APPENDIX D

GEOTECHNICAL

FIGURE EIGHT ISLAND, NORTH CAROLINA
INLET AND SHORELINE MANAGEMENT PROJECT

APPENDIX OVERVIEW

Introduction: An investigation of Rich Inlet and the associated ebb and flood tidal deltas was conducted in an effort to qualitatively and quantitatively evaluate sand resources for Figure Eight Island. These appendices contain the results from geotechnical field investigations and analysis of the resulting sand samples. The results of these investigations are provided in vibracore logs, jet probe logs, photographs, composite summary tables, grain size distribution curves/ histograms, and granularmetric reports. Thirty (30) vibracores were collected and sixteen (16) jet probes were advanced during the investigations. In addition the contract scope of services and two reports from cultural resource investigations conducted in support of the geotech investigation are included.

1) Scope of Services
The final scope of services for sand search investigations of Rich Inlet included, which were included in the original contract between CPENC and the Figure Eight Island Homeowners Association dated 18 July 2006 is provided in this appendix.

2) Scope of Services (Vibracore Addendum)
The final scope of services for the addendum to the 18 July 2006 contract, which included the collection and analysis of ten (10) additional vibracores is provided in this appendix.

3) Scope of Services (Cultural Resource Survey)
The final scope of services for a cultural resource survey of the Alternative 3 and 5 channel corridors and the corridor in which a terminal groin is propose under Alternative 5, is provided in this appendix.

4) Cultural Resource Investigation: Location of the Remains of the *Wild Dayrell* in Rich Inlet
This appendix includes the final report prepared by TAR detailing the results and conclusions of a survey to determine the location of the remains of the *Wild Dayrell*.

5) Cultural Resource Investigation: Terrestrial and Submerged Cultural Resource Survey Rich Inlet, Figure Eight Island, North Carolina
This appendix includes the final report prepared by TAR detailing the results and conclusions of a survey to determine the presence of any cultural resources within the proposed channel corridors associated with Alternative 3 and 5 as well as the corridor in which a terminal groin is proposed under Alternative 5.

6) 2007 Hutaff Island Native Beach Composite Summary Tables
A series of summary tables are presented in this appendix. These tables are used to calculate and summarize composite data. Composite calculations are based on native beach samples collected along the southwestern half of Hutaff Island by CPENC in March and September 2007. Samples were collected along three (3) shore-perpendicular transects from the dune to approximately -20

ft. NAVD 88 along the Island. These samples were collected according to beach fill compatibility standards implemented by the North Carolina Division of Coastal Management (15A NCAC 07H .0312). Sample locations along each transect are referenced to NAVD 88 and include: dune, dune toe, mid-berm, area between +3.0' and +2.0', MHW, MTL, MLW, -6', -8.8', -11.6', -14.4', -17.2', and -20'. An average of samples collected along each transect was calculated, producing the transect composite. An average of samples collected at each sample elevation was calculated producing elevation composites. The transect composites were then averaged to calculate the total native beach composite.

Five table types were produced to display this data. The *Transect Composite Summary* table is a summary of key grain size data for all of the composites. The *Transect Composite Data* table shows the composite data for the composite beach and the supporting composite profile line data used to calculate the composite beach. The *Transect Cumulative Percents and Computed Composite Distribution* table shows the percent retained on all sieves for the individual samples used to create transect composites. The *Elevation Cumulative Percents and Computed Composite Distribution* table shows the percent retained on all sieves for the individual samples used to create elevation composites. The *Percentage of Material by Sediment Grain Size Category* table shows the percent of material in each of the four grain size categories (fine, sand, granular and gravel) as defined by the North Carolina State Technical Standards outlined in 15A NCAC 07H .0312.

7) 2007 Hutaff Island Native Beach Individual Grab Sample Granularmetric Reports

This appendix contains individual granularmetric reports for each of the 39 grab samples collected along Hutaff Island during the 2007 Native Beach Characterization completed by CPENC.

8) 2007 Hutaff Island Native Beach Individual Grab Sample Grain Size Distribution Curves/Histograms

This appendix contains individual gradation grain size distribution curves/histograms for each of the 39 grab samples collected along Hutaff Island during the 2007 Native Beach Characterization completed by CPENC.

9) 2007 Hutaff Island Native Beach Composite Grab Sample Granularmetric Reports

Composite granularmetric reports, corresponding to data presented in the tables in Appendix 6, are included here. Granularmetric reports are presented for each transect and the total native beach.

10) 2007 Hutaff Island Native Beach Composite Grab Sample Grain Size Distribution Curves/Histograms

Composite grain size distribution curves and histograms of the data presented in the Appendix 6 tables are included here. Curves and histograms are presented for each transect and the total native beach.

11) 2007 Figure Eight Island Native Beach Composite Summary Tables

A series of summary tables are presented in this appendix. These tables are used to calculate and summarize composite data. Composite calculations are based on native beach samples collected

along Figure Eight Island by CPENC in March and September 2007. Samples were collected along four (4) shore-perpendicular transects from the dune to approximately -20 ft. NAVD 88 along Figure Eight Island. These samples were collected according to beach fill compatibility standards implemented by the North Carolina Division of Coastal Management (15A NCAC 07H .0312). Sample locations along each transect are referenced to NAVD 88 and include: dune, dune toe, mid-berm, area between +3.0' and +2.0', MHW, MTL, MLW, -6', -8.8', -11.6', -14.4', -17.2', and -20'. An average of samples collected along each transect was calculated, producing the transect composite. An average of samples collected at each sample elevation was calculated producing elevation composites. The transect composites were then averaged to calculate the total native beach composite.

Five table types were produced to display this data. The *Transect Composite Summary* table is a summary of key grain size data for all of the composites. The *Transect Composite Data* table shows the composite data for the composite beach and the supporting composite profile line data used to calculate the composite beach. The *Transect Cumulative Percents and Computed Composite Distribution* table shows the percent retained on all sieves for the individual samples used to create transect composites. The *Elevation Cumulative Percents and Computed Composite Distribution* table shows the percent retained on all sieves for the individual samples used to create elevation composites. The *Percentage of Material by Sediment Grain Size Category* table shows the percent of material in each of the four grain size categories (fine, sand, granular and gravel) as defined by the North Carolina State Technical Standards outlined in 15A NCAC 07H .0312.

12) 2007 Figure Eight Island Native Beach Individual Grab Sample Granularmetric Reports

This appendix contains individual granularmetric reports for each of the 52 grab samples collected along Figure Eight Island during the 2007 Native Beach Characterization completed by CPENC.

13) 2007 Figure Eight Island Native Beach Individual Grab Sample Grain Size Distribution Curves/Histograms

This appendix contains individual gradation grain size distribution curves/histograms for each of the 52 grab samples collected along Figure Eight Island during the 2007 Native Beach Characterization completed by CPENC.

14) 2007 Figure Eight Island Native Beach Composite Grab Sample Granularmetric Reports

Composite granularmetric reports, corresponding to data presented in the tables in Appendix 11, are included here. Granularmetric reports are presented for each transect and the total native beach.

15) 2007 Figure Eight Island Native Beach Composite Grab Sample Grain Size Distribution Curves/Histograms

Composite grain size distribution curves and histograms of the data presented in the Appendix 11 tables are included here. Curves and histograms are presented for each transect and the total native beach.

16) 2007 CPENC Jet Probe Logs

Sixteen (16) jet probes were advanced by CPENC in February 2007 within the project area. Geologists who are proficient in SCUBA diving, operate the jet probe by penetrating a graduated 7 m water pressure pipe into the ocean bottom and making observations as it passes through the sediment layers. The geologist is on the bottom and the support diver stays at the upper end of the probe to hold it upright against the current. The geologist on the bottom observes the graduated scale on the probe and by the "feel" of the objects it encounters, makes mental notes of the depths of each change in texture, which are afterwards incorporated into the field logs presented in this appendix.

17) 2007 CPENC Vibracore Logs

A total of 20 vibracores were collected by CPENC in March 2007 during geotechnical investigations within the project area. Laboratory and descriptive information for each vibracore is presented on the log sheets. Unified Soils Classification terminology is used in the core layer descriptions and key grain size information (mean grain size, fines content and sorting) for each vibracore sample is presented under the *Remarks* column. Multiple layer intervals are sometimes represented by a single sample. The *Sample Number* column is used to identify the specific sample that represents a specific layer.

18) 2007 CPENC Vibracore Photographs

Vibracores collected in 2007 were photographed in 2.0 ft. intervals. The photographs are included in this appendix.

19) 2007 CPENC Individual Vibracore Granularmetric Reports

This appendix contains individual granularmetric reports for each of the 78 vibracore samples collected during the 2007 sand search investigation within Rich Inlet and the associated ebb and flood tidal deltas.

20) 2007 CPENC Individual Vibracore Grain Size Distribution Curves/Histograms

This appendix contains individual gradation grain size distribution curves/histograms for each of the 78 vibracore samples collected during the 2007 sand search investigation within Rich Inlet and the associated ebb and flood tidal deltas.

21) 2008 CPENC Vibracore Logs

A total of 10 vibracores were collected by CPENC between 6 October and 7 November 2008 during additional geotechnical investigations within the project area. Laboratory and descriptive information for each vibracore is presented on the log sheets. Unified Soils Classification terminology is used in the core layer descriptions and key grain size information (mean grain size, fines content and sorting) for each vibracore sample is presented under the *Remarks* column. Multiple layer intervals are sometimes represented by a single sample. The *Sample Number* column is used to identify the specific sample that represents a specific layer.

22) 2008 CPENC Vibracore Photographs

Vibracores collected in 2008 were photographed in 2.0 ft. intervals. The photographs are included in this appendix.

23) 2008 CPENC Individual Vibracore Granularmetric Reports

This appendix contains individual granularmetric reports for each of the 50 vibracore samples collected during the 2008 vibracore investigation within Rich Inlet and the associated ebb and flood tidal deltas.

24) 2008 CPENC Individual Vibracore Grain Size Distribution Curves/Histograms

This appendix contains individual gradation grain size distribution curves/histograms for each of the 50 vibracore samples collected during the 2008 vibracore investigation within Rich Inlet and the associated ebb and flood tidal deltas.

25) Native Beach Table of Results for Survey to Quantify Clasts Greater Than Three (3) Inches

The North Carolina Technical Standards for Beach Fill Material outlined in 15A NCAC 07H.0312 state "the total number of sediments and shell material greater than three (3) inches in diameter, observable on the surface of the beach between mean low water (MLW) and the dune toe shall be calculated for an area of 50,000 square feet within the beach fill project boundaries." On 10 July 2008, CPENC conducted a survey to quantify clasts greater than three (3) inches within an area in the vicinity of 402 N. Beach Rd. The dimensions of the survey area were approximately 200 ft. along the beach and 250 ft. across the beach from the toe of dune to the MLW Line. The survey area was divided into 500 boxes measuring approximately ten (10) ft. by ten (10) ft., and clasts greater than three (3) in. were counted within each of the boxes. The table in this appendix contains the results of the survey as well as the coordinates defining the surveyed area.

26) Alternative 3 Channel Corridor Composite Summary Tables

A series of summary tables are presented in this appendix. These tables are used to calculate and summarize composite data for the proposed channel corridor for Alternative 3. Composite calculations are based on select beach quality samples from the 2007 and 2008 CPENC vibracores, presented in appendices 17, 19, 20, 21, 23, and 24. An average of beach quality layers, weighted by effective length, was calculated for each vibracore, producing the vibracore composite. The vibracore composites were averaged and weighted by effective length to calculate the borrow area composite.

Four table types were produced to display this data. The *Composite Summary* table is a summary of key grain size data for all of the composites. The *Composite Data* table shows the composite data for the borrow area and the supporting composite vibracore data used to calculate the borrow area composite. The *Cumulative Percents and Computed Composite Distribution* table shows the weighted average percent retained on all sieves for the individual samples used to create vibracore composites. The *Percentage of Material by Sediment Grain Size Category* table shows the percent of material in each of the four grain size categories (fine, sand, granular and gravel) as defined by the North Carolina State Technical Standards outlined in 15A NCAC 07H .0312.

27) Alternative 3 Channel Corridor Composite Vibracore Granularmetric Reports

Composite granularmetric reports, corresponding to data presented in the tables in Appendix 26, are included here. Granularmetric reports are presented for the Channel Corridor and each vibracore.

28) Alternative 3 Channel Corridor Composite Vibracore Grain Size Distribution Curves/Histograms

Composite grain size distribution curves and histograms of the data presented in the Appendix 26 tables are included here. Curves and histograms are presented for the Channel Corridor and each vibracore.

29) Alternative 5 Channel Corridor Composite Summary Tables

A series of summary tables are presented in this appendix. These tables are used to calculate and summarize composite data for the proposed channel corridor for Alternative 5. Composite calculations are based on select beach quality samples from the 2007 and 2008 CPENC vibracores, presented in appendices 17, 19, 20, 21, 23, and 24. An average of beach quality layers, weighted by effective length, was calculated for each vibracore, producing the vibracore composite. The vibracore composites were averaged and weighted by effective length to calculate the borrow area composite.

Four table types were produced to display this data. The *Composite Summary* table is a summary of key grain size data for all of the composites. The *Composite Data* table shows the composite data for the borrow area and the supporting composite vibracore data used to calculate the borrow area composite. The *Cumulative Percents and Computed Composite Distribution* table shows the weighted average percent retained on all sieves for the individual samples used to create vibracore composites. The *Percentage of Material by Sediment Grain Size Category* table shows the percent of material in each of the four grain size categories (fine, sand, granular and gravel) as defined by the North Carolina State Technical Standards outlined in 15A NCAC 07H .0312.

30) Alternative 5 Channel Corridor Composite Vibracore Granularmetric Reports

Composite granularmetric reports, corresponding to data presented in the tables in Appendix 29, are included here. Granularmetric reports are presented for the Channel Corridor and each vibracore.

31) Alternative 5 Channel Corridor Composite Vibracore Grain Size Distribution Curves/Histograms

Composite grain size distribution curves and histograms of the data presented in the Appendix 29 tables are included here. Curves and histograms are presented for the Channel Corridor and each vibracore.

APPENDIX 1

Scope of Services

TASK 2 - GEOTECHNICAL INVESTIGATIONS

CPE will utilize the following methodology to conduct reconnaissance and comprehensive geotechnical investigations of the Rich Inlet complex including the inlet throat, flood tidal delta, ebb tidal delta, and feeder channels (Nixon Channel and Green Channel), to identify and map the quality and quantity of sand to be placed on the northern end of Figure Eight Island, North Carolina. The proposed sand search, to be performed by the CPE coastal geology team, will be completed in two phases, which will include:

- Phase I – Research and Planning
- Phase II - Jet Probes and Vibracores
  - (1) Jetprobe Collection and Analysis
  - (2) Vibracore Planning/Meeting with ASSOCIATION
  - (3) Vibracore Collection and Analysis
  - (4) Sediment compatibility evaluation
  - (5) Cultural resources study and borrow area design refinement

A. Phase I – Research and Planning

This phase includes an analysis of existing geotechnical literature, geophysical data, and hydrographic survey data obtained by previous consultants, surveyors, universities and governmental agencies. Historical photographs of the inlet will be analyzed to determine the historic, preferred channel alignment (see Task 1.B). The GIS will be used in planning the geotechnical investigation, in the execution of the investigation, and in the mapping of the sand resources.

B. Phase II – Jet Probes and Vibracores

1. Jet probes: Jet probes are used as a cost efficient way to perform broad reconnaissance level ground truthing in order to limit the number of more costly vibracores. CPE proposes to use jet probes to provide preliminary qualitative information of the sediment contained in the feeder channels (Nixon Channel and Green Channel) and the ebb tide delta of Rich Inlet. Jet probes utilize a water pump to jet a graduated PVC pipe into the sediment. During the course of the probe, a CPE diver/geologist observes the material that is flowing out of the hole in the seafloor. Samples of the material will be obtained for grain size analysis and logs of the material will be prepared. CPE proposes to spend three (3) days taking reconnaissance jet probes.

2. Vibracore Planning: A meeting will be held with ASSOCIATION staff to review results and recommendations from Phase I work. Areas suspected of containing good quality and sufficient quantity of sand resources within the preferred channel realignment corridor will be targeted for vibracoring. Nevertheless, CPE does not warrant that beach compatible sand, acceptable to State and Federal regulators, will be obtained from the planned vibracores. Proposed vibracores will be located on the GIS to refine core placement in relation to legacy data.

3. Vibracore Collection and Analysis: A vibracore is a continuous undisturbed sample of material taken in a vibrating tube that is inserted into the bottom of the channel. It is estimated that approximately 20 cores (up to 20 ft. long) will be required to define the quality and quantity of material in the final channel re-location corridor and sand source area. Throughout the collection of the vibracores in the field, the team of CPE Geologists will closely monitor the material collected in the cores. When possible, cores will be split aboard the vessel to assure the most efficient placement of the vibracores as required.

The vibracores will be returned to CPE for additional logging and mechanical sieve analysis of sand samples taken from the cores. A core log will be prepared for each core describing the sediments by layers. Grain size analyses will be performed on approximately three to five sediment samples per core. Sub-samples will be obtained from distinct layers in the sediment record, or periodically through the core record. Grain size analysis will be conducted in accordance with the American Society for Testing and Materials (ASTM), Standard Material Designation D422-63 for partial size analysis of soils. Grain-size frequency distribution curves and textural statistical parameters will be developed for each vibracore sample.

4. Sediment Compatibility Evaluation: Sand resources in the Rich Inlet complex will be evaluated for compatibility with the native beach sand. The compatibility analysis will focus on the comparison of the mean grain sizes and provide the basis for determining how the dredged material will perform as beach fill. The sand will also be evaluated based on State and Federal guidelines for allowable quantities of silt, shell and rock. The inlet excavation area will also be evaluated for dredging feasibility and costs.

At the conclusion of the geotechnical and geophysical evaluations, a geotechnical report will be prepared that identifies the local geological framework, the quantity and quality of the available sand, and additional information which could be required for the permitting and construction processes. Report appendices will include the grain size analyses of discrete samples taken from the vibracores, core logs, and jet probe logs. Additionally, the report will provide isopach (sand thickness) maps, GIS plan-views displaying inlet sand resource area, vibracores and other datasets in relation to the project area, general data analyses, and final recommendations. Up to 5 copies of the report will be provided.

5. Cultural Resources Study of Wreck Site Wild Dayrell: Cartographic and historical research will be conducted to collect available historical data regarding the wreck. Location and mapping of the Wild Dayrell wreck site will start with plotting of existing surveys taken of the wreck. A magnetometer survey controlled by differential global positioning covering the inlet, shoals, and beach in the vicinity of the wreck will be performed to identify the apparent wreck boundaries. The remote sensing survey will utilize a hand held proton precession magnetometer and or a cesium vapor magnetometer. Offshore operations will be carried out from a small, shallow draft, boat equipped with DGPS and computer controlled Hypack navigation. Beach based operations will also be located with DGPS. The results of the research and the exact location of the Wild Dayrell will be provided on a georeferenced aerial photograph of Rich Inlet.

A cultural resource investigation of the final dredge design cut which will not be determined until the engineering design and environmental studies are near completion will be performed. The cost for the cultural resource investigation of the final dredge areas will be provided under an additional proposal when the area to be surveyed is determined.

The estimated fee to complete TASK 2 services is $225,000.00.

APPENDIX 2

Scope of Services (Vibracore Addendum)

TASK 1 – VIBRACORE COLLECTION AND ANALYSIS

Item I – Vibracore Collection

Nine (9) vibracores will be collected within the current channel design for the Rich Inlet Complex to supplement existing data and obtain the 500 ft spacing between vibracores required in the amended (Feb, 2008) North Carolina Technical Standards for Beach Fill Projects. The vibracores will be collected by Catlin Engineers and Scientists of Wilmington, North Carolina under the direction of a CPE-NC geologist. Vibracores shall be obtained by mechanical, electric, pneumatic or hydraulically activated boring having a minimum diameter of 3.0 inches.

The coring device shall recover a minimum of 85 percent of the unconsolidated strata through which it has penetrated, which does not include the overlap portion recovered after jetting. The total length of recovery will be measured by excluding the overlap portion recovered after each jet attempt. This value will be compared to the measured depth of penetration to calculate percent recovery. The desired depth of penetration is 20 unless otherwise stipulated by CPE-NC representatives. It is recognized, however, that maximum penetration may not be achieved at all sample locations. Penetration refusal shall be completed when less than 1 foot of advance is accomplished after 5 minutes of vibration with vibrating-type coring tool. When refusal is met at less than 90 percent of the desired depth of penetration, the Sub-Contractor will remove the sampled portion and a new core pipe will be set up. A jet pump hose shall be attached to the tip of the core pipe just below the vibrator. The rig shall be lowered to the bottom and jetted down to a depth 2 feet above where the first part met refusal. The jet will then be turned off and the vibrator turned on, taking the additional part of the core and 2 foot of overlap. Retries will be accomplished until penetration has reached refusal or until (3) three attempts have been made, whichever occurs first. The core tube or liner shall be split longitudinally to allow for inspection of the material obtained. Each half will be enclosed in transparent plastic for safe storage and transportation.

Item II – Vibracore Analysis

The vibracores will be transported to CPE-NC's office in Wilmington, North Carolina to be logged, sampled, and photographed. The vibracores will be logged in detail by describing sedimentary properties by layer in terms of layer thickness, color, texture (grain size), composition and presence of clay, silt, gravel, or shell and any other identifying features. The vibracores will be digitally photographed against an 18% gray background in 2 ft intervals. Sediment samples will be obtained from irregular intervals based on distinct layers in the sediment sequence. The cores will then be re-wrapped in plastic for archiving.

Sieve analyses will be conducted on all sediment samples obtained from the vibracores in accordance with American Society for Testing and Materials Standard Materials Designation D422-63 for particle size analysis of soils (ASTM, 2007). This method covers the quantitative determination of the distribution of sand size particles. For sediment finer than the No. 230 sieve (4.0 phi) the ASTM Standard Test Method,

Designation D1140-00 was followed (ASTM, 2006). Mechanical sieving was accomplished using calibrated sieves.

Grain size data will be entered into the gINT® software program, which computes the mean and median grain size, sorting, and silt/clay percentages for each sample using the moment method (FOLK, 1974). Grain size distribution curves and gradation analysis reports will be compiled for each sample.

Carbonate analysis of vibracore samples will be conducted to determine the % Calcium Carbonate in each layer. Composite values for each core will be calculated based on weighted averages of layers. The percent by weigh of carbonate is calculated using the following equation:

$$C = \frac{(W - R)}{W} \times 100$$

Where: C = Percent by weight carbonates
W = Mass of sample
R = Insoluble residue

Item III – Incorporation of Data in Final Report

Currently composite mean grain size, percent silt, percent granular, percent gravel, percent carbonate, and sorting were computed for each vibracore by calculating the weighted average (average of each sample weighted by representative core length). Composite values for mean grain size, percent silt, percent granular, percent gravel, percent carbonate, and sorting were then computed for the entire borrow area within the channel design. Once the additional nine (9) vibracores are collected and analyzed, data must be incorporated into the geotech report by generating new borrow area composite values for mean grain size, percent silt, percent granular, percent gravel, percent carbonate, and sorting that reflect the inclusion of the additional data. Subsequently the appendices portion of the geotech report will be updated.

Break Down of Additional Costs:

Item 1: Engineering Product Development	$25,180.38
Item 2: Geotechnical Investigations	$16,563.62
Item 3: Environmental Permitting & Documentation	$6,541.34
Total Cost for Additional CPE Professional Services	**$48,285.34**

APPENDIX 3

Scope of Services (Cultural Resource Survey)

The original scope of work associated with the contract dated 18 July 2006 between the Figure Eight Island Beach Homeowners Association and Coastal Planning & Engineering of North Carolina, Inc stated that:

> *A cultural resource investigation of the final dredge design cut which will not be determined until the engineering design and environmental studies are near completion will be performed. The cost for the cultural resource investigation of the final dredge areas will be provided under an additional proposal when the area to be surveyed is determined.*

At this time it is prudent to conduct such a cultural resource survey. CPE-NC is pleased to provide you with this proposal to conduct the necessary cultural resource survey associated with the Figure Eight Island Inlet and Shoreline Management Project. CPE-NC has coordinated with Mr. Richard Lawrence and Mr. Nathan Henry of the North Carolina Department of Cultural Resources' Underwater Archeology Branch, with regards to the methodology and areal coverage required for approval. Figure 1 shows the areas to be surveyed including both channels being considered (Alternative 3 and Alternative 5) as well as a corridor in which a terminal groin is proposed under Alternative 5.

CPE-NC has negotiated with Tidewater Atlantic Research, Inc. (TAR) of Washington, North Carolina to conduct the cultural resources investigation. TAR is the marine archeology firm that conducted the initial cultural resource survey to determine the location of the *Wild Dayrell* wreck in Rich Inlet. CPE-NC has worked with TAR on many sand searches throughout North Carolina and is highly confident in their capabilities.

CPE-NC will provide planning support for TAR in preparation of the investigation. CPE-NC will provide TAR with the areas to be surveyed as well as any additional project information necessary to conduct the investigation. TAR will provide all personnel and equipment to conduct a historical background review as well as the cultural resource survey. TAR will provide a draft report documenting the findings of the investigation to CPE-NC for technical review and comments. Upon review, TAR will prepare a final report to be submitted to the North Carolina Department of Cultural Resources for final approval.

The total, not to exceed, cost estimate for the submerged cultural resource investigation is $17,320. This task order will be charged as time and materials using the same rate schedule as is currently being used for all other tasks being conducted by CPE-NC.

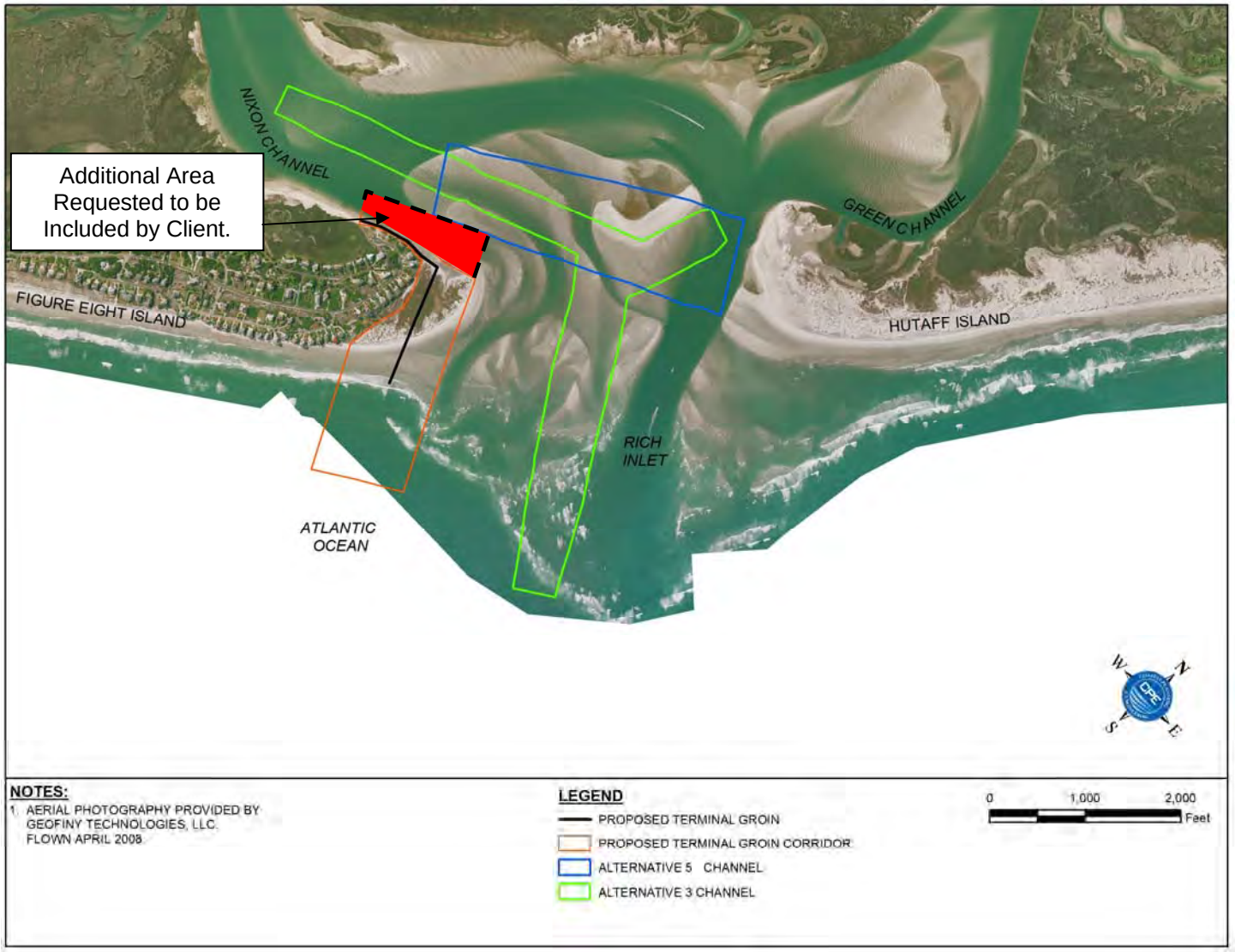
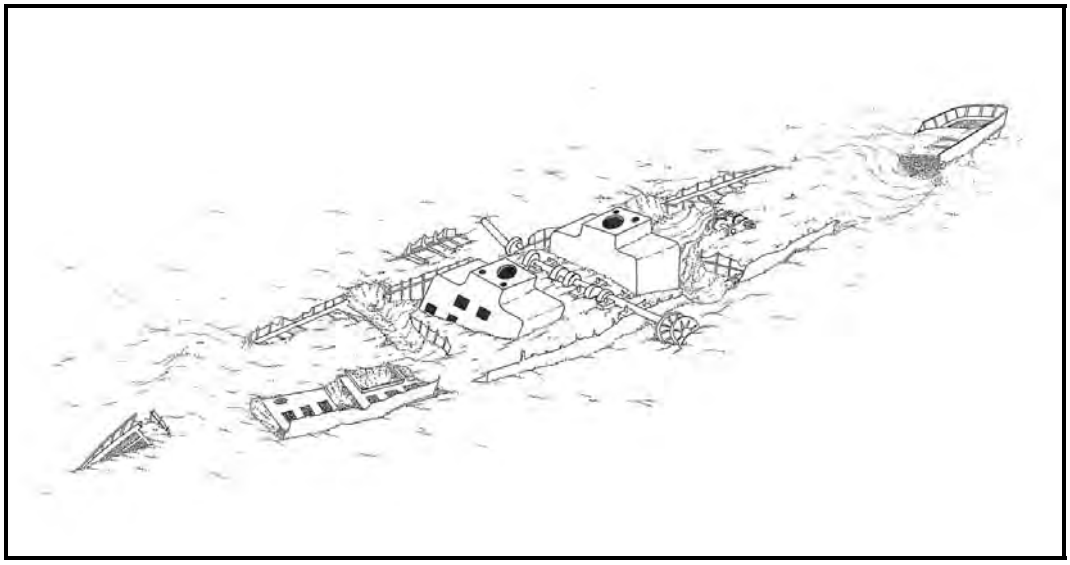


Figure 1. Map depicting the areas for which cultural resource investigations will be conducted including the two proposed channel corridors (Alternative 3 and 5) as well as the corridor in which a terminal groin is proposed under Alternative 5.

APPENDIX 4

Cultural Resource Invetigation: Location of the Remains of the *Wild Dayrell* in Rich Inlet

Location of the Remains of the Wild Dayrell
in Rich Inlet
Pender County, North Carolina



Submitted to:

Mr. Jeffrey L. Andrews, P.S.M., C.I.

Coastal Planning & Engineering, Inc.
2481 N.W. Boca Raton Boulevard
Boca Raton, Florida 33431

Submitted by:

Tidewater Atlantic Research, Inc.
P. O. Box 2494

Washington, North Carolina 27889

29 September 2006

Introduction

Coastal Planning and Engineering, Inc. (CPE) is currently working with the Figure Eight Beach Homeowners Association on a beach nourishment project for Figure Eight Island. The source material for this nourishment will be a borrow area in Rich Inlet (Figure 1). In order to avoid impacts to the Civil War blockade-runner *Wild Dayrell*, CPE contracted with Tidewater Atlantic Research, Inc., (TAR) of Washington, North Carolina to carry out a remote sensing survey to determine the exact position of the wreck site. The remote sensing investigation was carried out by TAR personnel Gordon Watts and Ray Tubby on 3 September 2006.

Wreck of the *Wild Dayrell*

The remains of the Anglo-Confederate Trading Company's steamer *Wild Dayrell,* lie in Rich Inlet approximately twenty miles north of Fort Fisher. That vessel was built by the firm of Jones, Quiggin and Company in Liverpool along with an identical sistership, the *Lucy*. *Lucy* and *Wild Dayrell* were constructed of iron, each measuring 215 feet in length, 20 feet in beam and 10 foot 3 inch depth of hold. The vessels' oscillating steam cylinder engines were built by Fawcett, Preston and Company in Liverpool and measured 52 inches in diameter with a 48-inch stroke. The *Wild Dayrell* was also equipped with feathering paddle wheel floats and a forecastle hood. Two raked pole masts and two raked retractable funnels were all that protruded above the level of the steamer's paddle boxes.



Figure 1. Rich Inlet beach renourishment project location.

The *Wild Dayrell* was launched on 17 September 1863. Although the steam trials of the *Wild Dayrell* were not reported in the press, its sistership *Lucy* proved to be capable of 15 ½ knots against a strong wind and tide during her trials in October 1863. On 12 November the vessel's registered owners, Edward Lawrence and Company, entered the vessel at Liverpool Customs for loading for Nassau. The fully loaded *Wild Dayrell* cleared for sea two days later. In December, the steamer made Nassau and, after being painted a lead color, took on a cargo for Wilmington. After two successful round trips the *Wild Dayrell* was run ashore on 1 February 1864.

The wreck of the *Wild Dayrell* was never lost. It lies in the shallow water of Rich Inlet south of Figure Eight Island and has been a popular site for fishing. However, because of strong currents in the inlet, the *Wild Dayrell* has never been a popular dive site though sport divers have recovered portholes from the hull during the early 1980s. In spite of the environment, the wreck was mapped by the staff and students of the Program in Maritime History and Underwater Archaeology in 1985. Although the dimensions of the hull was impossible to precisely establish because of deterioration of the structure, the overall length of the wreck corresponds closely with the 215-foot length of the *Wild Dayrell* recorded on that vessel's CBR. The 20-foot beam and 50-foot length of the engine room recorded at the wreck site also correspond precisely with those recorded on the CBR (Figure 2). The *Wild Dayrell*'s CBR and historical data associated with the vessel confirm that the ship was powered by two oscillating engines, or steam cylinders and that number of oscillating cylinders were identified at the wreck site.

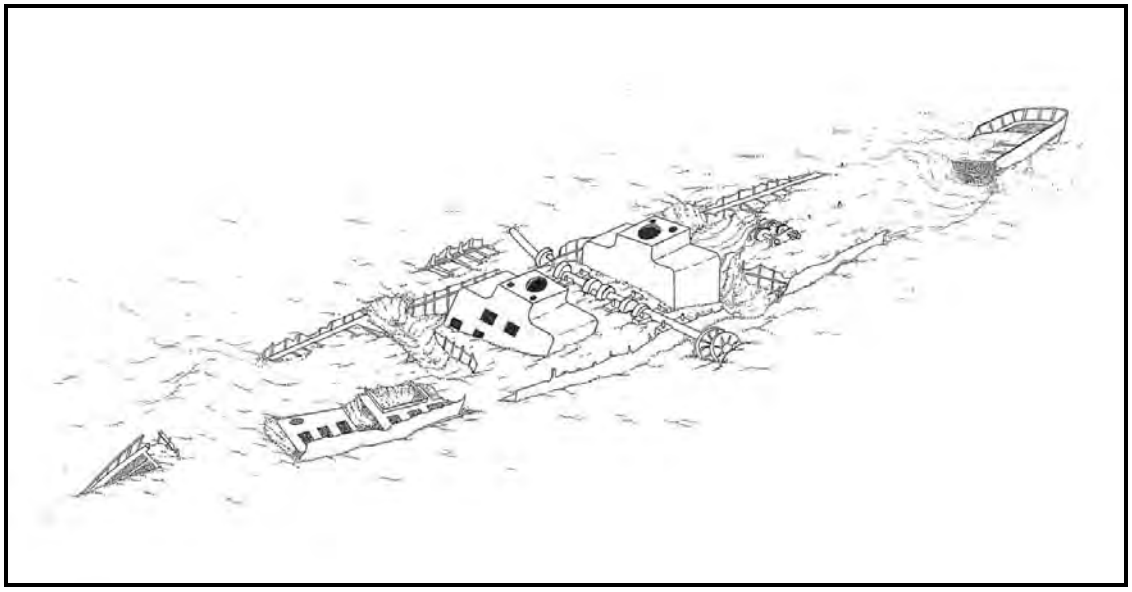


Figure 2. Perspective drawing of the remains of the *Wild Dayrell*.

Field Research Methodology and Equipment

To locate the remains of *Wild Dayrell*, TAR personnel used a 24-foot shallow-draft vessel for conducting the remote sensing survey (Figure 3). The wreck site was identified using an EG&G GEOMETRICS 881 cesium vapor magnetometer (Figure 4). Once the position of the wreck was established, a series of survey lanes were created in HYPACK®MAX to refine the magnetic signature. Because the wreck is now completely buried in the shoal on the south side of the Rich Inlet channel, breaking surf and shallow water made sonar imaging impossible. Data collection during the survey was controlled using a TRIMBLE differential global positioning system assuring reliable geographical location of the remains of *Wild Dayrell*.

An EG&G Geometrics G-881 marine cesium magnetometer capable of plus or minus 0.001 gamma resolution was employed to collect magnetic data in the survey area (Figure 4). To produce the most comprehensive magnetic record, data was collected at 10 samples per second. Due to shoal water and the possibility of snags in the project area, the magnetometer sensor was towed just below the water surface at a speed of approximately 3 knots. Magnetic data were recorded as a data file associated with the computer navigation system. Data from the survey were

contour plotted using QUICKSURF® computer software to facilitate anomaly location and definition of target signature characteristics. A 600 kHz MARINE SONICS high-resolution side scan sonar was to be employed to collect acoustic data in the survey area. However, due to shoal water and breaking surf in the inlet the side scan sonar could not be effectively utilized.

A TRIMBLE AgGPS was used to control navigation and data collection in the survey area. That system has an accuracy of plus or minus three feet, and can be used to generate highly accurate coordinates for the computer navigation system. The DGPS was employed in conjunction with an on-board Compaq 2.4 GHz laptop computer loaded with a Coastal Oceanographics HYPACK®MAX navigation and data collection software program. Positioning data generated by the navigation system were tied to magnetometer records by regular annotations to facilitate target location and anomaly analysis. All data is related to the North Carolina State Plane Coordinate System, NAD 83.

Data Analysis

Using QUICKSURF® contouring software, magnetic data generated during the survey were contour plotted at 10-gamma intervals (Figure 5). The contoured data was used to accurately identify the geographical location and distribution of the structural remains of the *Wild Dayrell*. Due to the fact that the wreck is entirely covered by a shoal, side scan sonar contributed nothing to analysis of the wreck site.



Figure 3. **Photograph of the 25-foot survey vessel *Atlantic Surveyor* employed during the Rich Inlet survey.**



Figure 4. **Photograph of magnetometer sensor being lowered into the ocean.**

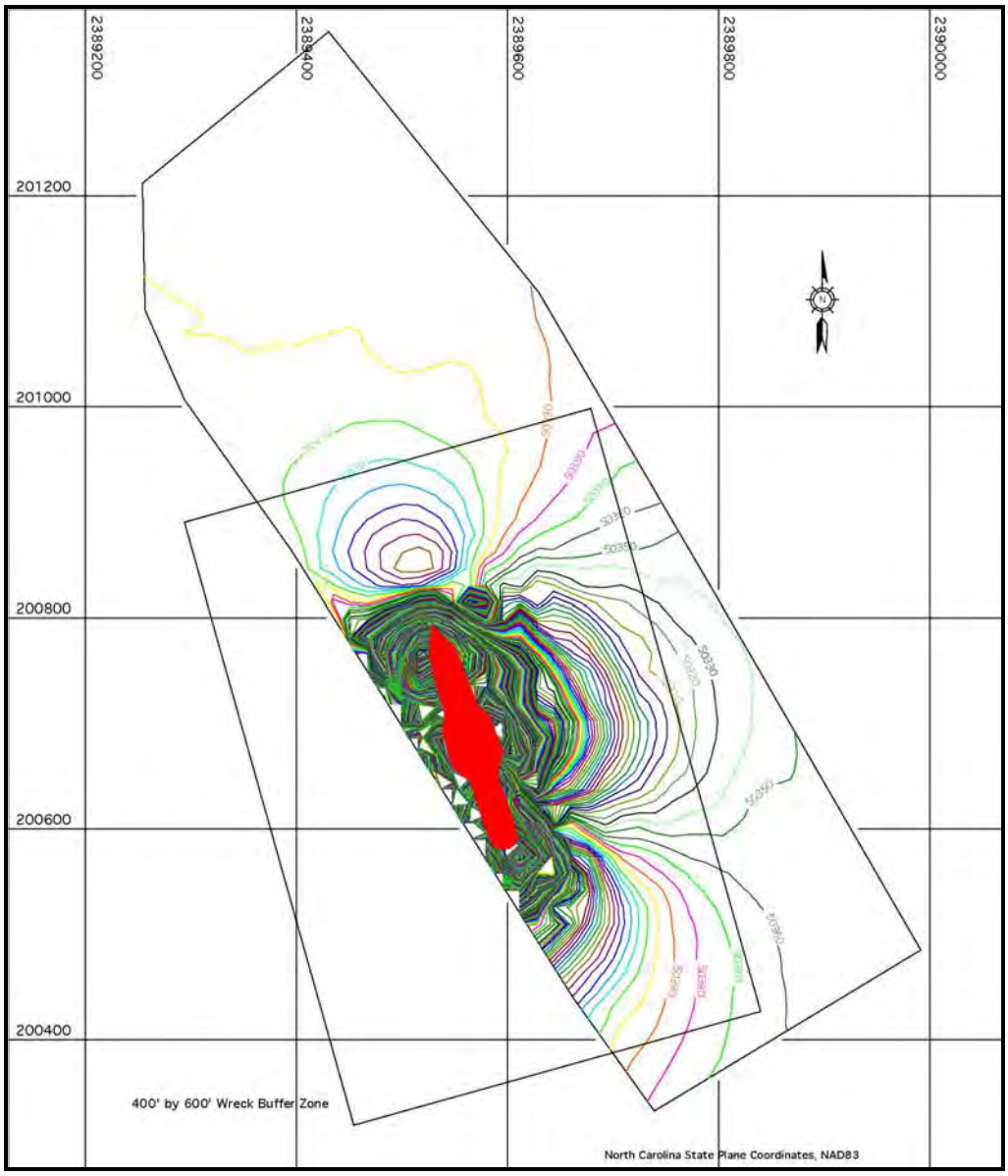


Figure 5. Magnetic contour map of the *Wild Dayrell* wreck site with proposed buffer zone.

Conclusions and Recommendations

The remote sensing survey conducted by TAR was successful in identifying the remains of the *Wild Dayrell* and generating an accurate geographical position for the wreck site. The bow lies to the northwest and the stern lies to the southeast. Coordinates for the longitudinal axis of the hull structure are:

NW 2389528.56, 200793.67
SE 2389600.84, 200581.71

On the recommendation of Richard Lawrence, head of the Underwater Archaeology Branch of the Department of Cultural Resources, a 400-foot by 600-foot buffer zone was established around the wreck site (Figure 5). Coordinates for the buffer zone are:

NW	2389293,85, 200890.38
NE	2389678.94, 200998.57
SE	2389839.48, 200427.20
SW	2389454.39, 200391.00

Proposed plans for dredging in Rich Inlet should be designed to avoid that buffer zone.

APPENDIX 5

Cultural Resource Investigation: Terrestrial and Submerged Cultural Resource Survey Rich Inlet, Figure Eight Island, North Carolina

DRAFT

Terrestrial and Submerged Cultural Resource Survey Rich Inlet, Figure Eight Island, North Carolina

Submitted to:

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6 May 2010

Abstract

Coastal Planning & Engineering of North Carolina, Inc. (CPE-NC) is the project engineer representing the Figure Eight Island Beach Homeowners Association in its efforts to obtain permits for the Figure Eight Island Inlet and Shoreline Management Project. In order to determine the proposed dredging effects on potentially significant submerged cultural resources, CPE-NC contracted with Tidewater Atlantic Research, Inc. of Washington, North Carolina to conduct a magnetometer and sidescan sonar survey of the proposed channel alternatives being considered. In addition the corridor in which a terminal groin is being proposed under Alternative 5a was also surveyed using terrestrial and marine survey protocol. Field research for the project was carried out on 10 December 2009, 8 and 9 March 2010, and 1 April 2010. Analysis of the remote-sensing data generated during the Rich Inlet survey identified a total of 116 magnetic targets and 6 sonar targets. Five anomalies, composed of 13 individual magnetic targets and 3 associated sonar targets, contain signature characteristics suggestive of potentially significant cultural material. Those five anomaly clusters are recommended for avoidance or additional investigation in the event that avoidance is not possible. The remaining 103 magnetic targets and three associated sonar targets are indicative of modern debris such as traps, anchors, pipe, rebar, and small cable and dredging related debris. No avoidance or additional investigation of the 103 individual magnetic targets is recommended in conjunction with the proposed project.

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Introduction

Coastal Planning and Engineering of North Carolina, Inc. (CPE-NC) of Wilmington, North Carolina is currently working with the Figure Eight Island Beach Homeowners Association to obtain permits for the Figure Eight Island Inlet and Shoreline Management Project. As part of the permitting process CPE-NC has been tasked with evaluating several channel alternatives in and around Rich Inlet. In order to determine the project's impact on potentially significant submerged cultural resources, CPE-NC contracted with Tidewater Atlantic Research, Inc. (TAR) of Washington, North Carolina to conduct a systematic magnetometer and side-scan sonar survey of an area that encompasses the proposed channel alternatives as well as the corridor in which a terminal groin is proposed for Alternative 5a.

The remote-sensing investigation conducted by TAR archaeologists was designed to provide accurate and reliable identification, assessment and documentation of submerged cultural resources in the study area. Survey methodology was developed to comply with guidelines for submerged cultural resource surveys in North Carolina created by the North Carolina Department of Cultural Resources. Those guidelines follow the criteria established by the National Historic Preservation Act of 1966 (Public Law 89-665), the National Environmental Policy Act of 1969 (Public Law 11-190), Executive Order 11593, the Advisory Council on Historic Preservation Procedures for the protection of historic and cultural properties (36 CFR Part 800) and the updated guidelines described in 36 CFR 64 and 36 CFR 66. The results of the investigation will furnish CPE-NC with the archaeological data required for complying with both state and federal submerged cultural resource legislation and regulations.

The terrestrial portion of the survey was conducted on 10 December 2009, 9 March and 1 April 2010, and the submerged portion on 8 March and 1 April 2010. Analysis of the remote-sensing data generated during the Rich Inlet survey identified a total of 116 magnetic anomalies and 6 sonar targets. Five anomaly clusters, composed of 13 individual magnetic anomalies and 3 associated sonar targets, contain signature characteristics suggestive of potentially significant cultural material. These five anomaly clusters are recommended for avoidance or additional investigation. The remaining 103 and three associated sonar targets are indicative of modern debris such as traps, anchors, pipe, rebar, and small cable. No avoidance or additional investigation of these 103 individual magnetic targets is recommended in conjunction with the proposed project.

Project survey personnel consisted of Gordon P. Watts, Jr., principal investigator and Joshua A. Daniel, remote-sensing operator. Dr. Watts and Mr. Daniel conducted both the terrestrial and marine portions of the survey. Robin Arnold and Dr. Watts carried out the historical and literature research. Dr. Watts and Mr. Daniel analyzed the remote-sensing data. Ms. Arnold, Mr. Daniel and Dr. Watts prepared this report document.

Project Location

The remote-sensing project area is situated at Rich Inlet which is located off the north end of Figure Eight Island at the confluence of Nixon Channel to the west and Green Channel to the north. The area surveyed is polygonal in shape, measuring approximately 5,000 feet long and 4,400 feet wide at its extreme points and covers an area of 193.8 acres (Figure 1). To ensure sufficient data would be available to locate any potentially significant targets in the project area, underwater remote-sensing data were collected along lanes spaced on 50-foot intervals; the terrestrial portion along transects spaced on 100-foot intervals.

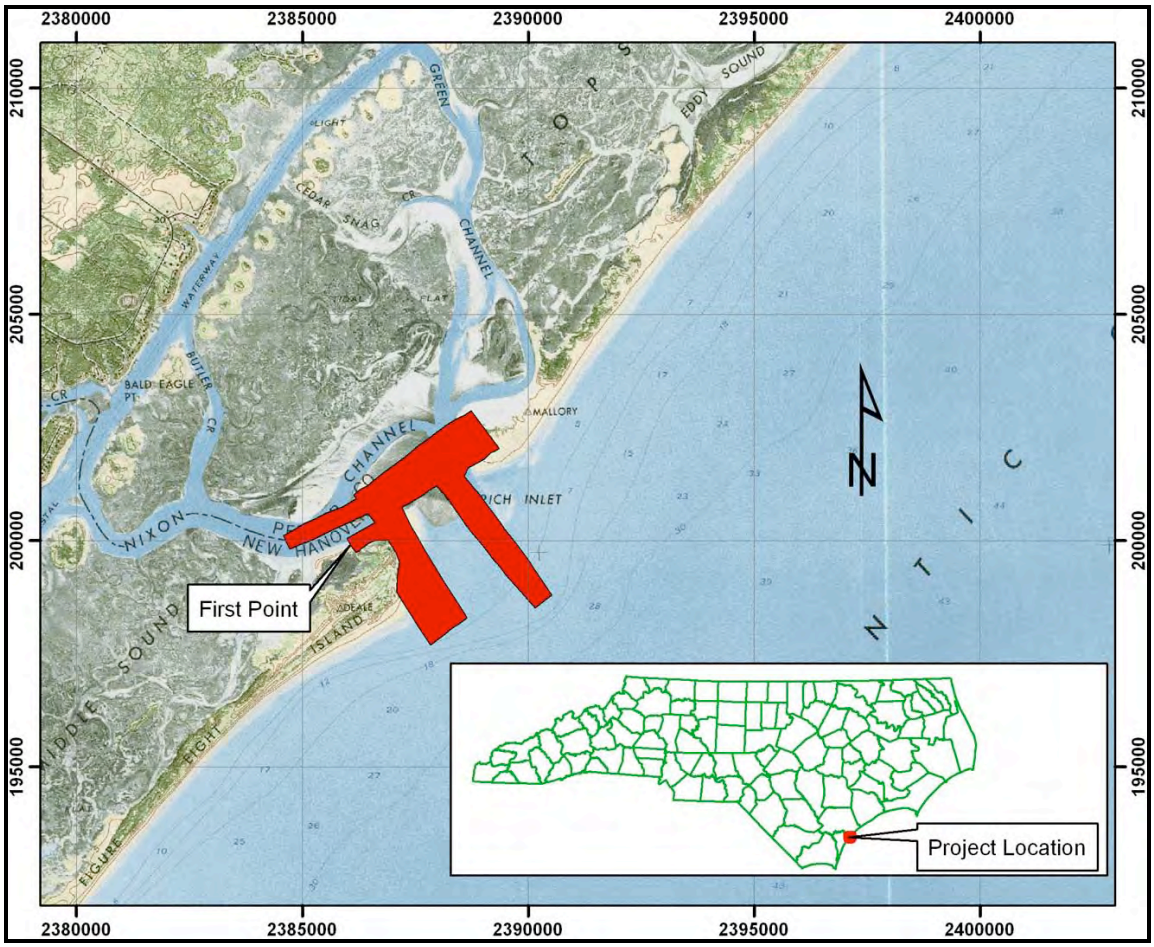


Figure 1. Project area location (USGS. "Hampstead quadrangle, North Carolina" 1:24,000).

The survey boundaries defined in North Carolina State Plane Coordinates, NAD 83, U.S. Survey Foot, beginning at "First Point" in Figure 1 and continuing clockwise are as follows:

Easting	Northing
2386077.7	199887.4
2385988.1	200055.7
2386606.4	200407.5
2386454.7	200599.2
2386124.7	200451.5
2385765.9	200289.7
2385540.6	200177.2
2385401.4	200108.3
2385234.4	200025.7
2385065.7	199963.0
2384990.3	199938.7
2384720.0	199815.6
2384575.6	200114.1
2384887.7	200287.6
2385007.4	200364.7
2385300.6	200501.8
2385475.2	200586.6
2385676.9	200667.9
2385868.6	200747.0
2385931.8	200776.7
2386109.5	200878.8
2386188.6	200932.7
2386132.0	201006.9
2386250.6	201118.7
2386425.5	201213.4
2386745.8	201468.5
2387045.1	201694.7
2387267.5	201859.5
2387482.9	202034.4
2387580.3	202112.4
2387735.9	202220.3
2387917.5	202356.9
2388001.8	202418.0
2388216.5	202575.6
2388417.1	202691.6
2388573.7	202762.3
2388737.1	202877.3
2389351.0	202039.1
2389262.1	201985.6
2389168.6	201944.7
2389021.7	201806.6
2388666.7	201612.5
2388586.9	201417.2
2388657.8	201330.0
2388715.0	201270.7

Easting	Northing
2388757.4	201214.4
2388806.9	201150.4
2388833.0	201119.6
2388908.9	201032.2
2388967.7	200953.0
2389104.0	200761.5
2389348.8	200434.1
2389511.1	200211.8
2389629.1	200060.8
2389891.2	199727.8
2390018.1	199551.5
2390094.9	199426.9
2390307.9	199108.3
2390509.2	198807.5
2390508.9	198800.1
2390147.8	198516.9
2390036.5	198647.8
2389813.5	198902.3
2389554.6	199190.5
2389497.6	199252.4
2389401.0	199380.3
2389356.5	199446.5
2389242.3	199570.2
2389192.6	199629.2
2389058.3	199805.8
2388907.0	199992.9
2388760.4	200172.4
2388687.1	200262.2
2388621.0	200346.7
2388531.7	200471.8
2388416.9	200640.1
2388358.3	200724.3
2388329.9	200760.2
2388259.7	200864.7
2388189.2	200964.3
2388163.4	201000.0
2388072.9	201095.4
2387968.2	201206.3
2387821.2	201127.8
2387777.8	201097.3
2387714.0	201052.7
2387632.3	200994.0
2387294.2	200789.2
2387198.2	200745.9
2387406.5	200310.9

Easting	Northing
2387499.4	200153.4
2387720.5	199787.3
2387974.0	199365.4
2388136.8	199095.9
2388365.5	198734.5
2388603.9	198367.8
2388640.6	198294.4
2388495.0	198188.6
2388306.1	198057.2
2388147.5	197937.0
2387835.6	197703.9
2387601.6	198055.6
2387424.2	198335.6
2387344.9	198460.3
2387181.4	198714.9
2387083.3	198867.7
2387086.9	198956.8
2387089.4	199080.8
2387091.9	199204.7
2387102.4	199281.2
2387118.2	199367.4
2387149.4	199527.4
2387122.5	199597.9
2387082.4	199713.6
2387029.1	199805.1
2386996.3	199853.5
2386898.2	200006.3
2386781.8	200010.9
2386662.5	200005.8
2386597.8	200000.9
2386514.9	199974.5
2386423.3	199918.6
2386356.8	199866.7
2386292.9	199819.6
2386259.4	199788.7
2386185.8	199747.0
2386077.7	199887.4
2385949.6	200602.4

Research Methodology

Literature and Historical Research

Due to the number of previous investigations conducted in the project vicinity, TAR personnel have carried out extensive literature searches in both primary and secondary source material. To assess the potential for finding significant historic and/or cultural resources within the proposed borrow areas TAR personnel reviewed previously collected literature, examined historical maps and charts and examined inventories of shipwrecks in the Rich Inlet area. The historical background in this document is built upon and refined from previous historical background assessments of the region developed by TAR.

Preliminary wreck-specific information was collected from primary and secondary sources that include: *A Guide to Sunken Ships in American Waters* (Lonsdale and Kaplan 1964); *Encyclopedia of American Shipwrecks* (Berman 1972); *Shipwrecks of the Civil War: The Encyclopedia of Union and Confederate Naval Losses* (Shomette 1973); *Merchant Steam Vessels of the United States 1790-1868* (Lytle and Holdcamper 1975); *Shipwrecks in the Americas* (Marx 1983); *Shipwreck Encyclopedia of The Civil War: North Carolina, 1861-1865* (Spence 1991); *Shipwrecks of North Carolina* (Gentile 1992); *Naval Documents of the American Revolution* (U.S. Navy [10 vols. published between 1964-1996]); *The Naval War of 1812: A Documentary History* (Dudley [two vols.] 1985); *Graveyard of the Atlantic* (Stick 1952); *Official Records of the Union and Confederate Navies in the War of the Rebellion* (The National Historical Society [31 vols.] 1987), *North Carolina Shipwreck Accounts: 1709 to 1950* (Charles 2004), and other published materials. A survey of select newspapers generated additional information.

Personnel at the North Carolina Office of Archives and History's Underwater Archaeology Branch (UAB) at Kure Beach, North Carolina were also contacted for shipwreck data associated with the Rich Inlet area (Richard W. Lawrence 2010, pers. comm.).

Remote-Sensing Survey

In order to reliably identify submerged cultural resources, TAR archaeologists conducted a systematic remote-sensing survey of the proposed borrow site. Underwater survey activities were conducted on 8 March 2010 from the 24-foot survey vessel *Atlantic Surveyor*. On 1 April 2010, they were conducted from a 20-foot Privateer. A pedestrian survey collected data on the beach and shoals. In order to fulfill the requirements for survey activities in North Carolina, magnetic and acoustic remote-sensing equipment were employed. This combination of remote-sensing represents the state of the art in submerged cultural resource location technology and it offers the most reliable and cost effective method to locate and identify potentially significant targets. Data collection was controlled using a differential global positioning system (DGPS). DGPS produces the highly accurate coordinates necessary to support a sophisticated navigation program and assures reliable target location.

An EG&G GEOMETRICS G-881 marine cesium magnetometer, capable of plus or minus 0.01 gamma resolution, was employed to collect magnetic data for the submerged portion of the survey area (Figure 2). To produce the most comprehensive magnetic record, data was collected at 10 samples per second. On 8 March 2010, the magnetometer sensor was towed just below the water surface at a speed of approximately three to four knots due to shoal water within the project area. On 1 April 2010, the magnetometer sensor was mounted to the bow of the vessel. Magnetic data were recorded as a data file associated with the computer navigation system. Data from the survey were contour plotted using QUICKSURF® computer software to facilitate anomaly location and definition of target signature characteristics. All magnetic data were correlated with the acoustic remote-sensing records.

A 445/900 kHz KLEIN SYSTEM 3900 digital sidescan sonar (interfaced with SONARPRO SONAR PROCESSING SYSTEM) was employed to collect acoustic data in the submerged portions of the survey area (Figure 3). Due to shoal water within the project area, the sidescan sonar transducer was deployed and maintained between 3 and 5 feet below the water surface. Acoustic data were collected using a range scale of 30 and 50 meters to provide a minimum of 200% coverage and high target signature definition. Acoustic data were recorded as a digital file with SONARPRO and tied to the magnetic and positioning data by the computer navigation system.



Figure 2. Launching the EG&G GEOMETRICS G-881 cesium vapor magnetometer.



Figure 3. Launching the KLEIN SYSTEM 3900 digital sidescan sonar.

A TRIMBLE AgGPS was used to control navigation and data collection in the survey area. That system has an accuracy of plus or minus three feet, and can be used to generate highly accurate coordinates for the computer navigation system on the survey vessel. The DGPS was employed in conjunction with an onboard COMPAQ 2.4 GHz laptop loaded with HYPACK navigation and data collection software (Figure 4). Positioning data generated by the navigation system were tied to magnetometer records by regular annotations to facilitate target location and anomaly analysis. All data is related to the North Carolina State Plane Coordinate System, NAD 83.

The terrestrial portion of the survey area was investigated on foot. Magnetic data was collected using a LITTLEMORE 7702 proton precession (Figure 5). Positioning and data recording was accomplished by a handheld TRIMBLE GEOEXPLORER SERIES GPS interfaced with HYPACK. A visual survey of the area exposed at low tide also took place during this portion of the survey.

Data Analysis

To ensure reliable target identification and assessment, analysis of the magnetic and acoustic data was carried out as it was generated. Using QUICKSURF® contouring software, magnetic data generated during the survey were contour plotted at 5-gamma intervals for analysis and accurate location of magnetic anomalies. The

magnetic data was examined for anomalies, which were then isolated and analyzed in accordance with intensity, duration, areal extent and signature characteristics. Sonar records were analyzed to identify targets on the basis of configuration, areal extent, target intensity and contrast with background, elevation and shadow image, and were also reviewed for possible association with identified magnetic anomalies.



Figure 4. Computer navigation system located at the research vessel helm.

Data generated by the remote-sensing equipment were developed to support an assessment of each magnetic and acoustic signature. Analysis of each target signature included consideration of magnetic and sonar signature characteristics previously demonstrated to be reliable indicators of historically significant submerged cultural resources. Assessment of each target includes avoidance options and possible adjustments to avoid potential cultural resources. Where avoidance is not possible the assessment includes recommendations for additional investigation to determine the exact nature of the cultural material generating the signature and its potential National Register of Historic Places (NRHP) significance. Historical evidence was developed into a background context and an inventory of shipwreck sites that identified possible correlations with magnetic targets (Appendix A). A magnetic contour map of the survey area was produced to aid in the analysis of each target.



Figure 5. Terrestrial survey using the LITTLEMORE magnetometer.

Historical Background for Rich Inlet Vicinity

The North Carolina coast exceeds 300 miles in extent, and "for the greater part of this distance barrier-reefs, or a cordon of long, low, narrow sandy islands, varying from one-fourth of a mile to nearly 4 miles in width, resist the assaults of the Atlantic, and appear for centuries to have maintained the same position in which we now find them" (U.S. War Department 1876:378).

Europeans surveyed the barrier reefs and coastline of contemporary Pender and New Hanover counties during the first quarter of the sixteenth century as reported by Giovanni da Verrazano and other explorers. Some 60 years later, according to Ralph Lane's chronicles of Sir Richard Grenville's expedition and John White's map [1585], Englishmen with the support of an unpopular Portuguese pilot fished in the region on their way to establish a colony on Roanoke Island. The Grenville party tolerated Simon Ferdinando as the former pirate was recognized as the "only skilled navigator alive with previous experience in negotiating the treacherous Carolina coastline" (Glasgow 1966:120-121).

Before John White arrived at Roanoke Island in 1587 to search for what today is known as the Lost Colony, his vessels presumably anchored in the vicinity of contemporary Figure Eight and Topsail islands. White's maps indicate that he was "aware of Cape Fear", and this fact would suggest that his vessel sailed closely up the coast to Roanoke Island. The White expeditions also contributed to the Molyneaux globe produced circa 1592, which clearly identified the "Cape of Feare" (Schoenbaum 1992:223).

Samuel Mace's 1602/1603 expedition, sponsored by Sir Walter Ralegh, enjoyed a month long sojourn in the vicinity of Rich Inlet where the English collected sassafras from aborigines (Noël Hume 1994:101,103). From the date of Mace's visit to the North Carolina coast to ostensibly search for the Raleigh colony to the beginning of the eighteenth century Europeans may have settled on the mainland although they left no physical evidence. In the interim, explorers continued to conduct superficial shoreline surveys and to ascend briefly into local waterways.

During mid-October 1663, Captain William Hilton reconnoitered Cape Fear Roads for a second time and on this occasion navigated up the North-East Cape Fear River. Aboard the *Adventure* the Massachusetts Bay mariner observed landmarks that he named "Turkey Quarter, Rocky Point and Stag Park." Of those, the latter two place names survive (Bloodworth 1947:30; Pender County 2008). Despite Hilton's positive reports on the beautiful terrain, the region remained in a "dormant state" due to a temporary moratorium enacted by the Lords Proprietors to prohibit colonization (Bloodworth 1947:30).

John Brickell surveyed North Carolina's barrier islands in 1729 and commented on the nature of inlets subsequently identified by the 1738 James Wimble chart. Brickell mentioned *Rich* Inlet, which is shown as "Reach" on Wimble's chart. In *The Natural History of North Carolina*, the Irish physician wrote: "Between these Islands and Sand Banks, are Inlets of several depths of Water, some admitting only of Sloops, Schooners, Brigantines, and Vessels of small Burthen … many of these being only Navigable for Periaugers and small Crofts, by reason of their many Shoals which are continually shifting by the violence of Storms" (Brickell 1968:2).

Brickell noted that early-eighteenth-century Carolina planters:

> [F]or the most part live by the Water side, few or none living in the In-land parts of the country at present, though the lands are as good and fertile as any that are yet inhabited, but not so commodious for Carriage as by the Water, for most part of the Plantations run but a Mile backward into the Woods, so that betwixt every River you shall see vast Tracts of Land lying waste, or inhabited only by wild beasts: What is worthy of Observation is, That almost every Planter may have a convenient Dock upon his plantation, and a sufficient Quantity of good Timber to build Ships and Boats withal" (Brickell 1968:14).

James Moore acquired the five-mile long, 1,300-acre sandbank south of Rich Inlet circa 1762. The island was later sold to Cornelius Harnett. After Harnett's death, planter James Foy purchased the tract [1795] that became part of his large Poplar Grove estate. The prosperous Foy family would retain ownership of "Woods Beach" [or Foy Island] until the 1950s, with the exception of a small tract [southern extremity] sold to the Hutaff family (Nadeau 1998:15; Barefoot 2005:170-171).

Maritime activities conducted near Rich Inlet were not greatly impacted by the American Revolution. However, some local residents exhibited ardent patriotism during the conflict and many prominent landowners and merchants were involved in the political events leading to the war and subsequent military actions. One such event occurred when American forces led by Colonel James Moore succeeded to repulse British soldiers and North Carolina Loyalists at the decisive battle at Moore's Creek Bridge in February 1776. In retribution for their owners' defiance, some Colonial plantations and salt works were plundered and destroyed in New Hanover County [and future Pender County] (Rankin 1975:15-20).

Despite the region's promising economic opportunities that were presented after American Independence, an out migration occurred during the early nineteenth century. This "Great Exodus" resulted in the loss of some of the largest and wealthiest landowners in southeastern North Carolina. This trend was driven by five factors: land grants for military service in the Revolution and War of 1812, availability of cheap land in the west, better cotton land in the west and south, higher prices elsewhere for hiring slaves and a decline in the productivity of the area's heavily farmed sandy soils (Louis Berger Group 2002:9).

During the antebellum period, international and packet maritime commerce did increase along the North Carolina coast. In September 1857, several vessels were lost off southeastern North Carolina in the midst of a severe hurricane. One casualty was reported in the vicinity of modern Figure Eight Island. On 17 September, *The New York Times* reported that the "Schooner *Abdel Kader*, Captain CORNELIUS, hence for New-York, with a cargo of naval stores, went ashore about Rich Inlet, 25 or 30 miles north [of] New Inlet, and will prove a total loss" (*The New York Times* 1857). Prior marine intelligence from the newspaper indicated that Captain Cornelius was familiar with the coast. On 6 June 1856, Cornelius cleared the port of New York aboard the *Abdel Kader* prior to his voyage to Savannah (*The New York Times* 1856).

The American Civil War disrupted commercial development and maritime trade near Rich Inlet. After Confederate forces in South Carolina attacked the U.S. garrison at Fort Sumter, President Abraham Lincoln declared a state of open rebellion and called for volunteers to preserve the Union. On 19 April 1861, Lincoln issued a proclamation to establish a blockade of Confederate ports in South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Texas. Eight days later, the blockade was extended to include ports in Virginia and North Carolina. Until the fall of Fort Fisher in January 1865 and the Union occupation of the Cape Fear, Wilmington remained as the Confederacy's major port for vessels running the blockade. As a consequence, the remains of numerous blockade runners lie along the coastline north and west of Cape Fear.

The remains of the Anglo-Confederate Trading Company's steamer *Wild Dayrell,* lie in Rich Inlet approximately 20 miles north of Fort Fisher. That vessel was built by the firm of Jones, Quiggin and Company in Liverpool along with an identical sistership, *Lucy*. *Lucy* and *Wild Dayrell* were constructed of iron, each measuring 215 feet in length, 20 feet in beam and 10 foot 3 inch depth of hold. The vessels' oscillating steam cylinder engines were built by Fawcett, Preston and Company in Liverpool and measured 52 inches in diameter with a 48-inch stroke. The *Wild Dayrell* was also equipped with feathering paddle wheel floats and a forecastle hood. Two raked pole masts and two raked retractable funnels were all that protruded above the level of the steamer's paddle boxes.

The *Wild Dayrell* was launched on 17 September 1863. Although the steam trials of the *Wild Dayrell* were not reported in the press, its sistership *Lucy* proved to be capable of 15 ½ knots against a strong wind and tide during her trials in October 1863. On 12 November the vessel's registered owners, Edward Lawrence and Company, entered the vessel at Liverpool Customs for loading for Nassau. The fully loaded *Wild Dayrell* cleared for sea two days later. In December, the steamer made Nassau and, after being painted a lead color, took on a cargo for Wilmington. After two successful round trips the *Wild Dayrell* was run ashore on 1 February 1864.

The wreck of the *Wild Dayrell* was never lost. It lies in the shallow water of Rich Inlet south of Figure Eight Island and has been a popular site for fishing (Figure 6). However, because of strong currents in the inlet, the *Wild Dayrell* has never been a popular dive site though sport divers have recovered portholes from the hull during the early 1980s. In spite of the environment, the wreck was mapped by the staff and students of the East Carolina University (ECU) Program in Maritime History and Underwater Archaeology in 1985 (Figure 7).

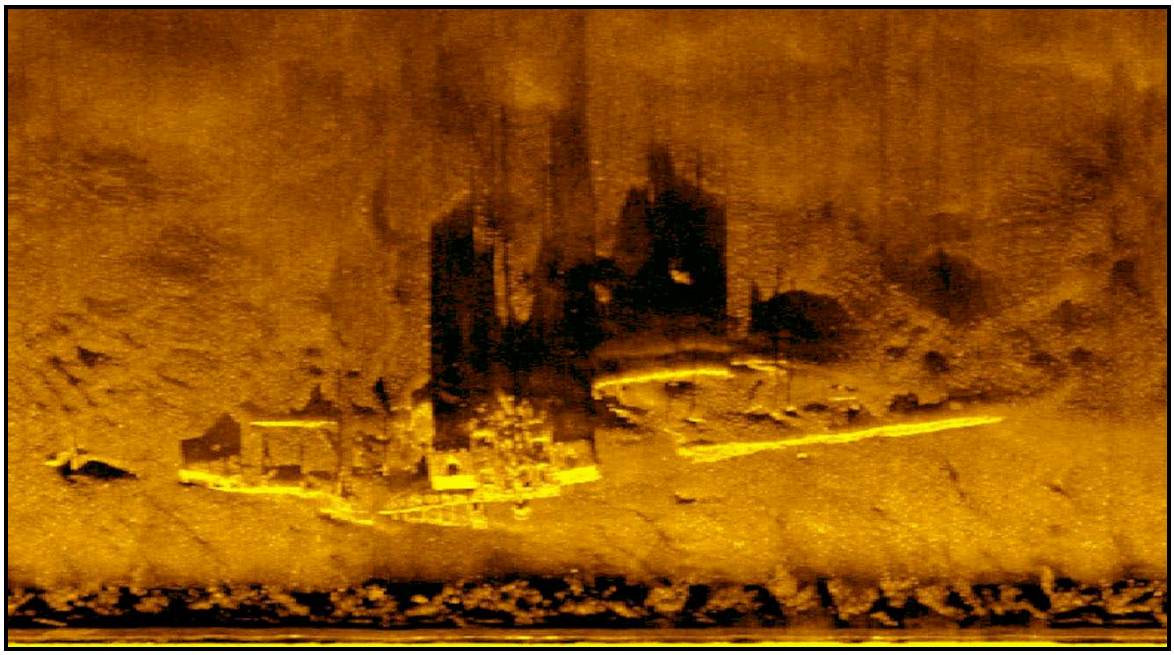


Figure 6. Sonar image of the *Wild Dayrell*.

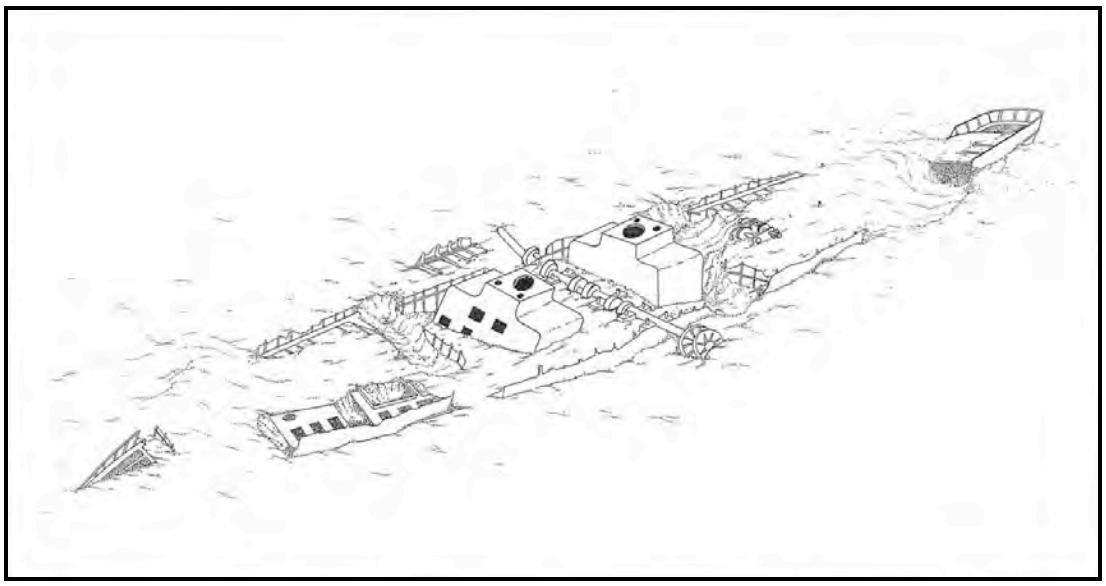


Figure 7. Perspective drawing of the remains of the *Wild Dayrell*.

Although the dimensions of the hull was impossible to precisely establish because of deterioration of the structure, the overall length of the wreck corresponds closely with the 215-foot length of the *Wild Dayrell* recorded on that vessel's *Certificate of British Registry* (CBR). The 20-foot beam and 50-foot length of the engine room recorded at the wreck site also correspond precisely with those recorded on the CBR. The *Wild Dayrell*'s CBR and historical data associated with the vessel confirm that the ship was powered by two oscillating engines, or steam cylinders and that number of oscillating cylinders were identified at the wreck site.

According to postwar records, the region's once prosperous plantation system disappeared during the Reconstruction Era. Some 4,000 native males had served the Confederacy and survivors faced a dismal future upon their return. The war's aftermath of economic and social upheaval also created a climate for political change. Historians related that carpetbaggers had seized control of nearby Wilmington and their stranglehold resulted in corruption at all levels of government. In 1873, landowners organized at Long Creek Village (former Lillington) to discuss plans to separate from New Hanover County's control. During February 1875, the future constituents of Pender County voted to form their own county and succeeded by popular vote. The name Pender was selected to honor native son General William D. Pender. The City of South Washington (now Watha) was designated as the first government center but was replaced by the present county seat of Burgaw in 1879 (Bloodworth 1947:1,3).

The lack of navigable channels also hindered postwar recovery. In 1875/1876, a Federal civil engineer reported about impediments to navigation in southeastern North Carolina that included Rich Inlet. S. T. Albert noted that the depth of Rich Inlet was only 2.5 feet (U.S. War Department 1876:384). He also remarked that:

> Between Bogue Sound and Wilmington are five shallow sounds, with an occasional inlet, where coasters may find a haven. These sounds … are for the most part occupied by an intricate network of channels through which a canoe cannot pass. The storms sweep into the sounds a large amount of sand which the feeble backwater is unable to remove, and large deltas have been formed by the ocean inside the inlets (U.S. War Department 1876:388).

Rich Inlet's shallow, meandering channel possibly contributed to a mid-April 1877 shipwreck. According to *The Deseret News*, a "schooner, loaded with lumber, is ashore near Rich Inlet. The vessel is broken in two, and with her cargo is a total loss. It is feared that the crew are all lost" (*Deseret News* 1877). A contemporary Connecticut paper published a similar story (*Hartford Daily Courant* 1877). Within two years, a coastwise vessel bound for Charleston stranded in Rich Inlet, according to *The New York Times.* Following its departure from New York, the steam yacht *Elizabeth* "took fire" in the inlet during March 1879 and "was totally destroyed". The newspaper related that the yacht's crew was safely ashore (*The New York Times* 1879). In 1898, the U.S. Life-Saving Service compiled its annual report and advised Congress that over the course of a ten-year-period (1888-1897) there was one confirmed vessel stranding at Rich Inlet (U.S. Life-Saving Service 1898:453).

Navigational improvements made during the twentieth century prompted some changes along Pender and New Hanover counties. During the 1920s, construction began on the Intracoastal Waterway (ICW), a protected waterway traversing the entire eastern seaboard of the United States. It was hoped that the waterway would facilitate coastal trade and open areas of the coast that had little access to transportation outlets. Prior to 1930, Beaufort remained the southern terminus of the ICW. To the south of that North Carolina port, the waterway resumed at Winyah Bay, South Carolina. Federal legislation enacted during the late 1920s approved construction of a 93-mile long waterway between the port cities of Beaufort and Wilmington. The projected waterway was expected to increase shipments of "large quantities of lumber, seafood, fertilizer, petroleum products, and general merchandise through the intervening sounds" (Angley 1984:8).

Those changes, however, had no impact on vessel traffic navigating through Rich Inlet. In 1922, the U.S. Coast and Geodetic Survey reported on the status of all North Carolina inlets remarking that: "Rich and Queens Inlets are 5 miles and 8½ miles, respectively, westward of New Topsail Inlet, and have channel depths over their bars of 2 to 4 feet at low tide. They are used to some extent as anchorages by small local craft but are not recommended to strangers" (U.S. Department of Commerce 1922:58-59).

The lack of vessel traffic in Rich Inlet did not deter local fishing craft, and apparently encouraged bootleg whisky enterprises on the northern end of Figure Eight Island. According to some accounts "there were quite a few illegal stills" producing illicit liquors during Prohibition (1919-1933). In particular, a still operated by "Rod Rogers" located at Big Oak Landing produced some five gallons of whiskey per

week. Situated at the base of a high bank along the creek, and backed by heavy foliage and large oaks, Roger's distillery was only accessible by high tide (Nadeau 1998:18-19; Zepke 2004:187).

During World War II, at least 12 American tankers and freighters were sunk in Onslow Bay after being torpedoed by German U-boats. The majority of those commercial vessels were lost during March and April 1942. Conversely, the 218-foot *U-352* was destroyed in the bay after being depth-charged by the USCG cutter *Icarus* (Gentile 1992:193-209; Survivor Topsail 2005).

In response to U-boat activity north of Figure Eight Island, coast guard auxiliary vessels were stationed at Rich and Mason inlets to watch for enemy submarines. A Porter's Neck resident who served in the inlet patrol later reported that two U.S. Army airplanes crashed at Figure Eight Island. J. Knight Davis recalled that one crashed into the ocean, and a possible Thunderbolt "cracked up on the dunes". In respect to the latter incident, the pilot survived and walked away. Davis maintained that the plane wreckage was visible for several years. The former coast guard observer also suggested that a "wrecked dredge" washed up on the island's south end (Nadeau 1998:20).

A Rich Inlet fisherman named Eugene Casteen provided information that P-47 and P-39 pilots used the beaches of Figure Eight as a strafing range in World War II. Flying out of their training base at Bluethenthal Field (ILM Airport), the five to six planes would fire at beach targets laid out by Casteen and others. Primitive barracks were constructed on the island to accommodate U.S. Army soldiers and USCG personnel, who served in mounted beach patrol units. A small pier was also constructed on the shoreline of the sound. After the global conflict ended, the federal government apparently abandoned the barracks. In the postwar period, fishermen and squatters occupied the shacks (Nadeau 1998:20-21; Zepke 2004:187-188).

Modern Development on Figure Eight Island

In 1955, two New Hanover County businessmen sought to purchase the 1,300-acre barrier island from descendents of the Foy and Hutaff families. After protracted negotiations, brothers Dan and Bruce Cameron purchased the island for approximately $100,000. Due to the extensive damage caused by Hurricane Hazel in 1954, the oceanfront property was probably seen as a liability to the previous owners (Nadeau 1998:15-16).

In April 1967, the U.S. Department of Defense released details regarding "Exercise Kitty Hawk", in which 70,000 air and ground troops would train during late summer along the North Carolina coast. Rich Inlet was designated as the southernmost staging area for "the biggest U.S. war games since the Vietnam buildup". According to the U.S. Strike Command, one phase of the military exercise

would include an amphibious Marine landing to coordinate with U.S. Army, U.S. Air Force, and U.S. Navy training maneuvers. The joint operation was scheduled to commence in late August 1967 (*The Dispatch* 1967).

During October 1977, New Hanover County filed a Superior Court petition to resolve a longstanding dispute between the county and Pender County. The legal action involved a 147-acre tract at the north end of Figure Eight Island, "over which both counties claim[ed] jurisdiction". Specifically, the disputed tract was "bounded on the west by Nixon Channel, on the north by Rich Inlet, and on the east by the Atlantic Ocean" (*Morning Star* 1977; Meyer 1978:7-C). Jurisdiction of Figure Eight Island was eventually awarded to New Hanover County, and the official county boundaries are located within Rich Inlet (Fennell 1982:2B).

By early 1982, Figure Eight Island was still largely undeveloped and its natural character was preserved to a great degree. Access to the island was prohibited by "invitation only" and was facilitated by a private bridge (Schoenbaum 1992:234). Fishing enthusiasts continued to enjoy superb catches near the island, and benefited from the state's artificial reef program. Beginning in 1973, the N.C Division of Marine Fisheries (NCDMF) also deposited discarded tires on fishing reefs including sites off Rich's Inlet, and nearby Topsail Beach to enhance commercial and recreational fishing (*Morning Star* 1975).

Seventy mph winds created by Hurricane Diana in September 1984 prompted a brief, voluntary evacuation of Figure Eight Island. A modern houseboat sank at the yacht club marina during the storm, and some residents later reported seeing "the shell of a wooden ship washed up on the beach" [near Dan Cameron home]. Witnesses observed "creosoted heart of pine wood" and "solid copper, hand cast nail spikes." Islanders noted that the wreck disappeared into the surf within days of the initial sighting (Nadeau 1991:89; 1998:90-92).

On 4 December 1984, N.C. underwater archaeologists Richard Lawrence and Leslie Bright visited Figure Eight Island to examine a wreck reported by Mr. Bob Maready. Mr. Lawrence and Mr. Bright conducted a visual inspection "from the point where the mainland access road intersects the beach, south to Rich Inlet" but were unable to relocate any vessel remains. In his previous telephone report, Mr. Maready described "cypress or oak" wooden remains with brass spikes and pins, and suggested that the overall dimensions of the wreck measured some 36 feet by 10 feet (Lawrence 1985:1).

During the 4 December visit, Mr. Lawrence and Mr. Bright also conducted a brief survey of the remains (Site 0001-FEB) of another wooden vessel that was situated "across the street and just south of the house at 524 Beach Drive in a wooded thicket" (Lawrence 1985:1). According to Nadeau (1998:54), the remains were near the north end of the island on a lot at 521 Beach Road North and were discovered by Robert Pollock in the early 1980s. Mr. Lawrence reported that Site 0001-FEB was "at the base of a dune system and was apparently deposited at a time when the inlet was situated south of its present location or during a time of extreme overwash". (Lawrence 1985:1-2). Historical records indicate that at least two inlets now closed

once existed on the northern end of Figure Eight Island. By 1991, "the fragmented spine of the ship" was still visible with its attached "rusted spikes and bolts" (Nadeau 1998:54-56).

In March 1985, the NCDMF cautioned mariners approaching Rich Inlet to avoid the sunken hulk of the *Wild Dayrell* as strong currents had swept away markers placed at the site in 1983. A local marina operator reported that at least six boats struck the wreck during 1984, and sustained damage. At this time, numerous vessels were navigating through Rich Inlet on "a typical summer day" (Headrick 1985).

A Wilmington newspaper published in 1986 informed readers about local fishing tournaments, and specifically advised king mackerel anglers to motor some six miles off Rich Inlet to Dallas Rock where large, sharp ledges attracted the popular finfish. In addition to the presence of king mackerel, sportsmen were able to catch abundant bluefish, dolphin, grouper, marlin, and wahoo aboard charter or private vessels off Rich Inlet (Cooney 1986).

During the 1990s, several hurricanes caused significant damage to coastal Pender and New Hanover counties, and resulted in the evacuation of thousands of residents and tourists. In November 1994, the area was subjected to the prolonged and erratic path of tropical storm Gordon, which whipped up 11-foot waves in some locations to cause serious beach erosion. Although Hurricane Bertha made landfall near Surf City in mid-July 1996 with sustained winds of 110 mph, the storm's greatest impact was the loss of revenue when tourists and residents were forced to leave barrier island accommodations. In early September 1996, Hurricane Fran came ashore within miles of Bertha's landfall site with maximum winds of 115 mph (122 mph per NOAA). Both 1996 tropical systems generated severe gales, floodwaters, and near-record storm surges (*The Charlotte Observer* 1994; Geroux 1996; Sack 1996; Torriero 1996).

A Figure Eight Island homeowner commented that every structure on the barrier island was damaged during Hurricane Fran, and that all docks and beach steps were lost. Sand was re-deposited to a depth of three feet on all roads (Nadeau 1998:9). In late August 1998, Hurricane Bonnie struck the same coastline with maximum winds of 115 knots and near-record rainfall totals. Hurricane Dennis skirted the coastline in late August 1999, which prompted officials to issue mandatory evacuation of low lying areas and some barrier island communities. In September 1999, epic flooding caused by Hurricane Floyd devastated Pender and New Hanover in addition to numerous other North Carolina counties (*Atlanta Journal-Constitution* 1998; Pressley 1999; *The Charlotte Observer* 1999).

Hurricane Isabel struck the North Carolina coast in mid-September 2003, and the effects of the storm may have dislodged a wreck that appeared in the vicinity of Rich Inlet several weeks later. On 14 November 2003, wreckage was found on the southern bank of the newly aligned Mason Inlet [between Figure Eight Island and Wrightsville Beach]. A local fisherman observed the vessel frame that was located "several hundred feet inland from the mouth of the inlet", and reported the site to

the N.C. UAB at Fort Fisher. Archaeologists were not able to view the wreckage but suggested that the remains might be related to those described in the 6 March 1985 *Memorandum*, which were identified as the Maready Site (Henry 2003:1).

Currently, Figure Eight Island is advertised as one of the most pristine privately owned beach properties in North Carolina. Development on the island is strictly managed to maintain its picturesque and tranquil character. Amenities include a luxurious yacht club that features a restaurant, marina, and tennis courts. Due to its exclusivity and seclusion, celebrities and politicians favor the island. Over 400 "aesthetically pleasing" homes are situated amid the island's maritime forests and high, rolling dunes (Barefoot 2005:170).

Previous Investigations

In 1984, the wreck of the *Wild Dayrell* (0001RII) was examined by the UAB staff and subsequently mapped in 1989 by students of the ECU Program in Maritime History and Underwater Archaeology. Although the dimensions of the hull were impossible to precisely establish because of deterioration of the structure, the overall length of the wreck corresponded closely with the 215-foot length of the *Wild Dayrell* recorded on that vessel's CBR. The 20-foot beam and 50-foot length of the engine room recorded at the wreck site also correspond precisely with those recorded on the CBR. The *Wild Dayrell*'s CBR and historical data associated with the vessel confirm that the ship was powered by two oscillating engines, or steam cylinders; the same number of oscillating cylinders were identified at the wreck site. With these data, it was determined that this wreck represents the probable remains of the *Wild Dayrell*.

On 31 May 2002, the UAB conducted an inspection dive on the *Wild Dayrell*, prompted by reports that the wreck had been exposed. A secondary goal of this inspection was to record accurate coordinates for the wreck site with the UAB's DGPS. Diving took place at high tide with the upper portions of the boilers four feet from the water surface. Along with obtaining coordinates, it was determined that the shipwreck appeared to be in the same condition as when it was examined by the UAB and ECU field school (Lawrence 2002).

On 3 September 2006, Tidewater Atlantic Research, Inc. (TAR) of Washington, North Carolina carried out a remote-sensing survey to determine the exact position of the wreck site of the Civil War blockade-runner *Wild Dayrell*. That remote-sensing survey was conducted for CPE-NC, working with the Figure Eight Island Beach Homeowners Association on the inlet and shoreline management project. As one of the project alternatives involved the repositioning of the Rich Inlet channel, the investigation carried out by TAR personnel relocated the *Wild Dayrell* and accurately established the location of the wreck using differential global positioning. On the recommendation of Richard Lawrence, head of the North Carolina UAB, a 400-foot by 600-foot protective buffer zone was established around the wreck site.

Description of Findings

An analysis of the remote-sensing data identified a total of 116 individual magnetic anomalies and 6 sonar targets within the area surveyed (Figure 8, Appendix B and Figure 9). Five clusters, composed of 13 individual anomalies, contained signature characteristics suggestive of potentially significant cultural material. Cluster RI-1 is composed of two associated magnetic signatures and a sonar image suggestive of possible ballast (Figure 8, Appendix B and Appendix C). As these signatures are suggestive of potentially significant cultural material, avoidance of these targets is recommended by the creation of a 150-foot radius buffer. Cluster RI-2 is composed of three magnetic anomalies (Figure 8 and Appendix B). Their proximity to each other along with their signature characteristics are suggestive of potentially significant cultural material. Avoidance of cluster RI-2 is recommended by the creation of a 100-foot radius buffer. Cluster RI-3 is composed of five magnetic anomalies (Figure 8 and Appendix B). Their proximity to each other along with their signature characteristics are suggestive of potentially significant cultural material. Avoidance of cluster RI-3 is recommended by the creation of a 150-foot radius buffer. Anomaly RI-4 is composed of a single magnetic anomaly (Figure 8 and Appendix B). Sonar identified possible structural debris at the site (Appendix C). Due to this anomaly's proximity to the *Wild Dayrell*, it could be disarticulated structure associated with that wreck. Avoidance of RI-4 is recommended by the creation of a 100-foot radius buffer. Cluster RI-5 is composed of two magnetic anomalies and a sonar image suggestive of possible structural debris (Figure 8, Appendix B and Appendix C). As these signatures are suggestive of potentially significant cultural material avoidance is recommended by the creation of a 100-foot radius buffer. Should avoidance prove impossible, additional investigation designed to fully assess each anomaly's historical and archaeological significance in terms of NRHP eligibility is recommended.

The remaining 103 magnetic targets in the survey area contained signature characteristics suggestive of modern material such as traps, anchors, pipe, rebar, small cable, moorings, and moored vessels (Figure 8 and Appendix B). Three targets, 81, 94, and 95, had associated sonar images illustrating a crab trap, scattered modern debris, and a tire, respectively (Appendix C). As the sensor was within several feet of the bottom, even small ferrous objects will generate a significant magnetic target. The cesium vapor magnetometer will also identify targets well in advance of their position and continue to record the associated magnetic disturbance well after crossing material generating the signature. This assessment is verified by modern material recorded by the sonar (Figure 9 and Appendix C). As their signature characteristics are suggestive of modern material, those 103 individual magnetic anomalies are not recommended for avoidance or additional investigation in conjunction with the proposed project.

Within the proposed survey area two locations proved to be inaccessible. One area was located in the surf zone off the north end of Figure Eight. The second was on a shoal west of the location of the *Wild Dayrell*. Breaking water in both areas proved to be too rough and shallow for safe vessel operations and too rough and deep for terrestrial survey means.



Figure 8. Magnetic contour map.



Figure 9. Sonar coverage map.

Conclusions and Recommendations

Development in the immediate vicinity of Rich Inlet is relatively modern and closely associated with Figure Eight Island. Because channels associated with Rich Inlet were limited in terms of both depth and access to habitable areas on the adjacent coast, navigation in the inlet has historically been limited. With the exception of very small craft, larger vessel traffic has been almost entirely associated with the consequences of mechanical disaster, war and weather. Documented wrecks in Rich Inlet or in the immediate vicinity have all been a result of one or more of those factors. While there are at least 5 documented wrecks in the vicinity of the proposed borrow area only one, *Wild Dayrell*, has been identified to date. The anomaly concentrations identified for avoidance or additional investigation could be associated with other documented wrecks.

The remote-sensing survey identified a total of 116 individual magnetic targets and 6 sonar targets (Appendix B and C). Five anomalies, composed of 13 individual magnetic targets and 3 associated sonar targets, contain signature characteristics suggestive of potentially significant cultural material. These five anomalies are recommended for avoidance. Should avoidance prove impossible, additional investigation designed to fully assess each anomaly's historical and archaeological significance in terms of NRHP eligibility is recommended. The remaining 103 and three associated sonar targets are indicative of modern debris such as traps, anchors, pipe, rebar, and small cable. No avoidance or additional investigation of these 103 individual magnetic targets is recommended in conjunction with the proposed project.

As there are no data for the two inaccessible areas, dredging operations in both locations should be carefully monitored for contact with submerged cultural resources. In the event that historic vessel material is identified, dredging should be shifted away from the material until an assessment of its NRHP eligibility can be made by archaeologists under contract to CPE-NC and personnel from the UAB at Fort Fisher.

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Appendix A

Known wrecks in the vicinity of Rich Inlet, North Carolina

Vessel	Type	Use	Date of Loss	Location	Disposition
Abdel Kader	schooner	coast trade-naval stores	September 1857	25/30 miles N of New Inlet	
Wild Dayrell	paddle steamer	blockade runner	February 1864	South of Figure Eight Island	
Unknown	schooner	lumber	April 1877	Near Rich Inlet	total loss
Elizabeth	steam yacht		March 1879	Rich Inlet	caught fire/total loss
Unknown	aircraft	U.S. Army	WWII	Ocean off Figure Eight Island	crashed & sunk
Unknown	Thunderbolt ? aircraft	U.S. Army	WWII	Dunes on Figure Eight Island	wreckage visible for several years
Unknown	dredge			South end of Figure Eight Island	
Unknown	wooden			South of Rich Inlet-521 Beach Rd N	remains of keel
Unknown	wooden			Near Don Cameron home	washed ashore during 1984 hurricane
Unknown	houseboat	pleasure	September 1984	Figure Eight Island marina	sank during hurricane
Unknown	Wooden			southern bank of Mason Inlet	appeared after hurricane

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Appendix B

Magnetic Target List
(All coordinates North Carolina State Plane, NAD 83, U.S. Survey Foot)

Anomaly	Map Designation	Characteristics	X	Y	Sonar	Recommendations
RI-1	101	3-1-mc12g167f	2386290.7	200057.5	RIS-3	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Sonar image suggestive of possible ballast. Avoidance by the creation of a 150-foot radius buffer is recommended.
	104	4-1-mc39g123f	2386282.2	199935.2	RIS-3	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Sonar image suggestive of possible ballast. Avoidance by the creation of a 150-foot radius buffer is recommended.
RI-2	2	27-1-nm51g149f	2387266.3	200536.7	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 100-foot radius buffer is recommended.
	4	26-1-mc67g114f	2387260.5	200510.0	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 100-foot radius buffer is recommended.
	114	28-3-nm98g147f	2387302.6	200575.0	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 100-foot radius buffer is recommended.
RI-3	93	1-1-pm24g67f	2388545.7	200876.5	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 150-foot radius buffer is recommended.

RI-3, cont'd	99	2-2-nm5g33f	2388617.3	200807.1	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 150-foot radius buffer is recommended.
	100	2-3-nm8g68f	2388512.3	200817.0	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 150-foot radius buffer is recommended.
	106	9-1-mc5g134f	2388502.2	200805.3	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 150-foot radius buffer is recommended.
	107	9-2-nm5g40f	2388633.0	200821.1	No	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Avoidance by the creation of a 150-foot radius buffer is recommended.
RI-4	115	14-1-pm4g24f	2389302.0	200513.9	RIS-5	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Sonar image suggestive of possible disarticulated structure from the *Wild Dayrell*. Avoidance by the creation of a 100-foot radius buffer is recommended.
RI-5	39	11-1-dp4g89f	2390239.3	199000.4	RIS-6	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Sonar image suggestive of possible disarticulated structure. Avoidance by the creation of a 100-foot radius buffer is recommended.
	40	12-1-dp10g75f	2390248.4	199086.1	RIS-6	Magnetic signature characteristics, intensity, and duration suggest that material generating the anomaly could be associated with the remains of a vessel or potentially significant cultural resource. Sonar image suggestive of possible disarticulated structure. Avoidance by the creation of a 100-foot radius buffer is recommended.

Individual Magnetic Targets

Map Designation	Name	X	Y	Sonar	Recommendations
0	28-1-nm24g62f	2387145.7	200853.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
1	28-2-nm16g58f	2387179.8	200803.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
3	27-2-dp9g34f	2387787.4	199670.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
5	25-1-mc28g52f	2387332.4	200208.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
6	25-2-mc124g127f	2387488.9	199931.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
7	24-1-mc26g72f	2387523.1	199811.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
8	24-2-pm18g55f	2387307.7	200158.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
9	23-1-dp51g26f	2387256.1	200155.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
10	23-2-dp425g22f	2387286.4	200076.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
11	22-1-mc101g61f	2387513.8	199626.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
12	22-2-dp38g27f	2387421.0	199775.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
13	21-1-mc111g30f	2387413.2	199684.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
14	21-2-mc122g44f	2387384.3	199737.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
15	21-3-mc52g62f	2387179.4	200076.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
16	20-1-mc85g49f	2387467.0	199494.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
17	19-1-nm67g67f	2387359.4	199589.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
18	18-1-mc31g203f	2387360.5	199504.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

19	17-1-pm69g23f	2387408.1	199310.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
20	17-2-dp41g41f	2387384.8	199357.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
21	17-3-nm23g19f	2387317.8	199451.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
22	16-1-pm23g36f	2387331.1	199368.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
23	16-2-dp23g32f	2387197.7	199584.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
24	16-3-mc101g288f	2386991.5	199924.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
25	15-1-mc72g50f	2387297.1	199245.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
26	15-2-mc24g23f	2387277.7	199305.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
27	15-3-mc19g41f	2387233.0	199438.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
28	14-1-mc84g28f	2387301.9	199179.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
29	14-2-mc60g98f	2387231.6	199308.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
30	13-3-mc56g53f	2387254.2	199153.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
31	13-2-mc35g99f	2387182.3	199283.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
32	12-1-mc78g30f	2387222.0	199131.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
33	12-2-dp177g36f	2387160.0	199237.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
34	11-1-mc178g40f	2387190.2	199084.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
35	11-2-pm75g17f	2387120.6	199232.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
36	28-1-mc4g67f	2388499.6	198520.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
37	16-1-dp3g45f	2387916.5	198388.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

38	3-1-dp3g41f	2389517.0	199272.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
41	12-2-pm5g26f	2389812.6	199656.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
42	12-3-dp61g109f	2389703.7	199790.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
43	16-1-pm8g66f	2389689.9	199795.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
44	29-1-pm4g138f	2389085.5	201933.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
45	28-1-nm8g83f	2389040.1	201966.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
46	27-1-pm3g74f	2389129.1	202072.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
47	24-1-pm5g29f	2388466.2	201872.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
48	23-1-pm4g41f	2389013.9	202237.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
49	22-1-nm8g31f	2388534.0	202035.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
50	21-1-nm4g59f	2388927.5	202329.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
51	20-1-nm14g50f	2388385.6	202053.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
52	20-2-mc8g64f	2388514.1	202129.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
53	16-1-dp4g111f	2388717.0	202466.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
54	15-1-dp6g107f	2388785.2	202534.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
55	2-1-pm22g45f	2384643.0	200144.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
56	2-3-pm3g58f	2384954.3	200316.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
57	2-4-pm9g26f	2385076.3	200387.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
58	3-1-mc14g55+f	2384830.5	200205.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

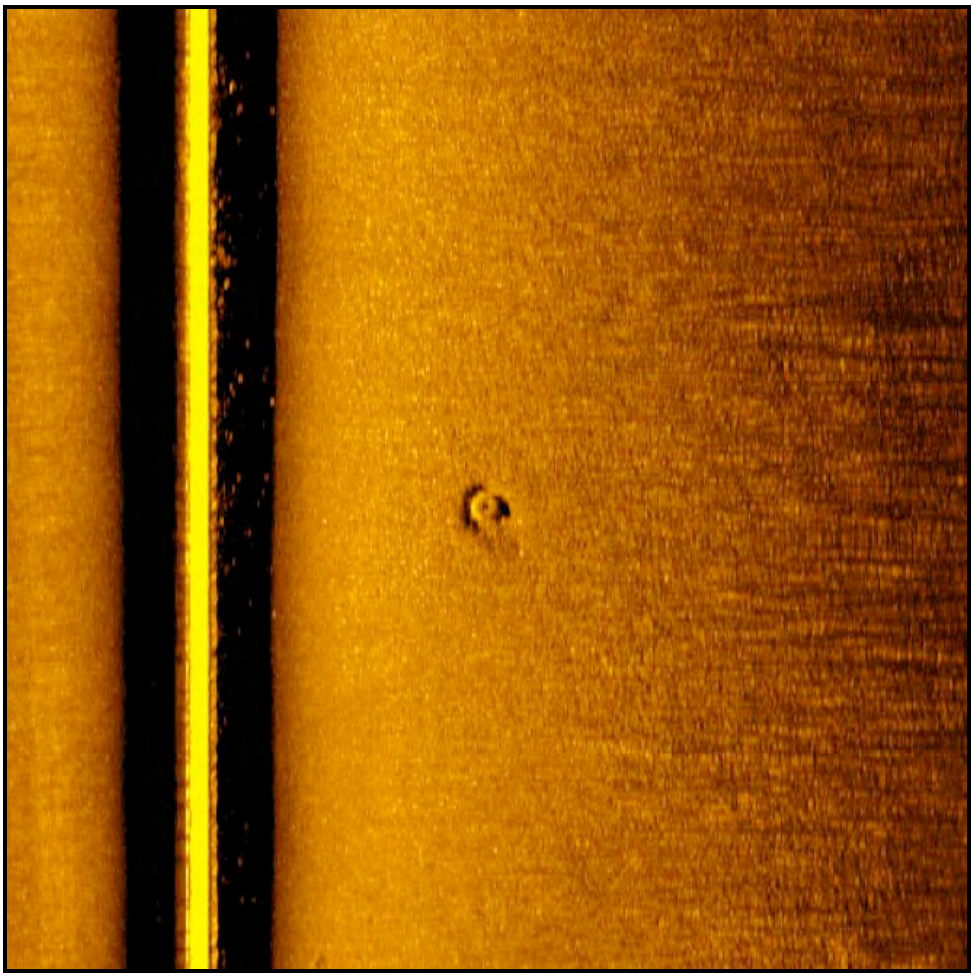
59	3-2-dp47g97f	2384982.9	200286.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
60	3-3-pm3g21f	2385039.9	200301.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
61	3-4-pm3g41f	2385106.8	200319.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
62	3-5-pm7g34f	2385741.0	200644.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
63	3-6-dp13g79f	2385839.1	200664.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
64	4-1-pm5g25f	2384820.4	200096.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
65	4-2-dp49g79f	2384892.6	200167.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
66	4-3-pm4g31f	2385086.1	200277.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
67	4-4-pm4g78f	2385315.4	200377.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
68	4-5-dp92g134f	2385741.7	200592.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
69	4-6-nm4g45f	2385832.7	200638.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
70	5-1-dp11g72f	2384932.4	200134.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
71	5-2-pm6g47f	2386007.3	200653.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
72	5-3-dp20g107f	2386098.8	200684.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
73	6-1-pm14g68f	2384799.1	200021.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
74	6-2-mc12g100f	2384954.1	200107.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
75	6-3-mc3g138f	2385366.5	200306.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
76	6-4-dp8g81f	2385540.2	200388.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
77	6-5-nm3g74f	2385637.5	200435.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

78	6-6-mc2g113f	2386080.6	200642.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
79	7-1-pm6g78f	2384808.6	200005.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
80	7-2-dp5g58f	2385044.6	200087.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
81	7-3-pm4g60f	2385187.9	200162.7	RIS-4	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. Sonar confirms the presence of a crab trap. No additional investigation is recommended.
82	7-4-dp9g119f	2385555.9	200336.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
83	7-5-mc6g173f	2386082.7	200575.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
84	8-2-pm5g45f	2385873.0	200432.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
85	8-3-dp48g88f	2386075.9	200509.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
86	8-4-pm4g52f	2386223.7	200583.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
87	8-5-dp8g67f	2386326.2	200646.5	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
88	9-1-dp23g70f	2385107.5	200007.0	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
89	9-2-dp125g148f	2385254.7	200074.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
90	9-3-dp5g43f	2385683.3	200273.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
91	9-4-dp4g60f	2386084.8	200456.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
92	9-5-pm3g30f	2386225.3	200534.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
94	2-1-nm5g61f	2386029.6	200023.4	RIS-2	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. Sonar confirms the presence of modern debris. No additional investigation is recommended.
95	2-2-pm5g65f	2386200.1	200085.5	RIS-1	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. Sonar confirms the presence of a tire. No additional investigation is recommended.
96	2-3-dp70g159f	2386297.9	200116.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

97	2-4-pm8g68f	2386468.3	200215.3	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
98	2-1-pm13g34f	2389320.5	199946.7	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
102	3-2-dp251g127f	2386440.6	200119.6	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
103	3-3-pm9g166f	2386609.1	200190.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
105	4-2-pm5g42f	2386458.3	200036.8	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
108	11-1-dp13g68f	2387544.5	200964.4	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
109	13-1-nm23g110f	2387761.4	201106.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
110	16-1-pm4g58f	2386943.8	201075.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
111	16-1-nm25g43f	2387529.4	201164.2	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
112	17-1-pm4g73f	2386852.5	201058.1	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.
113	18-1-dp3g87f	2386354.5	200835.9	No	Signature suggestive of small diameter pipe, trap, anchor or other small modern debris. No additional investigation is recommended.

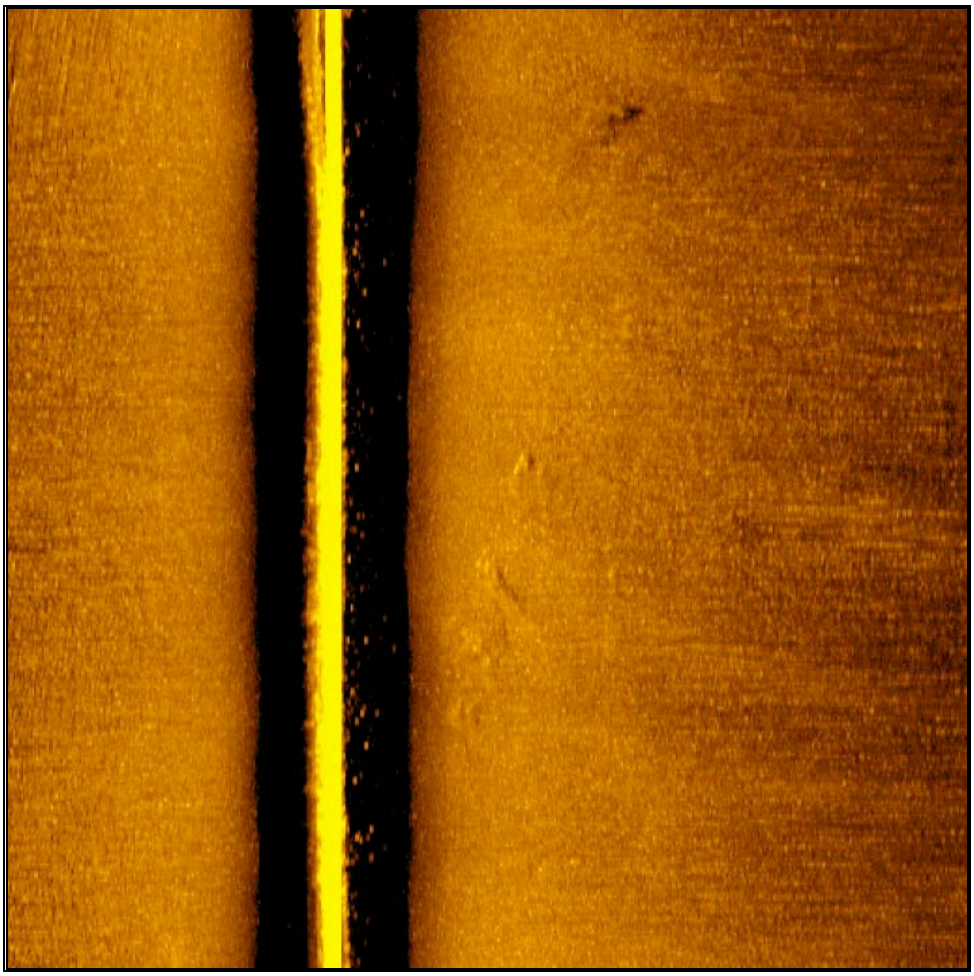
Appendix C
Sonar Targets

RIS-1



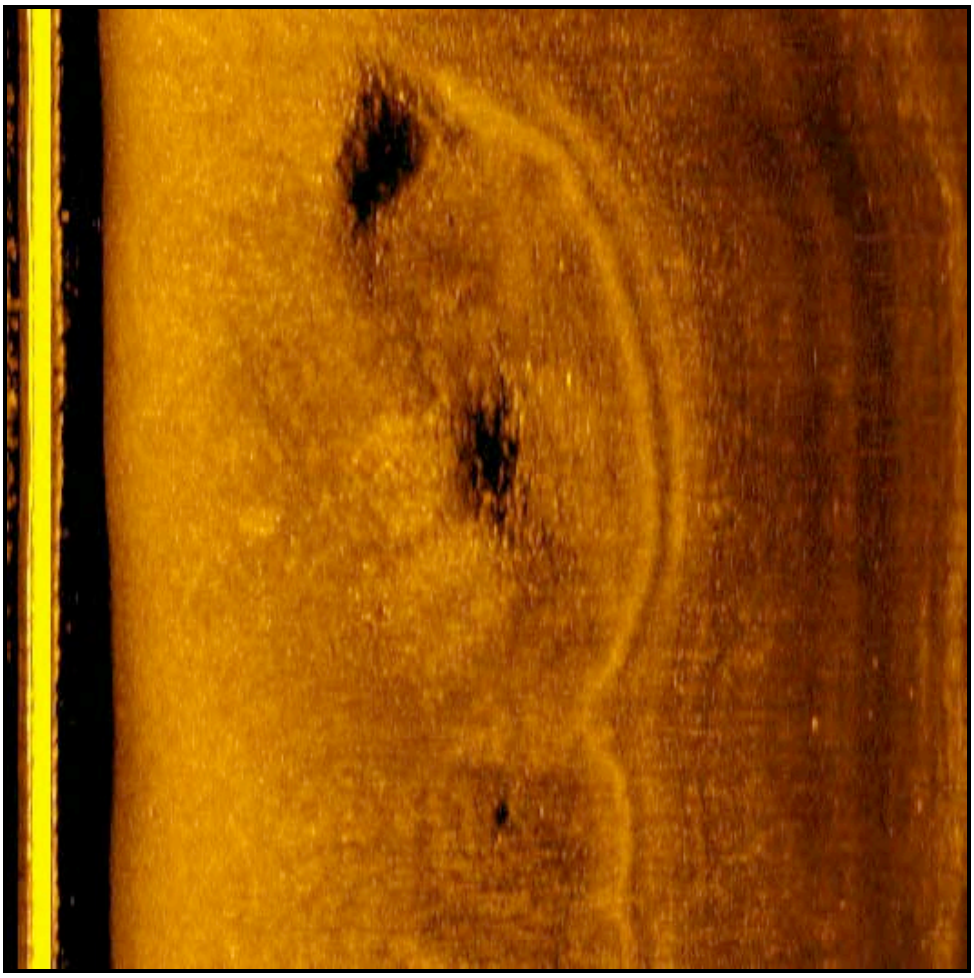
Contact Info: RIS-1	User Entered Info
• Sonar Time at Target: 03/08/2010 21:08:19 • Click Position (Projected Coordinates) (X) 2386175.50 (Y) 200099.91 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L12-4_100308160900.xtf • Ping Number: 238760 • Range to Target: 14.84 US Feet • Fish Height: 3.71 US Feet • Line Name: RI10_L12-4_100308160900	Target Height: 0.5 US Feet Target Length: 5.0 US Feet Target Shadow: 2.0 US Feet Target Width: 5.0 US Feet Mag Anomaly: 95 Avoidance: No Description: Tire

RIS-2



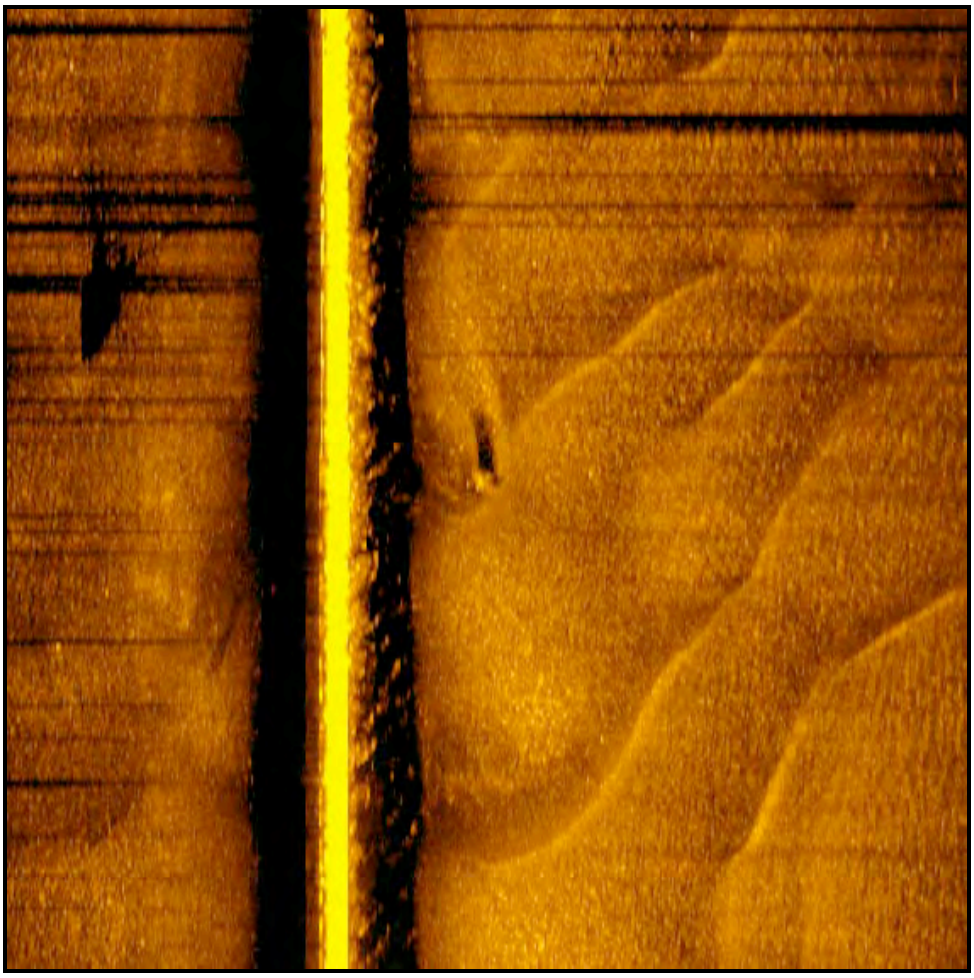
Contact Info: RIS-2	User Entered Info
• Sonar Time at Target: 03/08/2010 21:08:48 • Click Position (Projected Coordinates) (X) 2385961.25 (Y) 200041.34 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L12-4_100308160900.xtf • Ping Number: 239185 • Range to Target: 7.91 US Feet • Fish Height: 3.81 US Feet • Line Name: RI10_L12-4_100308160900	Target Height: N/A Target Length: N/A Target Shadow: N/At Target Width: N/A Mag Anomaly: 94 Avoidance: No Description: Modern Debris

RIS-3



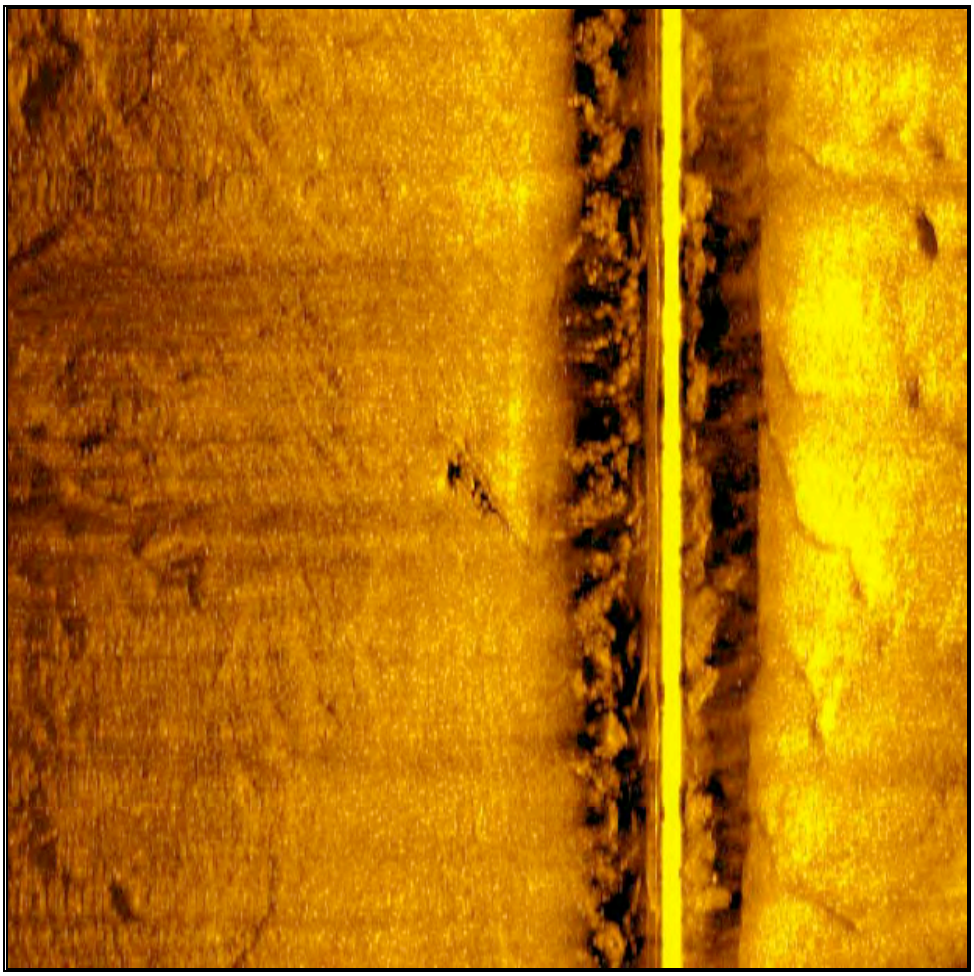
Contact Info: RIS-3	User Entered Info
• Sonar Time at Target: 03/08/2010 21:09:53 • Click Position (Projected Coordinates) (X) 2386309.75 (Y) 199992.81 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L12-4_100308160900.xtf • Ping Number: 240148 • Range to Target: 23.05 US Feet • Fish Height: 3.32 US Feet • Line Name: RI10_L12-4_100308160900	Target Height: 1.9 US Feet Target Length: 69.7 US Feet Target Shadow: 16.2 US Feet Target Width: 23.5 US Feet Mag Anomaly: 101, 104, RI-1 Avoidance: Yes Description: Depression with possible ballast

RIS-4



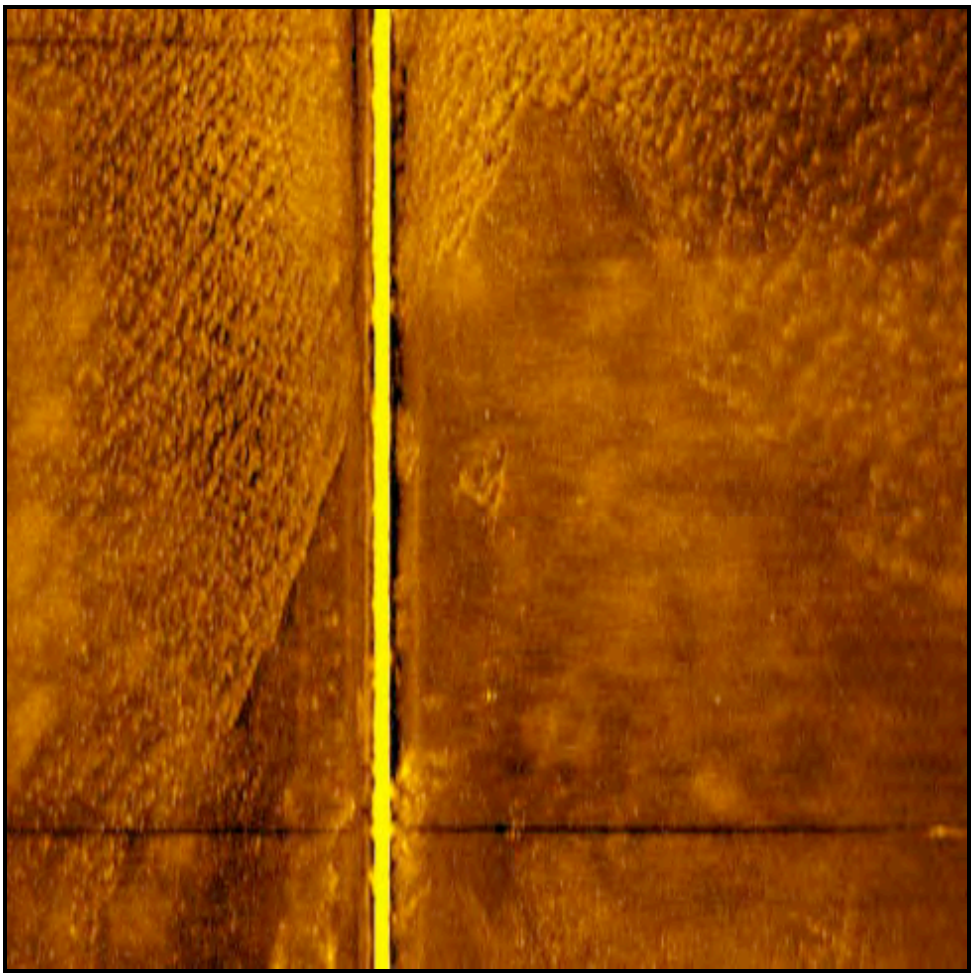
Contact Info: RIS-4	User Entered Info
• Sonar Time at Target: 03/08/2010 20:40:24 • Click Position (Projected Coordinates) (X) 2385155.75 (Y) 200171.19 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L7-4_100308154000.xtf • Ping Number: 213590 • Range to Target: 6.17 US Feet • Fish Height: 3.52 US Feet • Line Name: RI10_L7-4_100308154000	Target Height: 0.0 US Feet Target Length: 1.9 US Feet Target Shadow: 0.0 US Feet Target Width: 1.9 US Feet Mag Anomaly: 81 Avoidance: No Description: Trap

RIS-5



Contact Info: RIS-5	User Entered Info
• Sonar Time at Target: 03/08/2010 18:57:07 • Click Position (Projected Coordinates) (X) 2389298.50 (Y) 200546.31 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L01-2_100308135800.xtf • Ping Number: 104449 • Range to Target: 9.67 US Feet • Fish Height: 4.39 US Feet • Line Name: RI10_L01-2_100308135800	Target Height: 1.3 US Feet Target Length: 22.0 US Feet Target Shadow: 3.2 US Feet Target Width: 6.0 US Feet Mag Anomaly: 115, RI-4 Avoidance: Yes Description: Possible structure associated with the *Wild Dayrell*

RIS-6



Contact Info: RIS-6	User Entered Info
• Sonar Time at Target: 03/08/2010 18:44:35 • Click Position (Projected Coordinates) (X) 2390237.25 (Y) 199061.88 • Map Proj: NAD83 North Carolina State Planes, US Foot • Acoustic Source File: RI10_L01-2_100308134600.xtf • Ping Number: 93346 • Range to Target: 5.47 US Feet • Fish Height: 1.46 US Feet • Line Name: RI10_L01-2_100308134600	Target Height: 0.0 US Feet Target Length: 17.4 US Feet Target Shadow: 0.0 US Feet Target Width: 8.9 US Feet Mag Anomaly: 39, 40, RI-6 Avoidance: Yes Description: Possible structure

APPENDIX 6

2007 Hutaff Island Native Beach Composite Summary Tables

PROFILE LINE SUMMARY TABLE
HUTAFF ISLAND SAMPLES

PROFILE	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	% Carbonate
H1 COMPOSITE	0.20	2.33	0.64	0.89	5	6	6.9
H2 COMPOSITE	0.19	2.41	0.59	0.97	5	6	5.9
H3 COMPOSITE	0.24	2.03	1.16	1.14	5	6	17.0
BEACH COMPOSITE	**0.21**	**2.26**	**0.85**	**1.00**	**5**	**6**	**9.9**

PROFILE LINE DATA TABLE
HUTAFF ISLAND SAMPLES

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			
							GRAVEL						GRANULAR			SAND										FINE
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4	PAN
H1 COMPOSITE	0.20	2.33	0.64	0.89	5	6	0.00	0.00	0.00	0.00	0.01	0.03	0.06	0.19	0.42	0.89	1.47	2.24	3.51	6.31	17.25	56.32	93.70	98.68	99.04	99.11	99.98
H2 COMPOSITE	0.19	2.41	0.59	0.97	5	6	0.00	0.00	0.00	0.00	0.04	0.10	0.15	0.23	0.35	0.57	0.86	1.36	2.37	5.13	14.46	50.20	91.80	98.46	98.91	99.03	99.99
H3 COMPOSITE	0.24	2.03	1.16	1.14	5	6	0.00	0.00	0.09	0.18	0.55	0.86	1.21	2.18	3.67	5.96	8.29	10.93	14.29	18.82	28.29	55.63	92.19	98.41	98.77	98.86	99.99
BEACH COMPOSITE	**0.21**	**2.26**	**0.85**	**1.00**	**5**	**6**	**0.00**	**0.00**	**0.03**	**0.06**	**0.20**	**0.33**	**0.47**	**0.87**	**1.48**	**2.47**	**3.54**	**4.84**	**6.72**	**10.09**	**20.00**	**54.05**	**92.56**	**98.52**	**98.91**	**99.00**	**99.99**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
HUTAFF ISLAND (1 of 1)

SAMPLE I. D.	FINE % (<0.0625mm)	SAND % (0.0625mm-2.00mm)	GRANULAR % (2mm-4.76mm)	GRAVEL % (4.76mm-76mm)
H1 Dune	0.08	99.92	0.00	0.00
H1 Toe of Dune	0.11	99.89	0.00	0.00
H1 Mid-Berm	0.19	99.75	0.06	0.00
H1 (+3.0)	0.32	99.68	0.00	0.00
H1 MHW	0.16	99.84	0.00	0.00
H1 MTL	0.82	99.14	0.04	0.00
H1 MLW	0.58	94.60	4.48	0.34
H1 (-6.0)	1.31	98.43	0.26	0.00
H1 (-8.8)	1.54	98.38	0.08	0.00
H1 (-11.6)	1.41	98.56	0.03	0.00
H1 (-14.4)	1.71	98.23	0.06	0.00
H1 (-17.2)	1.59	98.41	0.00	0.00
H1 (-20.0)	1.73	98.12	0.15	0.00
H1 COMPOSITE	**0.89**	**98.69**	**0.40**	**0.03**
H2 Dune	0.34	99.66	0.00	0.00
H2 Toe of Dune	0.24	99.71	0.05	0.00
H2 Mid-Berm	0.33	99.60	0.07	0.00
H2 (+3.0)	0.56	99.44	0.00	0.00
H2 MHW	0.28	99.72	0.00	0.00
H2 MTL	0.98	99.02	0.00	0.00
H2 MLW	0.66	98.02	0.73	0.59
H2 (-6.0)	1.18	97.75	1.07	0.00
H2 (-8.8)	1.69	98.22	0.09	0.00
H2 (-11.6)	1.22	98.57	0.21	0.00
H2 (-14.4)	1.64	96.76	0.87	0.73
H2 (-17.2)	1.64	98.26	0.06	0.04
H2 (-20.0)	1.81	98.13	0.06	0.00
H2 COMPOSITE	**0.97**	**98.68**	**0.25**	**0.10**
H3 Dune	0.20	99.80	0.00	0.00
H3 Toe of Dune	0.64	99.36	0.00	0.00
H3 Mid-Berm	0.53	99.43	0.04	0.00
H3 (+2.0)	0.83	94.84	4.22	0.11
H3 MHW	0.84	91.53	7.08	0.55
H3 MTL	1.11	85.39	10.20	3.30
H3 MLW	1.10	82.35	9.86	6.69
H3 (-6.0)	1.19	95.61	3.07	0.13
H3 (-8.8)	1.76	98.21	0.03	0.00
H3 (-11.6)	1.59	97.37	0.81	0.23
H3 (-14.4)	1.56	97.75	0.57	0.12
H3 (-17.2)	1.78	97.82	0.40	0.00
H3 (-20.0)	1.71	98.02	0.27	0.00
H3 COMPOSITE	**1.14**	**95.19**	**2.81**	**0.86**
TOTAL BEACH COMPOSITE	**1.00**	**97.52**	**1.15**	**0.33**

PROFILE LINE COMPOSITES - HUTAFF ISLAND SAMPLES (1 of 1)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			
							GRAVEL						GRANULAR			SAND										FINE
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	3.75	4.00	PAN
H1 Dune	0.19	2.43	0.35	0.08	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	6.99	61.87	94.77	99.55	99.87	99.92	99.99
H1 Toe of Dune	0.19	2.40	0.35	0.11	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.06	0.37	8.96	63.55	96.34	99.64	99.85	99.89	100.00
H1 Mid-Berm	0.18	2.47	0.47	0.19	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.09	0.16	0.28	0.61	2.53	18.42	36.34	96.75	99.53	99.77	99.81	100.00
H1 (+3.0)	0.19	2.37	0.36	0.32	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.22	10.86	69.84	95.38	99.20	99.61	99.68	100.00
H1 MHW	0.20	2.30	0.32	0.16	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.27	14.09	77.29	98.74	99.66	99.82	99.84	100.00
H1 MTL	0.26	1.93	0.65	0.82	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.66	3.12	9.81	21.81	46.46	81.39	98.67	99.14	99.17	99.18	99.91
H1 MLW	0.36	1.47	1.23	0.58	6	7	0.00	0.00	0.00	0.00	0.13	0.34	0.75	2.32	4.82	10.20	16.14	21.63	26.95	37.24	53.34	81.98	98.32	99.27	99.40	99.42	100.00
H1 (-6.0)	0.19	2.41	0.56	1.31	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.47	0.85	1.40	2.57	4.88	12.67	47.83	94.06	98.50	98.66	98.69	99.99
H1 (-8.8)	0.15	2.73	0.41	1.54	3	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.15	0.20	0.29	0.43	0.84	2.54	19.33	80.23	96.17	98.10	98.46	99.98
H1 (-11.6)	0.20	2.30	0.55	1.41	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	0.47	1.12	2.64	7.13	20.89	58.93	95.33	98.50	98.57	98.59	99.99
H1 (-14.4)	0.19	2.42	0.47	1.71	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.10	0.20	0.45	1.02	3.11	14.27	51.93	92.84	98.17	98.25	98.29	99.95
H1 (-17.2)	0.17	2.55	0.43	1.59	4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.12	0.26	0.59	1.80	7.75	39.67	88.77	98.01	98.33	98.41	99.98
H1 (-20.0)	0.17	2.54	0.47	1.73	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.15	0.20	0.29	0.48	0.85	1.78	7.03	42.23	87.87	97.55	98.15	98.27	100.00
H1 COMPOSITE	**0.20**	**2.33**	**0.64**	**0.89**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.03**	**0.06**	**0.19**	**0.42**	**0.89**	**1.47**	**2.24**	**3.51**	**6.31**	**17.25**	**56.32**	**93.70**	**98.68**	**99.04**	**99.11**	**99.98**
H2 Dune	0.19	2.43	0.36	0.34	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.44	9.91	56.30	96.60	99.41	99.61	99.66	100.00
H2 Toe of Dune	0.17	2.54	0.35	0.24	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.06	0.09	0.36	2.74	43.69	93.97	99.24	99.68	99.76	100.00
H2 Mid-Berm	0.22	2.21	0.45	0.33	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.09	0.13	0.31	1.01	4.87	26.78	76.15	98.28	99.46	99.63	99.67	99.97
H2 (+3.0)	0.20	2.29	0.34	0.56	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	1.00	15.80	74.73	98.50	99.31	99.43	99.44	99.98
H2 MHW	0.18	2.44	0.30	0.28	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	5.34	58.38	98.56	99.65	99.72	99.72	99.97
H2 MTL	0.20	2.34	0.36	0.98	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.39	16.36	66.31	97.97	99.00	99.01	99.02	99.97
H2 MLW	0.31	1.67	0.80	0.66	6	7	0.00	0.00	0.00	0.00	0.33	0.59	0.92	1.03	1.32	2.01	3.07	5.73	13.36	34.65	63.06	89.06	99.00	99.31	99.33	99.34	99.99
H2 (-6.0)	0.20	2.30	0.81	1.18	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	1.07	1.92	3.18	4.75	6.64	10.46	19.54	48.67	91.87	98.48	98.76	98.82	99.98
H2 (-8.8)	0.16	2.60	0.53	1.69	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.47	0.84	1.30	2.00	3.10	5.96	30.42	85.15	97.40	98.21	98.31	99.99
H2 (-11.6)	0.18	2.47	0.59	1.22	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.21	0.63	1.16	1.96	3.04	4.57	8.56	42.35	91.17	98.15	98.63	98.78	99.99
H2 (-14.4)	0.17	2.58	0.77	1.64	4	6	0.00	0.00	0.00	0.00	0.18	0.73	0.81	1.17	1.60	1.96	2.31	2.70	3.06	4.00	6.79	25.32	83.28	97.26	98.10	98.36	100.00
H2 (-17.2)	0.16	2.66	0.44	1.64	4	6	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.06	0.10	0.16	0.27	0.46	0.74	1.52	4.17	24.99	84.37	97.17	98.07	98.36	99.99
H2 (-20.0)	0.15	2.77	0.44	1.81	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.13	0.22	0.40	0.70	1.32	2.97	16.19	74.73	96.15	97.59	98.19	99.98
H2 COMPOSITE	**0.19**	**2.41**	**0.59**	**0.97**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.10**	**0.15**	**0.23**	**0.35**	**0.57**	**0.86**	**1.36**	**2.37**	**5.13**	**14.46**	**50.20**	**91.80**	**98.46**	**98.91**	**99.03**	**99.99**
H3 Dune	0.20	2.30	0.38	0.20	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.14	1.79	17.45	72.17	98.04	99.63	99.78	99.80	100.00
H3 Toe of Dune	0.21	2.28	0.44	0.64	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.41	3.93	22.94	70.38	96.20	98.96	99.29	99.36	99.89
H3 Mid-Berm	0.21	2.22	0.45	0.53	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.05	0.11	0.37	0.97	5.15	26.23	72.45	98.65	99.43	99.46	99.47	100.00
H3 (+2.0)	0.47	1.08	1.16	0.83	5	6	0.00	0.00	0.00	0.00	0.00	0.11	0.78	1.79	4.33	10.59	19.18	30.41	44.15	58.96	72.15	89.99	98.85	99.15	99.16	99.17	100.00
H3 MHW	0.57	0.82	1.24	0.84	5	6	0.00	0.00	0.00	0.00	0.09	0.55	1.01	3.44	7.63	17.18	27.27	38.17	52.41	67.31	78.12	91.08	98.85	99.14	99.15	99.16	100.00
H3 MTL	0.39	1.36	1.60	1.11	5	6	0.00	0.00	0.00	0.57	1.66	3.30	4.48	8.02	13.50	18.68	22.26	25.51	29.63	34.41	43.73	73.61	97.78	98.87	98.89	98.89	100.00
H3 MLW	0.36	1.46	1.84	1.10	5	6	0.00	0.00	1.14	1.83	4.91	6.69	8.11	11.92	16.55	20.45	22.44	23.99	25.38	27.51	35.81	59.37	95.10	98.86	98.89	98.90	100.00
H3 (-6.0)	0.27	1.90	1.17	1.19	5	6	0.00	0.00	0.00	0.00	0.13	0.13	0.69	1.60	3.20	6.28	10.09	14.28	19.13	24.24	32.59	60.20	94.47	98.66	98.80	98.81	100.00
H3 (-8.8)	0.16	2.68	0.40	1.76	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.22	0.35	0.54	1.11	3.84	21.67	84.05	97.47	98.07	98.24	99.99
H3 (-11.6)	0.18	2.49	0.82	1.59	4	6	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.47	1.04	1.89	2.86	4.18	5.66	8.08	12.35	29.65	83.60	97.53	98.23	98.41	99.98
H3 (-14.4)	0.17	2.55	0.67	1.56	5	6	0.00	0.00	0.00	0.00	0.12	0.12	0.28	0.57	0.69	1.11	1.68	2.30	3.11	4.73	7.94	29.29	86.22	97.73	98.28	98.44	100.00
H3 (-17.2)	0.16	2.62	0.55	1.78	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.30	0.40	0.57	0.79	1.12	1.73	2.89	6.07	26.45	84.25	96.91	97.93	98.22	100.00
H3 (-20.0)	0.16	2.60	0.59	1.71	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.27	0.55	0.84	1.39	2.46	4.52	8.53	26.83	82.45	97.05	98.07	98.29	99.99
H3 COMPOSITE	**0.24**	**2.03**	**1.16**	**1.14**	**5**	**6**	**0.00**	**0.00**	**0.09**	**0.18**	**0.55**	**0.86**	**1.21**	**2.18**	**3.67**	**5.96**	**8.29**	**10.93**	**14.29**	**18.82**	**28.29**	**55.63**	**92.19**	**98.41**	**98.77**	**98.86**	**99.99**

ELEVATION COMPOSITES - HUTAFF ISLAND SAMPLES (1 of 2)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			
							GRAVEL						GRANULAR			SAND										FINE
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4.00	PAN
H1 Dune	0.19	2.43	0.35	0.08	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	6.99	61.87	94.77	99.55	99.87	99.92	99.99
H2 Dune	0.19	2.43	0.36	0.34	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.44	9.91	56.30	96.60	99.41	99.61	99.66	100.00
H3 Dune	0.20	2.30	0.38	0.20	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.14	1.79	17.45	72.17	98.04	99.63	99.78	99.80	100.00
DUNE COMPOSITE	**0.19**	**2.39**	**0.37**	**0.21**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.77**	**11.45**	**63.45**	**96.47**	**99.53**	**99.75**	**99.79**	**100.00**
H1 Toe of Dune	0.19	2.40	0.35	0.11	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.06	0.37	8.96	63.55	96.34	99.64	99.85	99.89	100.00
H2 Toe of Dune	0.17	2.54	0.35	0.24	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.06	0.09	0.36	2.74	43.69	93.97	99.24	99.68	99.76	100.00
H3 Toe of Dune	0.21	2.28	0.44	0.64	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.41	3.93	22.94	70.38	96.20	98.96	99.29	99.36	99.89
TOE OF DUNE COMPOSITE	**0.19**	**2.41**	**0.40**	**0.33**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.04**	**0.19**	**1.55**	**11.55**	**59.21**	**95.50**	**99.28**	**99.61**	**99.67**	**99.96**
H1 Mid-Berm	0.18	2.47	0.47	0.19	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.09	0.16	0.28	0.61	2.53	18.42	36.34	96.75	99.53	99.77	99.81	100.00
H2 Mid-Berm	0.22	2.21	0.45	0.33	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.09	0.13	0.31	1.01	4.87	26.78	76.15	98.28	99.46	99.63	99.67	99.97
H3 Mid-Berm	0.21	2.22	0.45	0.53	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.05	0.11	0.37	0.97	5.15	26.23	72.45	98.65	99.43	99.46	99.47	100.00
MID-BERM COMPOSITE	**0.20**	**2.30**	**0.47**	**0.35**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.06**	**0.08**	**0.13**	**0.32**	**0.86**	**4.18**	**23.81**	**61.65**	**97.89**	**99.47**	**99.62**	**99.65**	**99.99**
H1 (+3.0)	0.19	2.37	0.36	0.32	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.22	10.86	69.84	95.38	99.20	99.61	99.68	100.00
H2 (+3.0)	0.20	2.29	0.34	0.56	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	1.00	15.80	74.73	98.50	99.31	99.43	99.44	99.98
H3 (+2.0)	0.47	1.08	1.16	0.83	5	6	0.00	0.00	0.00	0.00	0.00	0.11	0.78	1.79	4.33	10.59	19.18	30.41	44.15	58.96	72.15	89.99	98.85	99.15	99.16	99.17	100.00
+2.0/ +3.0 COMPOSITE	**0.27**	**1.91**	**0.94**	**0.57**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.26**	**0.60**	**1.44**	**3.53**	**6.39**	**10.15**	**14.75**	**20.06**	**32.94**	**78.19**	**97.58**	**99.22**	**99.40**	**99.43**	**99.99**
H1 MHW	0.20	2.30	0.32	0.16	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.27	14.09	77.29	98.74	99.66	99.82	99.84	100.00
H2 MHW	0.18	2.44	0.30	0.28	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	5.34	58.38	98.56	99.65	99.72	99.72	99.97
H3 MHW	0.57	0.82	1.24	0.84	5	6	0.00	0.00	0.00	0.00	0.09	0.55	1.01	3.44	7.63	17.18	27.27	38.17	52.41	67.31	78.12	91.08	98.85	99.14	99.15	99.16	100.00
MHW COMPOSITE	**0.28**	**1.85**	**1.05**	**0.43**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.18**	**0.34**	**1.15**	**2.54**	**5.73**	**9.09**	**12.72**	**17.48**	**22.54**	**32.52**	**75.58**	**98.72**	**99.48**	**99.56**	**99.57**	**99.99**
H1 MTL	0.26	1.93	0.65	0.82	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	0.66	3.12	9.81	21.81	46.46	81.39	98.67	99.14	99.17	99.18	99.91
H2 MTL	0.20	2.34	0.36	0.98	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.39	16.36	66.31	97.97	99.00	99.01	99.02	99.97
H3 MTL	0.39	1.36	1.60	1.11	5	6	0.00	0.00	0.00	0.57	1.66	3.30	4.48	8.02	13.50	18.68	22.26	25.51	29.63	34.41	43.73	73.61	97.78	98.87	98.89	98.89	100.00
MTL COMPOSITE	**0.27**	**1.88**	**1.09**	**0.97**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.19**	**0.55**	**1.10**	**1.49**	**2.67**	**4.51**	**6.27**	**7.64**	**9.54**	**13.15**	**18.87**	**35.52**	**73.77**	**98.14**	**99.00**	**99.02**	**99.03**	**99.96**

ELEVATION COMPOSITES - HUTAFF ISLAND SAMPLES (2 of 2)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINE
							GRAVEL						GRANULAR			SAND											PAN
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4.00	
H1 MLW	0.36	1.47	1.23	0.58	6	7	0.00	0.00	0.00	0.00	0.13	0.34	0.75	2.32	4.82	10.20	16.14	21.63	26.95	37.24	53.34	81.98	98.32	99.27	99.40	99.42	100.00
H2 MLW	0.31	1.67	0.80	0.66	6	7	0.00	0.00	0.00	0.00	0.33	0.59	0.92	1.03	1.32	2.01	3.07	5.73	13.36	34.65	63.06	89.06	99.00	99.31	99.33	99.34	99.99
H3 MLW	0.36	1.46	1.84	1.10	5	6	0.00	0.00	1.14	1.83	4.91	6.69	8.11	11.92	16.55	20.45	22.44	23.99	25.38	27.51	35.81	59.37	95.10	98.86	98.89	98.90	100.00
MLW COMPOSITE	**0.35**	**1.53**	**1.36**	**0.78**	**6**	**7**	**0.00**	**0.00**	**0.38**	**0.61**	**1.79**	**2.54**	**3.26**	**5.09**	**7.56**	**10.89**	**13.88**	**17.12**	**21.90**	**33.13**	**50.74**	**76.80**	**97.47**	**99.15**	**99.21**	**99.22**	**100.00**
H1 (-6.0)	0.19	2.41	0.56	1.31	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.26	0.47	0.85	1.40	2.57	4.88	12.67	47.83	94.06	98.50	98.66	98.69	99.99
H2 (-6.0)	0.20	2.30	0.81	1.18	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	1.07	1.92	3.18	4.75	6.64	10.46	19.54	48.67	91.87	98.48	98.76	98.82	99.98
H3 (-6.0)	0.27	1.90	1.17	1.19	5	6	0.00	0.00	0.00	0.00	0.13	0.13	0.69	1.60	3.20	6.28	10.09	14.28	19.13	24.24	32.59	60.20	94.47	98.66	98.80	98.81	100.00
(-6.0) COMPOSITE	**0.22**	**2.20**	**0.91**	**1.23**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.23**	**0.71**	**1.51**	**2.89**	**4.71**	**6.81**	**9.45**	**13.19**	**21.60**	**52.23**	**93.47**	**98.55**	**98.74**	**98.77**	**99.99**
H1 (-8.8)	0.15	2.73	0.41	1.54	3	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.15	0.20	0.29	0.43	0.84	2.54	19.33	80.23	96.17	98.10	98.46	99.98
H2 (-8.8)	0.16	2.60	0.53	1.69	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.47	0.84	1.30	2.00	3.10	5.96	30.42	85.15	97.40	98.21	98.31	99.99
H3 (-8.8)	0.16	2.68	0.40	1.76	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.22	0.35	0.54	1.11	3.84	21.67	84.05	97.47	98.07	98.24	99.99
(-8.8) COMPOSITE	**0.16**	**2.67**	**0.46**	**1.66**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.07**	**0.25**	**0.42**	**0.65**	**0.99**	**1.68**	**4.11**	**23.81**	**83.14**	**97.01**	**98.13**	**98.34**	**99.99**
H1 (-11.6)	0.20	2.30	0.55	1.41	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	0.47	1.12	2.64	7.13	20.89	58.93	95.33	98.50	98.57	98.59	99.99
H2 (-11.6)	0.18	2.47	0.59	1.22	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.21	0.63	1.16	1.96	3.04	4.57	8.56	42.35	91.17	98.15	98.63	98.78	99.99
H3 (-11.6)	0.18	2.49	0.82	1.59	4	6	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.47	1.04	1.89	2.86	4.18	5.66	8.08	12.35	29.65	83.60	97.53	98.23	98.41	99.98
(-11.6) COMPOSITE	**0.19**	**2.42**	**0.67**	**1.41**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.08**	**0.08**	**0.11**	**0.20**	**0.43**	**0.90**	**1.50**	**2.42**	**3.78**	**6.59**	**13.93**	**43.64**	**90.03**	**98.06**	**98.48**	**98.59**	**99.99**
H1 (-14.4)	0.19	2.42	0.47	1.71	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.10	0.20	0.45	1.02	3.11	14.27	51.93	92.84	98.17	98.25	98.29	99.95
H2 (-14.4)	0.17	2.58	0.77	1.64	4	6	0.00	0.00	0.00	0.00	0.18	0.73	0.81	1.17	1.60	1.96	2.31	2.70	3.06	4.00	6.79	25.32	83.28	97.26	98.10	98.36	100.00
H3 (-14.4)	0.17	2.55	0.67	1.56	5	6	0.00	0.00	0.00	0.00	0.12	0.12	0.28	0.57	0.69	1.11	1.68	2.30	3.11	4.73	7.94	29.29	86.22	97.73	98.28	98.44	100.00
(-14.4) COMPOSITE	**0.17**	**2.52**	**0.65**	**1.64**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.10**	**0.28**	**0.36**	**0.58**	**0.78**	**1.06**	**1.40**	**1.82**	**2.40**	**3.95**	**9.67**	**35.51**	**87.45**	**97.72**	**98.21**	**98.36**	**99.98**
H1 (-17.2)	0.17	2.55	0.43	1.59	4	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.12	0.26	0.59	1.80	7.75	39.67	88.77	98.01	98.33	98.41	99.98
H2 (-17.2)	0.16	2.66	0.44	1.64	4	6	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.06	0.10	0.16	0.27	0.46	0.74	1.52	4.17	24.99	84.37	97.17	98.07	98.36	99.99
H3 (-17.2)	0.16	2.62	0.55	1.78	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.30	0.40	0.57	0.79	1.12	1.73	2.89	6.07	26.45	84.25	96.91	97.93	98.22	100.00
(-17.2) COMPOSITE	**0.16**	**2.61**	**0.48**	**1.67**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.05**	**0.12**	**0.17**	**0.26**	**0.39**	**0.61**	**1.02**	**2.07**	**6.00**	**30.37**	**85.80**	**97.36**	**98.11**	**98.33**	**99.99**
H1 (-20.0)	0.17	2.54	0.47	1.73	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.15	0.20	0.29	0.48	0.85	1.78	7.03	42.23	87.87	97.55	98.15	98.27	100.00
H2 (-20.0)	0.15	2.77	0.44	1.81	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.06	0.13	0.22	0.40	0.70	1.32	2.97	16.19	74.73	96.15	97.59	98.19	99.98
H3 (-20.0)	0.16	2.60	0.59	1.71	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.18	0.27	0.55	0.84	1.39	2.46	4.52	8.53	26.83	82.45	97.05	98.07	98.29	99.99
(-20.0) COMPOSITE	**0.16**	**2.64**	**0.51**	**1.75**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.08**	**0.16**	**0.29**	**0.45**	**0.76**	**1.34**	**2.54**	**6.18**	**28.42**	**81.68**	**96.92**	**97.94**	**98.25**	**99.99**

APPENDIX 7

2007 Hutaff Island Native Beach Individual Grab Sample Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (+3)

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,200	203,913	North Carolina State Plane	3.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2/5Y-6/1 Washed - 2/5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.34	104.02	0.01	0.00	#200 - 0.39 #230 - 0.32			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.01	0.01	0.02	0.02
45	1.50	0.35	0.21	0.20	0.23	0.22
60	2.00	0.25	11.10	10.64	11.33	10.86
80	2.50	0.18	61.54	58.98	72.87	69.84
120	3.00	0.13	26.65	25.54	99.52	95.38
170	3.50	0.09	3.99	3.82	103.51	99.20
200	3.75	0.07	0.43	0.41	103.94	99.61
230	4.00	0.06	0.07	0.07	104.01	99.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.78	2.60	2.33	2.12	2.04	1.72

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	0.36	0.46	3.93

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-11.6)

Analysis Date: 11-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,811	203,616	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.33	86.12	0.00	0.01	#200 - 1.43 #230 - 1.41			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
14	-0.50	1.41	0.12	0.14	0.15	0.17
18	0.00	1.00	0.26	0.30	0.41	0.47
25	0.50	0.71	0.57	0.65	0.98	1.12
35	1.00	0.50	1.33	1.52	2.31	2.64
45	1.50	0.35	3.92	4.49	6.23	7.13
60	2.00	0.25	12.02	13.76	18.25	20.89
80	2.50	0.18	33.22	38.04	51.47	58.93
120	3.00	0.13	31.79	36.40	83.26	95.33
170	3.50	0.09	2.77	3.17	86.03	98.50
200	3.75	0.07	0.06	0.07	86.09	98.57
230	4.00	0.06	0.02	0.02	86.11	98.59

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.84	2.72	2.38	2.05	1.82	1.26

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.55	-1.42	6.91

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-14.4)

Analysis Date: 10-26-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,044	203,286	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.75	91.21	0.00	0.05	#200 - 1.75 #230 - 1.71			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.05	0.05	0.06	0.06
14	-0.50	1.41	0.04	0.04	0.10	0.10
18	0.00	1.00	0.09	0.10	0.19	0.20
25	0.50	0.71	0.23	0.25	0.42	0.45
35	1.00	0.50	0.53	0.57	0.95	1.02
45	1.50	0.35	1.94	2.09	2.89	3.11
60	2.00	0.25	10.35	11.16	13.24	14.27
80	2.50	0.18	34.93	37.66	48.17	51.93
120	3.00	0.13	37.94	40.91	86.11	92.84
170	3.50	0.09	4.94	5.33	91.05	98.17
200	3.75	0.07	0.07	0.08	91.12	98.25
230	4.00	0.06	0.04	0.04	91.16	98.29

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.20	2.89	2.78	2.47	2.14	2.02	1.58

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.42	0.19	0.47	-1.31	8.39

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-17.2)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,564	203,025	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.50	87.10	0.00	0.02	#200 - 1.67 #230 - 1.59			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.05	0.06	0.05	0.06
18	0.00	1.00	0.05	0.06	0.10	0.12
25	0.50	0.71	0.12	0.14	0.22	0.26
35	1.00	0.50	0.29	0.33	0.51	0.59
45	1.50	0.35	1.07	1.21	1.58	1.80
60	2.00	0.25	5.27	5.95	6.85	7.75
80	2.50	0.18	28.25	31.92	35.10	39.67
120	3.00	0.13	43.45	49.10	78.55	88.77
170	3.50	0.09	8.18	9.24	86.73	98.01
200	3.75	0.07	0.28	0.32	87.01	98.33
230	4.00	0.06	0.07	0.08	87.08	98.41

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.34	2.95	2.86	2.61	2.27	2.13	1.77

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.55	0.17	0.43	-1.12	7.53

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-20)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,882	202,822	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.75	95.12	0.02	0.00	#200 - 1.85 #230 - 1.73			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.13	0.13	0.15	0.15
14	-0.50	1.41	0.05	0.05	0.20	0.20
18	0.00	1.00	0.09	0.09	0.29	0.29
25	0.50	0.71	0.18	0.19	0.47	0.48
35	1.00	0.50	0.36	0.37	0.83	0.85
45	1.50	0.35	0.90	0.93	1.73	1.78
60	2.00	0.25	5.08	5.25	6.81	7.03
80	2.50	0.18	34.06	35.20	40.87	42.23
120	3.00	0.13	44.16	45.64	85.03	87.87
170	3.50	0.09	9.37	9.68	94.40	97.55
200	3.75	0.07	0.58	0.60	94.98	98.15
230	4.00	0.06	0.12	0.12	95.10	98.27

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.96	2.86	2.59	2.26	2.13	1.81

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	0.47	-1.75	13.72

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-6)

Analysis Date: 11-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,449	203,768	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.16	90.98	0.01	0.01	#200 - 1.34 #230 - 1.31			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.04	0.04	0.04
10	-1.00	2.00	0.20	0.22	0.24	0.26
14	-0.50	1.41	0.19	0.21	0.43	0.47
18	0.00	1.00	0.35	0.38	0.78	0.85
25	0.50	0.71	0.51	0.55	1.29	1.40
35	1.00	0.50	1.08	1.17	2.37	2.57
45	1.50	0.35	2.13	2.31	4.50	4.88
60	2.00	0.25	7.18	7.79	11.68	12.67
80	2.50	0.18	32.40	35.16	44.08	47.83
120	3.00	0.13	42.61	46.23	86.69	94.06
170	3.50	0.09	4.09	4.44	90.78	98.50
200	3.75	0.07	0.15	0.16	90.93	98.66
230	4.00	0.06	0.03	0.03	90.96	98.69

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.11	2.89	2.79	2.52	2.18	2.05	1.51

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.56	-2.37	13.05

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 (-8.8)

Analysis Date: 11-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,603	203,599	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-3/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
93.59	92.21	0.03	0.02	#200 - 1.90 #230 - 1.54			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.06	0.06	0.06	0.06
10	-1.00	2.00	0.02	0.02	0.08	0.08
14	-0.50	1.41	0.07	0.07	0.15	0.15
18	0.00	1.00	0.05	0.05	0.20	0.20
25	0.50	0.71	0.08	0.09	0.28	0.29
35	1.00	0.50	0.13	0.14	0.41	0.43
45	1.50	0.35	0.38	0.41	0.79	0.84
60	2.00	0.25	1.59	1.70	2.38	2.54
80	2.50	0.18	15.71	16.79	18.09	19.33
120	3.00	0.13	57.00	60.90	75.09	80.23
170	3.50	0.09	14.92	15.94	90.01	96.17
200	3.75	0.07	1.81	1.93	91.82	98.10
230	4.00	0.06	0.34	0.36	92.16	98.46

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.12	2.96	2.75	2.55	2.40	2.07

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15	0.41	-2.11	20.6

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 Dune

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,135	203,952	North Carolina State Plane	7.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
108.04	107.98	0.02	0.01	#200 - 0.13 #230 - 0.08			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.06	0.06	0.07	0.07
60	2.00	0.25	7.48	6.92	7.55	6.99
80	2.50	0.18	59.29	54.88	66.84	61.87
120	3.00	0.13	35.55	32.90	102.39	94.77
170	3.50	0.09	5.16	4.78	107.55	99.55
200	3.75	0.07	0.35	0.32	107.90	99.87
230	4.00	0.06	0.05	0.05	107.95	99.92

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.02	2.84	2.70	2.39	2.16	2.08	1.86

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.35	0.39	3.39

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 MHW

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,223	203,899	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-7/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.84	102.68	0.01	0.00	#200 - 0.18 #230 - 0.16			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.27	0.26	0.28	0.27
60	2.00	0.25	14.21	13.82	14.49	14.09
80	2.50	0.18	64.99	63.20	79.48	77.29
120	3.00	0.13	22.06	21.45	101.54	98.74
170	3.50	0.09	0.95	0.92	102.49	99.66
200	3.75	0.07	0.16	0.16	102.65	99.82
230	4.00	0.06	0.02	0.02	102.67	99.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.66	2.48	2.28	2.09	2.02	1.67

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.3	0.20	0.32	0.19	3.76

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 Mid Berm

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,180	203,924	North Carolina State Plane	4.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.16	101.96	0.00	0.00	#200 - 0.23 #230 - 0.19			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.06	0.06	0.06	0.06
14	-0.50	1.41	0.03	0.03	0.09	0.09
18	0.00	1.00	0.07	0.07	0.16	0.16
25	0.50	0.71	0.12	0.12	0.28	0.28
35	1.00	0.50	0.34	0.33	0.62	0.61
45	1.50	0.35	1.96	1.92	2.58	2.53
60	2.00	0.25	16.23	15.89	18.81	18.42
80	2.50	0.18	18.31	17.92	37.12	36.34
120	3.00	0.13	61.71	60.41	98.83	96.75
170	3.50	0.09	2.84	2.78	101.67	99.53
200	3.75	0.07	0.25	0.24	101.92	99.77
230	4.00	0.06	0.04	0.04	101.96	99.81

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.89	2.82	2.61	2.18	1.92	1.58

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	0.47	-1.46	7.17

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 MLW

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,320	203,835	North Carolina State Plane	-3.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.46	103.89	0.02	0.00	#200 - 0.60 #230 - 0.58			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.14	0.13	0.14	0.13
4	-2.25	4.76	0.22	0.21	0.36	0.34
5	-2.00	4.00	0.43	0.41	0.79	0.75
7	-1.50	2.83	1.64	1.57	2.43	2.32
10	-1.00	2.00	2.61	2.50	5.04	4.82
14	-0.50	1.41	5.62	5.38	10.66	10.20
18	0.00	1.00	6.20	5.94	16.86	16.14
25	0.50	0.71	5.74	5.49	22.60	21.63
35	1.00	0.50	5.56	5.32	28.16	26.95
45	1.50	0.35	10.75	10.29	38.91	37.24
60	2.00	0.25	16.82	16.10	55.73	53.34
80	2.50	0.18	29.92	28.64	85.65	81.98
120	3.00	0.13	17.07	16.34	102.72	98.32
170	3.50	0.09	0.99	0.95	103.71	99.27
200	3.75	0.07	0.14	0.13	103.85	99.40
230	4.00	0.06	0.02	0.02	103.87	99.42

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.56	2.38	1.90	0.82	-0.01	-0.98

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.47	0.36	1.23	-1.03	3.2

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 MTL

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,260	203,877	North Carolina State Plane	-0.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
93.11	92.42	0.00	0.09	#200 - 0.83 #230 - 0.82			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.04	0.04	0.04
14	-0.50	1.41	0.09	0.10	0.13	0.14
18	0.00	1.00	0.48	0.52	0.61	0.66
25	0.50	0.71	2.29	2.46	2.90	3.12
35	1.00	0.50	6.23	6.69	9.13	9.81
45	1.50	0.35	11.17	12.00	20.30	21.81
60	2.00	0.25	22.95	24.65	43.25	46.46
80	2.50	0.18	32.52	34.93	75.77	81.39
120	3.00	0.13	16.09	17.28	91.86	98.67
170	3.50	0.09	0.44	0.47	92.30	99.14
200	3.75	0.07	0.03	0.03	92.33	99.17
230	4.00	0.06	0.01	0.01	92.34	99.18

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.58	2.41	2.05	1.56	1.26	0.64

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	1.93	0.26	0.65	-0.83	3.66

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H1 Toe of Dune

Analysis Date: 11-13-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,155	203,939	North Carolina State Plane	5.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.64	96.55	0.01	0.00	#200 - 0.15 #230 - 0.11			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.02	0.02	0.03	0.03
35	1.00	0.50	0.03	0.03	0.06	0.06
45	1.50	0.35	0.30	0.31	0.36	0.37
60	2.00	0.25	8.30	8.59	8.66	8.96
80	2.50	0.18	52.76	54.59	61.42	63.55
120	3.00	0.13	31.69	32.79	93.11	96.34
170	3.50	0.09	3.19	3.30	96.30	99.64
200	3.75	0.07	0.20	0.21	96.50	99.85
230	4.00	0.06	0.04	0.04	96.54	99.89

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.81	2.67	2.38	2.15	2.06	1.77

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.35	0.06	4.05

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (+3)

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,748	206,415	North Carolina State Plane	3.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.64	102.09	0.01	0.02	#200 - 0.57 #230 - 0.56			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
35	1.00	0.50	0.07	0.07	0.09	0.09
45	1.50	0.35	0.93	0.91	1.02	1.00
60	2.00	0.25	15.19	14.80	16.21	15.80
80	2.50	0.18	60.49	58.93	76.70	74.73
120	3.00	0.13	24.40	23.77	101.10	98.50
170	3.50	0.09	0.83	0.81	101.93	99.31
200	3.75	0.07	0.12	0.12	102.05	99.43
230	4.00	0.06	0.01	0.01	102.06	99.44

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.69	2.51	2.29	2.08	2.00	1.64

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	0.34	-0.15	3.84

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-11.6)

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,188	205,924	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.14	80.17	0.01	0.01	#200 - 1.37 #230 - 1.22			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.07	0.09	0.07	0.09
7	-1.50	2.83	0.04	0.05	0.11	0.14
10	-1.00	2.00	0.06	0.07	0.17	0.21
14	-0.50	1.41	0.34	0.42	0.51	0.63
18	0.00	1.00	0.43	0.53	0.94	1.16
25	0.50	0.71	0.65	0.80	1.59	1.96
35	1.00	0.50	0.88	1.08	2.47	3.04
45	1.50	0.35	1.24	1.53	3.71	4.57
60	2.00	0.25	3.24	3.99	6.95	8.56
80	2.50	0.18	27.42	33.79	34.37	42.35
120	3.00	0.13	39.61	48.82	73.98	91.17
170	3.50	0.09	5.66	6.98	79.64	98.15
200	3.75	0.07	0.39	0.48	80.03	98.63
230	4.00	0.06	0.12	0.15	80.15	98.78

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.27	2.93	2.83	2.58	2.24	2.11	1.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	0.59	-2.71	15.35

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-14.4)

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,324	205,997	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
79.83	78.55	0.03	0.00	#200 - 1.90 #230 - 1.64			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.14	0.18	0.14	0.18
4	-2.25	4.76	0.44	0.55	0.58	0.73
5	-2.00	4.00	0.06	0.08	0.64	0.81
7	-1.50	2.83	0.29	0.36	0.93	1.17
10	-1.00	2.00	0.34	0.43	1.27	1.60
14	-0.50	1.41	0.29	0.36	1.56	1.96
18	0.00	1.00	0.28	0.35	1.84	2.31
25	0.50	0.71	0.31	0.39	2.15	2.70
35	1.00	0.50	0.29	0.36	2.44	3.06
45	1.50	0.35	0.75	0.94	3.19	4.00
60	2.00	0.25	2.23	2.79	5.42	6.79
80	2.50	0.18	14.79	18.53	20.21	25.32
120	3.00	0.13	46.27	57.96	66.48	83.28
170	3.50	0.09	11.16	13.98	77.64	97.26
200	3.75	0.07	0.67	0.84	78.31	98.10
230	4.00	0.06	0.21	0.26	78.52	98.36

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.03	2.93	2.71	2.49	2.25	1.68

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	0.77	-4.04	23.72

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-17.2)

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,486	205,855	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.53	82.19	0.04	0.01	#200 - 1.93 #230 - 1.64			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.03	0.04	0.03	0.04
5	-2.00	4.00	0.02	0.02	0.05	0.06
7	-1.50	2.83	0.00	0.00	0.05	0.06
10	-1.00	2.00	0.03	0.04	0.08	0.10
14	-0.50	1.41	0.05	0.06	0.13	0.16
18	0.00	1.00	0.09	0.11	0.22	0.27
25	0.50	0.71	0.16	0.19	0.38	0.46
35	1.00	0.50	0.23	0.28	0.61	0.74
45	1.50	0.35	0.65	0.78	1.26	1.52
60	2.00	0.25	2.21	2.65	3.47	4.17
80	2.50	0.18	17.39	20.82	20.86	24.99
120	3.00	0.13	49.60	59.38	70.46	84.37
170	3.50	0.09	10.69	12.80	81.15	97.17
200	3.75	0.07	0.75	0.90	81.90	98.07
230	4.00	0.06	0.24	0.29	82.14	98.36

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.00	2.92	2.71	2.50	2.28	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.66	0.16	0.44	-2.44	21.02

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-20)

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,623	205,771	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-4/1 Dry - 2.5Y-6/2 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.19	79.81	0.07	0.02	#200 - 2.41 #230 - 1.81			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.04	0.03	0.04
10	-1.00	2.00	0.02	0.02	0.05	0.06
14	-0.50	1.41	0.06	0.07	0.11	0.13
18	0.00	1.00	0.07	0.09	0.18	0.22
25	0.50	0.71	0.15	0.18	0.33	0.40
35	1.00	0.50	0.24	0.30	0.57	0.70
45	1.50	0.35	0.50	0.62	1.07	1.32
60	2.00	0.25	1.34	1.65	2.41	2.97
80	2.50	0.18	10.73	13.22	13.14	16.19
120	3.00	0.13	47.53	58.54	60.67	74.73
170	3.50	0.09	17.39	21.42	78.06	96.15
200	3.75	0.07	1.17	1.44	79.23	97.59
230	4.00	0.06	0.49	0.60	79.72	98.19

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.22	3.01	2.79	2.58	2.49	2.08

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.77	0.15	0.44	-2.15	17.24

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-6)

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,045	206,230	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.25	83.29	0.01	0.02	#200 - 1.24 #230 - 1.18			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.41	0.49	0.41	0.49
10	-1.00	2.00	0.49	0.58	0.90	1.07
14	-0.50	1.41	0.72	0.85	1.62	1.92
18	0.00	1.00	1.06	1.26	2.68	3.18
25	0.50	0.71	1.32	1.57	4.00	4.75
35	1.00	0.50	1.59	1.89	5.59	6.64
45	1.50	0.35	3.22	3.82	8.81	10.46
60	2.00	0.25	7.65	9.08	16.46	19.54
80	2.50	0.18	24.54	29.13	41.00	48.67
120	3.00	0.13	36.40	43.20	77.40	91.87
170	3.50	0.09	5.57	6.61	82.97	98.48
200	3.75	0.07	0.24	0.28	83.21	98.76
230	4.00	0.06	0.05	0.06	83.26	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.24	2.91	2.80	2.52	2.09	1.81	0.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.81	-2.26	9.41

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 (-8.8)

Analysis Date: 10-22-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,393,088	206,095	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
79.02	77.73	0.04	0.01	#200 - 1.79 #230 - 1.69			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.07	0.09	0.07	0.09
14	-0.50	1.41	0.30	0.38	0.37	0.47
18	0.00	1.00	0.29	0.37	0.66	0.84
25	0.50	0.71	0.36	0.46	1.02	1.30
35	1.00	0.50	0.55	0.70	1.57	2.00
45	1.50	0.35	0.87	1.10	2.44	3.10
60	2.00	0.25	2.26	2.86	4.70	5.96
80	2.50	0.18	19.33	24.46	24.03	30.42
120	3.00	0.13	43.25	54.73	67.28	85.15
170	3.50	0.09	9.68	12.25	76.96	97.40
200	3.75	0.07	0.64	0.81	77.60	98.21
230	4.00	0.06	0.08	0.10	77.68	98.31

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	2.99	2.91	2.68	2.39	2.21	1.83

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.6	0.16	0.53	-2.6	15.34

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 Dune

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,702	206,504	North Carolina State Plane	9.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
103.19	102.86	0.02	0.00	#200 - 0.39 #230 - 0.34			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.44	0.43	0.45	0.44
60	2.00	0.25	9.77	9.47	10.22	9.91
80	2.50	0.18	47.87	46.39	58.09	56.30
120	3.00	0.13	41.59	40.30	99.68	96.60
170	3.50	0.09	2.90	2.81	102.58	99.41
200	3.75	0.07	0.21	0.20	102.79	99.61
230	4.00	0.06	0.05	0.05	102.84	99.66

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.84	2.73	2.43	2.16	2.07	1.74

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.36	-0.15	3.17

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 MHW

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,783	206,389	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.83	101.58	0.00	0.03	#200 - 0.28 #230 - 0.28			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.02	0.02	0.03	0.03
60	2.00	0.25	5.41	5.31	5.44	5.34
80	2.50	0.18	54.01	53.04	59.45	58.38
120	3.00	0.13	40.92	40.18	100.37	98.56
170	3.50	0.09	1.11	1.09	101.48	99.65
200	3.75	0.07	0.07	0.07	101.55	99.72
230	4.00	0.06	0.00	0.00	101.55	99.72

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.82	2.71	2.42	2.19	2.10	1.97

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	0.3	-0.07	2.8

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 Mid Berm

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,726	206,433	North Carolina State Plane	3.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-7/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
113.16	112.81	0.00	0.03	#200 - 0.37 #230 - 0.33			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.05	0.04	0.05	0.04
10	-1.00	2.00	0.03	0.03	0.08	0.07
14	-0.50	1.41	0.02	0.02	0.10	0.09
18	0.00	1.00	0.05	0.04	0.15	0.13
25	0.50	0.71	0.20	0.18	0.35	0.31
35	1.00	0.50	0.79	0.70	1.14	1.01
45	1.50	0.35	4.37	3.86	5.51	4.87
60	2.00	0.25	24.79	21.91	30.30	26.78
80	2.50	0.18	55.87	49.37	86.17	76.15
120	3.00	0.13	25.04	22.13	111.21	98.28
170	3.50	0.09	1.33	1.18	112.54	99.46
200	3.75	0.07	0.19	0.17	112.73	99.63
230	4.00	0.06	0.05	0.04	112.78	99.67

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.68	2.49	2.24	1.96	1.75	1.50

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.21	0.22	0.45	-0.94	7.91

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 MLW

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,894	206,301	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
97.40	96.75	0.00	0.01	#200 - 0.67 #230 - 0.66			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.32	0.33	0.32	0.33
4	-2.25	4.76	0.25	0.26	0.57	0.59
5	-2.00	4.00	0.32	0.33	0.89	0.92
7	-1.50	2.83	0.11	0.11	1.00	1.03
10	-1.00	2.00	0.28	0.29	1.28	1.32
14	-0.50	1.41	0.67	0.69	1.95	2.01
18	0.00	1.00	1.03	1.06	2.98	3.07
25	0.50	0.71	2.59	2.66	5.57	5.73
35	1.00	0.50	7.43	7.63	13.00	13.36
45	1.50	0.35	20.74	21.29	33.74	34.65
60	2.00	0.25	27.67	28.41	61.41	63.06
80	2.50	0.18	25.32	26.00	86.73	89.06
120	3.00	0.13	9.68	9.94	96.41	99.00
170	3.50	0.09	0.30	0.31	96.71	99.31
200	3.75	0.07	0.02	0.02	96.73	99.33
230	4.00	0.06	0.01	0.01	96.74	99.34

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.80	2.40	2.23	1.77	1.27	1.06	0.36

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.67	0.31	0.8	-1.73	9.04

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 MTL

Analysis Date: 11-14-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,812	206,366	North Carolina State Plane	-0.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.42	94.51	0.00	0.03	#200 - 0.99 #230 - 0.98			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.36	0.38	0.37	0.39
60	2.00	0.25	15.24	15.97	15.61	16.36
80	2.50	0.18	47.66	49.95	63.27	66.31
120	3.00	0.13	30.21	31.66	93.48	97.97
170	3.50	0.09	0.98	1.03	94.46	99.00
200	3.75	0.07	0.01	0.01	94.47	99.01
230	4.00	0.06	0.01	0.01	94.48	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.78	2.64	2.34	2.09	1.99	1.64

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.34	0.20	0.36	-0.15	2.61

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H2 Toe of Dune

Analysis Date: 11-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,716	206,492	North Carolina State Plane	5.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
105.43	105.18	0.02	0.00	#200 - 0.32 #230 - 0.24			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.05	0.05	0.05
7	-1.50	2.83	0.00	0.00	0.05	0.05
10	-1.00	2.00	0.00	0.00	0.05	0.05
14	-0.50	1.41	0.00	0.00	0.05	0.05
18	0.00	1.00	0.00	0.00	0.05	0.05
25	0.50	0.71	0.01	0.01	0.06	0.06
35	1.00	0.50	0.03	0.03	0.09	0.09
45	1.50	0.35	0.28	0.27	0.37	0.36
60	2.00	0.25	2.51	2.38	2.88	2.74
80	2.50	0.18	43.17	40.95	46.05	43.69
120	3.00	0.13	53.01	50.28	99.06	93.97
170	3.50	0.09	5.56	5.27	104.62	99.24
200	3.75	0.07	0.46	0.44	105.08	99.68
230	4.00	0.06	0.08	0.08	105.16	99.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.10	2.90	2.81	2.56	2.27	2.16	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	0.35	-1.17	18.73

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (+2)

Analysis Date: 10-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,579	208,673	North Carolina State Plane	2.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-5/2 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.01	88.29	0.00	0.00	#200 - 0.84 #230 - 0.83			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	0.00	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	0.10	0.11	0.10	0.11
5	-2.00	4.00	0.60	0.67	0.70	0.78
7	-1.50	2.83	0.90	1.01	1.60	1.79
10	-1.00	2.00	2.26	2.54	3.86	4.33
14	-0.50	1.41	5.57	6.26	9.43	10.59
18	0.00	1.00	7.65	8.59	17.08	19.18
25	0.50	0.71	10.00	11.23	27.08	30.41
35	1.00	0.50	12.23	13.74	39.31	44.15
45	1.50	0.35	13.18	14.81	52.49	58.96
60	2.00	0.25	11.74	13.19	64.23	72.15
80	2.50	0.18	15.88	17.84	80.11	89.99
120	3.00	0.13	7.89	8.86	88.00	98.85
170	3.50	0.09	0.27	0.30	88.27	99.15
200	3.75	0.07	0.01	0.01	88.28	99.16
230	4.00	0.06	0.01	0.01	88.29	99.17

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.78	2.33	2.08	1.20	0.26	-0.19	-0.95

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	1.08	0.47	1.16	-0.45	2.49

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-11.6)

Analysis Date: 10-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,994	208,257	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-6/2	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.44	87.07	0.02	0.02	#200 - 1.77 #230 - 1.59			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.20	0.23	0.20	0.23
4	-2.25	4.76	0.00	0.00	0.20	0.23
5	-2.00	4.00	0.00	0.00	0.20	0.23
7	-1.50	2.83	0.21	0.24	0.41	0.47
10	-1.00	2.00	0.50	0.57	0.91	1.04
14	-0.50	1.41	0.75	0.85	1.66	1.89
18	0.00	1.00	0.86	0.97	2.52	2.86
25	0.50	0.71	1.17	1.32	3.69	4.18
35	1.00	0.50	1.31	1.48	5.00	5.66
45	1.50	0.35	2.14	2.42	7.14	8.08
60	2.00	0.25	3.78	4.27	10.92	12.35
80	2.50	0.18	15.30	17.30	26.22	29.65
120	3.00	0.13	47.71	53.95	73.93	83.60
170	3.50	0.09	12.32	13.93	86.25	97.53
200	3.75	0.07	0.62	0.70	86.87	98.23
230	4.00	0.06	0.16	0.18	87.03	98.41

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.01	2.92	2.69	2.37	2.11	0.78

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.49	0.18	0.82	-2.79	12.93

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-14.4)

Analysis Date: 10-23-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,395,105	208,187	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
80.31	79.09	0.02	0.00	#200 - 1.72 #230 - 1.56			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.10	0.12	0.10	0.12
4	-2.25	4.76	0.00	0.00	0.10	0.12
5	-2.00	4.00	0.13	0.16	0.23	0.28
7	-1.50	2.83	0.23	0.29	0.46	0.57
10	-1.00	2.00	0.10	0.12	0.56	0.69
14	-0.50	1.41	0.34	0.42	0.90	1.11
18	0.00	1.00	0.46	0.57	1.36	1.68
25	0.50	0.71	0.50	0.62	1.86	2.30
35	1.00	0.50	0.65	0.81	2.51	3.11
45	1.50	0.35	1.30	1.62	3.81	4.73
60	2.00	0.25	2.58	3.21	6.39	7.94
80	2.50	0.18	17.15	21.35	23.54	29.29
120	3.00	0.13	45.72	56.93	69.26	86.22
170	3.50	0.09	9.24	11.51	78.50	97.73
200	3.75	0.07	0.44	0.55	78.94	98.28
230	4.00	0.06	0.13	0.16	79.07	98.44

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.98	2.90	2.68	2.40	2.19	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.55	0.17	0.67	-3.5	20.78

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-17.2)

Analysis Date: 10-23-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,395,225	208,141	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.76	80.33	0.03	0.00	#200 - 2.07 #230 - 1.78			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.07	0.09	0.07	0.09
7	-1.50	2.83	0.17	0.21	0.24	0.30
10	-1.00	2.00	0.08	0.10	0.32	0.40
14	-0.50	1.41	0.14	0.17	0.46	0.57
18	0.00	1.00	0.18	0.22	0.64	0.79
25	0.50	0.71	0.27	0.33	0.91	1.12
35	1.00	0.50	0.50	0.61	1.41	1.73
45	1.50	0.35	0.95	1.16	2.36	2.89
60	2.00	0.25	2.60	3.18	4.96	6.07
80	2.50	0.18	16.66	20.38	21.62	26.45
120	3.00	0.13	47.26	57.80	68.88	84.25
170	3.50	0.09	10.35	12.66	79.23	96.91
200	3.75	0.07	0.83	1.02	80.06	97.93
230	4.00	0.06	0.24	0.29	80.30	98.22

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.00	2.92	2.70	2.46	2.24	1.83

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.62	0.16	0.55	-3.24	22.56

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-20)

Analysis Date: 10-23-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,395,366	208,000	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
78.76	77.42	0.01	0.01	#200 - 1.93 #230 - 1.71			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.04	0.03	0.04
7	-1.50	2.83	0.11	0.14	0.14	0.18
10	-1.00	2.00	0.07	0.09	0.21	0.27
14	-0.50	1.41	0.22	0.28	0.43	0.55
18	0.00	1.00	0.23	0.29	0.66	0.84
25	0.50	0.71	0.43	0.55	1.09	1.39
35	1.00	0.50	0.84	1.07	1.93	2.46
45	1.50	0.35	1.62	2.06	3.55	4.52
60	2.00	0.25	3.16	4.01	6.71	8.53
80	2.50	0.18	14.41	18.30	21.12	26.83
120	3.00	0.13	43.81	55.62	64.93	82.45
170	3.50	0.09	11.50	14.60	76.43	97.05
200	3.75	0.07	0.80	1.02	77.23	98.07
230	4.00	0.06	0.17	0.22	77.40	98.29

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.05	2.93	2.71	2.45	2.20	1.56

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.6	0.16	0.59	-2.65	15.22

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-6)

Analysis Date: 10-22-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,761	208,510	North Carolina State Plane	-6.3 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-5/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.53	83.53	0.01	0.00	#200 - 1.20 #230 - 1.19			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.11	0.13	0.11	0.13
4	-2.25	4.76	0.00	0.00	0.11	0.13
5	-2.00	4.00	0.47	0.56	0.58	0.69
7	-1.50	2.83	0.77	0.91	1.35	1.60
10	-1.00	2.00	1.35	1.60	2.70	3.20
14	-0.50	1.41	2.60	3.08	5.30	6.28
18	0.00	1.00	3.22	3.81	8.52	10.09
25	0.50	0.71	3.54	4.19	12.06	14.28
35	1.00	0.50	4.10	4.85	16.16	19.13
45	1.50	0.35	4.32	5.11	20.48	24.24
60	2.00	0.25	7.06	8.35	27.54	32.59
80	2.50	0.18	23.34	27.61	50.88	60.20
120	3.00	0.13	28.97	34.27	79.85	94.47
170	3.50	0.09	3.54	4.19	83.39	98.66
200	3.75	0.07	0.12	0.14	83.51	98.80
230	4.00	0.06	0.01	0.01	83.52	98.81

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.06	2.85	2.72	2.32	1.55	0.68	-0.71

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.9	0.27	1.17	-1.47	4.49

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 (-8.8)

Analysis Date: 10-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,792	208,480	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
78.39	77.04	0.02	0.01	#200 - 1.93 #230 - 1.76			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.03	0.02	0.03
14	-0.50	1.41	0.07	0.09	0.09	0.12
18	0.00	1.00	0.08	0.10	0.17	0.22
25	0.50	0.71	0.10	0.13	0.27	0.35
35	1.00	0.50	0.15	0.19	0.42	0.54
45	1.50	0.35	0.45	0.57	0.87	1.11
60	2.00	0.25	2.14	2.73	3.01	3.84
80	2.50	0.18	13.98	17.83	16.99	21.67
120	3.00	0.13	48.90	62.38	65.89	84.05
170	3.50	0.09	10.52	13.42	76.41	97.47
200	3.75	0.07	0.47	0.60	76.88	98.07
230	4.00	0.06	0.13	0.17	77.01	98.24

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.00	2.93	2.73	2.53	2.34	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	0.4	-2.02	15.45

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 Dune

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,433	208,800	North Carolina State Plane	7.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.42	96.22	0.00	0.00	#200 - 0.22 #230 - 0.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.13	0.13	0.14	0.14
45	1.50	0.35	1.59	1.65	1.73	1.79
60	2.00	0.25	15.10	15.66	16.83	17.45
80	2.50	0.18	52.76	54.72	69.59	72.17
120	3.00	0.13	24.94	25.87	94.53	98.04
170	3.50	0.09	1.53	1.59	96.06	99.63
200	3.75	0.07	0.14	0.15	96.20	99.78
230	4.00	0.06	0.02	0.02	96.22	99.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.73	2.55	2.30	2.07	1.95	1.60

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.38	-0.19	3.71

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 MHW

Analysis Date: 10-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,585	208,669	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-5/2 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.72	88.97	0.00	0.00	#200 - 0.85 #230 - 0.84			3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.08	0.09	0.08	0.09
4	-2.25	4.76	0.41	0.46	0.49	0.55
5	-2.00	4.00	0.41	0.46	0.90	1.01
7	-1.50	2.83	2.18	2.43	3.08	3.44
10	-1.00	2.00	3.76	4.19	6.84	7.63
14	-0.50	1.41	8.57	9.55	15.41	17.18
18	0.00	1.00	9.05	10.09	24.46	27.27
25	0.50	0.71	9.78	10.90	34.24	38.17
35	1.00	0.50	12.78	14.24	47.02	52.41
45	1.50	0.35	13.37	14.90	60.39	67.31
60	2.00	0.25	9.70	10.81	70.09	78.12
80	2.50	0.18	11.63	12.96	81.72	91.08
120	3.00	0.13	6.97	7.77	88.69	98.85
170	3.50	0.09	0.26	0.29	88.95	99.14
200	3.75	0.07	0.01	0.01	88.96	99.15
230	4.00	0.06	0.01	0.01	88.97	99.16

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.75	2.23	1.86	0.92	-0.11	-0.56	-1.31

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	0.82	0.57	1.24	-0.27	2.29

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 Mid Berm

Analysis Date: 10-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,544	208,706	North Carolina State Plane	3.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
94.88	94.39	0.00	0.00	#200 - 0.54 #230 - 0.53			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
10	-1.00	2.00	0.01	0.01	0.04	0.04
14	-0.50	1.41	0.01	0.01	0.05	0.05
18	0.00	1.00	0.06	0.06	0.11	0.11
25	0.50	0.71	0.25	0.26	0.36	0.37
35	1.00	0.50	0.57	0.60	0.93	0.97
45	1.50	0.35	3.97	4.18	4.90	5.15
60	2.00	0.25	20.00	21.08	24.90	26.23
80	2.50	0.18	43.85	46.22	68.75	72.45
120	3.00	0.13	24.86	26.20	93.61	98.65
170	3.50	0.09	0.74	0.78	94.35	99.43
200	3.75	0.07	0.03	0.03	94.38	99.46
230	4.00	0.06	0.01	0.01	94.39	99.47

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.72	2.55	2.26	1.97	1.76	1.48

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.22	0.21	0.45	-0.97	6.58

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 MLW

Analysis Date: 10-22-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,651	208,612	North Carolina State Plane	-2.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/2 Dry - 5Y-6/2 Washed - 5Y-6/2	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.47	86.54	0.03	0.00	#200 - 1.11 #230 - 1.10			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	1.00	1.14	1.00	1.14
5/16	-3.00	8.00	0.60	0.69	1.60	1.83
3.5	-2.50	5.66	2.69	3.08	4.29	4.91
4	-2.25	4.76	1.56	1.78	5.85	6.69
5	-2.00	4.00	1.24	1.42	7.09	8.11
7	-1.50	2.83	3.33	3.81	10.42	11.92
10	-1.00	2.00	4.05	4.63	14.47	16.55
14	-0.50	1.41	3.41	3.90	17.88	20.45
18	0.00	1.00	1.74	1.99	19.62	22.44
25	0.50	0.71	1.36	1.55	20.98	23.99
35	1.00	0.50	1.22	1.39	22.20	25.38
45	1.50	0.35	1.86	2.13	24.06	27.51
60	2.00	0.25	7.26	8.30	31.32	35.81
80	2.50	0.18	20.61	23.56	51.93	59.37
120	3.00	0.13	31.25	35.73	83.18	95.10
170	3.50	0.09	3.29	3.76	86.47	98.86
200	3.75	0.07	0.03	0.03	86.50	98.89
230	4.00	0.06	0.01	0.01	86.51	98.90

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.84	2.72	2.30	0.86	-1.06	-2.49

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.46	0.36	1.84	-1.29	3.27

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 MTL

Analysis Date: 10-22-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,617	208,641	North Carolina State Plane	-0.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-5/2 Dry - 2.5Y-6/2 Washed - 2.5Y-6/2	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.14	85.20	0.01	0.00	#200 - 1.11 #230 - 1.11			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	0.49	0.57	0.49	0.57
3.5	-2.50	5.66	0.94	1.09	1.43	1.66
4	-2.25	4.76	1.41	1.64	2.84	3.30
5	-2.00	4.00	1.02	1.18	3.86	4.48
7	-1.50	2.83	3.05	3.54	6.91	8.02
10	-1.00	2.00	4.72	5.48	11.63	13.50
14	-0.50	1.41	4.46	5.18	16.09	18.68
18	0.00	1.00	3.08	3.58	19.17	22.26
25	0.50	0.71	2.80	3.25	21.97	25.51
35	1.00	0.50	3.55	4.12	25.52	29.63
45	1.50	0.35	4.12	4.78	29.64	34.41
60	2.00	0.25	8.03	9.32	37.67	43.73
80	2.50	0.18	25.74	29.88	63.41	73.61
120	3.00	0.13	20.82	24.17	84.23	97.78
170	3.50	0.09	0.94	1.09	85.17	98.87
200	3.75	0.07	0.02	0.02	85.19	98.89
230	4.00	0.06	0.00	0.00	85.19	98.89

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.71	2.53	2.10	0.42	-0.76	-1.93

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.36	0.39	1.6	-1.1	2.94

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: H3 Toe of Dune

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,394,441	208,791	North Carolina State Plane	5.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Hutaff Island Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.96	91.47	0.00	0.11	#200 - 0.71 #230 - 0.64			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
35	1.00	0.50	0.36	0.39	0.38	0.41
45	1.50	0.35	3.24	3.52	3.62	3.93
60	2.00	0.25	17.48	19.01	21.10	22.94
80	2.50	0.18	43.63	47.44	64.73	70.38
120	3.00	0.13	23.74	25.82	88.47	96.20
170	3.50	0.09	2.54	2.76	91.01	98.96
200	3.75	0.07	0.30	0.33	91.31	99.29
230	4.00	0.06	0.06	0.07	91.37	99.36

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

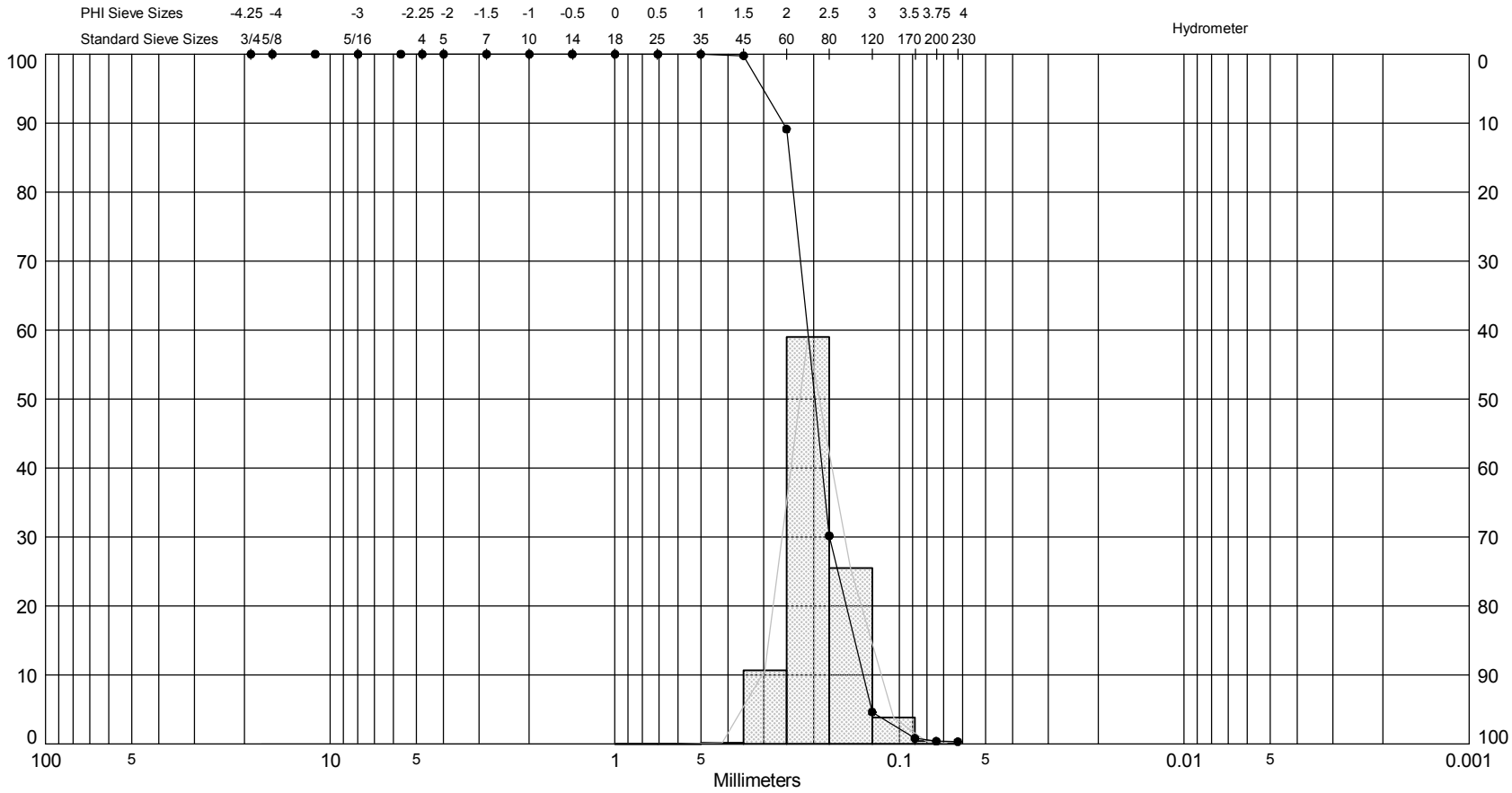
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.76	2.59	2.29	2.02	1.82	1.53

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.28	0.21	0.44	-0.21	3.55

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 8

2007 Hutaff Island Native Beach Individual Grab Sample Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (+3)	—●—	3.0	SP	#200 - 0.39 #230 - 0.32			2.33	2.37	0.46	3.93	0.36

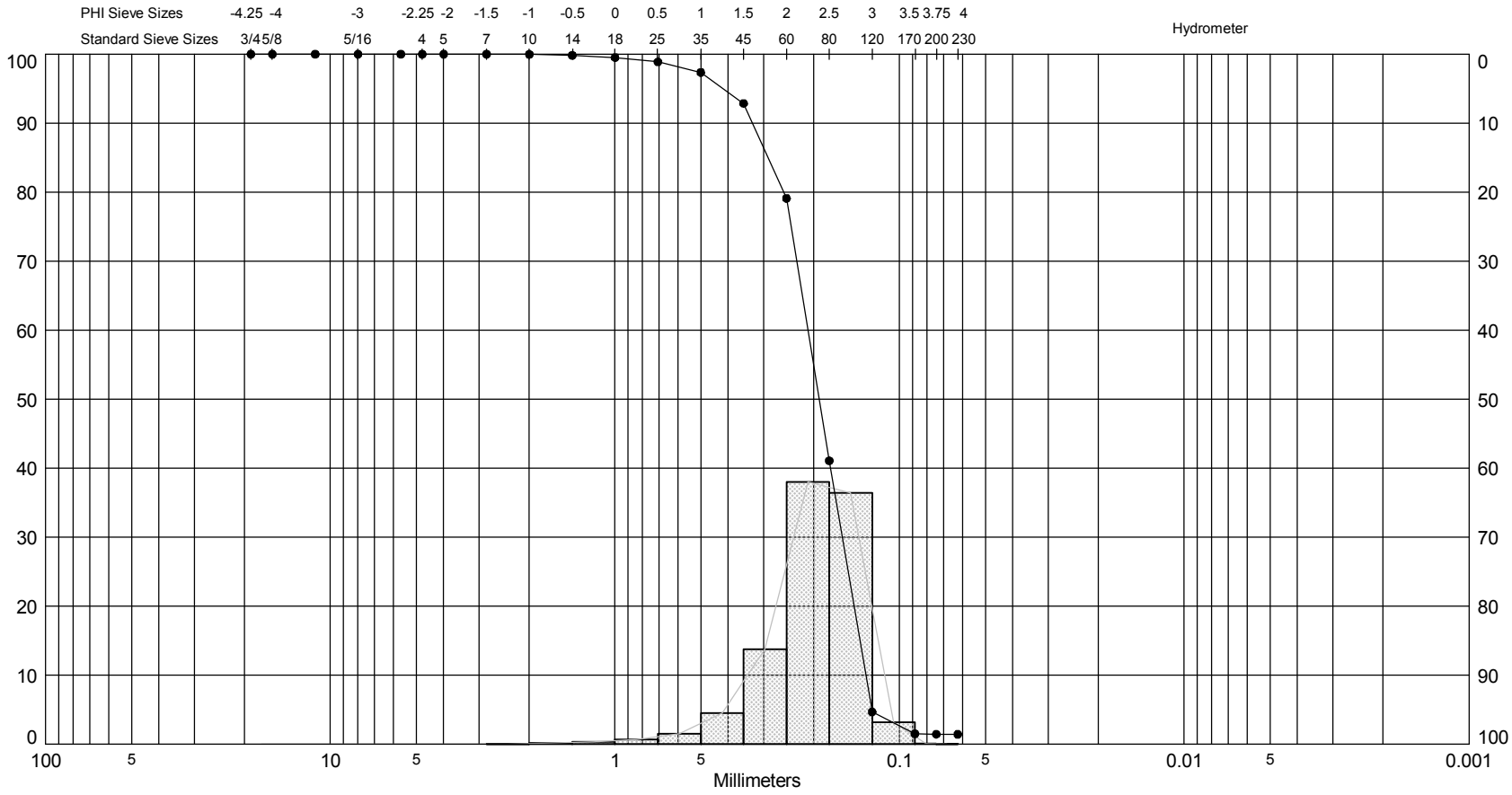
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,391,200
Northing (Y, ft):	203,913
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-11.6)	—●—	-11.6	SP	#200 - 1.43 #230 - 1.41			2.38	2.3	-1.42	6.91	0.55

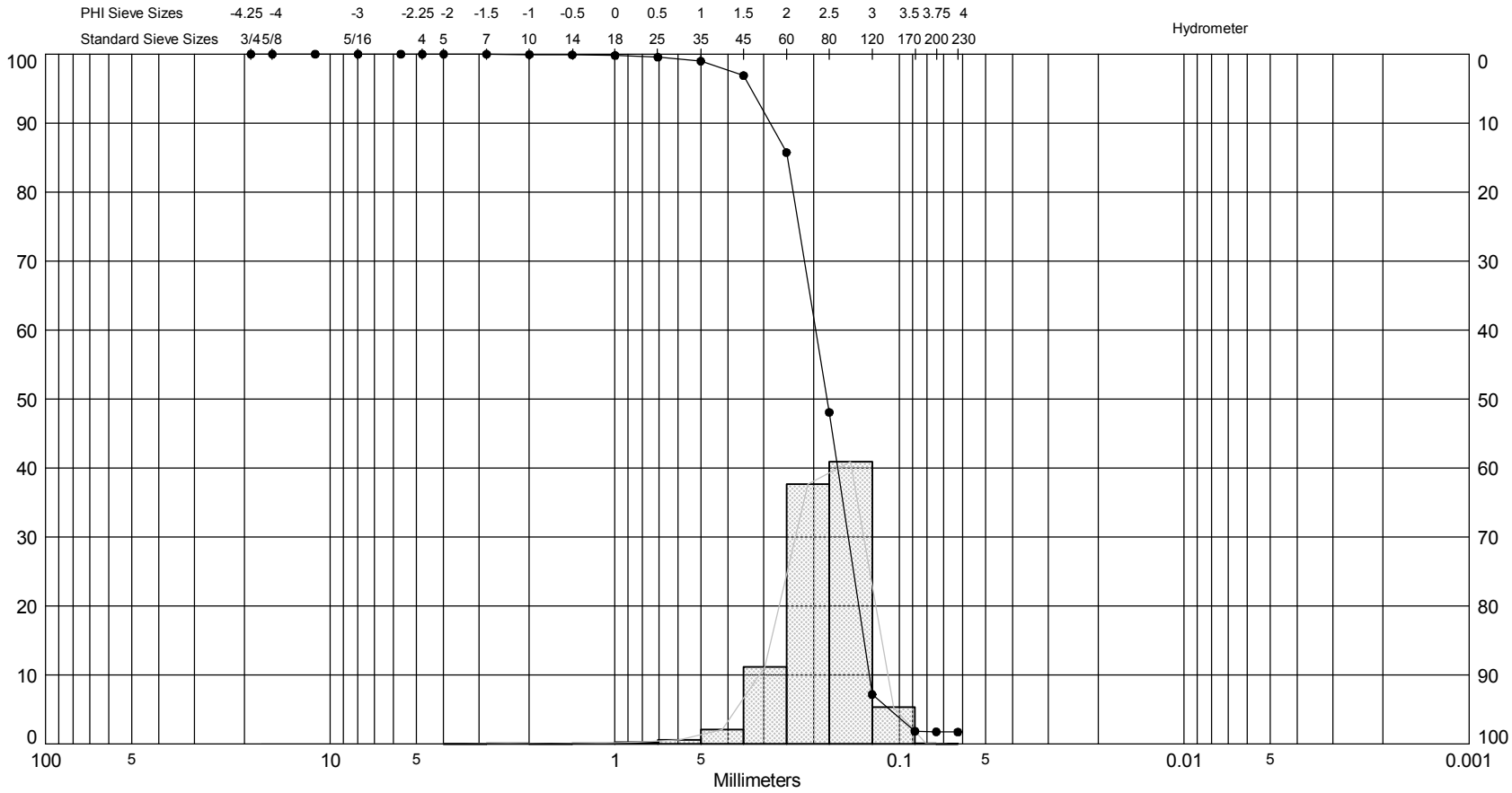
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-09-07
Analyzed By:	PB
Easting (X, ft):	2,391,811
Northing (Y, ft):	203,616
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-14.4)	—●—	-14.4	SP	#200 - 1.75 #230 - 1.71			2.47	2.42	-1.31	8.39	0.47

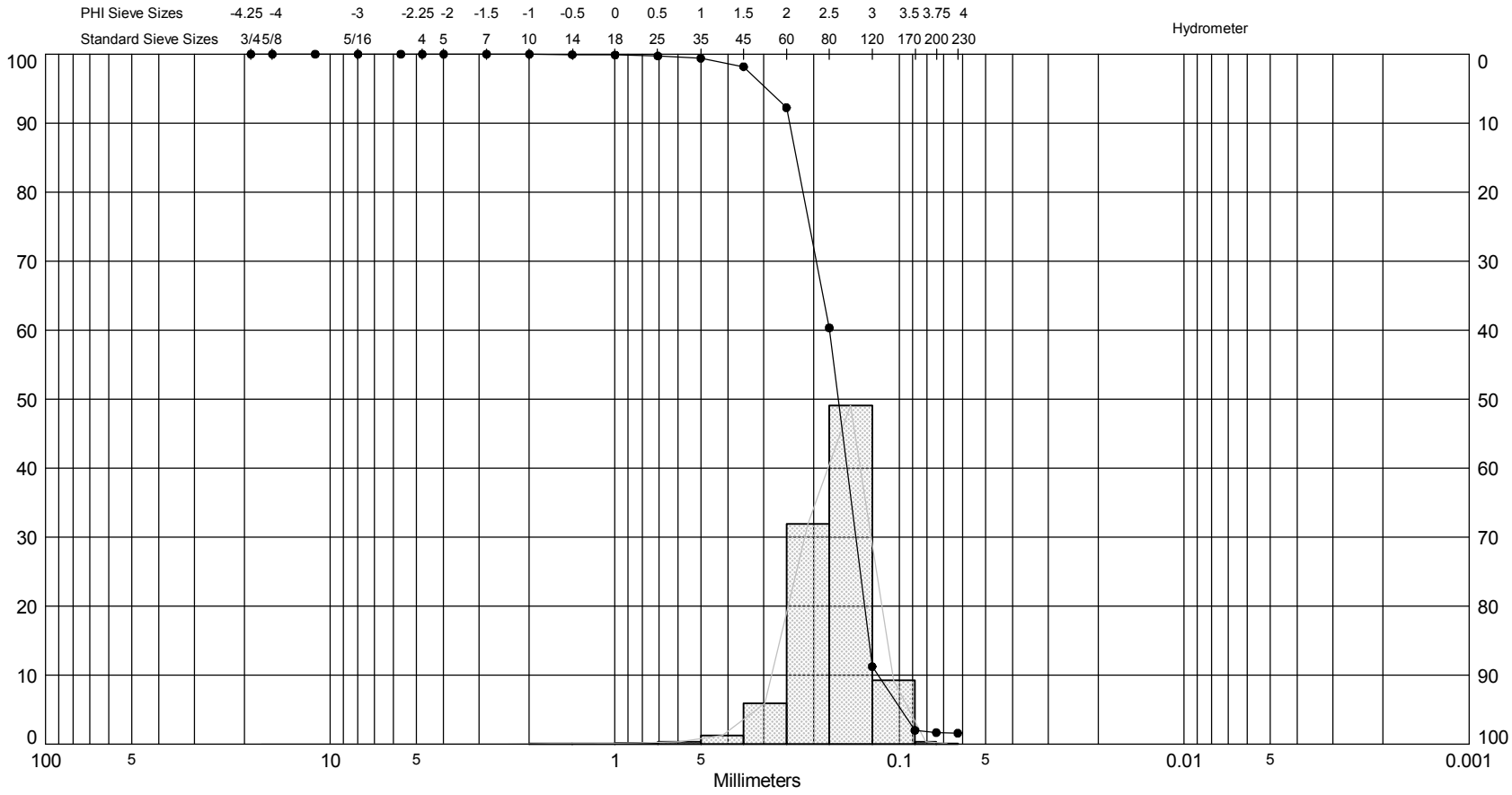
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-26-07
Analyzed By:	TD
Easting (X, ft):	2,392,044
Northing (Y, ft):	203,286
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-17.2)	—●—	-17.2	SP	#200 - 1.67 #230 - 1.59			2.61	2.55	-1.12	7.53	0.43

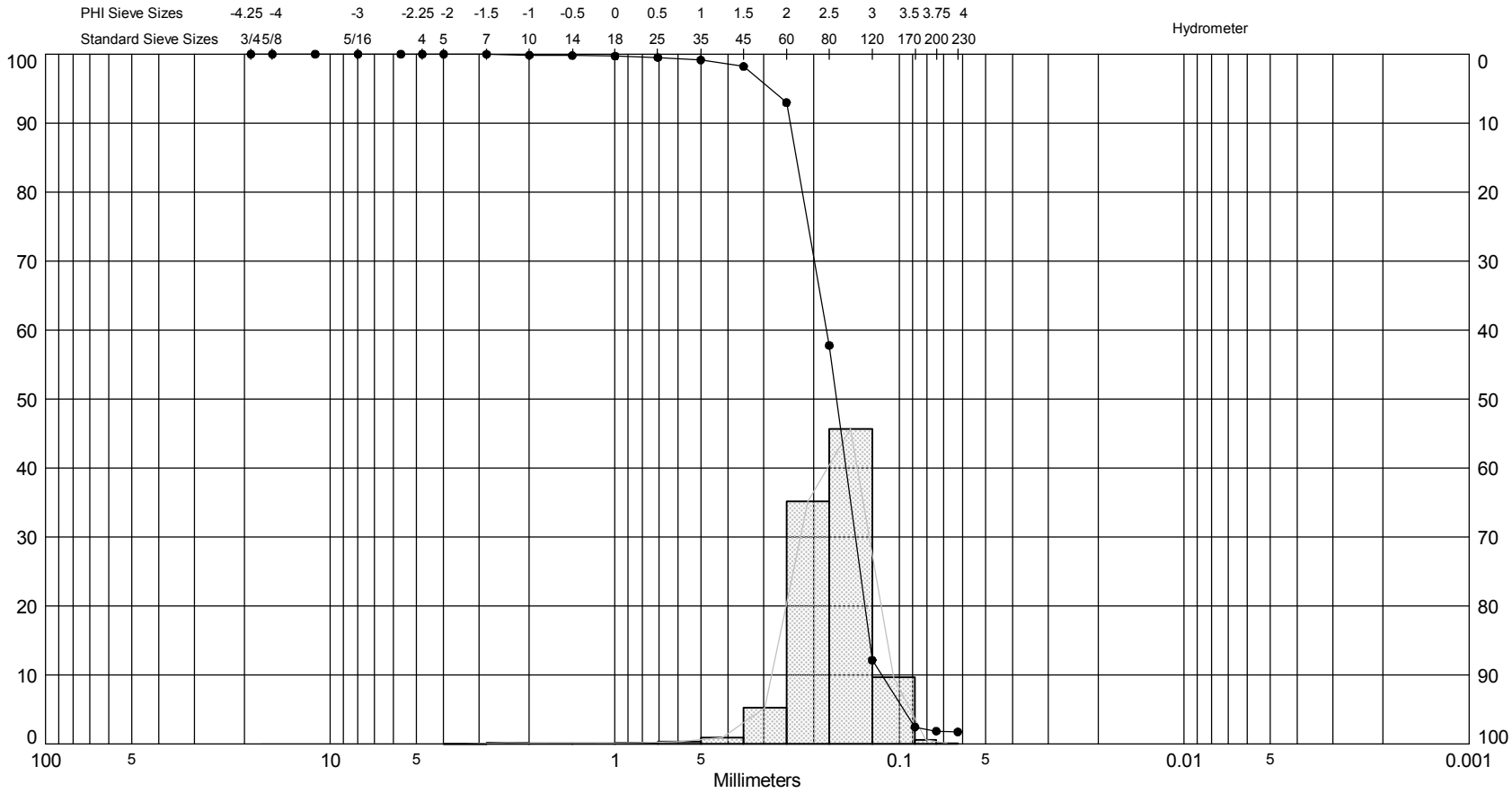
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,392,564
Northing (Y, ft):	203,025
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-20)	—●—	-20.0	SP	#200 - 1.85 #230 - 1.73			2.59	2.54	-1.75	13.72	0.47

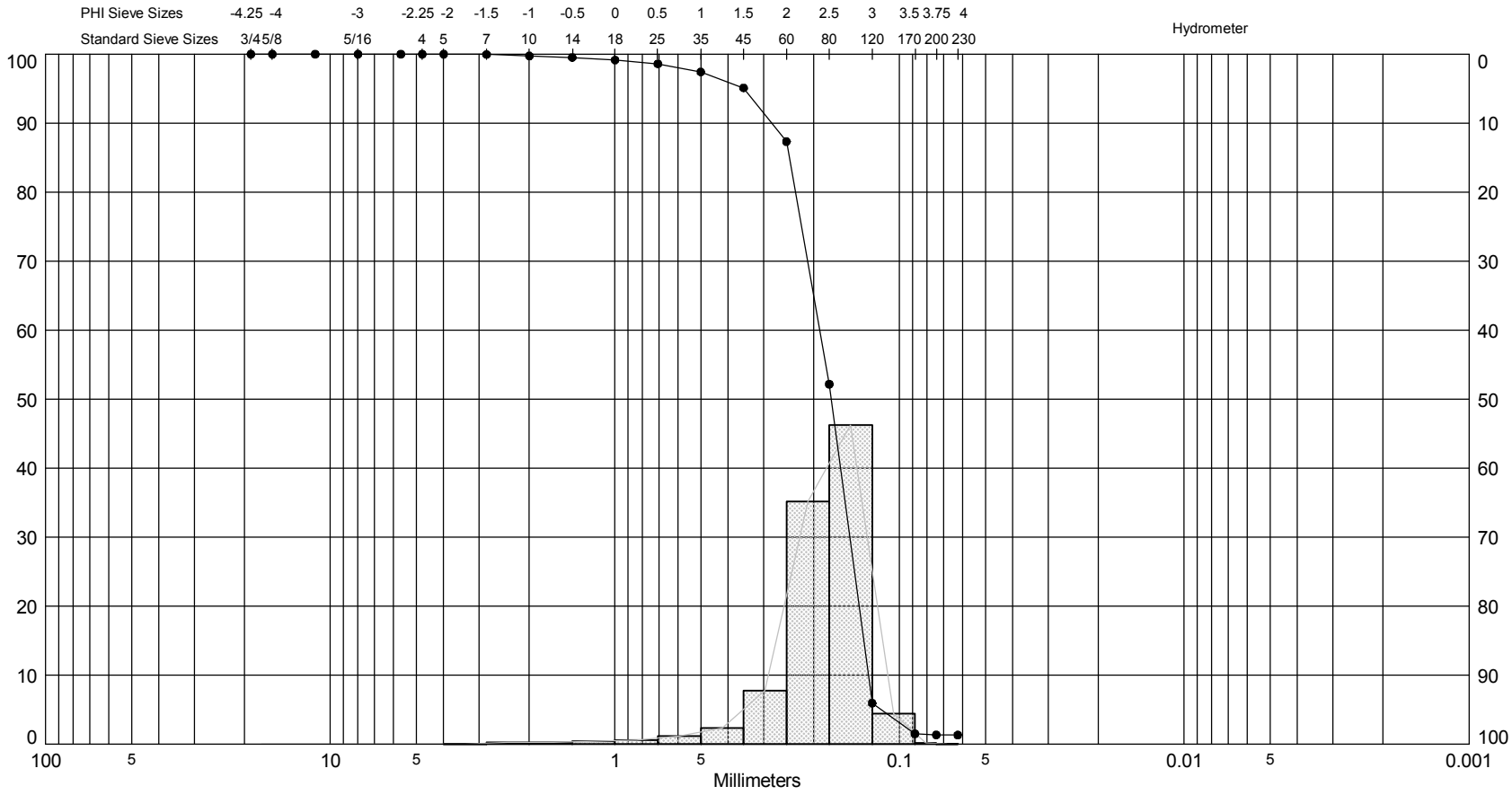
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,392,882
Northing (Y, ft):	202,822
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-6)	—●—	-6.0	SP	#200 - 1.34 #230 - 1.31			2.52	2.41	-2.37	13.05	0.56

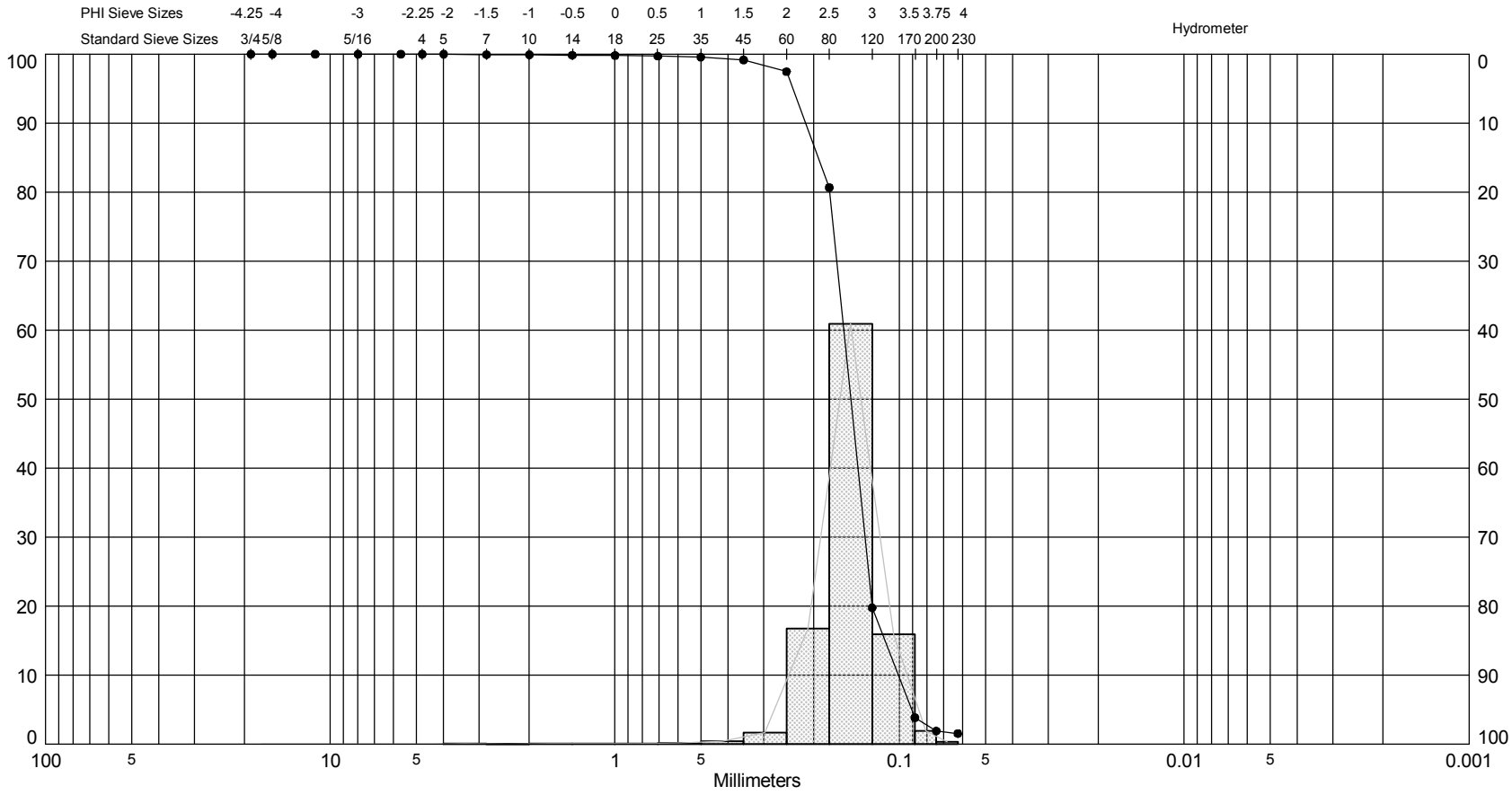
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-09-07
Analyzed By:	PB
Easting (X, ft):	2,391,449
Northing (Y, ft):	203,768
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 (-8.8)	—●—	-8.8	SP	#200 - 1.90 #230 - 1.54			2.75	2.73	-2.11	20.6	0.41

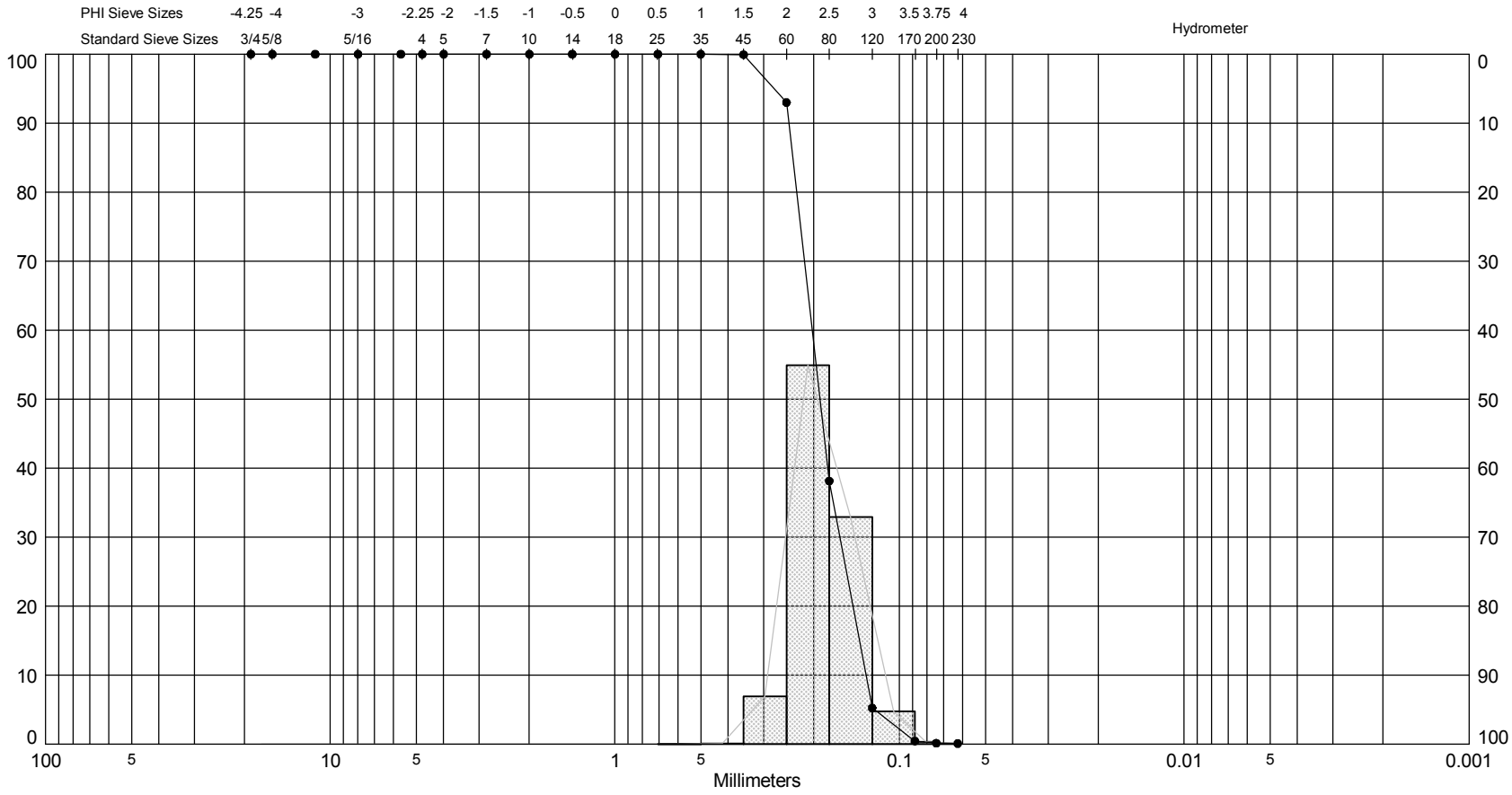
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-09-07
Analyzed By:	PB
Easting (X, ft):	2,391,603
Northing (Y, ft):	203,599
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 Dune	—●—	7.0	SP	#200 - 0.13 #230 - 0.08			2.39	2.43	0.39	3.39	0.35

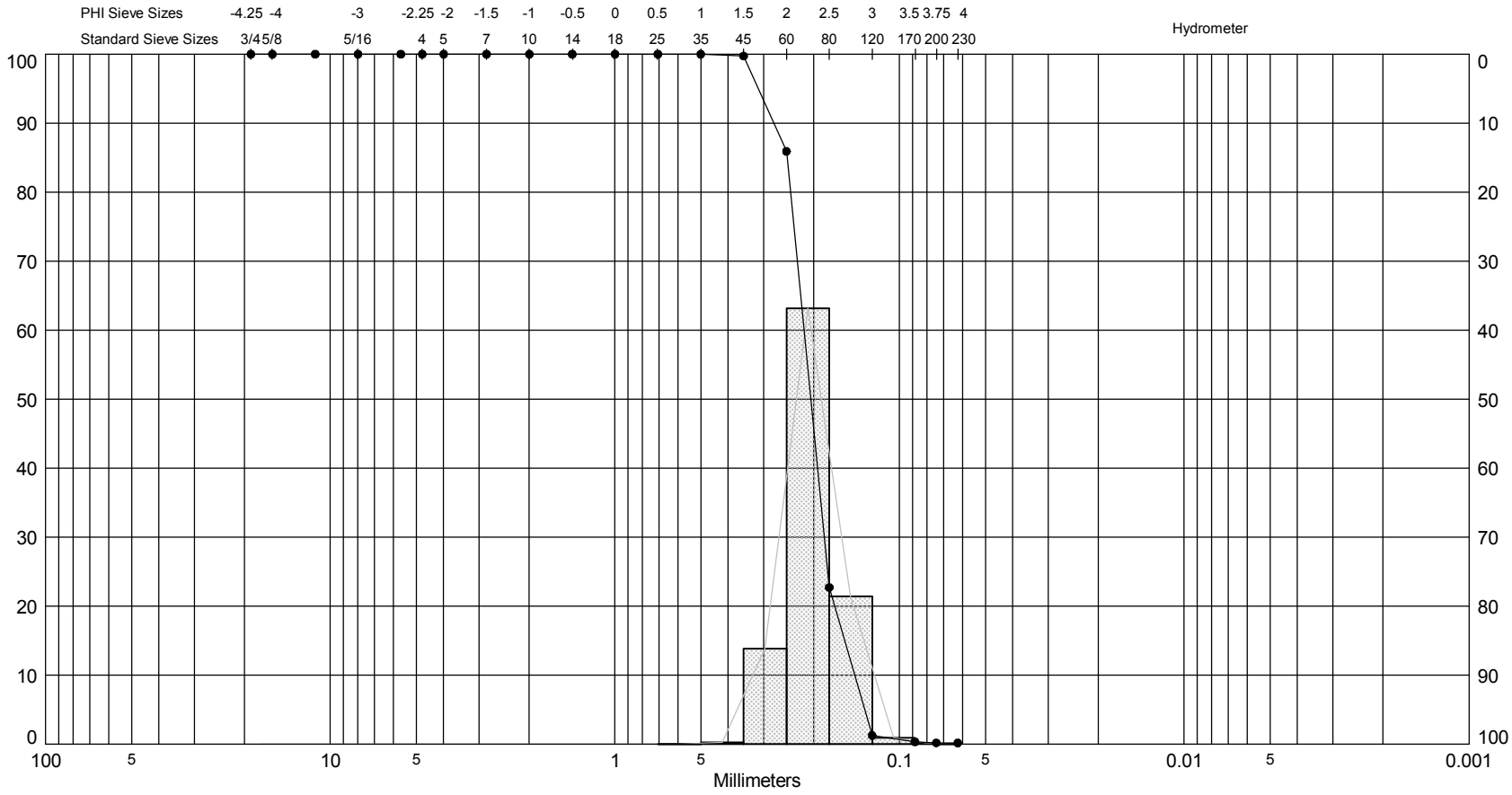
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,391,135
Northing (Y, ft):	203,952
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 MHW	—●—	1.4	SP	#200 - 0.18 #230 - 0.16			2.28	2.3	0.19	3.76	0.32

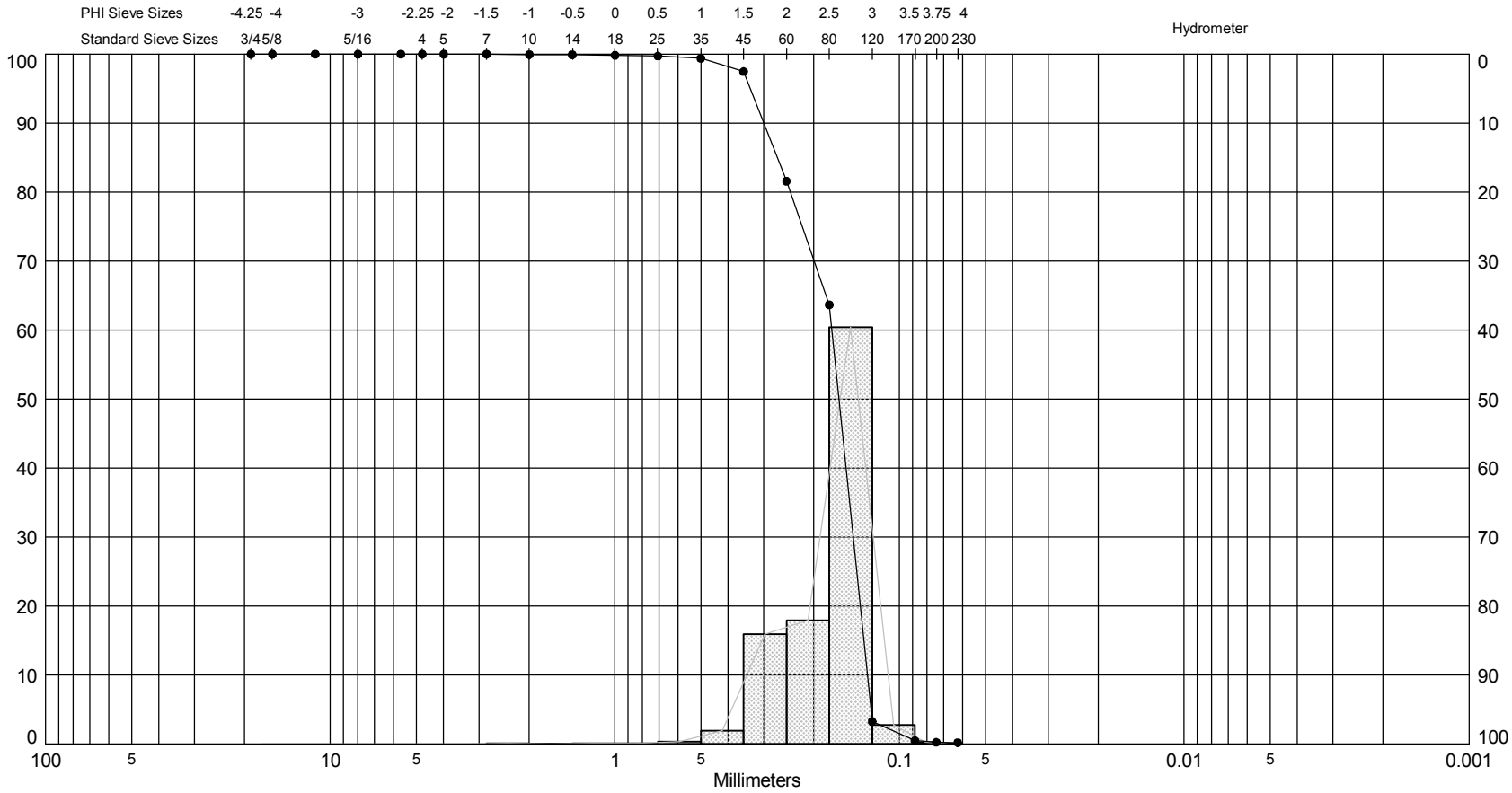
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,391,223
Northing (Y, ft):	203,899
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 Mid Berm	—●—	4.2	SP	#200 - 0.23 #230 - 0.19			2.61	2.47	-1.46	7.17	0.47

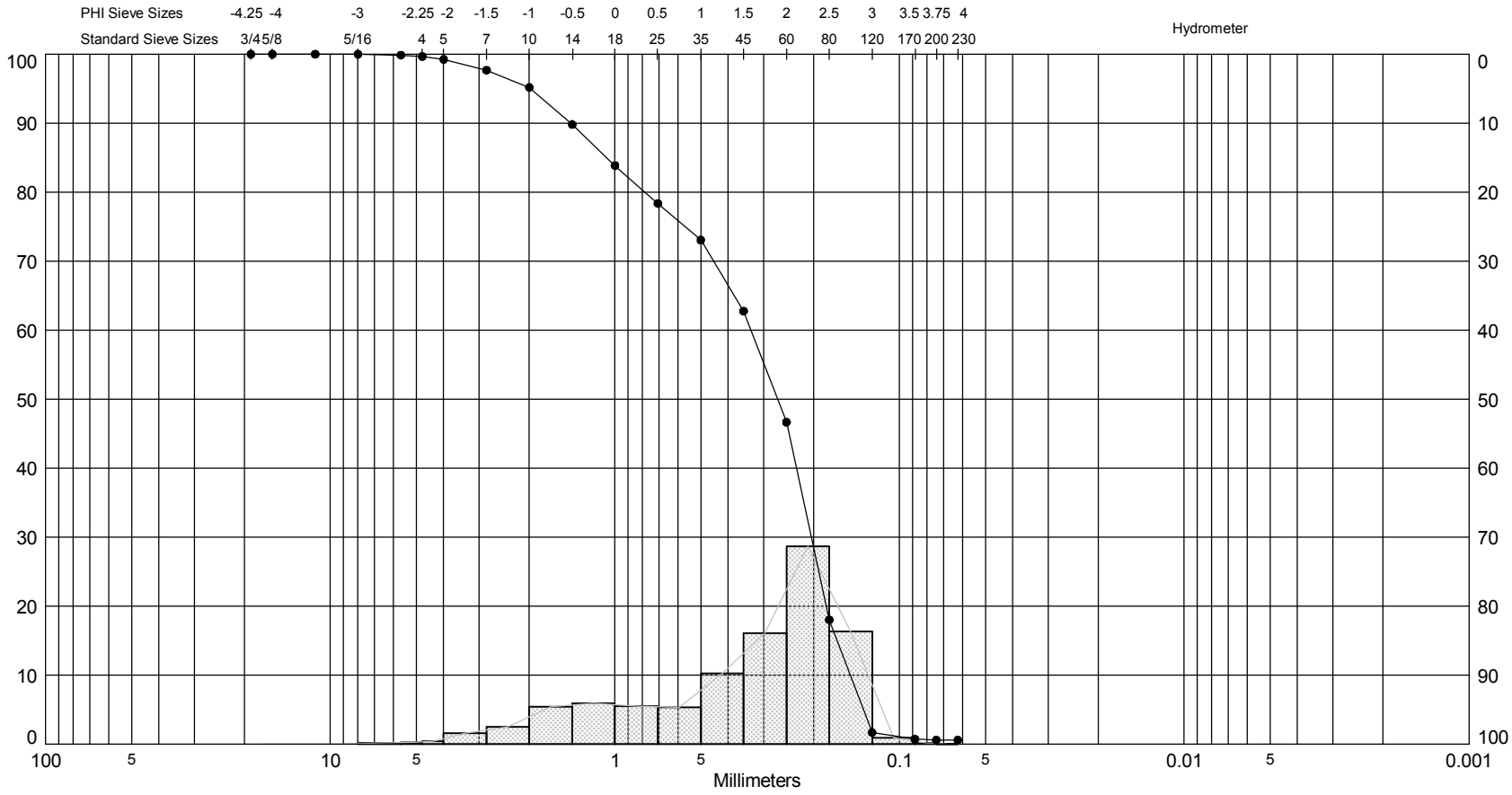
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,391,180
Northing (Y, ft):	203,924
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 MLW	—●—	-3.1	SW	#200 - 0.60 #230 - 0.58			1.9	1.47	-1.03	3.2	1.23

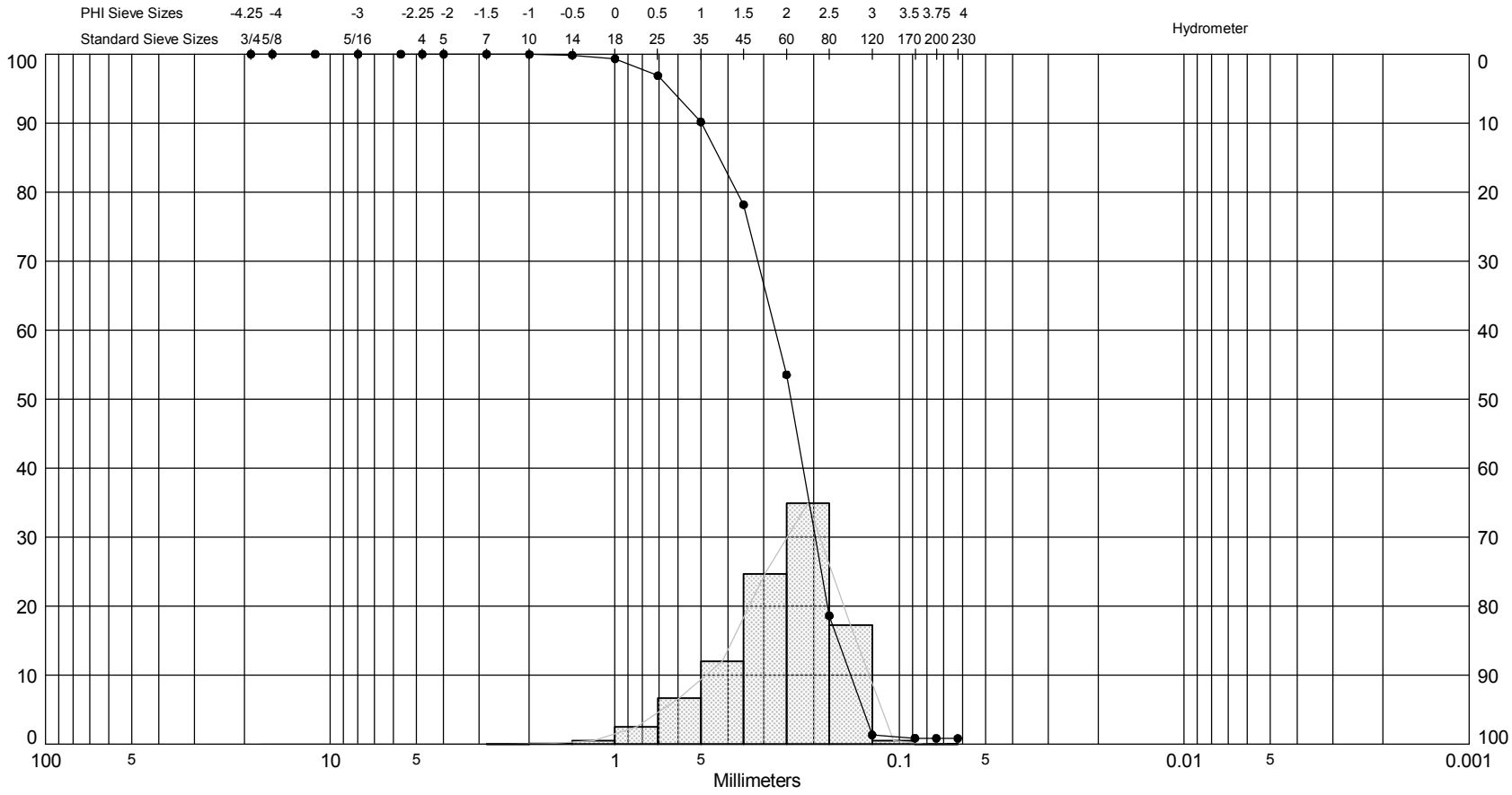
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,391,320
Northing (Y, ft):	203,835
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 MTL	—●—	-0.7	SP	#200 - 0.83 #230 - 0.82			2.05	1.93	-0.83	3.66	0.65

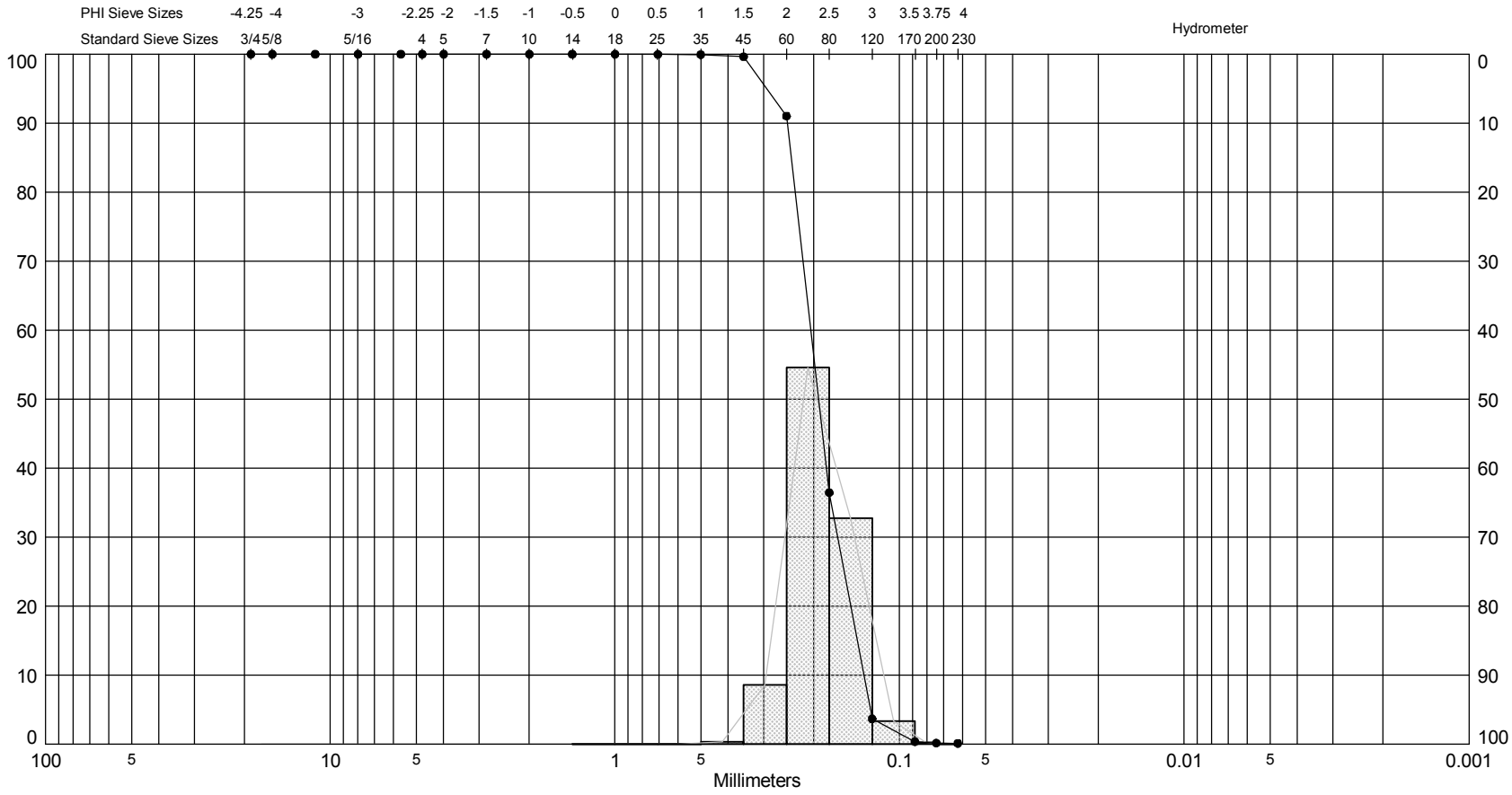
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,391,260
Northing (Y, ft):	203,877
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 Toe of Dune	—●—	5.2	SP	#200 - 0.15 #230 - 0.11			2.38	2.4	0.06	4.05	0.35

