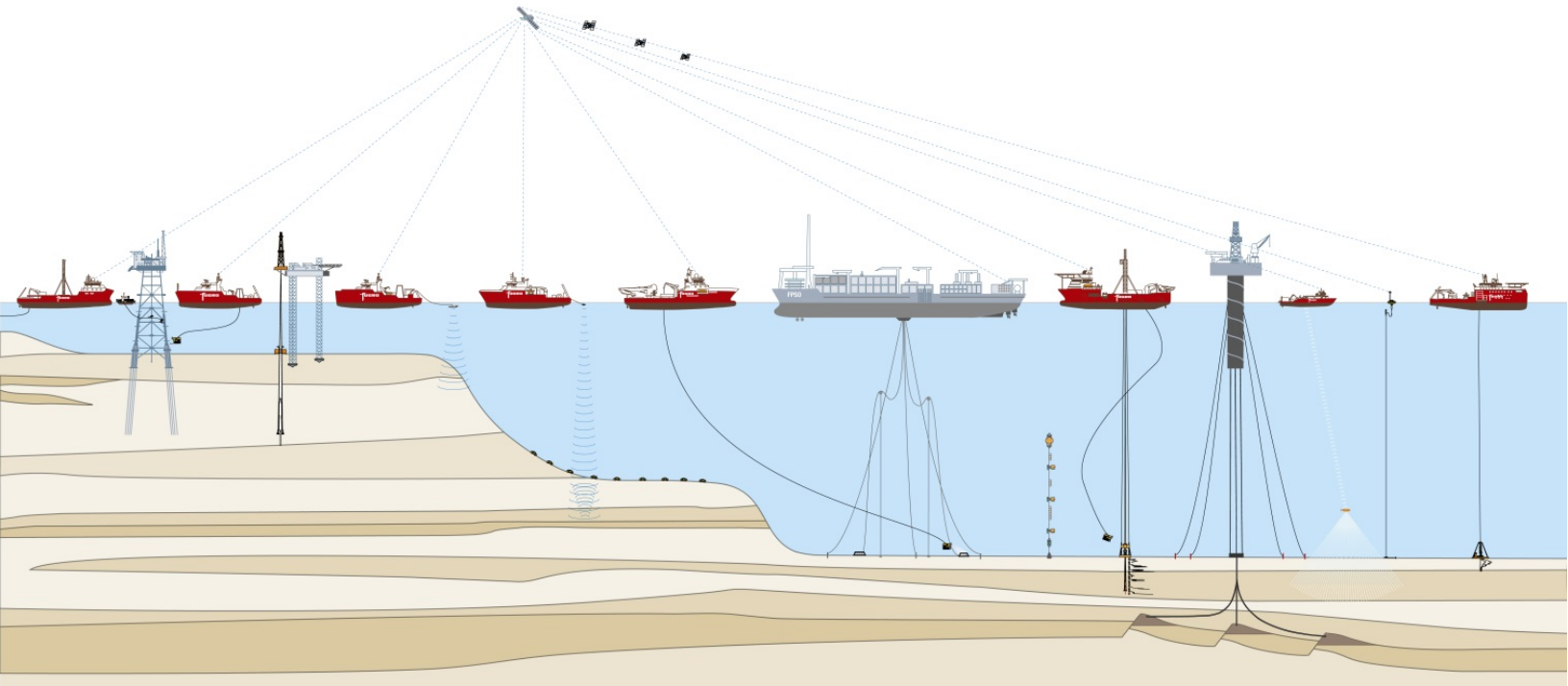
FUGRO

Geotechnical Data Report
South Fork Wind Farm and Export Cable
South Fork Wind Farm COP Survey
Offshore NY/RI/MA, Atlantic OCS

April 03, 2019
Fugro Report No.: 02.18031431(01)

Deepwater Wind South Fork, LLC

South Fork Wind Farm



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Prepared for: Deepwater Wind South Fork, LLC
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Providence, Rhode Island 02903

South Fork Wind Farm

1	Preliminary for Client Review	MDG/WRM	PP	PP	03 April 2019
Issue	**Geotechnical Data Report Status**	**Prepared**	**Checked**	**Approved**	**Date**

Fugro USA Marine, Inc.
101 West Main Street, Suite 350
Norfolk, VA

Report No.: 02.18031431
Date: April 03, 2019

Deepwater Wind South Fork, LLC
56 Exchange Terrace Suite 300
Providence, Rhode Island 02903

Attention: Bob Billington, Project Director

Geotechnical Data Report
South Fork Wind Farm and Export Cable
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Offshore NY/RI/MA, Atlantic OCS

Fugro USA Marine, Inc. (Fugro) is pleased to present this Geotechnical Data Report for the proposed South Fork Wind Farm (SFWF) and South Fork Export Cable (SFEC) project. The proposed SFWF is planned to be in Rhode Island Sound on the federally-administered Atlantic Outer Continental Shelf (OCS) and is being developed by Deepwater Wind South Fork, LLC within OCS Lease A-0486. In October 2018, Deepwater Wind South Fork, LLC was acquired by Ørsted. The U.S. Department of Interior's Bureau of Ocean Energy Management (BOEM) provides regulatory oversight for renewable energy developments on the OCS. The SFWF is an offshore wind farm that will export power to Long Island, New York using the SFEC.

Fugro's geotechnical data is based on the results of the shallow geotechnical ground investigation. The geotechnical survey was conducted in two phases. The first phase of the geotechnical survey was conducted from October to December 2017 and the subsequent laboratory test program. The ground investigation included the advancement of seabed cone penetration test (CPT) soundings at 35 locations, the collection of vibracores at 80 locations, and grab samples at 19 locations.

The second phase was conducted from January to March 2019 and the subsequent laboratory test program. The ground investigation included the advancement of seabed cone penetration tests at 9 locations, and the collection of vibracores at 43 locations, including cultural cores to support an Archaeological Resource Study.

For both phases laboratory testing was performed on representative samples in the wind farm and export cable routes to classify soil types per the Unified Soil Classification System (USCS) as well as mechanical and thermal properties of the soil. During the first phase the samples collected within the NY State Waters were evaluated against the New York State Department of Environmental Conservation's "Sediment Quality Thresholds for in-water/riparian placement in the Technical Guidance for Screening Contaminated Sediments" (NYSDEC-DFWMR 1999). The cultural core samples collected during both phases were delivered to the facilities of Gray and Pape in Providence, Rhode Island.

The information presented herein was developed to support the preparation of a Construction and Operations Plan (COP) pursuant to Title 30 of the Code of Federal Regulations Part 585 (CFR 585).

Fugro's services provided as described in this report were authorized by Task Order No. 2 (for phase one of the work) dated July 17, 2017 issued under the Services Agreement dated February 27, 2017. The second phase of work completed in late 2018 and early 2019 was authorized by Task Order No. 4, signed and dated on August 7, 2018. This report supersedes the previous Geotechnical Data Report, Fugro Document 02.17021080 dated January 31, 2018. We appreciate the opportunity to be of service to you on this project. Please do not hesitate to contact us if you have any questions or if we can be of further assistance.

Regards,
Fugro USA Marine, Inc.

Manuel De Gracia, MSc
Project Engineer

William R. Mack, P.E.
Supervising Engineer

Proserpine Peralta, PhD.
Deputy Engineering Manager

Distribution: One Final PDF electronic copy to Mr. Robert Billington and Ms. Melanie Gearon

CONTENTS

APPENDICES

TABLES IN THE MAIN TEXT

FIGURES FOLLOWING THE MAIN TEXT

CHARTS

1. INTRODUCTION

1.1 Purpose and Scope

Deepwater Wind South Fork, LLC (DWSF) is proposing to develop the South Fork Wind Farm (SFWF) project, an offshore wind energy project within the Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS-A 0486) (the Lease) interconnecting with the Long Island Power Authority transmission system on Long Island, New York. The project includes plans for installing the South Fork Export Cable (SFEC) that will be used to export power from the wind farm to New York.

Fugro USA Marine, Inc. (Fugro) conducted the geotechnical survey and prepared this report that describes the shallow geotechnical survey and laboratory testing for the proposed SFWF and SFEC areas based on the integration of the two phases of geotechnical programs conducted in 2017 and 2019.

The shallow geotechnical survey included explorations comprised of vibracores, cone penetration testing (CPT), and grab sampling to collect soil samples and perform in situ testing. The survey and information presented herein, are developed to support the preparation of a Construction and Operations Plan (COP) in pursuant to Title 30 of the Code of Federal Regulations Part 585 (CFR 585). The referenced geophysical survey, data evaluation, and reporting were conducted in general accordance with:

- Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information Pursuant to 30 CFR Part 585, prepared by the Bureau of Ocean Energy Management (BOEM) July 2015.
- Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585, prepared by BOEM July 2015 and March 2017.
- Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf prepared by BOEM November 2013.
- Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plan (COP), Version 3.0, prepared by BOEM April 2016.

1.2 Proposed South Fork Wind Farm

The proposed SFWF is located approximately 31 km southeast of Block Island, Rhode Island in Rhode Island Sound on the Atlantic Outer Continental Shelf (OCS). Currently the SFWF will include up to 15 wind turbine generators (WTG), an offshore substation (OSS), and an inter-array cable network. Monopile foundations are being considered for the WTGs.

The area surveyed for the SFWF is approximately 12-km by 7-km in size, comprises approximately 7,600 hectares, and covers portions of OCS Blocks 6965, 6966, 7015, and 7016 in the Providence (NK19-07) protraction area (Figures 1.1-1 through 1.1-3). The area surveyed is larger than the planned WTG footprint in order to encompass locations of potential seafloor disturbance associated with future SFWF construction and installation activities. The approximate bounding coordinates of the SFWF survey area are:

- Northwest Corner: N4,554,413, E315,878 (Latitude 41.120147 degrees, Longitude -71.193197 degrees)
- Northeast Corner: N4,553,726, E327,419 (Latitude 41.116500 degrees, Longitude -71.055622 degrees)
- Southeast Corner: N4,548,144, E326,709 (Latitude 41.066098 degrees, Longitude -71.062487 degrees)
- Southwest Corner: N4,548,808, E315,412 (Latitude 41.069595 degrees, Longitude -71.197052 degrees)
- Northing (N) and Easting (E) coordinates reference Universal Transverse Mercator (UTM), Zone 19 north, North American Datum 1983 (NAD83) and are in meters. Latitude and longitude coordinates reference NAD83.

Measured water depths in the surveyed SFWF area are between approximately 27 and 45 meters referenced to the mean lower low water (MLLW) datum.

1.3 Proposed South Fork Export Cable Corridor

The SFEC is planned to connect from an OSS in the SFWF to the preferred landfall on Long Island near Beach Lane, or possibly an alternate landfall location at Hither Hills (Figures 1.1-1 through 1.1-3). Currently the cable is planned to be installed to a nominal depth of up to 2 meters below the seafloor (BSF) using a trenching method. Cable installation at the shore crossing is anticipated to use a horizontally directional drilled (HDD) method to install the cable from a land-side entry point, pass beneath the shoreline and surf zone, and exit at the seafloor where the water depth is approximately 10 meters. The planned length of the SFEC and end point locations are:

- OSS End Point in the Wind Farm: N4,549,449, E317,489, UTM Zone 19N, NAD83, meters; (Longitude -71.1725 degrees, Latitude 41.0758 degrees NAD83)
- Preferred Landfall End Point: N4,535,837, E227,548, UTM Zone 19N, NAD83, meters; (Longitude -72.2358 degrees, Latitude 40.9283 degrees NAD83)
- Alternate Landfall End Point: N4,544,279, E247,151, UTM Zone 19N, NAD83, meters; (Longitude -72.0068 degrees, Latitude 41.0105 degrees NAD83)
- Total Length: 99 km
- Length in NY state water: 5.8 km
- Length in OCS water: 93.1 km

The SFEC corridor located on the OCS (outside of the 3-nautical mile limit) will be within OCS blocks, listed from east to west:

- 7013 to 7015, 7056 to 7063, and 7101 to 7106 of Providence protraction area (NK19-07)
- 6002 and 6003 of Block Island protraction area (NK19-10)
- 6031 to 6033 and 6080 to 6081 of New York protraction area (NK18-12)

With the exception of the shore approach segment, the water depth in the SFEC corridor is generally between 30 and 45 meters and the deepest water surveyed along the SFEC is approximately 48 meters (Re. MLLW). For the purposes of this report, the portion of the SFEC located within federal waters will be referred to as South Fork Export Cable OCS (SFECOCS) and the portion of the SFEC located within New York State waters will be referred to as South Fork Export Cable NYS (SFECNYS).

1.4 2017 Geophysical and Geotechnical Survey Overview

During 2017, DWSF commissioned a series of geophysical, geotechnical, archaeological, and benthic surveys to characterize site conditions in the proposed SFWF and SFEC development areas. Prior to performing the surveys, Fugro conducted a desktop study to build an initial understanding of the SFWF and SFEC site conditions (Fugro, 2017a). The desktop study provided an initial framework of the anticipated geologic and geotechnical conditions, geohazards, and natural and man-made siting constraints. This information was assimilated into a preliminary ground model and used to develop potential export cable routes and shore landing locations (Figure 1.1-3). Potential cable routes and shore landing locations developed during the desktop study phase also incorporated input from other project partners (e.g. environmental consultants) and input received by DWSF from stakeholder engagement meetings.

Information regarding the site conditions developed during the desktop study were used to select equipment and design the 2017 geophysical and geotechnical (G&G) survey. A G&G Survey Plan was prepared that described the planned survey and was submitted to BOEM for review on May 19, 2017 (Fugro, 2017b). A pre-survey meeting was conducted on April 18, 2017 at BOEM's office located in Silver Springs, Maryland to discuss the proposed G&G Survey Plan.

The G&G surveys were conducted to collect data used to characterize shallow hazards, geological conditions, geotechnical characteristics, and to provide data for marine archaeological resources assessments and benthic studies.

The geophysical survey was conducted first and occurred from July to November 2017. Geophysical survey data were reviewed by a Qualified Marine Archaeologist to confirm potential archaeological resources were not present at the planned geotechnical locations. Also, the geophysical data were reviewed and used to select geotechnical exploration locations that targeted specific geologic features and conditions in the study area.

A shallow geotechnical survey was conducted from October to December 2017 to investigate shallow subsurface conditions in the SFEC corridor and SFWF area. Geotechnical explorations included vibracores, CPTs, grab sampling, and sediment profile imaging/plan view imaging.

1.5 2017 Geotechnical Survey Overview

Fugro conducted a shallow geotechnical survey aboard the Megan T. Miller during the period October 21st through December 30th, 2017 in order to characterize the sub-bottom conditions within the Lease Area. It also addressed data collection necessary to support the marine archaeological and benthic assessments.

The methodology used in the G&G Survey was developed in accordance with BOEM regulations 30 CFR 585, Lease requirements, and BOEM survey guidelines.

Table 1.1: Overview of Geotechnical Operations

Equipment	No. of Locations	Start Date	End Date
3-m HPC (1st Period)	31	Saturday, October 21, 2017	Saturday, November 4, 2017
Seabed CPT Soundings	35	Thursday, November 9th, 2017	Tuesday, November 28th, 2017
Grab Samples[1]	19	Tuesday, November 14th, 2017	Thursday, November 16th, 2017
6-m HPC (1st Period)	21	Friday, December 1st, 2017	Tuesday, December 12th, 2017
HPC (2nd Period)	28	Friday, December 15, 2017	Saturday, December 30th, 2017
Notes: [1] Grab sampling was conducted from the Fugro Explorer, concurrent with Megan T. Miller activities.			

1.6 2018-2019 Geophysical and Geotechnical Survey Overview

During 2018, DWSF commissioned a second phase of geophysical, geotechnical, archaeological, and benthic surveys to characterize site conditions in the expanded work area in the eastern portion of the SFWF and SFEC development areas.

The G&G surveys were conducted to collect data in the expanded eastern portion of the maximum work area to extend the mapping of the geologic units first defined in the 2017 survey. The newly collected data was used to characterize shallow hazards, geological conditions, geotechnical characteristics, and to provide data for marine archaeological resources assessments and benthic studies. The geophysical survey was conducted from October 30 to December 31, 2018.

- High Resolution Geophysical (HRG) Survey including: multibeam hydrographic, side scan sonar, gradiometer, sub-bottom profiler, medium penetration sparker with a single-channel hydrophone array, and a medium penetration sparker with a multi-channel hydrophone array. Primary survey lines in the SFWF area were spaced 30 meters apart and included all systems except the sparker with multichannel hydrophone array. On every fifth primary line (spaced 150 meters apart) and all tie lines (spaced 500 meters apart), the sparker with multichannel hydrophone array and all other systems except the single channel hydrophone array.
- Additional vibracore sampling was conducted along the SFEC corridor and in the SFWF area at nominally proposed WTG locations. Vibracore exploration was used to investigate shallow stratigraphic conditions in support of cable route planning and design and characterize conditions in the SFWF area. Several vibracores were provided to a marine archaeologist to support an Archaeological Resource Study.
- Seabed CPT testing was conducted along the SFEC corridor and in the SFWF area at proposed WTG locations.

1.7 2019 Geotechnical Survey Overview

Fugro conducted a shallow geotechnical survey aboard the *M/V Gulfmark Conti* during the period January 11th through February 23rd, 2019 in order to characterize the sub-bottom conditions within the Lease Area. It also addressed data collection necessary to support the marine archaeological and benthic assessments. The methodology used in the G&G Survey was developed in accordance with BOEM regulations 30 CFR 585, Lease requirements, and BOEM survey guidelines.

Table 1.2: Overview of Geotechnical Operations

Equipment	No. of Locations	Start Date	End Date
6-m HPC (1st Period)	30	Friday, January 11th, 2019	Thursday, January 17th, 2019
6-m HPC (2nd Period)	13	Saturday, January 26th, 2019	Sunday, January 27th, 2019
Seabed CPT Soundings	9	Tuesday, February 22nd, 2019	Wednesday, February 23rd, 2019

1.8 2017-2019 Geophysical and Geotechnical Reporting

The G&G surveys and results from the surveys are presented in a series of reports. Those reports and general content include the following:

- Geophysical Survey and Shallow Hazards Report – Provides a summary of the geophysical data acquisition and processing methodologies and results from the shallow hazards assessment of the geophysical data.
- Geotechnical Data Report (GDR) (*this report*) – Provides a summary of the geotechnical exploration methodology for vibracore sampling, CPT, and grab sampling; vibracore and CPT logs, and results from the laboratory testing.
- Integrated Geophysical and Geotechnical Site Characterization Report – Provides a characterization of SFEC and SFWF site conditions based on the integration of the geotechnical and geophysical data.

1.9 Scope of Report

The scope of this report includes the following:

i. Description of the methods employed for the in-situ testing and sampling;
ii. Preliminary positioning and water depth measurements;
iii. Vibracore logs and descriptions of the soil strata;
iv. CPT sounding logs;
v. Results of laboratory testing.

1.10 Summary of Site Work

Geotechnical sampling and in situ testing during the G&G Survey were conducted using vibracores, grab sampling, and shallow seabed CPT testing. Table 1.3 and Table 1.4 provides a summary of the tests that were performed during the 2017 and 2019 geotechnical survey respectively.

Table 1.3: 2017 Summary of Geotechnical Sampling and In Situ Tests

Equipment	SFWF Array and Work Area	SFEC OCS Survey Corridor	SFEC NYS Survey Corridor
Water Depth (MLLW):	33 to 38 meters	26 to 47 meters	9 to 26 meters
Seabed CPT • Seascout 35 • 5 cm^2 cone • Pore pressure (u2) • 35-kN thrust max	16 locations, target up to 20 meters BSF	17 locations, target up to 10 meters BSF	2 locations, target up to 10 meters BSF
Vibracore • High Performance Corer (HPC)	16 Geotechnical cores and 10 Cultural cores; penetration up to 6 meters BSF	42 Geotechnical and/or Cultural cores; penetration up to 3 meters BSF	12 Environmental cores; penetration up to 3 meters BSF
Grab Sampler • Ponar Dredge	7 locations	12 locations	None taken

Table 1.4: 2019 Summary of Geotechnical Sampling and In Situ Tests

Equipment	SFWF Array and Work Area	SFEC OCS Survey Corridor
Water Depth (MLLW):	**33 to 38 meters**	**29 to 48 meters**
Seabed CPT • Seacalf Mk IV Continuous Drive System (CDS), • 15cm^2 cone • Pore pressure (u2) • 120--kN thrust max	9 locations, target up to 20 meters BSF	None taken
Vibracore • High Performance Corer (HPC)	9 Geotechnical cores and 20 Cultural cores; penetration up to 6 meters BSF	14 Cultural cores; penetration up to 6 meters BSF

1.11 Data Sources

The data used in this report were obtained during an offshore site investigation, including in situ tests and onshore laboratory testing.

1.12 Geodetic Data

The report uses the following horizontal and vertical data:

- Horizontal: NAD 1983 (UTM Zone 19N) in meters
- Vertical: MLLW in meters

1.13 Guidelines on Use of Report

Appendix A outlines the limitations of this report in terms of a range of considerations including, but not limited to, its purpose, its scope, the data on which it is based, its use by third parties, possible future changes in design procedures and possible changes in the conditions at the site with time. It represents a clear exposition of the constraints which apply to all reports issued by Fugro. It should be noted that these guidelines do not in any way supersede the terms and conditions of the contract between Fugro and Deepwater Wind South Fork, LLC.

2. GEOTECHNICAL EXPLORATION

The Geotechnical Survey was conducted in two phases. The first phase of the G&G Survey included the field work campaign for geotechnical sampling and in-situ testing at selected locations between October and December 2017. Geotechnical sampling and in situ testing during the 2017 field survey was conducted using vibracoring, grab sampling, and shallow seabed piezocone CPTs. Table 1.3 provides a summary of the geotechnical sampling and in situ testing equipment that were used. The second phase of the G&G included additional geotechnical sampling and in-situ testing at selected locations between January and February 2019.

Table 1.4 provides a summary of the geotechnical sampling and in situ testing equipment that were used during the second phase. The geophysical survey program was conducted in advance of the geotechnical investigation for both phases to (1) deconflict seafloor disturbance locations from potential marine archaeological resources, and (2) provide geophysical data that was used to select the geotechnical exploration locations along the export cable route and foundation locations.

Vibracores and CPT explorations provided different types of geotechnical data for use in cable route design. Vibracores provided physical samples that were tested in the laboratory to determine particle size distribution, Atterberg limit properties (e.g. plasticity), thermal conductivity, and specific gravity. Those types of data are commonly used to characterize the material types, support sediment fate studies resulting from jet trenching, erosional potential, and design the cable properties.

CPT data were used to estimate material density, strength, and soil behavior type. Those material parameters are commonly used as input to cable burial risk assessments, design cable installation techniques and production rates, and are superior data for providing ground truthing to seismic data. CPT tip resistance is a primary data source for interpolating material boundaries in between geotechnical explorations and defining where the cable installation will encounter different material types.

Geotechnical data will be integrated with the geophysical data to provide a comprehensive and coherent characterization of subsurface materials along the cable alignment.

2.1 2017 Geotechnical Exploration Vessels and Positioning

During the first phase of the CPT and vibracore sampling programs were conducted onboard the 30-meter (100 foot) *Megan T. Miller*. The *Megan T. Miller* has a 7.3-meter (24 foot) beam, and a 2.7-meter (9 foot) draft. The vessel was equipped with a hydraulic A-frame mounted aft for deploying and retrieving the HPC and SS35 units. The vessel can use up to a four-point anchoring system each with 8,160-kilogram (18,000 pound) line pull for station holding. The *James C. Miller* provided auxiliary support by providing the Protected Species Observers (PSOs) an observation platform during operations.

The grab sampling program was completed onboard the 170-foot survey vessel *Fugro Enterprise*, concurrent with the Inspire benthic camera survey. The benthic survey work is discussed in a separate report.

Positioning the vessels at each location was carried out with the aid of a differential Global Positioning System (DGPS). Fugro's Starfix 9.3 DGPS navigation software was installed onto the *Megan T. Miller* and offsets were measured to the center of the A-frame when extended outboard in deployment mode to capture the coordinates during testing or sampling.

2.2 2019 Geotechnical Exploration Vessels and Positioning

The second phase of the CPT and vibracore sampling programs were conducted onboard the *M/V Gulfmark Conti*, a 64-meter Dynamic Position Class 2 supply vessel. The *Conti* has a 16.5-meter beam, and a 2.4-meter draft. The vessel was equipped with a hydraulic A-frame mounted aft for deploying and retrieving the HPC and CDS units. PSO and Passive Acoustic Monitoring (PAM) personnel who provided environmental clearance during the deployment were onboard the *Conti*.

Positioning the vessels at each location was carried out with the aid of a DGPS. Fugro's Starfix NG DGPS navigation software was installed onto the *M/V Gulfmark Conti* and offsets were measured to the center of the A-frame when extended outboard in deployment mode to capture the coordinates during testing or sampling.

2.3 2017 Cone Penetration Tests

During the first phase a Seascout 35 seabed CPT system was used for CPTs. The Seascout 35 is a compact unit using a coiled rod system capable of advancing cones to a depth of 25 meters in certain soil conditions. It has 35 kN of thrust available and advances the cone at a nominal rate of penetration of 2 cm/sec. 5-cm^2 piezocones were used for this project.

When the vessel was stable on location, the Seascout 35 was deployed and lowered to the seabed. The equipment was operated remotely from the CPT control container on deck. During the lowering to and lifting from the seabed, piezo-cone data was recorded and viewed real-time.

The maximum penetration target depth for the CPTs located within SFWF and in the New York state waters was 25 meters. The maximum target depth was 10 meters for locations along the export cable route in Federal waters. If a minimum penetration depth of 5 meters for the CPTs located in the SFWF, or 3 meters along the export cable route was not achieved prior to refusal, then the unit would be offset to conduct a retest.

The results were monitored in real time using Fugro UNICAN data acquisition software from deck-to-deck. The data was processed and quality checked by the onboard geotechnical engineer using Fugro UNIPLOT data processing software. Preliminary CPT plots were produced offshore, and then the final QA/QC of the data and final plots where performed in the office. Table 2.1: presents a summary of the 2017 CPTs that were completed.

Table 2.1: 2017 Summary of Cone Penetration Tests

CPT Exploration Identification Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Reason for Termination
			Northing	Easting	Latitude	Longitude		
C-100	11/12/2017	-33.0	4,553,462	316,447	41.111721	-71.186134	0.5	Differential Pressure
C-100A	11/12/2017	-33.1	4,553,462	316,443	41.111719	-71.186186	0.6	Slope Threshold
C-100B	11/28/2017	-33.0	4,553,466	316,452	41.111757	-71.186081	1.4	Slope Threshold
C-101	11/12/2017	-34.8	4,553,354	317,792	41.111050	-71.170099	2.4	Differential Pressure
C-101A	11/12/2017	-34.9	4,553,355	317,798	41.111055	-71.170024	2.3	Differential Pressure
C-101B	11/28/2017	-34.9	4,553,356	317,796	41.111070	-71.170047	2.4	Slope Threshold
C-102	11/11/2017	-36.0	4,553,059	318,900	41.108643	-71.156824	3.1	Differential Pressure
C-102A	11/11/2017	-35.9	4,553,059	318,892	41.108638	-71.156916	3.2	Tip Threshold
C-102B	11/11/2017	-35.9	4,553,060	318,894	41.108648	-71.156900	3.3	Differential Pressure
C-103	11/11/2017	-37.8	4,553,108	320,669	41.109476	-71.135787	2.1	Differential Pressure
C-103A	11/11/2017	-37.8	4,553,103	320,669	41.109429	-71.135783	2.3	Differential Pressure
C-103B	11/11/2017	-37.7	4,553,107	320,664	41.109461	-71.135839	2.1	Differential Pressure
C-103C	11/28/2017	-37.8	4,553,110	320,673	41.109494	-71.135742	2.1	Differential Pressure
C-104	11/12/2017	-33.7	4,552,115	316,348	41.099568	-71.186912	7.1	Differential Pressure
C-105	11/12/2017	-34.2	4,551,932	317,636	41.098212	-71.171534	1	Slope Threshold
C-105A	11/12/2017	-34.2	4,551,925	317,635	41.098150	-71.171541	0.4	Tip Threshold
C-106	11/12/2017	-34.7	4,551,923	318,932	41.098425	-71.156107	2	Differential Pressure
C-106A	11/12/2017	-34.8	4,551,927	318,929	41.098455	-71.156147	0.9	Slope Threshold
C-106B	11/28/2017	-34.6	4,551,920	318,936	41.098397	-71.156063	4.2	Differential Pressure
C-107	11/12/2017	-34.9	4,551,802	320,601	41.097705	-71.136216	1.8	Slope Threshold
C-107A	11/12/2017	-34.9	4,551,801	320,596	41.097690	-71.136271	4.4	Differential Pressure
C-108	11/12/2017	-34.4	4,550,918	316,256	41.088773	-71.187649	0.5	Slope Threshold
C-108A	11/12/2017	-34.4	4,550,915	316,249	41.088749	-71.187734	5.6	Differential Pressure
C-109	11/13/2017	-34.4	4,550,852	317,428	41.088447	-71.173692	1	Slope Threshold
C-109A	11/13/2017	-34.4	4,550,852	317,428	41.088448	-71.173686	0.5	Slope Threshold

CPT Exploration Identification Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Reason for Termination
			Northing	Easting	Latitude	Longitude		
C-110	11/13/2017	-35.0	4,550,653	318,928	41.086989	-71.155782	0.8	Slope Threshold
C-110A	11/13/2017	-35.0	4,550,651	318,922	41.086967	-71.155853	0.8	Slope Threshold
C-110B	11/28/2017	-35.0	4,550,654	318,931	41.087002	-71.155743	0.9	Tip threshold
C-111	11/13/2017	-34.5	4,550,612	320,538	41.086977	-71.136611	0.5	Slope Threshold
C-111A	11/13/2017	-34.5	4,550,614	320,539	41.086995	-71.136602	3.2	Differential Pressure
C-112	11/13/2017	-35.4	4,549,572	316,144	41.076635	-71.188578	0.6	Slope Threshold
C-112A	11/13/2017	-35.4	4,549,569	316,146	41.076607	-71.188559	1.5	Differential Pressure
C-113B	11/28/2017	-35.4	4,549,447	317,489	41.075809	-71.172542	4.6	Slope Threshold
C-114	11/28/2017	-35.0	4,549,308	318,832	41.074861	-71.156533	2.6	Differential Pressure
C-115	11/28/2017	-35.2	4,549,146	320,437	41.073754	-71.137395	6	Differential Pressure
C-200	11/15/2017	-29.1	4,529,983	230,928	40.876735	-72.193194	7.3	Tip Threshold
C-201	11/15/2017	-31.4	4,531,376	237,477	40.891388	-72.116169	9.1	Tip Threshold
C-202	11/15/2017	-30.3	4,532,841	242,270	40.906087	-72.059963	1.5	Differential Pressure
C-202A	11/15/2017	-30.3	4,532,838	242,272	40.906063	-72.059935	1.6	Tip Threshold
C-203	11/9/2017	-29.1	4,536,067	251,646	40.938005	-71.950081	0	Tip Threshold
C-203A	11/9/2017	-29.2	4,536,063	251,640	40.937973	-71.950148	5.4	Differential Pressure
C-204	11/9/2017	-30.9	4,536,790	255,178	40.945578	-71.908463	0.4	Tip Threshold
C-204A	11/9/2017	-30.9	4,536,788	255,182	40.945564	-71.908407	6.3	Tip Threshold
C-205	11/9/2017	-33.1	4,538,371	260,358	40.961340	-71.847605	9.6	Differential Pressure
C-206	11/9/2017	-46.4	4,541,043	271,492	40.988578	-71.716436	5	Differential Pressure
C-207	11/24/2017	-44.3	4,543,074	275,742	41.008031	-71.666707	4.1	Slope Threshold
C-208	11/24/2017	-46.8	4,545,224	287,713	41.030582	-71.525227	10.1	Reached Target Depth
C-209	11/24/2017	-47.8	4,545,196	289,927	41.030899	-71.498906	10.1	Reached Target Depth
C-210	11/24/2017	-41.4	4,545,104	297,606	41.032022	-71.407615	6.8	Differential Pressure
C-211	11/24/2017	-50.0	4,545,078	299,635	41.032290	-71.383484	3	Slope Threshold
C-212	11/24/2017	-45.7	4,545,024	304,379	41.032956	-71.327085	1.4	Slope Threshold

CPT Exploration Identification Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Reason for Termination
			Northing	Easting	Latitude	Longitude		
C-212A	11/24/2017	-45.8	4,545,028	304,383	41.032990	-71.327033	1.4	Slope Threshold
C-213	11/25/2017	-43.1	4,545,575	307,156	41.038578	-71.294244	0.7	Differential Pressure
C-213A	11/25/2017	-43.0	4,545,580	307,160	41.038621	-71.294191	0.3	Differential Pressure
C-214	11/25/2017	-39.2	4,547,692	312,220	41.058813	-71.234688	2.8	Slope Threshold
C-215B	11/28/2017	-34.8	4,548,252	314,859	41.064456	-71.203476	0.8	Tip Threshold
C-216	11/13/2017	-35.6	4,549,426	316,913	41.075490	-71.179397	0.2	Tip Threshold
C-216A	11/13/2017	-35.5	4,549,429	316,916	41.075520	-71.179362	0	Tip Threshold
C-300	11/15/2017	-9.9	4,535,224	227,902	40.922874	-72.231347	10.8	Tip Threshold
C-301	11/16/2017	-10.0	4,543,612	247,506	41.004619	-72.002269	0.4	Tip Threshold
C-301A	11/16/2017	-9.9	4,543,616	247,507	41.004655	-72.002257	0.7	Tip Threshold

Notes:

[1] CPT sounding exploration number represents location in project area. 100-series (e.g. C-101), 200-series, and 300-series represents CPTs conducted in the SFWF area, federal waters on the OCS along the SFEC corridor, and New York state waters along the SFEC corridor, respectively.

2.4 2019 Cone Penetration Tests

During the second phase a Seacalf MkIV Continuous Drive System (CDS) was used for the CPTs. The CDS is a compact unit using a coiled rod system capable of advancing cones to a depth of 35 meters in certain soil conditions. It has 20 tonnes of thrust available and advances the cone at a nominal rate of penetration of 2 cm/sec. 15-cm^2 piezocones were used for this project.

When the vessel was stable on location, the CDS was deployed and lowered to the seabed. The equipment was operated remotely from the CPT control container on deck. During the lowering to and lifting from the seabed, piezo-cone data was recorded and viewed real-time.

The maximum penetration target depth for the CPTs located within SFWF was 20 meters. If a minimum penetration depth of 6 meters for the CPTs located in the SFWF was not achieved prior to refusal, then the unit would be offset to conduct a retest.

The results were monitored in real time using Fugro UNICAN data acquisition software and quality checked by the onboard geotechnical engineer, same as in the 2017 program. Table 2.2 presents a summary of the CPTs that were completed in 2019.

Table 2.2: 2019 Summary of Cone Penetration Tests

CPT Exploration Identification Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Reason for Termination
			Northing	Easting	Latitude	Longitude		
C-WTG-10	2/22/2019	-34.2	4,550,683.94	321,954.22	41.08794	-71.1198	6.98	Slope Threshold
C-WTG-11	2/22/2019	-33.2	4,550,667.85	323,051.59	41.08803	-71.1067	9.27	Slope Threshold
C-WTG-12	2/23/2019	-36.0	4,552,550.65	324,303.98	41.10525	-71.0924	4.19	Slope Threshold
C-WTG-12a	2/23/2019	-35.9	4,552,549.28	324,303.39	41.10524	-71.0924	4.09	Differential Pressure
C-WTG-13	2/22/2019	-34.4	4,548,837.45	324,334.42	41.07183	-71.0909	13.49	Slope Threshold
C-WTG-14	2/23/2019	-36.0	4,552,499.57	325,624.80	41.10508	-71.0766	13.91	Slope Threshold
C-WTG-15	2/22/2019	-33.3	4,548,856.11	325,657.79	41.07228	-71.0752	11.77	Tip Threshold
C-WTG-16	2/23/2019	-37.2	4,552,528.03	326,916.33	41.10561	-71.0613	19.43	Slope Threshold
C-WTG-17	2/23/2019	-34.6	4,550,666.01	326,908.81	41.08884	-71.0608	19.13	Differential Pressure
C-WTG-18	2/22/2019	-33.5	4,548,836.44	326,915.32	41.07237	-71.0602	6.46	Slope Threshold

Notes:
[1] CPT sounding exploration number represents location in project area. C-WTG-series (e.g. C-WTG-10), represents CPTs conducted in the SFWF area.

2.5 2017 Vibracore Sampling

The High Performance Corer (HPC) is a self-contained system that is launched from the A-frame of an exploration vessel. The HPC contains an electric motor and simple barrel design with a cutting shoe that holds a sample retainer and an 88.9-mm diameter clear plastic single-use liner for sample retention. For the first phase we used the barrel configuration in lengths of 6 and 3 meters. The 3-meter barrel was used to obtain the environmental, cultural and geotechnical cores along the cable route. The 6-meter barrel was used to obtain the cultural and geotechnical cores on the wind farm area.

In the event of recovery less than 2 meters for the cores along the cable route, and 3 meters in the SFWF, re-attempts were performed based on the recovery, the ground conditions, and performance of the equipment at each location. One way to improve our percentage of soil recovery was to increase the number of catchers (using sometimes 3) at the bottom of the shoe of the core barrel, where we introduce a plastic bag in between the catchers to help to create some friction to keep the soil sample inside the liner.

Retrieved soil cores were examined and logged by a geotechnical engineer. Immediately after the soil cores were retrieved from the core barrel, the cores were cut into segments not exceeding 1.5 meters, and the temperature was measured at the bottom of each core. After this process was completed, the cores were logged, and field tested (e.g. pocket penetrometer or Torvane test) if cohesive sediments were encountered, and the top and at the bottom of each segment sealed and labeled.

The geotechnical core samples that have been taken along the export cable route and within SFWF were processed in different dock facilities during our standby periods. The geotechnical soil samples were stored in buckets before being shipped to our laboratories in Houston, Texas, and Baton Rouge, Louisiana. The cultural core samples were stored onboard and were delivered to the facilities of Gray and Pape in Providence, Rhode Island when we were docked in Quonset, Rhode Island. Table 2.3 presents a summary of the vibracores that were collected in 2017.

Table 2.3: Summary of 2017 Vibracore Sampling

Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-100	12/3/2017	-33.0	4,553,465	316,449	41.111746	-71.186118	5.6	4.5	G	Reached Target Penetration
V-101	12/3/2017	-34.8	4,553,355	317,793	41.111054	-71.170090	5.9	3.6	G	Reached Target Penetration
V-102	12/3/2017	-36.0	4,553,060	318,901	41.108645	-71.156813	5.2	2.5	G	Reached Target Penetration
V-103	12/4/2017	-37.8	4,553,109	320,668	41.109480	-71.135794	1.7	0.8	G	Refusal
V-104	12/12/2017	-33.7	4,552,116	316,349	41.099582	-71.186900	1.3	1.2	G	Refusal
V-105	12/12/2017	-34.2	4,551,931	317,634	41.098201	-71.171558	2.2	1.0	G	Refusal
V-106	12/12/2017	-34.6	4,551,921	318,935	41.098407	-71.156076	2.1	1.4	G	Refusal
V-107	12/8/2017	-34.9	4,551,803	320,603	41.097711	-71.136184	2.1	1.3	G	Refusal
V-108	12/12/2017	-34.4	4,550,918	316,259	41.088773	-71.187612	1.2	0.6	G	Refusal
V-109	12/30/2017	-34.4	4,550,854	317,436	41.088469	-71.173598	1.5	0.7	G	Refusal
V-110	12/8/2017	-35.0	4,550,652	318,930	41.086979	-71.155757	3.4	2.7	G	Refusal
V-111	12/8/2017	-34.5	4,550,610	320,539	41.086961	-71.136599	2.9	1.4	G	Refusal
V-112	12/29/2017	-35.4	4,549,573	316,144	41.076640	-71.188584	1.1	0.6	G	Refusal
V-113	12/30/2017	-35.4	4,549,447	317,489	41.075806	-71.172550	3.8	0.7	G	Refusal
V-114	12/30/2017	-35	4,549,305	318,830	41.074830	-71.156551	1.2	1.0	G	Refusal
V-115	12/30/2017	-35.1	4,549,143	320,440	41.073727	-71.137350	1.1	0.4	G	Refusal
V-116	12/3/2017	-35.0	4,553,414	316,970	41.111405	-71.179907	2.7	1.9	C	Refusal
V-117	12/3/2017	-34.6	4,553,401	317,118	41.111316	-71.178131	5.9	3.4	C	Reached Target Penetration
V-118	12/3/2017	-34.6	4,553,351	317,669	41.110989	-71.171559	4.3	4.2	C	Refusal
V-119	12/3/2017	-36.1	4,553,213	319,213	41.110092	-71.153143	5.4	1.6	C	Reached Target Penetration
V-120	12/2/2017	-34.4	4,552,153	316,033	41.099842	-71.190674	5.3	5.8	C	Reached Target Penetration
V-121	12/2/2017	-35.0	4,551,941	318,420	41.098472	-71.162206	5.2	2.7	C	Reached Target Penetration

Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-122	12/2/2017	-34.4	4,550,931	316,009	41.088837	-71.190598	5.9	5.4	C	Reached Target Penetration
V-123	12/2/2017	-34.7	4,550,662	319,048	41.087094	-71.154359	5.7	5.4	C	Reached Target Penetration
V-124	12/2/2017	-35.5	4,549,478	317,316	41.076050	-71.174615	3.8	2.0	C	Refusal
V-125	12/1/2017	-34.8	4,549,441	317,812	41.075829	-71.168699	3.2	0.9	C	Refusal
V-200	10/28/2017	-30.2	4,529,647	231,764	40.873981	-72.183137	2.2	1.6	G	Refusal
V-201	10/28/2017	-31.3	4,530,483	234,571	40.882421	-72.150235	3	2.6	G	Reached Target Penetration
V-202	10/30/2017	-30.1	4,531,960	239,394	40.897256	-72.093685	3	1.5	G	Reached Target Penetration
V-203	11/1/2017	-31.3	4,532,427	240,923	40.901938	-72.075754	3	2.2	G	Reached Target Penetration
V-204	11/1/2017	-30.3	4,533,176	243,374	40.909447	-72.047012	3	2.2	G	Reached Target Penetration
V-205	11/1/2017	-28.5	4,533,785	245,355	40.915547	-72.023765	3	2.4	G	Reached Target Penetration
V-206	11/1/2017	-29.1	4,534,295	247,035	40.920651	-72.004050	3	3.0	G	Reached Target Penetration
V-207	11/1/2017	-30.0	4,535,027	249,424	40.927972	-71.976021	3	2.8	G	Reached Target Penetration
V-208	11/1/2017	-29.3	4,535,466	250,852	40.932363	-71.959257	3	2.9	G	Reached Target Penetration
V-209	11/1/2017	-26.1	4,538,432	250,238	40.958857	-71.967738	3	3.2	G	Reached Target Penetration
V-210	11/2/2017	-27.3	4,537,209	250,883	40.948052	-71.959586	3	3.4	G	Reached Target Penetration
V-211	11/2/2017	-30.0	4,536,197	253,244	40.939661	-71.931165	3	2.7	G	Reached Target Penetration
V-212	11/3/2017	-30.9	4,537,212	256,577	40.949794	-71.892024	2.4	2.1	G	Reached Target Penetration
V-213	11/3/2017	-30.9	4,537,669	258,054	40.954344	-71.874681	2.4	2.1	G	Reached Target Penetration
V-214	11/3/2017	-32.8	4,538,290	260,099	40.960534	-71.850652	2.7	3.0	C	Reached Target Penetration
V-215	11/3/2017	-33.3	4,538,710	261,483	40.964718	-71.834389	3	1.9	C	Reached Target Penetration
V-216	11/3/2017	-34.9	4,539,264	263,294	40.970234	-71.813107	1.9	1.6	G	Refusal

Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-217	11/3/2017	-38.2	4,538,935	265,037	40.967772	-71.792289	2.4	1.7	G	Reached Target Penetration
V-218	11/4/2017	-43.2	4,537,968	267,134	40.959673	-71.767029	2.5	1.4	G	Reached Target Penetration
V-219	12/15/2017	-47.0	4,539,740	269,826	40.976383	-71.735732	3.7	2.8	G	Reached Target Penetration
V-220	12/15/2017	-41.2	4,542,201	272,986	40.999410	-71.699123	2	0.8	G	Refusal
V-221	12/15/2017	-40.7	4,542,624	274,254	41.003570	-71.684211	1.2	0.6	G	Refusal
V-222	12/22/2017	-46.8	4,543,298	276,471	41.010248	-71.658121	3	1.6	C	Reached Target Penetration
V-223	12/22/2017	-44.0	4,543,791	278,075	41.015123	-71.639245	3	1.2	G	Reached Target Penetration
V-224	12/18/2017	-39.9	4,544,399	280,070	41.021131	-71.615756	1.5	1.3	G	Refusal
V-225	12/22/2017	-40.8	4,545,169	282,591	41.028740	-71.586075	1.9	0.8	G	Refusal
V-226	12/27/2017	-44.1	4,545,260	284,273	41.029998	-71.566126	2.2	0.9	G	Reached Target Penetration
V-227	12/18/2017	-44.8	4,545,248	285,698	41.030273	-71.549182	4.1	3.7	G	Reached Target Penetration
V-228	12/18/2017	-46.8	4,545,171	291,867	41.031175	-71.475839	2.2	1.5	G	Refusal
V-229	12/22/2017	-44.2	4,545,147	293,818	41.031457	-71.452646	2.7	1.8	G	Reached Target Penetration
V-230	12/18/2017	-43.9	4,545,126	295,582	41.031713	-71.431678	3	2.4	G	Reached Target Penetration
V-231	12/18/2017	-45.9	4,545,075	300,044	41.032358	-71.378623	2.3	1.5	C	Refusal
V-232	12/17/2017	-44.1	4,545,070	300,422	41.032406	-71.374129	3.3	3.2	GC	Reached Target Penetration
V-233	12/17/2017	-44.9	4,545,065	300,759	41.032448	-71.370123	2	1.8	C	Refusal
V-234	12/22/2017	-46.0	4,545,046	302,434	41.032686	-71.350210	2.7	1.8	G	Reached Target Penetration
V-235	12/21/2017	-42.6	4,545,006	305,932	41.033163	-71.308618	2.6	2.7	G	Reached Target Penetration
V-236	12/24/2017	-42.5	4,546,267	307,603	41.044906	-71.289150	3.4	3.2	G	Reached Target Penetration
V-237	10/21/2017	-40.1	4,547,744	309,543	41.058663	-71.266534	2.5	1.3	G	Reached Target Penetration
V-238	12/29/2017	-38.6	4,547,789	310,867	41.059372	-71.250803	0.9	0.5	G	Refusal

Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-239	10/21/2017	-38.1	4,547,889	313,767	41.060940	-71.216347	1.7	0.6	G	Refusal
V-240	10/21/2017	-34.2	4,548,320	314,969	41.065099	-71.202187	0.8	0.5	G	Refusal
V-241	12/29/2017	-34.4	4,549,254	316,398	41.073827	-71.185470	0.6	0.2	G	Refusal
V-300	10/23/2017	-10.0	4,535,221	227,901	40.922848	-72.231352	3	2.7	GE	Reached Target Penetration
V-301	10/23/2017	-9.9	4,535,248	227,943	40.923100	-72.230866	3	2.8	E	Reached Target Penetration
V-302	10/23/2017	-17	4,534,040	228,577	40.912444	-72.222817	3	3.0	GE	Reached Target Penetration
V-303	10/23/2017	-22.1	4,532,741	229,321	40.901011	-72.213436	3	2.9	GE	Reached Target Penetration
V-304	10/23/2017	-23.3	4,531,983	229,754	40.894333	-72.207971	3	2.9	E	Reached Target Penetration
V-305	10/23/2017	-25.5	4,531,179	230,215	40.887252	-72.202157	3	3.0	GE	Reached Target Penetration
V-306	10/21/2017	-10.0	4,543,606	247,506	41.004562	-72.002262	3	2.8	GE	Reached Target Penetration
V-307	10/21/2017	-9.9	4,543,633	247,549	41.004816	-72.001771	3	2.9	E	Reached Target Penetration
V-308	10/21/2017	-14.5	4,542,932	247,864	40.998607	-71.997745	3	3.0	E	Reached Target Penetration
V-309	10/22/2017	-17.2	4,542,347	248,173	40.993438	-71.993837	3	2.2	GE	Reached Target Penetration
V-310	10/22/2017	-21.4	4,540,745	249,017	40.979287	-71.983158	3	3.0	E	Reached Target Penetration
V-311	10/22/2017	-23.2	4,539,900	249,463	40.971829	-71.977524	3	2.4	GE	Reached Target Penetration

Notes:

[1] Vibracore exploration number represents location in project area.
100-series (e.g. V-101) represent vibracores conducted in the SFWF area,
200-series represent cores along the cable route in federal waters,
300-series represent cores along the SFEC corridor in New York state waters.

[2] Test type code is as follows:

C = Cultural vibracore for archaeological study

E = Environmental vibracore

G = Geotechnical vibracore

2.6 2019 Vibracore Sampling

During the 2019 phase of the SFWF campaign, the same HPC equipment from 2017 and described in Section 2.5 was used. For the 2019, phase the barrel length was kept at 6 meters.

In the event of recovery less than 3 meters for the cores along the cable route, and within SFWF, a maximum of two re-attempts were performed based on the recovery, the ground conditions, and performance of the equipment at each location.

Immediately after the soil cores were retrieved from the core barrel, the cores were cut into segments not exceeding one meter. After this process was completed, the cores were logged by a geotechnical engineer, field tested (e.g. pocket penetrometer or Torvane test) if cohesive sediments were encountered, and the top and at the bottom of each segment sealed and labeled.

The geotechnical soil samples were stored in wire baskets before being shipped to our laboratory in Houston, Texas. The cultural core samples were stored onboard until port call at Quonset, Rhode Island, and then delivered to the facility of Gray and Pape in Providence, Rhode Island.

Table 2.4 presents a summary of the vibracores that were collected in 2019.

Table 2.4: Summary of 2019 Vibracore Sampling

Vibracore Exploration Number	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-C-1	1/12/2019	-35.9	4,553,577	318,304	41.113169	-71.164071	5.2	5.8	C	Reached Target Penetration
V-C-2	1/12/2019	-36.4	4,553,573	318,406	41.113153	-71.162859	5.2	4.0	C	Reached Target Penetration
V-C-3	1/12/2019	-36.7	4,553,565	318,502	41.113103	-71.161706	2.3	0.5	C	Refusal
V-C-3a	1/12/2019	-36.7	4,553,563	318,501	41.113084	-71.161721	5.8	5.2	C	Reached Target Penetration
V-C-4	1/11/2019	-37.2	4,553,255	319,117	41.110454	-71.154301	4.0	3.8	C	Reached Target Penetration
V-C-5	1/11/2019	-35.9	4,553,184	319,305	41.10986	-71.152042	5.0	0.0	C	Sample liner could not be extracted, and sample was disposed
V-C-5a	1/11/2019	-35.9	4,553,184	319,305	41.109856	-71.152042	4.5	5.2	C	Reached Target Penetration
V-C-6	1/12/2019	-34.9	4,553,390	317,288	41.11126	-71.176114	5.2	6.2	C	Reached Target Penetration
V-C-7	1/12/2019	-35.5	4,553,378	317,454	41.111188	-71.174131	4.9	6.2	C	Reached Target Penetration
V-CF3-1	1/12/2019	-46.5	4,545,014	303,994	41.032769	-71.331657	2.3	5.6	C	Reached Target Penetration
V-CF3-2	1/12/2019	-46.1	4,545,008	304,167	41.032761	-71.329598	5.7	5.8	C	Reached Target Penetration
V-CF3-3	1/12/2019	-44.9	4,545,004	304,690	41.032845	-71.323377	5.8	6.3	C	Reached Target Penetration
V-CF5-1	1/13/2019	-42.9	4,545,071	299,172	41.032106	-71.388986	5.3	5.6	C	Reached Target Penetration
V-CF5-2	1/13/2019	-45.3	4,545,065	299,957	41.032251	-71.379655	3.7	3.3	C	Reached Target Penetration
V-CF5-3	1/13/2019	-44.7	4,545,052	300,625	41.032299	-71.371715	5.8	6.3	C	Reached Target Penetration
V-CF7-1	1/13/2019	-47.5	4,545,293	289,687	41.031712	-71.501794	5.3	5.7	C	Reached Target Penetration
V-CF7-2	1/13/2019	-47.6	4,545,287	290,052	41.031754	-71.497452	5.3	5.6	C	Reached Target Penetration
V-CF9-1	1/13/2019	-33.5	4,538,787	261,557	40.965436	-71.833532	4.8	4.9	C	Reached Target Penetration

Vibracore Exploration Number	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-CF9-2	1/13/2019	-33.4	4,545,014	303,994	40.966037	-71.830865	4.7	0.0	C	Sample liner could not be extracted, and sample was disposed.
V-CF9-2a	1/13/2019	-33.4	4,538,847	261,784	40.966036	-71.830867	4.8	5.8	C	Reached Target Penetration
V-CF11-1	1/15/2019	-31.0	4,537,142	256,210	40.949053	-71.896356	5.2	6.0	C	Reached Target Penetration
V-CF11-2	1/13/2019	-31.0	4,537,180	256,337	40.949439	-71.894857	5.2	5.2	C	Reached Target Penetration
V-CF13-1	1/15/2019	-29.5	4,535,382	250,656	40.931547	-71.961547	5.0	4.5	C	Reached Target Penetration
V-CF13-2	1/15/2019	-29.3	4,535,528	251,127	40.933001	-71.956015	5.3	0.0	C	Sample liner could not be extracted, and sample was disposed.
V-CF13-2a	1/15/2019	-29.3	4,535,528	251,127	40.933003	-71.956013	3.5	3.0	C	Reached Target Penetration
V-EX1	1/27/2019	-34.2	4,550,721	322,013	41.08828	-71.119096	5.3	3.8	C	Reached Target Penetration
V-EX2	1/26/2019	-33.8	4,550,708	322,189	41.088206	-71.117003	5.9	5.6	C	Reached Target Penetration
V-EX3	1/26/2019	-33.7	4,550,700	322,310	41.088159	-71.115554	3.7	4.5	C	Reached Target Penetration
V-EX4	1/26/2019	-33.4	4,550,623	323,388	41.087695	-71.102713	5.2	6.2	C	Reached Target Penetration
V-EX5	1/27/2019	-34.3	4,551,055	320,410	41.090937	-71.138272	5.5	5.0	C	Reached Target Penetration
V-EX6	1/27/2019	-34.4	4,551,049	320,475	41.090893	-71.137487	6.1	4.6	C	Reached Target Penetration
V-EX7	1/27/2019	-34.4	4,551,041	320,579	41.09085	-71.136259	6.1	5.4	C	Reached Target Penetration
V-EX8	1/26/2019	-35.2	4,553,036	327,076	41.110211	-71.059504	6.1	5.2	C	Reached Target Penetration
V-EX9	1/26/2019	-36.2	4,552,758	327,062	41.107712	-71.059595	6.1	4.4	C	Reached Target Penetration
V-EX10	1/26/2019	-37.6	4,552,177	327,021	41.102469	-71.059922	5.9	6.1	C	Reached Target Penetration
V-EX11	1/26/2019	-37.2	4,551,705	326,993	41.098215	-71.06012	5.1	5.6	C	Reached Target Penetration

Vibracore Exploration Number	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
V-EX12	1/26/2019	-36.2	4,551,239	326,957	41.094011	-71.060421	4.5	5.2	C	Reached Target Penetration
V-EX13	1/26/2019	-35.2	4,551,005	326,942	41.091899	-71.060529	3.9	4.0	C	Reached Target Penetration
V-WTG-10	1/15/2019	-34.2	4,550,681	321,956	41.08791	-71.119767	5.7	6.2	G	Reached Target Penetration
V-WTG-11	1/15/2019	-33.1	4,550,665	323,053	41.088002	-71.106707	4.7	4.9	G	Reached Target Penetration
V-WTG-12	1/16/2019	-36.0	4,552,548	324,302	41.105225	-71.092384	4.7	6.2	G	Reached Target Penetration
V-WTG-13	1/17/2019	-34.5	4,548,833	324,333	41.071792	-71.09095	4.3	4.5	G	Reached Target Penetration
V-WTG-14	1/16/2019	-36.0	4,552,496	325,625	41.105041	-71.076629	4.2	3.7	G	Reached Target Penetration
V-WTG-15	1/17/2019	-33.3	4,548,855	325,657	41.072278	-71.075208	1.8	0.2	G	Refusal
V-WTG-15a	1/17/2019	-33.3	4,548,854	325,656	41.072261	-71.075221	4.2	4.6	G	Reached Target Penetration
V-WTG-16	1/17/2019	-37.3	4,552,528	326,917	41.105606	-71.061251	5.9	5.1	G	Reached Target Penetration
V-WTG-17	1/17/2019	-34.6	4,550,665	326,905	41.088833	-71.060876	3.7	3.0	G	Reached Target Penetration
V-WTG-18	1/17/2019	-33.5	4,548,833	326,916	41.072341	-71.060225	3.3	4.2	G	Reached Target Penetration

Notes:

[1] Vibracore exploration number represents location in project area.
EX-series (e.g. EX-01) represent vibracores conducted in the SFWF area,
CF-series and C-series represent cores along the SFEC corridor in New York state waters.

[2] Test type code is as follows:

C = Cultural vibracore for archaeological study

G = Geotechnical vibracore

2.7 2017 Ambient Temperatures

The temperature of the air and water were measured coincident with core sampling to complement the thermal resistivity testing. Cores that were retrieved to deck were pulled from the barrel, the liner cut, and a metal probe was inserted into the soil core to measure the temperature before other logging. The temperature readings taken are listed in Table 2.5 below. While the effort was made to obtain the core readings as soon as possible after retrieval (within 15 minutes) a trend does exist between the core temperature and the corresponding air temperature measured.

Table 2.5: Summary of Ambient Temperature Readings

Vibracore Location	Sampling Date	Sampling Time	Ambient Air Temp (°C)	Ambient Water Temp (°C)	#1 Depth (m)	#1 Soil Temp (°C)	#2 Depth (m)	#2 Soil Temp (°C)
V-306	10/21/2017	12:13	19.8	18	2	22.3	3	20.1
V-307	10/21/2017	14:45	19	18	2	17.1	3	16.9
V-308	10/21/2017	18:06	18.6	18	2	16.4	3	16.2
V-309	10/22/2017	8:03	18.8	18	2	19.1	2.22	17.4
V-310	10/22/2017	11:37	20.3	19	2	17.3	2.95	16.1
V-311	10/22/2017	13:52	20.6	19	2	17.5	2.4	17.1
V-300	10/23/2017	7:40	18.5	19	2	18.1	2.72	18.8
V-301	10/23/2017	9:15	18.3	19	2	19.1	2.75	20.1
V-302	10/23/2017	11:15	22.7	19	2	18.7	3	16.9
V-303	10/23/2017	14:15	22.4	19	2	18	2.85	16.2
V-304	10/23/2017	15:45	19.3	19	2	17.9	2.86	16.1
V-305	10/23/2017	17:30	19.2	19	2	16.6	2.95	15.9
V-204	11/1/2017	8:14	18	18	1.5	17.1	2.2	17.3
V-205	11/1/2017	11:36	18	18	1.5	15.2	2.4	14.3
V-206	11/1/2017	13:55	18	18	1.5	16.3	2.96	15.3
V-207	11/1/2017	15:48	18	18	1.5	15.6	2.75	15.3
V-208	11/1/2017	17:37			1.5	15.3	2.85	15.3
V-209	11/1/2017	20:35	14.5	15	1.5	16.4	3.15	15.7
V-210	11/2/2017	15:30	14.5	15	1.65	17.2	3.35	17.2
V-211	11/2/2017	22:20		17	1.36	16.9	2.73	16.8
V-212	11/3/2017	1:04		16	1	16.7	2.13	16.4
V-213	11/3/2017	4:23		18	1.5	15.7	2.1	15.6
V-214	11/3/2017	8:32	17.9	18	1.5	20	2.95	17
V-215	11/3/2017	11:13		18	1	17.6	1.85	18.3
V-124	12/2/2017	7:50	7	13	1.3	13.9	1.91	
V-123	12/2/2017	10:21	6	13	1.5	16.2	3	15.1
V-122	12/2/2017	13:16	7	13	1.5	16.3	3	12.7

Vibracore Location	Sampling Date	Sampling Time	Ambient Air Temp (°C)	Ambient Water Temp (°C)	#1 Depth (m)	#1 Soil Temp (°C)	#2 Depth (m)	#2 Soil Temp (°C)
V-121	12/2/2017	17:20	7	13	2.07	14	2.67	
V-120	12/2/2017	20:42	7	13	1.21	15	2.7	15
V-119	12/3/2017	0:57	6	13	1.28	15	1.4	15
V-118	12/3/2017	5:36	7	13	1.03	10.9	2.53	10.4
V-117	12/3/2017	8:20	7	13	1.5	12.7	2.75	13.1
V-116	12/3/2017	11:02	7	13	1.25	13.1	1.25	
V-100	12/3/2017	13:44	7	13	0.45	13.6	1.95	13.7
V-101	12/3/2017	16:10	7	13	1.5	11.6	3	10.4
V-110	12/8/2017	13:43	4	13	0.65		2.28	9.6
V-111	12/8/2017	18:08	4	13	0.7	8.6	1.39	
V-107A	12/9/2017	0:48	4	13	0.6		1.29	
V-106	12/12/2017	0:48	4	13	0.82	7.4	1.39	
V-105	12/12/2017	3:24	4	13	0.43	7.4	1	
V-104	12/12/2017	6:26	7	13	0.48	10.6	1.17	
V-219	12/15/2017	9:34	-2	11	1.2	7	2.93	
V-232	12/17/2017	20:53	1	11	1	5.7	2.58	
V-231	12/18/2017	1:35	0	11	0.88	6.1	1.52	
V-230	12/18/2017	4:27	0	11	0.7	6	1.85	6
V-228	12/18/2017	7:25	5	12	0.45	9.5	1.01	8.9
V-227	12/18/2017	11:18	7	11	0.79	11	2.09	9
V-239	12/21/2017	10:48	0	12	0.28		0.55	
V-236	12/21/2017	19:35	0	12	1.5	6.5	2.65	4.5
V-235	12/22/2017	0:48	0	11	1.5	5.1	2.4	5.1
V-234	12/22/2017	4:08	0	11	1.2	4.6	1.75	
V-229	12/22/2017	7:40	4	11	1.17	12	1.17	12
V-222	12/22/2017	12:41	6	10	1.1	11.4	1.6	
V-223	12/22/2017	15:11	6	10	0.64	9	1.14	
V-109	12/30/2017	8:22	-4	9	0.72	11.9		
V-114	12/30/2017	13:53	-4	9	0.95	13.1		

2.8 2017 Grab Samples

During the first phase the grab samples were performed from the *Enterprise*, after the completion of the sediment-profile imaging data collection and the plan view underwater camera (PV) imaging data collection of the sediment water interface. Nineteen grab samples were collected using a Ponar Dredge Sampler with a sample area of 152 by 254 mm.

Table 2.6: Summary of Grab Sampling

Grab Sample Exploration Number	Completion Date	Seafloor Elevation (Re. MLLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Location
			Northing	Easting	Latitude	Longitude	
GS-2	11/16/2017	-35.22	4,553,285	317,310	41.110322	-71.175817	SFWF
GS-10	11/15/2017	-34.97	4,550,033	318,845	41.081392	-71.156590	SFWF
GS-11	11/15/2017	-35.49	4,549,496	319,642	41.076732	-71.146945	SFWF
GS-13	11/16/2017	-35.21	4,548,896	315,854	41.070482	-71.191829	SFWF
GS-19	11/15/2017	-34.79	4,552,297	318,101	41.101604	-71.166110	SFWF
GS-20	11/16/2017	-34.26	4,551,500	316,233	41.094005	-71.188102	SFWF
GS-21	11/16/2017	-33.67	4,552,714	316,366	41.104967	-71.186883	SFWF
GS-25	11/16/2017	-40.65	4,547,749	310,039	41.058819	-71.260637	Cable
GS-26	11/15/2017	-43.02	4,545,182	306,731	41.034938	-71.299174	Cable
GS-27	11/16/2017	-40.51	4,544,064	278,987	41.017823	-71.628508	Cable
GS-28	11/15/2017	-43.70	4,545,272	283,947	41.030024	-71.569998	Cable
GS-29	11/16/2017	-45.44	4,538,473	268,193	40.964514	-71.754652	Cable
GS-30	11/15/2017	-24.87	4,539,528	249,656	40.968539	-71.975080	Cable
GS-32	11/16/2017	-29.86	4,534,364	247,220	40.921336	-72.001890	Cable
GS-33	11/14/2017	-29.44	4,530,950	236,122	40.887117	-72.132047	Cable
GS-34	11/16/2017	-44.16	4,545,130	296,250	41.031915	-71.423740	Cable
GS-35	11/14/2017	-29.29	4,531,743	238,700	40.895075	-72.101830	Cable
GS-37	11/16/2017	-44.01	4,541,599	272,214	40.993775	-71.708063	Cable
GS-40	11/16/2017	-46.73	4,545,191	290,752	41.031067	-71.489097	Cable

3. SUMMARY OF SOIL CONDITIONS

The soil conditions are based on the seabed CPTs and the field descriptions of the soil core samples obtained from the HPC. A complete soil unit description for the SFWF and export cable route are provided in the separate Integrated G&G Site Characterization Report. The site conditions are separated into the SFWF area and the SFEC route.

3.1 South Fork Wind Farm (SFWF)

The proposed SFWF area is located on Cox Ledge within the Rhode Island Sound and contains water depths that range from approximately El. -27 to -45 meters MLLW. The area presents seafloor conditions with slopes that range between 1 to 3 degrees, and greater than 10 degrees along the margins of sand waves and 30 degrees along the flanks of seafloor boulders.

The seafloor across the SFWF area presents different types of features such as high boulder hazard areas, sand waves, and minor ripples. The areas on the SFWF with the fewest presence of boulders corresponds to the south-southeast to north-northwest trending paleo-channels, where mainly fine-grained sediments were encountered. The geophysical and geotechnical campaigns confirmed a high-density presence of boulders which are mainly located in the western and central portion of the SFWF, likely being a glacial moraine. The seafloor also includes fine-grained to coarse-grained sediments.

A layer of sand with gravels was encountered underneath the seafloor surface, with a nominal thickness between 1 to 2 meters with some interbedded fine soil content. Below this layer, a layer of low plasticity clays with sand and gravel was encountered.

3.2 South Fork Wind Farm Export Cable (SFEC)

The SFEC corridor contains water depths that range from approximately -9 meters MLLW near the south shore of Long Island, New York, to -50 meters MLLW within the northwest portion of Block 7062, Providence Area. Seafloor slopes generally vary from less than 1 degree to 3 degrees. Areas with seafloor slopes greater than 10 degrees generally occur along the margins of sand waves and can exceed 30 degrees along the flanks of seafloor boulders.

The eastern end of the cable route starting at the SFWF area until the bend in the route known as the ‘Z-Approach’ had a high proportion of gravel, cobbles and boulders on the upper surface, as represented by cores V-241 through V-231. Underneath fine-grained sands and clay was present.

The western part of the Z-Approach and westward along the cable route (from V-237 through C-206) was generally clean fine sand overlaying layers of either clayey sand or silty sand. Further west the gradation increases and generally includes various percentages of fine, medium, and coarse sand and gravel. Boulders are inferred to be present in the subsurface as on the cable route discharge in Hither Hills (early refusal in C-301), and on the bypassed isolated outcrops between V-219 through V-216.

4. LABORATORY ANALYSIS

Sediment samples and vibracores recovered during the G&G Survey were submitted for laboratory testing. The standard laboratory testing program is described in this section.

Vibracore samples were preserved in the field aboard the geotechnical survey vessel and tested at our onshore laboratory facilities in Houston, Texas, and in Baton Rouge, Louisiana, USA. Samples were transported to shore and then shipped by ground to the laboratory.

The laboratory test results reported herein are intended to provide preliminary data within the limitations of vibracore sampling methodology to characterize the soil properties. The following laboratory tests were performed:

Cohesionless samples

- Soil classification and description (ASTM D2487/D2488);
- Water (moisture) content (ASTM D2216);
- Particle size distribution:
  - sieve (ASTM D6913),
  - percent material passing a No. 200 sieve (ASTM D1140),
  - and hydrometer (ASTM D422);
- Particle density (ASTM D854);
- Thermal conductivity (ASTM D5334)

Cohesive samples

- Soil classification and description (ASTM D2487/D2488);
- Water (moisture) content (ASTM D2216);
- Unit weight or wet density measurements (ASTM D7263);
- Atterberg limits; liquid limit and plastic limit tests (ASTM D4318);
- Particle density (ASTM D854);
- Particle size distribution hydrometer (ASTM D422)
- Unconsolidated-Undrained (UU) triaxial Compression Test (ASTM D2850)
- Thermal conductivity (ASTM D5334)

Table 4.1 and Table 4.2 list the tests and quantity preformed on the vibracores along the export cable route and within the windfarm array, respectively. The summary of laboratory results and individual test results are presented in Appendices E, F, and G.

Table 4.1: Export Cable Vibracore and Grab Sample Standard Lab Testing Program

Test	Number of Tests from Vibracores	Number of Tests from Grab Samples	Total Number of Tests
Water content and visual classification	9	-	9
Unit weight	5	-	5
Atterberg limits	7	-	7
Sieve analysis	123	12	135
Passing no. 200 Sieve	6	-	6
Hydrometer analysis	52	12	64
Specific gravity	21	12	33
Minimum and maximum density	2	-	2
Thermal conductivity	13	-	13
UU triaxial	2	-	2

Table 4.2: SFWF Vibracore and Grab Sample Standard Lab Testing Program

Test	Number of Tests from Vibracores	Number of Tests from Grab Samples	Total Number of Tests
Water content and visual classification	72		72
Unit weight	12	-	12
Atterberg limits	9		9
Sieve analysis	78	7	85
Passing no. 200 Sieve	-	-	7
Hydrometer analysis	23	7	30
Specific gravity	24	7	31
Minimum and maximum density	1 (pending)	-	1 (pending)
Thermal conductivity	38	-	38
UU triaxial	8	-	8

4.1 Water Content

Water content, defined as the ratio of the mass of fluid to the mass of solids within a soil matrix, was performed in general accordance with ASTM D2216. The results are included on the “Summary of Laboratory Test Results” in Appendix E.1.

4.2 Grain Size Analysis

The grain size properties of selected samples were tested in general accordance with ASTM D422 to measure the gradational characteristics and fines contents of the encountered material. Typically, sieve analyses were performed on granular samples (sand and gravels), but they were also performed on selected samples of cohesive soils (i.e. sandy silt, clayey sand). Hydrometer analyses were also performed to determine the gradation of the finer portion of select samples. Individual test results are presented in Appendix E.2 and Appendix F.2 for vibracore and grab samples, respectively.

4.3 Specific Gravity

The specific gravity test was performed to determine the specific gravity of soil solids passing a 4.75-mm sieve by means of a water pycnometer (ASTM D854). The results are included on the "Summary of Laboratory Test Results" in Appendix E.1.

4.4 Atterberg Limits

Atterberg limits (liquid limit and plastic limit) were determined in accordance with ASTM D4318, and presented in Appendix E.3. Limits tests were generally assigned only to fine-grained samples or samples that exhibited plasticity.

4.5 Unit Weight

Unit Weight of the soils was determined in accordance with ASTM D7263. The results are included on the "Summary of Laboratory Test Results" in Appendix E.1.

4.6 Minimum and Maximum Density

Maximum and minimum dry unit weight tests were performed on selected cohesionless soil samples in accordance with ASTM D 4253 and 4254. The results are included on the "Summary of Laboratory Test Results" in Appendix E.1.

4.7 Undrained-Unconsolidated Triaxial

UU triaxial tests were performed in general accordance with ASTM D 2850. In this test, an undisturbed specimen is enclosed in a thin rubber membrane and subjected to a confining pressure approximately equal to the computed effective overburden pressure (or a limiting pressure of 140 pounds per square inch). The test specimen is not allowed to consolidate under the influence of this confining pressure prior to testing. The test specimen is loaded axially to failure at a constant rate of strain without permitting drainage from the specimen. The undrained shear strength of the fine-grained soil is equal to one-half the maximum deviator stress, or the deviator stress at approximately 15 percent strain, whichever came first. The results of the UU tests also are used as a basis for determining ε_{50} values. The triaxial test results are presented in Appendix E.4.

4.8 Thermal Conductivity

The thermal conductivity tests were performed in general accordance with ASTM D 5334. The determination of the thermal conductivity (λ) of the soil using a transient heat method used a needle probe having a large length to diameter ratio to simulate infinity conditions. The test was performed in intact and reconstituted soil specimens. For intact specimens a nominal 20-cm long section of the vibracore core sampler containing the intact soil was cut, and for the reconstituted soil specimens, the soil sample was compacted to the desired dry density and gravimetric water content in a plastic tube using the required compaction technique depending on the type of soil, to reach those soil properties. Thermal conductivity tests results representing the wind farm array contained in this report were performed on samples reconstituted to a loosened state and are summarized in Table 4.3.

Table 4.3 - Summary of Thermal Conductivity Tests (2019)

Location	Depth (m)	Thermal Conductivity (W/m·°K)	Test Unit Weight (kN/m³)	Test Moisture (%)
V-WTG-10	0.0	3.00	19.56	23.57
V-WTG-10	1.2	2.99	19.56	25.00
V-WTG-10	2.0	2.31	18.88	27.71
V-WTG-10	2.9	3.07	19.29	25.17
V-WTG-10	4.2	3.18	19.68	22.99
V-WTG-11	0.74	2.77	19.13	27.59
V-WTG-11	1.74	2.73	19.16	30.05
V-WTG-11	2.74	2.92	19.27	27.17
V-WTG-11	3.74	2.88	19.21	26.41
V-WTG-11	4.7	1.82	17.25	35.45
V-WTG-12	1.95	3.31	20.30	22.15
V-WTG-12	3.95	3.22	19.48	24.04
V-WTG-12	4.95	3.28	19.48	20.96
V-WTG-12	5.8	3.31	19.34	22.34
V-WTG-13	0.28	3.18	19.59	24.51
V-WTG-13	1.28	2.40	17.97	31.96
V-WTG-13	2.28	2.52	18.05	28.43
V-WTG-13	3.28	2.36	18.50	31.78
V-WTG-13	4.28	2.54	18.07	29.60
V-WTG-14	0.5	2.56	18.22	28.99
V-WTG-14	1.5	3.17	20.00	22.85
V-WTG-14	2.5	2.91	18.87	26.88
V-WTG-14	3.5	2.99	19.56	25.00
V-WTG-15a	1.3	1.47	16.04	44.92
V-WTG-15a	2.4	2.91	19.16	27.07
V-WTG-15a	3.3	1.56	15.61	43.83
V-WTG-15a	4.3	1.44	16.05	45.06
V-WTG-16	0.93	2.90	19.79	24.55
V-WTG-16	1.93	2.78	19.46	23.62
V-WTG-16	2.8	3.01	19.62	14.79
V-WTG-16	3.93	2.68	18.66	29.01
V-WTG-16	4.93	2.64	18.72	28.87
V-WTG-17	0.7	2.69	18.65	29.17
V-WTG-17	1.65	1.83	16.81	34.97
V-WTG-17	2.6	1.40	15.63	42.81
V-WTG-18	1.1	2.62	19.35	23.72
V-WTG-18	2.1	2.14	18.30	26.74
V-WTG-18	3.1	1.64	16.38	39.00

5. REFERENCES

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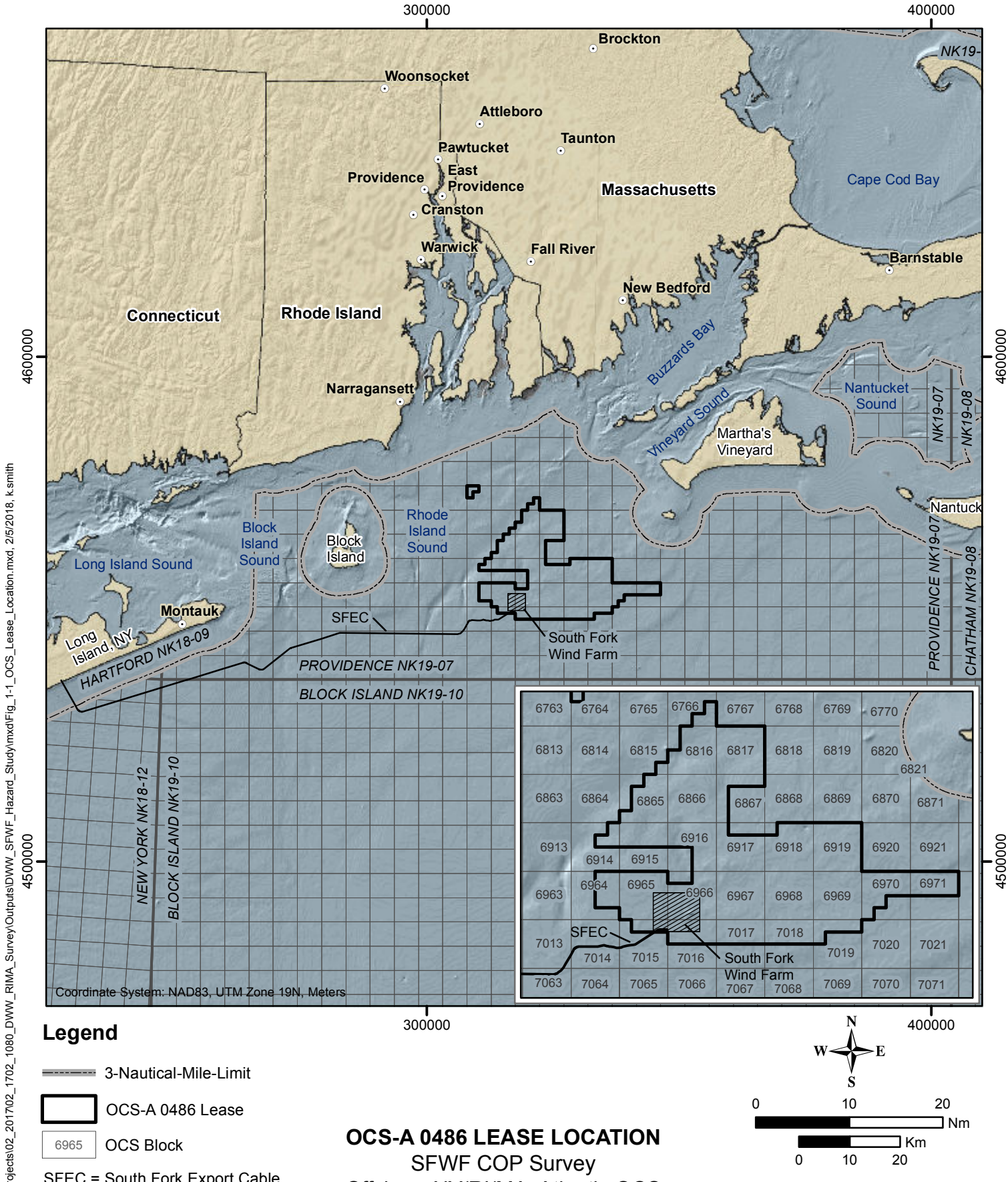
FIGURES



Legend

- 3-Nautical-Mile-Limit
- OCS-A 0486 Lease
- 6965 OCS Block
- SFEC = South Fork Export Cable

OCS-A 0486 LEASE LOCATION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

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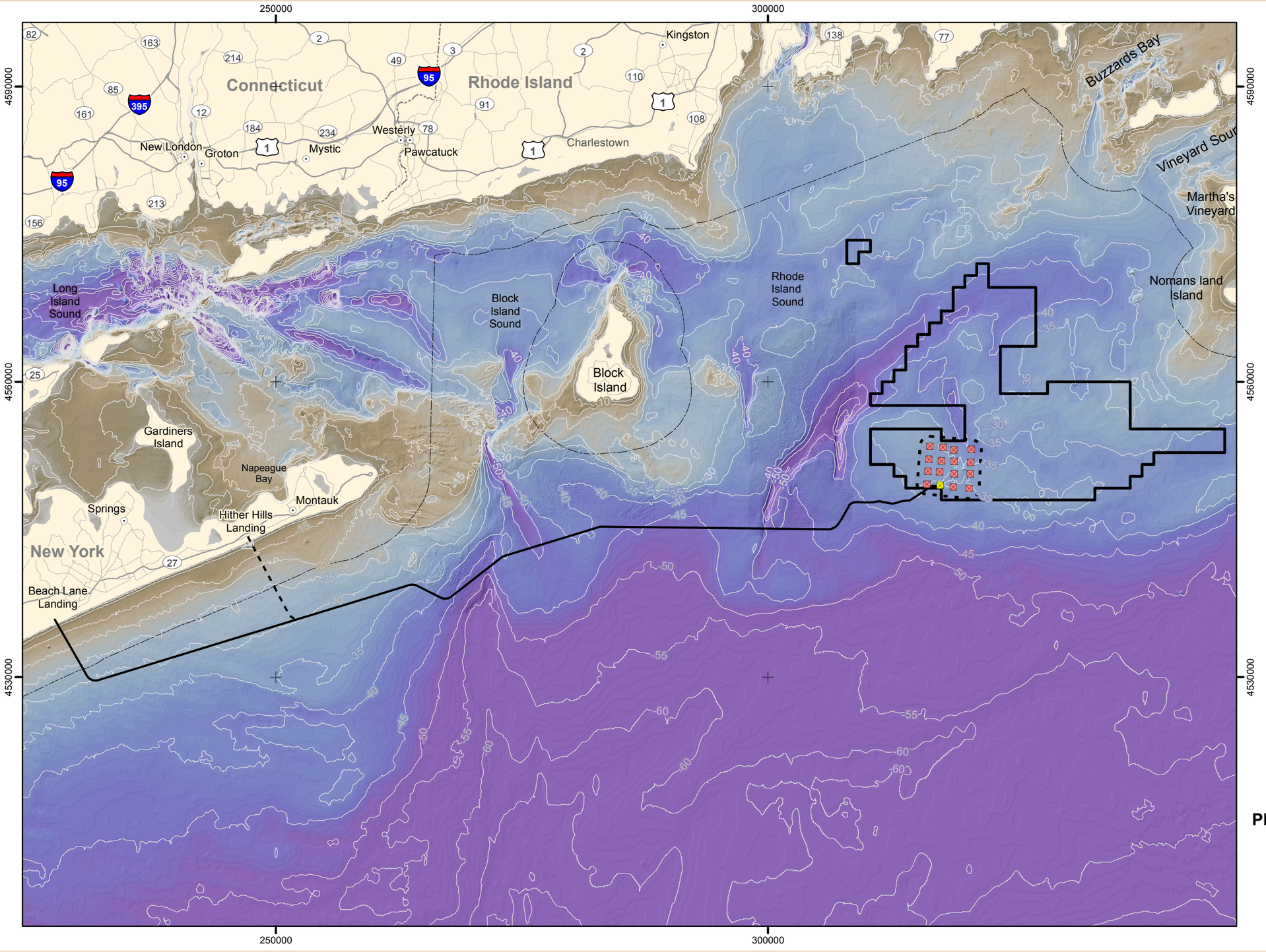

LEGEND

- Proposed Wind Turbine Generator
- Proposed Offshore Substation
- Survey Area
- Proposed South Fork Export Cable Route
- Proposed South Fork Export Cable Route Alternate Shore Landing
- OCS-A 0486 Lease Boundary
- Bathymetric Contour (Meters, Re. MLLW) Contour interval is 5 meters.
- 3 Nautical Mile Limit

Notes:

1. Coordinate Grid: NAD 1983, UTM Zone 19 North, Meters

N
W E
S

0 5 10 Nautical Miles

0 5 10 Kilometers

PROPOSED SOUTH FORK WIND FARM AND SOUTH FORK EXPORT CABLE ROUTE
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

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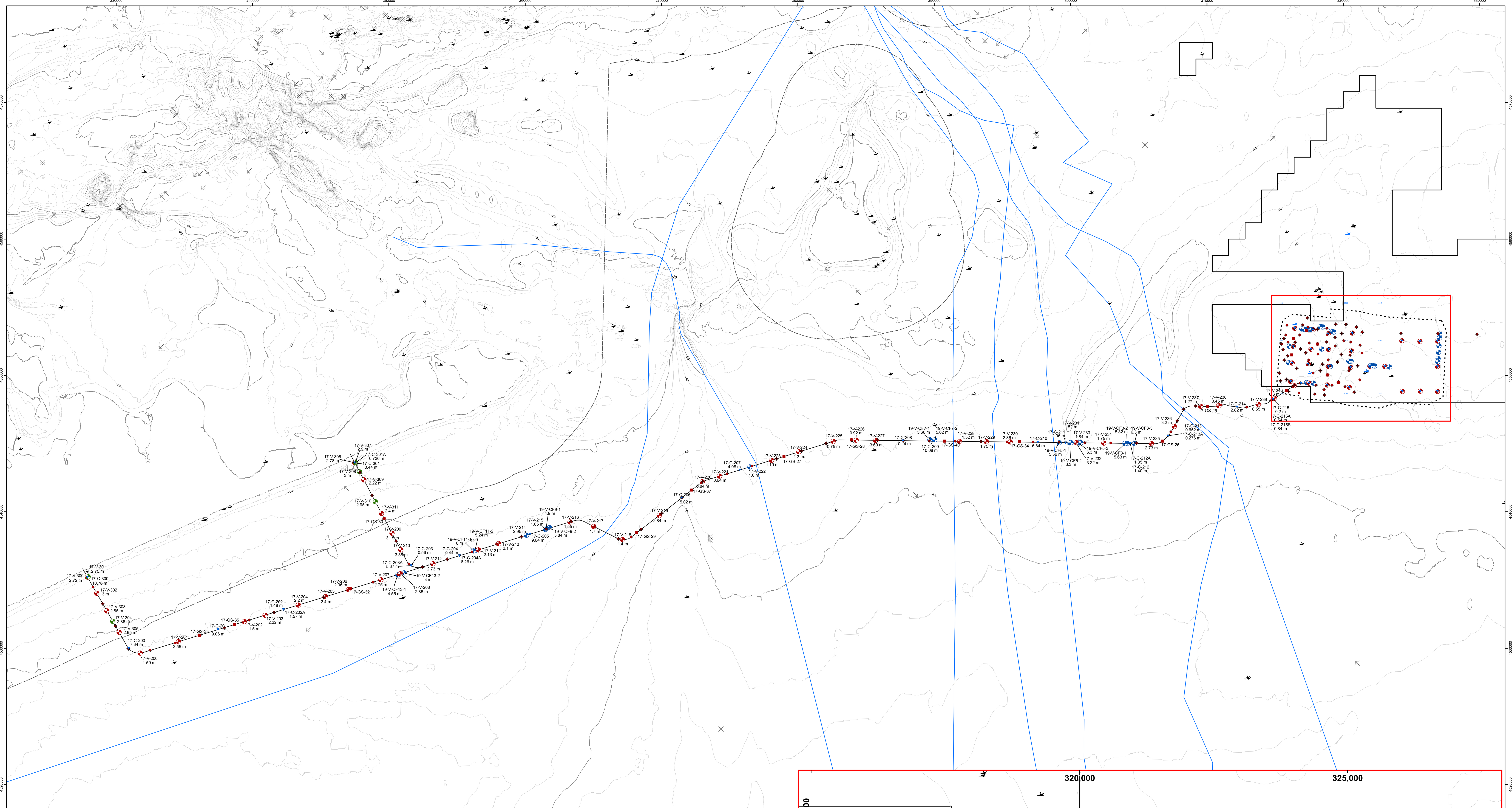
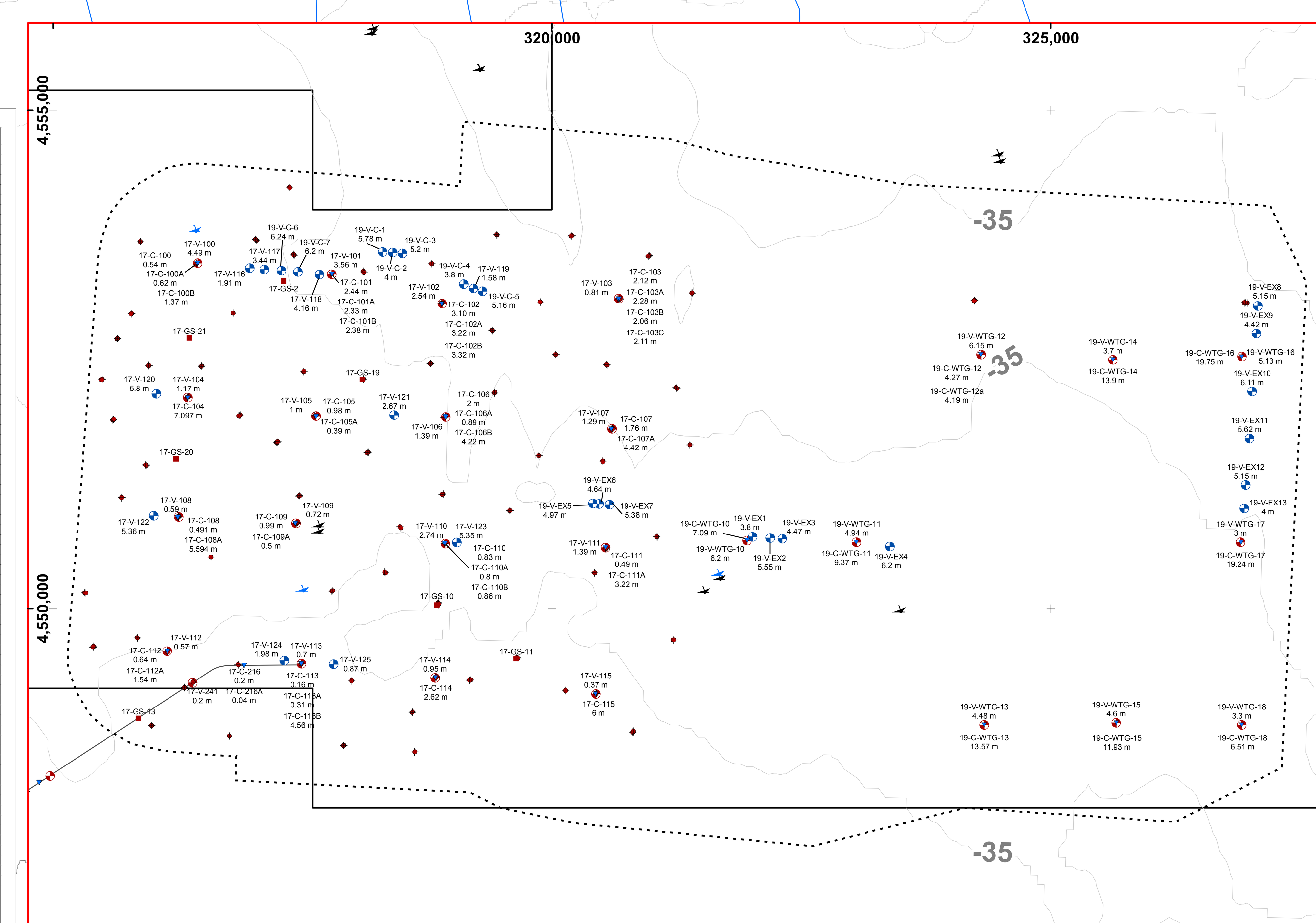
SEASCOUT 35 CPT SYSTEM
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

Seacalf MkIV Continuous Drive Seabed CPT System
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

HIGH PERFORMANCE CORER (HPC)
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

CHARTS





Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MMLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
17-V-100	12/3/2017	-33	4,553,465	316,449	41.111746	-71.186118	5.6	4.5	G	Reached Target Penetration
17-V-101	12/3/2017	-34.8	4,553,355	317,793	41.111054	-71.170090	5.9	3.6	G	Reached Target Penetration
17-V-102	12/3/2017	-36	4,553,060	318,901	41.108645	-71.156813	5.2	2.5	G	Reached Target Penetration
17-V-103	12/4/2017	-37.8	4,553,109	320,668	41.109480	-71.135794	1.7	0.8	G	Refusal
17-V-104	12/12/2017	-33.7	4,552,116	316,349	41.099582	-71.186900	1.3	1.2	G	Refusal
17-V-105	12/12/2017	-34.2	4,551,931	317,634	41.098201	-71.171558	2.2	1.0	G	Refusal
17-V-106	12/12/2017	-34.6	4,551,921	318,935	41.098407	-71.156076	2.1	1.4	G	Refusal
17-V-107	12/8/2017	-34.9	4,551,803	320,603	41.097711	-71.136184	2.1	1.3	G	Refusal
17-V-108	12/12/2017	-34.4	4,550,918	316,259	41.088773	-71.187612	1.2	0.6	G	Refusal
17-V-109	12/30/2017	-34.4	4,550,854	317,436	41.088469	-71.173598	1.5	0.7	G	Refusal
17-V-110	12/8/2017	-35	4,550,652	318,930	41.086979	-71.155757	3.4	2.7	G	Refusal
17-V-111	12/8/2017	-34.5	4,550,610	320,539	41.086961	-71.136599	2.9	1.4	G	Refusal
17-V-112	12/29/2017	-35.4	4,549,573	316,144	41.076640	-71.188584	1.1	0.6	G	Refusal
17-V-113	12/30/2017	-35.4	4,549,447	317,489	41.075806	-71.172550	3.8	0.7	G	Refusal
17-V-114	12/30/2017	-35	4,549,305	318,830	41.074830	-71.156551	1.2	1.0	G	Refusal
17-V-115	12/30/2017	-35.1	4,549,143	320,440	41.073727	-71.137350	1.1	0.4	G	Refusal
17-V-116	12/3/2017	-35	4,553,414	316,970	41.111405	-71.179907	2.7	1.9	C	Refusal
17-V-117	12/3/2017	-34.6	4,553,401	317,118	41.111316	-71.178131	5.9	3.4	C	Reached Target Penetration
17-V-118	12/3/2017	-34.6	4,553,351	317,669	41.110989	-71.171559	4.3	4.2	C	Refusal
17-V-119	12/3/2017	-36.1	4,553,213	319,213	41.110092	-71.153143	5.4	1.6	C	Reached Target Penetration
17-V-120	12/2/2017	-34.4	4,552,153	316,033	41.099842	-71.190674	5.3	5.8	C	Reached Target Penetration
17-V-121	12/2/2017	-35	4,551,941	318,420	41.098472	-71.162206	5.2	2.7	C	Reached Target Penetration
17-V-122	12/2/2017	-34.4	4,550,931	316,009	41.088837	-71.190598	5.9	5.4	C	Reached Target Penetration
17-V-123	12/2/2017	-34.7	4,550,662	319,048	41.087094	-71.154359	5.7	5.4	C	Reached Target Penetration
17-V-124	12/2/2017	-35.5	4,549,478	317,316	41.076050	-71.174615	3.8	2.0	C	Refusal
17-V-125	12/1/2017	-34.8	4,549,441	317,812	41.075829	-71.168699	3.2	0.9	C	Refusal
17-V-200	10/28/2017	-30.2	4,529,647	231,764	40.873981	-72.183137	2.2	1.6	G	Refusal
17-V-201	10/28/2017	-31.3	4,530,483	234,571	40.882421	-72.150235	3	2.6	G	Reached Target Penetration
17-V-202	10/30/2017	-30.1	4,531,960	239,394	40.897256	-72.093685	3	1.5	G	Reached Target Penetration
17-V-203	11/1/2017	-31.3	4,532,427	240,923	40.901938	-72.075754	3	2.2	G	Reached Target Penetration
17-V-204	11/1/2017	-30.3	4,533,176	243,374	40.909447	-72.047012	3	2.2	G	Reached Target Penetration
17-V-205	11/1/2017	-28.5	4,533,785	245,355	40.915547	-72.023765	3	2.4	G	Reached Target Penetration
17-V-206	11/1/2017	-29.1	4,534,295	247,035	40.920651	-72.004050	3	3.0	G	Reached Target Penetration
17-V-207	11/1/2017	-30	4,535,027	249,424	40.927972	-71.976021	3	2.8	G	Reached Target Penetration
17-V-208	11/1/2017	-29.3	4,535,466	250,852	40.932363	-71.959257	3	2.9	G	Reached Target Penetration
17-V-209	11/1/2017	-26.1	4,538,432	250,238	40.958857	-71.967738	3	3.2	G	Reached Target Penetration
17-V-210	11/2/2017	-27.3	4,537,209	250,883	40.948052	-71.959586	3	3.4	G	Reached Target Penetration
17-V-211	11/2/2017	-30	4,536,197	253,244	40.939661	-71.931165	3	2.7	G	Reached Target Penetration
17-V-212	11/3/2017	-30.9	4,537,212	256,577	40.949794	-71.892024	2.4	2.1	G	Reached Target Penetration
17-V-213	11/3/2017	-30.9	4,537,669	258,054	40.954344	-71.874681	2.4	2.1	G	Reached Target Penetration
17-V-214	11/3/2017	-32.8	4,538,290	260,099	40.960534	-71.850652	2.7	3.0	C	Reached Target Penetration
17-V-215	11/3/2017	-33.3	4,538,710	261,483	40.964718	-71.834389	3	1.9	C	Reached Target Penetration
17-V-216	11/3/2017	-34.9	4,539,264	263,294	40.970234	-71.813107	1.9	1.6	G	Refusal
17-V-217	11/3/2017	-38.2	4,538,935	265,037	40.967772	-71.792289	2.4	1.7	G	Reached Target Penetration
17-V-218	11/4/2017	-43.2	4,537,968	267,134	40.959673	-71.767029	2.5	1.4	G	Reached Target Penetration
17-V-219	12/15/2017	-47	4,539,740	269,826	40.976383	-71.735732	3.7	2.8	G	Reached Target Penetration
17-V-220	12/15/2017	-41.2	4,542,201	272,986	40.999410	-71.699123	2	0.8	G	Refusal
17-V-221	12/15/2017	-40.7	4,542,624	274,254	41.003570	-71.684211	1.2	0.6	G	Refusal
17-V-222	12/22/2017	-46.8	4,543,298	276,471	41.010248	-71.658121	3	1.6	C	Reached Target Penetration
17-V-223	12/22/2017	-44	4,543,791	278,075	41.015123	-71.639245	3	1.2	G	Reached Target Penetration
17-V-224	12/18/2017	-39.9	4,544,399	280,070	41.021131	-71.615756	1.5	1.3	G	Refusal
17-V-225	12/22/2017	-40.8	4,545,169	282,591	41.028740	-71.586075	1.9	0.8	G	Refusal
17-V-226	12/27/2017	-44.1	4,545,260	284,273	41.029998	-71.566126	2.2	0.9	G	Reached Target Penetration
17-V-227	12/18/2017	-44.8	4,545,248	285,698	41.030273	-71.549182	4.1	3.7	G	Reached Target Penetration
17-V-228	12/18/2017	-46.8	4,545,171	291,867	41.031175	-71.475839	2.2	1.5	G	Refusal
17-V-229	12/22/2017	-44.2	4,545,147	293,818	41.031457	-71.452646	2.7	1.8	G	Reached Target Penetration
17-V-230	12/18/2017	-43.9	4,545,126	295,582	41.031713	-71.431678	3	2.4	G	Reached Target Penetration
17-V-231	12/18/2017	-45.9	4,545,075	300,044	41.032358	-71.378623	2.3	1.5	C	Refusal
17-V-232	12/17/2017	-44.1	4,545,070	300,422	41.032406	-71.374129	3.3	3.2	GC	Reached Target Penetration
17-V-233	12/17/2017	-44.9	4,545,065	300,759	41.032448	-71.370123	2	1.8	C	Refusal
17-V-234	12/22/2017	-46	4,545,046	302,434	41.032686	-71.350210	2.7	1.8	G	Reached Target Penetration
17-V-235	12/21/2017	-42.6	4,545,006	305,932	41.033163	-71.308618	2.6	2.7	G	Reached Target Penetration
17-V-236	12/24/2017	-42.5	4,546,267	307,603	41.044906	-71.289150	3.4	3.2	G	Reached Target Penetration
17-V-237	10/21/2017	-40.1	4,547,744	309,543	41.058663	-71.266534	2.5	1.3	G	Reached Target Penetration
17-V-238	12/29/2017	-38.6	4,547,789	310,867	41.059372	-71.250803	0.9	0.5	G	Refusal
17-V-239	10/21/2017	-38.1	4,547,889	313,767	41.060940	-71.216347	1.7	0.6	G	Refusal
17-V-240	10/21/2017	-34.2	4,548,320	314,969	41.065099	-71.202187	0.8	0.5	G	Refusal
17-V-241	12/29/2017	-34.4	4,549,254	316,398	41.073827	-71.185470	0.6	0.2	G	Refusal
17-V-300	10/23/2017	-10	4,535,221	227,901	40.922848	-72.231352	3	2.7	GE	Reached Target Penetration
17-V-301	10/23/2017	-9.9	4,535,248	227,943	40.923100	-72.230866	3	2.8	E	Reached Target Penetration
17-V-302	10/23/2017	-17	4,534,040	228,577	40.912444	-72.222817	3	3.0	GE	Reached Target Penetration
17-V-303	10/23/2017	-22.1	4,532,741	229,321	40.901011	-72.213436	3	2.9	GE	Reached Target Penetration
17-V-304	10/23/2017	-23.3	4,531,983	229,754	40.894333	-72.207971	3	2.9	E	Reached Target Penetration
17-V-305	10/23/2017	-25.5	4,531,179	230,215	40.887252	-72.202157	3	3.0	GE	Reached Target Penetration
17-V-306	10/21/2017	-10	4,543,606	247,506	41.004562	-72.002262	3	2.8	GE	Reached Target Penetration
17-V-307	10/21/2017	-9.9	4,543,633	247,549	41.004816	-72.001771	3	2.9	E	Reached Target Penetration
17-V-308	10/21/2017	-14.5	4,542,932	247,864	40.998607	-71.997745	3	3.0	E	Reached Target Penetration
17-V-309	10/22/2017	-17.2	4,542,347	248,173	40.993438	-71.993837	3	2.2	GE	Reached Target Penetration
17-V-310	10/22/2017	-21.4	4,540,745	249,017	40.979287	-71.983158	3	3.0	E	Reached Target Penetration
17-V-311	10/22/2017	-23.2	4,539,900	249,463	40.971829	-71.977524	3	2.4	GE	Reached Target Penetration

Vibracore Exploration Number[1]	Completion Date	Seafloor Elevation (Re. MMLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Recovery (Meters)	Test Type[2]	Reason for Termination
			Northing	Easting	Latitude	Longitude				
19-V-C-5	1/11/2019	-35.6	4,553,184	319,305	41.109856	-71.152042	4.53	5.2	C	Refusal
19-V-C-4	1/11/2019	-36.9	4,553,255	319,117	41.110454	-71.154301	4.03	3.8	C	Refusal
19-V-C-3	1/12/2019	-36.7	4,553,563	318,501	41.113084	-71.161721	5.8	5.2	C	Refusal
19-V-C-2	1/12/2019	-36.4	4,553,573	318,406	41.113153	-71.162859	5.17	4.0	C	Refusal
19-V-C-1	1/12/2019	-36.0	4,553,577	318,304	41.113169	-71.164071	5.23	5.8	C	Refusal
19-V-C-7	1/12/2019	-35.5	4,553,378	317,454	41.111188	-71.174131	4.92	6.2	C	Reached Target Penetration
19-V-C-6	1/12/2019	-34.9	4,553,390	317,288	41.111260	-71.176114	5.25	6.2	C	Reached Target Penetration
19-V-CF3-3	1/12/2019	-44.9	4,545,004	304,690	41.032845	-71.323377	5.82	6.3	C	Reached Target Penetration
19-V-CF3-2	1/12/2019	-46.1	4,545,008	304,167	41.032761	-71.329598	5.66	5.8	C	Refusal
19-V-CF3-1	1/12/2019	-46.5	4,545,014	303,994	41.032769	-71.331657	2.3	5.6	C	Refusal
19-V-CF5-3	1/13/2019	-44.7	4,545,052	300,625	41.032299	-71.371715	5.77	6.3	C	Reached Target Penetration
19-V-CF5-2	1/13/2019	-45.3	4,545,065	299,957	41.032251	-71.379655	3.72	3.3	C	Refusal
19-V-CF5-1	1/13/2019	-42.9	4,545,071	299,172	41.032106	-71.388986	5.29	5.6	C	Refusal
19-V-CF7-2	1/13/2019	-47.6	4,545,287	290,052	41.031754	-71.497452	5.3	5.6	C	Refusal
19-V-CF7-1	1/13/2019	-47.5	4,545,293	289,687	41.031712	-71.501794	5.32	5.7	C	Refusal
19-V-CF9-2	1/13/2019	-33.5	4,538,847	261,784	40.966036	-71.830867	4.85	5.8	C	Refusal
19-V-CF9-1	1/13/2019	-33.5	4,538,787	261,557	40.965436	-71.833532	4.77	4.9	C	Refusal
19-V-CF11-2	1/13/2019	-31.0	4,537,180	256,337	40.949439	-71.894857	5.19	5.2	C	Refusal
19-V-CF11-1	1/15/2019	-31.0	4,537,142	256,210	40.949053	-71.896356	5.2	6.0	C	Reached Target Penetration
19-V-CF13-2	1/15/2019	-29.3	4,535,528	251,127	40.933003	-71.956013	3.48	3.0	C	Refusal
19-V-CF13-1	1/15/2019	-29.5	4,535,382	250,656	40.931547	-71.961547	5.03	4.6	C	Refusal
19-V-WTG-10	1/15/2019	-34.0	4,550,681	321,956	41.087910	-71.119767	5.7	6.2	G	Reached Target Penetration
19-V-WTG-11	1/15/2019	-32.9	4,550,665	323,053	41.088002	-71.106707	4.72	4.9	G	Refusal
19-V-WTG-12	1/16/2019	-36.0	4,552,548	324,302	41.105225	-71.092384	4.73	6.2	G	Reached Target Penetration
19-V-WTG-14	1/16/2019	-36.1	4,552,496	325,625	41.105041	-71.076629	4.22	3.7	G	Refusal
19-V-WTG-16	1/17/2019	-37.3	4,552,528	326,917	41.105606	-71.061251	5.9	5.1	G	Refusal
19-V-WTG-17	1/17/2019	-34.6	4,550,665	326,905	41.088833	-71.060876	3.7	3.0	G	Refusal
19-V-WTG-18	1/17/2019	-33.5	4,548,833	326,916	41.072341	-71.060225	4.15	3.3	G	Refusal
19-V-WTG-15	1/17/2019	-33.4	4,548,854	325,656	41.072261	-71.075221	4.16	4.6	G	Refusal
19-V-WTG-13	1/17/2019	-34.4	4,548,833	324,333	41.071792	-71.090950	4.26	4.5	G	Refusal
19-V-EX8	1/26/2019	-35.1	4,553,036	327,076	41.110211	-71.059504	6.15	5.2	C	Refusal
19-V-EX9	1/26/2019	-36.2	4,552,758	327,062	41.107712	-71.059595	6.15	4.4	C	Refusal
19-V-EX10	1/26/2019	-37.6	4,552,177	327,021	41.102469	-71.059922	5.86	6.1	C	Reached Target Penetration
19-V-EX11	1/26/2019	-37.1	4,551,705	326,993	41.098215	-71.060120	5.12	5.6	C	Refusal
19-V-EX12	1/26/2019	-36.2	4,551,239	326,957	41.094011	-71.060421	4.53	5.2	C	Refusal
19-V-EX13	1/26/2019	-35.2	4,551,005	326,942	41.091899	-71.060529	3.86	4.0	C	Refusal
19-V-EX4	1/26/2019	-33.4	4,550,623	323,388	41.087695	-71.102713	5.18	6.2	C	Reached Target Penetration
19-V-EX3	1/26/2019	-33.6	4,550,700	322,310	41.088159	-71.115554	3.67	4.5	C	Refusal
19-V-EX2	1/26/2019	-33.8	4,550,708	322,189	41.088206	-71.117003	5.9	5.6	C	Refusal
19-V-EX1	1/27/2019	-34.2	4,550,721	322,013	41.088280	-71.119096	5.35	3.8	C	Refusal
19-V-EX7	1/27/2019	-34.4	4,551,041	320,579	41.090850	-71.136259	6.11	5.4	C	Refusal
19-V-EX6	1/27/2019	-34.4	4,551,049	320,475	41.090893	-71.137487	6.15	4.6	C	Refusal
19-V-EX5	1/27/2019	-34.3	4,551,055	320,410	41.090937	-71.138272	5.49	5.0	C	Refusal

Notes:

[1] For 2017 data, vibracore exploration number represents location in project area. 100-series (e.g. V-101), 200-series, and 300-series represent vibracores conducted in the SFWF area, federal waters on the OCS along the SFEC corridor, and New York state waters along the SFEC corridor, respectively.

[2] Test type code is as follows:
C = Cultural vibracore for archaeological study
E = Environmental vibracore
G = Geotechnical vibracore

Grab Samples Exploration Number	Completion Date	Seafloor Elevation (Re. MMLW, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Location
			Northing	Easting	Latitude	Longitude	
17-GS-2	11/16/2017	-35.2	4,553,285	317,310	41.110322	-71.175817	SFWF
17-GS-10	11/15/2017	-35.0	4,550,033	318,845	41.081392	-71.156590	SFWF
17-GS-11	11/15/2017	-35.5	4,549,496	319,642	41.076732	-71.146945	SFWF
17-GS-13	11/16/2017	-35.2	4,548,896	315,854	41.070482	-71.191829	SFWF
17-GS-19	11/15/2017	-34.8	4,552,297	318,101	41.101604	-71.166110	SFWF
17-GS-20	11/16/2017	-34.3	4,551,500	316,233	41.094005	-71.188102	SFWF
17-GS-21	11/16/2017	-33.7	4,552,714	316,366	41.104967	-71.186883	SFWF
17-GS-25	11/16/2017	-40.6	4,547,749	310,039	41.058819	-71.260637	Cable
17-GS-26	11/15/2017	-43.0	4,545,182	306,731	41.034938	-71.299174	Cable
17-GS-27	11/16/2017	-40.5	4,544,064	278,987	41.017823	-71.628508	Cable
17-GS-28	11/15/2017	-43.7	4,545,272	283,947	41.030024	-71.569998	Cable
17-GS-29	11/16/2017	-45.4	4,538,473	268,193	40.964514	-71.754652	Cable
17-GS-30	11/15/2017	-24.9	4,539,528	249,656	40.968539	-71.975080	Cable
17-GS-32	11/16/2017	-29.9	4,534,364	247,220	40.921336	-72.001890	Cable
17-GS-33	11/14/2017	-29.4	4,530,950	236,122	40.887117	-72.132047	Cable
17-GS-34	11/16/2017	-44.2	4,545,130	296,250	41.031915	-71.423740	Cable
17-GS-35	11/14/2017	-29.3	4,531,743	238,700	40.895075	-72.101830	Cable
17-GS-37	11/16/2017	-44.0	4,541,599	272,214	40.993775	-71.708063	Cable
17-GS-40	11/16/2017	-46.7	4,545,191	290,752	41.031067	-71.489097	Cable

CPT Exploration Identification Number[1]	Completion Date	Seafloor Elevation (Re. MML, Meters)	NAD83, UTM19N, Meters		NAD83, Geographic		Penetration (Meters)	Reason for Termination
			Northing	Easting	Latitude	Longitude		
17-C-100	11/12/2017	-33	4,553,462	316,447	41.111721	-71.186134	0.5	Differential Pressure
17-C-100A	11/12/2017	-33.1	4,553,462	316,443	41.111719	-71.186186	0.6	Slope Threshold
17-C-100B	11/28/2017	-33	4,553,466	316,452	41.111757	-71.186081	1.4	Slope Threshold
17-C-101	11/12/2017	-34.8	4,553,354	317,792	41.111050	-71.170099	2.4	Differential Pressure
17-C-101A	11/12/2017	-34.9	4,553,355	317,798	41.111055	-71.170024	2.3	Differential Pressure
17-C-101B	11/28/2017	-34.9	4,553,356	317,796	41.111070	-71.170047	2.4	Slope Threshold
17-C-102	11/11/2017	-36	4,553,059	318,900	41.108643	-71.156824	3.1	Differential Pressure
17-C-102A	11/11/2017	-35.9	4,553,059	318,892	41.108638	-71.156916	3.2	Tip Threshold
17-C-102B	11/11/2017	-35.9	4,553,060	318,894	41.108648	-71.156900	3.3	Differential Pressure
17-C-103	11/11/2017	-37.8	4,553,108	320,669	41.109476	-71.135787	2.1	Differential Pressure
17-C-103A	11/11/2017	-37.8	4,553,103	320,669	41.109429	-71.135783	2.3	Differential Pressure
17-C-103B	11/11/2017	-37.7	4,553,107	320,664	41.109461	-71.135839	2.1	Differential Pressure
17-C-103C	11/28/2017	-37.8	4,553,110	320,673	41.109494	-71.135742	2.1	Differential Pressure
17-C-104	11/12/2017	-33.7	4,552,115	316,348	41.099568	-71.186912	7.1	Differential Pressure
17-C-105	11/12/2017	-34.2	4,551,932	317,636	41.098212	-71.171534	1	Slope Threshold
17-C-105A	11/12/2017	-34.2	4,551,925	317,635	41.098150	-71.171541	0.4	Tip Threshold
17-C-106	11/12/2017	-34.7	4,551,923	318,932	41.098425	-71.156107	2	Differential Pressure
17-C-106A	11/12/2017	-34.8	4,551,927	318,929	41.098455	-71.156147	0.9	Slope Threshold
17-C-106B	11/28/2017	-34.6	4,551,920	318,936	41.098397	-71.156063	4.2	Differential Pressure
17-C-107	11/12/2017	-34.9	4,551,802	320,601	41.097705	-71.136216	1.8	Slope Threshold
17-C-107A	11/12/2017	-34.9	4,551,801	320,596	41.097690	-71.136271	4.4	Differential Pressure
17-C-108	11/12/2017	-34.4	4,550,918	316,256	41.088773	-71.187649	0.5	Slope Threshold
17-C-108A	11/12/2017	-34.4	4,550,915	316,249	41.088749	-71.187734	5.6	Differential Pressure
17-C-109	11/13/2017	-34.4	4,550,852	317,428	41.088447	-71.173692	1	Slope Threshold
17-C-109A	11/13/2017	-34.4	4,550,852	317,428	41.088448	-71.173686	0.5	Slope Threshold
17-C-110	11/13/2017	-35	4,550,653	318,928	41.086989	-71.155782	0.8	Slope Threshold
17-C-110A	11/13/2017	-35	4,550,651	318,922	41.086967	-71.155853	0.8	Slope Threshold
17-C-110B	11/28/2017	-35	4,550,654	318,931	41.087002	-71.155743	0.9	Tip threshold
17-C-111	11/13/2017	-34.5	4,550,612	320,538	41.086977	-71.136611	0.5	Slope Threshold
17-C-111A	11/13/2017	-34.5	4,550,614	320,539	41.086995	-71.136602	3.2	Differential Pressure
17-C-112	11/13/2017	-35.4	4,549,572	316,144	41.076635	-71.188578	0.6	Slope Threshold
17-C-112A	11/13/2017	-35.4	4,549,569	316,146	41.076607	-71.188559	1.5	Differential Pressure
17-C-113B	11/28/2017	-35.4	4,549,447	317,489	41.075809	-71.172542	4.6	Slope Threshold
17-C-114	11/28/2017	-35	4,549,308	318,832	41.074861	-71.156533	2.6	Differential Pressure
17-C-115	11/28/2017	-35.2	4,549,146	320,437	41.073754	-71.137395	6	Differential Pressure
17-C-200	11/15/2017	-29.1	4,529,983	230,928	40.876735	-72.193194	7.3	Tip Threshold
17-C-201	11/15/2017	-31.4	4,531,376	237,477	40.891388	-72.116169	9.1	Tip Threshold
17-C-202	11/15/2017	-30.3	4,532,841	242,270	40.906087	-72.059963	1.5	Differential Pressure
17-C-202A	11/15/2017	-30.3	4,532,838	242,272	40.906063	-72.059935	1.6	Tip Threshold
17-C-203	11/9/2017	-29.1	4,536,067	251,640	40.938005	-71.950081	0	Tip Threshold
17-C-203A	11/9/2017	-29.2	4,536,063	251,640	40.937973	-71.950148	5.4	Differential Pressure
17-C-204	11/9/2017	-30.9	4,536,790	255,178	40.945578	-71.908463	0.4	Tip Threshold
17-C-204A	11/9/2017	-30.9	4,536,788	255,182	40.945564	-71.908407	6.3	Tip Threshold
17-C-205	11/9/2017	-33.1	4,538,371	260,358	40.961340	-71.847605	9.6	Differential Pressure
17-C-206	11/9/2017	-46.4	4,541,043	271,492	40.988578	-71.716436	5	Differential Pressure
17-C-207	11/24/2017	-44.3	4,543,074	275,742	41.008031	-71.666707	4.1	Slope Threshold
17-C-208	11/24/2017	-46.8	4,545,224	287,713	41.030582	-71.525227	10.1	Reached Target Depth
17-C-209	11/24/2017	-47.8	4,545,196	289,927	41.030899	-71.498906	10.1	Reached Target Depth
17-C-210	11/24/2017	-41.4	4,545,104	297,606	41.032022	-71.407615	6.8	Differential Pressure
17-C-211	11/24/2017	-50	4,545,078	299,635	41.032290	-71.383484	3	Slope Threshold
17-C-212	11/24/2017	-45.7	4,545,024	304,379	41.032956	-71.327085	1.4	Slope Threshold
17-C-212A	11/24/2017	-45.8	4,545,028	304,383	41.032990	-71.327033	1.4	Slope Threshold
17-C-213	11/25/2017	-43.1	4,545,575	307,156	41.038578	-71.294244	0.7	Differential Pressure
17-C-213A	11/25/2017	-43	4,545,580	307,160	41.038621	-71.294191	0.3	Differential Pressure
17-C-214	11/25/2017	-39.2	4,547,692	312,220	41.058813	-71.234688	2.8	Slope Threshold
17-C-215B	11/28/2017	-34.8	4,548,252	314,859	41.064456	-71.203476	0.8	Tip Threshold
17-C-216	11/13/2017	-35.6	4,549,426	316,913	41.075490	-71.179397	0.2	Tip Threshold
17-C-216A	11/13/2017	-35.5	4,549,429	316,916	41.075520	-71.179362	0	Tip Threshold
17-C-300	11/15/2017	-9.9	4,535,224	227,902	40.922874	-72.231347	10.8	Tip Threshold
17-C-301	11/16/2017	-10	4,543,612	247,506	41.004619	-72.002269	0.4	Tip Threshold
17-C-301A	11/16/2017	-9.9	4,543,616	247,507	41.004655	-72.002257	0.7	Tip Threshold
19-C-WTG-18	2/22/2019	-33.5	4,548,834	326,916	41.072352	-71.060228	6.51	Slope Threshold
19-C-WTG-15	2/22/2019	-33.4	4,548,854	325,659	41.072261	-71.075193	11.93	Tip Threshold
19-C-WTG-13	2/22/2019	-34.4	4,548,835	324,334	41.071808	-71.090948	13.57	Slope Threshold
19-C-WTG-10	2/22/2019	-34	4,550,682	321,956	41.087922	-71.119760	7.09	Slope Threshold
19-C-WTG-11	2/22/2019	-32.9	4,550,665	323,052	41.088007	-71.106716	9.37	Slope Threshold
19-C-WTG-17	2/23/2019	-34.6	4,550,663	326,908	41.088821	-71.060838	19.24	Differential Pressure
19-C-WTG-16	2/23/2019	-37.3	4,552,525	326,916	41.105584	-71.061270	19.75	Slope Threshold
19-C-WTG-14	2/23/2019	-36.1	4,552,497	325,624	41.105052	-71.076633	13.9	Slope Threshold
19-C-WTG-12	2/23/2019	-36	4,552,549	324,302	41.105239	-71.092390	4.27	Tip Threshold
19-C-WTG-12a	2/23/2019	-36	4,552,548	324,301	41.105227	-71.092396	4.19	Tip Threshold

Notes:

1 For 2017 data, cone penetration test (CPT) sounding exploration number represents location in project area. 100-series (e.g. C-101), 200-series, and 300-series represents CPTs conducted in the SFWF area, federal waters on the OCS along the SFEC corridor, and New York state waters along the SFEC corridor, respectively.

LEGEND

OCS-A 0486 LEASE
MAXIMUM WORK AREA
PROPOSED EXPORT CABLE ROUTE

BATHYMETRY CONTOURS (MLLW)
CONTOUR INTERVAL IS 25 METERS
CONTOUR INTERVAL IS 5 METERS

EXPLORATION EXPLANATION

19-V-100 / 4.49 m — GEOTECHNICAL VIBRACORE EXPLORATION: EXPLORATION ID; RECOVERED CORE LENGTH (METERS)

19-V-120 / 5.80 m — CULTURAL VIBRACORE EXPLORATION: EXPLORATION ID; RECOVERED CORE LENGTH (METERS)

19-V-310 / 2.95 m — ENVIRONMENTAL VIBRACORE EXPLORATION: EXPLORATION ID; RECOVERED CORE LENGTH (METERS)

19-C-100 / 1.37 m — CONE PENETRATION TEST: EXPLORATION ID; PENETRATION DEPTH OF CPT (METERS)

19-GS-10 — GRAB SAMPLE: EXPLORATION ID

SEDIMENT PROFILE IMAGE LOCATION

Notes:

1. Exploration ID's beginning with '19' were collected in 2019 while ID's beginning with '17' were collected in 2017.

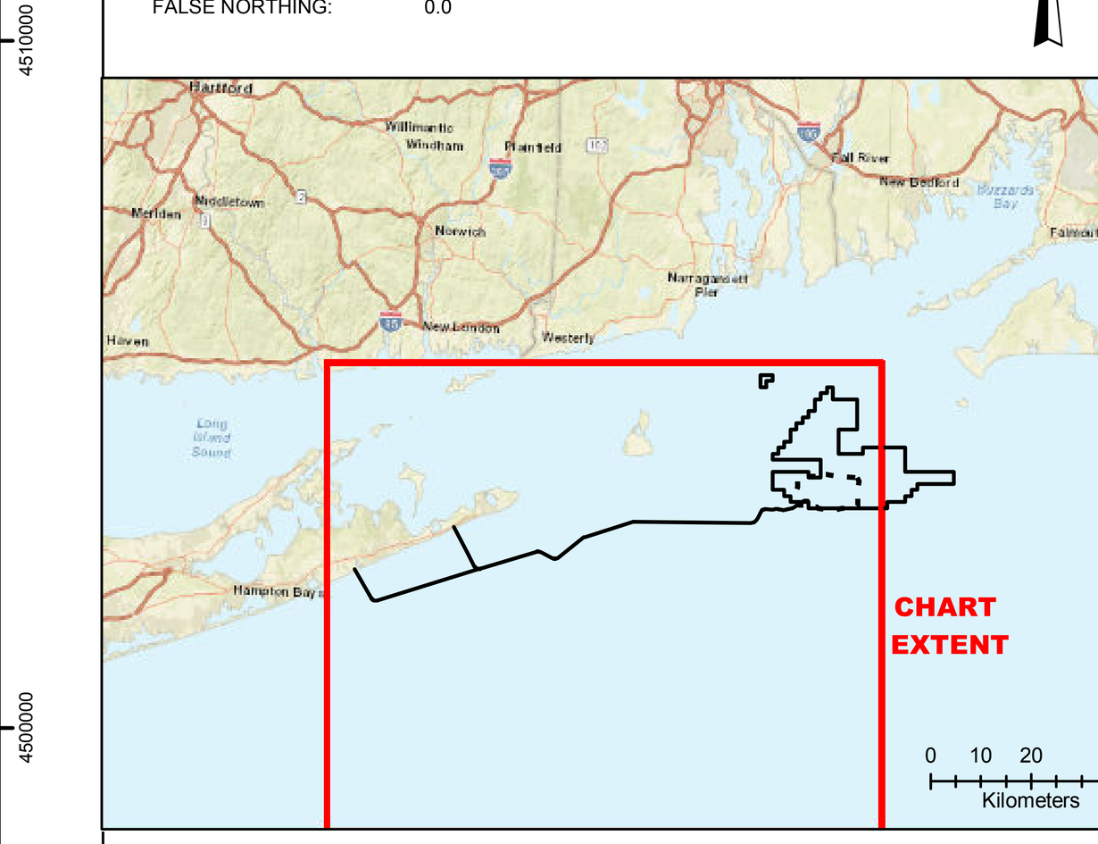
CAUTION POINT FEATURE
(SHIPWRECK AND OBSTRUCTION SOURCES: AWOIS AND NOAA NAUTICAL CHARTS)

POSSIBLE SHIPWRECK (IDENTIFIED BY FUGRO, 2017)
NOAA CHARTED SHIPWRECK
NOAA CHARTED OBSTRUCTION
EXISTING CABLE

GEODETIC INFORMATION

SPHEROID:	NAD 1983
SEMI-MAJOR AXIS:	6378137.000
SEMI-MINOR AXIS:	6356752.314
INVERSE FLATTENING:	298.25722101
ECCENTRICTY^2:	
PROJECTION:	UTM
ZONE:	19N
LONGITUDE OF ORIGIN:	0.0
FALSE EASTING:	500000.0
FALSE NORTHING:	0.0

N



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SOUTH FORK WIND FARM

AS-BUILT GEOTECHNICAL EXPLORATION LOCATIONS
SFWF COP SURVEY
OFFSHORE NY/RI/MA, ATLANTIC OCS

SCALE = 1:110,000
0 1 2 4 6 8
Kilometers

NO:	DATE:	DESCRIPTION:	DRAWN:	CHKD:	APPR:
1	Feb. 2018	Geotechnical Data Report	MLG	WBC	KRS
2	Apr. 2019	Geotechnical Data Report	MJD	WBC	KRS
3					

CHART 1

APPENDICES

A. GUIDELINES ON USE OF REPORT

This report and the assessment carried out in connection with the report (together the 'Services') were compiled and carried out by Fugro USA Marine, Inc. ('Fugro') for Deepwater Wind South Fork, LLC ('Client') in accordance with the terms of a contract between Fugro and the Client. The Services were performed by Fugro with the skill and care ordinarily exercised by a reasonable geotechnical specialist at the time the Services were performed. Further, and in particular, the Services were performed by Fugro taking into account the limits of the scope of works required by the Client, the time scale involved and the resources, including financial and manpower resources, agreed between Fugro and the Client.

Other than that expressly contained in paragraph one above, Fugro provides no other representation or warranty whether express or implied, in relation to the Services.

The Services were performed by Fugro exclusively for the purposes of the Client. Fugro is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, Fugro does not authorize, consent or condone any party other than the Client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and Fugro disclaims any liability to such party. Any such party would be well advised to seek independent advice from a competent geotechnical specialist and / or lawyer.

It is Fugro's understanding that this report is to be used for the purpose described in Section 1 (Introduction) of this report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, and/or should the Client's proposed development or use of the site change (including in particular any change in any design and/or specification relating to the proposed use or development of the site), this report may no longer be valid or appropriate and any further use of or reliance upon the report in those circumstances by the Client without Fugro's review and advice shall be at the Client's sole and own risk. Should Fugro be requested, and Fugro agree, to review the report after the date hereof, Fugro shall be entitled to additional payment at the then existing rates or such other terms as may be agreed between Fugro and the Client.

The passage of time may result in changes (whether man-made or otherwise) in site conditions and changes in regulatory or other legal provisions, technology, methods of analysis, or economic conditions which could render the report inaccurate or unreliable. The information, recommendations and conclusions contained in this report should not be relied upon if any such changes have taken place or after a period of two years from the date of this report or such other period as maybe expressly stated in the report, without the written agreement of Fugro. In the absence of such written agreement of Fugro, reliance on the report after any such changes have occurred or after the period of two years has expired shall be at the Client's own and sole risk. Should Fugro agree to review the report after the period of two years has expired, Fugro shall be entitled to additional payment at the then existing rates or such other terms as may be agreed between Fugro and the Client.

The observations, recommendations and conclusions in this report are based solely upon the Services which were provided pursuant to the contract between the Client and Fugro. Fugro has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the Client and Fugro.

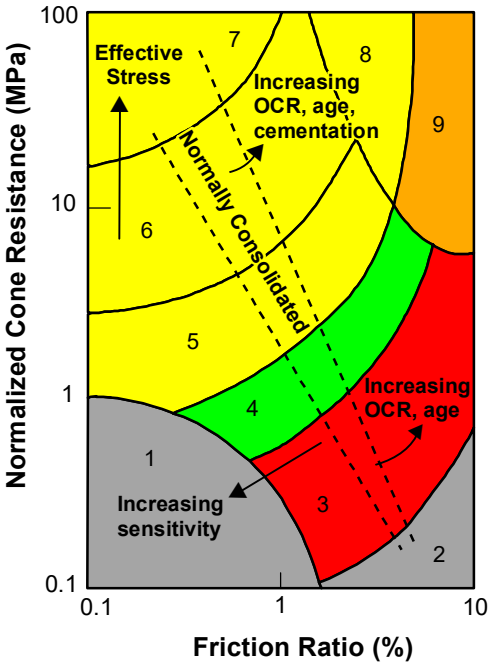
Fugro is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services.

Where the Services have involved Fugro's interpretation and/or other use of any information (including documentation or materials, analysis, recommendations and conclusions) provided by third parties (including independent testing and/or information services or laboratories) or the Client and upon which Fugro was reasonably entitled to rely or involved Fugro's observations of existing physical conditions of any site involved in the Services, then the Services clearly are limited by the accuracy of such information and the observations which were reasonably possible of the said site. Unless otherwise stated, Fugro was not authorized and did not attempt to independently verify the accuracy or completeness of such information, received from the Client or third parties during the performance of the Services. Fugro is not liable for any inaccuracies (including any incompleteness) in the said information, the discovery of which inaccuracies required the doing of any act including the gathering of any information which it was not reasonably possible for Fugro to do including the doing of any independent investigation of the information provided to Fugro save as otherwise provided in the terms of the contract between the Client and Fugro.

The soil and ground conditions information provided in the Services are based solely on evaluations of soil and ground condition samples and in situ tests at determined sample test locations and elevations. That information cannot be extrapolated to any area or elevation outside those locations and elevations unless specifically so stated in the report. In the light of the information available to Fugro, the soil and ground conditions information are considered appropriate for use in relation to the geotechnical design and installation aspects of the structures addressed in the report, but they may not be appropriate for the design of other structures.

B. CPT SOUNDING LOGS

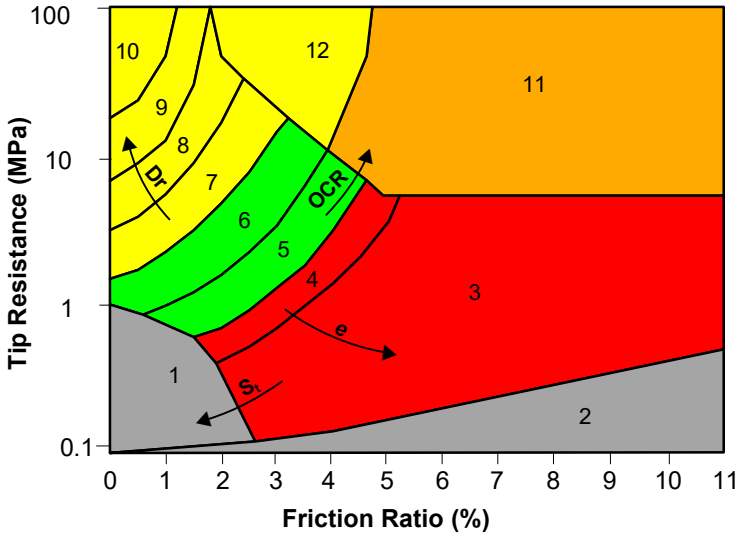
SBT CORRELATION CHART ROBERTSON, 1990



Zone	Soil Behavior Type	U.S.C.S.
1	Sensitive Fine-grained	OL-CH
2	Organic Material	OL-OH
3	Clay to Silty Clay	CL-CH
4	Clayey Silt to Silty Clay	MH-CL
5	Silty Sand to Sandy Silt	SM-ML
6	Sand to Silty Sand	SP-SM
7	Gravelly Sand to Sand	GP-SP
8	Sand to Clayey Sand	SP-SC
9	Very Stiff Fine-grained*	CH-CL

*overconsolidated or cemented

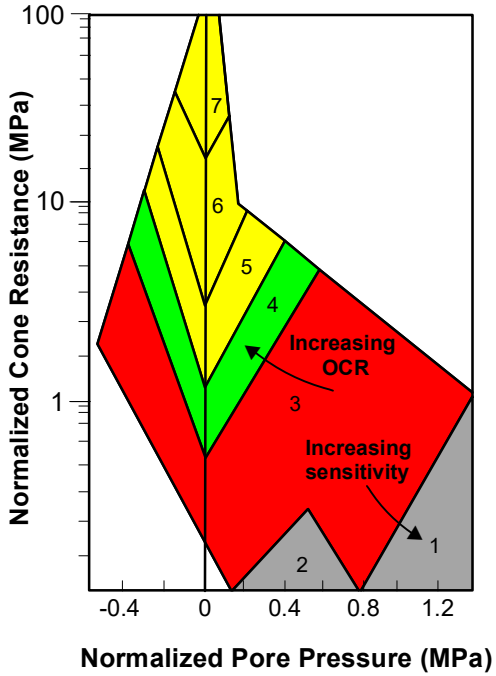
SBT CORRELATION CHART ROBERTSON & CAMPANELLA, 1988



Zone	Soil Behavior Type	U.S.C.S.
1	Sensitive Fine-grained	OL-CH
2	Organic Material	OL-OH
3	Clay	CH
4	Silty Clay to Clay	CL-CH
5	Clayey Silt to Silty Clay	MH-CL
6	Sandy Silt to Clayey Silt	ML-MH
7	Silty Sand to Sandy Silt	SM-ML
8	Sand to Silty Sand	SM-SP
9	Sand	SW-SP
10	Gravelly Sand to Sand	SW-GW
11	Very Stiff Fine-grained *	CH-CL
12	Sand to Clayey Sand *	SC-SM

*overconsolidated or cemented

SBT CORRELATION CHART ROBERTSON, 1990

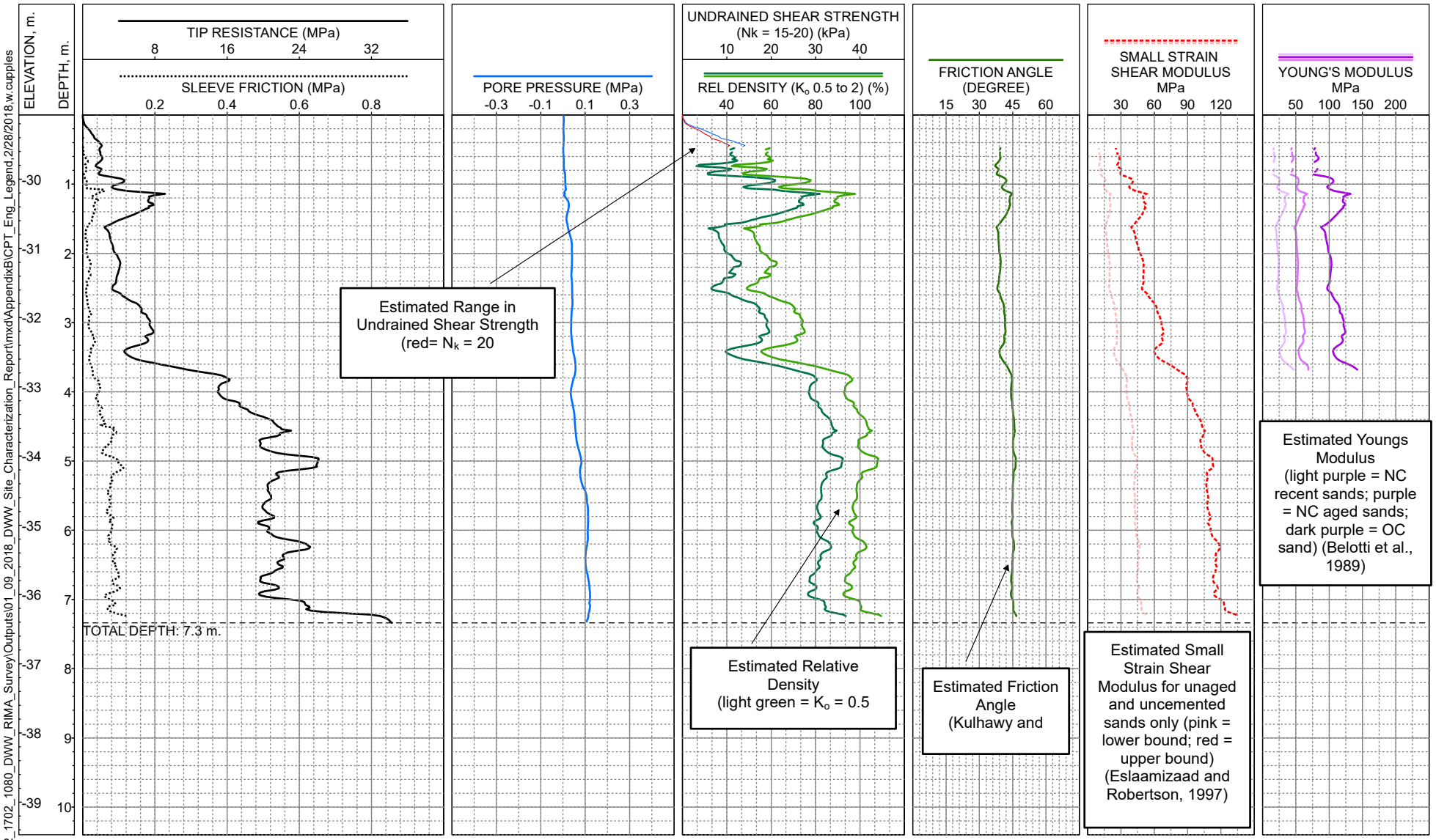


Zone	Soil Behavior Type	U.S.C.S.
1	Sensitive Fine-grained	OL-CH
2	Organic Material	OL-OH
3	Clay to Silty Clay	CL-CH
4	Clayey Silt to Silty Clay	MH-CL
5	Silty Sand to Sandy Silt	SM-ML
6	Sand to Silty Sand	SP-SM
7	Gravelly Sand to Sand	GP-SP

SEABED CPT LOG LEGEND

SFWF COP Survey

Offshore NY/RI/MA, Atlantic OCS



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SEABED CPT LOG LEGEND

SFWF COP Survey

Offshore NY/RI/MA, Atlantic OCS

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

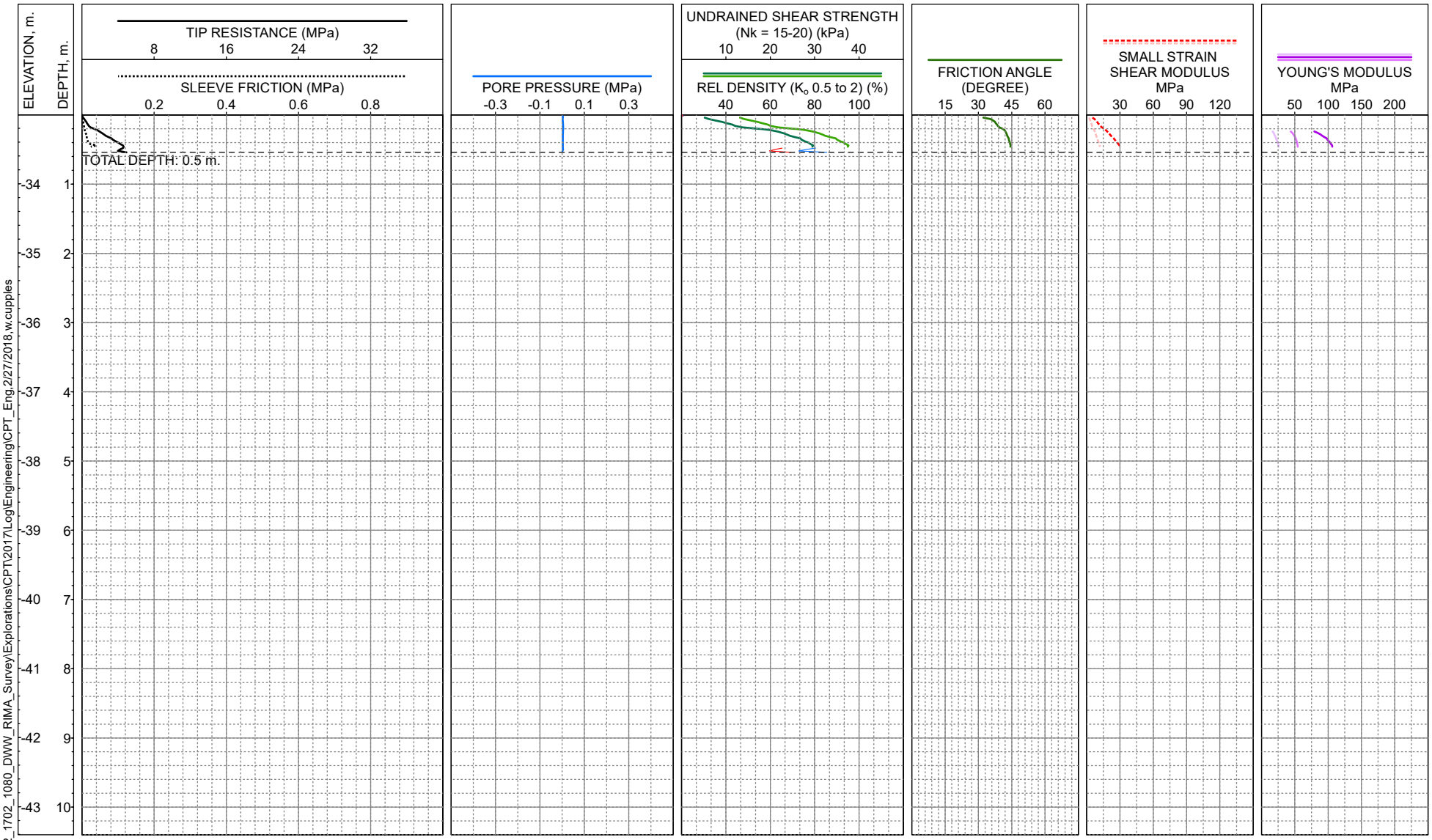
LOCATION: SFWF
SEAFLOOR EL: -33.0m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, slope, differential pressure

LOG OF CPT C-100
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 1

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -33.0m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, slope, differential pressure

LOG OF CPT C-100
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 1

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

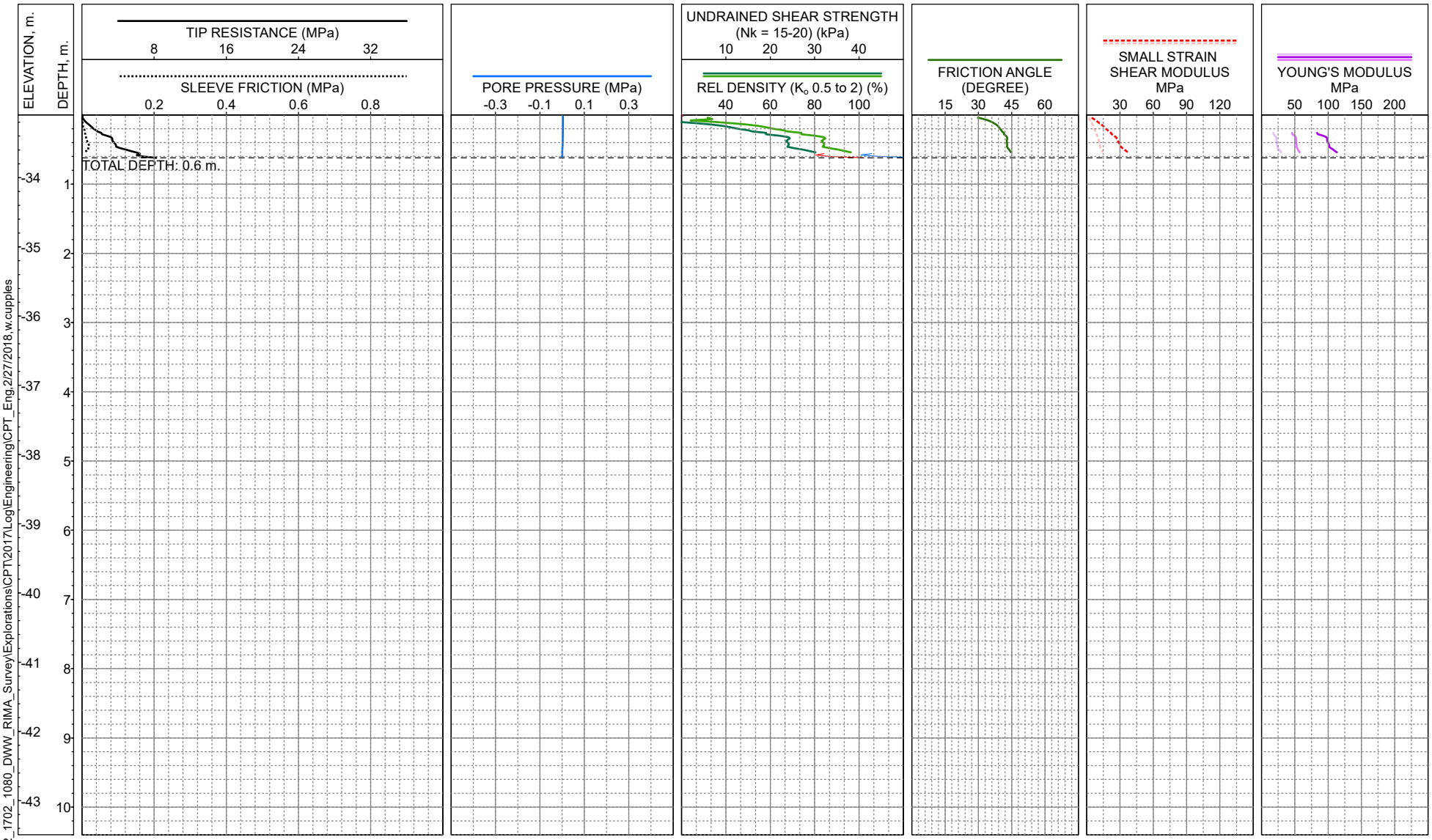
LOCATION: SFWF
SEAFLOOR EL: -33.1m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-100A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 2

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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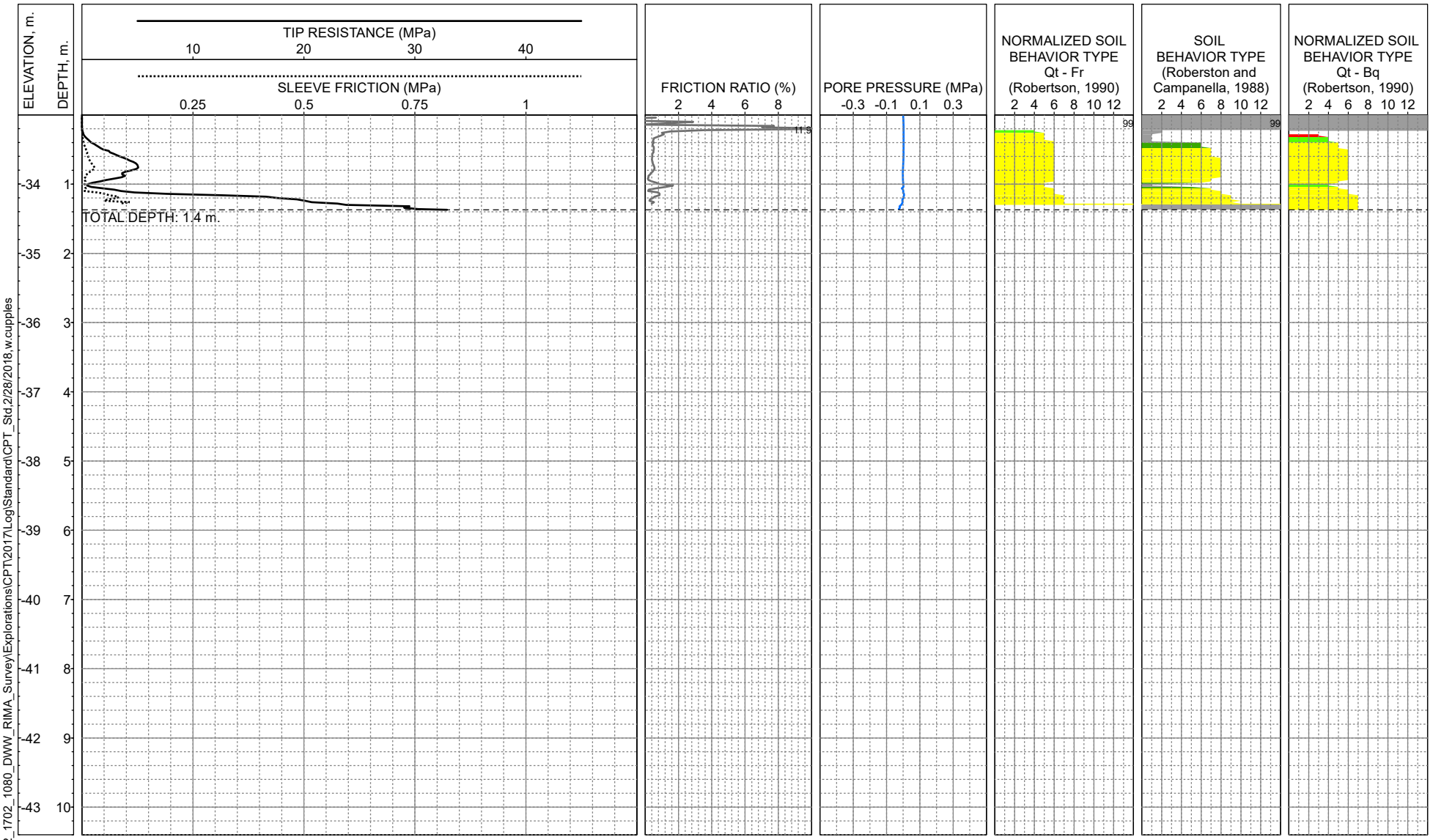
LOCATION: SFWF
SEAFLOOR EL: -33.1m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-100A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 2

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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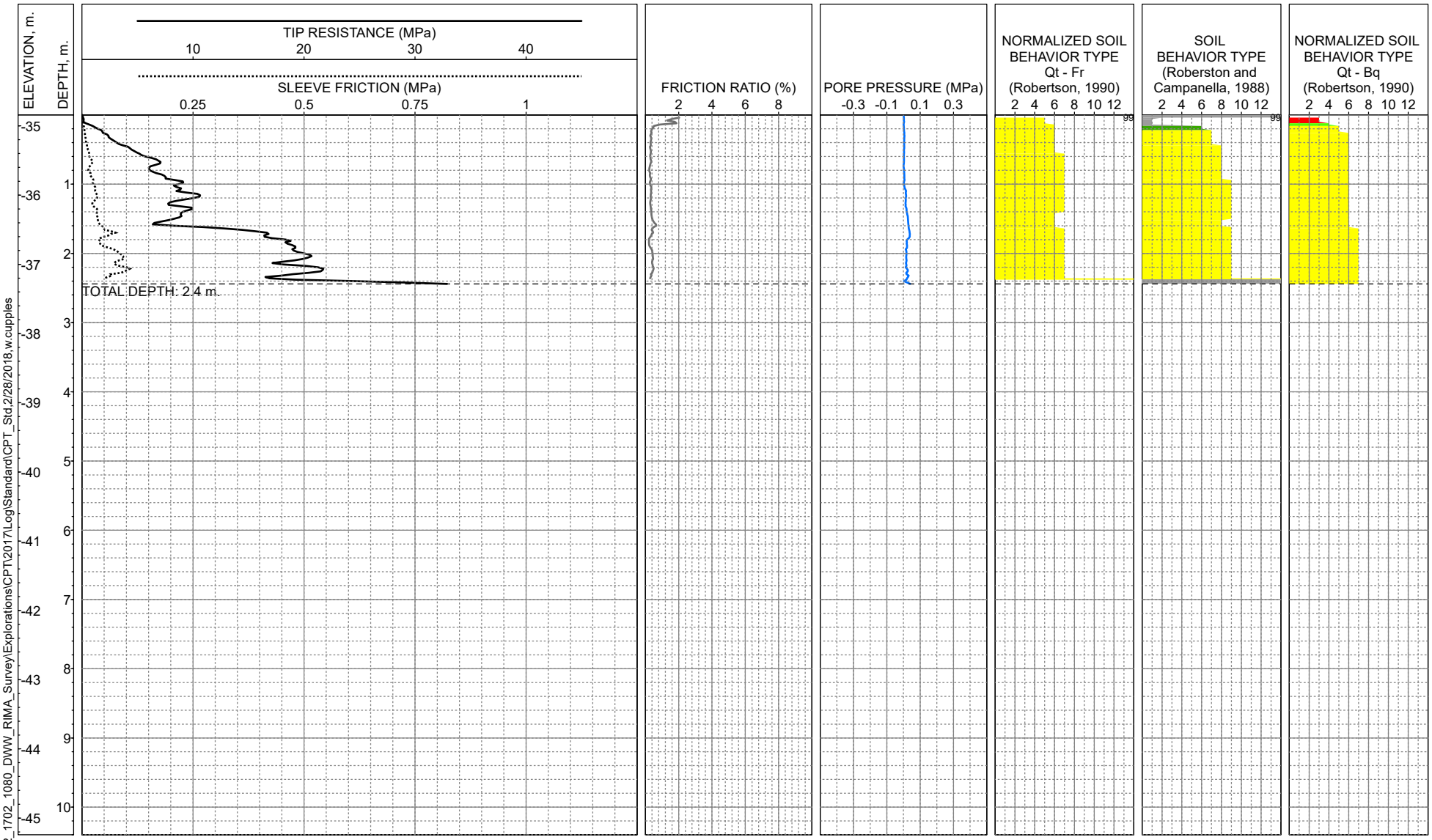
LOCATION: SFWF
SEAFLOOR EL: -33.0m (MLLW)
COMPLETION DEPTH: 1.4m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Slope, tip threshold

LOG OF CPT C-100B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 3

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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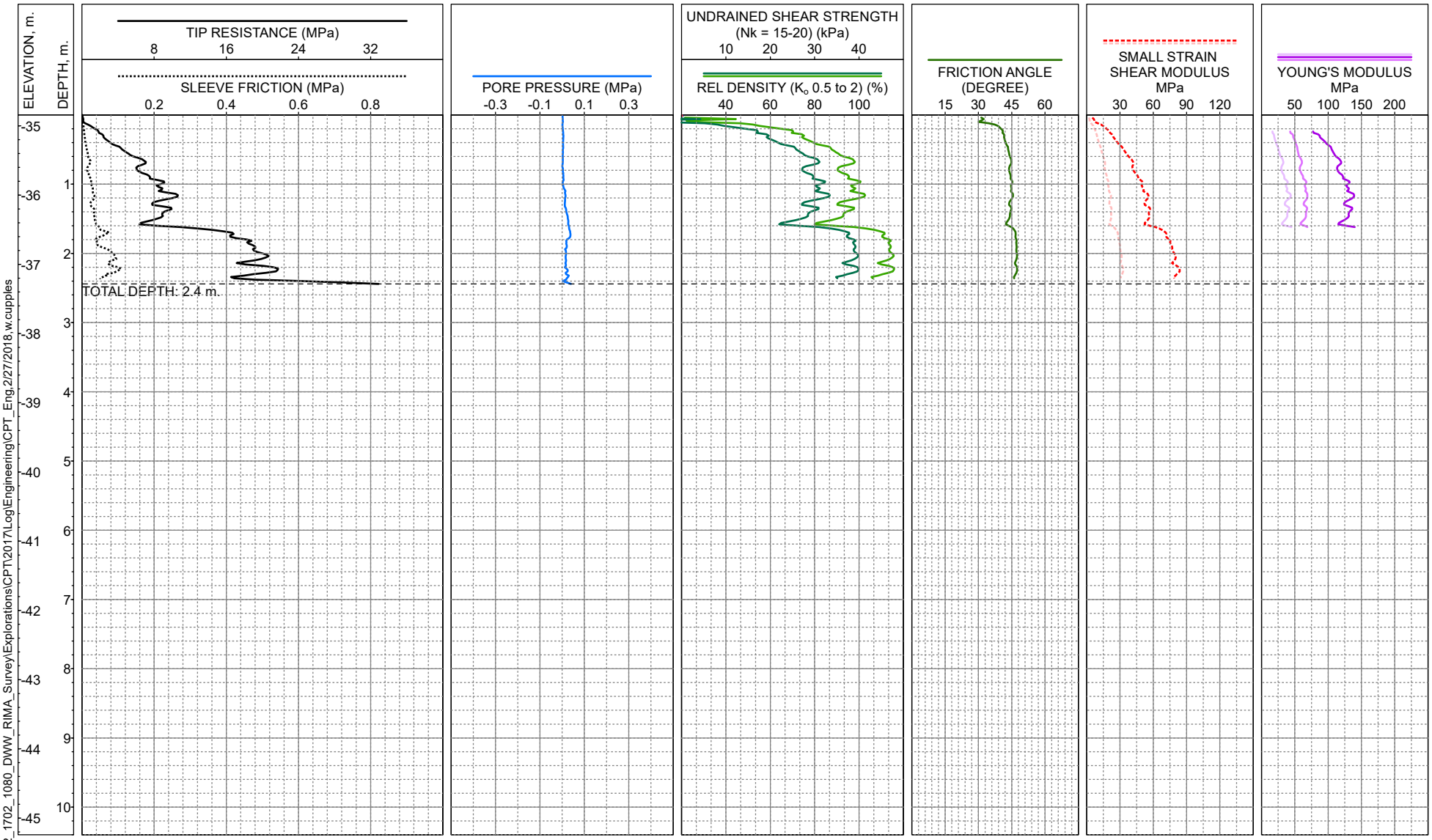
LOCATION: SFWF
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 2.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, differential pressure

LOG OF CPT C-101
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 4

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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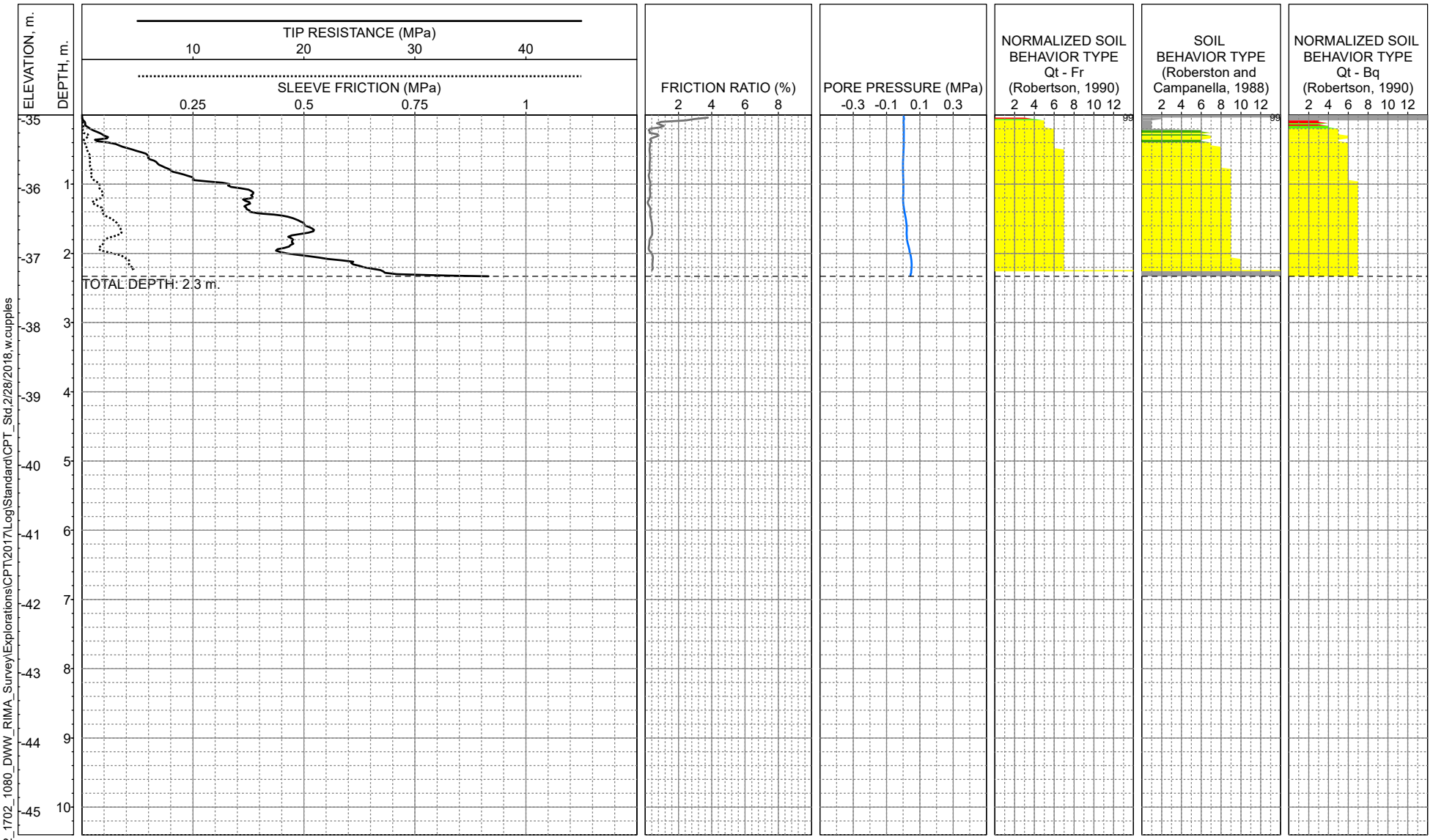
LOCATION: SFWF
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 2.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, differential pressure

LOG OF CPT C-101
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 4

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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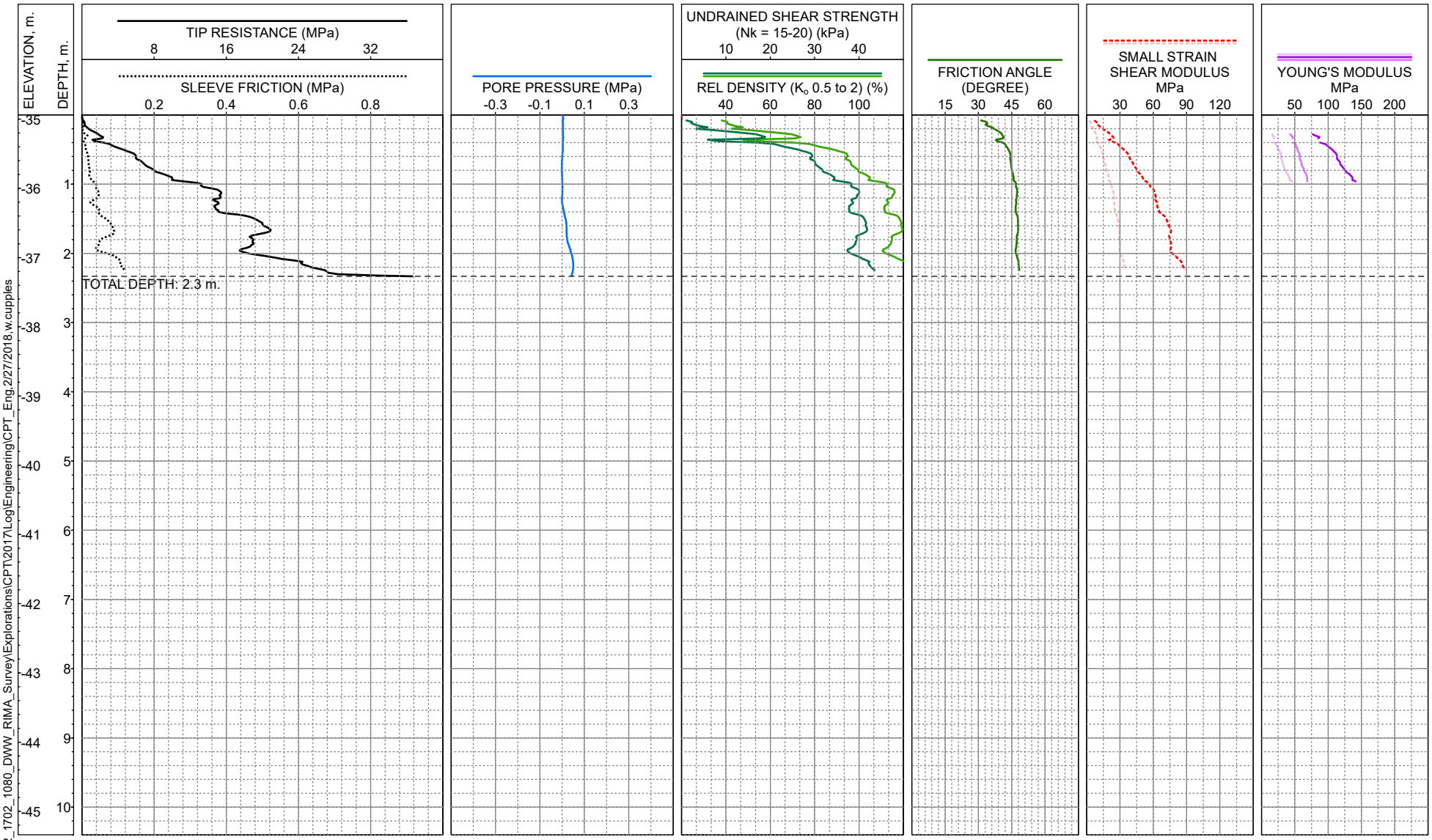
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 2.3m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, differential pressure

LOG OF CPT C-101A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 5

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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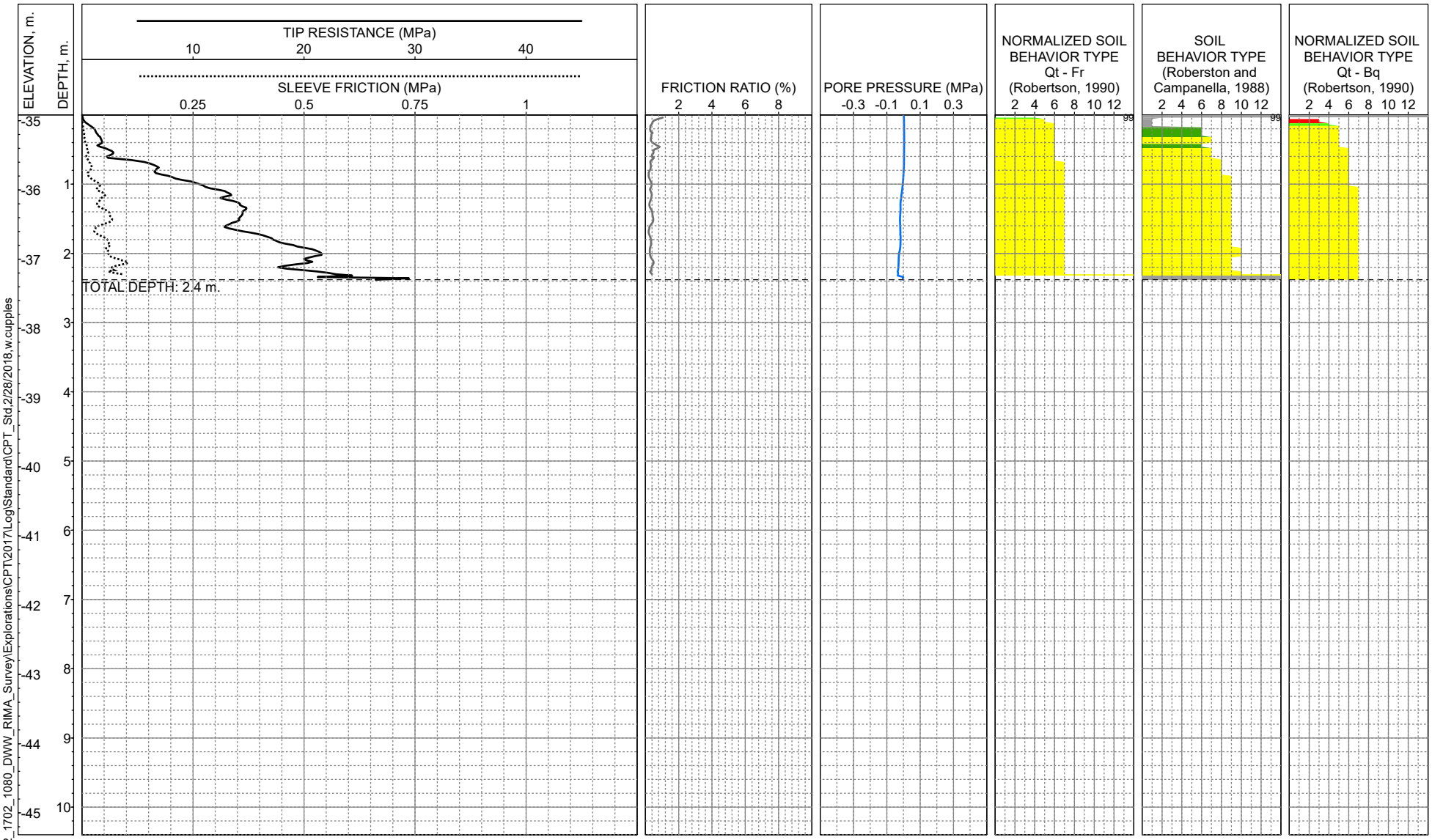
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 2.3m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip, differential pressure

