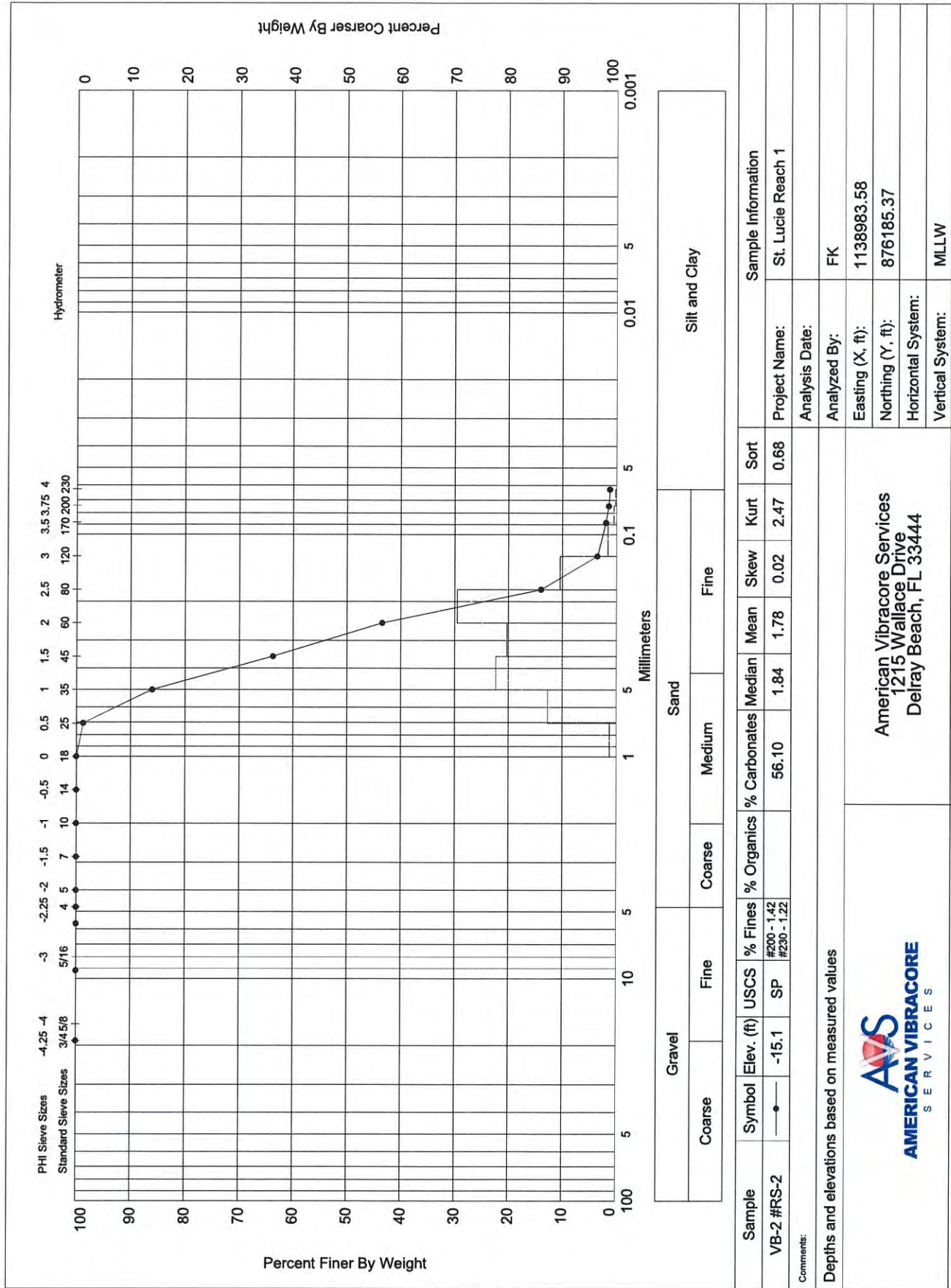


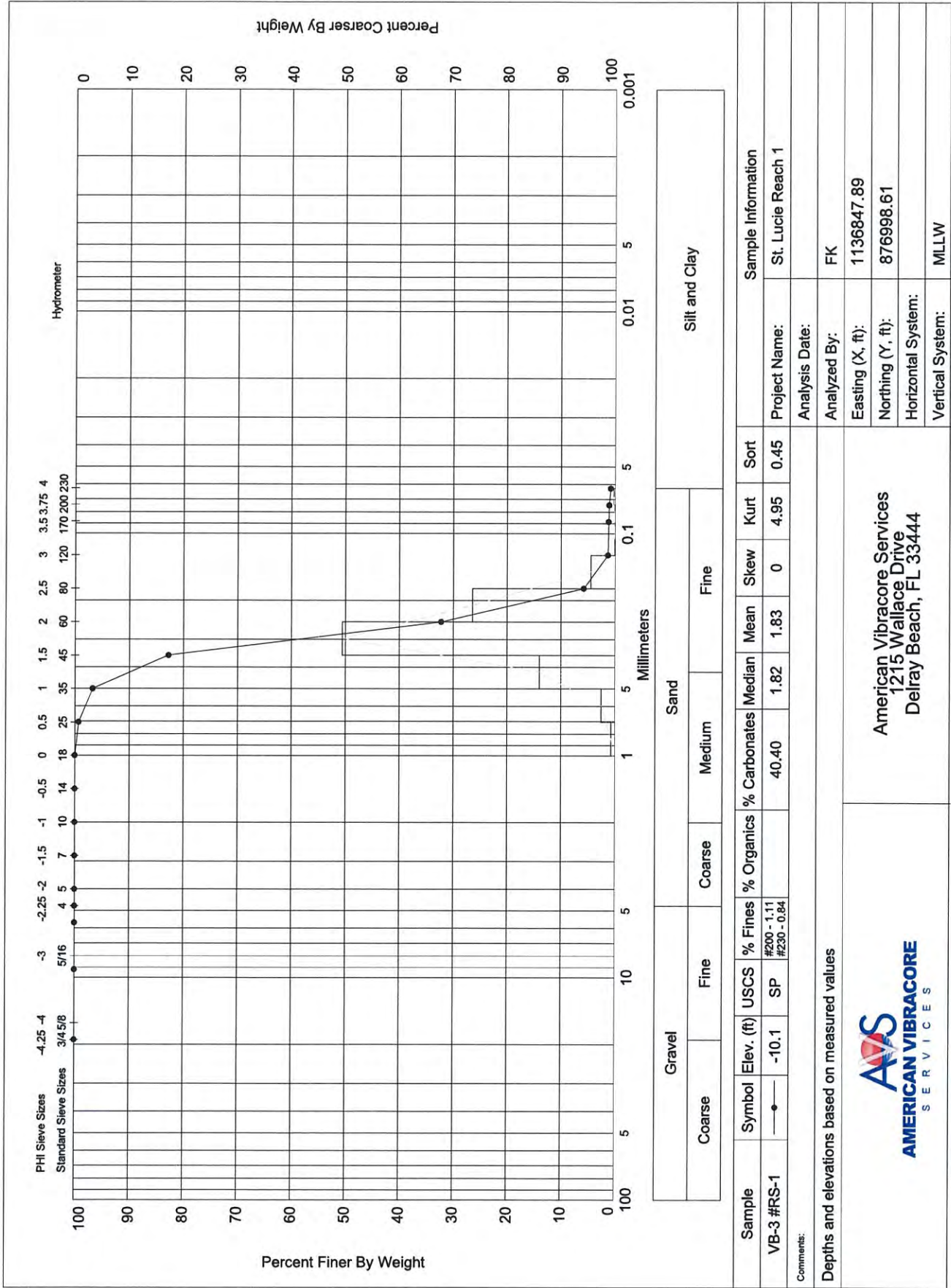
American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444





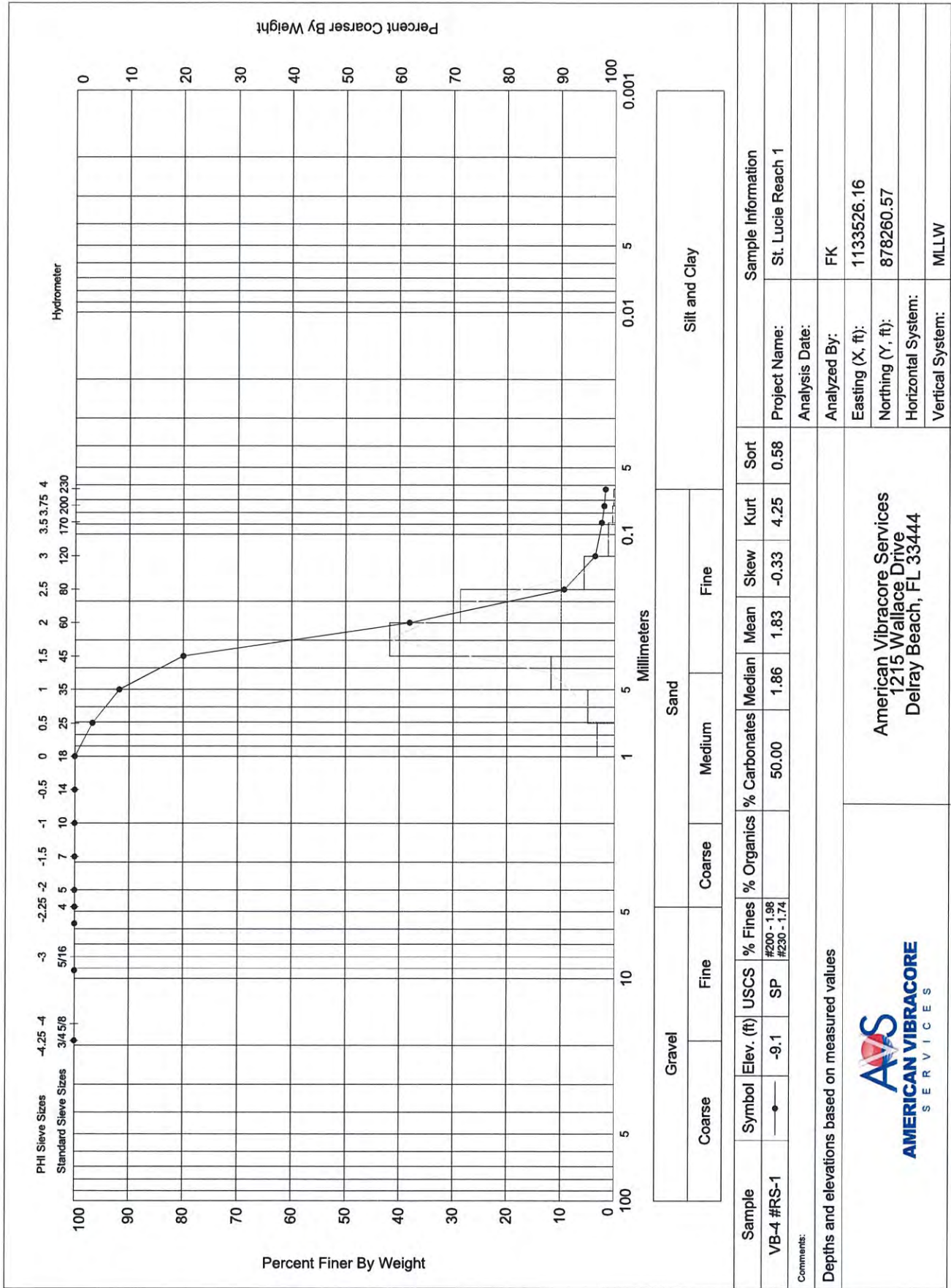
Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-2 #RS-1	—●—	-11.1	SP	#200 - 1.55 #230 - 1.43		20.50	2.03	2.04	0.15	3.81	0.45	Project Name:	St. Lucie Reach 1
Comments:												Analysis Date:	
Depths and elevations based on measured values												Analyzed By:	FK
												Easting (X, ft):	1138983.58
												Northing (Y, ft):	876185.37
												Horizontal System:	
												Vertical System:	MLLW