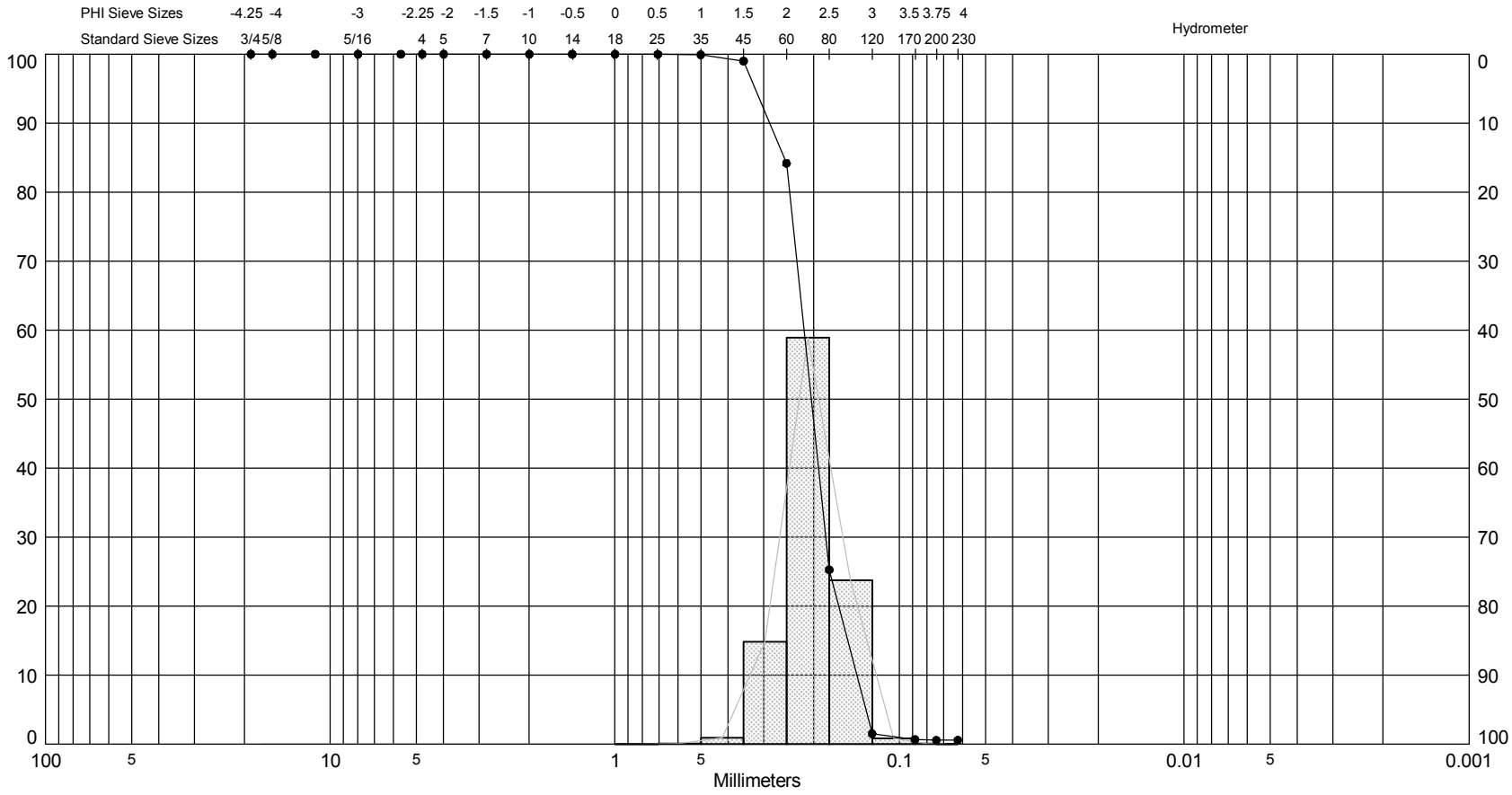
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-13-07
Analyzed By:	PB
Easting (X, ft):	2,391,155
Northing (Y, ft):	203,939
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (+3)	—●—	3.0	SP	#200 - 0.57 #230 - 0.56			2.29	2.29	-0.15	3.84	0.34

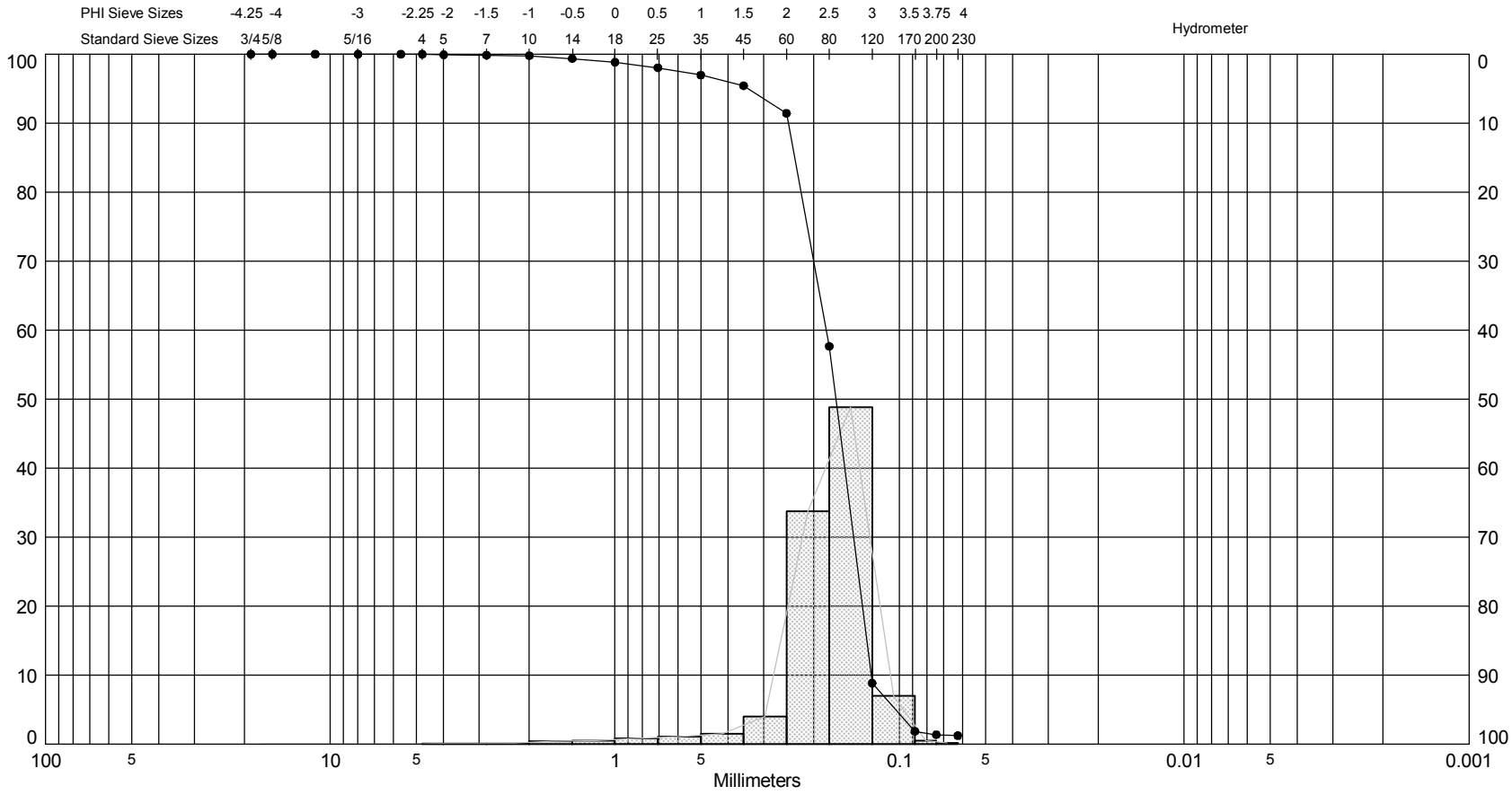
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,392,748
Northing (Y, ft):	206,415
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-11.6)	—●—	-11.6	SP	#200 - 1.37 #230 - 1.22			2.58	2.47	-2.71	15.35	0.59

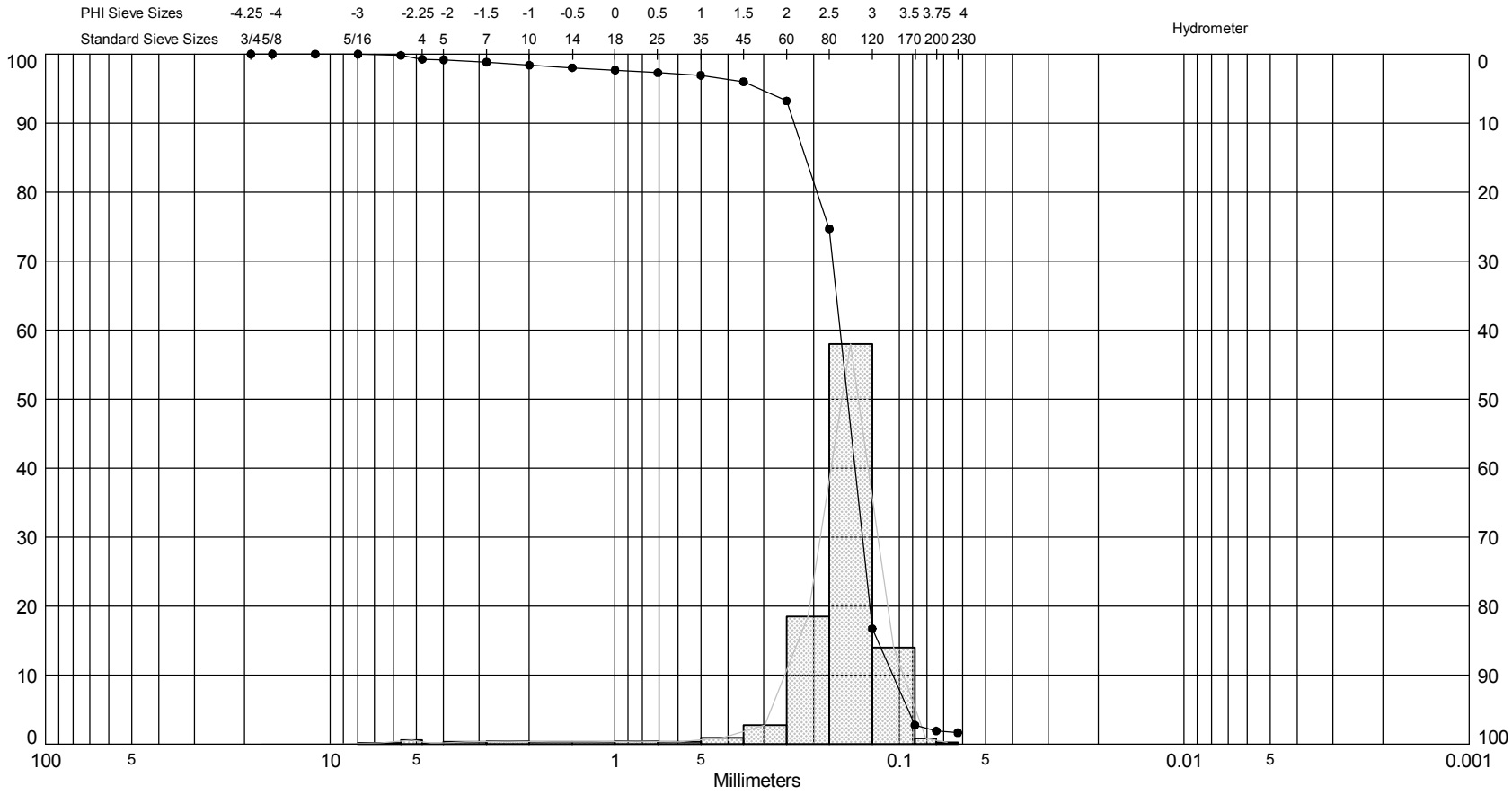
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,393,188
Northing (Y, ft):	205,924
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-14.4)	—●—	-14.4	SP	#200 - 1.90 #230 - 1.64			2.71	2.58	-4.04	23.72	0.77

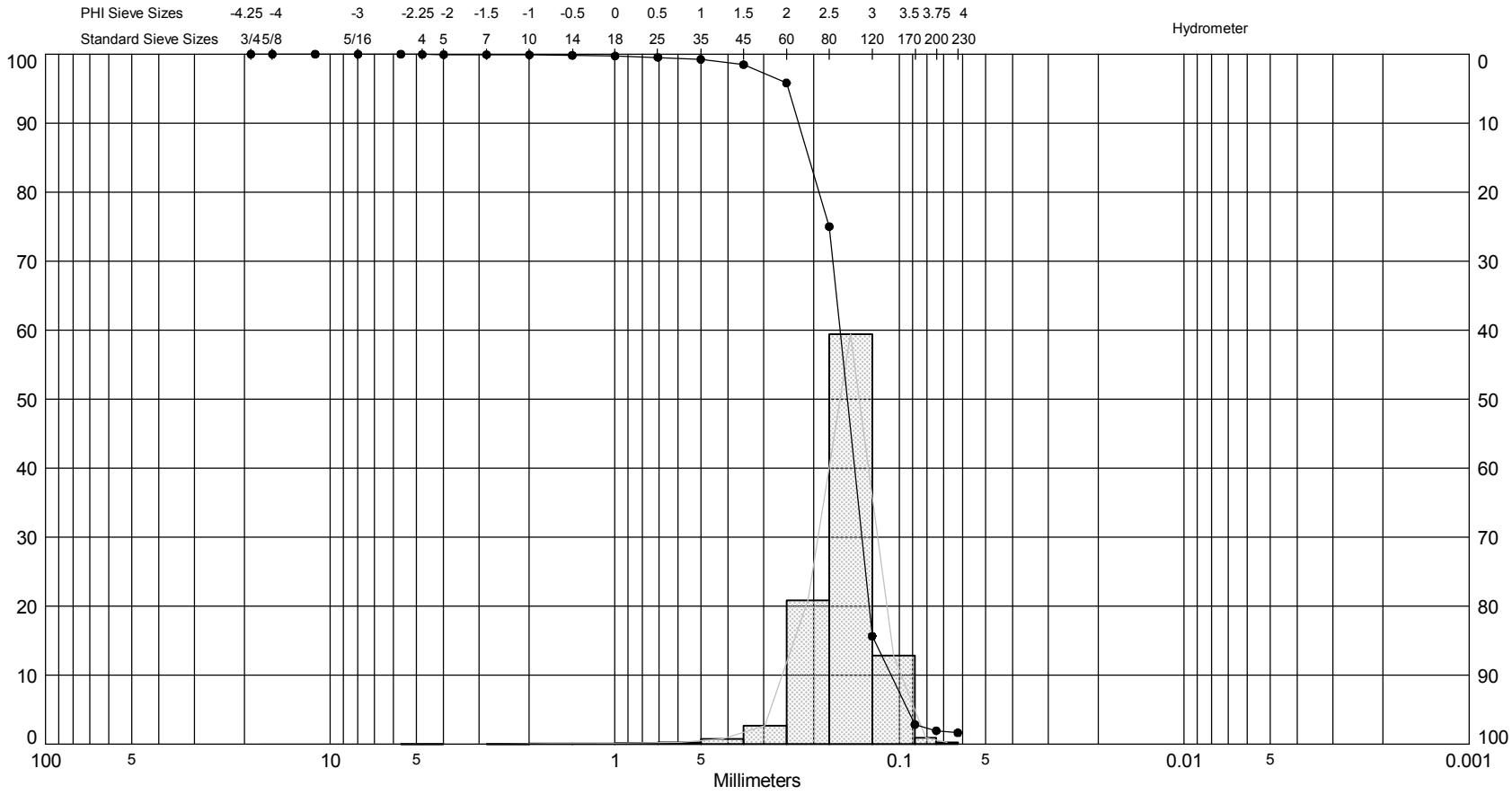
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,393,324
Northing (Y, ft):	205,997
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-17.2)	—●—	-17.2	SP	#200 - 1.93 #230 - 1.64			2.71	2.66	-2.44	21.02	0.44

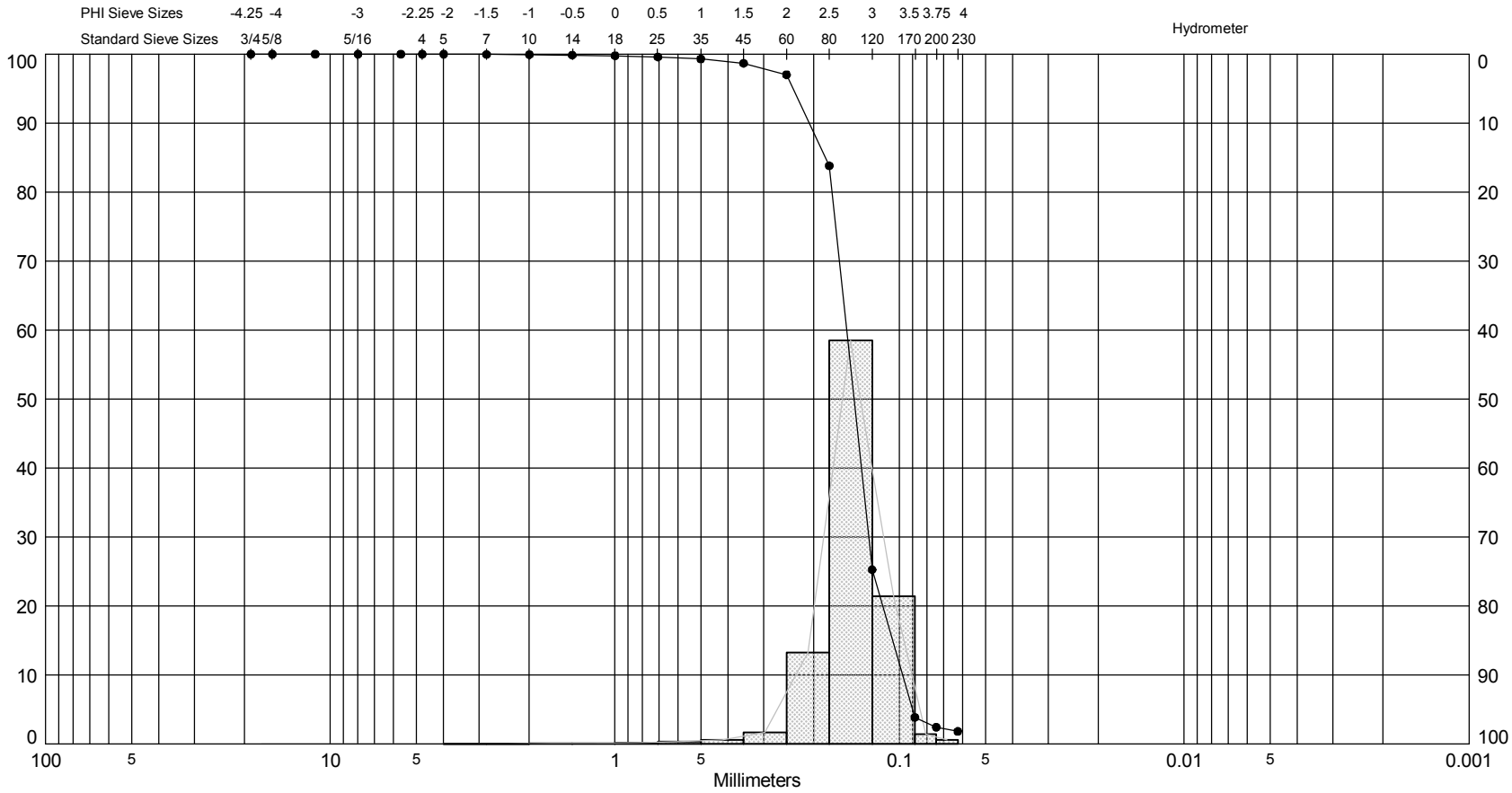
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,393,486
Northing (Y, ft):	205,855
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-20)	—●—	-20.0	SP	#200 - 2.41 #230 - 1.81			2.79	2.77	-2.15	17.24	0.44

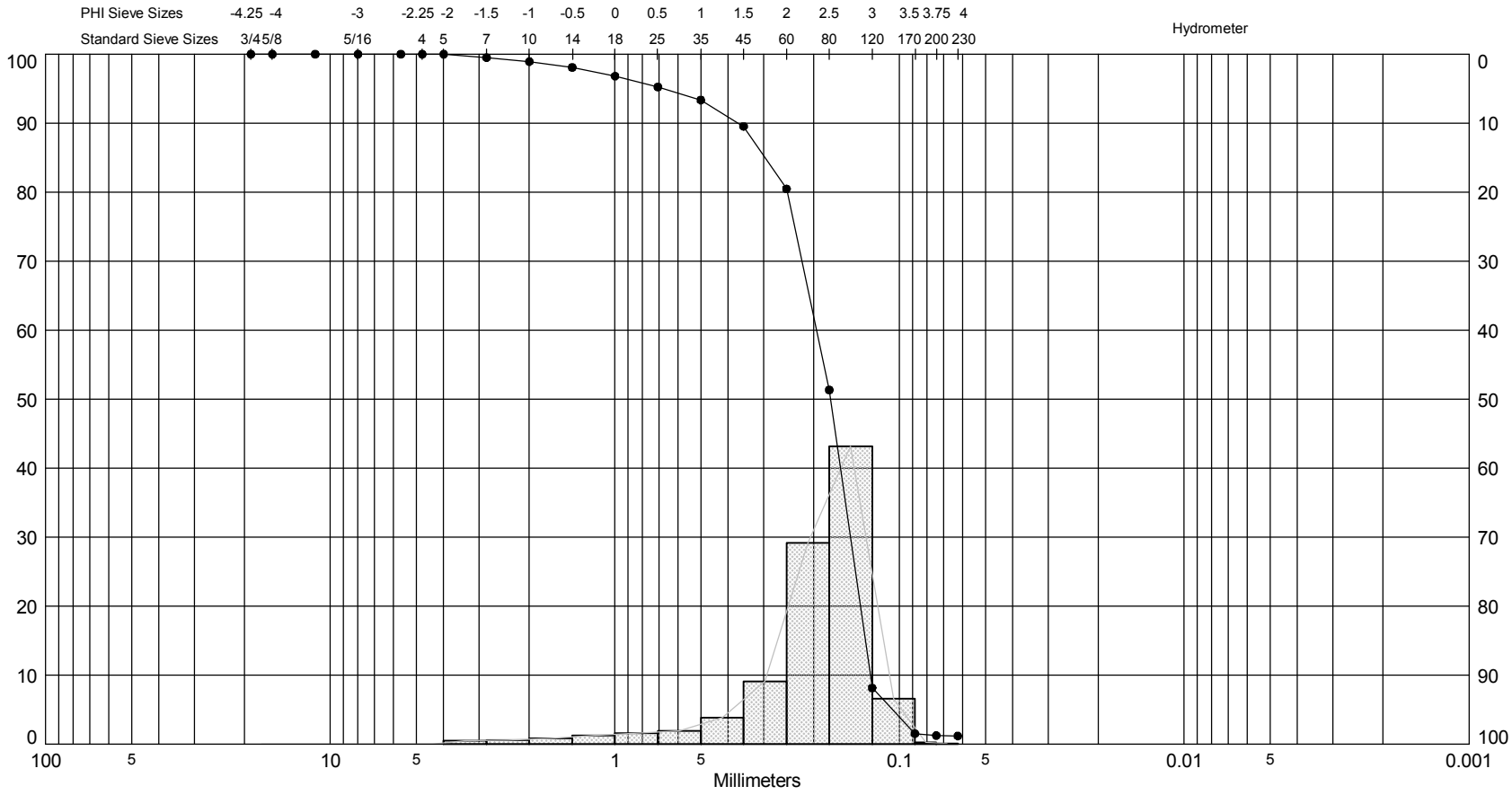
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,393,623
Northing (Y, ft):	205,771
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-6)	—●—	-6.0	SP	#200 - 1.24 #230 - 1.18			2.52	2.3	-2.26	9.41	0.81

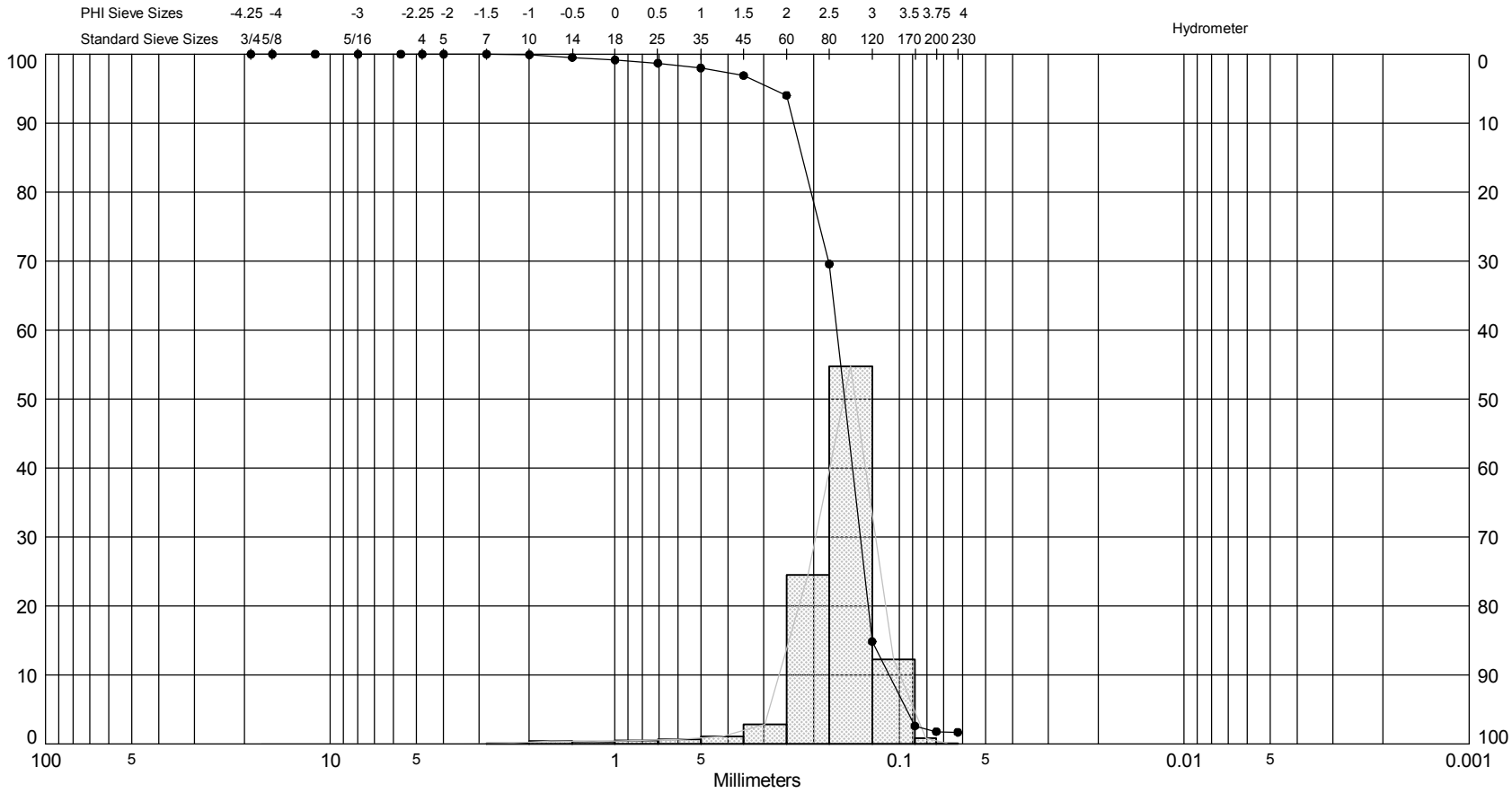
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	2,393,045
Northing (Y, ft):	206,230
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 (-8.8)	—●—	-8.8	SP	#200 - 1.79 #230 - 1.69			2.68	2.6	-2.6	15.34	0.53

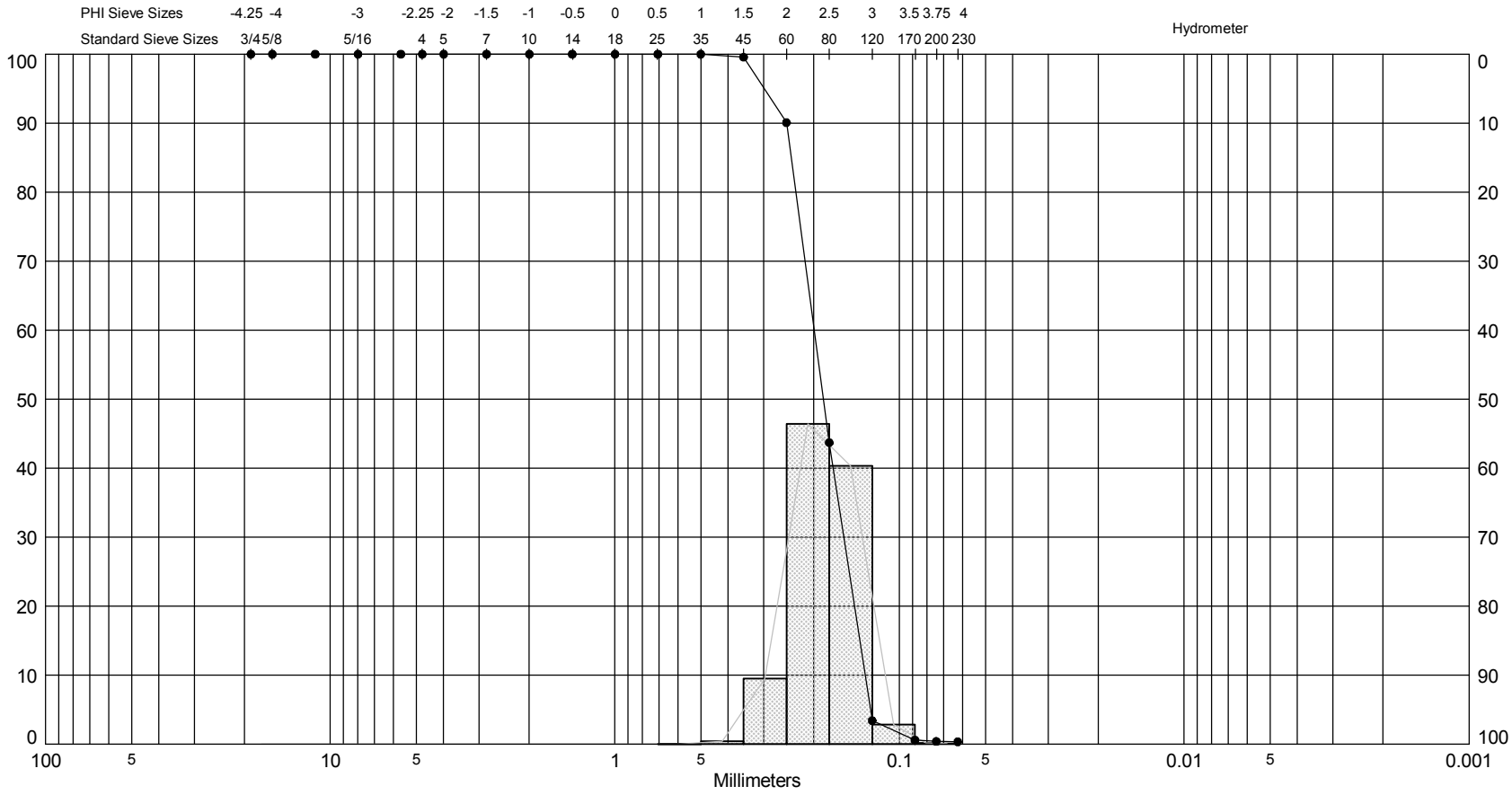
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	TD
Easting (X, ft):	2,393,088
Northing (Y, ft):	206,095
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 Dune	—●—	9.5	SP	#200 - 0.39 #230 - 0.34			2.43	2.43	-0.15	3.17	0.36

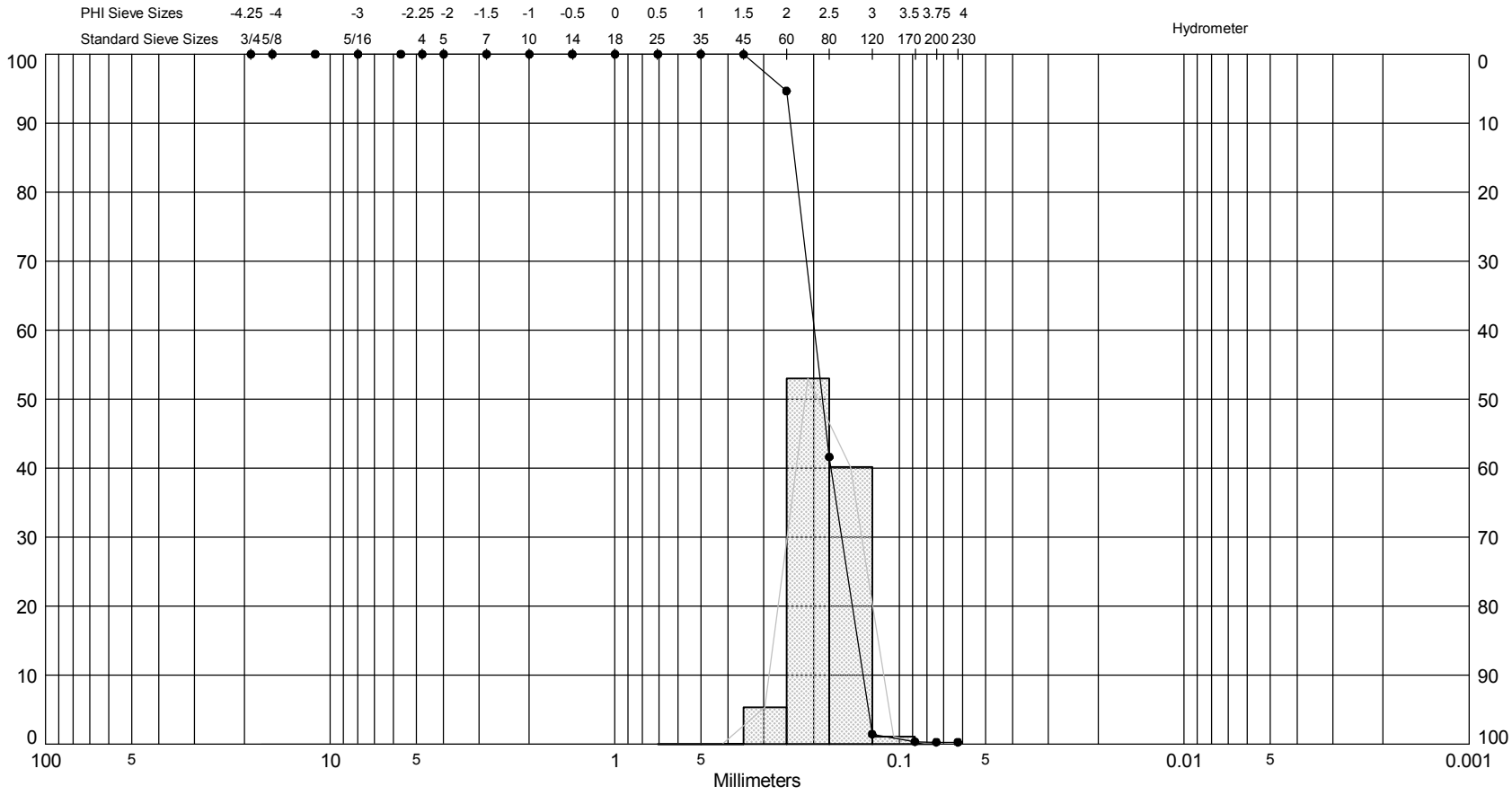
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,392,702
Northing (Y, ft):	206,504
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 MHW	—●—	1.4	SP	#200 - 0.28 #230 - 0.28			2.42	2.44	-0.07	2.8	0.3

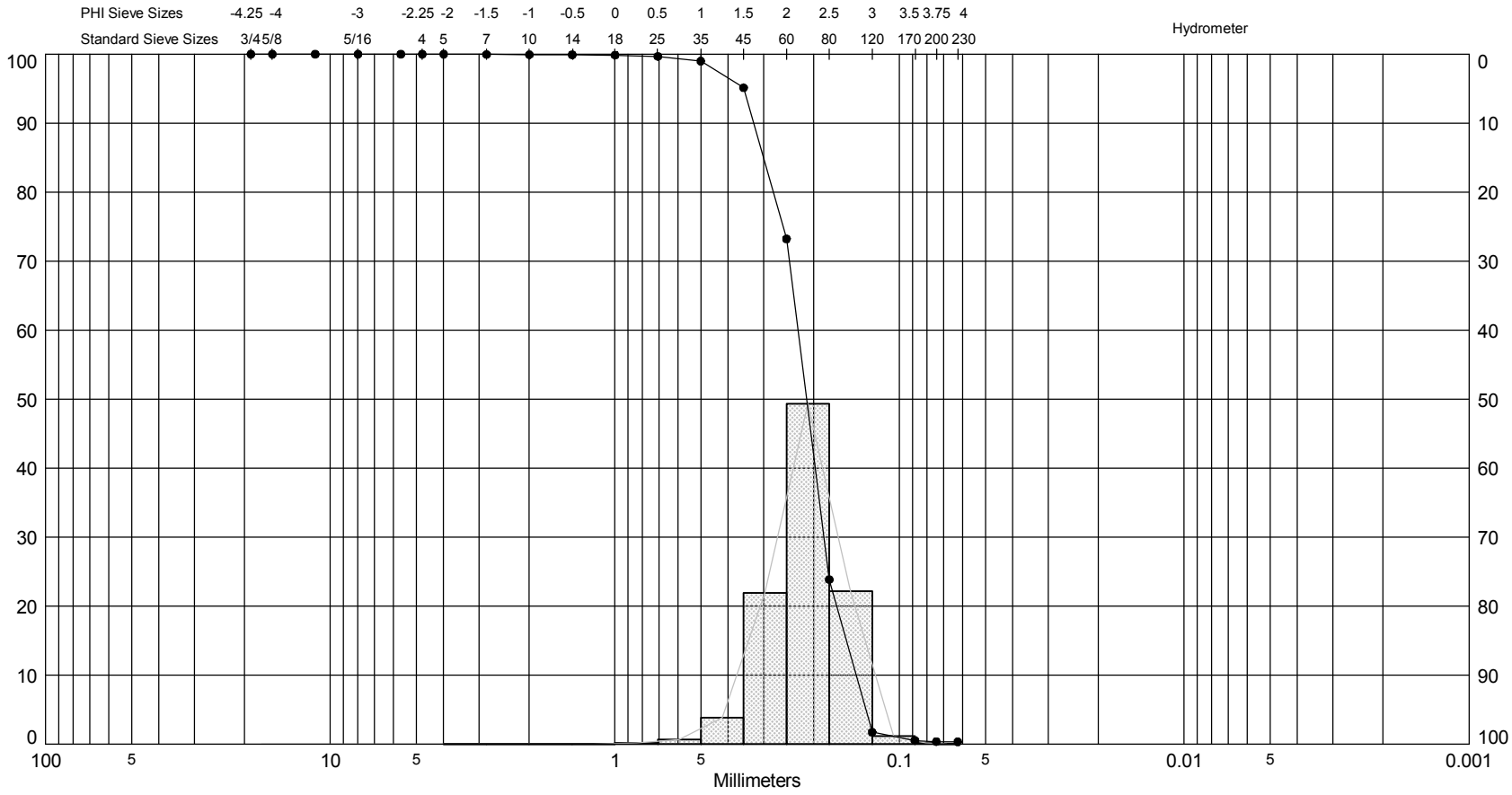
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,392,783
Northing (Y, ft):	206,389
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 Mid Berm	—●—	3.7	SP	#200 - 0.37 #230 - 0.33			2.24	2.21	-0.94	7.91	0.45

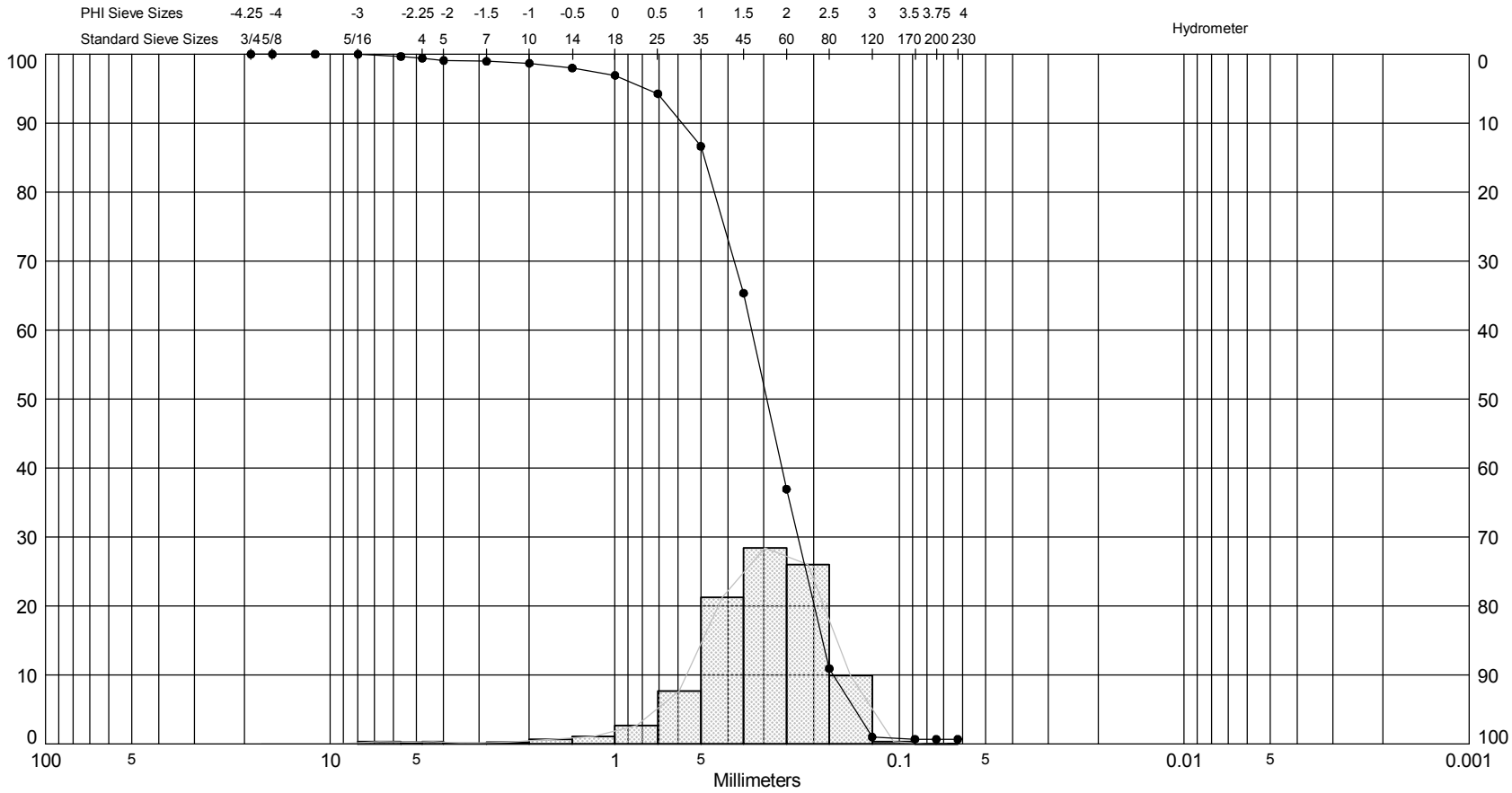
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,392,726
Northing (Y, ft):	206,433
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 MLW	—●—	-3.0	SP	#200 - 0.67 #230 - 0.66			1.77	1.67	-1.73	9.04	0.8

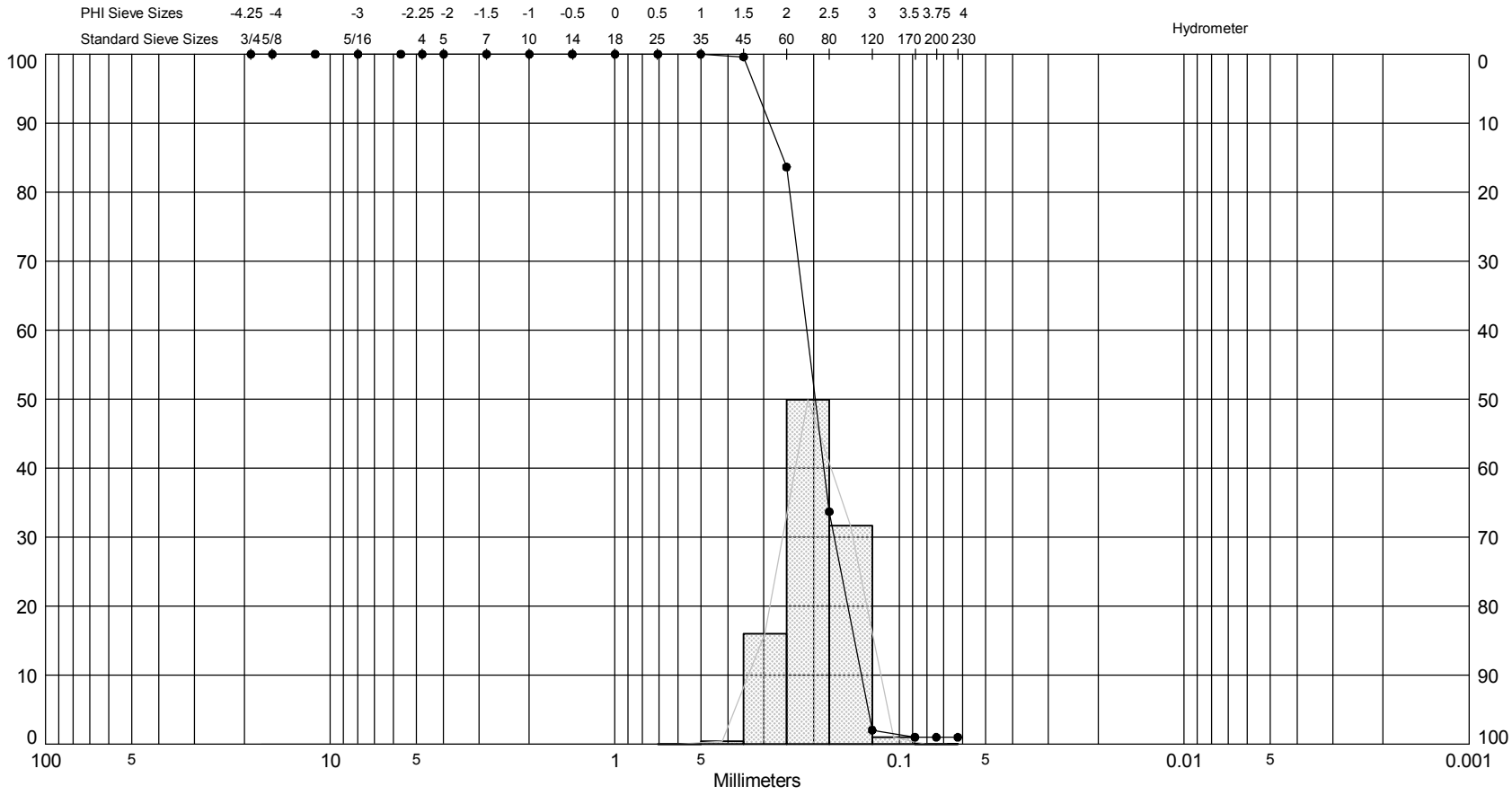
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,392,894
Northing (Y, ft):	206,301
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 MTL	—●—	-0.7	SP	#200 - 0.99 #230 - 0.98			2.34	2.34	-0.15	2.61	0.36

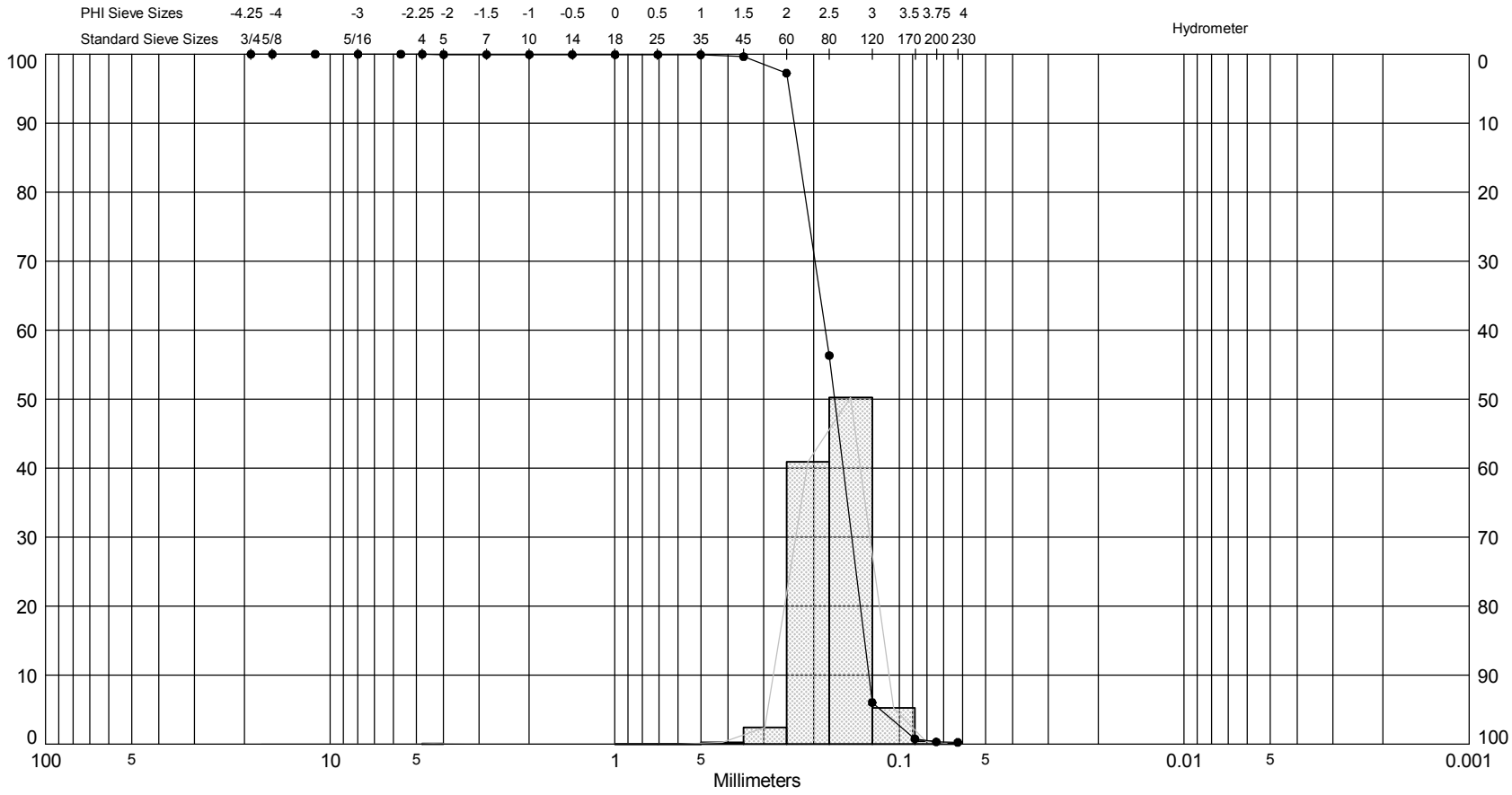
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	TD
Easting (X, ft):	2,392,812
Northing (Y, ft):	206,366
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 Toe of Dune	—●—	5.7	SP	#200 - 0.32 #230 - 0.24			2.56	2.54	-1.17	18.73	0.35

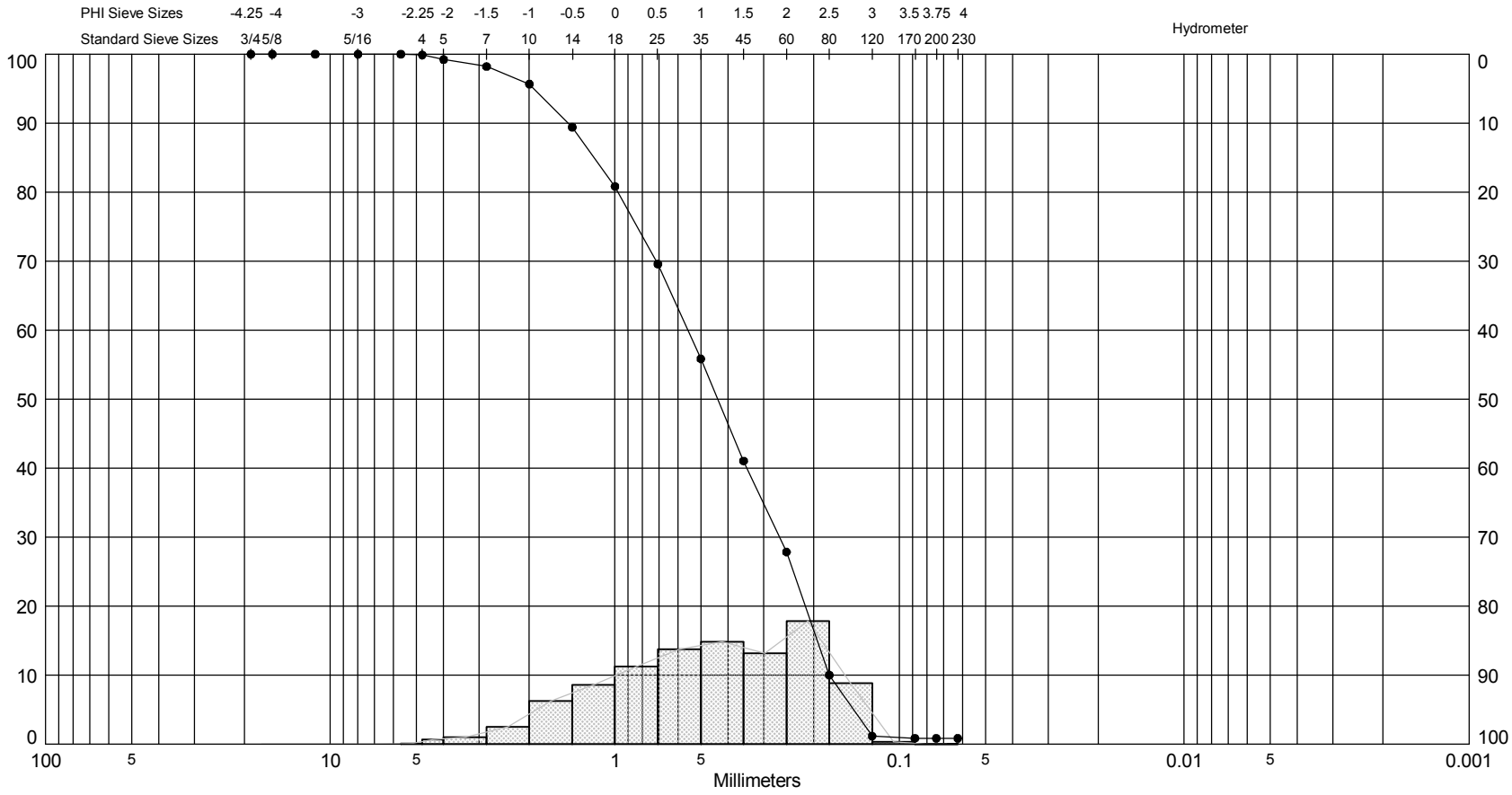
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-14-07
Analyzed By:	PB
Easting (X, ft):	2,392,716
Northing (Y, ft):	206,492
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (+2)	—●—	2.0	SW	#200 - 0.84 #230 - 0.83			1.2	1.08	-0.45	2.49	1.16

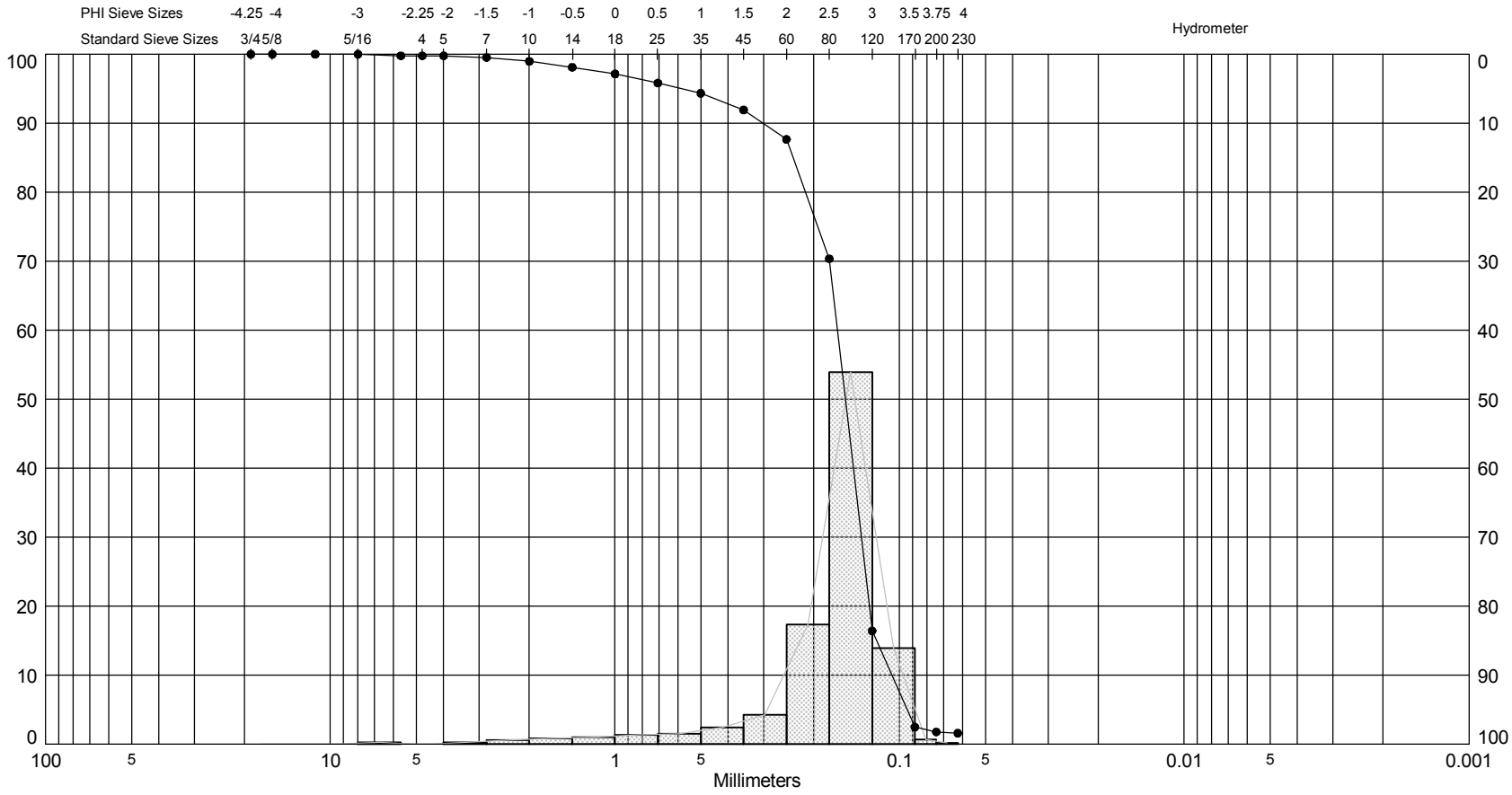
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	PB
Easting (X, ft):	2,394,579
Northing (Y, ft):	208,673
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-11.6)	—●—	-11.6	SP	#200 - 1.77 #230 - 1.59			2.69	2.49	-2.79	12.93	0.82

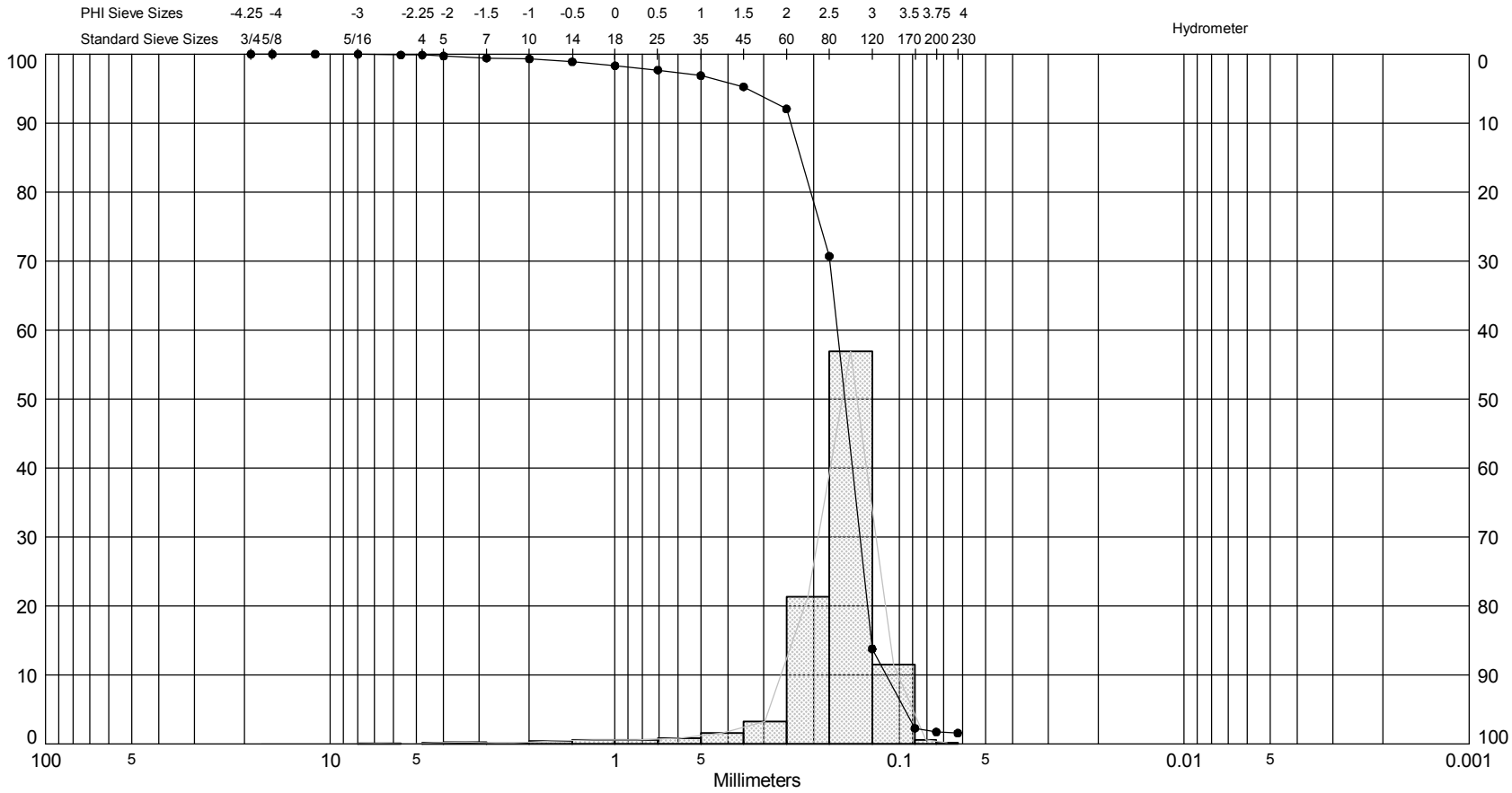
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	PB
Easting (X, ft):	2,394,994
Northing (Y, ft):	208,257
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-14.4)	—●—	-14.4	SP	#200 - 1.72 #230 - 1.56			2.68	2.55	-3.5	20.78	0.67

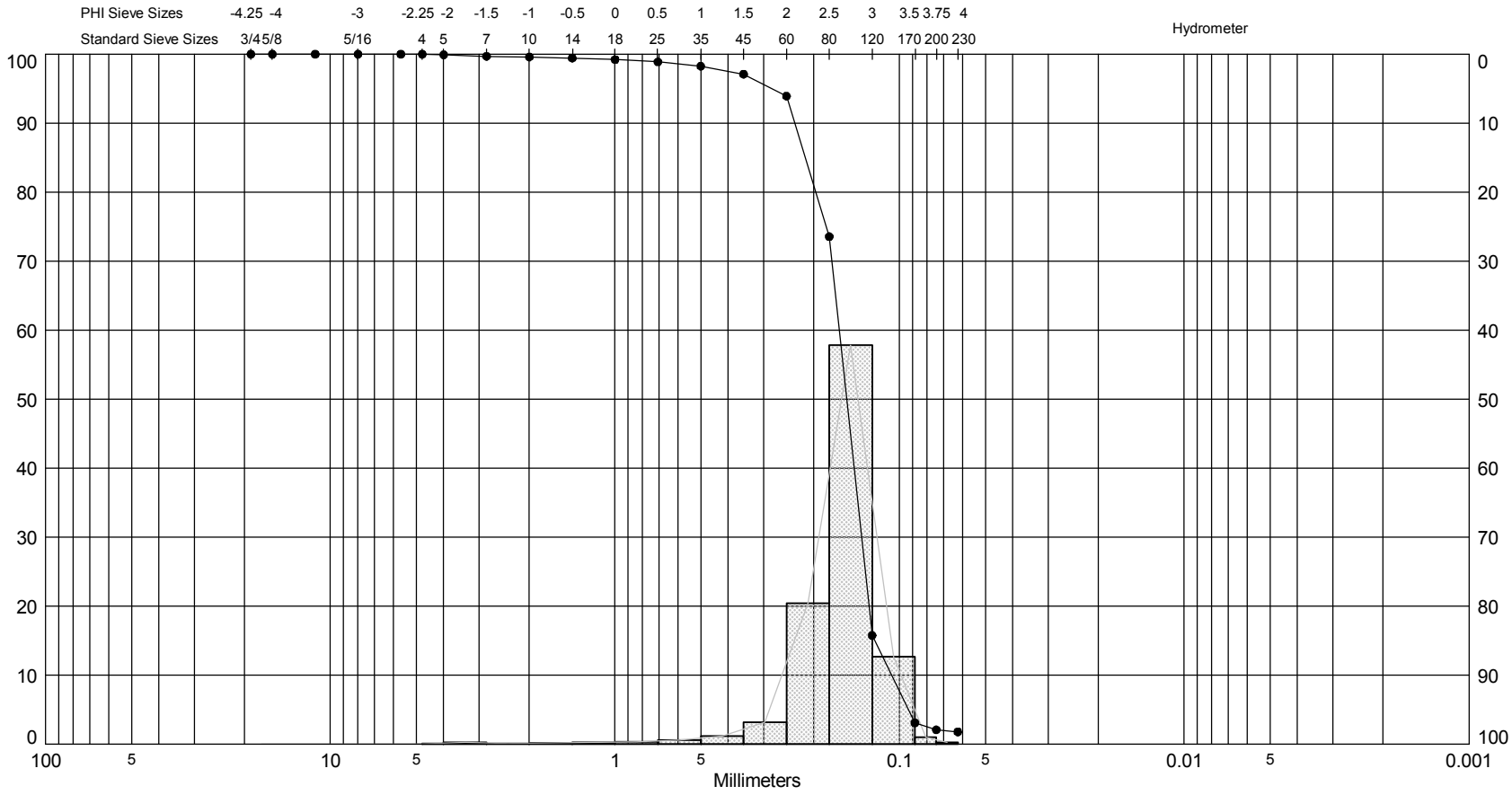
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	PB
Easting (X, ft):	2,395,105
Northing (Y, ft):	208,187
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-17.2)	—●—	-17.2	SP	#200 - 2.07 #230 - 1.78			2.7	2.62	-3.24	22.56	0.55

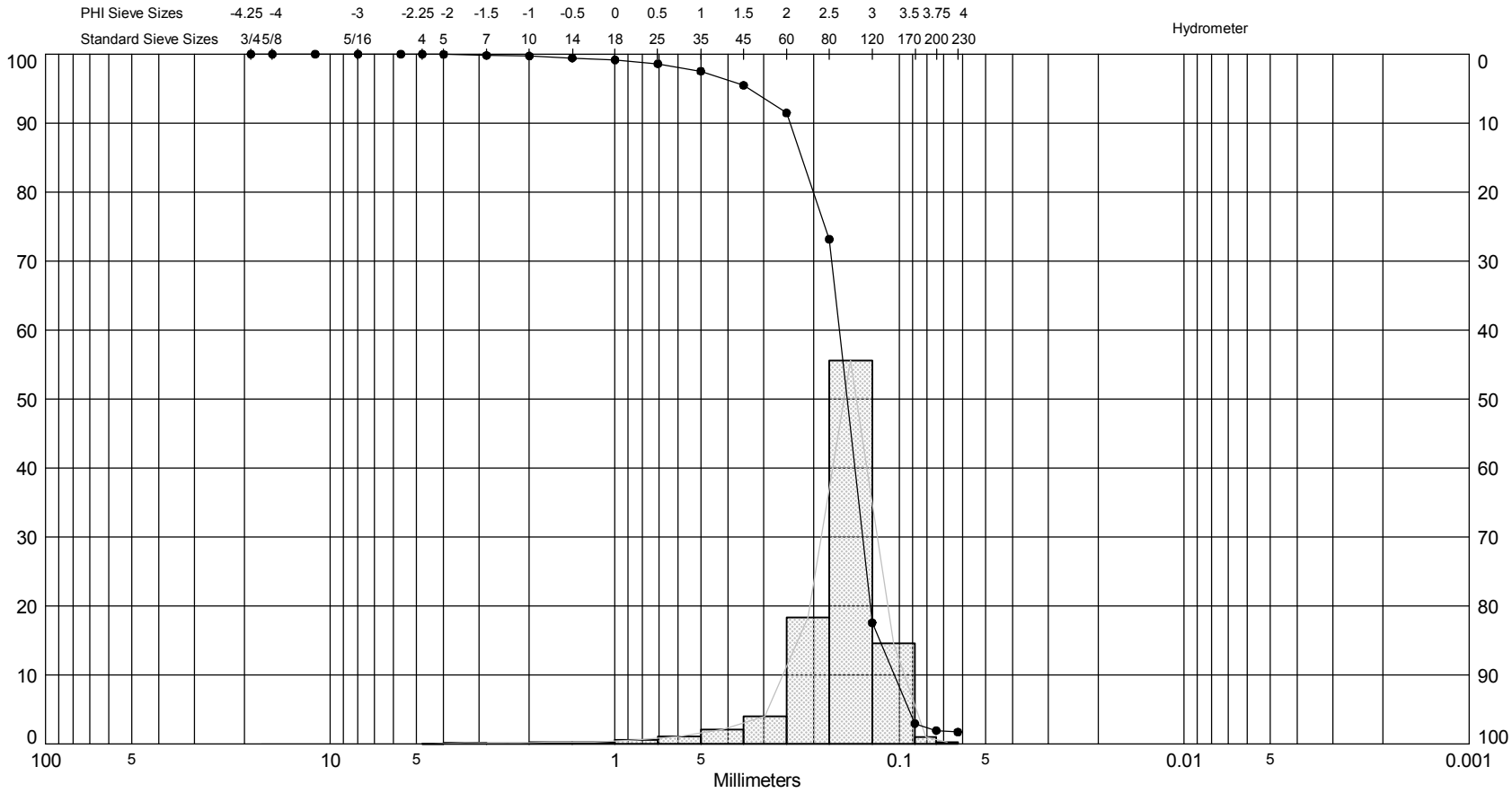
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	TD
Easting (X, ft):	2,395,225
Northing (Y, ft):	208,141
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-20)	—●—	-20.0	SP	#200 - 1.93 #230 - 1.71			2.71	2.6	-2.65	15.22	0.59

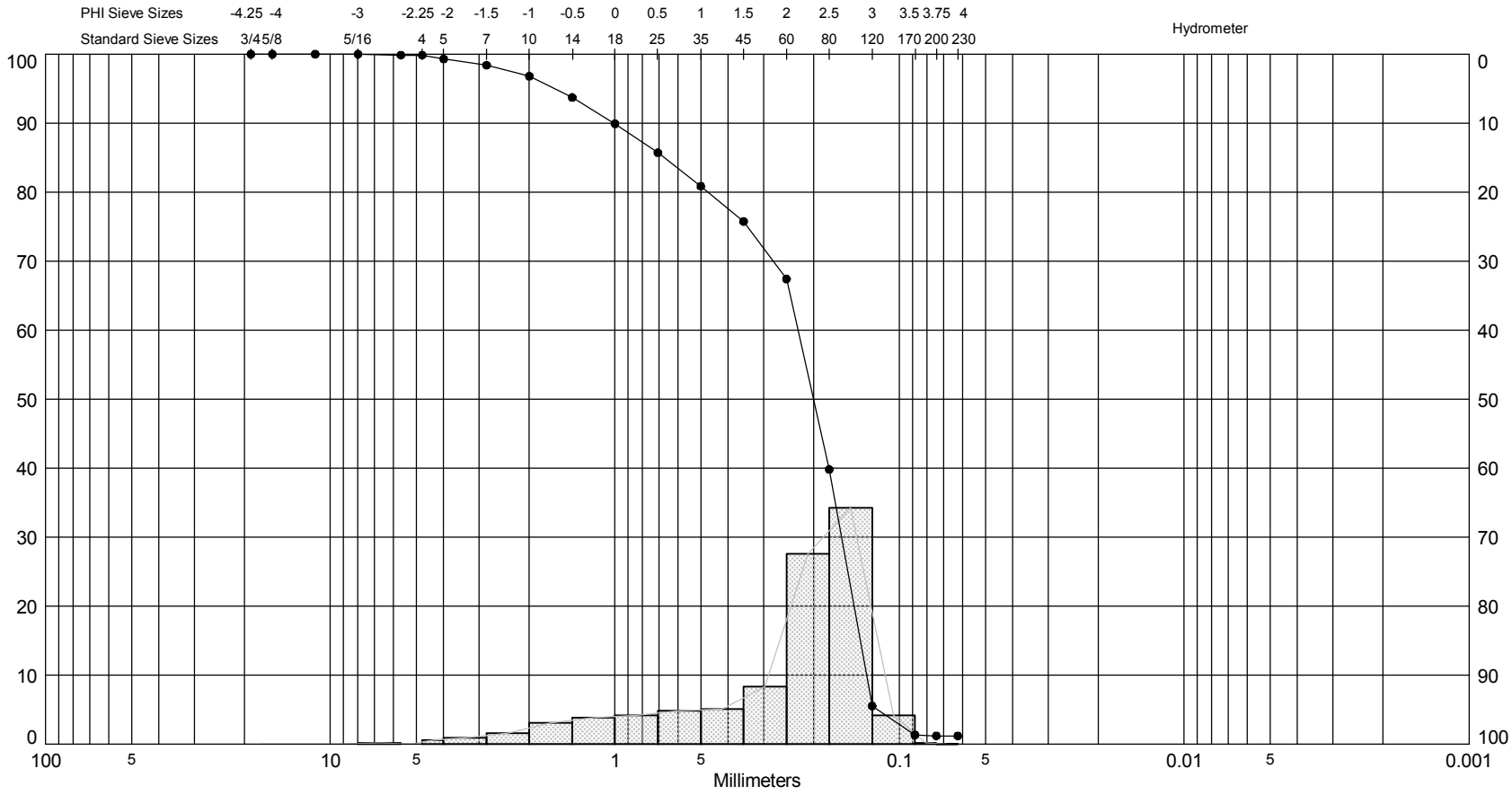
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	TD
Easting (X, ft):	2,395,366
Northing (Y, ft):	208,000
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-6)	—●—	-6.3	SW	#200 - 1.20 #230 - 1.19			2.32	1.9	-1.47	4.49	1.17

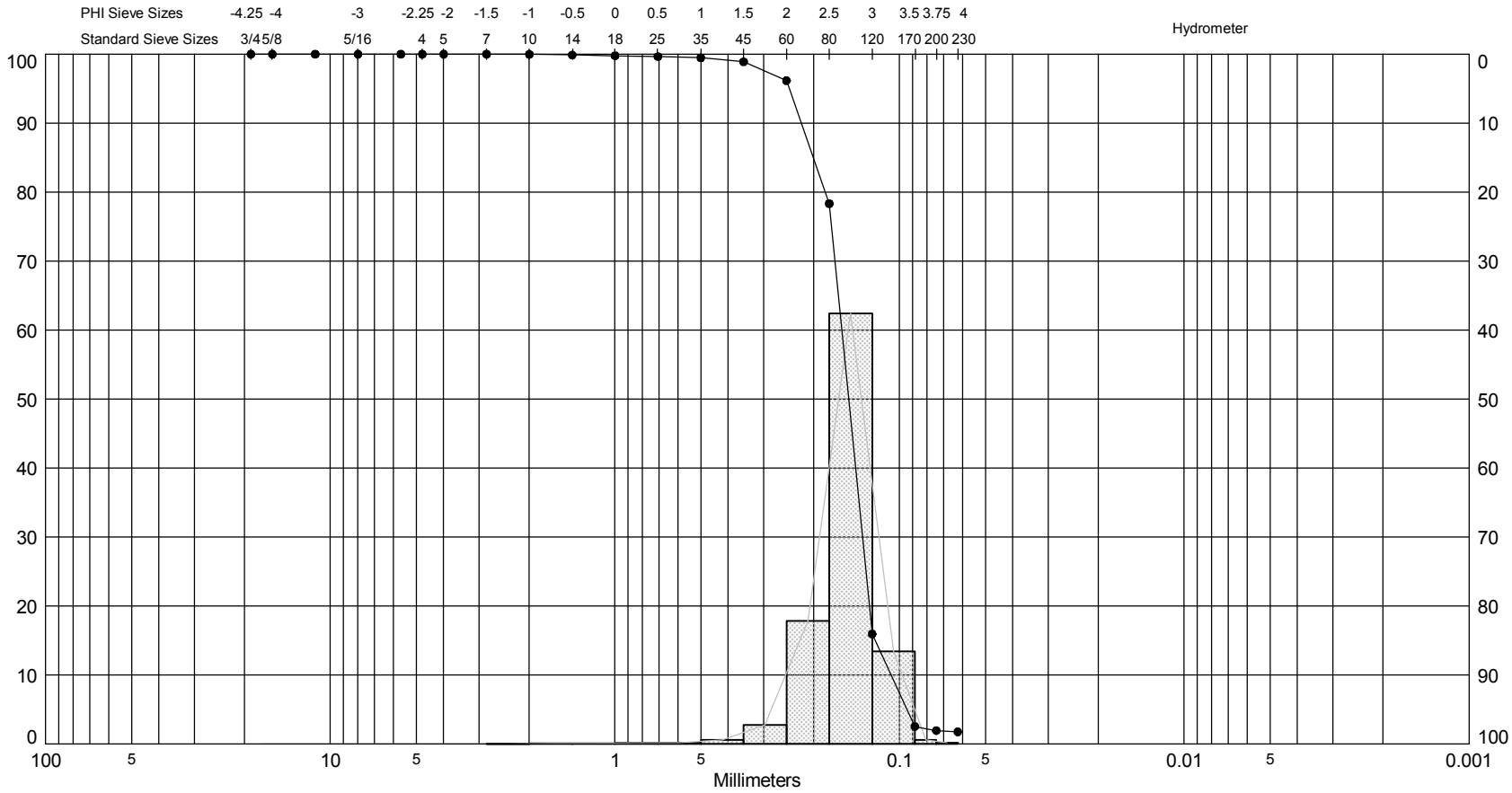
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	TD
Easting (X, ft):	2,394,761
Northing (Y, ft):	208,510
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 (-8.8)	—●—	-8.8	SP	#200 - 1.93 #230 - 1.76			2.73	2.68	-2.02	15.45	0.4

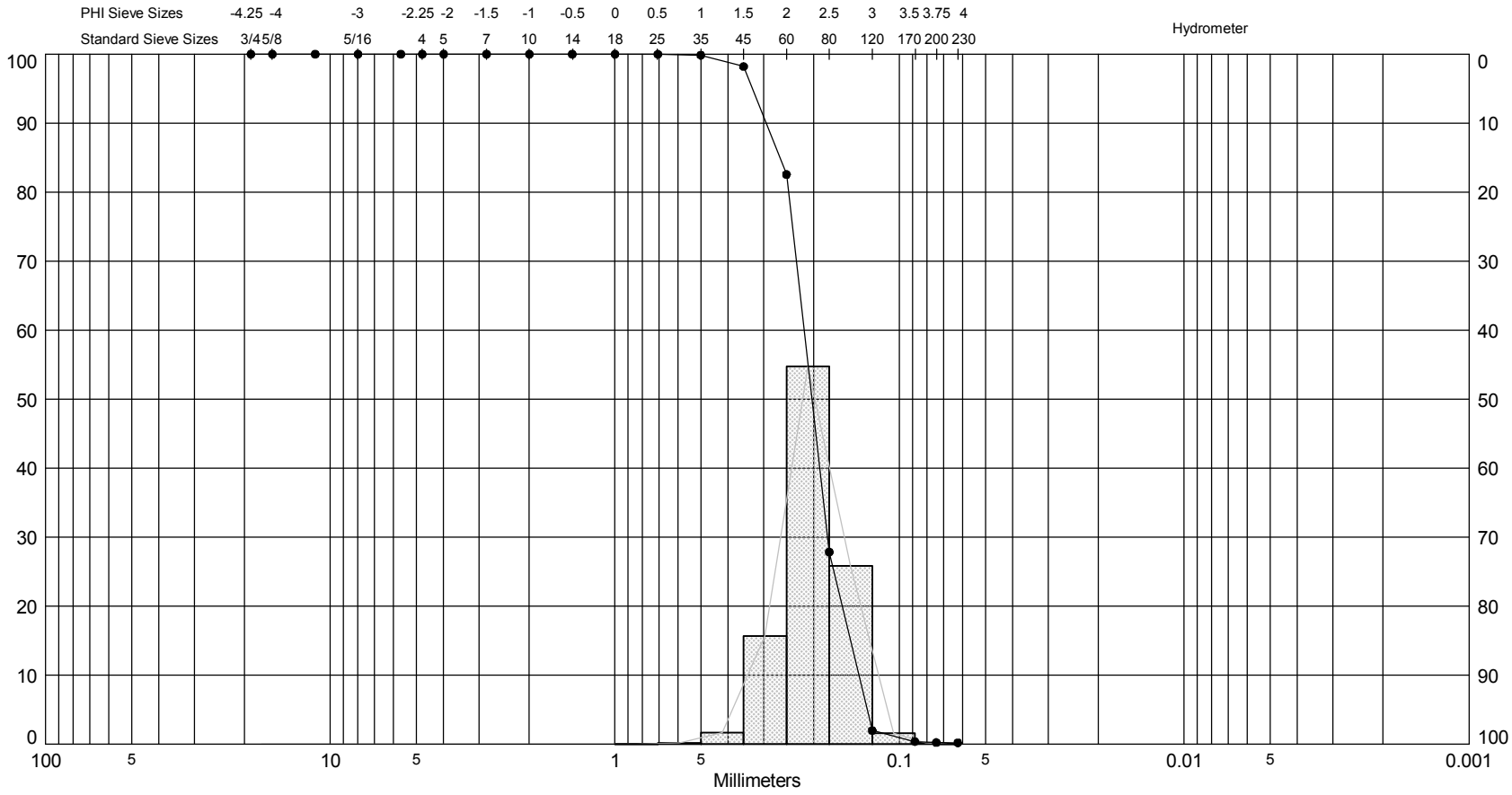
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	PB
Easting (X, ft):	2,394,792
Northing (Y, ft):	208,480
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 Dune	—●—	7.5	SP	#200 - 0.22 #230 - 0.20			2.3	2.3	-0.19	3.71	0.38

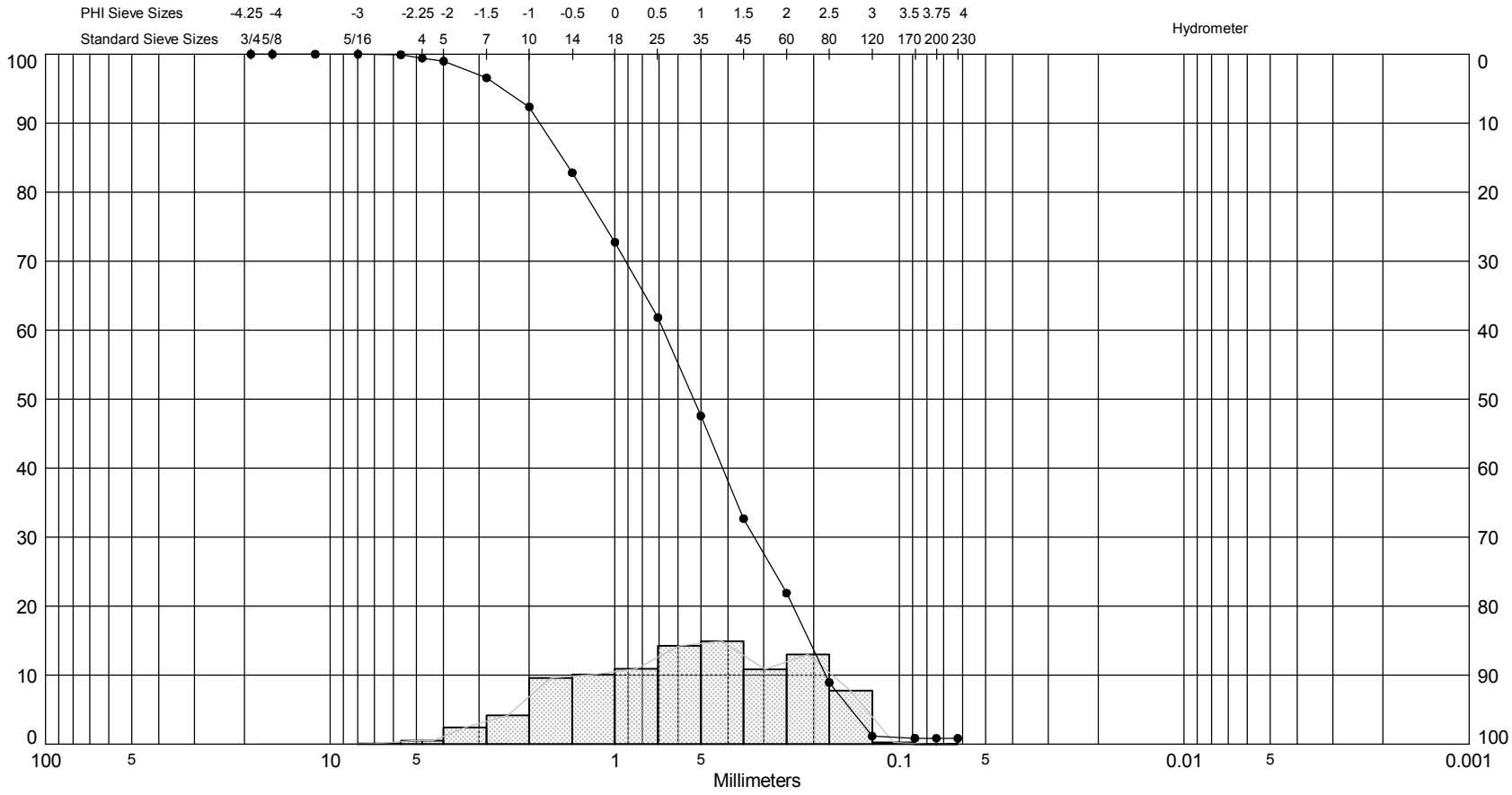
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,394,433
Northing (Y, ft):	208,800
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 MHW	—●—	1.4	SW	#200 - 0.85 #230 - 0.84			0.92	0.82	-0.27	2.29	1.24

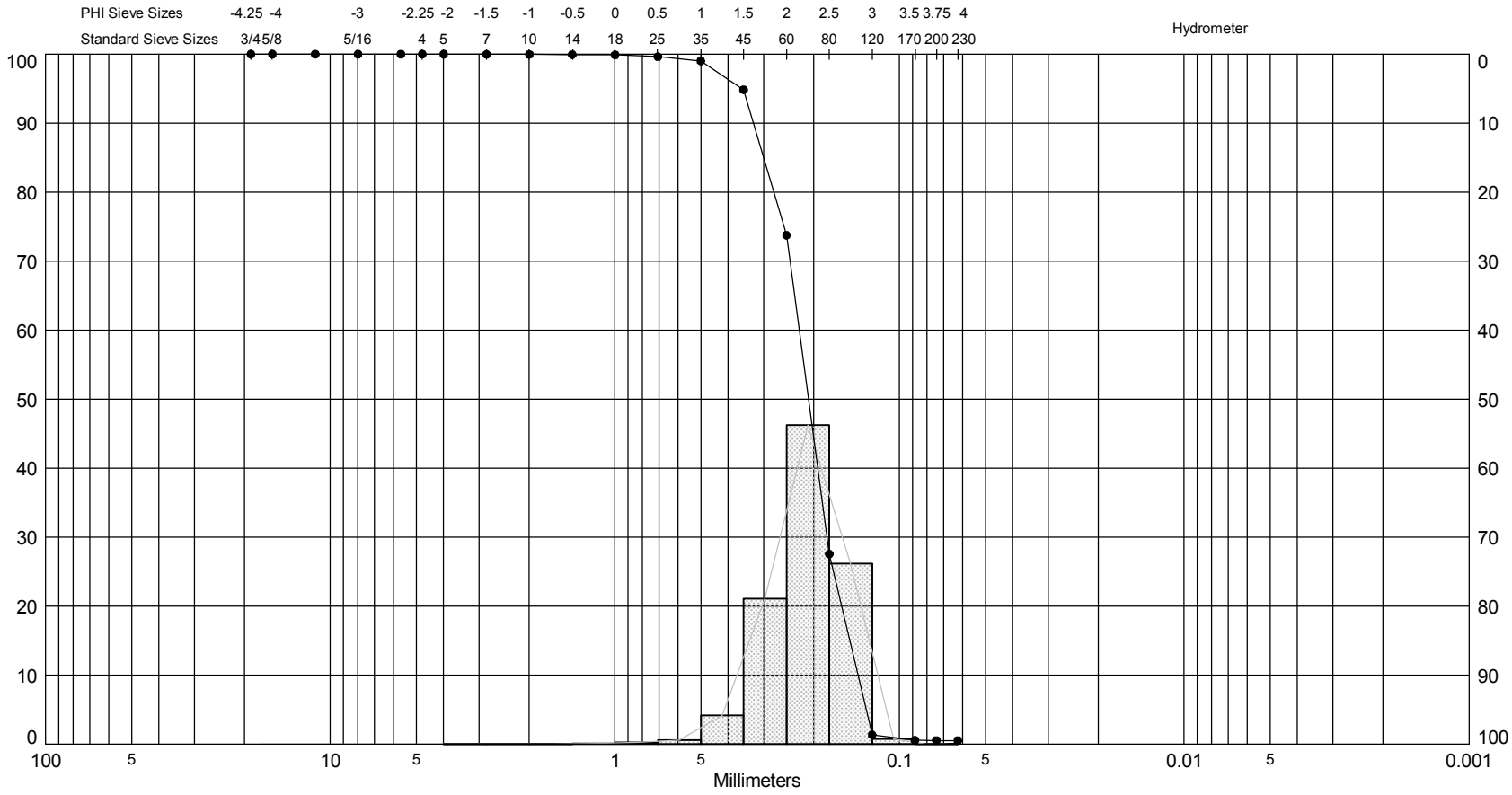
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	PB
Easting (X, ft):	2,394,585
Northing (Y, ft):	208,669
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 Mid Berm	—●—	3.8	SP	#200 - 0.54 #230 - 0.53			2.26	2.22	-0.97	6.58	0.45

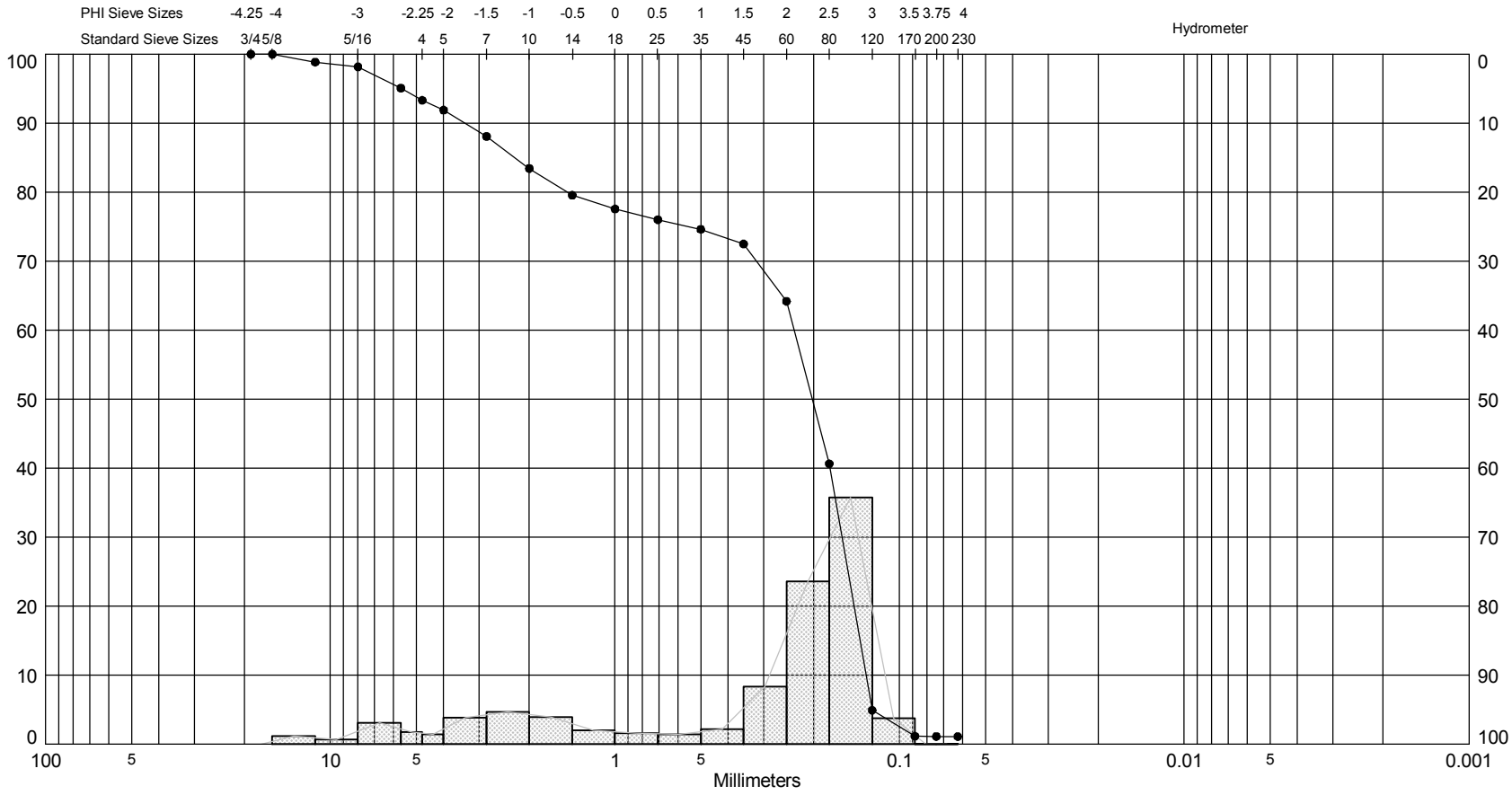
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	PB
Easting (X, ft):	2,394,544
Northing (Y, ft):	208,706
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 MLW	—●—	-2.9	SW	#200 - 1.11 #230 - 1.10			2.3	1.46	-1.29	3.27	1.84

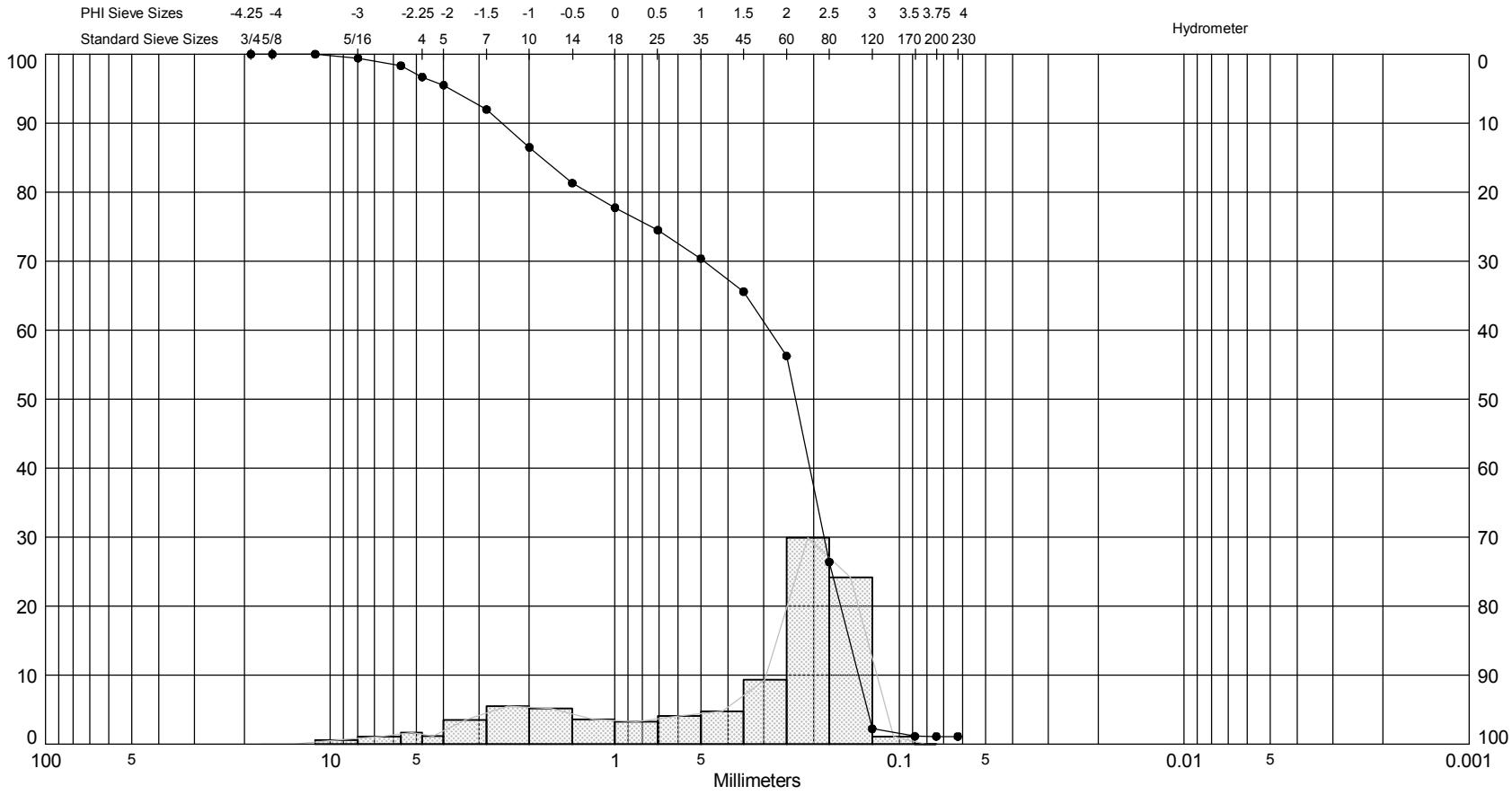
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	TD
Easting (X, ft):	2,394,651
Northing (Y, ft):	208,612
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 MTL	—●—	-0.8	SW	#200 - 1.11 #230 - 1.11			2.1	1.36	-1.1	2.94	1.6

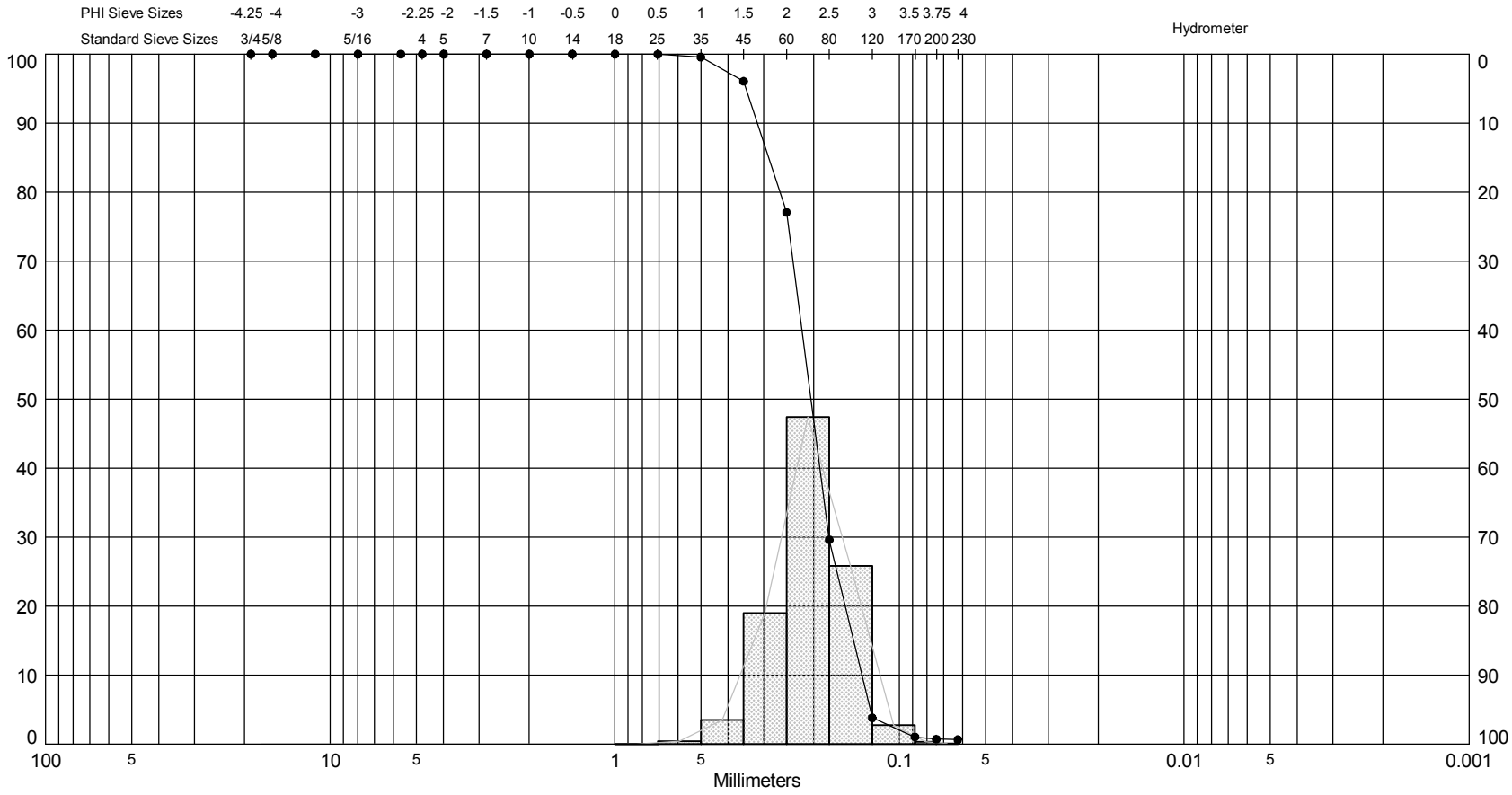
Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-22-07
Analyzed By:	TD
Easting (X, ft):	2,394,617
Northing (Y, ft):	208,641
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 Toe of Dune	—●—	5.7	SP	#200 - 0.71 #230 - 0.64			2.29	2.28	-0.21	3.55	0.44

Comments: Hutaff Island Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,394,441
Northing (Y, ft):	208,791
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 9

2007 Hutaff Island Native Beach Composite Grab Sample Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: Beach Comp.

Analysis Date:

Analyzed By:

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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.99	0.01	#200 - 1.09 #230 - 1.00			

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	0.03	0.03	0.03	0.03
5/16"	-3.00	8.00	0.03	0.03	0.06	0.06
3.5	-2.50	5.66	0.14	0.14	0.20	0.20
4	-2.25	4.76	0.13	0.13	0.33	0.33
5	-2.00	4.00	0.14	0.14	0.47	0.47
7	-1.50	2.83	0.40	0.40	0.87	0.87
10	-1.00	2.00	0.61	0.61	1.48	1.48
14	-0.50	1.41	0.99	0.99	2.47	2.47
18	0.00	1.00	1.07	1.07	3.54	3.54
25	0.50	0.71	1.30	1.30	4.84	4.84
35	1.00	0.50	1.88	1.88	6.72	6.72
45	1.50	0.35	3.37	3.37	10.09	10.09
60	2.00	0.25	9.91	9.91	20.00	20.00
80	2.50	0.18	34.05	34.05	54.05	54.05
120	3.00	0.13	38.51	38.51	92.56	92.56
170	3.50	0.09	5.96	5.96	98.52	98.52
200	3.75	0.07	0.39	0.39	98.91	98.91
230	4.00	0.06	0.09	0.09	99.00	99.00

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.20	2.89	2.77	2.44	2.07	1.80	0.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	0.85	-2.58	11.92

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: H1 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.87	0.02	#200 - 0.96 #230 - 0.89		7	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.01	0.01	0.01	0.01
4	-2.25	4.76	0.02	0.02	0.03	0.03
5	-2.00	4.00	0.03	0.03	0.06	0.06
7	-1.50	2.83	0.13	0.13	0.19	0.19
10	-1.00	2.00	0.23	0.23	0.42	0.42
14	-0.50	1.41	0.47	0.47	0.89	0.89
18	0.00	1.00	0.58	0.58	1.47	1.47
25	0.50	0.71	0.77	0.77	2.24	2.24
35	1.00	0.50	1.27	1.27	3.51	3.51
45	1.50	0.35	2.80	2.80	6.31	6.31
60	2.00	0.25	10.94	10.94	17.25	17.25
80	2.50	0.18	39.07	39.07	56.32	56.32
120	3.00	0.13	37.38	37.38	93.70	93.70
170	3.50	0.09	4.98	4.98	98.68	98.68
200	3.75	0.07	0.36	0.36	99.04	99.04
230	4.00	0.06	0.07	0.07	99.11	99.11

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.87	2.75	2.42	2.10	1.94	1.27

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	0.64	-2.33	12.63

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: H2 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
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FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.96	0.01	#200 - 1.09 #230 - 0.97		6	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.04	0.04	0.04	0.04
4	-2.25	4.76	0.06	0.06	0.10	0.10
5	-2.00	4.00	0.05	0.05	0.15	0.15
7	-1.50	2.83	0.08	0.08	0.23	0.23
10	-1.00	2.00	0.12	0.12	0.35	0.35
14	-0.50	1.41	0.22	0.22	0.57	0.57
18	0.00	1.00	0.29	0.29	0.86	0.86
25	0.50	0.71	0.50	0.50	1.36	1.36
35	1.00	0.50	1.01	1.01	2.37	2.37
45	1.50	0.35	2.76	2.76	5.13	5.13
60	2.00	0.25	9.33	9.33	14.46	14.46
80	2.50	0.18	35.74	35.74	50.20	50.20
120	3.00	0.13	41.60	41.60	91.80	91.80
170	3.50	0.09	6.66	6.66	98.46	98.46
200	3.75	0.07	0.45	0.45	98.91	98.91
230	4.00	0.06	0.12	0.12	99.03	99.03

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.24	2.91	2.80	2.50	2.15	2.02	1.48

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.59	-2.43	15.65

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: H3 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.13	0.01	#200 - 1.23 #230 - 1.14		17	

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	0.09	0.09	0.09	0.09
5/16"	-3.00	8.00	0.09	0.09	0.18	0.18
3.5	-2.50	5.66	0.37	0.37	0.55	0.55
4	-2.25	4.76	0.31	0.31	0.86	0.86
5	-2.00	4.00	0.35	0.35	1.21	1.21
7	-1.50	2.83	0.97	0.97	2.18	2.18
10	-1.00	2.00	1.49	1.49	3.67	3.67
14	-0.50	1.41	2.29	2.29	5.96	5.96
18	0.00	1.00	2.33	2.33	8.29	8.29
25	0.50	0.71	2.64	2.64	10.93	10.93
35	1.00	0.50	3.36	3.36	14.29	14.29
45	1.50	0.35	4.53	4.53	18.82	18.82
60	2.00	0.25	9.47	9.47	28.29	28.29
80	2.50	0.18	27.34	27.34	55.63	55.63
120	3.00	0.13	36.56	36.56	92.19	92.19
170	3.50	0.09	6.22	6.22	98.41	98.41
200	3.75	0.07	0.36	0.36	98.77	98.77
230	4.00	0.06	0.09	0.09	98.86	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.89	2.76	2.40	1.83	1.19	-0.71

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.03	0.24	1.16	-1.93	6.7

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: Dune Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.21	0.00	#200 - 0.25 #230 - 0.21			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.05	0.05	0.05	0.05
45	1.50	0.35	0.72	0.72	0.77	0.77
60	2.00	0.25	10.68	10.68	11.45	11.45
80	2.50	0.18	52.00	52.00	63.45	63.45
120	3.00	0.13	33.02	33.02	96.47	96.47
170	3.50	0.09	3.06	3.06	99.53	99.53
200	3.75	0.07	0.22	0.22	99.75	99.75
230	4.00	0.06	0.04	0.04	99.79	99.79

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.81	2.67	2.37	2.13	2.04	1.70

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.39	0.19	0.37	-0.03	3.5

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: Toe of Dune Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.29	0.04	#200 - 0.39 #230 - 0.33			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.00	0.00	0.02	0.02
10	-1.00	2.00	0.00	0.00	0.02	0.02
14	-0.50	1.41	0.00	0.00	0.02	0.02
18	0.00	1.00	0.00	0.00	0.02	0.02
25	0.50	0.71	0.02	0.02	0.04	0.04
35	1.00	0.50	0.15	0.15	0.19	0.19
45	1.50	0.35	1.36	1.36	1.55	1.55
60	2.00	0.25	10.00	10.00	11.55	11.55
80	2.50	0.18	47.66	47.66	59.21	59.21
120	3.00	0.13	36.29	36.29	95.50	95.50
170	3.50	0.09	3.78	3.78	99.28	99.28
200	3.75	0.07	0.33	0.33	99.61	99.61
230	4.00	0.06	0.06	0.06	99.67	99.67

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.72	2.40	2.14	2.05	1.67

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.4	-0.54	7.09

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: Mid-Berm Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.34	0.01	#200 - 0.38 #230 - 0.35			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.04	0.04	0.06	0.06
14	-0.50	1.41	0.02	0.02	0.08	0.08
18	0.00	1.00	0.05	0.05	0.13	0.13
25	0.50	0.71	0.19	0.19	0.32	0.32
35	1.00	0.50	0.54	0.54	0.86	0.86
45	1.50	0.35	3.32	3.32	4.18	4.18
60	2.00	0.25	19.63	19.63	23.81	23.81
80	2.50	0.18	37.84	37.84	61.65	61.65
120	3.00	0.13	36.24	36.24	97.89	97.89
170	3.50	0.09	1.58	1.58	99.47	99.47
200	3.75	0.07	0.15	0.15	99.62	99.62
230	4.00	0.06	0.03	0.03	99.65	99.65

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.81	2.68	2.35	2.02	1.80	1.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.47	-0.98	6.33

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: 2.0 / 3.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.56	0.01	#200 - 0.60 #230 - 0.57			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.04	0.04	0.04	0.04
5	-2.00	4.00	0.22	0.22	0.26	0.26
7	-1.50	2.83	0.34	0.34	0.60	0.60
10	-1.00	2.00	0.84	0.84	1.44	1.44
14	-0.50	1.41	2.09	2.09	3.53	3.53
18	0.00	1.00	2.86	2.86	6.39	6.39
25	0.50	0.71	3.76	3.76	10.15	10.15
35	1.00	0.50	4.60	4.60	14.75	14.75
45	1.50	0.35	5.31	5.31	20.06	20.06
60	2.00	0.25	12.88	12.88	32.94	32.94
80	2.50	0.18	45.25	45.25	78.19	78.19
120	3.00	0.13	19.39	19.39	97.58	97.58
170	3.50	0.09	1.64	1.64	99.22	99.22
200	3.75	0.07	0.18	0.18	99.40	99.40
230	4.00	0.06	0.03	0.03	99.43	99.43

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.65	2.46	2.19	1.69	1.12	-0.24

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.91	0.27	0.94	-1.69	5.78

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: MHW Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.42	0.01	#200 - 0.44 #230 - 0.43			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.03	0.03	0.03	0.03
4	-2.25	4.76	0.15	0.15	0.18	0.18
5	-2.00	4.00	0.16	0.16	0.34	0.34
7	-1.50	2.83	0.81	0.81	1.15	1.15
10	-1.00	2.00	1.39	1.39	2.54	2.54
14	-0.50	1.41	3.19	3.19	5.73	5.73
18	0.00	1.00	3.36	3.36	9.09	9.09
25	0.50	0.71	3.63	3.63	12.72	12.72
35	1.00	0.50	4.76	4.76	17.48	17.48
45	1.50	0.35	5.06	5.06	22.54	22.54
60	2.00	0.25	9.98	9.98	32.52	32.52
80	2.50	0.18	43.06	43.06	75.58	75.58
120	3.00	0.13	23.14	23.14	98.72	98.72
170	3.50	0.09	0.76	0.76	99.48	99.48
200	3.75	0.07	0.08	0.08	99.56	99.56
230	4.00	0.06	0.01	0.01	99.57	99.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.68	2.49	2.20	1.62	0.84	-0.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.85	0.28	1.05	-1.65	5.14

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: MTL Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.93	0.04	#200 - 0.98 #230 - 0.97			

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	0.19	0.19	0.19	0.19
3.5	-2.50	5.66	0.36	0.36	0.55	0.55
4	-2.25	4.76	0.55	0.55	1.10	1.10
5	-2.00	4.00	0.39	0.39	1.49	1.49
7	-1.50	2.83	1.18	1.18	2.67	2.67
10	-1.00	2.00	1.84	1.84	4.51	4.51
14	-0.50	1.41	1.76	1.76	6.27	6.27
18	0.00	1.00	1.37	1.37	7.64	7.64
25	0.50	0.71	1.90	1.90	9.54	9.54
35	1.00	0.50	3.61	3.61	13.15	13.15
45	1.50	0.35	5.72	5.72	18.87	18.87
60	2.00	0.25	16.65	16.65	35.52	35.52
80	2.50	0.18	38.25	38.25	73.77	73.77
120	3.00	0.13	24.37	24.37	98.14	98.14
170	3.50	0.09	0.86	0.86	99.00	99.00
200	3.75	0.07	0.02	0.02	99.02	99.02
230	4.00	0.06	0.01	0.01	99.03	99.03

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.71	2.53	2.19	1.68	1.25	-0.86

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.88	0.27	1.09	-2.16	7.79

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: MLW Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.78	0.00	#200 - 0.79 #230 - 0.78			

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	0.38	0.38	0.38	0.38
5/16"	-3.00	8.00	0.23	0.23	0.61	0.61
3.5	-2.50	5.66	1.18	1.18	1.79	1.79
4	-2.25	4.76	0.75	0.75	2.54	2.54
5	-2.00	4.00	0.72	0.72	3.26	3.26
7	-1.50	2.83	1.83	1.83	5.09	5.09
10	-1.00	2.00	2.47	2.47	7.56	7.56
14	-0.50	1.41	3.33	3.33	10.89	10.89
18	0.00	1.00	2.99	2.99	13.88	13.88
25	0.50	0.71	3.24	3.24	17.12	17.12
35	1.00	0.50	4.78	4.78	21.90	21.90
45	1.50	0.35	11.23	11.23	33.13	33.13
60	2.00	0.25	17.61	17.61	50.74	50.74
80	2.50	0.18	26.06	26.06	76.80	76.80
120	3.00	0.13	20.67	20.67	97.47	97.47
170	3.50	0.09	1.68	1.68	99.15	99.15
200	3.75	0.07	0.06	0.06	99.21	99.21
230	4.00	0.06	0.01	0.01	99.22	99.22

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.67	2.47	1.98	1.14	0.33	-1.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.53	0.35	1.36	-1.53	4.94

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -6.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SW		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.22	0.01	#200 - 1.26 #230 - 1.23			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.04	0.04	0.04	0.04
4	-2.25	4.76	0.00	0.00	0.04	0.04
5	-2.00	4.00	0.19	0.19	0.23	0.23
7	-1.50	2.83	0.48	0.48	0.71	0.71
10	-1.00	2.00	0.80	0.80	1.51	1.51
14	-0.50	1.41	1.38	1.38	2.89	2.89
18	0.00	1.00	1.82	1.82	4.71	4.71
25	0.50	0.71	2.10	2.10	6.81	6.81
35	1.00	0.50	2.64	2.64	9.45	9.45
45	1.50	0.35	3.74	3.74	13.19	13.19
60	2.00	0.25	8.41	8.41	21.60	21.60
80	2.50	0.18	30.63	30.63	52.23	52.23
120	3.00	0.13	41.24	41.24	93.47	93.47
170	3.50	0.09	5.08	5.08	98.55	98.55
200	3.75	0.07	0.19	0.19	98.74	98.74
230	4.00	0.06	0.03	0.03	98.77	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.89	2.78	2.46	2.06	1.67	0.07

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.2	0.22	0.91	-2.15	8.13

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -8.8 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.65	0.01	#200 - 1.87 #230 - 1.66			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.05	0.05	0.07	0.07
14	-0.50	1.41	0.18	0.18	0.25	0.25
18	0.00	1.00	0.17	0.17	0.42	0.42
25	0.50	0.71	0.23	0.23	0.65	0.65
35	1.00	0.50	0.34	0.34	0.99	0.99
45	1.50	0.35	0.69	0.69	1.68	1.68
60	2.00	0.25	2.43	2.43	4.11	4.11
80	2.50	0.18	19.70	19.70	23.81	23.81
120	3.00	0.13	59.33	59.33	83.14	83.14
170	3.50	0.09	13.87	13.87	97.01	97.01
200	3.75	0.07	1.12	1.12	98.13	98.13
230	4.00	0.06	0.21	0.21	98.34	98.34

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.03	2.93	2.72	2.51	2.30	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.67	0.16	0.46	-2.45	17.84

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -11.6 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.40	0.01	#200 - 1.52 #230 - 1.41			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.08	0.08	0.08	0.08
4	-2.25	4.76	0.00	0.00	0.08	0.08
5	-2.00	4.00	0.03	0.03	0.11	0.11
7	-1.50	2.83	0.09	0.09	0.20	0.20
10	-1.00	2.00	0.23	0.23	0.43	0.43
14	-0.50	1.41	0.47	0.47	0.90	0.90
18	0.00	1.00	0.60	0.60	1.50	1.50
25	0.50	0.71	0.92	0.92	2.42	2.42
35	1.00	0.50	1.36	1.36	3.78	3.78
45	1.50	0.35	2.81	2.81	6.59	6.59
60	2.00	0.25	7.34	7.34	13.93	13.93
80	2.50	0.18	29.71	29.71	43.64	43.64
120	3.00	0.13	46.39	46.39	90.03	90.03
170	3.50	0.09	8.03	8.03	98.06	98.06
200	3.75	0.07	0.42	0.42	98.48	98.48
230	4.00	0.06	0.11	0.11	98.59	98.59

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.31	2.94	2.84	2.57	2.19	2.03	1.22

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.42	0.19	0.67	-2.51	13.31

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -14.4 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.62	0.02	#200 - 1.79 #230 - 1.64			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.10	0.10	0.10	0.10
4	-2.25	4.76	0.18	0.18	0.28	0.28
5	-2.00	4.00	0.08	0.08	0.36	0.36
7	-1.50	2.83	0.22	0.22	0.58	0.58
10	-1.00	2.00	0.20	0.20	0.78	0.78
14	-0.50	1.41	0.28	0.28	1.06	1.06
18	0.00	1.00	0.34	0.34	1.40	1.40
25	0.50	0.71	0.42	0.42	1.82	1.82
35	1.00	0.50	0.58	0.58	2.40	2.40
45	1.50	0.35	1.55	1.55	3.95	3.95
60	2.00	0.25	5.72	5.72	9.67	9.67
80	2.50	0.18	25.84	25.84	35.51	35.51
120	3.00	0.13	51.94	51.94	87.45	87.45
170	3.50	0.09	10.27	10.27	97.72	97.72
200	3.75	0.07	0.49	0.49	98.21	98.21
230	4.00	0.06	0.15	0.15	98.36	98.36

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.97	2.88	2.64	2.30	2.12	1.59

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.52	0.17	0.65	-3.51	22.66

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -17.2 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.66	0.01	#200 - 1.89 #230 - 1.67			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.01	0.01	0.01	0.01
5	-2.00	4.00	0.04	0.04	0.05	0.05
7	-1.50	2.83	0.07	0.07	0.12	0.12
10	-1.00	2.00	0.05	0.05	0.17	0.17
14	-0.50	1.41	0.09	0.09	0.26	0.26
18	0.00	1.00	0.13	0.13	0.39	0.39
25	0.50	0.71	0.22	0.22	0.61	0.61
35	1.00	0.50	0.41	0.41	1.02	1.02
45	1.50	0.35	1.05	1.05	2.07	2.07
60	2.00	0.25	3.93	3.93	6.00	6.00
80	2.50	0.18	24.37	24.37	30.37	30.37
120	3.00	0.13	55.43	55.43	85.80	85.80
170	3.50	0.09	11.56	11.56	97.36	97.36
200	3.75	0.07	0.75	0.75	98.11	98.11
230	4.00	0.06	0.22	0.22	98.33	98.33

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	2.98	2.90	2.68	2.39	2.21	1.87

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	0.48	-2.53	19.5

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Hutaff Island

Sample Name: -20.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.74	0.01	#200 - 2.06 #230 - 1.75			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.01	0.01	0.01	0.01
7	-1.50	2.83	0.07	0.07	0.08	0.08
10	-1.00	2.00	0.08	0.08	0.16	0.16
14	-0.50	1.41	0.13	0.13	0.29	0.29
18	0.00	1.00	0.16	0.16	0.45	0.45
25	0.50	0.71	0.31	0.31	0.76	0.76
35	1.00	0.50	0.58	0.58	1.34	1.34
45	1.50	0.35	1.20	1.20	2.54	2.54
60	2.00	0.25	3.64	3.64	6.18	6.18
80	2.50	0.18	22.24	22.24	28.42	28.42
120	3.00	0.13	53.26	53.26	81.68	81.68
170	3.50	0.09	15.24	15.24	96.92	96.92
200	3.75	0.07	1.02	1.02	97.94	97.94
230	4.00	0.06	0.31	0.31	98.25	98.25

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

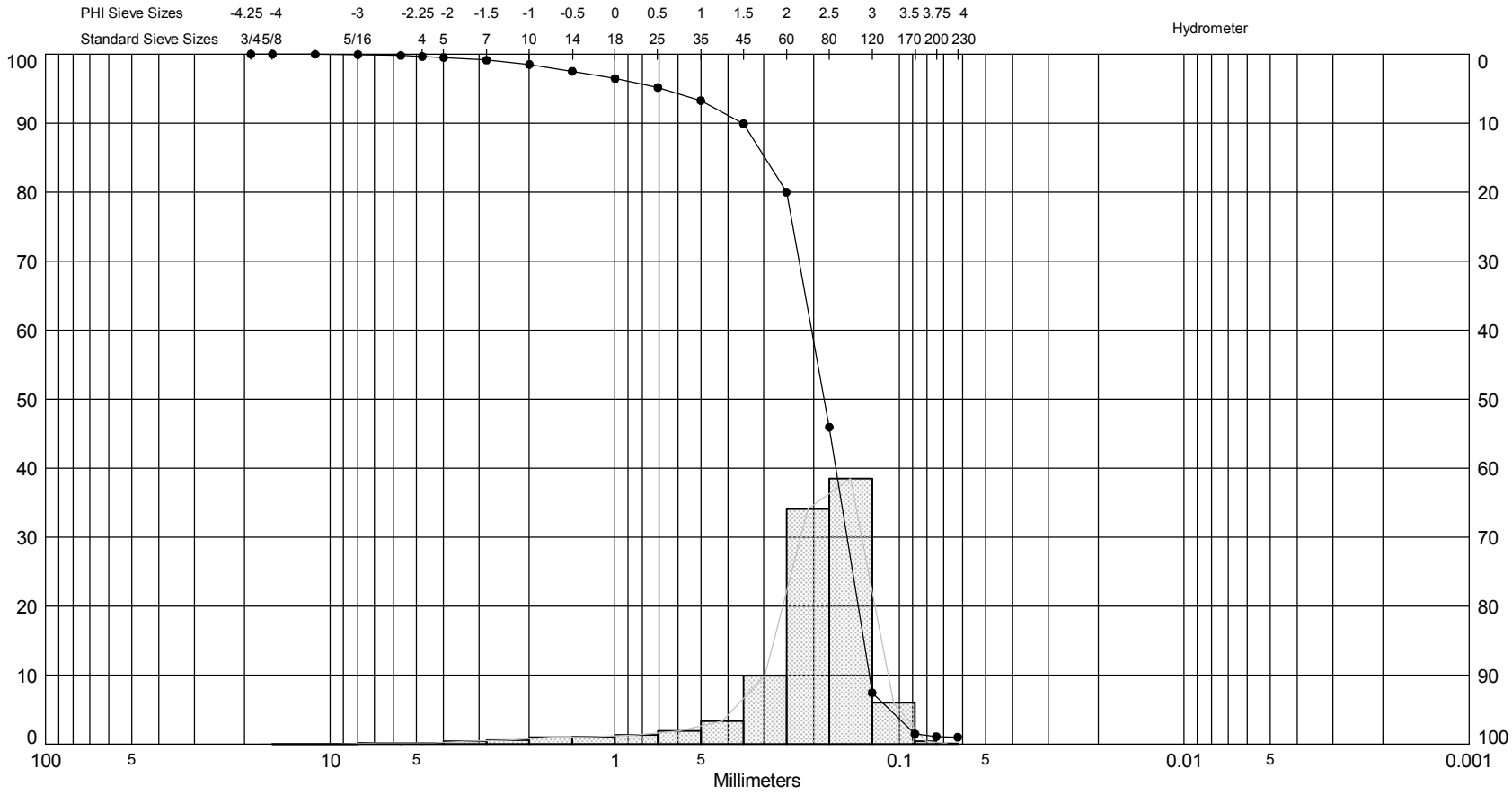
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.08	2.94	2.70	2.42	2.22	1.84

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.64	0.16	0.51	-2.3	15.6

GRANULARMETRIC REPORT HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 10

2007 Hutaff Island Native Beach Composite Grab Sample Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Beach Comp.	—●—		SP	#200 - 1.09 #230 - 1.00			2.44	2.26	-2.58	11.92	0.85

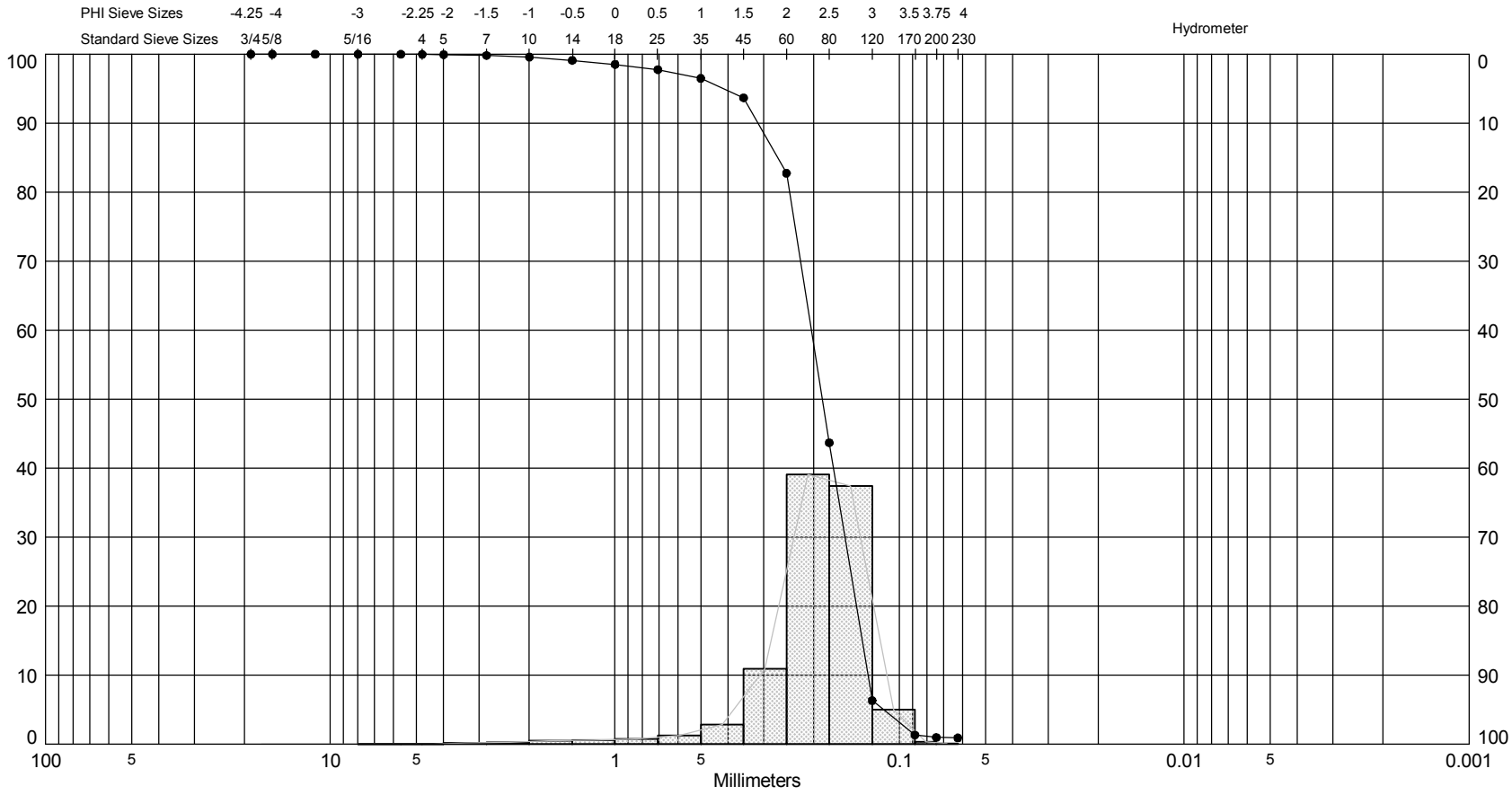
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
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fax (561) 391-9116

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H1 Comp.	—●—		SP	#200 - 0.96 #230 - 0.89		7	2.42	2.33	-2.33	12.63	0.64

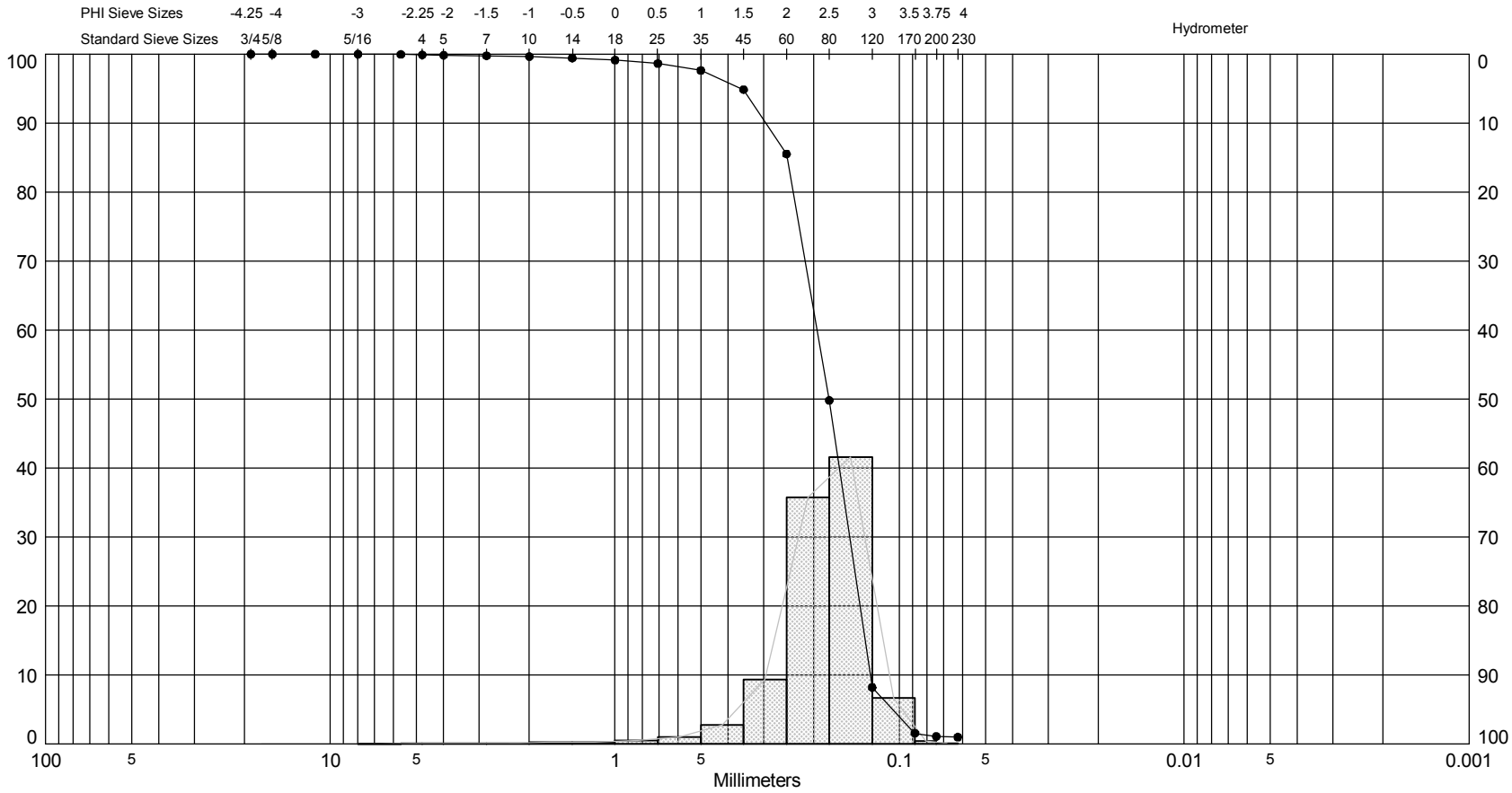
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H2 Comp.	—●—		SP	#200 - 1.09 #230 - 0.97		6	2.5	2.41	-2.43	15.65	0.59

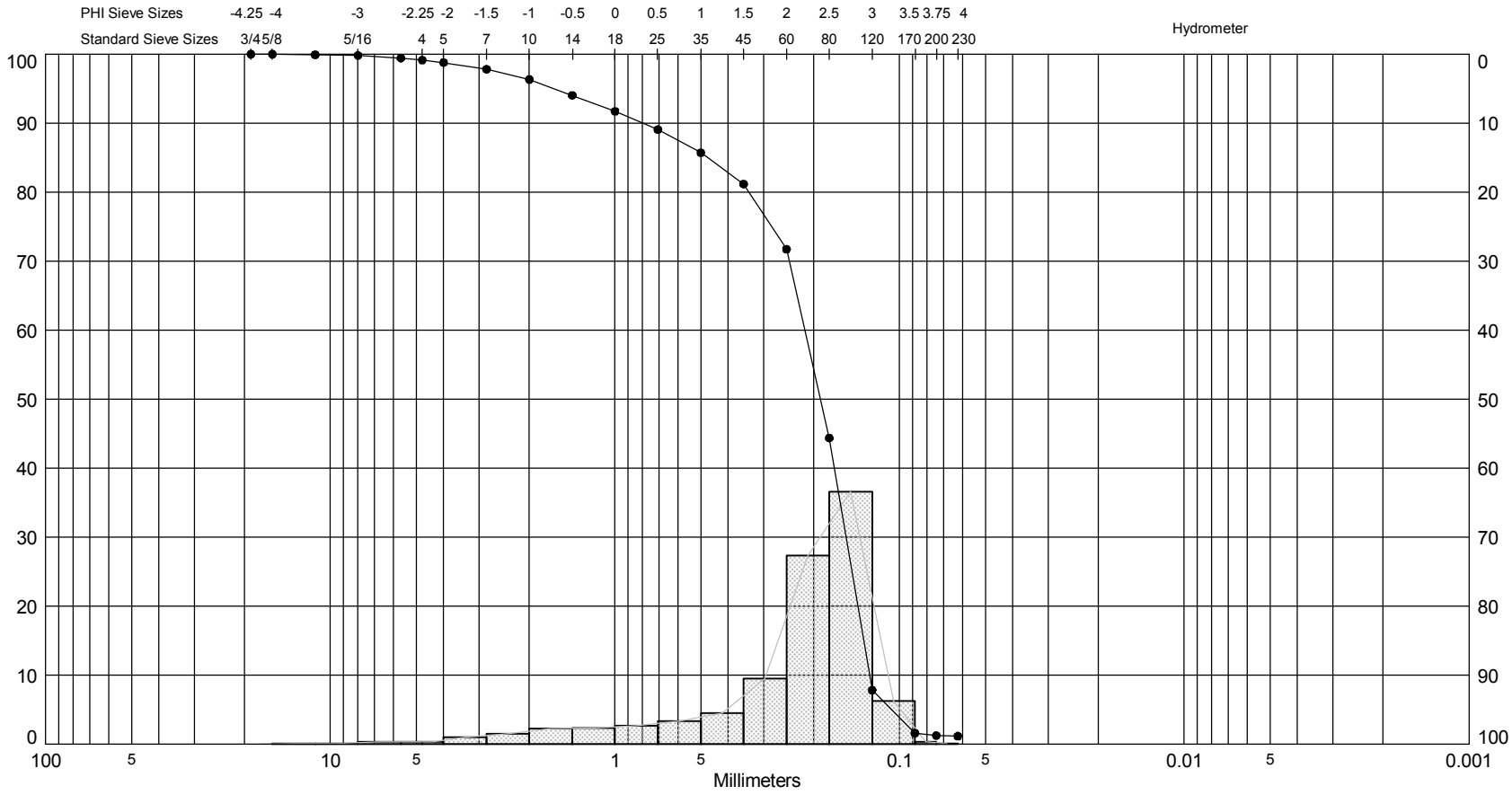
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
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fax (561) 391-9116

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
H3 Comp.	—●—		SW	#200 - 1.23 #230 - 1.14		17	2.4	2.03	-1.93	6.7	1.16

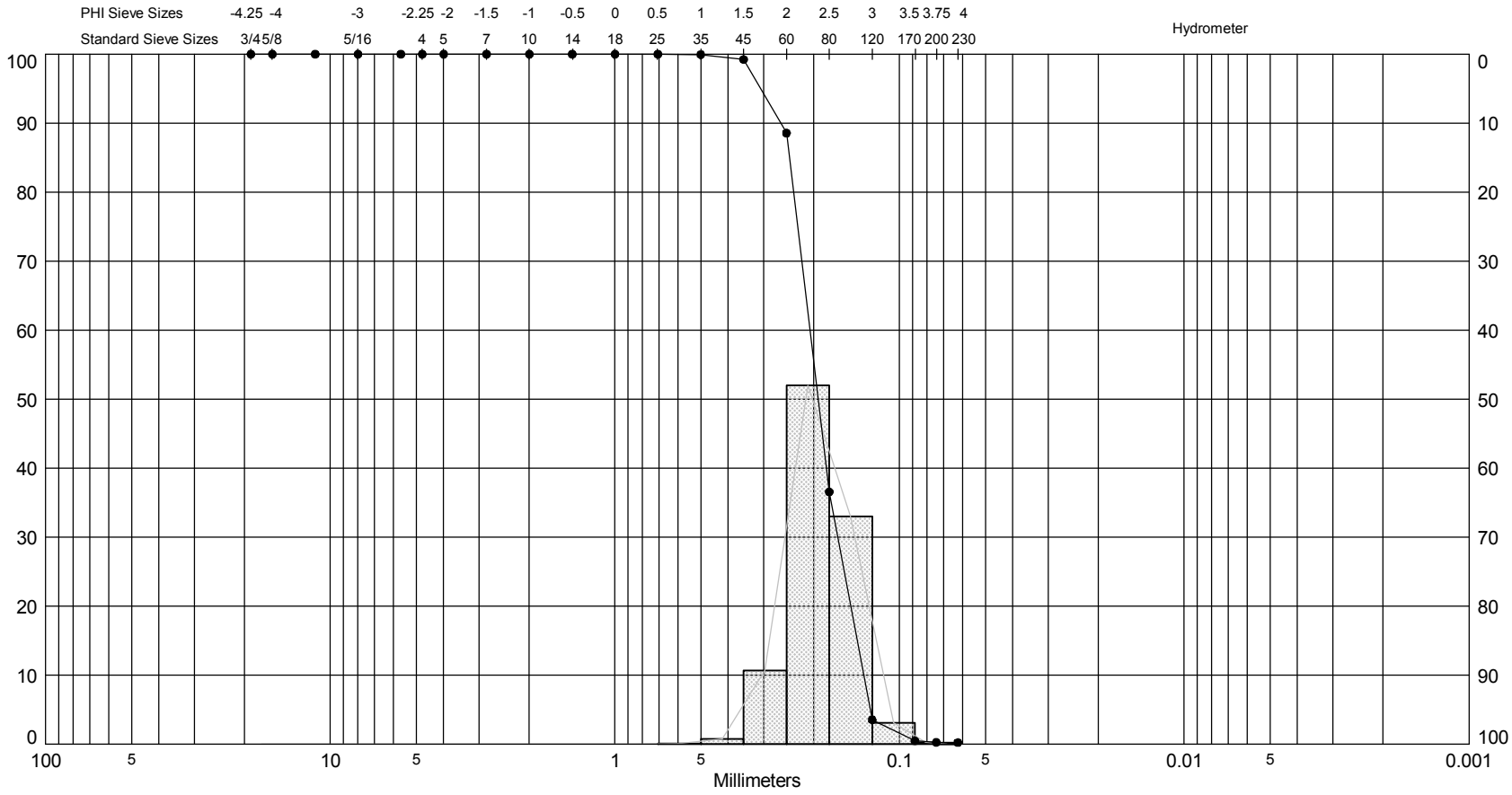
Comments: COMPOSITE

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

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Dune Comp.	—●—		SP	#200 - 0.25 #230 - 0.21			2.37	2.39	-0.03	3.5	0.37

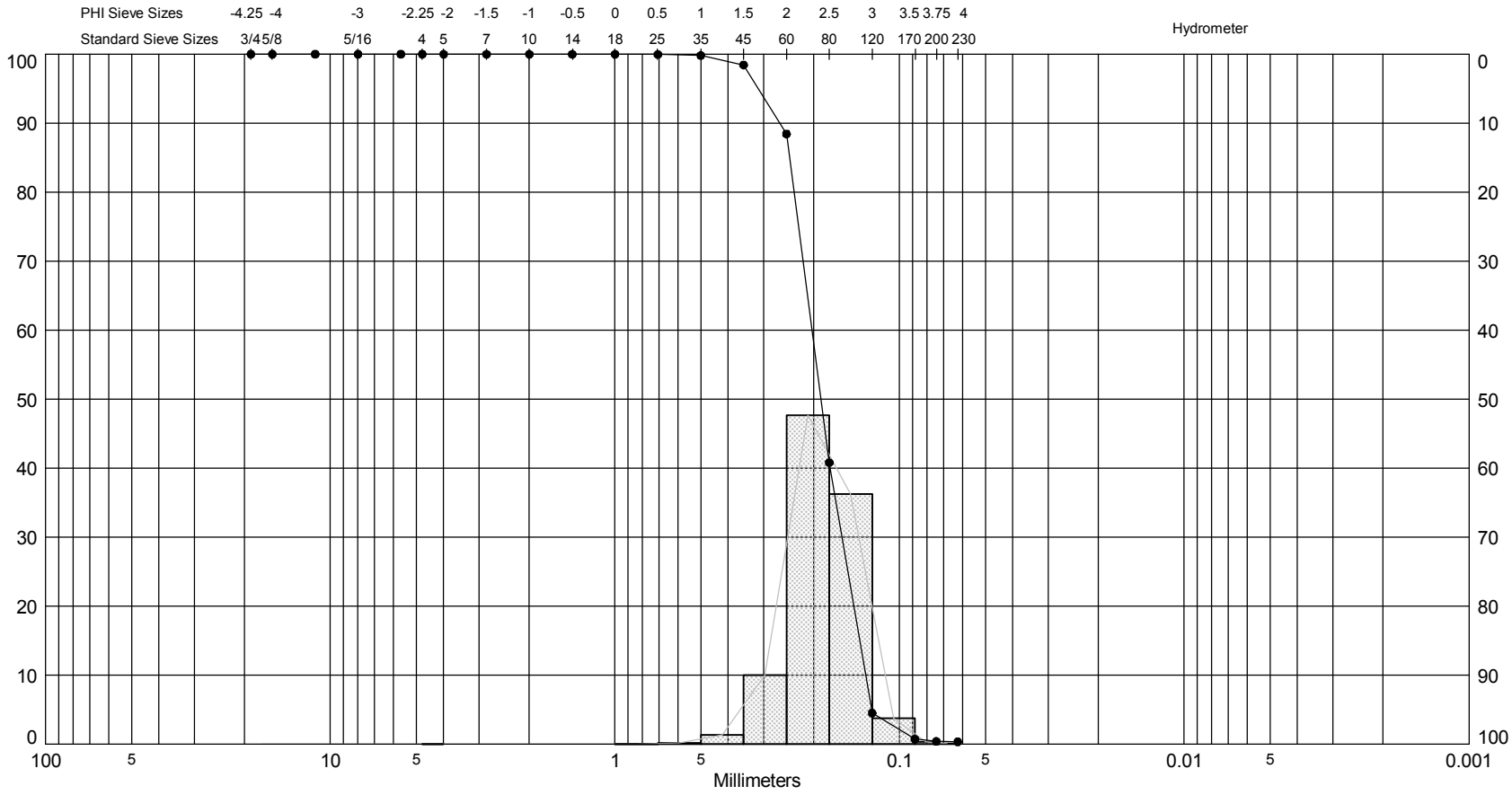
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Toe of Dune Comp.	—●—		SP	#200 - 0.39 #230 - 0.33			2.4	2.41	-0.54	7.09	0.4

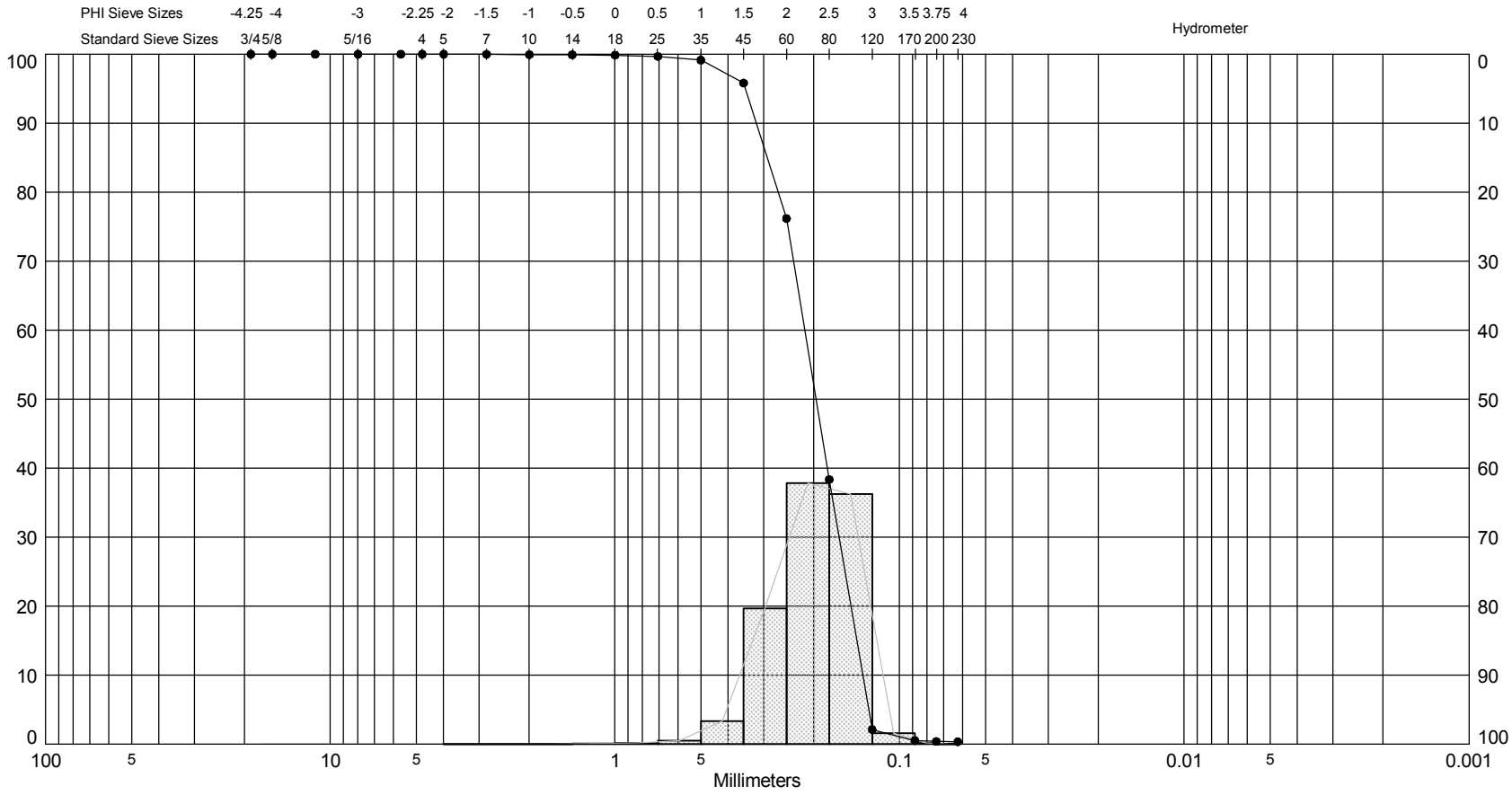
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Mid-Berm Comp.	—●—		SP	#200 - 0.38 #230 - 0.35			2.35	2.3	-0.98	6.33	0.47

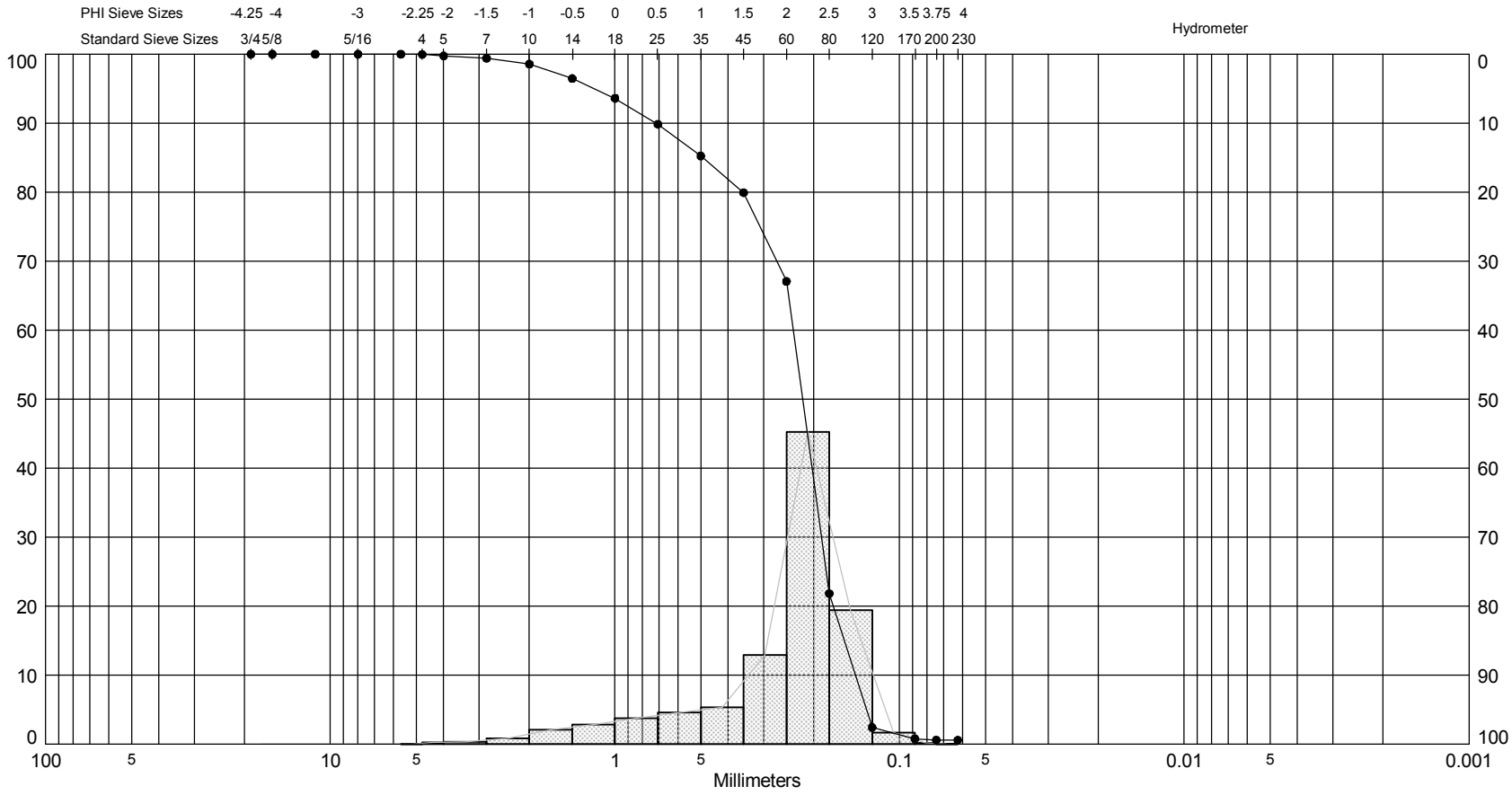
Comments: COMPOSITE

Depths and elevations based on measured values

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Sample Information	
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Analysis Date:	
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Easting (X, ft):	
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Horizontal System:	
Vertical System:	NAVD 88

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
2.0 / 3.0 Comp.	—●—		SW	#200 - 0.60 #230 - 0.57			2.19	1.91	-1.69	5.78	0.94

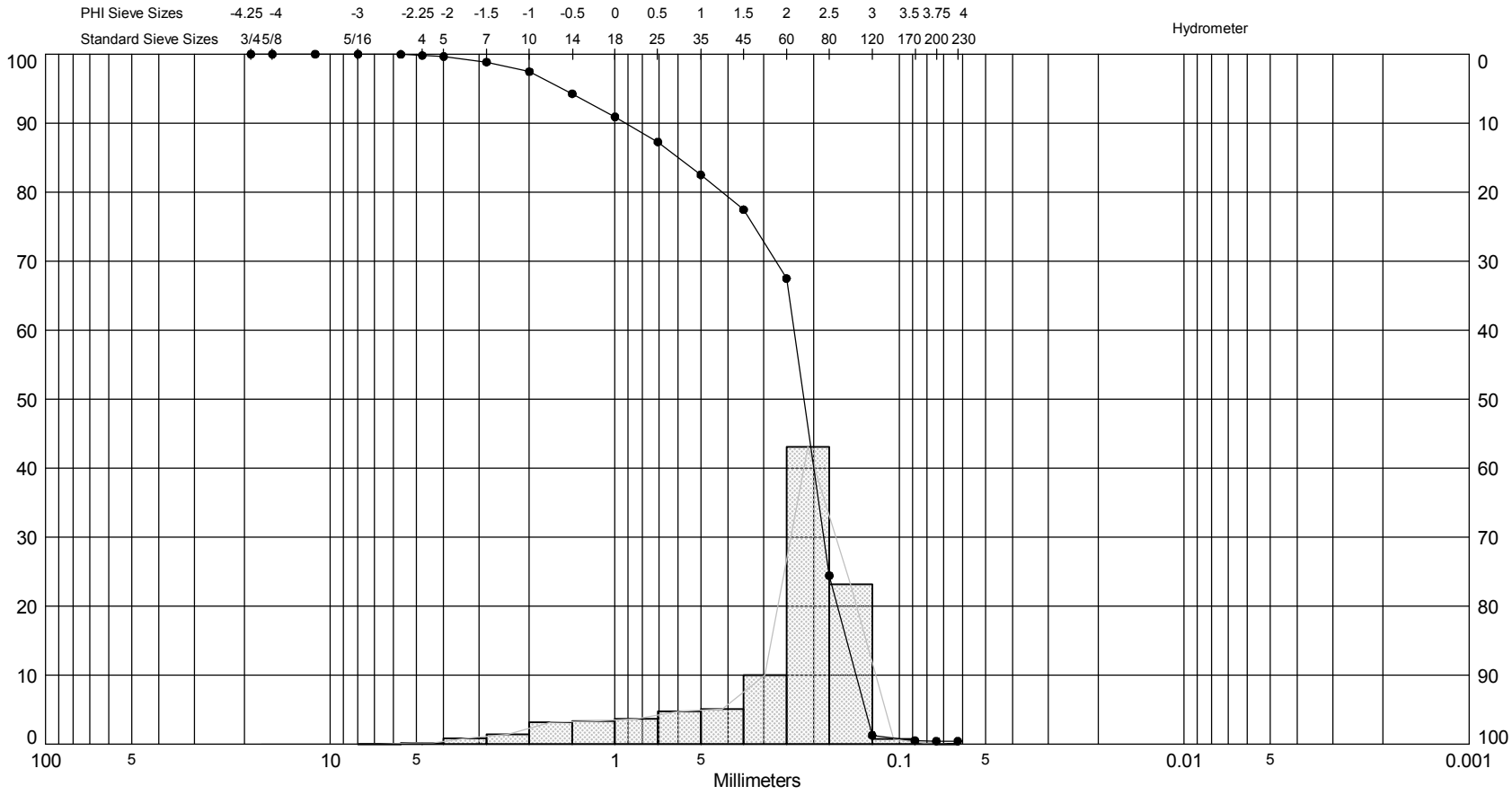
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
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Vertical System:	NAVD 88

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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MHW Comp.	—●—		SW	#200 - 0.44 #230 - 0.43			2.2	1.85	-1.65	5.14	1.05

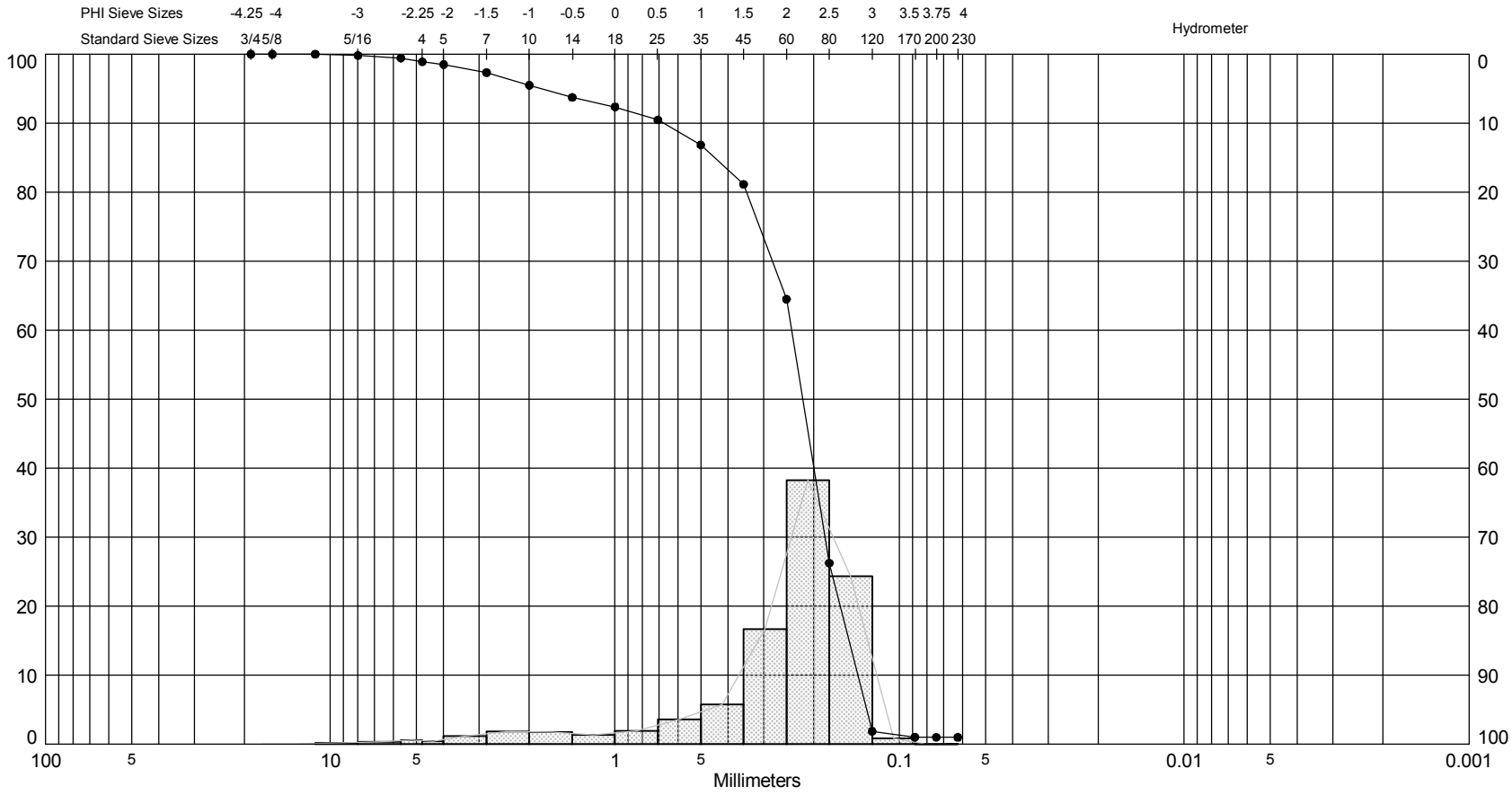
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MTL Comp.	—●—		SW	#200 - 0.98 #230 - 0.97			2.19	1.88	-2.16	7.79	1.09

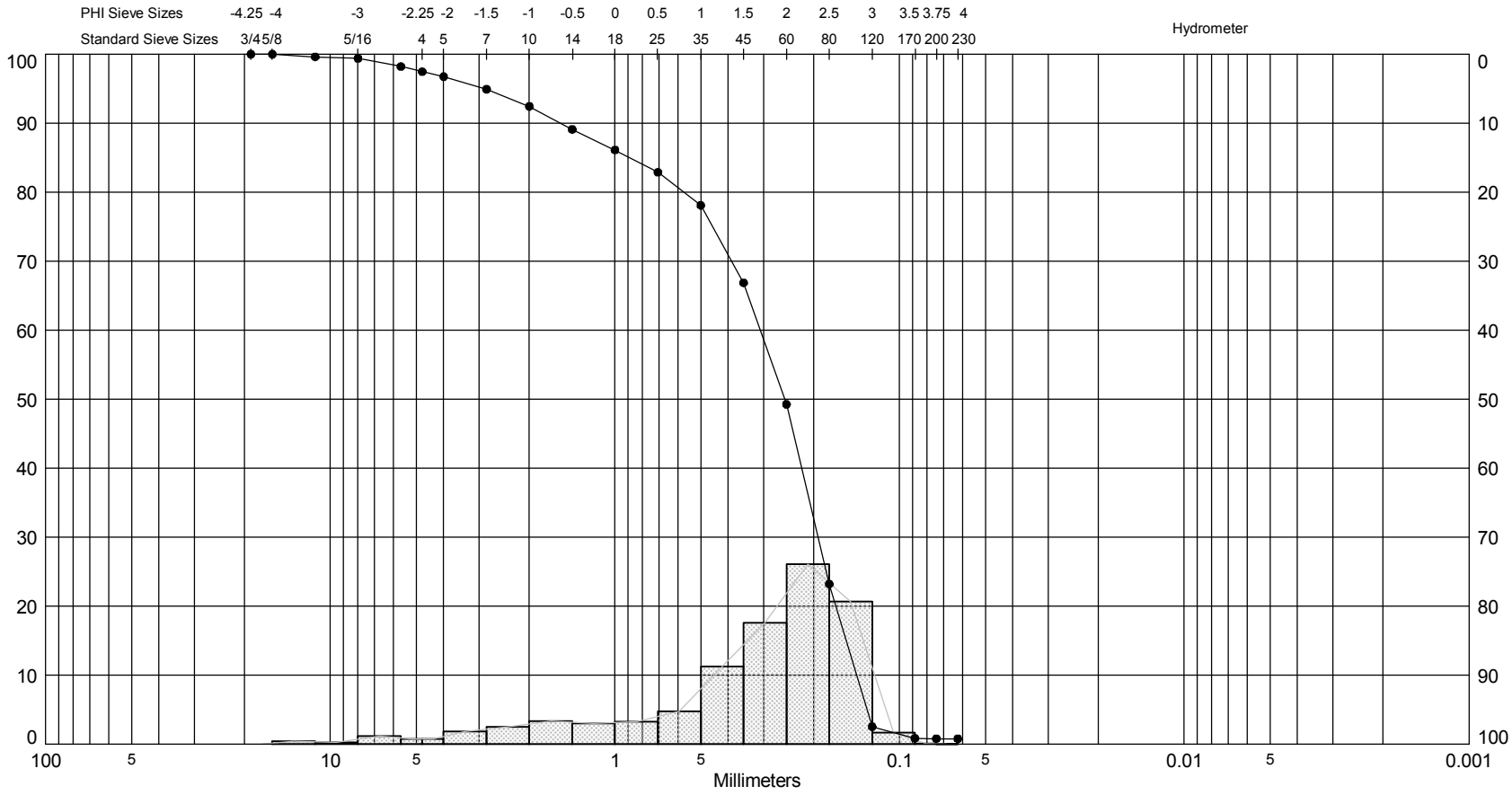
Comments: COMPOSITE

Depths and elevations based on measured values

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Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
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Easting (X, ft):	
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Vertical System:	NAVD 88

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MLW Comp.	—●—		SW	#200 - 0.79 #230 - 0.78			1.98	1.53	-1.53	4.94	1.36

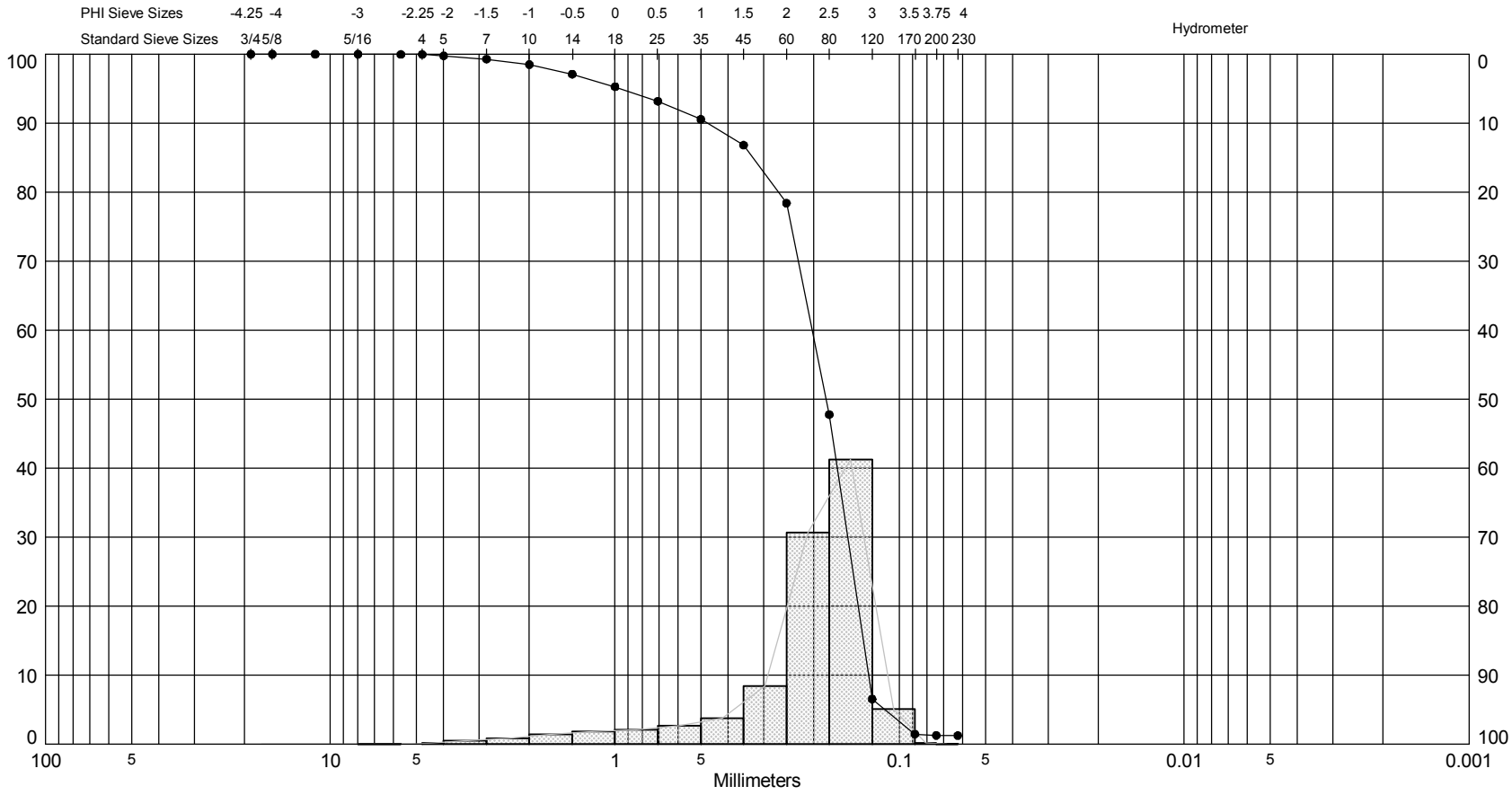
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-6.0 Comp.	—●—		SW	#200 - 1.26 #230 - 1.23			2.46	2.2	-2.15	8.13	0.91

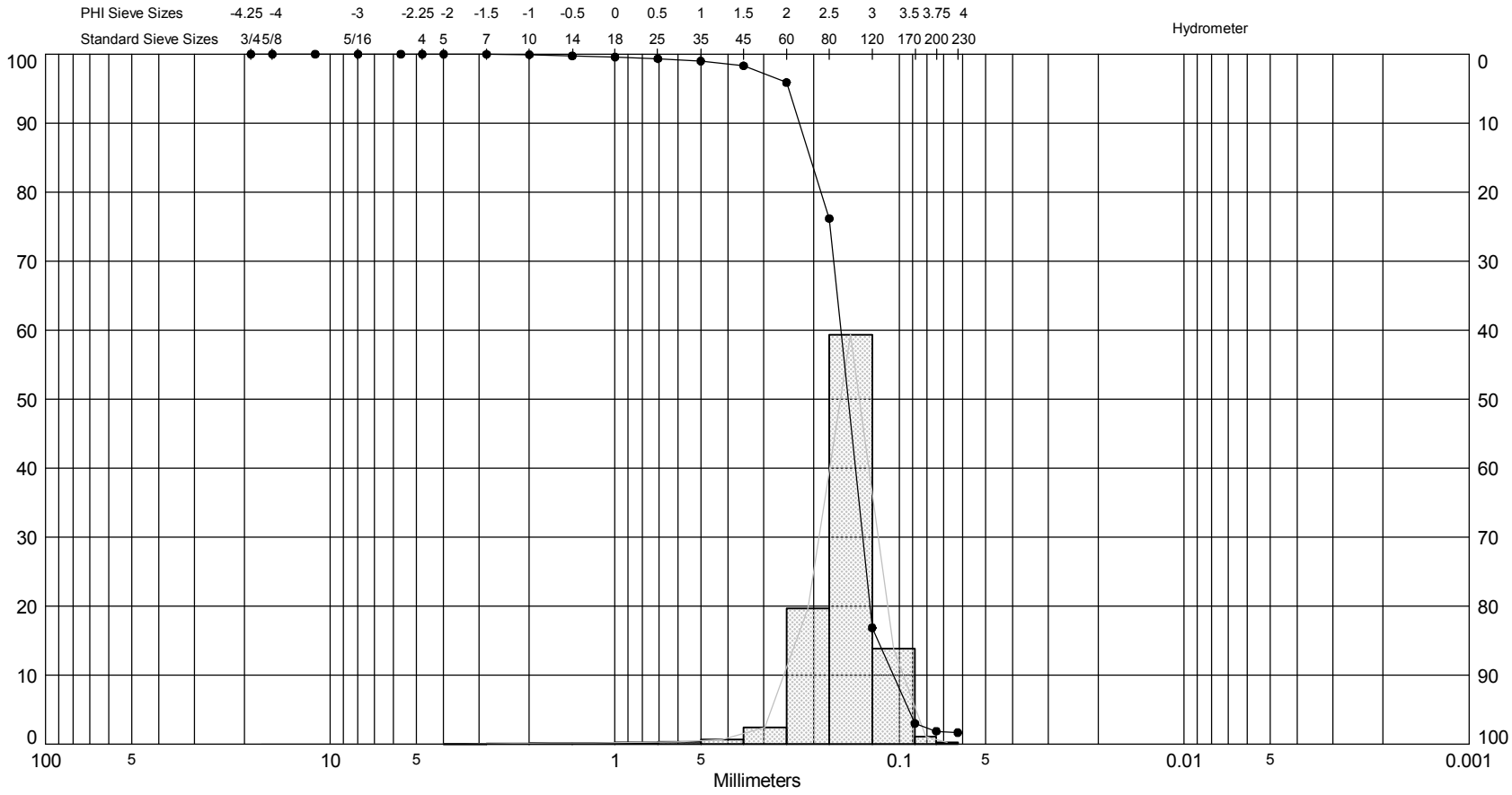
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-8.8 Comp.	—●—		SP	#200 - 1.87 #230 - 1.66			2.72	2.67	-2.45	17.84	0.46

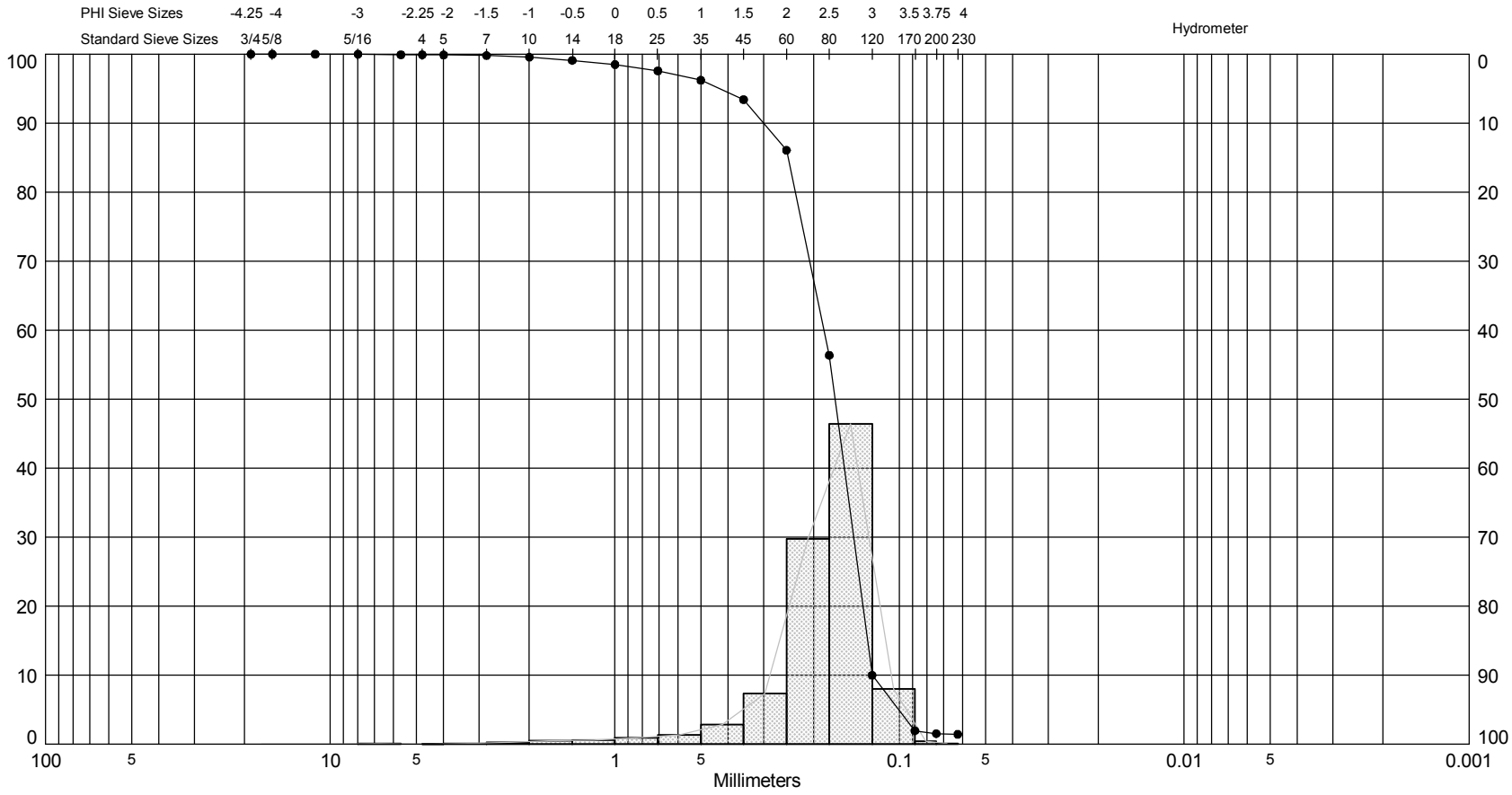
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-11.6 Comp.	—●—		SP	#200 - 1.52 #230 - 1.41			2.57	2.42	-2.51	13.31	0.67

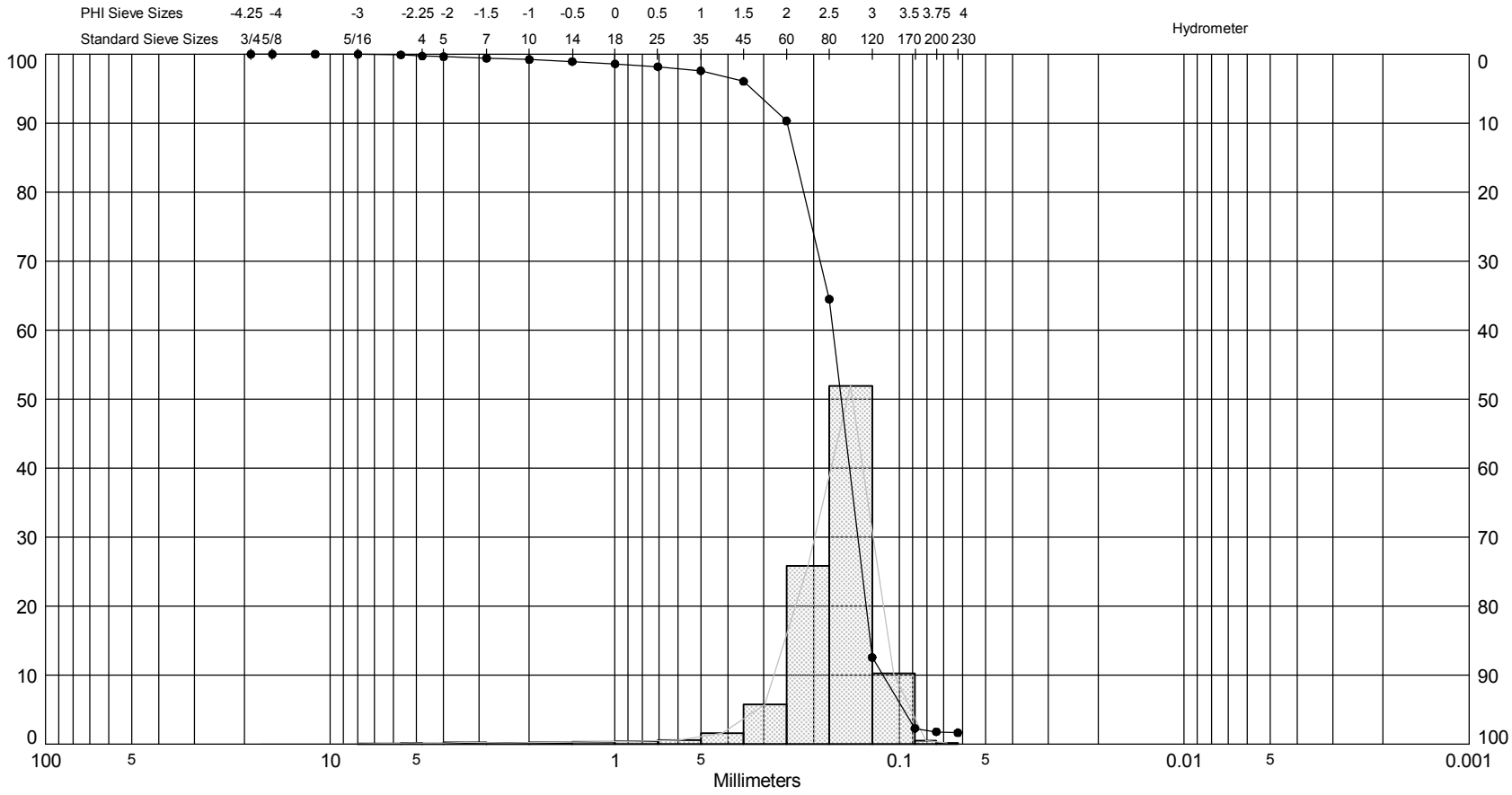
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-14.4 Comp.	—●—		SP	#200 - 1.79 #230 - 1.64			2.64	2.52	-3.51	22.66	0.65

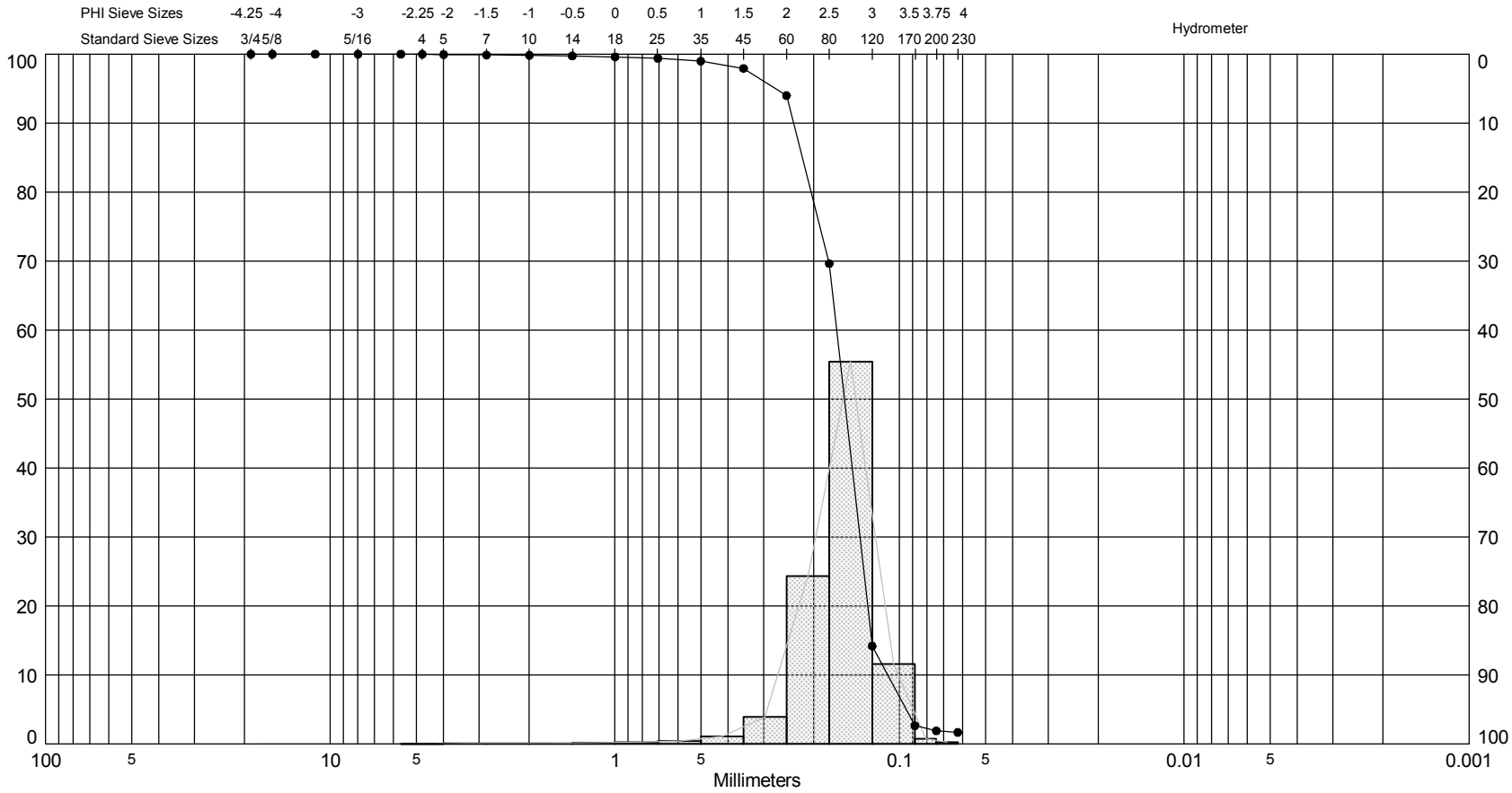
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Hutaff Island
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-17.2 Comp.	—●—		SP	#200 - 1.89 #230 - 1.67			2.68	2.61	-2.53	19.5	0.48

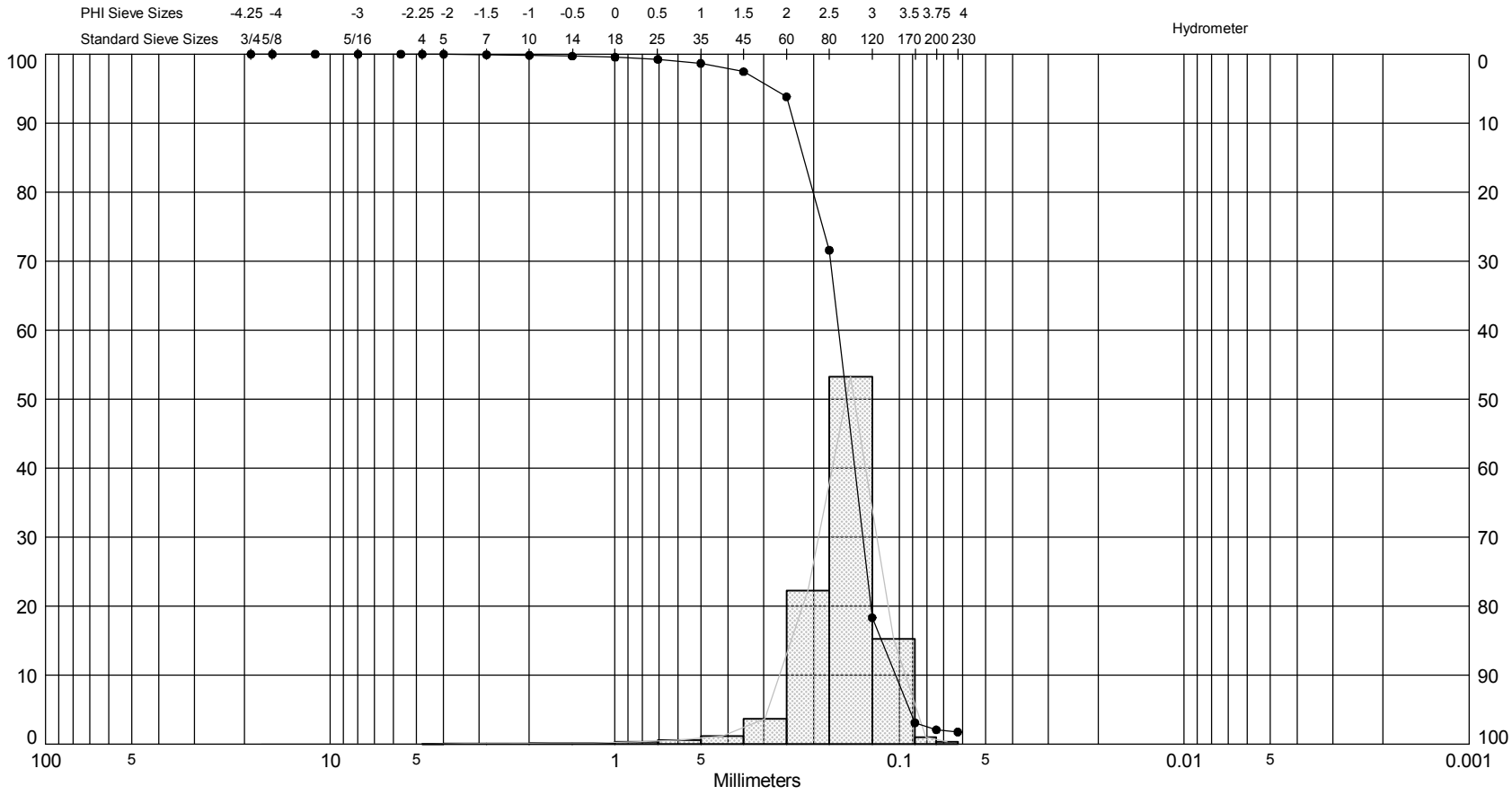
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
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SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-20.0 Comp.	—●—		SP	#200 - 2.06 #230 - 1.75			2.7	2.64	-2.3	15.6	0.51

Comments: COMPOSITE

Depths and elevations based on measured values

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Sample Information	
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Vertical System:	NAVD 88

SIEVE ANALYSIS HUTAFF COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 11

2007 Figure Eight Island Native Beach Composite Summary Tables

PROFILE LINE SUMMARY TABLE
FIGURE EIGHT BEACH SAMPLES

PROFILE	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	% Carbonate
80+00 COMPOSITE	0.19	2.40	0.66	0.96	5	7	7.9
120+00 COMPOSITE	0.18	2.45	0.55	1.03	5	6	5.4
160+00 COMPOSITE	0.18	2.45	0.50	1.13	5	6	4.8
200+00 COMPOSITE	0.18	2.47	0.46	1.04	5	6	5.9
BEACH COMPOSITE	**0.18**	**2.44**	**0.55**	**1.04**	**5**	**6**	**6.0**

PROFILE LINE DATA TABLE
FIGURE EIGHT BEACH SAMPLES

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																		
							GRAVEL						GRANULAR			SAND									FINE
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4	PAN
80+00 COMPOSITE	0.19	2.40	0.66	0.96	5	7	0.00	0.00	0.00	0.12	0.13	0.15	0.17	0.35	0.59	1.12	1.77	2.53	3.26	4.46	10.54	51.21	91.66	98.42	98.91	99.04	99.99
120+00 COMPOSITE	0.18	2.45	0.55	1.03	5	6	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.16	0.32	0.58	0.90	1.35	1.91	3.11	9.87	48.45	91.44	98.50	98.89	98.97	99.98
160+00 COMPOSITE	0.18	2.45	0.50	1.13	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.20	0.43	0.66	0.95	1.36	2.53	9.93	50.87	92.39	98.48	98.80	98.87	99.98
200+00 COMPOSITE	0.18	2.47	0.46	1.04	5	6	0.00	0.00	0.00	0.00	0.02	0.03	0.03	0.06	0.12	0.23	0.39	0.63	1.02	1.98	7.91	49.19	92.93	98.61	98.90	98.96	99.98
BEACH COMPOSITE	**0.18**	**2.44**	**0.55**	**1.04**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.03**	**0.04**	**0.05**	**0.07**	**0.17**	**0.31**	**0.59**	**0.93**	**1.36**	**1.89**	**3.02**	**9.56**	**49.93**	**92.11**	**98.50**	**98.87**	**98.96**	**99.98**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT BEACH (1 of 2)

SAMPLE I. D.	FINE % (<0.0625mm)	SAND % (0.0625mm-2.00mm)	GRANULAR % (2mm-4.76mm)	GRAVEL % (4.76mm-76mm)
80+00 Dune	0.28	99.71	0.01	0.00
80+00 Toe of Dune	0.24	97.96	0.52	1.28
80+00 Mid-Berm	0.38	99.62	0.00	0.00
80+00 (+2.0)	0.44	99.53	0.03	0.00
80+00 MHW	0.35	99.65	0.00	0.00
80+00 MTL	1.03	98.96	0.01	0.00
80+00 MLW	0.85	99.02	0.13	0.00
80+00 (-6.0)	1.07	96.79	1.90	0.24
80+00 (-8.8)	1.38	97.63	0.99	0.00
80+00 (-11.6)	1.37	98.12	0.51	0.00
80+00 (-14.4)	1.48	97.95	0.18	0.39
80+00 (-17.2)	1.85	97.44	0.71	0.00
80+00 (-20.0)	1.74	97.54	0.72	0.00
80+00 COMPOSITE	**0.96**	**98.46**	**0.44**	**0.15**
120+00 Dune	0.19	99.80	0.01	0.00
120+00 Toe of Dune	0.32	99.48	0.20	0.00
120+00 Mid-Berm	0.43	99.04	0.53	0.00
120+00 (+3.0)	0.39	99.61	0.00	0.00
120+00 MHW	0.53	99.47	0.00	0.00
120+00 MTL	1.36	98.51	0.07	0.06
120+00 MLW	1.16	98.30	0.47	0.07
120+00 (-6.0)	1.35	97.56	1.09	0.00
120+00 (-8.8)	1.44	98.48	0.08	0.00
120+00 (-11.6)	1.38	98.02	0.60	0.00
120+00 (-14.4)	1.43	98.12	0.45	0.00
120+00 (-17.2)	1.63	98.10	0.27	0.00
120+00 (-20.0)	1.79	98.00	0.11	0.10
120+00 COMPOSITE	**1.03**	**98.65**	**0.30**	**0.02**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT BEACH (2 of 2)

SAMPLE I. D.	FINE % (<0.0625mm)	SAND % (0.0625mm-2.00mm)	GRANULAR % (2mm-4.76mm)	GRAVEL % (4.76mm-76mm)
160+00 Dune	0.32	99.68	0.00	0.00
160+00 Toe of Dune	0.33	99.67	0.00	0.00
160+00 Mid-Berm	0.59	99.37	0.04	0.00
160+00 (+3.0)	0.36	99.64	0.00	0.00
160+00 MHW	0.36	99.64	0.00	0.00
160+00 MTL	1.28	98.72	0.00	0.00
160+00 MLW	1.18	98.23	0.59	0.00
160+00 (-6.0)	1.40	97.96	0.64	0.00
160+00 (-8.8)	1.65	97.56	0.79	0.00
160+00 (-11.6)	1.57	98.16	0.17	0.00
160+00 (-14.4)	1.63	98.07	0.30	0.00
160+00 (-17.2)	2.00	97.97	0.03	0.00
160+00 (-20.0)	1.98	97.95	0.07	0.00
160+00 COMPOSITE	**1.13**	**98.66**	**0.20**	**0.00**
200+00 Dune	0.49	99.50	0.01	0.00
200+00 Toe of Dune	0.15	99.81	0.04	0.00
200+00 Mid-Berm	0.63	99.37	0.00	0.00
200+00 (+2.0)	0.57	99.42	0.01	0.00
200+00 MHW	0.54	99.46	0.00	0.00
200+00 MTL	1.20	98.80	0.00	0.00
200+00 MLW	1.15	98.81	0.04	0.00
200+00 (-6.0)	1.38	97.63	0.65	0.34
200+00 (-8.8)	1.14	98.75	0.11	0.00
200+00 (-11.6)	1.35	98.61	0.04	0.00
200+00 (-14.4)	1.57	98.39	0.04	0.00
200+00 (-17.2)	1.37	98.50	0.13	0.00
200+00 (-20.0)	1.92	97.94	0.14	0.00
200+00 COMPOSITE	**1.04**	**98.85**	**0.09**	**0.03**
TOTAL BEACH COMPOSITE	**1.04**	**98.65**	**0.26**	**0.05**

PROFILE LINE COMPOSITES - FIGURE EIGHT BEACH SAMPLES (1 of 2)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINE
							GRAVEL						GRANULAR			SAND											
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	3.75	4.00	PAN
80+00 Dune	0.19	2.43	0.35	0.28	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.06	0.12	0.26	0.63	6.11	59.83	96.48	99.40	99.67	99.72	99.95
80+00 Toe of Dune	0.19	2.38	0.89	0.24	5	6	0.00	0.00	0.00	1.17	1.28	1.28	1.37	1.52	1.80	2.65	3.32	3.98	4.18	4.40	6.93	48.62	92.73	98.83	99.59	99.76	99.95
80+00 Mid-Berm	0.18	2.46	0.31	0.38	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.09	2.74	59.47	96.03	99.20	99.57	99.62	99.98
80+00 (+2.0)	0.18	2.48	0.31	0.44	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.04	0.04	0.11	3.39	51.97	97.24	99.44	99.54	99.56	99.98
80+00 MHW	0.19	2.40	0.30	0.35	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.07	0.09	0.18	5.37	64.52	98.51	99.56	99.62	99.65	99.99
80+00 MTL	0.19	2.36	0.39	1.03	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.18	0.40	1.79	13.93	63.31	97.35	98.89	98.96	98.97	100.00
80+00 MLW	0.20	2.35	0.41	0.85	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.13	0.26	0.41	0.59	0.80	1.35	10.65	66.91	97.65	99.03	99.14	99.15	99.98
80+00 (-6.0)	0.31	1.67	1.01	1.07	5	6	0.00	0.00	0.00	0.00	0.00	0.24	0.34	1.09	2.14	4.93	9.39	14.58	19.75	27.77	49.45	85.41	98.38	98.91	98.92	98.93	100.00
80+00 (-8.8)	0.19	2.43	0.74	1.38	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.55	0.99	1.99	2.77	3.47	4.15	5.37	10.84	43.48	88.11	97.90	98.48	98.62	99.99
80+00 (-11.6)	0.18	2.47	0.61	1.37	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.51	0.95	1.50	2.26	2.85	4.08	9.29	41.92	90.96	98.24	98.53	98.63	99.99
80+00 (-14.4)	0.17	2.57	0.63	1.48	5	7	0.00	0.00	0.00	0.39	0.39	0.39	0.43	0.44	0.57	0.97	1.34	1.74	2.05	2.50	4.58	32.97	86.68	97.76	98.34	98.52	100.00
80+00 (-17.2)	0.15	2.71	0.69	1.85	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.32	0.71	1.18	1.71	2.49	3.38	4.21	5.74	17.39	70.06	95.88	97.66	98.15	100.00
80+00 (-20.0)	0.17	2.56	0.73	1.74	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.72	1.59	2.32	3.34	4.42	5.44	7.95	29.93	81.46	96.45	97.87	98.26	100.00
80+00 COMPOSITE	**0.19**	**2.40**	**0.66**	**0.96**	**5**	**7**	**0.00**	**0.00**	**0.00**	**0.12**	**0.13**	**0.15**	**0.17**	**0.35**	**0.59**	**1.12**	**1.77**	**2.53**	**3.26**	**4.46**	**10.54**	**51.21**	**91.66**	**98.42**	**98.91**	**99.04**	**99.99**
120+00 Dune	0.18	2.50	0.35	0.19	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.09	0.35	4.38	49.99	94.64	99.42	99.73	99.81	99.97
120+00 Toe of Dune	0.19	2.43	0.45	0.32	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.12	0.20	0.26	0.38	0.70	1.02	1.84	7.46	57.22	94.96	99.07	99.62	99.68	99.95
120+00 Mid-Berm	0.19	2.40	0.54	0.43	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.35	0.53	0.72	0.87	1.13	1.54	3.02	11.26	55.58	95.17	99.18	99.51	99.57	99.98
120+00 (+3.0)	0.19	2.38	0.31	0.39	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.17	6.42	68.59	97.69	99.36	99.58	99.61	100.00
120+00 MHW	0.18	2.47	0.30	0.53	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	3.73	52.99	97.73	99.41	99.46	99.47	99.99
120+00 MTL	0.20	2.30	0.42	1.36	5	6	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.09	0.13	0.19	0.25	0.41	0.70	1.65	17.63	69.47	97.65	98.60	98.63	98.64	99.98
120+00 MLW	0.22	2.21	0.61	1.16	5	6	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.30	0.54	1.03	1.54	2.28	3.33	6.45	22.18	69.70	97.76	98.81	98.83	98.84	99.98
120+00 (-6.0)	0.22	2.19	0.78	1.35	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.09	2.17	3.34	4.85	6.37	10.41	24.51	60.77	94.65	98.56	98.64	98.65	100.00
120+00 (-8.8)	0.15	2.73	0.42	1.44	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.22	0.39	0.58	0.70	0.96	2.36	18.22	79.03	97.85	98.46	98.56	99.99
120+00 (-11.6)	0.18	2.44	0.68	1.38	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.36	0.60	1.28	2.06	2.97	3.71	5.16	11.12	42.73	90.30	98.12	98.50	98.62	99.99
120+00 (-14.4)	0.16	2.61	0.55	1.43	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.34	0.45	0.76	1.05	1.36	1.64	1.98	3.42	30.19	85.59	97.75	98.42	98.57	100.00
120+00 (-17.2)	0.15	2.69	0.48	1.63	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.27	0.41	0.65	0.87	1.16	1.52	2.66	22.69	81.57	97.26	98.18	98.37	99.93
120+00 (-20.0)	0.17	2.54	0.68	1.79	4	6	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.11	0.21	0.54	1.13	2.33	4.49	6.87	11.16	31.68	81.95	97.11	97.98	98.21	99.99
120+00 COMPOSITE	**0.18**	**2.45**	**0.55**	**1.03**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.02**	**0.07**	**0.16**	**0.32**	**0.58**	**0.90**	**1.35**	**1.91**	**3.11**	**9.87**	**48.45**	**91.44**	**98.50**	**98.89**	**98.97**	**99.98**

PROFILE LINE COMPOSITES - FIGURE EIGHT BEACH SAMPLES (2 of 2)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINE
							GRAVEL						GRANULAR			SAND											
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.50	3.75	4.00	PAN
160+00 Dune	0.17	2.58	0.29	0.32	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.52	38.00	94.97	99.39	99.61	99.68	99.98
160+00 Toe of Dune	0.20	2.34	0.40	0.33	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.17	1.02	15.07	70.63	94.53	99.20	99.59	99.67	100.00
160+00 Mid-Berm	0.20	2.35	0.42	0.59	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.15	0.31	0.68	1.90	12.55	68.42	94.83	98.94	99.36	99.41	99.91
160+00 (+3.0)	0.19	2.43	0.30	0.36	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.09	4.10	61.16	97.77	99.51	99.61	99.64	99.99
160+00 MHW	0.19	2.38	0.30	0.36	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	7.09	67.37	98.68	99.59	99.63	99.64	99.98
160+00 MTL	0.19	2.36	0.41	1.28	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.26	0.50	2.00	14.82	60.28	97.09	98.66	98.71	98.72	100.00
160+00 MLW	0.21	2.27	0.56	1.18	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.59	0.89	1.20	1.62	2.38	5.06	18.41	66.02	97.44	98.80	98.81	98.82	100.00
160+00 (-6.0)	0.21	2.23	0.64	1.40	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.38	0.64	1.14	1.64	2.29	3.53	7.49	22.21	64.38	96.57	98.55	98.59	98.60	99.98
160+00 (-8.8)	0.20	2.33	0.73	1.65	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.40	0.79	1.74	2.69	3.73	4.92	7.23	15.95	51.47	92.63	98.11	98.34	98.35	99.96
160+00 (-11.6)	0.18	2.45	0.56	1.57	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.66	1.14	1.78	2.51	3.84	9.68	44.88	92.06	98.10	98.32	98.33	100.00
160+00 (-14.4)	0.17	2.56	0.56	1.63	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.20	0.30	0.82	1.22	1.68	2.14	2.89	5.43	33.63	87.83	98.01	98.30	98.37	100.00
160+00 (-17.2)	0.15	2.73	0.37	2.00	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.16	0.25	0.35	0.59	1.46	18.66	80.15	97.00	97.85	98.00	100.00
160+00 (-20.0)	0.15	2.76	0.40	1.98	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.16	0.23	0.36	0.51	0.73	1.74	16.41	76.52	96.37	97.70	98.02	99.95
160+00 COMPOSITE	**0.18**	**2.45**	**0.50**	**1.13**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.10**	**0.20**	**0.43**	**0.66**	**0.95**	**1.36**	**2.53**	**9.93**	**50.87**	**92.39**	**98.48**	**98.80**	**98.87**	**99.98**
200+00 Dune	0.18	2.45	0.36	0.49	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.06	0.12	0.24	1.06	6.91	54.47	96.83	99.28	99.46	99.51	99.98
200+00 Toe of Dune	0.18	2.46	0.36	0.15	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.09	0.15	0.30	0.83	5.70	53.42	96.88	99.67	99.84	99.85	100.00
200+00 Mid-Berm	0.18	2.44	0.30	0.63	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.23	4.04	59.17	98.02	99.27	99.36	99.37	99.94
200+00 (+2.0)	0.18	2.45	0.30	0.57	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.05	0.14	3.08	57.54	97.73	99.29	99.42	99.43	99.99
200+00 MHW	0.19	2.40	0.32	0.54	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.22	8.65	61.77	98.33	99.41	99.44	99.46	99.90
200+00 MTL	0.19	2.40	0.38	1.20	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.15	0.31	1.18	11.11	59.30	96.62	98.71	98.79	98.80	99.93
200+00 MLW	0.20	2.31	0.40	1.15	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.20	0.32	0.66	2.30	15.38	69.94	97.48	98.83	98.84	98.85	100.00
200+00 (-6.0)	0.22	2.20	0.80	1.38	4	6	0.00	0.00	0.00	0.00	0.26	0.34	0.41	0.61	0.99	1.83	2.90	4.46	6.91	11.04	22.04	60.32	94.93	98.41	98.59	98.62	99.99
200+00 (-8.8)	0.17	2.53	0.48	1.14	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.27	0.51	0.88	1.37	2.43	6.73	39.16	90.29	98.40	98.77	98.86	100.00
200+00 (-11.6)	0.16	2.66	0.42	1.35	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.13	0.26	0.42	0.61	1.07	3.54	27.18	83.80	97.67	98.42	98.65	99.99
200+00 (-14.4)	0.16	2.63	0.41	1.57	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.11	0.19	0.33	0.56	1.14	3.82	30.30	86.04	97.89	98.34	98.43	99.99
200+00 (-17.2)	0.17	2.59	0.47	1.37	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.13	0.20	0.36	0.60	0.96	1.85	5.27	34.49	86.39	97.96	98.49	98.63	99.99
200+00 (-20.0)	0.16	2.60	0.49	1.92	3	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.14	0.22	0.37	0.70	1.18	2.29	6.56	32.40	84.74	97.10	97.88	98.08	100.00
200+00 COMPOSITE	**0.18**	**2.47**	**0.46**	**1.04**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.03**	**0.03**	**0.06**	**0.12**	**0.23**	**0.39**	**0.63**	**1.02**	**1.98**	**7.91**	**49.19**	**92.93**	**98.61**	**98.90**	**98.96**	**99.98**

ELEVATION COMPOSITES - FIGURE EIGHT BEACH SAMPLES (1 of 3)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			FINE
							GRAVEL						GRANULAR			SAND										
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4.00	PAN
80+00 Dune	0.19	2.43	0.35	0.28	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.06	0.12	0.26	0.63	6.11	59.83	96.48	99.40	99.67	99.72	99.95
120+00 Dune	0.18	2.50	0.35	0.19	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.09	0.35	4.38	49.99	94.64	99.42	99.73	99.81	99.97
160+00 Dune	0.17	2.58	0.29	0.32	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.52	38.00	94.97	99.39	99.61	99.68	99.98
200+00 Dune	0.18	2.45	0.36	0.49	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.06	0.12	0.24	1.06	6.91	54.47	96.83	99.28	99.46	99.51	99.98
DUNE COMPOSITE	**0.18**	**2.49**	**0.34**	**0.32**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.02**	**0.04**	**0.07**	**0.15**	**0.52**	**4.48**	**50.57**	**95.73**	**99.37**	**99.62**	**99.68**	**99.97**
80+00 Toe of Dune	0.19	2.38	0.89	0.24	5	6	0.00	0.00	0.00	1.17	1.28	1.28	1.37	1.52	1.80	2.65	3.32	3.98	4.18	4.40	6.93	48.62	92.73	98.83	99.59	99.76	99.95
120+00 Toe of Dune	0.19	2.43	0.45	0.32	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.12	0.20	0.26	0.38	0.70	1.02	1.84	7.46	57.22	94.96	99.07	99.62	99.68	99.95
160+00 Toe of Dune	0.20	2.34	0.40	0.33	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.17	1.02	15.07	70.63	94.53	99.20	99.59	99.67	100.00
200+00 Toe of Dune	0.18	2.46	0.36	0.15	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.05	0.09	0.15	0.30	0.83	5.70	53.42	96.88	99.67	99.84	99.85	100.00
TOE OF DUNE COMPOSITE	**0.19**	**2.40**	**0.57**	**0.26**	**6**	**6**	**0.00**	**0.00**	**0.00**	**0.29**	**0.32**	**0.32**	**0.36**	**0.41**	**0.51**	**0.74**	**0.95**	**1.22**	**1.42**	**2.02**	**8.79**	**57.47**	**94.78**	**99.19**	**99.66**	**99.74**	**99.98**
80+00 Mid-Berm	0.18	2.46	0.31	0.38	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	0.09	2.74	59.47	96.03	99.20	99.57	99.62	99.98
120+00 Mid-Berm	0.19	2.40	0.54	0.43	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.35	0.53	0.72	0.87	1.13	1.54	3.02	11.26	55.58	95.17	99.18	99.51	99.57	99.98
160+00 Mid-Berm	0.20	2.35	0.42	0.59	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.15	0.31	0.68	1.90	12.55	68.42	94.83	98.94	99.36	99.41	99.91
200+00 Mid-Berm	0.18	2.44	0.30	0.63	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.23	4.04	59.17	98.02	99.27	99.36	99.37	99.94
MID-BERM COMPOSITE	**0.19**	**2.41**	**0.41**	**0.51**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**	**0.09**	**0.14**	**0.21**	**0.26**	**0.37**	**0.57**	**1.31**	**7.65**	**60.66**	**96.01**	**99.15**	**99.45**	**99.49**	**99.95**
80+00 (+2.0)	0.18	2.48	0.31	0.44	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03	0.03	0.04	0.04	0.11	3.39	51.97	97.24	99.44	99.54	99.56	99.98
120+00 (+3.0)	0.19	2.38	0.31	0.39	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.17	6.42	68.59	97.69	99.36	99.58	99.61	100.00
160+00 (+3.0)	0.19	2.43	0.30	0.36	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.09	4.10	61.16	97.77	99.51	99.61	99.64	99.99
200+00 (+2.0)	0.18	2.45	0.30	0.57	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.05	0.14	3.08	57.54	97.73	99.29	99.42	99.43	99.99
+2.0/ +3.0 COMPOSITE	**0.18**	**2.44**	**0.31**	**0.44**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**	**0.03**	**0.13**	**4.25**	**59.82**	**97.61**	**99.40**	**99.54**	**99.56**	**99.99**
80+00 MHW	0.19	2.40	0.30	0.35	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.07	0.09	0.18	5.37	64.52	98.51	99.56	99.62	99.65	99.99
120+00 MHW	0.18	2.47	0.30	0.53	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	3.73	52.99	97.73	99.41	99.46	99.47	99.99
160+00 MHW	0.19	2.38	0.30	0.36	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	7.09	67.37	98.68	99.59	99.63	99.64	99.98
200+00 MHW	0.19	2.40	0.32	0.54	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.22	8.65	61.77	98.33	99.41	99.44	99.46	99.90
MHW COMPOSITE	**0.19**	**2.41**	**0.31**	**0.44**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.02**	**0.04**	**0.12**	**6.21**	**61.66**	**98.31**	**99.49**	**99.54**	**99.56**	**99.97**

ELEVATION COMPOSITES - FIGURE EIGHT BEACH SAMPLES (2 of 3)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINE
							GRAVEL						GRANULAR			SAND											PAN
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4.00	
80+00 MTL	0.19	2.36	0.39	1.03	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.18	0.40	1.79	13.93	63.31	97.35	98.89	98.96	98.97	100.00
120+00 MTL	0.20	2.30	0.42	1.36	5	6	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.09	0.13	0.19	0.25	0.41	0.70	1.65	17.63	69.47	97.65	98.60	98.63	98.64	99.98
160+00 MTL	0.19	2.36	0.41	1.28	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.26	0.50	2.00	14.82	60.28	97.09	98.66	98.71	98.72	100.00
200+00 MTL	0.19	2.40	0.38	1.20	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.15	0.31	1.18	11.11	59.30	96.62	98.71	98.79	98.80	99.93
MTL COMPOSITE	**0.20**	**2.35**	**0.40**	**1.22**	**5**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.02**	**0.02**	**0.04**	**0.08**	**0.14**	**0.25**	**0.48**	**1.66**	**14.37**	**63.09**	**97.18**	**98.72**	**98.77**	**98.78**	**99.98**
80+00 MLW	0.20	2.35	0.41	0.85	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.13	0.26	0.41	0.59	0.80	1.35	10.65	66.91	97.65	99.03	99.14	99.15	99.98
120+00 MLW	0.22	2.21	0.61	1.16	5	6	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.30	0.54	1.03	1.54	2.28	3.33	6.45	22.18	69.70	97.76	98.81	98.83	98.84	99.98
160+00 MLW	0.21	2.27	0.56	1.18	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.59	0.89	1.20	1.62	2.38	5.06	18.41	66.02	97.44	98.80	98.81	98.82	100.00
200+00 MLW	0.20	2.31	0.40	1.15	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.20	0.32	0.66	2.30	15.38	69.94	97.48	98.83	98.84	98.85	100.00
MLW COMPOSITE	**0.21**	**2.28**	**0.51**	**1.08**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.04**	**0.17**	**0.33**	**0.57**	**0.84**	**1.20**	**1.79**	**3.79**	**16.66**	**68.14**	**97.58**	**98.87**	**98.91**	**98.92**	**99.99**
80+00 (-6.0)	0.31	1.67	1.01	1.07	5	6	0.00	0.00	0.00	0.00	0.00	0.24	0.34	1.09	2.14	4.93	9.39	14.58	19.75	27.77	49.45	85.41	98.38	98.91	98.92	98.93	100.00
120+00 (-6.0)	0.22	2.19	0.78	1.35	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.09	2.17	3.34	4.85	6.37	10.41	24.51	60.77	94.65	98.56	98.64	98.65	100.00
160+00 (-6.0)	0.21	2.23	0.64	1.40	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.38	0.64	1.14	1.64	2.29	3.53	7.49	22.21	64.38	96.57	98.55	98.59	98.60	99.98
200+00 (-6.0)	0.22	2.20	0.80	1.38	4	6	0.00	0.00	0.00	0.00	0.26	0.34	0.41	0.61	0.99	1.83	2.90	4.46	6.91	11.04	22.04	60.32	94.93	98.41	98.59	98.62	99.99
(-6.0) COMPOSITE	**0.24**	**2.07**	**0.85**	**1.30**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.15**	**0.22**	**0.60**	**1.22**	**2.52**	**4.32**	**6.55**	**9.14**	**14.18**	**29.55**	**67.72**	**96.13**	**98.61**	**98.69**	**98.70**	**99.99**
80+00 (-8.8)	0.19	2.43	0.74	1.38	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.55	0.99	1.99	2.77	3.47	4.15	5.37	10.84	43.48	88.11	97.90	98.48	98.62	99.99
120+00 (-8.8)	0.15	2.73	0.42	1.44	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.22	0.39	0.58	0.70	0.96	2.36	18.22	79.03	97.85	98.46	98.56	99.99
160+00 (-8.8)	0.20	2.33	0.73	1.65	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.40	0.79	1.74	2.69	3.73	4.92	7.23	15.95	51.47	92.63	98.11	98.34	98.35	99.96
200+00 (-8.8)	0.17	2.53	0.48	1.14	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.27	0.51	0.88	1.37	2.43	6.73	39.16	90.29	98.40	98.77	98.86	100.00
(-8.8) COMPOSITE	**0.18**	**2.51**	**0.63**	**1.40**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.25**	**0.49**	**1.06**	**1.59**	**2.17**	**2.79**	**4.00**	**8.97**	**38.08**	**87.52**	**98.07**	**98.51**	**98.60**	**99.99**
80+00 (-11.6)	0.18	2.47	0.61	1.37	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.51	0.95	1.50	2.26	2.85	4.08	9.29	41.92	90.96	98.24	98.53	98.63	99.99
120+00 (-11.6)	0.18	2.44	0.68	1.38	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.36	0.60	1.28	2.06	2.97	3.71	5.16	11.12	42.73	90.30	98.12	98.50	98.62	99.99
160+00 (-11.6)	0.18	2.45	0.56	1.57	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.17	0.66	1.14	1.78	2.51	3.84	9.68	44.88	92.06	98.10	98.32	98.33	100.00
200+00 (-11.6)	0.16	2.66	0.42	1.35	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.13	0.26	0.42	0.61	1.07	3.54	27.18	83.80	97.67	98.42	98.65	99.99
(-11.6) COMPOSITE	**0.18**	**2.51**	**0.58**	**1.44**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.13**	**0.33**	**0.76**	**1.24**	**1.86**	**2.42**	**3.54**	**8.41**	**39.18**	**89.28**	**98.03**	**98.44**	**98.56**	**99.99**

ELEVATION COMPOSITES - FIGURE EIGHT BEACH SAMPLES (3 of 3)

SAMPLE I. D.	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINE
							GRAVEL						GRANULAR			SAND											PAN
							-4.25	-4.00	-3.50	-3.00	-2.50	-2.25	-2.00	-1.50	-1.00	-0.50	0.00	0.50	1.00	1.50	2.00	2.50	3.00	3.5	3.75	4.00	
80+00 (-14.4)	0.17	2.57	0.63	1.48	5	7	0.00	0.00	0.00	0.39	0.39	0.39	0.43	0.44	0.57	0.97	1.34	1.74	2.05	2.50	4.58	32.97	86.68	97.76	98.34	98.52	100.00
120+00 (-14.4)	0.16	2.61	0.55	1.43	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.34	0.45	0.76	1.05	1.36	1.64	1.98	3.42	30.19	85.59	97.75	98.42	98.57	100.00
160+00 (-14.4)	0.17	2.56	0.56	1.63	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.20	0.30	0.82	1.22	1.68	2.14	2.89	5.43	33.63	87.83	98.01	98.30	98.37	100.00
200+00 (-14.4)	0.16	2.63	0.41	1.57	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.04	0.11	0.19	0.33	0.56	1.14	3.82	30.30	86.04	97.89	98.34	98.43	99.99
(-14.4) COMPOSITE	**0.17**	**2.59**	**0.55**	**1.53**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.10**	**0.10**	**0.10**	**0.19**	**0.25**	**0.34**	**0.67**	**0.95**	**1.28**	**1.60**	**2.13**	**4.31**	**31.77**	**86.54**	**97.85**	**98.35**	**98.47**	**100.00**
80+00 (-17.2)	0.15	2.71	0.69	1.85	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.32	0.71	1.18	1.71	2.49	3.38	4.21	5.74	17.39	70.06	95.88	97.66	98.15	100.00
120+00 (-17.2)	0.15	2.69	0.48	1.63	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.27	0.41	0.65	0.87	1.16	1.52	2.66	22.69	81.57	97.26	98.18	98.37	99.93
160+00 (-17.2)	0.15	2.73	0.37	2.00	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.16	0.25	0.35	0.59	1.46	18.66	80.15	97.00	97.85	98.00	100.00
200+00 (-17.2)	0.17	2.59	0.47	1.37	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.13	0.20	0.36	0.60	0.96	1.85	5.27	34.49	86.39	97.96	98.49	98.63	99.99
(-17.2) COMPOSITE	**0.16**	**2.68**	**0.52**	**1.71**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.13**	**0.29**	**0.47**	**0.72**	**1.05**	**1.46**	**2.04**	**3.78**	**23.31**	**79.54**	**97.03**	**98.05**	**98.29**	**99.98**
80+00 (-20.0)	0.17	2.56	0.73	1.74	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.72	1.59	2.32	3.34	4.42	5.44	7.95	29.93	81.46	96.45	97.87	98.26	100.00
120+00 (-20.0)	0.17	2.54	0.68	1.79	4	6	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.11	0.21	0.54	1.13	2.33	4.49	6.87	11.16	31.68	81.95	97.11	97.98	98.21	99.99
160+00 (-20.0)	0.15	2.76	0.40	1.98	4	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.16	0.23	0.36	0.51	0.73	1.74	16.41	76.52	96.37	97.70	98.02	99.95
200+00 (-20.0)	0.16	2.60	0.49	1.92	3	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.14	0.22	0.37	0.70	1.18	2.29	6.56	32.40	84.74	97.10	97.88	98.08	100.00
(-20.0) COMPOSITE	**0.16**	**2.61**	**0.60**	**1.86**	**4**	**6**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.03**	**0.03**	**0.13**	**0.29**	**0.63**	**1.01**	**1.68**	**2.65**	**3.83**	**6.85**	**27.61**	**81.17**	**96.76**	**97.86**	**98.14**	**99.99**

APPENDIX 12

2007 Figure Eight Island Native Beach Individual Grab Sample Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (+2)

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,351	189,640	North Carolina State Plane	2.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.11	100.69	0.01	0.02	#200 - 0.46 #230 - 0.44			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
10	-1.00	2.00	0.00	0.00	0.03	0.03
14	-0.50	1.41	0.00	0.00	0.03	0.03
18	0.00	1.00	0.00	0.00	0.03	0.03
25	0.50	0.71	0.01	0.01	0.04	0.04
35	1.00	0.50	0.00	0.00	0.04	0.04
45	1.50	0.35	0.07	0.07	0.11	0.11
60	2.00	0.25	3.32	3.28	3.43	3.39
80	2.50	0.18	49.12	48.58	52.55	51.97
120	3.00	0.13	45.77	45.27	98.32	97.24
170	3.50	0.09	2.22	2.20	100.54	99.44
200	3.75	0.07	0.10	0.10	100.64	99.54
230	4.00	0.06	0.02	0.02	100.66	99.56

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.85	2.75	2.48	2.22	2.13	2.02

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.48	0.18	0.31	-0.76	12.77

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-11.6)

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,816	189,210	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/2 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.44	88.22	0.01	0.01	#200 - 1.47 #230 - 1.37			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.13	0.15	0.13	0.15
10	-1.00	2.00	0.32	0.36	0.45	0.51
14	-0.50	1.41	0.39	0.44	0.84	0.95
18	0.00	1.00	0.49	0.55	1.33	1.50
25	0.50	0.71	0.68	0.76	2.01	2.26
35	1.00	0.50	0.53	0.59	2.54	2.85
45	1.50	0.35	1.10	1.23	3.64	4.08
60	2.00	0.25	4.66	5.21	8.30	9.29
80	2.50	0.18	29.18	32.63	37.48	41.92
120	3.00	0.13	43.86	49.04	81.34	90.96
170	3.50	0.09	6.51	7.28	87.85	98.24
200	3.75	0.07	0.26	0.29	88.11	98.53
230	4.00	0.06	0.09	0.10	88.20	98.63

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.28	2.93	2.84	2.58	2.24	2.10	1.59

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.47	0.18	0.61	-2.94	16.43

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-14.4)

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,915	189,086	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/2 Dry - 5Y-7/1 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.51	83.26	0.01	0.00	#200 - 1.66 #230 - 1.48			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.33	0.39	0.33	0.39
3.5	-2.50	5.66	0.00	0.00	0.33	0.39
4	-2.25	4.76	0.00	0.00	0.33	0.39
5	-2.00	4.00	0.03	0.04	0.36	0.43
7	-1.50	2.83	0.01	0.01	0.37	0.44
10	-1.00	2.00	0.11	0.13	0.48	0.57
14	-0.50	1.41	0.34	0.40	0.82	0.97
18	0.00	1.00	0.31	0.37	1.13	1.34
25	0.50	0.71	0.34	0.40	1.47	1.74
35	1.00	0.50	0.26	0.31	1.73	2.05
45	1.50	0.35	0.38	0.45	2.11	2.50
60	2.00	0.25	1.76	2.08	3.87	4.58
80	2.50	0.18	23.99	28.39	27.86	32.97
120	3.00	0.13	45.39	53.71	73.25	86.68
170	3.50	0.09	9.36	11.08	82.61	97.76
200	3.75	0.07	0.49	0.58	83.10	98.34
230	4.00	0.06	0.15	0.18	83.25	98.52

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.98	2.89	2.66	2.36	2.20	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.57	0.17	0.63	-4.65	37.1

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-17.2)

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,379,081	188,995	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.38	89.75	0.06	0.00	#200 - 2.34 #230 - 1.85			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.06	0.07	0.06	0.07
7	-1.50	2.83	0.23	0.25	0.29	0.32
10	-1.00	2.00	0.36	0.39	0.65	0.71
14	-0.50	1.41	0.43	0.47	1.08	1.18
18	0.00	1.00	0.48	0.53	1.56	1.71
25	0.50	0.71	0.71	0.78	2.27	2.49
35	1.00	0.50	0.81	0.89	3.08	3.38
45	1.50	0.35	0.76	0.83	3.84	4.21
60	2.00	0.25	1.40	1.53	5.24	5.74
80	2.50	0.18	10.65	11.65	15.89	17.39
120	3.00	0.13	48.13	52.67	64.02	70.06
170	3.50	0.09	23.59	25.82	87.61	95.88
200	3.75	0.07	1.63	1.78	89.24	97.66
230	4.00	0.06	0.45	0.49	89.69	98.15

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.27	3.10	2.81	2.57	2.44	1.76

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.71	0.15	0.69	-3.28	17.86

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-20)

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,379,098	188,935	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/2 Dry - 5Y-6/2 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
93.37	91.76	0.03	0.00	#200 - 2.13 #230 - 1.74			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.28	0.30	0.28	0.30
10	-1.00	2.00	0.39	0.42	0.67	0.72
14	-0.50	1.41	0.81	0.87	1.48	1.59
18	0.00	1.00	0.68	0.73	2.16	2.32
25	0.50	0.71	0.95	1.02	3.11	3.34
35	1.00	0.50	1.01	1.08	4.12	4.42
45	1.50	0.35	0.95	1.02	5.07	5.44
60	2.00	0.25	2.34	2.51	7.41	7.95
80	2.50	0.18	20.52	21.98	27.93	29.93
120	3.00	0.13	48.11	51.53	76.04	81.46
170	3.50	0.09	14.00	14.99	90.04	96.45
200	3.75	0.07	1.33	1.42	91.37	97.87
230	4.00	0.06	0.36	0.39	91.73	98.26

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.45	3.08	2.94	2.69	2.39	2.18	1.28

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	0.73	-2.85	13.89

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-6)

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,618	189,439	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-5/2 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.19	89.23	0.00	0.00	#200 - 1.08 #230 - 1.07			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	0.00	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	0.22	0.24	0.22	0.24
5	-2.00	4.00	0.09	0.10	0.31	0.34
7	-1.50	2.83	0.68	0.75	0.99	1.09
10	-1.00	2.00	0.95	1.05	1.94	2.14
14	-0.50	1.41	2.52	2.79	4.46	4.93
18	0.00	1.00	4.02	4.46	8.48	9.39
25	0.50	0.71	4.68	5.19	13.16	14.58
35	1.00	0.50	4.66	5.17	17.82	19.75
45	1.50	0.35	7.23	8.02	25.05	27.77
60	2.00	0.25	19.55	21.68	44.60	49.45
80	2.50	0.18	32.43	35.96	77.03	85.41
120	3.00	0.13	11.70	12.97	88.73	98.38
170	3.50	0.09	0.48	0.53	89.21	98.91
200	3.75	0.07	0.01	0.01	89.22	98.92
230	4.00	0.06	0.01	0.01	89.23	98.93

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.87	2.48	2.36	2.01	1.33	0.64	-0.49

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.67	0.31	1.01	-1.39	4.56

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 (-8.8)

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,715	189,342	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.19	88.95	0.01	0.01	#200 - 1.52 #230 - 1.38			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	0.00	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	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.44	0.49	0.49	0.55
10	-1.00	2.00	0.40	0.44	0.89	0.99
14	-0.50	1.41	0.90	1.00	1.79	1.99
18	0.00	1.00	0.70	0.78	2.49	2.77
25	0.50	0.71	0.63	0.70	3.12	3.47
35	1.00	0.50	0.61	0.68	3.73	4.15
45	1.50	0.35	1.10	1.22	4.83	5.37
60	2.00	0.25	4.93	5.47	9.76	10.84
80	2.50	0.18	29.44	32.64	39.20	43.48
120	3.00	0.13	40.25	44.63	79.45	88.11
170	3.50	0.09	8.83	9.79	88.28	97.90
200	3.75	0.07	0.52	0.58	88.80	98.48
230	4.00	0.06	0.13	0.14	88.93	98.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.95	2.85	2.57	2.22	2.08	1.35

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.74	-2.91	14.44

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 Dune

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
		North Carolina State Plane	

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.80	101.56	0.00	0.05	#200 - 0.33 #230 - 0.28			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.01	0.01	0.02	0.02
18	0.00	1.00	0.04	0.04	0.06	0.06
25	0.50	0.71	0.06	0.06	0.12	0.12
35	1.00	0.50	0.14	0.14	0.26	0.26
45	1.50	0.35	0.38	0.37	0.64	0.63
60	2.00	0.25	5.58	5.48	6.22	6.11
80	2.50	0.18	54.69	53.72	60.91	59.83
120	3.00	0.13	37.31	36.65	98.22	96.48
170	3.50	0.09	2.97	2.92	101.19	99.40
200	3.75	0.07	0.27	0.27	101.46	99.67
230	4.00	0.06	0.05	0.05	101.51	99.72

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.83	2.71	2.41	2.18	2.09	1.90

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.35	-0.5	7.86

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 MHW

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,368	189,625	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
108.07	107.70	0.01	0.01	#200 - 0.38 #230 - 0.35			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.04	0.04	0.05	0.05
25	0.50	0.71	0.02	0.02	0.07	0.07
35	1.00	0.50	0.02	0.02	0.09	0.09
45	1.50	0.35	0.10	0.09	0.19	0.18
60	2.00	0.25	5.61	5.19	5.80	5.37
80	2.50	0.18	63.92	59.15	69.72	64.52
120	3.00	0.13	36.73	33.99	106.45	98.51
170	3.50	0.09	1.13	1.05	107.58	99.56
200	3.75	0.07	0.07	0.06	107.65	99.62
230	4.00	0.06	0.03	0.03	107.68	99.65

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.79	2.65	2.38	2.17	2.09	1.96

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.3	-0.29	6.73

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 Mid Berm

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
		North Carolina State Plane	

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.03	101.65	0.00	0.02	#200 - 0.43 #230 - 0.38			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.00	0.00	0.01	0.01
35	1.00	0.50	0.02	0.02	0.03	0.03
45	1.50	0.35	0.06	0.06	0.09	0.09
60	2.00	0.25	2.70	2.65	2.79	2.74
80	2.50	0.18	57.88	56.73	60.67	59.47
120	3.00	0.13	37.30	36.56	97.97	96.03
170	3.50	0.09	3.23	3.17	101.20	99.20
200	3.75	0.07	0.38	0.37	101.58	99.57
230	4.00	0.06	0.05	0.05	101.63	99.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.71	2.42	2.20	2.12	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.46	0.18	0.31	0.46	4.23

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 MLW

Analysis Date: 10-19-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,467	189,525	North Carolina State Plane	-2.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.42	90.67	0.02	0.02	#200 - 0.86 #230 - 0.85			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.09	0.10	0.09	0.10
10	-1.00	2.00	0.03	0.03	0.12	0.13
14	-0.50	1.41	0.12	0.13	0.24	0.26
18	0.00	1.00	0.14	0.15	0.38	0.41
25	0.50	0.71	0.16	0.18	0.54	0.59
35	1.00	0.50	0.19	0.21	0.73	0.80
45	1.50	0.35	0.50	0.55	1.23	1.35
60	2.00	0.25	8.50	9.30	9.73	10.65
80	2.50	0.18	51.43	56.26	61.16	66.91
120	3.00	0.13	28.10	30.74	89.26	97.65
170	3.50	0.09	1.26	1.38	90.52	99.03
200	3.75	0.07	0.10	0.11	90.62	99.14
230	4.00	0.06	0.01	0.01	90.63	99.15

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.78	2.63	2.35	2.13	2.05	1.70

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	0.41	-2.51	22.3

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 MTL

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,378,411	189,588	North Carolina State Plane	-1.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/2 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.01	81.18	0.00	0.00	#200 - 1.04 #230 - 1.03			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.01	0.01	0.02	0.02
18	0.00	1.00	0.04	0.05	0.06	0.07
25	0.50	0.71	0.09	0.11	0.15	0.18
35	1.00	0.50	0.18	0.22	0.33	0.40
45	1.50	0.35	1.14	1.39	1.47	1.79
60	2.00	0.25	9.96	12.14	11.43	13.93
80	2.50	0.18	40.50	49.38	51.93	63.31
120	3.00	0.13	27.92	34.04	79.85	97.35
170	3.50	0.09	1.26	1.54	81.11	98.89
200	3.75	0.07	0.06	0.07	81.17	98.96
230	4.00	0.06	0.01	0.01	81.18	98.97

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.80	2.67	2.37	2.11	2.02	1.63

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	0.39	-0.85	6.5

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 80+00 Toe of Dune

Analysis Date: 10-18-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
		North Carolina State Plane	

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.10	97.94	0.01	0.05	#200 - 0.41 #230 - 0.24			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	1.15	1.17	1.15	1.17
3.5	-2.50	5.66	0.11	0.11	1.26	1.28
4	-2.25	4.76	0.00	0.00	1.26	1.28
5	-2.00	4.00	0.09	0.09	1.35	1.37
7	-1.50	2.83	0.15	0.15	1.50	1.52
10	-1.00	2.00	0.27	0.28	1.77	1.80
14	-0.50	1.41	0.83	0.85	2.60	2.65
18	0.00	1.00	0.66	0.67	3.26	3.32
25	0.50	0.71	0.65	0.66	3.91	3.98
35	1.00	0.50	0.20	0.20	4.11	4.18
45	1.50	0.35	0.22	0.22	4.33	4.40
60	2.00	0.25	2.48	2.53	6.81	6.93
80	2.50	0.18	40.90	41.69	47.71	48.62
120	3.00	0.13	43.27	44.11	90.98	92.73
170	3.50	0.09	5.98	6.10	96.96	98.83
200	3.75	0.07	0.75	0.76	97.71	99.59
230	4.00	0.06	0.17	0.17	97.88	99.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.19	2.90	2.80	2.52	2.22	2.11	1.62

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	0.89	-4.21	24.42

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (+3)

Analysis Date: 11-13-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,845	192,819	North Carolina State Plane	3.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.13	97.77	0.01	0.00	#200 - 0.42 #230 - 0.39			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.00	0.00	0.01	0.01
35	1.00	0.50	0.01	0.01	0.02	0.02
45	1.50	0.35	0.15	0.15	0.17	0.17
60	2.00	0.25	6.13	6.25	6.30	6.42
80	2.50	0.18	61.01	62.17	67.31	68.59
120	3.00	0.13	28.56	29.10	95.87	97.69
170	3.50	0.09	1.64	1.67	97.51	99.36
200	3.75	0.07	0.22	0.22	97.73	99.58
230	4.00	0.06	0.03	0.03	97.76	99.61

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.76	2.61	2.35	2.15	2.08	1.89

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	0.31	0.3	4.42

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-11.6)

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,366	192,333	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/2 Dry - 5Y-6/2 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
99.17	97.83	0.01	0.01	#200 - 1.50 #230 - 1.38			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.18	0.18	0.18	0.18
7	-1.50	2.83	0.18	0.18	0.36	0.36
10	-1.00	2.00	0.24	0.24	0.60	0.60
14	-0.50	1.41	0.67	0.68	1.27	1.28
18	0.00	1.00	0.77	0.78	2.04	2.06
25	0.50	0.71	0.90	0.91	2.94	2.97
35	1.00	0.50	0.73	0.74	3.67	3.71
45	1.50	0.35	1.44	1.45	5.11	5.16
60	2.00	0.25	5.91	5.96	11.02	11.12
80	2.50	0.18	31.35	31.61	42.37	42.73
120	3.00	0.13	47.18	47.57	89.55	90.30
170	3.50	0.09	7.76	7.82	97.31	98.12
200	3.75	0.07	0.38	0.38	97.69	98.50
230	4.00	0.06	0.12	0.12	97.81	98.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.30	2.93	2.84	2.58	2.22	2.08	1.44

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	0.68	-2.92	15.38

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-14.4)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,476	192,220	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.18	87.92	0.02	0.00	#200 - 1.58 #230 - 1.43			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.24	0.27	0.24	0.27
7	-1.50	2.83	0.06	0.07	0.30	0.34
10	-1.00	2.00	0.10	0.11	0.40	0.45
14	-0.50	1.41	0.28	0.31	0.68	0.76
18	0.00	1.00	0.26	0.29	0.94	1.05
25	0.50	0.71	0.28	0.31	1.22	1.36
35	1.00	0.50	0.25	0.28	1.47	1.64
45	1.50	0.35	0.30	0.34	1.77	1.98
60	2.00	0.25	1.28	1.44	3.05	3.42
80	2.50	0.18	23.87	26.77	26.92	30.19
120	3.00	0.13	49.41	55.40	76.33	85.59
170	3.50	0.09	10.84	12.16	87.17	97.75
200	3.75	0.07	0.60	0.67	87.77	98.42
230	4.00	0.06	0.13	0.15	87.90	98.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	2.99	2.90	2.68	2.40	2.23	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	0.55	-3.9	29.18

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-17.2)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,542	192,182	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/2 Dry - 5Y-6/2 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.29	84.95	0.02	0.07	#200 - 1.82 #230 - 1.63			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.11	0.13	0.11	0.13
10	-1.00	2.00	0.12	0.14	0.23	0.27
14	-0.50	1.41	0.12	0.14	0.35	0.41
18	0.00	1.00	0.21	0.24	0.56	0.65
25	0.50	0.71	0.19	0.22	0.75	0.87
35	1.00	0.50	0.25	0.29	1.00	1.16
45	1.50	0.35	0.31	0.36	1.31	1.52
60	2.00	0.25	0.98	1.14	2.29	2.66
80	2.50	0.18	17.28	20.03	19.57	22.69
120	3.00	0.13	50.81	58.88	70.38	81.57
170	3.50	0.09	13.54	15.69	83.92	97.26
200	3.75	0.07	0.79	0.92	84.71	98.18
230	4.00	0.06	0.16	0.19	84.87	98.37

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.08	2.94	2.73	2.52	2.33	2.06

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.69	0.15	0.48	-3.35	26.44

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-20)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,604	192,064	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-4/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.87	80.43	0.02	0.01	#200 - 2.02 #230 - 1.79			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.08	0.10	0.08	0.10
4	-2.25	4.76	0.00	0.00	0.08	0.10
5	-2.00	4.00	0.00	0.00	0.08	0.10
7	-1.50	2.83	0.01	0.01	0.09	0.11
10	-1.00	2.00	0.08	0.10	0.17	0.21
14	-0.50	1.41	0.27	0.33	0.44	0.54
18	0.00	1.00	0.48	0.59	0.92	1.13
25	0.50	0.71	0.98	1.20	1.90	2.33
35	1.00	0.50	1.77	2.16	3.67	4.49
45	1.50	0.35	1.95	2.38	5.62	6.87
60	2.00	0.25	3.51	4.29	9.13	11.16
80	2.50	0.18	16.80	20.52	25.93	31.68
120	3.00	0.13	41.16	50.27	67.09	81.95
170	3.50	0.09	12.41	15.16	79.50	97.11
200	3.75	0.07	0.71	0.87	80.21	97.98
230	4.00	0.06	0.19	0.23	80.40	98.21

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.43	3.07	2.93	2.68	2.34	2.12	1.11

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	0.68	-2.34	11.65

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-6)

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,136	192,538	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
94.61	93.35	0.01	0.00	#200 - 1.36 #230 - 1.35			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.28	0.30	0.28	0.30
10	-1.00	2.00	0.75	0.79	1.03	1.09
14	-0.50	1.41	1.02	1.08	2.05	2.17
18	0.00	1.00	1.11	1.17	3.16	3.34
25	0.50	0.71	1.43	1.51	4.59	4.85
35	1.00	0.50	1.44	1.52	6.03	6.37
45	1.50	0.35	3.82	4.04	9.85	10.41
60	2.00	0.25	13.34	14.10	23.19	24.51
80	2.50	0.18	34.31	36.26	57.50	60.77
120	3.00	0.13	32.05	33.88	89.55	94.65
170	3.50	0.09	3.70	3.91	93.25	98.56
200	3.75	0.07	0.08	0.08	93.33	98.64
230	4.00	0.06	0.01	0.01	93.34	98.65