LOG OF CPT C-101A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 5

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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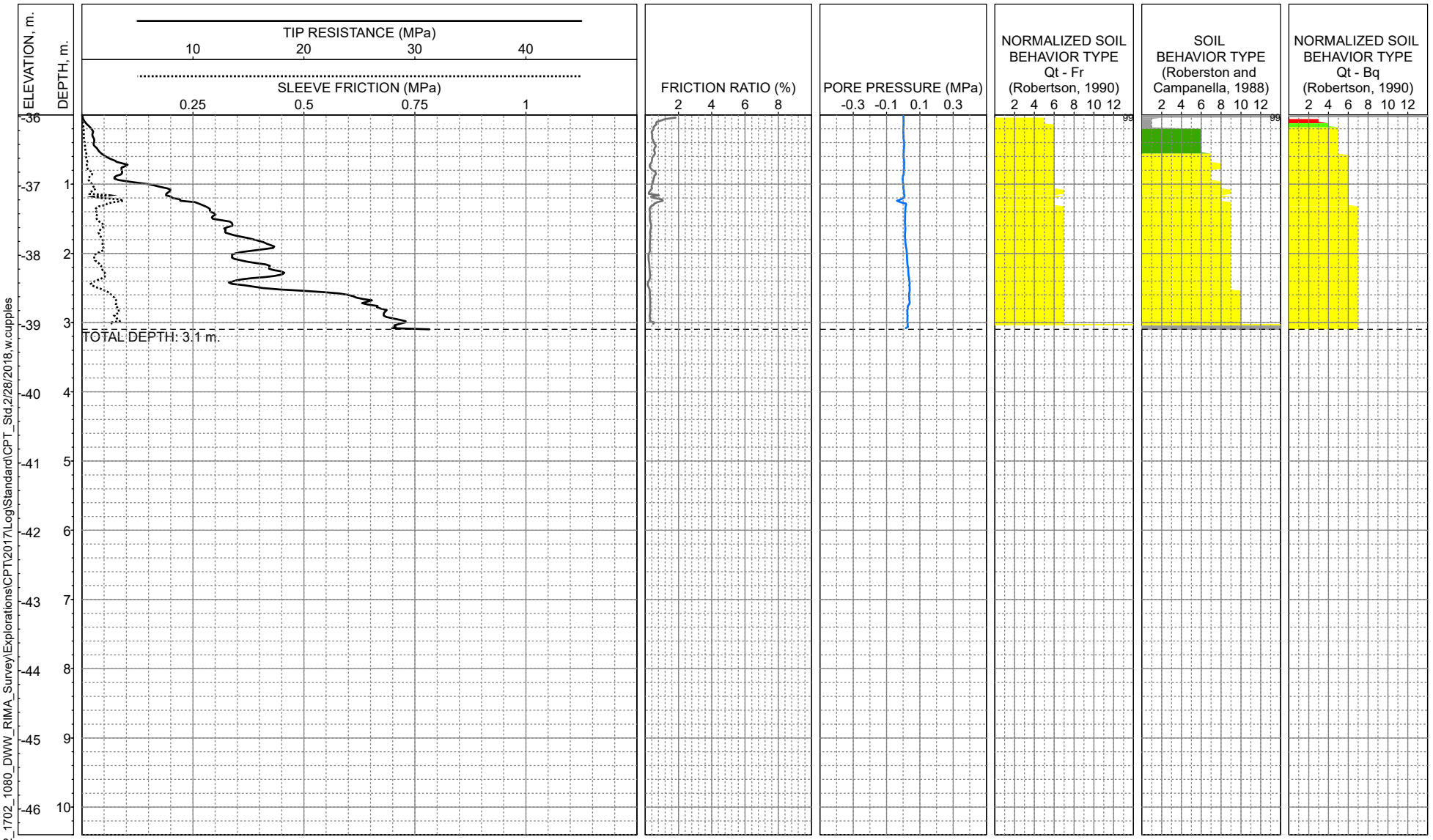
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 2.4m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Slope, tip threshold

LOG OF CPT C-101B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 6

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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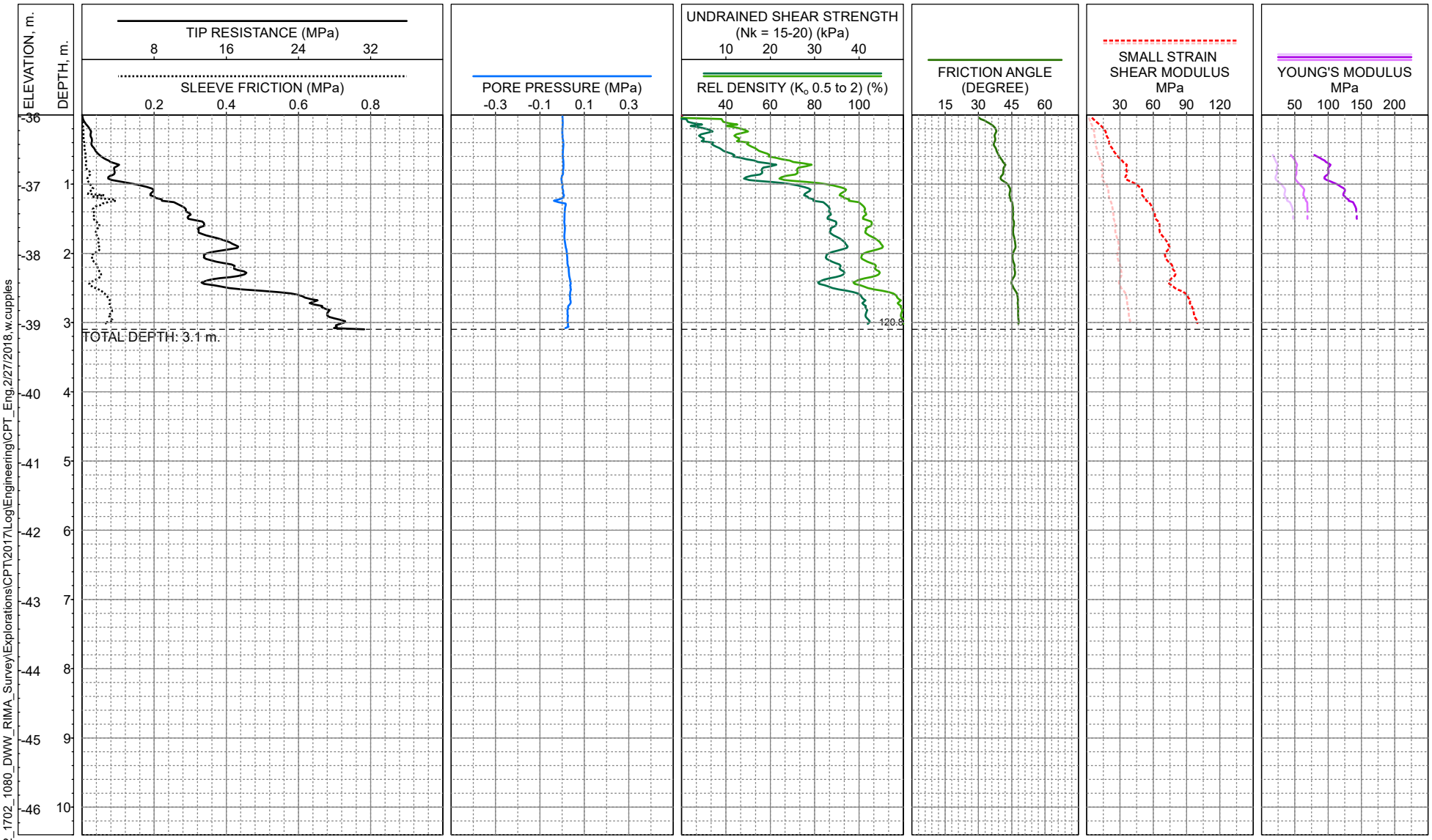
LOCATION: SFWF
SEAFLOOR EL: -36.0m (MLLW)
COMPLETION DEPTH: 3.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-102
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 7

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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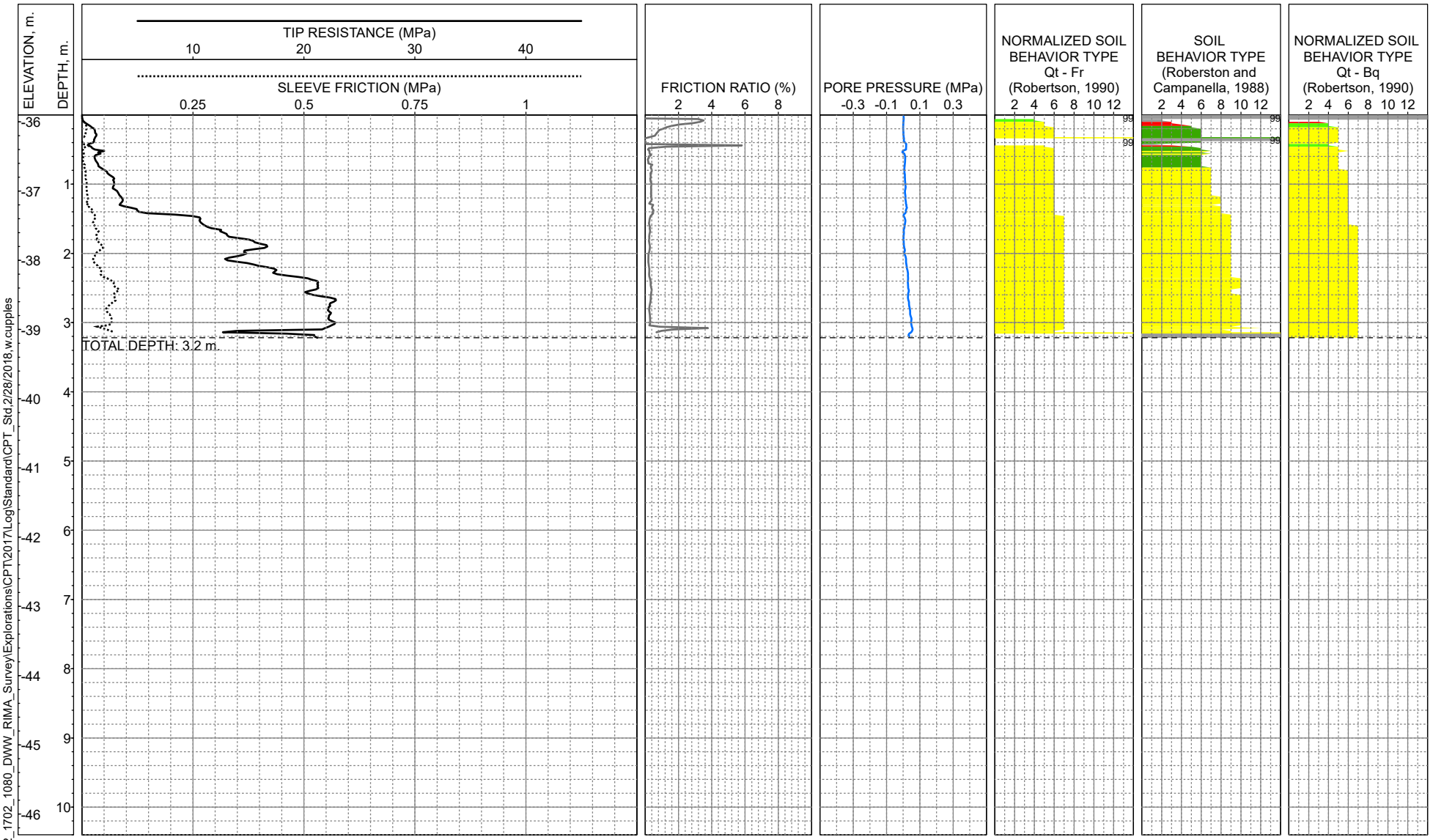
LOCATION: SFWF
SEAFLOOR EL: -36.0m (MLLW)
COMPLETION DEPTH: 3.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-102
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 7

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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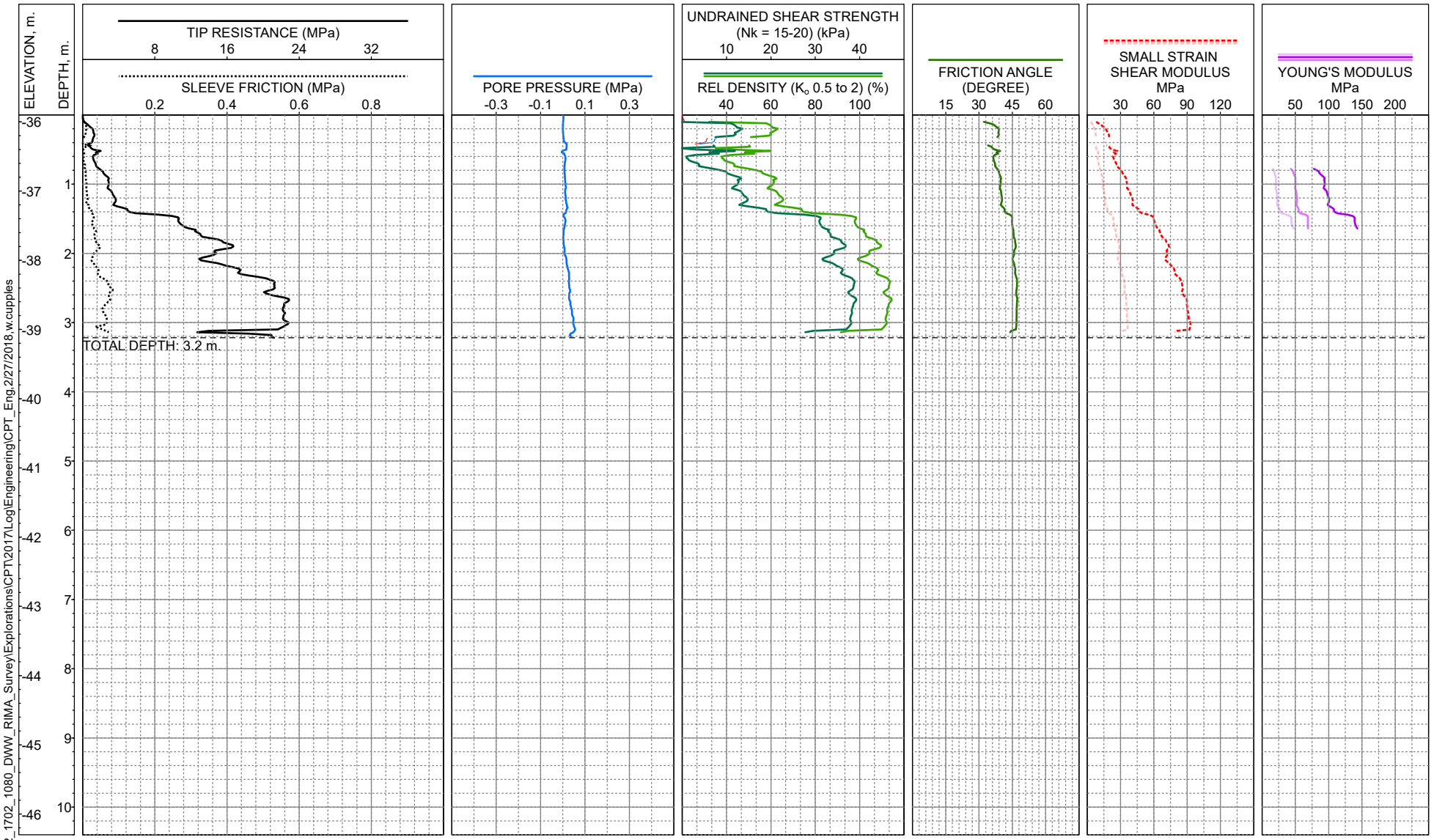
LOCATION: SFWF
SEAFLOOR EL: -35.9m (MLLW)
COMPLETION DEPTH: 3.2m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Target differnetial pressure

LOG OF CPT C-102A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 8

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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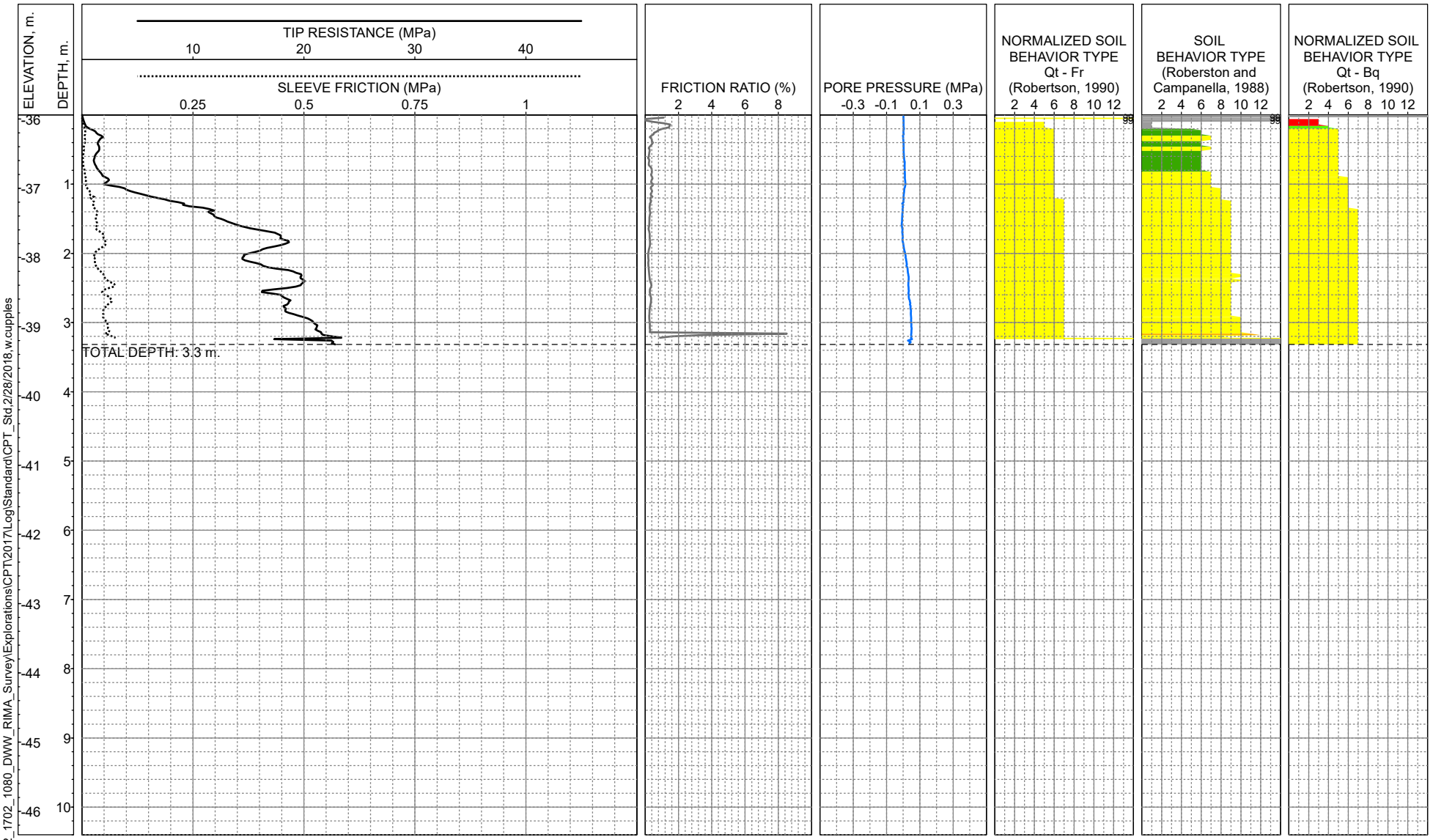
LOCATION: SFWF
SEAFLOOR EL: -35.9m (MLLW)
COMPLETION DEPTH: 3.2m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Target differnetial pressure

LOG OF CPT C-102A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 8

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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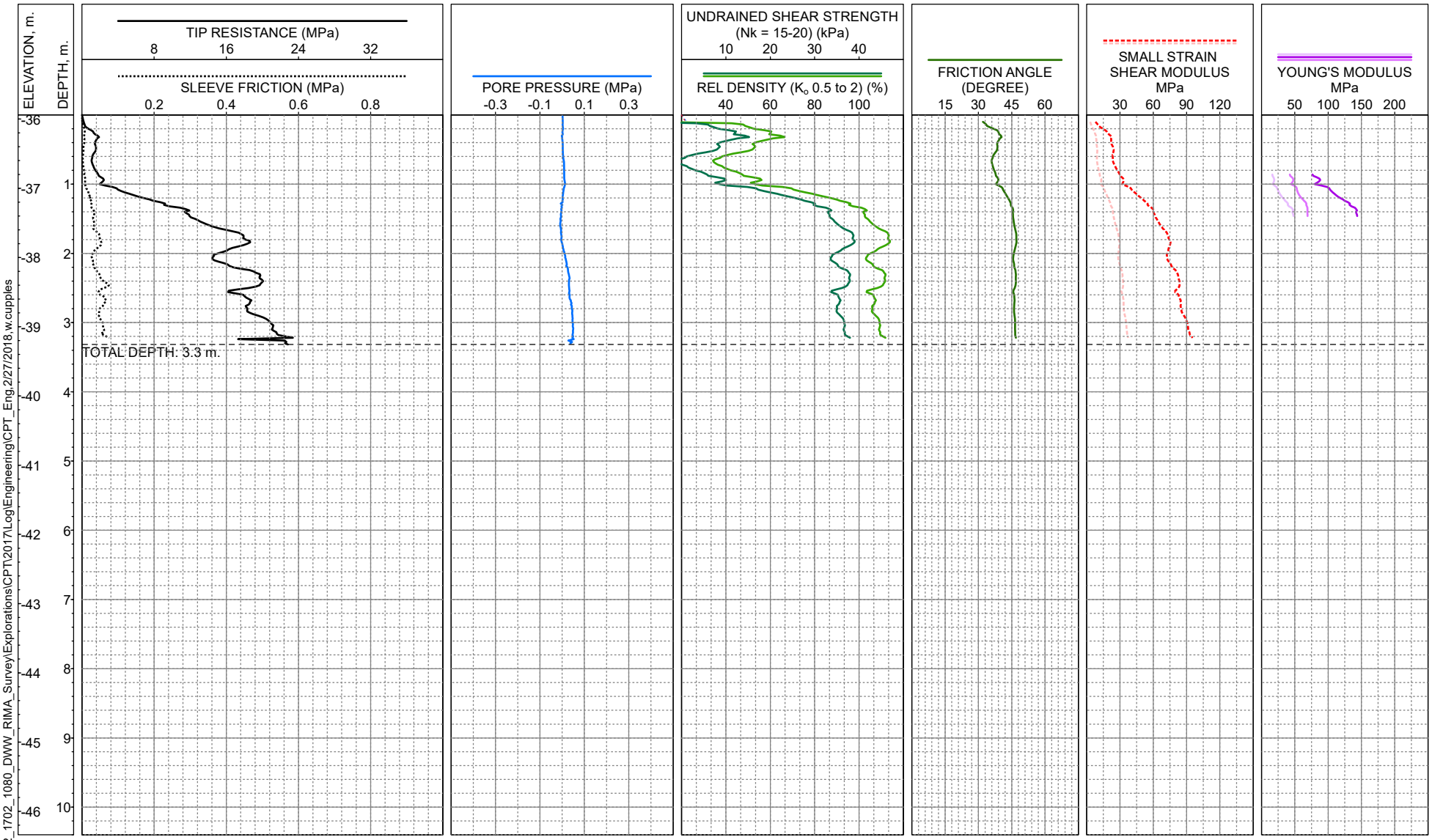
LOCATION: SFWF
SEAFLOOR EL: -35.9m (MLLW)
COMPLETION DEPTH: 3.3m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-102B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 9

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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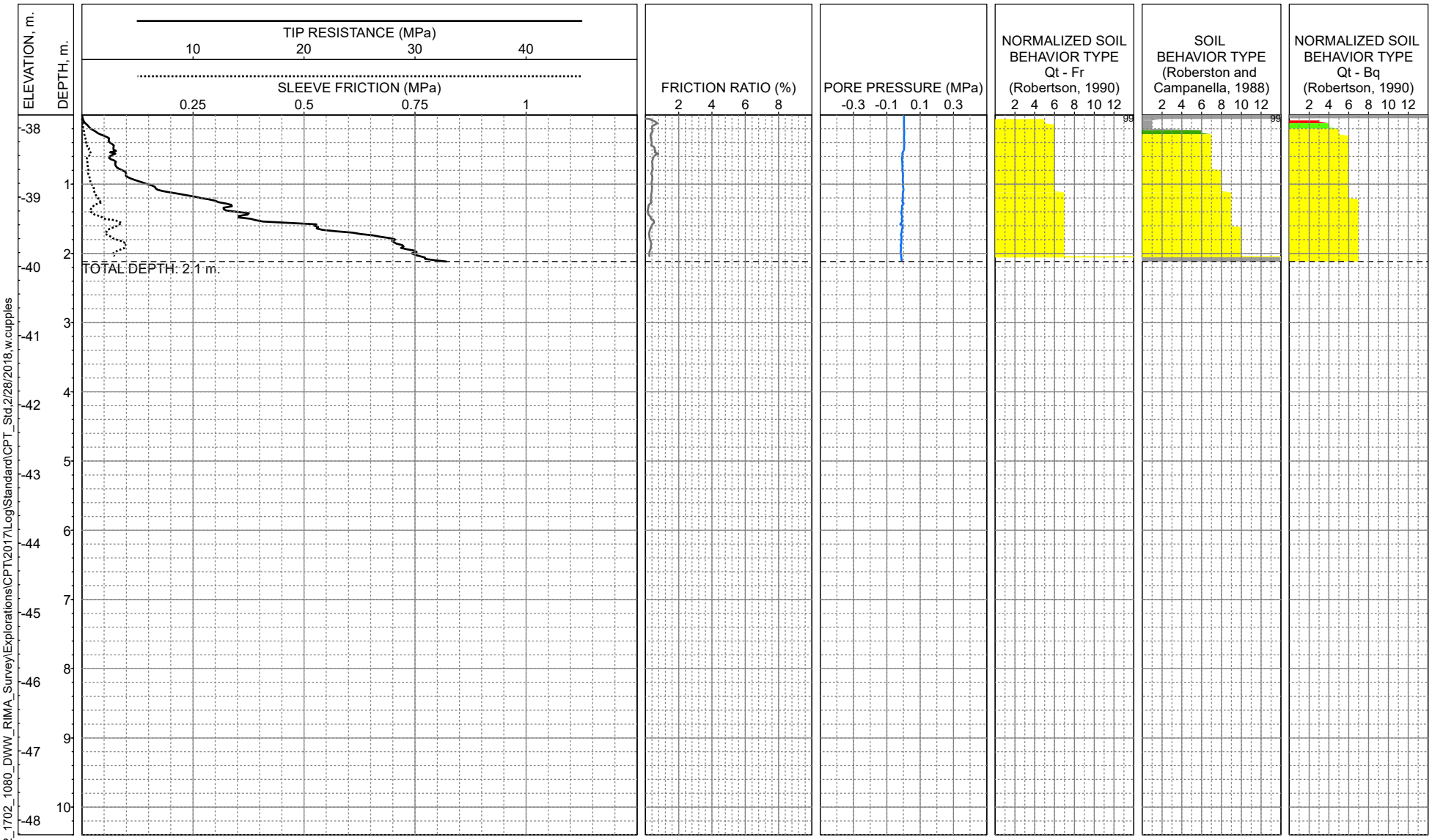
LOCATION: SFWF
SEAFLOOR EL: -35.9m (MLLW)
COMPLETION DEPTH: 3.3m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-102B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 9

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

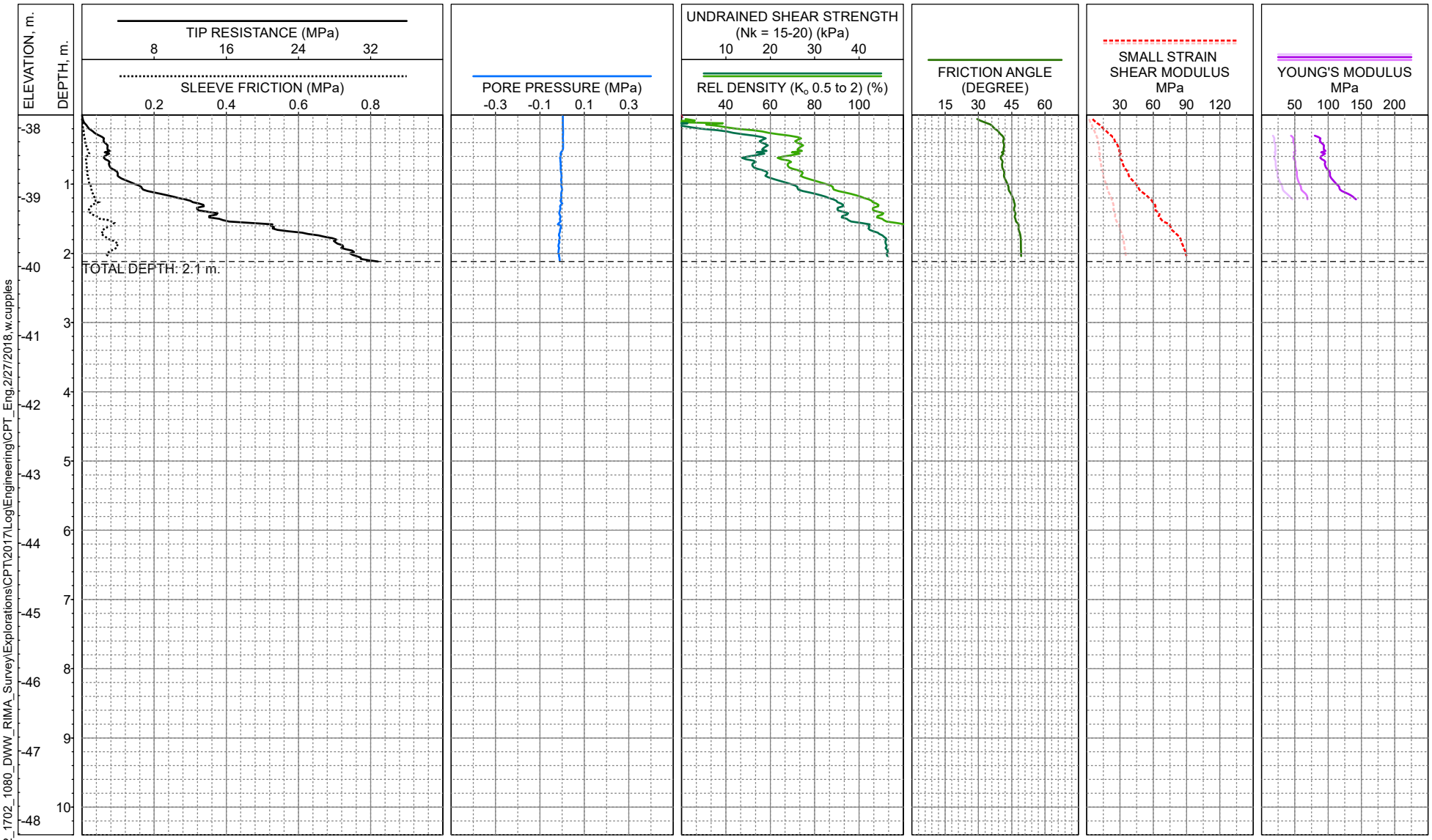
LOCATION: SFWF
SEAFLOOR EL: -37.8m (MLLW)
COMPLETION DEPTH: 2.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 10

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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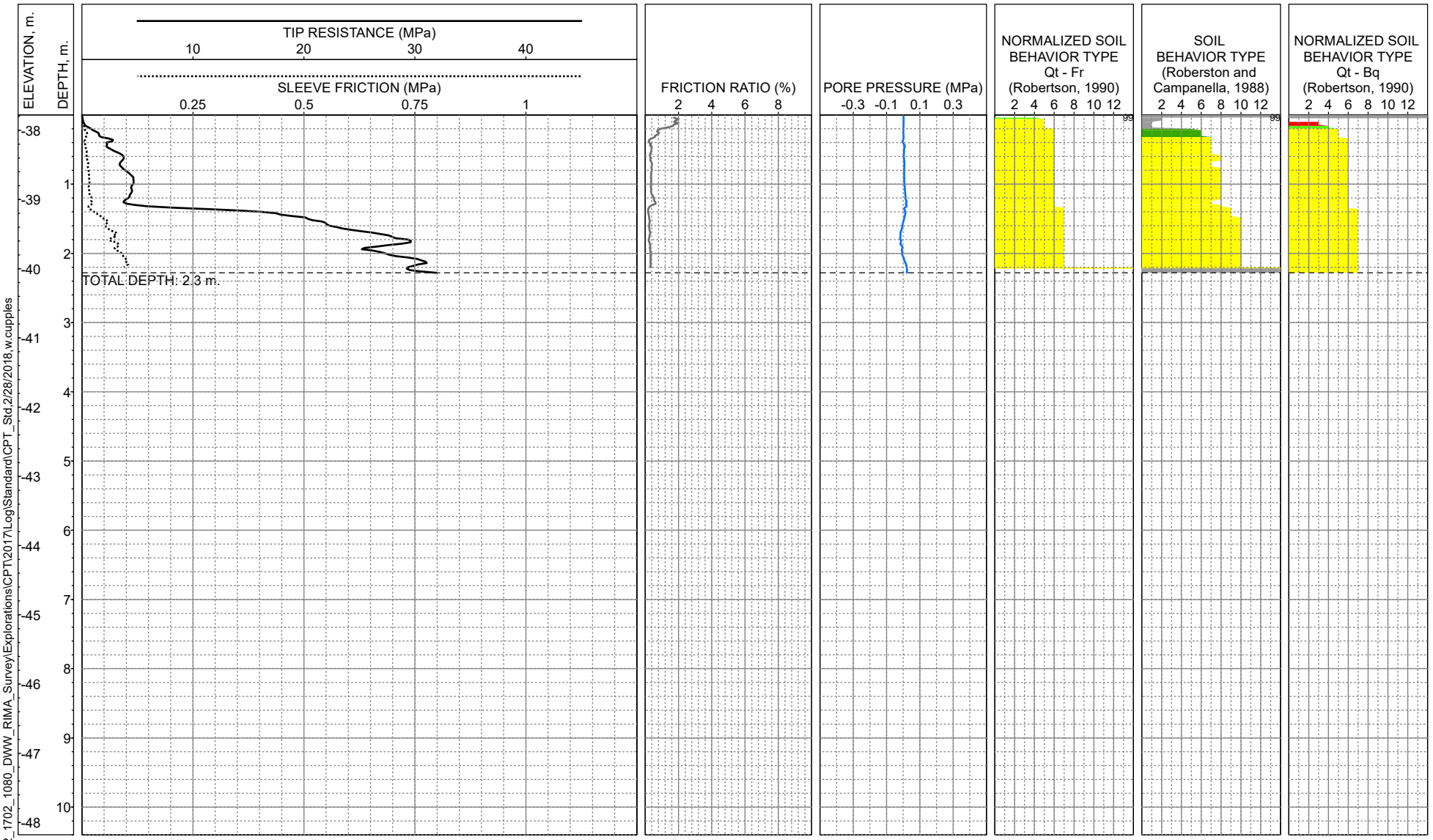
LOCATION: SFWF
SEAFLOOR EL: -37.8m (MLLW)
COMPLETION DEPTH: 2.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 10

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

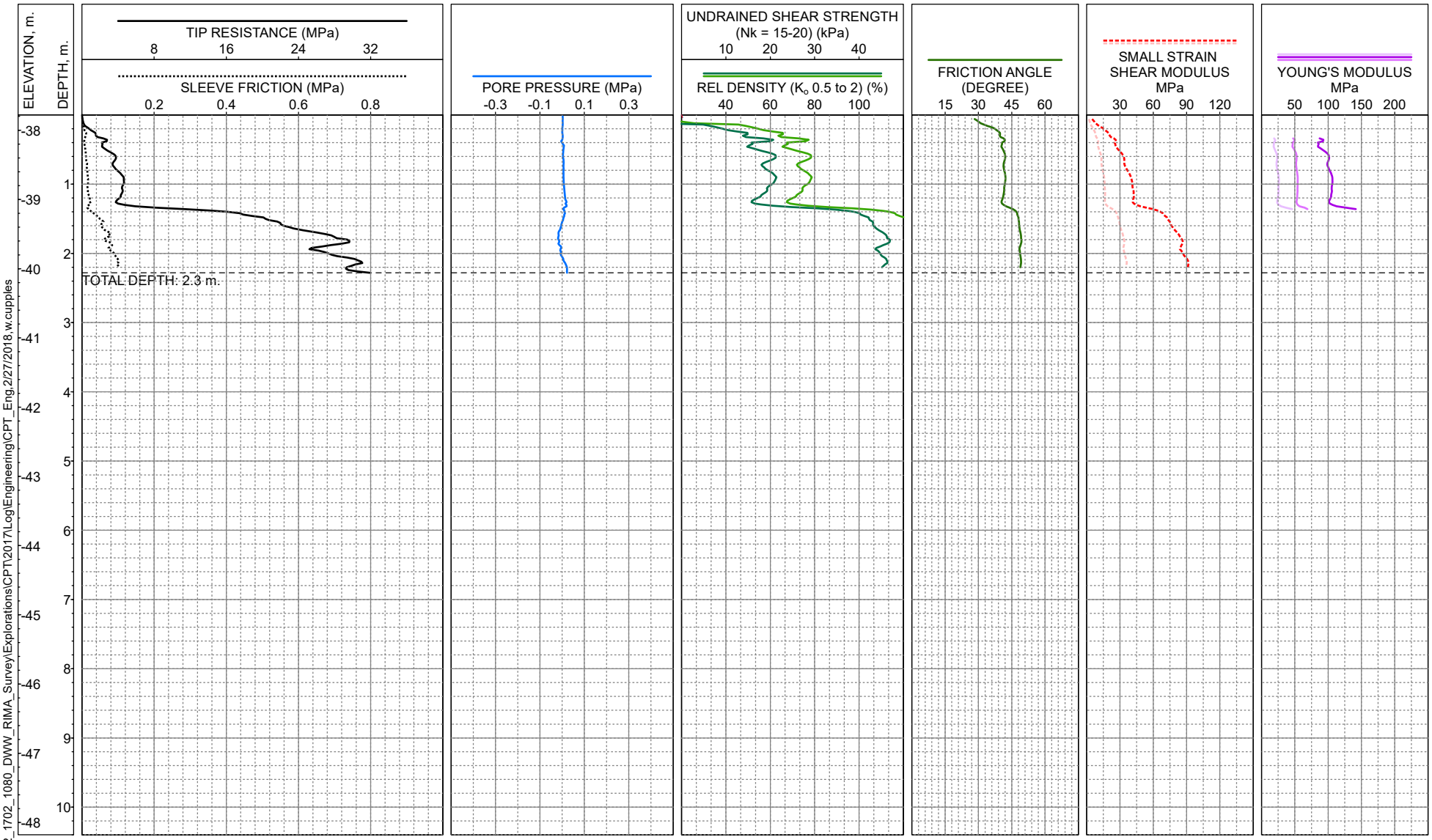
LOCATION: SFWF
SEAFLOOR EL: -37.8m (MLLW)
COMPLETION DEPTH: 2.3m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 11

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

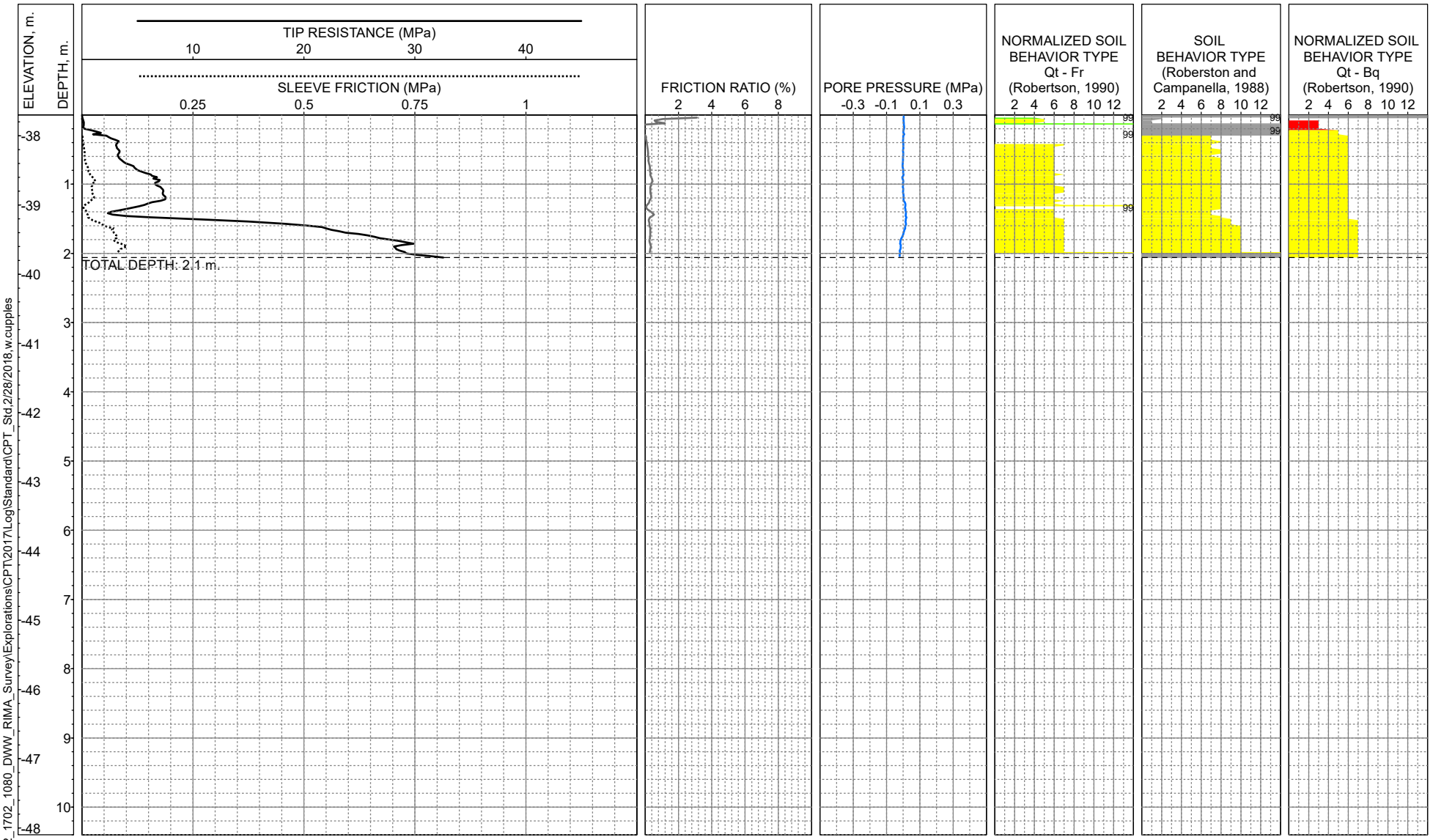
LOCATION: SFWF
SEAFLOOR EL: -37.8m (MLLW)
COMPLETION DEPTH: 2.3m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 11

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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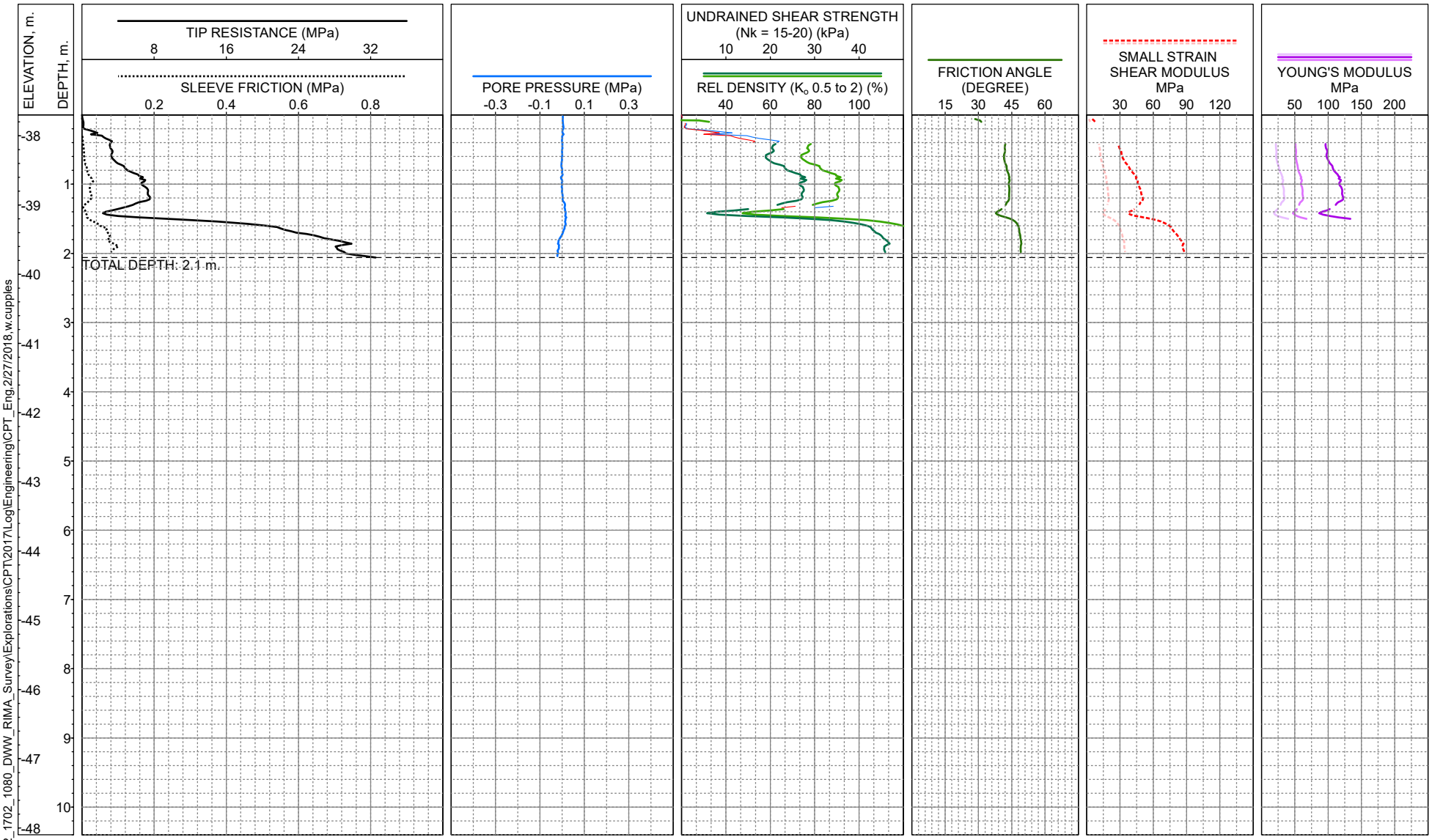
LOCATION: SFWF
SEAFLOOR EL: -37.7m (MLLW)
COMPLETION DEPTH: 2.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 12

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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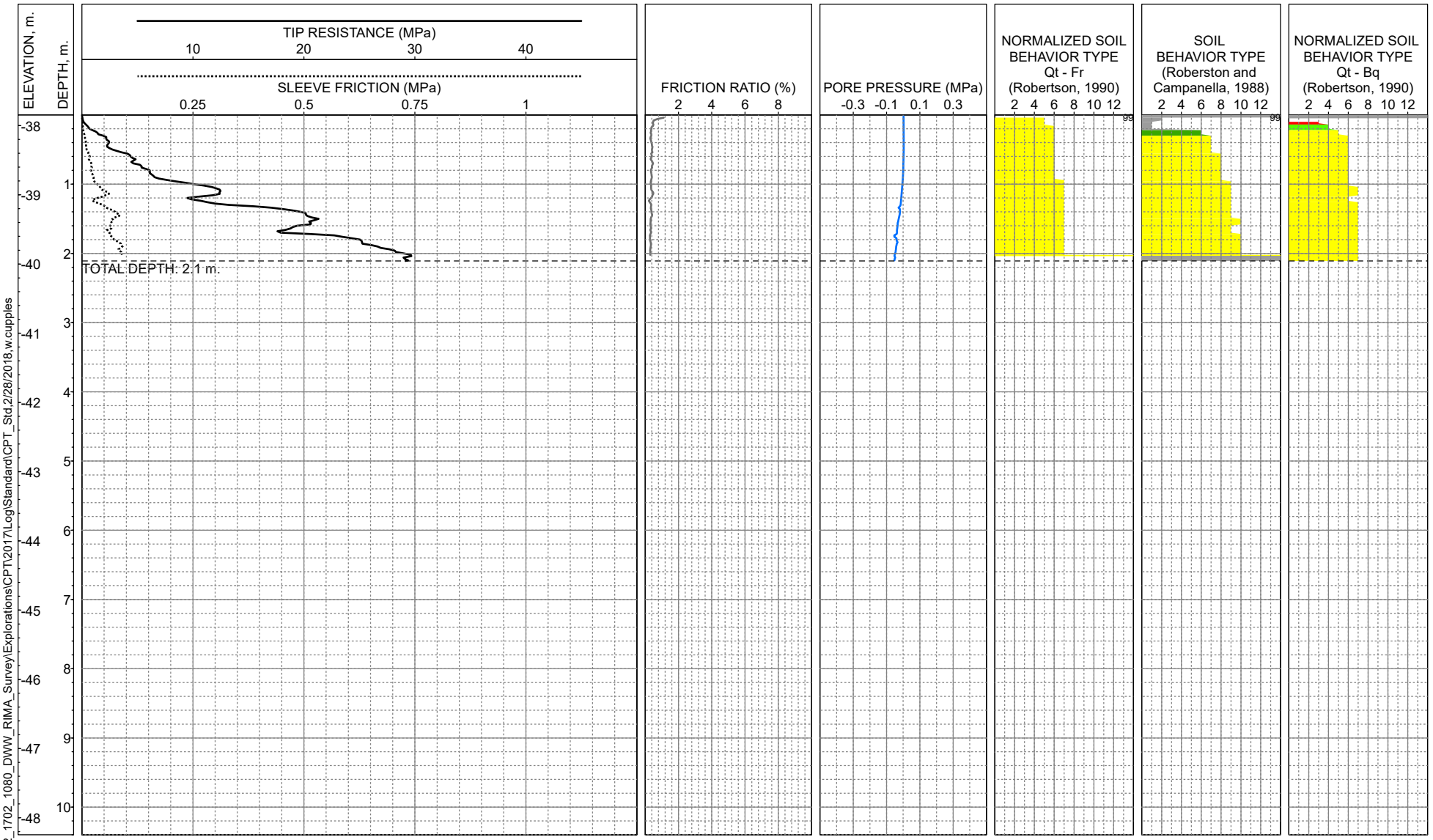
LOCATION: SFWF
SEAFLOOR EL: -37.7m (MLLW)
COMPLETION DEPTH: 2.1m
TEST DATE: 11/11/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 12

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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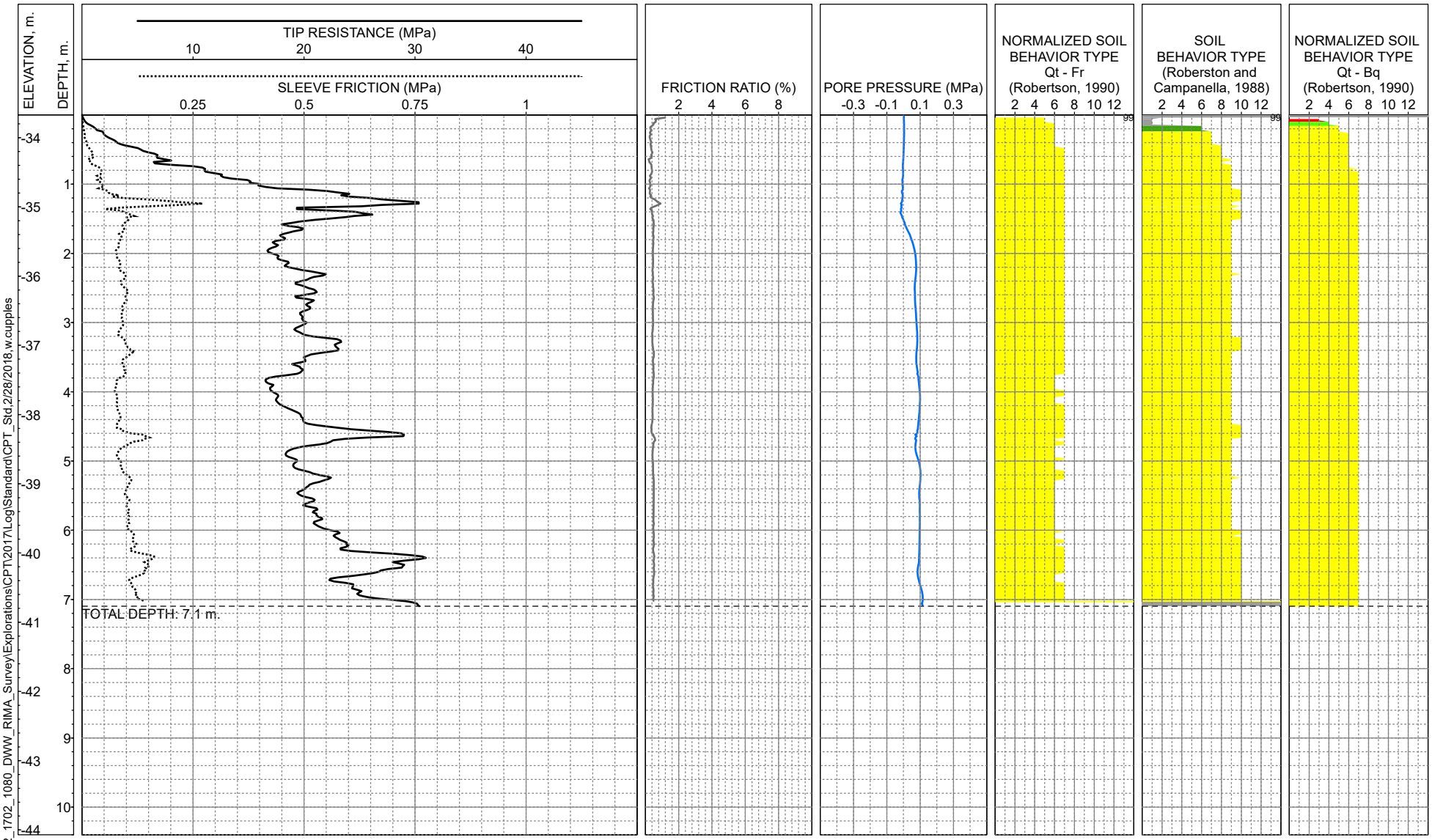
LOCATION: SFWF
SEAFLOOR EL: -37.8m (MLLW)
COMPLETION DEPTH: 2.1m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-103C
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 13

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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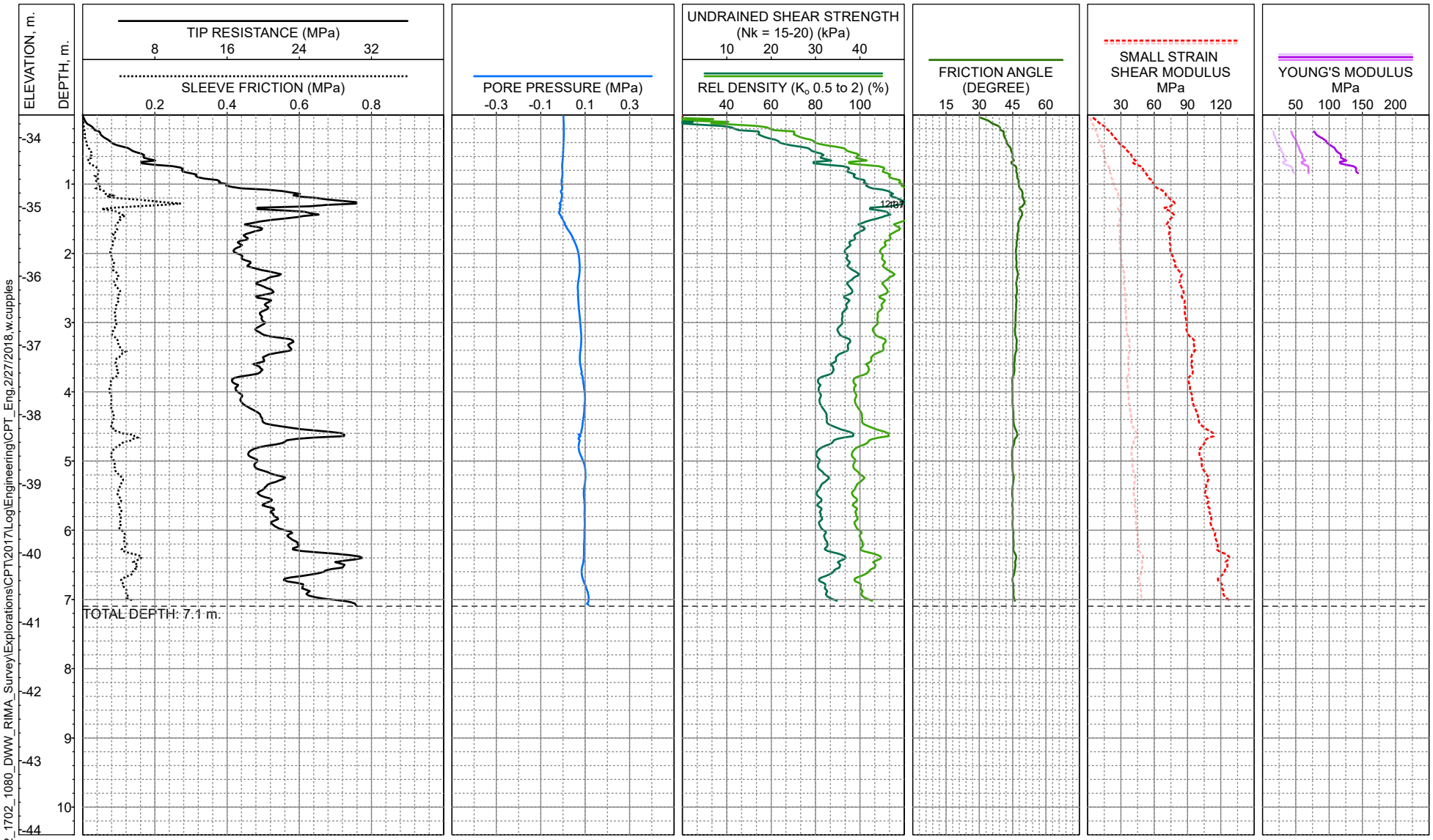
LOCATION: SFWF
SEAFLOOR EL: -33.7m (MLLW)
COMPLETION DEPTH: 7.1m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-104
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 14

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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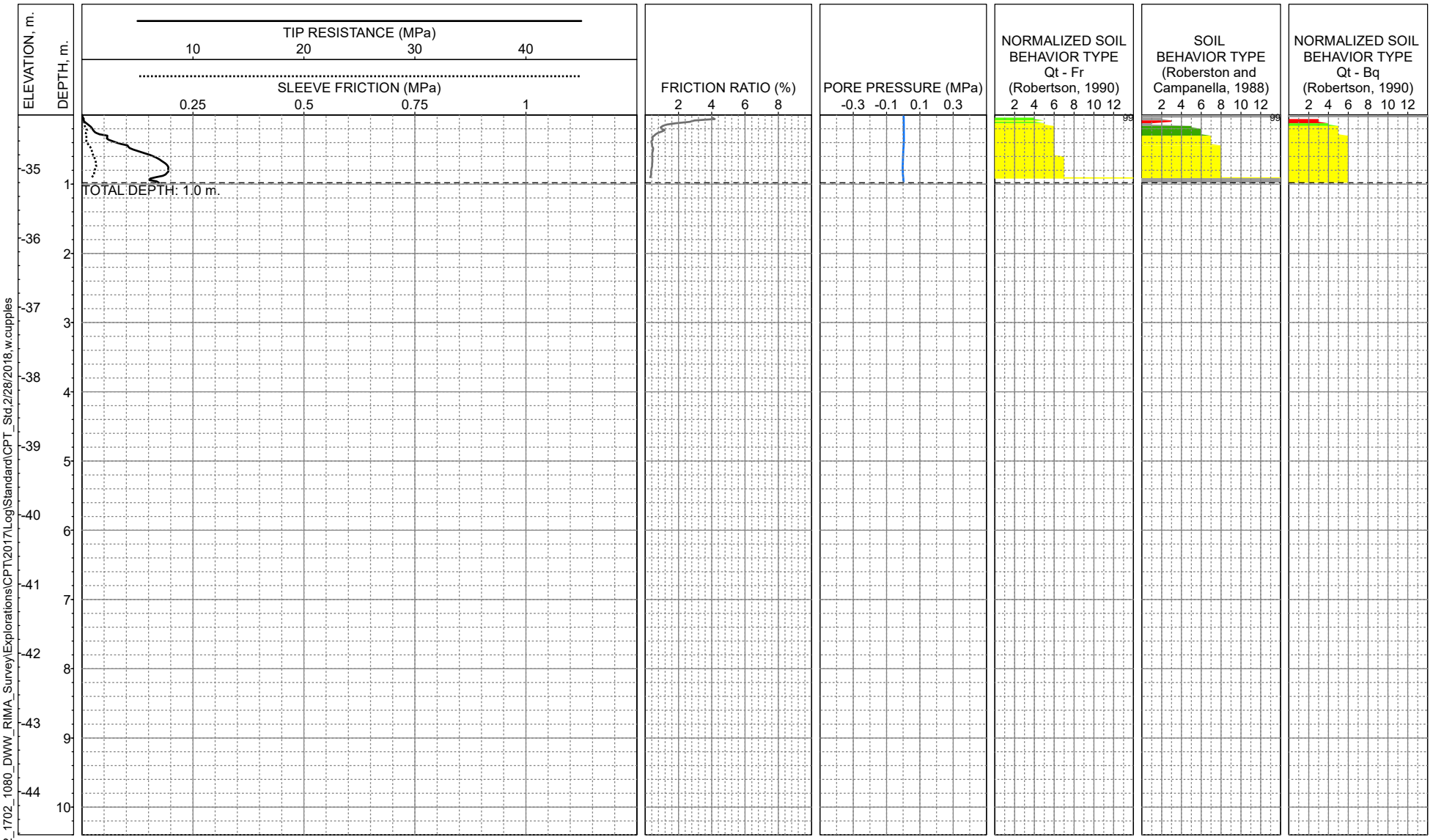
LOCATION: SFWF
SEAFLOOR EL: -33.7m (MLLW)
COMPLETION DEPTH: 7.1m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-104
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 14

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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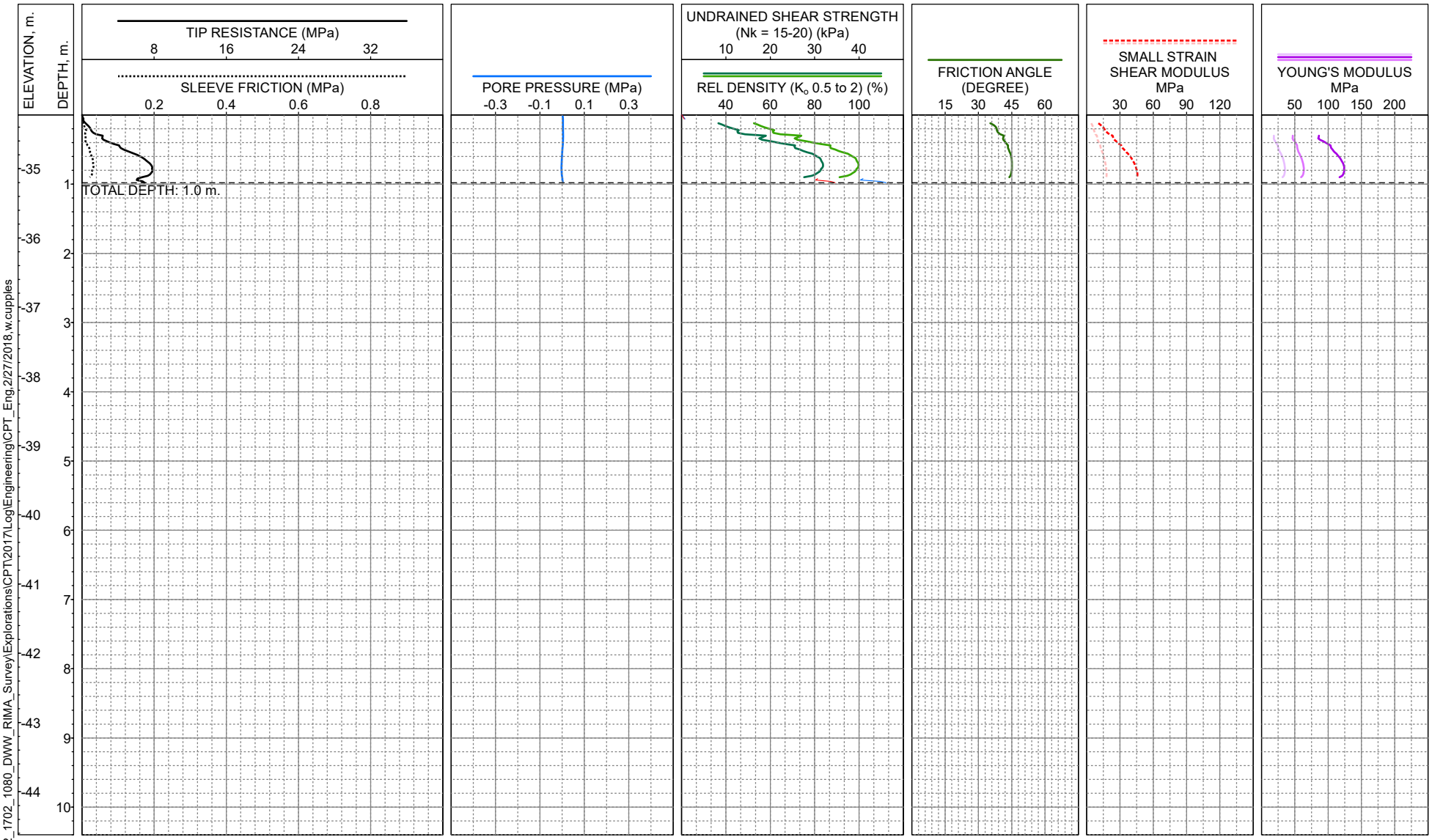
LOCATION: SFWF
SEAFLOOR EL: -34.2m (MLLW)
COMPLETION DEPTH: 1.0m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-105
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 15

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -34.2m (MLLW)
COMPLETION DEPTH: 1.0m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-105
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 15

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

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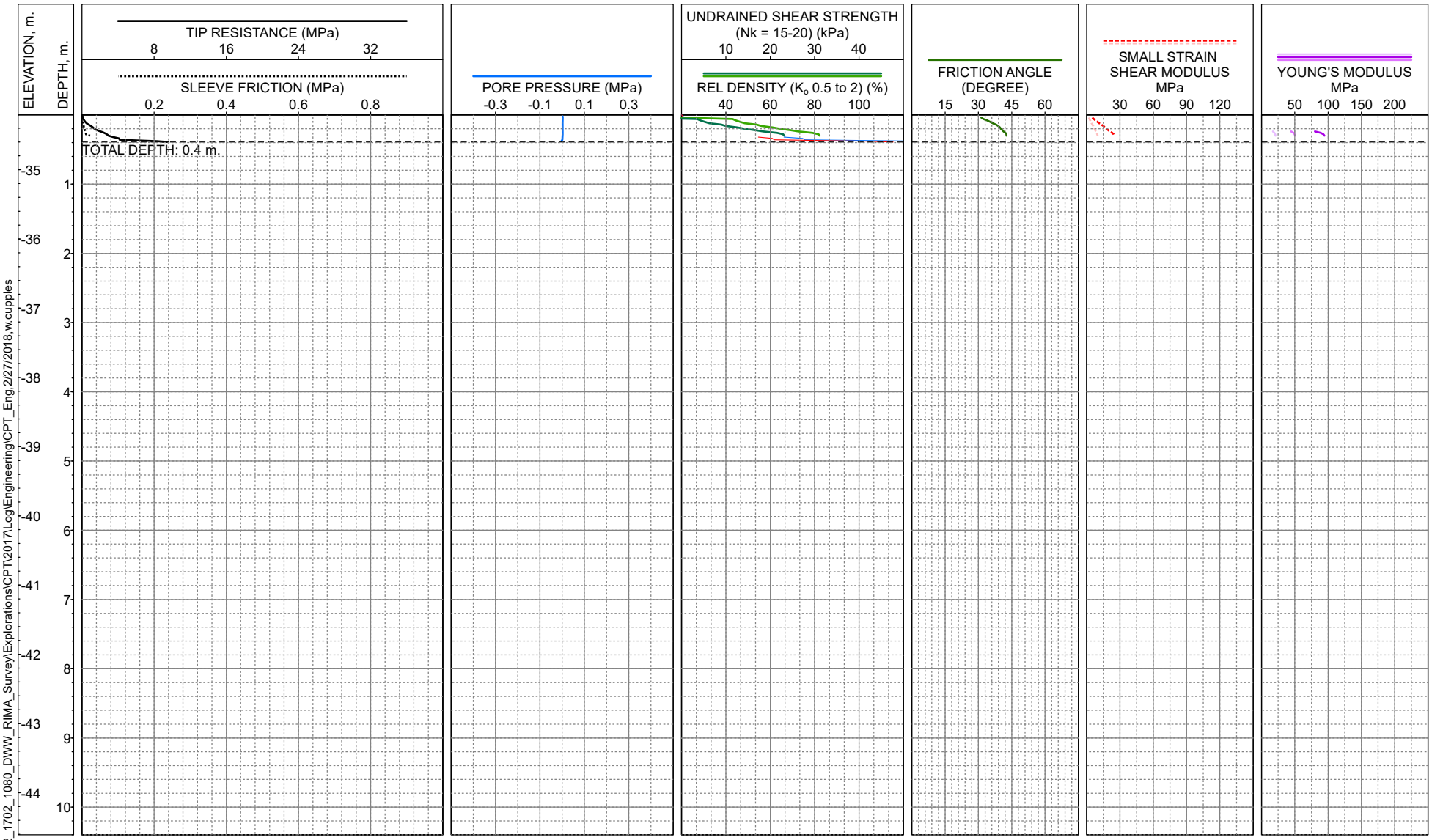
LOCATION: SFWF
SEAFLOOR EL: -34.2m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-105A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 16

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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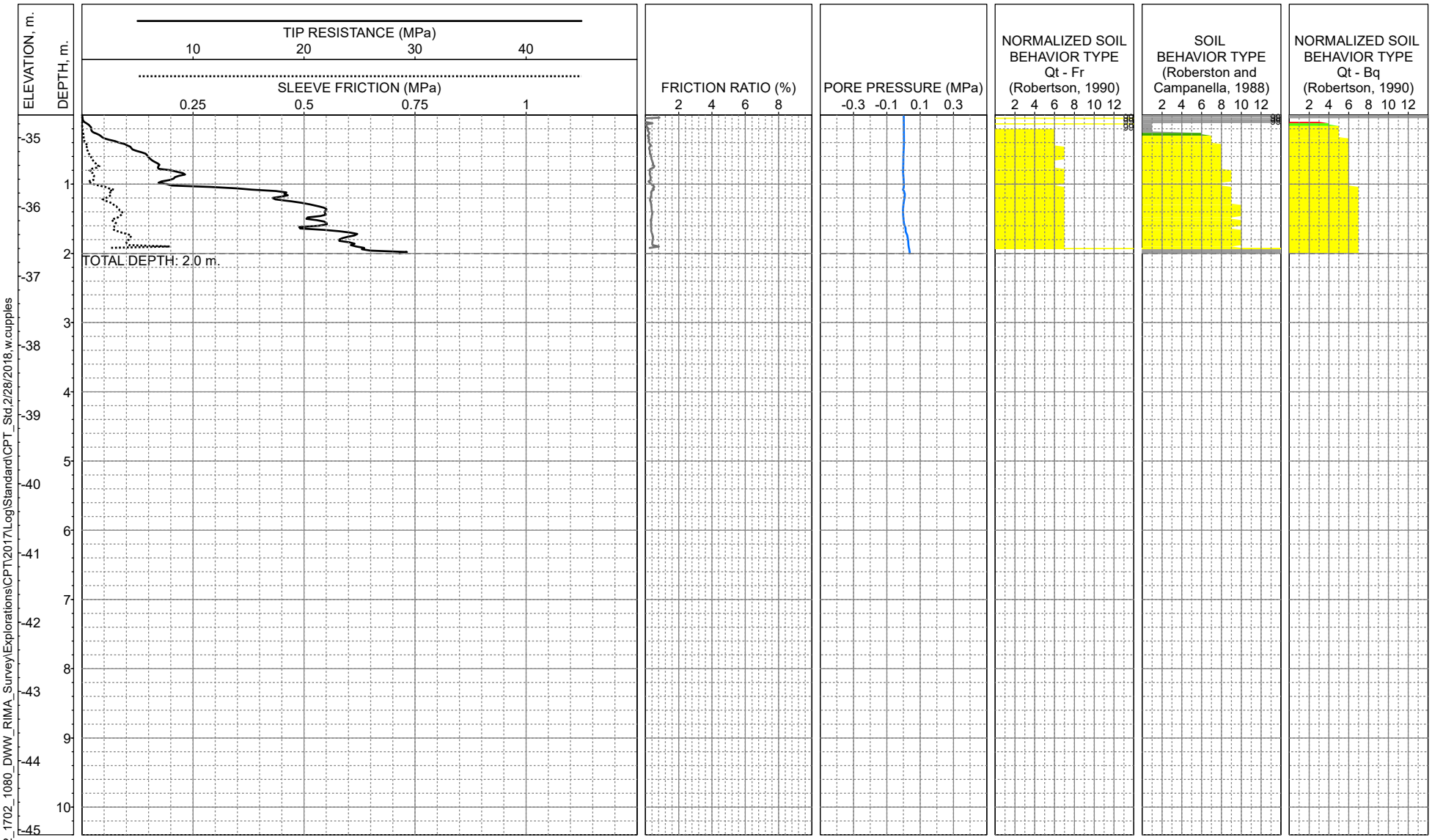
LOCATION: SFWF
SEAFLOOR EL: -34.2m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-105A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 16

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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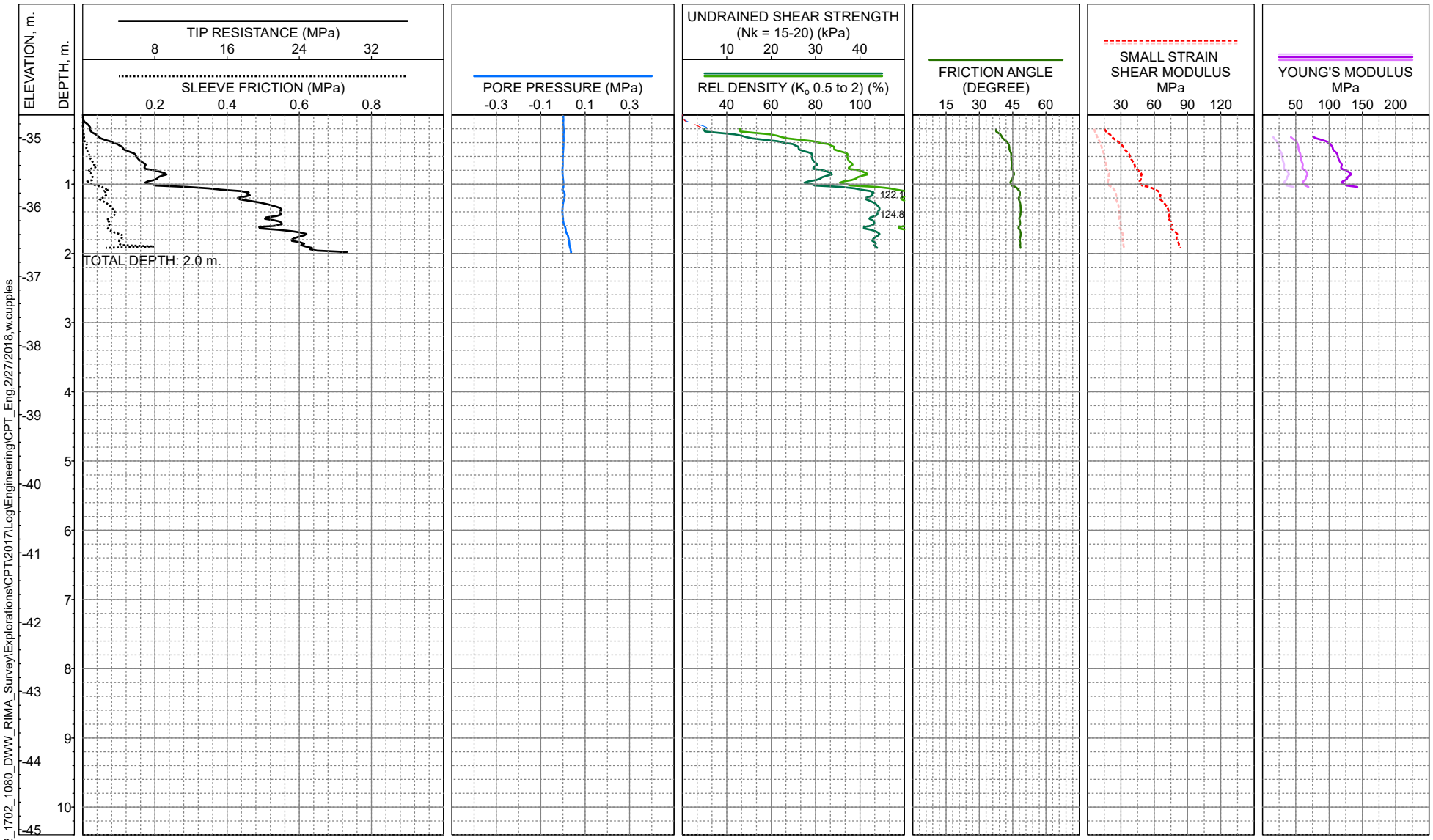
LOCATION: SFWF
SEAFLOOR EL: -34.7m (MLLW)
COMPLETION DEPTH: 2.0m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-106
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 17

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -34.7m (MLLW)
COMPLETION DEPTH: 2.0m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-106
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 17

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

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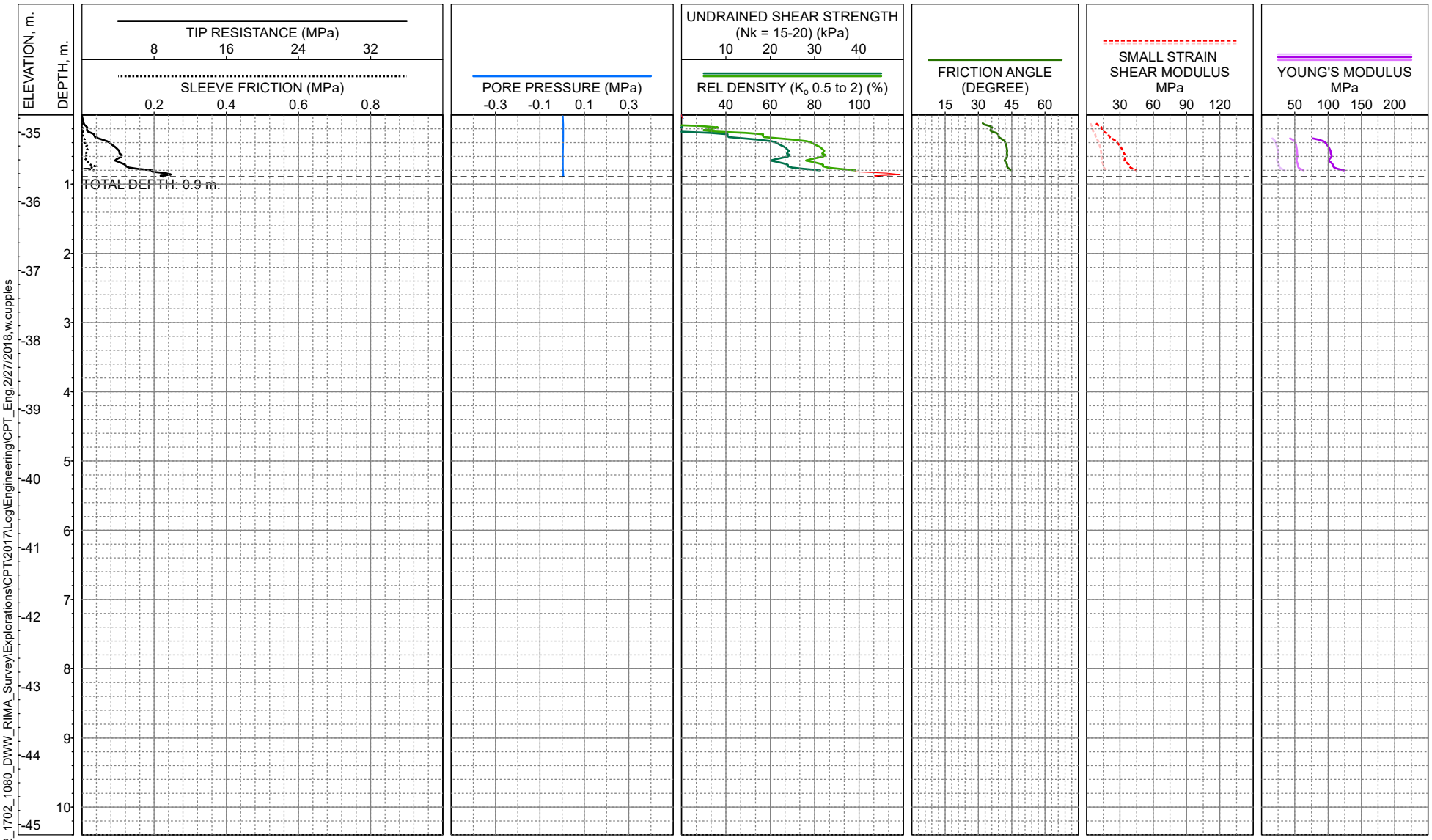
LOCATION: SFWF
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.9m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-106A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 18

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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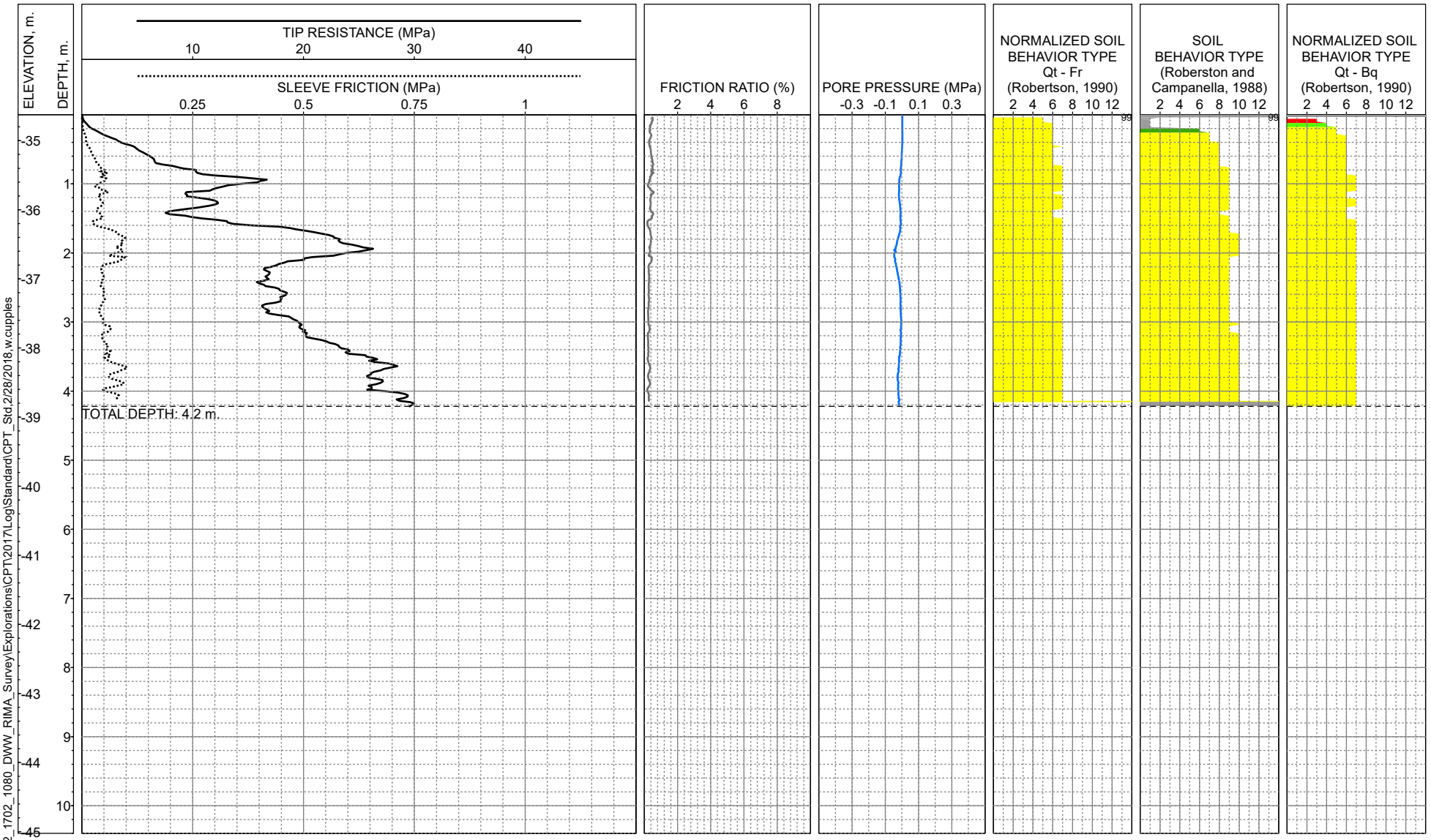
LOCATION: SFWF
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.9m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-106A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 18

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -34.6m (MLLW)
COMPLETION DEPTH: 4.2m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-106B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 19

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

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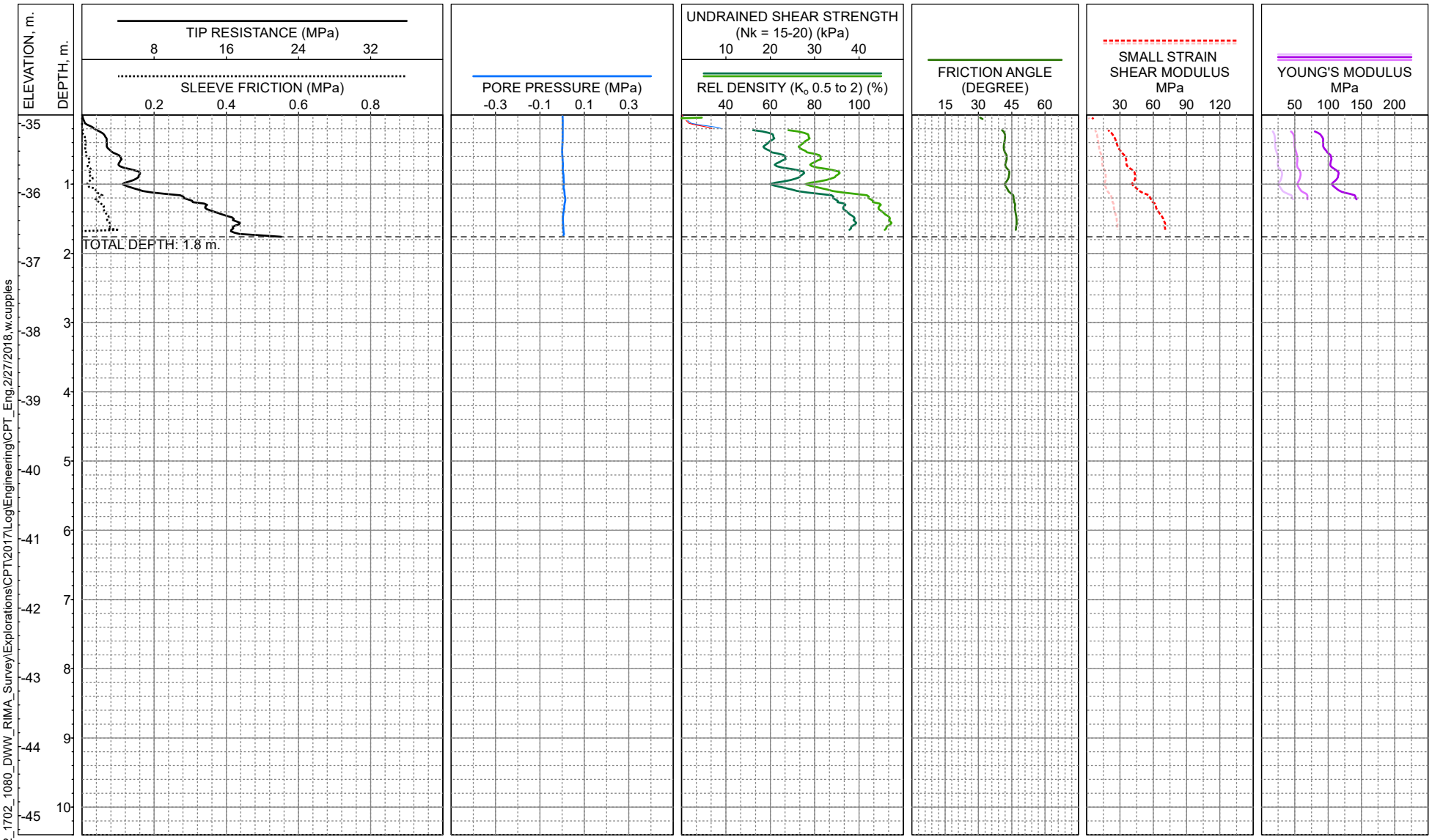
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 1.8m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-107
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 20

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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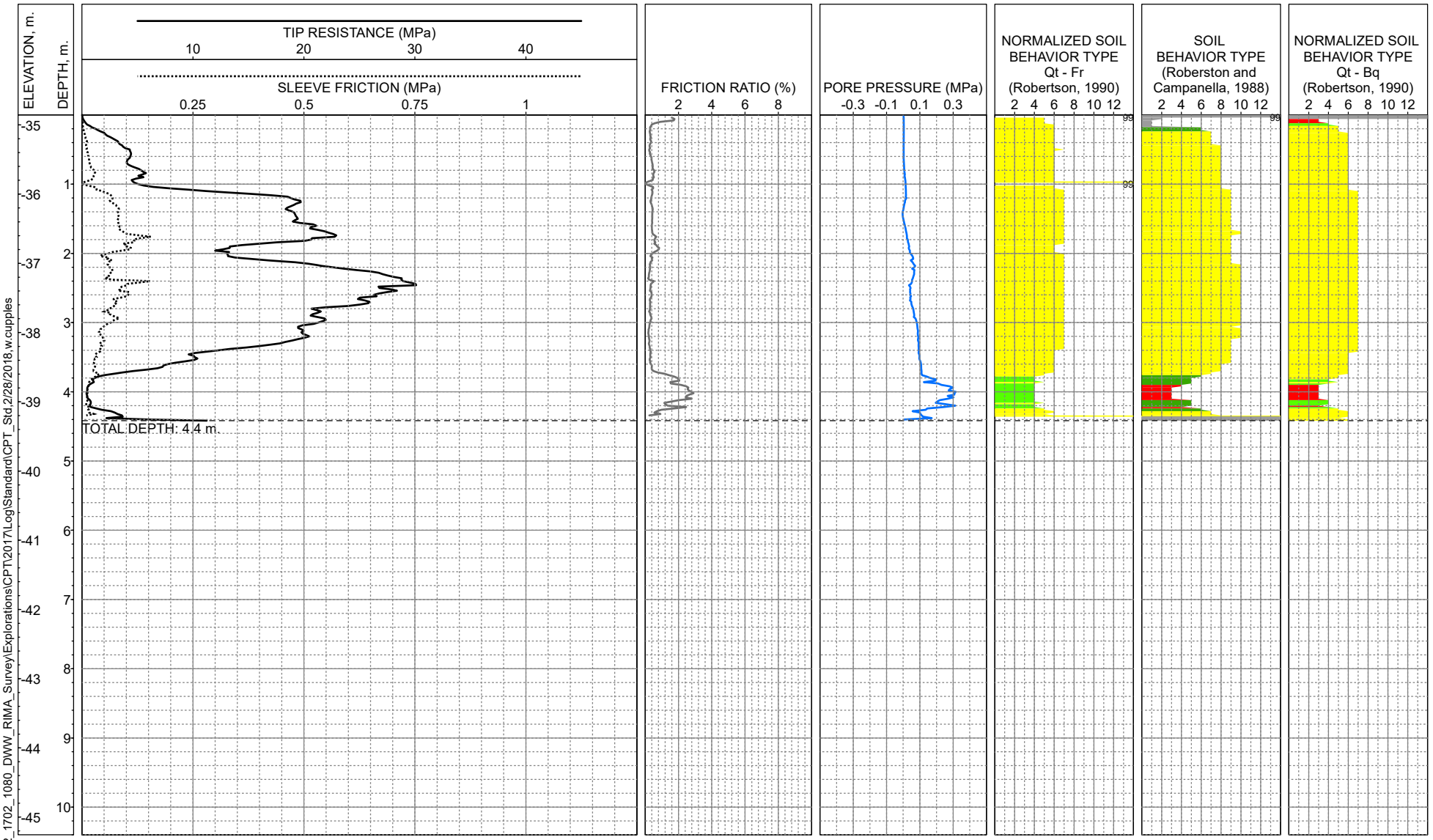
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 1.8m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-107
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 20

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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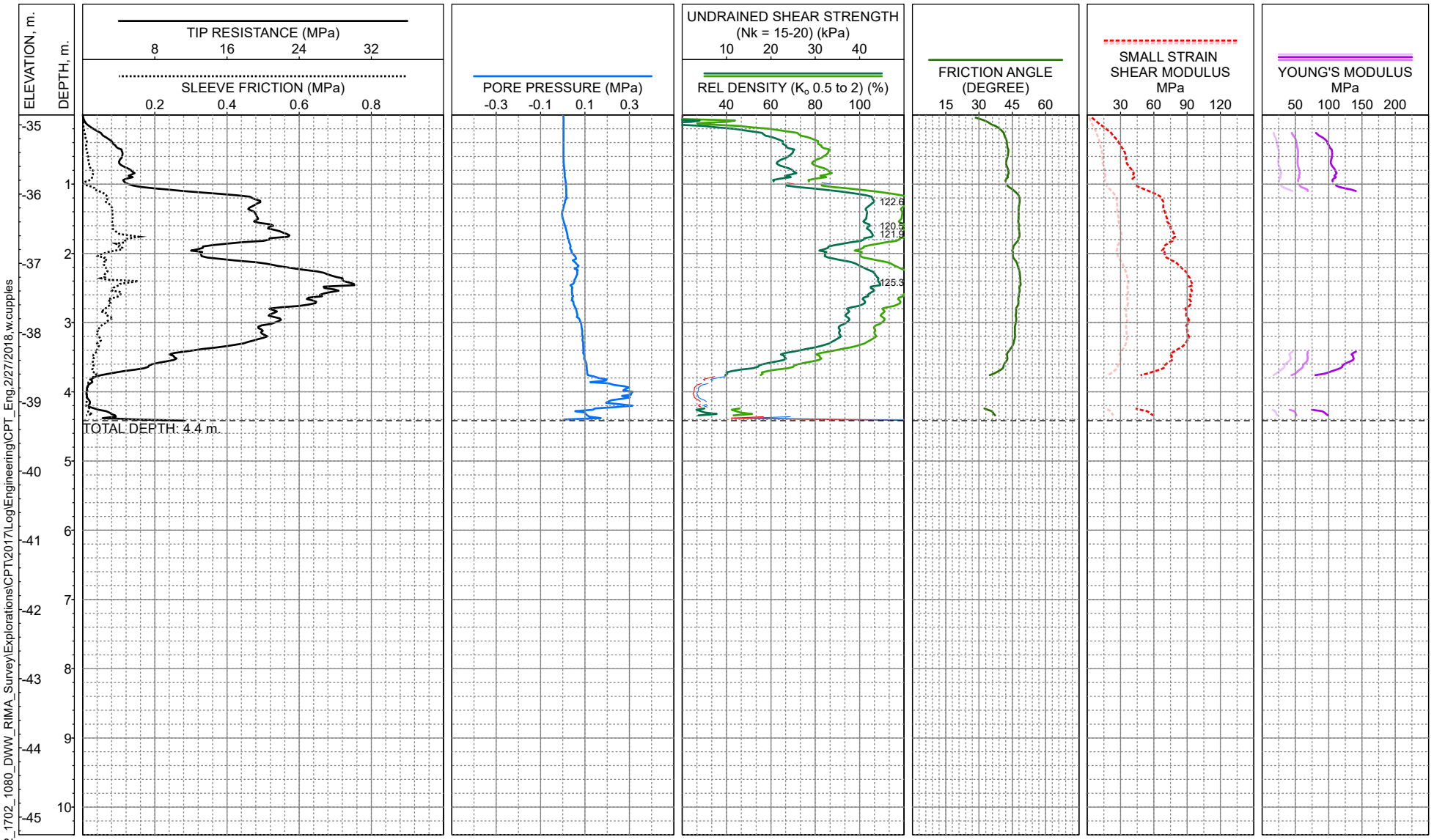
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 4.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-107A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 21

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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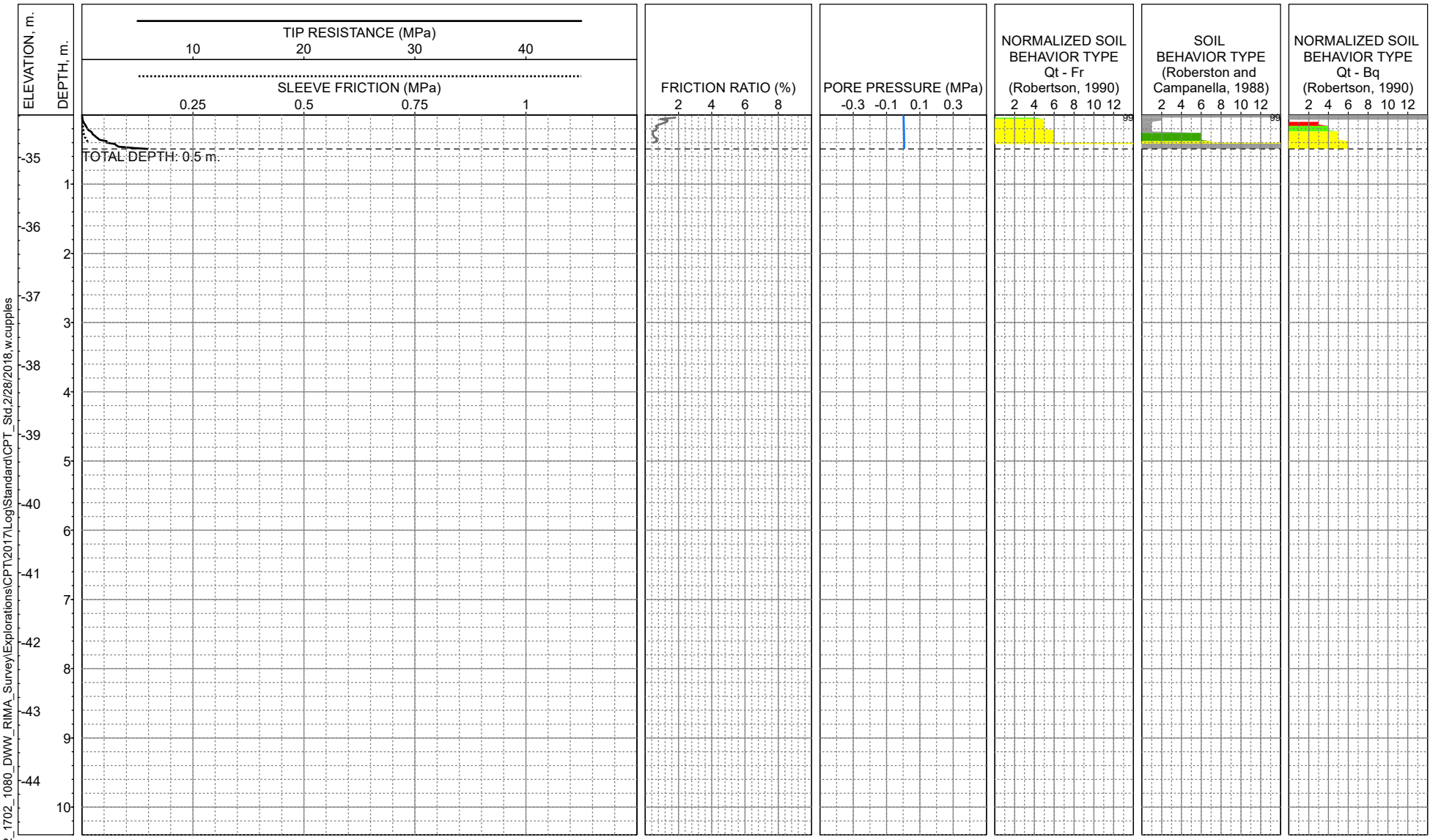
LOCATION: SFWF
SEAFLOOR EL: -34.9m (MLLW)
COMPLETION DEPTH: 4.4m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-107A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 21

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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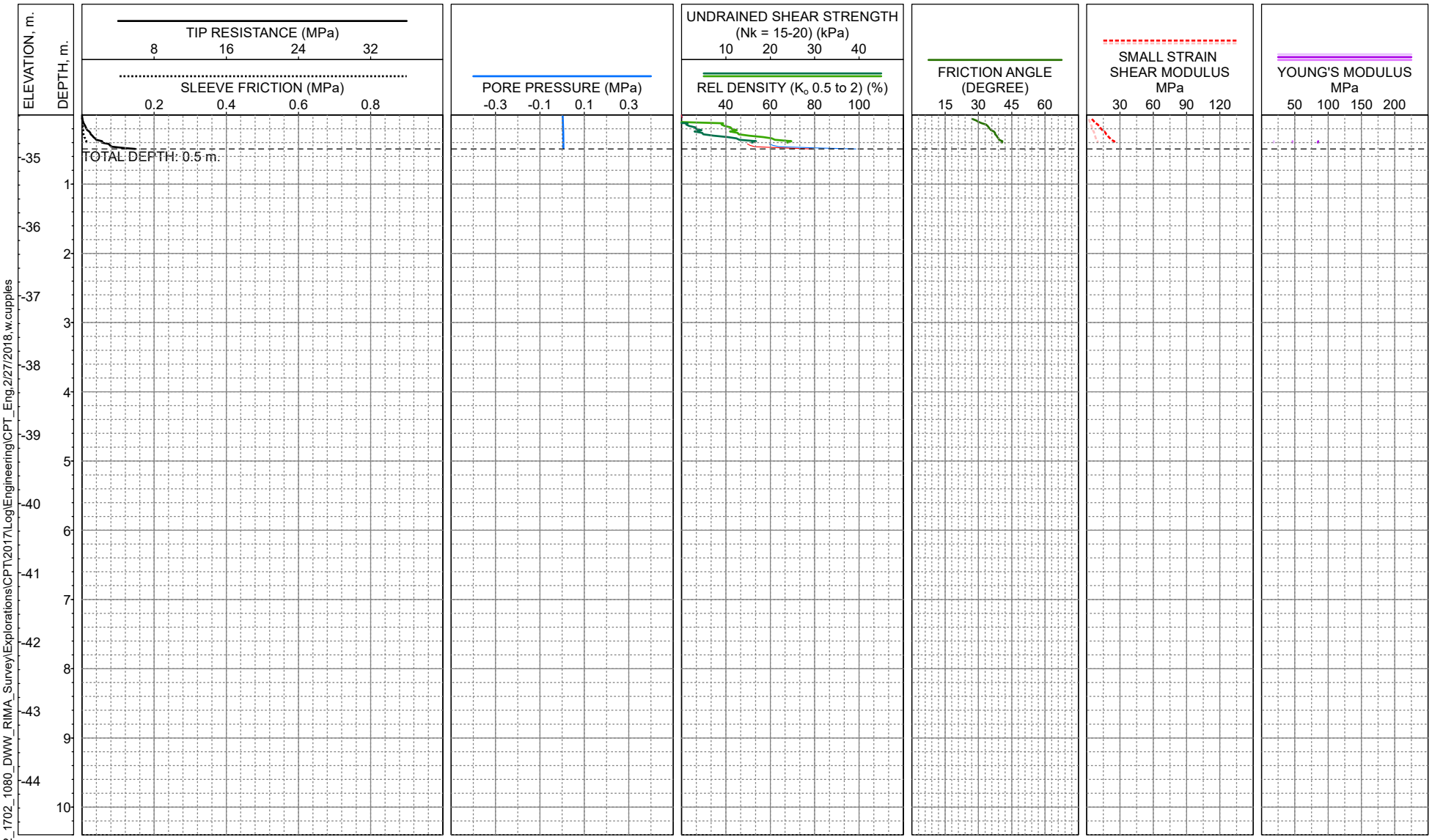
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-108
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 22

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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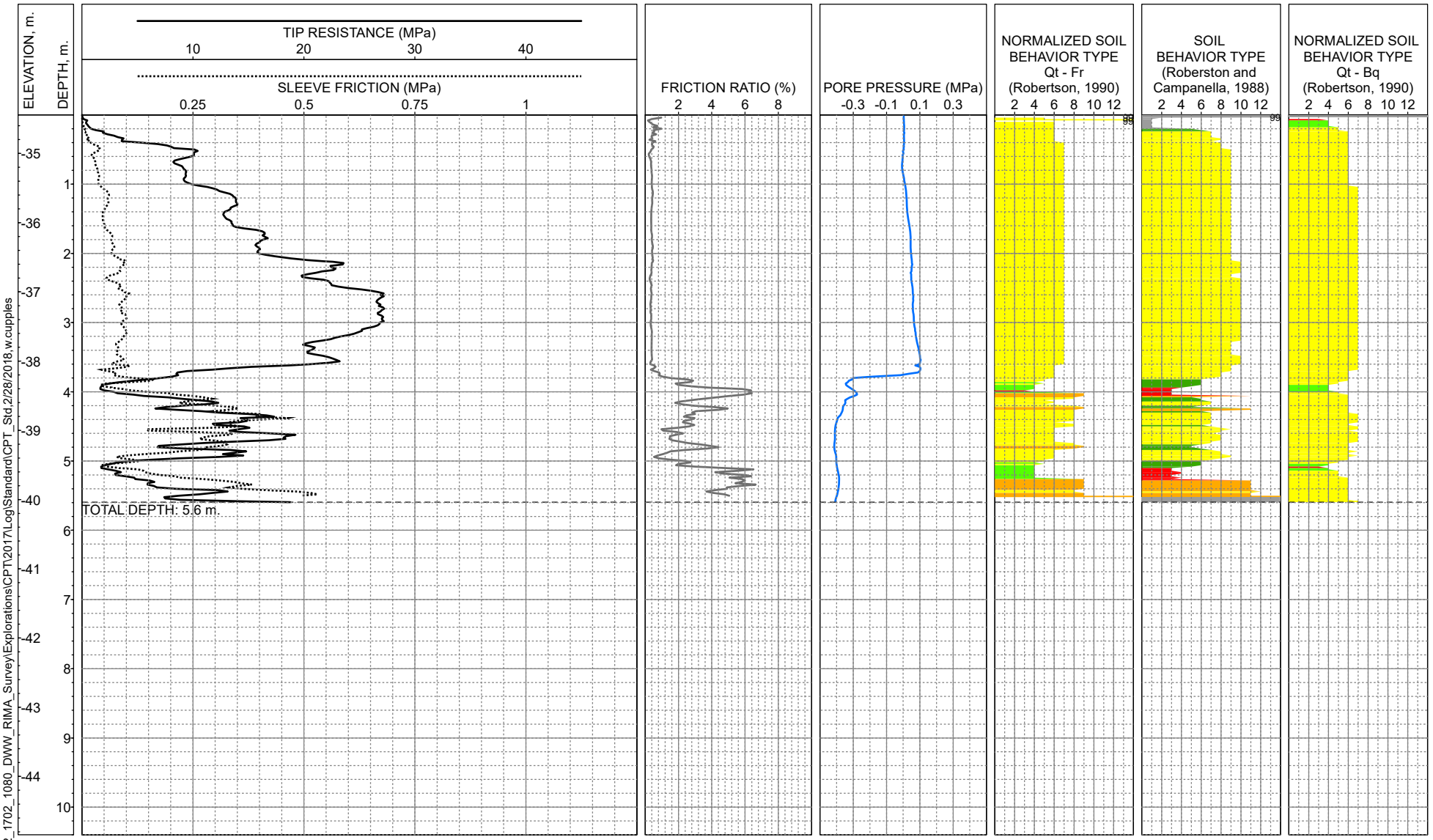
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-108
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 22

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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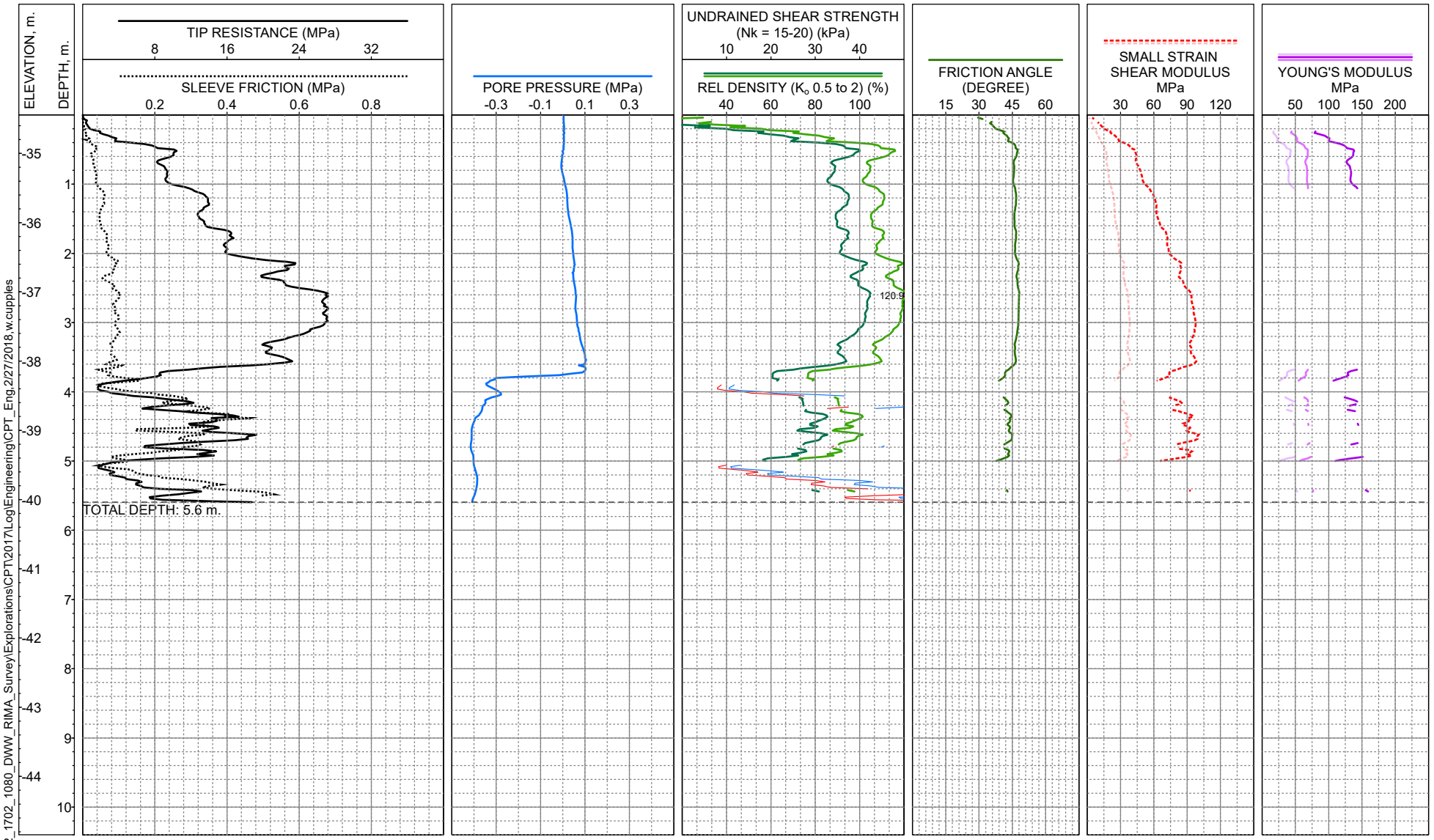
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 5.6m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-108A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 23

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

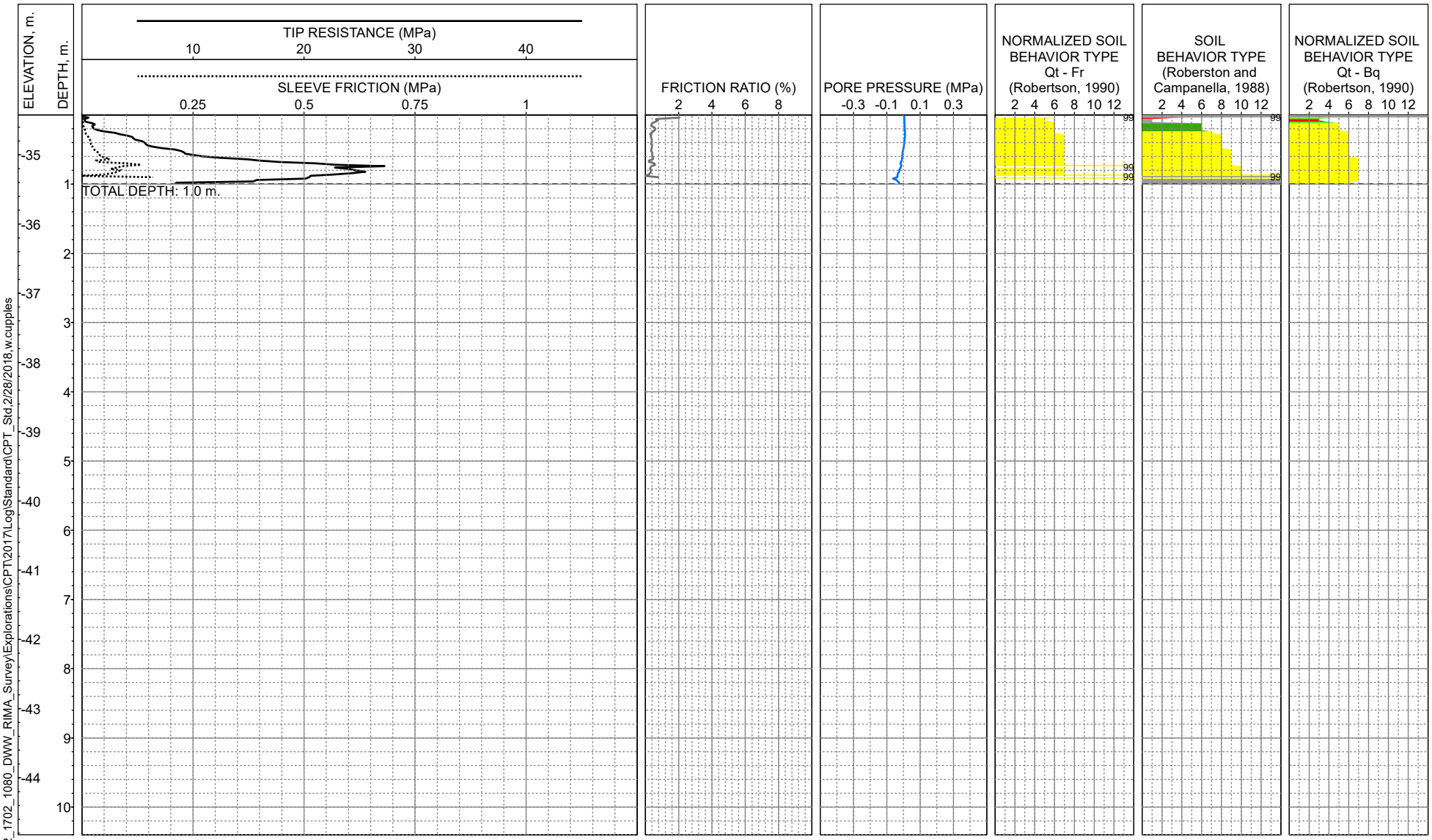
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 5.6m
TEST DATE: 11/12/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-108A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 23

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

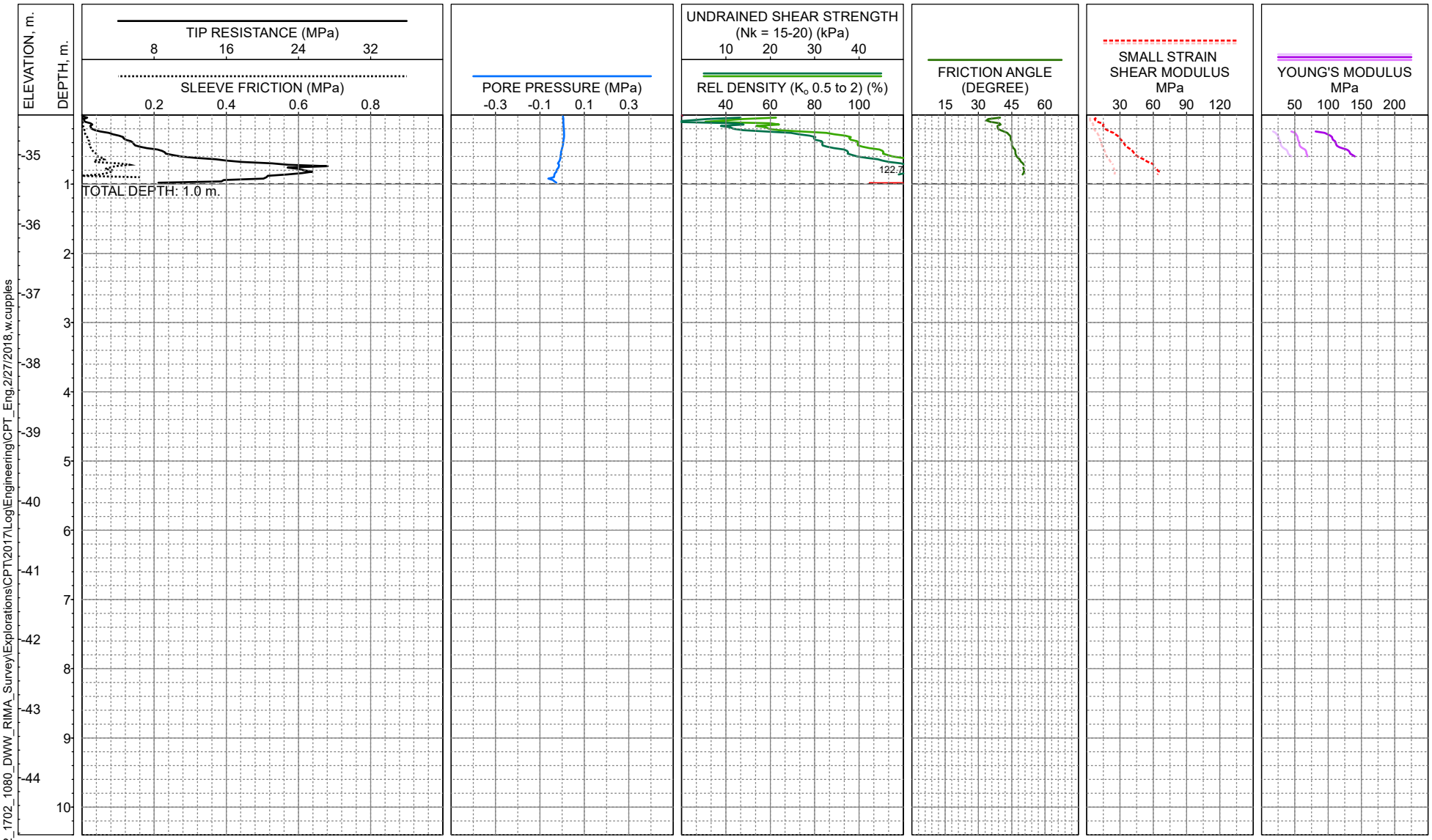
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 1.0m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-109
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 24

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 1.0m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-109
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 24

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

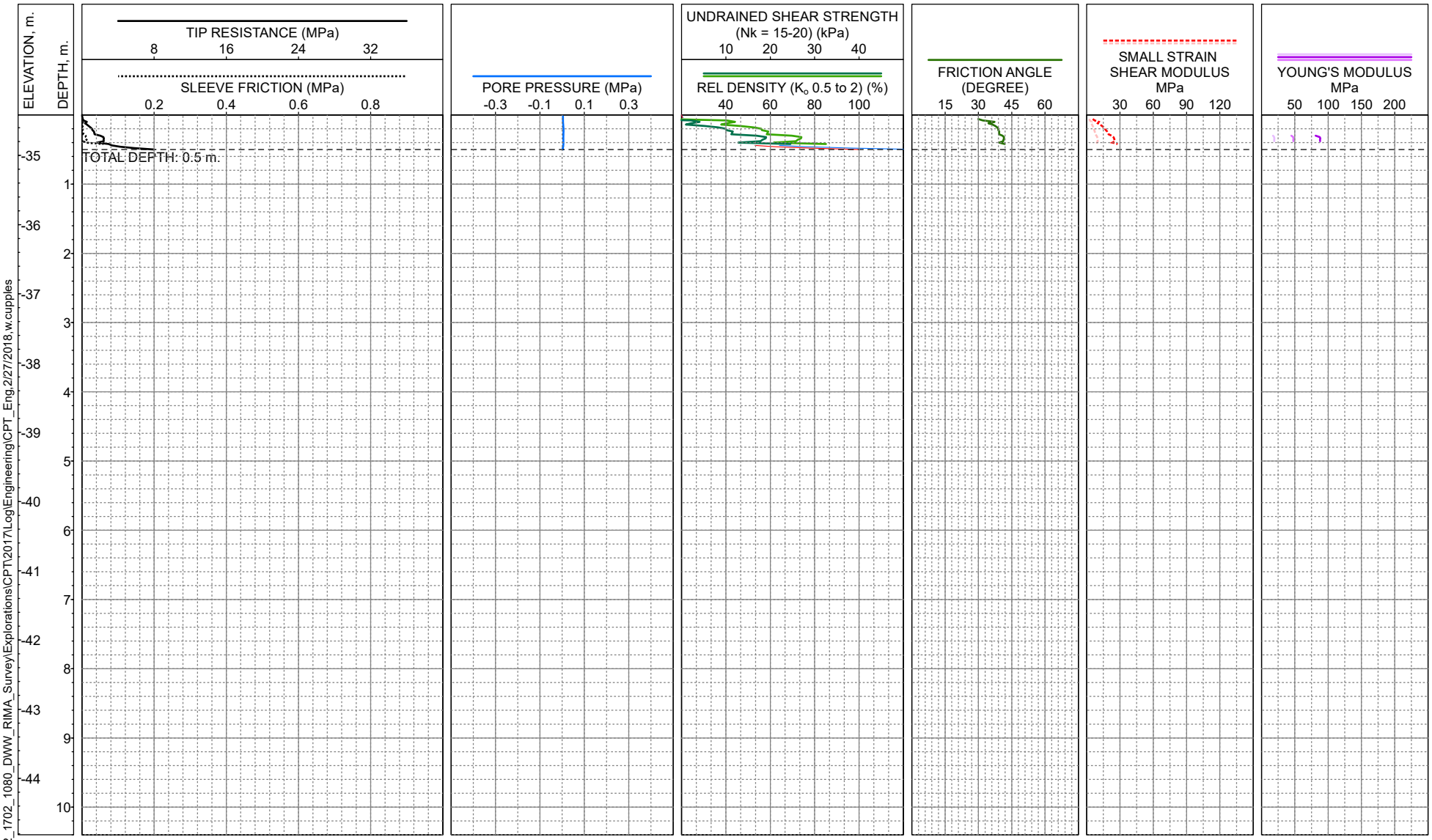
LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-109A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 25

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -34.4m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-109A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 25

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

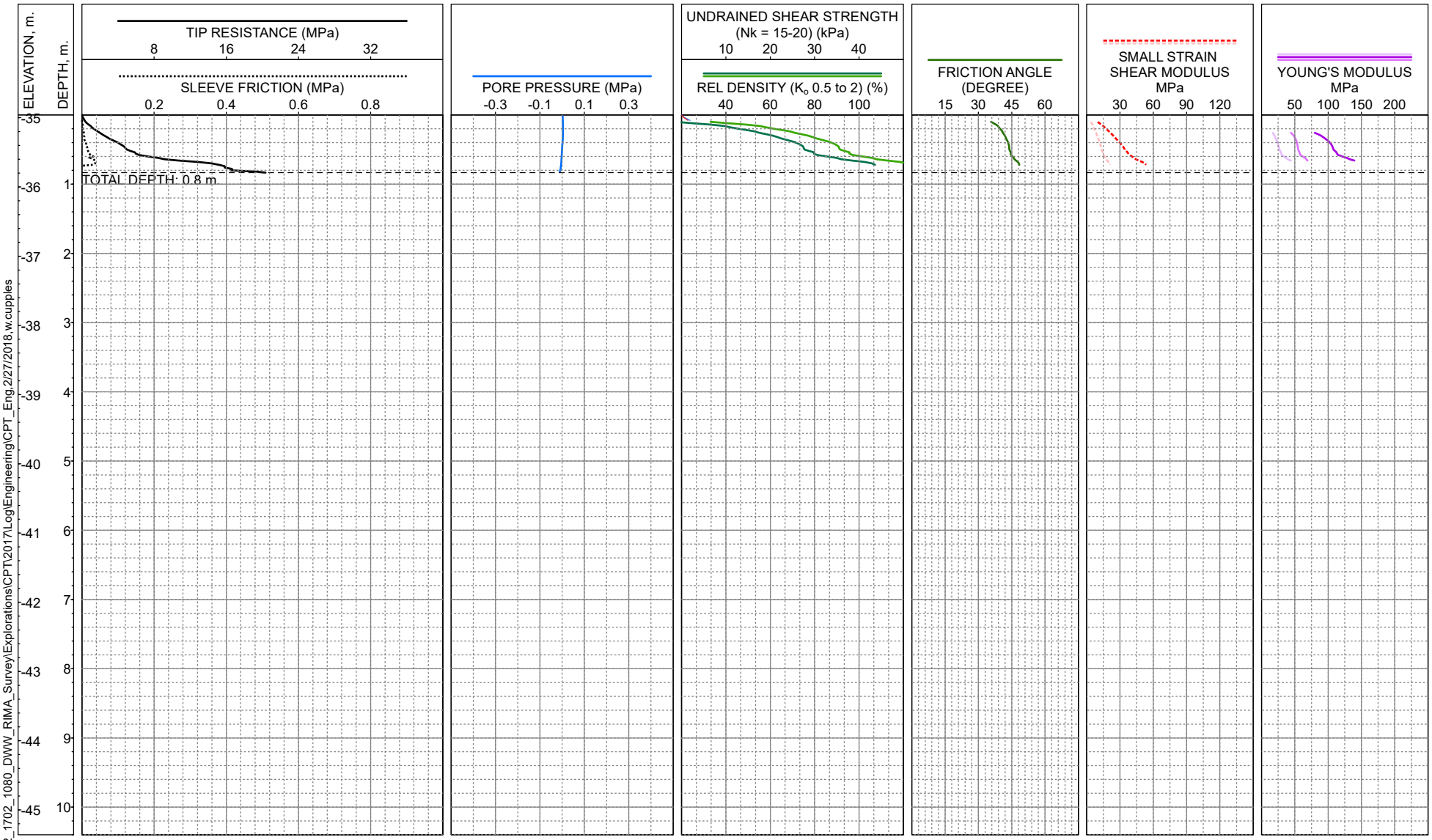
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-110
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 26

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-110
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 26

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

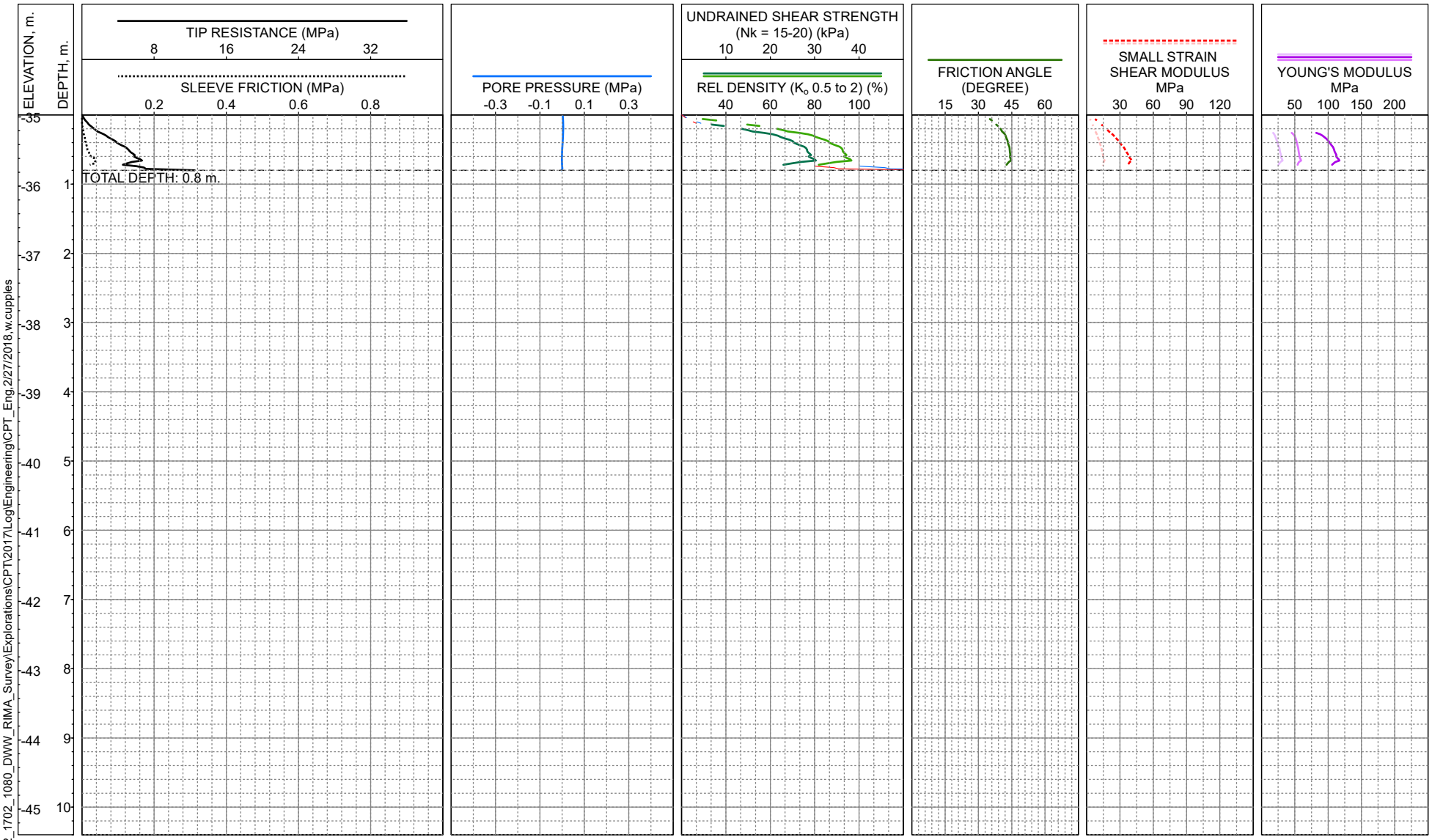
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-110A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 27

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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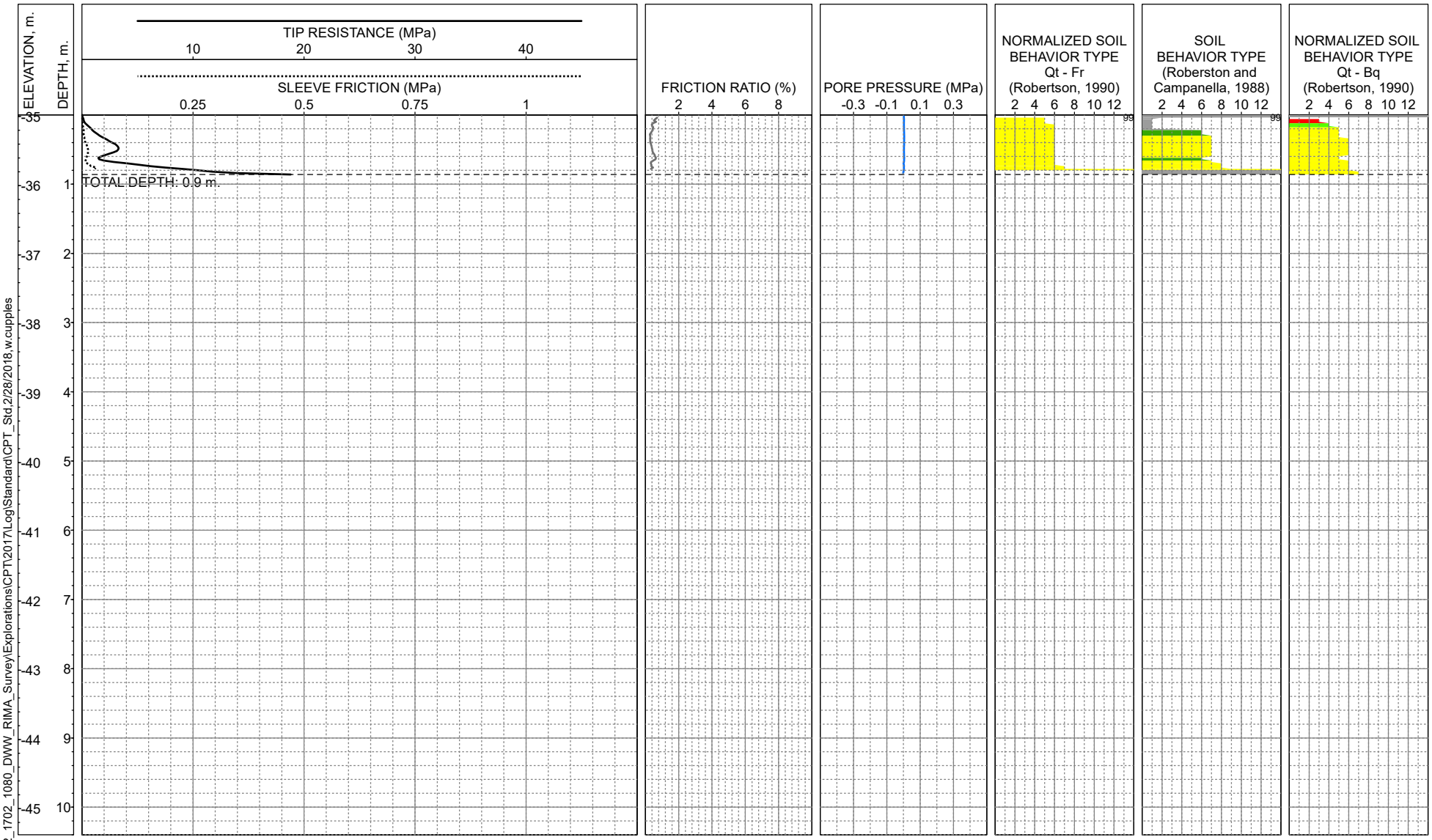
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-110A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 27

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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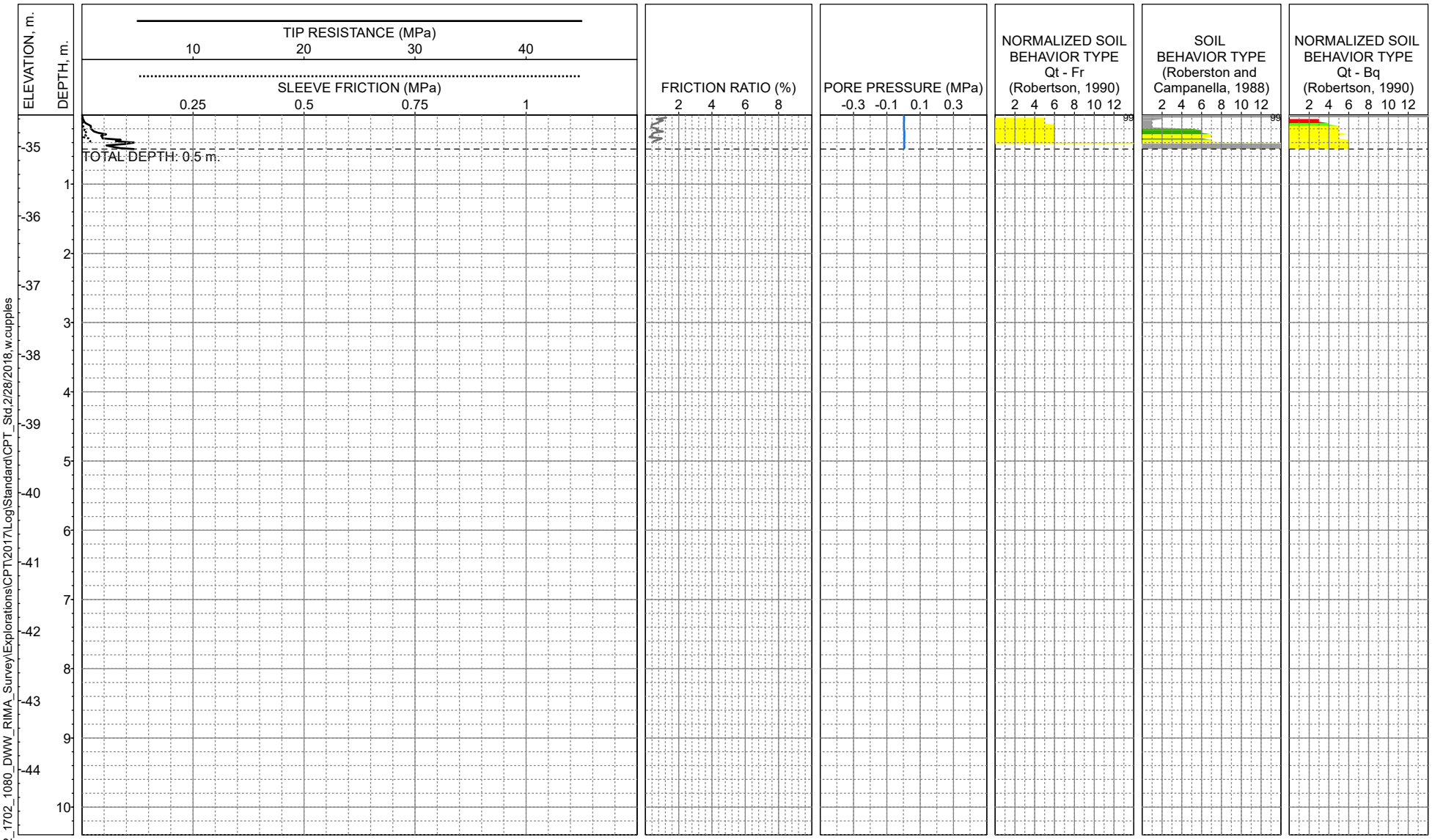
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 0.9m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-110B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 28

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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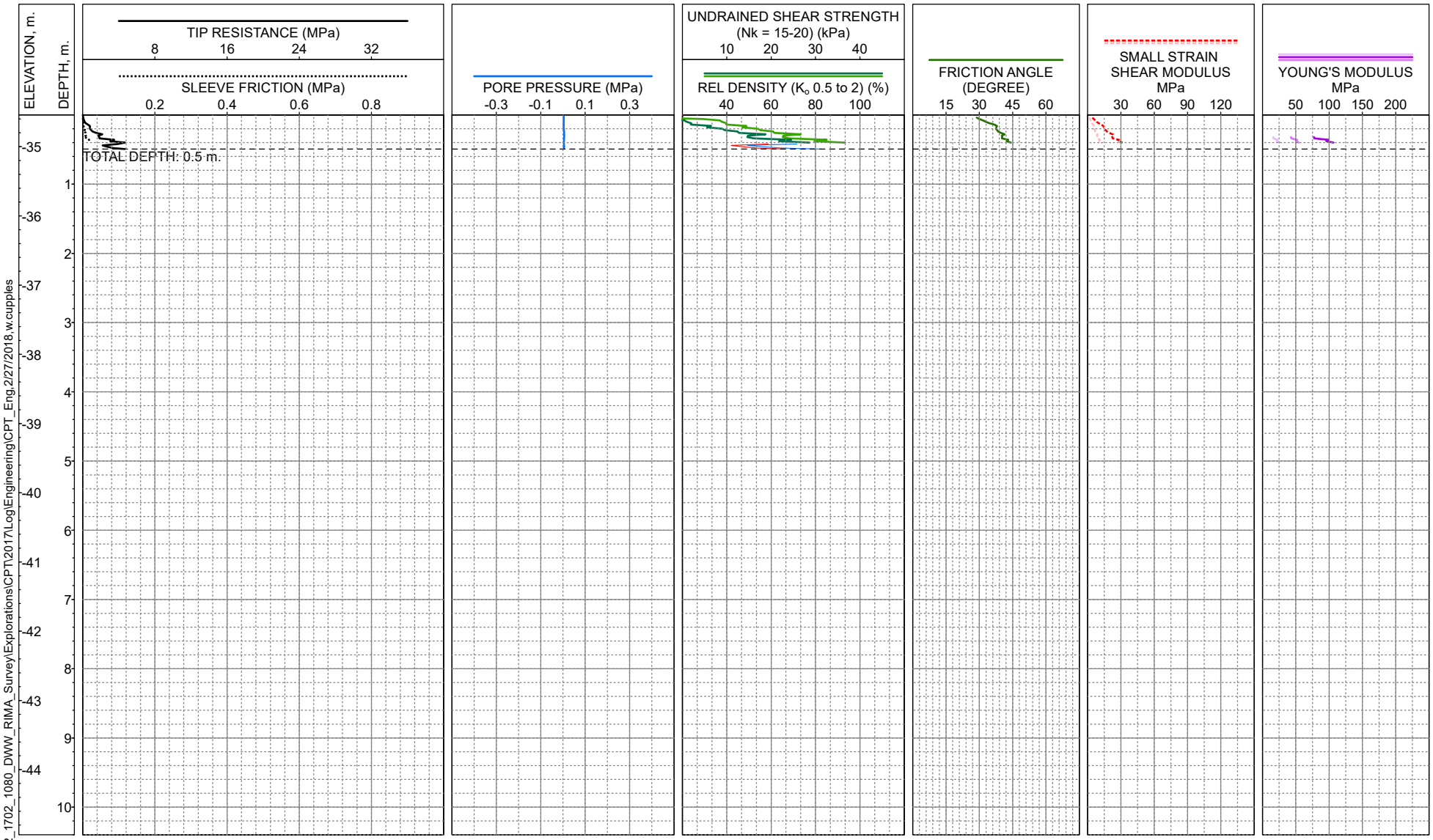
LOCATION: SFWF
SEAFLOOR EL: -34.5m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-111
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 29

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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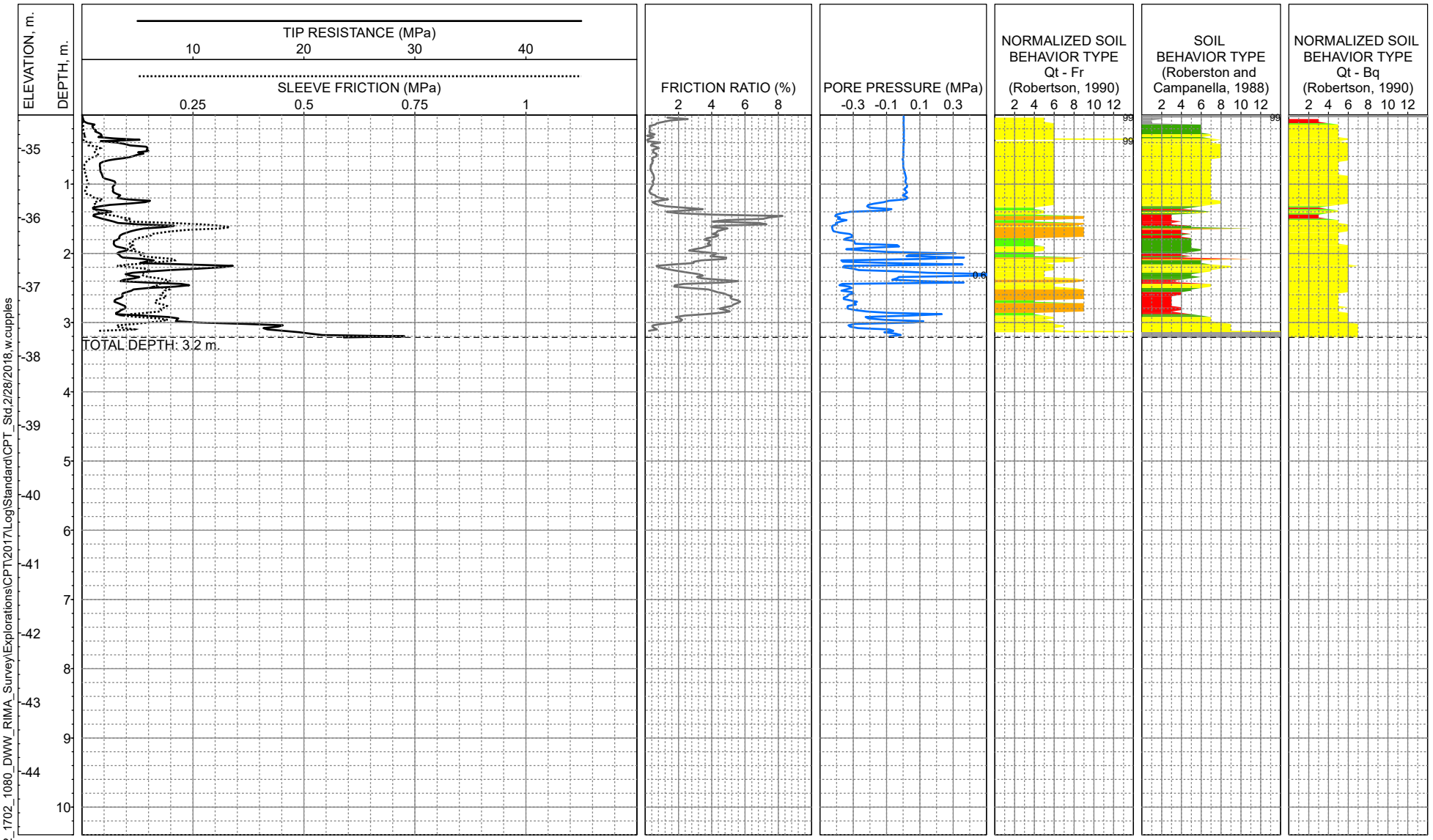
LOCATION: SFWF
SEAFLOOR EL: -34.5m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-111
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 29

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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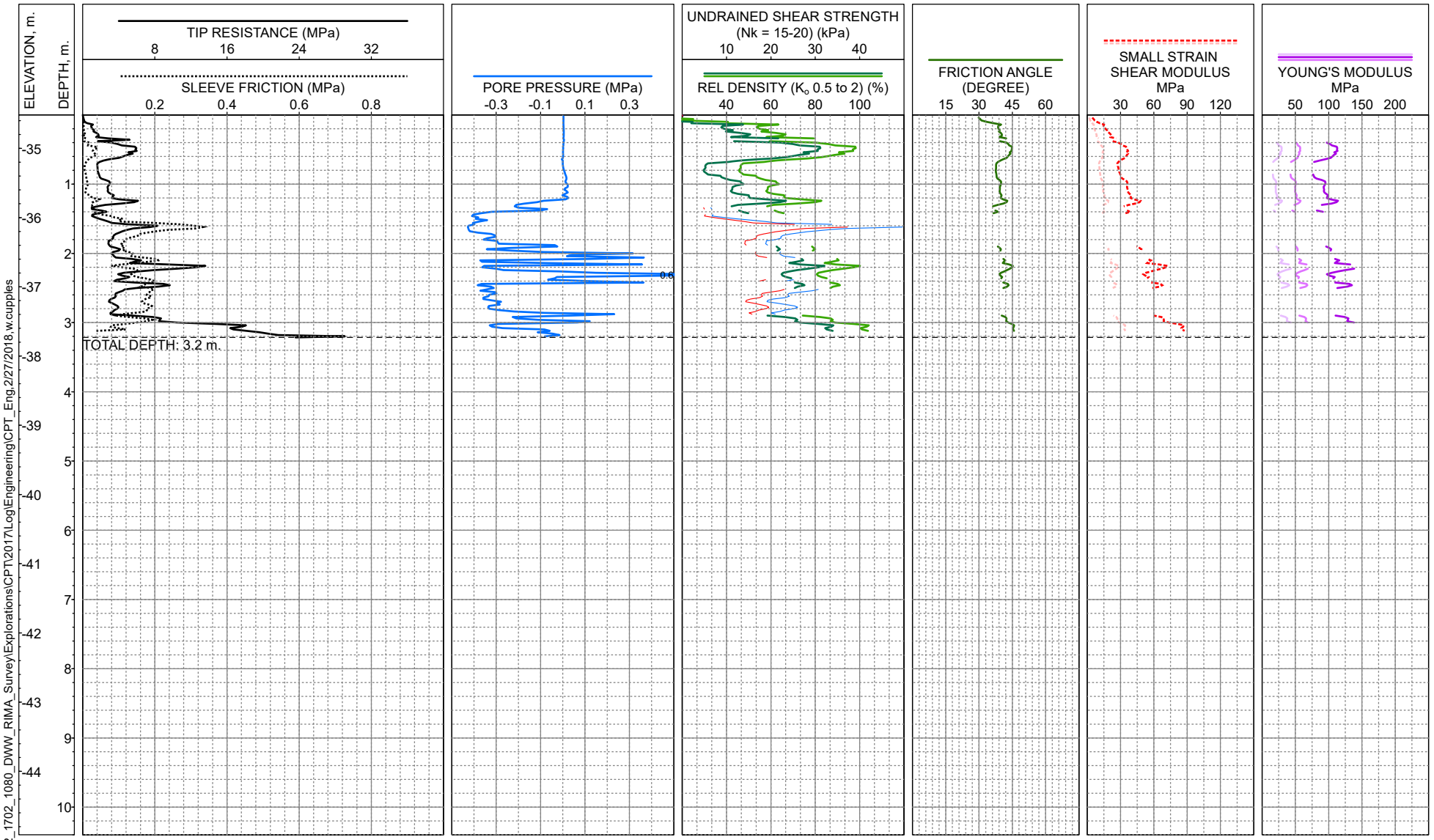
LOCATION: SFWF
SEAFLOOR EL: -34.5m (MLLW)
COMPLETION DEPTH: 3.2m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-111A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 30

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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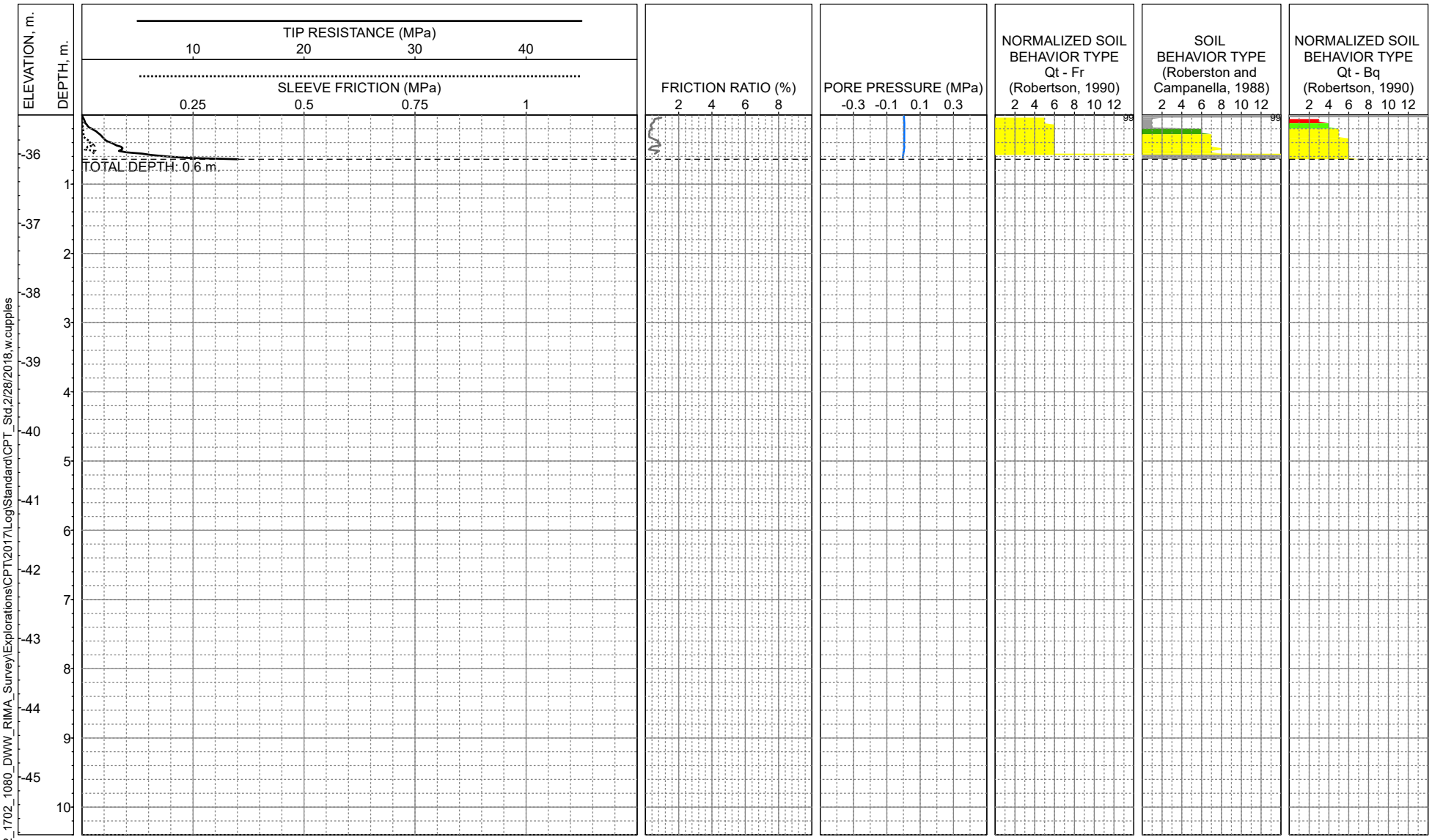
LOCATION: SFWF
SEAFLOOR EL: -34.5m (MLLW)
COMPLETION DEPTH: 3.2m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-111A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 30

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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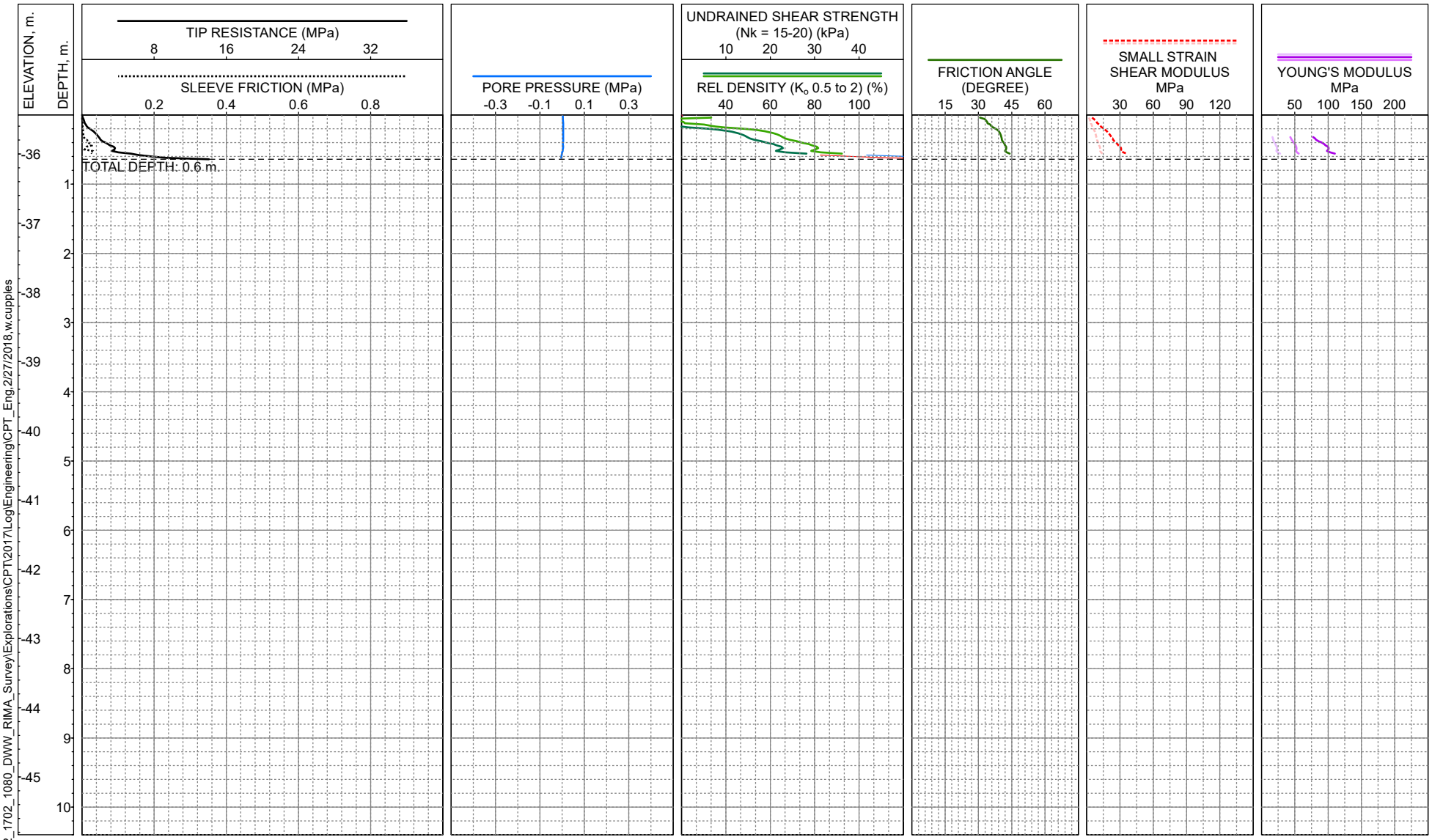
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-112
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 31

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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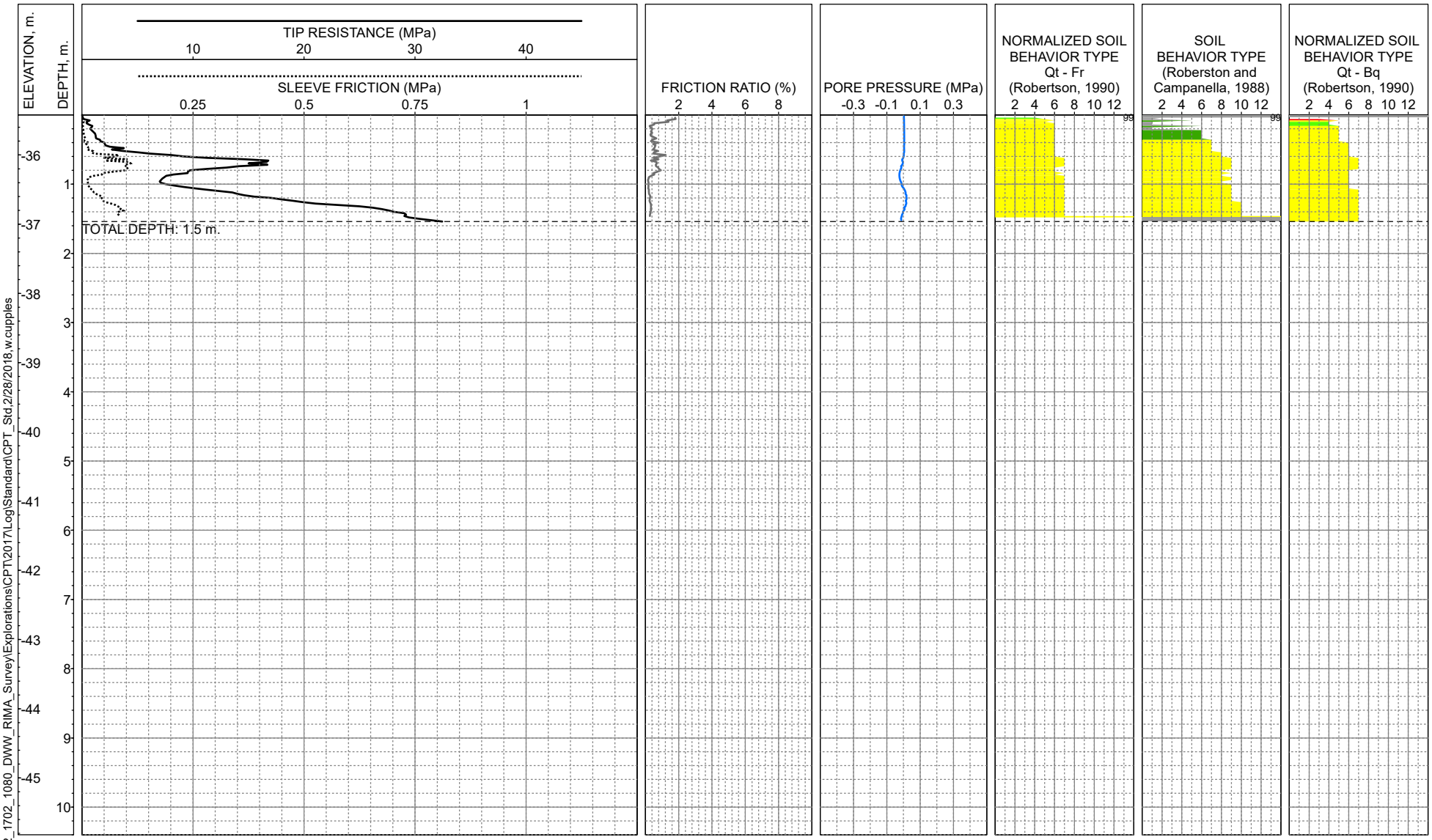
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Slope

LOG OF CPT C-112
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 31

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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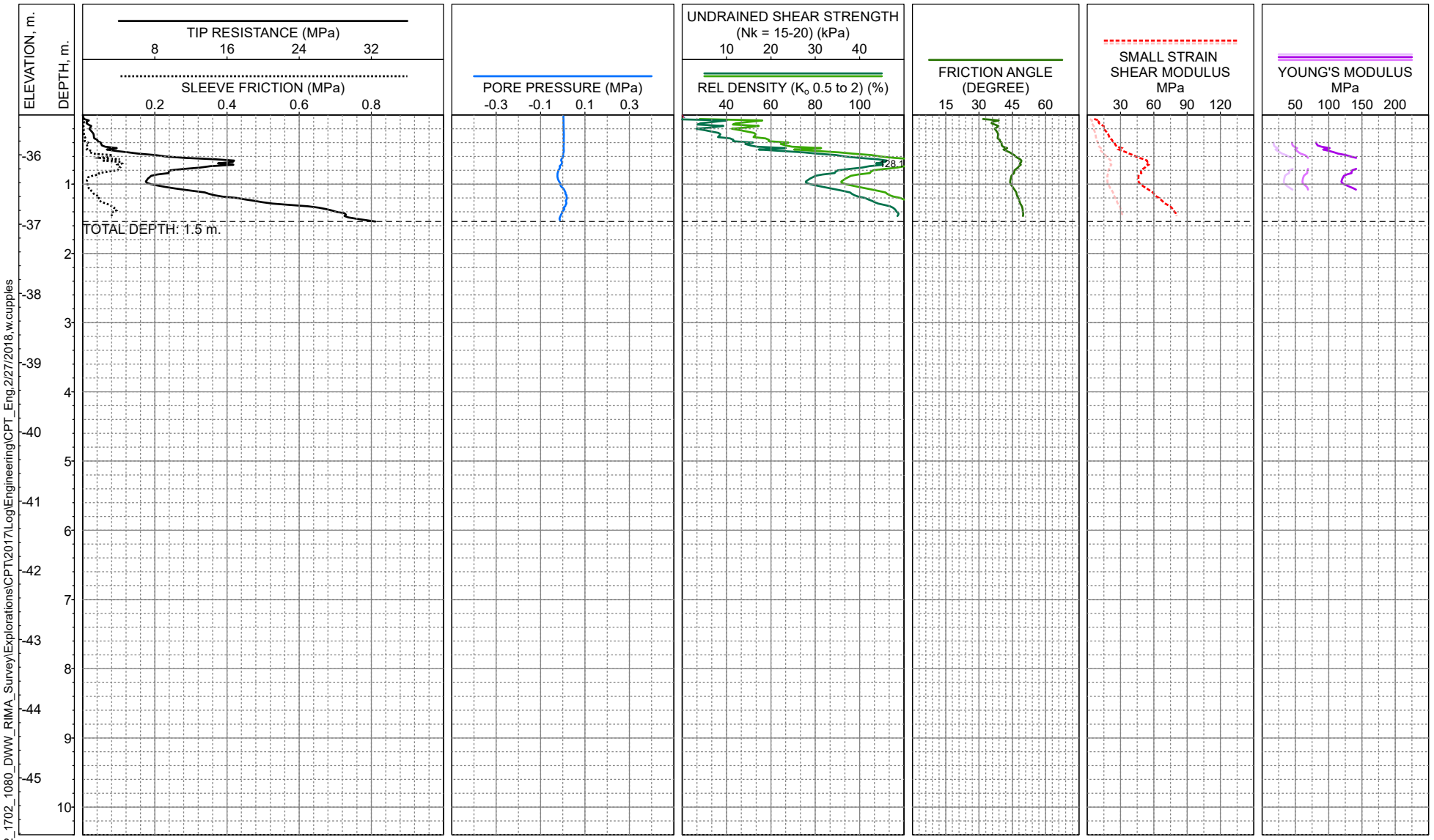
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 1.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-112A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 32

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 1.5m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-112A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 32

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

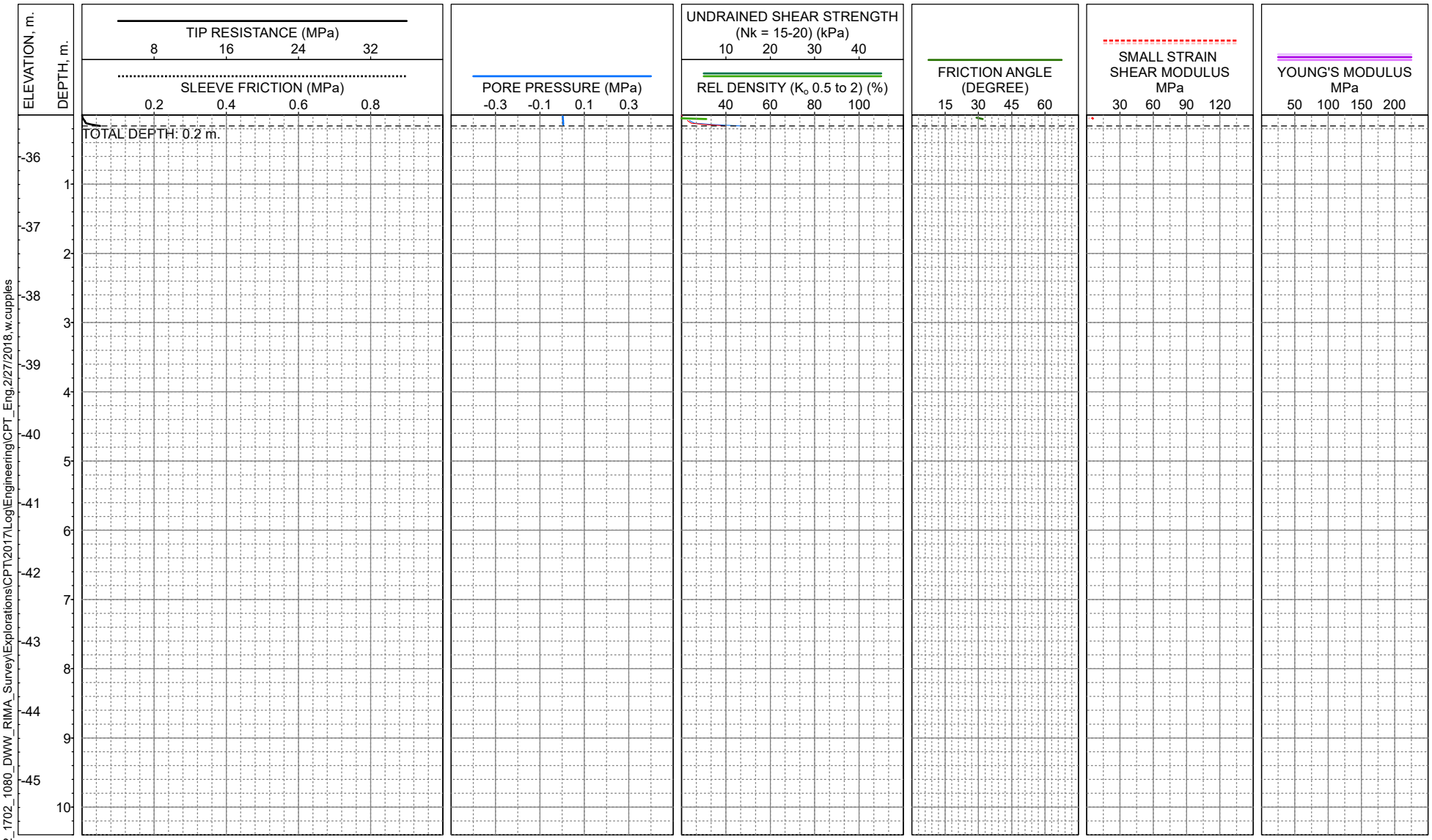
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-113
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 33

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-113
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 33

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

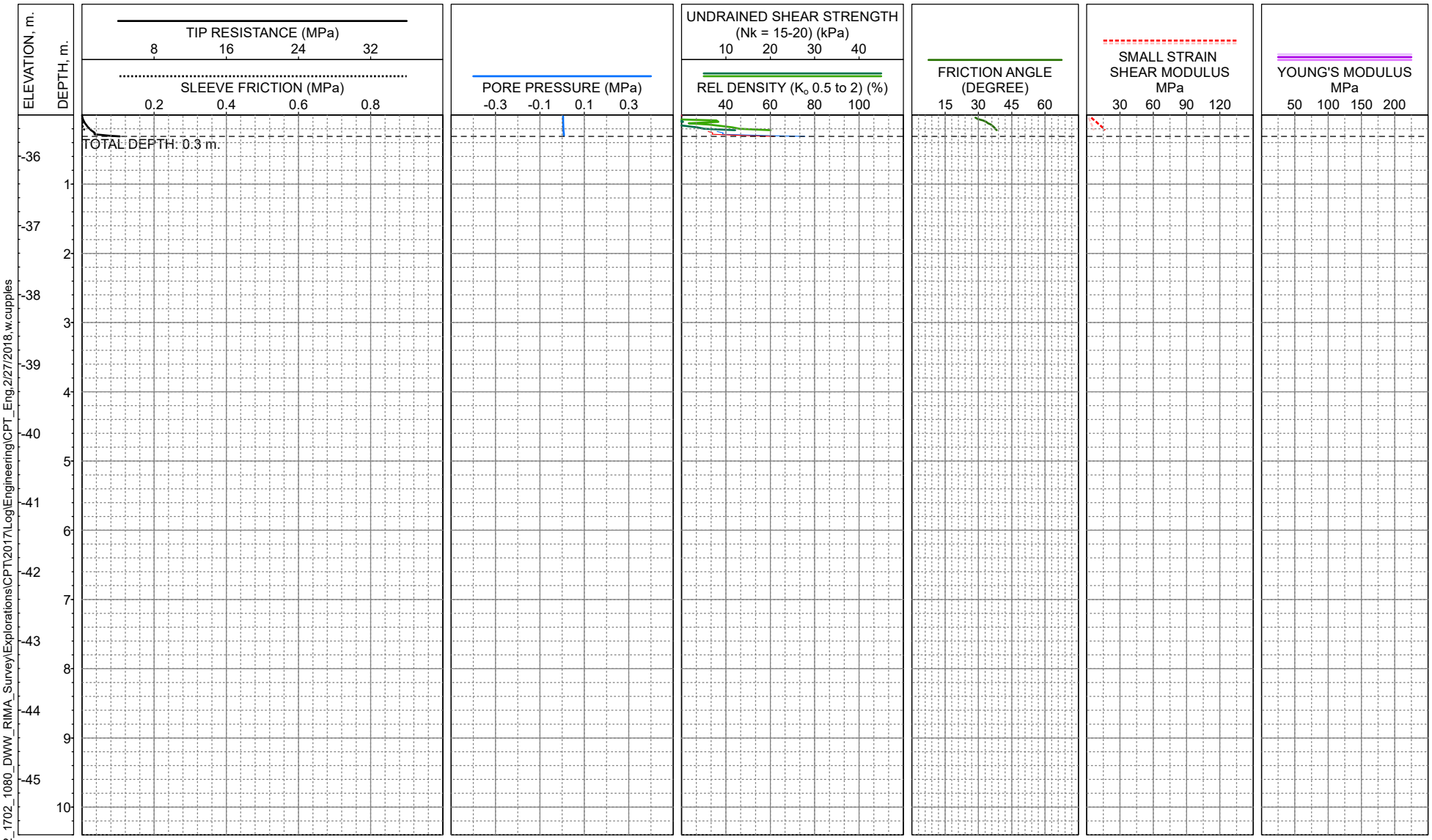
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.3m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-113A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 34

