HWA GeoSciences Inc.
DBE/MWBE

May 1, 2020
HWA Project No. 2012-113-23 Task 500

Anchor QEA, LLC
6720 SW Macadam Avenue, Suite 125
Portland, Oregon 97219

Attention: Ms. Nicole LaFranchise

Subject: **Materials Laboratory Report**
Soil Index Testing – SU07 and SU10
Millennium Bulk Terminals - Longview
Client Project No.: 190730-01.02

Dear Ms. LaFranchise;

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached Figures. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

SAMPLE DESCRIPTION: The subject samples were delivered to our laboratory on February 26, 2020 by Anchor QEA personnel. The samples were delivered in re-sealable plastic bags and were designated with exploration ID, sample number, and depth of sampling. The soil samples were classified using visual-manual methods. The descriptions may be found on the attached Summary of Material Properties, Figures 1 through 2.

MOISTURE CONTENT OF SOIL: The moisture content of the soil samples (percent by dry mass) were determined in general accordance with ASTM D 2216. The results are shown on Figures 1 through 2.

PARTICLE SIZE ANALYSIS OF SOILS: The particle size distribution of each specified sample was determined in general accordance with ASTM D6913 and D7928. The results are plotted on the attached Particle Size-Analysis of Soils Report, Figures 3 through 4, which also indicate the moisture content of the soil samples at the time of testing.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): The plasticity index of each specified sample was tested using method ASTM D4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index of Soils Report, Figure 5.

MOISTURE CONTENT, ASH, AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105^0 C) and ash content method 'C' (burned at 440^0 C). The results are percent by weight of dry soil and are summarized on Figures 1 through 2.

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA also makes no warranty as to how representative either the samples tested or the test results obtained are to actual field conditions. It is a well-established fact that sampling methods present varying degrees of disturbance that affect sample representativeness.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

Sincerely,

HWA GEOSCIENCES INC.

Stephen Wright
Materials Laboratory Manager

Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist
Vice President

Attachments:

Figures 1-2	Summary of Material Properties
Figures 3-4	Particle-Size Analysis of Soils
Figures 5	Liquid Limit, Plastic Limit and Plasticity Index of Soils

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU07-B-04,0-5	0.0	5.0	50.4									ML	Very pale brown, SILT with sand
SU07-B-04,5-10	5.0	10.0	134.2			119	67	52				OH	Brown, organic SILT
SU07-B-04,12.1-13.2	12.1	13.2	256.6	31.1								PT	Very dark grayish-brown, PEAT
SU07-B-04,13.2-16.2	13.2	16.2	68.0									ML	Dark gray, SILT with trace organics
SU07-B-04,16.2-20	16.2	20.0	55.3	3.5								ML	Dark gray, SILT
SU07-B-04,20-25	20.0	25.0	47.6			50	42	8				MH	Dark grayish-brown, elastic SILT
SU07-B-04,25-30	25.0	30.0	91.7									OL	Dark grayish-brown, organic SILT
SU07-B-04,30-35	30.0	35.0	76.7									OL	Dark brown, organic SILT
SU07-B-04,35-40	35.0	40.0	86.7			108	73	35				OH	Dark grayish-brown, organic SILT
SU07-B-04,40-42	40.0	42.0	91.1									OL	Dark grayish-brown, organic SILT
SU07-B-04,45-50	45.0	50.0	79.9									OL	Dark grayish-brown, organic SILT
SU07-B-04,50-55	50.0	55.0	77.1									OL	Very dark grayish-brown, organic SILT
SU07-B-04,55-60	55.0	60.0	69.2									OL	Very dark grayish-brown, organic SILT
SU10-B-01,0-5	0.0	5.0	8.1						10.3	85.6	4.1	SP	Dark grayish-brown, poorly graded SAND
SU10-B-01,6-10	6.0	10.0	7.9						0.1	97.2	2.6	SP	Dark grayish-brown, poorly graded SAND
SU10-B-01,10-15	10.0	15.0	8.4						0.1	96.8	3.2	SP	Dark grayish-brown, poorly graded SAND
SU10-B-01,15-20	15.0	20.0	31.1						0.9	91.5	7.5	SP-SM	Dark grayish-brown, poorly graded SAND with silt
SU10-B-01,20-25	20.0	25.0	41.8			43	35	8				ML	Dark grayish-brown, SILT
SU10-B-01,25-30	25.0	30.0	54.4			73	41	32				OH	Grayish-brown, organic SILT
SU10-B-01,30-35	30.0	35.0	38.4									ML	Dark gray, SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

SUMMARY OF
MATERIAL PROPERTIES

PROJECT NO.: 2012-113 T500 FIGURE: 1

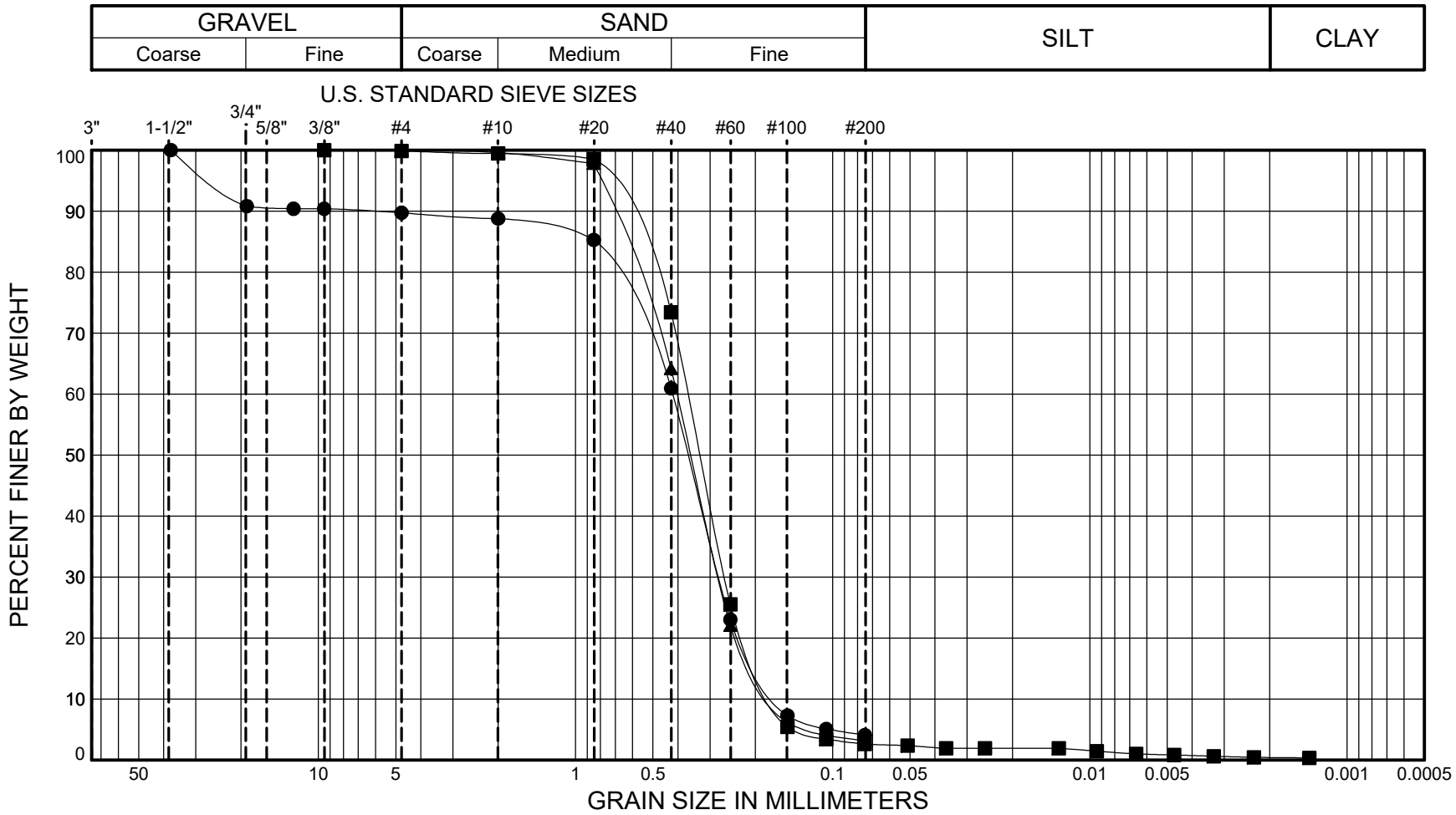
EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU10-B-01,35-40	35.0	40.0	70.8									OL	Dark grayish-brown, organic SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

SUMMARY OF
MATERIAL PROPERTIES



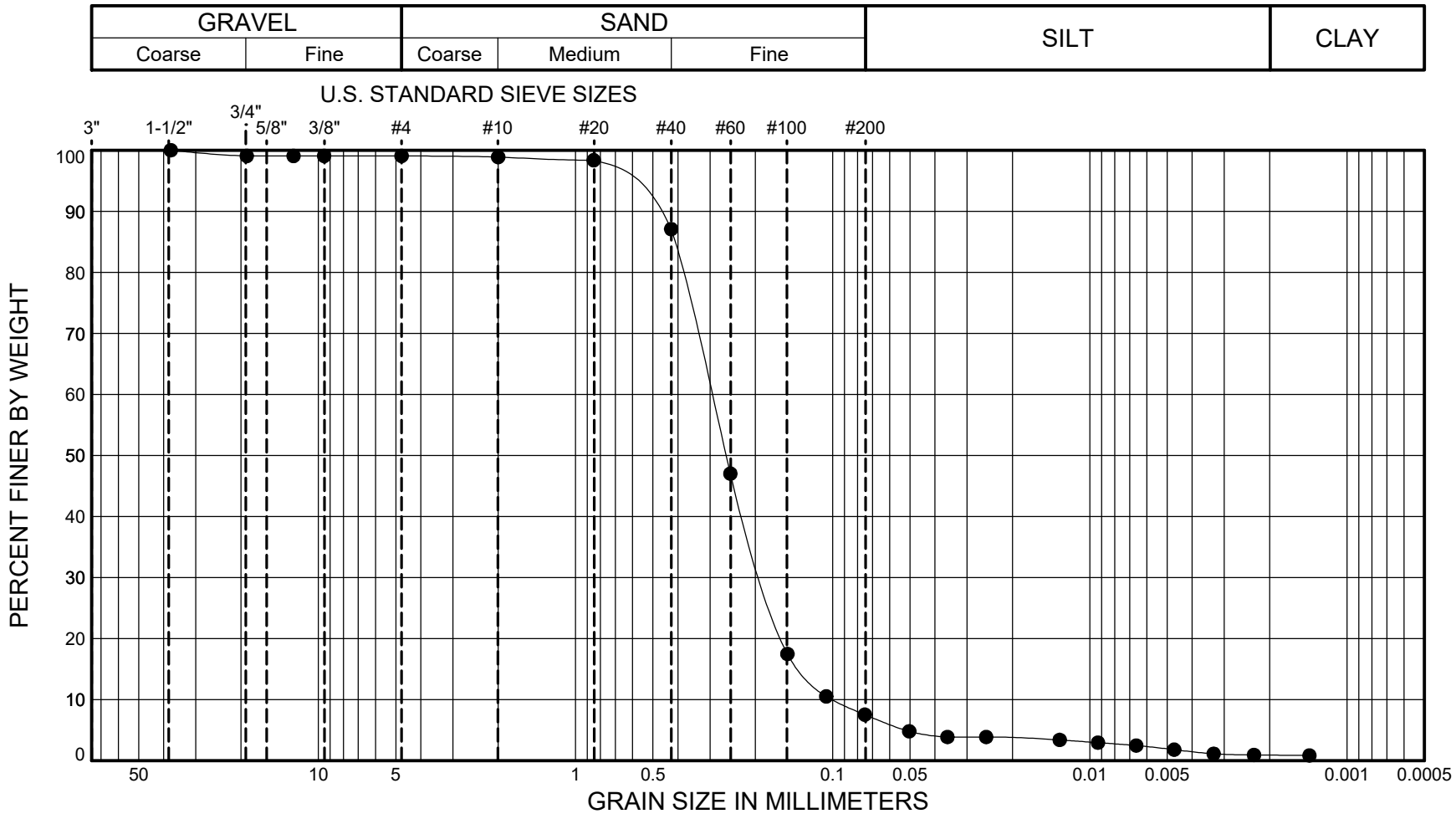
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SU10-B-01	0-5	0.0 - 5.0	(SP) Dark grayish-brown, poorly graded SAND	8				10.3	85.6	4.1
■	SU10-B-01	6-10	6.0 - 10.0	(SP) Dark grayish-brown, poorly graded SAND	8				0.1	97.2	2.6
▲	SU10-B-01	10-15	10.0 - 15.0	(SP) Dark grayish-brown, poorly graded SAND	8				0.1	96.8	3.2

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2012-113 T500 FIGURE: 3



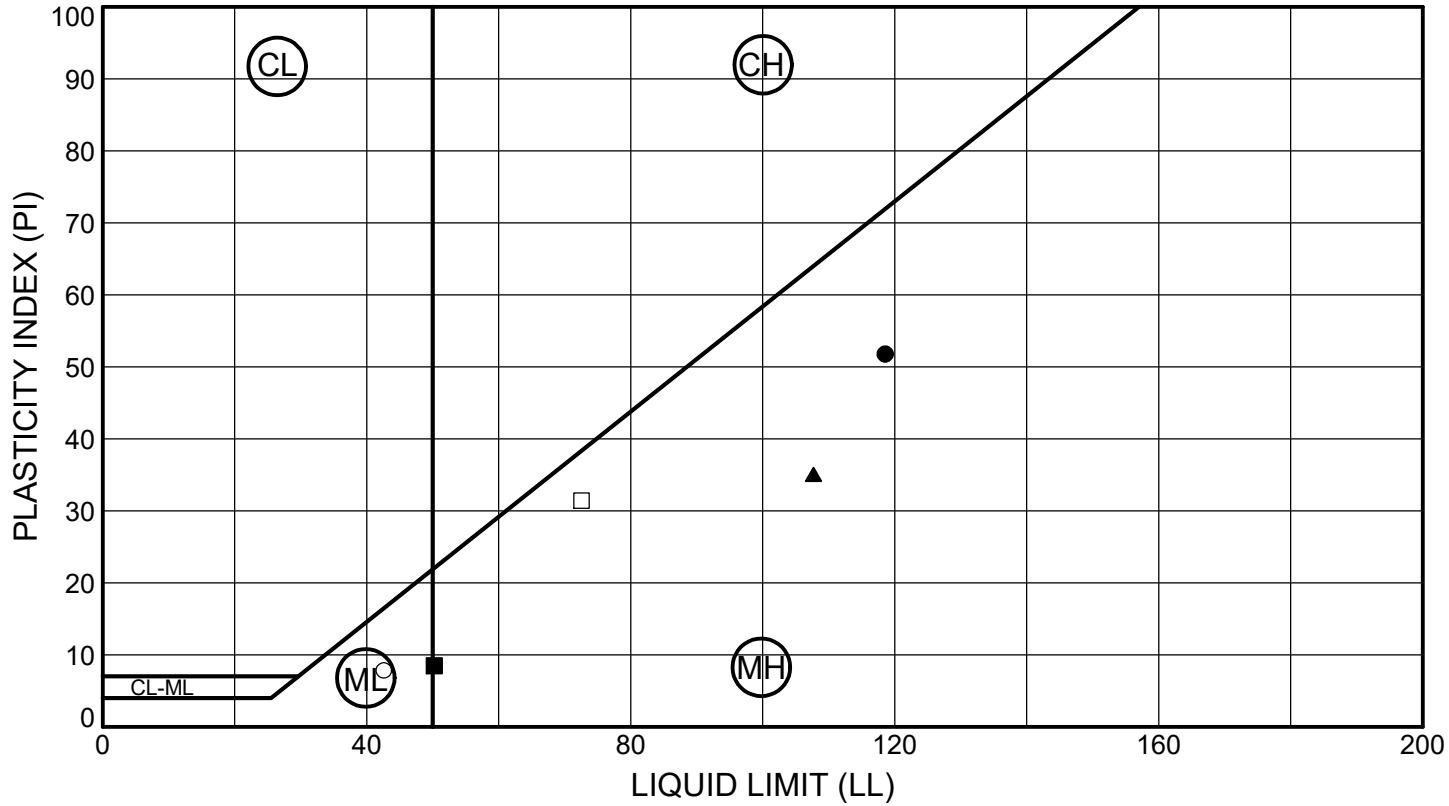
SYMBOL	SAMPLE		DEPTH (ft.)	CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
●	SU10-B-01	15-20	15.0 - 20.0	(SP-SM) Dark grayish-brown, poorly graded SAND with silt	31				0.9	91.5	7.5

HWA GeoSciences Inc.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2012-113 T500 FIGURE: 4



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	SU07-B-04	5-10	5.0 - 10.0	(OH) Brown, organic SILT	134	119	67	52	
■	SU07-B-04	20-25	20.0 - 25.0	(MH) Dark grayish-brown, elastic SILT	48	50	42	8	
▲	SU07-B-04	35-40	35.0 - 40.0	(OH) Dark grayish-brown, organic SILT	87	108	73	35	
○	SU10-B-01	20-25	20.0 - 25.0	(ML) Dark grayish-brown, SILT	42	43	35	8	
□	SU10-B-01	25-30	25.0 - 30.0	(OH) Grayish-brown, organic SILT	54	73	41	32	

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

PROJECT NO.: 2012-113 T500 FIGURE: 5

HWA GeoSciences Inc.
DBE/MWBE

June 5, 2020
HWA Project No. 2012-113-23 Task 500

Anchor QEA, LLC
6720 SW Macadam Avenue, Suite 125
Portland, Oregon 97219

Attention: Ms. Nicole LaFranchise

Subject: **Materials Laboratory Report**
Soil Index and Triaxial Strength Testing
Millennium Bulk Terminals - Longview
Client Project No.: 190730-01.02

Dear Ms. LaFranchise;

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached Figures. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

SAMPLE DESCRIPTION: The subject samples were delivered to our laboratory on February 17 and 26, 2020 by Anchor QEA personnel. The samples were delivered in Shelby tubes and were designated with exploration ID, sample number, and depth of sampling. The soil samples were classified using visual-manual methods. The descriptions may be found on the attached Summary of Material Properties, Figure 1.