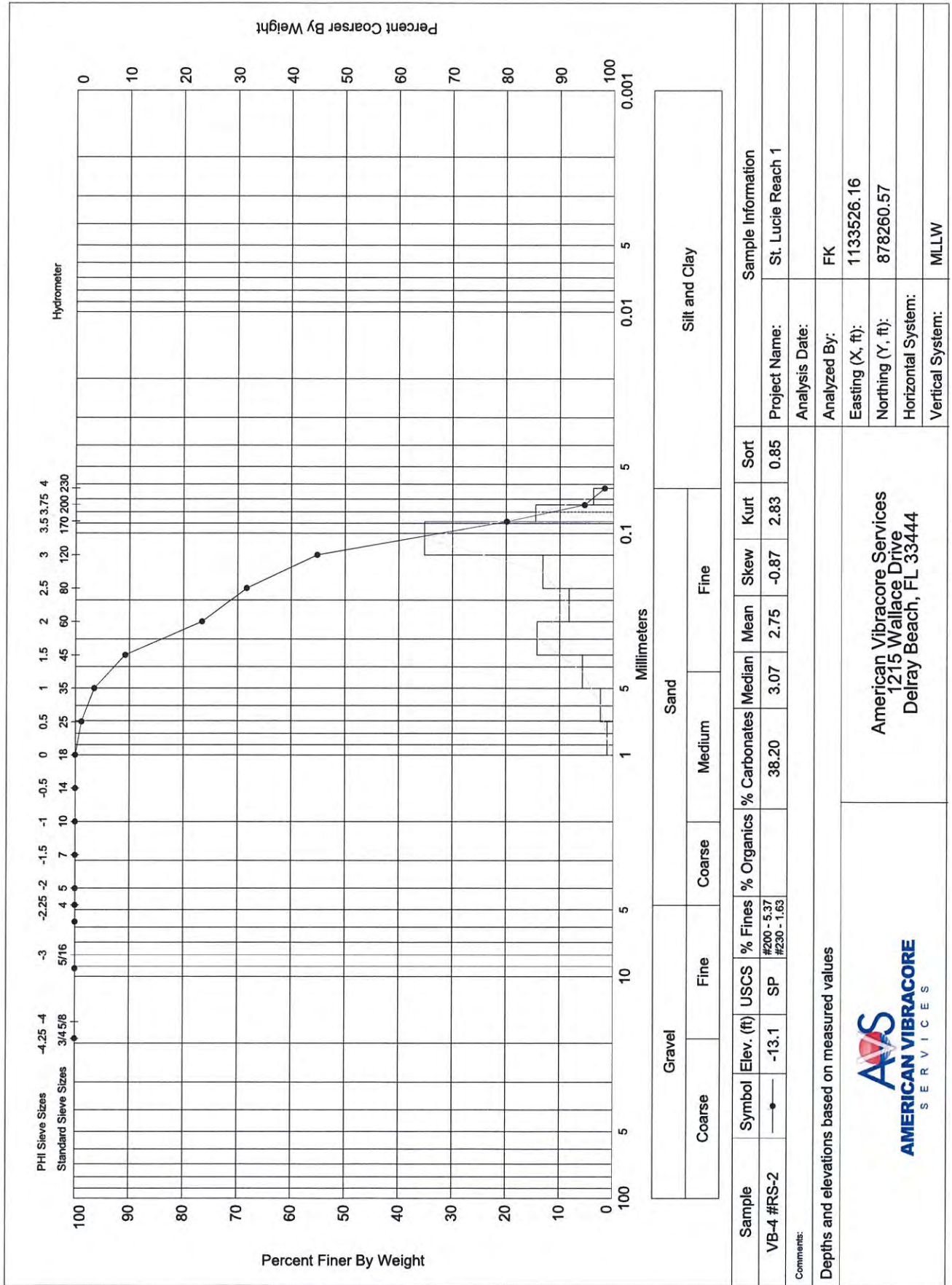


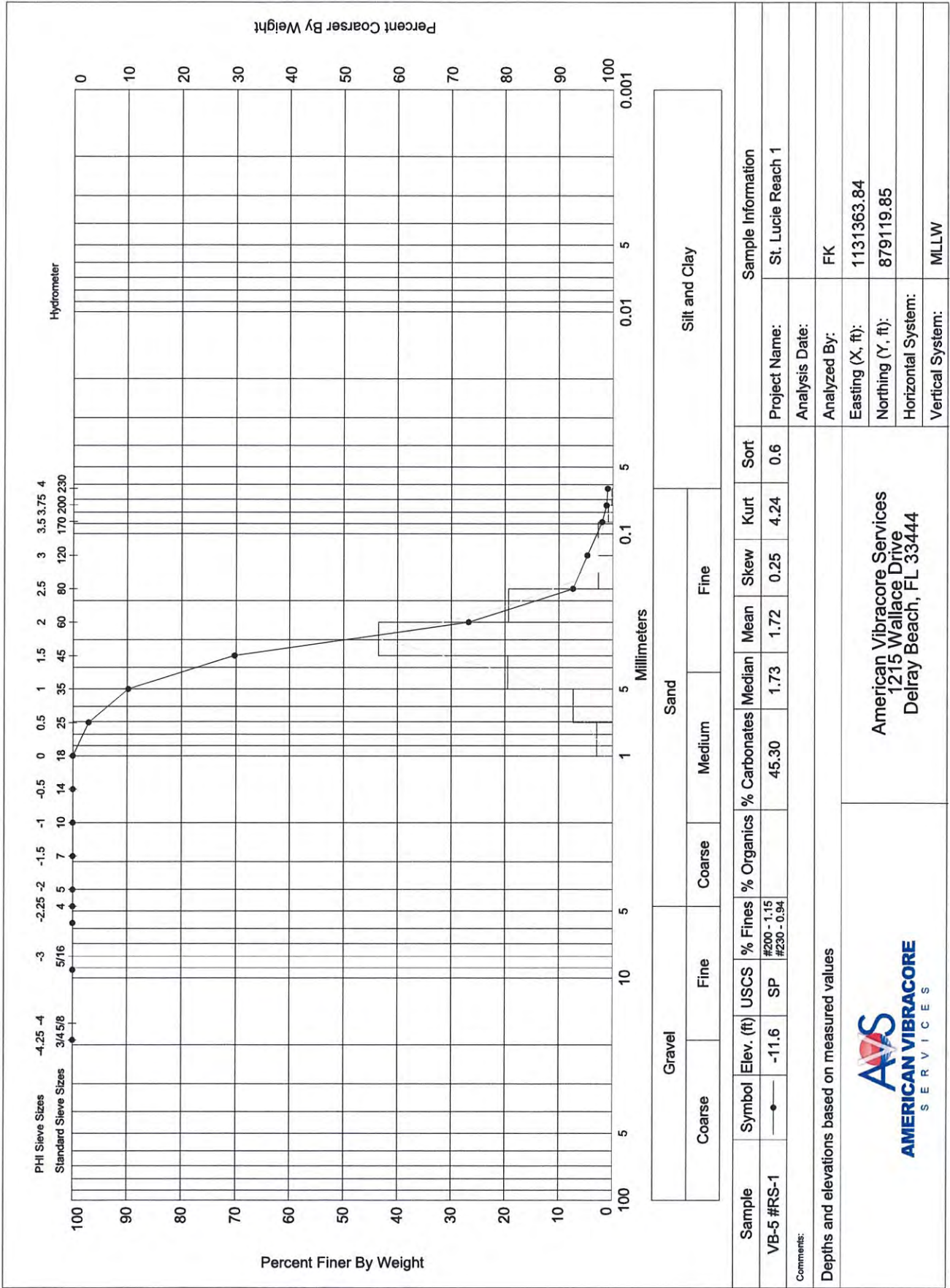


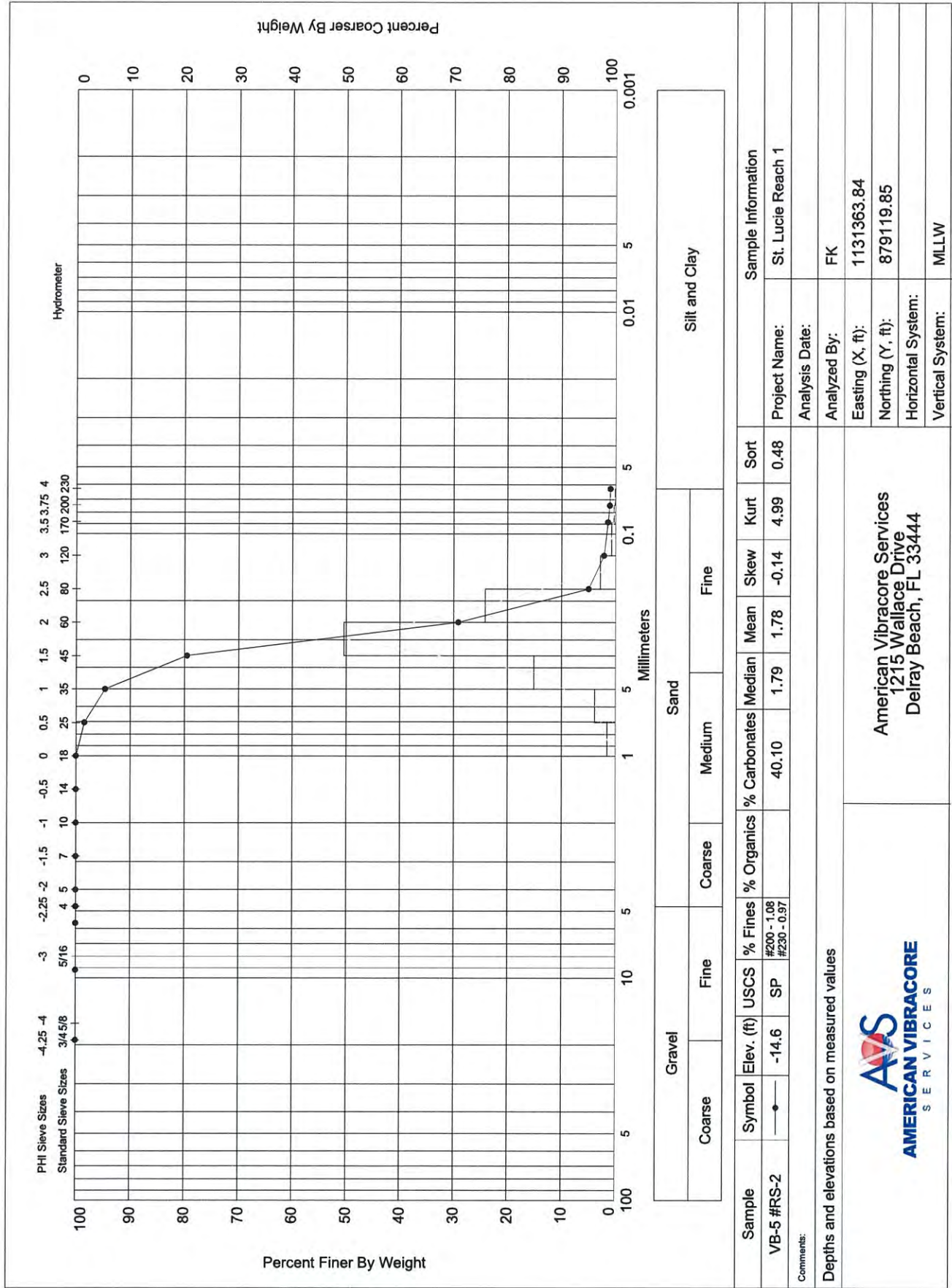


Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort	Sample Information	
VB-3 #RS-2	—●—	-13.6	SP	#200 - 1.48 #230 - 1.45		43.90	1.77	1.76	-0.12	4.47	0.47	Project Name:	St. Lucie Reach 1
Comments:												Analysis Date:	
Depths and elevations based on measured values												Analyzed By:	FK
												Easting (X, ft):	1136847.89
												Northing (Y, ft):	876998.61
												Horizontal System:	
												Vertical System:	MLLW









Post-CC Sieve Reports



Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-1 #RS-1

Analysis Date:

Analyzed By: FK

Easting (ft):

875180.88

Northing (ft):

1141564.14

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.1 MLLW

USCS:

SP

Munsell:

Wet - 10YR-6/3

Comments:

Dry Weight (g):

75.24

Wash Weight (g):

73.99

Pan Retained (g):

0.11

Sieve Loss (%):

0.13

Fines (%):

#200 - 3.76

#230 - 1.94

Organics (%):

Carbonates (%):

29.10

Shells (%):