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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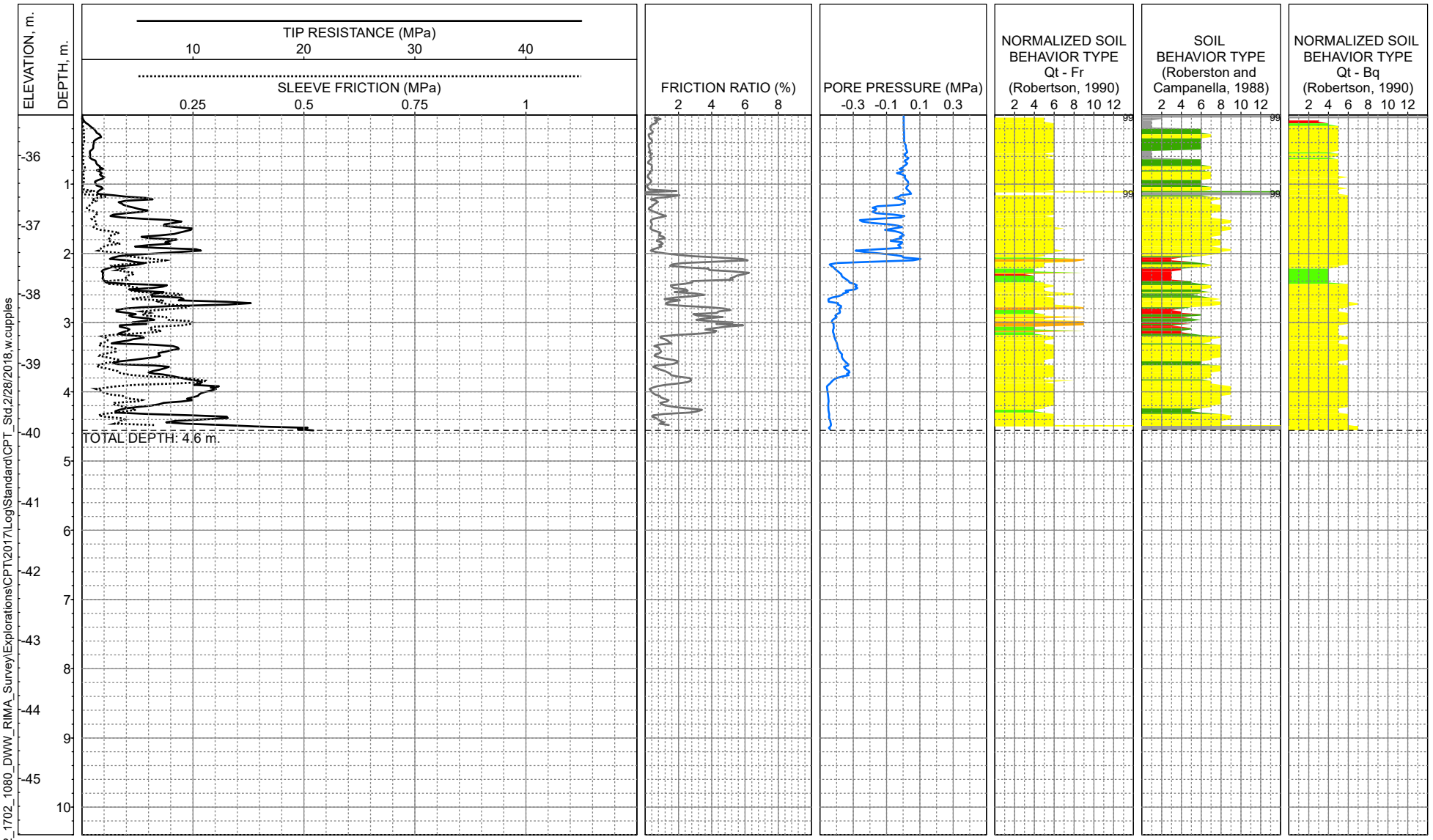
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 0.3m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-113A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 34

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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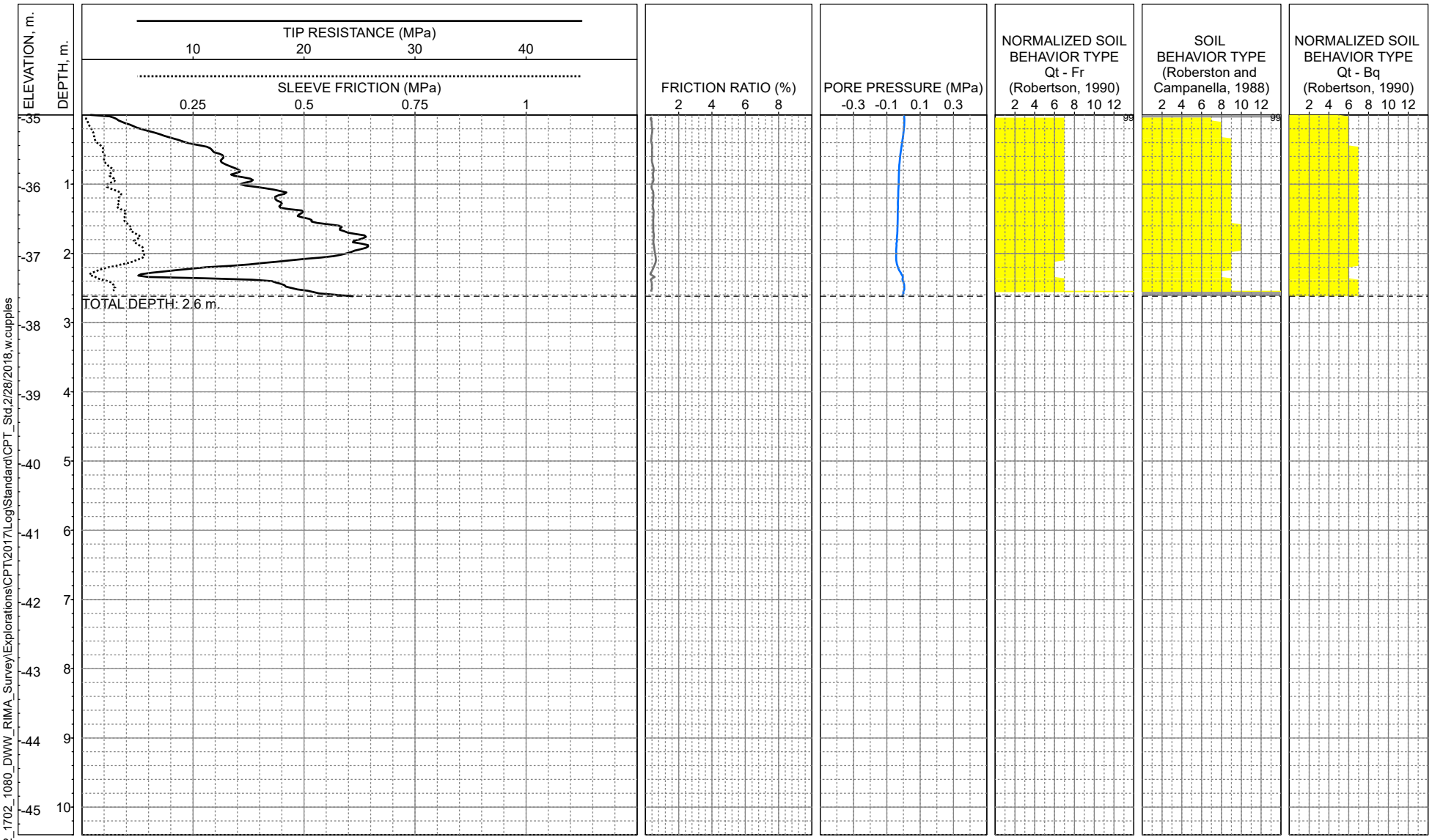
LOCATION: SFWF
SEAFLOOR EL: -35.4m (MLLW)
COMPLETION DEPTH: 4.6m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Slope, differential pressure

LOG OF CPT C-113B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 35

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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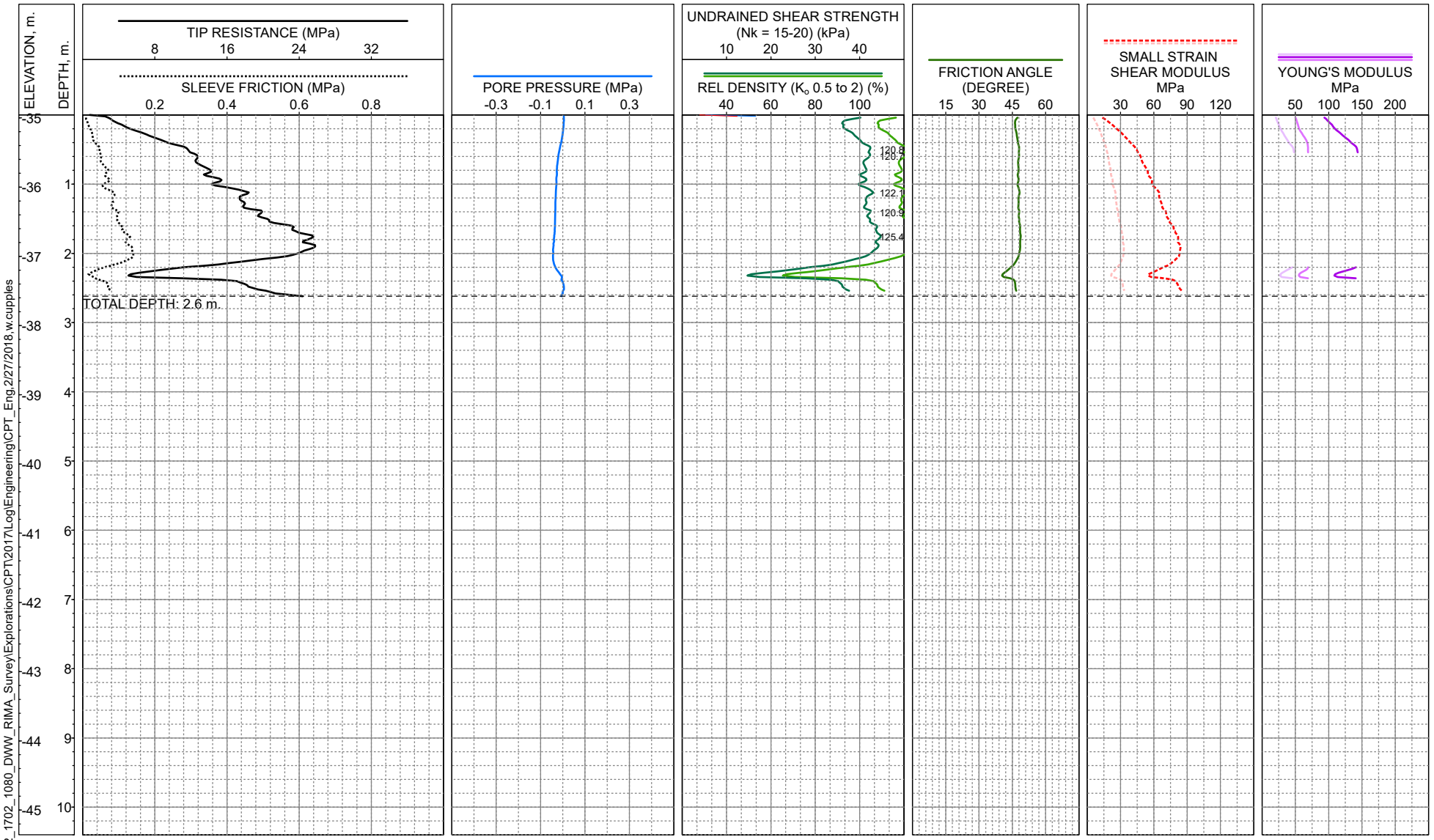
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 2.6m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-114
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 36

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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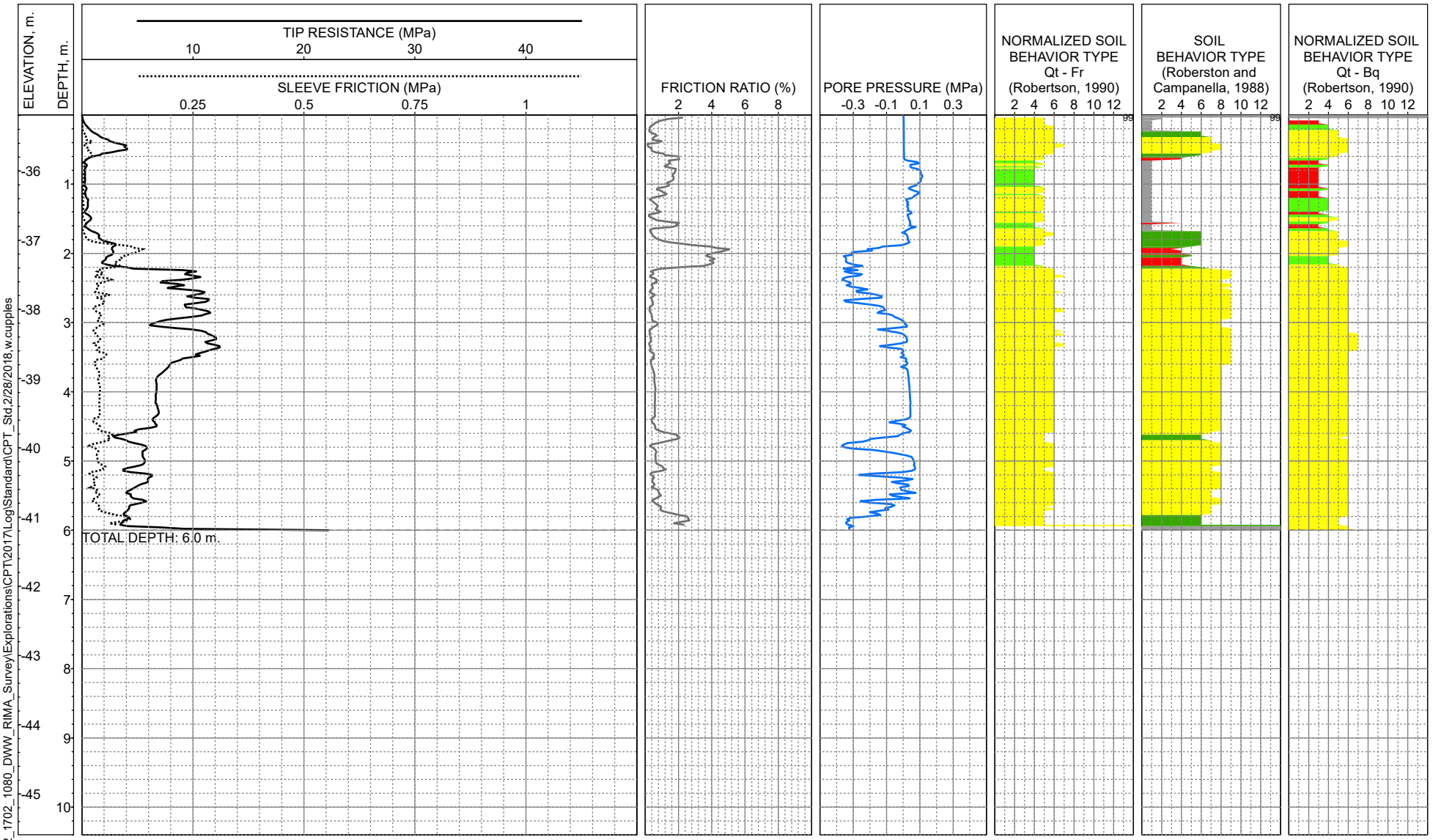
LOCATION: SFWF
SEAFLOOR EL: -35.0m (MLLW)
COMPLETION DEPTH: 2.6m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure

LOG OF CPT C-114
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 36

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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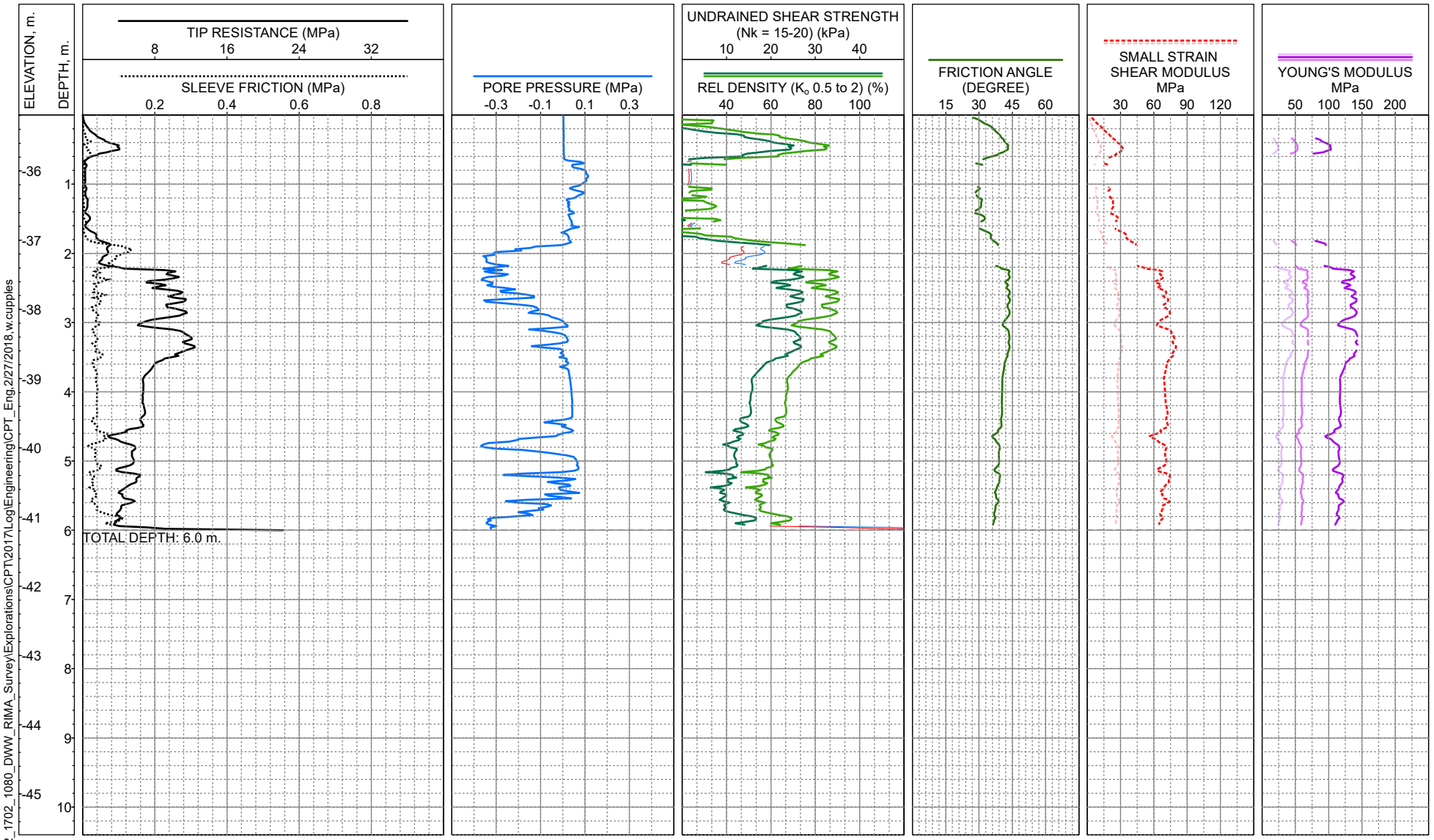
LOCATION: SFWF
SEAFLOOR EL: -35.2m (MLLW)
COMPLETION DEPTH: 6.0m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure, tip threshold

LOG OF CPT C-115
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 37

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

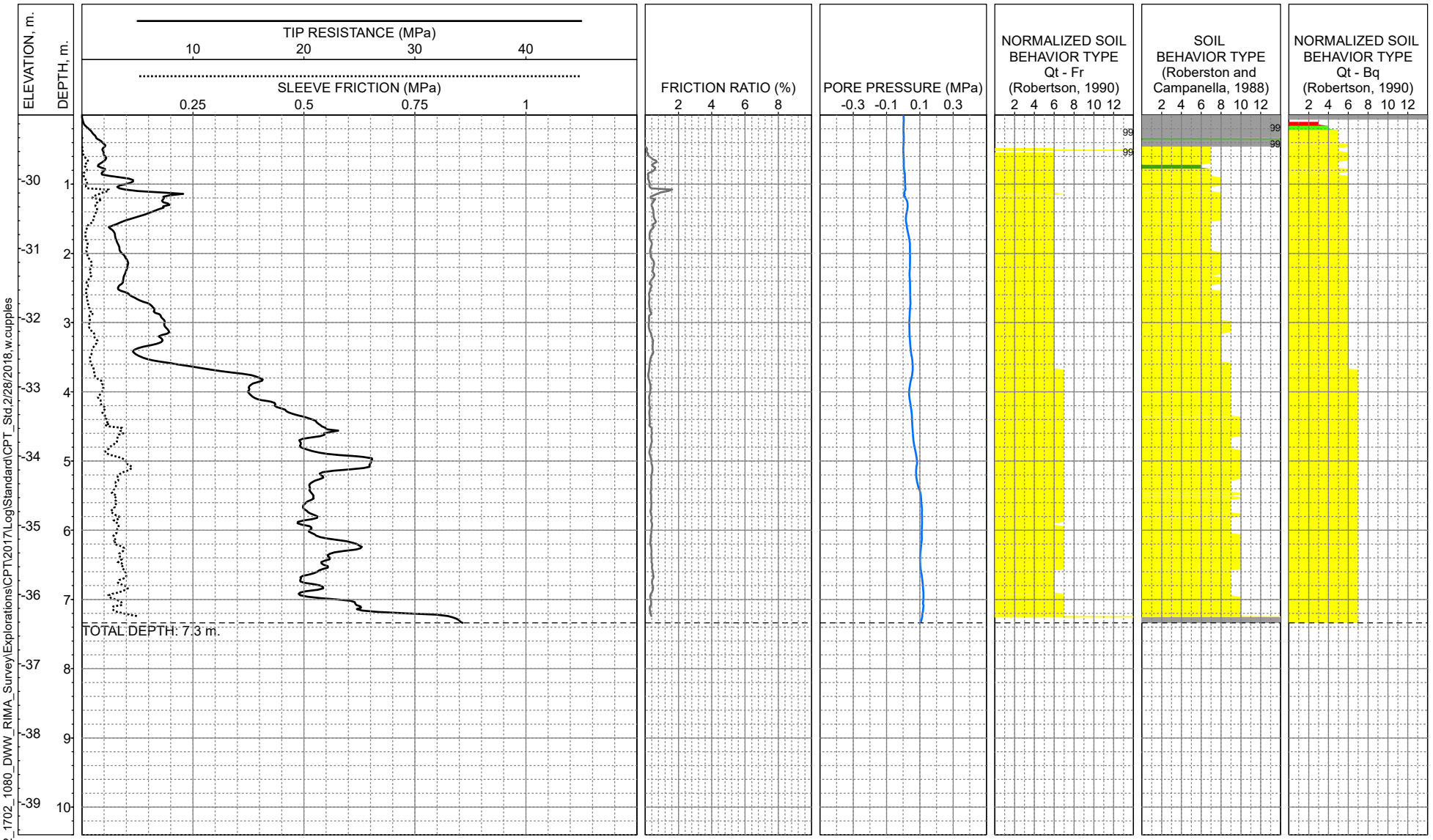
LOCATION: SFWF
SEAFLOOR EL: -35.2m (MLLW)
COMPLETION DEPTH: 6.0m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Differential pressure, tip threshold

LOG OF CPT C-115
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 37

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

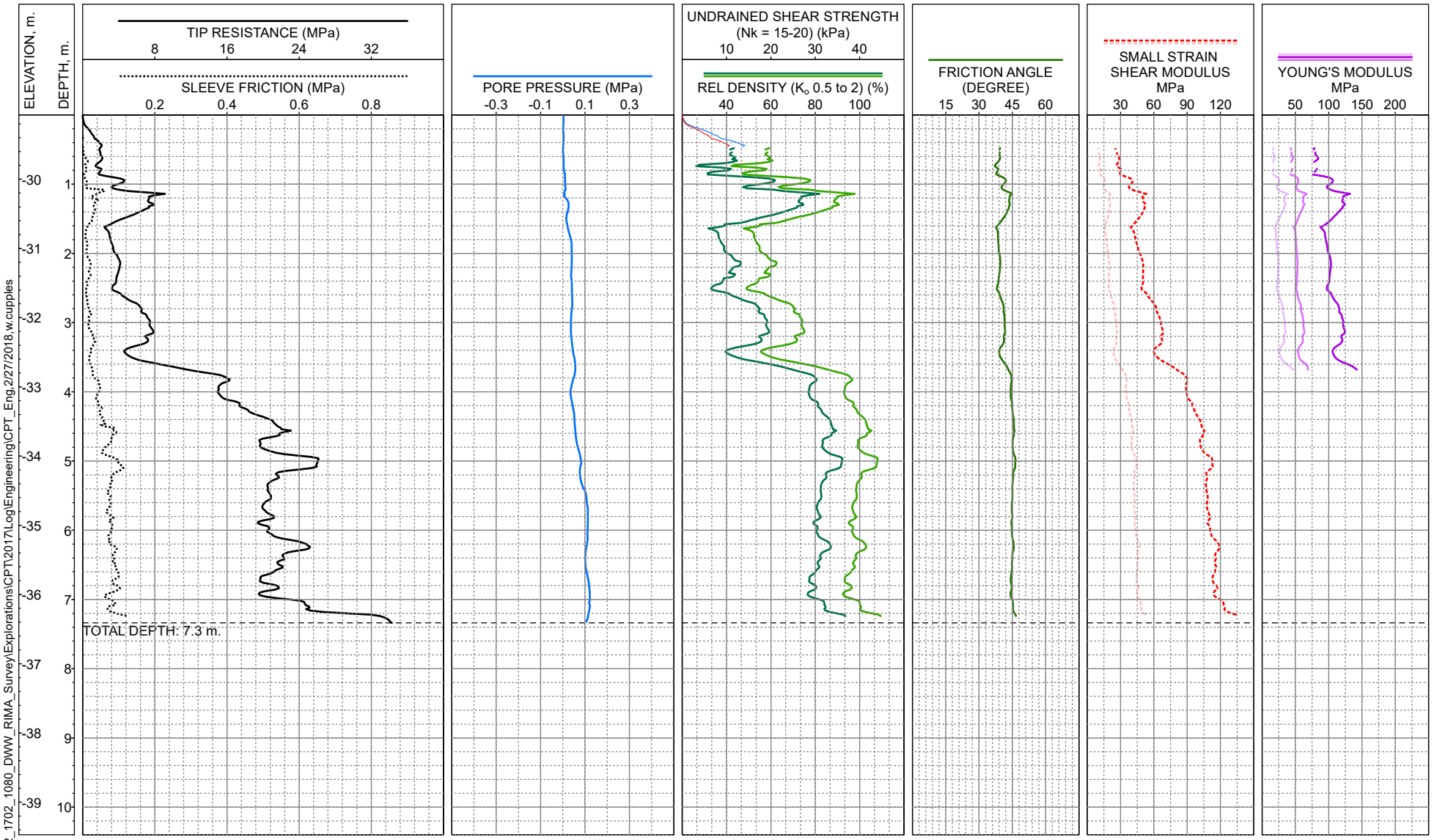
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.1m (MLLW)
COMPLETION DEPTH: 7.3m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-200
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 38

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

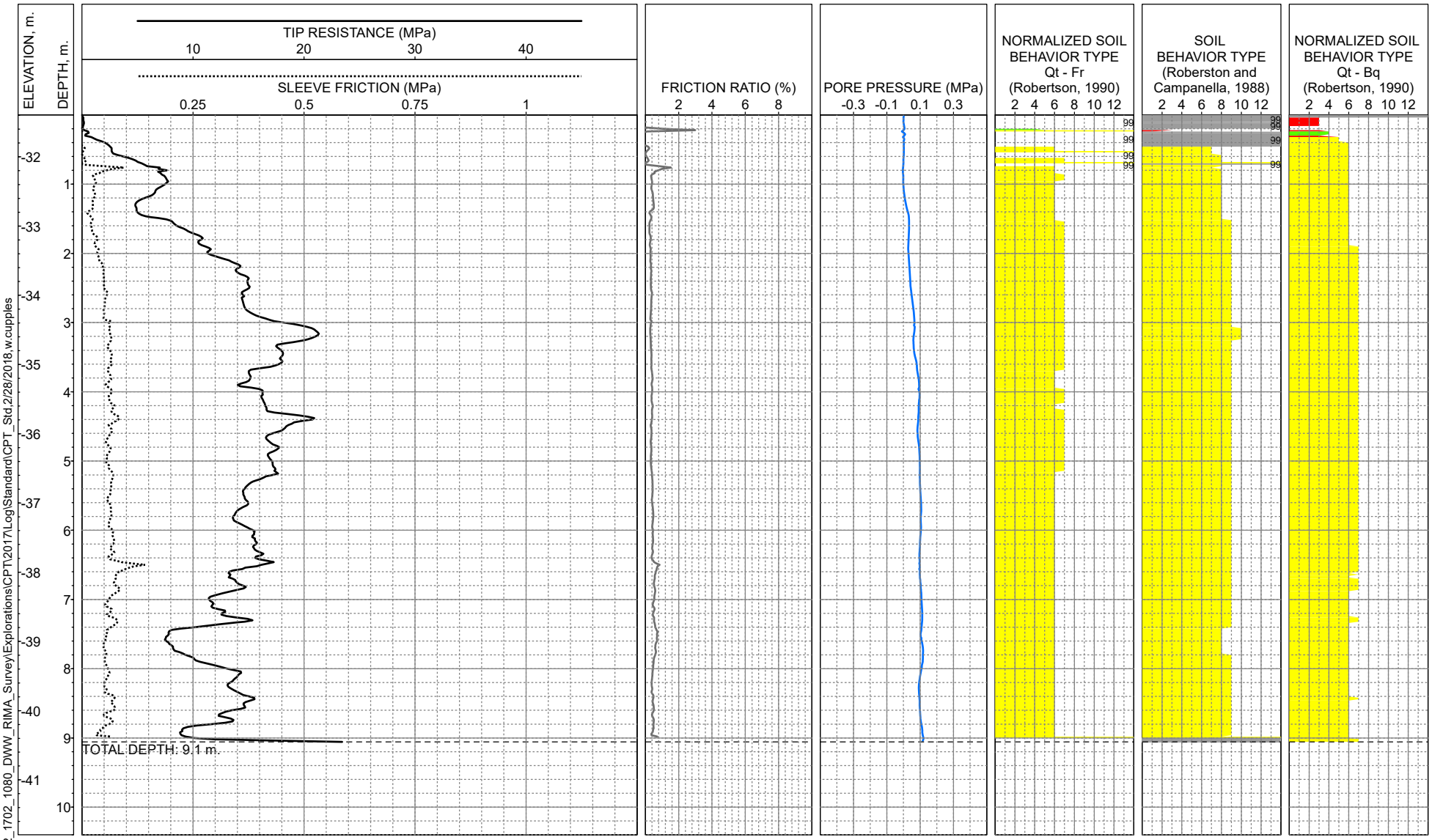
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.1m (MLLW)
COMPLETION DEPTH: 7.3m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-200
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 38

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

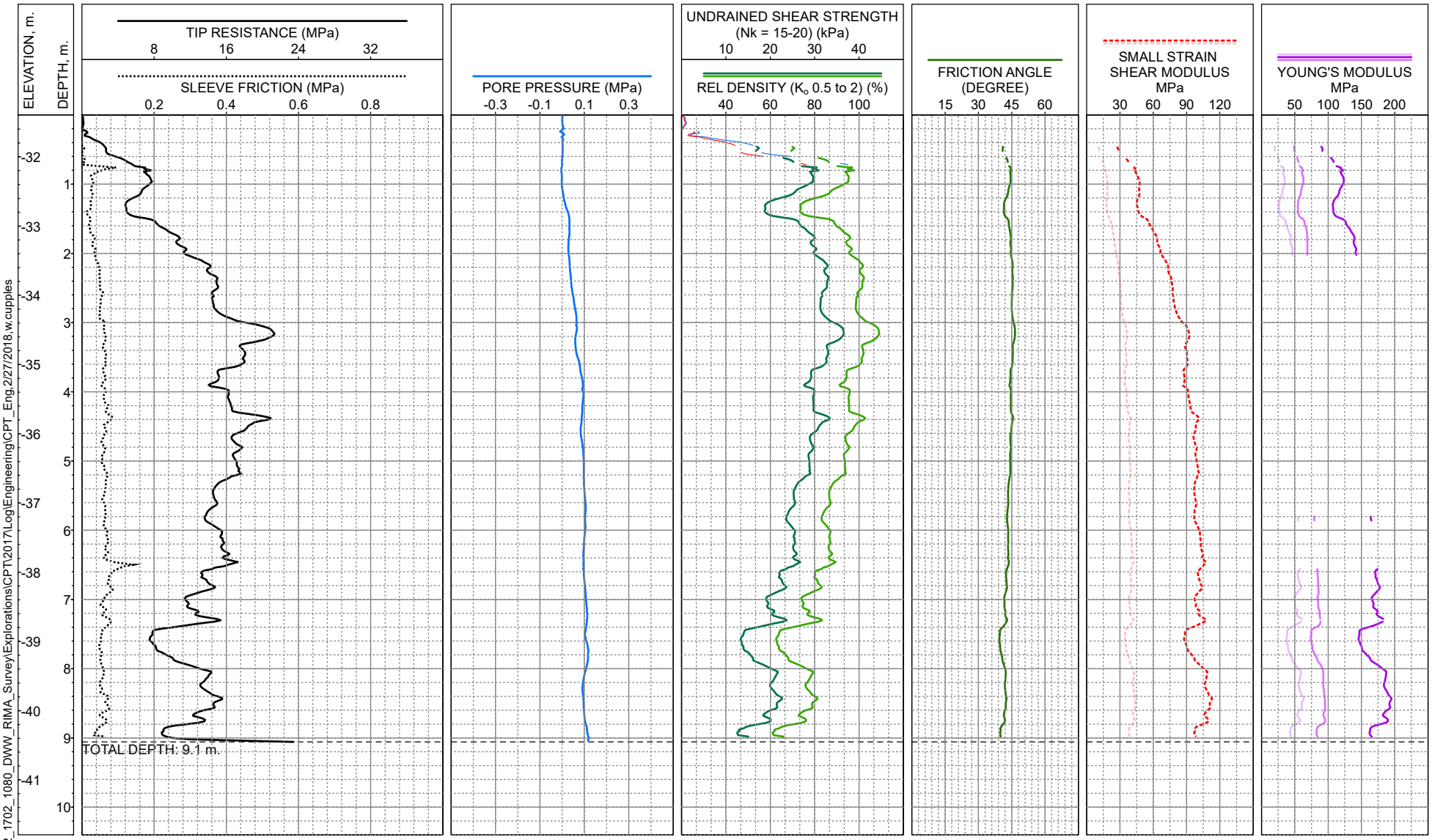
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -31.4m (MLLW)
COMPLETION DEPTH: 9.1m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-201
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 39

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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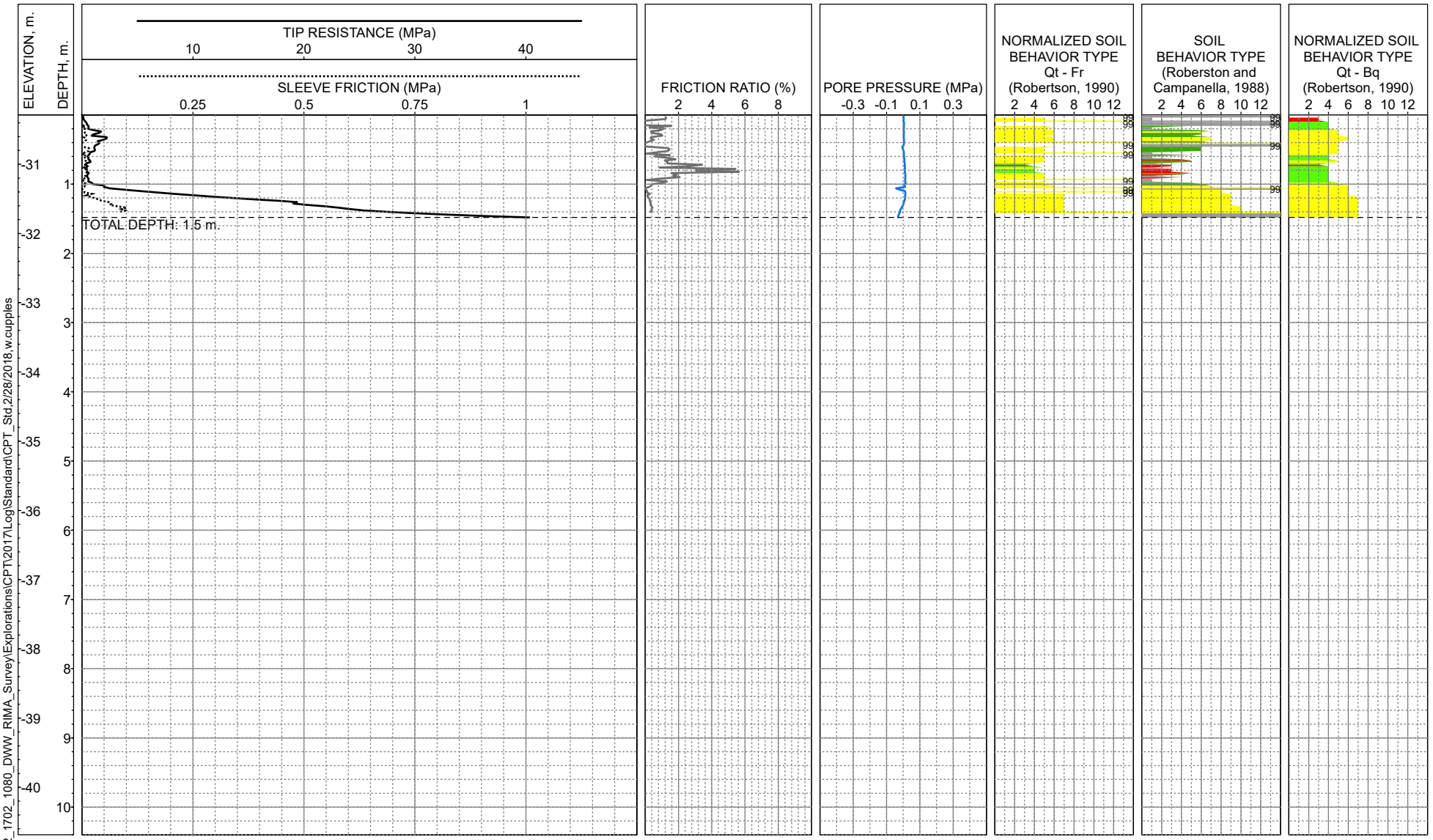
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -31.4m (MLLW)
COMPLETION DEPTH: 9.1m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-201
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 39

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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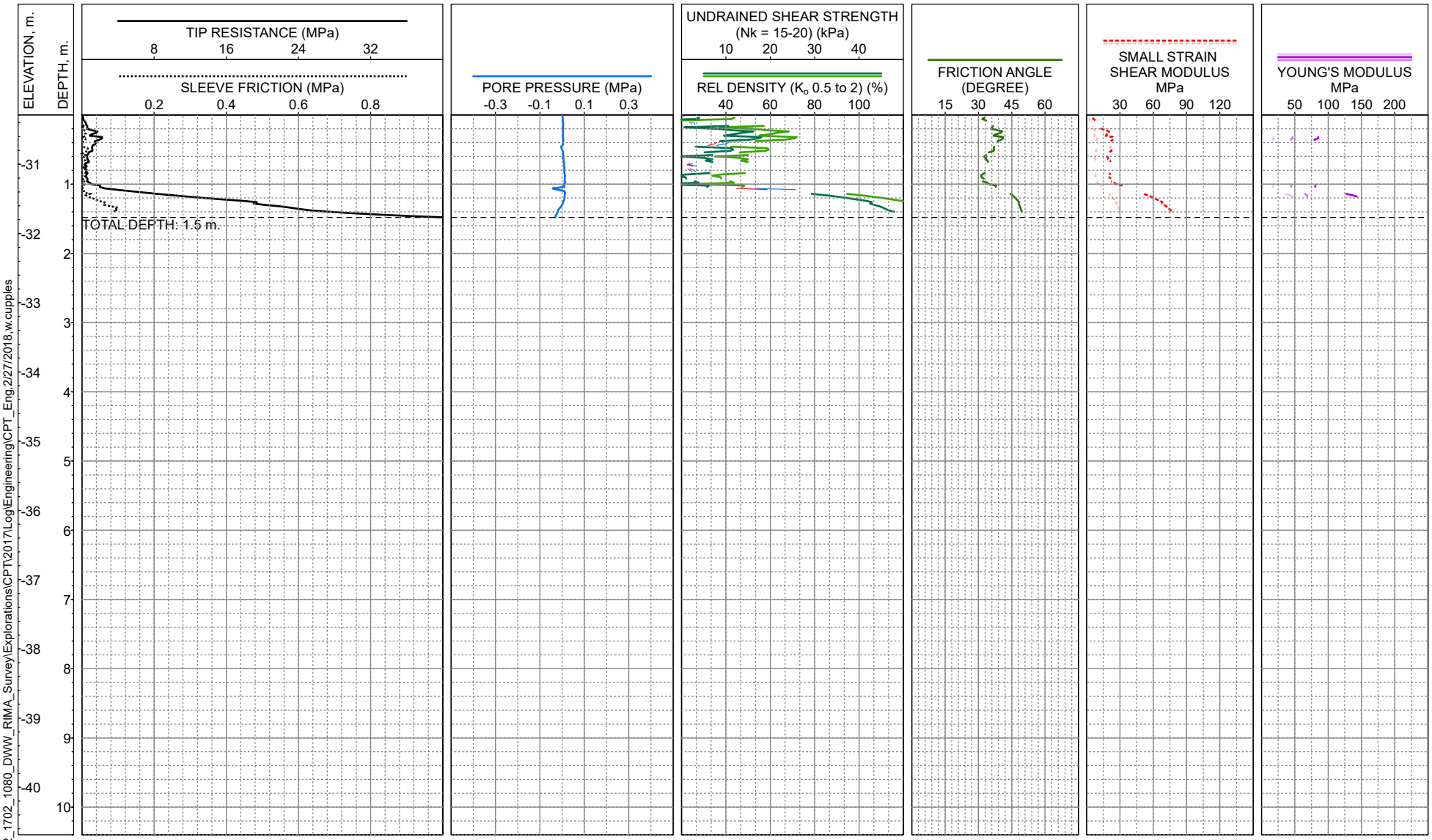
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.3m (MLLW)
COMPLETION DEPTH: 1.5m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip, differential pressure

LOG OF CPT C-202
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 40

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

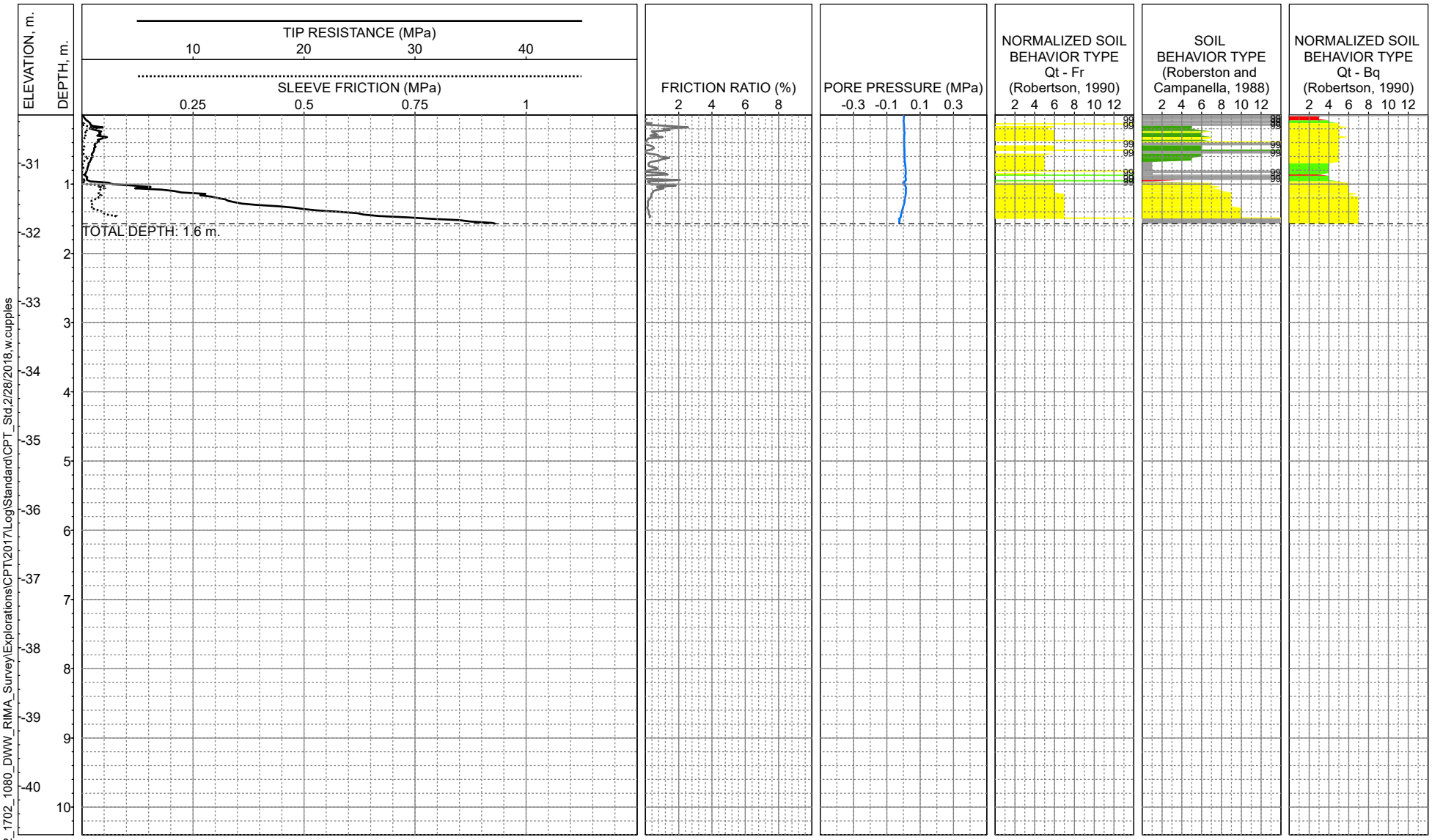
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.3m (MLLW)
COMPLETION DEPTH: 1.5m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip, differential pressure

LOG OF CPT C-202
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 40

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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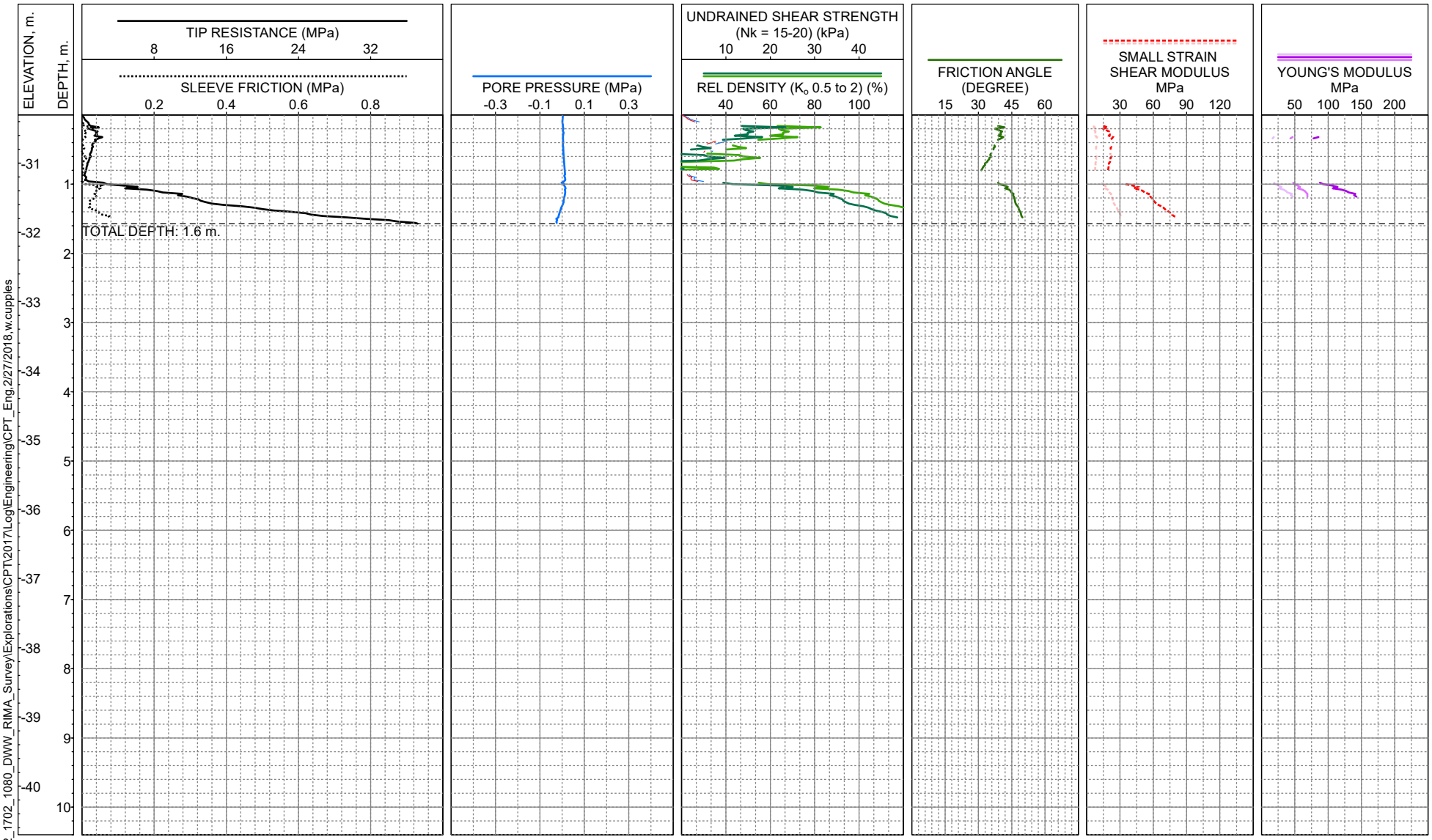
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.3m (MLLW)
COMPLETION DEPTH: 1.6m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip, differential pressure, tip threshold

LOG OF CPT C-202A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 41

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.3m (MLLW)
COMPLETION DEPTH: 1.6m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip, differential pressure, tip threshold

LOG OF CPT C-202A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 41

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

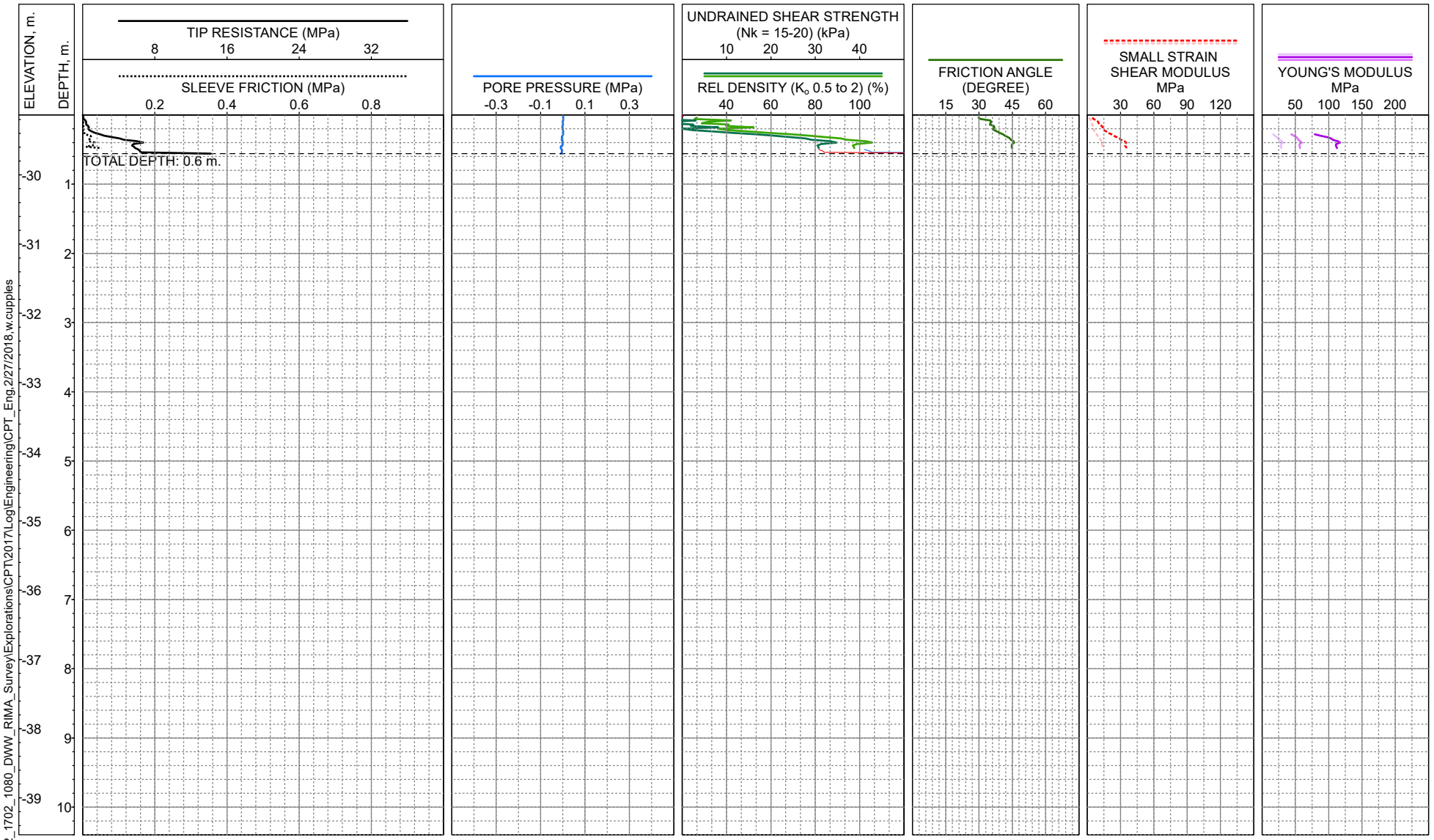
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.1m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-203
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 42

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

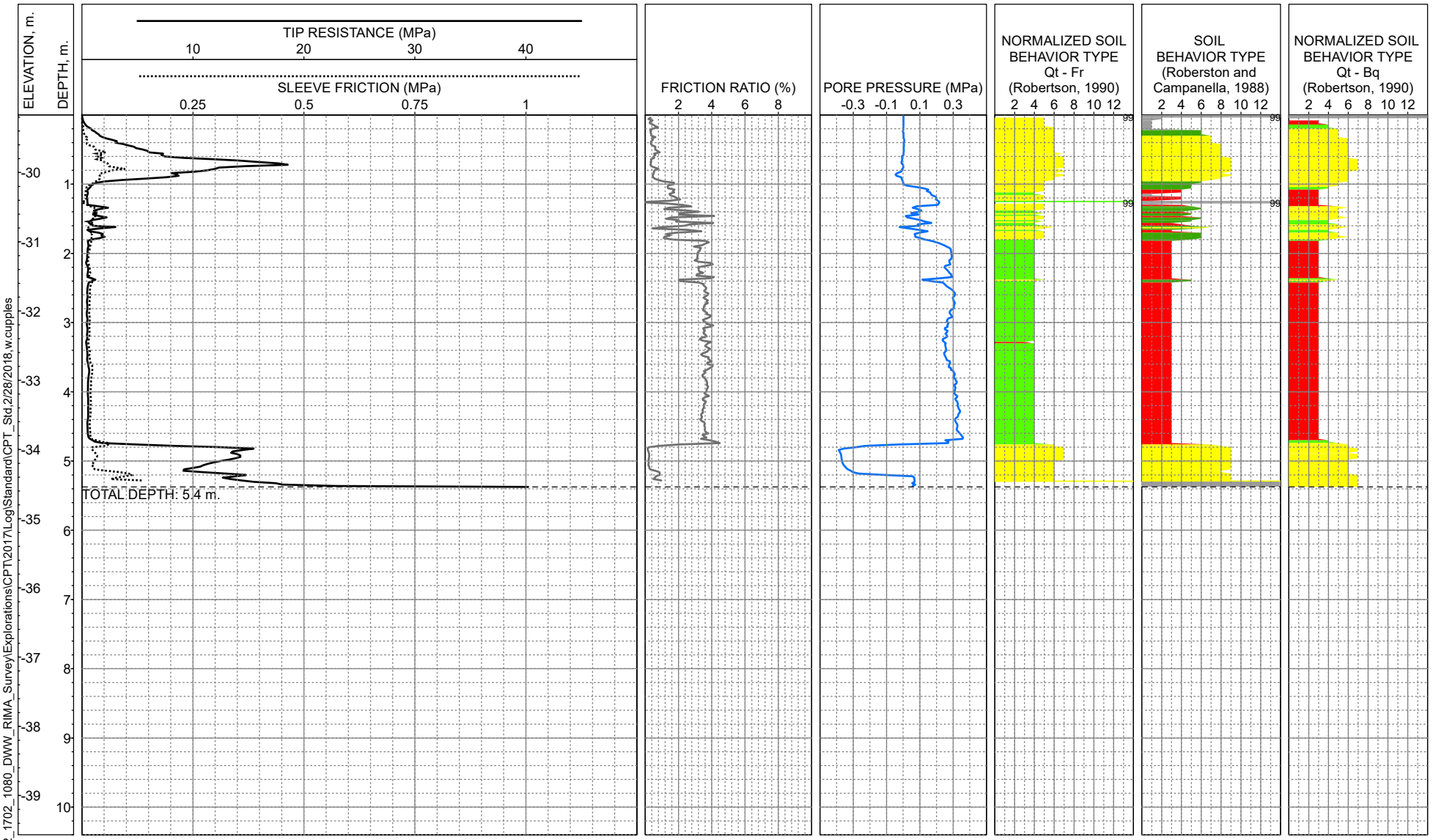
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.1m (MLLW)
COMPLETION DEPTH: 0.6m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-203
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 42

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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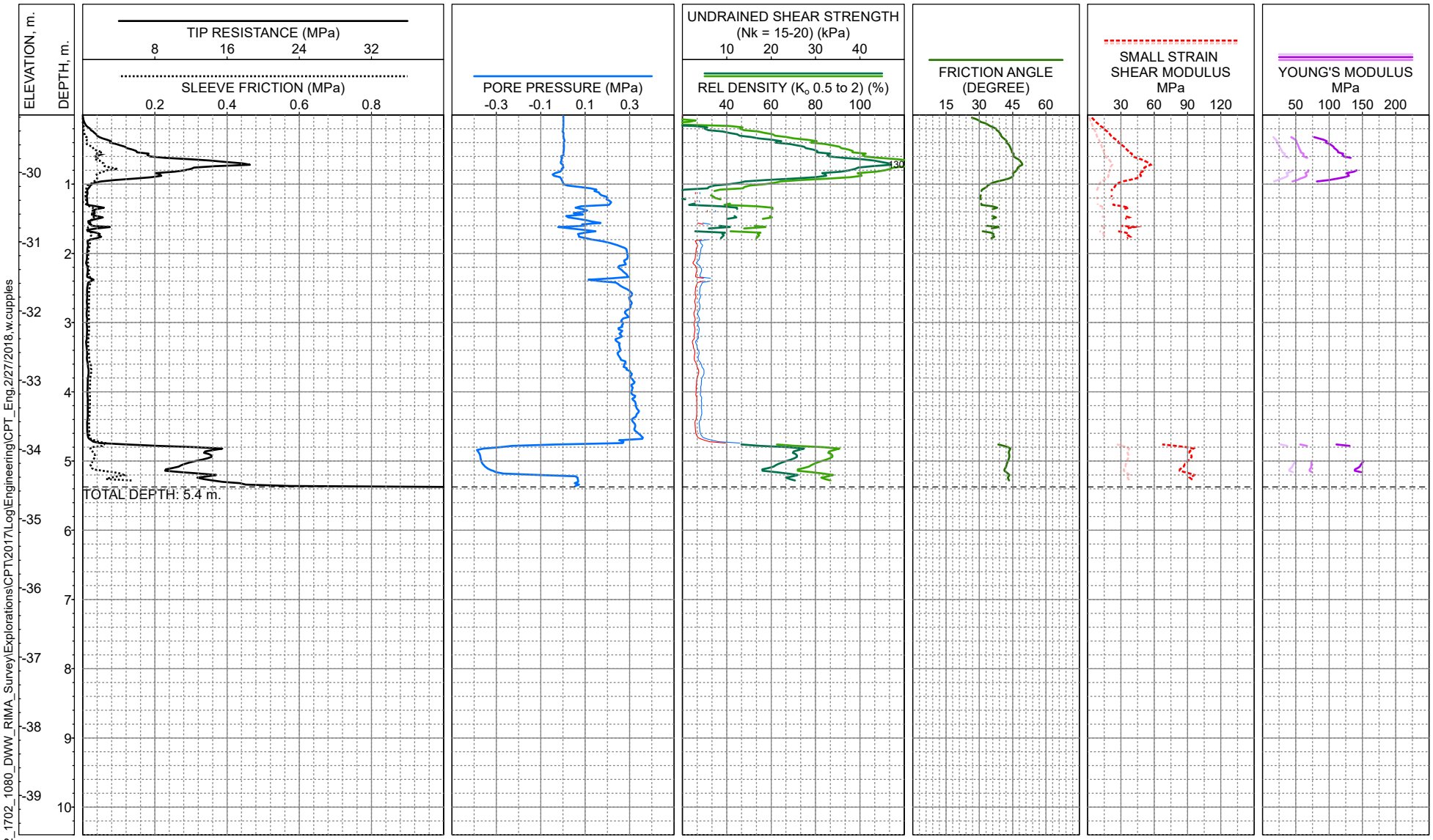
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.2m (MLLW)
COMPLETION DEPTH: 5.4m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-203A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 43

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -29.2m (MLLW)
COMPLETION DEPTH: 5.4m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-203A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 43

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

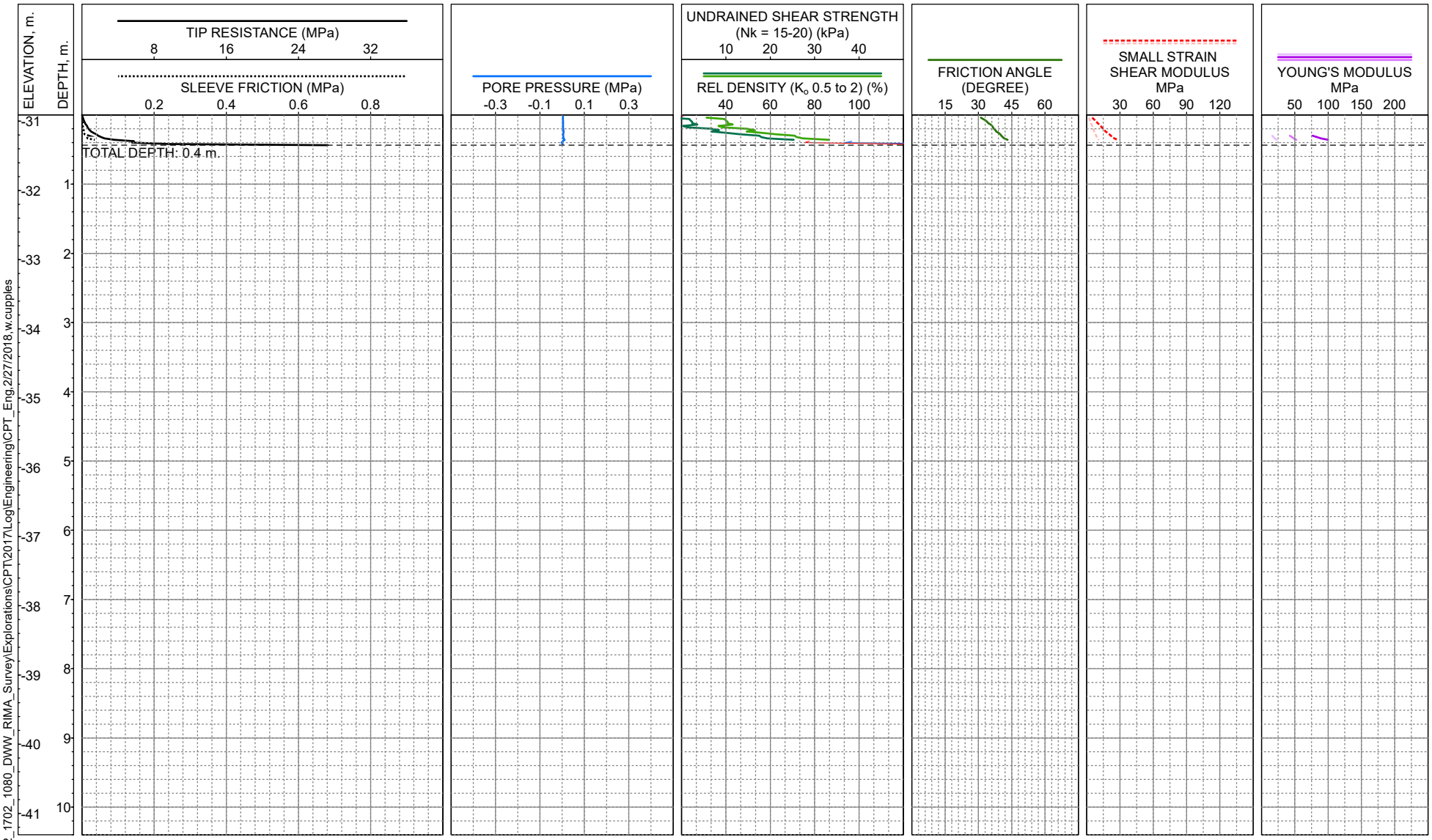
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.9m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-204
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 44

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

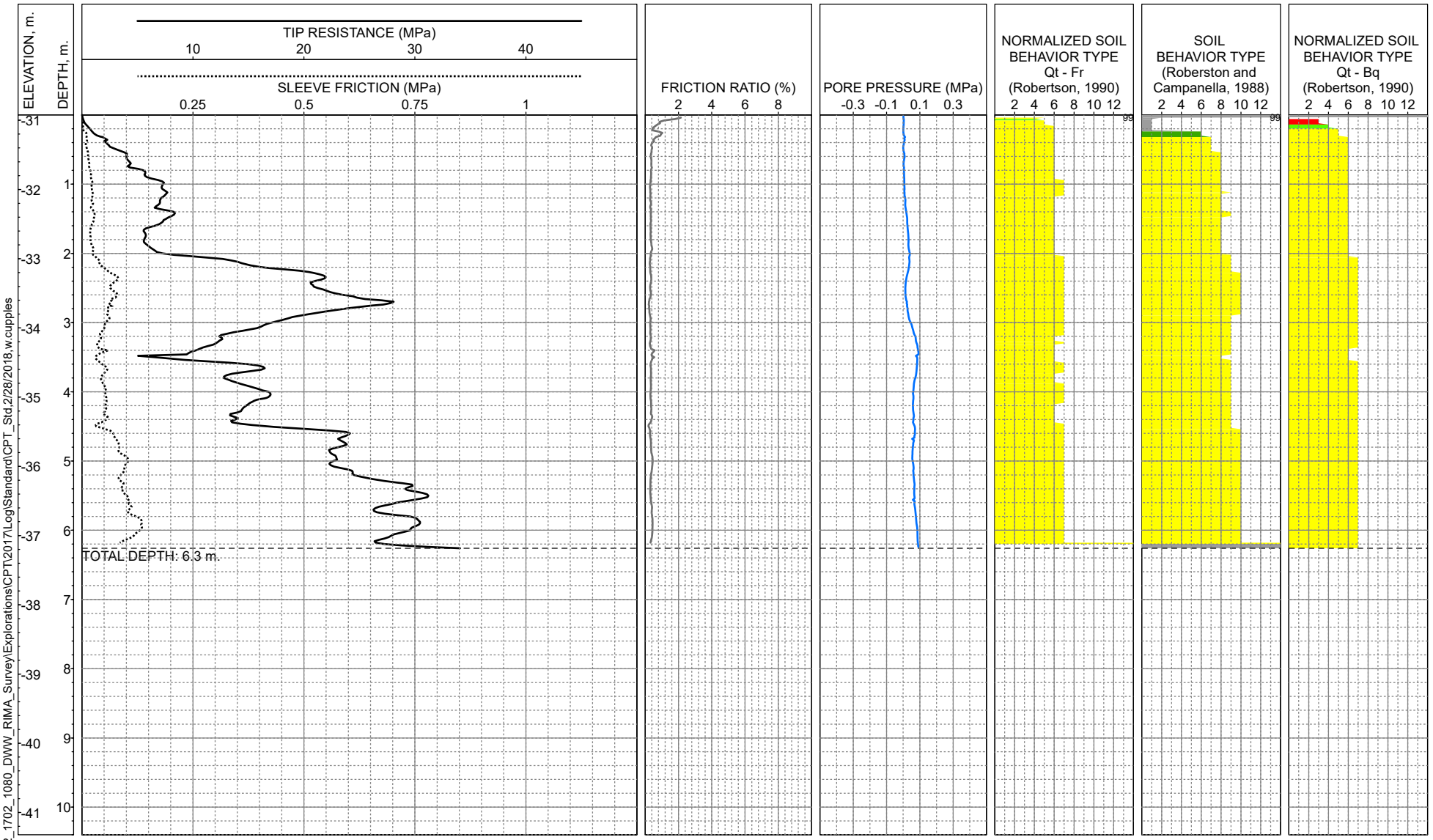
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.9m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-204
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 44

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

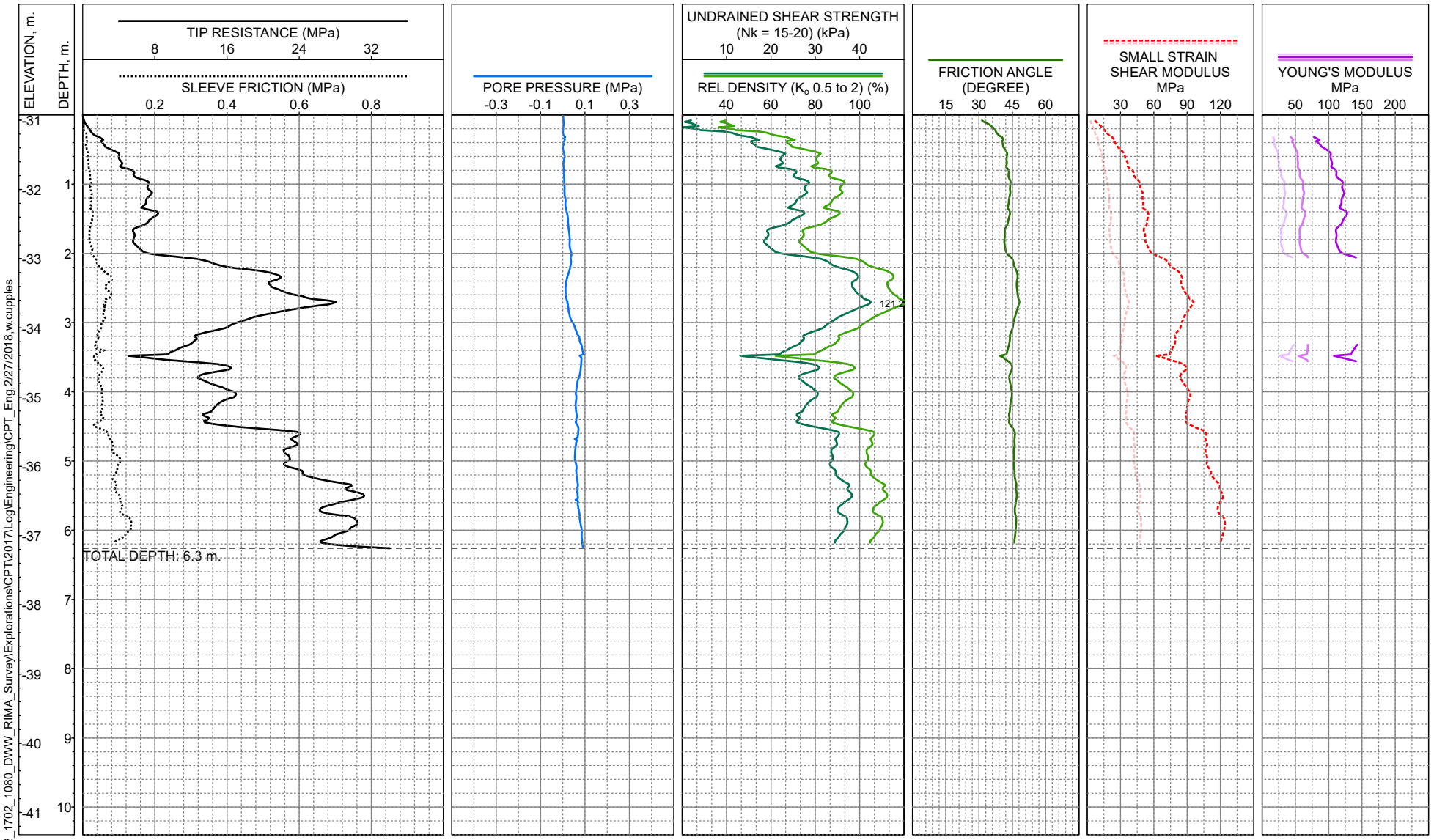
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.9m (MLLW)
COMPLETION DEPTH: 6.3m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip

LOG OF CPT C-204A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 45

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

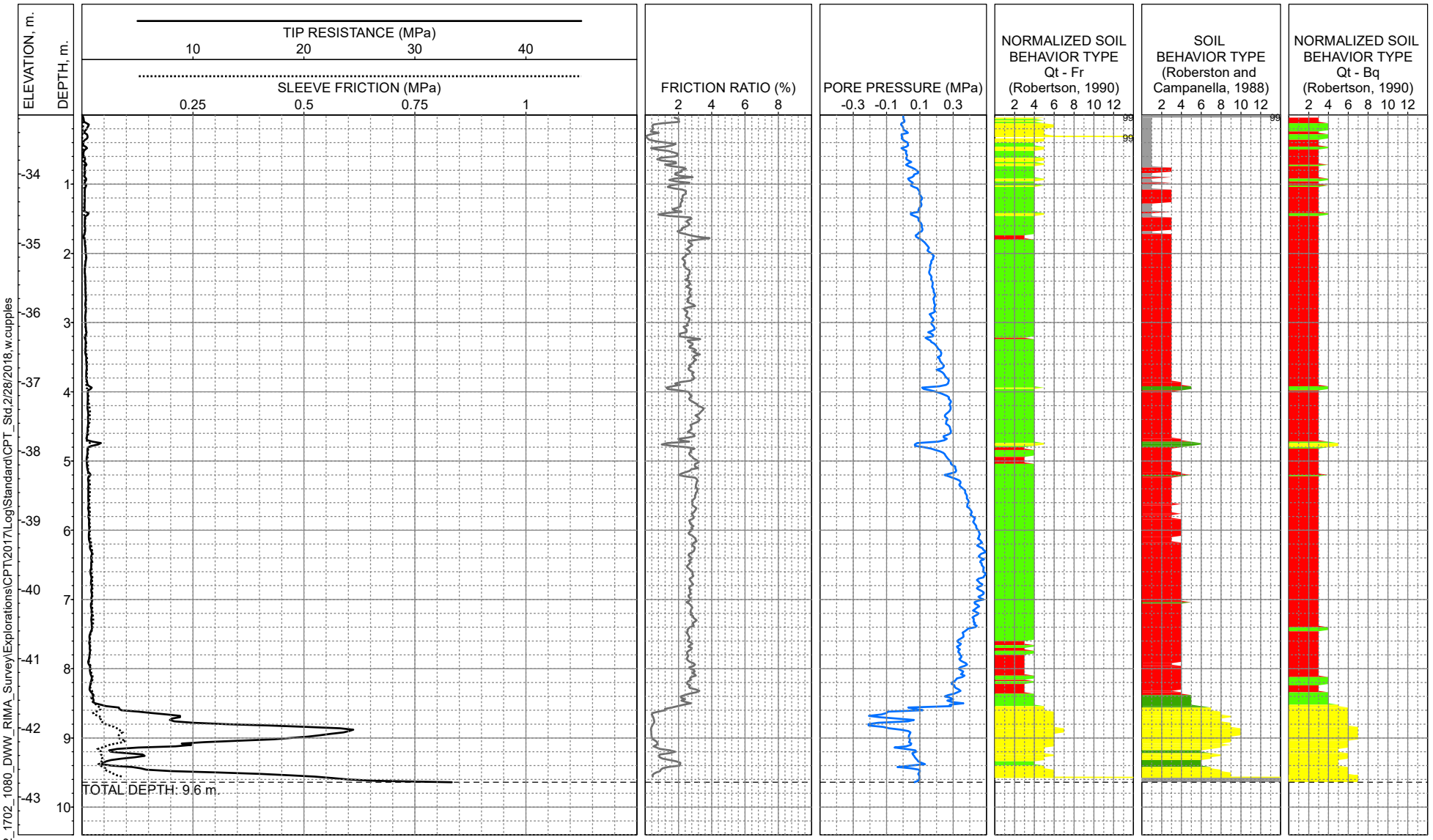
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -30.9m (MLLW)
COMPLETION DEPTH: 6.3m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip

LOG OF CPT C-204A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 45

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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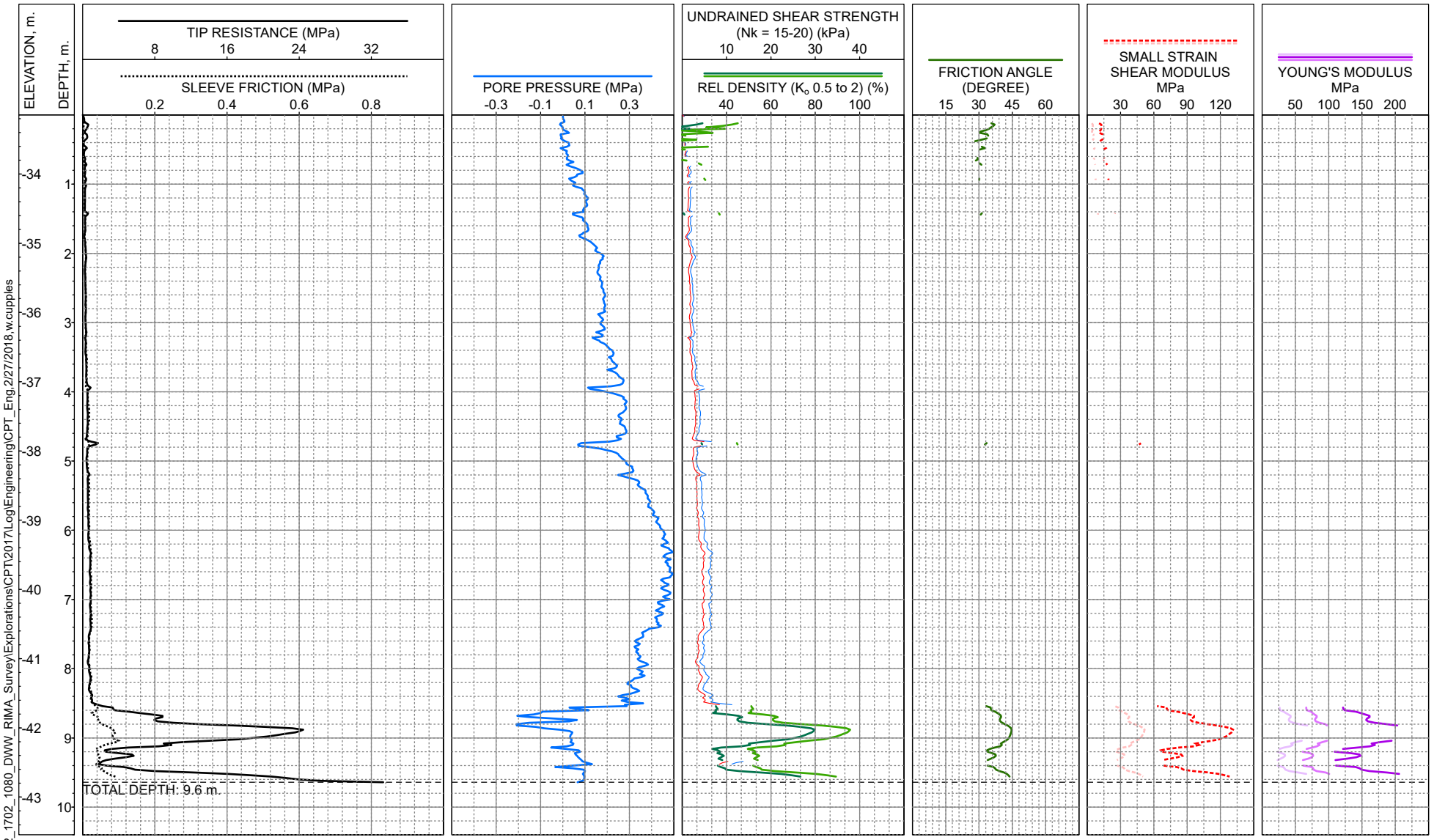
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -33.1m (MLLW)
COMPLETION DEPTH: 9.6m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-205
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 46

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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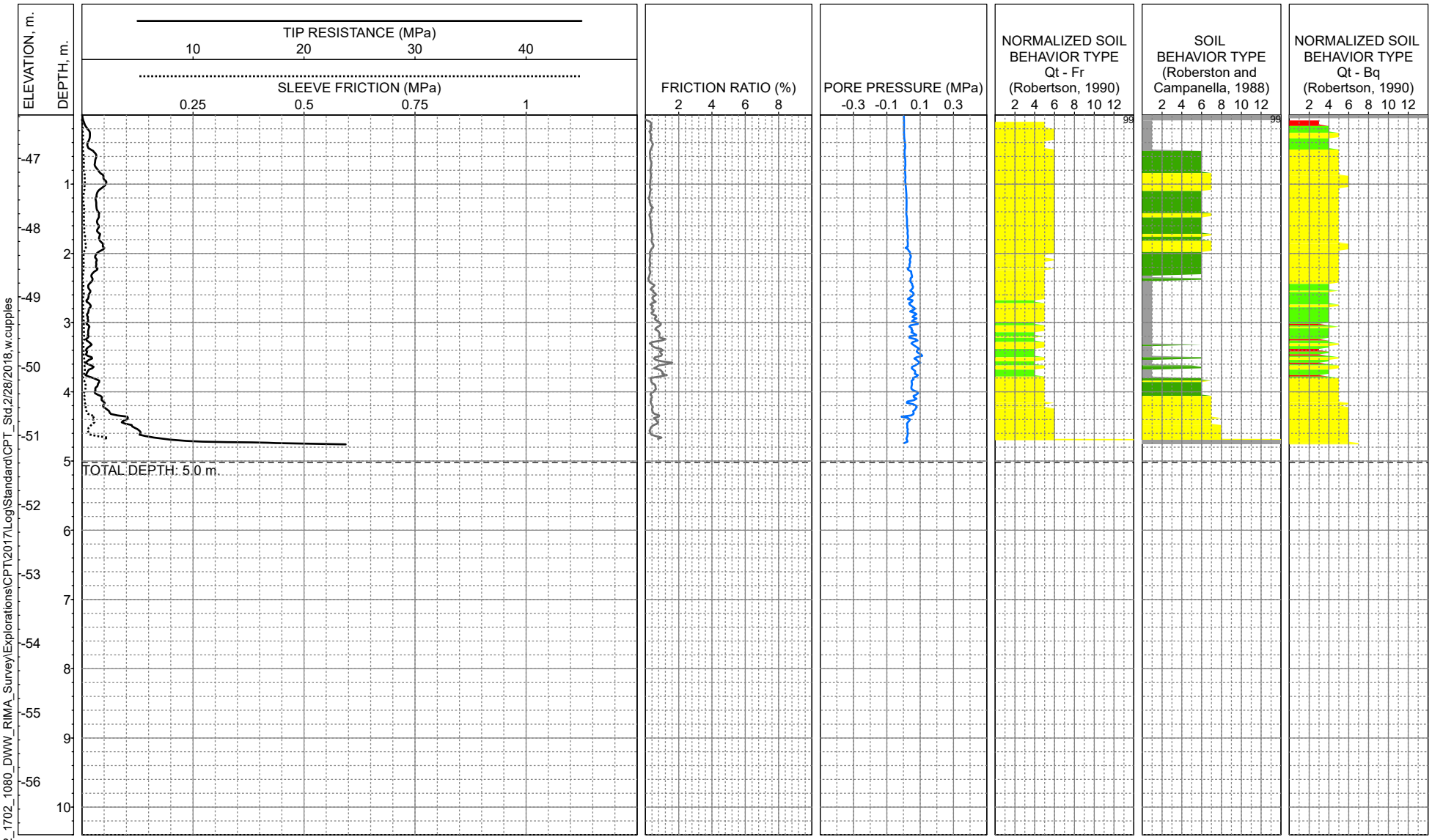
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -33.1m (MLLW)
COMPLETION DEPTH: 9.6m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-205
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 46

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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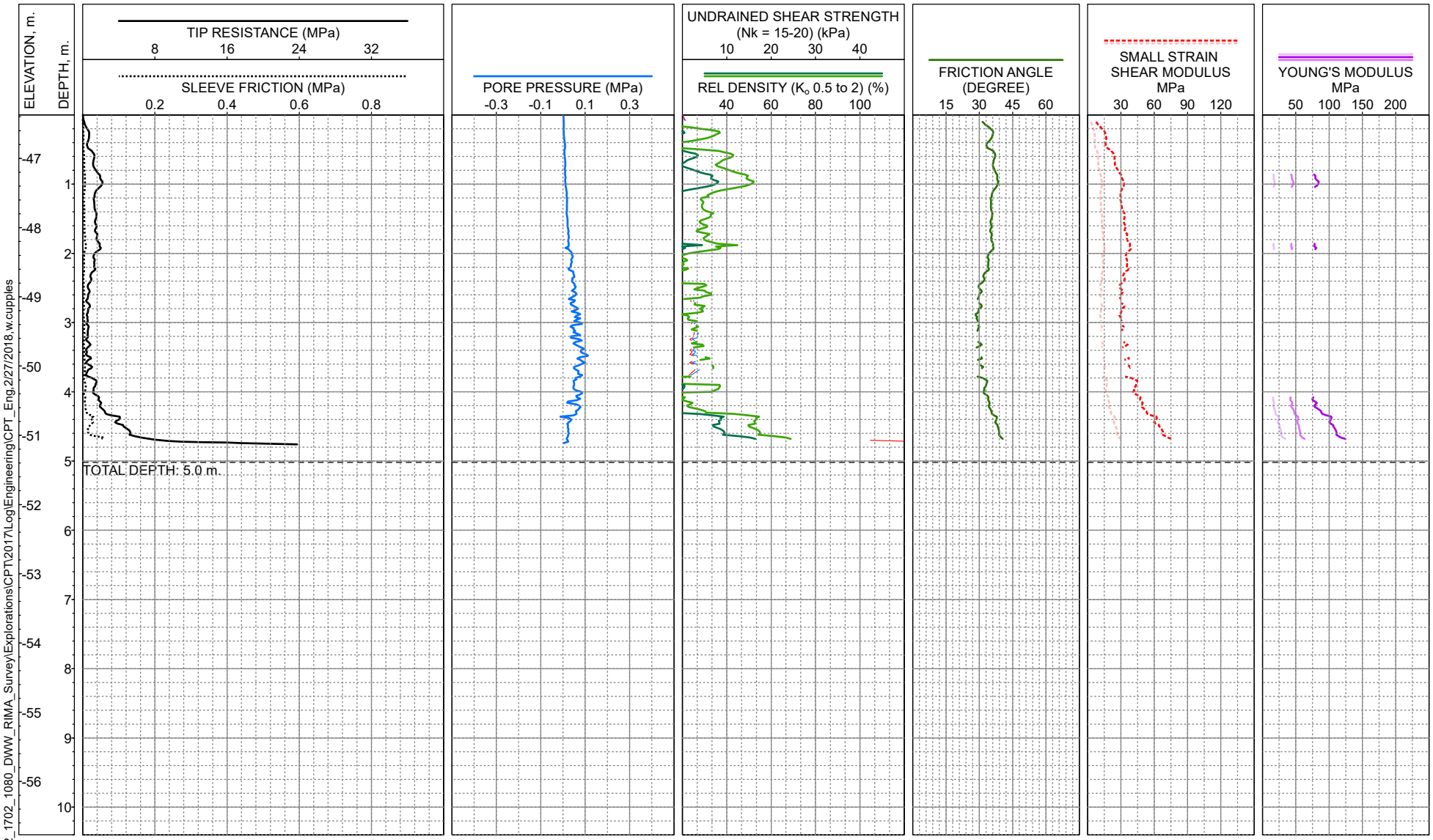
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -46.4m (MLLW)
COMPLETION DEPTH: 5.0m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip, differential pressure

LOG OF CPT C-206
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 47

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

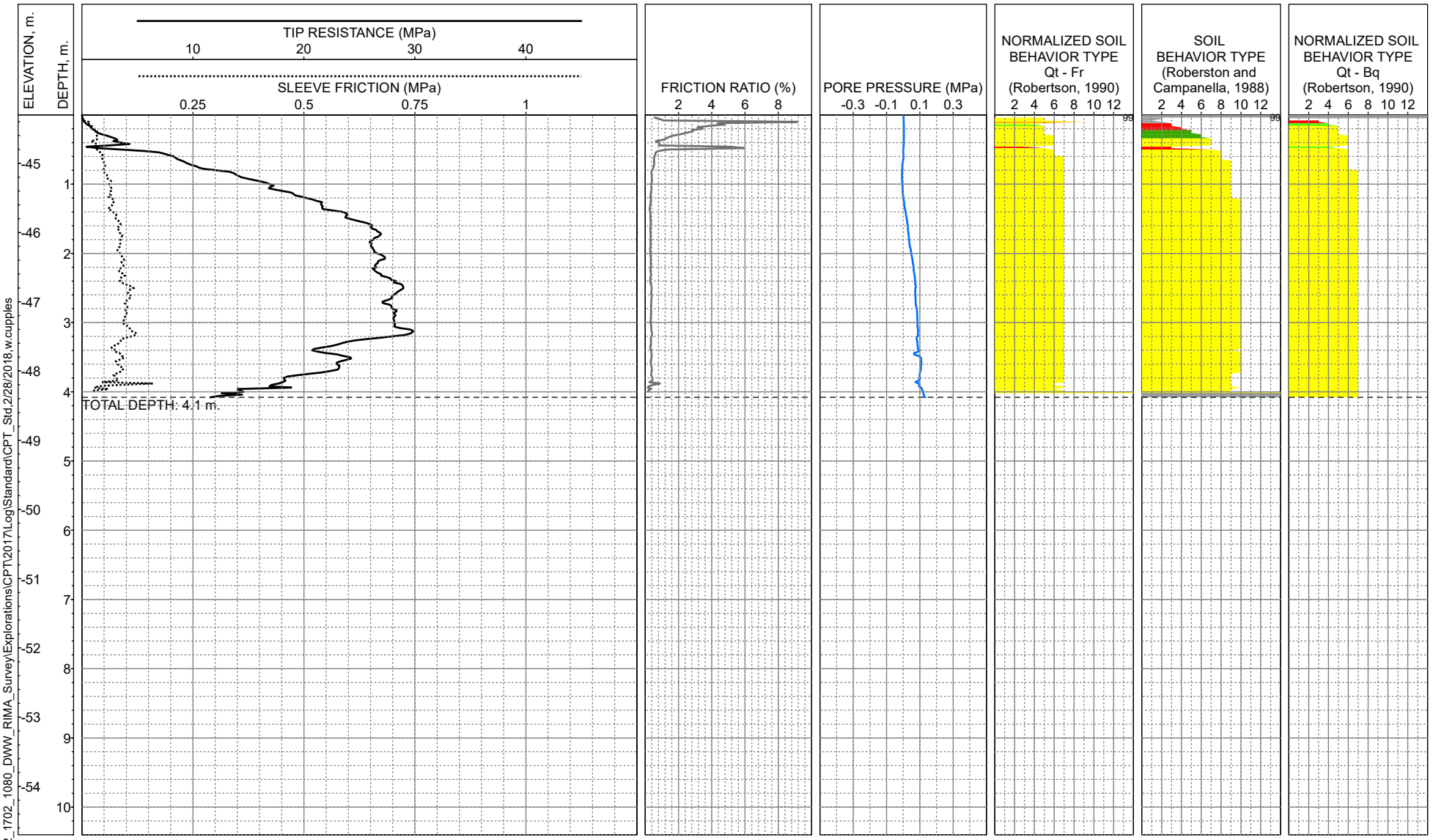
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -46.4m (MLLW)
COMPLETION DEPTH: 5.0m
TEST DATE: 11/9/2017
REASON FOR TERMINATION: Target tip, differential pressure

LOG OF CPT C-206
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 47

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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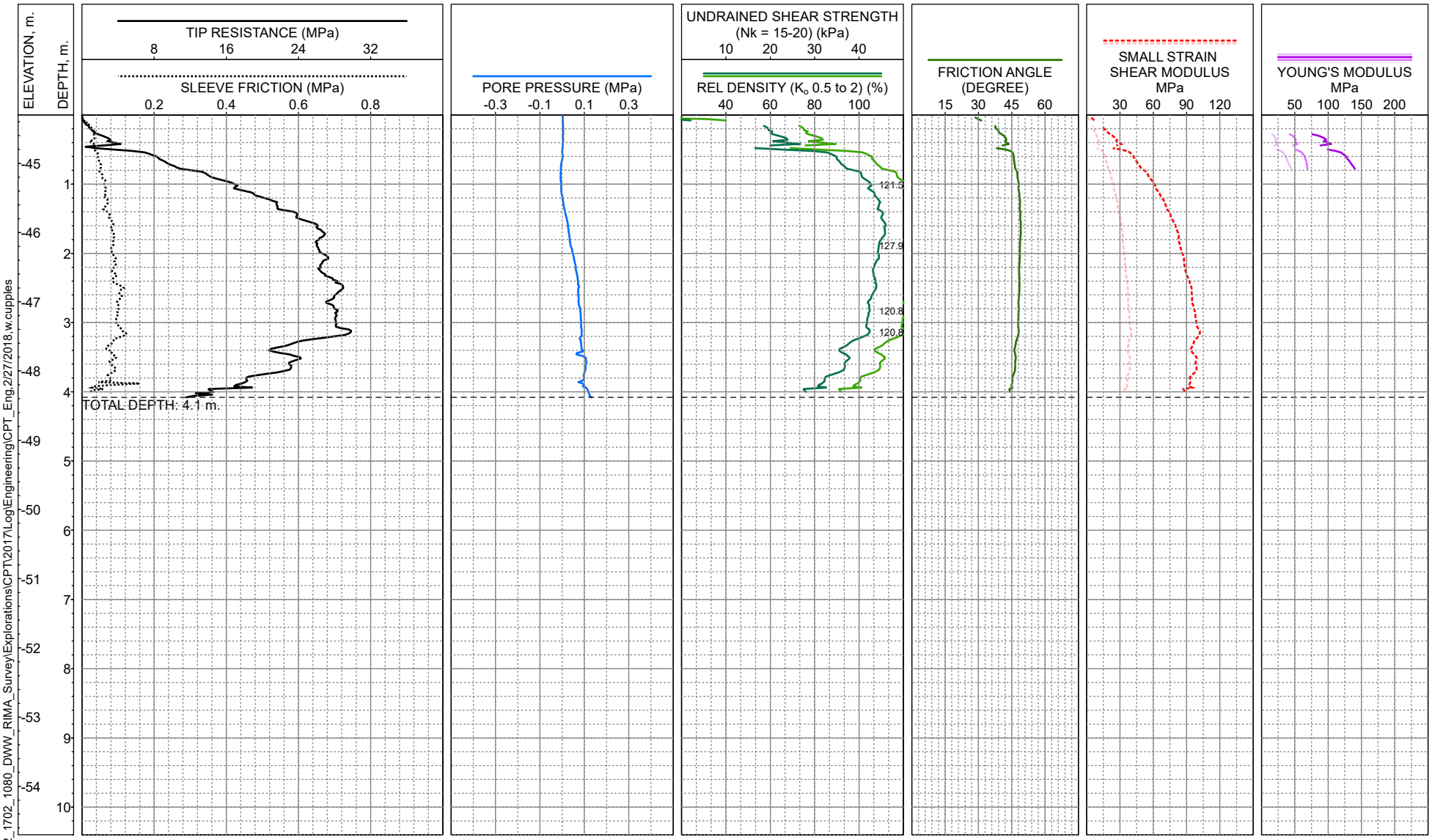
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -44.3m (MLLW)
COMPLETION DEPTH: 4.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-207
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 48

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

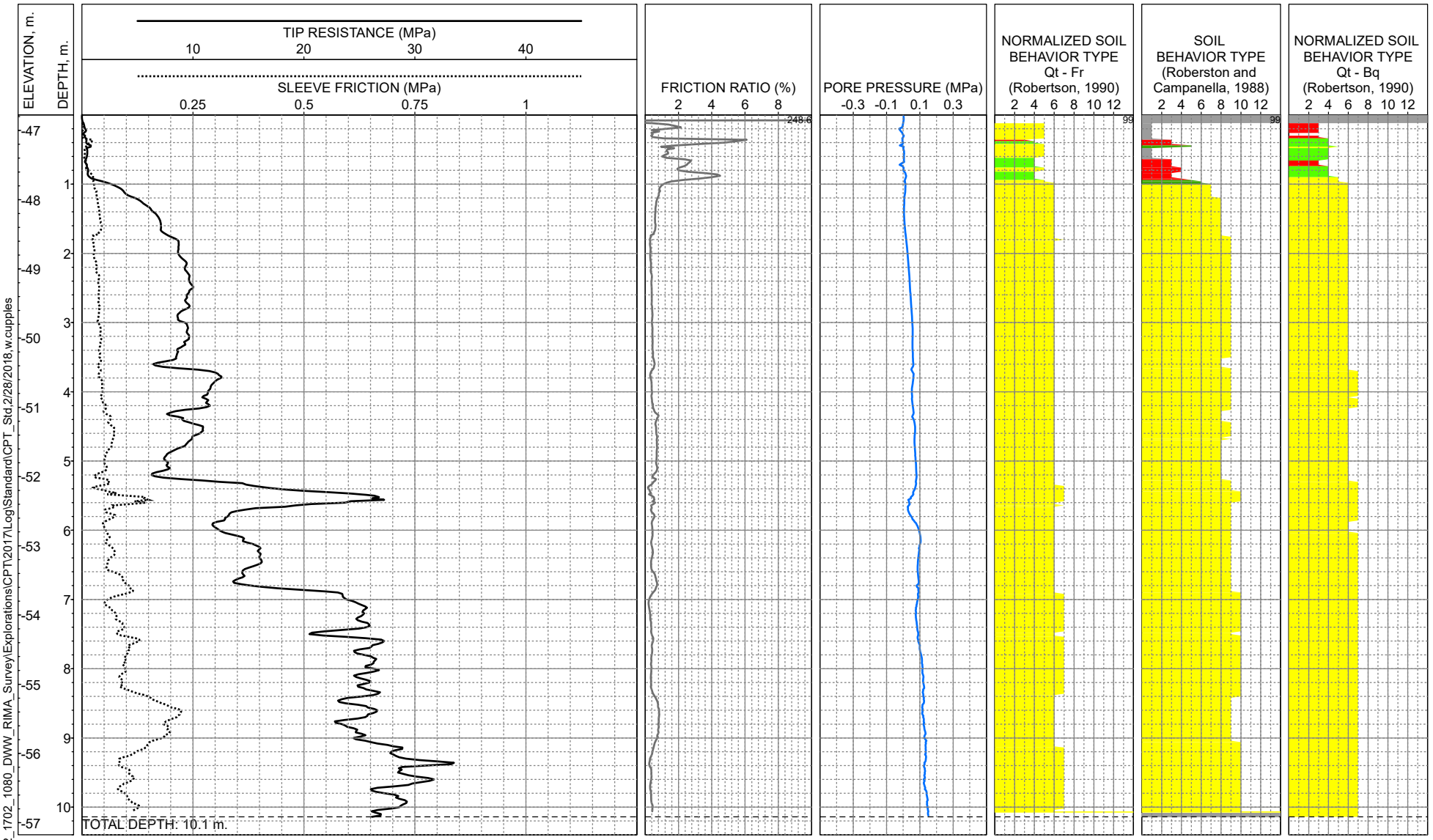
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -44.3m (MLLW)
COMPLETION DEPTH: 4.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-207
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 48

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

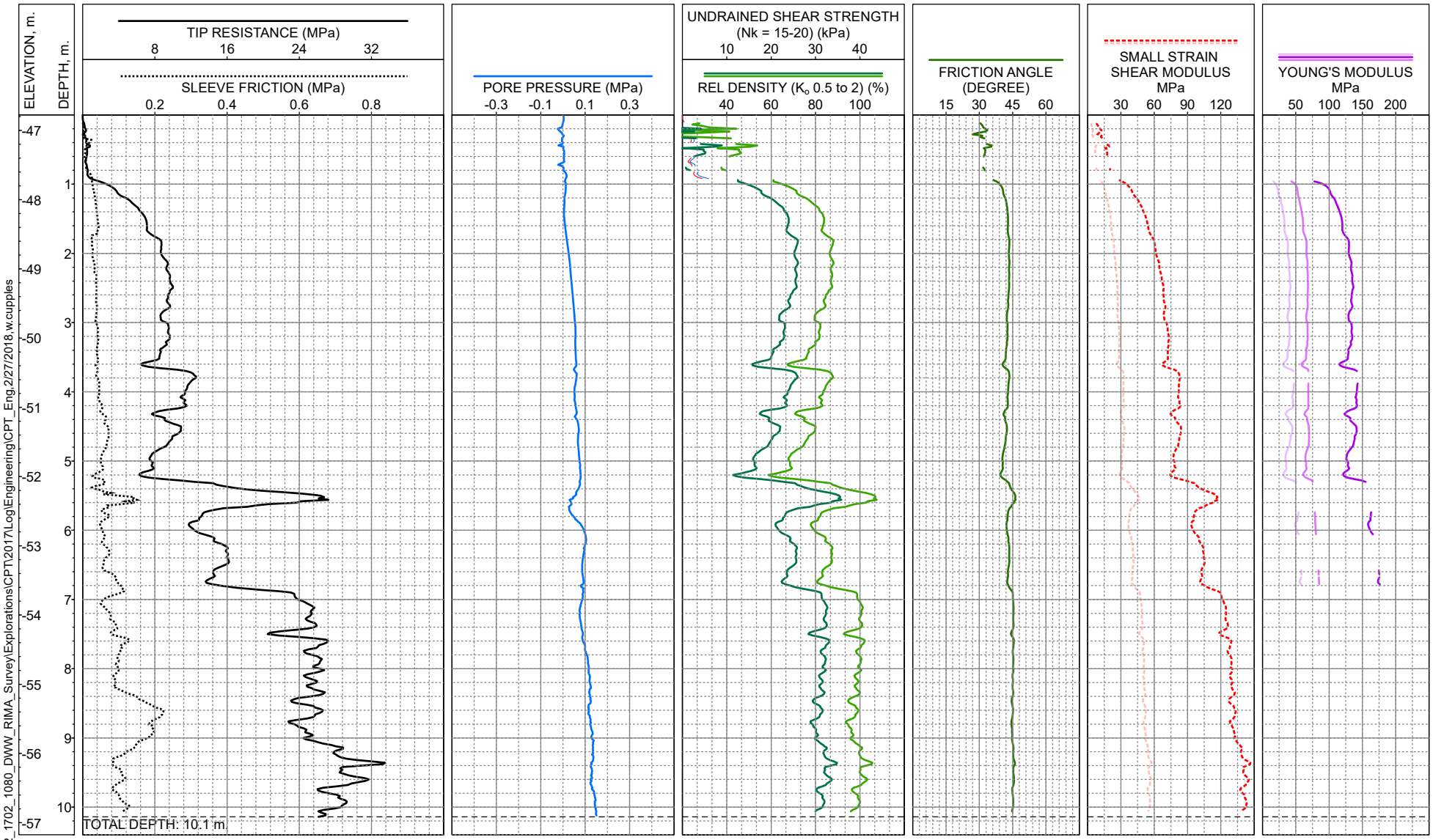
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -46.8m (MLLW)
COMPLETION DEPTH: 10.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target depth

LOG OF CPT C-208
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 49

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

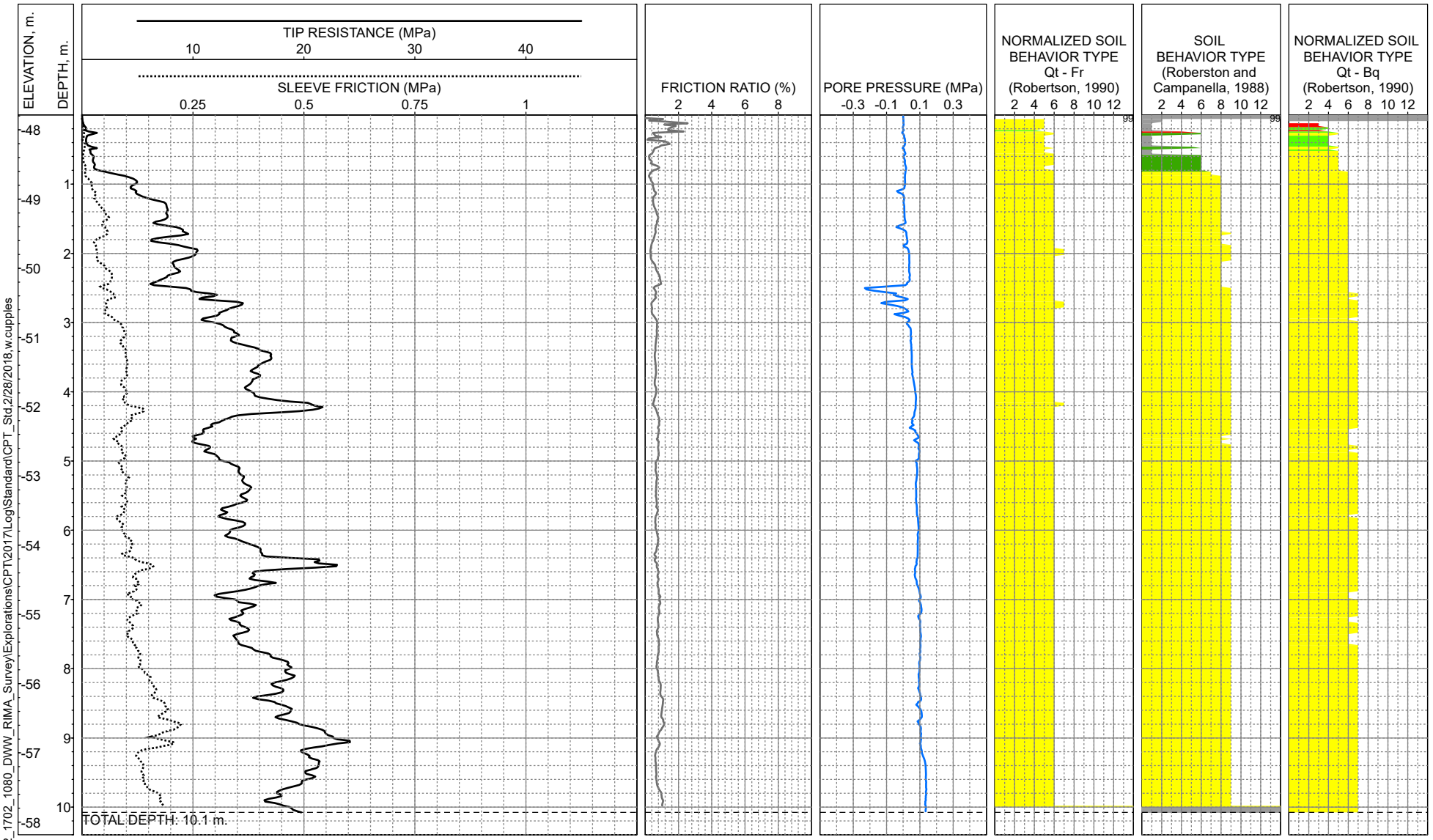
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -46.8m (MLLW)
COMPLETION DEPTH: 10.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target depth

LOG OF CPT C-208
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 49

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

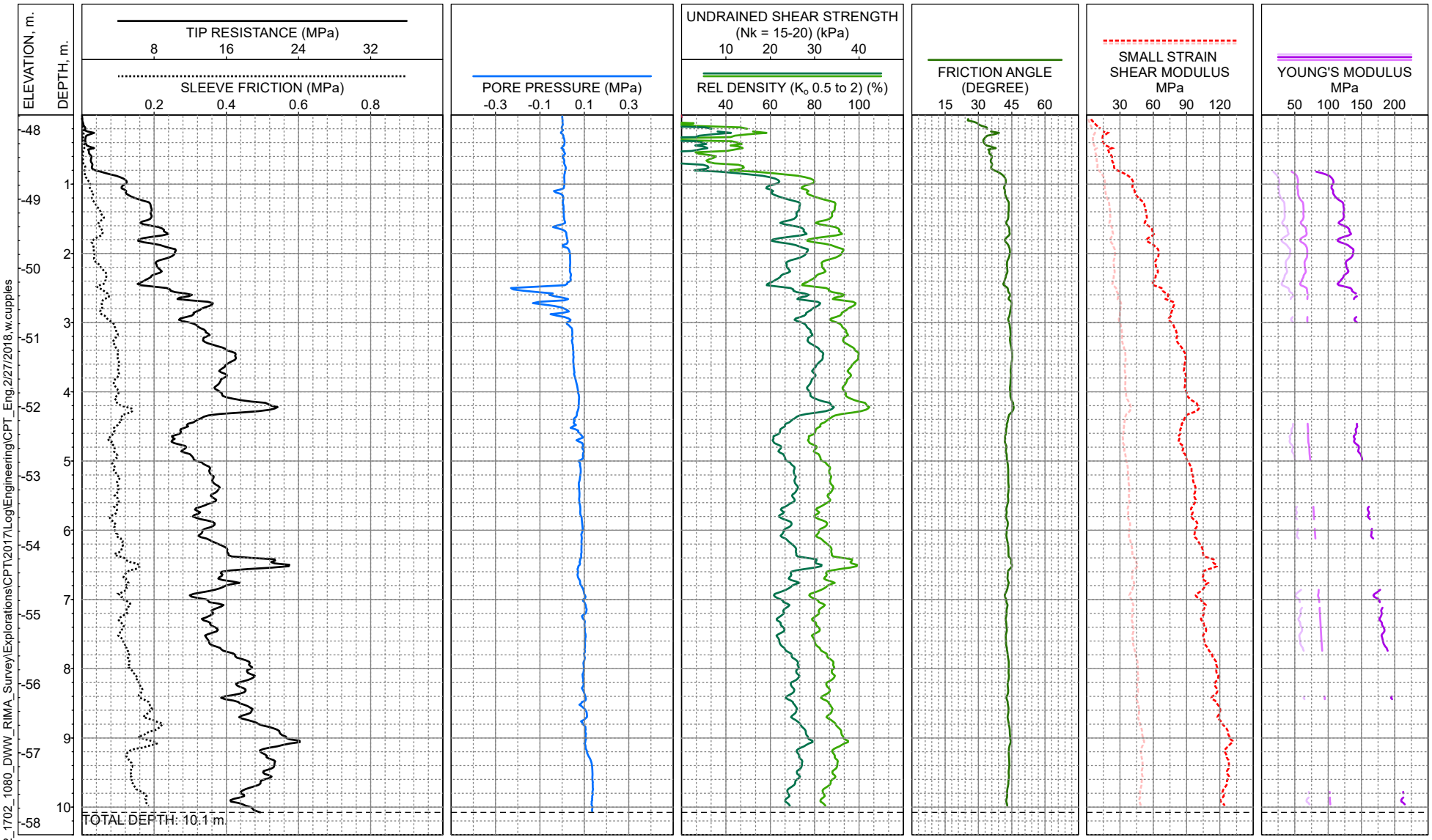
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -47.8m (MLLW)
COMPLETION DEPTH: 10.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target depth

LOG OF CPT C-209
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 50

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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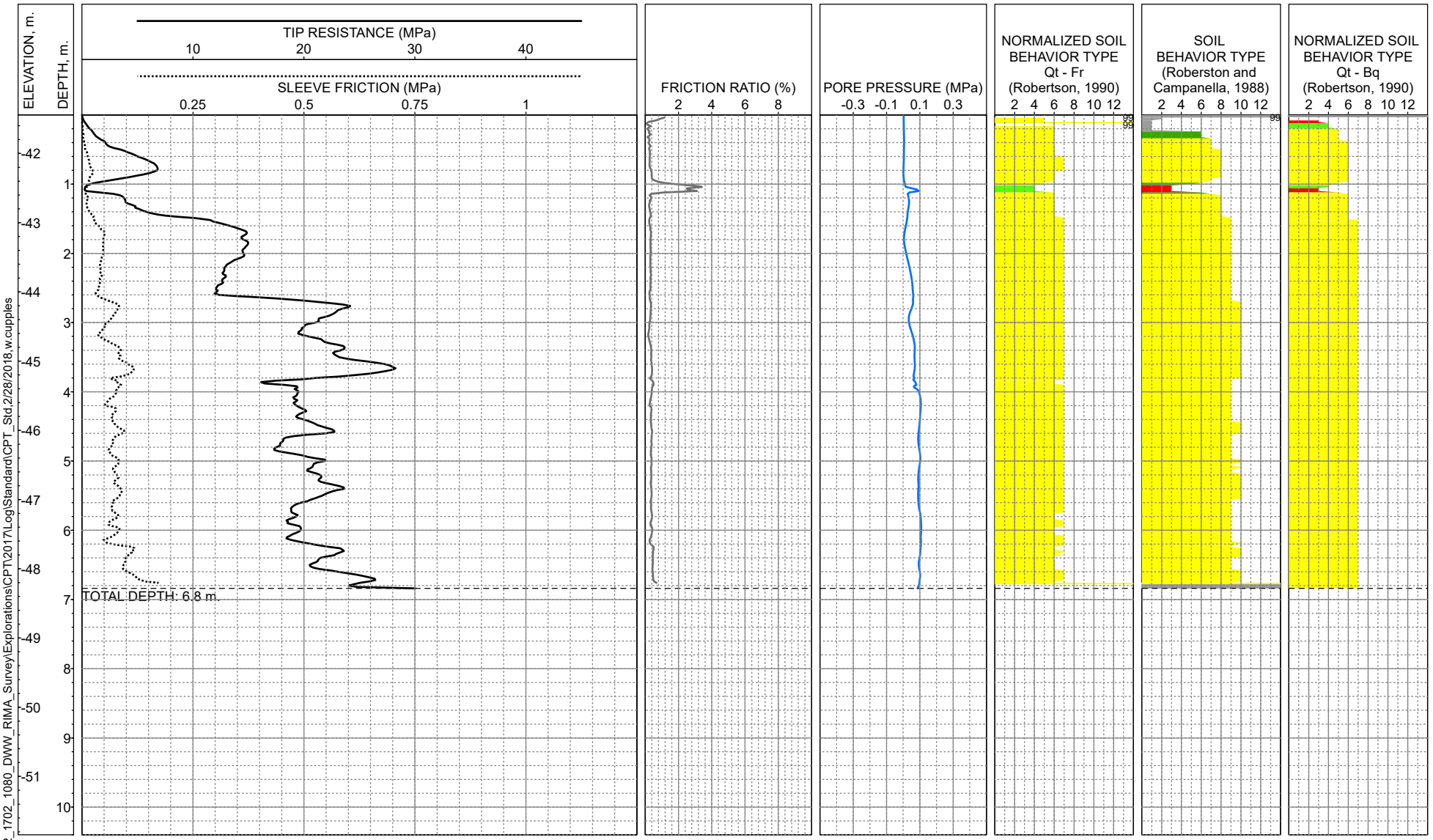
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -47.8m (MLLW)
COMPLETION DEPTH: 10.1m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target depth

LOG OF CPT C-209
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 50

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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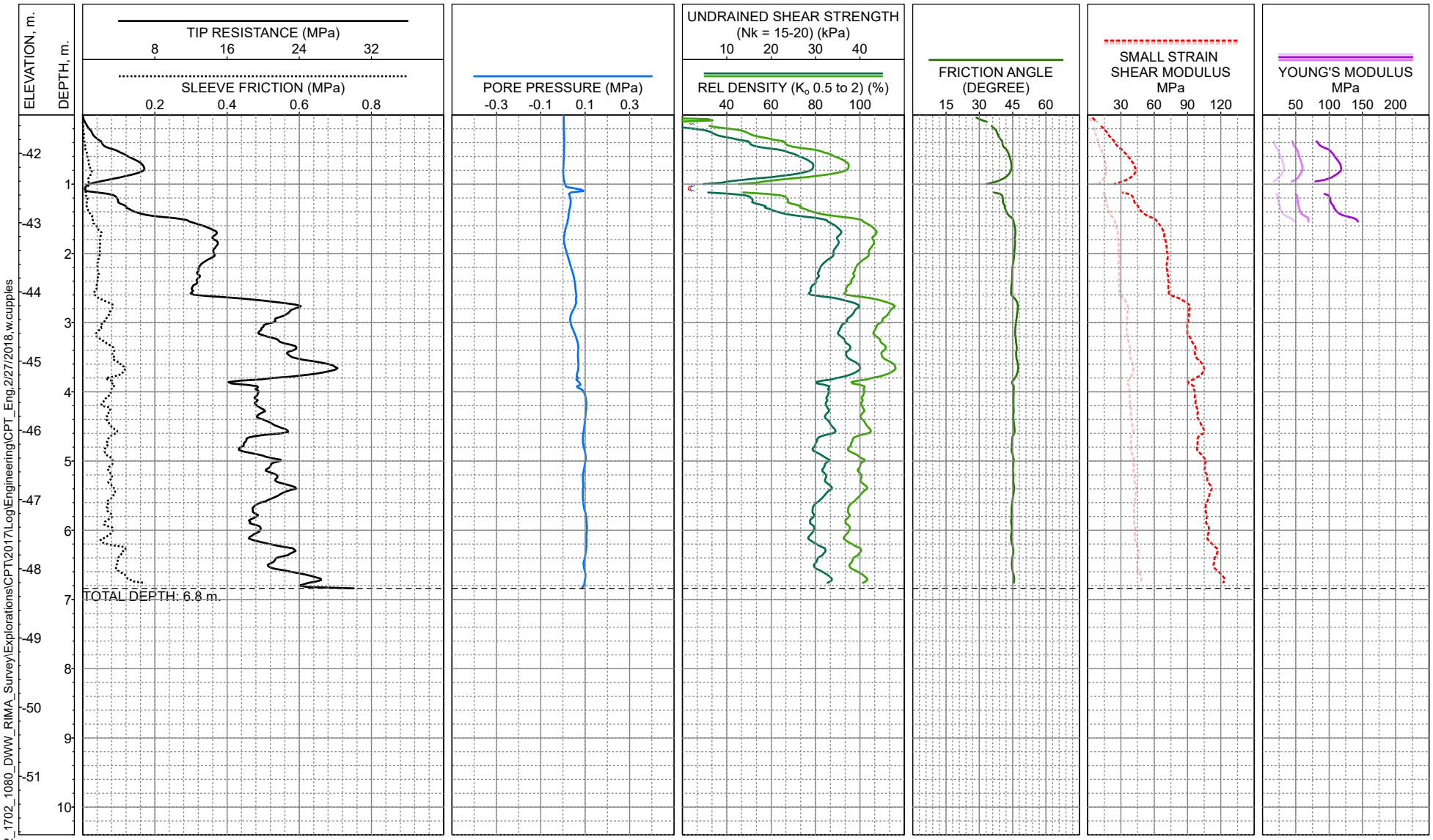
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -41.4m (MLLW)
COMPLETION DEPTH: 6.8m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-210
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 51

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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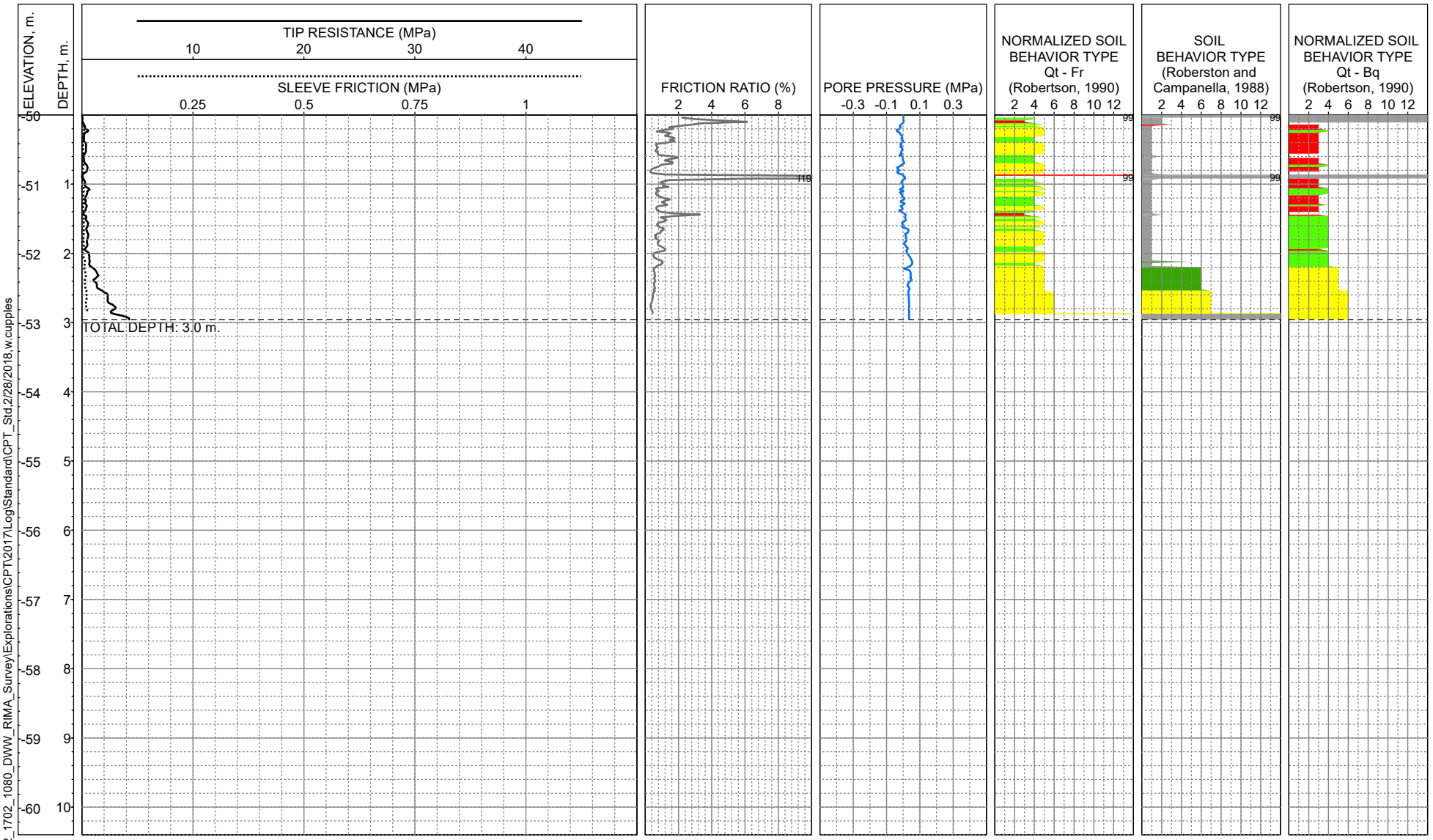
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -41.4m (MLLW)
COMPLETION DEPTH: 6.8m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target differential pressure

LOG OF CPT C-210
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 51

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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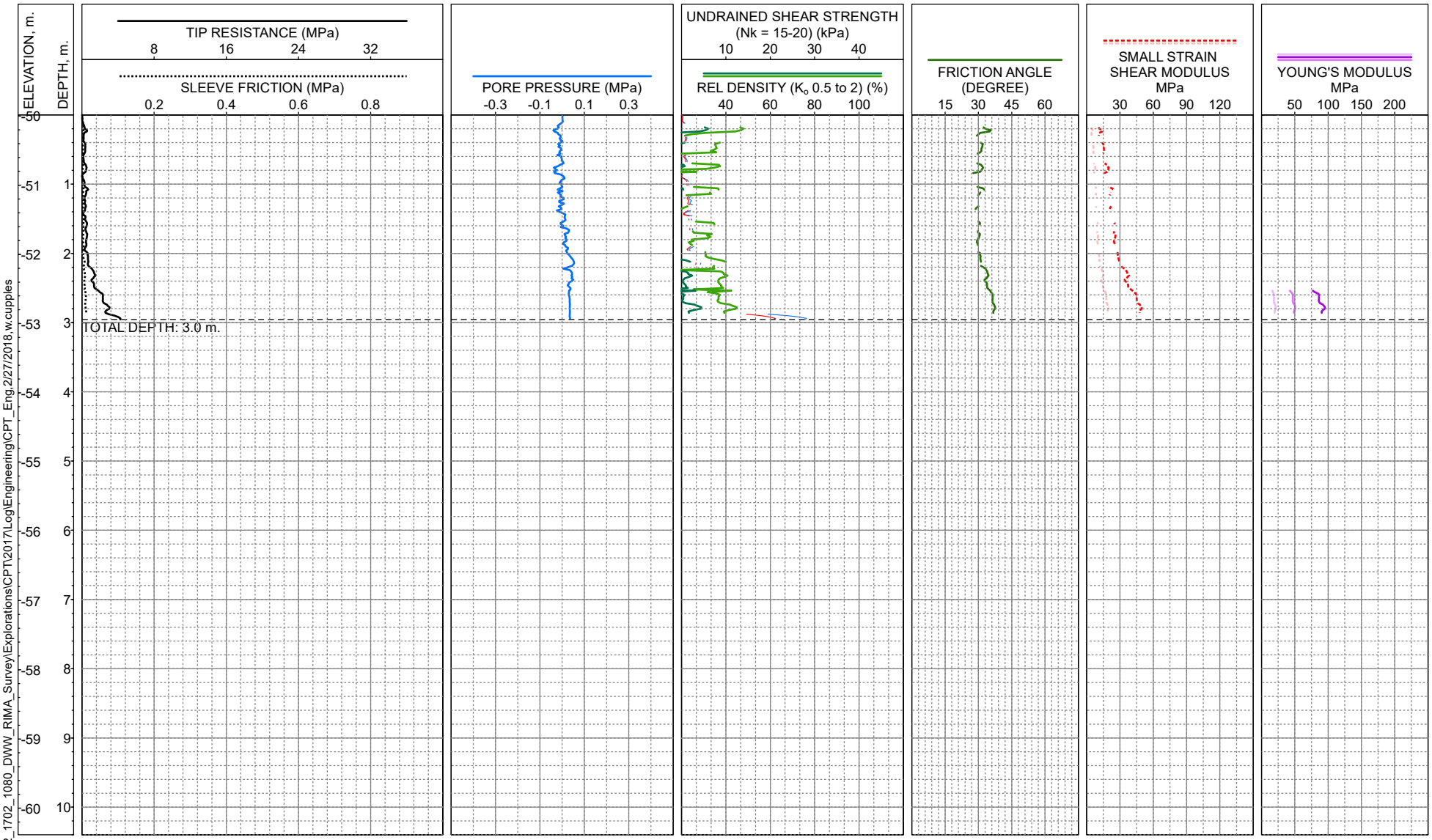
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -50.0m (MLLW)
COMPLETION DEPTH: 3.0m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-211
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 52

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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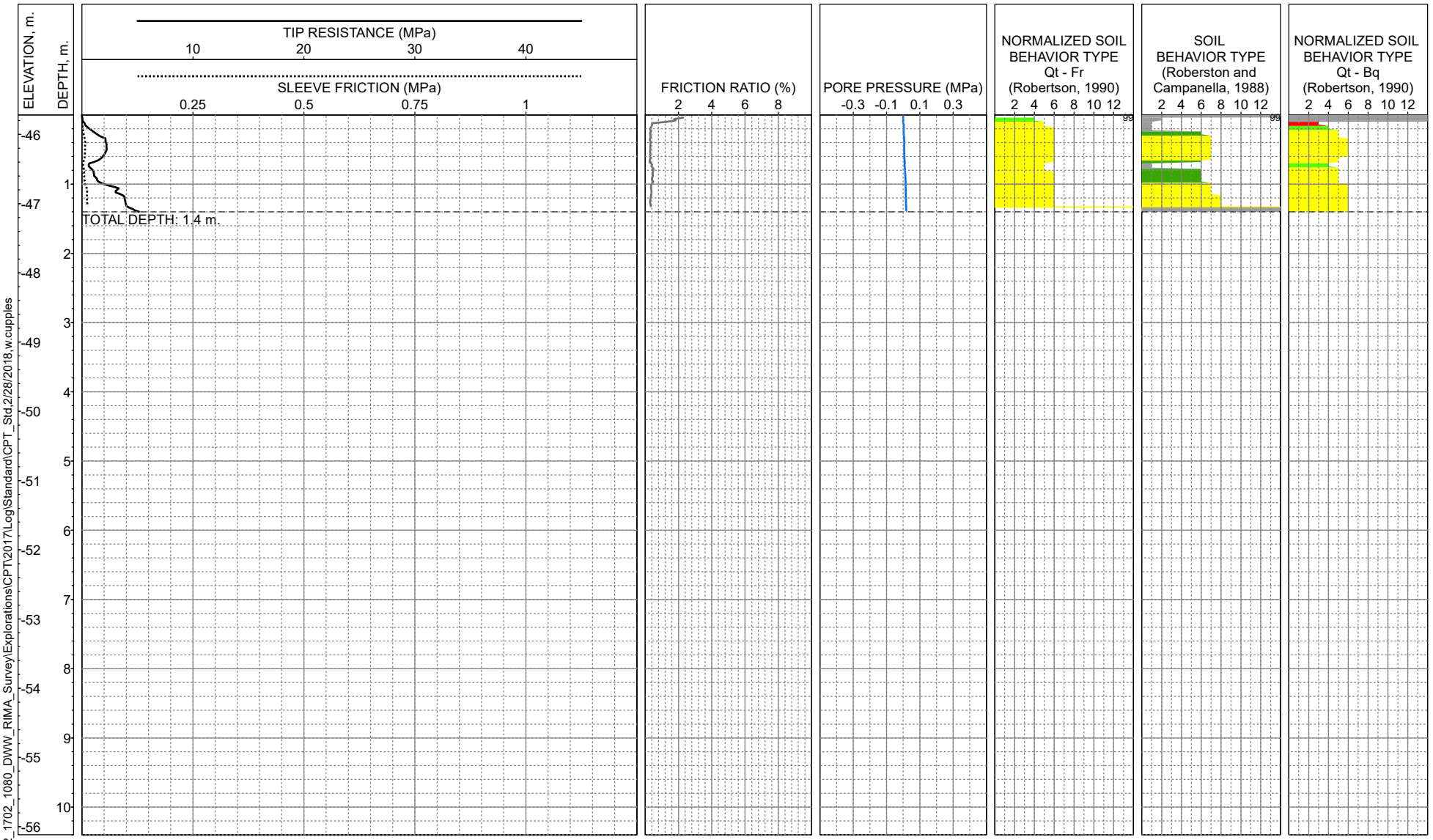
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -50.0m (MLLW)
COMPLETION DEPTH: 3.0m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-211
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 52

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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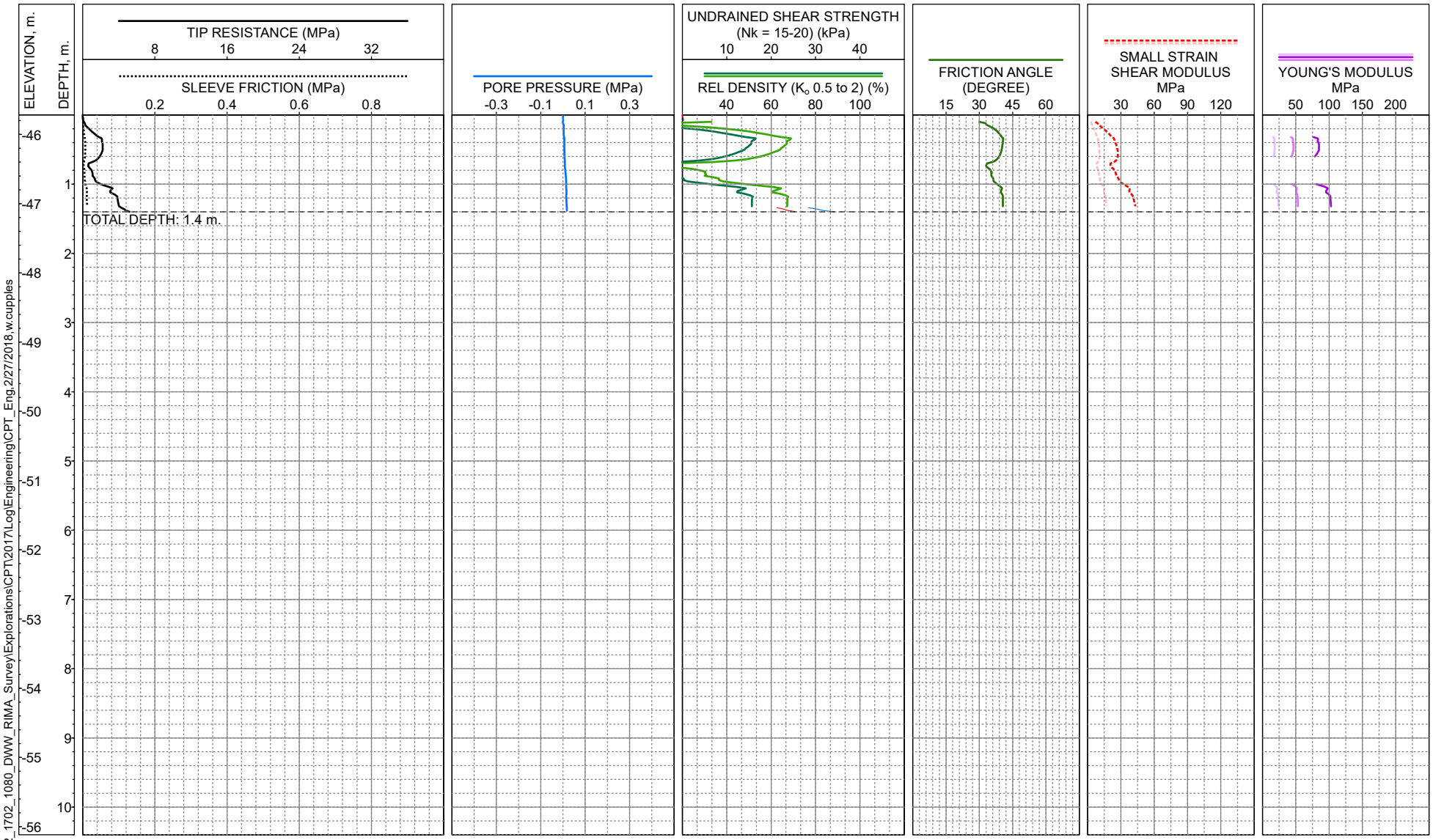
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -45.7m (MLLW)
COMPLETION DEPTH: 1.4m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-212
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 53

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -45.7m (MLLW)
COMPLETION DEPTH: 1.4m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-212
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 53

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

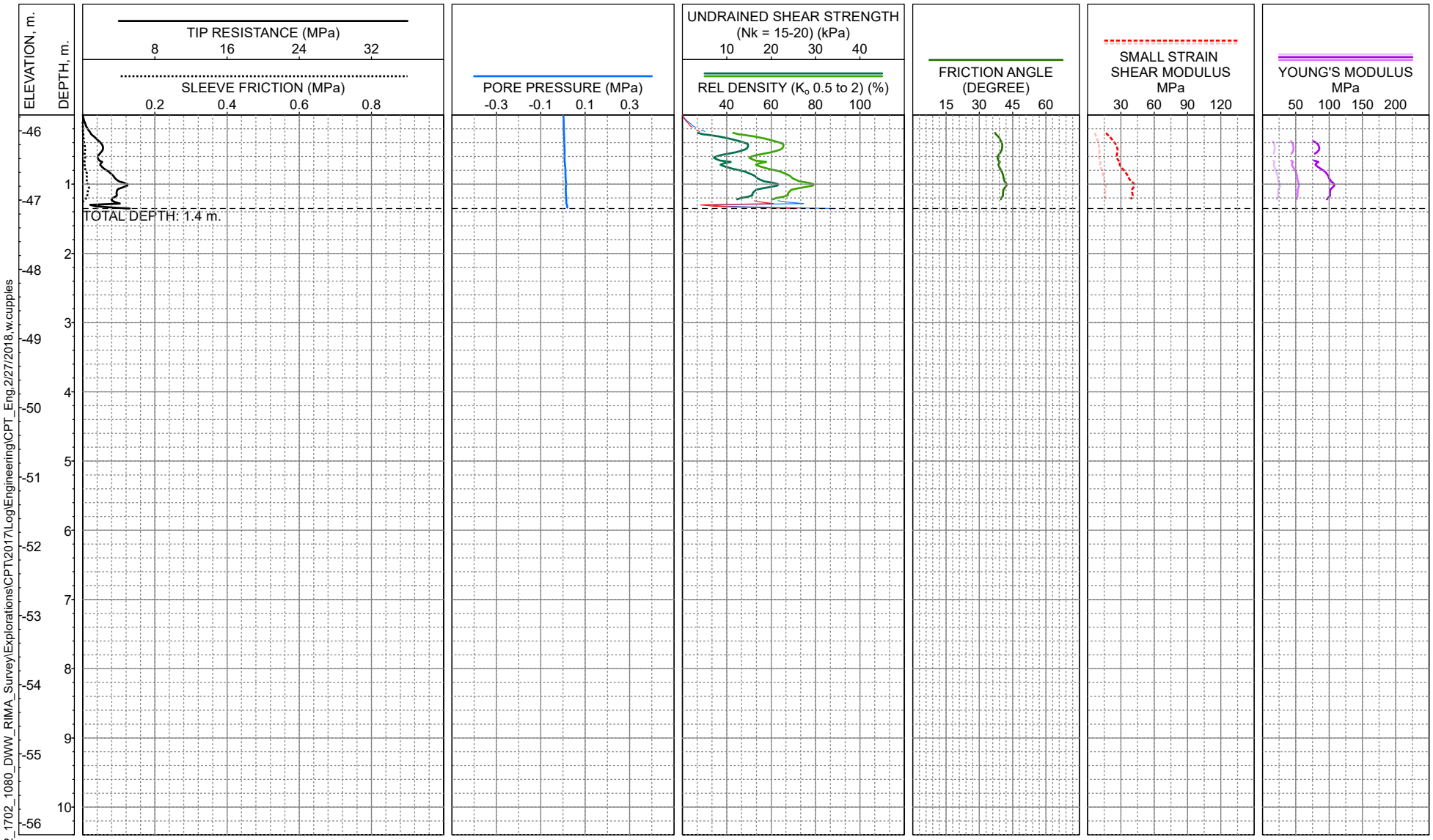
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -45.8m (MLLW)
COMPLETION DEPTH: 1.4m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-212A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 54

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

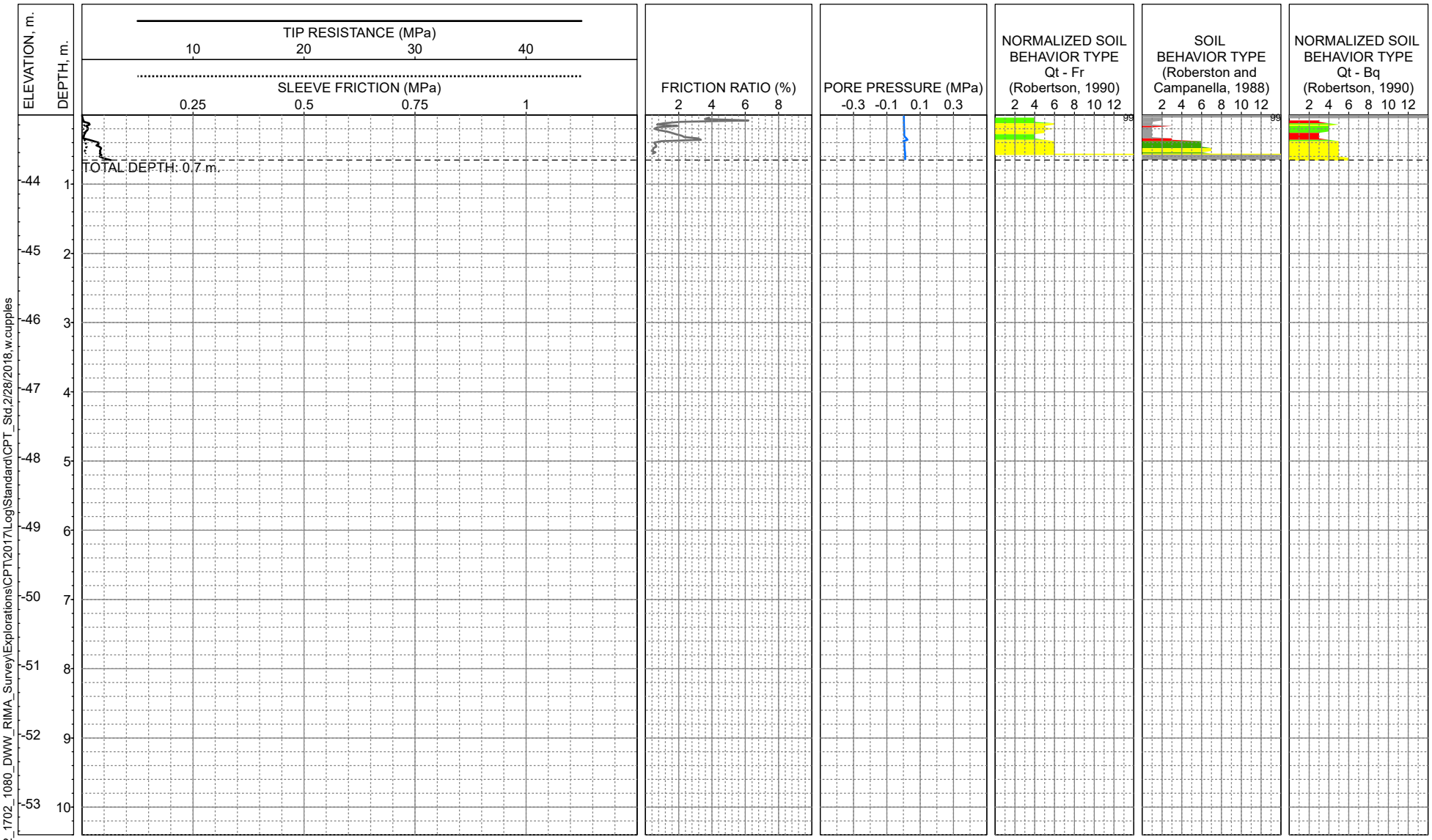
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -45.8m (MLLW)
COMPLETION DEPTH: 1.4m
TEST DATE: 11/24/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-212A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 54

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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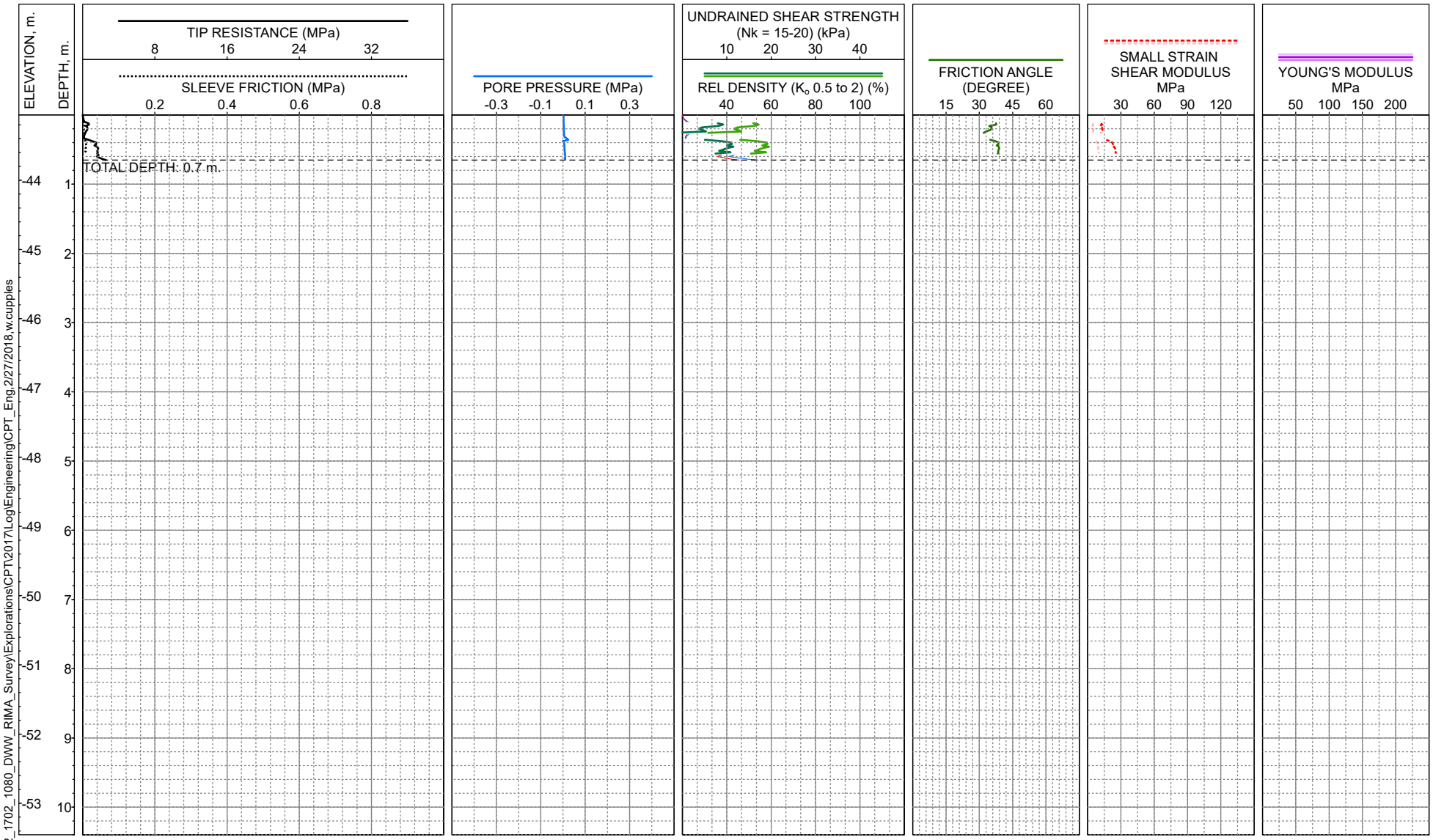
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -43.1m (MLLW)
COMPLETION DEPTH: 0.7m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Target differential pressure, slope

LOG OF CPT C-213
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 55

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

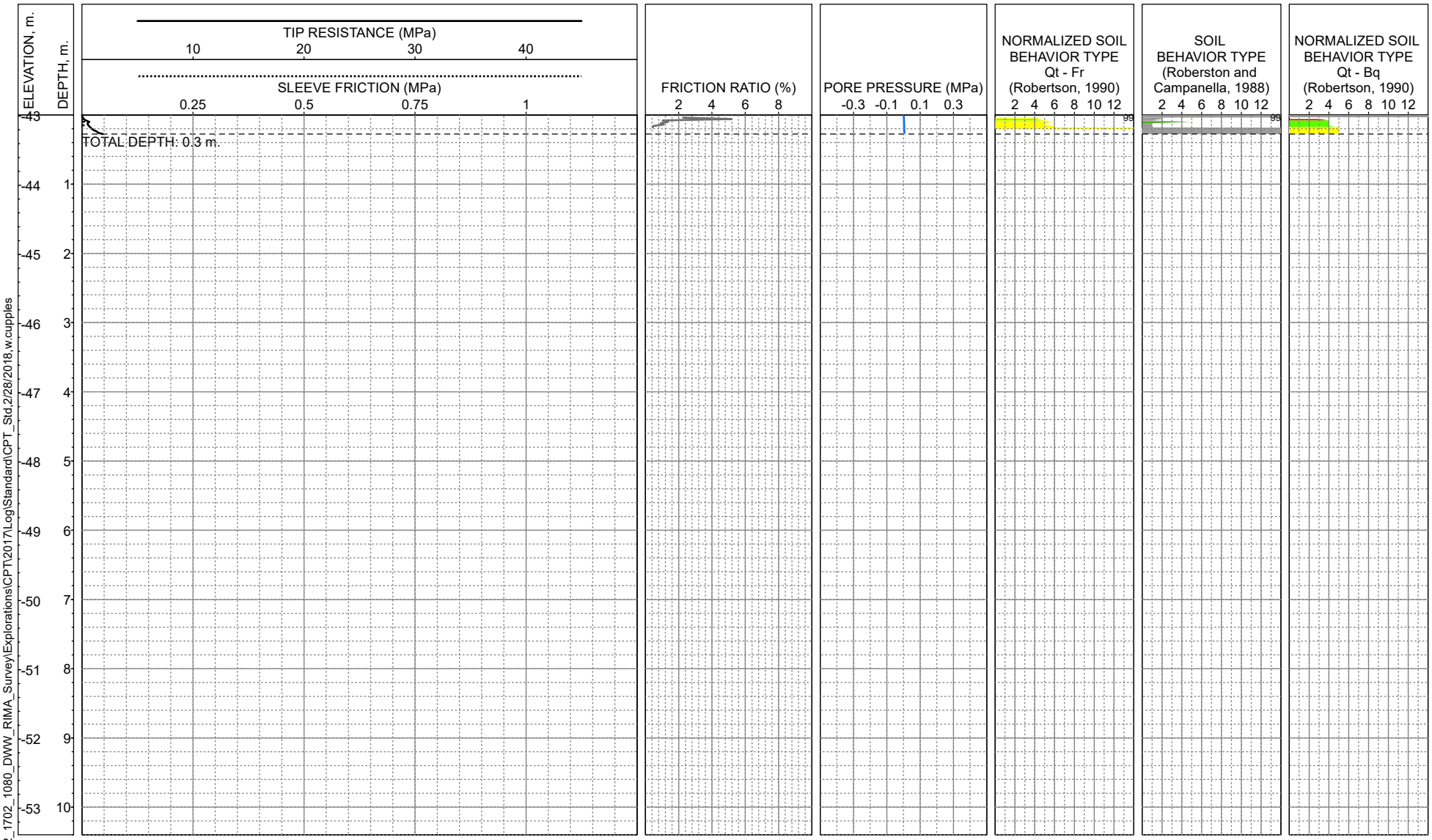
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -43.1m (MLLW)
COMPLETION DEPTH: 0.7m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Target differential pressure, slope

LOG OF CPT C-213
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 55

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

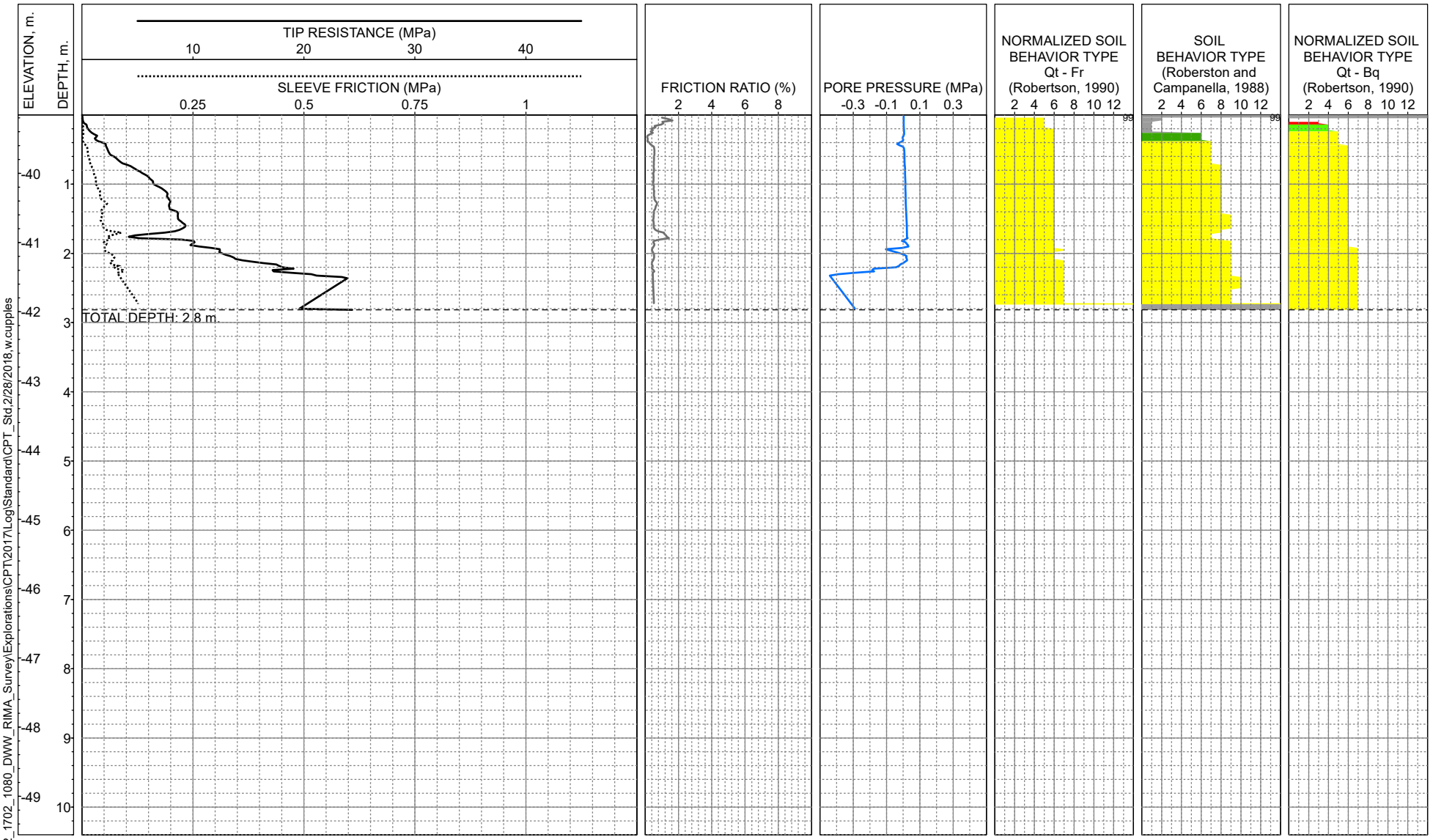
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -43.0m (MLLW)
COMPLETION DEPTH: 0.3m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Target differential pressure, slope

LOG OF CPT C-213A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 56

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

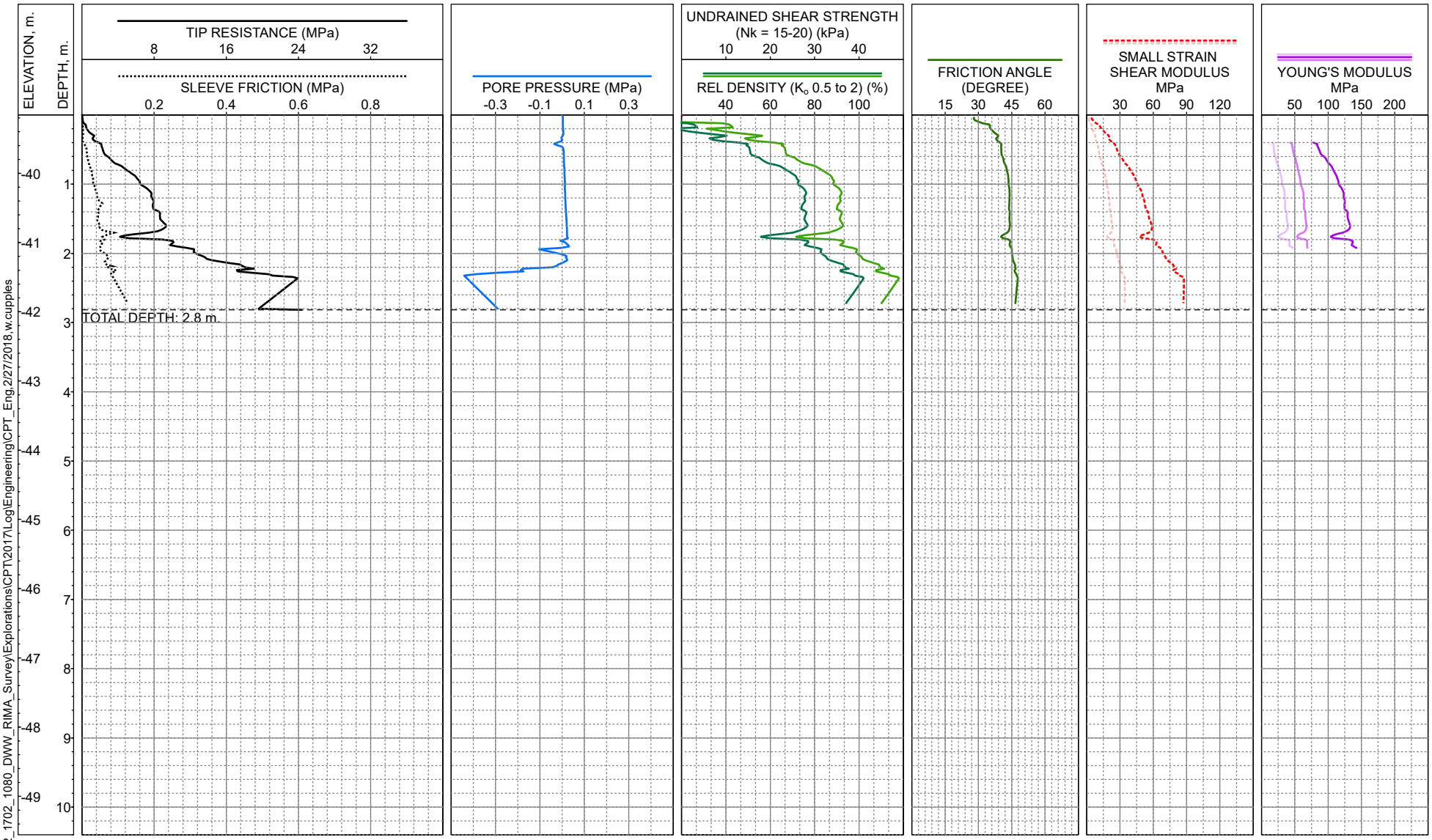
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -39.2m (MLLW)
COMPLETION DEPTH: 2.8m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-214
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 57

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -39.2m (MLLW)
COMPLETION DEPTH: 2.8m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Target slope

LOG OF CPT C-214
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 57

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

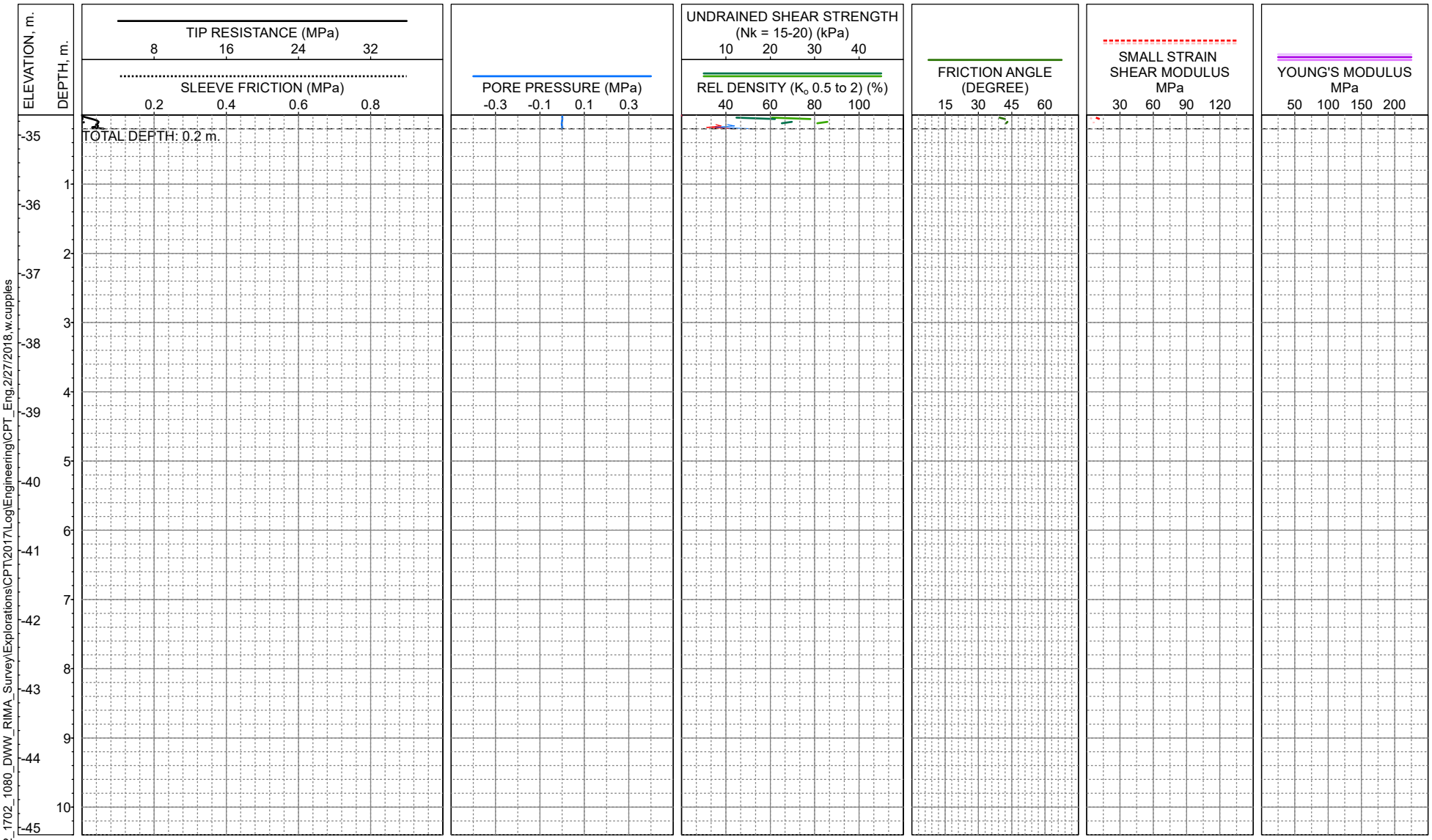
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.7m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-215
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 58

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

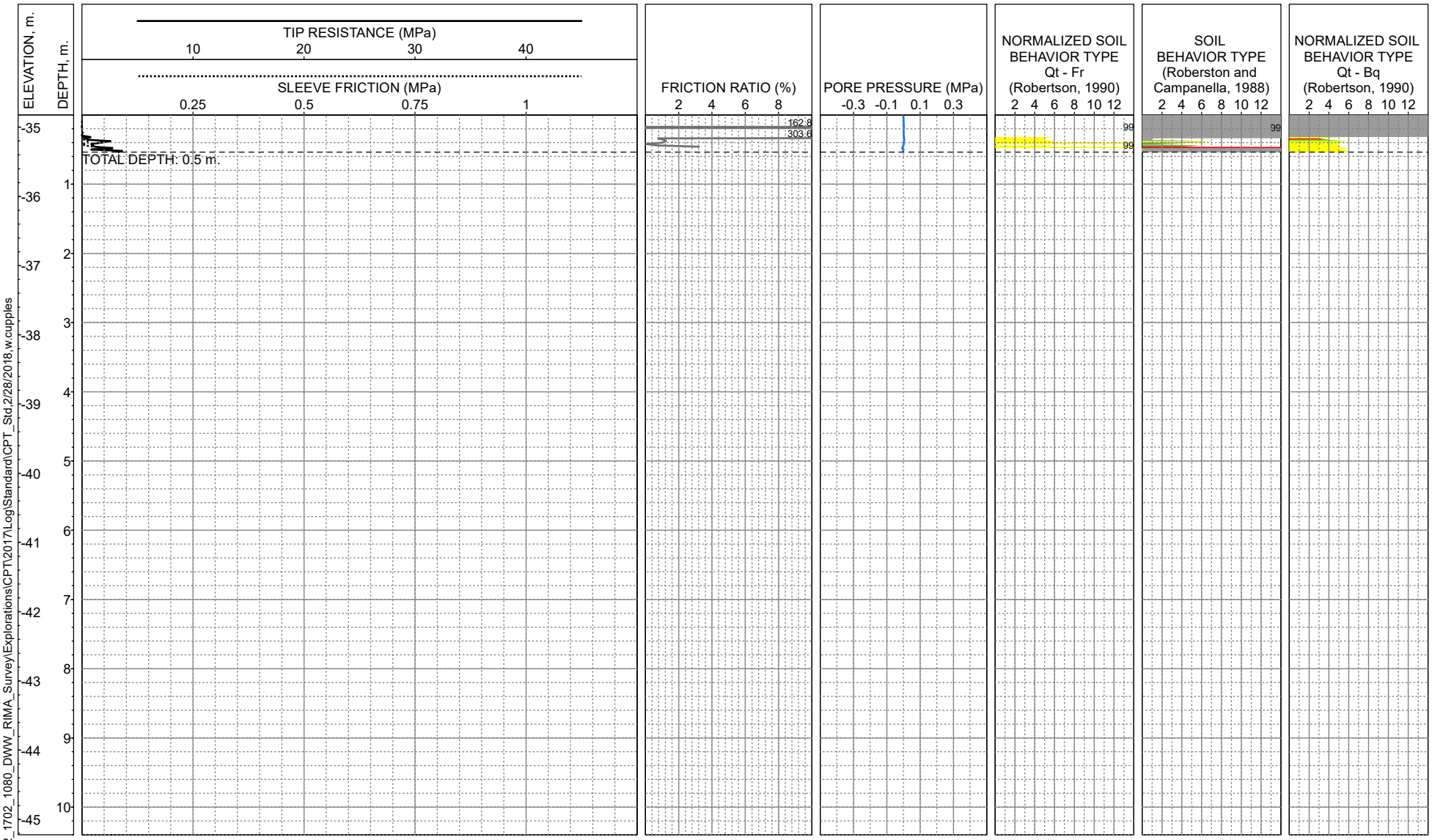
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.7m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-215
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 58

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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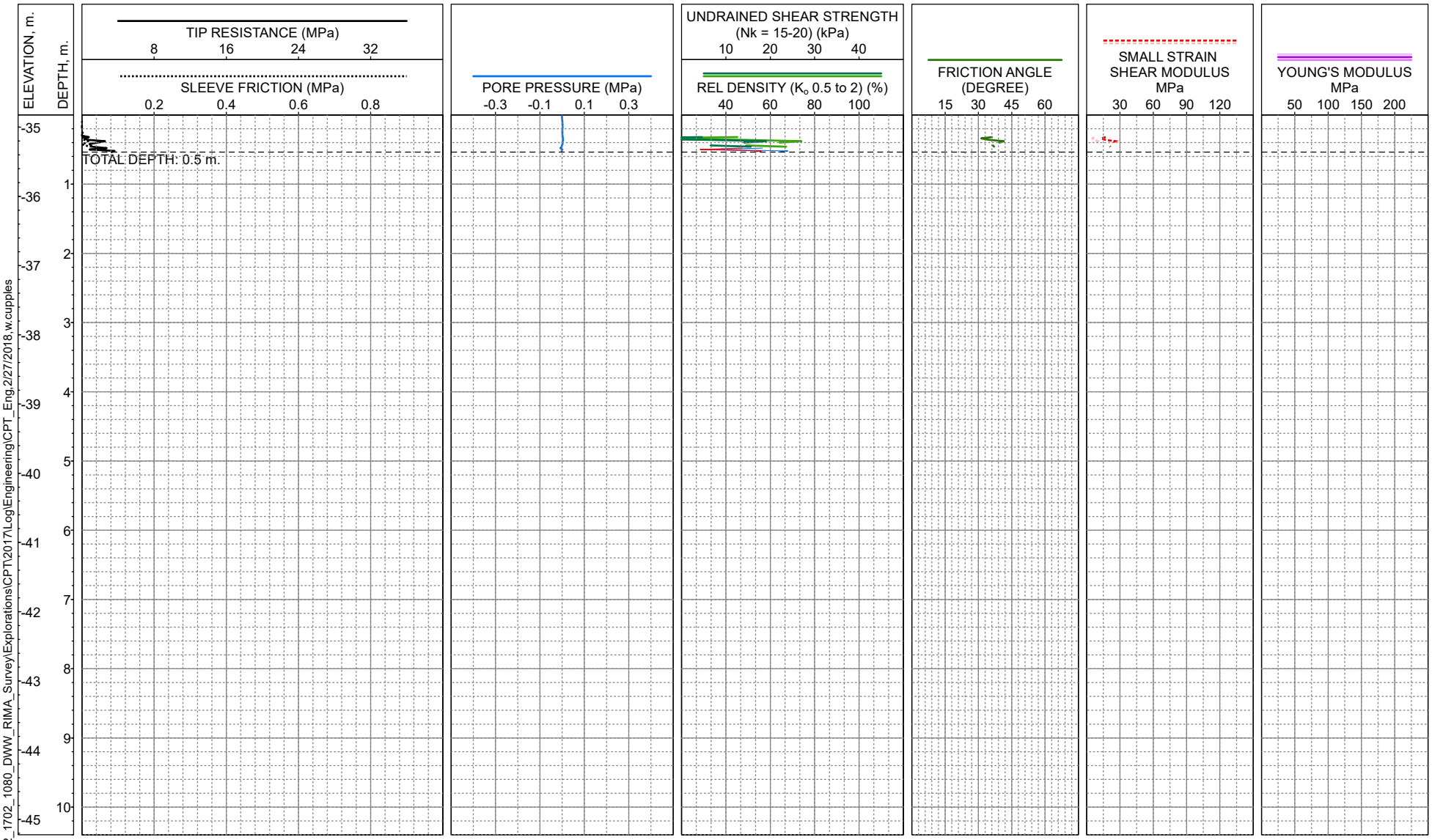
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-215A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 59