MOISTURE CONTENT OF SOIL: The moisture content of the soil samples (percent by dry mass) were determined in general accordance with ASTM D2216. The results are shown on Figure 1.

SPECIFIC GRAVITY OF SOILS: The specific gravity of selected samples of soil was determined using method ASTM D854. The test results are shown on the attached Summary of Material Properties, Figure 1.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): The plasticity index of each specified sample was tested using method ASTM D4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index of Soils Report, Figure 2.

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION OF SOILS: Selected samples were tested in general accordance with method ASTM D4767 to determine the shear strength characteristics of the soil. The samples were extruded from Shelby tubes and then the test specimens were trimmed to obtain a cylindrical test sample with a length to diameter ratio between 2:1 and 2.5:1. The specimens were carefully weighed and measured prior to testing.

Three trials were run at varying confining stresses specified by the client. Samples PDI-SU02-B-01-7.5-9.5 and PDI-SU02-B-01-44-46 were run using individual specimens for each requested confining pressure. Due to insufficient sample recovery, only two points were performed on PDI-SU02-B-01-7.5-9.5. At the request of the client, subsequent samples were run using a single specimen to perform a multi-stage shear test.

The multi-stage method was performed by first consolidating the sample at the lowest specified confining pressure. The sample was then sheared until the change in pore pressure was at or near its estimated peak. After reaching the peak change in pore pressure, the shear phase was terminated, and the specimen was reconsolidated at the middle consolidation pressure. Under the second consolidation pressure the sample was again sheared until the change in pore pressure was at or near its estimated peak, at which point the shear was terminated. The sample was reconsolidated a third and final time under the highest confining pressure and shearing was performed to sample failure, concluding the test.

The Consolidated Undrained test results are summarized and plotted graphically in Figures 3-8. Figures 3 and 4 show the test results of the initial two samples tested using different specimens for each confining pressure. Figures 5-8 are the results of the multi-stage test.

UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION OF SOILS: The unconsolidated, undrained strength of the selected samples were tested in general accordance with method ASTM D2850 to determine the strength characteristics of the soil. Each sample was extruded from the sample tube and a representative section was cut from the sample. The sample ends were trimmed to obtain a cylindrical test sample with a length to diameter ratio between 2:1 and 2.5:1. The bulk density of the sample was determined by careful weighing and dimensional measurement of the trimmed sample. The confining stresses used are indicated on the test plots. The results are summarized and plotted graphically on the attached Unconsolidated Undrained Triaxial Compression Test for Cohesive Soils reports, Figures 9-11.

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA also makes no warranty as to how

representative either the samples tested or the test results obtained are to actual field conditions. It is a well-established fact that sampling methods present varying degrees of disturbance that affect sample representativeness.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

Sincerely,

HWA GEOSCIENCES INC.

Daniel Walton
Materials Laboratory Supervisor

Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist
Vice President

Attachments:

Figure 1	Summary of Material Properties
Figure 2	Liquid Limit, Plastic Limit and Plasticity Index of Soils
Figures 3-8	Consolidated Undrained Triaxial Compression Test for Cohesive Soils
Figures 9-11	Unconsolidated Undrained Triaxial Compression Test for Cohesive Soils

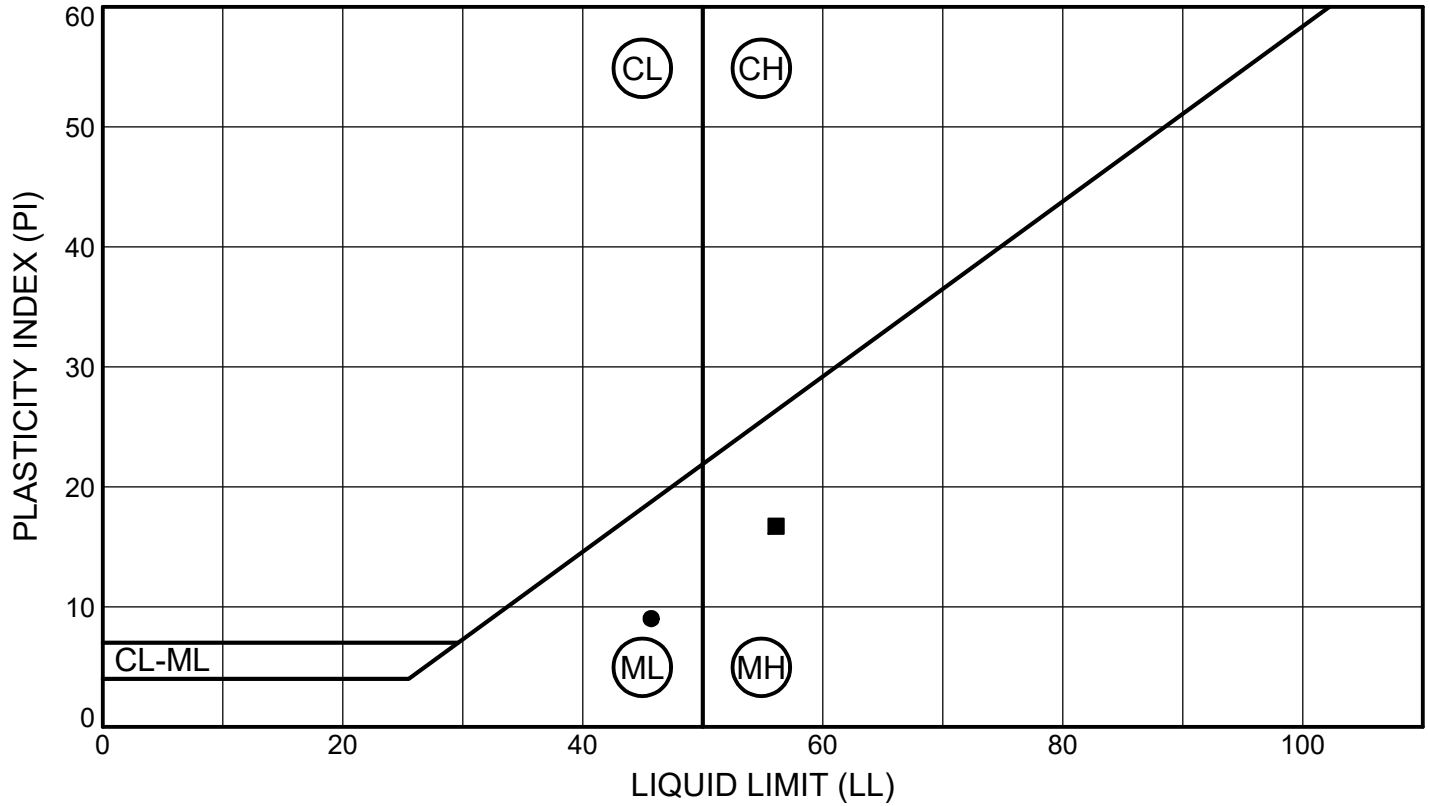
EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU02-B-01,7.5-9.5	7.5	9.5	19.7									SP-SM	Very dark olive-brown, poorly graded SAND with silt
SU02-B-01,44-46	44.0	46.0	60.2									ML	Olive gray, SILT
SU02-B-02,25-27.5	25.0	27.5	33.6									SM	Dark gray, silty SAND
SU02-B-02,40-42.5	40.0	42.5	45.2			46	37	9				ML	Olive-brown, SILT
SU06-B-05,25-27	25.0	27.0	33.2									ML	Dark grayish brown, SILT
SU10-B-01,25-27	25.0	27.0	55.4		2.683	56	39	17				MH	Dark grayish-brown, elastic SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

SUMMARY OF
MATERIAL PROPERTIES



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	SU02-B-02	40-42.5	40.0 - 42.5	(ML) Olive-brown, SILT	45	46	37	9	
■	SU10-B-01	25-27	25.0 - 27.0	(MH) Dark grayish-brown, elastic SILT	55	56	39	17	

HWA GEOSCIENCES INC.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

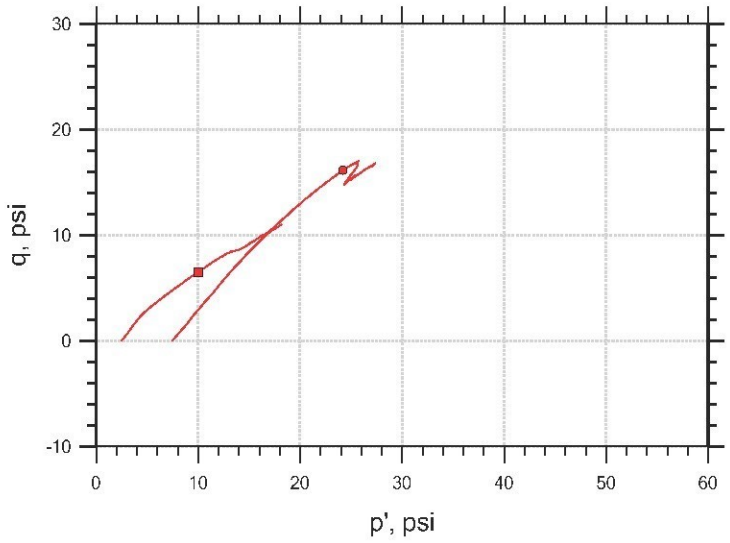
LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

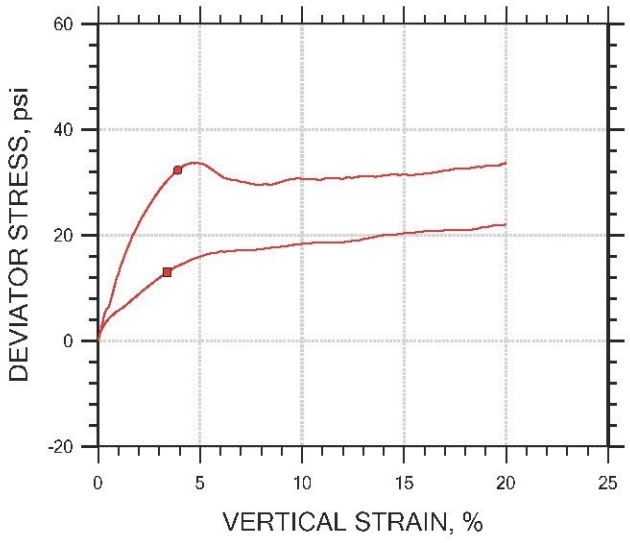
PROJECT NO.: 2012-113 T500 FIGURE: 2

GeoSciences Inc.

Client: Anchor QEA	
Project Name: Longview	
Project Location: Longview, WA	
Project Number: 2012-113 T5	
Tested By: DWalton	Checked By: SGreene
Boring ID: SU02 B-1	
Preparation: Shelby Tube	
Description: Olive gray, poorly graded SAND with silt	
Classification: poorly graded SAND with silt	
Group Symbol: SP-SM	
Liquid Limit: ---	Plastic Limit: ---
Plasticity Index: ---	Estimated Specific Gravity: 2.65

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●		
Sample ID		7.5-9.5	7.5-9.5		
Depth, ft		7.5-9.5	7.5-9.5		
Test Number		1	2		
Initial	Height, in	5.802	5.795		
	Diameter, in	2.867	2.856		
	Moisture Content (from Cuttings), %	19.7	12.2		
	Dry Density, pcf	93.5	96.7		
	Saturation (Wet Method), %	68.1	45.3		
	Void Ratio	0.769	0.711		
Before Shear	Moisture Content, %	28.8	25.7		
	Dry Density, pcf	93.8	98.4		
	Cross-sectional Area (Method A), in²	6.442	6.307		
	Saturation, %	100.0	100.0		
	Void Ratio	0.763	0.682		
	Back Pressure, psi	4.352	4.008		
Vertical Effective Consolidation Stress, psi		2.490	7.480		
Horizontal Effective Consolidation Stress, psi		2.500	7.491		
Vertical Strain after Consolidation, %		0.0008181	0.08191		
Volumetric Strain after Consolidation, %		0.03242	1.444		
Time to 50% Consolidation, min		0.8500	0.7200		
Shear Strength, psi		6.532	16.15		
Strain at Failure, %		3.40	3.90		
Strain Rate, %/min		0.2350	0.2760		
Deviator Stress at Failure, psi		13.06	32.30		
Effective Minor Principal Stress at Failure, psi		3.483	8.056		
Effective Major Principal Stress at Failure, psi		16.55	40.35		

Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

Remarks:

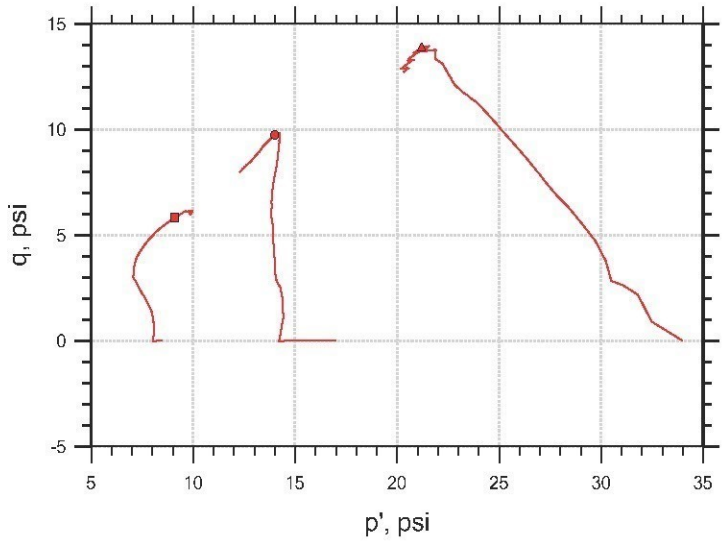
CU at 2.5psi, 7.5psi

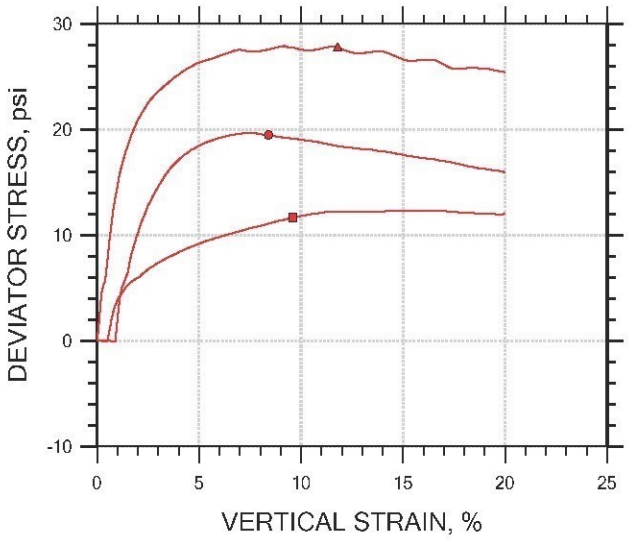
Figure 3

GeoSciences Inc.