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

3/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

0.60

0.80

0.60

0.80

35

1.00

0.50

2.47

3.28

3.07

4.08

45

1.50

0.35

13.52

17.97

16.59

22.05

60

2.00

0.25

34.71

46.13

51.30

68.18

80

2.50

0.18

13.07

17.37

64.37

85.55

120

3.00

0.13

7.11

9.45

71.48

95.00

170

3.50

0.09

0.46

0.61

71.94

95.61

200

3.75

0.07

0.47

0.62

72.41

96.24

230

4.00

0.06

1.37

1.82

73.78

98.06

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.00

2.46

2.20

1.80

1.53

1.33

1.03

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.86

0.28

0.59

0.79

4.89

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report				 American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444			
Depths and elevations based on measured values							
Project Name: St. Lucie Reach 1							
Sample Name: VB-1 #RS-2							
Analysis Date:							
Analyzed By: FK							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
875180.88		1141564.14		Florida State Plane East		-17.1 MLLW	
USCS:		Munsell:		Comments:			
SP		Wet - 10YR-4/1					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
36.53	35.81	0.02	0.16	#200 - 2.49 #230 - 2.19		34.40	
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	
3/8"	-3.20	9.19	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	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.00	0.00	0.00	0.00	
10	-1.00	2.00	0.00	0.00	0.00	0.00	
14	-0.50	1.41	0.00	0.00	0.00	0.00	
18	0.00	1.00	0.00	0.00	0.00	0.00	
25	0.50	0.71	0.36	0.99	0.36	0.99	
35	1.00	0.50	2.74	7.50	3.10	8.49	
45	1.50	0.35	6.57	17.99	9.67	26.47	
60	2.00	0.25	7.80	21.35	17.47	47.82	
80	2.50	0.18	10.59	28.99	28.06	76.81	
120	3.00	0.13	6.36	17.41	34.42	94.22	
170	3.50	0.09	0.95	2.60	35.37	96.82	
200	3.75	0.07	0.25	0.68	35.62	97.51	
230	4.00	0.06	0.11	0.30	35.73	97.81	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.15	2.71	2.47	2.04	1.46	1.21	0.77	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.95	0.26	0.67	-0.12	2.59		

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Project Name: St. Lucie Reach 1
Sample Name: VB-2 #RS-2
Analysis Date:
Analyzed By: FK



USCS:	Munsell:	Comments:
SP	Wet - 10YR-6/2	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
--------------	------------------	--------------------------	----------------	-------------------	---------------------	----------------------

[illegible]

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report				 AMERICAN VIBRACORE SERVICES American Vibracore Services 1215 Wallace Drive Delray Beach, FL 33444			
Depths and elevations based on measured values							
Project Name: St. Lucie Reach 1							
Sample Name: VB-3 #RS-1							
Analysis Date:							
Analyzed By: FK							
Easting (ft):		Northing (ft):		Coordinate System:		Elevation (ft):	
876998.61		1136847.89		Florida State Plane East		-10.1 MLLW	
USCS:		Munsell:		Comments:			
SP		Wet - 10YR-6/2					
Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
62.21	61.74	0.01	0.06	#200 - 1.11 #230 - 0.84		40.40	
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	
3/8"	-3.20	9.19	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	0.00	0.00	0.00	0.00	
7	-1.50	2.83	0.00	0.00	0.00	0.00	
10	-1.00	2.00	0.00	0.00	0.00	0.00	
14	-0.50	1.41	0.00	0.00	0.00	0.00	
18	0.00	1.00	0.00	0.00	0.00	0.00	
25	0.50	0.71	0.43	0.69	0.43	0.69	
35	1.00	0.50	1.58	2.54	2.01	3.23	
45	1.50	0.35	8.71	14.00	10.72	17.23	
60	2.00	0.25	31.45	50.55	42.17	67.79	
80	2.50	0.18	16.43	26.41	58.60	94.20	
120	3.00	0.13	2.79	4.48	61.39	98.68	
170	3.50	0.09	0.06	0.10	61.45	98.78	
200	3.75	0.07	0.07	0.11	61.52	98.89	
230	4.00	0.06	0.17	0.27	61.69	99.16	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.59	2.31	2.14	1.82	1.58	1.46	1.06	
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
	1.83	0.28	0.45	0	4.95		

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-3 #RS-2

Analysis Date:

Analyzed By: FK

Easting (ft):

876998.61

Northing (ft):

1136847.89

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.6 MLLW

USCS:

SP

Munsell:

Wet - 10YR-5/1

Comments:

Dry Weight (g):

60.84

Wash Weight (g):

59.98

Pan Retained (g):

0.02

Sieve Loss (%):

0.00

Fines (%):

#200 - 1.48

#230 - 1.45

Organics (%):

Carbonates (%):

43.90

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

0.64

1.05

0.64

1.05

35

1.00

0.50

2.55

4.19

3.19

5.24

45

1.50

0.35

10.66

17.52

13.85

22.76

60

2.00

0.25

30.58

50.26

44.43

73.03

80

2.50

0.18

13.32

21.89

57.75

94.92

120

3.00

0.13

1.71

2.81

59.46

97.73

170

3.50

0.09

0.38

0.62

59.84

98.36

200

3.75

0.07

0.10

0.16

59.94

98.52

230

4.00

0.06

0.02

0.03

59.96

98.55

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.51

2.25

2.04

1.77

1.52

1.31

0.97

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.76

0.30

0.47

-0.12

4.47

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #RS-1

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-9.1 MLLW

USCS:

SP

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

53.53

Wash Weight (g):

52.70

Pan Retained (g):

0.01

Sieve Loss (%):

0.17

Fines (%):