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

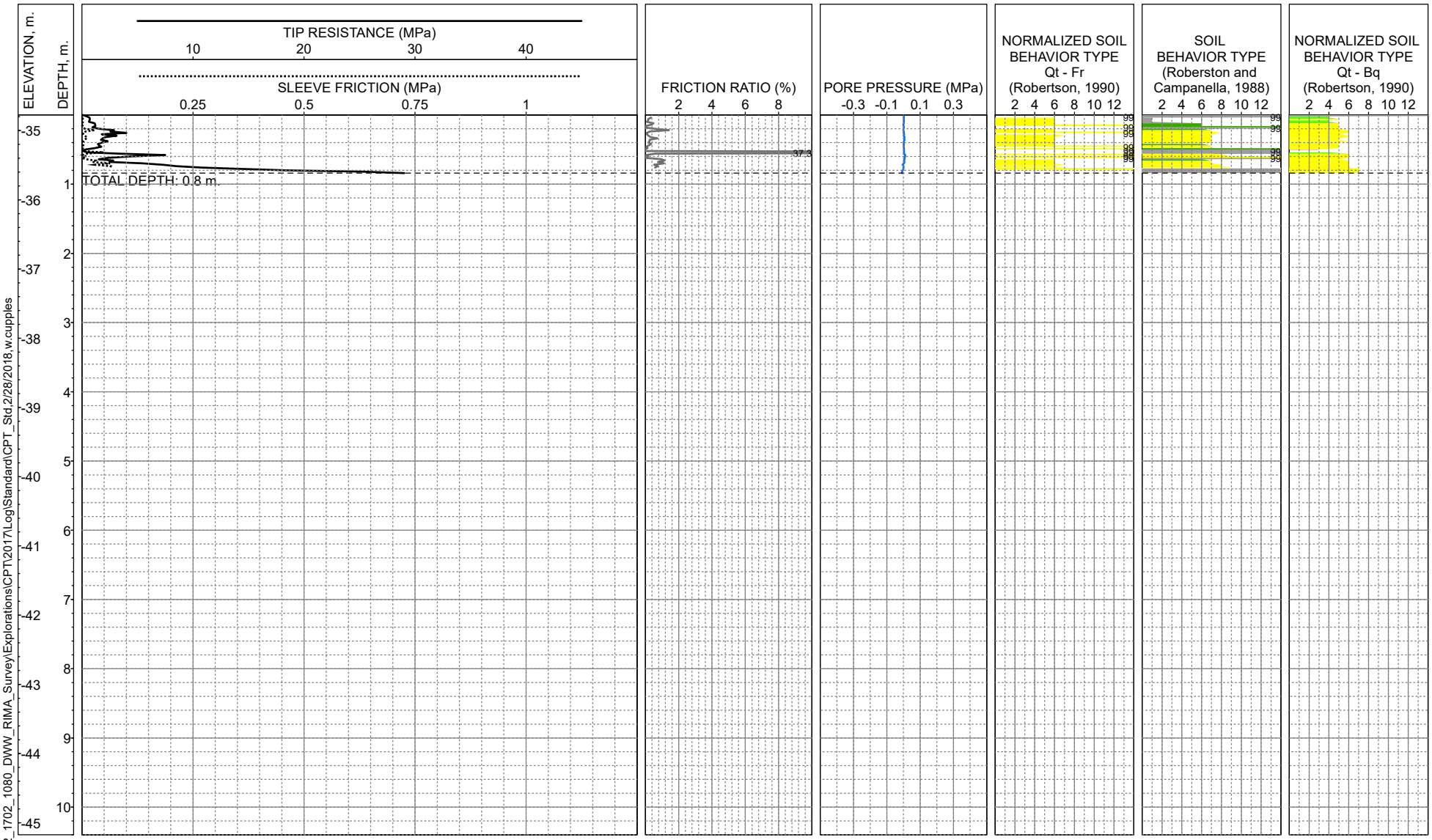
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.5m
TEST DATE: 11/25/2017
REASON FOR TERMINATION: Malfunction of SS35

LOG OF CPT C-215A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 59

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



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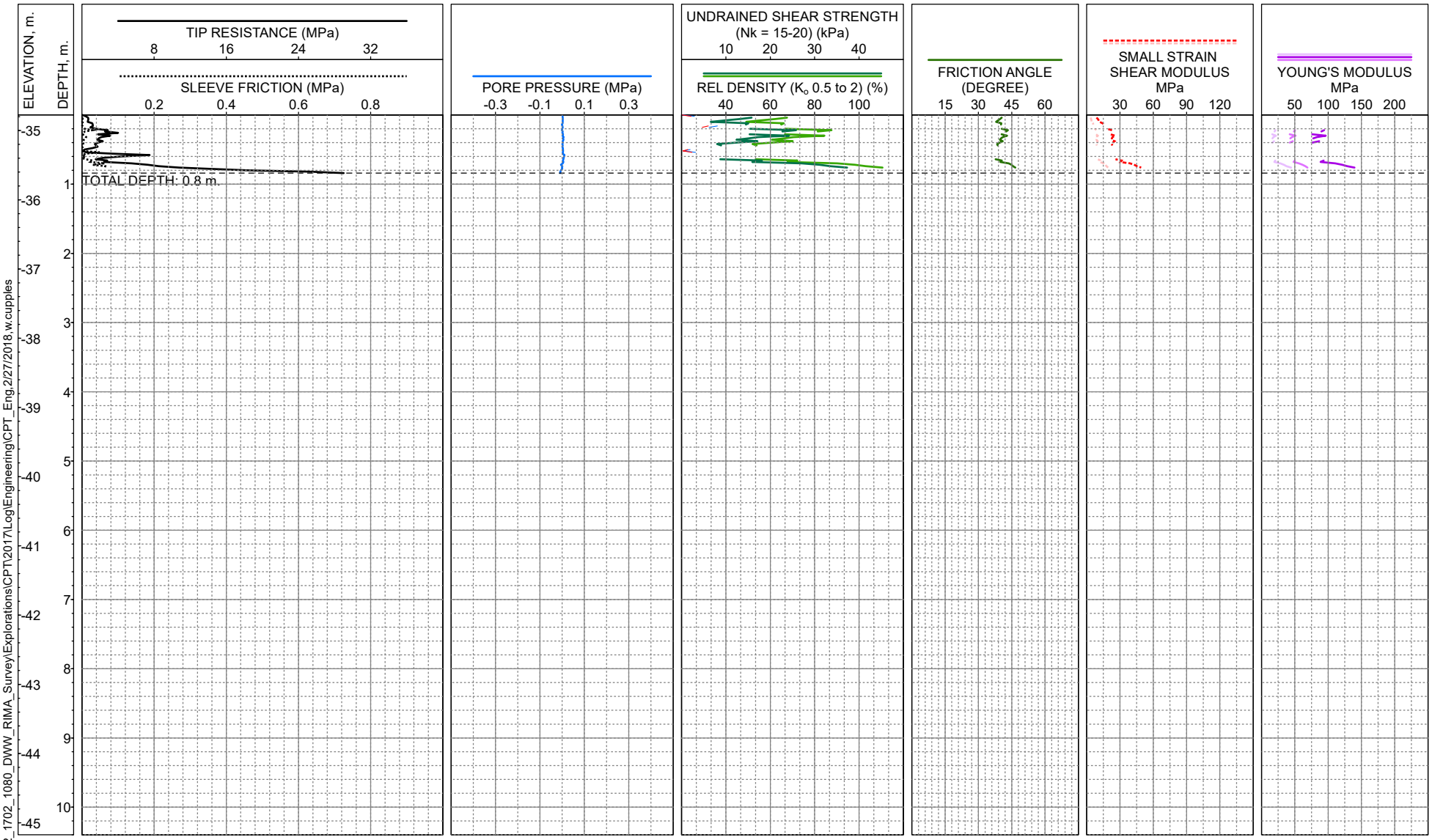
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-215B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 60

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -34.8m (MLLW)
COMPLETION DEPTH: 0.8m
TEST DATE: 11/28/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-215B
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 60

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

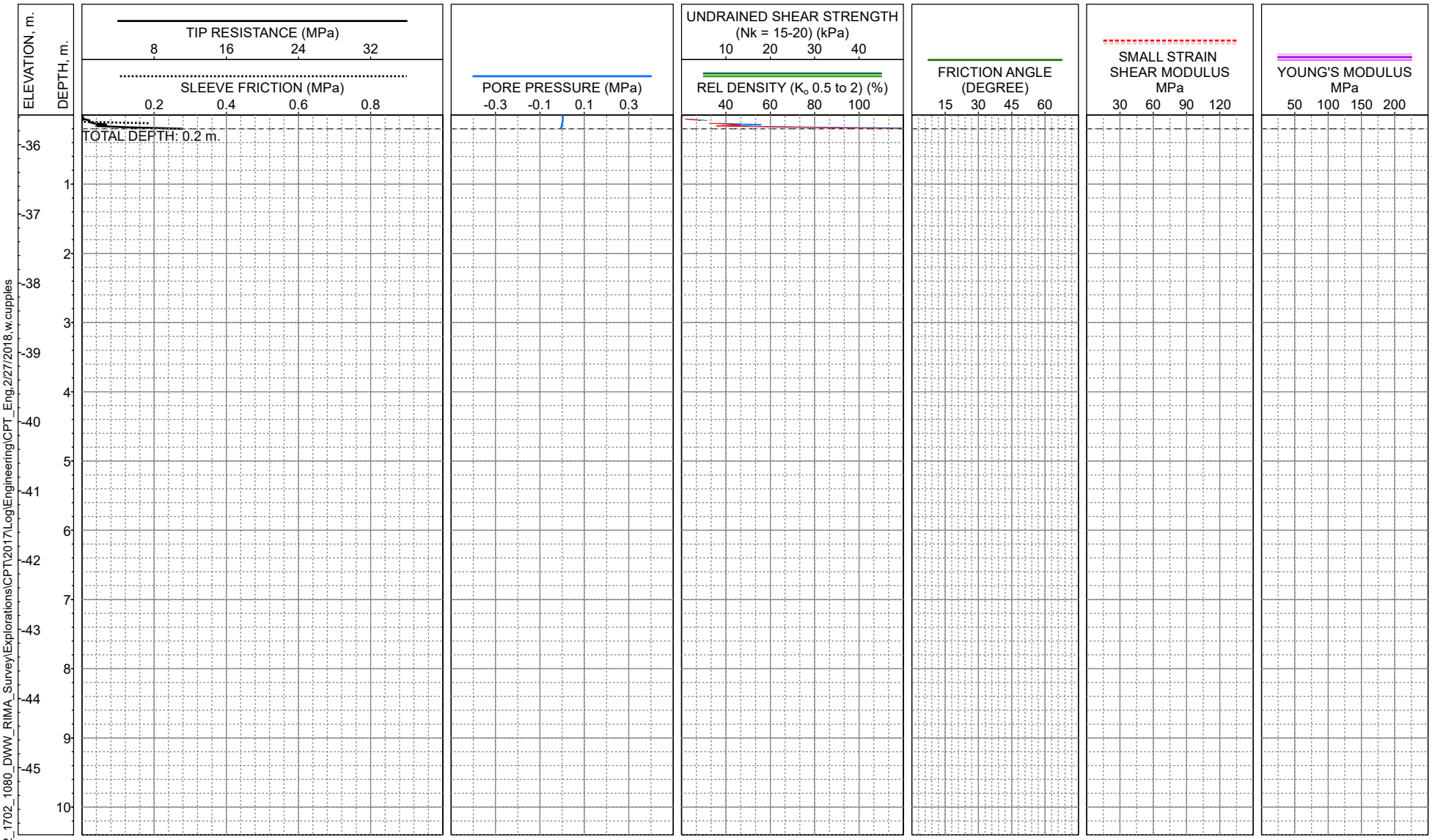
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -35.6m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-216
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 61

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -35.6m (MLLW)
COMPLETION DEPTH: 0.2m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-216
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 61

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080

N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

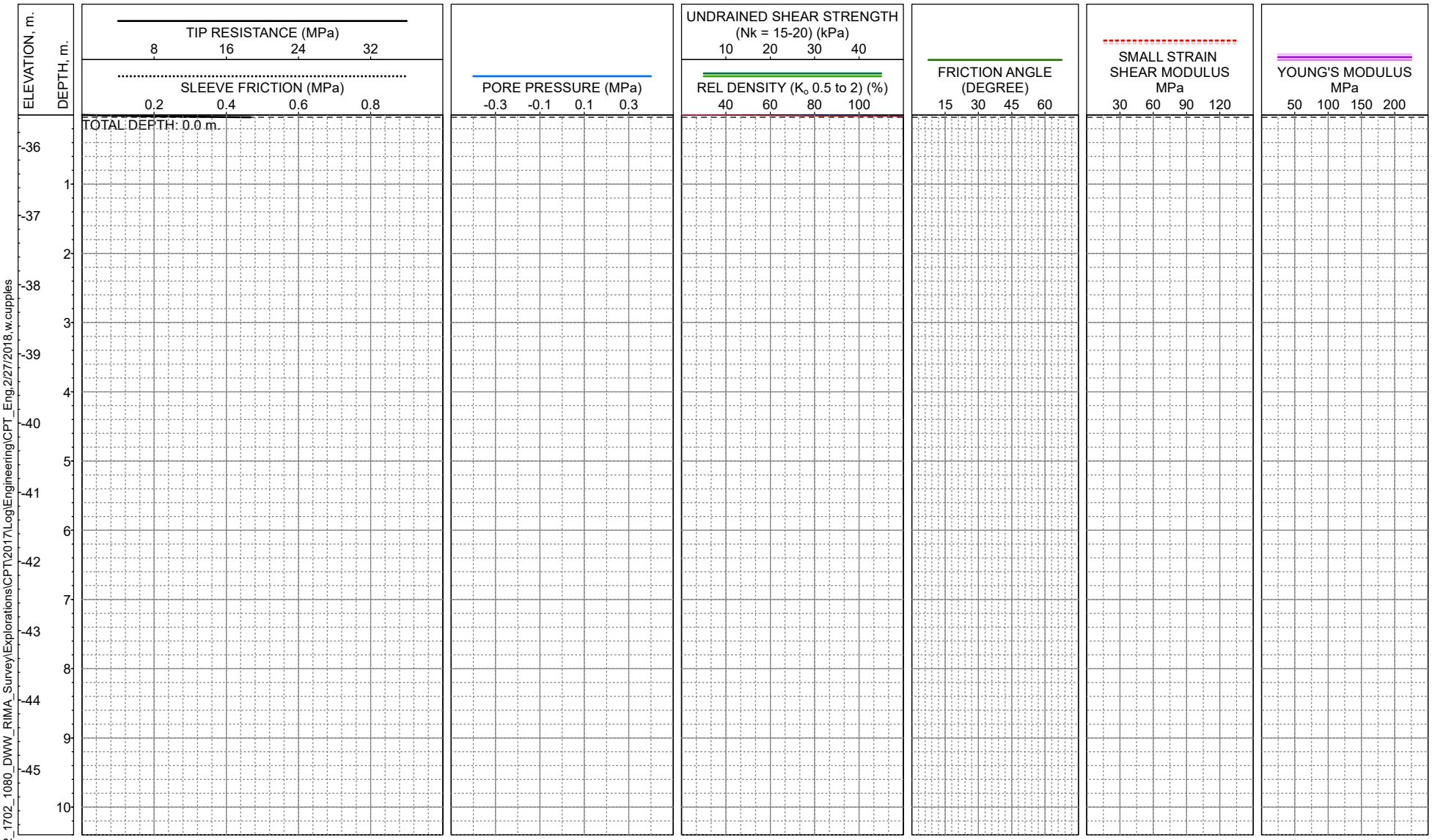
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -35.5m (MLLW)
COMPLETION DEPTH: 0.0m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-216A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 62

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

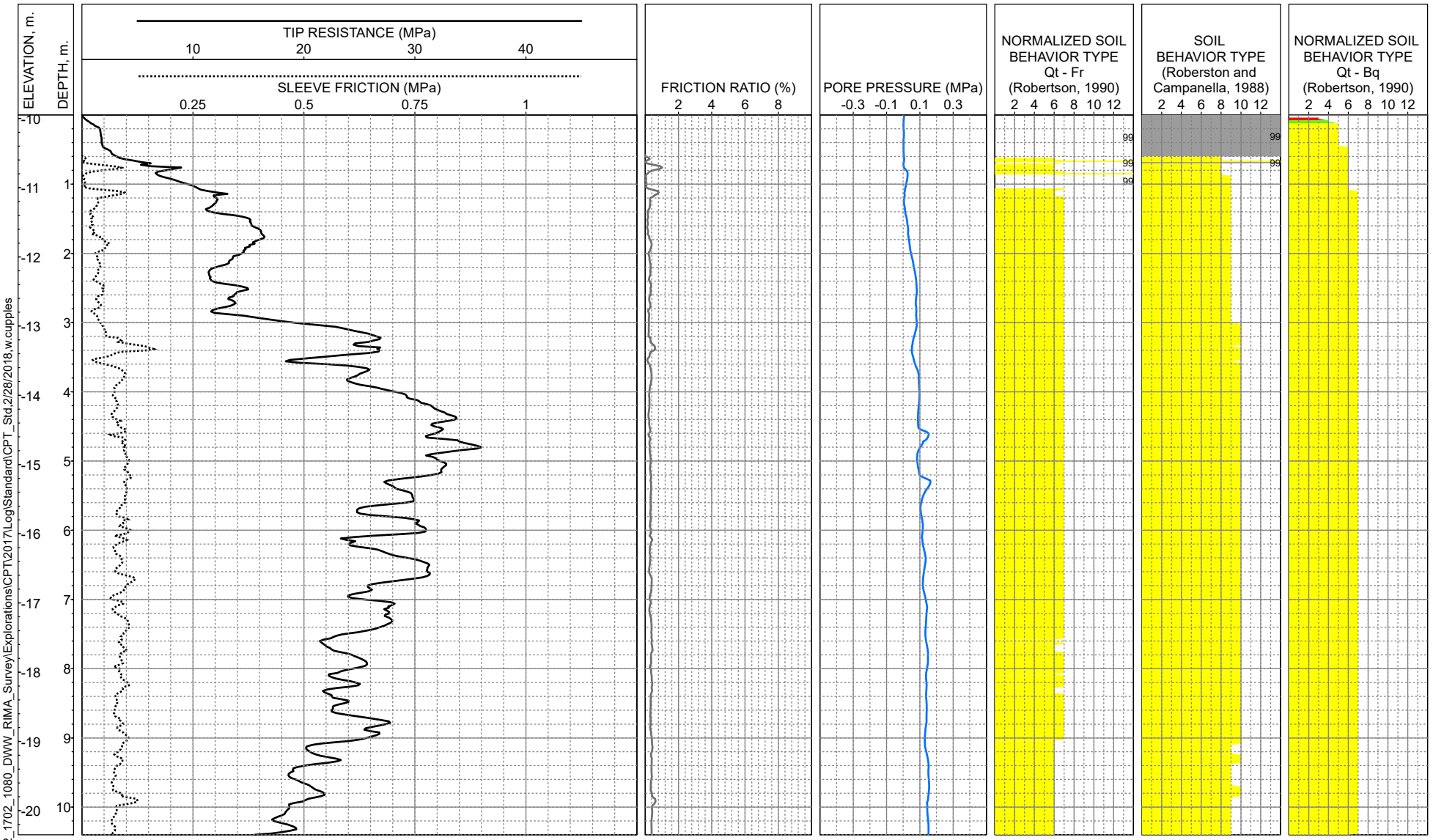
LOCATION: Export Cable (Federal Waters)
SEAFLOOR EL: -35.5m (MLLW)
COMPLETION DEPTH: 0.0m
TEST DATE: 11/13/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-216A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 62

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

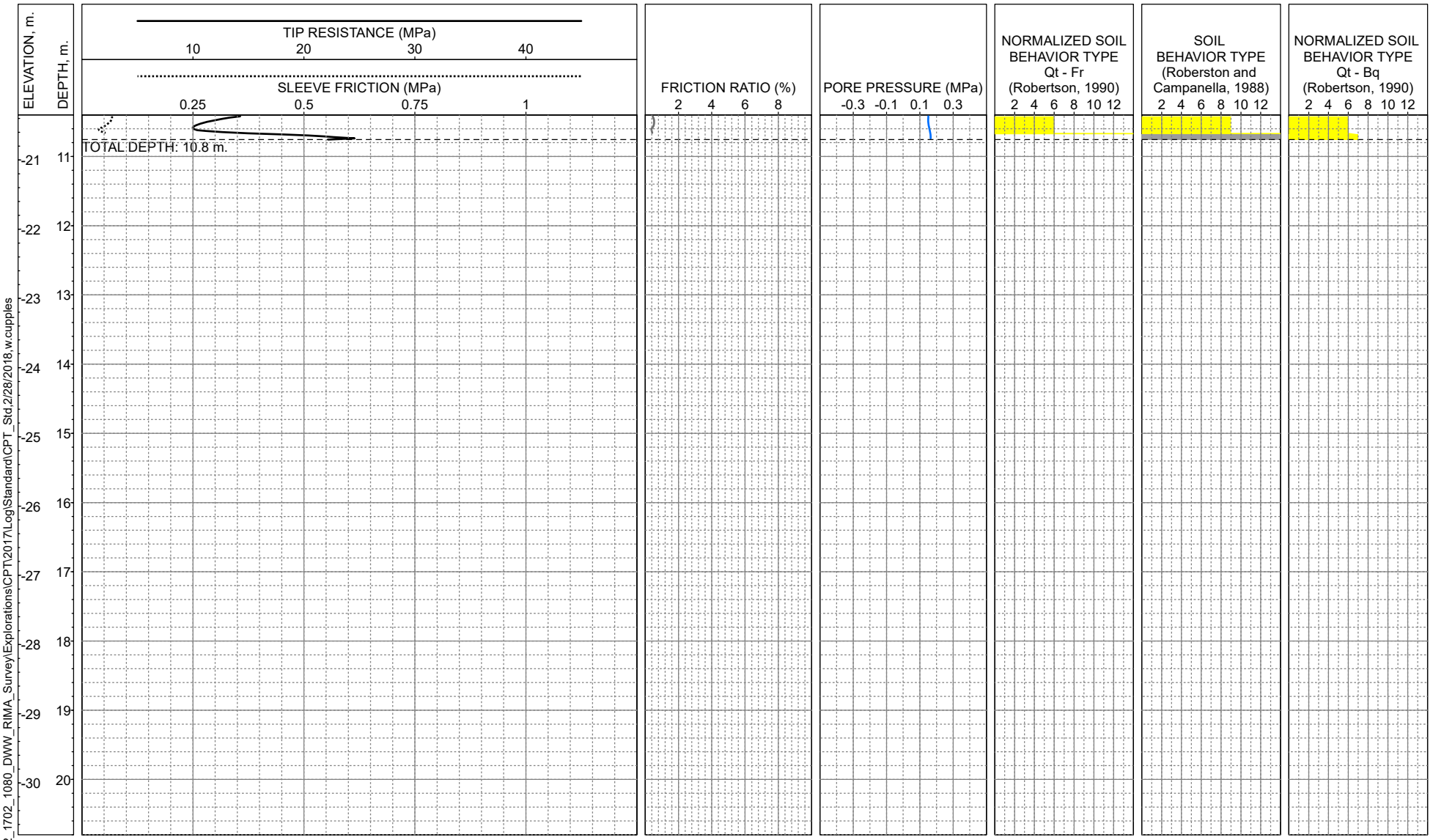
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 10.8m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-300
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 63a

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

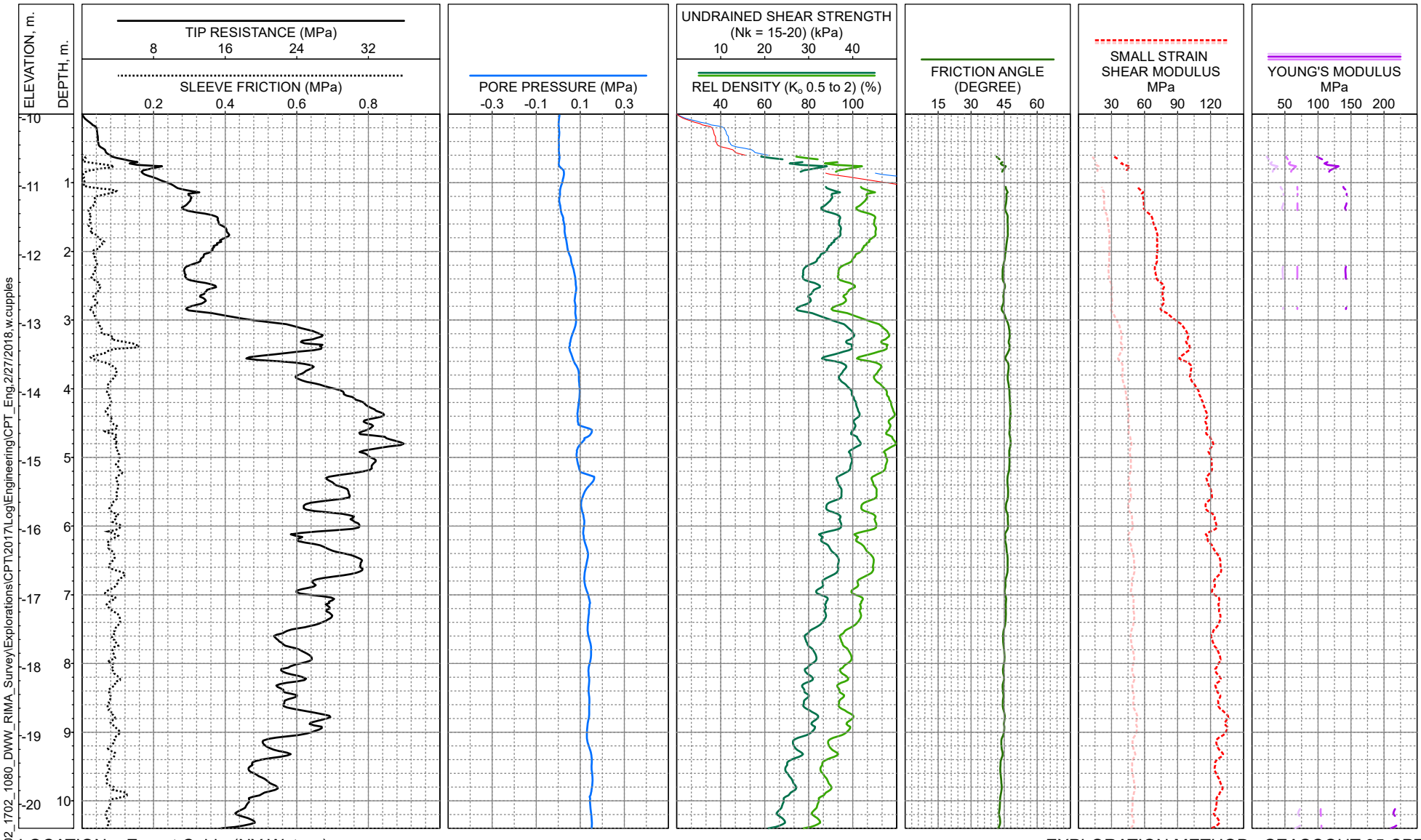
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 10.8m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-300
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 63b

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng,2/27/2018,w.cupples

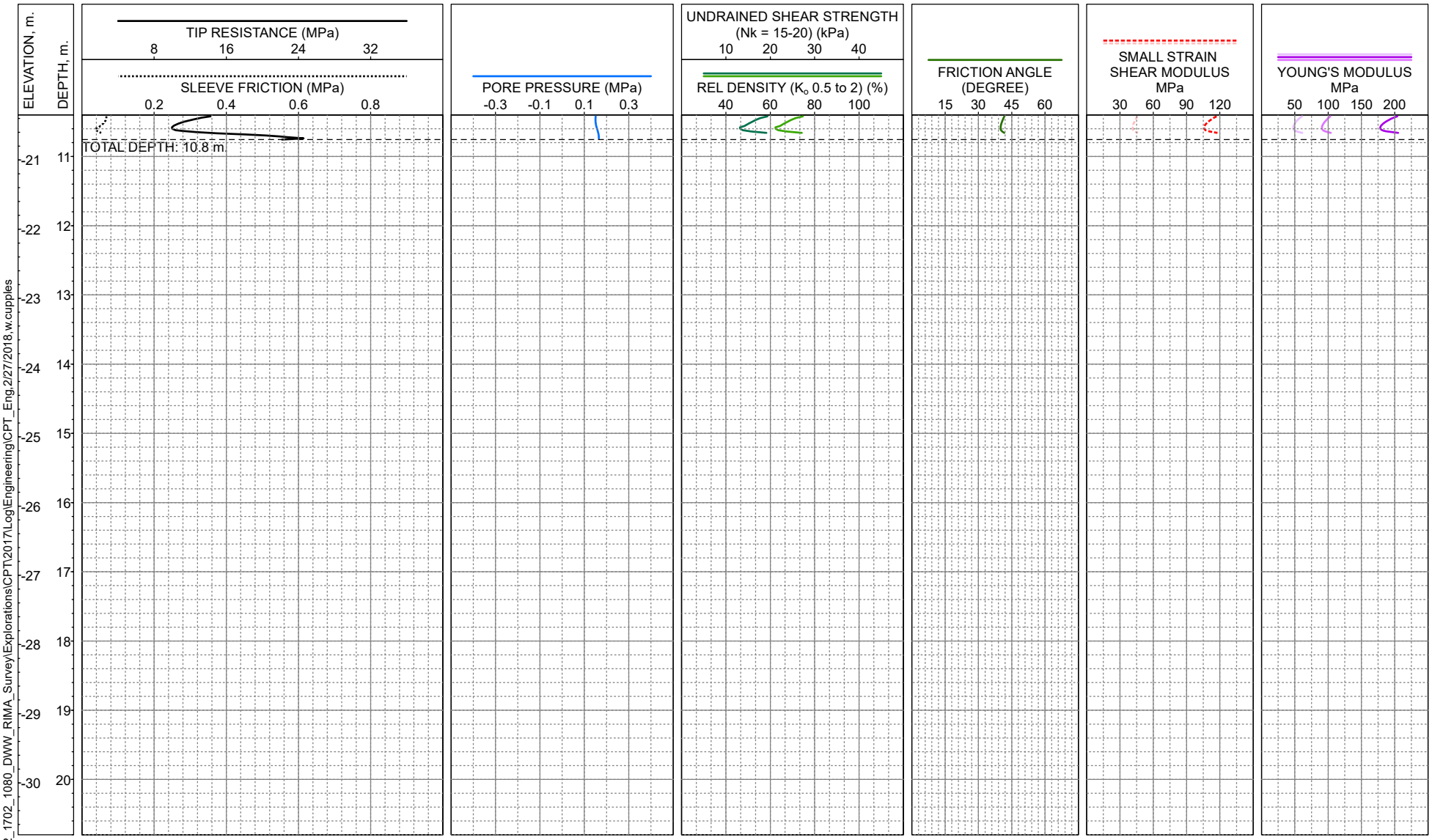
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 10.8m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-300
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 63a

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018,w.cupples

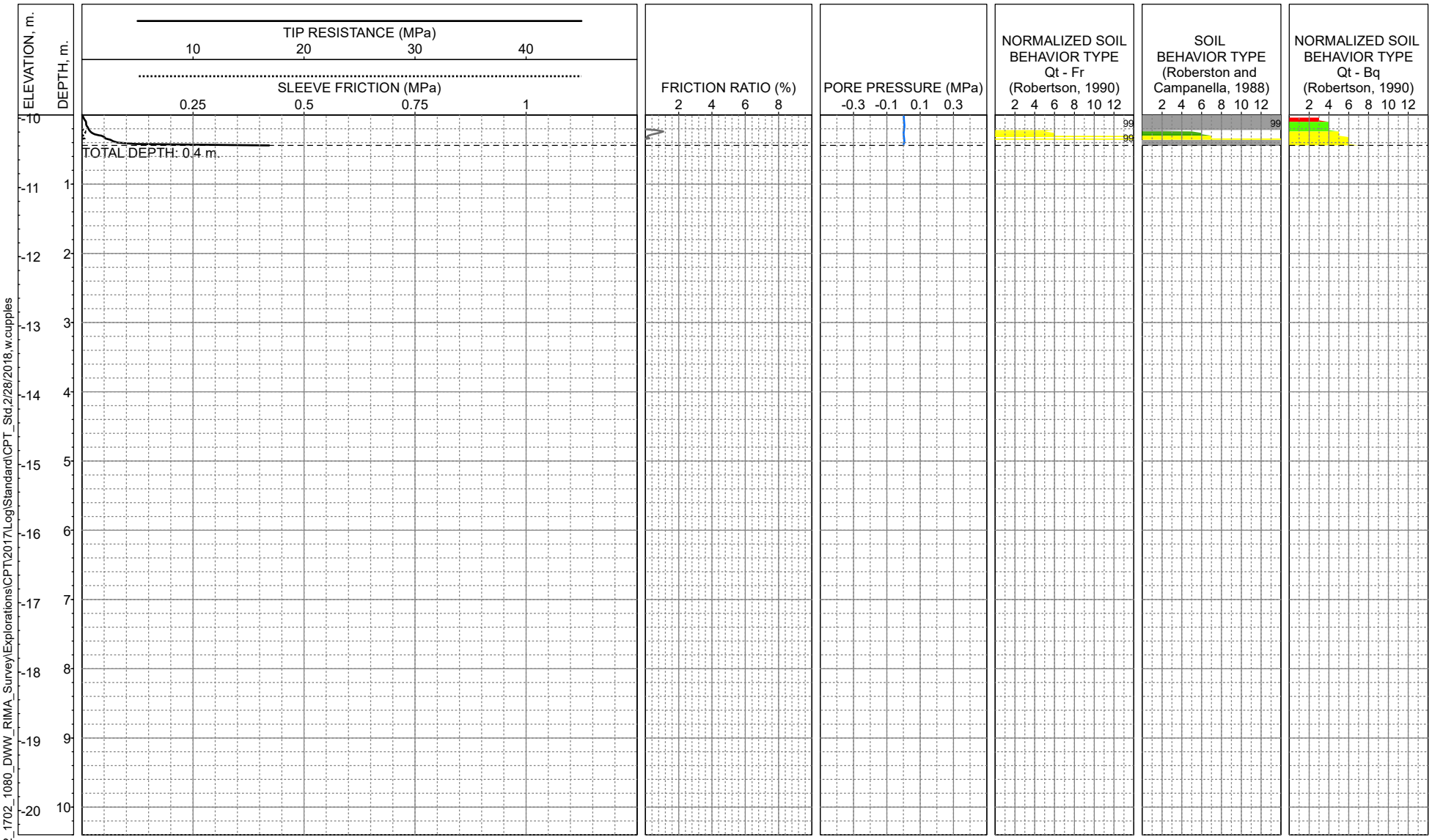
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 10.8m
TEST DATE: 11/15/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-300
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 63b

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

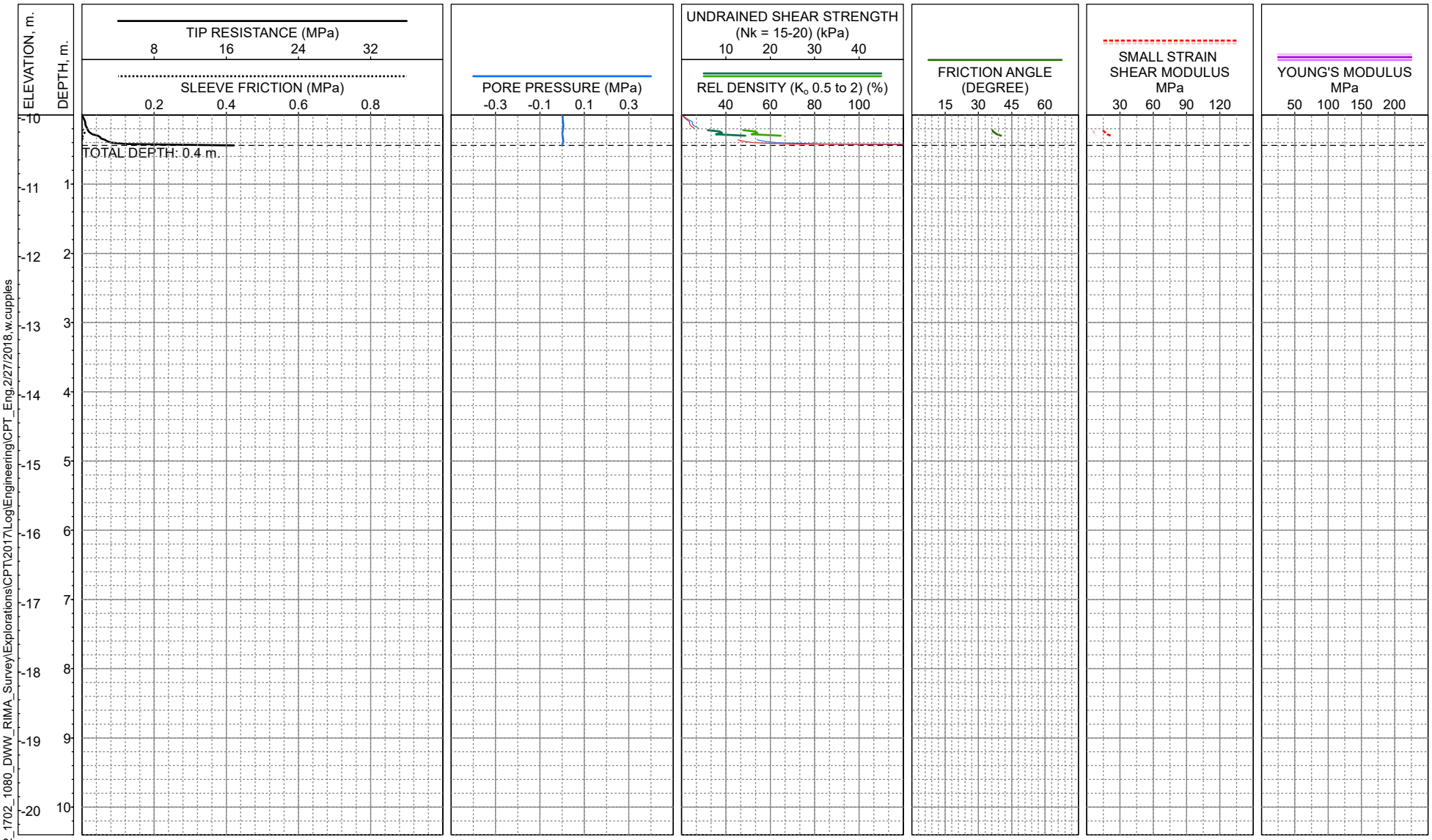
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -10.0m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/16/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-301
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 64

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng.2/27/2018.w.cupples

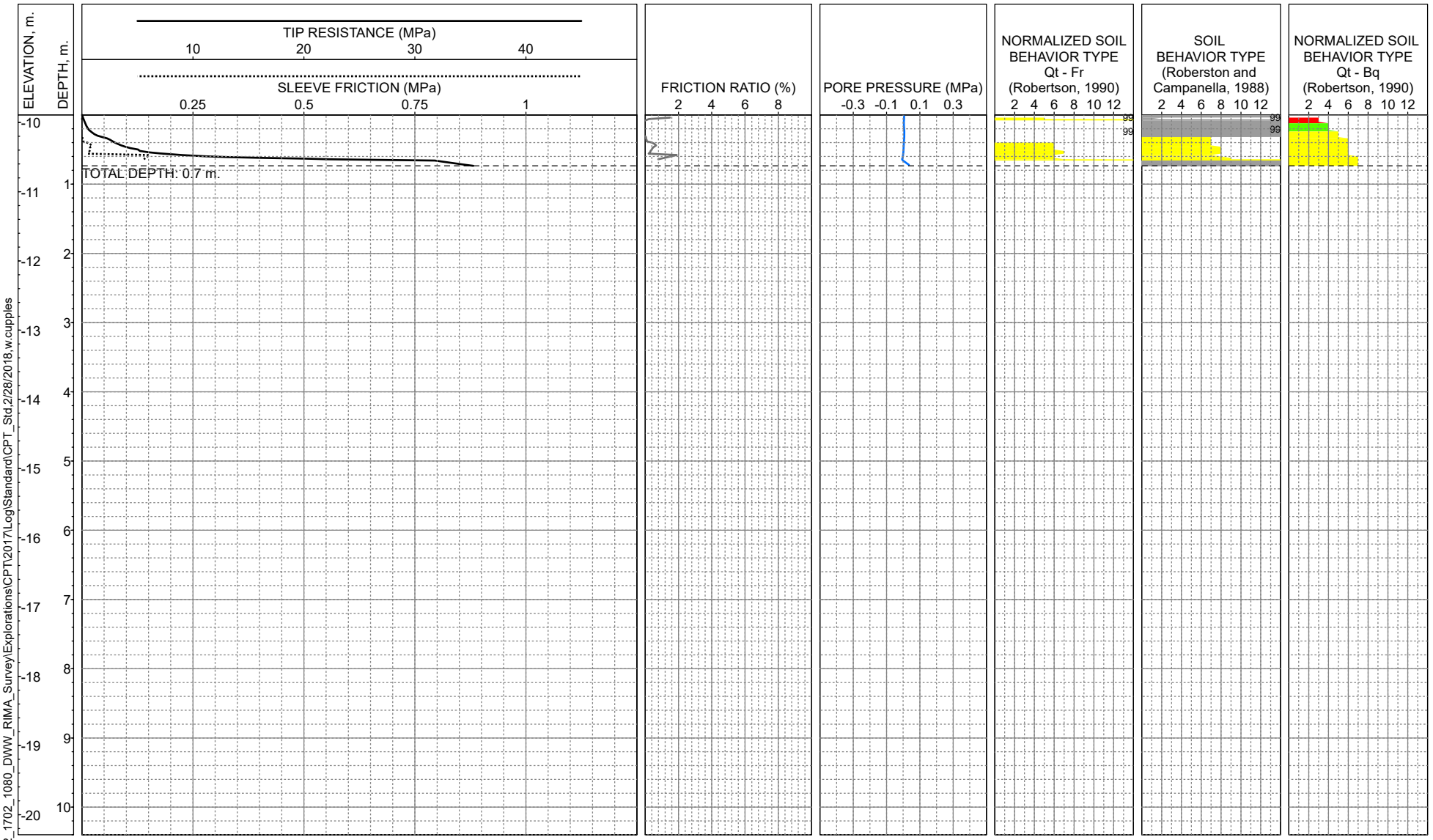
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -10.0m (MLLW)
COMPLETION DEPTH: 0.4m
TEST DATE: 11/16/2017
REASON FOR TERMINATION: Target tip threshold

LOG OF CPT C-301
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 64

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Standard\CPT_Std.2/28/2018.w.cupples

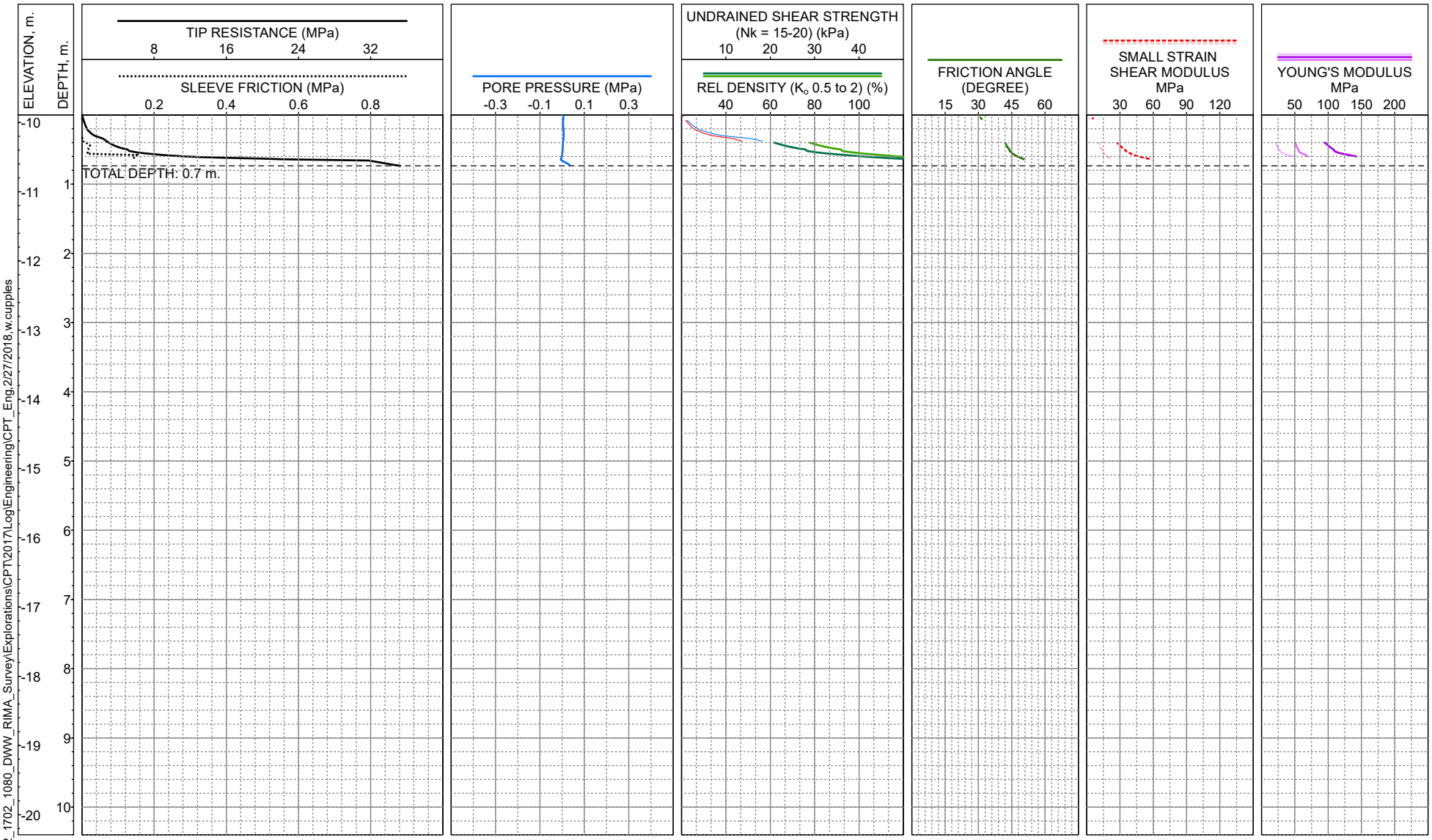
LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 0.7m
TEST DATE: 11/16/2017
REASON FOR TERMINATION: Tip threshold

LOG OF CPT C-301A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

FIGURE B- 65

DEEPWATER WIND SOUTH FORK, LLC
PROJECT NO. 02.17021080



N:\Projects\02_2017\02_1702_1080_DWW_RIMA_Survey\Explorations\CPT\2017\Log\Engineering\CPT_Eng_2/27/2018_w.cupples

LOCATION: Export Cable (NY Waters)
SEAFLOOR EL: -9.9m (MLLW)
COMPLETION DEPTH: 0.7m
TEST DATE: 11/16/2017
REASON FOR TERMINATION: Tip threshold

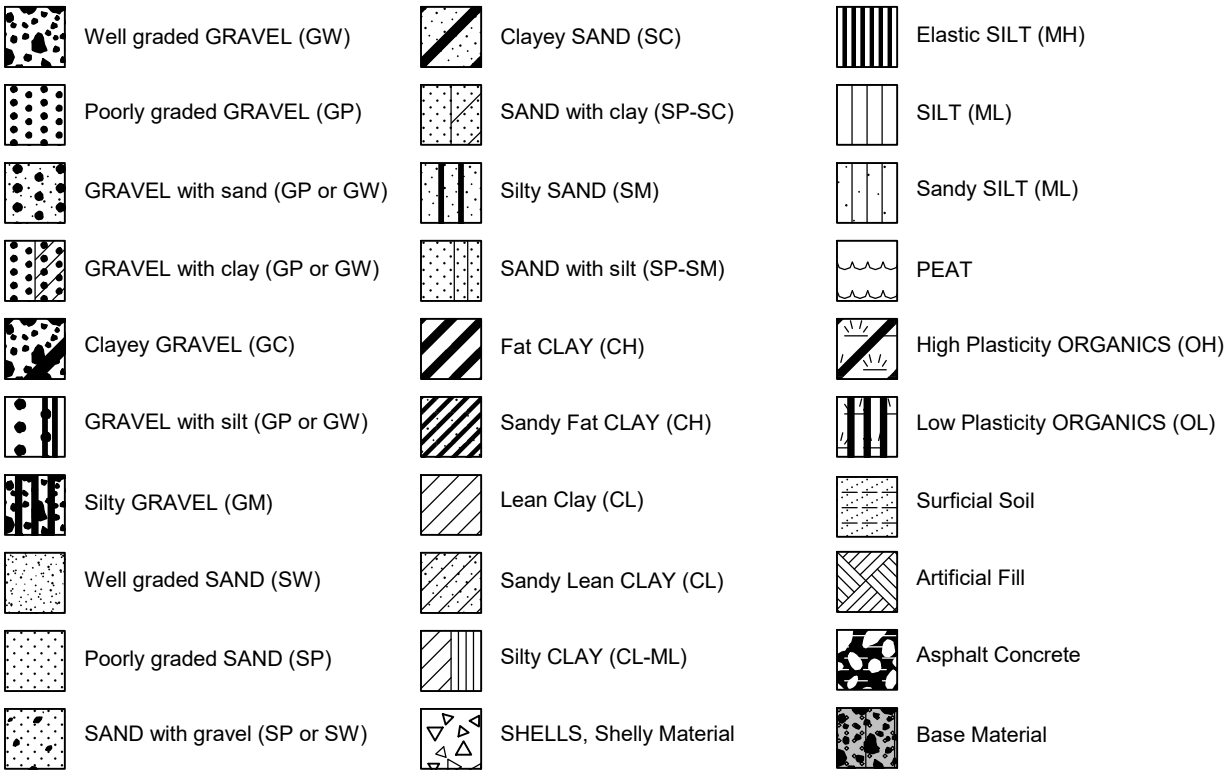
LOG OF CPT C-301A
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

EXPLORATION METHOD: SEASCOUT 35 CPT
CONE SIZE: 5cm^2
CONE AREA RATIO: 0.50
REVIEWED BY: B. Mack

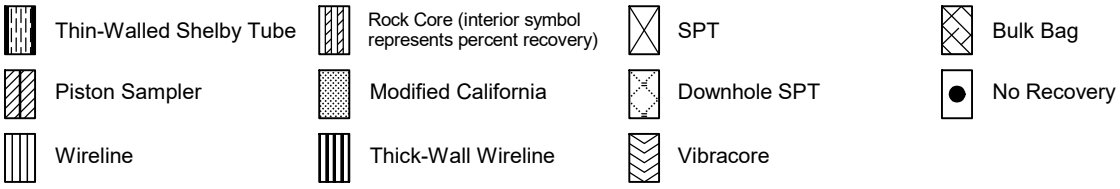
FIGURE B- 65

C. VIBRACORE EXPLORATION LOGS

SOIL TYPES



SAMPLERS



CLASSIFICATION TEST/BLOW COUNTS

- ■ Percent Passing No. 200 Sieve
- ● Water Content (%)
- □ Submerged Unit Weight (kN/m^3)
- ○ Theoretical Submerged Unit Weight (kN/m^3)

Plastic Limit — Liquid Limit

Non-Plastic ×

Water Level Symbols

- Initial or perched water level
- Final ground water level

STRENGTH TESTS

- ⊗ Pocket Penetrometer
- ⊕ Torvane
- ⊕ Remote Vane
- ◆ Miniature Vane
- ⟐ Residual Vane
- ▲ Unconsolidated Undrained Triaxial
- ▣ Unconfined Compression (soil)
- ◇△ (Open symbols indicate remolded tests)

CPT (Nk = 15 and 20)

KEY TO TERMS AND SYMBOLS USED ON BORING LOGS

SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-1

LOG OF VIBRACORE NO. V-100

LOCATION: N 4,553,465 E 316,449 UTM19N, WGS84, Meters

SEAFLOOR EL: -33.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine SAND (SP): gray (10YR6/1).	19	2			0.24	2.67	13.6
-34	1	2								
		3	-dark gray, 1.45m to 1.95m							
-35	2	4	-grayish brown, 1.95m to 2.80m		2			0.27		13.7
-36	3	5	-gray, with a trace of fine to coarse rounded gravel, and few shell fragments below 2.80m	9					2.67	
			3.55m / 3.80m							
-37	4	6	Well-graded Fine to Coarse GRAVEL with sand (GW): dark gray (10YR4/1).	13 5	2 0			0.29		
		7	4.49m Poorly graded Fine to Medium SAND with gravel (SP): yellowish brown (10YR5/4), fine to coarse rounded gravel.		2			0.36		
-38	5									
			PD = 5.55m							
-39	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 5.55 m
RECOVERED LENGTH: 4.49 m
EXPLORATION DATE: December 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-101

LOCATION: N 4,553,355 E 317,793 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.8 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35		1	Poorly graded Fine SAND (SP): light gray (10YR7/1).							
-36	1	2	-light brownish gray, medium sand with a trace of coarse sand below 1.05m	12	3			0.22	2.68	11.6
			2.30m		2			0.48		
-37	2	3	Well-graded Medium to Coarse SAND with gravel (SW): brown (10YR5/3), fine rounded gravel. 2.80m	4						
-38	3	4	Clayey SAND (SC): olive gray (5Y5/2), with a trace of fine gravel. 3.56m	9	2 39			2.8	2.70	10.4
		5	-sandy lean clay, 3.00m to 3.10m							
-39	4	6	-mottled dark grayish brown below 3.00m							
		7	-gravelly lean clay, 3.10m to 3.51m							
-40	5	8	-lean clay below 3.51m							
		9								
-41	6		**PD = 5.92m**							

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 5.92 m
RECOVERED LENGTH: 3.56 m
EXPLORATION DATE: December 3, 2017

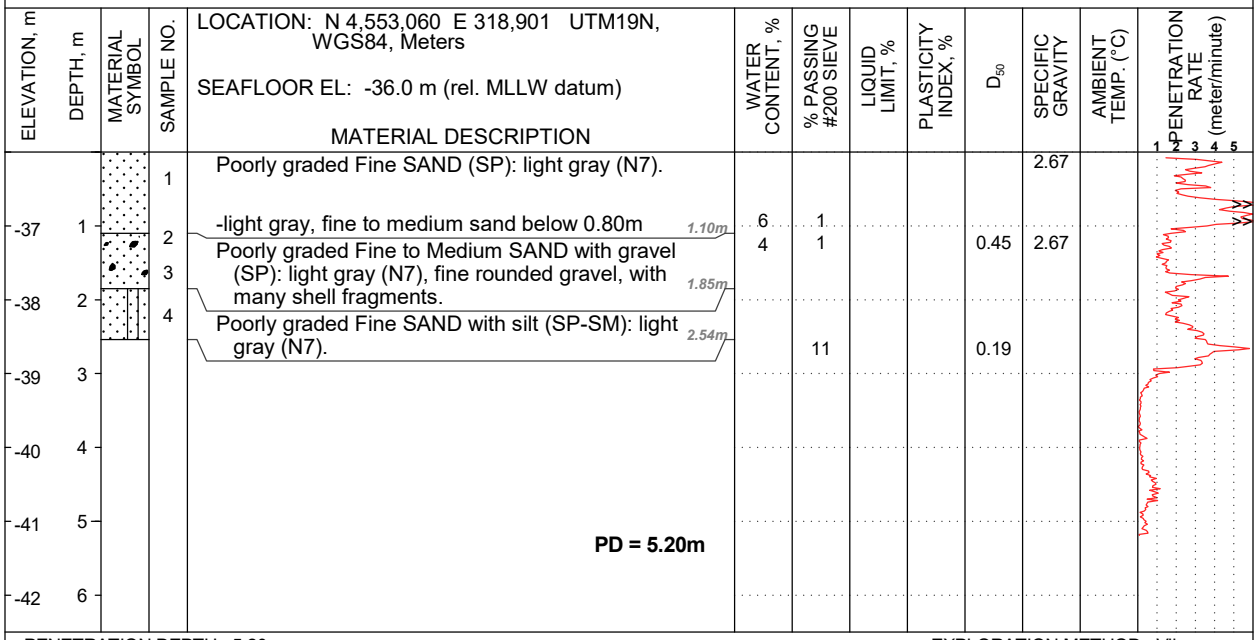
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-2

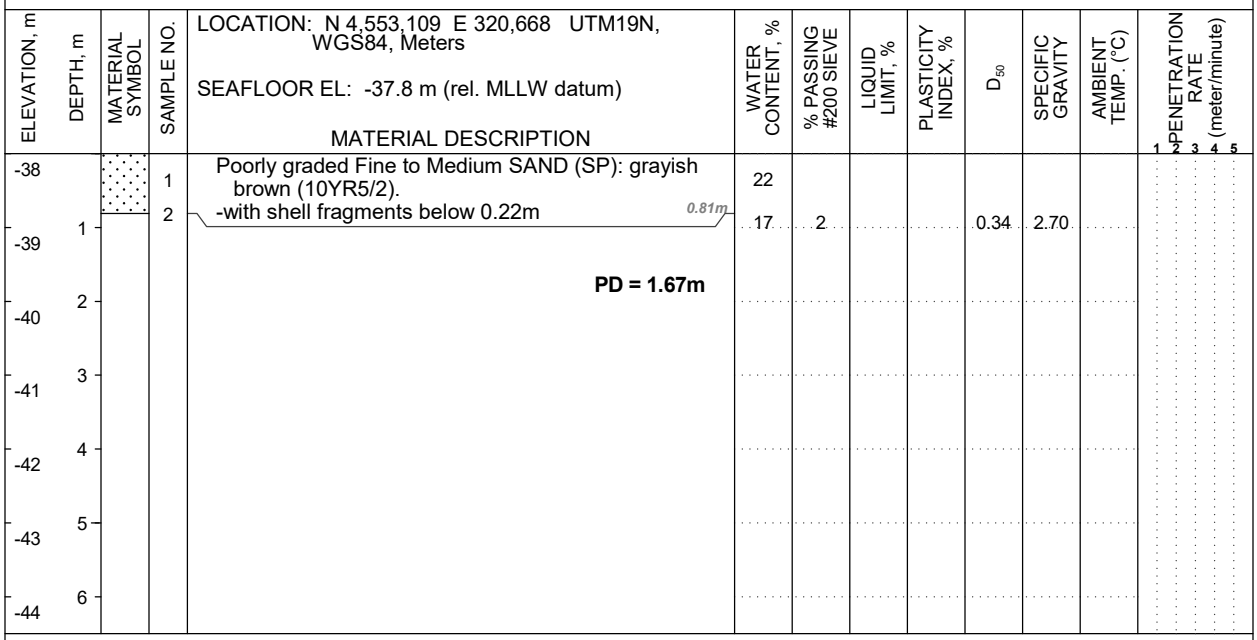
LOG OF VIBRACORE NO. V-102



PENETRATION DEPTH: 5.20 m
RECOVERED LENGTH: 2.54 m
EXPLORATION DATE: December 3, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-103



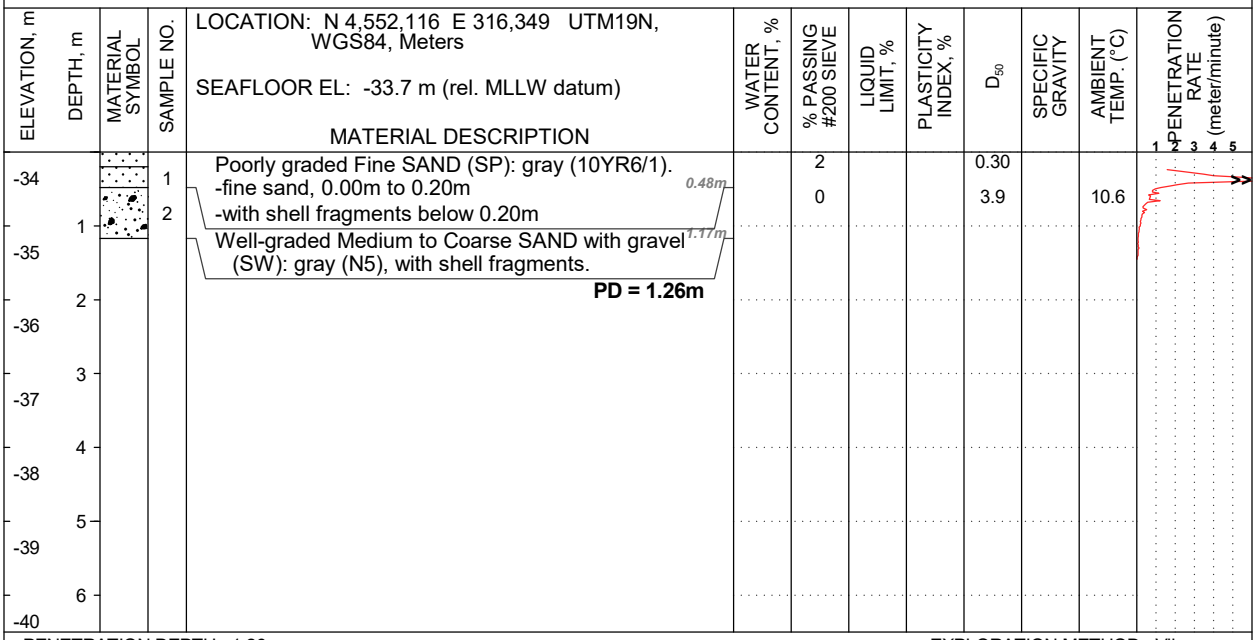
PENETRATION DEPTH: 1.67 m
RECOVERED LENGTH: 0.81 m
EXPLORATION DATE: December 4, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-3

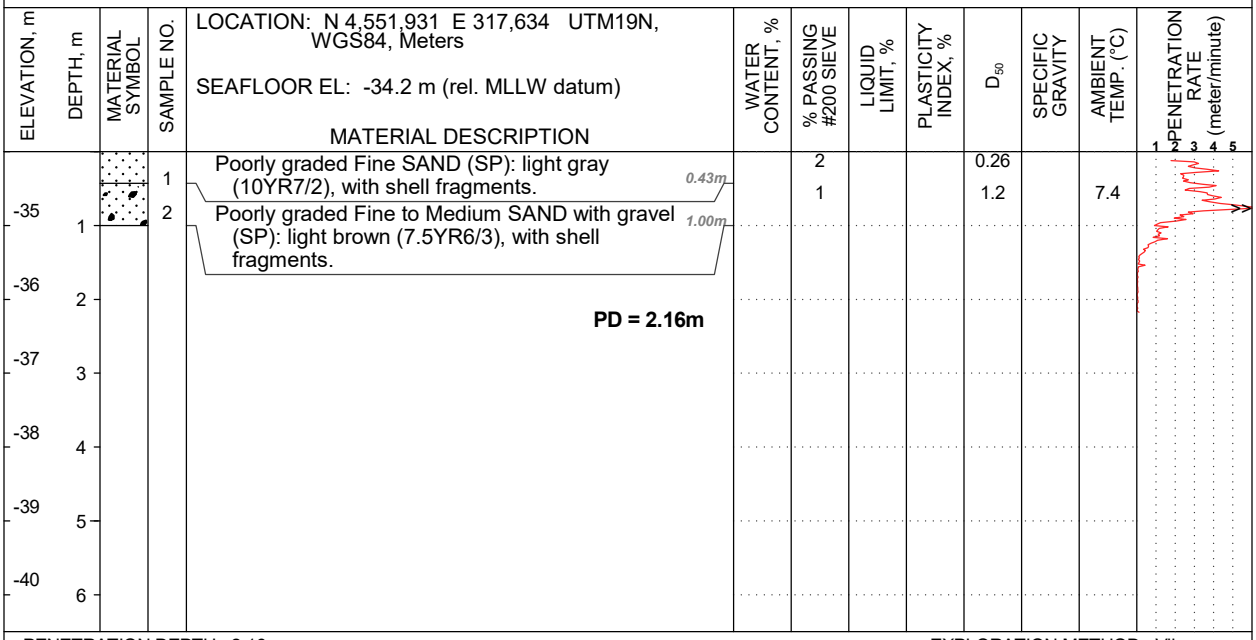
LOG OF VIBRACORE NO. V-104



PENETRATION DEPTH: 1.26 m
RECOVERED LENGTH: 1.17 m
EXPLORATION DATE: December 12, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-105



PENETRATION DEPTH: 2.16 m
RECOVERED LENGTH: 1.00 m
EXPLORATION DATE: December 12, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-4

LOG OF VIBRACORE NO. V-106

LOCATION: N 4,551,921 E 318,935 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.6 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Fine to Medium SAND with gravel (SP): very pale brown (10YR7/3). *0.30m*

Poorly graded Medium to Coarse SAND with gravel (SP): very pale brown (10YR7/3), fine rounded gravel. *1.39m*

-coarse sand, fine rounded gravel, 0.50m to 0.75m

-brown, fine to coarse subangular to rounded gravel below 0.75m

PD = 2.05m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	0	1		0			0.47		
-36	1	2		1			2.5		7.4
-37	2								
-38	3								
-39	4								
-40	5								
-41	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.05 m
RECOVERED LENGTH: 1.39 m
EXPLORATION DATE: December 12, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-107

LOCATION: N 4,551,803 E 320,603 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.9 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Fine SAND (SP): light brownish gray (10YR6/2). *0.60m*

-fine to medium sand below 0.45m

-light brownish gray, coarse gravel, 0.60m to 1.29m

PD = 2.05m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	0	1	18	1			0.21	2.68	
-36	1	2	17						
		3		4					
-37	2								
-38	3								
-39	4								
-40	5								
-41	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.05 m
RECOVERED LENGTH: 1.29 m
EXPLORATION DATE: December 8, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-5

LOG OF VIBRACORE NO. V-108

LOCATION: N 4,550,918 E 316,259 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	1	1	Poorly graded Fine to Medium SAND (SP): pale brown (10YR6/3), trace fine gravel, with shell fragments. 0.59m		1			0.46		
		2	-gray, fine to medium sand below 0.10m		1			0.23	2.70	
-36	2		**PD = 1.18m**							
-37	3									
-38	4									
-39	5									
-40	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 1.18 m
RECOVERED LENGTH: 0.59 m
EXPLORATION DATE: December 12, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-109

LOCATION: N 4,550,854 E 317,436 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	1	1	Poorly graded Fine to Medium SAND (SP): gray (10YR6/1). 0.72m		3			0.44		11.9
			-medium to coarse sand with gravel below 0.40m							
-36	2		**PD = 1.53m**							
-37	3									
-38	4									
-39	5									
-40	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 1.53 m
RECOVERED LENGTH: 0.72 m
EXPLORATION DATE: December 30, 2017

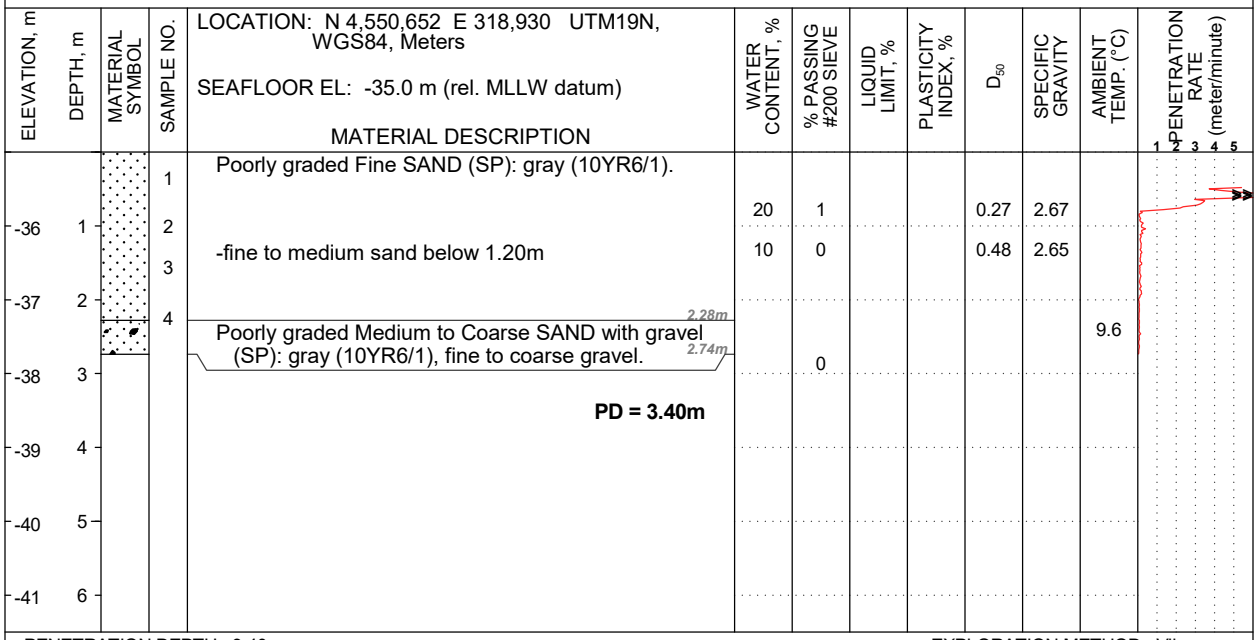
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-6

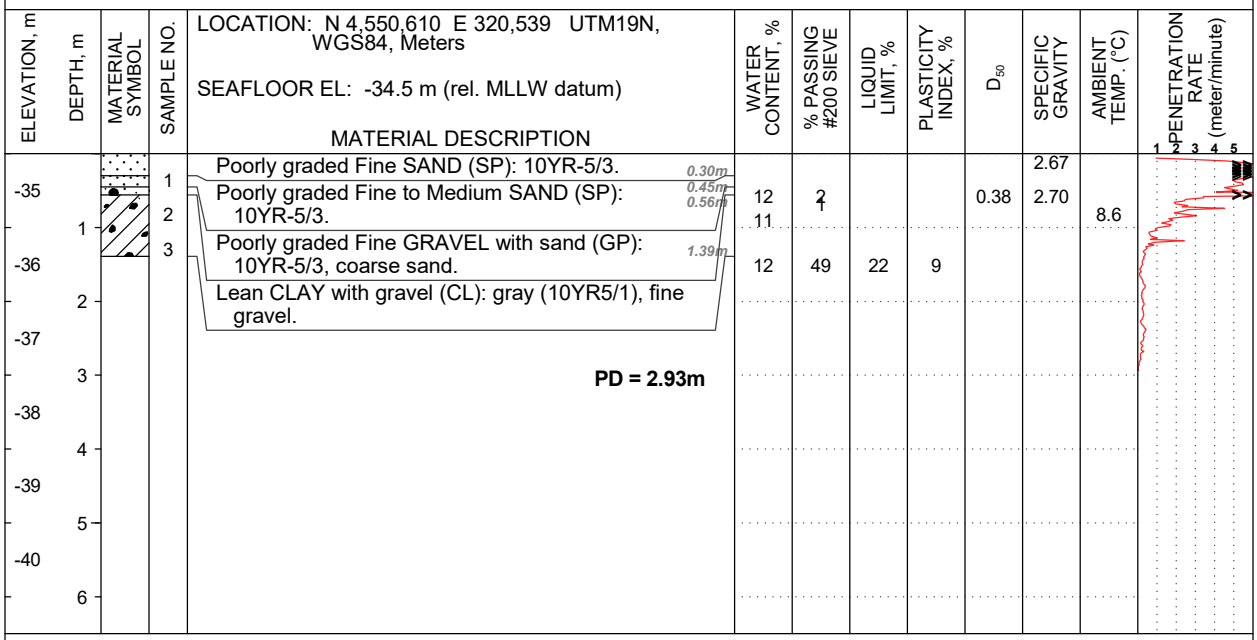
LOG OF VIBRACORE NO. V-110



PENETRATION DEPTH: 3.40 m
RECOVERED LENGTH: 2.74 m
EXPLORATION DATE: December 8, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-111



PENETRATION DEPTH: 2.93 m
RECOVERED LENGTH: 1.39 m
EXPLORATION DATE: December 8, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-7

LOG OF VIBRACORE NO. V-112

LOCATION: N 4,549,573 E 316,144 UTM19N, WGS84, Meters

SEAFLOOR EL: -35.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-36	1		1	Poorly graded Fine to Medium SAND (SP): grayish brown (10YR5/2), with shell fragments. 0.57m		0			0.80			
-37	2			-with fine to coarse gravel below 0.30m								
-38	3			**PD = 1.05m**								
-39	4											
-40	5											
-41	6											

PENETRATION DEPTH: 1.05 m
RECOVERED LENGTH: 0.57 m
EXPLORATION DATE: December 29, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-113

LOCATION: N 4,549,447 E 317,489 UTM19N, WGS84, Meters

SEAFLOOR EL: -35.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-36	1		1	Poorly graded Medium to Coarse SAND (SP): dark brown (10YR3/3). 0.25m 0.50m		25			0.22	2.70		
-37	2		1	Well-graded Fine to Medium SAND with silt (SW-SM): dark grayish brown (10YR4/2). 0.70m		9			0.60			
-38	3			Clayey Fine to Medium SAND (SC): dark gray (10YR4/1).		37			0.14			
-39	4			**PD = 3.80m**								
-40	5											
-41	6											

PENETRATION DEPTH: 3.80 m
RECOVERED LENGTH: 0.70 m
EXPLORATION DATE: December 30, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. Greenwood
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-8

LOG OF VIBRACORE NO. V-114

LOCATION: N 4,549,305 E 318,830 UTM19N, WGS84, Meters

SEAFLOOR EL: -35.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-36	1	1	Poorly graded Fine SAND (SP): light gray (N7).		1			0.31	2.70	13.1	
			-with some rounded fine gravel below 0.60m 0.95m								
			PD = 1.23m								
-37	2										
-38	3										
-39	4										
-40	5										
-41	6										

PENETRATION DEPTH: 1.23 m
RECOVERED LENGTH: 0.95 m
EXPLORATION DATE: December 30, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-115

LOCATION: N 4,549,143 E 320,440 UTM19N, WGS84, Meters

SEAFLOOR EL: -35.1 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-36	1	1	Poorly graded Medium SAND (SP): light brownish gray (10YR6/2), fine to coarse rounded gravel, 0.20m		1			0.75			
		2	with many shell fragments. 0.37m		46			0.12			
			Clayey Fine to Medium SAND (SC): dark gray (N4).								
			PD = 1.14m								
-37	2										
-38	3										
-39	4										
-40	5										
-41	6										

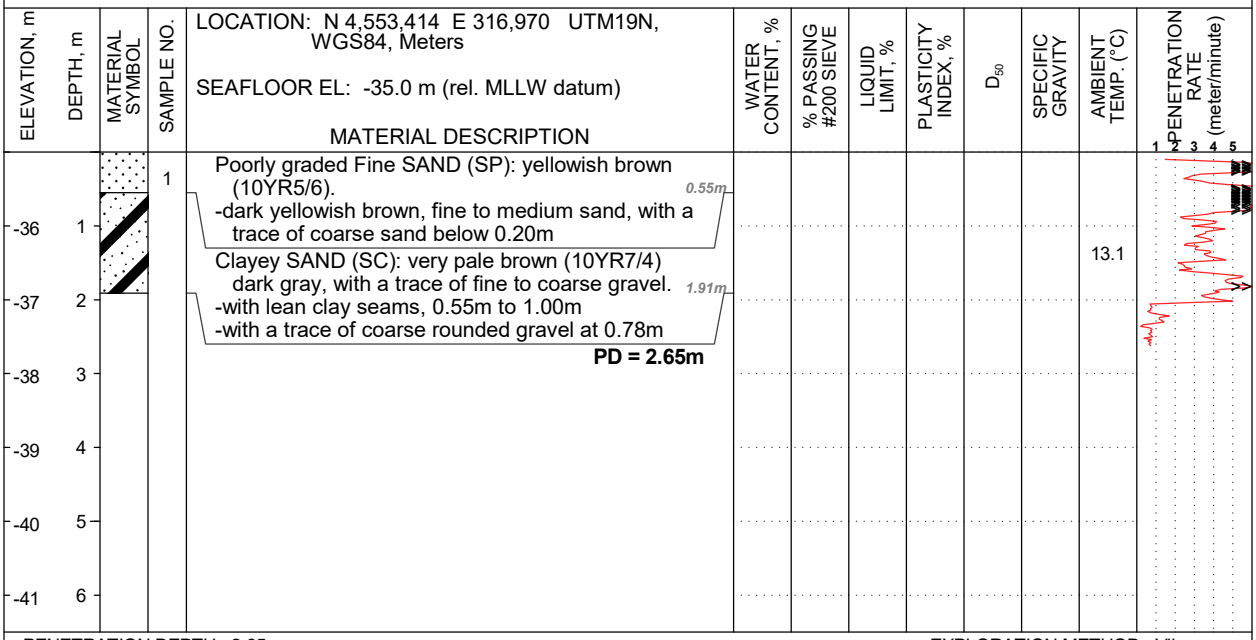
PENETRATION DEPTH: 1.14 m
RECOVERED LENGTH: 0.37 m
EXPLORATION DATE: December 30, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-9

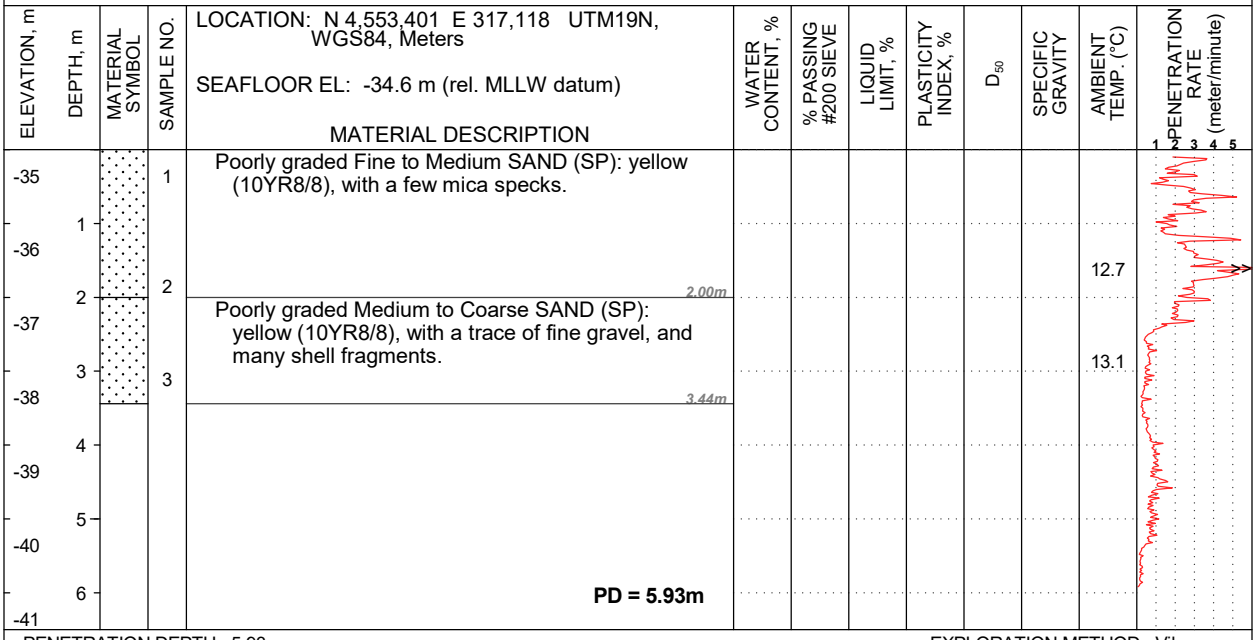
LOG OF VIBRACORE NO. V-116



PENETRATION DEPTH: 2.65 m
RECOVERED LENGTH: 1.91 m
EXPLORATION DATE: December 3, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-117



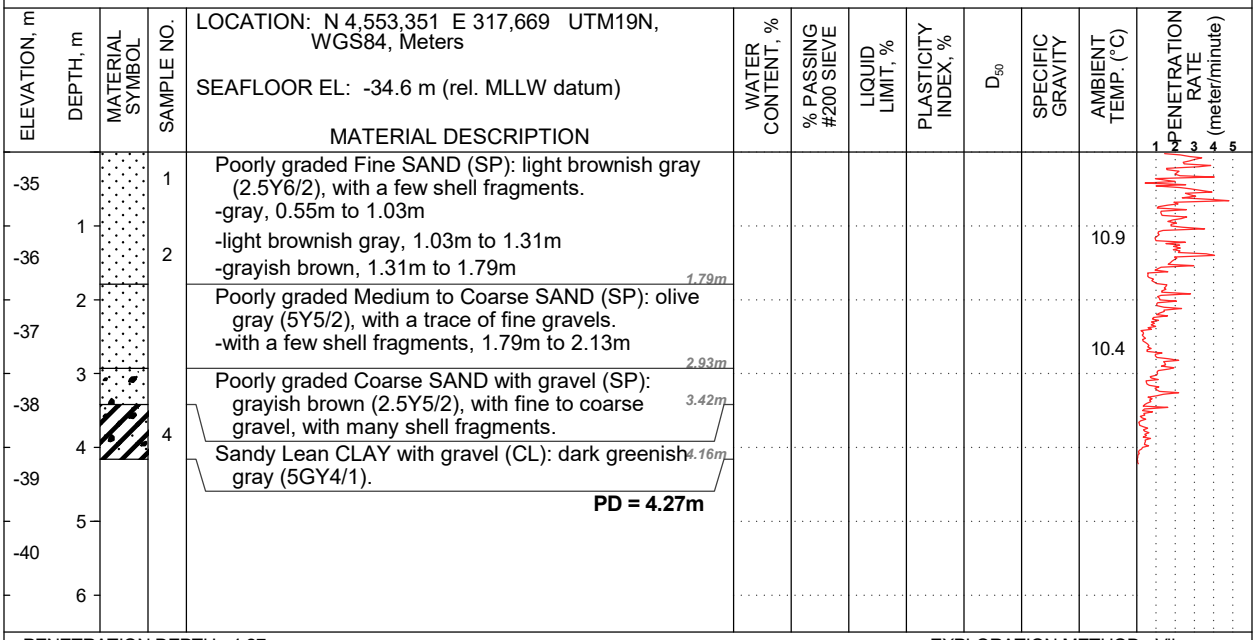
PENETRATION DEPTH: 5.93 m
RECOVERED LENGTH: 3.44 m
EXPLORATION DATE: December 3, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-10

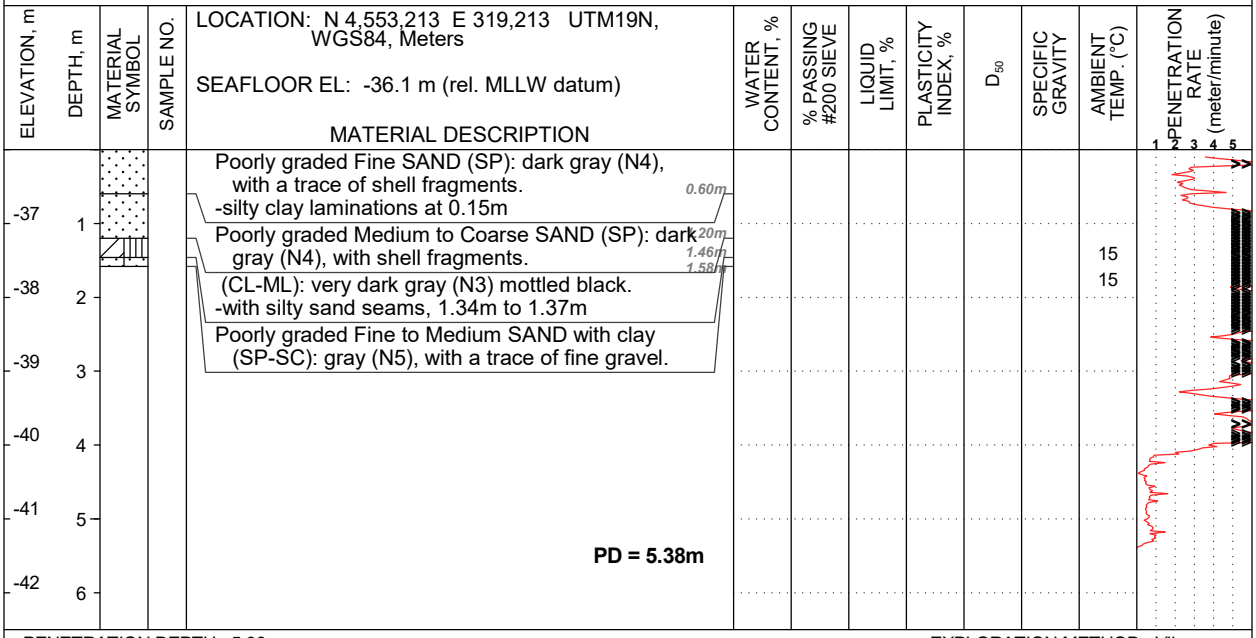
LOG OF VIBRACORE NO. V-118



PENETRATION DEPTH: 4.27 m
RECOVERED LENGTH: 4.16 m
EXPLORATION DATE: December 3, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-119



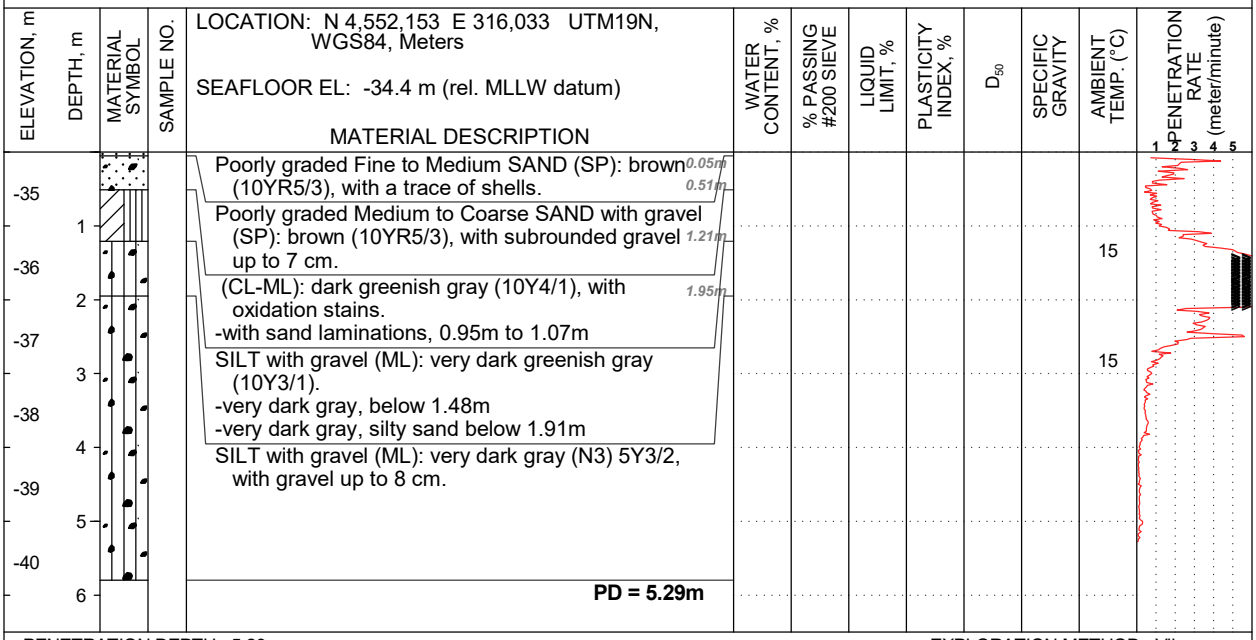
PENETRATION DEPTH: 5.38 m
RECOVERED LENGTH: 1.58 m
EXPLORATION DATE: December 3, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-11

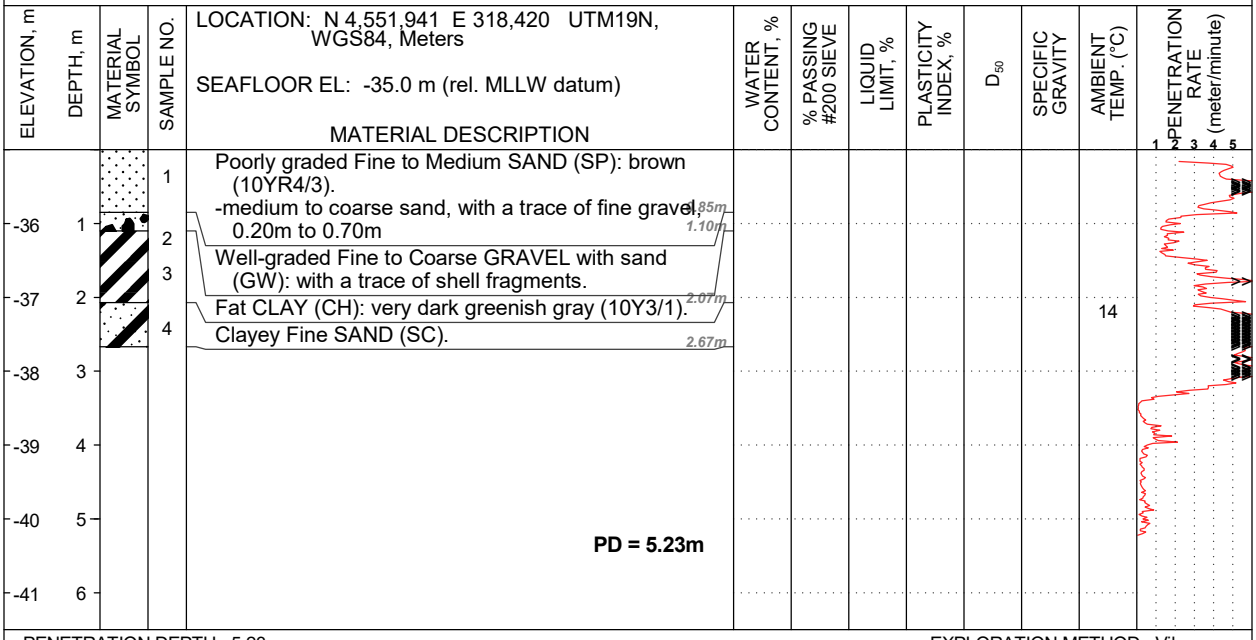
LOG OF VIBRACORE NO. V-120



PENETRATION DEPTH: 5.29 m
RECOVERED LENGTH: 5.80 m
EXPLORATION DATE: December 2, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-121



PENETRATION DEPTH: 5.23 m
RECOVERED LENGTH: 2.67 m
EXPLORATION DATE: December 2, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-12

LOG OF VIBRACORE NO. V-122

LOCATION: N 4,550,931 E 316,009 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	1	1	Poorly graded Fine SAND (SP): pale brown (10YR6/3), with shell fragments.						2.66	
			1.10m							
-36	2	2	Well-graded Fine to Coarse GRAVEL with sand (GW): dark grayish brown (10YR4/2), gravel up to 7 cm, with shell fragments. 1.50m		2			0.33	2.70	16.3
			Sandy Lean CLAY with gravel (CL): very dark greenish gray (10Y3/1), fine gravel. 2.23m							
-37	3		Poorly graded Medium to Coarse SAND with gravel (SP): yellowish brown (10YR5/6), fine gravel.							15.7
-38	4		-greenish gray, 2.50m to 3.00m							
			-grayish brown, gravel up to 4 cm, 3.00m to 4.00m							
-39			-with oxidation stains at 3.52m							
	5		-dark yellowish brown, 4.00m to 4.30m							12.7
			-grayish brown, below 4.30m							
-40		3	5.36m							
	6		**PD = 5.94m**							

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 5.94 m
RECOVERED LENGTH: 5.36 m
EXPLORATION DATE: December 2, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-123

LOCATION: N 4,550,662 E 319,048 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.7 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-35	1		Poorly graded Fine to Medium SAND (SP): light yellowish brown (10YR6/4), with a few shell fragments.							
			-gray, medium sand, 0.87m to 1.50m							
-36			-yellowish brown, medium to coarse sand below 1.50m 1.68m							16.2
	2		Poorly graded Coarse SAND with gravel (SP): gray (2.5Y5/1), with a few shell fragments. 2.32m							
-37			-dark grayish brown, with silt below 2.18m 3.00m							
	3		Poorly graded Fine SAND (SP): yellowish brown (10YR5/6).							15.1
-38			-dark gray, sandy lean clay with gravel, 2.37m to 2.55m 4.25m 4.35m							
	4		-light olive brown, coarse sand with gravel, with few iron lenses, 2.55m to 2.78m							
-39		4	-olive gray, medium sand below 2.78m 5.35m							14.6
	5	5	Well-graded Fine to Coarse SAND (SW): olive brown (2.5Y4/4), with manganese pockets.							
-40			Sandy Lean CLAY with gravel (CL): dark gray (N4).							
	6									
-41										

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 5.73 m
RECOVERED LENGTH: 5.35 m
EXPLORATION DATE: December 2, 2017

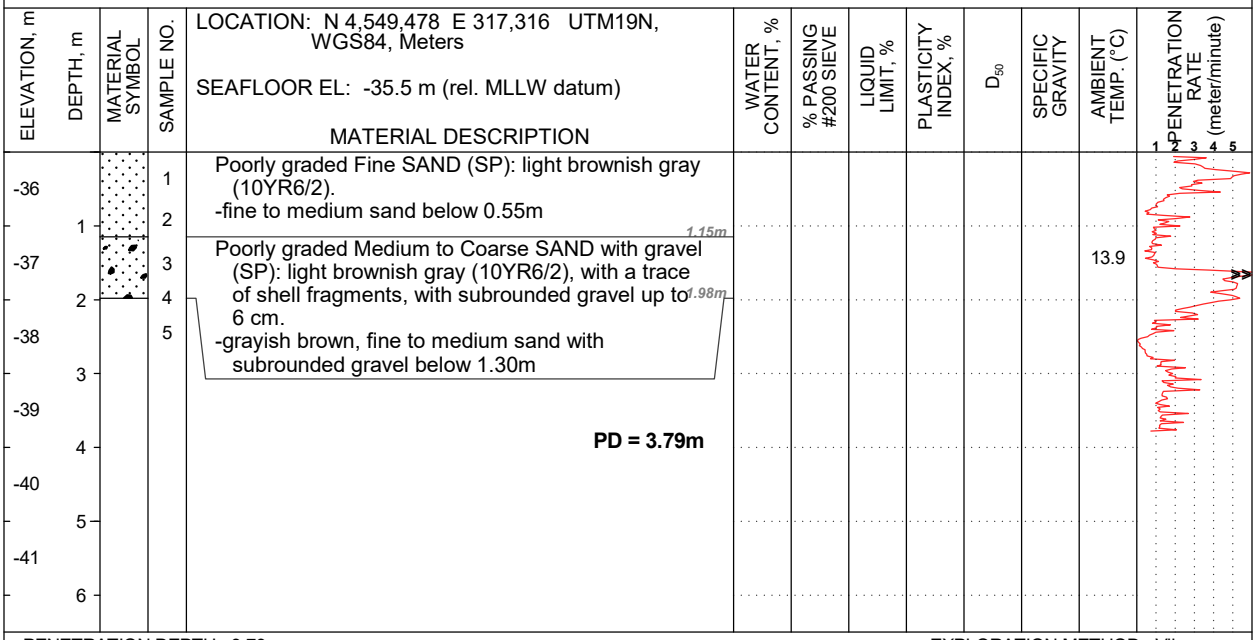
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-13

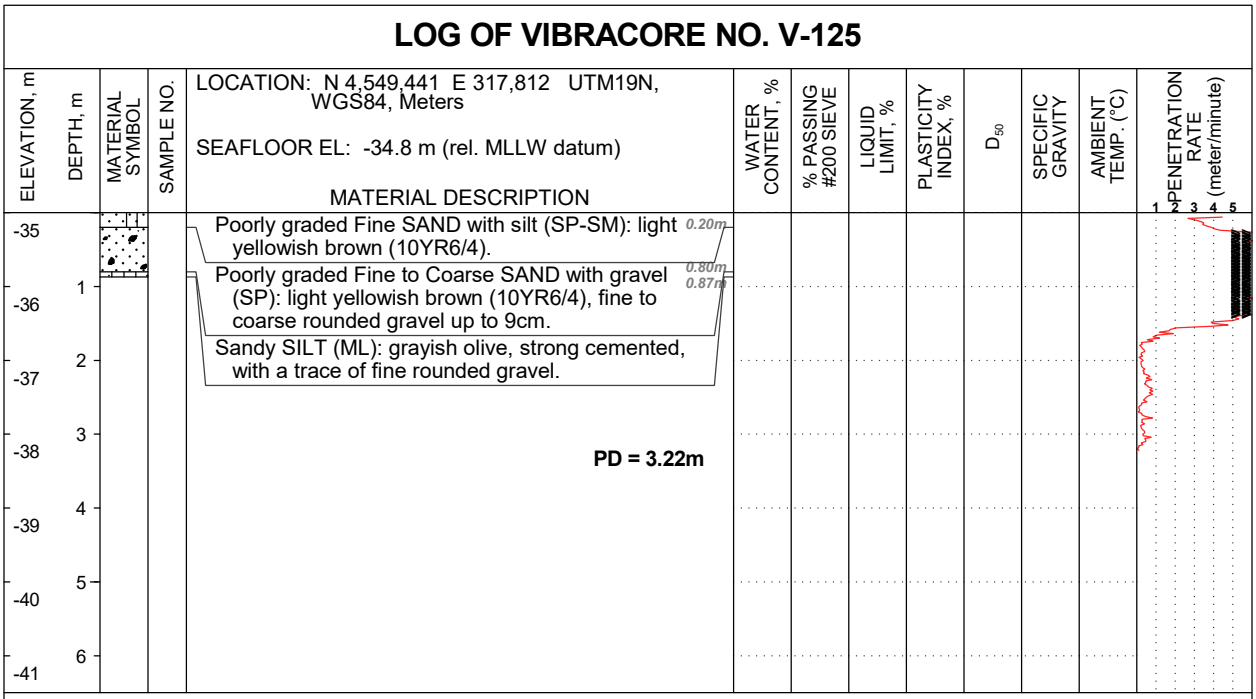
LOG OF VIBRACORE NO. V-124



PENETRATION DEPTH: 3.79 m
RECOVERED LENGTH: 1.98 m
EXPLORATION DATE: December 2, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-125



PENETRATION DEPTH: 3.22 m
RECOVERED LENGTH: 0.87 m
EXPLORATION DATE: December 1, 2017
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-14

LOG OF VIBRACORE NO. V-200

LOCATION: N 4,529,647 E 231,764 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-31	1	1	Poorly graded Medium SAND (SP): gray (10YR5/1), with a trace of fine sand.		5			0.26	2.70	
		2	Poorly graded Fine SAND with silt (SP-SM): gray (10YR5/1) mottled dark gray. *1.02m*							
		3	-with organic partings and shell fragments at 0.60m *1.25m*		3			0.30		
-32	2	4	-with shell fragments, 0.80m to 0.90m *1.59m*							
			Poorly graded Fine SAND (SP): light yellowish brown (10YR6/4), with a trace of silt.							
-33	3		-brownish yellow, below 1.25m							
			PD = 2.20m							
-34	4									
-35	5									
-36	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.20 m
RECOVERED LENGTH: 1.59 m
EXPLORATION DATE: October 28, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-201

LOCATION: N 4,530,483 E 234,571 UTM19N, WGS84, Meters

SEAFLOOR EL: -31.3 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-32	1	1	Poorly graded Fine to Medium SAND (SP): olive (5Y5/4). *0.44m*	9	2			0.28		
		2	-olive gray, with shell fragments below 0.14m *0.52m*		9			0.19	2.70	
		3	Poorly graded Fine SAND with silt (SP-SM): dark gray (N4).		3			0.31		
-33	2	4	Poorly graded Fine SAND (SP): pale brown (10YR6/3).							
		5	-with a trace of fine to coarse gravel at 0.53m *2.55m*							
-34	3		-with silty sand lenses, dark gray at 0.83m							
			-fine sand below 1.50m							
-35	4		**PD = 3.00m**							
-36	5									
-37	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.55 m
EXPLORATION DATE: October 28, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-15

LOG OF VIBRACORE NO. V-202

LOCATION: N 4,531,960 E 239,394 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.1 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine SAND (SP): brownish yellow (10YR6/6). 0.15m		8			0.24	2.70	
-31	1	2	Poorly graded Fine SAND with silt and gravel (SP-SM): very pale brown (10YR7/3), coarse gravel. 0.70m	13	16			0.12	2.68	
		3	-with silty sand lenses, dark gray at 0.49m 0.87m		7			0.23		
-32	2	4	-with a trace of fine rounded gravel at 0.58m							
-33	3		Silty SAND (SM): grayish brown (10YR5/2), with mica specks. 1.50m							
-34	4		Poorly graded Fine SAND with silt (SP-SM): light yellowish brown (10YR6/4).							
-35	5		**PD = 3.00m**							
-36	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 1.50 m
EXPLORATION DATE: October 30, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-203

LOCATION: N 4,532,427 E 240,923 UTM19N, WGS84, Meters

SEAFLOOR EL: -31.3 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine SAND (SP): light gray (10YR7/2). 0.35m	4	1			0.34	2.64	
-32	1	2	Well-graded Fine SAND with gravel (SW): very pale brown (10YR7/4), fine rounded gravel. 1.05m		1			0.37	2.70	
		3	Poorly graded Fine SAND (SP): grayish brown (10YR5/2).		3			0.22		
-33	2	4	-with silt pockets, dark gray at 1.35m 2.22m							
-34	3		-with silt pockets, dark gray at 1.38m							
-35	4		-with silt pockets, dark gray at 1.60m							
-36	5		**PD = 3.00m**							
-37	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.22 m
EXPLORATION DATE: November 1, 2017

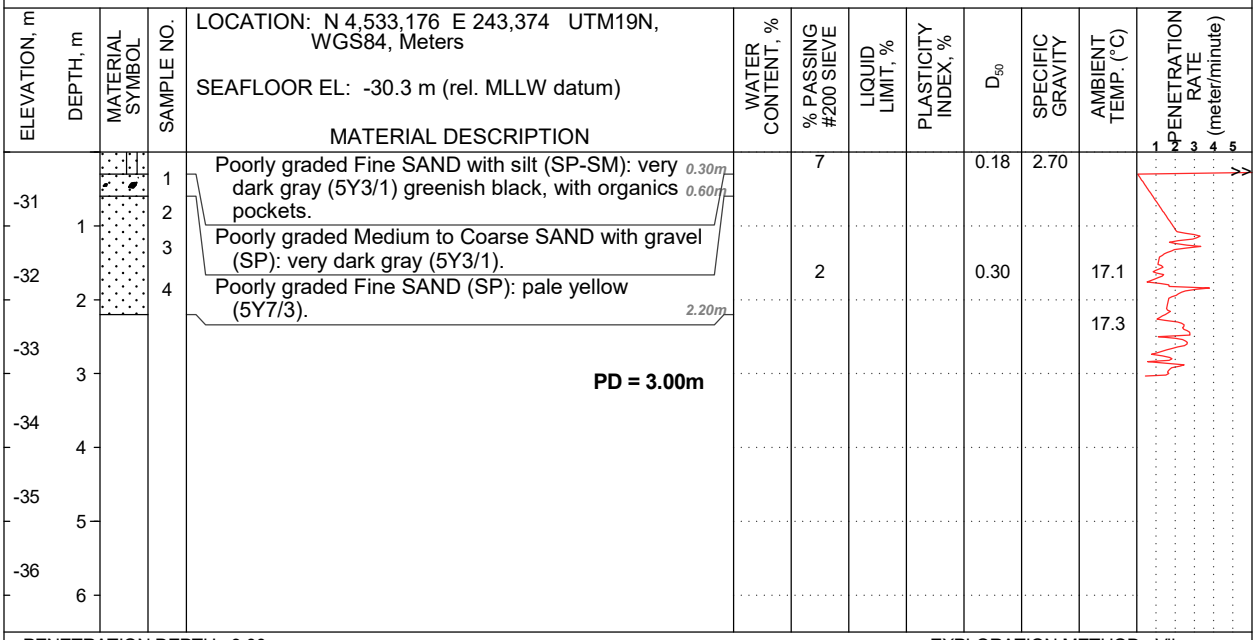
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-16

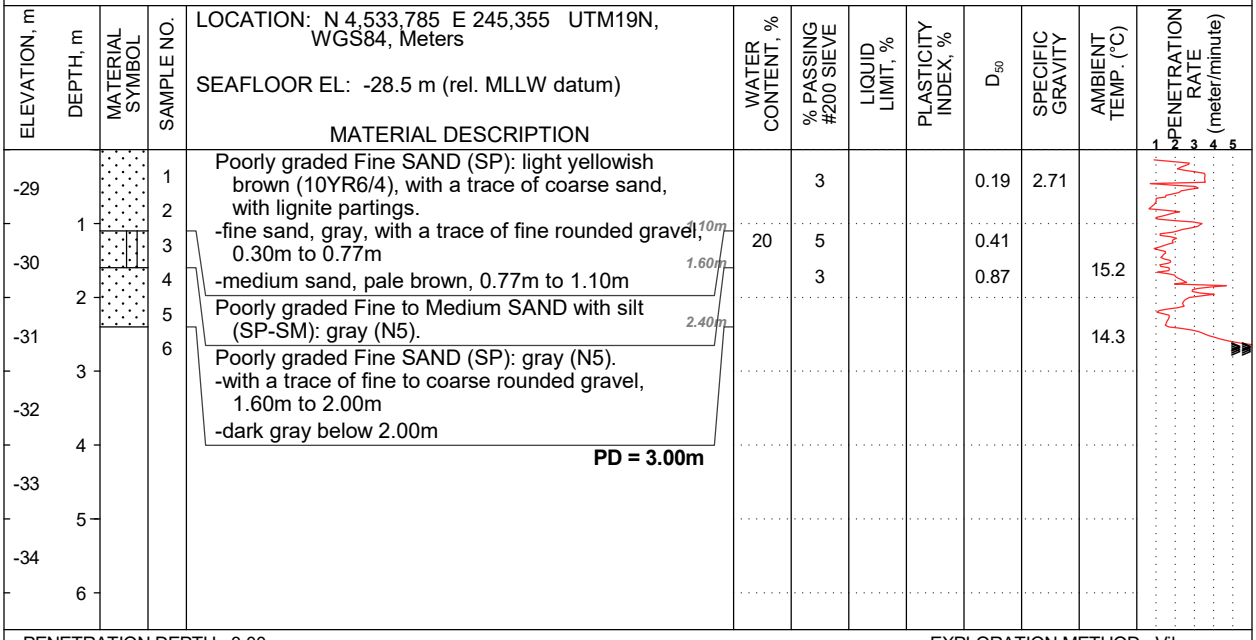
LOG OF VIBRACORE NO. V-204



PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.20 m
EXPLORATION DATE: November 1, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-205



PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.40 m
EXPLORATION DATE: November 1, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-17

LOG OF VIBRACORE NO. V-206

LOCATION: N 4,534,295 E 247,035 UTM19N, WGS84, Meters

SEAFLOOR EL: -29.1 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	3	1			0.38	2.68	
		2		1			1.6	2.70	
-30	1	3							
		4		3			0.30		16.3
-31	2								
-32	3								15.3
-33	4								
-34	5								
-35	6								

Poorly graded Fine to Medium SAND (SP): light yellowish brown (10YR6/4), with a few shell fragments. 0.42m – 0.78m

Poorly graded Fine to Medium SAND with gravel (SP): grayish brown (10YR5/2), fine gravel.

Poorly graded Fine SAND (SP): light gray (N7).
-gray, 1.05m to 1.95m

2.96m

PD = 3.00m

PENETRATION RESISTANCE RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.96 m
EXPLORATION DATE: November 1, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-207

LOCATION: N 4,535,027 E 249,424 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.0 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1							
		2		3			0.39	2.68	
-31	1	3	12	2			0.55	2.68	
		4		2			0.43		15.6
-32	2	5							
-33	3	6							15.3
-34	4								
-35	5								
-36	6								

Well-graded Medium SAND (SW): very pale brown (10YR7/4), with shell fragments. 0.20m – 0.35m – 0.55m

Poorly graded Fine to Medium SAND (SP): light gray (10R7/1), with a trace of fine rounded gravel.

Silty SAND (SM): brown (10YR4/3), with fine to coarse rounded gravel.

Poorly graded Fine to Medium SAND (SP): very pale brown (10YR8/2) to mottled yellowish brown,
-with a trace of fine gravel at 0.78m
-with a trace of coarse rounded gravel at 1.12m
-gray, with oxidation staining, 1.20m to 1.50m
-with lignite partings at 1.48m
-very pale brown, with a trace of fine to coarse gravel below 1.50m

2.75m

PD = 3.00m

PENETRATION RESISTANCE RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.75 m
EXPLORATION DATE: November 1, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-18

LOG OF VIBRACORE NO. V-208

LOCATION: N 4,535,466 E 250,852 UTM19N, WGS84, Meters

SEAFLOOR EL: -29.3 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Fine to Medium SAND (SP): 7.5YR5/6.
-medium to coarse sand, grayish brown, 0.23m to 0.92m
-with shell fragments below 0.60m
-trace gravel up to 4cm, 0.60m to 0.92m
-light gray, below 0.92m
1.50m
Poorly graded Fine to Medium SAND (SP): light gray (10YR7/1), trace gravel up to 4cm.
2.85m
PD = 3.00m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1		1			0.52	2.70	
-30	1	2							
		3		1			0.42		15.3
-31	2								
-32		4	8	2			0.45		15.3
	3								
-33	4								
-34	5								
-35	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.85 m
EXPLORATION DATE: November 1, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-209

LOCATION: N 4,538,432 E 250,238 UTM19N, WGS84, Meters

SEAFLOOR EL: -26.1 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Fine to Medium SAND (SP): yellowish red (5YR5/6) to greyish brown, with shell fragments.
-greenish gray, 0.60m to 1.06m
1.06m
-trace gravel, 0.94m to 1.06m
Poorly graded Fine to Medium SAND (SP): light brownish gray (10YR6/2), trace gravel.
PD = 3.00m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1		1			0.47	2.69	
-27	1	2							
		3	13	1			0.36	2.65	16.4
-28	2	4	5	1			0.41		
-29	3								15.7
-30	4								
-31	5								
-32	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 3.15 m
EXPLORATION DATE: November 1, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-19

LOG OF VIBRACORE NO. V-210

LOCATION: N 4,537,209 E 250,883 UTM19N, WGS84, Meters

SEAFLOOR EL: -27.3 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND (SP): 7.5YR6/4.		2			0.35	2.70	
-28	1	2	-light gray, below 0.40m							
		3	-with fine to coarse rounded gravel, 0.70m to 0.90m		2			0.26		
-29	2	4	-with a few mica flakes below 0.90m							17.2
		5	2.35m							
-30	3	6	Silty SAND (SM): gray (N5), with shell fragments. 2.58m							
		7	Fat CLAY (CH): very soft, dark gray (N4).	47	92	58	29			
-31	4	8	**PD = 3.00m**							17.2
-32	5									
-33	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 3.35 m
EXPLORATION DATE: November 2, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-211

LOCATION: N 4,536,197 E 253,244 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND (SP): brown (10YR5/3). 0.35m	6	1			0.56	2.68	
			0.66m		1			5.0	2.68	
-31	1	2	Poorly graded Fine to Coarse GRAVEL with sand (GP): white (10YR8/1) to dark gray, fine to medium sand, with lignite. 0.82m	11	10			0.33	2.68	
		3								16.9
-32	2	4	Poorly graded Fine to Medium SAND (SP): yellowish brown (10YR5/6) to light gray. 1.86m		2			0.51		
		5	Poorly graded Fine SAND with silt (SP-SM): light gray (10YR7/1), with a trace of gravel and lignite. 2.73m							16.8
-33	3		Poorly graded Fine to Medium SAND (SP): white (10YR8/1) to light gray, trace gravel.							
-34	4		**PD = 3.00m**							
-35	5									
-36	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.73 m
EXPLORATION DATE: November 2, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-20

LOG OF VIBRACORE NO. V-212

LOCATION: N 4,537,212 E 256,577 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
			1	Poorly graded Fine to Medium SAND (SP): 2.5Y7/1 to reddish grey.		3			0.34	2.70		
-32	1		2	-reddish brown, 0.00m to 0.33m								
			3	-with a trace of gravel below 0.33m		4			0.38		16.7	
-33	2			2.13m							16.4	
				PD = 2.39m								
-34	3											
-35	4											
-36	5											
-37	6											

PENETRATION RATE: 1 2 3 4 5

PENETRATION DEPTH: 2.39 m
RECOVERED LENGTH: 2.13 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-213

LOCATION: N 4,537,669 E 258,054 UTM19N, WGS84, Meters

SEAFLOOR EL: -30.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
			1	Poorly graded Fine to Medium SAND (SP): dark grayish brown (10YR4/2).		4			0.50	2.70		
-32	1		2	-with a trace of fine rounded gravel up to 3cm, 0.00m to 1.60m	17	1			0.52			
			3	-yellow, 0.55m to 1.12m		1			0.38		15.7	
-33	2			-yellowish brown, 1.12m to 2.10m							15.6	
				-dark yellowish brown, below 1.60m								
				2.10m								
-34	3			**PD = 2.42m**								
-35	4											
-36	5											
-37	6											

PENETRATION RATE: 1 2 3 4 5

PENETRATION DEPTH: 2.42 m
RECOVERED LENGTH: 2.10 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-21

LOG OF VIBRACORE NO. V-214

LOCATION: N 4,538,290 E 260,099 UTM19N, WGS84, Meters

SEAFLOOR EL: -32.8 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Medium SAND with gravel (SP): brown (10YR5/3) to grayish brown, gravel subrounded up to 8cm, with a few shell fragments. 0.40m

Poorly graded Fine to Medium SAND with silt (SP-SM): brown (10YR5/3) to dark gray. 1.65m
-with silt laminations, 0.63m to 0.64m
-with silt laminations, 0.92m to 0.93m

Poorly graded Fine to Medium SAND (SP): light gray (10YR7/1) gray.

PD = 2.71m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-33	0	1							
-34	1	2							
-35	2	3	16	5			0.35	2.68	20
-36	3	4							17
-37	4								
-38	5								
-39	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.71 m
RECOVERED LENGTH: 2.95 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-215

LOCATION: N 4,538,710 E 261,483 UTM19N, WGS84, Meters

SEAFLOOR EL: -33.3 m (rel. MLLW datum)

MATERIAL DESCRIPTION

Poorly graded Fine to Medium SAND (SP): yellowish red (5YR5/6).
-with a trace of fine gravel, 0.00m to 1.00m
-with clay pockets, dark gray, 0.13m to 0.46m
-medium to coarse sand, 0.50m to 1.15m
-yellowish brown, 1.00m to 1.15m 1.85m
-yellowish red, 1.15m to 1.64m
-dark yellowish brown, below 1.64m

PD = 3.00m

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-34	1	1							
-35	2	2							18.3
-36	3								
-37	4								
-38	5								
-39	6								

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 1.85 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-22

LOG OF VIBRACORE NO. V-216

LOCATION: N 4,539,264 E 263,294 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND with gravel (SP): light yellowish brown (10YR6/4), fine to coarse gravel up to 6 cm. 0.55m		3			1.4	2.70	
-36	1	2	Poorly graded Fine to Medium SAND (SP): light gray (10YR7/1). 1.55m		3			0.37		18.4
-37	2		-with a trace of gravel, 0.55m to 1.00m							
-38	3		**PD = 1.92m**							
-39	4									
-40	5									
-41	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 1.92 m
RECOVERED LENGTH: 1.55 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-217

LOCATION: N 4,538,935 E 265,037 UTM19N, WGS84, Meters

SEAFLOOR EL: -38.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
			Poorly graded Fine to Medium SAND (SP): gray (5Y6/1). 0.66m							
-39	1	1	Poorly graded Fine to Medium SAND with gravel (SP): gray (5Y6/1), with lignite partings. 1.04m		3			0.42	2.70	
-40	2	2	Poorly graded Fine to Medium SAND with silt (SP-SM): gray (5Y6/1). 1.70m		5			0.25		
-41	3		**PD = 2.36m**							
-42	4									
-43	5									
-44	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.36 m
RECOVERED LENGTH: 1.70 m
EXPLORATION DATE: November 3, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-23

LOG OF VIBRACORE NO. V-218

LOCATION: N 4,537,968 E 267,134 UTM19N, WGS84, Meters

SEAFLOOR EL: -43.2 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-43.2	0								
		1		26			0.098	2.70	
-44	1								
		2		44			0.079		14.6
-45	2								
-46	3								
-47	4								
-48	5								
-49	6								

Silty Fine SAND (SM): gray (N5).

1.40m

PD = 2.49m

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 2.49 m
RECOVERED LENGTH: 1.40 m
EXPLORATION DATE: November 4, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-219

LOCATION: N 4,539,740 E 269,826 UTM19N, WGS84, Meters

SEAFLOOR EL: -47.0 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-47.0	0								
		1	14	14			0.27	2.68	
-48	1	2							
		3	10	26			0.17		7
-49	2	4							
		5							
-50	3								
-51	4								
-52	5								
-53	6								

Poorly graded Fine SAND (SP): dark greenish gray (10GY4/1), with few mica specks.

0.20m

Silty Fine to Medium SAND (SM): very dark greenish gray (10GY3/1).
-with a trace of shell fragments, 0.20m to 0.35m
-trace coarse gravel, 0.35m to 2.20m
-with a trace of coarse sand, 1.10m to 2.20m

2.84m

PD = 3.74m

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.74 m
RECOVERED LENGTH: 2.84 m
EXPLORATION DATE: December 15, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-24

LOG OF VIBRACORE NO. V-220

LOCATION: N 4,542,201 E 272,986 UTM19N, WGS84, Meters

SEAFLOOR EL: -41.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-42	1		1	Poorly graded Fine to Medium SAND (SP): pale brown (10YR6/3).	19	2			0.35			
			2	-medium sand with a trace of coarse sand, 0.00m to 0.20m (0.84m)								
				-gray, below 0.20m								
-43	2			**PD = 2.00m**								
-44	3											
-45	4											
-46	5											
-47	6											

PENETRATION DEPTH: 2.00 m
RECOVERED LENGTH: 0.84 m
EXPLORATION DATE: December 15, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-221

LOCATION: N 4,542,624 E 274,254 UTM19N, WGS84, Meters

SEAFLOOR EL: -40.7 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-41	1		1	Poorly graded Fine to Medium SAND (SP): with shell fragments. (0.64m)	17	1			0.40			
-42	2			**PD = 1.18m**								
-43	3											
-44	4											
-45	5											
-46	6											
-47												

PENETRATION DEPTH: 1.18 m
RECOVERED LENGTH: 0.64 m
EXPLORATION DATE: December 15, 2017

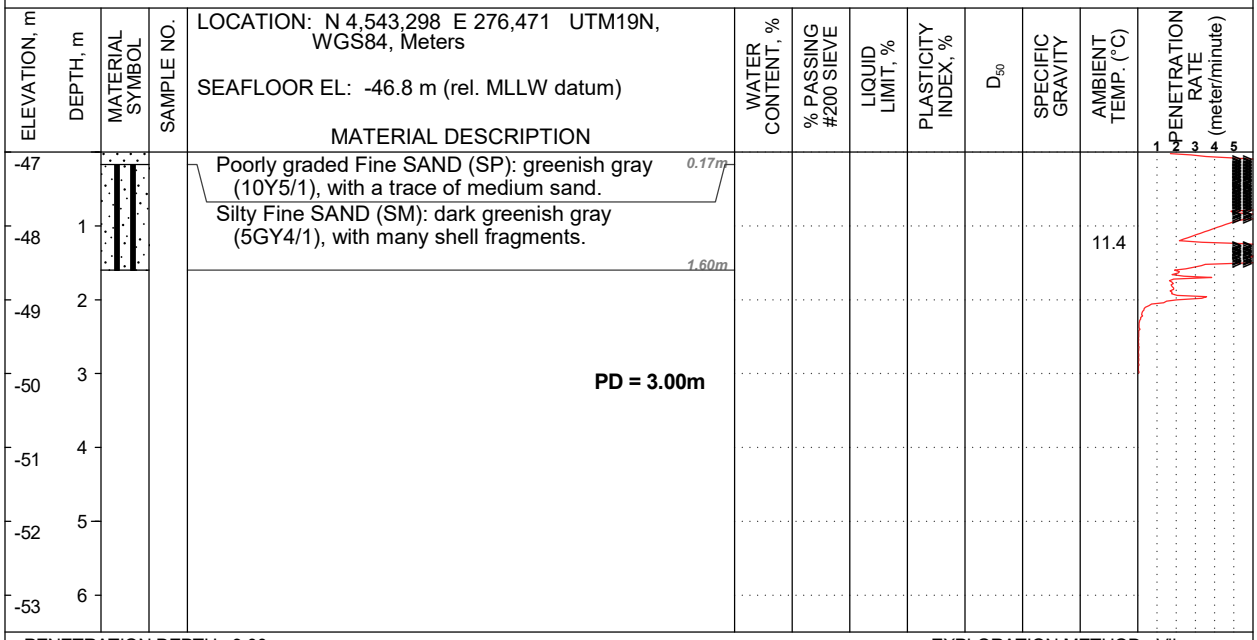
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-25

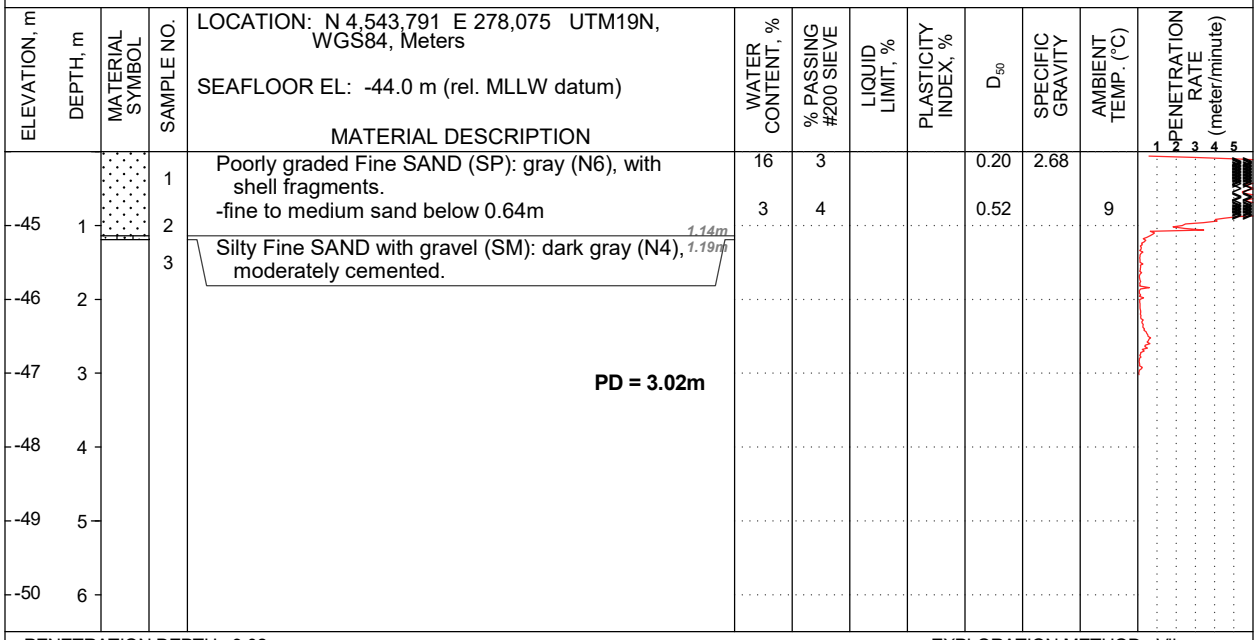
LOG OF VIBRACORE NO. V-222



PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 1.60 m
EXPLORATION DATE: December 22, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-223



PENETRATION DEPTH: 3.02 m
RECOVERED LENGTH: 1.19 m
EXPLORATION DATE: December 22, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-26

LOG OF VIBRACORE NO. V-224

LOCATION: N 4,544,399 E 280,070 UTM19N, WGS84, Meters

SEAFLOOR EL: -39.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-40											
-41	1	1	Poorly graded Fine SAND (SP): dark grayish brown (10YR4/2).								
		2	-with a trace of coarse sand and a few shell fragments, 0.00m to 0.80m	18	1			0.32			
-42	2		1.30m -light brownish gray, with mica specks and a few shell fragments below 0.80m								
			PD = 1.50m								
-43	3										
-44	4										
-45	5										
-46	6										

PENETRATION DEPTH: 1.50 m
RECOVERED LENGTH: 1.30 m
EXPLORATION DATE: December 18, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-225

LOCATION: N 4,545,169 E 282,591 UTM19N, WGS84, Meters

SEAFLOOR EL: -40.8 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-41											
		1	Poorly graded Fine SAND (SP): light brownish gray (10YR6/2), with shell fragments and mica specks.	17	2			0.25			
-42	1	2	0.70m -fine sand, dark gray below 0.35m 0.75m	12	3			0.24	2.68		
		3	Poorly graded Fine SAND with silt (SP-SM): dark gray (10YR4/1).	21	11			0.17			
-43	2										
			PD = 1.90m								
-44	3										
-45	4										
-46	5										
-47	6										

PENETRATION DEPTH: 1.90 m
RECOVERED LENGTH: 0.75 m
EXPLORATION DATE: December 22, 2017

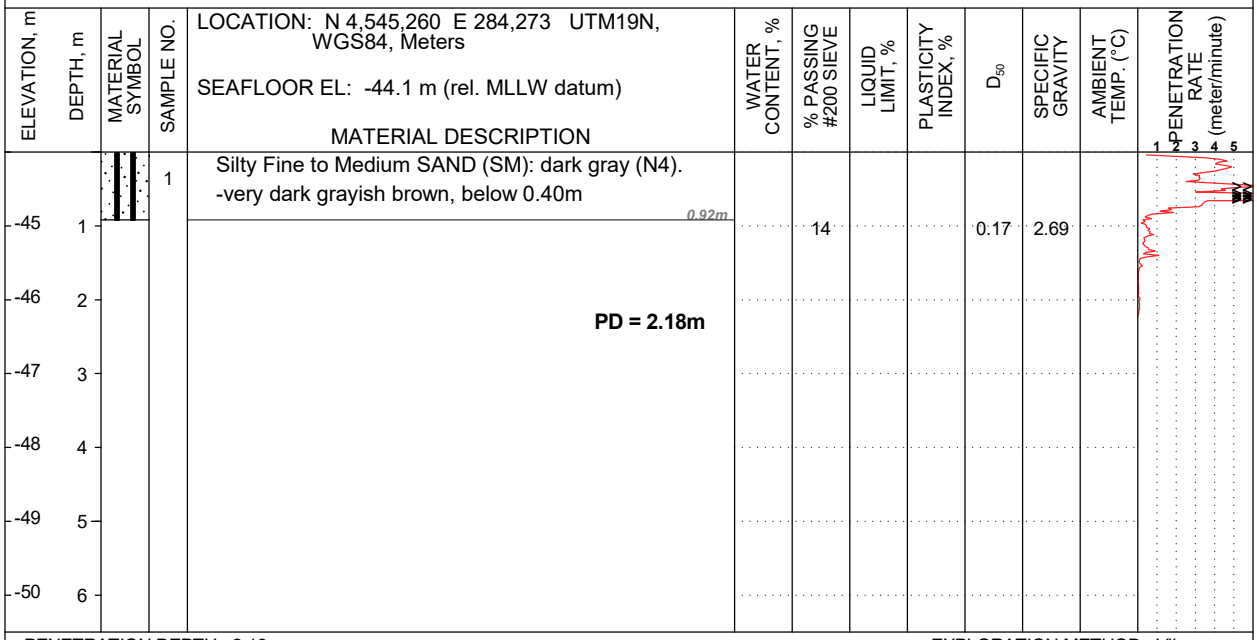
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. Greenwood
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-27

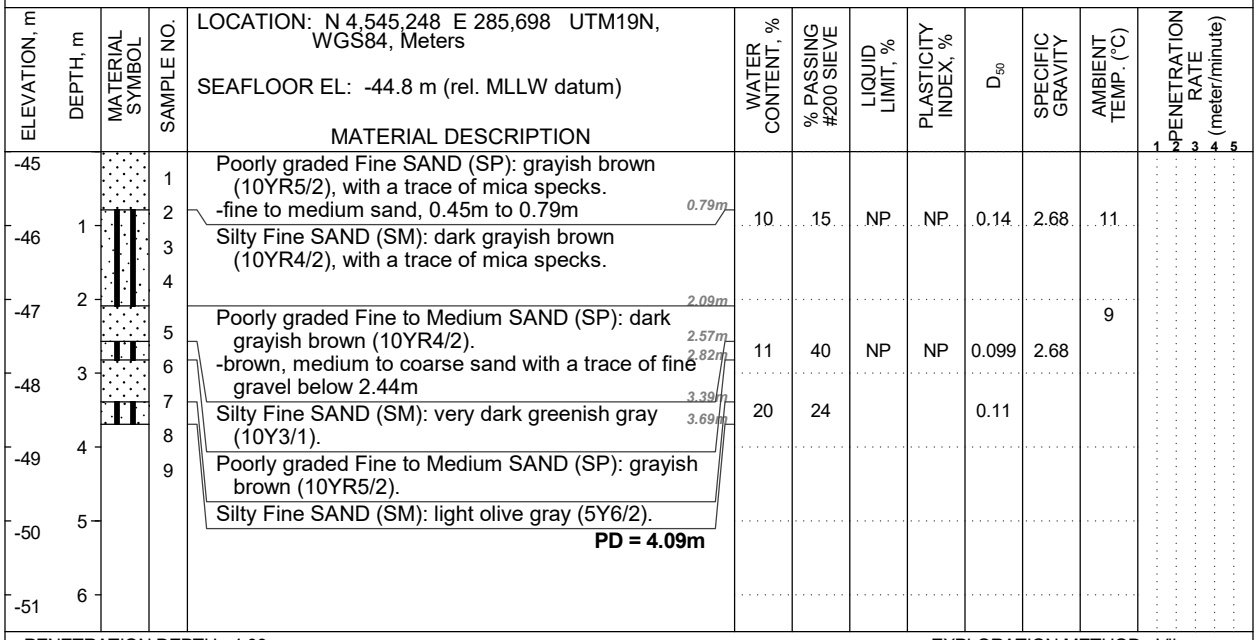
LOG OF VIBRACORE NO. V-226



PENETRATION DEPTH: 2.18 m
RECOVERED LENGTH: 0.92 m
EXPLORATION DATE: December 27, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-227



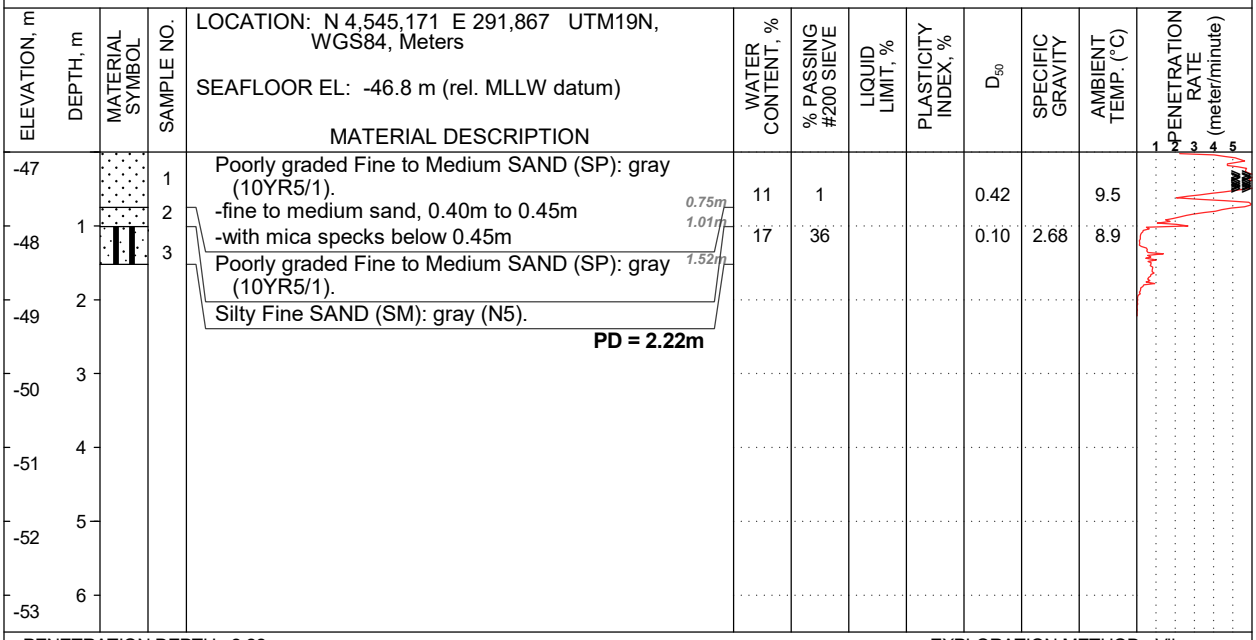
PENETRATION DEPTH: 4.09 m
RECOVERED LENGTH: 3.69 m
EXPLORATION DATE: December 18, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-28

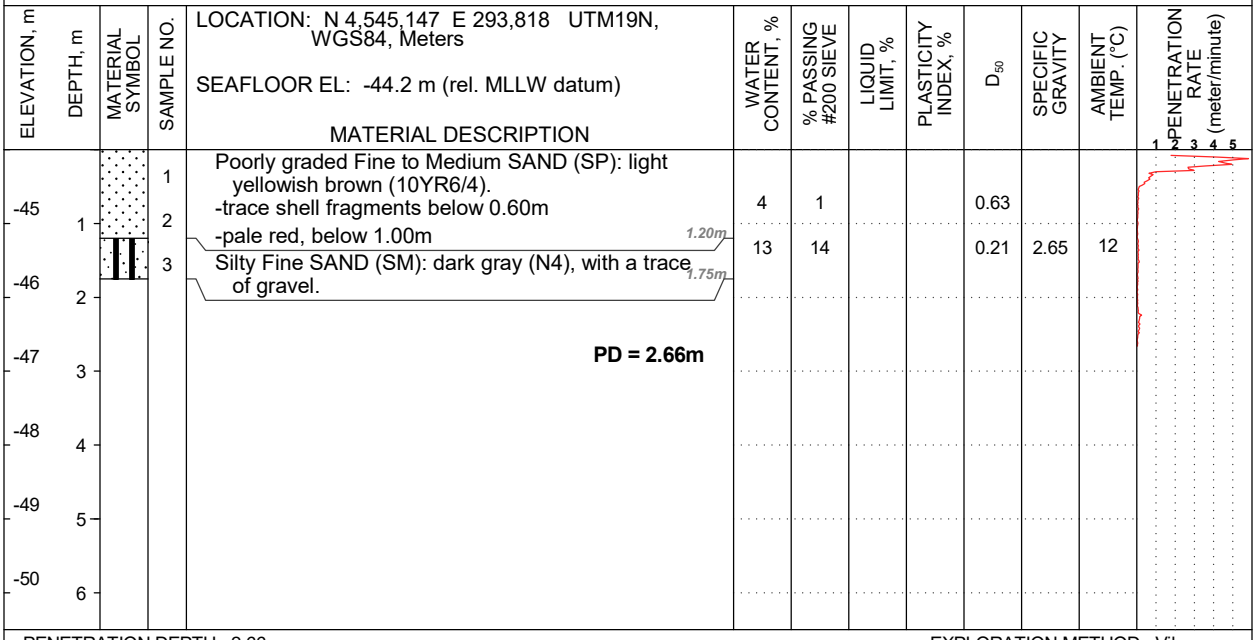
LOG OF VIBRACORE NO. V-228



PENETRATION DEPTH: 2.22 m
RECOVERED LENGTH: 1.52 m
EXPLORATION DATE: December 18, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-229



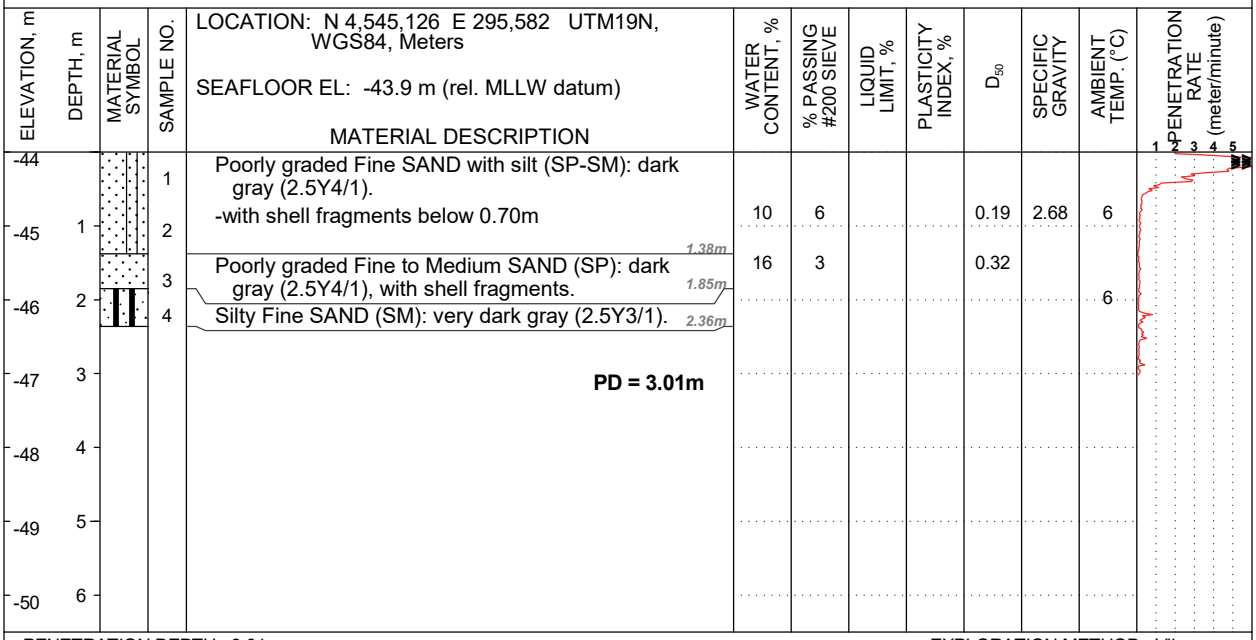
PENETRATION DEPTH: 2.66 m
RECOVERED LENGTH: 1.75 m
EXPLORATION DATE: December 22, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-29

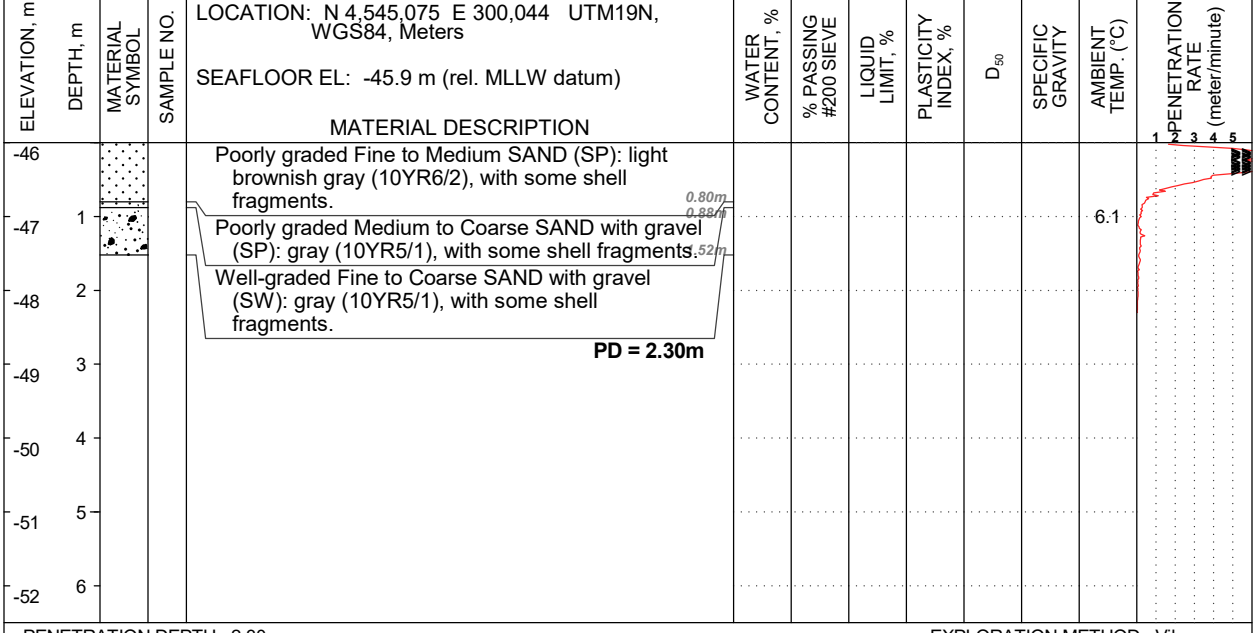
LOG OF VIBRACORE NO. V-230



PENETRATION DEPTH: 3.01 m
RECOVERED LENGTH: 2.36 m
EXPLORATION DATE: December 18, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-231



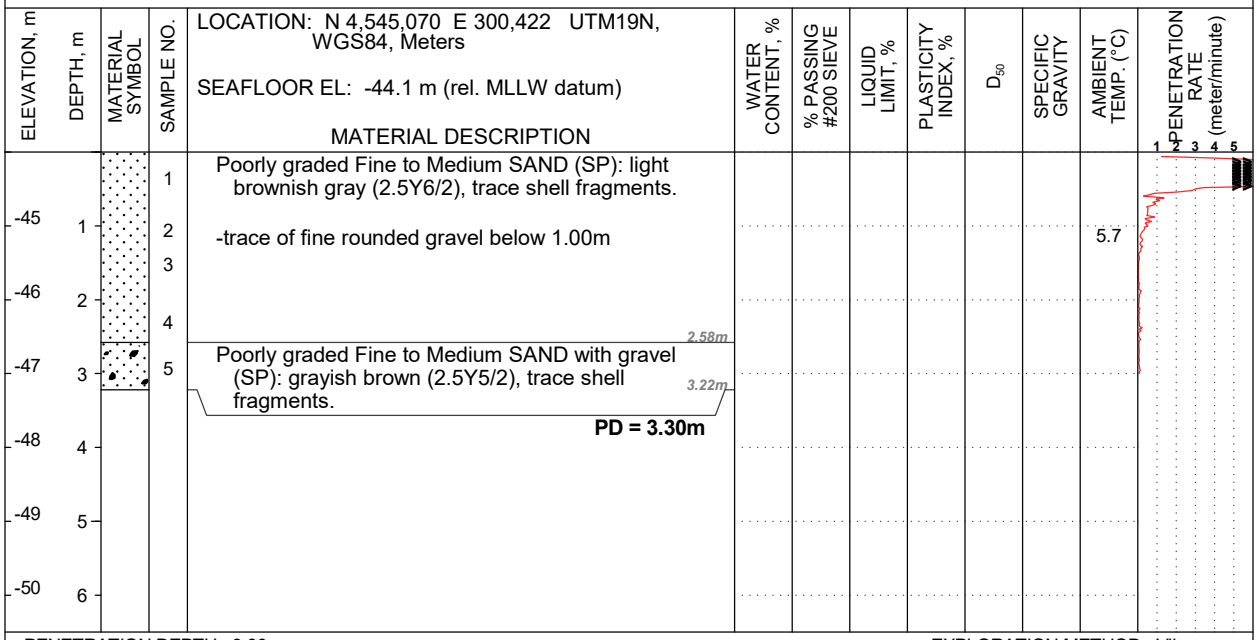
PENETRATION DEPTH: 2.30 m
RECOVERED LENGTH: 1.52 m
EXPLORATION DATE: December 18, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-30

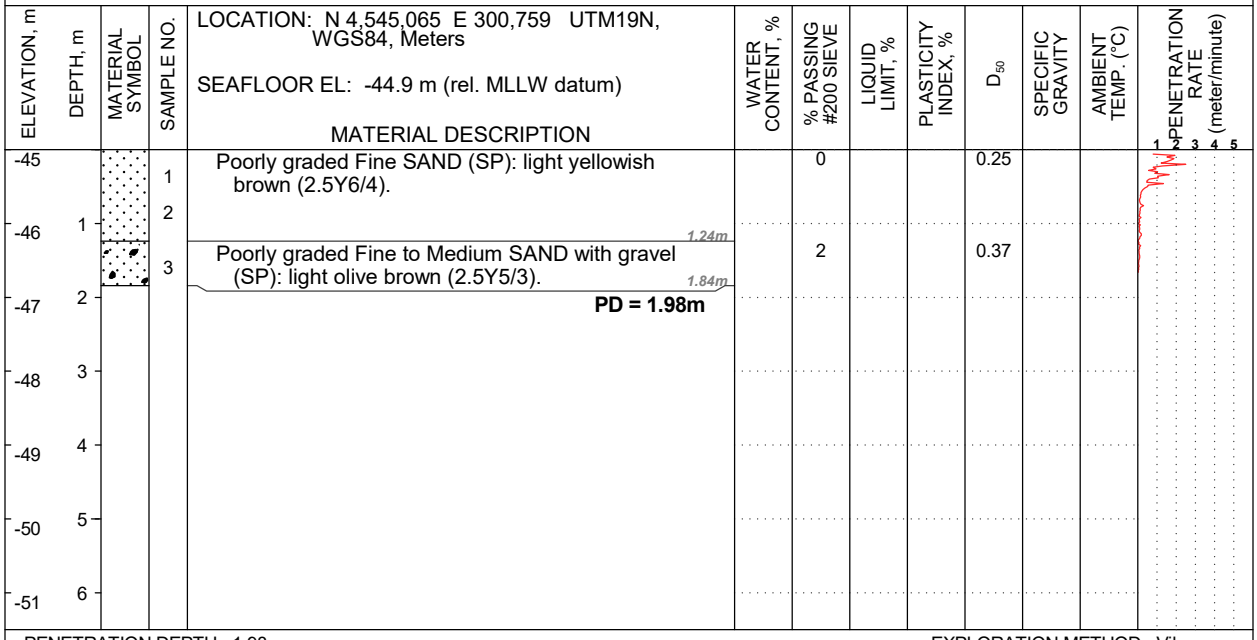
LOG OF VIBRACORE NO. V-232



PENETRATION DEPTH: 3.30 m
RECOVERED LENGTH: 3.22 m
EXPLORATION DATE: December 17, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: W. Cupples
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-233



PENETRATION DEPTH: 1.98 m
RECOVERED LENGTH: 1.84 m
EXPLORATION DATE: December 17, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-31

LOG OF VIBRACORE NO. V-234

LOCATION: N 4,545,046 E 302,434 UTM19N, WGS84, Meters

SEAFLOOR EL: -46.0 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-47	1	1	3	0			0.42		
		2	3	0			0.71	2.68	
		3							4.6
-48	2	4							
-49	3								
-50	4								
-51	5								
-52	6								

Poorly graded Fine to Medium SAND (SP): light brown (7.5YR6/3).
-light brownish gray, fine sand, with mica specks, 0.00m to 0.10m
-medium sand, 0.10m to 0.60m
-medium sand, mottled light gray, with a trace of fine gravel, with shell fragments below 0.60m 1.75m

PD = 2.68m

PENETRATION RATE (meter/minute) 1 2 3 4 5

PENETRATION DEPTH: 2.68 m
RECOVERED LENGTH: 1.75 m
EXPLORATION DATE: December 22, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. Greenwood
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-235

LOCATION: N 4,545,006 E 305,932 UTM19N, WGS84, Meters

SEAFLOOR EL: -42.6 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-43	1	1	4	1			0.48	2.63	
		2	2	1			0.88		
-44									
	2	3	4	0			0.71		5.1
-45									5.1
	3	4							
-46									
	4								
-47									
	5								
-48									
	6								
-49									

Poorly graded Medium SAND (SP): light yellowish brown (10YR6/4).
-with a trace of fine gravel below 0.20m

PD = 2.63m

PENETRATION RATE (meter/minute) 1 2 3 4 5

PENETRATION DEPTH: 2.63 m
RECOVERED LENGTH: 2.73 m
EXPLORATION DATE: December 21, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. Greenwood
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-32

LOG OF VIBRACORE NO. V-236

LOCATION: N 4,546,267 E 307,603 UTM19N, WGS84, Meters

SEAFLOOR EL: -42.5 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND with gravel (SP): pale brown (10YR6/3), fine gravel. 0.20m 0.25m	10	1			1.5		
-43		2		30	81	51	31			
	1	4	Clayey Medium SAND with gravel (SC): dark gray (N4) mottled pale brown. 1.15m	10	**99**	51	27	0.0029	2.76	
-44		5	Fat CLAY with sand (CH): very soft, dark gray (N4).							6.5
	2	6	Fat CLAY (CH): very soft, dark gray (N4).							
-45		7	2.65m							
	3	8	Lean CLAY (CL): very soft, gray (N5). 3.20m	30	86	49	27			4.5
-46		9	**PD = 3.42m**							
	4	10								
-47		11								
	5	12								
-48		3								
	6									

PENETRATION RATE (meter/minute) 1 2 3 4 5

PENETRATION DEPTH: 3.42 m
RECOVERED LENGTH: 3.20 m
EXPLORATION DATE: December 24, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. Greenwood
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-237

LOCATION: N 4,547,744 E 309,543 UTM19N, WGS84, Meters

SEAFLOOR EL: -40.1 m (rel. MLLW datum)

MATERIAL DESCRIPTION

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND (SP): very pale brown (10YR8/2). 0.30m	10	7			0.67		
-41	1	2	-fine sand, 0.00m to 0.10m 0.72m	9	29	NP	NP	0.21	2.68	
		3	Poorly graded Medium SAND with silt (SP-SM): light brownish gray (10YR6/2), with a trace of fine to coarse gravel up to 6 cm. 1.27m							
-42	2	4	Silty Fine to Medium SAND (SM): gray (N5), with a trace of fine to coarse rounded gravel up to 3 cm.							
-43	3		**PD = 2.48m**							
-44	4									
-45	5									
-46	6									

PENETRATION RATE (meter/minute) 1 2 3 4 5

PENETRATION DEPTH: 2.48 m
RECOVERED LENGTH: 1.27 m
EXPLORATION DATE: October 21, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-33

LOG OF VIBRACORE NO. V-238

LOCATION: N 4,547,789 E 310,867 UTM19N, WGS84, Meters

SEAFLOOR EL: -38.6 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-39	0		1	Poorly graded Medium to Coarse SAND (SP): grayish brown (10YR5/2). 0.20m 0.45m		2			1.7	2.69		
-40	1			Poorly graded Medium to Coarse SAND with gravel (SP). **PD = 0.93m**								
-41	2											
-42	3											
-43	4											
-44	5											
-45	6											

PENETRATION DEPTH: 0.93 m
RECOVERED LENGTH: 0.45 m
EXPLORATION DATE: December 29, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-239

LOCATION: N 4,547,889 E 313,767 UTM19N, WGS84, Meters

SEAFLOOR EL: -38.1 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
	0		1	Well-graded SAND with silt and gravel (SW-SM): gray (N5) light brownish gray. 0.28m 0.55m	8 9	11 40	NP	NP	0.71 0.16	2.68		
-39	1		2	Silty Fine to Medium SAND (SM): dark gray (N4), with a trace of fine rounded gravel, and clay pockets. **PD = 1.67m**								
-40	2											
-41	3											
-42	4											
-43	5											
-44	6											

PENETRATION DEPTH: 1.67 m
RECOVERED LENGTH: 0.55 m
EXPLORATION DATE: October 21, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-34

LOG OF VIBRACORE NO. V-240

LOCATION: N 4,548,320 E 314,969 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-35	1		1	Well-graded Fine GRAVEL with sand (GW): pale brown (10YR6/3), medium to coarse sand. 0.50m **PD = 0.76m**	2	0			7.7			1 2 3 4 5
-36	2											
-37	3											
-38	4											
-39	5											
-40	6											

PENETRATION DEPTH: 0.76 m
RECOVERED LENGTH: 0.50 m
EXPLORATION DATE: October 21, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORE NO. V-241

LOCATION: N 4,549,254 E 316,398 UTM19N, WGS84, Meters

SEAFLOOR EL: -34.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	MATERIAL SYMBOL	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)	PENETRATION RATE (meter/minute)
-35	1		1	Well-graded Fine to Coarse GRAVEL with sand (GW). 0.20m **PD = 0.60m**								1 2 3 4 5
-36	2											
-37	3											
-38	4											
-39	5											
-40	6											

PENETRATION DEPTH: 0.60 m
RECOVERED LENGTH: 0.20 m
EXPLORATION DATE: December 29, 2017
The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: M. De Gracia
CHECKED BY: wrm

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-35

LOG OF VIBRACORE NO. V-300

LOCATION: N 4,535,221 E 227,901 UTM19N, WGS84, Meters

SEAFLOOR EL: -10.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND (SP): very pale brown (10YR8/3).		1			0.63	2.67	
		2	-gray, with fine to coarse rounded gravel, 0.13m to 0.30m	4	1 10			0.46 0.30		
-11	1	3	0.84m 1.44m							
		4	Poorly graded Medium SAND with gravel (SP): very pale brown (10YR7/4).							
-12	2	5	Poorly graded Fine SAND with silt (SP-SM): very pale brown (10YR7/4).		2			0.39		18.1
		6	-mottled gray, 1.35m to 1.40m							18.8
-13	3		2.75m 2.85m							
		7	Poorly graded Fine to Medium SAND (SP): 10YR2/1, with a trace of fine rounded gravel, with organic matter.							
-14	4	8	-very pale brown, 1.50m to 2.25m							
			-very pale brown, 2.25m to 2.48m							
-15	5	9	-very pale brown, 2.48m to 2.75m							
			Poorly graded Medium to Coarse SAND with gravel (SP): yellow (10YR7/8).							
-16	6		**PD = 3.00m**							

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.72 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-301

LOCATION: N 4,535,248 E 227,943 UTM19N, WGS84, Meters

SEAFLOOR EL: -9.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-10		1	Poorly graded Coarse SAND (SP): very pale brown (10YR7/3), with a trace of gravel.	3	1 3			0.60 0.48	2.70	
			0.40m							
-11	1	2	Poorly graded Fine to Medium SAND (SP): light yellowish brown (10YR6/4).		4			0.49		
			-with a trace of fine to coarse rounded gravel, 0.40m to 1.50m		2			0.37		
-12	2	3	-yellow, 1.50m to 2.00m							19.1
		4	-yellow, with a trace of coarse rounded gravel, 2.00m to 2.40m							20.1
-13	3	5	-with many mica specks below 2.00m							
			-very pale brown, below 2.40m							
-14	4		**PD = 3.00m**							
-15	5									
-16	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.75 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-36

LOG OF VIBRACORE NO. V-302

LOCATION: N 4,534,040 E 228,577 UTM19N, WGS84, Meters

SEAFLOOR EL: -17.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine SAND (SP): very pale brown (10YR7/3).	6	2			0.29	2.70	
		2	-very pale brown, with a trace of fine to coarse rounded gravel, 0.13m to 0.55m		3			0.34		
-18	1	3	-with fine gravel lens at 0.48m		1					
		4	-gray, 0.55m to 1.40m							
-19	2	5	-dark gray, with organic matter, 0.83m to 1.40m		1			0.30	2.69	18.7
		6	-medium to coarse sand, dark gray, 1.40m to 1.78m							
-20	3	7	-light yellowish brown, 1.48m to 1.53m							16.9
			-dark gray, 1.78m to 2.00m							
-21	4		-medium sand, very pale brown, with mica specks, 2.00m to 2.50m							
			-pale brown, fine to medium sand below 2.50m							
-22	5		**PD = 3.00m**							
-23	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 3.00 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-303

LOCATION: N 4,532,741 E 229,321 UTM19N, WGS84, Meters

SEAFLOOR EL: -22.1 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine SAND with silt (SP-SM): very pale brown (10YR7/3).		1			0.39	2.70	
		2	-light gray, with a trace of fine rounded gravel, 0.18m to 0.41m		11			0.24		
-23	1	3	*1.15m*							
		4	-with a trace of coarse sand, 0.41m to 1.15m *1.60m*		26			0.12		
-24	2	5	-dark brown, with oxidation partings, 0.58m to 0.78m	20	2			0.32		18
		6	-gray, 0.76m to 1.60m							
-25	3	7	-with many mica specks, 0.78m to 0.88m *2.85m*							16.2
			Silty Fine SAND (SM): gray (N5).							
-26	4		-with many mica specks below 1.15m							
			Poorly graded Fine SAND (SP): very pale brown (10YR7/3).							
-27	5		-reddish yellow, oxidation partings at 2.42m							
			-with a trace of coarse sand below 2.42m							
-28	6		**PD = 3.00m**							

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.85 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-37

LOG OF VIBRACORE NO. V-304

LOCATION: N 4,531,983 E 229,754 UTM19N, WGS84, Meters

SEAFLOOR EL: -23.3 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-24	1	1	Poorly graded Fine SAND with gravel (SP): light gray (10YR7/1), fine rounded gravel, with trace shell fragments. 0.30m		1			0.37	2.70	
		2			2			0.28		
					2			0.23		
			-very pale brown, with mica specks, 0.13m to 0.20m							
-25	2		Poorly graded Fine SAND (SP): very pale brown (10YR7/3).	18	1			0.32		17.9
		3	-pale brown, 1.50m to 2.00m							
-26			-medium sand, with mica specks, 2.00m to 2.60m							
	3	4	-very pale brown, 2.00m to 2.13m							15.9
			-light yellowish brown, 2.13m to 2.60m							
-27	4		-grayish brown, below 2.60m							
			PD = 3.00m							
-28	5									
-29	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.86 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-305

LOCATION: N 4,531,179 E 230,215 UTM19N, WGS84, Meters

SEAFLOOR EL: -25.5 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-26	1	1	Poorly graded Fine SAND (SP): very pale brown (10YR7/3).		2			0.24	2.70	
		2	-fine sand, 0.00m to 0.30m 0.78m		2			0.21		
		3	-light brownish gray, 0.30m to 0.55m 0.92m		1			0.24		
-27	2	4	-light gray, with a trace of coarse sand, with mica pecks, 0.55m to 0.78m							
		5	Well-graded Fine to Coarse SAND with gravel (SW): gray (10YR6/1), with shell fragments.	22	2			0.19		16.6
-28		6	Poorly graded Fine SAND (SP): dark gray (10YR4/1).							
	3	7	-yellowish brown, 1.00m to 2.07m							15.9
-29			-yellowish brown, 2.00m to 2.07m							
	4		-very pale brown, below 2.07m							
-30			**PD = 3.00m**							
	5									
-31	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.95 m
EXPLORATION DATE: October 23, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-38

LOG OF VIBRACORE NO. V-306

LOCATION: N 4,543,606 E 247,506 UTM19N, WGS84, Meters

SEAFLOOR EL: -10.0 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND with gravel (SP): very pale brown (10YR7/3), coarse gravel, with shell fragments.		1			2.5	2.70	
					3			1.6	2.70	
			0.80m		1			2.5	2.67	
-11	1	2	-black, with organic matter, 0.35m to 0.48m		3			4.0		
			-very pale brown, 0.48m to 0.80m							
-12	2	3	Poorly graded Medium to Coarse SAND with gravel (SP): brownish yellow (10YR6/8), with mica specks. 2.00m	17	2			0.19		22.3
-13	3		Poorly graded Fine SAND (SP): yellowish brown (10YR5/6), with mica pecks.							20.1
			PD = 3.00m							
-14	4									
-15	5									
-16	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.78 m
EXPLORATION DATE: October 21, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-307

LOCATION: N 4,543,633 E 247,549 UTM19N, WGS84, Meters

SEAFLOOR EL: -9.9 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-10		1	Poorly graded Fine to Medium SAND (SP): very pale brown (10YR7/3), with a few shell fragments.		2			0.65	2.70	
			0.60m		1			0.75		
-11	1		Poorly graded Fine to Medium SAND (SP): yellowish brown (10YR5/8) and reddish brown.							
			-with fine gravel, 0.60m to 1.50m							
			-with silt pocket at 1.50m							
-12	2	2	-with many mica specks below 2.00m		1			0.52		17.1
			-very pale brown, 2.70m to 2.80m							
-13	3		**PD = 3.00m**							16.9
-14	4									
-15	5									
-16	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.90 m
EXPLORATION DATE: October 21, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-39

LOG OF VIBRACORE NO. V-308

LOCATION: N 4,542,932 E 247,864 UTM19N, WGS84, Meters

SEAFLOOR EL: -14.5 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Fine to Medium SAND (SP): very pale brown (10YR7/4). 0.30m		3			0.40	2.68	
		2			1			0.57		
		3	Poorly graded Fine SAND (SP): brownish yellow (10YR6/8), with a trace of fine to coarse rounded to subrounded gravel.		2			0.34		
-15	1		-very pale brown, 0.50m to 1.20m							
-16										
	2	4	-with many mica specks below 2.00m		1			0.32		16.4
-17										
	3		PD = 3.00m							16.2
-18										
	4									
-19										
	5									
-20										
	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 3.00 m
EXPLORATION DATE: October 21, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-309

LOCATION: N 4,542,347 E 248,173 UTM19N, WGS84, Meters

SEAFLOOR EL: -17.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
		1	Poorly graded Medium SAND (SP): very pale brown (10YR7/3), with shell fragments. 0.30m		3			0.42	2.70	
		2			2			0.43		
-18	1		Poorly graded Fine to Medium SAND (SP): yellowish brown (10YR5/8) light gray, with few mica specks.							
	2									
-19		3	-very pale brown, 2.00m to 3.00m		2			0.43		19.1
-20										17.4
	3		PD = 3.00m							
-21										
	4									
-22										
	5									
-23										
	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.22 m
EXPLORATION DATE: October 22, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-40

LOG OF VIBRACORE NO. V-310

LOCATION: N 4,540,745 E 249,017 UTM19N, WGS84, Meters

SEAFLOOR EL: -21.4 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-22	1	1	Poorly graded Fine SAND (SP): very pale brown (10YR7/3) yellowish brown.	5	1			0.32		
		2	-light brown, 0.15m to 0.40m		1			0.32	2.70	
		3	-light gray, 0.40m to 0.80m (0.80m)		3			0.22		
-23		4	-gray, below 0.70m (1.00m)		3			0.33		
	2	5	Poorly graded Coarse SAND with gravel (SP): yellowish brown (10YR5/8) gray, with coarse rounded gravel, with shell fragments, with many mica specks.							17.3
-24										
	3		Poorly graded Fine SAND (SP): yellowish brown (10YR5/8), with many mica specks.							16.1
-25			-grayish brown, 2.45m to 2.50m							
	4		**PD = 3.00m**							
-26										
	5									
-27										
	6									

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.95 m
EXPLORATION DATE: October 22, 2017

EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORE NO. V-311

LOCATION: N 4,539,900 E 249,463 UTM19N, WGS84, Meters

SEAFLOOR EL: -23.2 m (rel. MLLW datum)

ELEVATION, m	DEPTH, m	SAMPLE NO.	MATERIAL DESCRIPTION	WATER CONTENT, %	% PASSING #200 SIEVE	LIQUID LIMIT, %	PLASTICITY INDEX, %	D_{50}	SPECIFIC GRAVITY	AMBIENT TEMP. (°C)
-24	1	1	Poorly graded Fine to Medium SAND (SP): light gray (10YR7/1), with organic matter and few shell fragments.	17	5			0.21		
		2	-light gray, 0.10m to 0.26m (0.59m)		1			1.3	2.70	
		3	-light gray, with coarse sand seams, 0.26m to 0.34m (1.05m)							
-25	2	4	-gray, below 0.34m		2			0.32		17.5
		5	Poorly graded Fine to Medium SAND with gravel (SP): gray (10YR6/1), fine rounded gravel, with a trace of shell fragments.							17.1
-26	3	6	Poorly graded Fine SAND (SP): white (N8).							
			-light brownish gray, below 1.40m							
-27	4		-with a trace of coarse gravel at 1.50m							
			-pale brown, 1.70m to 1.90m							
-28	5		-oxidation partings at 1.86m							
			-light yellowish brown, below 1.90m							
-29	6		-pocket of silt at 1.95m							
			-with few mica specks below 2.10m							
			PD = 3.00m							

PENETRATION RATE (meter/minute): 1 2 3 4 5

PENETRATION DEPTH: 3.00 m
RECOVERED LENGTH: 2.40 m
EXPLORATION DATE: October 22, 2017

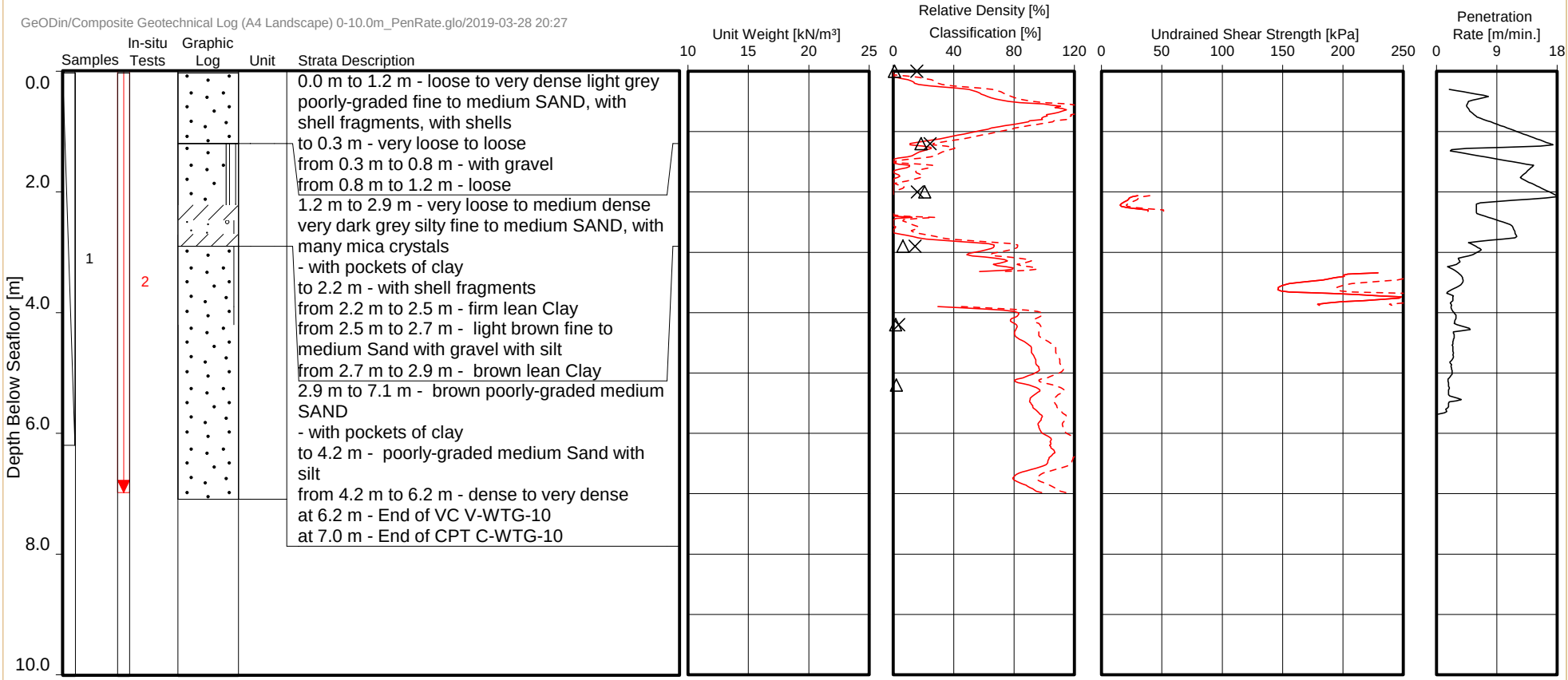
EXPLORATION METHOD: Vibracore
CONTRACTOR: FMGI
LOGGED BY: J.Fisher
CHECKED BY: wrm

The log and data presented are a simplification of actual conditions encountered at the time of exploring at the explored location. Subsurface conditions may differ at other locations and with the passage of time.