Client: Anchor QEA	
Project Name: Longview	
Project Location: Longview, WA	
Project Number: 2012-113 T5	
Tested By: DWalton	Checked By: SGreene
Boring ID: SU02 B-1	
Preparation: Shelby Tube	
Description: Olive gray, SILT (ML)	
Classification: SILT	
Group Symbol: ML	
Liquid Limit: ---	Plastic Limit: ---
Plasticity Index: ---	Estimated Specific Gravity: 2.65

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767





Symbol		■	●	▲	
Sample ID		44-46	44-46	44-46	
Depth, ft		44-46	44-46	44-46	
Test Number		1	2	3	
Initial	Height, in	5.817	5.884	5.819	
	Diameter, in	2.846	2.848	2.842	
	Moisture Content (from Cuttings), %	60.2	58.9	61.4	
	Dry Density, pcf	64.9	62.8	61.9	
	Saturation (Wet Method), %	103.0	95.7	97.3	
	Void Ratio	1.55	1.63	1.67	
Before Shear	Moisture Content, %	52.3	58.1	51.3	
	Dry Density, pcf	69.4	65.1	70.1	
	Cross-sectional Area (Method A), in²	6.058	6.157	5.839	
	Saturation, %	100.0	100.0	100.0	
	Void Ratio	1.38	1.54	1.36	
	Back Pressure, psi	11.00	11.01	11.00	
Vertical Effective Consolidation Stress, psi		8.416	16.94	33.74	
Horizontal Effective Consolidation Stress, psi		8.499	16.98	34.00	
Vertical Strain after Consolidation, %		1.306	0.5372	4.326	
Volumetric Strain after Consolidation, %		5.131	4.564	12.28	
Time to 50% Consolidation, min		72.00	45.00	365.0	
Shear Strength, psi		5.839	9.741	13.92	
Strain at Failure, %		9.60	8.40	11.8	
Strain Rate, %/min		0.004000	0.006600	0.001650	
Deviator Stress at Failure, psi		11.68	19.48	27.83	
Effective Minor Principal Stress at Failure, psi		3.270	4.262	7.278	
Effective Major Principal Stress at Failure, psi		14.95	23.74	35.11	

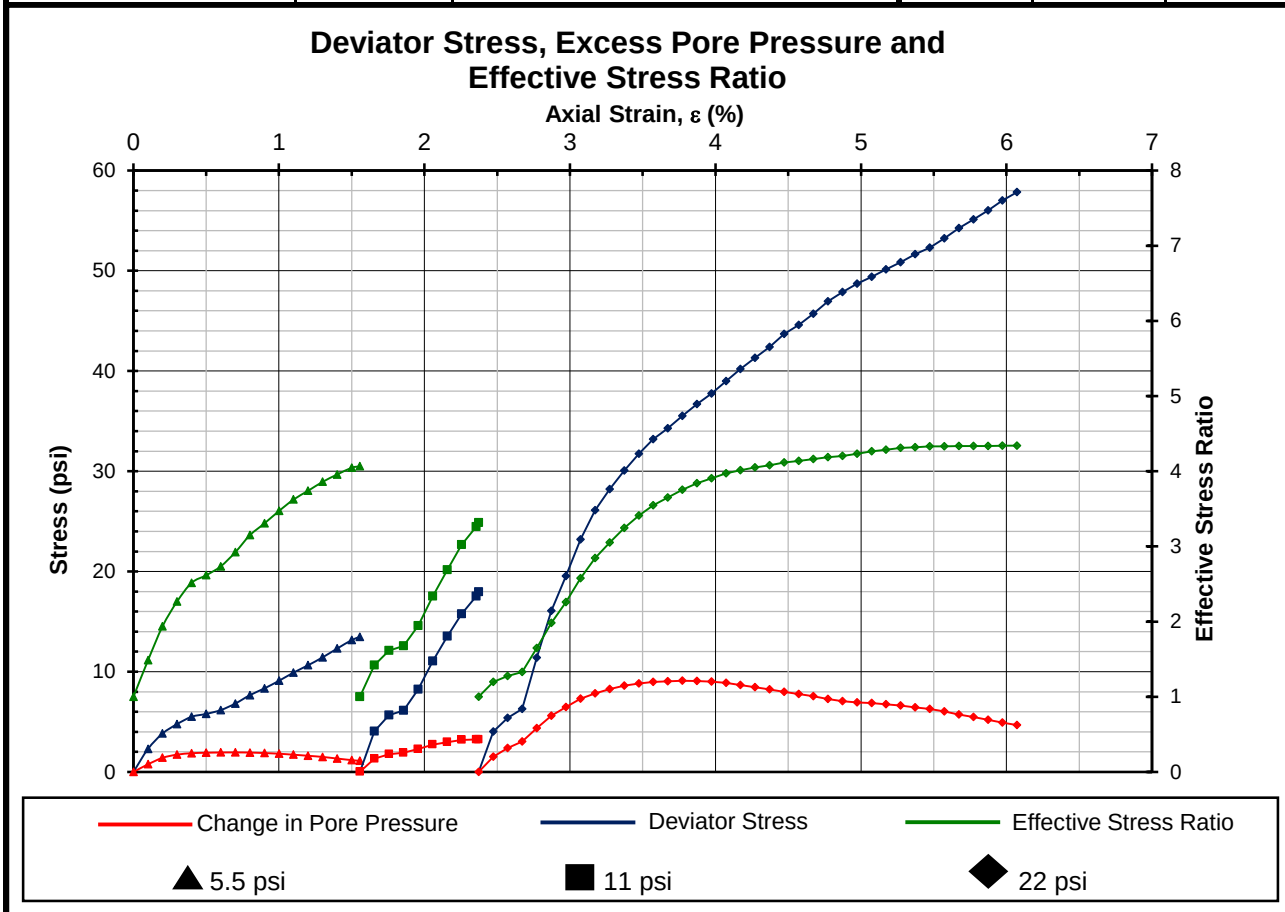
Notes:
- Before Shear Saturation set to 100% for phase calculation.
- Moisture Content determined by ASTM D2216.
- Deviator Stress includes membrane correction.
- Values for c and φ determined from best-fit straight line for the specific test conditions. Actual strength parameters may vary and should be determined by an engineer for site conditions.

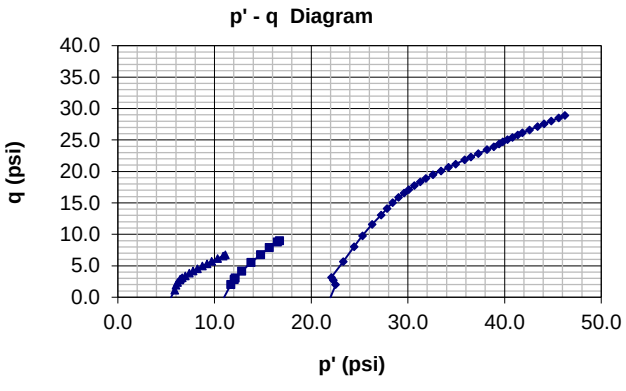
Remarks:

CU at 8.5psi, 17psi, 34psi

Figure 4

HWA GeoSciences Inc - Materials Testing Laboratory						
Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)						
Project Name:	Anchor QEA - Longview			Date:	4/21/2020	
Project No.:	2012-113 T500		Exploration ID:		PDI-SU02-B02	
Technician:	DW		Sample No:		25-27.5	
Sample Description:	Dark gray, silty SAND (SM)			Sample Depth, ft:	25-27.5 feet	
Confining Pressures:	**5.5 psi**	**11 psi**	**22 psi**	Consolidation T50 Values (minutes)		
Initial Moisture:	33.6%	Final Moisture:	31.6%	5.5 psi	11 psi	22 psi
Initial Wet Density, pcf:	121.2			112.5	128	98
Initial Dry Density, pcf:	90.7					



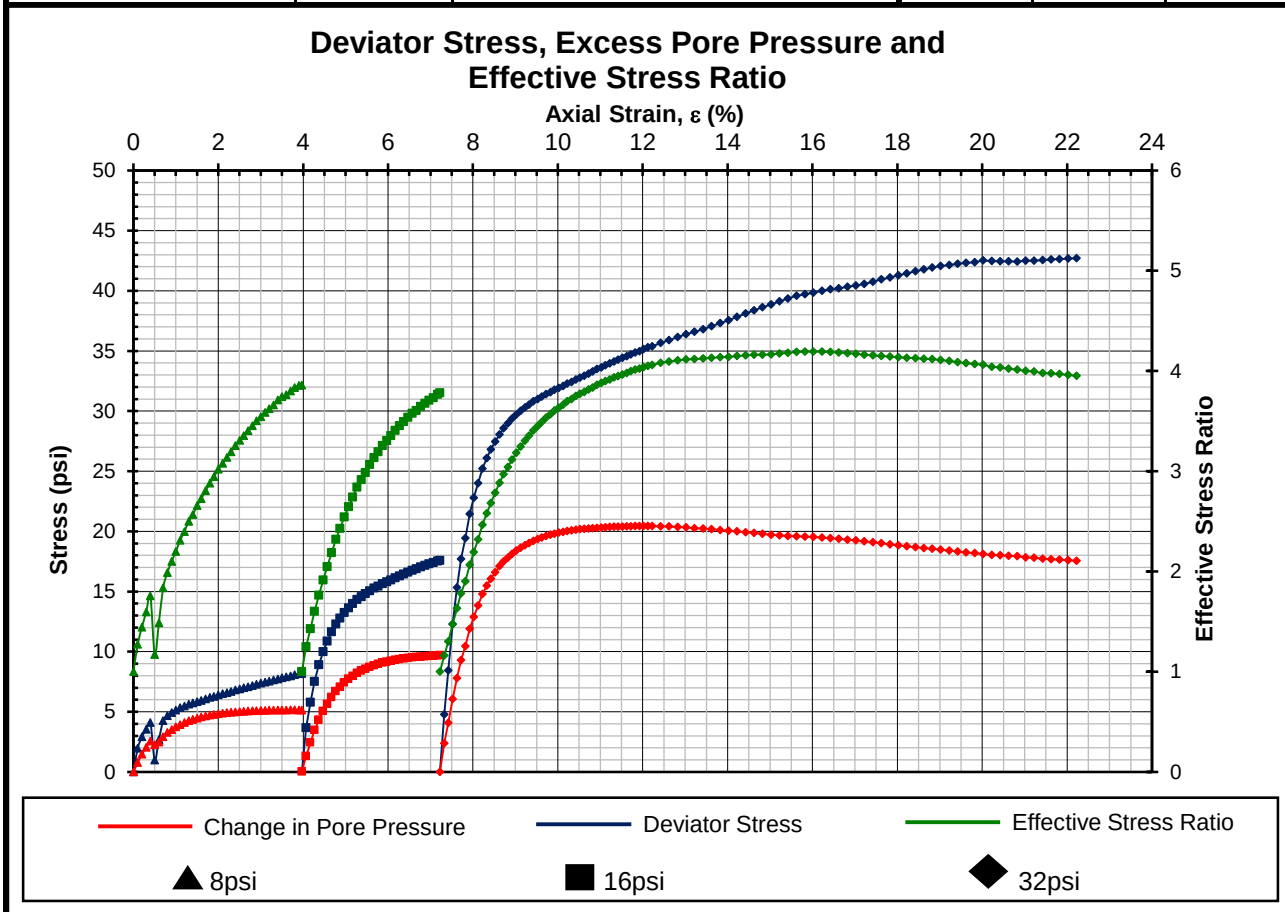


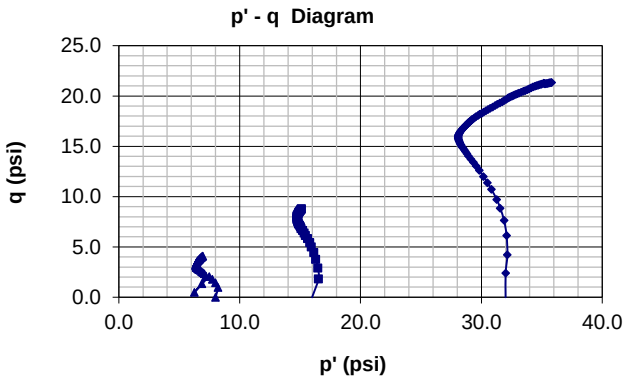
Reviewed by: S. Greene Figure 5

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	5/28/2020	
Project No.:	2012-113 T500		Exploration ID:		SU02-B02	
Technician:	DW		Sample No:		40-42.5	
Sample Description:	Olive brown, SILT (ML)			Sample Depth, ft:	40-42.5	
Confining Pressures:	**8psi**	**16psi**	**32psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	45.2%	Final Moisture:		36.0%	8psi	16psi	32psi
Initial Wet Density, pcf:	112.1				144.5	50	41
Initial Dry Density, pcf:	77.2						





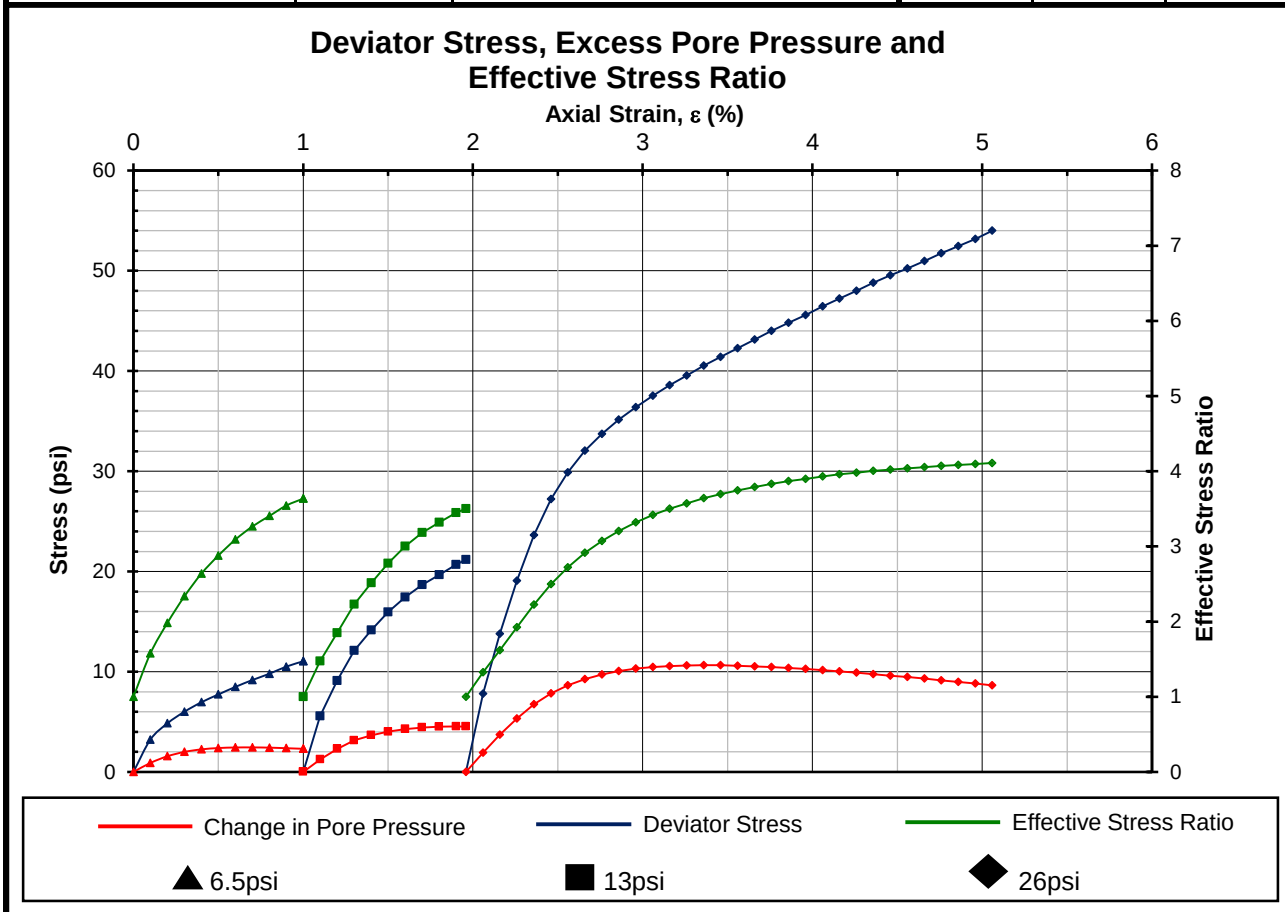
Reviewed by: S. Greene

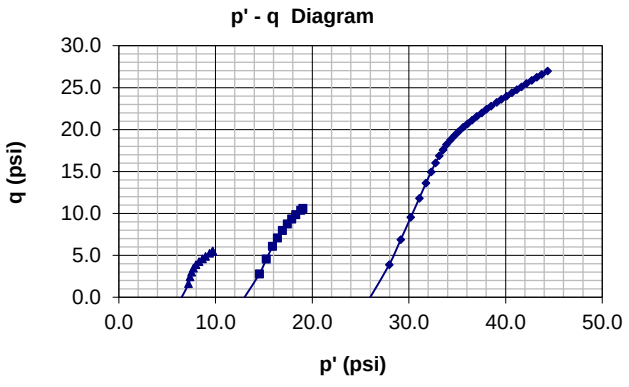
Figure 6

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	5/20/2020	
Project No.:	2012-113 T500		Exploration ID:		SU06-B-05	
Technician:	DW		Sample No:		25-27	
Sample Description:	Very dark gray, silty SAND (SM)			Sample Depth, ft:	25-27	
Confining Pressures:	**6.5psi**	**13psi**	**26psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	33.2%	Final Moisture:		31.9%	6.5psi	13psi	26psi
Initial Wet Density, pcf:	121.1				1.0	1.0	1.0
Initial Dry Density, pcf:	91.0						