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.04	2.84	2.71	2.35	2.01	1.70	0.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	0.78	-2.2	9.25

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 (-8.8)

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,381,220	192,479	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.82	84.61	0.02	0.01	#200 - 1.54 #230 - 1.44			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.06	0.07	0.07	0.08
14	-0.50	1.41	0.12	0.14	0.19	0.22
18	0.00	1.00	0.15	0.17	0.34	0.39
25	0.50	0.71	0.16	0.19	0.50	0.58
35	1.00	0.50	0.10	0.12	0.60	0.70
45	1.50	0.35	0.22	0.26	0.82	0.96
60	2.00	0.25	1.20	1.40	2.02	2.36
80	2.50	0.18	13.61	15.86	15.63	18.22
120	3.00	0.13	52.19	60.81	67.82	79.03
170	3.50	0.09	16.15	18.82	83.97	97.85
200	3.75	0.07	0.52	0.61	84.49	98.46
230	4.00	0.06	0.09	0.10	84.58	98.56

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.13	2.97	2.76	2.56	2.43	2.08

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15	0.42	-2.79	22.86

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 Dune

Analysis Date: 11-12-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,759	192,920	North Carolina State Plane	16.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.99	100.82	0.00	0.03	#200 - 0.27 #230 - 0.19			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.01	0.01	0.02	0.02
18	0.00	1.00	0.01	0.01	0.03	0.03
25	0.50	0.71	0.01	0.01	0.04	0.04
35	1.00	0.50	0.05	0.05	0.09	0.09
45	1.50	0.35	0.26	0.26	0.35	0.35
60	2.00	0.25	4.07	4.03	4.42	4.38
80	2.50	0.18	46.06	45.61	50.48	49.99
120	3.00	0.13	45.09	44.65	95.57	94.64
170	3.50	0.09	4.83	4.78	100.40	99.42
200	3.75	0.07	0.31	0.31	100.71	99.73
230	4.00	0.06	0.08	0.08	100.79	99.81

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.04	2.88	2.78	2.50	2.23	2.13	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.35	-0.26	6.11

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 MHW

Analysis Date: 11-12-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,884	192,774	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.07	97.57	0.00	0.01	#200 - 0.54 #230 - 0.53			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.02	0.02	0.03	0.03
60	2.00	0.25	3.63	3.70	3.66	3.73
80	2.50	0.18	48.31	49.26	51.97	52.99
120	3.00	0.13	43.88	44.74	95.85	97.73
170	3.50	0.09	1.65	1.68	97.50	99.41
200	3.75	0.07	0.05	0.05	97.55	99.46
230	4.00	0.06	0.01	0.01	97.56	99.47

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.85	2.75	2.47	2.22	2.12	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	0.3	-0.08	2.81

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 Mid Berm

Analysis Date: 11-12-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,808	192,864	North Carolina State Plane	8.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/2 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.66	102.23	0.01	0.02	#200 - 0.49 #230 - 0.43			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.16	0.16	0.16	0.16
7	-1.50	2.83	0.19	0.19	0.35	0.35
10	-1.00	2.00	0.18	0.18	0.53	0.53
14	-0.50	1.41	0.19	0.19	0.72	0.72
18	0.00	1.00	0.15	0.15	0.87	0.87
25	0.50	0.71	0.27	0.26	1.14	1.13
35	1.00	0.50	0.42	0.41	1.56	1.54
45	1.50	0.35	1.52	1.48	3.08	3.02
60	2.00	0.25	8.46	8.24	11.54	11.26
80	2.50	0.18	45.50	44.32	57.04	55.58
120	3.00	0.13	40.64	39.59	97.68	95.17
170	3.50	0.09	4.12	4.01	101.80	99.18
200	3.75	0.07	0.34	0.33	102.14	99.51
230	4.00	0.06	0.06	0.06	102.20	99.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.86	2.75	2.44	2.16	2.05	1.62

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.54	-3.15	23.26

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 MLW

Analysis Date: 11-12-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,983	192,667	North Carolina State Plane	-2.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.34	103.15	0.00	0.02	#200 - 1.17 #230 - 1.16			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.07	0.07	0.07	0.07
5	-2.00	4.00	0.08	0.08	0.15	0.15
7	-1.50	2.83	0.16	0.15	0.31	0.30
10	-1.00	2.00	0.25	0.24	0.56	0.54
14	-0.50	1.41	0.51	0.49	1.07	1.03
18	0.00	1.00	0.53	0.51	1.60	1.54
25	0.50	0.71	0.77	0.74	2.37	2.28
35	1.00	0.50	1.10	1.05	3.47	3.33
45	1.50	0.35	3.26	3.12	6.73	6.45
60	2.00	0.25	16.41	15.73	23.14	22.18
80	2.50	0.18	49.58	47.52	72.72	69.70
120	3.00	0.13	29.28	28.06	102.00	97.76
170	3.50	0.09	1.10	1.05	103.10	98.81
200	3.75	0.07	0.02	0.02	103.12	98.83
230	4.00	0.06	0.01	0.01	103.13	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.75	2.59	2.29	2.03	1.80	1.27

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.21	0.22	0.61	-2.74	15.67

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 MTL

Analysis Date: 11-12-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,910	192,741	North Carolina State Plane	-0.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
108.69	107.21	0.00	0.02	#200 - 1.37 #230 - 1.36			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.07	0.06	0.07	0.06
5	-2.00	4.00	0.00	0.00	0.07	0.06
7	-1.50	2.83	0.03	0.03	0.10	0.09
10	-1.00	2.00	0.04	0.04	0.14	0.13
14	-0.50	1.41	0.06	0.06	0.20	0.19
18	0.00	1.00	0.07	0.06	0.27	0.25
25	0.50	0.71	0.17	0.16	0.44	0.41
35	1.00	0.50	0.31	0.29	0.75	0.70
45	1.50	0.35	1.03	0.95	1.78	1.65
60	2.00	0.25	17.37	15.98	19.15	17.63
80	2.50	0.18	56.34	51.84	75.49	69.47
120	3.00	0.13	30.63	28.18	106.12	97.65
170	3.50	0.09	1.03	0.95	107.15	98.60
200	3.75	0.07	0.03	0.03	107.18	98.63
230	4.00	0.06	0.01	0.01	107.19	98.64

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.76	2.60	2.31	2.07	1.95	1.60

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.42	-2.11	20.04

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 120+00 Toe of Dune

Analysis Date: 11-13-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,380,801	192,911	North Carolina State Plane	11.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.87	102.59	0.01	0.05	#200 - 0.38 #230 - 0.32			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.05	0.05	0.05
7	-1.50	2.83	0.07	0.07	0.12	0.12
10	-1.00	2.00	0.08	0.08	0.20	0.20
14	-0.50	1.41	0.06	0.06	0.26	0.26
18	0.00	1.00	0.12	0.12	0.38	0.38
25	0.50	0.71	0.33	0.32	0.71	0.70
35	1.00	0.50	0.33	0.32	1.04	1.02
45	1.50	0.35	0.84	0.82	1.88	1.84
60	2.00	0.25	5.78	5.62	7.66	7.46
80	2.50	0.18	51.19	49.76	58.85	57.22
120	3.00	0.13	38.82	37.74	97.67	94.96
170	3.50	0.09	4.23	4.11	101.90	99.07
200	3.75	0.07	0.57	0.55	102.47	99.62
230	4.00	0.06	0.06	0.06	102.53	99.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.85	2.74	2.43	2.18	2.09	1.78

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.45	-2.36	20.97

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (+3)

Analysis Date: 10-23-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,594	195,781	North Carolina State Plane	3.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.13	101.78	0.00	0.01	#200 - 0.39 #230 - 0.36			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.01	0.01	0.02	0.02
45	1.50	0.35	0.07	0.07	0.09	0.09
60	2.00	0.25	4.10	4.01	4.19	4.10
80	2.50	0.18	58.28	57.06	62.47	61.16
120	3.00	0.13	37.39	36.61	99.86	97.77
170	3.50	0.09	1.78	1.74	101.64	99.51
200	3.75	0.07	0.10	0.10	101.74	99.61
230	4.00	0.06	0.03	0.03	101.77	99.64

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.81	2.69	2.40	2.18	2.10	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.3	0.19	3.5

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-11.6)

Analysis Date: 10-23-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,384,040	195,264	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.38	82.00	0.01	0.00	#200 - 1.68 #230 - 1.67			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.13	0.16	0.14	0.17
14	-0.50	1.41	0.41	0.49	0.55	0.66
18	0.00	1.00	0.40	0.48	0.95	1.14
25	0.50	0.71	0.53	0.64	1.48	1.78
35	1.00	0.50	0.61	0.73	2.09	2.51
45	1.50	0.35	1.11	1.33	3.20	3.84
60	2.00	0.25	4.87	5.84	8.07	9.68
80	2.50	0.18	29.35	35.20	37.42	44.88
120	3.00	0.13	39.34	47.18	76.76	92.06
170	3.50	0.09	5.04	6.04	81.80	98.10
200	3.75	0.07	0.18	0.22	81.98	98.32
230	4.00	0.06	0.01	0.01	81.99	98.33

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.24	2.91	2.82	2.55	2.22	2.09	1.60

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	0.56	-2.62	14.54

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-14.4)

Analysis Date: 10-23-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,384,134	195,171	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
80.32	79.02	0.01	0.00	#200 - 1.70 #230 - 1.63			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.04	0.03	0.04
7	-1.50	2.83	0.13	0.16	0.16	0.20
10	-1.00	2.00	0.08	0.10	0.24	0.30
14	-0.50	1.41	0.42	0.52	0.66	0.82
18	0.00	1.00	0.32	0.40	0.98	1.22
25	0.50	0.71	0.37	0.46	1.35	1.68
35	1.00	0.50	0.37	0.46	1.72	2.14
45	1.50	0.35	0.60	0.75	2.32	2.89
60	2.00	0.25	2.04	2.54	4.36	5.43
80	2.50	0.18	22.65	28.20	27.01	33.63
120	3.00	0.13	43.53	54.20	70.54	87.83
170	3.50	0.09	8.18	10.18	78.72	98.01
200	3.75	0.07	0.23	0.29	78.95	98.30
230	4.00	0.06	0.06	0.07	79.01	98.37

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.96	2.88	2.65	2.35	2.19	1.92

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.56	0.17	0.56	-3.33	21.14

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-17.2)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,384,296	195,067	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.16	84.48	0.03	0.00	#200 - 2.15 #230 - 2.00			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
14	-0.50	1.41	0.05	0.06	0.08	0.09
18	0.00	1.00	0.06	0.07	0.14	0.16
25	0.50	0.71	0.08	0.09	0.22	0.25
35	1.00	0.50	0.09	0.10	0.31	0.35
45	1.50	0.35	0.21	0.24	0.52	0.59
60	2.00	0.25	0.75	0.87	1.27	1.46
80	2.50	0.18	14.82	17.20	16.09	18.66
120	3.00	0.13	52.98	61.49	69.07	80.15
170	3.50	0.09	14.52	16.85	83.59	97.00
200	3.75	0.07	0.73	0.85	84.32	97.85
230	4.00	0.06	0.13	0.15	84.45	98.00

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.11	2.96	2.75	2.55	2.42	2.10

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15	0.37	-1.81	17.36

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-20)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,384,367	194,975	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/2 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.15	80.59	0.03	0.05	#200 - 2.30 #230 - 1.98			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.04	0.05	0.06	0.07
14	-0.50	1.41	0.07	0.09	0.13	0.16
18	0.00	1.00	0.06	0.07	0.19	0.23
25	0.50	0.71	0.11	0.13	0.30	0.36
35	1.00	0.50	0.12	0.15	0.42	0.51
45	1.50	0.35	0.18	0.22	0.60	0.73
60	2.00	0.25	0.83	1.01	1.43	1.74
80	2.50	0.18	12.05	14.67	13.48	16.41
120	3.00	0.13	49.38	60.11	62.86	76.52
170	3.50	0.09	16.31	19.85	79.17	96.37
200	3.75	0.07	1.09	1.33	80.26	97.70
230	4.00	0.06	0.26	0.32	80.52	98.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.47	3.19	2.99	2.78	2.57	2.49	2.11

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.76	0.15	0.4	-2.28	21.27

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-6)

Analysis Date: 10-23-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,820	195,535	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-5/1 Dry - 2.5Y-6/2 Washed - 2.5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.17	82.03	0.00	0.02	#200 - 1.41 #230 - 1.40			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.10	0.12	0.10	0.12
7	-1.50	2.83	0.22	0.26	0.32	0.38
10	-1.00	2.00	0.22	0.26	0.54	0.64
14	-0.50	1.41	0.42	0.50	0.96	1.14
18	0.00	1.00	0.42	0.50	1.38	1.64
25	0.50	0.71	0.54	0.65	1.92	2.29
35	1.00	0.50	1.03	1.24	2.95	3.53
45	1.50	0.35	3.29	3.96	6.24	7.49
60	2.00	0.25	12.24	14.72	18.48	22.21
80	2.50	0.18	35.07	42.17	53.55	64.38
120	3.00	0.13	26.77	32.19	80.32	96.57
170	3.50	0.09	1.65	1.98	81.97	98.55
200	3.75	0.07	0.03	0.04	82.00	98.59
230	4.00	0.06	0.01	0.01	82.01	98.60

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.80	2.66	2.33	2.03	1.79	1.19

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	0.64	-2.57	13.96

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 (-8.8)

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,938	195,481	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.38	83.01	0.00	0.04	#200 - 1.66 #230 - 1.65			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.06	0.07	0.06	0.07
7	-1.50	2.83	0.28	0.33	0.34	0.40
10	-1.00	2.00	0.33	0.39	0.67	0.79
14	-0.50	1.41	0.80	0.95	1.47	1.74
18	0.00	1.00	0.80	0.95	2.27	2.69
25	0.50	0.71	0.88	1.04	3.15	3.73
35	1.00	0.50	1.00	1.19	4.15	4.92
45	1.50	0.35	1.95	2.31	6.10	7.23
60	2.00	0.25	7.36	8.72	13.46	15.95
80	2.50	0.18	29.97	35.52	43.43	51.47
120	3.00	0.13	34.73	41.16	78.16	92.63
170	3.50	0.09	4.62	5.48	82.78	98.11
200	3.75	0.07	0.19	0.23	82.97	98.34
230	4.00	0.06	0.01	0.01	82.98	98.35

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.22	2.90	2.79	2.48	2.13	2.00	1.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	0.73	-2.61	12.22

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 Dune

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,542	195,838	North Carolina State Plane	13.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.53	96.25	0.01	0.02	#200 - 0.39 #230 - 0.32			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.01	0.01	0.02	0.02
45	1.50	0.35	0.02	0.02	0.04	0.04
60	2.00	0.25	0.46	0.48	0.50	0.52
80	2.50	0.18	36.18	37.48	36.68	38.00
120	3.00	0.13	54.99	56.97	91.67	94.97
170	3.50	0.09	4.27	4.42	95.94	99.39
200	3.75	0.07	0.21	0.22	96.15	99.61
230	4.00	0.06	0.07	0.07	96.22	99.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.90	2.82	2.61	2.33	2.21	2.06

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	0.29	0.05	3.51

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 MHW

Analysis Date: 10-23-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,614	195,756	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-6/1 Washed - 2.5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.20	99.85	0.00	0.02	#200 - 0.37 #230 - 0.36			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.00	0.00	0.00	0.00
35	1.00	0.50	0.01	0.01	0.01	0.01
45	1.50	0.35	0.04	0.04	0.05	0.05
60	2.00	0.25	7.05	7.04	7.10	7.09
80	2.50	0.18	60.40	60.28	67.50	67.37
120	3.00	0.13	31.37	31.31	98.87	98.68
170	3.50	0.09	0.91	0.91	99.78	99.59
200	3.75	0.07	0.04	0.04	99.82	99.63
230	4.00	0.06	0.01	0.01	99.83	99.64

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.77	2.62	2.36	2.15	2.07	1.85

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.38	0.19	0.3	0.1	3.13

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 Mid Berm

Analysis Date: 10-24-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,573	195,808	North Carolina State Plane	6.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.50	96.06	0.02	0.09	#200 - 0.64 #230 - 0.59			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.04	0.04	0.04
14	-0.50	1.41	0.06	0.06	0.10	0.10
18	0.00	1.00	0.05	0.05	0.15	0.15
25	0.50	0.71	0.15	0.16	0.30	0.31
35	1.00	0.50	0.36	0.37	0.66	0.68
45	1.50	0.35	1.18	1.22	1.84	1.90
60	2.00	0.25	10.28	10.65	12.12	12.55
80	2.50	0.18	53.91	55.87	66.03	68.42
120	3.00	0.13	25.49	26.41	91.52	94.83
170	3.50	0.09	3.97	4.11	95.49	98.94
200	3.75	0.07	0.41	0.42	95.90	99.36
230	4.00	0.06	0.05	0.05	95.95	99.41

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.02	2.79	2.62	2.34	2.11	2.03	1.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	0.42	-0.82	9.41

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 MLW

Analysis Date:

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,720	195,645	North Carolina State Plane	-2.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-4/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.33	83.34	0.00	0.00	#200 - 1.19 #230 - 1.18			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.23	0.27	0.23	0.27
10	-1.00	2.00	0.27	0.32	0.50	0.59
14	-0.50	1.41	0.25	0.30	0.75	0.89
18	0.00	1.00	0.26	0.31	1.01	1.20
25	0.50	0.71	0.35	0.42	1.36	1.62
35	1.00	0.50	0.64	0.76	2.00	2.38
45	1.50	0.35	2.26	2.68	4.26	5.06
60	2.00	0.25	11.26	13.35	15.52	18.41
80	2.50	0.18	40.15	47.61	55.67	66.02
120	3.00	0.13	26.50	31.42	82.17	97.44
170	3.50	0.09	1.15	1.36	83.32	98.80
200	3.75	0.07	0.01	0.01	83.33	98.81
230	4.00	0.06	0.01	0.01	83.34	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.79	2.64	2.33	2.07	1.91	1.49

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.27	0.21	0.56	-2.85	17.45

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 MTL

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,640	195,726	North Carolina State Plane	-0.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/2 Washed - 5Y-7/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.19	83.09	0.00	0.00	#200 - 1.29 #230 - 1.28			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
18	0.00	1.00	0.08	0.10	0.12	0.15
25	0.50	0.71	0.09	0.11	0.21	0.26
35	1.00	0.50	0.20	0.24	0.41	0.50
45	1.50	0.35	1.26	1.50	1.67	2.00
60	2.00	0.25	10.79	12.82	12.46	14.82
80	2.50	0.18	38.27	45.46	50.73	60.28
120	3.00	0.13	30.99	36.81	81.72	97.09
170	3.50	0.09	1.32	1.57	83.04	98.66
200	3.75	0.07	0.04	0.05	83.08	98.71
230	4.00	0.06	0.01	0.01	83.09	98.72

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.82	2.70	2.39	2.11	2.01	1.62

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.36	0.19	0.41	-1.04	6.96

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 160+00 Toe of Dune

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,383,559	195,822	North Carolina State Plane	8.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
105.03	104.69	0.01	0.00	#200 - 0.41 #230 - 0.33			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.04	0.04	0.05	0.05
35	1.00	0.50	0.13	0.12	0.18	0.17
45	1.50	0.35	0.89	0.85	1.07	1.02
60	2.00	0.25	14.76	14.05	15.83	15.07
80	2.50	0.18	58.35	55.56	74.18	70.63
120	3.00	0.13	25.10	23.90	99.28	94.53
170	3.50	0.09	4.91	4.67	104.19	99.20
200	3.75	0.07	0.41	0.39	104.60	99.59
230	4.00	0.06	0.08	0.08	104.68	99.67

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.05	2.78	2.59	2.31	2.09	2.01	1.64

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.34	0.20	0.4	0.19	4.18

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (+2)

Analysis Date: 11-09-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,854	198,499	North Carolina State Plane	2.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.22	100.66	0.01	0.01	#200 - 0.58 #230 - 0.57			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.00	0.00	0.01	0.01
18	0.00	1.00	0.00	0.00	0.01	0.01
25	0.50	0.71	0.00	0.00	0.01	0.01
35	1.00	0.50	0.04	0.04	0.05	0.05
45	1.50	0.35	0.09	0.09	0.14	0.14
60	2.00	0.25	2.98	2.94	3.12	3.08
80	2.50	0.18	55.12	54.46	58.24	57.54
120	3.00	0.13	40.68	40.19	98.92	97.73
170	3.50	0.09	1.58	1.56	100.50	99.29
200	3.75	0.07	0.13	0.13	100.63	99.42
230	4.00	0.06	0.01	0.01	100.64	99.43

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.83	2.72	2.43	2.20	2.12	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	0.3	-0.1	5.65

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-11.6)

Analysis Date: 10-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,178	197,908	North Carolina State Plane	-11.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.55	84.42	0.02	0.01	#200 - 1.58 #230 - 1.35			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.04	0.03	0.04
14	-0.50	1.41	0.08	0.09	0.11	0.13
18	0.00	1.00	0.11	0.13	0.22	0.26
25	0.50	0.71	0.14	0.16	0.36	0.42
35	1.00	0.50	0.16	0.19	0.52	0.61
45	1.50	0.35	0.39	0.46	0.91	1.07
60	2.00	0.25	2.11	2.47	3.02	3.54
80	2.50	0.18	20.22	23.64	23.24	27.18
120	3.00	0.13	48.44	56.62	71.68	83.80
170	3.50	0.09	11.87	13.87	83.55	97.67
200	3.75	0.07	0.64	0.75	84.19	98.42
230	4.00	0.06	0.20	0.23	84.39	98.65

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	3.01	2.92	2.70	2.45	2.26	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.66	0.16	0.42	-1.81	14.38

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-14.4)

Analysis Date: 10-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,403	197,618	North Carolina State Plane	-14.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.19	84.87	0.02	0.01	#200 - 1.66 #230 - 1.57			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
10	-1.00	2.00	0.01	0.01	0.04	0.04
14	-0.50	1.41	0.06	0.07	0.10	0.11
18	0.00	1.00	0.07	0.08	0.17	0.19
25	0.50	0.71	0.12	0.14	0.29	0.33
35	1.00	0.50	0.20	0.23	0.49	0.56
45	1.50	0.35	0.50	0.58	0.99	1.14
60	2.00	0.25	2.31	2.68	3.30	3.82
80	2.50	0.18	22.82	26.48	26.12	30.30
120	3.00	0.13	48.04	55.74	74.16	86.04
170	3.50	0.09	10.21	11.85	84.37	97.89
200	3.75	0.07	0.39	0.45	84.76	98.34
230	4.00	0.06	0.08	0.09	84.84	98.43

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.38	2.98	2.90	2.68	2.40	2.23	2.02

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.63	0.16	0.41	-1.84	15.26

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-17.2)

Analysis Date: 10-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,565	197,384	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.82	81.71	0.01	0.01	#200 - 1.51 #230 - 1.37			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.07	0.08	0.07	0.08
10	-1.00	2.00	0.04	0.05	0.11	0.13
14	-0.50	1.41	0.06	0.07	0.17	0.20
18	0.00	1.00	0.13	0.16	0.30	0.36
25	0.50	0.71	0.20	0.24	0.50	0.60
35	1.00	0.50	0.30	0.36	0.80	0.96
45	1.50	0.35	0.74	0.89	1.54	1.85
60	2.00	0.25	2.83	3.42	4.37	5.27
80	2.50	0.18	24.20	29.22	28.57	34.49
120	3.00	0.13	42.98	51.90	71.55	86.39
170	3.50	0.09	9.58	11.57	81.13	97.96
200	3.75	0.07	0.44	0.53	81.57	98.49
230	4.00	0.06	0.12	0.14	81.69	98.63

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.98	2.89	2.65	2.34	2.18	1.96

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.59	0.17	0.47	-2.22	16.97

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-20)

Analysis Date: 10-24-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,819	197,070	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-3/2 Dry - 2.5Y-6/2 Washed - 2.5Y-6/2	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
75.66	74.21	0.02	0.00	#200 - 2.12 #230 - 1.92			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.05	0.07	0.05	0.07
10	-1.00	2.00	0.05	0.07	0.10	0.14
14	-0.50	1.41	0.06	0.08	0.16	0.22
18	0.00	1.00	0.11	0.15	0.27	0.37
25	0.50	0.71	0.25	0.33	0.52	0.70
35	1.00	0.50	0.36	0.48	0.88	1.18
45	1.50	0.35	0.84	1.11	1.72	2.29
60	2.00	0.25	3.23	4.27	4.95	6.56
80	2.50	0.18	19.55	25.84	24.50	32.40
120	3.00	0.13	39.60	52.34	64.10	84.74
170	3.50	0.09	9.35	12.36	73.45	97.10
200	3.75	0.07	0.59	0.78	74.04	97.88
230	4.00	0.06	0.15	0.20	74.19	98.08

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	2.99	2.91	2.67	2.36	2.18	1.82

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.6	0.16	0.49	-2.11	14.69

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-6)

Analysis Date: 10-26-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,009	198,163	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-4/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.31	88.10	0.01	0.01	#200 - 1.41 #230 - 1.38			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.23	0.26	0.23	0.26
4	-2.25	4.76	0.07	0.08	0.30	0.34
5	-2.00	4.00	0.06	0.07	0.36	0.41
7	-1.50	2.83	0.18	0.20	0.54	0.61
10	-1.00	2.00	0.34	0.38	0.88	0.99
14	-0.50	1.41	0.75	0.84	1.63	1.83
18	0.00	1.00	0.96	1.07	2.59	2.90
25	0.50	0.71	1.39	1.56	3.98	4.46
35	1.00	0.50	2.19	2.45	6.17	6.91
45	1.50	0.35	3.69	4.13	9.86	11.04
60	2.00	0.25	9.82	11.00	19.68	22.04
80	2.50	0.18	34.19	38.28	53.87	60.32
120	3.00	0.13	30.91	34.61	84.78	94.93
170	3.50	0.09	3.11	3.48	87.89	98.41
200	3.75	0.07	0.16	0.18	88.05	98.59
230	4.00	0.06	0.03	0.03	88.08	98.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.01	2.84	2.71	2.37	2.04	1.73	0.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.2	0.22	0.8	-2.48	11.72

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 (-8.8)

Analysis Date: 10-26-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,013	198,077	North Carolina State Plane	-8.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.53	85.57	0.02	0.00	#200 - 1.23 #230 - 1.14			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.08	0.09	0.10	0.11
14	-0.50	1.41	0.14	0.16	0.24	0.27
18	0.00	1.00	0.21	0.24	0.45	0.51
25	0.50	0.71	0.32	0.37	0.77	0.88
35	1.00	0.50	0.42	0.49	1.19	1.37
45	1.50	0.35	0.92	1.06	2.11	2.43
60	2.00	0.25	3.72	4.30	5.83	6.73
80	2.50	0.18	28.06	32.43	33.89	39.16
120	3.00	0.13	44.24	51.13	78.13	90.29
170	3.50	0.09	7.02	8.11	85.15	98.40
200	3.75	0.07	0.32	0.37	85.47	98.77
230	4.00	0.06	0.08	0.09	85.55	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.29	2.94	2.85	2.61	2.28	2.14	1.80

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.53	0.17	0.48	-2.33	15.5

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 Dune

Analysis Date: 11-12-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,832	198,518	North Carolina State Plane	8.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.70	102.20	0.00	0.02	#200 - 0.54 #230 - 0.49			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.03	0.03	0.04	0.04
18	0.00	1.00	0.02	0.02	0.06	0.06
25	0.50	0.71	0.06	0.06	0.12	0.12
35	1.00	0.50	0.12	0.12	0.24	0.24
45	1.50	0.35	0.84	0.82	1.08	1.06
60	2.00	0.25	6.01	5.85	7.09	6.91
80	2.50	0.18	48.84	47.56	55.93	54.47
120	3.00	0.13	43.50	42.36	99.43	96.83
170	3.50	0.09	2.52	2.45	101.95	99.28
200	3.75	0.07	0.18	0.18	102.13	99.46
230	4.00	0.06	0.05	0.05	102.18	99.51

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.85	2.74	2.45	2.19	2.10	1.84

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.45	0.18	0.36	-0.85	8

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 MHW

Analysis Date: 11-12-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,863	198,487	North Carolina State Plane	1.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
99.19	98.75	0.00	0.10	#200 - 0.56 #230 - 0.54			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.02	0.02	0.03	0.03
45	1.50	0.35	0.19	0.19	0.22	0.22
60	2.00	0.25	8.36	8.43	8.58	8.65
80	2.50	0.18	52.69	53.12	61.27	61.77
120	3.00	0.13	36.26	36.56	97.53	98.33
170	3.50	0.09	1.07	1.08	98.60	99.41
200	3.75	0.07	0.03	0.03	98.63	99.44
230	4.00	0.06	0.02	0.02	98.65	99.46

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.80	2.68	2.39	2.15	2.07	1.78

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.32	-0.19	3.19

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 Mid Berm

Analysis Date: 11-12-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,837	198,513	North Carolina State Plane	3.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
105.38	104.79	0.01	0.06	#200 - 0.64 #230 - 0.63			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
35	1.00	0.50	0.03	0.03	0.04	0.04
45	1.50	0.35	0.20	0.19	0.24	0.23
60	2.00	0.25	4.02	3.81	4.26	4.04
80	2.50	0.18	58.10	55.13	62.36	59.17
120	3.00	0.13	40.94	38.85	103.30	98.02
170	3.50	0.09	1.32	1.25	104.62	99.27
200	3.75	0.07	0.09	0.09	104.71	99.36
230	4.00	0.06	0.01	0.01	104.72	99.37

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.82	2.70	2.42	2.19	2.11	2.01

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.44	0.18	0.3	-0.05	3.61

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 MLW

Analysis Date: 10-29-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,954	198,390	North Carolina State Plane	-2.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
112.56	111.27	0.00	0.00	#200 - 1.16 #230 - 1.15			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.05	0.04	0.05	0.04
14	-0.50	1.41	0.08	0.07	0.13	0.11
18	0.00	1.00	0.10	0.09	0.23	0.20
25	0.50	0.71	0.14	0.12	0.37	0.32
35	1.00	0.50	0.38	0.34	0.75	0.66
45	1.50	0.35	1.85	1.64	2.60	2.30
60	2.00	0.25	14.72	13.08	17.32	15.38
80	2.50	0.18	61.41	54.56	78.73	69.94
120	3.00	0.13	31.00	27.54	109.73	97.48
170	3.50	0.09	1.52	1.35	111.25	98.83
200	3.75	0.07	0.01	0.01	111.26	98.84
230	4.00	0.06	0.01	0.01	111.27	98.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.76	2.59	2.32	2.09	2.01	1.60

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.31	0.20	0.4	-1.34	10.54

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 MTL

Analysis Date: 11-12-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,888	198,459	North Carolina State Plane	-0.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.20	99.06	0.00	0.07	#200 - 1.21 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.05	0.05	0.05	0.05
18	0.00	1.00	0.03	0.03	0.08	0.08
25	0.50	0.71	0.07	0.07	0.15	0.15
35	1.00	0.50	0.16	0.16	0.31	0.31
45	1.50	0.35	0.87	0.87	1.18	1.18
60	2.00	0.25	9.95	9.93	11.13	11.11
80	2.50	0.18	48.29	48.19	59.42	59.30
120	3.00	0.13	37.39	37.32	96.81	96.62
170	3.50	0.09	2.09	2.09	98.90	98.71
200	3.75	0.07	0.08	0.08	98.98	98.79
230	4.00	0.06	0.01	0.01	98.99	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.83	2.71	2.40	2.14	2.05	1.69

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.38	-0.85	7.04

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island 2007

Sample Name: 200+00 Toe of Dune

Analysis Date: 11-12-07

Analyzed By: TD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,833	198,517	North Carolina State Plane	3.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-7/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	Native Beach

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.95	100.80	0.00	0.00	#200 - 0.16 #230 - 0.15			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4	-4.25	19.03	0.00	0.00	0.00	0.00
5/8	-4.00	16.00	0.00	0.00	0.00	0.00
7/16	-3.50	11.31	0.00	0.00	0.00	0.00
5/16	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.03	0.03	0.04	0.04
14	-0.50	1.41	0.01	0.01	0.05	0.05
18	0.00	1.00	0.04	0.04	0.09	0.09
25	0.50	0.71	0.06	0.06	0.15	0.15
35	1.00	0.50	0.15	0.15	0.30	0.30
45	1.50	0.35	0.54	0.53	0.84	0.83
60	2.00	0.25	4.92	4.87	5.76	5.70
80	2.50	0.18	48.17	47.72	53.93	53.42
120	3.00	0.13	43.87	43.46	97.80	96.88
170	3.50	0.09	2.82	2.79	100.62	99.67
200	3.75	0.07	0.17	0.17	100.79	99.84
230	4.00	0.06	0.01	0.01	100.80	99.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

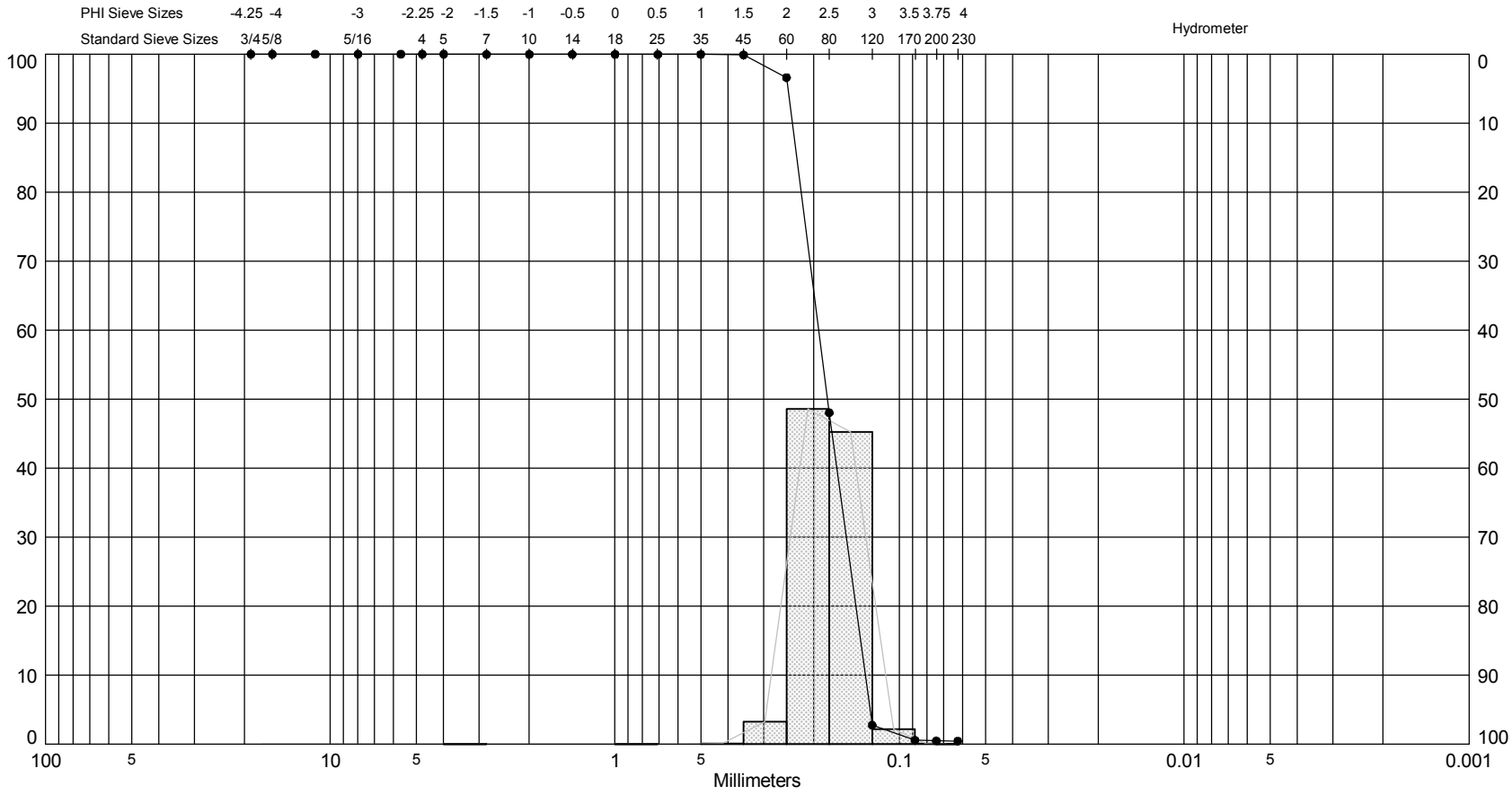
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.85	2.75	2.46	2.20	2.11	1.93

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.46	0.18	0.36	-1.16	11.71

GRANULARMETRIC REPORT FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/26/09

APPENDIX 13

2007 Figure Eight Island Native Beach Individual Grab Sample Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (+2)	—●—	2.0	SP	#200 - 0.46 #230 - 0.44			2.48	2.48	-0.76	12.77	0.31

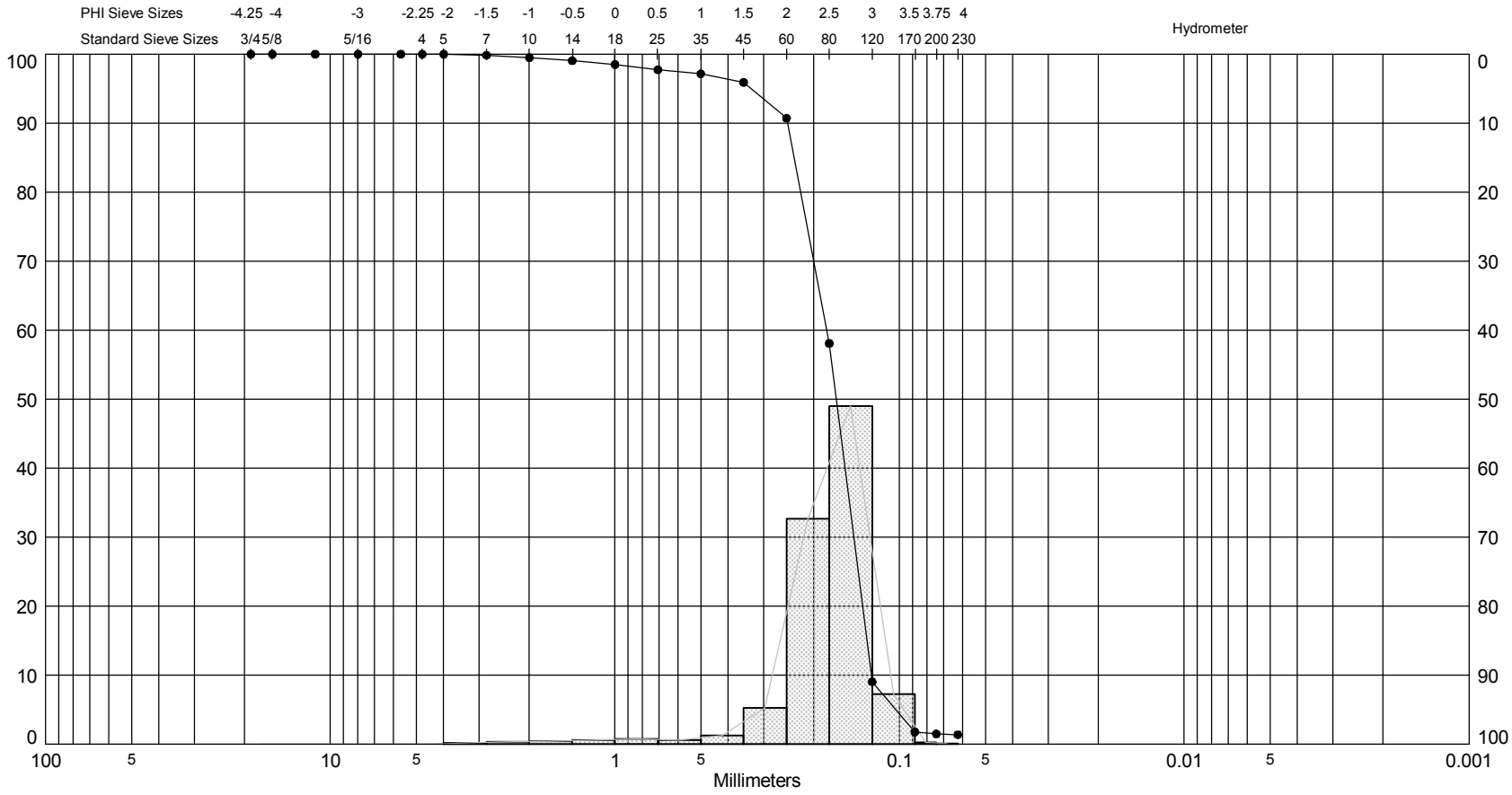
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	2,378,351
Northing (Y, ft):	189,640
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-11.6)	—●—	-11.6	SP	#200 - 1.47 #230 - 1.37			2.58	2.47	-2.94	16.43	0.61

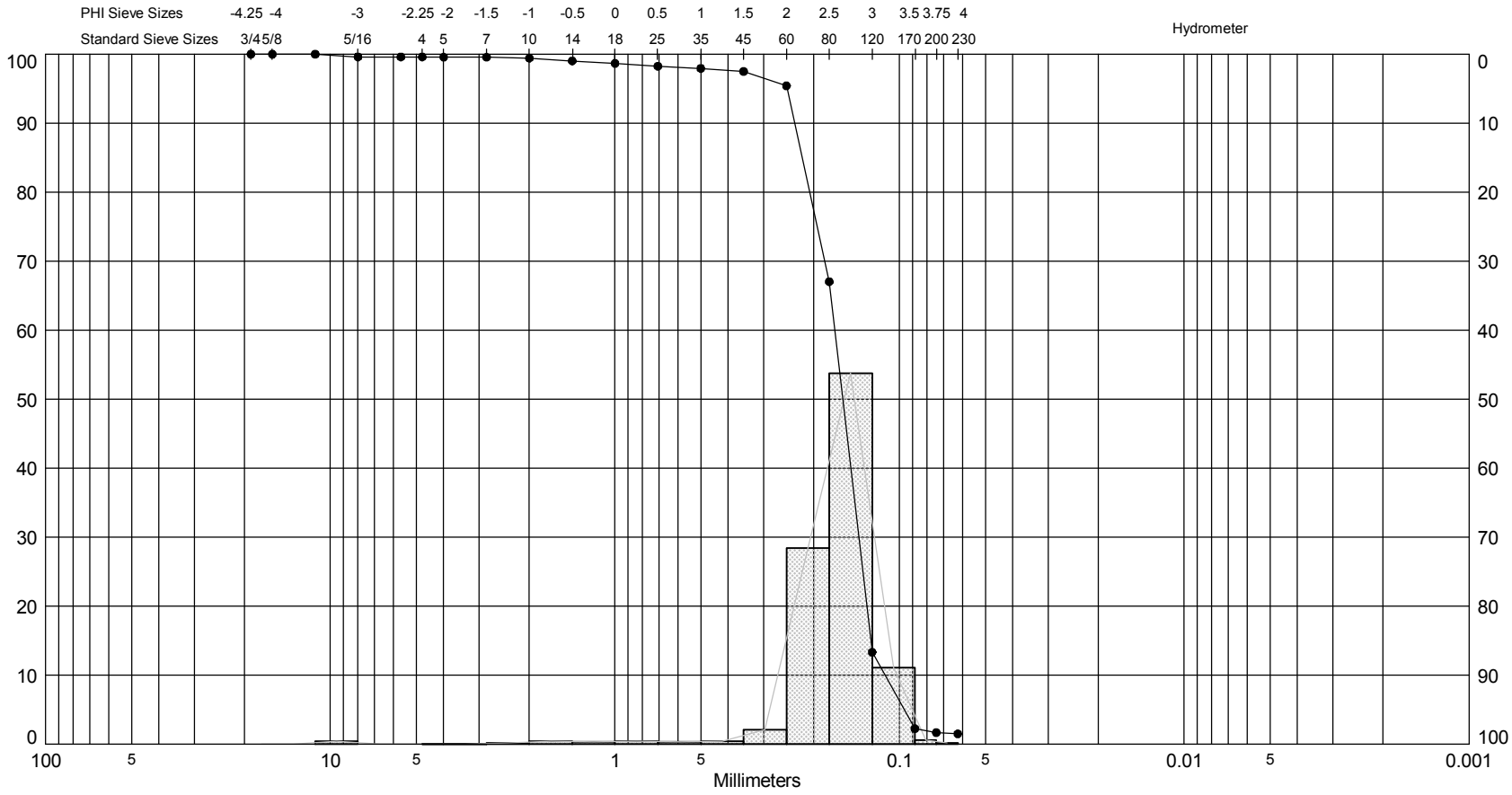
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,378,816
Northing (Y, ft):	189,210
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-14.4)	—●—	-14.4	SP	#200 - 1.66 #230 - 1.48			2.66	2.57	-4.65	37.1	0.63

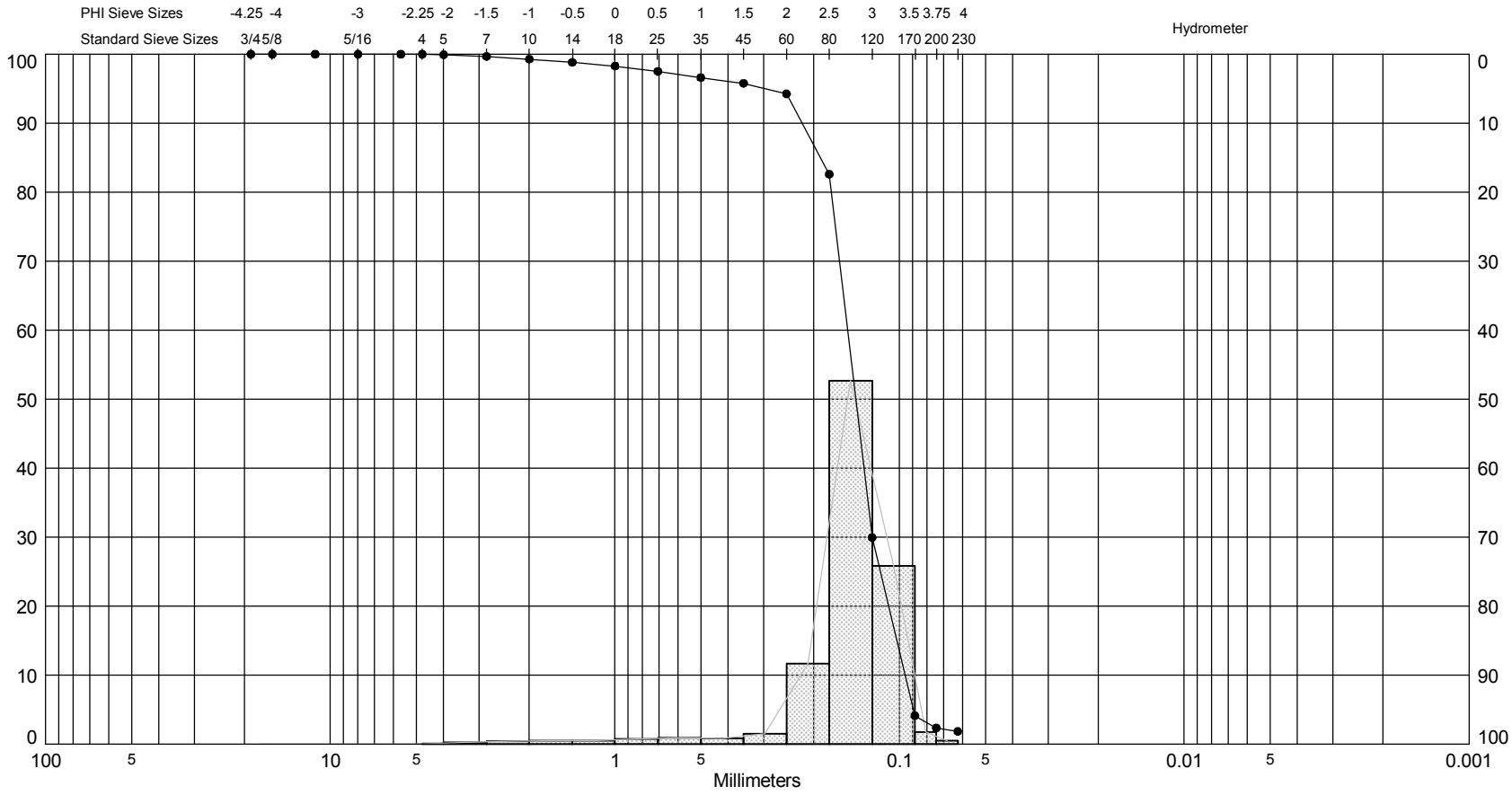
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,378,915
Northing (Y, ft):	189,086
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-17.2)	—●—	-17.2	SP	#200 - 2.34 #230 - 1.85			2.81	2.71	-3.28	17.86	0.69

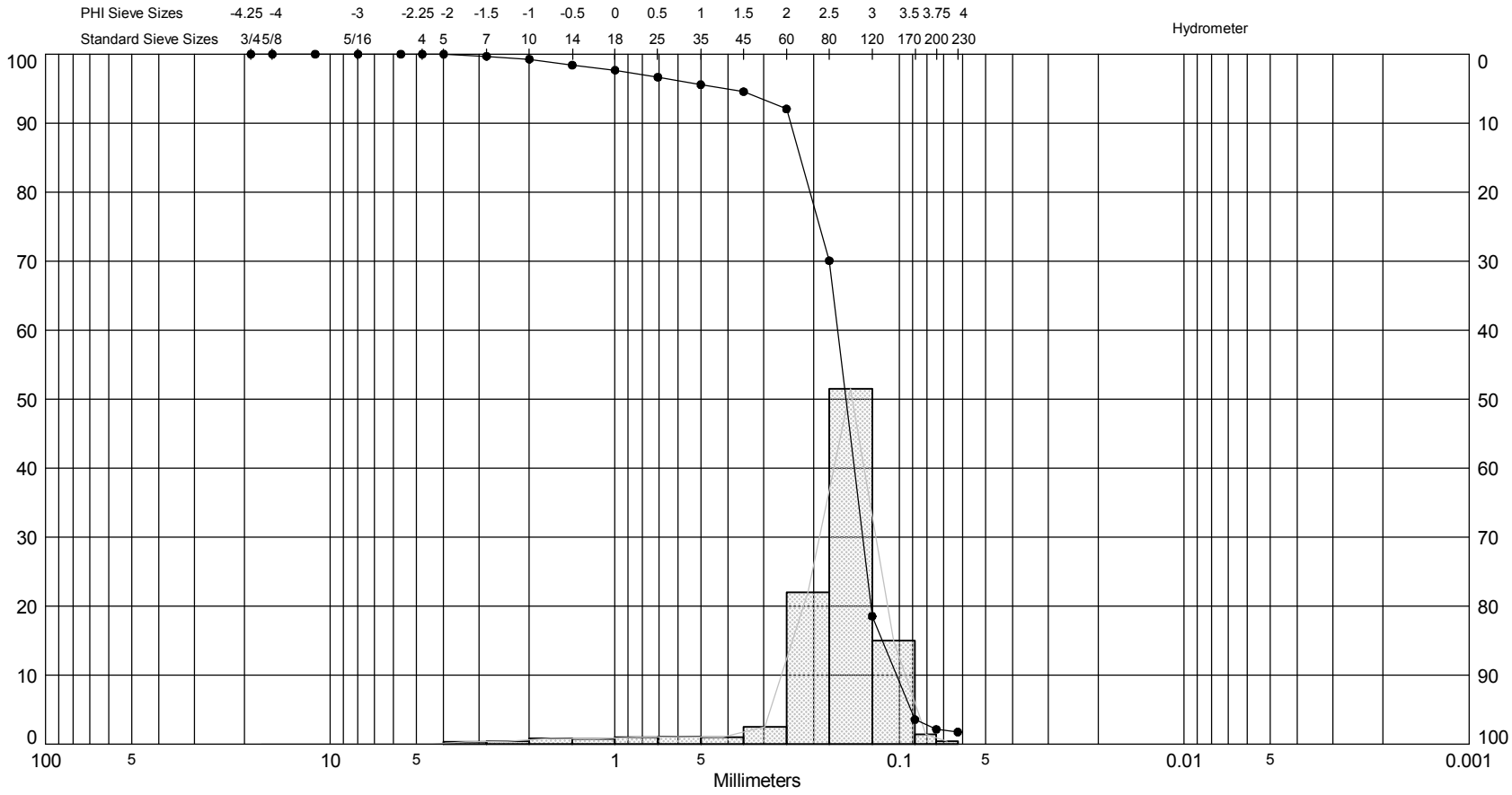
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,379,081
Northing (Y, ft):	188,995
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-20)	—●—	-20.0	SP	#200 - 2.13 #230 - 1.74			2.69	2.56	-2.85	13.89	0.73

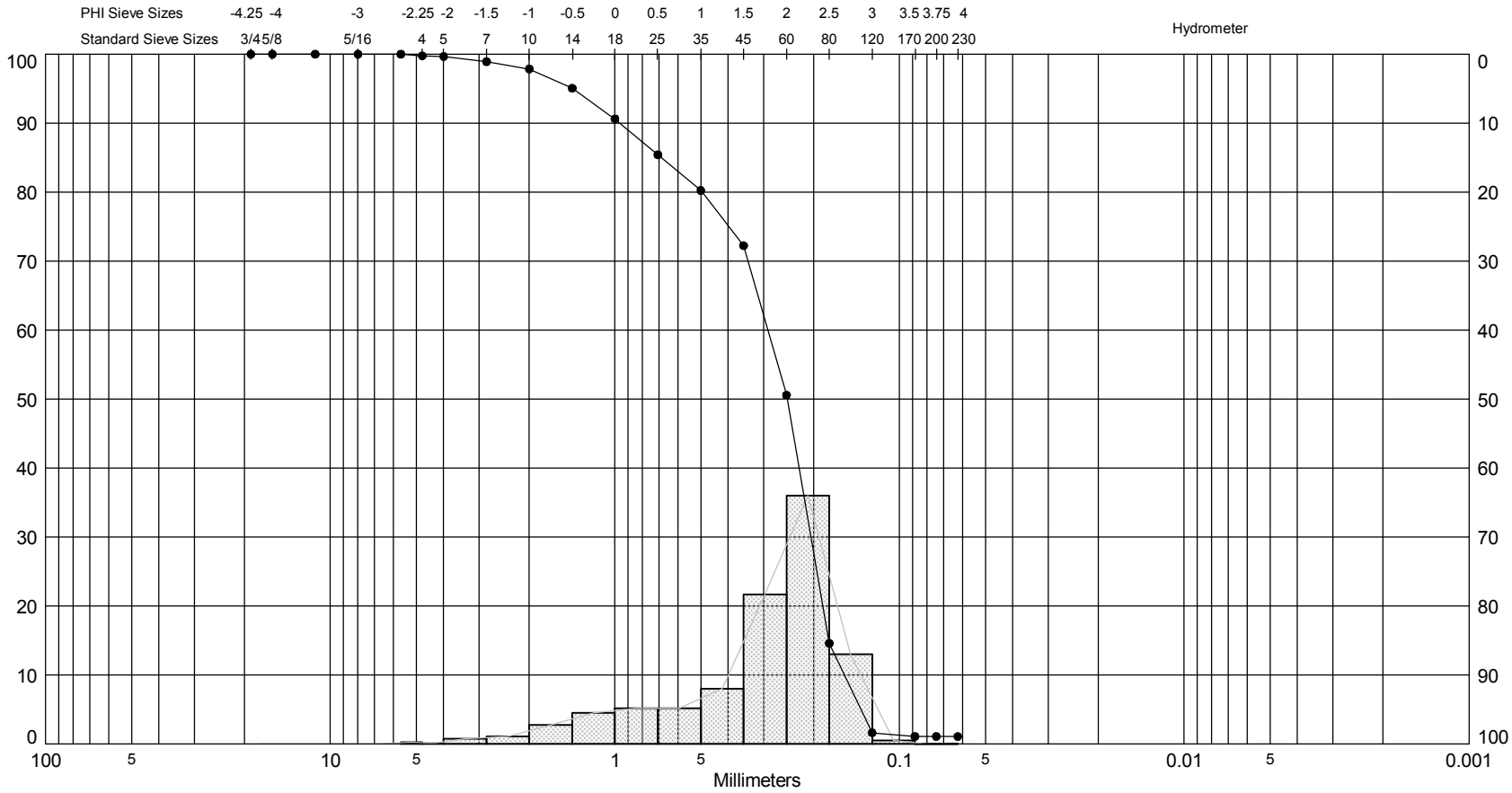
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,379,098
Northing (Y, ft):	188,935
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-6)	—●—	-6.0	SW	#200 - 1.08 #230 - 1.07			2.01	1.67	-1.39	4.56	1.01

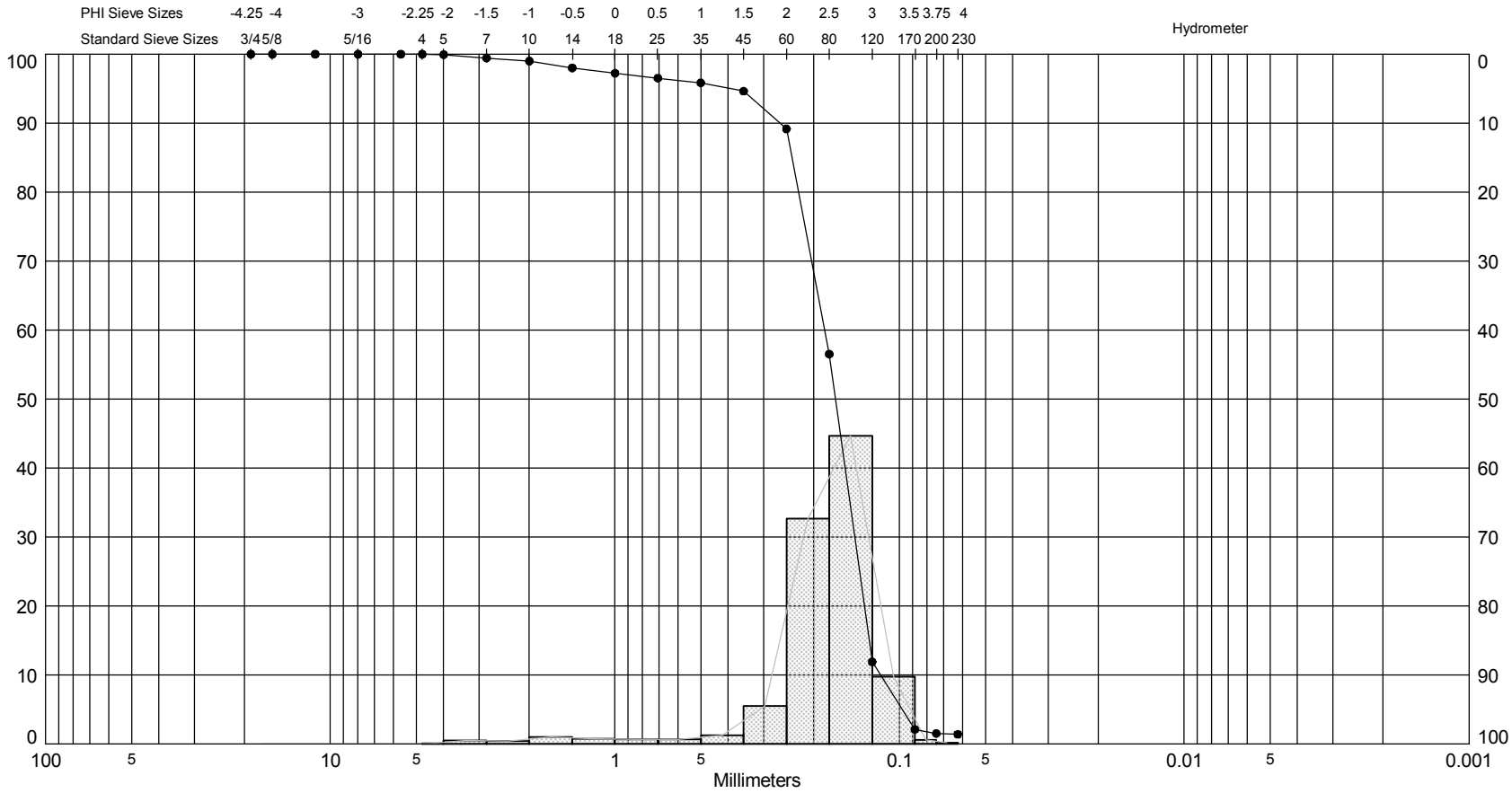
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,378,618
Northing (Y, ft):	189,439
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 (-8.8)	—●—	-8.8	SP	#200 - 1.52 #230 - 1.38			2.57	2.43	-2.91	14.44	0.74

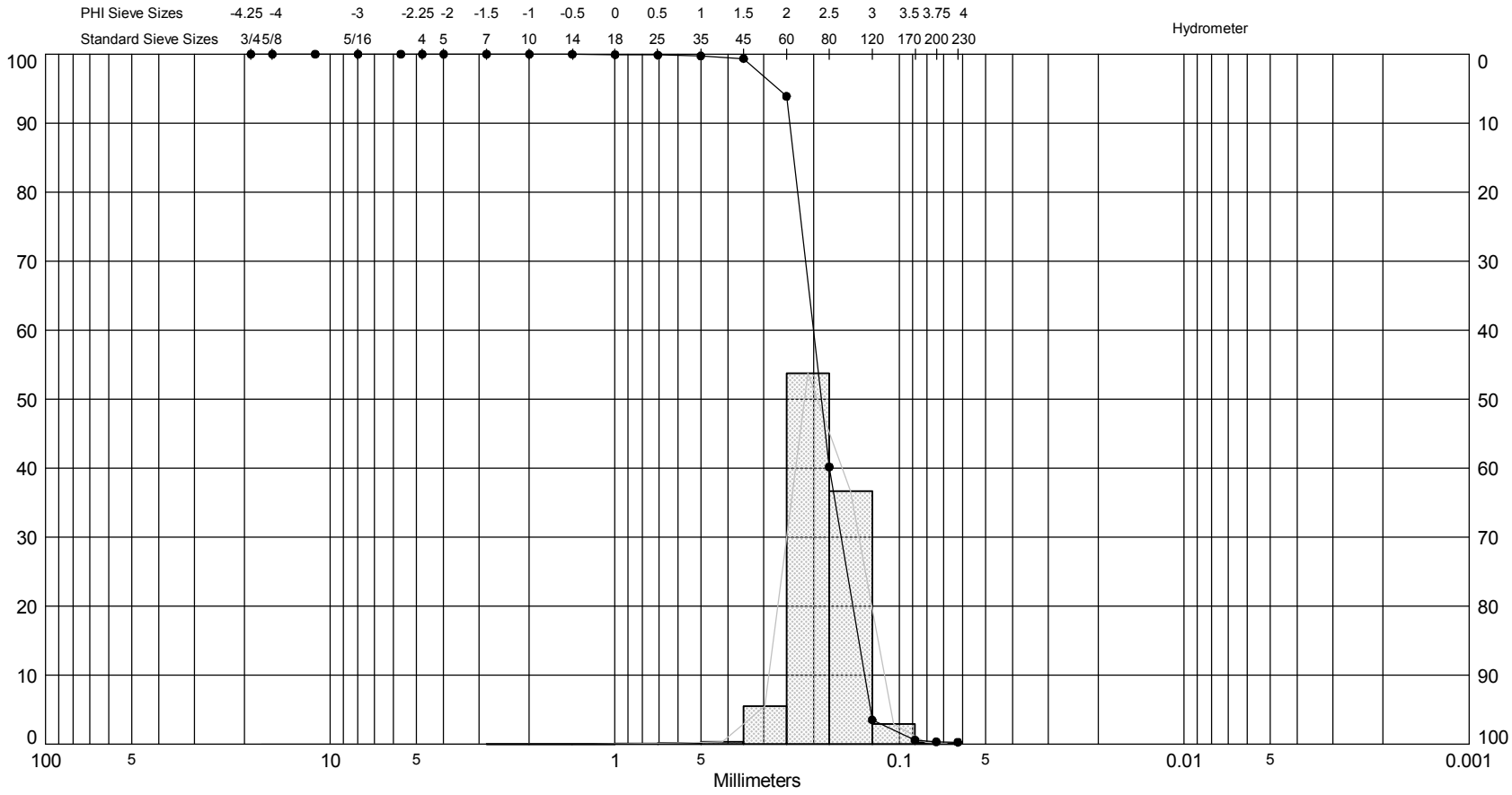
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,378,715
Northing (Y, ft):	189,342
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 Dune	—●—		SP	#200 - 0.33 #230 - 0.28			2.41	2.43	-0.5	7.86	0.35

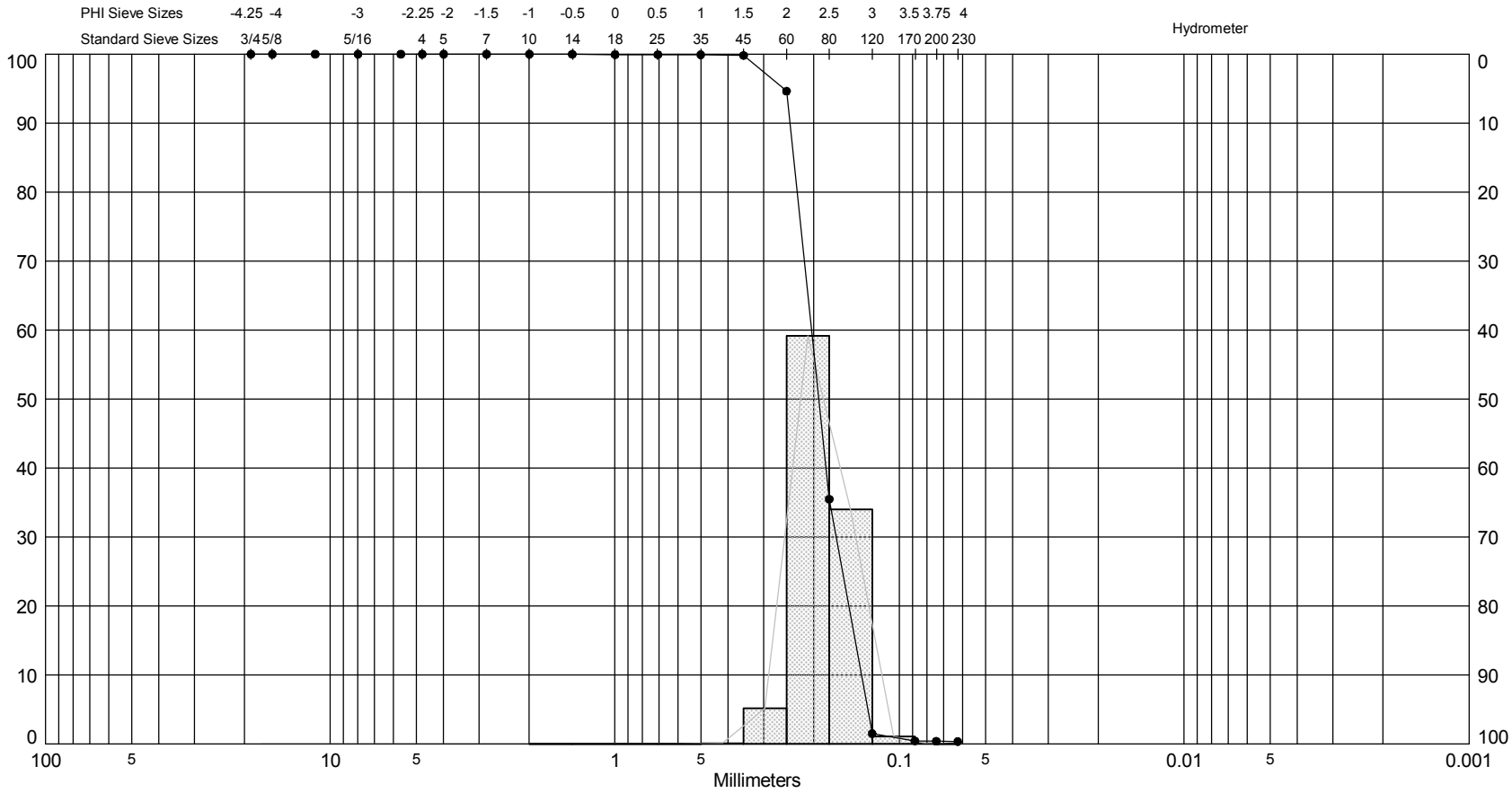
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 MHW	—●—	1.4	SP	#200 - 0.38 #230 - 0.35			2.38	2.4	-0.29	6.73	0.3

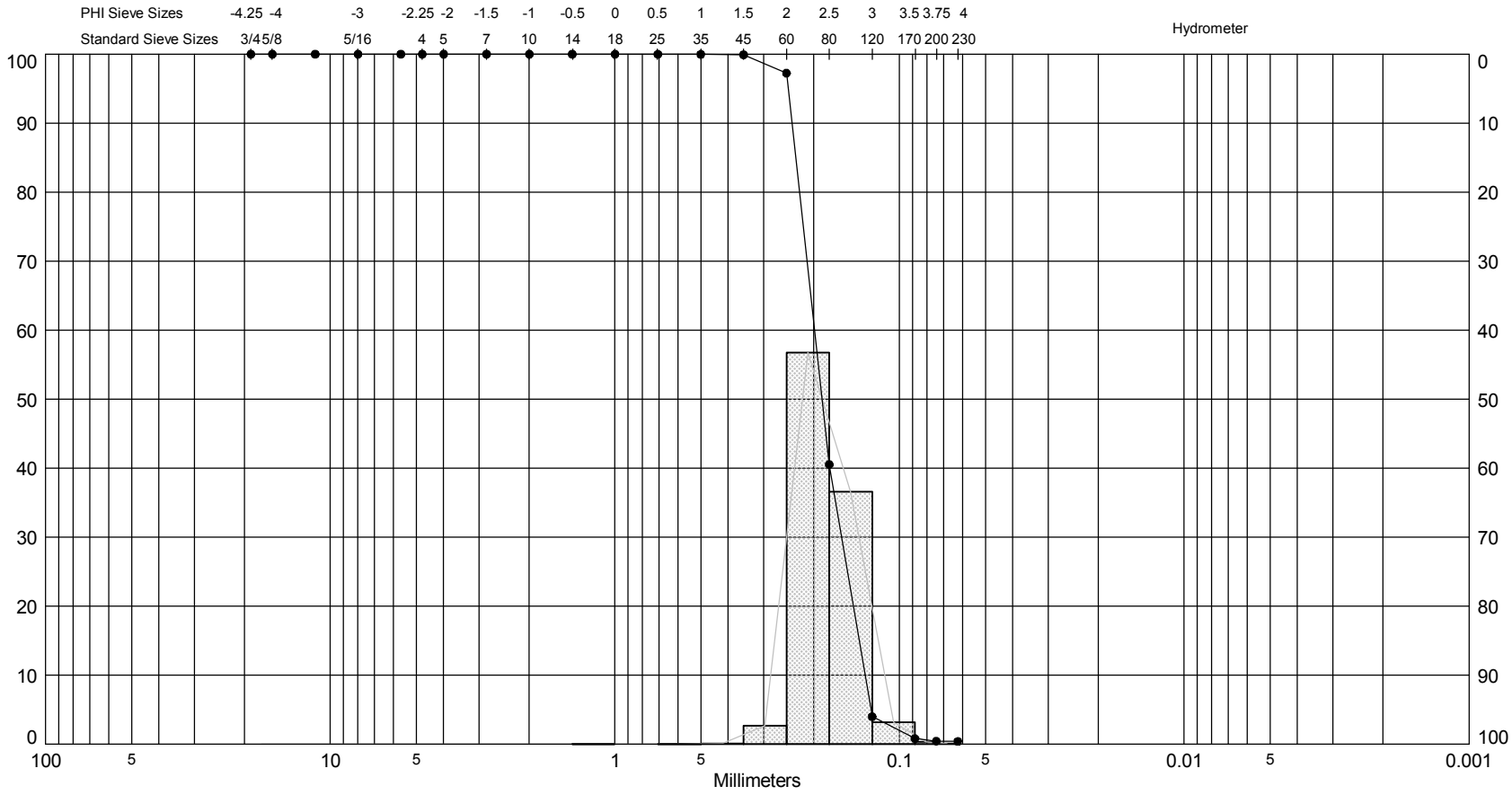
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	2,378,368
Northing (Y, ft):	189,625
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 Mid Berm	—●—		SP	#200 - 0.43 #230 - 0.38			2.42	2.46	0.46	4.23	0.31

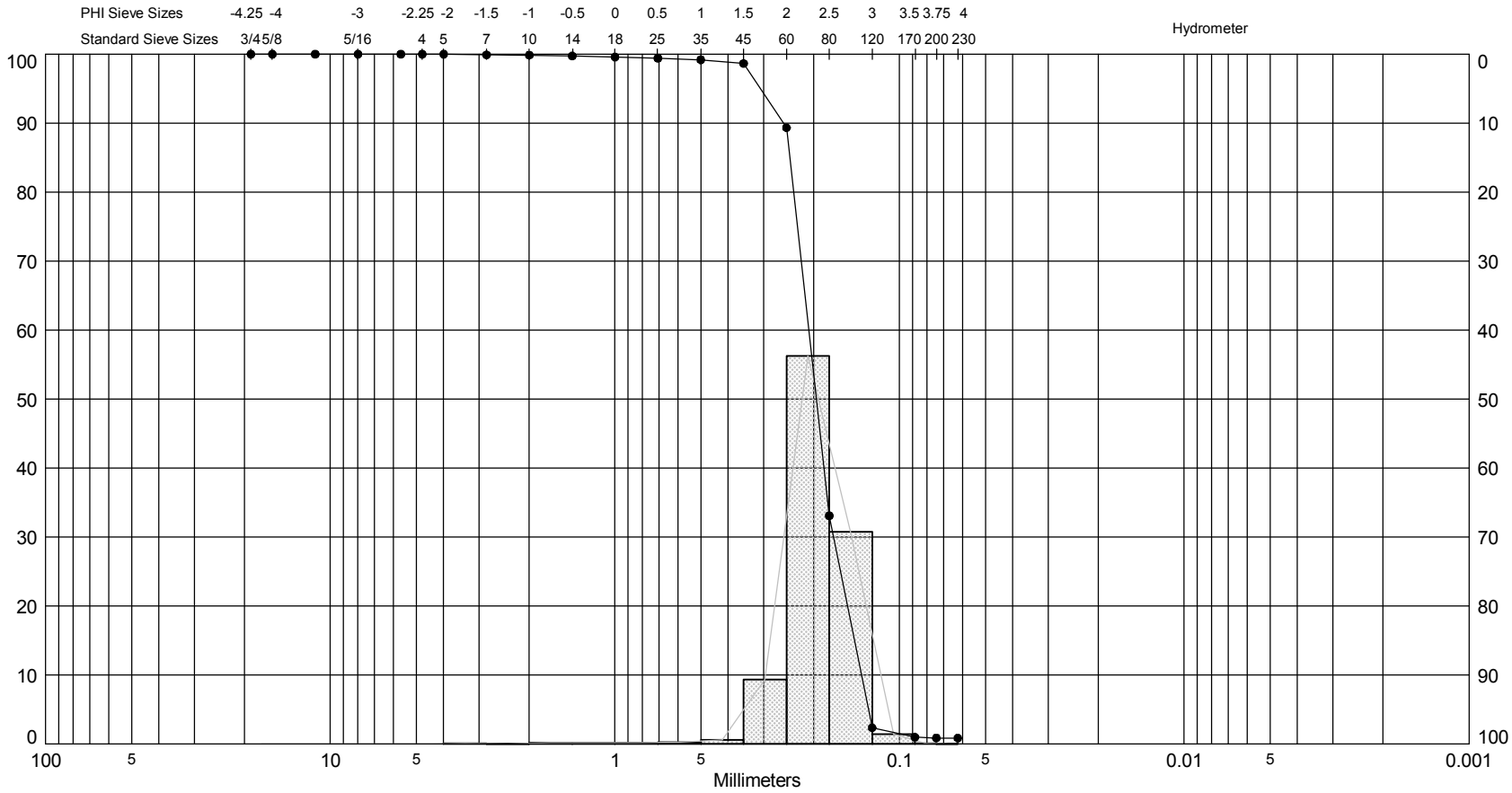
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 MLW	—●—	-2.8	SP	#200 - 0.86 #230 - 0.85			2.35	2.35	-2.51	22.3	0.41

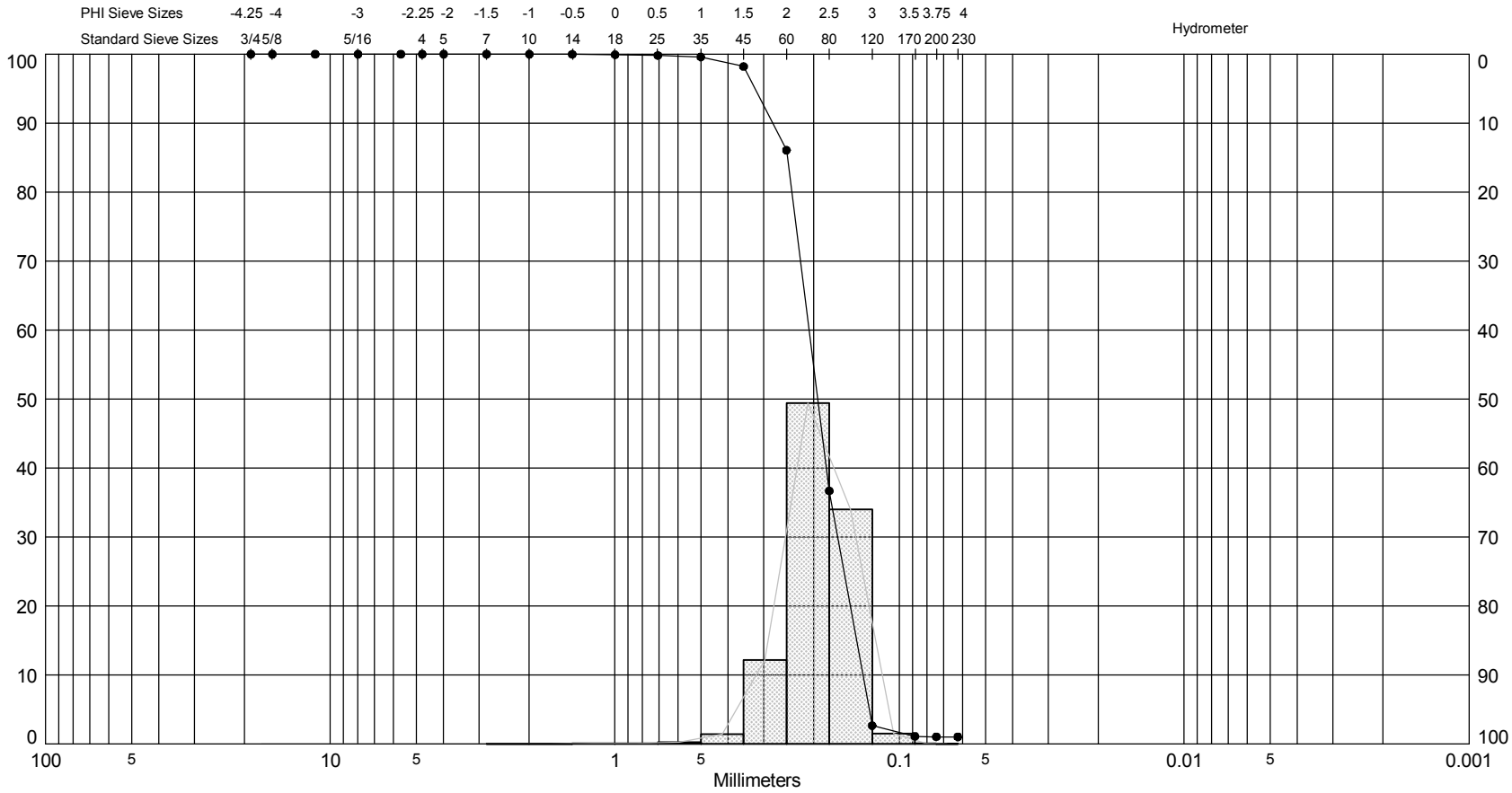
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-19-07
Analyzed By:	TD
Easting (X, ft):	2,378,467
Northing (Y, ft):	189,525
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 MTL	—●—	-1.0	SP	#200 - 1.04 #230 - 1.03			2.37	2.36	-0.85	6.5	0.39

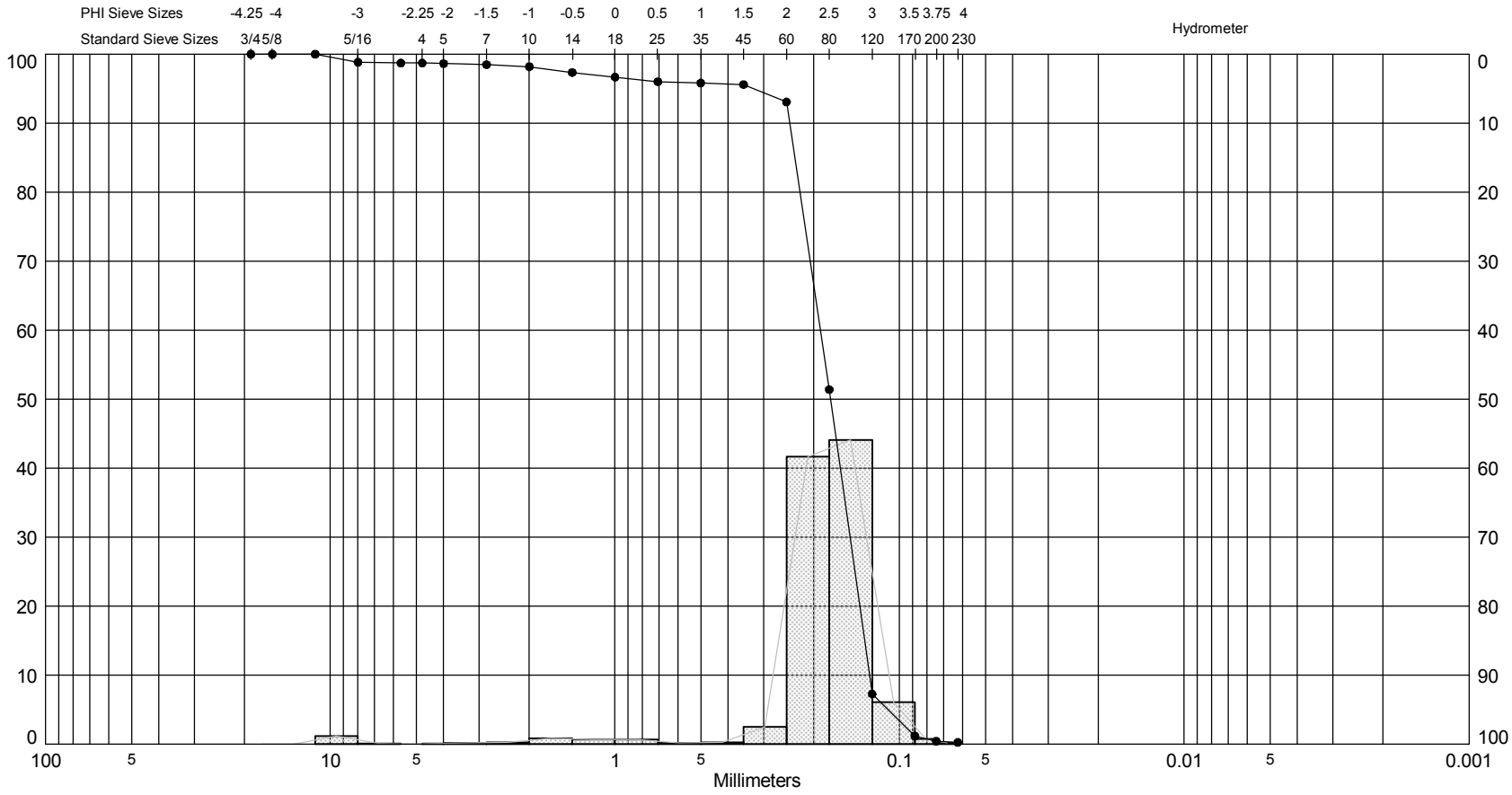
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	2,378,411
Northing (Y, ft):	189,588
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 Toe of Dune	—●—		SW	#200 - 0.41 #230 - 0.24			2.52	2.38	-4.21	24.42	0.89

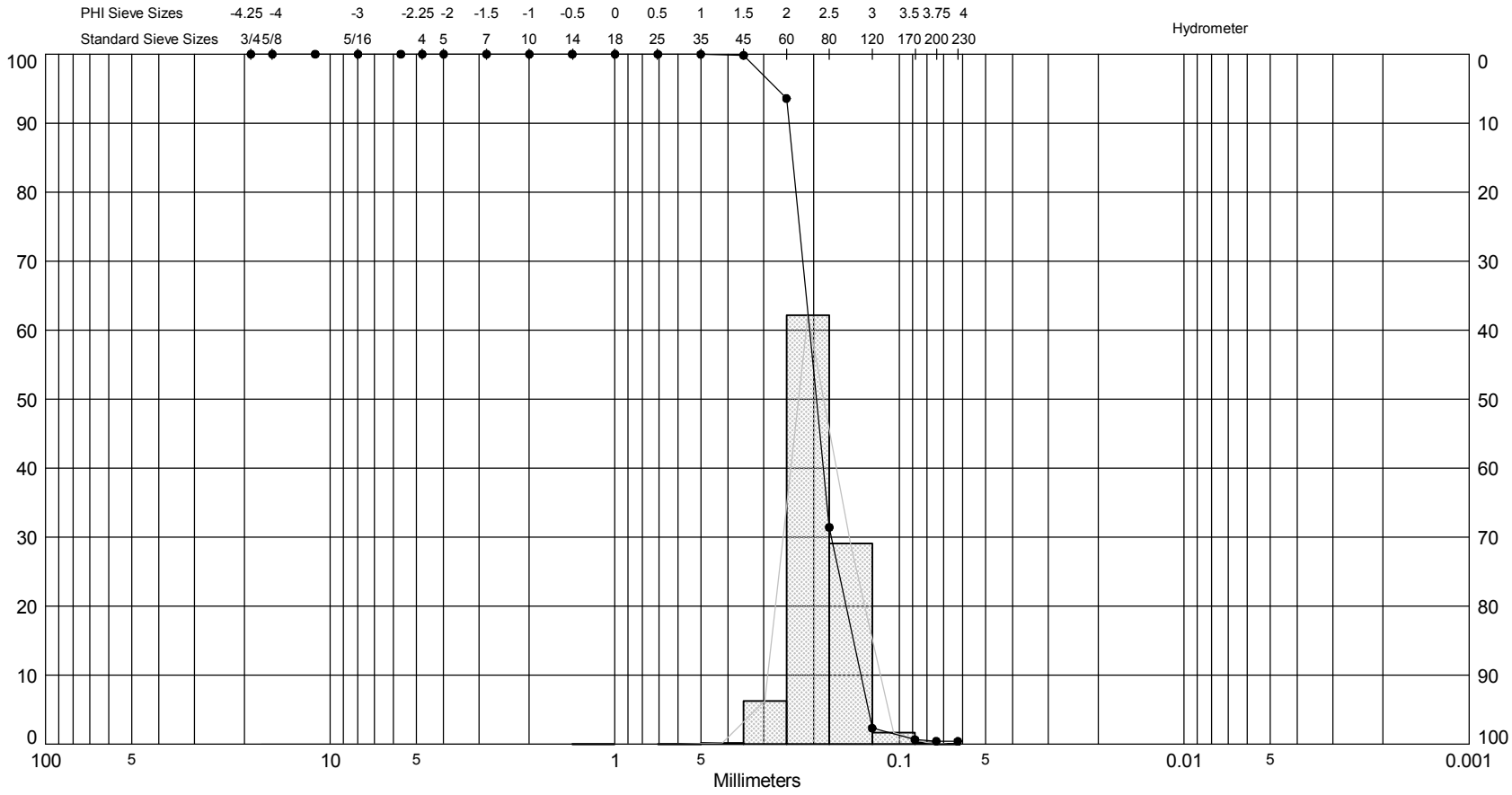
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-18-07
Analyzed By:	TD
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (+3)	—●—	3.0	SP	#200 - 0.42 #230 - 0.39			2.35	2.38	0.3	4.42	0.31

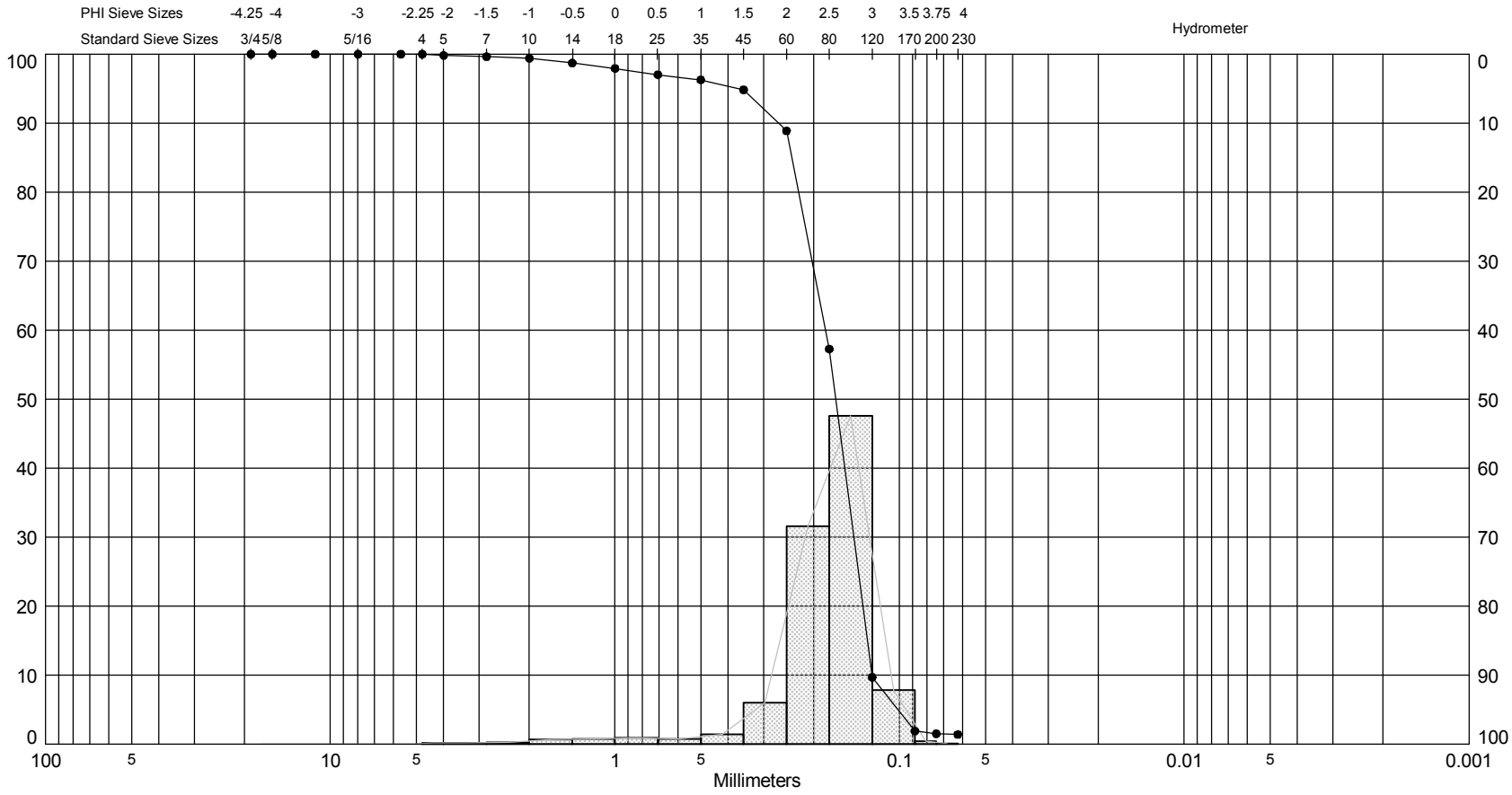
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-13-07
Analyzed By:	TD
Easting (X, ft):	2,380,845
Northing (Y, ft):	192,819
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-11.6)	—●—	-11.6	SP	#200 - 1.50 #230 - 1.38			2.58	2.44	-2.92	15.38	0.68

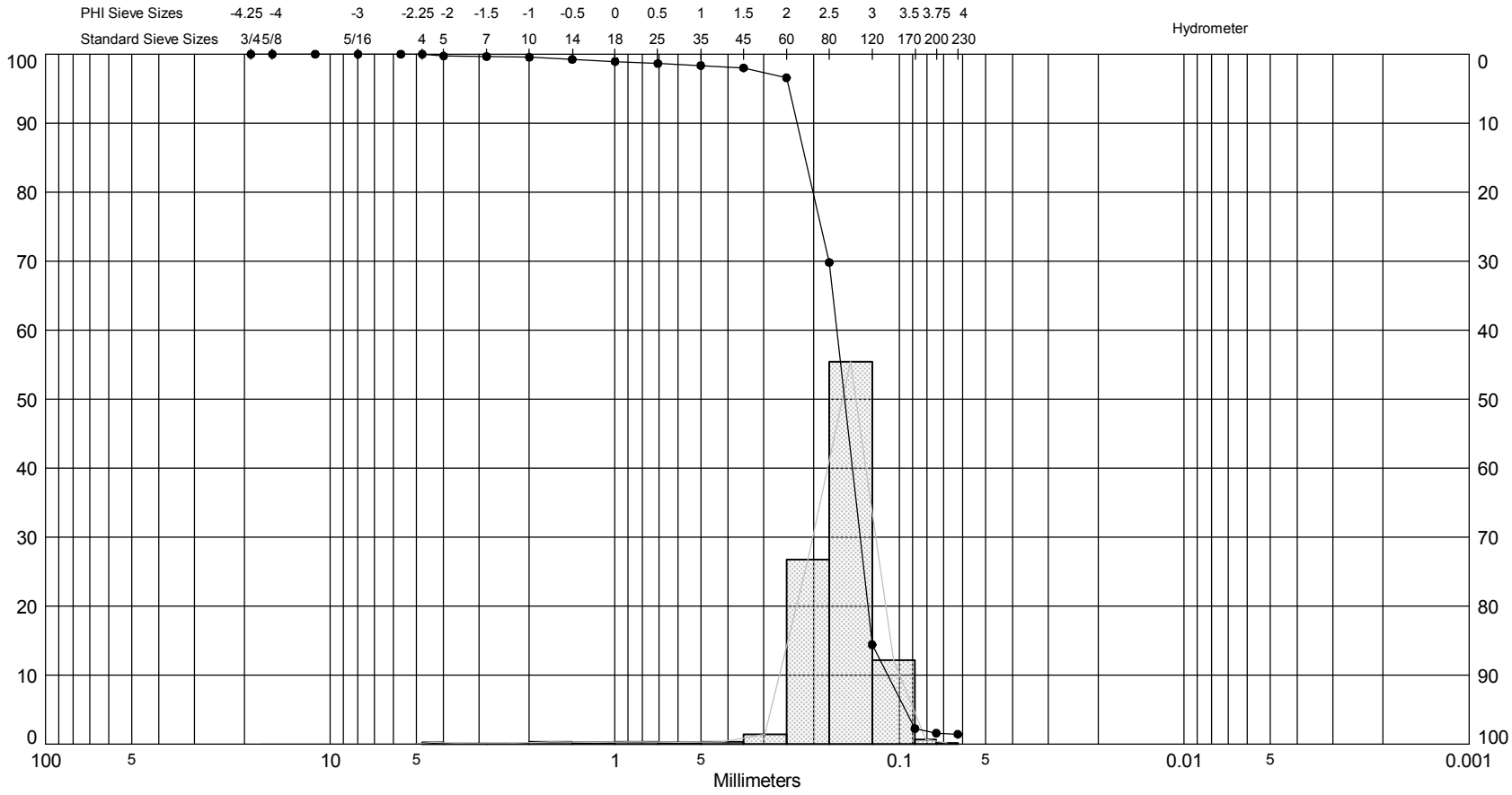
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,381,366
Northing (Y, ft):	192,333
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-14.4)	—●—	-14.4	SP	#200 - 1.58 #230 - 1.43			2.68	2.61	-3.9	29.18	0.55

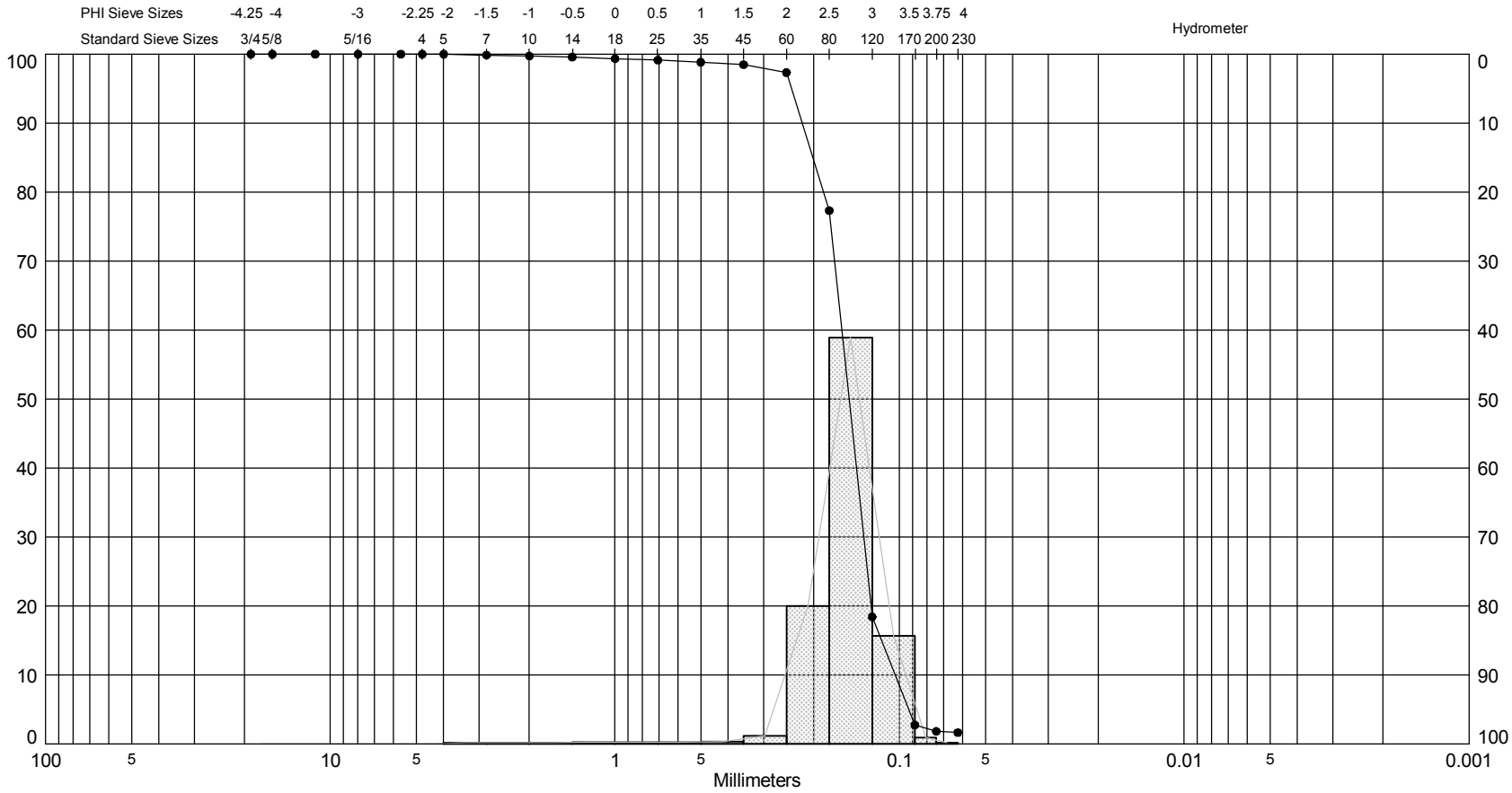
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,381,476
Northing (Y, ft):	192,220
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-17.2)	—●—	-17.2	SP	#200 - 1.82 #230 - 1.63			2.73	2.69	-3.35	26.44	0.48

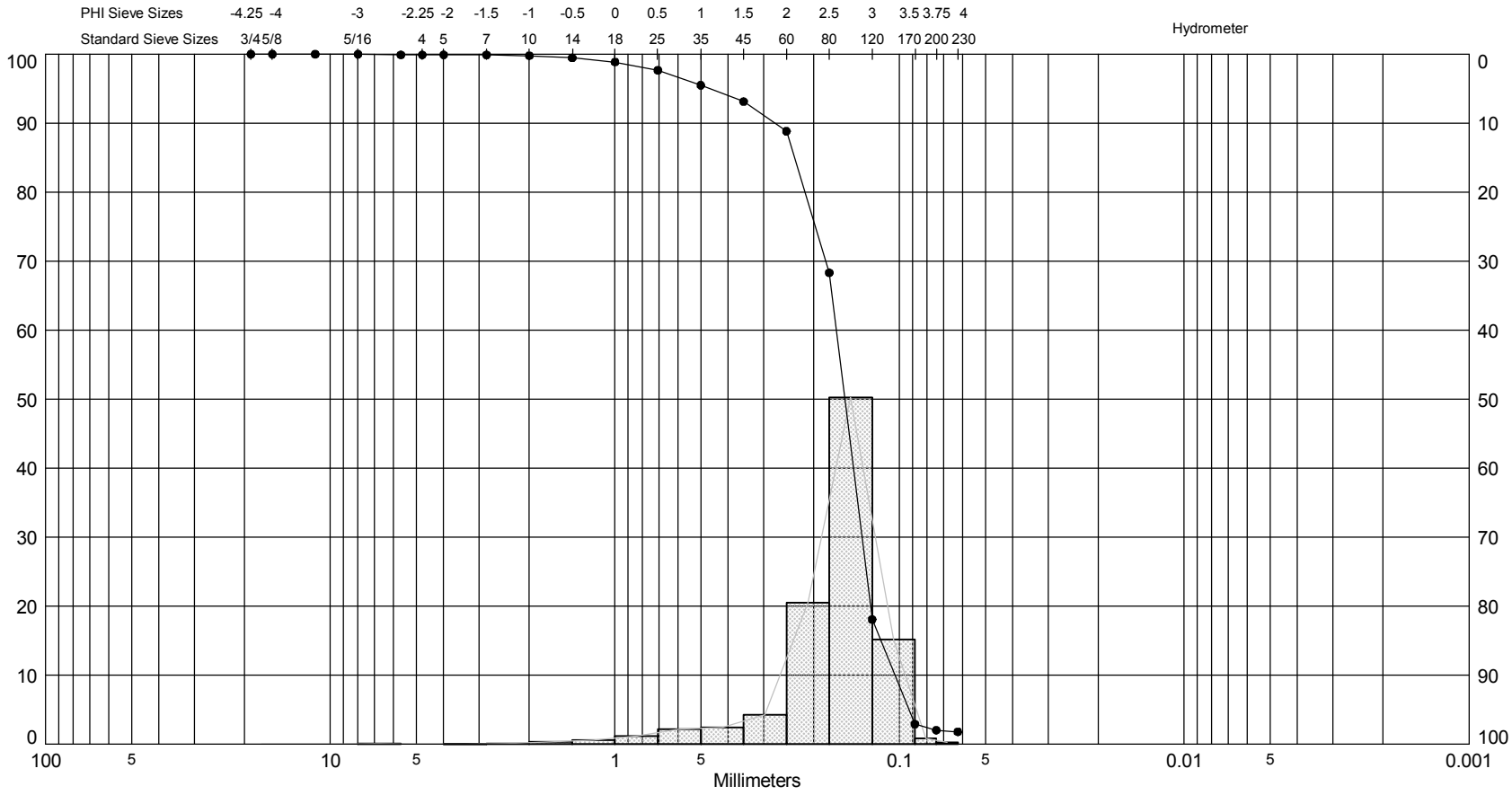
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,381,542
Northing (Y, ft):	192,182
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-20)	—●—	-20.0	SP	#200 - 2.02 #230 - 1.79			2.68	2.54	-2.34	11.65	0.68

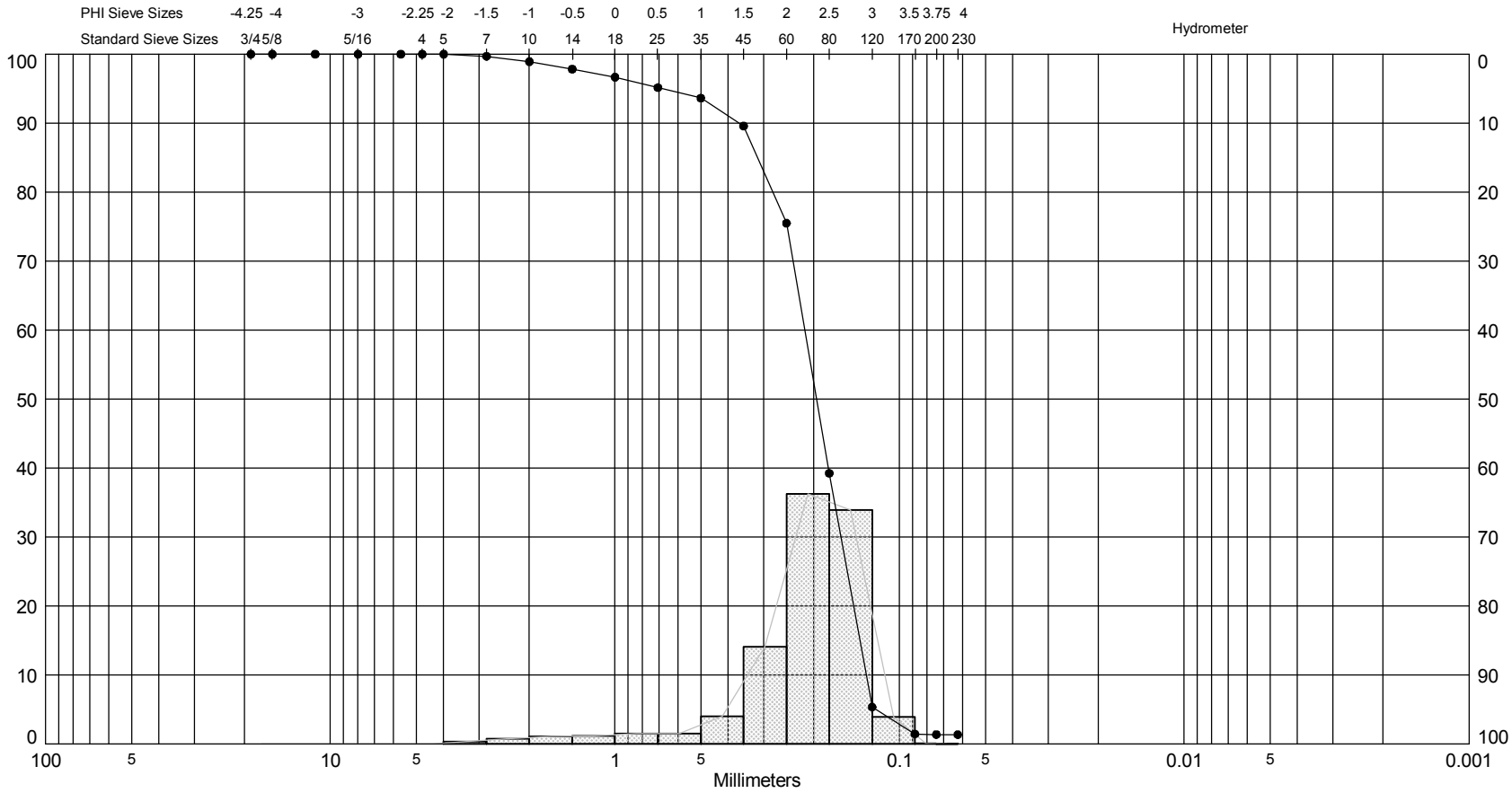
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,381,604
Northing (Y, ft):	192,064
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-6)	—●—	-6.0	SP	#200 - 1.36 #230 - 1.35			2.35	2.19	-2.2	9.25	0.78

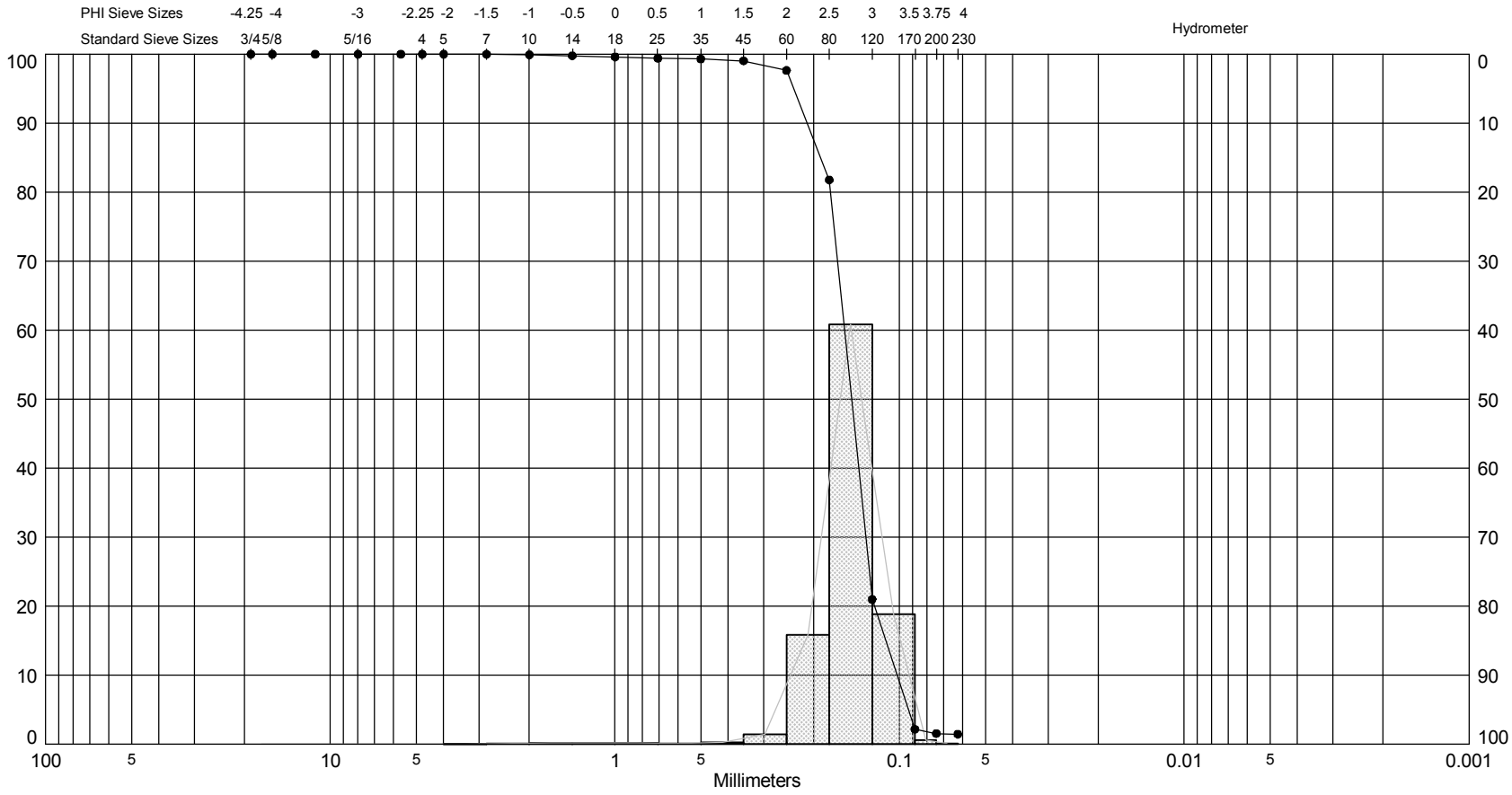
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,381,136
Northing (Y, ft):	192,538
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 (-8.8)	—●—	-8.8	SP	#200 - 1.54 #230 - 1.44			2.76	2.73	-2.79	22.86	0.42

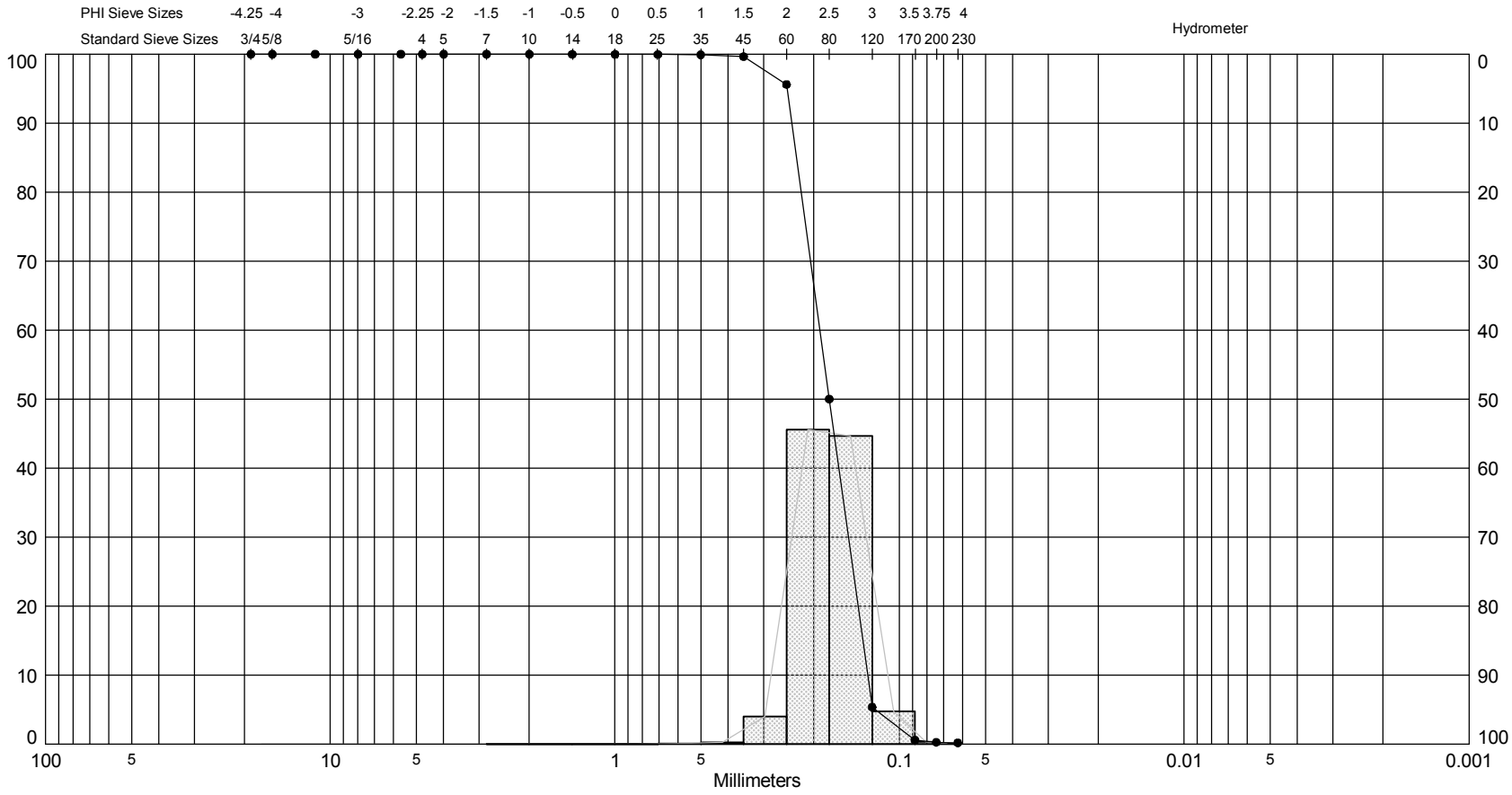
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,381,220
Northing (Y, ft):	192,479
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 Dune	—●—	16.8	SP	#200 - 0.27 #230 - 0.19			2.5	2.5	-0.26	6.11	0.35

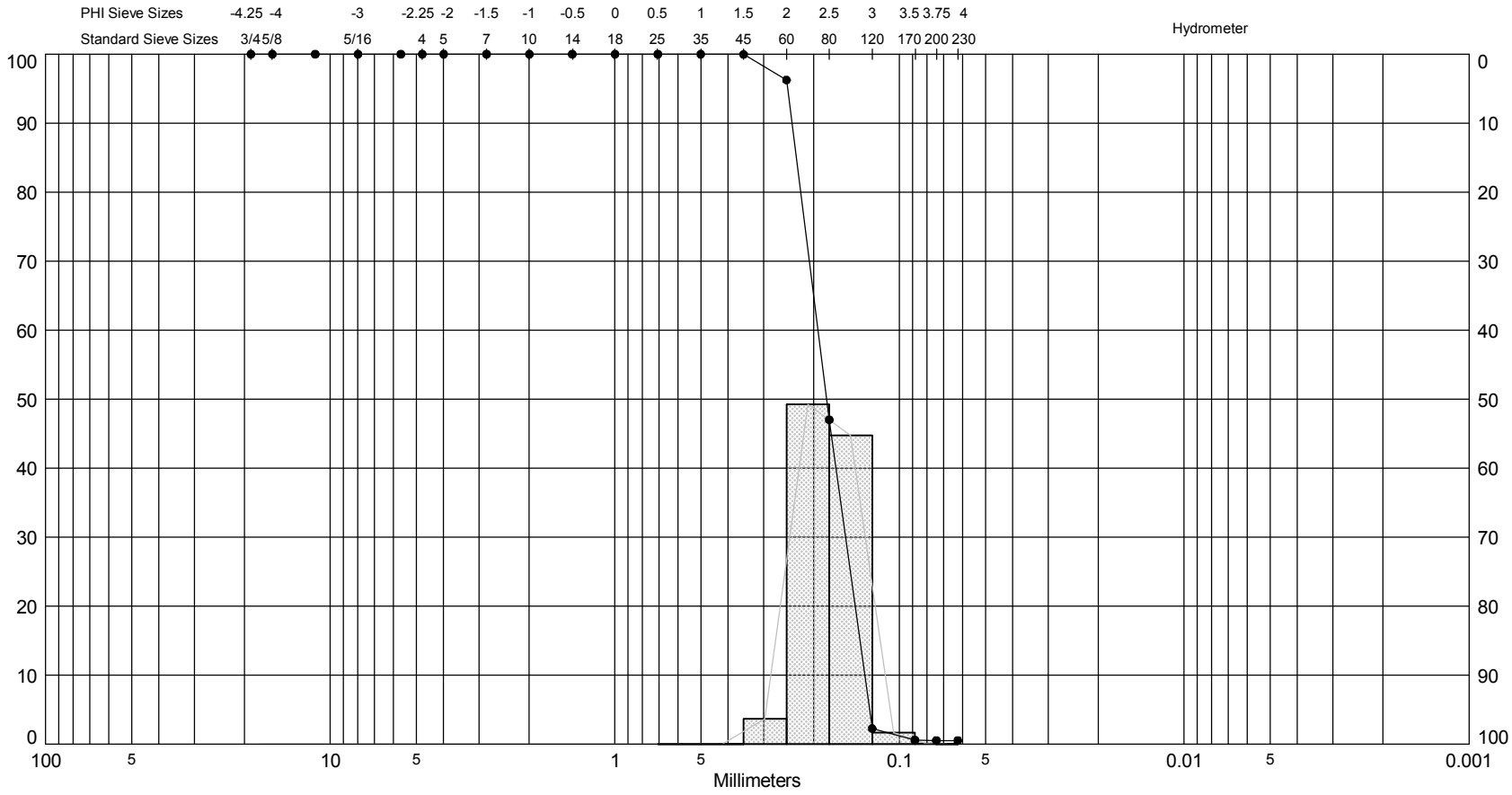
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	PB
Easting (X, ft):	2,380,759
Northing (Y, ft):	192,920
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 MHW	—●—	1.4	SP	#200 - 0.54 #230 - 0.53			2.47	2.47	-0.08	2.81	0.3

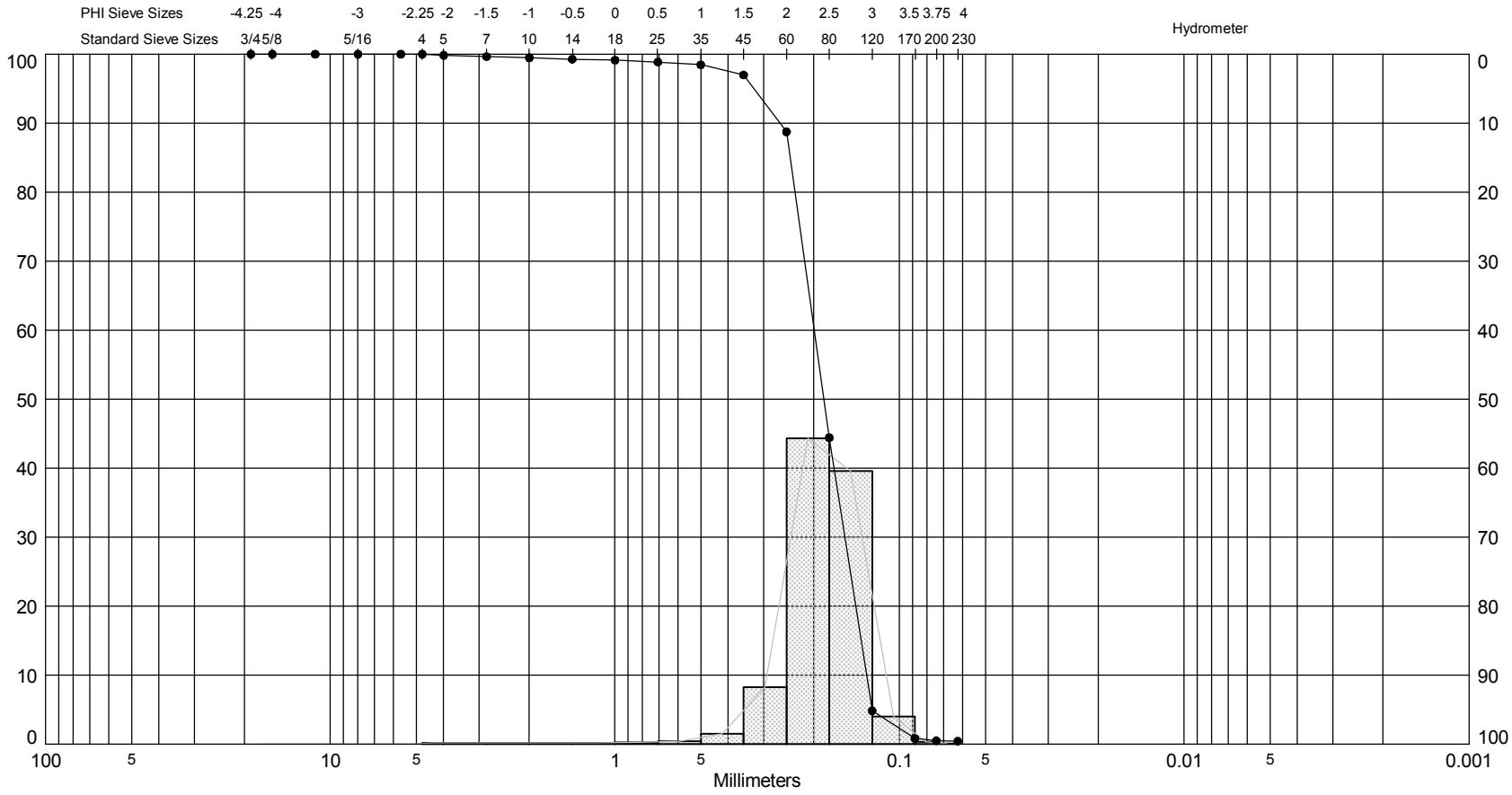
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	PB
Easting (X, ft):	2,380,884
Northing (Y, ft):	192,774
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 Mid Berm	—●—	8.5	SP	#200 - 0.49 #230 - 0.43			2.44	2.4	-3.15	23.26	0.54

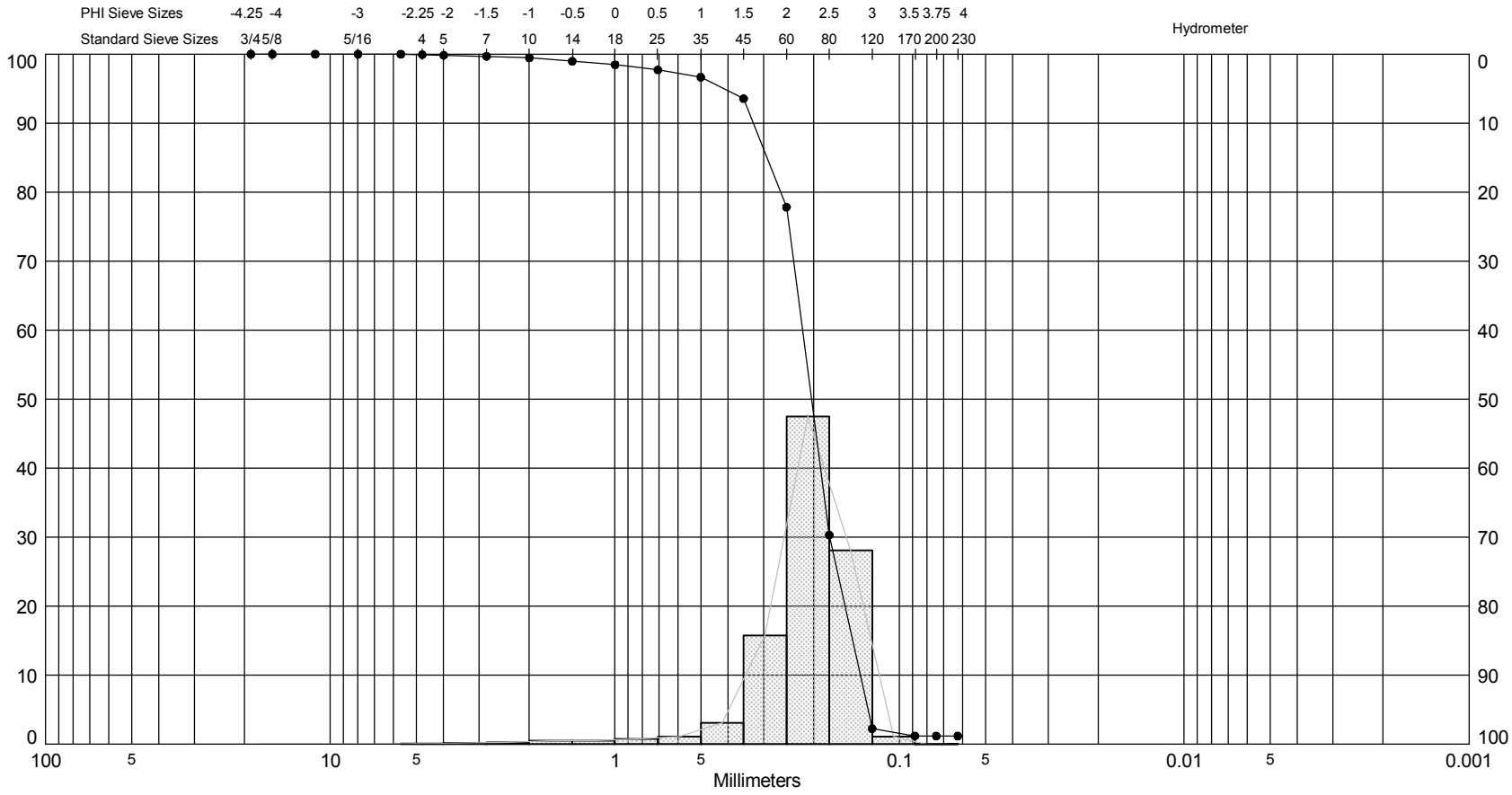
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	PB
Easting (X, ft):	2,380,808
Northing (Y, ft):	192,864
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 MLW	—●—	-2.6	SP	#200 - 1.17 #230 - 1.16			2.29	2.21	-2.74	15.67	0.61

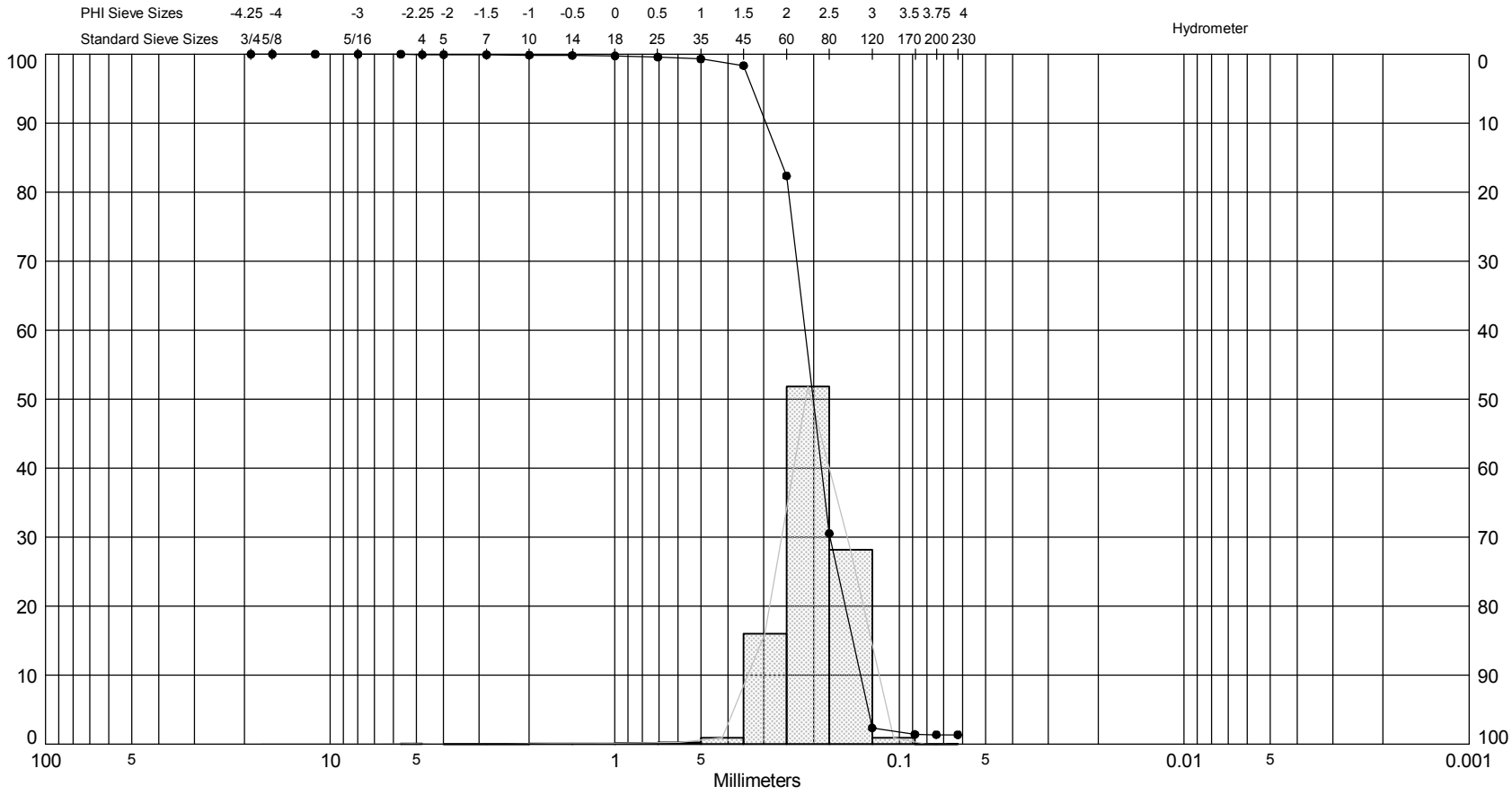
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	PB
Easting (X, ft):	2,380,983
Northing (Y, ft):	192,667
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 MTL	—●—	-0.7	SP	#200 - 1.37 #230 - 1.36			2.31	2.3	-2.11	20.04	0.42

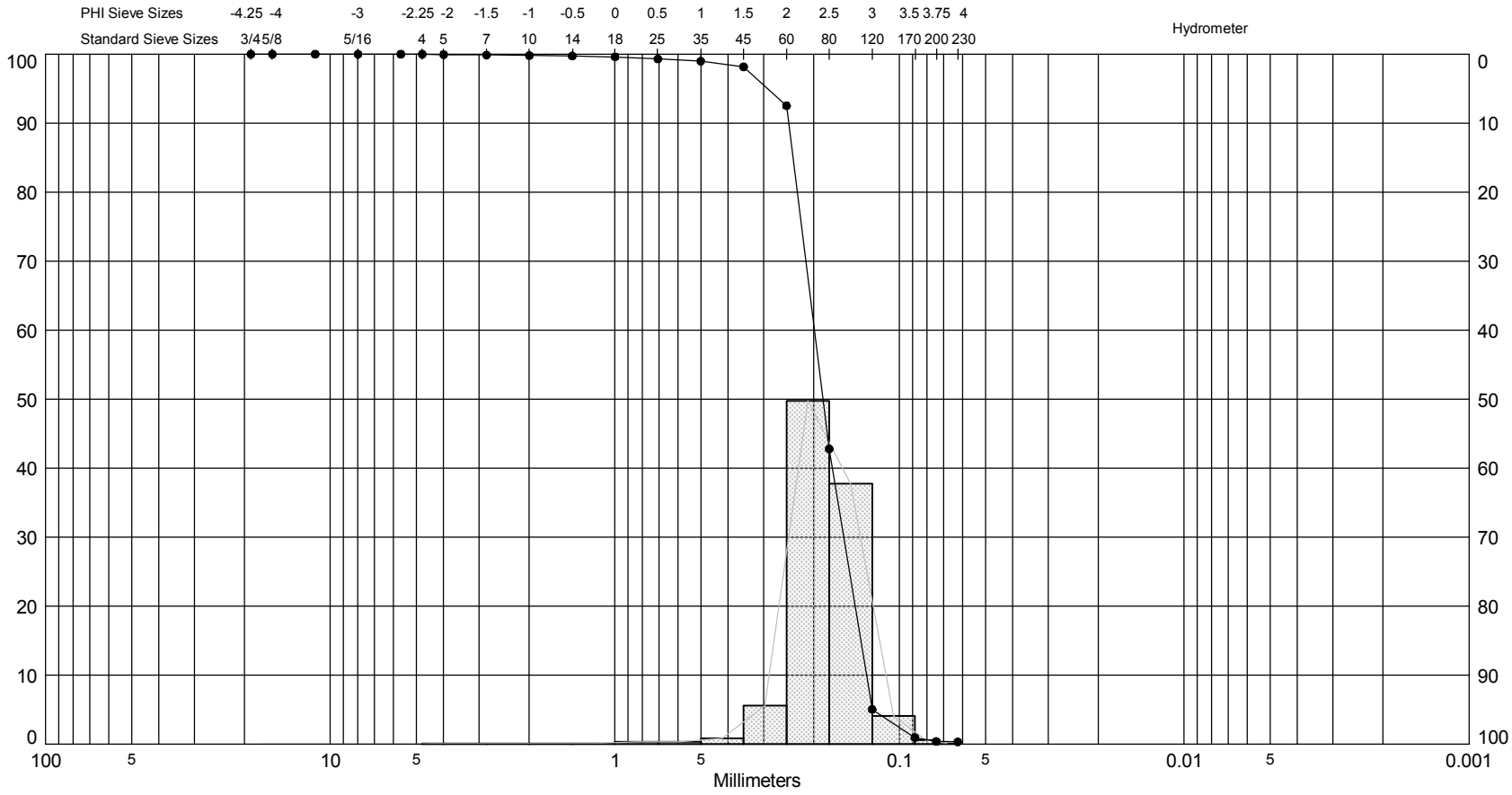
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	PB
Easting (X, ft):	2,380,910
Northing (Y, ft):	192,741
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 Toe of Dune	—●—	11.7	SP	#200 - 0.38 #230 - 0.32			2.43	2.43	-2.36	20.97	0.45

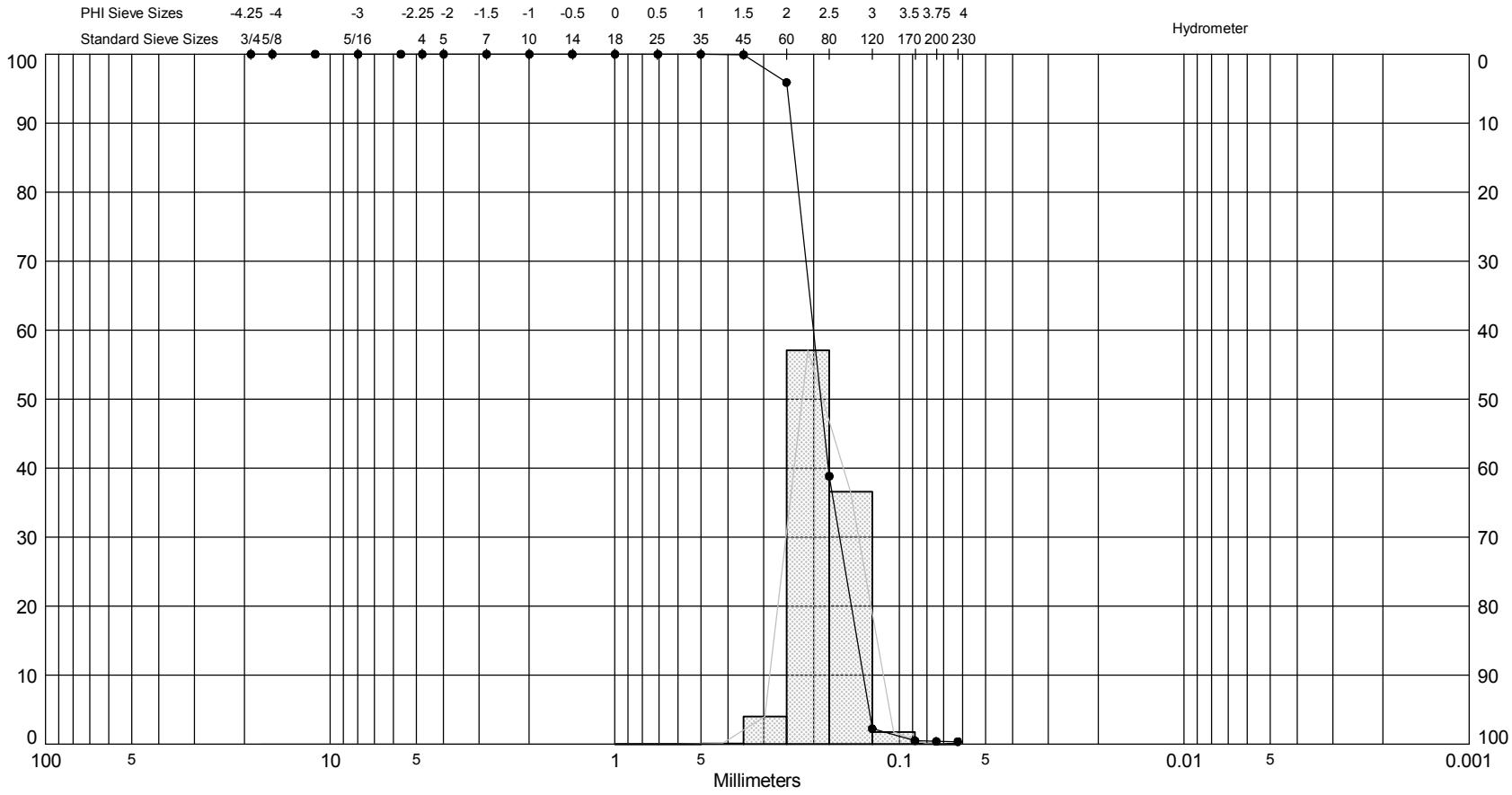
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-13-07
Analyzed By:	TD
Easting (X, ft):	2,380,801
Northing (Y, ft):	192,911
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (+3)	—●—	3.0	SP	#200 - 0.39 #230 - 0.36			2.4	2.43	0.19	3.5	0.3

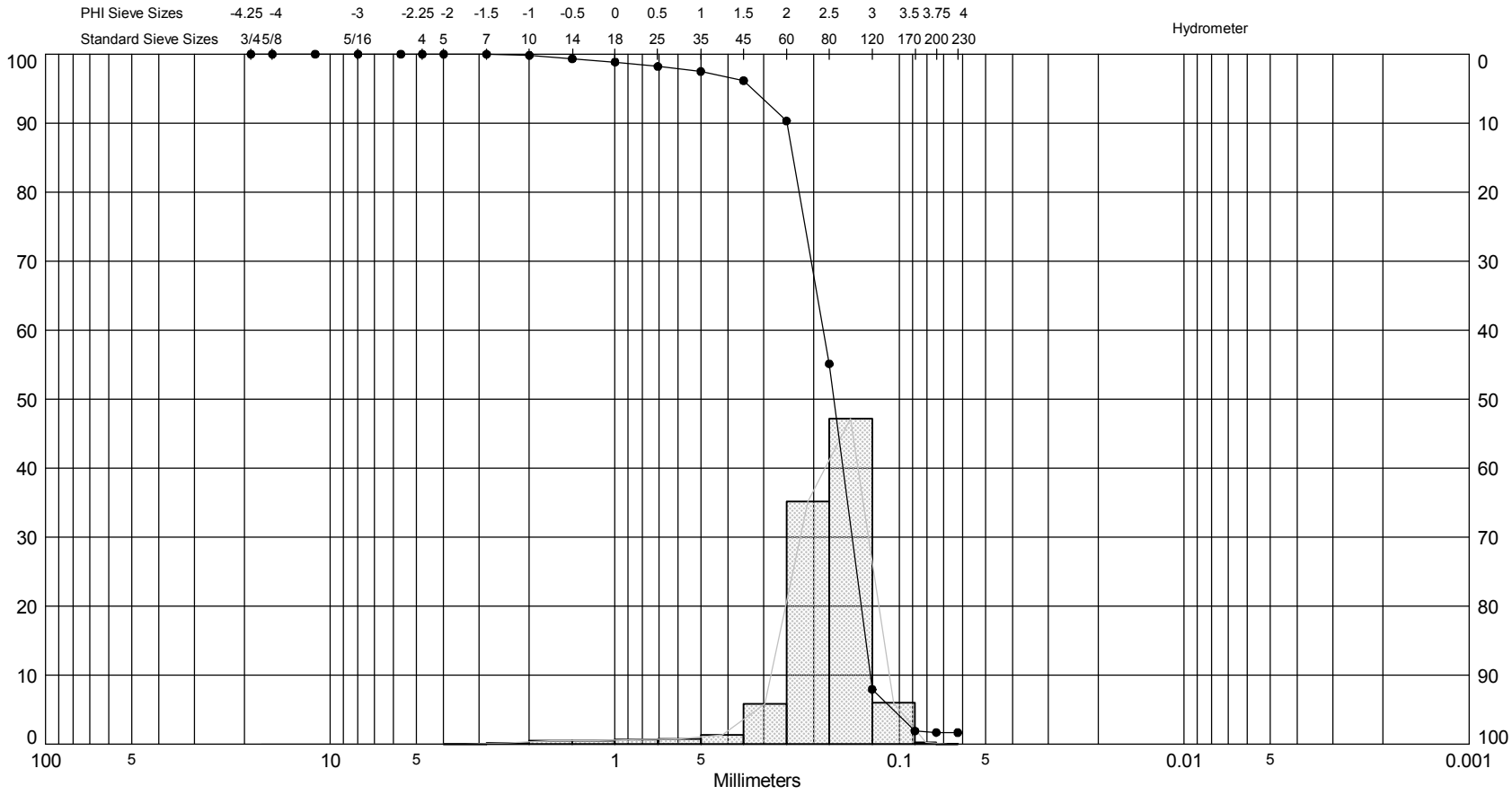
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	PB
Easting (X, ft):	2,383,594
Northing (Y, ft):	195,781
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-11.6)	—●—	-11.6	SP	#200 - 1.68 #230 - 1.67			2.55	2.45	-2.62	14.54	0.56

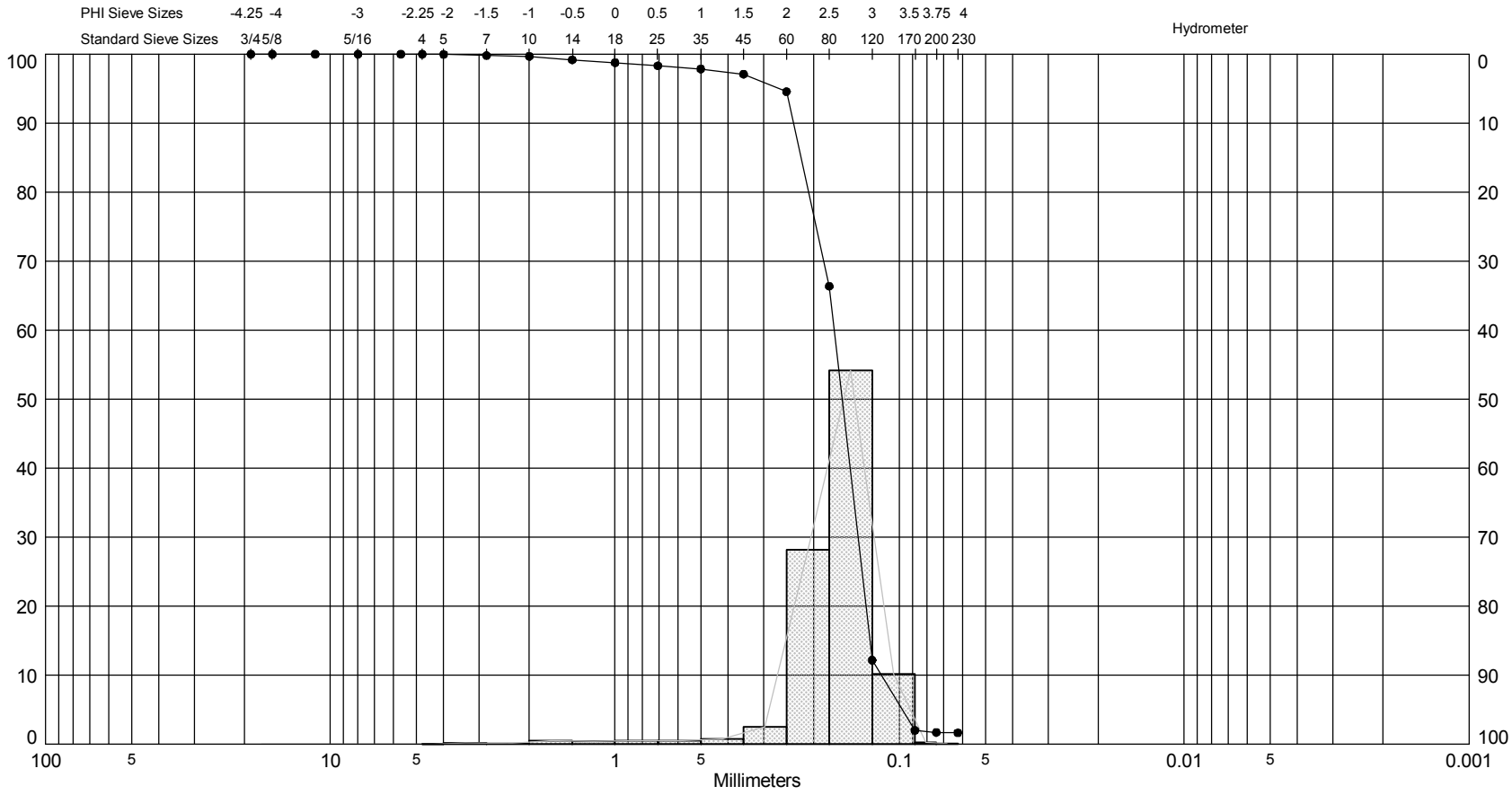
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	TD
Easting (X, ft):	2,384,040
Northing (Y, ft):	195,264
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-14.4)	—●—	-14.4	SP	#200 - 1.70 #230 - 1.63			2.65	2.56	-3.33	21.14	0.56

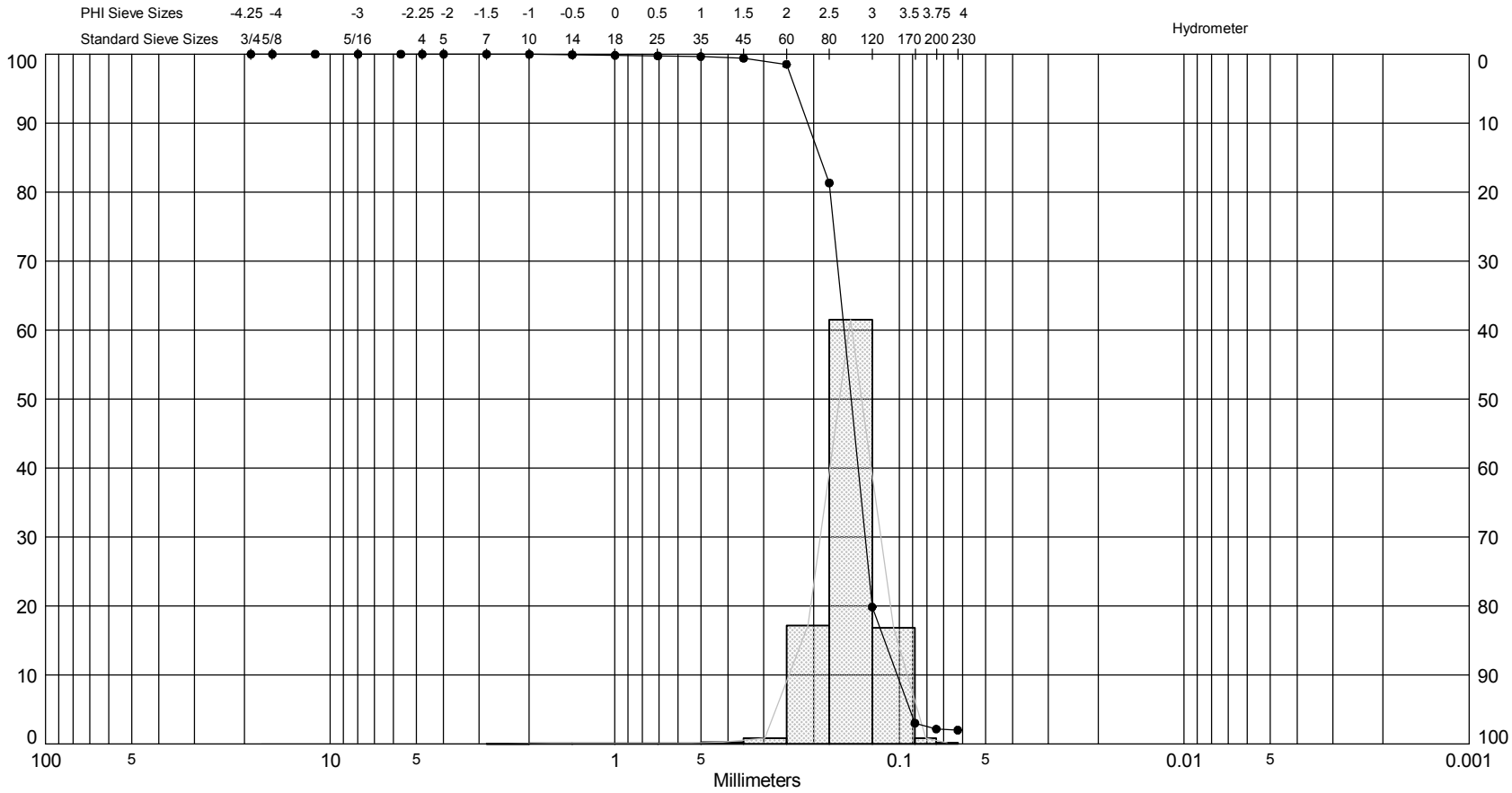
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	PB
Easting (X, ft):	2,384,134
Northing (Y, ft):	195,171
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-17.2)	—●—	-17.2	SP	#200 - 2.15 #230 - 2.00			2.75	2.73	-1.81	17.36	0.37

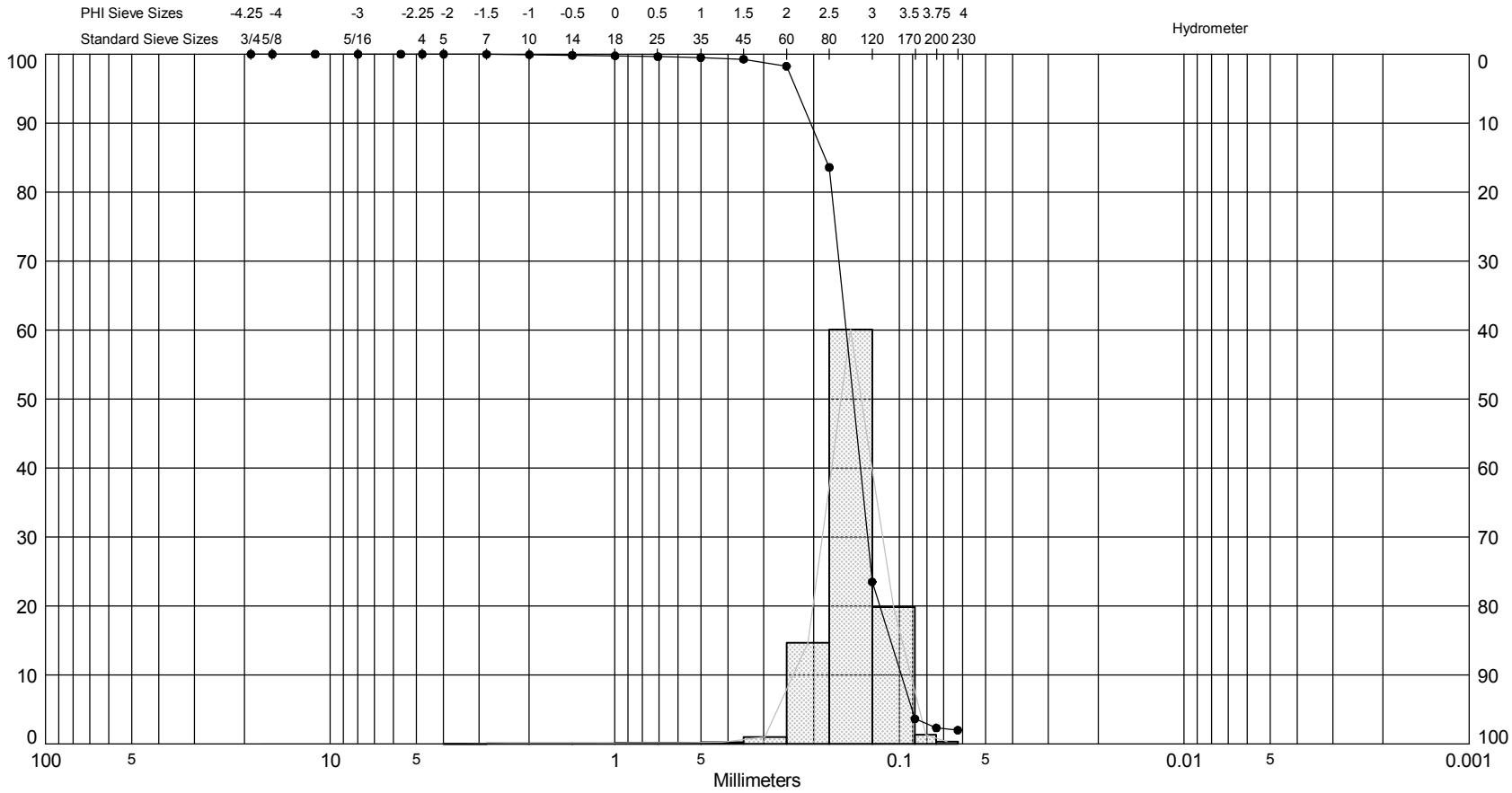
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,384,296
Northing (Y, ft):	195,067
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-20)	—●—	-20.0	SP	#200 - 2.30 #230 - 1.98			2.78	2.76	-2.28	21.27	0.4

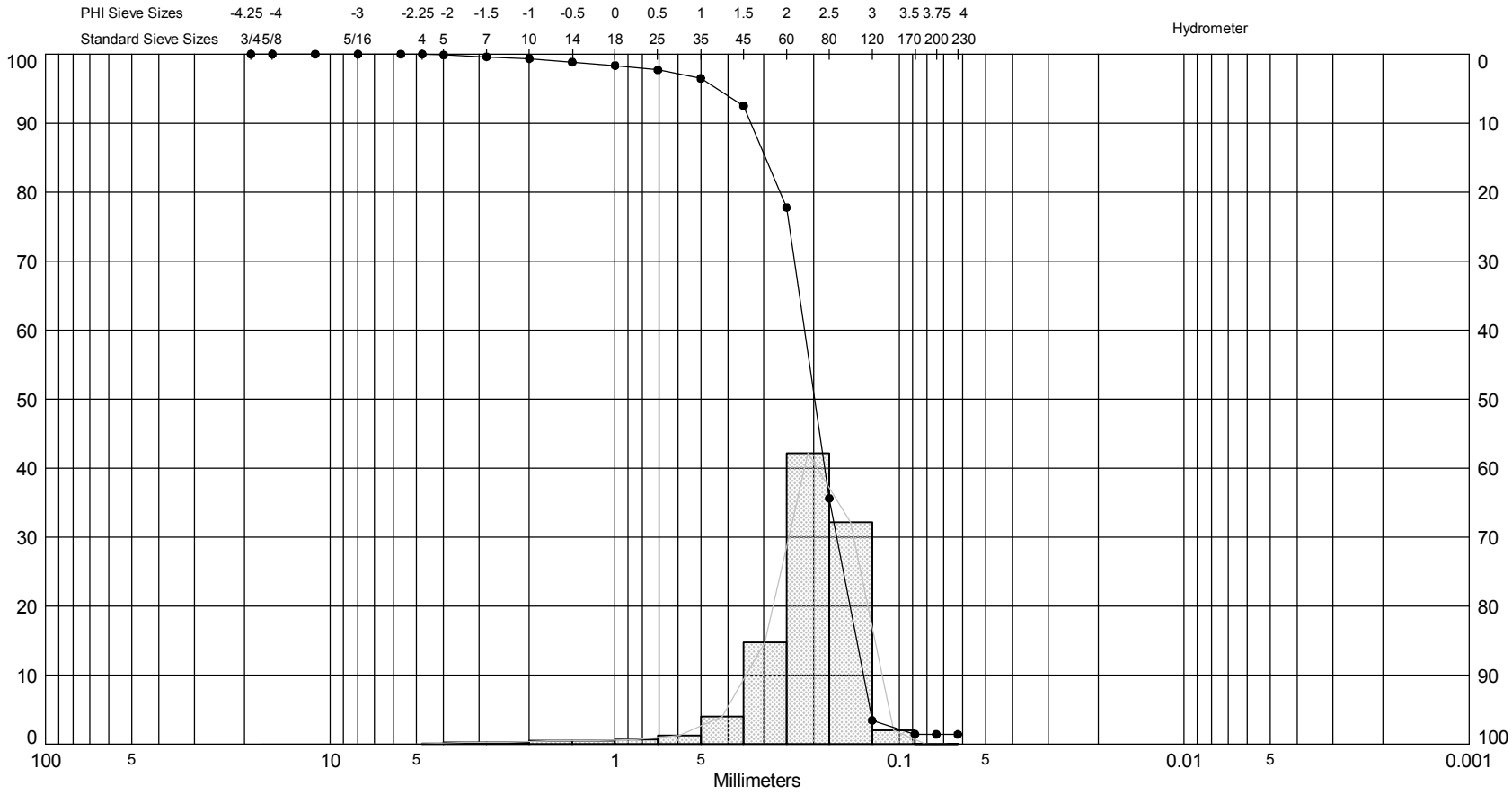
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,384,367
Northing (Y, ft):	194,975
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-6)	—●—	-6.0	SP	#200 - 1.41 #230 - 1.40			2.33	2.23	-2.57	13.96	0.64

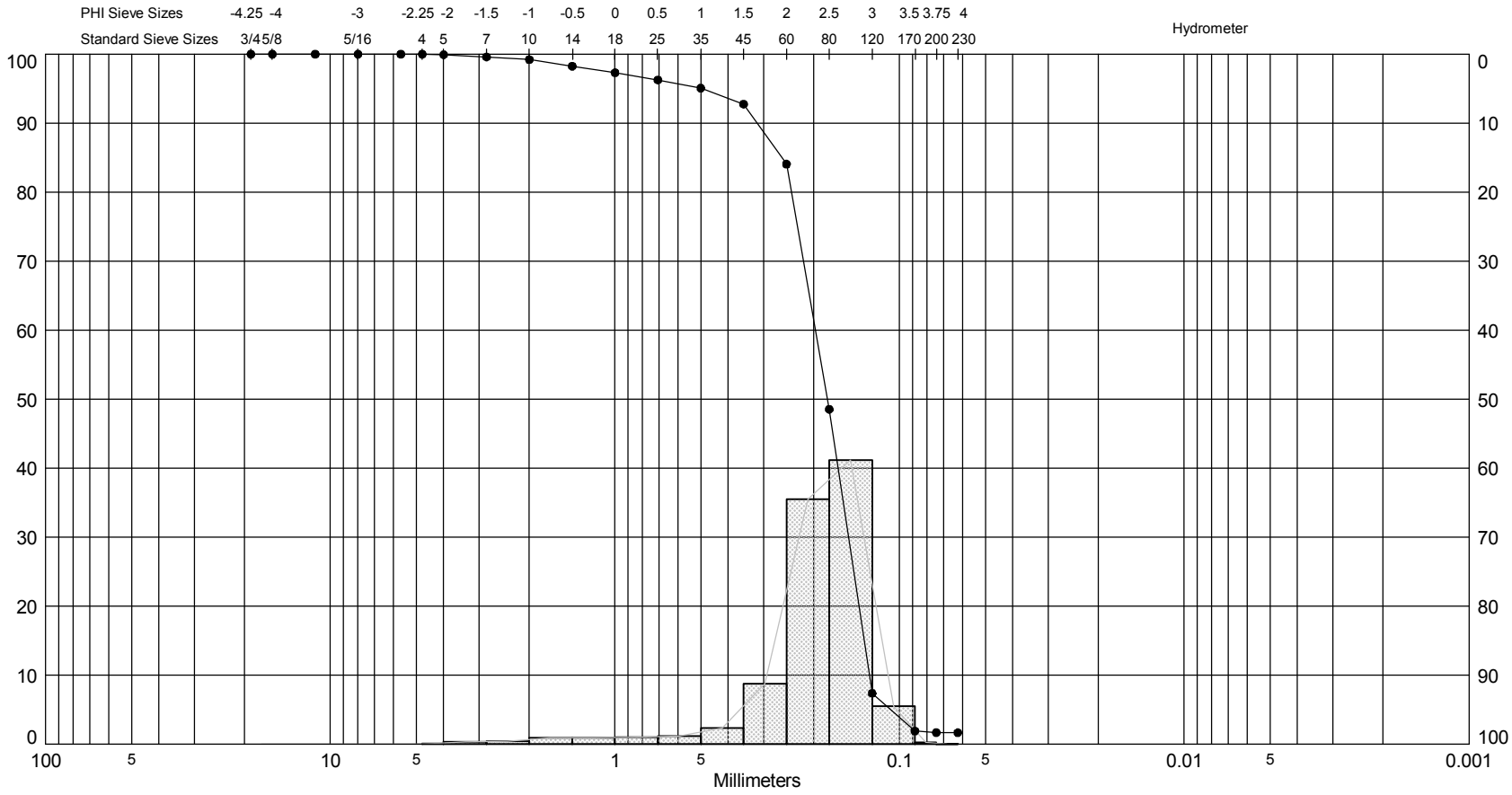
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	PB
Easting (X, ft):	2,383,820
Northing (Y, ft):	195,535
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 (-8.8)	—●—	-8.8	SP	#200 - 1.66 #230 - 1.65			2.48	2.33	-2.61	12.22	0.73

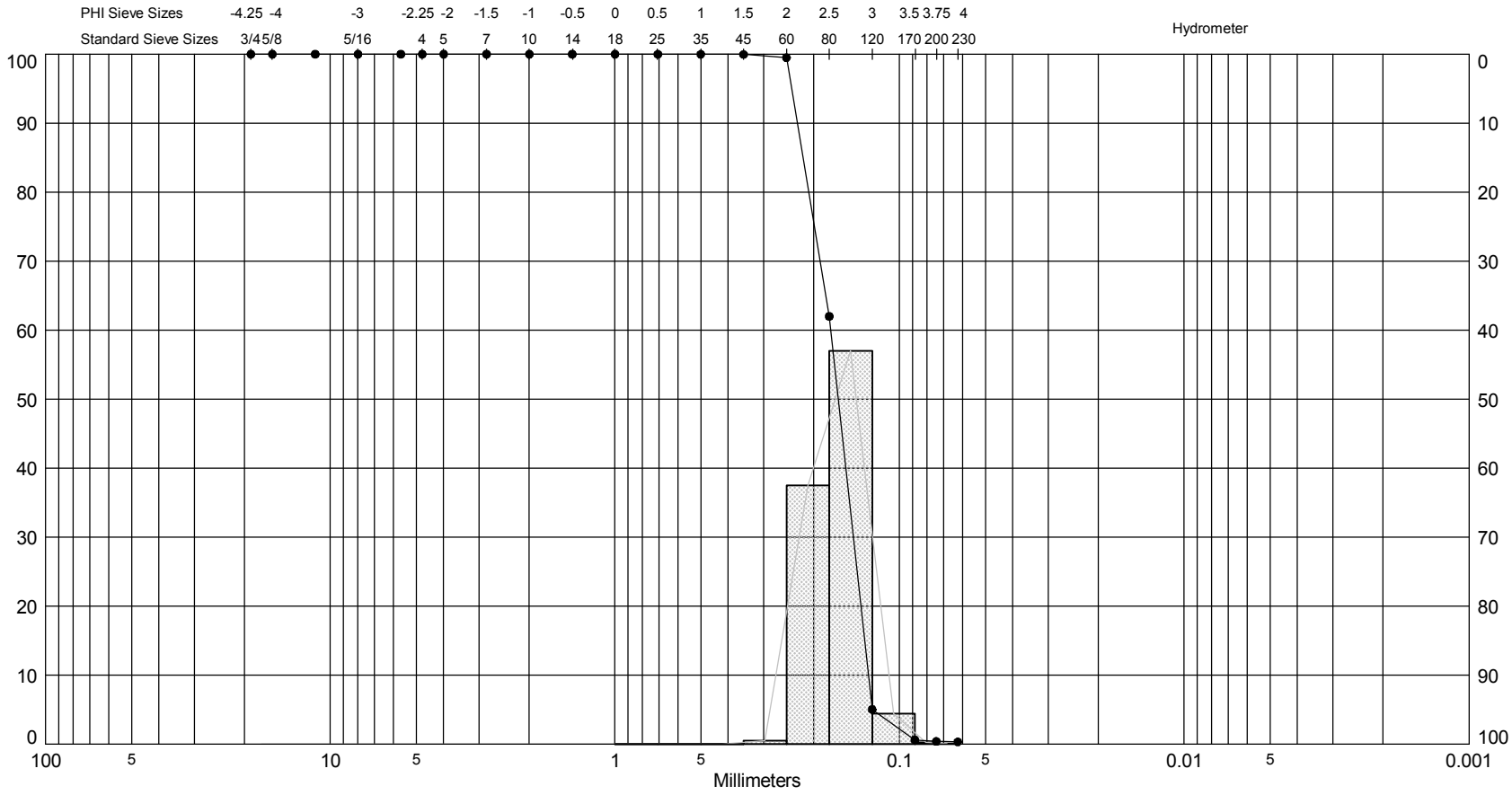
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,383,938
Northing (Y, ft):	195,481
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 Dune	—●—	13.6	SP	#200 - 0.39 #230 - 0.32			2.61	2.58	0.05	3.51	0.29

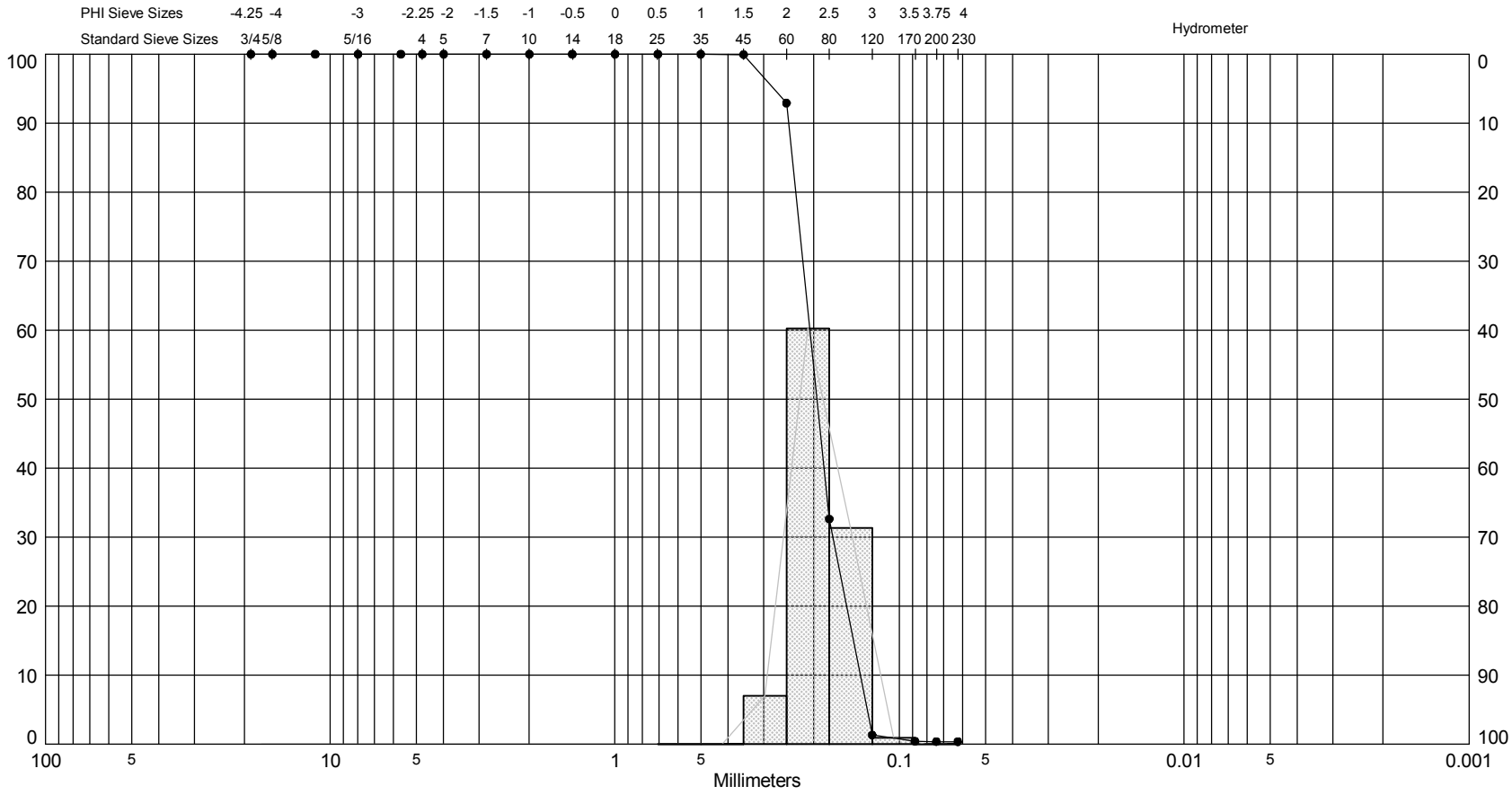
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,383,542
Northing (Y, ft):	195,838
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 MHW	—●—	1.4	SP	#200 - 0.37 #230 - 0.36			2.36	2.38	0.1	3.13	0.3

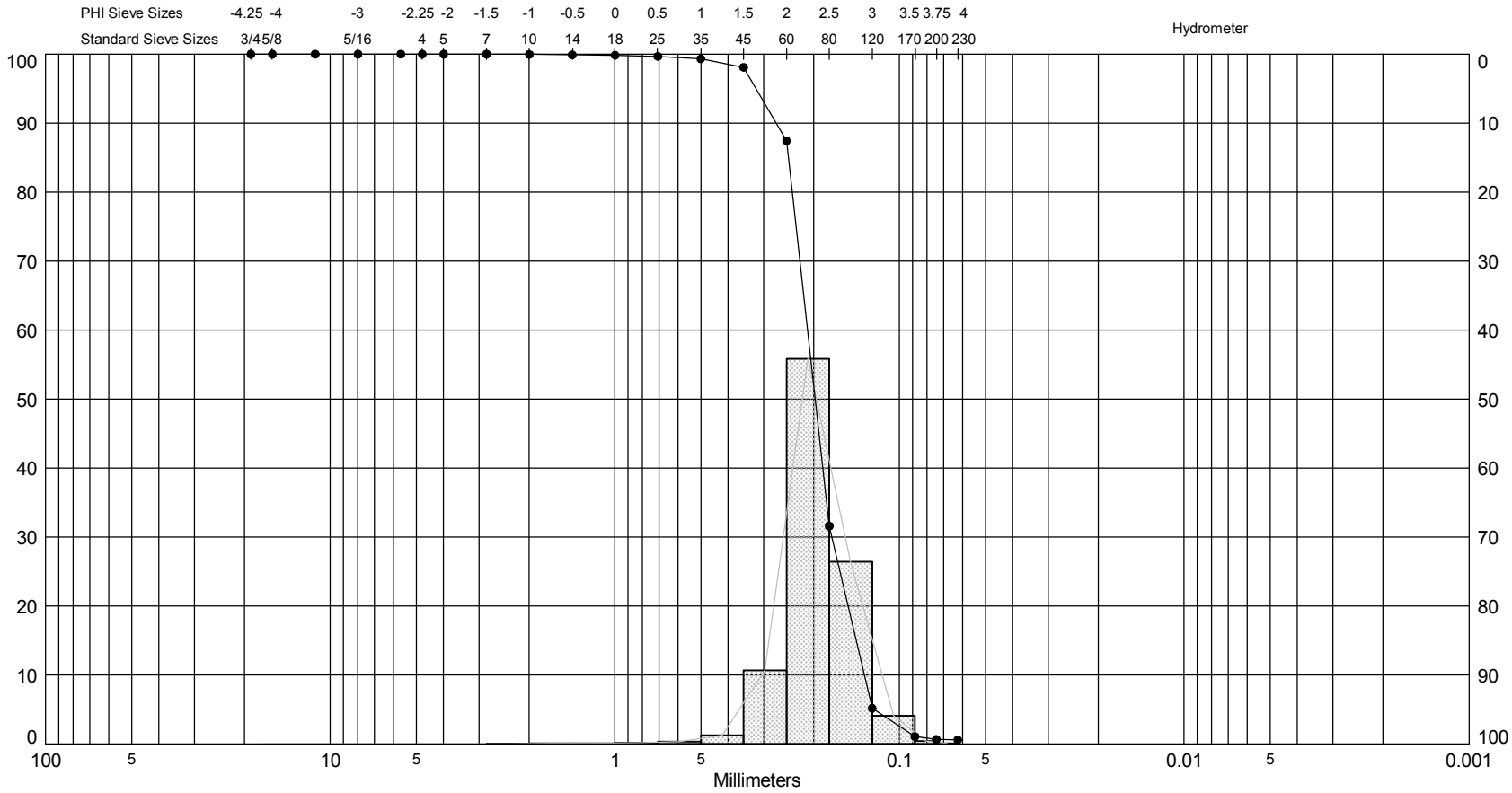
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-23-07
Analyzed By:	PB
Easting (X, ft):	2,383,614
Northing (Y, ft):	195,756
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 Mid Berm	—●—	6.8	SP	#200 - 0.64 #230 - 0.59			2.34	2.35	-0.82	9.41	0.42

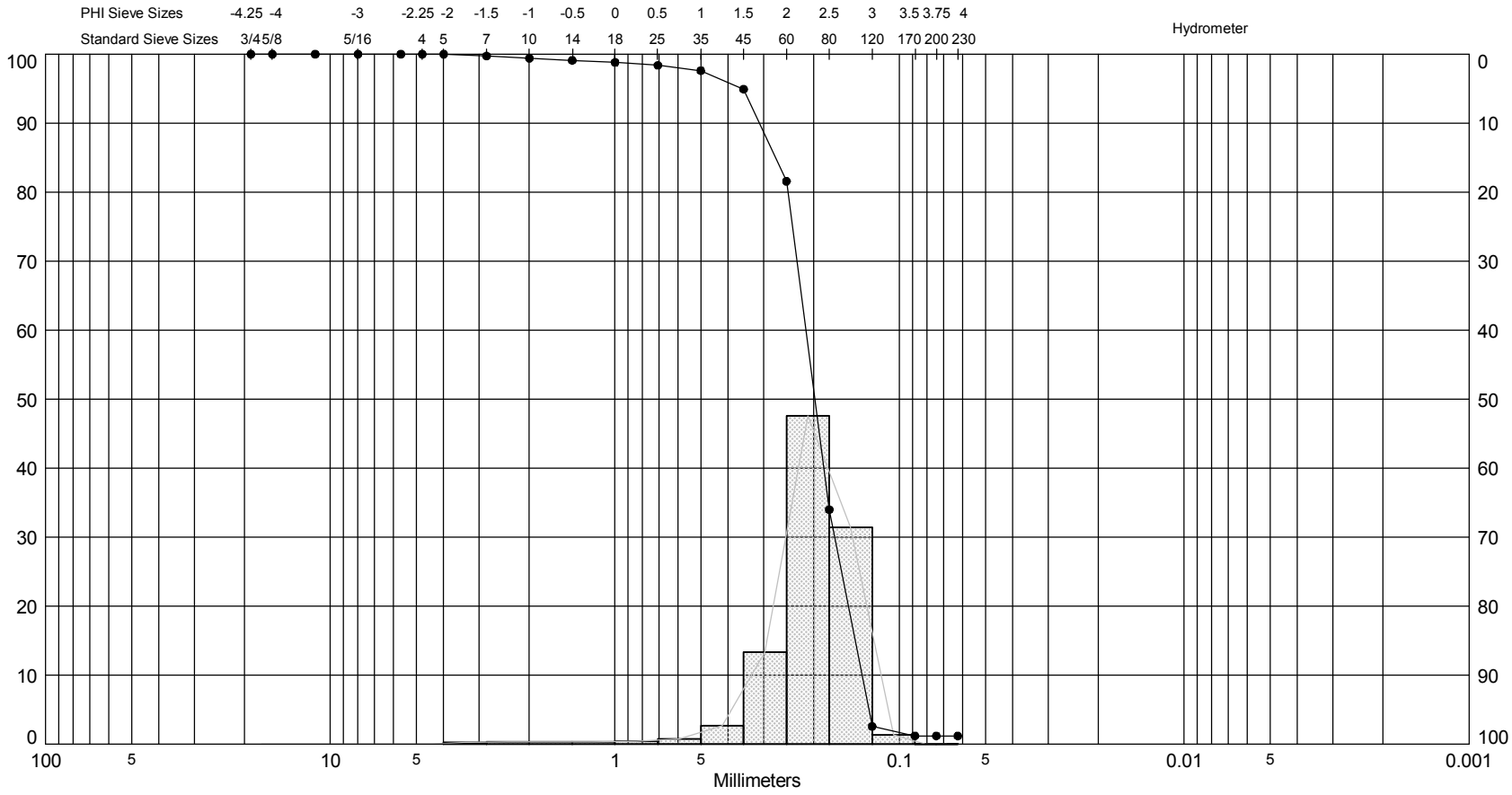
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	TD
Easting (X, ft):	2,383,573
Northing (Y, ft):	195,808
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 MLW	—●—	-2.8	SP	#200 - 1.19 #230 - 1.18			2.33	2.27	-2.85	17.45	0.56

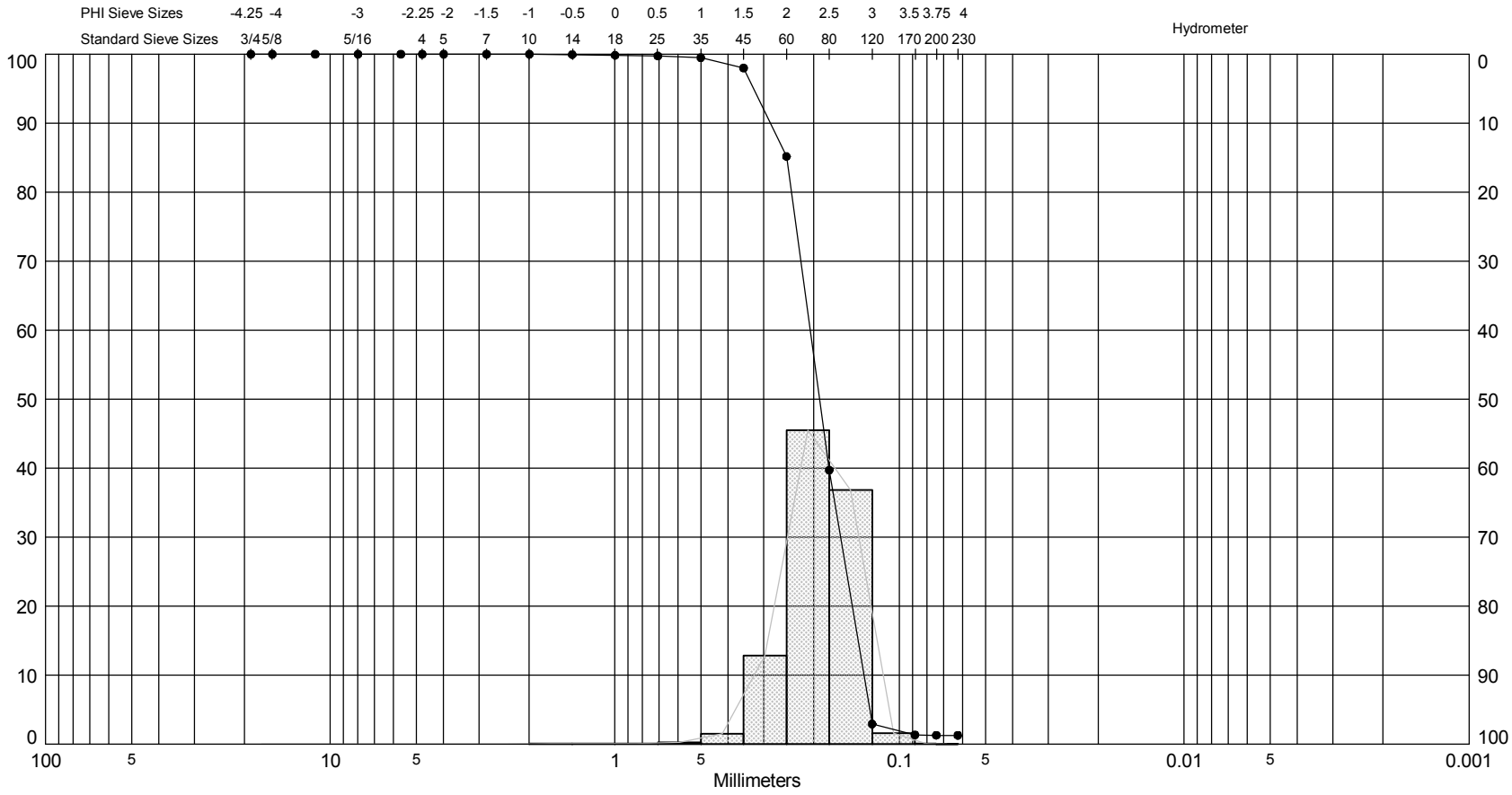
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	
Analyzed By:	PB
Easting (X, ft):	2,383,720
Northing (Y, ft):	195,645
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 MTL	—●—	-0.8	SP	#200 - 1.29 #230 - 1.28			2.39	2.36	-1.04	6.96	0.41

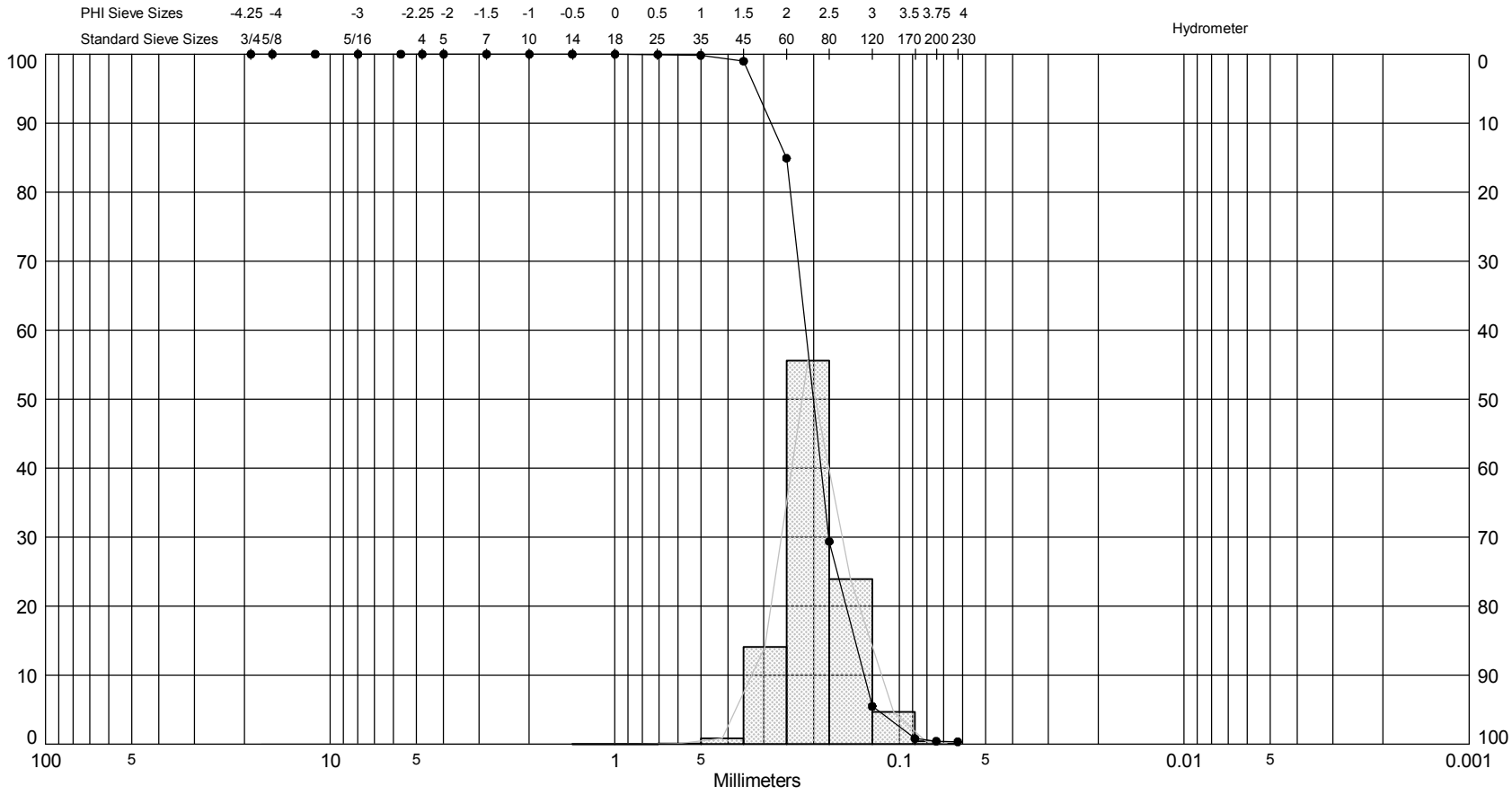
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,383,640
Northing (Y, ft):	195,726
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 Toe of Dune	—●—	8.0	SP	#200 - 0.41 #230 - 0.33			2.31	2.34	0.19	4.18	0.4

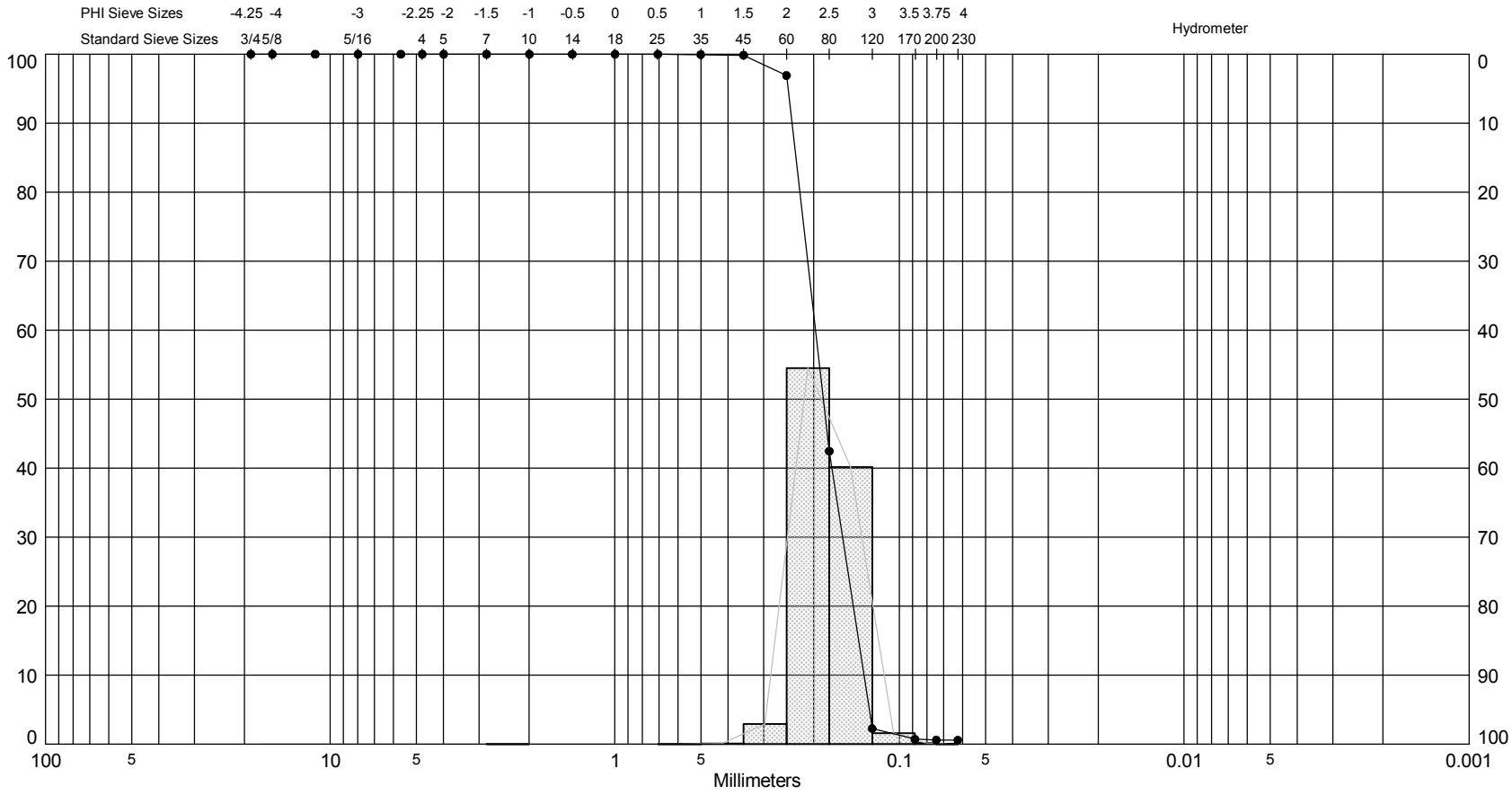
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,383,559
Northing (Y, ft):	195,822
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (+2)	—●—	2.0	SP	#200 - 0.58 #230 - 0.57			2.43	2.45	-0.1	5.65	0.3

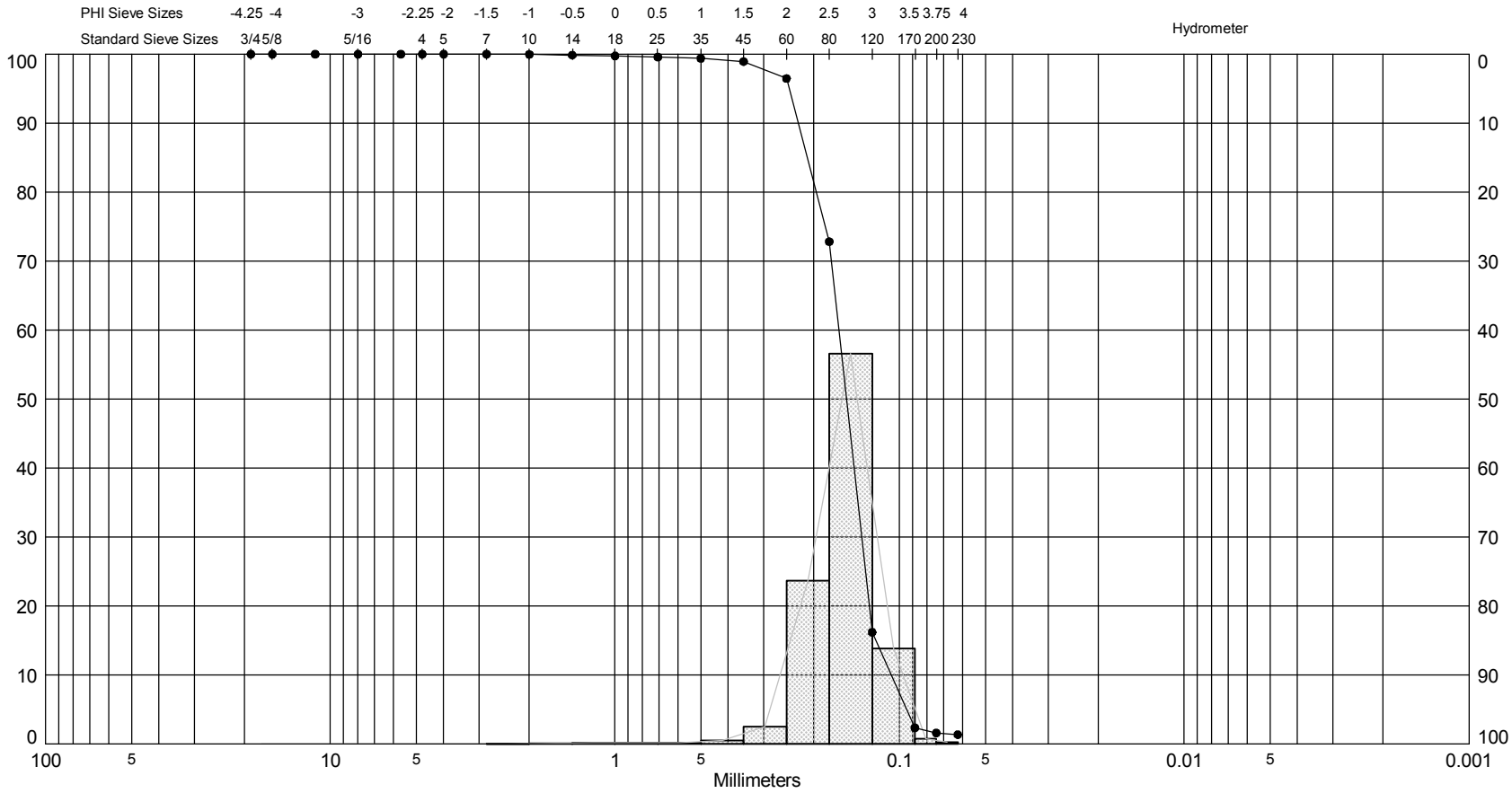
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-09-07
Analyzed By:	TD
Easting (X, ft):	2,386,854
Northing (Y, ft):	198,499
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-11.6)	—●—	-11.6	SP	#200 - 1.58 #230 - 1.35			2.7	2.66	-1.81	14.38	0.42

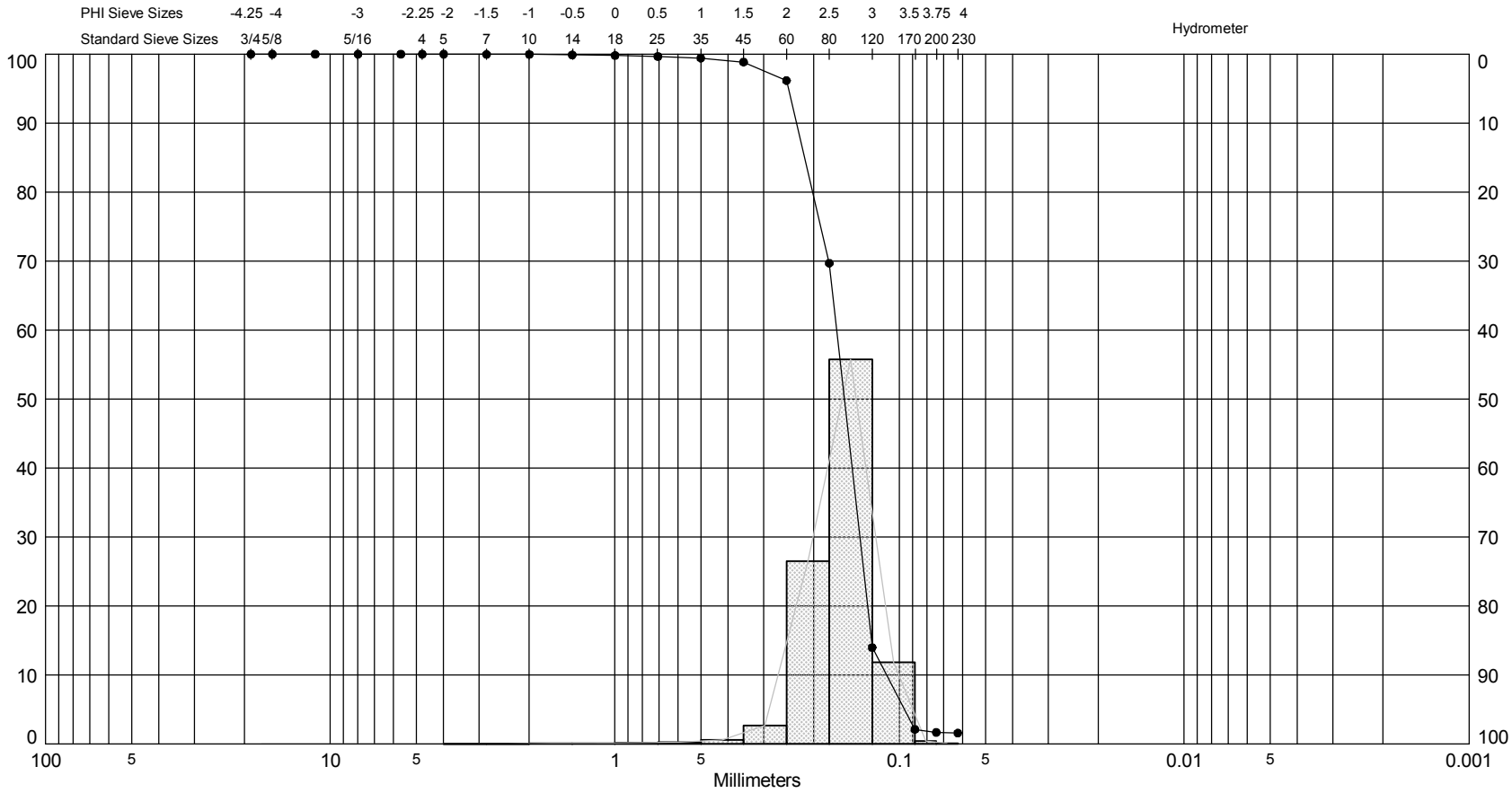
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-25-07
Analyzed By:	PB
Easting (X, ft):	2,387,178
Northing (Y, ft):	197,908
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-14.4)	—●—	-14.4	SP	#200 - 1.66 #230 - 1.57			2.68	2.63	-1.84	15.26	0.41

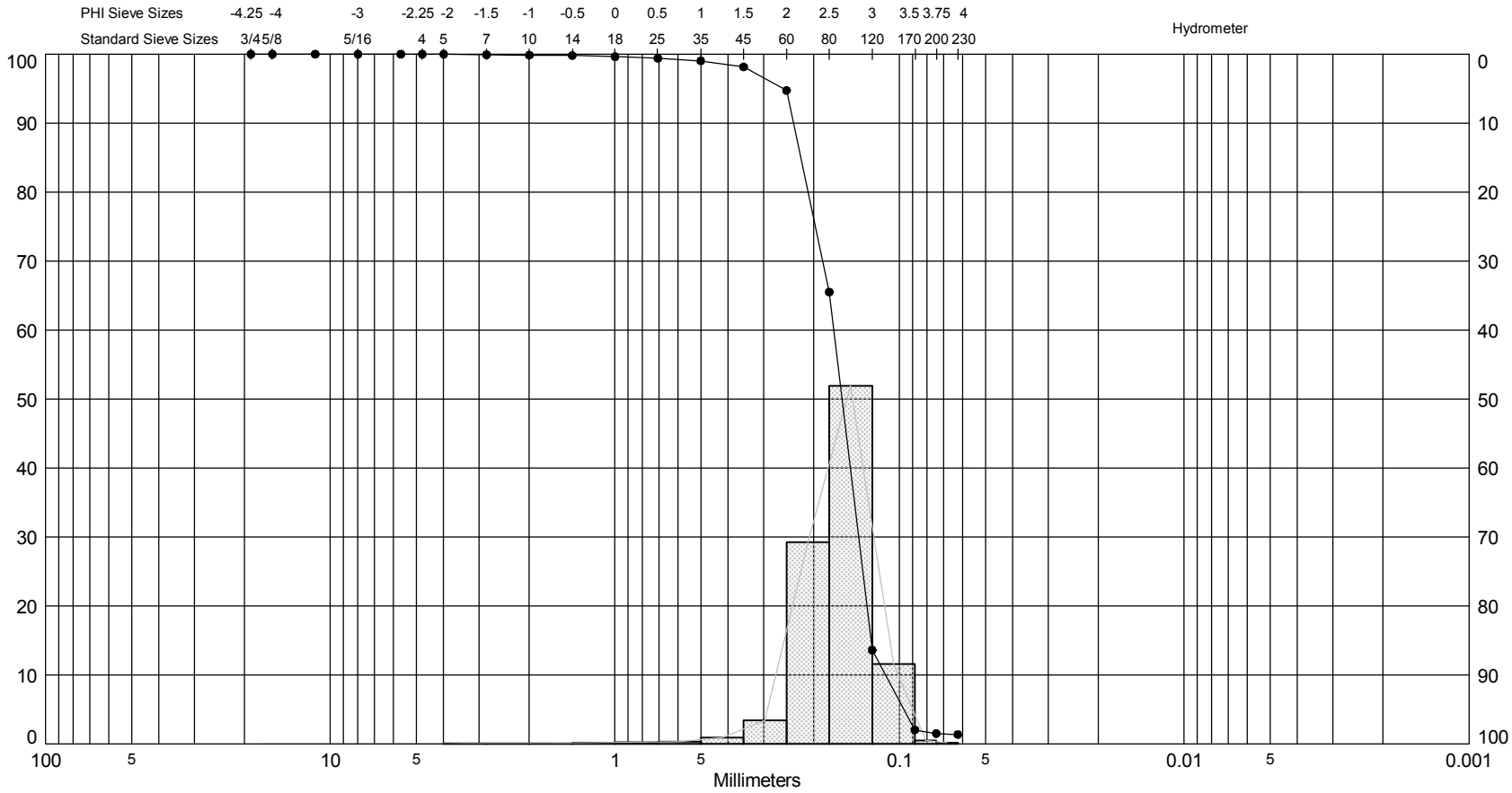
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-25-07
Analyzed By:	PB
Easting (X, ft):	2,387,403
Northing (Y, ft):	197,618
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-17.2)	—●—	-17.2	SP	#200 - 1.51 #230 - 1.37			2.65	2.59	-2.22	16.97	0.47

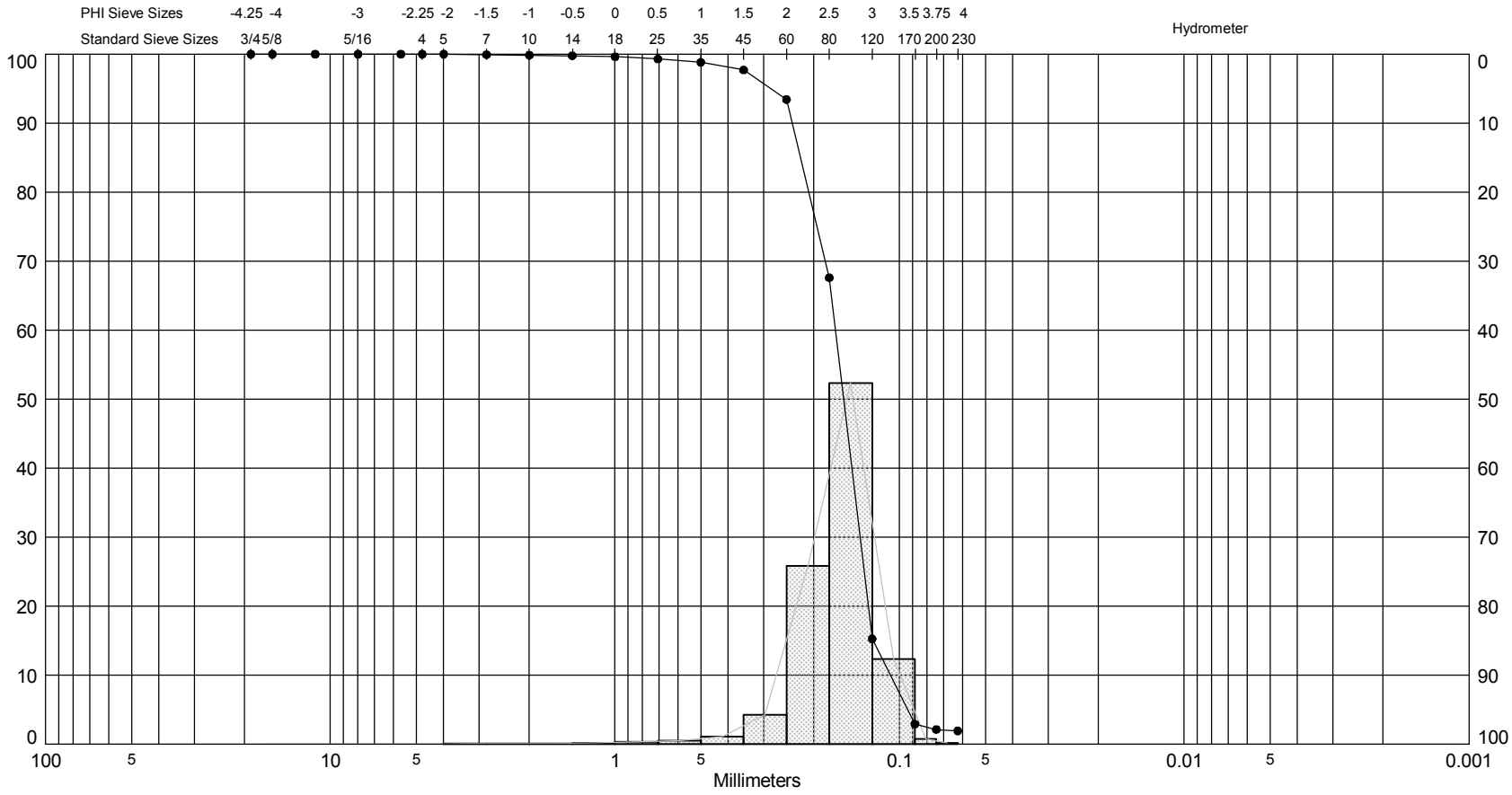
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-25-07
Analyzed By:	PB
Easting (X, ft):	2,387,565
Northing (Y, ft):	197,384
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-20)	—●—	-20.0	SP	#200 - 2.12 #230 - 1.92			2.67	2.6	-2.11	14.69	0.49

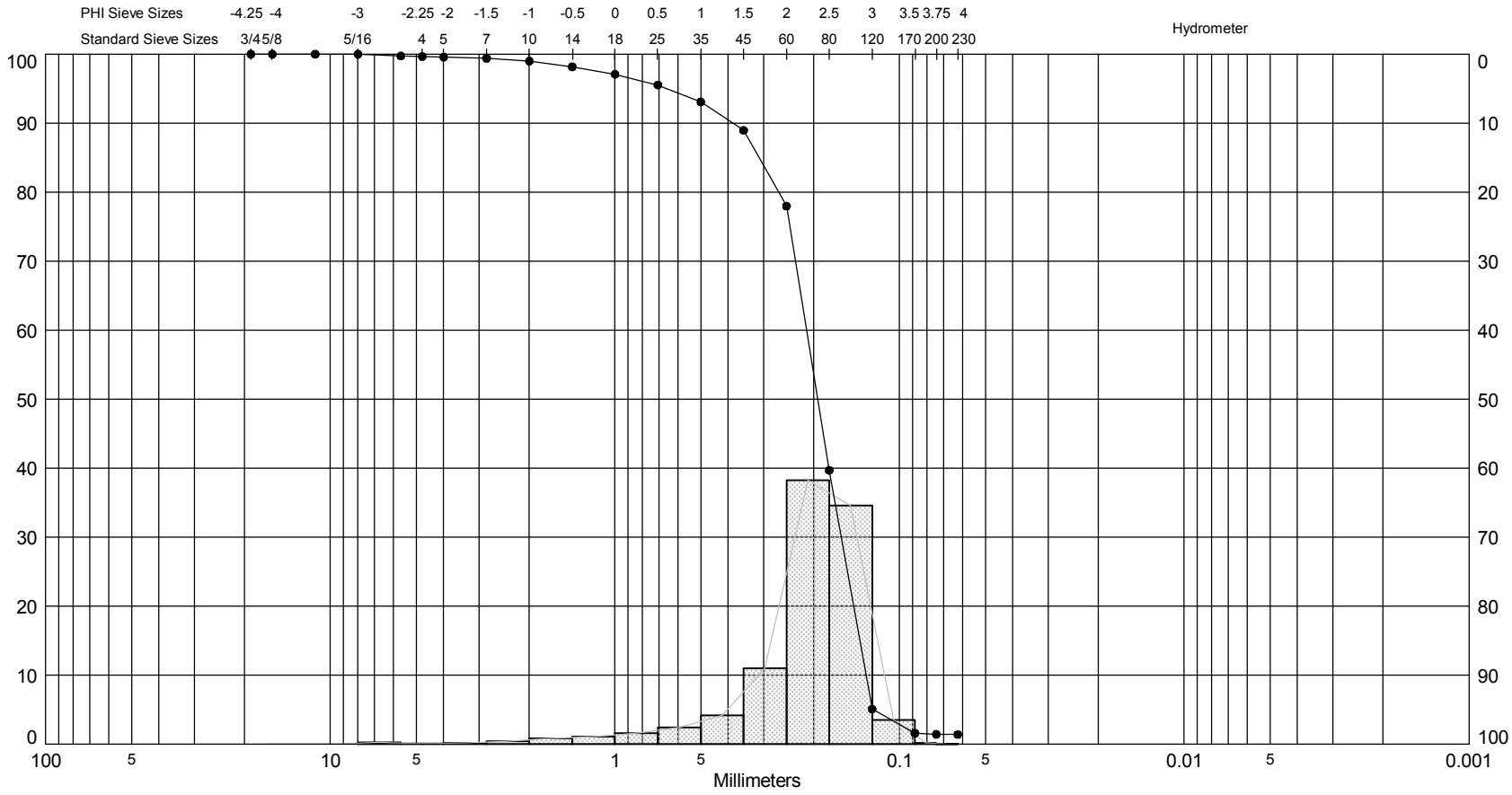
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-24-07
Analyzed By:	PB
Easting (X, ft):	2,387,819
Northing (Y, ft):	197,070
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-6)	—●—	-6.0	SP	#200 - 1.41 #230 - 1.38			2.37	2.2	-2.48	11.72	0.8

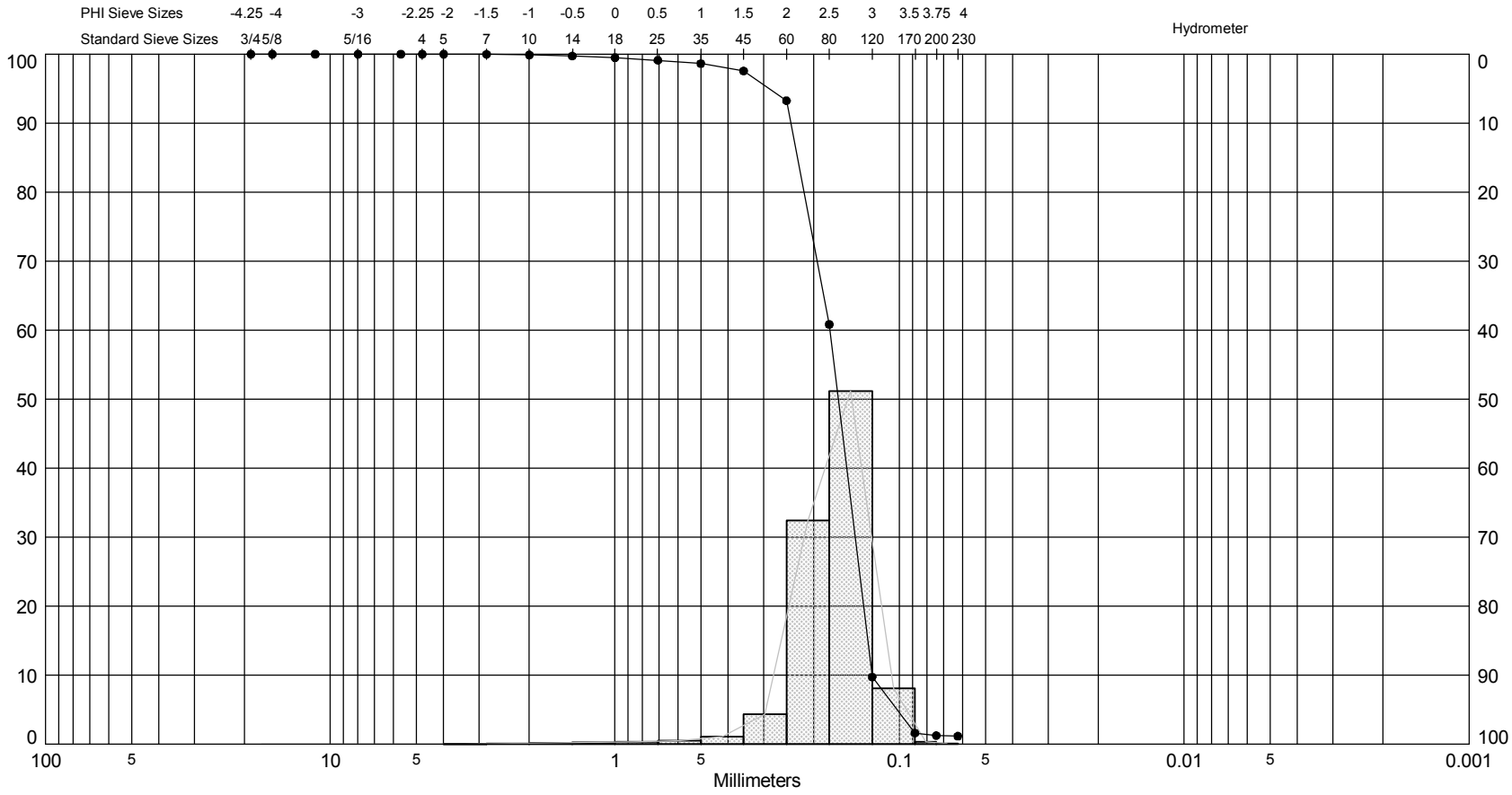
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-26-07
Analyzed By:	TD
Easting (X, ft):	2,387,009
Northing (Y, ft):	198,163
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 (-8.8)	—●—	-8.8	SP	#200 - 1.23 #230 - 1.14			2.61	2.53	-2.33	15.5	0.48

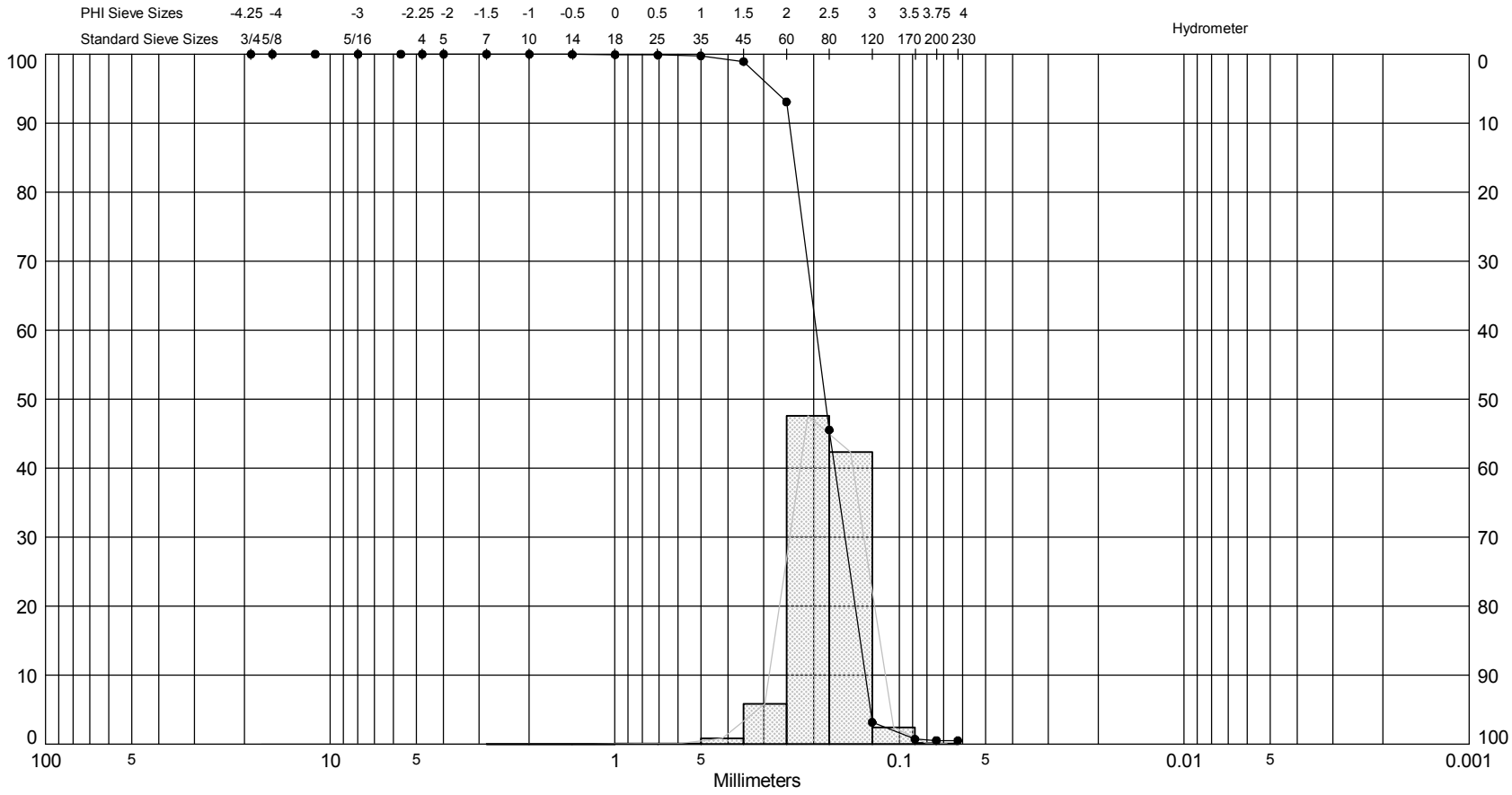
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-26-07
Analyzed By:	TD
Easting (X, ft):	2,387,013
Northing (Y, ft):	198,077
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 Dune	—●—	8.6	SP	#200 - 0.54 #230 - 0.49			2.45	2.45	-0.85	8	0.36

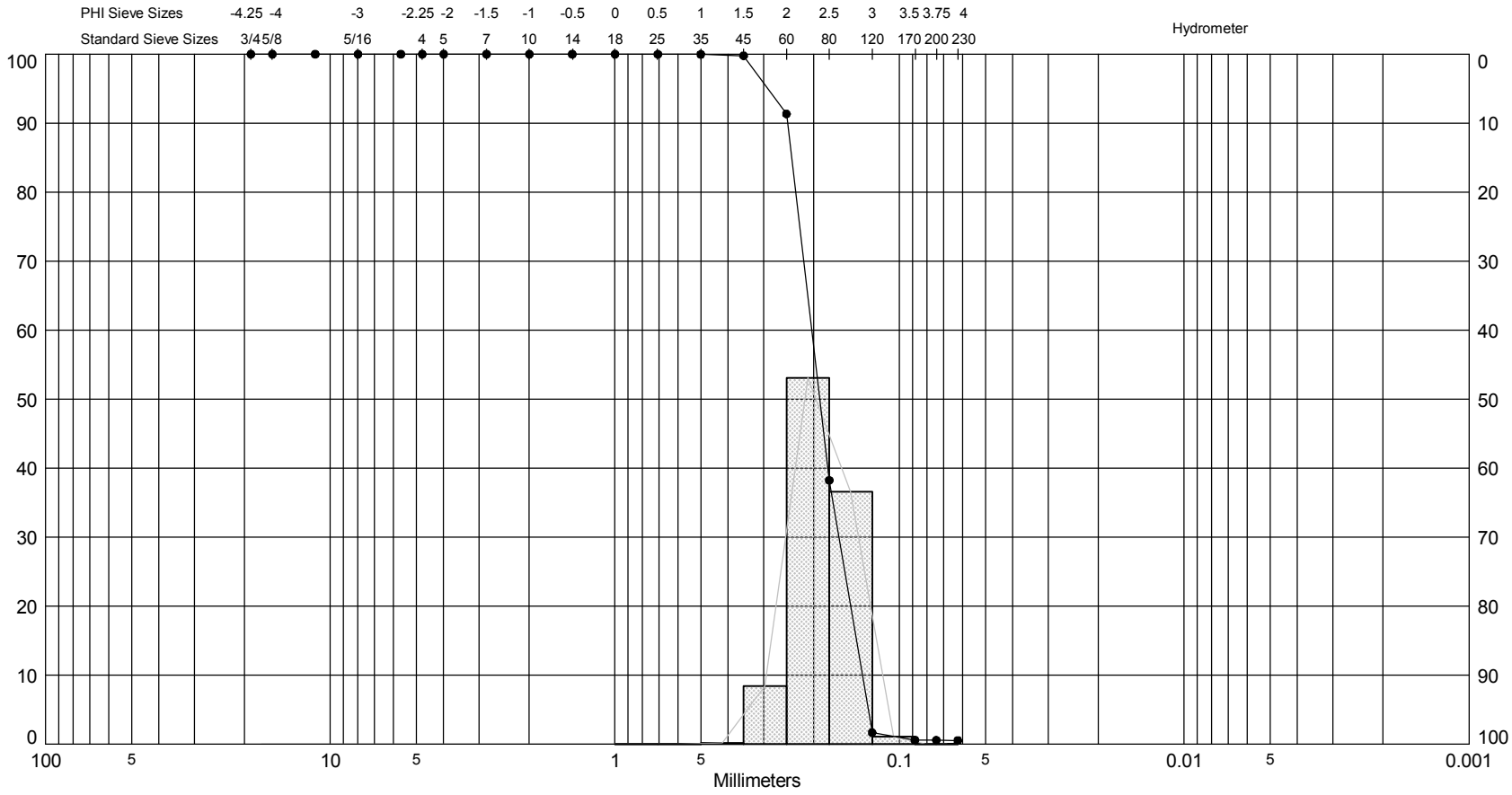
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	TD
Easting (X, ft):	2,386,832
Northing (Y, ft):	198,518
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 MHW	—●—	1.4	SP	#200 - 0.56 #230 - 0.54			2.39	2.4	-0.19	3.19	0.32

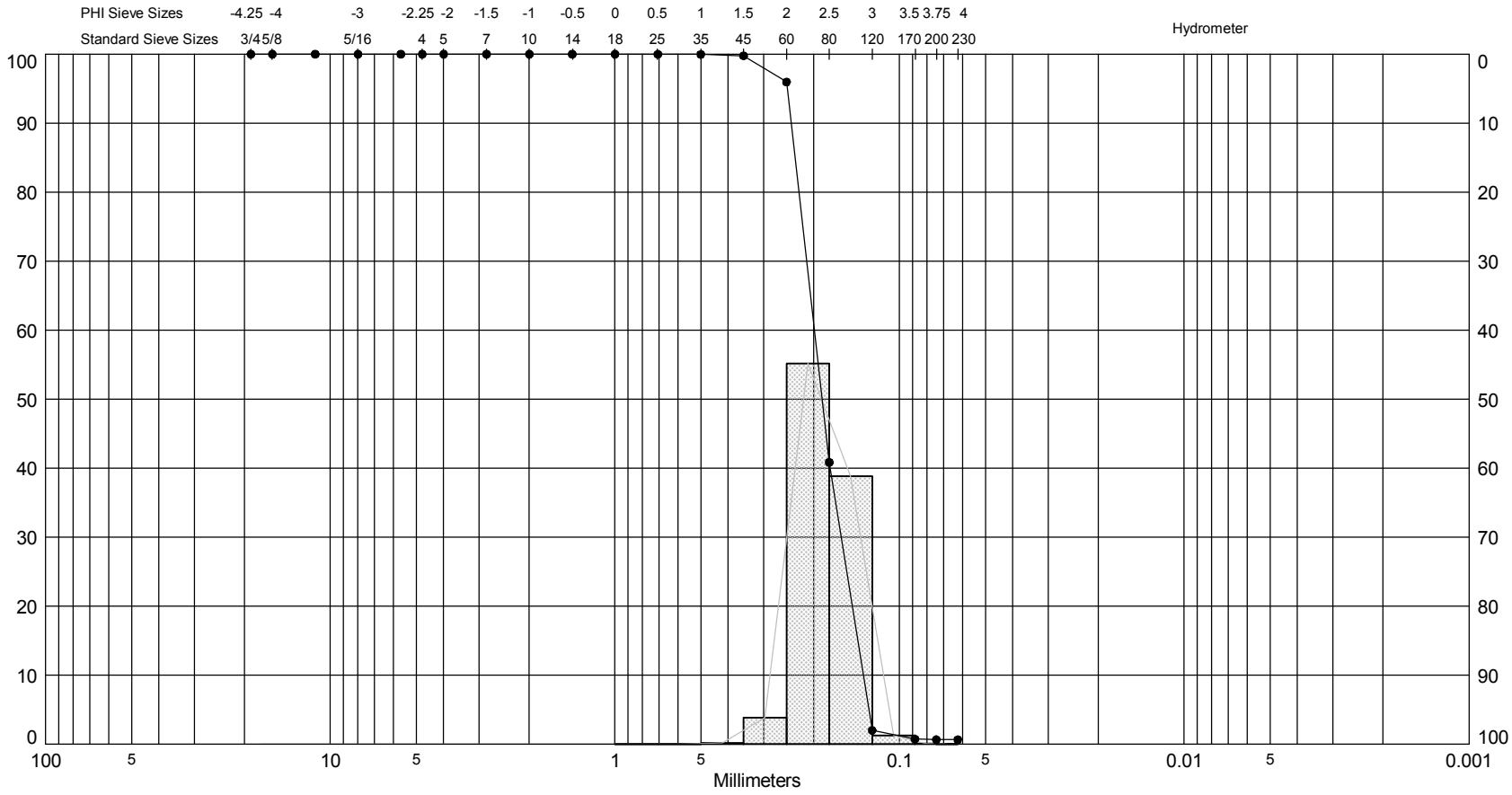
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	TD
Easting (X, ft):	2,386,863
Northing (Y, ft):	198,487
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 Mid Berm	—●—	3.3	SP	#200 - 0.64 #230 - 0.63			2.42	2.44	-0.05	3.61	0.3

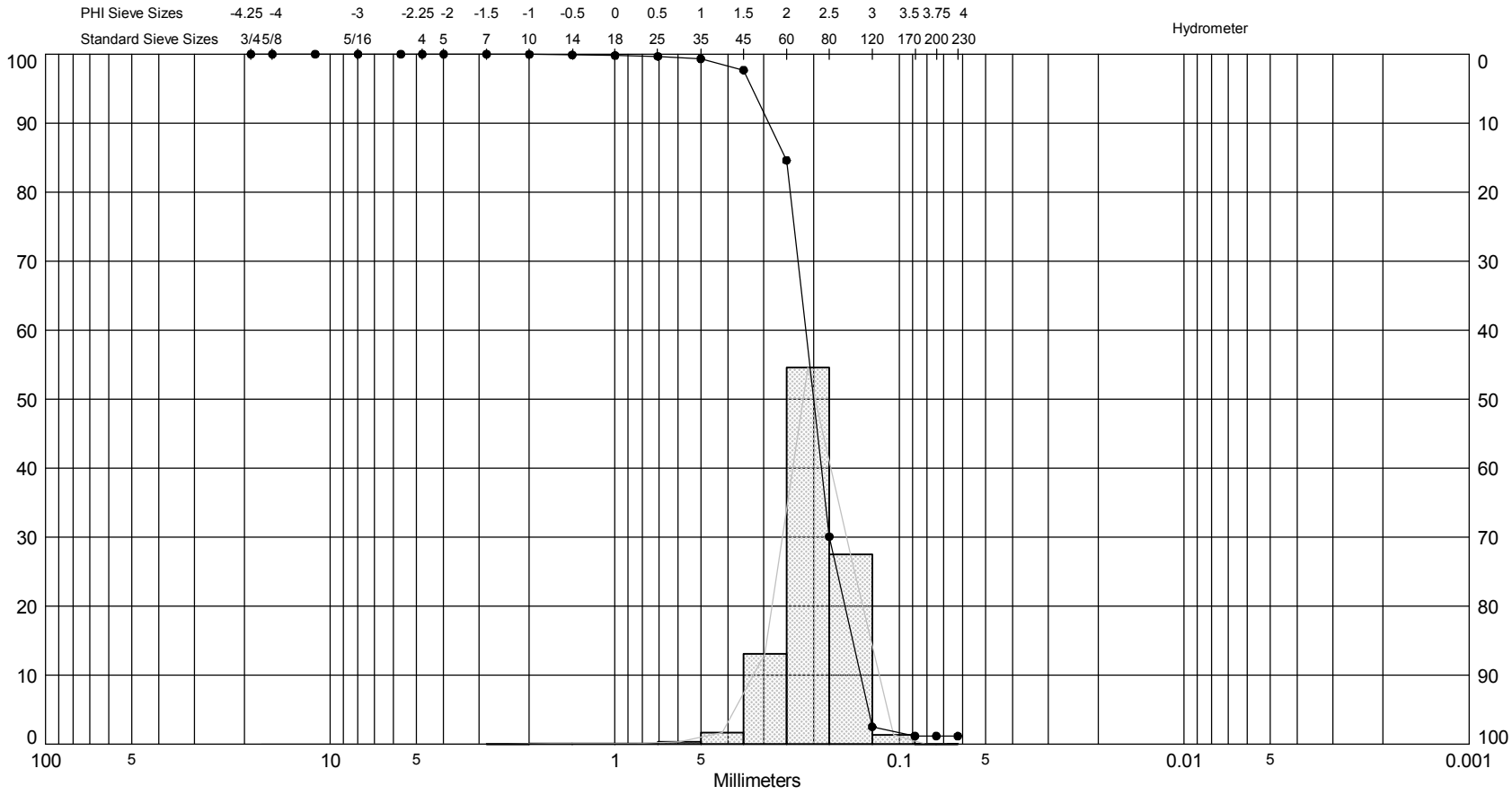
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	TD
Easting (X, ft):	2,386,837
Northing (Y, ft):	198,513
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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FL 33431
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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 MLW	—●—	-2.9	SP	#200 - 1.16 #230 - 1.15			2.32	2.31	-1.34	10.54	0.4

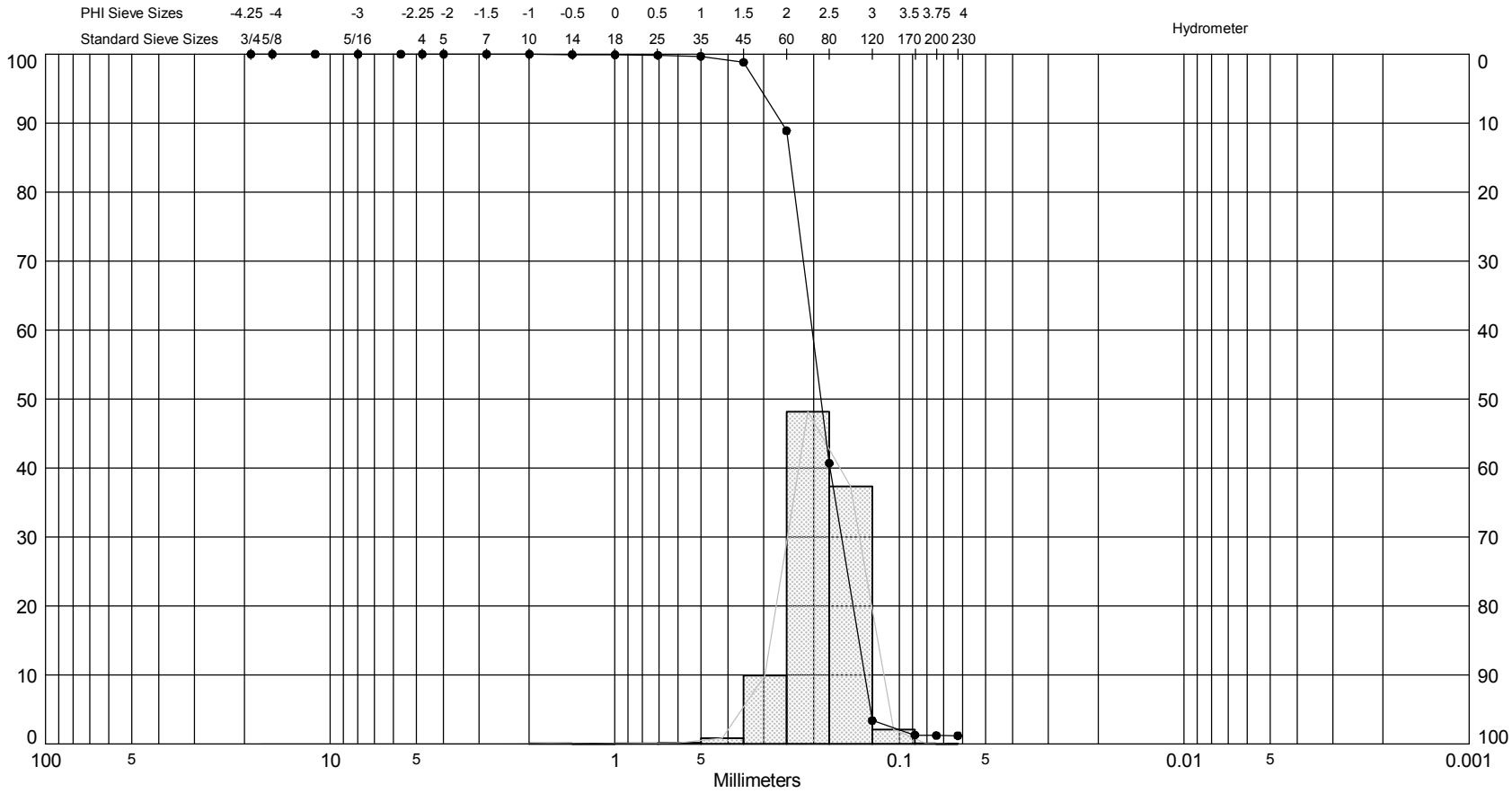
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	10-29-07
Analyzed By:	PB
Easting (X, ft):	2,386,954
Northing (Y, ft):	198,390
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 MTL	—●—	-0.7	SP	#200 - 1.21 #230 - 1.20			2.4	2.4	-0.85	7.04	0.38

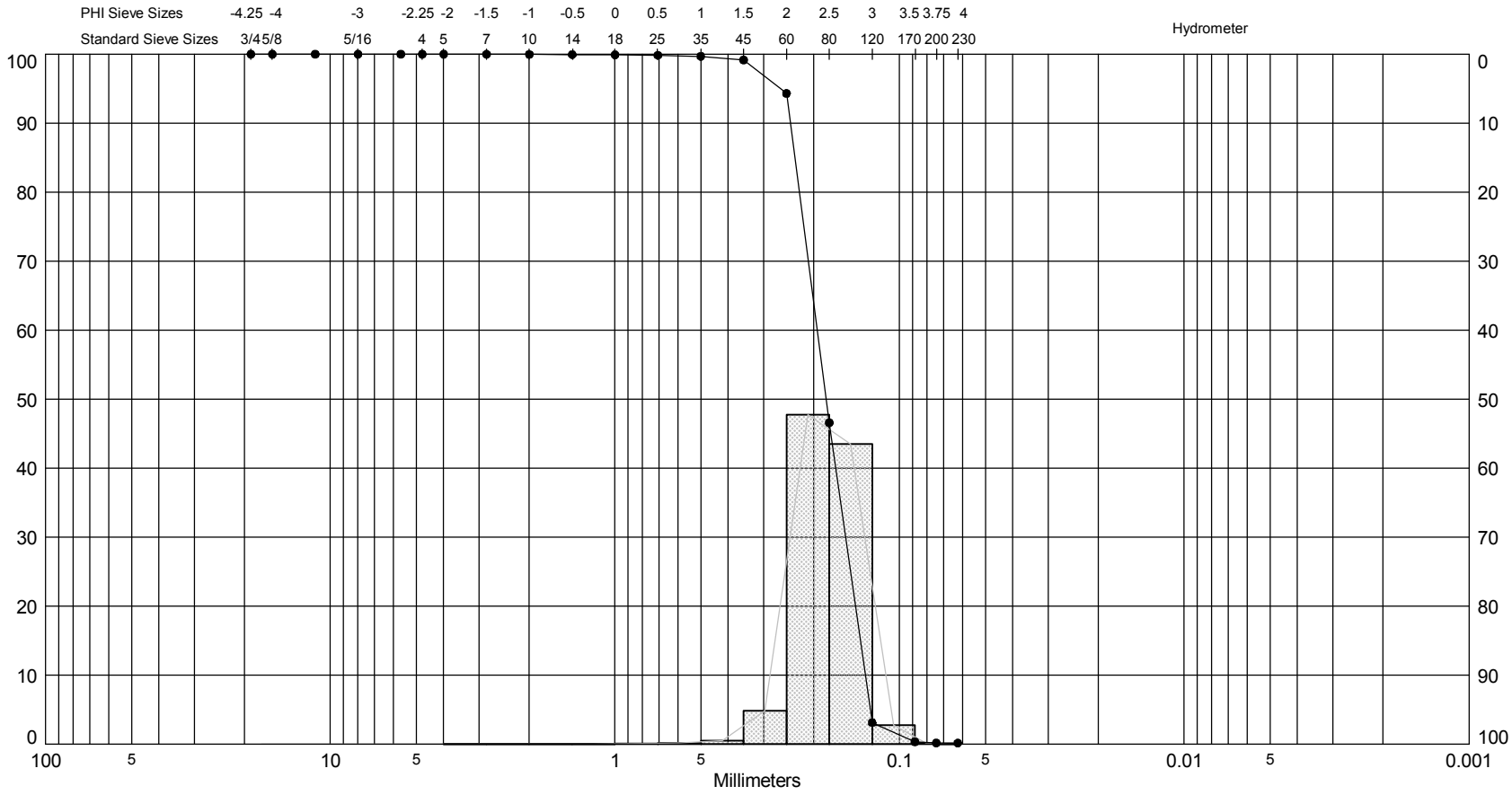
Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	TD
Easting (X, ft):	2,386,888
Northing (Y, ft):	198,459
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 Toe of Dune	—●—	3.9	SP	#200 - 0.16 #230 - 0.15			2.46	2.46	-1.16	11.71	0.36

Comments: Native Beach

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island 2007
Analysis Date:	11-12-07
Analyzed By:	TD
Easting (X, ft):	2,386,833
Northing (Y, ft):	198,517
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 14

2007 Figure Eight Island Native Beach Composite Grab Sample Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: Beach Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.02	0.02	#200 - 1.13 #230 - 1.04			

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	0.03	0.03	0.03	0.03
3.5	-2.50	5.66	0.01	0.01	0.04	0.04
4	-2.25	4.76	0.01	0.01	0.05	0.05
5	-2.00	4.00	0.02	0.02	0.07	0.07
7	-1.50	2.83	0.10	0.10	0.17	0.17
10	-1.00	2.00	0.14	0.14	0.31	0.31
14	-0.50	1.41	0.28	0.28	0.59	0.59
18	0.00	1.00	0.34	0.34	0.93	0.93
25	0.50	0.71	0.43	0.43	1.36	1.36
35	1.00	0.50	0.53	0.53	1.89	1.89
45	1.50	0.35	1.13	1.13	3.02	3.02
60	2.00	0.25	6.54	6.54	9.56	9.56
80	2.50	0.18	40.37	40.37	49.93	49.93
120	3.00	0.13	42.18	42.18	92.11	92.11
170	3.50	0.09	6.39	6.39	98.50	98.50
200	3.75	0.07	0.37	0.37	98.87	98.87
230	4.00	0.06	0.09	0.09	98.96	98.96

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.23	2.90	2.80	2.50	2.19	2.08	1.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	0.55	-2.86	20.3

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: 200+00 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.02	0.02	#200 - 1.10 #230 - 1.04		6	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.02	0.02	0.02	0.02
4	-2.25	4.76	0.01	0.01	0.03	0.03
5	-2.00	4.00	0.00	0.00	0.03	0.03
7	-1.50	2.83	0.03	0.03	0.06	0.06
10	-1.00	2.00	0.06	0.06	0.12	0.12
14	-0.50	1.41	0.11	0.11	0.23	0.23
18	0.00	1.00	0.16	0.16	0.39	0.39
25	0.50	0.71	0.24	0.24	0.63	0.63
35	1.00	0.50	0.39	0.39	1.02	1.02
45	1.50	0.35	0.96	0.96	1.98	1.98
60	2.00	0.25	5.93	5.93	7.91	7.91
80	2.50	0.18	41.28	41.28	49.19	49.19
120	3.00	0.13	43.74	43.74	92.93	92.93
170	3.50	0.09	5.68	5.68	98.61	98.61
200	3.75	0.07	0.29	0.29	98.90	98.90
230	4.00	0.06	0.06	0.06	98.96	98.96

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.18	2.90	2.80	2.51	2.21	2.10	1.75

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.47	0.18	0.46	-2.22	18.07

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: 160+00 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.11	0.02	#200 - 1.20 #230 - 1.13		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	0.00	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	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.08	0.08	0.10	0.10
10	-1.00	2.00	0.10	0.10	0.20	0.20
14	-0.50	1.41	0.23	0.23	0.43	0.43
18	0.00	1.00	0.23	0.23	0.66	0.66
25	0.50	0.71	0.29	0.29	0.95	0.95
35	1.00	0.50	0.41	0.41	1.36	1.36
45	1.50	0.35	1.17	1.17	2.53	2.53
60	2.00	0.25	7.40	7.40	9.93	9.93
80	2.50	0.18	40.94	40.94	50.87	50.87
120	3.00	0.13	41.52	41.52	92.39	92.39
170	3.50	0.09	6.09	6.09	98.48	98.48
200	3.75	0.07	0.32	0.32	98.80	98.80
230	4.00	0.06	0.07	0.07	98.87	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.21	2.90	2.79	2.49	2.18	2.07	1.67

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	0.5	-2.36	16.85

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: 120+00 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.01	0.02	#200 - 1.11 #230 - 1.03		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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.01	0.01	0.01	0.01
4	-2.25	4.76	0.01	0.01	0.02	0.02
5	-2.00	4.00	0.05	0.05	0.07	0.07
7	-1.50	2.83	0.09	0.09	0.16	0.16
10	-1.00	2.00	0.16	0.16	0.32	0.32
14	-0.50	1.41	0.26	0.26	0.58	0.58
18	0.00	1.00	0.32	0.32	0.90	0.90
25	0.50	0.71	0.45	0.45	1.35	1.35
35	1.00	0.50	0.56	0.56	1.91	1.91
45	1.50	0.35	1.20	1.20	3.11	3.11
60	2.00	0.25	6.76	6.76	9.87	9.87
80	2.50	0.18	38.58	38.58	48.45	48.45
120	3.00	0.13	42.99	42.99	91.44	91.44
170	3.50	0.09	7.06	7.06	98.50	98.50
200	3.75	0.07	0.39	0.39	98.89	98.89
230	4.00	0.06	0.08	0.08	98.97	98.97

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.91	2.81	2.52	2.20	2.08	1.64

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	0.55	-2.68	17.97

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: 80+00 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.95	0.01	#200 - 1.09 #230 - 0.96			

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	0.12	0.12	0.12
3.5	-2.50	5.66	0.01	0.01	0.13	0.13
4	-2.25	4.76	0.02	0.02	0.15	0.15
5	-2.00	4.00	0.02	0.02	0.17	0.17
7	-1.50	2.83	0.18	0.18	0.35	0.35
10	-1.00	2.00	0.24	0.24	0.59	0.59
14	-0.50	1.41	0.53	0.53	1.12	1.12
18	0.00	1.00	0.65	0.65	1.77	1.77
25	0.50	0.71	0.76	0.76	2.53	2.53
35	1.00	0.50	0.73	0.73	3.26	3.26
45	1.50	0.35	1.20	1.20	4.46	4.46
60	2.00	0.25	6.08	6.08	10.54	10.54
80	2.50	0.18	40.67	40.67	51.21	51.21
120	3.00	0.13	40.45	40.45	91.66	91.66
170	3.50	0.09	6.76	6.76	98.42	98.42
200	3.75	0.07	0.49	0.49	98.91	98.91
230	4.00	0.06	0.13	0.13	99.04	99.04

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.25	2.91	2.79	2.49	2.18	2.07	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.66	-3.16	19.77

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: Dune Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.29	0.03	#200 - 0.38 #230 - 0.32			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.01	0.01	0.02	0.02
18	0.00	1.00	0.02	0.02	0.04	0.04
25	0.50	0.71	0.03	0.03	0.07	0.07
35	1.00	0.50	0.08	0.08	0.15	0.15
45	1.50	0.35	0.37	0.37	0.52	0.52
60	2.00	0.25	3.96	3.96	4.48	4.48
80	2.50	0.18	46.09	46.09	50.57	50.57
120	3.00	0.13	45.16	45.16	95.73	95.73
170	3.50	0.09	3.64	3.64	99.37	99.37
200	3.75	0.07	0.25	0.25	99.62	99.62
230	4.00	0.06	0.06	0.06	99.68	99.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.87	2.77	2.49	2.22	2.12	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.49	0.18	0.34	-0.52	7.16

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: Toe of Dune Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.24	0.02	#200 - 0.34 #230 - 0.26			

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	0.29	0.29	0.29	0.29
3.5	-2.50	5.66	0.03	0.03	0.32	0.32
4	-2.25	4.76	0.00	0.00	0.32	0.32
5	-2.00	4.00	0.04	0.04	0.36	0.36
7	-1.50	2.83	0.05	0.05	0.41	0.41
10	-1.00	2.00	0.10	0.10	0.51	0.51
14	-0.50	1.41	0.23	0.23	0.74	0.74
18	0.00	1.00	0.21	0.21	0.95	0.95
25	0.50	0.71	0.27	0.27	1.22	1.22
35	1.00	0.50	0.20	0.20	1.42	1.42
45	1.50	0.35	0.60	0.60	2.02	2.02
60	2.00	0.25	6.77	6.77	8.79	8.79
80	2.50	0.18	48.68	48.68	57.47	57.47
120	3.00	0.13	37.31	37.31	94.78	94.78
170	3.50	0.09	4.41	4.41	99.19	99.19
200	3.75	0.07	0.47	0.47	99.66	99.66
230	4.00	0.06	0.08	0.08	99.74	99.74

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.02	2.86	2.73	2.42	2.17	2.07	1.72

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.57	-4.47	40.33

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: Mid-Berm Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.46	0.05	#200 - 0.55 #230 - 0.51			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.04	0.04	0.04	0.04
7	-1.50	2.83	0.05	0.05	0.09	0.09
10	-1.00	2.00	0.05	0.05	0.14	0.14
14	-0.50	1.41	0.07	0.07	0.21	0.21
18	0.00	1.00	0.05	0.05	0.26	0.26
25	0.50	0.71	0.11	0.11	0.37	0.37
35	1.00	0.50	0.20	0.20	0.57	0.57
45	1.50	0.35	0.74	0.74	1.31	1.31
60	2.00	0.25	6.34	6.34	7.65	7.65
80	2.50	0.18	53.01	53.01	60.66	60.66
120	3.00	0.13	35.35	35.35	96.01	96.01
170	3.50	0.09	3.14	3.14	99.15	99.15
200	3.75	0.07	0.30	0.30	99.45	99.45
230	4.00	0.06	0.04	0.04	99.49	99.49

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.83	2.70	2.40	2.16	2.08	1.79

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.41	-2.14	22.05

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: 2.0 / 3.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.43	0.01	#200 - 0.46 #230 - 0.44			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.00	0.00	0.01	0.01
14	-0.50	1.41	0.00	0.00	0.01	0.01
18	0.00	1.00	0.00	0.00	0.01	0.01
25	0.50	0.71	0.01	0.01	0.02	0.02
35	1.00	0.50	0.01	0.01	0.03	0.03
45	1.50	0.35	0.10	0.10	0.13	0.13
60	2.00	0.25	4.12	4.12	4.25	4.25
80	2.50	0.18	55.57	55.57	59.82	59.82
120	3.00	0.13	37.79	37.79	97.61	97.61
170	3.50	0.09	1.79	1.79	99.40	99.40
200	3.75	0.07	0.14	0.14	99.54	99.54
230	4.00	0.06	0.02	0.02	99.56	99.56

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.82	2.70	2.41	2.19	2.11	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.44	0.18	0.31	-0.12	6.84

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: MHW Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.41	0.03	#200 - 0.46 #230 - 0.44			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.01	0.01	0.02	0.02
35	1.00	0.50	0.02	0.02	0.04	0.04
45	1.50	0.35	0.08	0.08	0.12	0.12
60	2.00	0.25	6.09	6.09	6.21	6.21
80	2.50	0.18	55.45	55.45	61.66	61.66
120	3.00	0.13	36.65	36.65	98.31	98.31
170	3.50	0.09	1.18	1.18	99.49	99.49
200	3.75	0.07	0.05	0.05	99.54	99.54
230	4.00	0.06	0.02	0.02	99.56	99.56

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.80	2.68	2.39	2.17	2.09	1.90

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.31	-0.11	3.82

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: MTL Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.20	0.02	#200 - 1.23 #230 - 1.22			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.02	0.02	0.02	0.02
5	-2.00	4.00	0.00	0.00	0.02	0.02
7	-1.50	2.83	0.00	0.00	0.02	0.02
10	-1.00	2.00	0.02	0.02	0.04	0.04
14	-0.50	1.41	0.04	0.04	0.08	0.08
18	0.00	1.00	0.06	0.06	0.14	0.14
25	0.50	0.71	0.11	0.11	0.25	0.25
35	1.00	0.50	0.23	0.23	0.48	0.48
45	1.50	0.35	1.18	1.18	1.66	1.66
60	2.00	0.25	12.71	12.71	14.37	14.37
80	2.50	0.18	48.72	48.72	63.09	63.09
120	3.00	0.13	34.09	34.09	97.18	97.18
170	3.50	0.09	1.54	1.54	98.72	98.72
200	3.75	0.07	0.05	0.05	98.77	98.77
230	4.00	0.06	0.01	0.01	98.78	98.78

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.81	2.67	2.37	2.11	2.02	1.63

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	0.4	-1.3	11.36

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: MLW Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.07	0.01	#200 - 1.09 #230 - 1.08			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.02	0.02	0.02	0.02
5	-2.00	4.00	0.02	0.02	0.04	0.04
7	-1.50	2.83	0.13	0.13	0.17	0.17
10	-1.00	2.00	0.16	0.16	0.33	0.33
14	-0.50	1.41	0.24	0.24	0.57	0.57
18	0.00	1.00	0.27	0.27	0.84	0.84
25	0.50	0.71	0.36	0.36	1.20	1.20
35	1.00	0.50	0.59	0.59	1.79	1.79
45	1.50	0.35	2.00	2.00	3.79	3.79
60	2.00	0.25	12.87	12.87	16.66	16.66
80	2.50	0.18	51.48	51.48	68.14	68.14
120	3.00	0.13	29.44	29.44	97.58	97.58
170	3.50	0.09	1.29	1.29	98.87	98.87
200	3.75	0.07	0.04	0.04	98.91	98.91
230	4.00	0.06	0.01	0.01	98.92	98.92

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.77	2.62	2.32	2.08	1.97	1.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.28	0.21	0.51	-2.77	19.03

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -6.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.29	0.01	#200 - 1.31 #230 - 1.30			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.07	0.07	0.07	0.07
4	-2.25	4.76	0.08	0.08	0.15	0.15
5	-2.00	4.00	0.07	0.07	0.22	0.22
7	-1.50	2.83	0.38	0.38	0.60	0.60
10	-1.00	2.00	0.62	0.62	1.22	1.22
14	-0.50	1.41	1.30	1.30	2.52	2.52
18	0.00	1.00	1.80	1.80	4.32	4.32
25	0.50	0.71	2.23	2.23	6.55	6.55
35	1.00	0.50	2.59	2.59	9.14	9.14
45	1.50	0.35	5.04	5.04	14.18	14.18
60	2.00	0.25	15.37	15.37	29.55	29.55
80	2.50	0.18	38.17	38.17	67.72	67.72
120	3.00	0.13	28.41	28.41	96.13	96.13
170	3.50	0.09	2.48	2.48	98.61	98.61
200	3.75	0.07	0.08	0.08	98.69	98.69
230	4.00	0.06	0.01	0.01	98.70	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.79	2.63	2.27	1.85	1.56	0.15

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.07	0.24	0.85	-2.05	8.23

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -8.8 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.39	0.01	#200 - 1.49 #230 - 1.40			

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
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.03	0.03	0.03
7	-1.50	2.83	0.22	0.22	0.25	0.25
10	-1.00	2.00	0.24	0.24	0.49	0.49
14	-0.50	1.41	0.57	0.57	1.06	1.06
18	0.00	1.00	0.53	0.53	1.59	1.59
25	0.50	0.71	0.58	0.58	2.17	2.17
35	1.00	0.50	0.62	0.62	2.79	2.79
45	1.50	0.35	1.21	1.21	4.00	4.00
60	2.00	0.25	4.97	4.97	8.97	8.97
80	2.50	0.18	29.11	29.11	38.08	38.08
120	3.00	0.13	49.44	49.44	87.52	87.52
170	3.50	0.09	10.55	10.55	98.07	98.07
200	3.75	0.07	0.44	0.44	98.51	98.51
230	4.00	0.06	0.09	0.09	98.60	98.60

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.96	2.87	2.62	2.28	2.12	1.60

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.51	0.18	0.63	-2.95	16.69

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -11.6 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.43	0.01	#200 - 1.56 #230 - 1.44			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.05	0.05	0.05
7	-1.50	2.83	0.08	0.08	0.13	0.13
10	-1.00	2.00	0.20	0.20	0.33	0.33
14	-0.50	1.41	0.43	0.43	0.76	0.76
18	0.00	1.00	0.48	0.48	1.24	1.24
25	0.50	0.71	0.62	0.62	1.86	1.86
35	1.00	0.50	0.56	0.56	2.42	2.42
45	1.50	0.35	1.12	1.12	3.54	3.54
60	2.00	0.25	4.87	4.87	8.41	8.41
80	2.50	0.18	30.77	30.77	39.18	39.18
120	3.00	0.13	50.10	50.10	89.28	89.28
170	3.50	0.09	8.75	8.75	98.03	98.03
200	3.75	0.07	0.41	0.41	98.44	98.44
230	4.00	0.06	0.12	0.12	98.56	98.56

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.33	2.95	2.86	2.61	2.27	2.12	1.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.51	0.18	0.58	-2.88	17.05

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -14.4 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.53	0.00	#200 - 1.65 #230 - 1.53			

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	0.10	0.10	0.10	0.10
3.5	-2.50	5.66	0.00	0.00	0.10	0.10
4	-2.25	4.76	0.00	0.00	0.10	0.10
5	-2.00	4.00	0.09	0.09	0.19	0.19
7	-1.50	2.83	0.06	0.06	0.25	0.25
10	-1.00	2.00	0.09	0.09	0.34	0.34
14	-0.50	1.41	0.33	0.33	0.67	0.67
18	0.00	1.00	0.28	0.28	0.95	0.95
25	0.50	0.71	0.33	0.33	1.28	1.28
35	1.00	0.50	0.32	0.32	1.60	1.60
45	1.50	0.35	0.53	0.53	2.13	2.13
60	2.00	0.25	2.18	2.18	4.31	4.31
80	2.50	0.18	27.46	27.46	31.77	31.77
120	3.00	0.13	54.77	54.77	86.54	86.54
170	3.50	0.09	11.31	11.31	97.85	97.85
200	3.75	0.07	0.50	0.50	98.35	98.35
230	4.00	0.06	0.12	0.12	98.47	98.47

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.37	2.98	2.89	2.67	2.38	2.21	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.59	0.17	0.55	-3.97	31.97

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -17.2 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.69	0.02	#200 - 1.95 #230 - 1.71			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.11	0.11	0.13	0.13
10	-1.00	2.00	0.16	0.16	0.29	0.29
14	-0.50	1.41	0.18	0.18	0.47	0.47
18	0.00	1.00	0.25	0.25	0.72	0.72
25	0.50	0.71	0.33	0.33	1.05	1.05
35	1.00	0.50	0.41	0.41	1.46	1.46
45	1.50	0.35	0.58	0.58	2.04	2.04
60	2.00	0.25	1.74	1.74	3.78	3.78
80	2.50	0.18	19.53	19.53	23.31	23.31
120	3.00	0.13	56.23	56.23	79.54	79.54
170	3.50	0.09	17.49	17.49	97.03	97.03
200	3.75	0.07	1.02	1.02	98.05	98.05
230	4.00	0.06	0.24	0.24	98.29	98.29

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.13	2.96	2.74	2.52	2.31	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	0.52	-3.15	22.59

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Native Beach

Sample Name: -20.0 Comp.