#200 - 1.98

#230 - 1.74

Organics (%):

Carbonates (%):

50.00

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

1.74

3.25

1.74

3.25

35

1.00

0.50

2.65

4.95

4.39

8.20

45

1.50

0.35

6.35

11.86

10.74

20.06

60

2.00

0.25

22.40

41.85

33.14

61.91

80

2.50

0.18

15.35

28.68

48.49

90.58

120

3.00

0.13

3.08

5.75

51.57

96.34

170

3.50

0.09

0.66

1.23

52.23

97.57

200

3.75

0.07

0.24

0.45

52.47

98.02

230

4.00

0.06

0.13

0.24

52.60

98.26

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.88

2.39

2.23

1.86

1.56

1.33

0.68

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.83

0.28

0.58

-0.33

4.25

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-4 #RS-2

Analysis Date:

Analyzed By: FK

Easting (ft):

878260.57

Northing (ft):

1133526.16

Coordinate System:

Florida State Plane East

Elevation (ft):

-13.1 MLLW

USCS:

SP

Munsell:

Wet - 10YR-3/1

Comments:

Dry Weight (g):

63.16

Wash Weight (g):

62.58

Pan Retained (g):

0.32

Sieve Loss (%):

0.21

Fines (%):

#200 - 5.37

#230 - 1.63

Organics (%):

Carbonates (%):

38.20

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

3/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

0.72

1.14

0.72

1.14

35

1.00

0.50

1.49

2.36

2.21

3.50

45

1.50

0.35

3.64

5.76

5.85

9.26

60

2.00

0.25

8.97

14.20

14.82

23.46

80

2.50

0.18

5.20

8.23

20.02

31.70

120

3.00

0.13

8.31

13.16

28.33

44.85

170

3.50

0.09

22.27

35.26

50.60

80.11

200

3.75

0.07

9.17

14.52

59.77

94.63

230

4.00

0.06

2.36

3.74

62.13

98.37

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.77

3.57

3.43

3.07

2.09

1.74

1.13

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.75

0.15

0.85

-0.87

2.83

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values



American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #RS-1

Analysis Date:

Analyzed By: FK

Easting (ft):

879119.85

Northing (ft):

1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-11.6 MLLW

USCS:

SP

Munsell:

Wet - 10YR-6/2

Comments:

Dry Weight (g):

58.40

Wash Weight (g):

57.87

Pan Retained (g):

0.01

Sieve Loss (%):

0.02

Fines (%):

#200 - 1.15
#230 - 0.94

Organics (%):

Carbonates (%):

45.30

Shells (%):

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

3/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

1.70

2.91

1.70

2.91

35

1.00

0.50

4.26

7.29

5.96

10.21

45

1.50

0.35

11.40

19.52

17.36

29.73

60

2.00

0.25

25.42

43.53

42.78

73.25

80

2.50

0.18

11.32

19.38

54.10

92.64

120

3.00

0.13

1.56

2.67

55.66

95.31

170

3.50

0.09

1.59

2.72

57.25

98.03

200

3.75

0.07

0.48

0.82

57.73

98.85

230

4.00

0.06

0.12

0.21

57.85

99.06

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.94

2.28

2.05

1.73

1.38

1.15

0.64

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.72

0.30

0.6

0.25

4.24

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Granularmetric Report

Depths and elevations based on measured values

American Vibracore Services
1215 Wallace Drive
Delray Beach, FL 33444

Project Name: St. Lucie Reach 1

Sample Name: VB-5 #RS-2

Analysis Date:

Analyzed By: FK

Easting (ft):

879119.85

Northing (ft):

1131363.84

Coordinate System:

Florida State Plane East

Elevation (ft):

-14.6 MLLW

USCS:

SP

Munsell:

Wet - 10YR-5/2

Comments:

Dry Weight (g):

64.02

Wash Weight (g):

63.46

Pan Retained (g):

0.00

Sieve Loss (%):

0.09

Fines (%):

#200 - 1.08

#230 - 0.97

Organics (%):

Carbonates (%):

40.10

Shells (%):

Sieve Number

Sieve Size
(Phi)Sieve Size
(Millimeters)Grams
Retained% Weight
RetainedCum. Grams
RetainedC. % Weight
Retained

3/4"

-4.25

19.03

0.00

0.00

0.00

0.00

5/8"

-3.20

9.19

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

0.00

0.00

0.00

0.00

7

-1.50

2.83

0.00

0.00

0.00

0.00

10

-1.00

2.00

0.00

0.00

0.00

0.00

14

-0.50

1.41

0.00

0.00

0.00

0.00

18

0.00

1.00

0.00

0.00

0.00

0.00

25

0.50

0.71

0.98

1.53

0.98

1.53

35

1.00

0.50

2.45

3.83

3.43

5.36

45

1.50

0.35

9.68

15.12

13.11

20.48

60

2.00

0.25

32.27

50.41

45.38

70.88

80

2.50

0.18

15.45

24.13

60.83

95.02

120

3.00

0.13

1.82

2.84

62.65

97.86

170

3.50

0.09

0.47

0.73

63.12

98.59

200

3.75

0.07

0.21

0.33

63.33

98.92

230

4.00

0.06

0.07

0.11

63.40

99.03

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.50

2.27

2.09

1.79

1.54

1.35

0.95

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.78

0.29

0.48

-0.14

4.99

GRANULARMETRIC REPORT ST LUCIE REACH 1.GPJ BIG CARLOS PASS.GDT 7/28/15

Calcium Carbonate Reports



REPORT OF CARBONATES CONTENT
By Acid Leaching Vesterberg Method

DATE: 7-6-15

CLIENT: Taylor Engineering

PROJECT: St. Lucie Reach 1

SAMPLED BY: Fred Kaub

TESTED BY: Michael Lenz

MATERIAL DESCRIPTION: (Refer to individual description)