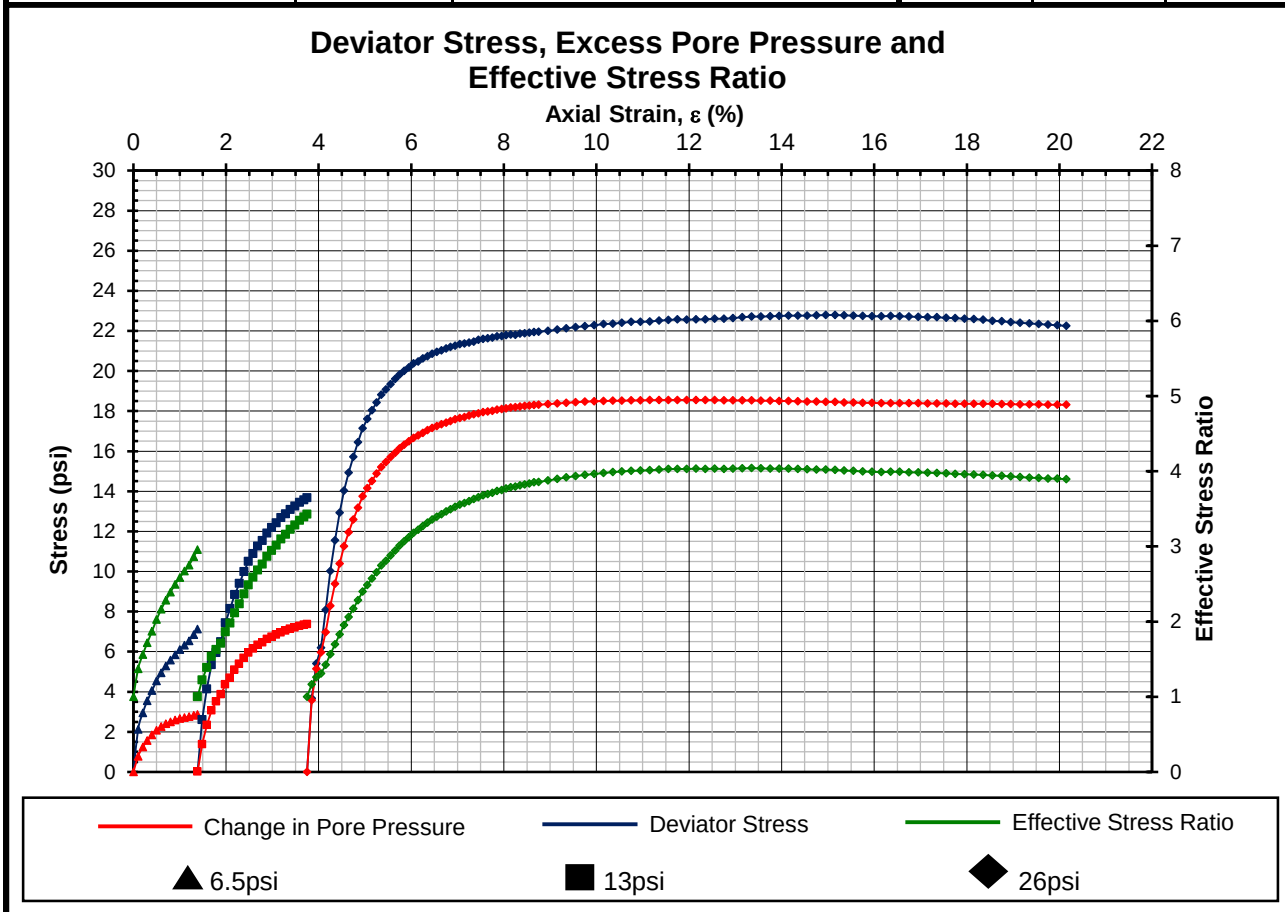


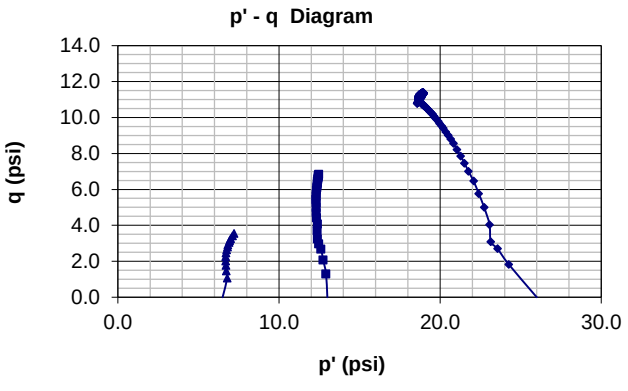


Reviewed by: S. Greene

Figure 7

HWA GeoSciences Inc - Materials Testing Laboratory						
Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)						
Project Name:	Anchor - Longview			Date:	5/7/2020	
Project No.:	2012-113 T500		Exploration ID:		SU10-B-01	
Technician:	DW		Sample No:		25-27	
Sample Description:	Dark grayish brown, elastic SILT (MH)			Sample Depth, ft:	25-27 feet	
Confining Pressures:	**6.5psi**	**13psi**	**26psi**		Consolidation T50 Values	
Initial Moisture:	55.4%	Final Moisture:		45.7%	6.5psi	13psi	26psi
Initial Wet Density, pcf:	107.1				16.25	12.5	18
Initial Dry Density, pcf:	68.9						





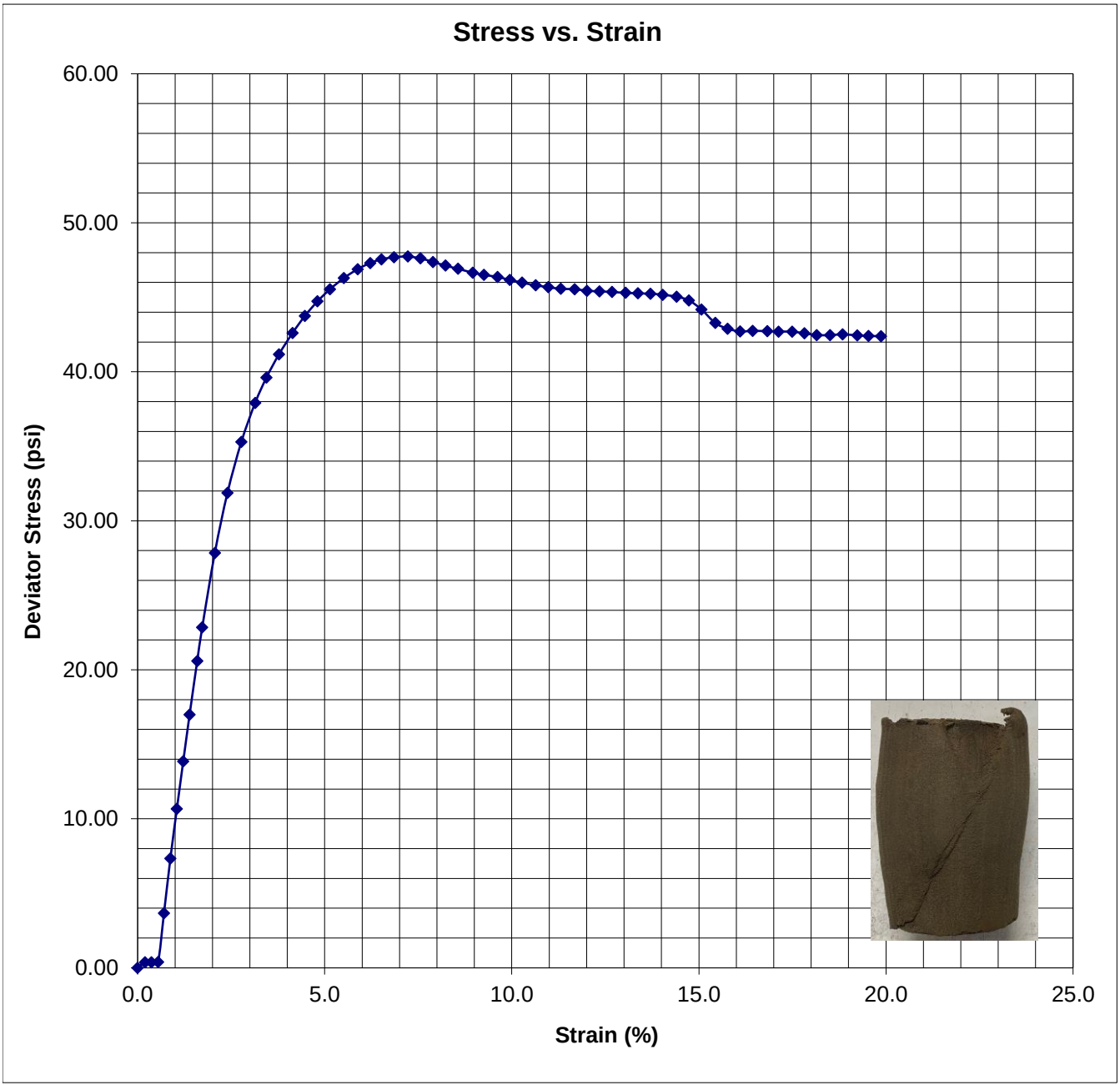
Reviewed by: S. Greene Figure 8

HWA GeoSciences Inc. Materials Testing Laboratory

Unconsolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D2850)

Client: Anchor QEA **Project Number:** 2012-113 T500

Project Name: Longview



Soil Classification:	Dark gray, silty SAND (SM)		
Sample Point:	SU02-B02		
Sample Number:	25-27.5	Initial Moisture Content (%):	26.5
Sample Depth:	25-27.5 feet	Wet Unit Weight (pcf):	115.7
Confining Stress (psi)	11.0	Dry Unit Weight (pcf):	91.4
Strain Rate (%\min):	1.0	Total Peak Stress (psi)	47.7

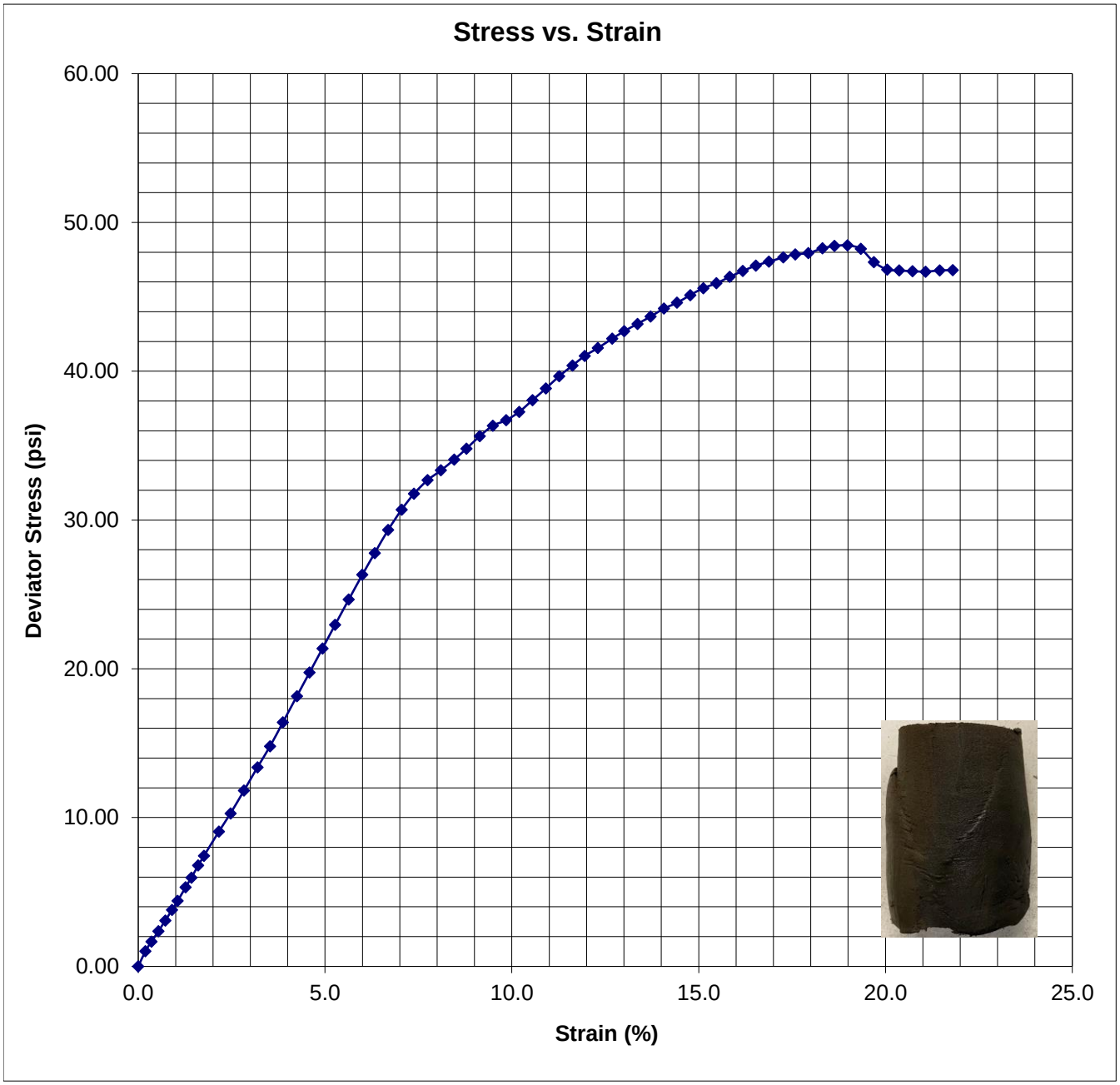
Figure No.: 9

HWA GeoSciences Inc. Materials Testing Laboratory

Unconsolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D2850)

Client: Anchor QEA **Project Number:** 2012-113 T500

Project Name: Longview



Soil Classification:	Very dark gray, silty SAND (SM)		
Sample Point:	SU06-B05		
Sample Number:	25-27	Initial Moisture Content (%):	34.0
Sample Depth:	25-27 feet	Wet Unit Weight (pcf):	124.0
Confining Stress (psi)	13.0	Dry Unit Weight (pcf):	92.5
Strain Rate (%\min):	1.0	Total Peak Stress (psi)	47.6

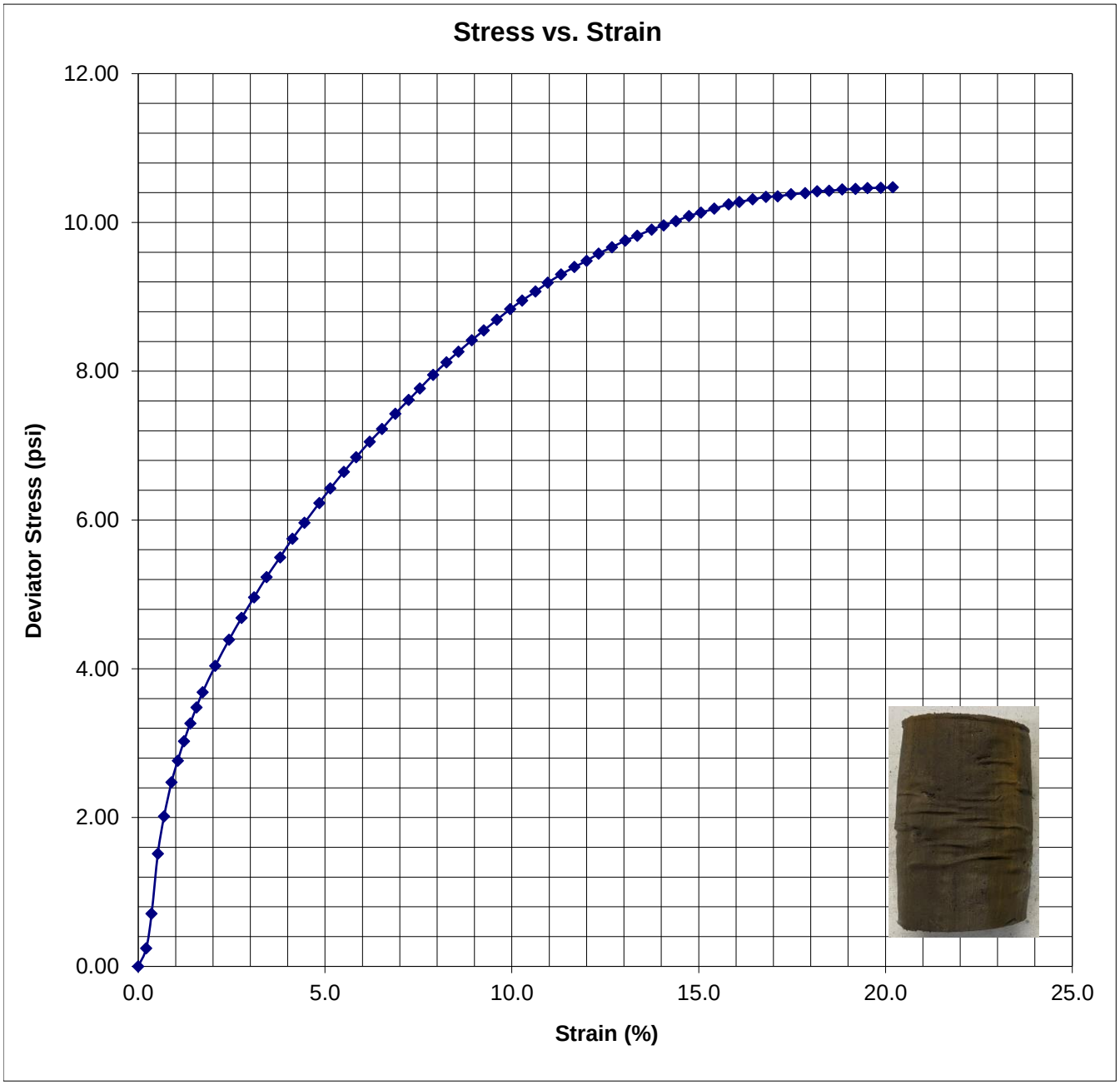
Figure No.: 10

HWA GeoSciences Inc. Materials Testing Laboratory

Unconsolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D2850)

Client: Anchor QEA **Project Number:** 2012-113 T500

Project Name: Longview



Soil Classification:	Dark grayish brown, elastic SILT (MH)		
Sample Point:	SU10-B01		
Sample Number:	25-27	Initial Moisture Content (%):	47.9
Sample Depth:	25-27 feet	Wet Unit Weight (pcf):	105.9
Confining Stress (psi)	13.0	Dry Unit Weight (pcf):	71.6
Strain Rate (%\min):	1.0	Total Peak Stress (psi)	10.3

Figure No.: 11

HWA GeoSciences Inc.
DBE/MWBE

September 22, 2020
HWA Project No. 2012-113-23 Task 500

Anchor QEA, LLC
6720 SW Macadam Avenue, Suite 125
Portland, Oregon 97219

Attention: Ms. Nicole LaFranchise

Subject: **Materials Laboratory Report**
Soil Index, Consolidation, Permeability and Triaxial Strength Testing
Millennium Bulk Terminals - Longview
Client Project No.: 190730-01.02

Dear Ms. LaFranchise;

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached Figures. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

SAMPLE DESCRIPTION: The subject samples were delivered to our laboratory on February 17 and 26, 2020 by Anchor QEA personnel. The samples were delivered in Shelby tubes and were designated with exploration ID, sample number, and depth of sampling. The soil samples were classified using visual-manual methods. The descriptions may be found on the attached Summary of Material Properties, Figure 1.