Analysis Date:

Analyzed By:

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):

USCS:	Munsell:	Comments:
SP		COMPOSITE

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.85	0.01	#200 - 2.14 #230 - 1.86			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.03	0.03	0.03	0.03
4	-2.25	4.76	0.00	0.00	0.03	0.03
5	-2.00	4.00	0.00	0.00	0.03	0.03
7	-1.50	2.83	0.10	0.10	0.13	0.13
10	-1.00	2.00	0.16	0.16	0.29	0.29
14	-0.50	1.41	0.34	0.34	0.63	0.63
18	0.00	1.00	0.38	0.38	1.01	1.01
25	0.50	0.71	0.67	0.67	1.68	1.68
35	1.00	0.50	0.97	0.97	2.65	2.65
45	1.50	0.35	1.18	1.18	3.83	3.83
60	2.00	0.25	3.02	3.02	6.85	6.85
80	2.50	0.18	20.76	20.76	27.61	27.61
120	3.00	0.13	53.56	53.56	81.17	81.17
170	3.50	0.09	15.59	15.59	96.76	96.76
200	3.75	0.07	1.10	1.10	97.86	97.86
230	4.00	0.06	0.28	0.28	98.14	98.14

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

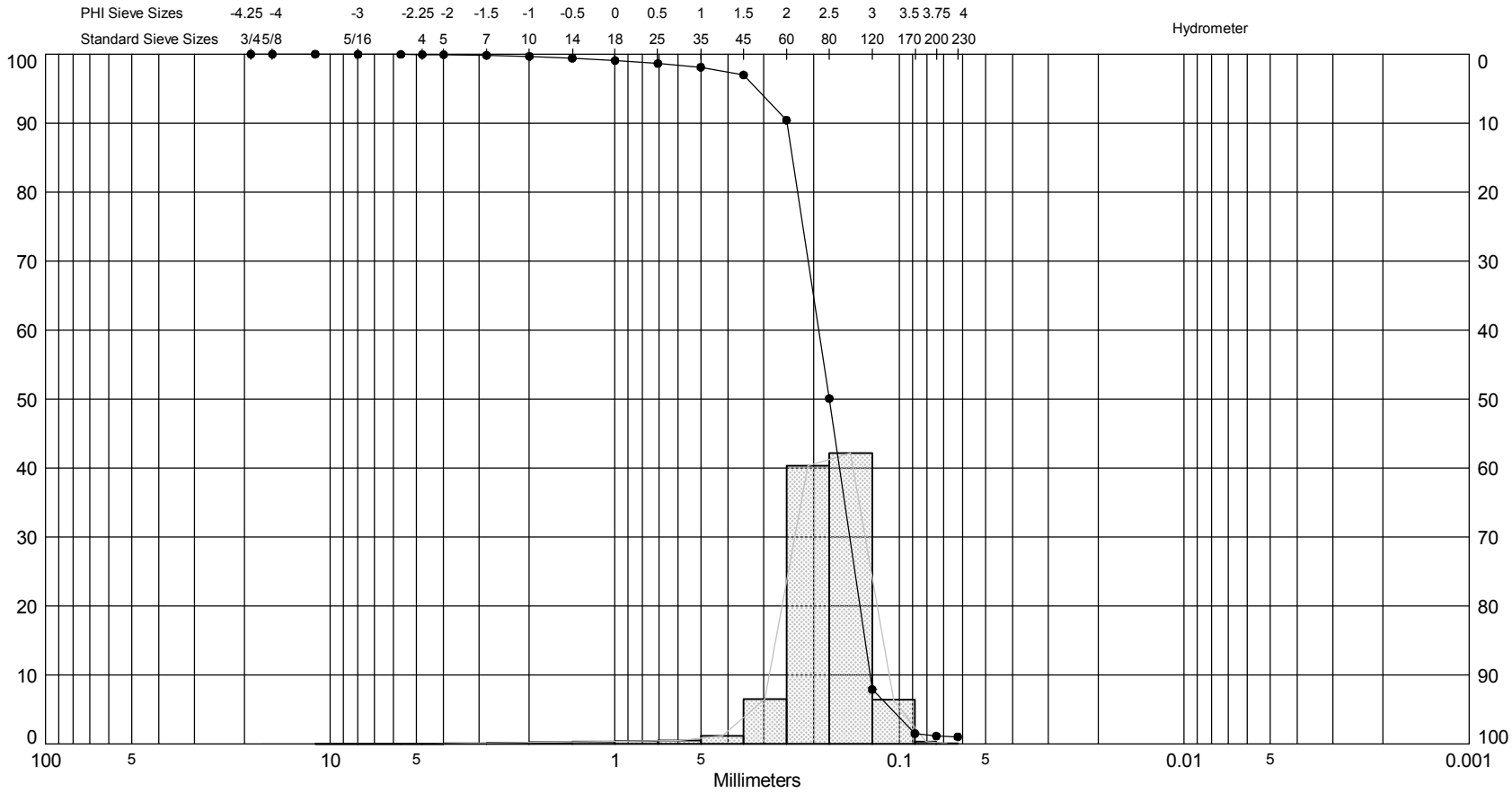
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.09	2.94	2.71	2.44	2.22	1.69

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.61	0.16	0.6	-2.8	16.47

GRANULARMETRIC REPORT FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 15

2007 Figure Eight Island Native Beach Composite Grab Sample Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Beach Comp.	—●—		SP	#200 - 1.13 #230 - 1.04			2.5	2.44	-2.86	20.3	0.55

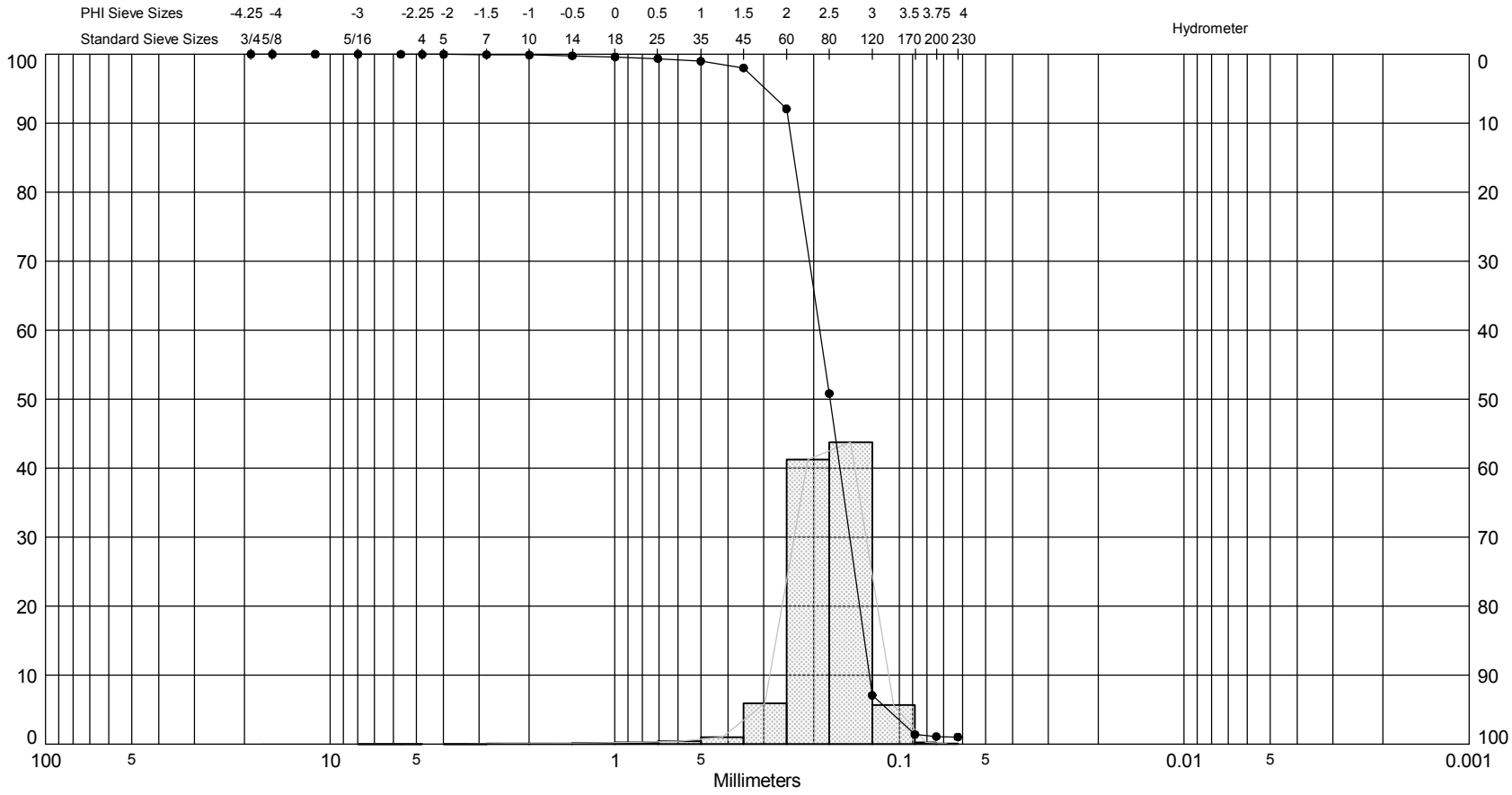
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
200+00 Comp.	—●—		SP	#200 - 1.10 #230 - 1.04		6	2.51	2.47	-2.22	18.07	0.46

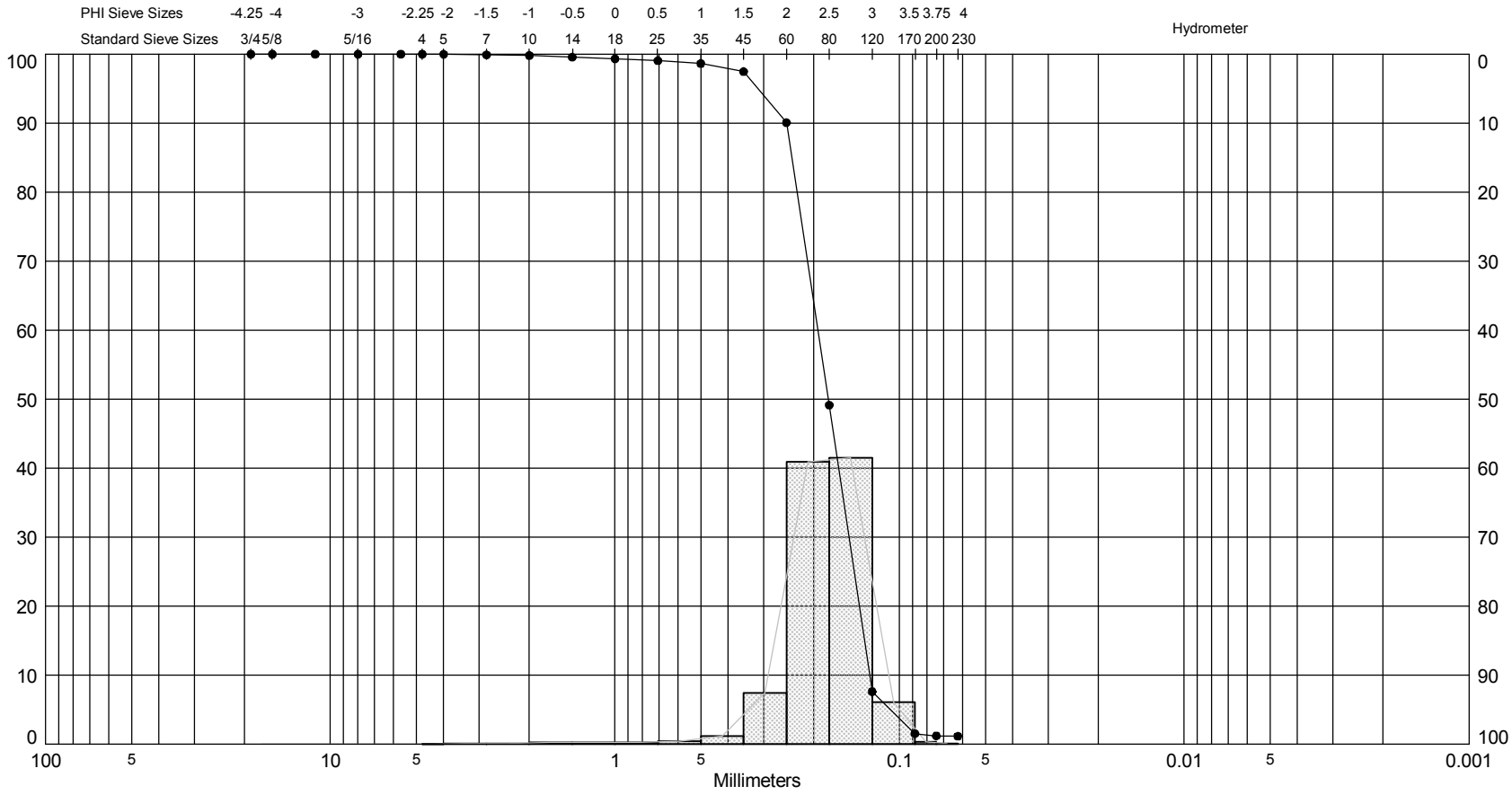
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
160+00 Comp.	—●—		SP	#200 - 1.20 #230 - 1.13		5	2.49	2.45	-2.36	16.85	0.5

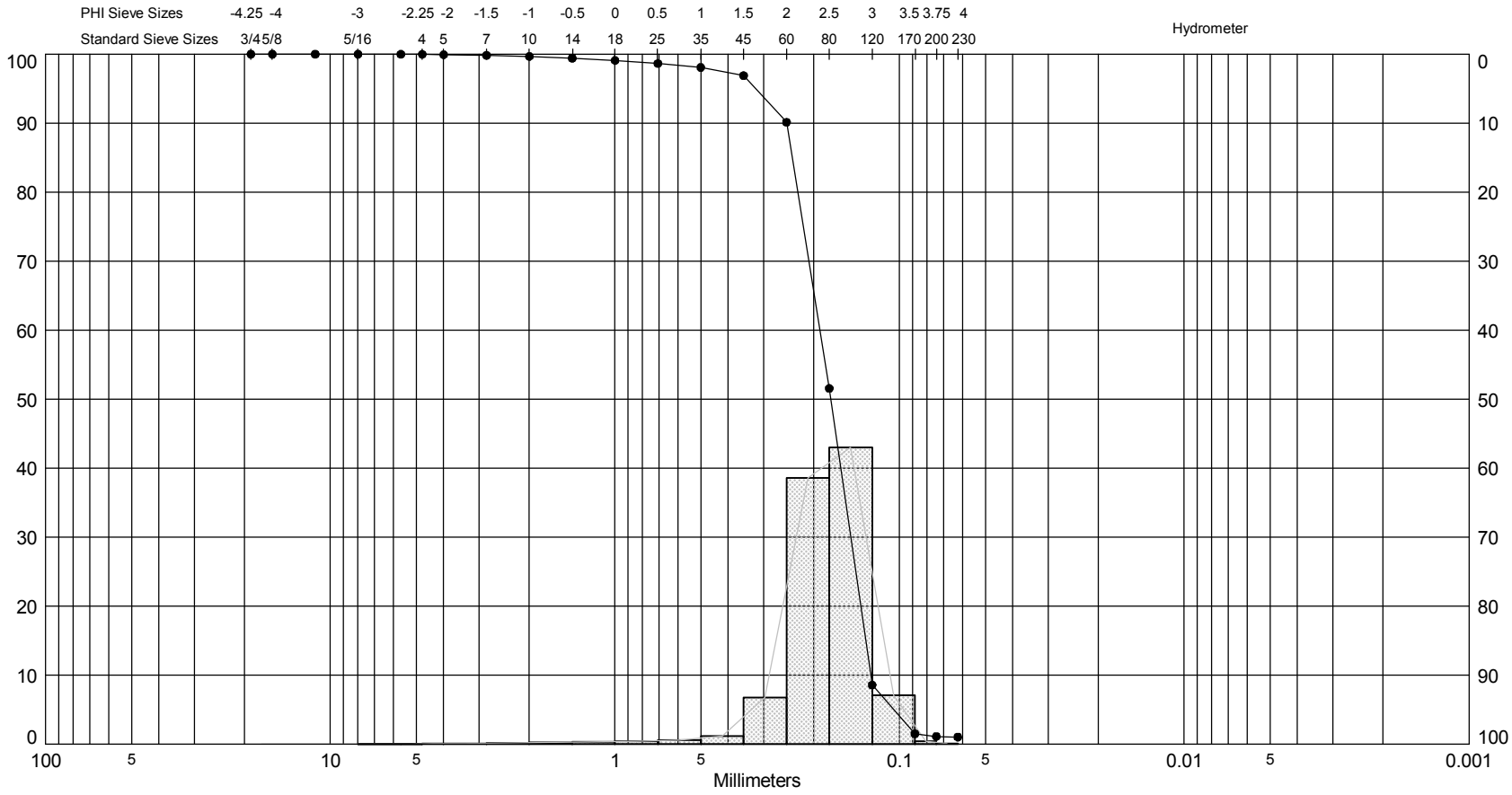
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
120+00 Comp.	—●—		SP	#200 - 1.11 #230 - 1.03		5	2.52	2.45	-2.68	17.97	0.55

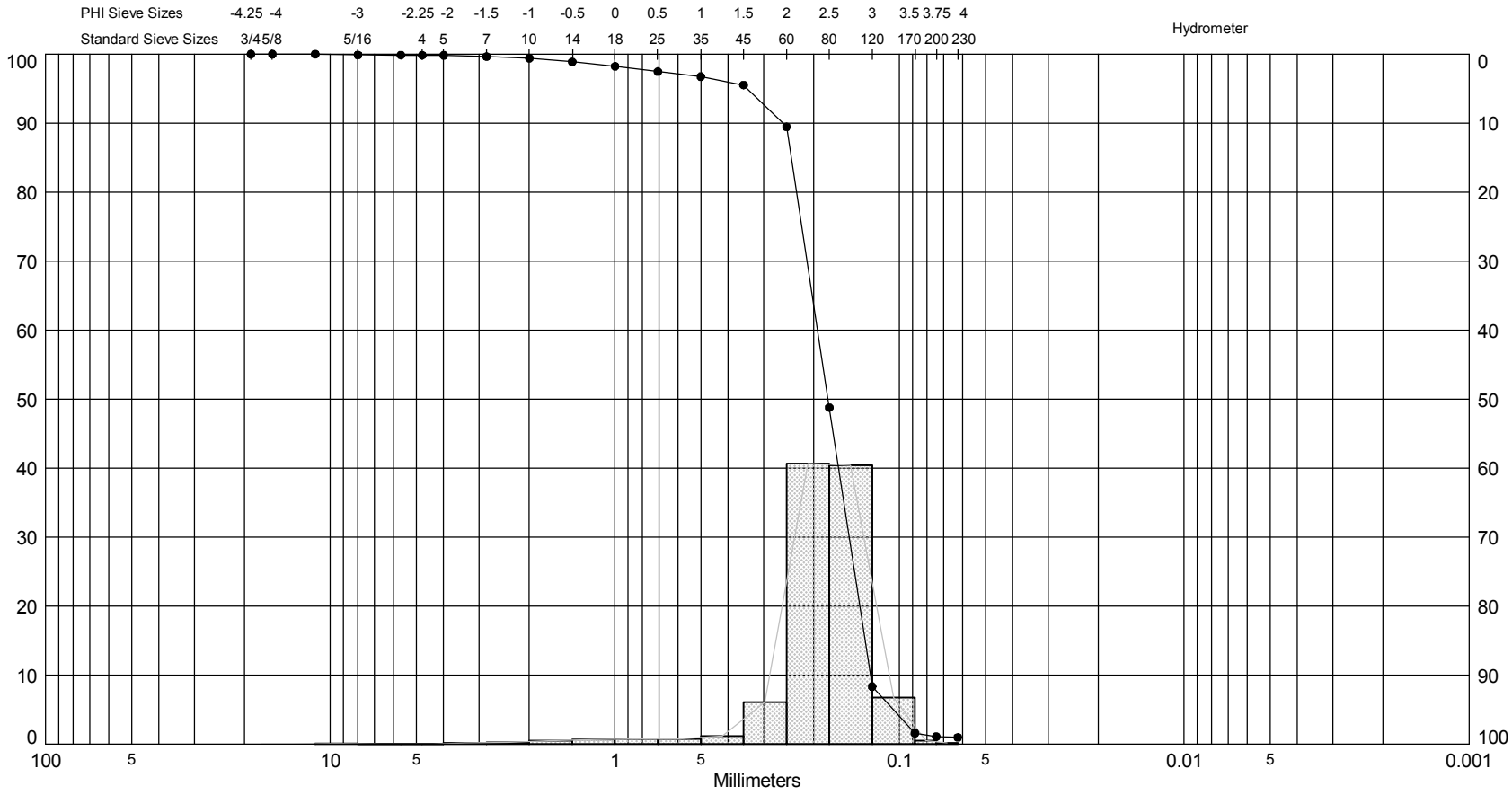
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
80+00 Comp.	—●—		SP	#200 - 1.09 #230 - 0.96			2.49	2.4	-3.16	19.77	0.66

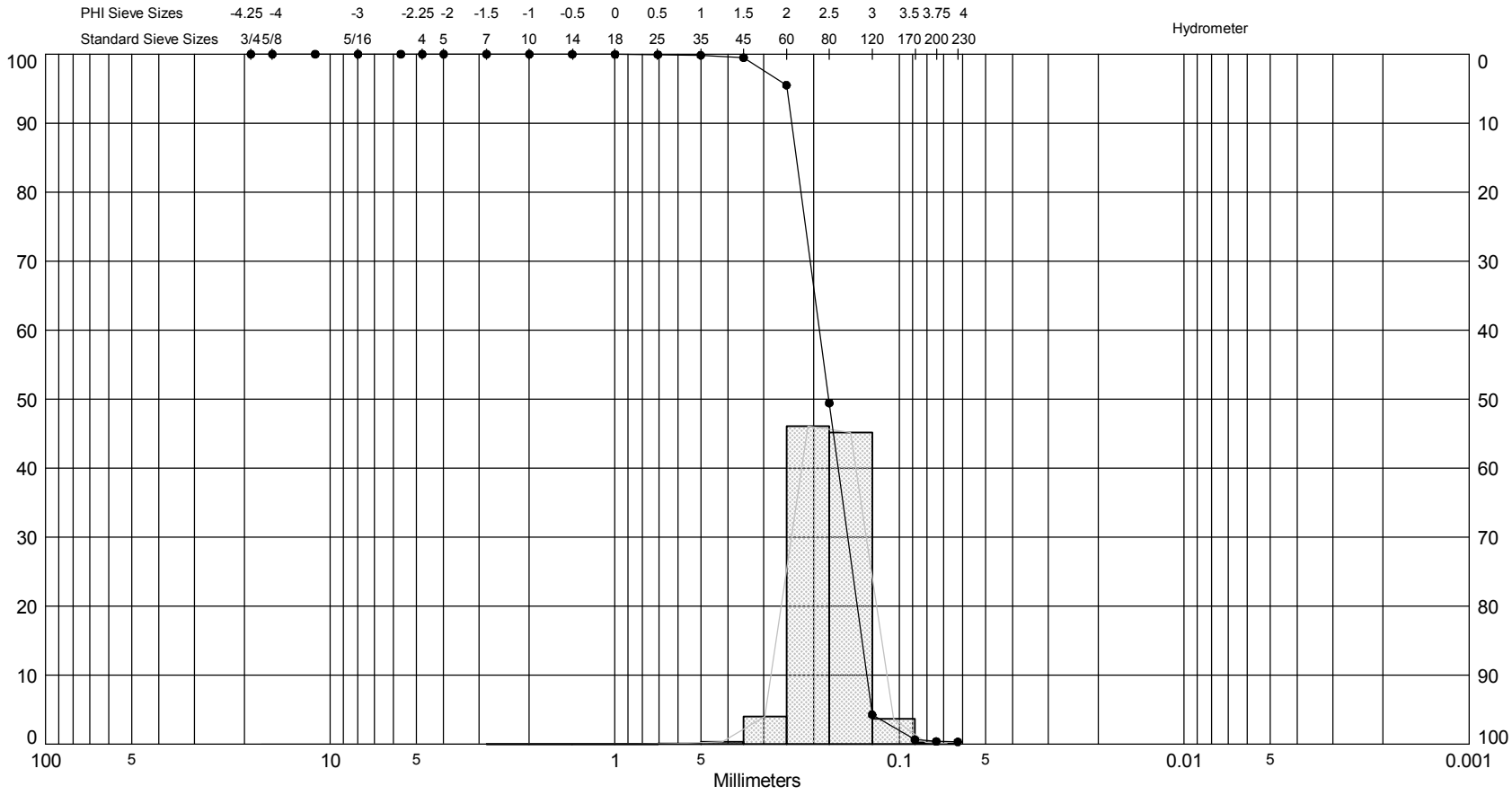
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Dune Comp.	—●—		SP	#200 - 0.38 #230 - 0.32			2.49	2.49	-0.52	7.16	0.34

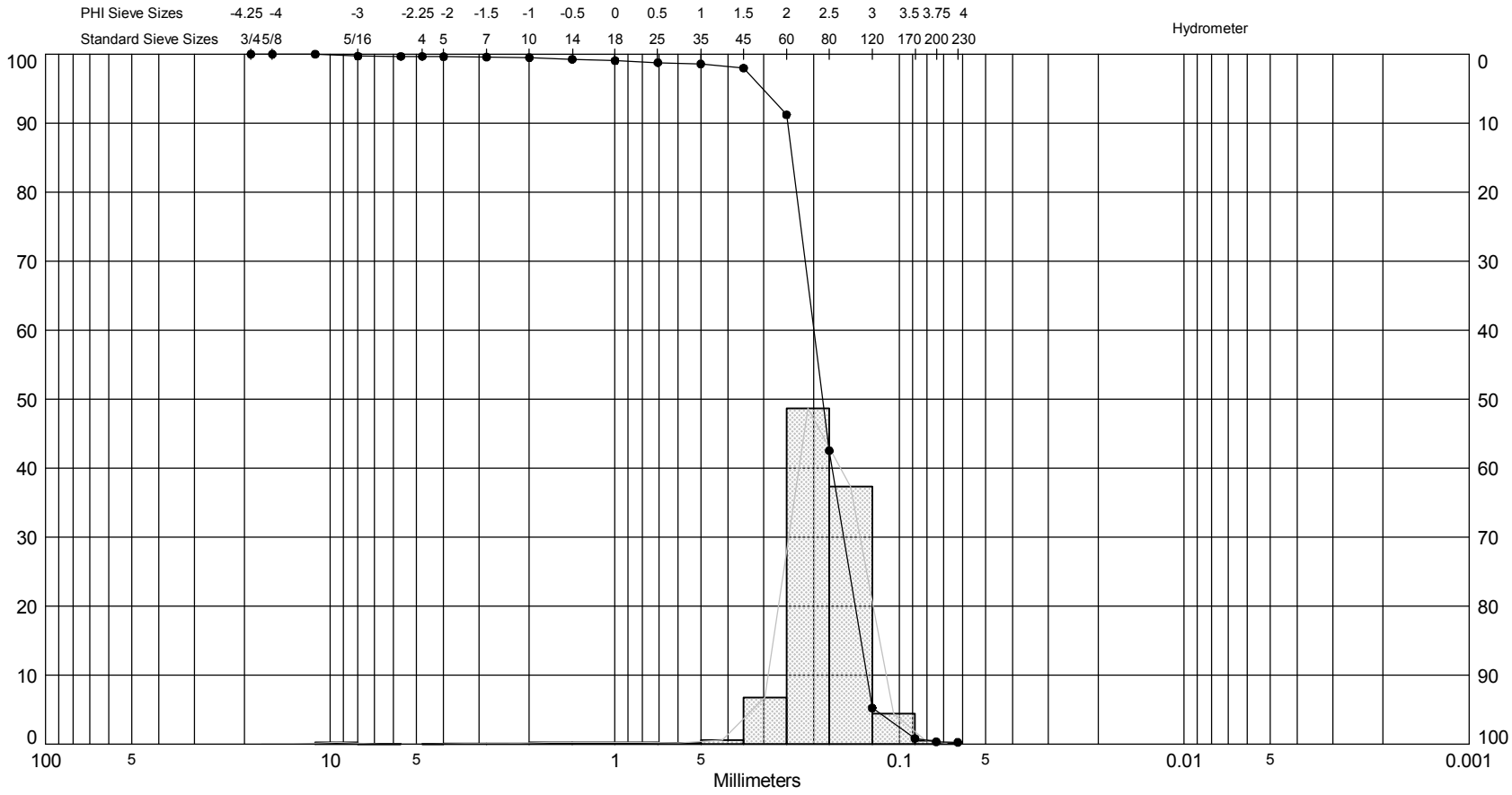
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Toe of Dune Comp.	—●—		SP	#200 - 0.34 #230 - 0.26			2.42	2.4	-4.47	40.33	0.57

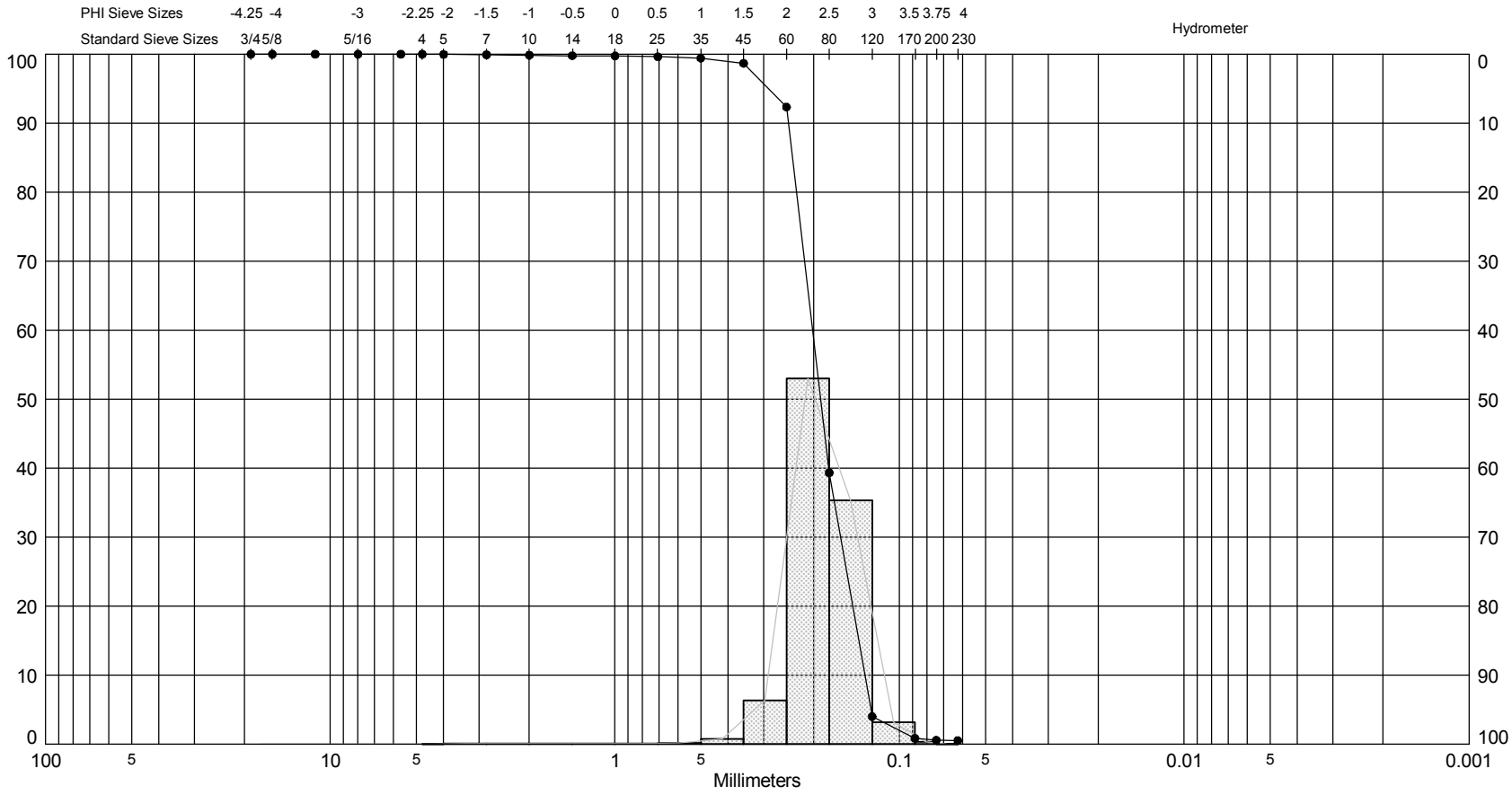
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Mid-Berm Comp.	—●—		SP	#200 - 0.55 #230 - 0.51			2.4	2.41	-2.14	22.05	0.41

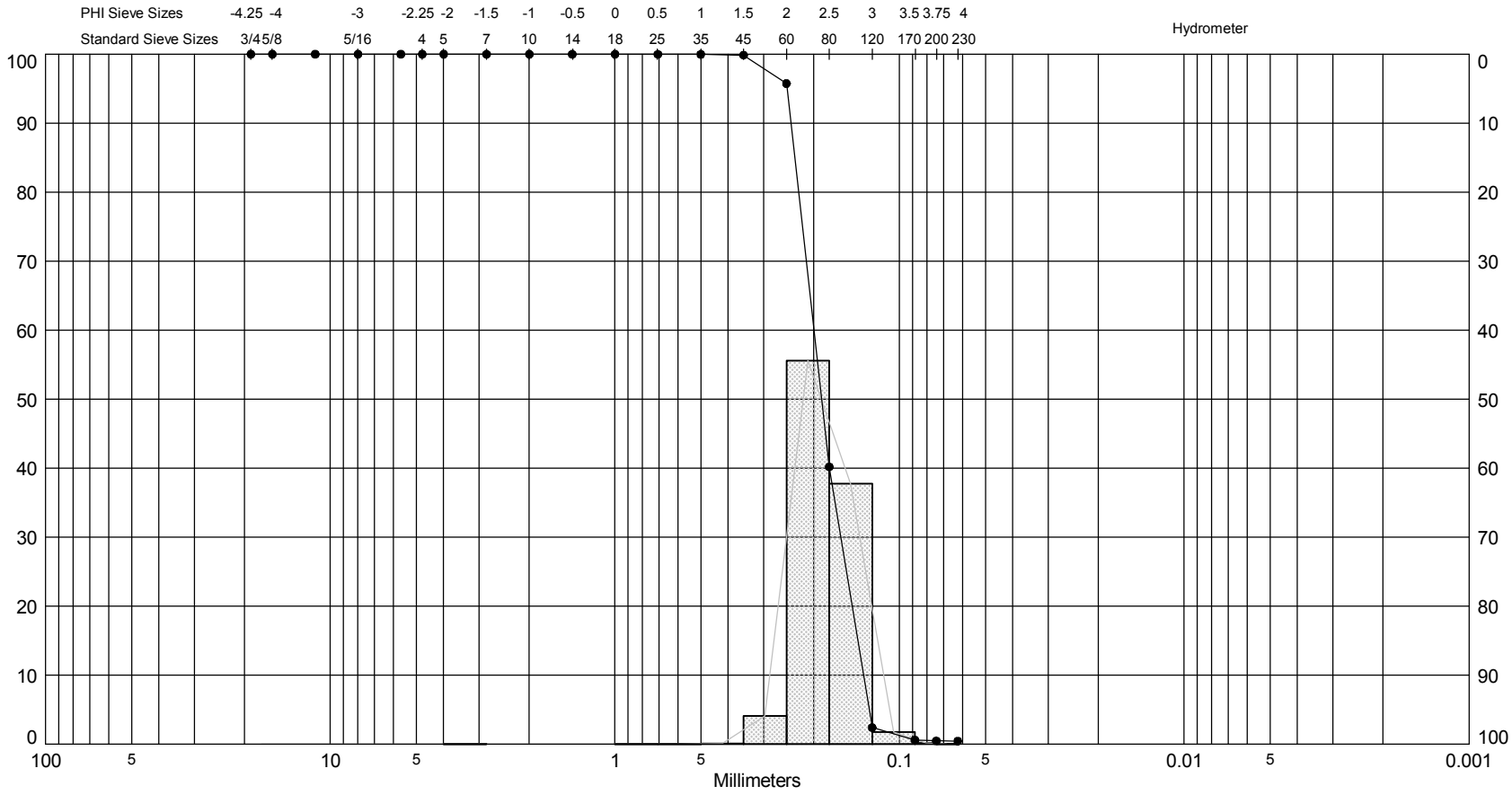
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
2.0 / 3.0 Comp.	—●—		SP	#200 - 0.46 #230 - 0.44			2.41	2.44	-0.12	6.84	0.31

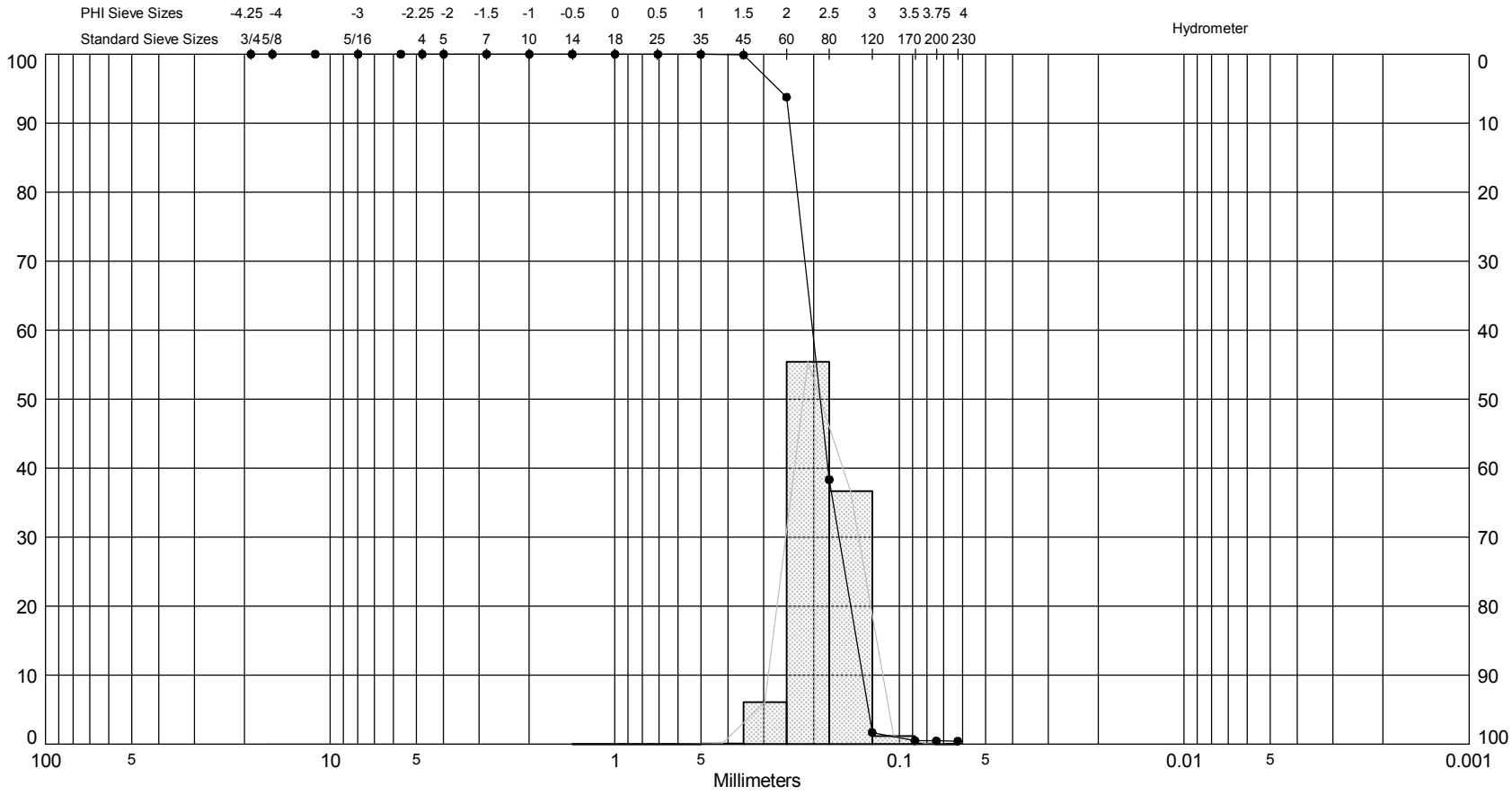
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MHW Comp.	—●—		SP	#200 - 0.46 #230 - 0.44			2.39	2.41	-0.11	3.82	0.31

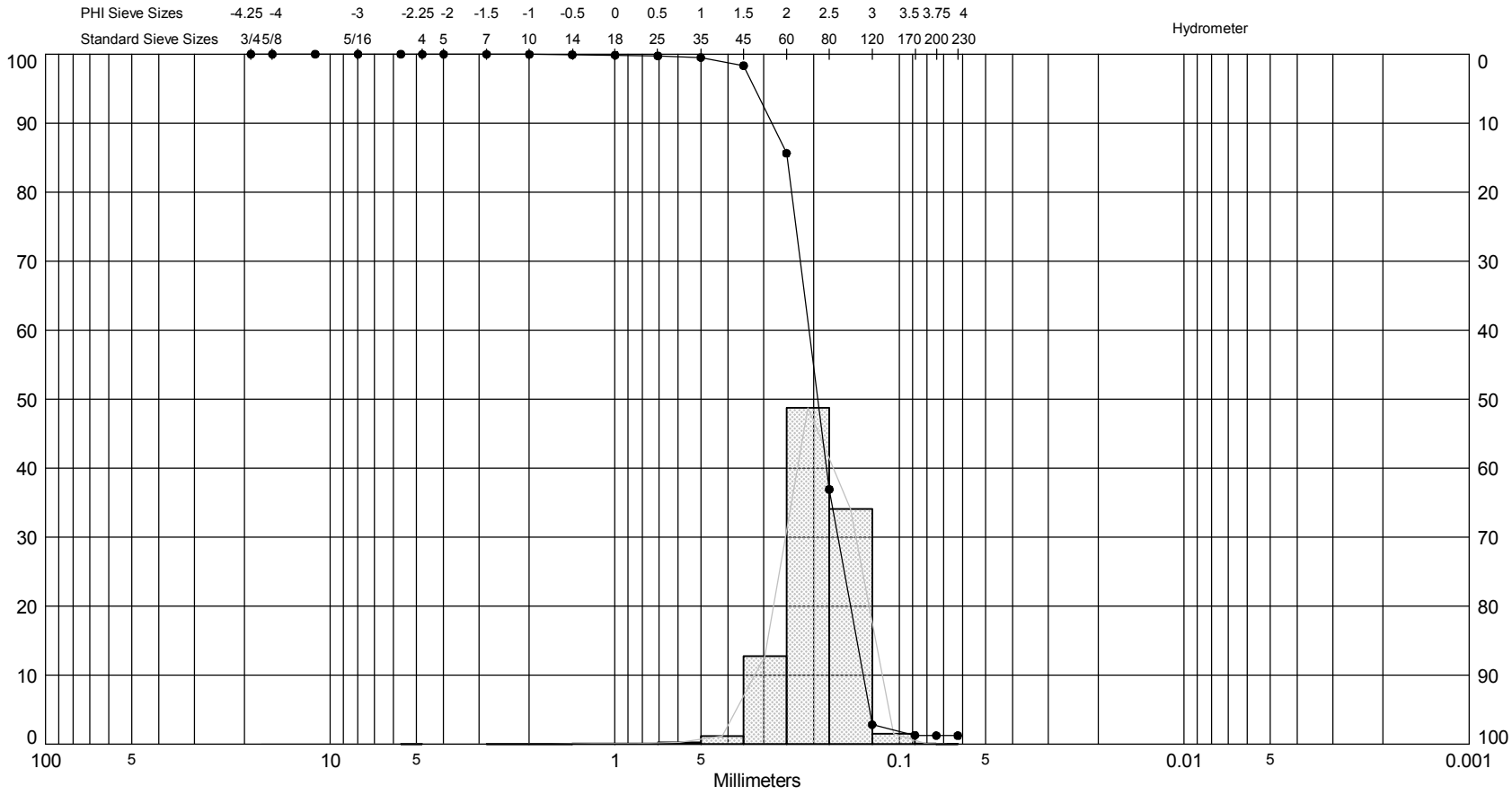
Comments: COMPOSITE

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

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MTL Comp.	—●—		SP	#200 - 1.23 #230 - 1.22			2.37	2.35	-1.3	11.36	0.4

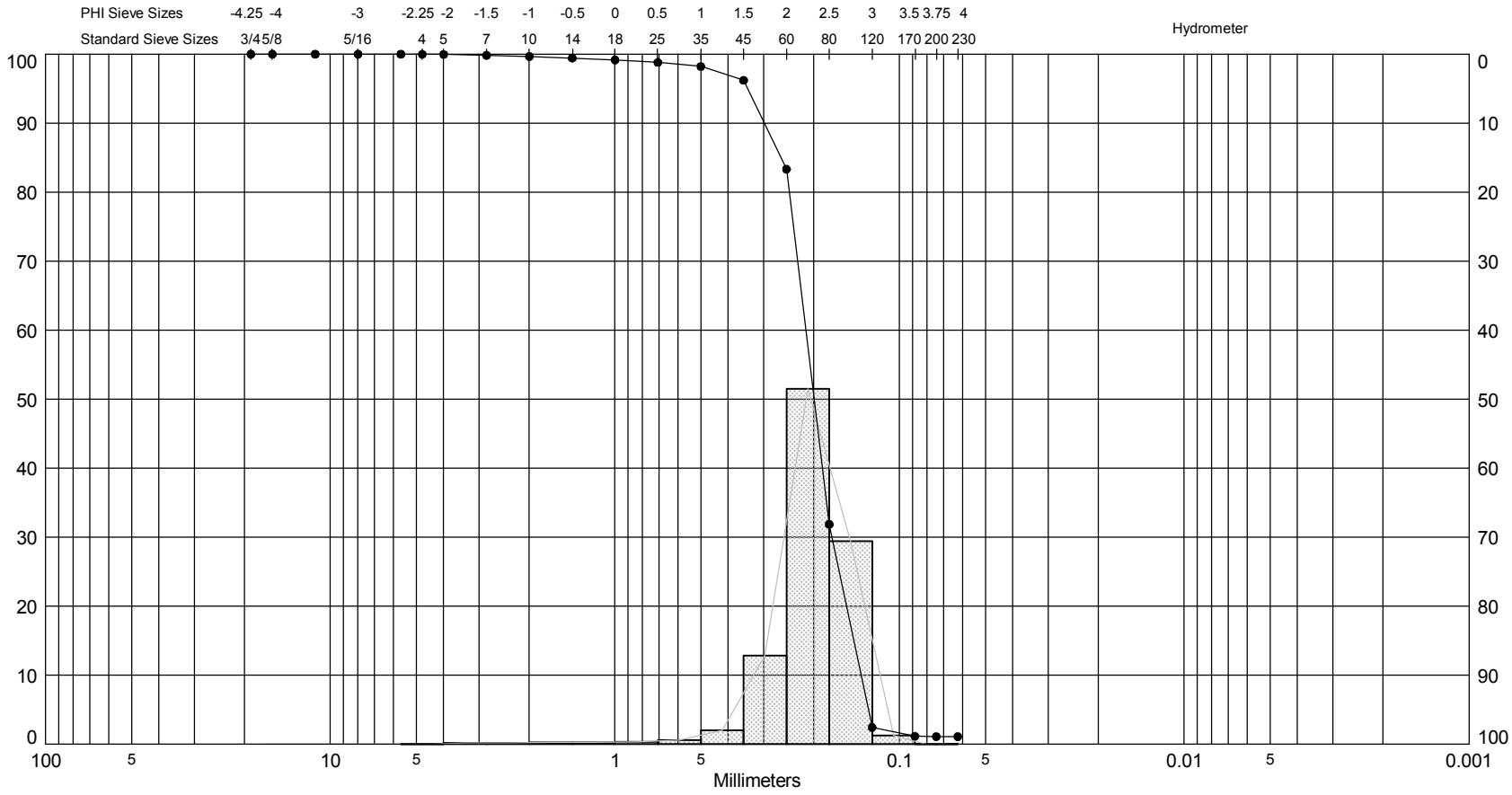
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
MLW Comp.	—●—		SP	#200 - 1.09 #230 - 1.08			2.32	2.28	-2.77	19.03	0.51

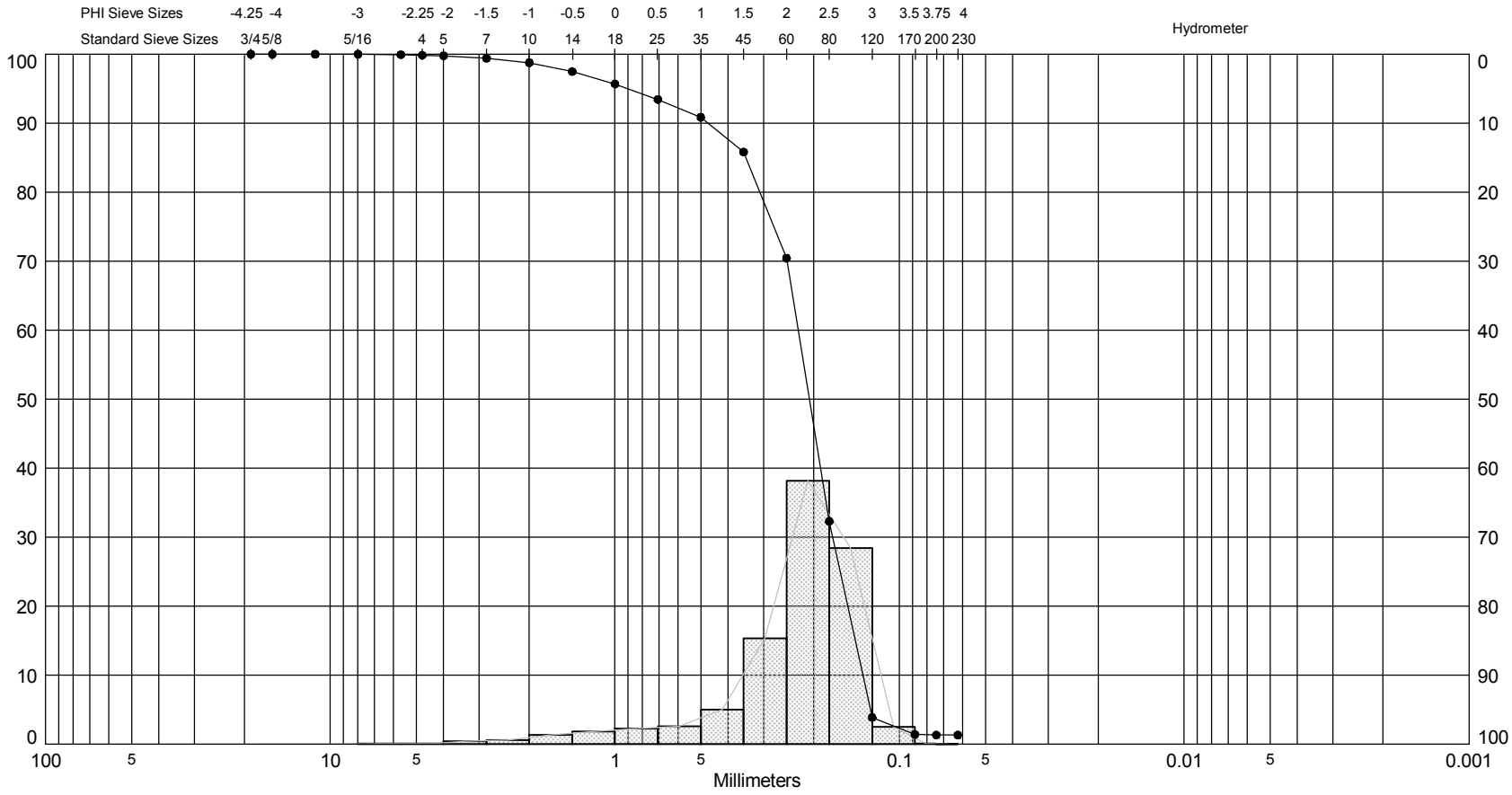
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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FL 33431
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fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-6.0 Comp.	—●—		SP	#200 - 1.31 #230 - 1.30			2.27	2.07	-2.05	8.23	0.85

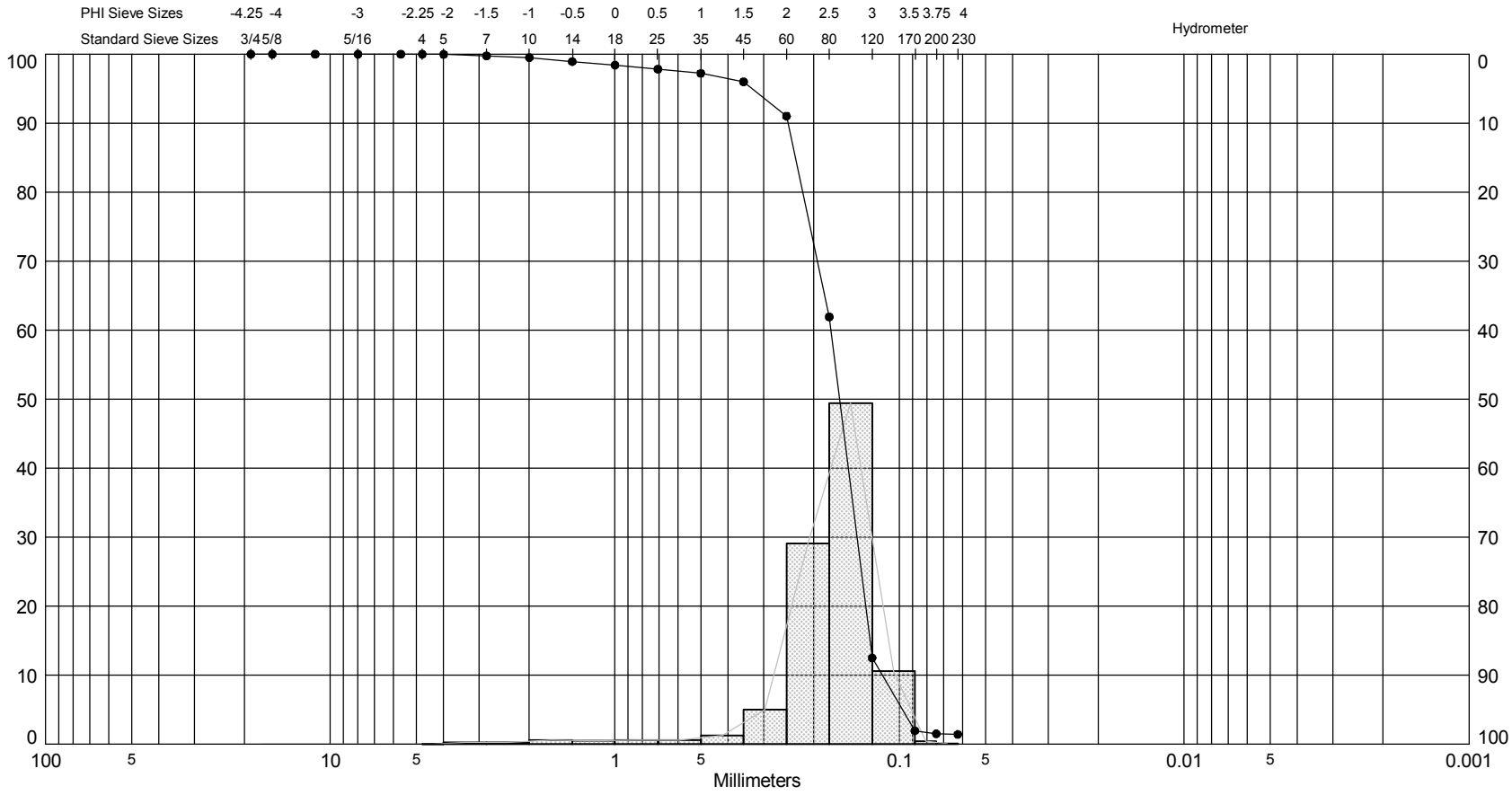
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-8.8 Comp.	—●—		SP	#200 - 1.49 #230 - 1.40			2.62	2.51	-2.95	16.69	0.63

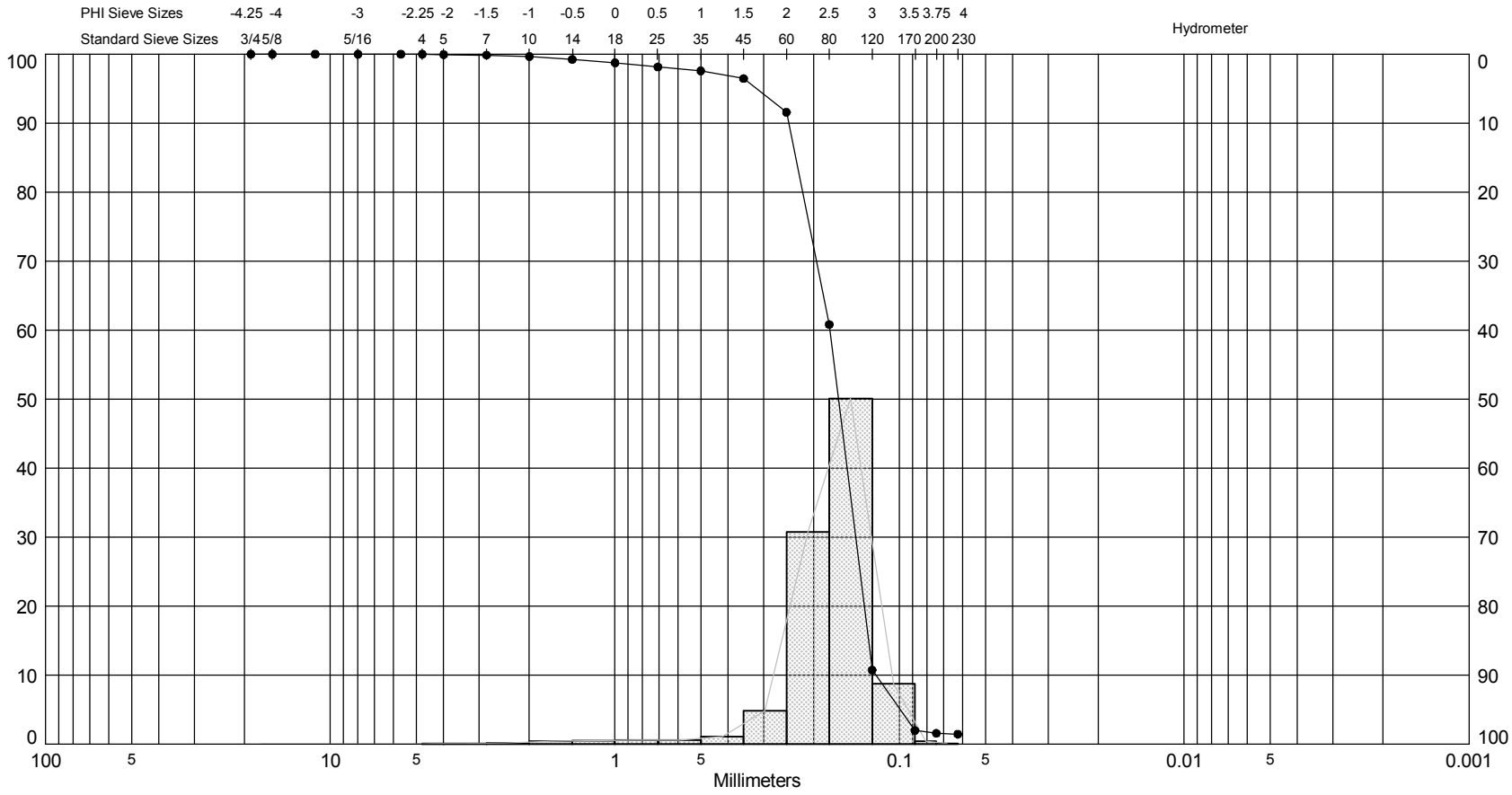
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-11.6 Comp.	—●—		SP	#200 - 1.56 #230 - 1.44			2.61	2.51	-2.88	17.05	0.58

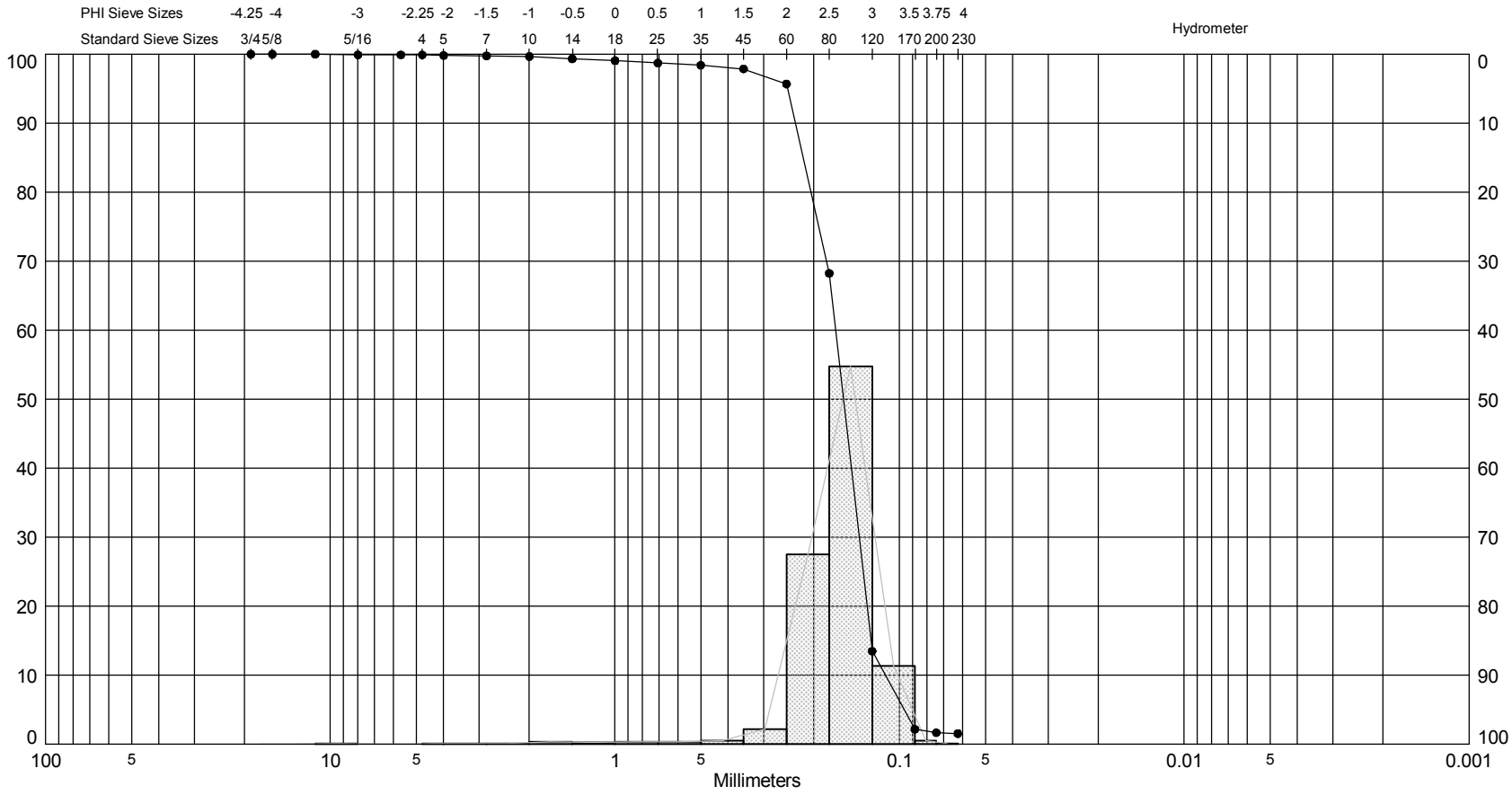
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-14.4 Comp.	—●—		SP	#200 - 1.65 #230 - 1.53			2.67	2.59	-3.97	31.97	0.55

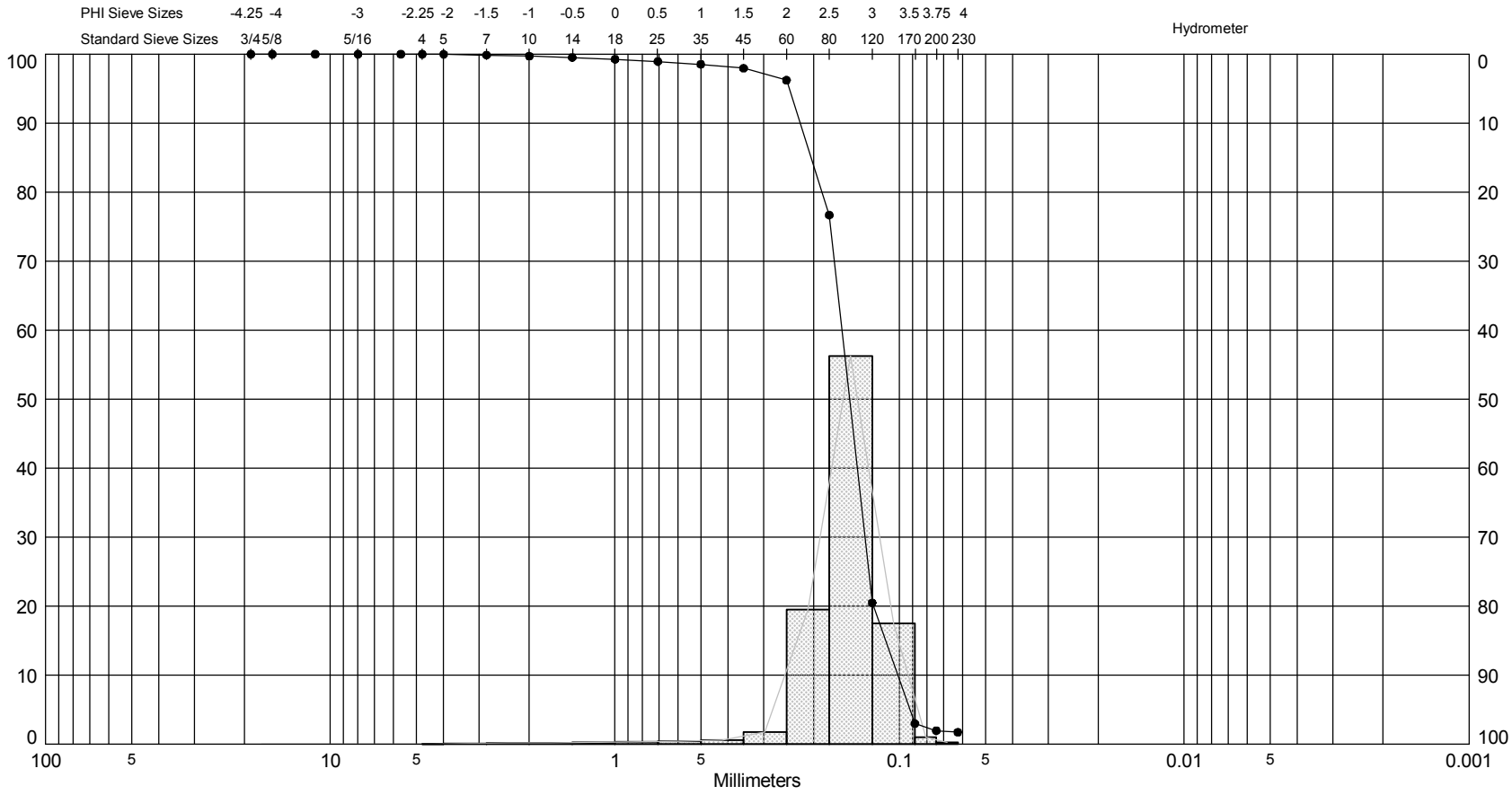
Comments: COMPOSITE

Depths and elevations based on measured values

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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-17.2 Comp.	—●—		SP	#200 - 1.95 #230 - 1.71			2.74	2.68	-3.15	22.59	0.52

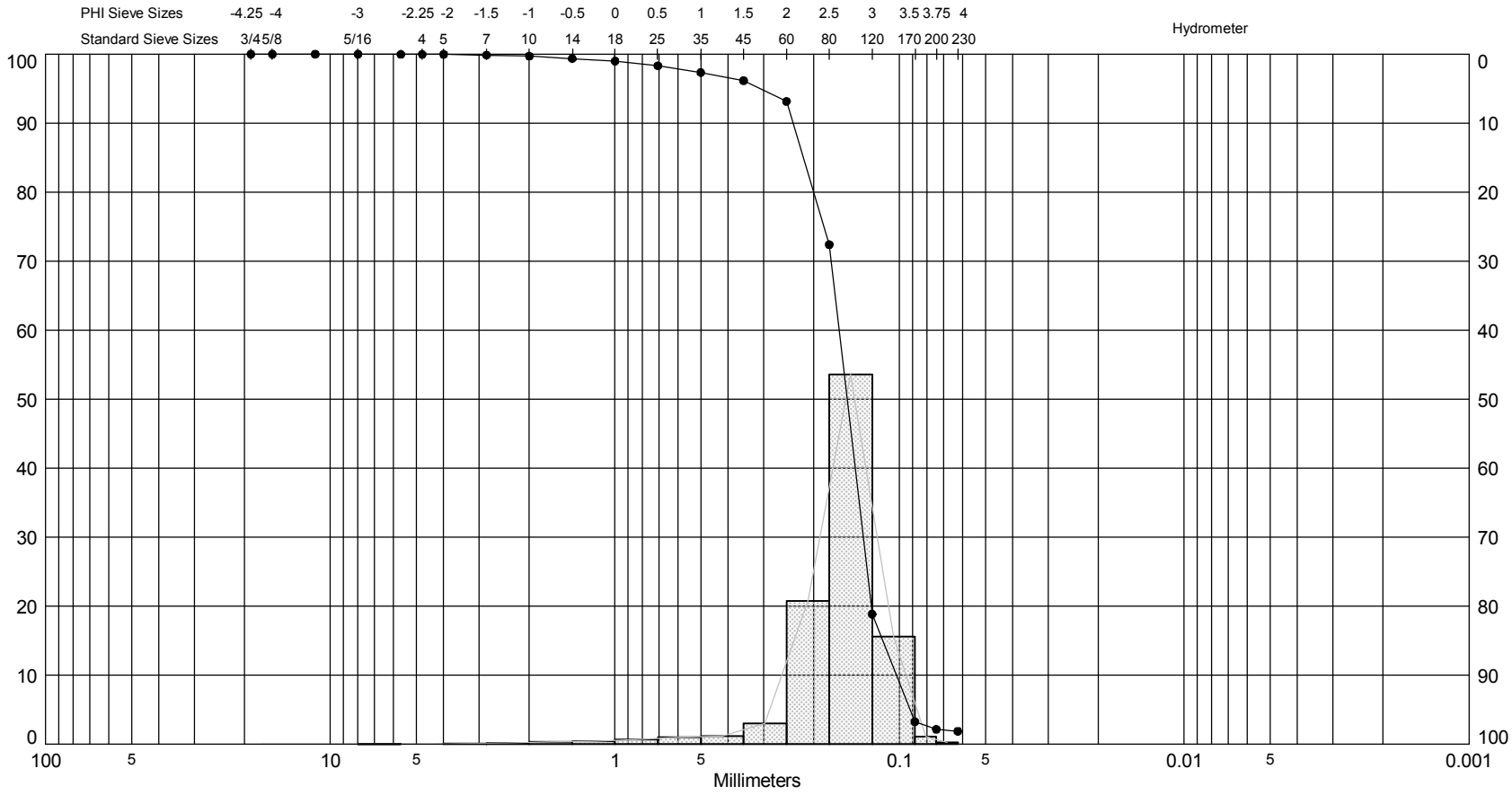
Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
-20.0 Comp.	—●—		SP	#200 - 2.14 #230 - 1.86			2.71	2.61	-2.8	16.47	0.6

Comments: COMPOSITE

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Native Beach
Analysis Date:	
Analyzed By:	
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE EIGHT NATIVE COMPOSITES.GPJ JPBRAZIL.GDT 10/27/09

APPENDIX 16

2007 CPENC Jetprobe Logs

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-01

COORDINATES:
N = 201125
E = 2388382
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/22/07
START TIME: 1215
END TIME: 1221

WATER DEPTH (ft): 6.3
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: SW
SPEED (mph): 8-12
WAVES:
DIR: NE
HEIGHT (ft): 1-2
CURRENT:
DIR: Slack Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID:
BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
	0		**SEA FLOOR**
	1		SAND, fine grained, quartz, little whole shell, single layer, whole shell (2"x3"), (SP).
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-02

COORDINATES:
N = 198751
E = 2390235
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/22/07
START TIME: 1405
END TIME: 1412

WATER DEPTH (ft): 18.9
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: SW
SPEED (mph): 8-12
WAVES:
DIR: NE
HEIGHT (ft): 1-2
CURRENT:
DIR: Outgoing Tide
SPEED (mph): Moderate

SAND SAMPLES:
TOP:

MID: 2.58ϕ, Silt: 1.25%, Shell: 0.02%
Munsell Color: Wet 5Y-4/2, Dry 5Y-6/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Poor Visibility
BOTTOM: Poor Visibility

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–13		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	13–20		SAND, fine grained, quartz, some shell fragments, single layer, (GP).
	20–25		Sand samples washed away quickly

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-03

COORDINATES:
N = 198786
E = 2389228
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/22/07
START TIME: 1510
END TIME: 1517

WATER DEPTH (ft): 13.5
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: S
SPEED (mph): 10-15
WAVES:
DIR: SE
HEIGHT (ft): 2-3
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.17ϕ, Silt: 1.34%, Shell: 0.08%
Munsell Color: Wet 5Y-4/1, Dry 5Y-7/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: No Visibility
BOTTOM: No Visibility

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–14		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	14–20		SAND, fine grained, quartz, little shell fragments, trace shell hash, single layer, (SP).

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-04

COORDINATES:
N = 202324
E = 2388531
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/22/07
START TIME: 1540
END TIME: 1545

WATER DEPTH (ft): 2.1
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: N/A
SPEED (mph): N/A
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: N/A
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.10ϕ, Silt: 1.11%, Shell: 0.02%
Munsell Color: Wet 5Y-5/2, Dry 5Y-7/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: N/A
BOTTOM: N/A

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–20		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	20		Jetprobe done on dry land

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-05

COORDINATES:
N = 201187
E = 2387314
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/22/07
START TIME: 1625
END TIME: 1630

WATER DEPTH (ft): 5.5
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: S
SPEED (mph): 10-15
WAVES:
DIR: SE
HEIGHT (ft): 0-1
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.19ϕ, Silt: 1.09%, Shell: 0.43%
Munsell Color: Wet 5Y-5/1, Dry 5Y-7/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
	0		**SEA FLOOR**
	1		SAND, fine grained, quartz, little whole shell, single layer, whole shell (2"x3"), (SP).
	2–10		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	11–20		SAND, fine grained, quartz, little shell fragments, trace shell hash, single layer, (SP).
	21–25		

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-06

COORDINATES:
N = 199397
E = 2389758
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1250
END TIME: 1300

WATER DEPTH (ft): 6.4
TOP DIVER: RB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: E
SPEED (mph): 8-10
WAVES:
DIR: W
HEIGHT (ft): 2-3
CURRENT:
DIR: Slack Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID:
BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–20		SAND, fine grained, quartz, trace shell hash, single layer, (SP).

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-07

COORDINATES:
N = 200745
E = 2391926
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1315
END TIME: 1326

WATER DEPTH (ft): 9.4
TOP DIVER: RB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: E
SPEED (mph): 8-10
WAVES:
DIR: W
HEIGHT (ft): 2-3
CURRENT:
DIR: Slack Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID:
BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–20		SAND, fine grained, quartz, trace shell hash, single layer, (SP).

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-08

COORDINATES:
N = 200529
E = 2388581
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1430
END TIME: 1440

WATER DEPTH (ft): 6.3
TOP DIVER: RB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: E
SPEED (mph): 5-10
WAVES:
DIR: W
HEIGHT (ft): 1-2
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.20ϕ, Silt: 1.28%, Shell: 0.01%
Munsell Color: Wet 5Y-4/1, Dry 5Y-6/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
	0		SEA FLOOR
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-09

COORDINATES:
N = 200664
E = 2386367
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1530
END TIME: 1545

WATER DEPTH (ft): 9.7
TOP DIVER: RB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 9.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: ESE
SPEED (mph): 0-5
WAVES:
DIR: N/A
HEIGHT (ft): 0
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID:
BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Moderate

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–5		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	5–9		SAND, quartz, little silt, trace shell hash, single layer, (SP-SM).
	9–25		Refusal on coarse shell gravel lag deposit

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-10

COORDINATES:
N = 202398
E = 2387538
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1630
END TIME: 1635

WATER DEPTH (ft): 2.3
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: SSE
SPEED (mph): 15-20
WAVES:
DIR: N\A
HEIGHT (ft): N\A
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.18ϕ, Silt: 1.01%, Shell: 0.00%
Munsell Color: Wet 5Y-5/2, Dry 5Y-7/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–20		SAND, fine grained, quartz, little silt, trace shell hash, trace wood, single layer, (SM).

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-11

COORDINATES:
N = 202290
E = 2386816
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/24/07
START TIME: 1705
END TIME: 1710

WATER DEPTH (ft): 3.8
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: SSE
SPEED (mph): 10-15
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Outgoing Tide
SPEED (mph): Strong

SAND SAMPLES:
TOP:

MID: 2.01ϕ, Silt: 1.12%, Shell: 0.32%
Munsell Color: Wet 5Y-5/1, Dry 5Y-6/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–20		SAND, fine grained, quartz, little silt, trace shell hash, trace wood, single layer, (SM).
	20		Strong current over flat, 1.5' deep shoal

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-12

COORDINATES:
N = 203960
E = 2388525
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/25/07
START TIME: 0932
END TIME: 0939

WATER DEPTH (ft): 6.5
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: NE
SPEED (mph): 8-12
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID: 2.29ϕ, Silt: 1.14%, Shell: 0.01%
Munsell Color: Wet 5Y-5/1, Dry 5Y-7/1
BOTTOM:
Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–12		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	12–20		SAND, fine grained, quartz, little shell fragments, trace clay, single layer, clay balls in hole, (SP).
	20–25		No clay balls visible on 10.0' penetration

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-13

COORDINATES:
N = 204448
E = 2389926
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/25/07
START TIME: 1010
END TIME: 1018

WATER DEPTH (ft): 11.8
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 18.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: NE
SPEED (mph): 8-12
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Outgoing Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.28ϕ, Silt: 2.35%, Shell: 0.21%
Munsell Color: Wet 5Y-4/2, Dry 5Y-6/2

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Moderate

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–6		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	6–18		SAND, fine grained, quartz, little shell fragments, single layer, (SP).
	18		No refusal, pipe seized up in collapsing hole

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-14

COORDINATES:
N = 200322
E = 2385355
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/25/07
START TIME: 1056
END TIME: 1103

WATER DEPTH (ft): 8.5
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: ENE
SPEED (mph): 10-15
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Incoming Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.31ϕ, Silt: 1.12%, Shell: 0.04%
Munsell Color: Wet 5Y-5/1, Dry 5Y-6/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–3		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	3–12		SAND, fine grained, quartz, little silt, single layer, visible mud balls between 3'-12', (SP-SM).
	12–18		SAND, fine grained, quartz, some shell fragments, single layer, (GP).
	18–20		SAND, fine grained, quartz, trace shell fragments, single layer, (SP).
	20–25		Very little material coming out of hole Moderate turbidity from 3.0-12.0'

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-15

COORDINATES:
N = 200150
E = 2383672
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/25/07
START TIME: 1111
END TIME: 1124

WATER DEPTH (ft): 6.9
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 20.0
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: ENE
SPEED (mph): 10-15
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Incoming Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:
MID: 2.07ϕ, Silt: 1.17%, Shell: 0.07%
Munsell Color: Wet 5Y-4/1, Dry 5Y-6/1
BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–14		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	14–20		SAND, fine grained, quartz, some shell fragments, single layer, (GP).
	20–25		

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

JET PROBE LOG

PROJECT:Figure Eight Island/Rich Inlet

JET PROBE: FEJP-07-16

COORDINATES:
N = 199696
E = 2384943
Horz Coord Sys: North Carolina State Plane
Datum - Horz: NAD 1983 **Vert:** NAVD 88

DATE: 02/25/07
START TIME: 1150
END TIME: 1200

WATER DEPTH (ft): 11.7
TOP DIVER: JB
BOTTOM DIVER: KW

LENGTH OF PVC PIPE (ft): 20.0
PENETRATION DEPTH (ft): 18.5
JET PUMP TYPE: Briggs & Straton 3.0 HP
GAL/HR: 8460
DIAMETER OF PIPE (in): 1.5

SUPPORT VESSEL: Parker
POSITIONING: Real-Time Kinematics (RTK)
NAVIGATION SYSTEM: Hypack

WEATHER:
WIND:
DIR: ENE
SPEED (mph): 10-15
WAVES:
DIR: N/A
HEIGHT (ft): N/A
CURRENT:
DIR: Incoming Tide
SPEED (mph): N/A

SAND SAMPLES:
TOP:

MID: 2.30ϕ, Silt: 1.11%, Shell: 0.09%
Munsell Color: Wet 5Y-5/1, Dry 5Y-6/1

BOTTOM:

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

TURBIDITY:
TOP: Low
BOTTOM: Low

DRAWN BY: **CHECKED BY:**
JOB NO. 2700.02

ELEV. (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION
			SEA FLOOR
	0–11		SAND, fine grained, quartz, trace shell hash, single layer, (SP).
	11–18		SAND, fine grained, quartz, some shell hash, single layer, (GP).
	19		Hard Refusal at 18.5'

JET PROBE LOG FIGURE EIGHT JP.GPJ JPBRAZIL.GDT 10/26/09

APPENDIX 17

2007 CPENC Vibracore Logs

Boring Designation FEVC-07-01

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-01
LOCATION COORDINATES: X = 2,390,205 Y = 198,940

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 8.7 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 08:07
COMPLETED: 03-28-07 08:11

16. ELEVATION TOP OF BORING: -15.5 Ft.

17. TOTAL RECOVERY FOR BORING: 8.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-15.5	0.0					
-17.3	1.8		SAND, fine grained, quartz, trace shell hash, trace silt, 1.0" shell fragment @ 1.6', light gray (5Y-7/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.19, Phi Sorting: 0.53 Shell Hash: 0%, Fines (230): 0.60% (SP)
-18.7	3.2		SAND, fine grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells up to 0.5", gray (5Y-5/1), (SP).		2	Sample #2, Depth = 2.5' Mean (mm): 0.17, Phi Sorting: 0.51 Shell Hash: 0%, Fines (230): 1.18% (SP)
-22.2	6.7		SAND, fine grained, quartz, trace silt, silt lamina @ 6.0', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 5.0' Mean (mm): 0.19, Phi Sorting: 0.39 Shell Hash: 0%, Fines (230): 1.15% (SP)
-24.0	8.5		SAND, fine grained, quartz, trace silt, silt laminae from 7.2'-7.8' and 8.0', gray (5Y-5/1), (SP-SM).		4	Sample #4, Depth = 7.0' Mean (mm): 0.16, Phi Sorting: 0.40 Shell Hash: 0%, Fines (230): 8.43% (SP-SM)
-24.2	8.7		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-02

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-02
LOCATION COORDINATES: X = 2,388,733 Y = 202,440

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 14.3 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 10:31
COMPLETED: 03-28-07 10:35

16. ELEVATION TOP OF BORING: -9.0 Ft.

17. TOTAL RECOVERY FOR BORING: 13.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-9.0	0.0					
-11.5	2.5		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", little shell hash from 2.1'- 2.3', 0.75" shell fragments @ 2.2' and 2.5', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.26, Phi Sorting: 0.70 Shell Hash: 0%, Fines (230): 0.98% (SP)
-22.5	13.5		SAND, fine grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells up to 2.0", trace shell hash laminae, 0.5" shell hash pocket @ 3.0', 1.0" shell fragments @ 10.2' and 13.3', 3.0" shell fragment @ 13.5', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 7.0' Mean (mm): 0.21, Phi Sorting: 0.46 Shell Hash: 0%, Fines (230): 1.09% (SP)
					3	Sample #3, Depth = 11.0' Mean (mm): 0.20, Phi Sorting: 0.31 Shell Hash: 0%, Fines (230): 1.24% (SP)
-23.3	14.3		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-03

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-03
LOCATION COORDINATES: X = 2,392,093 Y = 200,758

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 7.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 11:19
COMPLETED: 03-28-07 11:22

16. ELEVATION TOP OF BORING: -15.0 Ft.

17. TOTAL RECOVERY FOR BORING: 5.8 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-15.0	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", 2.0" olive gray (5Y-4/2) silty pocket @ 1.6', 1.0" shell fragment @ 2.6', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.18, Phi Sorting: 0.37 Shell Hash: 0%, Fines (230): 1.28% (SP)
					2	Sample #2, Depth = 4.0' Mean (mm): 0.18, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.62% (SP)
-20.4	5.4					Sample #3, Depth = 5.6' Mean (mm): 0.19, Phi Sorting: 1.28 Shell Hash: 4%, Fines (230): 2.05% (SW)
-20.8	5.8		SAND, fine grained, quartz, little shell hash, little silt, trace shell fragments, trace whole shell, whole shells up to 0.5", shell fragments up to 1.5", gray (5Y-5/1), (SW).		3	
-22.0	7.0		No Recovery.			
			End of Boring			

0
5
10
15
20
25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-04

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-04
LOCATION COORDINATES: X = 2,391,811 Y = 199,871

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 7.7 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 12:27
COMPLETED: 03-28-07 12:30

16. ELEVATION TOP OF BORING: -15.5 Ft.

17. TOTAL RECOVERY FOR BORING: 6.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-15.5	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.5", silty laminae from 4.7'-4.9', olive gray (5Y-4/2) silty pockets (0.75") @ 6.8' and (1.0"x0.75") @ 6.9', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.18, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 1.18% (SP)
					2	Sample #2, Depth = 5.2' Mean (mm): 0.18, Phi Sorting: 0.37 Shell Hash: 0%, Fines (230): 1.18% (SP)
-22.4	6.9					
-23.2	7.7		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-05

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-05
LOCATION COORDINATES: X = 2,389,867 Y = 199,037

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 8.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 13:50
COMPLETED: 03-28-07 13:53

16. ELEVATION TOP OF BORING: -12.9 Ft.

17. TOTAL RECOVERY FOR BORING: 7.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-12.9	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, whole shells up to 0.5", shell fragments up to 1.5", silty laminae from 2.0'-2.2', little shell hash from 3.6'-3.9', 4.8'-4.9' and 5.9'-6.2', (1.0"x1.5") silty pocket @ 2.5', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.19, Phi Sorting: 0.47 Shell Hash: 0%, Fines (230): 1.13% (SP)
					2	Sample #2, Depth = 6.5' Mean (mm): 0.21, Phi Sorting: 0.55 Shell Hash: 0%, Fines (230): 0.98% (SP)
-20.1	7.2					
-20.9	8.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-06

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-06
LOCATION COORDINATES: X = 2,389,210 Y = 198,965

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 9.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 14:24
COMPLETED: 03-28-07 14:26

16. ELEVATION TOP OF BORING: -12.4 Ft.

17. TOTAL RECOVERY FOR BORING: 8.4 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-12.4	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine grained, quartz, trace shell hash, trace silt, trace medium to coarse grained shell hash laminae and pockets up to 1.0", 0.75" shell fragment @ 2.1', light gray (5Y-7/1), (SW).		1	Sample #1, Depth = 1.5' Mean (mm): 0.36, Phi Sorting: 1.26 Shell Hash: 5%, Fines (230): 0.94% (SW)
-15.8	3.4					
-16.6	4.2		SAND, fine grained, quartz, trace shell hash, trace silt, 1.0" shell fragment @ 3.5', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 3.8' Mean (mm): 0.20, Phi Sorting: 0.61 Shell Hash: 0%, Fines (230): 1.34% (SP)
-18.4	6.0		SAND, fine grained, quartz, little shell hash, trace silt, 3.0" whole shell @ 5.0', 2.0" shell fragment @ 4.7', layer of shell hash and shell fragments from 4.2'-4.5', shell hash layers from 5.2'-5.3' and 5.8'-6.0', gray (5Y-6/1), (SW).		3	Sample #3, Depth = 5.0' Mean (mm): 0.31, Phi Sorting: 0.97 Shell Hash: 2%, Fines (230): 1.14% (SW)
-19.6	7.2				4	Sample #4, Depth = 6.5' Mean (mm): 0.64, Phi Sorting: 1.65 Shell Hash: 12%, Fines (230): 0.98% (SW)
-20.8	8.4		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shell typically up to 0.5", shell hash laminae @ 6.2', 6.5' and 6.6', 1.0" shell fragment @ 6.8', gray (5Y-5/1), (SW).		5	Sample #5, Depth = 8.0' Mean (mm): 0.19, Phi Sorting: 0.62 Shell Hash: 1%, Fines (230): 1.62% (SP)
-21.4	9.0		SAND, fine grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells typically up to 0.5", shell hash laminae @ 7.5', silty laminae @ 7.6' and 7.7', 0.5" silty sand pocket @ 7.3', 0.75" whole shell @ 7.4', 0.75" shell fragments @ 7.2', 8.0', 8.1' and 8.4', gray (5Y-5/1), (SP).			
			No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-07

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-07
LOCATION COORDINATES: X = 2,390,615 Y = 200,380

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 8.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 14:52
COMPLETED: 03-28-07 14:56

16. ELEVATION TOP OF BORING: -11.4 Ft.

17. TOTAL RECOVERY FOR BORING: 7.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-11.4	0.0					
-12.9	1.5		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to 1.0", gray (5Y-5/1), (SP-SM).		1	Sample #1, Depth = 1.0' Mean (mm): 0.19, Phi Sorting: 0.71 Shell Hash: 1%, Fines (230): 5.97% (SP-SM)
-14.1	2.7		SAND, fine grained, quartz, trace shell hash, trace silt, 1.0" coral fragment @ 1.5', 0.75" shell fragment @ 2.6', 1.5" shell fragment @ 1.6', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 2.0' Mean (mm): 0.19, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 1.41% (SP)
-14.6	3.2				1	
-18.6	7.2		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, whole shells up to 0.5", shell hash pocket @ 3.1', shell fragments up to 1.5", 0.75" rock fragment @ 3.2', gray (5Y-5/1), (SP-SM). SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments up to 0.75", whole shells up to 0.5", laminae of heavy minerals @ 4.6' and 4.7', 0.2" clayey lenses @ 5.7', 5.8' and 6.9', 1.0" clayey pockets @ 7.0' and 7.2', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 5.0' Mean (mm): 0.19, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.23% (SP)
-19.9	8.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-08

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-08
LOCATION COORDINATES: X = 2,390,181 Y = 200,226

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 9.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-28-07 15:37
COMPLETED: 03-28-07 15:39

16. ELEVATION TOP OF BORING: -11.4 Ft.

17. TOTAL RECOVERY FOR BORING: 7.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-11.4	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-12.4	1.0		SAND, medium grained, quartz, some shell hash, little whole shell, trace rock fragments, trace shell fragments, trace silt, rock fragments typically up to 1.0", whole shells and shell fragments up to 2.0", (3.0"x1.0") limestone fragment @ 0.2', gray (5Y-6/1), (SW).		1	Sample #1, Depth = 0.5' Mean (mm): 1.06, Phi Sorting: 2.08 Shell Hash: 24%, Fines (230): 0.69% (SW)
-14.5	3.1		SAND, fine grained, quartz, little shell hash, trace silt, pocket of shell fragments up to 2.0" from 1.7'-2.3', 0.75" whole shells @ 1.7' and 1.8', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 2.5' Mean (mm): 0.29, Phi Sorting: 0.85 Shell Hash: 1%, Fines (230): 1.42% (SP)
-15.7	4.3				1	
-16.9	5.5		SAND, medium grained, quartz, some shell hash, little shell fragments, trace silt, trace whole shell, 1.0" shell hash layers @ 3.3', 3.6' and 4.2', shell fragments up to 1.5", gray (5Y-6/1), (SW).		3	Sample #3, Depth = 5.0' Mean (mm): 0.55, Phi Sorting: 1.33 Shell Hash: 2%, Fines (230): 0.89% (SW)
-18.2	6.8				2	
-19.3	7.9		SHELL HASH, some sand, trace shell fragments, trace silt, trace whole shell, shell fragments up to 1.5", whole shells up to 2.0", gray (5Y-6/1), (GW).		4	Sample #4, Depth = 7.5' Mean (mm): 1.29, Phi Sorting: 1.80 Shell Hash: 12%, Fines (230): 1.11% (SW)
-20.4	9.0		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, whole shells up to 0.5", shell hash laminae @ 6.0', 6.1' and 6.3', shell fragments up to 1.5", gray (5Y-6/1), (SP).			
			SHELL HASH, little sand, little shell fragments, little whole shell, trace silt, whole shells and shell fragments up to 1.5", 1.0" silty layer @ 7.8', dark greenish gray (10BG-4/1), (GW).			
			No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-09

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-09
LOCATION COORDINATES: X = 2,388,776 Y = 201,051

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING: STARTED 03-30-07 13:14 | COMPLETED 03-30-07 13:18

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -5.8 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 14 Ft.

8. TOTAL DEPTH OF BORING: 16.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-5.8	0.0					
-8.1	2.3		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 0.5", whole shells typically up to 1.5", (2.5"x1.0") whole shell @ 0.9', gray (5Y-6/1), (SW).		1	Sample #1, Depth = 1.0' Mean (mm): 0.39, Phi Sorting: 1.22 Shell Hash: 2%, Fines (230): 1.10% (SW)
-14.3	8.5		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", trace shelly laminae from 4.2'-4.7', (2.0"x0.75") whole shell @ 4.8', 0.75" whole shell @ 7.0', (1.0"x0.75") shell fragment @ 8.4', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 5.5' Mean (mm): 0.21, Phi Sorting: 0.32 Shell Hash: 0%, Fines (230): 1.38% (SP)
-16.1	10.3		SAND, fine grained, quartz, little shell hash, trace silt, trace whole shell, whole shells up to 0.5", (1.25"x1.0") shell fragment @ 9.0', (2.5"x1.5") shell fragment @ 9.6', gray (5Y-6/1), (SW).		3	Sample #3, Depth = 9.0' Mean (mm): 0.29, Phi Sorting: 1.04 Shell Hash: 2%, Fines (230): 1.35% (SW)
-19.8	14.0		SAND, medium grained, quartz, trace shell fragments, trace whole shell, shell fragments up to 1.5", whole shell up to 2.0", gray (5Y-5/1), (SW).		4	Sample #4, Depth = 11.9' Mean (mm): 0.58, Phi Sorting: 1.44 Shell Hash: 4%, Fines (230): 1.29% (SW)
-22.3	16.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-10

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-10
LOCATION COORDINATES: X = 2,385,121 Y = 200,150

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 16.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-29-07 07:40
COMPLETED: 03-29-07 07:43

16. ELEVATION TOP OF BORING: -9.3 Ft.

17. TOTAL RECOVERY FOR BORING: 14.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-9.3	0.0					
-11.3	2.0		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments typically up to 0.5", (1.5"x1.0") whole shell @ 0.1', (1.0"x0.75") shell fragment @ 1.4', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 0.7' Mean (mm): 0.28, Phi Sorting: 0.68 Shell Hash: 1%, Fines (230): 0.92% (SP)
-17.1	7.8		SAND, fine grained, quartz, trace organics, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", (2.0"x0.75") whole shell @ 2.4', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 4.5' Mean (mm): 0.20, Phi Sorting: 0.42 Shell Hash: 0%, Fines (230): 1.34% (SP)
-17.7	8.4		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to 0.5", gray (5Y-6/1), (SP).		1	
-21.5	12.2		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", gray (5Y-6/1), (SP).		3	Sample #3, Depth = 11.0' Mean (mm): 0.19, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.43% (SP)
-23.8	14.5		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, trace wood, whole shells up to 0.5", shell fragments up to 2.0", 2.0" silty pocket @ 13.6', (2.0"x0.75") silty pocket @ 13.8', color is mottled gray (5Y-5/1) and, gray (5Y-6/1), (SW).		4	Sample #4, Depth = 13.9' Mean (mm): 0.25, Phi Sorting: 1.09 Shell Hash: 2%, Fines (230): 2.48% (SW)
-25.3	16.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-11

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-11
LOCATION COORDINATES: X = 2,386,946 Y = 201,018

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING | STARTED: 03-30-07 16:49 | COMPLETED: 03-30-07 17:52

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -4.4 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 14.4 Ft.

8. TOTAL DEPTH OF BORING: 16.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-4.4	0.0					
-6.3	1.9		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments typically up to 0.5", 0.75" shell fragment @ 1.5', (1.5"x0.75") shell fragment @ 1.7', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 0.9' Mean (mm): 0.25, Phi Sorting: 0.76 Shell Hash: 1%, Fines (230): 1.26% (SP)
-10.6	6.2		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", silty lamina @ 5.9', 0.75" whole shell @ 2.0', 0.75" shell fragment @ 2.1', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 4.0' Mean (mm): 0.21, Phi Sorting: 0.34 Shell Hash: 0%, Fines (230): 1.27% (SP)
-11.8	7.4		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", (1.0"x0.75") shell fragment @ 6.2', (2.0"x1.0") shell fragment @ 6.4', (0.5"x1.5") shell fragment @ 7.4', gray (5Y-6/1), (SP).		1	
-16.3	11.9		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5"; (3.0"x1.5") silty pocket from 8.1'-8.4', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 9.0' Mean (mm): 0.19, Phi Sorting: 0.36 Shell Hash: 0%, Fines (230): 1.32% (SP)
-18.8	14.4		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, trace shell hash from 12.1' to 12.4', shell fragments up to 2.0", whole shells up to 0.5", gray (5Y-5/1), (SW).		4	Sample #4, Depth = 13.0' Mean (mm): 0.31, Phi Sorting: 1.06 Shell Hash: 2%, Fines (230): 1.36% (SW)
-20.9	16.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-12

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-12
LOCATION COORDINATES: X = 2,386,433 Y = 200,711

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING | STARTED: 03-30-07 08:02 | COMPLETED: 03-30-07 08:06

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -7.5 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 12 Ft.

8. TOTAL DEPTH OF BORING: 14.0 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-7.5	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", little shell hash from 8.1'-8.4', some shell hash from 8.7'-9.0', 1.5" whole shell @ 8.8', 1.0" shell fragment @ 7.6', (1.0"x0.75") shell fragments @ 8.9' and 9.0', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.20, Phi Sorting: 0.36 Shell Hash: 0%, Fines (230): 1.38% (SP)
					2	Sample #2, Depth = 7.0' Mean (mm): 0.20, Phi Sorting: 0.39 Shell Hash: 0%, Fines (230): 1.47% (SP)
-16.6	9.1					
-17.6	10.1		Shelly SAND, quartz, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shells up to 1.5", light brownish gray (2.5Y-6/2), (SW).		3	Sample #3, Depth = 9.7' Mean (mm): 0.77, Phi Sorting: 1.88 Shell Hash: 10%, Fines (230): 1.10% (SW)
-19.5	12.0		CLAY, trace shell fragments, trace whole shell, shell fragments typically up to 0.5", whole shells up to 3.0", (2.0"x1.5") shell fragments @ 11.2' and 12.0', very dark gray (5Y-3/1), (CL).			
-21.5	14.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-13

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-13
LOCATION COORDINATES: X = 2,385,692 Y = 200,595

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING: STARTED 03-30-07 11:59 | COMPLETED 03-30-07 12:02

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -10.6 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 14 Ft.

8. TOTAL DEPTH OF BORING: 16.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-10.6	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-11.6	1.0		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", 1.0" shell fragments @ 0.3' and 0.7', 0.5" shelly clay layer @ 1.0', gray (5Y-5/1), (SW).		1	Sample #1, Depth = 0.5' Mean (mm): 0.35, Phi Sorting: 1.12 Shell Hash: 1%, Fines (230): 1.05% (SW)
-15.9	5.3		SAND, fine grained, quartz, trace shell hash, trace silt, 0.75" shell fragment @ 1.1', silt laminae @ 2.1', gray (5Y-5/1), (SP).		2	Sample #2, Depth = 4.0' Mean (mm): 0.18, Phi Sorting: 0.32 Shell Hash: 0%, Fines (230): 1.76% (SP)
-21.1	10.5		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell hash distributed in laminae and pockets up to 1.0", shell fragments typically up to 1.0", 1.0" silt pockets @ 9.4' 10.3' and 10.5', 1.5" shell fragments @ 7.4' and 9.7'; 2.0" clay pocket from 7.8'-8.0', some silt from 8.2'-8.4', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 6.5' Mean (mm): 0.22, Phi Sorting: 0.56 Shell Hash: 0%, Fines (230): 1.20% (SP)
-23.2	12.6		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", shell hash laminae from 10.6'-11.5' and 12.4', 1.0" shell fragment @ 10.9', gray (5Y-5/1), (SP).		4	Sample #4, Depth = 11.5' Mean (mm): 0.30, Phi Sorting: 0.62 Shell Hash: 1%, Fines (230): 1.47% (SP)
-24.6	14.0		Sandy SHELL, trace silt, shell component is shell hash and shell fragments up to 2.0", sand layer from 13.0'-13.2', clay layer from 13.8'-14.0', gray (5Y-5/1), (GW).		5	Sample #5, Depth = 13.0' Mean (mm): 0.72, Phi Sorting: 2.31 Shell Hash: 27%, Fines (230): 1.67% (SW)
-27.1	16.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-14

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-14
LOCATION COORDINATES: X = 2,387,347 Y = 202,224

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

14. ELEVATION GROUND WATER

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

15. DATE BORING | STARTED: 03-30-07 12:33 | COMPLETED: 03-30-07 12:36

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -7.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 15.2 Ft.

8. TOTAL DEPTH OF BORING: 17.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-7.0	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", 1.5" whole shell @ 4.2', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.19, Phi Sorting: 0.41 Shell Hash: 0%, Fines (230): 1.14% (SP)
-12.2	5.2					
-12.6	5.6		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", 2 (0.5"x3.5") clayey burrows @ 5.4', (2.0"x0.5") whole shell @ 5.6', gray (2.5Y-6/1), (SW).		3	Sample #2, Depth = 5.9' Mean (mm): 0.24, Phi Sorting: 0.69 Shell Hash: 0%, Fines (230): 1.02% (SP)
-13.2	6.2				2	
-14.8	7.8		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", 2.0" shell hash pocket @ 5.9', gray (5Y-5/1), (SP).		3	Sample #3, Depth = 6.5' Mean (mm): 0.33, Phi Sorting: 1.06 Shell Hash: 2%, Fines (230): 1.02% (SW)
-18.5	11.5		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shells up to 1.5", trace shell hash from 6.7'-7.0', gray (2.5Y-6/1), (SW).		4	Sample #4, Depth = 9.5' Mean (mm): 0.21, Phi Sorting: 0.58 Shell Hash: 0%, Fines (230): 1.13% (SP)
-19.5	12.5		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", organic lens @ 8.6', (0.5"x2.0") whole shell @ 9.0', 0.75" shell fragment @ 9.7', gray (5Y-6/1), (SP).		5	Sample #5, Depth = 11.8' Mean (mm): 0.48, Phi Sorting: 1.86 Shell Hash: 12%, Fines (230): 0.79% (SW)
-22.2	15.2		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 1.5", whole shells up to 2.5", trace shell hash from 12.0'-12.2', gray (5Y-6/1), (SW).		4	
-24.5	17.5		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", (2.0"x1.5") shell hash pocket @ 14.1', gray (5Y-6/1), (SP).			
			No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-15

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-15
LOCATION COORDINATES: X = 2,388,715 Y = 200,330

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 16.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-30-07 13:43
COMPLETED: 03-30-07 13:46

16. ELEVATION TOP OF BORING: -5.3 Ft.

17. TOTAL RECOVERY FOR BORING: 14.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-5.3	0.0					
-8.3	3.0		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typicaly up to 0.5", 1.0" whole shell @ 0.4', 2.5" whole shell @ 1.8', 0.75" shell fragment @ 1.7', light olive gray (5Y-6/2), (SP).		1	Sample #1, Depth = 1.5' Mean (mm): 0.24, Phi Sorting: 0.58 Shell Hash: 0%, Fines (230): 1.05% (SP)
-15.8	10.5		SAND, fine grained, quartz, trace shell hash, trace silt, 0.5" silty pocket @ 7.0', 0.75" shell fragment @ 3.4', light olive gray (5Y-6/2), (SP).		2	Sample #2, Depth = 5.5' Mean (mm): 0.18, Phi Sorting: 0.30 Shell Hash: 0%, Fines (230): 1.10% (SP)
-18.3	13.0		SAND, fine grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells up to 0.5", shell hash laminae @ 10.7', 10.9' and 11.3', 0.75" shell fragment @ 10.5', light olive gray (5Y-6/2), (SP).		3	Sample #3, Depth = 12.0' Mean (mm): 0.25, Phi Sorting: 0.37 Shell Hash: 0%, Fines (230): 1.09% (SP)
-19.5	14.2		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", 1.0" shell fragment @ 13.9', light olive gray (5Y-6/2), (SP).		1	
-21.3	16.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-16

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-16 | LOCATION COORDINATES: X = 2,388,474 Y = 201,638

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic ☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies | CONTRACTOR FILE NO.

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED | DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING | STARTED: 03-30-07 14:15 | COMPLETED: 03-30-07 14:19

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 8 Ft.

8. TOTAL DEPTH OF BORING: 9.0 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
0.0	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, shell fragments up to 0.5", shell hash lenses @ 2.0', 2.3', 2.4' and 2.9', 2.0" little shell hash pocket @ 3.6', 1.5" whole shell @ 2.4', light olive gray (5Y-6/2), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.21, Phi Sorting: 0.38 Shell Hash: 0%, Fines (230): 1.13% (SP)
					2	Sample #2, Depth = 4.5' Mean (mm): 0.21, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 1.46% (SP)
-7.3	7.3					Sample #3, Depth = 7.7'
-8.0	8.0		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shells typically up to 0.5", 0.75" shell fragments @ 7.5' and 7.8', 1.0" shell fragment @ 7.6', gray (5Y-6/1), (SW).		3	Mean (mm): 0.49, Phi Sorting: 1.67 Shell Hash: 4%, Fines (230): 1.19% (SW)
-9.0	9.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-16A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-16A
LOCATION COORDINATES: X = 2,388,474 Y = 201,638

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 18.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED
UNDISTURBED (UD)

13. TOTAL NUMBER CORE BOXES

14. ELEVATION GROUND WATER

15. DATE BORING
STARTED: 03-30-07 14:40
COMPLETED: 03-30-07 14:45

16. ELEVATION TOP OF BORING: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 10.1 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
0.0	0.0					
			Jetted to 7.5'.			
-7.5	7.5					
-8.0	8.0		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", gray (5Y-5/1), (SW).		1	Sample #1, Depth = 7.8' Mean (mm): 0.27, Phi Sorting: 1.01 Shell Hash: 1%, Fines (230): 1.13% (SW)
-11.8	11.8		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, whole shells up to 0.5", shell fragments up to 2.0", gray (5Y-5/1), (SW).		2	Sample #2, Depth = 10.3' Mean (mm): 0.59, Phi Sorting: 1.71 Shell Hash: 3%, Fines (230): 0.85% (SW)
-12.7	12.7		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", gray (5Y-5/1), (SP).		VC-16 (2)	
-14.9	14.9		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, whole shells and shell fragments up to 2.0", gray (5Y-6/1), (SW).		3	Sample #3, Depth = 13.9' Mean (mm): 0.30, Phi Sorting: 0.95 Shell Hash: 1%, Fines (230): 1.03% (SW)
-17.6	17.6		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", little shell hash pocket @ 15.8', gray (5Y-6/1), (SP).		4	Sample #4, Depth = 16.5' Mean (mm): 0.21, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.45% (SP)
-18.5	18.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-17

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-17
LOCATION COORDINATES: X = 2,387,728 Y = 201,394

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 13.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-30-07 15:44
COMPLETED: 03-30-07 15:47

16. ELEVATION TOP OF BORING: -3.0 Ft.

17. TOTAL RECOVERY FOR BORING: 11.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-3.0	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", shell hash and shell fragment layer from 2.7'-3.0', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.22, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 0.99% (SP)
-7.7	4.7					
-8.4	5.4		Shelly SAND, medium grained, quartz, trace silt, shell component is shell hash and shell fragments up to 1.5", light olive gray (5Y-6/2), (SW).		2	Sample #2, Depth = 5.1' Mean (mm): 0.68, Phi Sorting: 2.25 Shell Hash: 3%, Fines (230): 1.15% (SW)
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", shell hash laminae @ 5.8', 6.0', 7.2' and 7.6', some shell hash from 8.5'-8.6', (3) 0.75" shell fragments @ 6.3', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 7.0' Mean (mm): 0.24, Phi Sorting: 0.59 Shell Hash: 0%, Fines (230): 1.17% (SP)
-11.8	8.8					
			SAND, medium grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to 1.0", olive gray (5Y-5/2), (SW).		4	Sample #4, Depth = 10.1' Mean (mm): 0.55, Phi Sorting: 1.61 Shell Hash: 3%, Fines (230): 0.91% (SW)
-13.7	10.7					
			SAND, fine grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells up to 0.5", gray (5Y-6/1), (SP).		5	Sample #5, Depth = 11.5' Mean (mm): 0.26, Phi Sorting: 0.63 Shell Hash: 0%, Fines (230): 1.20% (SP)
-14.9	11.9					
			No Recovery.			
-16.5	13.5					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-17A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-17A
LOCATION COORDINATES: X = 2,387,728 Y = 201,394

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 18.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED
UNDISTURBED (UD)

13. TOTAL NUMBER CORE BOXES

14. ELEVATION GROUND WATER

15. DATE BORING
STARTED: 03-30-07 16:10
COMPLETED: 03-30-07 16:15

16. ELEVATION TOP OF BORING: -3.0 Ft.

17. TOTAL RECOVERY FOR BORING: 9.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW/KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-3.0	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			Jetted to 9.0".			
-12.0	9.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", shell hash laminae @ 10.2', 10.5' and 11.2', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 10.3' Mean (mm): 0.27, Phi Sorting: 0.73 Shell Hash: 1%, Fines (230): 1.27% (SP)
-15.0	12.0					
			SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to 1.5", gray (5Y-6/1), (SW).		2	Sample #2, Depth = 12.6' Mean (mm): 0.41, Phi Sorting: 1.14 Shell Hash: 2%, Fines (230): 0.80% (SW)
-16.3	13.3					
			SAND, fine grained, quartz, trace shell hash, trace silt, some shell hash @ 4.7', 0.75" shell fragment @ 4.7', gray (5Y-6/1), (SP).		1	
-17.2	14.2					
-18.0	15.0				2	
			SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments typically up to 1.0", trace shell hash from 14.4'-14.5', 2.5" and 3.0" shell fragments @ 14.8', gray (5Y-6/1), (SW).		1	
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, shell fragments up to 2.0", gray (5Y-6/1), (SP).			
-21.2	18.2					
-21.5	18.5		No Recovery.			
			End of Boring			

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-18

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-18
LOCATION COORDINATES: X = 2,387,894 Y = 201,815

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

14. ELEVATION GROUND WATER

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

15. DATE BORING: STARTED 03-31-07 13:30 | COMPLETED 03-31-07 13:35

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -3.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 16.3 Ft.

8. TOTAL DEPTH OF BORING: 18.0 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-3.0	0.0					
-6.3	3.3		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", 3.0" medium grained pocket @ 1.0', gray (5Y-5/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.27, Phi Sorting: 0.71 Shell Hash: 0%, Fines (230): 1.01% (SP)
-10.3	7.3		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 0.5", whole shells up to 2.0", shell hash laminae from 5.3'-6.0', 6.5' and 6.9', shell hash layer from 6.5'-6.7', gray (5Y-6/1), (SW).		2	Sample #2, Depth = 4.5' Mean (mm): 0.34, Phi Sorting: 1.09 Shell Hash: 1%, Fines (230): 1.12% (SW)
-12.9	9.9		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to 0.5", shell hash layer from 8.4'-8.5', shell hash and shell fragments up to 1.0" from 9.2'-9.4', shell hash lamina @ 9.8', gray (5Y-5/1), (SP).		1	
-19.3	16.3		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 2.0", (2) 0.75" rock fragments @ 13.0', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 13.0' Mean (mm): 0.23, Phi Sorting: 0.54 Shell Hash: 0%, Fines (230): 1.00% (SP)
-21.0	18.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-07-19

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-07-19
LOCATION COORDINATES: X = 2,389,020 Y = 200,054

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 18.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 03-31-07 14:30
COMPLETED: 03-31-07 14:35

16. ELEVATION TOP OF BORING: -4.0 Ft.

17. TOTAL RECOVERY FOR BORING: 15.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-4.0	0.0					
			SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, little shell hash from 3.5'-8.5', (3.0"x1.5") shell hash pocket @ 14.3', whole shells up to 1.5", shell fragments up to 2.0", gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.21, Phi Sorting: 0.43 Shell Hash: 0%, Fines (230): 1.00% (SP)
					2	Sample #2, Depth = 7.3' Mean (mm): 0.23, Phi Sorting: 0.39 Shell Hash: 0%, Fines (230): 1.23% (SP)
-18.5	14.5					
-19.2	15.2		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to 0.5", gray (5Y-6/1), (SW).		3	Sample #3, Depth = 14.9' Mean (mm): 0.31, Phi Sorting: 0.92 Shell Hash: 1%, Fines (230): 1.27% (SW)
			No Recovery.			
-22.0	18.0					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-07-20

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2007
Figure Eight Island, North Carolina

9. SIZE AND TYPE OF BIT 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane | HORIZONTAL: NAD 1983 | VERTICAL: NAVD 88

2. BORING DESIGNATION: FEVC-07-20
LOCATION COORDINATES: X = 2,386,609 Y = 200,201

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

12. TOTAL SAMPLES | DISTURBED | UNDISTURBED (UD)

4. NAME OF DRILLER: Walter Sexton

13. TOTAL NUMBER CORE BOXES

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL | BEARING

14. ELEVATION GROUND WATER

15. DATE BORING | STARTED: 03-31-07 15:45 | COMPLETED: 03-31-07 15:49

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

16. ELEVATION TOP OF BORING: -12.2 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

17. TOTAL RECOVERY FOR BORING: 13.2 Ft.

8. TOTAL DEPTH OF BORING: 16.0 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KR

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-12.2	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-14.4	2.2		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.5", gray (5Y-5/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.22, Phi Sorting: 0.75 Shell Hash: 0%, Fines (230): 1.62% (SP)
-16.0	3.8		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 2.0", whole shells up to 2.5", gray (5Y-6/1), (SW).		2	Sample #2, Depth = 2.6' Mean (mm): 0.96, Phi Sorting: 2.12 Shell Hash: 6%, Fines (230): 0.66% (SW)
-17.6	5.4		SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, whole shells typically up to 0.5", (1.0"x0.75") whole shell @ 3.9', shell fragments up to 1.5", gray (5Y-5/1), (SP).		1	
-18.5	6.3				3	Sample #3, Depth = 5.8' Mean (mm): 0.44, Phi Sorting: 1.46 Shell Hash: 2%, Fines (230): 1.30% (SW)
-19.3	7.1				1	
-23.1	10.9		SAND, medium grained, quartz, trace shell fragments, trace shell hash, trace whole shell, shell fragments up to 2.5", whole shells up to 2.0", gray (5Y-6/1), (SW). SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", (2.0"x1.25") whole shell @ 6.9', gray (5Y-5/1), (SP).		4	Sample #4, Depth = 8.5' Mean (mm): 0.13, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 26.36% (SC)
-25.4	13.2		CLAY, little silt, trace sand, trace shell fragments, trace shell hash, trace whole shell, shell fragments typically up to 0.5", (1.0"x0.5") shell fragment @ 8.0', whole shells up to 1.25", very dark gray (5Y-3/1), (SC). SAND, quartz, trace shell hash, trace silt, 1.0" very dark gray (5Y-3/1) silty pocket @ 12.0', dark gray (5Y-4/1), (SP).			
-28.2	16.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/16/09

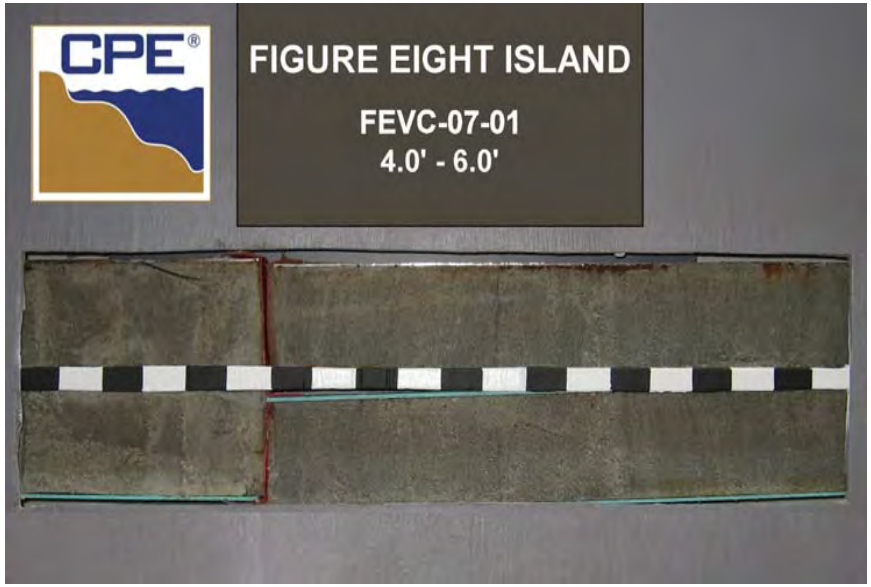
SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

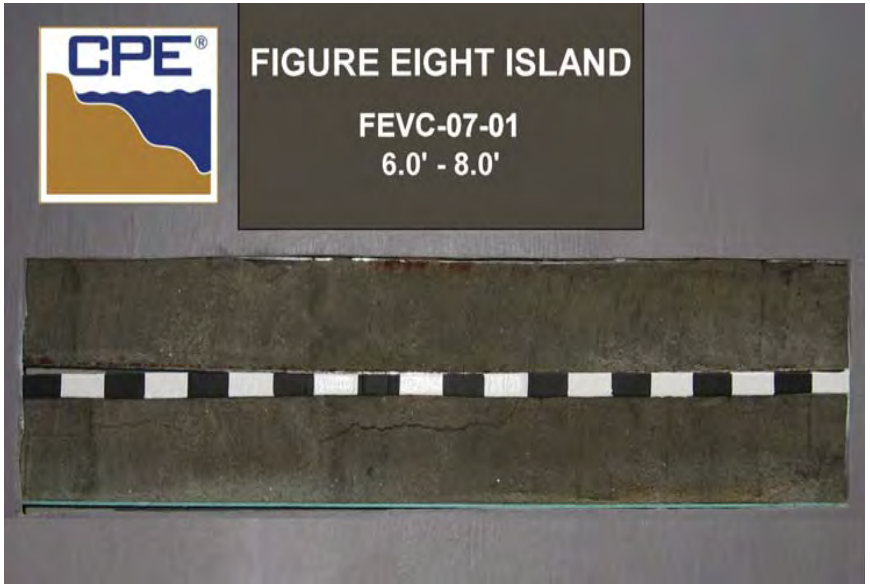
APPENDIX 18

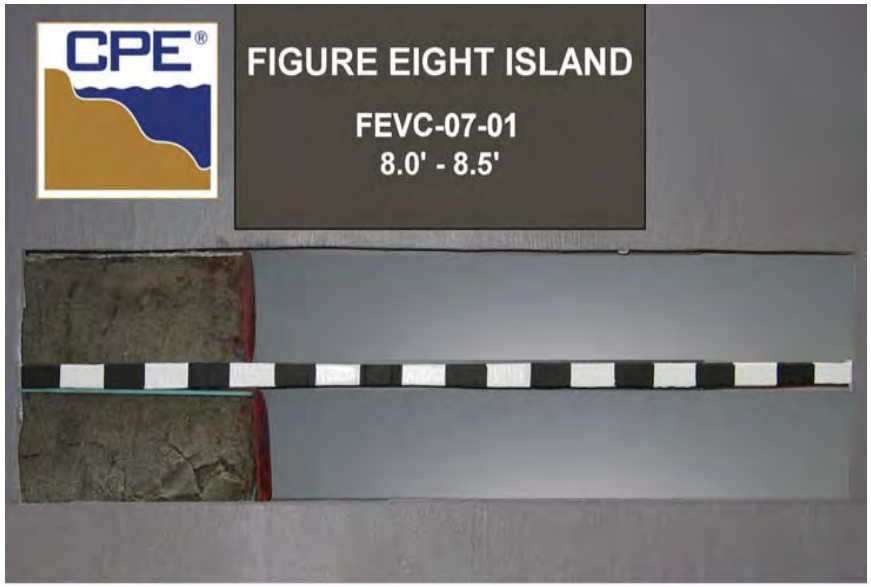
2007 CPENC Vibracore Photographs


CPE
FIGURE EIGHT ISLAND
FEVC-07-01
0.0' - 2.0'

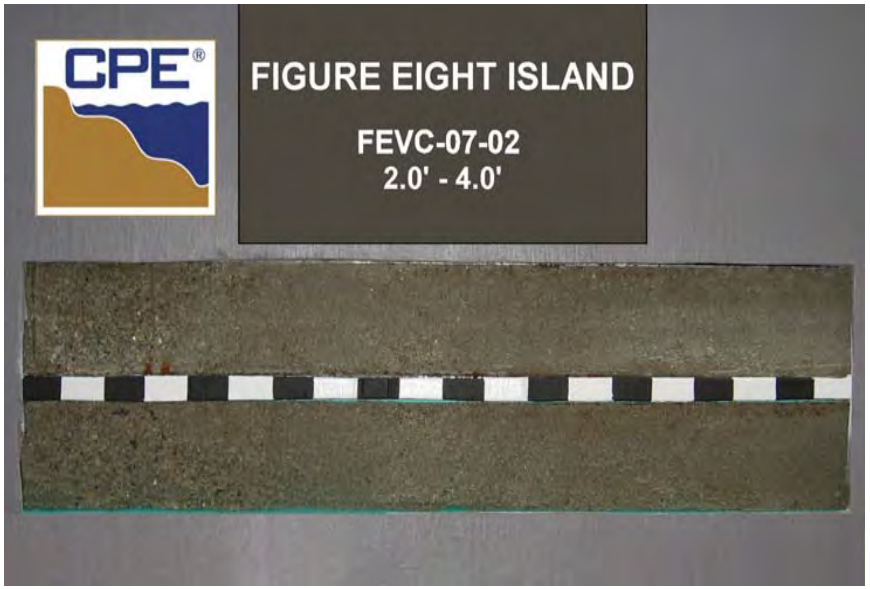

CPE
FIGURE EIGHT ISLAND
FEVC-07-01
2.0' - 4.0'

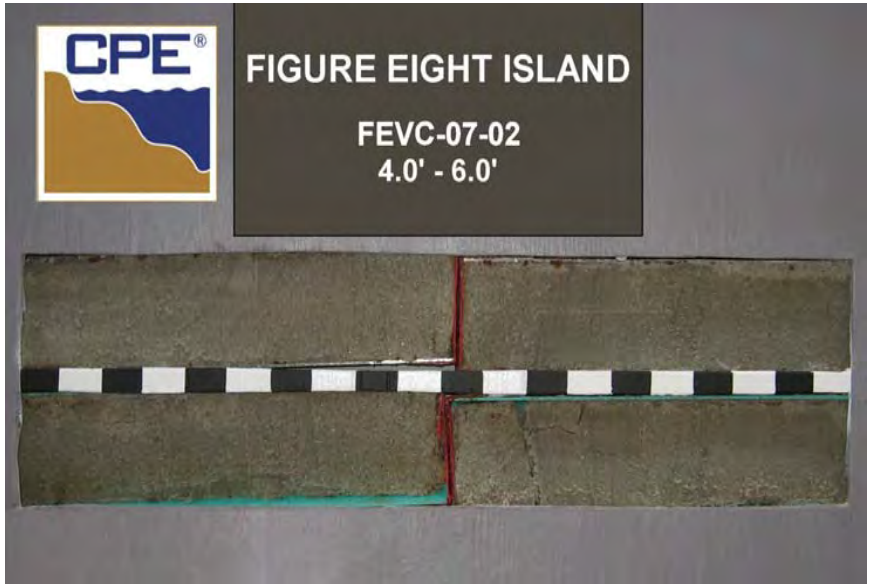

CPE
FIGURE EIGHT ISLAND
FEVC-07-01
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-01
6.0' - 8.0'

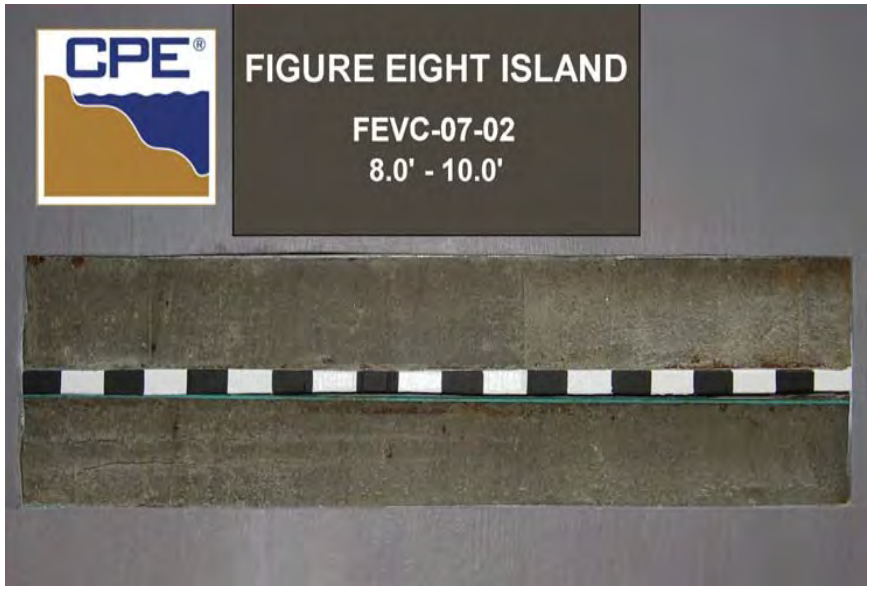

CPE®
FIGURE EIGHT ISLAND
FEVC-07-01
8.0' - 8.5'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
8.0' - 10.0'

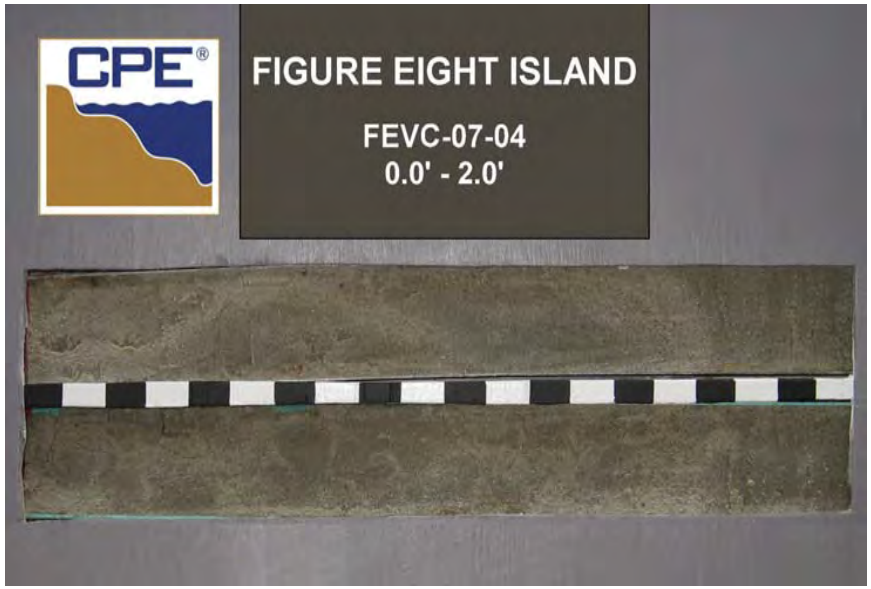

CPE
FIGURE EIGHT ISLAND
FEVC-07-02
10.0' - 12.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-02
12.0' - 13.5'

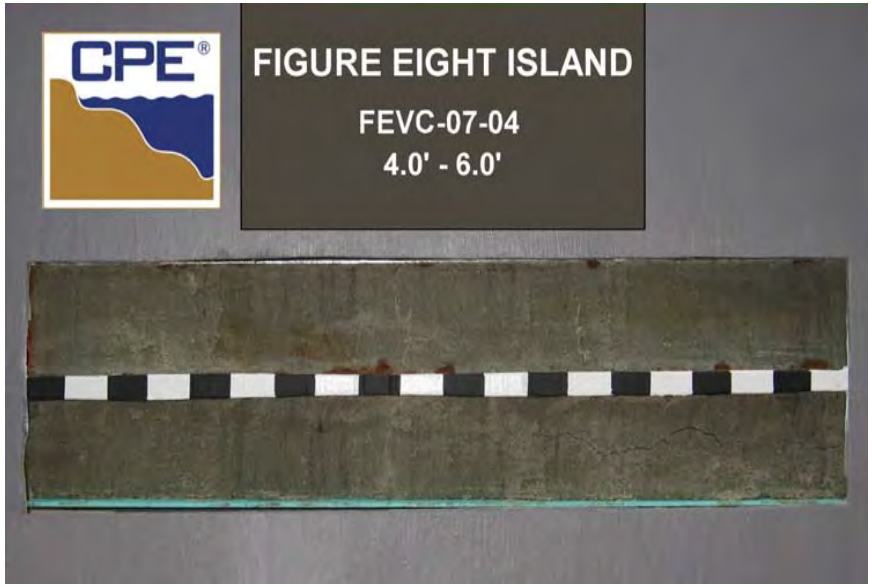

CPE
FIGURE EIGHT ISLAND
FEVC-07-03
0.0' - 2.0'

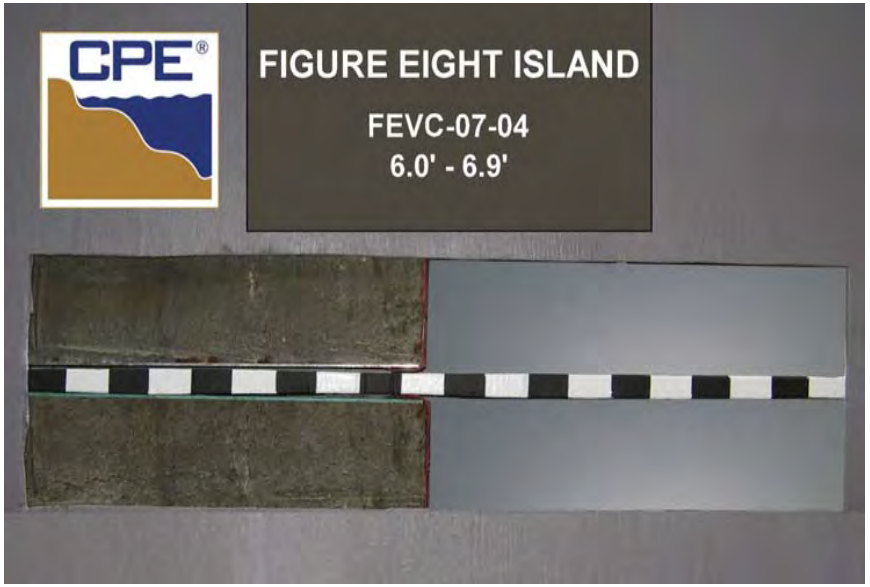

CPE
FIGURE EIGHT ISLAND
FEVC-07-03
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-03
4.0' - 5.8'


CPE
FIGURE EIGHT ISLAND
FEVC-07-04
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-04
2.0' - 4.0'

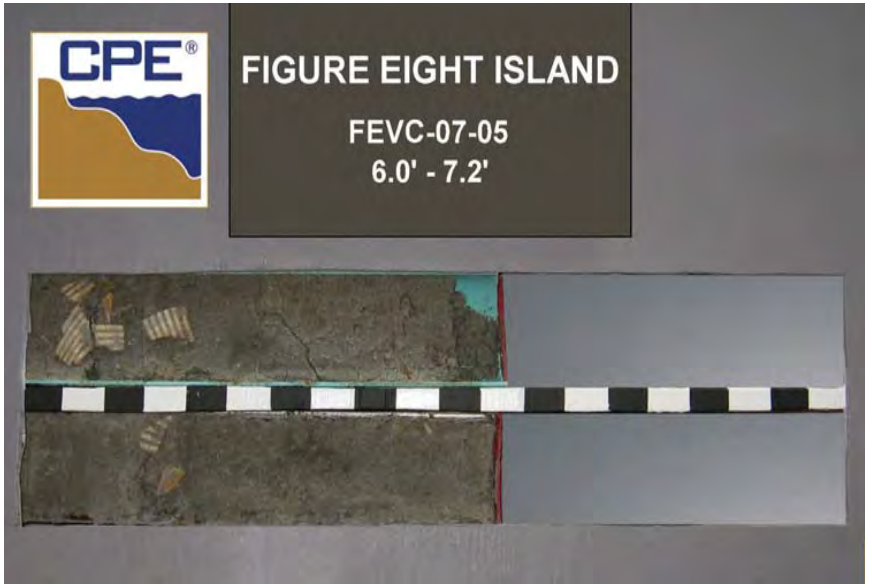

CPE
FIGURE EIGHT ISLAND
FEVC-07-04
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-04
6.0' - 6.9'

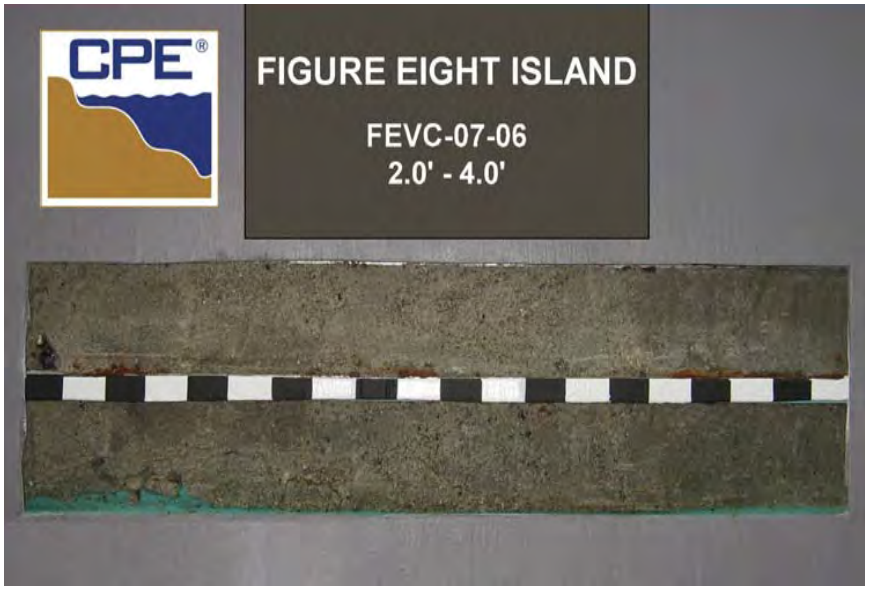

CPE
FIGURE EIGHT ISLAND
FEVC-07-05
0.0' - 2.0'

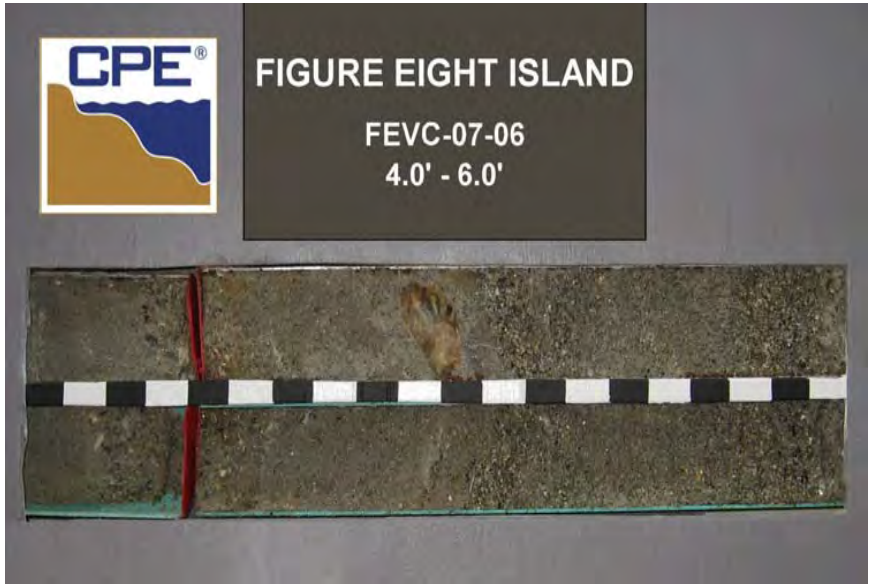

CPE
FIGURE EIGHT ISLAND
FEVC-07-05
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-05
4.0' - 6.0'

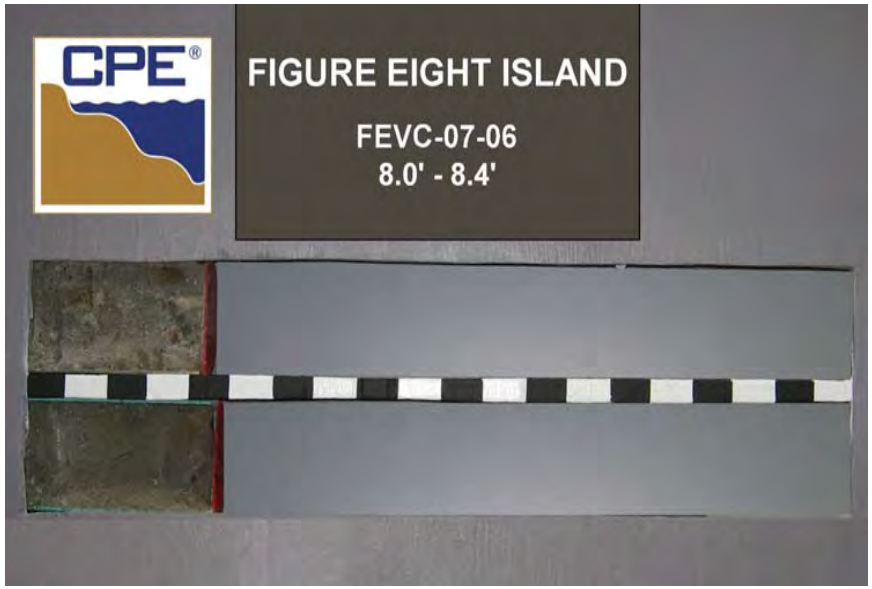

CPE
FIGURE EIGHT ISLAND
FEVC-07-05
6.0' - 7.2'


CPE
FIGURE EIGHT ISLAND
FEVC-07-06
0.0' - 2.0'

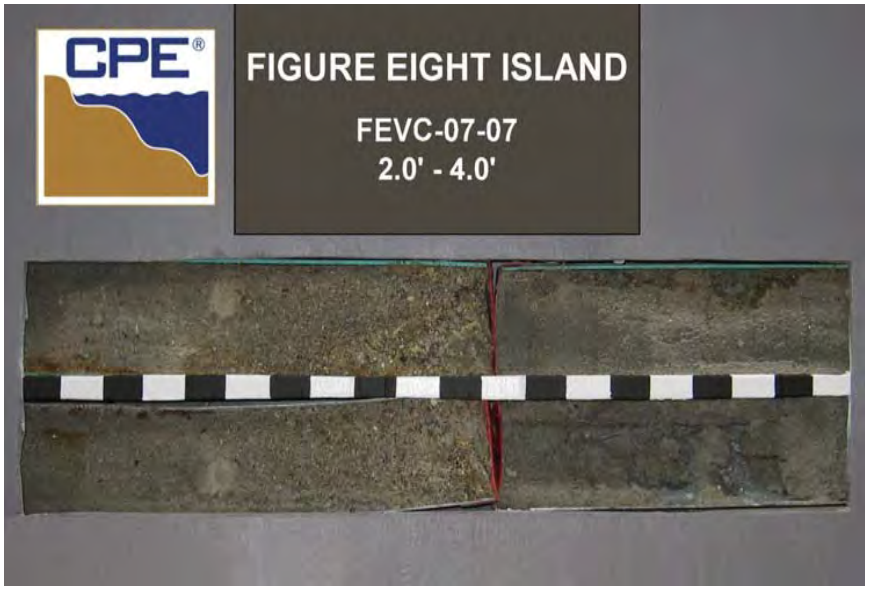

CPE
FIGURE EIGHT ISLAND
FEVC-07-06
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-06
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-06
6.0' - 8.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-06
8.0' - 8.4'


CPE
FIGURE EIGHT ISLAND
FEVC-07-07
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-07
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-07
4.0' - 6.0'

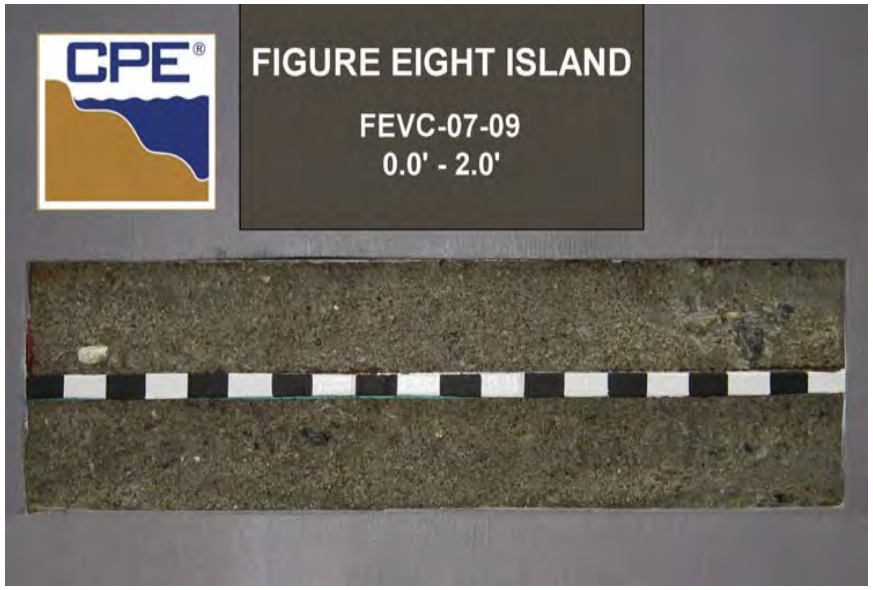

CPE
FIGURE EIGHT ISLAND
FEVC-07-07
6.0' - 7.2'

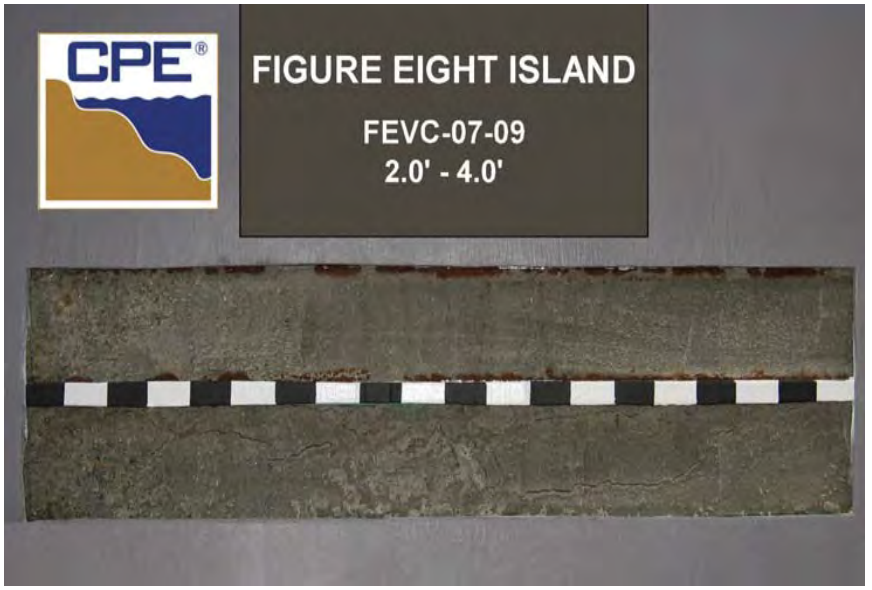

CPE
FIGURE EIGHT ISLAND
FEVC-07-08
0.0' - 2.0'

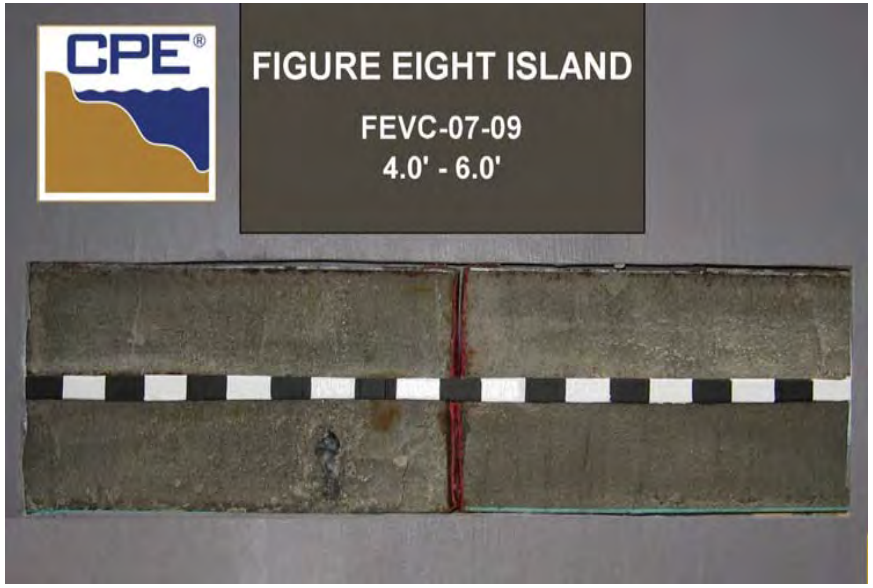

CPE
FIGURE EIGHT ISLAND
FEVC-07-08
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-08
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-08
6.0' - 7.9'


CPE
FIGURE EIGHT ISLAND
FEVC-07-09
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-09
2.0' - 4.0'

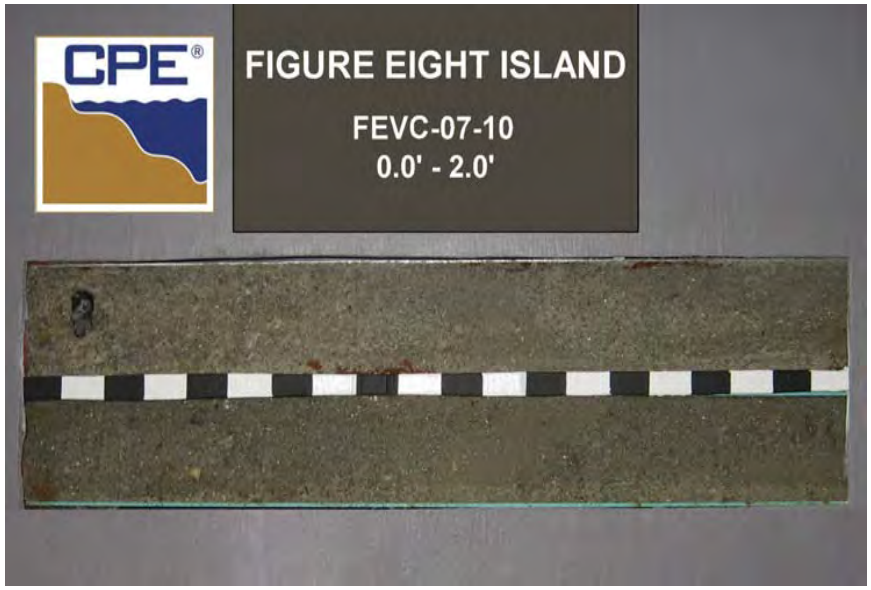

CPE
FIGURE EIGHT ISLAND
FEVC-07-09
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-09
6.0' - 8.0'

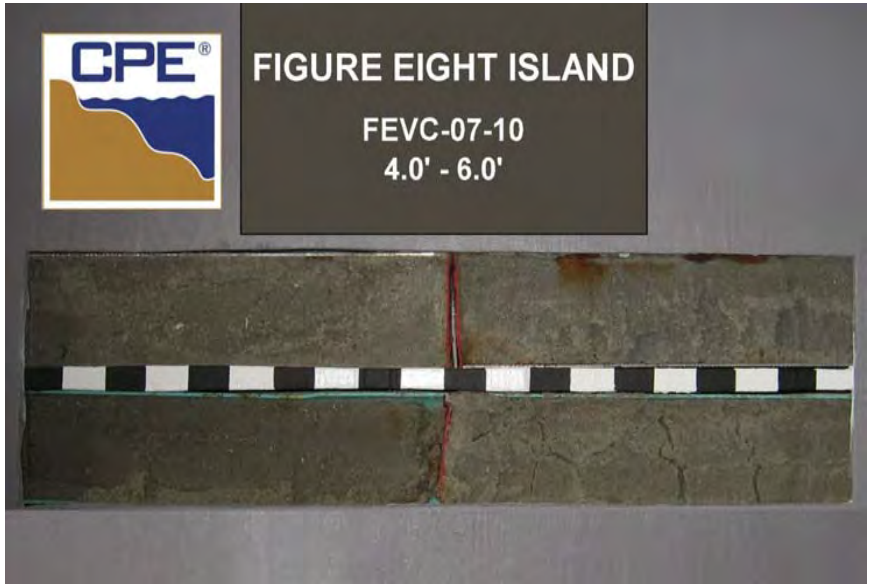

CPE
FIGURE EIGHT ISLAND
FEVC-07-09
8.0' - 10.0'

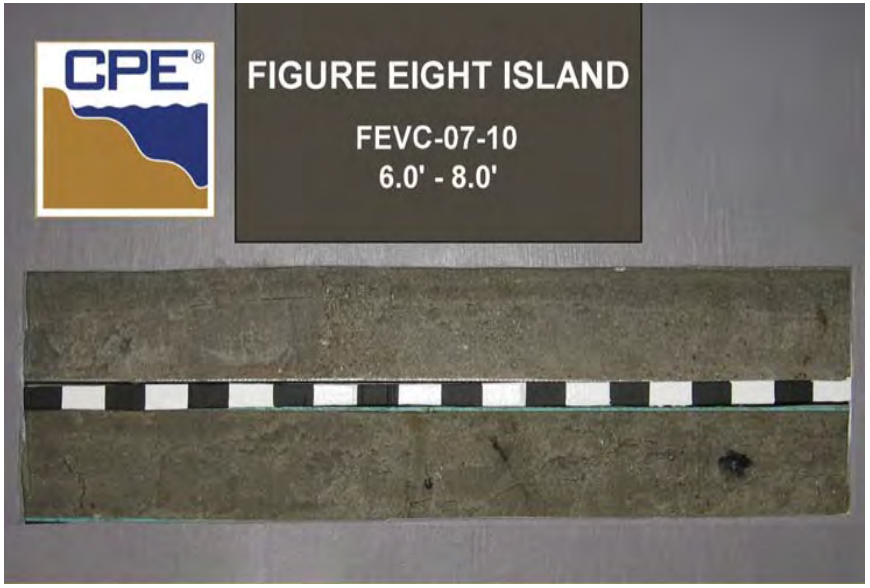

CPE
FIGURE EIGHT ISLAND
FEVC-07-09
10.0' - 12.0'

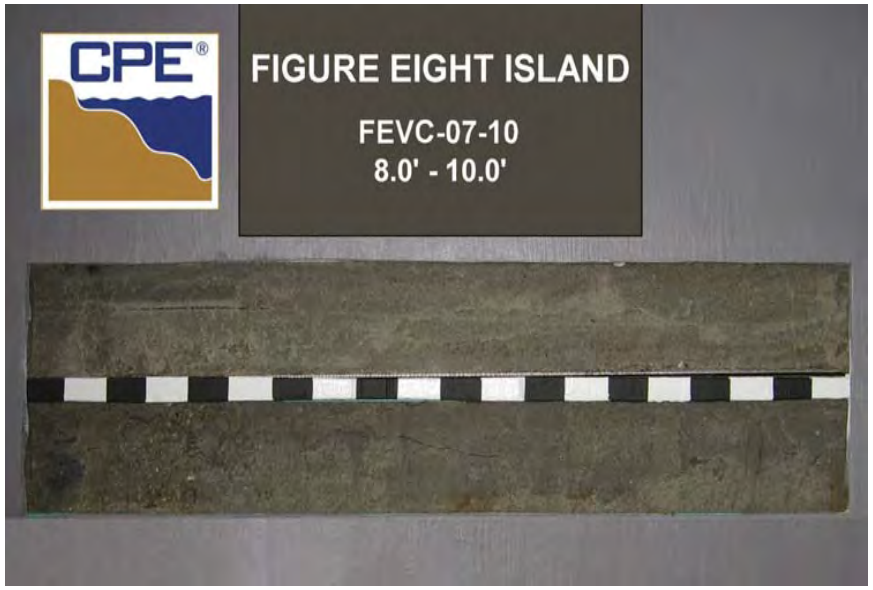

CPE
FIGURE EIGHT ISLAND
FEVC-07-09
12.0' - 14.0'

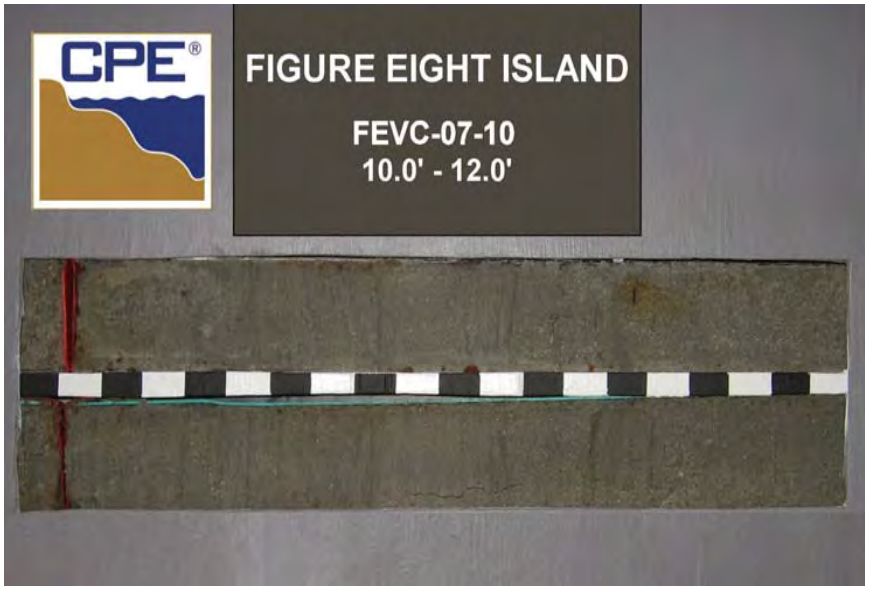

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
0.0' - 2.0'

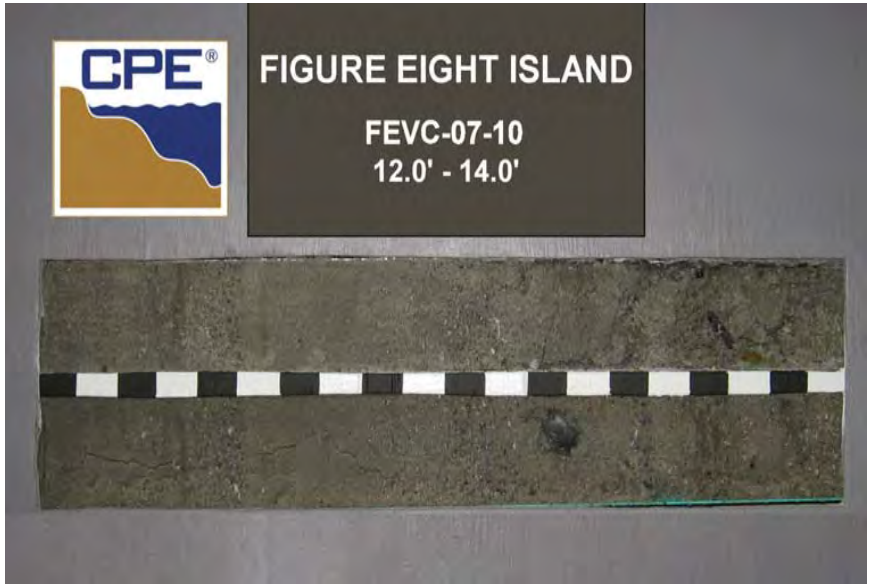

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
2.0' - 4.0'

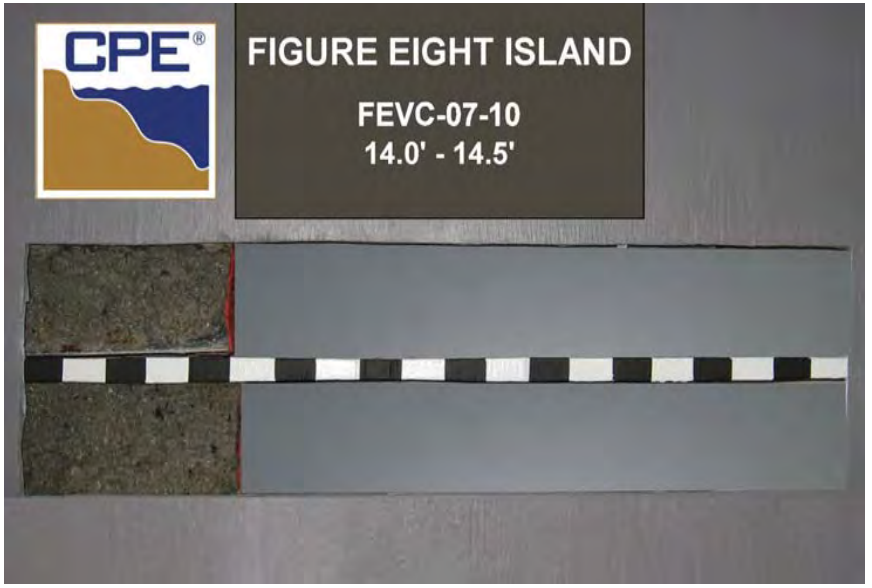

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-10
6.0' - 8.0'

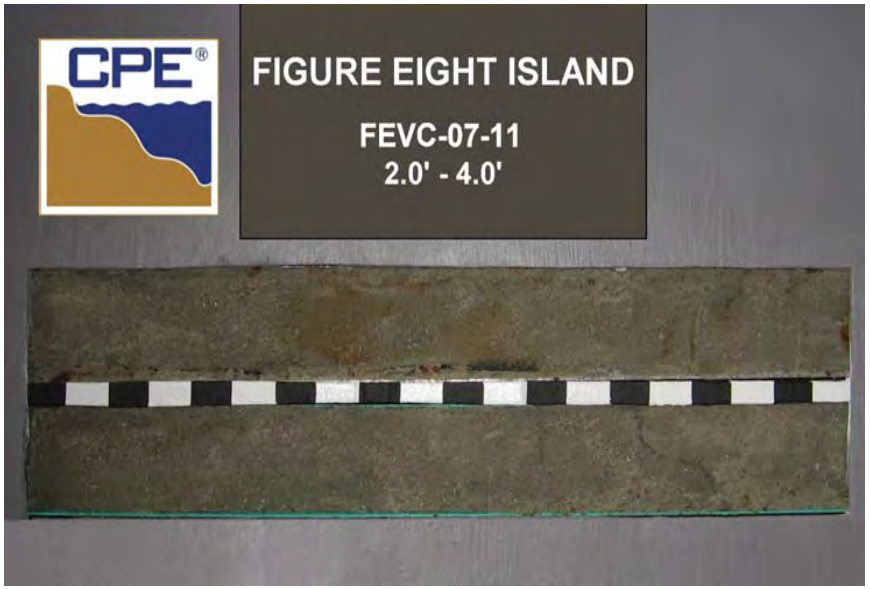

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
8.0' - 10.0'

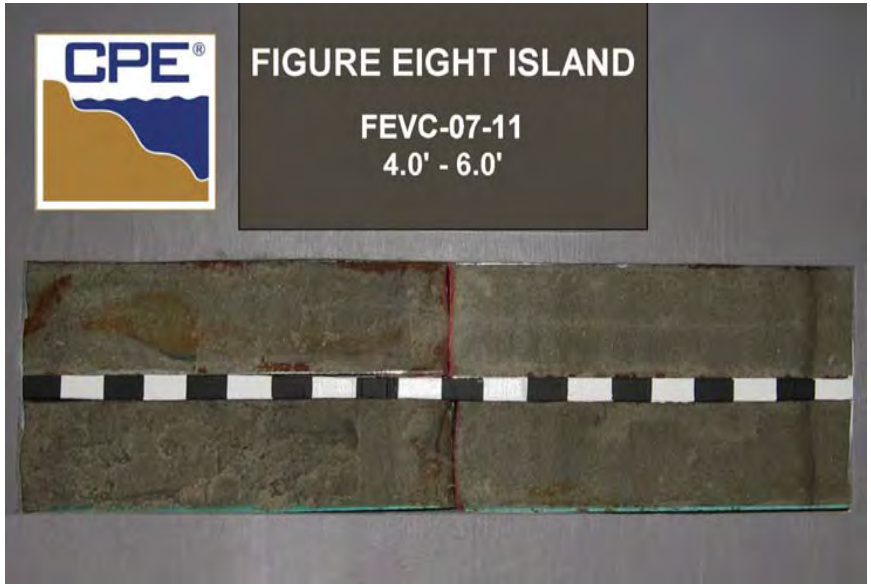

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
10.0' - 12.0'

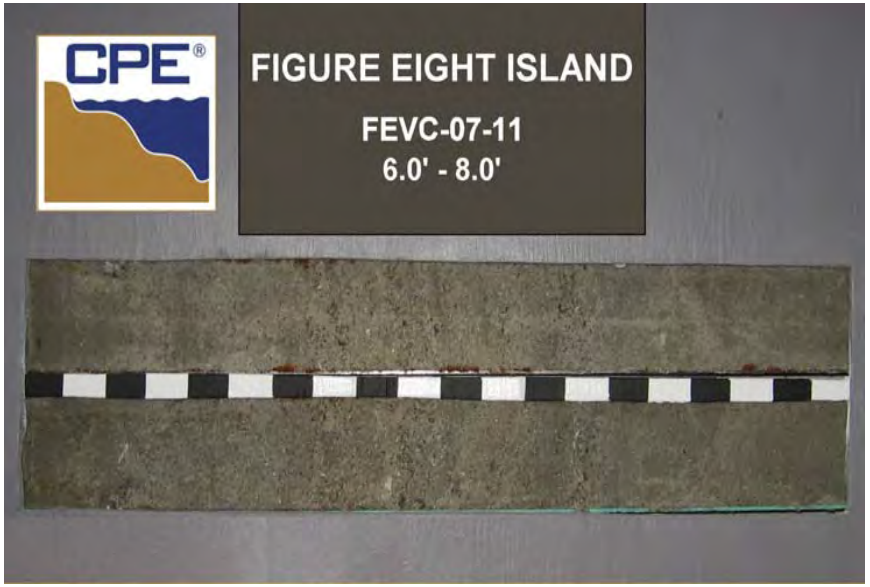

CPE
FIGURE EIGHT ISLAND
FEVC-07-10
12.0' - 14.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-10
14.0' - 14.5'

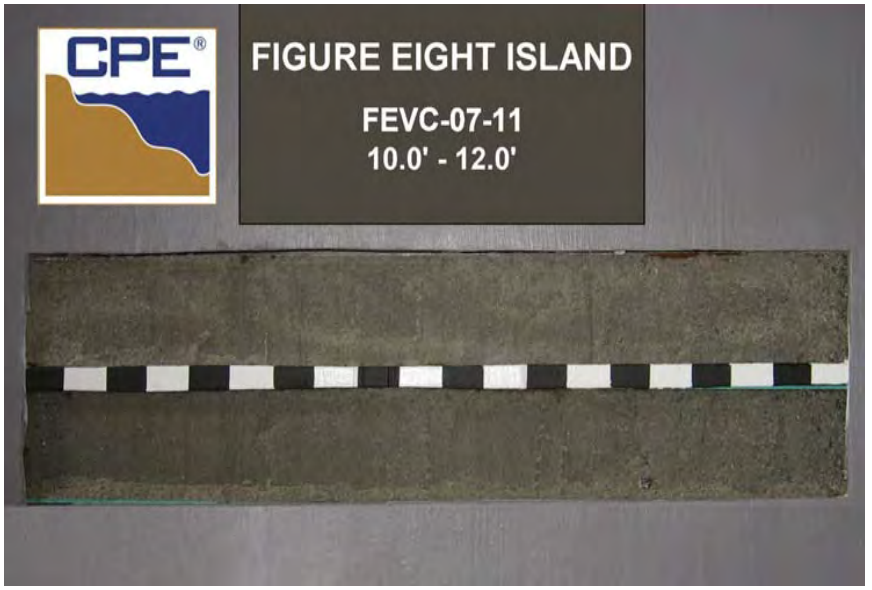

CPE
FIGURE EIGHT ISLAND
FEVC-07-11
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-11
2.0' - 4.0'

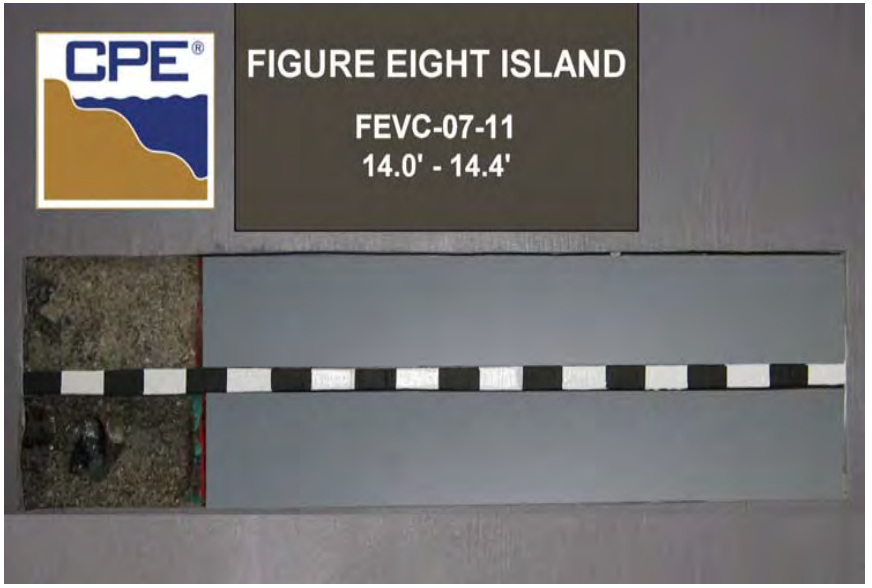

CPE
FIGURE EIGHT ISLAND
FEVC-07-11
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-11
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-11
8.0' - 10.0'

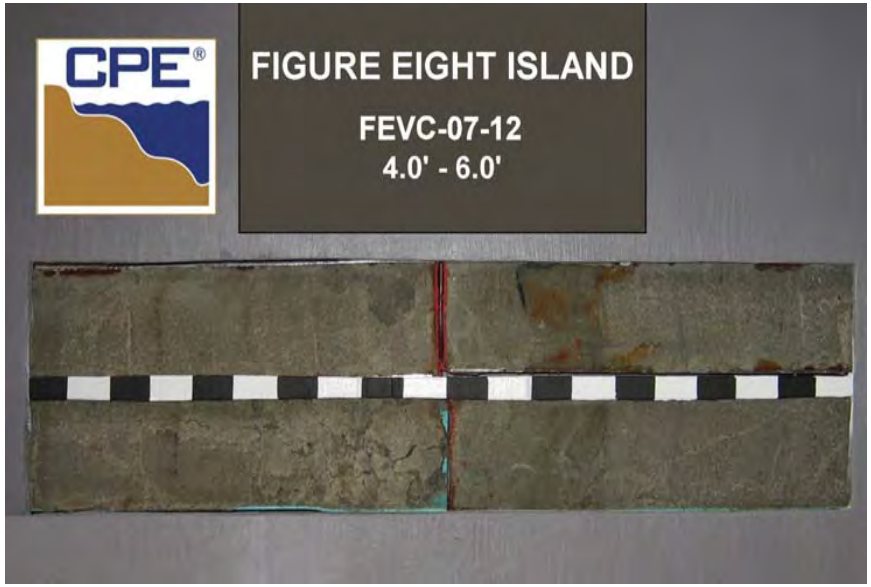

CPE
FIGURE EIGHT ISLAND
FEVC-07-11
10.0' - 12.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-11
12.0' - 14.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-11
14.0' - 14.4'


CPE
FIGURE EIGHT ISLAND
FEVC-07-12
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-12
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-12
4.0' - 6.0'

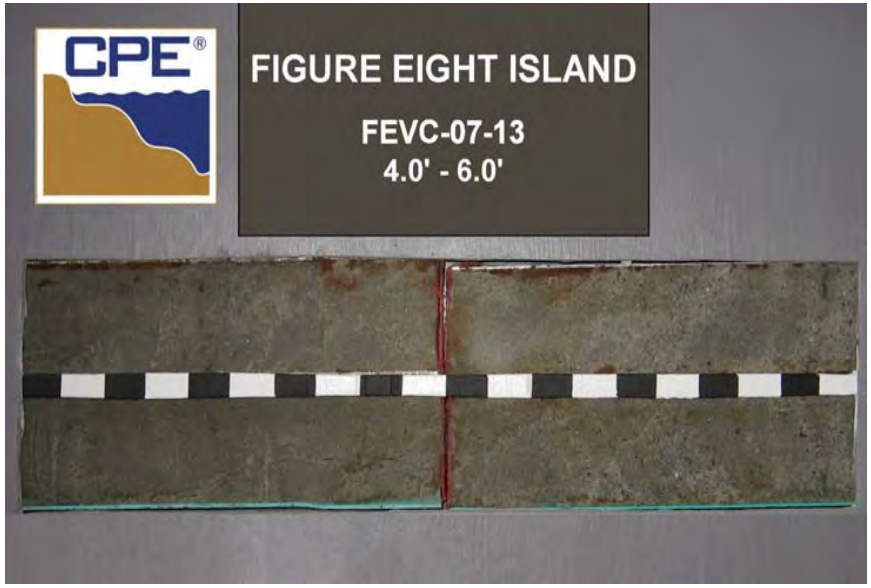

CPE
FIGURE EIGHT ISLAND
FEVC-07-12
6.0' - 8.0'

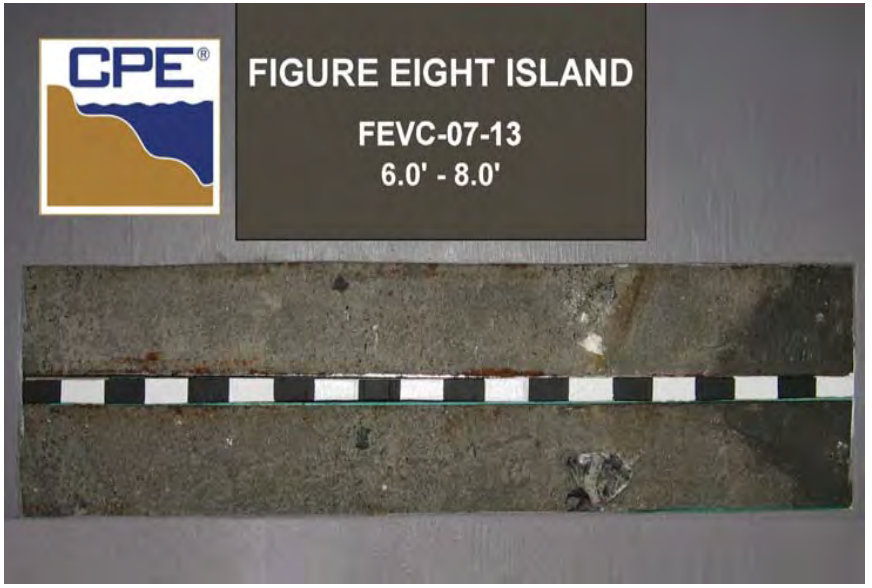

CPE®
FIGURE EIGHT ISLAND
FEVC-07-12
8.0' - 10.0'

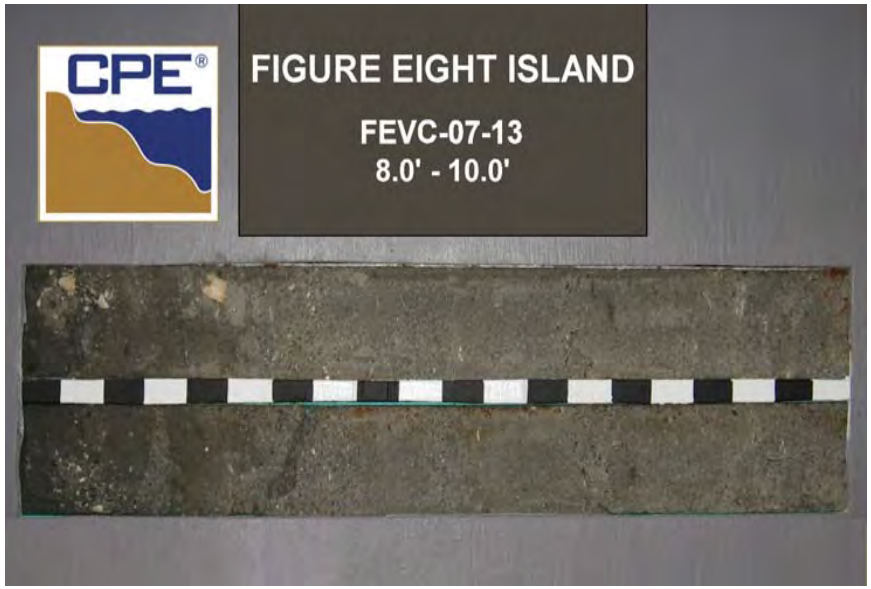

CPE®
FIGURE EIGHT ISLAND
FEVC-07-12
10.0' - 12.0'

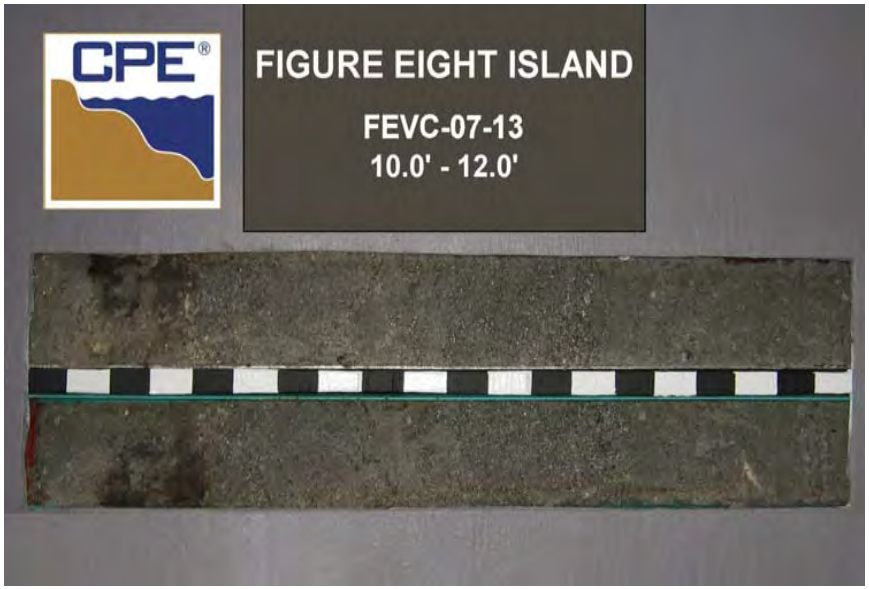

CPE
FIGURE EIGHT ISLAND
FEVC-07-13
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-13
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-13
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-13
6.0' - 8.0'

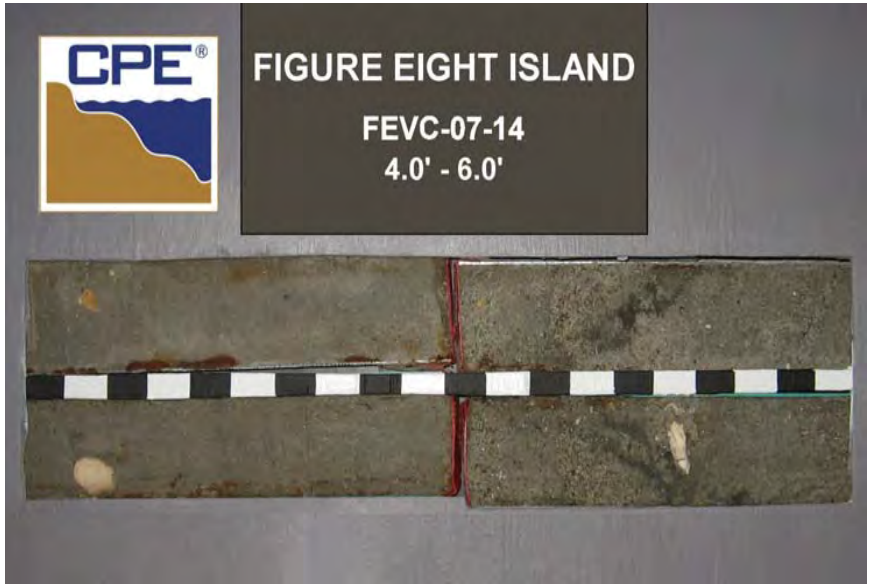

CPE
FIGURE EIGHT ISLAND
FEVC-07-13
8.0' - 10.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-13
10.0' - 12.0'

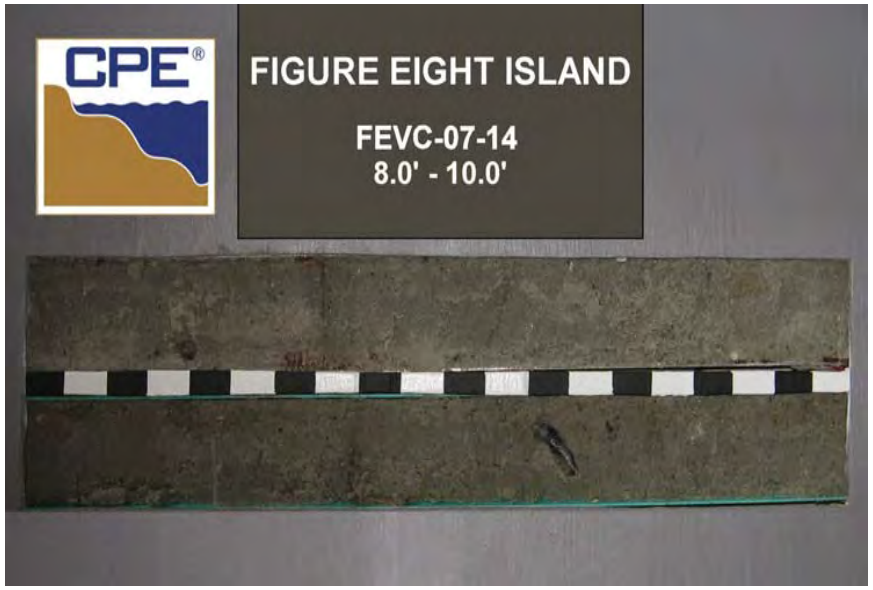

CPE
FIGURE EIGHT ISLAND
FEVC-07-13
12.0' - 14.0'

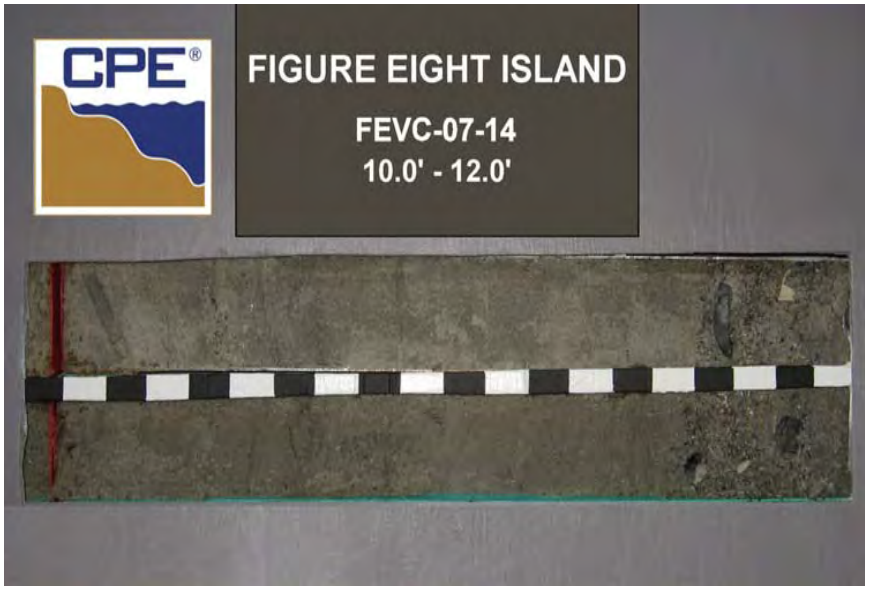

CPE
FIGURE EIGHT ISLAND
FEVC-07-14
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-14
2.0' - 4.0'

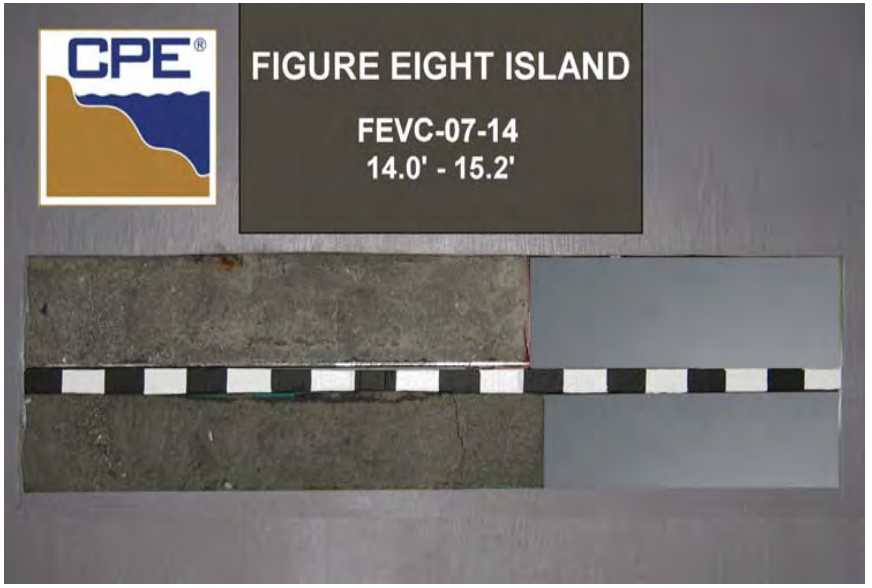

CPE
FIGURE EIGHT ISLAND
FEVC-07-14
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-14
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-14
8.0' - 10.0'

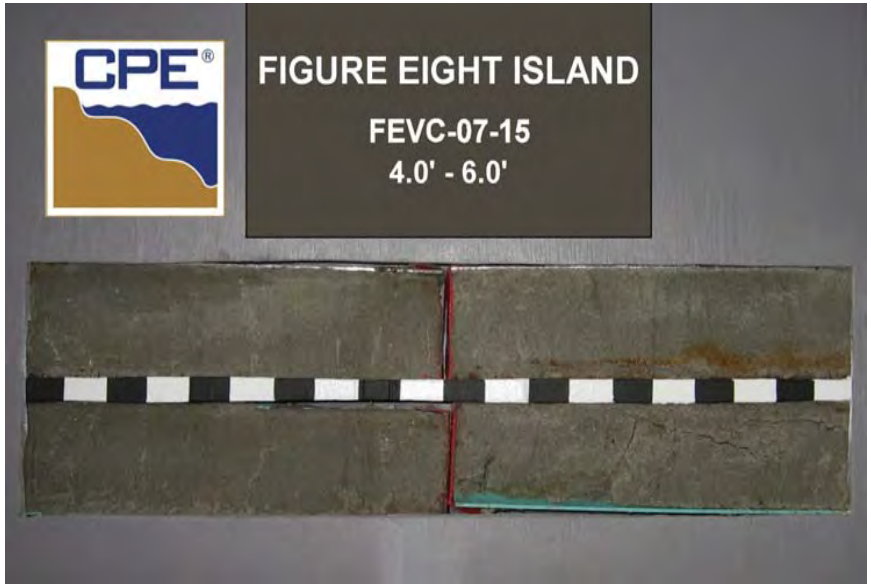

CPE
FIGURE EIGHT ISLAND
FEVC-07-14
10.0' - 12.0'

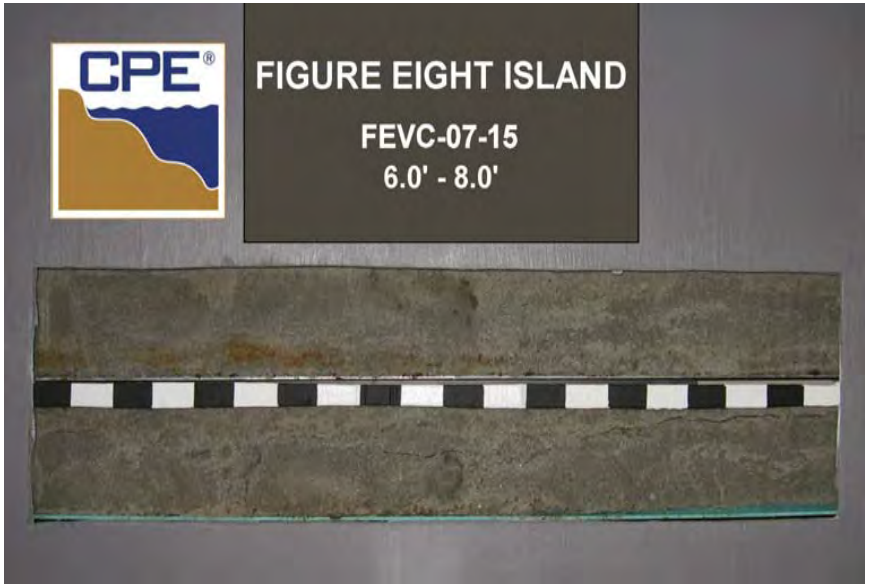

CPE
FIGURE EIGHT ISLAND
FEVC-07-14
12.0' - 14.0'

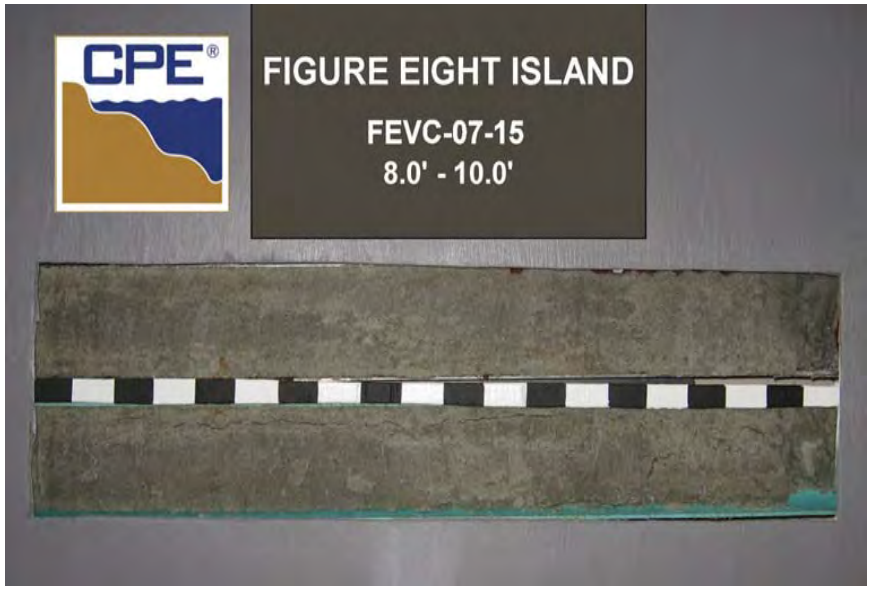

CPE
FIGURE EIGHT ISLAND
FEVC-07-14
14.0' - 15.2'

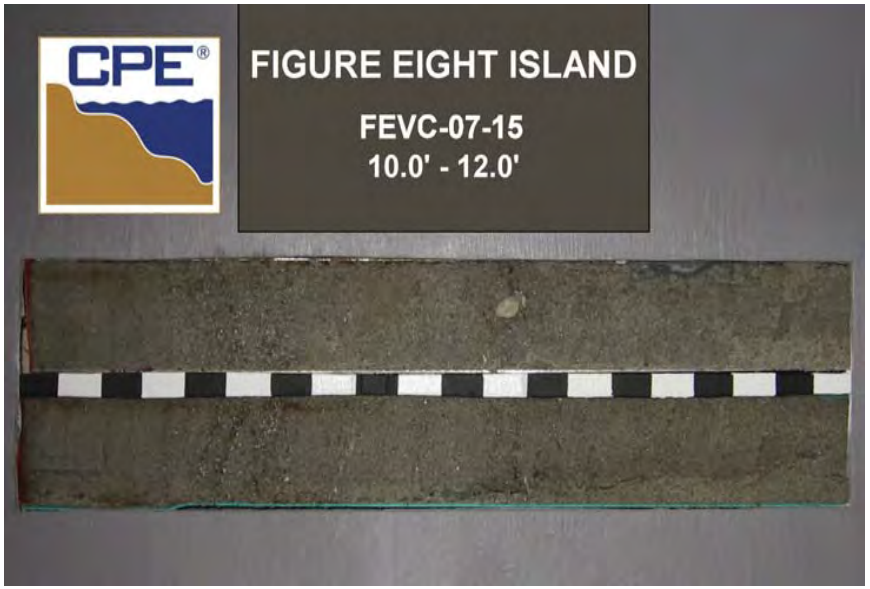

CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
0.0' - 2.0'

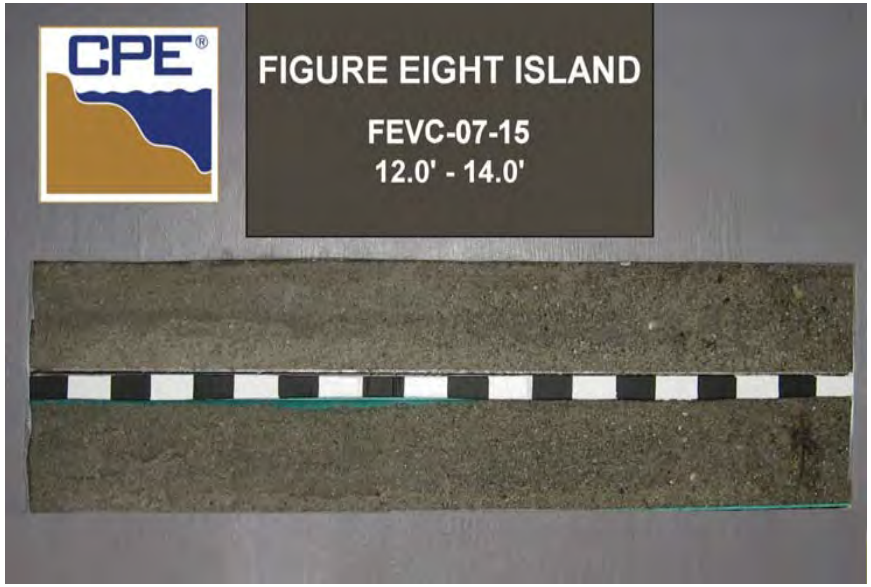

CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
2.0' - 4.0'

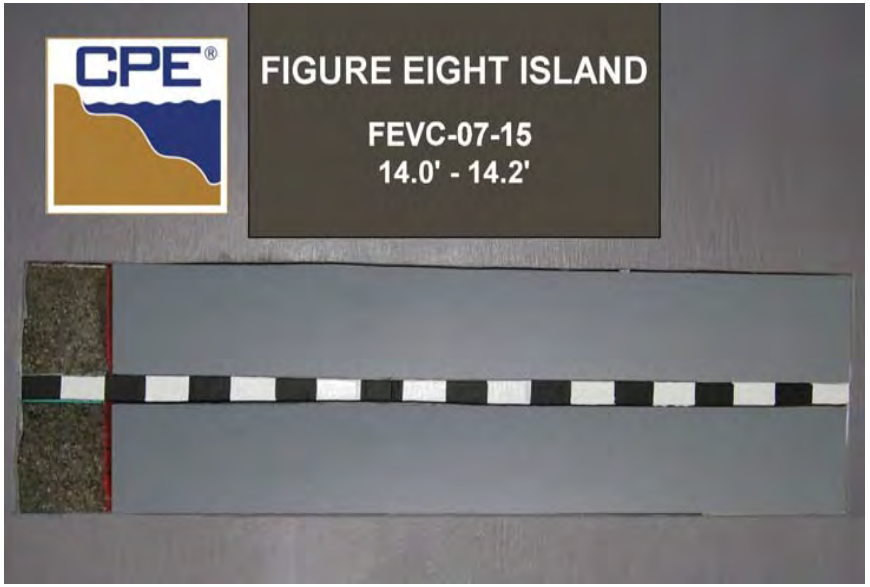

CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
4.0' - 6.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
6.0' - 8.0'

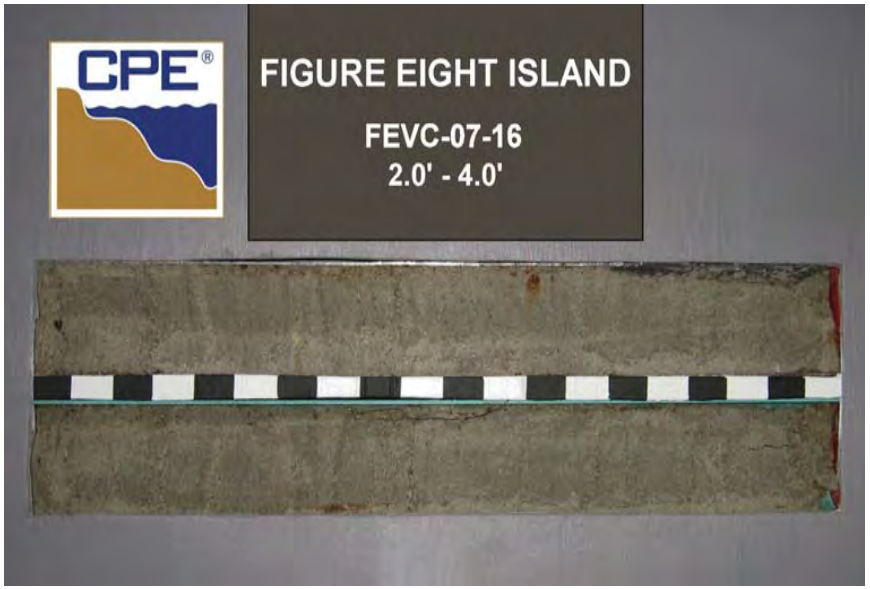

CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
8.0' - 10.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
10.0' - 12.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
12.0' - 14.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-15
14.0' - 14.2'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16
0.0' - 2.0'

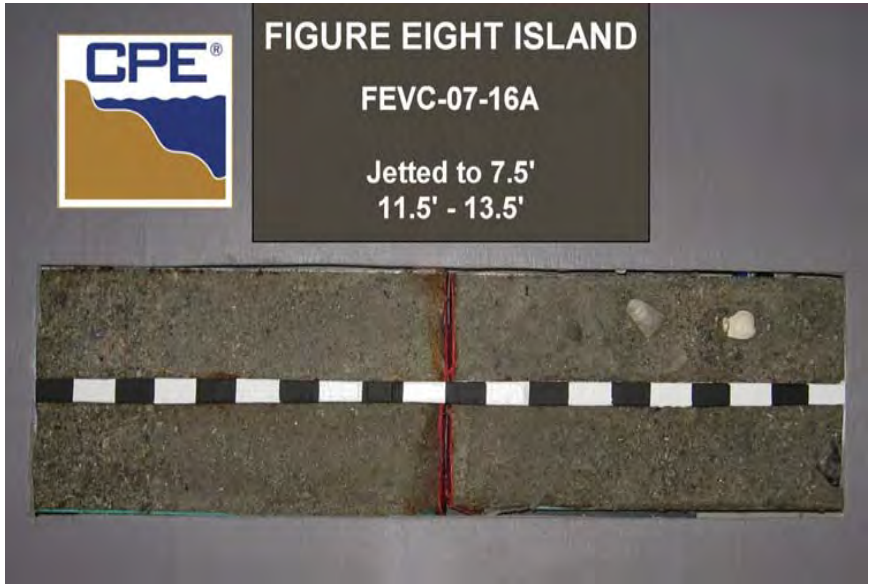

CPE
FIGURE EIGHT ISLAND
FEVC-07-16
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16
6.0' - 8.0'

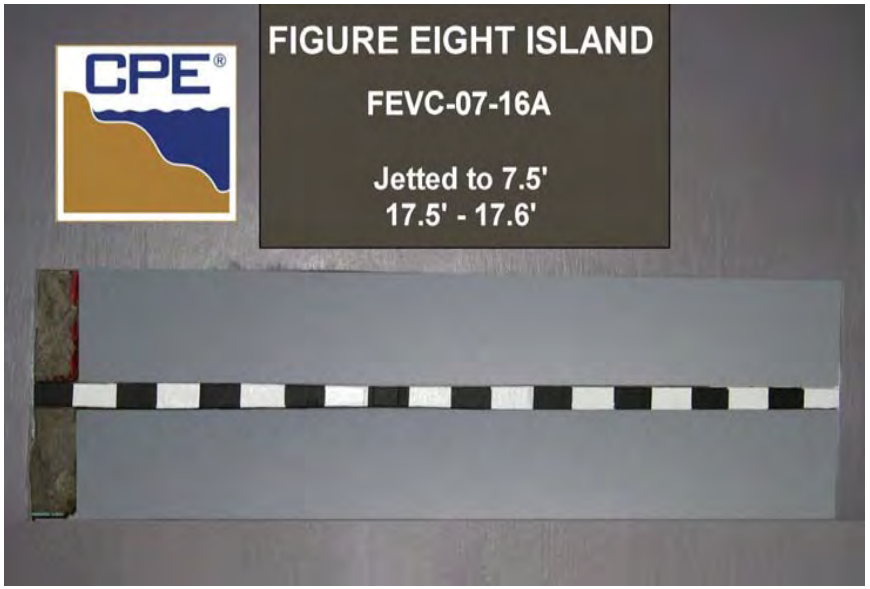

CPE
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
7.5' - 9.5'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
9.5' - 11.5'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
11.5' - 13.5'


CPE
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
13.5' - 15.5'

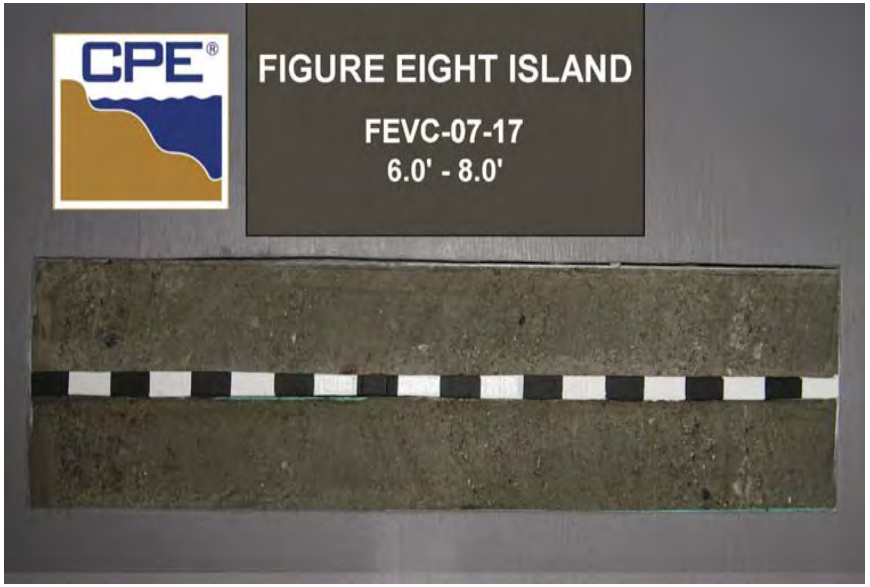

CPE®
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
15.5' - 17.5'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-16A
Jetted to 7.5'
17.5' - 17.6'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17
2.0' - 4.0'

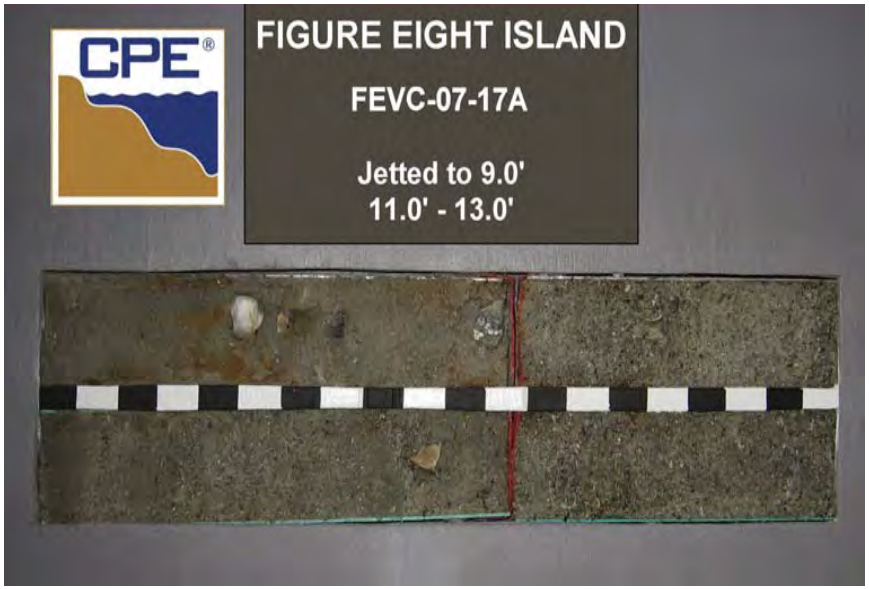

CPE
FIGURE EIGHT ISLAND
FEVC-07-17
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17
8.0' - 10.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17
10.0' - 11.9'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17A
Jetted to 9.0'
9.0' - 11.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17A
Jetted to 9.0'
11.0' - 13.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17A
Jetted to 9.0'
13.0' - 15.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-17A
Jetted to 9.0'
15.0' - 17.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-17A
Jetted to 9.0'
17.0' - 18.2'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
2.0' - 4.0'

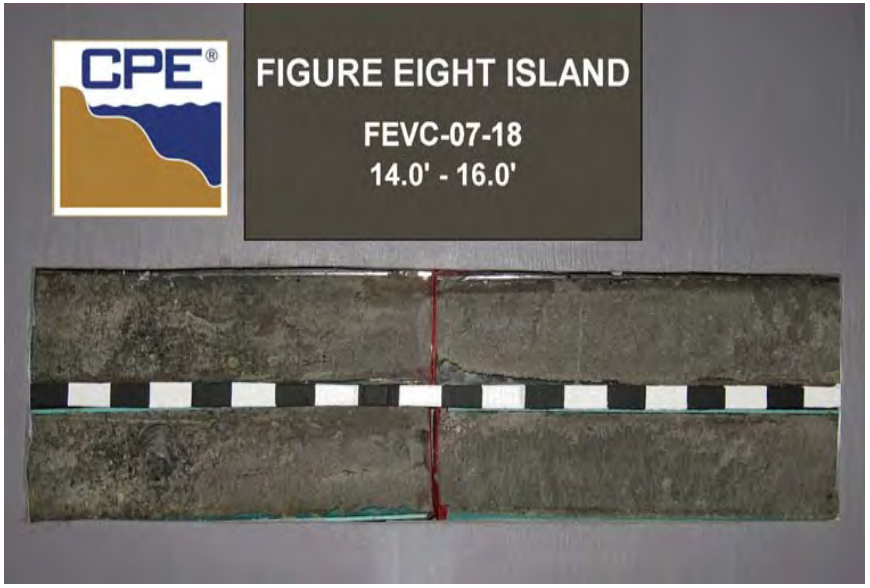

CPE
FIGURE EIGHT ISLAND
FEVC-07-18
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
8.0' - 10.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
10.0' - 12.0'

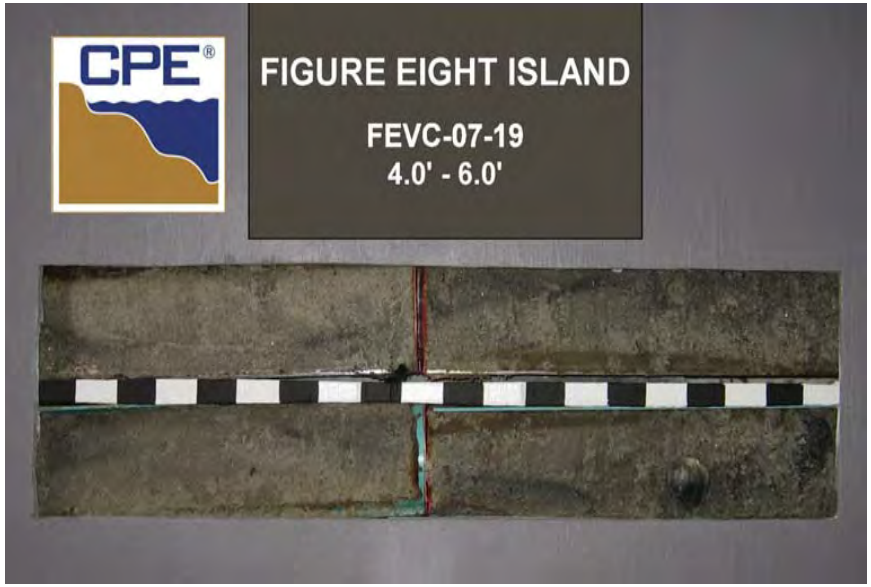

CPE
FIGURE EIGHT ISLAND
FEVC-07-18
12.0' - 14.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-18
14.0' - 16.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-18
16.0' - 16.3'

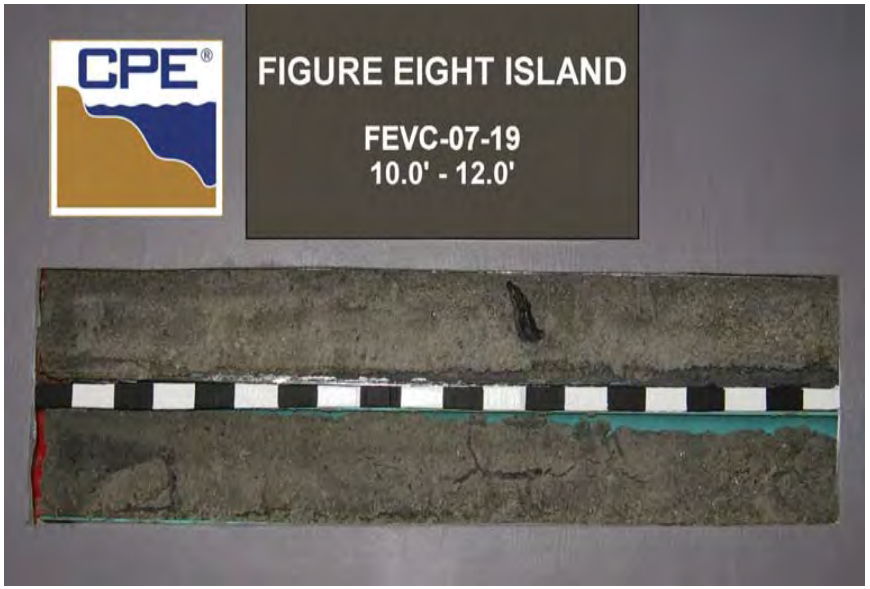

CPE
FIGURE EIGHT ISLAND
FEVC-07-19
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-19
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-19
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-19
6.0' - 8.0'


CPE®
FIGURE EIGHT ISLAND
FEVC-07-19
8.0' - 10.0'

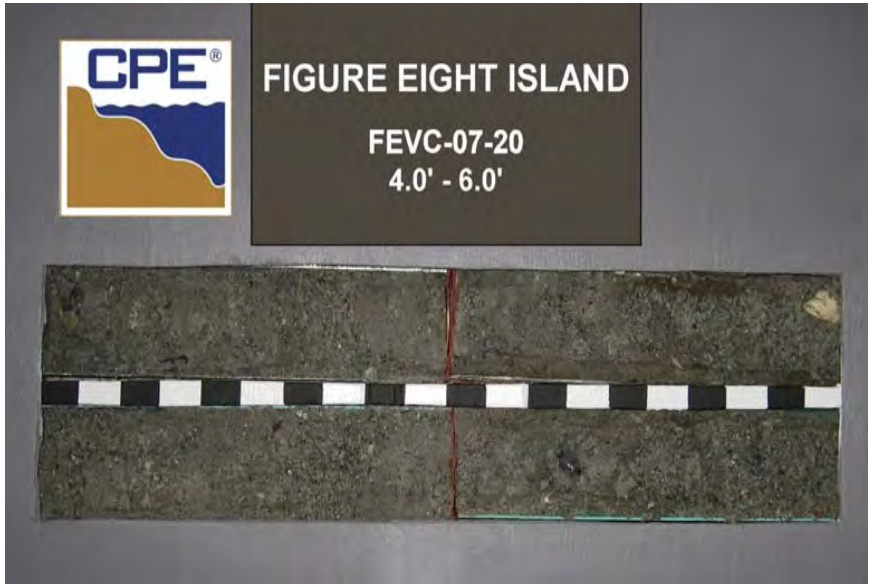

CPE®
FIGURE EIGHT ISLAND
FEVC-07-19
10.0' - 12.0'

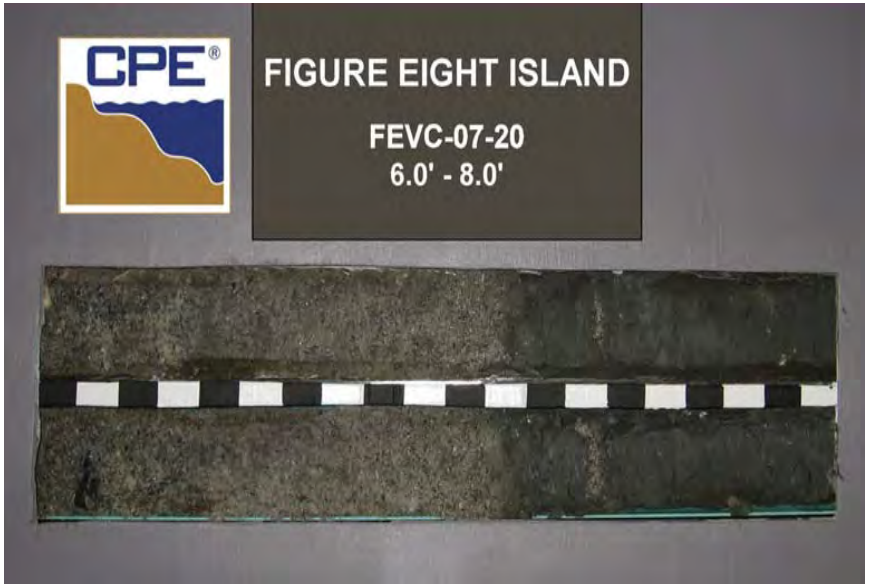

CPE®
FIGURE EIGHT ISLAND
FEVC-07-19
12.0' - 14.0'

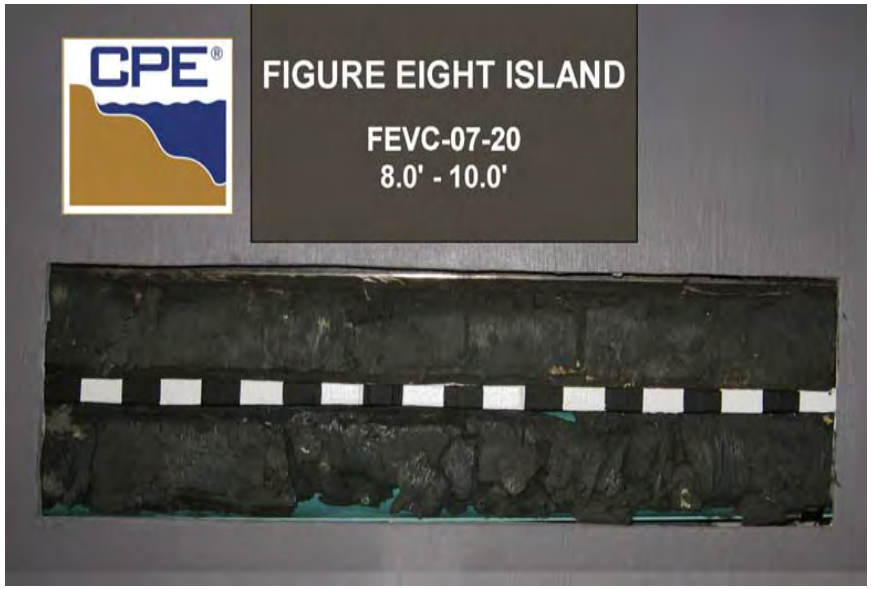

CPE®
FIGURE EIGHT ISLAND
FEVC-07-19
14.0' - 15.2'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
0.0' - 2.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
2.0' - 4.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
4.0' - 6.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
6.0' - 8.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
8.0' - 10.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
10.0' - 12.0'


CPE
FIGURE EIGHT ISLAND
FEVC-07-20
12.0' - 13.2'

APPENDIX 19

2007 CPENC Individual Vibracore Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-01 #1

Analysis Date: 05-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,205	198,940	North Carolina State Plane	-16.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-7/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.26	90.71	0.01	0.00	#200 - 0.65 #230 - 0.60		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.08	0.09	0.08	0.09
5	-2.00	4.00	0.08	0.09	0.16	0.18
7	-1.50	2.83	0.00	0.00	0.16	0.18
10	-1.00	2.00	0.06	0.07	0.22	0.25
14	-0.50	1.41	0.20	0.22	0.42	0.47
18	0.00	1.00	0.21	0.23	0.63	0.70
25	0.50	0.71	0.40	0.44	1.03	1.14
35	1.00	0.50	0.70	0.77	1.73	1.91
45	1.50	0.35	1.76	1.93	3.49	3.84
60	2.00	0.25	7.20	7.89	10.69	11.73
80	2.50	0.18	38.88	42.60	49.57	54.33
120	3.00	0.13	36.81	40.34	86.38	94.67
170	3.50	0.09	3.97	4.35	90.35	99.02
200	3.75	0.07	0.30	0.33	90.65	99.35
230	4.00	0.06	0.05	0.05	90.70	99.40

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.04	2.87	2.76	2.45	2.16	2.05	1.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.53	-2.67	18.94

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-01 #2

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,205	198,940	North Carolina State Plane	-18.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.80	97.69	0.03	0.02	#200 - 1.32 #230 - 1.18		5	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.16	0.16	0.18	0.18
10	-1.00	2.00	0.08	0.08	0.26	0.26
14	-0.50	1.41	0.15	0.15	0.41	0.41
18	0.00	1.00	0.14	0.14	0.55	0.55
25	0.50	0.71	0.26	0.26	0.81	0.81
35	1.00	0.50	0.42	0.43	1.23	1.24
45	1.50	0.35	0.91	0.92	2.14	2.16
60	2.00	0.25	4.50	4.55	6.64	6.71
80	2.50	0.18	32.69	33.09	39.33	39.80
120	3.00	0.13	47.68	48.26	87.01	88.06
170	3.50	0.09	9.78	9.90	96.79	97.96
200	3.75	0.07	0.71	0.72	97.50	98.68
230	4.00	0.06	0.14	0.14	97.64	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.35	2.96	2.86	2.61	2.28	2.14	1.81

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.54	0.17	0.51	-2.59	19.58

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-01 #3

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,205	198,940	North Carolina State Plane	-20.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.36	84.39	0.00	0.02	#200 - 1.16 #230 - 1.15		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.04	0.03	0.04
14	-0.50	1.41	0.04	0.05	0.07	0.09
18	0.00	1.00	0.03	0.04	0.10	0.13
25	0.50	0.71	0.09	0.11	0.19	0.24
35	1.00	0.50	0.15	0.18	0.34	0.42
45	1.50	0.35	0.73	0.86	1.07	1.28
60	2.00	0.25	6.78	7.94	7.85	9.22
80	2.50	0.18	39.56	46.34	47.41	55.56
120	3.00	0.13	34.54	40.46	81.95	96.02
170	3.50	0.09	2.33	2.73	84.28	98.75
200	3.75	0.07	0.08	0.09	84.36	98.84
230	4.00	0.06	0.01	0.01	84.37	98.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.85	2.74	2.44	2.17	2.07	1.73

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.39	-1.21	10.08

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-01 #4

Analysis Date: 07-02-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,205	198,940	North Carolina State Plane	-22.5 NAVD 88

USCS:	Munsell:	Comments:
SP-SM	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.04	77.88	0.01	0.00	#200 - 8.56 #230 - 8.43			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
14	-0.50	1.41	0.05	0.06	0.09	0.11
18	0.00	1.00	0.08	0.09	0.17	0.20
25	0.50	0.71	0.12	0.14	0.29	0.34
35	1.00	0.50	0.14	0.16	0.43	0.50
45	1.50	0.35	0.30	0.35	0.73	0.85
60	2.00	0.25	1.59	1.87	2.32	2.72
80	2.50	0.18	17.62	20.72	19.94	23.44
120	3.00	0.13	47.04	55.32	66.98	78.76
170	3.50	0.09	10.29	12.10	77.27	90.86
200	3.75	0.07	0.49	0.58	77.76	91.44
230	4.00	0.06	0.11	0.13	77.87	91.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	3.22	2.97	2.74	2.51	2.32	2.06

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.67	0.16	0.4	-1.95	16.27

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-02 #1

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,733	202,440	North Carolina State Plane	-10.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.14	85.29	0.00	0.01	#200 - 0.99 #230 - 0.98		11	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.16	0.19	0.21	0.25
10	-1.00	2.00	0.41	0.48	0.62	0.73
14	-0.50	1.41	0.70	0.81	1.32	1.54
18	0.00	1.00	1.03	1.20	2.35	2.74
25	0.50	0.71	1.59	1.85	3.94	4.59
35	1.00	0.50	2.66	3.09	6.60	7.68
45	1.50	0.35	6.81	7.91	13.41	15.59
60	2.00	0.25	24.36	28.28	37.77	43.87
80	2.50	0.18	34.45	39.99	72.22	83.86
120	3.00	0.13	12.48	14.49	84.70	98.35
170	3.50	0.09	0.55	0.64	85.25	98.99
200	3.75	0.07	0.02	0.02	85.27	99.01
230	4.00	0.06	0.01	0.01	85.28	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.50	2.39	2.08	1.67	1.51	0.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.94	0.26	0.7	-1.85	8.35

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-02 #2

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,733	202,440	North Carolina State Plane	-16.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.93	83.03	0.00	0.01	#200 - 1.10 #230 - 1.09		8	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.04	0.05	0.05	0.06
14	-0.50	1.41	0.09	0.11	0.14	0.17
18	0.00	1.00	0.12	0.14	0.26	0.31
25	0.50	0.71	0.33	0.39	0.59	0.70
35	1.00	0.50	0.76	0.91	1.35	1.61
45	1.50	0.35	2.32	2.76	3.67	4.37
60	2.00	0.25	11.18	13.32	14.85	17.69
80	2.50	0.18	42.51	50.65	57.36	68.34
120	3.00	0.13	24.71	29.44	82.07	97.78
170	3.50	0.09	0.92	1.10	82.99	98.88
200	3.75	0.07	0.02	0.02	83.01	98.90
230	4.00	0.06	0.01	0.01	83.02	98.91

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.77	2.61	2.32	2.07	1.94	1.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.28	0.21	0.46	-1.66	10.12

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-02 #3

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,733	202,440	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.59	86.52	0.01	0.00	#200 - 1.25 #230 - 1.24		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
25	0.50	0.71	0.04	0.05	0.05	0.06
35	1.00	0.50	0.13	0.15	0.18	0.21
45	1.50	0.35	0.51	0.58	0.69	0.79
60	2.00	0.25	6.52	7.44	7.21	8.23
80	2.50	0.18	54.67	62.42	61.88	70.65
120	3.00	0.13	23.89	27.27	85.77	97.92
170	3.50	0.09	0.70	0.80	86.47	98.72
200	3.75	0.07	0.03	0.03	86.50	98.75
230	4.00	0.06	0.01	0.01	86.51	98.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.74	2.58	2.33	2.13	2.06	1.78

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	0.31	-0.4	5.78

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-03 #1

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,093	200,758	North Carolina State Plane	-16.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.18	86.07	0.01	0.00	#200 - 1.33 #230 - 1.28			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.00	0.00	0.02	0.02
14	-0.50	1.41	0.01	0.01	0.03	0.03
18	0.00	1.00	0.04	0.05	0.07	0.08
25	0.50	0.71	0.06	0.07	0.13	0.15
35	1.00	0.50	0.09	0.10	0.22	0.25
45	1.50	0.35	0.41	0.47	0.63	0.72
60	2.00	0.25	4.19	4.81	4.82	5.53
80	2.50	0.18	36.11	41.42	40.93	46.95
120	3.00	0.13	40.77	46.77	81.70	93.72
170	3.50	0.09	4.09	4.69	85.79	98.41
200	3.75	0.07	0.23	0.26	86.02	98.67
230	4.00	0.06	0.04	0.05	86.06	98.72

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.14	2.90	2.80	2.53	2.24	2.13	1.94

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.37	-1	10.36

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-03 #2

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,093	200,758	North Carolina State Plane	-19.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.57	84.36	0.01	0.19	#200 - 1.66 #230 - 1.62			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.01	0.01	0.02	0.02
25	0.50	0.71	0.01	0.01	0.03	0.03
35	1.00	0.50	0.05	0.06	0.08	0.09
45	1.50	0.35	0.22	0.26	0.30	0.35
60	2.00	0.25	2.56	2.99	2.86	3.34
80	2.50	0.18	39.22	45.83	42.08	49.17
120	3.00	0.13	38.27	44.72	80.35	93.89
170	3.50	0.09	3.64	4.25	83.99	98.14
200	3.75	0.07	0.17	0.20	84.16	98.34
230	4.00	0.06	0.03	0.04	84.19	98.38

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.89	2.79	2.51	2.24	2.14	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.33	-0.23	5.42

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-03 #3

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,392,093	200,758	North Carolina State Plane	-20.6 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.11	82.42	0.03	0.00	#200 - 2.34 #230 - 2.05			4

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	0.42	0.50	0.42	0.50
5/16"	-3.00	8.00	1.13	1.34	1.55	1.84
3.5	-2.50	5.66	1.38	1.64	2.93	3.48
4	-2.25	4.76	0.00	0.00	2.93	3.48
5	-2.00	4.00	0.29	0.34	3.22	3.82
7	-1.50	2.83	0.43	0.51	3.65	4.33
10	-1.00	2.00	0.41	0.49	4.06	4.82
14	-0.50	1.41	0.44	0.52	4.50	5.34
18	0.00	1.00	0.37	0.44	4.87	5.78
25	0.50	0.71	0.41	0.49	5.28	6.27
35	1.00	0.50	0.46	0.55	5.74	6.82
45	1.50	0.35	0.66	0.78	6.40	7.60
60	2.00	0.25	2.30	2.73	8.70	10.33
80	2.50	0.18	18.52	22.02	27.22	32.35
120	3.00	0.13	42.59	50.64	69.81	82.99
170	3.50	0.09	11.49	13.66	81.30	96.65
200	3.75	0.07	0.85	1.01	82.15	97.66
230	4.00	0.06	0.24	0.29	82.39	97.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.44	3.04	2.92	2.67	2.33	2.13	-0.83