LOG OF VIBRACORES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE C-41

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:27



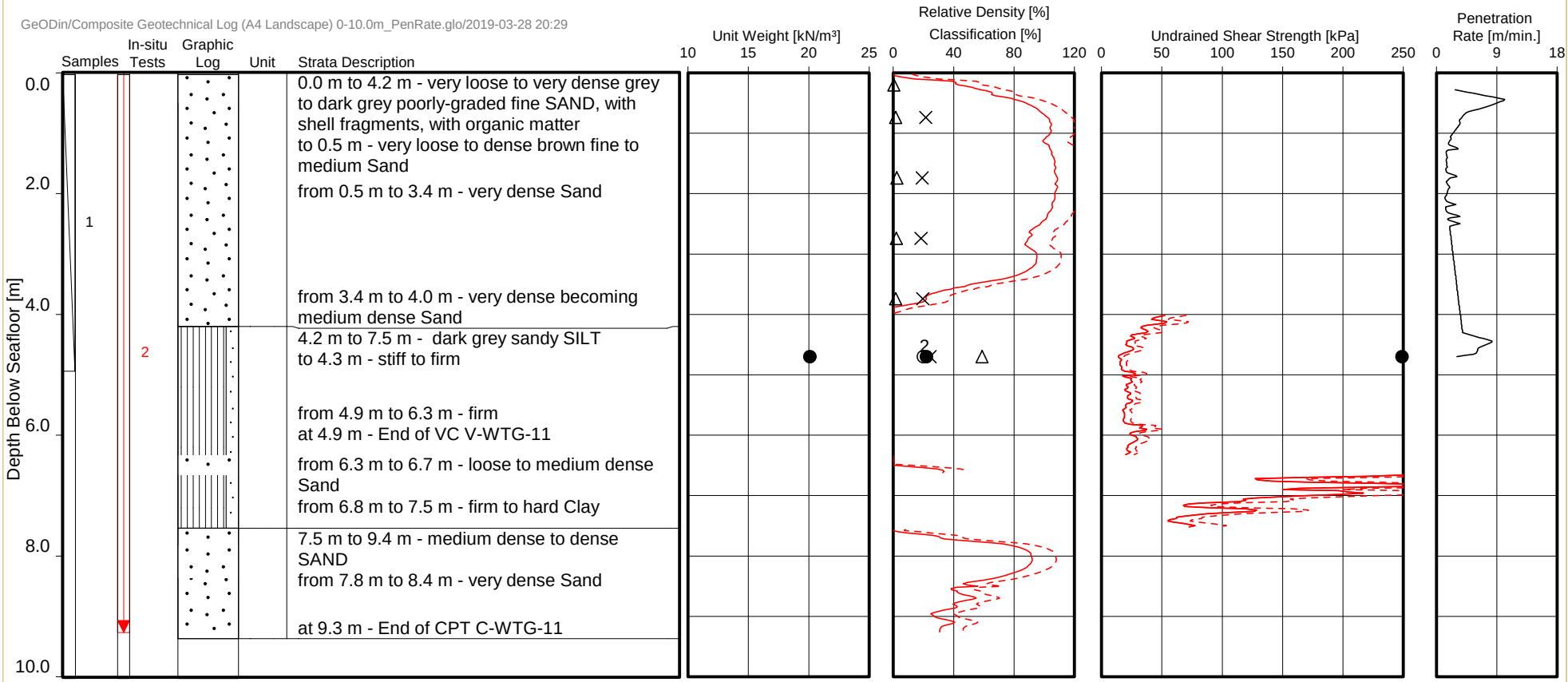
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-10	6.2 m / 5.7 m	34.2 m	321956 m E 4550681 m N	15-Jan-2019
(2) C-WTG-10	7.0 m / 7.0 m	34.2 m	321954 m E 4550684 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-10
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:29



Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-11	4.9 m / 4.7 m	33.1 m	323053 m E 4550665 m N	15-Jan-2019
(2) C-WTG-11	9.3 m / 9.3 m	33.2 m	323052 m E 4550668 m N	22-Feb-2019

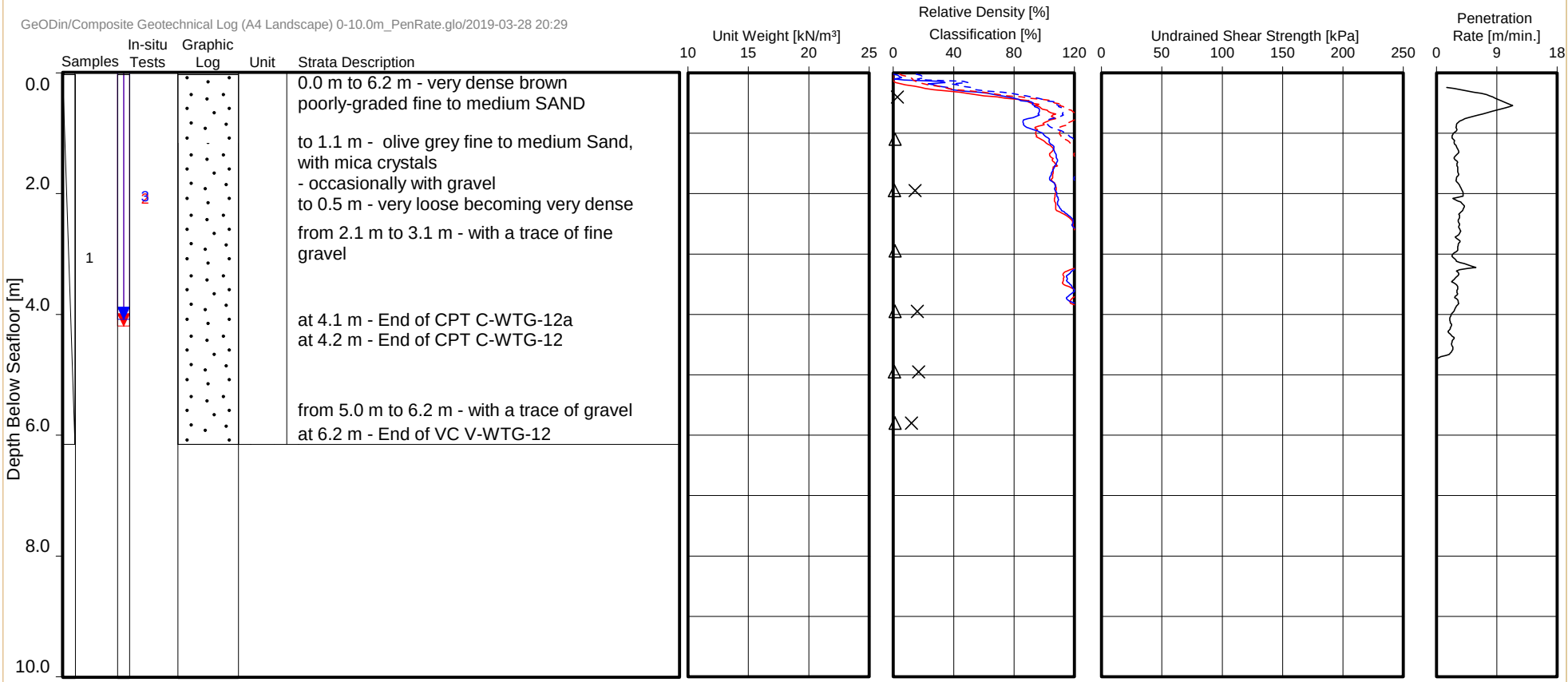
- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: $K_0 = 2.0$, $K_0 = 0.5$
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: $N_{kt} = 20$, $N_{kt} = 15$
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-11
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

Ørsted US Offshore Wind
Revolution Wind Farm and South Fork Wind Farm

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:29



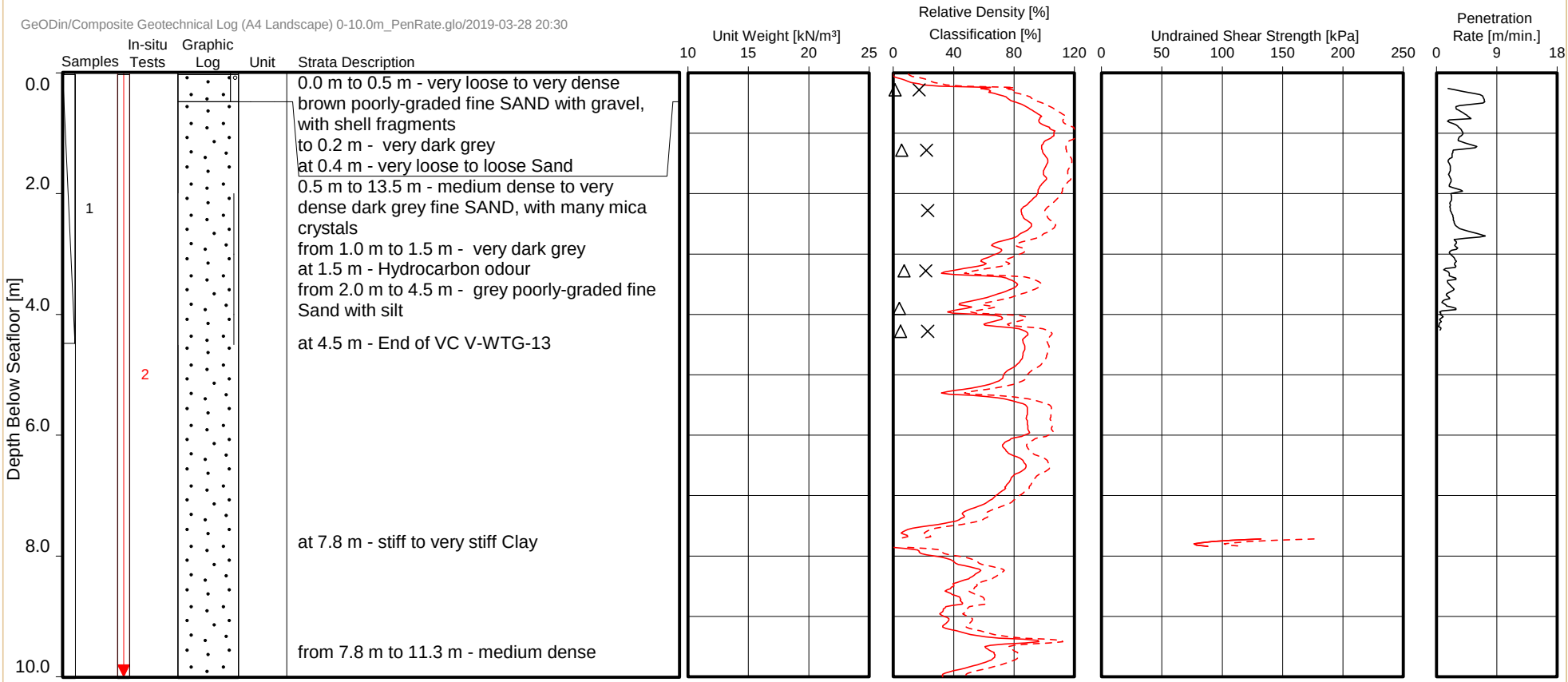
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-12	6.2 m / 4.7 m	36.0 m	324302 m E 4552548 m N	16-Jan-2019
(2) C-WTG-12	4.2 m / 4.2 m	36.0 m	324304 m E 4552551 m N	23-Feb-2019
(3) C-WTG-12a	4.1 m / 4.1 m	36.0 m	324303 m E 4552549 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-12
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:30



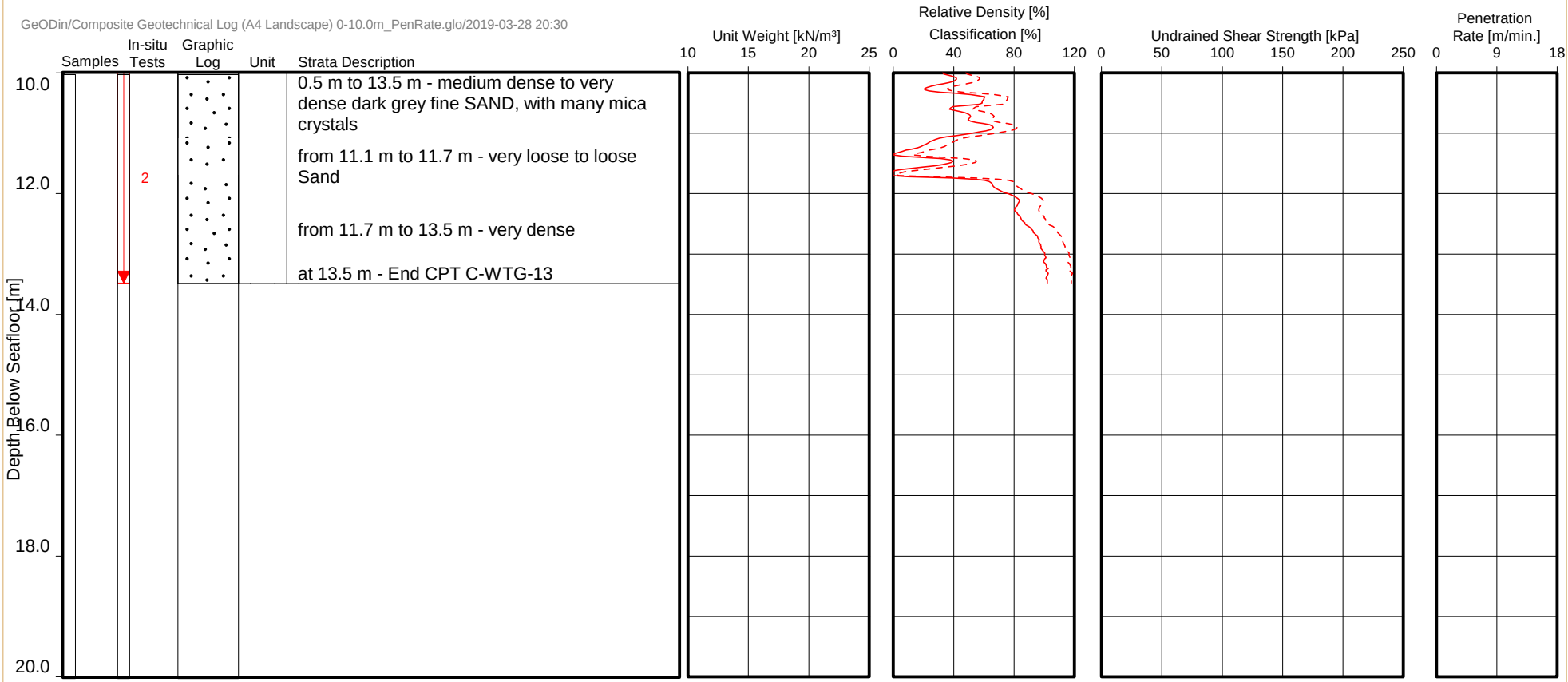
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-13	4.5 m / 4.3 m	34.5 m	324333 m E 4548833 m N	17-Jan-2019
(2) C-WTG-13	13.5 m / 13.5 m	34.5 m	324334 m E 4548837 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-13
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:30



Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-13	4.5 m / 4.3 m	34.5 m	324333 m E 4548833 m N	17-Jan-2019
(2) C-WTG-13	13.5 m / 13.5 m	34.5 m	324334 m E 4548837 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content

Relative density estimated from CPT
—— K_0 = 2.0 - - - K_0 = 0.5

- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil

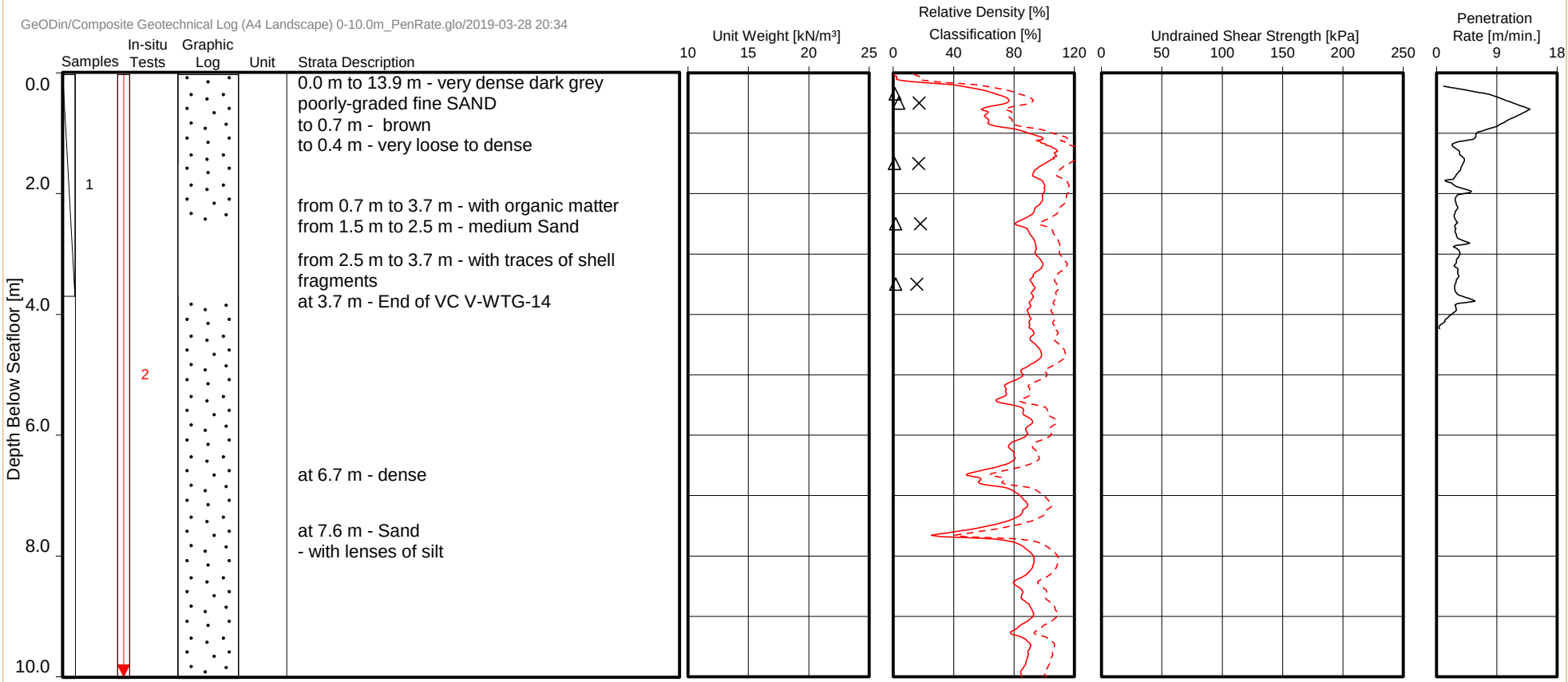
Undrained shear strength estimated from CPT
—— N_{kt} = 20 - - - N_{kt} = 15

- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-13
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:34



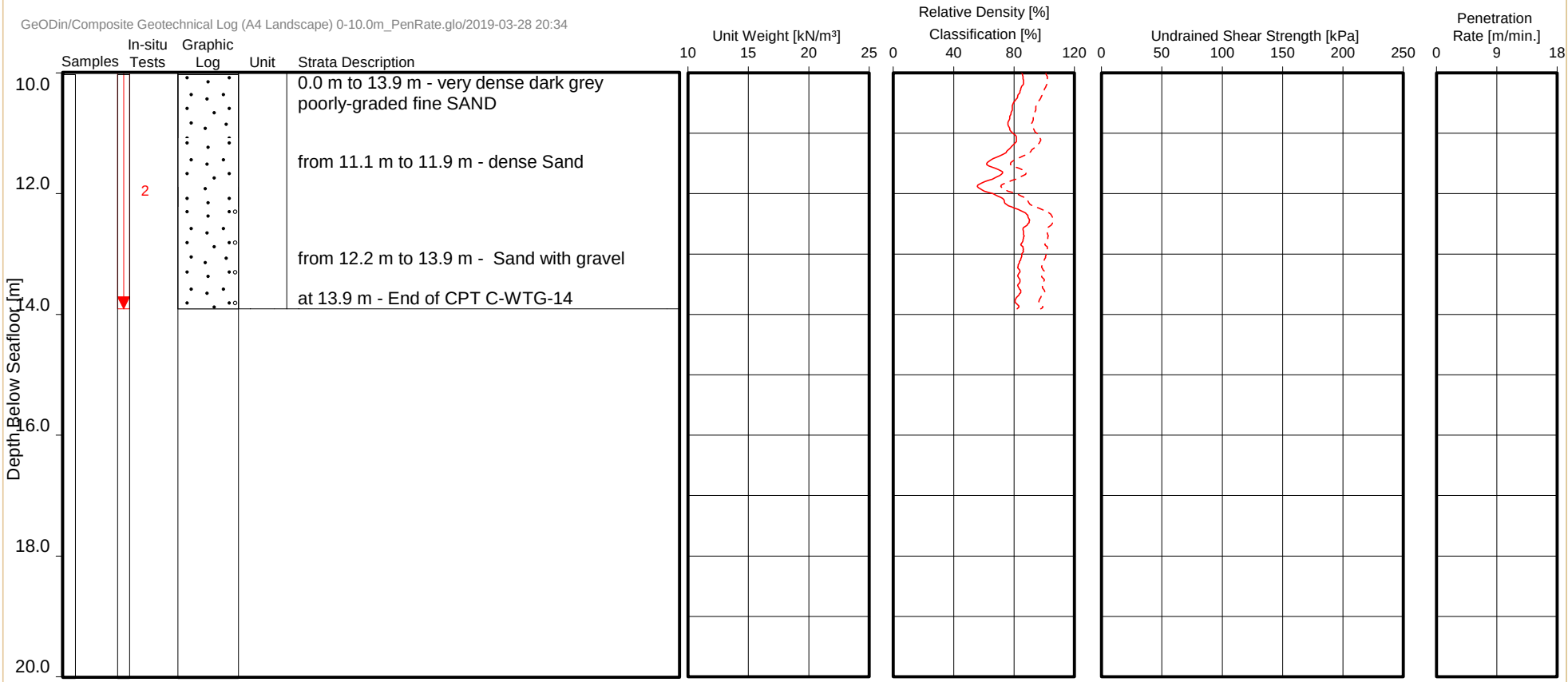
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-14	3.7 m / 4.2 m	36.0 m	325625 m E 4552496 m N	16-Jan-2019
(2) C-WTG-14	13.9 m / 13.9 m	36.0 m	325625 m E 4552500 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-14
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 20:34



Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-14	3.7 m / 4.2 m	36.0 m	325625 m E 4552496 m N	16-Jan-2019
(2) C-WTG-14	13.9 m / 13.9 m	36.0 m	325625 m E 4552500 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content

Relative density estimated from CPT
$K_0 = 2.0$ $K_0 = 0.5$

- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil

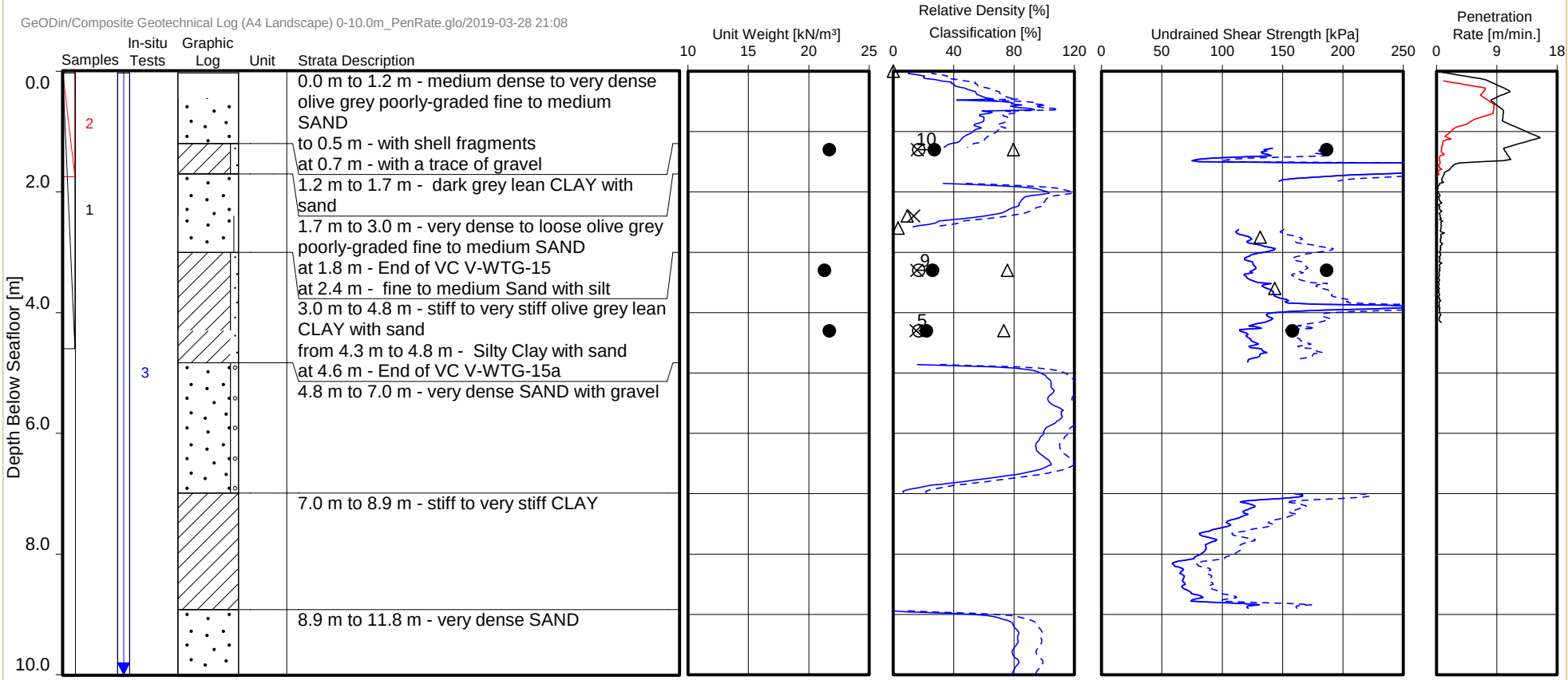
Undrained shear strength estimated from CPT
$N_{kt} = 20$ $N_{kt} = 15$

- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-14
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 21:08



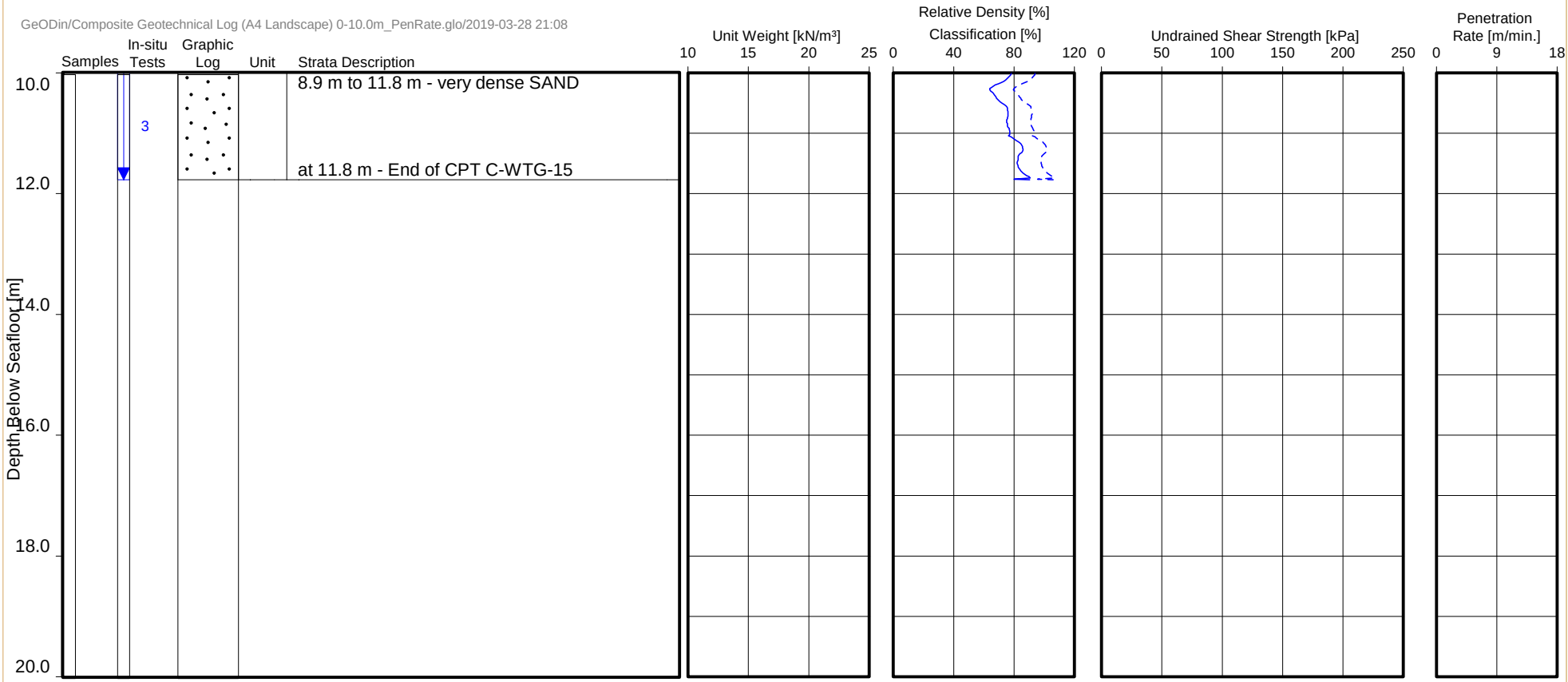
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-15a	4.6 m / 4.2 m	33.3 m	325656 m E 4548854 m N	17-Jan-2019
(2) V-WTG-15	0.2 m / 1.8 m	33.3 m	325657 m E 4548855 m N	17-Jan-2019
(3) C-WTG-15	11.8 m / 11.8 m	33.3 m	325658 m E 4548856 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: $K_0 = 2.0$, $K_0 = 0.5$
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: $N_{kt} = 20$, $N_{kt} = 15$
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-15a
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 21:08



Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-15a	4.6 m / 4.2 m	33.3 m	325656 m E 4548854 m N	17-Jan-2019
(2) V-WTG-15	0.2 m / 1.8 m	33.3 m	325657 m E 4548855 m N	17-Jan-2019
(3) C-WTG-15	11.8 m / 11.8 m	33.3 m	325658 m E 4548856 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content

Relative density estimated from CPT
—— K_0 = 2.0 - - - K_0 = 0.5

- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil

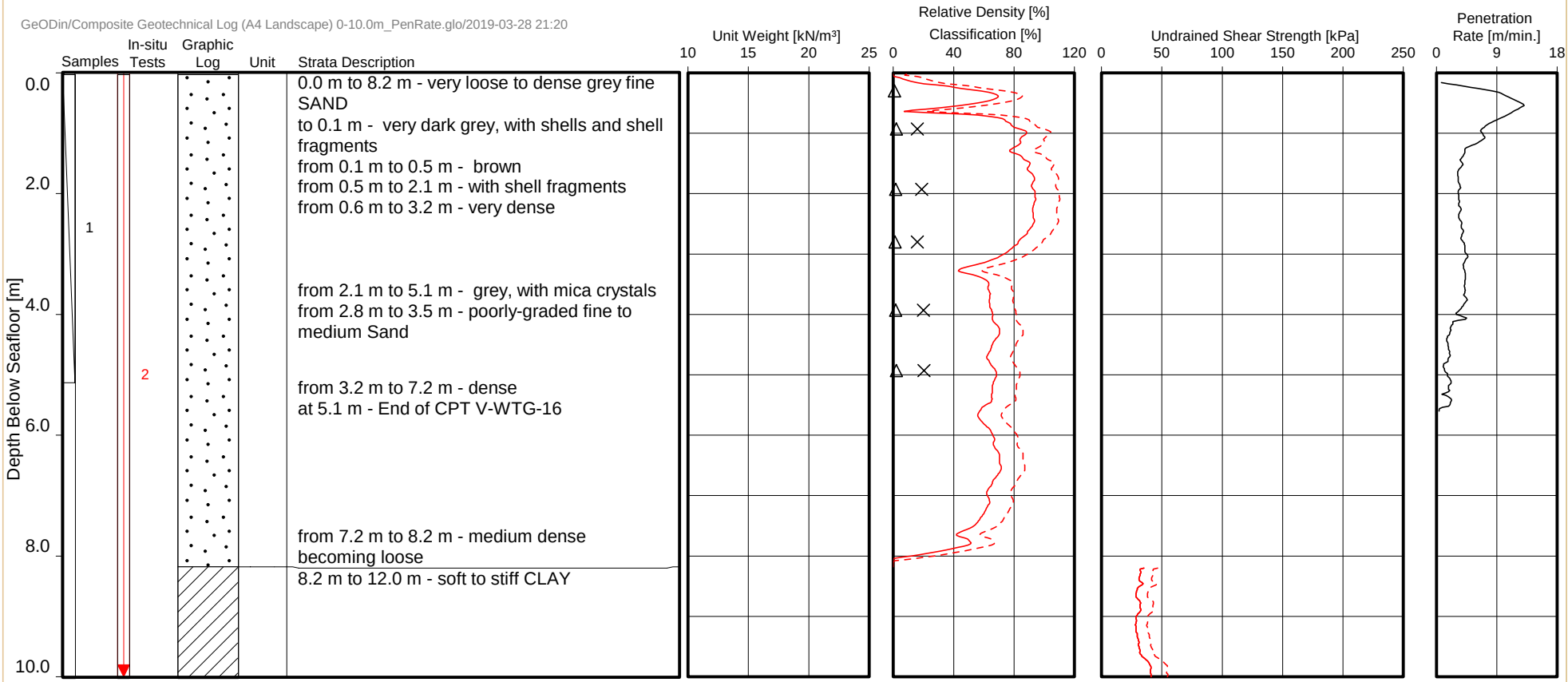
Undrained shear strength estimated from CPT
—— N_{kt} = 20 - - - N_{kt} = 15

- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-15a
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 21:20



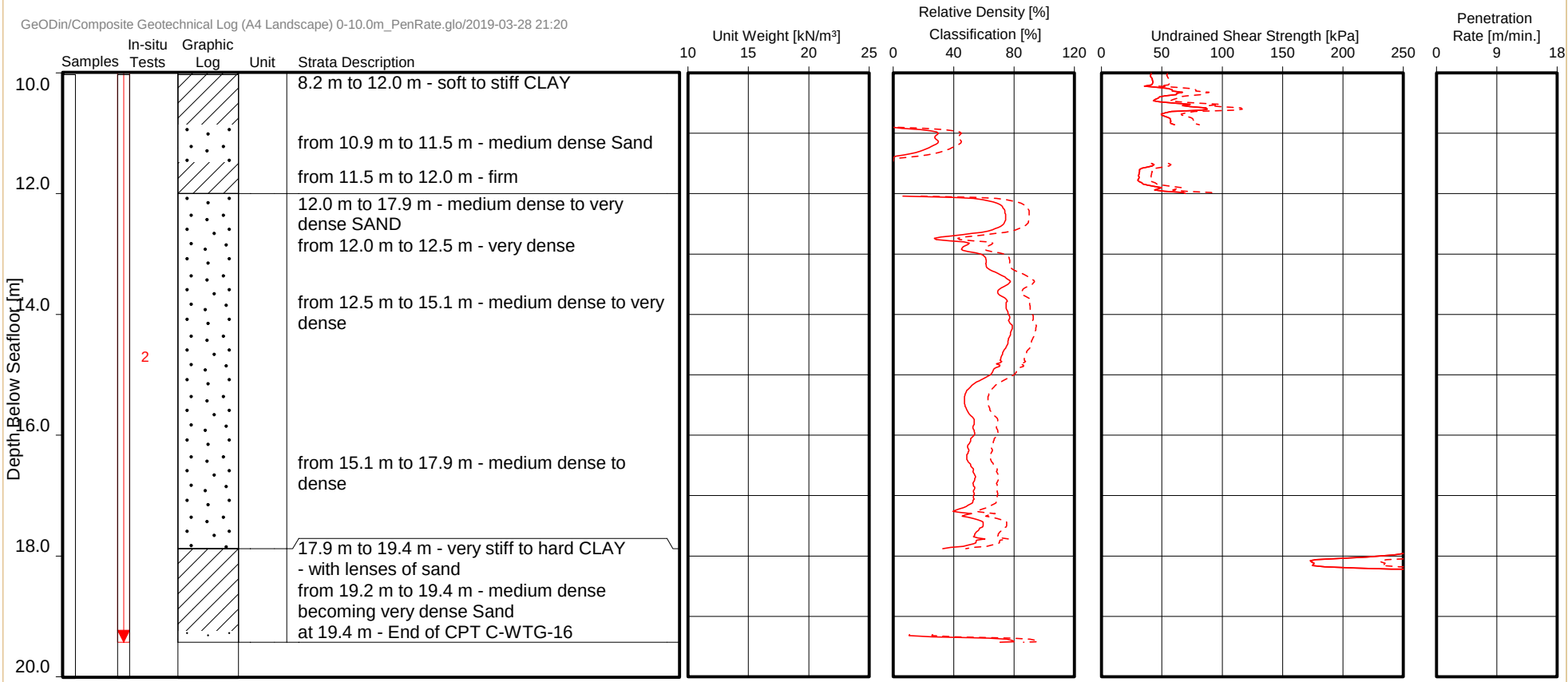
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-16	5.1 m / 5.9 m	37.3 m	326917 m E 4552528 m N	17-Jan-2019
(2) C-WTG-16	19.4 m / 19.4 m	37.3 m	326916 m E 4552528 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-16
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 21:20



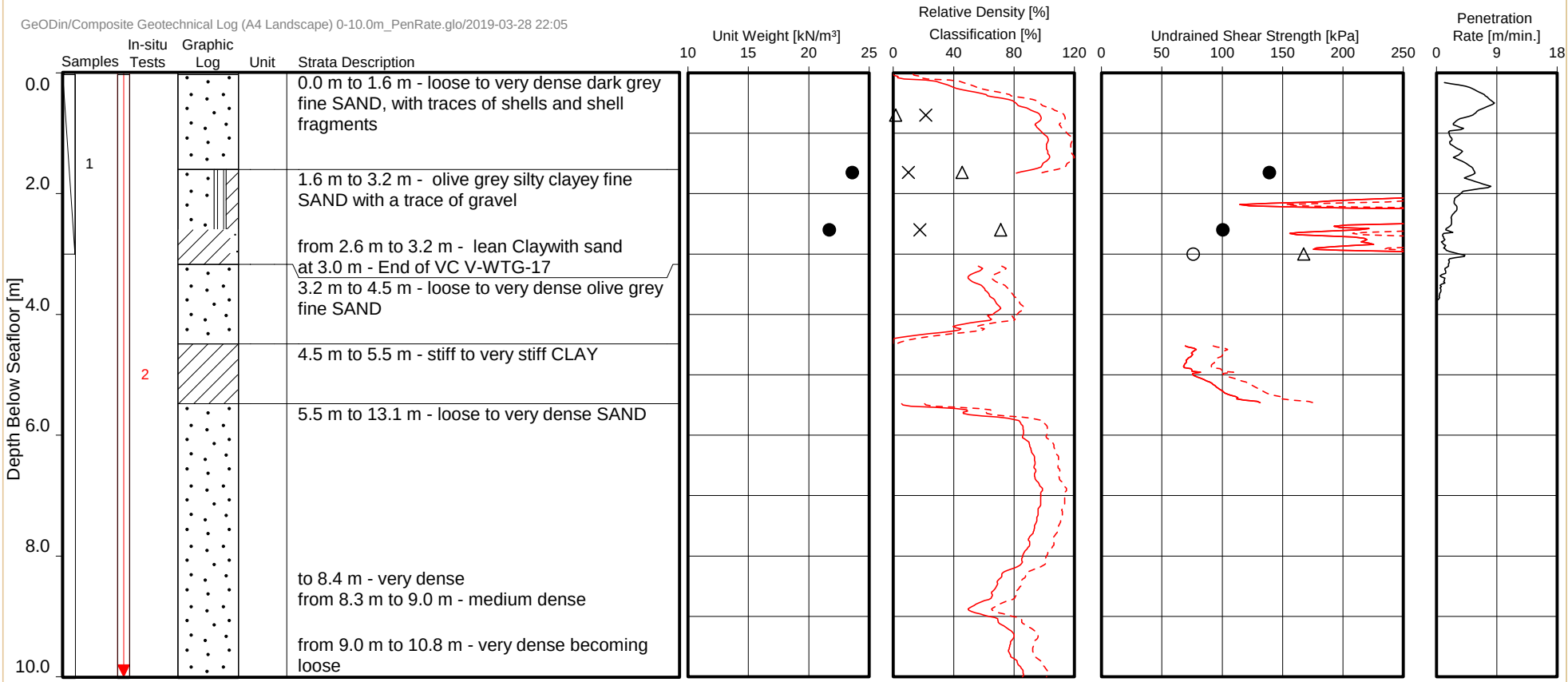
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-16	5.1 m / 5.9 m	37.3 m	326917 m E 4552528 m N	17-Jan-2019
(2) C-WTG-16	19.4 m / 19.4 m	37.3 m	326916 m E 4552528 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-16
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 22:05



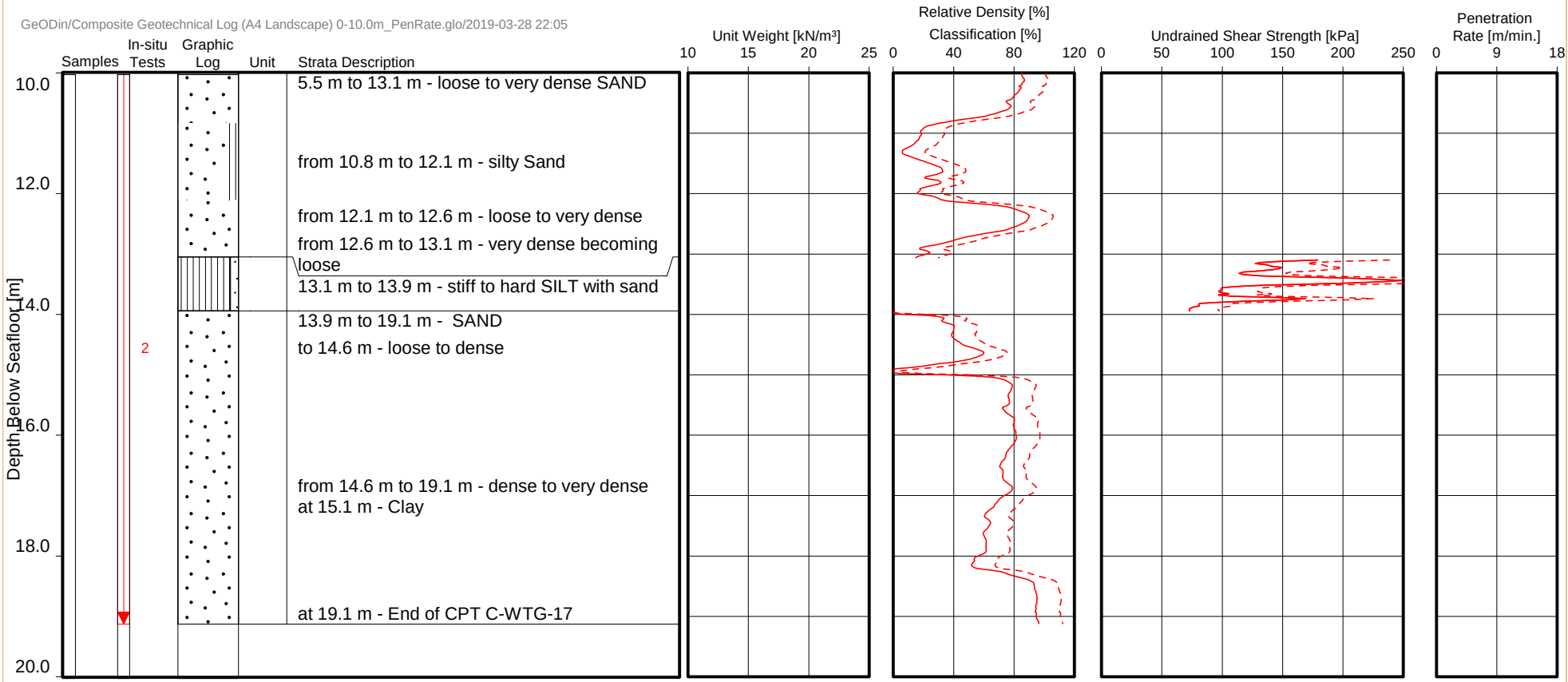
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-17	3.0 m / 3.7 m	34.6 m	326905 m E 4550665 m N	17-Jan-2019
(2) C-WTG-17	19.1 m / 19.1 m	34.6 m	326909 m E 4550666 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT: —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT: —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-17
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 22:05



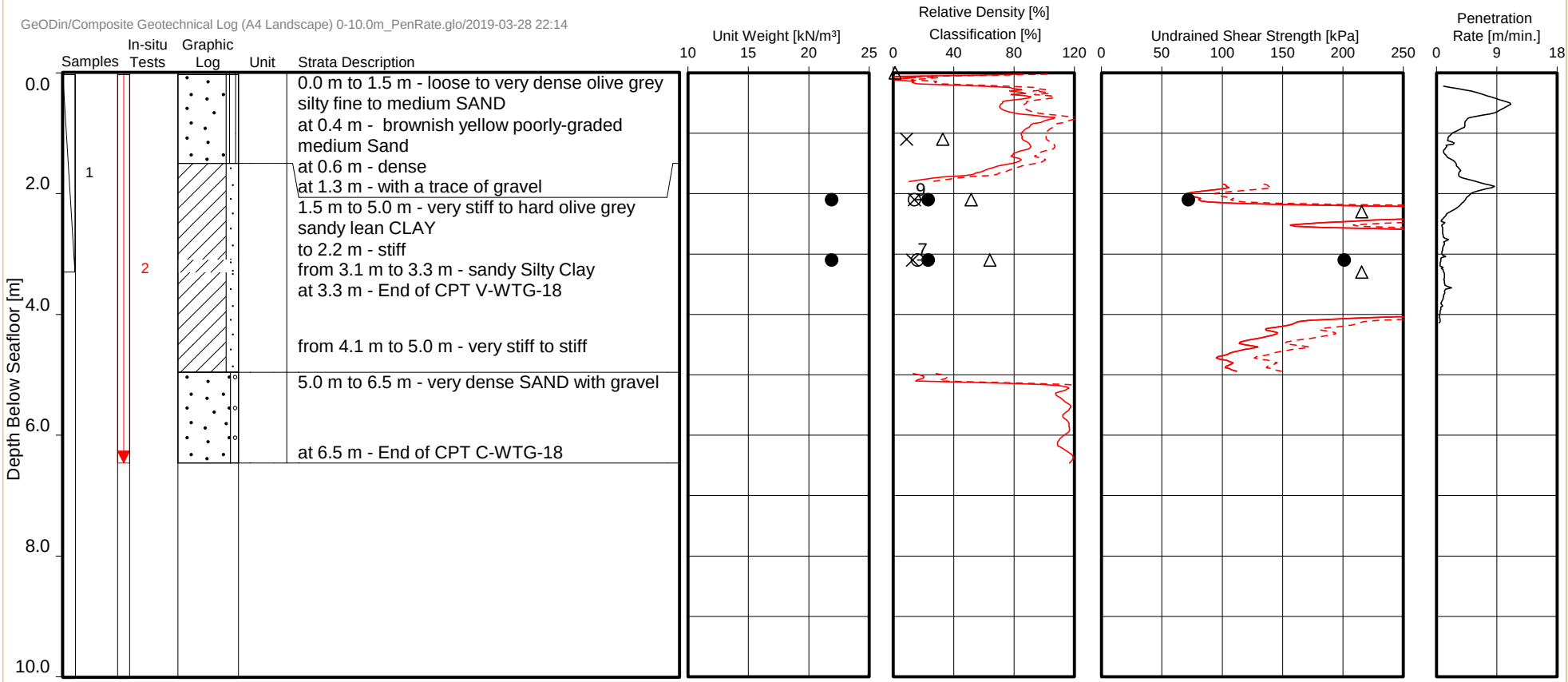
Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-17	3.0 m / 3.7 m	34.6 m	326905 m E 4550665 m N	17-Jan-2019
(2) C-WTG-17	19.1 m / 19.1 m	34.6 m	326909 m E 4550666 m N	23-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT
- —— K_0 = 2.0 - - - K_0 = 0.5
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT
- —— N_{kt} = 20 - - - N_{kt} = 15
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

V-WTG-17
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

GeODin/Composite Geotechnical Log (A4 Landscape) 0-10.0m_PenRate.glo/2019-03-28 22:14



Location(s):	Recovery / Penetration:	Water Depth:	Co-ordinates:	Date:
(1) V-WTG-18	4.2 m / 3.3 m	33.5 m	326916 m E 4548833 m N	17-Jan-2019
(2) C-WTG-18	6.5 m / 6.5 m	33.5 m	326915 m E 4548836 m N	22-Feb-2019

- Unit weight derived from water content
- Unit weight derived from volume mass calculation
- Water content
- Plastic limit
- Liquid limit
- Plasticity index
- Percentage fines
- Carbonate content
- Organic content
- Relative density estimated from CPT
- $K_0 = 2.0$ $K_0 = 0.5$
- Pocket penetrometer
- Torvane
- Fallcone
- Laboratory vane
- UU-triaxial
- CU-triaxial
- Direct simple shear
- In-situ vane shear
- Slashed symbol refers to test on remoulded soil
- Undrained shear strength estimated from CPT
- $N_{kt} = 20$ $N_{kt} = 15$
- Vibrocore Penetration Rate

COMPOSITE GEOTECHNICAL LOG

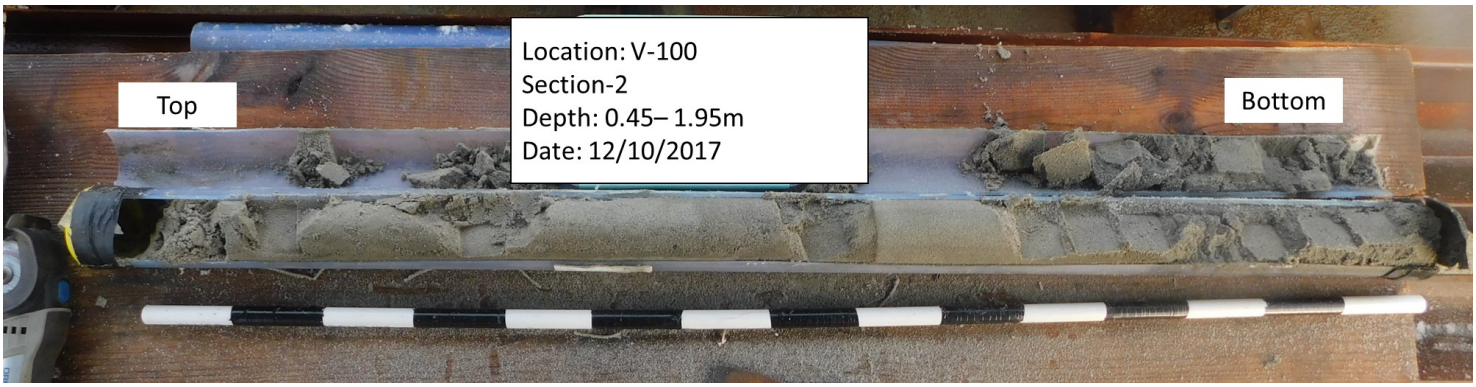
V-WTG-18
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

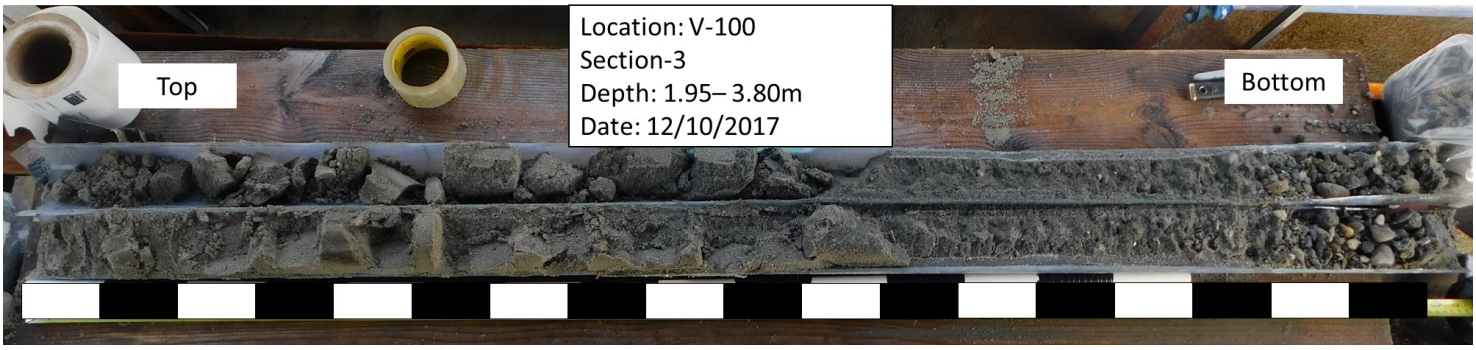
D. VIBRACORE PHOTOGRAPHS

D.1 SFWF VIBRACORE PHOTOGRAPHS

D.2 EXPORT CABLE VIBRACORE PHOTOGRAPHS

D.3 ENVIRONMENTAL VIBRACORE PHOTOGRAPHS



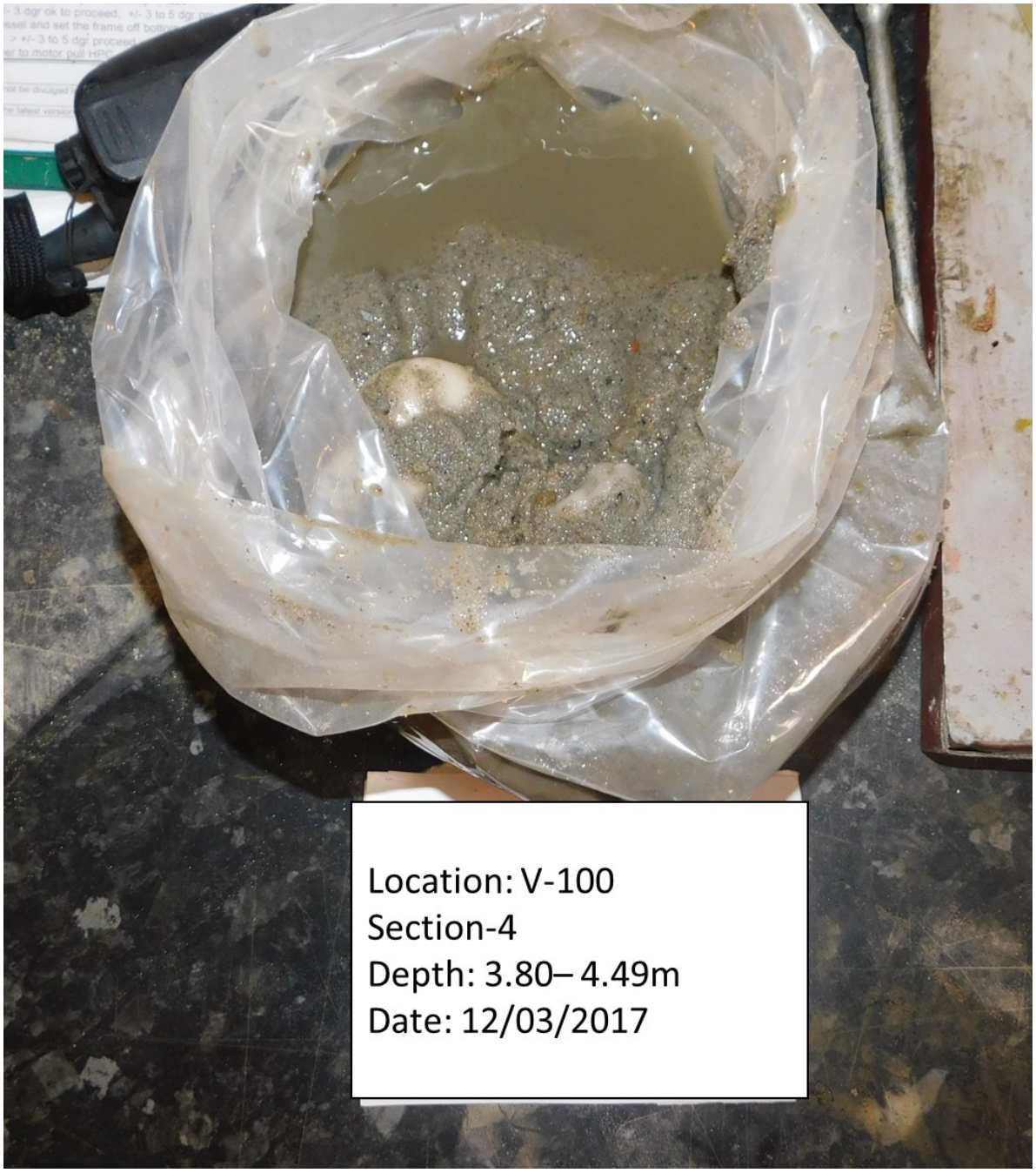


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-100
4.49 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.1

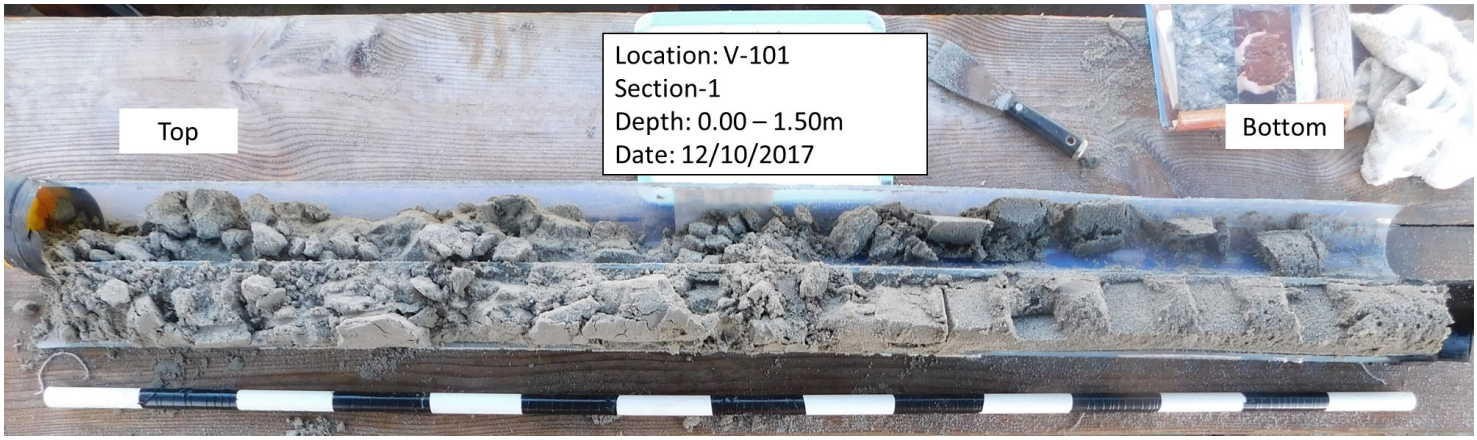


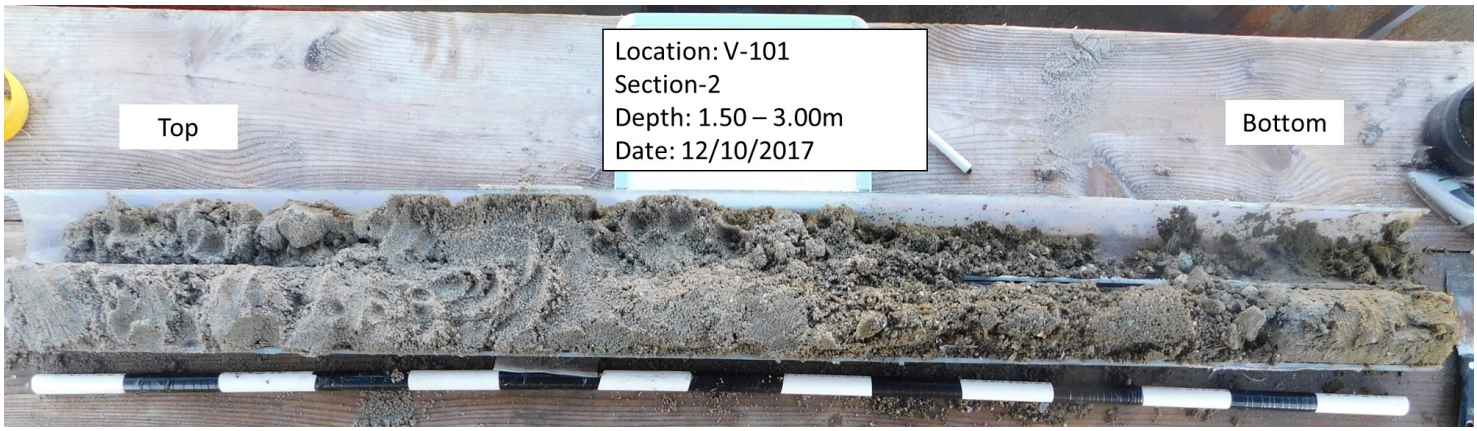
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-100
4.49 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.2



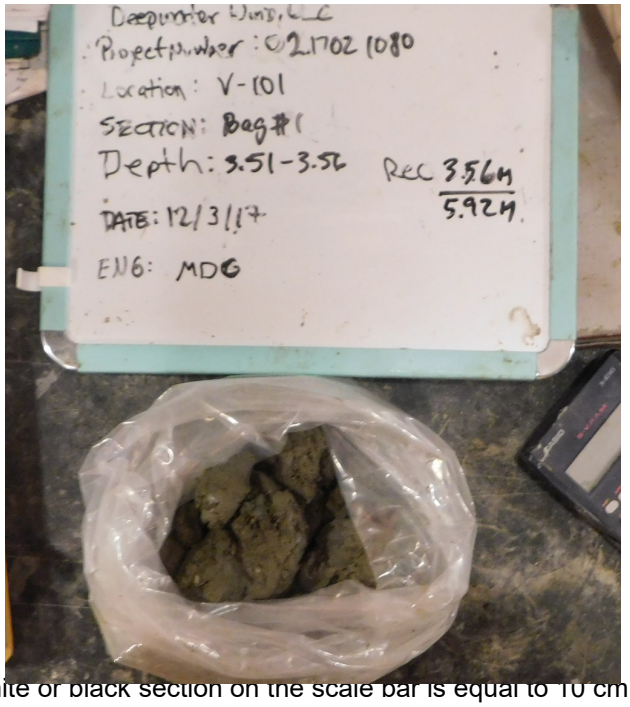


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-101
3.56 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.3



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-101
3.56 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.4

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-102
2.54 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
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Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.5

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-103
0.81 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.6

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-104
1.17 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.7

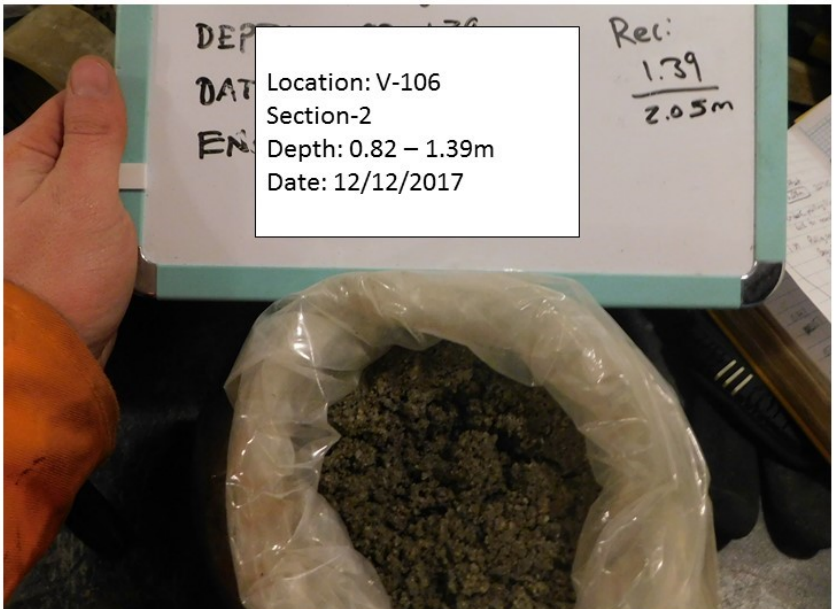
No Picture
From: 0.43 to 1.00m

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-105
1.00 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.8

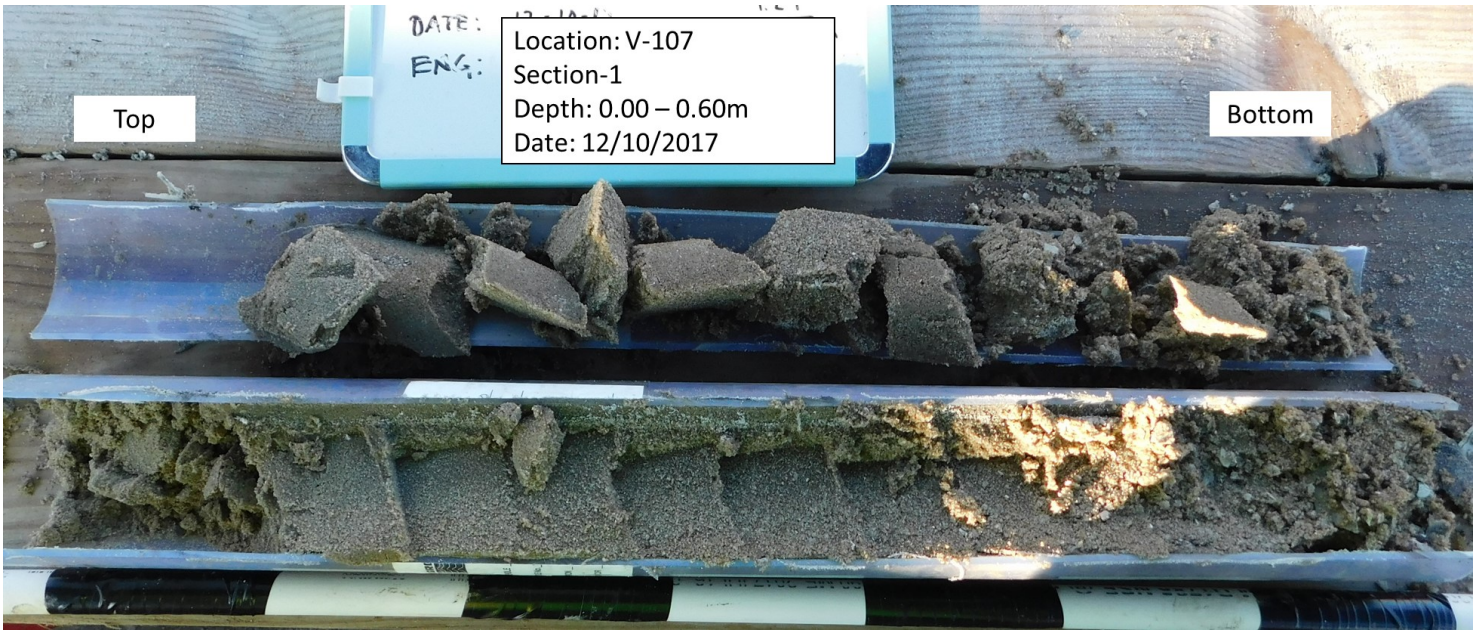


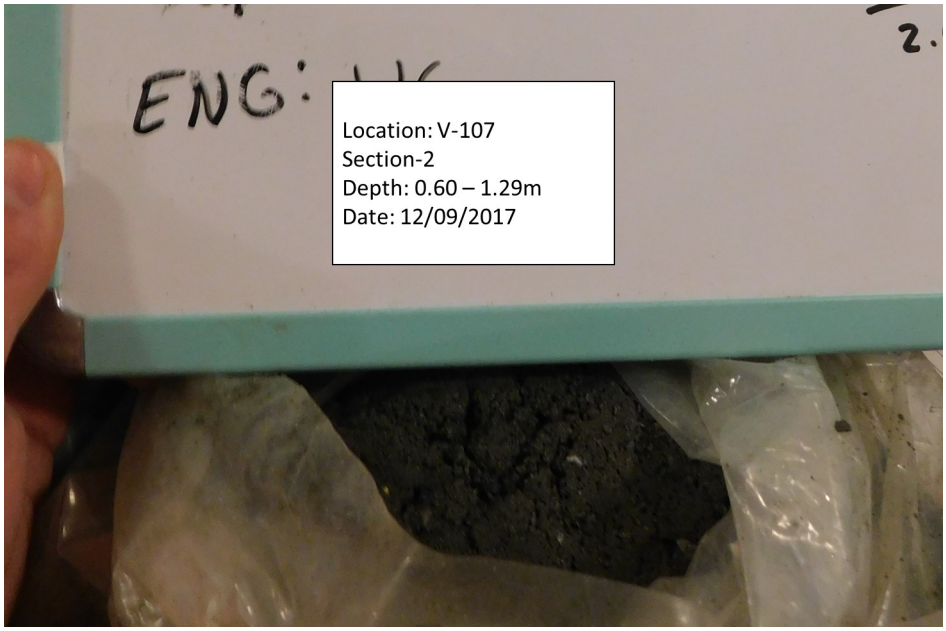
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-106
1.39 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.9





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-107
1.29 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.10

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-108
0.59 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

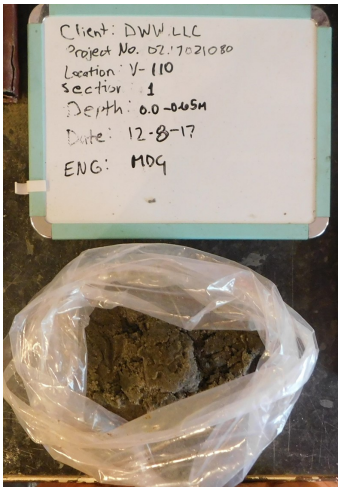
FIGURE D-1.11

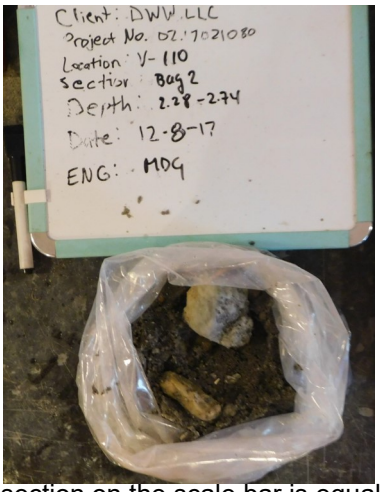
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-109
0.72 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.12



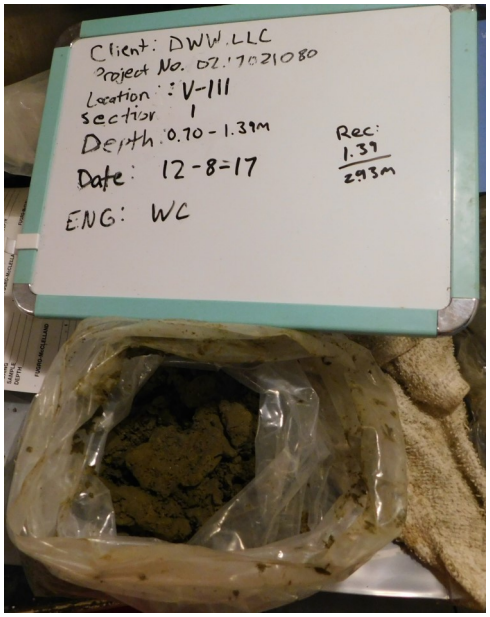


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-110
2.74 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.13



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-111
1.39 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.14

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-112
0.57 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.15

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-113
0.70 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

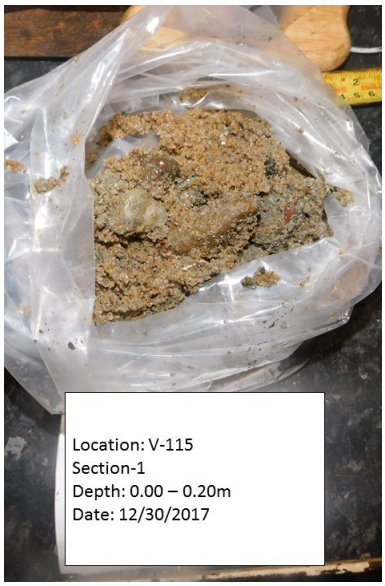
FIGURE D-1.16

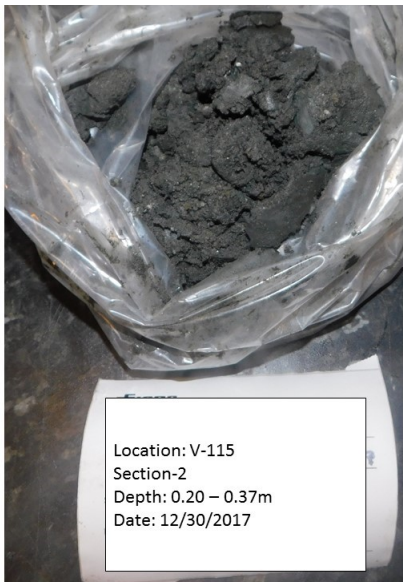
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-114
0.95 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.17



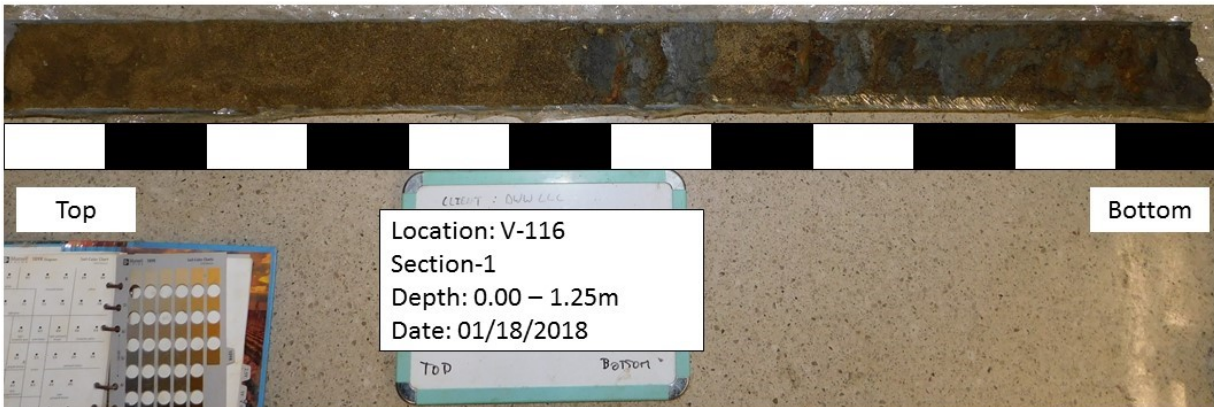


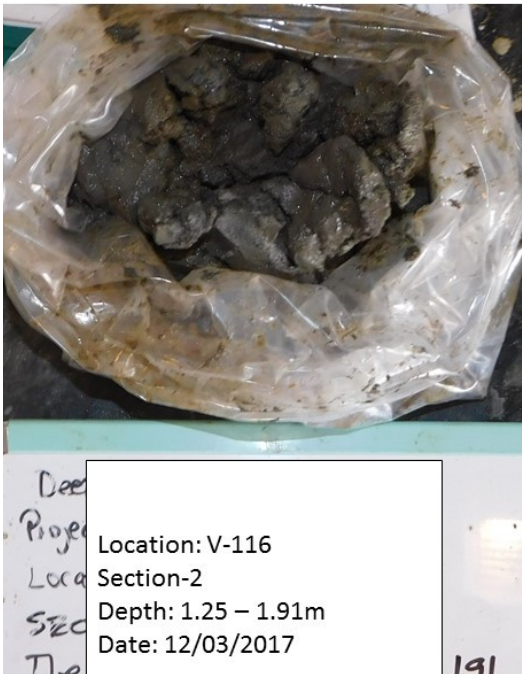
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-115
0.37 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.18



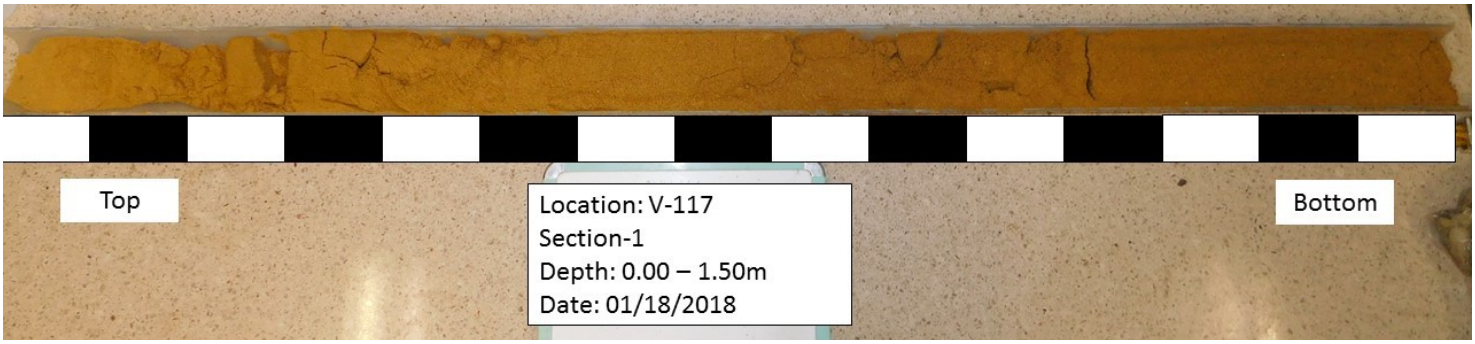


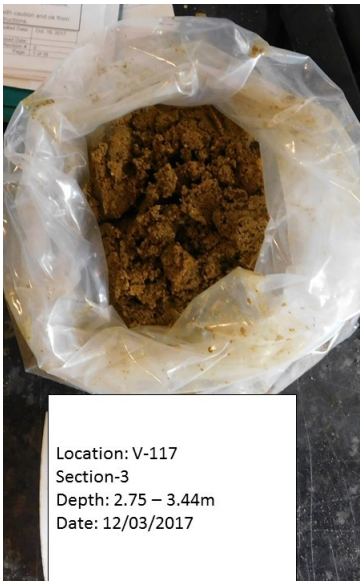
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-116
1.91 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.19



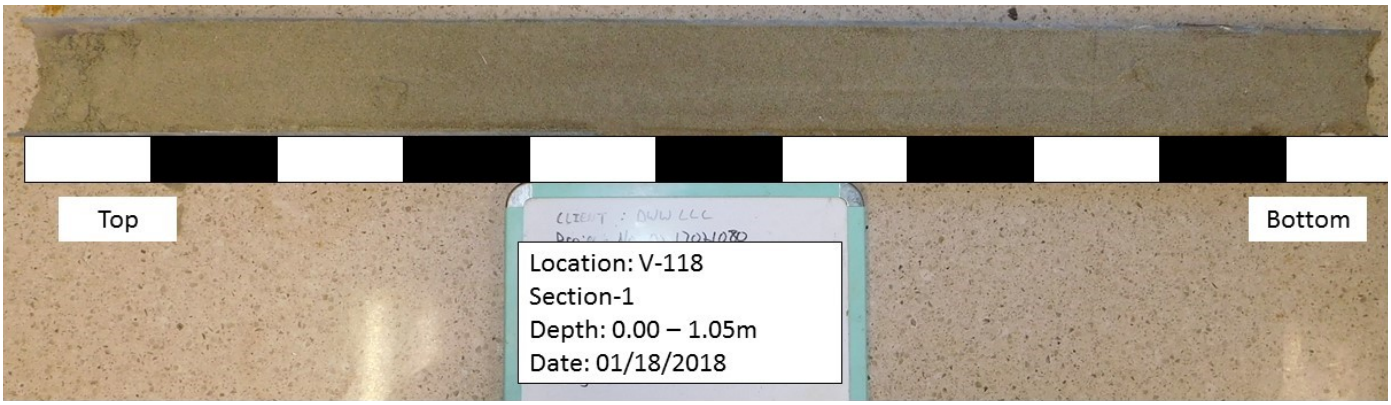


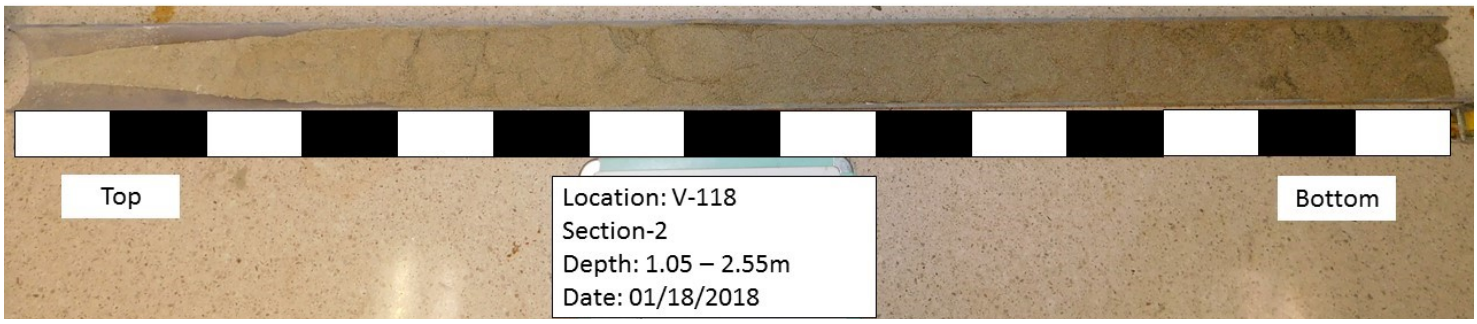
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-117
3.44 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.20



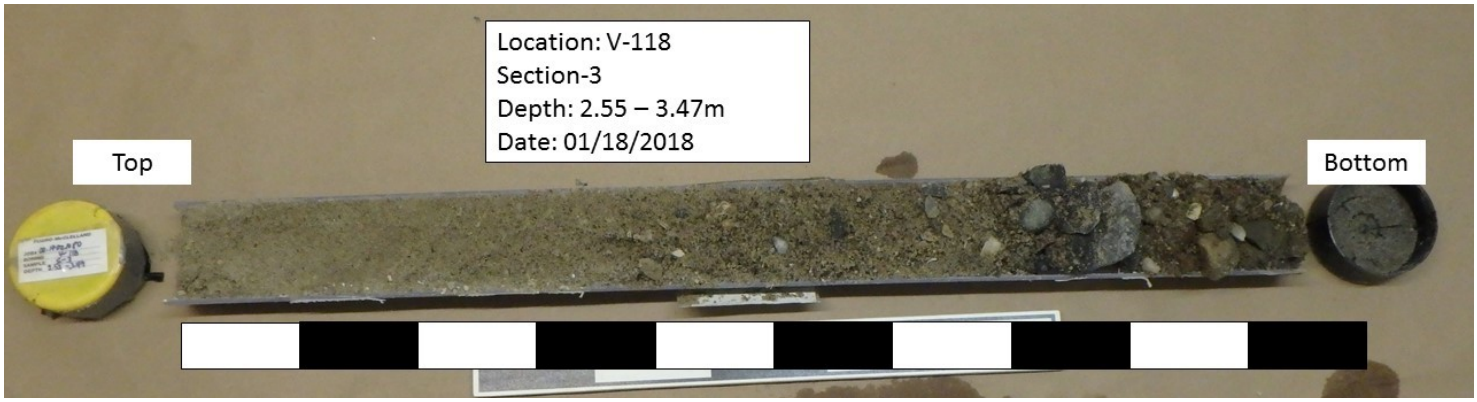


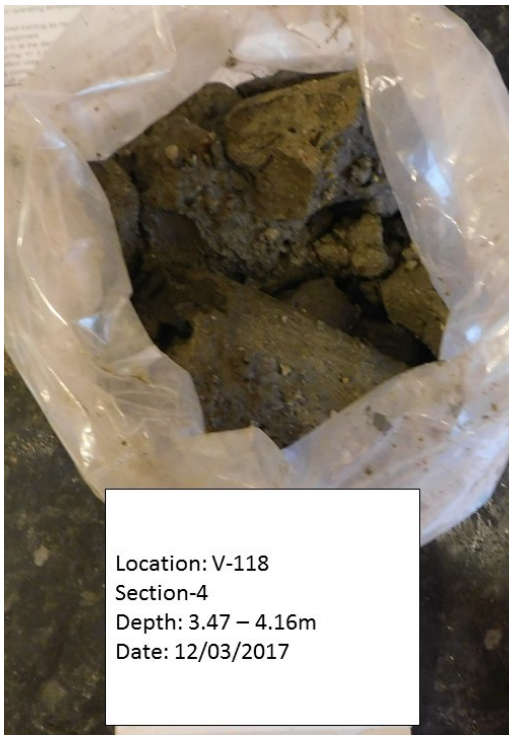
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-118
4.16 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.21



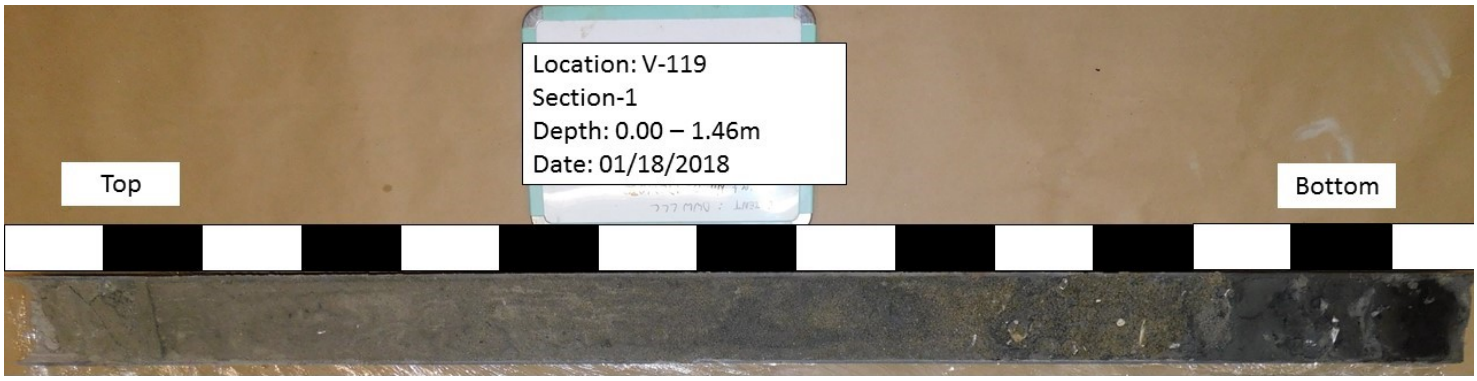


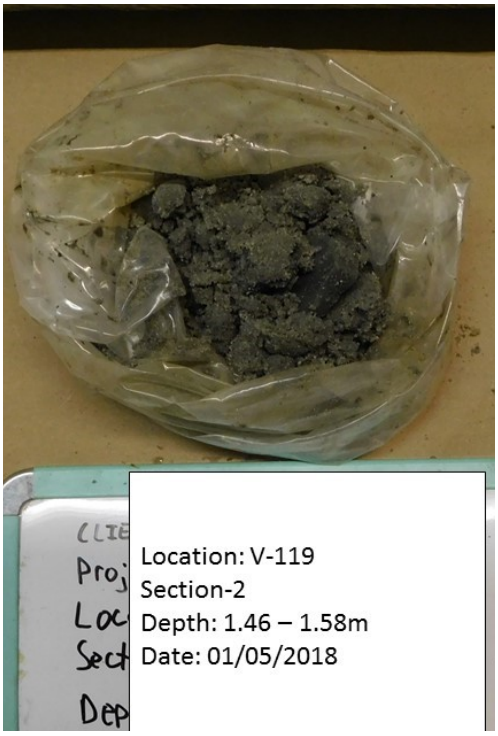
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-118
4.16 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.22



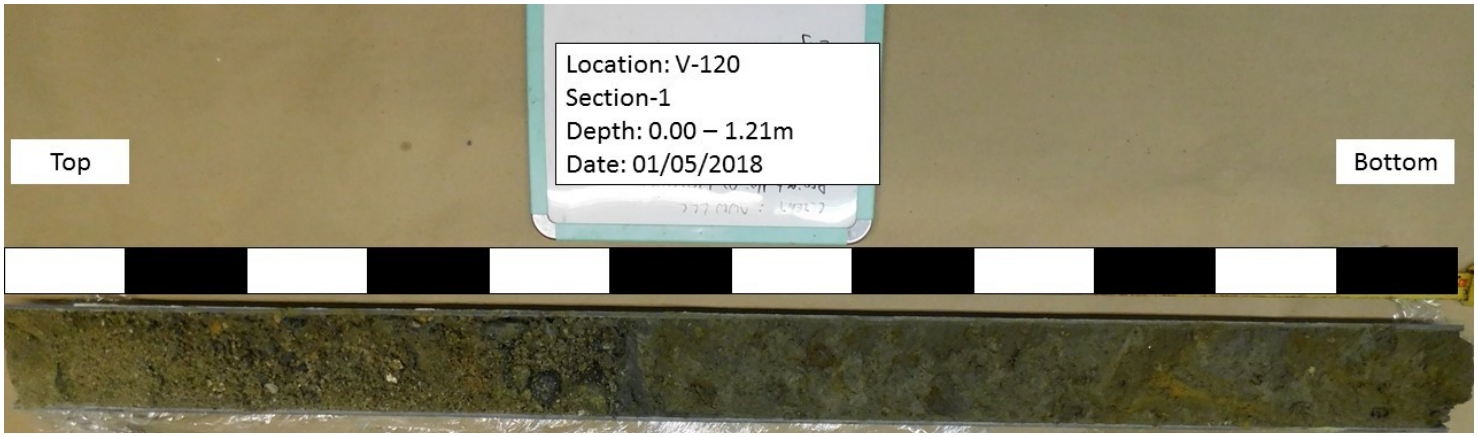


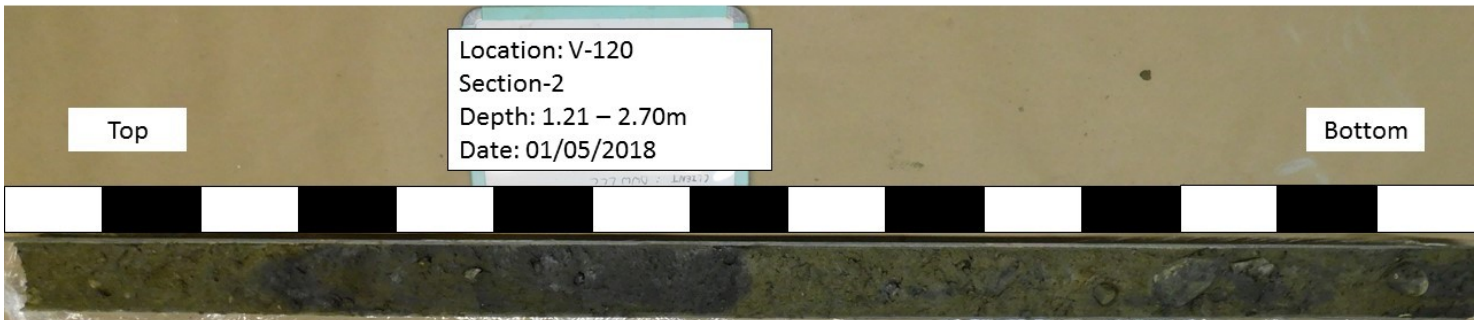
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-119
1.58 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.23



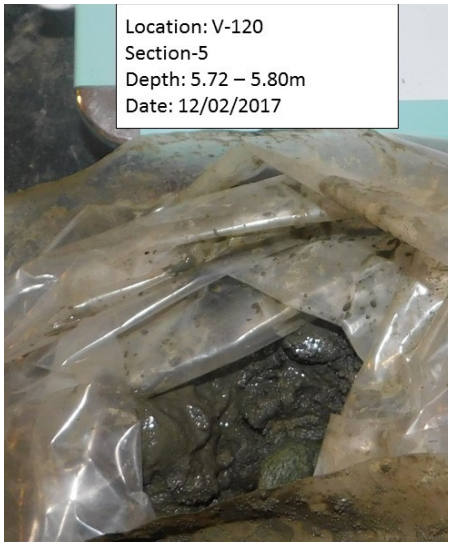


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-120
5.80 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.24

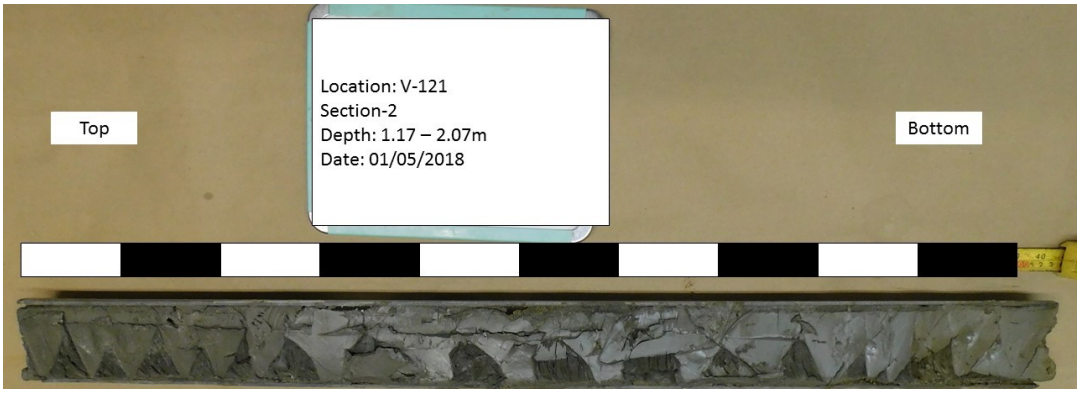


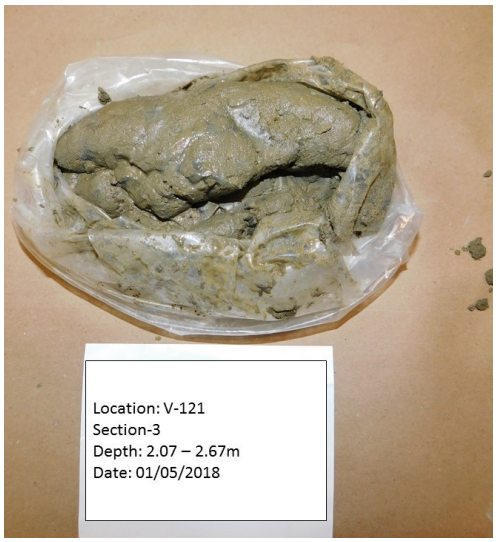
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-120
5.80 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.25



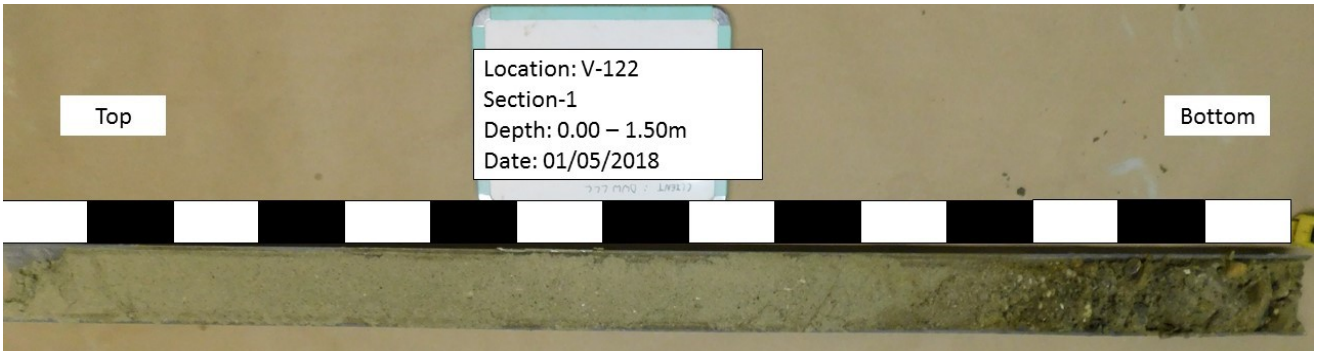


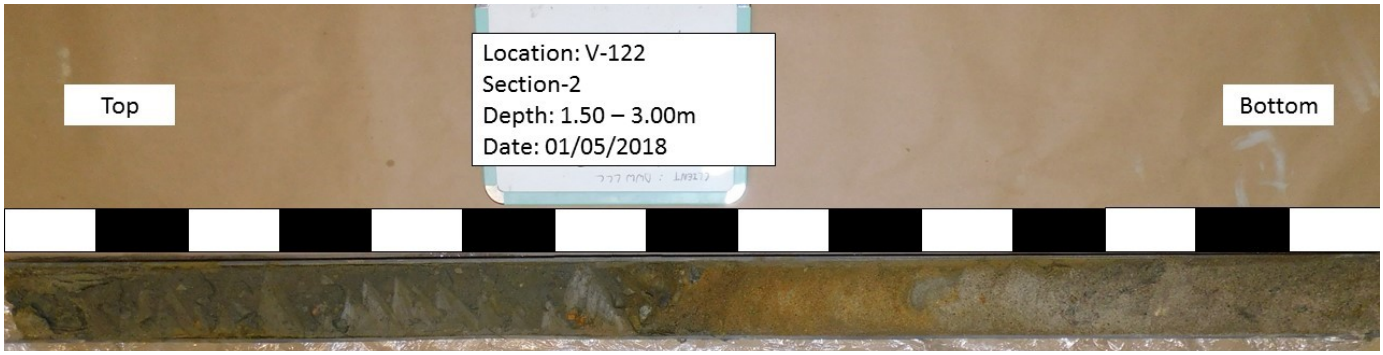
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

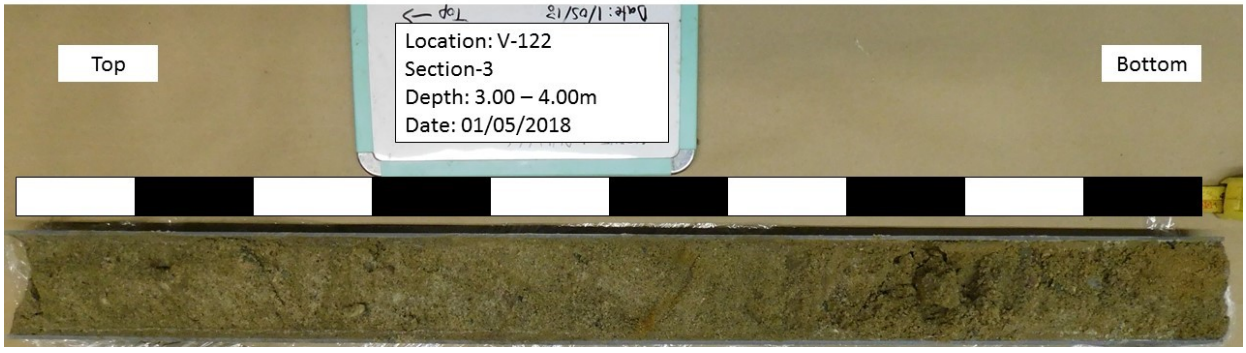
Vibrocore V-121
2.67 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.26





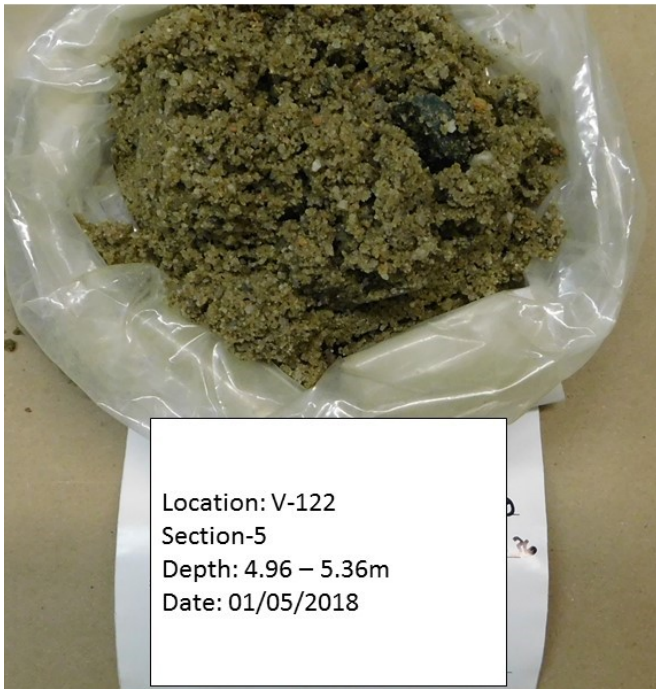


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-122
5.36 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.27

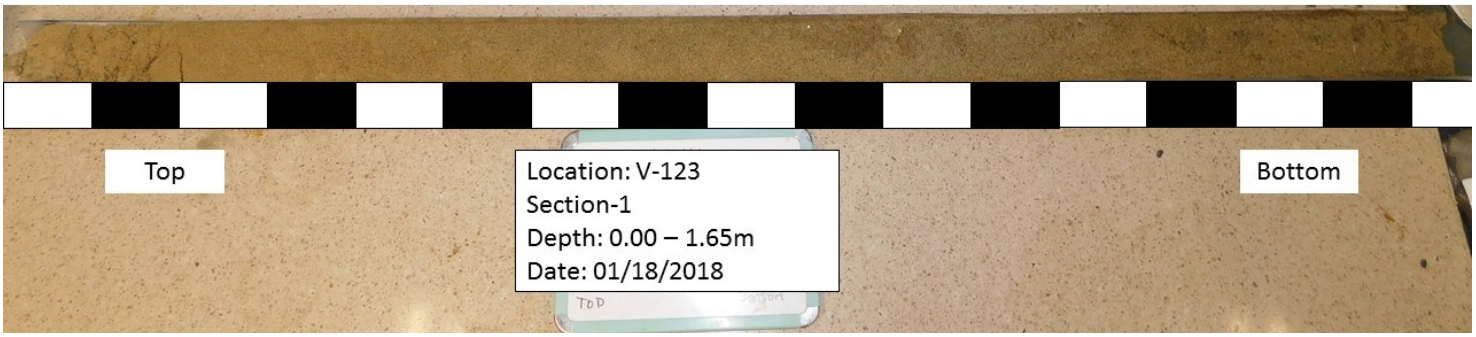


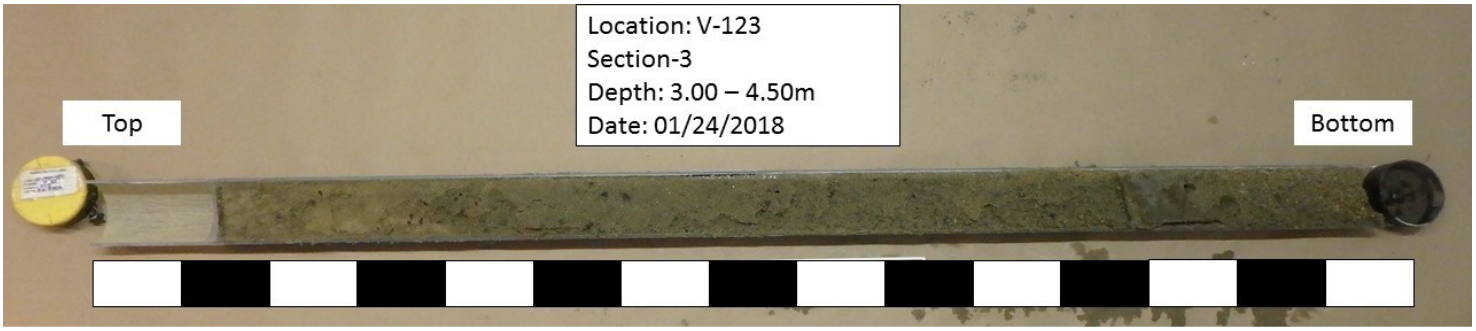
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-122
5.36 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.28



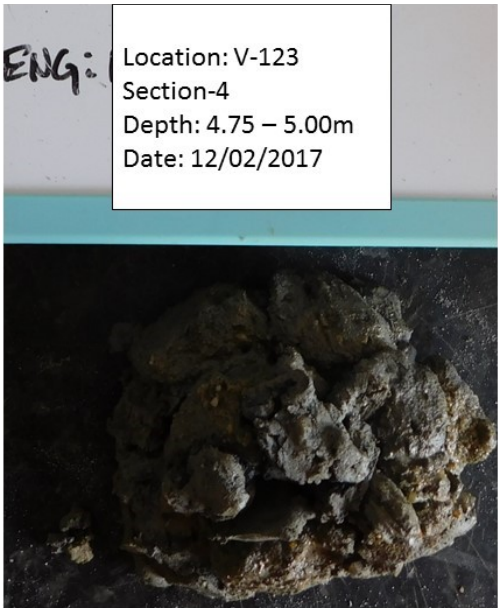


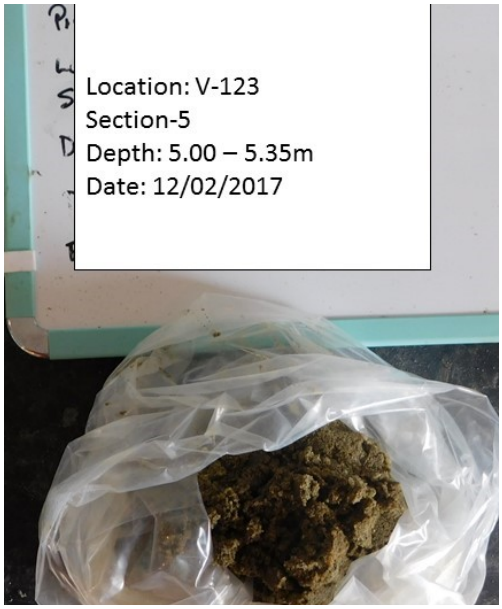
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-123
5.35 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.29

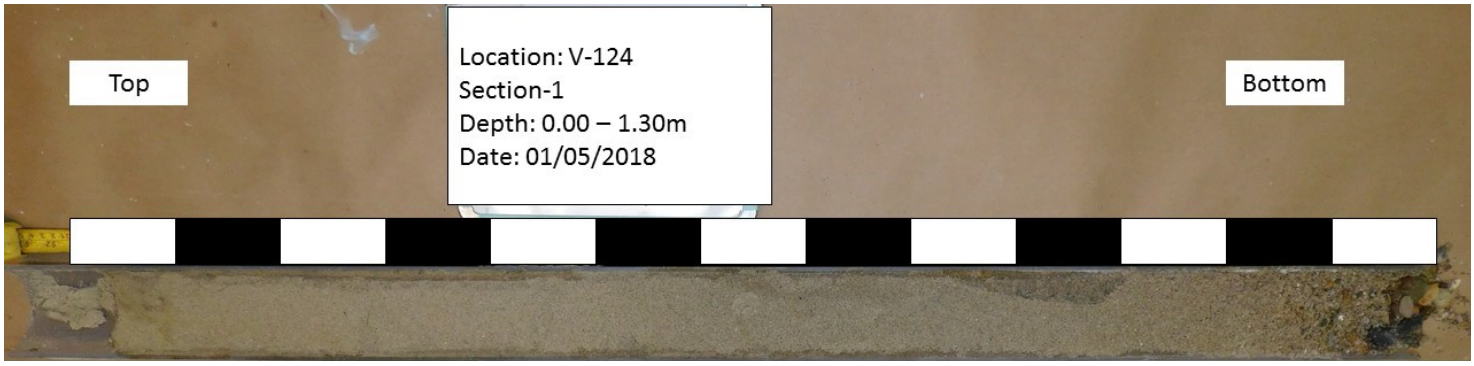


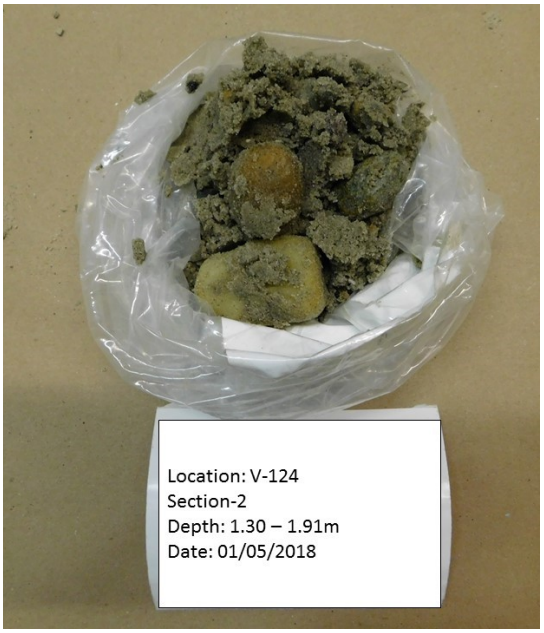


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-123
5.35 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS



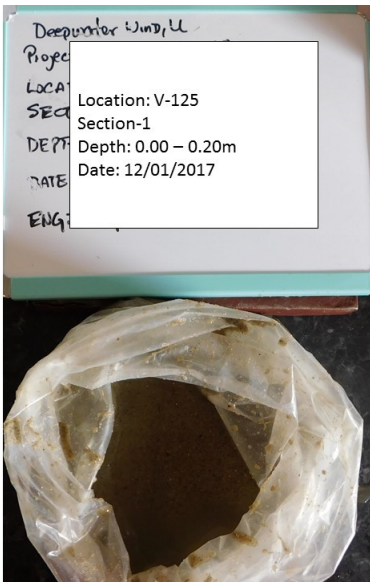


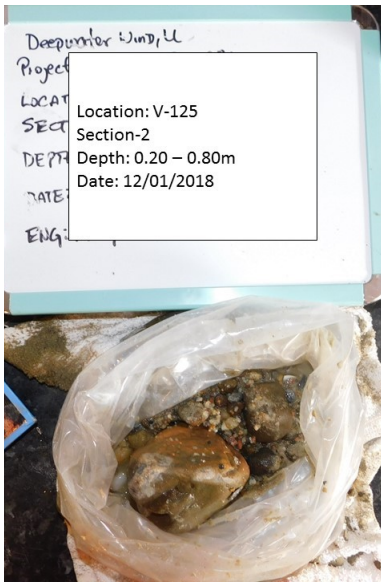
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

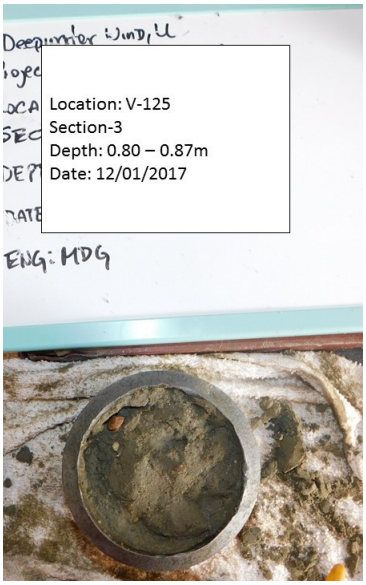
Vibrocore V-124
1.98 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.31





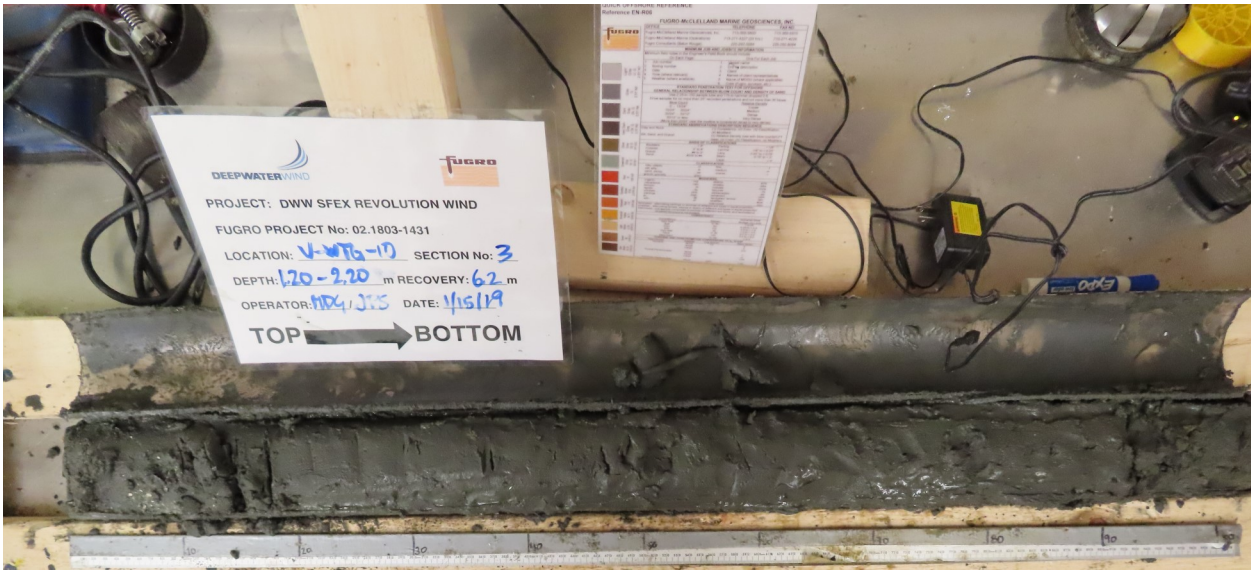


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibrocore V-125
0.87 meters recovery

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.32



Vibrocore V-WTG-10
0.20 to 2.20 meters

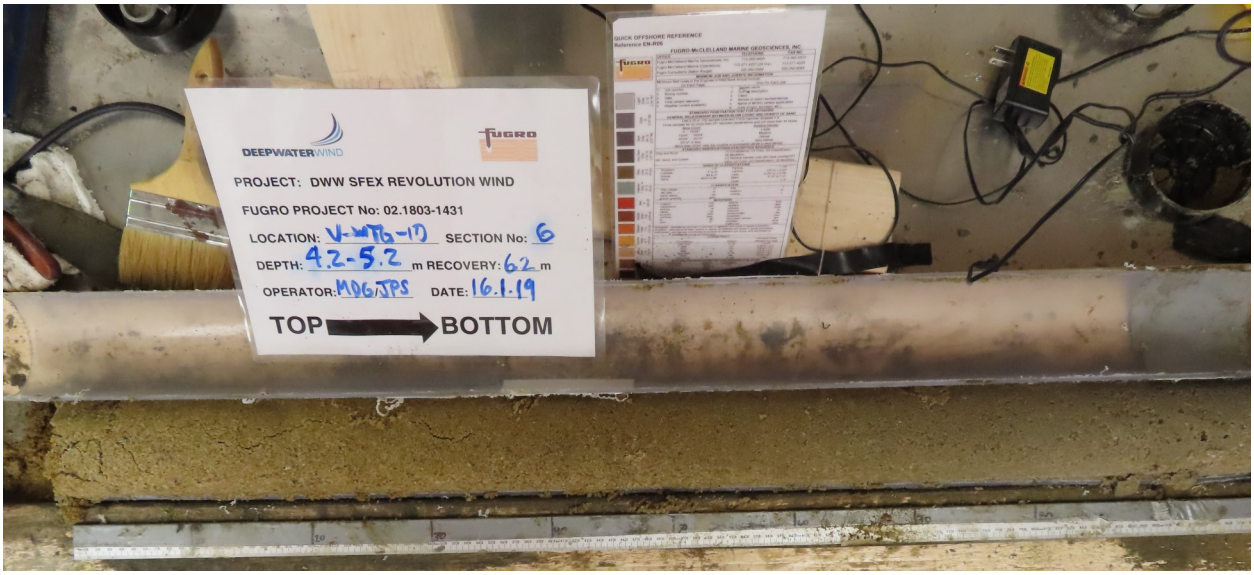
SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.33

Vibrocore V-WTG-10
2.20 to 4.20 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

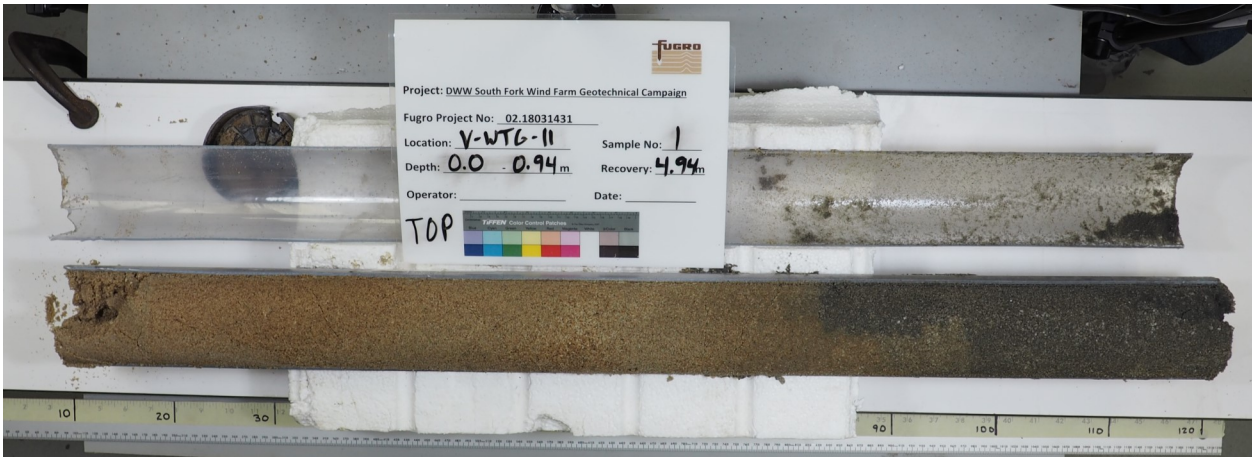
FIGURE D-1.34

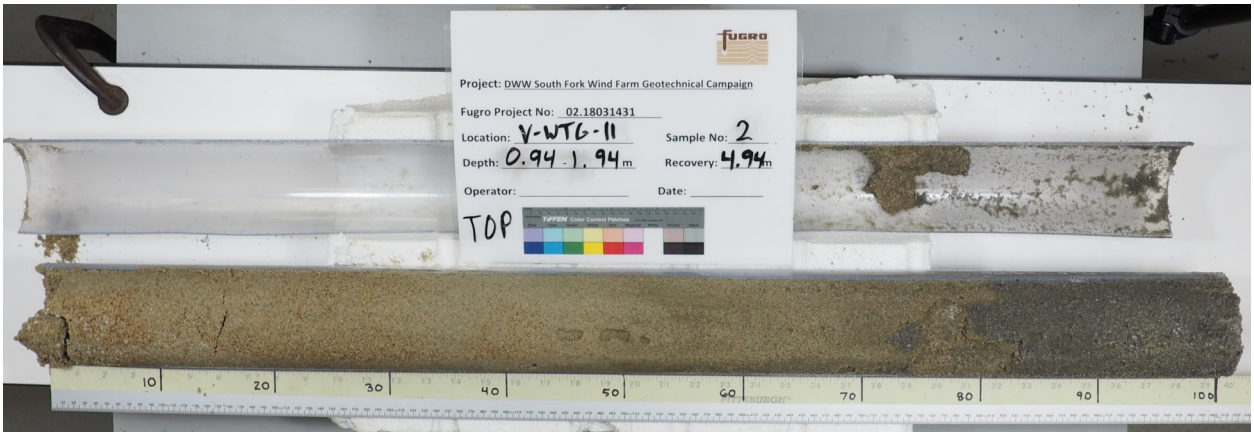


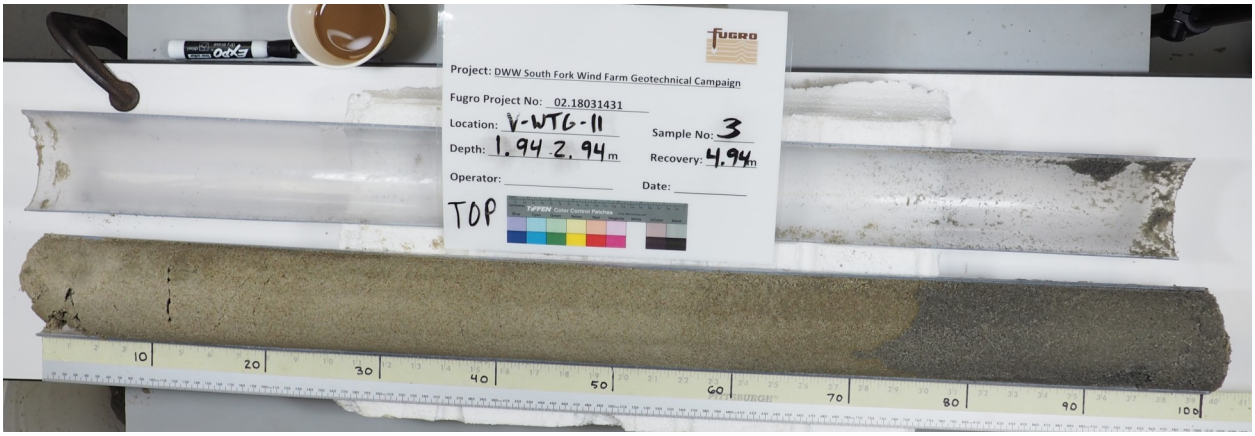
Vibrocore V-WTG-10
2.20 to 4.20 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.35



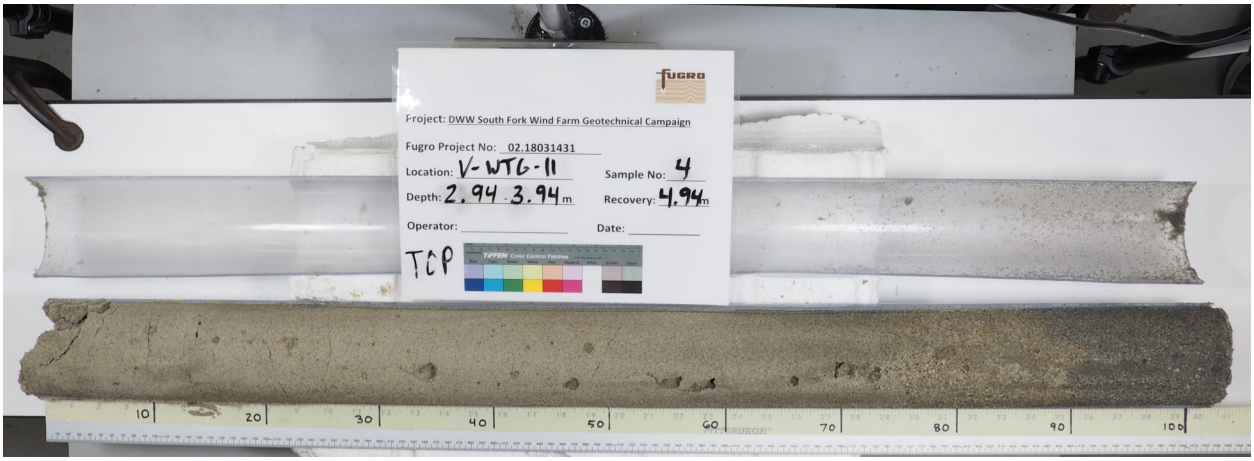


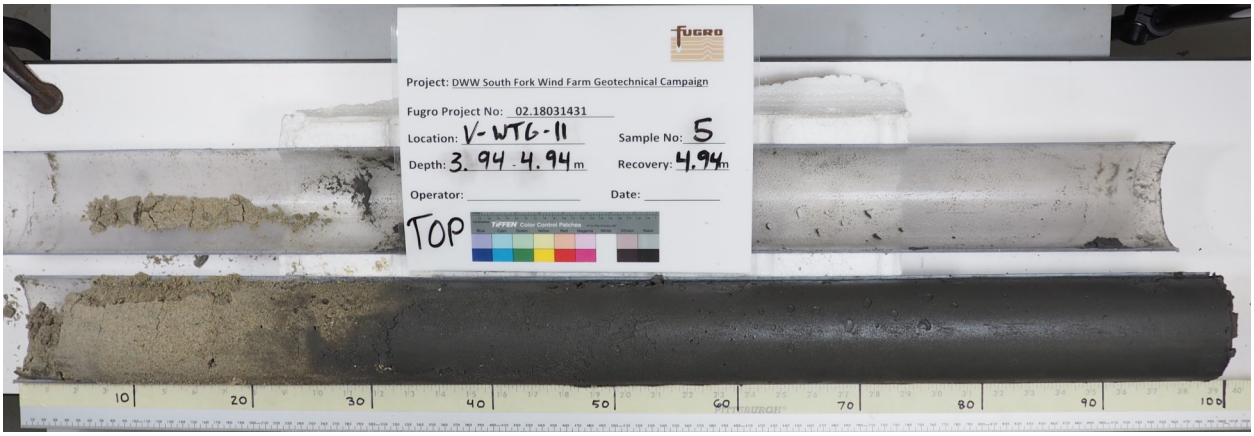


Vibrocore V-WTG-11
0.00 to 2.94 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.36

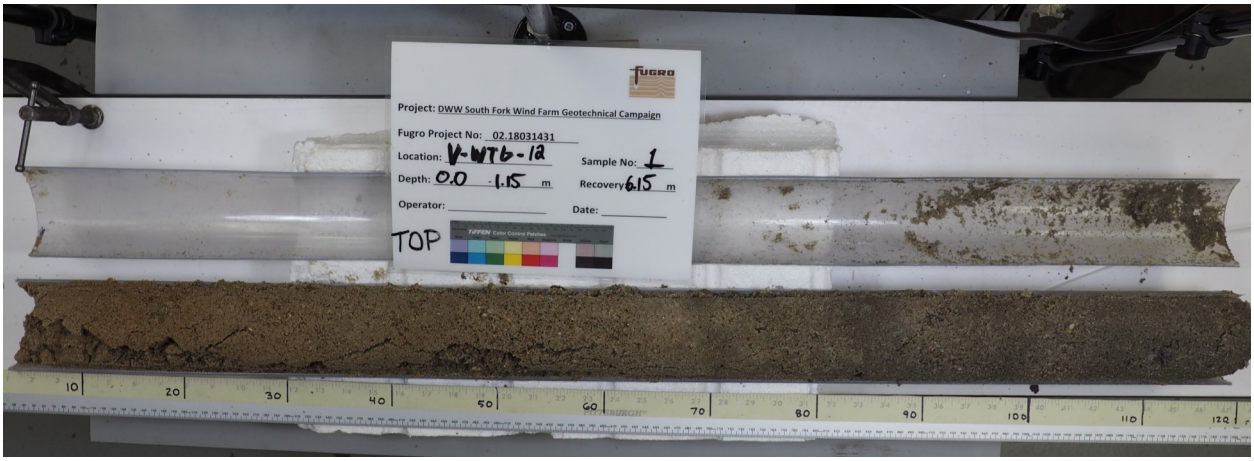


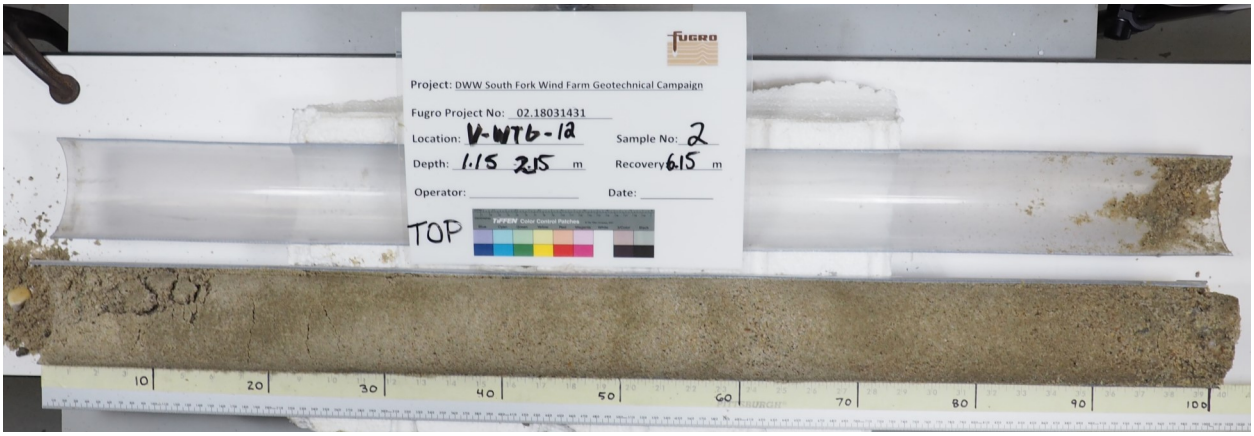


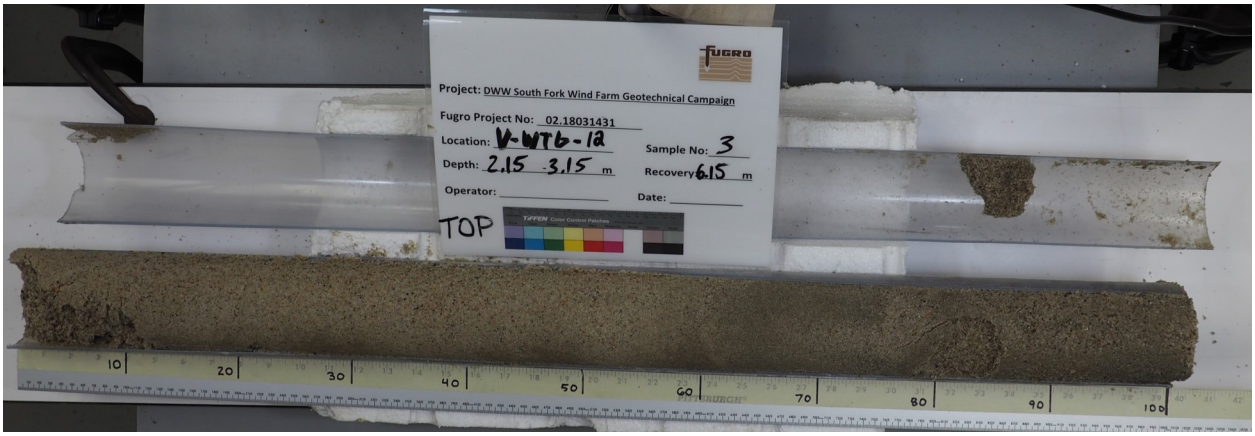
Vibrocore V-WTG-11
2.94t o 4.94 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.37



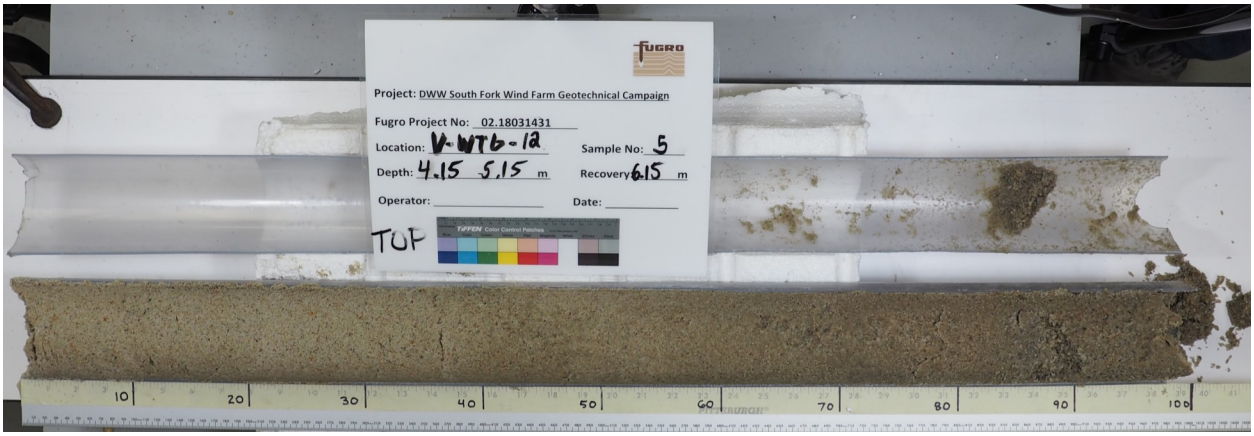


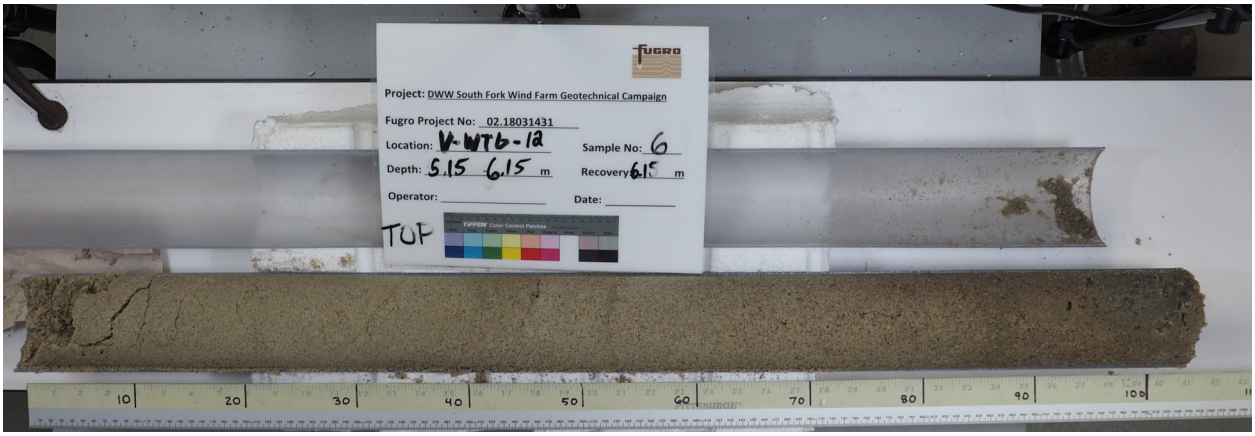


Vibrocore V-WTG-12
0.00 to 3.15 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.38

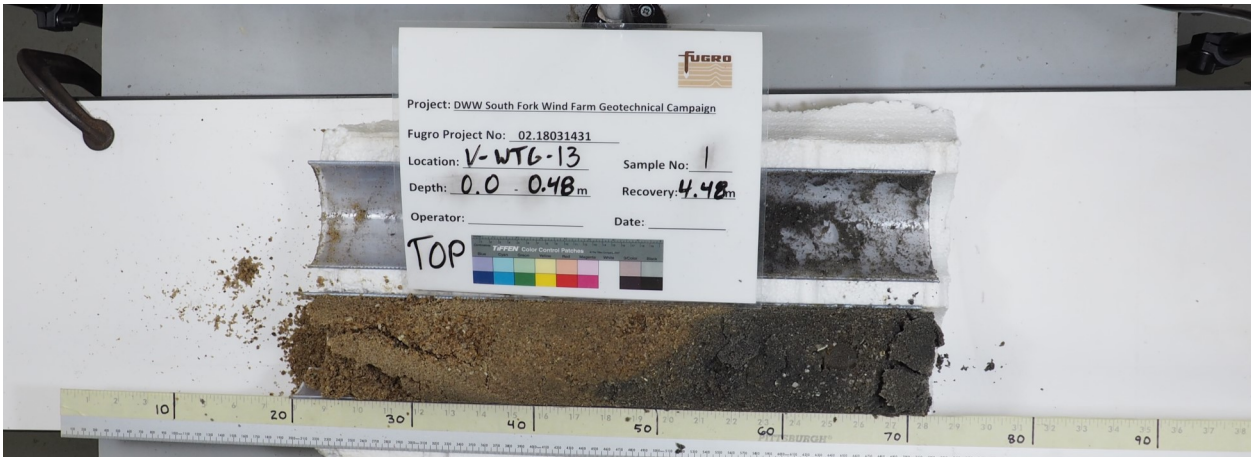


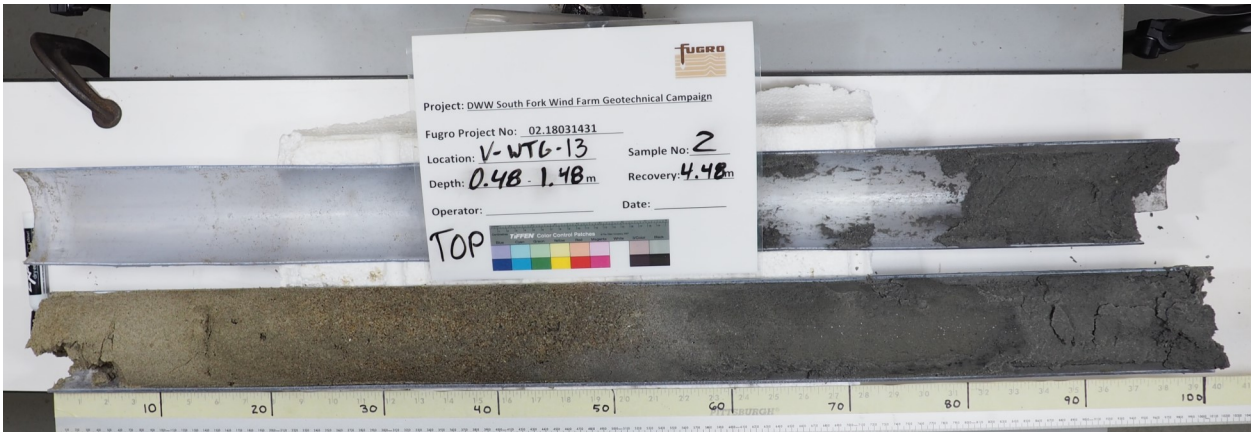


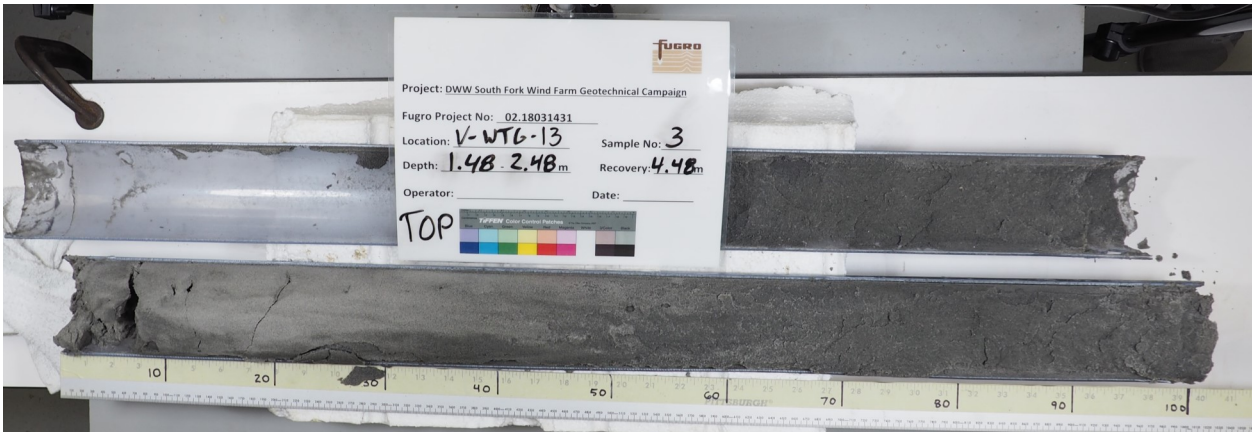
Vibrocore V-WTG-12
3.15 to 6.15 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.39



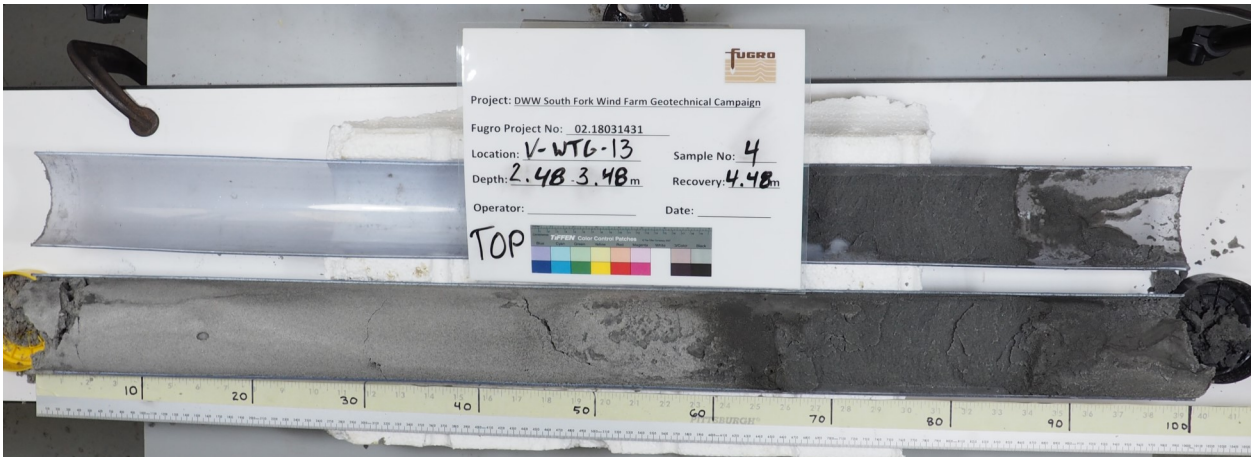


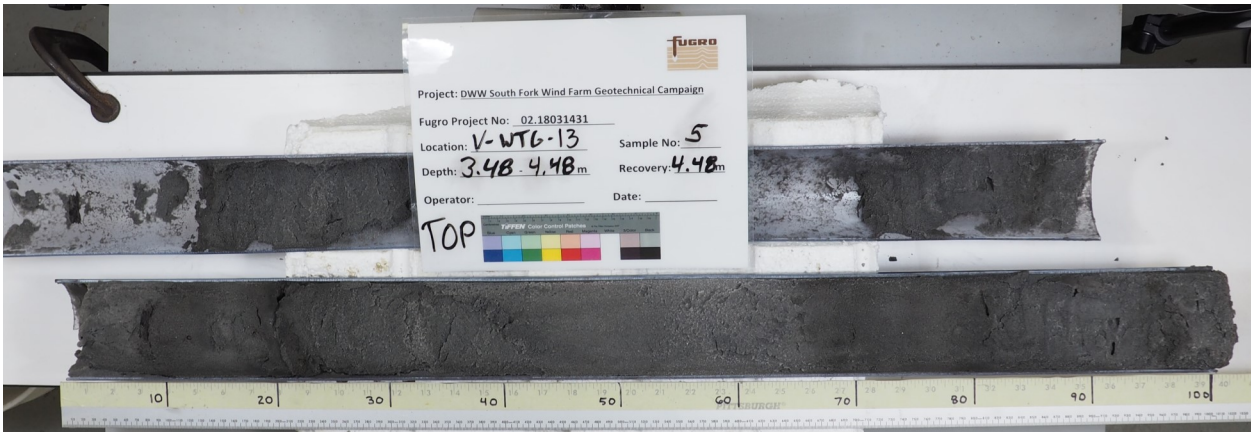


Vibrocore V-WTG-13
0.00 to 2.48 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.40

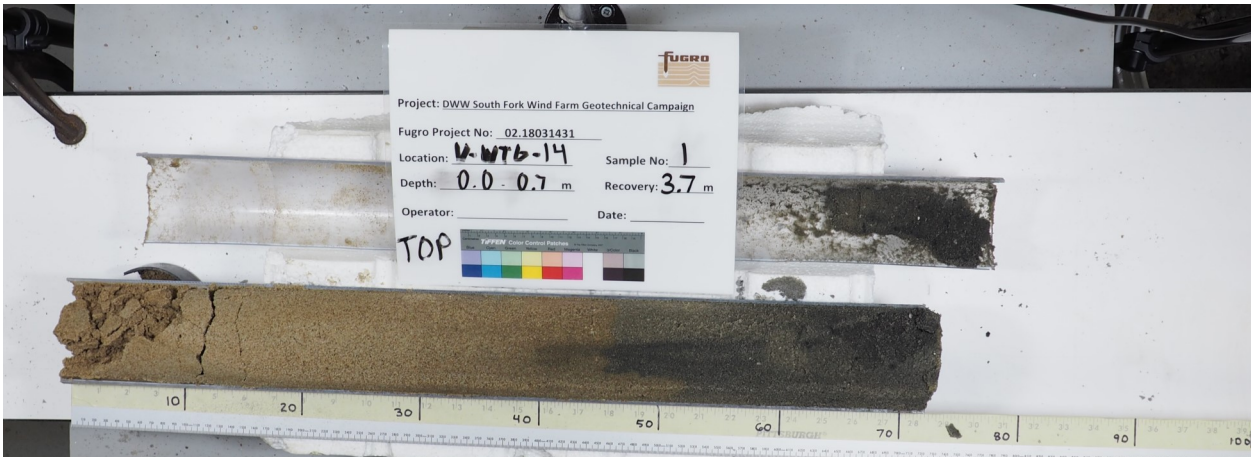


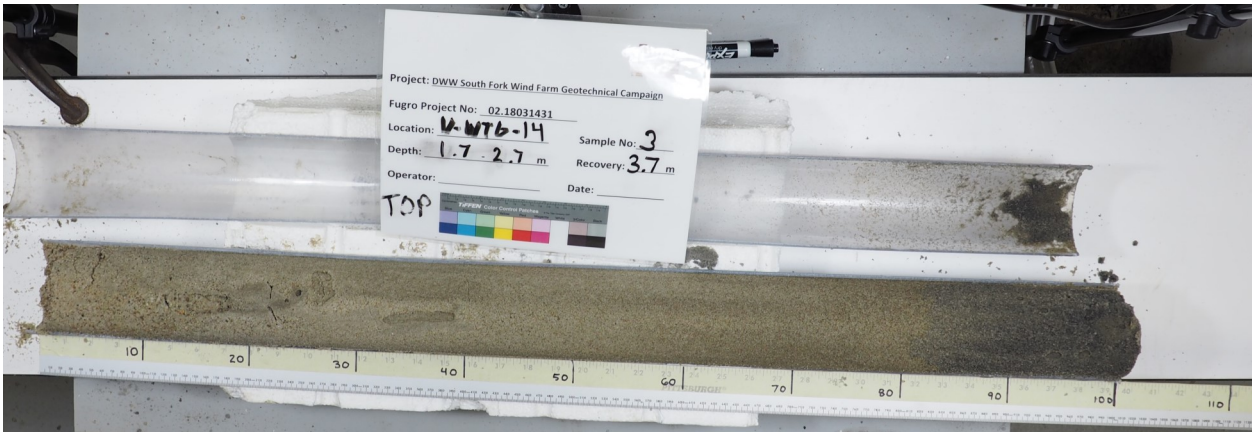


Vibrocore V-WTG-13
2.48 to 4.48 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.41

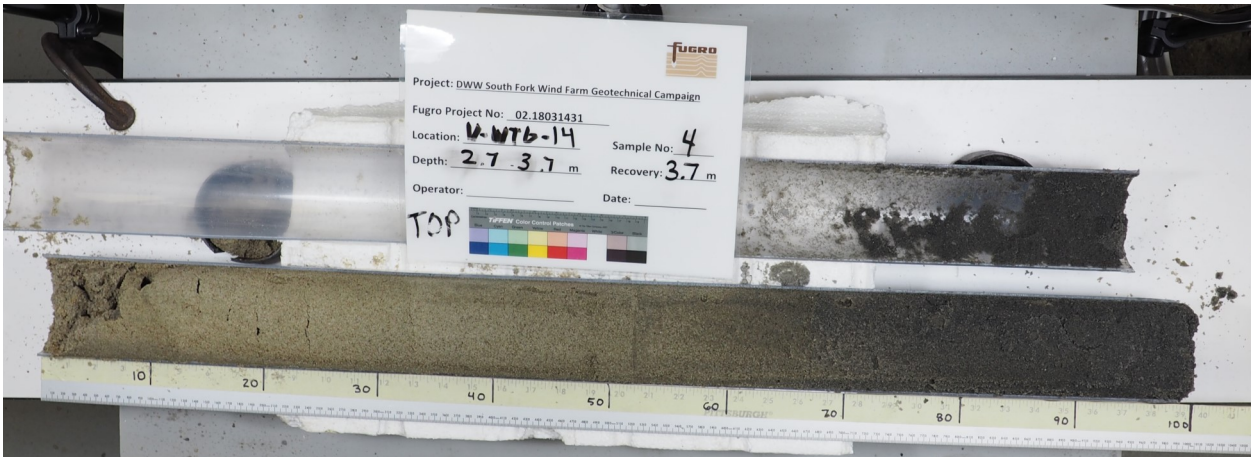




Vibrocore V-WTG-14
0.00 to 2.70 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

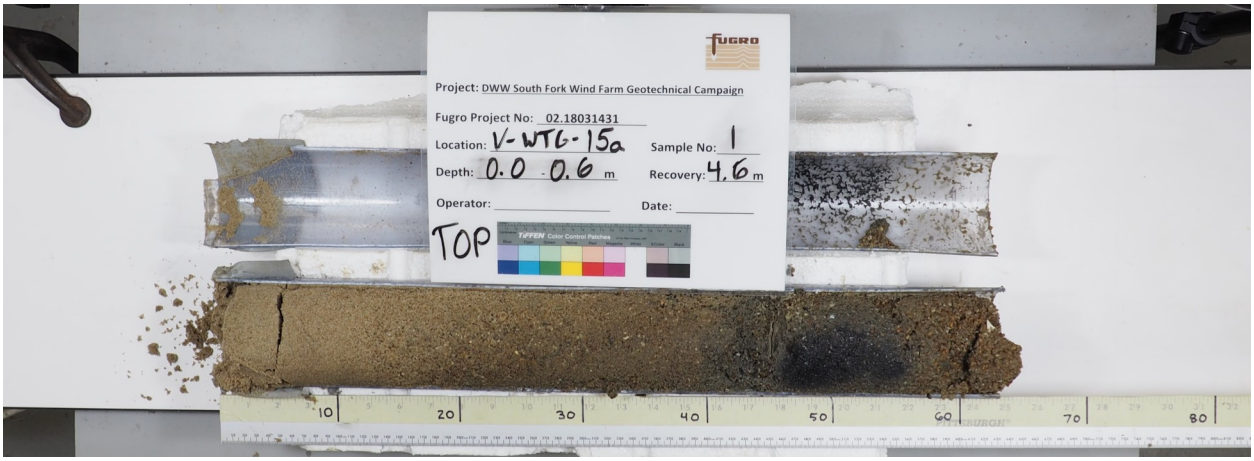
FIGURE D-1.42



Vibrocore V-WTG-14
2.70 to 3.70 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

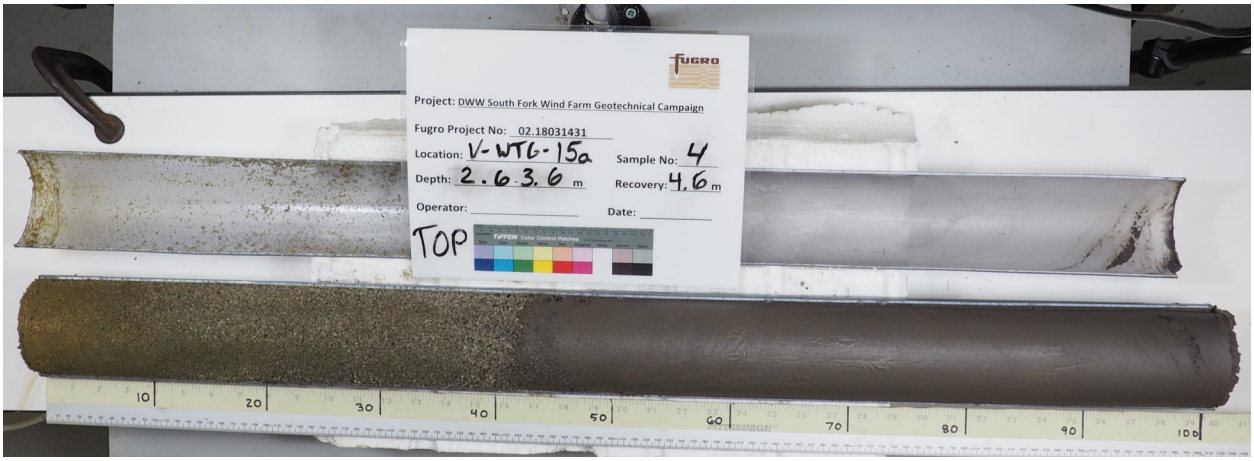
FIGURE D-1.43

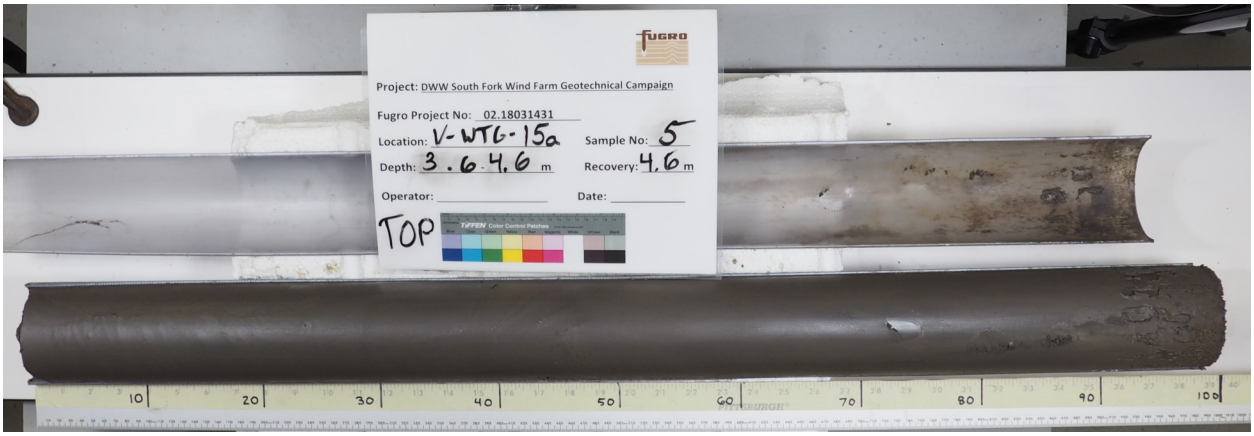


Vibrocore V-WTG-15a
0.00 to 2.60 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.44

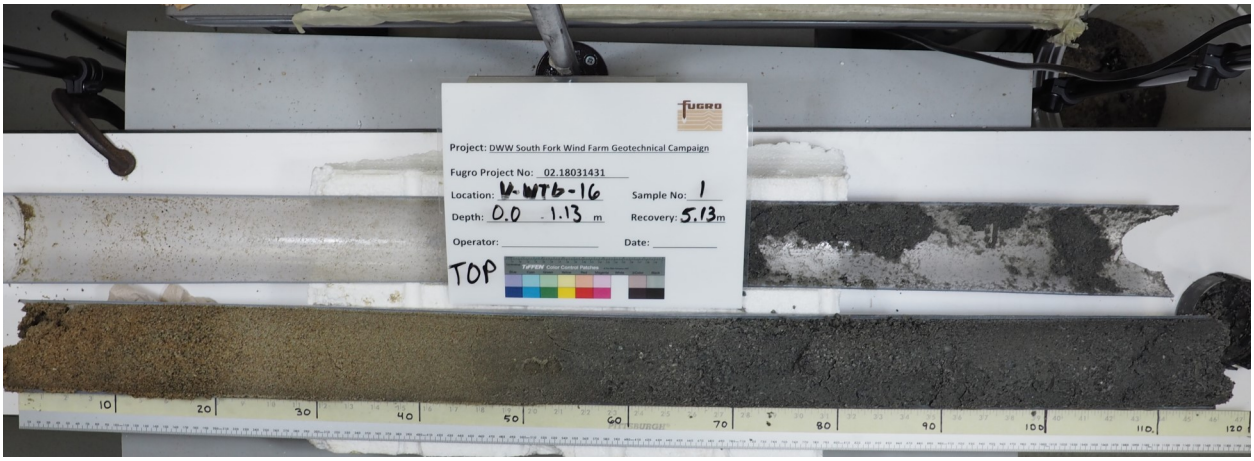


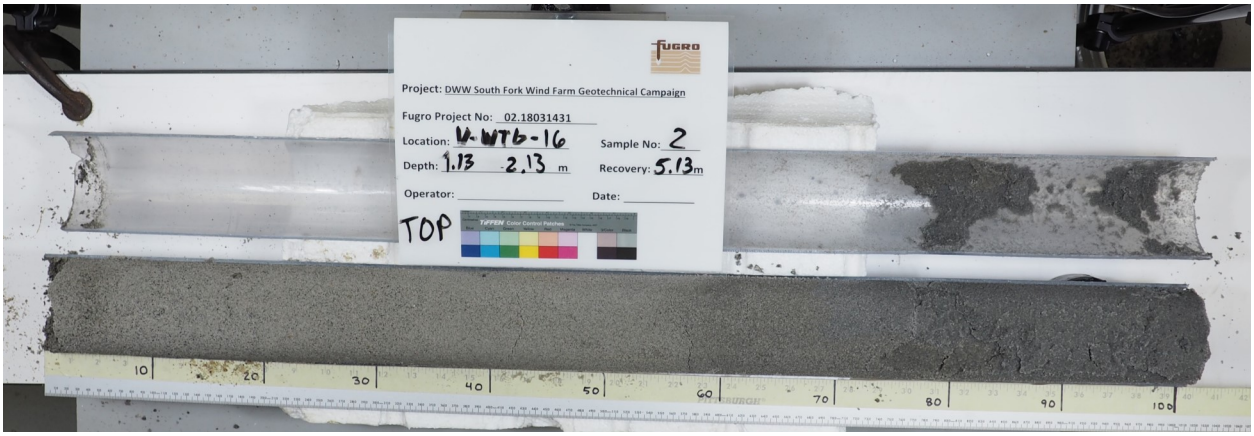


Vibrocore V-WTG-15a
2.60 to 4.60 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.45

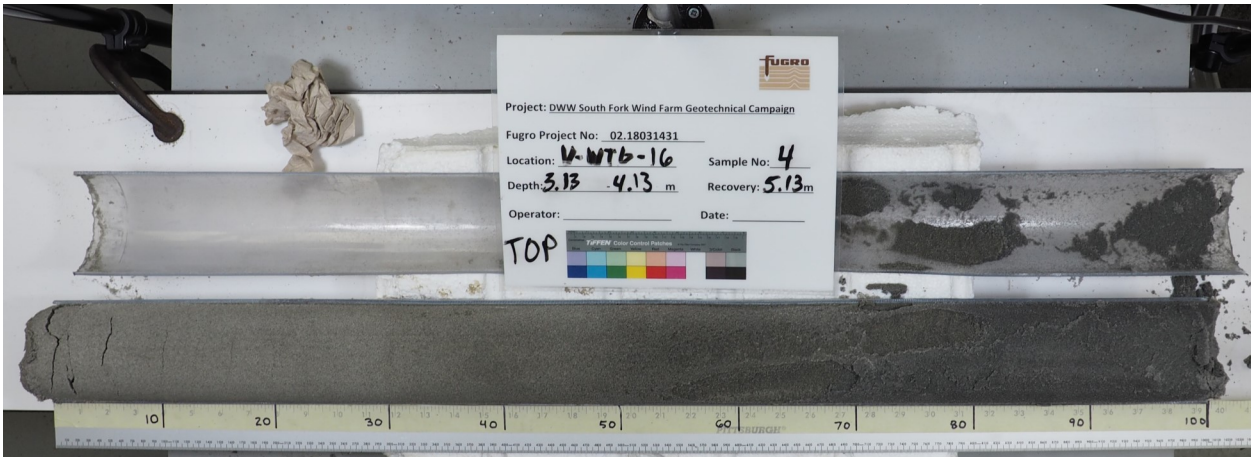


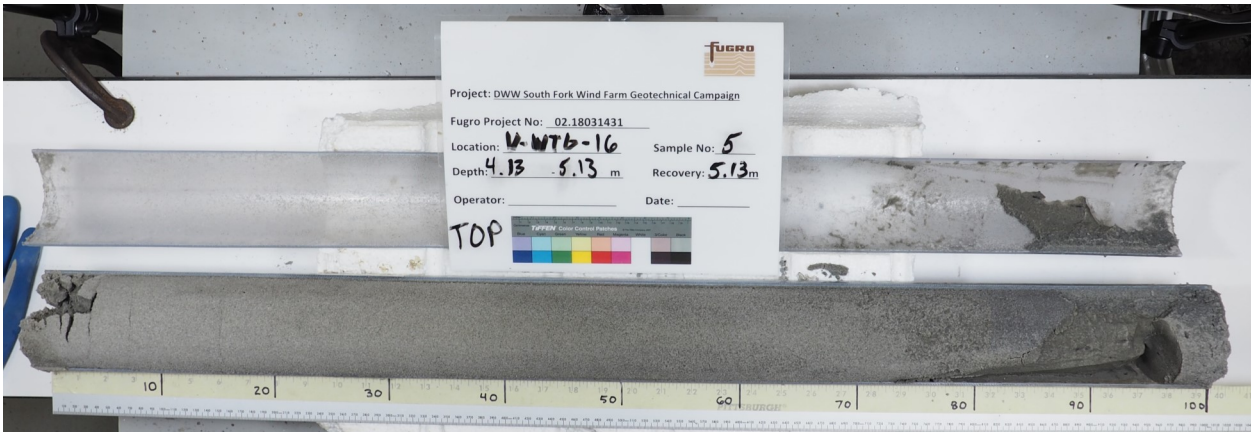


Vibrocore V-WTG-16
0.00 to 3.13 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.46

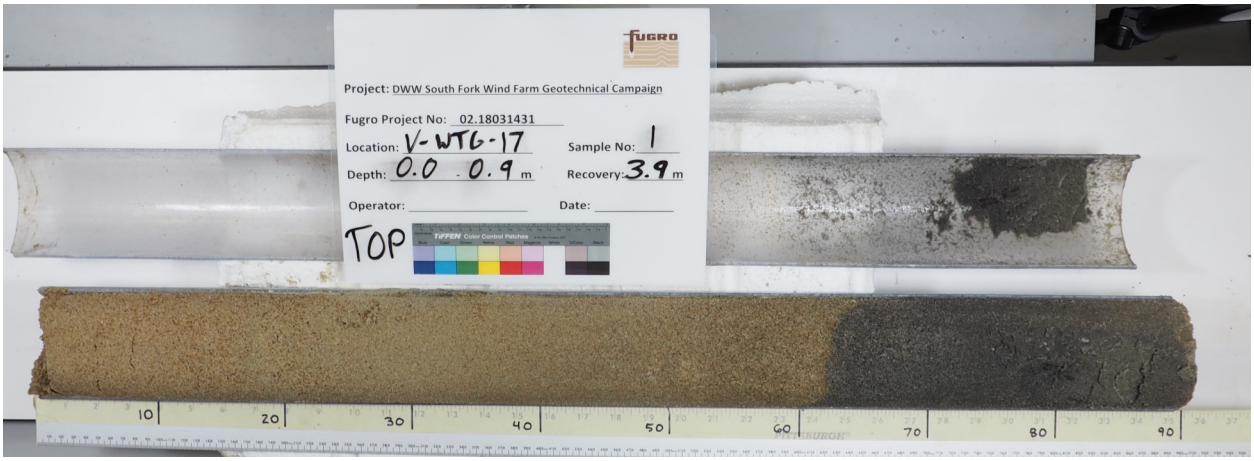


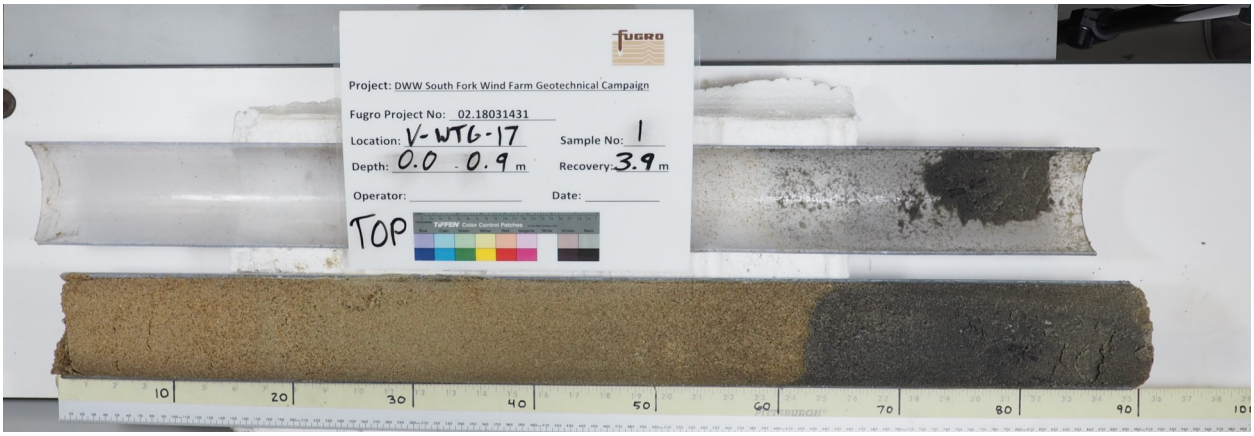


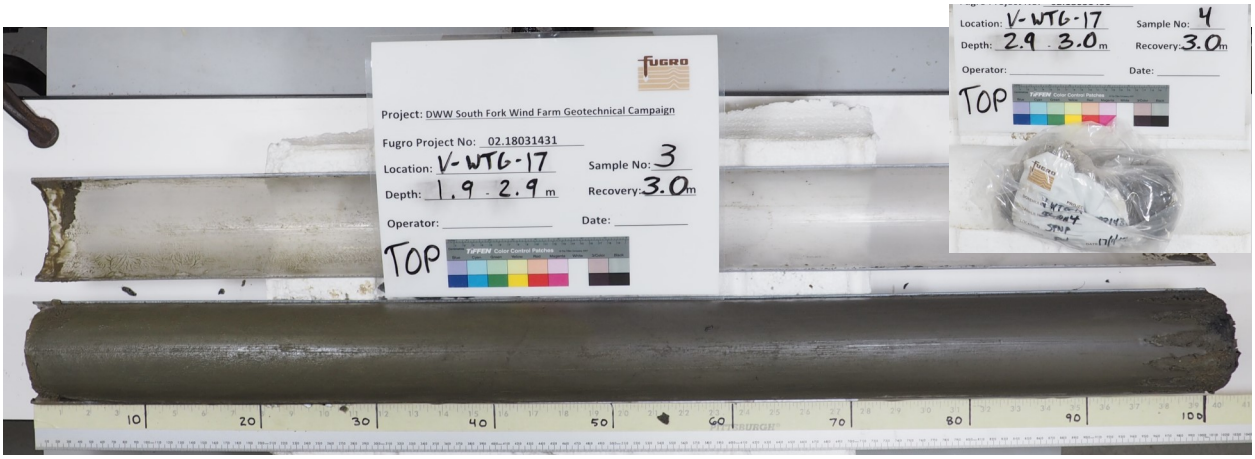
Vibrocore V-WTG-16
3.13 to 5.13 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.47



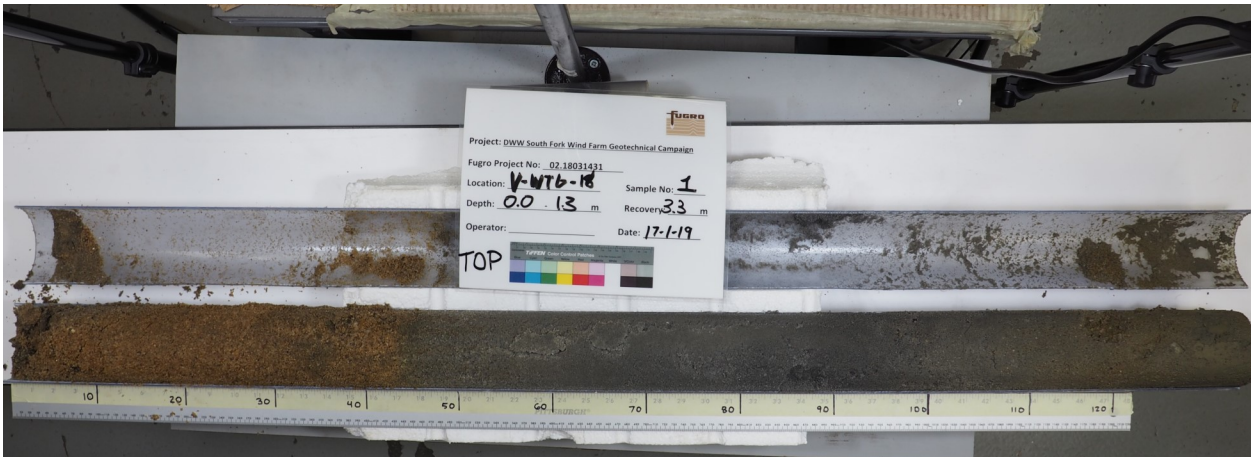


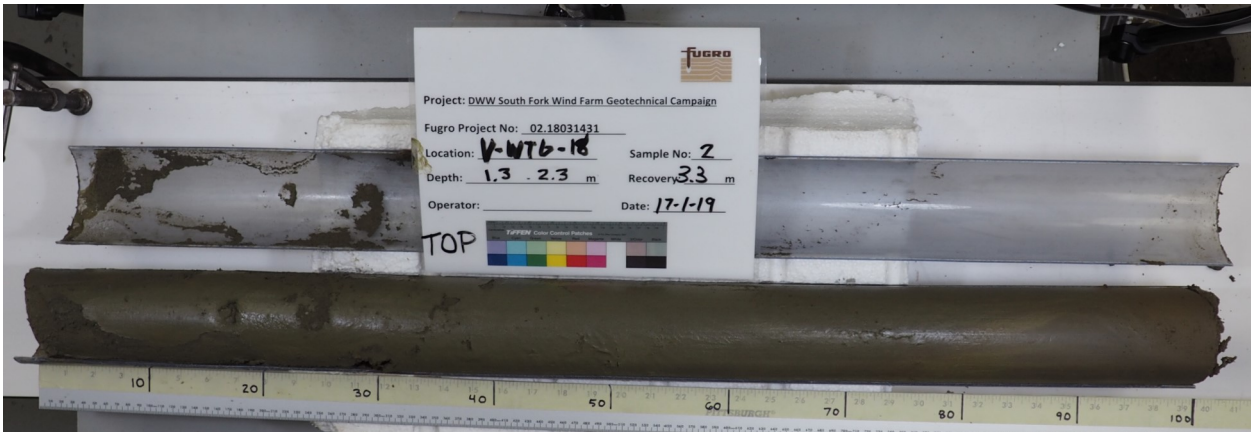


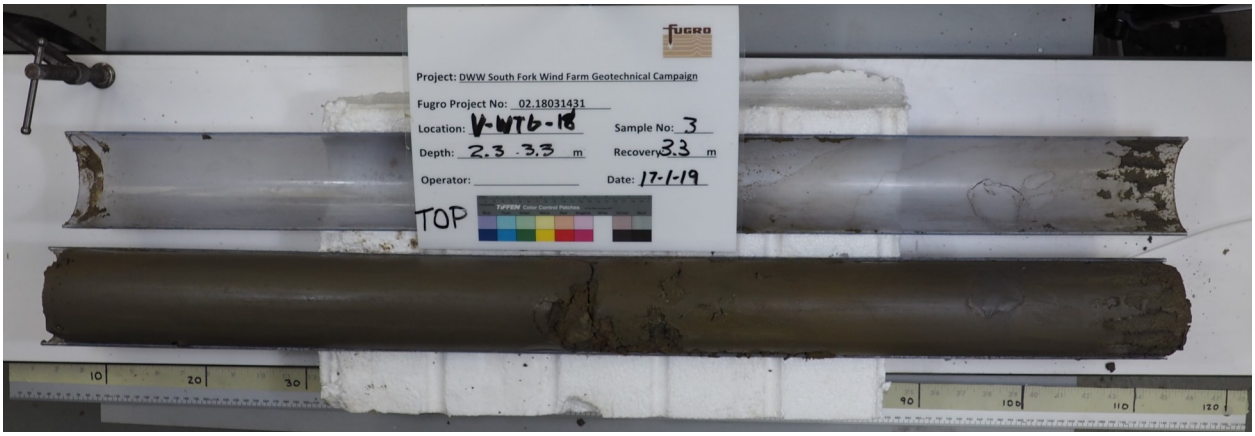
Vibrocore V-WTG-17
0.00 to 3.00 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.48