RESULTS

Location	Mass of Sample (g)	Insoluble Residue (g)	Carbonates Content (%)
Core VB-1 Depth 2.0'	106.15	75.24	29.1
Core VB-1 Depth 6.0'	102.57	36.53	64.4
Core VB-2 Depth 2.0'	108.52	86.23	20.5
Core VB-2 Depth 6.0'	104.34	45.85	56.1
Core VB-3 Depth 2.0'	104.35	62.21	40.4
Core VB-3 Depth 5.5'	108.51	60.84	43.9
Core VB-4 Depth 1.0'	107.09	53.53	50.0
Core VB-4 Depth 5.0'	102.21	63.14	38.2
Core VB-5 Depth 1.5'	106.85	58.40	45.3
Core VB-5 Depth 4.5'	106.83	64.02	40.1

Photo Documentation



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-1

0.0 - 2.0 FEET

TOP

BOTTOM





AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-1

2.0 - 4.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-1

40 - 6.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-1

6.0 - 8.0 FEET

TOP

BOTTOM





AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-1

8.0 - 8.2 FEET

TOP

BOTTOM



AAS
AMERICAN VIBRACORE
SERVICES

ST LUCIE REACH 1

VB-2

0.0 - 2.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE
CORPORATION

ST LUCIE REACH 1

VB-2

2.0 - 4.0 FEET

TOP

BOTTOM



AVS

AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-2

4.0 - 6.0 FEET

TOP

BOTTOM





AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-2

6.0 - 8.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

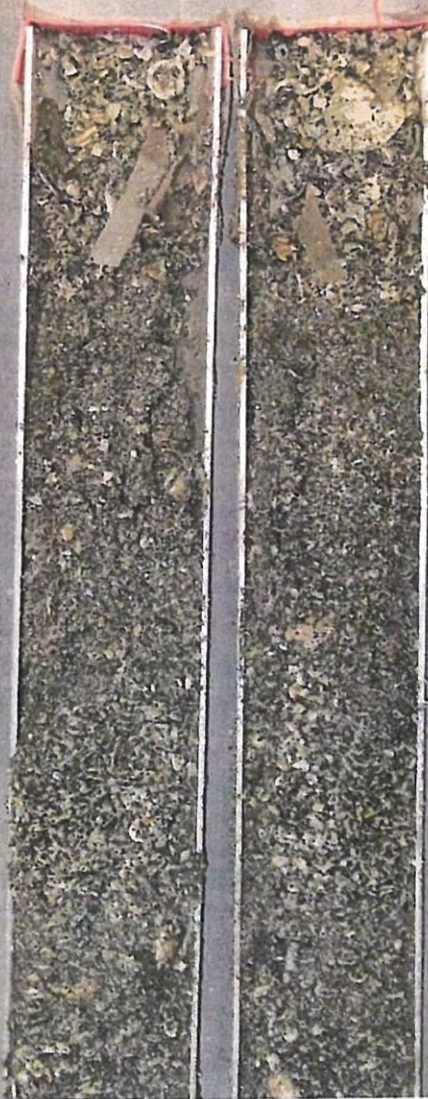
ST LUCIE REACH 1

VB-2

8.0 - 9.3 FEET

TOP

BOTTOM



AES
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-3

0.0 - 2.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-3

2.0 - 4.0 FEET

TOP

BOTTOM



American Vibracore
American Vibracore

ST LUCIE REACH 1

VB-3

4.0 - 6.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE
CORPORATION

ST LUCIE REACH 1

VB-3

6.0 - 7.0 FEET

TOP

BOTTOM



AVS

AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-4

0.0 - 2.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-4

2.0 - 4.0 FEET

TOP

BOTTOM



AAS

AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-4

4.0 - 6.0 FEET

TOP

BOTTOM





AMERICAN VIBRACORE

ST LUCIE REACH 1

VB--4

6.0 - 7.9 FEET

TOP

BOTTOM



AES
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-5

0.0 - 2.0 FEET

TOP

BOTTOM



AES
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-5

2.0 - 4.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-5

4.0 - 6.0 FEET

TOP

BOTTOM



AVS
AMERICAN VIBRACORE

ST LUCIE REACH 1

VB-5

6.0 - 7.0 FEET

TOP

BOTTOM



AAS
AMERICAN VIBRACORE
SERVICES

ST LUCIE REACH 1

VB-5

7.0 - 11.0 FEET

TOP

BOTTOM