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	1.28	-3.28	13.71

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-04 #1

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,811	199,871	North Carolina State Plane	-16.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.19	84.19	0.01	0.00	#200 - 1.22 #230 - 1.18			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.05	0.06	0.05	0.06
5	-2.00	4.00	0.02	0.02	0.07	0.08
7	-1.50	2.83	0.01	0.01	0.08	0.09
10	-1.00	2.00	0.08	0.09	0.16	0.18
14	-0.50	1.41	0.06	0.07	0.22	0.25
18	0.00	1.00	0.06	0.07	0.28	0.32
25	0.50	0.71	0.15	0.18	0.43	0.50
35	1.00	0.50	0.22	0.26	0.65	0.76
45	1.50	0.35	0.53	0.62	1.18	1.38
60	2.00	0.25	5.30	6.22	6.48	7.60
80	2.50	0.18	33.17	38.94	39.65	46.54
120	3.00	0.13	40.28	47.28	79.93	93.82
170	3.50	0.09	4.07	4.78	84.00	98.60
200	3.75	0.07	0.15	0.18	84.15	98.78
230	4.00	0.06	0.03	0.04	84.18	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.12	2.90	2.80	2.54	2.22	2.11	1.79

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.48	0.18	0.44	-2.68	23.95

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-04 #2

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,391,811	199,871	North Carolina State Plane	-20.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.31	84.30	0.00	0.00	#200 - 1.20 #230 - 1.18			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.04	0.05	0.05	0.06
25	0.50	0.71	0.04	0.05	0.09	0.11
35	1.00	0.50	0.12	0.14	0.21	0.25
45	1.50	0.35	0.59	0.69	0.80	0.94
60	2.00	0.25	5.05	5.92	5.85	6.86
80	2.50	0.18	41.43	48.56	47.28	55.42
120	3.00	0.13	33.08	38.78	80.36	94.20
170	3.50	0.09	3.75	4.40	84.11	98.60
200	3.75	0.07	0.17	0.20	84.28	98.80
230	4.00	0.06	0.02	0.02	84.30	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.09	2.87	2.75	2.44	2.19	2.09	1.84

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.45	0.18	0.37	-0.5	6.2

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-05 #1

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,867	199,037	North Carolina State Plane	-13.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.44	84.47	0.00	0.00	#200 - 1.15 #230 - 1.13		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
10	-1.00	2.00	0.02	0.02	0.06	0.07
14	-0.50	1.41	0.09	0.11	0.15	0.18
18	0.00	1.00	0.16	0.19	0.31	0.37
25	0.50	0.71	0.25	0.29	0.56	0.66
35	1.00	0.50	0.53	0.62	1.09	1.28
45	1.50	0.35	1.64	1.92	2.73	3.20
60	2.00	0.25	8.25	9.66	10.98	12.86
80	2.50	0.18	35.35	41.37	46.33	54.23
120	3.00	0.13	35.10	41.08	81.43	95.31
170	3.50	0.09	2.93	3.43	84.36	98.74
200	3.75	0.07	0.09	0.11	84.45	98.85
230	4.00	0.06	0.02	0.02	84.47	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.86	2.75	2.45	2.15	2.04	1.59

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.47	-1.81	11.74

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-05 #2

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,867	199,037	North Carolina State Plane	-19.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.41	84.56	0.00	0.00	#200 - 1.00 #230 - 0.98		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.05	0.06	0.10	0.12
10	-1.00	2.00	0.15	0.18	0.25	0.30
14	-0.50	1.41	0.40	0.47	0.65	0.77
18	0.00	1.00	0.34	0.40	0.99	1.17
25	0.50	0.71	0.54	0.63	1.53	1.80
35	1.00	0.50	0.64	0.75	2.17	2.55
45	1.50	0.35	1.92	2.25	4.09	4.80
60	2.00	0.25	11.74	13.75	15.83	18.55
80	2.50	0.18	45.37	53.12	61.20	71.67
120	3.00	0.13	20.79	24.34	81.99	96.01
170	3.50	0.09	2.43	2.85	84.42	98.86
200	3.75	0.07	0.12	0.14	84.54	99.00
230	4.00	0.06	0.02	0.02	84.56	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.75	2.57	2.30	2.06	1.91	1.51

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.25	0.21	0.55	-2.44	15.19

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-06 #1

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,210	198,965	North Carolina State Plane	-13.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-7/1 Dry - 2.5Y-7/1 Washed - 2.5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.01	88.18	0.00	0.00	#200 - 0.95 #230 - 0.94			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	1.72	1.93	1.72	1.93
5/16"	-3.00	8.00	0.00	0.00	1.72	1.93
3.5	-2.50	5.66	0.40	0.45	2.12	2.38
4	-2.25	4.76	0.26	0.29	2.38	2.67
5	-2.00	4.00	0.57	0.64	2.95	3.31
7	-1.50	2.83	1.29	1.45	4.24	4.76
10	-1.00	2.00	1.34	1.51	5.58	6.27
14	-0.50	1.41	1.57	1.76	7.15	8.03
18	0.00	1.00	1.94	2.18	9.09	10.21
25	0.50	0.71	2.56	2.88	11.65	13.09
35	1.00	0.50	4.47	5.02	16.12	18.11
45	1.50	0.35	11.03	12.39	27.15	30.50
60	2.00	0.25	27.35	30.73	54.50	61.23
80	2.50	0.18	25.03	28.12	79.53	89.35
120	3.00	0.13	8.21	9.22	87.74	98.57
170	3.50	0.09	0.42	0.47	88.16	99.04
200	3.75	0.07	0.01	0.01	88.17	99.05
230	4.00	0.06	0.01	0.01	88.18	99.06

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.81	2.40	2.24	1.82	1.28	0.79	-1.42

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.49	0.36	1.26	-2.21	8.4

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-06 #2

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,210	198,965	North Carolina State Plane	-16.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.94	82.81	0.00	0.01	#200 - 1.38 #230 - 1.34			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.09	0.11	0.09	0.11
7	-1.50	2.83	0.05	0.06	0.14	0.17
10	-1.00	2.00	0.32	0.38	0.46	0.55
14	-0.50	1.41	0.33	0.39	0.79	0.94
18	0.00	1.00	0.34	0.41	1.13	1.35
25	0.50	0.71	0.48	0.57	1.61	1.92
35	1.00	0.50	0.87	1.04	2.48	2.96
45	1.50	0.35	2.02	2.41	4.50	5.37
60	2.00	0.25	6.37	7.59	10.87	12.96
80	2.50	0.18	37.26	44.39	48.13	57.35
120	3.00	0.13	30.23	36.01	78.36	93.36
170	3.50	0.09	4.21	5.02	82.57	98.38
200	3.75	0.07	0.20	0.24	82.77	98.62
230	4.00	0.06	0.03	0.04	82.80	98.66

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.87	2.75	2.42	2.14	2.03	1.42

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.35	0.20	0.61	-2.68	15.62

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-06 #3

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,210	198,965	North Carolina State Plane	-17.4 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.07	87.07	0.00	0.00	#200 - 1.15 #230 - 1.14			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.42	0.48	0.42	0.48
4	-2.25	4.76	0.15	0.17	0.57	0.65
5	-2.00	4.00	0.26	0.30	0.83	0.95
7	-1.50	2.83	0.66	0.75	1.49	1.70
10	-1.00	2.00	0.89	1.01	2.38	2.71
14	-0.50	1.41	2.05	2.33	4.43	5.04
18	0.00	1.00	2.25	2.55	6.68	7.59
25	0.50	0.71	2.86	3.25	9.54	10.84
35	1.00	0.50	3.85	4.37	13.39	15.21
45	1.50	0.35	9.70	11.01	23.09	26.22
60	2.00	0.25	22.81	25.90	45.90	52.12
80	2.50	0.18	32.74	37.17	78.64	89.29
120	3.00	0.13	8.04	9.13	86.68	98.42
170	3.50	0.09	0.35	0.40	87.03	98.82
200	3.75	0.07	0.03	0.03	87.06	98.85
230	4.00	0.06	0.01	0.01	87.07	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.81	2.43	2.31	1.96	1.44	1.04	-0.51

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.68	0.31	0.97	-1.88	7.05

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-06 #4

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,210	198,965	North Carolina State Plane	-18.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.28	90.40	0.01	0.01	#200 - 0.99 #230 - 0.98			12

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	3.30	3.62	3.30	3.62
5/16"	-3.00	8.00	0.00	0.00	3.30	3.62
3.5	-2.50	5.66	2.53	2.77	5.83	6.39
4	-2.25	4.76	0.41	0.45	6.24	6.84
5	-2.00	4.00	1.70	1.86	7.94	8.70
7	-1.50	2.83	3.32	3.64	11.26	12.34
10	-1.00	2.00	4.05	4.44	15.31	16.78
14	-0.50	1.41	5.96	6.53	21.27	23.31
18	0.00	1.00	6.01	6.58	27.28	29.89
25	0.50	0.71	6.84	7.49	34.12	37.38
35	1.00	0.50	7.56	8.28	41.68	45.66
45	1.50	0.35	11.71	12.83	53.39	58.49
60	2.00	0.25	16.85	18.46	70.24	76.95
80	2.50	0.18	15.46	16.94	85.70	93.89
120	3.00	0.13	4.47	4.90	90.17	98.79
170	3.50	0.09	0.18	0.20	90.35	98.99
200	3.75	0.07	0.02	0.02	90.37	99.01
230	4.00	0.06	0.01	0.01	90.38	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.61	2.21	1.95	1.17	-0.37	-1.09	-3.00

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.65	0.64	1.65	-0.95	3.15

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-06 #5

Analysis Date: 06-18-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,210	198,965	North Carolina State Plane	-20.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
81.59	80.31	0.02	0.01	#200 - 1.68 #230 - 1.62			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	0.00	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	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.37	0.45	0.42	0.51
10	-1.00	2.00	0.28	0.34	0.70	0.85
14	-0.50	1.41	0.28	0.34	0.98	1.19
18	0.00	1.00	0.30	0.37	1.28	1.56
25	0.50	0.71	0.42	0.51	1.70	2.07
35	1.00	0.50	0.62	0.76	2.32	2.83
45	1.50	0.35	1.11	1.36	3.43	4.19
60	2.00	0.25	4.02	4.93	7.45	9.12
80	2.50	0.18	29.87	36.61	37.32	45.73
120	3.00	0.13	38.96	47.75	76.28	93.48
170	3.50	0.09	3.84	4.71	80.12	98.19
200	3.75	0.07	0.11	0.13	80.23	98.32
230	4.00	0.06	0.05	0.06	80.28	98.38

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.16	2.90	2.81	2.54	2.22	2.09	1.58

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.43	0.19	0.62	-3.45	20.56

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-07 #1

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,615	200,380	North Carolina State Plane	-12.4 NAVD 88

USCS:	Munsell:	Comments:
SP-SM	Wet - 5Y-5/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.86	84.92	4.19	0.00	#200 - 6.03 #230 - 5.97			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	0.00	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	0.50	0.58	0.50	0.58
7	-1.50	2.83	0.37	0.43	0.87	1.01
10	-1.00	2.00	0.28	0.33	1.15	1.34
14	-0.50	1.41	0.28	0.33	1.43	1.67
18	0.00	1.00	0.30	0.35	1.73	2.02
25	0.50	0.71	0.42	0.49	2.15	2.51
35	1.00	0.50	0.62	0.72	2.77	3.23
45	1.50	0.35	1.11	1.29	3.88	4.52
60	2.00	0.25	4.02	4.68	7.90	9.20
80	2.50	0.18	29.87	34.79	37.77	43.99
120	3.00	0.13	38.96	45.38	76.73	89.37
170	3.50	0.09	3.84	4.47	80.57	93.84
200	3.75	0.07	0.11	0.13	80.68	93.97
230	4.00	0.06	0.05	0.06	80.73	94.03

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
	2.94	2.84	2.57	2.23	2.10	1.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.71	-3.72	21.27

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-07 #2

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,615	200,380	North Carolina State Plane	-13.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-7/3 Washed - 2.5Y-7/3	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.28	82.13	0.01	0.00	#200 - 1.43 #230 - 1.41			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.07	0.08	0.07	0.08
14	-0.50	1.41	0.18	0.22	0.25	0.30
18	0.00	1.00	0.19	0.23	0.44	0.53
25	0.50	0.71	0.29	0.35	0.73	0.88
35	1.00	0.50	0.41	0.49	1.14	1.37
45	1.50	0.35	1.01	1.21	2.15	2.58
60	2.00	0.25	4.45	5.34	6.60	7.92
80	2.50	0.18	46.65	56.02	53.25	63.94
120	3.00	0.13	26.47	31.78	79.72	95.72
170	3.50	0.09	2.21	2.65	81.93	98.37
200	3.75	0.07	0.17	0.20	82.10	98.57
230	4.00	0.06	0.02	0.02	82.12	98.59

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.82	2.67	2.38	2.15	2.07	1.73

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	0.44	-2.3	16.84

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-07 #3

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,615	200,380	North Carolina State Plane	-16.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.50	83.48	0.01	0.00	#200 - 1.24 #230 - 1.23			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.05	0.06	0.06	0.07
18	0.00	1.00	0.08	0.09	0.14	0.16
25	0.50	0.71	0.10	0.12	0.24	0.28
35	1.00	0.50	0.12	0.14	0.36	0.42
45	1.50	0.35	0.26	0.31	0.62	0.73
60	2.00	0.25	2.69	3.18	3.31	3.91
80	2.50	0.18	52.81	62.50	56.12	66.41
120	3.00	0.13	25.73	30.45	81.85	96.86
170	3.50	0.09	1.53	1.81	83.38	98.67
200	3.75	0.07	0.08	0.09	83.46	98.76
230	4.00	0.06	0.01	0.01	83.47	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.79	2.64	2.37	2.17	2.10	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.33	-1.36	16.29

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-08 #1

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,181	200,226	North Carolina State Plane	-11.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 2.5Y-6/2 Washed - 2.5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.96	95.34	0.00	0.03	#200 - 0.70 #230 - 0.69			24

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	4.62	4.81	4.62	4.81
7/16"	-3.50	11.31	5.59	5.83	10.21	10.64
5/16"	-3.00	8.00	4.98	5.19	15.19	15.83
3.5	-2.50	5.66	3.45	3.60	18.64	19.43
4	-2.25	4.76	1.29	1.34	19.93	20.77
5	-2.00	4.00	1.24	1.29	21.17	22.06
7	-1.50	2.83	2.93	3.05	24.10	25.11
10	-1.00	2.00	4.18	4.36	28.28	29.47
14	-0.50	1.41	6.15	6.41	34.43	35.88
18	0.00	1.00	6.59	6.87	41.02	42.75
25	0.50	0.71	6.72	7.00	47.74	49.75
35	1.00	0.50	8.15	8.49	55.89	58.24
45	1.50	0.35	11.95	12.45	67.84	70.69
60	2.00	0.25	13.41	13.97	81.25	84.66
80	2.50	0.18	10.19	10.62	91.44	95.28
120	3.00	0.13	3.61	3.76	95.05	99.04
170	3.50	0.09	0.24	0.25	95.29	99.29
200	3.75	0.07	0.01	0.01	95.30	99.30
230	4.00	0.06	0.01	0.01	95.31	99.31

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.49	1.98	1.65	0.51	-1.52	-2.98	-3.98

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	-0.08	1.06	2.08	-0.59	2.09

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-08 #2

Analysis Date: 06-19-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,181	200,226	North Carolina State Plane	-13.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-6/1 Washed - 2.5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.64	85.42	0.01	0.00	#200 - 1.43 #230 - 1.42			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	0.00	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	0.34	0.39	0.34	0.39
5	-2.00	4.00	0.08	0.09	0.42	0.48
7	-1.50	2.83	0.32	0.37	0.74	0.85
10	-1.00	2.00	0.51	0.59	1.25	1.44
14	-0.50	1.41	1.15	1.33	2.40	2.77
18	0.00	1.00	1.48	1.71	3.88	4.48
25	0.50	0.71	2.45	2.83	6.33	7.31
35	1.00	0.50	4.38	5.06	10.71	12.37
45	1.50	0.35	10.29	11.88	21.00	24.25
60	2.00	0.25	22.55	26.03	43.55	50.28
80	2.50	0.18	28.88	33.33	72.43	83.61
120	3.00	0.13	12.15	14.02	84.58	97.63
170	3.50	0.09	0.81	0.93	85.39	98.56
200	3.75	0.07	0.01	0.01	85.40	98.57
230	4.00	0.06	0.01	0.01	85.41	98.58

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.51	2.37	1.99	1.51	1.15	0.09

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.8	0.29	0.85	-1.71	7.26

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-08 #3

Analysis Date: 06-14-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,181	200,226	North Carolina State Plane	-16.4 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.26	88.46	0.00	0.00	#200 - 0.90 #230 - 0.89			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	0.76	0.85	0.76	0.85
3.5	-2.50	5.66	1.82	2.04	2.58	2.89
4	-2.25	4.76	0.73	0.82	3.31	3.71
5	-2.00	4.00	0.42	0.47	3.73	4.18
7	-1.50	2.83	1.38	1.55	5.11	5.73
10	-1.00	2.00	3.13	3.51	8.24	9.24
14	-0.50	1.41	5.41	6.06	13.65	15.30
18	0.00	1.00	7.08	7.93	20.73	23.23
25	0.50	0.71	9.04	10.13	29.77	33.36
35	1.00	0.50	11.88	13.31	41.65	46.67
45	1.50	0.35	14.25	15.96	55.90	62.63
60	2.00	0.25	13.26	14.86	69.16	77.49
80	2.50	0.18	14.19	15.90	83.35	93.39
120	3.00	0.13	4.91	5.50	88.26	98.89
170	3.50	0.09	0.17	0.19	88.43	99.08
200	3.75	0.07	0.02	0.02	88.45	99.10
230	4.00	0.06	0.01	0.01	88.46	99.11

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.65	2.20	1.92	1.10	0.09	-0.46	-1.74

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.86	0.55	1.33	-0.86	3.42

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-08 #4

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,181	200,226	North Carolina State Plane	-18.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 10BG-4/1 Dry - 10G-5/1 Washed - 10G-5/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.36	94.34	0.01	0.01	#200 - 1.12 #230 - 1.11			12

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	3.84	4.03	3.84	4.03
5/16"	-3.00	8.00	3.59	3.76	7.43	7.79
3.5	-2.50	5.66	5.74	6.02	13.17	13.81
4	-2.25	4.76	2.52	2.64	15.69	16.45
5	-2.00	4.00	4.14	4.34	19.83	20.79
7	-1.50	2.83	7.28	7.63	27.11	28.42
10	-1.00	2.00	8.22	8.62	35.33	37.04
14	-0.50	1.41	11.21	11.76	46.54	48.80
18	0.00	1.00	9.08	9.52	55.62	58.32
25	0.50	0.71	8.50	8.91	64.12	67.23
35	1.00	0.50	6.92	7.26	71.04	74.49
45	1.50	0.35	5.36	5.62	76.40	80.11
60	2.00	0.25	4.39	4.60	80.79	84.71
80	2.50	0.18	8.10	8.49	88.89	93.20
120	3.00	0.13	4.95	5.19	93.84	98.39
170	3.50	0.09	0.42	0.44	94.26	98.83
200	3.75	0.07	0.05	0.05	94.31	98.88
230	4.00	0.06	0.01	0.01	94.32	98.89

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.67	1.92	1.05	-0.44	-1.72	-2.29	-3.37

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	-0.37	1.29	1.8	0.04	2.12

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-09 #1

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,776	201,051	North Carolina State Plane	-6.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.05	87.10	0.00	0.01	#200 - 1.11 #230 - 1.10		23	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	1.41	1.60	1.41	1.60
3.5	-2.50	5.66	0.44	0.50	1.85	2.10
4	-2.25	4.76	0.00	0.00	1.85	2.10
5	-2.00	4.00	0.53	0.60	2.38	2.70
7	-1.50	2.83	1.10	1.25	3.48	3.95
10	-1.00	2.00	1.41	1.60	4.89	5.55
14	-0.50	1.41	2.74	3.11	7.63	8.66
18	0.00	1.00	3.46	3.93	11.09	12.59
25	0.50	0.71	4.52	5.13	15.61	17.72
35	1.00	0.50	6.76	7.68	22.37	25.40
45	1.50	0.35	13.48	15.31	35.85	40.71
60	2.00	0.25	22.80	25.89	58.65	66.60
80	2.50	0.18	20.17	22.91	78.82	89.51
120	3.00	0.13	7.74	8.79	86.56	98.30
170	3.50	0.09	0.50	0.57	87.06	98.87
200	3.75	0.07	0.02	0.02	87.08	98.89
230	4.00	0.06	0.01	0.01	87.09	98.90

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.81	2.38	2.18	1.68	0.97	0.33	-1.17

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.35	0.39	1.22	-1.6	5.87

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-09 #2

Analysis Date: 07-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,776	201,051	North Carolina State Plane	-11.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.53	83.39	0.00	0.02	#200 - 1.39 #230 - 1.38		9	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.01	0.01	0.02	0.02
25	0.50	0.71	0.02	0.02	0.04	0.04
35	1.00	0.50	0.08	0.09	0.12	0.13
45	1.50	0.35	0.53	0.63	0.65	0.76
60	2.00	0.25	11.14	13.18	11.79	13.94
80	2.50	0.18	54.57	64.56	66.36	78.50
120	3.00	0.13	16.34	19.33	82.70	97.83
170	3.50	0.09	0.62	0.73	83.32	98.56
200	3.75	0.07	0.04	0.05	83.36	98.61
230	4.00	0.06	0.01	0.01	83.37	98.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.64	2.47	2.28	2.09	2.02	1.66

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.28	0.21	0.32	-0.28	5.89

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-09 #3

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,776	201,051	North Carolina State Plane	-14.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.89	87.71	0.01	0.01	#200 - 1.37 #230 - 1.35		12	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.29	0.33	0.29	0.33
4	-2.25	4.76	0.83	0.93	1.12	1.26
5	-2.00	4.00	0.52	0.58	1.64	1.84
7	-1.50	2.83	0.96	1.08	2.60	2.92
10	-1.00	2.00	1.11	1.25	3.71	4.17
14	-0.50	1.41	1.57	1.77	5.28	5.94
18	0.00	1.00	1.52	1.71	6.80	7.65
25	0.50	0.71	1.82	2.05	8.62	9.70
35	1.00	0.50	2.48	2.79	11.10	12.49
45	1.50	0.35	4.72	5.31	15.82	17.80
60	2.00	0.25	18.88	21.24	34.70	39.04
80	2.50	0.18	42.00	47.25	76.70	86.29
120	3.00	0.13	10.46	11.77	87.16	98.06
170	3.50	0.09	0.47	0.53	87.63	98.59
200	3.75	0.07	0.04	0.04	87.67	98.63
230	4.00	0.06	0.02	0.02	87.69	98.65

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.87	2.48	2.38	2.12	1.67	1.33	-0.77

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.8	0.29	1.04	-2.3	8.39

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-09 #4

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,776	201,051	North Carolina State Plane	-17.7 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.26	89.15	0.01	0.04	#200 - 1.31 #230 - 1.29		35	4

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	0.94	1.04	0.94	1.04
3.5	-2.50	5.66	1.98	2.19	2.92	3.23
4	-2.25	4.76	0.51	0.57	3.43	3.80
5	-2.00	4.00	1.36	1.51	4.79	5.31
7	-1.50	2.83	2.31	2.56	7.10	7.87
10	-1.00	2.00	4.08	4.52	11.18	12.39
14	-0.50	1.41	6.60	7.31	17.78	19.70
18	0.00	1.00	7.12	7.89	24.90	27.59
25	0.50	0.71	8.55	9.47	33.45	37.06
35	1.00	0.50	8.70	9.64	42.15	46.70
45	1.50	0.35	11.41	12.64	53.56	59.34
60	2.00	0.25	13.87	15.37	67.43	74.71
80	2.50	0.18	17.25	19.11	84.68	93.82
120	3.00	0.13	4.12	4.56	88.80	98.38
170	3.50	0.09	0.23	0.25	89.03	98.63
200	3.75	0.07	0.05	0.06	89.08	98.69
230	4.00	0.06	0.02	0.02	89.10	98.71

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.63	2.24	2.01	1.13	-0.16	-0.75	-2.05

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	0.78	0.58	1.44	-0.75	2.84

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-10 #1

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,121	200,150	North Carolina State Plane	-10.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.89	87.09	0.00	0.00	#200 - 0.93 #230 - 0.92		5	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.05	0.06	0.05	0.06
4	-2.25	4.76	0.00	0.00	0.05	0.06
5	-2.00	4.00	0.25	0.28	0.30	0.34
7	-1.50	2.83	0.28	0.32	0.58	0.66
10	-1.00	2.00	0.46	0.52	1.04	1.18
14	-0.50	1.41	0.56	0.64	1.60	1.82
18	0.00	1.00	0.54	0.61	2.14	2.43
25	0.50	0.71	1.06	1.21	3.20	3.64
35	1.00	0.50	2.40	2.73	5.60	6.37
45	1.50	0.35	11.47	13.05	17.07	19.42
60	2.00	0.25	33.46	38.07	50.53	57.49
80	2.50	0.18	29.78	33.88	80.31	91.37
120	3.00	0.13	6.52	7.42	86.83	98.79
170	3.50	0.09	0.24	0.27	87.07	99.06
200	3.75	0.07	0.01	0.01	87.08	99.07
230	4.00	0.06	0.01	0.01	87.09	99.08

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.74	2.39	2.26	1.90	1.57	1.37	0.75

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.82	0.28	0.68	-2.27	12.14

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-10 #2

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,121	200,150	North Carolina State Plane	-13.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.45	82.34	0.00	0.01	#200 - 1.35 #230 - 1.34		13	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.01	0.01	0.01	0.01
7	-1.50	2.83	0.01	0.01	0.02	0.02
10	-1.00	2.00	0.06	0.07	0.08	0.09
14	-0.50	1.41	0.13	0.16	0.21	0.25
18	0.00	1.00	0.15	0.18	0.36	0.43
25	0.50	0.71	0.20	0.24	0.56	0.67
35	1.00	0.50	0.31	0.37	0.87	1.04
45	1.50	0.35	1.09	1.31	1.96	2.35
60	2.00	0.25	10.33	12.38	12.29	14.73
80	2.50	0.18	45.96	55.07	58.25	69.80
120	3.00	0.13	23.22	27.83	81.47	97.63
170	3.50	0.09	0.82	0.98	82.29	98.61
200	3.75	0.07	0.03	0.04	82.32	98.65
230	4.00	0.06	0.01	0.01	82.33	98.66

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.76	2.59	2.32	2.09	2.01	1.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.3	0.20	0.42	-2.13	16.11

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-10 #3

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,121	200,150	North Carolina State Plane	-20.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.36	82.18	0.00	0.00	#200 - 1.44 #230 - 1.43		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
14	-0.50	1.41	0.02	0.02	0.04	0.04
18	0.00	1.00	0.02	0.02	0.06	0.06
25	0.50	0.71	0.04	0.05	0.10	0.11
35	1.00	0.50	0.08	0.10	0.18	0.21
45	1.50	0.35	0.30	0.36	0.48	0.57
60	2.00	0.25	3.60	4.32	4.08	4.89
80	2.50	0.18	47.76	57.29	51.84	62.18
120	3.00	0.13	28.05	33.65	79.89	95.83
170	3.50	0.09	2.16	2.59	82.05	98.42
200	3.75	0.07	0.12	0.14	82.17	98.56
230	4.00	0.06	0.01	0.01	82.18	98.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.82	2.69	2.39	2.18	2.10	2.00

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.42	0.19	0.33	-0.68	10.9

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-10 #4

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,121	200,150	North Carolina State Plane	-23.2 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.52	82.46	0.03	0.01	#200 - 2.53 #230 - 2.48			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	1.43	1.69	1.43	1.69
5/16"	-3.00	8.00	0.00	0.00	1.43	1.69
3.5	-2.50	5.66	0.00	0.00	1.43	1.69
4	-2.25	4.76	0.00	0.00	1.43	1.69
5	-2.00	4.00	0.04	0.05	1.47	1.74
7	-1.50	2.83	0.45	0.53	1.92	2.27
10	-1.00	2.00	0.65	0.77	2.57	3.04
14	-0.50	1.41	1.12	1.33	3.69	4.37
18	0.00	1.00	1.04	1.23	4.73	5.60
25	0.50	0.71	1.38	1.63	6.11	7.23
35	1.00	0.50	1.76	2.08	7.87	9.31
45	1.50	0.35	2.63	3.11	10.50	12.42
60	2.00	0.25	10.08	11.93	20.58	24.35
80	2.50	0.18	44.08	52.15	64.66	76.50
120	3.00	0.13	16.42	19.43	81.08	95.93
170	3.50	0.09	1.20	1.42	82.28	97.35
200	3.75	0.07	0.10	0.12	82.38	97.47
230	4.00	0.06	0.04	0.05	82.42	97.52

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.69	2.49	2.25	2.01	1.65	-0.24

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.98	0.25	1.09	-3.28	15.61

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-11 #1

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-5.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-6/4 Washed - 2.5Y-7/3	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.66	83.60	0.00	0.01	#200 - 1.27 #230 - 1.26		11	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.09	0.11	0.09	0.11
4	-2.25	4.76	0.09	0.11	0.18	0.22
5	-2.00	4.00	0.07	0.08	0.25	0.30
7	-1.50	2.83	0.51	0.60	0.76	0.90
10	-1.00	2.00	0.34	0.40	1.10	1.30
14	-0.50	1.41	0.67	0.79	1.77	2.09
18	0.00	1.00	0.93	1.10	2.70	3.19
25	0.50	0.71	1.28	1.51	3.98	4.70
35	1.00	0.50	1.77	2.09	5.75	6.79
45	1.50	0.35	5.50	6.50	11.25	13.29
60	2.00	0.25	18.17	21.46	29.42	34.75
80	2.50	0.18	38.45	45.42	67.87	80.17
120	3.00	0.13	14.81	17.49	82.68	97.66
170	3.50	0.09	0.86	1.02	83.54	98.68
200	3.75	0.07	0.04	0.05	83.58	98.73
230	4.00	0.06	0.01	0.01	83.59	98.74

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.61	2.44	2.17	1.77	1.56	0.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.01	0.25	0.76	-2.44	11.62

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-11 #2

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-8.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-7/4 Washed - 2.5Y-7/4	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.81	82.78	0.01	0.02	#200 - 1.28 #230 - 1.27		5	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.02	0.02	0.03	0.03
25	0.50	0.71	0.07	0.08	0.10	0.11
35	1.00	0.50	0.19	0.23	0.29	0.34
45	1.50	0.35	0.79	0.94	1.08	1.28
60	2.00	0.25	14.78	17.64	15.86	18.92
80	2.50	0.18	52.74	62.93	68.60	81.85
120	3.00	0.13	13.63	16.26	82.23	98.11
170	3.50	0.09	0.50	0.60	82.73	98.71
200	3.75	0.07	0.01	0.01	82.74	98.72
230	4.00	0.06	0.01	0.01	82.75	98.73

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.57	2.45	2.25	2.05	1.92	1.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	0.34	-0.54	6.38

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-11 #3

Analysis Date: 06-20-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-13.4 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.77	82.68	0.01	0.01	#200 - 1.33 #230 - 1.32		5	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
25	0.50	0.71	0.07	0.08	0.11	0.13
35	1.00	0.50	0.25	0.30	0.36	0.43
45	1.50	0.35	1.02	1.22	1.38	1.65
60	2.00	0.25	6.85	8.18	8.23	9.83
80	2.50	0.18	48.15	57.48	56.38	67.31
120	3.00	0.13	24.60	29.37	80.98	96.68
170	3.50	0.09	1.61	1.92	82.59	98.60
200	3.75	0.07	0.06	0.07	82.65	98.67
230	4.00	0.06	0.01	0.01	82.66	98.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.78	2.63	2.35	2.13	2.05	1.70

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	0.36	-0.68	6.57

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-11 #4

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-17.4 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.57	85.43	0.01	0.02	#200 - 1.37 #230 - 1.36		17	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.23	0.27	0.23	0.27
4	-2.25	4.76	0.19	0.22	0.42	0.49
5	-2.00	4.00	0.36	0.42	0.78	0.91
7	-1.50	2.83	1.15	1.33	1.93	2.24
10	-1.00	2.00	1.35	1.56	3.28	3.80
14	-0.50	1.41	2.20	2.54	5.48	6.34
18	0.00	1.00	2.36	2.73	7.84	9.07
25	0.50	0.71	2.78	3.21	10.62	12.28
35	1.00	0.50	4.01	4.63	14.63	16.91
45	1.50	0.35	7.12	8.22	21.75	25.13
60	2.00	0.25	16.91	19.53	38.66	44.66
80	2.50	0.18	35.05	40.49	73.71	85.15
120	3.00	0.13	11.18	12.91	84.89	98.06
170	3.50	0.09	0.47	0.54	85.36	98.60
200	3.75	0.07	0.03	0.03	85.39	98.63
230	4.00	0.06	0.01	0.01	85.40	98.64

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.49	2.37	2.07	1.49	0.90	-0.76

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.71	0.31	1.06	-1.76	5.95

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-12 #1

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,433	200,711	North Carolina State Plane	-9.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.68	83.56	0.00	0.05	#200 - 1.40 #230 - 1.38		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.02	0.02	0.03	0.03
25	0.50	0.71	0.04	0.05	0.07	0.08
35	1.00	0.50	0.16	0.19	0.23	0.27
45	1.50	0.35	0.77	0.91	1.00	1.18
60	2.00	0.25	10.18	12.02	11.18	13.20
80	2.50	0.18	48.88	57.72	60.06	70.92
120	3.00	0.13	21.95	25.92	82.01	96.84
170	3.50	0.09	1.42	1.68	83.43	98.52
200	3.75	0.07	0.07	0.08	83.50	98.60
230	4.00	0.06	0.02	0.02	83.52	98.62

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.75	2.58	2.32	2.10	2.02	1.66

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.32	0.20	0.36	-0.39	5.66

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-12 #2

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,433	200,711	North Carolina State Plane	-14.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.75	81.57	0.01	0.01	#200 - 1.49 #230 - 1.47		5	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.06	0.07	0.06	0.07
10	-1.00	2.00	0.02	0.02	0.08	0.09
14	-0.50	1.41	0.02	0.02	0.10	0.11
18	0.00	1.00	0.03	0.04	0.13	0.15
25	0.50	0.71	0.06	0.07	0.19	0.22
35	1.00	0.50	0.21	0.25	0.40	0.47
45	1.50	0.35	0.97	1.17	1.37	1.64
60	2.00	0.25	9.08	10.97	10.45	12.61
80	2.50	0.18	46.96	56.75	57.41	69.36
120	3.00	0.13	22.20	26.83	79.61	96.19
170	3.50	0.09	1.85	2.24	81.46	98.43
200	3.75	0.07	0.07	0.08	81.53	98.51
230	4.00	0.06	0.02	0.02	81.55	98.53

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.77	2.61	2.33	2.11	2.03	1.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	0.39	-1.47	15.61

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-12 #3

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,433	200,711	North Carolina State Plane	-17.2 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-6/2 Dry - 2.5Y-6/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.27	89.31	0.00	0.03	#200 - 1.12 #230 - 1.10		35	10

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	1.18	1.31	1.18	1.31
5/16"	-3.00	8.00	1.04	1.15	2.22	2.46
3.5	-2.50	5.66	2.91	3.22	5.13	5.68
4	-2.25	4.76	1.16	1.29	6.29	6.97
5	-2.00	4.00	3.11	3.45	9.40	10.42
7	-1.50	2.83	7.10	7.87	16.50	18.29
10	-1.00	2.00	8.74	9.68	25.24	27.97
14	-0.50	1.41	10.80	11.96	36.04	39.93
18	0.00	1.00	7.24	8.02	43.28	47.95
25	0.50	0.71	4.77	5.28	48.05	53.23
35	1.00	0.50	2.58	2.86	50.63	56.09
45	1.50	0.35	2.42	2.68	53.05	58.77
60	2.00	0.25	4.90	5.43	57.95	64.20
80	2.50	0.18	17.36	19.23	75.31	83.43
120	3.00	0.13	12.93	14.32	88.24	97.75
170	3.50	0.09	0.97	1.07	89.21	98.82
200	3.75	0.07	0.05	0.06	89.26	98.88
230	4.00	0.06	0.02	0.02	89.28	98.90

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.52	2.28	0.19	-1.15	-1.65	-2.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.38	0.77	1.88	-0.16	1.73

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-13 #1

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-11.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.55	91.61	0.01	0.03	#200 - 1.07 #230 - 1.05		17	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	1.02	1.10	1.02	1.10
3.5	-2.50	5.66	0.05	0.05	1.07	1.15
4	-2.25	4.76	0.22	0.24	1.29	1.39
5	-2.00	4.00	0.36	0.39	1.65	1.78
7	-1.50	2.83	0.81	0.88	2.46	2.66
10	-1.00	2.00	1.49	1.61	3.95	4.27
14	-0.50	1.41	2.30	2.49	6.25	6.76
18	0.00	1.00	2.83	3.06	9.08	9.82
25	0.50	0.71	3.49	3.77	12.57	13.59
35	1.00	0.50	5.13	5.54	17.70	19.13
45	1.50	0.35	12.17	13.15	29.87	32.28
60	2.00	0.25	26.90	29.07	56.77	61.35
80	2.50	0.18	24.12	26.06	80.89	87.41
120	3.00	0.13	10.01	10.82	90.90	98.23
170	3.50	0.09	0.62	0.67	91.52	98.90
200	3.75	0.07	0.03	0.03	91.55	98.93
230	4.00	0.06	0.02	0.02	91.57	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.43	2.26	1.80	1.22	0.72	-0.85

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.53	0.35	1.12	-1.81	6.96

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-13 #2

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-14.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/2 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
83.69	82.27	0.02	0.02	#200 - 1.82 #230 - 1.76		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.01	0.01	0.02	0.02
18	0.00	1.00	0.01	0.01	0.03	0.03
25	0.50	0.71	0.01	0.01	0.04	0.04
35	1.00	0.50	0.04	0.05	0.08	0.09
45	1.50	0.35	0.14	0.17	0.22	0.26
60	2.00	0.25	1.56	1.86	1.78	2.12
80	2.50	0.18	40.97	48.95	42.75	51.07
120	3.00	0.13	35.83	42.81	78.58	93.88
170	3.50	0.09	3.46	4.13	82.04	98.01
200	3.75	0.07	0.14	0.17	82.18	98.18
230	4.00	0.06	0.05	0.06	82.23	98.24

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.14	2.88	2.78	2.49	2.23	2.14	2.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.32	-0.23	7.69

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-13 #3

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-17.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.12	84.12	0.00	0.02	#200 - 1.22 #230 - 1.20		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.15	0.18	0.16	0.19
14	-0.50	1.41	0.24	0.28	0.40	0.47
18	0.00	1.00	0.39	0.46	0.79	0.93
25	0.50	0.71	0.73	0.86	1.52	1.79
35	1.00	0.50	1.43	1.68	2.95	3.47
45	1.50	0.35	4.64	5.45	7.59	8.92
60	2.00	0.25	14.65	17.21	22.24	26.13
80	2.50	0.18	40.44	47.51	62.68	73.64
120	3.00	0.13	20.36	23.92	83.04	97.56
170	3.50	0.09	0.99	1.16	84.03	98.72
200	3.75	0.07	0.05	0.06	84.08	98.78
230	4.00	0.06	0.02	0.02	84.10	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.72	2.53	2.25	1.97	1.71	1.14

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	0.56	-1.77	9.11

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-13 #4

Analysis Date: 06-21-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-22.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.48	83.29	0.01	0.05	#200 - 1.48 #230 - 1.47			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	0.00	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	0.14	0.17	0.14	0.17
5	-2.00	4.00	0.12	0.14	0.26	0.31
7	-1.50	2.83	0.19	0.22	0.45	0.53
10	-1.00	2.00	0.24	0.28	0.69	0.81
14	-0.50	1.41	0.31	0.37	1.00	1.18
18	0.00	1.00	0.73	0.86	1.73	2.04
25	0.50	0.71	1.51	1.79	3.24	3.83
35	1.00	0.50	3.27	3.87	6.51	7.70
45	1.50	0.35	8.63	10.22	15.14	17.92
60	2.00	0.25	43.89	51.95	59.03	69.87
80	2.50	0.18	19.30	22.85	78.33	92.72
120	3.00	0.13	4.67	5.53	83.00	98.25
170	3.50	0.09	0.21	0.25	83.21	98.50
200	3.75	0.07	0.02	0.02	83.23	98.52
230	4.00	0.06	0.01	0.01	83.24	98.53

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.71	2.31	2.11	1.81	1.57	1.41	0.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.75	0.30	0.62	-2.16	12.54

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-13 #5

Analysis Date: 06-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-23.6 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - N-6/0 Washed - N-6/0	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.23	88.78	0.03	0.02	#200 - 1.71 #230 - 1.67			27

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	4.73	5.24	4.73	5.24
5/16"	-3.00	8.00	5.82	6.45	10.55	11.69
3.5	-2.50	5.66	5.79	6.42	16.34	18.11
4	-2.25	4.76	1.33	1.47	17.67	19.58
5	-2.00	4.00	2.93	3.25	20.60	22.83
7	-1.50	2.83	4.36	4.83	24.96	27.66
10	-1.00	2.00	3.26	3.61	28.22	31.27
14	-0.50	1.41	3.60	3.99	31.82	35.26
18	0.00	1.00	2.62	2.90	34.44	38.16
25	0.50	0.71	1.98	2.19	36.42	40.35
35	1.00	0.50	1.51	1.67	37.93	42.02
45	1.50	0.35	2.73	3.03	40.66	45.05
60	2.00	0.25	8.74	9.69	49.40	54.74
80	2.50	0.18	21.02	23.30	70.42	78.04
120	3.00	0.13	16.80	18.62	87.22	96.66
170	3.50	0.09	1.35	1.50	88.57	98.16
200	3.75	0.07	0.12	0.13	88.69	98.29
230	4.00	0.06	0.04	0.04	88.73	98.33

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.66	2.43	1.76	-1.78	-2.66	-3.53

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.47	0.72	2.31	-0.57	1.72

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-14 #1

Analysis Date: 06-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,347	202,224	North Carolina State Plane	-9.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.12	83.16	0.01	0.00	#200 - 1.15 #230 - 1.14			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.17	0.20	0.17	0.20
4	-2.25	4.76	0.00	0.00	0.17	0.20
5	-2.00	4.00	0.00	0.00	0.17	0.20
7	-1.50	2.83	0.01	0.01	0.18	0.21
10	-1.00	2.00	0.03	0.04	0.21	0.25
14	-0.50	1.41	0.04	0.05	0.25	0.30
18	0.00	1.00	0.03	0.04	0.28	0.34
25	0.50	0.71	0.04	0.05	0.32	0.39
35	1.00	0.50	0.11	0.13	0.43	0.52
45	1.50	0.35	0.42	0.50	0.85	1.02
60	2.00	0.25	5.41	6.43	6.26	7.45
80	2.50	0.18	47.92	56.97	54.18	64.42
120	3.00	0.13	27.86	33.12	82.04	97.54
170	3.50	0.09	1.06	1.26	83.10	98.80
200	3.75	0.07	0.04	0.05	83.14	98.85
230	4.00	0.06	0.01	0.01	83.15	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.80	2.66	2.37	2.15	2.08	1.81

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	0.41	-4.62	54.91

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-14 #2

Analysis Date: 06-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,347	202,224	North Carolina State Plane	-12.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 2.5Y-7/1 Washed - 5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.42	85.55	0.00	0.02	#200 - 1.03 #230 - 1.02			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.27	0.31	0.27	0.31
10	-1.00	2.00	0.29	0.34	0.56	0.65
14	-0.50	1.41	0.50	0.58	1.06	1.23
18	0.00	1.00	0.82	0.95	1.88	2.18
25	0.50	0.71	1.42	1.64	3.30	3.82
35	1.00	0.50	2.52	2.92	5.82	6.74
45	1.50	0.35	5.86	6.78	11.68	13.52
60	2.00	0.25	13.87	16.05	25.55	29.57
80	2.50	0.18	41.08	47.54	66.63	77.11
120	3.00	0.13	17.92	20.74	84.55	97.85
170	3.50	0.09	0.94	1.09	85.49	98.94
200	3.75	0.07	0.03	0.03	85.52	98.97
230	4.00	0.06	0.01	0.01	85.53	98.98

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.67	2.48	2.21	1.86	1.58	0.70

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.07	0.24	0.69	-2.04	9.2

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-14 #3

Analysis Date: 06-22-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,347	202,224	North Carolina State Plane	-13.5 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 2.5Y-6/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.57	87.71	0.01	0.02	#200 - 1.03 #230 - 1.02			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	0.18	0.20	0.18	0.20
3.5	-2.50	5.66	0.54	0.61	0.72	0.81
4	-2.25	4.76	0.05	0.06	0.77	0.87
5	-2.00	4.00	0.17	0.19	0.94	1.06
7	-1.50	2.83	0.44	0.50	1.38	1.56
10	-1.00	2.00	0.87	0.98	2.25	2.54
14	-0.50	1.41	2.02	2.28	4.27	4.82
18	0.00	1.00	3.13	3.53	7.40	8.35
25	0.50	0.71	4.60	5.19	12.00	13.54
35	1.00	0.50	7.00	7.90	19.00	21.44
45	1.50	0.35	12.22	13.80	31.22	35.24
60	2.00	0.25	15.93	17.99	47.15	53.23
80	2.50	0.18	26.52	29.94	73.67	83.17
120	3.00	0.13	13.16	14.86	86.83	98.03
170	3.50	0.09	0.81	0.91	87.64	98.94
200	3.75	0.07	0.03	0.03	87.67	98.97
230	4.00	0.06	0.01	0.01	87.68	98.98

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.53	2.36	1.91	1.13	0.66	-0.47

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.61	0.33	1.06	-1.44	5.61

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-14 #4

Analysis Date: 06-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,347	202,224	North Carolina State Plane	-16.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.11	84.16	0.01	0.00	#200 - 1.13 #230 - 1.13			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.10	0.12	0.10	0.12
5	-2.00	4.00	0.06	0.07	0.16	0.19
7	-1.50	2.83	0.11	0.13	0.27	0.32
10	-1.00	2.00	0.15	0.18	0.42	0.50
14	-0.50	1.41	0.25	0.29	0.67	0.79
18	0.00	1.00	0.28	0.33	0.95	1.12
25	0.50	0.71	0.49	0.58	1.44	1.70
35	1.00	0.50	1.05	1.23	2.49	2.93
45	1.50	0.35	2.66	3.13	5.15	6.06
60	2.00	0.25	12.30	14.45	17.45	20.51
80	2.50	0.18	39.21	46.07	56.66	66.58
120	3.00	0.13	26.95	31.66	83.61	98.24
170	3.50	0.09	0.52	0.61	84.13	98.85
200	3.75	0.07	0.02	0.02	84.15	98.87
230	4.00	0.06	0.00	0.00	84.15	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.78	2.63	2.32	2.05	1.84	1.33

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.24	0.21	0.58	-2.86	17.67

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-14 #5

Analysis Date: 06-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,347	202,224	North Carolina State Plane	-18.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - N-7/0 Washed - N-7/0	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.53	94.80	0.01	0.02	#200 - 0.81 #230 - 0.79			12

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	4.35	4.55	4.35	4.55
5/16"	-3.00	8.00	4.11	4.30	8.46	8.85
3.5	-2.50	5.66	0.83	0.87	9.29	9.72
4	-2.25	4.76	0.30	0.31	9.59	10.03
5	-2.00	4.00	0.84	0.88	10.43	10.91
7	-1.50	2.83	1.65	1.73	12.08	12.64
10	-1.00	2.00	2.10	2.20	14.18	14.84
14	-0.50	1.41	3.12	3.27	17.30	18.11
18	0.00	1.00	3.15	3.30	20.45	21.41
25	0.50	0.71	3.36	3.52	23.81	24.93
35	1.00	0.50	3.75	3.93	27.56	28.86
45	1.50	0.35	8.10	8.48	35.66	37.34
60	2.00	0.25	18.64	19.51	54.30	56.85
80	2.50	0.18	28.65	29.99	82.95	86.84
120	3.00	0.13	11.12	11.64	94.07	98.48
170	3.50	0.09	0.62	0.65	94.69	99.13
200	3.75	0.07	0.06	0.06	94.75	99.19
230	4.00	0.06	0.02	0.02	94.77	99.21

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.45	2.30	1.82	0.51	-0.82	-3.45

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.06	0.48	1.86	-1.43	3.89

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-15 #1

Analysis Date: 06-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,715	200,330	North Carolina State Plane	-6.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.50	86.61	0.01	0.02	#200 - 1.07 #230 - 1.05		8	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.12	0.14	0.12	0.14
10	-1.00	2.00	0.20	0.23	0.32	0.37
14	-0.50	1.41	0.36	0.41	0.68	0.78
18	0.00	1.00	0.46	0.53	1.14	1.31
25	0.50	0.71	0.90	1.03	2.04	2.34
35	1.00	0.50	1.78	2.03	3.82	4.37
45	1.50	0.35	4.37	4.99	8.19	9.36
60	2.00	0.25	21.49	24.56	29.68	33.92
80	2.50	0.18	43.77	50.02	73.45	83.94
120	3.00	0.13	11.91	13.61	85.36	97.55
170	3.50	0.09	1.16	1.33	86.52	98.88
200	3.75	0.07	0.04	0.05	86.56	98.93
230	4.00	0.06	0.02	0.02	86.58	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.50	2.41	2.16	1.82	1.64	1.06

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.07	0.24	0.58	-2.01	10.99

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-15 #2

Analysis Date: 06-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,715	200,330	North Carolina State Plane	-10.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.39	84.47	0.01	0.02	#200 - 1.11 #230 - 1.10		3	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.01	0.01	0.02	0.02
25	0.50	0.71	0.02	0.02	0.04	0.04
35	1.00	0.50	0.05	0.06	0.09	0.10
45	1.50	0.35	0.16	0.19	0.25	0.29
60	2.00	0.25	2.56	3.00	2.81	3.29
80	2.50	0.18	43.81	51.31	46.62	54.60
120	3.00	0.13	36.50	42.75	83.12	97.35
170	3.50	0.09	1.27	1.49	84.39	98.84
200	3.75	0.07	0.04	0.05	84.43	98.89
230	4.00	0.06	0.01	0.01	84.44	98.90

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.84	2.74	2.46	2.21	2.12	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.46	0.18	0.3	-0.45	6.17

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-15 #3

Analysis Date: 06-25-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,715	200,330	North Carolina State Plane	-17.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.41	86.50	0.01	0.02	#200 - 1.10 #230 - 1.09		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.04	0.05	0.04	0.05
7	-1.50	2.83	0.00	0.00	0.04	0.05
10	-1.00	2.00	0.00	0.00	0.04	0.05
14	-0.50	1.41	0.03	0.03	0.07	0.08
18	0.00	1.00	0.02	0.02	0.09	0.10
25	0.50	0.71	0.10	0.11	0.19	0.21
35	1.00	0.50	0.37	0.42	0.56	0.63
45	1.50	0.35	3.69	4.22	4.25	4.85
60	2.00	0.25	38.96	44.57	43.21	49.42
80	2.50	0.18	38.58	44.14	81.79	93.56
120	3.00	0.13	4.52	5.17	86.31	98.73
170	3.50	0.09	0.13	0.15	86.44	98.88
200	3.75	0.07	0.02	0.02	86.46	98.90
230	4.00	0.06	0.01	0.01	86.47	98.91

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.64	2.39	2.29	2.01	1.73	1.63	1.50

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2	0.25	0.37	-0.96	12.17

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16 #1

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-1.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-7/2 Washed - 5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.81	84.95	0.00	0.14	#200 - 1.13 #230 - 1.13		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.03	0.03	0.03
10	-1.00	2.00	0.02	0.02	0.05	0.05
14	-0.50	1.41	0.04	0.05	0.09	0.10
18	0.00	1.00	0.10	0.12	0.19	0.22
25	0.50	0.71	0.20	0.23	0.39	0.45
35	1.00	0.50	0.35	0.41	0.74	0.86
45	1.50	0.35	1.55	1.81	2.29	2.67
60	2.00	0.25	14.14	16.48	16.43	19.15
80	2.50	0.18	54.30	63.28	70.73	82.43
120	3.00	0.13	13.58	15.83	84.31	98.26
170	3.50	0.09	0.46	0.54	84.77	98.80
200	3.75	0.07	0.06	0.07	84.83	98.87
230	4.00	0.06	0.00	0.00	84.83	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.55	2.44	2.24	2.05	1.90	1.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.22	0.21	0.38	-1.72	14.47

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16 #2

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-4.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 2.5Y-6/1 Dry - 2.5Y-7/2 Washed - 5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.31	87.28	0.01	0.28	#200 - 1.49 #230 - 1.46		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.15	0.17	0.20	0.23
10	-1.00	2.00	0.03	0.03	0.23	0.26
14	-0.50	1.41	0.08	0.09	0.31	0.35
18	0.00	1.00	0.12	0.14	0.43	0.49
25	0.50	0.71	0.26	0.29	0.69	0.78
35	1.00	0.50	0.27	0.31	0.96	1.09
45	1.50	0.35	1.09	1.23	2.05	2.32
60	2.00	0.25	10.72	12.14	12.77	14.46
80	2.50	0.18	53.38	60.45	66.15	74.91
120	3.00	0.13	20.06	22.72	86.21	97.63
170	3.50	0.09	0.69	0.78	86.90	98.41
200	3.75	0.07	0.09	0.10	86.99	98.51
230	4.00	0.06	0.03	0.03	87.02	98.54

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.70	2.50	2.29	2.09	2.01	1.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.27	0.21	0.44	-3.08	26.85

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16 #3

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-7.7 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.73	91.91	0.28	0.00	#200 - 1.22 #230 - 1.19		20	4

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	3.40	3.67	3.40	3.67
5/16"	-3.00	8.00	0.00	0.00	3.40	3.67
3.5	-2.50	5.66	1.28	1.38	4.68	5.05
4	-2.25	4.76	1.30	1.40	5.98	6.45
5	-2.00	4.00	0.58	0.63	6.56	7.08
7	-1.50	2.83	2.79	3.01	9.35	10.09
10	-1.00	2.00	3.06	3.30	12.41	13.39
14	-0.50	1.41	5.00	5.39	17.41	18.78
18	0.00	1.00	4.34	4.68	21.75	23.46
25	0.50	0.71	4.96	5.35	26.71	28.81
35	1.00	0.50	5.41	5.83	32.12	34.64
45	1.50	0.35	9.49	10.23	41.61	44.87
60	2.00	0.25	16.19	17.46	57.80	62.33
80	2.50	0.18	23.24	25.06	81.04	87.39
120	3.00	0.13	9.91	10.69	90.95	98.08
170	3.50	0.09	0.57	0.61	91.52	98.69
200	3.75	0.07	0.08	0.09	91.60	98.78
230	4.00	0.06	0.03	0.03	91.63	98.81

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.86	2.43	2.25	1.65	0.14	-0.76	-2.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.02	0.49	1.67	-1.23	3.77

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16A #1

Analysis Date: 06-15-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-7.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.39	84.45	0.00	0.04	#200 - 1.14 #230 - 1.13			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	0.00	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	0.22	0.26	0.22	0.26
5	-2.00	4.00	0.21	0.25	0.43	0.51
7	-1.50	2.83	0.57	0.67	1.00	1.18
10	-1.00	2.00	1.16	1.36	2.16	2.54
14	-0.50	1.41	2.33	2.73	4.49	5.27
18	0.00	1.00	2.42	2.83	6.91	8.10
25	0.50	0.71	2.60	3.04	9.51	11.14
35	1.00	0.50	2.71	3.17	12.22	14.31
45	1.50	0.35	4.79	5.61	17.01	19.92
60	2.00	0.25	12.44	14.57	29.45	34.49
80	2.50	0.18	36.35	42.57	65.80	77.06
120	3.00	0.13	17.86	20.92	83.66	97.98
170	3.50	0.09	0.69	0.81	84.35	98.79
200	3.75	0.07	0.06	0.07	84.41	98.86
230	4.00	0.06	0.01	0.01	84.42	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.67	2.48	2.18	1.67	1.15	-0.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.87	0.27	1.01	-1.82	6.08

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16A #2

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-10.3 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.58	88.95	0.00	0.17	#200 - 0.85 #230 - 0.85		29	3

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	6.18	6.90	6.18	6.90
5/16"	-3.00	8.00	0.25	0.28	6.43	7.18
3.5	-2.50	5.66	1.11	1.24	7.54	8.42
4	-2.25	4.76	0.24	0.27	7.78	8.69
5	-2.00	4.00	1.03	1.15	8.81	9.84
7	-1.50	2.83	1.60	1.79	10.41	11.63
10	-1.00	2.00	2.11	2.36	12.52	13.99
14	-0.50	1.41	3.45	3.85	15.97	17.84
18	0.00	1.00	4.18	4.67	20.15	22.51
25	0.50	0.71	6.13	6.84	26.28	29.35
35	1.00	0.50	8.47	9.46	34.75	38.81
45	1.50	0.35	14.13	15.77	48.88	54.58
60	2.00	0.25	19.34	21.59	68.22	76.17
80	2.50	0.18	17.78	19.85	86.00	96.02
120	3.00	0.13	2.54	2.84	88.54	98.86
170	3.50	0.09	0.25	0.28	88.79	99.14
200	3.75	0.07	0.01	0.01	88.80	99.15
230	4.00	0.06	0.00	0.00	88.80	99.15

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.47	2.20	1.97	1.35	0.18	-0.74	-3.71

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.77	0.59	1.71	-1.41	4.18

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16A #3

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-13.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.77	86.91	0.00	0.05	#200 - 1.03 #230 - 1.03		13	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.72	0.82	0.72	0.82
4	-2.25	4.76	0.00	0.00	0.72	0.82
5	-2.00	4.00	0.42	0.48	1.14	1.30
7	-1.50	2.83	0.53	0.60	1.67	1.90
10	-1.00	2.00	1.20	1.37	2.87	3.27
14	-0.50	1.41	1.58	1.80	4.45	5.07
18	0.00	1.00	1.46	1.66	5.91	6.73
25	0.50	0.71	1.83	2.08	7.74	8.81
35	1.00	0.50	2.75	3.13	10.49	11.94
45	1.50	0.35	7.53	8.58	18.02	20.52
60	2.00	0.25	26.06	29.69	44.08	50.21
80	2.50	0.18	36.50	41.59	80.58	91.80
120	3.00	0.13	6.09	6.94	86.67	98.74
170	3.50	0.09	0.20	0.23	86.87	98.97
200	3.75	0.07	0.00	0.00	86.87	98.97
230	4.00	0.06	0.00	0.00	86.87	98.97

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.73	2.41	2.30	2.00	1.58	1.24	-0.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.73	0.30	0.95	-2.36	9.34

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-16A #4

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	-16.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
84.56	83.60	0.00	0.31	#200 - 1.45 #230 - 1.45		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
14	-0.50	1.41	0.03	0.04	0.05	0.06
18	0.00	1.00	0.02	0.02	0.07	0.08
25	0.50	0.71	0.03	0.04	0.10	0.12
35	1.00	0.50	0.15	0.18	0.25	0.30
45	1.50	0.35	0.77	0.91	1.02	1.21
60	2.00	0.25	14.85	17.56	15.87	18.77
80	2.50	0.18	54.79	64.79	70.66	83.56
120	3.00	0.13	12.38	14.64	83.04	98.20
170	3.50	0.09	0.28	0.33	83.32	98.53
200	3.75	0.07	0.02	0.02	83.34	98.55
230	4.00	0.06	0.00	0.00	83.34	98.55

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.52	2.43	2.24	2.05	1.92	1.61

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.22	0.21	0.33	-0.95	10.38

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17 #1

Analysis Date: 07-05-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-5.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.19	87.34	0.01	0.00	#200 - 1.00 #230 - 0.99		5	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.16	0.18	0.16	0.18
14	-0.50	1.41	0.12	0.14	0.28	0.32
18	0.00	1.00	0.18	0.20	0.46	0.52
25	0.50	0.71	0.33	0.37	0.79	0.89
35	1.00	0.50	0.49	0.56	1.28	1.45
45	1.50	0.35	2.11	2.39	3.39	3.84
60	2.00	0.25	17.65	20.01	21.04	23.85
80	2.50	0.18	51.91	58.86	72.95	82.71
120	3.00	0.13	13.79	15.64	86.74	98.35
170	3.50	0.09	0.55	0.62	87.29	98.97
200	3.75	0.07	0.03	0.03	87.32	99.00
230	4.00	0.06	0.01	0.01	87.33	99.01

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.54	2.43	2.22	2.01	1.80	1.53

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.18	0.22	0.44	-2.12	15.07

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17 #2

Analysis Date: 07-05-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-8.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/2 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
90.94	89.90	0.01	0.00	#200 - 1.17 #230 - 1.15		25	3

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
1"	-4.75	26.91	0.00	0.00	0.00	0.00
3/4"	-4.25	19.03	6.83	7.51	6.83	7.51
5/8"	-4.00	16.00	0.00	0.00	6.83	7.51
7/16"	-3.50	11.31	3.18	3.50	10.01	11.01
5/16"	-3.00	8.00	1.71	1.88	11.72	12.89
3.5	-2.50	5.66	1.97	2.17	13.69	15.06
4	-2.25	4.76	0.50	0.55	14.19	15.61
5	-2.00	4.00	0.67	0.74	14.86	16.35
7	-1.50	2.83	2.27	2.50	17.13	18.85
10	-1.00	2.00	2.62	2.88	19.75	21.73
14	-0.50	1.41	3.53	3.88	23.28	25.61
18	0.00	1.00	4.11	4.52	27.39	30.13
25	0.50	0.71	3.91	4.30	31.30	34.43
35	1.00	0.50	4.38	4.82	35.68	39.25
45	1.50	0.35	6.47	7.11	42.15	46.36
60	2.00	0.25	14.17	15.58	56.32	61.94
80	2.50	0.18	24.90	27.38	81.22	89.32
120	3.00	0.13	8.35	9.18	89.57	98.50
170	3.50	0.09	0.27	0.30	89.84	98.80
200	3.75	0.07	0.03	0.03	89.87	98.83
230	4.00	0.06	0.02	0.02	89.89	98.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.81	2.40	2.24	1.62	-0.58	-2.12	-4.25

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.56	0.68	2.25	-1.11	2.93

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17 #3

Analysis Date: 07-06-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-10.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.55	85.55	0.01	0.00	#200 - 1.18 #230 - 1.17		9	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.13	0.15	0.13	0.15
4	-2.25	4.76	0.00	0.00	0.13	0.15
5	-2.00	4.00	0.00	0.00	0.13	0.15
7	-1.50	2.83	0.16	0.18	0.29	0.33
10	-1.00	2.00	0.19	0.22	0.48	0.55
14	-0.50	1.41	0.32	0.37	0.80	0.92
18	0.00	1.00	0.38	0.44	1.18	1.36
25	0.50	0.71	0.68	0.79	1.86	2.15
35	1.00	0.50	1.61	1.86	3.47	4.01
45	1.50	0.35	6.00	6.93	9.47	10.94
60	2.00	0.25	21.57	24.92	31.04	35.86
80	2.50	0.18	43.02	49.71	74.06	85.57
120	3.00	0.13	11.22	12.96	85.28	98.53
170	3.50	0.09	0.25	0.29	85.53	98.82
200	3.75	0.07	0.00	0.00	85.53	98.82
230	4.00	0.06	0.01	0.01	85.54	98.83

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.86	2.48	2.39	2.14	1.78	1.60	1.07

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.03	0.24	0.59	-2.6	15.94

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17 #4

Analysis Date: 07-06-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-13.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/2 Dry - 2.5Y-6/2 Washed - 2.5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
93.49	92.66	0.00	0.00	#200 - 0.92 #230 - 0.91		28	3

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	3.33	3.56	3.33	3.56
7/16"	-3.50	11.31	0.00	0.00	3.33	3.56
5/16"	-3.00	8.00	1.14	1.22	4.47	4.78
3.5	-2.50	5.66	0.60	0.64	5.07	5.42
4	-2.25	4.76	0.18	0.19	5.25	5.61
5	-2.00	4.00	0.83	0.89	6.08	6.50
7	-1.50	2.83	1.93	2.06	8.01	8.56
10	-1.00	2.00	3.23	3.45	11.24	12.01
14	-0.50	1.41	5.52	5.90	16.76	17.91
18	0.00	1.00	5.66	6.05	22.42	23.96
25	0.50	0.71	6.38	6.82	28.80	30.78
35	1.00	0.50	7.32	7.83	36.12	38.61
45	1.50	0.35	12.47	13.34	48.59	51.95
60	2.00	0.25	22.66	24.24	71.25	76.19
80	2.50	0.18	16.94	18.12	88.19	94.31
120	3.00	0.13	4.26	4.56	92.45	98.87
170	3.50	0.09	0.19	0.20	92.64	99.07
200	3.75	0.07	0.01	0.01	92.65	99.08
230	4.00	0.06	0.01	0.01	92.66	99.09

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.58	2.22	1.98	1.43	0.08	-0.66	-2.83

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.85	0.55	1.61	-1.41	4.66

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17 #5

Analysis Date: 07-06-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-14.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.66	87.63	0.01	0.03	#200 - 1.21 #230 - 1.20		9	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.24	0.27	0.24	0.27
4	-2.25	4.76	0.00	0.00	0.24	0.27
5	-2.00	4.00	0.00	0.00	0.24	0.27
7	-1.50	2.83	0.13	0.15	0.37	0.42
10	-1.00	2.00	0.36	0.41	0.73	0.83
14	-0.50	1.41	0.53	0.60	1.26	1.43
18	0.00	1.00	0.52	0.59	1.78	2.02
25	0.50	0.71	0.76	0.86	2.54	2.88
35	1.00	0.50	1.48	1.67	4.02	4.55
45	1.50	0.35	6.13	6.91	10.15	11.46
60	2.00	0.25	32.53	36.69	42.68	48.15
80	2.50	0.18	37.15	41.90	79.83	90.05
120	3.00	0.13	7.44	8.39	87.27	98.44
170	3.50	0.09	0.30	0.34	87.57	98.78
200	3.75	0.07	0.01	0.01	87.58	98.79
230	4.00	0.06	0.01	0.01	87.59	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.79	2.43	2.32	2.02	1.68	1.56	1.03

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.93	0.26	0.63	-2.8	17.02

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17A #1

Analysis Date: 07-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-13.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.18	86.11	0.00	0.02	#200 - 1.28 #230 - 1.27		12	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	0.00	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	0.09	0.10	0.09	0.10
5	-2.00	4.00	0.10	0.11	0.19	0.21
7	-1.50	2.83	0.35	0.40	0.54	0.61
10	-1.00	2.00	0.55	0.63	1.09	1.24
14	-0.50	1.41	0.71	0.81	1.80	2.05
18	0.00	1.00	0.83	0.95	2.63	3.00
25	0.50	0.71	1.34	1.54	3.97	4.54
35	1.00	0.50	2.75	3.15	6.72	7.69
45	1.50	0.35	7.78	8.92	14.50	16.61
60	2.00	0.25	22.35	25.64	36.85	42.25
80	2.50	0.18	39.30	45.08	76.15	87.33
120	3.00	0.13	9.72	11.15	85.87	98.48
170	3.50	0.09	0.20	0.23	86.07	98.71
200	3.75	0.07	0.01	0.01	86.08	98.72
230	4.00	0.06	0.01	0.01	86.09	98.73

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.84	2.46	2.36	2.09	1.66	1.47	0.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.91	0.27	0.73	-2.27	10.45

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-17A #2

Analysis Date: 07-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-15.6 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.19	91.47	0.00	0.02	#200 - 0.81 #230 - 0.80		20	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	0.43	0.47	0.43	0.47
3.5	-2.50	5.66	0.97	1.05	1.40	1.52
4	-2.25	4.76	0.22	0.24	1.62	1.76
5	-2.00	4.00	0.34	0.37	1.96	2.13
7	-1.50	2.83	1.16	1.26	3.12	3.39
10	-1.00	2.00	1.82	1.97	4.94	5.36
14	-0.50	1.41	3.16	3.43	8.10	8.79
18	0.00	1.00	3.80	4.12	11.90	12.91
25	0.50	0.71	5.06	5.49	16.96	18.40
35	1.00	0.50	7.83	8.49	24.79	26.89
45	1.50	0.35	16.12	17.49	40.91	44.38
60	2.00	0.25	26.67	28.93	67.58	73.31
80	2.50	0.18	19.12	20.74	86.70	94.05
120	3.00	0.13	4.51	4.89	91.21	98.94
170	3.50	0.09	0.22	0.24	91.43	99.18
200	3.75	0.07	0.01	0.01	91.44	99.19
230	4.00	0.06	0.01	0.01	91.45	99.20

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.60	2.26	2.04	1.60	0.89	0.28	-1.09

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.28	0.41	1.14	-1.5	5.4

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-18 #1

Analysis Date: 07-09-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,894	201,815	North Carolina State Plane	-5.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 2.5Y-7/2 Washed - 2.5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.79	85.93	0.00	0.02	#200 - 1.02 #230 - 1.01		11	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.27	0.31	0.27	0.31
7	-1.50	2.83	0.04	0.05	0.31	0.36
10	-1.00	2.00	0.39	0.45	0.70	0.81
14	-0.50	1.41	0.63	0.73	1.33	1.54
18	0.00	1.00	0.63	0.73	1.96	2.27
25	0.50	0.71	1.32	1.52	3.28	3.79
35	1.00	0.50	3.40	3.92	6.68	7.71
45	1.50	0.35	10.77	12.41	17.45	20.12
60	2.00	0.25	21.87	25.20	39.32	45.32
80	2.50	0.18	34.26	39.47	73.58	84.79
120	3.00	0.13	11.74	13.53	85.32	98.32
170	3.50	0.09	0.55	0.63	85.87	98.95
200	3.75	0.07	0.03	0.03	85.90	98.98
230	4.00	0.06	0.01	0.01	85.91	98.99

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.49	2.38	2.06	1.60	1.33	0.65

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.91	0.27	0.71	-1.8	8.8

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-18 #2

Analysis Date: 06-26-07

Analyzed By: ST

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,894	201,815	North Carolina State Plane	-7.5 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.57	86.79	0.01	0.23	#200 - 1.13 #230 - 1.12		13	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	0.99	1.13	0.99	1.13
3.5	-2.50	5.66	0.71	0.81	1.70	1.94
4	-2.25	4.76	0.28	0.32	1.98	2.26
5	-2.00	4.00	0.20	0.23	2.18	2.49
7	-1.50	2.83	0.66	0.75	2.84	3.24
10	-1.00	2.00	0.96	1.10	3.80	4.34
14	-0.50	1.41	1.27	1.45	5.07	5.79
18	0.00	1.00	1.82	2.08	6.89	7.87
25	0.50	0.71	2.89	3.30	9.78	11.17
35	1.00	0.50	4.95	5.65	14.73	16.82
45	1.50	0.35	11.75	13.42	26.48	30.24
60	2.00	0.25	25.77	29.43	52.25	59.67
80	2.50	0.18	28.92	33.03	81.17	92.70
120	3.00	0.13	5.27	6.02	86.44	98.72
170	3.50	0.09	0.13	0.15	86.57	98.87
200	3.75	0.07	0.00	0.00	86.57	98.87
230	4.00	0.06	0.01	0.01	86.58	98.88

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.69	2.37	2.23	1.84	1.30	0.93	-0.77

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.55	0.34	1.09	-2.26	8.99

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-18 #3

Analysis Date: 06-26-07

Analyzed By: RS

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,894	201,815	North Carolina State Plane	-16.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.52	84.70	0.00	0.05	#200 - 1.00 #230 - 1.00		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.03	0.04	0.03	0.04
4	-2.25	4.76	0.00	0.00	0.03	0.04
5	-2.00	4.00	0.01	0.01	0.04	0.05
7	-1.50	2.83	0.11	0.13	0.15	0.18
10	-1.00	2.00	0.09	0.11	0.24	0.29
14	-0.50	1.41	0.19	0.22	0.43	0.51
18	0.00	1.00	0.25	0.29	0.68	0.80
25	0.50	0.71	0.50	0.58	1.18	1.38
35	1.00	0.50	1.33	1.56	2.51	2.94
45	1.50	0.35	5.27	6.16	7.78	9.10
60	2.00	0.25	20.60	24.09	28.38	33.19
80	2.50	0.18	40.44	47.29	68.82	80.48
120	3.00	0.13	15.24	17.82	84.06	98.30
170	3.50	0.09	0.59	0.69	84.65	98.99
200	3.75	0.07	0.01	0.01	84.66	99.00
230	4.00	0.06	0.00	0.00	84.66	99.00

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.60	2.44	2.18	1.83	1.64	1.17

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.1	0.23	0.54	-1.98	12.51

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-19 #1

Analysis Date: 07-05-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,020	200,054	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-7/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.86	88.98	0.00	0.00	#200 - 1.00 #230 - 1.00		6	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.03	0.03	0.03
7	-1.50	2.83	0.03	0.03	0.06	0.06
10	-1.00	2.00	0.03	0.03	0.09	0.09
14	-0.50	1.41	0.19	0.21	0.28	0.30
18	0.00	1.00	0.14	0.16	0.42	0.46
25	0.50	0.71	0.21	0.23	0.63	0.69
35	1.00	0.50	0.57	0.63	1.20	1.32
45	1.50	0.35	2.14	2.38	3.34	3.70
60	2.00	0.25	13.81	15.37	17.15	19.07
80	2.50	0.18	54.03	60.13	71.18	79.20
120	3.00	0.13	17.50	19.47	88.68	98.67
170	3.50	0.09	0.29	0.32	88.97	98.99
200	3.75	0.07	0.01	0.01	88.98	99.00
230	4.00	0.06	0.00	0.00	88.98	99.00

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.62	2.47	2.26	2.05	1.90	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.22	0.21	0.43	-2.37	17.59

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-19 #2

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,020	200,054	North Carolina State Plane	-11.3 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.43	87.38	0.00	0.05	#200 - 1.23 #230 - 1.23		4	0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.08	0.09	0.08	0.09
14	-0.50	1.41	0.05	0.06	0.13	0.15
18	0.00	1.00	0.07	0.08	0.20	0.23
25	0.50	0.71	0.08	0.09	0.28	0.32
35	1.00	0.50	0.35	0.40	0.63	0.72
45	1.50	0.35	2.93	3.31	3.56	4.03
60	2.00	0.25	26.18	29.61	29.74	33.64
80	2.50	0.18	48.85	55.24	78.59	88.88
120	3.00	0.13	8.48	9.59	87.07	98.47
170	3.50	0.09	0.26	0.29	87.33	98.76
200	3.75	0.07	0.01	0.01	87.34	98.77
230	4.00	0.06	0.00	0.00	87.34	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.82	2.46	2.37	2.15	1.85	1.70	1.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.1	0.23	0.39	-1.31	11.24

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-19 #3

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,020	200,054	North Carolina State Plane	-18.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.48	90.33	0.01	0.00	#200 - 1.28 #230 - 1.27		20	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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.13	0.14	0.13	0.14
4	-2.25	4.76	0.11	0.12	0.24	0.26
5	-2.00	4.00	0.12	0.13	0.36	0.39
7	-1.50	2.83	0.53	0.58	0.89	0.97
10	-1.00	2.00	0.83	0.91	1.72	1.88
14	-0.50	1.41	1.56	1.71	3.28	3.59
18	0.00	1.00	2.43	2.66	5.71	6.25
25	0.50	0.71	3.47	3.79	9.18	10.04
35	1.00	0.50	6.43	7.03	15.61	17.07
45	1.50	0.35	10.66	11.65	26.27	28.72
60	2.00	0.25	20.29	22.18	46.56	50.90
80	2.50	0.18	32.05	35.03	78.61	85.93
120	3.00	0.13	11.28	12.33	89.89	98.26
170	3.50	0.09	0.39	0.43	90.28	98.69
200	3.75	0.07	0.03	0.03	90.31	98.72
230	4.00	0.06	0.01	0.01	90.32	98.73

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.87	2.47	2.34	1.98	1.34	0.92	-0.23

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.71	0.31	0.92	-1.54	5.83

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-20 #1

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,609	200,201	North Carolina State Plane	-13.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-5/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
82.93	81.59	0.01	0.00	#200 - 1.67 #230 - 1.62			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.08	0.10	0.08	0.10
5	-2.00	4.00	0.00	0.00	0.08	0.10
7	-1.50	2.83	0.20	0.24	0.28	0.34
10	-1.00	2.00	0.27	0.33	0.55	0.67
14	-0.50	1.41	0.58	0.70	1.13	1.37
18	0.00	1.00	0.86	1.04	1.99	2.41
25	0.50	0.71	1.22	1.47	3.21	3.88
35	1.00	0.50	1.84	2.22	5.05	6.10
45	1.50	0.35	4.03	4.86	9.08	10.96
60	2.00	0.25	11.02	13.29	20.10	24.25
80	2.50	0.18	29.85	35.99	49.95	60.24
120	3.00	0.13	27.71	33.41	77.66	93.65
170	3.50	0.09	3.73	4.50	81.39	98.15
200	3.75	0.07	0.15	0.18	81.54	98.33
230	4.00	0.06	0.04	0.05	81.58	98.38

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.86	2.72	2.36	2.01	1.69	0.75

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.21	0.22	0.75	-2.06	9.37

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-20 #2

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,609	200,201	North Carolina State Plane	-14.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.13	90.50	0.00	0.00	#200 - 0.67 #230 - 0.66			6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	4.08	4.48	4.08	4.48
7/16"	-3.50	11.31	1.61	1.77	5.69	6.25
5/16"	-3.00	8.00	7.09	7.78	12.78	14.03
3.5	-2.50	5.66	3.37	3.70	16.15	17.73
4	-2.25	4.76	0.86	0.94	17.01	18.67
5	-2.00	4.00	2.96	3.25	19.97	21.92
7	-1.50	2.83	3.07	3.37	23.04	25.29
10	-1.00	2.00	4.77	5.23	27.81	30.52
14	-0.50	1.41	5.91	6.49	33.72	37.01
18	0.00	1.00	6.03	6.62	39.75	43.63
25	0.50	0.71	5.61	6.16	45.36	49.79
35	1.00	0.50	5.81	6.38	51.17	56.17
45	1.50	0.35	7.15	7.85	58.32	64.02
60	2.00	0.25	9.73	10.68	68.05	74.70
80	2.50	0.18	15.28	16.77	83.33	91.47
120	3.00	0.13	6.77	7.43	90.10	98.90
170	3.50	0.09	0.37	0.41	90.47	99.31
200	3.75	0.07	0.02	0.02	90.49	99.33
230	4.00	0.06	0.01	0.01	90.50	99.34

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.74	2.28	2.01	0.52	-1.54	-2.73	-3.85

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.06	0.96	2.12	-0.49	1.98

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-20 #3

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,609	200,201	North Carolina State Plane	-18.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-5/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
86.05	84.93	0.00	0.01	#200 - 1.31 #230 - 1.30			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	3.93	4.57	3.93	4.57
3.5	-2.50	5.66	0.71	0.83	4.64	5.40
4	-2.25	4.76	0.32	0.37	4.96	5.77
5	-2.00	4.00	0.25	0.29	5.21	6.06
7	-1.50	2.83	1.18	1.37	6.39	7.43
10	-1.00	2.00	1.53	1.78	7.92	9.21
14	-0.50	1.41	2.45	2.85	10.37	12.06
18	0.00	1.00	3.12	3.63	13.49	15.69
25	0.50	0.71	4.35	5.06	17.84	20.75
35	1.00	0.50	6.68	7.76	24.52	28.51
45	1.50	0.35	12.00	13.95	36.52	42.46
60	2.00	0.25	21.78	25.31	58.30	67.77
80	2.50	0.18	19.67	22.86	77.97	90.63
120	3.00	0.13	6.67	7.75	84.64	98.38
170	3.50	0.09	0.26	0.30	84.90	98.68
200	3.75	0.07	0.01	0.01	84.91	98.69
230	4.00	0.06	0.01	0.01	84.92	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.78	2.35	2.16	1.65	0.77	0.03	-2.74

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.18	0.44	1.46	-1.63	5.2

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2007

Sample Name: FEVC-07-20 #4

Analysis Date: 07-10-07

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,609	200,201	North Carolina State Plane	-20.7 NAVD 88

USCS:	Munsell:	Comments:
SC	Wet - 5Y-3/1 Dry - 5Y-6/1 Washed - 5Y-6/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
79.95	59.02	0.15	0.01	#200 - 28.90 #230 - 26.36			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.03	0.04	0.03	0.04
10	-1.00	2.00	0.01	0.01	0.04	0.05
14	-0.50	1.41	0.02	0.03	0.06	0.08
18	0.00	1.00	0.01	0.01	0.07	0.09
25	0.50	0.71	0.02	0.03	0.09	0.12
35	1.00	0.50	0.02	0.03	0.11	0.15
45	1.50	0.35	0.04	0.05	0.15	0.20
60	2.00	0.25	0.22	0.28	0.37	0.48
80	2.50	0.18	5.80	7.25	6.17	7.73
120	3.00	0.13	24.23	30.31	30.40	38.04
170	3.50	0.09	22.17	27.73	52.57	65.77
200	3.75	0.07	4.26	5.33	56.83	71.10
230	4.00	0.06	2.03	2.54	58.86	73.64

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

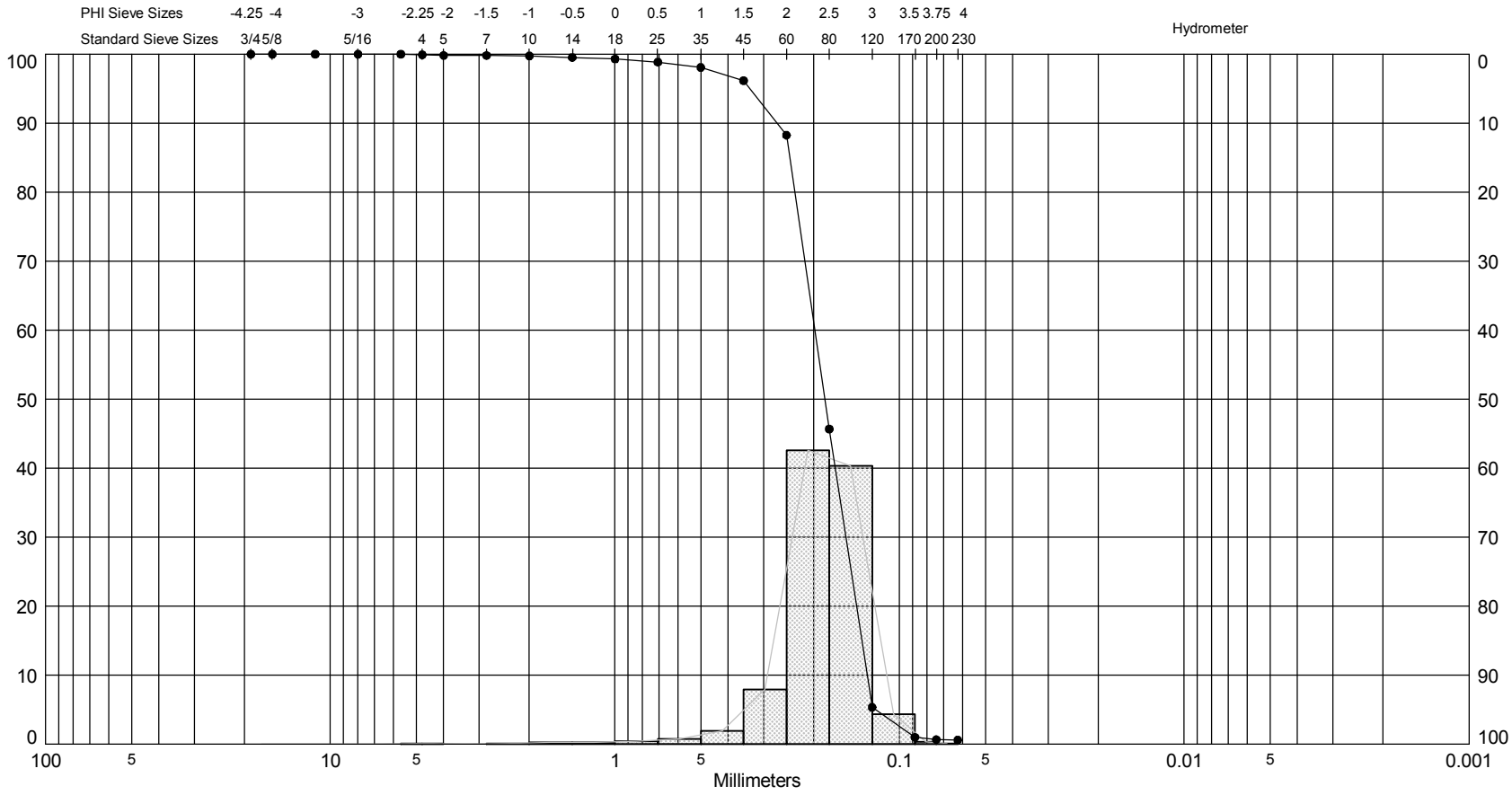
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
			3.22	2.78	2.64	2.31

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.98	0.13	0.44	-1.22	13.56

GRANULARMETRIC REPORT FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09

APPENDIX 20

2007 CPENC Individual Vibracore Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-01 #1	—●—	-16.5	SP	#200 - 0.65 #230 - 0.60		6	2.45	2.4	-2.67	18.94	0.53

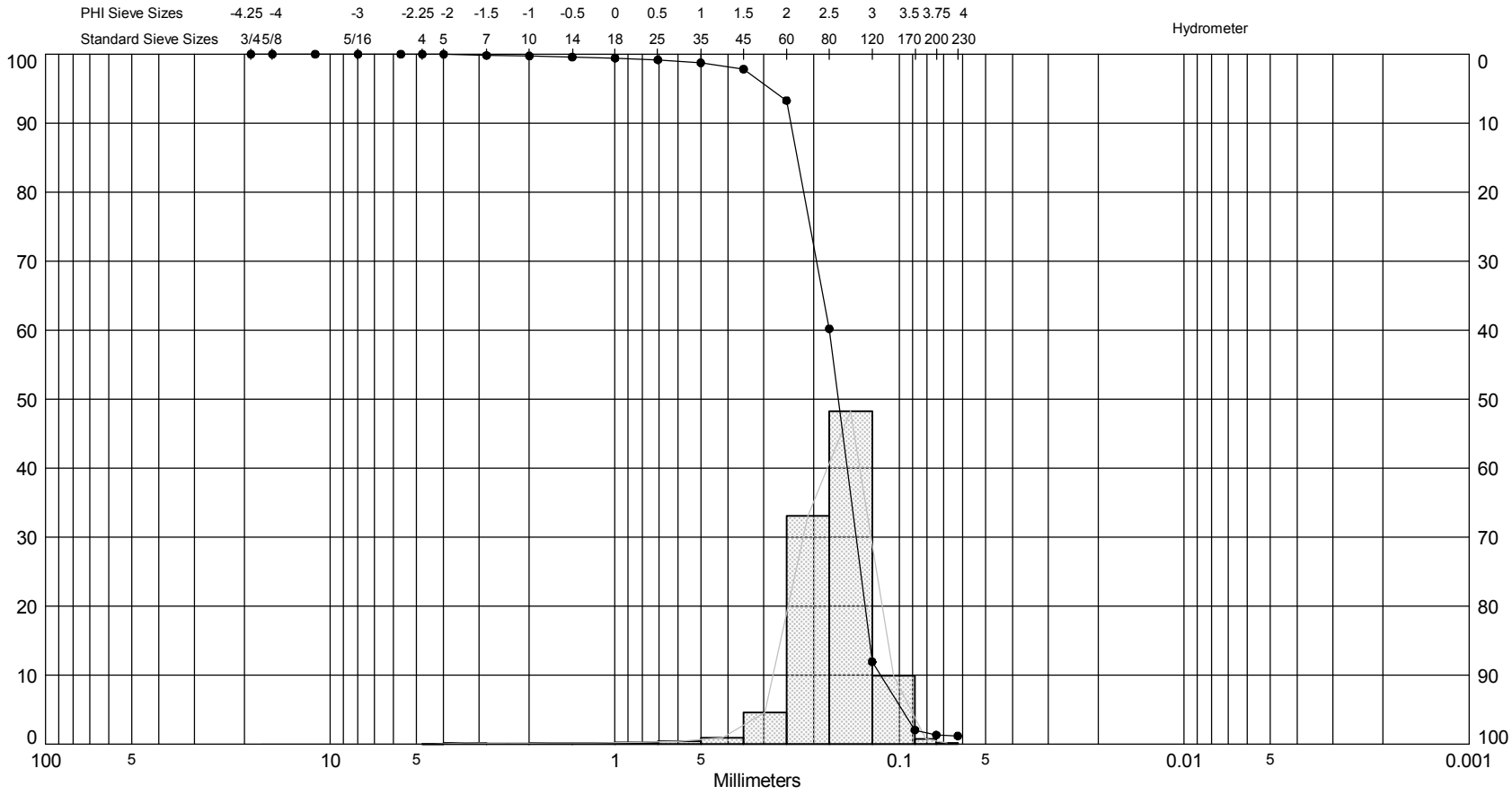
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	05-14-07
Analyzed By:	PB
Easting (X, ft):	2,390,205
Northing (Y, ft):	198,940
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-01 #2	—●—	-18.0	SP	#200 - 1.32 #230 - 1.18		5	2.61	2.54	-2.59	19.58	0.51

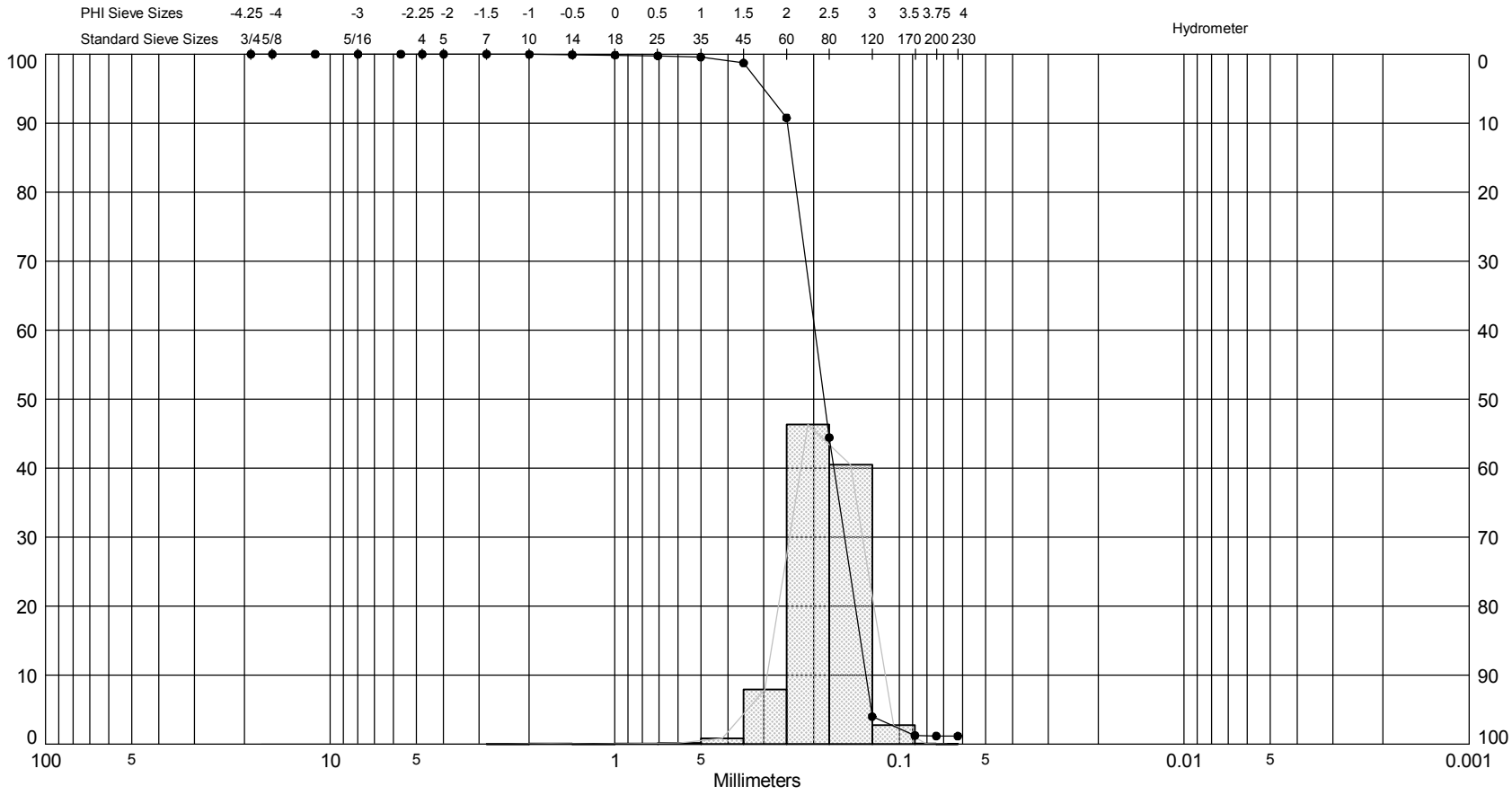
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,390,205
Northing (Y, ft):	198,940
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-01 #3	—●—	-20.5	SP	#200 - 1.16 #230 - 1.15		4	2.44	2.43	-1.21	10.08	0.39

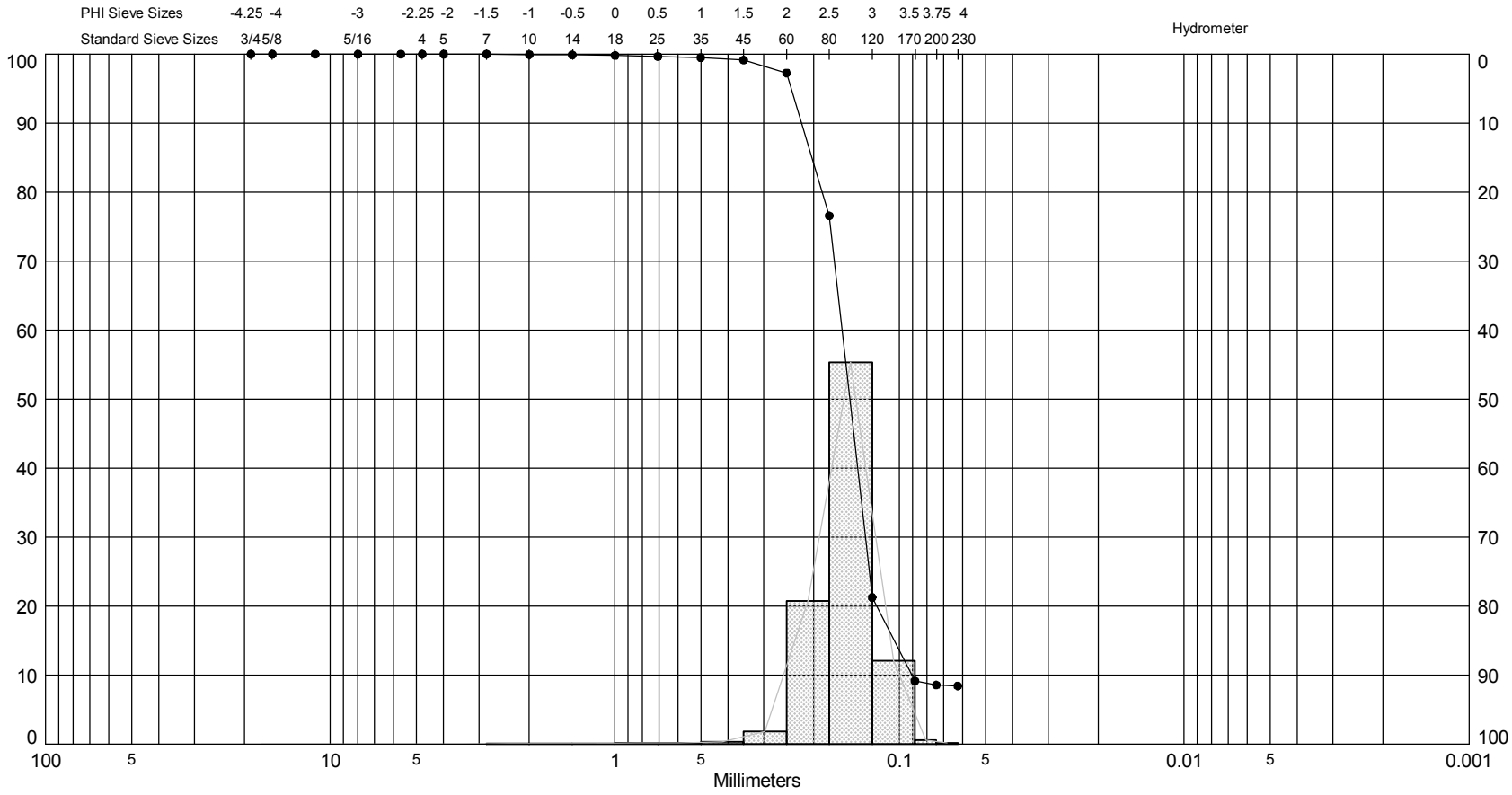
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,390,205
Northing (Y, ft):	198,940
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-01 #4	—●—	-22.5	SP-SM	#200 - 8.56 #230 - 8.43			2.74	2.67	-1.95	16.27	0.4

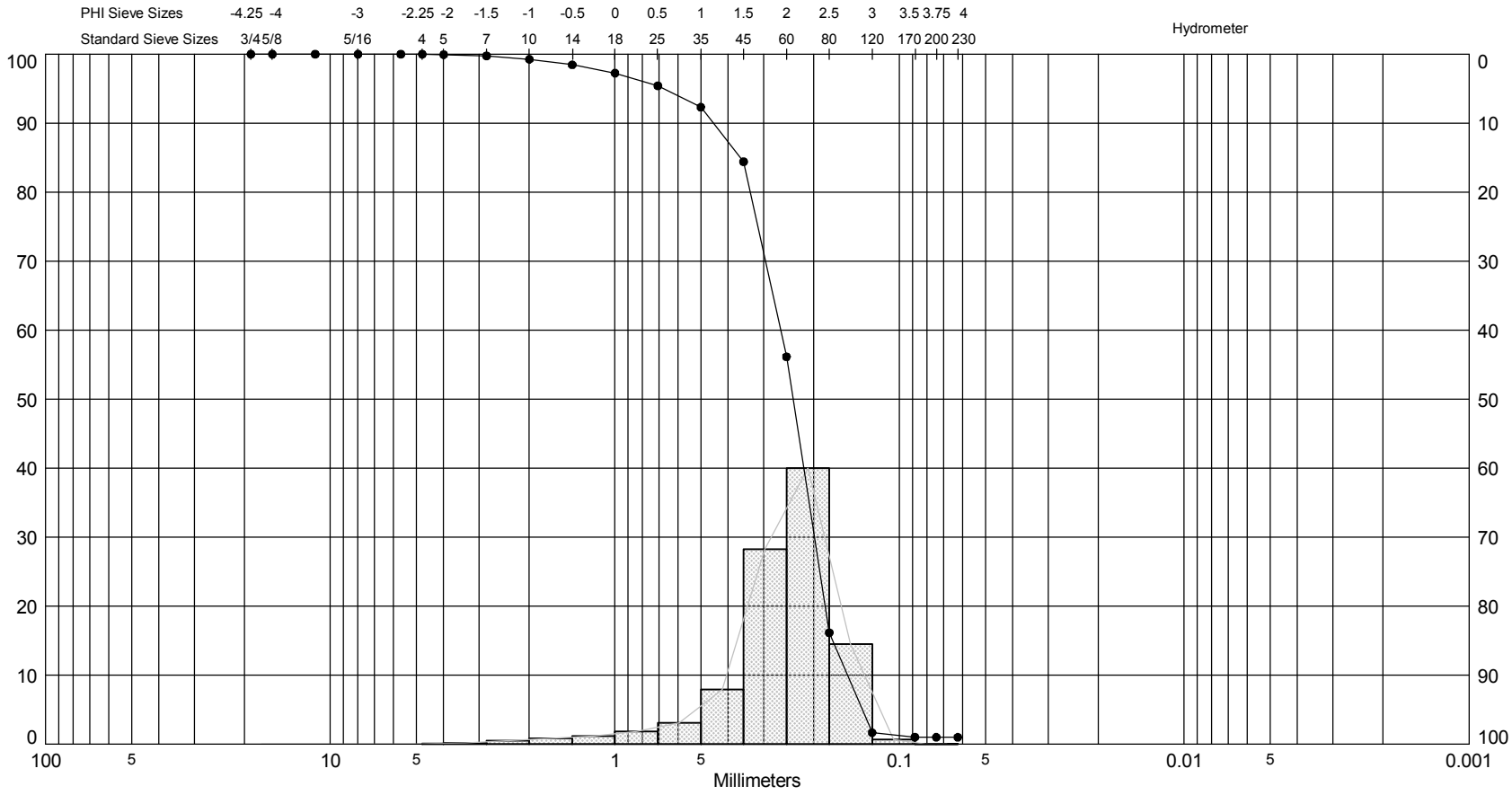
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-02-07
Analyzed By:	PB
Easting (X, ft):	2,390,205
Northing (Y, ft):	198,940
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-02 #1	—●—	-10.0	SP	#200 - 0.99 #230 - 0.98		11	2.08	1.94	-1.85	8.35	0.7

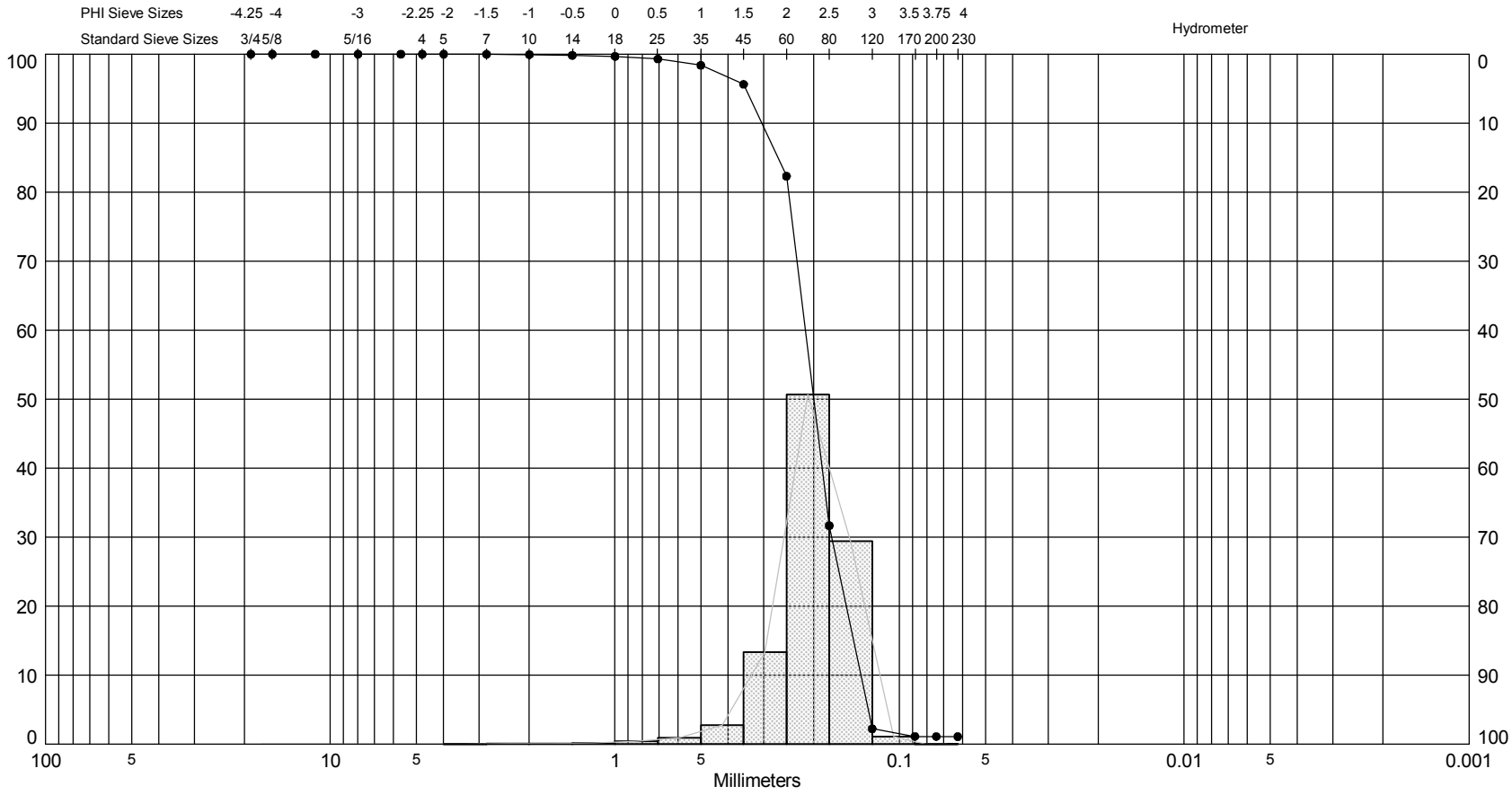
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,388,733
Northing (Y, ft):	202,440
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-02 #2	—●—	-16.0	SP	#200 - 1.10 #230 - 1.09		8	2.32	2.28	-1.66	10.12	0.46

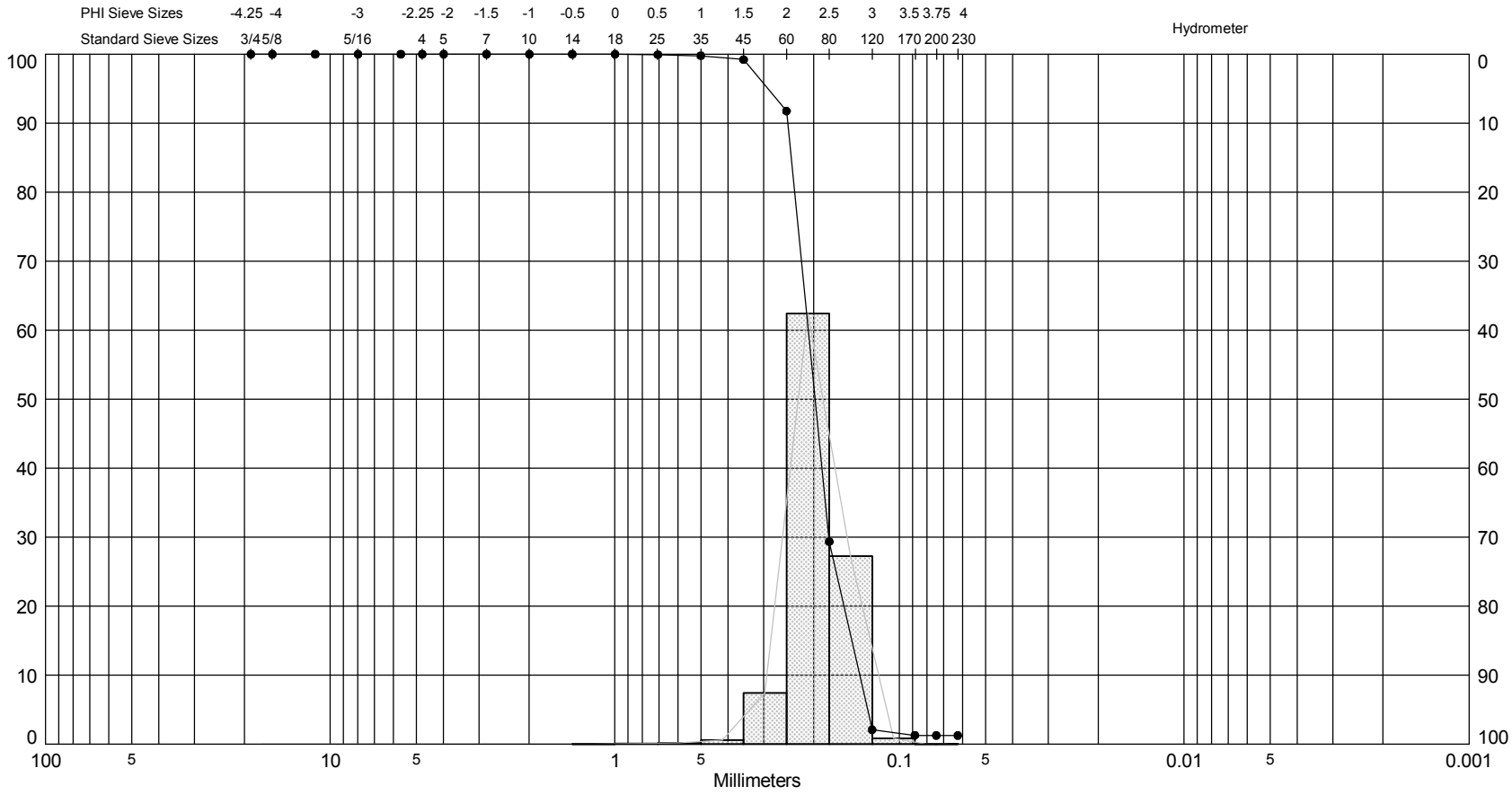
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,388,733
Northing (Y, ft):	202,440
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-02 #3	—●—	-20.0	SP	#200 - 1.25 #230 - 1.24		4	2.33	2.35	-0.4	5.78	0.31

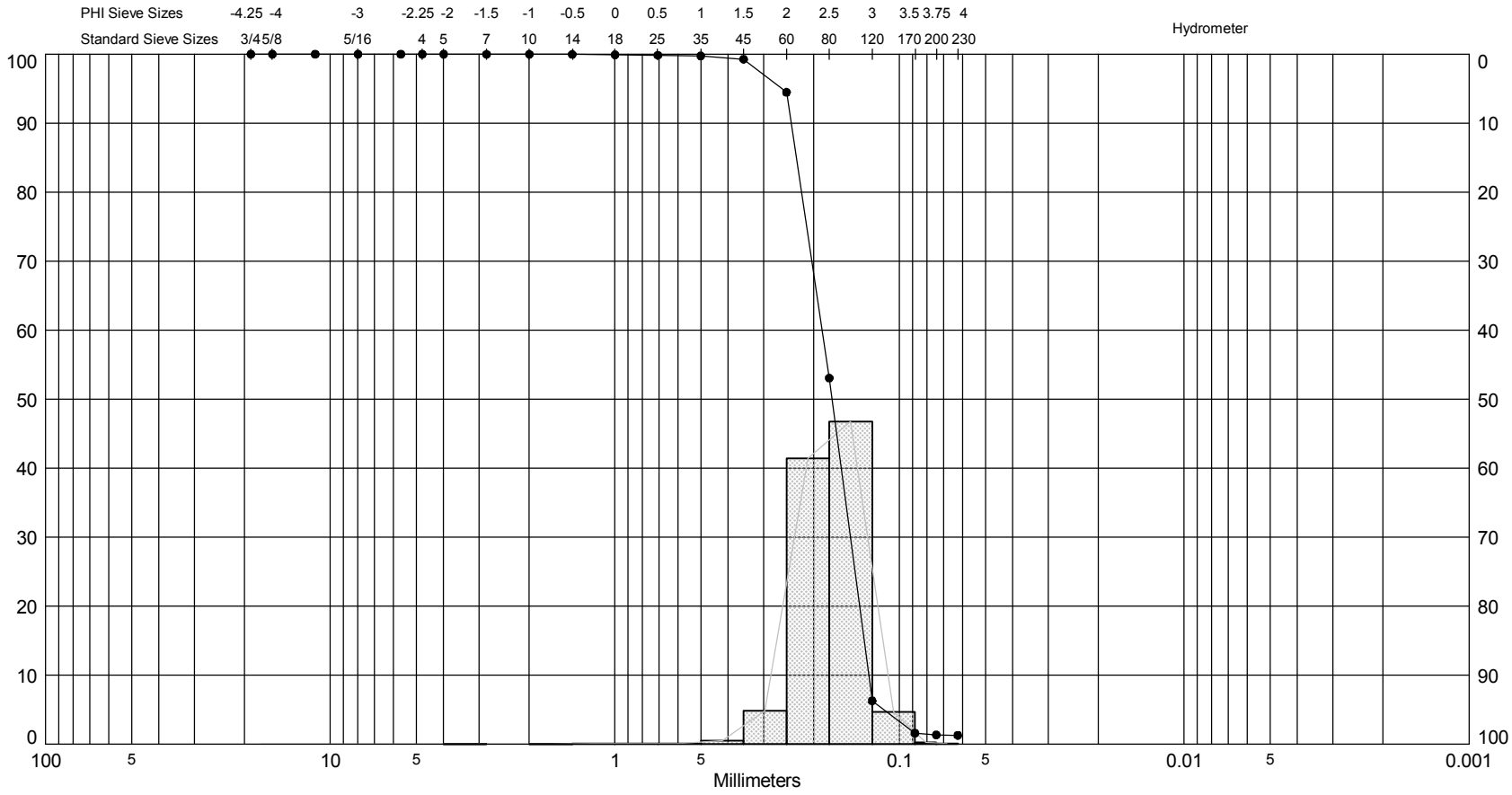
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,388,733
Northing (Y, ft):	202,440
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-03 #1	—●—	-16.0	SP	#200 - 1.33 #230 - 1.28			2.53	2.5	-1	10.36	0.37

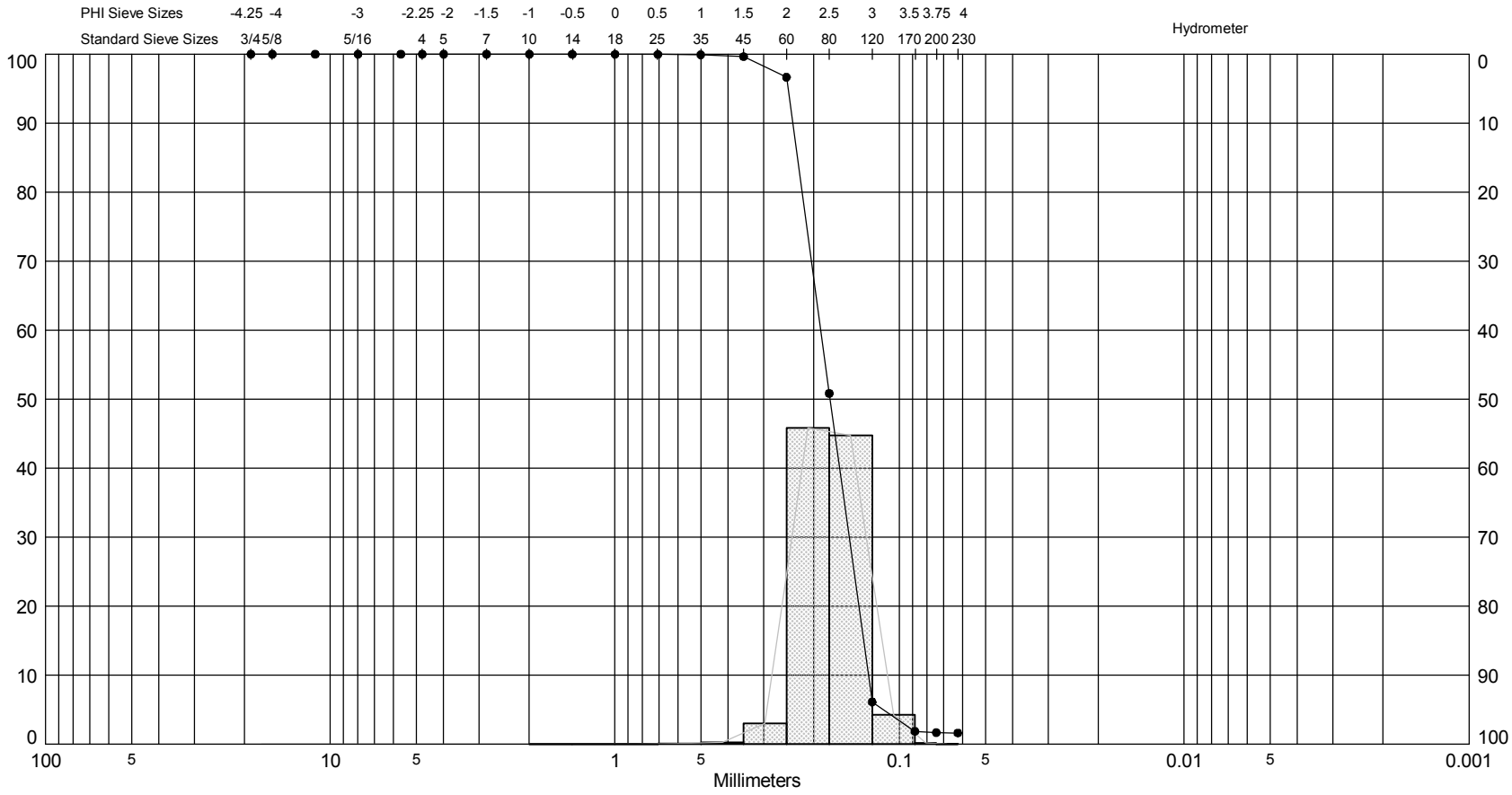
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,392,093
Northing (Y, ft):	200,758
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-03 #2	—●—	-19.0	SP	#200 - 1.66 #230 - 1.62			2.51	2.5	-0.23	5.42	0.33

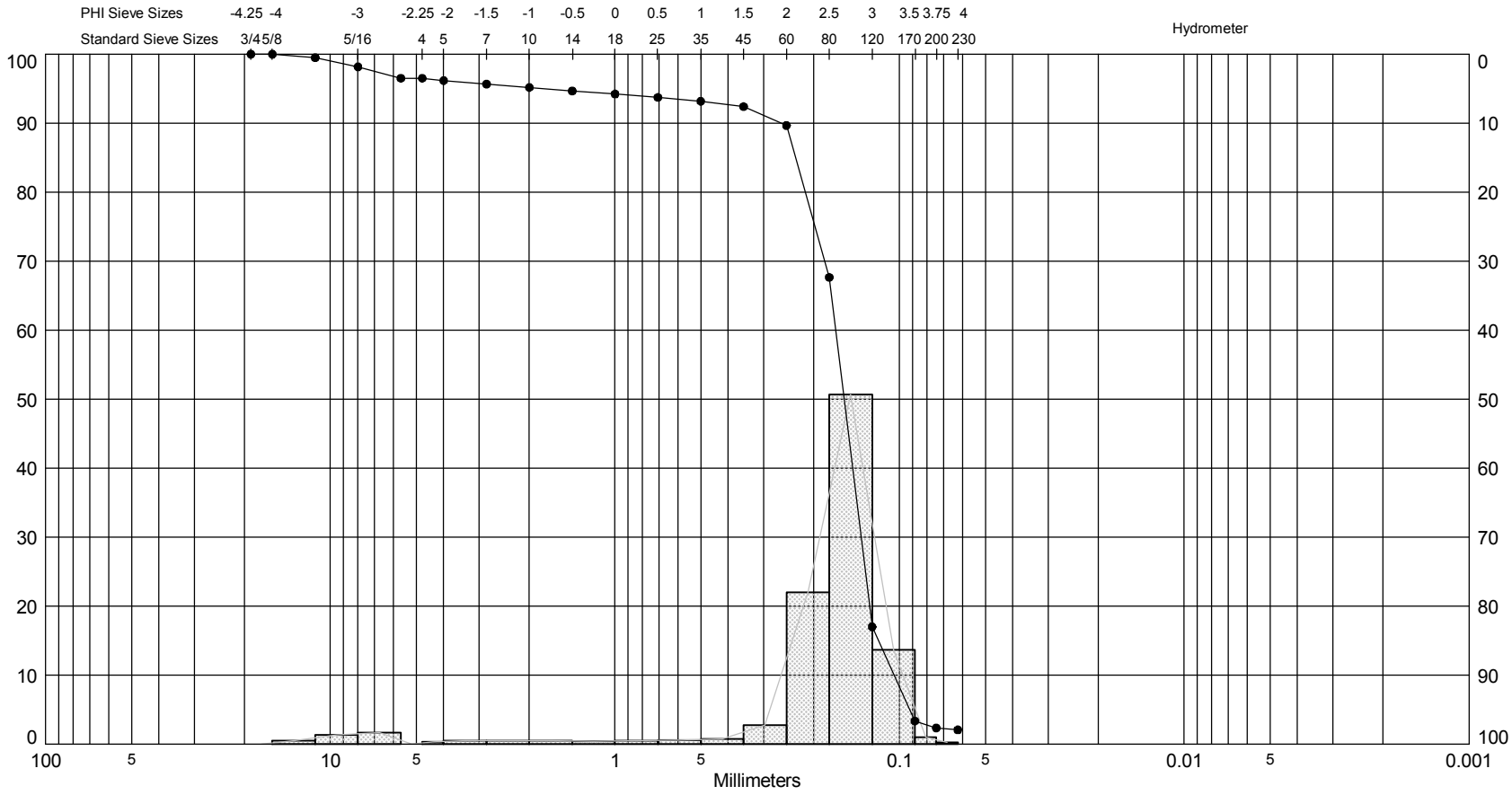
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,392,093
Northing (Y, ft):	200,758
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-03 #3	—●—	-20.6	SW	#200 - 2.34 #230 - 2.05			2.67	2.36	-3.28	13.71	1.28

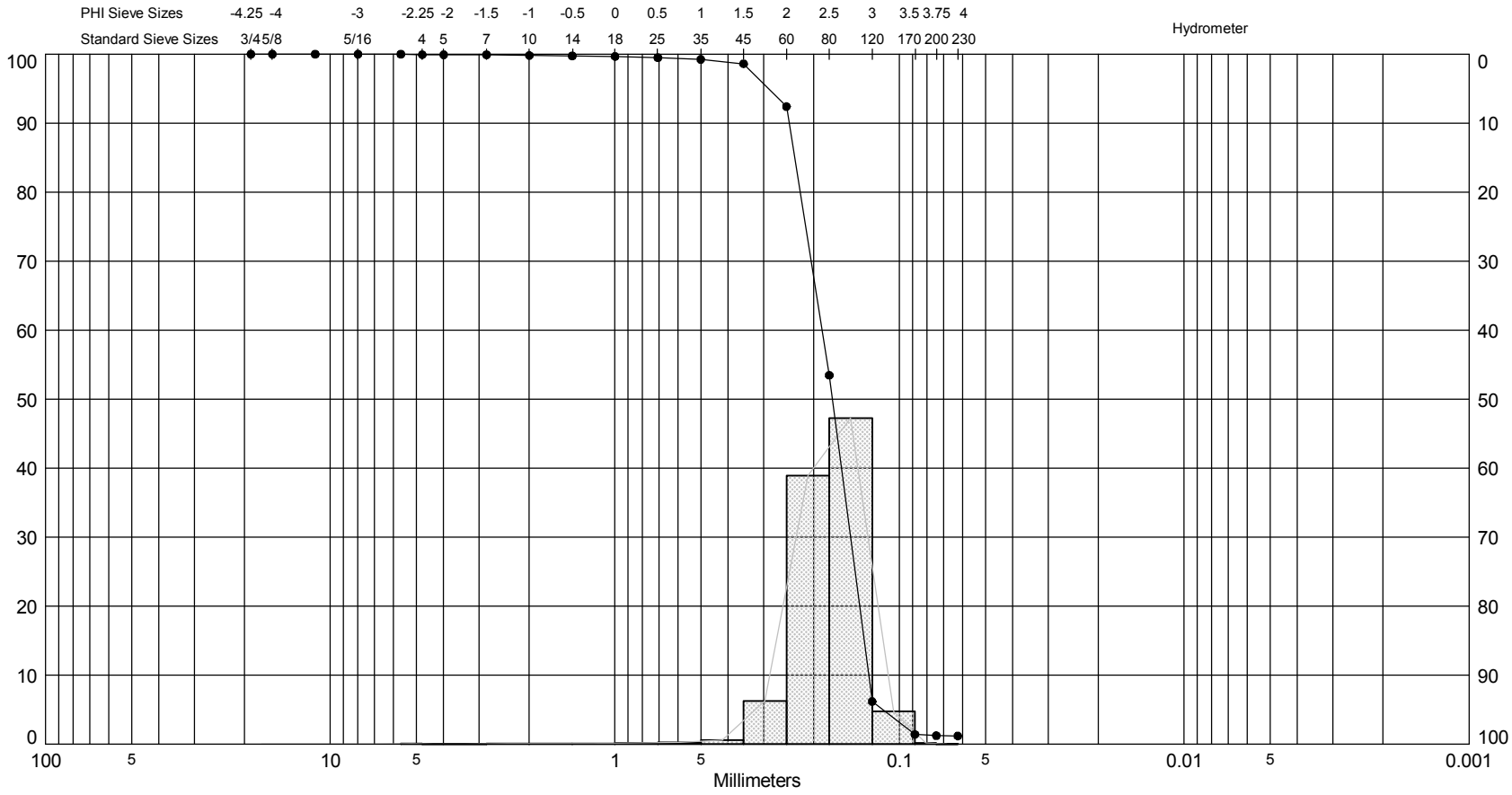
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,392,093
Northing (Y, ft):	200,758
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-04 #1	—●—	-16.5	SP	#200 - 1.22 #230 - 1.18			2.54	2.48	-2.68	23.95	0.44

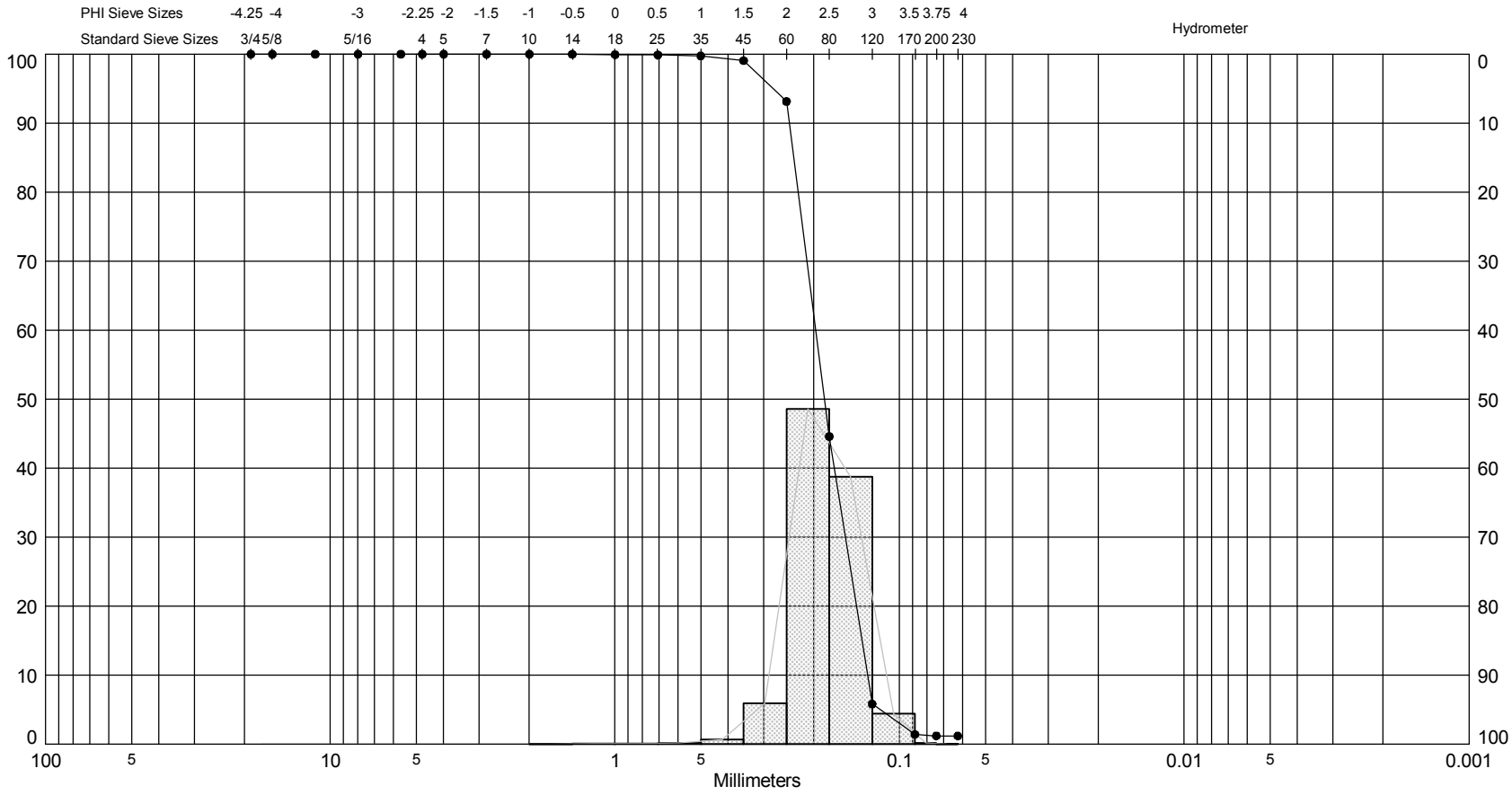
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,391,811
Northing (Y, ft):	199,871
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-04 #2	—●—	-20.7	SP	#200 - 1.20 #230 - 1.18			2.44	2.45	-0.5	6.2	0.37

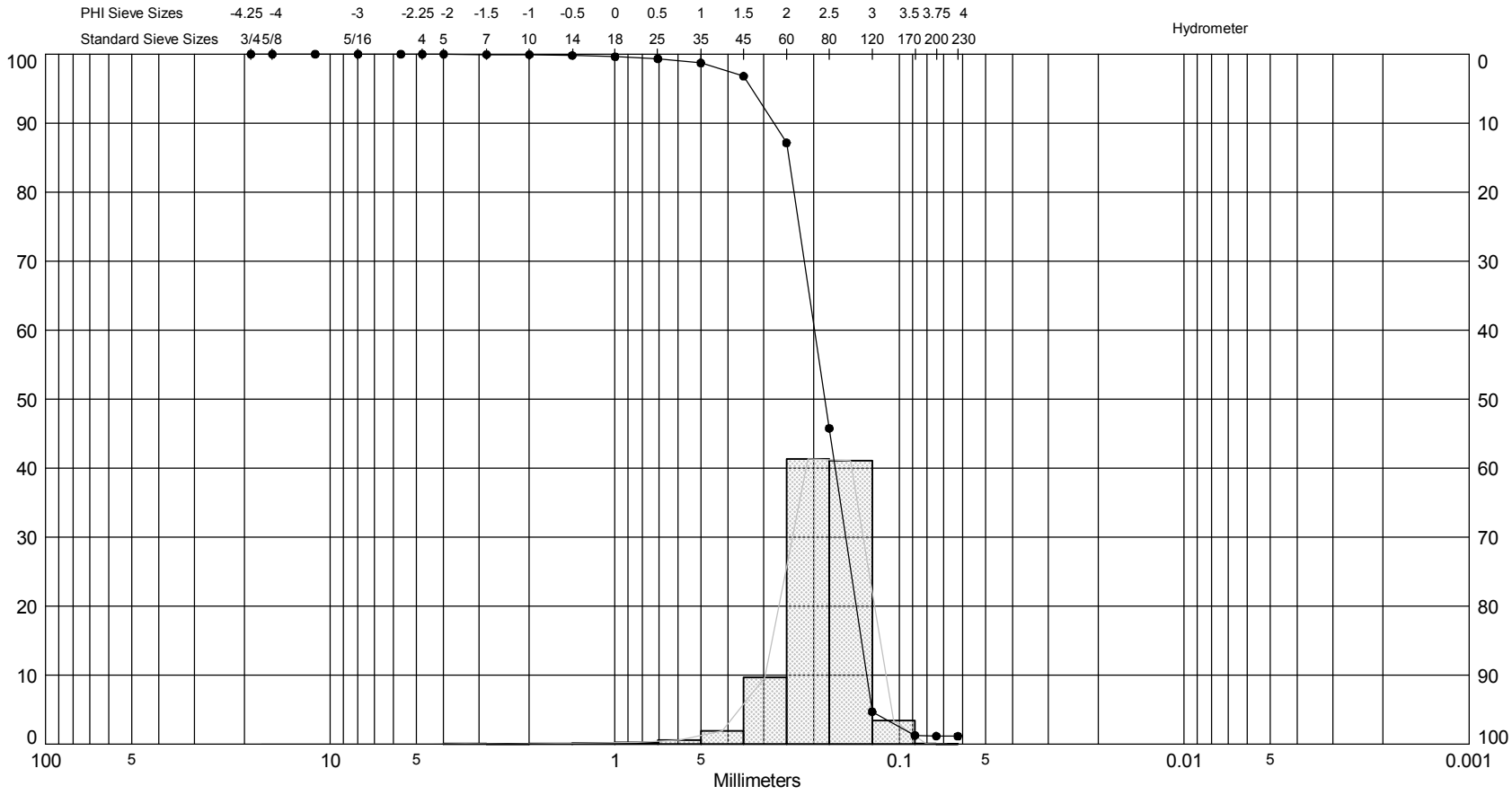
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,391,811
Northing (Y, ft):	199,871
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-05 #1	—●—	-13.9	SP	#200 - 1.15 #230 - 1.13		6	2.45	2.4	-1.81	11.74	0.47

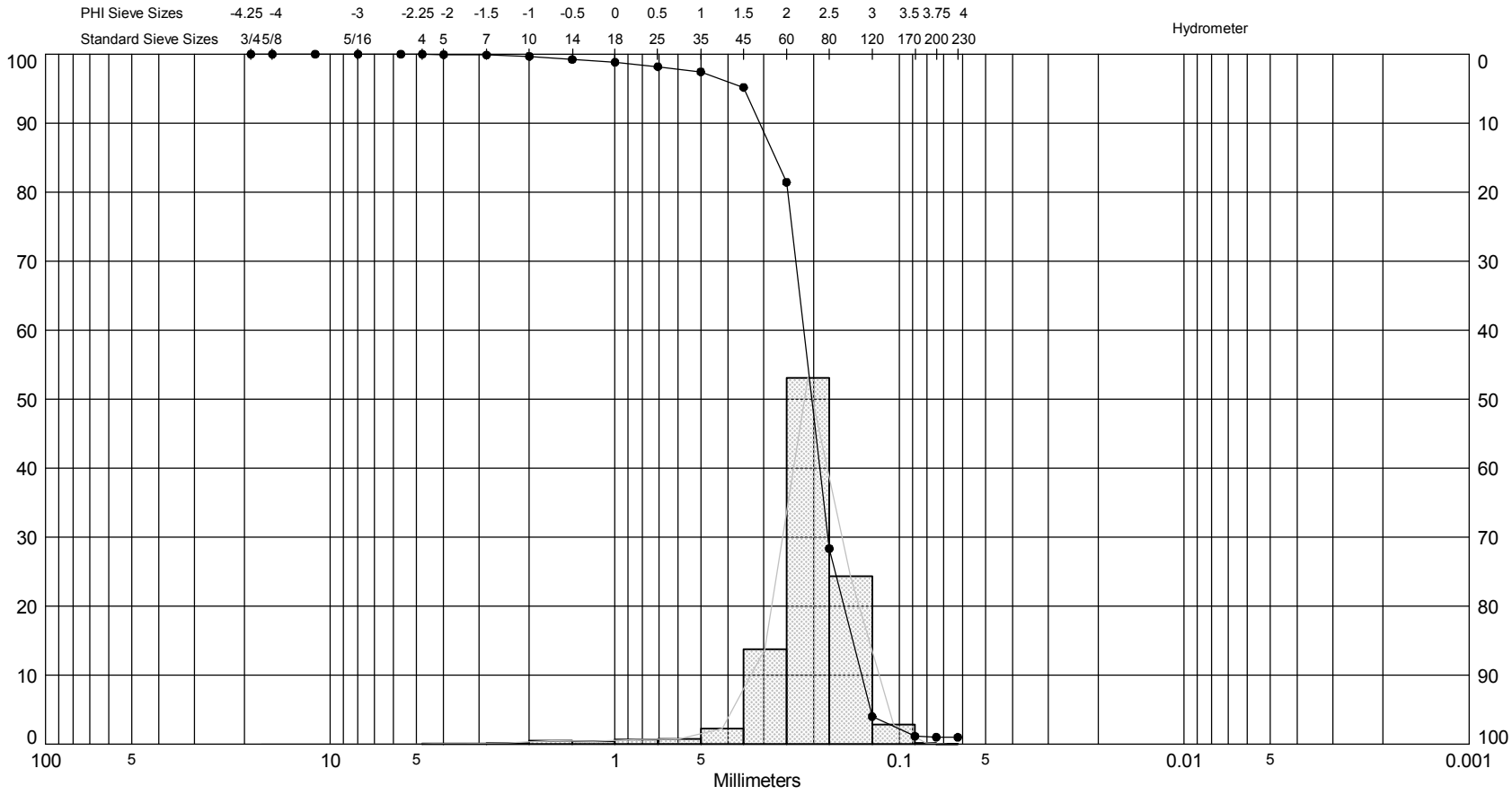
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,389,867
Northing (Y, ft):	199,037
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-05 #2	—●—	-19.4	SP	#200 - 1.00 #230 - 0.98		6	2.3	2.25	-2.44	15.19	0.55

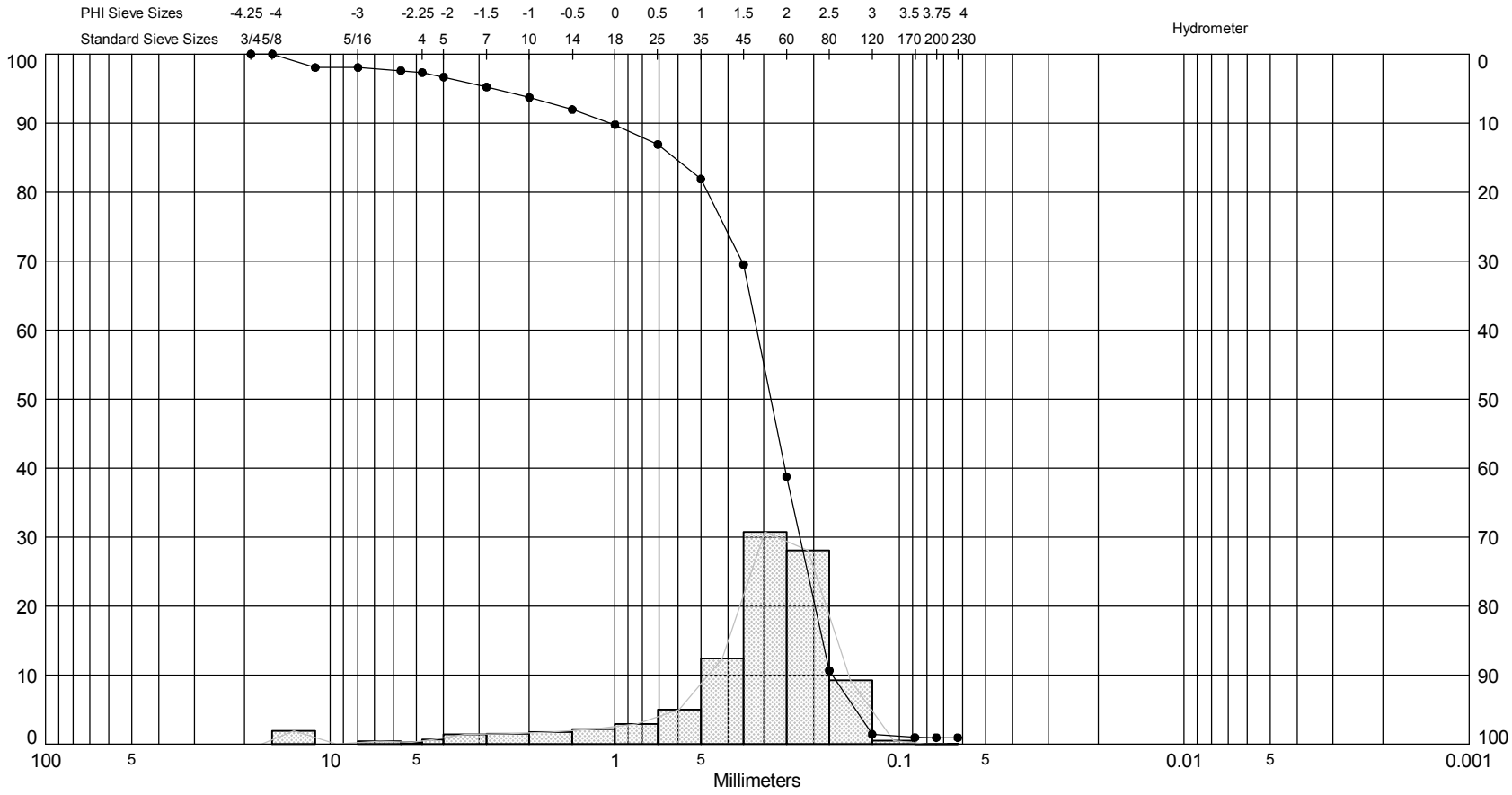
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,389,867
Northing (Y, ft):	199,037
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-06 #1	—●—	-13.9	SW	#200 - 0.95 #230 - 0.94			1.82	1.49	-2.21	8.4	1.26

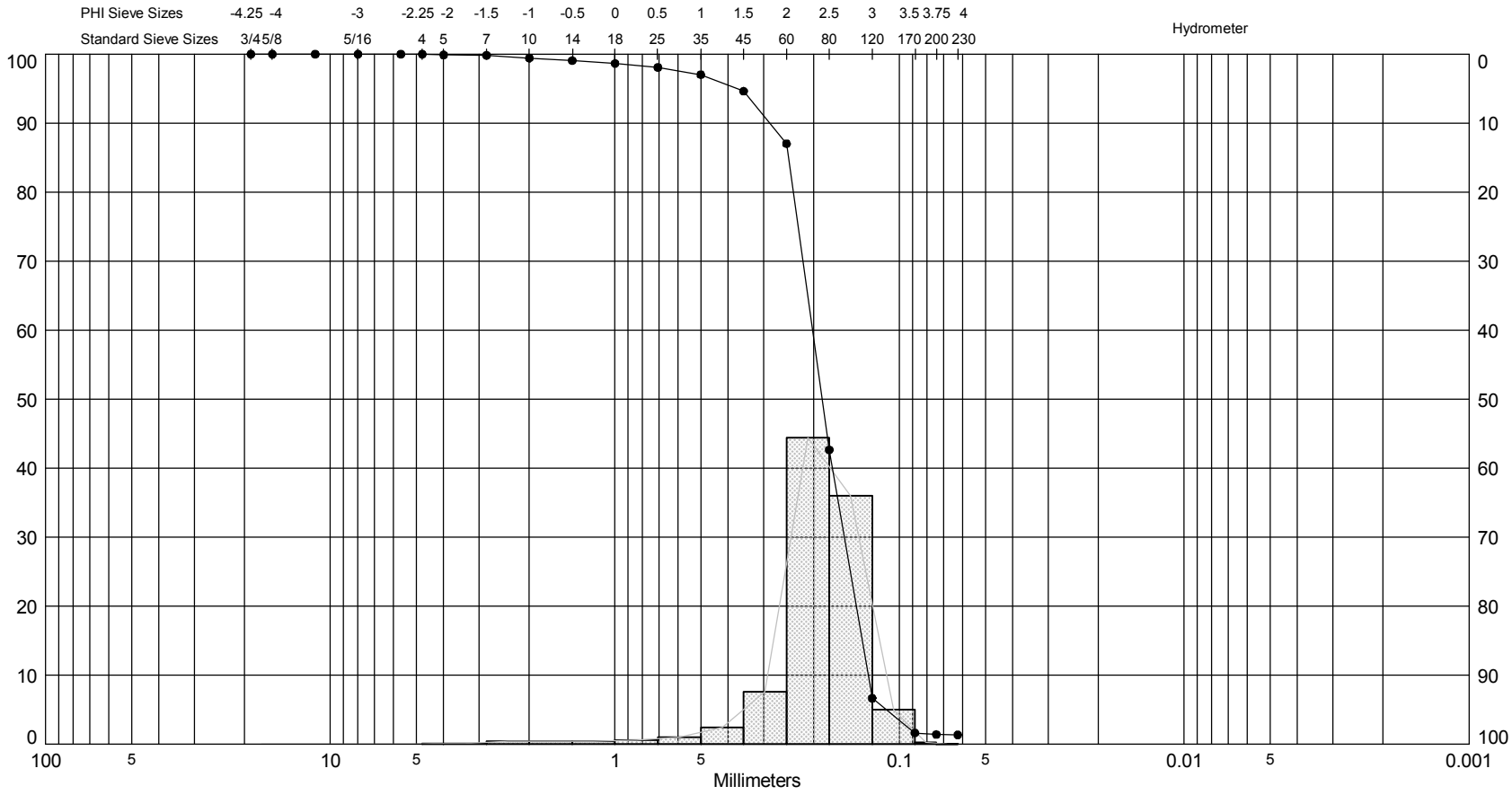
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,389,210
Northing (Y, ft):	198,965
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-06 #2	—●—	-16.2	SP	#200 - 1.38 #230 - 1.34			2.42	2.35	-2.68	15.62	0.61

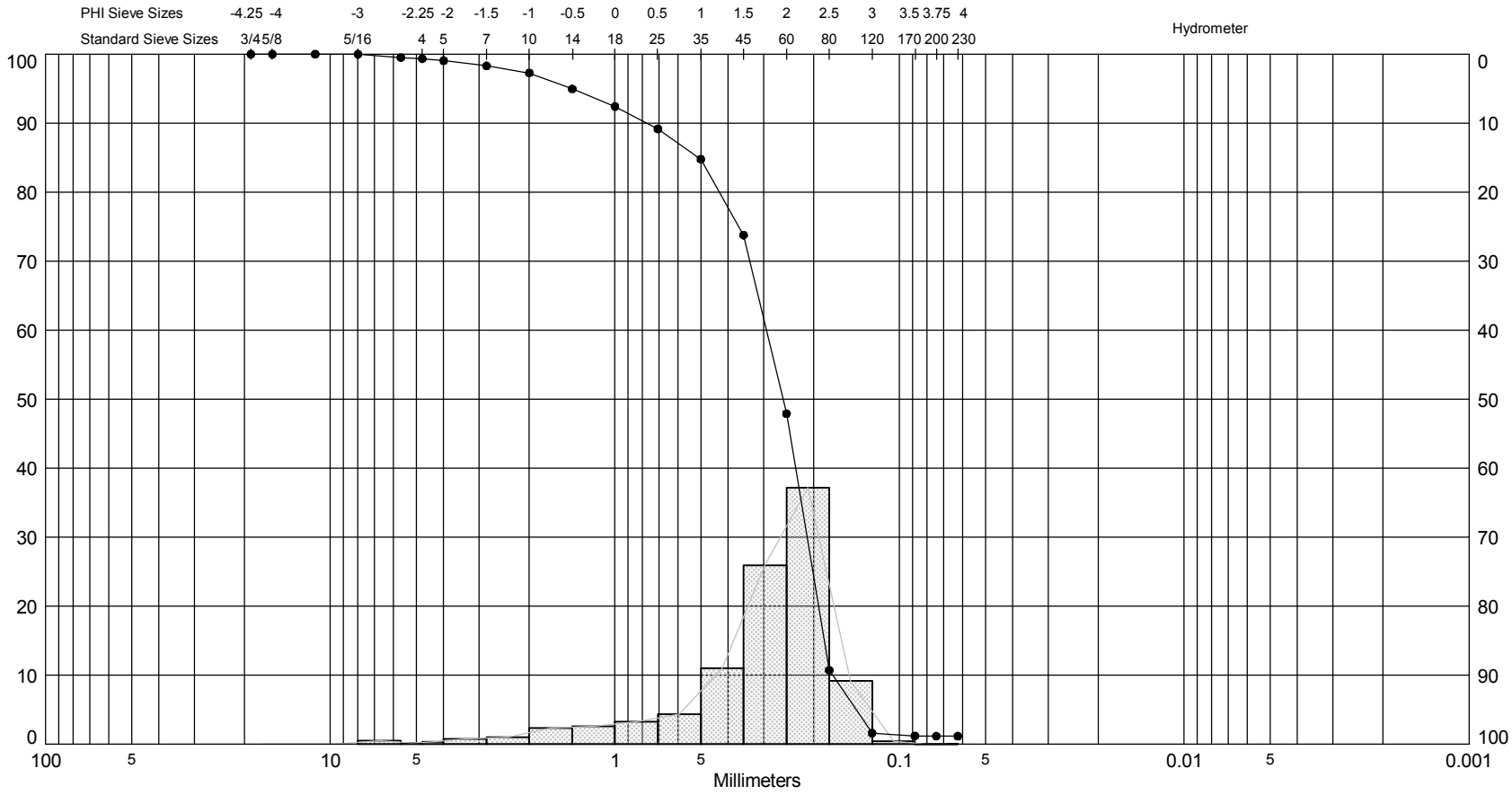
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,389,210
Northing (Y, ft):	198,965
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-06 #3	—●—	-17.4	SW	#200 - 1.15 #230 - 1.14			1.96	1.68	-1.88	7.05	0.97

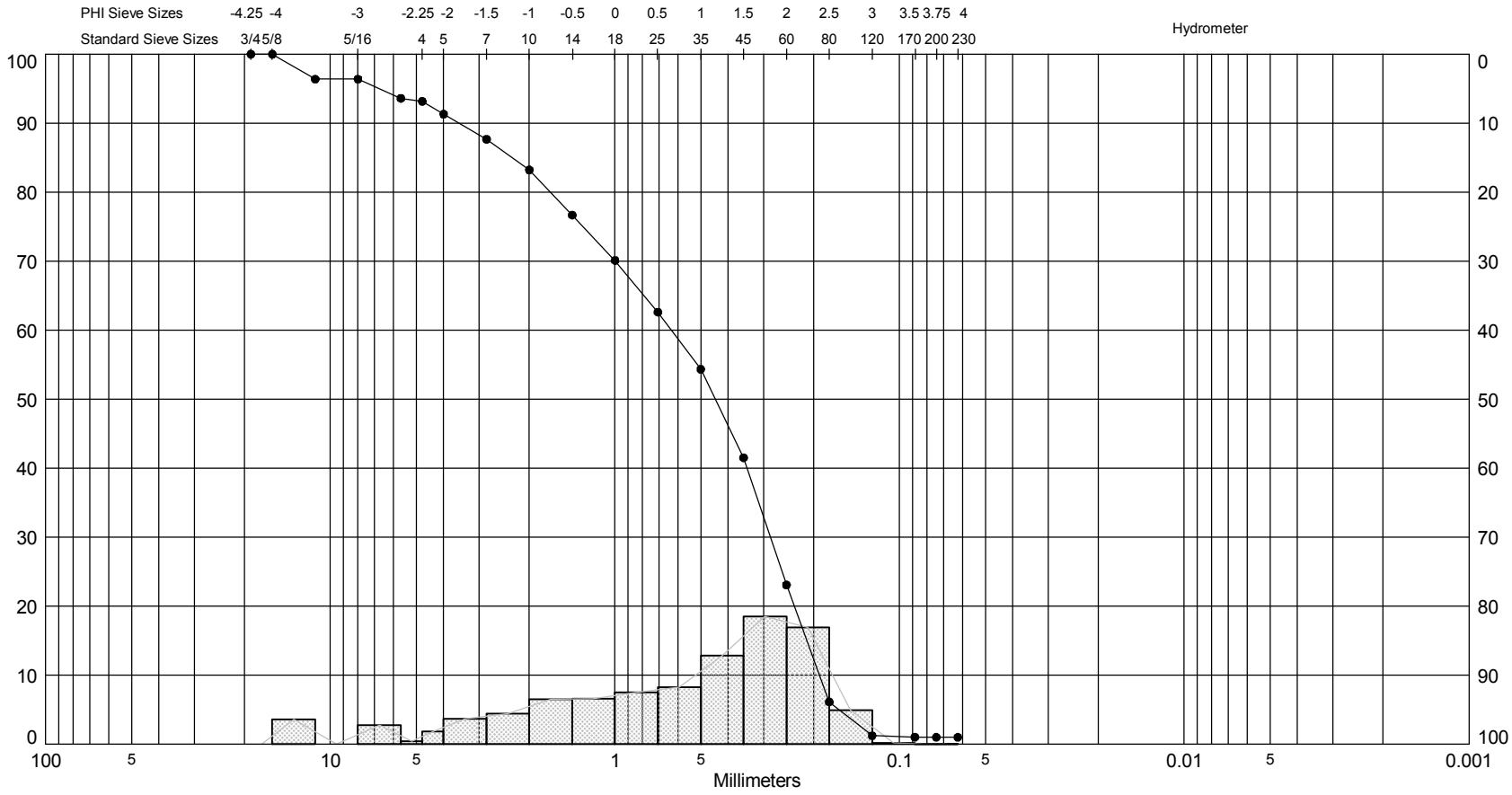
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,389,210
Northing (Y, ft):	198,965
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-06 #4	—●—	-18.9	SW	#200 - 0.99 #230 - 0.98			1.17	0.65	-0.95	3.15	1.65

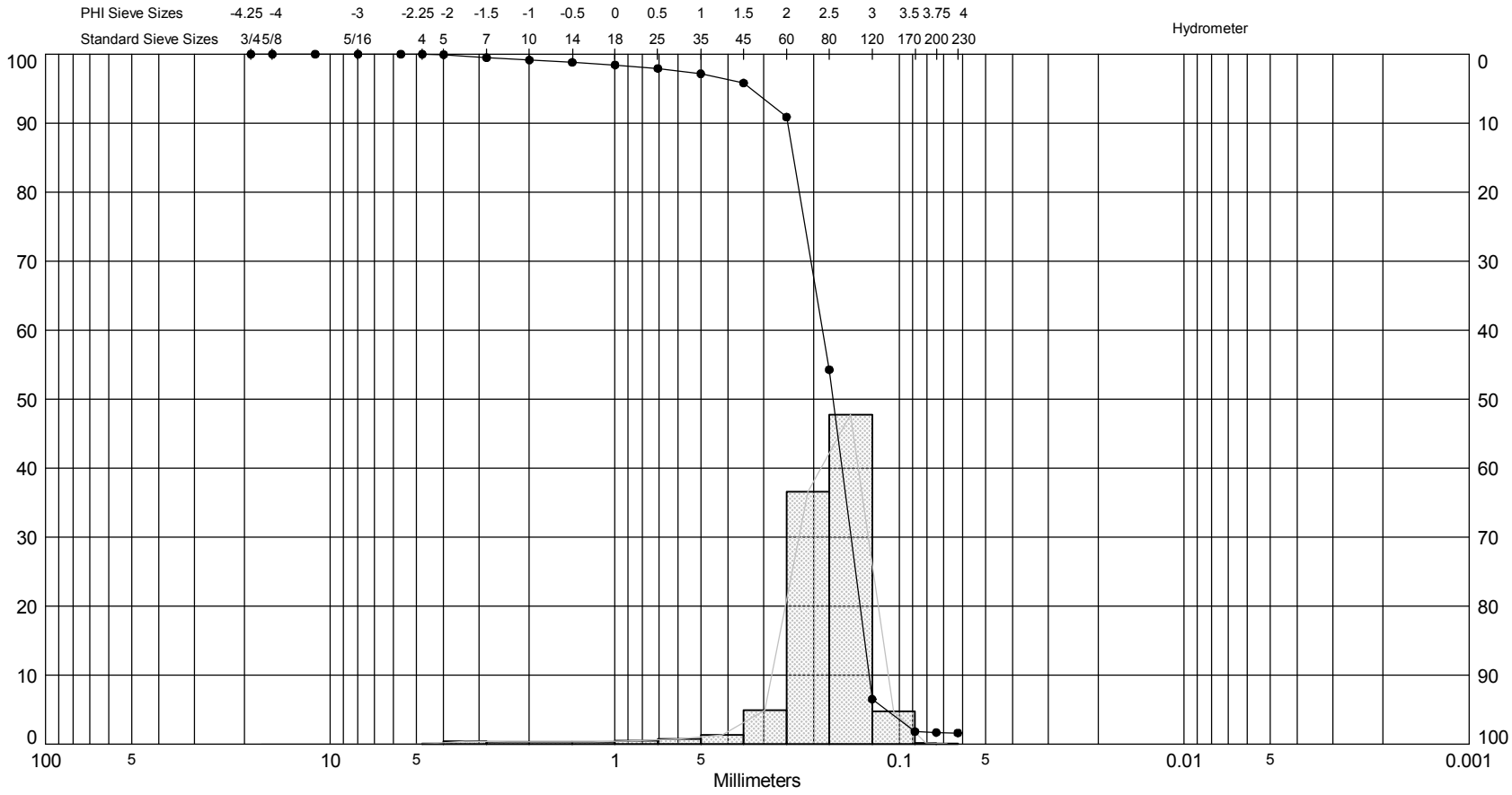
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,389,210
Northing (Y, ft):	198,965
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-06 #5	—●—	-20.4	SP	#200 - 1.68 #230 - 1.62			2.54	2.43	-3.45	20.56	0.62

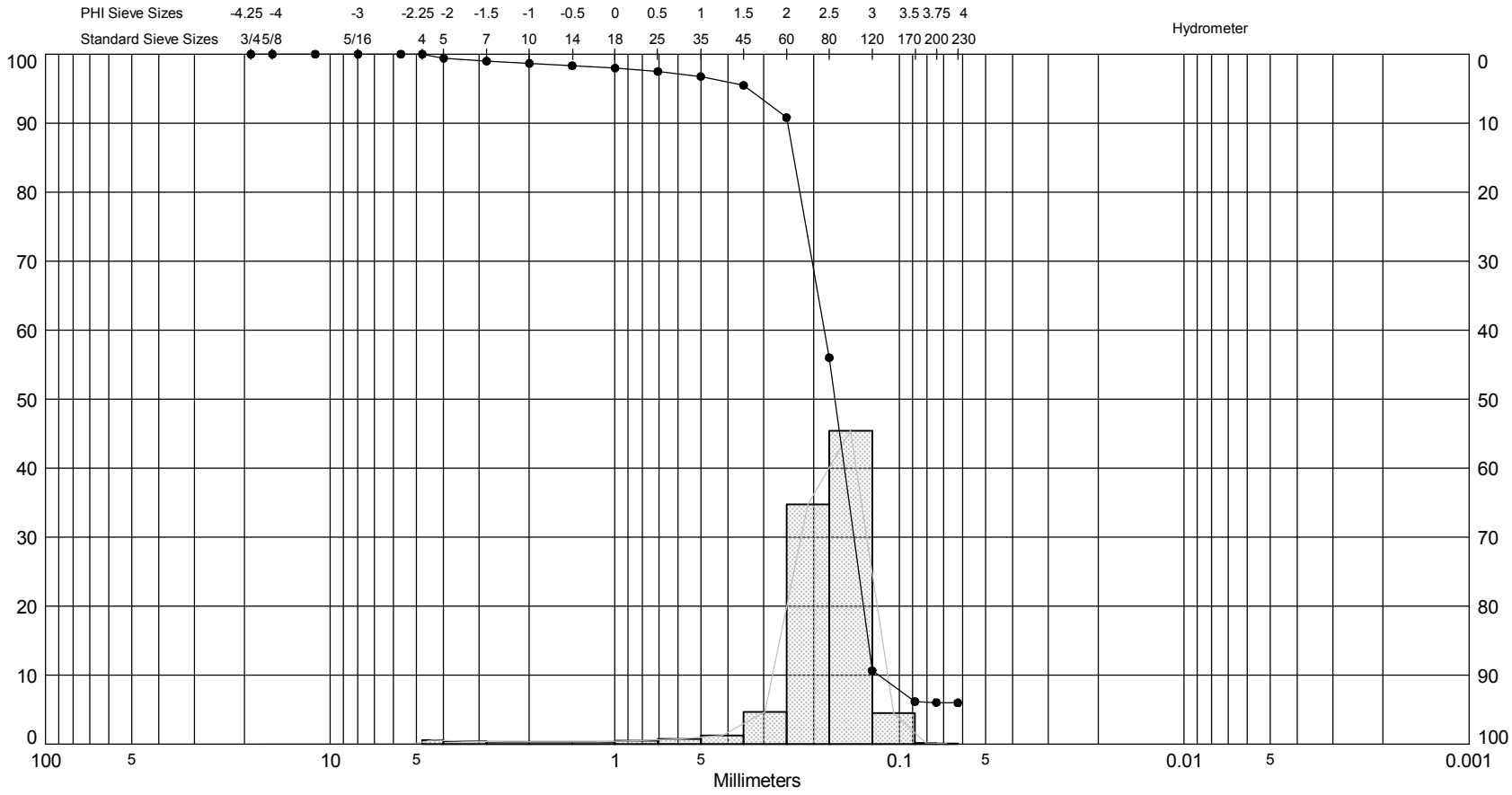
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-18-07
Analyzed By:	PB
Easting (X, ft):	2,389,210
Northing (Y, ft):	198,965
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-07 #1	—●—	-12.4	SP-SM	#200 - 6.03 #230 - 5.97			2.57	2.4	-3.72	21.27	0.71

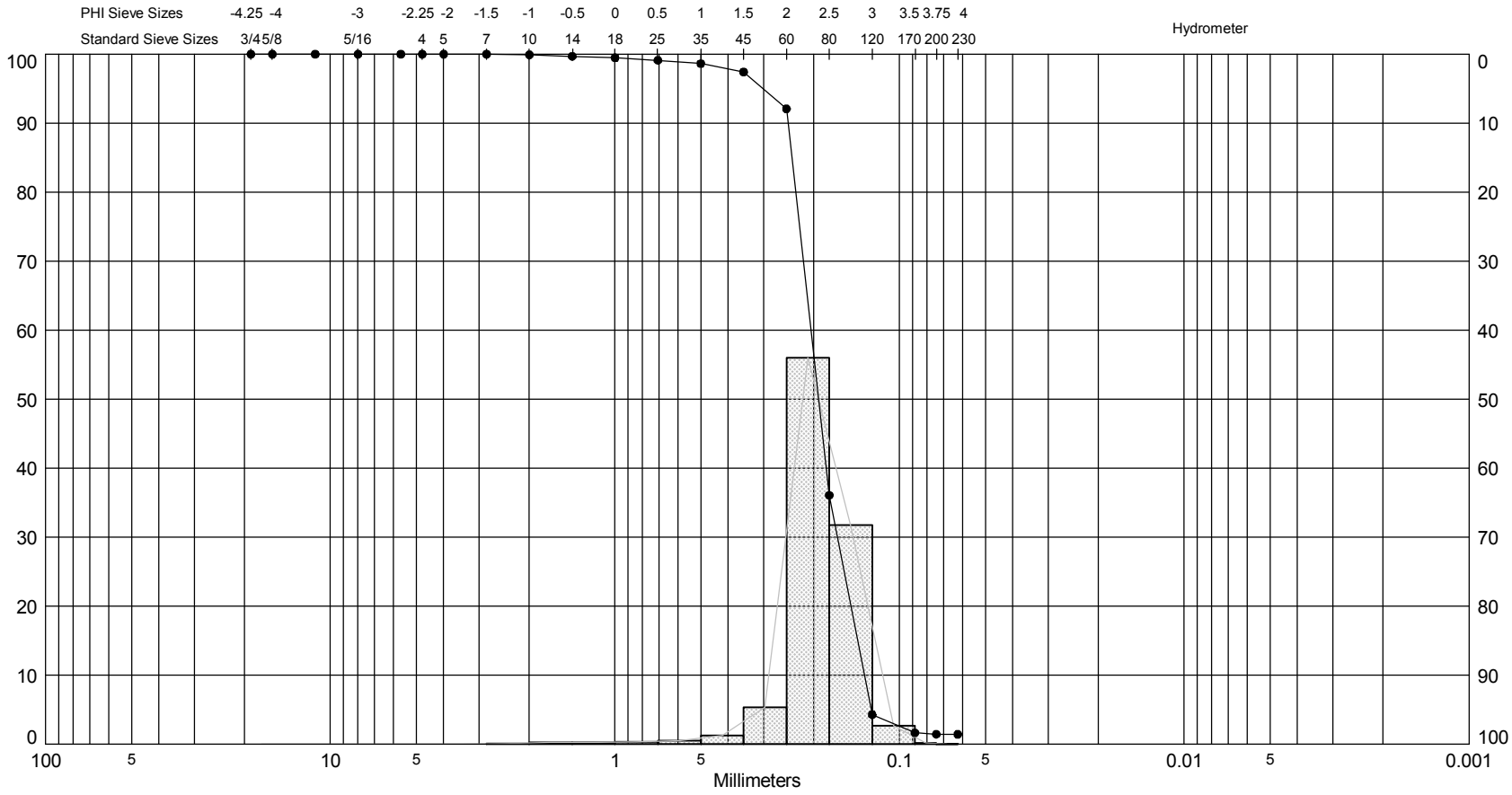
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,390,615
Northing (Y, ft):	200,380
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-07 #2	—●—	-13.4	SP	#200 - 1.43 #230 - 1.41			2.38	2.37	-2.3	16.84	0.44

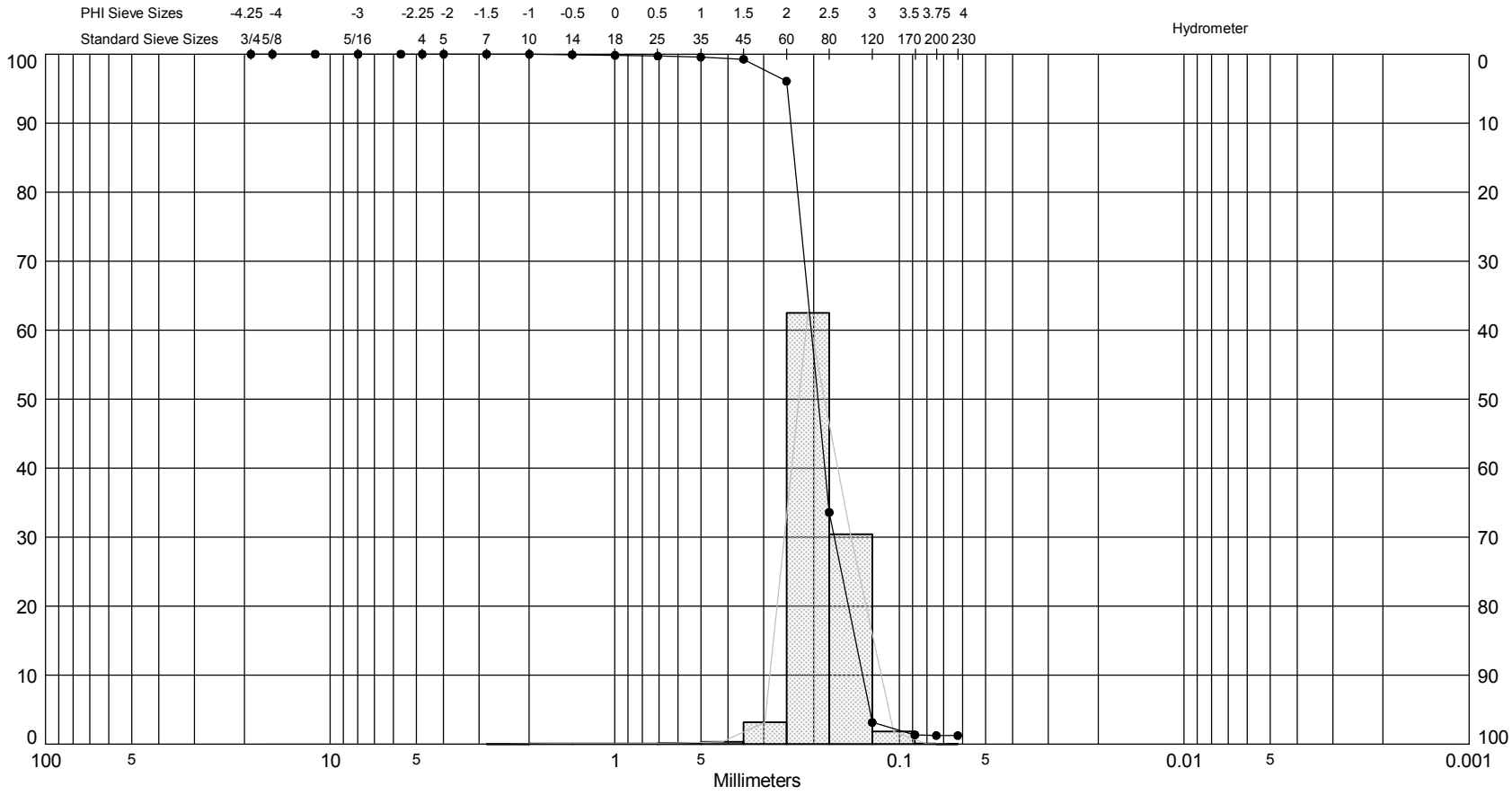
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,390,615
Northing (Y, ft):	200,380
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-07 #3	—●—	-16.4	SP	#200 - 1.24 #230 - 1.23			2.37	2.4	-1.36	16.29	0.33

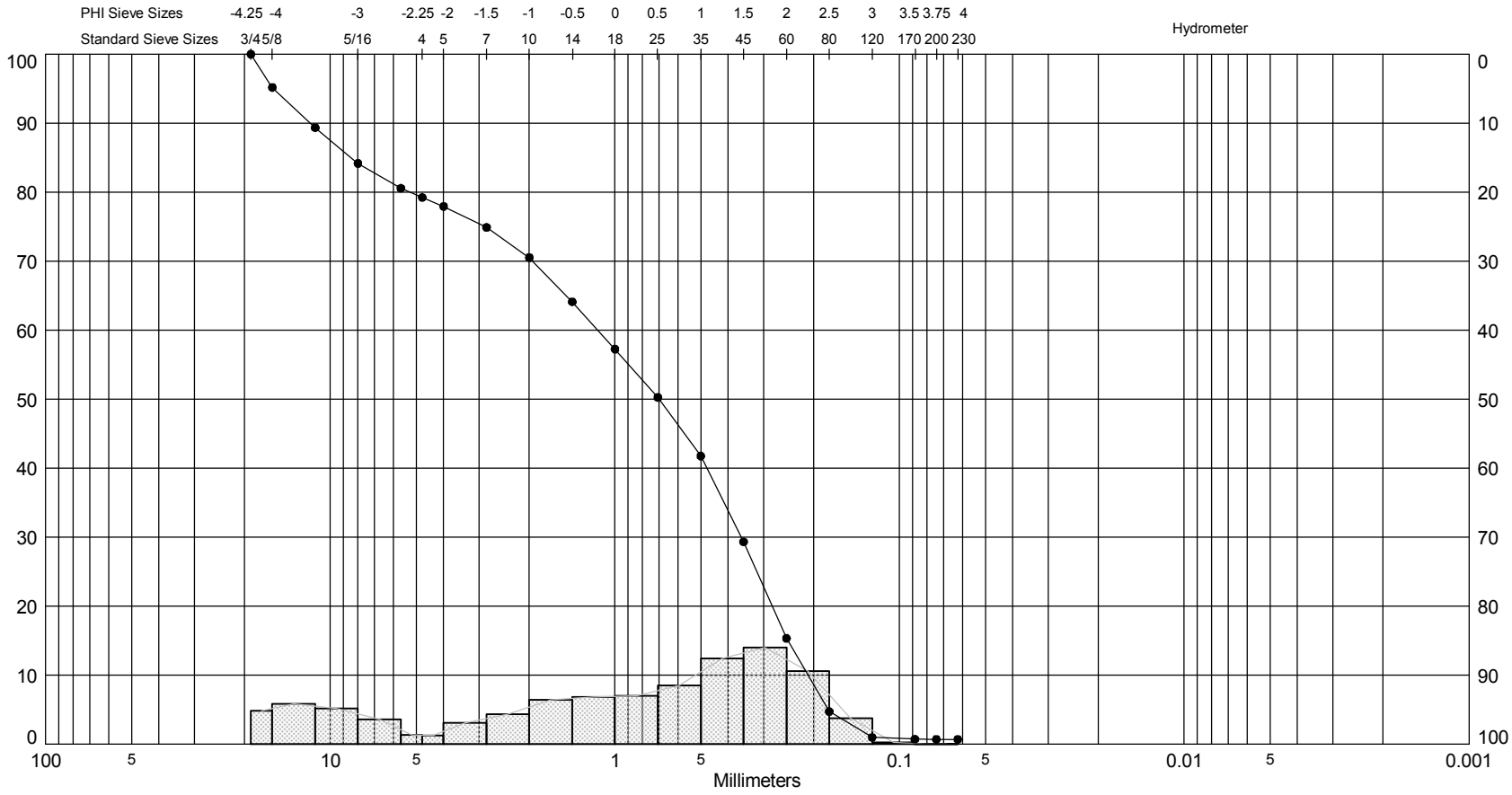
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,390,615
Northing (Y, ft):	200,380
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-08 #1	—●—	-11.9	SW	#200 - 0.70 #230 - 0.69			0.51	-0.08	-0.59	2.09	2.08

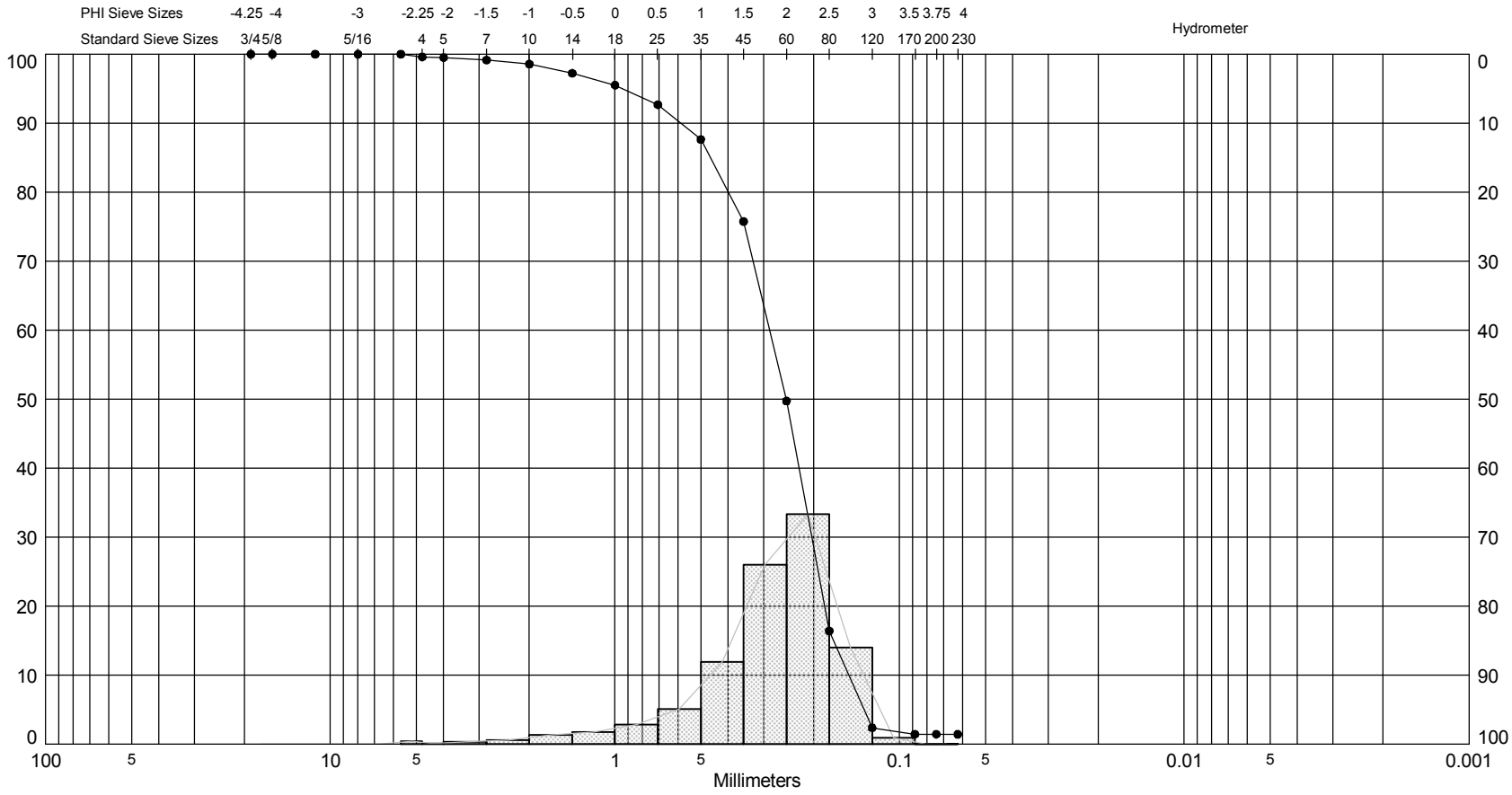
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,390,181
Northing (Y, ft):	200,226
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-08 #2	—●—	-13.9	SP	#200 - 1.43 #230 - 1.42			1.99	1.8	-1.71	7.26	0.85

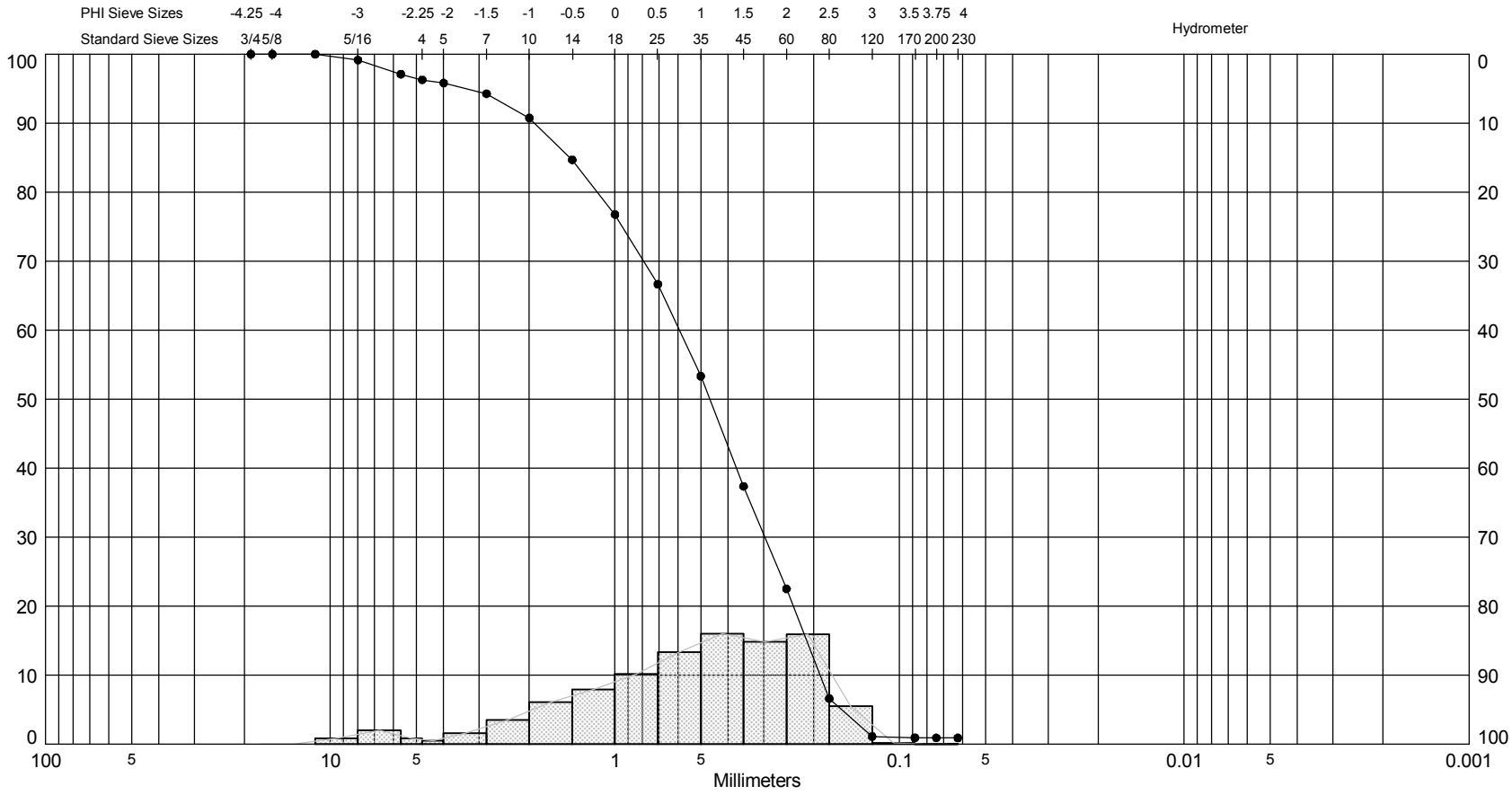
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-19-07
Analyzed By:	PB
Easting (X, ft):	2,390,181
Northing (Y, ft):	200,226
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-08 #3	—●—	-16.4	SW	#200 - 0.90 #230 - 0.89			1.1	0.86	-0.86	3.42	1.33

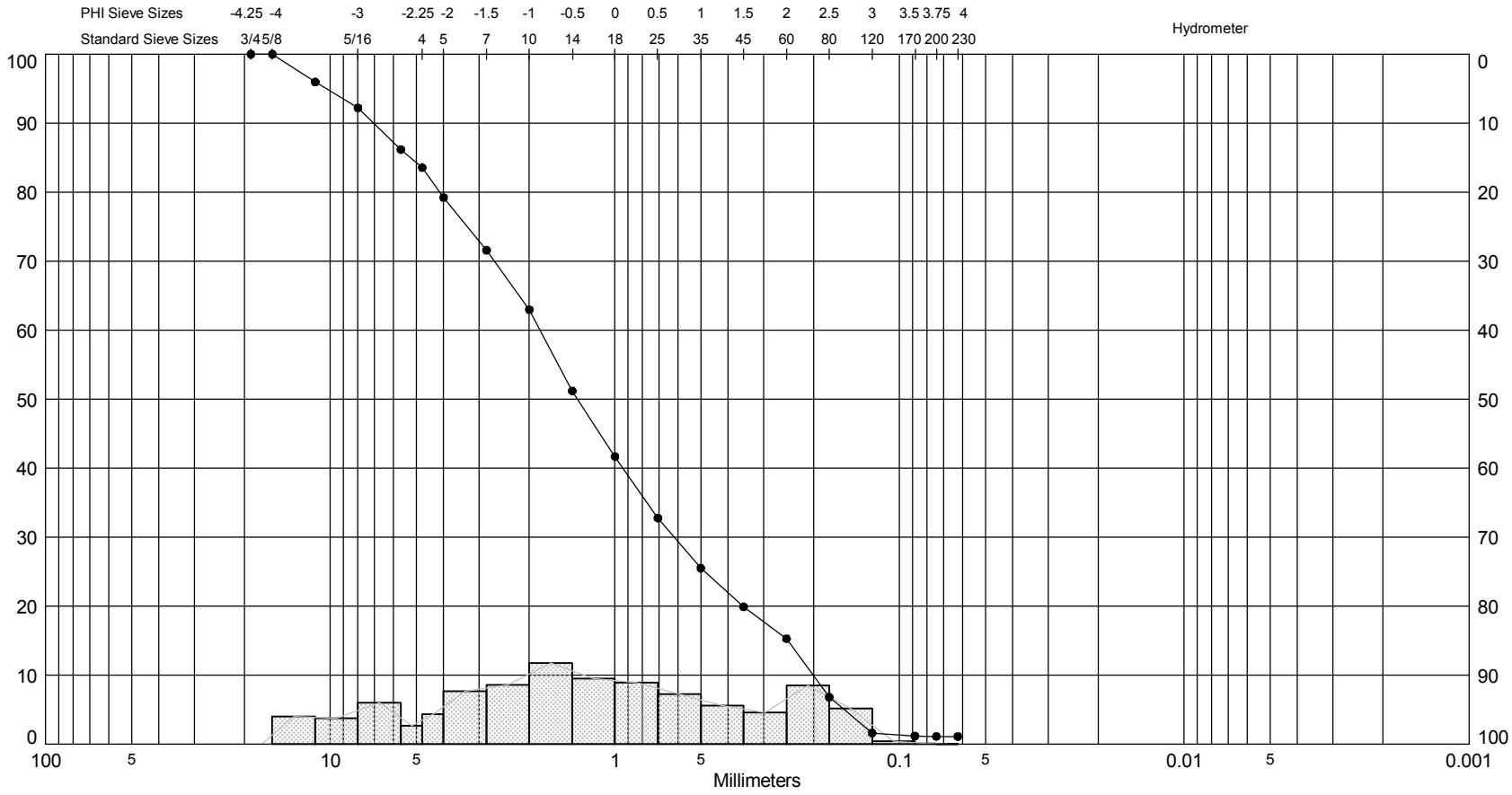
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-14-07
Analyzed By:	PB
Easting (X, ft):	2,390,181
Northing (Y, ft):	200,226
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-08 #4	—●—	-18.9	SW	#200 - 1.12 #230 - 1.11				-0.37	0.04	2.12	1.8

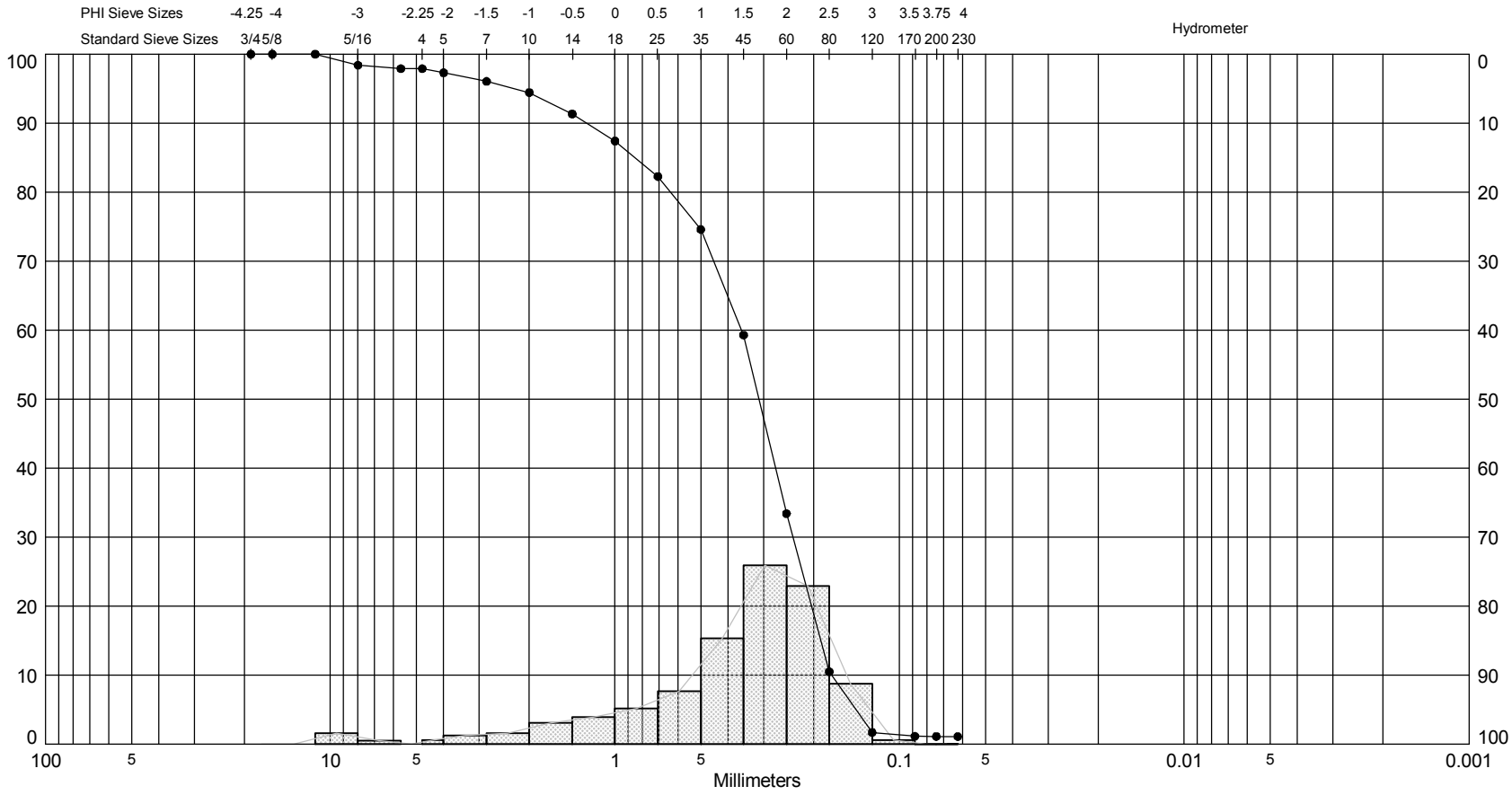
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,390,181
Northing (Y, ft):	200,226
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-09 #1	—●—	-6.8	SW	#200 - 1.11 #230 - 1.10		23	1.68	1.35	-1.6	5.87	1.22

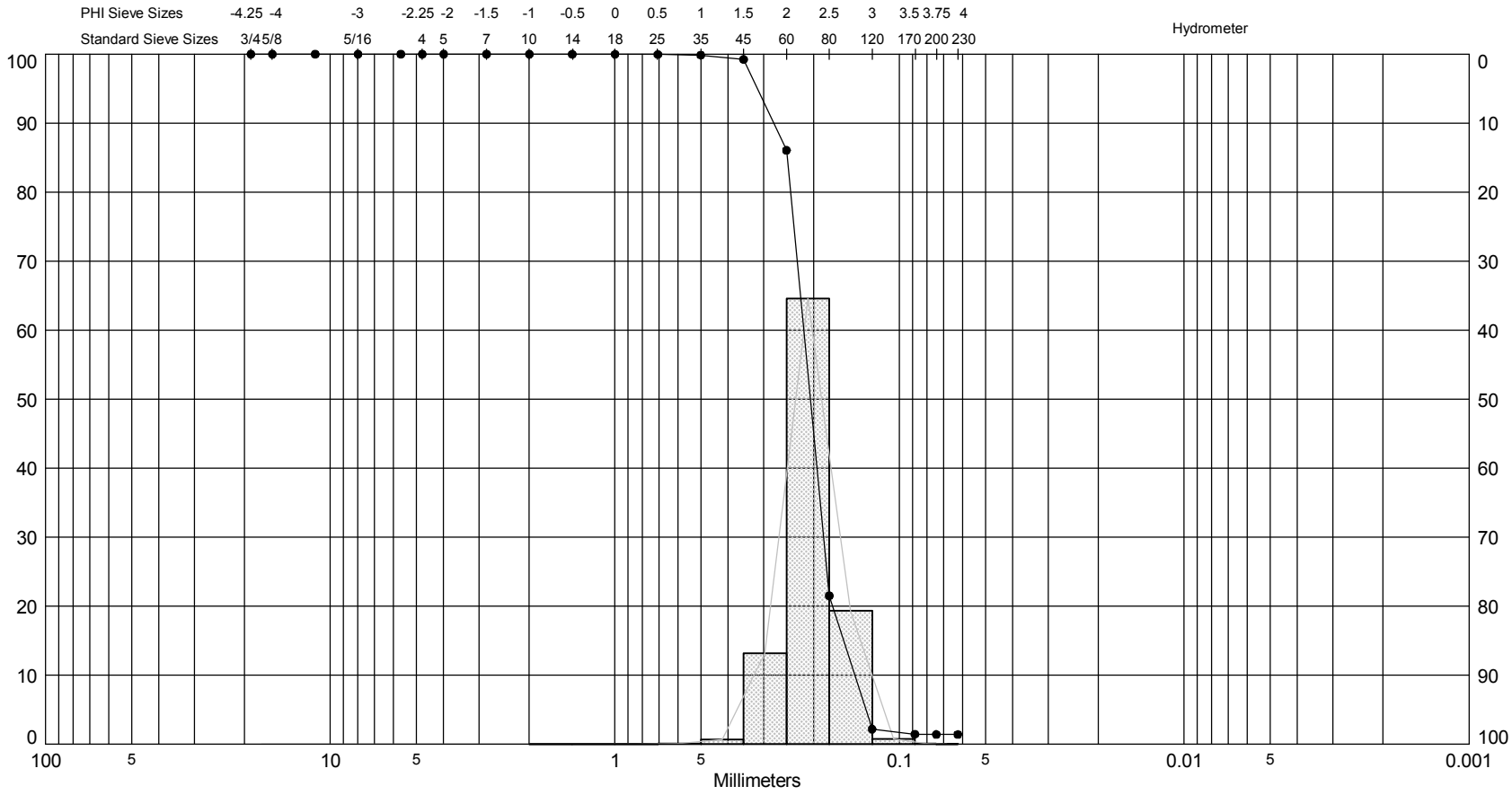
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,388,776
Northing (Y, ft):	201,051
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-09 #2	—●—	-11.3	SP	#200 - 1.39 #230 - 1.38		9	2.28	2.28	-0.28	5.89	0.32

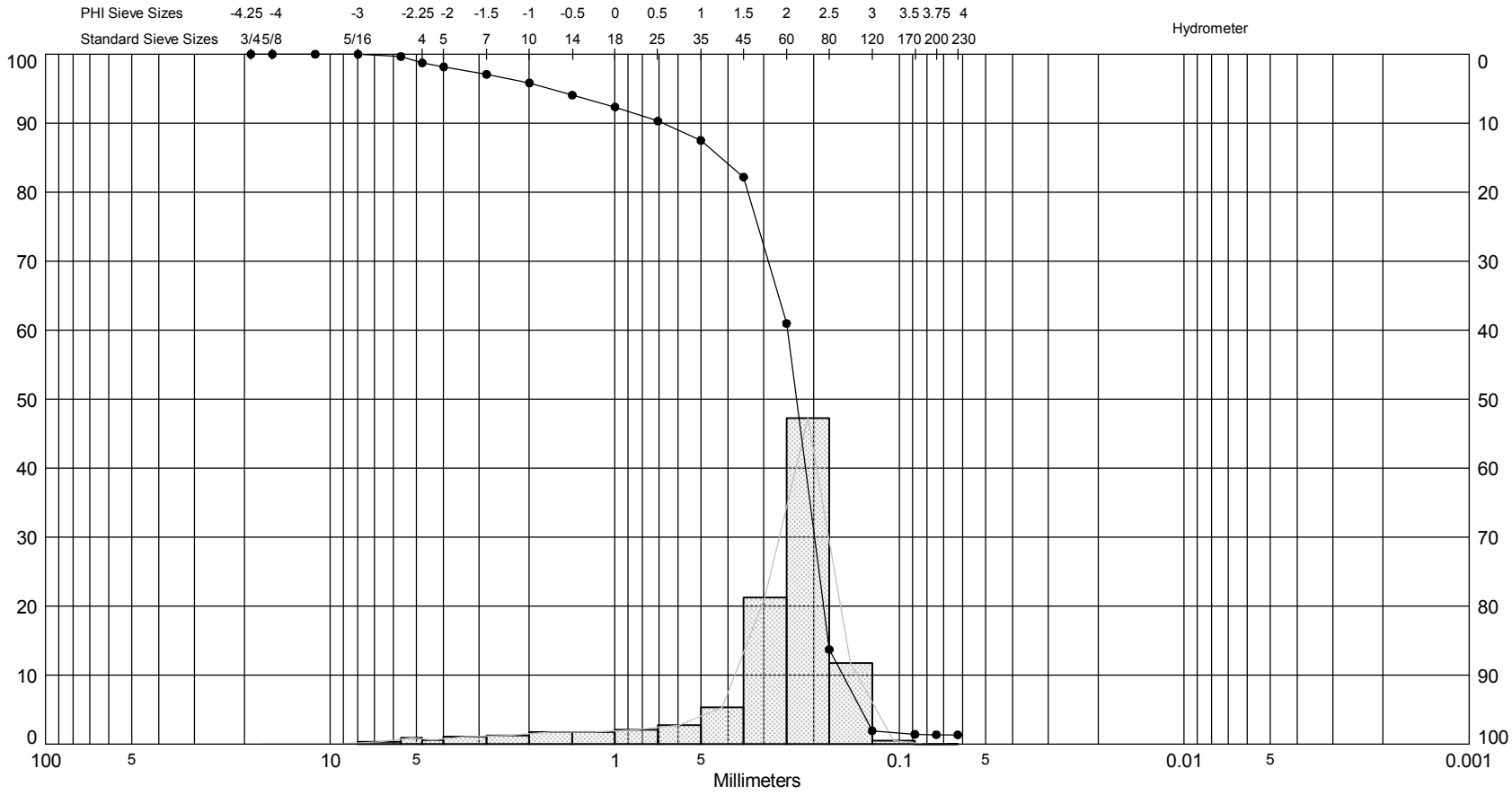
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-09-07
Analyzed By:	PB
Easting (X, ft):	2,388,776
Northing (Y, ft):	201,051
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-09 #3	—●—	-14.8	SW	#200 - 1.37 #230 - 1.35		12	2.12	1.8	-2.3	8.39	1.04

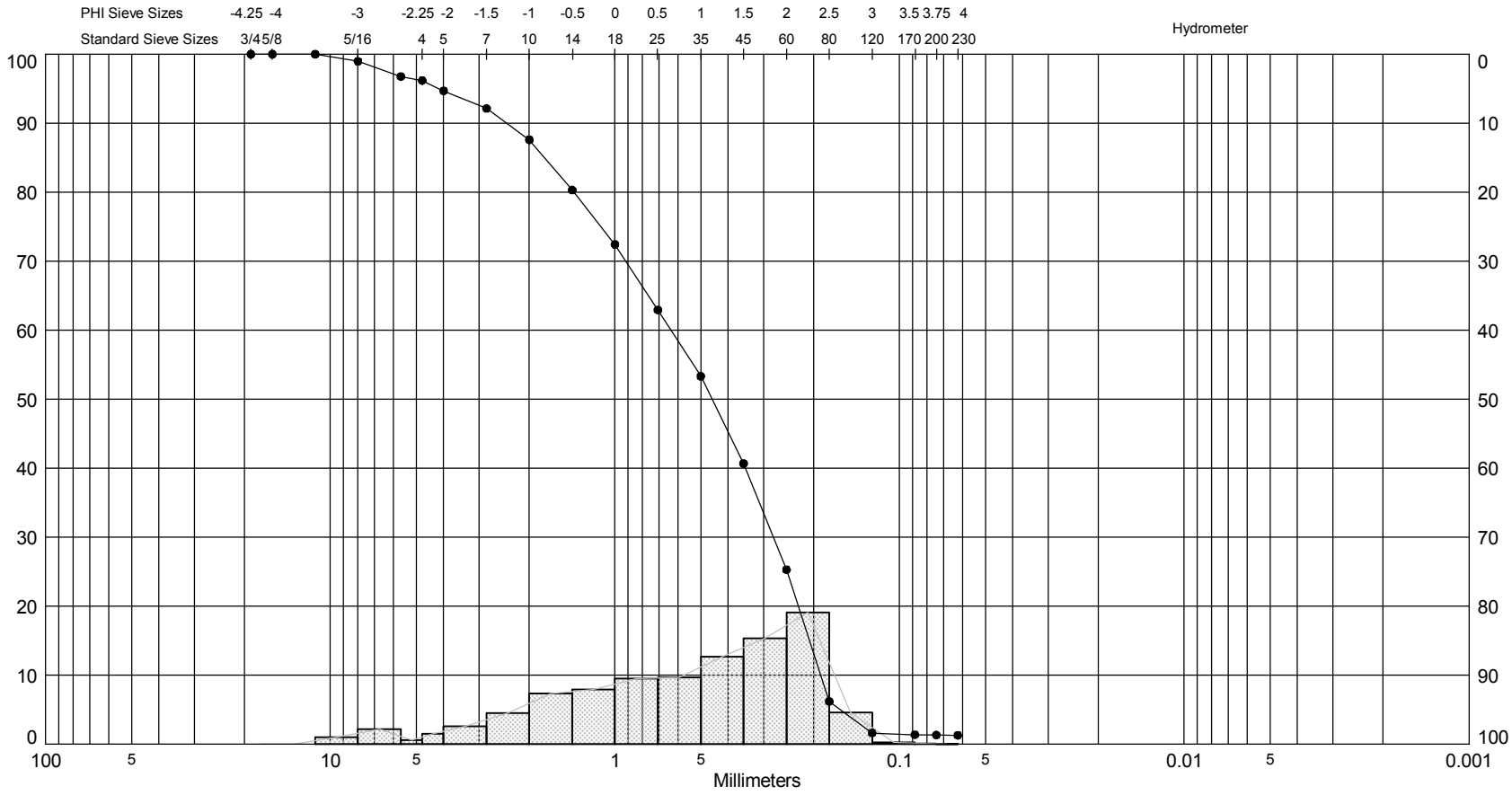
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,388,776
Northing (Y, ft):	201,051
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-09 #4	—●—	-17.7	SW	#200 - 1.31 #230 - 1.29		35	1.13	0.78	-0.75	2.84	1.44

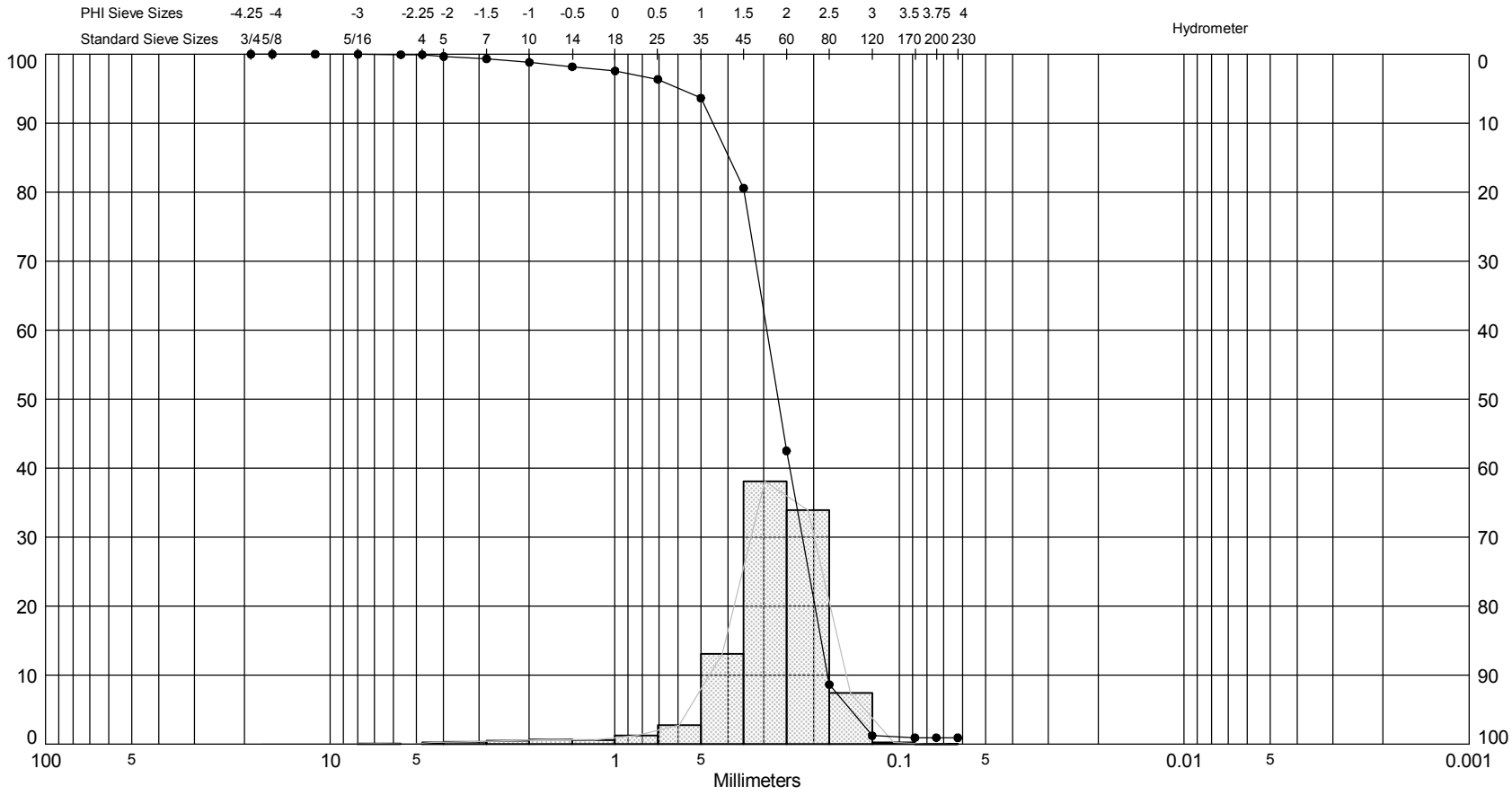
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,388,776
Northing (Y, ft):	201,051
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-10 #1	—●—	-10.0	SP	#200 - 0.93 #230 - 0.92		5	1.9	1.82	-2.27	12.14	0.68

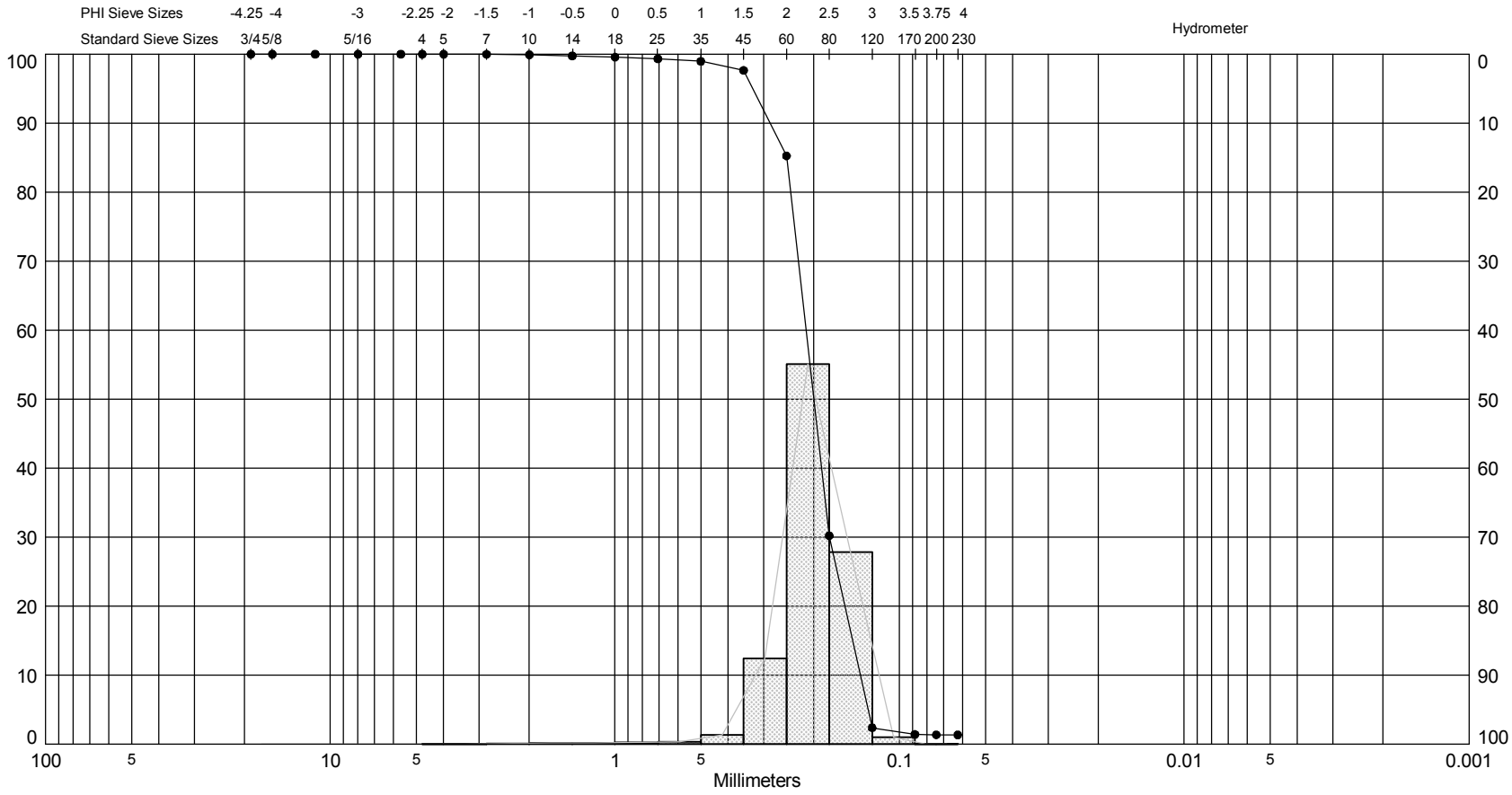
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,385,121
Northing (Y, ft):	200,150
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-10 #2	—●—	-13.8	SP	#200 - 1.35 #230 - 1.34		13	2.32	2.3	-2.13	16.11	0.42

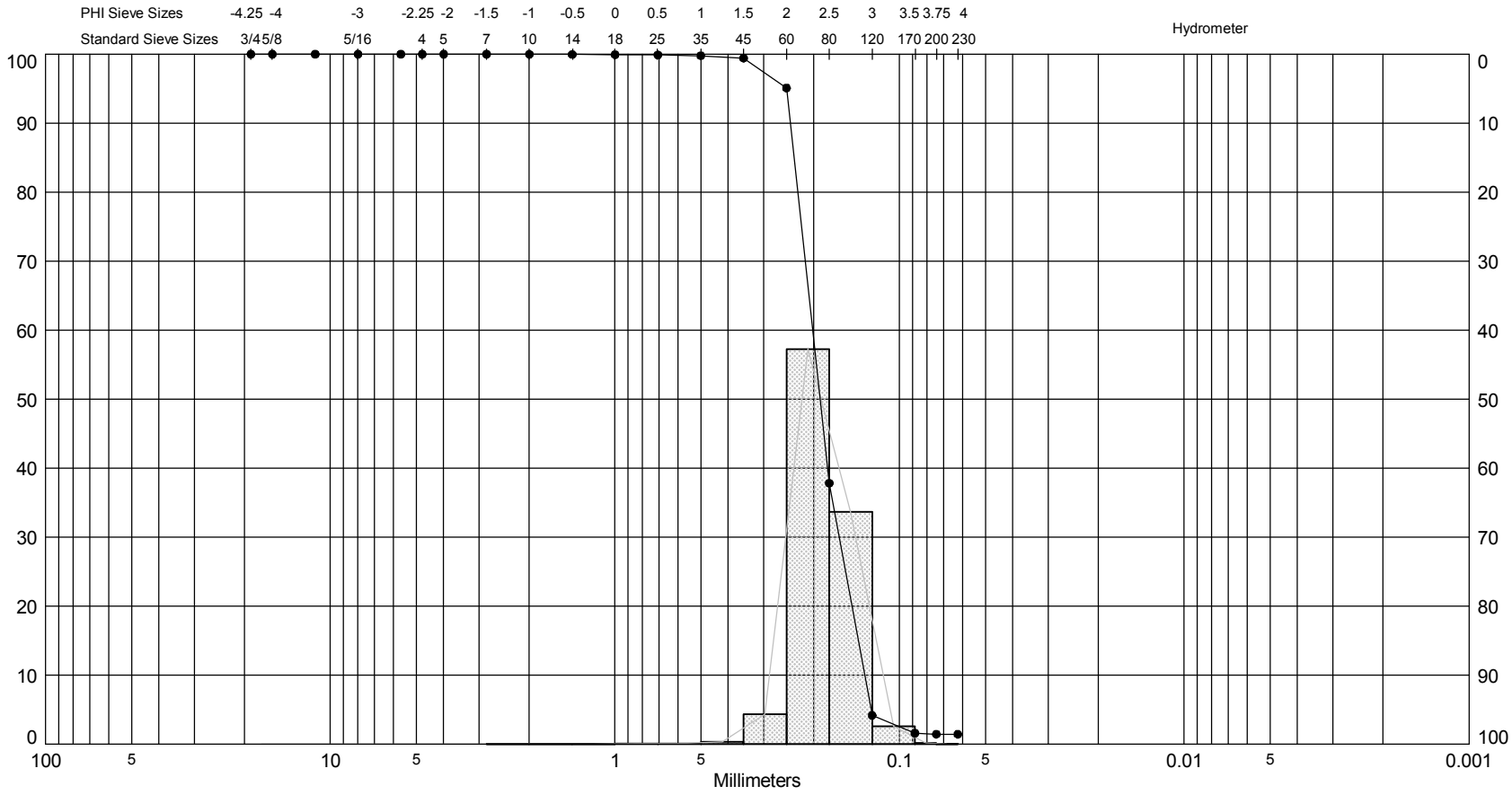
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,385,121
Northing (Y, ft):	200,150
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-10 #3	—●—	-20.3	SP	#200 - 1.44 #230 - 1.43		4	2.39	2.42	-0.68	10.9	0.33

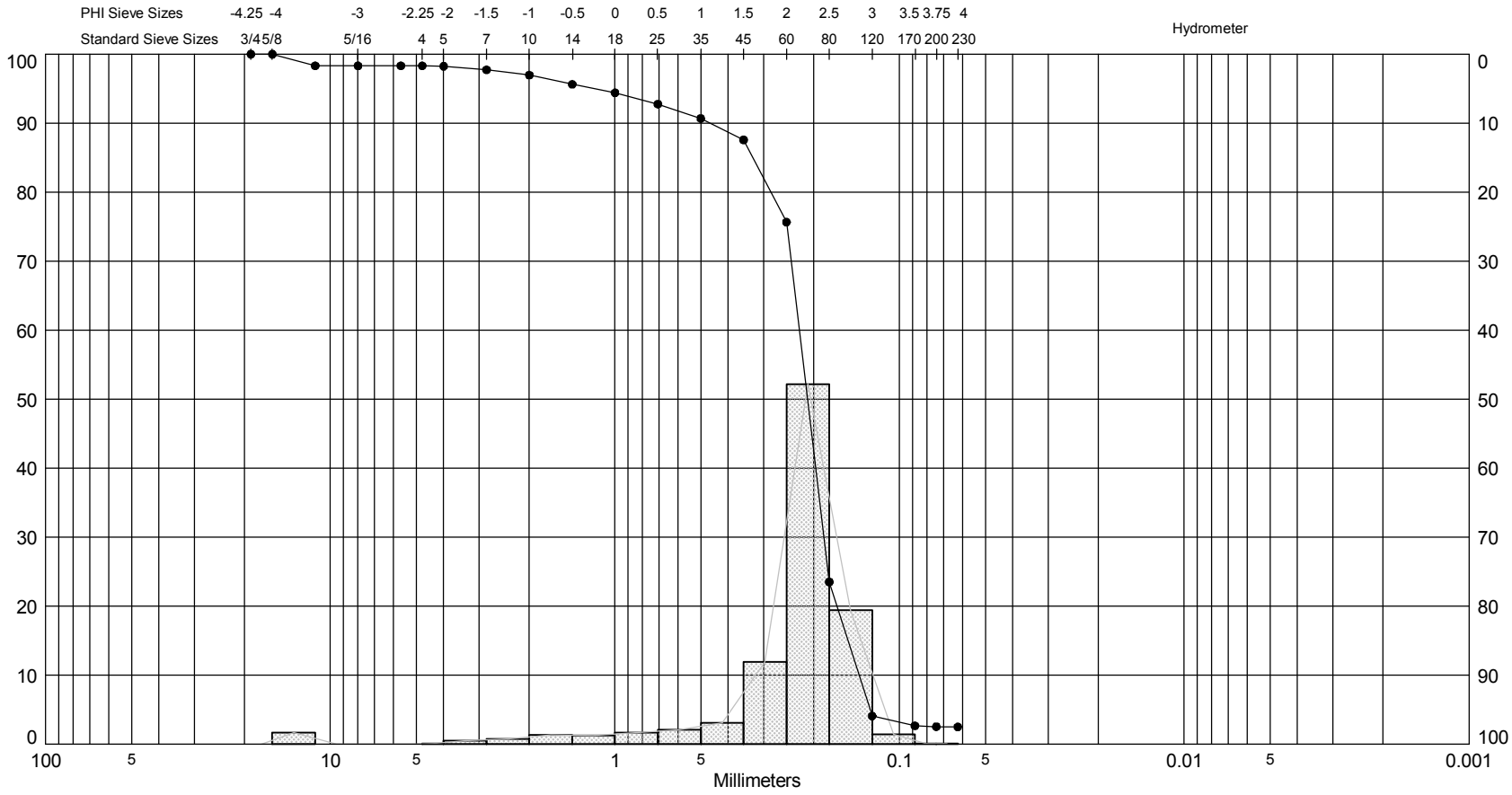
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,385,121
Northing (Y, ft):	200,150
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-10 #4	—●—	-23.2	SW	#200 - 2.53 #230 - 2.48			2.25	1.98	-3.28	15.61	1.09

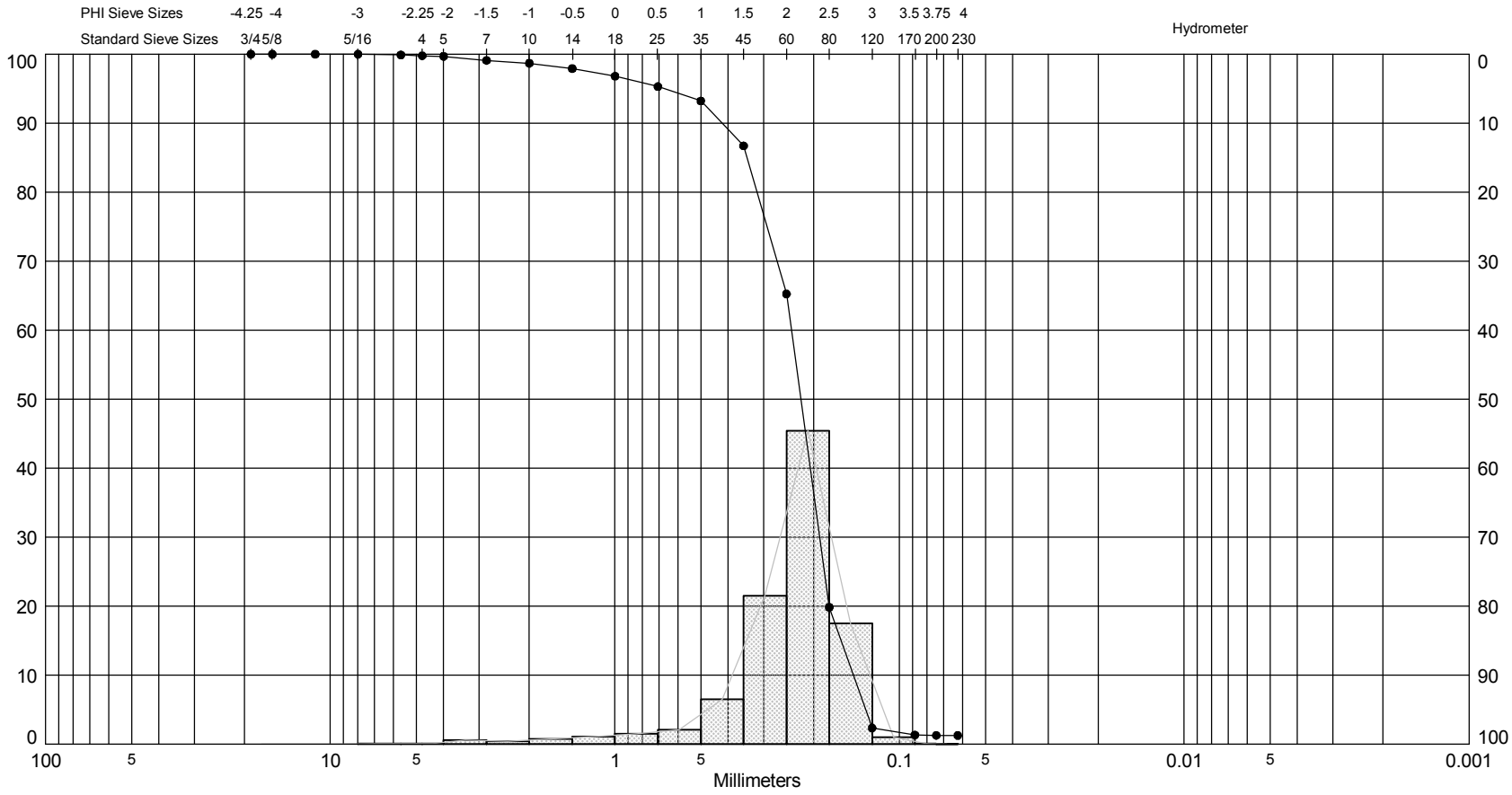
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,385,121
Northing (Y, ft):	200,150
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 #1	—●—	-5.3	SP	#200 - 1.27 #230 - 1.26		11	2.17	2.01	-2.44	11.62	0.76

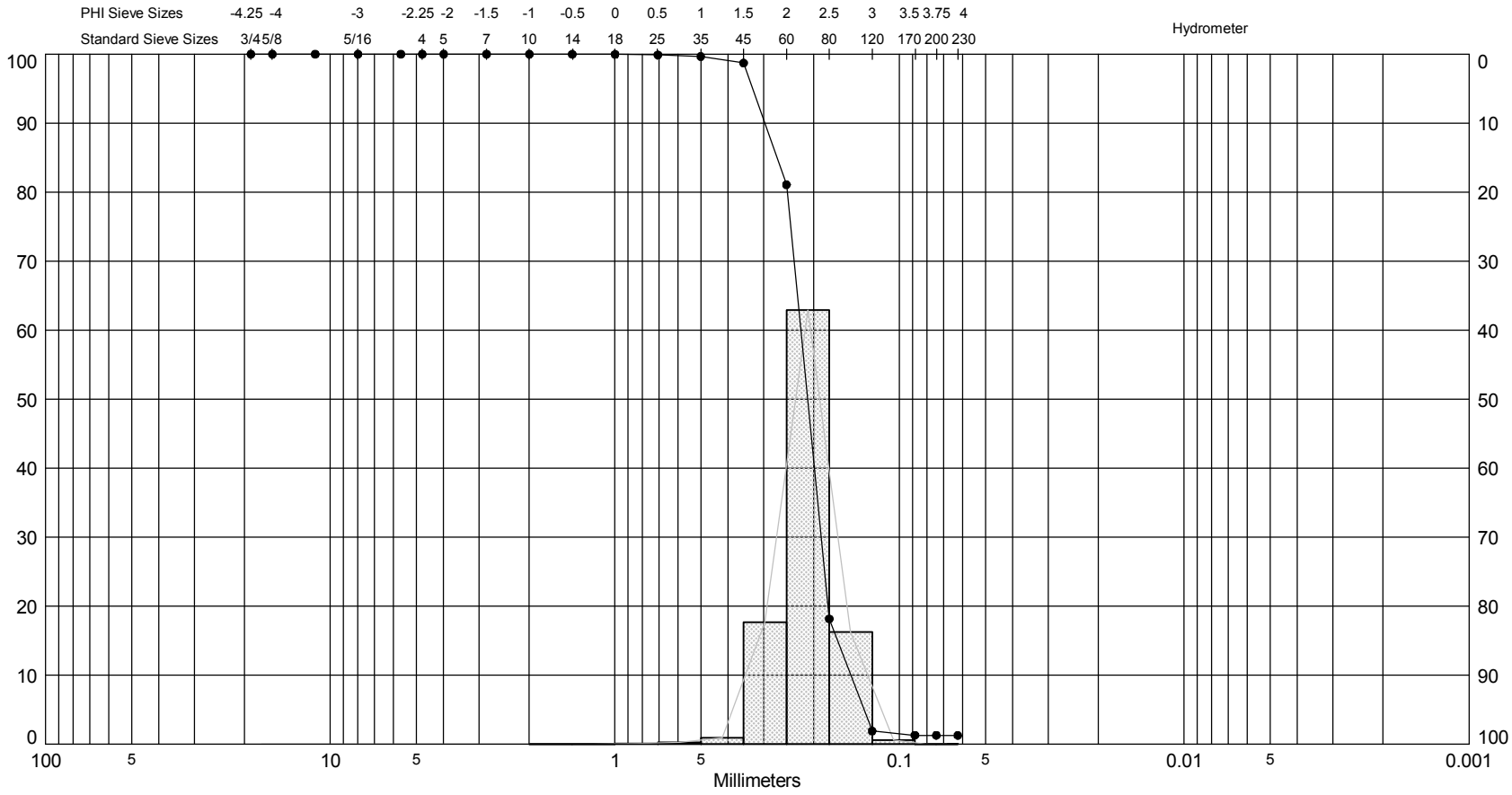
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 #2	—●—	-8.4	SP	#200 - 1.28 #230 - 1.27		5	2.25	2.23	-0.54	6.38	0.34

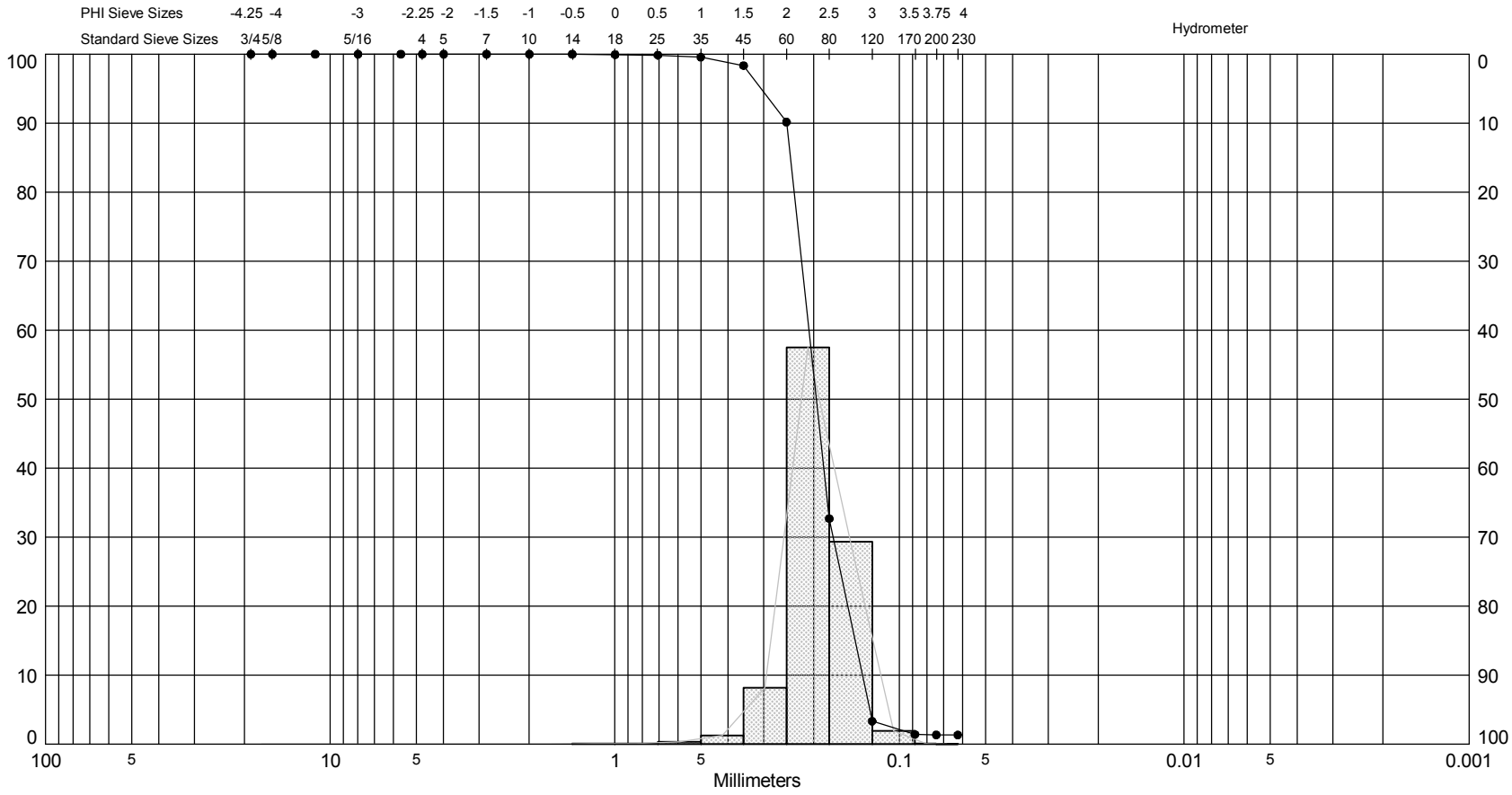
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 #3	—●—	-13.4	SP	#200 - 1.33 #230 - 1.32		5	2.35	2.36	-0.68	6.57	0.36

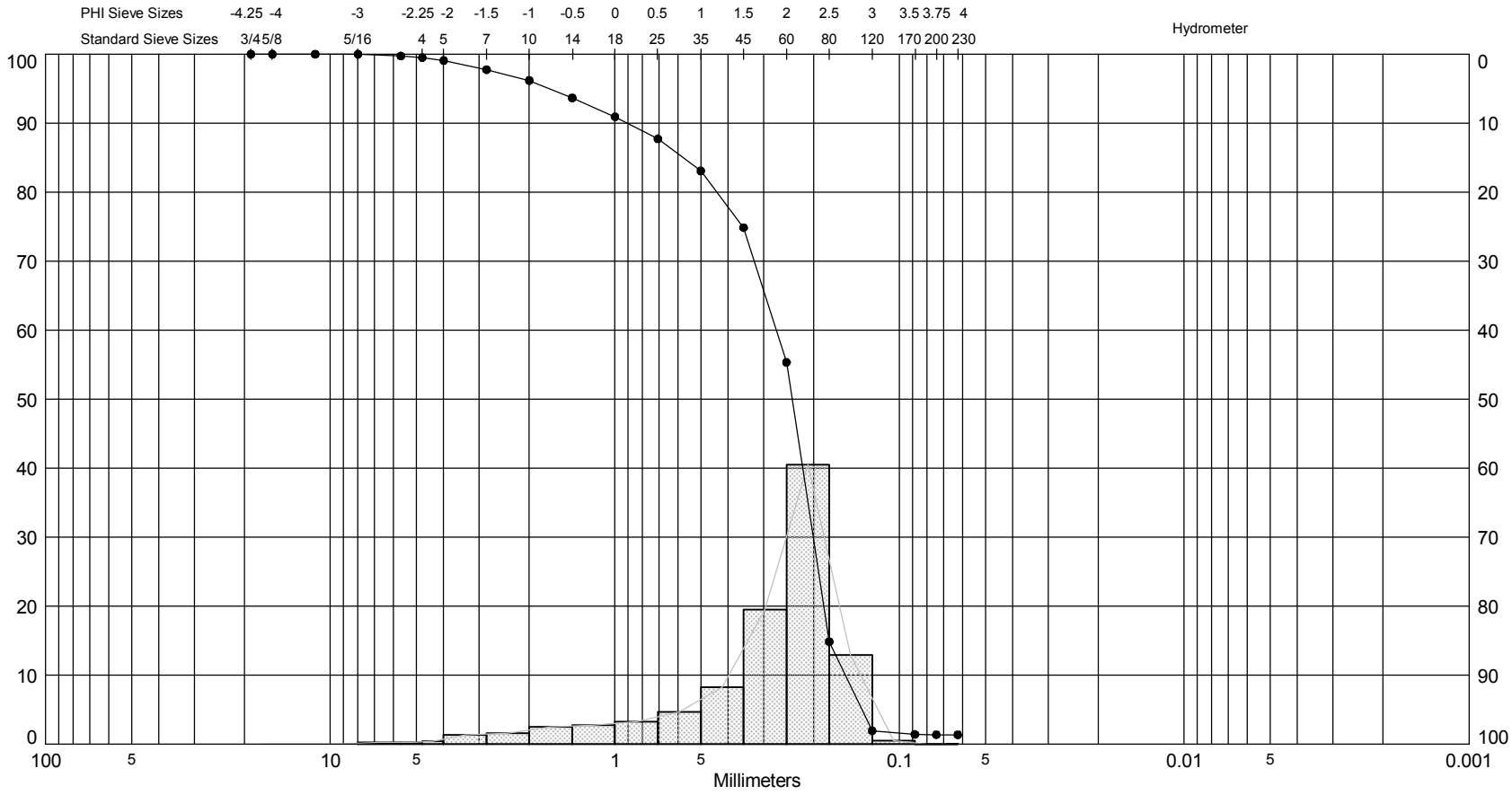
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-20-07
Analyzed By:	PB
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 #4	—●—	-17.4	SW	#200 - 1.37 #230 - 1.36		17	2.07	1.71	-1.76	5.95	1.06

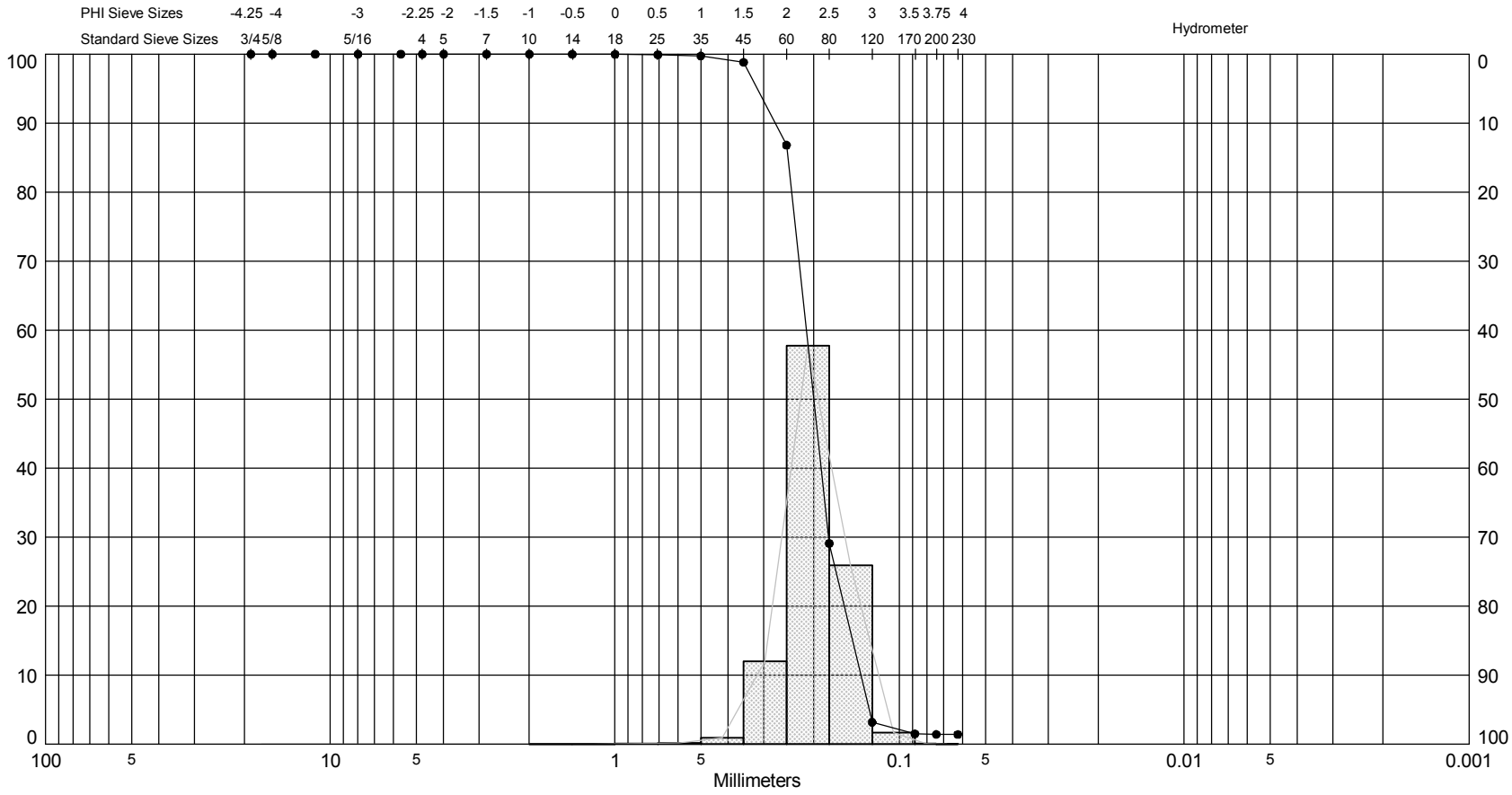
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-12 #1	—●—	-9.5	SP	#200 - 1.40 #230 - 1.38		4	2.32	2.32	-0.39	5.66	0.36

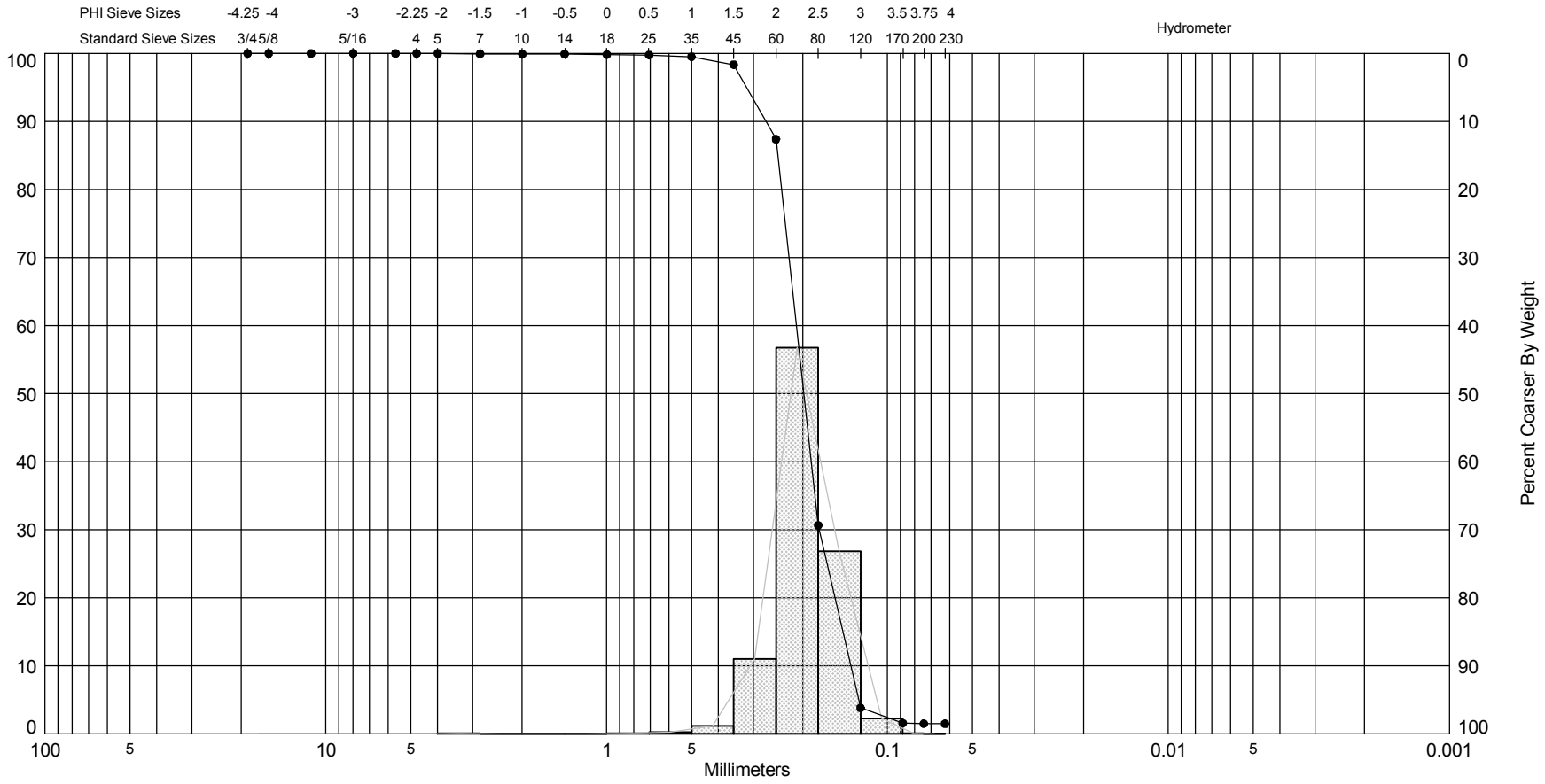
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,386,433
Northing (Y, ft):	200,711
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-12 #2	—●—	-14.5	SP	#200 - 1.49 #230 - 1.47		5	2.33	2.33	-1.47	15.61	0.39