MOISTURE CONTENT OF SOIL: The moisture content of the soil samples (percent by dry mass) were determined in general accordance with ASTM D2216. The results are shown on Figure 1.

SPECIFIC GRAVITY OF SOILS: The specific gravity of selected samples of soil was determined using method ASTM D854. The test results are shown on the attached Summary of Material Properties, Figure 1.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): The plasticity index of each specified sample was tested using method ASTM D4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index of Soils Report, Figure 2.

HYDRAULIC CONDUCTIVITY OF SOIL (FLEXI-WALL TRIAXIAL CHAMBER METHOD): The hydraulic conductivity (also commonly referred to as coefficient of permeability) of PDI-SU02-B05-30-32 was measured in general accordance with method ASTM D5084. The sample was extruded from a Shelby tube, trimmed, and encapsulated in a latex membrane within a triaxial pressure chamber. The sample was saturated and subjected to a back-pressure differential of 3 psi. Testing was conducted until inflow was approximately equal to outflow and the hydraulic conductivity was essential steady. The test results are presented below in Table 1.

Table 1 - Hydraulic Conductivity Test Results

Sample	Material Description	Initial Moisture Content (%)	Initial Dry Density (pcf)	Hydraulic Conductivity (cm/sec)
SU02-B05-30-32	Dark grayish brown, elastic SILT (MH)	54.3%	65.7	$7.0x10^{-7}$

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION OF SOILS: Selected samples were tested in general accordance with method ASTM D4767 to determine the shear strength characteristics of the soil. The samples were extruded from Shelby tubes and then the test specimens were trimmed to obtain a cylindrical test sample with a length to diameter ratio between 2:1 and 2.5:1. The specimens were carefully weighed and measured prior to testing.

Three trials were run at varying confining stresses specified by the client. Each sample was run using a single specimen to perform a multi-stage shear test.

The multi-stage method was performed by first consolidating the sample at the lowest specified confining pressure. The sample was then sheared until the change in pore pressure was at or near its estimated peak. After reaching the peak change in pore pressure, the shear phase was terminated, and the specimen was reconsolidated at the middle consolidation pressure. Under the second consolidation pressure the sample was again sheared until the change in pore pressure was at or near its estimated peak, at which point the shear was terminated. The sample was reconsolidated a third and final time under the highest confining pressure and shearing was performed to sample failure, concluding the test.

The Consolidated Undrained test results are summarized and plotted graphically in Figures 3-8.

ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOIL: The consolidation properties of selected soil samples were measured in general accordance with ASTM D 2435. Saturation was maintained by inundation of the sample throughout the test. The samples were subjected to increasing increments of total stress. Each load was maintained for a period of 24-hours to

collect sufficient data for use in the estimation of secondary consolidation. Unloading of the samples was carried out incrementally. The primary and secondary compression test results are presented on the attached Consolidation Test Report, Figures 9a-10j.

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA also makes no warranty as to how representative either the samples tested or the test results obtained are to actual field conditions. It is a well-established fact that sampling methods present varying degrees of disturbance that affect sample representativeness.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

Sincerely,

HWA GEOSCIENCES INC.

Daniel Walton
Materials Laboratory Supervisor

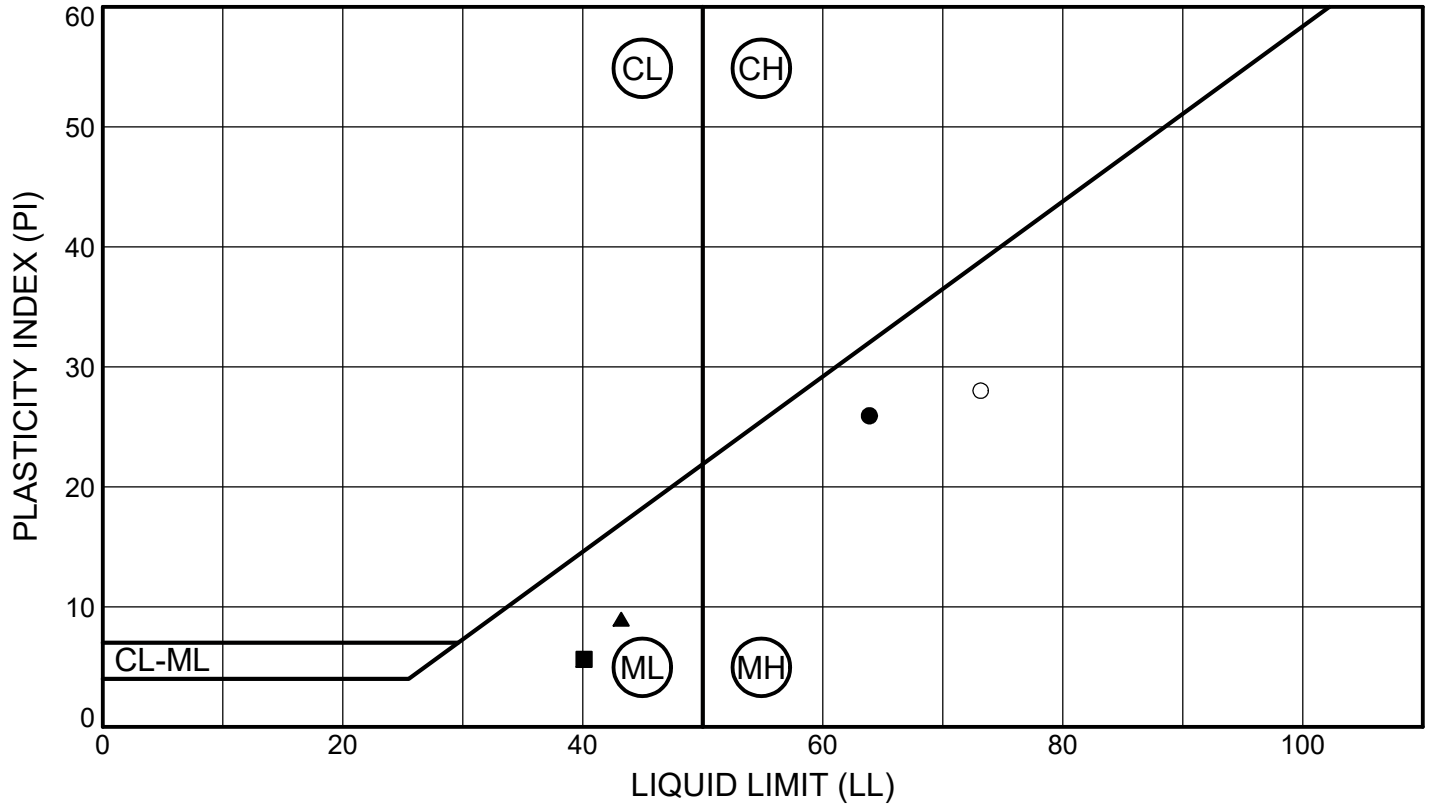
Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist
Vice President

Attachments:

Figure 1	Summary of Material Properties
Figure 2	Liquid Limit, Plastic Limit and Plasticity Index of Soils
Figures 3-8	Consolidated Undrained Triaxial Compression Test for Cohesive Soils
Figures 9a-10j	Consolidation Test Report

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU02-B-01,15-17	15.0	17.0	19.0									SP-SM	Grayish brown, poorly graded SAND with silt
SU02-B-03,15-17.5	15.0	17.5	31.8									SM	Dark grayish-brown, silty SAND
SU02-B-05,30-32	30.0	32.0	54.3			64	38	26				MH	Dark grayish-brown, elastic SILT
SU02-B-06,20-22	20.0	22.0	57.0		2.702	40	34	6				ML	Dark gray, SILT
SU07-B-02,20-22	20.0	22.0	63.3		2.656	43	34	9				ML	Grayish-brown, SILT
SU07-B-04,50-52	50.0	52.0	91.0			73	45	28				OH	Dark grayish-brown, organic SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	SU02-B-05	30-32	30.0 - 32.0	(MH) Dark grayish-brown, elastic SILT	54	64	38	26	
■	SU02-B-06	20-22	20.0 - 22.0	(ML) Dark gray, SILT	57	40	34	6	
▲	SU07-B-02	20-22	20.0 - 22.0	(ML) Grayish-brown, SILT	63	43	34	9	
○	SU07-B-04	50-52	50.0 - 52.0	(OH) Dark grayish-brown, organic SILT	91	73	45	28	

HWA GeoSciences Inc.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

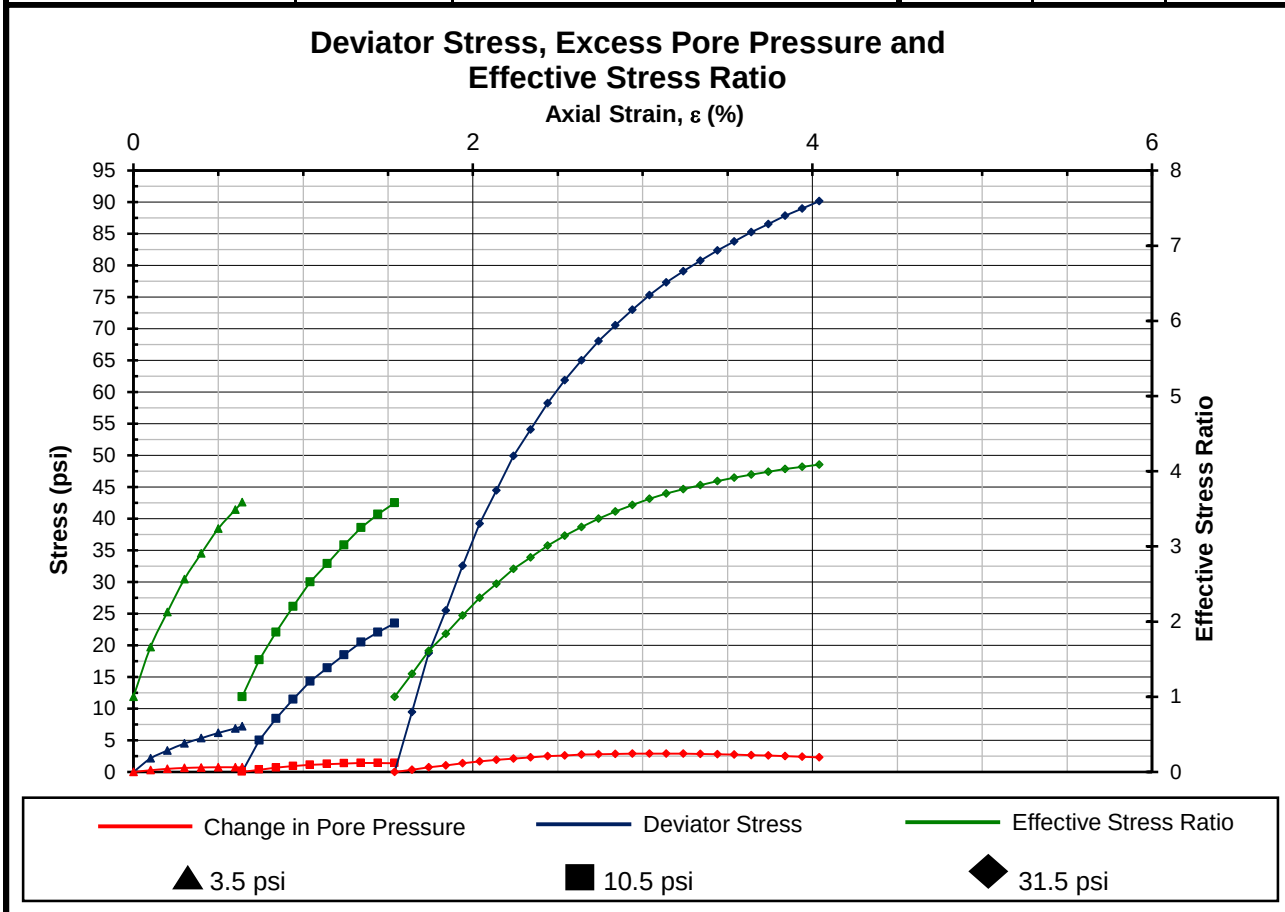
LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

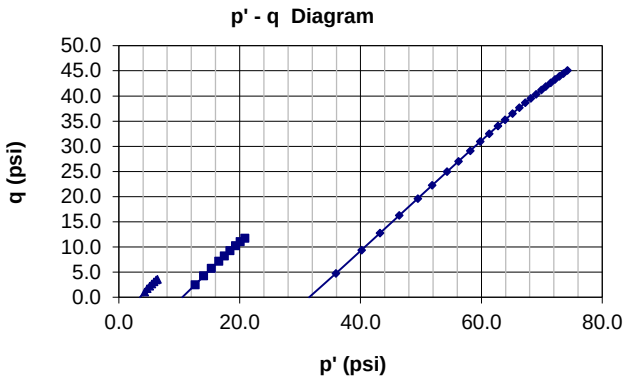
PROJECT NO.: 2012-113 T500 FIGURE: 2

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	6/8/2020	
Project No.:	2012-113 T500		Exploration ID:		SU02-B-01	
Technician:	DW/KN		Sample No:		15-17	
Sample Description:	Grayish-brown, SP-SM			Sample Depth, ft:	15-17	
Confining Pressures:	**3.5 psi**	**10.5 psi**	**31.5 psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	19.0%	Final Moisture:	25.5%	3.5 psi	10.5 psi	31.5 psi
Initial Wet Density, pcf:	115.3			0.6	0.7	0.6
Initial Dry Density, pcf:	96.9					