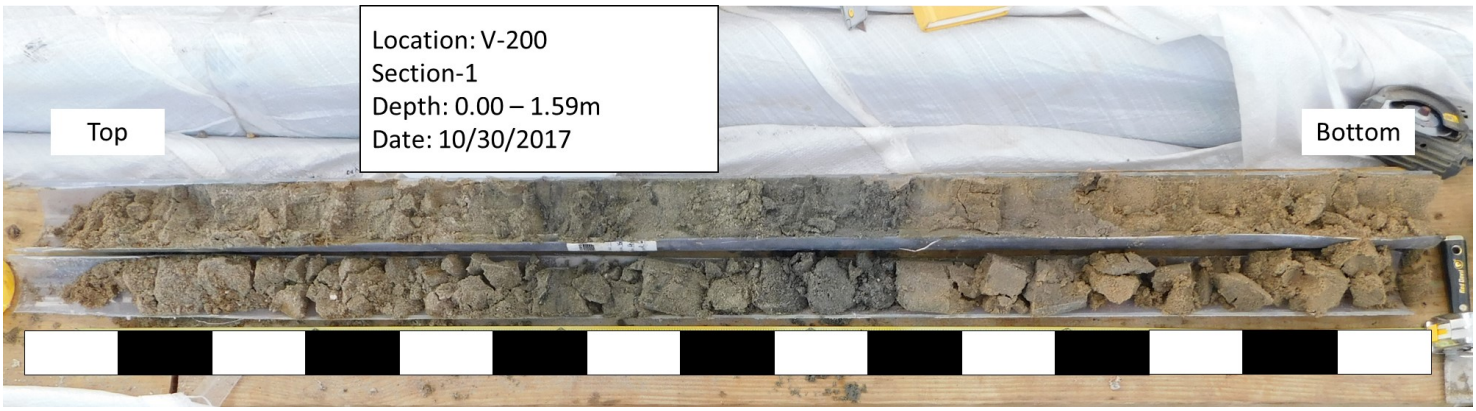




Vibrocore V-WTG-18
0.00 to 3.30 meters

SFWF VIBROCORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-1.49



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-200
1.59 meters recovery

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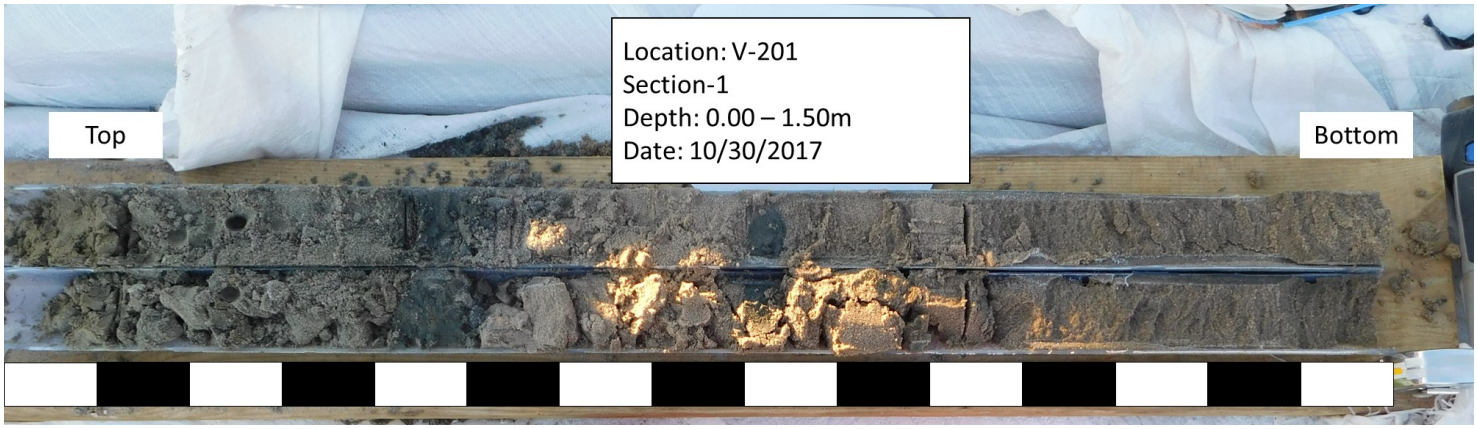
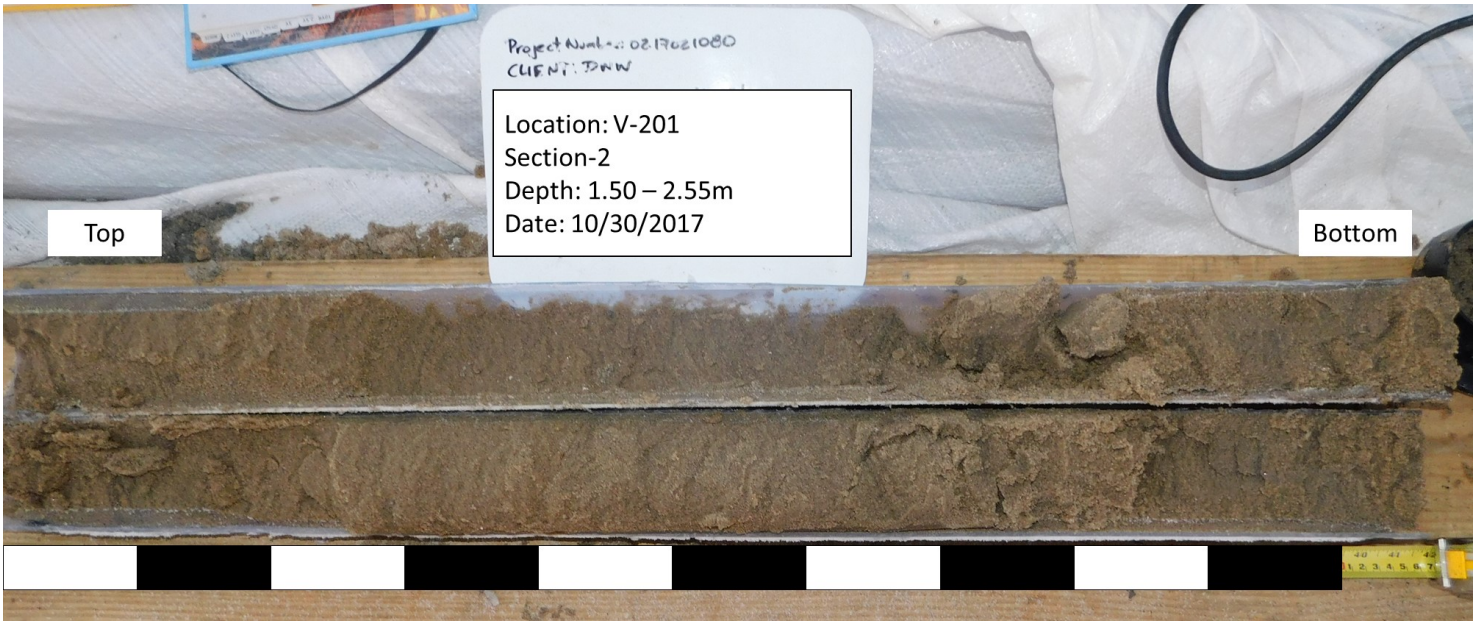
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.1





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-201
2.55 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.2

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-202
1.50 meters recovery

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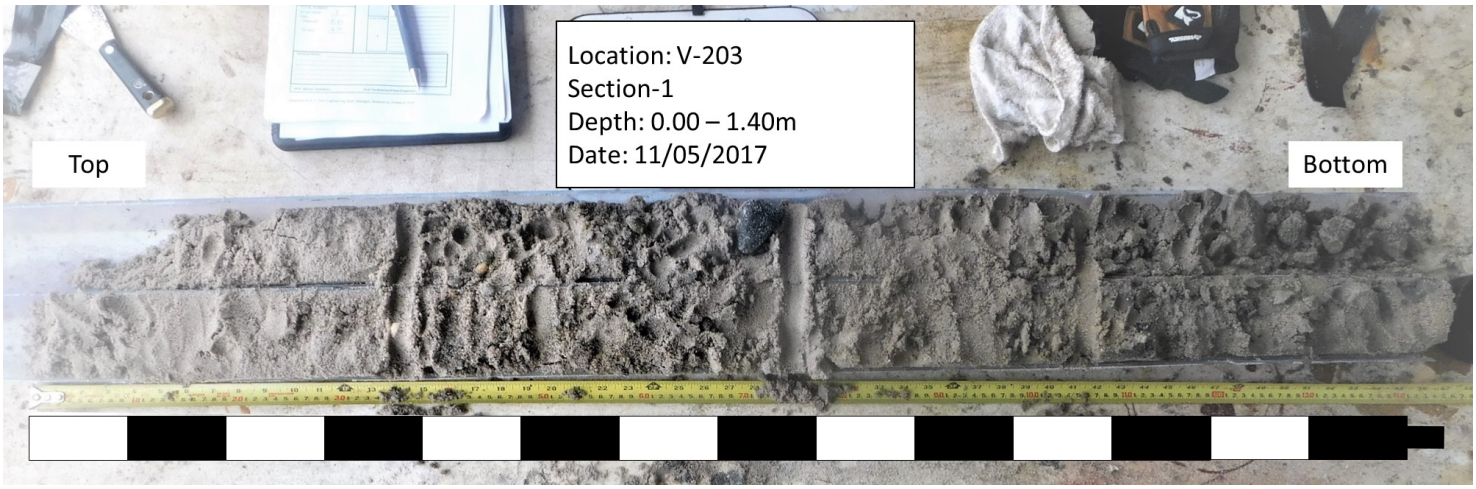
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.3



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-203
2.22 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.4

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-204
2.20 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.5

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-205
2.40 meters recovery

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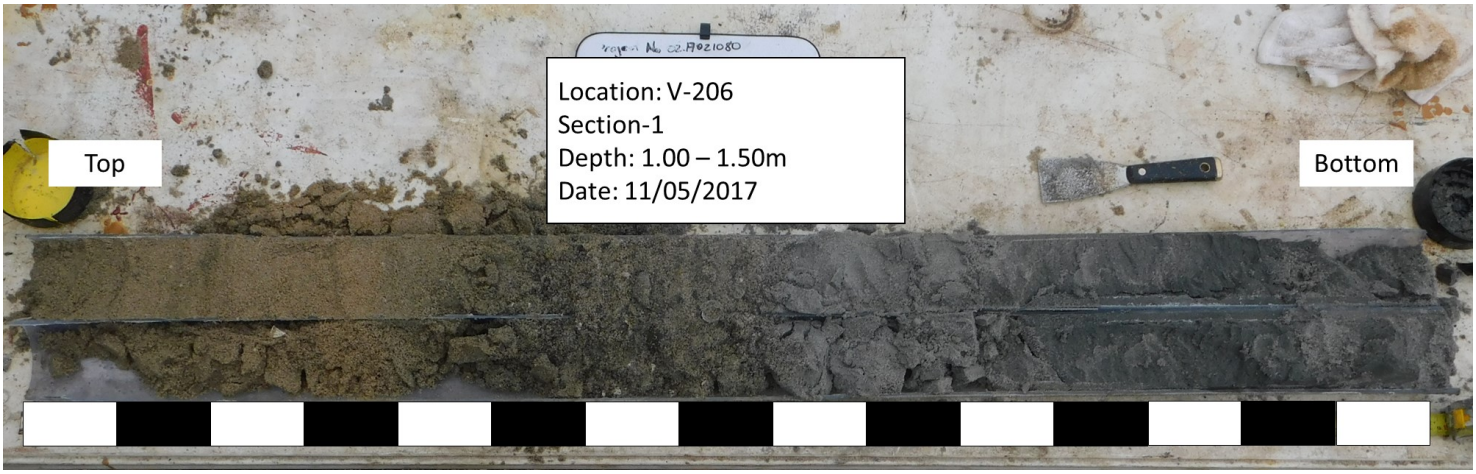
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.6

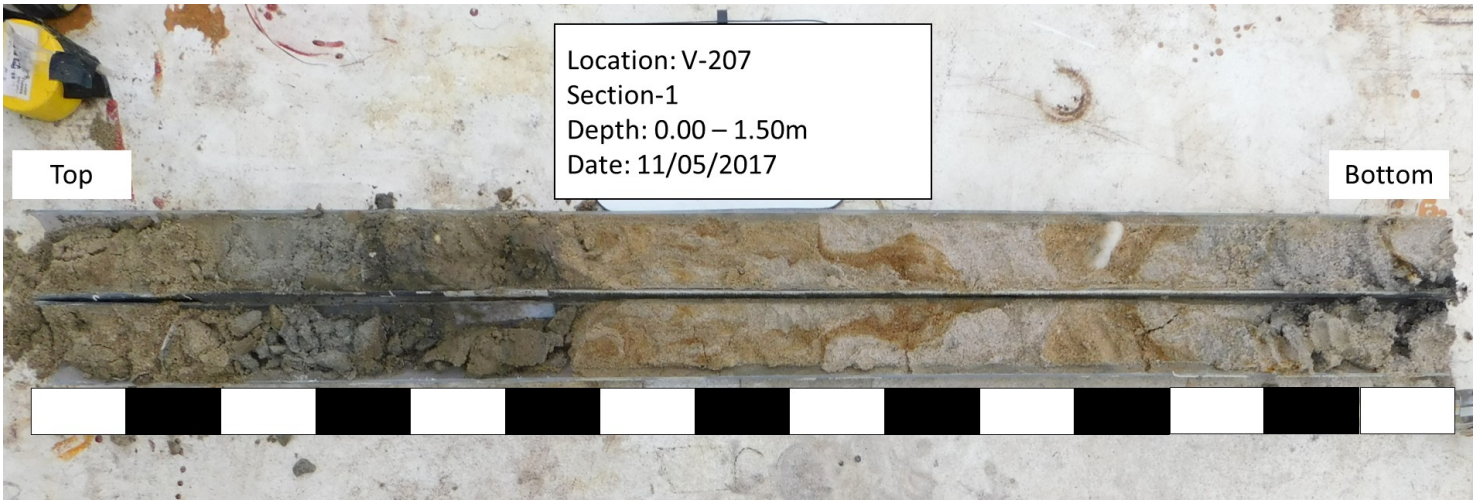


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-206
2.96 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.7

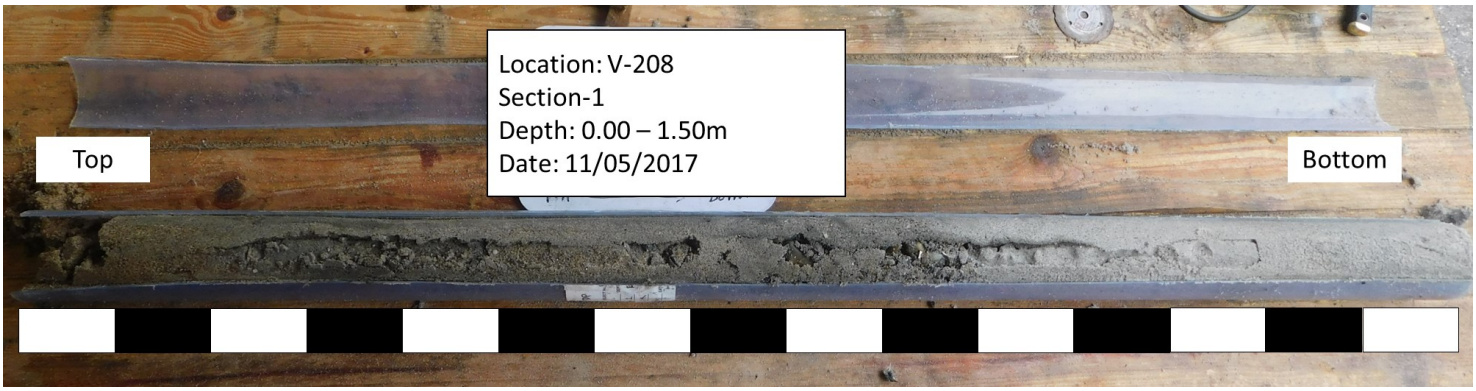


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-207
2.75 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.8



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-208
2.85 meters recovery

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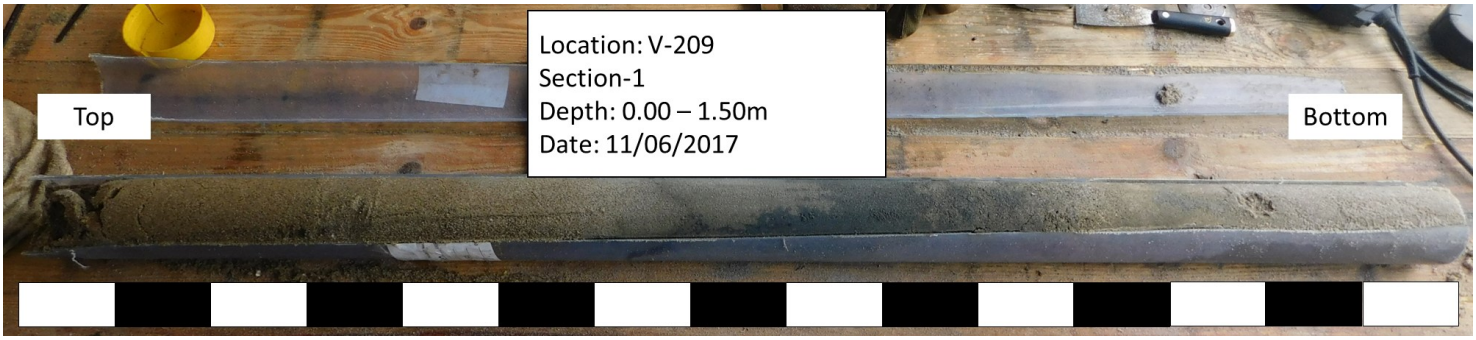
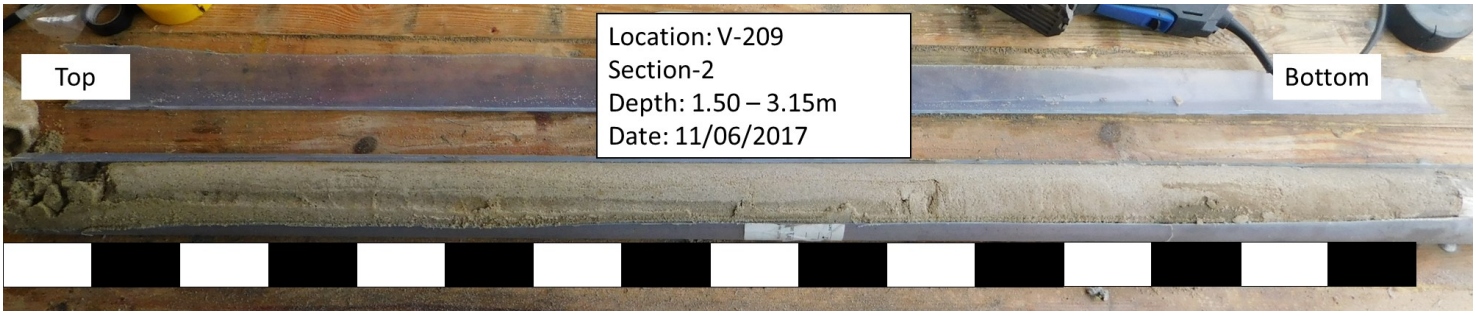
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.9





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-209
3.15 meters recovery

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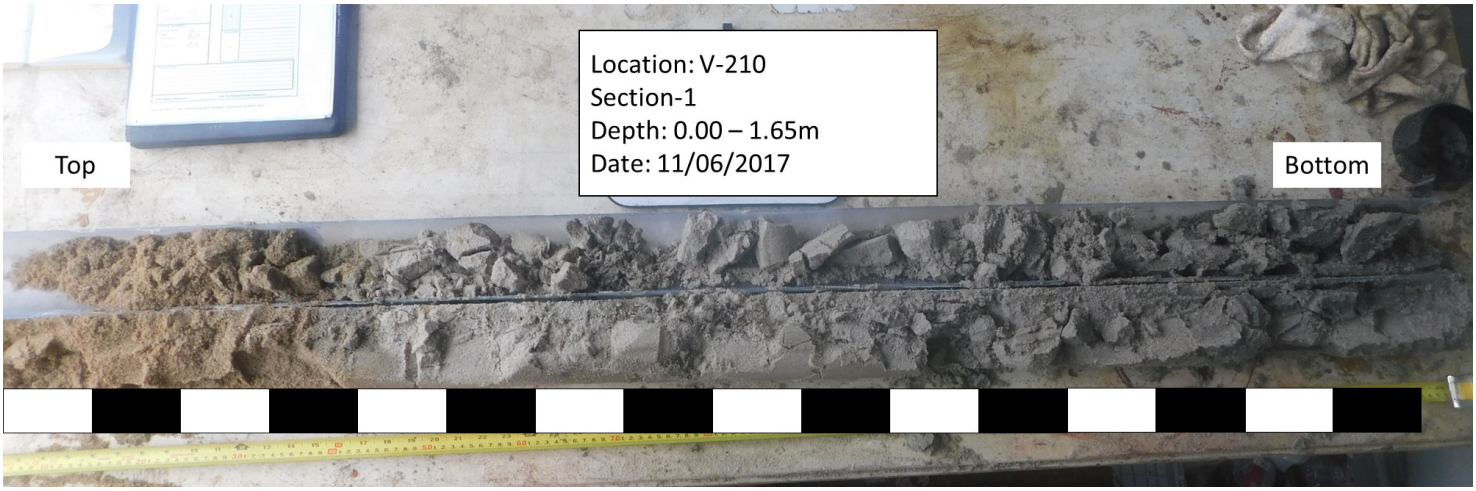
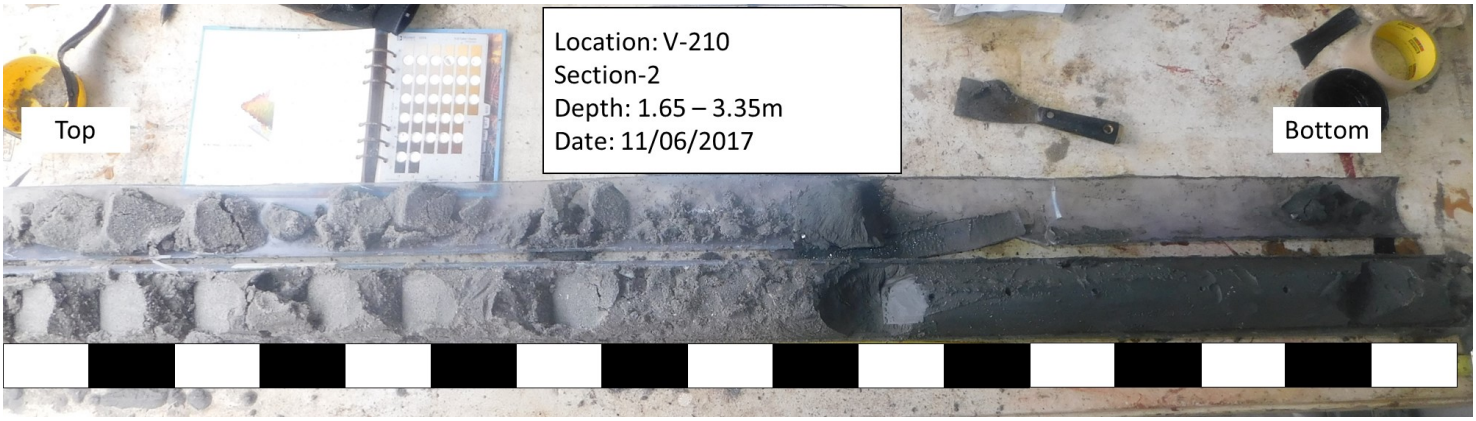
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.10





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-210
3.35 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
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FIGURE D-2.11

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-211
2.73 meters recovery

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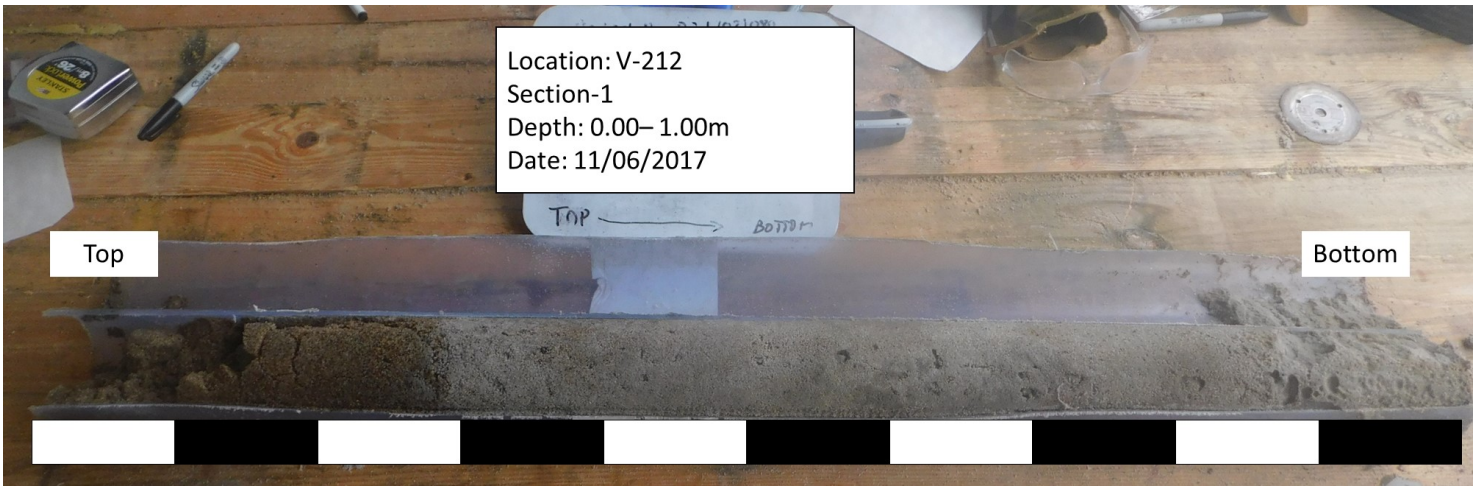
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.12



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-212
2.13 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.13

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-213
2.10 meters recovery

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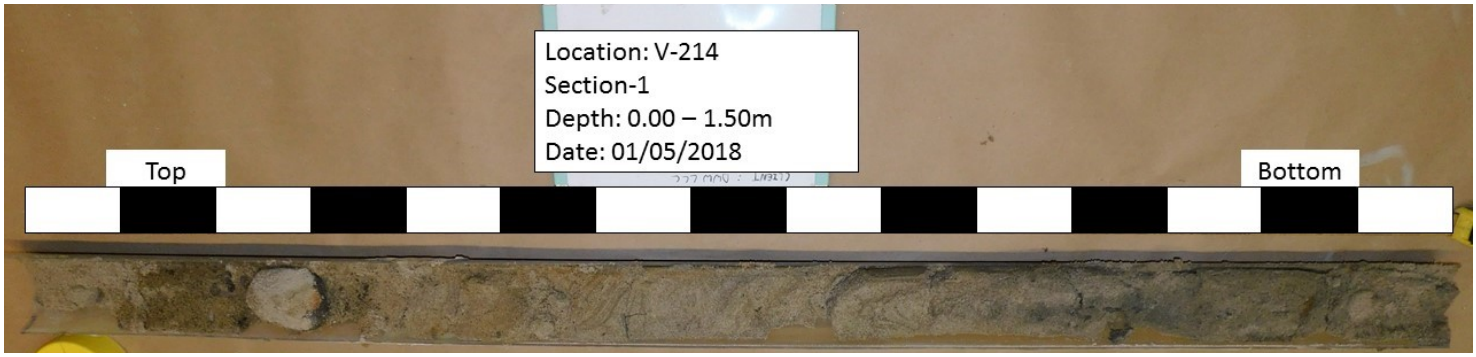
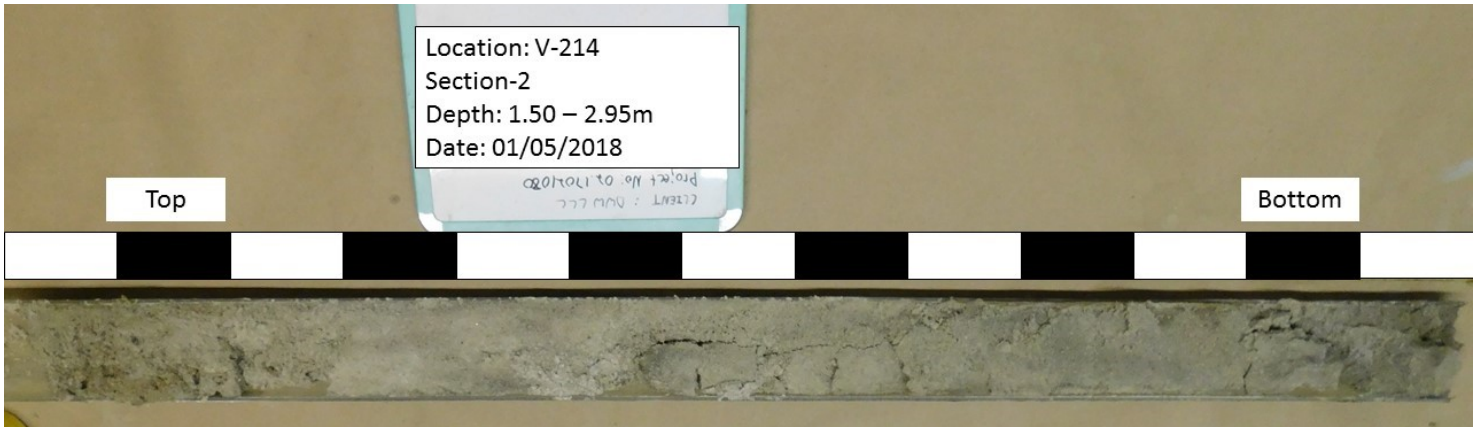
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.14





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-214
2.95 meters recovery

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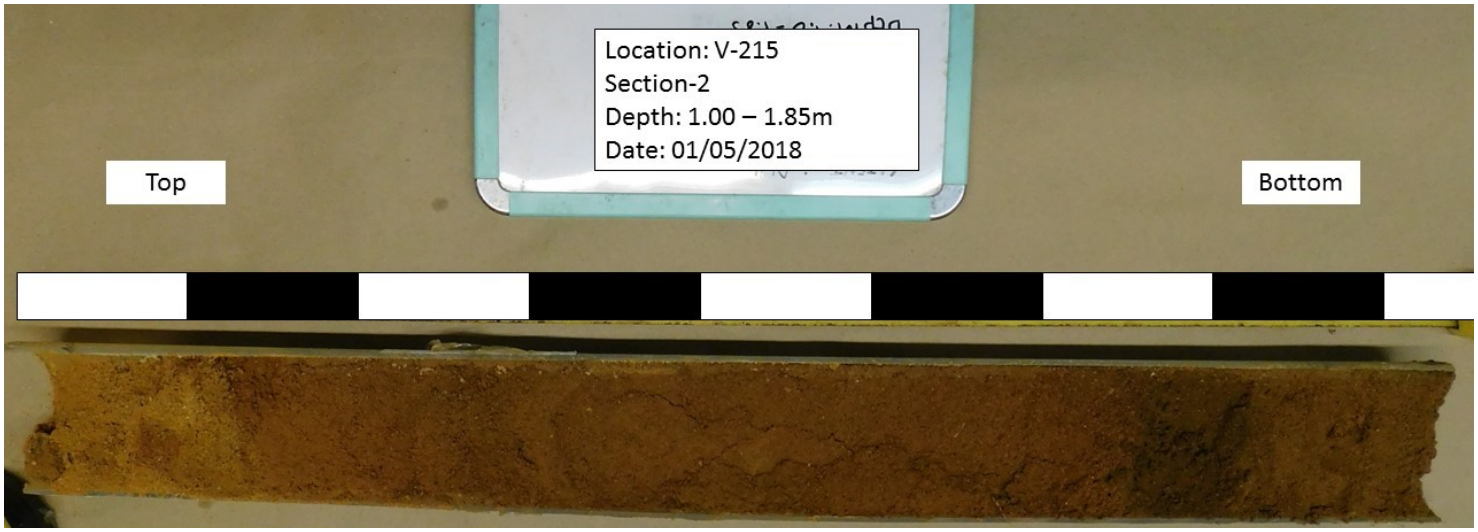
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.15



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-215
1.85 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.16

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-216
1.55 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.17

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-217
1.70 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

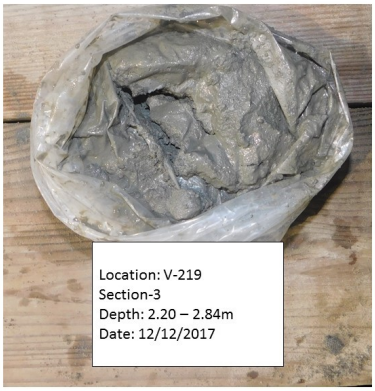
FIGURE D-2.18

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-218
1.40 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.19

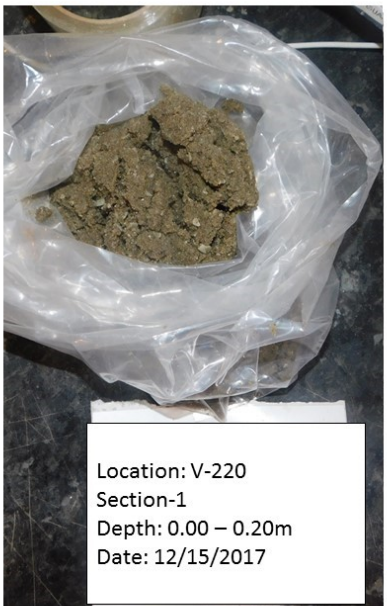


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-219
2.84 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

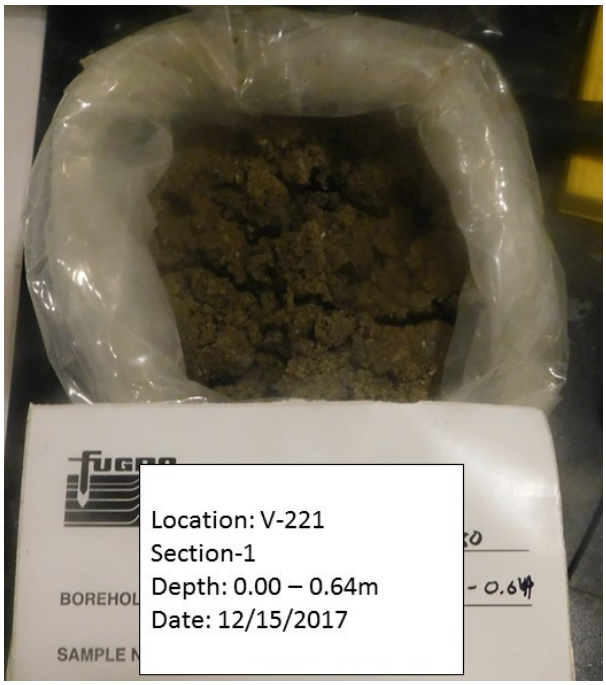
FIGURE D-2.20



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-220
0.84 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

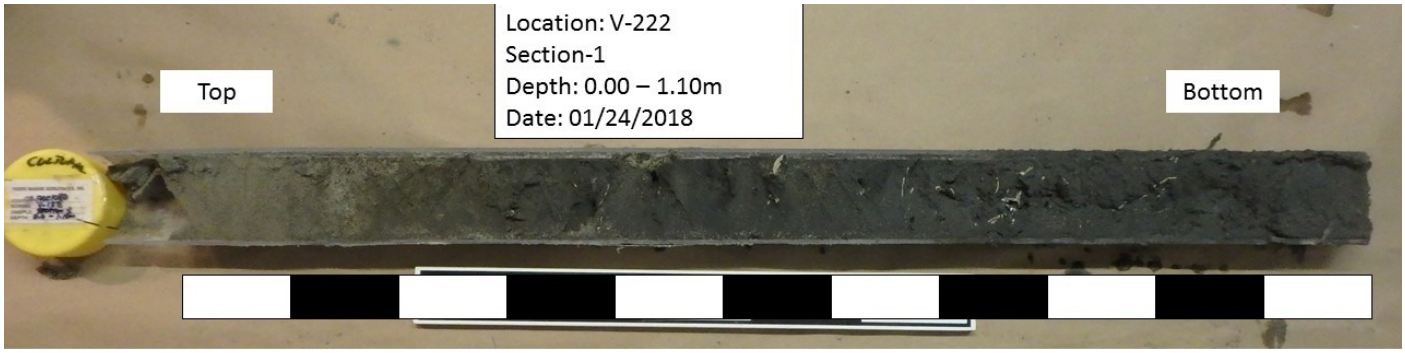


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-221
0.64 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.22



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-222
1.60 meters recovery

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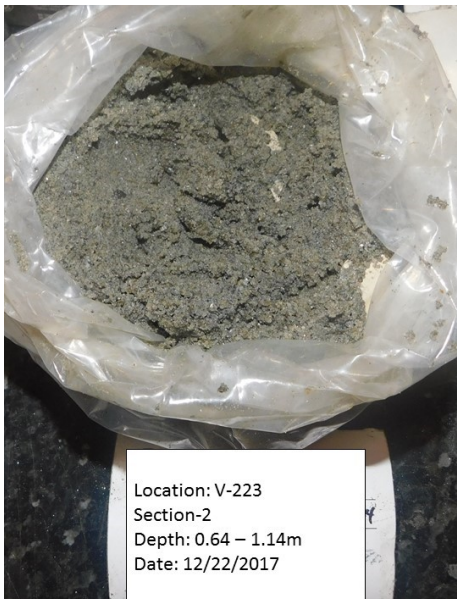
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.23



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-223
1.19 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.24

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-223
1.19 meters recovery

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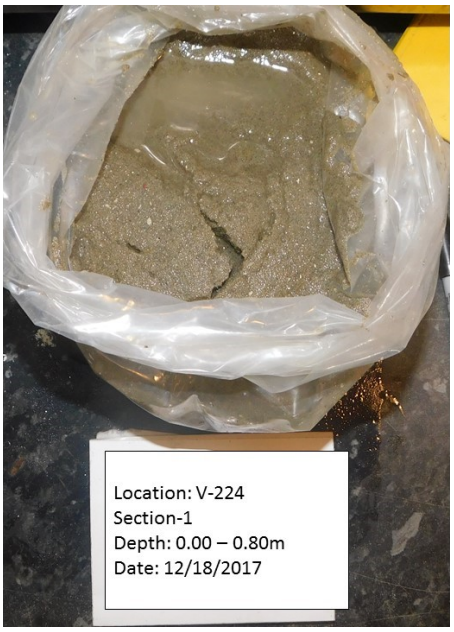
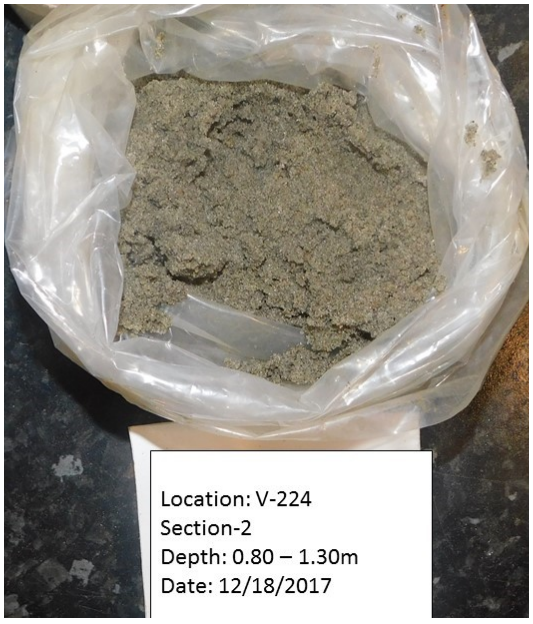
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.25



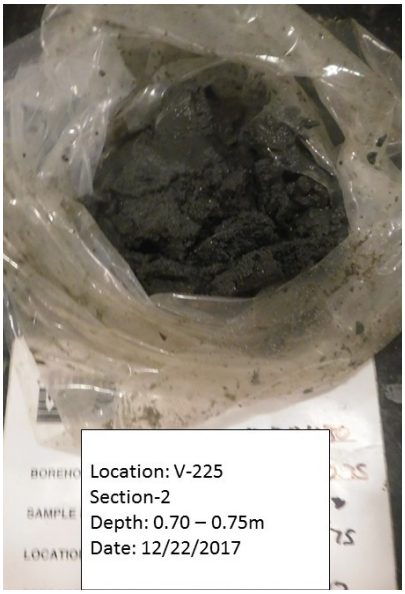


Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-224
1.30 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.26



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-225
0.75 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.27

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-226
0.92 meters recovery

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SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.28

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-227
3.69 meters recovery

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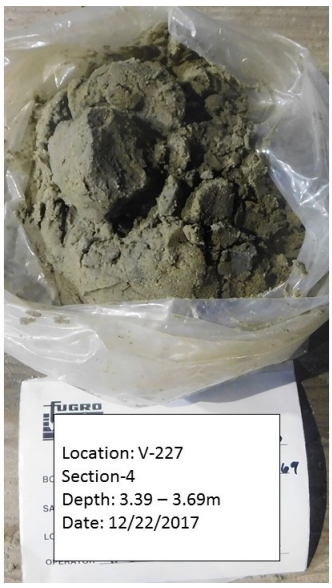
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.29



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-227
3.69 meters recovery

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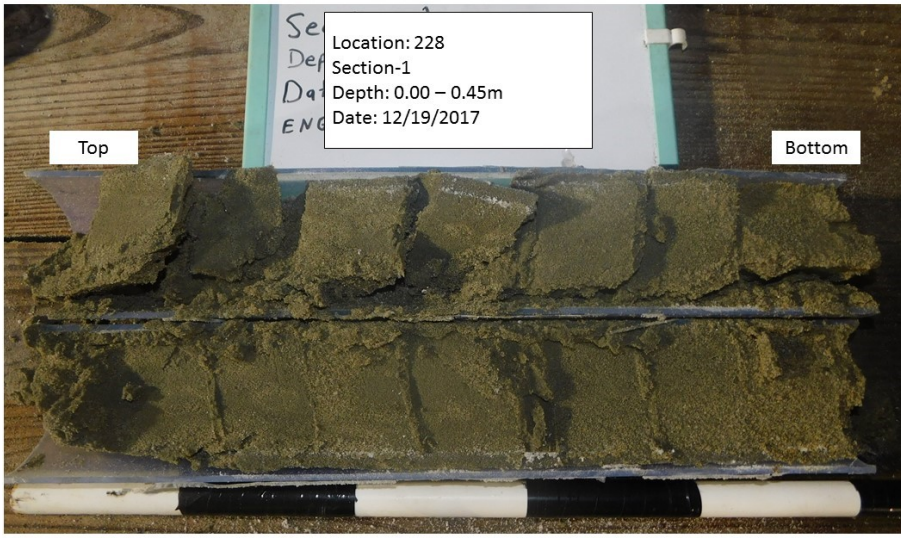
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.30



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-228
1.52 meters recovery

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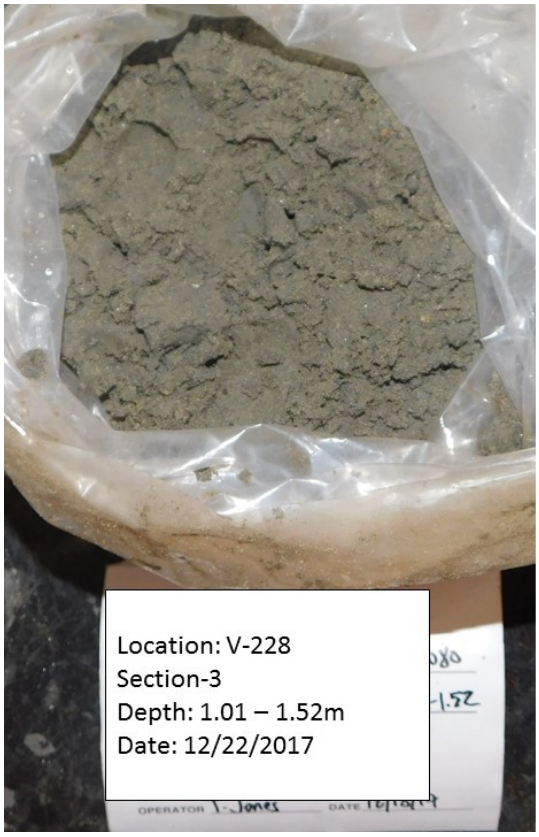
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.31



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-228
1.52 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

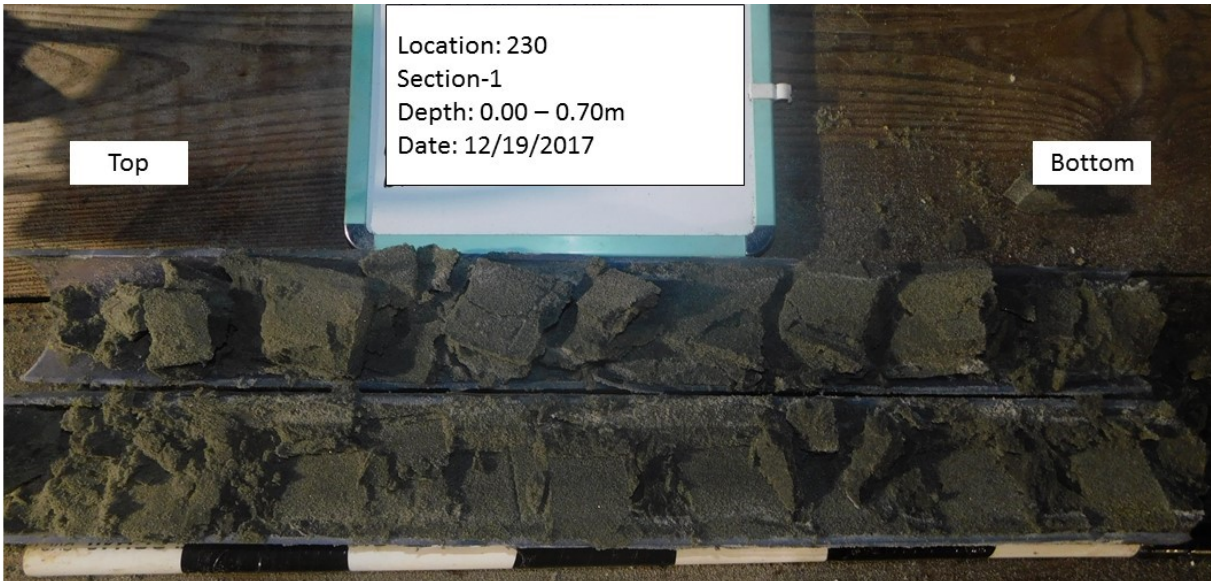
FIGURE D-2.32

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-229
1.75 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.33



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-230
2.36 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.34

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-230
2.36 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.35

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-231
1.52 meters recovery

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SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

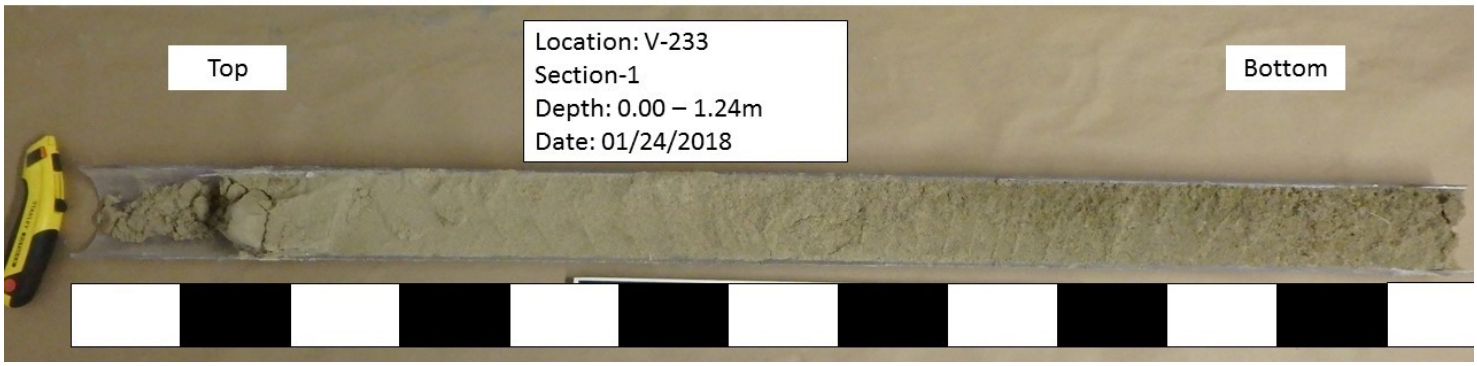
FIGURE D-2.36

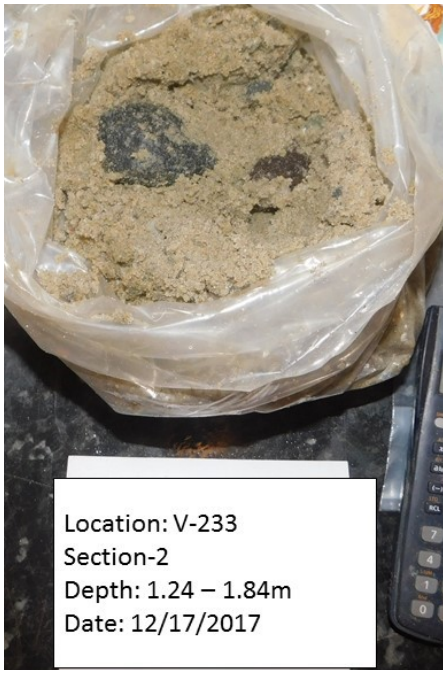
Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-232
3.22 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.37





Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-233
1.84 meters recovery

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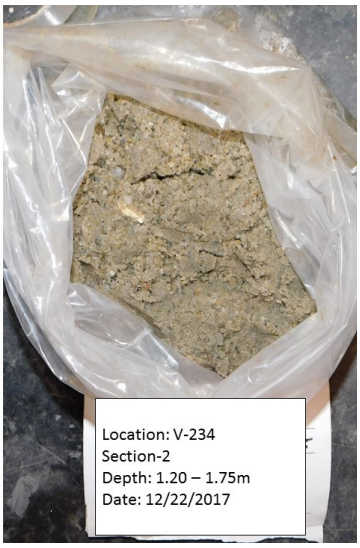
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.38



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-234
1.75 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.39

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-235
2.73 meters recovery

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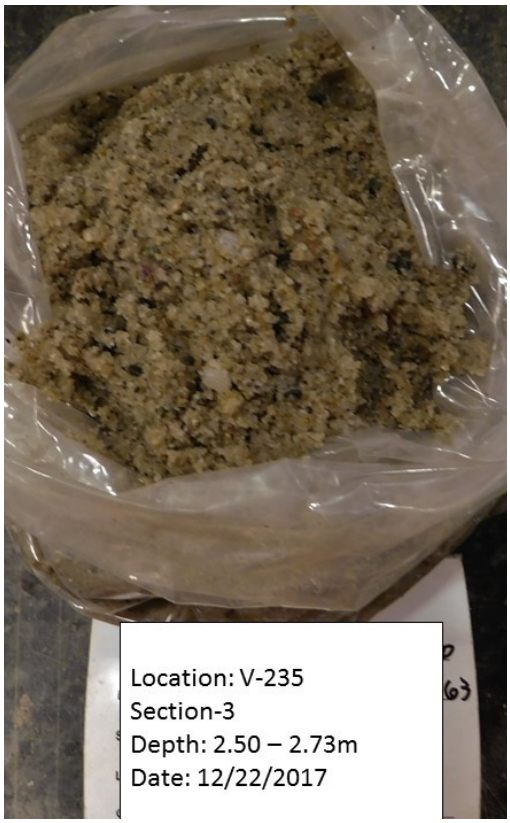
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.40



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-235
2.73 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.41

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-236
3.20 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.42

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-236
3.20 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.43

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-237
1.27 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.44

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-238
0.45 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.45

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-239
0.55 meters recovery

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VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

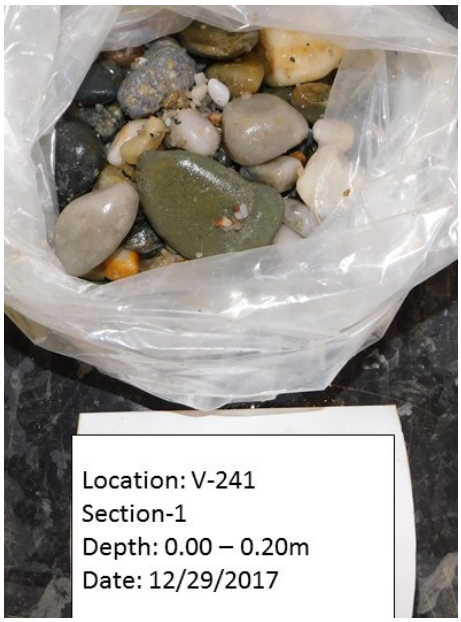
FIGURE D-2.46

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-240
0.50 meters recovery

EXPORT CABLE
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.47



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-241
0.20 meters recovery

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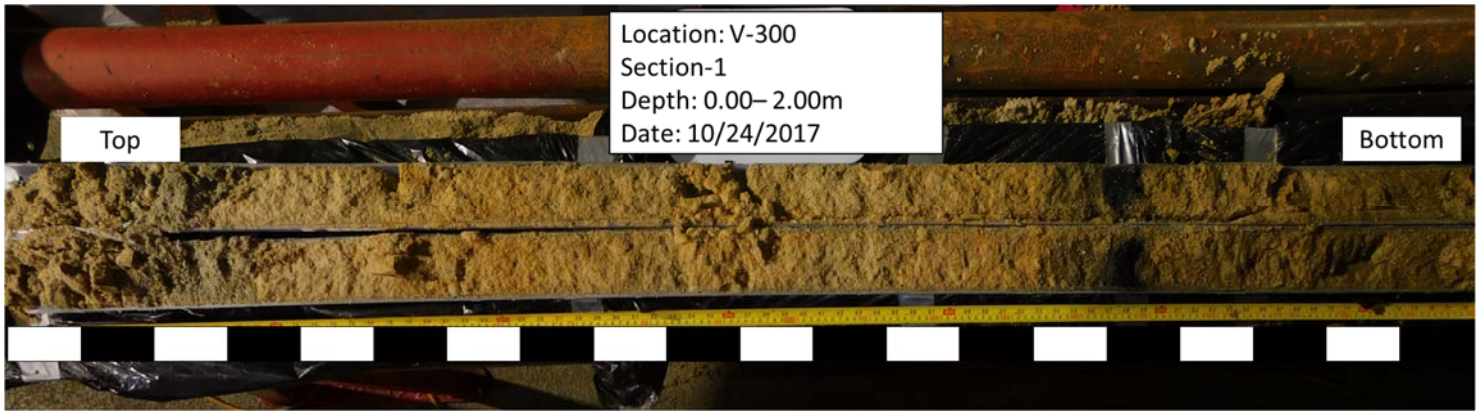
VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-2.48



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-300
2.72 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
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Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.1

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-301
2.75 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.2

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-302
3.00 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.3

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-303
2.85 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.4

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-304
2.86 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.5

v

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-305
2.95 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.6

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-306
2.78 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

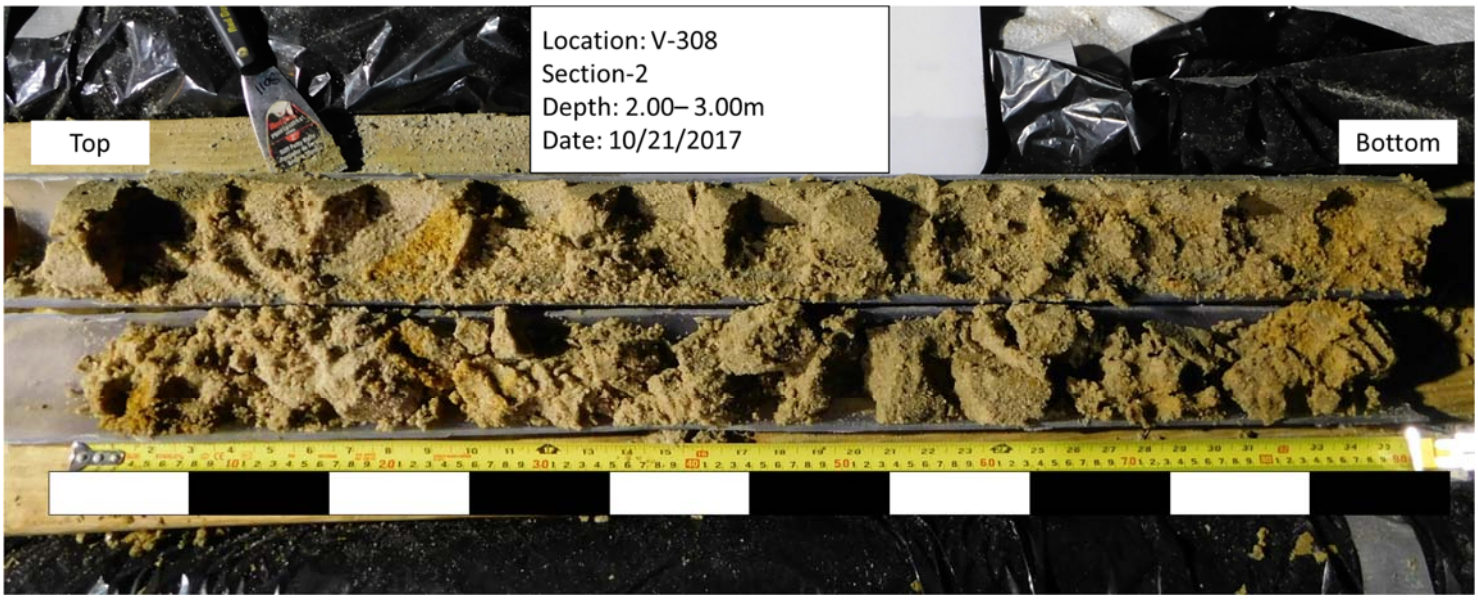
FIGURE D-3.7

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-307
2.90 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.8



Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-308
3.00 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.9

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-309
2.22 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.10

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-310
2.95 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.11

Scale Bar Note: Each white or black section on the scale bar is equal to 10 cm

Vibracore V-311
2.40 meters recovery

ENVIRONMENTAL VIBRACORE SAMPLE PHOTOGRAPHS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE D-3.12

E. VIBRACORE LABORATORY TESTING PROGRAM RESULTS

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
V-100	0.45	Poorly graded SAND (SP)	2	19					2.67	2									
V-100	1.45	Poorly graded SAND (SP)	3				14.2	17.3											
V-100	1.95	Poorly graded SAND (SP)	4							2									
V-100	2.80	Poorly graded SAND (SP)	5	9					2.67										
V-100	3.55	Well-graded GRAVEL with sand (GW)	6	13						2									
V-101	1.05	Medium SAND (SP)	2	12			14.9	18.4	2.68	3									
V-101	2.00	Medium SAND (SP)	3							2									
V-101	2.30	Poorly graded SAND with gravel (SP)	4	4															
V-101	2.80	Clayey SAND with gravel (SC)	5							2									
V-101	2.85	Clayey SAND (SC)	6	9					2.70										
V-101	3.00	Clayey SAND (SC)	7							39									
V-102	0.00	Fine SAND (SP)	1						2.67										
V-102	0.80	SAND (SP)	2	6						1									
V-102	1.10	Poorly graded SAND with gravel (SP)	3	4			15.8	19.1	2.67	1									
V-103	0.22	SAND (SP)	2	22															
V-104	0.00	Poorly graded SAND (SP)	1							2									
V-104	0.48	Poorly graded SAND with gravel (SP)	2							0									
V-105	0.00	Poorly graded SAND (SP)	1							2									
V-105	0.43	Poorly graded SAND with gravel (SP)	2							1									
V-106	0.00	Poorly graded SAND with gravel (SP)	1							0									
V-106	0.75	Poorly graded SAND with gravel (SP)	2							1									
V-107	0.45	Poorly graded SAND (SP)	2	18						1									
V-107	0.60	Poorly graded SAND with gravel (SP)	3	17					2.68										
V-108	0.10	Poorly graded SAND with gravel (SP)	2							1									
V-110	0.65	SAND (SP)	2	20					2.67	1									
V-110	1.20	SAND (SP)	3	10					2.65	0									
V-110	1.90	Poorly graded SAND with gravel (SP)	4				15.4	18.1											
V-110	2.74									0									
V-111	0.00	Fine SAND (SP)	1						2.67										
V-111	0.45	Poorly graded GRAVEL with sand	2	12					2.70	2									

SUMMARY OF LABORATORY TEST RESULTS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.1

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
		(GP)																	
V-111	0.56	Lean CLAY with gravel (CL)	3	11						1									
V-113	0.50		1							25									
V-113	0.51	Well-graded SAND with silt (SW-SM)							2.70	9									
V-113	0.70	Silty SAND (SM)								37									
V-114	0.00		1				13.5	16.4											
V-115	0.20		2							1									
V-115	0.37	Clayey SAND (SC)								46									
V-122	0.00	Poorly graded SAND (SP)	1						2.66										
V-122	1.10	Well-graded GRAVEL with sand (GW)	2						2.70	2									
V-200	0.57	Poorly graded SAND with silt (SP-SM)	2						2.70	5									
V-200	1.25	Poorly graded SAND (SP)	4							3									
V-201	0.14	Poorly graded SAND (SP)	2	9						2									
V-201	0.44	Poorly graded SAND with silt (SP-SM)	3						2.70	9									
V-201	0.52	Poorly graded SAND (SP)	4							3									
V-201	1.50	Poorly graded SAND (SP)	5									2.0							
V-202	0.15	Poorly graded SAND with silt (SP-SM)	2						2.70	8									
V-202	0.70	Silty SAND (SM)	3							16									
V-202	0.87	Poorly graded SAND with silt (SP-SM)	4	13					2.68	7									
V-203	0.00	Poorly graded SAND (SP)	1	4					2.64	1									
V-203	0.35	Well-graded SAND with gravel (SW)	2						2.70	1									
V-203	1.40	Poorly graded SAND (SP)	4							3									
V-204	0.00	Silty SAND (SM)	1						2.70	7									
V-204	1.50	Poorly graded SAND (SP)	4							2									
V-205	0.30	Poorly graded SAND (SP)	2						2.71	3									
V-205	1.10	Poorly graded SAND with silt (SP-SM)	4	20						5									
V-205	1.60	Poorly graded SAND (SP)	5							3									
V-206	0.00	Poorly graded SAND (SP)	1	3					2.68	1									
V-206	0.42	Poorly graded SAND with gravel (SP)	2						2.70	1									
V-206	1.50	Poorly graded SAND (SP)	4							3									

SUMMARY OF LABORATORY TEST RESULTS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.2

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
V-207	0.55	Poorly graded SAND (SP)	4						2.68	3									
V-207	1.20	Poorly graded SAND (SP)	5	12					2.68	2									
V-207	1.50	Poorly graded SAND (SP)	6							2									
V-208	0.00	Poorly graded SAND (SP)	1						2.70	1									
V-208	1.30	Poorly graded SAND (SP)	3							1		1.85							
V-208	2.50	Poorly graded SAND (SP)	4	8						2									
V-209	0.00	Poorly graded SAND (SP)	1						2.69	1									
V-209	1.30	Poorly graded SAND (SP)	3	13					2.65	1									
V-209	2.00	Poorly graded SAND (SP)	4	5						1									
V-210	0.00	Poorly graded SAND (SP)	1						2.70	2									
V-210	0.90	Poorly graded SAND (SP)	4							2									
V-210	2.75	Fat CLAY (CH)	7												0.45				
V-210	2.95	Fat CLAY (CH)	8	47						92			58	29	0.50				
V-211	0.00	Poorly graded SAND (SP)	1	6					2.68	1									
V-211	0.35	Poorly graded GRAVEL with sand	2						2.68	1		2.3							
		(GP)																	
V-211	0.82	Poorly graded SAND with silt (SP-SM)	4	11					2.68	10									
V-211	1.86	Poorly graded SAND (SP)	5							2									
V-212	0.33	Poorly graded SAND (SP)	2						2.70	3									
V-212	1.00	Poorly graded SAND (SP)	3							4									
V-213	0.00	Poorly graded SAND (SP)	1						2.70	4									
V-213	0.55	Poorly graded SAND (SP)	2	17						1									
V-213	1.02	Poorly graded SAND (SP)	3							1									
V-214	1.50	Well-graded SAND (SW)	3	16					2.68	5									
V-216	0.00	Poorly graded SAND with gravel (SP)	1						2.70	3									
V-216	1.00	Poorly graded SAND (SP)	2							3									
V-217	0.66	Poorly graded SAND with gravel (SP)	1						2.70	3									
V-217	1.50	Poorly graded SAND with silt (SP-SM)	2							5									
V-218	0.00	Silty SAND (SM)	1						2.70	26									
V-218	1.05	Silty SAND (SM)	2							44									

SUMMARY OF LABORATORY TEST RESULTS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.3

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
V-219	0.35	Silty SAND (SM)	3	14					2.68	14									
V-219	1.10	Silty SAND (SM)	4	10						26									
V-220	0.20	Poorly graded SAND (SP)	2	19						2									
V-221	0.00	Poorly graded SAND (SP)	1	17						1									
V-223	0.00	Poorly graded SAND (SP)	1	16					2.68	3									
V-223	0.64	Poorly graded SAND (SP)	2	3						4									
V-224	0.80	Poorly graded SAND (SP)	2	18						1									
V-225	0.00	Poorly graded SAND (SP)	1	17						2									
V-225	0.35	Poorly graded SAND (SP)	2	12					2.68	3									
V-225	0.70	Poorly graded SAND with silt (SP-SM)	3	21						11									
V-227	0.79	Silty SAND (SM)	3	10					2.68	15			NP	NP					
V-227	2.57	Silty SAND (SM)	7	11					2.68	40			NP	NP					
V-227	3.39	Silty SAND (SM)	9	20						24									
V-228	0.45	Poorly graded SAND (SP)	2	11						1									
V-228	1.01	Silty SAND (SM)	3	17					2.68	36									
V-229	0.60	Poorly graded SAND (SP)	2	4						1									
V-229	1.20	Silty SAND (SM)	3						2.65	14									
V-229	1.20	Silty SAND (SM)		13															
V-230	0.70	Poorly graded SAND with silt (SP-SM)	2	10					2.68	6									
V-230	1.38	Poorly graded SAND (SP)	3	16						3									
V-233	0.00	Well-graded SAND (SW)	1							0									
V-233	1.24	Poorly graded SAND (SP)	3							2									
V-234	0.10	Poorly graded SAND (SP)	2	3						0									
V-234	0.60	Poorly graded SAND (SP)	3	3					2.68	0									
V-235	0.00	Poorly graded SAND (SP)	1	4						1									
V-235	0.20	Poorly graded SAND (SP)	2	2					2.63	1									
V-235	1.50	Poorly graded SAND (SP)	3	4						0									
V-236	0.00	Poorly graded SAND with gravel (SP)	1	10						1									
V-236	0.25	Fat CLAY with sand (CH)	4	30	19					81			51	31			16	1.1	
V-236	1.15	Fat CLAY (CH)	7	10	20				2.76	99			51	27			24	1.1	

SUMMARY OF LABORATORY TEST RESULTS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.4

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
V-236	1.50	Fat CLAY (CH)	8												0.40				
V-236	2.10	Fat CLAY (CH)	10												0.40				
V-236	2.65	Lean CLAY (CL)	12	30						86			49	27					
V-237	0.30	Poorly graded SAND with silt (SP-SM)	3	10						7									
V-237	0.72	Silty SAND (SM)	4	9					2.68	29			NP	NP					
V-239	0.00	Well-graded SAND with silt and gravel	1	8						11									
		(SW-SM)																	
V-239	0.28	Silty SAND (SM)	2	9					2.68	40			NP	NP					
V-240	0.00	Well-graded GRAVEL with sand (GW)	1	2						0									
V-300	0.30	Poorly graded SAND with gravel (SP)	2						2.67	1									
V-300	0.84	Poorly graded SAND with silt (SP-SM)	3	4						10									
V-300	2.00	Poorly graded SAND (SP)	6							2		2.7							
V-301	0.00	Poorly graded SAND (SP)	1	3						1									
V-301	0.40	Poorly graded SAND (SP)	2						2.70	4									
V-301	1.50	Poorly graded SAND (SP)	3							2									
V-302	0.13	Poorly graded SAND (SP)	1						2.70	2									
V-302	0.55	Poorly graded SAND (SP)	2	6						1									
V-302	1.78	Poorly graded SAND (SP)	5						2.69	1									
V-303	0.00	Poorly graded SAND (SP)	1						2.70	1		1.6							
V-303	1.15	Silty SAND (SM)	4							26									
V-303	1.60	Poorly graded SAND (SP)	5	20						2									
V-304	0.00	Poorly graded SAND with gravel (SP)	1						2.70	1									
V-304	0.30	Poorly graded SAND (SP)	2							2									
V-304	2.00	Poorly graded SAND (SP)	3	18						1									
V-305	0.30	Poorly graded SAND (SP)	2						2.70	2									
V-305	1.00	Poorly graded SAND (SP)	6							1									
V-305	2.00	Poorly graded SAND (SP)	7	22						2									
V-306	0.15	Poorly graded SAND with gravel (SP)	1						2.67	1									
V-306	0.80	Poorly graded SAND with gravel (SP)	2							3									
V-306	2.00	Poorly graded SAND (SP)	3	17						2									

SUMMARY OF LABORATORY TEST RESULTS
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.5

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
V-307	0.15	Poorly graded SAND with gravel (SP)	1						2.70	1									
V-307	2.00	Poorly graded SAND (SP)	2							1									
V-308	0.15	Poorly graded SAND (SP)	1						2.68	1		1.36							
V-308	0.50	Poorly graded SAND (SP)	3							2									
V-308	2.00	Poorly graded SAND (SP)	4							1									
V-309	0.30	Poorly graded SAND (SP)	2						2.70	2									
V-309	2.00	Poorly graded SAND (SP)	3							2									
V-310	0.00	Poorly graded SAND (SP)	1							1									
V-310	0.40	Poorly graded SAND (SP)	2						2.70	3									
V-310	1.00	Poorly graded SAND (SP)	4							3									
V-311	0.15	Poorly graded SAND (SP)	1	17						2									
V-311	0.59	Poorly graded SAND with gravel (SP)	2						2.70	1		1.2							
V-311	1.70	Poorly graded SAND (SP)	4							2									

SUMMARY OF LABORATORY TEST RESULTS

SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS,

FIGURE E-1.6

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	INTACT THERMAL CONDUCTIVITY W/(m·K)	Max e THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa	
														LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress
V-WTG-10	0.00	POORLY GRADED SAND		16						1			3.00						
V-WTG-10	1.20			24						18			2.99						
V-WTG-10	2.00			16						21			2.31						
V-WTG-10	2.90	POORLY GRADED SAND with SILT		14						6			3.07						
V-WTG-10	4.20	POORLY GRADED SAND		4						1			3.18						
V-WTG-10	5.20	POORLY GRADED SAND								2									
V-WTG-11	0.20	POORLY GRADED SAND								0									
V-WTG-11	0.74	POORLY GRADED SAND		21						2			2.77						
V-WTG-11	1.74	POORLY GRADED SAND		19						2			2.73						
V-WTG-11	2.74	POORLY GRADED SAND		18						2			2.92						
V-WTG-11	3.74	POORLY GRADED SAND		20						2			2.88						
V-WTG-11	4.70	SANDY SILT		25	20				2.70	59			1.82	22	2			250	100
V-WTG-12	0.40			3															
V-WTG-12	1.10	POORLY GRADED SAND								1									
V-WTG-12	1.95	POORLY GRADED SAND		14						1			3.31						
V-WTG-12	2.95	POORLY GRADED SAND								1									
V-WTG-12	3.95	POORLY GRADED SAND		16						1			3.22						
V-WTG-12	4.95	POORLY GRADED SAND		17						1			3.28						
V-WTG-12	5.80	POORLY GRADED SAND		12						1			3.31						
V-WTG-13	0.28	POORLY GRADED SAND		17						1			3.18						
V-WTG-13	1.28	POORLY GRADED SAND with SILT		22						6			2.40						
V-WTG-13	2.28	POORLY GRADED SAND		23					2.70	4			2.52						
V-WTG-13	3.28	POORLY GRADED SAND with SILT		22					2.70	7			2.36						
V-WTG-13	4.28	POORLY GRADED SAND		23						5			2.54						
V-WTG-14	0.35	POORLY GRADED SAND								1									
V-WTG-14	0.50	POORLY GRADED SAND		17					2.70	4			2.56						
V-WTG-14	1.50	POORLY GRADED SAND		17						1			3.17						
V-WTG-14	2.50	POORLY GRADED SAND		18						2			2.91						
V-WTG-14	3.50	POORLY GRADED SAND		15						1			2.99						
V-WTG-15a	0.00	POORLY GRADED SAND								0									

SUMMARY OF LABORATORY TEST RESULTS
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts,

FIGURE E-1.7

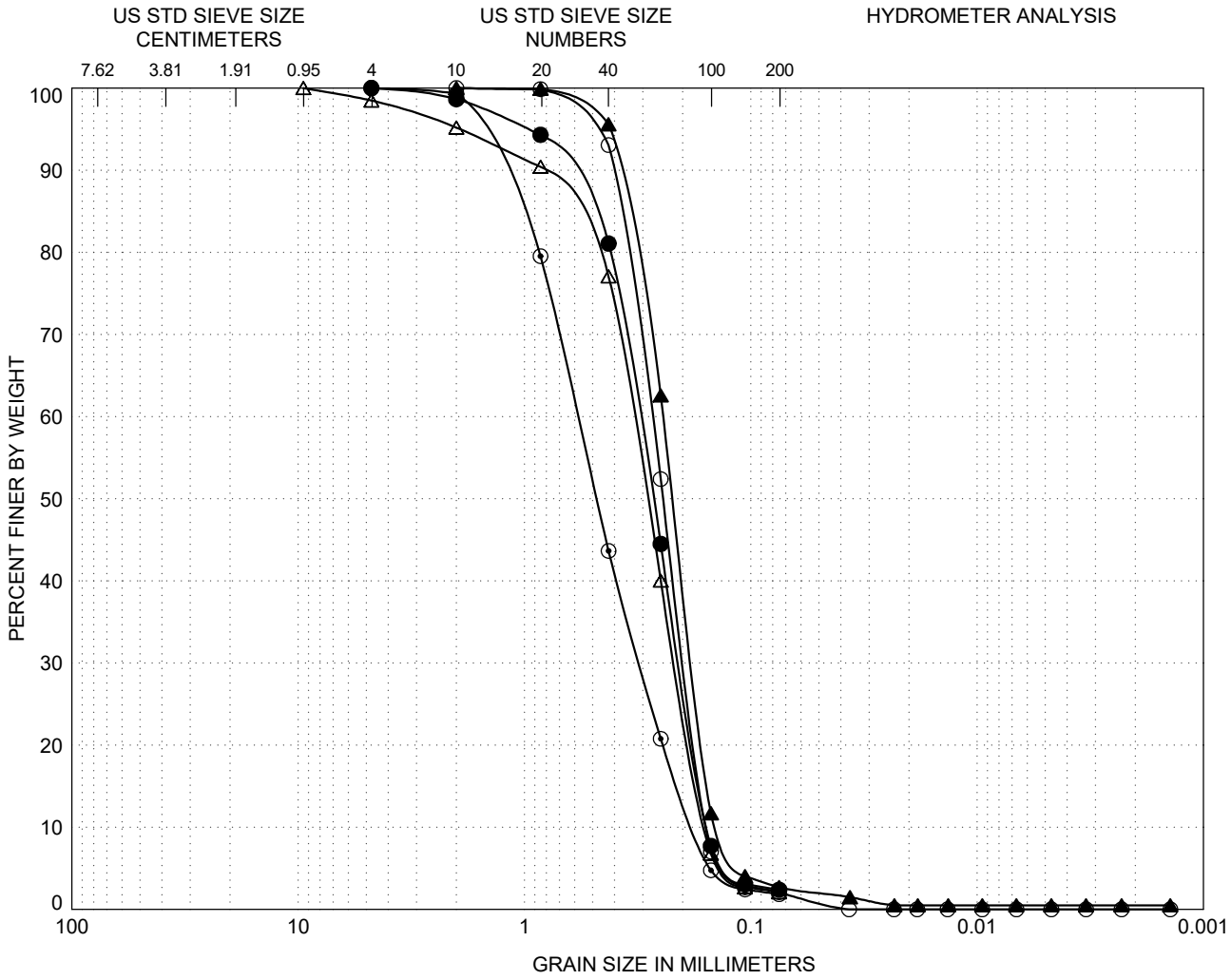
LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	INTACT THERMAL CONDUCTIVITY W/(m·K)	Max e THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa	
														LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress
V-WTG-15a	1.30	LEAN CLAY with SAND		16	22				2.70	80			1.47	27	10			190	38
V-WTG-15a	2.40	POORLY GRADED SAND with SILT		14					2.66	9			2.91						
V-WTG-15a	2.60	POORLY GRADED SAND								3									
V-WTG-15a	3.30	LEAN CLAY with SAND		16	21				2.70	76			1.56	26	9			180	85
V-WTG-15a	4.30	SILTY CLAY with SAND		15	22				2.70	73			1.44	22	5			160	110
V-WTG-16	0.30	POORLY GRADED SAND								1									
V-WTG-16	0.93	POORLY GRADED SAND		16						2			2.90						
V-WTG-16	1.93	POORLY GRADED SAND		19						2			2.78						
V-WTG-16	2.80	POORLY GRADED SAND		16						1			3.01						
V-WTG-16	3.93	POORLY GRADED SAND		20						2			2.68						
V-WTG-16	4.93	POORLY GRADED SAND		20						2			2.64						
V-WTG-17	0.70	POORLY GRADED SAND		22						2			2.69						
V-WTG-17	1.65	SILTY, CLAYEY SAND		10	24				2.70	46			1.83	17	5			140	42
V-WTG-17	2.60	LEAN CLAY with SAND		18	22				2.68	71			1.40	26	9			100	65
V-WTG-18	0.00	POORLY GRADED SAND								1									
V-WTG-18	1.10			9					2.70	33			2.62						
V-WTG-18	2.10	SANDY LEAN CLAY		14	22				2.70	52			2.14	23	9			70	55
V-WTG-18	3.10	SANDY SILTY CLAY		13	22				2.70	64			1.64	23	7			200	78

LAB SUMMARY _N:\PROJECTS\02_2018\02_1803_1431_DWW_SFEX_REVOLUTION_WIND\EXPLORATIONS\GINT\2019\FA19V.GPJ_ 3/29/19 07:56 PM

FIGURE E-1.8

SUMMARY OF LABORATORY TEST RESULTS

DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts,

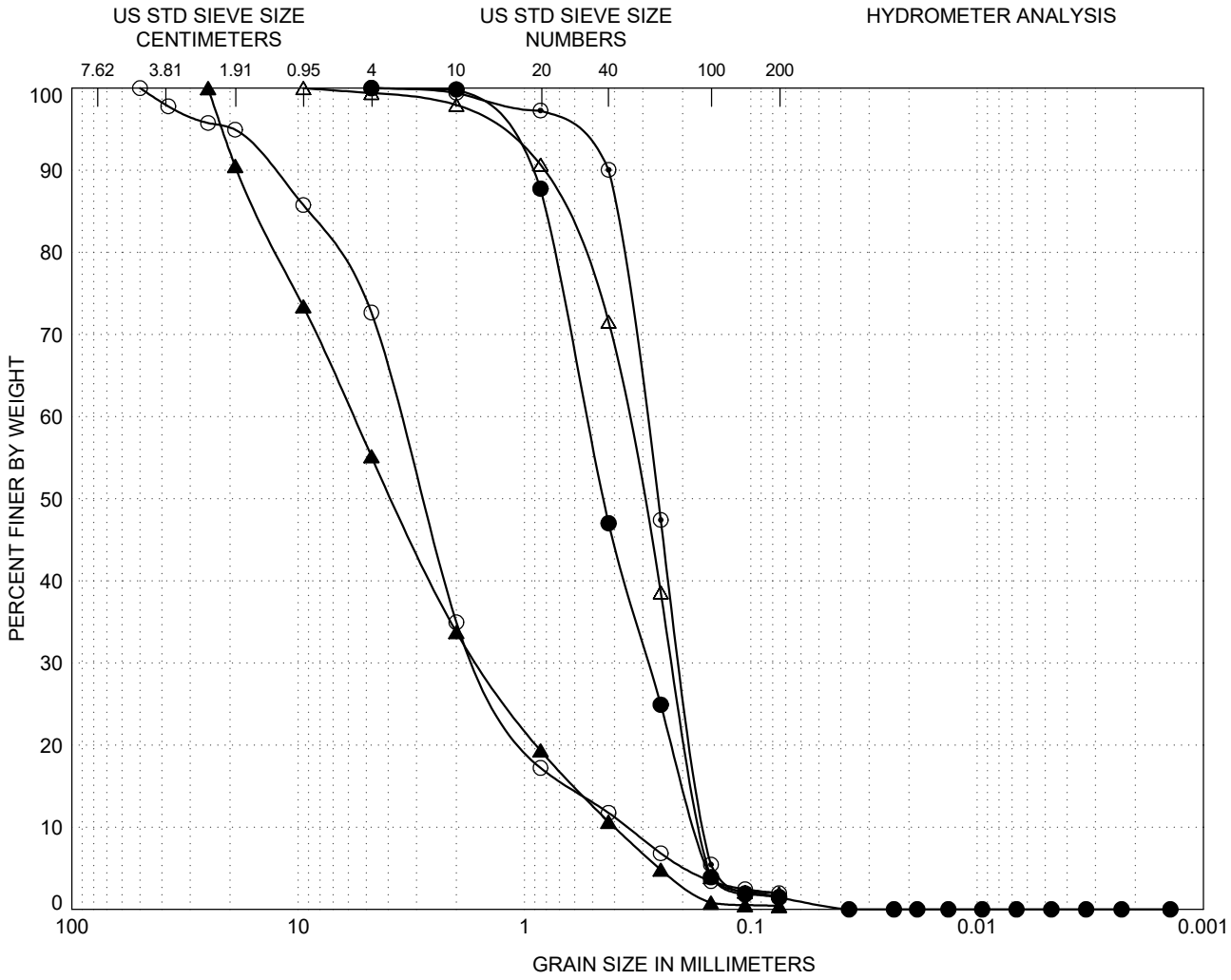


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-100	0.45	POORLY GRADED SAND (SP) fine sand	0.9	1.8
●	V-100	1.95	POORLY GRADED SAND (SP) fine sand	0.9	2.0
△	V-100	3.55	POORLY GRADED SAND (SP) fine sand	0.9	2.1
▲	V-101	1.05	POORLY GRADED SAND (SP) fine sand	1.0	1.8
⊙	V-101	2.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	3.3

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.1

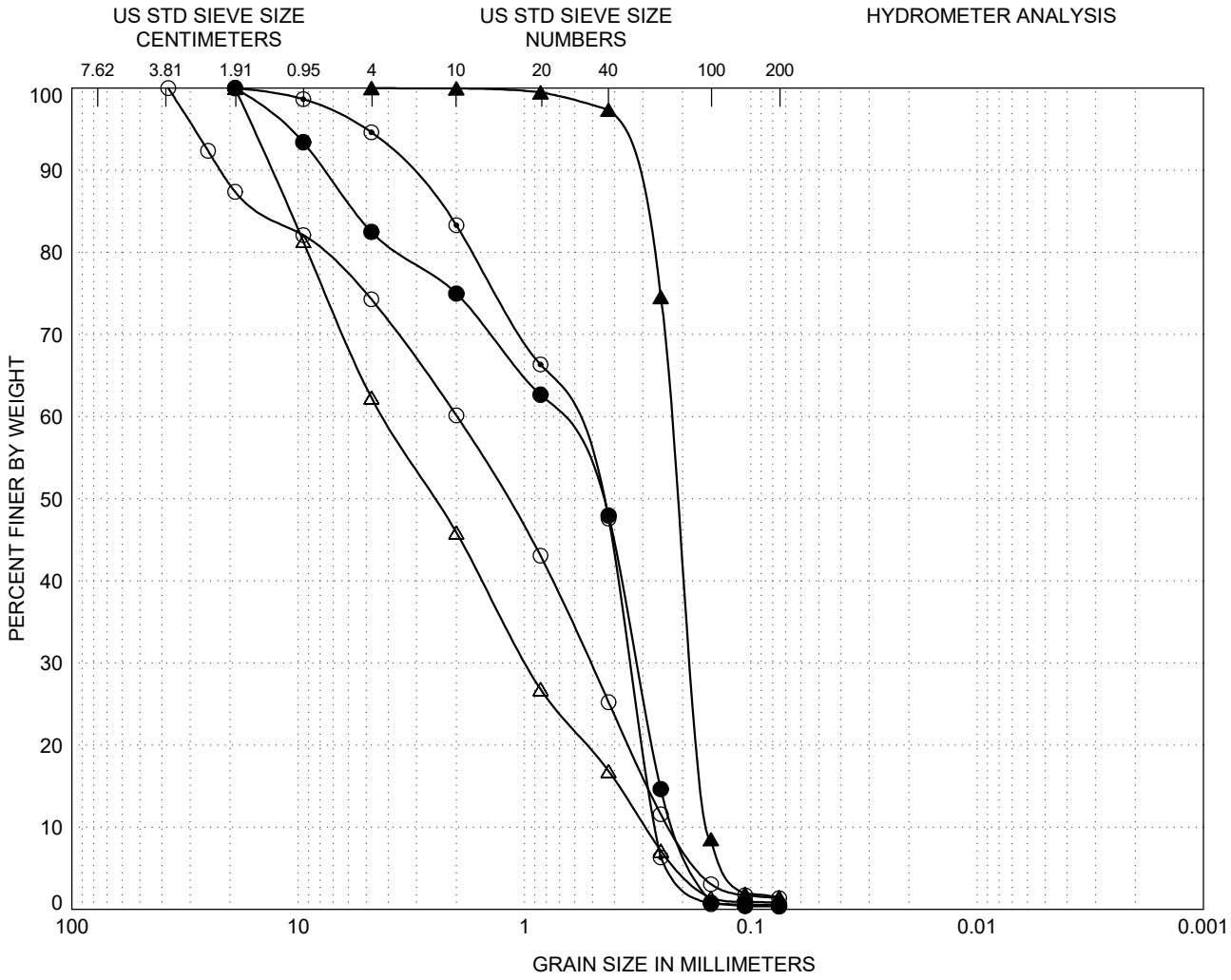


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-101	2.80	WELL-GRADED SAND with GRAVEL (SW) medium to coarse sand, fine gravel	2.0	10.1
●	V-102	1.10	POORLY GRADED SAND (SP) fine to medium sand	0.9	3.0
△	V-104	0.00	POORLY GRADED SAND (SP) fine sand	0.8	2.2
▲	V-104	0.48	WELL-GRADED SAND with GRAVEL (SW) medium to coarse sand, fine gravel	1.1	14.3
⊙	V-105	0.00	POORLY GRADED SAND (SP) fine sand	0.9	1.8

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.2

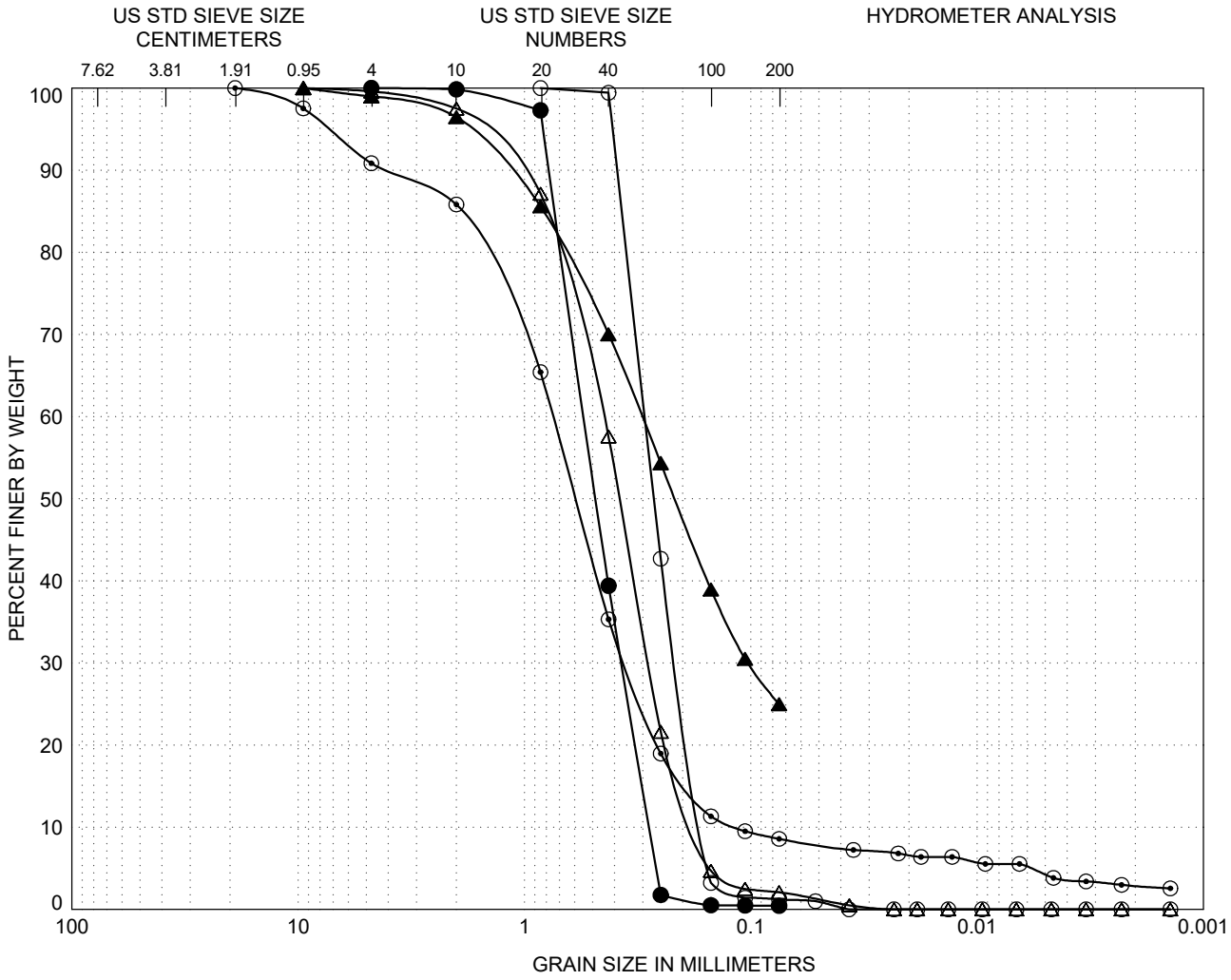


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-105	0.43	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine to coarse gravel	0.6	8.7
●	V-106	0.00	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.6	3.6
△	V-106	0.75	POORLY GRADED SAND with GRAVEL (SP) medium to coarse sand, fine gravel	0.8	14.4
▲	V-107	0.45	POORLY GRADED SAND (SP) fine sand	0.9	1.5
⊙	V-108	0.10	POORLY GRADED SAND (SP) fine to medium sand	0.7	2.6

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.3

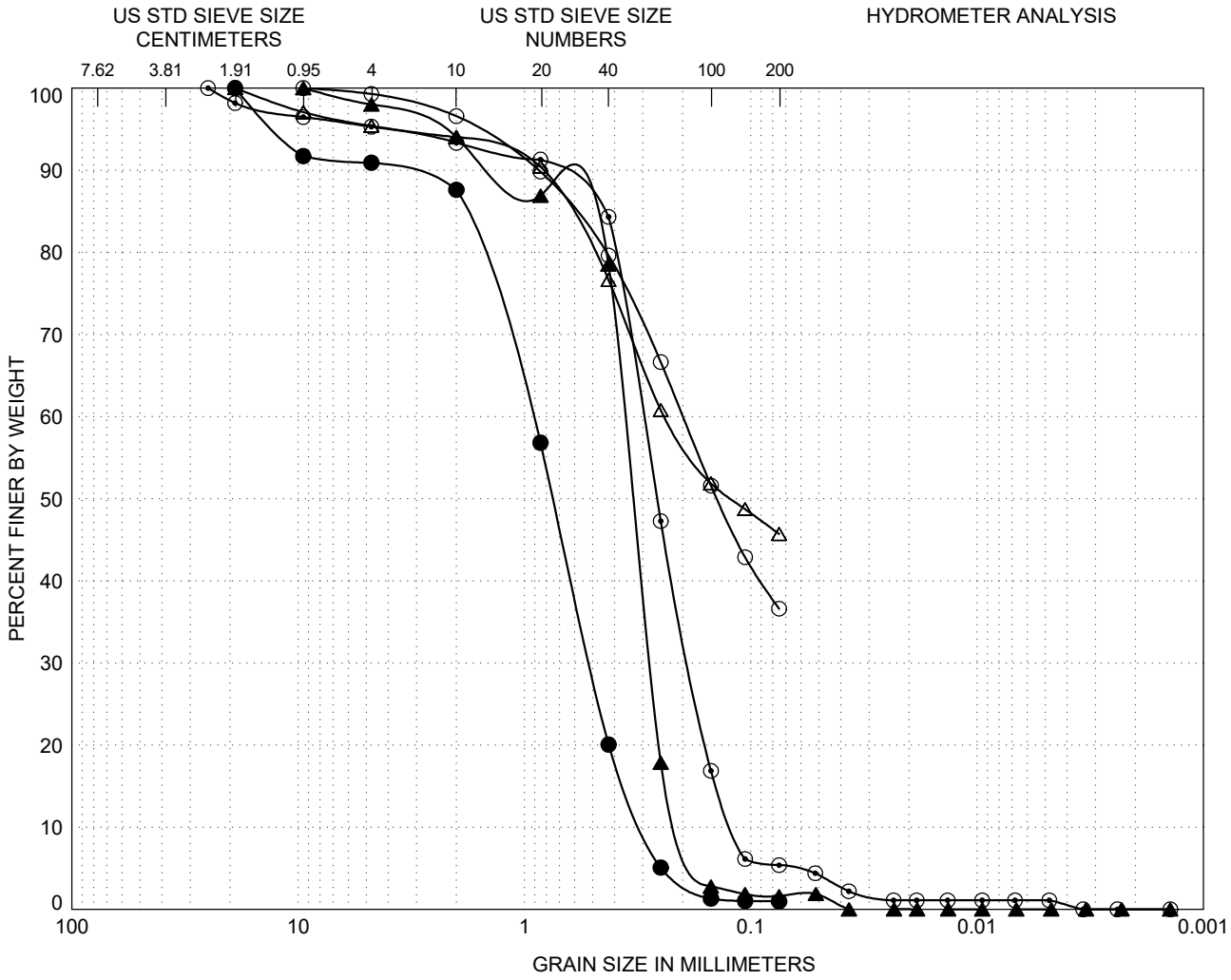


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-110	0.65	POORLY GRADED SAND (SP) fine sand	0.9	1.8
●	V-110	1.20	POORLY GRADED SAND (SP) fine to medium sand	0.9	1.9
△	V-111	0.45	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.6
▲	V-113	0.50			
⊙	V-113	0.51	WELL-GRADED SAND with SILT (SW-SM) fine to medium sand, non-plastic silt	1.5	6.5

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.4

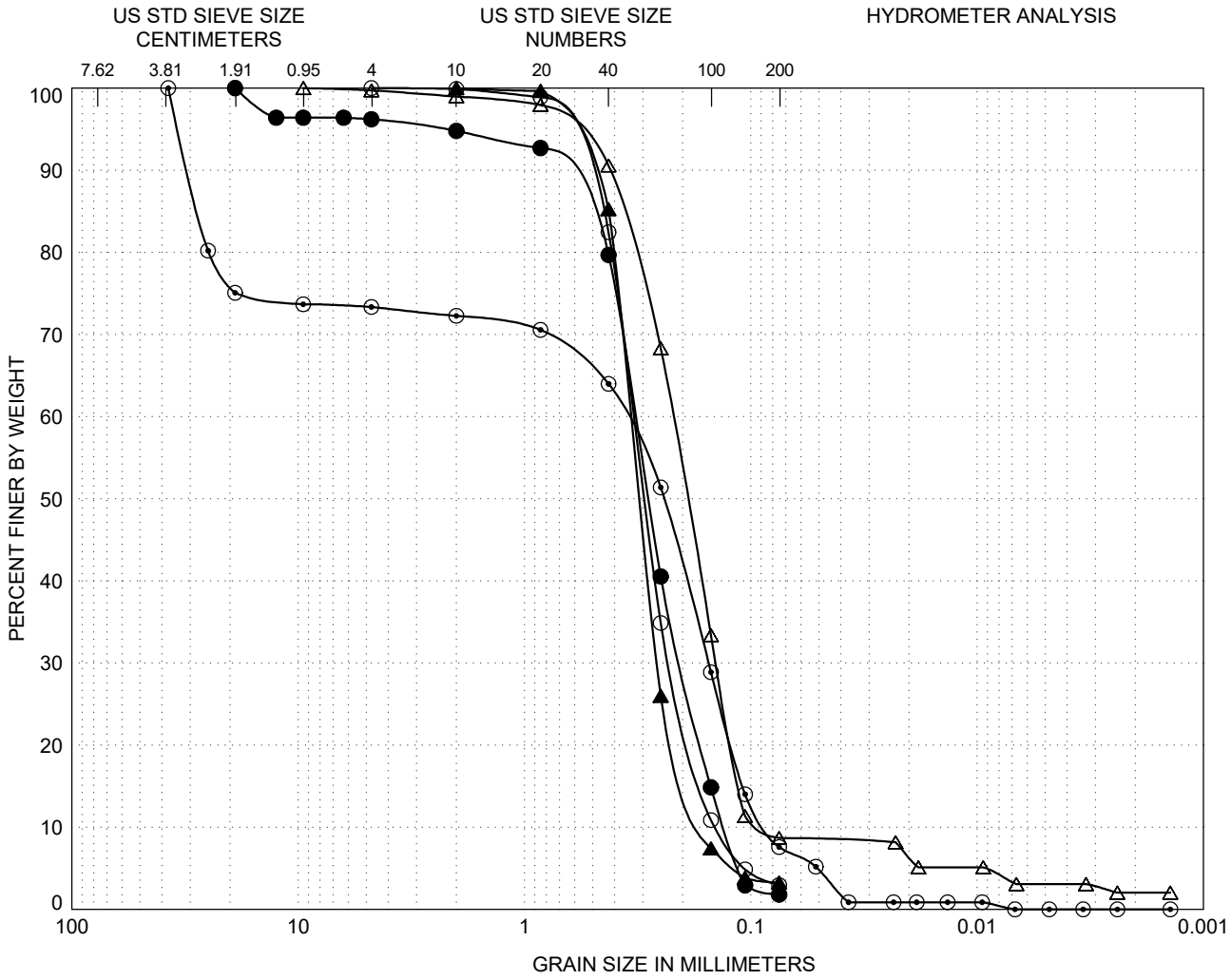


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-113	0.70	*Silty SAND (SM)*		
●	V-115	0.20	POORLY GRADED SAND (SP) medium sand	1.0	3.1
△	V-115	0.37	*Clayey SAND (SC)*		
▲	V-122	1.10	POORLY GRADED SAND (SP) fine sand	1.1	1.9
⊙	V-200	0.57	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.0	2.5

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.5

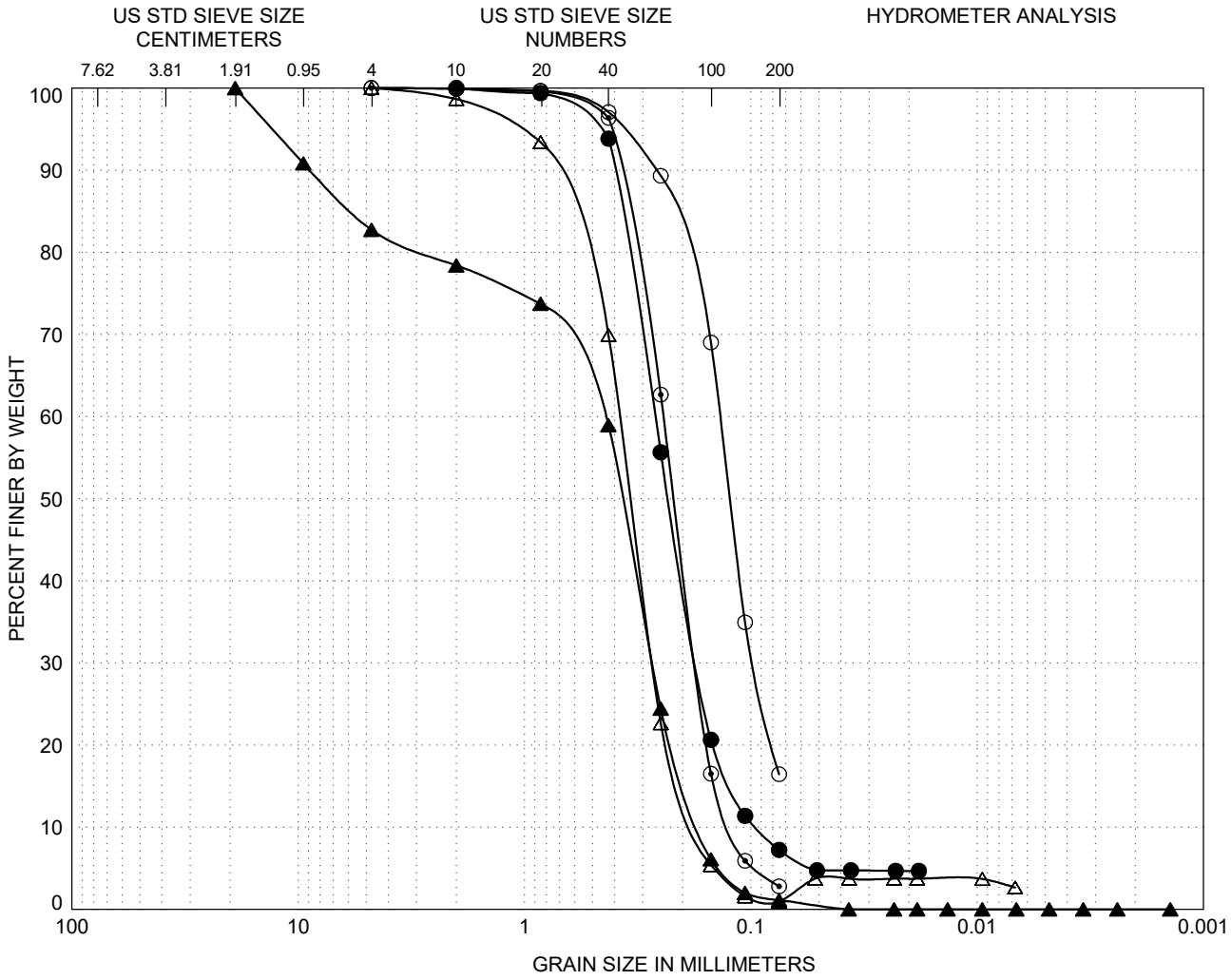


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-200	1.25	POORLY GRADED SAND (SP) fine sand	1.1	2.3
●	V-201	0.14	POORLY GRADED SAND (SP) fine sand	1.0	2.5
△	V-201	0.44	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.0	2.5
▲	V-201	0.52	POORLY GRADED SAND (SP) fine sand	1.2	2.1
⊙	V-202	0.15	POORLY GRADED SAND with SILT and GRAVEL (SP-SM) fine sand, non-plastic silt, coarse gravel	0.8	4.2

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.6

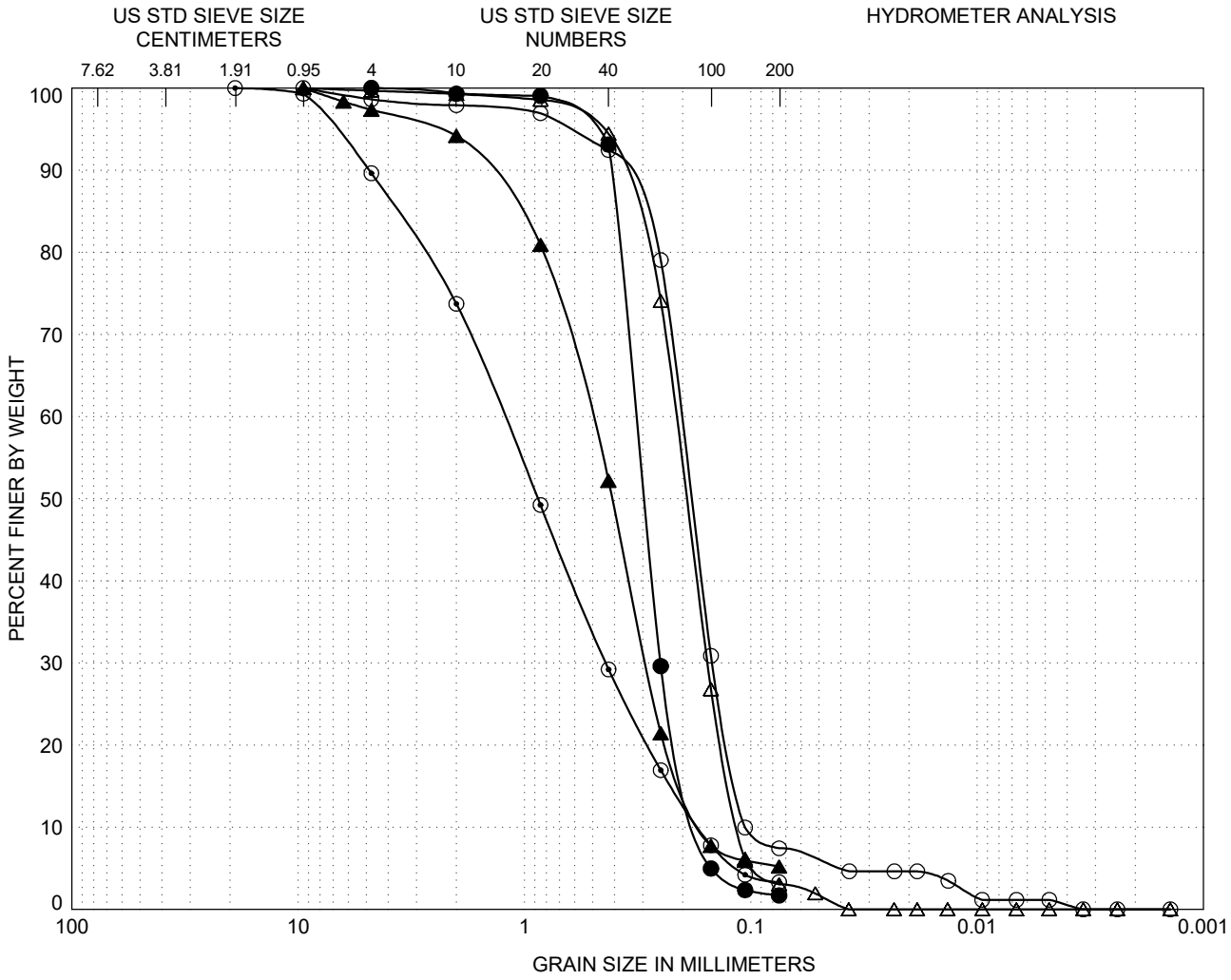


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-202	0.70	*Silty SAND (SM)*		
●	V-202	0.87	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.2	2.8
△	V-203	0.00	POORLY GRADED SAND (SP) fine sand	1.1	2.2
▲	V-203	0.35	POORLY GRADED SAND with GRAVEL (SP) fine sand, fine gravel	1.0	2.7
⊙	V-203	1.40	POORLY GRADED SAND (SP) fine sand	1.0	2.0

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.7

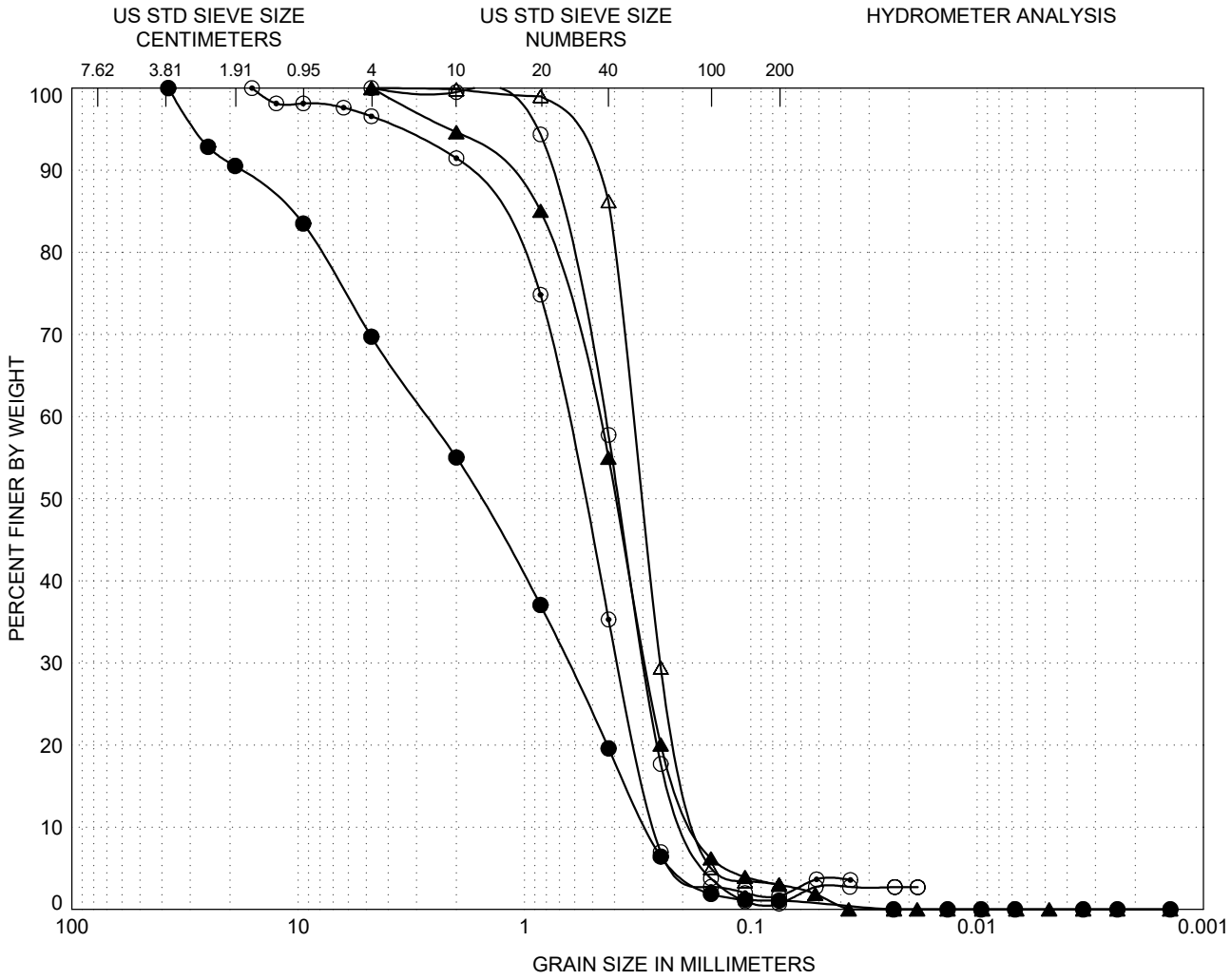


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-204	0.00	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.0	1.9
●	V-204	1.50	POORLY GRADED SAND (SP) fine sand	1.2	1.9
△	V-205	0.30	POORLY GRADED SAND (SP) fine sand	1.0	1.9
▲	V-205	1.10	POORLY GRADED SAND with SILT (SP-SM) fine to medium sand, non-plastic silt	1.0	3.1
⊙	V-205	1.60	POORLY GRADED SAND (SP) fine to medium sand	0.9	7.3

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.8

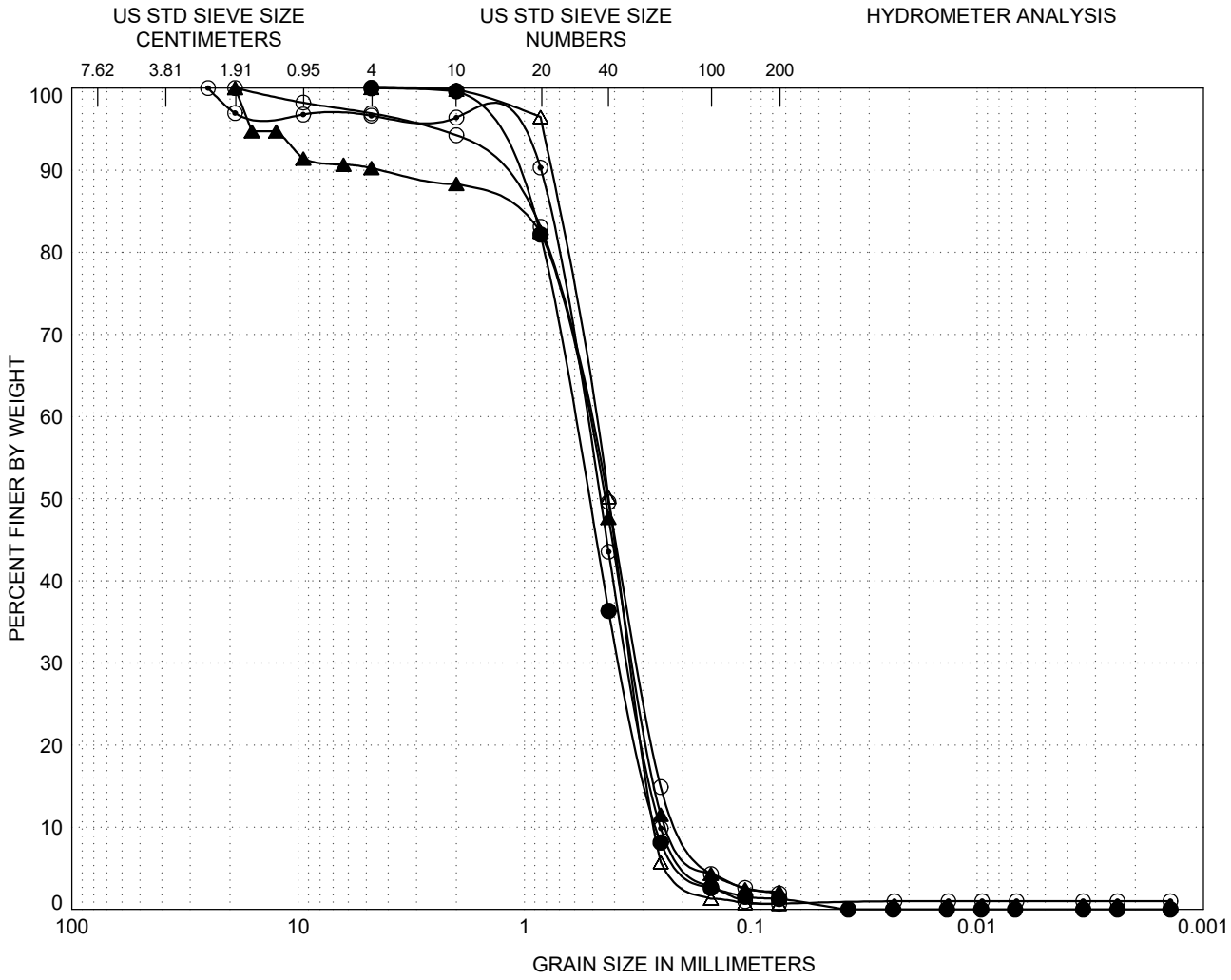


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-206	0.00	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.4
●	V-206	0.42	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.5	9.3
△	V-206	1.50	POORLY GRADED SAND (SP) fine sand	1.1	2.0
▲	V-207	0.55	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.8
⊙	V-207	1.20	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.5

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.9

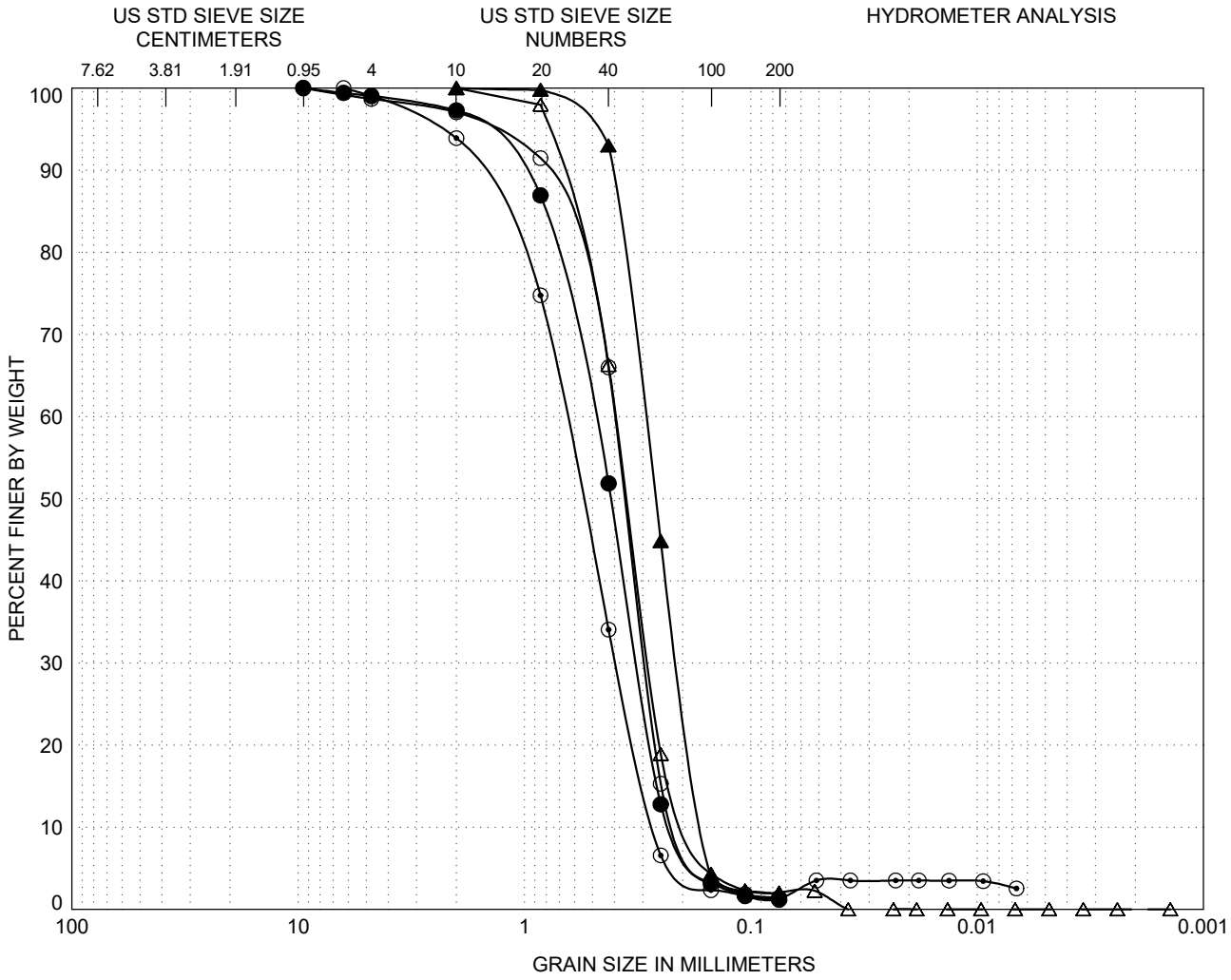


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-207	1.50	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.7
●	V-208	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.3
△	V-208	1.30	POORLY GRADED SAND (SP) fine to medium sand	0.9	1.9
▲	V-208	2.50	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.4
⊙	V-209	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.2

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.10

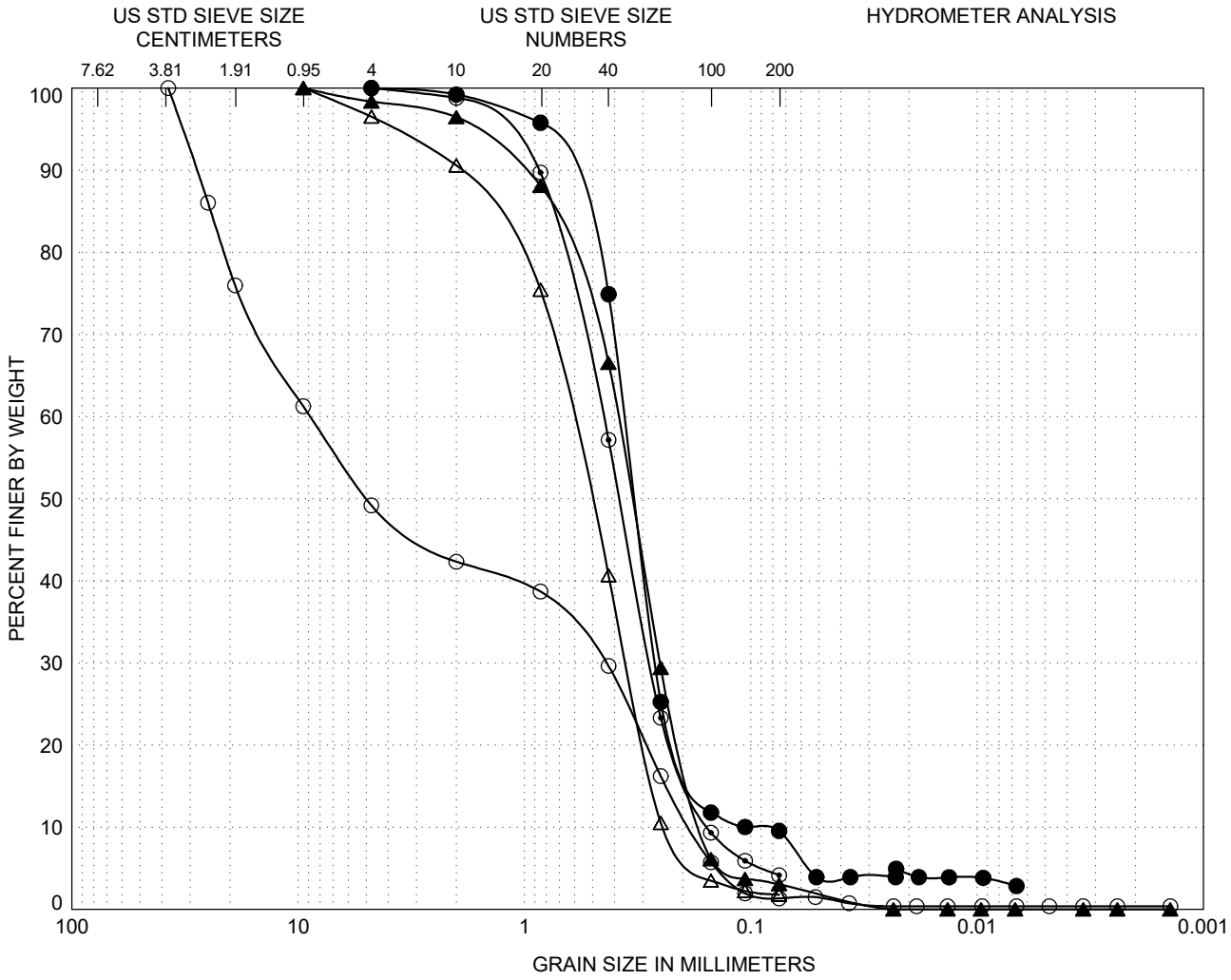


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-209	1.30	POORLY GRADED SAND (SP) fine to medium sand	1.1	2.0
●	V-209	2.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.3
△	V-210	0.00	POORLY GRADED SAND (SP) fine to medium sand	1.1	2.2
▲	V-210	0.90	POORLY GRADED SAND (SP) fine sand	0.9	1.8
⊙	V-211	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.5

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.11

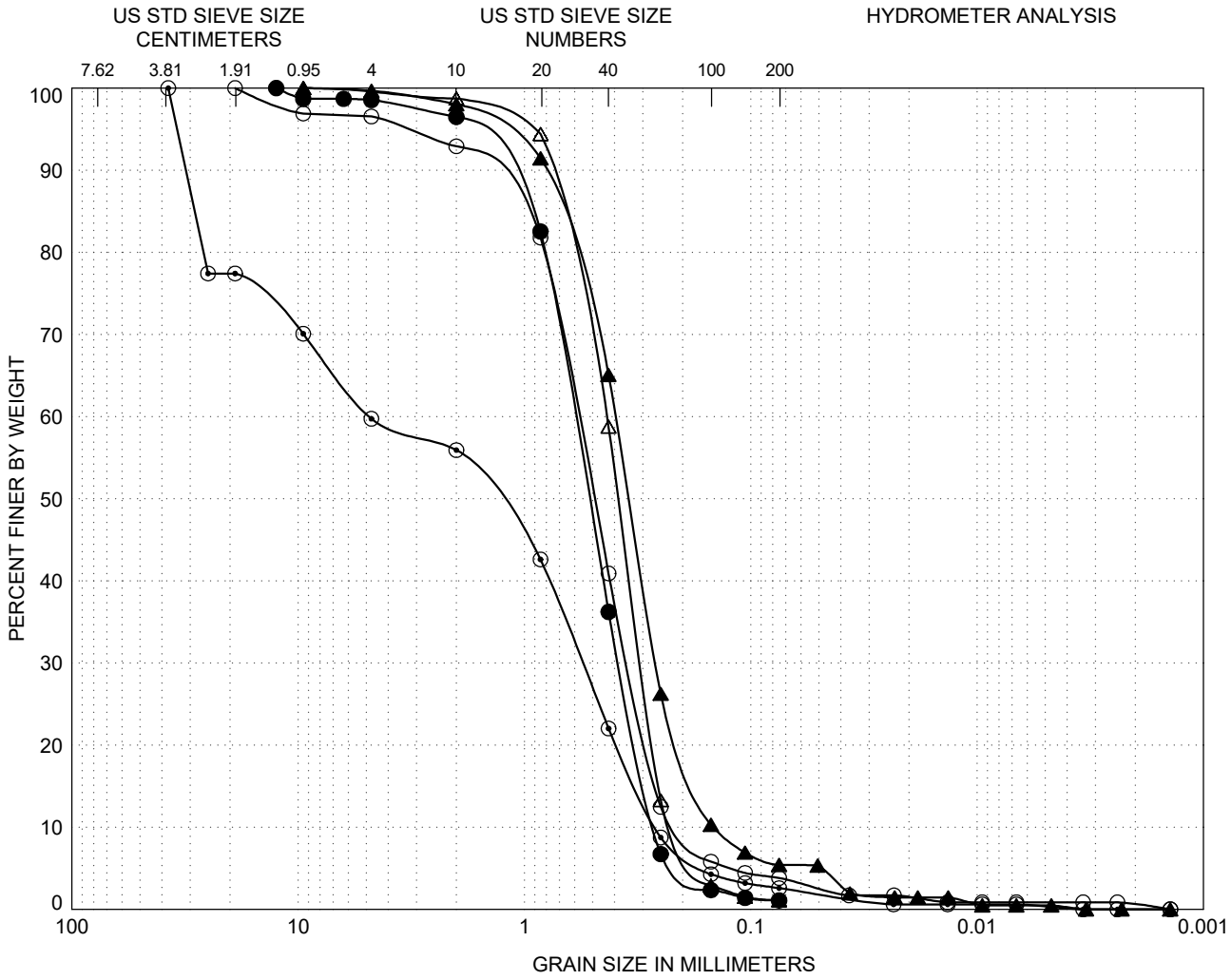


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-211	0.35	POORLY GRADED GRAVEL with SAND (GP) fine to coarse gravel, fine to medium sand	0.1	47.8
●	V-211	0.82	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.8	3.5
△	V-211	1.86	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.6
▲	V-212	0.33	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.4
⊙	V-212	1.00	POORLY GRADED SAND (SP) fine to medium sand	1.1	2.9

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.12

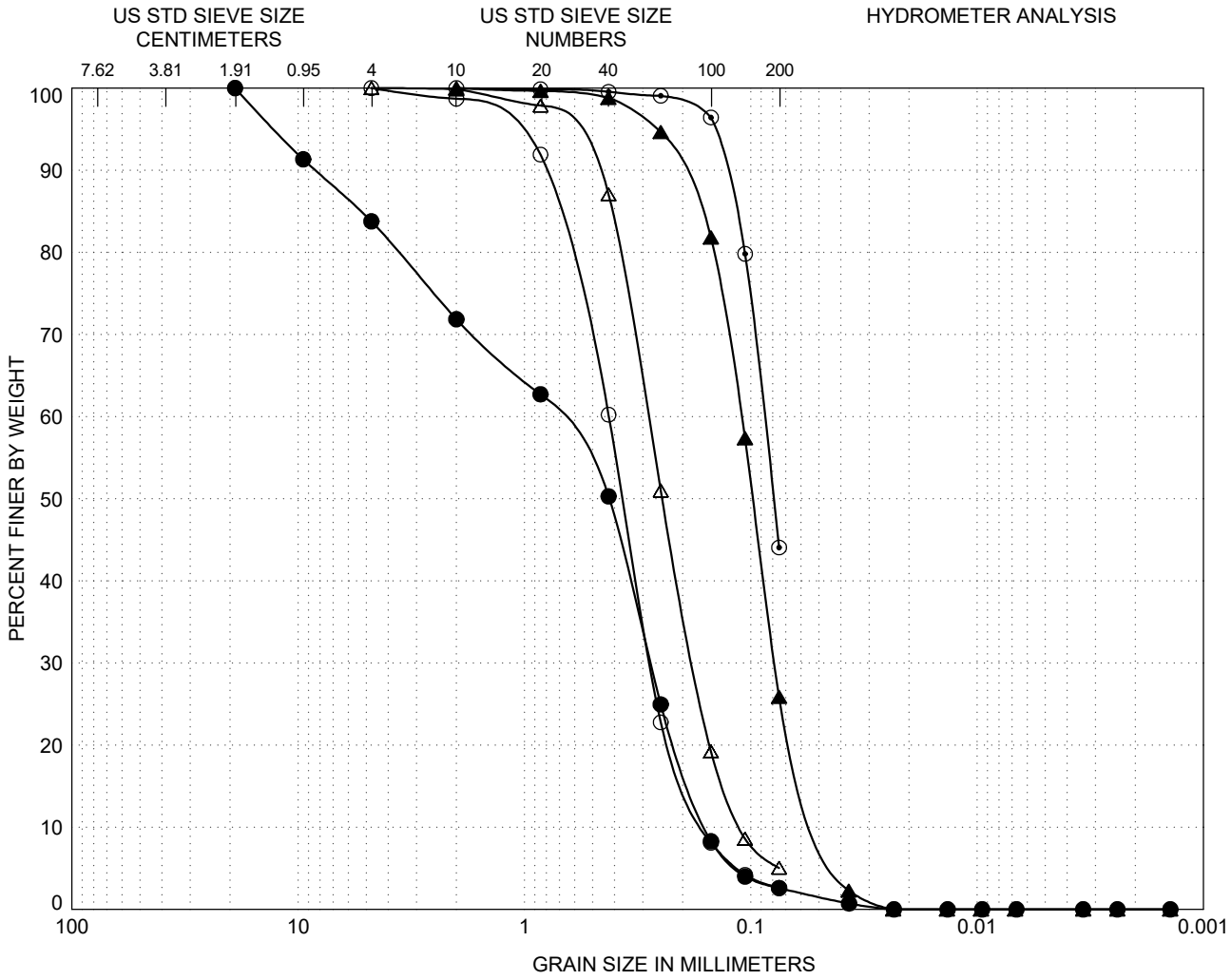


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-213	0.00	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.8
●	V-213	0.55	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.3
△	V-213	1.02	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.0
▲	V-214	1.50	POORLY GRADED SAND with SILT (SP-SM) fine to medium sand, non-plastic silt	1.2	2.7
⊙	V-216	0.00	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine to coarse gravel	0.2	18.4

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.13

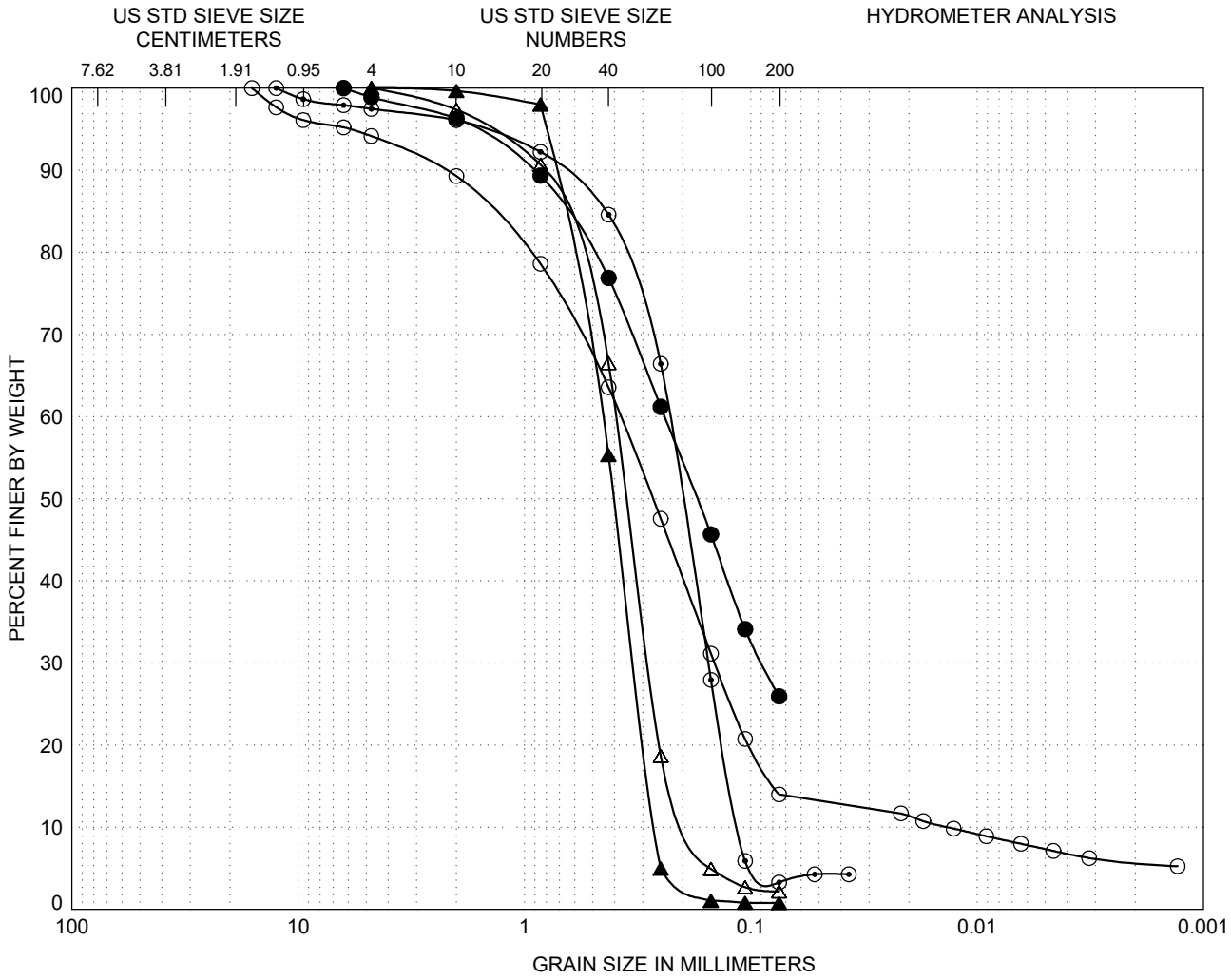


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-216	1.00	POORLY GRADED SAND (SP) fine to medium sand	1.1	2.6
●	V-217	0.66	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.7	4.6
△	V-217	1.50	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.0	2.6
▲	V-218	0.00	*Silty SAND (SM)*	1.2	2.4
⊙	V-218	1.05	*Silty SAND (SM)*		

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.14

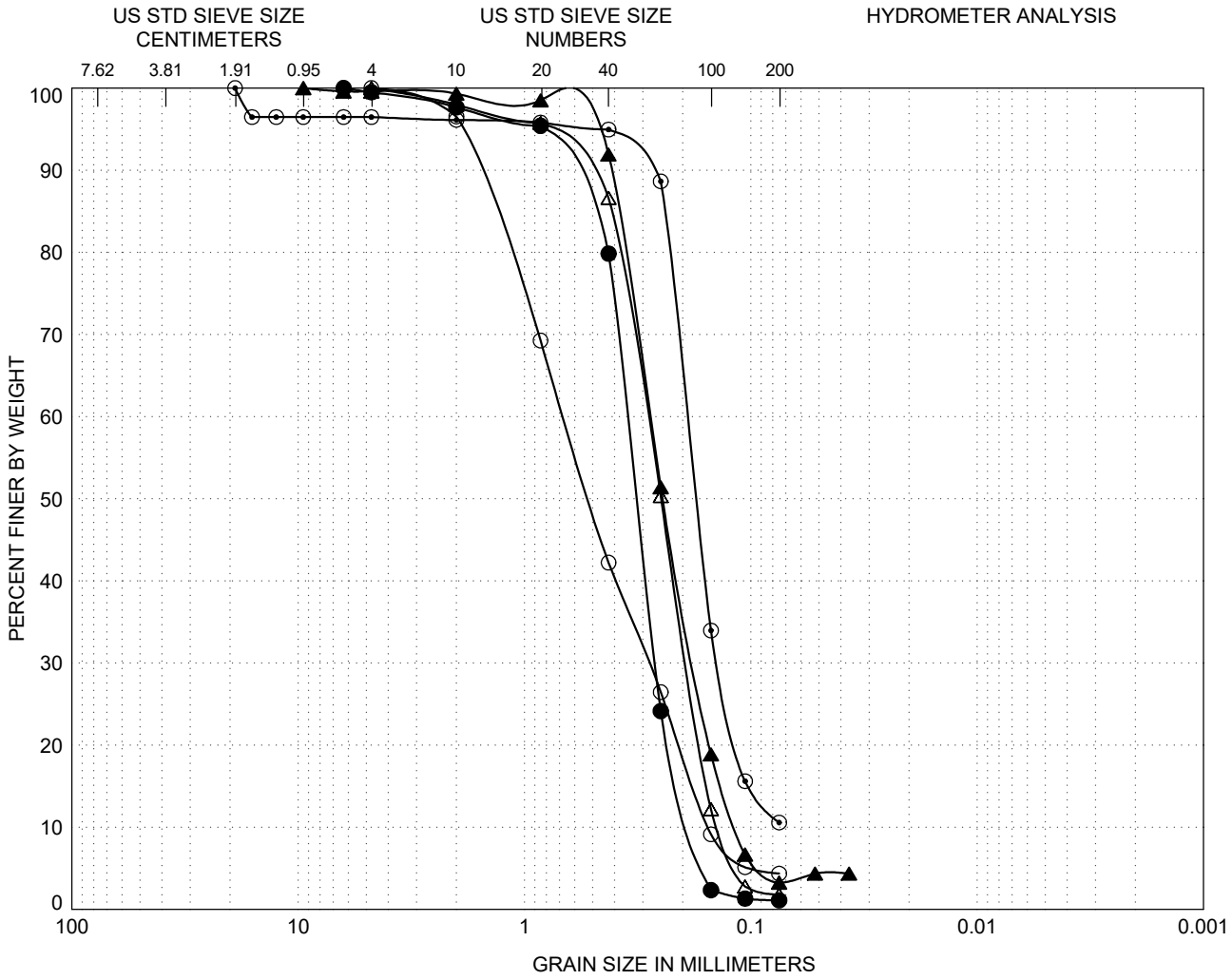


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-219	0.35	SILTY SAND (SM) fine to medium sand, non-plastic silt	4.1	28.1
●	V-219	1.10	*Silty SAND (SM)*		
△	V-220	0.20	POORLY GRADED SAND (SP) fine to medium sand	1.1	2.2
▲	V-221	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	1.7
⊙	V-223	0.00	POORLY GRADED SAND (SP) fine sand	0.9	2.0

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.15

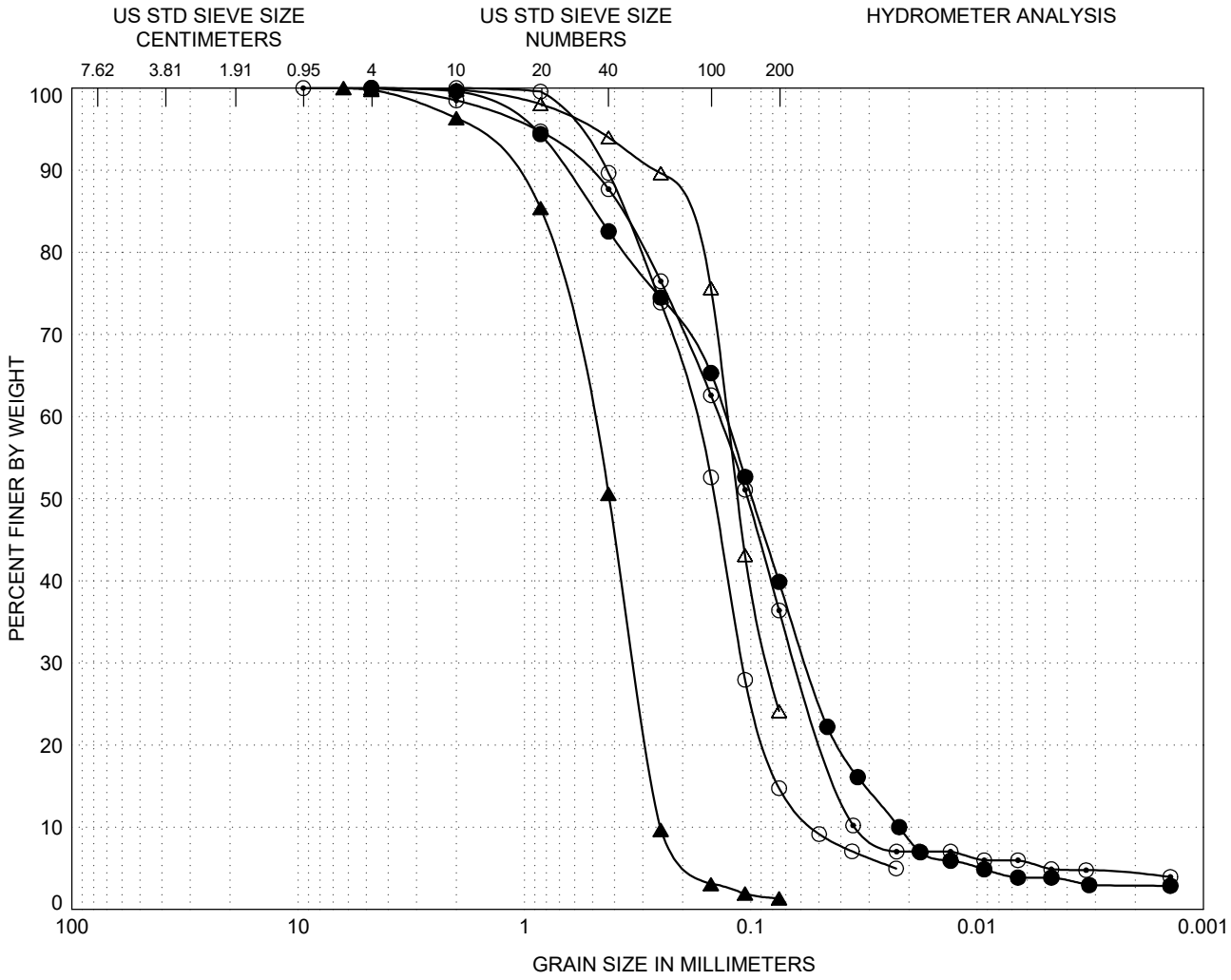


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-223	0.64	POORLY GRADED SAND (SP) fine to medium sand	0.8	4.4
●	V-224	0.80	POORLY GRADED SAND (SP) fine sand	1.1	2.0
△	V-225	0.00	POORLY GRADED SAND (SP) fine sand	0.9	2.1
▲	V-225	0.35	POORLY GRADED SAND (SP) fine sand	1.0	2.4
⊙	V-225	0.70	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.4	2.7

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.16

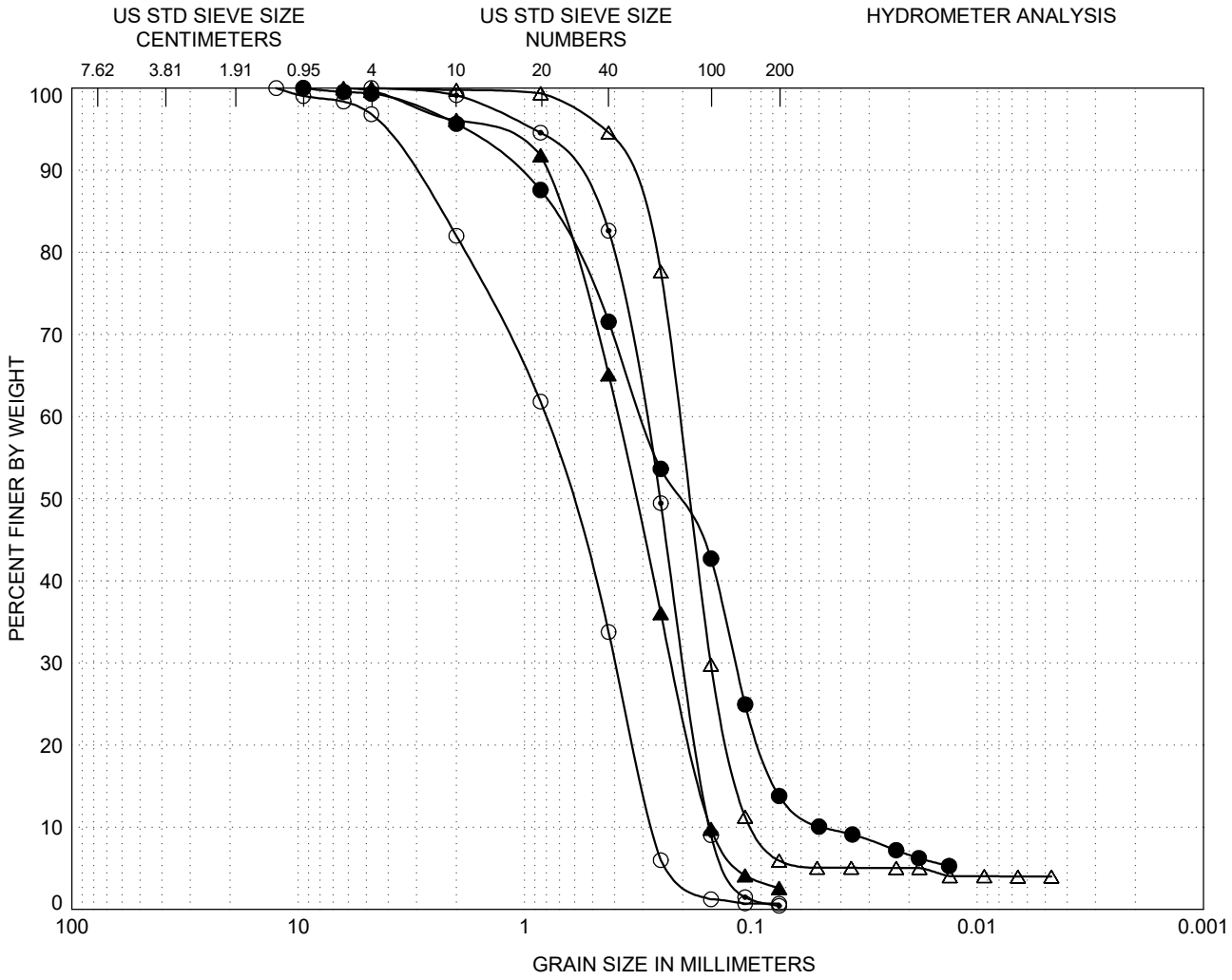


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-227	0.79	SILTY SAND (SM) fine sand, non-plastic silt	1.3	3.4
●	V-227	2.57	SILTY SAND (SM) fine sand, non-plastic silt	1.1	5.9
△	V-227	3.39	*Silty SAND (SM)*		
▲	V-228	0.45	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.0
⊙	V-228	1.01	*Silty SAND (SM)*	0.8	4.0

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.17

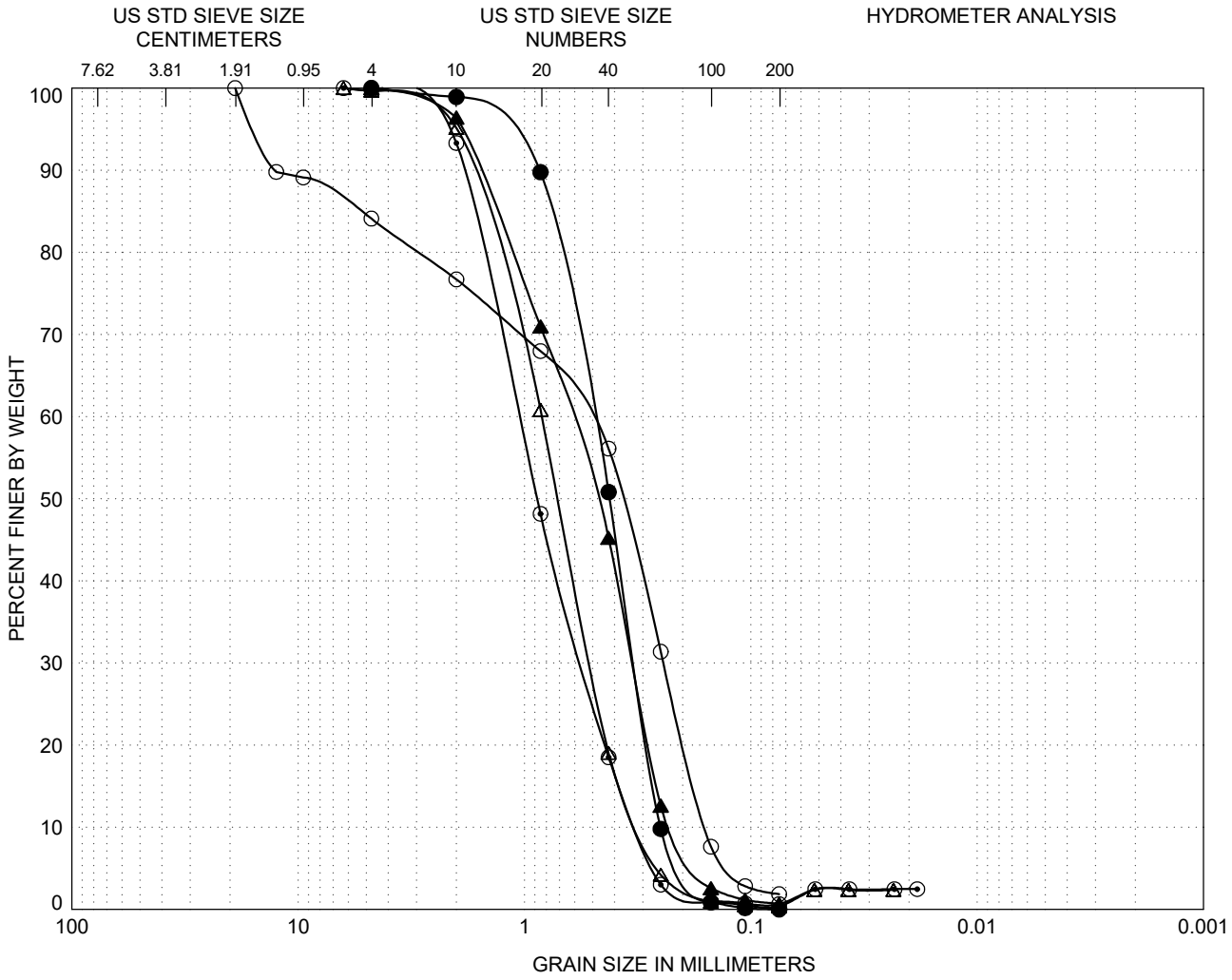


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-229	0.60	POORLY GRADED SAND (SP) fine to medium sand	0.7	3.0
●	V-229	1.20	SILTY SAND (SM) fine sand, non-plastic silt	0.9	6.2
△	V-230	0.70	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	1.1	2.1
▲	V-230	1.38	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.6
⊙	V-233	0.00	POORLY GRADED SAND (SP) fine sand	0.9	1.9

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.18

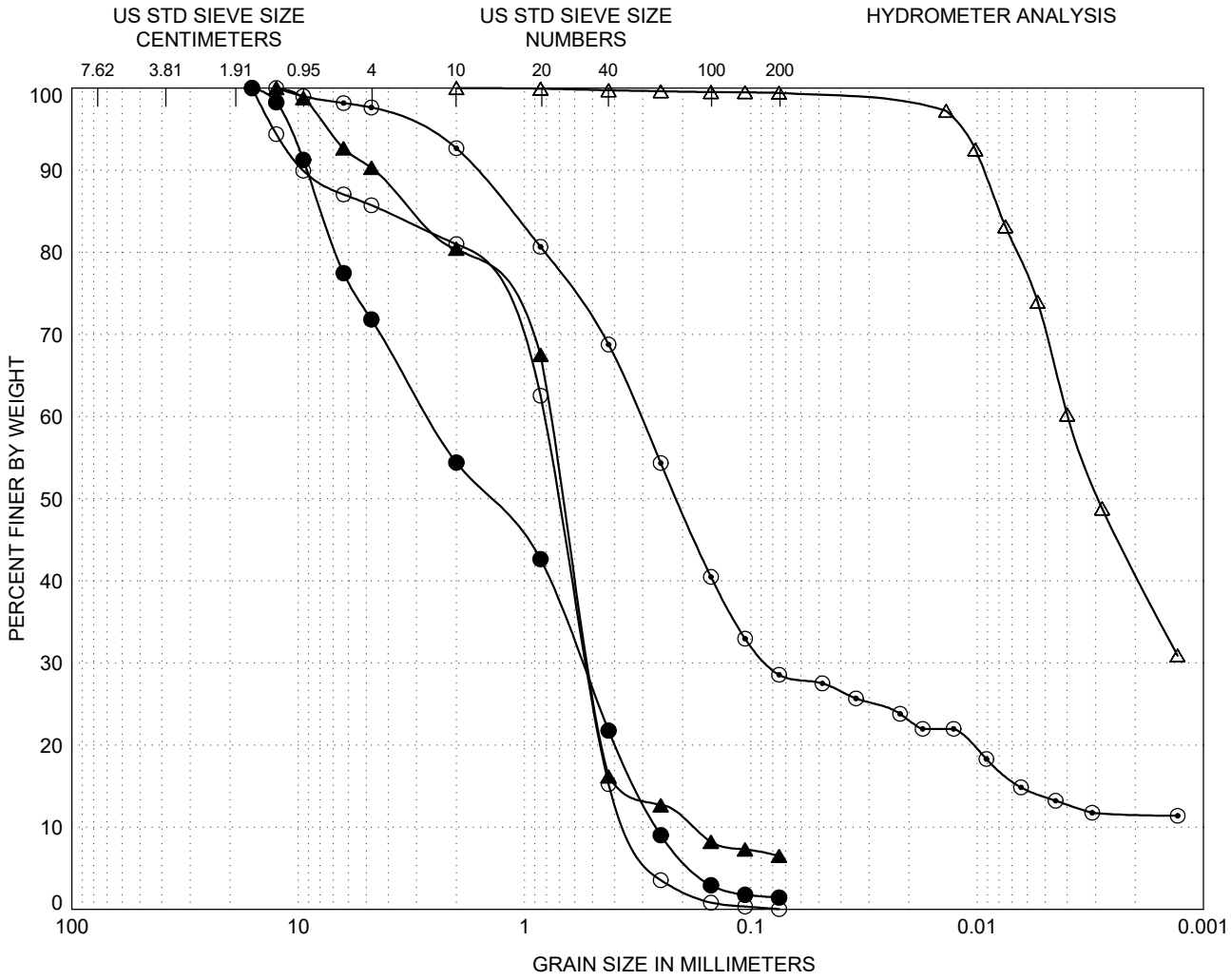


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-233	1.24	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.7	3.4
●	V-234	0.10	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.0
△	V-234	0.60	POORLY GRADED SAND (SP) medium sand	1.0	2.7
▲	V-235	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.9
⊙	V-235	0.20	POORLY GRADED SAND (SP) medium sand	0.9	3.4

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.19

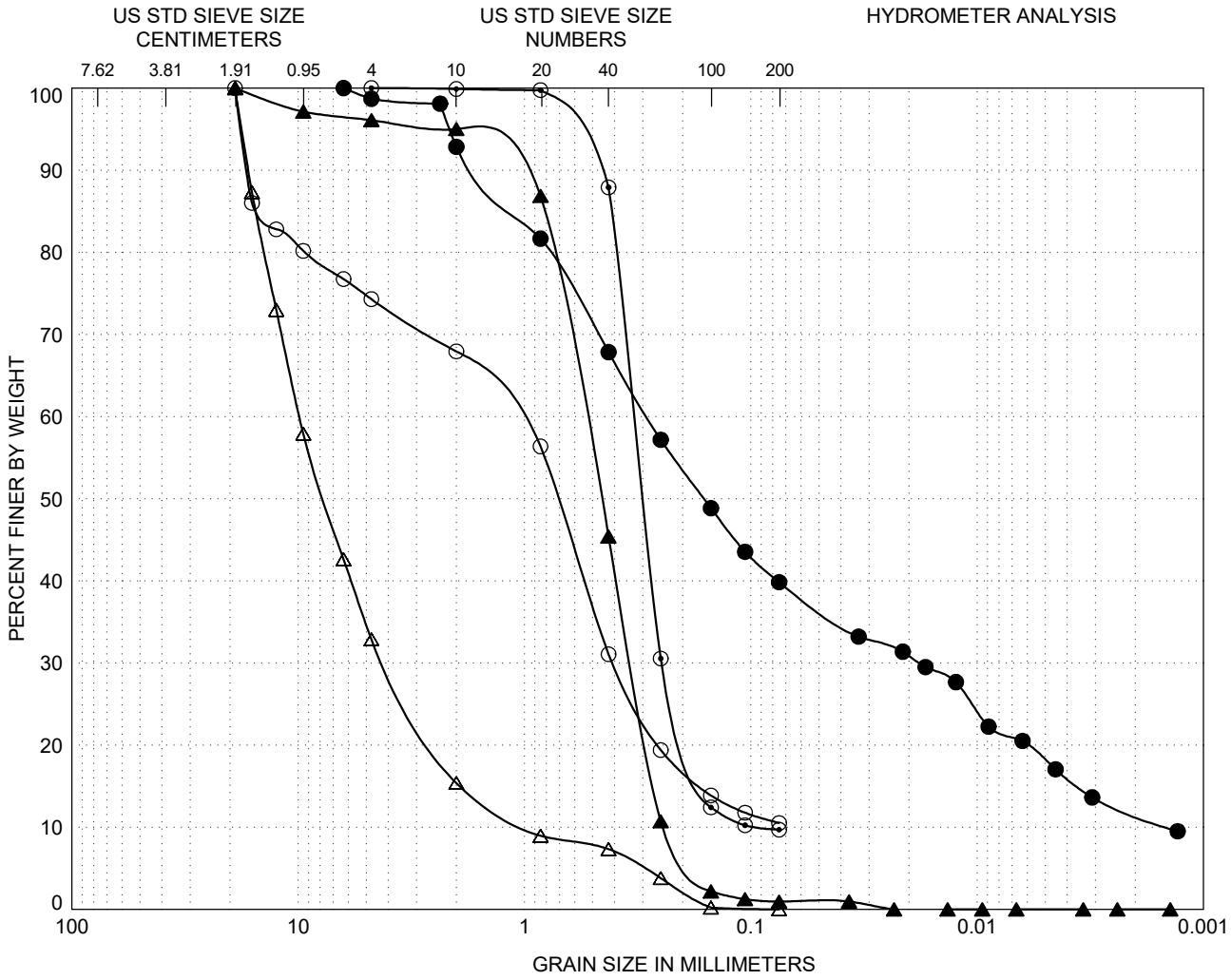


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-235	1.50	POORLY GRADED SAND (SP) medium sand	1.0	2.4
●	V-236	0.00	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.5	10.1
△	V-236	1.15	FAT CLAY (CH) high plasticity clay		
▲	V-237	0.30	POORLY GRADED SAND with SILT (SP-SM) medium sand, non-plastic silt	1.9	4.2
⊙	V-237	0.72	SILTY SAND (SM) fine to medium sand, non-plastic silt		

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.20

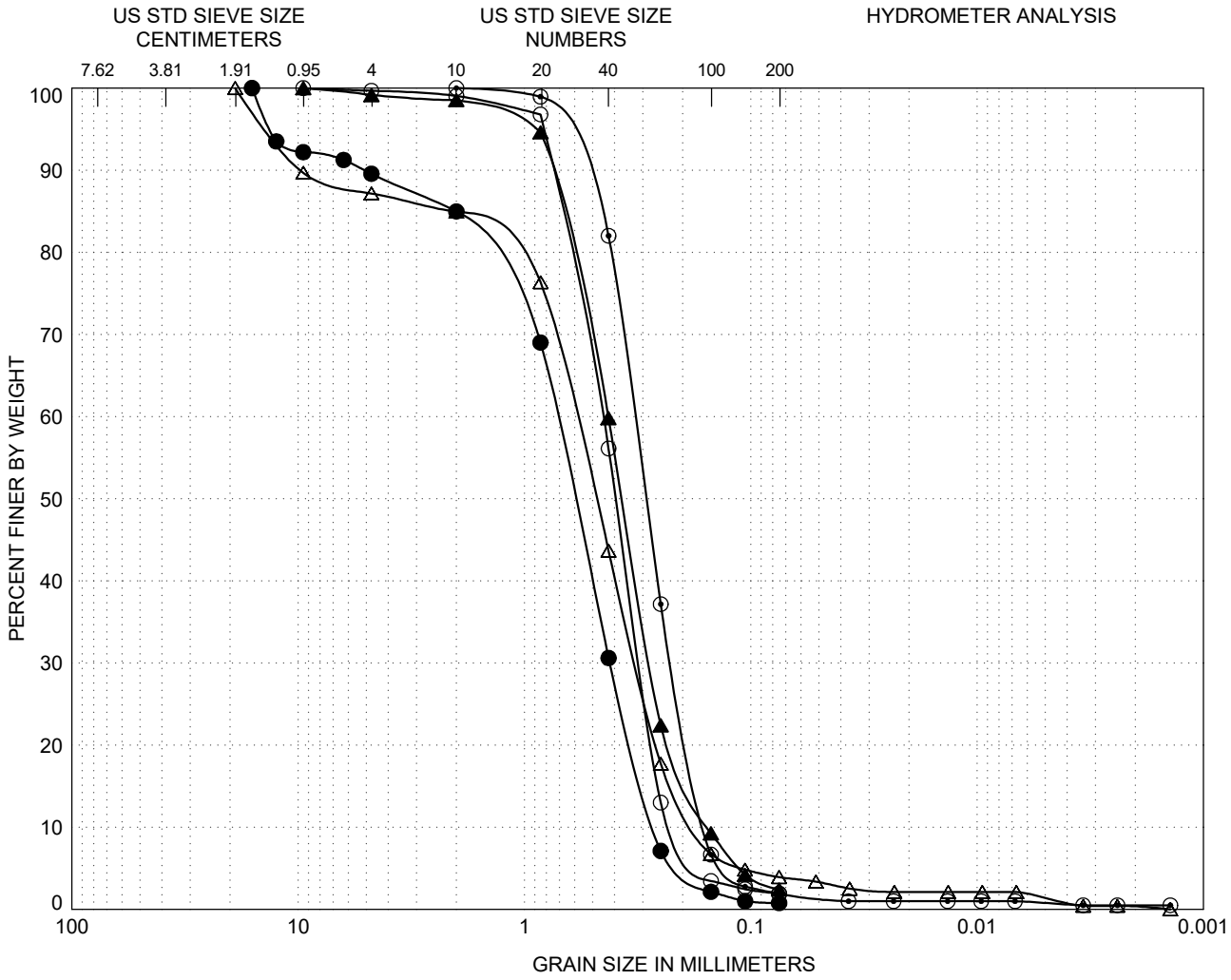


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-239	0.00	WELL-GRADED SAND with SILT and GRAVEL (SW-SM) fine to medium sand, non-plastic silt, fine gravel	2.3	17.1
●	V-239	0.28	SILTY SAND (SM) fine to medium sand, non-plastic silt	0.8	199.5
△	V-240	0.00	WELL-GRADED GRAVEL with SAND (GW) fine gravel, medium to coarse sand	1.8	10.1
▲	V-300	0.30	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.3
⊙	V-300	0.84	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	2.0	3.6

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.21

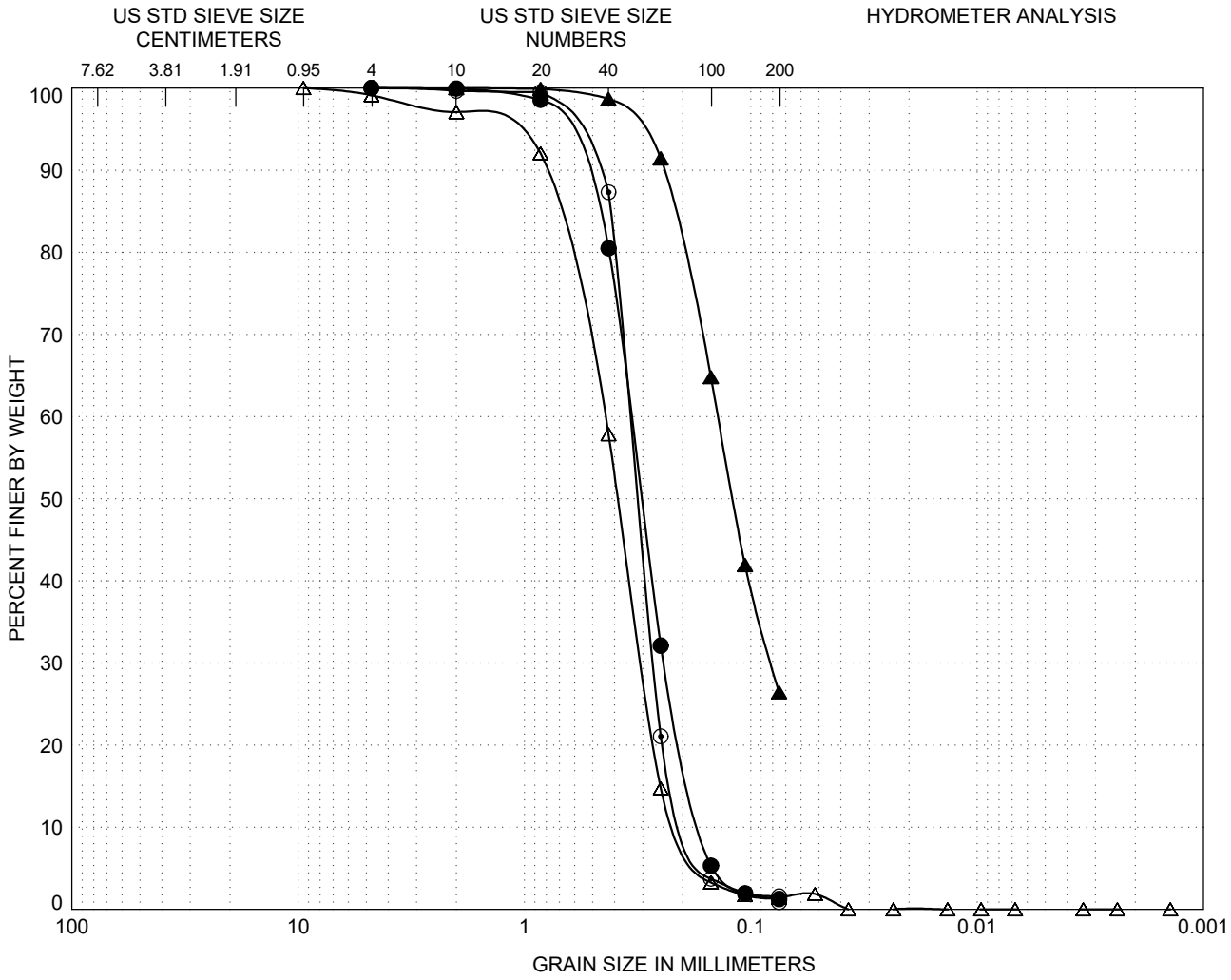


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-300	2.00	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.1
●	V-301	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.7
△	V-301	0.40	POORLY GRADED SAND (SP) fine to medium sand	1.0	3.4
▲	V-301	1.50	POORLY GRADED SAND (SP) fine to medium sand	1.2	2.8
⊙	V-302	0.13	POORLY GRADED SAND (SP) fine sand	0.9	2.1

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.22

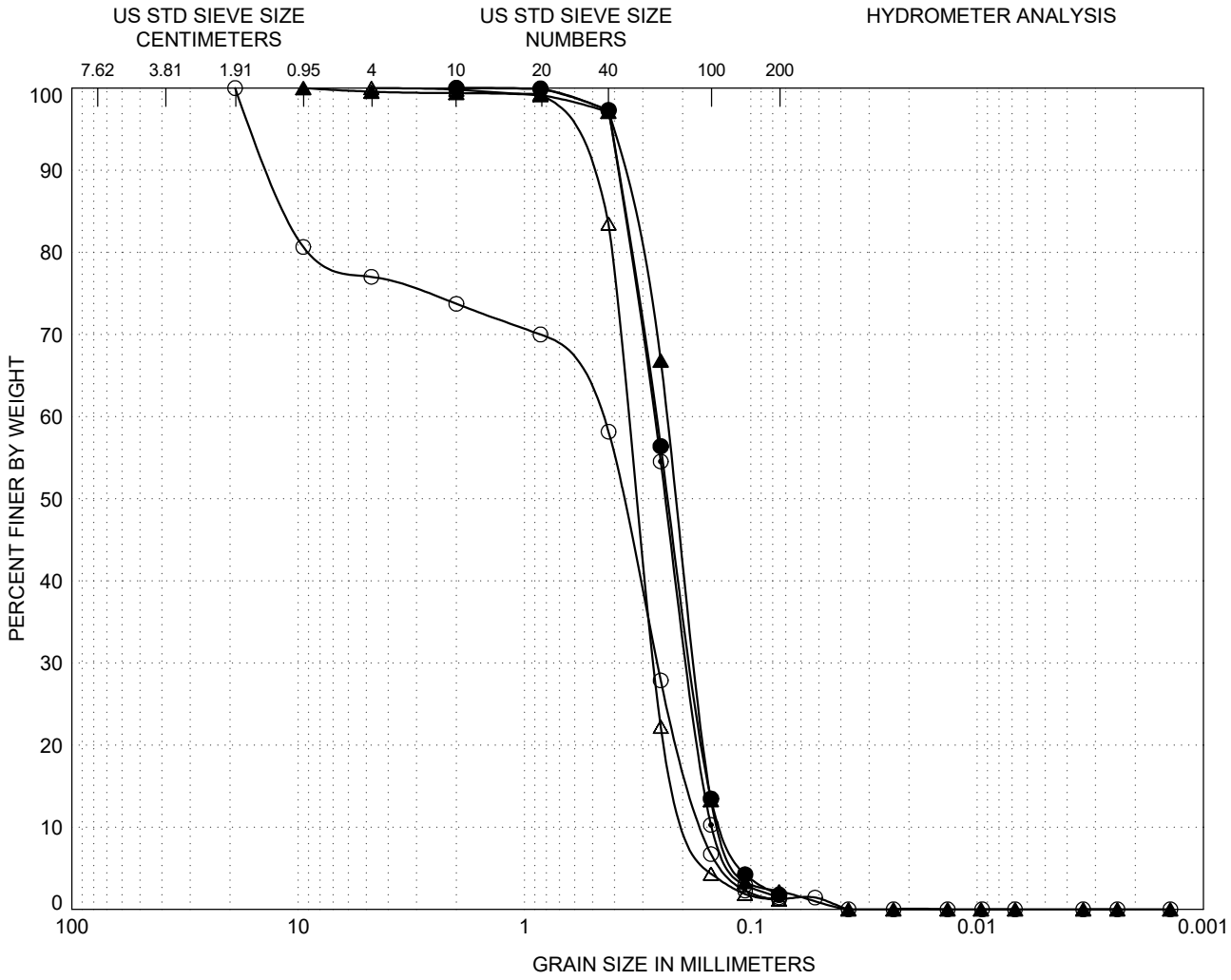


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-302	0.55	*Poorly graded SAND (SP)*		
●	V-302	1.78	POORLY GRADED SAND (SP) fine sand	1.0	2.1
△	V-303	0.00	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.2
▲	V-303	1.15	*Silty SAND (SM)*		
⊙	V-303	1.60	POORLY GRADED SAND (SP) fine sand	1.2	1.9