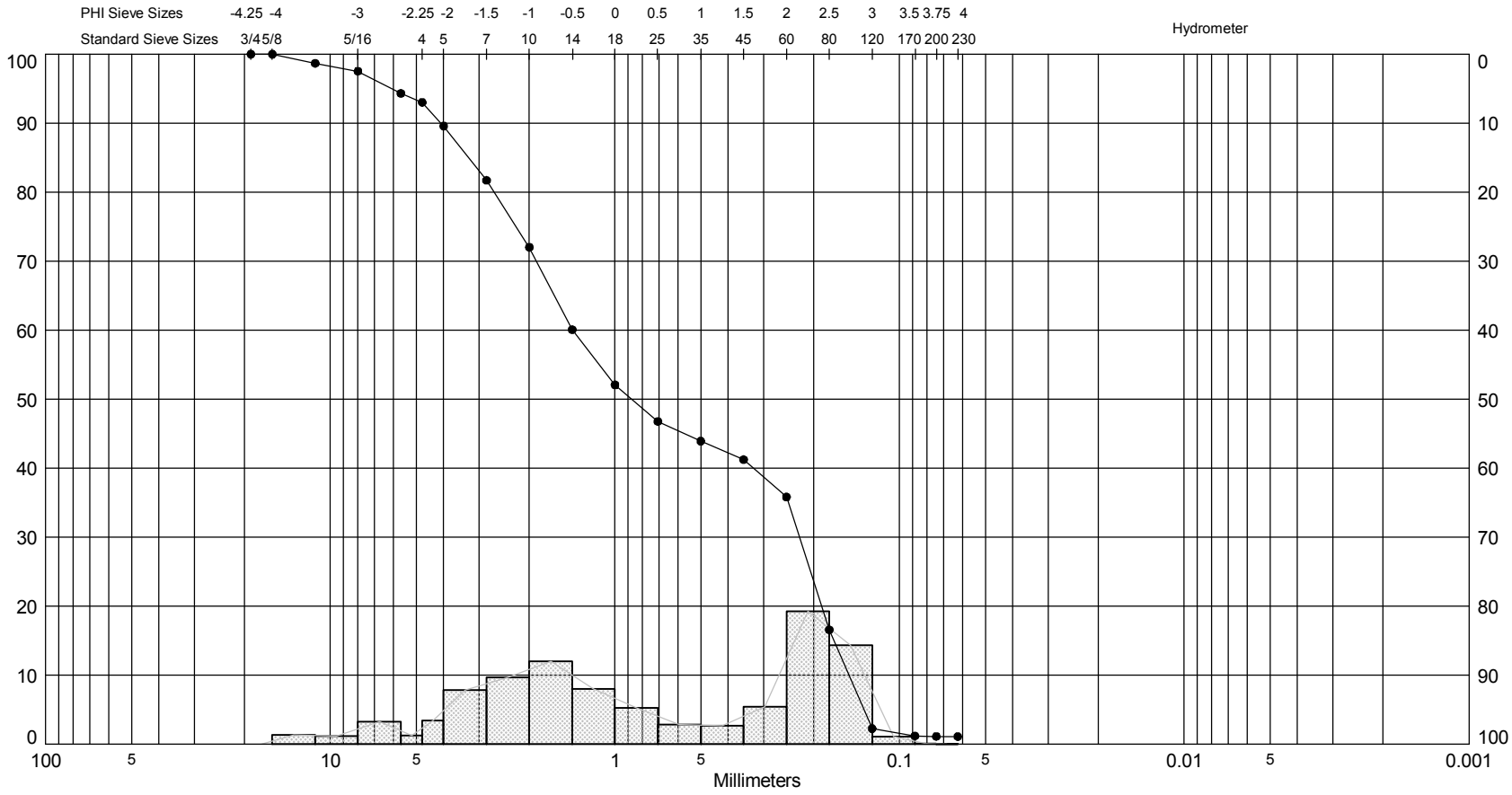
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,386,433
Northing (Y, ft):	200,711
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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FL 33431
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fax (561) 391-9116

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-12 #3	—●—	-17.2	SW	#200 - 1.12 #230 - 1.10		35	0.19	0.38	-0.16	1.73	1.88

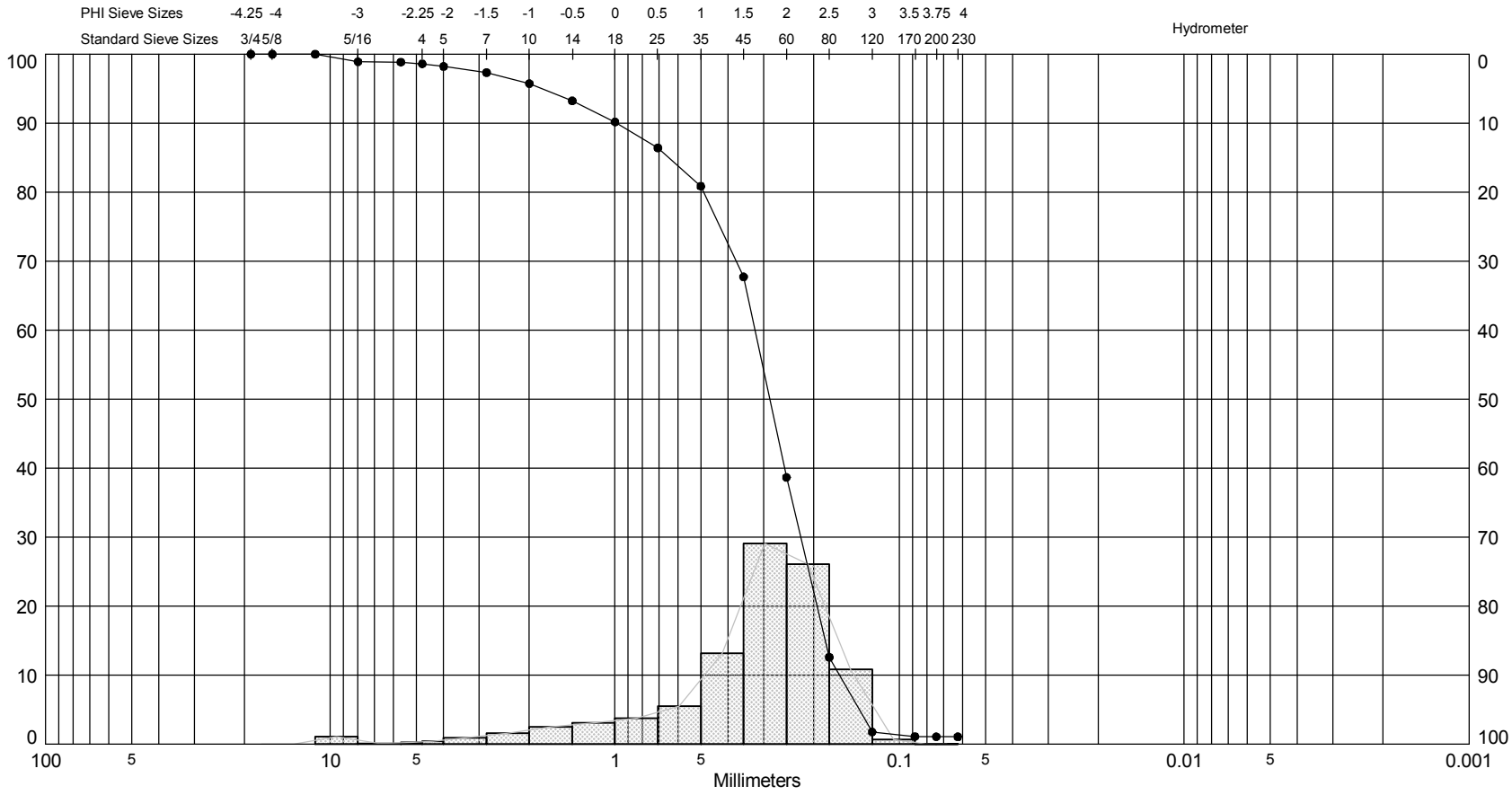
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,386,433
Northing (Y, ft):	200,711
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 #1	—●—	-11.1	SW	#200 - 1.07 #230 - 1.05		17	1.8	1.53	-1.81	6.96	1.12

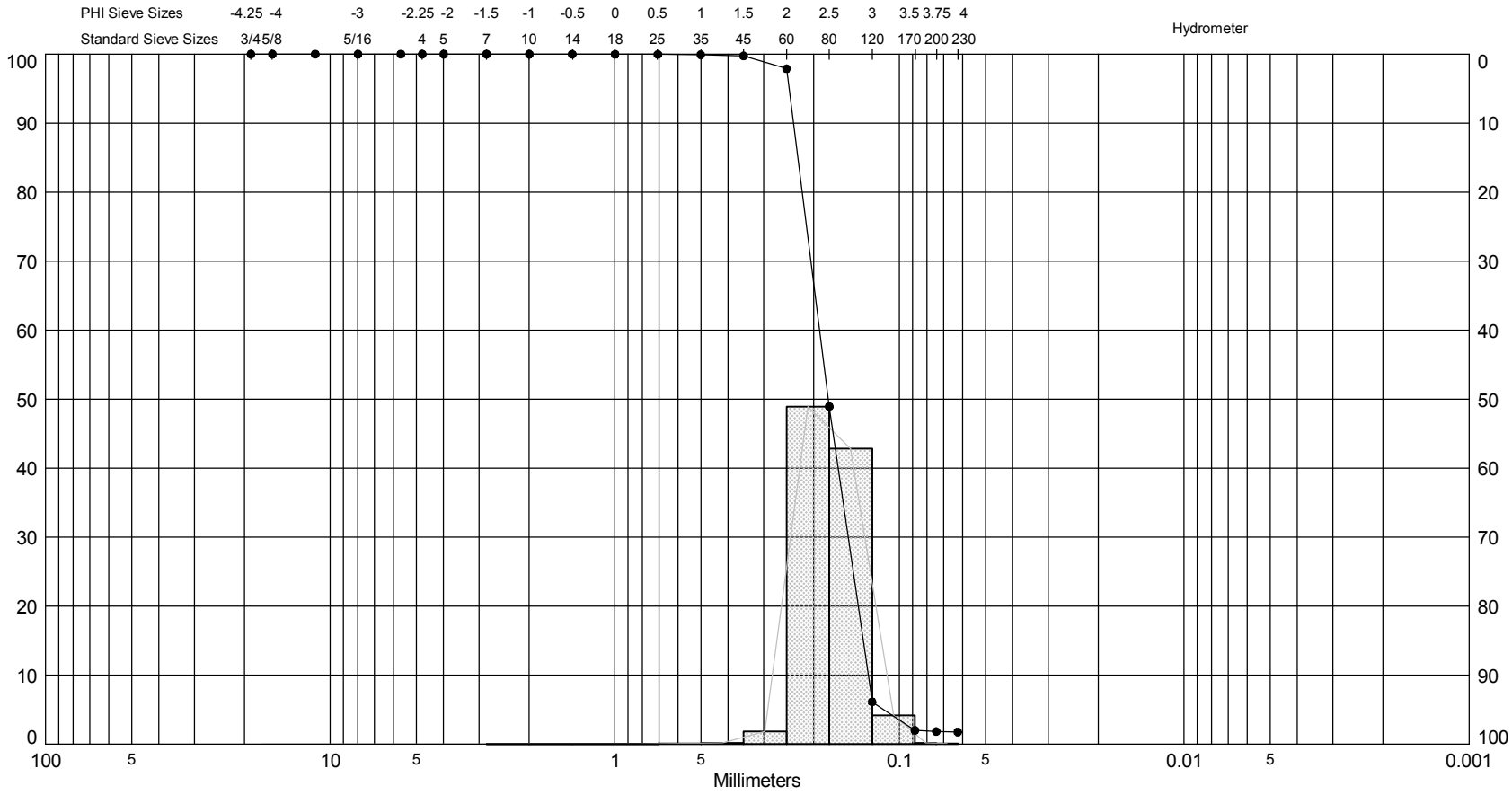
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 #2	—●—	-14.6	SP	#200 - 1.82 #230 - 1.76		4	2.49	2.5	-0.23	7.69	0.32

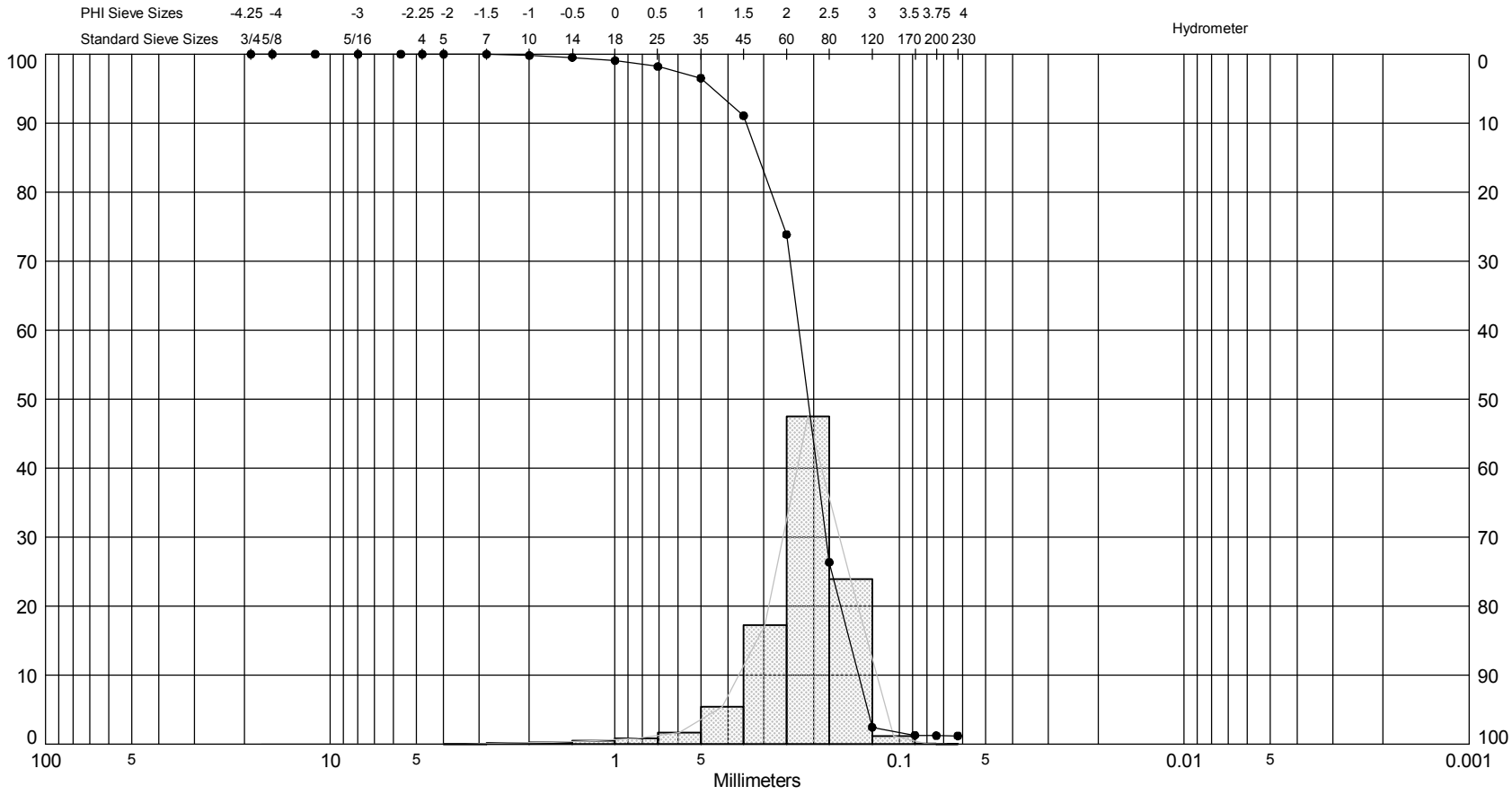
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 #3	—●—	-17.1	SP	#200 - 1.22 #230 - 1.20		6	2.25	2.17	-1.77	9.11	0.56

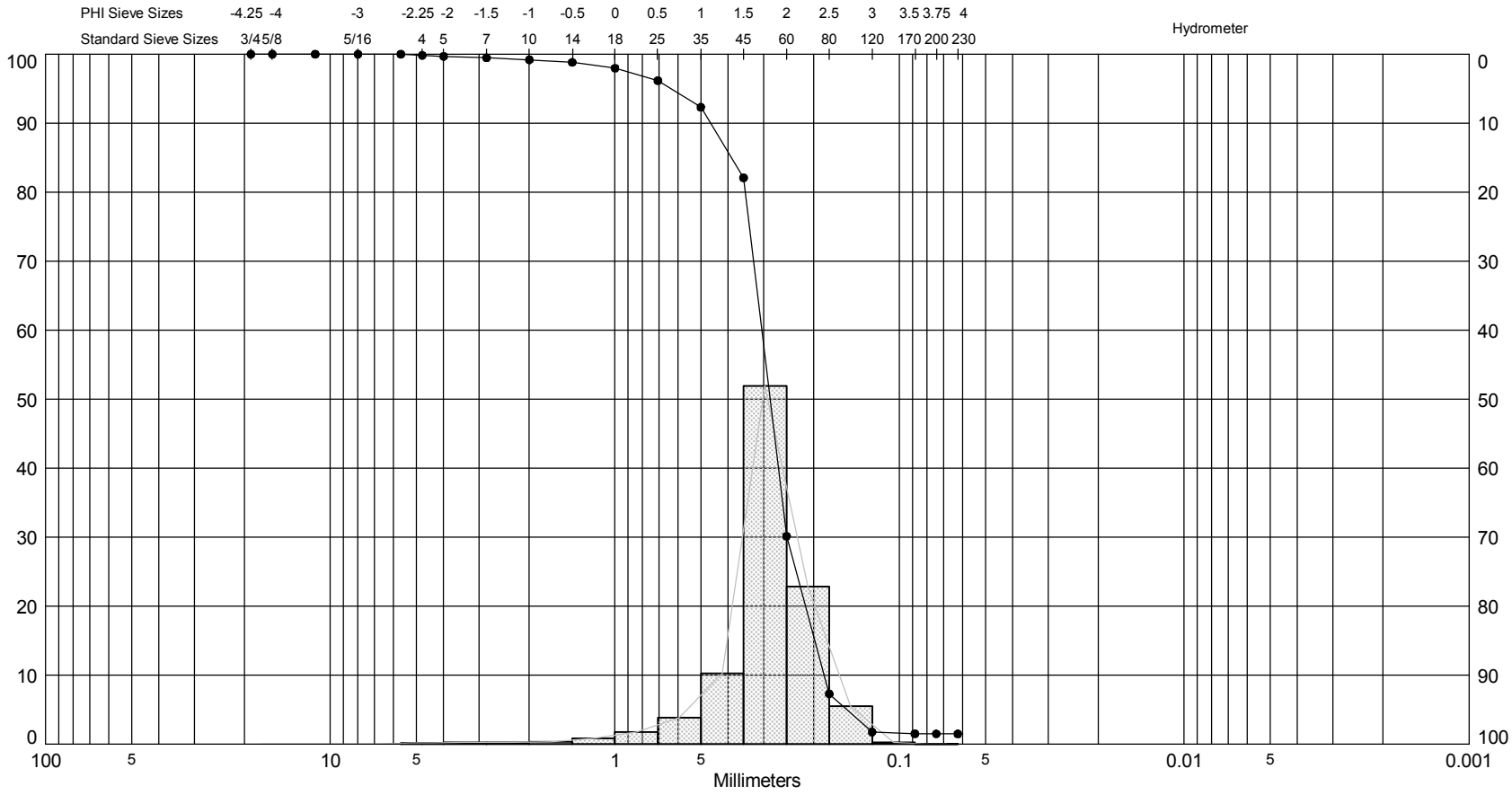
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 #4	—●—	-22.1	SP	#200 - 1.48 #230 - 1.47			1.81	1.75	-2.16	12.54	0.62

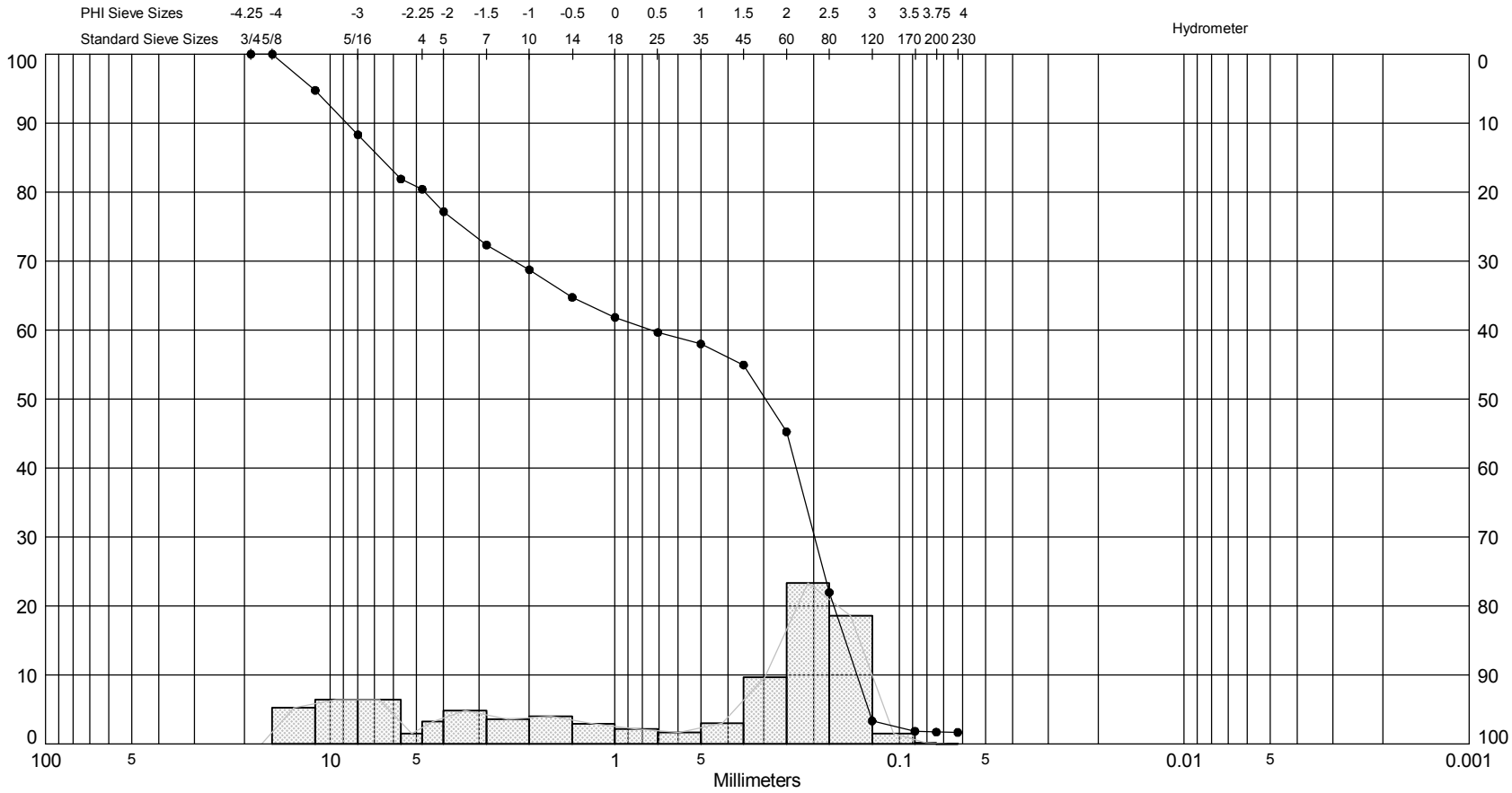
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-21-07
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 #5	—●—	-23.6	SW	#200 - 1.71 #230 - 1.67			1.76	0.47	-0.57	1.72	2.31

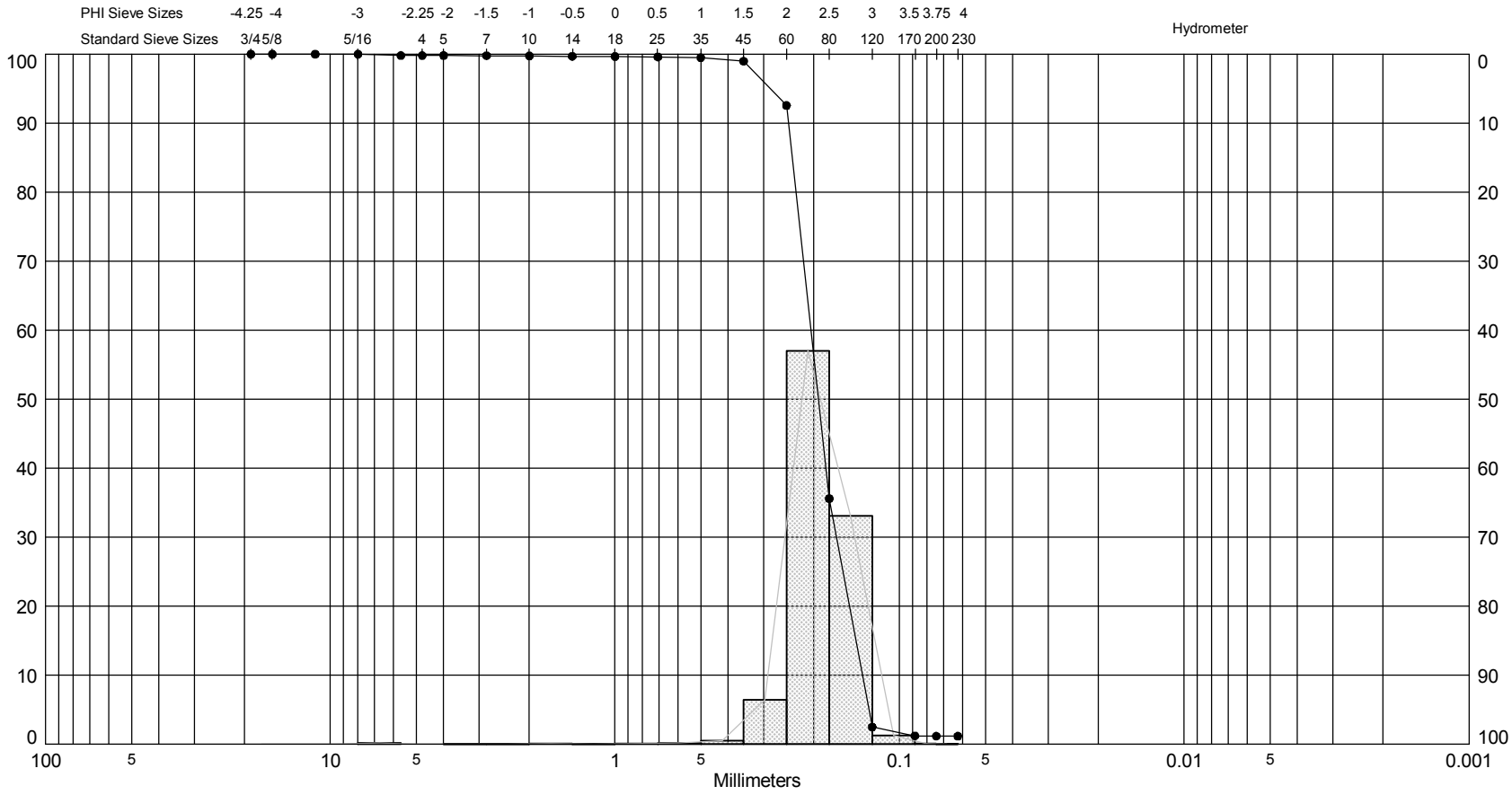
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-22-07
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-14 #1	—●—	-9.0	SP	#200 - 1.15 #230 - 1.14			2.37	2.38	-4.62	54.91	0.41

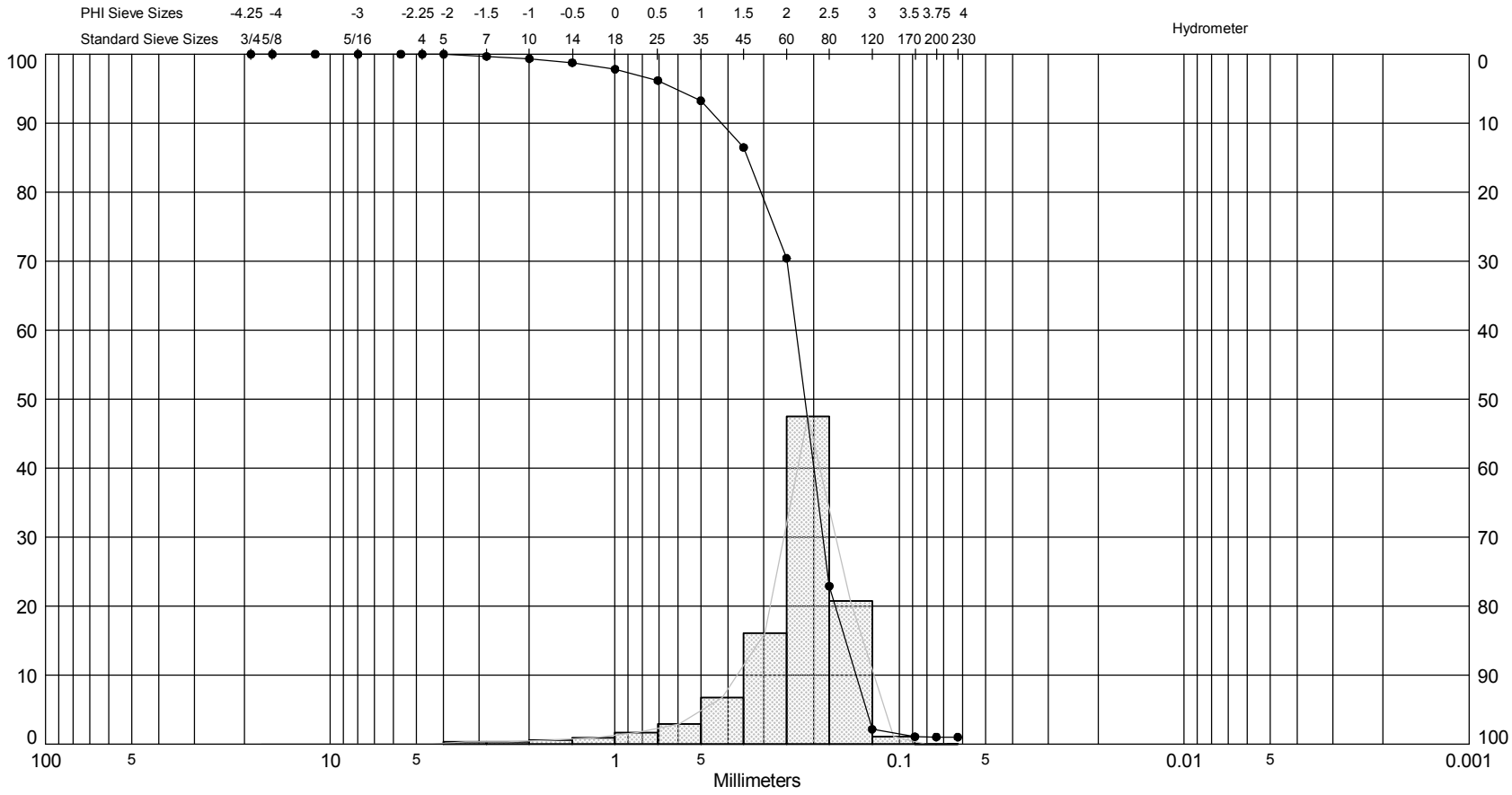
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-22-07
Analyzed By:	PB
Easting (X, ft):	2,387,347
Northing (Y, ft):	202,224
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-14 #2	—●—	-12.9	SP	#200 - 1.03 #230 - 1.02			2.21	2.07	-2.04	9.2	0.69

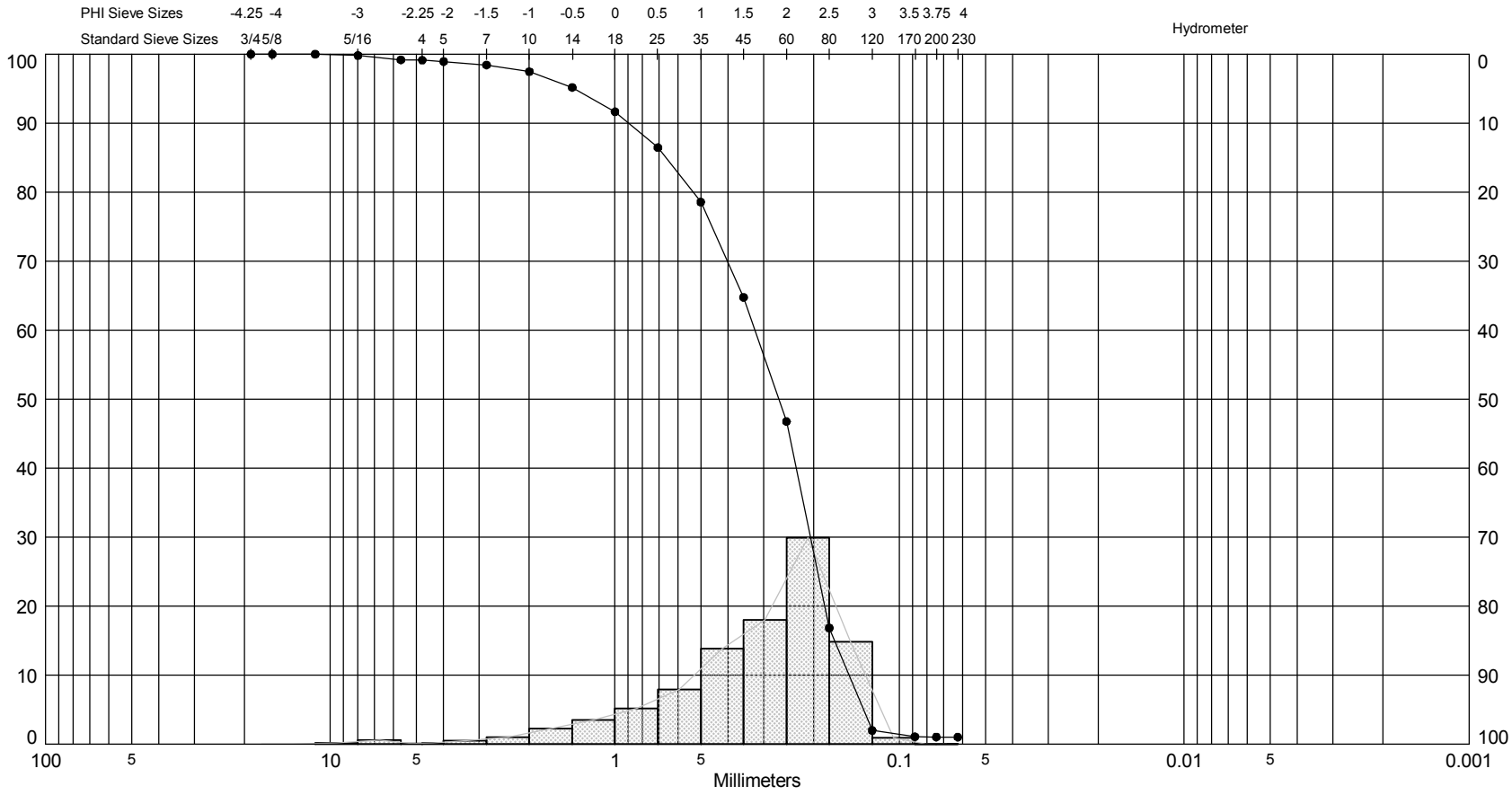
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-22-07
Analyzed By:	PB
Easting (X, ft):	2,387,347
Northing (Y, ft):	202,224
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-14 #3	—●—	-13.5	SW	#200 - 1.03 #230 - 1.02			1.91	1.61	-1.44	5.61	1.06

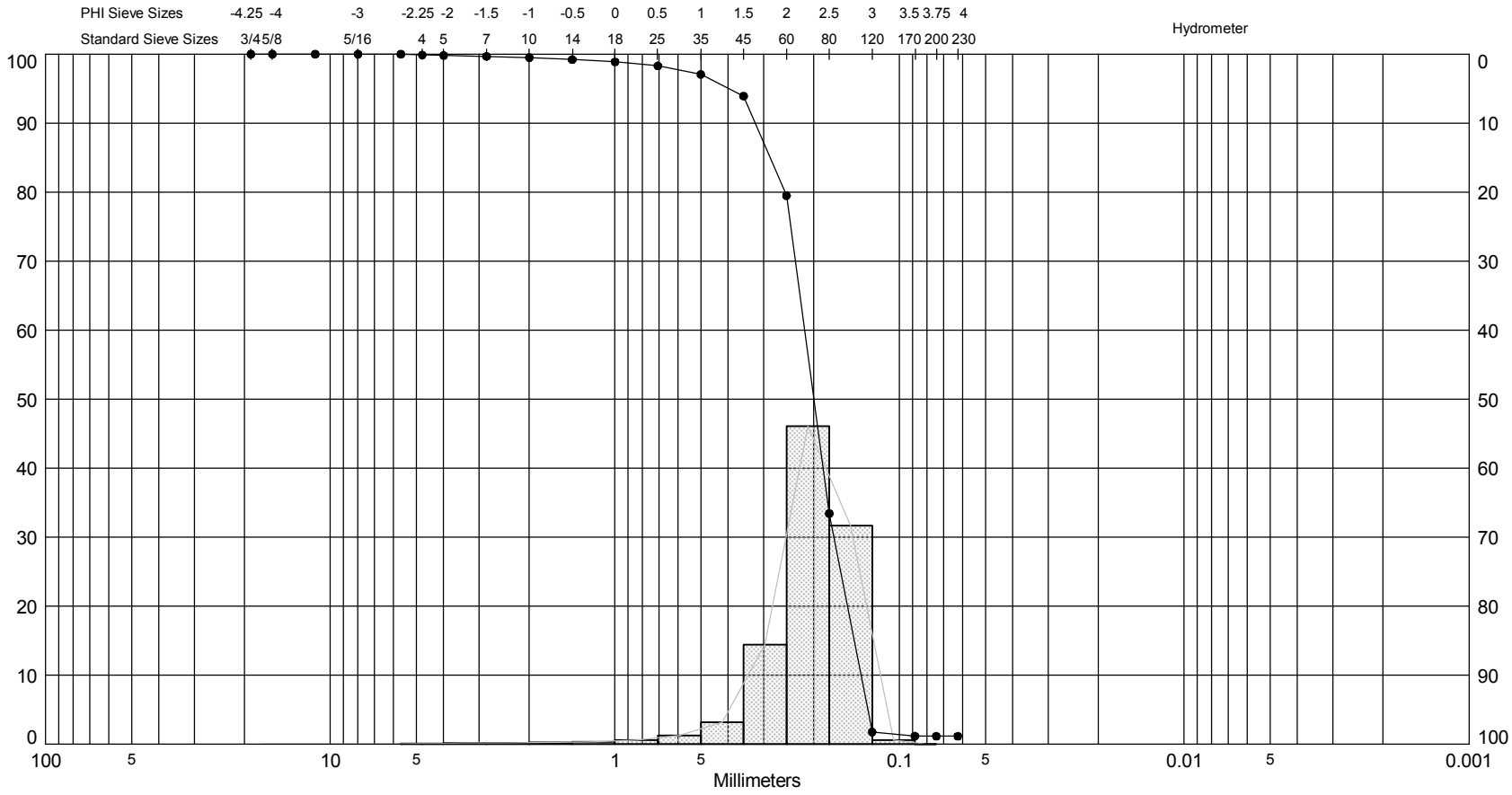
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-22-07
Analyzed By:	PB
Easting (X, ft):	2,387,347
Northing (Y, ft):	202,224
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-14 #4	—●—	-16.5	SP	#200 - 1.13 #230 - 1.13			2.32	2.24	-2.86	17.67	0.58

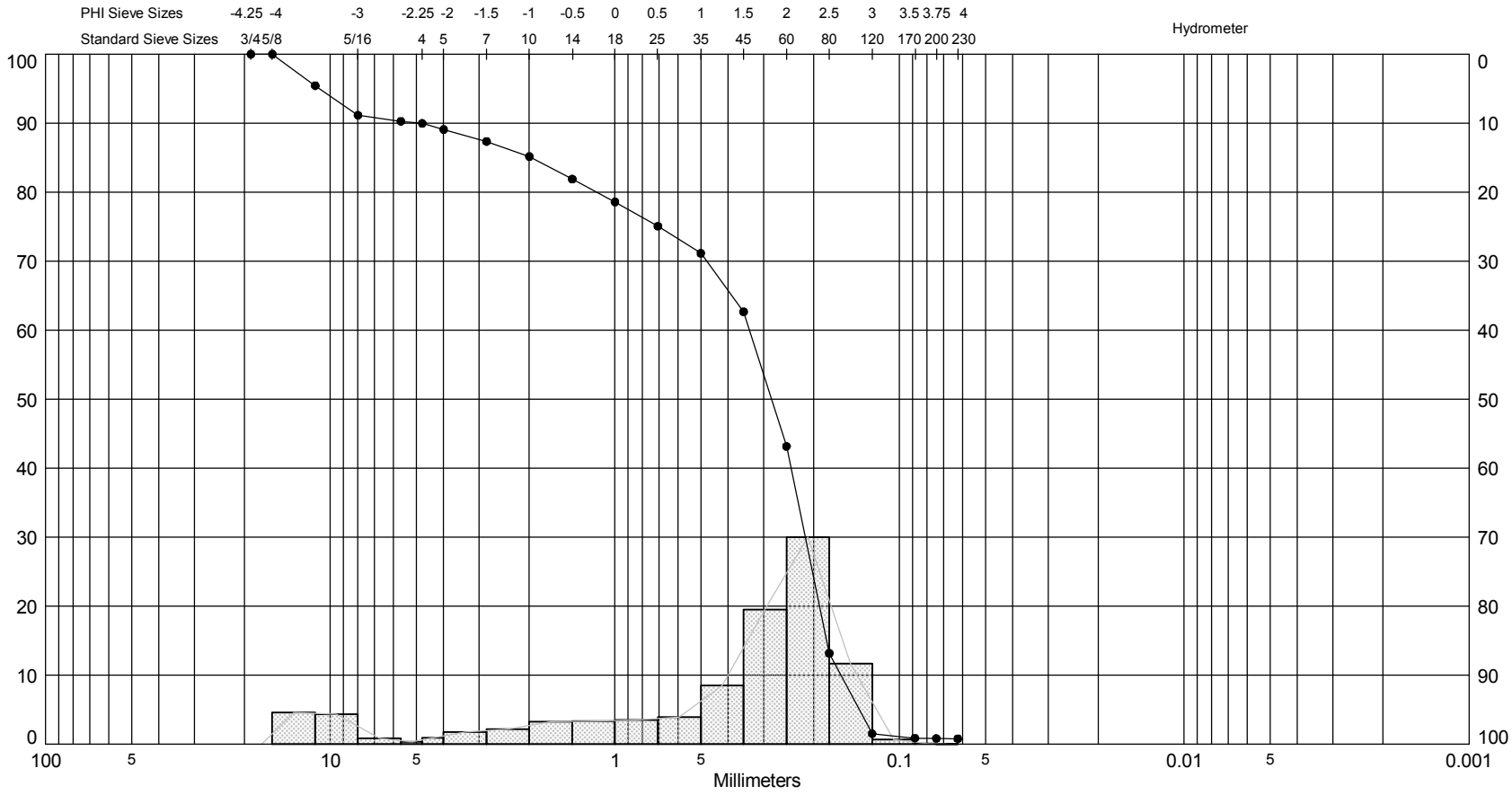
Comments:

Depths and elevations based on measured values

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FL 33431
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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-25-07
Analyzed By:	PB
Easting (X, ft):	2,387,347
Northing (Y, ft):	202,224
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-14 #5	—●—	-18.8	SW	#200 - 0.81 #230 - 0.79			1.82	1.06	-1.43	3.89	1.86

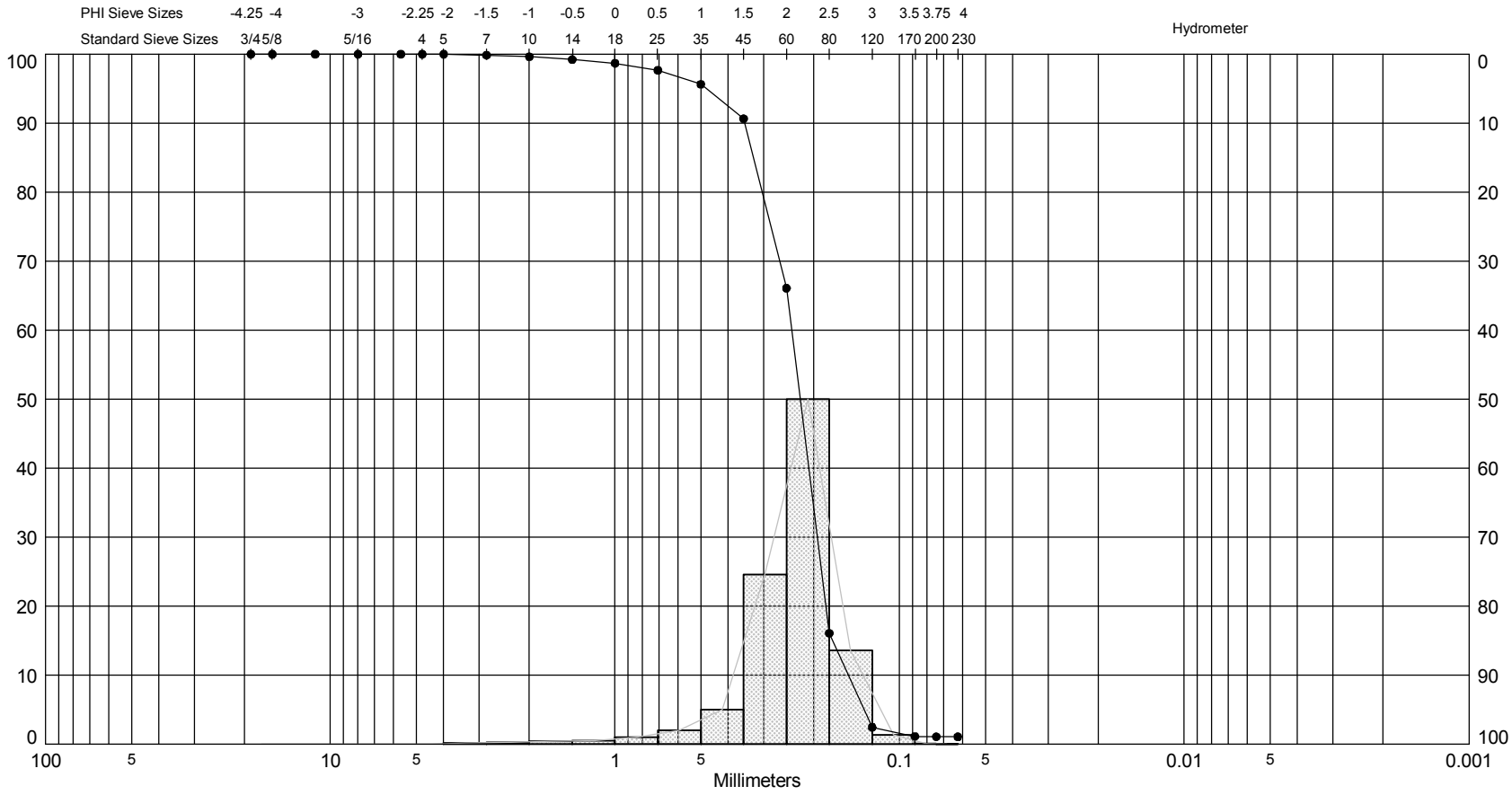
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-25-07
Analyzed By:	PB
Easting (X, ft):	2,387,347
Northing (Y, ft):	202,224
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-15 #1	—●—	-6.8	SP	#200 - 1.07 #230 - 1.05		8	2.16	2.07	-2.01	10.99	0.58

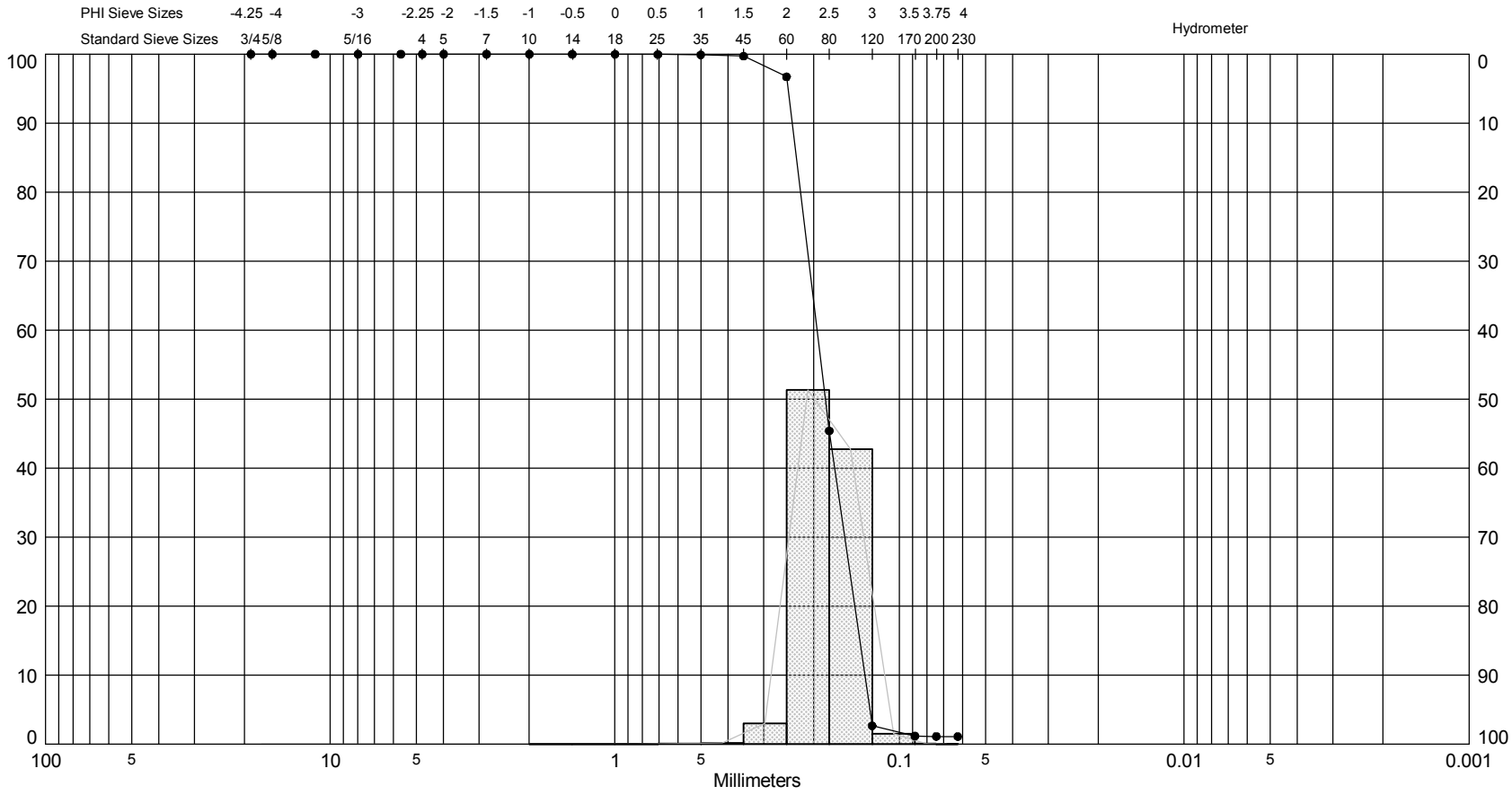
Comments:

Depths and elevations based on measured values

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FL 33431
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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-25-07
Analyzed By:	PB
Easting (X, ft):	2,388,715
Northing (Y, ft):	200,330
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-15 #2	—●—	-10.8	SP	#200 - 1.11 #230 - 1.10		3	2.46	2.46	-0.45	6.17	0.3

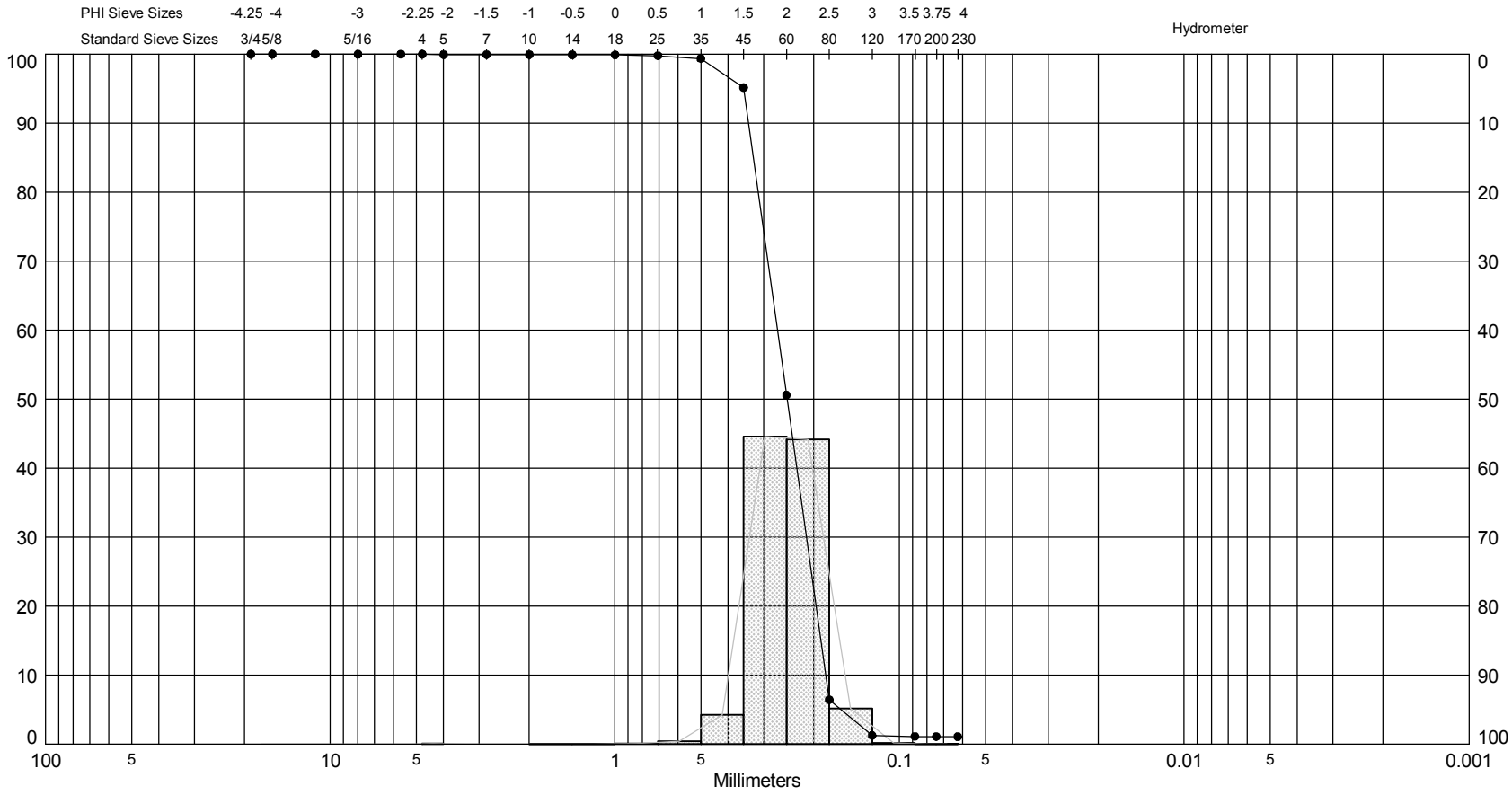
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-25-07
Analyzed By:	PB
Easting (X, ft):	2,388,715
Northing (Y, ft):	200,330
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-15 #3	—●—	-17.3	SP	#200 - 1.10 #230 - 1.09		6	2.01	2	-0.96	12.17	0.37

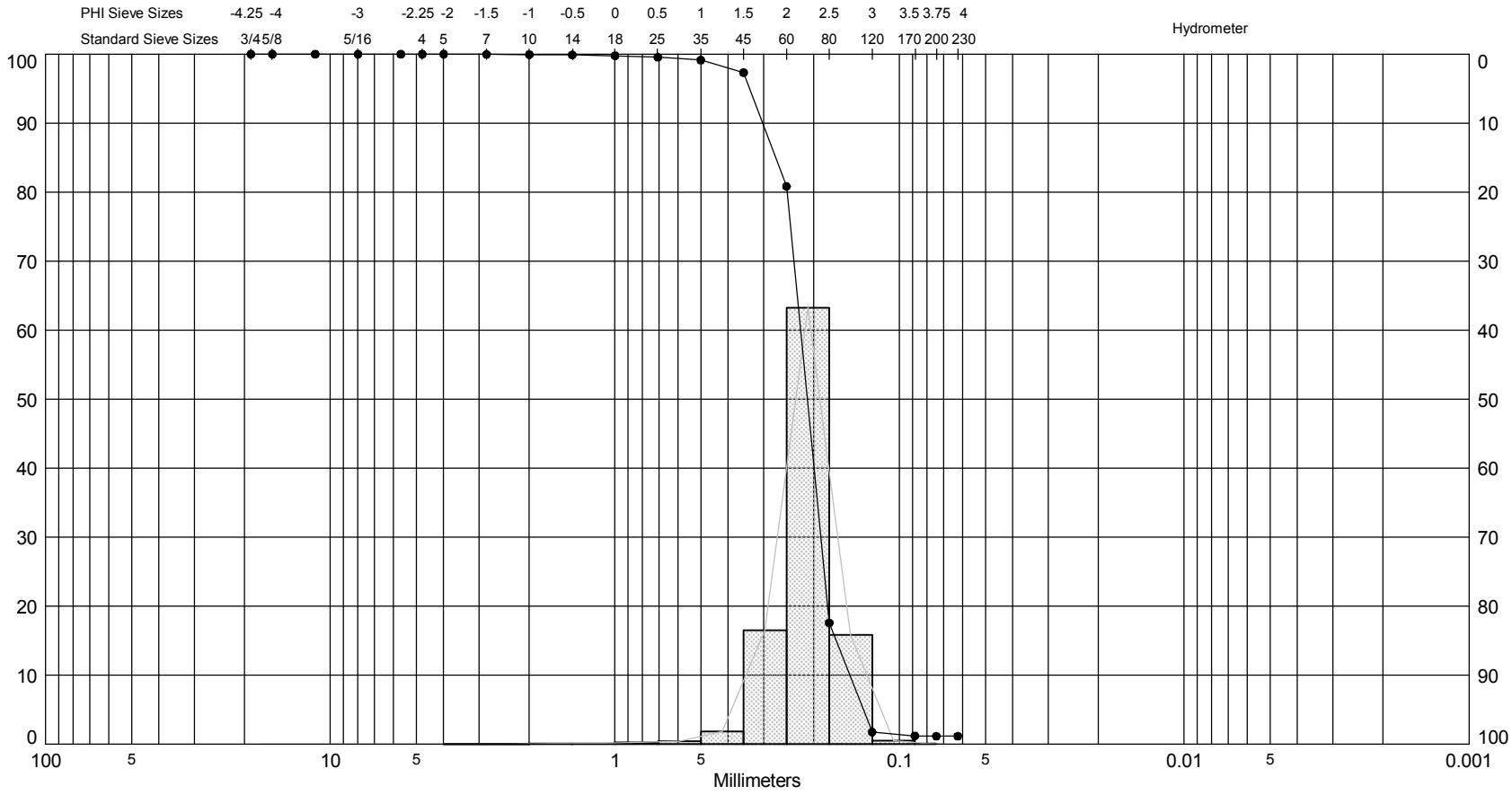
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-25-07
Analyzed By:	PB
Easting (X, ft):	2,388,715
Northing (Y, ft):	200,330
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16 #1	—●—	-1.0	SP	#200 - 1.13 #230 - 1.13		4	2.24	2.22	-1.72	14.47	0.38

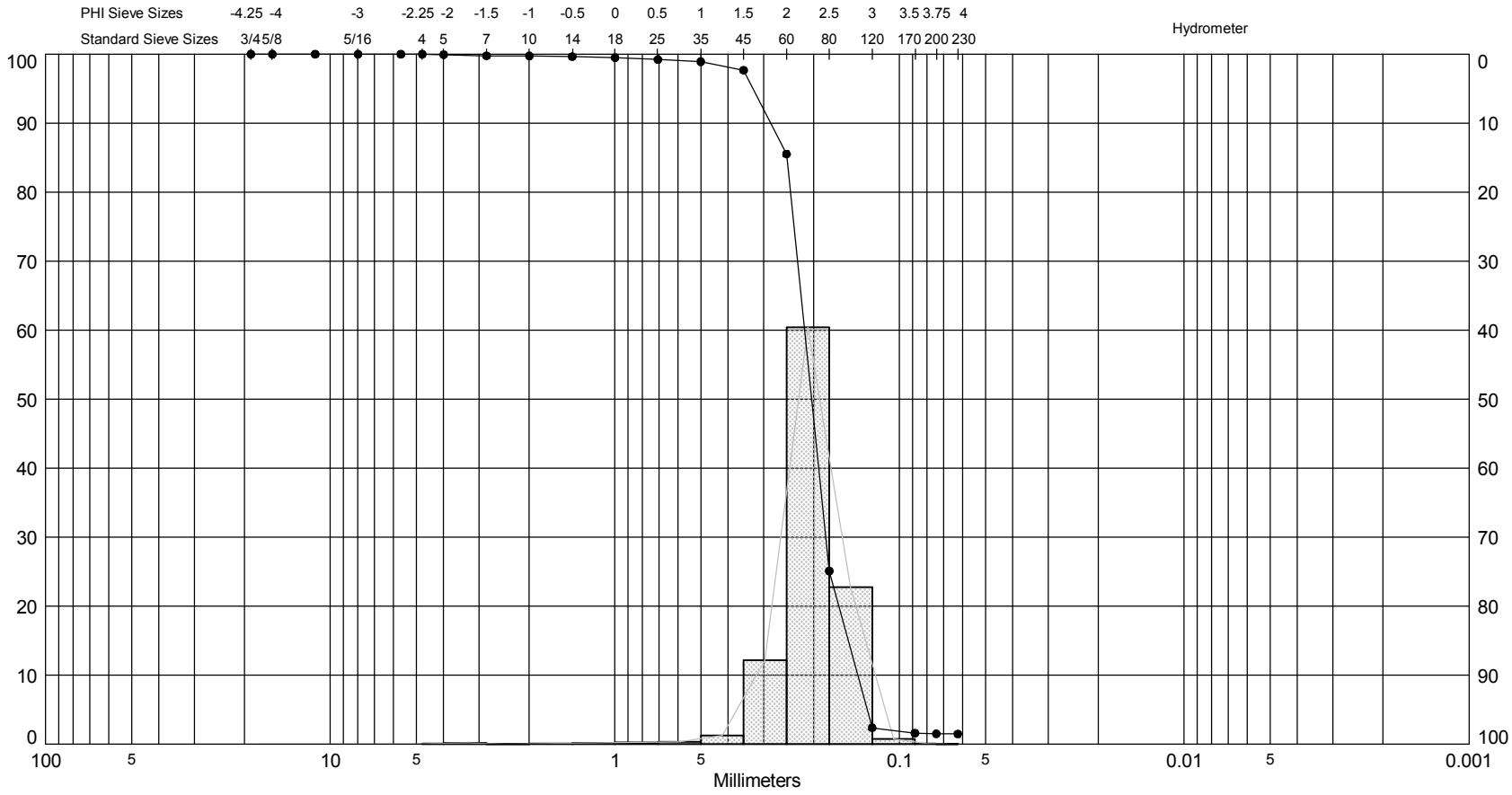
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16 #2	—●—	-4.5	SP	#200 - 1.49 #230 - 1.46		6	2.29	2.27	-3.08	26.85	0.44

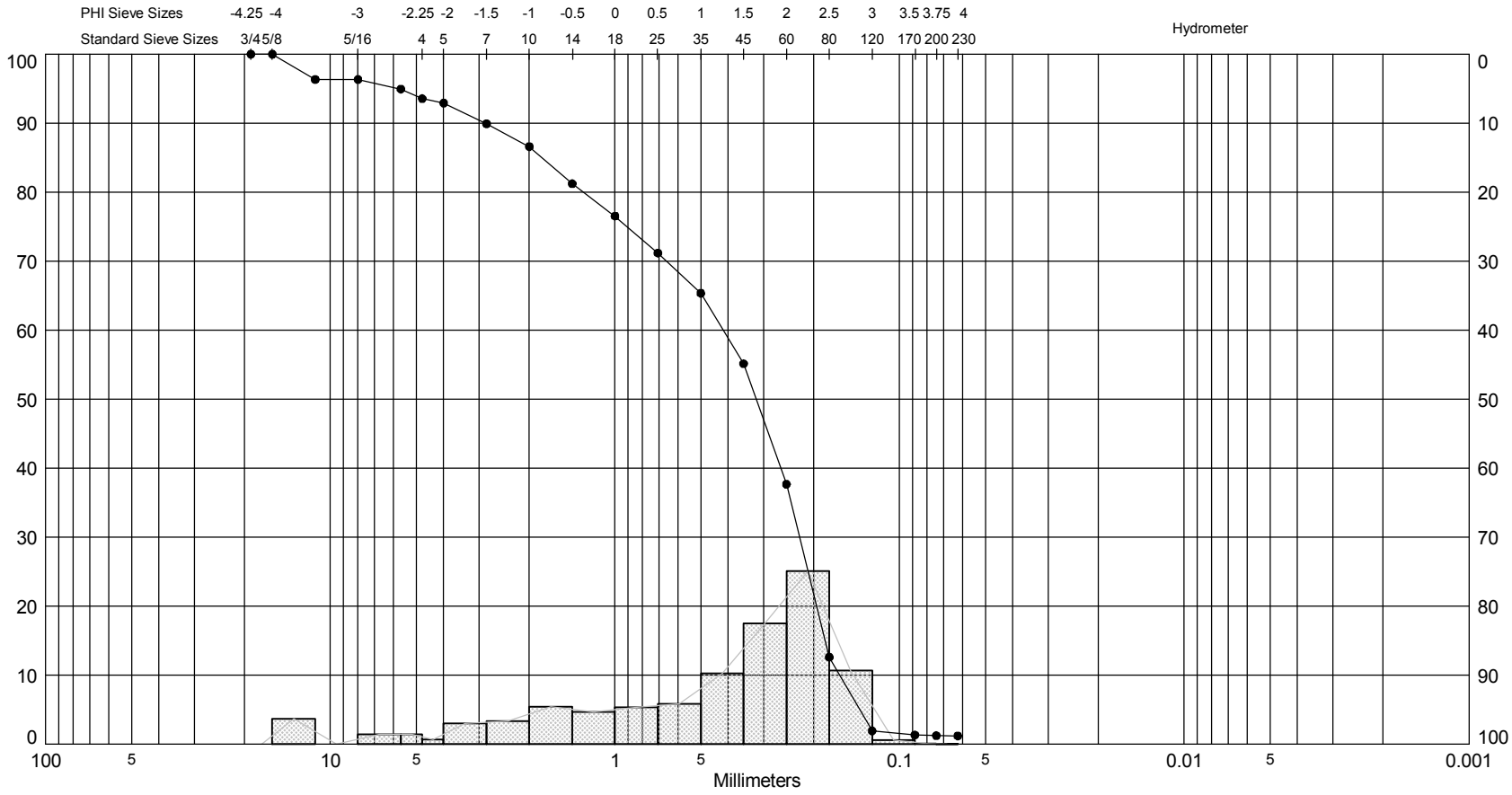
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16 #3	—●—	-7.7	SW	#200 - 1.22 #230 - 1.19		20	1.65	1.02	-1.23	3.77	1.67

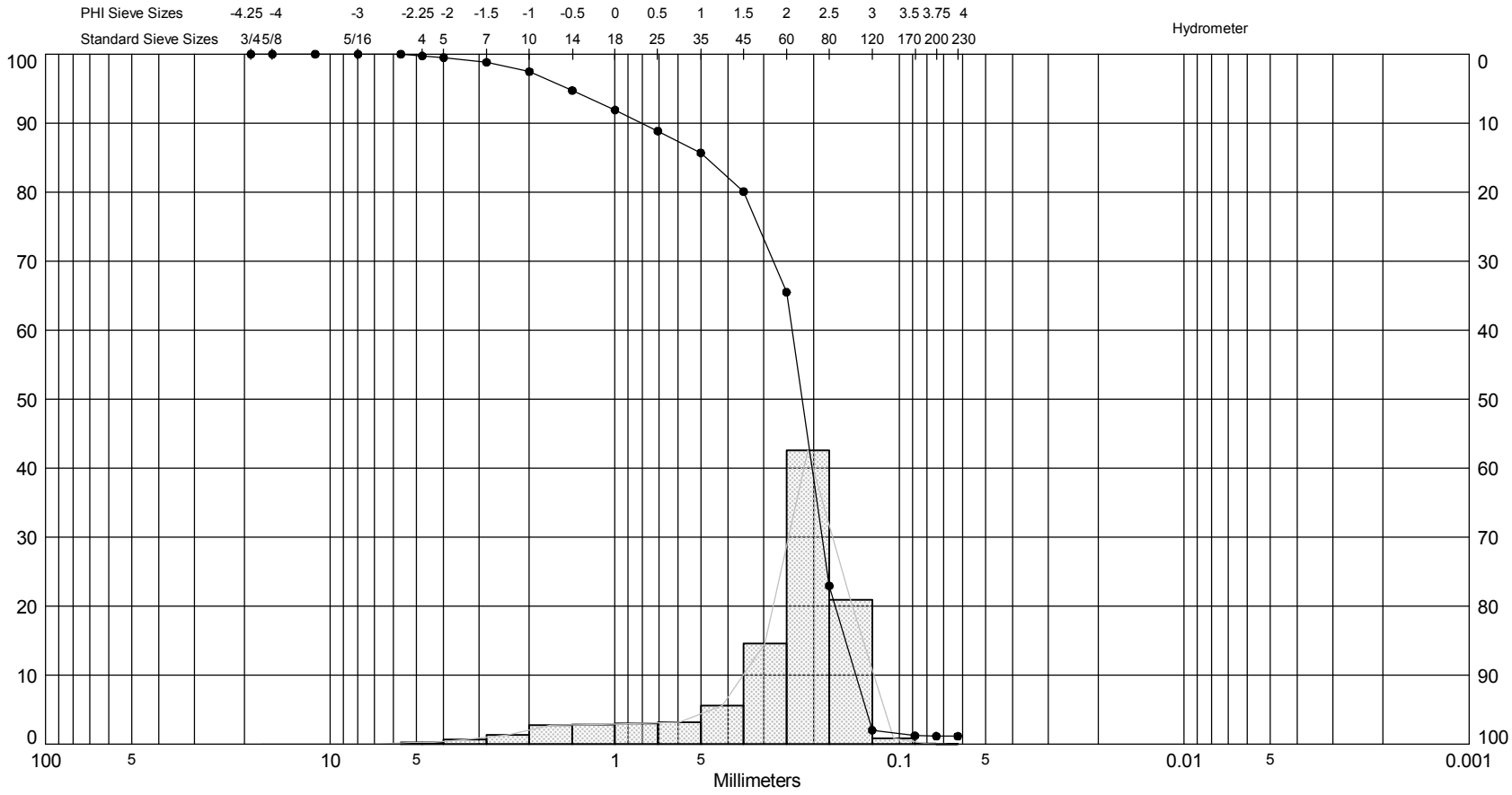
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16A #1	—●—	-7.8	SW	#200 - 1.14 #230 - 1.13			2.18	1.87	-1.82	6.08	1.01

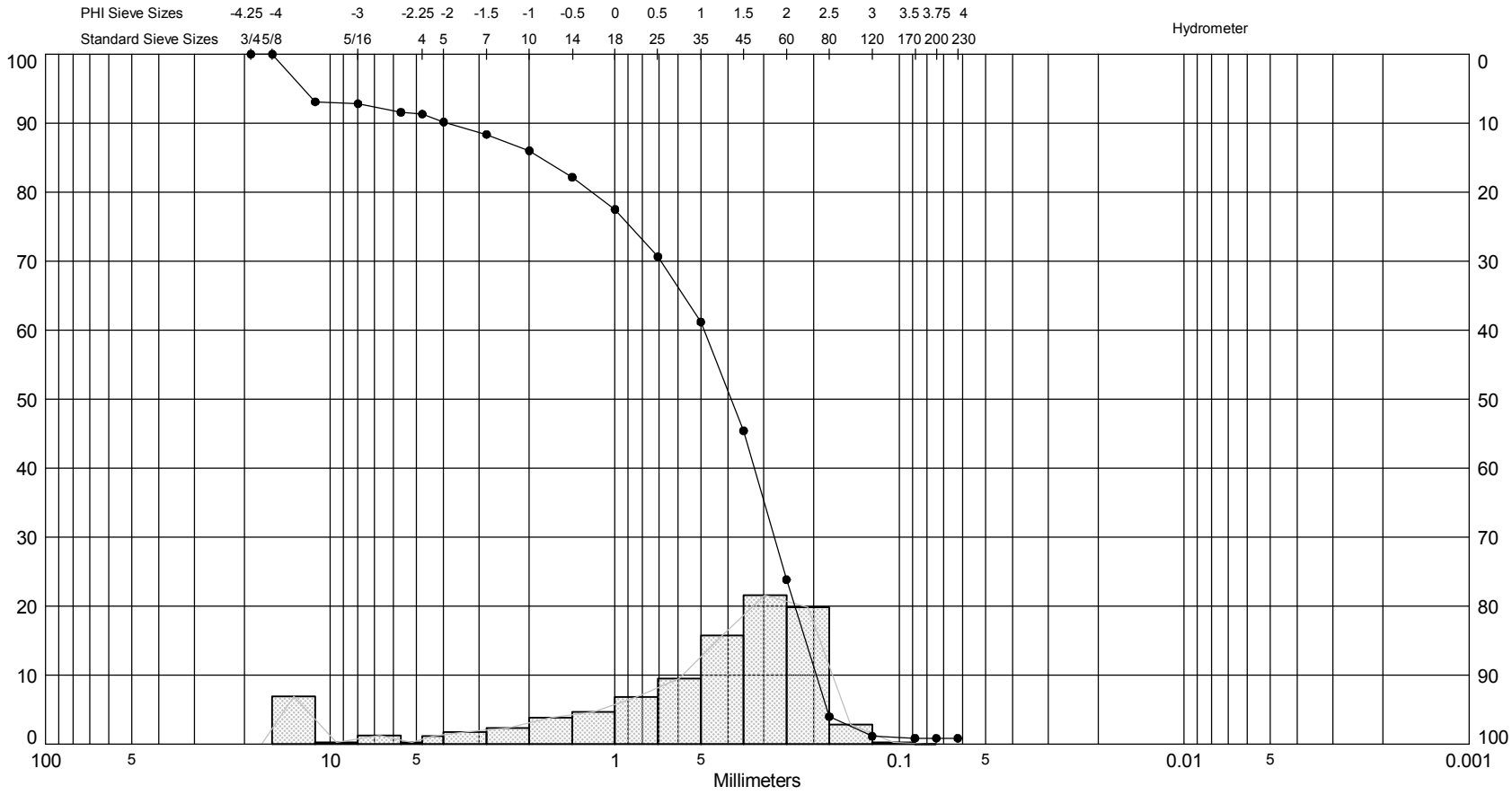
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-15-07
Analyzed By:	PB
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16A #2	—●—	-10.3	SW	#200 - 0.85 #230 - 0.85		29	1.35	0.77	-1.41	4.18	1.71

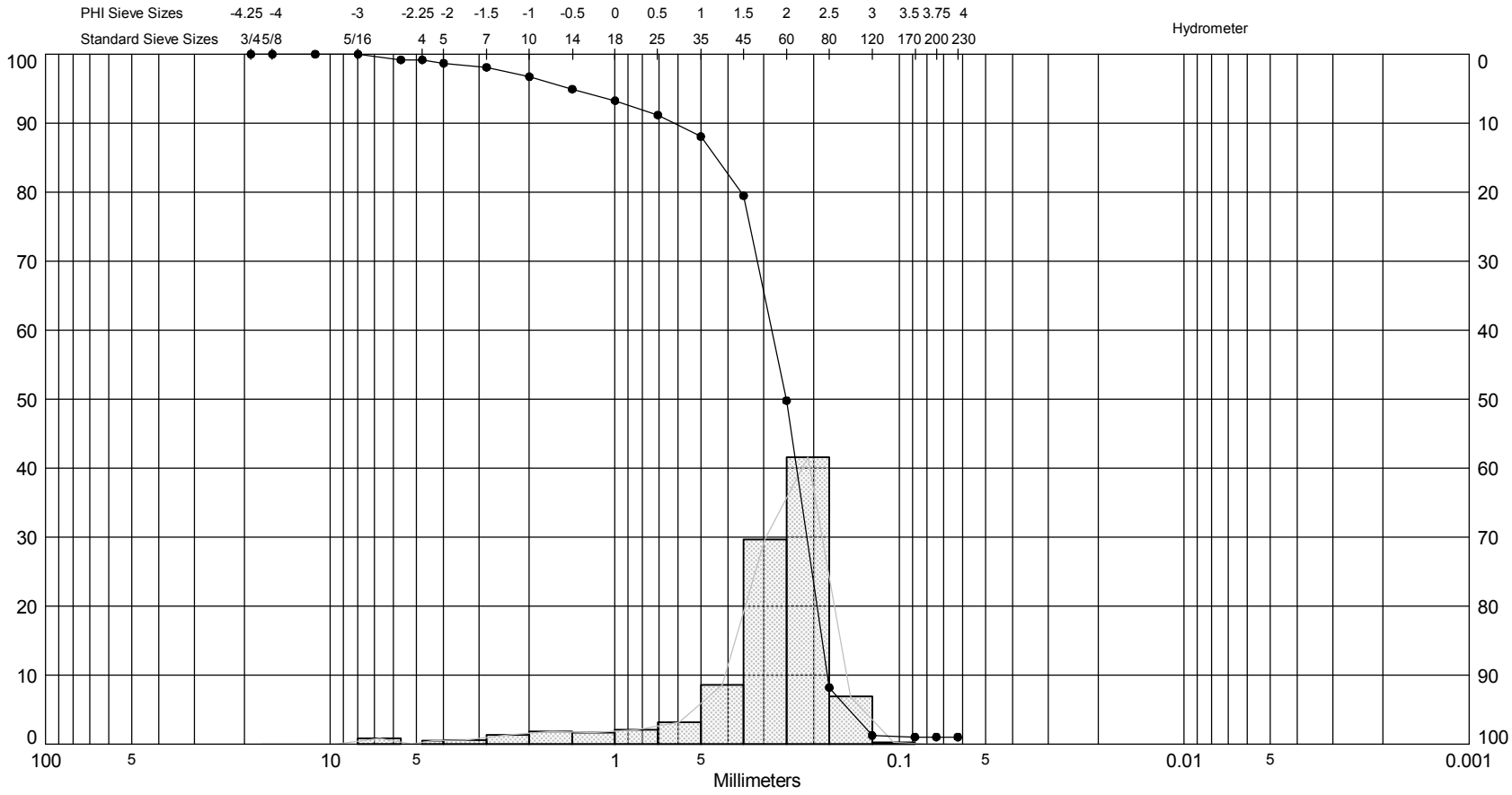
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16A #3	—●—	-13.9	SW	#200 - 1.03 #230 - 1.03		13	2	1.73	-2.36	9.34	0.95

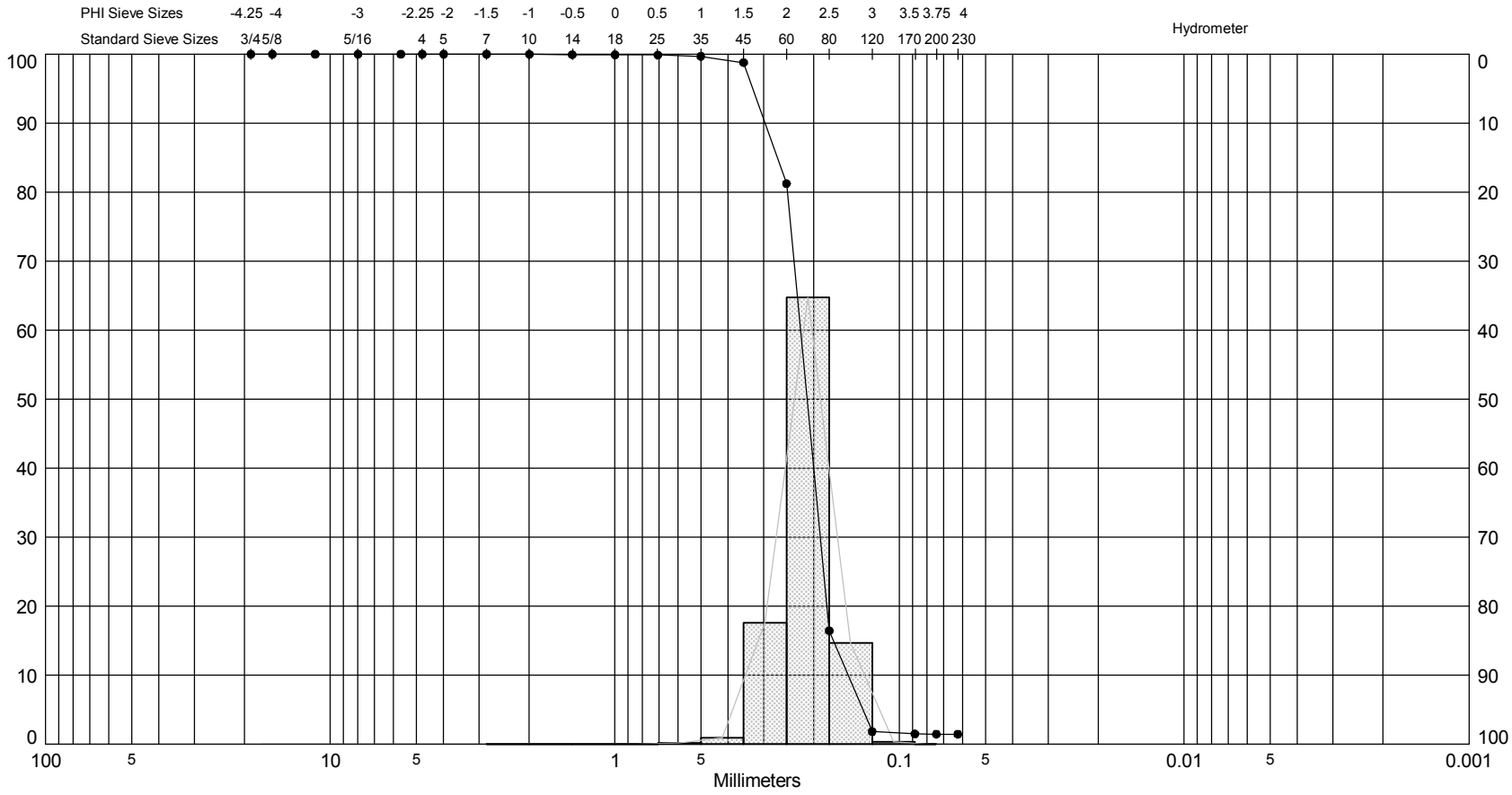
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16A #4	—●—	-16.5	SP	#200 - 1.45 #230 - 1.45		4	2.24	2.22	-0.95	10.38	0.33

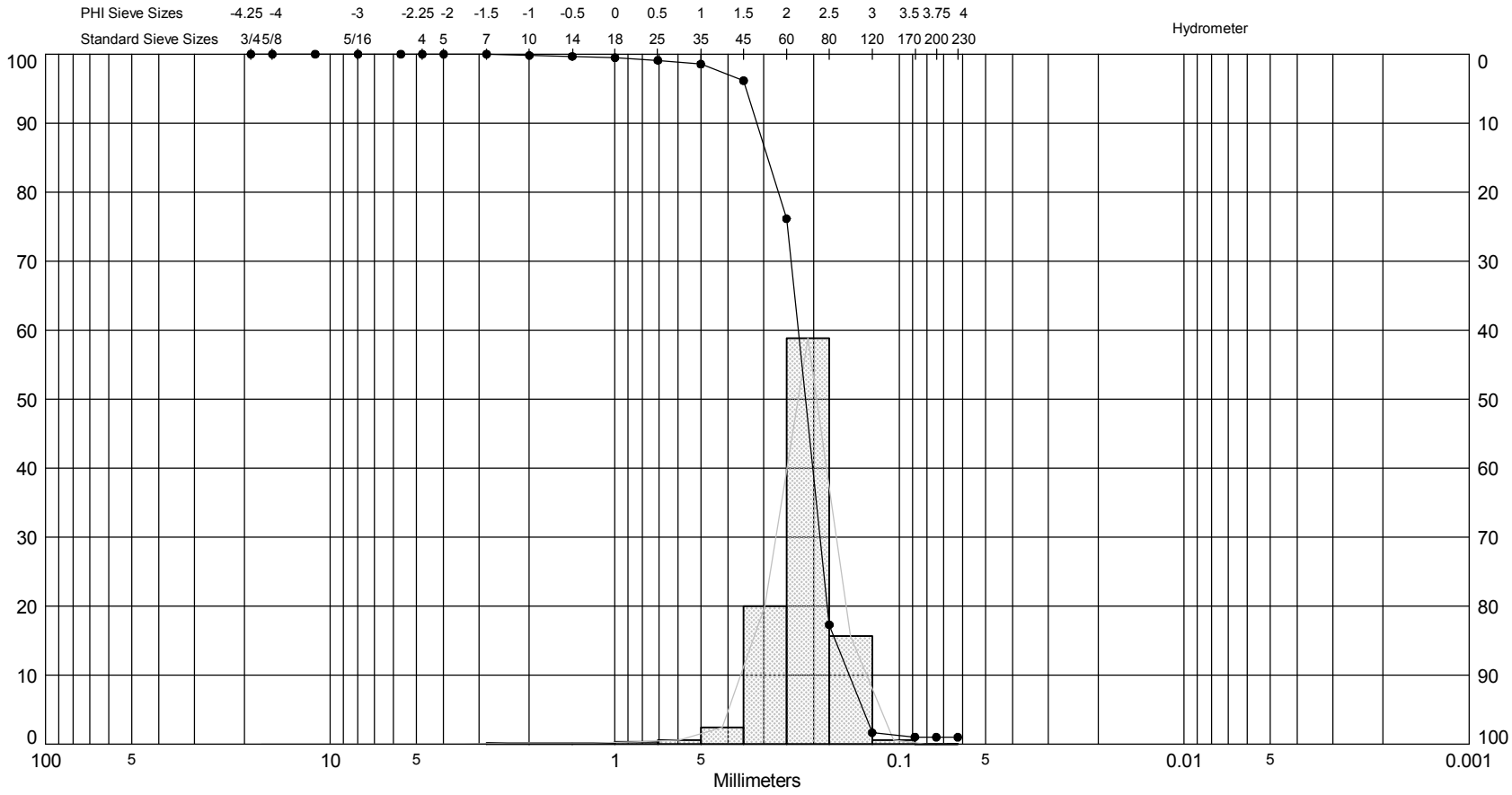
Comments:

Depths and elevations based on measured values

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ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 #1	—●—	-5.0	SP	#200 - 1.00 #230 - 0.99		5	2.22	2.18	-2.12	15.07	0.44

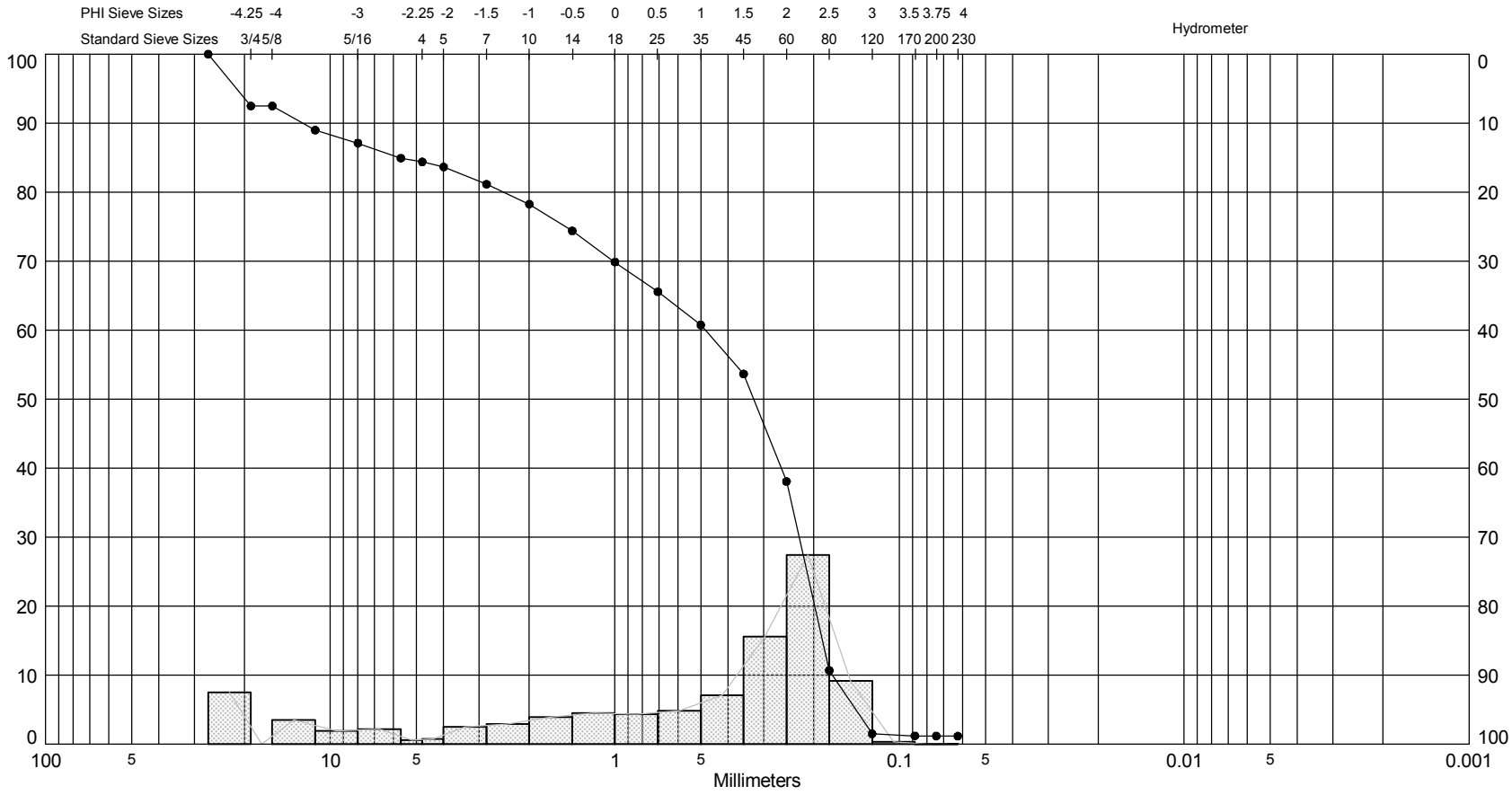
Comments:

Depths and elevations based on measured values

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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-05-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 #2	—●—	-8.1	SW	#200 - 1.17 #230 - 1.15		25	1.62	0.56	-1.11	2.93	2.25

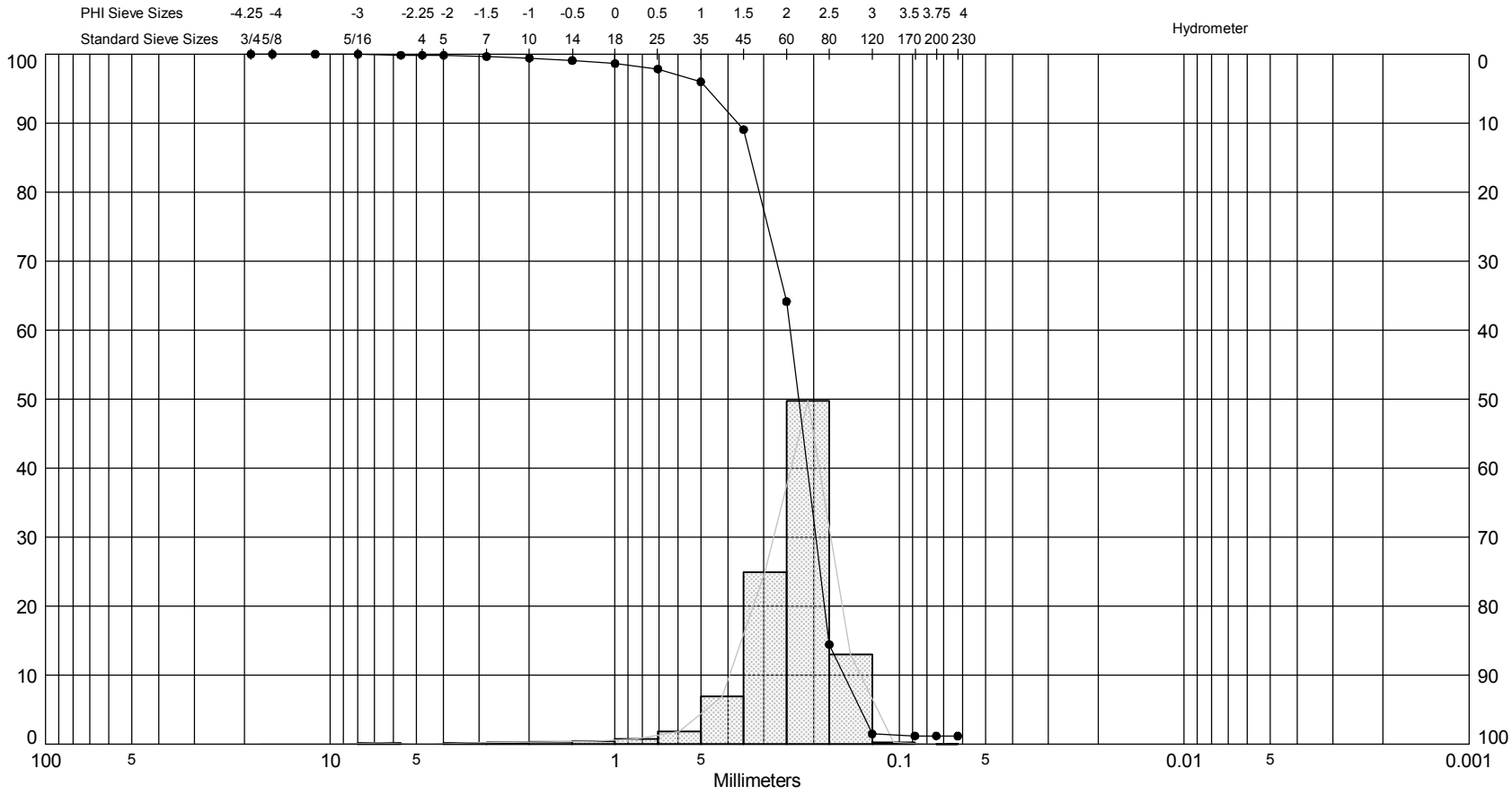
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-05-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 #3	—●—	-10.0	SP	#200 - 1.18 #230 - 1.17		9	2.14	2.03	-2.6	15.94	0.59

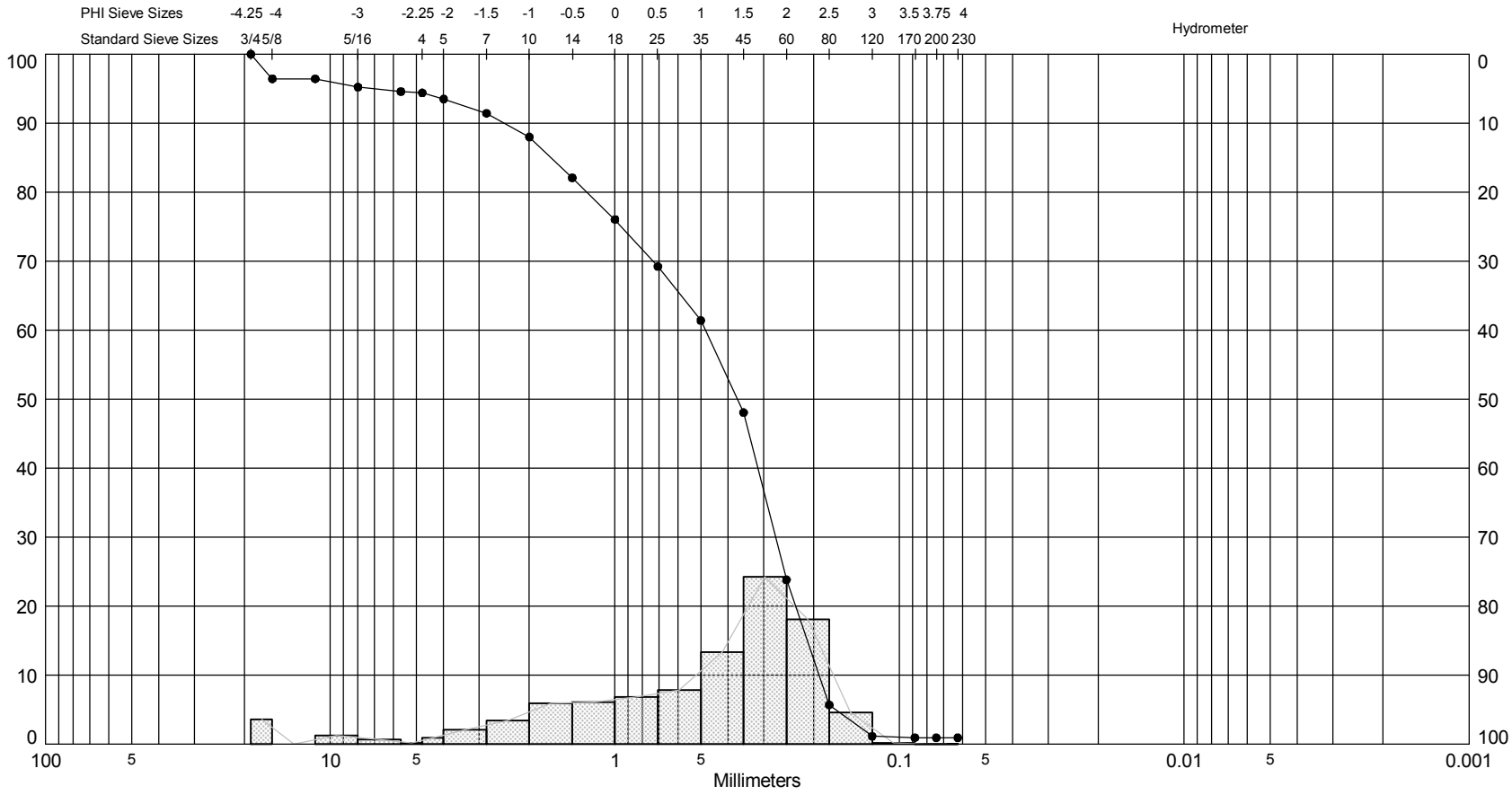
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-06-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 #4	—●—	-13.1	SW	#200 - 0.92 #230 - 0.91		28	1.43	0.85	-1.41	4.66	1.61

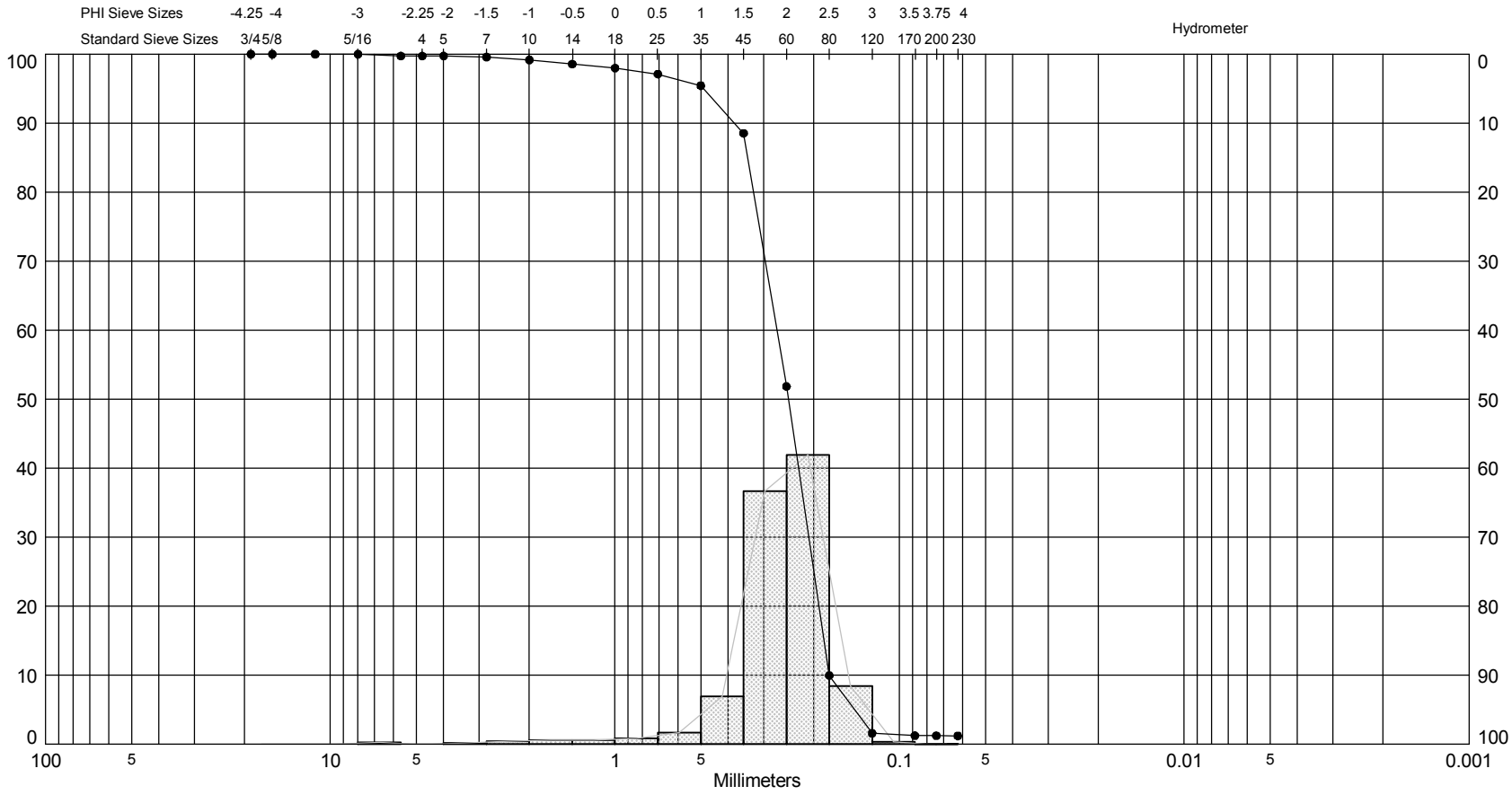
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-06-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 #5	—●—	-14.5	SP	#200 - 1.21 #230 - 1.20		9	2.02	1.93	-2.8	17.02	0.63

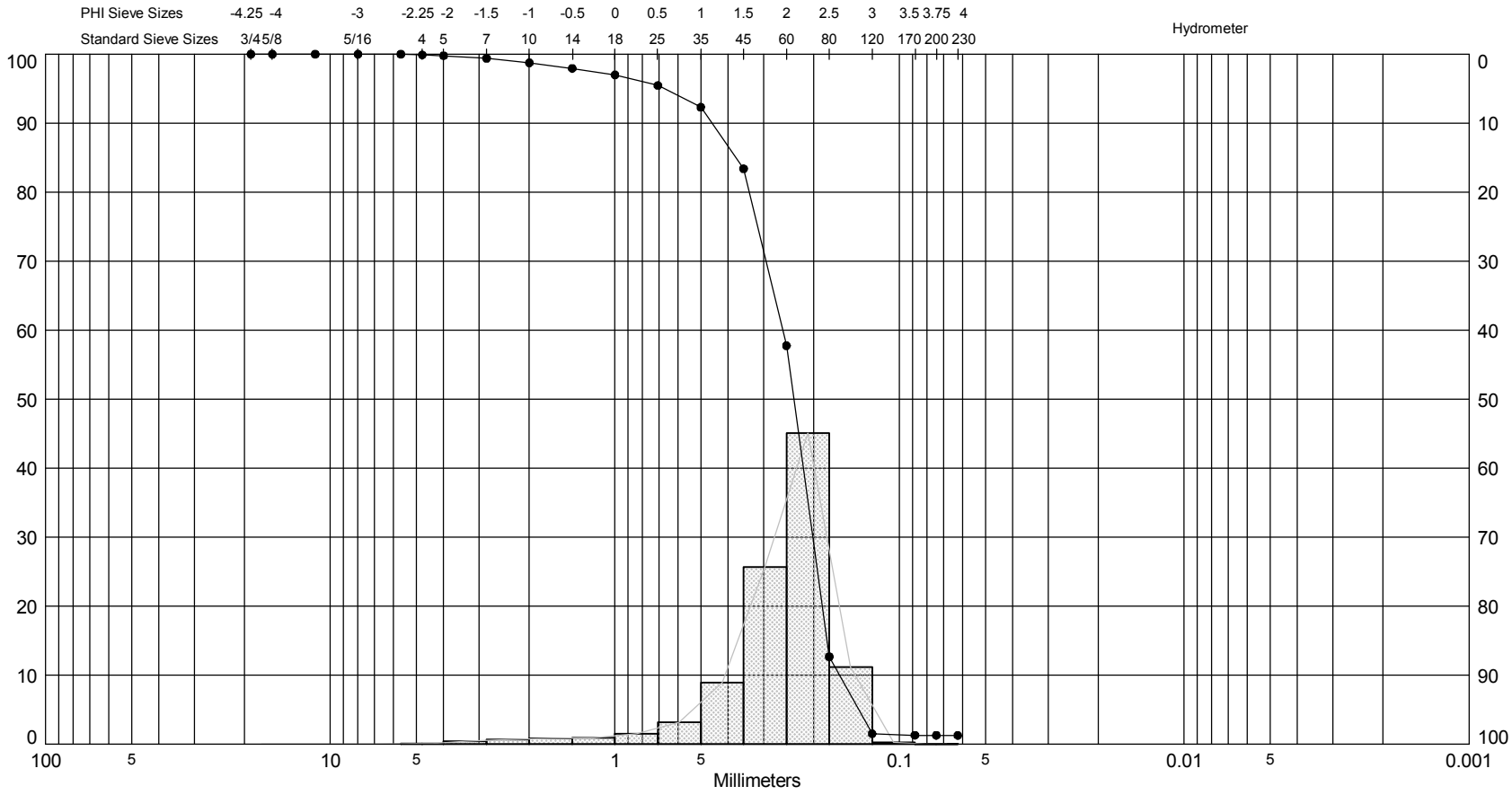
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-06-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17A #1	—●—	-13.3	SP	#200 - 1.28 #230 - 1.27		12	2.09	1.91	-2.27	10.45	0.73

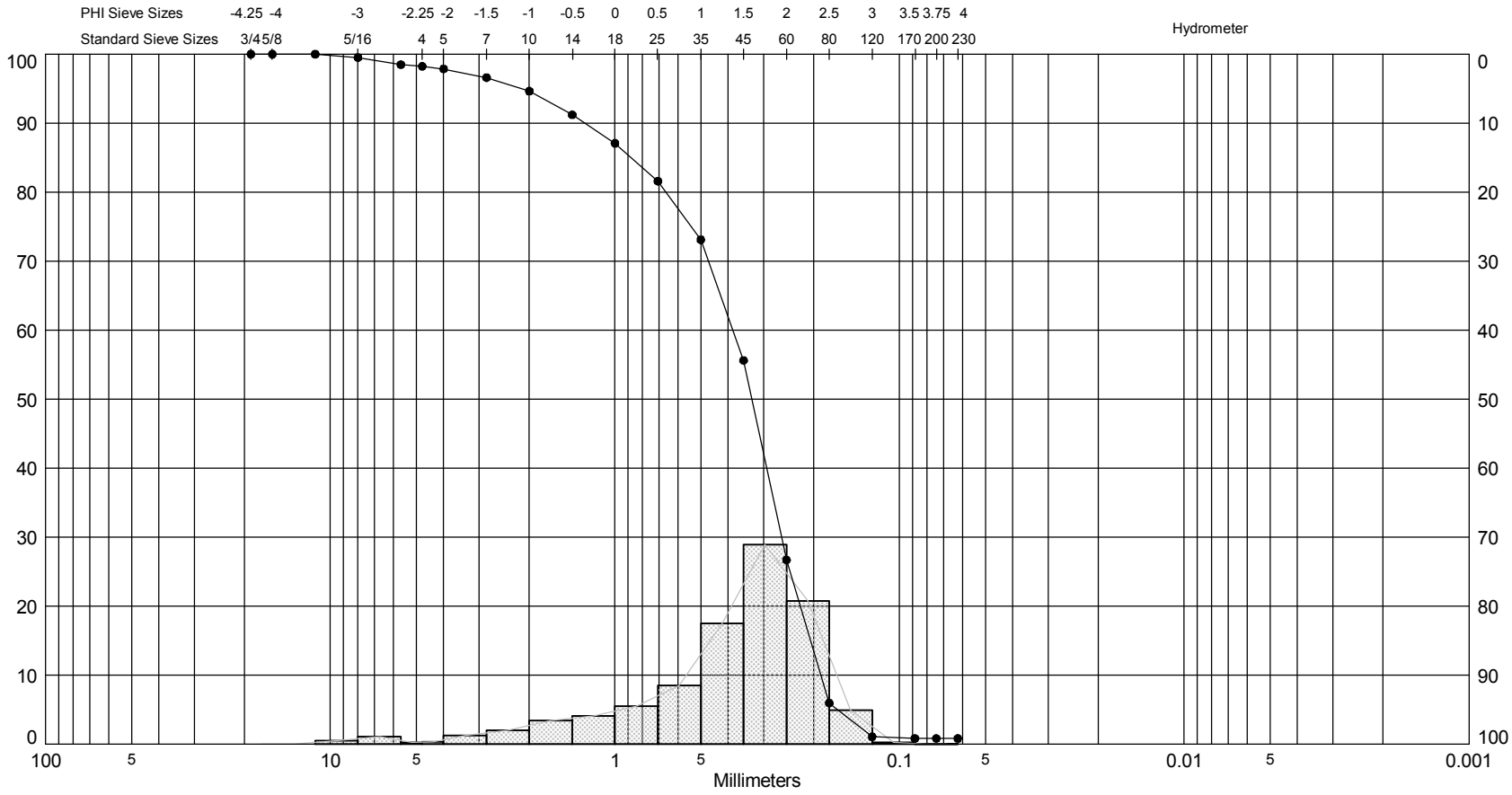
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-09-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17A #2	—●—	-15.6	SW	#200 - 0.81 #230 - 0.80		20	1.6	1.28	-1.5	5.4	1.14

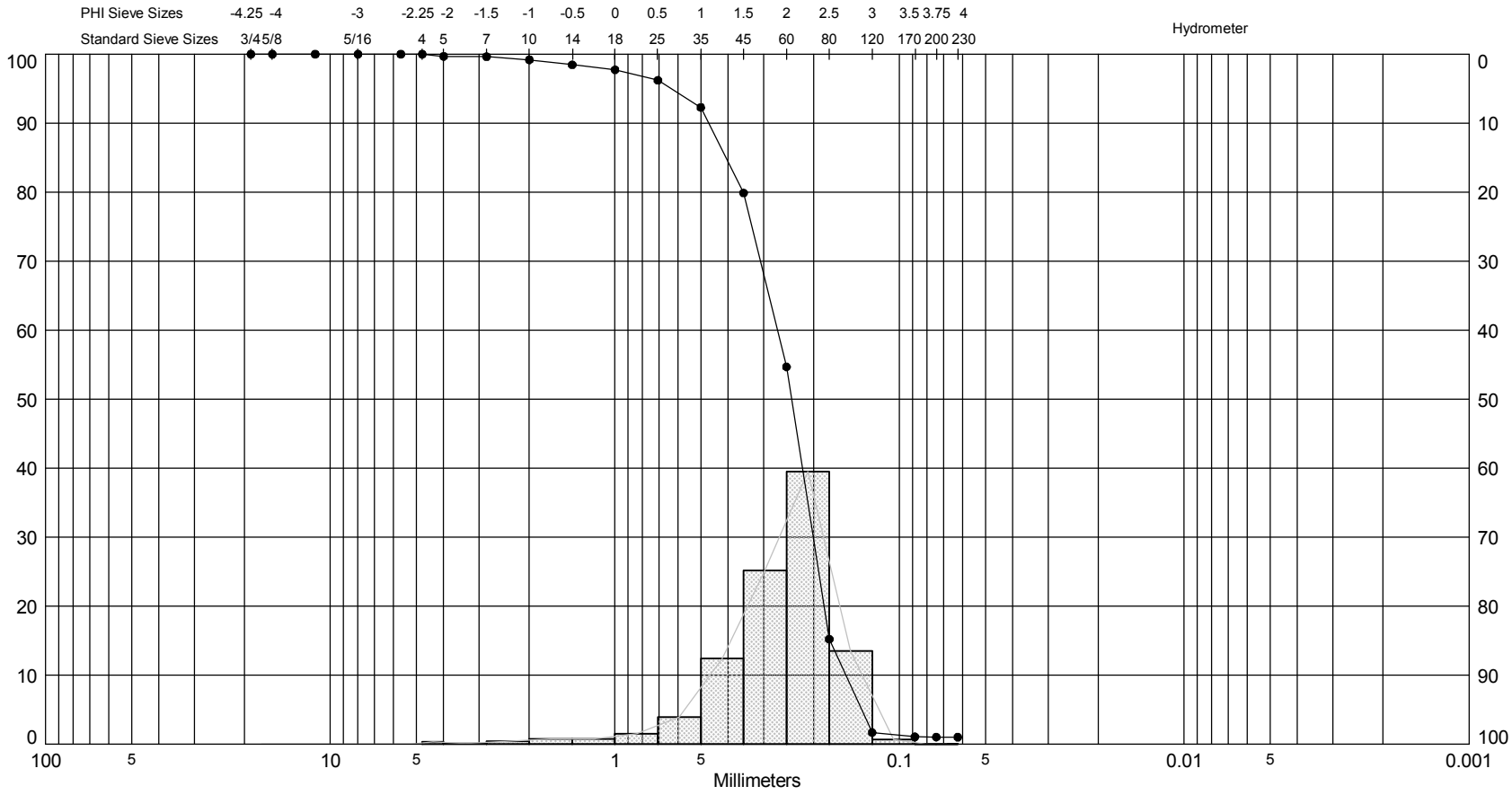
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-09-07
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-18 #1	—●—	-5.0	SP	#200 - 1.02 #230 - 1.01		11	2.06	1.91	-1.8	8.8	0.71

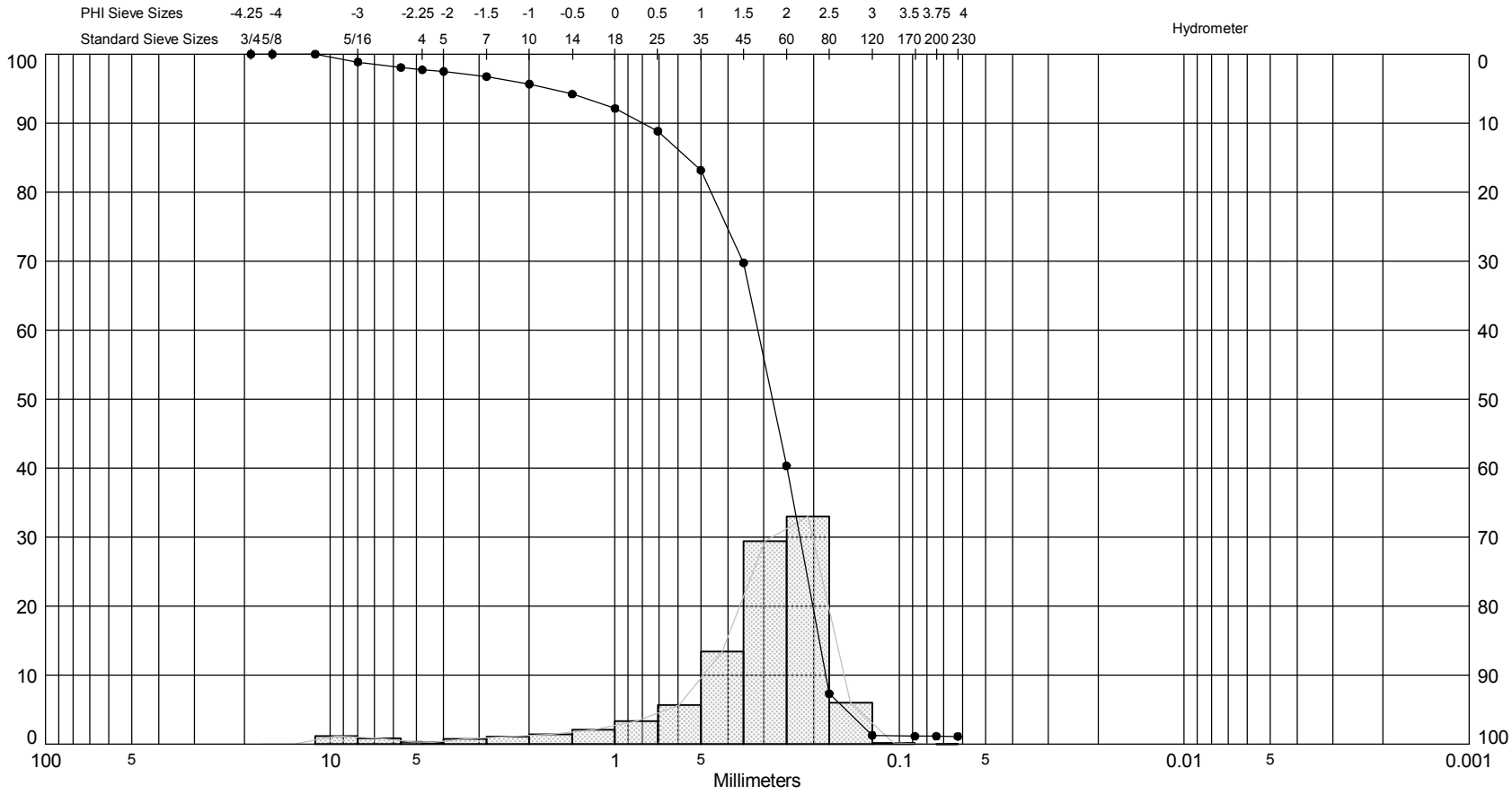
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-09-07
Analyzed By:	PB
Easting (X, ft):	2,387,894
Northing (Y, ft):	201,815
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-18 #2	—●—	-7.5	SW	#200 - 1.13 #230 - 1.12		13	1.84	1.55	-2.26	8.99	1.09

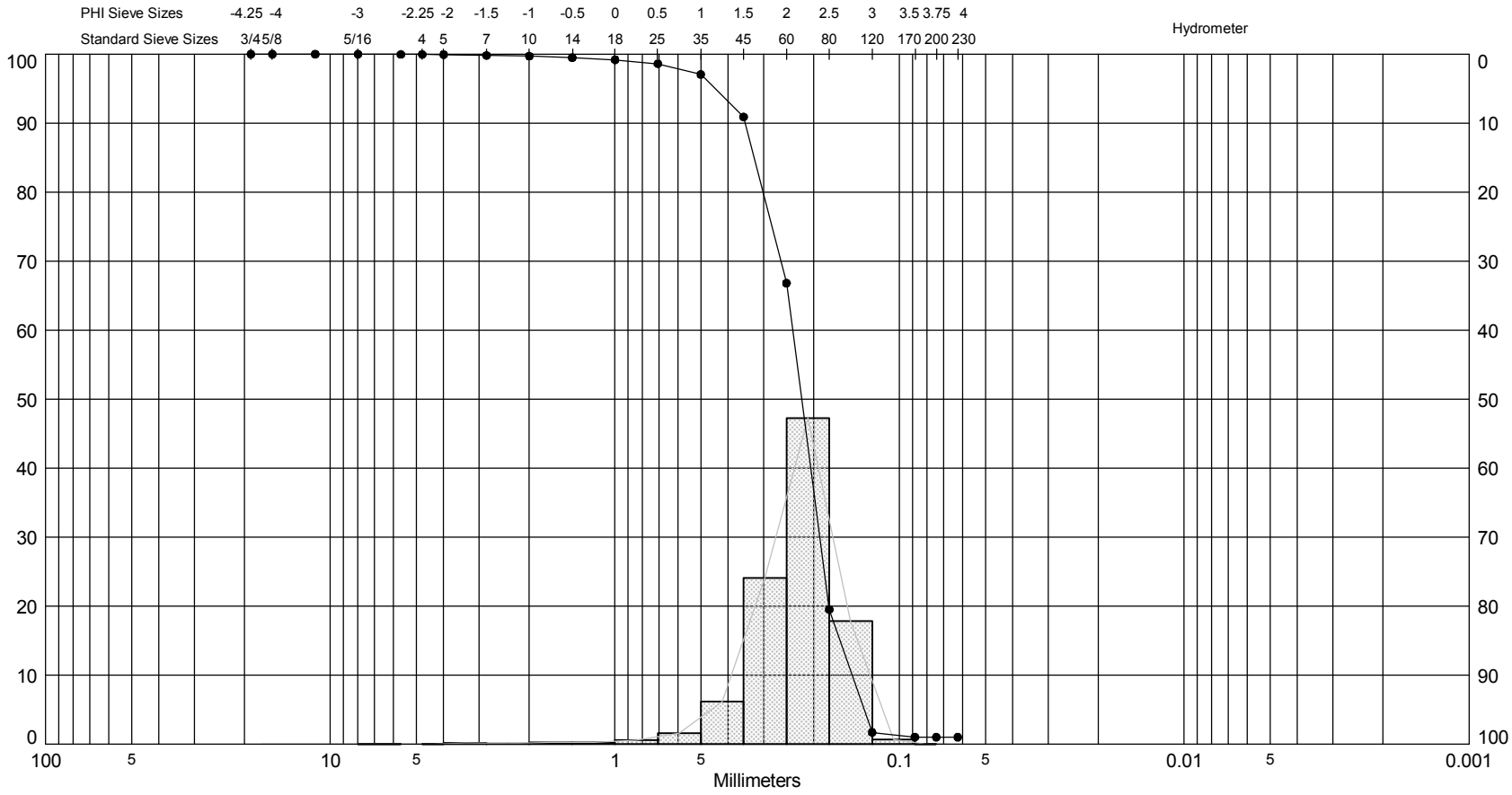
Comments:

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

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	ST
Easting (X, ft):	2,387,894
Northing (Y, ft):	201,815
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-18 #3	—●—	-16.0	SP	#200 - 1.00 #230 - 1.00		6	2.18	2.1	-1.98	12.51	0.54

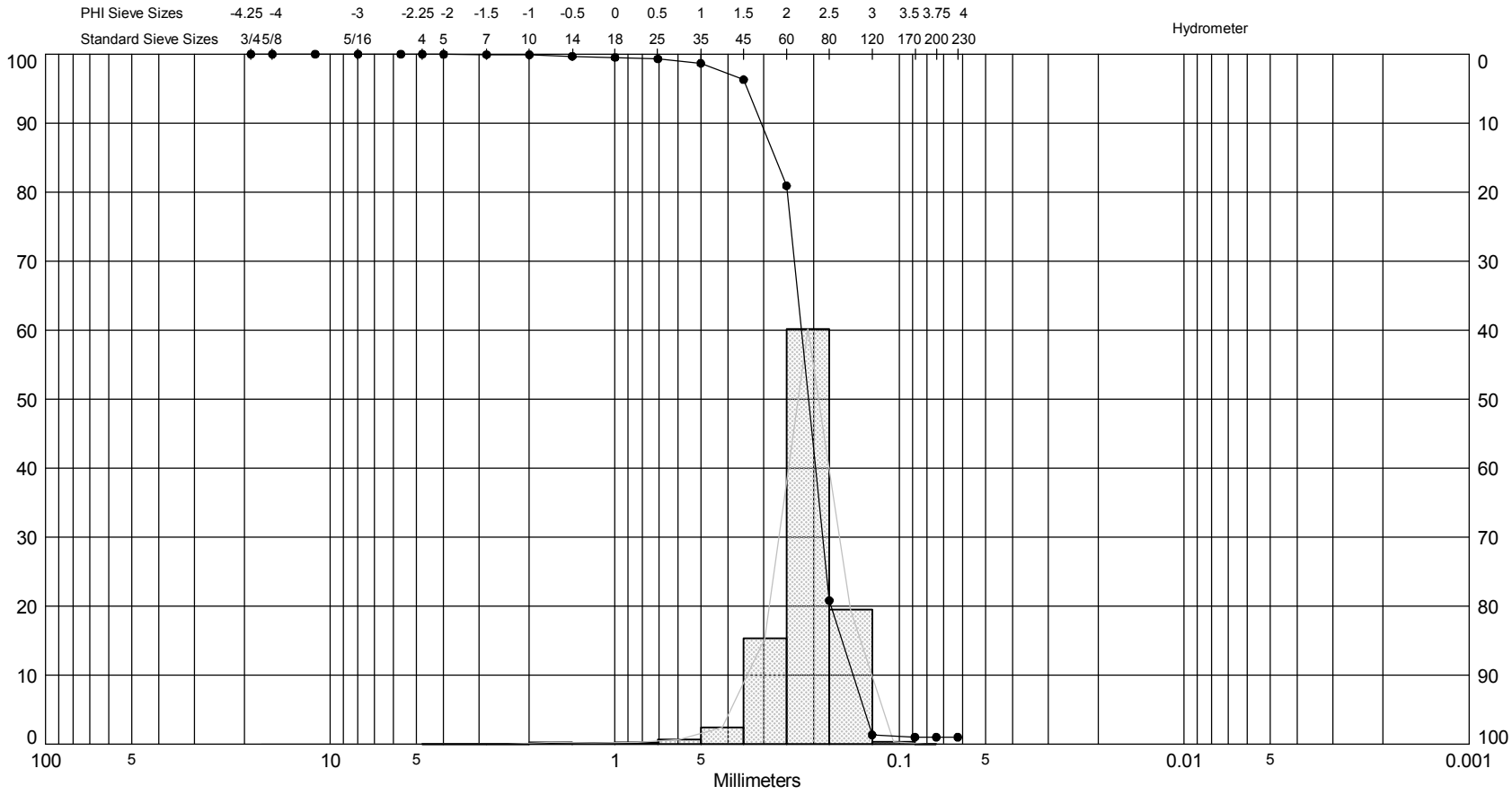
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	06-26-07
Analyzed By:	RS
Easting (X, ft):	2,387,894
Northing (Y, ft):	201,815
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-19 #1	—●—	-6.0	SP	#200 - 1.00 #230 - 1.00		6	2.26	2.22	-2.37	17.59	0.43

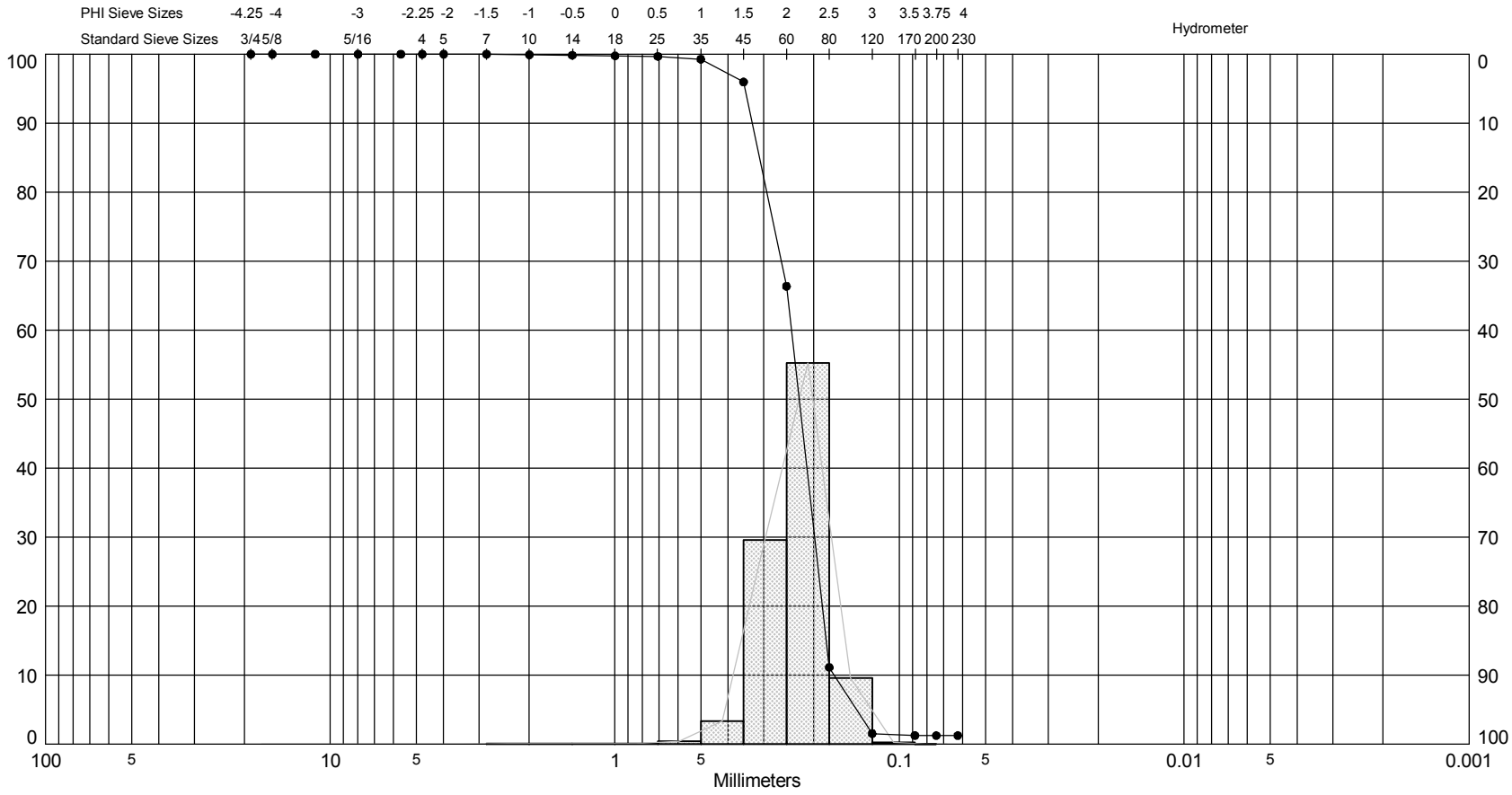
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-05-07
Analyzed By:	PB
Easting (X, ft):	2,389,020
Northing (Y, ft):	200,054
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-19 #2	—●—	-11.3	SP	#200 - 1.23 #230 - 1.23		4	2.15	2.1	-1.31	11.24	0.39

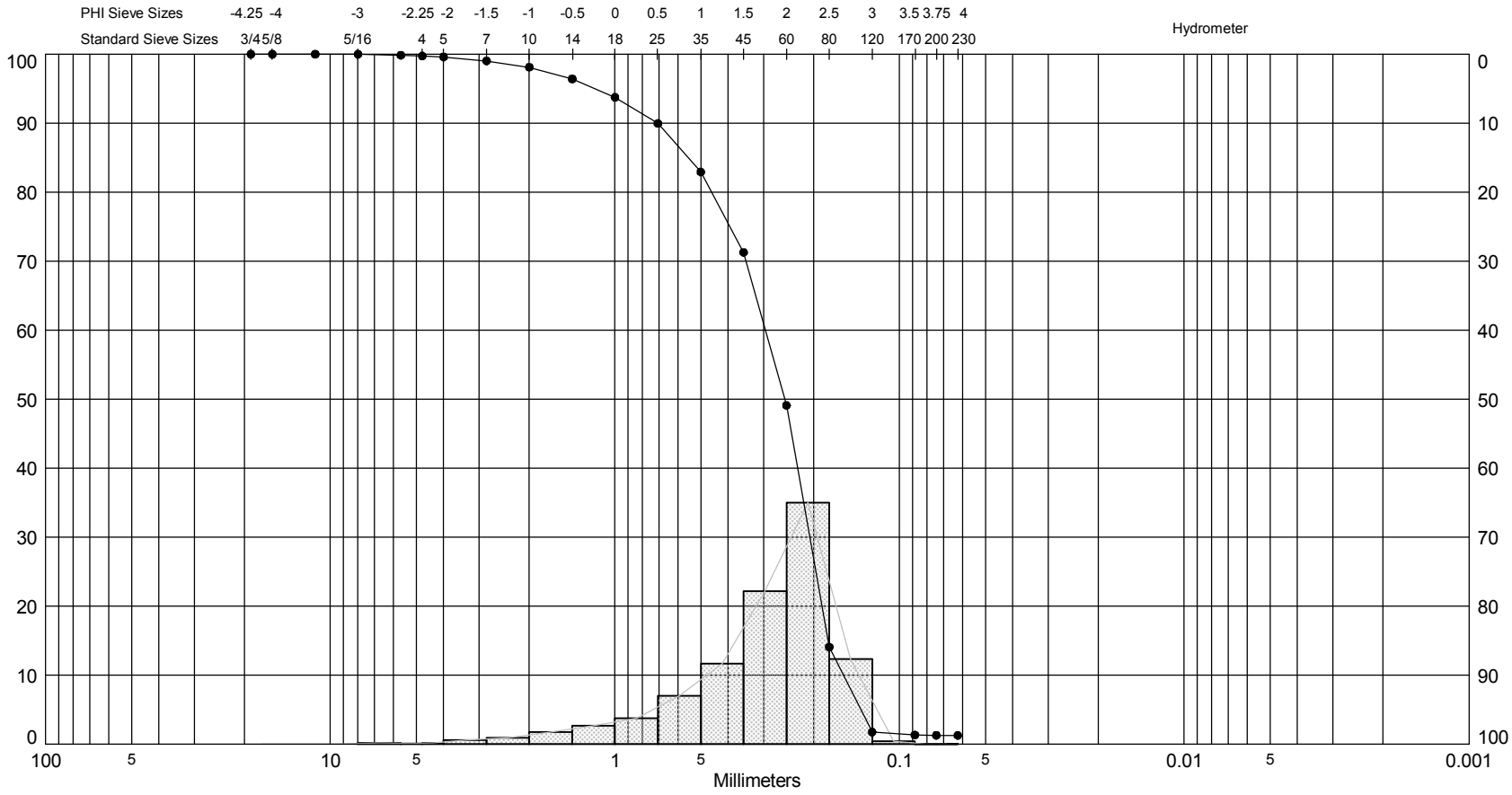
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,389,020
Northing (Y, ft):	200,054
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-19 #3	—●—	-18.9	SW	#200 - 1.28 #230 - 1.27		20	1.98	1.71	-1.54	5.83	0.92

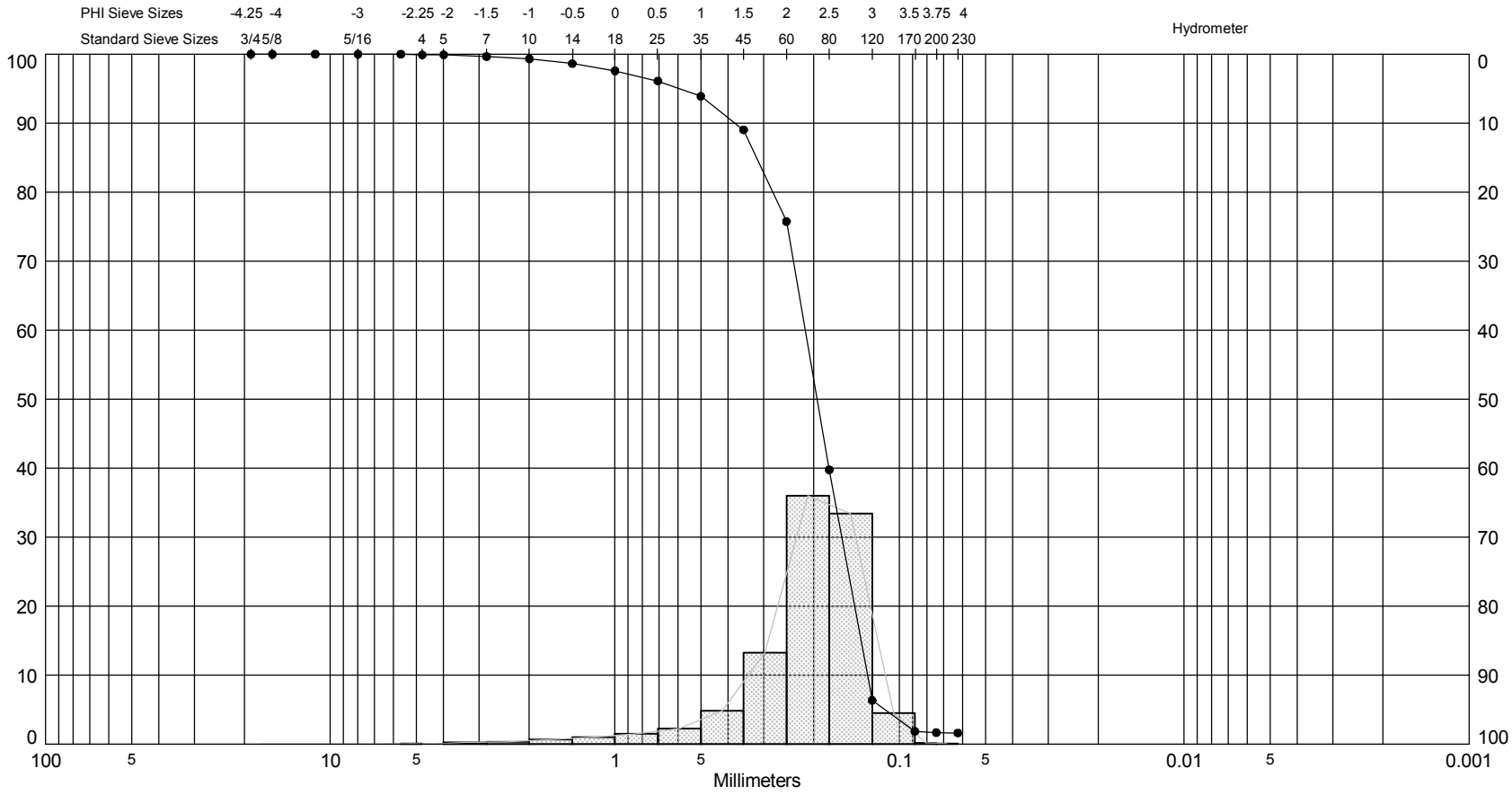
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,389,020
Northing (Y, ft):	200,054
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-20 #1	—●—	-13.2	SP	#200 - 1.67 #230 - 1.62			2.36	2.21	-2.06	9.37	0.75

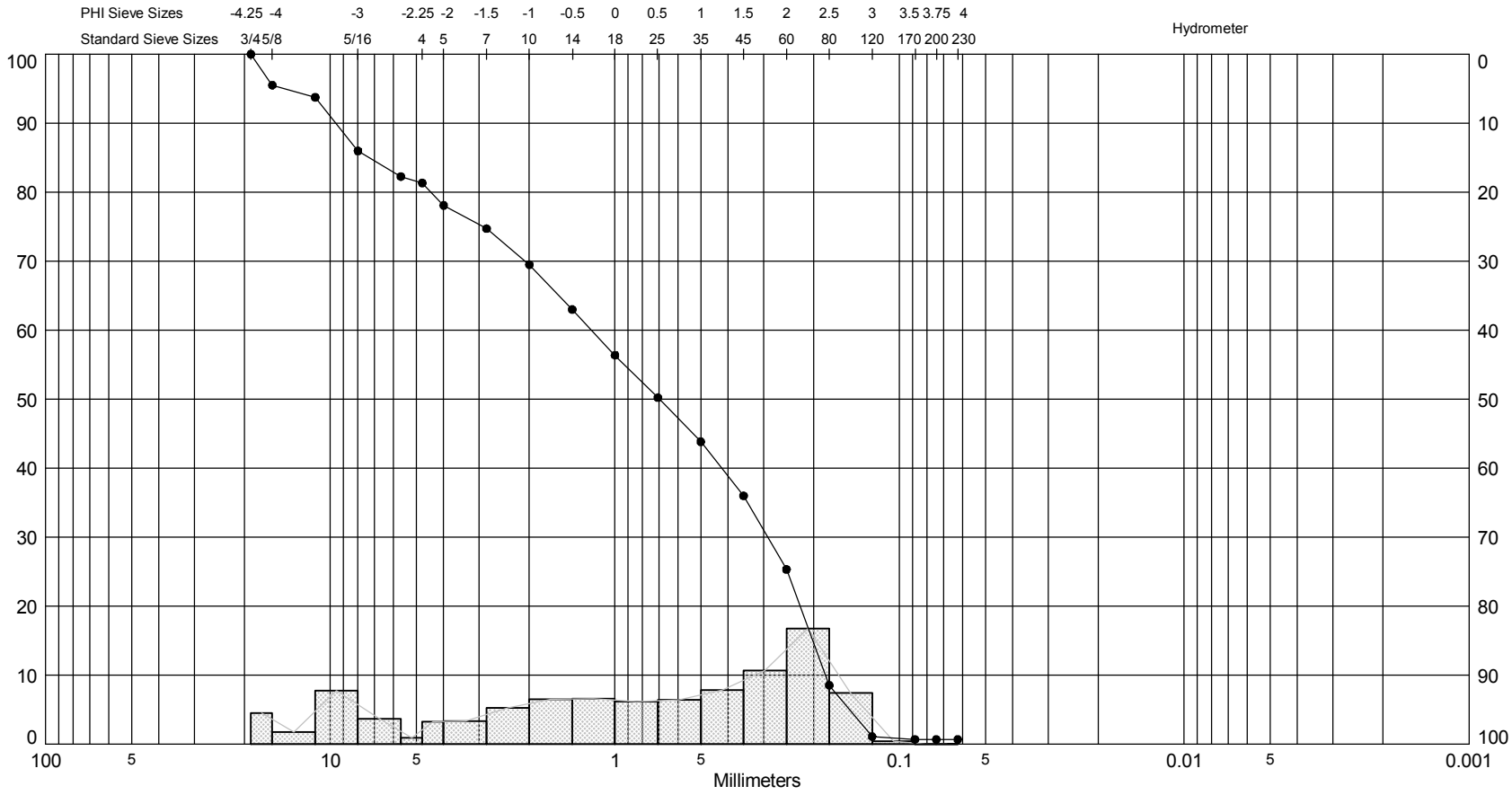
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,386,609
Northing (Y, ft):	200,201
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-20 #2	—●—	-14.8	SW	#200 - 0.67 #230 - 0.66			0.52	0.06	-0.49	1.98	2.12

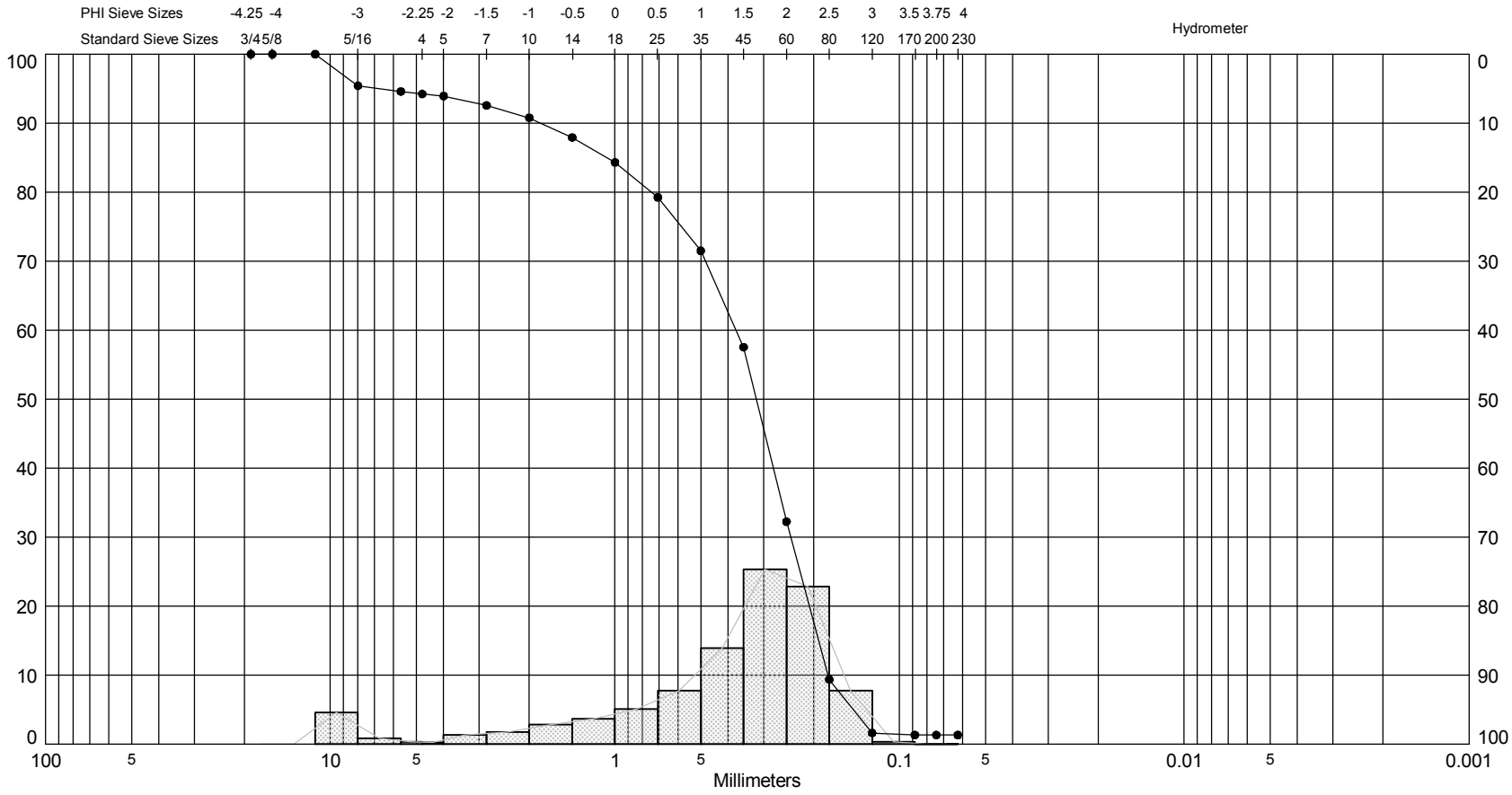
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,386,609
Northing (Y, ft):	200,201
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-20 #3	—●—	-18.0	SW	#200 - 1.31 #230 - 1.30			1.65	1.18	-1.63	5.2	1.46

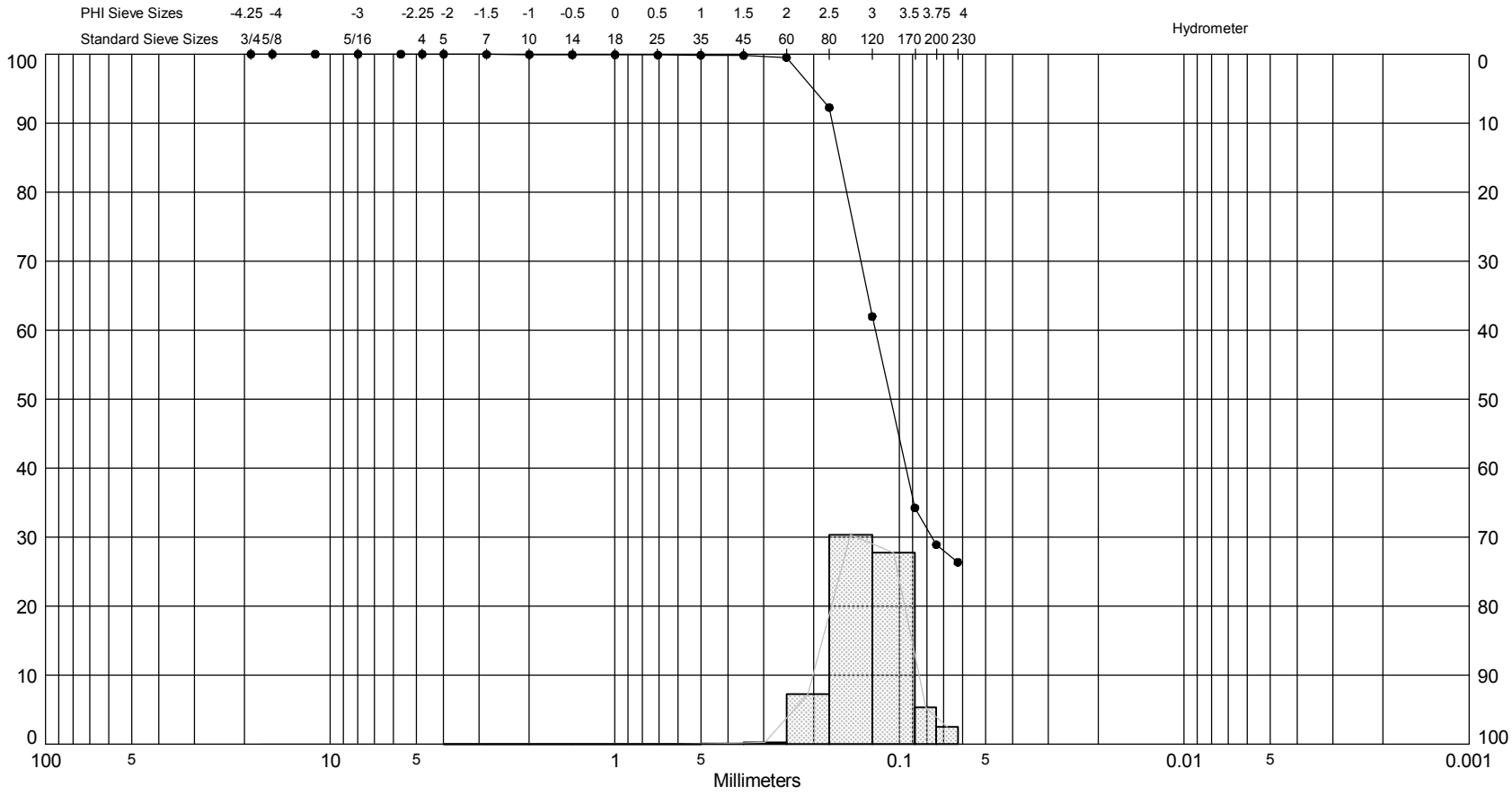
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,386,609
Northing (Y, ft):	200,201
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2007.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-20 #4	—●—	-20.7	SC	#200 - 28.90 #230 - 26.36			3.22	2.98	-1.22	13.56	0.44

Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2007
Analysis Date:	07-10-07
Analyzed By:	PB
Easting (X, ft):	2,386,609
Northing (Y, ft):	200,201
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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APPENDIX 21

2008 CPENC Vibracore Logs

Boring Designation FEVC-08-01

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-01
LOCATION COORDINATES: X = 2,385,534 Y = 200,207

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 14.4 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 07:32
COMPLETED: 10-06-08 07:35

16. ELEVATION TOP OF BORING: -10.6 Ft.

17. TOTAL RECOVERY FOR BORING: 12.2 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-10.6	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine to medium grained, quartz, trace shell hash, trace silt, trace shelly lenses up to (3.0"x1.0"), silty laminae @ 4.2' and 8.6', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.18, Phi Sorting: 0.40 Shell Hash: 0%, Fines (230): 1.48% (SP)
					2	Sample #2, Depth = 7.0' Mean (mm): 0.21, Phi Sorting: 0.53 Shell Hash: 0%, Fines (230): 1.37% (SP)
-19.6	9.0					
			SAND, fine to medium grained, quartz, little shell fragments, little shell hash, trace whole shell, shell fragments and whole shells up to (2.0"x1.0"), trace shelll hash from 9.2' to 9.3' and 9.6' to 9.7', light olive gray (5Y-6/2), (SW).		3	Sample #3, Depth = 10.5' Mean (mm): 0.57, Phi Sorting: 1.75 Shell Hash: 2%, Fines (230): 1.76% (SW)
-21.6	11.0					
			SAND, fine to medium grained, quartz, trace shell hash, trace silt, gray (5Y-5/1), (SP).		4	Sample #4, Depth = 11.6' Mean (mm): 0.14, Phi Sorting: 0.31 Shell Hash: 0%, Fines (230): 3.29% (SP)
-22.8	12.2					
			No Recovery.			
-25.0	14.4					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-02

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-02
LOCATION COORDINATES: X = 2,386,109 Y = 200,498

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 10.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 08:15
COMPLETED: 10-06-08 08:25

16. ELEVATION TOP OF BORING: -4.8 Ft.

17. TOTAL RECOVERY FOR BORING: 9.1 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-4.8	0.0					
			SAND, fine to medium grained, quartz, trace organics, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", 0.12" silty lens @ 4.9', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.23, Phi Sorting: 0.70 Shell Hash: 0%, Fines (230): 1.30% (SP)
					2	Sample #2, Depth = 7.0' Mean (mm): 0.18, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.14% (SP)
-13.9	9.1					
			No Recovery.			
-15.3	10.5					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-02A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-02A
LOCATION COORDINATES: X = 2,386,110 Y = 200,509

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 17.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES

14. ELEVATION GROUND WATER

15. DATE BORING
STARTED: 11-06-08 12:39
COMPLETED: 11-06-08 12:45

16. ELEVATION TOP OF BORING: -5.0 Ft.

17. TOTAL RECOVERY FOR BORING: 10 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-5.0	0.0					
			Jetted to 7.0'.			
-12.0	7.0					
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", gray (5Y-6/1), (SP).		1	Sample #1, Depth = 10.0' Mean (mm): 0.18, Phi Sorting: 0.35 Shell Hash: 0%, Fines (230): 1.25% (SP)
					2	Sample #2, Depth = 15.0' Mean (mm): 0.18, Phi Sorting: 0.34 Shell Hash: 0%, Fines (230): 1.29% (SP)
-22.0	17.0					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-08-03

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-03
LOCATION COORDINATES: X = 2,387,390 Y = 201,128

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 20.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 10:20
COMPLETED: 10-06-08 10:26

16. ELEVATION TOP OF BORING: -3.6 Ft.

17. TOTAL RECOVERY FOR BORING: 19 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-3.6	0.0					
-5.7	2.1		SAND, medium grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to (1.0"x0.5"), (3.0"x1.5") shell hash pocket @ 0.3', gray (5Y-6/1), (SW).		1	Sample #1, Depth = 1.4' Mean (mm): 0.35, Phi Sorting: 1.43 Shell Hash: 2%, Fines (230): 0.93% (SW)
					2	Sample #2, Depth = 3.5' Mean (mm): 0.19, Phi Sorting: 0.49 Shell Hash: 0%, Fines (230): 1.26% (SP)
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, 0.12" silty lens @ 5.8' and 11.2', (1.0"x0.25") silty pocket @ 7.1', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 8.5' Mean (mm): 0.17, Phi Sorting: 0.35 Shell Hash: 0%, Fines (230): 1.30% (SP)
-15.3	11.7					
-16.8	13.2		SAND, fine to medium grained, quartz, little shell hash, trace organics, trace shell fragments, trace silt, trace whole shell, shell fragments and whole shells up to 1.0", (3.0"x1.5") shelly pocket @ 11.8', (3.0"x2.0") shelly pocket @ 13.0', (3.0"x1.5") silty peat pocket @ 12.2', gray (5Y-6/1), (SW).		4	Sample #4, Depth = 12.6' Mean (mm): 0.60, Phi Sorting: 1.59 Shell Hash: 7%, Fines (230): 0.93% (SW)
					5	Sample #5, Depth = 14.0' Mean (mm): 0.19, Phi Sorting: 0.34 Fines (230): 1.29% (SP)
			SAND, fine to medium grained, quartz, trace shell hash, trace silt, 0.25" silty lens @ 16.2', gray (5Y-6/1), (SP).		6	Sample #6, Depth = 17.0' Mean (mm): 0.20, Phi Sorting: 0.35 Shell Hash: 0%, Fines (230): 1.16% (SP)
-22.6	19.0					
-23.6	20.0		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-04

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-04
LOCATION COORDINATES: X = 2,388,485 Y = 202,080

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 20.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 10:49
COMPLETED: 10-06-08 10:53

16. ELEVATION TOP OF BORING: -3.0 Ft.

17. TOTAL RECOVERY FOR BORING: 10.4 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-3.0	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-5.2	2.2		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.0", gray (5Y-5/1), (SW).		1	Sample #1, Depth = 1.0' Mean (mm): 0.29, Phi Sorting: 1.03 Shell Hash: 1%, Fines (230): 1.15% (SW)
-7.0	4.0		Shelly SAND, fine to medium grained, quartz, trace shell fragments, trace silt, trace whole shell, shell fragments up to 1.0", whole shells up to (2.0"x1.5"), shell component is shell hash, pale olive (5Y-6/3), (SW).		2	Sample #2, Depth = 3.0' Mean (mm): 1.09, Phi Sorting: 1.71 Shell Hash: 14%, Fines (230): 0.98% (SW)
-9.5	6.5		SAND, fine to medium grained, quartz, little shell hash, trace shell fragments, trace silt, shell fragments up to (3.0"x1.0"). Approximately 0.6' of material was lost during transfer of core from galvenized steel tube to PVC, light olive gray (5Y-6/2), (SW).		3	Sample #3, Depth = 5.5' Mean (mm): 0.48, Phi Sorting: 1.62 Shell Hash: 2%, Fines (230): 1.30% (SW)
-13.4	10.4		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, whole shells up to 0.5", shell fragments up to (2.0"x1.0"), (3.0"x1.0") shelly pocket @ 7.2', (3.0"x 1.5") shelly pocket @ 9.4', (2.5"x1.5") shelly pocket @ 10.2', shell components are shell hash, gray (5Y-6/1), (SP).		4	Sample #4, Depth = 8.0' Mean (mm): 0.23, Phi Sorting: 0.42 Shell Hash: 0%, Fines (230): 1.14% (SP)
			No Recovery.			
-23.0	20.0		End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-04A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-04A
LOCATION COORDINATES: X = 2,388,477 Y = 202,102

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 20.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 07:35
COMPLETED: 11-07-08 07:40

16. ELEVATION TOP OF BORING: -1.4 Ft.

17. TOTAL RECOVERY FOR BORING: 11 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-1.4	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			Jetted to 8.0'.			
-9.4	8.0					
-10.9	9.5		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, whole shells up to 1.0", shell fragments up to (2.0"x1.25"), (6.0"x1.5") shelly pocket @ 8.5', 3.0" shelly pocket @ 9.3', pockets are probably associated with jetting, light gray (5Y-7/1), (SP).		VC-4 (4)	
-16.2	14.8		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments and whole shells typically up to 1.0", (3.0"x1.5") shell fragment at 13.3', 0.25" shelly lenses from 11.5' to 11.9', (3.0"x2.0") shelly pocket @ 14.4', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 10.5' Mean (mm): 0.22, Phi Sorting: 0.34 Shell Hash: 0%, Fines (230): 0.98% (SP)
-17.7	16.3		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to (2.0"x1.25"), whole shells up to 1.5", (3.0"x2.0") shell hash pocket @ 15.1', gray (5Y-6/1), (SW).		2	Sample #2, Depth = 13.5' Mean (mm): 0.19, Phi Sorting: 0.32 Shell Hash: 0%, Fines (230): 1.24% (SP)
-20.4	19.0		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", (3.0"x1.0") some shell hash pocket @ 16.9', gray (5Y-6/1), (SP).		3	Sample #3, Depth = 15.7' Mean (mm): 0.34, Phi Sorting: 0.87 Shell Hash: 1%, Fines (230): 0.95% (SW)
-21.4	20.0		No Recovery.		4	Sample #4, Depth = 17.5' Mean (mm): 0.25, Phi Sorting: 0.46 Shell Hash: 0%, Fines (230): 1.09% (SP)
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-05

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-05
LOCATION COORDINATES: X = 2,388,173 Y = 201,385

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 14.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 11:57
COMPLETED: 10-06-08 12:02

16. ELEVATION TOP OF BORING: -2.0 Ft.

17. TOTAL RECOVERY FOR BORING: 10.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-2.0	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to (1.0"x0.75"), light olive gray (5Y-6/2), (SP).		1	Sample #1, Depth = 2.5' Mean (mm): 0.22, Phi Sorting: 0.64 Shell Hash: 1%, Fines (230): 1.06% (SP)
-6.7	4.7					
			SAND, fine to medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 2.5", whole shells up to (2.0"x1.25"), gray (5Y-5/1), (SW).		2	Sample #2, Depth = 6.5' Mean (mm): 0.46, Phi Sorting: 1.21 Shell Hash: 3%, Fines (230): 1.17% (SW)
-9.6	7.6					
-10.5	8.5		SAND, fine to medium grained, quartz, trace shell hash, trace silt, trace whole shell, whole shells up to 1.0", gray (5Y-5/1), (SP).		3	Sample #3, Depth = 8.0' Mean (mm): 0.27, Phi Sorting: 0.68 Shell Hash: 0%, Fines (230): 1.13% (SP)
-11.2	9.2				4	
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments up to 1.25", whole shells up to (2.5"x0.75"), gray (5Y-5/1), (SW).		5	Sample #4, Depth = 8.8' Mean (mm): 0.34, Phi Sorting: 1.16 Shell Hash: 2%, Fines (230): 1.16% (SW) Sample #5, Depth = 9.8' Mean (mm): 0.22, Phi Sorting: 0.39 Shell Hash: 0%, Fines (230): 1.20% (SP)
-12.9	10.9					
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 2.0", gray (5Y-6/1), (SP). No Recovery.			
-16.5	14.5					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-05A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-05A
LOCATION COORDINATES: X = 2,388,174 Y = 201,399

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 20.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 11:17
COMPLETED: 11-07-08 11:21

16. ELEVATION TOP OF BORING: -1.5 Ft.

17. TOTAL RECOVERY FOR BORING: 9.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-1.5	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			Jetted to 9.0'.			
-10.5	9.0					
-11.4	9.9		SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to (1.5"x1.25"), whole shells up to 1.5", light olive gray (5Y-6/2), (SW).		1	Sample #1, Depth = 9.5' Mean (mm): 2.77, Phi Sorting: 2.31 Shell Hash: 8%, Fines (230): 0.80% (SW)
-14.1	12.6		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to (0.75"x0.5"), (2.5"x1.5") whole shell @ 10.6', 2.0" little shell hash pocket @ 10.3', gray (5Y-6/1), (SP).		VC-5 (5)	
-16.5	15.0		SAND, fine to medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to (1.0"x0.75"), some shell hash layer from 13.9' to 14.2', 0.25" olive (5Y-4/3) silty lens @ 13.2', gray (5Y-6/1), (SP).		2	Sample #2, Depth = 13.4' Mean (mm): 0.25, Phi Sorting: 0.74 Shell Hash: 1%, Fines (230): 0.97% (SP) Sample #3, Depth = 15.3' Mean (mm): 0.65, Phi Sorting: 1.30 Shell Hash: 4%, Fines (230): 1.32% (SW) Sample #4, Depth = 16.3' Mean (mm): 0.23, Phi Sorting: 0.63 Shell Hash: 0%, Fines (230): 0.88% (SP) Sample #5, Depth = 17.5' Mean (mm): 0.29, Phi Sorting: 0.81 Shell Hash: 1%, Fines (230): 0.80% (SP)
-17.0	15.5				3	
-18.2	16.7				4	
-20.0	18.5		SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to (2.0"x1.25"), olive gray (5Y-5/2), (SW).		5	
-21.5	20.0		SAND, fine to medium grained, quartz, trace shell hash, trace silt, shell fragments up to 0.25", 1.5" whole shell @ 16.6', 0.25" shelly lenses from 15.9' to 16.2', gray (5Y-6/1), (SP).			
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.75", gray (5Y-6/1), (SP).			
			No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-06

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-06
LOCATION COORDINATES: X = 2,386,618 Y = 200,973

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 22.6 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 10-06-08 12:52
COMPLETED: 10-06-08 12:55

16. ELEVATION TOP OF BORING: -1.1 Ft.

17. TOTAL RECOVERY FOR BORING: 20.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-1.1	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.25", 2.0" litttle shell hash pocket @ 5.0', 0.25" olive (5Y-5/3) silty lenses from 11.9' to 12.2', gray (5Y-6/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.19, Phi Sorting: 0.38 Shell Hash: 0%, Fines (230): 1.15% (SP)
					2	Sample #2, Depth = 6.0' Mean (mm): 0.21, Phi Sorting: 0.72 Shell Hash: 0%, Fines (230): 1.09% (SP)
					3	Sample #3, Depth = 11.5' Mean (mm): 0.17, Phi Sorting: 0.33 Shell Hash: 0%, Fines (230): 1.42% (SP)
-13.9	12.8					
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments up to (1.5"x1.0"), (2.0"x1.25") whole shell @ 13.1', (1.0"x2.0") shelly pocket @ 13.1', (3.0"x1.5") shelly pocket @ 13.6', gray (5Y-6/1), (SW).		4	Sample #4, Depth = 13.8' Mean (mm): 0.34, Phi Sorting: 1.48 Shell Hash: 3%, Fines (230): 1.23% (SW)
-15.3	14.2				5	Sample #5, Depth = 15.0' Mean (mm): 0.14, Phi Sorting: 0.89 Shell Hash: 0%, Fines (230): 32.97% (SC)
-16.3	15.2					
			SAND, some clay, trace shell fragments, trace shell hash, shell fragments typically up to 0.75", (1.0"x4.0") shell fragment @ 14.6', (1.0"x0.75") limestone rock fragment @ 14.6', dark olive gray (5Y-3/2), (SC).			
-18.5	17.4					
			CLAY, trace sand, trace shell fragments, trace shell hash, trace whole shell, shell fragments up to (2.0"x1.0"), (2.0"x0.5") sandy pocket @ 15.4', 0.75" sandy pocket @ 17.0', dark olive gray (5Y-3/2), (CL).			
-19.7	18.6					
			Sandy CLAY, trace shell fragments, trace shell hash, trace whole shell, shell fragments up to 1.5", whole shells up to (2.0"x0.75"), dark olive gray (5Y-3/2), (CL).			
-22.0	20.9					
			CLAY, trace sand, trace shell hash, dark olive gray (5Y-3/2), (CL).			
-23.7	22.6		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-08-07

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-07
LOCATION COORDINATES: X = 2,388,723 Y = 200,701

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 13.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 09:08
COMPLETED: 11-07-08 09:12

16. ELEVATION TOP OF BORING: -3.7 Ft.

17. TOTAL RECOVERY FOR BORING: 12.7 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-3.7	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, shell fragments up to 1.5", whole shells up to (2.0"x1.25"), 0.5" shelly layer @ 7.0', (2.0"x2.5") shelly pocket @ 4.9', (2.0"x1.0") shelly pocket @ 5.9', light gray (5Y-7/1), (SP).		1	Sample #1, Depth = 2.0' Mean (mm): 0.23, Phi Sorting: 0.72 Shell Hash: 1%, Fines (230): 0.79% (SP)
					2	Sample #2, Depth = 8.0' Mean (mm): 0.20, Phi Sorting: 0.43 Shell Hash: 0%, Fines (230): 1.05% (SP)
-13.5	9.8		SAND, fine to medium grained, quartz, little shell hash, trace rock fragments, trace shell fragments, trace silt, shell fragments up to (2.0"x1.0"), (3.0"x2.0") whole shell @ 11.6', limestone rock fragments up to 1.0", gray (5Y-5/1), (SW).		3	Sample #3, Depth = 10.5' Mean (mm): 0.39, Phi Sorting: 1.20 Shell Hash: 2%, Fines (230): 0.90% (SW)
-15.3	11.6					
-16.4	12.7		SAND, fine to medium grained, quartz, trace shell hash, trace silt, gray (5Y-6/1), (SP).		4	Sample #4, Depth = 12.3' Mean (mm): 0.20, Phi Sorting: 0.32 Shell Hash: 0%, Fines (230): 1.20% (SP)
-17.2	13.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-07A

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-07A
LOCATION COORDINATES: X = 2,388,723 Y = 200,701

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 18.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 09:35
COMPLETED: 11-07-08 09:40

16. ELEVATION TOP OF BORING: -3.7 Ft.

17. TOTAL RECOVERY FOR BORING: 7.5 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-3.7	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			Jetted to 9.4'.			
-13.1	9.4					
-14.1	10.4		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", gray (5Y-6/1), (SP).		VC-7 (2)	
-15.2	11.5		SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, shell fragments up to 0.5", gray (5Y-5/1), (SW).		VC-7 (3)	
			SAND, fine to medium grained, quartz, trace shell hash, trace silt, gray (5Y-5/1), (SP).		1	Sample #1, Depth = 15.0' Mean (mm): 0.21, Phi Sorting: 0.36 Shell Hash: 0%, Fines (230): 1.20% (SP)
-20.6	16.9					
-22.2	18.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

Boring Designation FEVC-08-08

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-08
LOCATION COORDINATES: X = 2,389,411 Y = 200,087

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 11.5 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 13:27
COMPLETED: 11-07-08 13:33

16. ELEVATION TOP OF BORING: -7.0 Ft.

17. TOTAL RECOVERY FOR BORING: 10.8 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-7.0	0.0					
-11.0	4.0		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 0.5", (2.0"x1.0") shelly pocket @ 2.3', gray (5Y-6/1), (SW).		1	Sample #1, Depth = 2.0' Mean (mm): 0.26, Phi Sorting: 0.88 Shell Hash: 1%, Fines (230): 1.13% (SW)
-16.5	9.5		SAND, fine to medium grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to (2.0"x1.0"), whole shells up to (2.0"x1.25"), gray (5Y-6/1) from 6.0' to 6.1' and 8.0' to 8.2', gray (5Y-5/1), (SW).		2	Sample #2, Depth = 7.2' Mean (mm): 0.30, Phi Sorting: 0.86 Shell Hash: 1%, Fines (230): 1.24% (SW)
-17.8	10.8		Shelly SAND, fine to medium grained, quartz, trace shell fragments, trace silt, shell fragments up to (1.0"x0.75"), shell component is shell hash, gray (5Y-5/1), (SW).		3	Sample #3, Depth = 10.3' Mean (mm): 0.60, Phi Sorting: 1.29 Shell Hash: 4%, Fines (230): 1.48% (SW)
-18.5	11.5		No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-08-09

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-09
LOCATION COORDINATES: X = 2,389,900 Y = 199,466

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 12.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 14:00
COMPLETED: 11-07-08 14:05

16. ELEVATION TOP OF BORING: -9.7 Ft.

17. TOTAL RECOVERY FOR BORING: 10.3 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
-9.7	0.0					
			SAND, fine to medium grained, quartz, trace rock fragments, trace shell fragments, trace shell hash, trace silt, shell fragments typically up to (1.0"x1.25"), rock fragments up to 0.5", (2.0"x0.5") shell fragment @ 2.0', 0.25" shell hash lenses @ 3.3', 4.3', 4.7', and 4.8', some shell from 6.5' to 6.6', material from 8.0'-8.3' lost during core transfer in one half, gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm): 0.23, Phi Sorting: 0.68 Shell Hash: 0%, Fines (230): 1.13% (SP)
					2	Sample #2, Depth = 4.0' Mean (mm): 0.21, Phi Sorting: 0.44 Shell Hash: 0%, Fines (230): 1.20% (SP)
					3	Sample #3, Depth = 8.0' Mean (mm): 0.17, Phi Sorting: 0.35 Shell Hash: 0%, Fines (230): 1.34% (SP)
-20.0	10.3					
			No Recovery.			
-21.7	12.0					
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 **MODIFIED FOR THE FLORIDA DEP** JUN 04

Boring Designation FEVC-08-10

DRILLING LOG

DIVISION

INSTALLATION

SHEET 1 OF 1 SHEETS

1. PROJECT
Figure Eight Island / Rich Inlet 2008
Figure Eight Island, North Carolina

2. BORING DESIGNATION: FEVC-08-10
LOCATION COORDINATES: X = 2,389,697 Y = 199,802

3. DRILLING AGENCY: Athena Technologies
CONTRACTOR FILE NO.:

4. NAME OF DRILLER: Walter Sexton

5. DIRECTION OF BORING: ☒ VERTICAL ☐ INCLINED
DEG. FROM VERTICAL:
BEARING:

6. THICKNESS OF OVERBURDEN: 0.0 Ft.

7. DEPTH DRILLED INTO ROCK: 0.0 Ft.

8. TOTAL DEPTH OF BORING: 9.0 Ft.

9. SIZE AND TYPE OF BIT: 3.0 In.

10. COORDINATE SYSTEM/DATUM: North Carolina State Plane
HORIZONTAL: NAD 1983
VERTICAL: NAVD 88

11. MANUFACTURER'S DESIGNATION OF DRILL: Hydraulic
☐ AUTO HAMMER ☐ MANUAL HAMMER

12. TOTAL SAMPLES:
DISTURBED:
UNDISTURBED (UD):

13. TOTAL NUMBER CORE BOXES:

14. ELEVATION GROUND WATER:

15. DATE BORING
STARTED: 11-07-08 14:39
COMPLETED: 11-07-08 14:45

16. ELEVATION TOP OF BORING: -8.5 Ft.

17. TOTAL RECOVERY FOR BORING: 7.9 Ft.

18. SIGNATURE AND TITLE OF INSPECTOR: KW

ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured values	% REC.	BOX OR SAMPLE	REMARKS
-8.5	0.0					Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.
			SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.5", gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.5' Mean (mm): 0.21, Phi Sorting: 0.57 Shell Hash: 0%, Fines (230): 1.20% (SP)
					2	Sample #2, Depth = 4.0' Mean (mm): 0.21, Phi Sorting: 0.43 Shell Hash: 0%, Fines (230): 1.13% (SP)
-13.6	5.1		SAND, fine to medium grained, quartz, trace shell fragments, trace shell hash, trace silt, shell fragments up to 1.25", (3.0"x0.75") whole shell @ 5.8', shell hash layers from 5.9' to 6.0' and 6.6' to 6.9', trace shelly laminae, gray (5Y-6/1), (SP).		3	Sample #3, Depth = 5.6' Mean (mm): 0.30, Phi Sorting: 0.80 Shell Hash: 0%, Fines (230): 1.18% (SP)
-15.7	7.2					
-16.4	7.9				4	Sample #4, Depth = 7.6' Mean (mm): 0.71, Phi Sorting: 1.75 Shell Hash: 6%, Fines (230): 1.05% (SW)
-17.5	9.0		SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt, trace whole shell, shell fragments up to 1.25", whole shells up to 1.0", olive gray (5Y-5/2), (SW).			
			No Recovery.			
			End of Boring			

0 5 10 15 20 25

FLORIDA DEP ROSS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/15/09

SAJ FORM 1836 JUN 02 MODIFIED FOR THE FLORIDA DEP JUN 04

APPENDIX 22

2008 CPENC Vibracore Photographs


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
10.0' - 12.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-01
12.0' - 12.2'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02
8.0' - 9.1'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02A
Jetted to 7.0'
7.0' - 9.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02A
Jetted to 7.0'
9.0'- 11.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02A
Jetted to 7.0'
11.0' - 13.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02A
Jetted to 7.0'
13.0' - 15.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-02A
Jetted to 7.0'
15.0' - 17.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
10.0' - 12.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
12.0' - 14.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
14.0' - 16.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
16.0' - 18.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-03
18.0' - 19.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04
10.0' - 10.4'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
10.0' - 12.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
12.0' - 14.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
14.0' - 16.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
16.0' - 18.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-04A
Jetted to 8.0'
18.0' - 19.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
4.0' - 6.0'

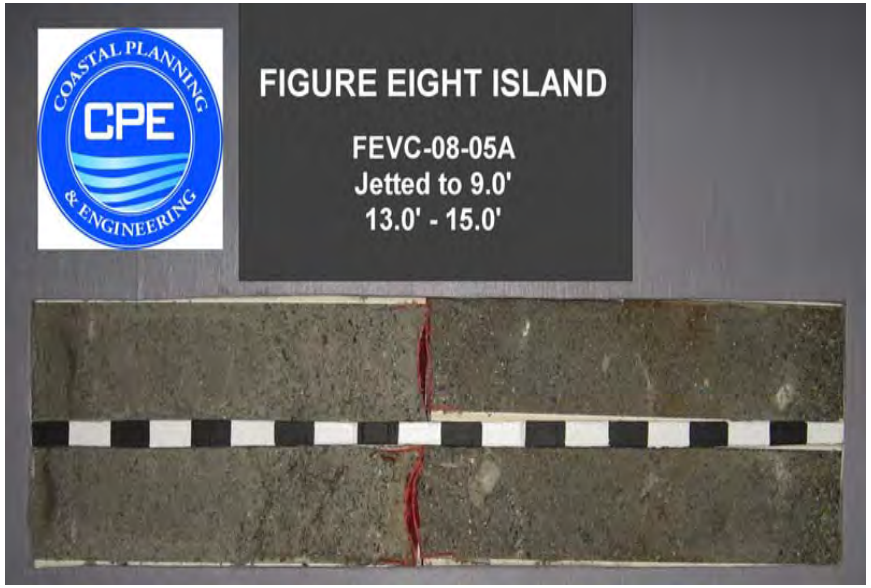

COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05
10.0' - 10.9'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05A
Jetted to 9.0'
9.0' - 11.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05A
Jetted to 9.0'
11.0' - 13.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05A
Jetted to 9.0'
13.0' - 15.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05A
Jetted to 9.0'
15.0' - 17.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-05A
Jetted to 9.0'
17.0' - 18.5'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
10.0' - 12.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
12.0' - 14.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
14.0' - 16.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
16.0' - 18.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
18.0' - 20.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-06
20.0' - 20.9'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
6.0' - 8.0'

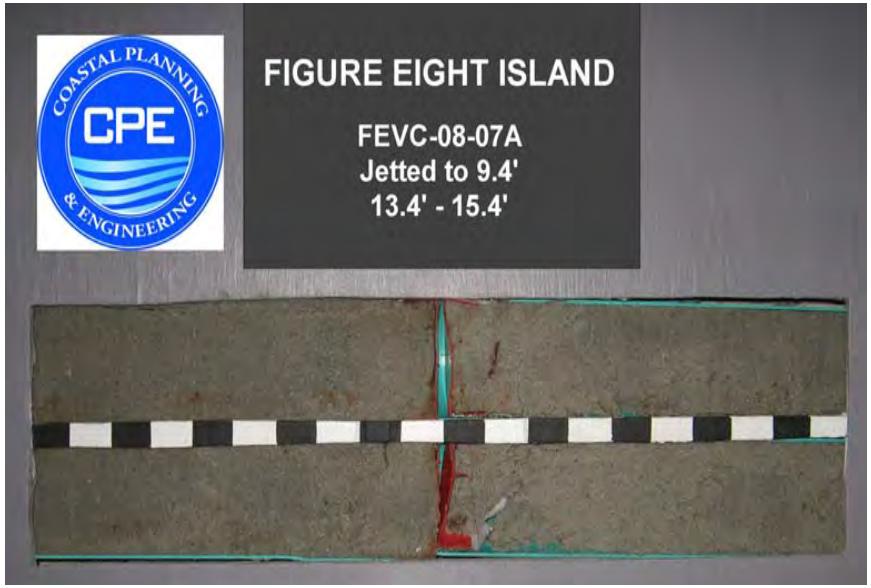

COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
10.0' - 12.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07
12.0' - 12.7'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07A
Jetted to 9.4'
9.4' - 11.4'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07A
Jetted to 9.4'
11.4' - 13.4'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07A
Jetted to 9.4'
13.4' - 15.4'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-07A
Jetted to 9.4'
15.4' - 16.9'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-08
10.0' - 10.8'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
6.0' - 8.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
8.0' - 10.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-09
10.0' - 10.3'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-10
0.0' - 2.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-10
2.0' - 4.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-10
4.0' - 6.0'


COASTAL PLANNING
CPE
& ENGINEERING
FIGURE EIGHT ISLAND
FEVC-08-10
6.0' - 7.9'

APPENDIX 23

2008 CPENC Individual Vibracore Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-01 #1

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,534	200,207	North Carolina State Plane	-12.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.98	86.68	0.01	0.00	#200 - 1.51 #230 - 1.48			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
10	-1.00	2.00	0.11	0.13	0.15	0.18
14	-0.50	1.41	0.08	0.09	0.23	0.27
18	0.00	1.00	0.06	0.07	0.29	0.34
25	0.50	0.71	0.06	0.07	0.35	0.41
35	1.00	0.50	0.16	0.18	0.51	0.59
45	1.50	0.35	0.44	0.50	0.95	1.09
60	2.00	0.25	2.84	3.23	3.79	4.32
80	2.50	0.18	36.69	41.70	40.48	46.02
120	3.00	0.13	42.21	47.98	82.69	94.00
170	3.50	0.09	3.78	4.30	86.47	98.30
200	3.75	0.07	0.17	0.19	86.64	98.49
230	4.00	0.06	0.03	0.03	86.67	98.52

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.12	2.90	2.80	2.54	2.25	2.14	2.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.4	-2.61	24.09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-01 #2

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,534	200,207	North Carolina State Plane	-17.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.61	91.36	0.00	0.00	#200 - 1.40 #230 - 1.37			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.05	0.05	0.05
7	-1.50	2.83	0.10	0.11	0.15	0.16
10	-1.00	2.00	0.17	0.18	0.32	0.34
14	-0.50	1.41	0.31	0.33	0.63	0.67
18	0.00	1.00	0.28	0.30	0.91	0.97
25	0.50	0.71	0.54	0.58	1.45	1.55
35	1.00	0.50	0.80	0.86	2.25	2.41
45	1.50	0.35	2.08	2.25	4.33	4.66
60	2.00	0.25	14.71	15.88	19.04	20.54
80	2.50	0.18	49.01	52.92	68.05	73.46
120	3.00	0.13	21.87	23.62	89.92	97.08
170	3.50	0.09	1.35	1.46	91.27	98.54
200	3.75	0.07	0.06	0.06	91.33	98.60
230	4.00	0.06	0.03	0.03	91.36	98.63

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.72	2.53	2.28	2.04	1.86	1.51

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	0.53	-2.57	16.52

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-01 #3

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,534	200,207	North Carolina State Plane	-21.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/2 Dry - 5Y-7/1 Washed - 5Y-8/1	(2.0"x0.5") shell removed, 5.65g

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.45	87.02	0.02	0.12	#200 - 1.81 #230 - 1.76			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	5.86	6.63	5.86	6.63
5/16"	-3.00	8.00	0.29	0.33	6.15	6.96
3.5	-2.50	5.66	2.13	2.41	8.28	9.37
4	-2.25	4.76	0.22	0.25	8.50	9.62
5	-2.00	4.00	0.69	0.78	9.19	10.40
7	-1.50	2.83	1.49	1.68	10.68	12.08
10	-1.00	2.00	1.78	2.01	12.46	14.09
14	-0.50	1.41	2.88	3.26	15.34	17.35
18	0.00	1.00	3.78	4.27	19.12	21.62
25	0.50	0.71	5.17	5.85	24.29	27.47
35	1.00	0.50	7.59	8.58	31.88	36.05
45	1.50	0.35	14.69	16.61	46.57	52.66
60	2.00	0.25	18.57	20.99	65.14	73.65
80	2.50	0.18	16.64	18.81	81.78	92.46
120	3.00	0.13	4.61	5.21	86.39	97.67
170	3.50	0.09	0.42	0.47	86.81	98.14
200	3.75	0.07	0.04	0.05	86.85	98.19
230	4.00	0.06	0.04	0.05	86.89	98.24

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.74	2.28	2.04	1.42	0.29	-0.71	-3.68

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.82	0.57	1.75	-1.39	4.09

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-01 #4

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,534	200,207	North Carolina State Plane	-22.2 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.78	84.95	0.04	0.02	#200 - 3.53 #230 - 3.29			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
14	-0.50	1.41	0.00	0.00	0.02	0.02
18	0.00	1.00	0.00	0.00	0.02	0.02
25	0.50	0.71	0.03	0.03	0.05	0.05
35	1.00	0.50	0.01	0.01	0.06	0.06
45	1.50	0.35	0.05	0.06	0.11	0.12
60	2.00	0.25	0.22	0.25	0.33	0.37
80	2.50	0.18	8.75	9.97	9.08	10.34
120	3.00	0.13	57.60	65.62	66.68	75.96
170	3.50	0.09	17.10	19.48	83.78	95.44
200	3.75	0.07	0.90	1.03	84.68	96.47
230	4.00	0.06	0.21	0.24	84.89	96.71

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.21	2.99	2.80	2.61	2.54	2.23

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.81	0.14	0.31	-0.66	12.65

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-02 #1

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,109	200,498	North Carolina State Plane	-6.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.37	97.26	0.00	0.17	#200 - 1.31 #230 - 1.30			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.58	0.59	0.58	0.59
4	-2.25	4.76	0.00	0.00	0.58	0.59
5	-2.00	4.00	0.03	0.03	0.61	0.62
7	-1.50	2.83	0.11	0.11	0.72	0.73
10	-1.00	2.00	0.48	0.49	1.20	1.22
14	-0.50	1.41	0.14	0.14	1.34	1.36
18	0.00	1.00	0.41	0.42	1.75	1.78
25	0.50	0.71	0.54	0.55	2.29	2.33
35	1.00	0.50	1.63	1.66	3.92	3.99
45	1.50	0.35	5.05	5.13	8.97	9.12
60	2.00	0.25	21.00	21.35	29.97	30.47
80	2.50	0.18	44.78	45.52	74.75	75.99
120	3.00	0.13	20.91	21.26	95.66	97.25
170	3.50	0.09	1.36	1.38	97.02	98.63
200	3.75	0.07	0.06	0.06	97.08	98.69
230	4.00	0.06	0.01	0.01	97.09	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.69	2.49	2.21	1.87	1.66	1.10

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.11	0.23	0.7	-3.19	19.91

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-02 #2

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,109	200,498	North Carolina State Plane	-11.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.50	95.40	0.00	0.00	#200 - 1.16 #230 - 1.14			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.01	0.01	0.02	0.02
25	0.50	0.71	0.02	0.02	0.04	0.04
35	1.00	0.50	0.04	0.04	0.08	0.08
45	1.50	0.35	0.23	0.24	0.31	0.32
60	2.00	0.25	4.17	4.32	4.48	4.64
80	2.50	0.18	41.84	43.36	46.32	48.00
120	3.00	0.13	45.66	47.32	91.98	95.32
170	3.50	0.09	3.33	3.45	95.31	98.77
200	3.75	0.07	0.07	0.07	95.38	98.84
230	4.00	0.06	0.02	0.02	95.40	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.88	2.79	2.52	2.23	2.13	2.00

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.5	0.18	0.33	-0.45	5.14

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-02A #1

Analysis Date: 04-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,110	200,509	North Carolina State Plane	-15.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.88	103.57	0.01	0.00	#200 - 1.28 #230 - 1.25			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.01	0.01	0.01	0.01
7	-1.50	2.83	0.00	0.00	0.01	0.01
10	-1.00	2.00	0.01	0.01	0.02	0.02
14	-0.50	1.41	0.03	0.03	0.05	0.05
18	0.00	1.00	0.02	0.02	0.07	0.07
25	0.50	0.71	0.07	0.07	0.14	0.14
35	1.00	0.50	0.11	0.10	0.25	0.24
45	1.50	0.35	0.37	0.35	0.62	0.59
60	2.00	0.25	4.99	4.76	5.61	5.35
80	2.50	0.18	53.38	50.90	58.99	56.25
120	3.00	0.13	41.42	39.49	100.41	95.74
170	3.50	0.09	3.02	2.88	103.43	98.62
200	3.75	0.07	0.10	0.10	103.53	98.72
230	4.00	0.06	0.03	0.03	103.56	98.75

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.85	2.74	2.44	2.19	2.10	1.96

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.45	0.18	0.35	-0.91	11.35

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-02A #2

Analysis Date: 04-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,110	200,509	North Carolina State Plane	-20.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
106.88	105.50	0.00	0.00	#200 - 1.30 #230 - 1.29			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
18	0.00	1.00	0.05	0.05	0.07	0.07
25	0.50	0.71	0.03	0.03	0.10	0.10
35	1.00	0.50	0.08	0.07	0.18	0.17
45	1.50	0.35	0.31	0.29	0.49	0.46
60	2.00	0.25	4.01	3.75	4.50	4.21
80	2.50	0.18	51.82	48.48	56.32	52.69
120	3.00	0.13	45.55	42.62	101.87	95.31
170	3.50	0.09	3.48	3.26	105.35	98.57
200	3.75	0.07	0.14	0.13	105.49	98.70
230	4.00	0.06	0.01	0.01	105.50	98.71

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.87	2.76	2.47	2.21	2.12	2.01

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.48	0.18	0.34	-0.58	7.53

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #1

Analysis Date: 09-01-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-5.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	(1.0"x0.75") shell fragment removed, 2.91g

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
110.13	109.17	0.01	0.05	#200 - 0.94 #230 - 0.93			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	0.60	0.54	0.60	0.54
5/16"	-3.00	8.00	1.44	1.31	2.04	1.85
3.5	-2.50	5.66	1.51	1.37	3.55	3.22
4	-2.25	4.76	1.06	0.96	4.61	4.18
5	-2.00	4.00	0.73	0.66	5.34	4.84
7	-1.50	2.83	1.30	1.18	6.64	6.02
10	-1.00	2.00	1.98	1.80	8.62	7.82
14	-0.50	1.41	2.89	2.62	11.51	10.44
18	0.00	1.00	3.61	3.28	15.12	13.72
25	0.50	0.71	4.13	3.75	19.25	17.47
35	1.00	0.50	5.12	4.65	24.37	22.12
45	1.50	0.35	8.90	8.08	33.27	30.20
60	2.00	0.25	17.12	15.55	50.39	45.75
80	2.50	0.18	36.64	33.27	87.03	79.02
120	3.00	0.13	20.75	18.84	107.78	97.86
170	3.50	0.09	1.17	1.06	108.95	98.92
200	3.75	0.07	0.15	0.14	109.10	99.06
230	4.00	0.06	0.01	0.01	109.11	99.07

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.63	2.44	2.06	1.18	0.30	-1.93

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.53	0.35	1.43	-1.73	5.56

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #2

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-7.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.12	84.08	0.01	0.00	#200 - 1.27 #230 - 1.26			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.06	0.07	0.06	0.07
5	-2.00	4.00	0.00	0.00	0.06	0.07
7	-1.50	2.83	0.14	0.16	0.20	0.23
10	-1.00	2.00	0.08	0.09	0.28	0.32
14	-0.50	1.41	0.17	0.20	0.45	0.52
18	0.00	1.00	0.22	0.26	0.67	0.78
25	0.50	0.71	0.18	0.21	0.85	0.99
35	1.00	0.50	0.31	0.36	1.16	1.35
45	1.50	0.35	0.82	0.96	1.98	2.31
60	2.00	0.25	5.46	6.41	7.44	8.72
80	2.50	0.18	37.03	43.50	44.47	52.22
120	3.00	0.13	36.78	43.21	81.25	95.43
170	3.50	0.09	2.77	3.25	84.02	98.68
200	3.75	0.07	0.04	0.05	84.06	98.73
230	4.00	0.06	0.01	0.01	84.07	98.74

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.87	2.76	2.47	2.19	2.08	1.71

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.42	0.19	0.49	-3.36	25.67

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #3

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-12.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
89.09	87.94	0.00	0.00	#200 - 1.34 #230 - 1.30			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.05	0.06	0.05	0.06
7	-1.50	2.83	0.00	0.00	0.05	0.06
10	-1.00	2.00	0.01	0.01	0.06	0.07
14	-0.50	1.41	0.02	0.02	0.08	0.09
18	0.00	1.00	0.11	0.12	0.19	0.21
25	0.50	0.71	0.07	0.08	0.26	0.29
35	1.00	0.50	0.16	0.18	0.42	0.47
45	1.50	0.35	0.27	0.30	0.69	0.77
60	2.00	0.25	1.17	1.31	1.86	2.08
80	2.50	0.18	36.74	41.24	38.60	43.32
120	3.00	0.13	46.54	52.24	85.14	95.56
170	3.50	0.09	2.70	3.03	87.84	98.59
200	3.75	0.07	0.06	0.07	87.90	98.66
230	4.00	0.06	0.04	0.04	87.94	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.89	2.80	2.56	2.28	2.17	2.04

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.53	0.17	0.35	-2.7	29.24

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #4

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-16.2 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.69	101.74	0.00	0.00	#200 - 0.93 #230 - 0.93			7

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.58	0.56	0.58	0.56
5/16"	-3.00	8.00	1.73	1.68	2.31	2.24
3.5	-2.50	5.66	1.38	1.34	3.69	3.58
4	-2.25	4.76	1.51	1.47	5.20	5.05
5	-2.00	4.00	1.92	1.87	7.12	6.92
7	-1.50	2.83	4.77	4.65	11.89	11.57
10	-1.00	2.00	4.88	4.75	16.77	16.32
14	-0.50	1.41	7.94	7.73	24.71	24.05
18	0.00	1.00	7.81	7.61	32.52	31.66
25	0.50	0.71	5.86	5.71	38.38	37.37
35	1.00	0.50	6.82	6.64	45.20	44.01
45	1.50	0.35	9.72	9.47	54.92	53.48
60	2.00	0.25	20.71	20.17	75.63	73.65
80	2.50	0.18	20.19	19.66	95.82	93.31
120	3.00	0.13	5.70	5.55	101.52	98.86
170	3.50	0.09	0.21	0.20	101.73	99.06
200	3.75	0.07	0.01	0.01	101.74	99.07
230	4.00	0.06	0.00	0.00	101.74	99.07

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.65	2.26	2.03	1.32	-0.44	-1.03	-2.26

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	0.74	0.60	1.59	-0.78	2.61

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #5

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-17.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
95.11	93.89	0.01	0.00	#200 - 1.31 #230 - 1.29			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.02	0.02	0.02	0.02
14	-0.50	1.41	0.02	0.02	0.04	0.04
18	0.00	1.00	0.02	0.02	0.06	0.06
25	0.50	0.71	0.03	0.03	0.09	0.09
35	1.00	0.50	0.11	0.12	0.20	0.21
45	1.50	0.35	0.51	0.54	0.71	0.75
60	2.00	0.25	5.59	5.88	6.30	6.63
80	2.50	0.18	51.97	54.64	58.27	61.27
120	3.00	0.13	33.86	35.60	92.13	96.87
170	3.50	0.09	1.67	1.76	93.80	98.63
200	3.75	0.07	0.06	0.06	93.86	98.69
230	4.00	0.06	0.02	0.02	93.88	98.71

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.82	2.69	2.40	2.17	2.09	1.86

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.41	0.19	0.34	-0.8	9.46

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-03 #6

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-20.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.62	84.61	0.00	0.00	#200 - 1.16 #230 - 1.16			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.05	0.04	0.05
10	-1.00	2.00	0.01	0.01	0.05	0.06
14	-0.50	1.41	0.09	0.11	0.14	0.17
18	0.00	1.00	0.09	0.11	0.23	0.28
25	0.50	0.71	0.09	0.11	0.32	0.39
35	1.00	0.50	0.10	0.12	0.42	0.51
45	1.50	0.35	0.32	0.37	0.74	0.88
60	2.00	0.25	7.20	8.41	7.94	9.29
80	2.50	0.18	55.01	64.25	62.95	73.54
120	3.00	0.13	21.06	24.60	84.01	98.14
170	3.50	0.09	0.56	0.65	84.57	98.79
200	3.75	0.07	0.04	0.05	84.61	98.84
230	4.00	0.06	0.00	0.00	84.61	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.71	2.53	2.32	2.12	2.05	1.74

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.32	0.20	0.35	-2.26	23.45

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04 #1

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-4.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
87.05	86.06	0.00	0.00	#200 - 1.18 #230 - 1.15			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.20	0.23	0.20	0.23
4	-2.25	4.76	0.61	0.70	0.81	0.93
5	-2.00	4.00	0.15	0.17	0.96	1.10
7	-1.50	2.83	0.76	0.87	1.72	1.97
10	-1.00	2.00	1.05	1.21	2.77	3.18
14	-0.50	1.41	1.95	2.24	4.72	5.42
18	0.00	1.00	2.18	2.50	6.90	7.92
25	0.50	0.71	2.79	3.21	9.69	11.13
35	1.00	0.50	3.51	4.03	13.20	15.16
45	1.50	0.35	6.99	8.03	20.19	23.19
60	2.00	0.25	16.08	18.47	36.27	41.66
80	2.50	0.18	35.87	41.21	72.14	82.87
120	3.00	0.13	13.41	15.40	85.55	98.27
170	3.50	0.09	0.45	0.52	86.00	98.79
200	3.75	0.07	0.03	0.03	86.03	98.82
230	4.00	0.06	0.03	0.03	86.06	98.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.54	2.40	2.10	1.55	1.05	-0.59

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.77	0.29	1.03	-1.89	6.74

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04 #2

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-6.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/3 Dry - 5Y-7/1 Washed - 5Y-7/1	(1.25"x1.25") and (1.25"x0.5") shell fragments removed, 20.20g

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
88.78	87.93	0.00	0.00	#200 - 0.99 #230 - 0.98			14

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	1.66	1.87	1.66	1.87
5/16"	-3.00	8.00	2.08	2.34	3.74	4.21
3.5	-2.50	5.66	3.28	3.69	7.02	7.90
4	-2.25	4.76	1.77	1.99	8.79	9.89
5	-2.00	4.00	4.13	4.65	12.92	14.54
7	-1.50	2.83	8.24	9.28	21.16	23.82
10	-1.00	2.00	9.33	10.51	30.49	34.33
14	-0.50	1.41	10.75	12.11	41.24	46.44
18	0.00	1.00	7.74	8.72	48.98	55.16
25	0.50	0.71	5.88	6.62	54.86	61.78
35	1.00	0.50	5.13	5.78	59.99	67.56
45	1.50	0.35	6.10	6.87	66.09	74.43
60	2.00	0.25	8.72	9.82	74.81	84.25
80	2.50	0.18	10.13	11.41	84.94	95.66
120	3.00	0.13	2.78	3.13	87.72	98.79
170	3.50	0.09	0.17	0.19	87.89	98.98
200	3.75	0.07	0.03	0.03	87.92	99.01
230	4.00	0.06	0.01	0.01	87.93	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.47	1.99	1.53	-0.30	-1.44	-1.92	-2.89

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	-0.13	1.09	1.71	-0.03	1.99

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04 #3

Analysis Date: 03-17-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-8.5 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/2 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
91.99	90.79	0.00	0.00	#200 - 1.30 #230 - 1.30			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	1.66	1.80	1.66	1.80
7/16"	-3.50	11.31	3.07	3.34	4.73	5.14
5/16"	-3.00	8.00	0.00	0.00	4.73	5.14
3.5	-2.50	5.66	1.08	1.17	5.81	6.31
4	-2.25	4.76	0.36	0.39	6.17	6.70
5	-2.00	4.00	0.42	0.46	6.59	7.16
7	-1.50	2.83	1.40	1.52	7.99	8.68
10	-1.00	2.00	1.79	1.95	9.78	10.63
14	-0.50	1.41	2.79	3.03	12.57	13.66
18	0.00	1.00	4.14	4.50	16.71	18.16
25	0.50	0.71	4.31	4.69	21.02	22.85
35	1.00	0.50	7.46	8.11	28.48	30.96
45	1.50	0.35	12.02	13.07	40.50	44.03
60	2.00	0.25	21.27	23.12	61.77	67.15
80	2.50	0.18	24.43	26.56	86.20	93.71
120	3.00	0.13	4.43	4.82	90.63	98.53
170	3.50	0.09	0.14	0.15	90.77	98.68
200	3.75	0.07	0.02	0.02	90.79	98.70
230	4.00	0.06	0.00	0.00	90.79	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.63	2.32	2.15	1.63	0.63	-0.24	-3.04

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.05	0.48	1.62	-1.72	5.45

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04 #4

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-11.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
92.52	91.52	0.02	0.04	#200 - 1.14 #230 - 1.14			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.10	0.11	0.10	0.11
7	-1.50	2.83	0.00	0.00	0.10	0.11
10	-1.00	2.00	0.01	0.01	0.11	0.12
14	-0.50	1.41	0.11	0.12	0.22	0.24
18	0.00	1.00	0.16	0.17	0.38	0.41
25	0.50	0.71	0.36	0.39	0.74	0.80
35	1.00	0.50	0.63	0.68	1.37	1.48
45	1.50	0.35	2.23	2.41	3.60	3.89
60	2.00	0.25	20.89	22.58	24.49	26.47
80	2.50	0.18	56.97	61.58	81.46	88.05
120	3.00	0.13	9.79	10.58	91.25	98.63
170	3.50	0.09	0.19	0.21	91.44	98.84
200	3.75	0.07	0.02	0.02	91.46	98.86
230	4.00	0.06	0.00	0.00	91.46	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.83	2.47	2.39	2.19	1.97	1.77	1.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.14	0.23	0.42	-2.6	21.04

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04A #1

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,477	202,102	North Carolina State Plane	-11.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
96.94	96.00	0.00	0.01	#200 - 0.98 #230 - 0.98			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.03	0.03	0.04	0.04
25	0.50	0.71	0.07	0.07	0.11	0.11
35	1.00	0.50	0.29	0.30	0.40	0.41
45	1.50	0.35	1.97	2.03	2.37	2.44
60	2.00	0.25	19.01	19.61	21.38	22.05
80	2.50	0.18	62.14	64.10	83.52	86.15
120	3.00	0.13	12.23	12.62	95.75	98.77
170	3.50	0.09	0.23	0.24	95.98	99.01
200	3.75	0.07	0.01	0.01	95.99	99.02
230	4.00	0.06	0.00	0.00	95.99	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.48	2.41	2.22	2.02	1.85	1.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	0.34	-0.78	6.34

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04A #2

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,477	202,102	North Carolina State Plane	-14.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
94.52	93.37	0.00	0.01	#200 - 1.24 #230 - 1.24			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.01	0.01	0.02	0.02
25	0.50	0.71	0.07	0.07	0.09	0.09
35	1.00	0.50	0.12	0.13	0.21	0.22
45	1.50	0.35	0.58	0.61	0.79	0.83
60	2.00	0.25	6.45	6.82	7.24	7.65
80	2.50	0.18	58.73	62.13	65.97	69.78
120	3.00	0.13	26.52	28.06	92.49	97.84
170	3.50	0.09	0.83	0.88	93.32	98.72
200	3.75	0.07	0.04	0.04	93.36	98.76
230	4.00	0.06	0.00	0.00	93.36	98.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.75	2.59	2.34	2.14	2.07	1.81

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.36	0.19	0.32	-0.55	7.01

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04A #3

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,477	202,102	North Carolina State Plane	-17.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
116.53	115.42	0.01	0.01	#200 - 0.96 #230 - 0.95			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	0.52	0.45	0.52	0.45
3.5	-2.50	5.66	0.45	0.39	0.97	0.84
4	-2.25	4.76	0.16	0.14	1.13	0.98
5	-2.00	4.00	0.20	0.17	1.33	1.15
7	-1.50	2.83	0.65	0.56	1.98	1.71
10	-1.00	2.00	0.84	0.72	2.82	2.43
14	-0.50	1.41	1.39	1.19	4.21	3.62
18	0.00	1.00	2.06	1.77	6.27	5.39
25	0.50	0.71	2.76	2.37	9.03	7.76
35	1.00	0.50	7.66	6.57	16.69	14.33
45	1.50	0.35	21.45	18.41	38.14	32.74
60	2.00	0.25	40.54	34.79	78.68	67.53
80	2.50	0.18	32.94	28.27	111.62	95.80
120	3.00	0.13	3.67	3.15	115.29	98.95
170	3.50	0.09	0.09	0.08	115.38	99.03
200	3.75	0.07	0.01	0.01	115.39	99.04
230	4.00	0.06	0.01	0.01	115.40	99.05

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.49	2.29	2.13	1.75	1.29	1.05	-0.11

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.57	0.34	0.87	-2.36	10.97

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-04A #4

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,477	202,102	North Carolina State Plane	-18.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.31	100.28	0.01	0.07	#200 - 1.09 #230 - 1.09			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.03	0.03	0.03
7	-1.50	2.83	0.00	0.00	0.03	0.03
10	-1.00	2.00	0.11	0.11	0.14	0.14
14	-0.50	1.41	0.13	0.13	0.27	0.27
18	0.00	1.00	0.28	0.28	0.55	0.55
25	0.50	0.71	0.43	0.42	0.98	0.97
35	1.00	0.50	1.42	1.40	2.40	2.37
45	1.50	0.35	6.42	6.34	8.82	8.71
60	2.00	0.25	33.11	32.68	41.93	41.39
80	2.50	0.18	50.22	49.57	92.15	90.96
120	3.00	0.13	7.87	7.77	100.02	98.73
170	3.50	0.09	0.17	0.17	100.19	98.90
200	3.75	0.07	0.01	0.01	100.20	98.91
230	4.00	0.06	0.00	0.00	100.20	98.91

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.76	2.43	2.34	2.09	1.75	1.61	1.21

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.02	0.25	0.46	-1.71	11.1

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05 #1

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-4.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/2 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
106.00	104.87	0.00	0.00	#200 - 1.07 #230 - 1.06			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.09	0.08	0.09	0.08
4	-2.25	4.76	0.15	0.14	0.24	0.22
5	-2.00	4.00	0.23	0.22	0.47	0.44
7	-1.50	2.83	0.34	0.32	0.81	0.76
10	-1.00	2.00	0.26	0.25	1.07	1.01
14	-0.50	1.41	0.42	0.40	1.49	1.41
18	0.00	1.00	0.52	0.49	2.01	1.90
25	0.50	0.71	0.58	0.55	2.59	2.45
35	1.00	0.50	0.68	0.64	3.27	3.09
45	1.50	0.35	2.36	2.23	5.63	5.32
60	2.00	0.25	16.88	15.92	22.51	21.24
80	2.50	0.18	55.80	52.64	78.31	73.88
120	3.00	0.13	24.88	23.47	103.19	97.35
170	3.50	0.09	1.64	1.55	104.83	98.90
200	3.75	0.07	0.03	0.03	104.86	98.93
230	4.00	0.06	0.01	0.01	104.87	98.94

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.72	2.52	2.27	2.04	1.84	1.43

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	0.64	-3.45	21.37

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05 #2

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-8.5 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
108.31	107.06	0.01	0.01	#200 - 1.19 #230 - 1.17			3

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	0.26	0.24	0.26	0.24
3.5	-2.50	5.66	0.53	0.49	0.79	0.73
4	-2.25	4.76	0.69	0.64	1.48	1.37
5	-2.00	4.00	1.21	1.12	2.69	2.49
7	-1.50	2.83	1.64	1.51	4.33	4.00
10	-1.00	2.00	3.17	2.93	7.50	6.93
14	-0.50	1.41	5.22	4.82	12.72	11.75
18	0.00	1.00	6.73	6.21	19.45	17.96
25	0.50	0.71	6.77	6.25	26.22	24.21
35	1.00	0.50	11.09	10.24	37.31	34.45
45	1.50	0.35	17.02	15.71	54.33	50.16
60	2.00	0.25	24.45	22.57	78.78	72.73
80	2.50	0.18	23.17	21.39	101.95	94.12
120	3.00	0.13	4.87	4.50	106.82	98.62
170	3.50	0.09	0.18	0.17	107.00	98.79
200	3.75	0.07	0.02	0.02	107.02	98.81
230	4.00	0.06	0.02	0.02	107.04	98.83

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.60	2.26	2.05	1.49	0.54	-0.16	-1.33

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.13	0.46	1.21	-1.08	3.7

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05 #3

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-10.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.44	103.28	0.02	0.00	#200 - 1.13 #230 - 1.13			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.29	0.28	0.29	0.28
5	-2.00	4.00	0.20	0.19	0.49	0.47
7	-1.50	2.83	0.28	0.27	0.77	0.74
10	-1.00	2.00	0.27	0.26	1.04	1.00
14	-0.50	1.41	0.58	0.56	1.62	1.56
18	0.00	1.00	0.73	0.70	2.35	2.26
25	0.50	0.71	1.24	1.19	3.59	3.45
35	1.00	0.50	2.44	2.34	6.03	5.79
45	1.50	0.35	11.18	10.70	17.21	16.49
60	2.00	0.25	32.61	31.22	49.82	47.71
80	2.50	0.18	43.65	41.79	93.47	89.50
120	3.00	0.13	9.54	9.13	103.01	98.63
170	3.50	0.09	0.23	0.22	103.24	98.85
200	3.75	0.07	0.02	0.02	103.26	98.87
230	4.00	0.06	0.00	0.00	103.26	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.80	2.43	2.33	2.03	1.64	1.48	0.83

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	1.9	0.27	0.68	-2.49	13.5

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05 #4

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-10.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-7/2	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.77	101.57	0.01	0.00	#200 - 1.19 #230 - 1.16			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	0.55	0.54	0.55	0.54
3.5	-2.50	5.66	0.82	0.80	1.37	1.34
4	-2.25	4.76	0.33	0.32	1.70	1.66
5	-2.00	4.00	0.62	0.60	2.32	2.26
7	-1.50	2.83	1.08	1.05	3.40	3.31
10	-1.00	2.00	1.46	1.42	4.86	4.73
14	-0.50	1.41	2.32	2.26	7.18	6.99
18	0.00	1.00	3.42	3.33	10.60	10.32
25	0.50	0.71	3.74	3.64	14.34	13.96
35	1.00	0.50	7.22	7.03	21.56	20.99
45	1.50	0.35	13.68	13.31	35.24	34.30
60	2.00	0.25	20.99	20.42	56.23	54.72
80	2.50	0.18	32.83	31.95	89.06	86.67
120	3.00	0.13	12.25	11.92	101.31	98.59
170	3.50	0.09	0.12	0.12	101.43	98.71
200	3.75	0.07	0.10	0.10	101.53	98.81
230	4.00	0.06	0.03	0.03	101.56	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.46	2.32	1.88	1.15	0.65	-0.94

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.54	0.34	1.16	-1.72	6.19

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05 #5

Analysis Date: 03-19-09

Analyzed By: KW

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-11.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.75	97.56	0.00	0.00	#200 - 1.20 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.04	0.04	0.04
14	-0.50	1.41	0.07	0.07	0.11	0.11
18	0.00	1.00	0.17	0.17	0.28	0.28
25	0.50	0.71	0.23	0.23	0.51	0.51
35	1.00	0.50	0.49	0.50	1.00	1.01
45	1.50	0.35	2.34	2.37	3.34	3.38
60	2.00	0.25	18.00	18.23	21.34	21.61
80	2.50	0.18	60.82	61.59	82.16	83.20
120	3.00	0.13	14.91	15.10	97.07	98.30
170	3.50	0.09	0.47	0.48	97.54	98.78
200	3.75	0.07	0.02	0.02	97.56	98.80
230	4.00	0.06	0.00	0.00	97.56	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.53	2.43	2.23	2.03	1.85	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.2	0.22	0.39	-1.61	11.75

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05A #1

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,174	201,399	North Carolina State Plane	-11.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/2 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
128.21	127.30	0.01	0.05	#200 - 0.82 #230 - 0.80			8

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
1"	-4.75	26.91	0.00	0.00	0.00	0.00
3/4"	-4.25	19.03	15.57	12.14	15.57	12.14
5/8"	-4.00	16.00	7.02	5.48	22.59	17.62
7/16"	-3.50	11.31	11.48	8.95	34.07	26.57
5/16"	-3.00	8.00	10.48	8.17	44.55	34.74
3.5	-2.50	5.66	9.33	7.28	53.88	42.02
4	-2.25	4.76	3.10	2.42	56.98	44.44
5	-2.00	4.00	3.47	2.71	60.45	47.15
7	-1.50	2.83	7.21	5.62	67.66	52.77
10	-1.00	2.00	7.04	5.49	74.70	58.26
14	-0.50	1.41	7.67	5.98	82.37	64.24
18	0.00	1.00	6.21	4.84	88.58	69.08
25	0.50	0.71	4.44	3.46	93.02	72.54
35	1.00	0.50	5.65	4.41	98.67	76.95
45	1.50	0.35	7.67	5.98	106.34	82.93
60	2.00	0.25	9.87	7.70	116.21	90.63
80	2.50	0.18	9.08	7.08	125.29	97.71
120	3.00	0.13	1.66	1.29	126.95	99.00
170	3.50	0.09	0.21	0.16	127.16	99.16
200	3.75	0.07	0.03	0.02	127.19	99.18
230	4.00	0.06	0.03	0.02	127.22	99.20

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.31	1.57	0.78	-1.75	-3.59	-4.07	-4.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	-1.47	2.77	2.31	0.27	1.7

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05A #2

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,174	201,399	North Carolina State Plane	-14.9 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
106.55	105.51	0.00	0.00	#200 - 1.01 #230 - 0.97			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	0.28	0.26	0.28	0.26
3.5	-2.50	5.66	0.14	0.13	0.42	0.39
4	-2.25	4.76	0.00	0.00	0.42	0.39
5	-2.00	4.00	0.35	0.33	0.77	0.72
7	-1.50	2.83	0.26	0.24	1.03	0.96
10	-1.00	2.00	0.44	0.41	1.47	1.37
14	-0.50	1.41	0.47	0.44	1.94	1.81
18	0.00	1.00	0.65	0.61	2.59	2.42
25	0.50	0.71	0.69	0.65	3.28	3.07
35	1.00	0.50	2.84	2.67	6.12	5.74
45	1.50	0.35	8.26	7.75	14.38	13.49
60	2.00	0.25	26.41	24.79	40.79	38.28
80	2.50	0.18	47.86	44.92	88.65	83.20
120	3.00	0.13	16.56	15.54	105.21	98.74
170	3.50	0.09	0.20	0.19	105.41	98.93
200	3.75	0.07	0.06	0.06	105.47	98.99
230	4.00	0.06	0.04	0.04	105.51	99.03

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.53	2.41	2.13	1.73	1.55	0.86

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.99	0.25	0.74	-3	17.26

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05A #3

Analysis Date: 09-01-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,174	201,399	North Carolina State Plane	-16.8 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/2 Dry - 5Y-6/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
97.33	96.23	0.02	0.17	#200 - 1.35 #230 - 1.32			4

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	0.50	0.51	0.50	0.51
3.5	-2.50	5.66	2.02	2.08	2.52	2.59
4	-2.25	4.76	0.63	0.65	3.15	3.24
5	-2.00	4.00	1.00	1.03	4.15	4.27
7	-1.50	2.83	3.03	3.11	7.18	7.38
10	-1.00	2.00	4.25	4.37	11.43	11.75
14	-0.50	1.41	7.22	7.42	18.65	19.17
18	0.00	1.00	9.06	9.31	27.71	28.48
25	0.50	0.71	9.02	9.27	36.73	37.75
35	1.00	0.50	15.01	15.42	51.74	53.17
45	1.50	0.35	17.47	17.95	69.21	71.12
60	2.00	0.25	14.45	14.85	83.66	85.97
80	2.50	0.18	9.66	9.92	93.32	95.89
120	3.00	0.13	2.46	2.53	95.78	98.42
170	3.50	0.09	0.18	0.18	95.96	98.60
200	3.75	0.07	0.05	0.05	96.01	98.65
230	4.00	0.06	0.03	0.03	96.04	98.68

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.46	1.93	1.63	0.90	-0.19	-0.71	-1.88

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	0.63	0.65	1.3	-0.7	3.05

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05A #4

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,174	201,399	North Carolina State Plane	-17.8 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
114.67	113.70	0.01	0.02	#200 - 0.90 #230 - 0.88			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.04	0.03	0.04	0.03
7	-1.50	2.83	0.28	0.24	0.32	0.27
10	-1.00	2.00	0.46	0.40	0.78	0.67
14	-0.50	1.41	0.75	0.65	1.53	1.32
18	0.00	1.00	0.83	0.72	2.36	2.04
25	0.50	0.71	1.32	1.15	3.68	3.19
35	1.00	0.50	1.88	1.64	5.56	4.83
45	1.50	0.35	4.17	3.64	9.73	8.47
60	2.00	0.25	15.97	13.93	25.70	22.40
80	2.50	0.18	64.96	56.65	90.66	79.05
120	3.00	0.13	22.26	19.41	112.92	98.46
170	3.50	0.09	0.71	0.62	113.63	99.08
200	3.75	0.07	0.02	0.02	113.65	99.10
230	4.00	0.06	0.02	0.02	113.67	99.12

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.63	2.46	2.24	2.02	1.77	1.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.14	0.23	0.63	-2.72	13.66

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-05A #5

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,174	201,399	North Carolina State Plane	-19.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
106.84	106.05	0.01	0.05	#200 - 0.81 #230 - 0.80			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.10	0.09	0.10	0.09
4	-2.25	4.76	0.00	0.00	0.10	0.09
5	-2.00	4.00	0.11	0.10	0.21	0.19
7	-1.50	2.83	0.47	0.44	0.68	0.63
10	-1.00	2.00	0.73	0.68	1.41	1.31
14	-0.50	1.41	1.46	1.37	2.87	2.68
18	0.00	1.00	2.29	2.14	5.16	4.82
25	0.50	0.71	2.56	2.40	7.72	7.22
35	1.00	0.50	5.54	5.19	13.26	12.41
45	1.50	0.35	12.28	11.49	25.54	23.90
60	2.00	0.25	28.97	27.12	54.51	51.02
80	2.50	0.18	41.67	39.00	96.18	90.02
120	3.00	0.13	9.51	8.90	105.69	98.92
170	3.50	0.09	0.28	0.26	105.97	99.18
200	3.75	0.07	0.01	0.01	105.98	99.19
230	4.00	0.06	0.01	0.01	105.99	99.20

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.78	2.42	2.31	1.98	1.52	1.16	0.04

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.77	0.29	0.81	-1.8	7.32

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-06 #1

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-3.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.74	97.61	0.00	0.00	#200 - 1.17 #230 - 1.15			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
10	-1.00	2.00	0.03	0.03	0.04	0.04
14	-0.50	1.41	0.05	0.05	0.09	0.09
18	0.00	1.00	0.08	0.08	0.17	0.17
25	0.50	0.71	0.10	0.10	0.27	0.27
35	1.00	0.50	0.27	0.27	0.54	0.54
45	1.50	0.35	0.84	0.85	1.38	1.39
60	2.00	0.25	7.58	7.68	8.96	9.07
80	2.50	0.18	50.81	51.46	59.77	60.53
120	3.00	0.13	35.59	36.04	95.36	96.57
170	3.50	0.09	2.16	2.19	97.52	98.76
200	3.75	0.07	0.07	0.07	97.59	98.83
230	4.00	0.06	0.02	0.02	97.61	98.85

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.83	2.70	2.40	2.15	2.07	1.74

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.4	0.19	0.38	-1.42	12.31

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-06 #2

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-7.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.22	103.09	0.00	0.00	#200 - 1.10 #230 - 1.09			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.89	0.85	0.89	0.85
3.5	-2.50	5.66	0.00	0.00	0.89	0.85
4	-2.25	4.76	0.22	0.21	1.11	1.06
5	-2.00	4.00	0.00	0.00	1.11	1.06
7	-1.50	2.83	0.03	0.03	1.14	1.09
10	-1.00	2.00	0.11	0.11	1.25	1.20
14	-0.50	1.41	0.19	0.18	1.44	1.38
18	0.00	1.00	0.16	0.15	1.60	1.53
25	0.50	0.71	0.31	0.30	1.91	1.83
35	1.00	0.50	0.64	0.61	2.55	2.44
45	1.50	0.35	2.04	1.96	4.59	4.40
60	2.00	0.25	10.54	10.11	15.13	14.51
80	2.50	0.18	54.52	52.31	69.65	66.82
120	3.00	0.13	32.03	30.73	101.68	97.55
170	3.50	0.09	1.35	1.30	103.03	98.85
200	3.75	0.07	0.05	0.05	103.08	98.90
230	4.00	0.06	0.01	0.01	103.09	98.91

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.78	2.63	2.34	2.10	2.01	1.53

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	0.72	-4.96	36.13

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-06 #3

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-12.6 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
102.64	101.17	0.00	0.00	#200 - 1.42 #230 - 1.42			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.02	0.02	0.03	0.03
18	0.00	1.00	0.05	0.05	0.08	0.08
25	0.50	0.71	0.02	0.02	0.10	0.10
35	1.00	0.50	0.07	0.07	0.17	0.17
45	1.50	0.35	0.19	0.19	0.36	0.36
60	2.00	0.25	1.88	1.83	2.24	2.19
80	2.50	0.18	39.84	38.82	42.08	41.01
120	3.00	0.13	53.99	52.60	96.07	93.61
170	3.50	0.09	4.97	4.84	101.04	98.45
200	3.75	0.07	0.13	0.13	101.17	98.58
230	4.00	0.06	0.00	0.00	101.17	98.58

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.14	2.91	2.82	2.59	2.29	2.18	2.04

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.55	0.17	0.33	-0.91	10.1

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-06 #4

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-14.9 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
113.11	111.91	0.02	0.16	#200 - 1.25 #230 - 1.23			3

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	1.99	1.76	1.99	1.76
5/16"	-3.00	8.00	0.90	0.80	2.89	2.56
3.5	-2.50	5.66	1.33	1.18	4.22	3.74
4	-2.25	4.76	0.19	0.17	4.41	3.91
5	-2.00	4.00	0.93	0.82	5.34	4.73
7	-1.50	2.83	2.12	1.87	7.46	6.60
10	-1.00	2.00	2.34	2.07	9.80	8.67
14	-0.50	1.41	2.93	2.59	12.73	11.26
18	0.00	1.00	2.76	2.44	15.49	13.70
25	0.50	0.71	3.23	2.86	18.72	16.56
35	1.00	0.50	4.44	3.93	23.16	20.49
45	1.50	0.35	8.63	7.63	31.79	28.12
60	2.00	0.25	15.93	14.08	47.72	42.20
80	2.50	0.18	41.95	37.09	89.67	79.29
120	3.00	0.13	21.03	18.59	110.70	97.88
170	3.50	0.09	0.92	0.81	111.62	98.69
200	3.75	0.07	0.07	0.06	111.69	98.75
230	4.00	0.06	0.02	0.02	111.71	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.63	2.44	2.11	1.30	0.40	-1.93

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.54	0.34	1.48	-1.88	6.04

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-06 #5

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-16.1 NAVD 88

USCS:	Munsell:	Comments:
SC	Wet - 5Y-3/2 Dry - 5Y-5/2 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
85.90	57.70	0.13	0.00	#200 - 35.65 #230 - 32.97			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.30	0.35	0.30	0.35
3.5	-2.50	5.66	0.50	0.58	0.80	0.93
4	-2.25	4.76	0.00	0.00	0.80	0.93
5	-2.00	4.00	0.02	0.02	0.82	0.95
7	-1.50	2.83	0.11	0.13	0.93	1.08
10	-1.00	2.00	0.04	0.05	0.97	1.13
14	-0.50	1.41	0.07	0.08	1.04	1.21
18	0.00	1.00	0.06	0.07	1.10	1.28
25	0.50	0.71	0.05	0.06	1.15	1.34
35	1.00	0.50	0.05	0.06	1.20	1.40
45	1.50	0.35	0.14	0.16	1.34	1.56
60	2.00	0.25	0.84	0.98	2.18	2.54
80	2.50	0.18	8.29	9.65	10.47	12.19
120	3.00	0.13	20.10	23.40	30.57	35.59
170	3.50	0.09	18.75	21.83	49.32	57.42
200	3.75	0.07	5.95	6.93	55.27	64.35
230	4.00	0.06	2.30	2.68	57.57	67.03

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
			3.33	2.77	2.58	2.13

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.85	0.14	0.89	-4.29	27.62

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-07 #1

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-5.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-7/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
111.93	111.12	0.02	0.05	#200 - 0.80 #230 - 0.79			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.38	0.34	0.38	0.34
4	-2.25	4.76	0.00	0.00	0.38	0.34
5	-2.00	4.00	0.38	0.34	0.76	0.68
7	-1.50	2.83	0.57	0.51	1.33	1.19
10	-1.00	2.00	0.33	0.29	1.66	1.48
14	-0.50	1.41	0.45	0.40	2.11	1.88
18	0.00	1.00	0.46	0.41	2.57	2.29
25	0.50	0.71	0.58	0.52	3.15	2.81
35	1.00	0.50	1.31	1.17	4.46	3.98
45	1.50	0.35	4.29	3.83	8.75	7.81
60	2.00	0.25	19.37	17.31	28.12	25.12
80	2.50	0.18	56.95	50.88	85.07	76.00
120	3.00	0.13	24.98	22.32	110.05	98.32
170	3.50	0.09	0.94	0.84	110.99	99.16
200	3.75	0.07	0.04	0.04	111.03	99.20
230	4.00	0.06	0.01	0.01	111.04	99.21

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.68	2.49	2.24	2.00	1.74	1.13

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	2.13	0.23	0.72	-3.44	19.81

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-07 #2

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-11.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-7/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
112.57	111.38	0.00	0.00	#200 - 1.06 #230 - 1.05			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.08	0.07	0.08	0.07
14	-0.50	1.41	0.16	0.14	0.24	0.21
18	0.00	1.00	0.22	0.20	0.46	0.41
25	0.50	0.71	0.30	0.27	0.76	0.68
35	1.00	0.50	0.61	0.54	1.37	1.22
45	1.50	0.35	1.99	1.77	3.36	2.99
60	2.00	0.25	12.83	11.40	16.19	14.39
80	2.50	0.18	64.39	57.20	80.58	71.59
120	3.00	0.13	29.22	25.96	109.80	97.55
170	3.50	0.09	1.52	1.35	111.32	98.90
200	3.75	0.07	0.05	0.04	111.37	98.94
230	4.00	0.06	0.01	0.01	111.38	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.74	2.57	2.31	2.09	2.01	1.59

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	0.43	-1.92	13.68

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-07 #3

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-14.2 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
105.26	104.32	0.00	0.00	#200 - 0.90 #230 - 0.90			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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	1.03	0.98	1.03	0.98
4	-2.25	4.76	0.51	0.48	1.54	1.46
5	-2.00	4.00	0.62	0.59	2.16	2.05
7	-1.50	2.83	1.58	1.50	3.74	3.55
10	-1.00	2.00	2.59	2.46	6.33	6.01
14	-0.50	1.41	4.14	3.93	10.47	9.94
18	0.00	1.00	5.59	5.31	16.06	15.25
25	0.50	0.71	5.28	5.02	21.34	20.27
35	1.00	0.50	6.93	6.58	28.27	26.85
45	1.50	0.35	11.79	11.20	40.06	38.05
60	2.00	0.25	24.66	23.43	64.72	61.48
80	2.50	0.18	32.98	31.33	97.70	92.81
120	3.00	0.13	6.51	6.18	104.21	98.99
170	3.50	0.09	0.07	0.07	104.28	99.06
200	3.75	0.07	0.04	0.04	104.32	99.10
230	4.00	0.06	0.00	0.00	104.32	99.10

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.68	2.36	2.22	1.76	0.86	0.07	-1.21

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.35	0.39	1.2	-1.35	4.27

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-07 #4

Analysis Date: 03-20-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-16.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
99.71	98.52	0.00	0.00	#200 - 1.23 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.03	0.03	0.04	0.04
25	0.50	0.71	0.06	0.06	0.10	0.10
35	1.00	0.50	0.13	0.13	0.23	0.23
45	1.50	0.35	0.51	0.51	0.74	0.74
60	2.00	0.25	7.78	7.80	8.52	8.54
80	2.50	0.18	61.19	61.37	69.71	69.91
120	3.00	0.13	27.91	27.99	97.62	97.90
170	3.50	0.09	0.84	0.84	98.46	98.74
200	3.75	0.07	0.03	0.03	98.49	98.77
230	4.00	0.06	0.03	0.03	98.52	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.75	2.59	2.34	2.13	2.06	1.77

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.35	0.20	0.32	-0.56	7.21

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-07A #1

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-18.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.28	99.08	0.00	0.00	#200 - 1.21 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
18	0.00	1.00	0.04	0.04	0.05	0.05
25	0.50	0.71	0.12	0.12	0.17	0.17
35	1.00	0.50	0.38	0.38	0.55	0.55
45	1.50	0.35	1.92	1.91	2.47	2.46
60	2.00	0.25	17.27	17.22	19.74	19.68
80	2.50	0.18	60.51	60.34	80.25	80.02
120	3.00	0.13	18.34	18.29	98.59	98.31
170	3.50	0.09	0.42	0.42	99.01	98.73
200	3.75	0.07	0.06	0.06	99.07	98.79
230	4.00	0.06	0.01	0.01	99.08	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.61	2.46	2.25	2.04	1.89	1.57

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.23	0.21	0.36	-0.76	6.3

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-08 #1

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,411	200,087	North Carolina State Plane	-9.0 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
101.57	100.42	0.00	0.00	#200 - 1.13 #230 - 1.13			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	0.00	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	0.33	0.32	0.33	0.32
5	-2.00	4.00	0.19	0.19	0.52	0.51
7	-1.50	2.83	0.56	0.55	1.08	1.06
10	-1.00	2.00	0.85	0.84	1.93	1.90
14	-0.50	1.41	1.41	1.39	3.34	3.29
18	0.00	1.00	1.77	1.74	5.11	5.03
25	0.50	0.71	2.03	2.00	7.14	7.03
35	1.00	0.50	3.78	3.72	10.92	10.75
45	1.50	0.35	7.07	6.96	17.99	17.71
60	2.00	0.25	17.68	17.41	35.67	35.12
80	2.50	0.18	45.94	45.23	81.61	80.35
120	3.00	0.13	18.13	17.85	99.74	98.20
170	3.50	0.09	0.65	0.64	100.39	98.84
200	3.75	0.07	0.03	0.03	100.42	98.87
230	4.00	0.06	0.00	0.00	100.42	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.60	2.44	2.16	1.71	1.38	-0.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.93	0.26	0.88	-2.15	8.54

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-08 #2

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,411	200,087	North Carolina State Plane	-14.2 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
106.31	105.03	0.01	0.04	#200 - 1.27 #230 - 1.24			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	0.36	0.34	0.36	0.34
3.5	-2.50	5.66	0.71	0.67	1.07	1.01
4	-2.25	4.76	0.16	0.15	1.23	1.16
5	-2.00	4.00	0.22	0.21	1.45	1.37
7	-1.50	2.83	0.65	0.61	2.10	1.98
10	-1.00	2.00	0.41	0.39	2.51	2.37
14	-0.50	1.41	0.81	0.76	3.32	3.13
18	0.00	1.00	0.80	0.75	4.12	3.88
25	0.50	0.71	1.54	1.45	5.66	5.33
35	1.00	0.50	3.87	3.64	9.53	8.97
45	1.50	0.35	15.31	14.40	24.84	23.37
60	2.00	0.25	36.45	34.29	61.29	57.66
80	2.50	0.18	36.04	33.90	97.33	91.56
120	3.00	0.13	7.43	6.99	104.76	98.55
170	3.50	0.09	0.19	0.18	104.95	98.73
200	3.75	0.07	0.00	0.00	104.95	98.73
230	4.00	0.06	0.03	0.03	104.98	98.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.75	2.39	2.26	1.89	1.52	1.24	0.39

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.73	0.30	0.86	-2.8	13.98

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-08 #3

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,411	200,087	North Carolina State Plane	-17.3 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/1 Dry - 5Y-7/1 Washed - 5Y-7/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
105.09	103.63	0.02	0.09	#200 - 1.50 #230 - 1.48			4

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	1.31	1.25	1.31	1.25
4	-2.25	4.76	0.91	0.87	2.22	2.12
5	-2.00	4.00	0.87	0.83	3.09	2.95
7	-1.50	2.83	3.18	3.03	6.27	5.98
10	-1.00	2.00	4.90	4.66	11.17	10.64
14	-0.50	1.41	8.59	8.17	19.76	18.81
18	0.00	1.00	10.08	9.59	29.84	28.40
25	0.50	0.71	9.17	8.73	39.01	37.13
35	1.00	0.50	12.15	11.56	51.16	48.69
45	1.50	0.35	15.49	14.74	66.65	63.43
60	2.00	0.25	19.99	19.02	86.64	82.45
80	2.50	0.18	13.89	13.22	100.53	95.67
120	3.00	0.13	2.76	2.63	103.29	98.30
170	3.50	0.09	0.17	0.16	103.46	98.46
200	3.75	0.07	0.04	0.04	103.50	98.50
230	4.00	0.06	0.02	0.02	103.52	98.52

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.47	2.06	1.80	1.04	-0.18	-0.67	-1.66

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	0.74	0.60	1.29	-0.62	2.63

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-09 #1

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,900	199,466	North Carolina State Plane	-10.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-8/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
103.32	102.14	0.00	0.00	#200 - 1.14 #230 - 1.13			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.14	0.14	0.14	0.14
3.5	-2.50	5.66	0.00	0.00	0.14	0.14
4	-2.25	4.76	0.00	0.00	0.14	0.14
5	-2.00	4.00	0.18	0.17	0.32	0.31
7	-1.50	2.83	0.28	0.27	0.60	0.58
10	-1.00	2.00	0.42	0.41	1.02	0.99
14	-0.50	1.41	0.51	0.49	1.53	1.48
18	0.00	1.00	0.65	0.63	2.18	2.11
25	0.50	0.71	0.91	0.88	3.09	2.99
35	1.00	0.50	1.86	1.80	4.95	4.79
45	1.50	0.35	4.67	4.52	9.62	9.31
60	2.00	0.25	21.30	20.62	30.92	29.93
80	2.50	0.18	51.19	49.55	82.11	79.48
120	3.00	0.13	19.23	18.61	101.34	98.09
170	3.50	0.09	0.77	0.75	102.11	98.84
200	3.75	0.07	0.02	0.02	102.13	98.86
230	4.00	0.06	0.01	0.01	102.14	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.62	2.45	2.20	1.88	1.66	1.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.09	0.23	0.68	-2.93	16.85

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-09 #2

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,900	199,466	North Carolina State Plane	-13.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.10	98.90	0.00	0.01	#200 - 1.20 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.04	0.04	0.04	0.04
10	-1.00	2.00	0.13	0.13	0.17	0.17
14	-0.50	1.41	0.13	0.13	0.30	0.30
18	0.00	1.00	0.17	0.17	0.47	0.47
25	0.50	0.71	0.30	0.30	0.77	0.77
35	1.00	0.50	0.64	0.64	1.41	1.41
45	1.50	0.35	2.14	2.14	3.55	3.55
60	2.00	0.25	12.47	12.46	16.02	16.01
80	2.50	0.18	58.68	58.62	74.70	74.63
120	3.00	0.13	23.56	23.54	98.26	98.17
170	3.50	0.09	0.60	0.60	98.86	98.77
200	3.75	0.07	0.03	0.03	98.89	98.80
230	4.00	0.06	0.00	0.00	98.89	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.70	2.51	2.29	2.08	2.00	1.56

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	0.44	-2.37	16.86

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-09 #3

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,900	199,466	North Carolina State Plane	-17.7 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.45	99.10	0.00	0.00	#200 - 1.36 #230 - 1.34			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	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	0.01	0.01	0.01	0.01
14	-0.50	1.41	0.05	0.05	0.06	0.06
18	0.00	1.00	0.05	0.05	0.11	0.11
25	0.50	0.71	0.10	0.10	0.21	0.21
35	1.00	0.50	0.14	0.14	0.35	0.35
45	1.50	0.35	0.35	0.35	0.70	0.70
60	2.00	0.25	2.60	2.59	3.30	3.29
80	2.50	0.18	39.87	39.69	43.17	42.98
120	3.00	0.13	51.58	51.35	94.75	94.33
170	3.50	0.09	4.26	4.24	99.01	98.57
200	3.75	0.07	0.07	0.07	99.08	98.64
230	4.00	0.06	0.02	0.02	99.10	98.66

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.08	2.90	2.81	2.57	2.27	2.16	2.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.53	0.17	0.35	-1.4	12.46

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-10 #1

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,697	199,802	North Carolina State Plane	-10.0 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.17	97.01	0.00	0.00	#200 - 1.20 #230 - 1.20			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.15	0.15	0.15	0.15
4	-2.25	4.76	0.02	0.02	0.17	0.17
5	-2.00	4.00	0.00	0.00	0.17	0.17
7	-1.50	2.83	0.03	0.03	0.20	0.20
10	-1.00	2.00	0.14	0.14	0.34	0.34
14	-0.50	1.41	0.25	0.25	0.59	0.59
18	0.00	1.00	0.36	0.37	0.95	0.96
25	0.50	0.71	0.53	0.54	1.48	1.50
35	1.00	0.50	1.25	1.27	2.73	2.77
45	1.50	0.35	3.40	3.46	6.13	6.23
60	2.00	0.25	12.56	12.79	18.69	19.02
80	2.50	0.18	45.13	45.97	63.82	64.99
120	3.00	0.13	32.14	32.74	95.96	97.73
170	3.50	0.09	1.00	1.02	96.96	98.75
200	3.75	0.07	0.05	0.05	97.01	98.80
230	4.00	0.06	0.00	0.00	97.01	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.79	2.65	2.34	2.07	1.88	1.32

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	0.57	-2.83	18.73

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-10 #2

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,697	199,802	North Carolina State Plane	-12.5 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.83	99.68	0.00	0.00	#200 - 1.14 #230 - 1.13			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.19	0.19	0.19	0.19
5	-2.00	4.00	0.00	0.00	0.19	0.19
7	-1.50	2.83	0.15	0.15	0.34	0.34
10	-1.00	2.00	0.03	0.03	0.37	0.37
14	-0.50	1.41	0.12	0.12	0.49	0.49
18	0.00	1.00	0.05	0.05	0.54	0.54
25	0.50	0.71	0.09	0.09	0.63	0.63
35	1.00	0.50	0.18	0.18	0.81	0.81
45	1.50	0.35	1.18	1.17	1.99	1.98
60	2.00	0.25	13.10	12.99	15.09	14.97
80	2.50	0.18	64.52	63.99	79.61	78.96
120	3.00	0.13	19.60	19.44	99.21	98.40
170	3.50	0.09	0.43	0.43	99.64	98.83
200	3.75	0.07	0.03	0.03	99.67	98.86
230	4.00	0.06	0.01	0.01	99.68	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.91	2.63	2.47	2.27	2.08	2.01	1.62

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.25	0.21	0.43	-4.25	41.42

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-10 #3

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,697	199,802	North Carolina State Plane	-14.1 NAVD 88

USCS:	Munsell:	Comments:
SP	Wet - 5Y-6/1 Dry - 5Y-7/2 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
98.88	97.78	0.00	0.06	#200 - 1.18 #230 - 1.18			0

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.22	0.22	0.22	0.22
4	-2.25	4.76	0.17	0.17	0.39	0.39
5	-2.00	4.00	0.17	0.17	0.56	0.56
7	-1.50	2.83	0.29	0.29	0.85	0.85
10	-1.00	2.00	0.69	0.70	1.54	1.55
14	-0.50	1.41	1.01	1.02	2.55	2.57
18	0.00	1.00	1.47	1.49	4.02	4.06
25	0.50	0.71	2.38	2.41	6.40	6.47
35	1.00	0.50	4.70	4.75	11.10	11.22
45	1.50	0.35	12.55	12.69	23.65	23.91
60	2.00	0.25	31.75	32.11	55.40	56.02
80	2.50	0.18	34.41	34.80	89.81	90.82
120	3.00	0.13	7.64	7.73	97.45	98.55
170	3.50	0.09	0.24	0.24	97.69	98.79
200	3.75	0.07	0.03	0.03	97.72	98.82
230	4.00	0.06	0.00	0.00	97.72	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.77	2.40	2.27	1.91	1.52	1.19	0.20

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.75	0.30	0.8	-2.06	9.38

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Island / Rich Inlet 2008

Sample Name: FEVC-08-10 #4

Analysis Date: 03-23-09

Analyzed By: KW

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,697	199,802	North Carolina State Plane	-16.1 NAVD 88

USCS:	Munsell:	Comments:
SW	Wet - 5Y-5/2 Dry - 5Y-7/1 Washed - 5Y-8/1	

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
104.11	102.99	0.00	0.00	#200 - 1.06 #230 - 1.05			6

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	4.05	3.89	4.05	3.89
5/16"	-3.00	8.00	0.85	0.82	4.90	4.71
3.5	-2.50	5.66	2.31	2.22	7.21	6.93
4	-2.25	4.76	0.84	0.81	8.05	7.74
5	-2.00	4.00	1.53	1.47	9.58	9.21
7	-1.50	2.83	4.89	4.70	14.47	13.91
10	-1.00	2.00	6.16	5.92	20.63	19.83
14	-0.50	1.41	9.14	8.78	29.77	28.61
18	0.00	1.00	8.55	8.21	38.32	36.82
25	0.50	0.71	7.94	7.63	46.26	44.45
35	1.00	0.50	7.70	7.40	53.96	51.85
45	1.50	0.35	9.72	9.34	63.68	61.19
60	2.00	0.25	13.21	12.69	76.89	73.88
80	2.50	0.18	17.93	17.22	94.82	91.10
120	3.00	0.13	7.70	7.40	102.52	98.50
170	3.50	0.09	0.41	0.39	102.93	98.89
200	3.75	0.07	0.05	0.05	102.98	98.94
230	4.00	0.06	0.01	0.01	102.99	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