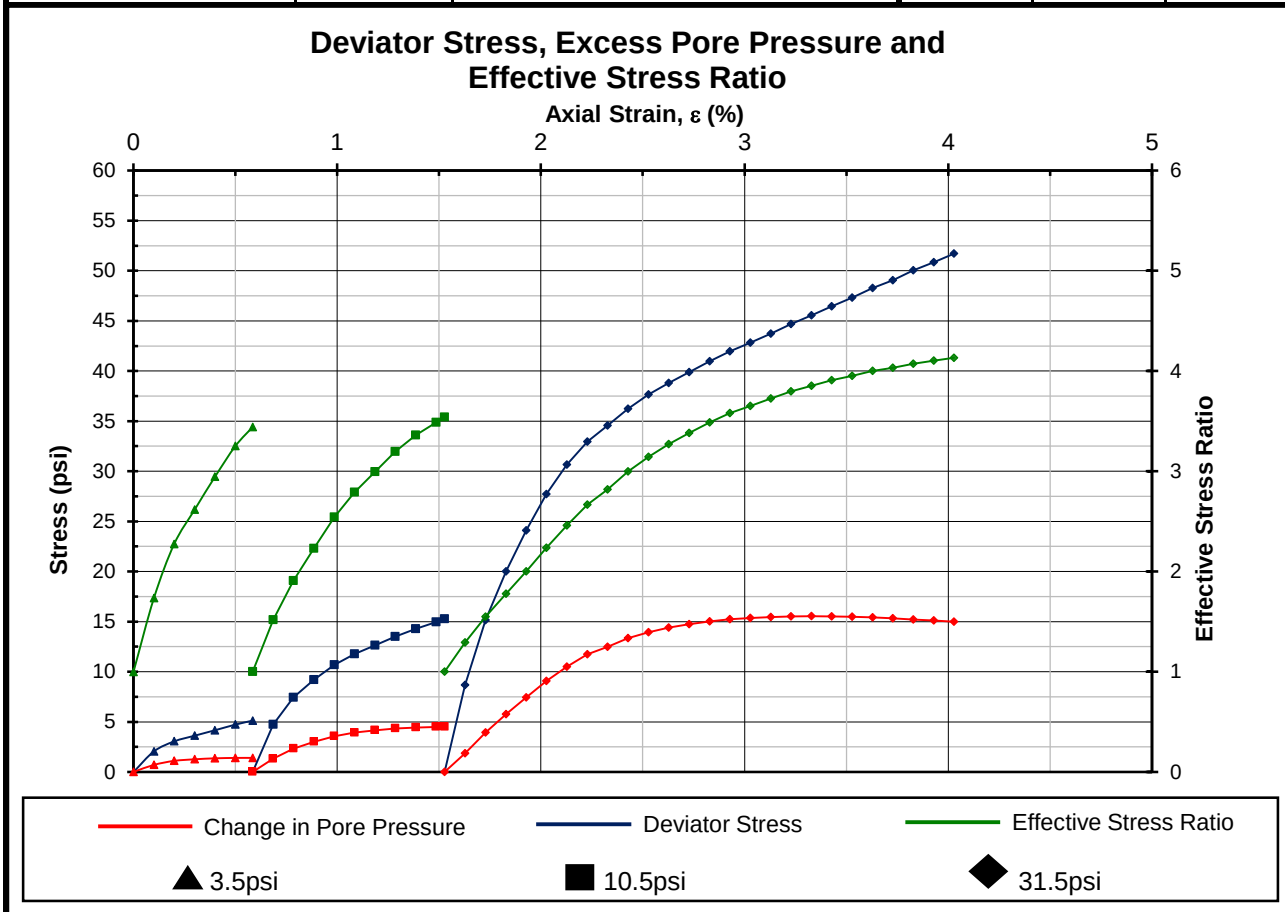
Reviewed by: S. Greene

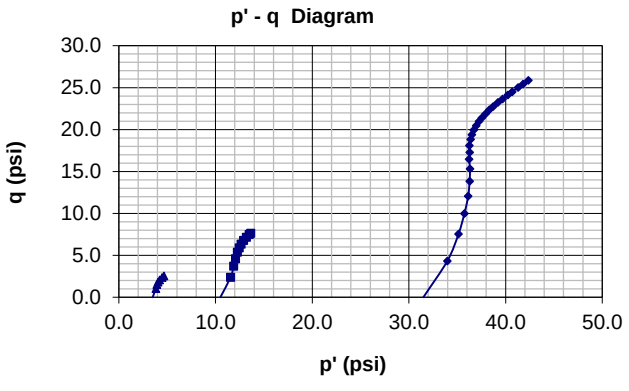
Figure 3

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	6/4/2020	
Project No.:	2012-113 T500		Exploration ID:		SU02-B03	
Technician:	DW		Sample No:		15-17.5	
Sample Description:	Dark grayish brown, silty SAND (SM)			Sample Depth, ft:	15-17.5	
Confining Pressures:	**3.5psi**	**10.5psi**	**31.5psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	31.8%	Final Moisture:		27.4%	3.5psi	10.5psi	31.5psi
Initial Wet Density, pcf:	124.4				13	13	32
Initial Dry Density, pcf:	94.4						





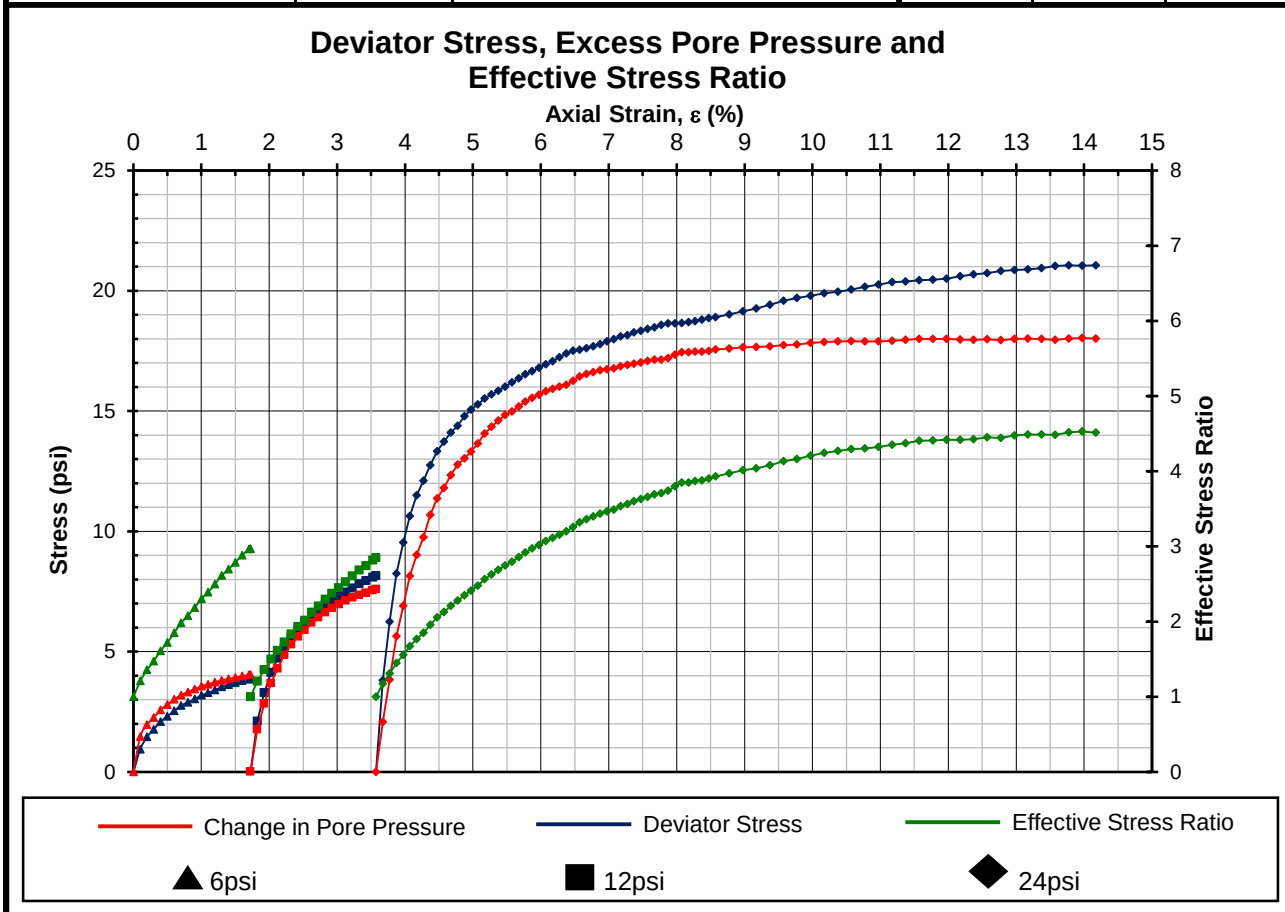
Reviewed by: S. Greene

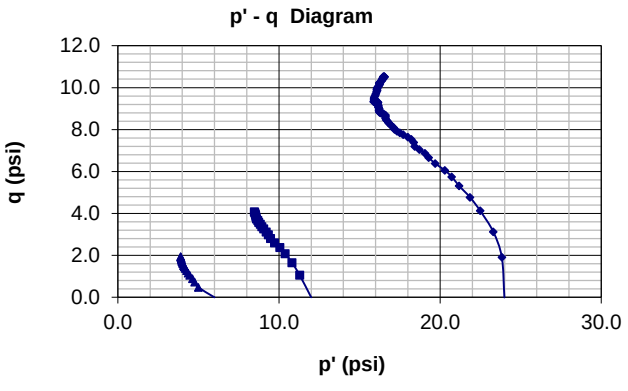
Figure 4

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	6/22/2020	
Project No.:	2012-113 T500		Exploration ID:		SU02-B05	
Technician:	DW		Sample No:		30-32	
Sample Description:	Dark grayish brown, SILT (ML)			Sample Depth, ft:	30-32	
Confining Pressures:	**6psi**	**12psi**	**24psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	54.3%	Final Moisture:		47.9%	6psi	12psi	24psi
Initial Wet Density, pcf:	101.4				242	313	392
Initial Dry Density, pcf:	65.7						





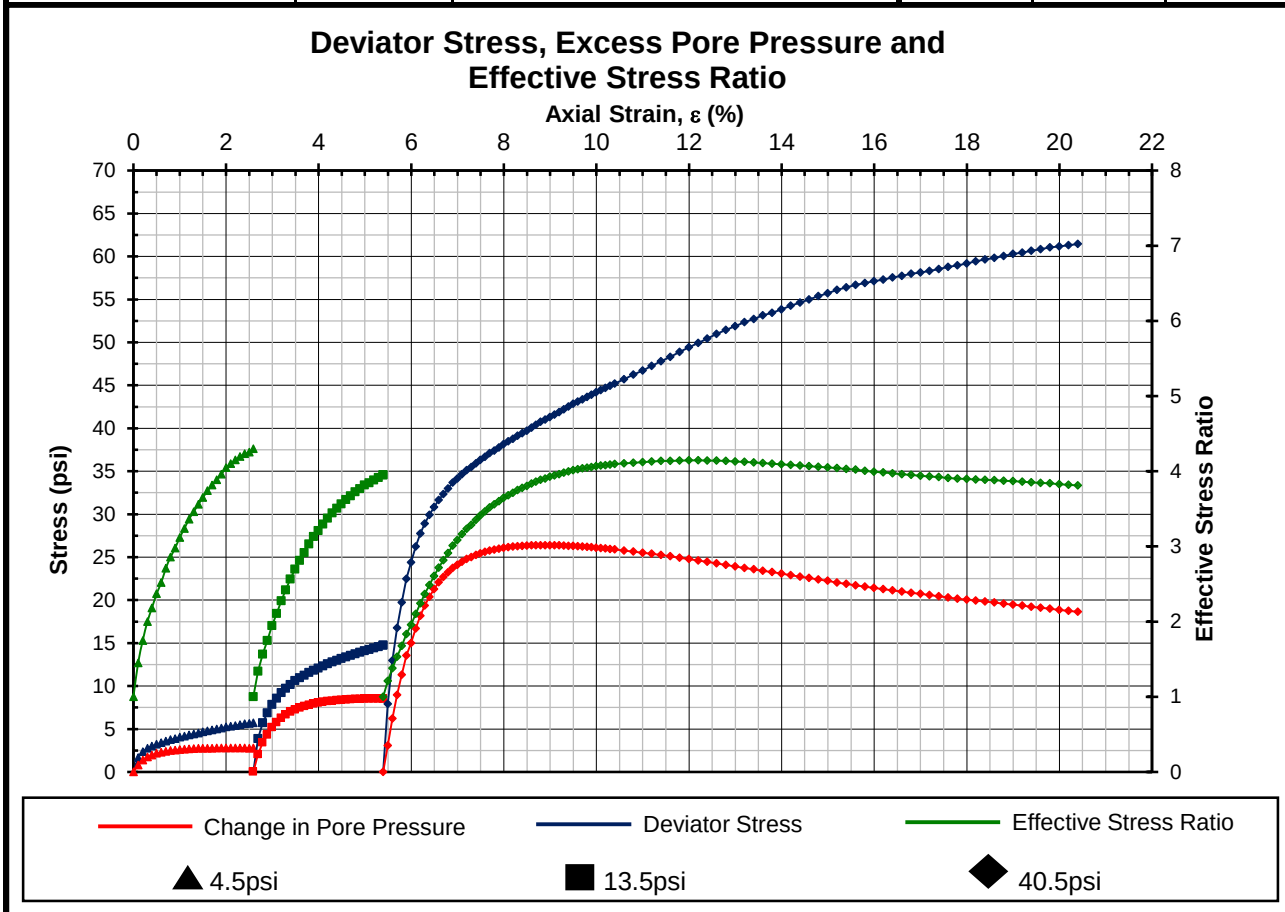
Reviewed by: S. Greene

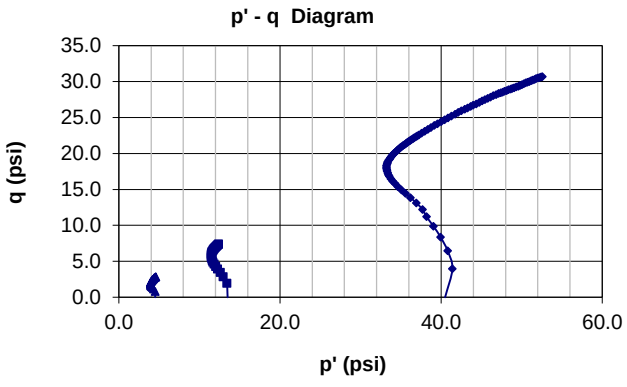
Figure 5

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor QEA - Longview			Date:	6/11/2020
Project No.:	2012-113 T500		Exploration ID:		SU02-B06
Technician:	DW		Sample No:		20-22
Sample Description:	Dark gray, SILT (ML)			Sample Depth, ft:	20-22
Confining Pressures:	**4.5psi**	**13.5psi**	**40.5psi**	Consolidation T50 Values (minutes)	
Initial Moisture:	57.0%	Final Moisture:	30.0%	4.5psi	13.5psi	40.5psi
Initial Wet Density, pcf:	115.8			128	60	40
Initial Dry Density, pcf:	73.7					

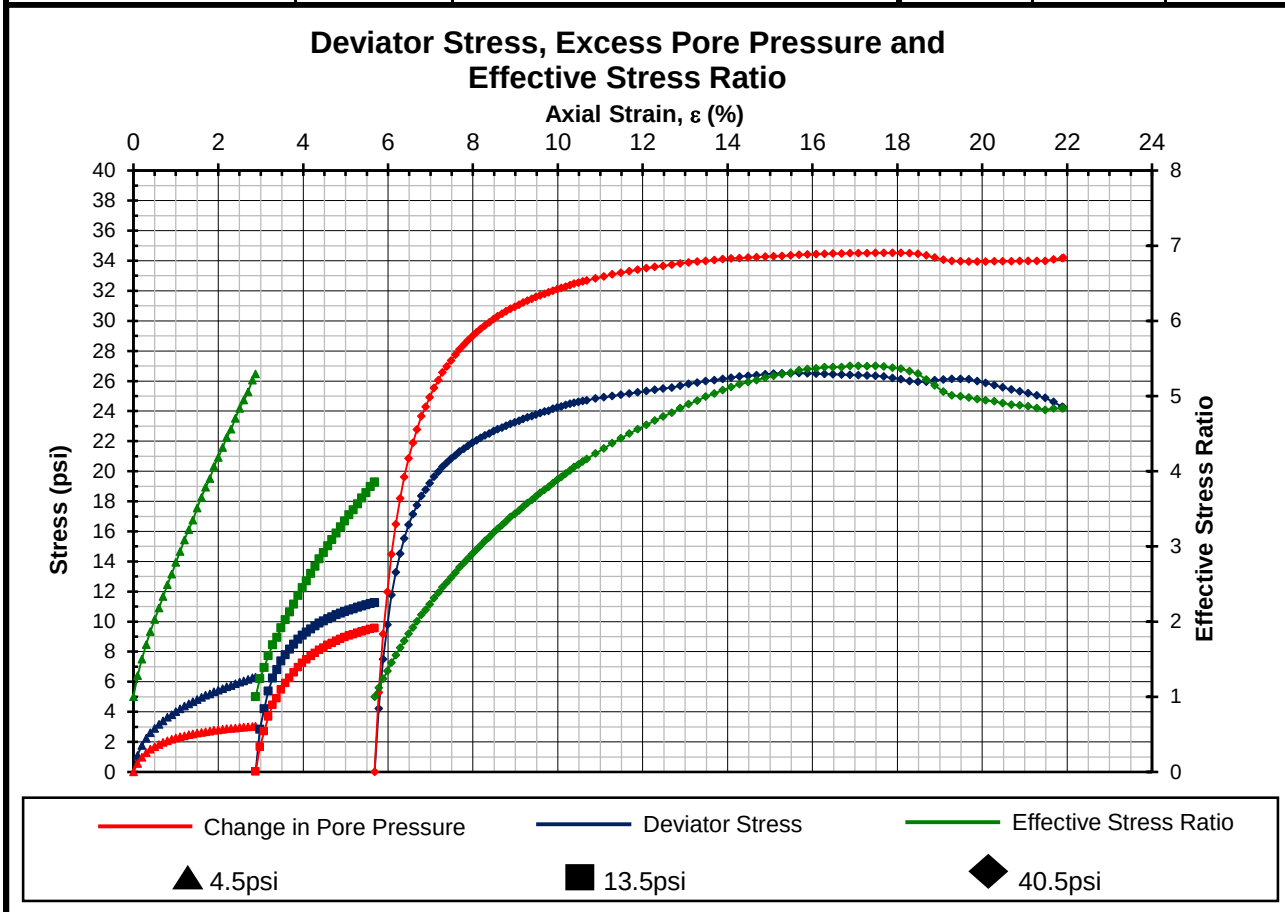


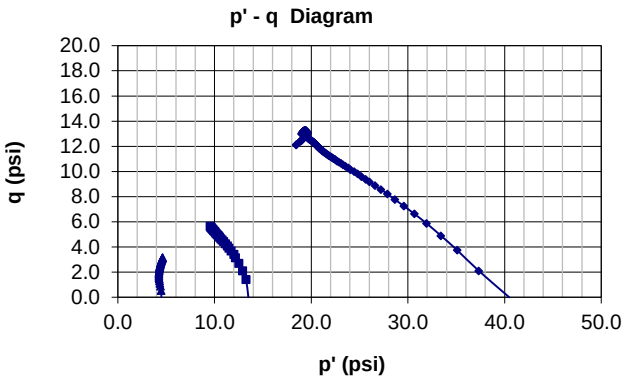


Reviewed by: S. Greene

Figure 6

HWA GeoSciences Inc - Materials Testing Laboratory						
Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)						
Project Name:	Anchor - Longview			Date:	7/28/2020	
Project No.:	2012-113 T500		Exploration ID:		SU07-B02	
Technician:	DW		Sample No:		20-22	
Sample Description:	Dark grayish brown, SILT (ML)			Sample Depth, ft:	20-22	
Confining Pressures:	**4.5psi**	**13.5psi**	**40.5psi**	Consolidation T50 Values (minutes)		
Initial Moisture:	63.3%	Final Moisture:	51.0%	4.5psi	13.5psi	40.5psi
Initial Wet Density, pcf:	98.8			32	72	98
Initial Dry Density, pcf:	60.5					