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.23

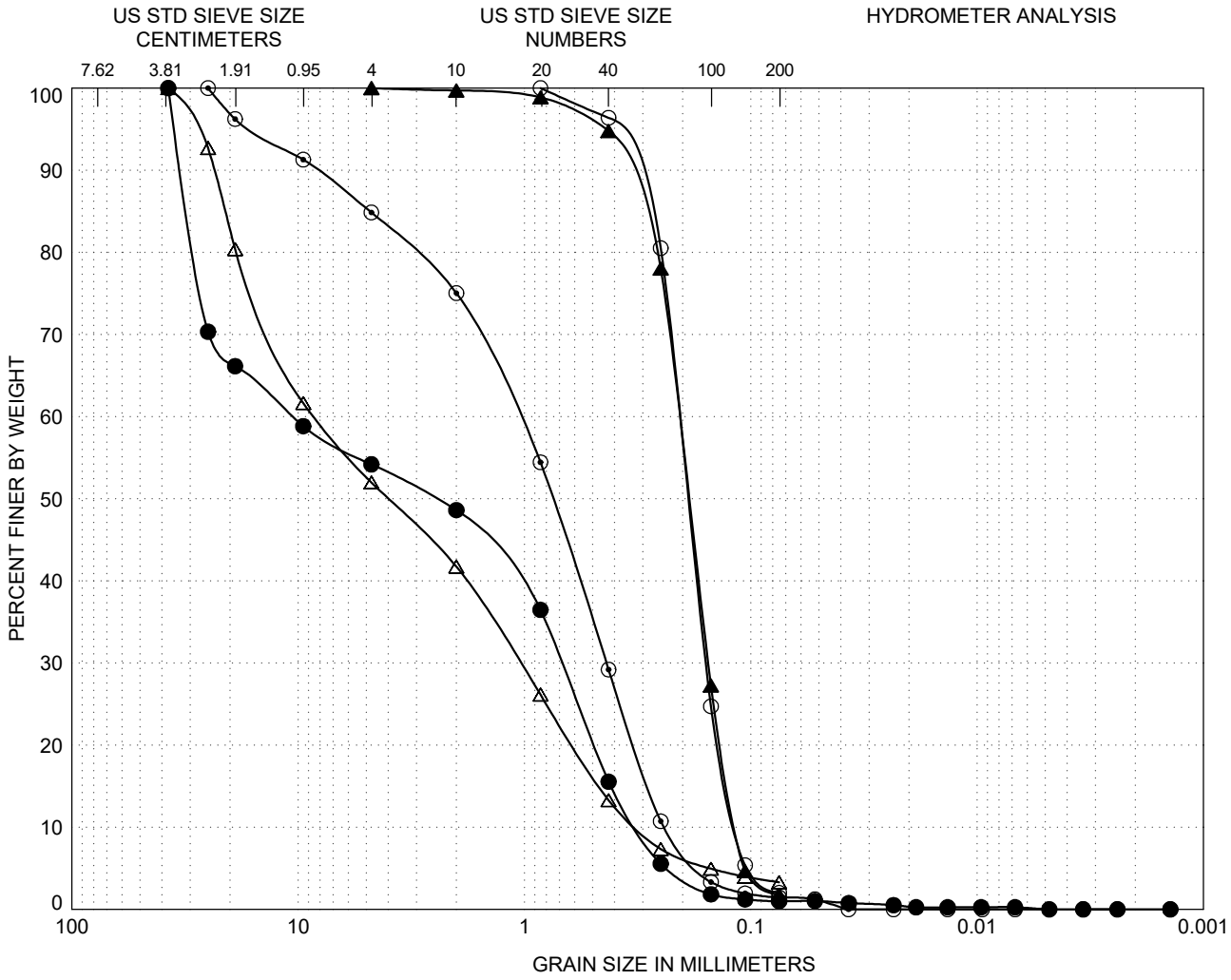


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-304	0.00	POORLY GRADED SAND with GRAVEL (SP) fine sand, fine gravel	0.9	2.9
●	V-304	0.30	POORLY GRADED SAND (SP) fine sand	1.0	2.0
△	V-304	2.00	POORLY GRADED SAND (SP) fine sand	1.2	2.0
▲	V-305	0.30	POORLY GRADED SAND (SP) fine sand	1.0	1.8
⊙	V-305	1.00	POORLY GRADED SAND (SP) fine sand	0.9	1.8

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.24

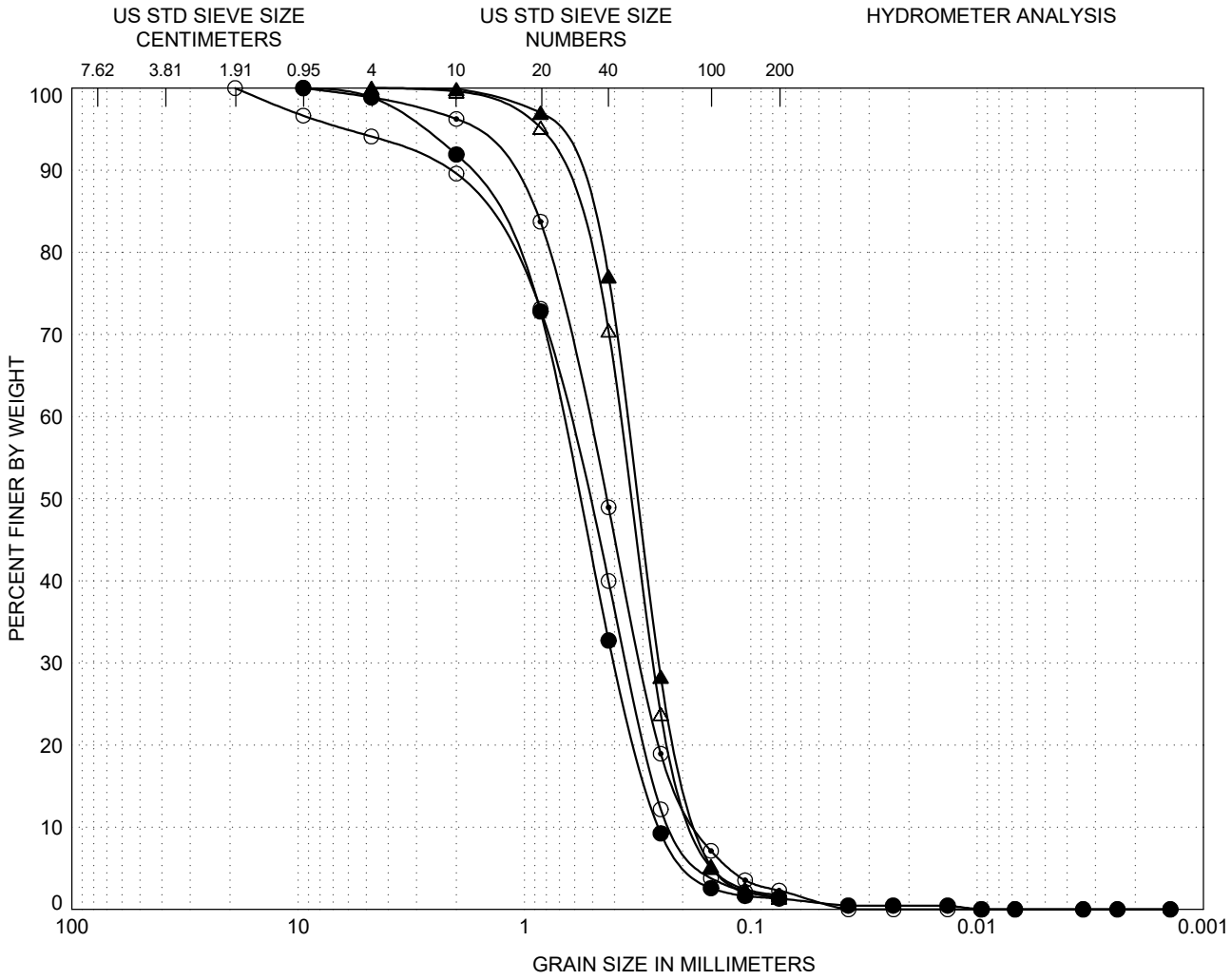


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-305	2.00	POORLY GRADED SAND (SP) fine sand	1.0	1.8
●	V-306	0.15	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, coarse gravel	0.1	33.5
△	V-306	0.80	POORLY GRADED SAND with GRAVEL (SP) medium to coarse sand, fine to coarse gravel	0.4	26.6
▲	V-306	2.00	POORLY GRADED SAND (SP) fine sand	1.0	1.8
⊙	V-307	0.15	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.7	4.5

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.25

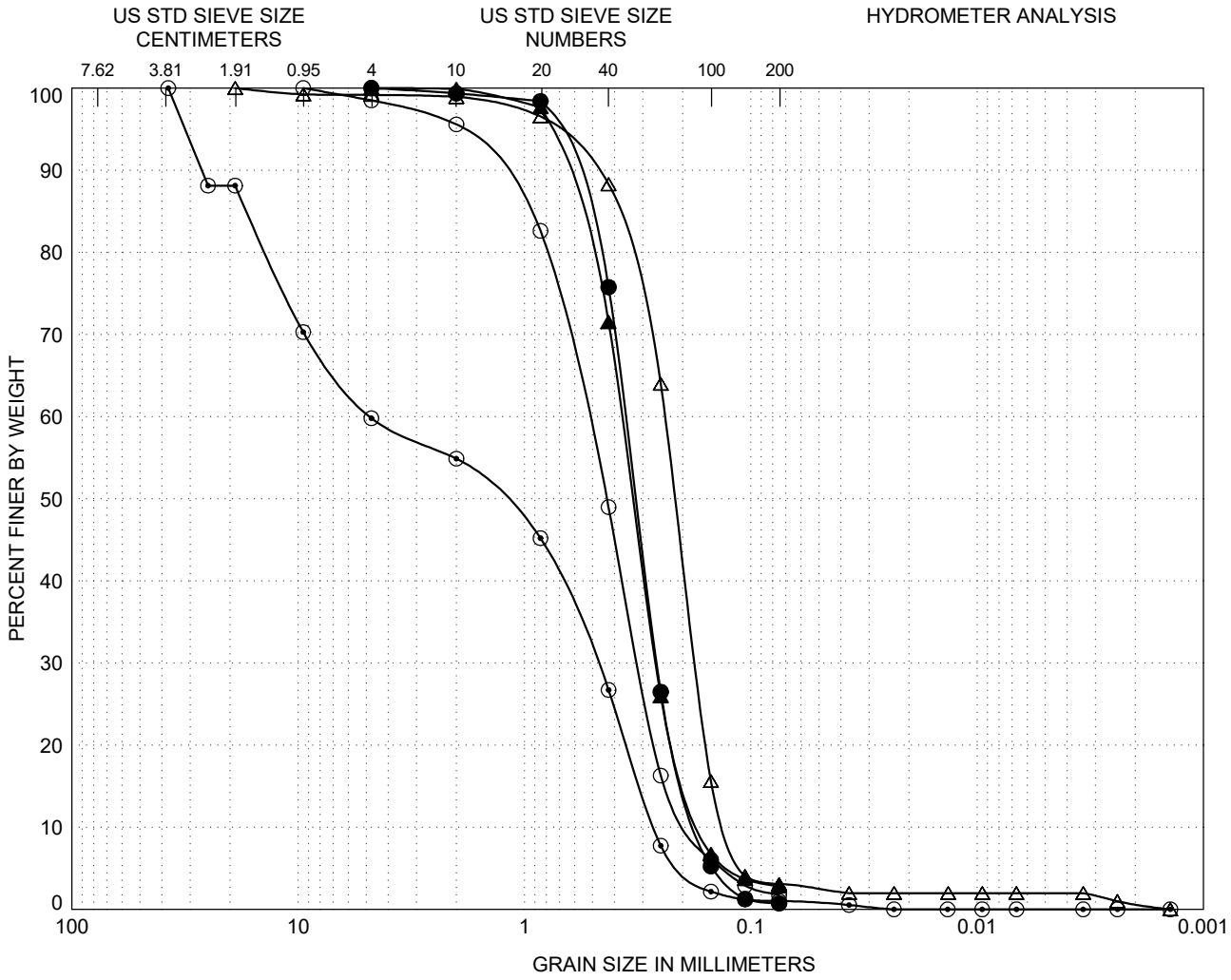


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-307	2.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	3.0
●	V-308	0.15	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.7
△	V-308	0.50	POORLY GRADED SAND (SP) fine sand	1.1	2.2
▲	V-308	2.00	POORLY GRADED SAND (SP) fine sand	1.1	2.1
⊙	V-309	0.30	POORLY GRADED SAND (SP) fine to medium sand	1.0	3.1

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.26

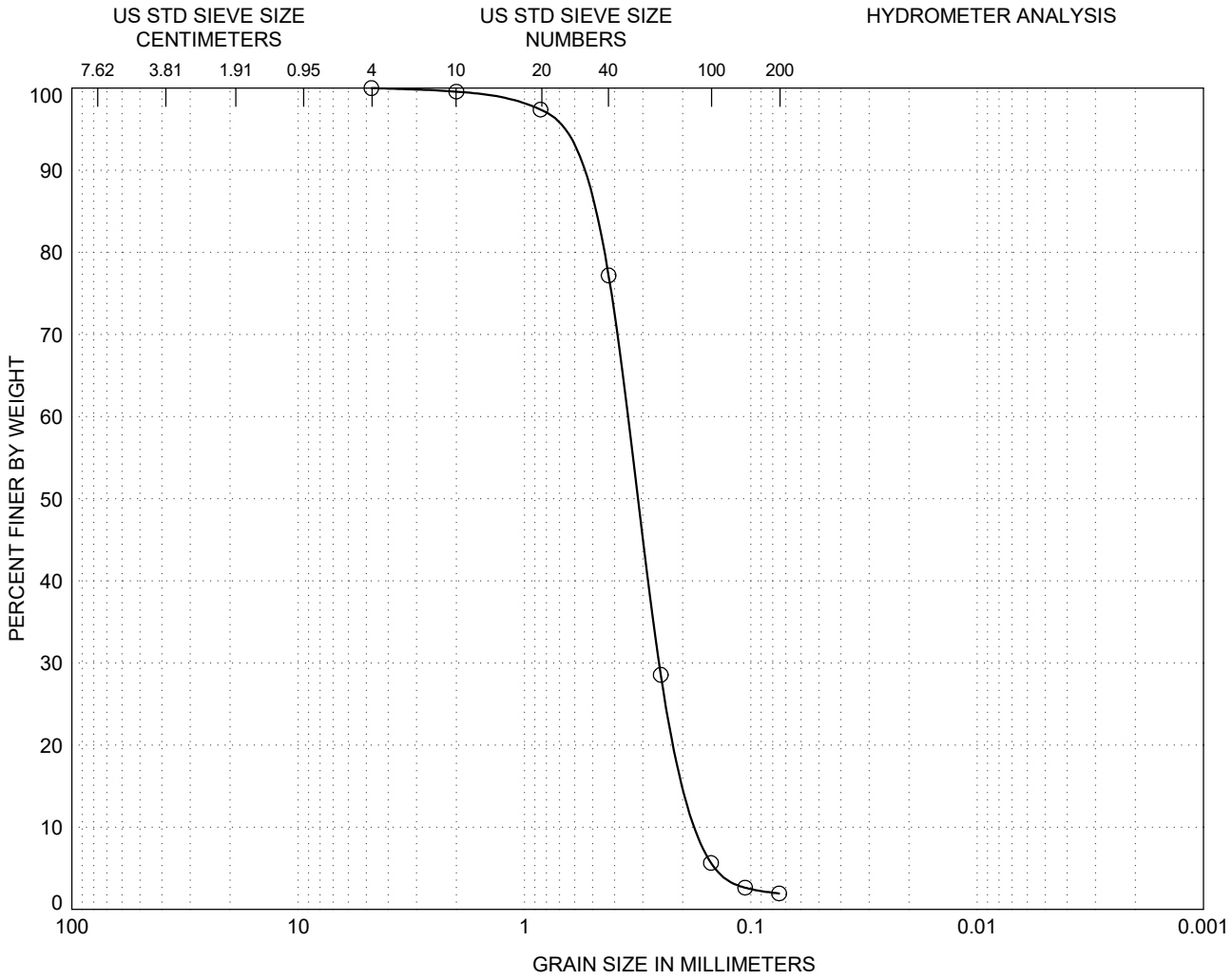


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	V-309	2.00	POORLY GRADED SAND (SP) fine to medium sand	1.0	2.9
●	V-310	0.00	POORLY GRADED SAND (SP) fine sand	1.1	2.1
△	V-310	0.40	POORLY GRADED SAND (SP) fine sand	1.0	1.9
▲	V-310	1.00	POORLY GRADED SAND (SP) fine sand	1.1	2.3
⊙	V-311	0.59	POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel	0.2	18.1

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.27

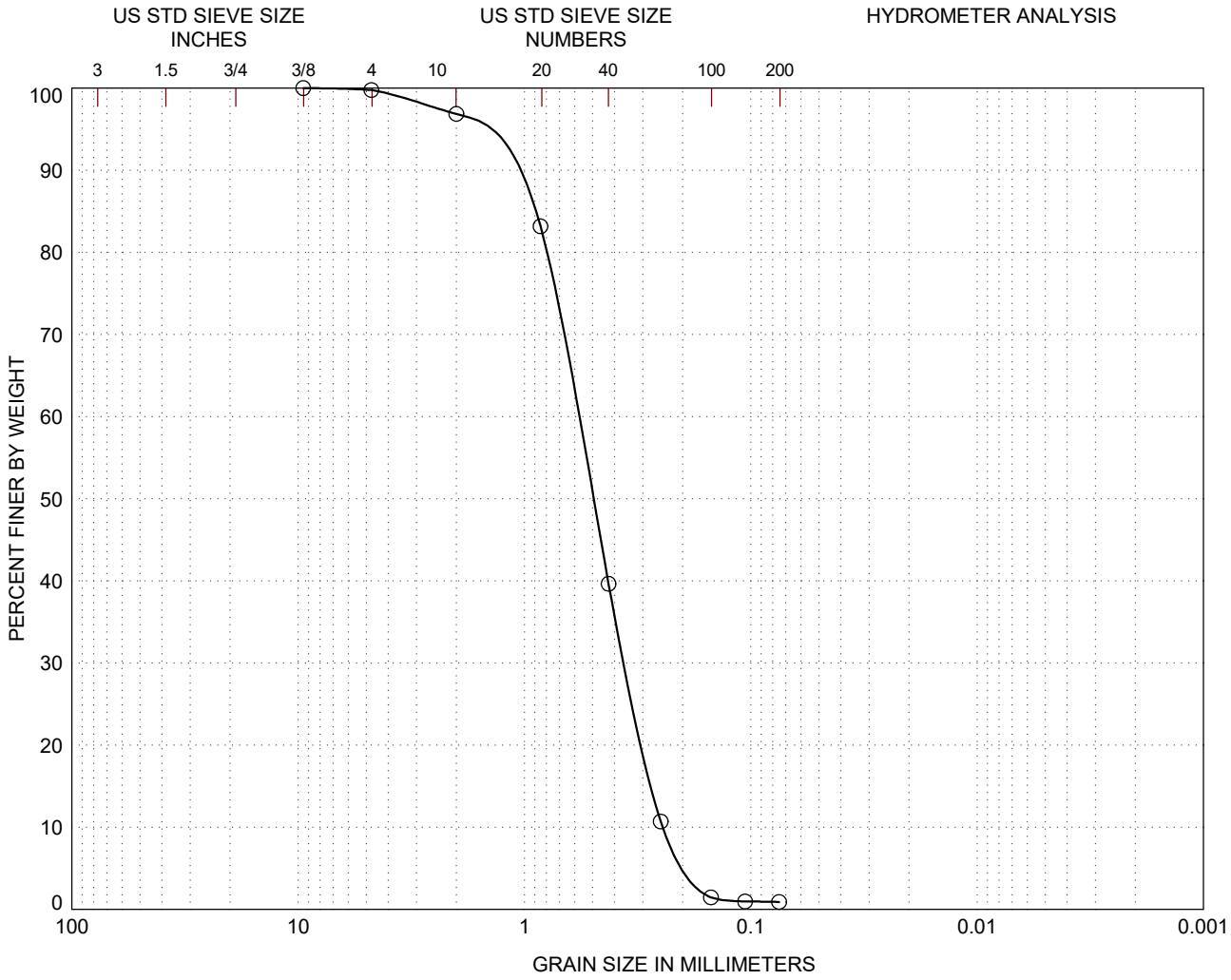


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND				Cc	Cu
	(location)	(depth,m)			
○	V-311	1.70	POORLY GRADED SAND (SP) fine sand	1.1	2.1

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE E-2.28



0.2% GRAVEL		98.9% SAND			0.9% FINES	
0.0% Coarse	0.2% Fine	2.9% Coarse	57.2% Medium	38.7% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.8
2	96.9
0.85	83.2
0.425	39.6
0.25	10.7
0.15	1.5
0.106	1.0
0.075	0.9

Location: V-WTG-10
Depth: 0.00

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.30	0.953	0.588	0.501	0.356	0.271	0.241

PARTICLE SIZE DISTRIBUTION
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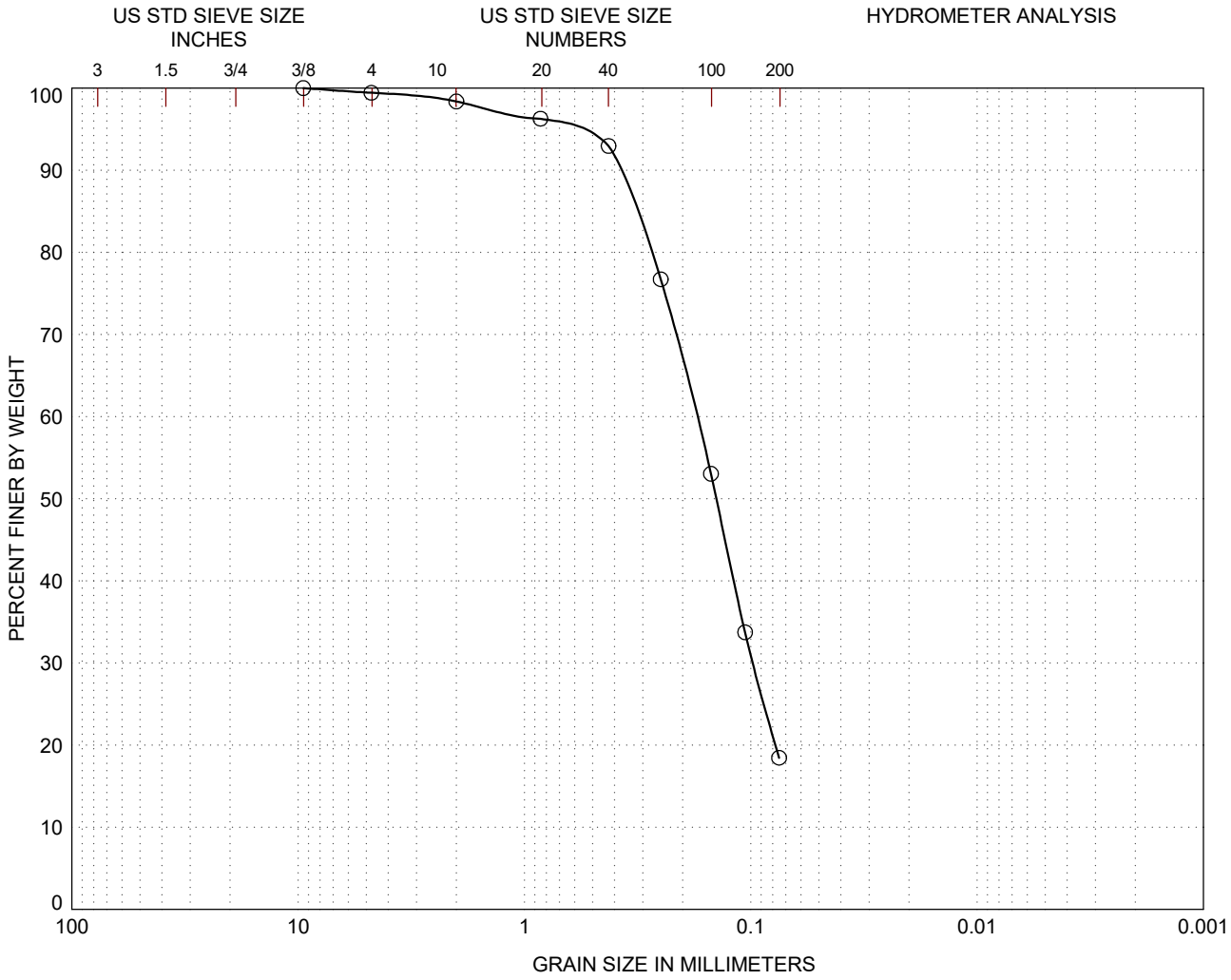
Rhode Island / Massachusetts

FIGURE E-2.29



0.6% GRAVEL		81.0% SAND			18.5% FINES	
0.0% Coarse	0.6% Fine	1.1% Coarse	5.4% Medium	74.5% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.4
2	98.4
0.85	96.3
0.425	93.0
0.25	76.7
0.15	53.0
0.106	33.7
0.075	18.5

Location: V-WTG-10
Depth: 1.20

SILTY SAND (SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.386	0.328	0.174	0.142	0.0974		

PARTICLE SIZE DISTRIBUTION
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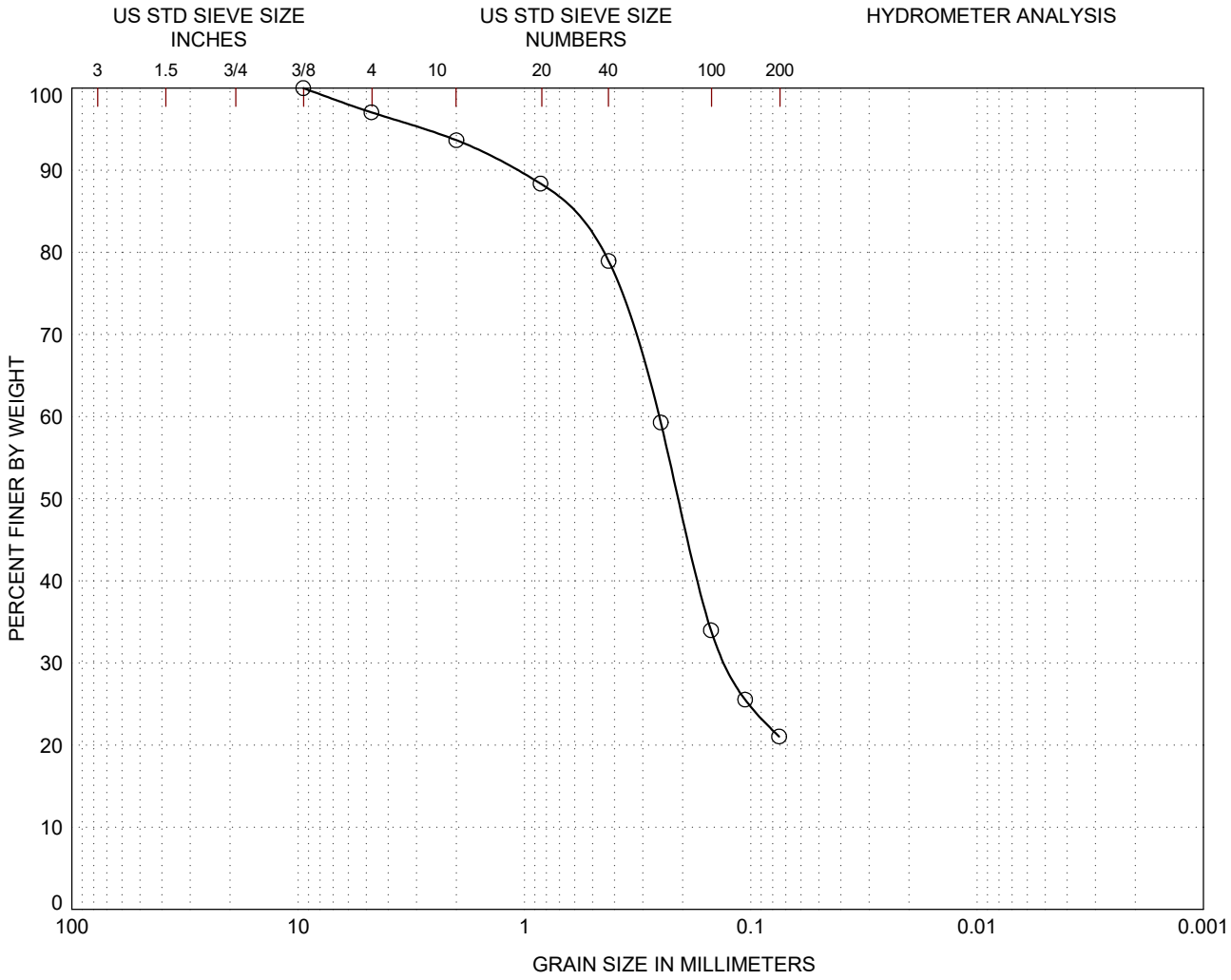
Rhode Island / Massachusetts

FIGURE E-2.30



2.9% GRAVEL		76.0% SAND			21.0% FINES	
0.0% Coarse	2.9% Fine	3.4% Coarse	14.7% Medium	57.9% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	97.1
2	93.7
0.85	88.4
0.425	78.9
0.25	59.3
0.15	34.0
0.106	25.5
0.075	21.0

Location: V-WTG-10
Depth: 2.00

SILTY SAND (SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.11	0.663	0.255	0.207	0.127		

PARTICLE SIZE DISTRIBUTION
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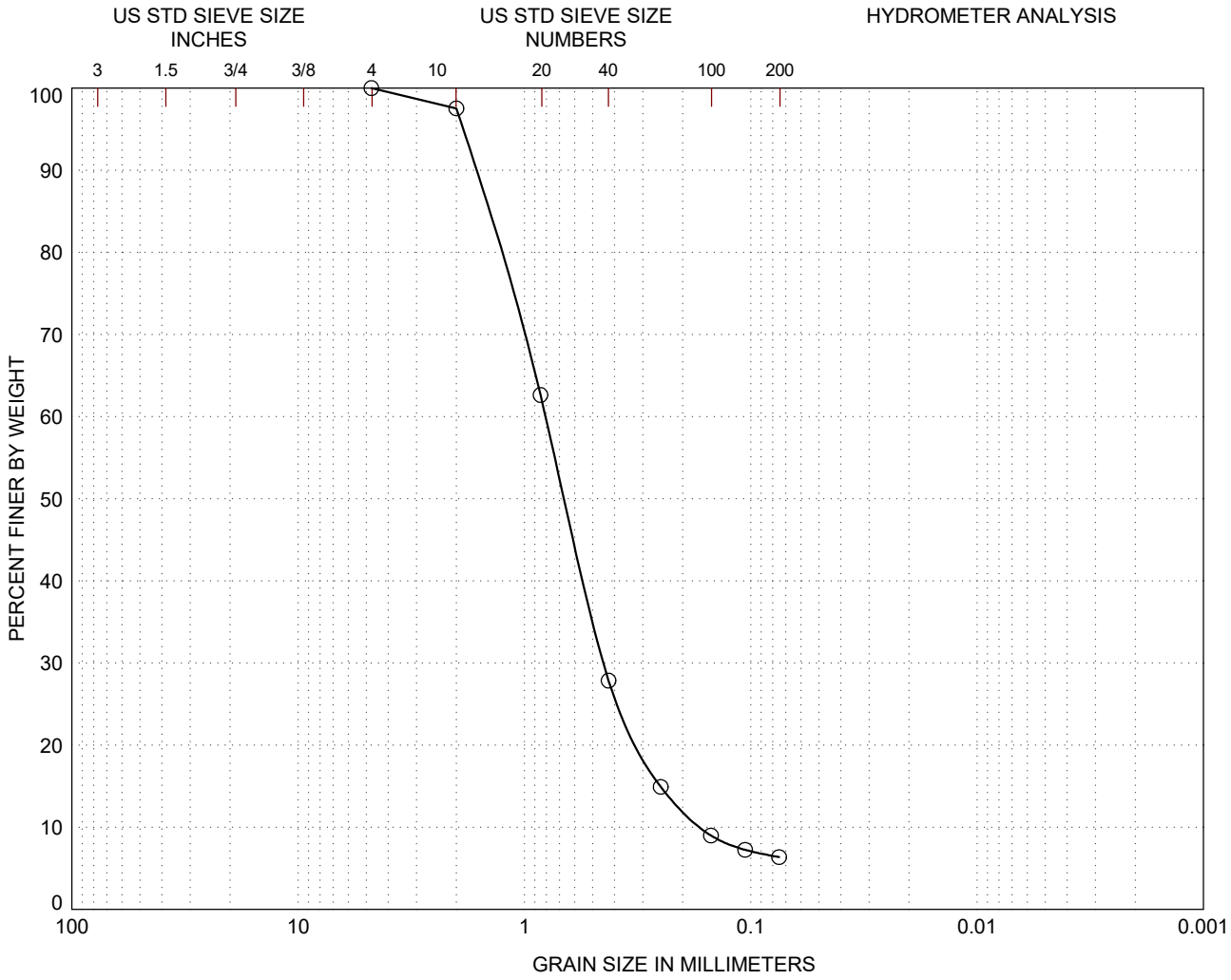
Rhode Island / Massachusetts

FIGURE E-2.31



0.0% GRAVEL		93.6% SAND			6.4% FINES	
0.0% Coarse	0.0% Fine	2.5% Coarse	69.7% Medium	21.5% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	97.5
0.85	62.6
0.425	27.9
0.25	14.9
0.15	9.0
0.106	7.2
0.075	6.4

Location: V-WTG-10
Depth: 2.90

POORLY GRADED SAND with SILT (SP-SM) medium sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.5	4.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.66	1.47	0.807	0.661	0.444	0.251	0.164

PARTICLE SIZE DISTRIBUTION
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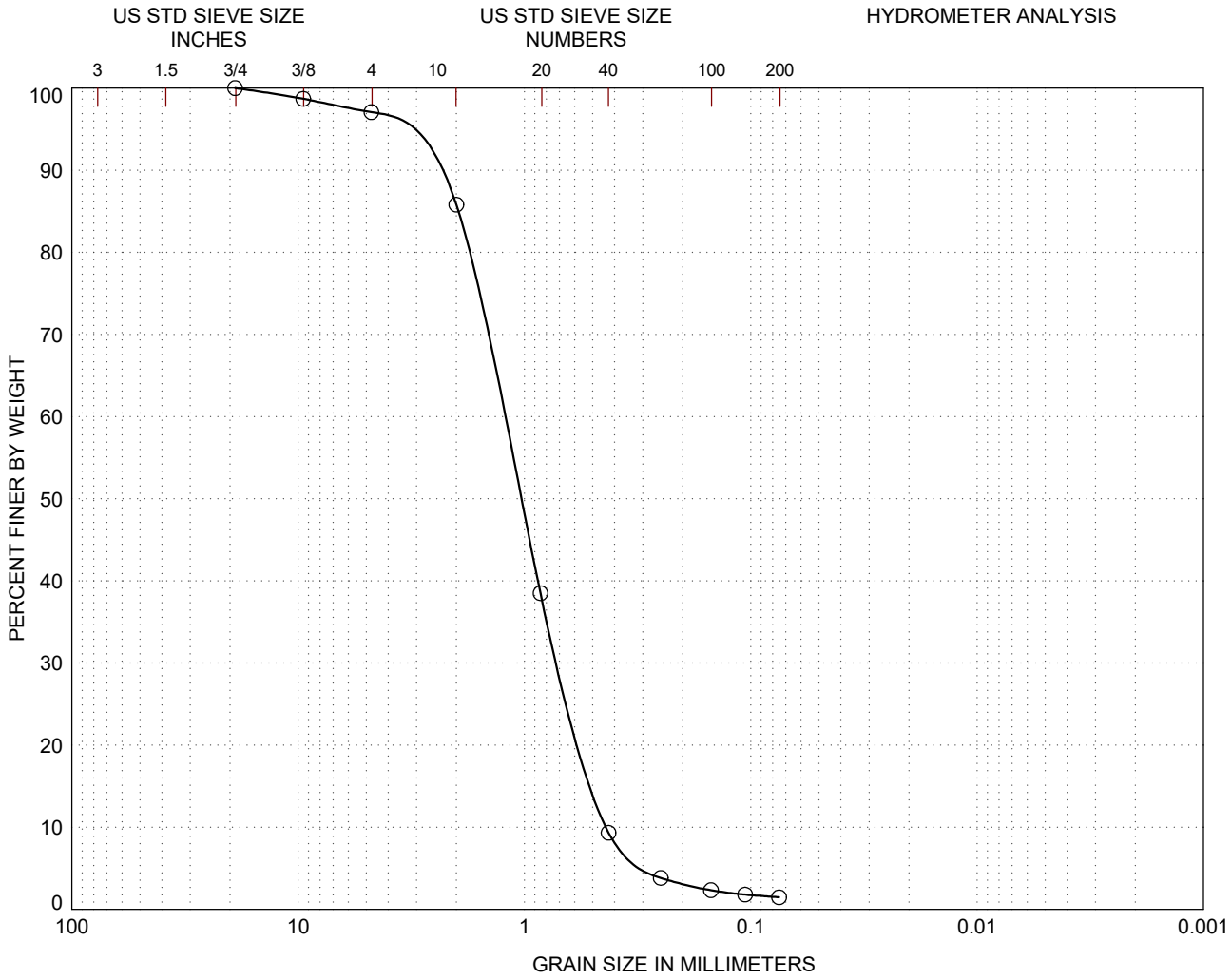
Rhode Island / Massachusetts

FIGURE E-2.32



2.9% GRAVEL		95.6% SAND			1.5% FINES	
0.0% Coarse	2.9% Fine	11.3% Coarse	76.5% Medium	7.8% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	98.7
4.75	97.1
2	85.8
0.85	38.5
0.425	9.3
0.25	3.8
0.15	2.3
0.106	1.8
0.075	1.5

Location: V-WTG-10
Depth: 4.20

POORLY GRADED SAND (SP) medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
2.76	1.97	1.25	1.05	0.695	0.486	0.432

PARTICLE SIZE DISTRIBUTION
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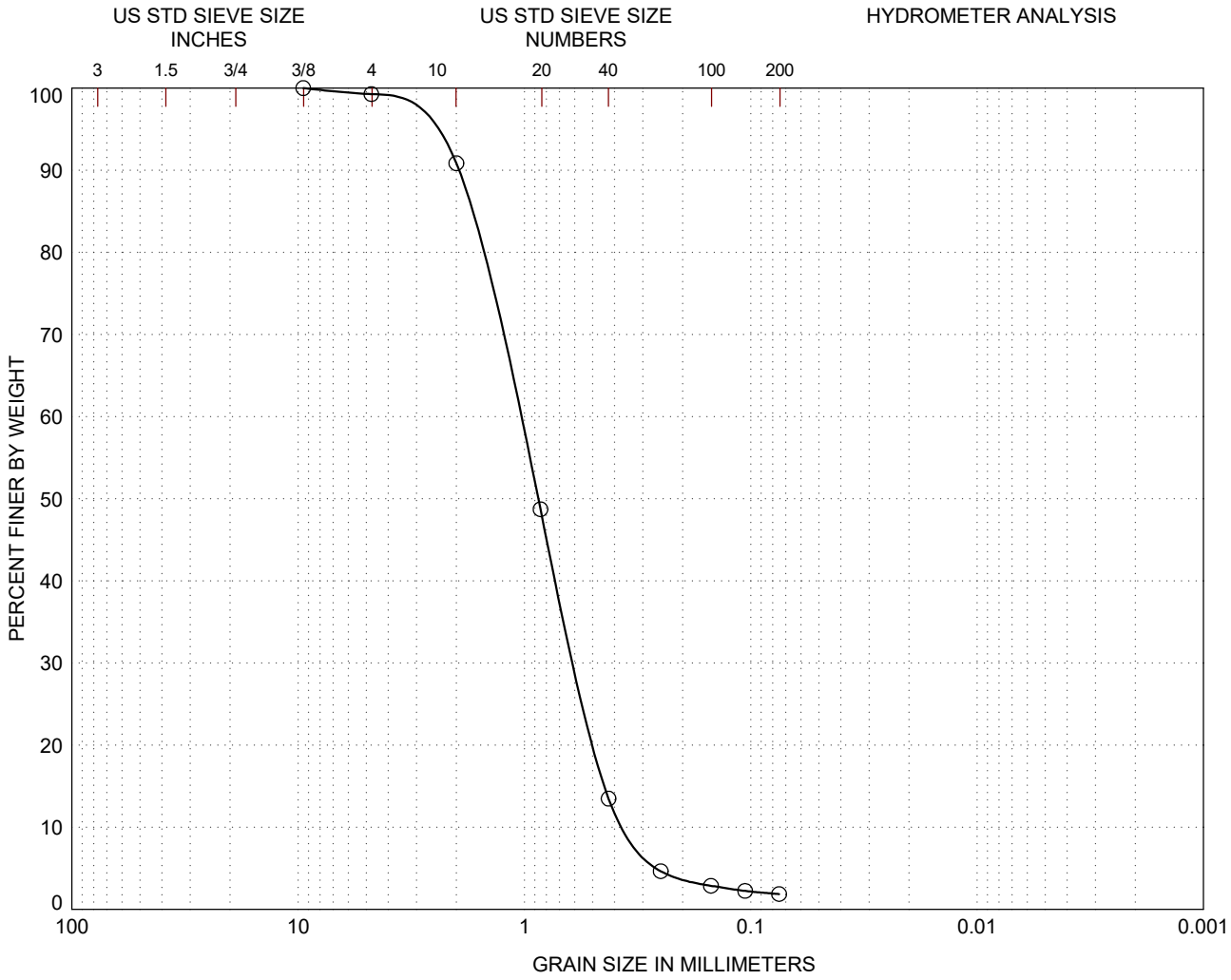
Rhode Island / Massachusetts

FIGURE E-2.33



0.7% GRAVEL		97.4% SAND			1.9% FINES	
0.0% Coarse	0.7% Fine	8.4% Coarse	77.4% Medium	11.6% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.3
2	90.9
0.85	48.7
0.425	13.5
0.25	4.6
0.15	2.9
0.106	2.3
0.075	1.9

Location: V-WTG-10
Depth: 5.20

POORLY GRADED SAND (SP) medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	3.1

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.97	1.78	1.07	0.872	0.588	0.438	0.345

PARTICLE SIZE DISTRIBUTION
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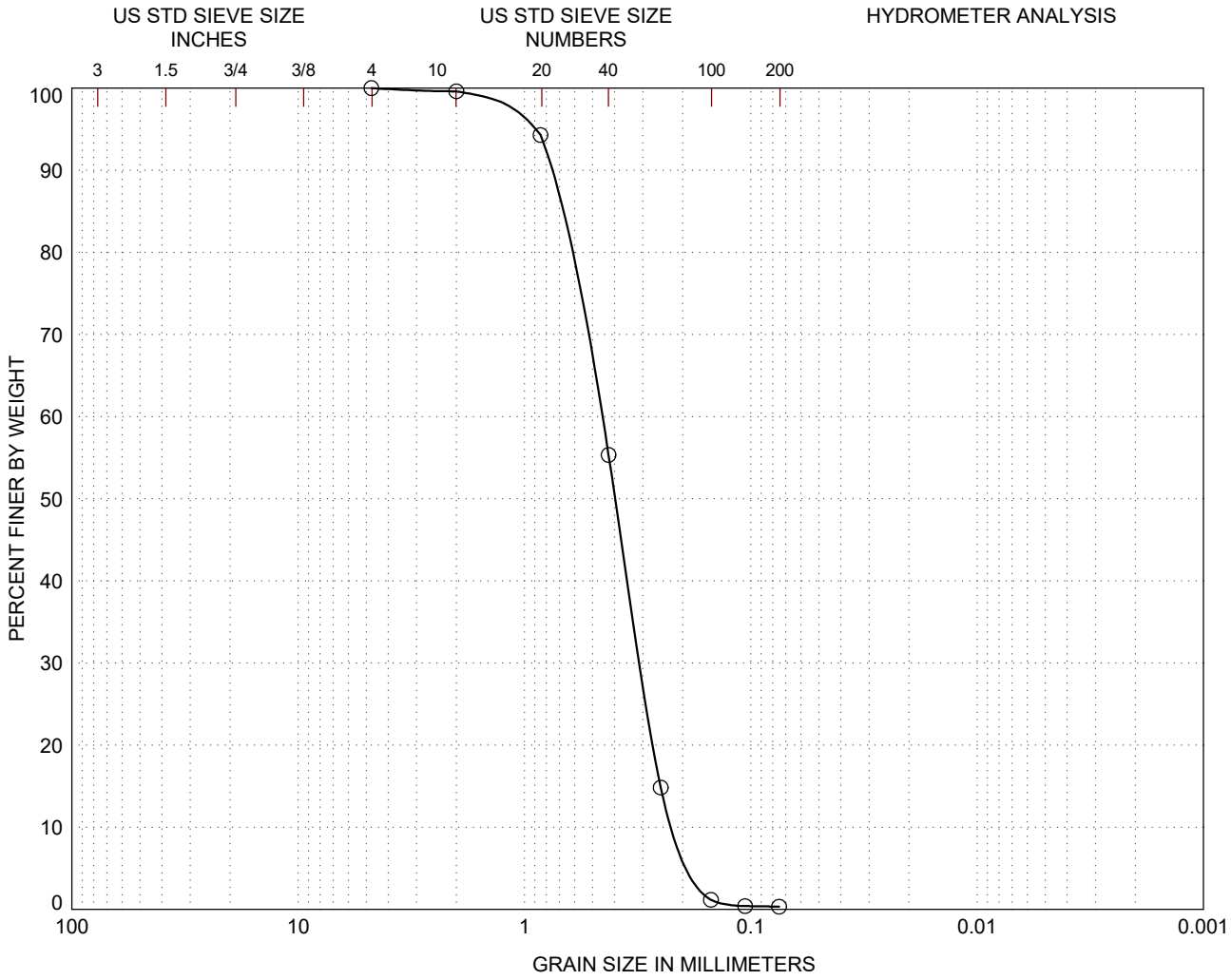
Rhode Island / Massachusetts

FIGURE E-2.34



0.0% GRAVEL		99.7% SAND			0.3% FINES	
0.0% Coarse	0.0% Fine	0.4% Coarse	44.3% Medium	55.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.6
0.85	94.3
0.425	55.3
0.25	14.8
0.15	1.2
0.106	0.4
0.075	0.3

Location: V-WTG-11
Depth: 0.20

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.788	0.721	0.462	0.396	0.305	0.251	0.209

PARTICLE SIZE DISTRIBUTION
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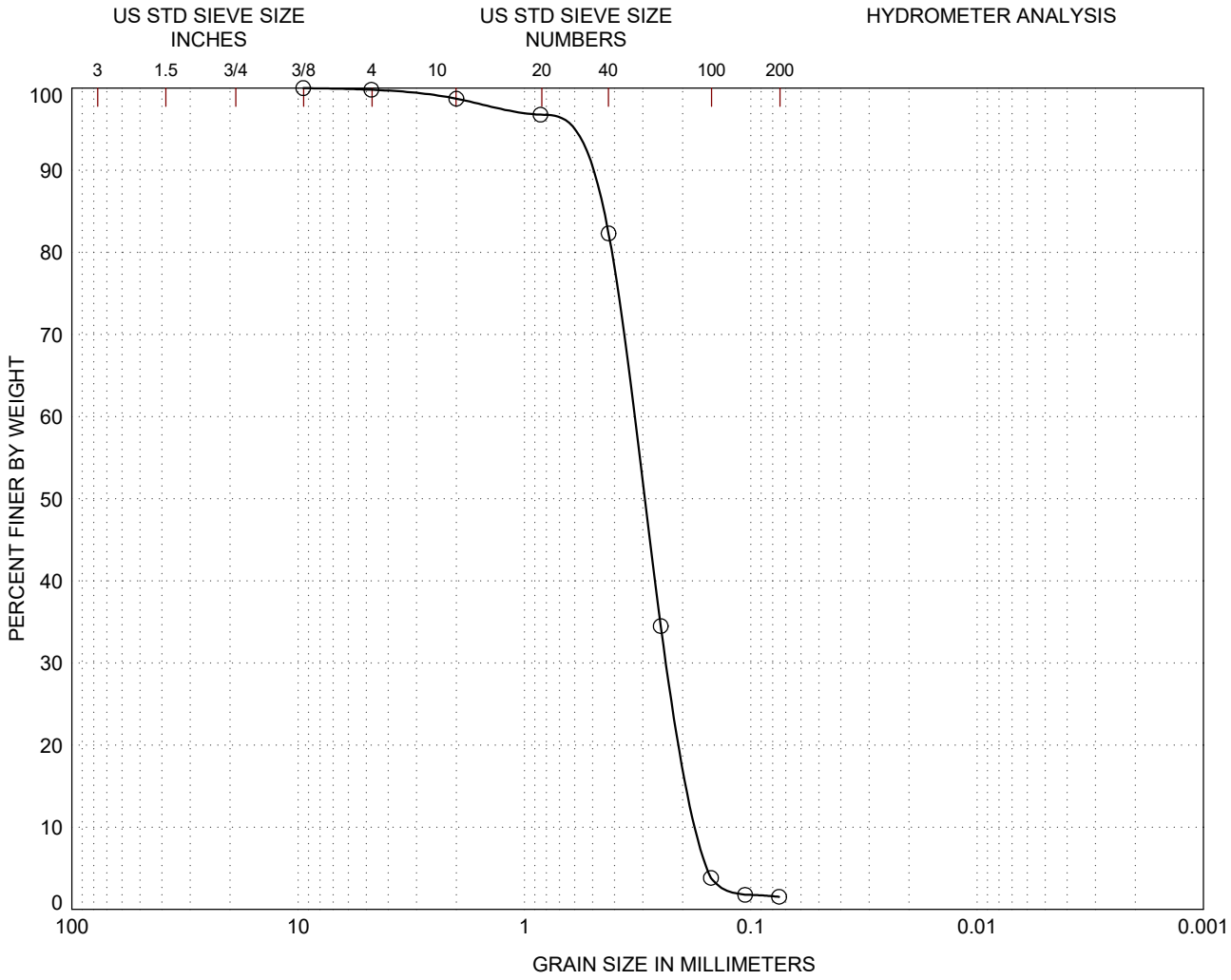
FIGURE E-2.35



0.2% GRAVEL		98.3% SAND			1.5% FINES	
0.0% Coarse	0.2% Fine	1.1% Coarse	16.4% Medium	80.8% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.8
2	98.7
0.85	96.8
0.425	82.3
0.25	34.5
0.15	3.8
0.106	1.8
0.075	1.5

Location: V-WTG-11
Depth: 0.74

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.615	0.484	0.332	0.297	0.232	0.181	0.166

PARTICLE SIZE DISTRIBUTION
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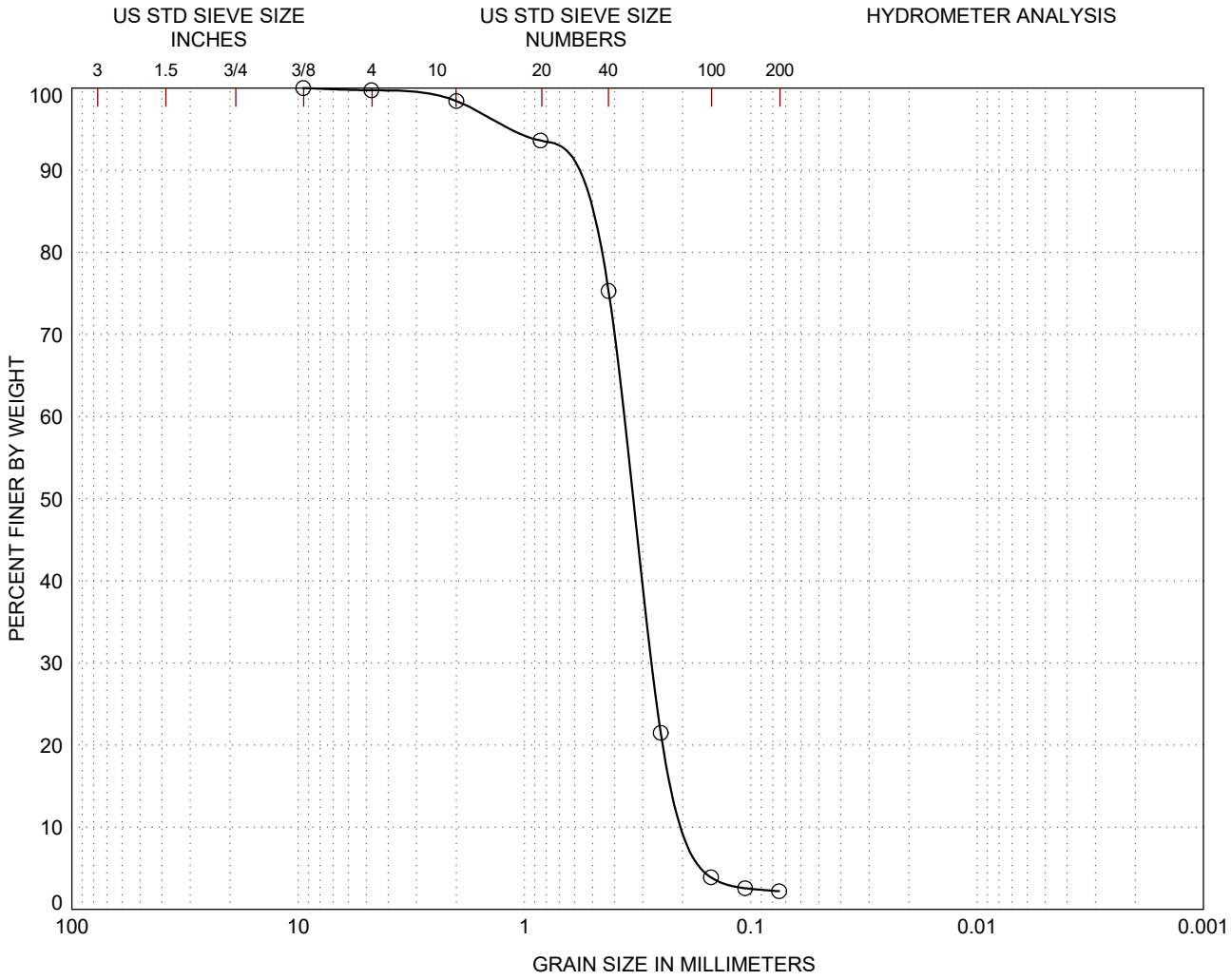
FIGURE E-2.36



0.3% GRAVEL		97.5% SAND			2.2% FINES	
0.0% Coarse	0.3% Fine	1.3% Coarse	23.1% Medium	73.1% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.7
2	98.4
0.85	93.6
0.425	75.3
0.25	21.5
0.15	3.9
0.106	2.6
0.075	2.2

Location: V-WTG-11
Depth: 1.74

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.741	0.614	0.365	0.331	0.272	0.207	0.179

PARTICLE SIZE DISTRIBUTION
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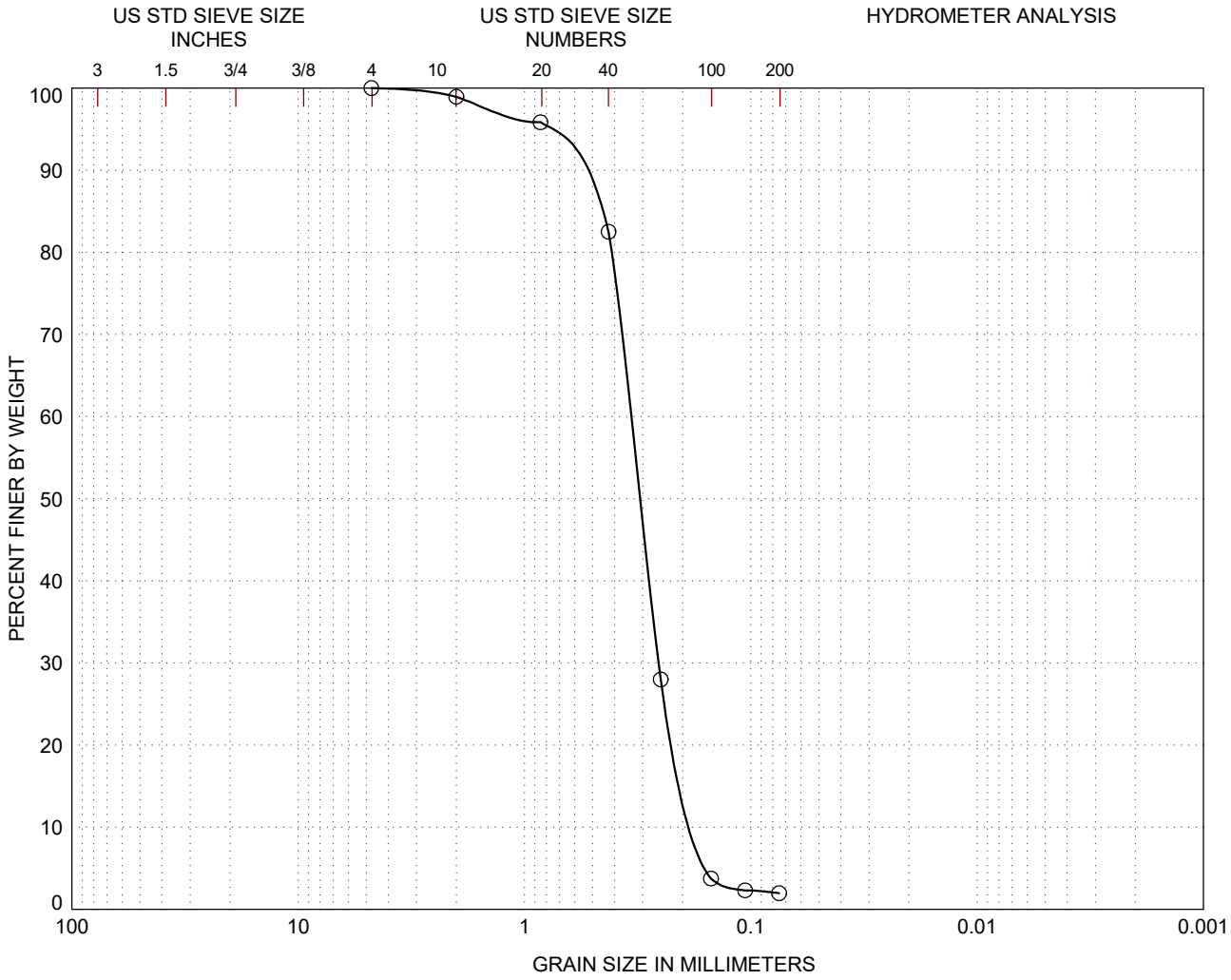
Rhode Island / Massachusetts

FIGURE E-2.37



0.0% GRAVEL		98.0% SAND			2.0% FINES	
0.0% Coarse	0.0% Fine	1.1% Coarse	16.4% Medium	80.5% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	98.9
0.85	95.8
0.425	82.5
0.25	28.0
0.15	3.8
0.106	2.3
0.075	2.0

Location: V-WTG-11
Depth: 2.74

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.627	0.484	0.341	0.310	0.255	0.190	0.171

PARTICLE SIZE DISTRIBUTION
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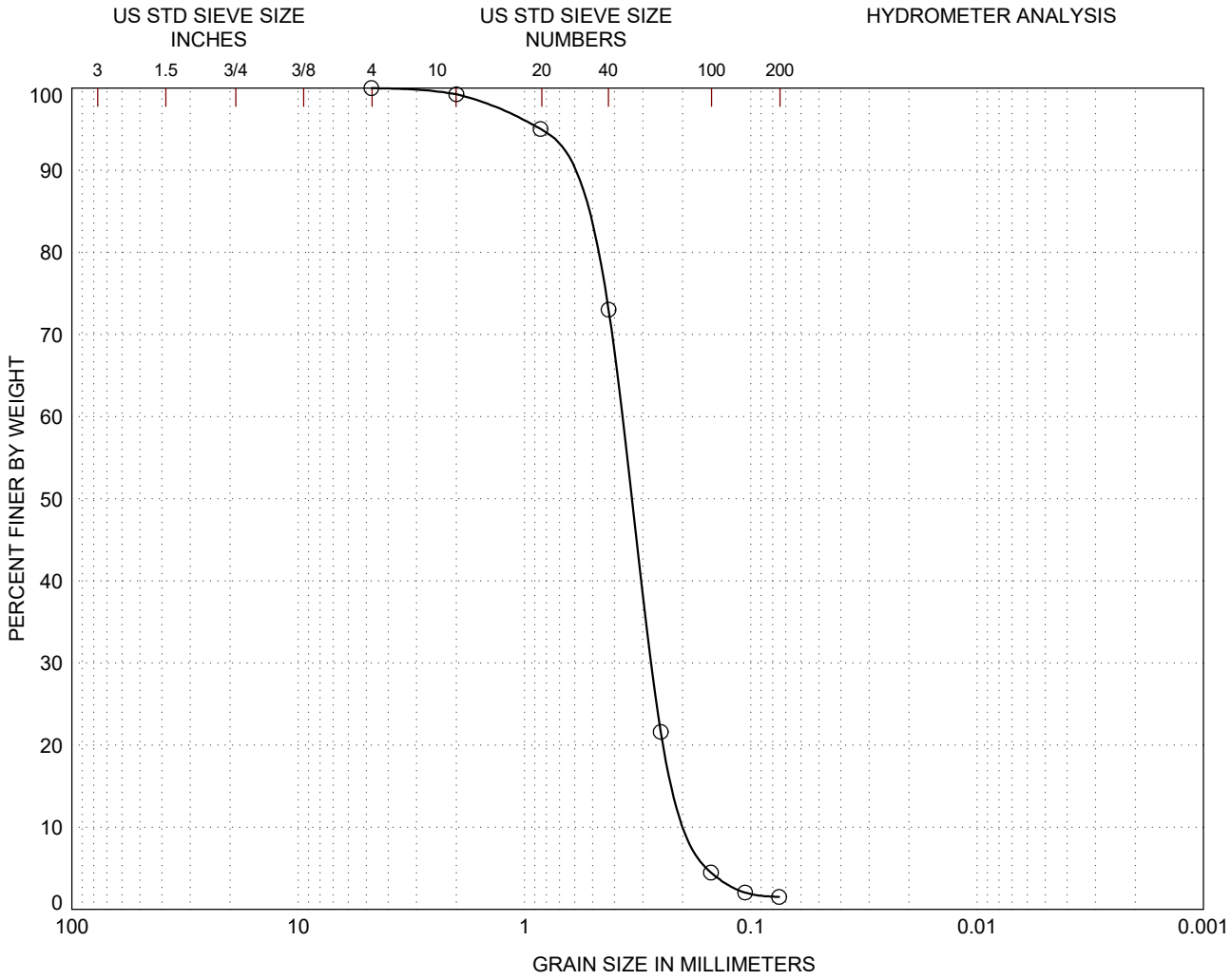
Rhode Island / Massachusetts

FIGURE E-2.38



0.0% GRAVEL		98.5% SAND			1.5% FINES	
0.0% Coarse	0.0% Fine	0.8% Coarse	26.2% Medium	71.5% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.2
0.85	95.0
0.425	73.0
0.25	21.6
0.15	4.5
0.106	2.0
0.075	1.5

Location: V-WTG-11
Depth: 3.74

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.1

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.726	0.620	0.372	0.335	0.273	0.205	0.177

PARTICLE SIZE DISTRIBUTION
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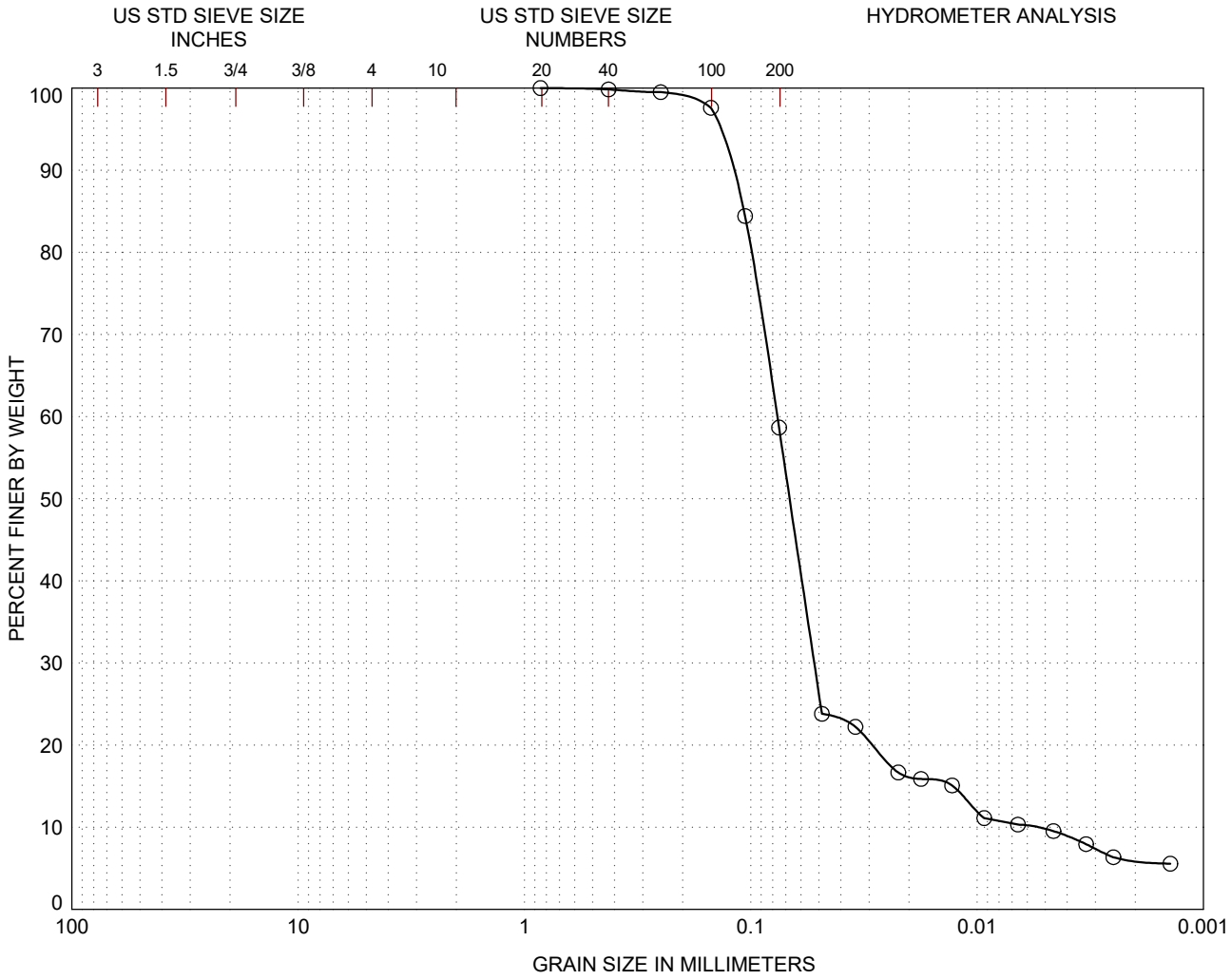
Rhode Island / Massachusetts

FIGURE E-2.39



0.0% GRAVEL		41.3% SAND			58.7% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.2% Medium	41.2% Fine	49.0% SILT	9.7% CLAY

Sieve Size (mm)	Percent Finer
0.85	100.0
0.425	99.8
0.25	99.5
0.15	97.6
0.106	84.4
0.075	58.7

Location: V-WTG-11
Depth: 4.70

SANDY SILT (ML) low plasticity silt, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
20	22	2	6.3	13.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.123	0.108	0.0764	0.0673	0.0524	0.0128	0.00571

PARTICLE SIZE DISTRIBUTION
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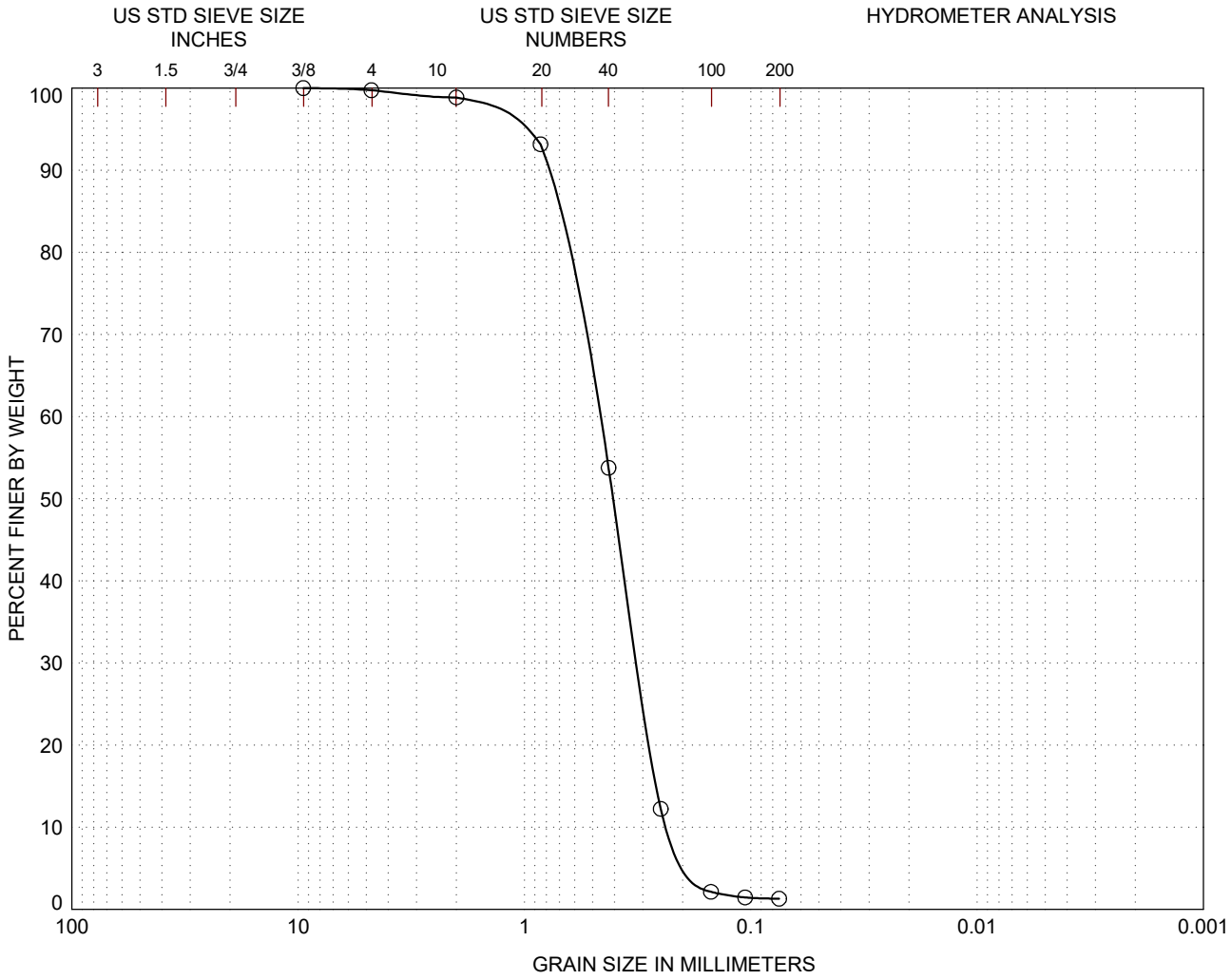
FIGURE E-2.40



0.3% GRAVEL		98.4% SAND			1.3% FINES	
0.0% Coarse	0.3% Fine	0.9% Coarse	45.1% Medium	52.5% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.7
2	98.9
0.85	93.2
0.425	53.8
0.25	12.2
0.15	2.1
0.106	1.4
0.075	1.3

Location: V-WTG-12
Depth: 1.10

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.1

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.804	0.736	0.474	0.405	0.314	0.259	0.223

PARTICLE SIZE DISTRIBUTION
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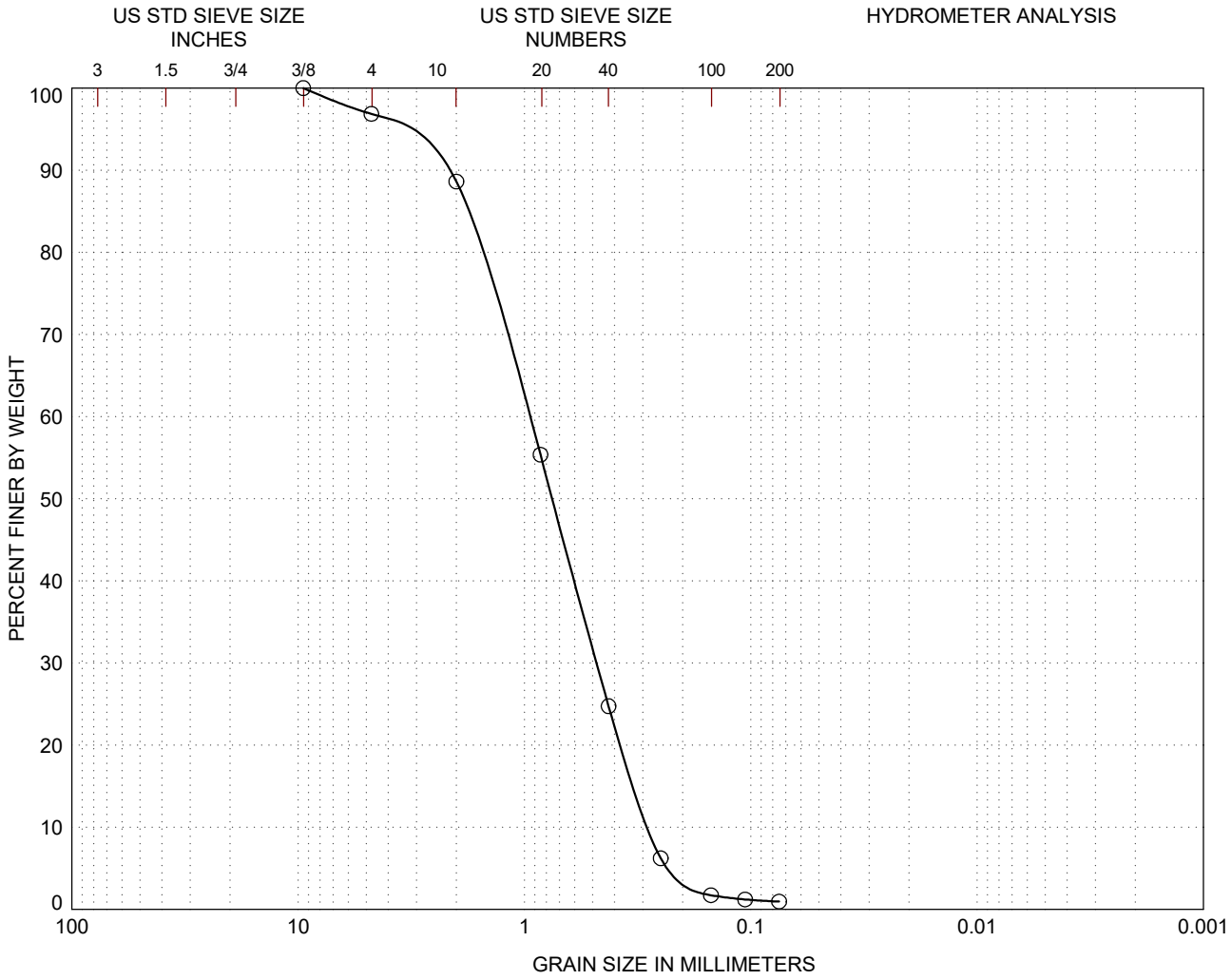
FIGURE E-2.41



3.1% GRAVEL		95.9% SAND			0.9% FINES	
0.0% Coarse	3.1% Fine	8.2% Coarse	63.9% Medium	23.8% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	96.9
2	88.6
0.85	55.4
0.425	24.7
0.25	6.2
0.15	1.7
0.106	1.2
0.075	0.9

Location: V-WTG-12
Depth: 1.95

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	3.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
2.31	1.82	0.958	0.753	0.479	0.322	0.279

PARTICLE SIZE DISTRIBUTION
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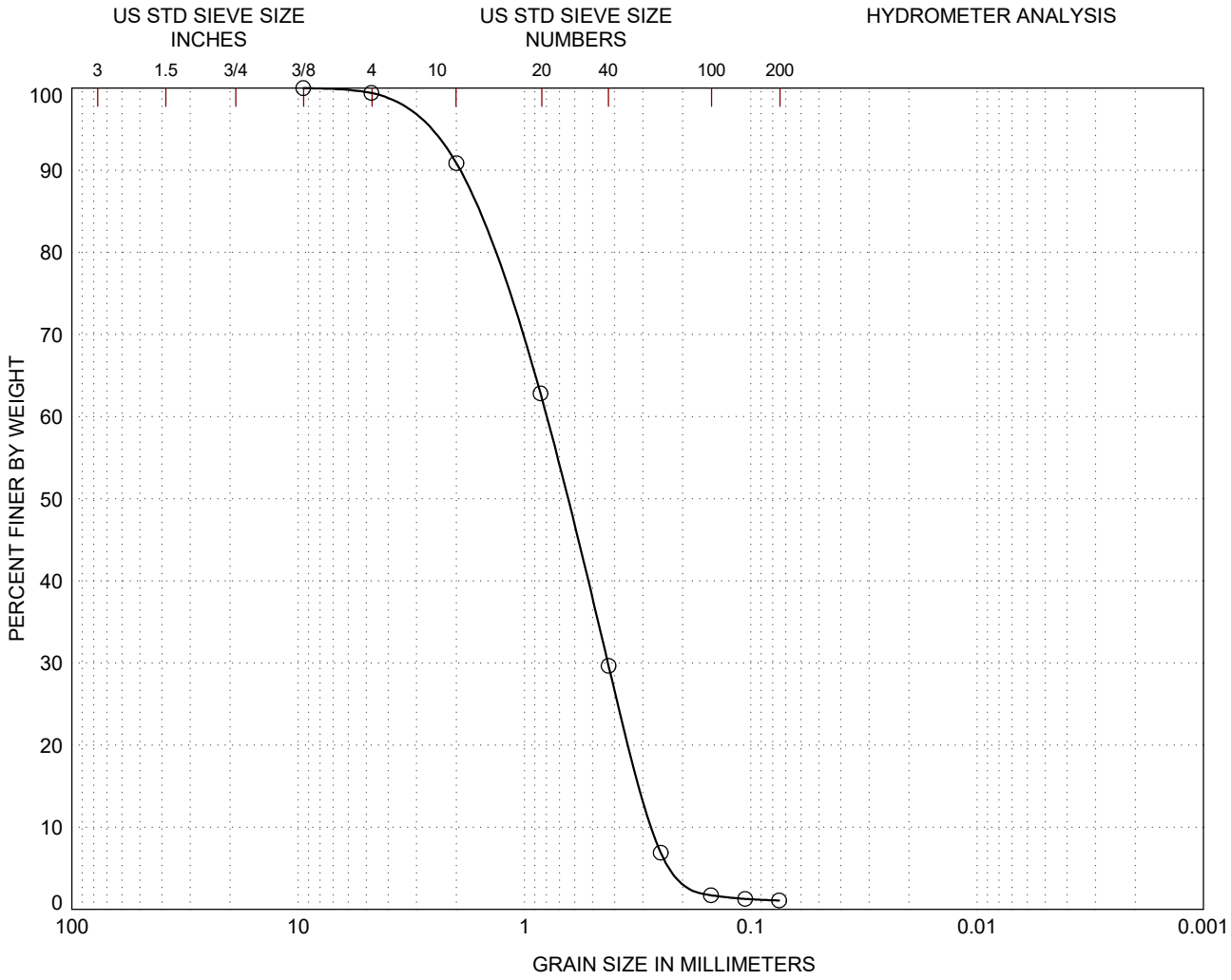
FIGURE E-2.42



0.6% GRAVEL		98.3% SAND			1.1% FINES	
0.0% Coarse	0.6% Fine	8.6% Coarse	61.2% Medium	28.6% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.4
2	90.9
0.85	62.8
0.425	29.7
0.25	6.9
0.15	1.7
0.106	1.3
0.075	1.1

Location: V-WTG-12
Depth: 2.95

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	3.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.95	1.67	0.801	0.650	0.428	0.302	0.269

PARTICLE SIZE DISTRIBUTION
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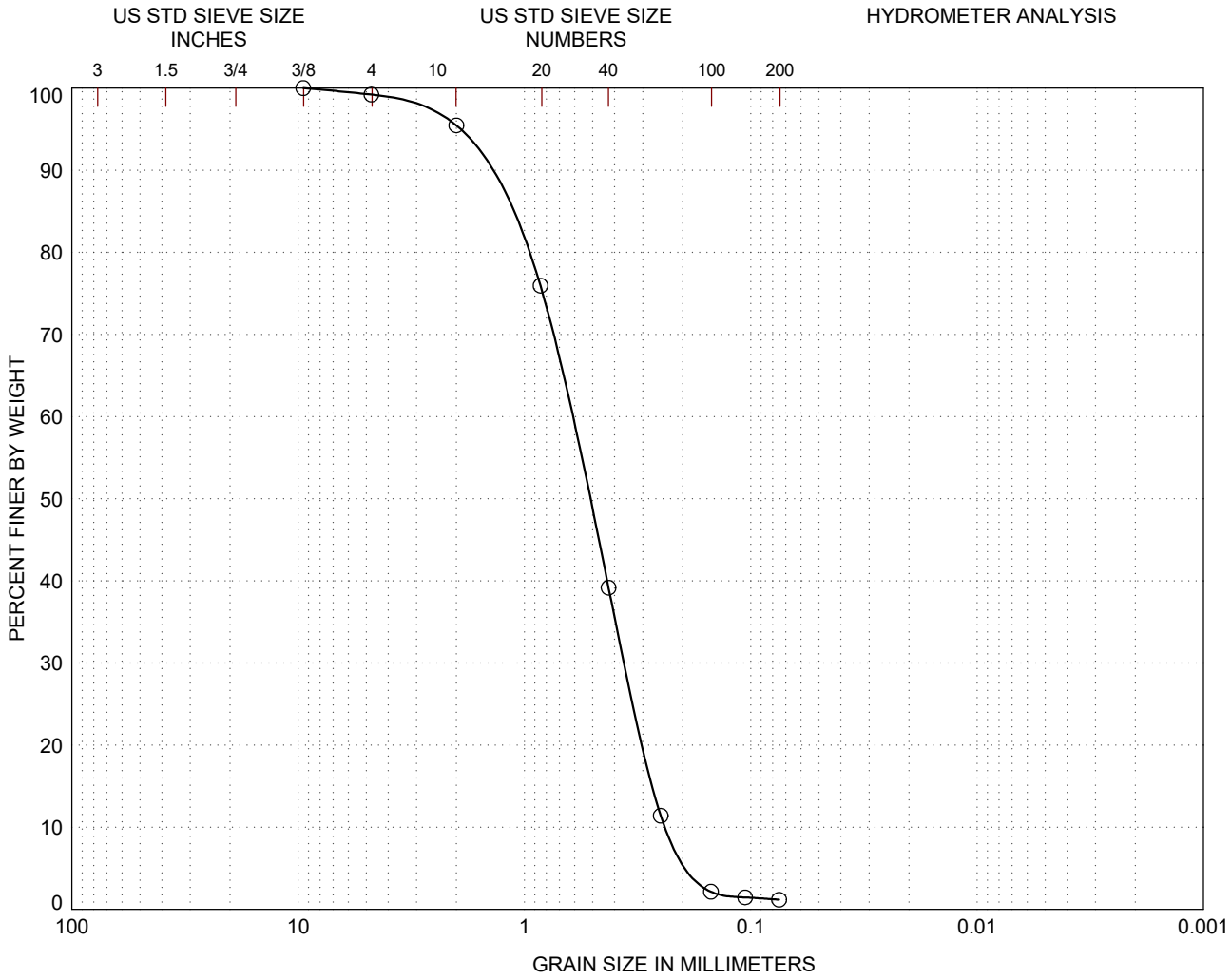
FIGURE E-2.43



0.8% GRAVEL		98.0% SAND			1.2% FINES	
0.0% Coarse	0.8% Fine	3.7% Coarse	56.3% Medium	38.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.2
2	95.5
0.85	75.9
0.425	39.2
0.25	11.4
0.15	2.1
0.106	1.5
0.075	1.2

Location: V-WTG-12
Depth: 3.95

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.7

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.57	1.26	0.629	0.521	0.357	0.268	0.231

PARTICLE SIZE DISTRIBUTION
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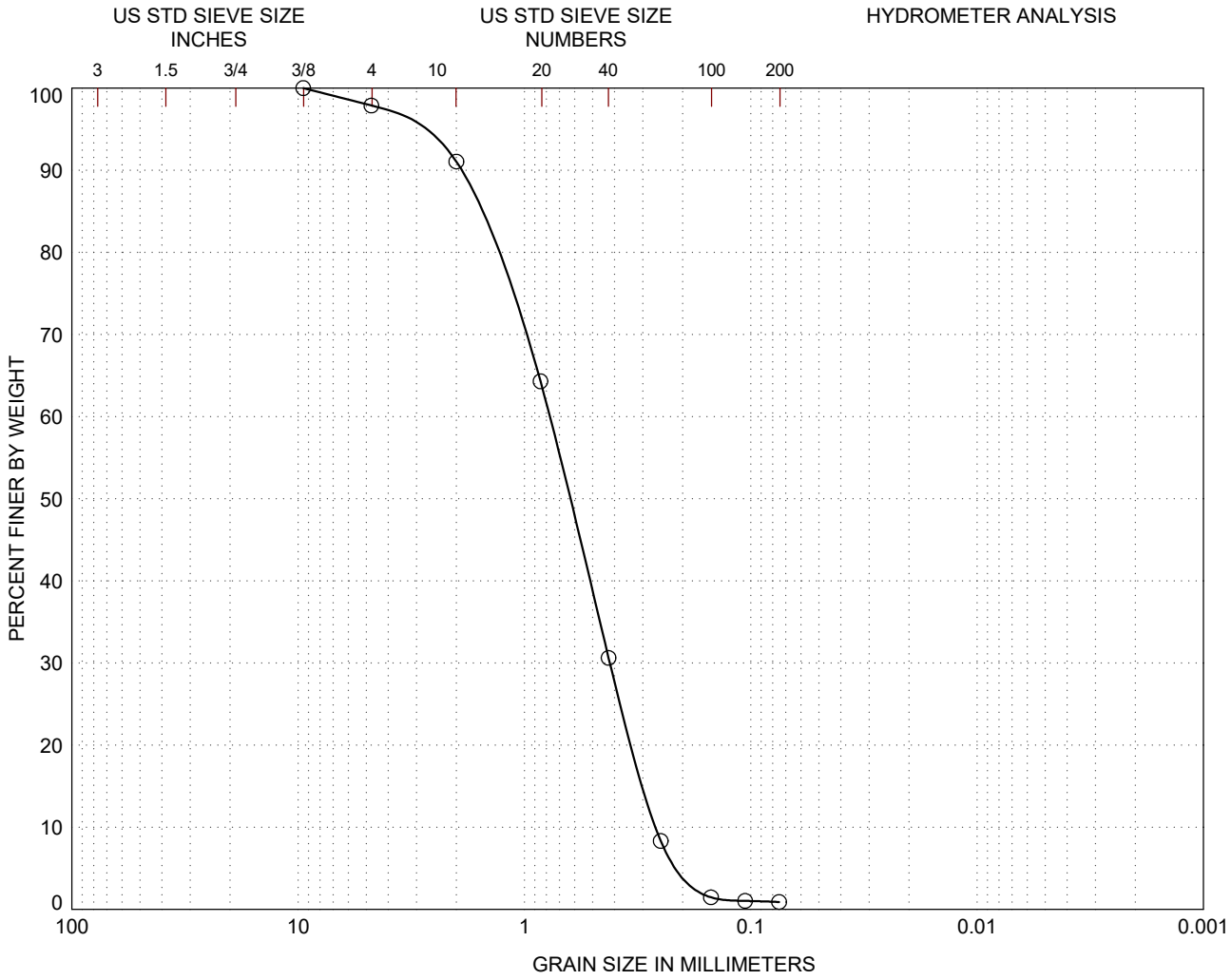
FIGURE E-2.44



2.1% GRAVEL		97.0% SAND			0.9% FINES	
0.0% Coarse	2.1% Fine	6.8% Coarse	60.4% Medium	29.7% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	97.9
2	91.0
0.85	64.3
0.425	30.6
0.25	8.3
0.15	1.5
0.106	1.0
0.075	0.9

Location: V-WTG-12
Depth: 4.95

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	3.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.93	1.65	0.778	0.633	0.419	0.293	0.260

PARTICLE SIZE DISTRIBUTION
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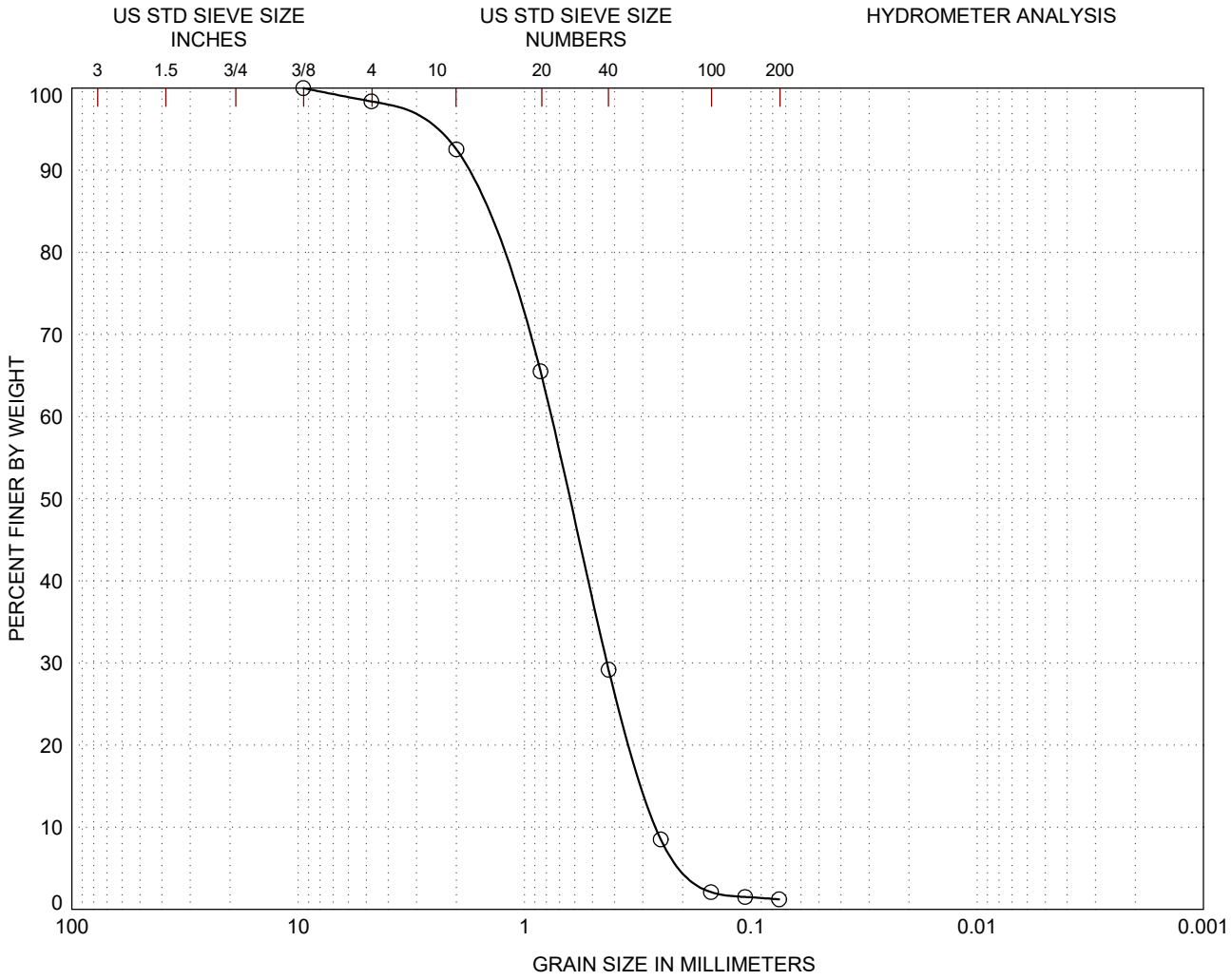
FIGURE E-2.45



1.6% GRAVEL		97.2% SAND			1.2% FINES	
0.0% Coarse	1.6% Fine	5.8% Coarse	63.4% Medium	28.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	98.4
2	92.5
0.85	65.5
0.425	29.2
0.25	8.5
0.15	2.1
0.106	1.5
0.075	1.2

Location: V-WTG-12
Depth: 5.80

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.85	1.58	0.765	0.632	0.432	0.295	0.260

PARTICLE SIZE DISTRIBUTION
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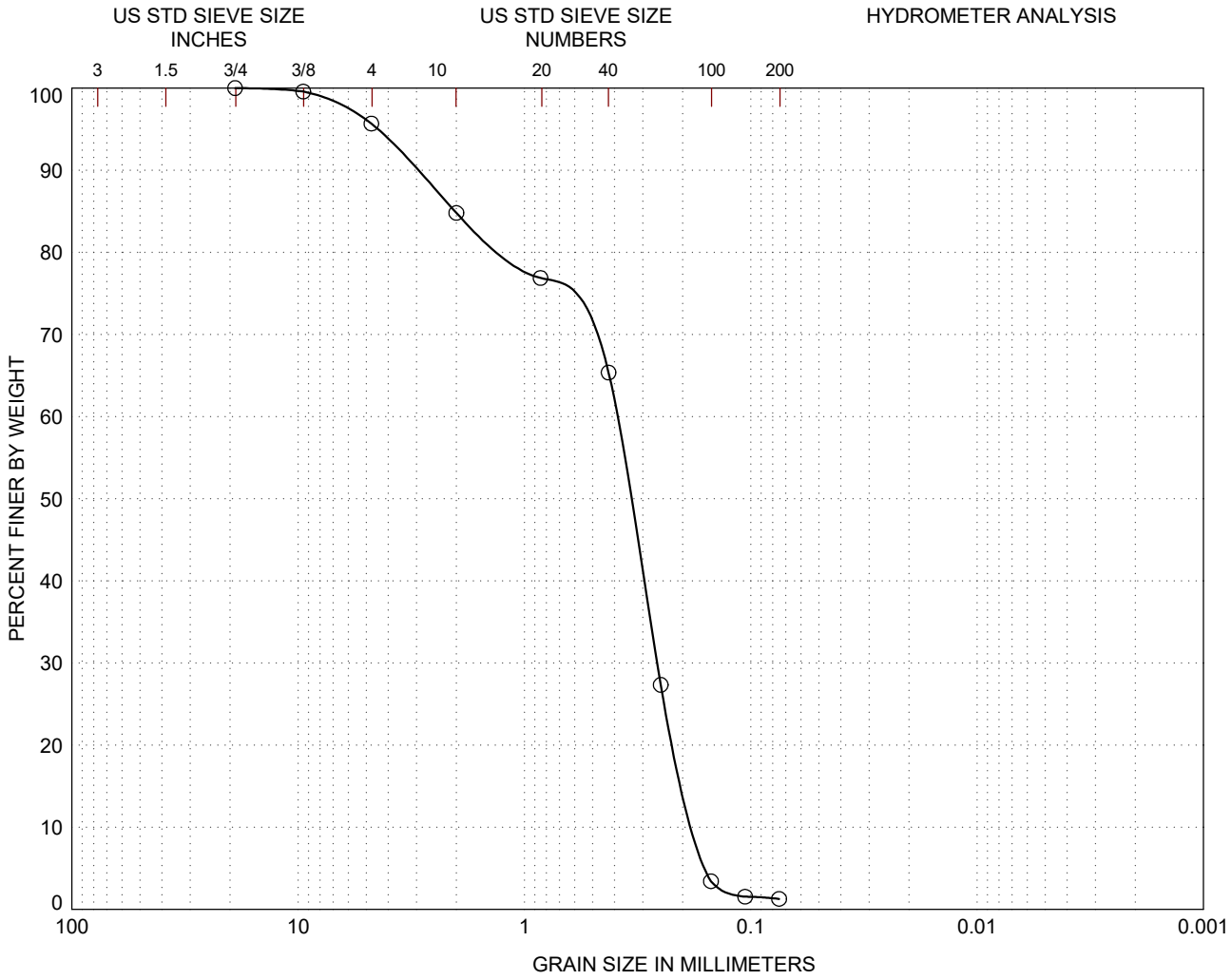
Rhode Island / Massachusetts

FIGURE E-2.46



4.3% GRAVEL		94.4% SAND			1.3% FINES	
0.0% Coarse	4.3% Fine	10.9% Coarse	19.4% Medium	64.1% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	99.6
4.75	95.7
2	84.8
0.85	76.9
0.425	65.4
0.25	27.3
0.15	3.4
0.106	1.5
0.075	1.3

Location: V-WTG-13
Depth: 0.28

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
3.02	2.03	0.394	0.343	0.259	0.192	0.173

PARTICLE SIZE DISTRIBUTION
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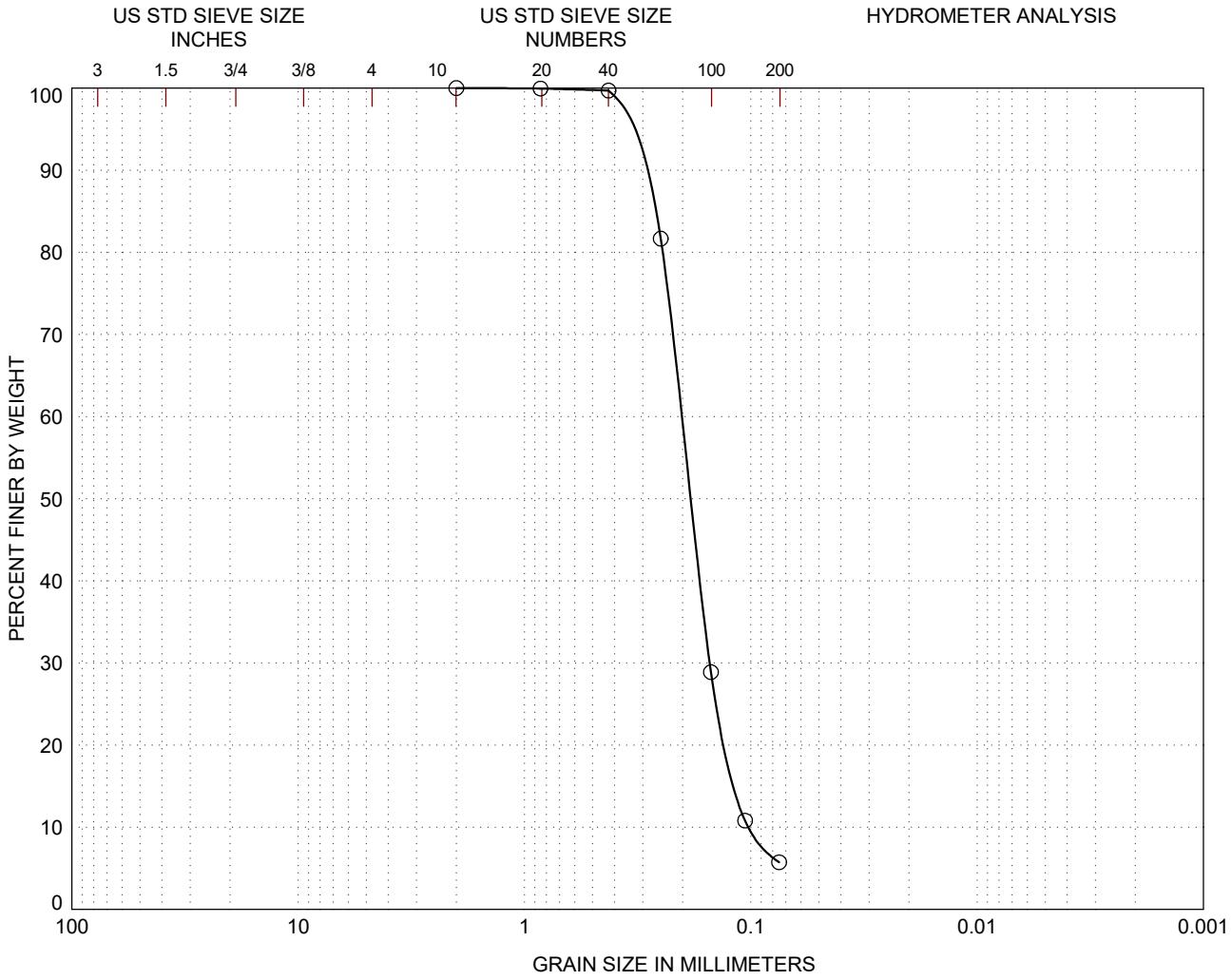
Rhode Island / Massachusetts

FIGURE E-2.47



0.0% GRAVEL		94.3% SAND			5.7% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.3% Medium	94.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	99.9
0.425	99.7
0.25	81.7
0.15	28.9
0.106	10.8
0.075	5.7

Location: V-WTG-13
Depth: 1.28

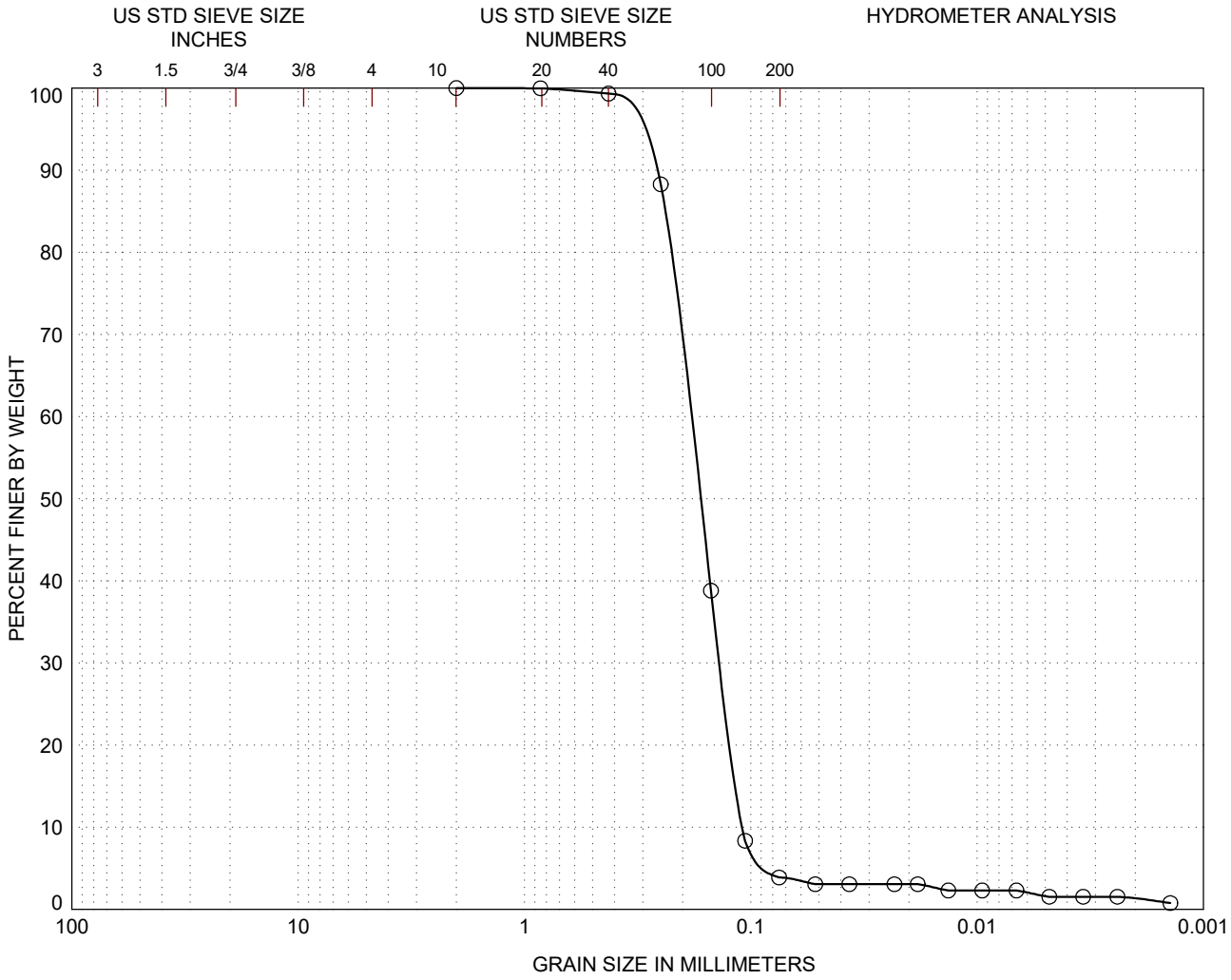
POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.319	0.276	0.203	0.184	0.152	0.115	0.100

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.48



0.0% GRAVEL		96.1% SAND			3.9% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.7% Medium	95.5% Fine	2.3% SILT	1.6% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	100.0
0.425	99.3
0.25	88.3
0.15	38.8
0.106	8.4
0.075	3.9

Location: V-WTG-13
Depth: 2.28

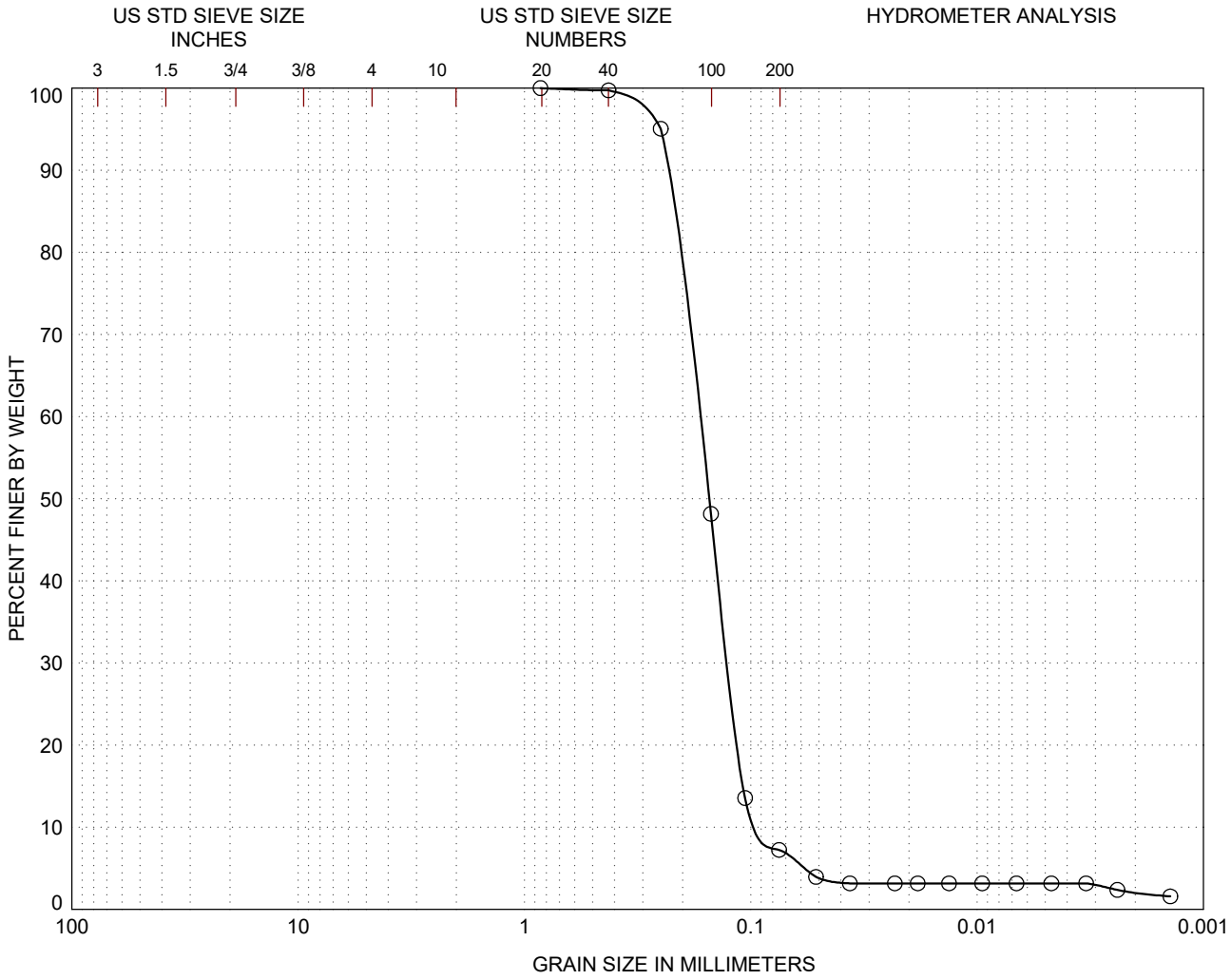
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	1.7

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.272	0.242	0.187	0.168	0.136	0.114	0.108

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.49



0.0% GRAVEL		92.8% SAND			7.2% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.3% Medium	92.5% Fine	4.1% SILT	3.2% CLAY

Sieve Size (mm)	Percent Finer
0.85	100.0
0.425	99.7
0.25	95.1
0.15	48.2
0.106	13.6
0.075	7.2

Location: V-WTG-13
Depth: 3.28

POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.237	0.224	0.171	0.153	0.125	0.108	0.0873

PARTICLE SIZE DISTRIBUTION
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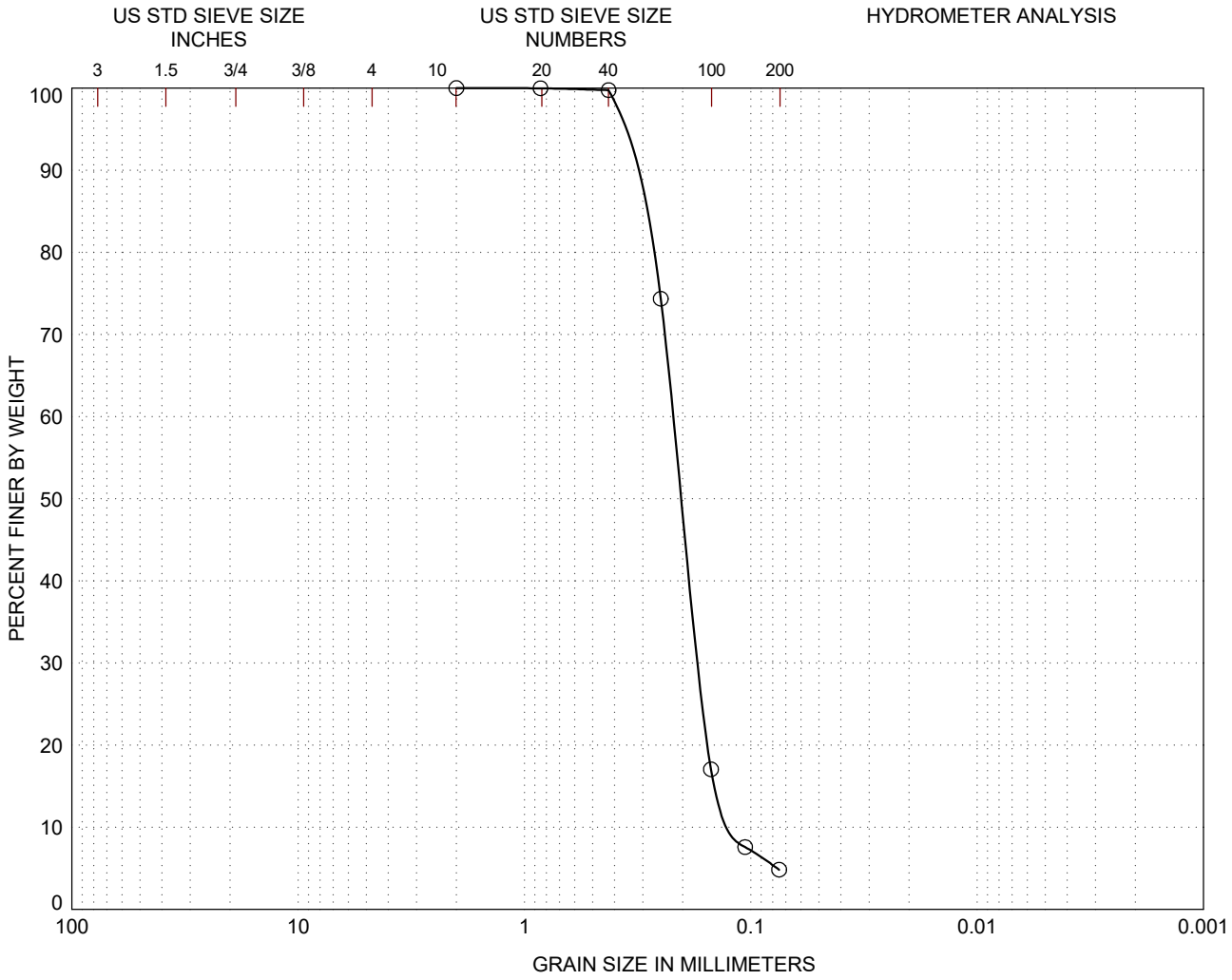
Rhode Island / Massachusetts

FIGURE E-2.50



0.0% GRAVEL		95.2% SAND			4.8% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.3% Medium	94.9% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	100.0
0.425	99.7
0.25	74.3
0.15	17.1
0.106	7.6
0.075	4.8

Location: V-WTG-13
Depth: 4.28

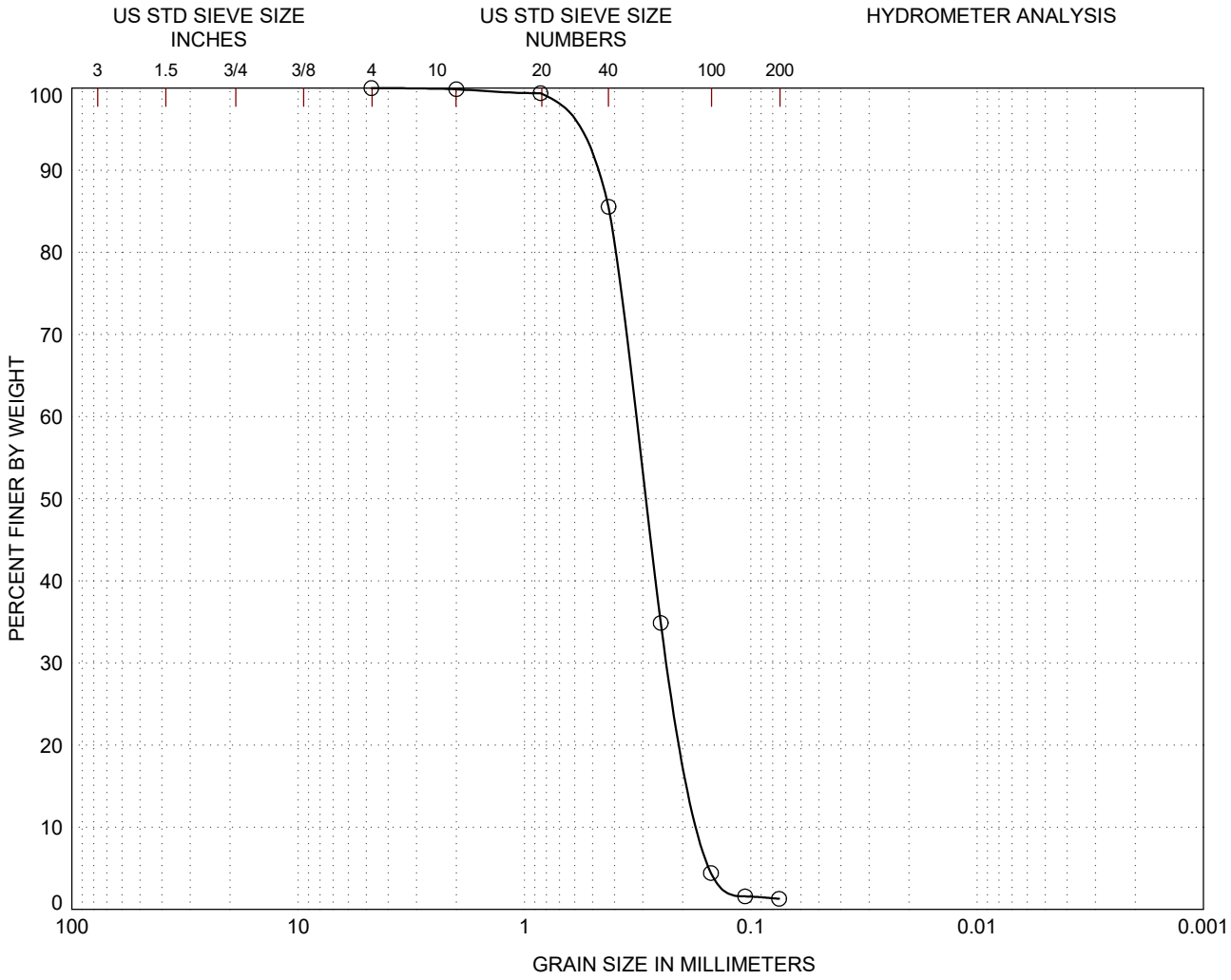
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	1.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.347	0.312	0.220	0.201	0.168	0.139	0.116

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.51



0.0% GRAVEL		98.7% SAND			1.3% FINES	
0.0% Coarse	0.0% Fine	0.1% Coarse	14.3% Medium	84.3% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.9
0.85	99.4
0.425	85.5
0.25	34.9
0.15	4.4
0.106	1.6
0.075	1.3

Location: V-WTG-14
Depth: 0.35

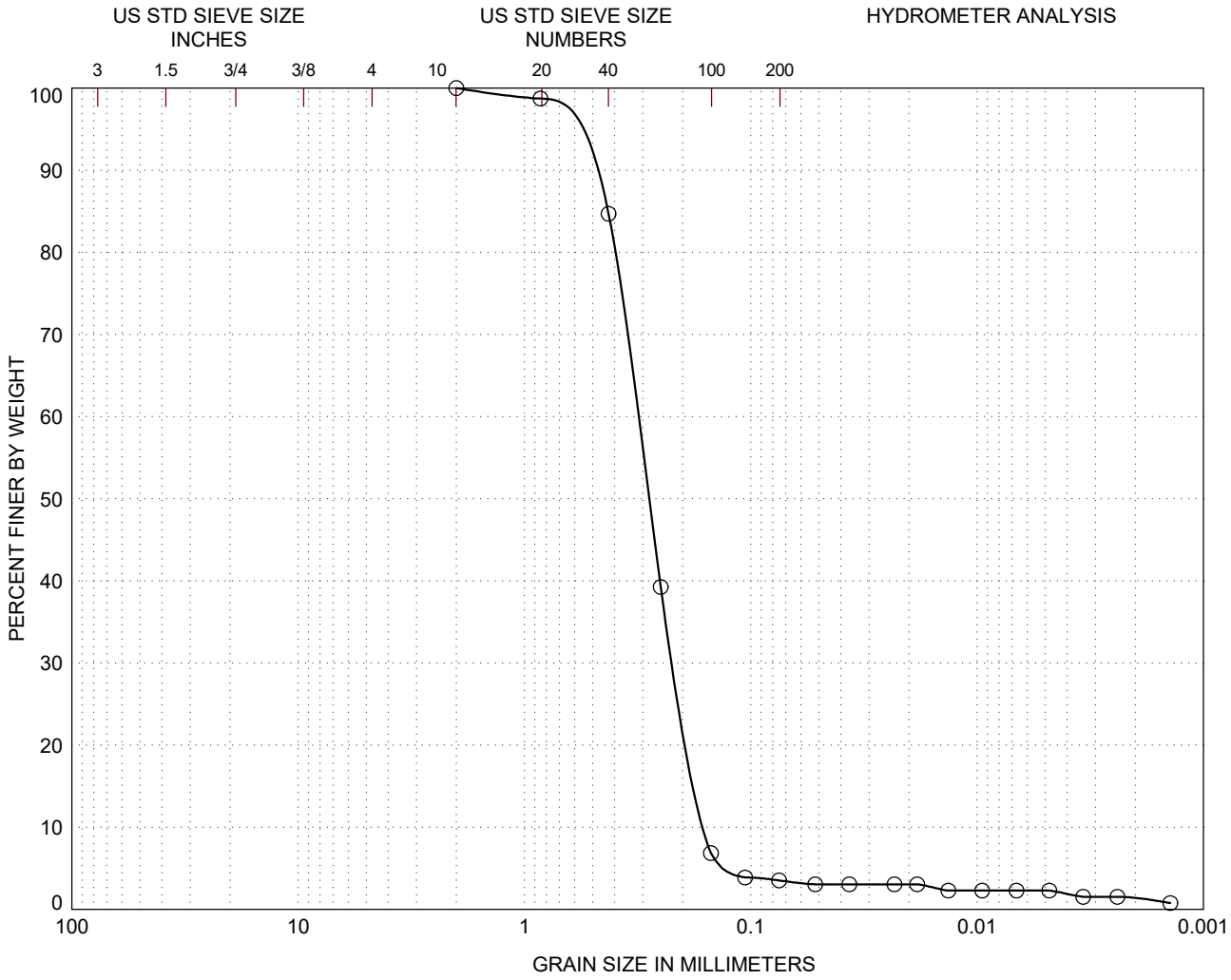
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.531	0.423	0.325	0.293	0.230	0.179	0.165

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.52



0.0% GRAVEL		96.5% SAND			3.5% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	15.3% Medium	81.2% Fine	1.2% SILT	2.3% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	98.7
0.425	84.7
0.25	39.3
0.15	6.8
0.106	3.9
0.075	3.5

Location: V-WTG-14
Depth: 0.50

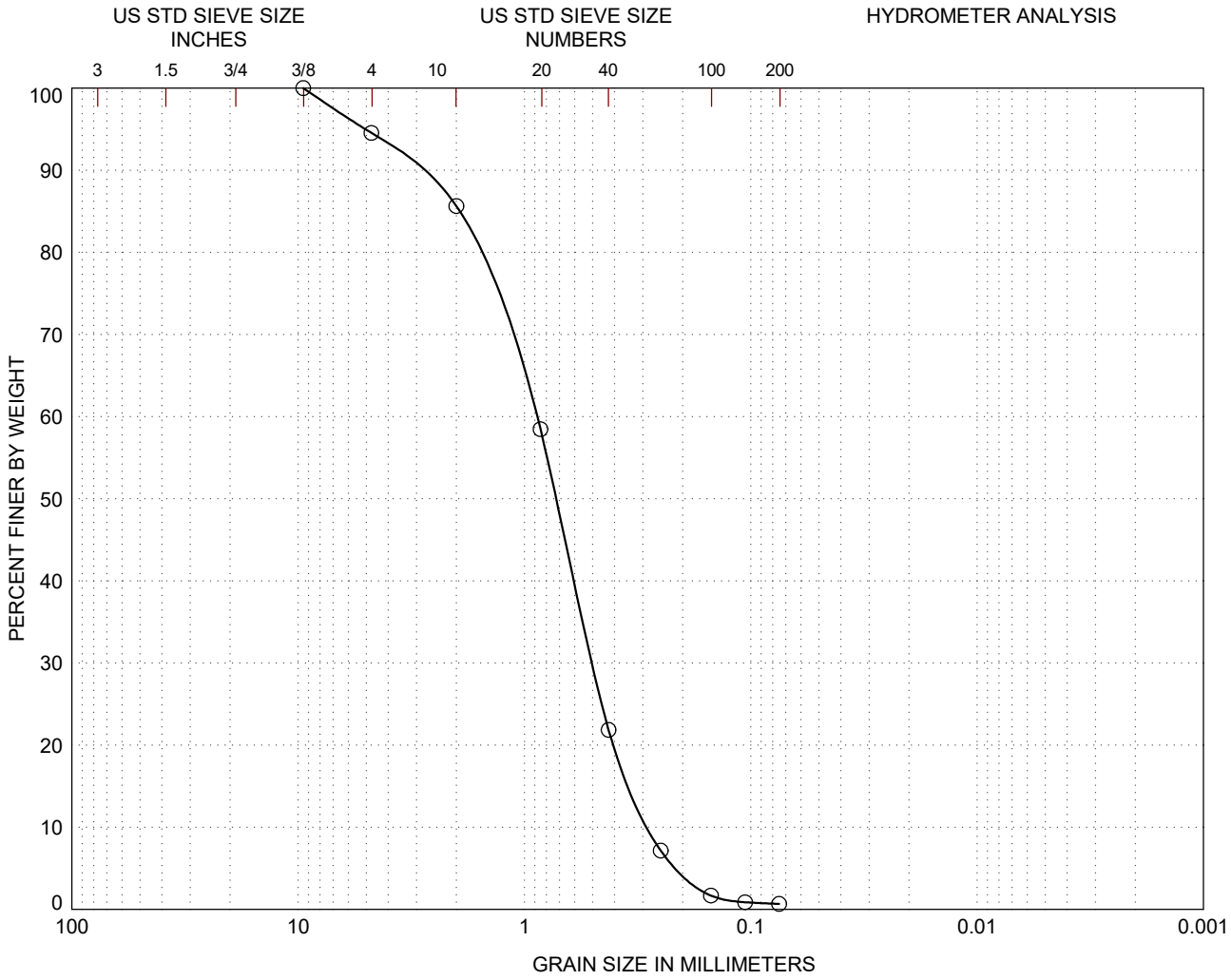
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.552	0.432	0.319	0.283	0.216	0.171	0.158

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.53



5.5% GRAVEL		93.9% SAND			0.7% FINES	
0.0% Coarse	5.5% Fine	8.9% Coarse	63.8% Medium	21.2% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	94.5
2	85.6
0.85	58.5
0.425	21.9
0.25	7.2
0.15	1.7
0.106	0.9
0.075	0.7

Location: V-WTG-14
Depth: 1.50

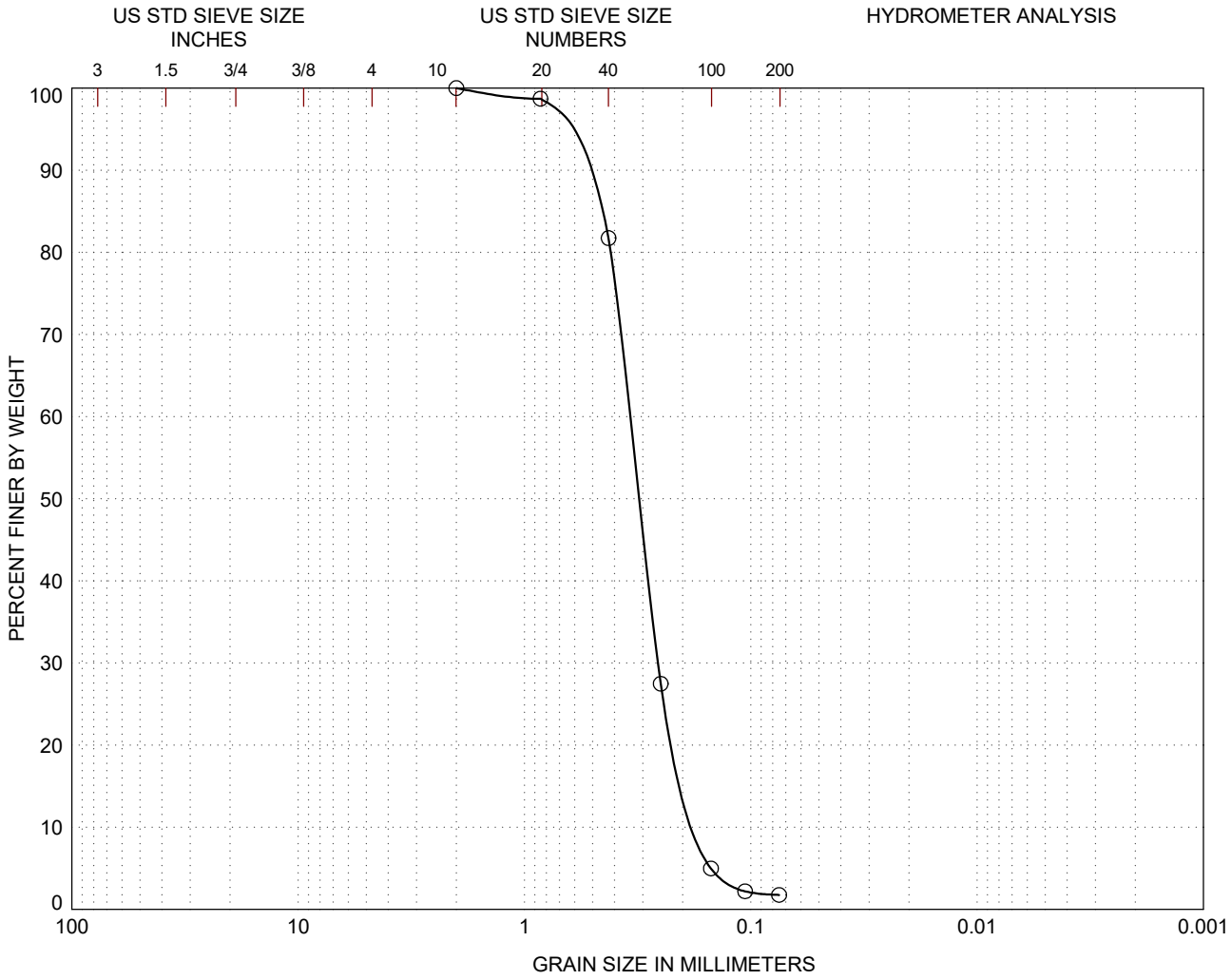
POORLY GRADED SAND (SP) medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	3.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
3.06	1.96	0.892	0.724	0.496	0.332	0.277

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.54



0.0% GRAVEL		98.2% SAND			1.8% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	18.3% Medium	80.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	98.7
0.425	81.7
0.25	27.5
0.15	5.0
0.106	2.2
0.075	1.8

Location: V-WTG-14
Depth: 2.50

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.596	0.486	0.344	0.312	0.256	0.188	0.168

PARTICLE SIZE DISTRIBUTION
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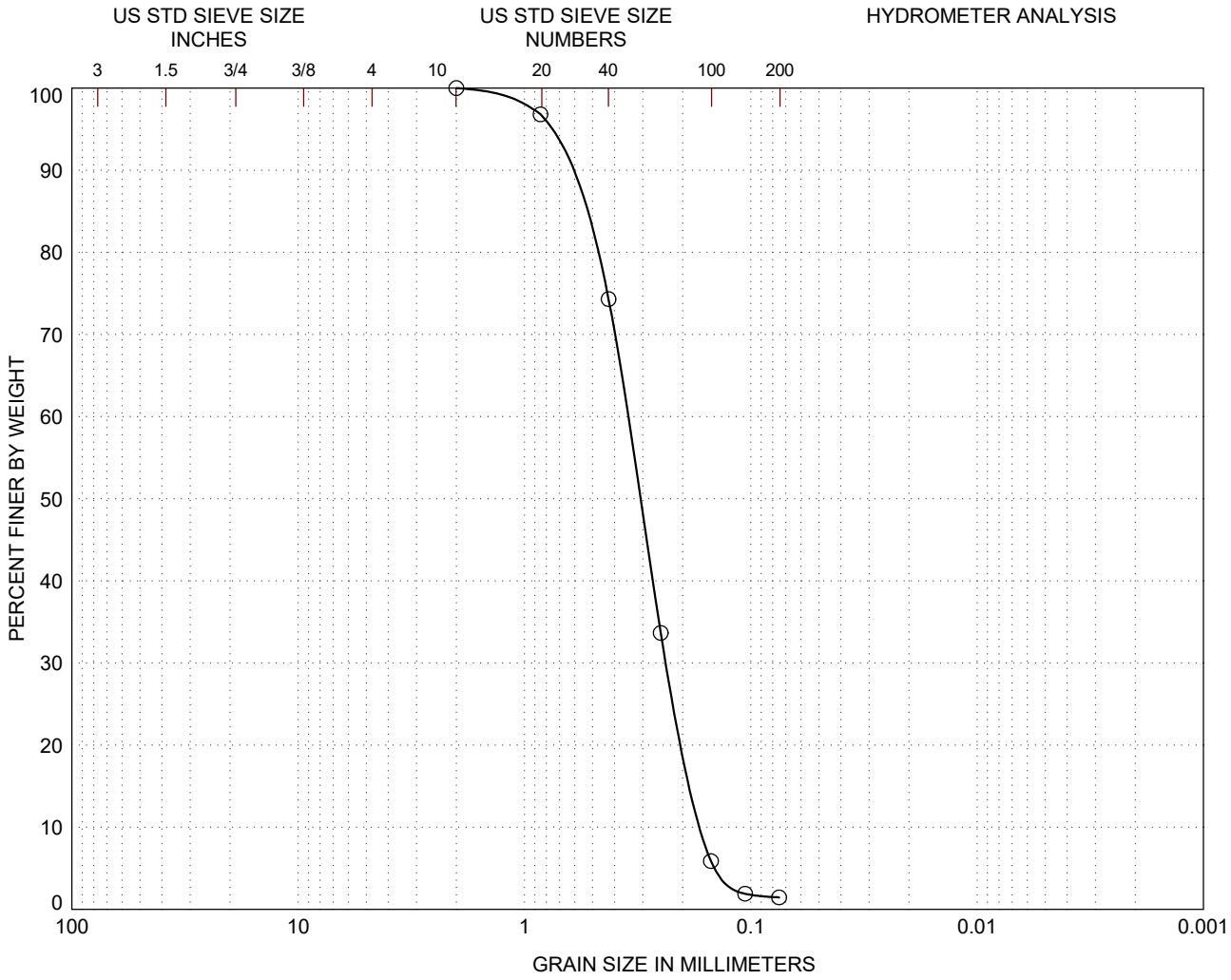
Rhode Island / Massachusetts

FIGURE E-2.55



0.0% GRAVEL		98.5% SAND			1.5% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	25.7% Medium	72.9% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.8
0.425	74.3
0.25	33.7
0.15	5.9
0.106	1.9
0.075	1.5

Location: V-WTG-14
Depth: 3.50

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.689	0.591	0.353	0.309	0.234	0.177	0.162

PARTICLE SIZE DISTRIBUTION
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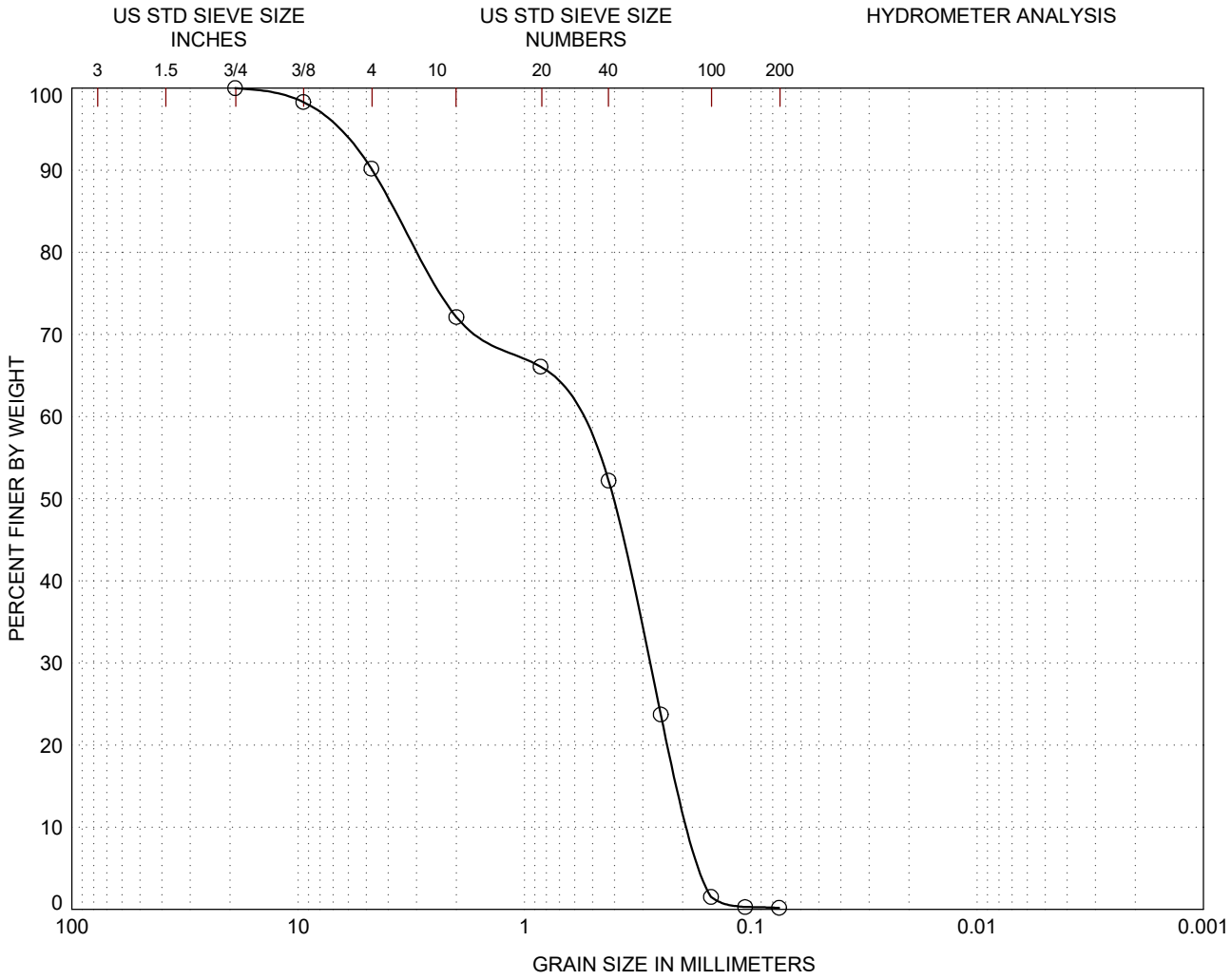
Rhode Island / Massachusetts

FIGURE E-2.56



9.8% GRAVEL		90.0% SAND			0.2% FINES	
0.0% Coarse	9.8% Fine	18.1% Coarse	19.9% Medium	52.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	98.3
4.75	90.2
2	72.1
0.85	66.1
0.425	52.2
0.25	23.7
0.15	1.5
0.106	0.3
0.075	0.2

Location: V-WTG-15a
Depth: 0.00

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.7	3.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
4.71	3.70	0.627	0.408	0.281	0.205	0.182

PARTICLE SIZE DISTRIBUTION
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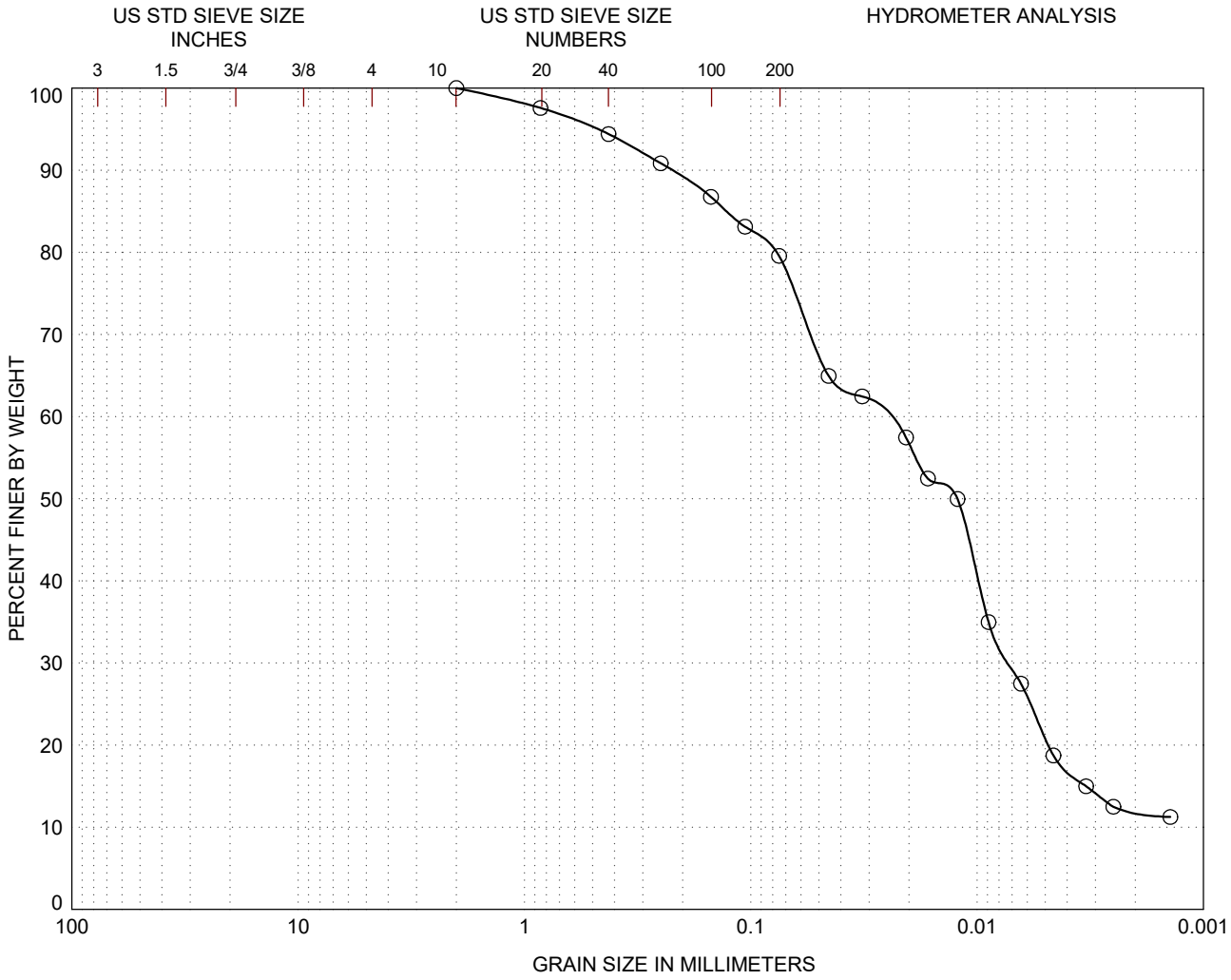
FIGURE E-2.57



0.0% GRAVEL		20.4% SAND			79.6% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	5.6% Medium	14.8% Fine	58.6% SILT	20.9% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	97.6
0.425	94.4
0.25	90.8
0.15	86.8
0.106	83.1
0.075	79.6

Location: V-WTG-15a
Depth: 1.30

LEAN CLAY with SAND (CL) low plasticity clay, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
17	27	10		

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.225	0.127	0.0259	0.0123	0.00715	0.00330	

PARTICLE SIZE DISTRIBUTION
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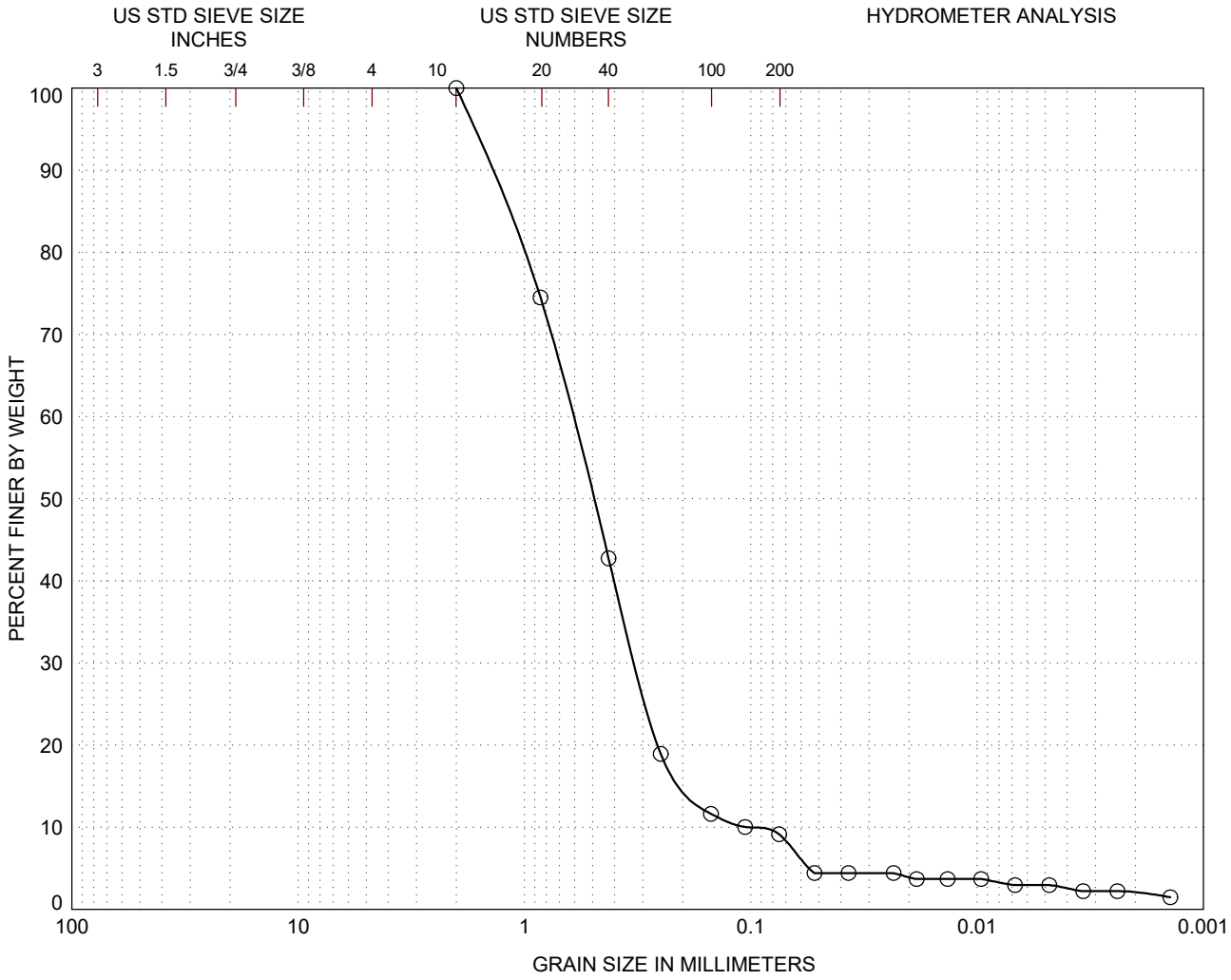
FIGURE E-2.58



0.0% GRAVEL		90.9% SAND			9.1% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	57.3% Medium	33.6% Fine	6.2% SILT	2.9% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	74.5
0.425	42.7
0.25	18.9
0.15	11.6
0.106	10.0
0.075	9.1

Location: V-WTG-15a
Depth: 2.40

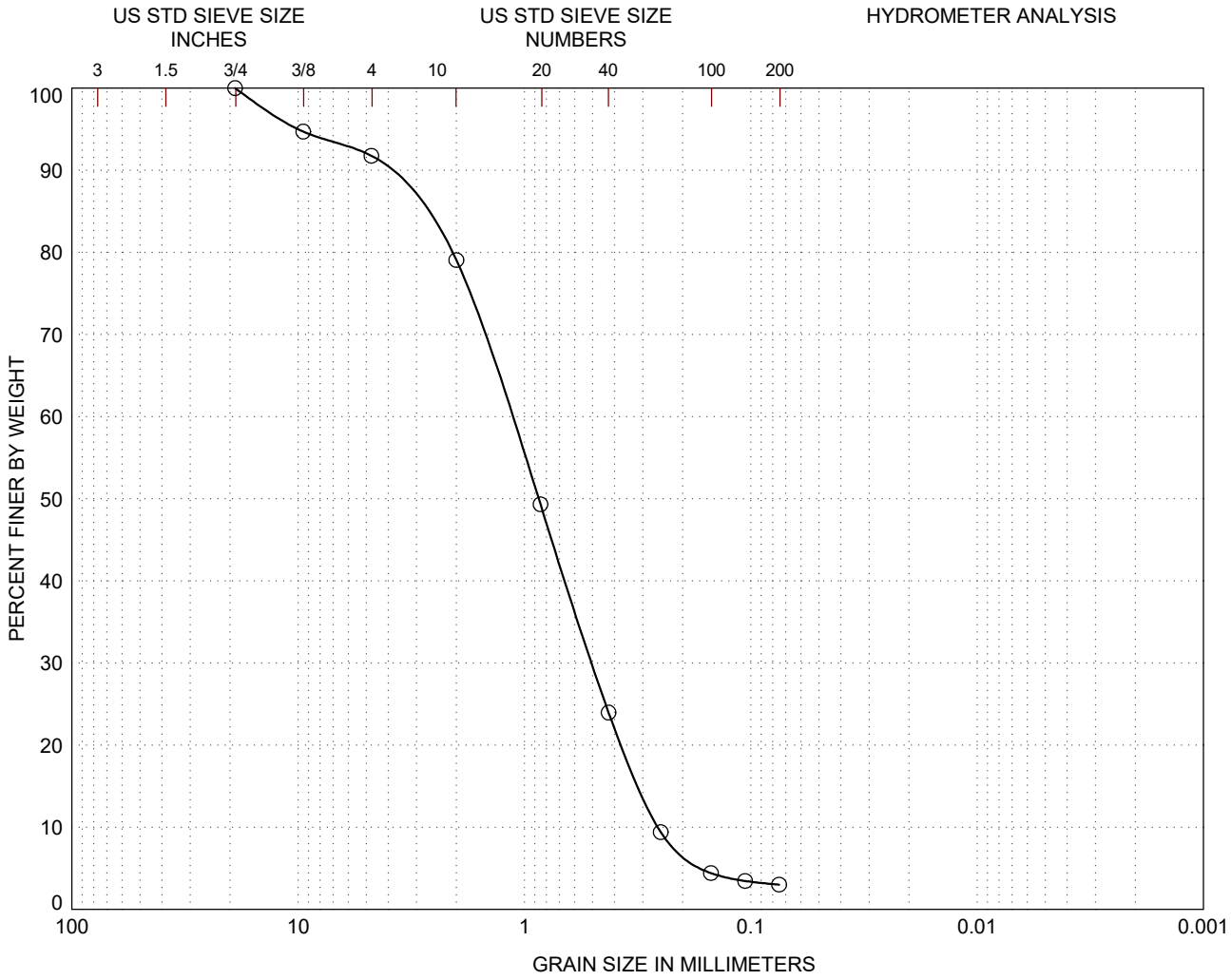
POORLY GRADED SAND with SILT (SP-SM) fine to medium sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.6	5.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.43	1.21	0.619	0.498	0.320	0.190	0.105

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.59



8.2% GRAVEL		88.7% SAND			3.0% FINES	
0.0% Coarse	8.2% Fine	12.7% Coarse	55.1% Medium	21.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	94.7
4.75	91.8
2	79.1
0.85	49.3
0.425	24.0
0.25	9.4
0.15	4.4
0.106	3.5
0.075	3.0

Location: V-WTG-15a
Depth: 2.60

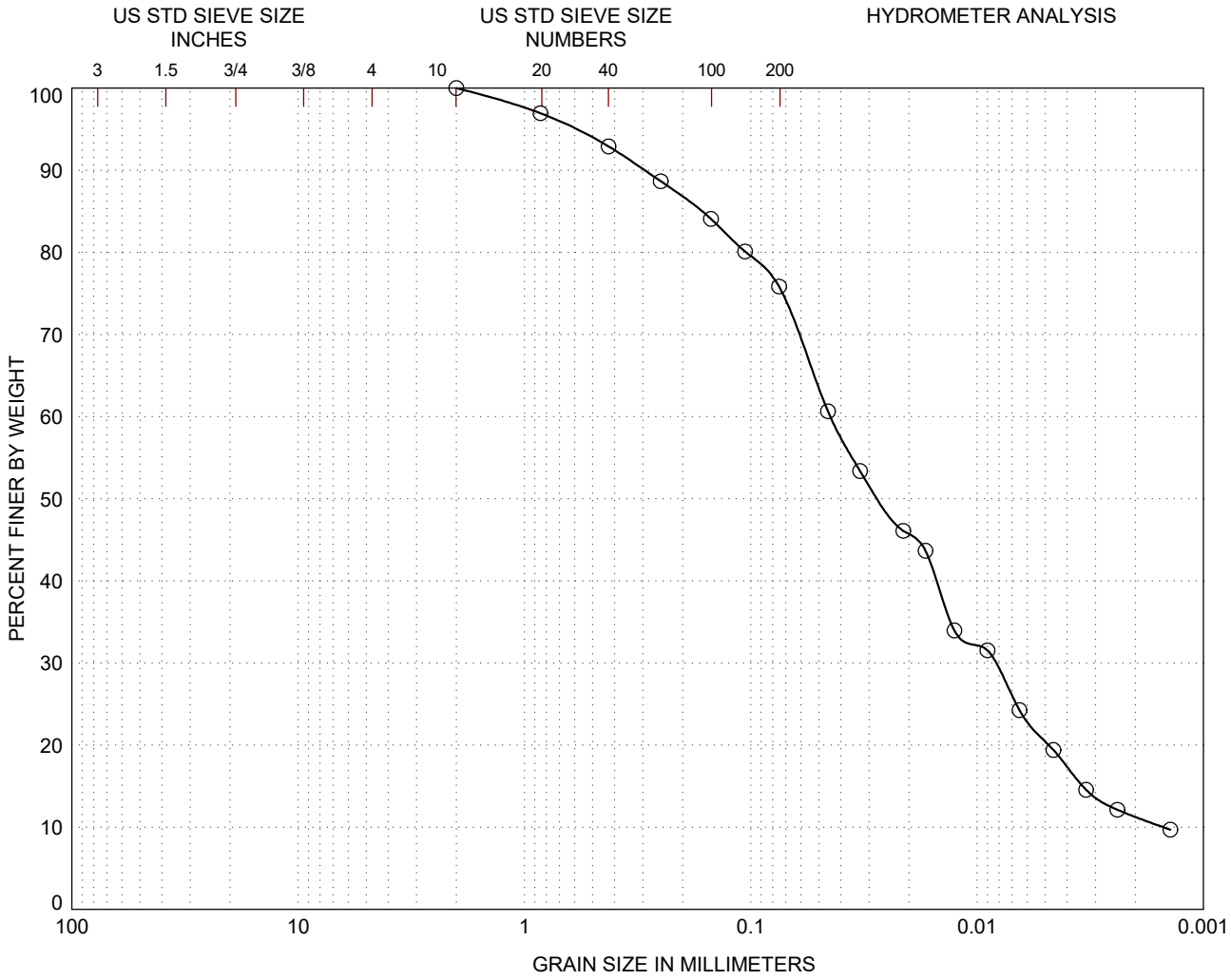
POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	4.5

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
4.21	3.00	1.16	0.867	0.501	0.307	0.256

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.60



0.0% GRAVEL		24.2% SAND			75.8% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	7.1% Medium	17.1% Fine	55.3% SILT	20.6% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.9
0.425	92.9
0.25	88.7
0.15	84.1
0.106	80.1
0.075	75.8

Location: V-WTG-15a
Depth: 3.30

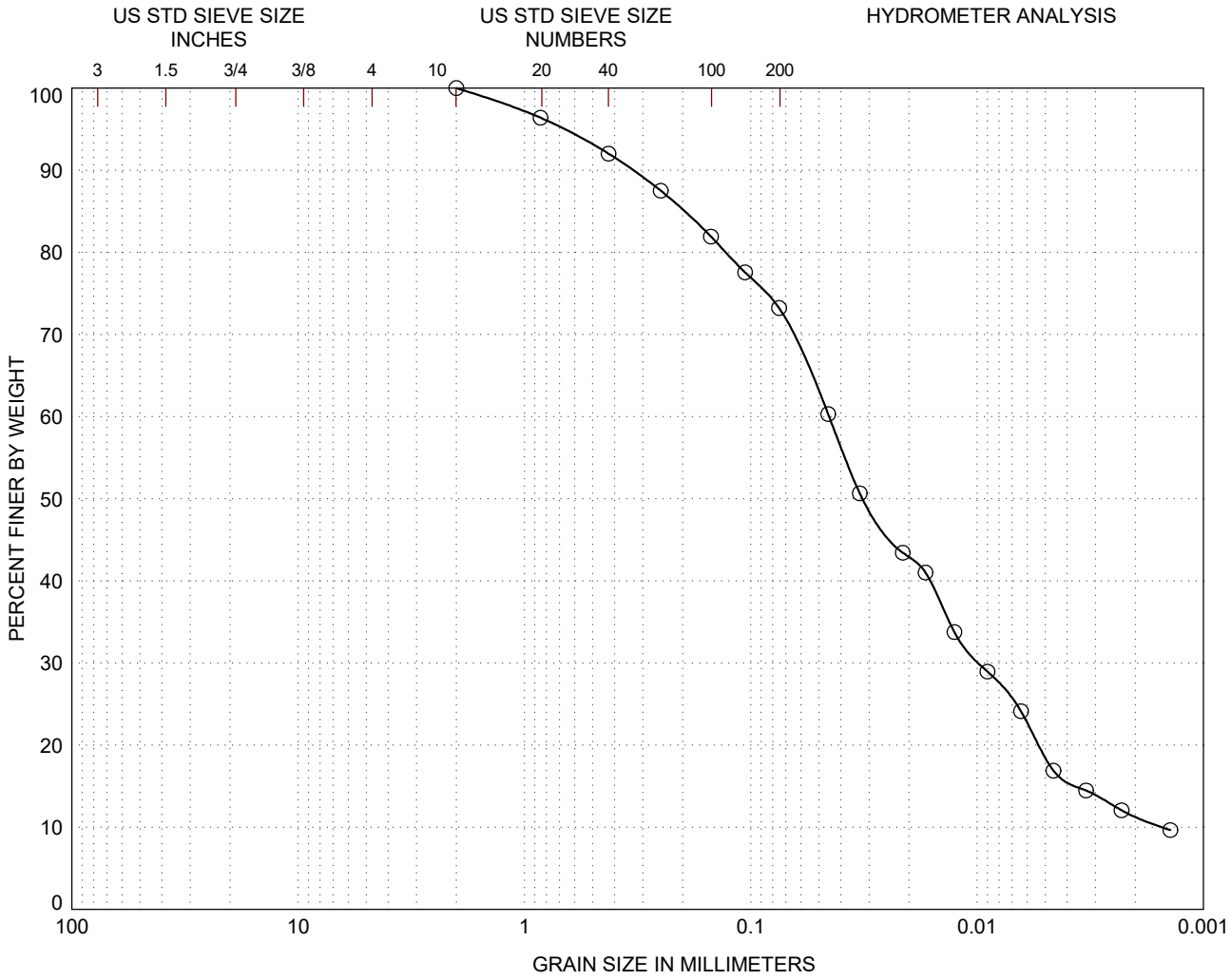
LEAN CLAY with SAND (CL) low plasticity clay, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
17	26	9	1.1	29.6

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.296	0.166	0.0443	0.0268	0.00840	0.00340	0.00150

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.61



0.0% GRAVEL		26.8% SAND			73.2% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	8.0% Medium	18.8% Fine	54.5% SILT	18.7% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.4
0.425	92.0
0.25	87.5
0.15	81.9
0.106	77.6
0.075	73.2

Location: V-WTG-15a
Depth: 4.30

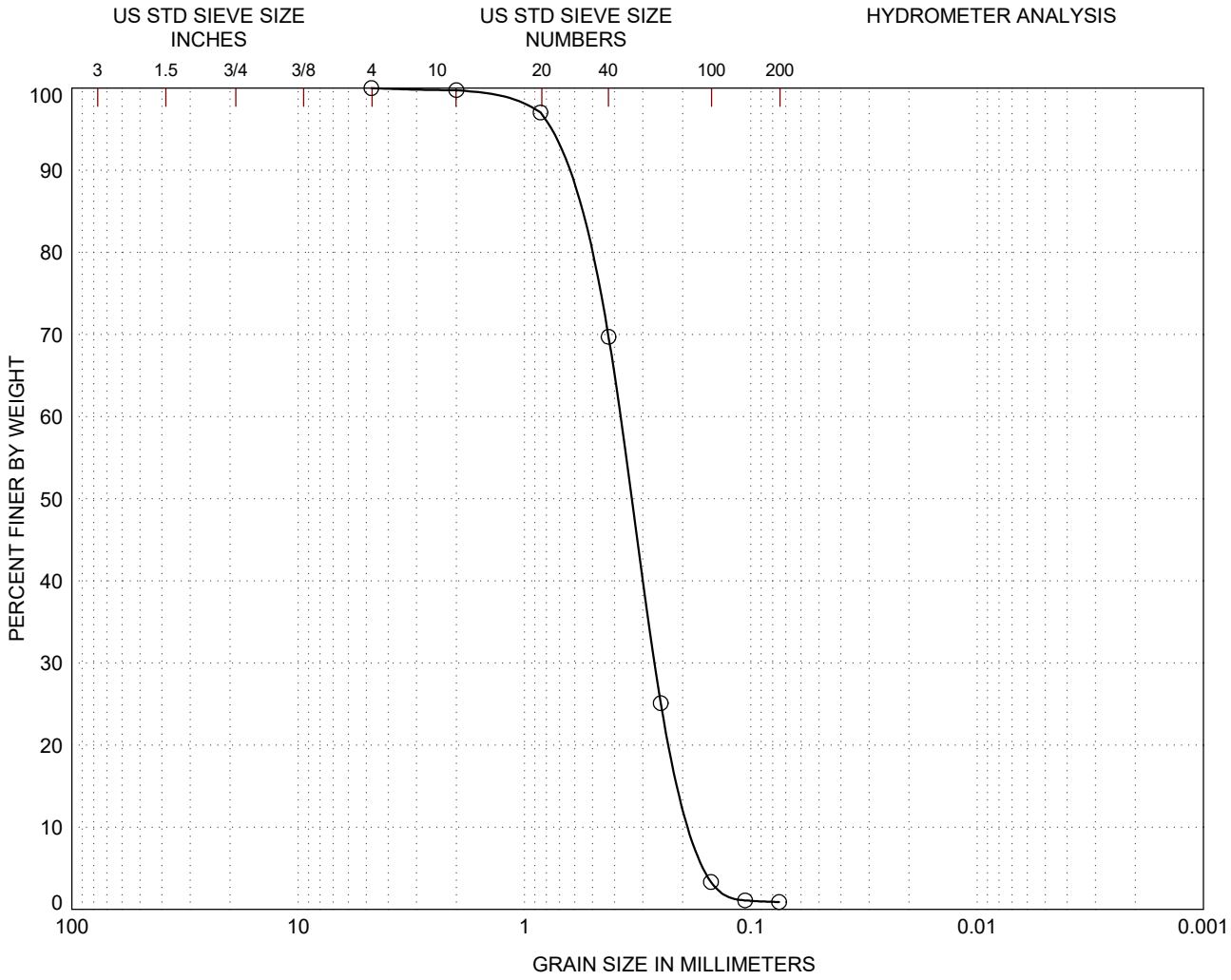
SILTY CLAY with SAND (CL-ML) low plasticity clay, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
17	22	5	1.4	29.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.336	0.199	0.0450	0.0317	0.00969	0.00355	0.00150

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.62



0.0% GRAVEL		99.1% SAND			0.9% FINES	
0.0% Coarse	0.0% Fine	0.2% Coarse	30.0% Medium	68.8% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.8
0.85	97.0
0.425	69.7
0.25	25.1
0.15	3.3
0.106	1.1
0.075	0.9

Location: V-WTG-16
Depth: 0.30

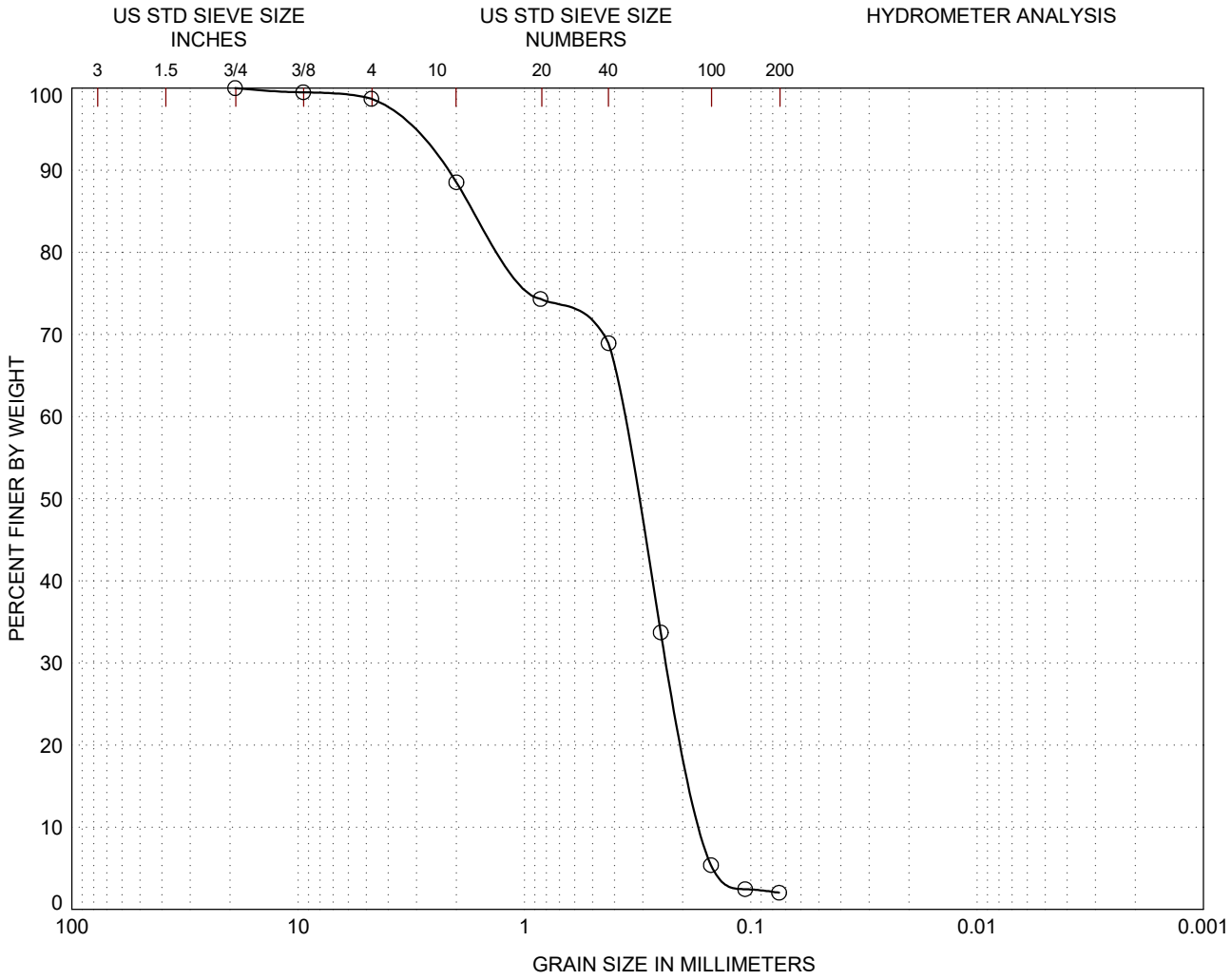
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.711	0.626	0.379	0.336	0.265	0.197	0.175

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.63



1.3% GRAVEL		96.7% SAND			2.0% FINES	
0.0% Coarse	1.3% Fine	10.2% Coarse	19.6% Medium	66.9% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	99.5
4.75	98.7
2	88.5
0.85	74.3
0.425	68.9
0.25	33.7
0.15	5.4
0.106	2.5
0.075	2.0

Location: V-WTG-16
Depth: 0.93

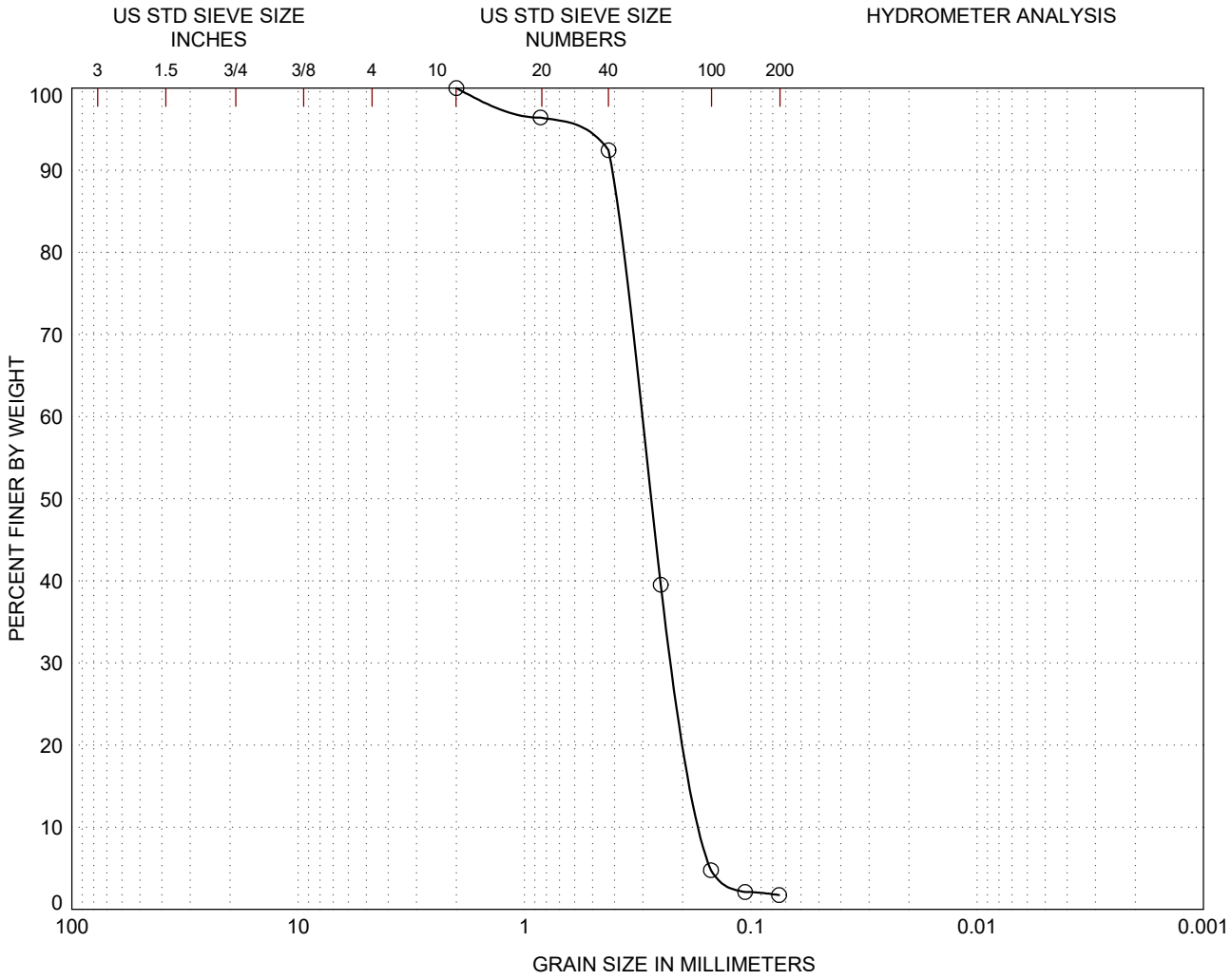
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
2.27	1.62	0.371	0.319	0.234	0.178	0.163

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.64



0.0% GRAVEL		98.3% SAND			1.7% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	7.6% Medium	90.7% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.4
0.425	92.4
0.25	39.5
0.15	4.8
0.106	2.1
0.075	1.7

Location: V-WTG-16
Depth: 1.93

POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	1.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.415	0.394	0.307	0.278	0.217	0.174	0.162