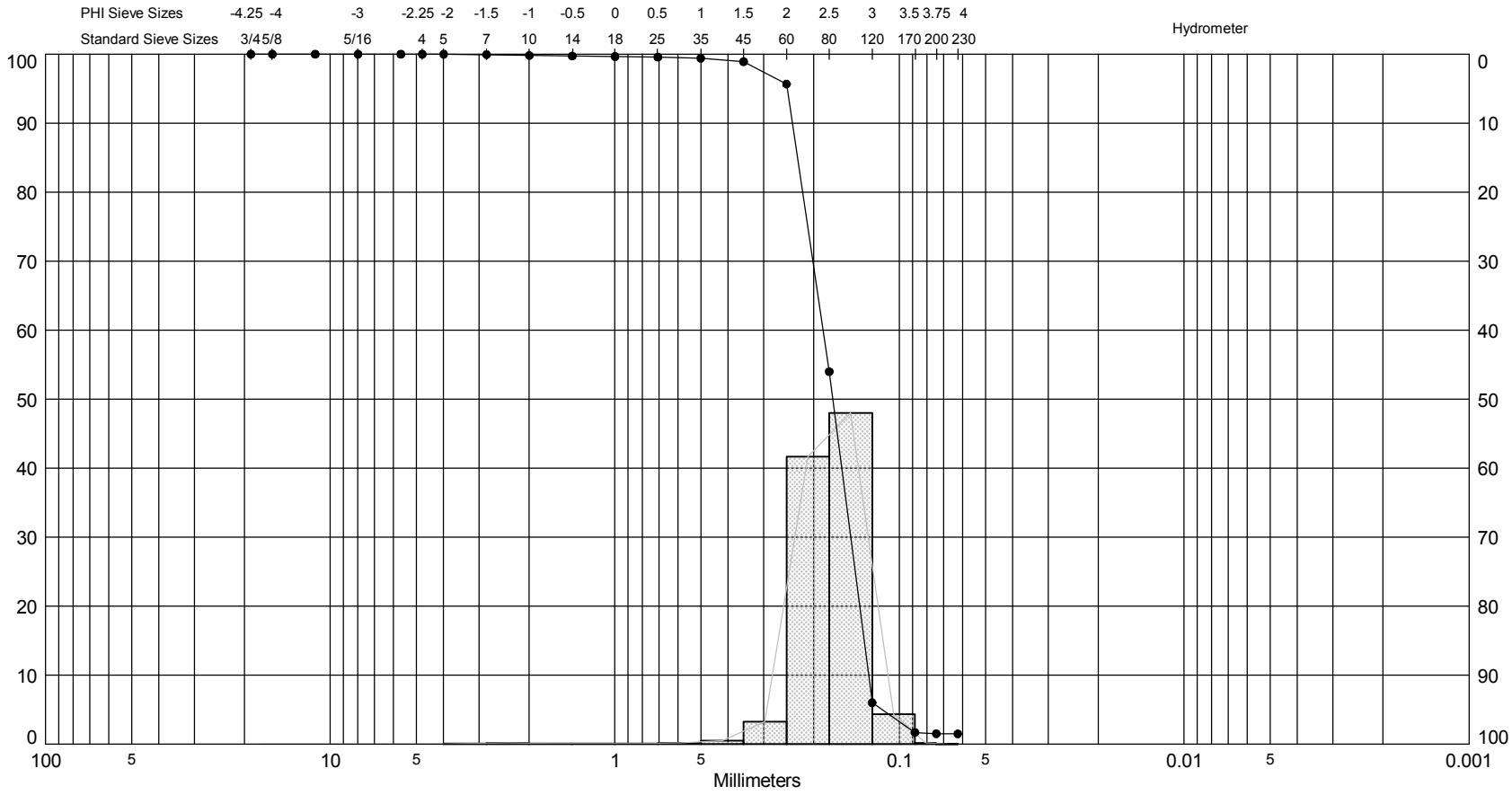
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.76	2.29	2.03	0.88	-0.71	-1.32	-2.93

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	0.5	0.71	1.75	-0.67	2.62

GRANULARMETRIC REPORT FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09

APPENDIX 24

2008 CPENC Individual Vibracore Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-01 #1	—●—	-12.6	SP	#200 - 1.51 #230 - 1.48			2.54	2.5	-2.61	24.09	0.4

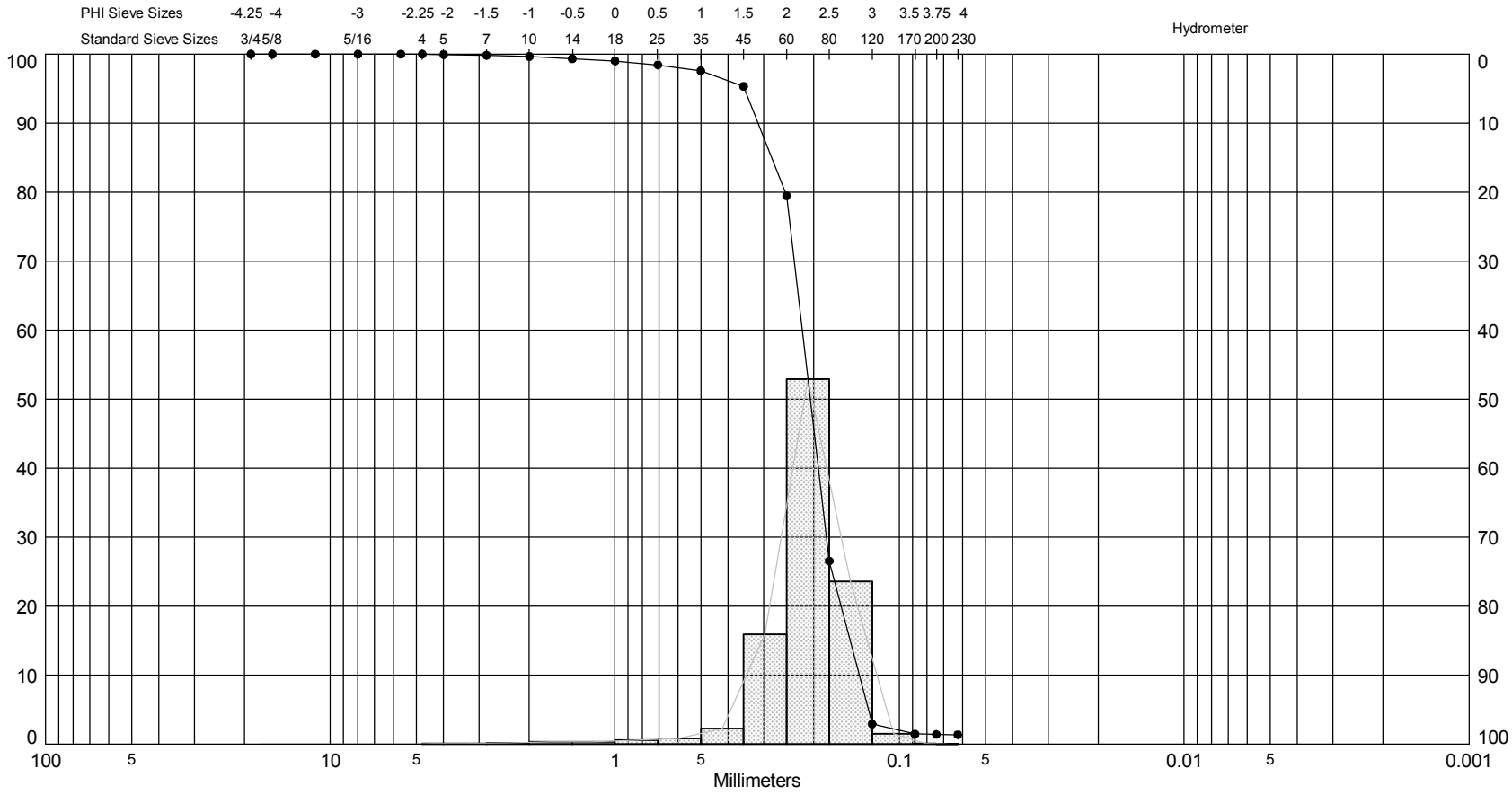
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,385,534
Northing (Y, ft):	200,207
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-01 #2	—●—	-17.6	SP	#200 - 1.40 #230 - 1.37			2.28	2.23	-2.57	16.52	0.53

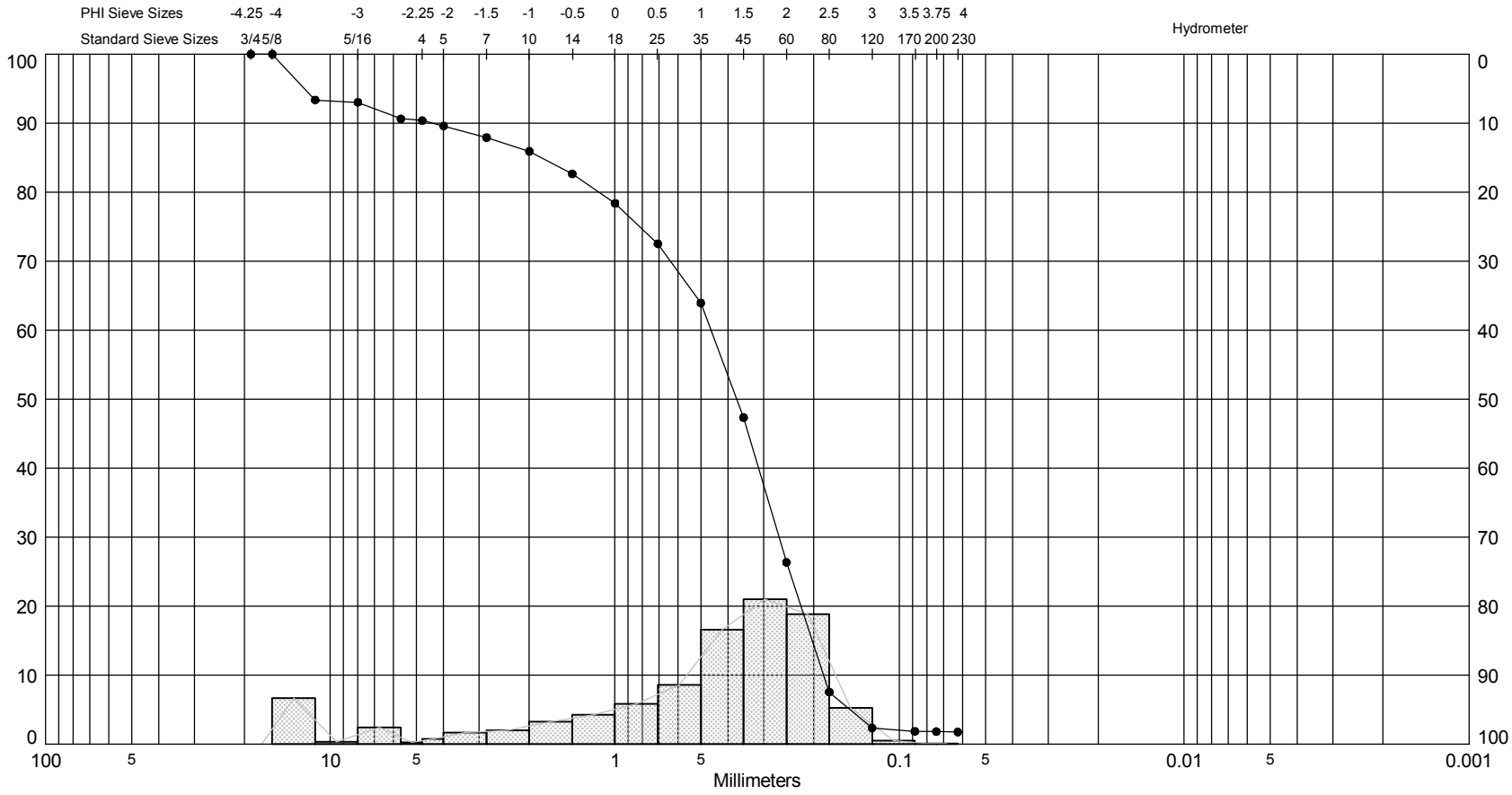
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,385,534
Northing (Y, ft):	200,207
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-01 #3	—●—	-21.1	SW	#200 - 1.81 #230 - 1.76			1.42	0.82	-1.39	4.09	1.75

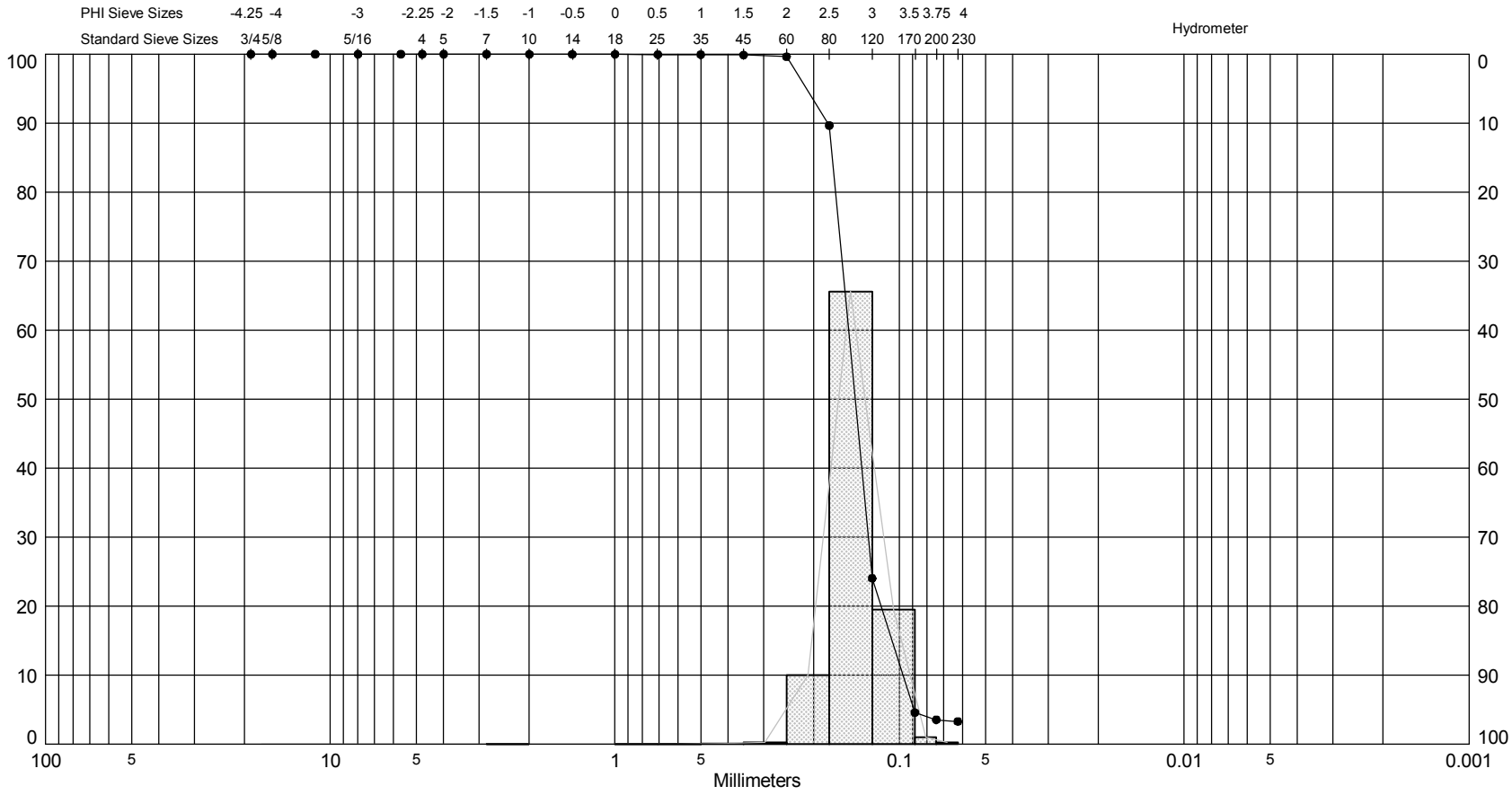
Comments: (2.0"x0.5") shell removed, 5.65g

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,385,534
Northing (Y, ft):	200,207
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-01 #4	—●—	-22.2	SP	#200 - 3.53 #230 - 3.29			2.8	2.81	-0.66	12.65	0.31

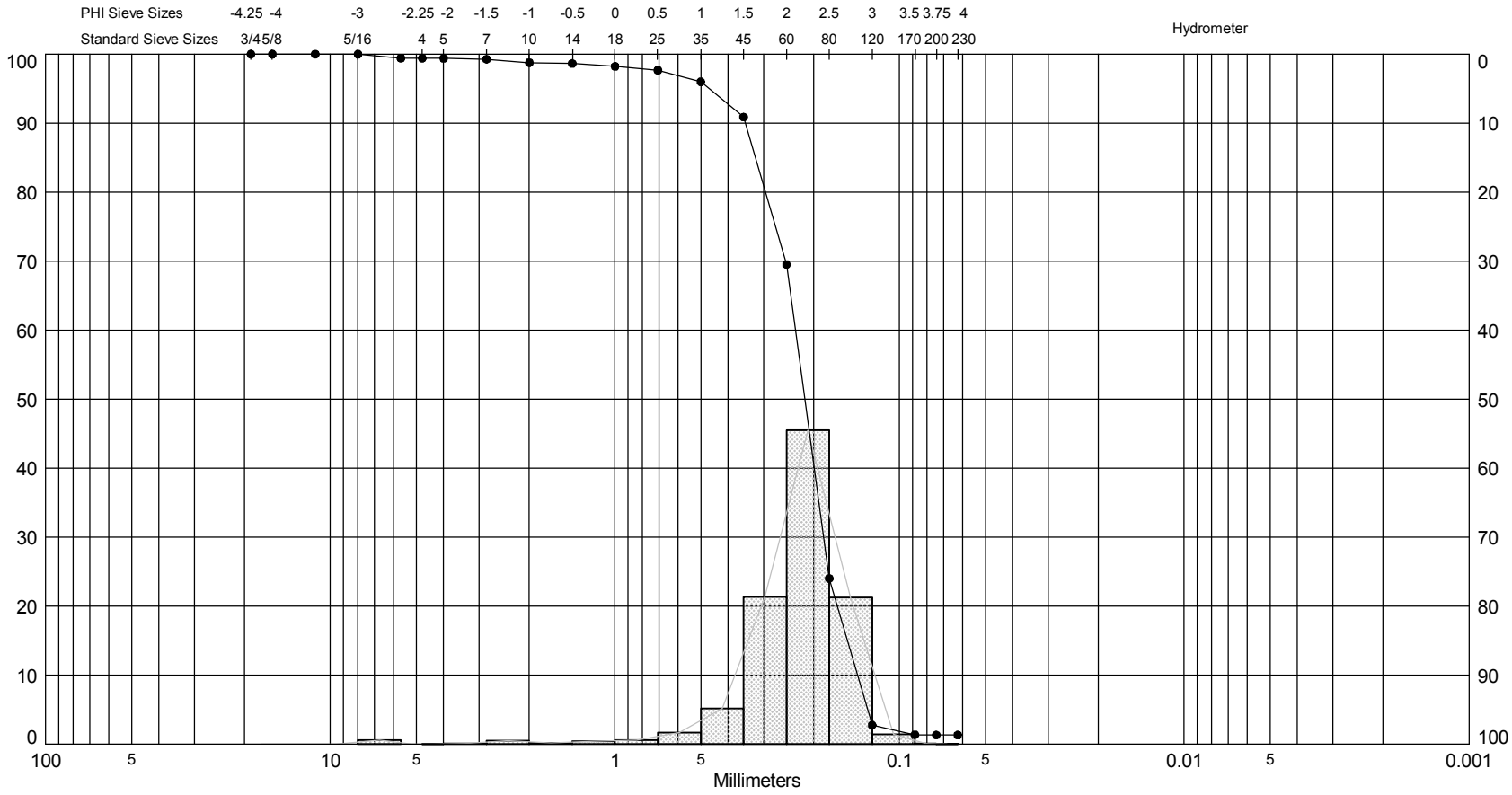
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,385,534
Northing (Y, ft):	200,207
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-02 #1	—●—	-6.8	SP	#200 - 1.31 #230 - 1.30			2.21	2.11	-3.19	19.91	0.7

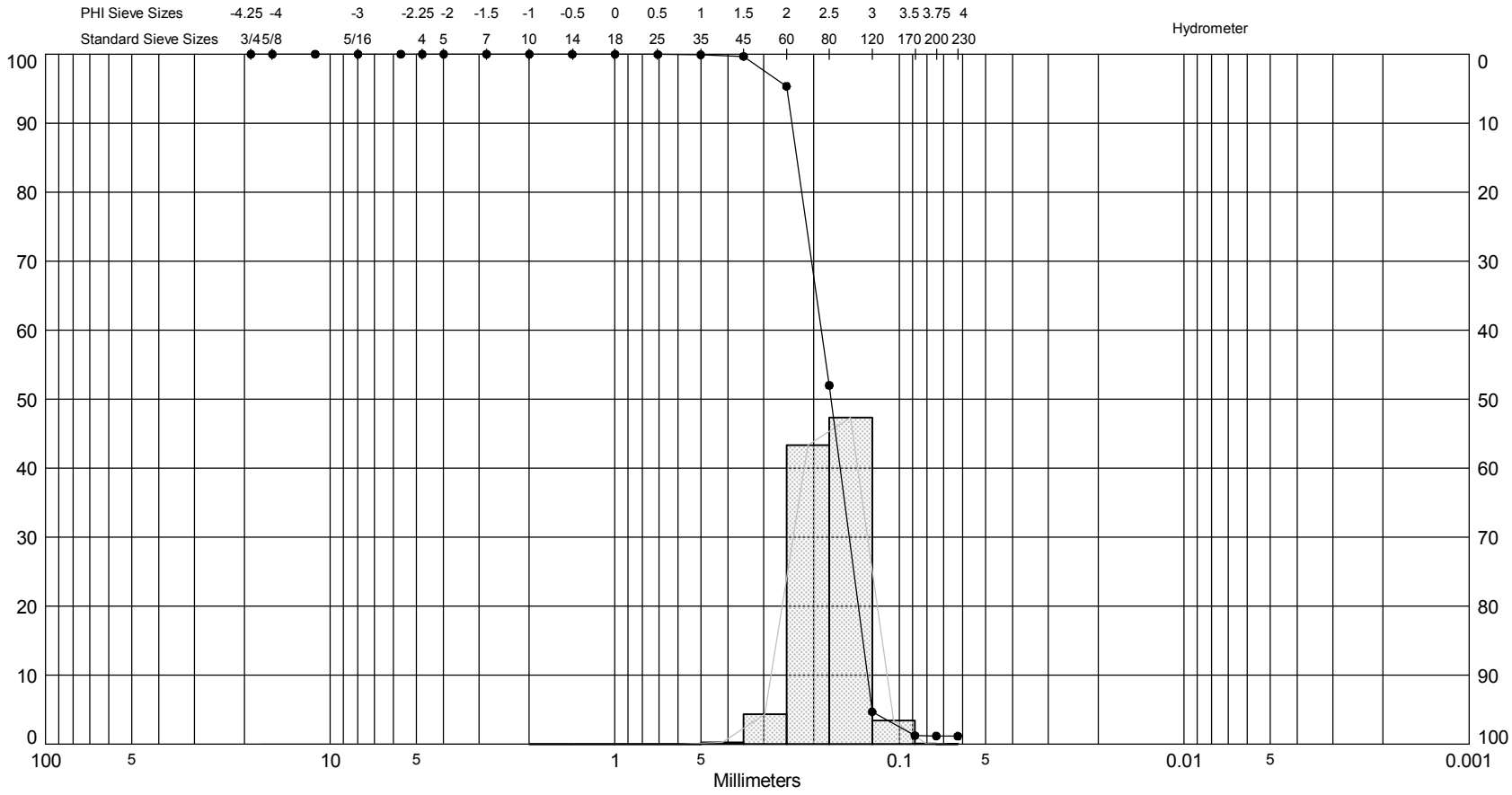
Comments:

Depths and elevations based on measured values

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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,386,109
Northing (Y, ft):	200,498
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-02 #2	—●—	-11.8	SP	#200 - 1.16 #230 - 1.14			2.52	2.5	-0.45	5.14	0.33

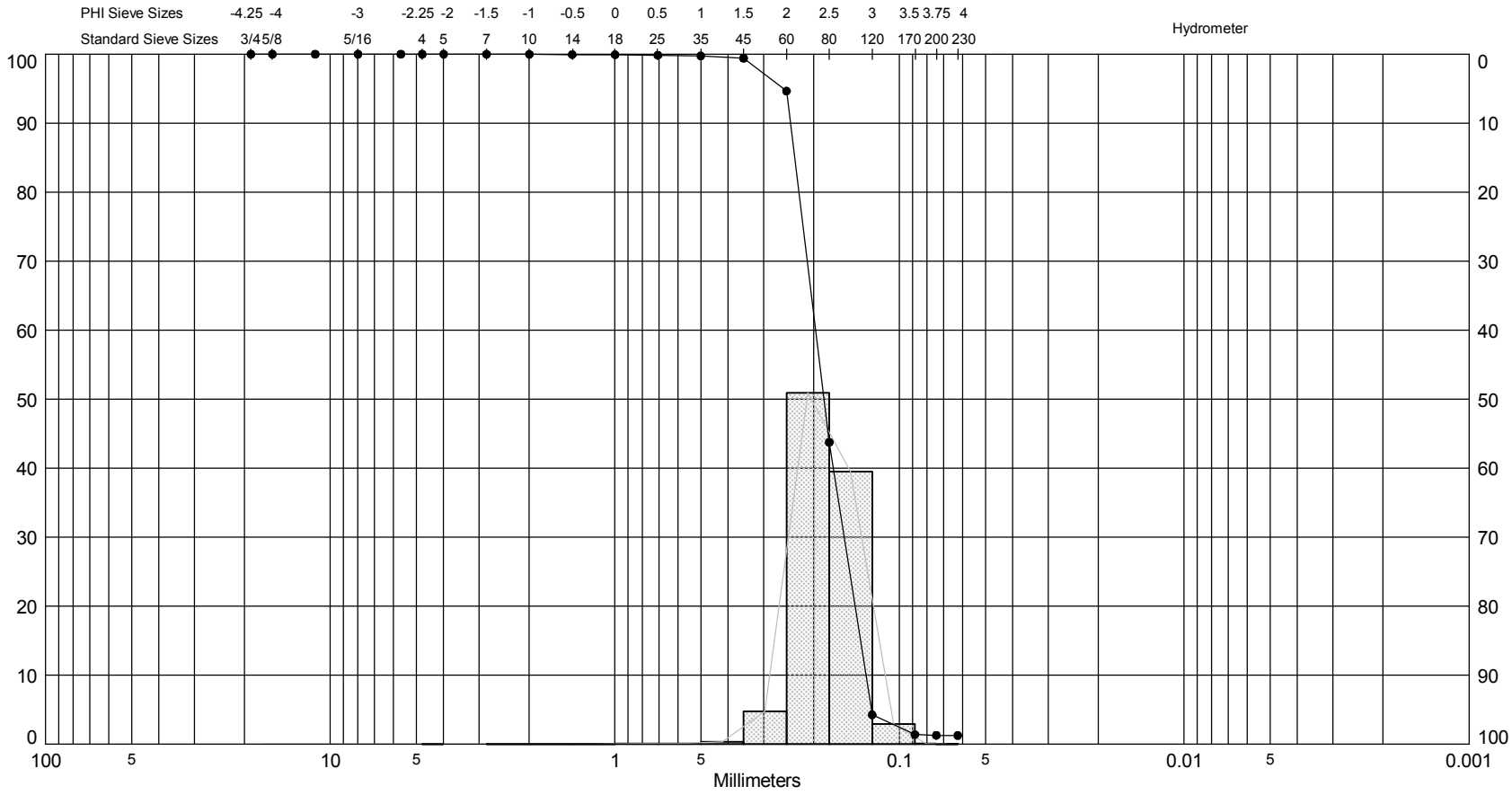
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,386,109
Northing (Y, ft):	200,498
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-02A #1	—●—	-15.0	SP	#200 - 1.28 #230 - 1.25			2.44	2.45	-0.91	11.35	0.35

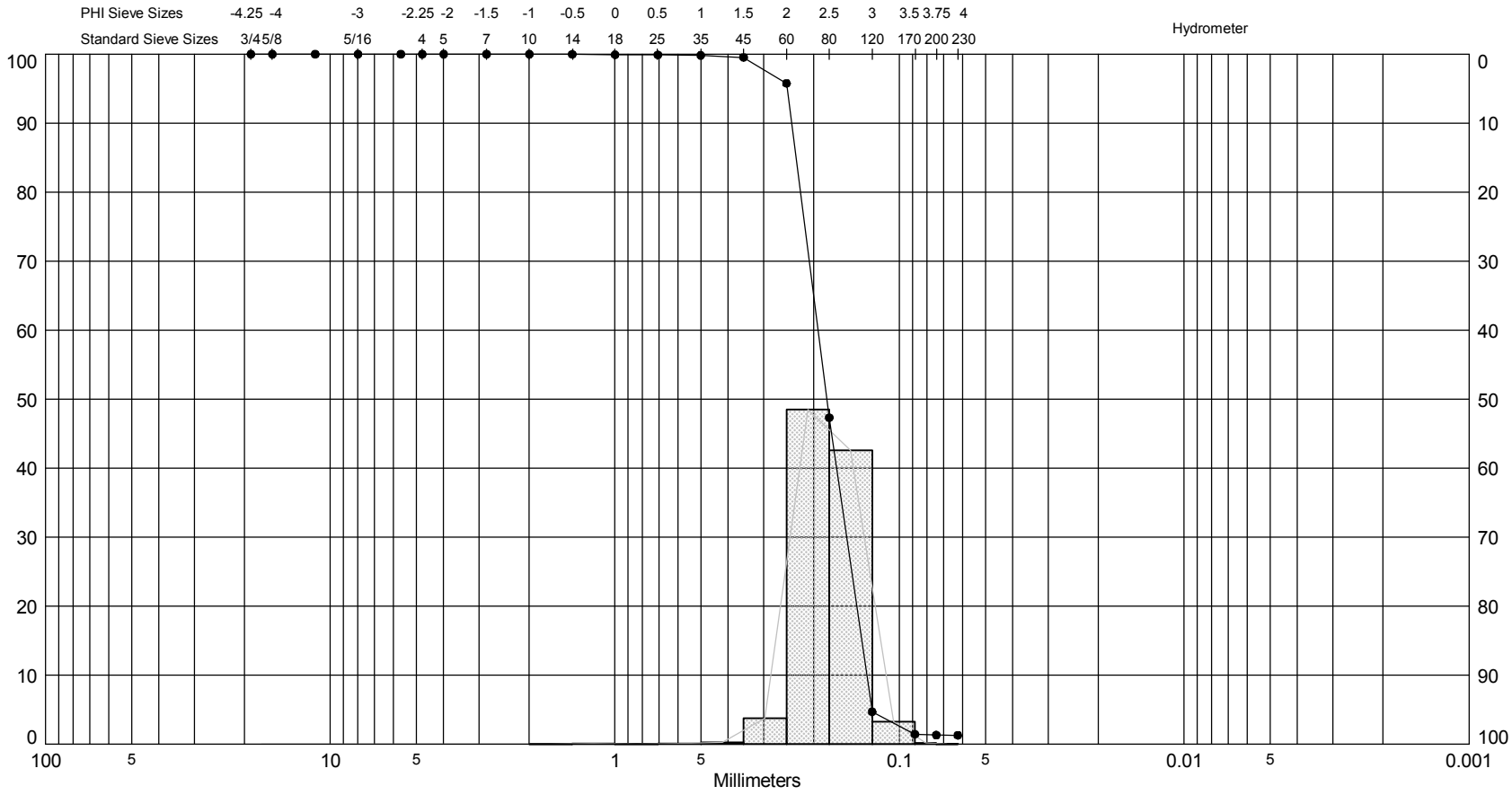
Comments:

Depths and elevations based on measured values

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2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	04-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,110
Northing (Y, ft):	200,509
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-02A #2	—●—	-20.0	SP	#200 - 1.30 #230 - 1.29			2.47	2.48	-0.58	7.53	0.34

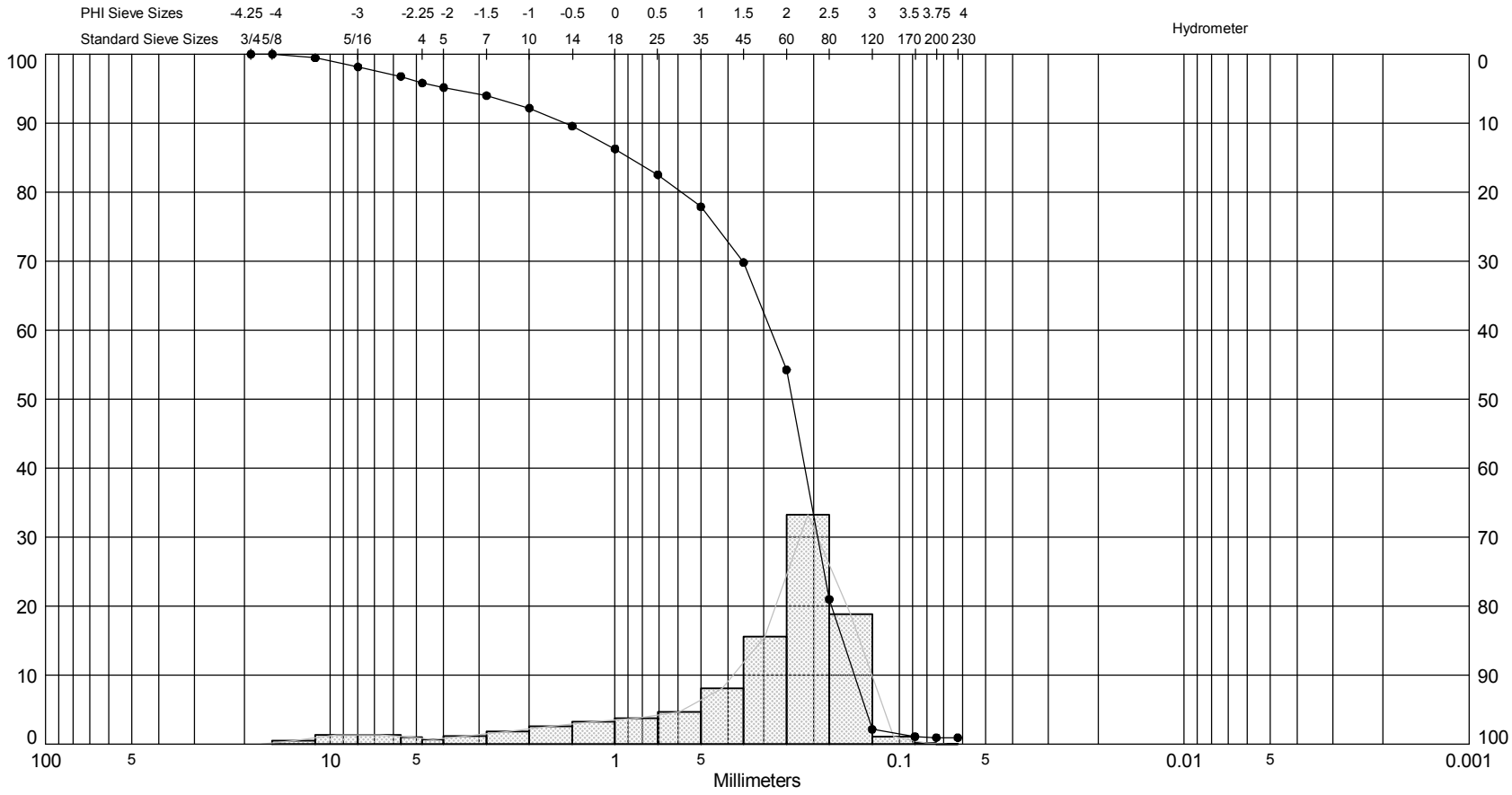
Comments:

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

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	04-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,110
Northing (Y, ft):	200,509
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #1	—●—	-5.0	SW	#200 - 0.94 #230 - 0.93			2.06	1.53	-1.73	5.56	1.43

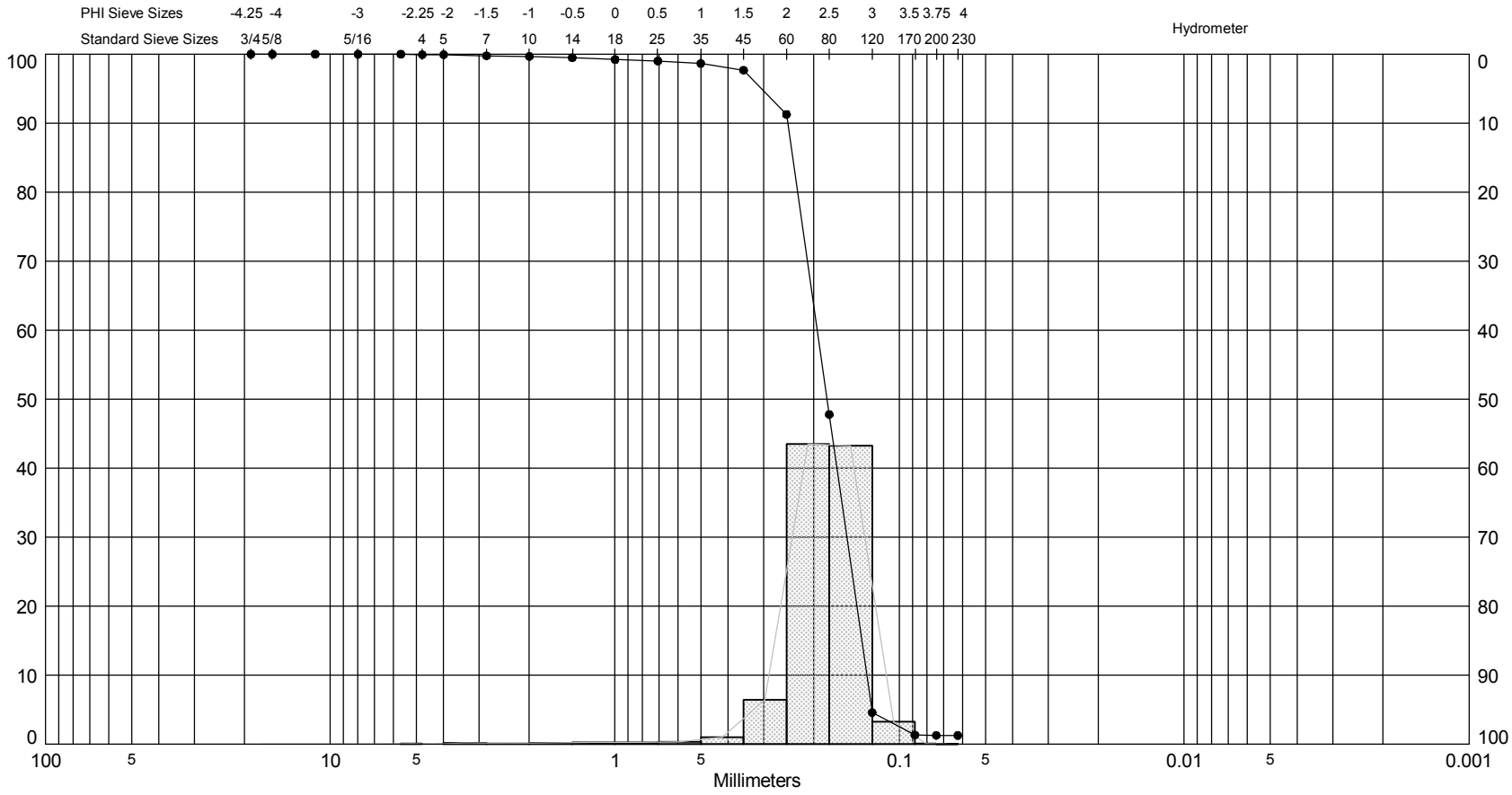
Comments: (1.0"x0.75") shell fragment removed, 2.91g

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	09-01-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #2	—●—	-7.1	SP	#200 - 1.27 #230 - 1.26			2.47	2.42	-3.36	25.67	0.49

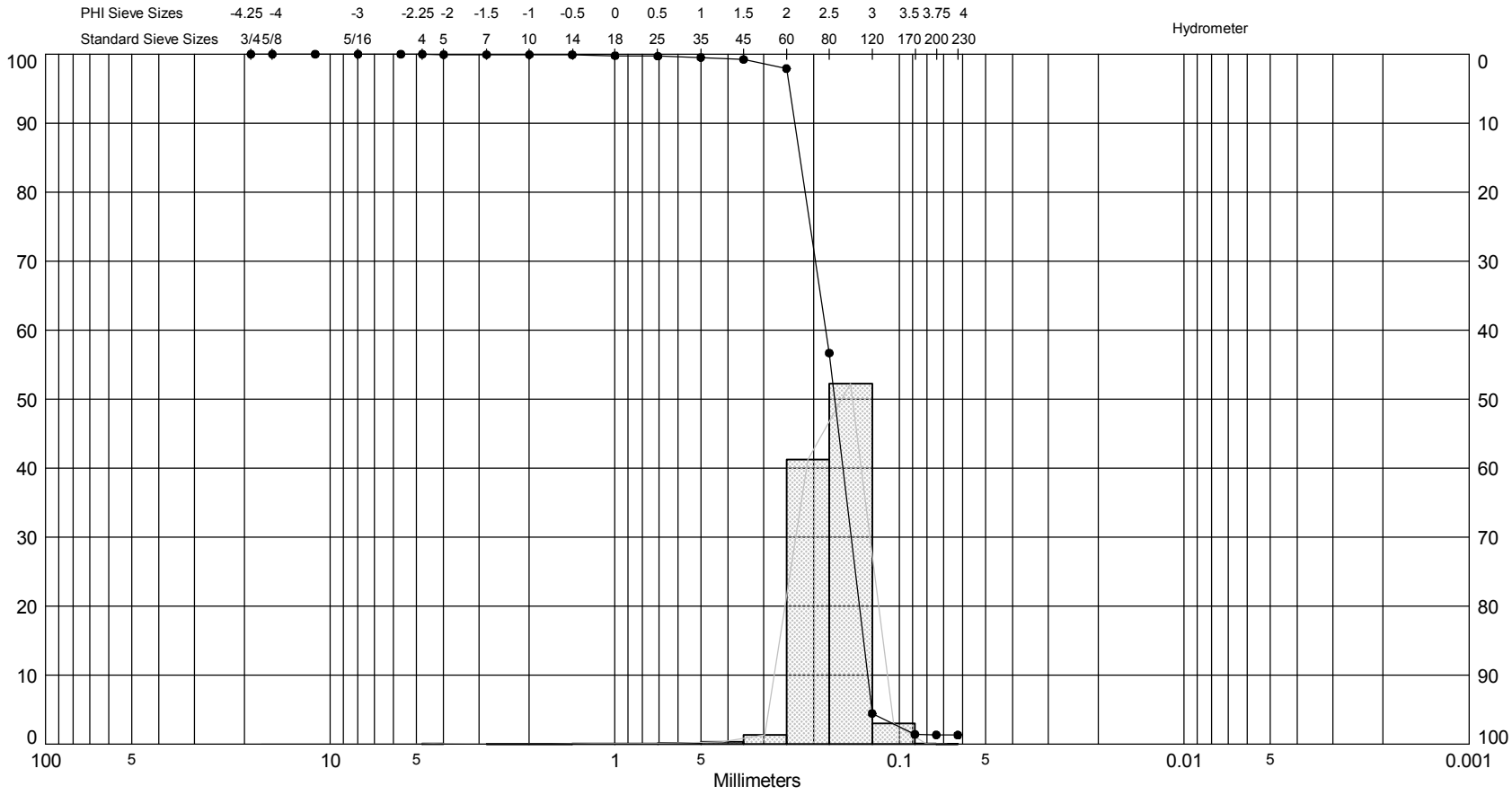
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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fax (561) 391-9116

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #3	—●—	-12.1	SP	#200 - 1.34 #230 - 1.30			2.56	2.53	-2.7	29.24	0.35

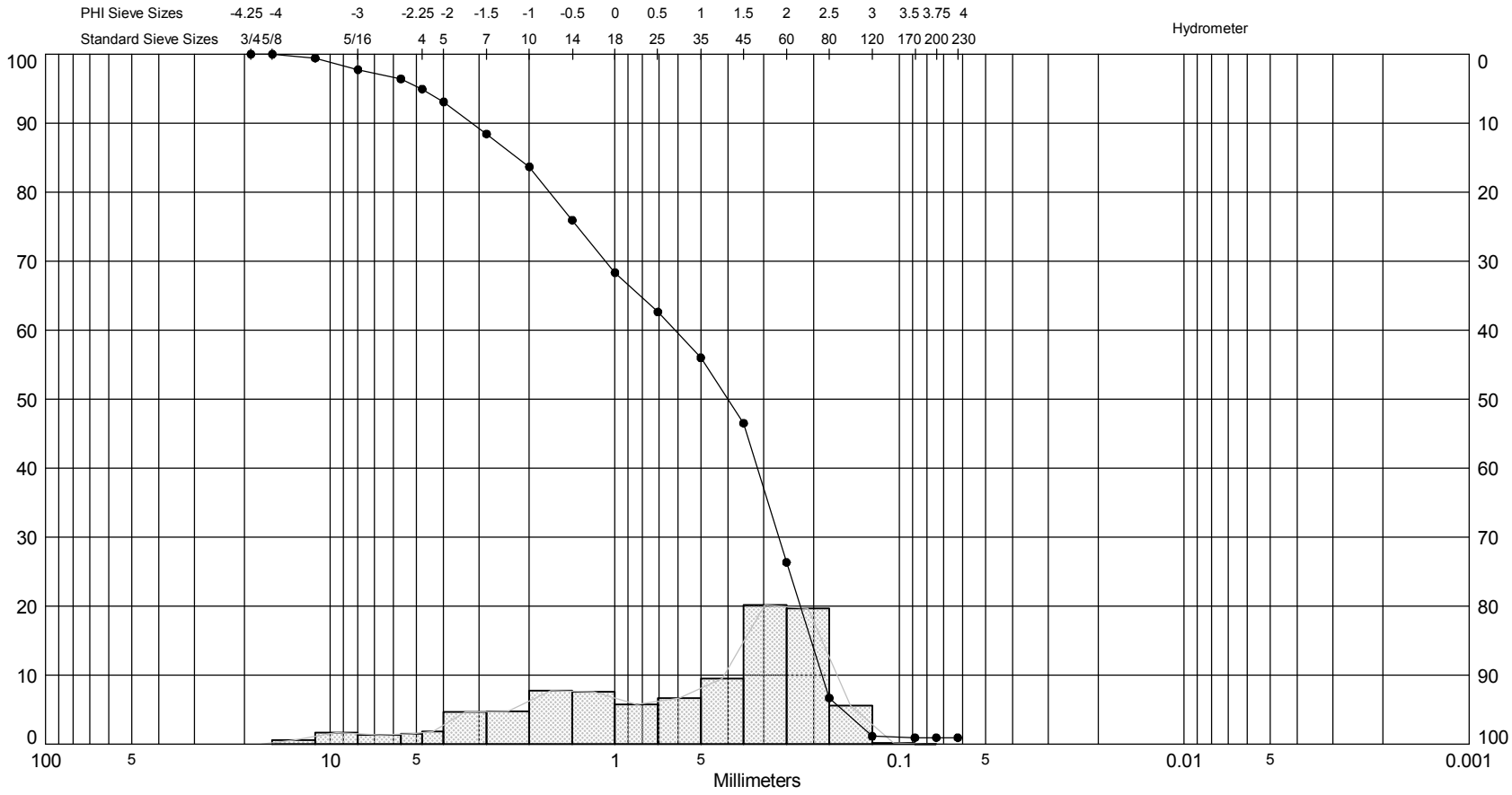
Comments:

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

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #4	—●—	-16.2	SW	#200 - 0.93 #230 - 0.93			1.32	0.74	-0.78	2.61	1.59

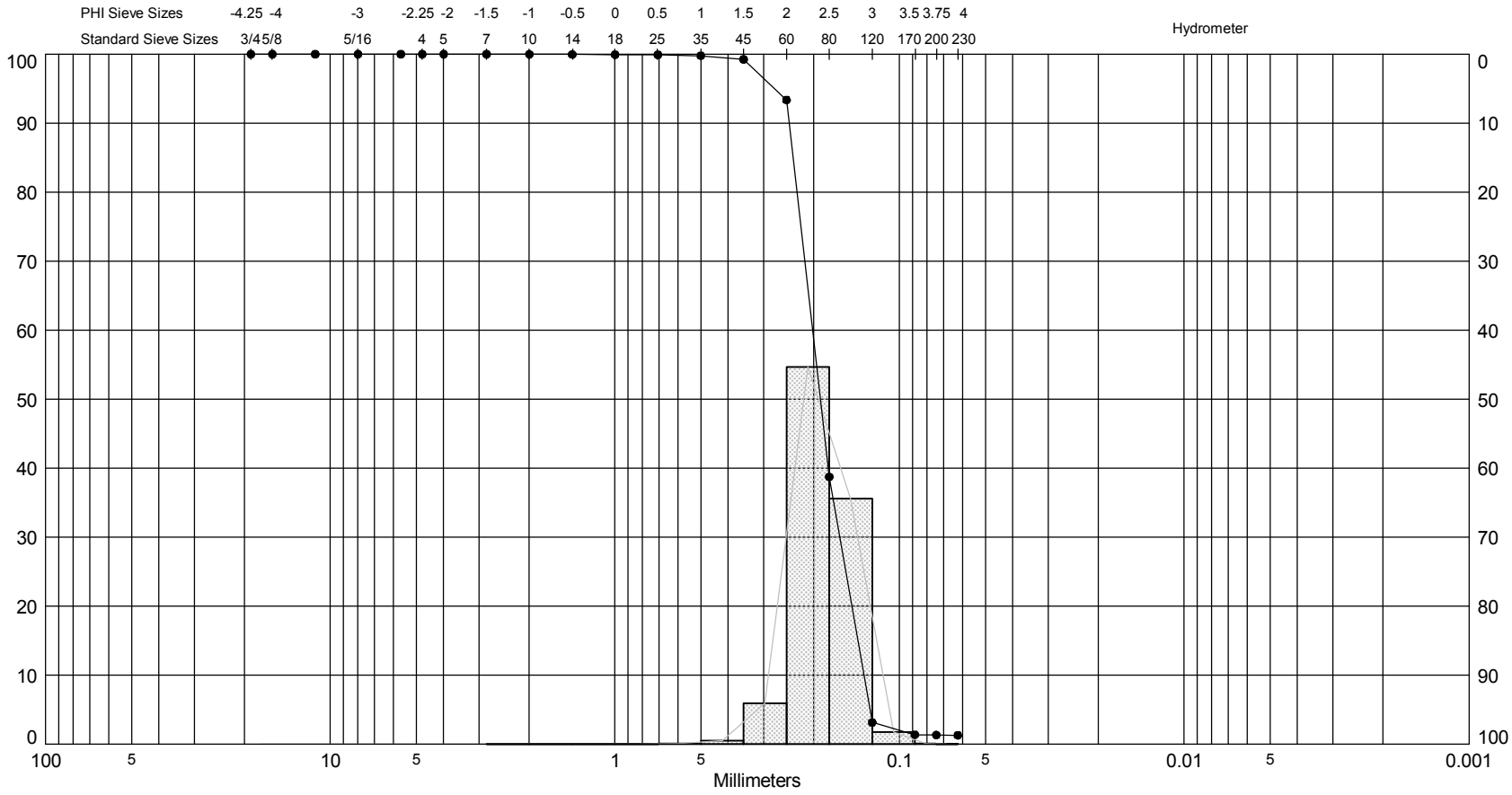
Comments:

Depths and elevations based on measured values

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #5	—●—	-17.6	SP	#200 - 1.31 #230 - 1.29			2.4	2.41	-0.8	9.46	0.34

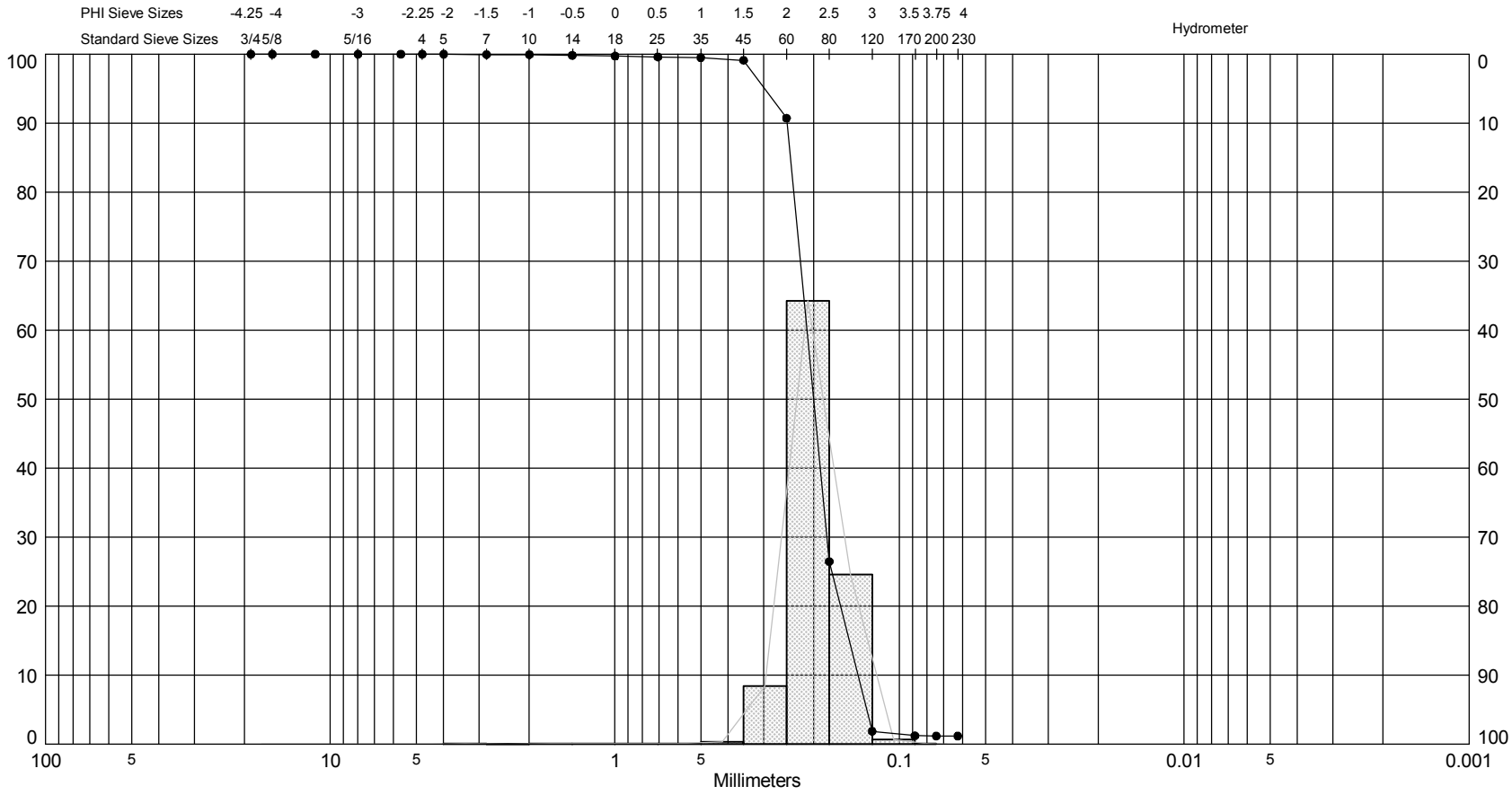
Comments:

Depths and elevations based on measured values

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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 #6	—●—	-20.6	SP	#200 - 1.16 #230 - 1.16			2.32	2.32	-2.26	23.45	0.35

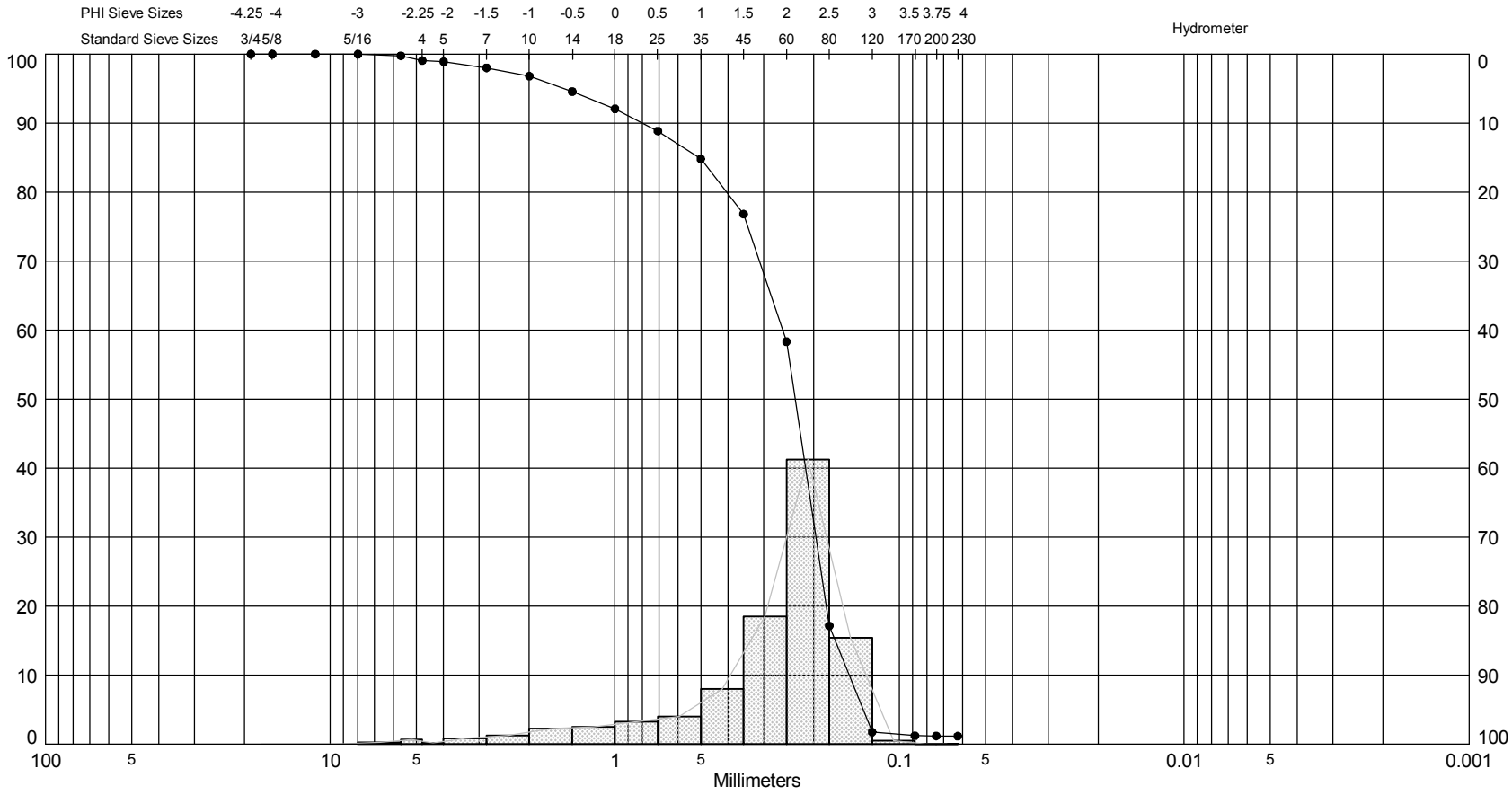
Comments:

Depths and elevations based on measured values

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ph (561) 391-8102
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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 #1	—●—	-4.0	SW	#200 - 1.18 #230 - 1.15			2.1	1.77	-1.89	6.74	1.03

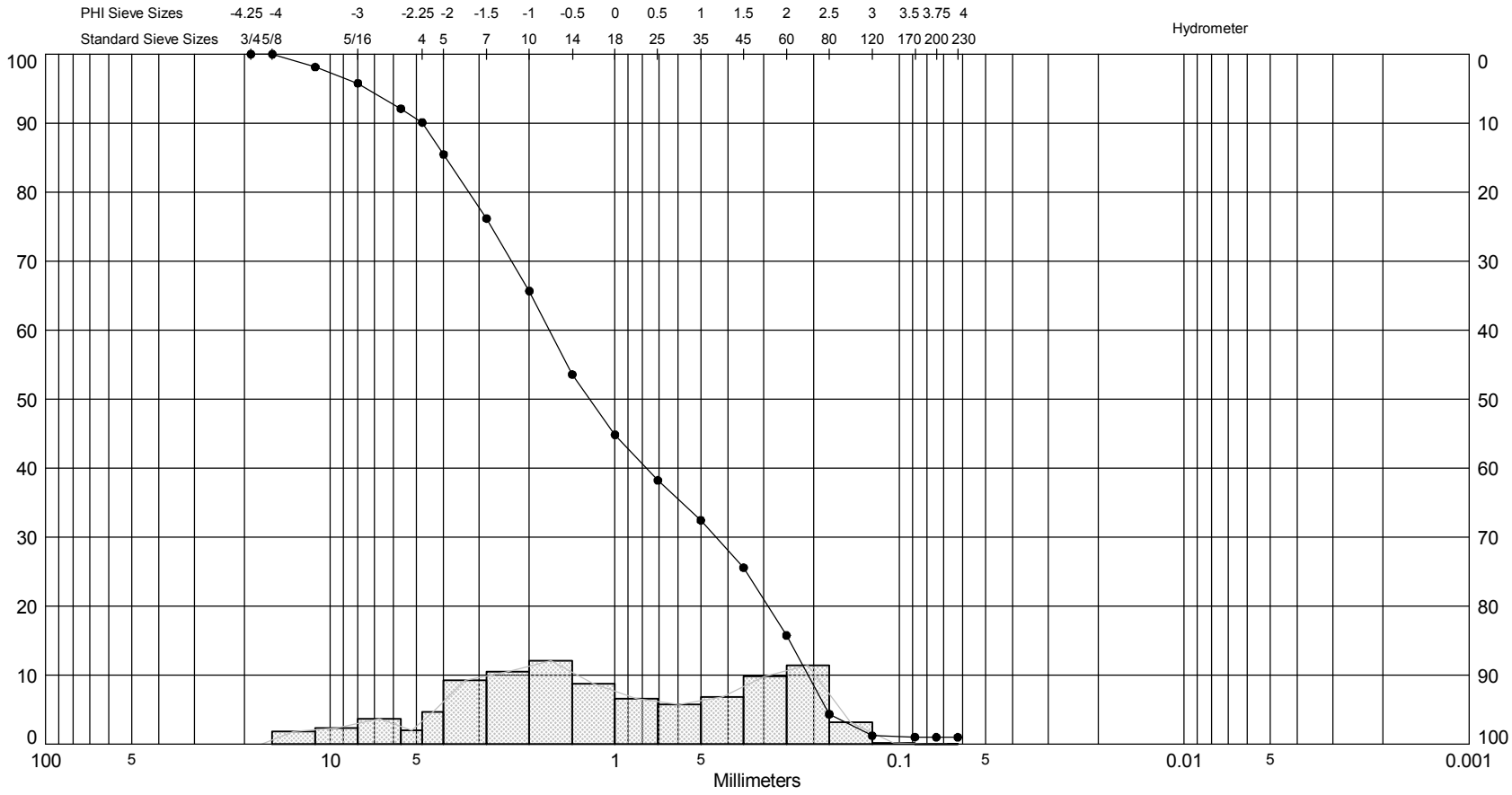
Comments:

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

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 #2	—●—	-6.0	SW	#200 - 0.99 #230 - 0.98				-0.13	-0.03	1.99	1.71

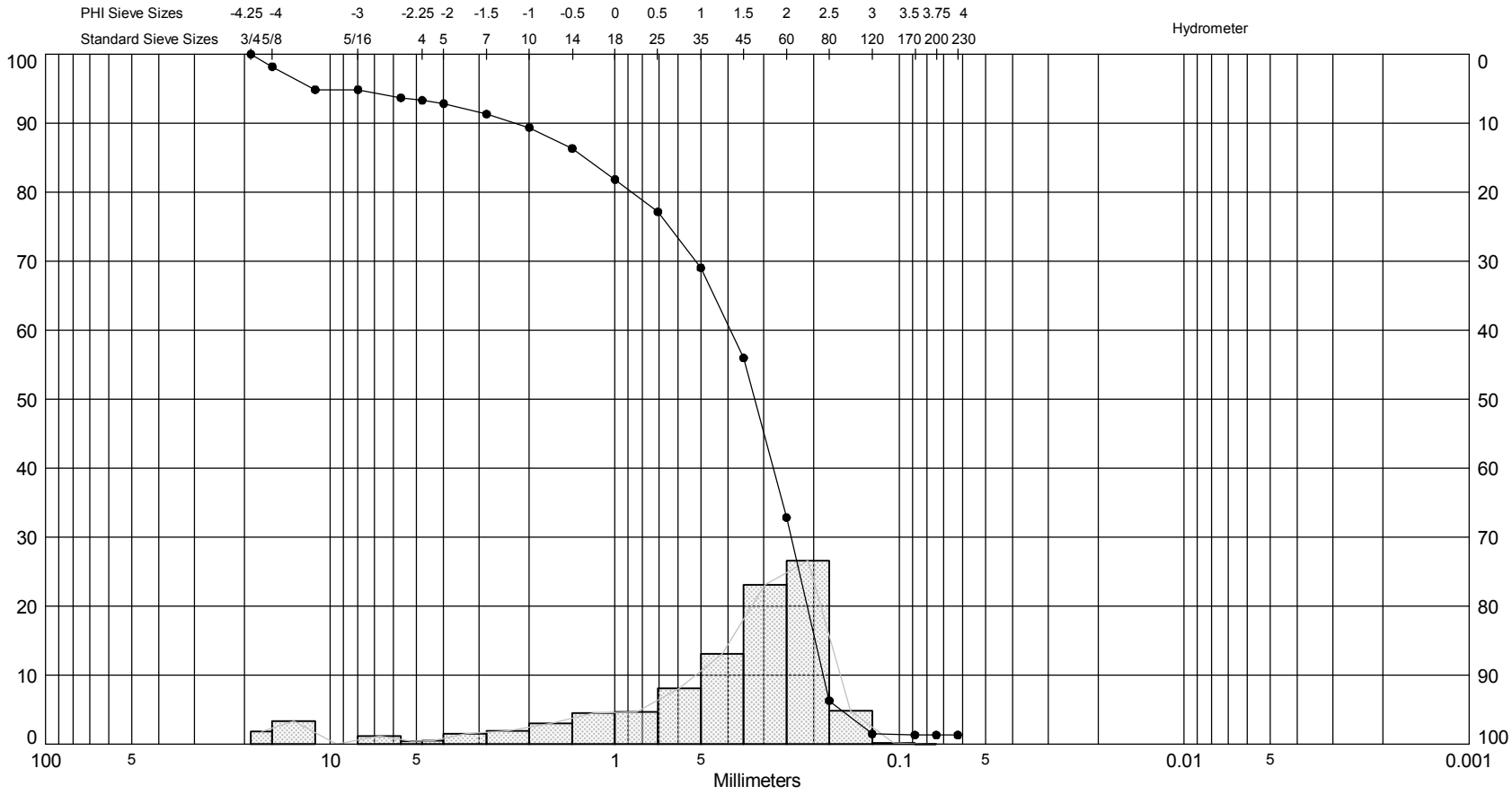
Comments: (1.25"x1.25") and (1.25"x0.5") shell fragments removed, 20.20g

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

Coastal Planning & Engineering
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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 #3	—●—	-8.5	SW	#200 - 1.30 #230 - 1.30			1.63	1.05	-1.72	5.45	1.62

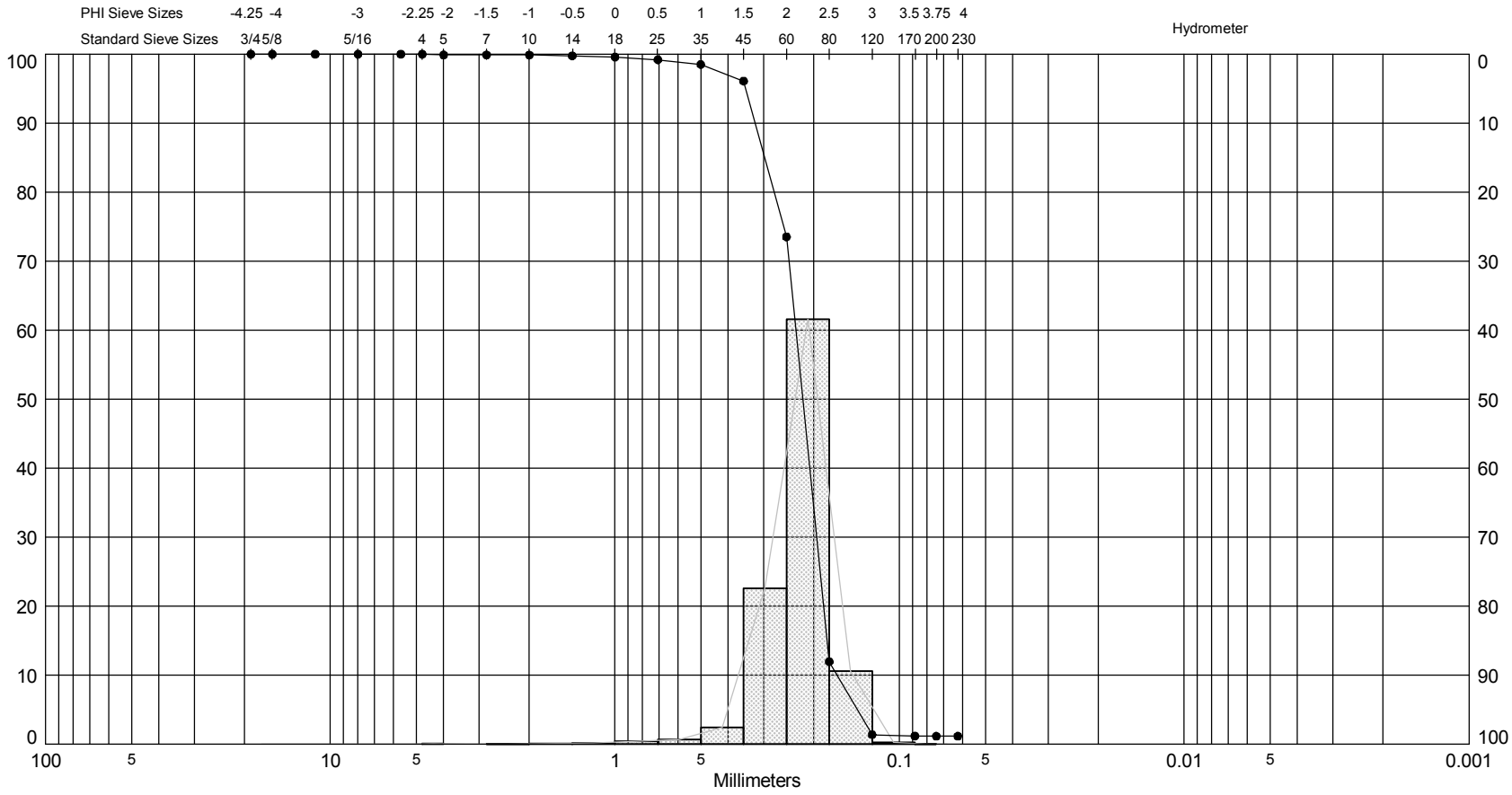
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-17-09
Analyzed By:	KW
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 #4	—●—	-11.0	SP	#200 - 1.14 #230 - 1.14			2.19	2.14	-2.6	21.04	0.42

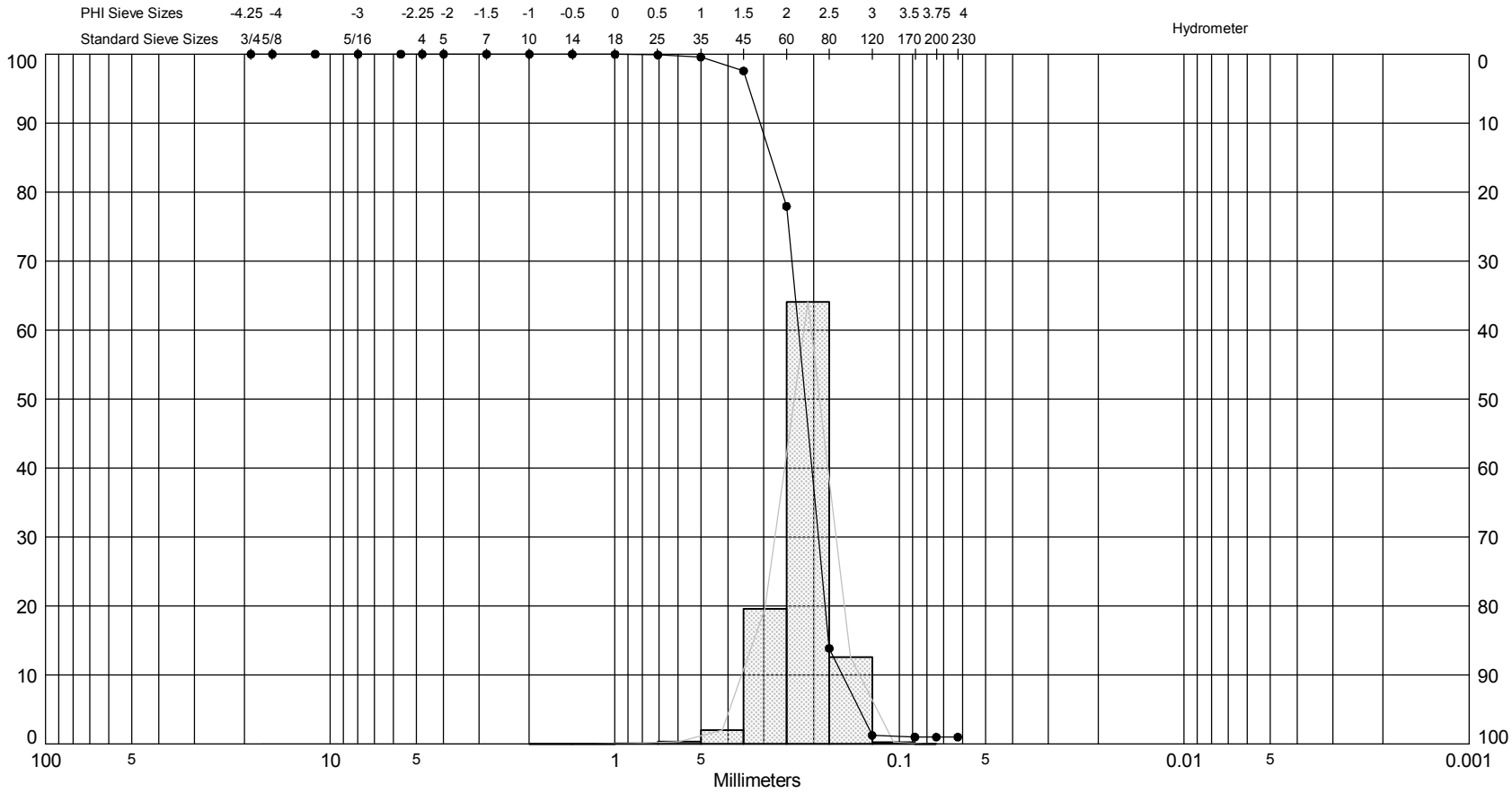
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04A #1	—●—	-11.9	SP	#200 - 0.98 #230 - 0.98			2.22	2.19	-0.78	6.34	0.34

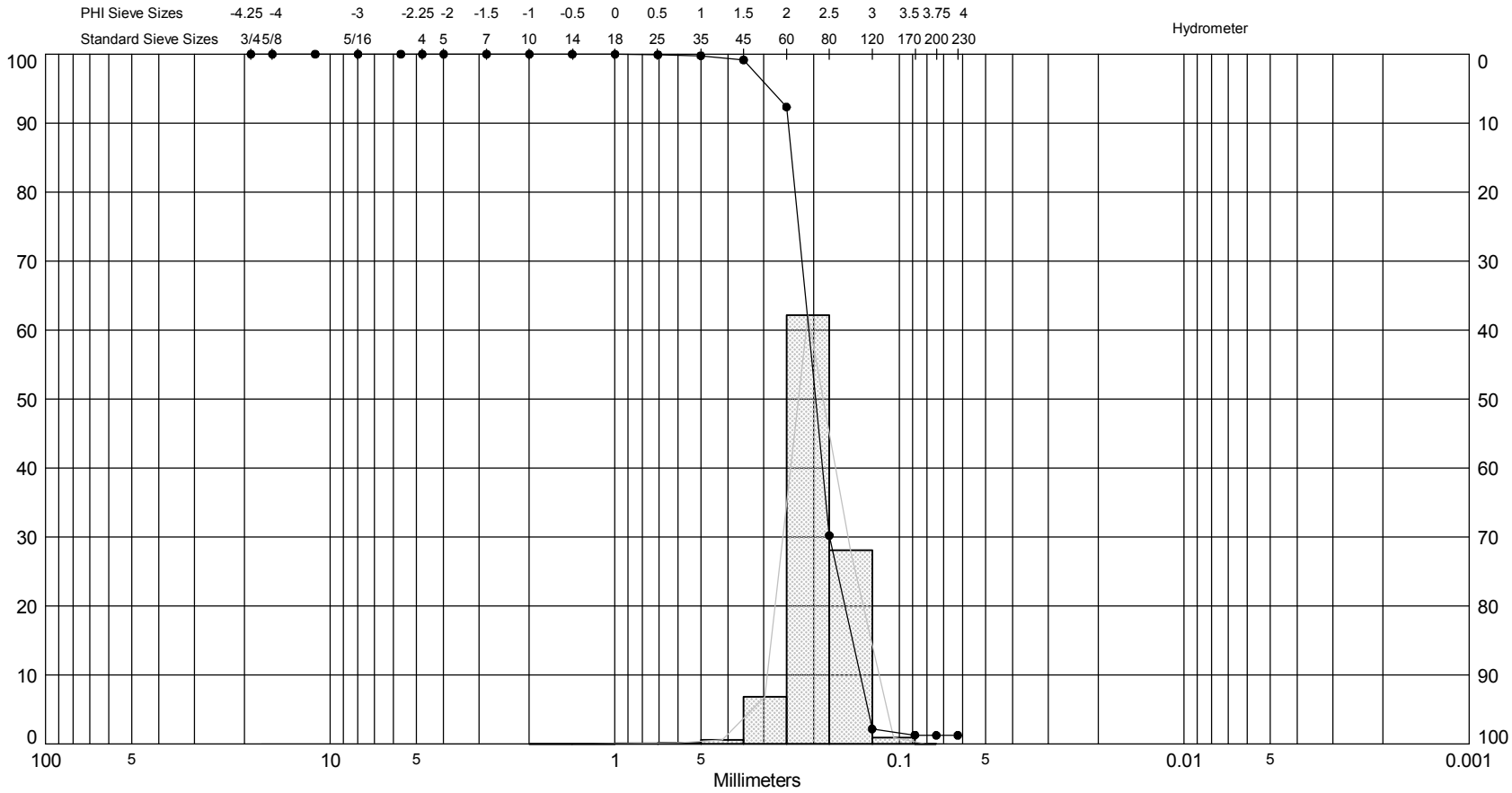
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,477
Northing (Y, ft):	202,102
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04A #2	—●—	-14.9	SP	#200 - 1.24 #230 - 1.24			2.34	2.36	-0.55	7.01	0.32

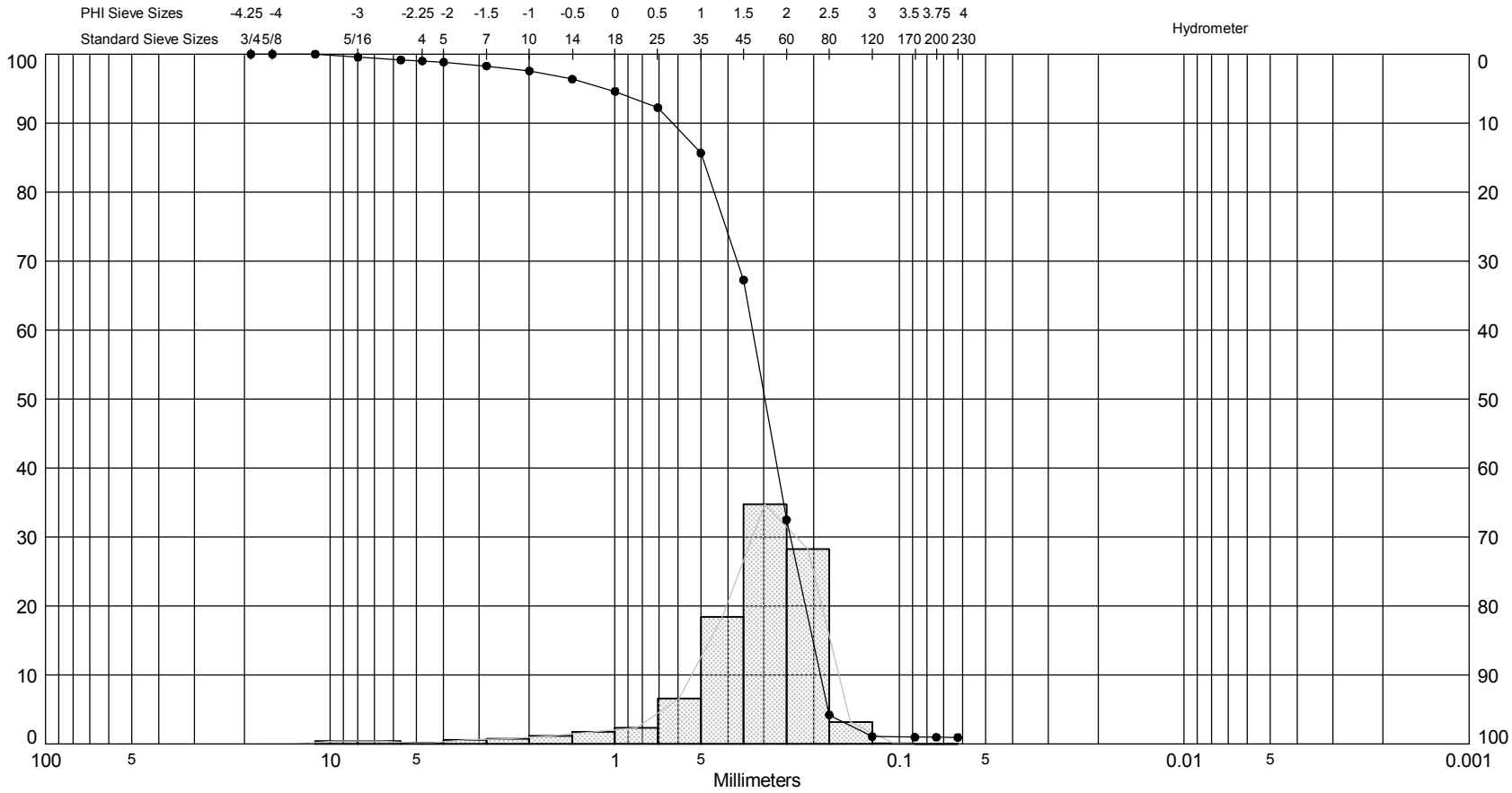
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,477
Northing (Y, ft):	202,102
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04A #3	—●—	-17.1	SW	#200 - 0.96 #230 - 0.95			1.75	1.57	-2.36	10.97	0.87

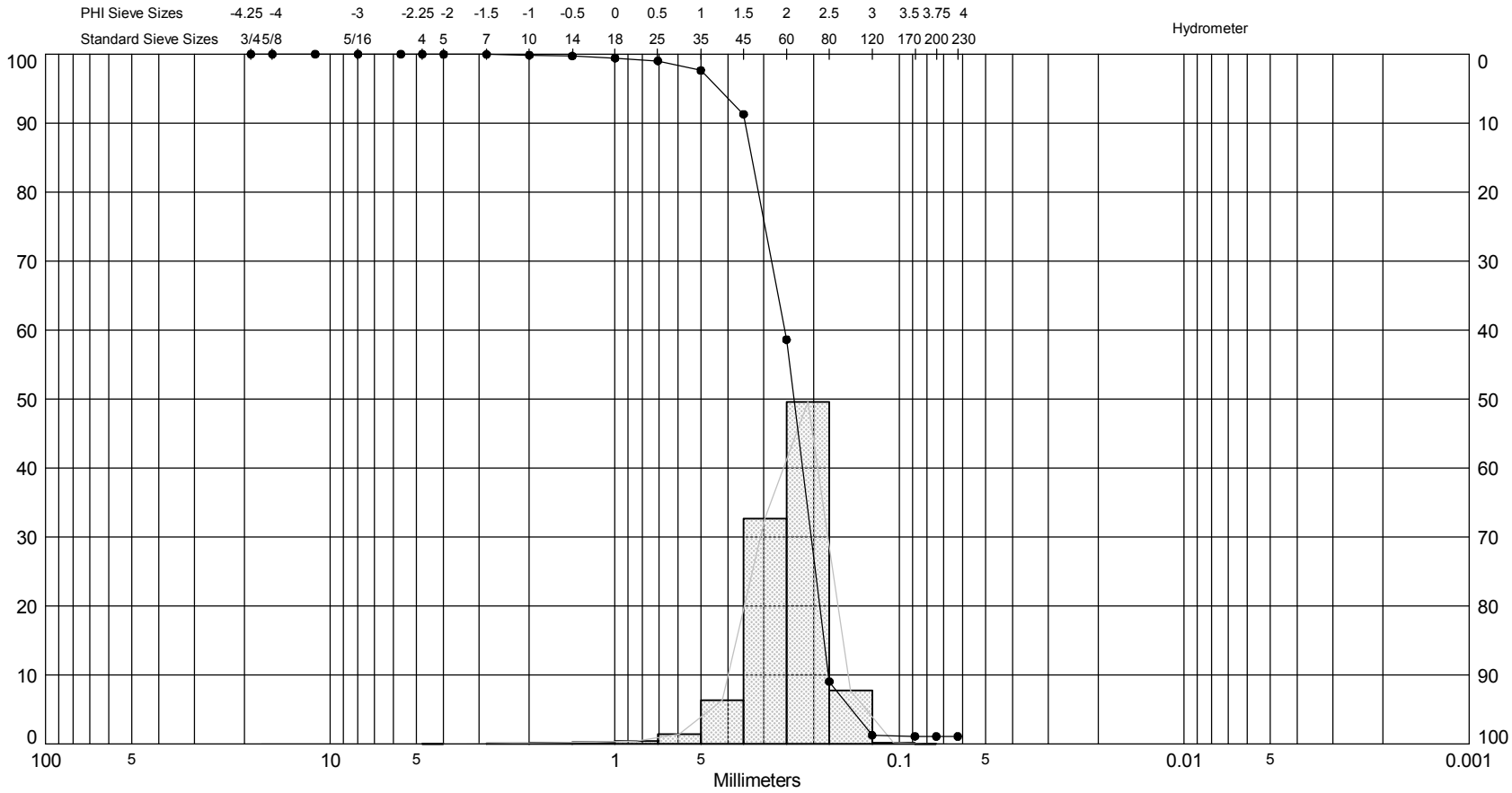
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,477
Northing (Y, ft):	202,102
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04A #4	—●—	-18.9	SP	#200 - 1.09 #230 - 1.09			2.09	2.02	-1.71	11.1	0.46

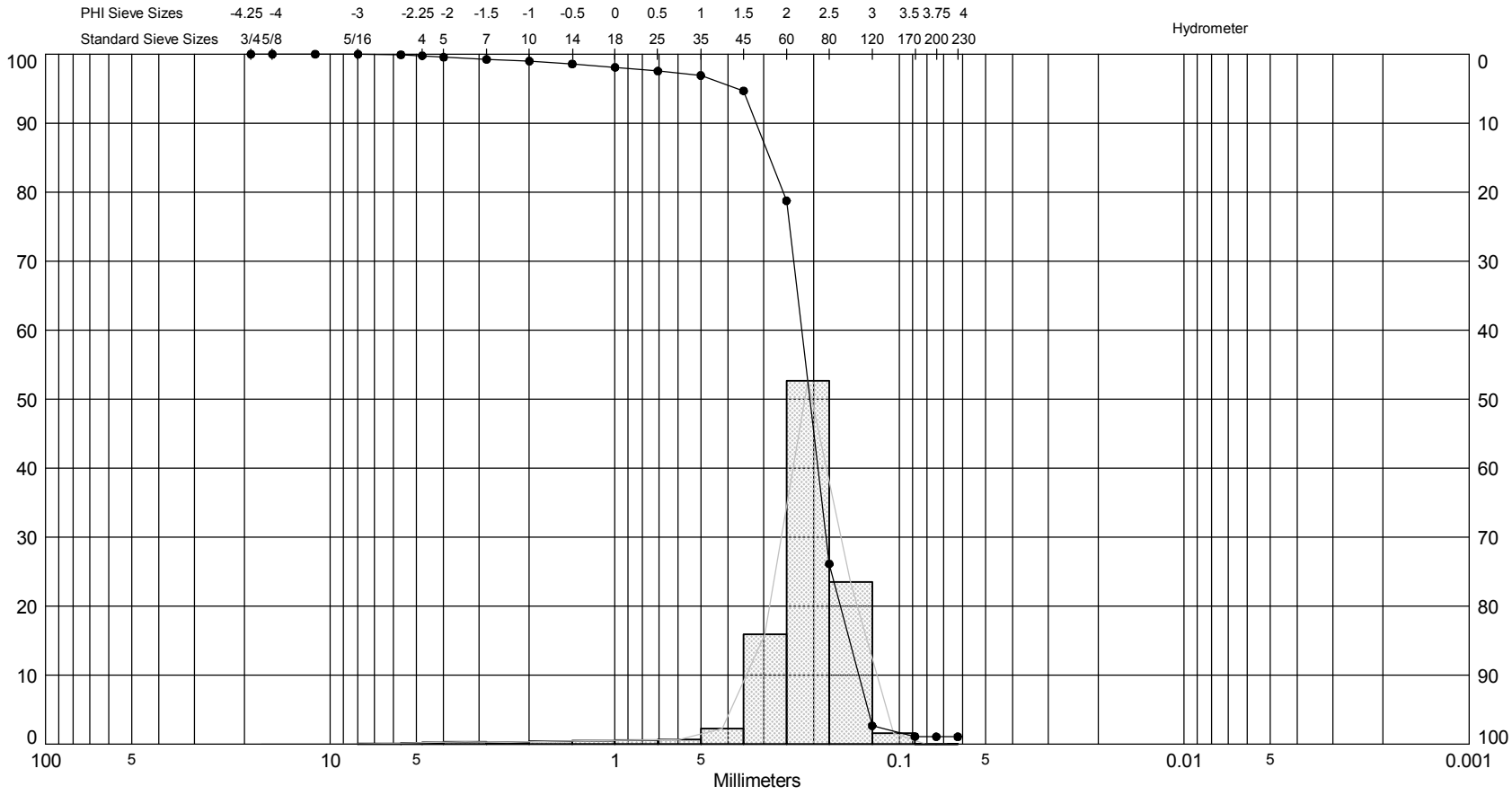
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,477
Northing (Y, ft):	202,102
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 #1	—●—	-4.5	SP	#200 - 1.07 #230 - 1.06			2.27	2.19	-3.45	21.37	0.64

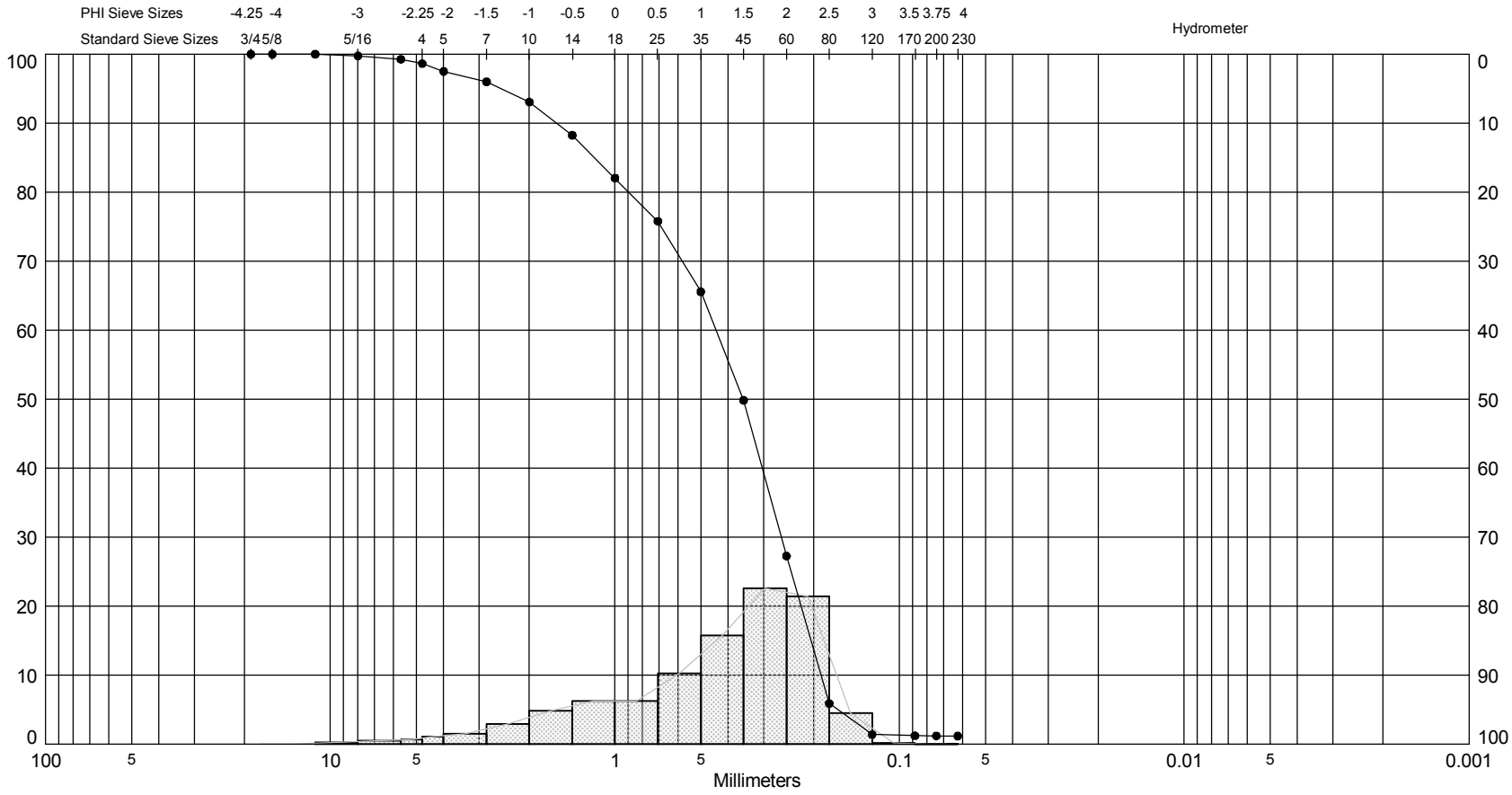
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 #2	—●—	-8.5	SW	#200 - 1.19 #230 - 1.17			1.49	1.13	-1.08	3.7	1.21

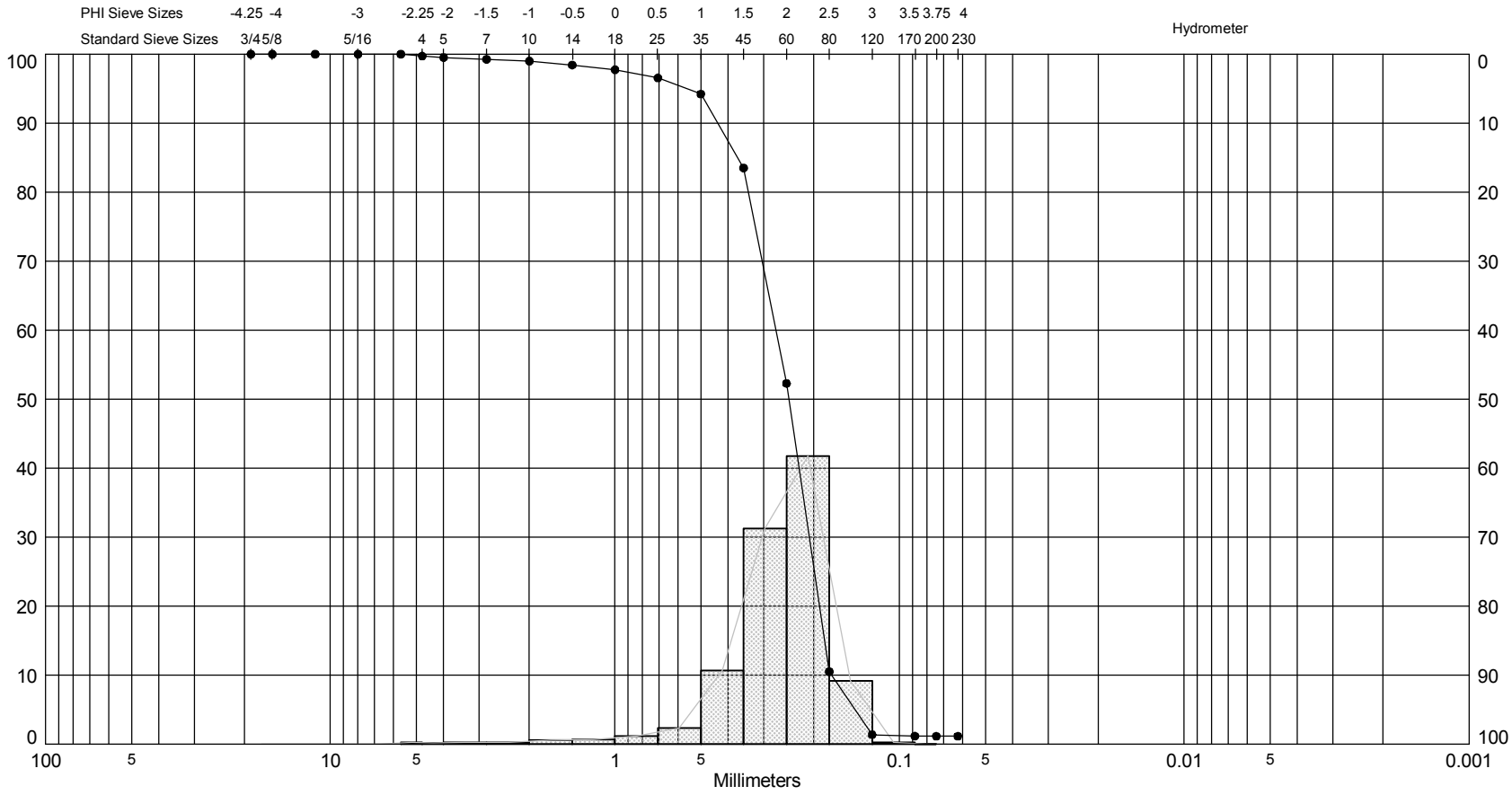
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 #3	—●—	-10.0	SP	#200 - 1.13 #230 - 1.13			2.03	1.9	-2.49	13.5	0.68

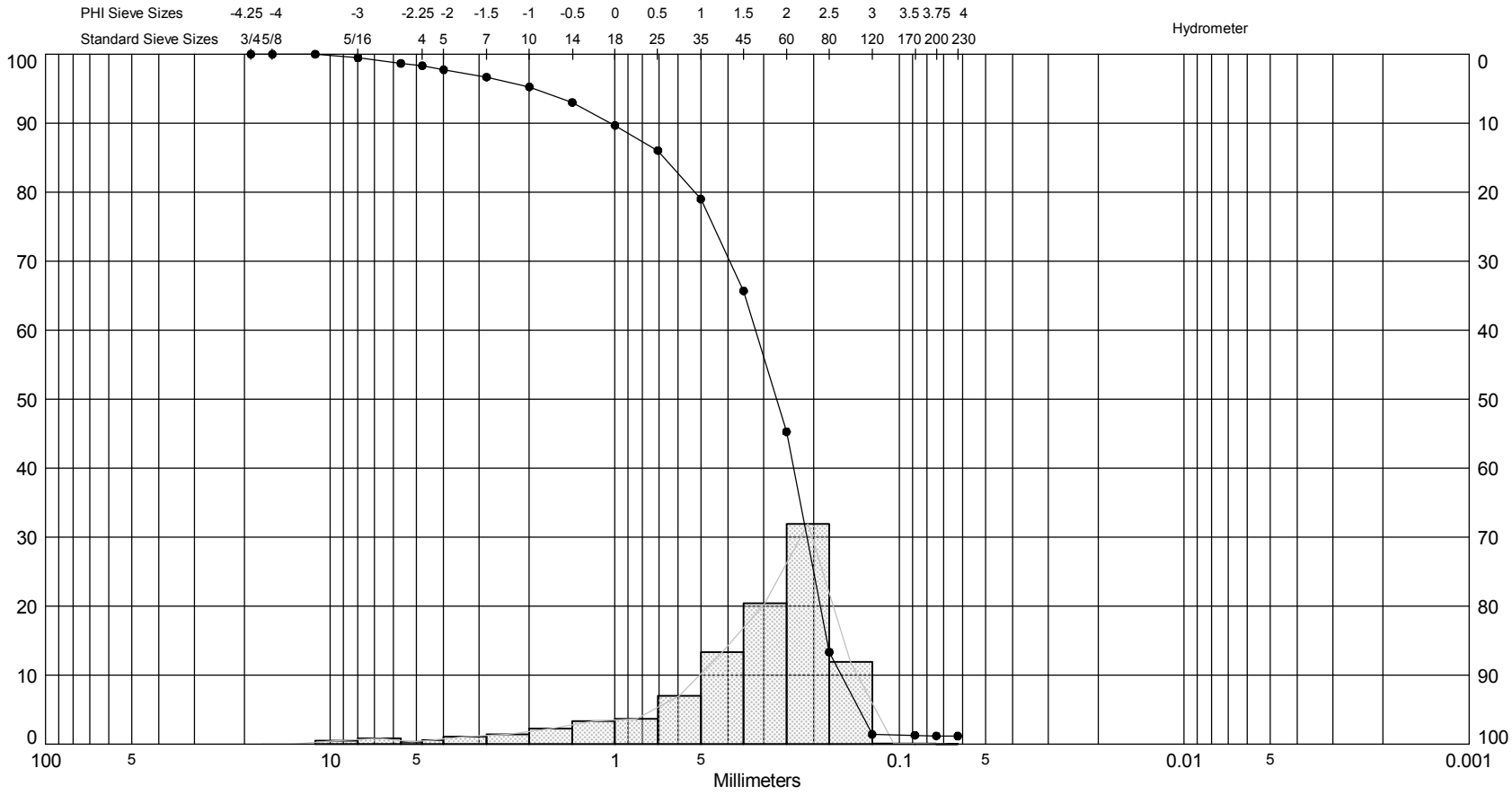
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 #4	—●—	-10.8	SW	#200 - 1.19 #230 - 1.16			1.88	1.54	-1.72	6.19	1.16

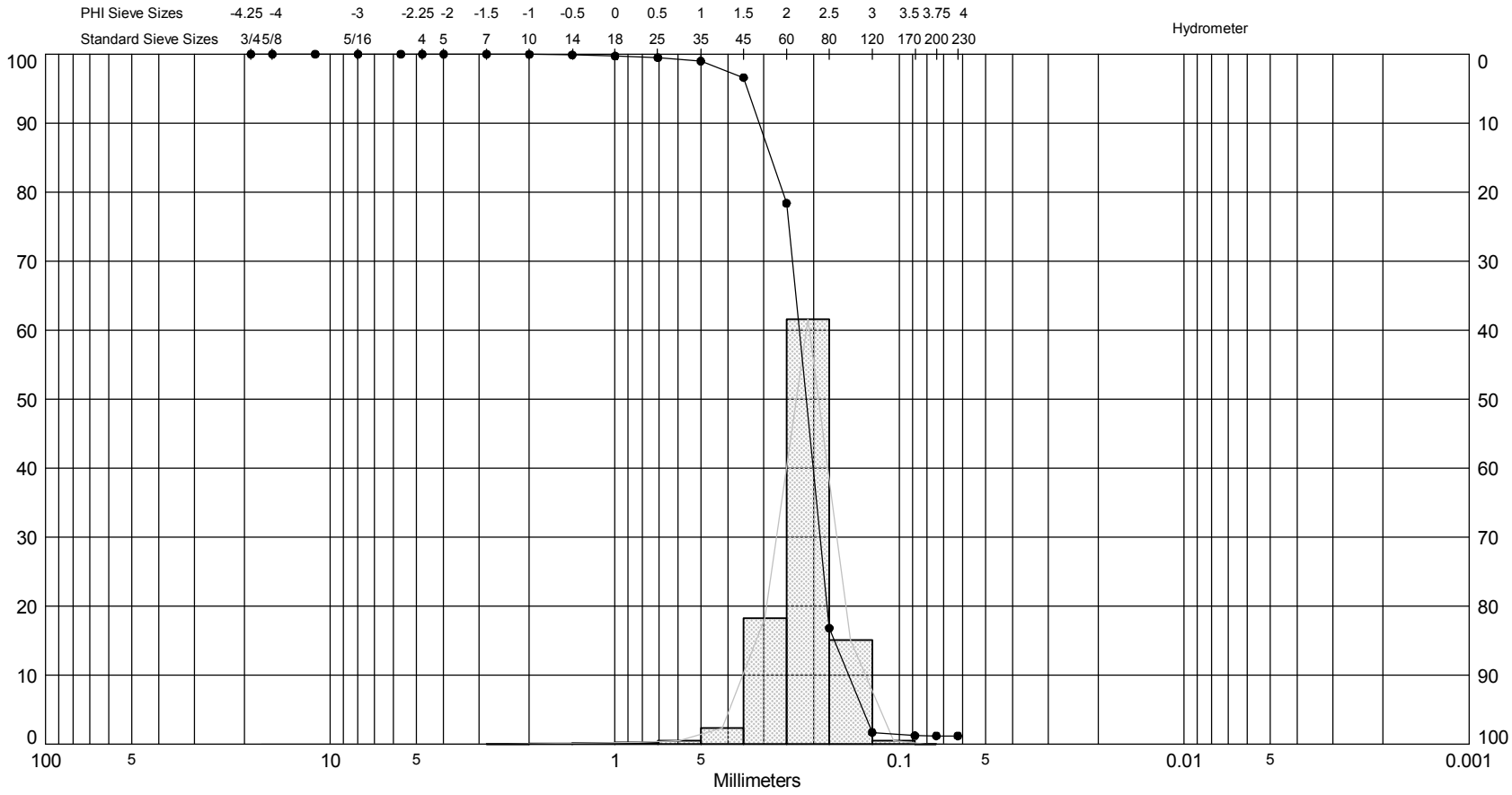
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 #5	—●—	-11.8	SP	#200 - 1.20 #230 - 1.20			2.23	2.2	-1.61	11.75	0.39

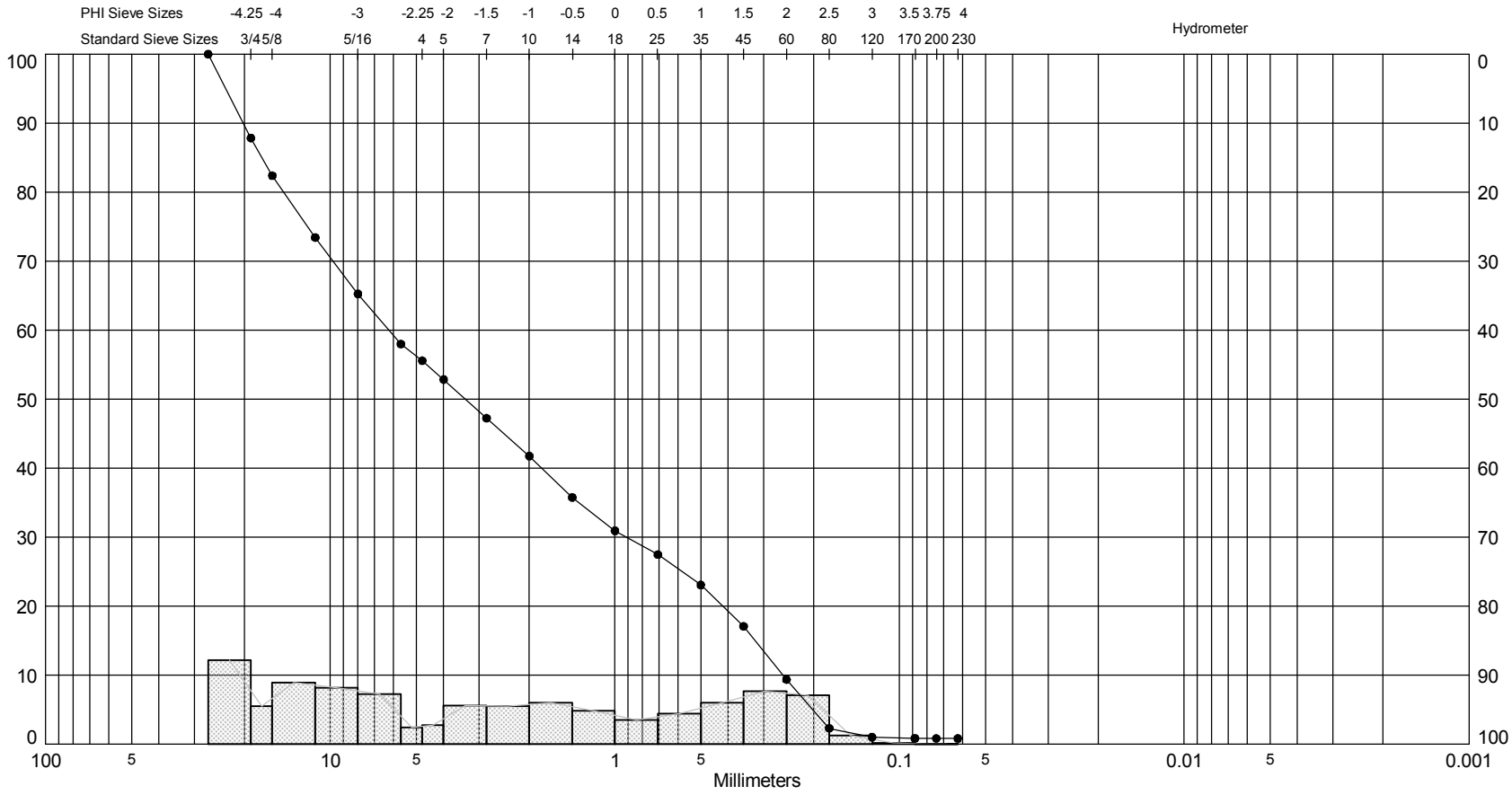
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-19-09
Analyzed By:	KW
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05A #1	—●—	-11.0	SW	#200 - 0.82 #230 - 0.80				-1.47	0.27	1.7	2.31

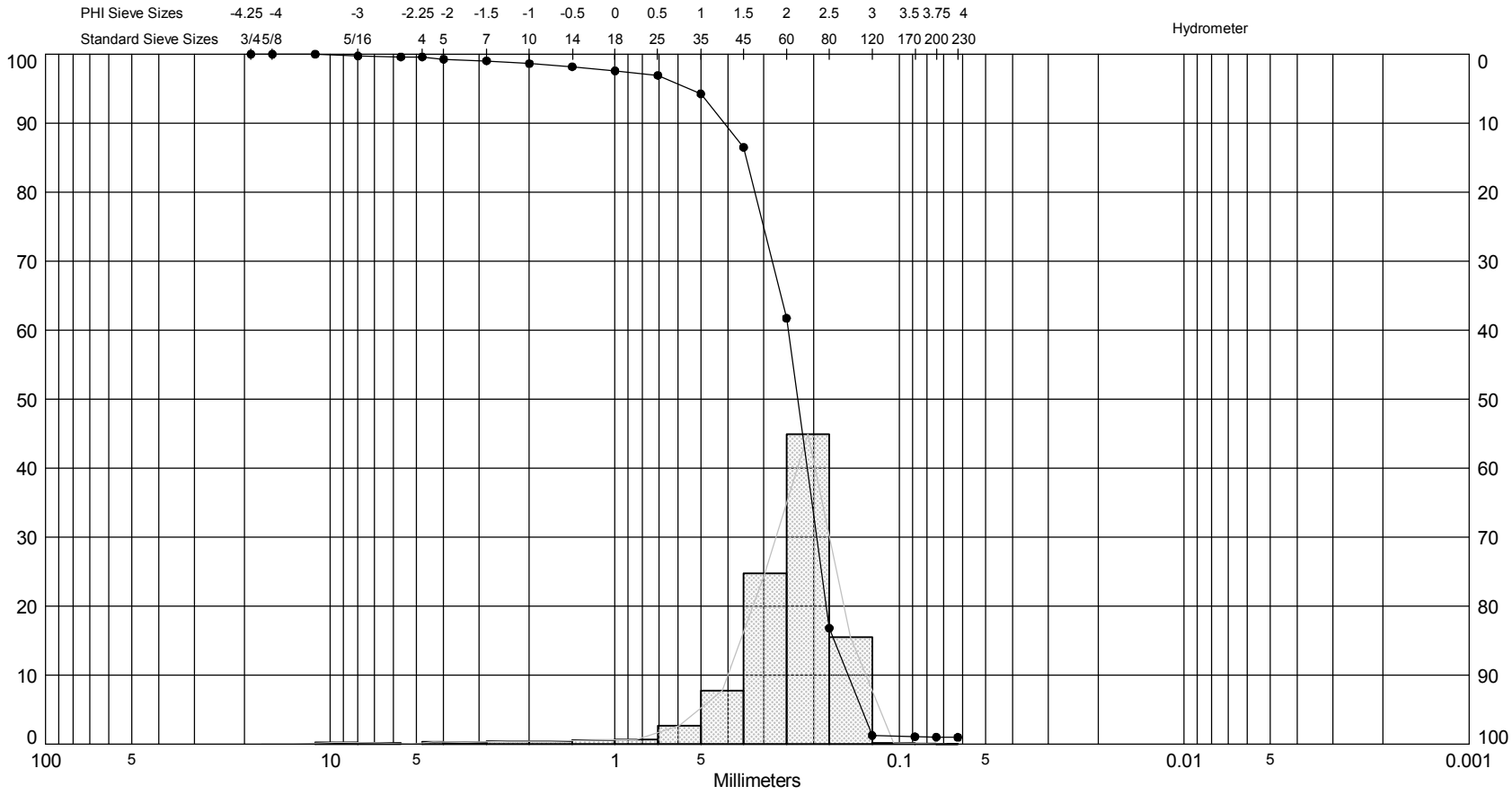
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,174
Northing (Y, ft):	201,399
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05A #2	—●—	-14.9	SP	#200 - 1.01 #230 - 0.97			2.13	1.99	-3	17.26	0.74

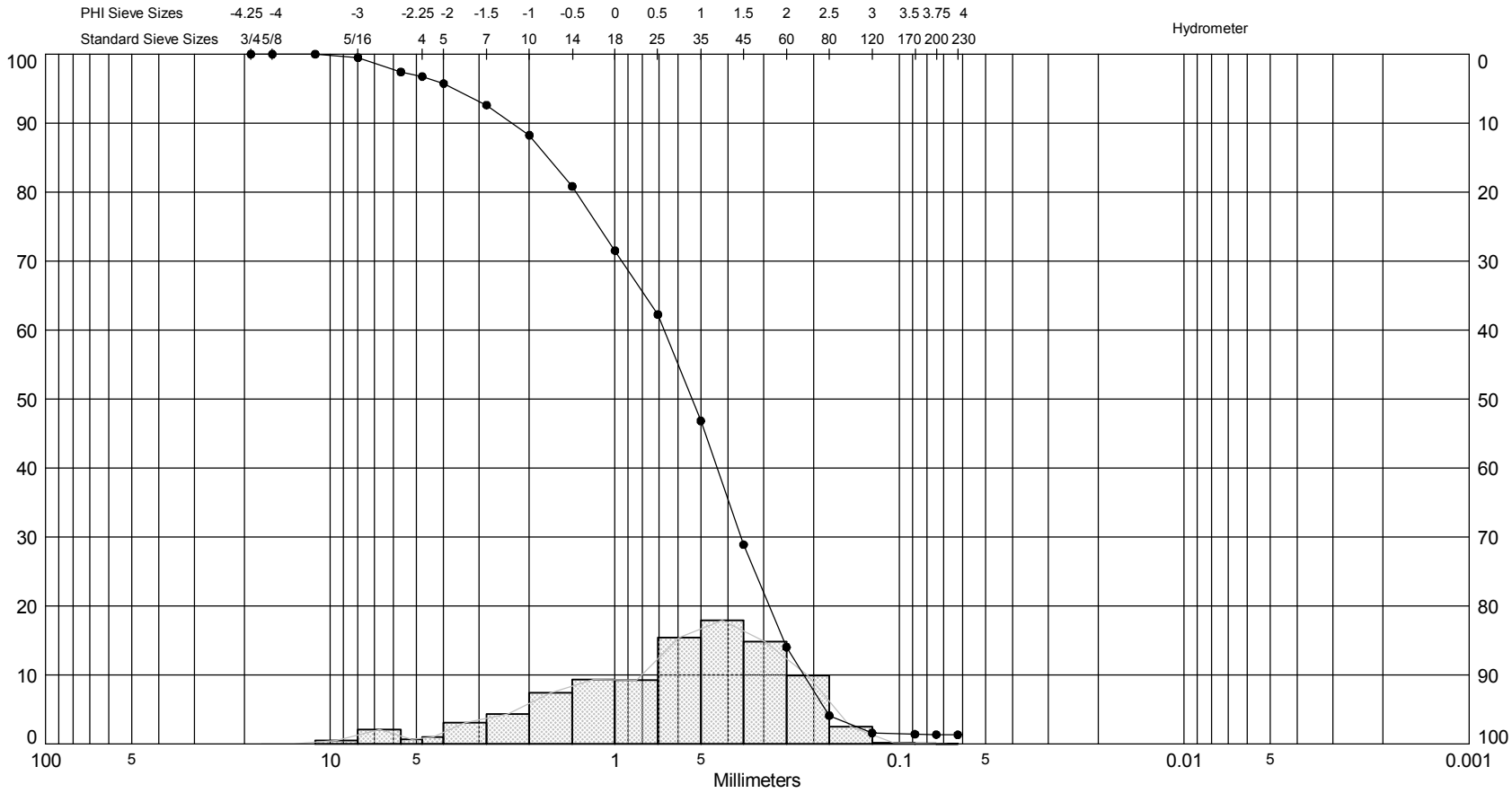
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,174
Northing (Y, ft):	201,399
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05A #3	—●—	-16.8	SW	#200 - 1.35 #230 - 1.32			0.9	0.63	-0.7	3.05	1.3

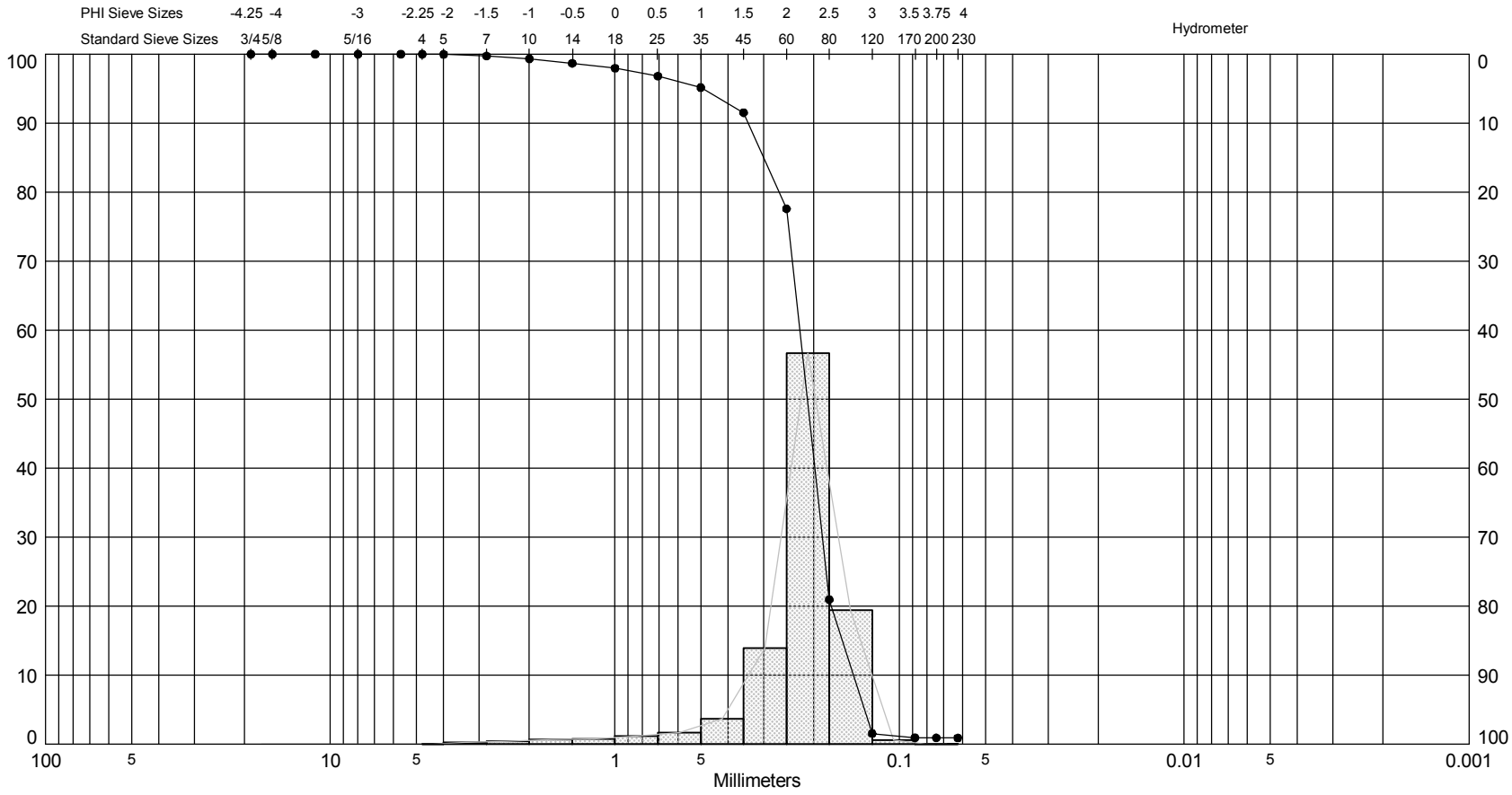
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	09-01-09
Analyzed By:	KW
Easting (X, ft):	2,388,174
Northing (Y, ft):	201,399
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05A #4	—●—	-17.8	SP	#200 - 0.90 #230 - 0.88			2.24	2.14	-2.72	13.66	0.63

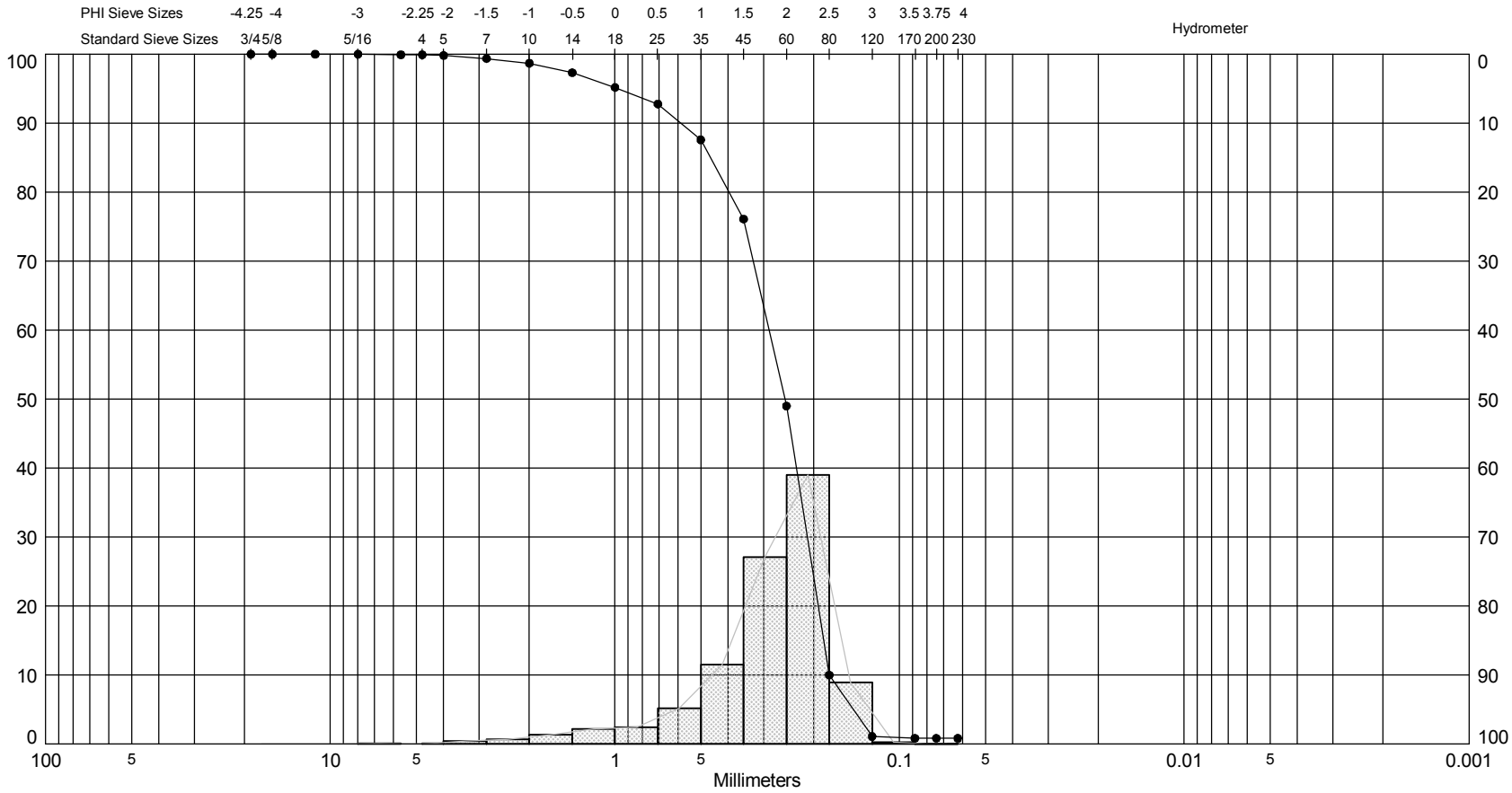
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,174
Northing (Y, ft):	201,399
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05A #5	—●—	-19.0	SP	#200 - 0.81 #230 - 0.80			1.98	1.77	-1.8	7.32	0.81

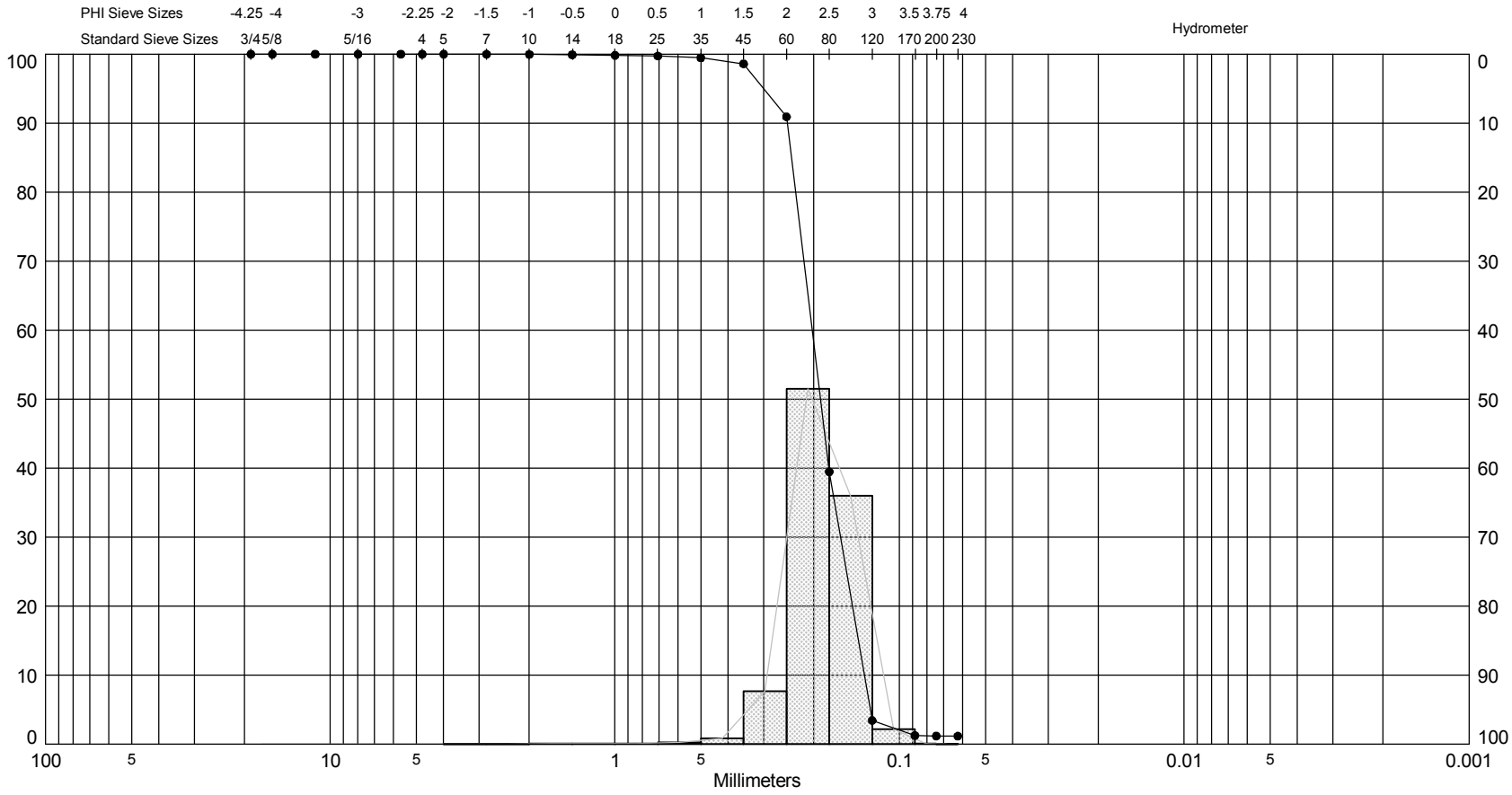
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,174
Northing (Y, ft):	201,399
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 #1	—●—	-3.1	SP	#200 - 1.17 #230 - 1.15			2.4	2.4	-1.42	12.31	0.38

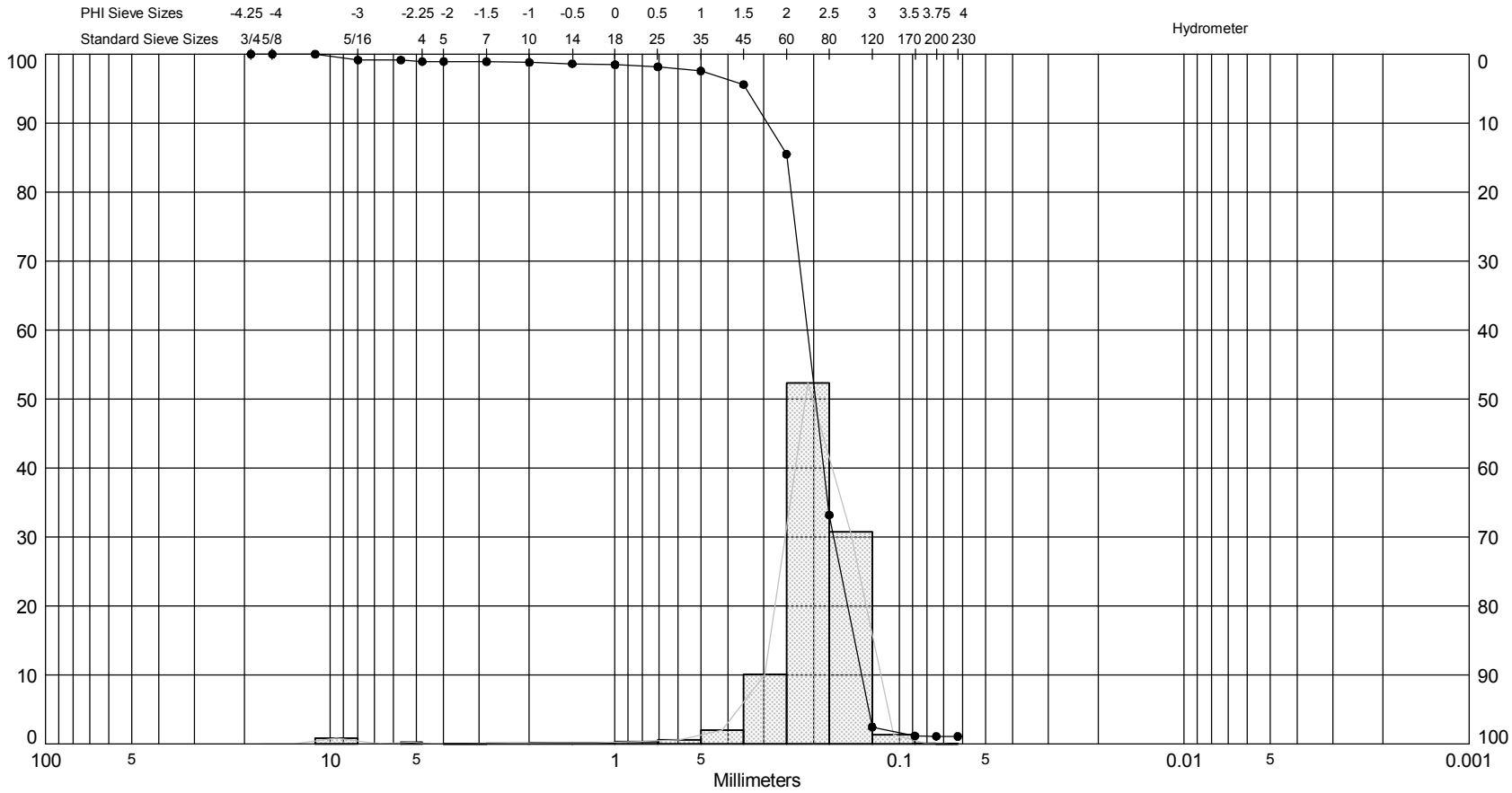
Comments:

Depths and elevations based on measured values

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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 #2	—●—	-7.1	SP	#200 - 1.10 #230 - 1.09			2.34	2.26	-4.96	36.13	0.72

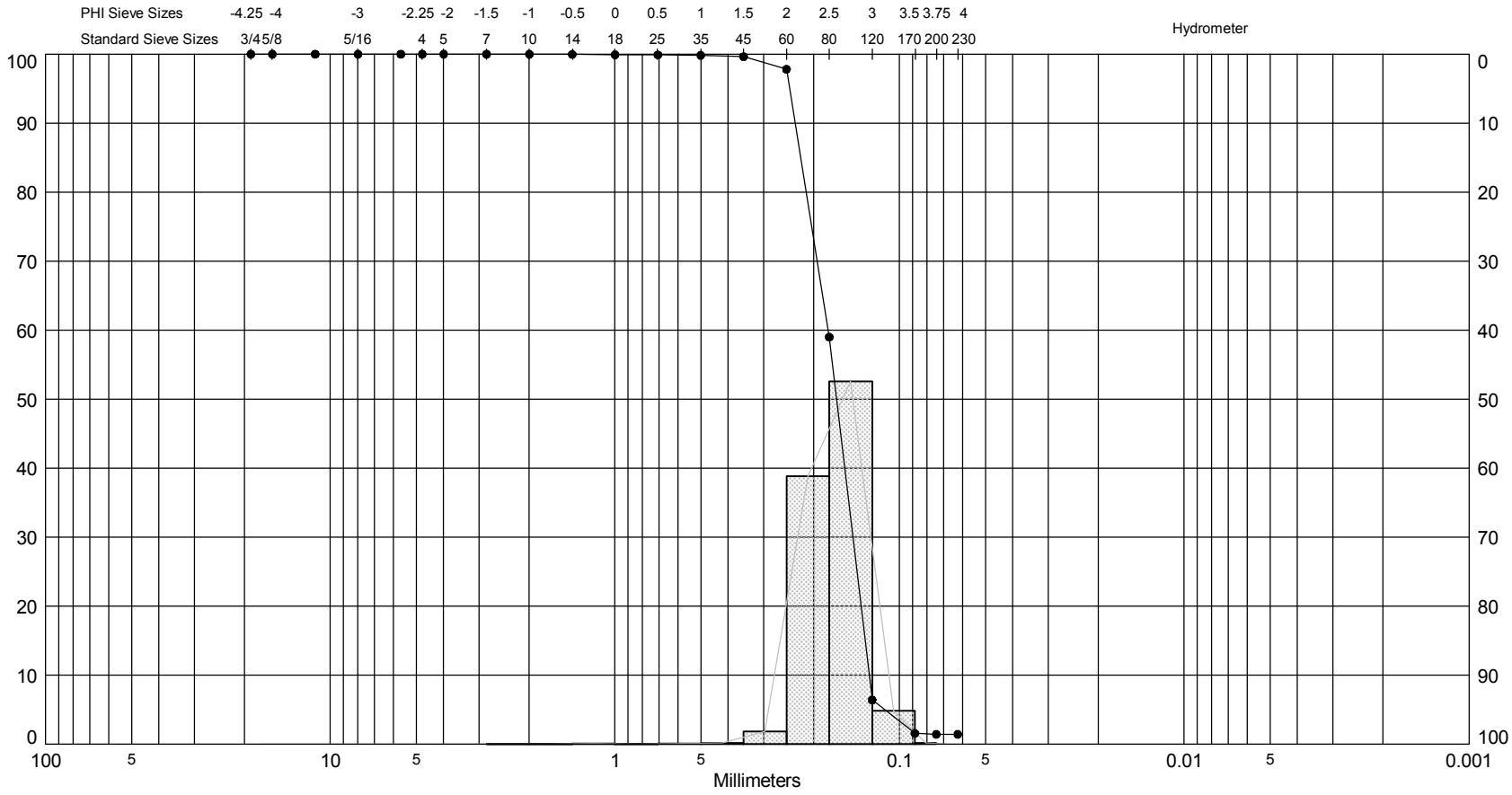
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 #3	—●—	-12.6	SP	#200 - 1.42 #230 - 1.42			2.59	2.55	-0.91	10.1	0.33

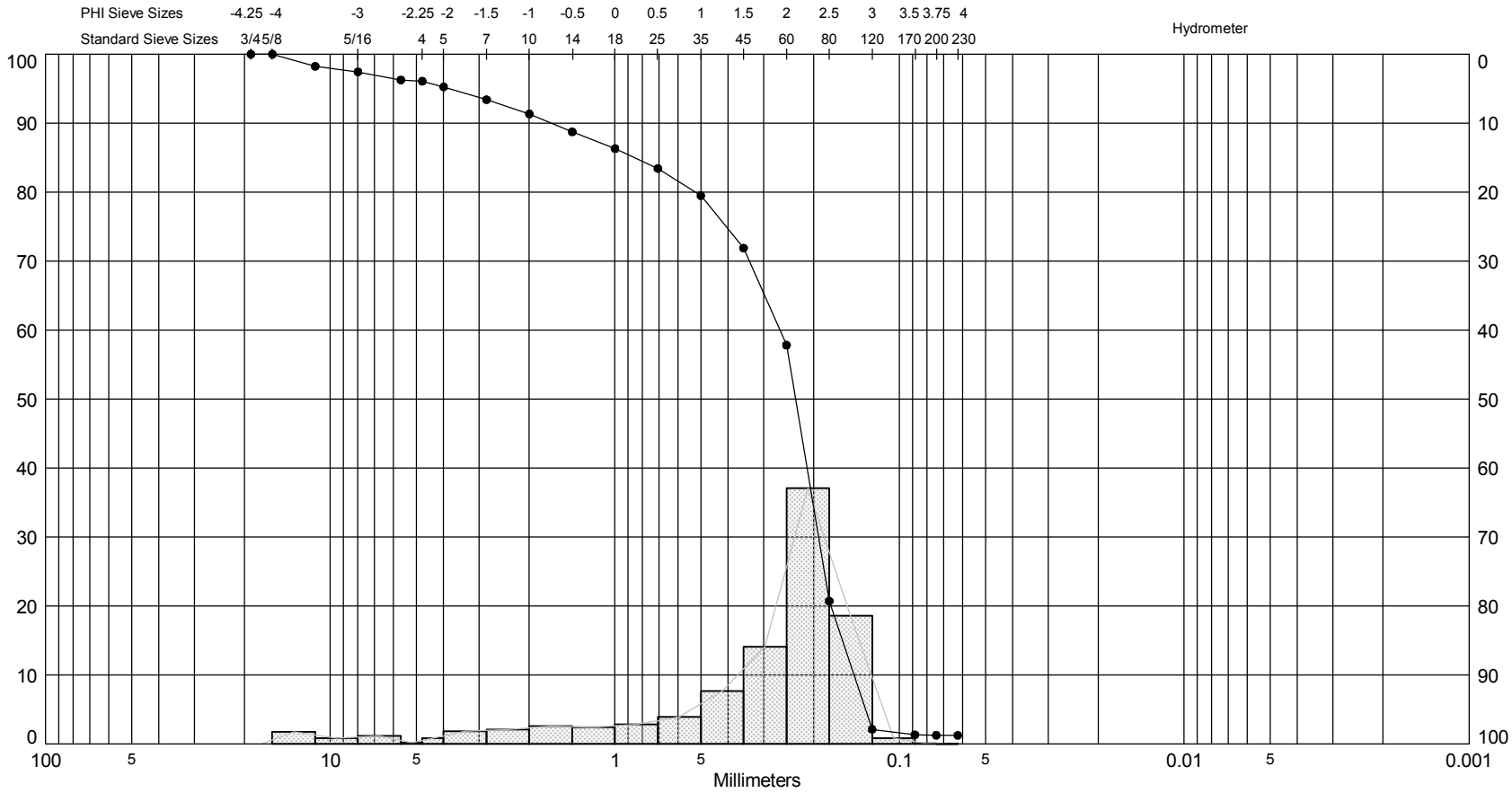
Comments:

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

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 #4	—●—	-14.9	SW	#200 - 1.25 #230 - 1.23			2.11	1.54	-1.88	6.04	1.48

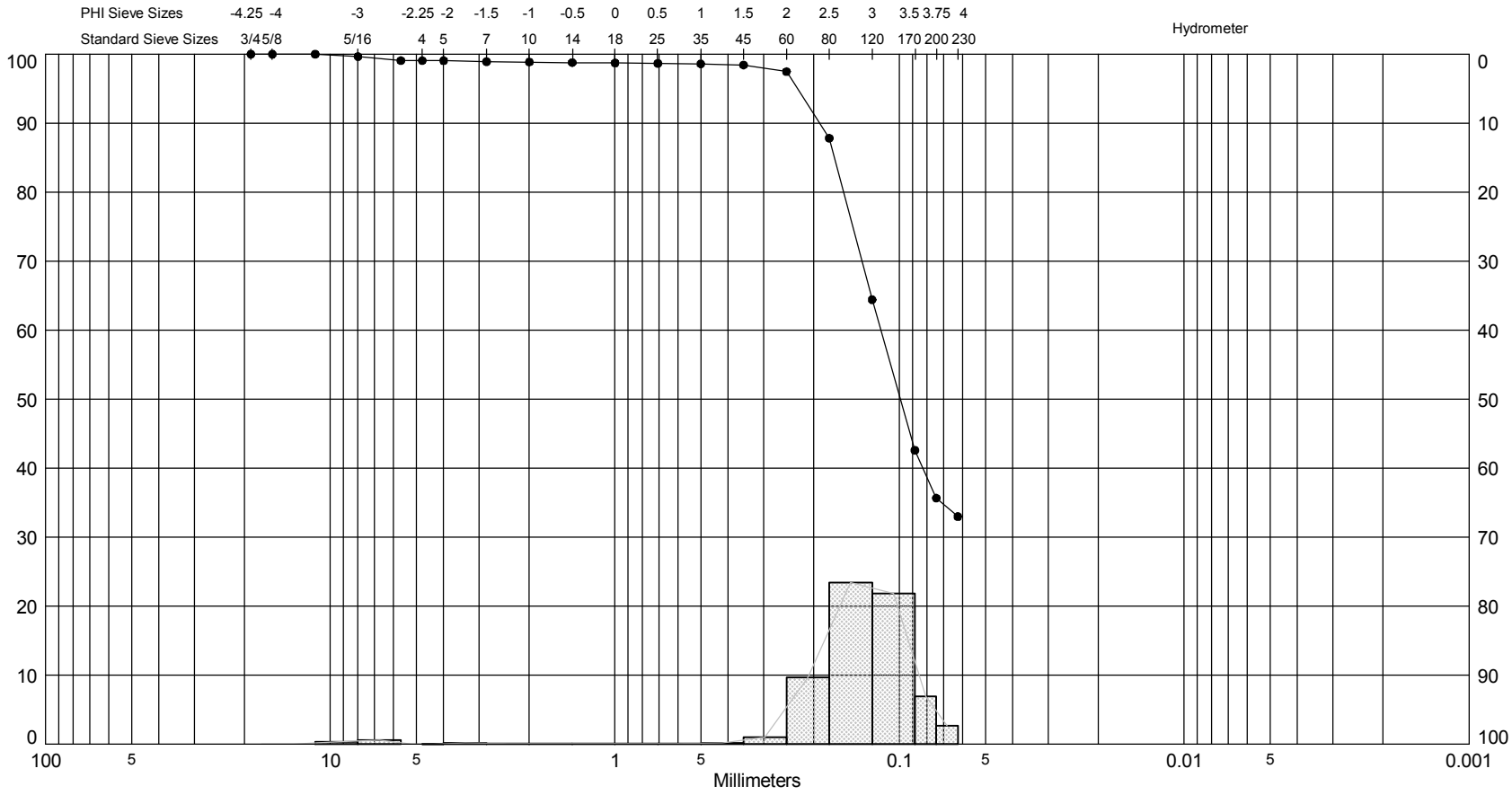
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 #5	—●—	-16.1	SC	#200 - 35.65 #230 - 32.97			3.33	2.85	-4.29	27.62	0.89

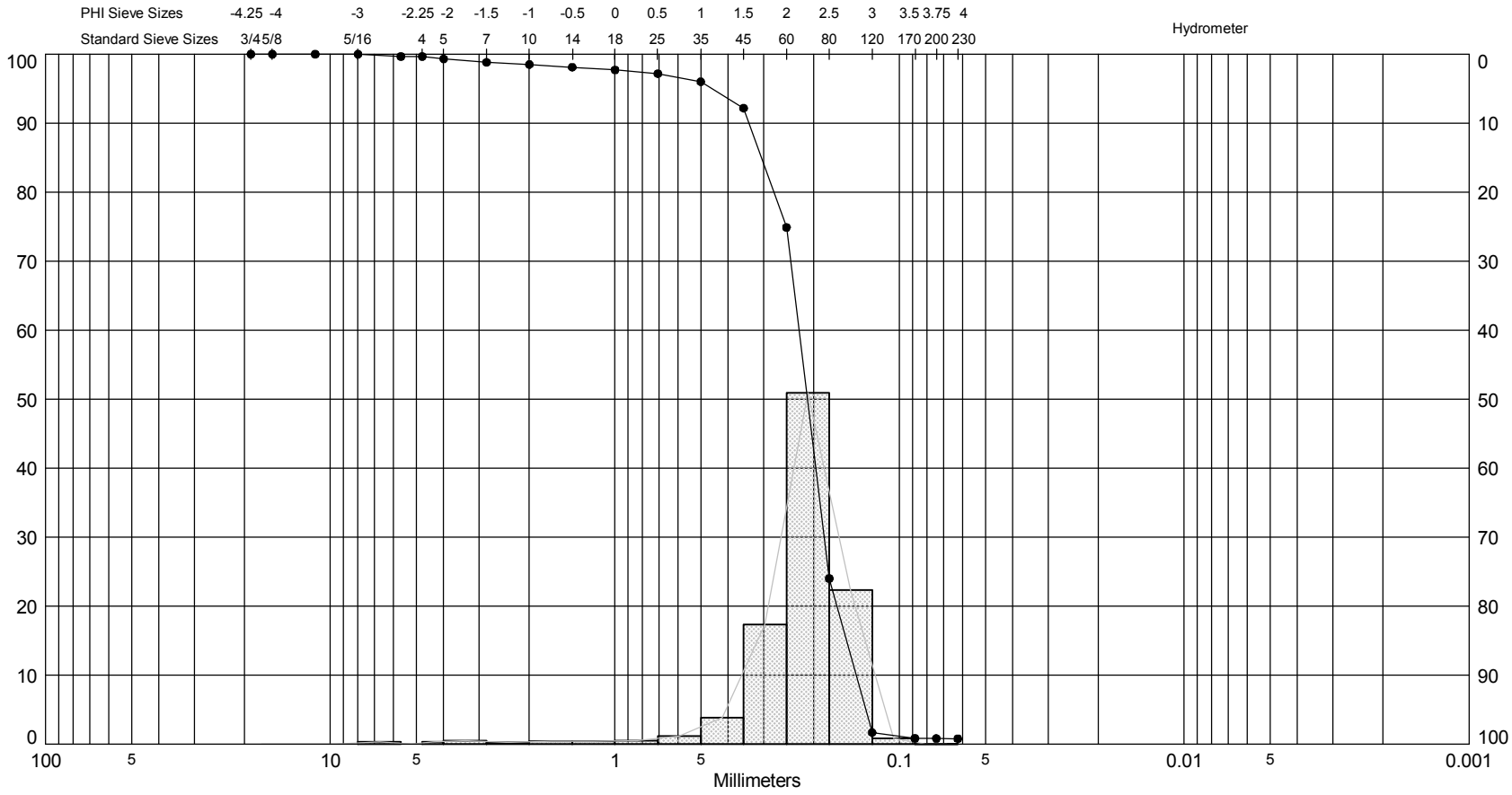
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07 #1	—●—	-5.7	SP	#200 - 0.80 #230 - 0.79			2.24	2.13	-3.44	19.81	0.72

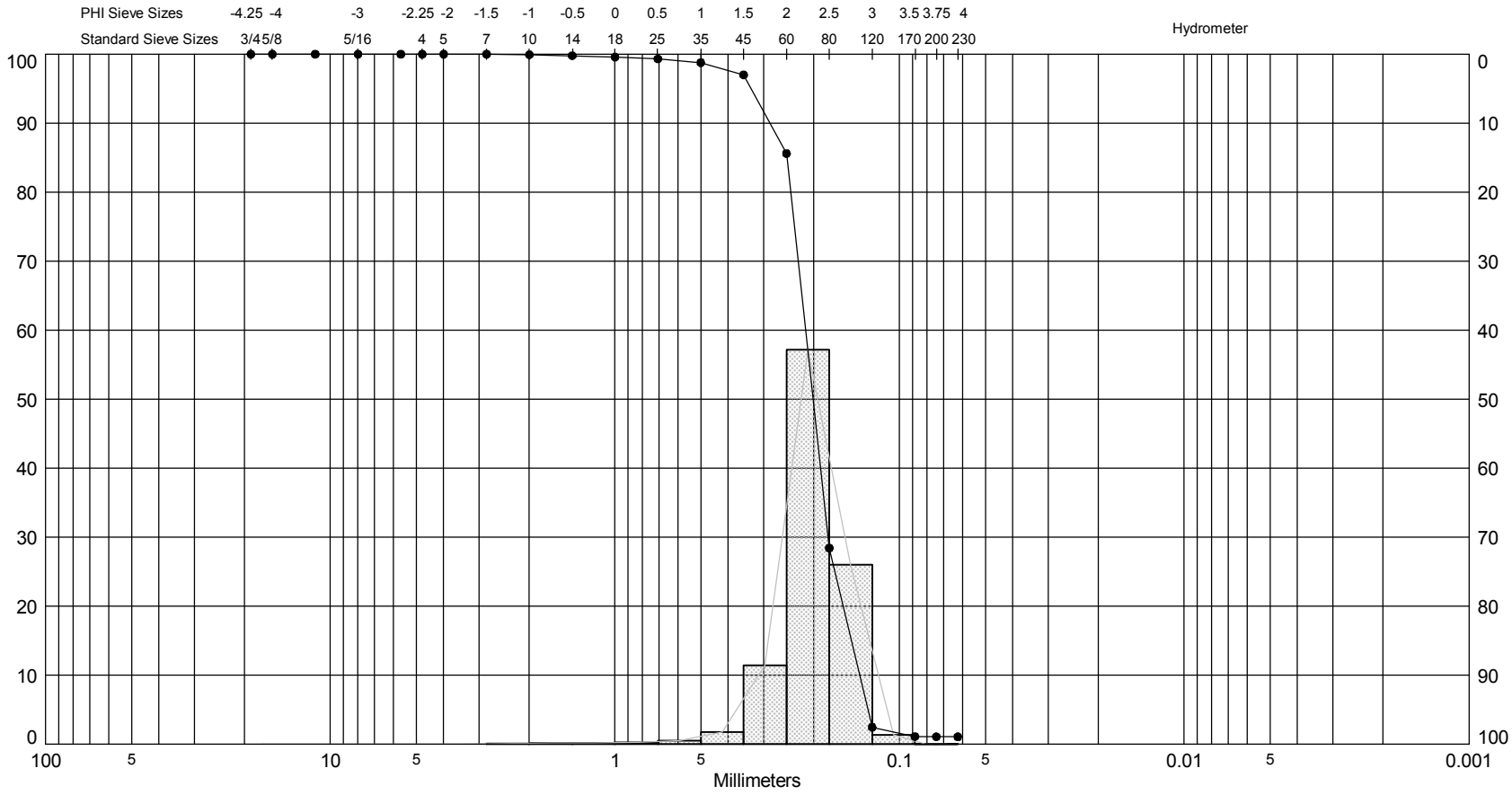
Comments:

Depths and elevations based on measured values

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FL 33431
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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07 #2	—●—	-11.7	SP	#200 - 1.06 #230 - 1.05			2.31	2.29	-1.92	13.68	0.43

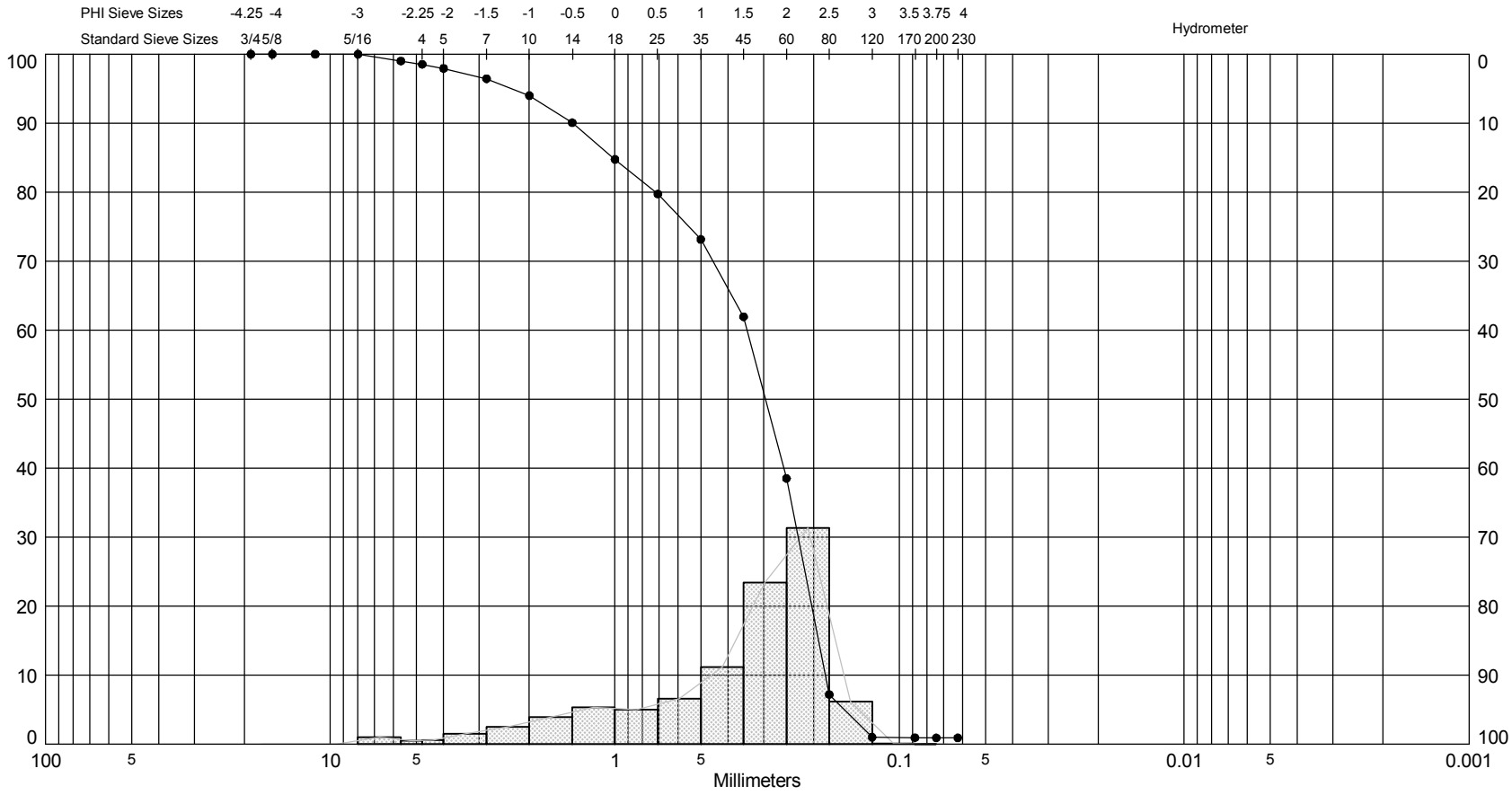
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07 #3	—●—	-14.2	SW	#200 - 0.90 #230 - 0.90			1.76	1.35	-1.35	4.27	1.2

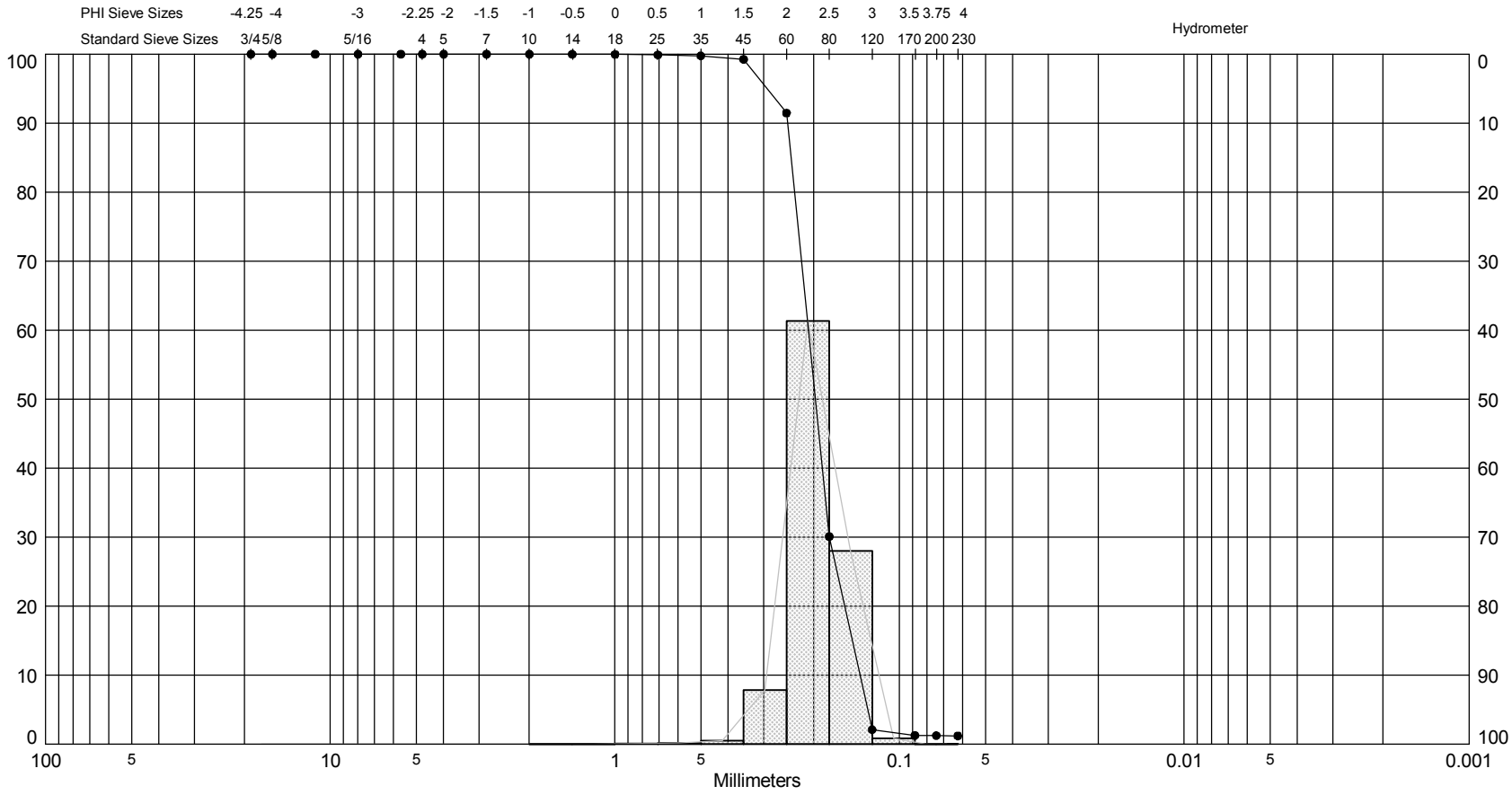
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07 #4	—●—	-16.0	SP	#200 - 1.23 #230 - 1.20			2.34	2.35	-0.56	7.21	0.32

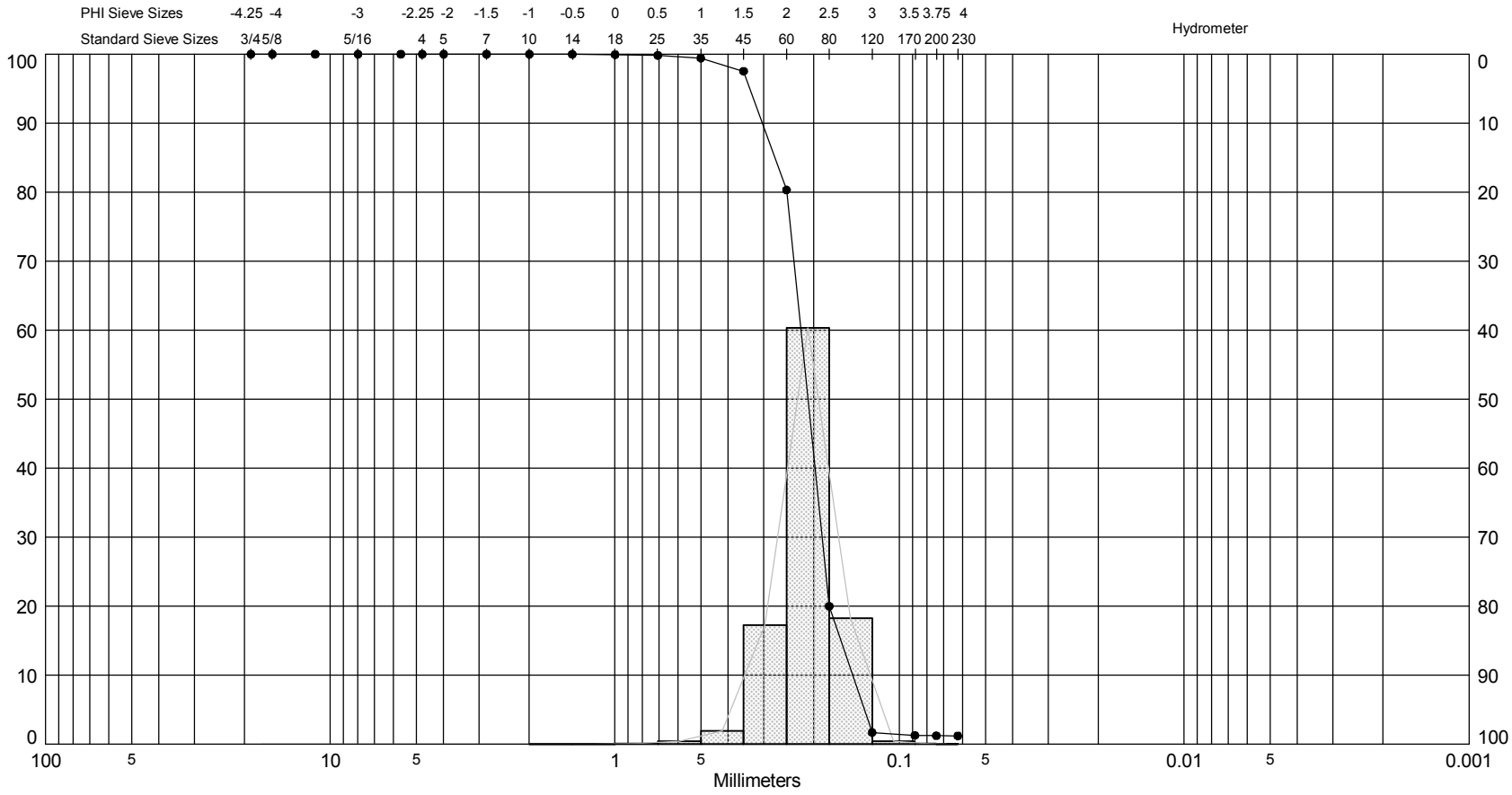
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-20-09
Analyzed By:	KW
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07A #1	—●—	-18.7	SP	#200 - 1.21 #230 - 1.20			2.25	2.23	-0.76	6.3	0.36

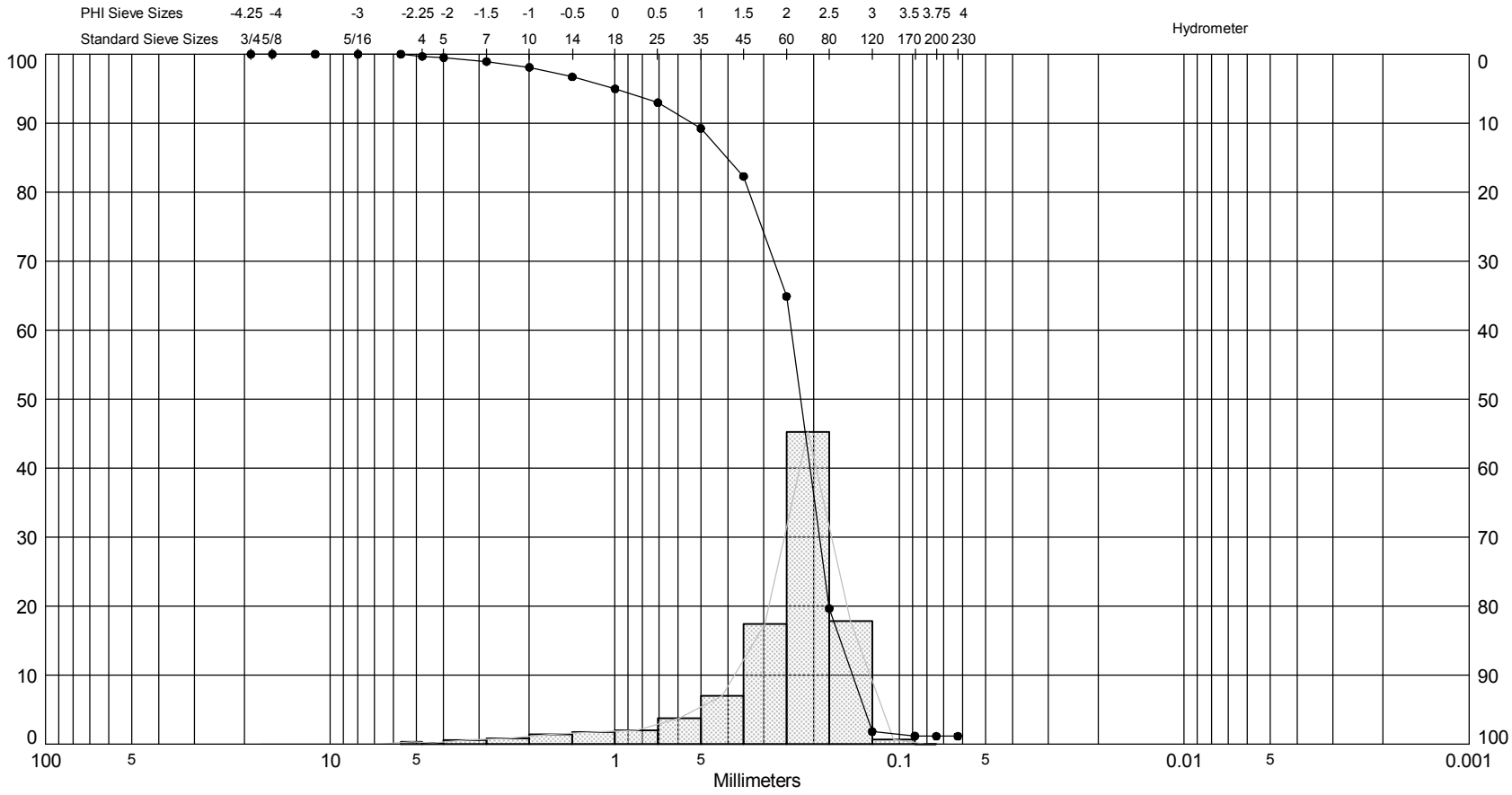
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-08 #1	—●—	-9.0	SW	#200 - 1.13 #230 - 1.13			2.16	1.93	-2.15	8.54	0.88

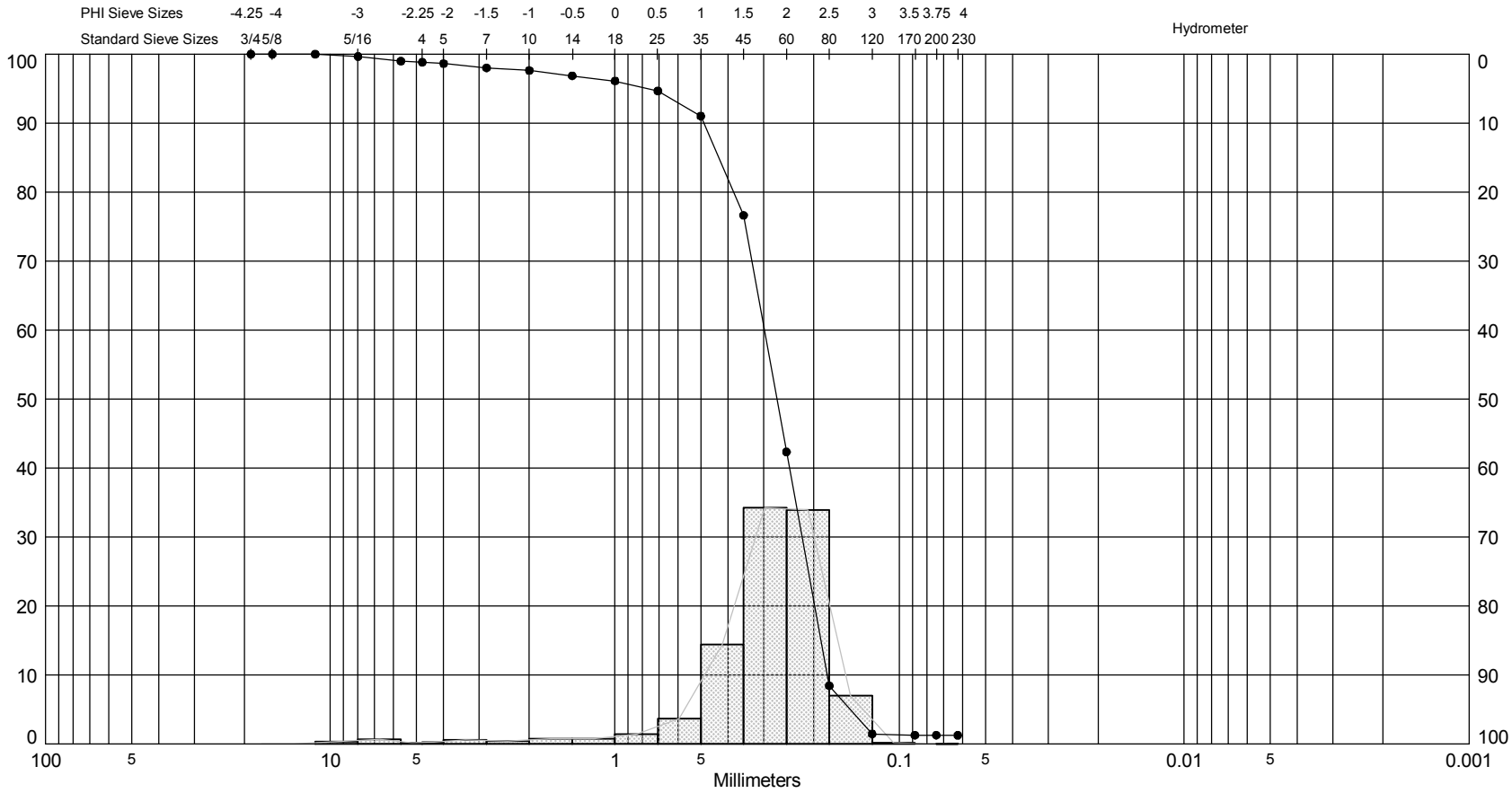
Comments:

Depths and elevations based on measured values

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FL 33431
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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,411
Northing (Y, ft):	200,087
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-08 #2	—●—	-14.2	SW	#200 - 1.27 #230 - 1.24			1.89	1.73	-2.8	13.98	0.86

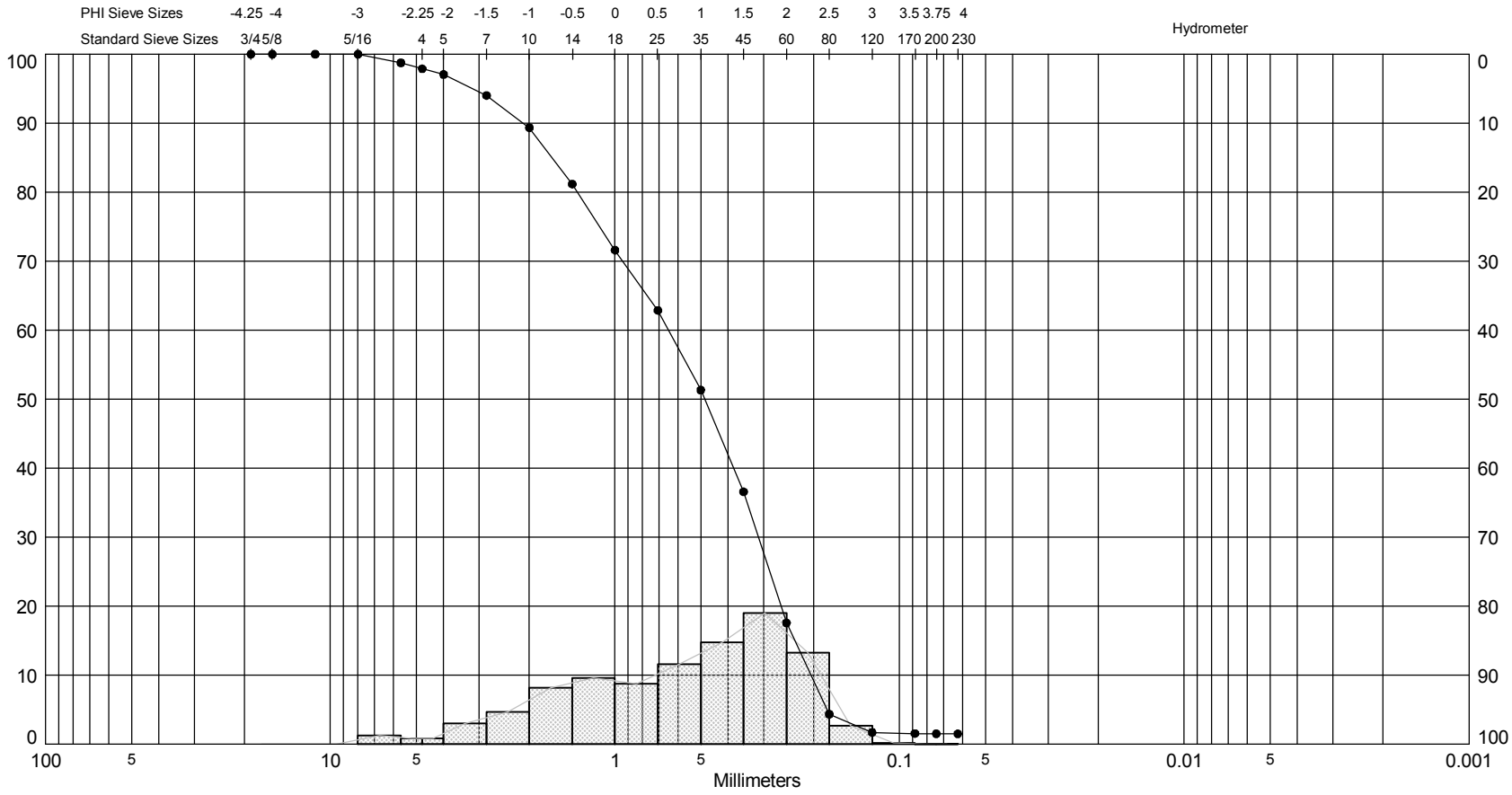
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,411
Northing (Y, ft):	200,087
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-08 #3	—●—	-17.3	SW	#200 - 1.50 #230 - 1.48			1.04	0.74	-0.62	2.63	1.29

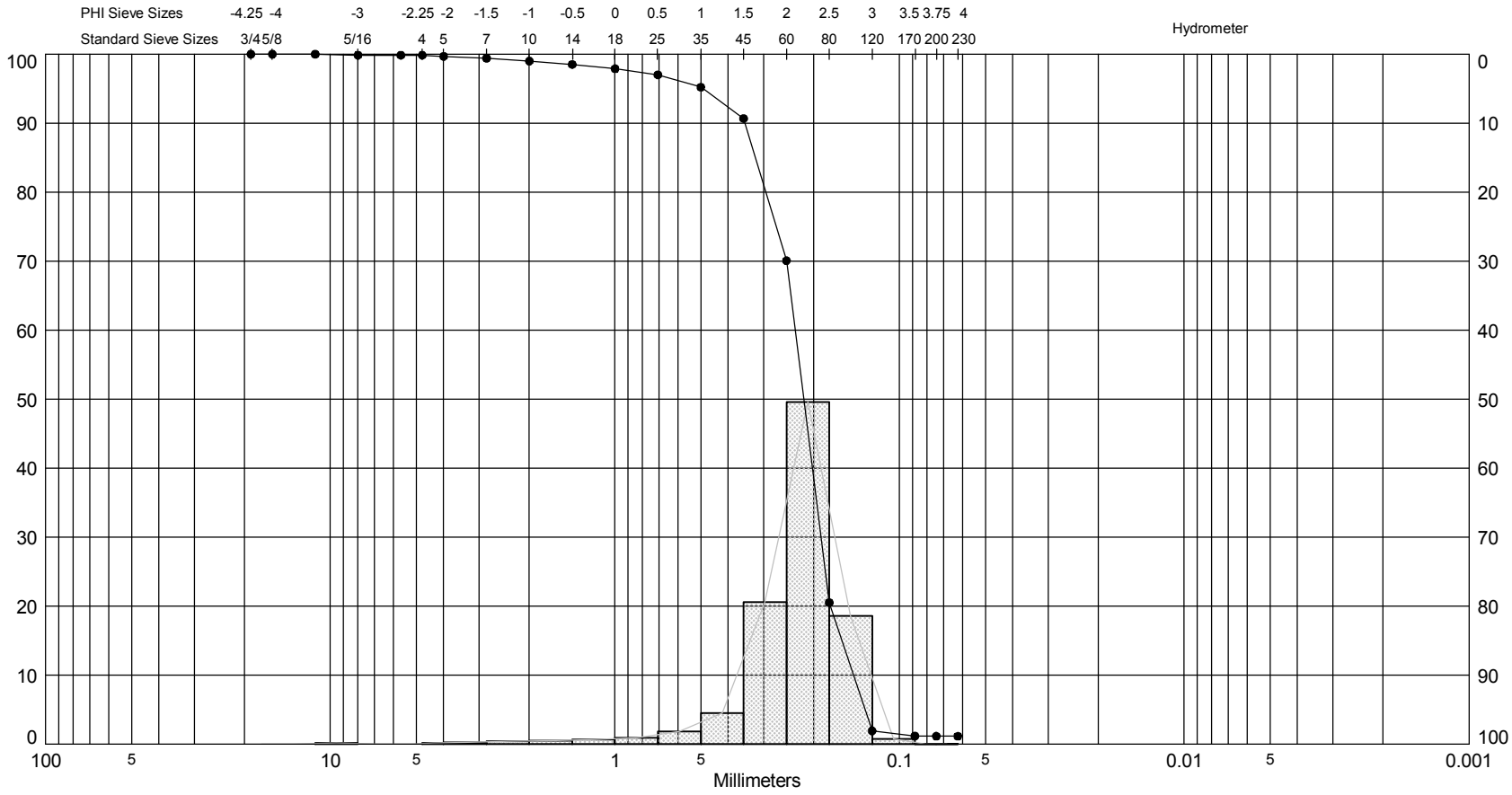
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,411
Northing (Y, ft):	200,087
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-09 #1	—●—	-10.7	SP	#200 - 1.14 #230 - 1.13			2.2	2.09	-2.93	16.85	0.68

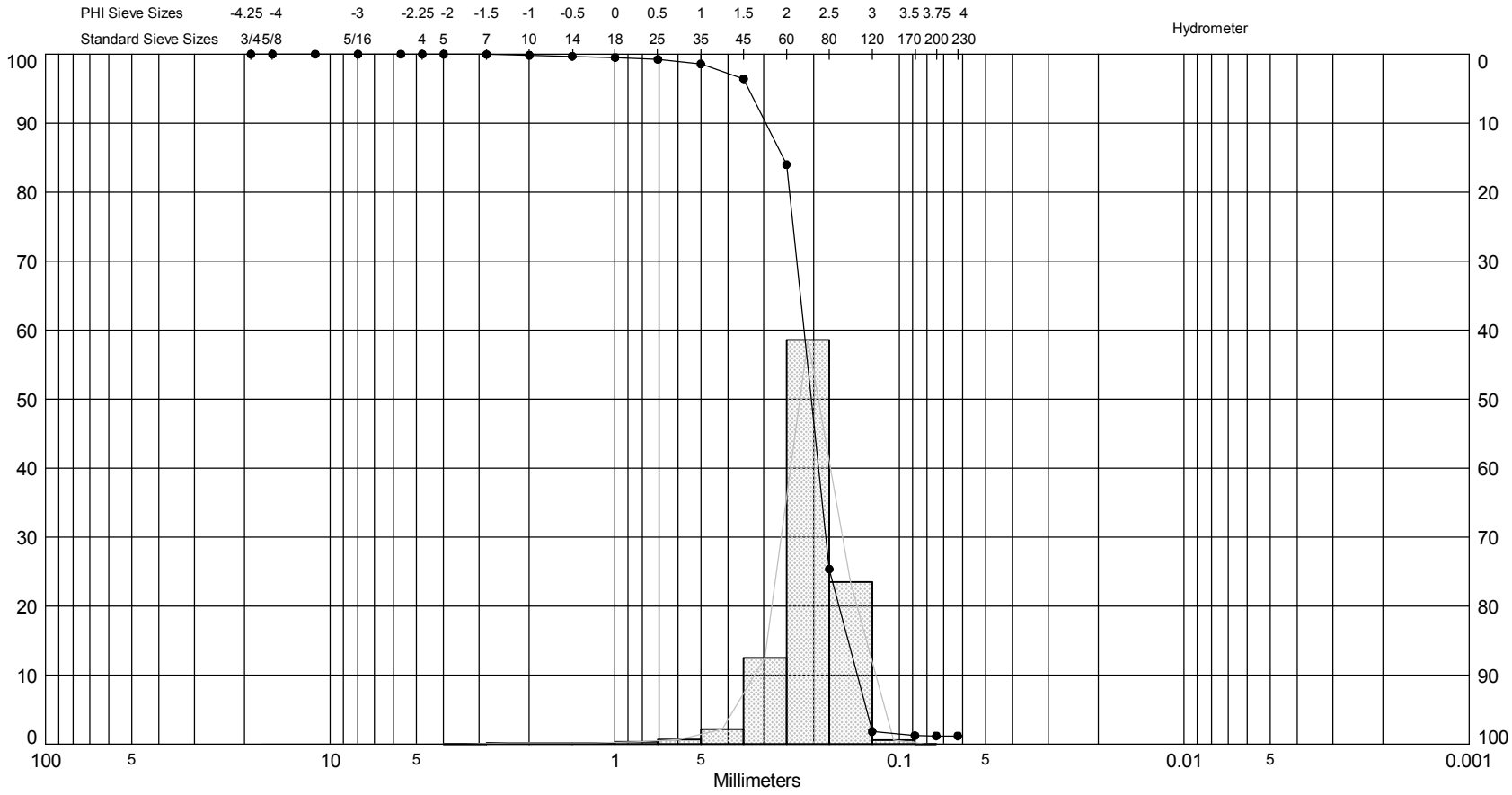
Comments:

Depths and elevations based on measured values

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FL 33431
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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,900
Northing (Y, ft):	199,466
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-09 #2	—●—	-13.7	SP	#200 - 1.20 #230 - 1.20			2.29	2.26	-2.37	16.86	0.44

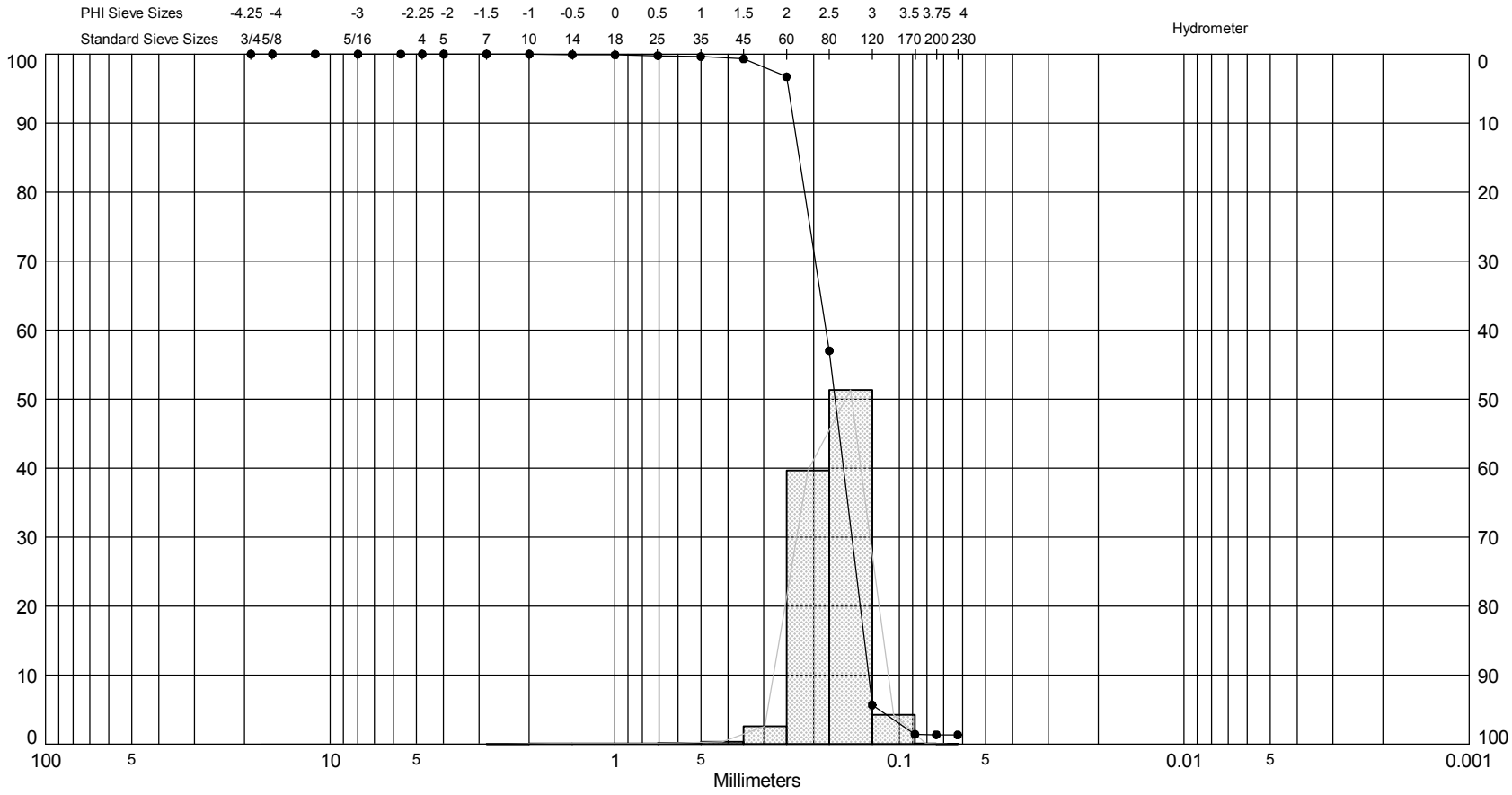
Comments:

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,900
Northing (Y, ft):	199,466
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-09 #3	—●—	-17.7	SP	#200 - 1.36 #230 - 1.34			2.57	2.53	-1.4	12.46	0.35

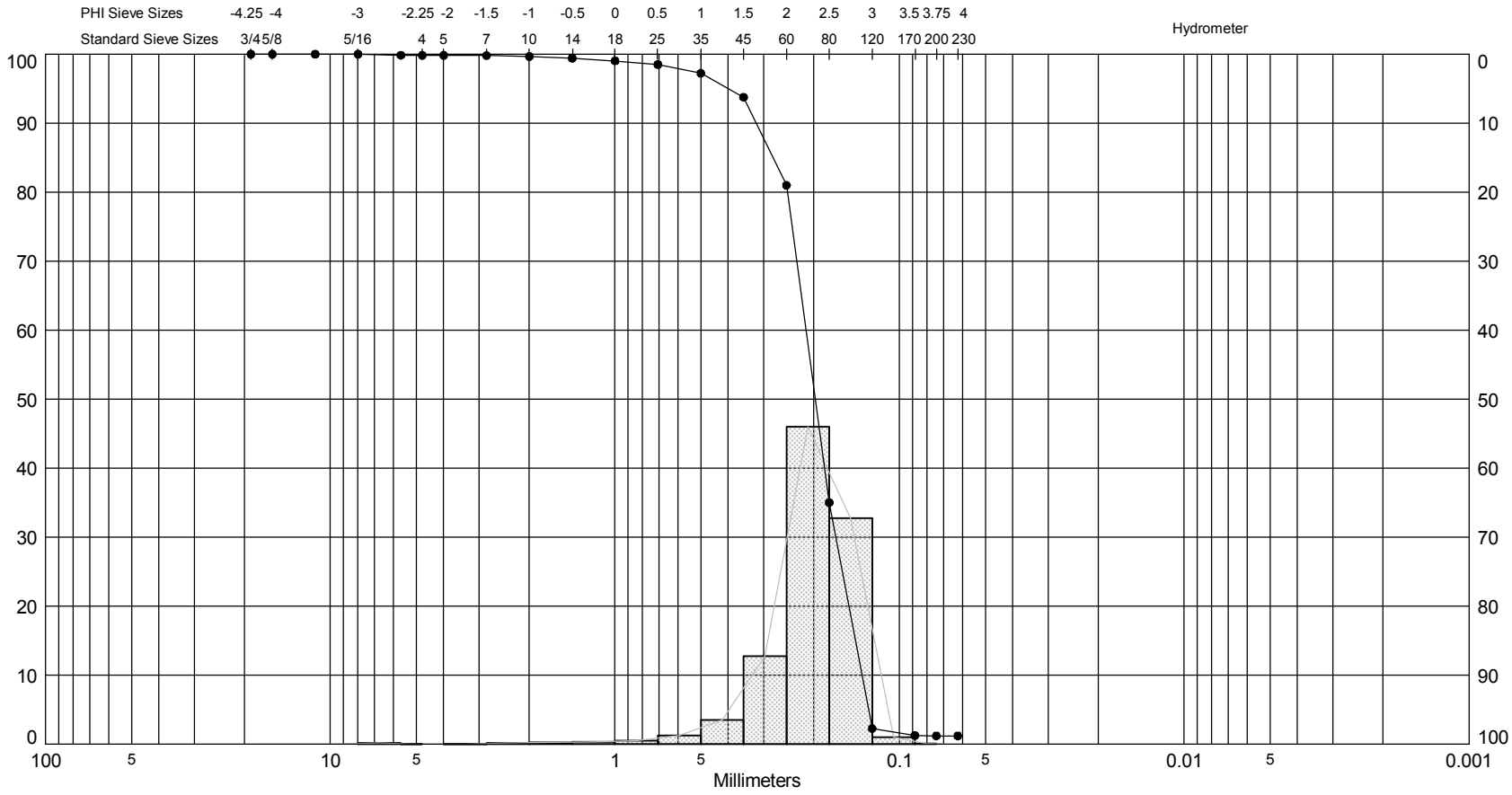
Comments:

Depths and elevations based on measured values

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Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,900
Northing (Y, ft):	199,466
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-10 #1	—●—	-10.0	SP	#200 - 1.20 #230 - 1.20			2.34	2.26	-2.83	18.73	0.57

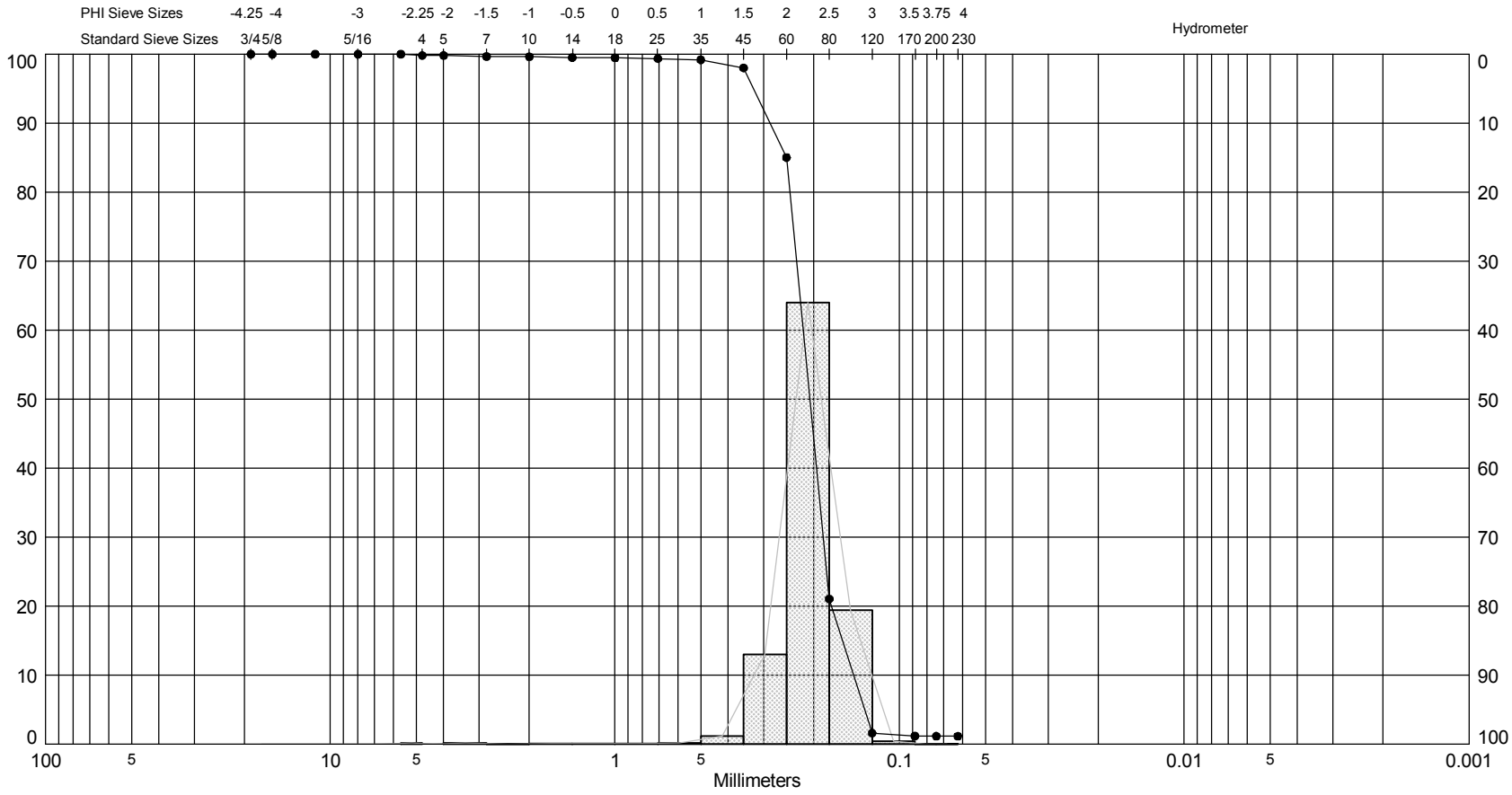
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,697
Northing (Y, ft):	199,802
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-10 #2	—●—	-12.5	SP	#200 - 1.14 #230 - 1.13			2.27	2.25	-4.25	41.42	0.43

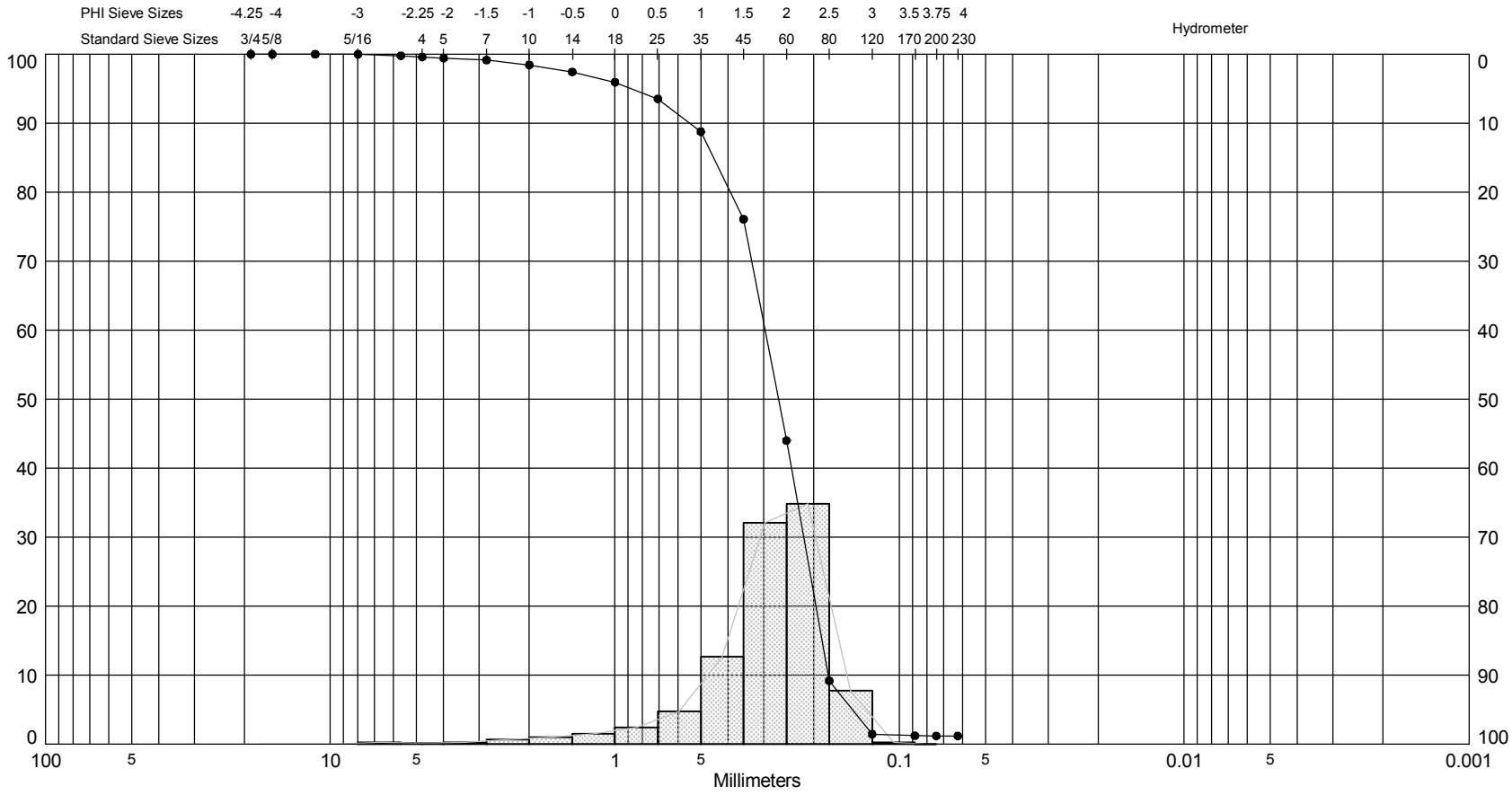
Comments:

Depths and elevations based on measured values

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fax (561) 391-9116

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,697
Northing (Y, ft):	199,802
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

SIEVE ANALYSIS FIGUREEIGHT_2008_VIBRACORES.GPJ JPBRAZIL.GDT 10/19/09



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-10 #3	—●—	-14.1	SP	#200 - 1.18 #230 - 1.18			1.91	1.75	-2.06	9.38	0.8

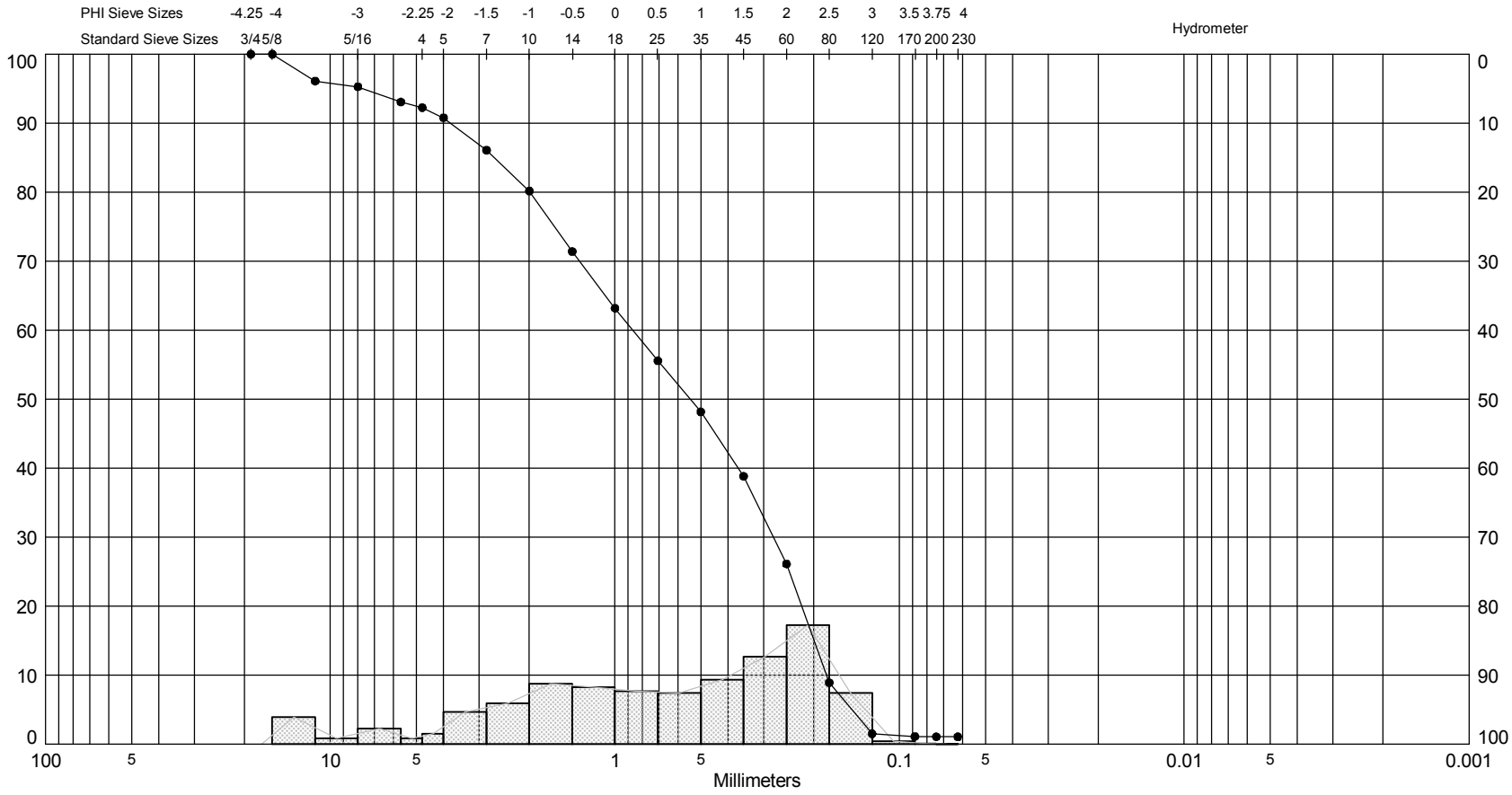
Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,697
Northing (Y, ft):	199,802
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Gravel		Sand			Silt and Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-10 #4	—●—	-16.1	SW	#200 - 1.06 #230 - 1.05			0.88	0.5	-0.67	2.62	1.75

Comments:

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Island / Rich Inlet 2008
Analysis Date:	03-23-09
Analyzed By:	KW
Easting (X, ft):	2,389,697
Northing (Y, ft):	199,802
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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APPENDIX 25

Native Beach Table of Results for Survey to Quantify Clasts Greater Than Three (3) Inches

SW	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	NW
A	1	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	
B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C	4	2	1	0	0	0	0	0	0	3	1	0	1	0	0	0	0	0	3	0	
D	2	1	0	0	0	0	1	6	3	1	0	5	1	1	2	2	1	0	0	1	
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
F	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
G	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	3	0	
H	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	
I	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
J	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
K	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
L	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
N	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
O	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
P	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
Q	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	0	
R	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
S	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
V	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
W	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SE																					NE

Coordinates of Corner Points (North Carolina State Plane)		
Corner Point	**Easting**	**Northing**
Southwest	**2383643.2**	**195542.3**
Northwest	**2383467.4**	**195717.8**
Southeast	**2383785.7**	**195684.5**
Northeast	**2383609.6**	**195861.5**

Total # of Clasts Counted	**85**

APPENDIX 26

Alternative 3 Channel Corridor Composite Summary Table

COMPOSITE SUMMARY TABLE
FIGURE EIGHT VIBRACORES

SAMPLE I. D.	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	% CARBONATES
FEVC-08-01 Composite	8.4	0.19	2.38	0.49	1.43	6	7	9.9
FEVC-08-02 Composite	14.2	0.19	2.36	0.51	1.23	6	8	4.9
FEVC-08-03 Composite	15.4	0.22	2.17	0.99	1.20	6	7	8.9
FEVC-08-04 Composite	16.0	0.32	1.64	1.27	1.14	6	7	19.7
FEVC-08-05 Composite	17.0	0.27	1.87	0.92	1.08	6	7	13.9
FEVC-08-06 Composite	13.2	0.19	2.37	0.60	1.21	6	8	4.2
FEVC-08-07 Composite	15.3	0.23	2.12	0.71	0.98	6	7	10.1
FEVC-08-08 Composite	10.8	0.31	1.69	0.99	1.23	5	7	16.2
FEVC-08-09 Composite	9.3	0.20	2.31	0.52	1.23	6	7	6.8
FEVC-08-10 Composite	7.9	0.26	1.97	0.93	1.16	6	7	15.5
FEVC-07-01 Composite	3.5	0.18	2.46	0.52	0.88	6	7	5.1
FEVC-07-02 Composite	10.0	0.22	2.20	0.54	1.08	6	7	8.3
FEVC-07-05 Composite	6.1	0.20	2.34	0.51	1.07	6	7	6.0
FEVC-07-09 Composite	13.2	0.30	1.72	1.13	1.31	6	7	17.4
FEVC-07-10 Composite	9.7	0.22	2.19	0.54	1.24	6	7	9.7
FEVC-07-11 Composite	14.4	0.23	2.13	0.67	1.30	6	7	8.2
FEVC-07-12 Composite	6.8	0.20	2.33	0.37	1.41	6	7	4.6
FEVC-07-13 Composite	8.4	0.21	2.26	0.64	1.47	5	6	6.4
FEVC-07-15 Composite	13.7	0.21	2.27	0.46	1.08	6	7	4.8
FEVC-07-16 Composite	17.6	0.29	1.81	1.16	1.21	6	7	11.7
FEVC-07-17 Composite	16.0	0.30	1.75	1.03	1.05	6	7	0.3
FEVC-07-18 Composite	16.0	0.27	1.89	0.80	1.03	6	7	9.4
FEVC-07-19 Composite	15.0	0.23	2.13	0.44	1.16	6	7	5.3
Alternative 3 Composite	277.9	0.24	2.06	0.85	1.18	6	7	10.0

COMPOSITE DATA TABLE
FIGURE EIGHT VIBRACORES

SAMPLE I. D.	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				% CARBONATE
								GRAVEL						GRANULAR						SAND								
								-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0	PAN	
FEVC-08-01 Composite	8.4	0.19	2.38	0.49	1.43	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.25	0.46	0.63	0.94	1.44	2.75	11.85	58.76	95.43	98.41	98.54	98.57	100.00	9.9
FEVC-08-02 Composite	14.2	0.19	2.36	0.51	1.23	6	8	0.00	0.00	0.00	0.00	0.19	0.19	0.20	0.23	0.39	0.45	0.60	0.80	1.37	3.19	12.96	59.46	96.04	98.67	98.75	98.77	99.95	4.9
FEVC-08-03 Composite	15.4	0.22	2.17	0.99	1.20	6	7	0.00	0.00	0.13	0.47	0.79	1.08	1.37	2.03	2.77	3.94	5.24	6.39	7.85	10.30	17.34	57.88	96.35	98.71	98.78	98.80	99.99	8.9
FEVC-08-04 Composite	16.0	0.32	1.64	1.27	1.14	6	7	0.00	0.28	1.01	1.32	1.99	2.38	3.04	4.50	6.23	8.53	10.79	13.07	16.46	23.31	43.18	86.84	98.48	98.83	98.85	98.86	99.98	19.7
FEVC-08-05 Composite	17.0	0.27	1.87	0.92	1.08	6	7	0.00	0.00	0.00	0.11	0.34	0.53	0.90	1.47	2.36	3.82	5.73	7.76	11.37	18.61	38.66	83.36	98.23	98.87	98.90	98.92	99.99	13.9
FEVC-08-06 Composite	13.2	0.19	2.37	0.60	1.21	6	8	0.00	0.00	0.05	0.39	0.42	0.50	0.53	0.60	0.71	0.88	1.05	1.28	1.72	2.98	9.97	57.47	96.07	98.70	98.78	98.79	100.00	4.2
FEVC-08-07 Composite	15.3	0.23	2.12	0.71	0.98	6	7	0.00	0.00	0.00	0.00	0.23	0.28	0.46	0.81	1.21	1.85	2.68	3.55	4.95	8.44	23.91	76.84	98.13	98.96	99.01	99.02	99.98	10.1
FEVC-08-08 Composite	10.8	0.31	1.69	0.99	1.23	5	7	0.00	0.00	0.00	0.17	0.66	0.96	1.24	2.12	3.19	5.08	7.26	9.79	14.41	26.10	52.30	87.90	98.39	98.74	98.75	98.77	99.97	16.2
FEVC-08-09 Composite	9.3	0.20	2.31	0.52	1.23	6	7	0.00	0.00	0.00	0.04	0.04	0.04	0.08	0.17	0.33	0.53	0.78	1.17	1.94	4.09	15.24	64.70	96.79	98.72	98.76	98.77	100.00	6.8
FEVC-08-10 Composite	7.9	0.26	1.97	0.93	1.16	6	7	0.00	0.00	0.34	0.42	0.73	0.91	1.08	1.63	2.40	3.57	4.84	6.37	8.79	14.56	32.54	78.24	98.21	98.80	98.84	98.84	99.98	15.5
FEVC-07-01 Composite	3.5	0.18	2.46	0.52	0.88	6	7	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.16	0.24	0.41	0.59	0.93	1.51	2.95	9.51	48.62	92.14	98.57	99.04	99.12	99.99	5.1
FEVC-07-02 Composite	10.0	0.22	2.20	0.54	1.08	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.22	0.50	0.89	1.61	2.99	6.82	23.29	72.45	97.94	98.89	98.91	98.92	99.99	8.3
FEVC-07-05 Composite	6.1	0.20	2.34	0.51	1.07	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.16	0.40	0.67	1.09	1.76	3.80	15.01	60.81	95.57	98.79	98.91	98.93	100.00	6.0
FEVC-07-09 Composite	13.2	0.30	1.72	1.13	1.31	6	7	0.00	0.00	0.00	0.51	1.12	1.37	1.89	2.82	4.26	6.65	9.31	12.57	16.45	22.91	39.89	84.85	98.06	98.63	98.68	98.69	99.98	17.4
FEVC-07-10 Composite	9.7	0.22	2.19	0.54	1.24	6	7	0.00	0.00	0.00	0.00	0.02	0.02	0.10	0.19	0.37	0.64	0.92	1.39	2.36	6.69	24.87	74.56	97.70	98.71	98.75	98.76	99.99	9.7
FEVC-07-11 Composite	14.4	0.23	2.13	0.67	1.30	6	7	0.00	0.00	0.00	0.00	0.07	0.13	0.22	0.58	0.94	1.55	2.29	3.22	4.63	8.12	23.96	77.52	97.56	98.65	98.69	98.70	99.99	8.2
FEVC-07-12 Composite	6.8	0.20	2.33	0.37	1.41	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.04	0.07	0.13	0.34	1.34	13.00	70.39	96.62	98.49	98.57	98.59	99.96	4.6
FEVC-07-13 Composite	8.4	0.21	2.26	0.64	1.47	5	6	0.00	0.00	0.00	0.13	0.14	0.17	0.21	0.32	0.58	0.99	1.53	2.30	3.60	7.27	18.03	63.73	95.76	98.38	98.49	98.53	99.98	6.4
FEVC-07-15 Composite	13.7	0.21	2.27	0.46	1.08	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.11	0.23	0.38	0.69	1.35	3.57	19.98	69.63	97.66	98.86	98.90	98.92	99.98	4.8
FEVC-07-16 Composite	17.6	0.29	1.81	1.16	1.21	6	7	0.00	0.00	1.64	1.70	2.12	2.24	2.59	3.23	4.05	5.37	6.83	8.91	11.77	17.46	35.56	84.60	98.24	98.73	98.78	98.79	99.80	11.7
FEVC-07-17 Composite	16.0	0.30	1.75	1.03	1.05	6	7	0.33	0.75	0.90	1.19	1.55	1.64	1.85	2.46	3.47	5.05	6.83	9.08	12.41	20.41	44.90	87.60	98.56	98.92	98.94	98.95	99.99	12.6
FEVC-07-18 Composite	16.0	0.27	1.89	0.80	1.03	6	7	0.00	0.00	0.00	0.28	0.50	0.58	0.76	1.01	1.49	2.21	3.11	4.72	8.17	18.45	44.28	85.12	98.41	98.95	98.96	98.97	99.92	9.4
FEVC-07-19 Composite	15.0	0.23	2.13	0.44	1.16	6	7	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.05	0.15	0.31	0.50	0.76	1.45	4.75	29.65	85.75	98.53	98.83	98.84	98.84	99.97	5.3
Alternative 3 Composite	277.9	0.24	2.06	0.85	1.18	6	7	0.02	0.06	0.23	0.37	0.58	0.69	0.88	1.28	1.84	2.71	3.70	4.92	6.88	11.61	28.22	75.10	97.49	98.76	98.81	98.82	99.97	10.0

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (1 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				FINES PAN	% CARBONATES
									GRAVEL						GRANULAR			SAND													
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0		
FEVC-08-01#1	-12.6	4.5	0.18	2.5	0.4	1.48	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.27	0.34	0.41	0.59	1.09	4.32	46.02	94.00	98.30	98.49	98.52	100.00	
FEVC-08-01#2	-17.6	3.9	0.21	2.23	0.53	1.37	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16	0.34	0.67	0.97	1.55	2.41	4.66	20.54	73.46	97.08	98.54	98.60	98.63	100.00	9.9
FEVC-08-01#3	-21.1	0.0	0.57	0.82	1.75	1.76	6	7	0.00	0.00	6.63	6.96	9.37	9.62	10.40	12.08	14.09	17.35	21.62	27.47	36.05	52.66	73.65	92.46	97.67	98.14	98.19	98.24	99.88	ND
FEVC-08-01#4	-22.2	0.0	0.14	2.81	0.31	3.29	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.06	0.12	0.37	10.34	75.96	95.44	96.47	96.71	99.98	ND
Cut to -19.0																														
FEVC-08-01 Composite		**8.4**	**0.19**	**2.38**	**0.49**	**1.43**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.10**	**0.25**	**0.46**	**0.63**	**0.94**	**1.44**	**2.75**	**11.85**	**58.76**	**95.43**	**98.41**	**98.54**	**98.57**	**100.00**	**9.9**
FEVC-08-02#1	-6.8	4.5	0.23	2.11	0.70	1.30	6	8	0.00	0.00	0.00	0.00	0.59	0.59	0.62	0.73	1.22	1.36	1.78	2.33	3.99	9.12	30.47	75.99	97.25	98.63	98.69	98.70	99.83	
FEVC-08-02#2	-11.8	4.6	0.18	2.50	0.33	1.14	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.08	0.32	4.64	48.00	95.32	98.77	98.84	98.86	100.00	5.2
FEVC-08-02A#1	-15	3.6	0.18	2.45	0.35	1.25	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.05	0.07	0.14	0.24	0.59	5.35	56.25	95.74	98.62	98.72	98.75	100.00	
FEVC-08-02A#2	-20	1.5	0.18	2.48	0.34	1.29	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.10	0.17	0.46	4.21	52.69	95.31	98.57	98.70	98.71	100.00	4.4
Cut to -19.0																														
FEVC-08-02 Composite		**14.2**	**0.19**	**2.36**	**0.51**	**1.23**	**6**	**8**	**0.00**	**0.00**	**0.00**	**0.00**	**0.19**	**0.19**	**0.20**	**0.23**	**0.39**	**0.45**	**0.60**	**0.80**	**1.37**	**3.19**	**12.96**	**59.46**	**96.04**	**98.67**	**98.75**	**98.77**	**99.95**	**4.9**
FEVC-08-03#1	-5	2.1	0.35	1.53	1.43	0.93	6	8	0.00	0.00	0.54	1.85	3.22	4.18	4.84	6.02	7.82	10.44	13.72	17.47	22.12	30.20	45.75	79.02	97.86	98.92	99.06	99.07	99.95	
FEVC-08-03#2	-7.1	3.9	0.19	2.42	0.49	1.26	6	7	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.23	0.32	0.52	0.78	0.99	1.35	2.31	8.72	52.22	95.43	98.68	98.73	98.74	100.00	
FEVC-08-03#3	-12.1	5.7	0.17	2.53	0.35	1.30	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.07	0.09	0.21	0.29	0.47	0.77	2.08	43.32	95.56	98.59	98.66	98.70	100.00	8.9
FEVC-08-03#4	-16.2	1.5	0.60	0.74	1.59	0.93	6	7	0.00	0.00	0.56	2.24	3.58	5.05	6.92	11.57	16.32	24.05	31.66	37.37	44.01	53.48	73.65	93.31	98.86	99.06	99.07	99.07	100.00	
FEVC-08-03#5	-17.6	2.2	0.19	2.41	0.34	1.29	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.06	0.09	0.21	0.75	6.63	61.27	96.87	98.63	98.69	98.71	100.00	
FEVC-08-03#6	-20.6	0.0	0.20	2.32	0.35	1.16	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.17	0.28	0.39	0.51	0.88	9.29	73.54	98.14	98.79	98.84	98.84	100.00	ND
Cut to -19.0																														
FEVC-08-03 Composite		**15.4**	**0.22**	**2.17**	**0.99**	**1.2**	**6**	**7**	**0.00**	**0.00**	**0.13**	**0.47**	**0.79**	**1.08**	**1.37**	**2.03**	**2.77**	**3.94**	**5.24**	**6.39**	**7.85**	**10.30**	**17.34**	**57.88**	**96.35**	**98.71**	**98.78**	**98.80**	**99.99**	**8.9**
FEVC-08-04#1	-4.0	2.2	0.29	1.77	1.03	1.15	5	7	0.00	0.00	0.00	0.00	0.23	0.93	1.10	1.97	3.18	5.42	7.92	11.13	15.16	23.19	41.66	82.87	98.27	98.79	98.82	98.85	100.00	
FEVC-08-04#2	-6.0	1.8	1.09	-0.13	1.71	0.98	6	7	0.00	0.00	1.87	4.21	7.90	9.89	14.54	23.82	34.33	46.44	55.16	61.78	67.56	74.43	84.25	95.66	98.79	98.98	99.01	99.02	100.00	23.0
FEVC-08-04#3	-8.5	2.5	0.48	1.05	1.62	1.30	6	7	0.00	1.80	5.14	5.14	6.31	6.70	7.16	8.68	10.63	13.66	18.16	22.85	30.96	44.03	67.15	93.71	98.53	98.68	98.70	98.70	100.00	
FEVC-08-04#4	-11.0	3.9	0.23	2.14	0.42	1.14	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.12	0.24	0.41	0.80	1.48	3.89	26.47	88.05	98.63	98.84	98.86	98.86	99.96	
FEVC-08-04A#1	-11.9	0.0	0.22	2.19	0.34	0.98	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.11	0.41	2.44	22.05	86.15	98.77	99.01	99.02	99.02	99.99	ND
FEVC-08-04A#2	-14.9	2.8	0.19	2.36	0.32	1.24	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.09	0.22	0.83	7.65	69.78	97.84	98.72	98.76	98.76	99.99	
FEVC-08-04A#3	-17.1	1.5	0.34	1.57	0.87	0.95	6	7	0.00	0.00	0.00	0.45	0.84	0.98	1.15	1.71	2.43	3.62	5.39	7.76	14.33	32.74	67.53	95.80	98.95	99.03	99.04	99.05	99.99	13.6
FEVC-08-04A#4	-18.9	1.3	0.25	2.02	0.46	1.09	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.14	0.27	0.55	0.97	2.37	8.71	41.39	90.96	98.73	98.90	98.91	98.91	99.93	
Cut to -19.0																														
FEVC-08-04 Composite		**16.0**	**0.32**	**1.64**	**1.27**	**1.14**	**6**	**7**	**0.00**	**0.28**	**1.01**	**1.32**	**1.99**	**2.38**	**3.04**	**4.50**	**6.23**	**8.53**	**10.79**	**13.07**	**16.46**	**23.31**	**43.18**	**86.84**	**98.48**	**98.83**	**98.85**	**98.86**	**99.98**	**19.7**
FEVC-08-05#1	-4.5	4.7	0.22	2.19	0.64	1.06	6	8	0.00	0.00	0.00	0.00	0.08	0.22	0.44	0.76	1.01	1.41	1.90	2.45	3.09	5.32	21.24	73.88	97.35	98.90	98.93	98.94	100.00	
FEVC-08-05#2	-8.5	2.9	0.46	1.13	1.21	1.17	5	7	0.00	0.00	0.00	0.24	0.73	1.37	2.49	4.00	6.93	11.75	17.96	24.21	34.45	50.16	72.73	94.12	98.62	98.79	98.81	98.83	99.99	
FEVC-08-05#3	-10.0	0.9	0.27	1.90	0.68	1.13	5	7	0.00	0.00	0.00	0.00	0.00	0.28	0.47	0.74	1.00	1.56	2.26	3.45	5.79	16.49	47.71	89.50	98.63	98.85	98.87	98.87	100.00	11.1
FEVC-08-05#4	-10.8	0.7	0.34	1.54	1.16	1.16	5	7	0.00	0.00	0.00	0.54	1.34	1.66	2.26	3.31	4.73	6.99	10.32	13.96	20.99	34.30	54.72	86.67	98.59	98.71	98.81	98.84	100.00	
FEVC-08-05#5	-11.8	2.9	0.22	2.20	0.39	1.20	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.28	0.51	1.01	3.38	21.61	83.20	98.30	98.78	98.80	98.80	100.00	
FEVC-08-05A#1	-11.0	0.0	2.77	-1.47	2.31	0.80	6	8	12.14	17.62	26.57	34.74	42.02	44.44	47.15	52.77	58.26	64.24	69.08	72.54	76.95	82.93	90.63	97.71	99.00	99.16	99.18	99.20	99.95	ND
FEVC-08-05A#2	-14.9	2.4	0.25	1.99	0.74	0.97	6	7	0.00	0.00	0.00	0.26	0.39	0.39	0.72	0.96	1.37	1.81	2.42	3.07	5.74	13.49	38.28	83.20	98.74	98.93	98.99	99.03	100.00	
FEVC-08-05A#3	-16.8	0.5	0.65	0.63	1.30	1.32	5	6	0.00	0.00	0.00	0.51	2.59	3.24	4.27	7.38	11.75	19.17	28.48	37.75	53.17	71.12	85.97	95.89	98.42	98.60	98.65	98.68	99.83	20.6
FEVC-08-05A#4	-17.8	1.2	0.23	2.14	0.63	0.88	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.27	0.67	1.32	2.04	3.19	4.83	8.47	22.40	79.05	98.46	99.08	99.10	99.12	99.98	
FEVC-08-05A#5	-19.0	0.8	0.29	1.77	0.81	0.80	6	7	0.00	0.00	0.00	0.00	0.09	0.09	0.19	0.63	1.31	2.68	4.82	7.22	12.41	23.90	51.02	90.02	98.92	99.18	99.19	99.20	99.95	
Cut to -19.0																														
FEVC-08-05 Composite		**17.0**	**0.27**	**1.87**	**0.92**	**1.08**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.11**	**0.34**	**0.53**	**0.90**	**1.47**	**2.36**	**3.82**	**5.73**	**7.76**	**11.37**	**18.61**	**38.66**	**83.36**	**98.23**	**98.87**	**98.90**	**98.92**	**99.99**	**13.9**
FEVC-08-06#1	-3.1	4.0	0.19	2.4	0.38	1.15	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.17	0.27	0.54	1.39	9.07	60.53	96.57	98.76	98.83	98.85	100.00	
FEVC-08-06#2	-7.1	4.8	0.21	2.26	0.72	1.09	6	8	0.00	0.00	0.00	0.85	0.85	1.06	1.06	1.09	1.20	1.38	1.53	1.83	2.44	4.40	14.51	66.82	97.55	98.85	98.90	98.91	100.00	4.2
FEVC-08-06#3	-12.6	4.0	0.17	2.55	0.33	1.42	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.08	0.10	0.17	0.36	2.19	41.01	93.61	98.45	98.58	98.58	100.00	
FEVC-08-06#4	-14.9	0.4	0.34	1.54	1.48	1.23	6	7	0.00	0.00	1.76	2.56	3.74	3.91	4.73	6.60	8.67	11.26	13.70	16.56	20.49	28.12	42.20	79.29	97.88	98.69	98.75	98.77	99.84	
FEVC-08-06#5	-16.1	0.0	0.14	2.85	0.89	32.97	3	5	0.00	0.00	0.00	0.35	0.93	0.93	0.95	1.08	1.13	1.21	1.28	1.34	1.40	1.56	2.54	12.19	35.59	57.42	64.35	67.03	100.00	ND
Cut to -14.3																														
FEVC-08-06 Composite		**13.2**	**0.19**	**2.37**	**0.6**	**1.21**	**6**	**8**	**0.00**	**0.00**	**0.05**	**0.39**	**0.42**	**0.50**	**0.53**	**0.60**	**0.71**	**0.88**	**1.05**	**1.28**	**1.72**	**2.98**	**9.97**	**57.47**	**96.07**	**98.70**	**98.78**	**98.79**	**100.00**	**4.2**

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (2 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			FINES PAN	% CARBONATES
									GRAVEL						GRANULAR					SAND										
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0		
FEVC-08-07#1	-5.7	5.0	0.23	2.13	0.72	0.79	7	7	0.00	0.00	0.00	0.00	0.34	0.34	0.68	1.19	1.48	1.88	2.29	2.81	3.98	7.81	25.12	76.00	98.32	99.16	99.20	99.21	99.95	
FEVC-08-07#2	-11.7	4.8	0.20	2.29	0.43	1.05	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.21	0.41	0.68	1.22	2.99	14.39	71.59	97.55	98.90	98.94	98.95	100.00	11.0
FEVC-08-07#3	-14.2	1.8	0.39	1.35	1.20	0.90	5	8	0.00	0.00	0.00	0.00	0.98	1.46	2.05	3.55	6.01	9.94	15.25	20.27	26.85	38.05	61.48	92.81	98.99	99.06	99.10	99.10	100.00	
FEVC-08-07#4	-16.0	1.1	0.20	2.35	0.32	1.20	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.10	0.23	0.74	8.54	69.91	97.90	98.74	98.77	98.80	100.00	
FEVC-08-07A#1	-18.7	2.6	0.21	2.23	0.36	1.20	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.17	0.55	2.46	19.68	80.02	98.31	98.73	98.79	98.80	100.00	5.7
Cut to -19.0																														
FEVC-08-07 Composite		**15.3**	**0.23**	**2.12**	**0.71**	**0.98**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.23**	**0.28**	**0.46**	**0.81**	**1.21**	**1.85**	**2.68**	**3.55**	**4.95**	**8.44**	**23.91**	**76.84**	**98.13**	**98.96**	**99.01**	**99.02**	**99.98**	**10.1**
FEVC-08-08#1	-9.0	4.0	0.26	1.93	0.88	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.32	0.51	1.06	1.90	3.29	5.03	7.03	10.75	17.71	35.12	80.35	98.20	98.84	98.87	98.87	100.00	
FEVC-08-08#2	-14.2	5.5	0.30	1.73	0.86	1.24	5	7	0.00	0.00	0.00	0.34	1.01	1.16	1.37	1.98	2.37	3.13	3.88	5.33	8.97	23.37	57.66	91.56	98.55	98.73	98.73	98.76	99.96	16.2
FEVC-08-08#3	-17.3	1.3	0.60	0.74	1.29	1.48	5	7	0.00	0.00	0.00	0.00	1.25	2.12	2.95	5.98	10.64	18.81	28.40	37.13	48.69	63.43	82.45	95.67	98.30	98.46	98.50	98.52	99.91	
Cut to -19.0																														
FEVC-08-08 Composite		**10.8**	**0.31**	**1.69**	**0.99**	**1.23**	**5**	**7**	**0.00**	**0.00**	**0.00**	**0.17**	**0.66**	**0.96**	**1.24**	**2.12**	**3.19**	**5.08**	**7.26**	**9.79**	**14.41**	**26.10**	**52.30**	**87.90**	**98.39**	**98.74**	**98.75**	**98.77**	**99.97**	**16.2**
FEVC-08-09#1	-10.7	2.5	0.23	2.09	0.68	1.13	6	8	0.00	0.00	0.00	0.14	0.14	0.14	0.31	0.58	0.99	1.48	2.11	2.99	4.79	9.31	29.93	79.48	98.09	98.84	98.86	98.87	100.00	
FEVC-08-09#2	-13.7	3.5	0.21	2.26	0.44	1.20	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.30	0.47	0.77	1.41	3.55	16.01	74.63	98.17	98.77	98.80	98.80	99.99	6.8
FEVC-08-09#3	-17.7	3.3	0.17	2.53	0.35	1.34	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.11	0.21	0.35	0.70	3.29	42.98	94.33	98.57	98.64	98.66	100.00	
Cut to -19.0																														
FEVC-08-09 Composite		**9.3**	**0.20**	**2.31**	**0.52**	**1.23**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.04**	**0.04**	**0.04**	**0.08**	**0.17**	**0.33**	**0.53**	**0.78**	**1.17**	**1.94**	**4.09**	**15.24**	**64.70**	**96.79**	**98.72**	**98.76**	**98.77**	**100.00**	**6.8**
FEVC-08-10#1	-10.0	2.8	0.21	2.26	0.57	1.20	6	7	0.00	0.00	0.00	0.00	0.15	0.17	0.17	0.20	0.34	0.59	0.96	1.50	2.77	6.23	19.02	64.99	97.73	98.75	98.80	98.80	100.00	
FEVC-08-10#2	-12.5	2.3	0.21	2.25	0.43	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.34	0.37	0.49	0.54	0.63	0.81	1.98	14.97	78.96	98.40	98.83	98.86	98.87	100.00	15.5
FEVC-08-10#3	-14.1	2.1	0.30	1.75	0.80	1.18	6	7	0.00	0.00	0.00	0.00	0.22	0.39	0.56	0.85	1.55	2.57	4.06	6.47	11.22	23.91	56.02	90.82	98.55	98.79	98.82	98.82	99.94	
FEVC-08-10#4	-16.1	0.7	0.71	0.50	1.75	1.05	5	7	0.00	0.00	3.89	4.71	6.93	7.74	9.21	13.91	19.83	28.61	36.82	44.45	51.85	61.19	73.88	91.10	98.50	98.89	98.94	98.95	100.00	
Cut to -19.0																														
FEVC-08-10 Composite		**7.9**	**0.26**	**1.97**	**0.93**	**1.16**	**6**	**7**	**0.00**	**0.00**	**0.34**	**0.42**	**0.73**	**0.91**	**1.08**	**1.63**	**2.40**	**3.57**	**4.84**	**6.37**	**8.79**	**14.56**	**32.54**	**78.24**	**98.21**	**98.80**	**98.84**	**98.84**	**99.98**	**15.5**
FEVC-07-01#1	-16.5	1.8	0.19	2.40	0.53	0.60	7	7	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.18	0.25	0.47	0.70	1.14	1.91	3.84	11.73	54.33	94.67	99.02	99.35	99.40	100.00	5.7
FEVC-07-01#2	-18.0	1.4	0.17	2.54	0.51	1.18	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.18	0.26	0.41	0.55	0.81	1.24	2.16	6.71	39.80	88.06	97.96	98.68	98.82	99.98	4.5
FEVC-07-01#3	-20.5	0.3	0.19	2.43	0.39	1.15	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.13	0.24	0.42	1.28	9.22	55.56	96.02	98.75	98.84	98.85	99.98	4.4
FEVC-07-01#4	-22.5	0.0	0.16	2.67	0.40	8.43	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.11	0.20	0.34	0.50	0.85	2.72	23.44	78.76	90.86	91.44	91.57	100.00	
Cut to -19.0																														
FEVC-07-01 Composite		**3.5**	**0.18**	**2.46**	**0.52**	**0.88**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.05**	**0.10**	**0.16**	**0.24**	**0.41**	**0.59**	**0.93**	**1.51**	**2.95**	**9.51**	**48.62**	**92.14**	**98.57**	**99.04**	**99.12**	**99.99**	**5.1**
FEVC-07-02#1	-10.0	2.5	0.26	1.94	0.70	0.98	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.25	0.73	1.54	2.74	4.59	7.68	15.59	43.87	83.86	98.35	98.99	99.01	99.02	99.99	11.3
FEVC-07-02#2	-16.0	6.5	0.21	2.28	0.46	1.09	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.17	0.31	0.70	1.61	4.37	17.69	68.34	97.78	98.88	98.90	98.91	99.99	7.7
FEVC-07-02#3	-20.0	1.0	0.20	2.35	0.31	1.24	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.21	0.79	8.23	70.65	97.92	98.72	98.75	98.76	100.00	4.3
Cut to -19.0																														
FEVC-07-02 Composite		**10.0**	**0.22**	**2.20**	**0.54**	**1.08**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.07**	**0.22**	**0.50**	**0.89**	**1.61**	**2.99**	**6.82**	**23.29**	**72.45**	**97.94**	**98.89**	**98.91**	**98.92**	**99.99**	**8.3**
FEVC-07-05#1	-13.9	3.8	0.19	2.40	0.47	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.18	0.37	0.66	1.28	3.20	12.86	54.23	95.31	98.74	98.85	98.87	100.00	6.2
FEVC-07-05#2	-19.4	2.3	0.21	2.25	0.55	0.98	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.12	0.30	0.77	1.17	1.80	2.55	4.80	18.55	71.67	96.01	98.86	99.00	99.02	100.00	5.8
Cut to -19.0																														
FEVC-07-05 Composite		**6.1**	**0.20**	**2.34**	**0.51**	**1.07**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.08**	**0.16**	**0.40**	**0.67**	**1.09**	**1.76**	**3.80**	**15.01**	**60.81**	**95.57**	**98.79**	**98.91**	**98.93**	**100.00**	**6.0**
FEVC-07-09#1	-6.8	2.3	0.39	1.35	1.22	1.10	6	7	0.00	0.00	0.00	1.60	2.10	2.10	2.70	3.95	5.55	8.66	12.59	17.72	25.40	40.71	66.60	89.51	98.30	98.87	98.89	98.90	99.99	23.1
FEVC-07-09#2	-11.3	6.2	0.21	2.28	0.32	1.38	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.13	0.76	13.94	78.50	97.83	98.56	98.61	98.62	99.98	8.9
FEVC-07-09#3	-14.8	1.8	0.29	1.80	1.04	1.35	6	7	0.00	0.00	0.00	0.00	0.33	1.26	1.84	2.92	4.17	5.94	7.65	9.70	12.49	17.80	39.04	86.29	98.06	98.59	98.63	98.65	99.99	11.8
FEVC-07-09#4	-17.7	2.9	0.58	0.78	1.44	1.29	5	6	0.00	0.00	0.00	1.04	3.23	3.80	5.31	7.87	12.39	19.70	27.59	37.06	46.70	59.34	74.71	93.82	98.38	98.63	98.69	98.71	99.96	34.5
Cut to -19.0																														
FEVC-07-09 Composite		**13.2**	**0.30**	**1.72**	**1.13**	**1.31**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.51**	**1.12**	**1.37**	**1.89**	**2.82**	**4.26**	**6.65**	**9.31**	**12.57**	**16.45**	**22.91**	**39.89**	**84.85**	**98.06**	**98.63**	**98.68**	**98.69**	**99.98**	**17.4**
FEVC-07-10#1	-10.00	2.6	0.28	1.82	0.68	0.92	6	7	0.00	0.00	0.00	0.00	0.06	0.06	0.34	0.66	1.18	1.82	2.43	3.64	6.37	19.42	57.49	91.37	98.79	99.06	99.07	99.08	100.00	4.9
FEVC-07-10#2	-13.80	5.8	0.20	2.30	0.42	1.34	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.09	0.25	0.43	0.67	1.04	2.35	14.73	69.80	97.63	98.61	98.65	98.66	99.99	13.1
FEVC-07-10#3	-20.30	1.3	0.19	2.42	0.33	1.43	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.06	0.11	0.21	0.57	4.89	62.18	95.83	98.42	98.56	98.57	100.00	3.8
FEVC-07-10#4	-23.20	0.0	0.25	1.98	1.09	2.48	6	7	0.00	0.00	1.69	1.69	1.69	1.69	1.74	2.27	3.04	4.37	5.60	7.23	9.31	12.42	24.35	76.50	95.93	97.35	97.47	97.52	99.99	
Cut to -19.0																														
FEVC-07-10 Composite		**9.7**	**0.22**	**2.19**	**0.54**	**1.24**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.02**	**0.10**	**0.19**	**0.37**	**0.64**	**0.92**	**1.39**	**2.36**	**6.69**	**24.87**	**74.56**	**97.70**	**98.71**	**98.75**	**98.76**	**99.99**	**9.7**

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (3 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			FINES PAN	% CARBONATES
									GRAVEL						GRANULAR			SAND												
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0		
FEVC-07-11#1	-5.30	3.1	0.25	2.01	0.76	1.26	6	6	0.00	0.00	0.00	0.00	0.11	0.22	0.30	0.90	1.30	2.09	3.19	4.70	6.79	13.29	34.75	80.17	97.66	98.68	98.73	98.74	99.99	10.5
FEVC-07-11#2	-8.40	4.3	0.21	2.23	0.34	1.27	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.11	0.34	1.28	18.92	81.85	98.11	98.71	98.72	98.73	99.98	4.5
FEVC-07-11#3	-13.40	4.5	0.19	2.36	0.36	1.32	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.43	1.65	9.83	67.31	96.68	98.60	98.67	98.68	99.99	5.3
FEVC-07-11#4	-17.40	2.5	0.31	1.71	1.06	1.36	5	6	0.00	0.00	0.00	0.00	0.27	0.49	0.91	2.24	3.80	6.34	9.07	12.28	16.91	25.13	44.66	85.15	98.06	98.60	98.63	98.64	99.98	17.2
Cut to -19.0																														
FEVC-07-11 Composite		**14.4**	**0.23**	**2.13**	**0.67**	**1.30**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.13**	**0.22**	**0.58**	**0.94**	**1.55**	**2.29**	**3.22**	**4.63**	**8.12**	**23.96**	**77.52**	**97.56**	**98.65**	**98.69**	**98.70**	**99.99**	**8.2**
FEVC-07-12#1	-9.50	4.5	0.20	2.32	0.36	1.38	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.08	0.27	1.18	13.20	70.92	96.84	98.52	98.60	98.62	99.95	4.4
FEVC-07-12#2	-14.50	2.3	0.20	2.33	0.39	1.47	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.09	0.11	0.15	0.22	0.47	1.64	12.61	69.36	96.19	98.43	98.51	98.53	99.99	4.9
FEVC-07-12#3	-17.20	0.0	0.77	0.38	1.88	1.10	6	6	0.00	0.00	1.31	2.46	5.68	6.97	10.42	18.29	27.97	39.93	47.95	53.23	56.09	58.77	64.20	83.43	97.75	98.82	98.88	98.90	99.97	34.6
Cut to -14.3																														
FEVC-07-12 Composite		**6.8**	**0.20**	**2.33**	**0.37**	**1.41**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.03**	**0.04**	**0.07**	**0.13**	**0.34**	**1.34**	**13.00**	**70.39**	**96.62**	**98.49**	**98.57**	**98.59**	**99.96**	**4.6**
FEVC-07-13#1	-11.10	1.0	0.35	1.53	1.12	1.05	5	6	0.00	0.00	0.00	1.10	1.15	1.39	1.78	2.66	4.27	6.76	9.82	13.59	19.13	32.28	61.35	87.41	98.23	98.90	98.93	98.95	99.97	16.6
FEVC-07-13#2	-14.60	4.3	0.18	2.50	0.32	1.76	5	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.09	0.26	2.12	51.07	93.88	98.01	98.18	98.24	99.98	4.4
FEVC-07-13#3	-17.10	3.1	0.22	2.17	0.56	1.20	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.19	0.47	0.93	1.79	3.47	8.92	26.13	73.64	97.56	98.72	98.78	98.80	99.98	5.9
FEVC-07-13#4	-22.10	0.0	0.30	1.75	0.62	1.47	5	6	0.00	0.00	0.00	0.00	0.00	0.17	0.31	0.53	0.81	1.18	2.04	3.83	7.70	17.92	69.87	92.72	98.25	98.50	98.52	98.53	99.95	
FEVC-07-13#5	-23.60	0.0	0.72	0.47	2.31	1.67	5	6	0.00	0.00	5.24	11.69	18.11	19.58	22.83	27.66	31.27	35.26	38.16	40.35	42.02	45.05	54.74	78.04	96.66	98.16	98.29	98.33	99.98	
Cut to 19.0																														
FEVC-07-13 Composite		**8.4**	**0.21**	**2.26**	**0.64**	**1.47**	**5**	**6**	**0.00**	**0.00**	**0.00**	**0.13**	**0.14**	**0.17**	**0.21**	**0.32**	**0.58**	**0.99**	**1.53**	**2.30**	**3.60**	**7.27**	**18.03**	**63.73**	**95.76**	**98.38**	**98.49**	**98.53**	**99.98**	**6.4**
FEVC-07-15#1	-6.8	3.7	0.24	2.07	0.58	1.05	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.37	0.78	1.31	2.34	4.37	9.36	33.92	83.94	97.55	98.88	98.93	98.95	99.98	7.7
FEVC-07-15#2	-10.8	7.5	0.18	2.46	0.30	1.10	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.10	0.29	3.29	54.60	97.35	98.84	98.89	98.90	99.98	3.1
FEVC-07-15#3	-17.3	2.5	0.25	2.00	0.37	1.09	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.08	0.10	0.21	0.63	4.85	49.42	93.56	98.73	98.88	98.90	98.91	99.98	5.5
Cut to -19.0																														
FEVC-07-15 Composite		**13.7**	**0.21**	**2.27**	**0.46**	**1.08**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.05**	**0.11**	**0.23**	**0.38**	**0.69**	**1.35**	**3.57**	**19.98**	**69.63**	**97.66**	**98.86**	**98.90**	**98.92**	**99.98**	**4.8**
FEVC-07-16#1	-1.0	2.8	0.21	2.22	0.38	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.10	0.22	0.45	0.86	2.67	19.15	82.43	98.26	98.80	98.87	98.87	99.86	4.3
FEVC-07-16#2	-4.5	5.4	0.21	2.27	0.44	1.46	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	0.26	0.35	0.49	0.78	1.09	2.32	14.46	74.91	97.63	98.41	98.51	98.54	99.72	5.5
FEVC-07-16#3	-7.7	0.7	0.49	1.02	1.67	1.19	6	6	0.00	0.00	3.67	3.67	5.05	6.45	7.08	10.09	13.39	18.78	23.46	28.81	34.64	44.87	62.33	87.39	98.08	98.69	98.78	98.81	100.00	19.6
FEVC-07-16A#1	-7.8	0.0	0.27	1.87	1.01	1.13	5	7	0.00	0.00	0.00	0.00	0.00	0.26	0.51	1.18	2.54	5.27	8.10	11.14	14.31	19.92	34.49	77.06	97.98	98.79	98.86	98.87	99.96	
FEVC-07-16A#2	-10.3	3.8	0.59	0.77	1.71	0.85	5	6	0.00	0.00	6.90	7.18	8.42	8.69	9.84	11.63	13.99	17.84	22.51	29.35	38.81	54.58	76.17	96.02	98.86	99.14	99.15	99.15	99.83	29.1
FEVC-07-16A#3	-13.9	2.2	0.30	1.73	0.95	1.03	6	7	0.00	0.00	0.00	0.00	0.82	0.82	1.30	1.90	3.27	5.07	6.73	8.81	11.94	20.52	50.21	91.80	98.74	98.97	98.97	98.97	99.95	12.8
FEVC-07-16A#4	-16.5	2.7	0.21	2.22	0.33	1.45	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.08	0.12	0.30	1.21	18.77	83.56	98.20	98.53	98.55	98.55	99.69	4.3
Cut to -19.0																														
FEVC-07-16 Composite		**17.6**	**0.29**	**1.81**	**1.16**	**1.21**	**6**	**7**	**0.00**	**0.00**	**1.64**	**1.70**	**2.12**	**2.24**	**2.59**	**3.23**	**4.05**	**5.37**	**6.83**	**8.91**	**11.77**	**17.46**	**35.56**	**84.60**	**98.24**	**98.73**	**98.78**	**98.79**	**99.80**	**11.7**
FEVC-07-17#1	-5.00	4.7	0.22	2.18	0.44	0.99	6	7	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.32	0.52	0.89	1.45	3.84	23.85	82.71	98.35	98.97	99.00	99.01	100.00	5.3
FEVC-07-17#2	-8.10	0.7	0.68	0.56	2.25	1.15	6	6	8	8	11.01	12.89	15.06	15.61	16.35	18.85	21.73	25.61	30.13	34.43	39.25	46.36	61.94	89.32	98.50	98.80	98.83	98.85	100.00	24.5
FEVC-07-17#3	-10.00	3.4	0.24	2.03	0.59	1.17	6	7	0	0	0.00	0.00	0.15	0.15	0.15	0.33	0.55	0.92	1.36	2.15	4.01	10.94	35.86	85.57	98.53	98.82	98.82	98.83	100.00	9.1
FEVC-07-17#4	-13.10	1.9	0.55	0.85	1.61	0.91	5	6	0	4	3.56	4.78	5.42	5.61	6.50	8.56	12.01	17.91	23.96	30.78	38.61	51.95	76.19	94.31	98.87	99.07	99.08	99.09	100.00	27.9
FEVC-07-17#5	-14.50	1.2	0.26	1.93	0.63	1.20	6	7	0	0	0.00	0.00	0.27	0.27	0.27	0.42	0.83	1.43	2.02	2.88	4.55	11.46	48.15	90.05	98.44	98.78	98.79	98.80	99.97	8.8
FEVC-07-17A#1	-13.30	2.0	0.27	1.91	0.73	1.27	6	7	0	0	0.00	0.00	0.00	0.10	0.21	0.61	1.24	2.05	3.00	4.54	7.69	16.61	42.25	87.33	98.48	98.71	98.72	98.73	99.98	11.7
FEVC-07-17A#2	-15.60	2.1	0.41	1.28	1.14	0.80	6	6	0	0	0.00	0.47	1.52	1.76	2.13	3.39	5.36	8.79	12.91	18.40	26.89	44.38	73.31	94.05	98.94	99.18	99.19	99.20	99.98	20.0
Cut to -19.0																														
FEVC-07-17 Composite		**16.0**	**0.30**	**1.75**	**1.03**	**1.05**	**6**	**7**	**0**	**1**	**1**	**1**	**2**	**2**	**2**	**2**	**3**	**5**	**7**	**9**	**12**	**20**	**45**	**88**	**99**	**99**	**99**	**99**	**100**	**12.6**
FEVC-07-18#1	-5.0	5.9	0.27	1.91	0.71	1.01	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.36	0.81	1.54	2.27	3.79	7.71	20.12	45.32	84.79	98.32	98.95	98.98	98.99	99.98	10.6
FEVC-07-18#2	-7.5	4.0	0.34	1.55	1.09	1.12	6	7	0.00	0.00	0.00	1.13	1.94	2.26	2.49	3.24	4.34	5.79	7.87	11.17	16.82	30.24	59.67	92.70	98.72	98.87	98.87	98.88	99.77	13.0
FEVC-07-18#3	-16.0	6.1	0.23	2.1	0.54	1	6	7	0.00	0.00	0.00	0.00	0.04	0.04	0.05	0.18	0.29	0.51	0.80	1.38	2.94	9.10	33.19	80.48	98.30	98.99	99.00	99.00	99.95	5.8
Cut to -19.0																														
FEVC-07-18 Composite		**16.0**	**0.27**	**1.89**	**0.80**	**1.03**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.28**	**0.50**	**0.58**	**0.76**	**1.01**	**1.49**	**2.21**	**3.11**	**4.72**	**8.17**	**18.45**	**44.28**	**85.12**	**98.41**	**98.95**	**98.96**	**98.97**	**99.92**	**9.4**
FEVC-07-19#1	-6.0	4.7	0.21	2.22	0.43	1.00	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.09	0.30	0.46	0.69	1.32	3.70	19.07	79.20	98.67	98.99	99.00	99.00	100.00	5.8
FEVC-07-19#2	-11.3	9.8	0.23	2.10	0.39	1.23	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.15	0.23	0.32	0.72	4.03	33.64	88.88	98.47	98.76	98.77	98.77	99.95	4.3
FEVC-07-19#3	-18.9	0.5	0.31	1.71	0.92	1.27	6	6	0.00	0.00	0.00	0.00	0.14	0.26	0.39	0.97	1.88	3.59	6.25	10.04	17.07	28.72	50.90	85.93	98.26	98.69	98.72	98.73	100.00	19.7
Cut to -19.0																														
FEVC-07-19 Composite		**15.0**	**0.23**	**2.13**	**0.44**	**1.16**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.02**	**0.05**	**0.15**	**0.31**	**0.50**	**0.76**	**1.45**	**4.75**	**29.65**	**85.75**	**98.53**	**98.83**	**98.84**	**98.84**	**99.97**	**5.3**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (1 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-08-01#1	0.18	2.50	0.40	1.48
FEVC-08-01#2	0.21	2.23	0.53	1.37
FEVC-08-01#3	0.57	0.82	1.75	1.76
FEVC-08-01#4	0.14	2.81	0.31	3.29
FEVC-08-01 Composite	**1.43**	**98.32**	**0.25**	**0.00**
FEVC-08-02#1	0.23	2.11	0.70	1.30
FEVC-08-02#2	0.18	2.50	0.33	1.14
FEVC-08-02A#1	0.18	2.45	0.35	1.25
FEVC-08-02A#2	0.18	2.48	0.34	1.29
FEVC-08-02 Composite	**1.23**	**98.37**	**0.20**	**0.19**
FEVC-08-03#1	0.35	1.53	1.43	0.93
FEVC-08-03#2	0.19	2.42	0.49	1.26
FEVC-08-03#3	0.17	2.53	0.35	1.30
FEVC-08-03#4	0.60	0.74	1.59	0.93
FEVC-08-03#5	0.19	2.41	0.34	1.29
FEVC-08-03#6	0.20	2.32	0.35	1.16
FEVC-08-03 Composite	**1.20**	**96.03**	**1.69**	**1.08**
FEVC-08-04#1	1.15	95.67	2.25	0.93
FEVC-08-04#2	0.98	64.69	24.44	9.89
FEVC-08-04#3	1.30	88.07	3.93	6.70
FEVC-08-04#4	1.14	98.74	0.12	0.00
FEVC-08-04A#1	0.98	99.02	0.00	0.00
FEVC-08-04A#2	1.24	98.76	0.00	0.00
FEVC-08-04A#3	0.95	96.62	1.45	0.98
FEVC-08-04A#4	1.09	98.77	0.14	0.00
FEVC-08-04 Composite	**1.14**	**92.63**	**3.85**	**2.38**
FEVC-08-05#1	1.06	97.93	0.79	0.22
FEVC-08-05#2	1.17	91.90	5.56	1.37
FEVC-08-05#3	1.13	97.87	0.72	0.28
FEVC-08-05#4	1.16	94.11	3.07	1.66
FEVC-08-05#5	1.20	98.76	0.04	0.00
FEVC-08-05A#1	0.80	40.94	13.82	44.44
FEVC-08-05A#2	0.97	97.66	0.98	0.39
FEVC-08-05A#3	1.32	86.93	8.51	3.24
FEVC-08-05A#4	0.88	98.45	0.67	0.00
FEVC-08-05A#5	0.80	97.89	1.22	0.09
FEVC-08-05 Composite	**1.08**	**96.56**	**1.83**	**0.53**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (2 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-08-06#1	0.19	2.40	0.38	1.15
FEVC-08-06#2	0.21	2.26	0.72	1.09
FEVC-08-06#3	0.17	2.55	0.33	1.42
FEVC-08-06#4	0.34	1.54	1.48	1.23
FEVC-08-06#5	0.14	2.85	0.89	32.97
FEVC-08-06 Composite	**1.21**	**98.07**	**0.21**	**0.50**
FEVC-08-07#1	0.79	97.73	1.14	0.34
FEVC-08-07#2	1.05	98.88	0.07	0.00
FEVC-08-07#3	0.90	93.09	4.55	1.46
FEVC-08-07#4	1.20	98.80	0.00	0.00
FEVC-08-07A#1	1.20	98.80	0.00	0.00
FEVC-08-07 Composite	**0.98**	**97.80**	**0.93**	**0.28**
FEVC-08-08#1	1.13	96.97	1.58	0.32
FEVC-08-08#2	1.24	96.39	1.21	1.16
FEVC-08-08#3	1.48	87.88	8.52	2.12
FEVC-08-08 Composite	**1.23**	**95.58**	**2.23**	**0.96**
FEVC-08-09#1	1.13	97.88	0.85	0.14
FEVC-08-09#2	1.20	98.63	0.17	0.00
FEVC-08-09#3	1.34	98.65	0.01	0.00
FEVC-08-09 Composite	**1.23**	**98.44**	**0.30**	**0.04**
FEVC-08-10#1	1.20	98.46	0.17	0.17
FEVC-08-10#2	1.13	98.50	0.18	0.19
FEVC-08-10#3	1.18	97.27	1.16	0.39
FEVC-08-10#4	1.05	79.12	12.09	7.74
FEVC-08-10 Composite	**1.16**	**96.44**	**1.49**	**0.91**
FEVC-07-01#1	0.60	99.15	0.16	0.09
FEVC-07-01#2	1.18	98.56	0.26	0.00
FEVC-07-01#3	1.15	98.81	0.04	0.00
FEVC-07-01#4	8.43	91.52	0.05	0.00
FEVC-07-01 Composite	**0.88**	**98.88**	**0.19**	**0.05**
FEVC-07-02#1	0.98	98.29	0.73	0.00
FEVC-07-02#2	1.09	98.85	0.06	0.00
FEVC-07-02#3	1.24	98.76	0.00	0.00
FEVC-07-02 Composite	**1.08**	**98.70**	**0.22**	**0.00**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (3 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-07-05#1	1.13	98.80	0.07	0.00
FEVC-07-05#2	0.98	98.72	0.30	0.00
FEVC-07-05 Composite	**1.07**	**98.77**	**0.16**	**0.00**
FEVC-07-09#1	1.10	93.35	3.45	2.10
FEVC-07-09#2	1.38	98.62	0.00	0.00
FEVC-07-09#3	1.35	94.48	2.91	1.26
FEVC-07-09#4	1.29	86.32	8.59	3.80
FEVC-07-09 Composite	**1.31**	**94.43**	**2.89**	**1.37**
FEVC-07-15#1	1.05	98.58	0.37	0.00
FEVC-07-15#2	1.10	98.90	0.00	0.00
FEVC-07-15#3	1.09	98.86	0.05	0.00
FEVC-07-15 Composite	**1.08**	**98.81**	**0.11**	**0.00**
FEVC-07-16#1	1.13	98.82	0.05	0.00
FEVC-07-16#2	1.46	98.28	0.26	0.00
FEVC-07-16#3	1.19	85.42	6.94	6.45
FEVC-07-16A#1	1.13	96.33	2.28	0.26
FEVC-07-16A#2	0.85	85.16	5.30	8.69
FEVC-07-16A#3	1.03	95.70	2.45	0.82
FEVC-07-16A#4	1.45	98.53	0.02	0.00
FEVC-07-16 Composite	**1.21**	**94.74**	**1.82**	**2.24**
FEVC-07-17#1	0.99	98.83	0.18	0.00
FEVC-07-17#2	1.15	77.12	6.12	15.61
FEVC-07-17#3	1.17	98.28	0.40	0.15
FEVC-07-17#4	0.91	87.08	6.40	5.61
FEVC-07-17#5	1.20	97.97	0.56	0.27
FEVC-07-17A#1	1.27	97.49	1.14	0.10
FEVC-07-17A#2	0.80	93.84	3.60	1.76
FEVC-07-17 Composite	**1.05**	**95.48**	**1.82**	**1.64**
FEVC-07-18#1	1.01	98.18	0.81	0.00
FEVC-07-18#2	1.12	94.54	2.08	2.26
FEVC-07-18#3	1.00	98.71	0.25	0.04
FEVC-07-18 Composite	**1.03**	**97.47**	**0.91**	**0.58**
FEVC-07-19#1	1.00	98.91	0.09	0.00
FEVC-07-19#2	1.23	98.68	0.09	0.00
FEVC-07-19#3	1.27	96.85	1.62	0.26
FEVC-07-19 Composite	**1.16**	**98.69**	**0.14**	**0.01**
Alternative 3 Composite	**1.18**	**96.98**	**1.15**	**0.69**

APPENDIX 27

Alternative 3 Channel Corridor Composite Vibracore Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: Alternative 3 composite

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
		North Carolina State Plane	

USCS:	Munsell:	Comments:
		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.15	0.03	#200 - 1.19 #230 - 1.18		10	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.02	0.02	0.02	0.02
5/8"	-4.00	16.00	0.04	0.04	0.06	0.06
7/16"	-3.50	11.31	0.17	0.17	0.23	0.23
5/16"	-3.00	8.00	0.14	0.14	0.37	0.37
3.5	-2.50	5.66	0.21	0.21	0.58	0.58
4	-2.25	4.76	0.11	0.11	0.69	0.69
5	-2.00	4.00	0.19	0.19	0.88	0.88
7	-1.50	2.83	0.40	0.40	1.28	1.28
10	-1.00	2.00	0.56	0.56	1.84	1.84
14	-0.50	1.41	0.87	0.87	2.71	2.71
18	0.00	1.00	0.99	0.99	3.70	3.70
25	0.50	0.71	1.22	1.22	4.92	4.92
35	1.00	0.50	1.96	1.96	6.88	6.88
45	1.50	0.35	4.73	4.73	11.61	11.61
60	2.00	0.25	16.61	16.61	28.22	28.22
80	2.50	0.18	46.88	46.88	75.10	75.10
120	3.00	0.13	22.39	22.39	97.49	97.49
170	3.50	0.09	1.27	1.27	98.76	98.76
200	3.75	0.07	0.05	0.05	98.81	98.81
230	4.00	0.06	0.01	0.01	98.82	98.82

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.70	2.50	2.23	1.90	1.63	0.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.06	0.24	0.85	-3.07	15.95

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-01 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,390,205	198,940	North Carolina State Plane	-15.5 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.87	0.01	#200 - 0.96 #230 - 0.88		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	0.00	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	0.05	0.05	0.05	0.05
5	-2.00	4.00	0.05	0.05	0.10	0.10
7	-1.50	2.83	0.06	0.06	0.16	0.16
10	-1.00	2.00	0.08	0.08	0.24	0.24
14	-0.50	1.41	0.17	0.17	0.41	0.41
18	0.00	1.00	0.18	0.18	0.59	0.59
25	0.50	0.71	0.34	0.34	0.93	0.93
35	1.00	0.50	0.58	0.58	1.51	1.51
45	1.50	0.35	1.44	1.44	2.95	2.95
60	2.00	0.25	6.56	6.56	9.51	9.51
80	2.50	0.18	39.11	39.11	48.62	48.62
120	3.00	0.13	43.52	43.52	92.14	92.14
170	3.50	0.09	6.43	6.43	98.57	98.57
200	3.75	0.07	0.47	0.47	99.04	99.04
230	4.00	0.06	0.08	0.08	99.12	99.12

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.22	2.91	2.80	2.52	2.20	2.08	1.66

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.46	0.18	0.52	-2.55	18.88

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-02 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,733	202,440	North Carolina State Plane	-9.0 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.07	0.01	#200 - 1.09 #230 - 1.08		8	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.05	0.05	0.07	0.07
10	-1.00	2.00	0.15	0.15	0.22	0.22
14	-0.50	1.41	0.28	0.28	0.50	0.50
18	0.00	1.00	0.39	0.39	0.89	0.89
25	0.50	0.71	0.72	0.72	1.61	1.61
35	1.00	0.50	1.38	1.38	2.99	2.99
45	1.50	0.35	3.83	3.83	6.82	6.82
60	2.00	0.25	16.47	16.47	23.29	23.29
80	2.50	0.18	49.16	49.16	72.45	72.45
120	3.00	0.13	25.49	25.49	97.94	97.94
170	3.50	0.09	0.95	0.95	98.89	98.89
200	3.75	0.07	0.02	0.02	98.91	98.91
230	4.00	0.06	0.01	0.01	98.92	98.92

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.73	2.55	2.27	2.02	1.78	1.26

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.2	0.22	0.54	-2.1	11.72

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-05 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,867	199,037	North Carolina State Plane	-12.9 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.07	0.00	#200 - 1.09 #230 - 1.07		6	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.06	0.06	0.08	0.08
10	-1.00	2.00	0.08	0.08	0.16	0.16
14	-0.50	1.41	0.24	0.24	0.40	0.40
18	0.00	1.00	0.27	0.27	0.67	0.67
25	0.50	0.71	0.42	0.42	1.09	1.09
35	1.00	0.50	0.67	0.67	1.76	1.76
45	1.50	0.35	2.04	2.04	3.80	3.80
60	2.00	0.25	11.21	11.21	15.01	15.01
80	2.50	0.18	45.80	45.80	60.81	60.81
120	3.00	0.13	34.76	34.76	95.57	95.57
170	3.50	0.09	3.22	3.22	98.79	98.79
200	3.75	0.07	0.12	0.12	98.91	98.91
230	4.00	0.06	0.02	0.02	98.93	98.93

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.83	2.70	2.38	2.11	2.01	1.55

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.34	0.20	0.51	-2.16	14.08

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-09 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,776	201,051	North Carolina State Plane	-5.8 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.29	0.02	#200 - 1.32 #230 - 1.31		17	

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	0.51	0.51	0.51	0.51
3.5	-2.50	5.66	0.61	0.61	1.12	1.12
4	-2.25	4.76	0.25	0.25	1.37	1.37
5	-2.00	4.00	0.52	0.52	1.89	1.89
7	-1.50	2.83	0.93	0.93	2.82	2.82
10	-1.00	2.00	1.44	1.44	4.26	4.26
14	-0.50	1.41	2.39	2.39	6.65	6.65
18	0.00	1.00	2.66	2.66	9.31	9.31
25	0.50	0.71	3.26	3.26	12.57	12.57
35	1.00	0.50	3.88	3.88	16.45	16.45
45	1.50	0.35	6.46	6.46	22.91	22.91
60	2.00	0.25	16.98	16.98	39.89	39.89
80	2.50	0.18	44.96	44.96	84.85	84.85
120	3.00	0.13	13.21	13.21	98.06	98.06
170	3.50	0.09	0.57	0.57	98.63	98.63
200	3.75	0.07	0.05	0.05	98.68	98.68
230	4.00	0.06	0.01	0.01	98.69	98.69

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.49	2.39	2.11	1.56	0.94	-0.85

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.72	0.30	1.13	-2.04	7.24

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-10 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,121	200,150	North Carolina State Plane	-9.3 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.23	0.01	#200 - 1.25 #230 - 1.24		10	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.02	0.02	0.02	0.02
4	-2.25	4.76	0.00	0.00	0.02	0.02
5	-2.00	4.00	0.08	0.08	0.10	0.10
7	-1.50	2.83	0.09	0.09	0.19	0.19
10	-1.00	2.00	0.18	0.18	0.37	0.37
14	-0.50	1.41	0.27	0.27	0.64	0.64
18	0.00	1.00	0.28	0.28	0.92	0.92
25	0.50	0.71	0.47	0.47	1.39	1.39
35	1.00	0.50	0.97	0.97	2.36	2.36
45	1.50	0.35	4.33	4.33	6.69	6.69
60	2.00	0.25	18.18	18.18	24.87	24.87
80	2.50	0.18	49.69	49.69	74.56	74.56
120	3.00	0.13	23.14	23.14	97.70	97.70
170	3.50	0.09	1.01	1.01	98.71	98.71
200	3.75	0.07	0.04	0.04	98.75	98.75
230	4.00	0.06	0.01	0.01	98.76	98.76

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.70	2.51	2.25	2.00	1.76	1.30

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	0.54	-2.41	15.52

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-11 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-4.4 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.29	0.01	#200 - 1.31 #230 - 1.30		8	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.07	0.07	0.07	0.07
4	-2.25	4.76	0.06	0.06	0.13	0.13
5	-2.00	4.00	0.09	0.09	0.22	0.22
7	-1.50	2.83	0.36	0.36	0.58	0.58
10	-1.00	2.00	0.36	0.36	0.94	0.94
14	-0.50	1.41	0.61	0.61	1.55	1.55
18	0.00	1.00	0.74	0.74	2.29	2.29
25	0.50	0.71	0.93	0.93	3.22	3.22
35	1.00	0.50	1.41	1.41	4.63	4.63
45	1.50	0.35	3.49	3.49	8.12	8.12
60	2.00	0.25	15.84	15.84	23.96	23.96
80	2.50	0.18	53.56	53.56	77.52	77.52
120	3.00	0.13	20.04	20.04	97.56	97.56
170	3.50	0.09	1.09	1.09	98.65	98.65
200	3.75	0.07	0.04	0.04	98.69	98.69
230	4.00	0.06	0.01	0.01	98.70	98.70

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.66	2.48	2.24	2.01	1.75	1.05

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.13	0.23	0.67	-2.94	15.81

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-12 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,433	200,711	North Carolina State Plane	-7.5 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.37	0.04	#200 - 1.43 #230 - 1.41		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	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.01	0.01	0.03	0.03
14	-0.50	1.41	0.01	0.01	0.04	0.04
18	0.00	1.00	0.03	0.03	0.07	0.07
25	0.50	0.71	0.06	0.06	0.13	0.13
35	1.00	0.50	0.21	0.21	0.34	0.34
45	1.50	0.35	1.00	1.00	1.34	1.34
60	2.00	0.25	11.66	11.66	13.00	13.00
80	2.50	0.18	57.39	57.39	70.39	70.39
120	3.00	0.13	26.23	26.23	96.62	96.62
170	3.50	0.09	1.87	1.87	98.49	98.49
200	3.75	0.07	0.08	0.08	98.57	98.57
230	4.00	0.06	0.02	0.02	98.59	98.59

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.76	2.59	2.32	2.10	2.03	1.66

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	0.37	-0.77	9.34

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-13 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,692	200,595	North Carolina State Plane	-10.6 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 6.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.45	0.02	#200 - 1.51 #230 - 1.47		6	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.13	0.13	0.13	0.13
3.5	-2.50	5.66	0.01	0.01	0.14	0.14
4	-2.25	4.76	0.03	0.03	0.17	0.17
5	-2.00	4.00	0.04	0.04	0.21	0.21
7	-1.50	2.83	0.11	0.11	0.32	0.32
10	-1.00	2.00	0.26	0.26	0.58	0.58
14	-0.50	1.41	0.41	0.41	0.99	0.99
18	0.00	1.00	0.54	0.54	1.53	1.53
25	0.50	0.71	0.77	0.77	2.30	2.30
35	1.00	0.50	1.30	1.30	3.60	3.60
45	1.50	0.35	3.67	3.67	7.27	7.27
60	2.00	0.25	10.76	10.76	18.03	18.03
80	2.50	0.18	45.70	45.70	63.73	63.73
120	3.00	0.13	32.03	32.03	95.76	95.76
170	3.50	0.09	2.62	2.62	98.38	98.38
200	3.75	0.07	0.11	0.11	98.49	98.49
230	4.00	0.06	0.04	0.04	98.53	98.53

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.82	2.68	2.35	2.08	1.91	1.19

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.26	0.21	0.64	-2.92	18.13

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-15 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,715	200,330	North Carolina State Plane	-5.3 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.06	0.02	#200 - 1.10 #230 - 1.08		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	0.00	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	0.01	0.01	0.01	0.01
7	-1.50	2.83	0.04	0.04	0.05	0.05
10	-1.00	2.00	0.06	0.06	0.11	0.11
14	-0.50	1.41	0.12	0.12	0.23	0.23
18	0.00	1.00	0.15	0.15	0.38	0.38
25	0.50	0.71	0.31	0.31	0.69	0.69
35	1.00	0.50	0.66	0.66	1.35	1.35
45	1.50	0.35	2.22	2.22	3.57	3.57
60	2.00	0.25	16.41	16.41	19.98	19.98
80	2.50	0.18	49.65	49.65	69.63	69.63
120	3.00	0.13	28.03	28.03	97.66	97.66
170	3.50	0.09	1.20	1.20	98.86	98.86
200	3.75	0.07	0.04	0.04	98.90	98.90
230	4.00	0.06	0.02	0.02	98.92	98.92

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.95	2.76	2.60	2.30	2.05	1.88	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.27	0.21	0.46	-1.77	12.35

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-16 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	0.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.01	0.20	#200 - 1.22 #230 - 1.21		12	

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	1.64	1.64	1.64	1.64
5/16"	-3.00	8.00	0.06	0.06	1.70	1.70
3.5	-2.50	5.66	0.42	0.42	2.12	2.12
4	-2.25	4.76	0.12	0.12	2.24	2.24
5	-2.00	4.00	0.35	0.35	2.59	2.59
7	-1.50	2.83	0.64	0.64	3.23	3.23
10	-1.00	2.00	0.82	0.82	4.05	4.05
14	-0.50	1.41	1.32	1.32	5.37	5.37
18	0.00	1.00	1.46	1.46	6.83	6.83
25	0.50	0.71	2.08	2.08	8.91	8.91
35	1.00	0.50	2.86	2.86	11.77	11.77
45	1.50	0.35	5.69	5.69	17.46	17.46
60	2.00	0.25	18.10	18.10	35.56	35.56
80	2.50	0.18	49.04	49.04	84.60	84.60
120	3.00	0.13	13.64	13.64	98.24	98.24
170	3.50	0.09	0.49	0.49	98.73	98.73
200	3.75	0.07	0.05	0.05	98.78	98.78
230	4.00	0.06	0.01	0.01	98.79	98.79

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.49	2.40	2.15	1.71	1.37	-0.64

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.81	0.29	1.16	-2.9	12.49

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-17 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.04	0.01	#200 - 1.06 #230 - 1.05		13	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
1"	-4.75	26.91	0.00	0.00	0.00	0.00
3/4"	-4.25	19.03	0.33	0.33	0.33	0.33
5/8"	-4.00	16.00	0.42	0.42	0.75	0.75
7/16"	-3.50	11.31	0.15	0.15	0.90	0.90
5/16"	-3.00	8.00	0.29	0.29	1.19	1.19
3.5	-2.50	5.66	0.36	0.36	1.55	1.55
4	-2.25	4.76	0.09	0.09	1.64	1.64
5	-2.00	4.00	0.21	0.21	1.85	1.85
7	-1.50	2.83	0.61	0.61	2.46	2.46
10	-1.00	2.00	1.01	1.01	3.47	3.47
14	-0.50	1.41	1.58	1.58	5.05	5.05
18	0.00	1.00	1.78	1.78	6.83	6.83
25	0.50	0.71	2.25	2.25	9.08	9.08
35	1.00	0.50	3.33	3.33	12.41	12.41
45	1.50	0.35	8.00	8.00	20.41	20.41
60	2.00	0.25	24.49	24.49	44.90	44.90
80	2.50	0.18	42.70	42.70	87.60	87.60
120	3.00	0.13	10.96	10.96	98.56	98.56
170	3.50	0.09	0.36	0.36	98.92	98.92
200	3.75	0.07	0.02	0.02	98.94	98.94
230	4.00	0.06	0.01	0.01	98.95	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.84	2.46	2.35	2.06	1.59	1.22	-0.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.75	0.30	1.09	-2.84	13.13

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-18 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,894	201,815	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.95	0.08	#200 - 1.04 #230 - 1.03		9	

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	0.28	0.28	0.28	0.28
3.5	-2.50	5.66	0.22	0.22	0.50	0.50
4	-2.25	4.76	0.08	0.08	0.58	0.58
5	-2.00	4.00	0.18	0.18	0.76	0.76
7	-1.50	2.83	0.25	0.25	1.01	1.01
10	-1.00	2.00	0.48	0.48	1.49	1.49
14	-0.50	1.41	0.72	0.72	2.21	2.21
18	0.00	1.00	0.90	0.90	3.11	3.11
25	0.50	0.71	1.61	1.61	4.72	4.72
35	1.00	0.50	3.45	3.45	8.17	8.17
45	1.50	0.35	10.28	10.28	18.45	18.45
60	2.00	0.25	25.83	25.83	44.28	44.28
80	2.50	0.18	40.84	40.84	85.12	85.12
120	3.00	0.13	13.29	13.29	98.41	98.41
170	3.50	0.09	0.54	0.54	98.95	98.95
200	3.75	0.07	0.01	0.01	98.96	98.96
230	4.00	0.06	0.01	0.01	98.97	98.97

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.87	2.49	2.38	2.07	1.63	1.38	0.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.89	0.27	0.8	-2.58	13.45

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-07-19 Comp.