PARTICLE SIZE DISTRIBUTION
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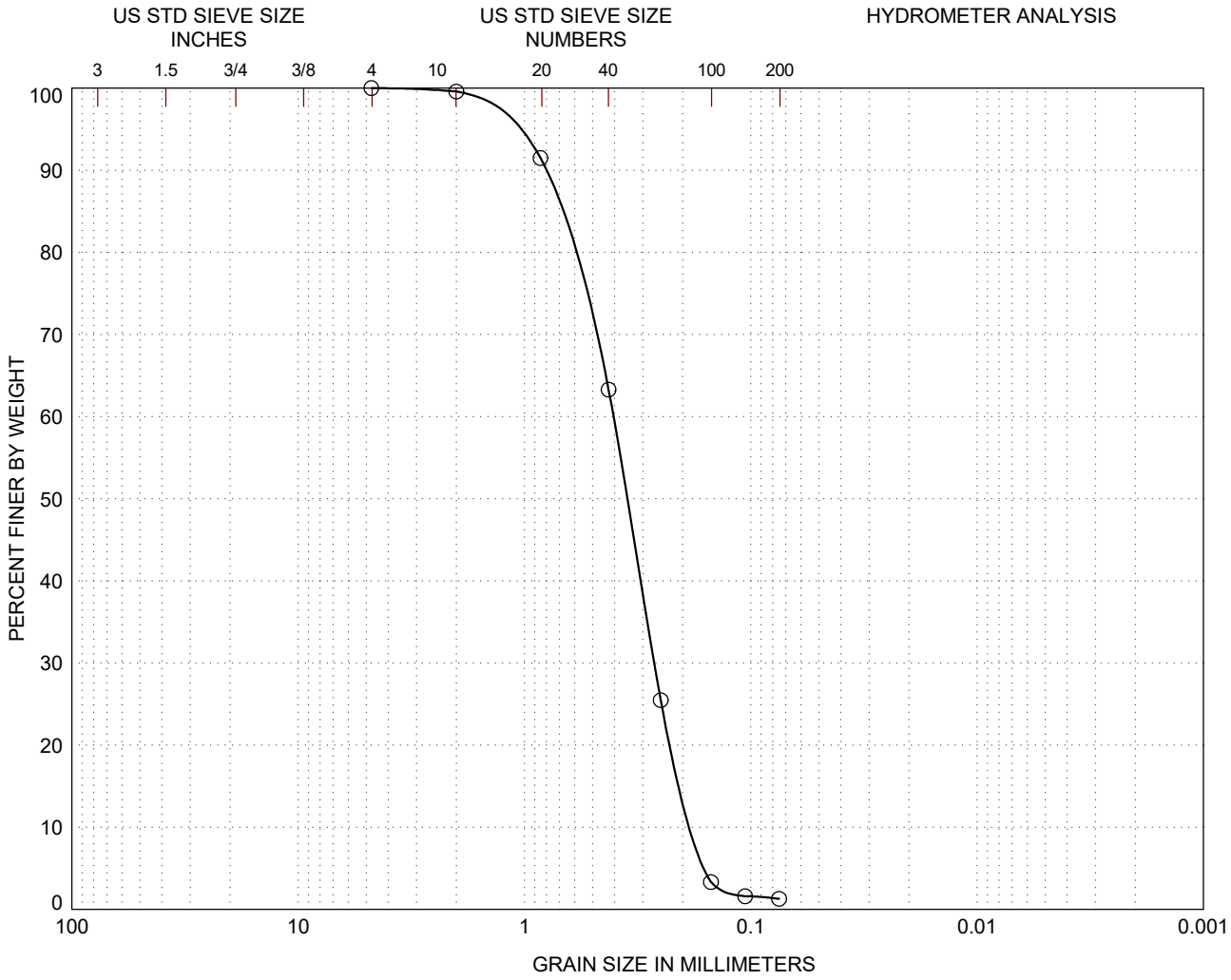
Rhode Island / Massachusetts

FIGURE E-2.65



0.0% GRAVEL		98.7% SAND			1.3% FINES	
0.0% Coarse	0.0% Fine	0.4% Coarse	36.3% Medium	62.0% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.6
0.85	91.5
0.425	63.3
0.25	25.5
0.15	3.3
0.106	1.6
0.075	1.3

Location: V-WTG-16
Depth: 2.80

POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.820	0.725	0.406	0.353	0.266	0.196	0.175

PARTICLE SIZE DISTRIBUTION
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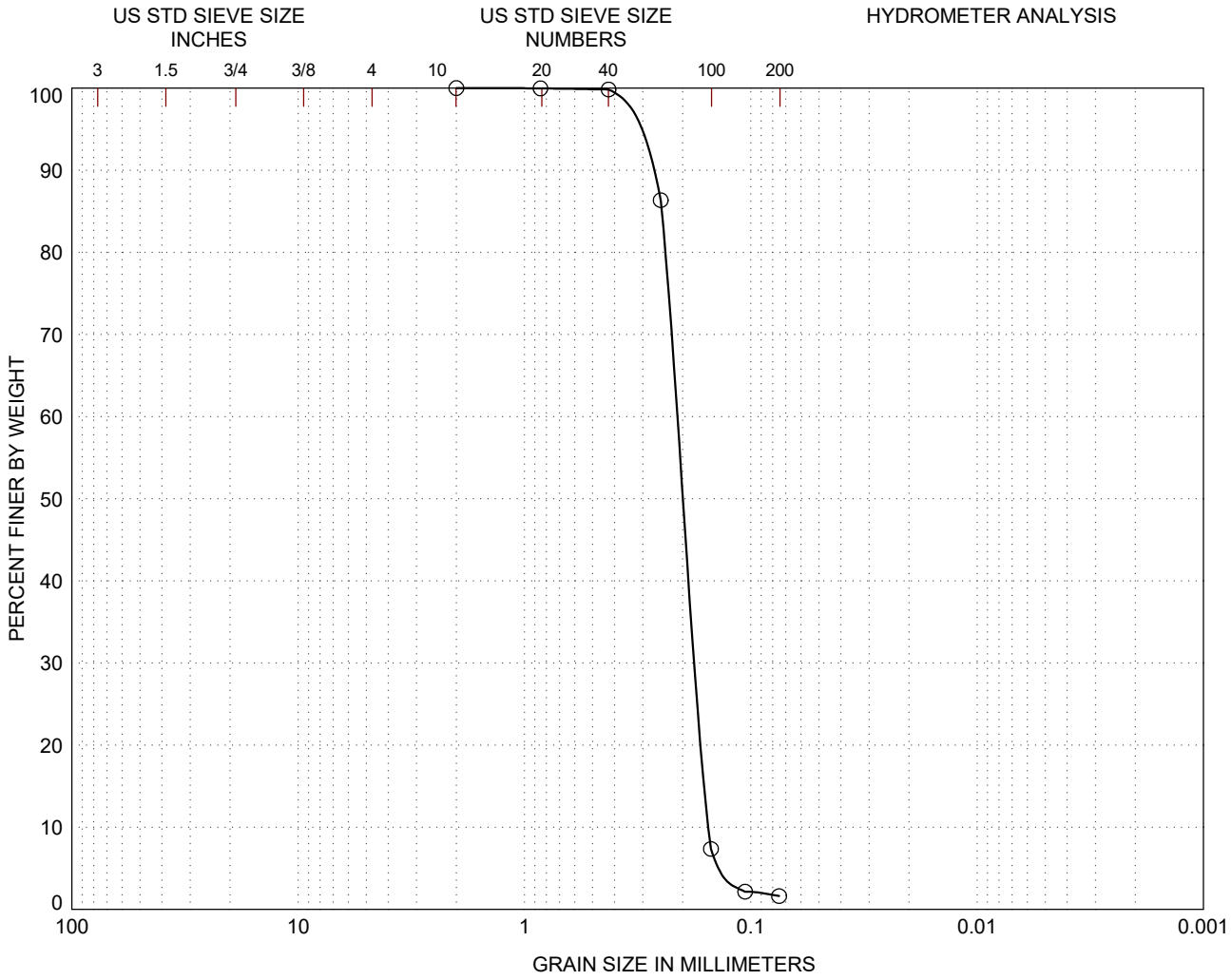
Rhode Island / Massachusetts

FIGURE E-2.66



0.0% GRAVEL		98.4% SAND			1.6% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.2% Medium	98.2% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	100.0
0.425	99.8
0.25	86.3
0.15	7.4
0.106	2.2
0.075	1.6

Location: V-WTG-16
Depth: 3.93

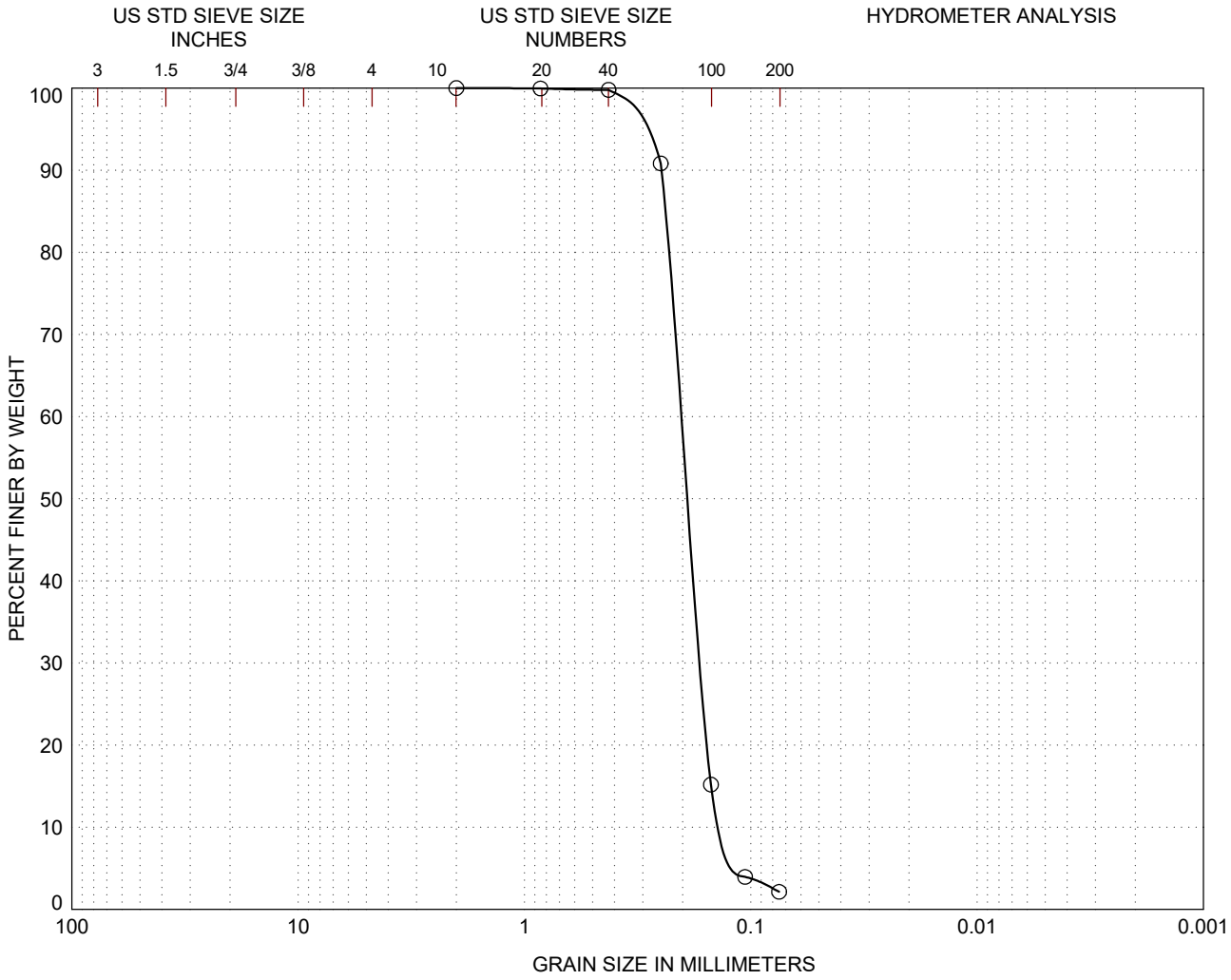
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	1.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.289	0.248	0.211	0.198	0.174	0.158	0.153

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.67



0.0% GRAVEL		97.9% SAND			2.1% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	0.2% Medium	97.6% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	99.9
0.425	99.8
0.25	90.8
0.15	15.2
0.106	4.0
0.075	2.1

Location: V-WTG-16
Depth: 4.93

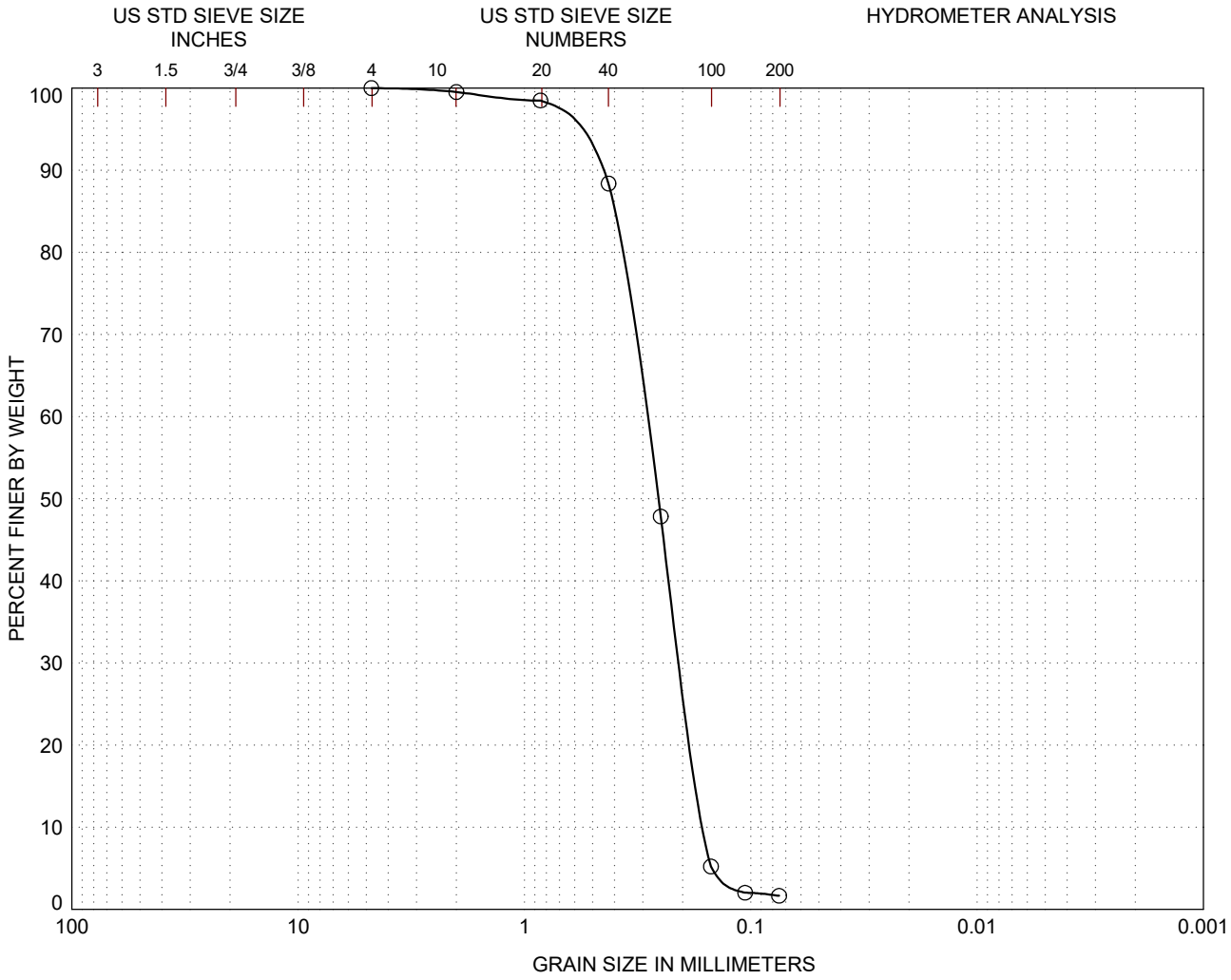
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	1.6

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.249	0.240	0.203	0.190	0.166	0.149	0.128

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.68



0.0% GRAVEL		98.4% SAND			1.6% FINES	
0.0% Coarse	0.0% Fine	0.5% Coarse	11.1% Medium	86.7% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.5
0.85	98.5
0.425	88.4
0.25	47.8
0.15	5.2
0.106	2.0
0.075	1.6

Location: V-WTG-17
Depth: 0.70

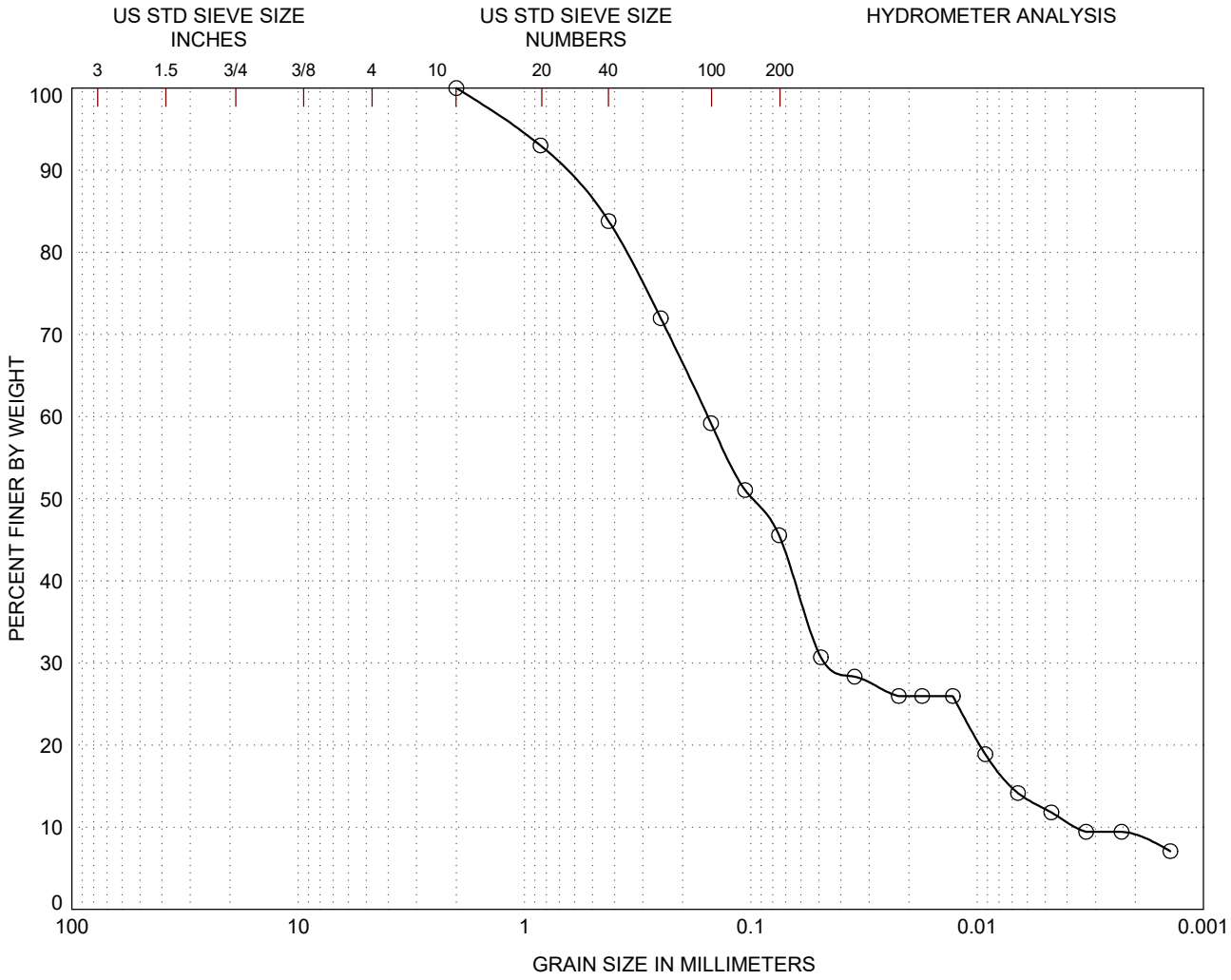
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	1.8

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.475	0.407	0.293	0.257	0.202	0.169	0.159

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.69



0.0% GRAVEL		54.4% SAND			45.6% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	16.2% Medium	38.3% Fine	33.3% SILT	12.2% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	93.0
0.425	83.8
0.25	72.0
0.15	59.2
0.106	51.1
0.075	45.6

Location: V-WTG-17
Depth: 1.65

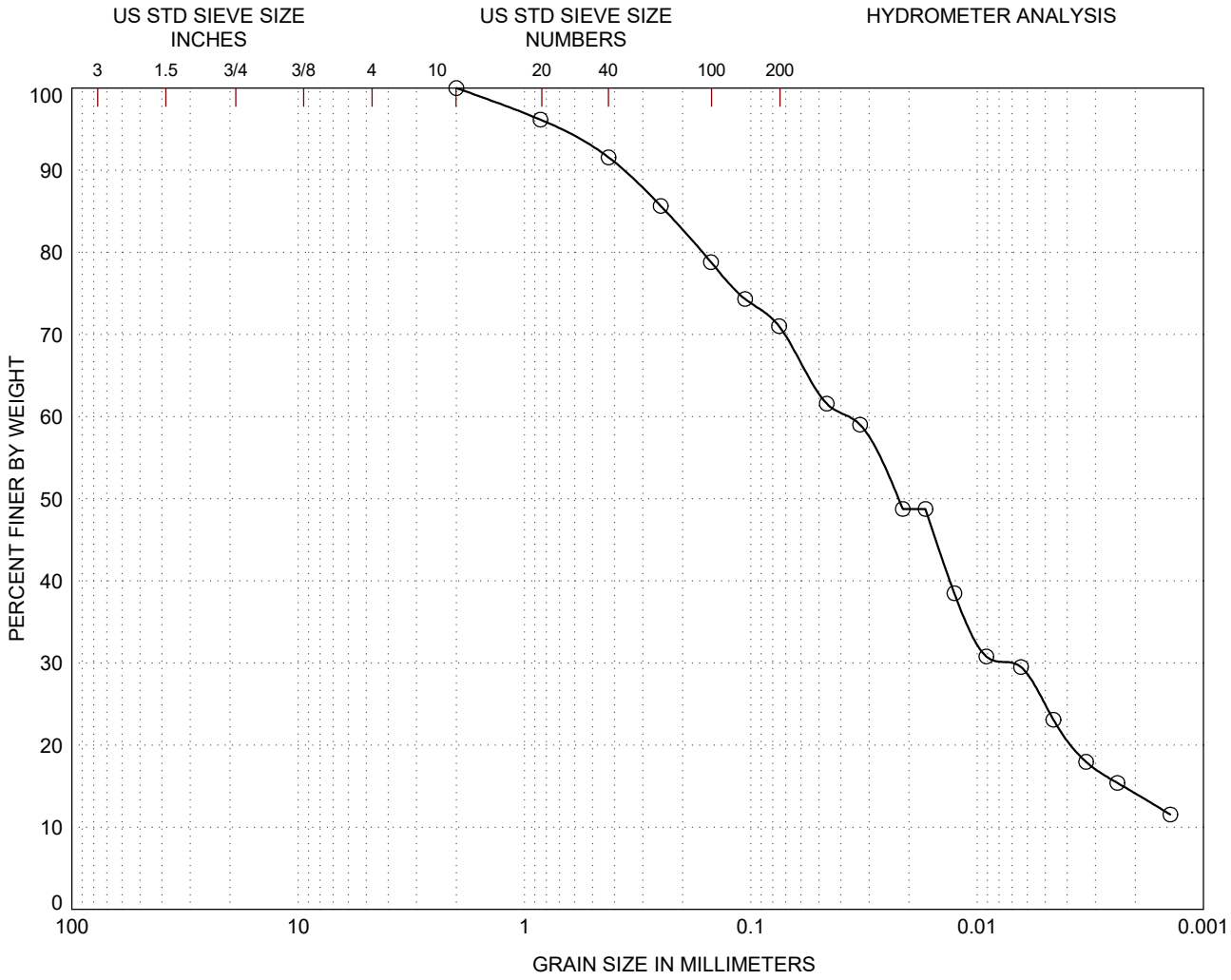
SILTY, CLAYEY SAND (SC-SM) fine sand, low plasticity clay

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
12	17	5	3.5	43.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.678	0.465	0.155	0.0992	0.0443	0.00700	0.00359

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.70



0.0% GRAVEL		29.0% SAND			71.0% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	8.4% Medium	20.5% Fine	46.3% SILT	24.7% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.2
0.425	91.6
0.25	85.6
0.15	78.8
0.106	74.3
0.075	71.0

Location: V-WTG-17
Depth: 2.60

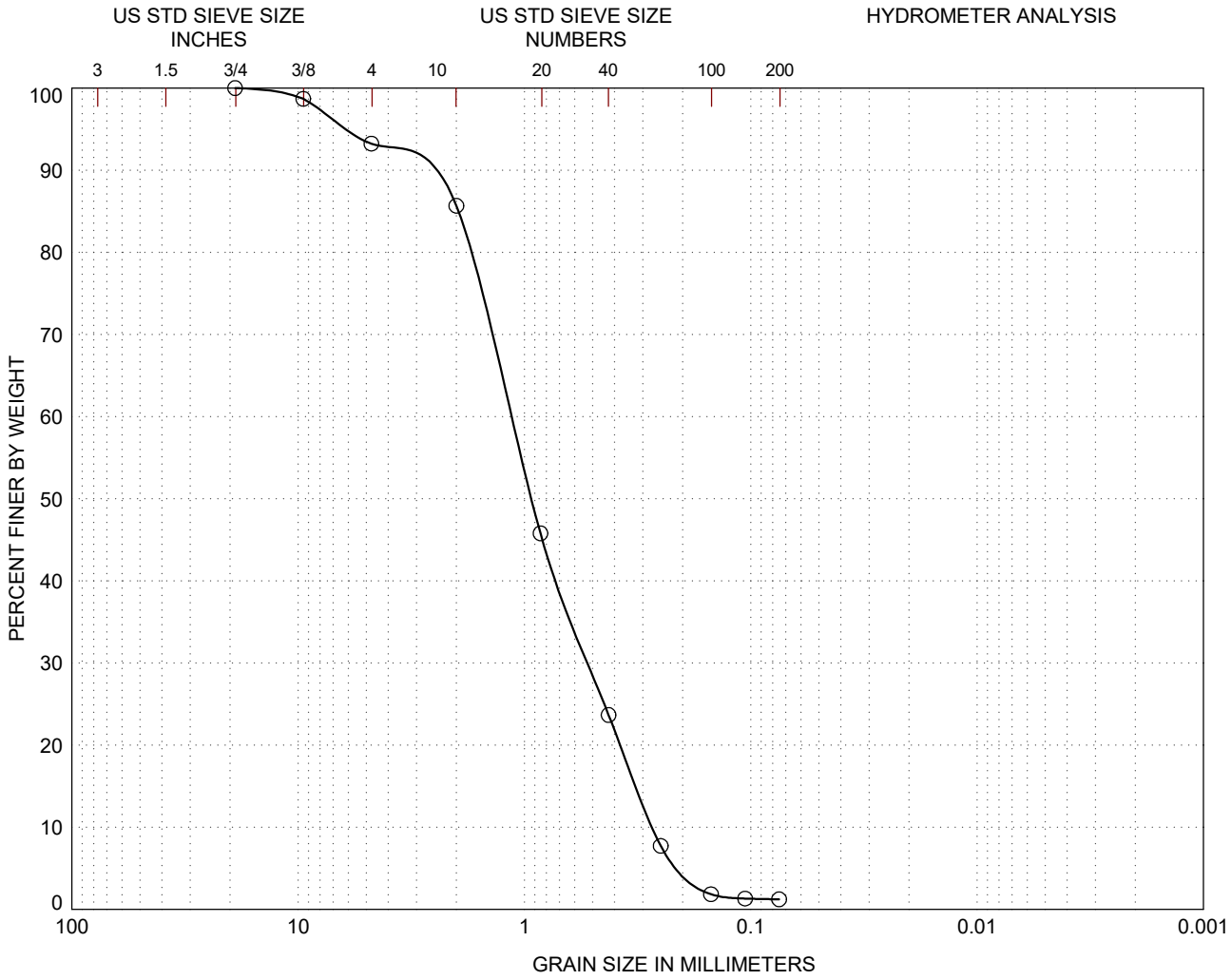
LEAN CLAY with SAND (CL) low plasticity clay, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
17	26	9		

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.369	0.238	0.0375	0.0225	0.00733	0.00227	

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.71



6.8% GRAVEL		92.0% SAND			1.2% FINES	
0.0% Coarse	6.8% Fine	7.6% Coarse	62.0% Medium	22.4% Fine	% SILT	% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	98.7
4.75	93.2
2	85.7
0.85	45.8
0.425	23.7
0.25	7.7
0.15	1.8
0.106	1.3
0.075	1.2

Location: V-WTG-18
Depth: 0.00

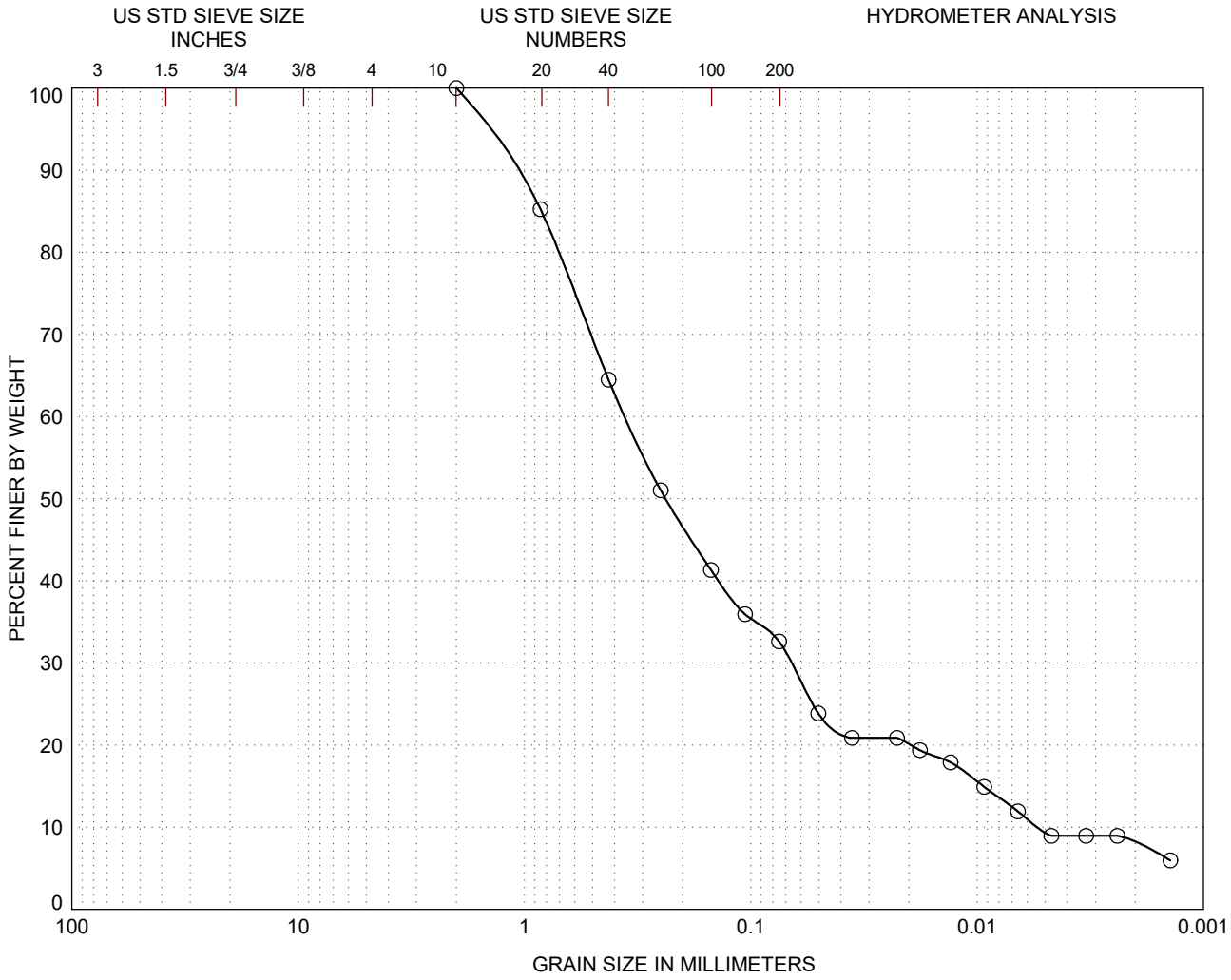
POORLY GRADED SAND (SP) medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	4.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
3.28	1.97	1.15	0.930	0.518	0.319	0.270

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.72



0.0% GRAVEL		67.4% SAND			32.6% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	35.5% Medium	31.9% Fine	23.1% SILT	9.5% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	85.2
0.425	64.5
0.25	51.0
0.15	41.3
0.106	35.9
0.075	32.6

Location: V-WTG-18
Depth: 1.10

SILTY SAND (SM) fine to medium sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			2.3	67.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.12	0.843	0.356	0.237	0.0666	0.00940	0.00530

PARTICLE SIZE DISTRIBUTION
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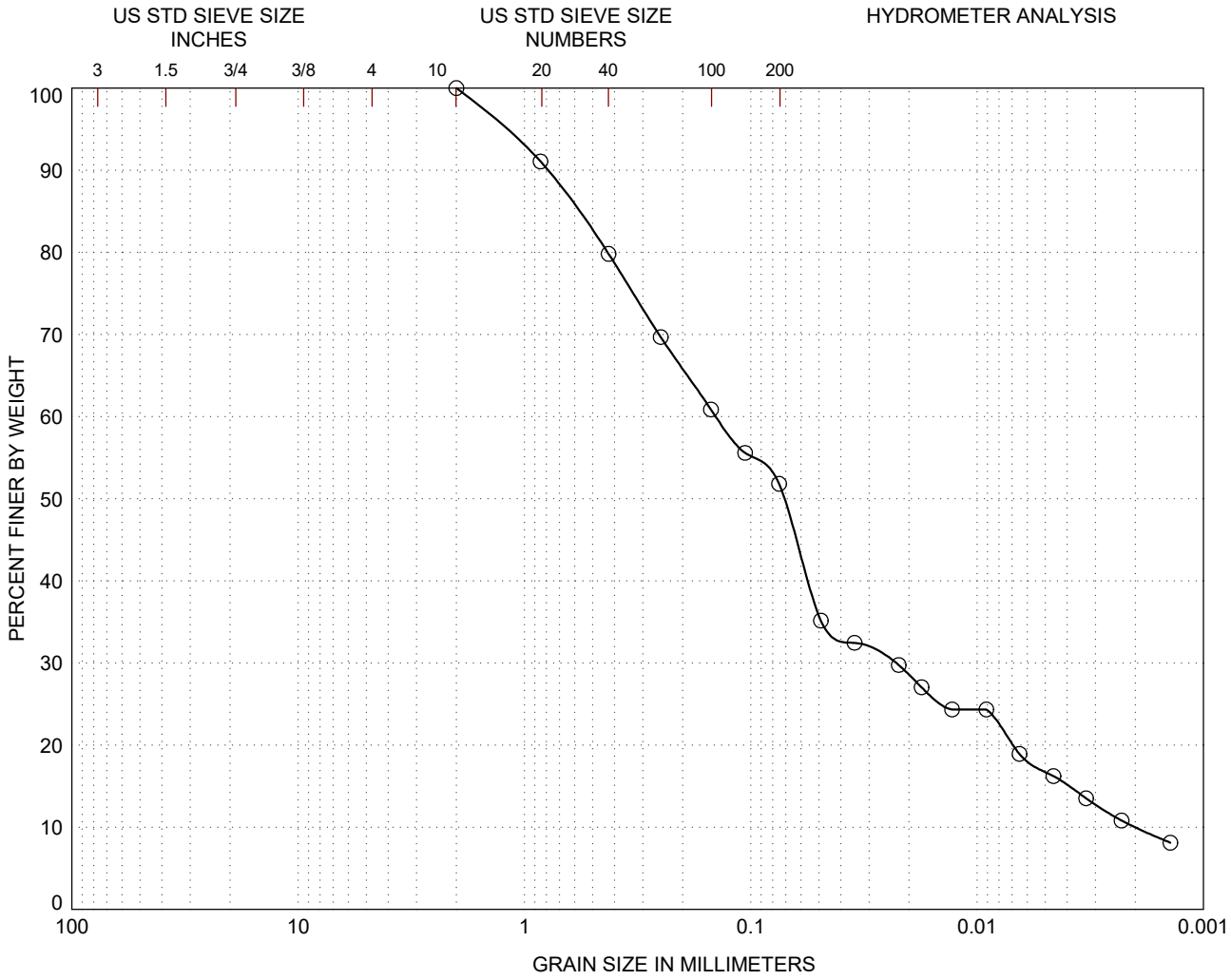
Rhode Island / Massachusetts

FIGURE E-2.73



0.0% GRAVEL		48.2% SAND			51.8% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	20.2% Medium	28.0% Fine	34.9% SILT	16.9% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	91.1
0.425	79.8
0.25	69.7
0.15	60.9
0.106	55.6
0.075	51.8

Location: V-WTG-18
Depth: 2.10

SANDY LEAN CLAY (CL) low plasticity clay, fine to medium sand

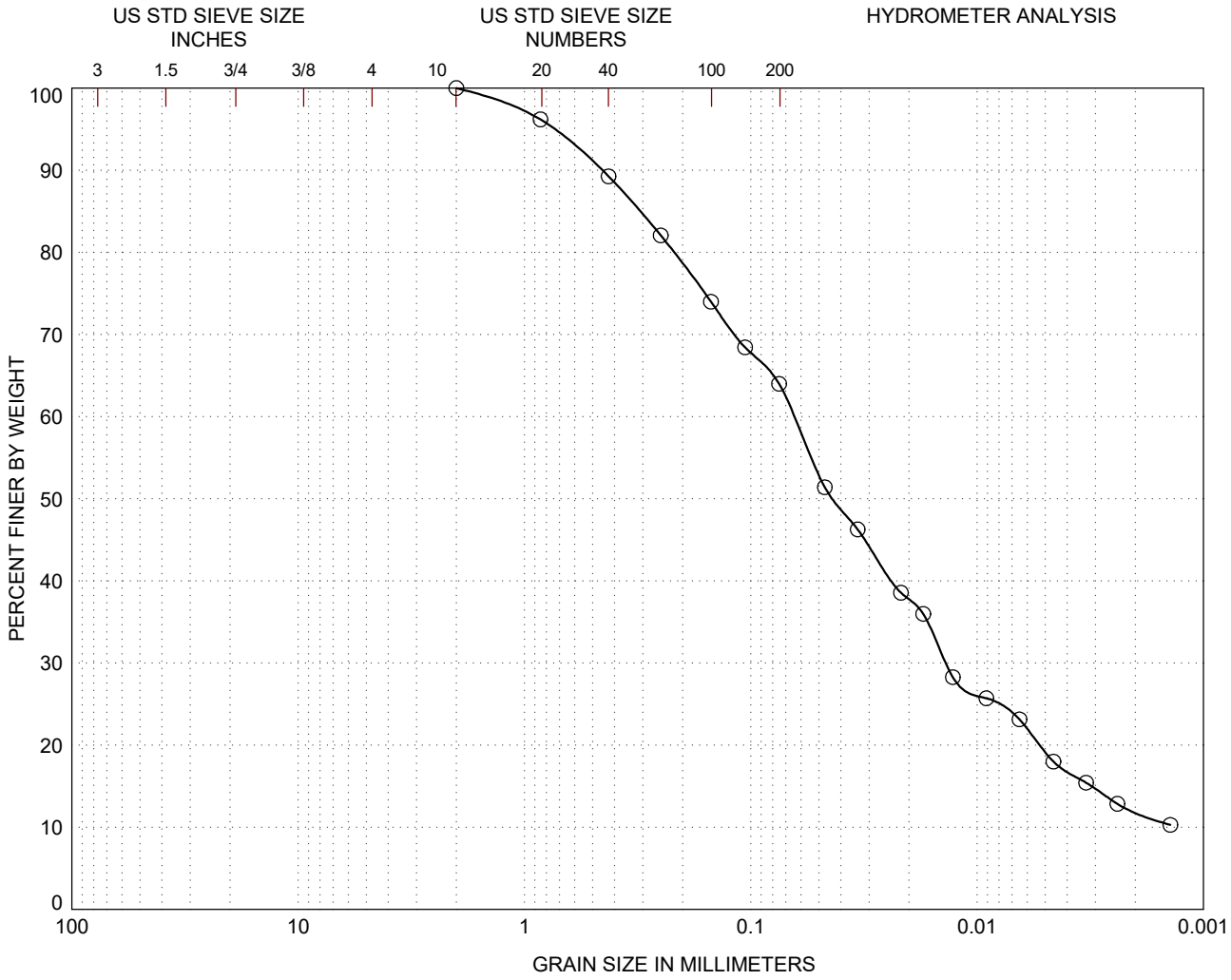
Plastic Limit:	Liquid Limit:	Plasticity Index:
14	23	9

C_c	C_u
1.9	71.6

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.796	0.585	0.142	0.0716	0.0232	0.00396	0.00198

PARTICLE SIZE DISTRIBUTION
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-2.74



0.0% GRAVEL		36.0% SAND			64.0% FINES	
0.0% Coarse	0.0% Fine	0.0% Coarse	10.7% Medium	25.3% Fine	44.8% SILT	19.2% CLAY

Sieve Size (mm)	Percent Finer
2	100.0
0.85	96.2
0.425	89.3
0.25	82.1
0.15	74.0
0.106	68.4
0.075	64.0

Location: V-WTG-18
Depth: 3.10

SANDY SILTY CLAY (CL-ML) low plasticity clay, fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
16	23	7		

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.458	0.311	0.0647	0.0430	0.0137	0.00313	

PARTICLE SIZE DISTRIBUTION
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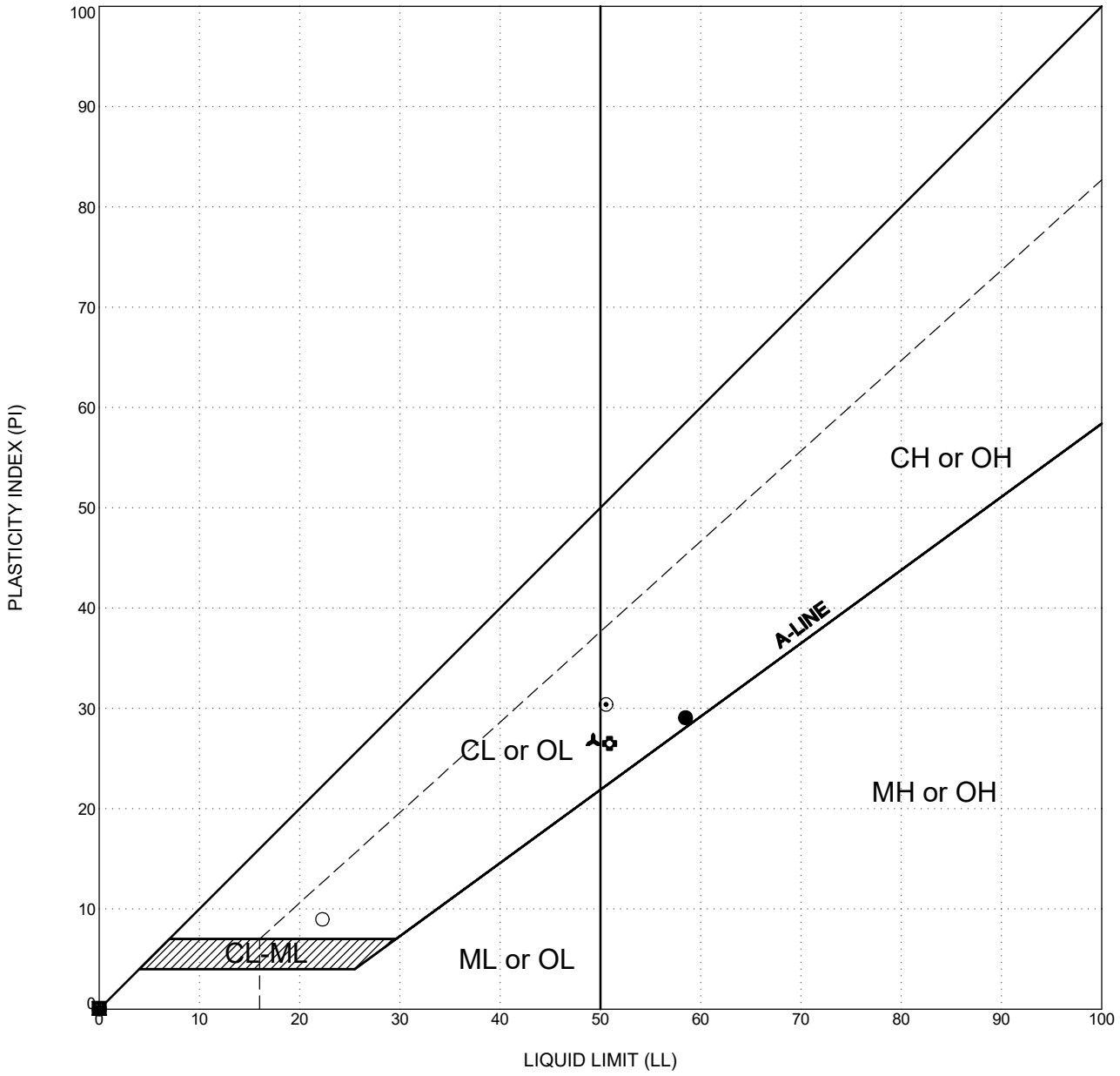
Rhode Island / Massachusetts

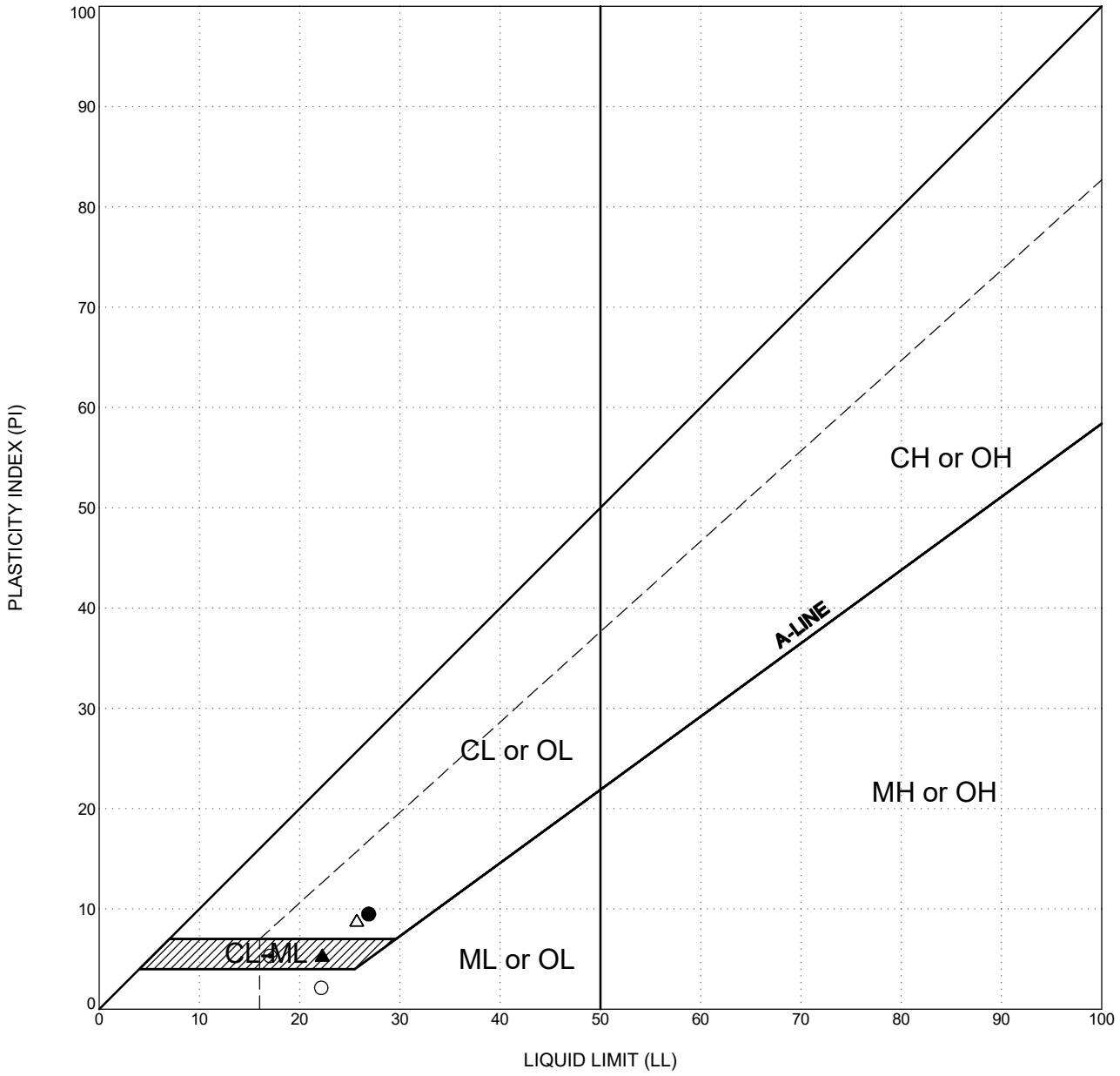
FIGURE E-2.75



LEGEND	location	depth, m	CLASSIFICATION	LIQUID LIMIT(LL)	PLASTIC LIMIT(PL)	PLASTICITY INDEX (PI)
○	V-111	1.39		22	13	9
●	V-210	2.95	*Fat CLAY (CH)*	58	29	29
△	V-227	0.79	SILTY SAND (SM) fine sand, non-plastic silt	NP	NP	NP
▲	V-227	2.57	SILTY SAND (SM) fine sand, non-plastic silt	NP	NP	NP
⊙	V-236	0.25	*Fat CLAY with sand (CH)*	51	20	31
✿	V-236	1.15	FAT CLAY (CH) high plasticity clay	51	24	27
⅄	V-236	2.65	*Lean CLAY (CL)*	49	22	27
◘	V-237	0.72	SILTY SAND (SM) fine to medium sand, non-plastic silt	NP	NP	NP
⊗	V-239	0.28	SILTY SAND (SM) fine to medium sand, non-plastic silt	NP	NP	NP

PLASTICITY CHART
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

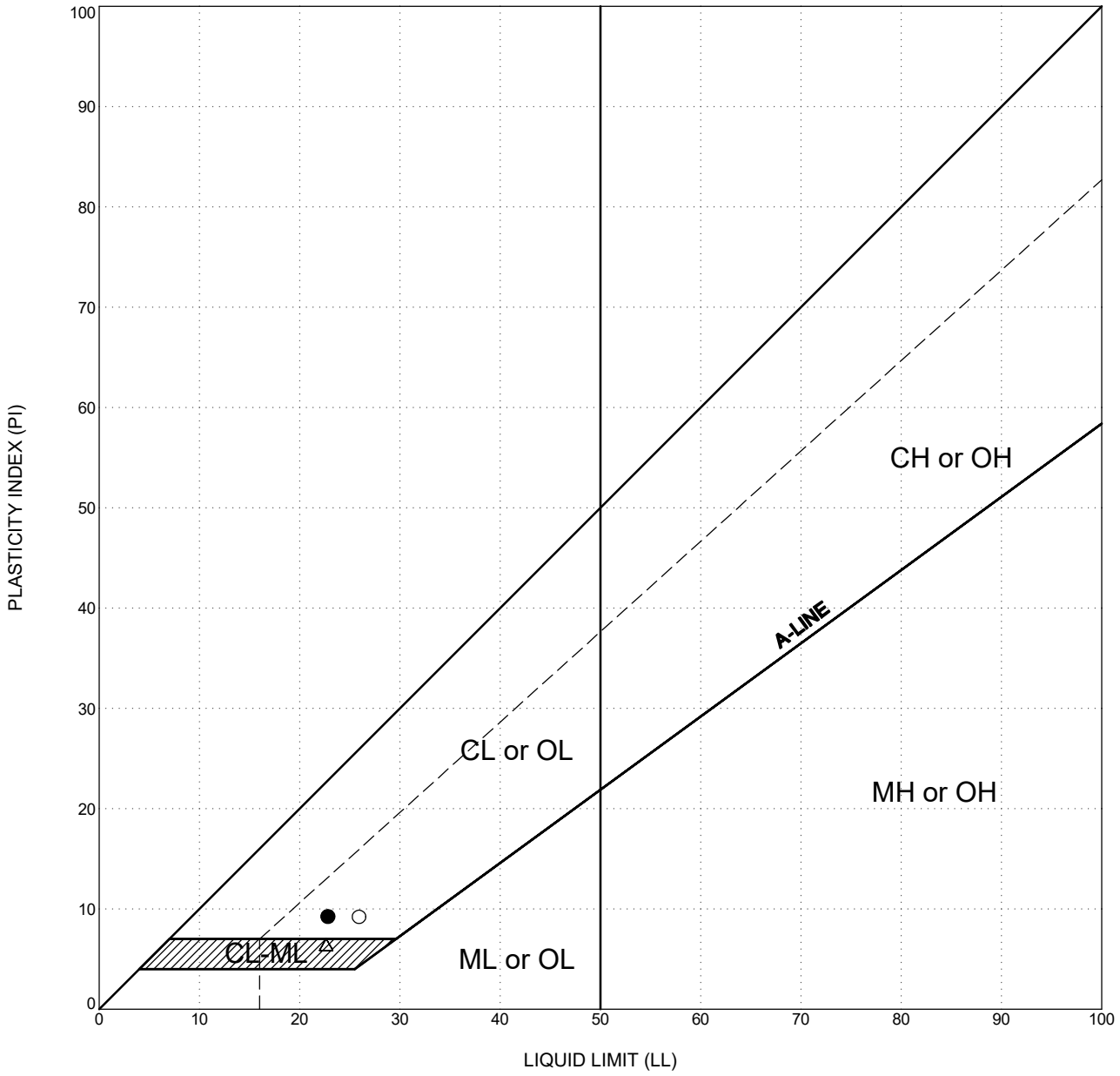
FIGURE E-3.1



LEGEND	location	depth, m	CLASSIFICATION	LIQUID LIMIT(LL)	PLASTIC LIMIT(PL)	PLASTICITY INDEX (PI)
○	V-WTG-11	4.70	SANDY SILT (ML) low plasticity silt, fine sand	22	20	2
●	V-WTG-15a	1.30	LEAN CLAY with SAND (CL) low plasticity clay, fine sand	27	17	10
△	V-WTG-15a	3.30	LEAN CLAY with SAND (CL) low plasticity clay, fine sand	26	17	9
▲	V-WTG-15a	4.30	SILTY CLAY with SAND (CL-ML) low plasticity clay, fine sand	22	17	5
⊙	V-WTG-17	1.65	SILTY, CLAYEY SAND (SC-SM) fine sand, low plasticity clay	17	12	5

PLASTICITY CHART
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-3.2



LEGEND	location	depth, m	CLASSIFICATION	LIQUID LIMIT(LL)	PLASTIC LIMIT(PL)	PLASTICITY INDEX (PI)
○	V-WTG-17	2.60	LEAN CLAY with SAND (CL) low plasticity clay, fine sand	26	17	9
●	V-WTG-18	2.10	SANDY LEAN CLAY (CL) low plasticity clay, fine to medium sand	23	14	9
△	V-WTG-18	3.10	SANDY SILTY CLAY (CL-ML) low plasticity clay, fine sand	23	16	7

PLASTICITY CHART
DWW-SFWF 2019 Geotechnical Program
Rhode Island / Massachusetts

FIGURE E-3.3

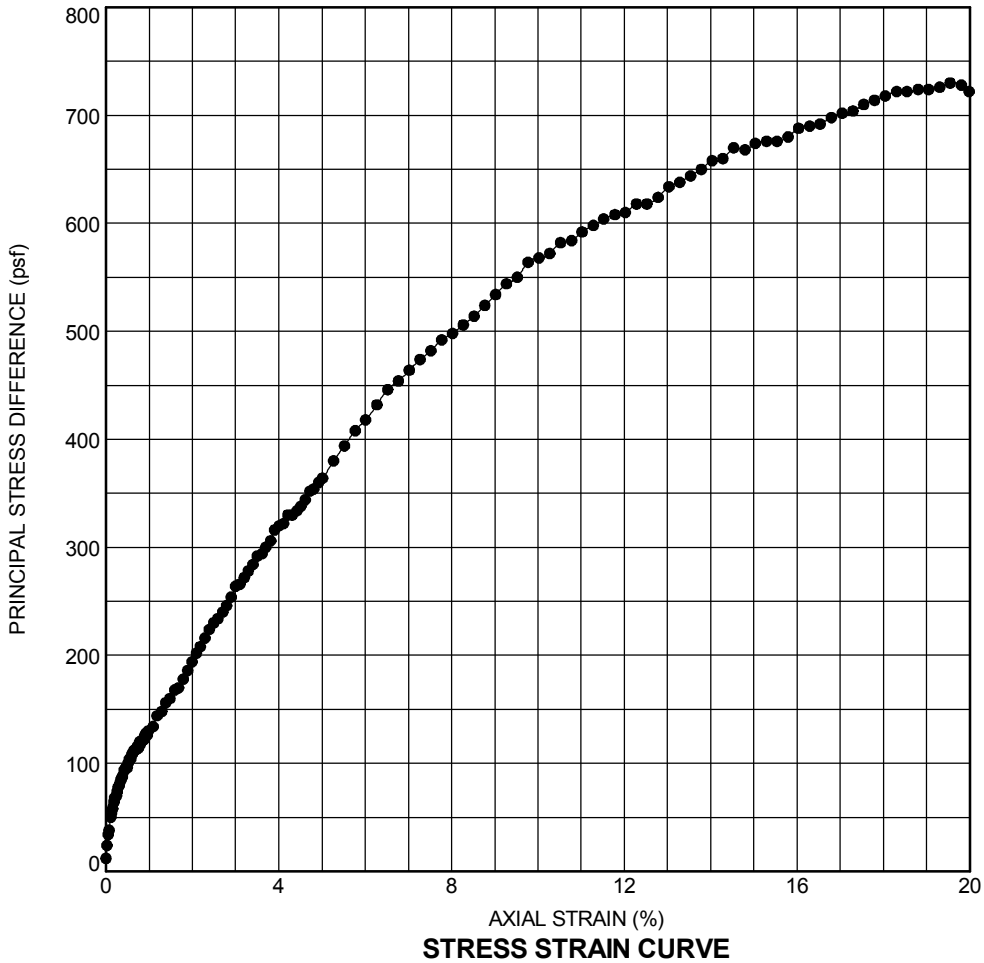
TRIAXIAL SHEAR TEST

Project Name: Deep Water Wind	Type of Test: Unconsolidated Undrained ASTM D 2850
Source of Sample: V-236 Depth: 0.25-0.55 ft.	Visual Classification: FAT CLAY WITH SAND (CH), dark gray
Sample Number: 3	
Project No.: 02.17021080 Test Date.: 1/24/2018	Organic Content (%) ASTM D2974: N/A
Sample No. 1 ● 2 ■ 3 ▲	Atterberg Limits ASTM D 4318: LL = 51 PL = 20 PI = 31

INITIAL	Water Content (%)	39.9
	Dry Density (pcf)	85.2
	Saturation (%)	100.0
	Void Ratio	0.98
	Diameter (inches)	2.87
	Height (inches)	5.68
	% Passing #200 Sieve	80.7
	Specific Gravity (assumed)	2.70
Strain Rate (%/min.)		1.0
Cell Pressure (psi)		7.40
Deviator Stress (psf)		673
Shear Strength (psf)		337
Failure Strain (%)		15.0
σ_1 Failure (psf):		1739
σ_3 Failure (psf):		1066
Failure Type:		Bulging

Failure Sketch

Remarks:
Visual classification in general accordance with ASTM Standard D2487.



STRESS STRAIN CURVE

TRIAXIAL SHEAR TEST

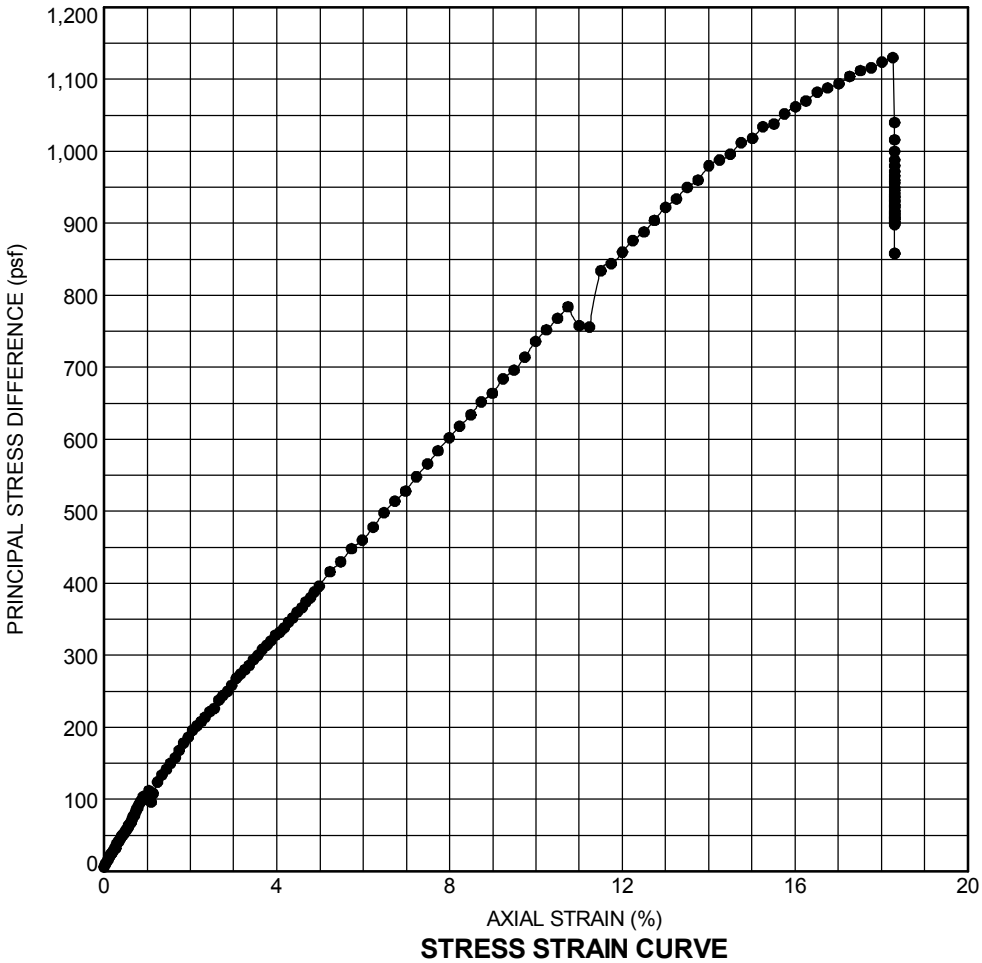
Project Name: Deep Water Wind	Type of Test: Unconsolidated Undrained ASTM D 2850
Source of Sample: V-236 Depth: 1.15-1.5 ft.	Visual Classification: FAT CLAY (CH), dark gray
Sample Number: 6	
Project No.: 02.17021080 Test Date.: 1/24/2018	Organic Content (%) ASTM D2974: N/A
Sample No. 1 ● 2 ■ 3 ▲	Atterberg Limits ASTM D 4318: LL = 51 PL = 24 PI = 27

INITIAL	Water Content (%)	34.5
	Dry Density (pcf)	96.4
	Saturation (%)	100.0
	Void Ratio	0.75
	Diameter (inches)	2.87
	Height (inches)	5.66
	% Passing #200 Sieve	99.4
	Specific Gravity (measured)	2.757
	Strain Rate (%/min.)	1.0
	Cell Pressure (psi)	7.40
	Deviator Stress (psf)	1018
	Shear Strength (psf)	509
	Failure Strain (%)	15.0
	σ_1 Failure (psf):	2083
	σ_3 Failure (psf):	1066
	Failure Type:	Bulging

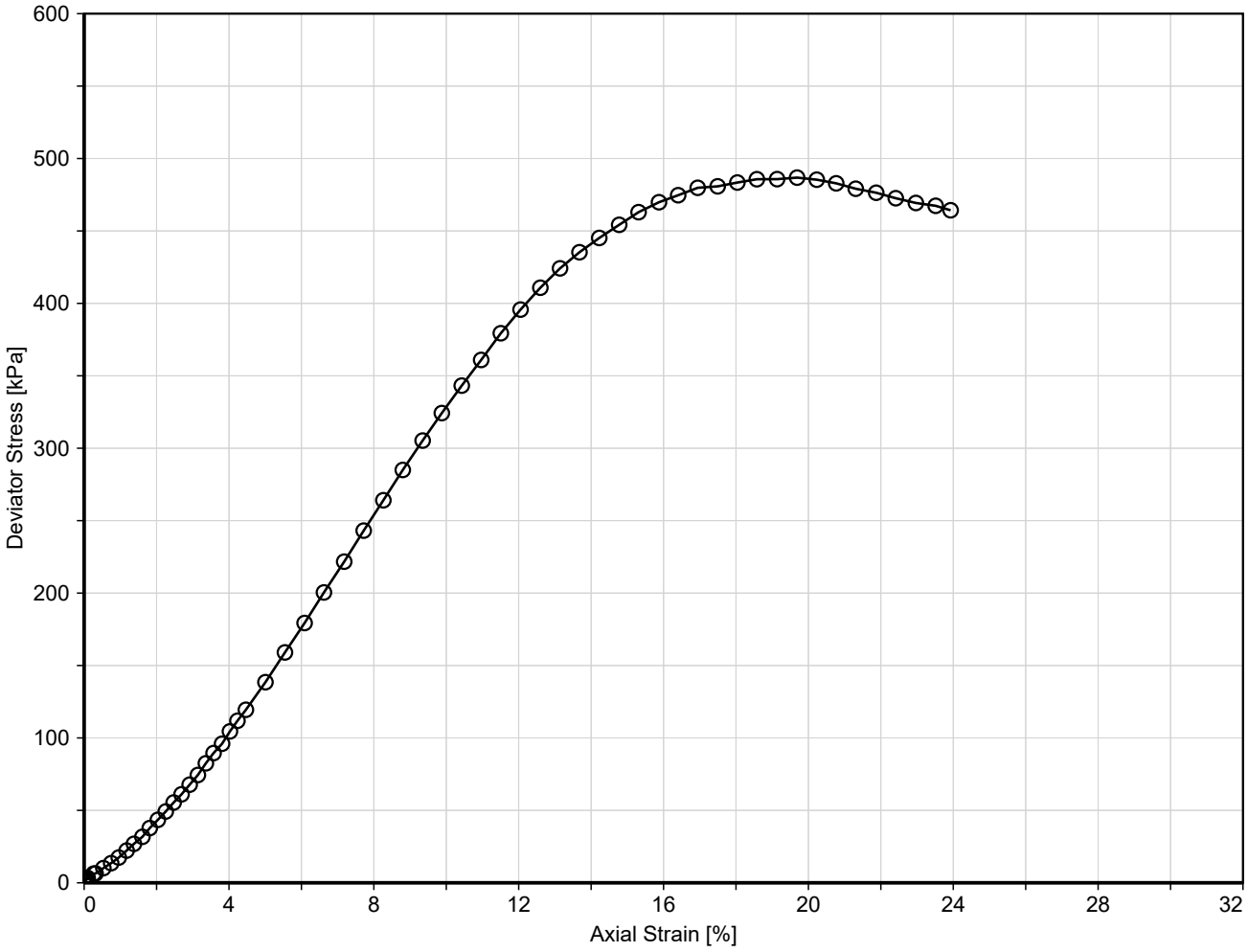
Failure Sketch

Remarks:
Visual classification in general accordance with ASTM Standard D2487.

*See Particle Size Analysis Graph



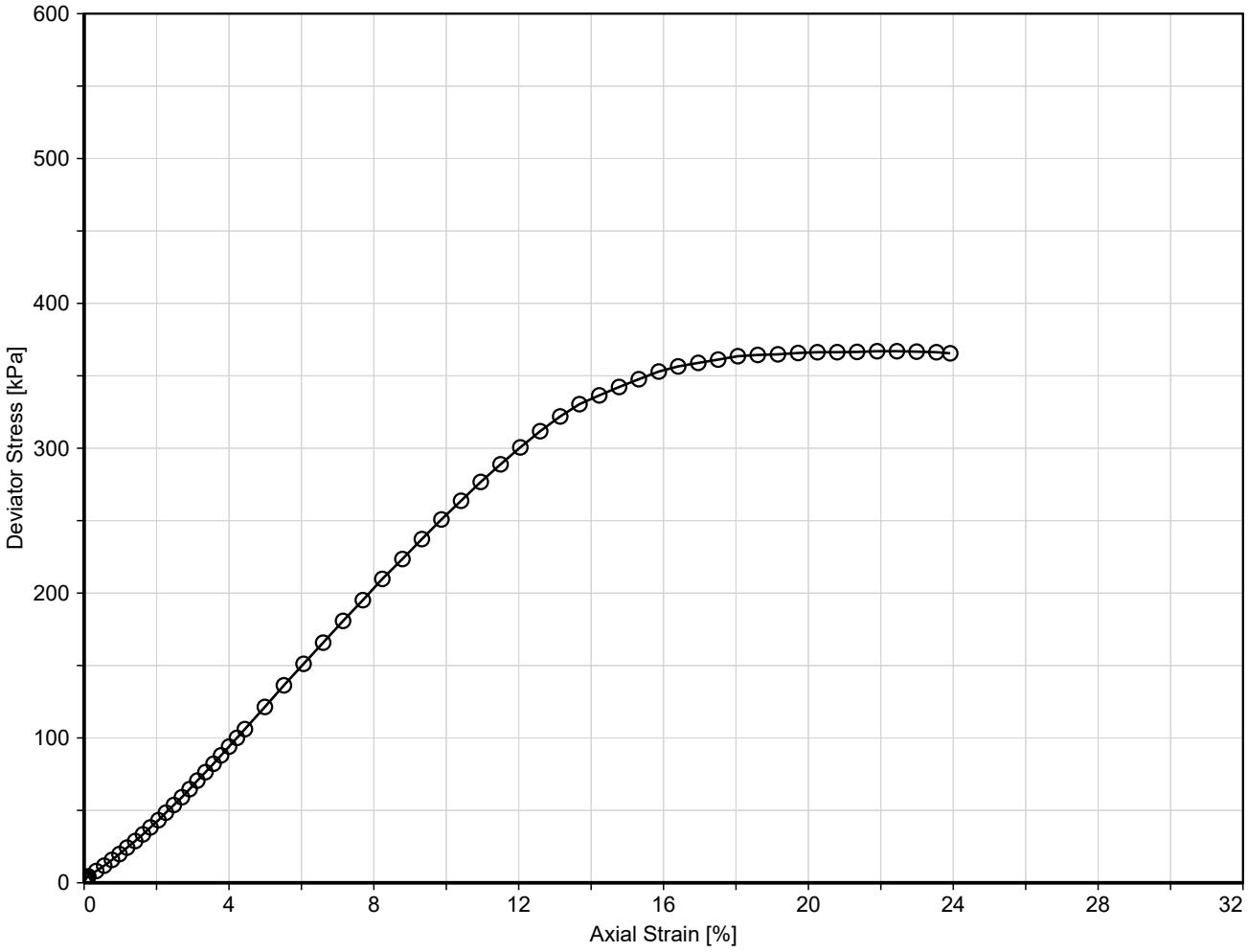
STRESS STRAIN CURVE



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.5
Specimen length [mm]	147.3
Unit weight [kN/m^3]	20.1
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.0
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	104
Undrained shear strength, s_u [kPa]	243
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.7
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	3.2
Axial strain at failure, ε_f [%]	19.7
Failure type	Bulge failure

Sample : 5a
Test method : ASTM D2850-03a
Sample depth : 4.7 m
Visual identification : dark grey sandy CLAY with shell fragments

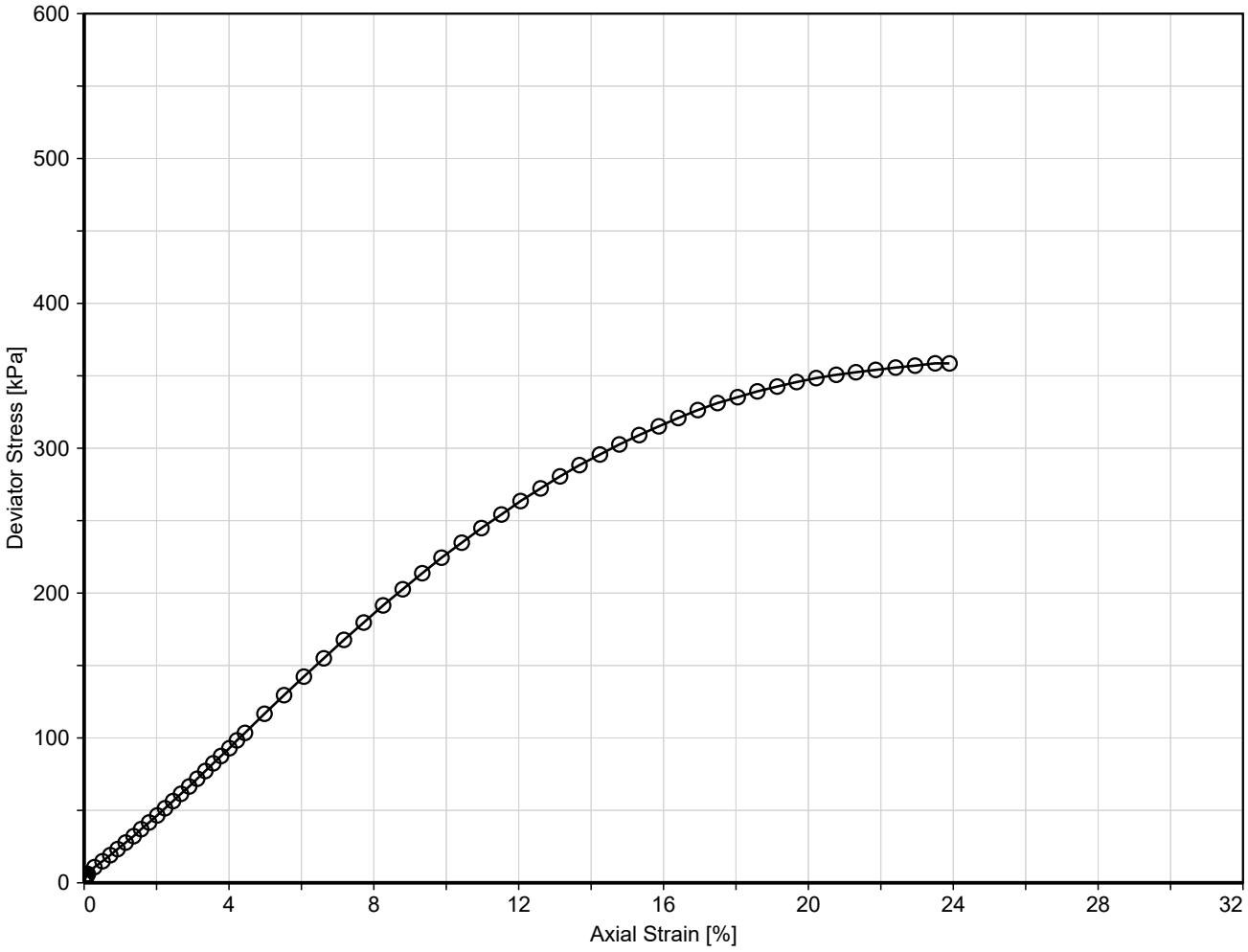
UU-TRIAXIAL TEST RESULTS
V-WTG-11



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.7
Specimen length [mm]	146.8
Unit weight [kN/m^3]	21.7
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.3
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	43
Undrained shear strength, s_u [kPa]	183
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.3
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	2.5
Axial strain at failure, ε_f [%]	22.4
Failure type	Bulge failure

Sample	: 2a	Test method	: ASTM D2850-03a
Sample depth	: 1.3 m		
Visual identification	: dark grey CLAY with gravel		

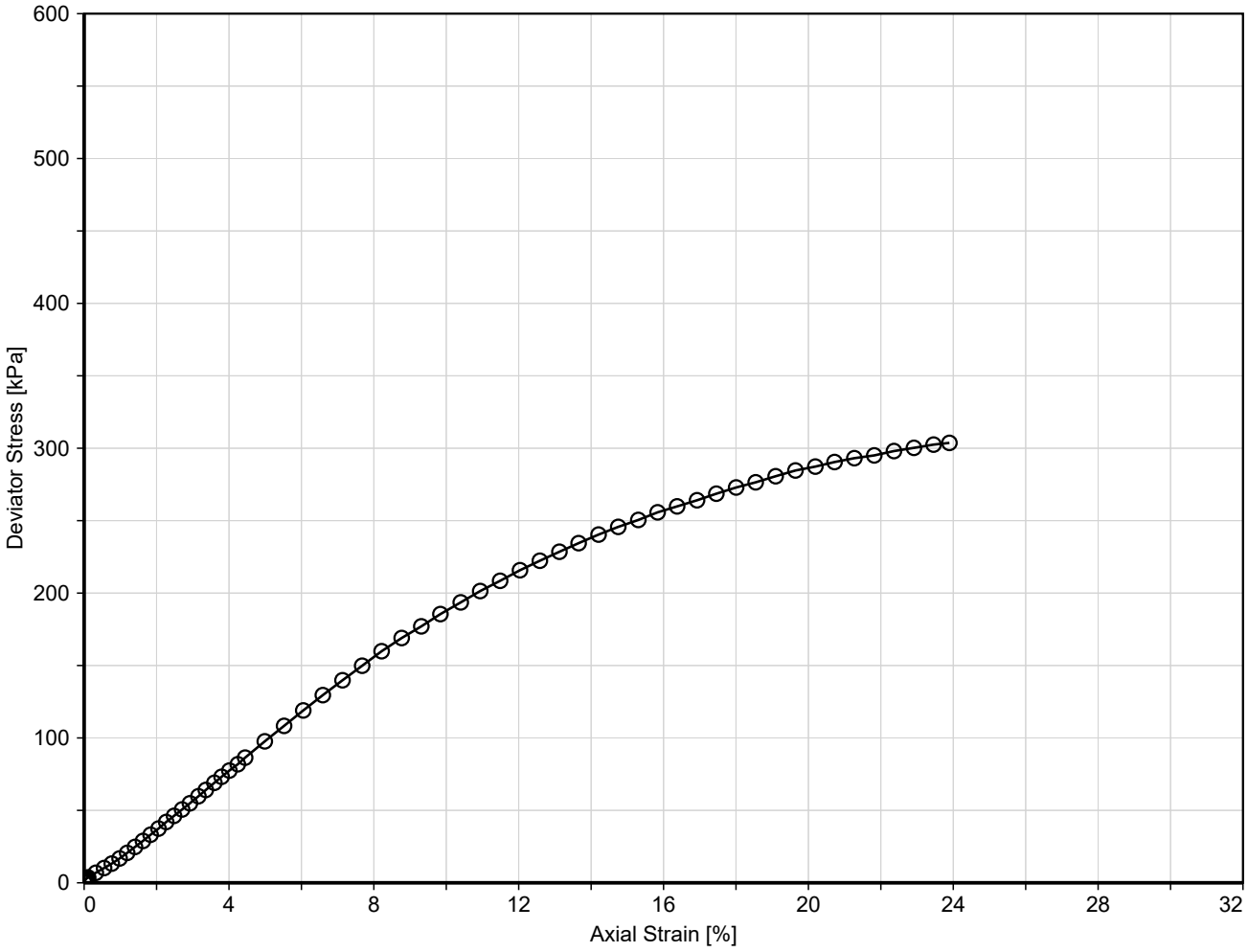
UU-TRIAXIAL TEST RESULTS
V-WTG-15a



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.2
Specimen length [mm]	149.2
Unit weight [kN/m^3]	21.3
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.5
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	84
Undrained shear strength, s_u [kPa]	179
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.7
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	2.3
Axial strain at failure, ε_f [%]	23.5
Failure type	Bulge failure

Sample : 4b
Sample depth : 3.3 m
Visual identification : dark grey CLAY with gravel
Test method : ASTM D2850-03a

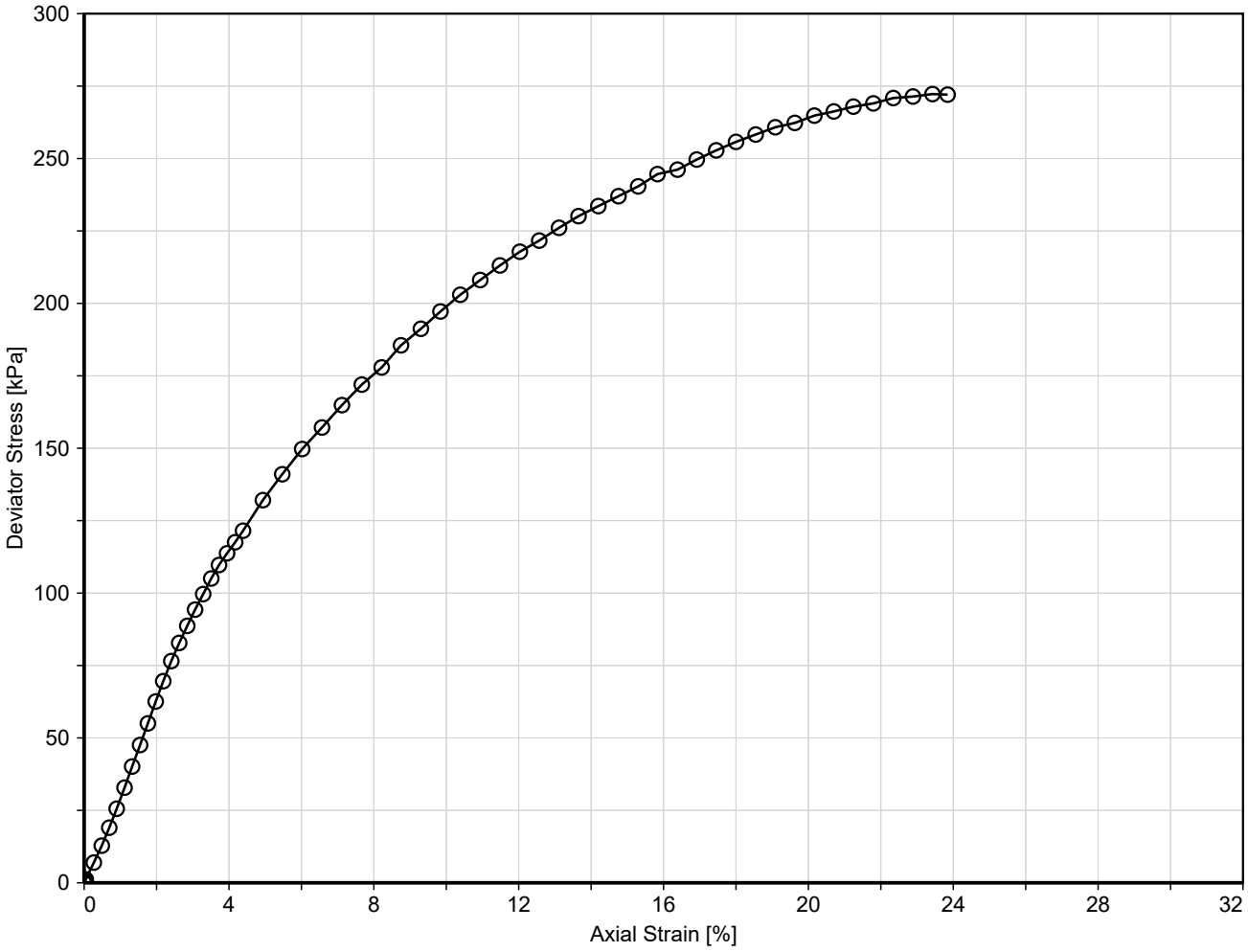
UU-TRIAXIAL TEST RESULTS
V-WTG-15a



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.5
Specimen length [mm]	147.8
Unit weight [kN/m^3]	21.7
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.5
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	111
Undrained shear strength, s_u [kPa]	152
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.8
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	2.0
Axial strain at failure, ε_f [%]	23.9
Failure type	Bulge failure

Sample	: 5a	Test method	: ASTM D2850-03a
Sample depth	: 4.3 m		
Visual identification	: olive grey CLAY with gravel		

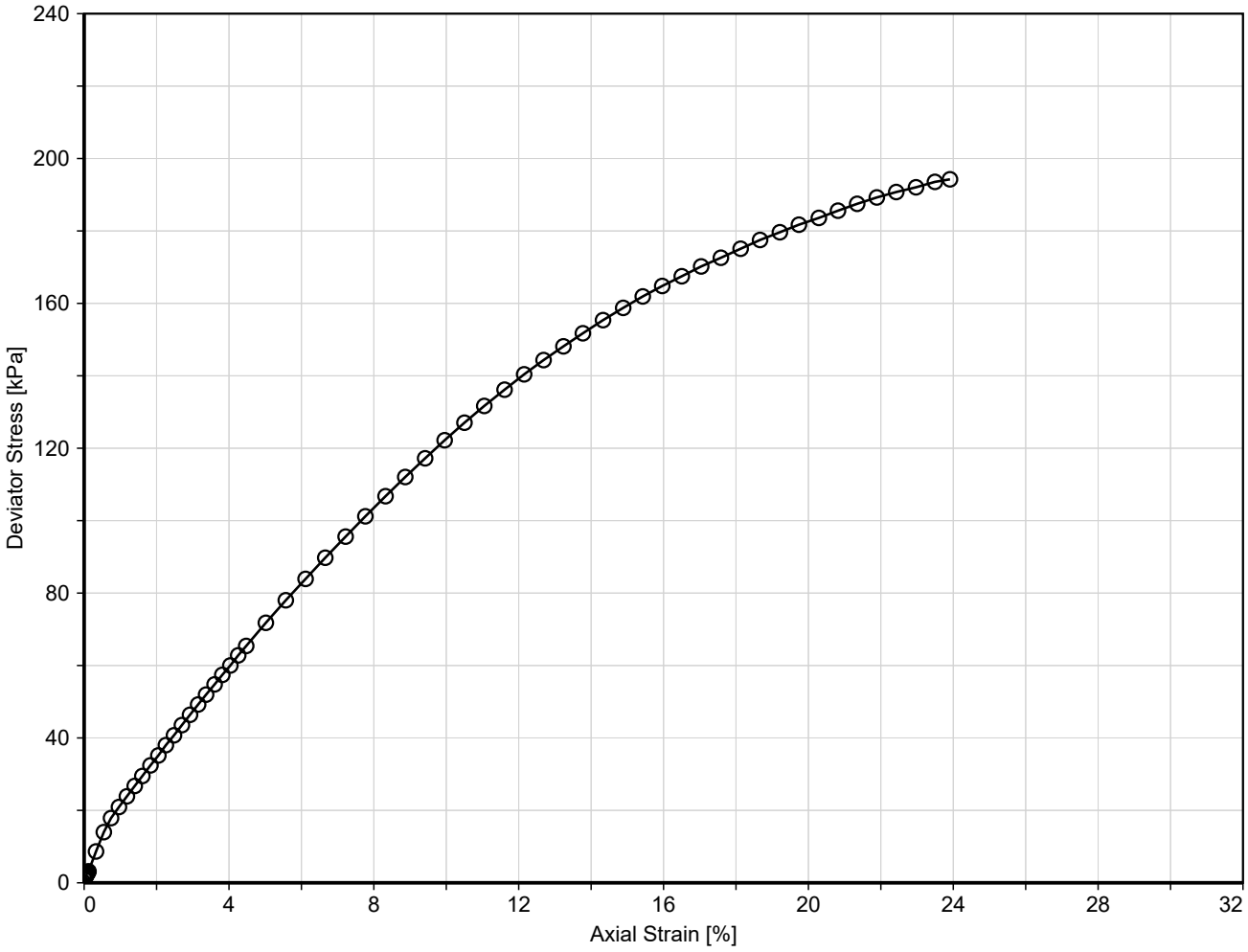
UU-TRIAXIAL TEST RESULTS
V-WTG-15a



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	72.8
Specimen length [mm]	149.4
Unit weight [kN/m^3]	23.6
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.4
Strain rate [%/h]	32.5
FAILURE CONDITIONS	
Cell pressure [kPa]	42
Undrained shear strength, s_u [kPa]	136
Axial strain at 50% of max deviator stress, ε_{50} [%]	5.2
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	2.6
Axial strain at failure, ε_f [%]	23.4
Failure type	Bulge failure

Sample : 2a
Sample depth : 1.6 m
Visual identification : olive grey sand CLAY with gravel
Test method : ASTM D2850-03a

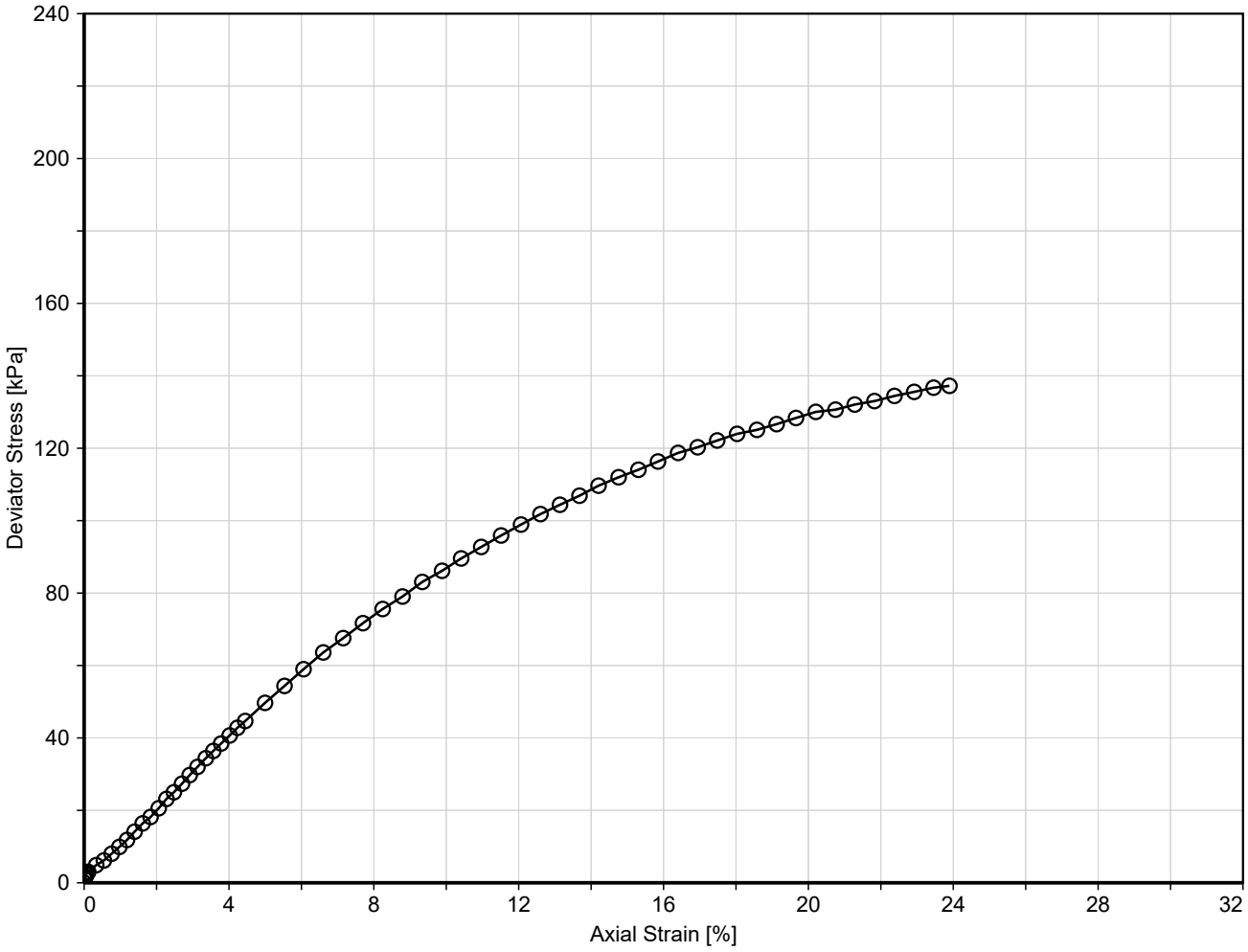
UU-TRIAXIAL TEST RESULTS
V-WTG-17



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.4
Specimen length [mm]	147.7
Unit weight [kN/m^3]	21.7
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.5
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	63
Undrained shear strength, s_u [kPa]	97
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.4
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	1.3
Axial strain at failure, ε_f [%]	23.9
Failure type	Bulge failure

Sample	: 3a	Test method	: ASTM D2850-03a
Sample depth	: 2.6 m		
Visual identification	: olive grey silty, clayey SAND		

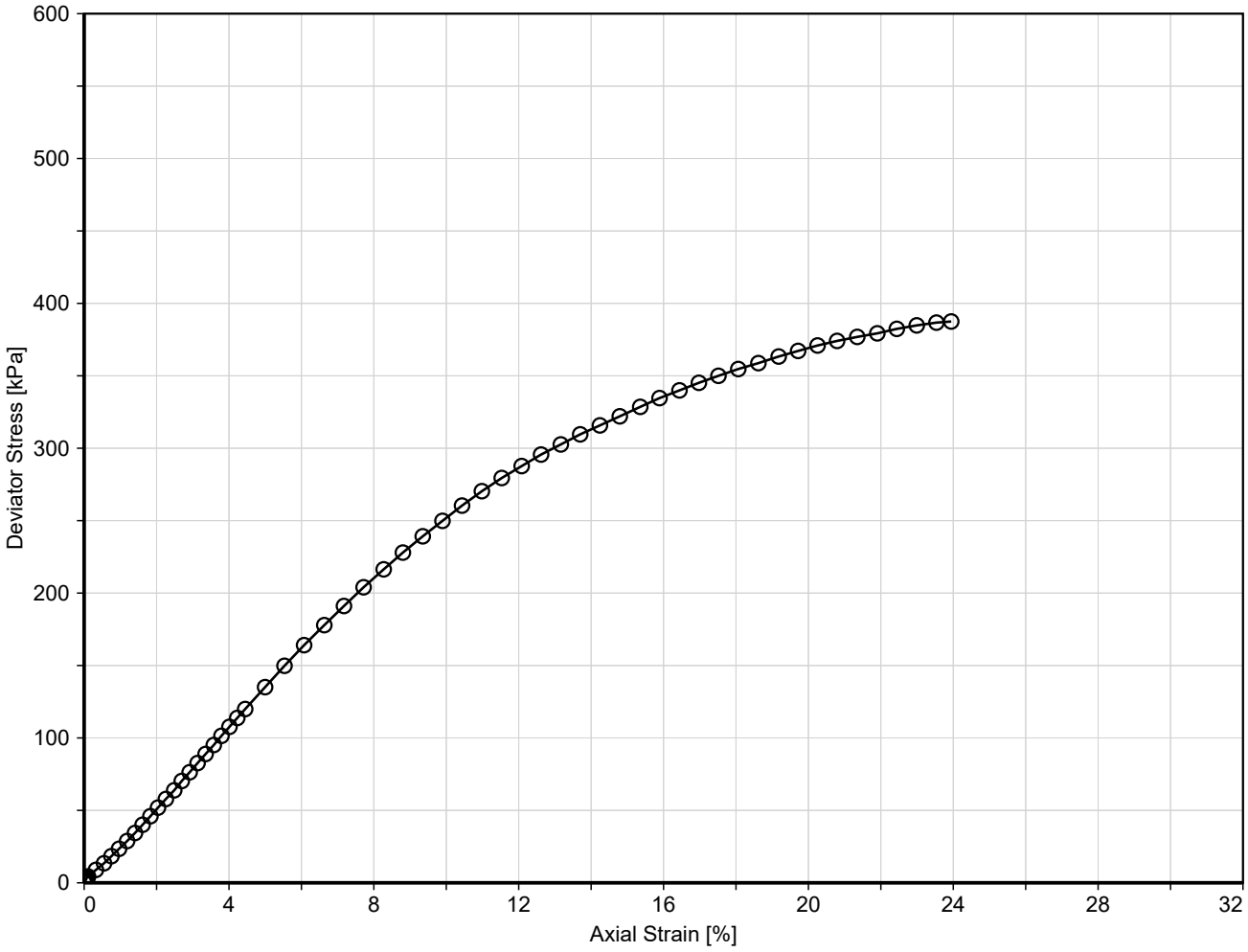
UU-TRIAXIAL TEST RESULTS
V-WTG-17



Curve	
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.8
Specimen length [mm]	147.1
Unit weight [kN/m^3]	21.9
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.5
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	56
Undrained shear strength, s_u [kPa]	69
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.3
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	0.9
Axial strain at failure, ε_f [%]	23.9
Failure type	Bulge failure

Sample : 2a
Test method : ASTM D2850-03a
Sample depth : 2.1 m
Visual identification : olive grey sandy (fine to medium) lean CLAY

UU-TRIAXIAL TEST RESULTS
V-WTG-18



Curve	⊖—⊖
INITIAL CONDITIONS	
Specimen condition	Undisturbed
Specimen diameter [mm]	71.8
Specimen length [mm]	148.2
Unit weight [kN/m^3]	21.9
Water content [%]	
Membrane thickness [mm]	0.3
Membrane correction [kPa]	3.5
Strain rate [%/h]	32.6
FAILURE CONDITIONS	
Cell pressure [kPa]	76
Undrained shear strength, s_u [kPa]	194
Axial strain at 50% of max deviator stress, ε_{50} [%]	7.3
Young's modulus at 50% of max deviator stress, E_{50} [MPa]	2.7
Axial strain at failure, ε_f [%]	23.9
Failure type	Bulge failure

Sample : 3a
Sample depth : 3.1 m
Visual identification : dark grey sandy silty CLAY
Test method : ASTM D2850-03a

UU-TRIAXIAL TEST RESULTS
V-WTG-18

F. GRAB SAMPLES LABORATORY TESTING RESULTS

F.1 SUMMARY OF LABORATORY TEST RESULTS

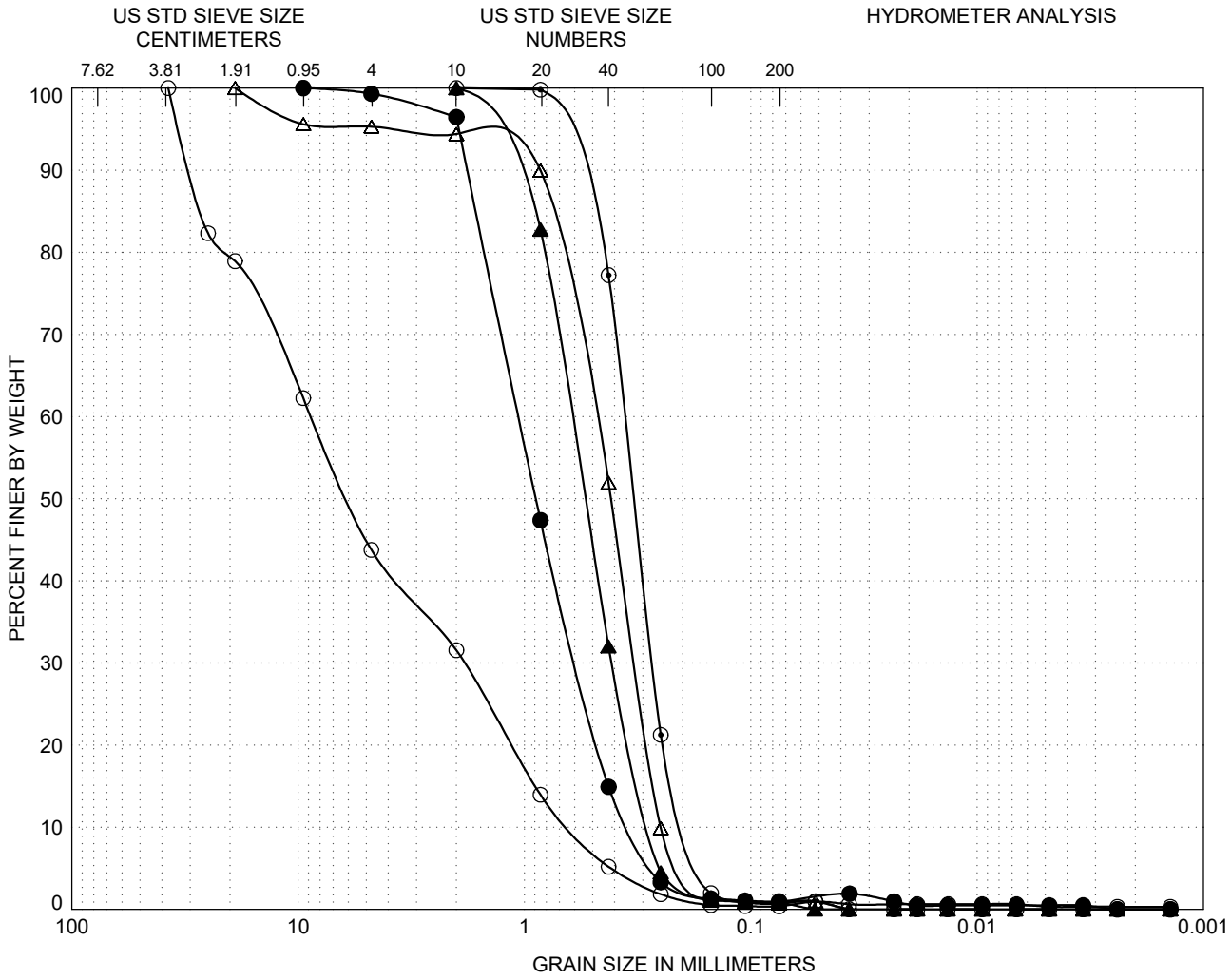
F.2 GRAIN SIZE CURVES

LOCATION	DEPTH, m	MATERIAL DESCRIPTION	SAMPLE NUMBER	MOISTURE CONTENT (%)	WET UNIT WEIGHT kN/m^3	SUBMERGED UNIT WEIGHT	MIN UNIT WEIGHT (kN/m^3)	MAX UNIT WEIGHT (kN/m^3)	SPECIFIC GRAVITY	FINES (%)	ORGANIC CONTENT (%)	THERMAL CONDUCTIVITY W/(m·K)	ATTERBERG LIMITS		TORVANE	Pocket Penetrometer	UU TRIAXIAL kPa		Advanced Tests?
													LL	PI	S_u, kPa	S_u, kPa	S_u	Confining Stress	
GS-2	0.00		GS-2						2.67	0									
GS-11	0.00		GS-11						2.66	1									
GS-13	0.00		GS-13						2.66	1									
GS-19	0.00		GS-19						2.67	1									
GS-21	0.00		GS-21						2.67	1									
GS-25	0.00		GS-25						2.67	3									
GS-26	0.00		GS-26						2.66	1									
GS-27	0.00		GS-27						2.69	1									
GS-28	0.00		GS-28						2.68	2									
GS-29	0.00		GS-29						2.67	8									
GS-30	0.00		GS-30						2.67										
GS-33	0.00		GS-33						2.71	2									
GS-34	0.00		GS-34						2.69	1									
GS-35	0.00		GS-35						2.69	1									
GS-37	0.00		GS-37						2.67	1									
GS-40	0.00		GS-40						2.68	1									

SUMMARY OF LABORATORY TEST RESULTS

SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE F-1.1

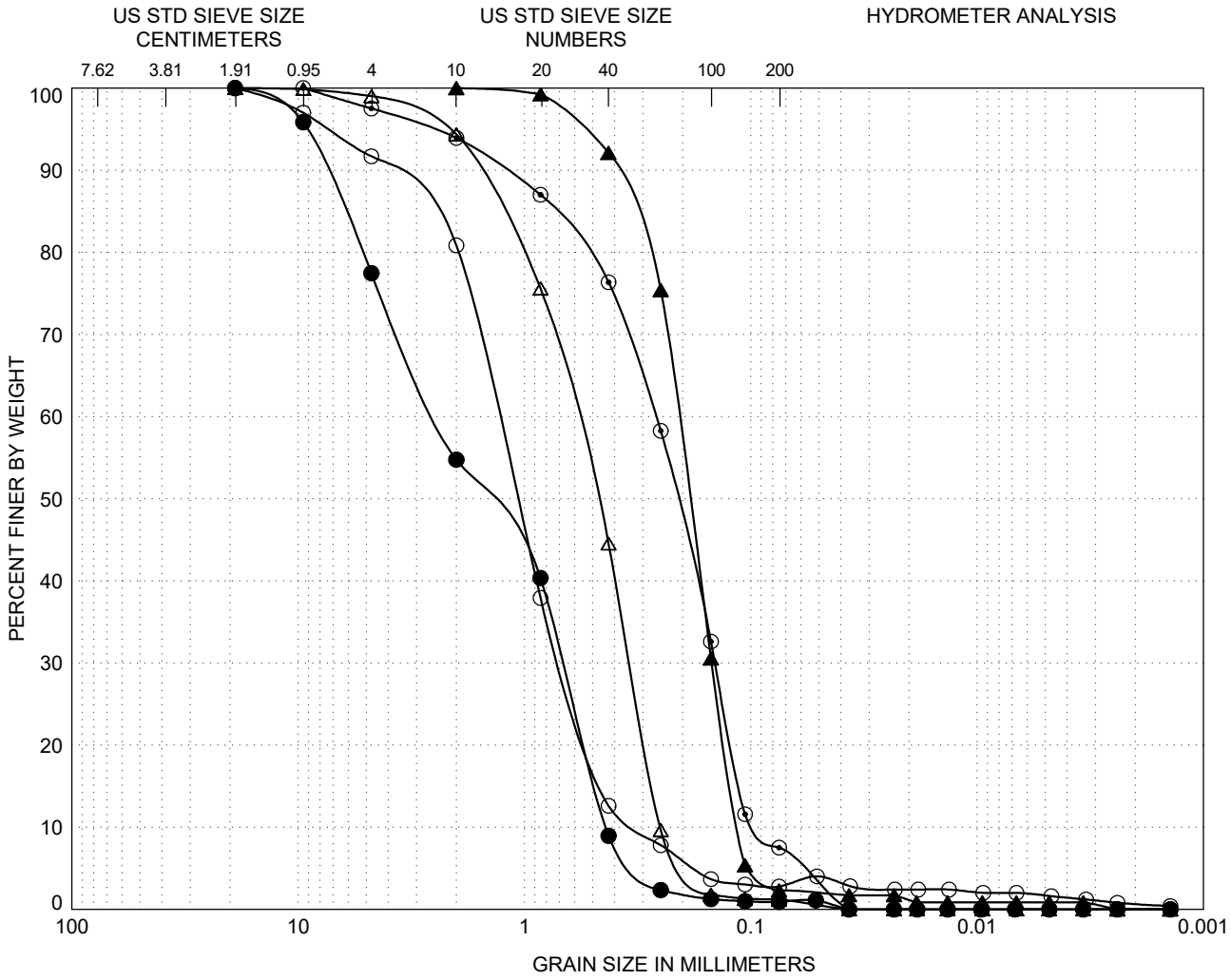


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	GS-2	0.00	POORLY GRADED GRAVEL with SAND (GP) fine to coarse gravel, medium to coarse sand	0.6	14.0
●	GS-11	0.00	POORLY GRADED SAND (SP) medium sand	1.0	3.1
△	GS-13	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.0
▲	GS-19	0.00	POORLY GRADED SAND (SP) medium sand	1.0	2.2
⊙	GS-21	0.00	POORLY GRADED SAND (SP) fine sand	1.1	1.9

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE F-2.1

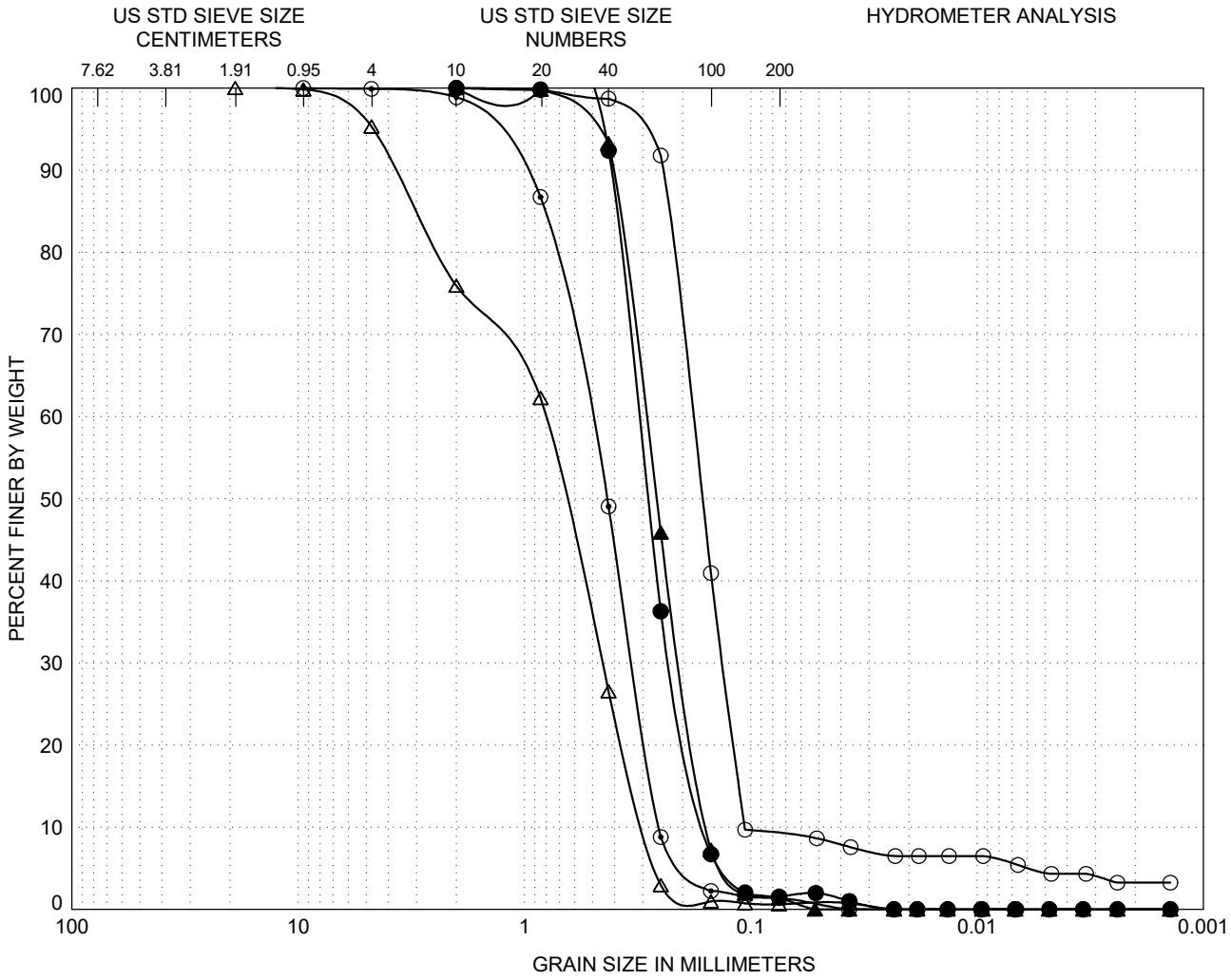


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	GS-25	0.00	POORLY GRADED SAND (SP) medium sand	1.1	4.1
●	GS-26	0.00	POORLY GRADED SAND with GRAVEL (SP) medium to coarse sand, fine gravel	0.4	5.6
△	GS-27	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.4
▲	GS-28	0.00	POORLY GRADED SAND (SP) fine sand	0.9	1.9
⊙	GS-29	0.00	POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt	0.8	2.8

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE F-2.2

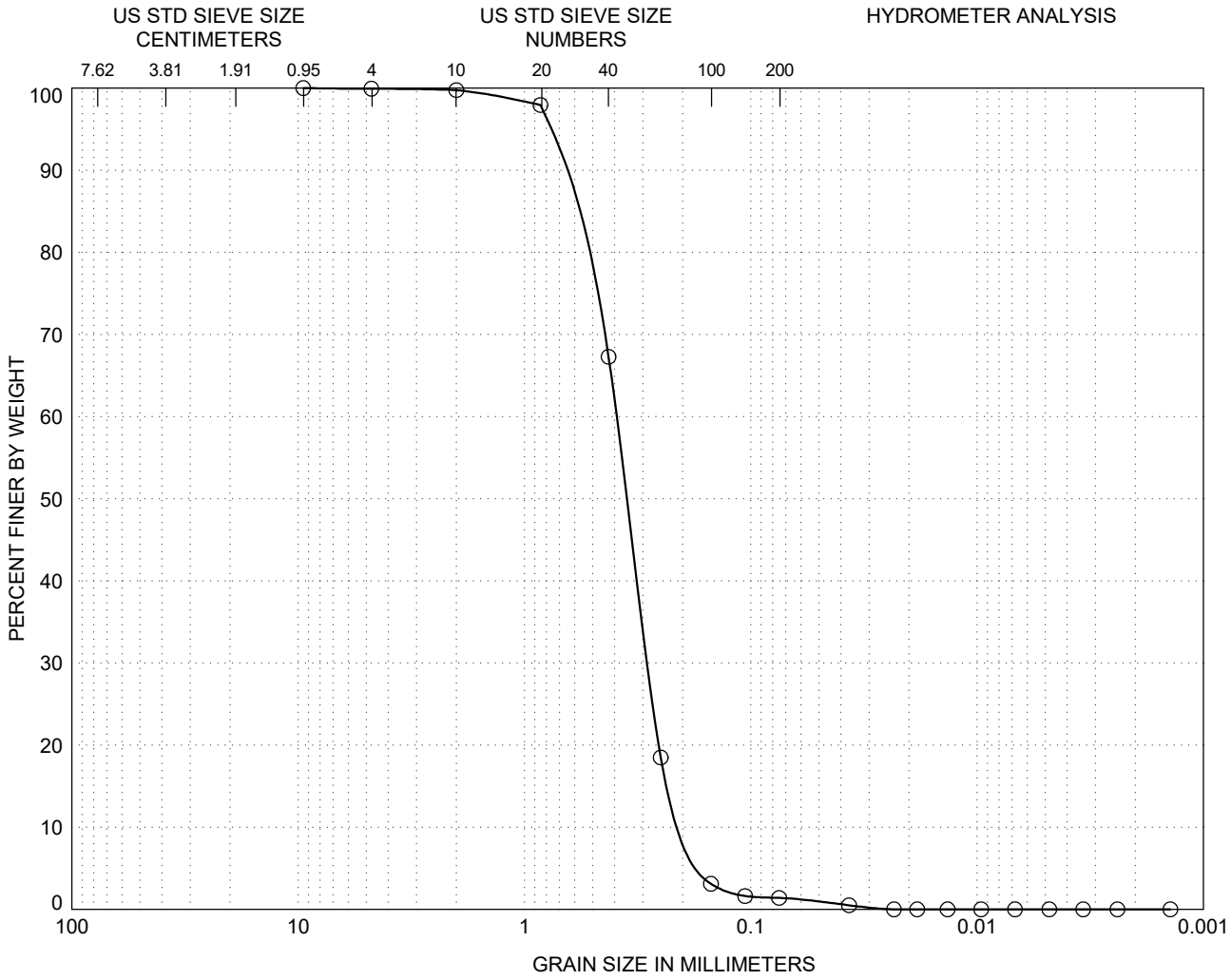


GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

LEGEND	(location)	(depth,m)		Cc	Cu
○	GS-30	0.00		0.9	1.7
●	GS-33	0.00	POORLY GRADED SAND (SP) fine sand	1.0	2.0
△	GS-34	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.9	2.8
▲	GS-35	0.00	POORLY GRADED SAND (SP) fine sand	0.9	1.9
⊙	GS-37	0.00	POORLY GRADED SAND (SP) fine to medium sand	0.8	2.0

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE F-2.3



GRAVEL		SAND			SILT or CLAY
Coarse	Fine	Coarse	Medium	Fine	

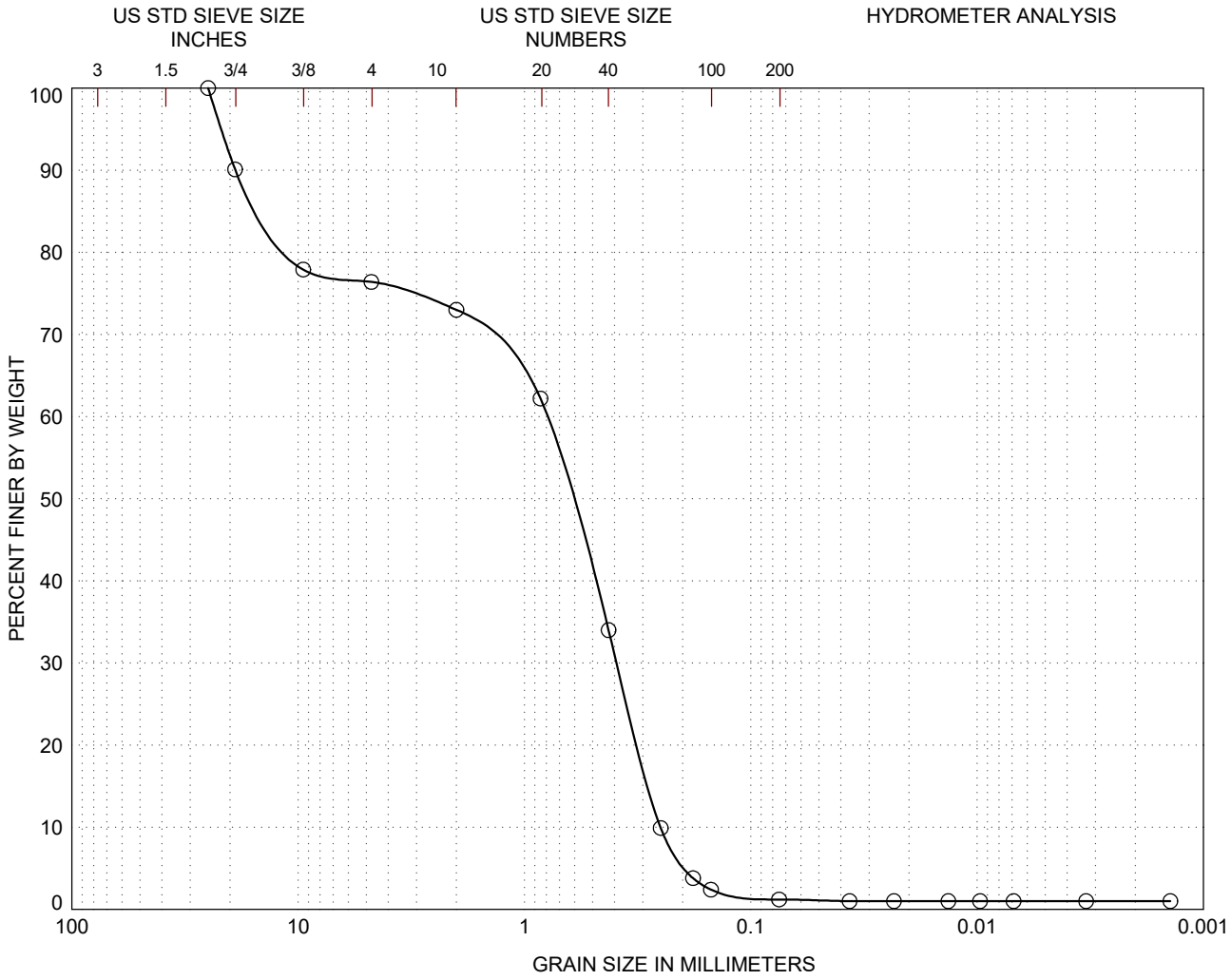
LEGEND	(location)	(depth,m)		Cc	Cu
○	GS-40	0.00	POORLY GRADED SAND (SP) fine sand	1.1	2.1

GRAIN SIZE CURVES
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE F-2.4

G. ENVIRONMENTAL LABORATORY TEST RESULTS

G.1 GRAIN SIZE CURVES



23.6% GRAVEL		75.2% SAND			1.2% FINES	
9.9% Coarse	13.7% Fine	3.4% Coarse	39.0% Medium	32.8% Fine	0.2% SILT	1.0% CLAY

Sieve Size (mm)	Percent Finer
25	100.0
19	90.1
9.5	77.9
4.75	76.4
2	73.0
0.85	62.2
0.425	34.0
0.25	9.9
0.18	3.8
0.15	2.4
0.075	1.2

Location: V-300
Depth: 0.15

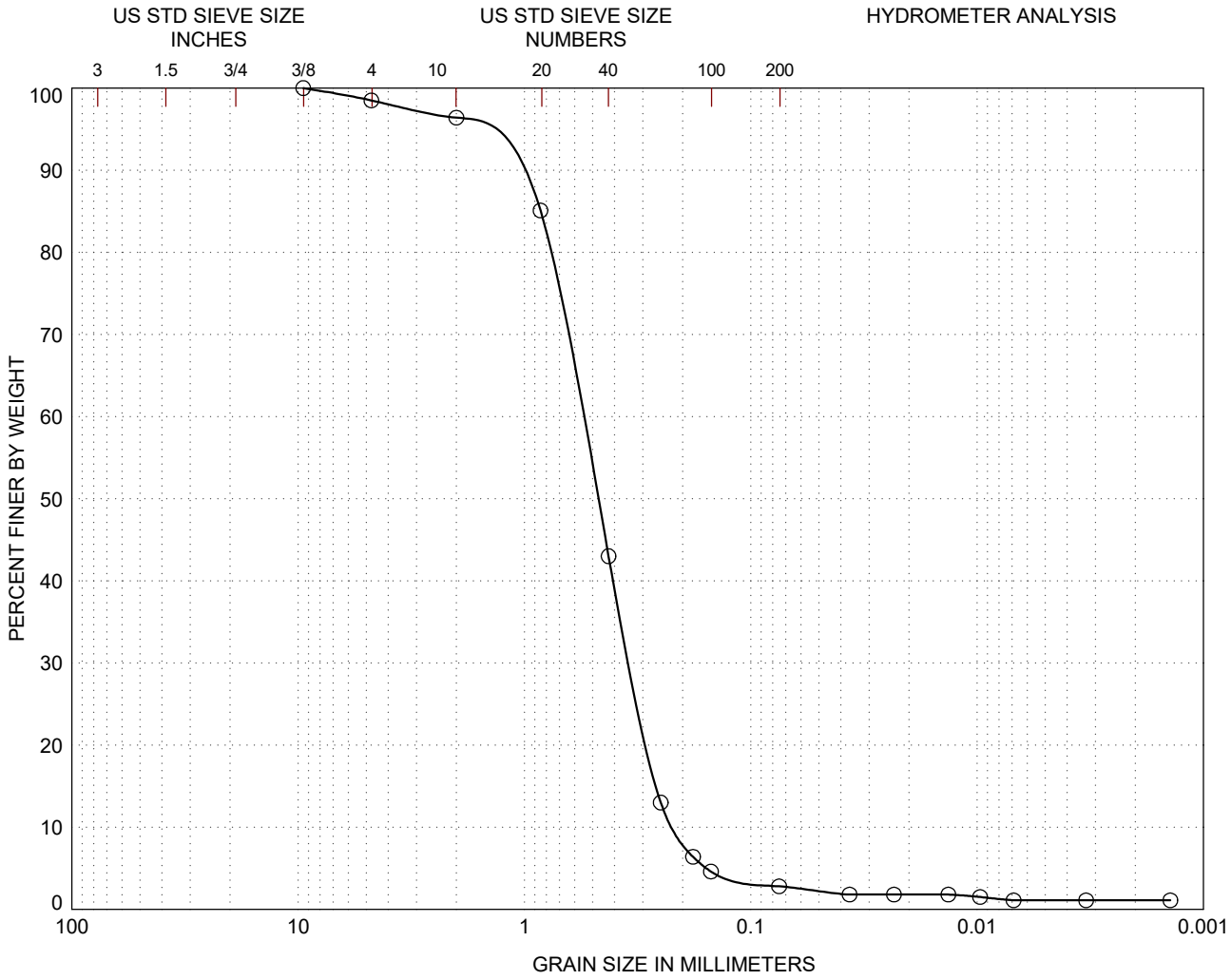
POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine to coarse gravel

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.8	3.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
18.9	14.2	0.805	0.630	0.389	0.280	0.251

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1a



1.5% GRAVEL		95.7% SAND			2.8% FINES	
0.0% Coarse	1.5% Fine	2.1% Coarse	53.4% Medium	40.2% Fine	1.7% SILT	1.1% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	98.5
2	96.4
0.85	85.1
0.425	43.0
0.25	13.0
0.18	6.4
0.15	4.6
0.075	2.8

Location: V-301
Depth: 0.15

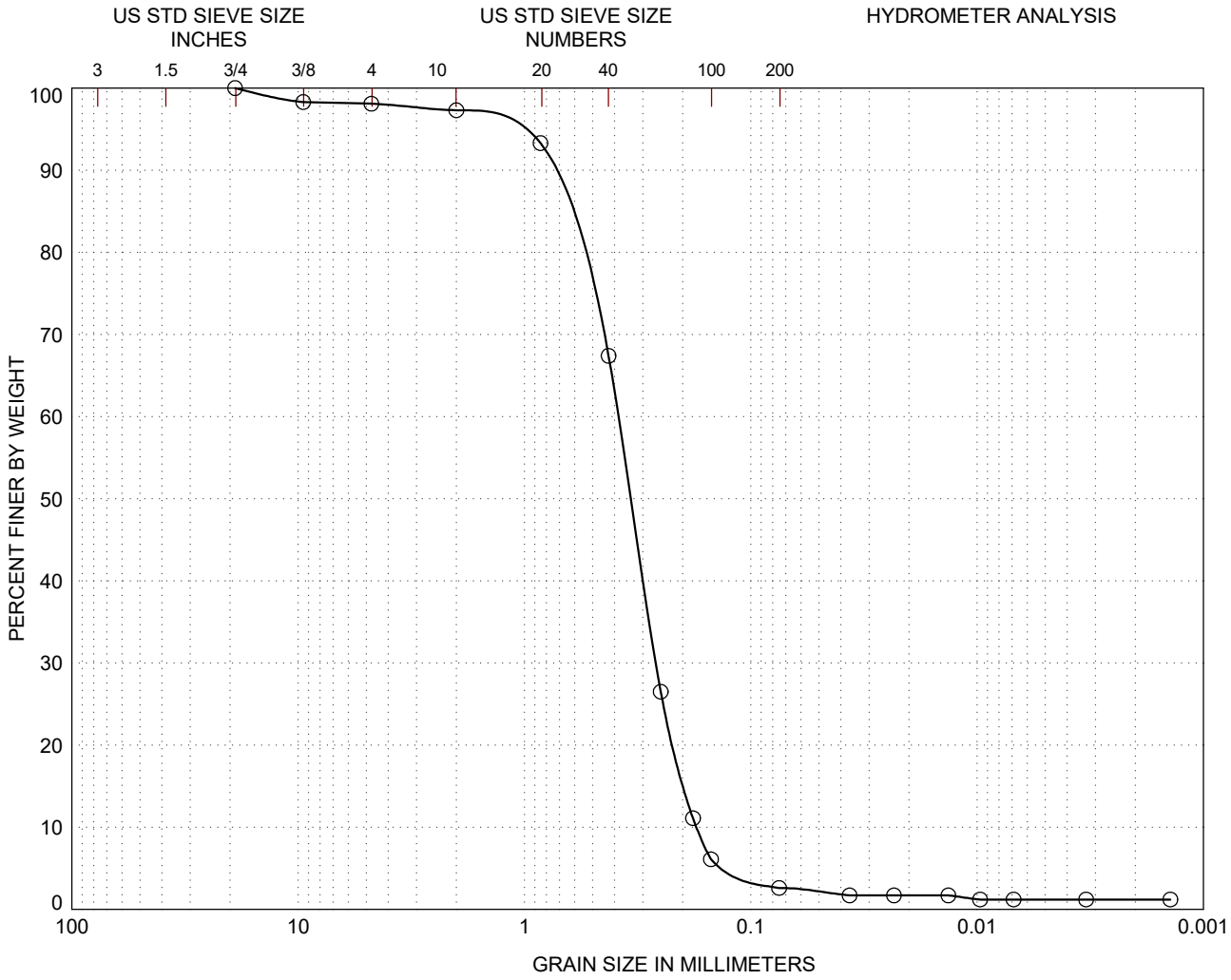
POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	2.6

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.23	0.849	0.562	0.477	0.338	0.259	0.215

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1b



1.9% GRAVEL		95.5% SAND			2.6% FINES	
0.0% Coarse	1.9% Fine	0.8% Coarse	29.9% Medium	64.8% Fine	1.4% SILT	1.2% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	98.3
4.75	98.1
2	97.3
0.85	93.3
0.425	67.4
0.25	26.5
0.18	11.1
0.15	6.1
0.075	2.6

Location: V-302
Depth: 0.15

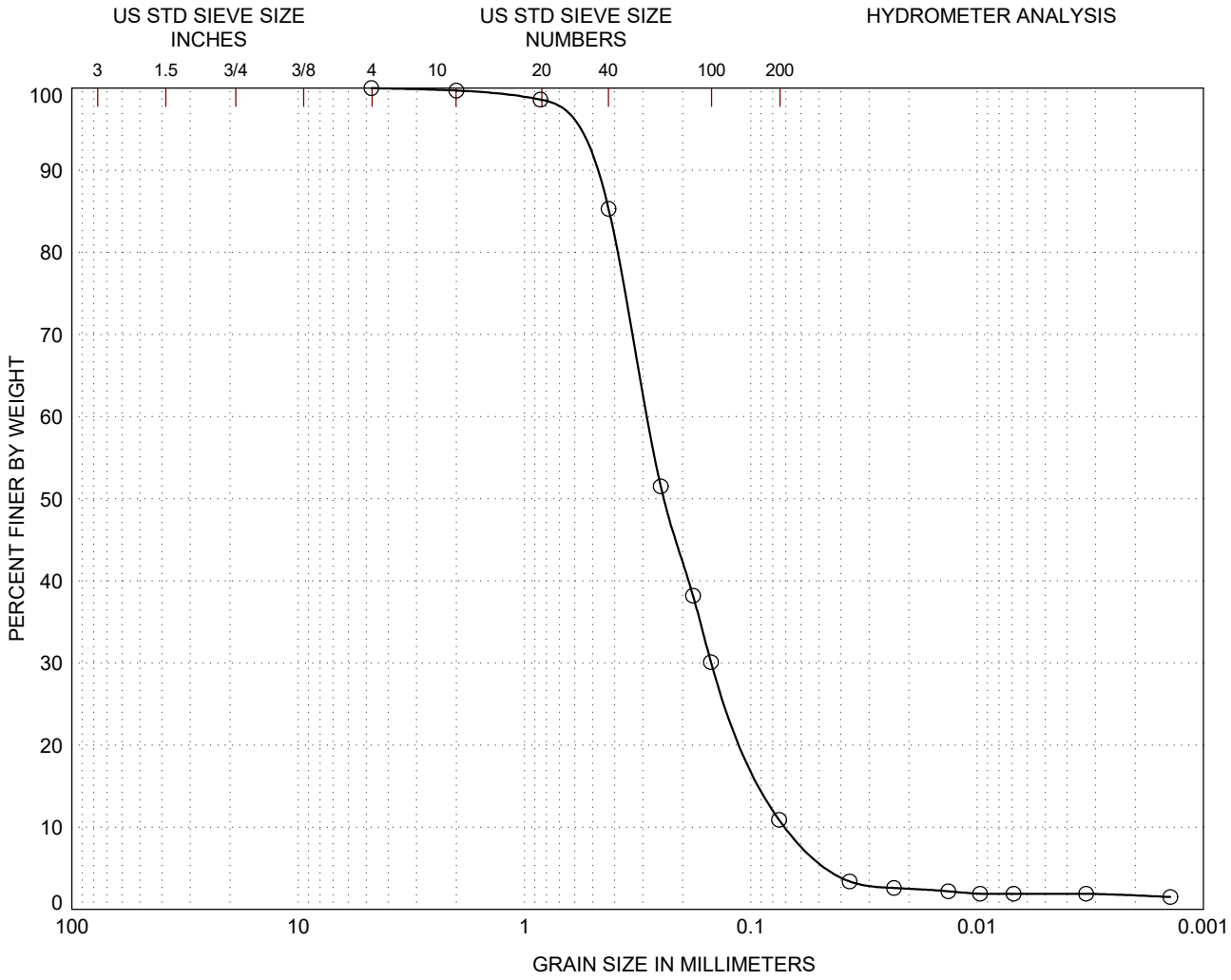
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.778	0.681	0.386	0.339	0.262	0.196	0.173

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1c



0.0% GRAVEL		89.1% SAND			10.9% FINES	
0.0% Coarse	0.0% Fine	0.3% Coarse	14.4% Medium	74.4% Fine	9.0% SILT	1.9% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.7
0.85	98.6
0.425	85.3
0.25	51.5
0.18	38.2
0.15	30.1
0.075	10.9

Location: V-303
Depth: 0.15

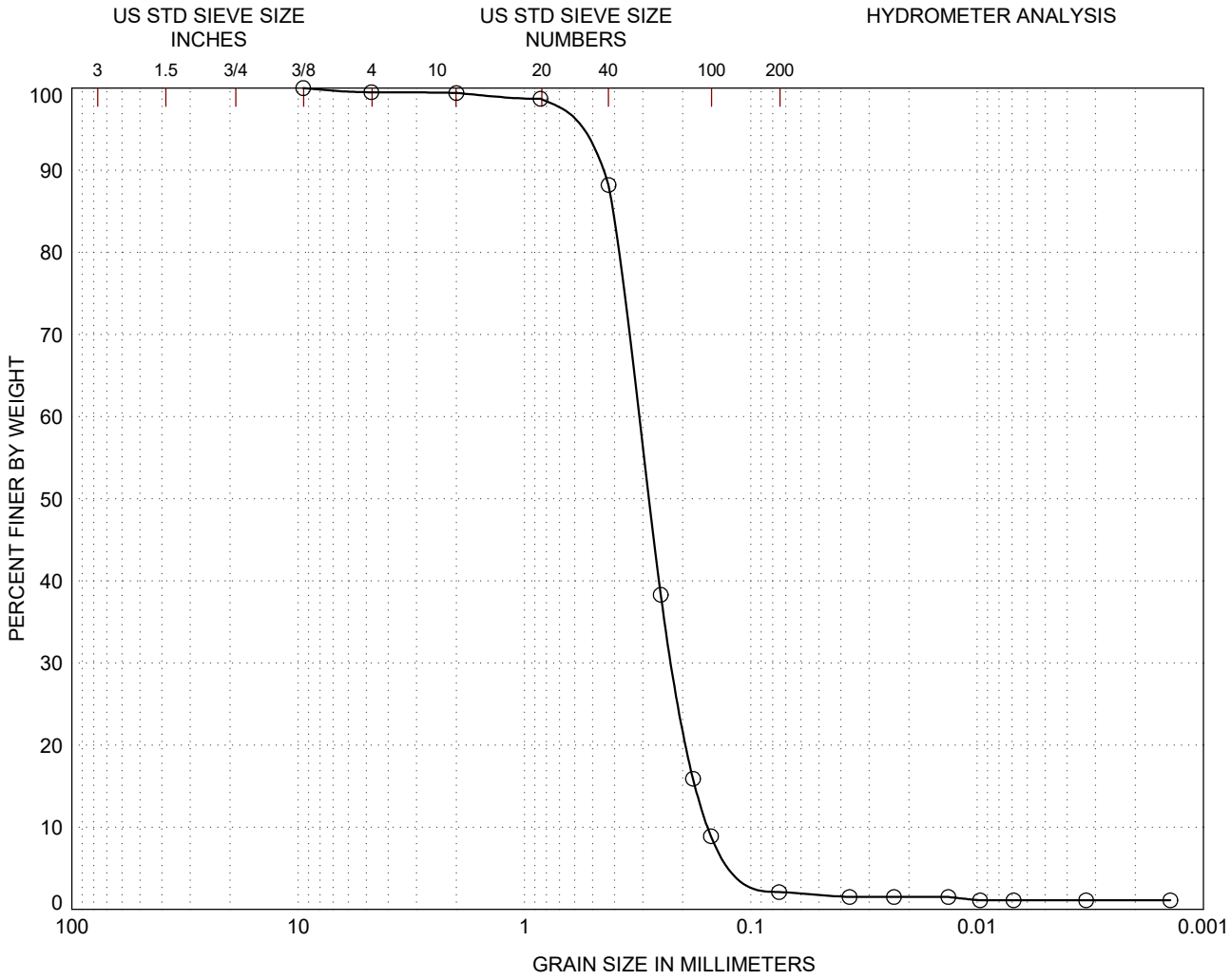
POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	4.2

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.543	0.423	0.286	0.241	0.149	0.0870	0.0688

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1d



0.5% GRAVEL		97.4% SAND			2.1% FINES	
0.0% Coarse	0.5% Fine	0.1% Coarse	11.2% Medium	86.1% Fine	1.0% SILT	1.1% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.5
2	99.4
0.85	98.7
0.425	88.2
0.25	38.3
0.18	15.9
0.15	8.9
0.075	2.1

Location: V-304
Depth: 0.15

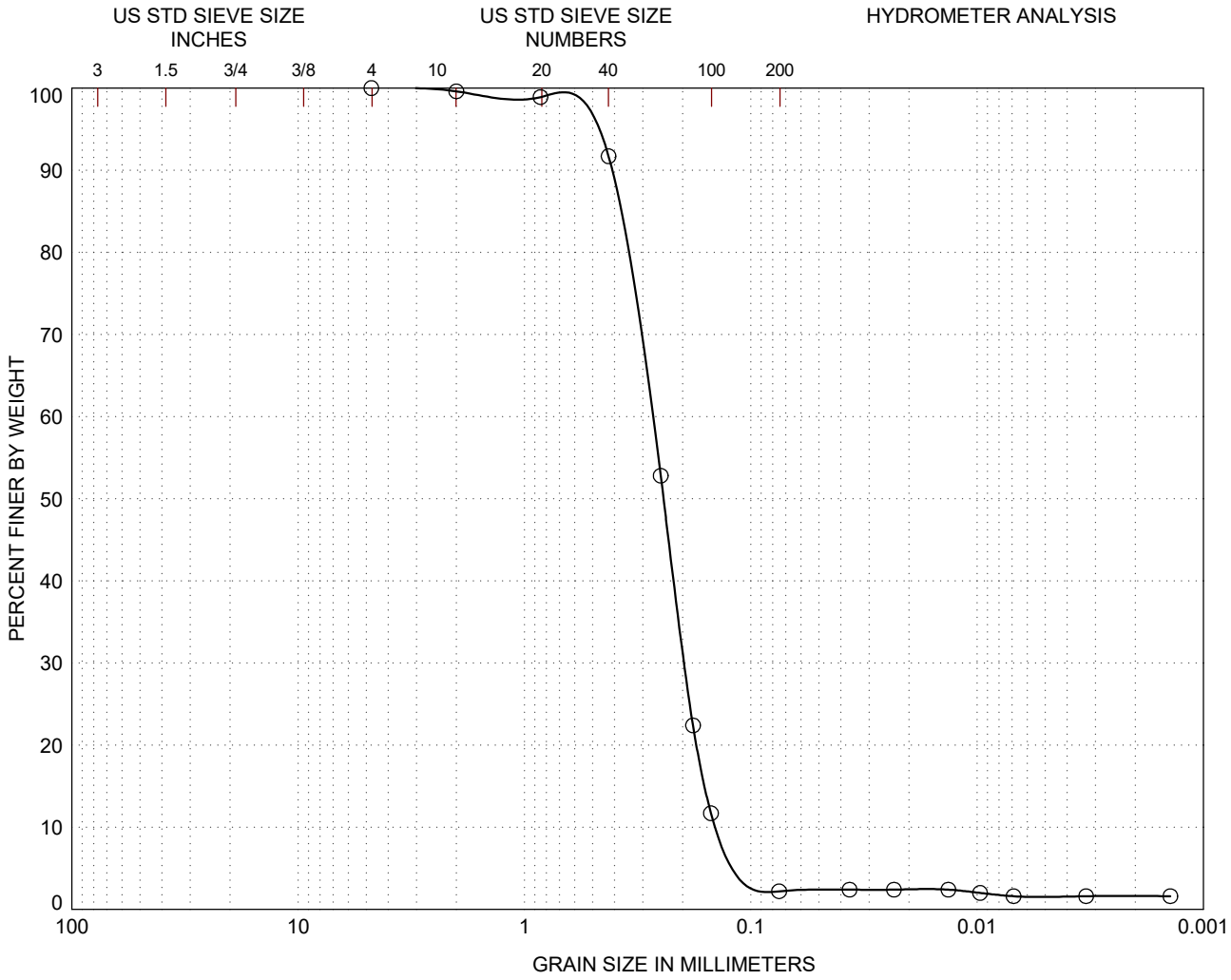
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.0

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.479	0.411	0.315	0.283	0.221	0.176	0.154

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1e



0.0% GRAVEL		97.8% SAND			2.2% FINES	
0.0% Coarse	0.0% Fine	0.4% Coarse	7.9% Medium	89.5% Fine	0.6% SILT	1.6% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.6
0.85	98.9
0.425	91.7
0.25	52.8
0.18	22.4
0.15	11.7
0.075	2.2

Location: V-305
Depth: 0.15

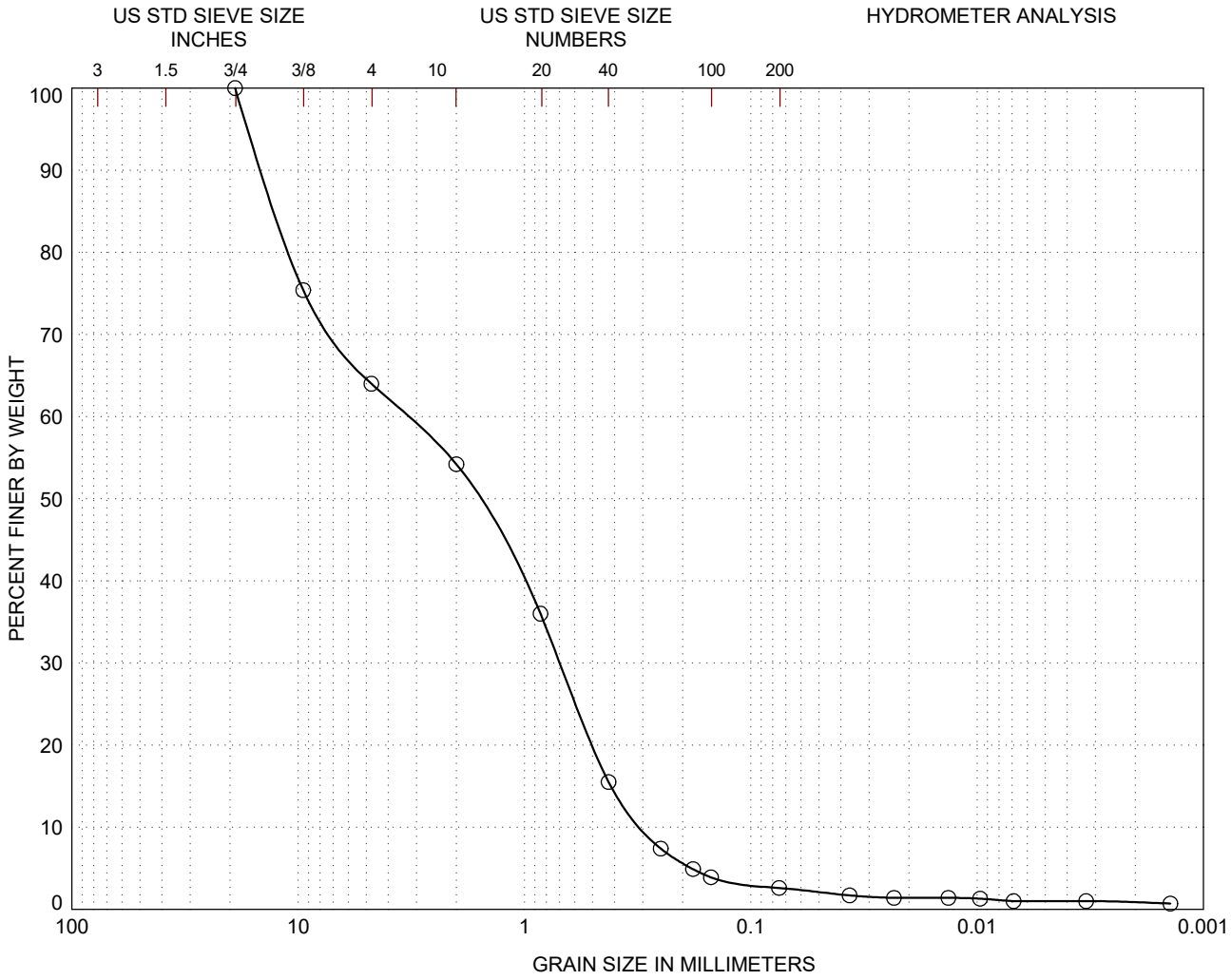
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.2	2.4

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.415	0.388	0.276	0.243	0.195	0.159	0.116

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1f



36.0% GRAVEL		61.4% SAND			2.6% FINES	
0.0% Coarse	36.0% Fine	9.8% Coarse	38.7% Medium	12.9% Fine	1.6% SILT	1.0% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	75.4
4.75	64.0
2	54.2
0.85	36.0
0.425	15.5
0.25	7.4
0.18	4.9
0.15	3.9
0.075	2.6

Location: V-306
Depth: 0.10

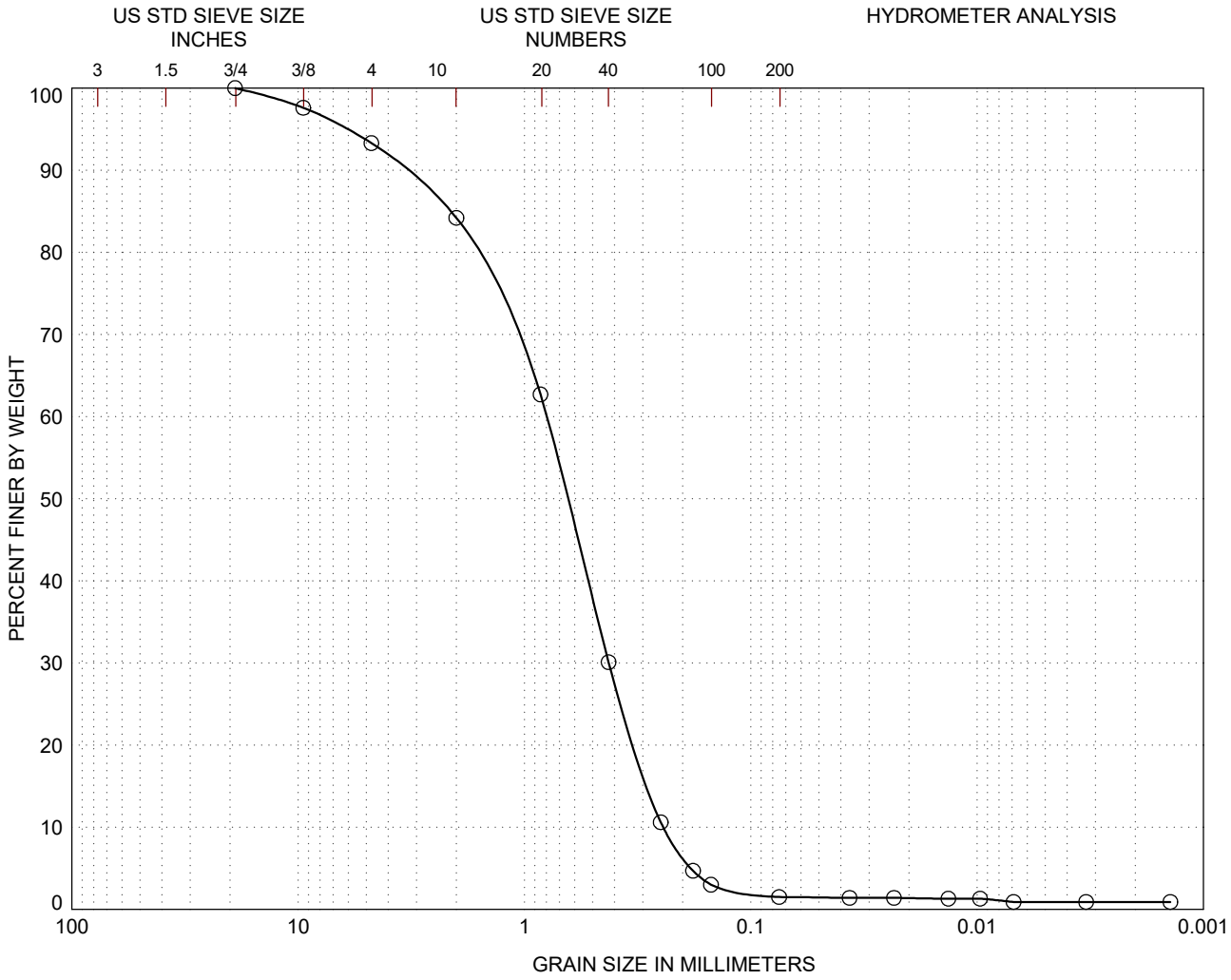
POORLY GRADED SAND with GRAVEL (SP) fine to medium sand, fine gravel

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.5	11.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
14.3	12.5	3.34	1.64	0.694	0.411	0.296

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1g



6.7% GRAVEL		91.8% SAND			1.5% FINES	
0.0% Coarse	6.7% Fine	9.1% Coarse	54.1% Medium	28.6% Fine	0.6% SILT	0.9% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	97.6
4.75	93.3
2	84.2
0.85	62.7
0.425	30.1
0.25	10.6
0.18	4.7
0.15	3.0
0.075	1.5

Location: V-307
Depth: 0.10

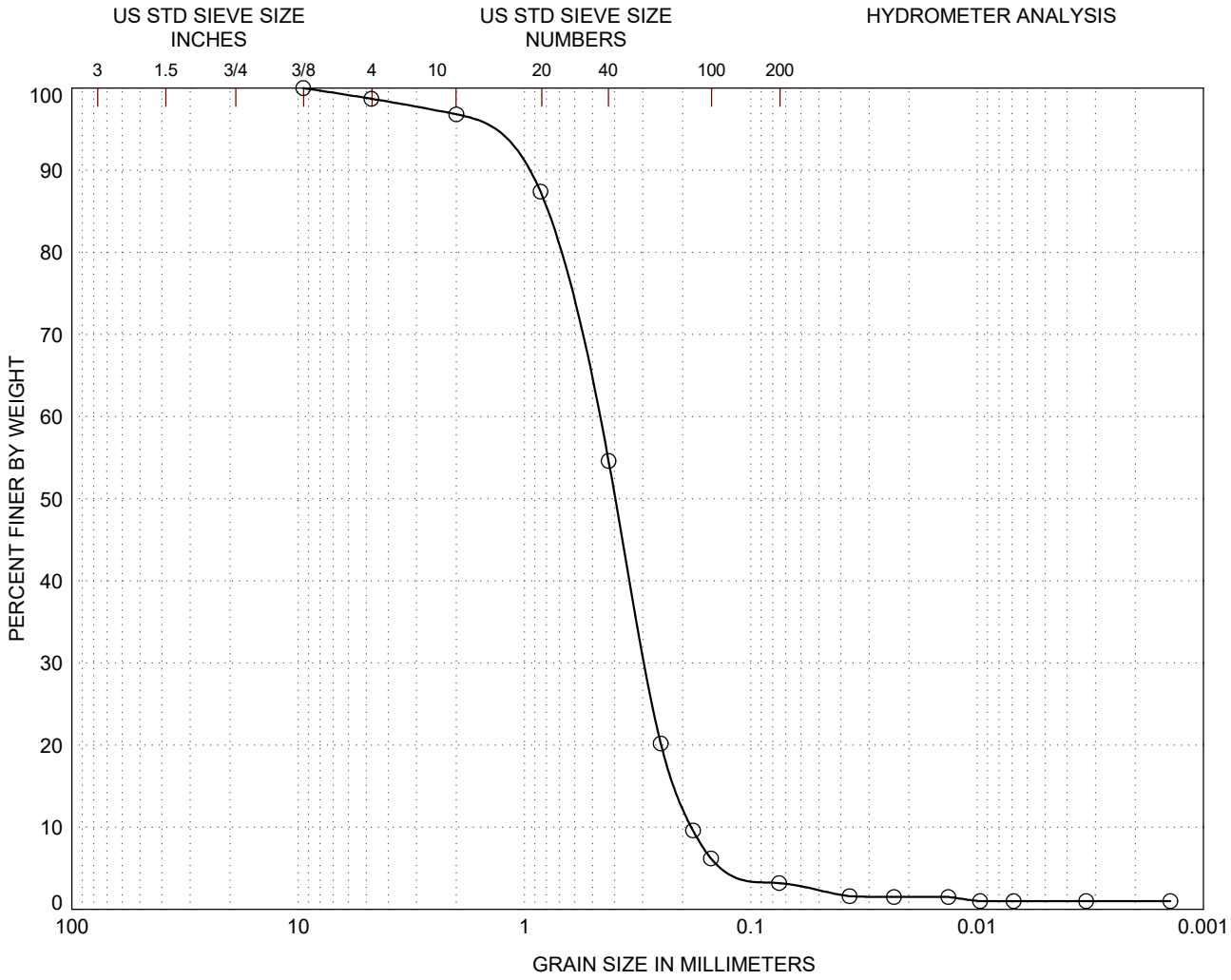
POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			0.9	3.3

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
3.47	2.16	0.803	0.649	0.424	0.282	0.242

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1h



1.3% GRAVEL		95.5% SAND			3.2% FINES	
0.0% Coarse	1.3% Fine	1.9% Coarse	42.2% Medium	51.4% Fine	2.2% SILT	1.0% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	98.7
2	96.8
0.85	87.4
0.425	54.6
0.25	20.2
0.18	9.6
0.15	6.2
0.075	3.2

Location: V-308
Depth: 0.10

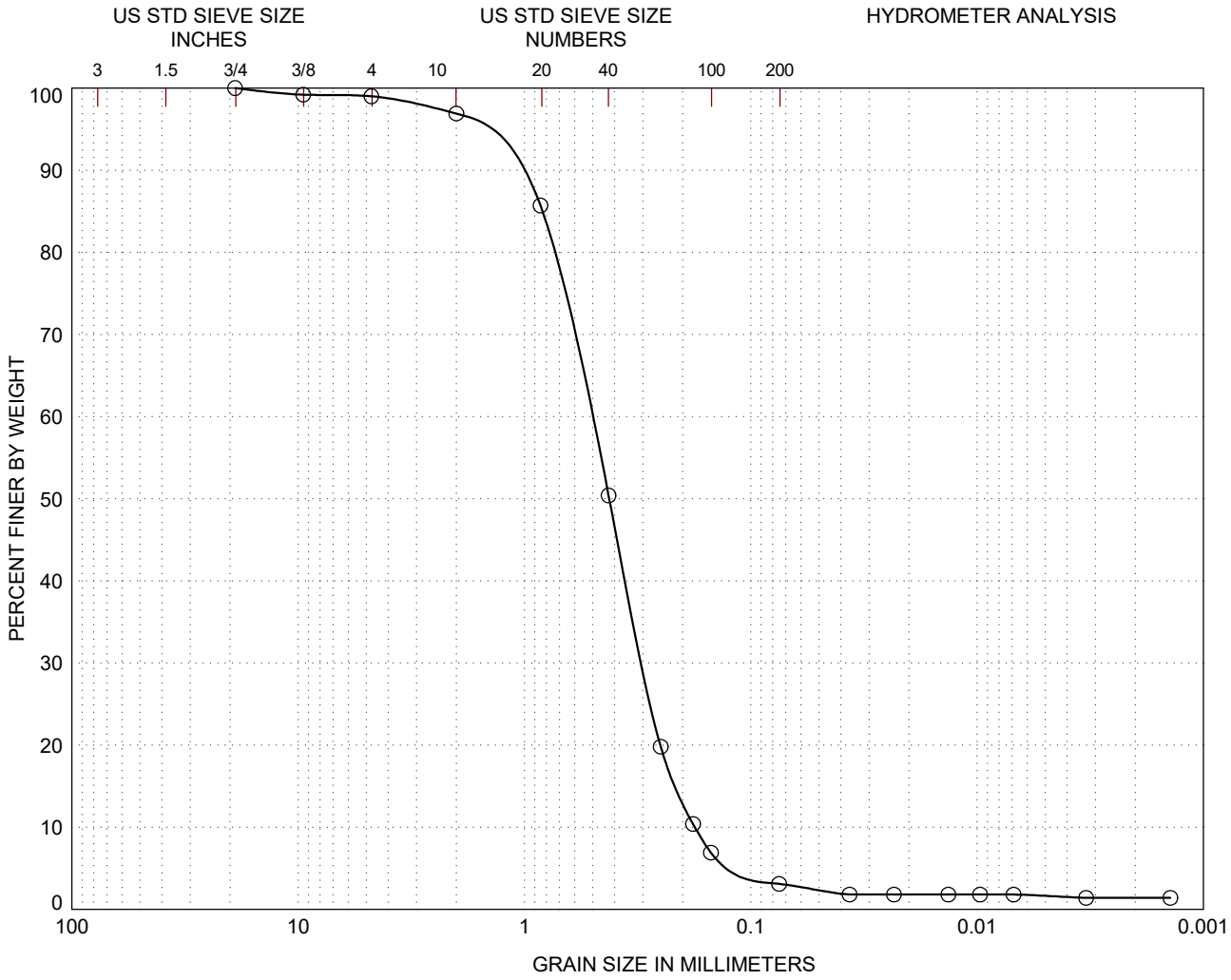
POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.6

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.08	0.808	0.476	0.396	0.291	0.213	0.182

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1i



1.0% GRAVEL		95.9% SAND			3.1% FINES	
0.0% Coarse	1.0% Fine	2.1% Coarse	46.5% Medium	47.3% Fine	1.5% SILT	1.6% CLAY

Sieve Size (mm)	Percent Finer
19	100.0
9.5	99.2
4.75	99.0
2	96.9
0.85	85.7
0.425	50.4
0.25	19.8
0.18	10.4
0.15	6.9
0.075	3.1

Location: V-309
Depth: 0.10

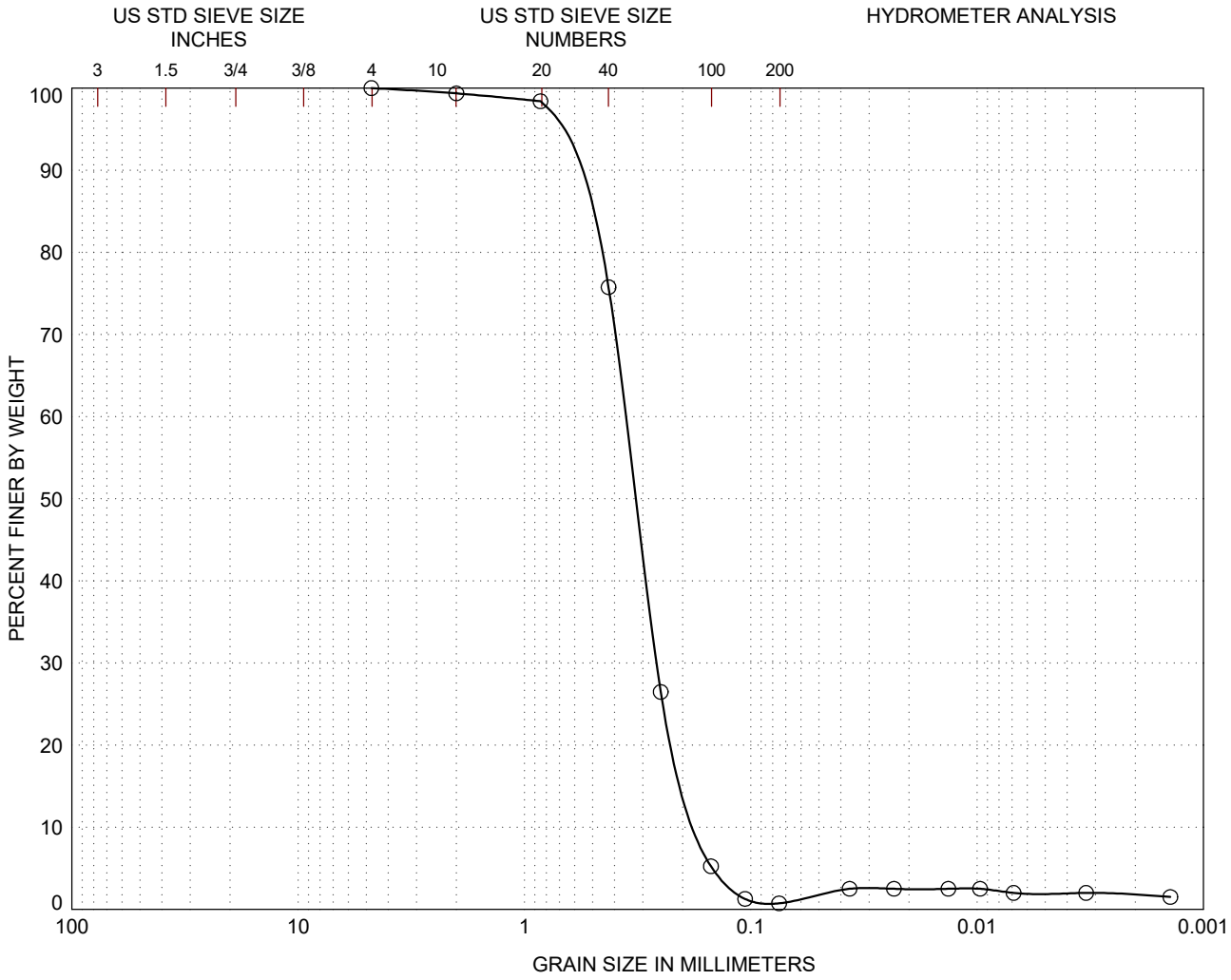
POORLY GRADED SAND (SP) fine to medium sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.0	2.9

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
1.18	0.838	0.513	0.422	0.298	0.211	0.176

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1j



0.0% GRAVEL		99.3% SAND			0.7% FINES	
0.0% Coarse	0.0% Fine	0.6% Coarse	23.6% Medium	75.0% Fine	-1.3% SILT	2.0% CLAY

Sieve Size (mm)	Percent Finer
4.75	100.0
2	99.4
0.85	98.4
0.425	75.8
0.25	26.5
0.15	5.2
0.106	1.3
0.075	0.7

Location: V-310
Depth: 0.15

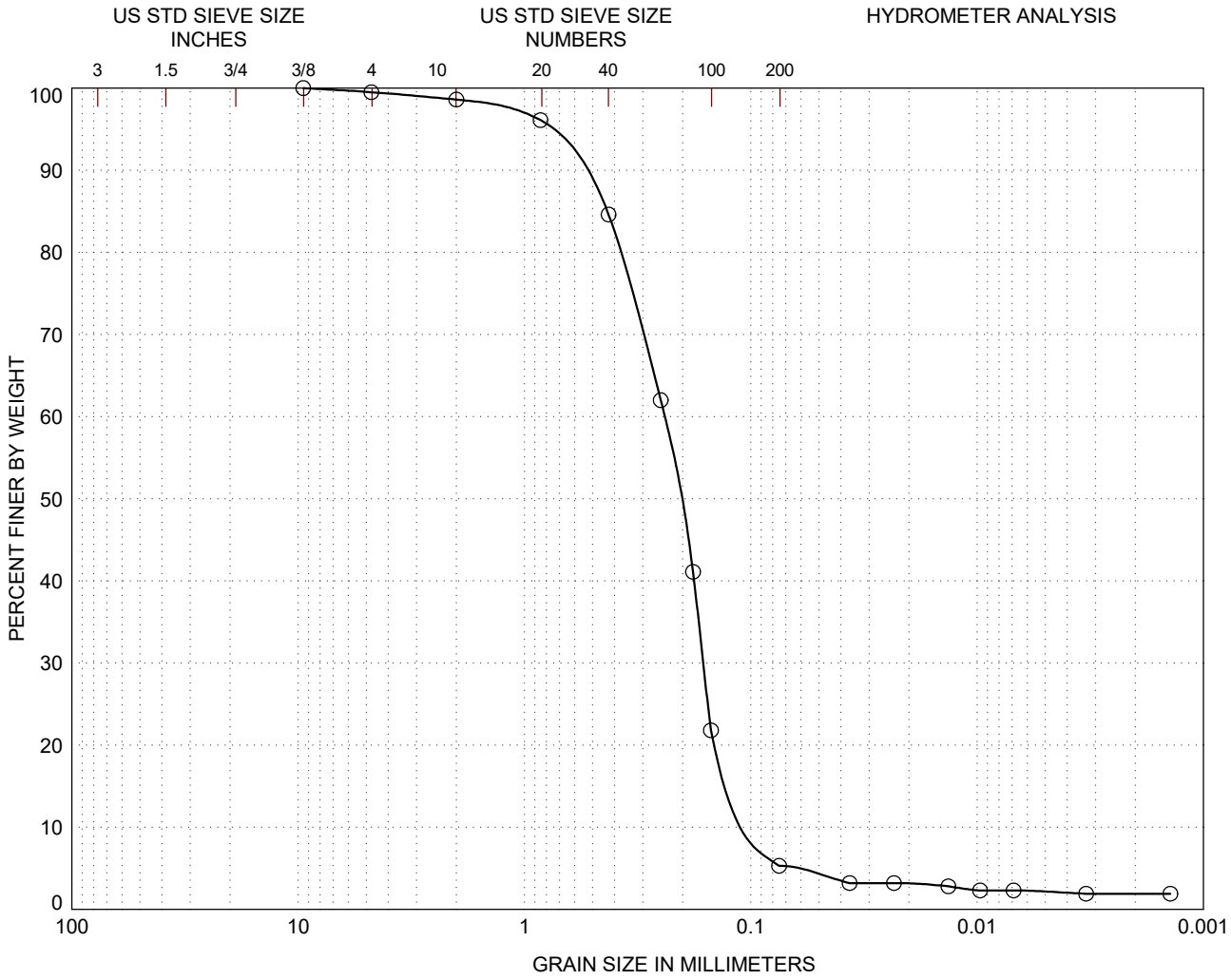
POORLY GRADED SAND (SP) fine sand

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.1	2.1

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.657	0.564	0.359	0.322	0.260	0.190	0.168

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1k



0.5% GRAVEL		94.2% SAND			5.3% FINES	
0.0% Coarse	0.5% Fine	0.9% Coarse	14.0% Medium	79.3% Fine	3.2% SILT	2.1% CLAY

Sieve Size (mm)	Percent Finer
9.5	100.0
4.75	99.5
2	98.6
0.85	96.1
0.425	84.6
0.25	62.0
0.18	41.1
0.15	21.8
0.075	5.3

Location: V-311
Depth: 0.10

POORLY GRADED SAND with SILT (SP-SM) fine sand, non-plastic silt

Plastic Limit:	Liquid Limit:	Plasticity Index:	C_c	C_u
			1.2	2.7

D_{90}	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}
0.588	0.435	0.242	0.207	0.162	0.113	0.0914

PARTICLE SIZE DISTRIBUTION
SFWF COP Survey
Offshore NY/RI/MA, Atlantic OCS

FIGURE G-1I

H. ENVIRONMENTAL LABORATORY TESTING

Twelve vibracores were collected within the New York State Waters for environmental and geotechnical testing, following the procedures laid out in the previously submitted Sediment Sampling Plan. Two cable routes approaching land on the south shore of Long Island near Montauk were evaluated - Beach Lane and Hither Hills. Six cores were collected from each approach. Vibracores were collected during the day, and processing was conducted onboard the vessel in calm waters during the night.

Vibracore samples were collected in single-use clear plastic liners, and all reusable sampling equipment was cleaned and rinsed with distilled water to prevent cross-contamination. Cores were split longitudinally, photographed, and visually described to the Unified Soil Classification system. The upper 2 meters of each core were sub-sampled for both environmental and geotechnical analysis.

One side of the split sample was used to obtain discrete sub-samples for particle size analysis and sent to a Fugro geotechnical laboratory. The other side of the split sample was homogenized and used to fill containers provided by TestAmerica, an analytical laboratory part of the New York State Department of Health Environmental Laboratory Approval Program. The samples were then stored on ice and transported under chain of custody to TestAmerica. The sediment was tested for the following analytes:

- Arsenic
- Cadmium
- Copper
- Lead
- Mercury
- Benzene
- Total BTEX
- Total PAH
- Sum of DDT+DDE+DDD
- Mirex
- Chlordane
- Dieldrin
- PCBs (sum of aroclors)
- Dioxin (Toxic Equivalency Total)
- Grain Size
- Total Organic Carbon

In addition to the sediment samples themselves, QAQC samples also included in the testing program were an equipment blank of the rinse water and a duplicate sample from the field, and matrix spike and matrix spike duplicate samples from the laboratory.

The results of the sediment sampling and analysis are summarized in Table 5.1 and Table 5.2 below. Compared against the Sediment Quality Thresholds for in-water/riparian placement in the Technical Guidance for Screening Contaminated Sediments (NYSDEC-DFWMR 1999), the results correspond to Class A – No Appreciable Contamination. The complete results are listed in section G2 of this Appendix.

Table 5.1: Class A Sediment Quality Comparison, Beach Lane Approach

		Result (µg/kg unless otherwise specified)							Method Detection Limit	Class A Threshold Value*	
Sample ID / Analyte	Method	V-300	V-301	V-302	V-303	V-304	V-304 (Duplicate)	V-305		µg/kg	mg/kg
Benzene	8260C	ND	ND	ND	ND	ND	ND	ND	2.1	590	0.59
Total BTEX	8260C	ND	ND	ND	ND	ND	ND	ND	11	960	0.96
Chlordane (technical)	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.95	3	0.003
DDD	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.06	3	0.003
DDE	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.045		
DDT	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.085		
Dieldrin	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.056	110	0.11
Mirex	8081B_LL	ND	ND	ND	ND	ND	ND	ND	0.042	1.4	0.0014
Polychlorinated biphenyls, Total	8082A	ND	ND	ND	ND	ND	ND	ND	0.34	100	0.1
Arsenic	6010C	0.31	0.35	0.51	1.7	0.72	0.56	0.82	0.15	14000	14
Cadmium	6010C	ND	ND	ND	ND	ND	ND	ND	0.019	1200	1.2
Copper	6010C	0.99	1.2	1.7	3.9	1.5	1.5	2	0.088	33000	33
Lead	6010C	0.64	0.64	1	2.2	1.4	1.2	1.7	0.13	33000	33
Mercury	7471B	ND	ND	ND	ND	ND	ND	ND	0.004	170	0.17
2, 3, 7, 8-TCDD (sum of toxic equivalency)	1613B	ND	ND	ND	ND	ND	0.000043	ND	0.000045	0.0045	4.5E-06

Notes:
ND – Non Detect, below the Method Detection Limit

Table 5.2: Class A Sediment Quality Comparison, Hither Hills Approach

		Result (µg/kg unless otherwise specified)						Method Detection Limit	Class A Threshold Value*	
Sample ID / Analyte	Method	V-306	V-307	V-308	V-309	V-310	V-311		µg/kg	mg/kg
Benzene	8260C	ND	ND	ND	ND	ND	ND	2.1	590	0.59
Total BTEX	8260C	ND	ND	ND	ND	ND	ND	11	960	0.96
Chlordane (technical)	8081B_LL	ND	ND	ND	ND	ND	ND	0.95	3	0.003
DDD	8081B_LL	ND	ND	ND	ND	ND	ND	0.06	3	0.003
DDE	8081B_LL	ND	ND	ND	ND	ND	ND	0.045		
DDT	8081B_LL	ND	ND	ND	ND	ND	ND	0.085		
Dieldrin	8081B_LL	ND	ND	0.065	ND	ND	ND	0.056	110	0.11
Mirex	8081B_LL	ND	ND	ND	ND	ND	ND	0.042	1.4	0.0014
Polychlorinated biphenyls, Total	8082A	ND	ND	ND	ND	ND	ND	0.34	100	0.1
Arsenic	6010C	1.7	1.6	1.5	0.81	0.8	1.5	0.15	14000	14
Cadmium	6010C	ND	ND	ND	ND	ND	0.025	0.019	1200	1.2
Copper	6010C	0.98	1.3	1.2	2.1	1.7	1.7	0.088	33000	33
Lead	6010C	1.3	1.9	1.6	1.5	1.4	2.1	0.13	33000	33
Mercury	7471B	ND	ND	ND	ND	ND	ND	0.004	170	0.17
2, 3, 7, 8-TCDD (sum of toxic equivalency)	1613B	ND	ND	ND	ND	ND	0.000098	0.000045	0.0045	4.5E-06

Notes:
ND – Non Detect, below the Method Detection Limit