Analysis Date: 08-28-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,020	200,054	North Carolina State Plane	-4.0 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.13	0.03	#200 - 1.16 #230 - 1.16		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	0.00	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	0.01	0.01	0.01	0.01
5	-2.00	4.00	0.01	0.01	0.02	0.02
7	-1.50	2.83	0.03	0.03	0.05	0.05
10	-1.00	2.00	0.10	0.10	0.15	0.15
14	-0.50	1.41	0.16	0.16	0.31	0.31
18	0.00	1.00	0.19	0.19	0.50	0.50
25	0.50	0.71	0.26	0.26	0.76	0.76
35	1.00	0.50	0.69	0.69	1.45	1.45
45	1.50	0.35	3.30	3.30	4.75	4.75
60	2.00	0.25	24.90	24.90	29.65	29.65
80	2.50	0.18	56.10	56.10	85.75	85.75
120	3.00	0.13	12.78	12.78	98.53	98.53
170	3.50	0.09	0.30	0.30	98.83	98.83
200	3.75	0.07	0.01	0.01	98.84	98.84
230	4.00	0.06	0.00	0.00	98.84	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.86	2.48	2.40	2.18	1.91	1.73	1.51

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.13	0.23	0.44	-2.07	15.2

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-01 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,385,534	200,207	North Carolina State Plane	-10.6 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.43	0.00	#200 - 1.46 #230 - 1.43		10	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.02	0.02	0.02	0.02
7	-1.50	2.83	0.08	0.08	0.10	0.10
10	-1.00	2.00	0.15	0.15	0.25	0.25
14	-0.50	1.41	0.21	0.21	0.46	0.46
18	0.00	1.00	0.17	0.17	0.63	0.63
25	0.50	0.71	0.31	0.31	0.94	0.94
35	1.00	0.50	0.50	0.50	1.44	1.44
45	1.50	0.35	1.31	1.31	2.75	2.75
60	2.00	0.25	9.10	9.10	11.85	11.85
80	2.50	0.18	46.91	46.91	58.76	58.76
120	3.00	0.13	36.67	36.67	95.43	95.43
170	3.50	0.09	2.98	2.98	98.41	98.41
200	3.75	0.07	0.13	0.13	98.54	98.54
230	4.00	0.06	0.03	0.03	98.57	98.57

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.72	2.41	2.14	2.04	1.62

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.38	0.19	0.49	-2.56	18.4

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-02 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,109	200,498	North Carolina State Plane	-4.8 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 8.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.18	0.05	#200 - 1.25 #230 - 1.23		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	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.19	0.19	0.19	0.19
4	-2.25	4.76	0.00	0.00	0.19	0.19
5	-2.00	4.00	0.01	0.01	0.20	0.20
7	-1.50	2.83	0.03	0.03	0.23	0.23
10	-1.00	2.00	0.16	0.16	0.39	0.39
14	-0.50	1.41	0.06	0.06	0.45	0.45
18	0.00	1.00	0.15	0.15	0.60	0.60
25	0.50	0.71	0.20	0.20	0.80	0.80
35	1.00	0.50	0.57	0.57	1.37	1.37
45	1.50	0.35	1.82	1.82	3.19	3.19
60	2.00	0.25	9.77	9.77	12.96	12.96
80	2.50	0.18	46.50	46.50	59.46	59.46
120	3.00	0.13	36.58	36.58	96.04	96.04
170	3.50	0.09	2.63	2.63	98.67	98.67
200	3.75	0.07	0.08	0.08	98.75	98.75
230	4.00	0.06	0.02	0.02	98.77	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.71	2.40	2.13	2.03	1.59

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.36	0.19	0.51	-3.38	28.76

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-03 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-3.6 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.19	0.01	#200 - 1.22 #230 - 1.20		9	

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	0.13	0.13	0.13	0.13
5/16"	-3.00	8.00	0.34	0.34	0.47	0.47
3.5	-2.50	5.66	0.32	0.32	0.79	0.79
4	-2.25	4.76	0.29	0.29	1.08	1.08
5	-2.00	4.00	0.29	0.29	1.37	1.37
7	-1.50	2.83	0.66	0.66	2.03	2.03
10	-1.00	2.00	0.74	0.74	2.77	2.77
14	-0.50	1.41	1.17	1.17	3.94	3.94
18	0.00	1.00	1.30	1.30	5.24	5.24
25	0.50	0.71	1.15	1.15	6.39	6.39
35	1.00	0.50	1.46	1.46	7.85	7.85
45	1.50	0.35	2.45	2.45	10.30	10.30
60	2.00	0.25	7.04	7.04	17.34	17.34
80	2.50	0.18	40.54	40.54	57.88	57.88
120	3.00	0.13	38.47	38.47	96.35	96.35
170	3.50	0.09	2.36	2.36	98.71	98.71
200	3.75	0.07	0.07	0.07	98.78	98.78
230	4.00	0.06	0.02	0.02	98.80	98.80

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.84	2.72	2.40	2.09	1.90	-0.09

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.17	0.22	0.99	-3.05	13.59

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-04 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.12	0.02	#200 - 1.15 #230 - 1.14		20	

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	0.28	0.28	0.28	0.28
7/16"	-3.50	11.31	0.73	0.73	1.01	1.01
5/16"	-3.00	8.00	0.31	0.31	1.32	1.32
3.5	-2.50	5.66	0.67	0.67	1.99	1.99
4	-2.25	4.76	0.39	0.39	2.38	2.38
5	-2.00	4.00	0.66	0.66	3.04	3.04
7	-1.50	2.83	1.46	1.46	4.50	4.50
10	-1.00	2.00	1.73	1.73	6.23	6.23
14	-0.50	1.41	2.30	2.30	8.53	8.53
18	0.00	1.00	2.26	2.26	10.79	10.79
25	0.50	0.71	2.28	2.28	13.07	13.07
35	1.00	0.50	3.39	3.39	16.46	16.46
45	1.50	0.35	6.85	6.85	23.31	23.31
60	2.00	0.25	19.87	19.87	43.18	43.18
80	2.50	0.18	43.66	43.66	86.84	86.84
120	3.00	0.13	11.64	11.64	98.48	98.48
170	3.50	0.09	0.35	0.35	98.83	98.83
200	3.75	0.07	0.02	0.02	98.85	98.85
230	4.00	0.06	0.01	0.01	98.86	98.86

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.47	2.36	2.08	1.54	0.93	-1.36

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.64	0.32	1.27	-2.22	7.97

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-05 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-2.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.07	0.01	#200 - 1.10 #230 - 1.08		14	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.11	0.11	0.11	0.11
3.5	-2.50	5.66	0.23	0.23	0.34	0.34
4	-2.25	4.76	0.19	0.19	0.53	0.53
5	-2.00	4.00	0.37	0.37	0.90	0.90
7	-1.50	2.83	0.57	0.57	1.47	1.47
10	-1.00	2.00	0.89	0.89	2.36	2.36
14	-0.50	1.41	1.46	1.46	3.82	3.82
18	0.00	1.00	1.91	1.91	5.73	5.73
25	0.50	0.71	2.03	2.03	7.76	7.76
35	1.00	0.50	3.61	3.61	11.37	11.37
45	1.50	0.35	7.24	7.24	18.61	18.61
60	2.00	0.25	20.05	20.05	38.66	38.66
80	2.50	0.18	44.70	44.70	83.36	83.36
120	3.00	0.13	14.87	14.87	98.23	98.23
170	3.50	0.09	0.64	0.64	98.87	98.87
200	3.75	0.07	0.03	0.03	98.90	98.90
230	4.00	0.06	0.02	0.02	98.92	98.92

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.89	2.52	2.41	2.13	1.66	1.32	-0.19

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.87	0.27	0.92	-2.26	9.23

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-06 Comp.

Analysis Date: 10-30-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-1.1 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 8.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.21	0.00	#200 - 1.22 #230 - 1.21		4	

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	0.05	0.05	0.05	0.05
5/16"	-3.00	8.00	0.34	0.34	0.39	0.39
3.5	-2.50	5.66	0.03	0.03	0.42	0.42
4	-2.25	4.76	0.08	0.08	0.50	0.50
5	-2.00	4.00	0.03	0.03	0.53	0.53
7	-1.50	2.83	0.07	0.07	0.60	0.60
10	-1.00	2.00	0.11	0.11	0.71	0.71
14	-0.50	1.41	0.17	0.17	0.88	0.88
18	0.00	1.00	0.17	0.17	1.05	1.05
25	0.50	0.71	0.23	0.23	1.28	1.28
35	1.00	0.50	0.44	0.44	1.72	1.72
45	1.50	0.35	1.26	1.26	2.98	2.98
60	2.00	0.25	6.99	6.99	9.97	9.97
80	2.50	0.18	47.50	47.50	57.47	57.47
120	3.00	0.13	38.60	38.60	96.07	96.07
170	3.50	0.09	2.63	2.63	98.70	98.70
200	3.75	0.07	0.08	0.08	98.78	98.78
230	4.00	0.06	0.01	0.01	98.79	98.79

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.73	2.42	2.16	2.06	1.64

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	0.6	-4.97	42.23

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-07 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,723	200,701	North Carolina State Plane	-3.7 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.96	0.02	#200 - 0.99 #230 - 0.98		10	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.23	0.23	0.23	0.23
4	-2.25	4.76	0.05	0.05	0.28	0.28
5	-2.00	4.00	0.18	0.18	0.46	0.46
7	-1.50	2.83	0.35	0.35	0.81	0.81
10	-1.00	2.00	0.40	0.40	1.21	1.21
14	-0.50	1.41	0.64	0.64	1.85	1.85
18	0.00	1.00	0.83	0.83	2.68	2.68
25	0.50	0.71	0.87	0.87	3.55	3.55
35	1.00	0.50	1.40	1.40	4.95	4.95
45	1.50	0.35	3.49	3.49	8.44	8.44
60	2.00	0.25	15.47	15.47	23.91	23.91
80	2.50	0.18	52.93	52.93	76.84	76.84
120	3.00	0.13	21.29	21.29	98.13	98.13
170	3.50	0.09	0.83	0.83	98.96	98.96
200	3.75	0.07	0.05	0.05	99.01	99.01
230	4.00	0.06	0.01	0.01	99.02	99.02

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.67	2.48	2.25	2.01	1.74	1.01

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.12	0.23	0.71	-3.14	16.87

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-08 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,411	200,087	North Carolina State Plane	-7.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.20	0.03	#200 - 1.25 #230 - 1.23		16	

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	0.17	0.17	0.17	0.17
3.5	-2.50	5.66	0.49	0.49	0.66	0.66
4	-2.25	4.76	0.30	0.30	0.96	0.96
5	-2.00	4.00	0.28	0.28	1.24	1.24
7	-1.50	2.83	0.88	0.88	2.12	2.12
10	-1.00	2.00	1.07	1.07	3.19	3.19
14	-0.50	1.41	1.89	1.89	5.08	5.08
18	0.00	1.00	2.18	2.18	7.26	7.26
25	0.50	0.71	2.53	2.53	9.79	9.79
35	1.00	0.50	4.62	4.62	14.41	14.41
45	1.50	0.35	11.69	11.69	26.10	26.10
60	2.00	0.25	26.20	26.20	52.30	52.30
80	2.50	0.18	35.60	35.60	87.90	87.90
120	3.00	0.13	10.49	10.49	98.39	98.39
170	3.50	0.09	0.35	0.35	98.74	98.74
200	3.75	0.07	0.01	0.01	98.75	98.75
230	4.00	0.06	0.02	0.02	98.77	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.84	2.45	2.32	1.96	1.45	1.07	-0.52

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.69	0.31	0.99	-2.03	7.95

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-09 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
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FL 33431
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,900	199,466	North Carolina State Plane	-9.7 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.23	0.00	#200 - 1.24 #230 - 1.23		7	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.04	0.04	0.04	0.04
3.5	-2.50	5.66	0.00	0.00	0.04	0.04
4	-2.25	4.76	0.00	0.00	0.04	0.04
5	-2.00	4.00	0.04	0.04	0.08	0.08
7	-1.50	2.83	0.09	0.09	0.17	0.17
10	-1.00	2.00	0.16	0.16	0.33	0.33
14	-0.50	1.41	0.20	0.20	0.53	0.53
18	0.00	1.00	0.25	0.25	0.78	0.78
25	0.50	0.71	0.39	0.39	1.17	1.17
35	1.00	0.50	0.77	0.77	1.94	1.94
45	1.50	0.35	2.15	2.15	4.09	4.09
60	2.00	0.25	11.15	11.15	15.24	15.24
80	2.50	0.18	49.46	49.46	64.70	64.70
120	3.00	0.13	32.09	32.09	96.79	96.79
170	3.50	0.09	1.93	1.93	98.72	98.72
200	3.75	0.07	0.04	0.04	98.76	98.76
230	4.00	0.06	0.01	0.01	98.77	98.77

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.80	2.66	2.35	2.10	2.01	1.54

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.31	0.20	0.52	-2.88	20.86

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 3

Sample Name: FEVC-08-10 Comp.

Analysis Date: 10-29-09

Analyzed By: PB

Coastal Planning & Engineering
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,389,697	199,802	North Carolina State Plane	-8.5 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.14	0.02	#200 - 1.16 #230 - 1.16		16	

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	0.34	0.34	0.34	0.34
5/16"	-3.00	8.00	0.08	0.08	0.42	0.42
3.5	-2.50	5.66	0.31	0.31	0.73	0.73
4	-2.25	4.76	0.18	0.18	0.91	0.91
5	-2.00	4.00	0.17	0.17	1.08	1.08
7	-1.50	2.83	0.55	0.55	1.63	1.63
10	-1.00	2.00	0.77	0.77	2.40	2.40
14	-0.50	1.41	1.17	1.17	3.57	3.57
18	0.00	1.00	1.27	1.27	4.84	4.84
25	0.50	0.71	1.53	1.53	6.37	6.37
35	1.00	0.50	2.42	2.42	8.79	8.79
45	1.50	0.35	5.77	5.77	14.56	14.56
60	2.00	0.25	17.98	17.98	32.54	32.54
80	2.50	0.18	45.70	45.70	78.24	78.24
120	3.00	0.13	19.97	19.97	98.21	98.21
170	3.50	0.09	0.59	0.59	98.80	98.80
200	3.75	0.07	0.04	0.04	98.84	98.84
230	4.00	0.06	0.00	0.00	98.84	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

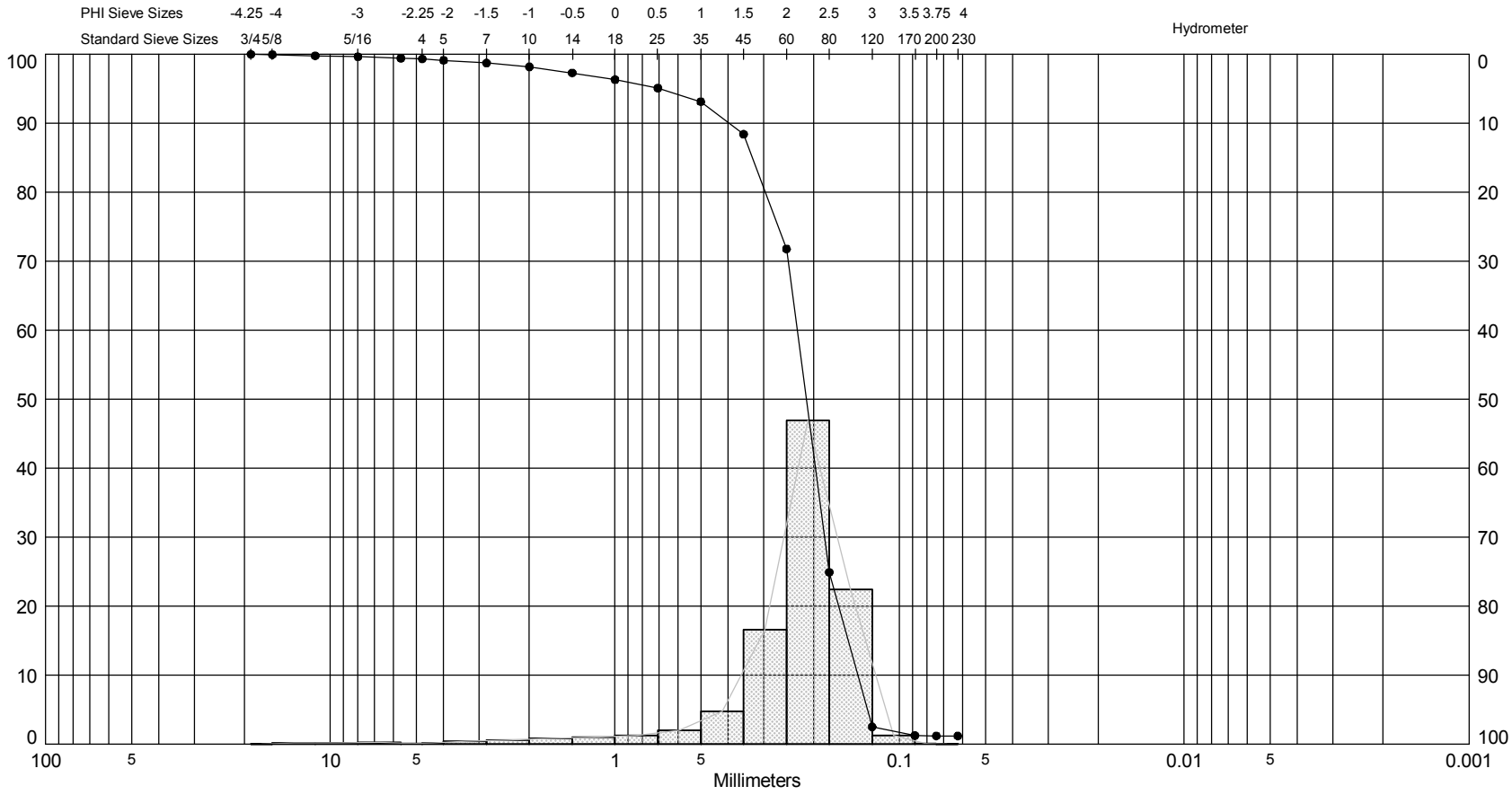
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.64	2.46	2.19	1.79	1.54	0.05

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.97	0.26	0.93	-2.84	13.42

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

APPENDIX 28

Alternative 3 Channel Corridor Composite Vibracore Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Alternative 3 composite	—●—			#200 - 1.19 #230 - 1.18		10	2.23	2.06	-3.07	15.95	0.85

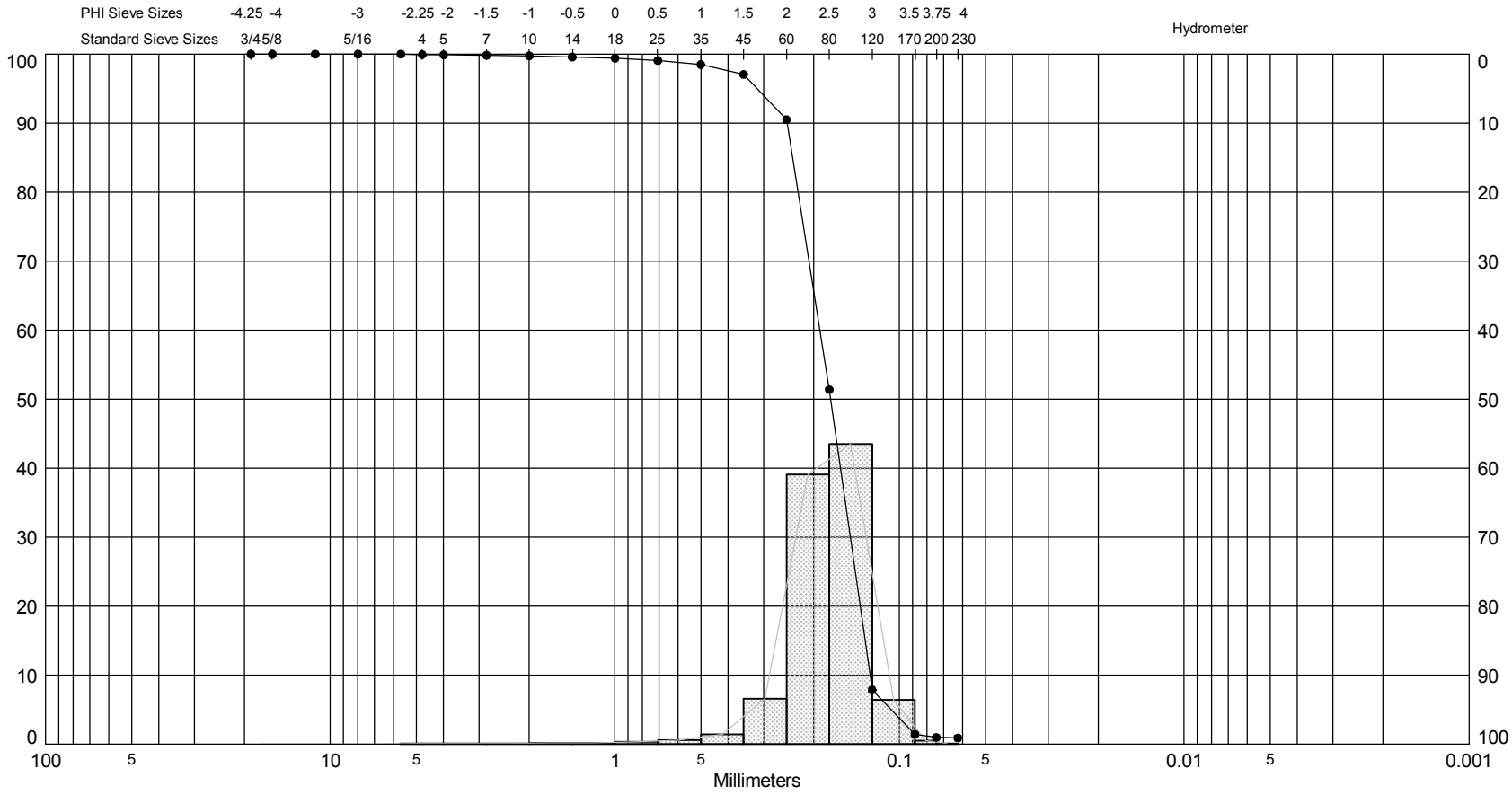
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-01 Comp.	—●—	-15.5	SP	#200 - 0.96 #230 - 0.88		5	2.52	2.46	-2.55	18.88	0.52

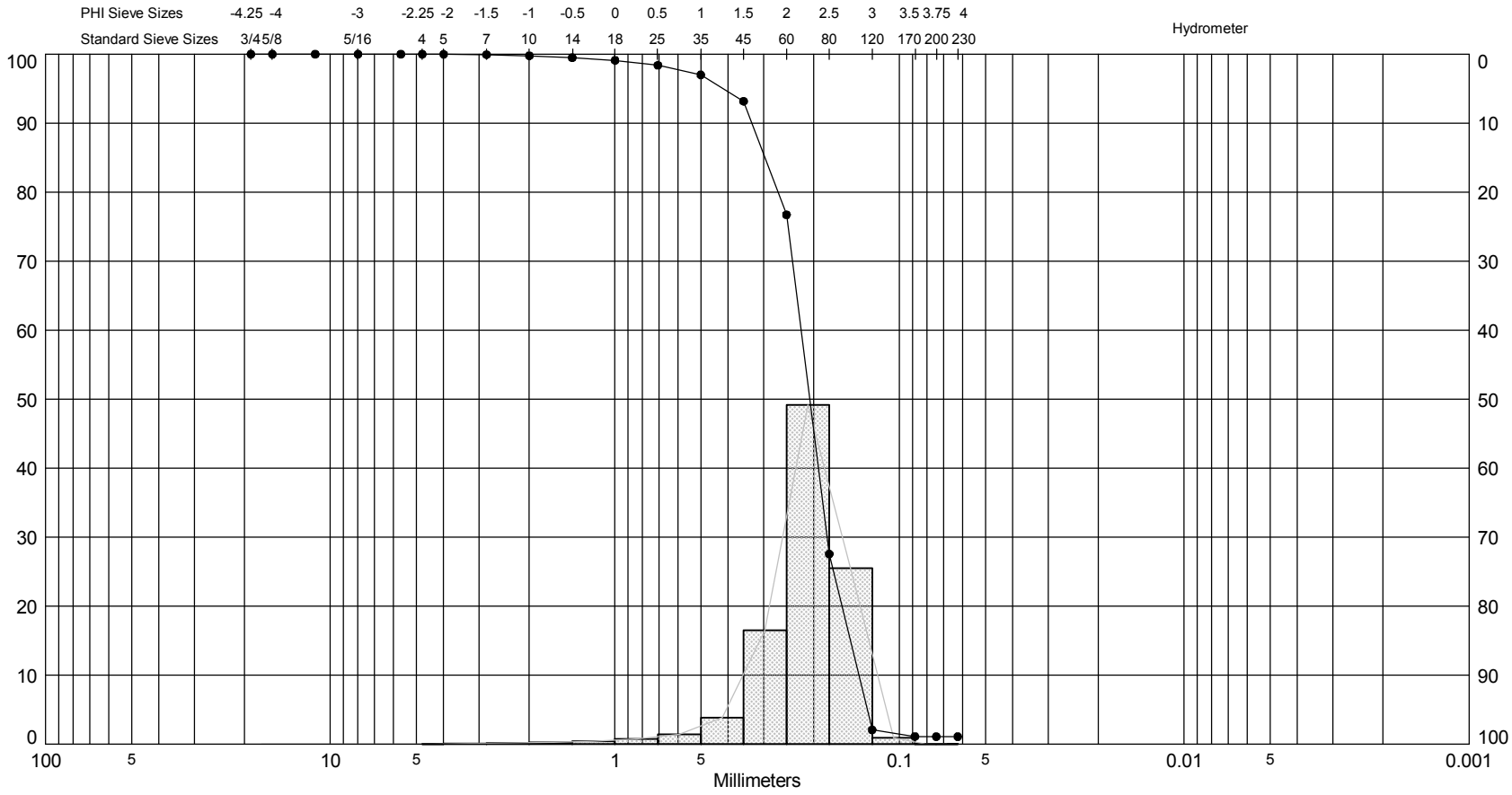
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,390,205
Northing (Y, ft):	198,940
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-02 Comp.	—●—	-9.0	SP	#200 - 1.09 #230 - 1.08		8	2.27	2.2	-2.1	11.72	0.54

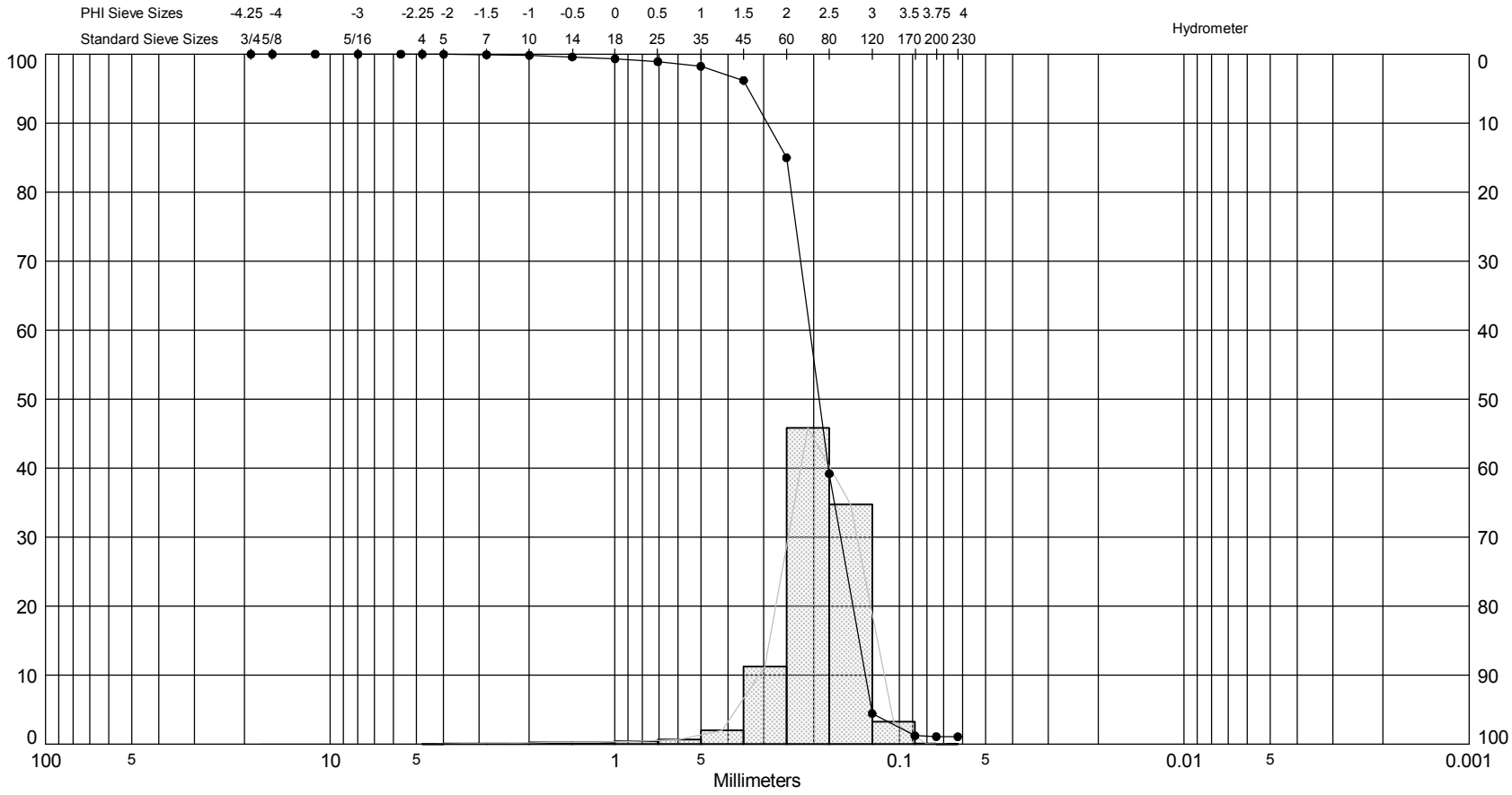
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,733
Northing (Y, ft):	202,440
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-05 Comp.	—●—	-12.9	SP	#200 - 1.09 #230 - 1.07		6	2.38	2.34	-2.16	14.08	0.51

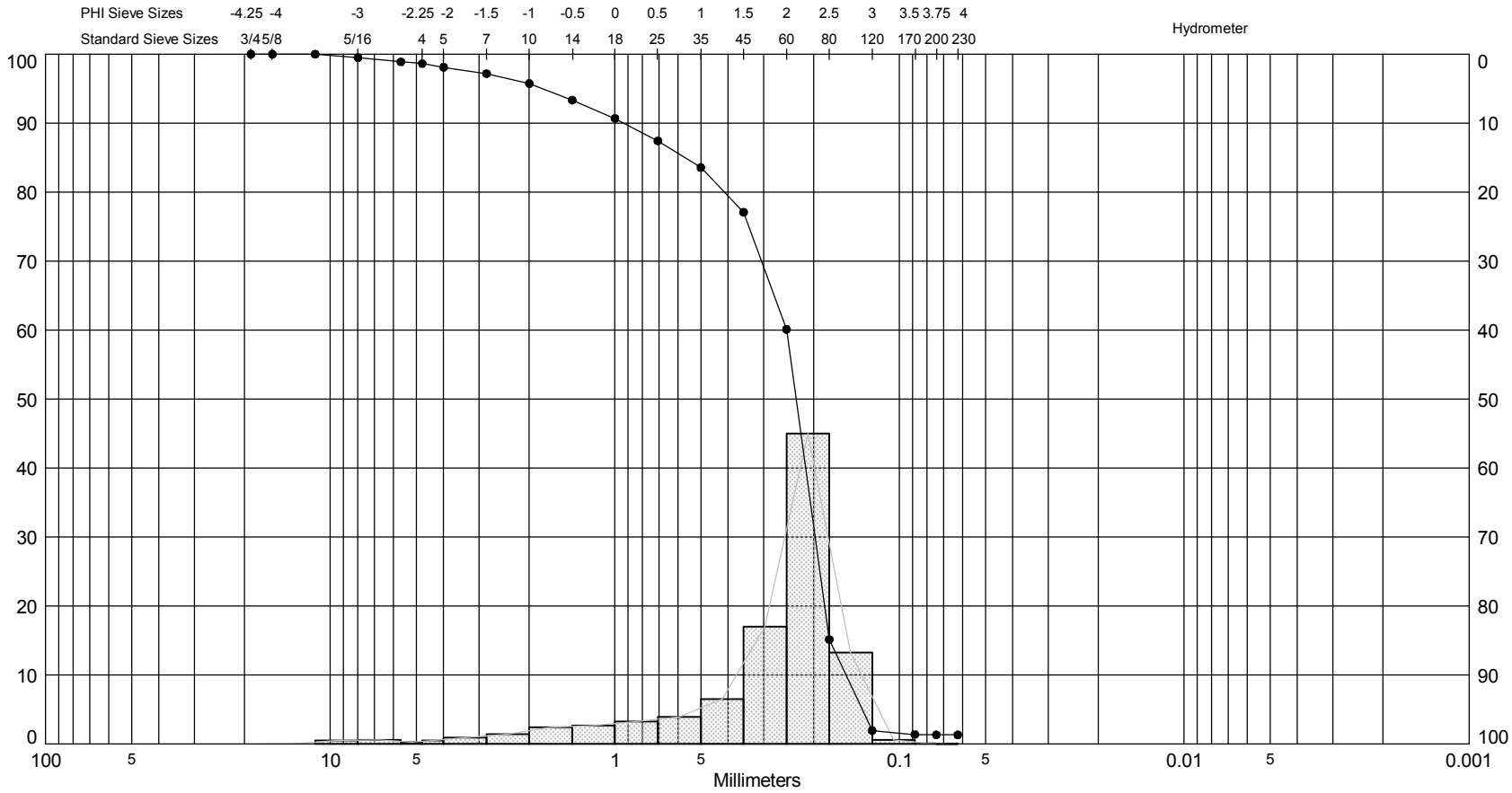
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,389,867
Northing (Y, ft):	199,037
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-09 Comp.	—●—	-5.8	SW	#200 - 1.32 #230 - 1.31		17	2.11	1.72	-2.04	7.24	1.13

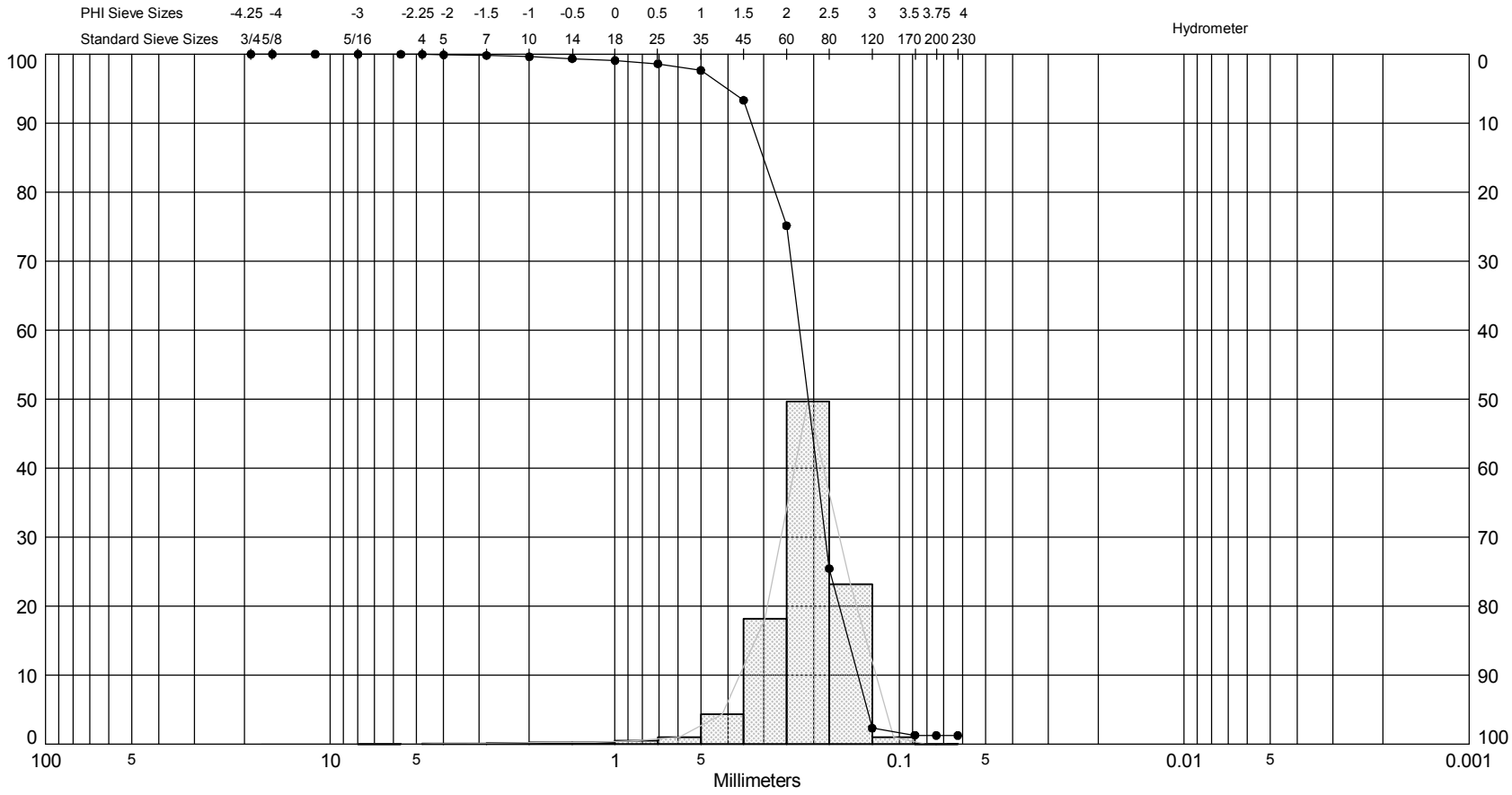
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,776
Northing (Y, ft):	201,051
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-10 Comp.	—●—	-9.3	SP	#200 - 1.25 #230 - 1.24		10	2.25	2.19	-2.41	15.52	0.54

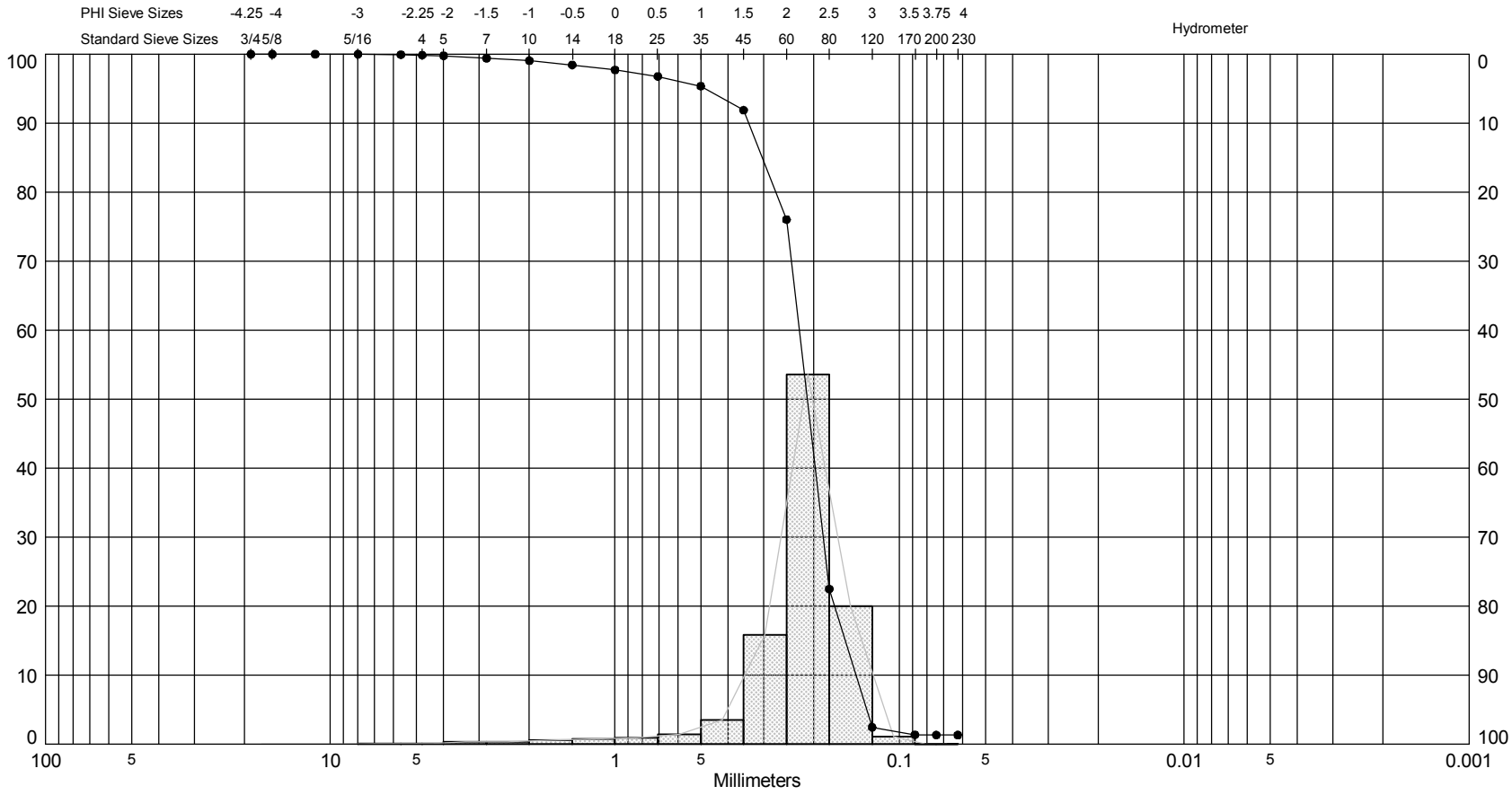
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,385,121
Northing (Y, ft):	200,150
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 Comp.	—●—	-4.4	SP	#200 - 1.31 #230 - 1.30		8	2.24	2.13	-2.94	15.81	0.67

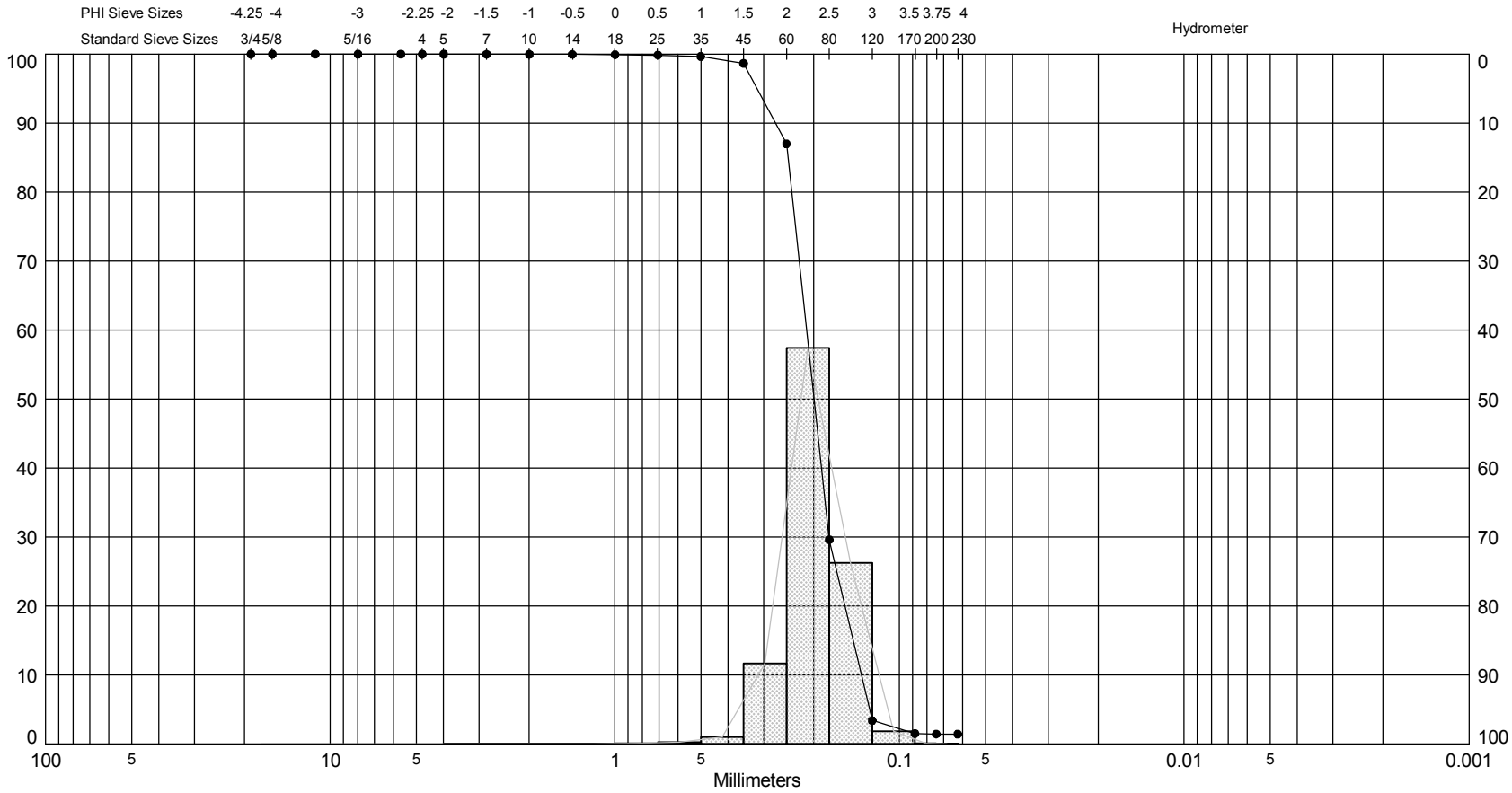
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-12 Comp.	—●—	-7.5	SP	#200 - 1.43 #230 - 1.41		5	2.32	2.33	-0.77	9.34	0.37

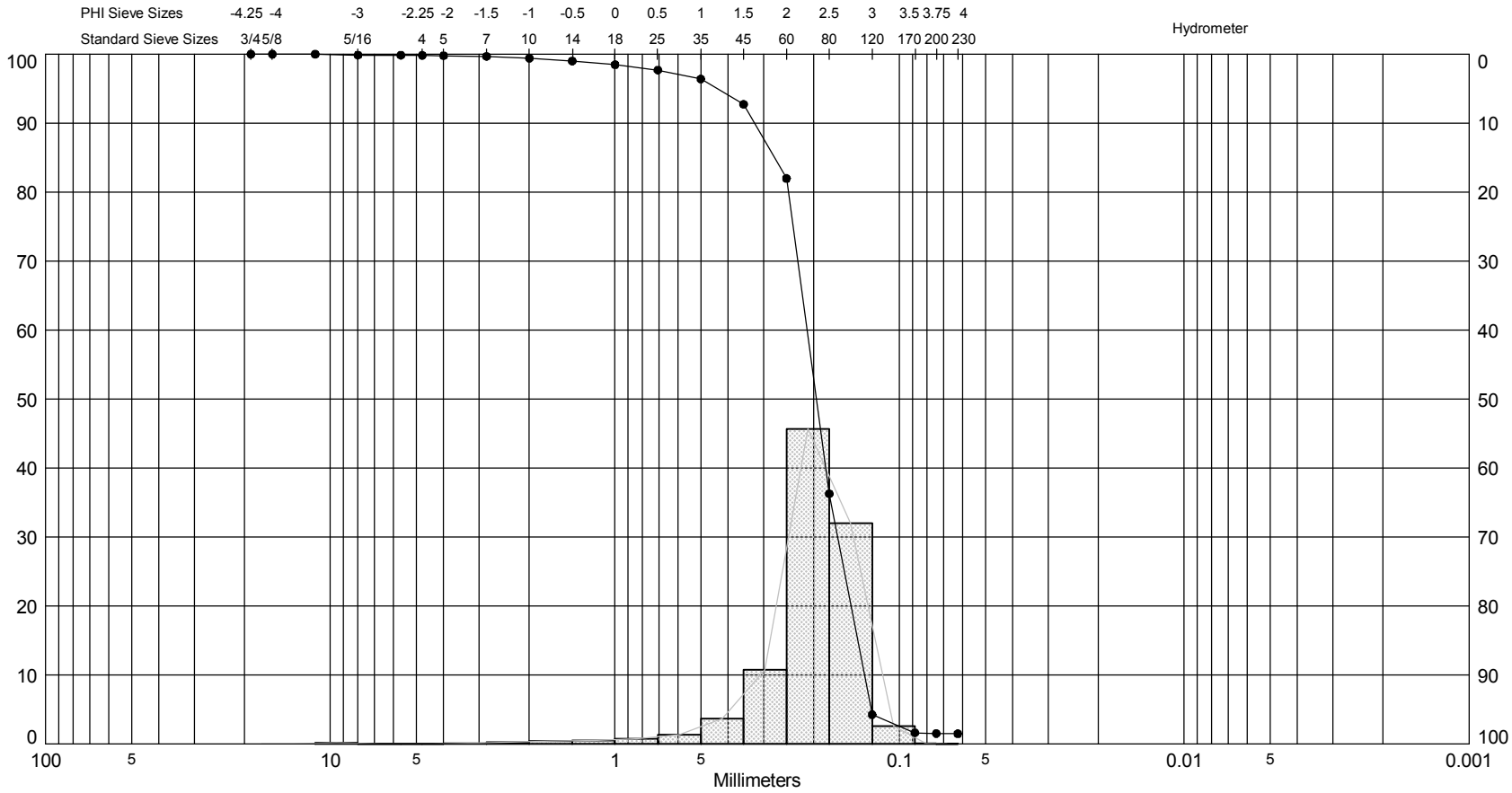
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,386,433
Northing (Y, ft):	200,711
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-13 Comp.	—●—	-10.6	SP	#200 - 1.51 #230 - 1.47		6	2.35	2.26	-2.92	18.13	0.64

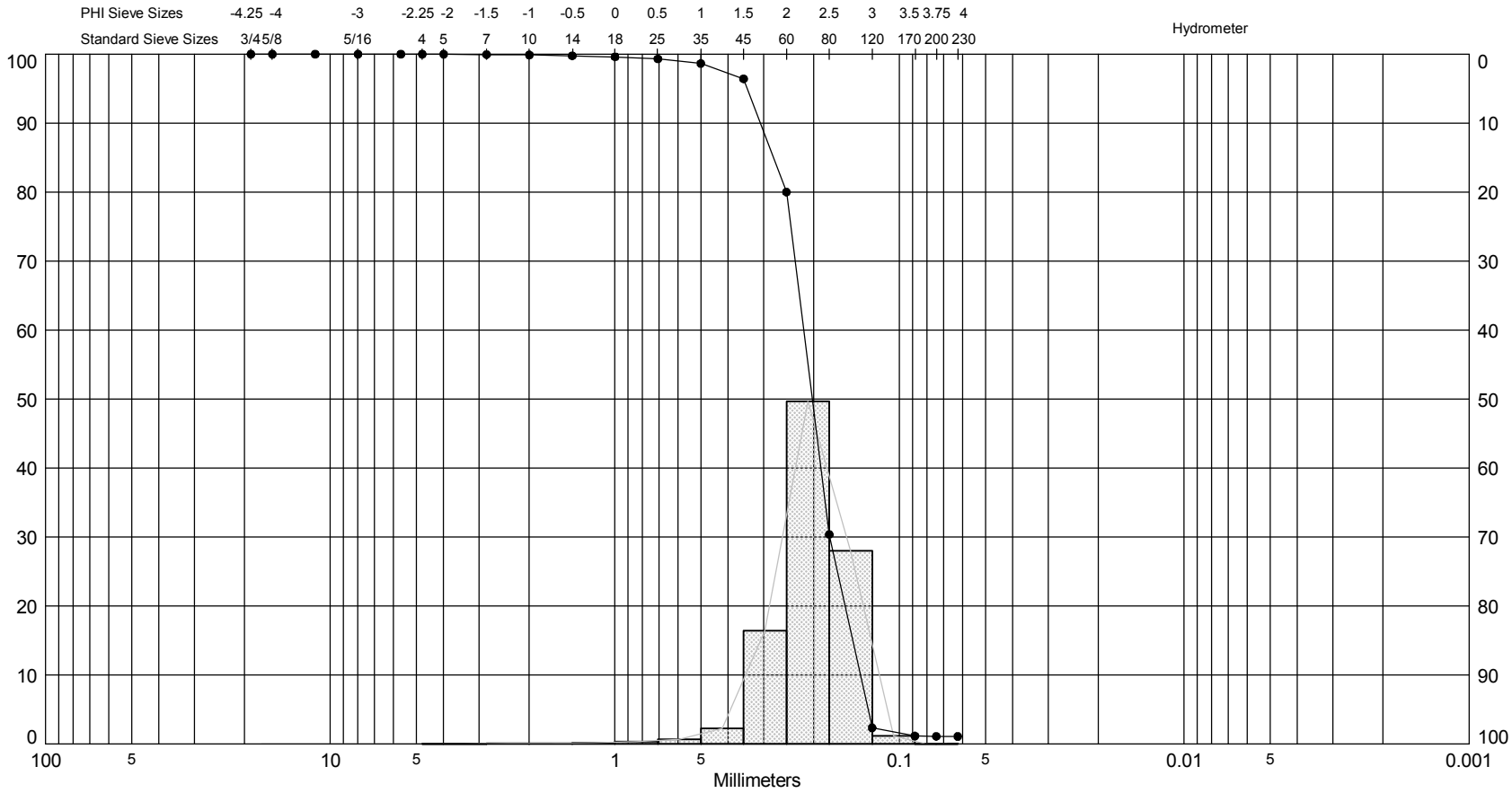
Comments: Composite data. Average dry Munsell Value is 6.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,385,692
Northing (Y, ft):	200,595
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-15 Comp.	—●—	-5.3	SP	#200 - 1.10 #230 - 1.08		5	2.3	2.27	-1.77	12.35	0.46

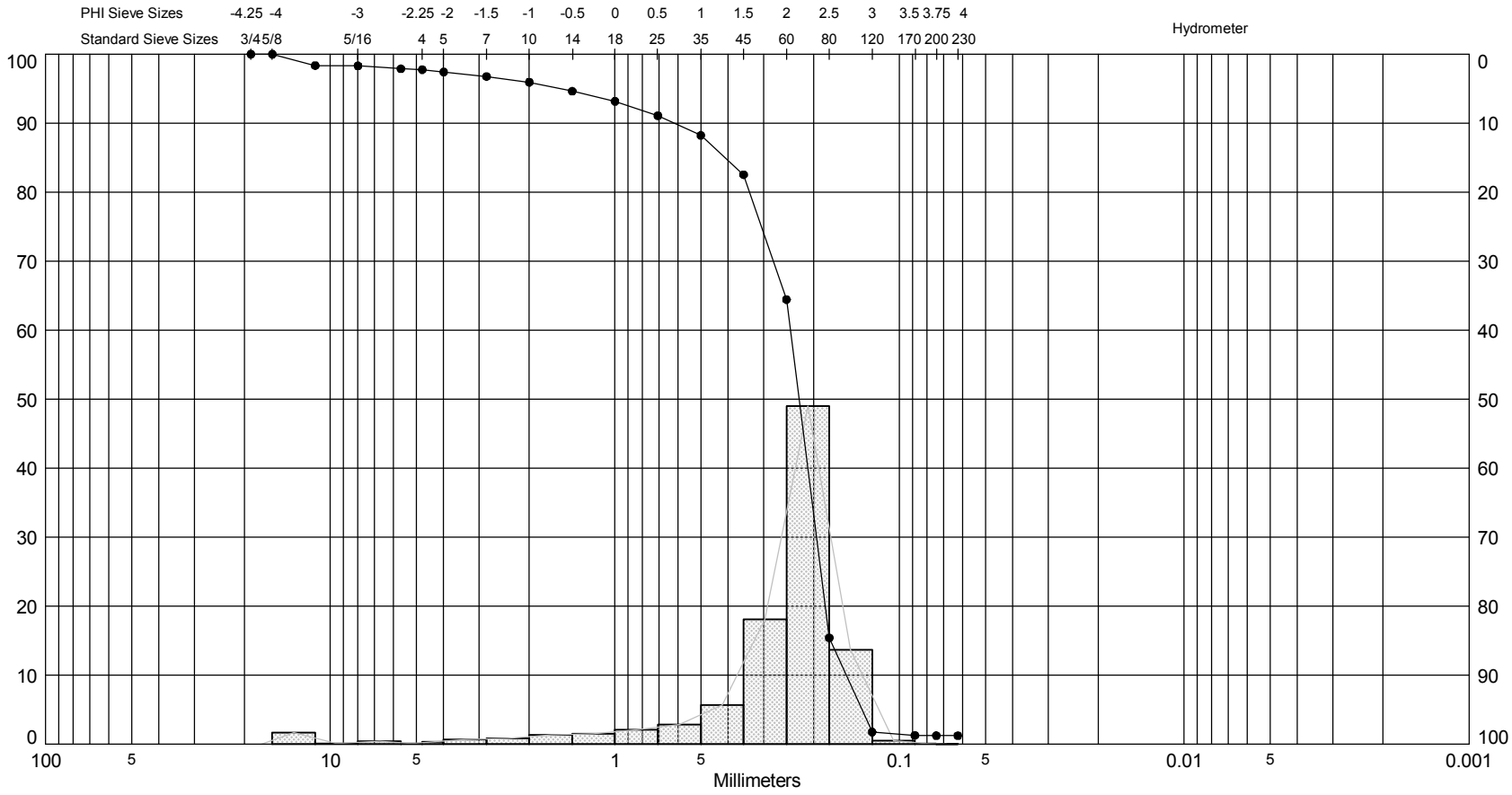
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,715
Northing (Y, ft):	200,330
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16 Comp.	—●—	0.0	SW	#200 - 1.22 #230 - 1.21		12	2.15	1.81	-2.9	12.49	1.16

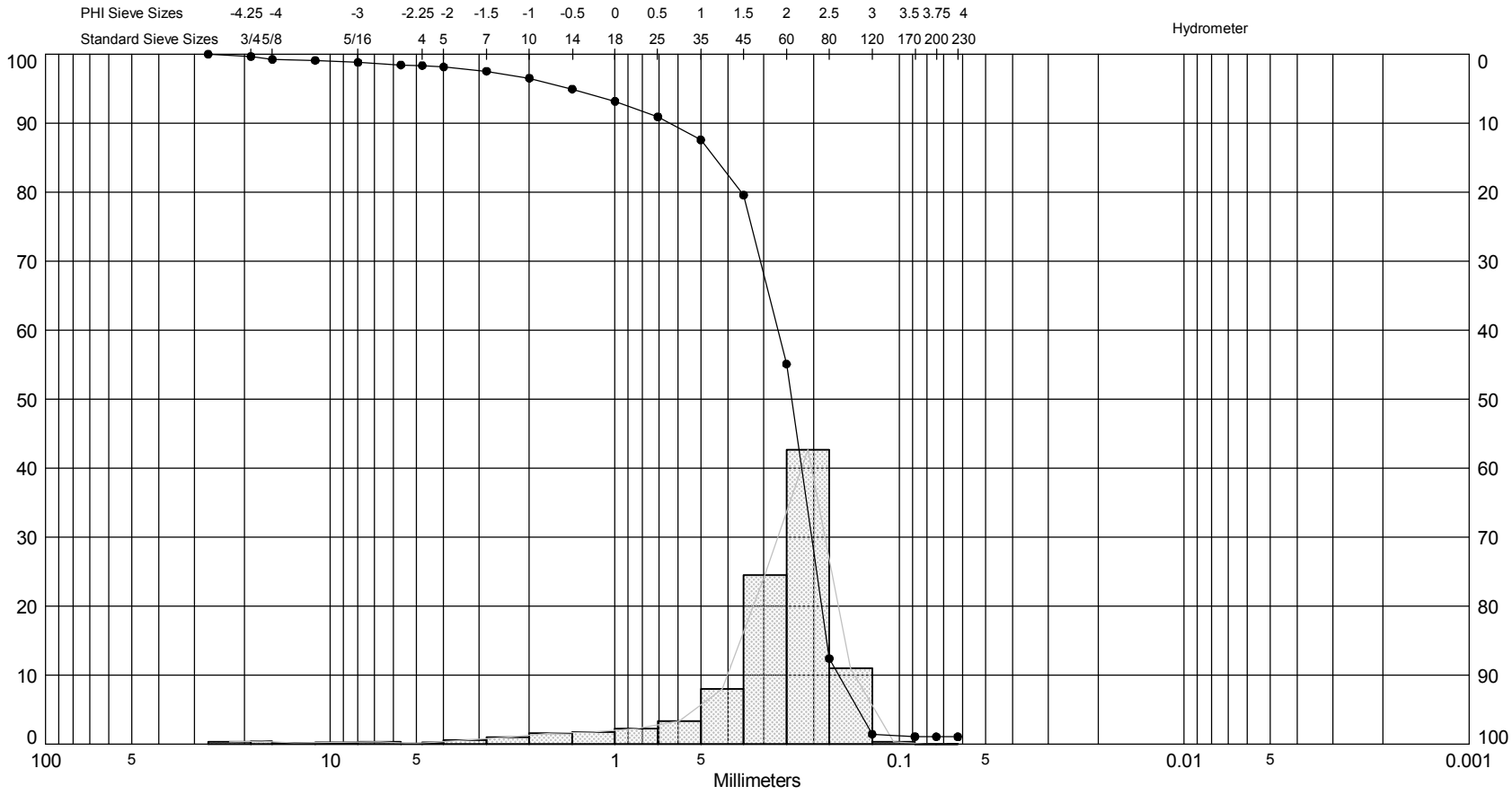
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 Comp.	—●—	-3.0	SW	#200 - 1.06 #230 - 1.05		13	2.06	1.75	-2.84	13.13	1.09

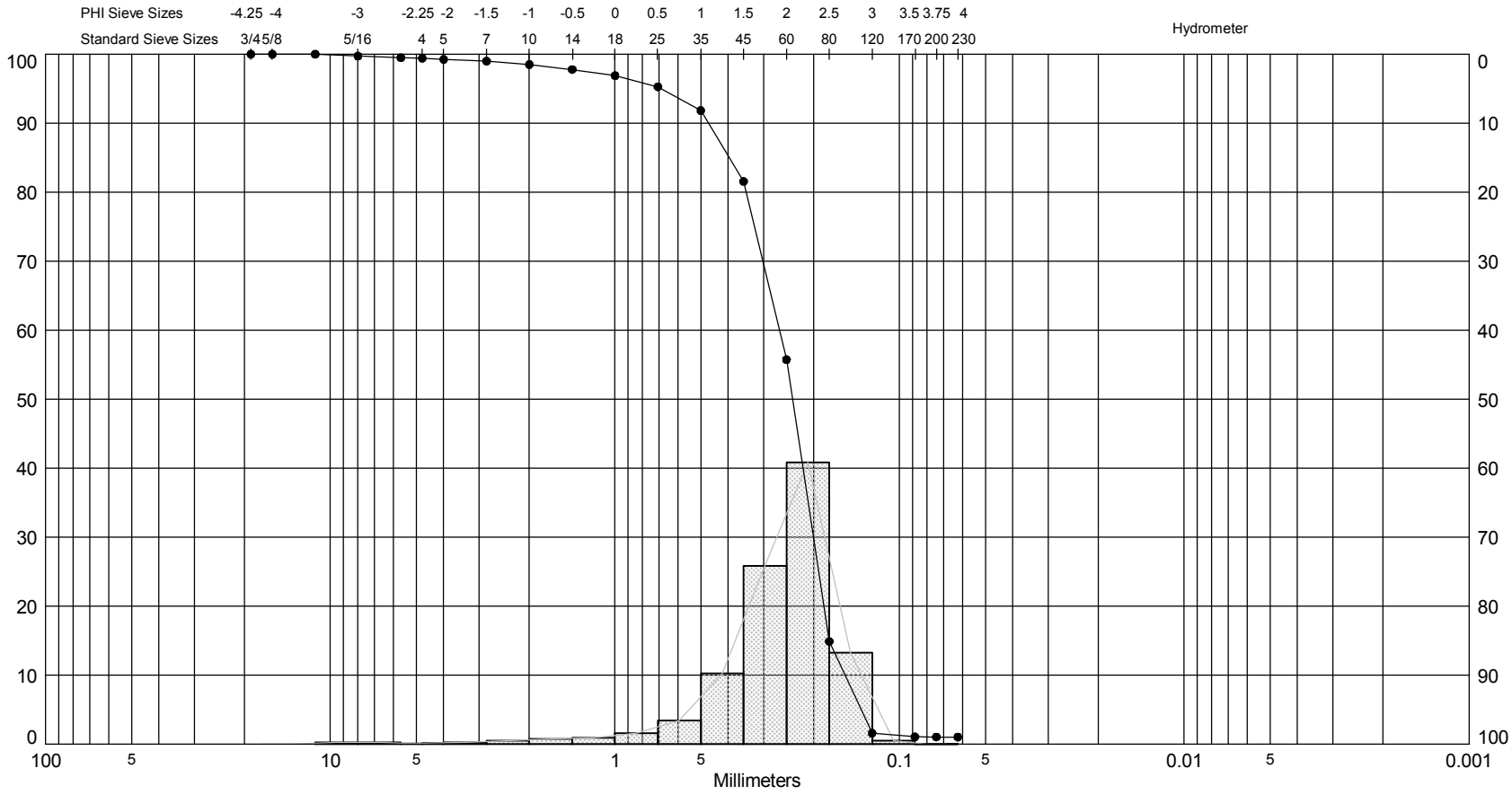
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-18 Comp.	—●—	-3.0	SP	#200 - 1.04 #230 - 1.03		9	2.07	1.89	-2.58	13.45	0.8

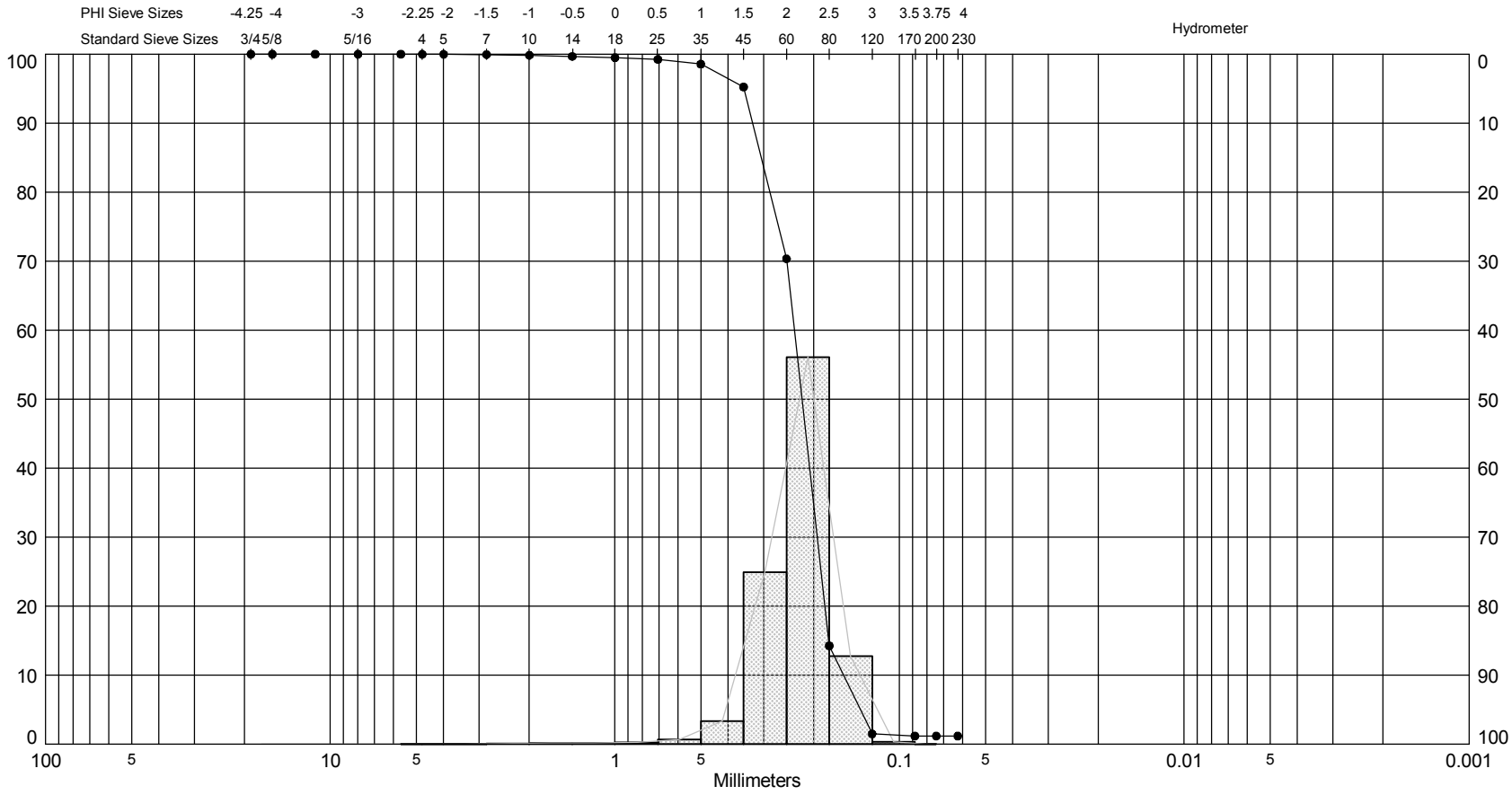
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,387,894
Northing (Y, ft):	201,815
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-19 Comp.	—●—	-4.0	SP	#200 - 1.16 #230 - 1.16		5	2.18	2.13	-2.07	15.2	0.44

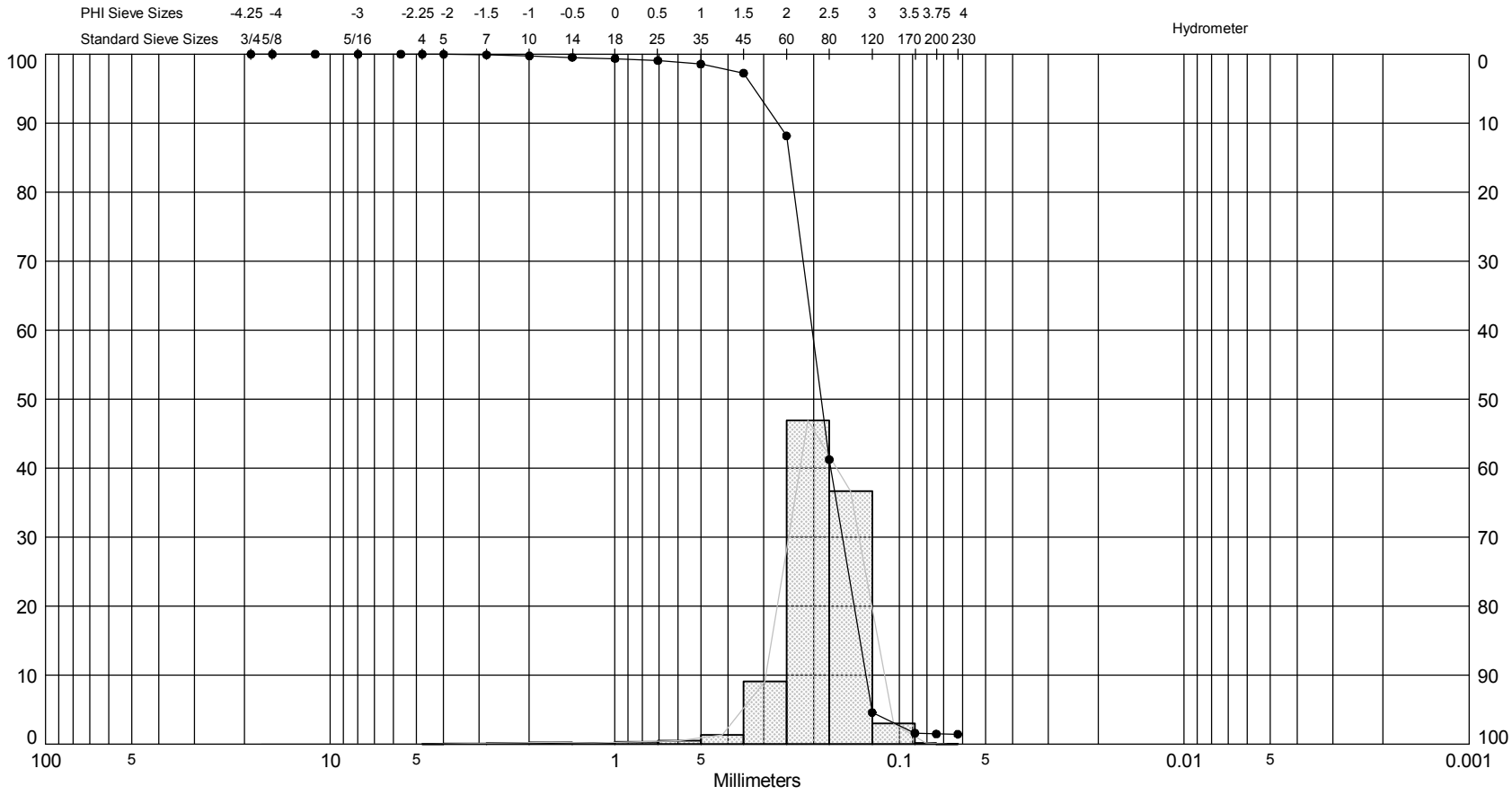
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	08-28-09
Analyzed By:	PB
Easting (X, ft):	2,389,020
Northing (Y, ft):	200,054
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-01 Comp.	—●—	-10.6	SP	#200 - 1.46 #230 - 1.43		10	2.41	2.38	-2.56	18.4	0.49

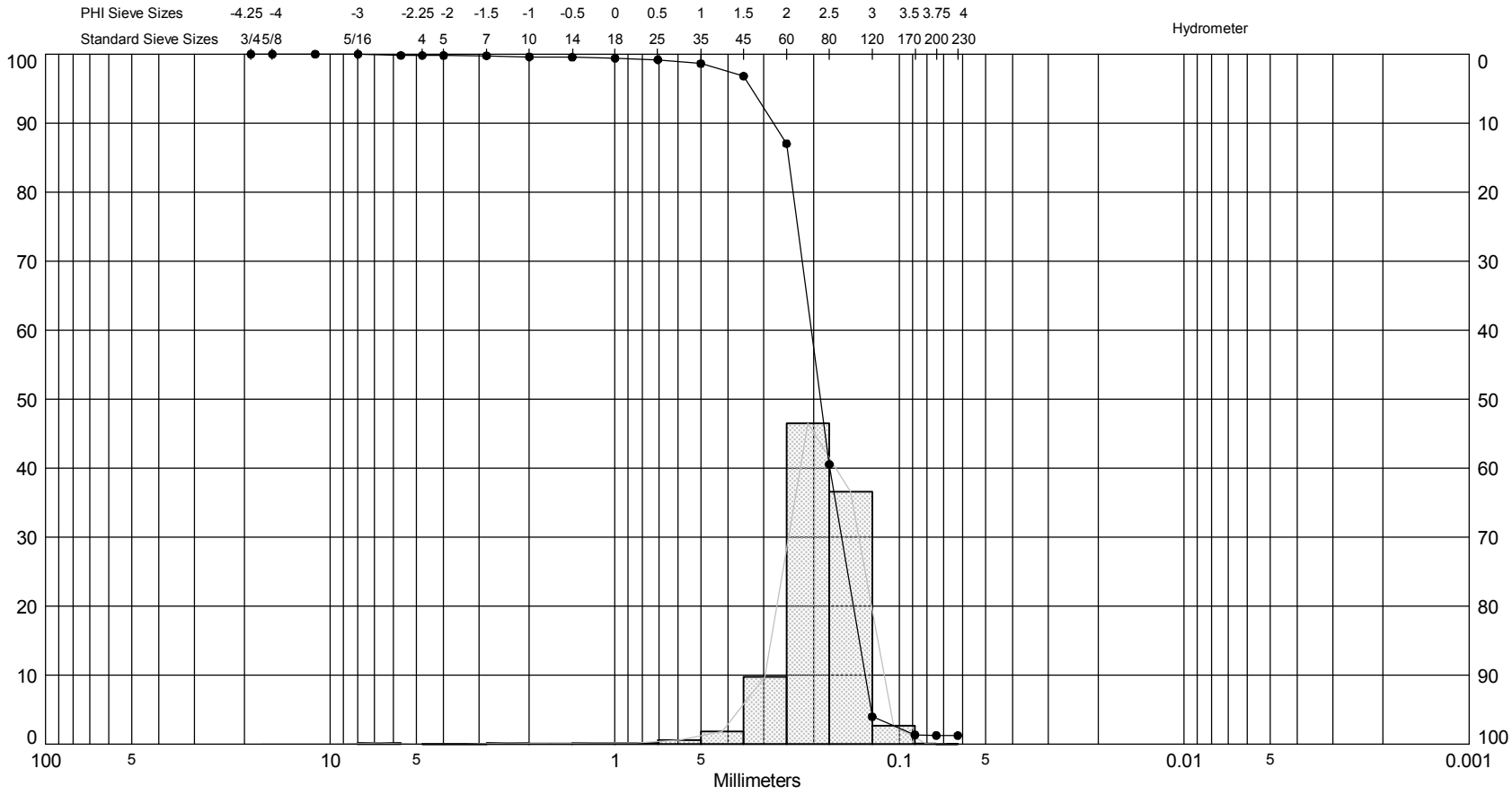
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,385,534
Northing (Y, ft):	200,207
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-02 Comp.	—●—	-4.8	SP	#200 - 1.25 #230 - 1.23		5	2.4	2.36	-3.38	28.76	0.51

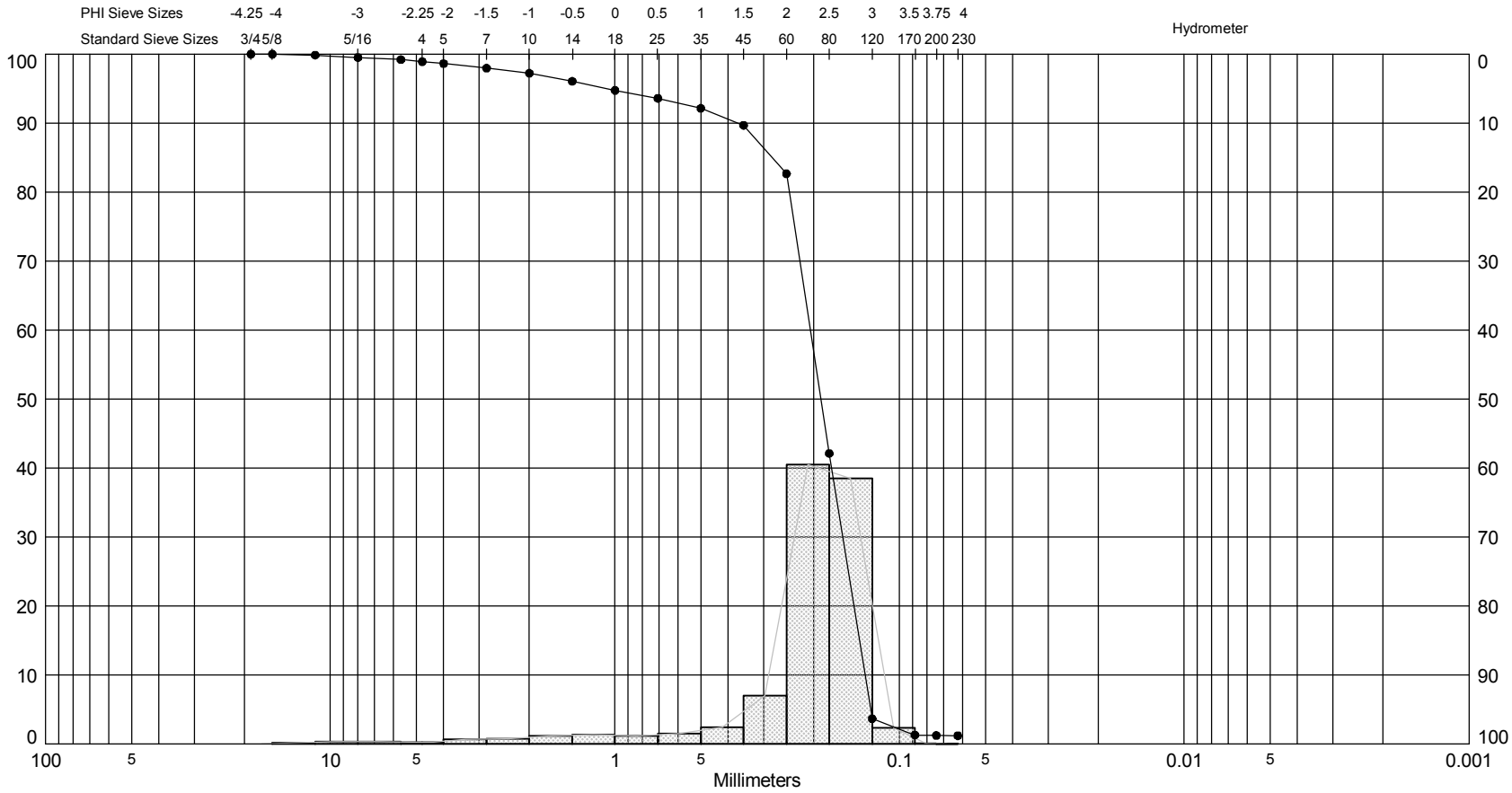
Comments: Composite data. Average dry Munsell Value is 8.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,386,109
Northing (Y, ft):	200,498
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 Comp.	—●—	-3.6	SW	#200 - 1.22 #230 - 1.20		9	2.4	2.17	-3.05	13.59	0.99

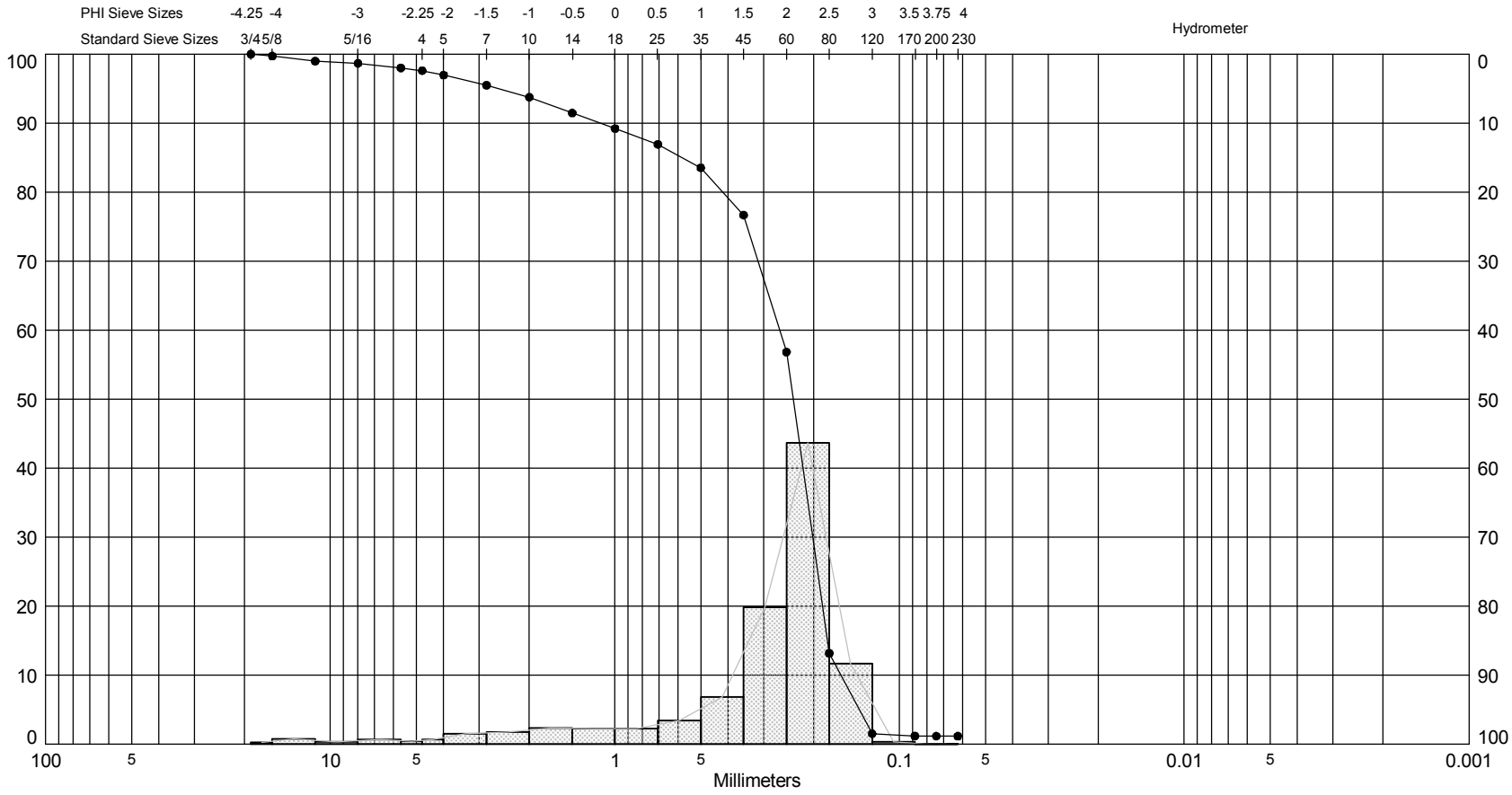
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 Comp.	—●—	-3.0	SW	#200 - 1.15 #230 - 1.14		20	2.08	1.64	-2.22	7.97	1.27

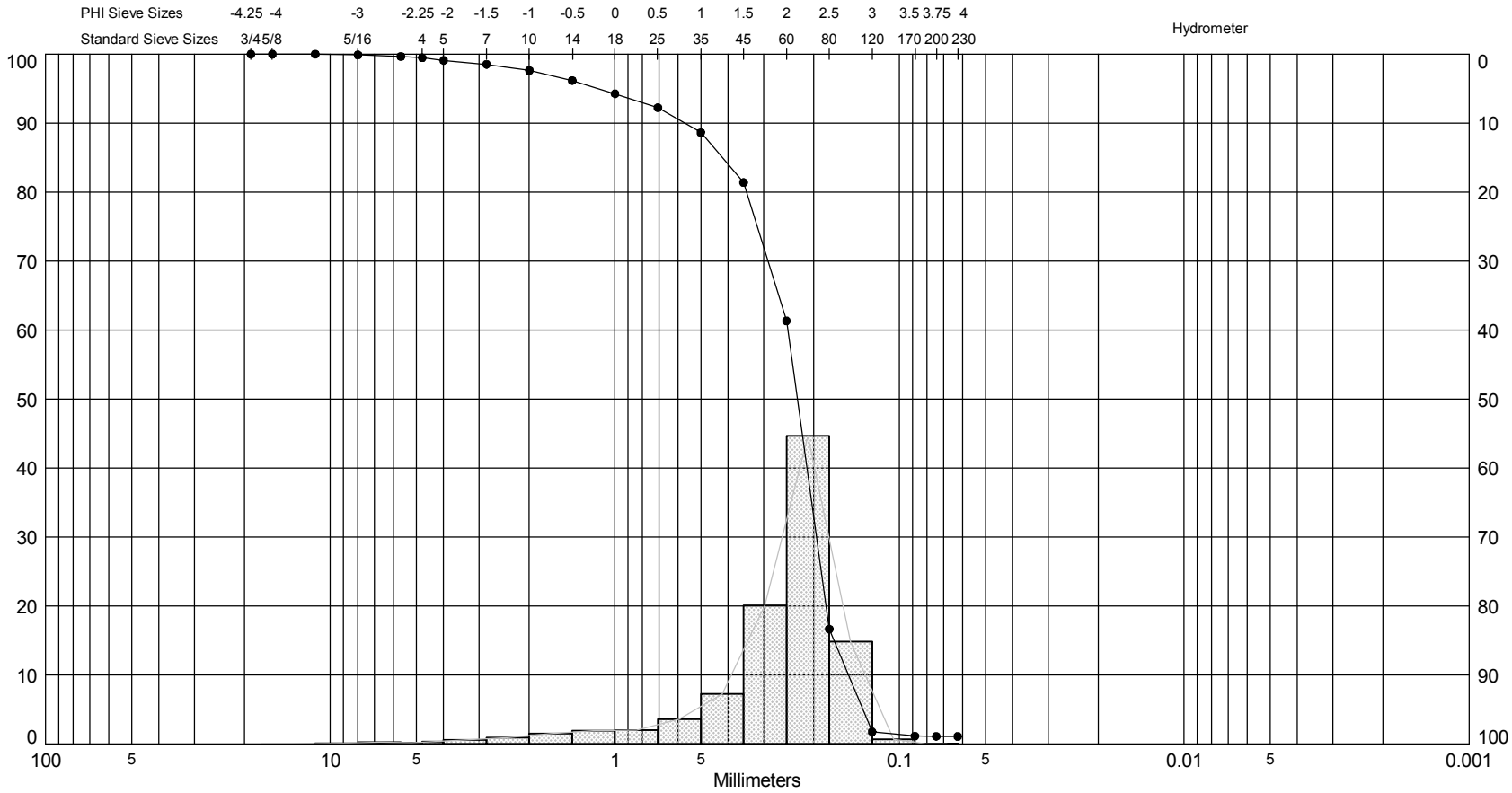
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 Comp.	—●—	-2.0	SW	#200 - 1.10 #230 - 1.08		14	2.13	1.87	-2.26	9.23	0.92

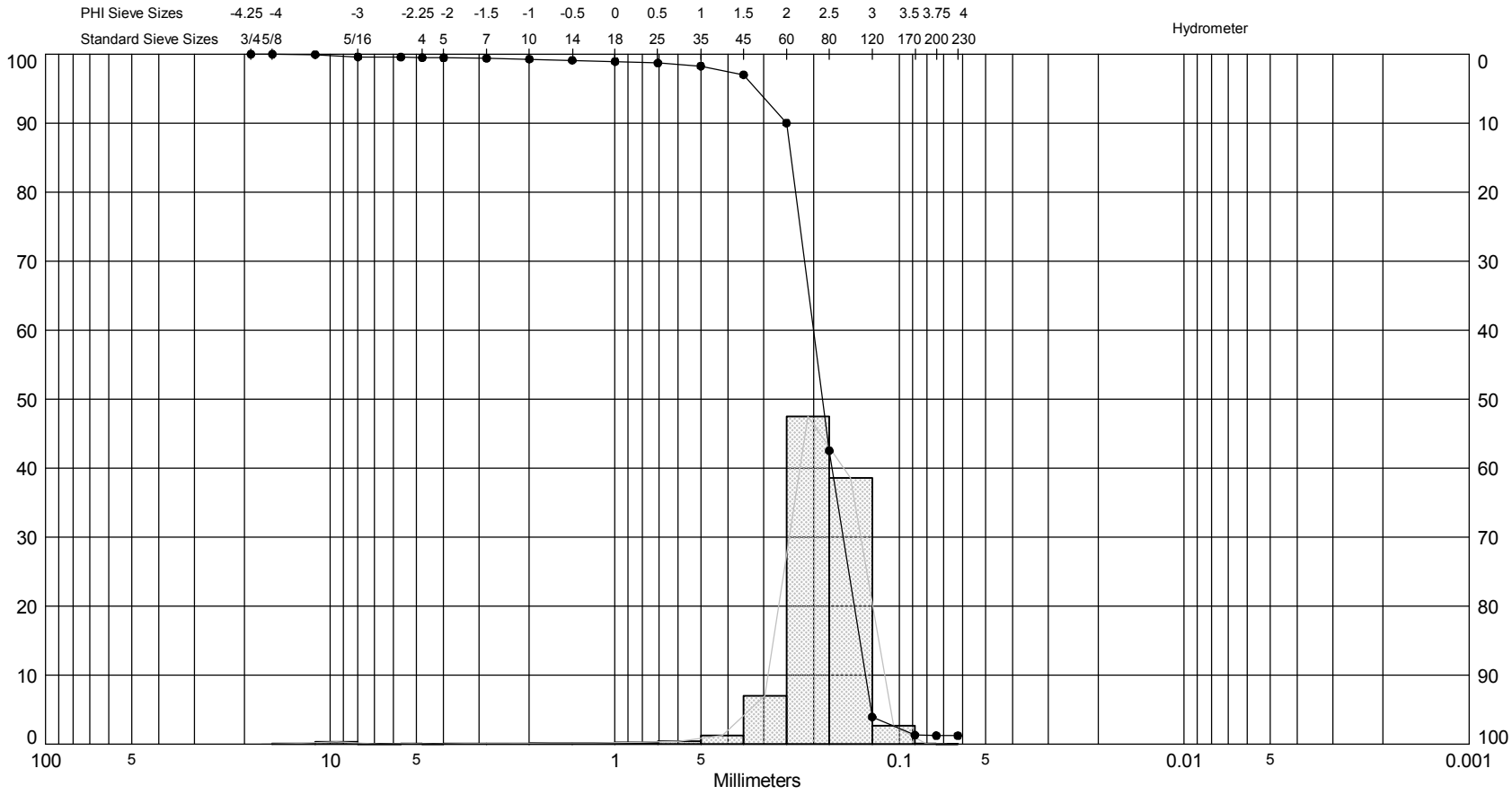
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 Comp.	—●—	-1.1	SP	#200 - 1.22 #230 - 1.21		4	2.42	2.37	-4.97	42.23	0.6

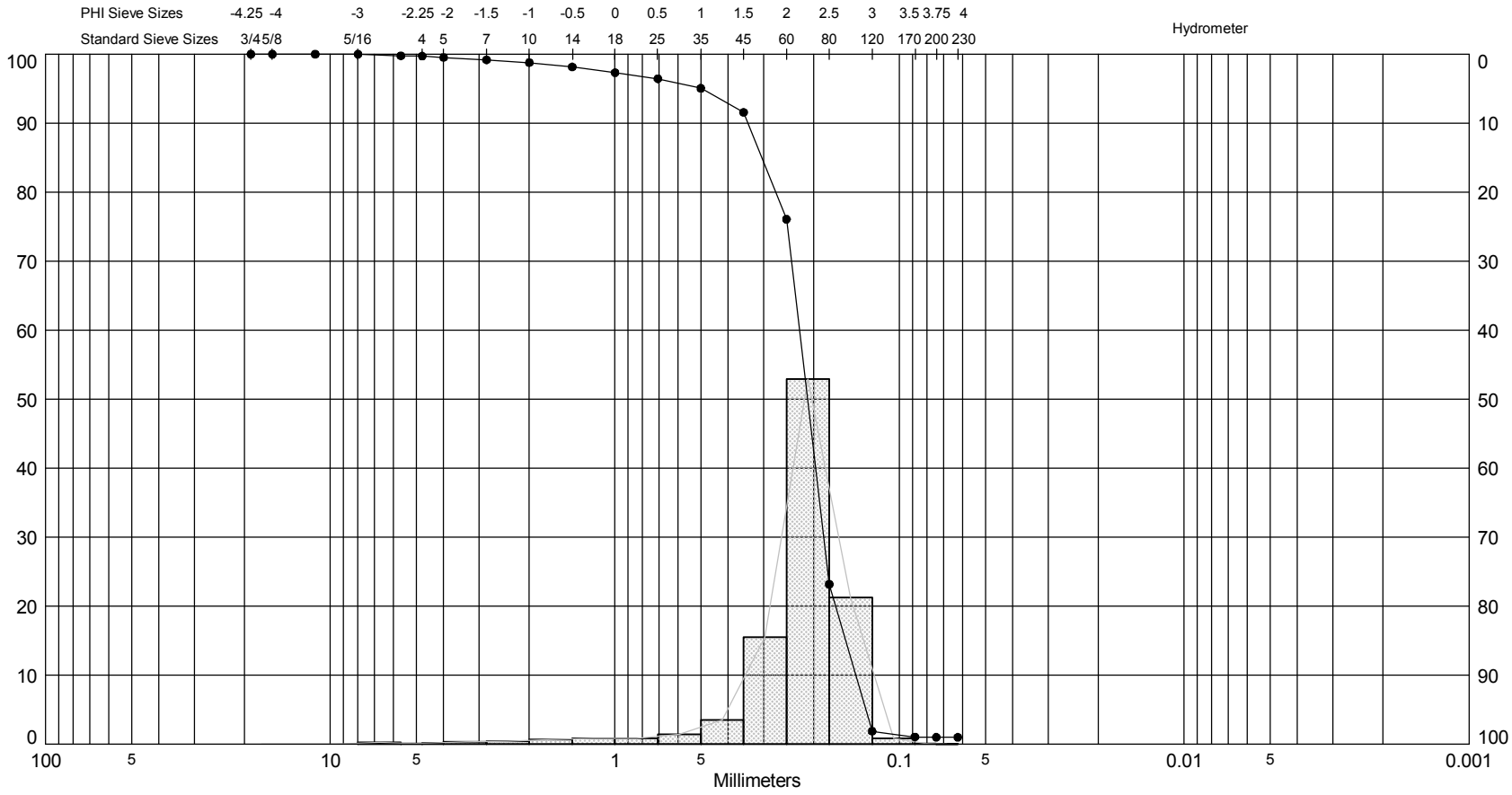
Comments: Composite data. Average dry Munsell Value is 8.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-30-09
Analyzed By:	PB
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-07 Comp.	—●—	-3.7	SP	#200 - 0.99 #230 - 0.98		10	2.25	2.12	-3.14	16.87	0.71

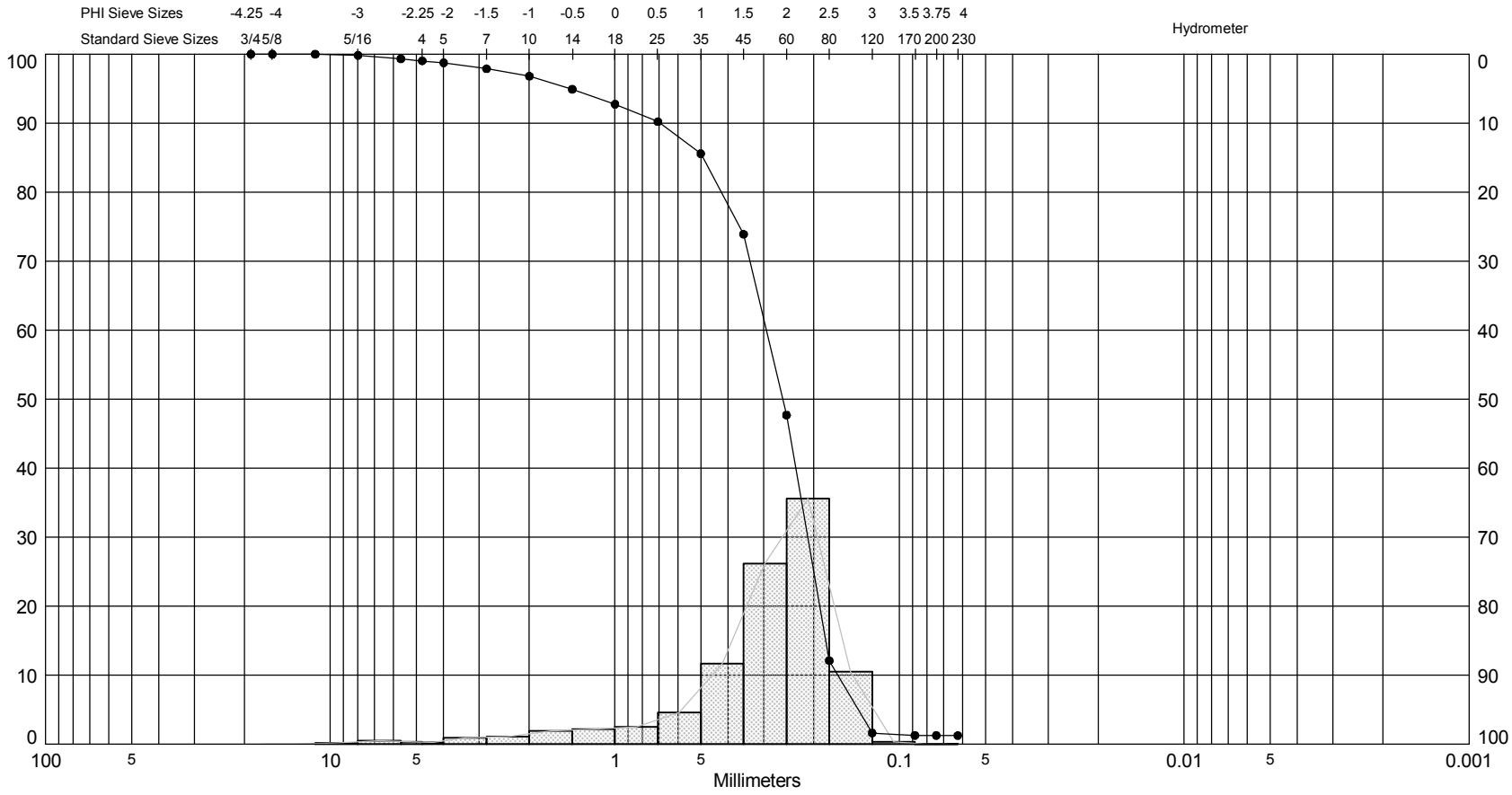
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,388,723
Northing (Y, ft):	200,701
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-08 Comp.	—●—	-7.0	SW	#200 - 1.25 #230 - 1.23		16	1.96	1.69	-2.03	7.95	0.99

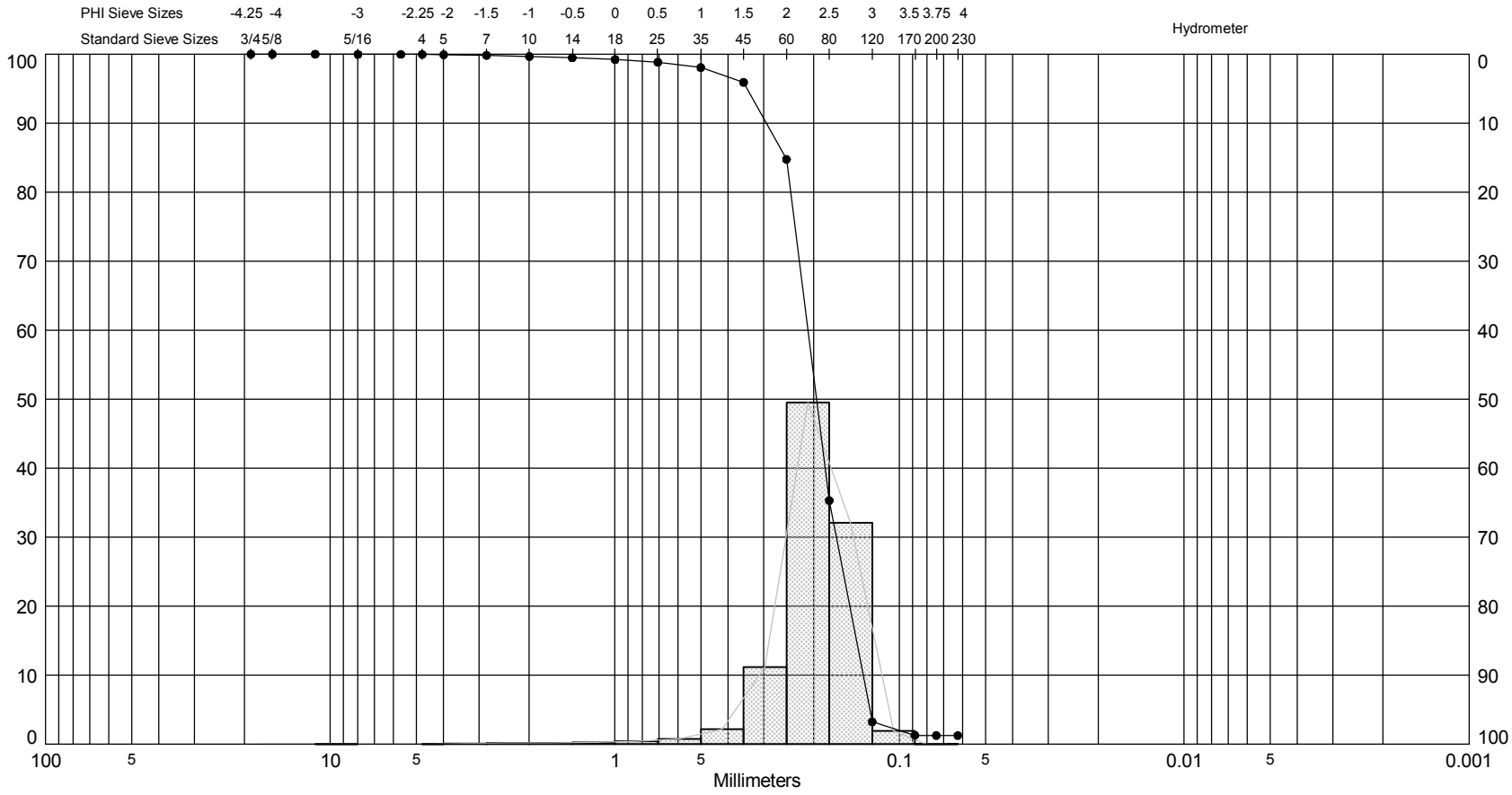
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,389,411
Northing (Y, ft):	200,087
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-09 Comp.	—●—	-9.7	SP	#200 - 1.24 #230 - 1.23		7	2.35	2.31	-2.88	20.86	0.52

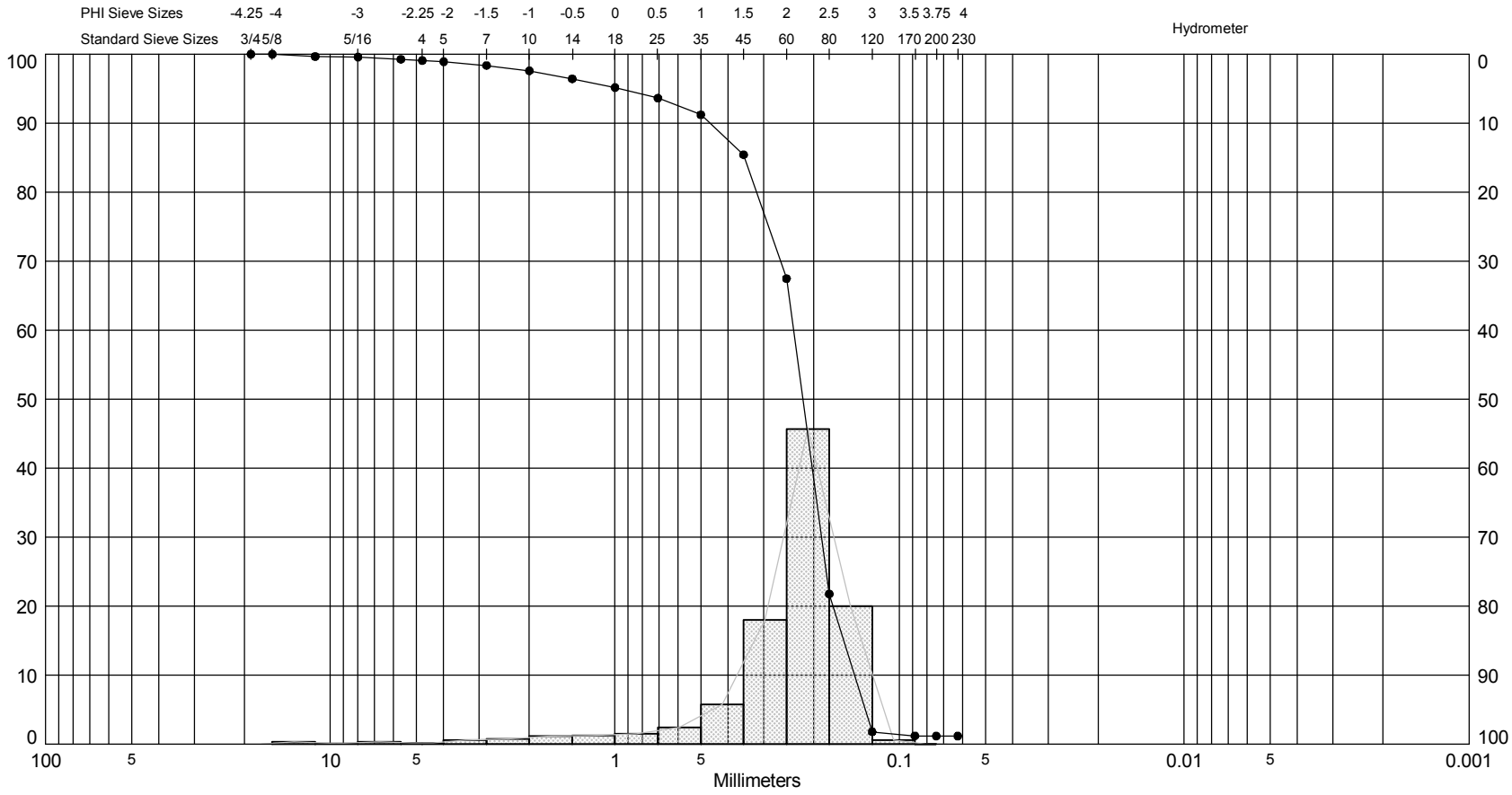
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,389,900
Northing (Y, ft):	199,466
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-10 Comp.	—●—	-8.5	SW	#200 - 1.16 #230 - 1.16		16	2.19	1.97	-2.84	13.42	0.93

Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 3
Analysis Date:	10-29-09
Analyzed By:	PB
Easting (X, ft):	2,389,697
Northing (Y, ft):	199,802
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_3_MERGED_COMPOSITE.GPJ JPBRAZIL.GDT 3/11/10

APPENDIX 29

Alternative 5 Channel Corridor Composite Summary Table

COMPOSITE SUMMARY TABLE
FIGURE EIGHT VIBRACORES

SAMPLE I. D.	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	% CARBONATES
FEVC-08-01 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-08-02 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-08-03 Composite	10.7	0.20	2.29	0.83	1.21	6	7	7.8
FEVC-08-04 Composite	11.3	0.36	1.48	1.42	1.16	6	7	22.1
FEVC-08-05 Composite	12.3	0.27	1.88	0.93	1.13	6	8	11.3
FEVC-08-06 Composite	13.2	0.19	2.37	0.60	1.21	6	8	4.2
FEVC-08-07 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-08-08 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-08-09 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-08-10 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS							
FEVC-07-02 Composite	5.3	0.23	2.12	0.61	1.04	6	7	9.4
FEVC-07-11 Composite	9.9	0.22	2.19	0.53	1.28	6	7	6.6
FEVC-07-12 Composite	6.8	0.20	2.33	0.37	1.41	6	7	4.6
FEVC-07-16 Composite	14.3	0.30	1.74	1.24	1.17	6	7	13.0
FEVC-07-17 Composite	11.3	0.29	1.80	1.13	1.05	6	7	11.6
FEVC-07-18 Composite	11.3	0.29	1.81	0.87	1.05	5	7	10.9
Alternative 5 Composite	106.4	0.25	1.98	0.99	1.17	6	7	10.5

COMPOSITE DATA TABLE
FIGURE EIGHT VIBRACORES

SAMPLE I. D.	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																					% CARBONATE
								GRAVEL						GRANULAR						SAND								PAN	
								-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0		
FEVC-08-01 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-08-02 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-08-03 Composite	10.7	0.20	2.29	0.83	1.21	6	7	0.00	0.00	0.11	0.36	0.63	0.85	1.00	1.29	1.68	2.28	3.07	3.92	5.04	7.11	13.07	53.57	95.96	98.69	98.76	98.79	99.99	7.8
FEVC-08-04 Composite	11.3	0.36	1.48	1.42	1.16	6	7	0.00	0.40	1.44	1.81	2.70	3.24	4.15	6.14	8.48	11.56	14.49	17.35	21.09	27.52	46.13	88.05	98.50	98.81	98.83	98.84	99.99	22.1
FEVC-08-05 Composite	12.3	0.27	1.88	0.93	1.13	6	8	0.00	0.00	0.00	0.09	0.29	0.53	0.93	1.49	2.39	3.88	5.82	7.86	11.25	18.03	37.59	82.87	98.06	98.83	98.86	98.87	100.00	11.3
FEVC-08-06 Composite	13.2	0.19	2.37	0.60	1.21	6	8	0.00	0.00	0.05	0.39	0.42	0.50	0.53	0.60	0.71	0.88	1.05	1.28	1.72	2.98	9.97	57.47	96.07	98.70	98.78	98.79	100.00	4.2
FEVC-08-07 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-08-08 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-08-09 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-08-10 Composite	VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS																												
FEVC-07-02 Composite	5.3	0.23	2.12	0.61	1.04	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.38	0.82	1.46	2.53	4.47	9.66	30.04	75.66	98.05	98.93	98.95	98.96	99.99	9.4
FEVC-07-11 Composite	9.9	0.22	2.19	0.53	1.28	6	7	0.00	0.00	0.00	0.00	0.03	0.07	0.09	0.28	0.41	0.66	1.02	1.55	2.38	5.13	21.58	77.65	97.61	98.67	98.71	98.72	99.99	6.6
FEVC-07-12 Composite	6.8	0.20	2.33	0.37	1.41	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.04	0.07	0.13	0.34	1.34	13.00	70.39	96.62	98.49	98.57	98.59	99.96	4.6
FEVC-07-16 Composite	14.3	0.30	1.74	1.24	1.17	6	7	0.00	0.00	2.01	2.09	2.58	2.72	3.13	3.89	4.85	6.38	8.11	10.58	13.92	20.40	38.12	84.49	98.23	98.76	98.82	98.83	99.82	13.0
FEVC-07-17 Composite	11.3	0.29	1.80	1.13	1.05	6	7	0.47	1.06	1.28	1.60	1.90	1.97	2.17	2.73	3.65	5.08	6.63	8.48	10.97	17.10	39.91	86.32	98.51	98.92	98.94	98.95	100.00	11.6
FEVC-07-18 Composite	11.3	0.29	1.81	0.87	1.05	5	7	0.00	0.00	0.00	0.40	0.69	0.80	1.05	1.36	2.00	2.92	4.07	6.10	10.34	22.34	48.90	87.06	98.46	98.93	98.94	98.95	99.90	10.9
Alternative 5 Composite	106.4	0.25	1.98	0.99	1.17	6	7	0.05	0.16	0.58	0.78	1.06	1.22	1.49	2.02	2.74	3.83	5.05	6.55	8.86	14.07	30.69	76.71	97.63	98.78	98.82	98.83	99.96	10.5

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (1 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																				% CARBONATES
									GRAVEL						GRANULAR			SAND									FINES		
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0	PAN	
FEVC-08-01#1	-12.6	0.0	0.18	2.50	0.40	1.48	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.27	0.34	0.41	0.59	1.09	4.32	46.02	94.00	98.30	98.49	98.52	100.00	ND
FEVC-08-01#2	-17.6	0.0	0.21	2.23	0.53	1.37	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.16	0.34	0.67	0.97	1.55	2.41	4.66	20.54	73.46	97.08	98.54	98.60	98.63	100.00	ND
FEVC-08-01#3	-21.1	0.0	0.57	0.82	1.75	1.76	6	7	0.00	0.00	6.63	6.96	9.37	9.62	10.40	12.08	14.09	17.35	21.62	27.47	36.05	52.66	73.65	92.46	97.67	98.14	98.19	98.24	99.88	ND
FEVC-08-01#4	-22.2	0.0	0.14	2.81	0.31	3.29	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.05	0.06	0.12	0.37	10.34	75.96	95.44	96.47	96.71	99.98	ND
Cut to -14.3																														
FEVC-08-01 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																					
FEVC-08-02#1	-6.8	0.0	0.23	2.11	0.70	1.30	6	8	0.00	0.00	0.00	0.00	0.59	0.59	0.62	0.73	1.22	1.36	1.78	2.33	3.99	9.12	30.47	75.99	97.25	98.63	98.69	98.70	99.83	ND
FEVC-08-02#2	-11.8	0.0	0.18	2.50	0.33	1.14	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.08	0.32	4.64	48.00	95.32	98.77	98.84	98.86	100.00	ND
FEVC-08-02A#1	-15.0	0.0	0.18	2.45	0.35	1.25	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.05	0.07	0.14	0.24	0.59	5.35	56.25	95.74	98.62	98.72	98.75	100.00	ND
FEVC-08-02A#2	-20.0	0.0	0.18	2.48	0.34	1.29	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	0.10	0.17	0.46	4.21	52.69	95.31	98.57	98.70	98.71	100.00	ND
Cut to -14.3																														
FEVC-08-02 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																					
FEVC-08-03#1	-5.0	2.1	0.35	1.53	1.43	0.93	6	8	0.00	0.00	0.54	1.85	3.22	4.18	4.84	6.02	7.82	10.44	13.72	17.47	22.12	30.20	45.75	79.02	97.86	98.92	99.06	99.07	99.95	
FEVC-08-03#2	-7.1	3.9	0.19	2.42	0.49	1.26	6	7	0.00	0.00	0.00	0.00	0.00	0.07	0.07	0.23	0.32	0.52	0.78	0.99	1.35	2.31	8.72	52.22	95.43	98.68	98.73	98.74	100.00	7.8
FEVC-08-03#3	-12.1	4.7	0.17	2.53	0.35	1.30	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.07	0.09	0.21	0.29	0.47	0.77	2.08	43.32	95.56	98.59	98.66	98.70	100.00	
FEVC-08-03#4	-16.2	0.0	0.60	0.74	1.59	0.93	6	7	0.00	0.00	0.56	2.24	3.58	5.05	6.92	11.57	16.32	24.05	31.66	37.37	44.01	53.48	73.65	93.31	98.86	99.06	99.07	99.07	100.00	ND
FEVC-08-03#5	-17.6	0.0	0.19	2.41	0.34	1.29	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.06	0.09	0.21	0.75	6.63	61.27	96.87	98.63	98.69	98.71	100.00	ND
FEVC-08-03#6	-20.6	0.0	0.20	2.32	0.35	1.16	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.06	0.17	0.28	0.39	0.51	0.88	9.29	73.54	98.14	98.79	98.84	98.84	100.00	ND
Cut to -14.3																														
FEVC-08-03 Composite		**10.7**	**0.20**	**2.29**	**0.83**	**1.21**	**6**	**7**	**0.00**	**0.00**	**0.11**	**0.36**	**0.63**	**0.85**	**1.00**	**1.29**	**1.68**	**2.28**	**3.07**	**3.92**	**5.04**	**7.11**	**13.07**	**53.57**	**95.96**	**98.69**	**98.76**	**98.79**	**99.99**	**7.8**
FEVC-08-04#1	-4.0	2.2	0.29	1.77	1.03	1.15	5	7	0.00	0.00	0.00	0.00	0.23	0.93	1.10	1.97	3.18	5.42	7.92	11.13	15.16	23.19	41.66	82.87	98.27	98.79	98.82	98.85	100.00	
FEVC-08-04#2	-6.0	1.8	1.09	-0.13	1.71	0.98	6	7	0.00	0.00	1.87	4.21	7.90	9.89	14.54	23.82	34.33	46.44	55.16	61.78	67.56	74.43	84.25	95.66	98.79	98.98	99.01	99.02	100.00	23.0
FEVC-08-04#3	-8.5	2.5	0.48	1.05	1.62	1.30	6	7	0.00	1.80	5.14	5.14	6.31	6.70	7.16	8.68	10.63	13.66	18.16	22.85	30.96	44.03	67.15	93.71	98.53	98.68	98.70	98.70	100.00	
FEVC-08-04#4	-11.0	3.9	0.23	2.14	0.42	1.14	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.12	0.24	0.41	0.80	1.48	3.89	26.47	88.05	98.63	98.84	98.86	98.86	99.96	
FEVC-08-04A#1	-11.9	0.0	0.22	2.19	0.34	0.98	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.11	0.41	2.44	22.05	86.15	98.77	99.01	99.02	99.02	99.99	ND
FEVC-08-04A#2	-14.9	0.9	0.19	2.36	0.32	1.24	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.09	0.22	0.83	7.65	69.78	97.84	98.72	98.76	98.76	99.99	12.8
FEVC-08-04A#3	-17.1	0.0	0.34	1.57	0.87	0.95	6	7	0.00	0.00	0.00	0.45	0.84	0.98	1.15	1.71	2.43	3.62	5.39	7.76	14.33	32.74	67.53	95.80	98.95	99.03	99.04	99.05	99.99	ND
FEVC-08-04A#4	-18.9	0.0	0.25	2.02	0.46	1.09	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.14	0.27	0.55	0.97	2.37	8.71	41.39	90.96	98.73	98.90	98.91	98.91	99.93	ND
Cut to -14.3																														
FEVC-08-04 Composite		**11.3**	**0.36**	**1.48**	**1.42**	**1.16**	**6**	**7**	**0.00**	**0.40**	**1.44**	**1.81**	**2.70**	**3.24**	**4.15**	**6.14**	**8.48**	**11.56**	**14.49**	**17.35**	**21.09**	**27.52**	**46.13**	**88.05**	**98.50**	**98.81**	**98.83**	**98.84**	**99.99**	**22.1**
FEVC-08-05#1	-4.5	4.7	0.22	2.19	0.64	1.06	6	8	0.00	0.00	0.00	0.00	0.08	0.22	0.44	0.76	1.01	1.41	1.90	2.45	3.09	5.32	21.24	73.88	97.35	98.90	98.93	98.94	100.00	
FEVC-08-05#2	-8.5	2.9	0.46	1.13	1.21	1.17	5	7	0.00	0.00	0.00	0.24	0.73	1.37	2.49	4.00	6.93	11.75	17.96	24.21	34.45	50.16	72.73	94.12	98.62	98.79	98.81	98.83	99.99	
FEVC-08-05#3	-10.0	0.9	0.27	1.90	0.68	1.13	5	7	0.00	0.00	0.00	0.00	0.00	0.28	0.47	0.74	1.00	1.56	2.26	3.45	5.79	16.49	47.71	89.50	98.63	98.85	98.87	98.87	100.00	11.1
FEVC-08-05#4	-10.8	0.7	0.34	1.54	1.16	1.16	5	7	0.00	0.00	0.00	0.54	1.34	1.66	2.26	3.31	4.73	6.99	10.32	13.96	20.99	34.30	54.72	86.67	98.59	98.71	98.81	98.84	100.00	
FEVC-08-05#5	-11.8	2.9	0.22	2.20	0.39	1.20	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.28	0.51	1.01	3.38	21.61	83.20	98.30	98.78	98.80	98.80	100.00	
FEVC-08-05A#1	-11.0	0.0	2.77	-1.47	2.31	0.80	6	8	12.14	17.62	26.57	34.74	42.02	44.44	47.15	52.77	58.26	64.24	69.08	72.54	76.95	82.93	90.63	97.71	99.00	99.16	99.18	99.20	99.95	ND
FEVC-08-05A#2	-14.9	0.2	0.25	1.99	0.74	0.97	6	7	0.00	0.00	0.00	0.26	0.39	0.39	0.72	0.96	1.37	1.81	2.42	3.07	5.74	13.49	38.28	83.20	98.74	98.93	98.99	99.03	100.00	20.5
FEVC-08-05A#3	-16.8	0.0	0.65	0.63	1.30	1.32	5	6	0.00	0.00	0.00	0.51	2.59	3.24	4.27	7.38	11.75	19.17	28.48	37.75	53.17	71.12	85.97	95.89	98.42	98.60	98.65	98.68	99.83	ND
FEVC-08-05A#4	-17.8	0.0	0.23	2.14	0.63	0.88	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.27	0.67	1.32	2.04	3.19	4.83	8.47	22.40	79.05	98.46	99.08	99.10	99.12	99.98	ND
FEVC-08-05A#5	-19.0	0.0	0.29	1.77	0.81	0.80	6	7	0.00	0.00	0.00	0.00	0.09	0.09	0.19	0.63	1.31	2.68	4.82	7.22	12.41	23.90	51.02	90.02	98.92	99.18	99.19	99.20	99.95	ND
Cut to -14.3																														
FEVC-08-05 Composite		**12.3**	**0.27**	**1.88**	**0.93**	**1.13**	**6**	**8**	**0.00**	**0.00**	**0.00**	**0.09**	**0.29**	**0.53**	**0.93**	**1.49**	**2.39**	**3.88**	**5.82**	**7.86**	**11.25**	**18.03**	**37.59**	**82.87**	**98.06**	**98.83**	**98.86**	**98.87**	**100.00**	**11.3**

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (2 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																			% CARBONATES
									GRAVEL						GRANULAR					SAND							FINES PAN	
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0	
FEVC-08-06#1	-3.1	4.0	0.19	2.40	0.38	1.15	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.09	0.17	0.27	0.54	1.39	9.07	60.53	96.57	98.76	98.83	98.85	100.00	
FEVC-08-06#2	-7.1	4.8	0.21	2.26	0.72	1.09	6	8	0.00	0.00	0.00	0.85	0.85	1.06	1.06	1.09	1.20	1.38	1.53	1.83	2.44	4.40	14.51	66.82	97.55	98.85	98.90	98.91	100.00	4.2
FEVC-08-06#3	-12.6	4.0	0.17	2.55	0.33	1.42	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.08	0.10	0.17	0.36	2.19	41.01	93.61	98.45	98.58	98.58	100.00	
FEVC-08-06#4	-14.9	0.4	0.34	1.54	1.48	1.23	6	7	0.00	0.00	1.76	2.56	3.74	3.91	4.73	6.60	8.67	11.26	13.70	16.56	20.49	28.12	42.20	79.29	97.88	98.69	98.75	98.77	99.84	
FEVC-08-06#5	-16.1	0.0	0.14	2.85	0.89	32.97	3	5	0.00	0.00	0.00	0.35	0.93	0.93	0.95	1.08	1.13	1.21	1.28	1.34	1.40	1.56	2.54	12.19	35.59	57.42	64.35	67.03	100.00	ND
Cut to -14.3																														
FEVC-08-06 Composite		**13.2**	**0.19**	**2.37**	**0.60**	**1.21**	**6**	**8**	**0.00**	**0.00**	**0.05**	**0.39**	**0.42**	**0.50**	**0.53**	**0.60**	**0.71**	**0.88**	**1.05**	**1.28**	**1.72**	**2.98**	**9.97**	**57.47**	**96.07**	**98.70**	**98.78**	**98.79**	**100.00**	**4.2**
FEVC-08-07#1	-5.7	0.0	0.23	2.13	0.72	0.79	7	7	0.00	0.00	0.00	0.00	0.34	0.34	0.68	1.19	1.48	1.88	2.29	2.81	3.98	7.81	25.12	76.00	98.32	99.16	99.20	99.21	99.95	ND
FEVC-08-07#2	-11.7	0.0	0.20	2.29	0.43	1.05	7	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.21	0.41	0.68	1.22	2.99	14.39	71.59	97.55	98.90	98.94	98.95	100.00	ND
FEVC-08-07#3	-14.2	0.0	0.39	1.35	1.20	0.90	5	8	0.00	0.00	0.00	0.00	0.98	1.46	2.05	3.55	6.01	9.94	15.25	20.27	26.85	38.05	61.48	92.81	98.99	99.06	99.10	99.10	100.00	ND
FEVC-08-07#4	-16.0	0.0	0.20	2.35	0.32	1.20	6	8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.10	0.23	0.74	8.54	69.91	97.90	98.74	98.77	98.80	100.00	ND
FEVC-08-07A#1	-18.7	0.0	0.21	2.23	0.36	1.20	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.17	0.55	2.46	19.68	80.02	98.31	98.73	98.79	98.80	100.00	ND
Cut to -14.3																														
FEVC-08-07 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																			
FEVC-08-08#1	-9.0	0.0	0.26	1.93	0.88	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.32	0.51	1.06	1.90	3.29	5.03	7.03	10.75	17.71	35.12	80.35	98.20	98.84	98.87	98.87	100.00	ND
FEVC-08-08#2	-14.2	0.0	0.30	1.73	0.86	1.24	5	7	0.00	0.00	0.00	0.34	1.01	1.16	1.37	1.98	2.37	3.13	3.88	5.33	8.97	23.37	57.66	91.56	98.55	98.73	98.73	98.76	99.96	ND
FEVC-08-08#3	-17.3	0.0	0.60	0.74	1.29	1.48	5	7	0.00	0.00	0.00	0.00	1.25	2.12	2.95	5.98	10.64	18.81	28.40	37.13	48.69	63.43	82.45	95.67	98.30	98.46	98.50	98.52	99.91	ND
Cut to -14.3																														
FEVC-08-08 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																			
FEVC-08-09#1	-10.7	0.0	0.23	2.09	0.68	1.13	6	8	0.00	0.00	0.00	0.14	0.14	0.14	0.31	0.58	0.99	1.48	2.11	2.99	4.79	9.31	29.93	79.48	98.09	98.84	98.86	98.87	100.00	ND
FEVC-08-09#2	-13.7	0.0	0.21	2.26	0.44	1.20	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	0.30	0.47	0.77	1.41	3.55	16.01	74.63	98.17	98.77	98.80	98.80	99.99	ND
FEVC-08-09#3	-17.7	0.0	0.17	2.53	0.35	1.34	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.11	0.21	0.35	0.70	3.29	42.98	94.33	98.57	98.64	98.66	100.00	ND
Cut to -14.3																														
FEVC-08-09 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																			
FEVC-08-10#1	-10.0	0.0	0.21	2.26	0.57	1.20	6	7	0.00	0.00	0.00	0.00	0.15	0.17	0.17	0.20	0.34	0.59	0.96	1.50	2.77	6.23	19.02	64.99	97.73	98.75	98.80	98.80	100.00	ND
FEVC-08-10#2	-12.5	0.0	0.21	2.25	0.43	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.34	0.37	0.49	0.54	0.63	0.81	1.98	14.97	78.96	98.40	98.83	98.86	98.87	100.00	ND
FEVC-08-10#3	-14.1	0.0	0.30	1.75	0.80	1.18	6	7	0.00	0.00	0.00	0.00	0.22	0.39	0.56	0.85	1.55	2.57	4.06	6.47	11.22	23.91	56.02	90.82	98.55	98.79	98.82	98.82	99.94	ND
FEVC-08-10#4	-16.1	0.0	0.71	0.50	1.75	1.05	5	7	0.00	0.00	3.89	4.71	6.93	7.74	9.21	13.91	19.83	28.61	36.82	44.45	51.85	61.19	73.88	91.10	98.50	98.89	98.94	98.95	100.00	ND
Cut to -14.3																														
FEVC-08-10 Composite									**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**																			

CUMULATIVE PERCENTS AND COMPUTED DISTRIBUTIONS - FIGURE EIGHT VIBRACORES (3 OF 3)

SAMPLE I. D.	ELEVATION (NAVD88 FT)	EFFECTIVE LENGTH (FT)	MEAN (mm)	PHI MEAN	PHI SORTING	% SILT	MUNSELL COLOR WET	MUNSELL COLOR DRY	CUMULATIVE PERCENT RETAINED (SIEVES EXPRESSED IN PHI)																					% CARBONATES
									GRAVEL						GRANULAR					SAND										FINES PAN	
									-4.25	-4.0	-3.50	-3.0	-2.50	-2.25	-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	3.75	4.0		
FEVC-07-02#1	-10.0	2.5	0.26	1.94	0.70	0.98	6	6	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.25	0.73	1.54	2.74	4.59	7.68	15.59	43.87	83.86	98.35	98.99	99.01	99.02	99.99	11.3
FEVC-07-02#2	-16.0	2.8	0.21	2.28	0.46	1.09	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.17	0.31	0.70	1.61	4.37	17.69	68.34	97.78	98.88	98.90	98.91	99.99	7.7
FEVC-07-02#3	-20.0	0.0	0.20	2.35	0.31	1.24	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.21	0.79	8.23	70.65	97.92	98.72	98.75	98.76	100.00	4.3
Cut to -14.3																														
FEVC-07-02 Composite		**5.3**	**0.23**	**2.12**	**0.61**	**1.04**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.12**	**0.38**	**0.82**	**1.46**	**2.53**	**4.47**	**9.66**	**30.04**	**75.66**	**98.05**	**98.93**	**98.95**	**98.96**	**99.99**	**9.4**
FEVC-07-11#1	-5.3	3.1	0.25	2.01	0.76	1.26	6	6	0.00	0.00	0.00	0.00	0.11	0.22	0.30	0.90	1.30	2.09	3.19	4.70	6.79	13.29	34.75	80.17	97.66	98.68	98.73	98.74	99.99	10.5
FEVC-07-11#2	-8.4	4.3	0.21	2.23	0.34	1.27	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.11	0.34	1.28	18.92	81.85	98.11	98.71	98.72	98.73	99.98	4.5
FEVC-07-11#3	-13.4	2.5	0.19	2.36	0.36	1.32	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.13	0.43	1.65	9.83	67.31	96.68	98.60	98.67	98.68	99.99	5.3
FEVC-07-11#4	-17.4	0.0	0.31	1.71	1.06	1.36	5	6	0.00	0.00	0.00	0.00	0.27	0.49	0.91	2.24	3.80	6.34	9.07	12.28	16.91	25.13	44.66	85.15	98.06	98.60	98.63	98.64	99.98	17.2
Cut to -14.3																														
FEVC-07-11 Composite		**9.9**	**0.22**	**2.19**	**0.53**	**1.28**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.03**	**0.07**	**0.09**	**0.28**	**0.41**	**0.66**	**1.02**	**1.55**	**2.38**	**5.13**	**21.58**	**77.65**	**97.61**	**98.67**	**98.71**	**98.72**	**99.99**	**6.6**
FEVC-07-12#1	-9.5	4.5	0.20	2.32	0.36	1.38	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.08	0.27	1.18	13.20	70.92	96.84	98.52	98.60	98.62	99.95	4.4
FEVC-07-12#2	-14.5	2.3	0.20	2.33	0.39	1.47	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.09	0.11	0.15	0.22	0.47	1.64	12.61	69.36	96.19	98.43	98.51	98.53	99.99	4.9
FEVC-07-12#3	-17.2	0.0	0.77	0.38	1.88	1.10	6	6	0.00	0.00	1.31	2.46	5.68	6.97	10.42	18.29	27.97	39.93	47.95	53.23	56.09	58.77	64.20	83.43	97.75	98.82	98.88	98.90	99.97	34.6
Cut to -14.3																														
FEVC-07-12 Composite		**6.8**	**0.20**	**2.33**	**0.37**	**1.41**	**6**	**7**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.02**	**0.03**	**0.04**	**0.07**	**0.13**	**0.34**	**1.34**	**13.00**	**70.39**	**96.62**	**98.49**	**98.57**	**98.59**	**99.96**	**4.6**
FEVC-07-16#1	-1.0	2.8	0.21	2.22	0.38	1.13	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.10	0.22	0.45	0.86	2.67	19.15	82.43	98.26	98.80	98.87	98.87	99.86	4.3
FEVC-07-16#2	-4.5	5.4	0.21	2.27	0.44	1.46	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	0.26	0.35	0.49	0.78	1.09	2.32	14.46	74.91	97.63	98.41	98.51	98.54	99.72	5.5
FEVC-07-16#3	-7.7	0.7	0.49	1.02	1.67	1.19	6	6	0.00	0.00	3.67	3.67	5.05	6.45	7.08	10.09	13.39	18.78	23.46	28.81	34.64	44.87	62.33	87.39	98.08	98.69	98.78	98.81	100.00	19.6
FEVC-07-16A#1	-7.8	0.0	0.27	1.87	1.01	1.13	5	7	0.00	0.00	0.00	0.00	0.00	0.26	0.51	1.18	2.54	5.27	8.10	11.14	14.31	19.92	34.49	77.06	97.98	98.79	98.86	98.87	99.96	
FEVC-07-16A#2	-10.3	3.8	0.59	0.77	1.71	0.85	5	6	0.00	0.00	6.90	7.18	8.42	8.69	9.84	11.63	13.99	17.84	22.51	29.35	38.81	54.58	76.17	96.02	98.86	99.14	99.15	99.15	99.83	29.1
FEVC-07-16A#3	-13.9	1.6	0.30	1.73	0.95	1.03	6	7	0.00	0.00	0.00	0.00	0.82	0.82	1.30	1.90	3.27	5.07	6.73	8.81	11.94	20.52	50.21	91.80	98.74	98.97	98.97	98.97	99.95	12.8
FEVC-07-16A#4	-16.5	0.0	0.21	2.22	0.33	1.45	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.08	0.12	0.30	1.21	18.77	83.56	98.20	98.53	98.55	98.55	99.69	4.3
Cut to -14.3																														
FEVC-07-16 Composite		**14.3**	**0.30**	**1.74**	**1.24**	**1.17**	**6**	**7**	**0.00**	**0.00**	**2.01**	**2.09**	**2.58**	**2.72**	**3.13**	**3.89**	**4.85**	**6.38**	**8.11**	**10.58**	**13.92**	**20.40**	**38.12**	**84.49**	**98.23**	**98.76**	**98.82**	**98.83**	**99.82**	**13.0**
FEVC-07-17#1	-5.0	4.7	0.22	2.18	0.44	0.99	6	7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.32	0.52	0.89	1.45	3.84	23.85	82.71	98.35	98.97	99.00	99.01	100.00	5.3
FEVC-07-17#2	-8.1	0.7	0.68	0.56	2.25	1.15	6	6	7.51	7.51	11.01	12.89	15.06	15.61	16.35	18.85	21.73	25.61	30.13	34.43	39.25	46.36	61.94	89.32	98.50	98.80	98.83	98.85	100.00	24.5
FEVC-07-17#3	-10.0	3.4	0.24	2.03	0.59	1.17	6	7	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.33	0.55	0.92	1.36	2.15	4.01	10.94	35.86	85.57	98.53	98.82	98.82	98.83	100.00	9.1
FEVC-07-17#4	-13.1	1.9	0.55	0.85	1.61	0.91	5	6	0.00	3.56	3.56	4.78	5.42	5.61	6.50	8.56	12.01	17.91	23.96	30.78	38.61	51.95	76.19	94.31	98.87	99.07	99.08	99.09	100.00	27.9
FEVC-07-17#5	-14.5	0.6	0.26	1.93	0.63	1.20	6	7	0.00	0.00	0.00	0.00	0.27	0.27	0.27	0.42	0.83	1.43	2.02	2.88	4.55	11.46	48.15	90.05	98.44	98.78	98.79	98.80	99.97	8.8
FEVC-07-17A#1	-13.3	0.0	0.27	1.91	0.73	1.27	6	7	0.00	0.00	0.00	0.00	0.00	0.10	0.21	0.61	1.24	2.05	3.00	4.54	7.69	16.61	42.25	87.33	98.48	98.71	98.72	98.73	99.98	11.7
FEVC-07-17A#2	-15.6	0.0	0.41	1.28	1.14	0.80	6	6	0.00	0.00	0.00	0.47	1.52	1.76	2.13	3.39	5.36	8.79	12.91	18.40	26.89	44.38	73.31	94.05	98.94	99.18	99.19	99.20	99.98	20.0
Cut to -14.3																														
FEVC-07-17 Composite		**11.3**	**0.29**	**1.80**	**1.13**	**1.05**	**6**	**7**	**0.47**	**1.06**	**1.28**	**1.60**	**1.90**	**1.97**	**2.17**	**2.73**	**3.65**	**5.08**	**6.63**	**8.48**	**10.97**	**17.10**	**39.91**	**86.32**	**98.51**	**98.92**	**98.94**	**98.95**	**100.00**	**11.6**
FEVC-07-18#1	-5.0	5.9	0.27	1.91	0.71	1.01	5	7	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.36	0.81	1.54	2.27	3.79	7.71	20.12	45.32	84.79	98.32	98.95	98.98	98.99	99.98	10.6
FEVC-07-18#2	-7.5	4.0	0.34	1.55	1.09	1.12	6	7	0.00	0.00	0.00	1.13	1.94	2.26	2.49	3.24	4.34	5.79	7.87	11.17	16.82	30.24	59.67	92.70	98.72	98.87	98.87	98.88	99.77	13.0
FEVC-07-18#3	-15.5	1.4	0.23	2.10	0.54	1.00	6	7	0.00	0.00	0.00	0.00	0.04	0.04	0.05	0.18	0.29	0.51	0.80	1.38	2.94	9.10	33.19	80.48	98.30	98.99	99.00	99.00	99.95	5.8
Cut to -14.3																														
FEVC-07-18 Composite		**11.3**	**0.29**	**1.81**	**0.87**	**1.05**	**5**	**7**	**0.00**	**0.00**	**0.00**	**0.40**	**0.69**	**0.80**	**1.05**	**1.36**	**2.00**	**2.92**	**4.07**	**6.10**	**10.34**	**22.34**	**48.90**	**87.06**	**98.46**	**98.93**	**98.94**	**98.95**	**99.90**	**10.9**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (1 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-08-01#1	1.48	98.34	0.18	0.00
FEVC-08-01#2	1.37	98.29	0.34	0.00
FEVC-08-01#3	1.76	84.15	4.47	9.62
FEVC-08-01#4	3.29	96.69	0.02	0.00
FEVC-08-01 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			
FEVC-08-02#1	1.30	97.48	0.63	0.59
FEVC-08-02#2	1.14	98.86	0.00	0.00
FEVC-08-02A#1	1.25	98.73	0.02	0.00
FEVC-08-02A#2	1.29	98.71	0.00	0.00
FEVC-08-02 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			
FEVC-08-03#1	0.93	91.25	3.64	4.18
FEVC-08-03#2	1.26	98.42	0.25	0.07
FEVC-08-03#3	1.30	98.63	0.07	0.00
FEVC-08-03#4	0.93	82.75	11.27	5.05
FEVC-08-03#5	1.29	98.69	0.02	0.00
FEVC-08-03#6	1.16	98.78	0.06	0.00
FEVC-08-03 Composite	**1.21**	**97.11**	**0.84**	**0.85**
FEVC-08-04#1	1.15	95.67	2.25	0.93
FEVC-08-04#2	0.98	64.69	24.44	9.89
FEVC-08-04#3	1.30	88.07	3.93	6.70
FEVC-08-04#4	1.14	98.74	0.12	0.00
FEVC-08-04A#1	0.98	99.02	0.00	0.00
FEVC-08-04A#2	1.24	98.76	0.00	0.00
FEVC-08-04A#3	0.95	96.62	1.45	0.98
FEVC-08-04A#4	1.09	98.77	0.14	0.00
FEVC-08-04 Composite	**1.16**	**90.36**	**5.24**	**3.24**
FEVC-08-05#1	1.06	97.93	0.79	0.22
FEVC-08-05#2	1.17	91.90	5.56	1.37
FEVC-08-05#3	1.13	97.87	0.72	0.28
FEVC-08-05#4	1.16	94.11	3.07	1.66
FEVC-08-05#5	1.20	98.76	0.04	0.00
FEVC-08-05A#1	0.80	40.94	13.82	44.44
FEVC-08-05A#2	0.97	97.66	0.98	0.39
FEVC-08-05A#3	1.32	86.93	8.51	3.24
FEVC-08-05A#4	0.88	98.45	0.67	0.00
FEVC-08-05A#5	0.80	97.89	1.22	0.09
FEVC-08-05 Composite	**1.13**	**96.48**	**1.87**	**0.53**

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (2 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-08-06#1	1.15	98.81	0.04	0.00
FEVC-08-06#2	1.09	97.71	0.14	1.06
FEVC-08-06#3	1.42	98.57	0.01	0.00
FEVC-08-06#4	1.23	90.10	4.76	3.91
FEVC-08-06#5	32.97	65.90	0.20	0.93
FEVC-08-06 Composite	**1.21**	**98.07**	**0.21**	**0.50**
FEVC-08-07#1	0.79	97.73	1.14	0.34
FEVC-08-07#2	1.05	98.88	0.07	0.00
FEVC-08-07#3	0.90	93.09	4.55	1.46
FEVC-08-07#4	1.20	98.80	0.00	0.00
FEVC-08-07A#1	1.20	98.80	0.00	0.00
FEVC-08-07 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			
FEVC-08-08#1	1.13	96.97	1.58	0.32
FEVC-08-08#2	1.24	96.39	1.21	1.16
FEVC-08-08#3	1.48	87.88	8.52	2.12
FEVC-08-08 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			
FEVC-08-09#1	1.13	97.88	0.85	0.14
FEVC-08-09#2	1.20	98.63	0.17	0.00
FEVC-08-09#3	1.34	98.65	0.01	0.00
FEVC-08-09 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			
FEVC-08-10#1	1.20	98.46	0.17	0.17
FEVC-08-10#2	1.13	98.50	0.18	0.19
FEVC-08-10#3	1.18	97.27	1.16	0.39
FEVC-08-10#4	1.05	79.12	12.09	7.74
FEVC-08-10 Composite	**VIBRACORE NOT USED IN BORROW AREA COMPOSITE CALCULATIONS**			

PERCENTAGE OF MATERIAL BY SEDIMENT GRAIN SIZE CATEGORY
FIGURE EIGHT VIBRACORES (3 of 3)

SAMPLE I.D.	Fine % (<0.0625mm)	Sand % (0.0625mm-2.00mm)	Granular % (2mm-4.76mm)	Gravel % (4.76mm-76mm)
FEVC-07-02#1	0.98	98.29	0.73	0.00
FEVC-07-02#2	1.09	98.85	0.06	0.00
FEVC-07-02#3	1.24	98.76	0.00	0.00
FEVC-07-02 Composite	**1.04**	**98.59**	**0.38**	**0.00**
FEVC-07-11#1	1.26	97.44	1.08	0.22
FEVC-07-11#2	1.27	98.73	0.00	0.00
FEVC-07-11#3	1.32	98.68	0.00	0.00
FEVC-07-11#4	1.36	94.84	3.31	0.49
FEVC-07-11 Composite	**1.28**	**98.31**	**0.34**	**0.07**
FEVC-07-12#1	1.38	98.62	0.00	0.00
FEVC-07-12#2	1.47	98.44	0.09	0.00
FEVC-07-12#3	1.10	70.93	21.00	6.97
FEVC-07-12 Composite	**1.41**	**98.56**	**0.03**	**0.00**
FEVC-07-16#1	1.13	98.82	0.05	0.00
FEVC-07-16#2	1.46	98.28	0.26	0.00
FEVC-07-16#3	1.19	85.42	6.94	6.45
FEVC-07-16A#1	1.13	96.33	2.28	0.26
FEVC-07-16A#2	0.85	85.16	5.30	8.69
FEVC-07-16A#3	1.03	95.70	2.45	0.82
FEVC-07-16A#4	1.45	98.53	0.02	0.00
FEVC-07-16 Composite	**1.17**	**93.98**	**2.13**	**2.72**
FEVC-07-17#1	0.99	98.83	0.18	0.00
FEVC-07-17#2	1.15	77.12	6.12	15.61
FEVC-07-17#3	1.17	98.28	0.40	0.15
FEVC-07-17#4	0.91	87.08	6.40	5.61
FEVC-07-17#5	1.20	97.97	0.56	0.27
FEVC-07-17A#1	1.27	97.49	1.14	0.10
FEVC-07-17A#2	0.80	93.84	3.60	1.76
FEVC-07-17 Composite	**1.05**	**95.30**	**1.68**	**1.97**
FEVC-07-18#1	1.01	98.18	0.81	0.00
FEVC-07-18#2	1.12	94.54	2.08	2.26
FEVC-07-18#3	1.00	98.71	0.25	0.04
FEVC-07-18 Composite	**1.05**	**96.96**	**1.19**	**0.80**
Alternative 5 Composite	**1.17**	**96.09**	**1.53**	**1.22**

APPENDIX 30

Alternative 5 Channel Corridor Composite Vibracore Granularmetric Reports

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: Alternative 5 Comp.

Analysis Date: 10-30-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
		North Carolina State Plane	

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.13	0.04	#200 - 1.18 #230 - 1.17		10	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
1"	-4.75	26.91	0.00	0.00	0.00	0.00
3/4"	-4.25	19.03	0.05	0.05	0.05	0.05
5/8"	-4.00	16.00	0.11	0.11	0.16	0.16
7/16"	-3.50	11.31	0.42	0.42	0.58	0.58
5/16"	-3.00	8.00	0.20	0.20	0.78	0.78
3.5	-2.50	5.66	0.28	0.28	1.06	1.06
4	-2.25	4.76	0.16	0.16	1.22	1.22
5	-2.00	4.00	0.27	0.27	1.49	1.49
7	-1.50	2.83	0.53	0.53	2.02	2.02
10	-1.00	2.00	0.72	0.72	2.74	2.74
14	-0.50	1.41	1.09	1.09	3.83	3.83
18	0.00	1.00	1.22	1.22	5.05	5.05
25	0.50	0.71	1.50	1.50	6.55	6.55
35	1.00	0.50	2.31	2.31	8.86	8.86
45	1.50	0.35	5.21	5.21	14.07	14.07
60	2.00	0.25	16.62	16.62	30.69	30.69
80	2.50	0.18	46.02	46.02	76.71	76.71
120	3.00	0.13	20.92	20.92	97.63	97.63
170	3.50	0.09	1.15	1.15	98.78	98.78
200	3.75	0.07	0.04	0.04	98.82	98.82
230	4.00	0.06	0.01	0.01	98.83	98.83

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.94	2.67	2.48	2.21	1.83	1.56	-0.02

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.97	0.26	0.99	-3.03	14.62

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-02 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,733	202,440	North Carolina State Plane	-9.0 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.03	0.01	#200 - 1.05 #230 - 1.04		9	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.00	0.00	0.00	0.00
4	-2.25	4.76	0.00	0.00	0.00	0.00
5	-2.00	4.00	0.03	0.03	0.03	0.03
7	-1.50	2.83	0.09	0.09	0.12	0.12
10	-1.00	2.00	0.26	0.26	0.38	0.38
14	-0.50	1.41	0.44	0.44	0.82	0.82
18	0.00	1.00	0.64	0.64	1.46	1.46
25	0.50	0.71	1.07	1.07	2.53	2.53
35	1.00	0.50	1.94	1.94	4.47	4.47
45	1.50	0.35	5.19	5.19	9.66	9.66
60	2.00	0.25	20.38	20.38	30.04	30.04
80	2.50	0.18	45.62	45.62	75.66	75.66
120	3.00	0.13	22.39	22.39	98.05	98.05
170	3.50	0.09	0.88	0.88	98.93	98.93
200	3.75	0.07	0.02	0.02	98.95	98.95
230	4.00	0.06	0.01	0.01	98.96	98.96

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.69	2.49	2.22	1.88	1.66	1.05

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.12	0.23	0.61	-2.03	10.28

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-11 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,946	201,018	North Carolina State Plane	-4.4 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.27	0.01	#200 - 1.29 #230 - 1.28		7	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00
3.5	-2.50	5.66	0.03	0.03	0.03	0.03
4	-2.25	4.76	0.04	0.04	0.07	0.07
5	-2.00	4.00	0.02	0.02	0.09	0.09
7	-1.50	2.83	0.19	0.19	0.28	0.28
10	-1.00	2.00	0.13	0.13	0.41	0.41
14	-0.50	1.41	0.25	0.25	0.66	0.66
18	0.00	1.00	0.36	0.36	1.02	1.02
25	0.50	0.71	0.53	0.53	1.55	1.55
35	1.00	0.50	0.83	0.83	2.38	2.38
45	1.50	0.35	2.75	2.75	5.13	5.13
60	2.00	0.25	16.45	16.45	21.58	21.58
80	2.50	0.18	56.07	56.07	77.65	77.65
120	3.00	0.13	19.96	19.96	97.61	97.61
170	3.50	0.09	1.06	1.06	98.67	98.67
200	3.75	0.07	0.04	0.04	98.71	98.71
230	4.00	0.06	0.01	0.01	98.72	98.72

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.93	2.66	2.48	2.25	2.03	1.83	1.48

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.19	0.22	0.53	-2.91	19.87

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-12 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,433	200,711	North Carolina State Plane	-7.5 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.37	0.04	#200 - 1.43 #230 - 1.41		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	0.00	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	0.02	0.02	0.02	0.02
10	-1.00	2.00	0.01	0.01	0.03	0.03
14	-0.50	1.41	0.01	0.01	0.04	0.04
18	0.00	1.00	0.03	0.03	0.07	0.07
25	0.50	0.71	0.06	0.06	0.13	0.13
35	1.00	0.50	0.21	0.21	0.34	0.34
45	1.50	0.35	1.00	1.00	1.34	1.34
60	2.00	0.25	11.66	11.66	13.00	13.00
80	2.50	0.18	57.39	57.39	70.39	70.39
120	3.00	0.13	26.23	26.23	96.62	96.62
170	3.50	0.09	1.87	1.87	98.49	98.49
200	3.75	0.07	0.08	0.08	98.57	98.57
230	4.00	0.06	0.02	0.02	98.59	98.59

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.76	2.59	2.32	2.10	2.03	1.66

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.33	0.20	0.37	-0.77	9.34

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-16 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,474	201,638	North Carolina State Plane	0.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.99	0.18	#200 - 1.18 #230 - 1.17		13	

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	2.01	2.01	2.01	2.01
5/16"	-3.00	8.00	0.08	0.08	2.09	2.09
3.5	-2.50	5.66	0.49	0.49	2.58	2.58
4	-2.25	4.76	0.14	0.14	2.72	2.72
5	-2.00	4.00	0.41	0.41	3.13	3.13
7	-1.50	2.83	0.76	0.76	3.89	3.89
10	-1.00	2.00	0.96	0.96	4.85	4.85
14	-0.50	1.41	1.53	1.53	6.38	6.38
18	0.00	1.00	1.73	1.73	8.11	8.11
25	0.50	0.71	2.47	2.47	10.58	10.58
35	1.00	0.50	3.34	3.34	13.92	13.92
45	1.50	0.35	6.48	6.48	20.40	20.40
60	2.00	0.25	17.72	17.72	38.12	38.12
80	2.50	0.18	46.37	46.37	84.49	84.49
120	3.00	0.13	13.74	13.74	98.23	98.23
170	3.50	0.09	0.53	0.53	98.76	98.76
200	3.75	0.07	0.06	0.06	98.82	98.82
230	4.00	0.06	0.01	0.01	98.83	98.83

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.88	2.49	2.40	2.13	1.63	1.16	-0.95

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.74	0.30	1.24	-2.65	10.63

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-17 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,728	201,394	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.05	0.00	#200 - 1.06 #230 - 1.05		12	

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained
1"	-4.75	26.91	0.00	0.00	0.00	0.00
3/4"	-4.25	19.03	0.47	0.47	0.47	0.47
5/8"	-4.00	16.00	0.59	0.59	1.06	1.06
7/16"	-3.50	11.31	0.22	0.22	1.28	1.28
5/16"	-3.00	8.00	0.32	0.32	1.60	1.60
3.5	-2.50	5.66	0.30	0.30	1.90	1.90
4	-2.25	4.76	0.07	0.07	1.97	1.97
5	-2.00	4.00	0.20	0.20	2.17	2.17
7	-1.50	2.83	0.56	0.56	2.73	2.73
10	-1.00	2.00	0.92	0.92	3.65	3.65
14	-0.50	1.41	1.43	1.43	5.08	5.08
18	0.00	1.00	1.55	1.55	6.63	6.63
25	0.50	0.71	1.85	1.85	8.48	8.48
35	1.00	0.50	2.49	2.49	10.97	10.97
45	1.50	0.35	6.13	6.13	17.10	17.10
60	2.00	0.25	22.81	22.81	39.91	39.91
80	2.50	0.18	46.41	46.41	86.32	86.32
120	3.00	0.13	12.19	12.19	98.51	98.51
170	3.50	0.09	0.41	0.41	98.92	98.92
200	3.75	0.07	0.02	0.02	98.94	98.94
230	4.00	0.06	0.01	0.01	98.95	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.86	2.48	2.38	2.11	1.67	1.41	-0.53

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.8	0.29	1.13	-3.11	14.56

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-07-18 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,894	201,815	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	0.95	0.10	#200 - 1.06 #230 - 1.05		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	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.40	0.40	0.40	0.40
3.5	-2.50	5.66	0.29	0.29	0.69	0.69
4	-2.25	4.76	0.11	0.11	0.80	0.80
5	-2.00	4.00	0.25	0.25	1.05	1.05
7	-1.50	2.83	0.31	0.31	1.36	1.36
10	-1.00	2.00	0.64	0.64	2.00	2.00
14	-0.50	1.41	0.92	0.92	2.92	2.92
18	0.00	1.00	1.15	1.15	4.07	4.07
25	0.50	0.71	2.03	2.03	6.10	6.10
35	1.00	0.50	4.24	4.24	10.34	10.34
45	1.50	0.35	12.00	12.00	22.34	22.34
60	2.00	0.25	26.56	26.56	48.90	48.90
80	2.50	0.18	38.16	38.16	87.06	87.06
120	3.00	0.13	11.40	11.40	98.46	98.46
170	3.50	0.09	0.47	0.47	98.93	98.93
200	3.75	0.07	0.01	0.01	98.94	98.94
230	4.00	0.06	0.01	0.01	98.95	98.95

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.85	2.46	2.34	2.01	1.55	1.24	0.23

Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
	1.81	0.29	0.87	-2.46	11.91

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-08-03 Comp.

Analysis Date: 09-08-09

Analyzed By: KD

Coastal Planning & Engineering
2481 NW Boca Raton Blvd, Boca Raton
FL 33431
ph (561) 391-8102
fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,387,390	201,128	North Carolina State Plane	-3.6 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.20	0.01	#200 - 1.24 #230 - 1.21		8	

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	0.11	0.11	0.11	0.11
5/16"	-3.00	8.00	0.25	0.25	0.36	0.36
3.5	-2.50	5.66	0.27	0.27	0.63	0.63
4	-2.25	4.76	0.22	0.22	0.85	0.85
5	-2.00	4.00	0.15	0.15	1.00	1.00
7	-1.50	2.83	0.29	0.29	1.29	1.29
10	-1.00	2.00	0.39	0.39	1.68	1.68
14	-0.50	1.41	0.60	0.60	2.28	2.28
18	0.00	1.00	0.79	0.79	3.07	3.07
25	0.50	0.71	0.85	0.85	3.92	3.92
35	1.00	0.50	1.12	1.12	5.04	5.04
45	1.50	0.35	2.07	2.07	7.11	7.11
60	2.00	0.25	5.96	5.96	13.07	13.07
80	2.50	0.18	40.50	40.50	53.57	53.57
120	3.00	0.13	42.39	42.39	95.96	95.96
170	3.50	0.09	2.73	2.73	98.69	98.69
200	3.75	0.07	0.07	0.07	98.76	98.76
230	4.00	0.06	0.03	0.03	98.79	98.79

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.86	2.75	2.46	2.15	2.04	0.98

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.29	0.20	0.83	-3.71	20.49

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-08-04 Comp.

Analysis Date: 10-30-09

Analyzed By: KD

Coastal Planning & Engineering
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,485	202,080	North Carolina State Plane	-3.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 7.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.15	0.01	#200 - 1.17 #230 - 1.16		22	

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	0.40	0.40	0.40	0.40
7/16"	-3.50	11.31	1.04	1.04	1.44	1.44
5/16"	-3.00	8.00	0.37	0.37	1.81	1.81
3.5	-2.50	5.66	0.89	0.89	2.70	2.70
4	-2.25	4.76	0.54	0.54	3.24	3.24
5	-2.00	4.00	0.91	0.91	4.15	4.15
7	-1.50	2.83	1.99	1.99	6.14	6.14
10	-1.00	2.00	2.34	2.34	8.48	8.48
14	-0.50	1.41	3.08	3.08	11.56	11.56
18	0.00	1.00	2.93	2.93	14.49	14.49
25	0.50	0.71	2.86	2.86	17.35	17.35
35	1.00	0.50	3.74	3.74	21.09	21.09
45	1.50	0.35	6.43	6.43	27.52	27.52
60	2.00	0.25	18.61	18.61	46.13	46.13
80	2.50	0.18	41.92	41.92	88.05	88.05
120	3.00	0.13	10.45	10.45	98.50	98.50
170	3.50	0.09	0.31	0.31	98.81	98.81
200	3.75	0.07	0.02	0.02	98.83	98.83
230	4.00	0.06	0.01	0.01	98.84	98.84

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.83	2.45	2.34	2.05	1.30	0.26	-1.79

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.48	0.36	1.42	-1.88	6.09

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-08-05 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

Coastal Planning & Engineering
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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,388,173	201,385	North Carolina State Plane	-2.0 NAVD 88

USCS:	Munsell:	Comments:
SW		Composite data. Average dry Munsell Value is 8.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.13	0.00	#200 - 1.14 #230 - 1.13		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	0.00	0.00	0.00	0.00
5/16"	-3.00	8.00	0.09	0.09	0.09	0.09
3.5	-2.50	5.66	0.20	0.20	0.29	0.29
4	-2.25	4.76	0.24	0.24	0.53	0.53
5	-2.00	4.00	0.40	0.40	0.93	0.93
7	-1.50	2.83	0.56	0.56	1.49	1.49
10	-1.00	2.00	0.90	0.90	2.39	2.39
14	-0.50	1.41	1.49	1.49	3.88	3.88
18	0.00	1.00	1.94	1.94	5.82	5.82
25	0.50	0.71	2.04	2.04	7.86	7.86
35	1.00	0.50	3.39	3.39	11.25	11.25
45	1.50	0.35	6.78	6.78	18.03	18.03
60	2.00	0.25	19.56	19.56	37.59	37.59
80	2.50	0.18	45.28	45.28	82.87	82.87
120	3.00	0.13	15.19	15.19	98.06	98.06
170	3.50	0.09	0.77	0.77	98.83	98.83
200	3.75	0.07	0.03	0.03	98.86	98.86
230	4.00	0.06	0.01	0.01	98.87	98.87

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.90	2.54	2.41	2.14	1.68	1.35	-0.21

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.88	0.27	0.93	-2.27	9.16

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

Granularmetric Report

Depths and elevations based on measured values

Project Name: Figure Eight Alternative 5

Sample Name: FEVC-08-06 Comp.

Analysis Date: 08-28-09

Analyzed By: KD

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fax (561) 391-9116

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
2,386,618	200,973	North Carolina State Plane	-1.1 NAVD 88

USCS:	Munsell:	Comments:
SP		Composite data. Average dry Munsell Value is 8.

Dry Weight (g):	Wash Weight (g):	Pan Retained (g):	Sieve Loss (%):	Fines (%):	Organics (%):	Carbonates (%):	Shell Hash (%):
100.00	100.00	1.21	0.00	#200 - 1.22 #230 - 1.21		4	

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	0.05	0.05	0.05	0.05
5/16"	-3.00	8.00	0.34	0.34	0.39	0.39
3.5	-2.50	5.66	0.03	0.03	0.42	0.42
4	-2.25	4.76	0.08	0.08	0.50	0.50
5	-2.00	4.00	0.03	0.03	0.53	0.53
7	-1.50	2.83	0.07	0.07	0.60	0.60
10	-1.00	2.00	0.11	0.11	0.71	0.71
14	-0.50	1.41	0.17	0.17	0.88	0.88
18	0.00	1.00	0.17	0.17	1.05	1.05
25	0.50	0.71	0.23	0.23	1.28	1.28
35	1.00	0.50	0.44	0.44	1.72	1.72
45	1.50	0.35	1.26	1.26	2.98	2.98
60	2.00	0.25	6.99	6.99	9.97	9.97
80	2.50	0.18	47.50	47.50	57.47	57.47
120	3.00	0.13	38.60	38.60	96.07	96.07
170	3.50	0.09	2.63	2.63	98.70	98.70
200	3.75	0.07	0.08	0.08	98.78	98.78
230	4.00	0.06	0.01	0.01	98.79	98.79

Shell Hash calculated from visual estimate of shell <4.75mm and >2.8mm.

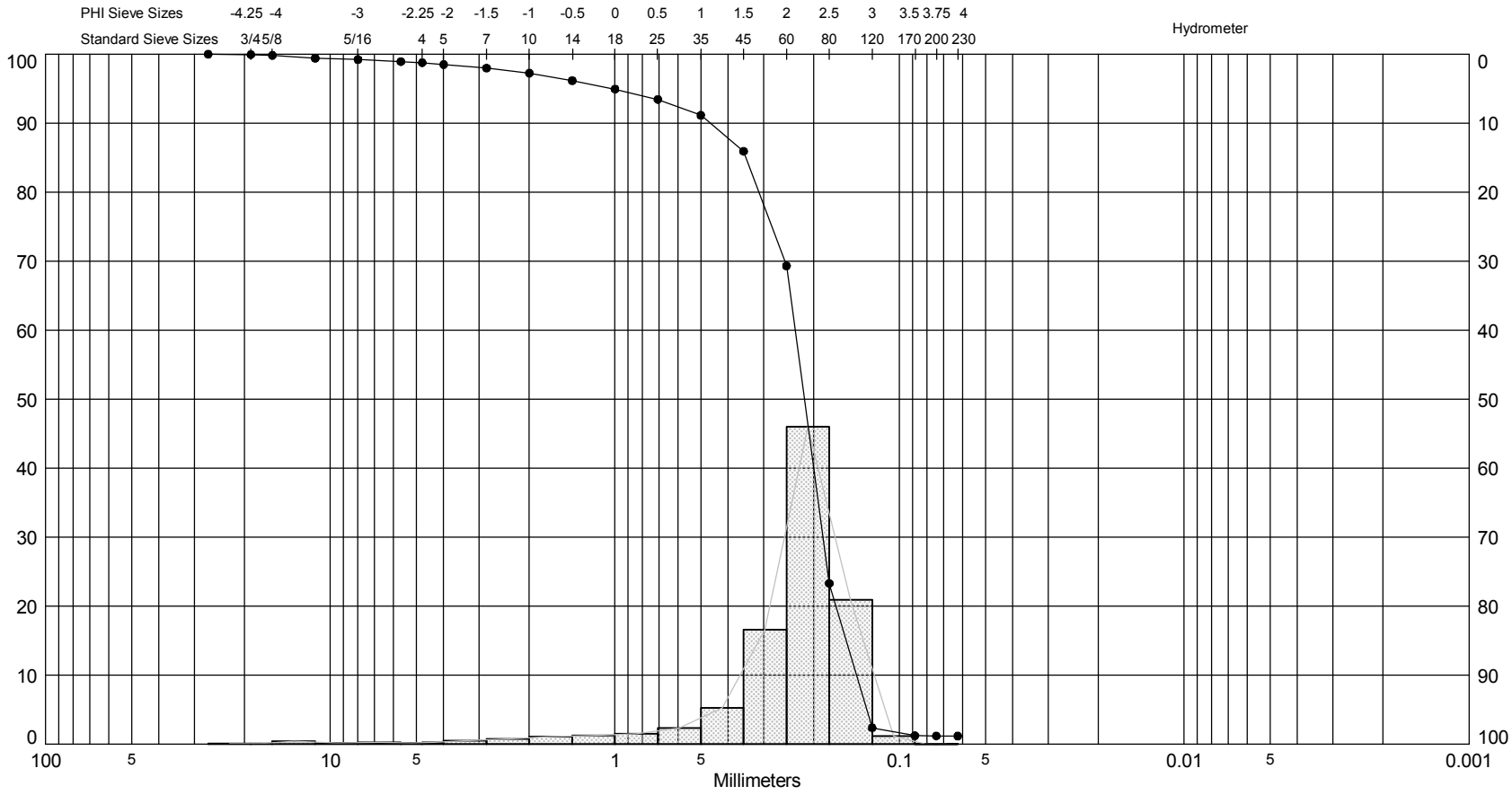
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.84	2.73	2.42	2.16	2.06	1.64

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	2.37	0.19	0.6	-4.97	42.23

GRANULARMETRIC REPORT FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10

APPENDIX 31

Alternative 5 Channel Corridor Composite Vibracore Grain Size Distribution Curves/Histograms



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
Alternative 5 Comp.	—●—		SW	#200 - 1.18 #230 - 1.17		10	2.21	1.97	-3.03	14.62	0.99

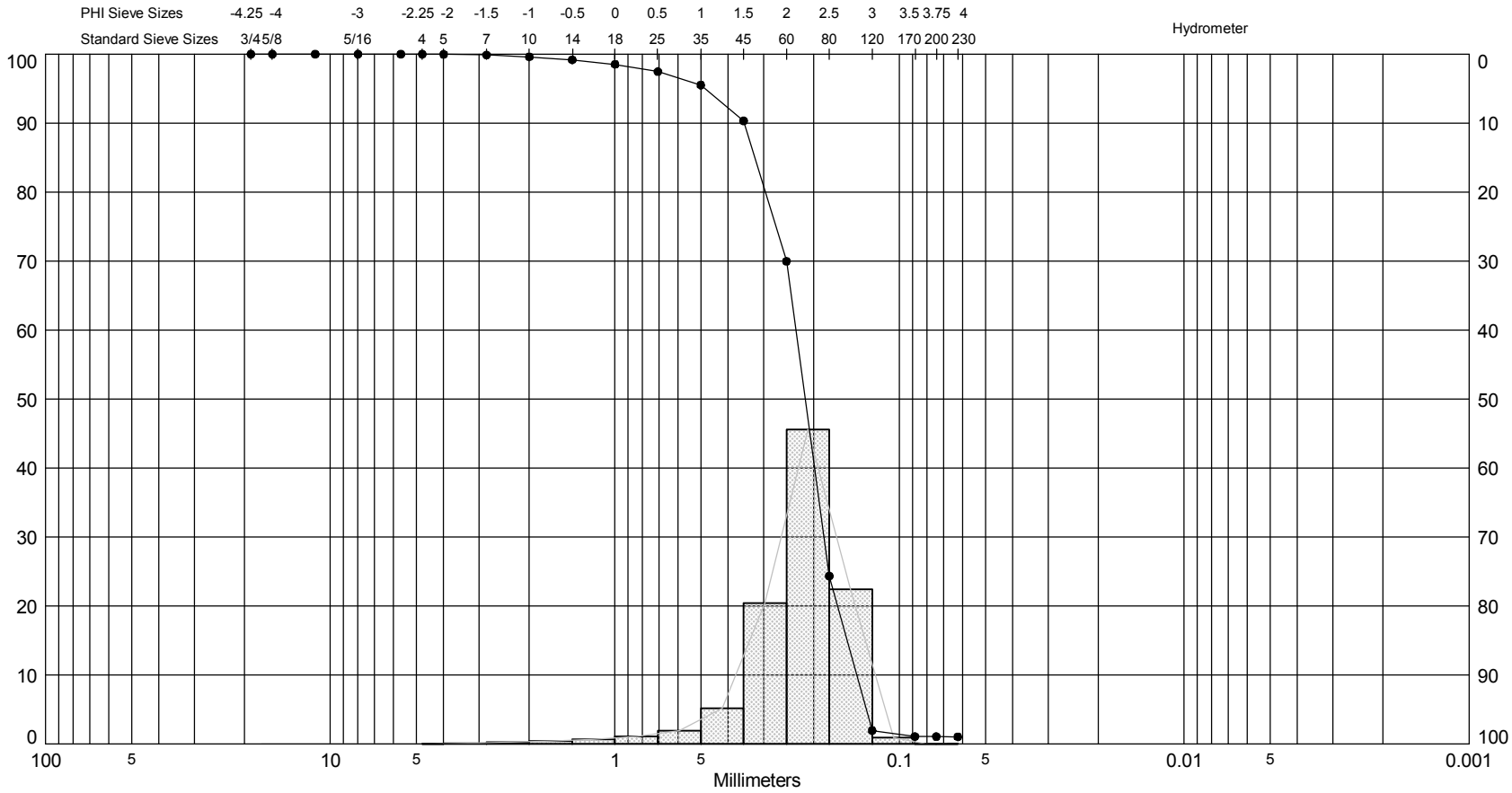
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	10-30-09
Analyzed By:	KD
Easting (X, ft):	
Northing (Y, ft):	
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-02 Comp.	—●—	-9.0	SP	#200 - 1.05 #230 - 1.04		9	2.22	2.12	-2.03	10.28	0.61

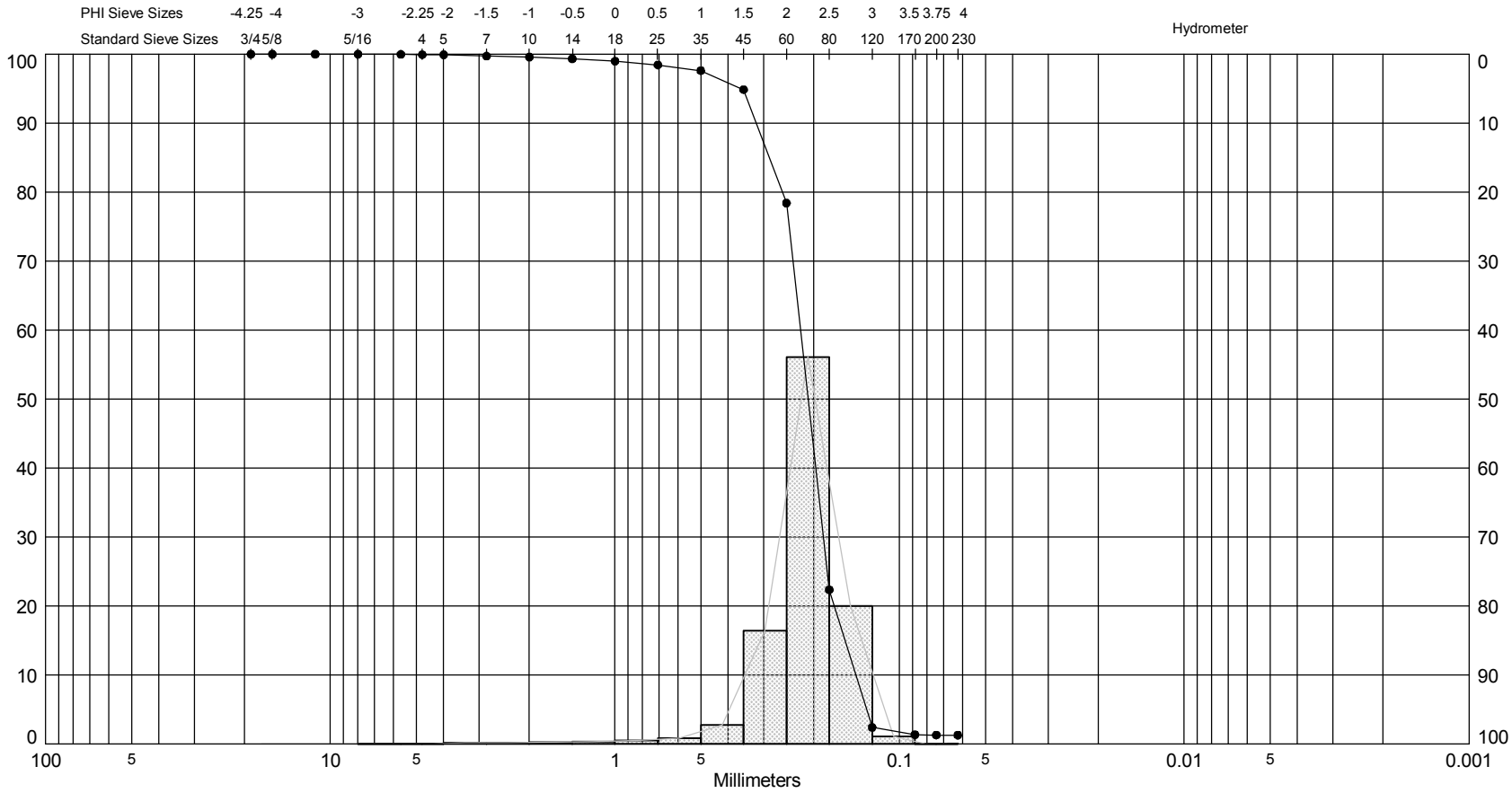
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,388,733
Northing (Y, ft):	202,440
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-11 Comp.	—●—	-4.4	SP	#200 - 1.29 #230 - 1.28		7	2.25	2.19	-2.91	19.87	0.53

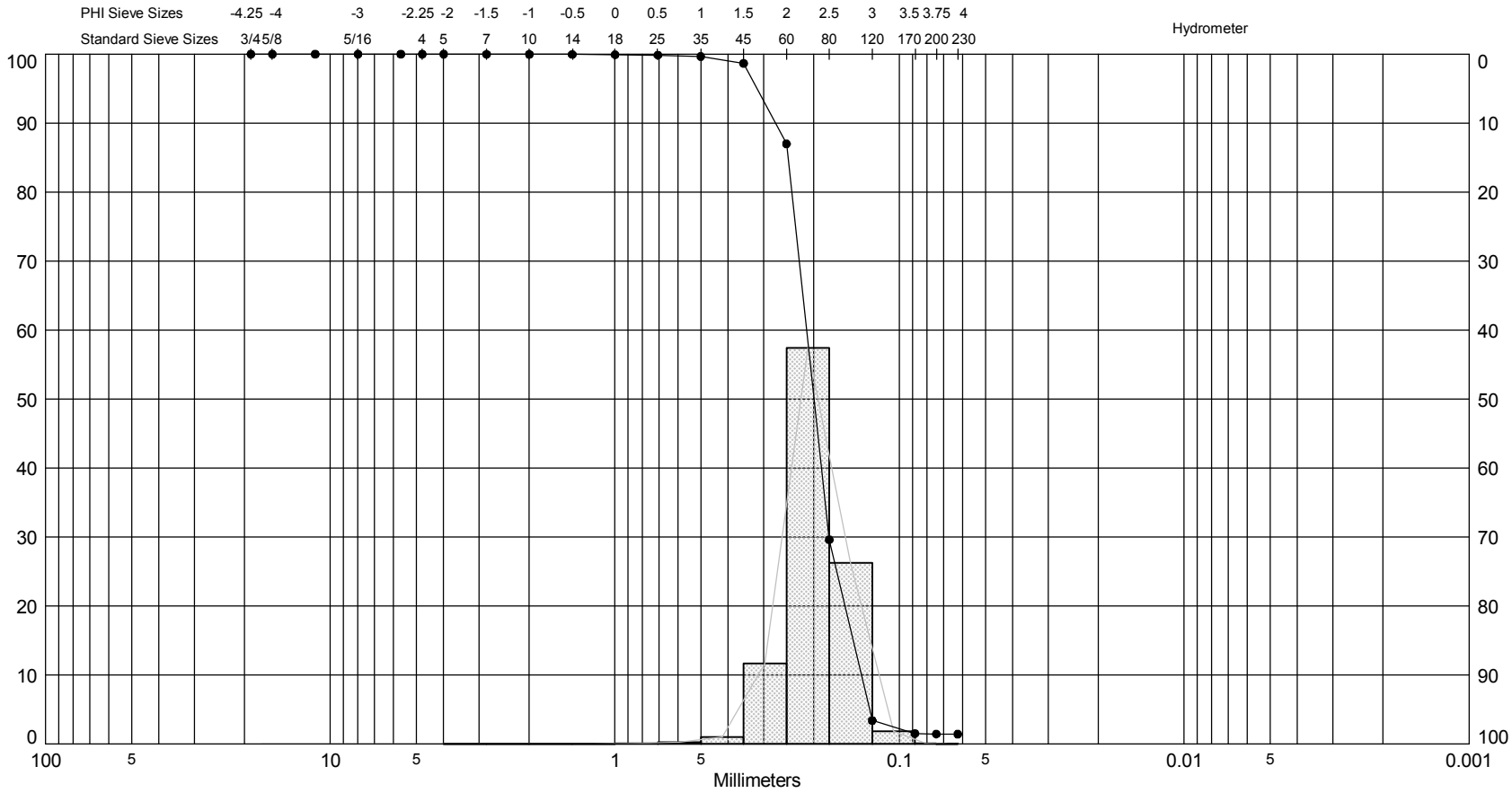
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,386,946
Northing (Y, ft):	201,018
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-12 Comp.	—●—	-7.5	SP	#200 - 1.43 #230 - 1.41		5	2.32	2.33	-0.77	9.34	0.37

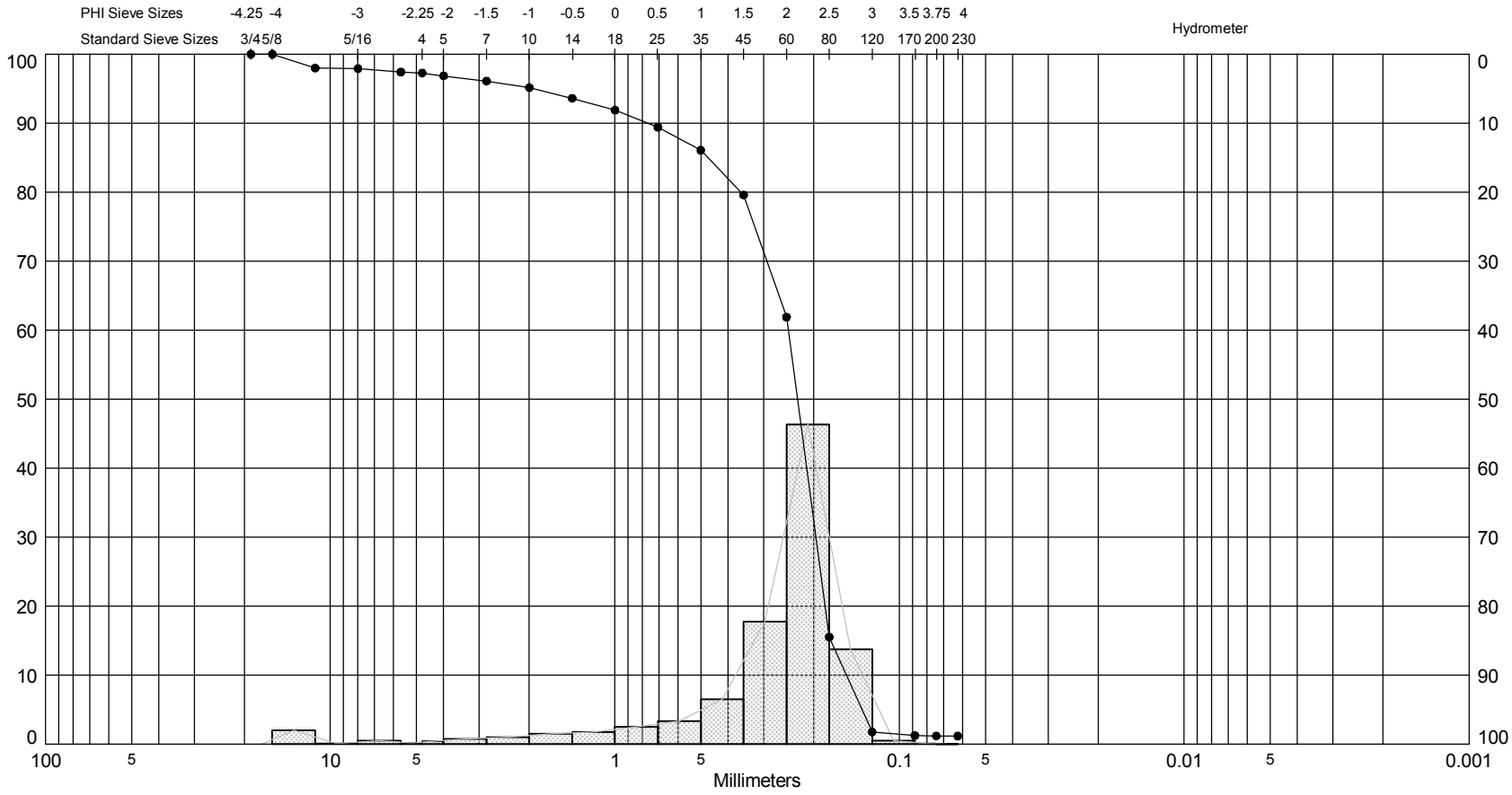
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,386,433
Northing (Y, ft):	200,711
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-16 Comp.	—●—	0.0	SW	#200 - 1.18 #230 - 1.17		13	2.13	1.74	-2.65	10.63	1.24

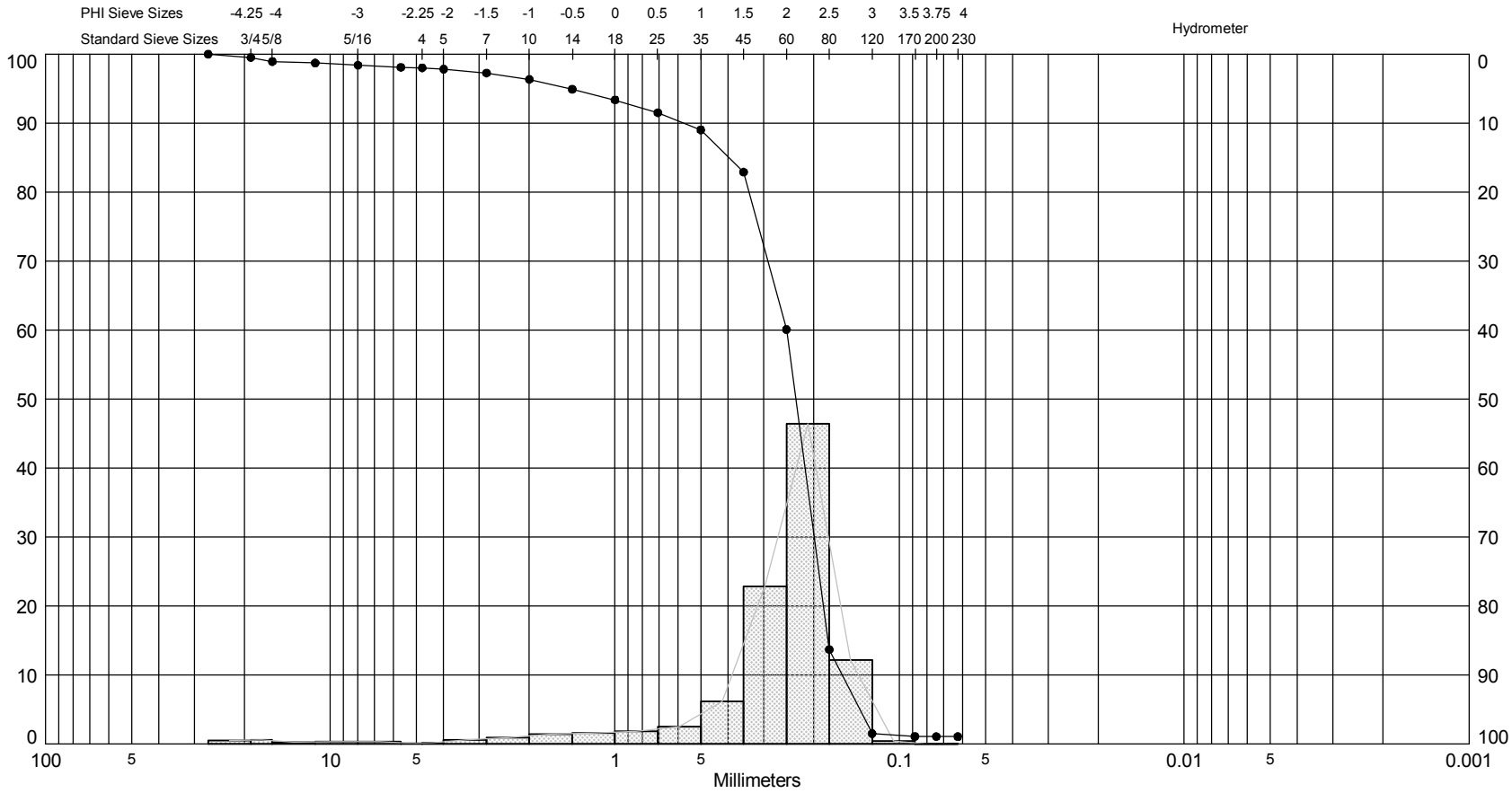
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,388,474
Northing (Y, ft):	201,638
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-17 Comp.	—●—	-3.0	SW	#200 - 1.06 #230 - 1.05		12	2.11	1.8	-3.11	14.56	1.13

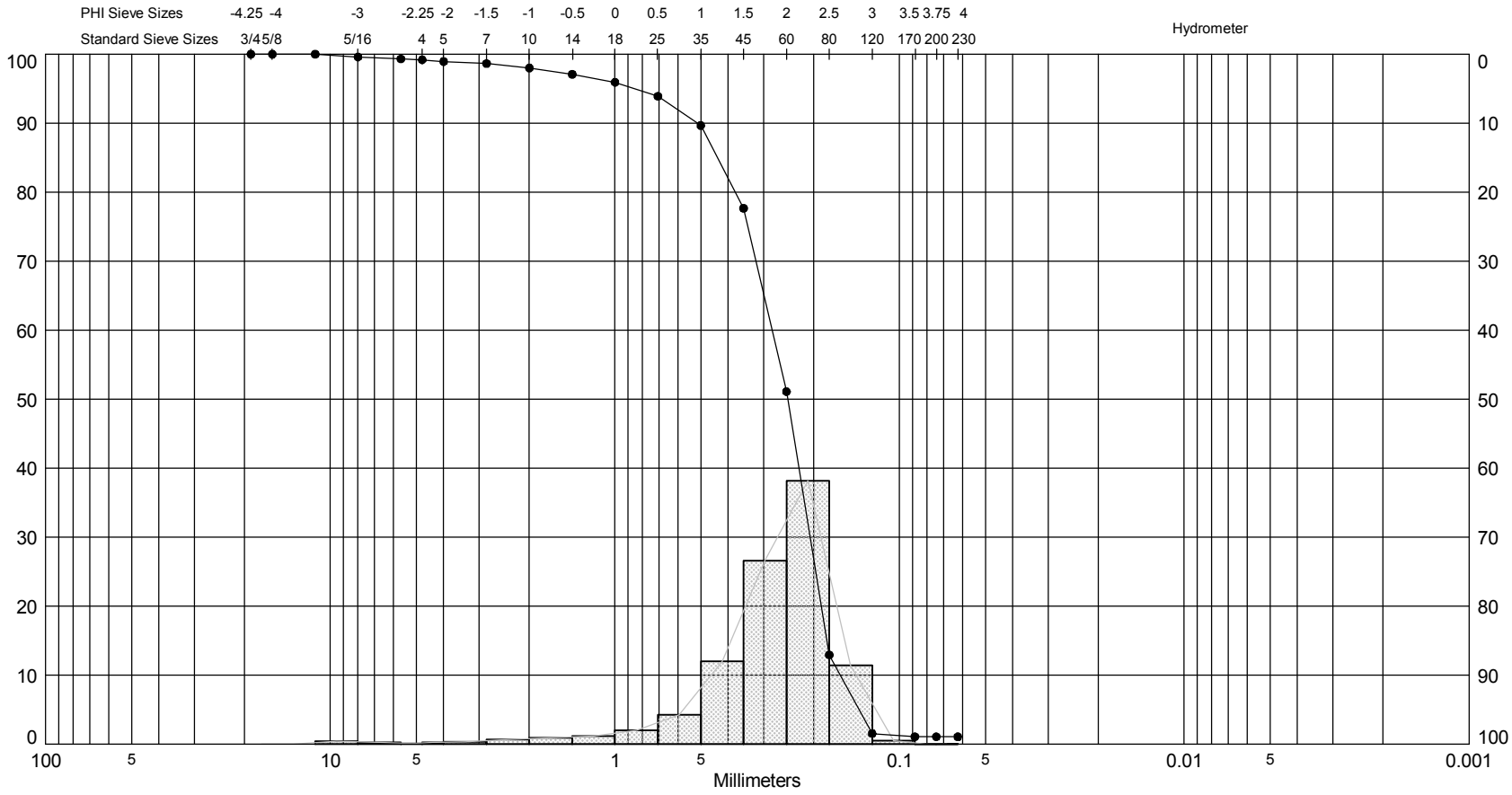
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,387,728
Northing (Y, ft):	201,394
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-07-18 Comp.	—●—	-3.0	SW	#200 - 1.06 #230 - 1.05		11	2.01	1.81	-2.46	11.91	0.87

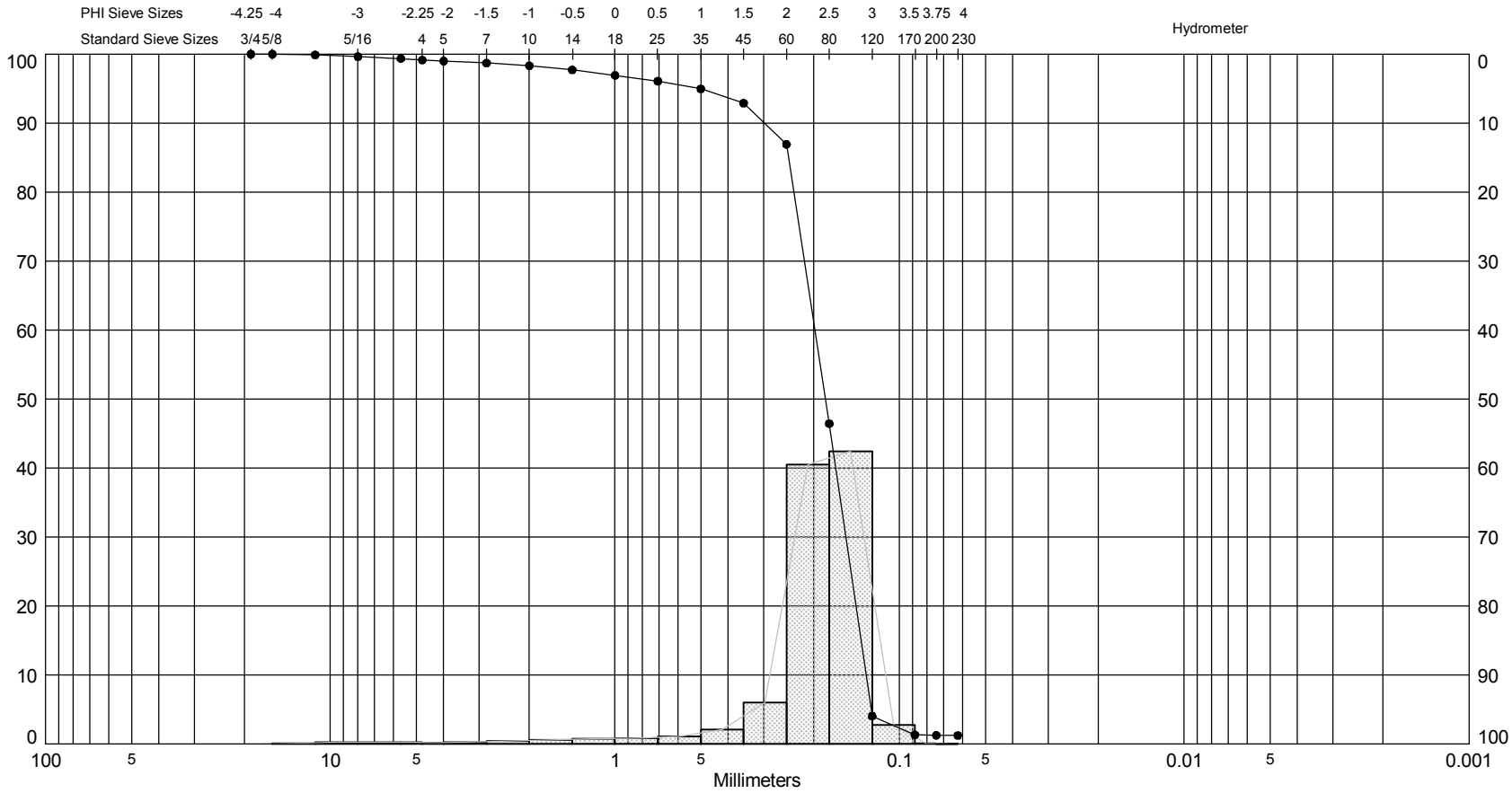
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,387,894
Northing (Y, ft):	201,815
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-03 Comp.	—●—	-3.6	SP	#200 - 1.24 #230 - 1.21		8	2.46	2.29	-3.71	20.49	0.83

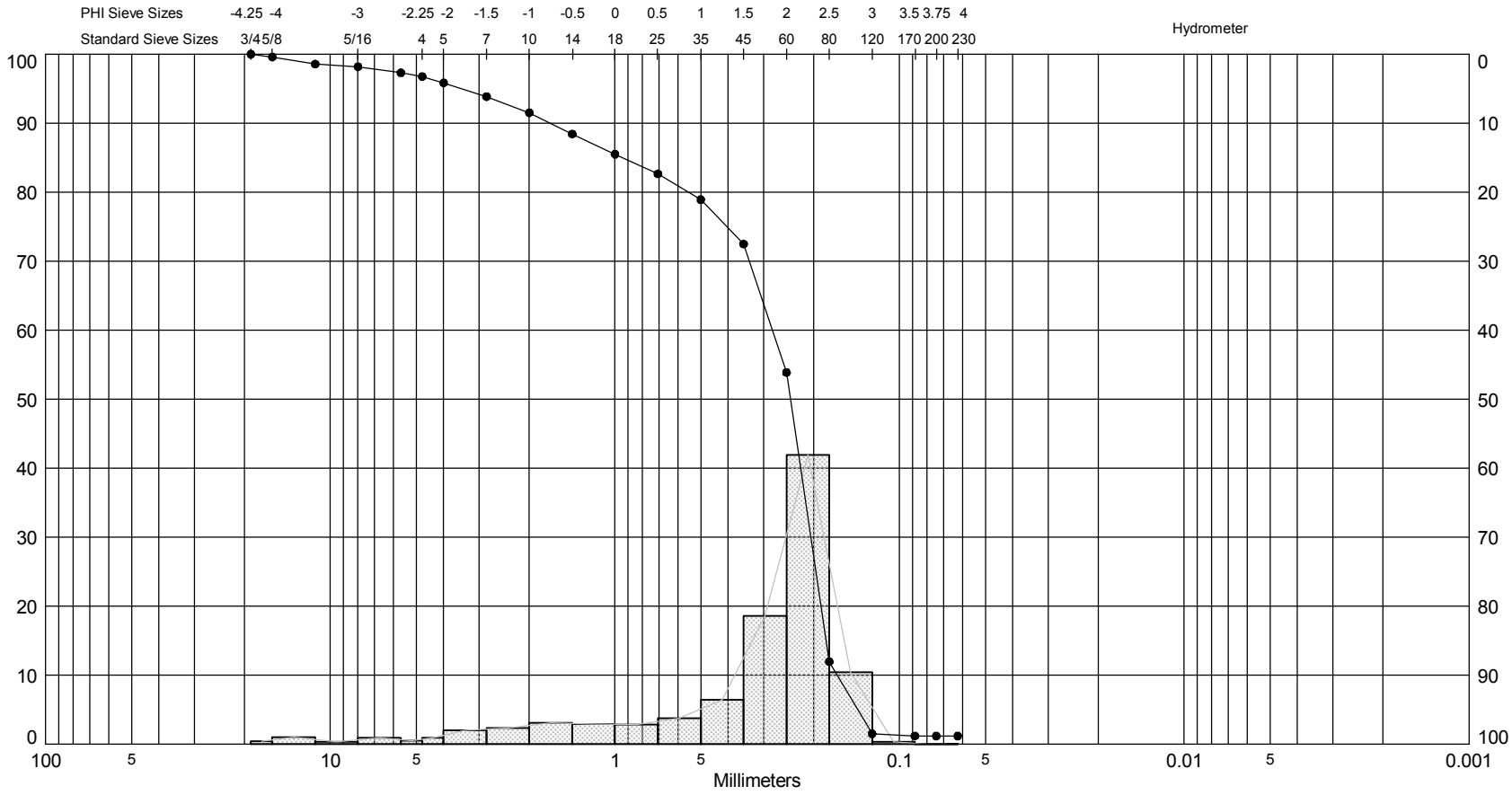
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	09-08-09
Analyzed By:	KD
Easting (X, ft):	2,387,390
Northing (Y, ft):	201,128
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-04 Comp.	—●—	-3.0	SW	#200 - 1.17 #230 - 1.16		22	2.05	1.48	-1.88	6.09	1.42

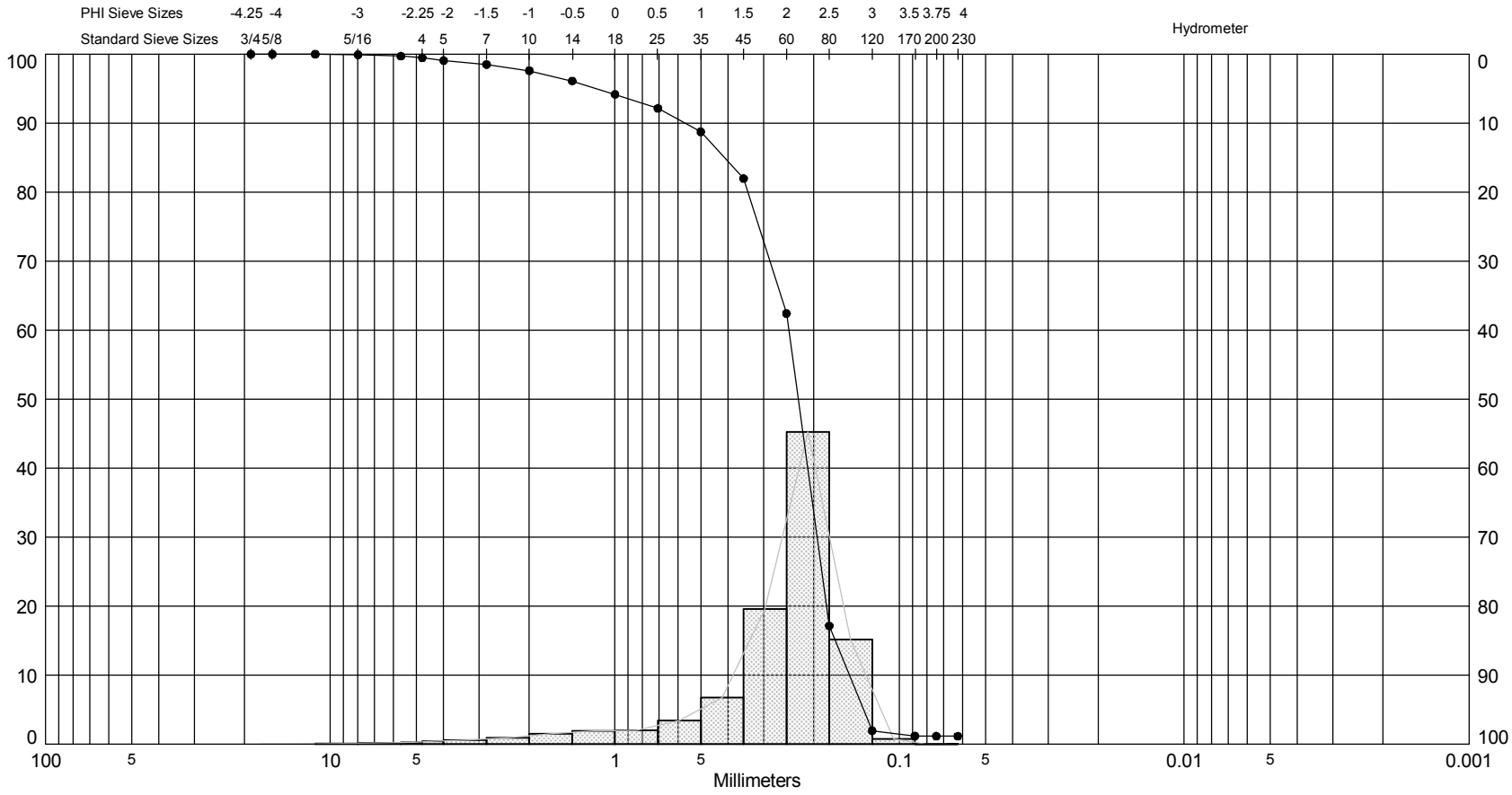
Comments: Composite data. Average dry Munsell Value is 7.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	10-30-09
Analyzed By:	KD
Easting (X, ft):	2,388,485
Northing (Y, ft):	202,080
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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fax (561) 391-9116

SIEVE ANALYSIS FIGURE_EIGHT_ALTERNATIVE_5.GPJ JPBRAZIL.GDT 3/11/10



Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-05 Comp.	—●—	-2.0	SW	#200 - 1.14 #230 - 1.13		11	2.14	1.88	-2.27	9.16	0.93

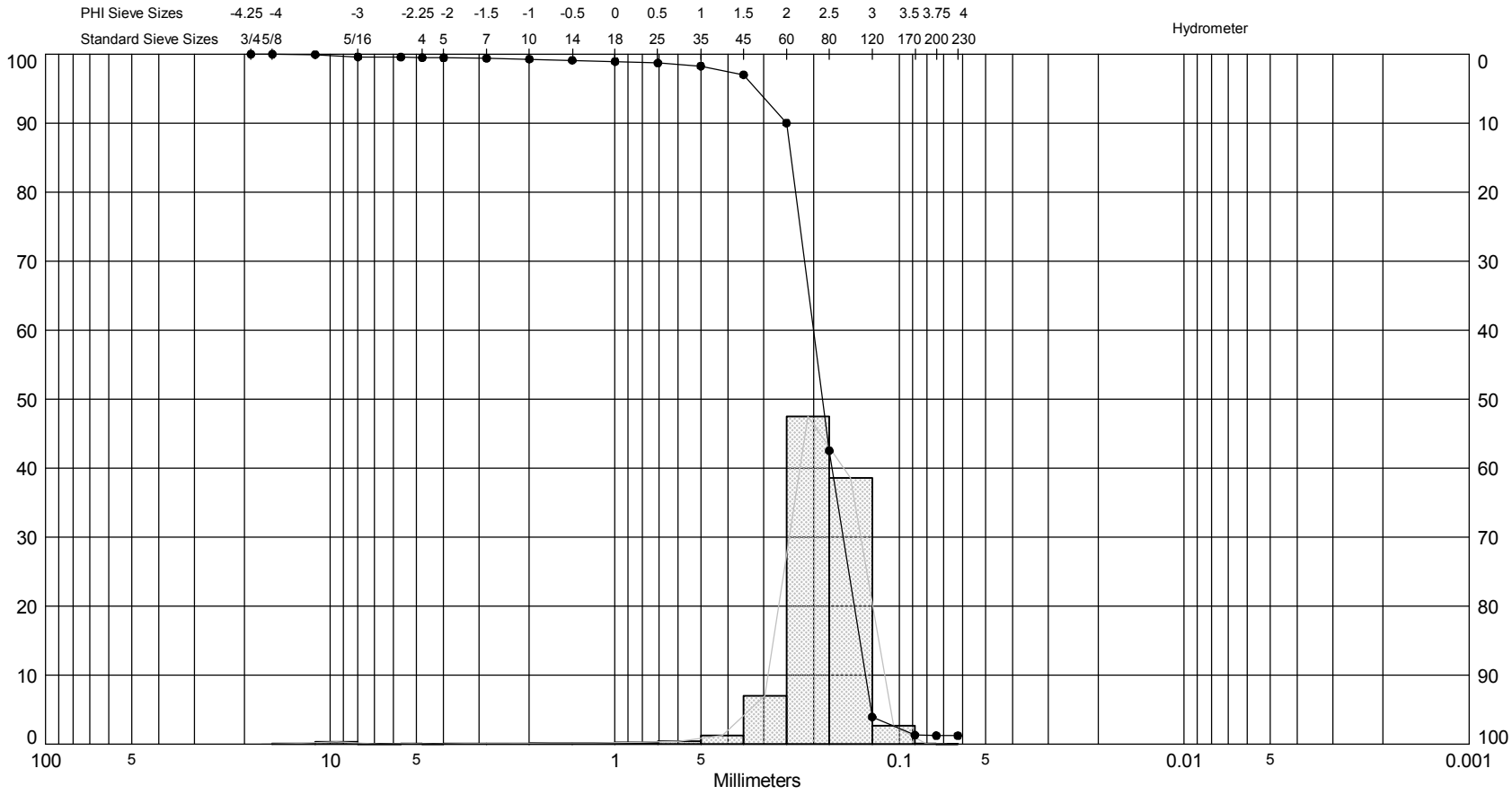
Comments: Composite data. Average dry Munsell Value is 8.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,388,173
Northing (Y, ft):	201,385
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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Sample	Symbol	Elev. (ft)	USCS	% Fines	% Organics	% Carbonates	Median	Mean	Skew	Kurt	Sort
FEVC-08-06 Comp.	—●—	-1.1	SP	#200 - 1.22 #230 - 1.21		4	2.42	2.37	-4.97	42.23	0.6

Comments: Composite data. Average dry Munsell Value is 8.

Depths and elevations based on measured values

Sample Information	
Project Name:	Figure Eight Alternative 5
Analysis Date:	08-28-09
Analyzed By:	KD
Easting (X, ft):	2,386,618
Northing (Y, ft):	200,973
Horizontal System:	NAD 1983
Vertical System:	NAVD 88

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