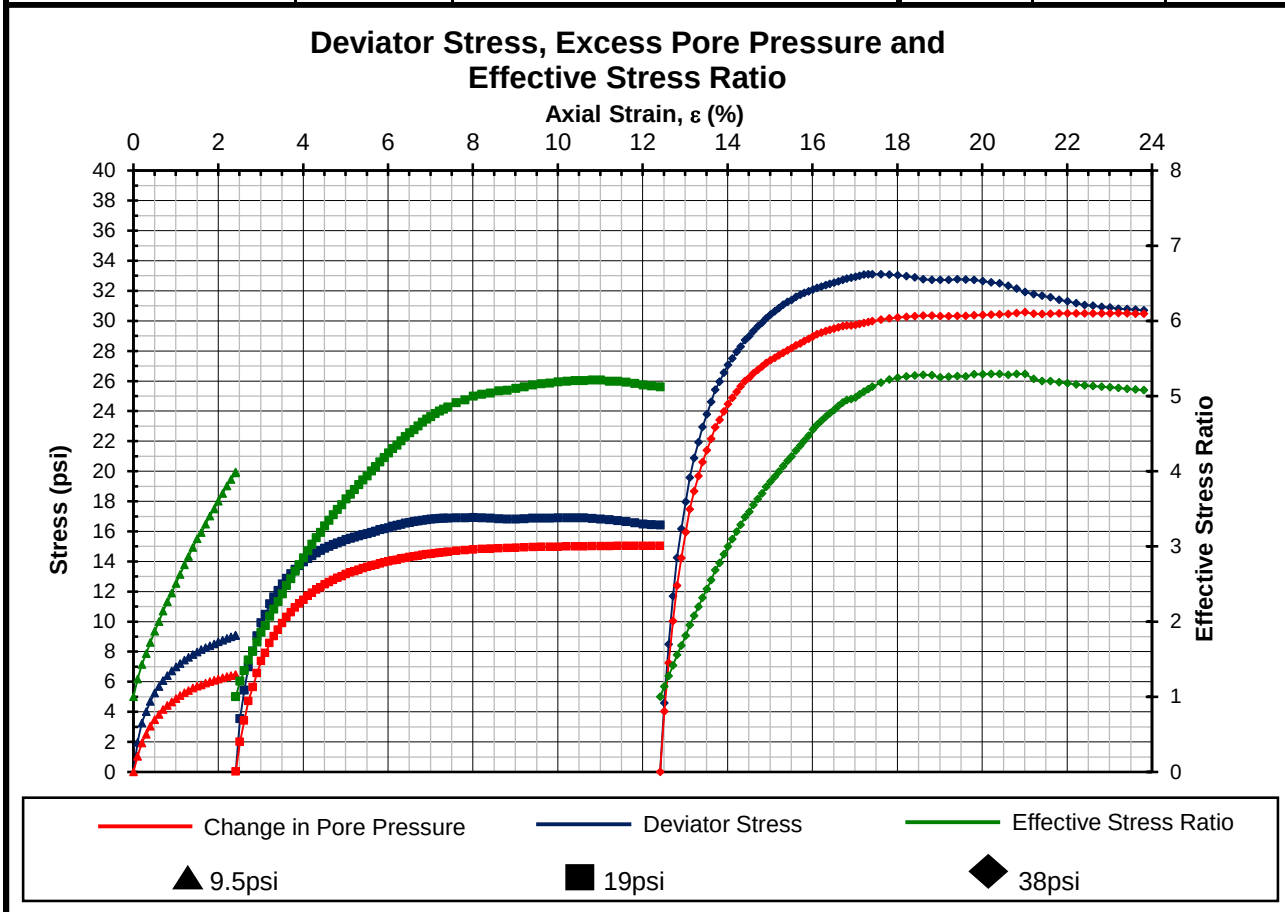


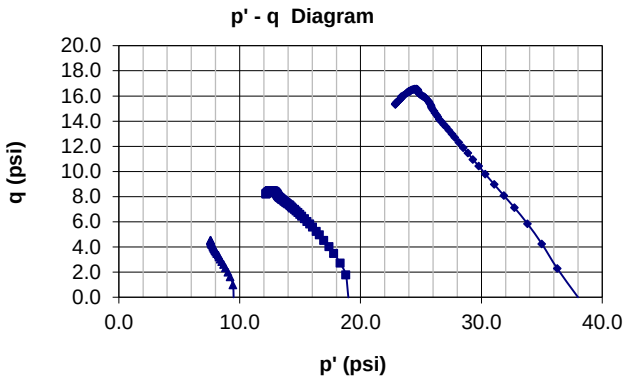


Reviewed by: S. Greene

Figure 7

HWA GeoSciences Inc - Materials Testing Laboratory						
Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)						
Project Name:	Anchor - Longview			Date:	7/13/2020	
Project No.:	2012-113 T500		Exploration ID:		SU07-B04	
Technician:	DW		Sample No:		50-52	
Sample Description:	Very dark grayish brown, SILT (ML)			Sample Depth, ft:	50-52	
Confining Pressures:	**9.5psi**	**19psi**	**38psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	69.7%	Final Moisture:	55.0%	9.5psi	19psi	38psi
Initial Wet Density, pcf:	98.1			40	72	128
Initial Dry Density, pcf:	57.8					

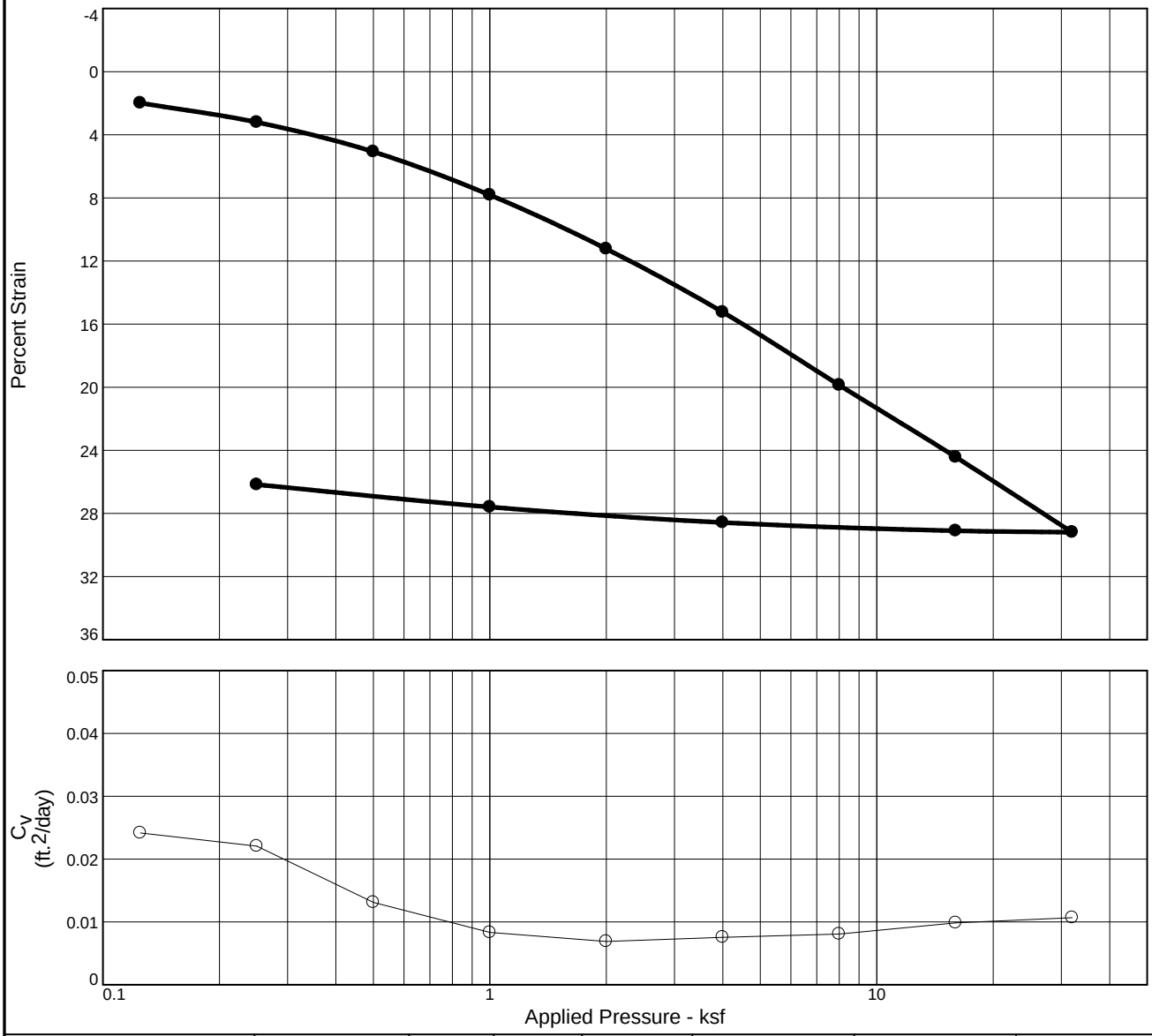




Reviewed by: S. Greene

Figure 8

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
99.9 %	65.0 %	60.2	64	26	2.65	MH		1.726

MATERIAL DESCRIPTION

Dark grayish brown, elastic SILT

Project No. 2012-113 **Client:** Anchor QEA

Project: Millenium Bulk Terminals - Longview

Source of Sample: SU02-B-05 **Depth:** 30 **Sample Number:** 30-32

HWA GeoSciences Inc. DBE/MWBE

Remarks:

*Specific gravity information is assumed

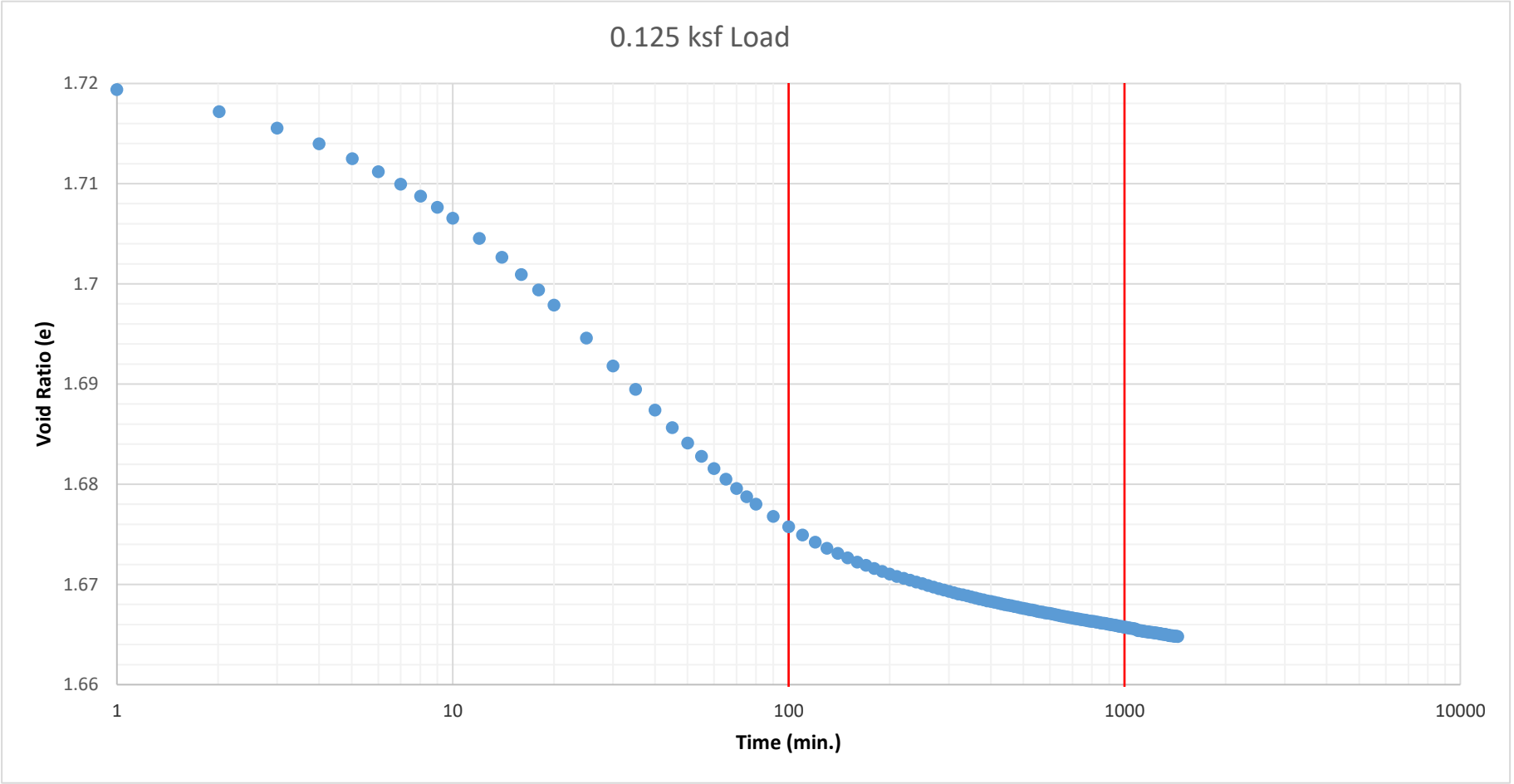
Figure 9a

Tested By: DW **Checked By:** SEG

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf



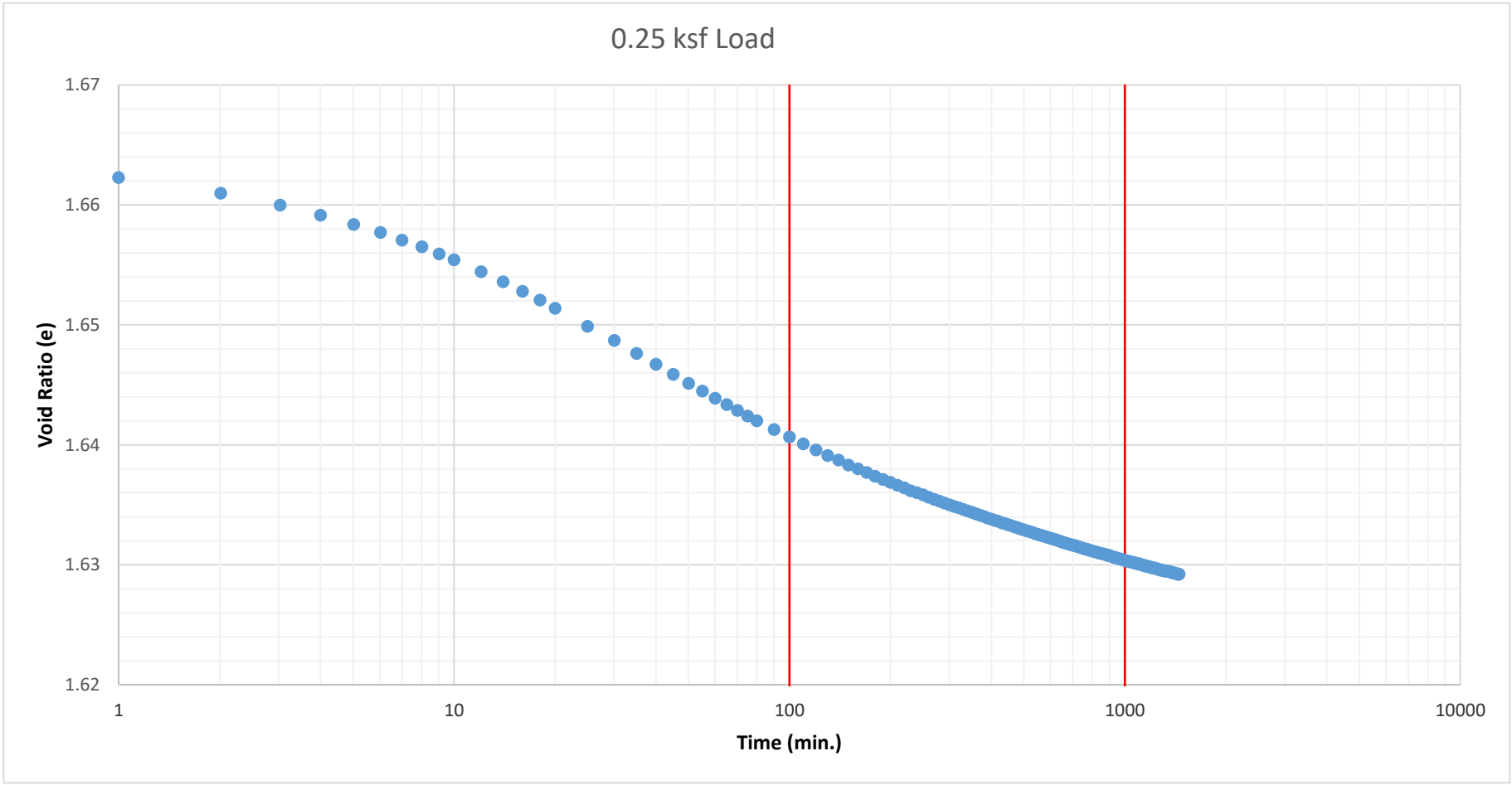
	C_α=	1.6758	-	1.6657	=	0.0100	

Figure 9b

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf

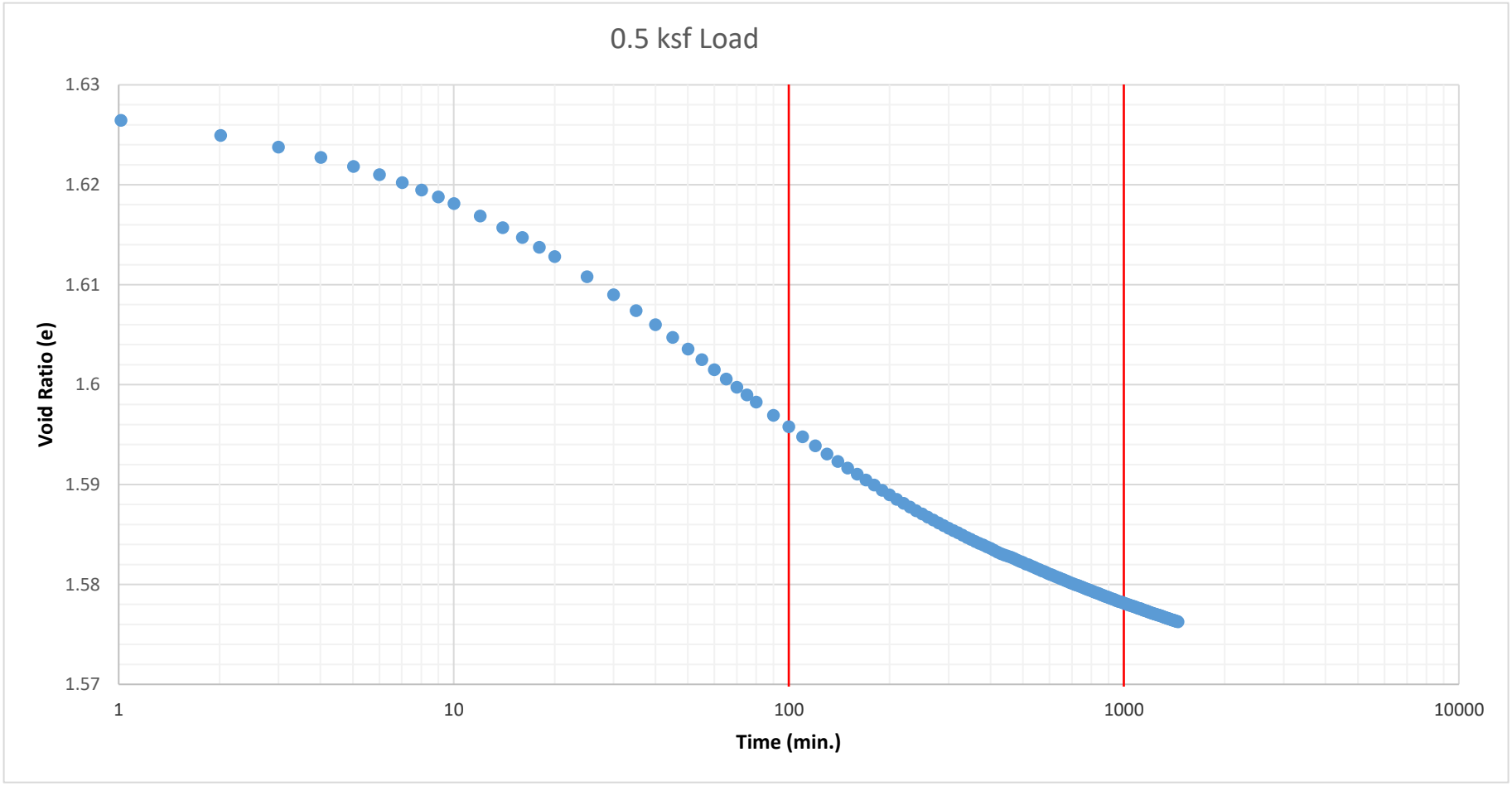


	C_α=	1.6406	-	1.6304	=	0.0103

Figure 9c

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf

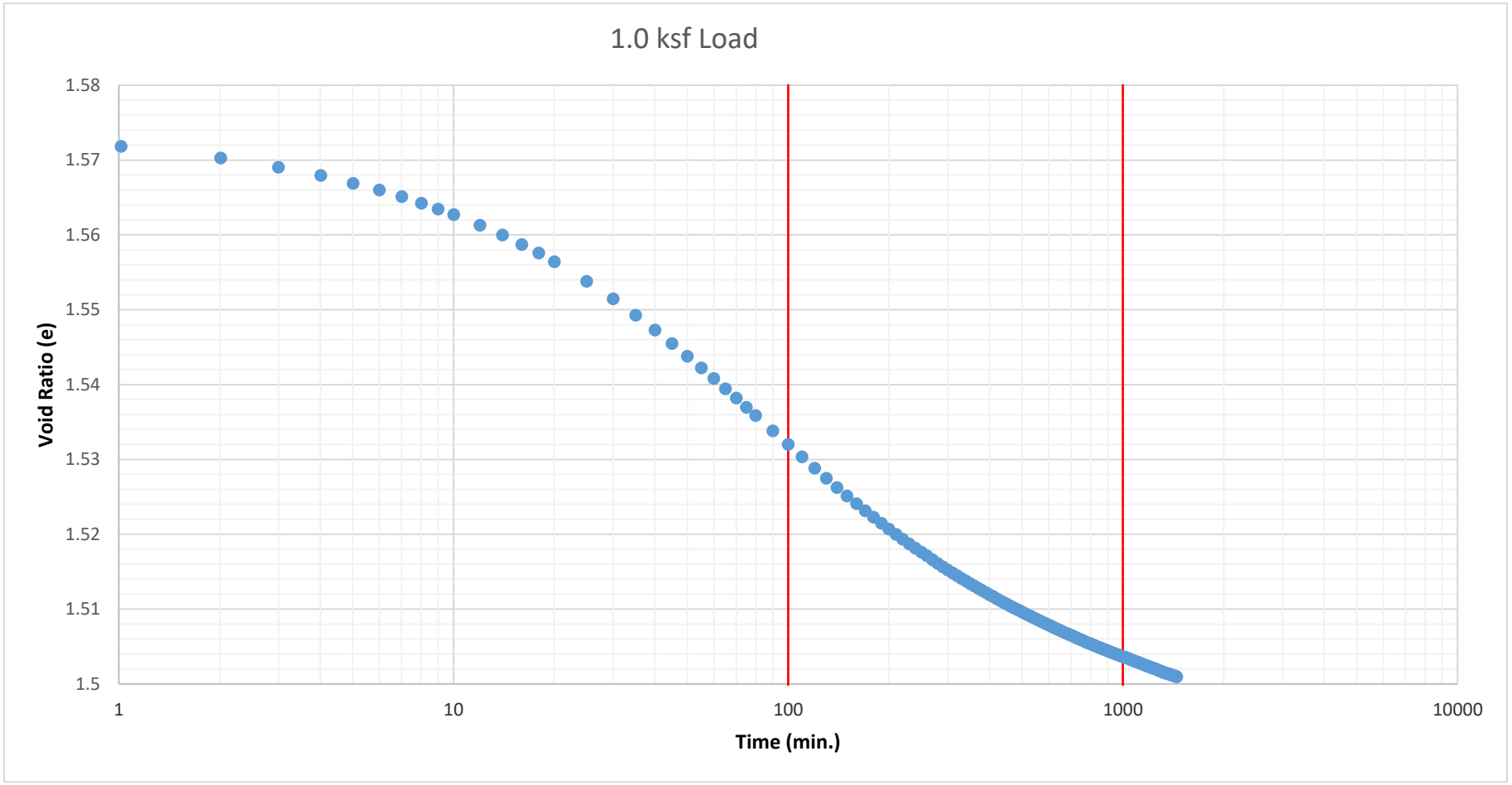


	C_α=	1.5958	-	1.5781	=	0.0176

Figure 9d

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf

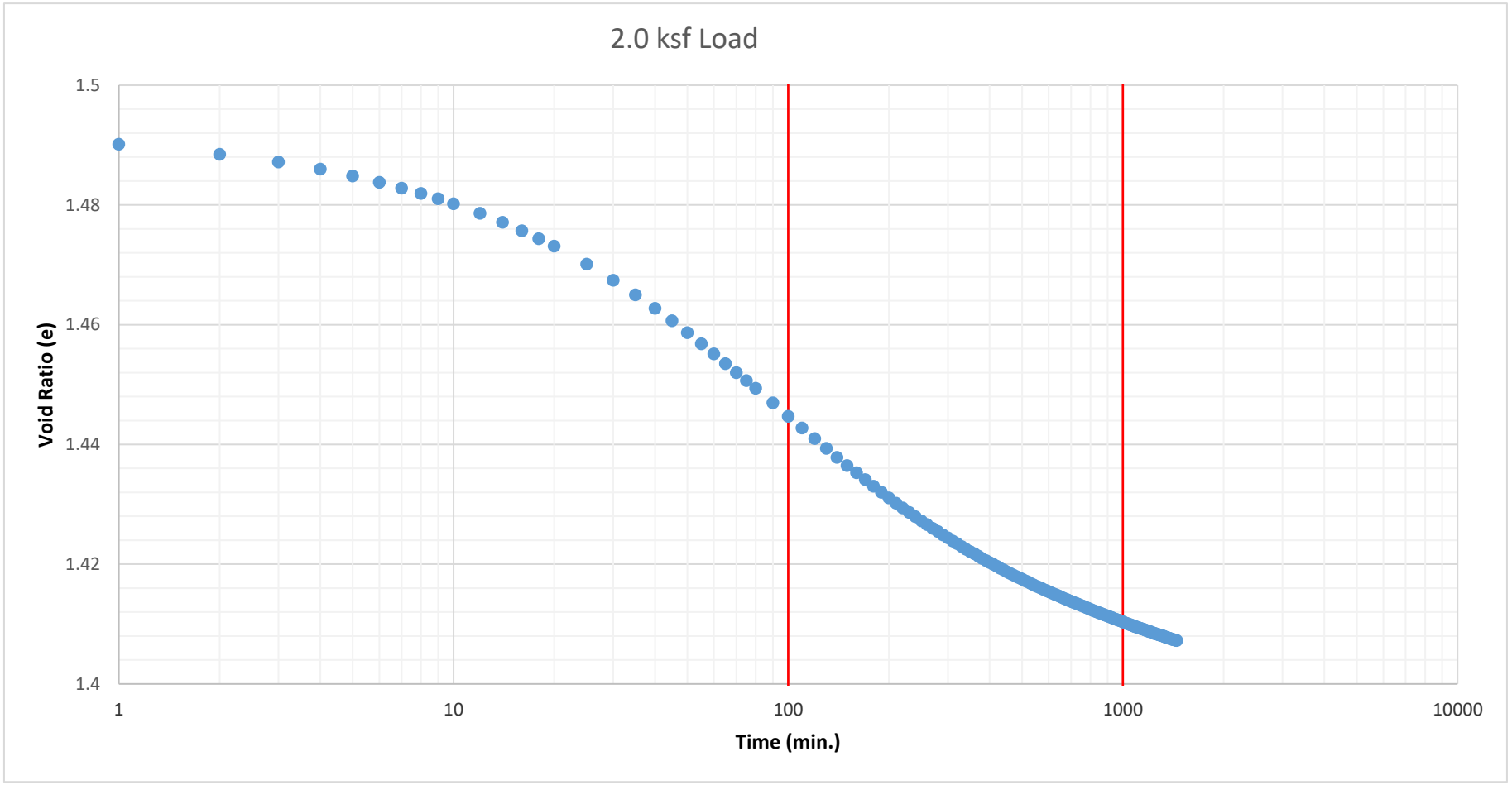


	C_α=	1.5320	-	1.5036	=	0.0283

Figure 9e

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf

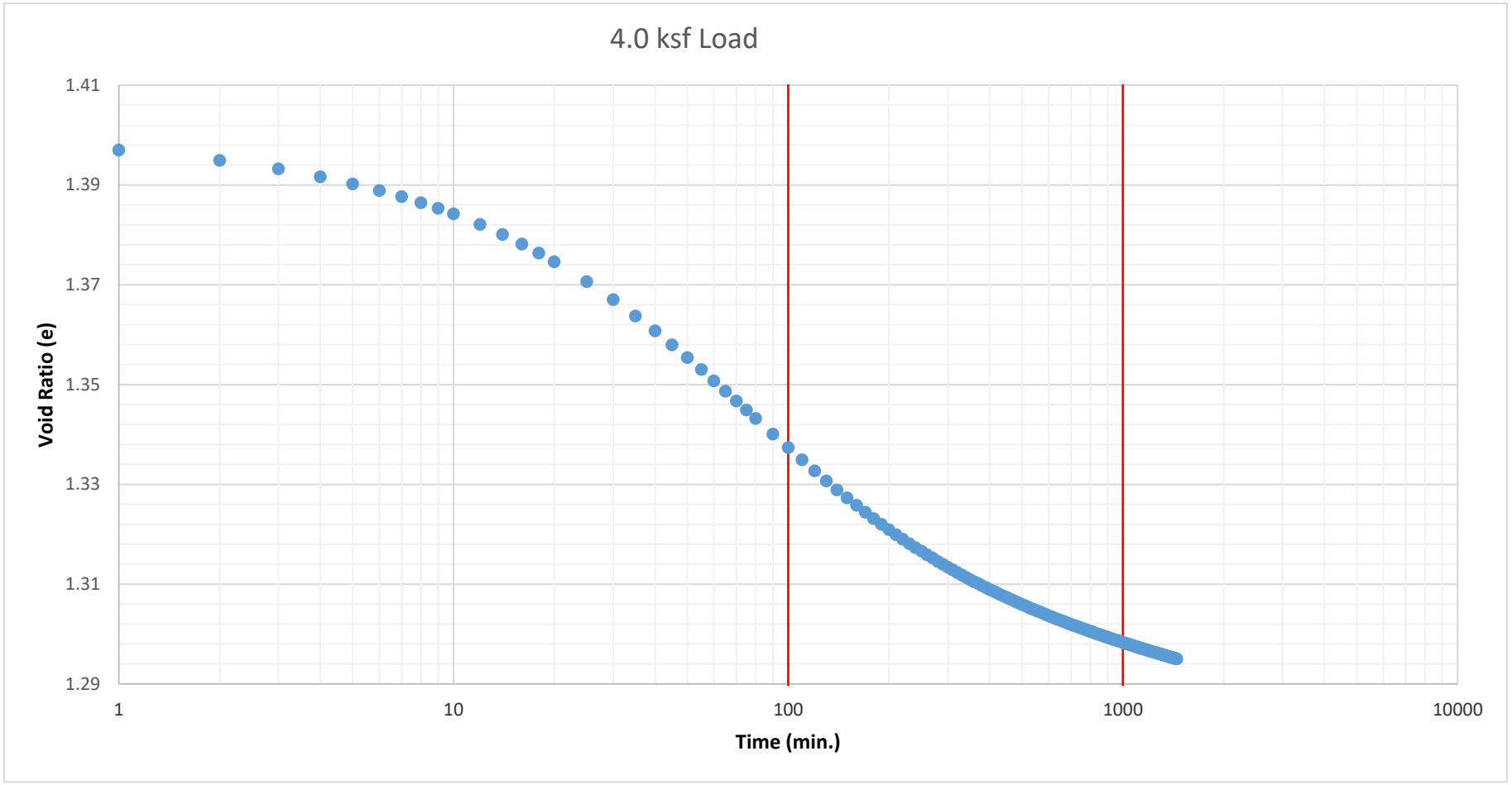


	C_α=	1.4447	-	1.4104	=	0.0343

Figure 9f

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf



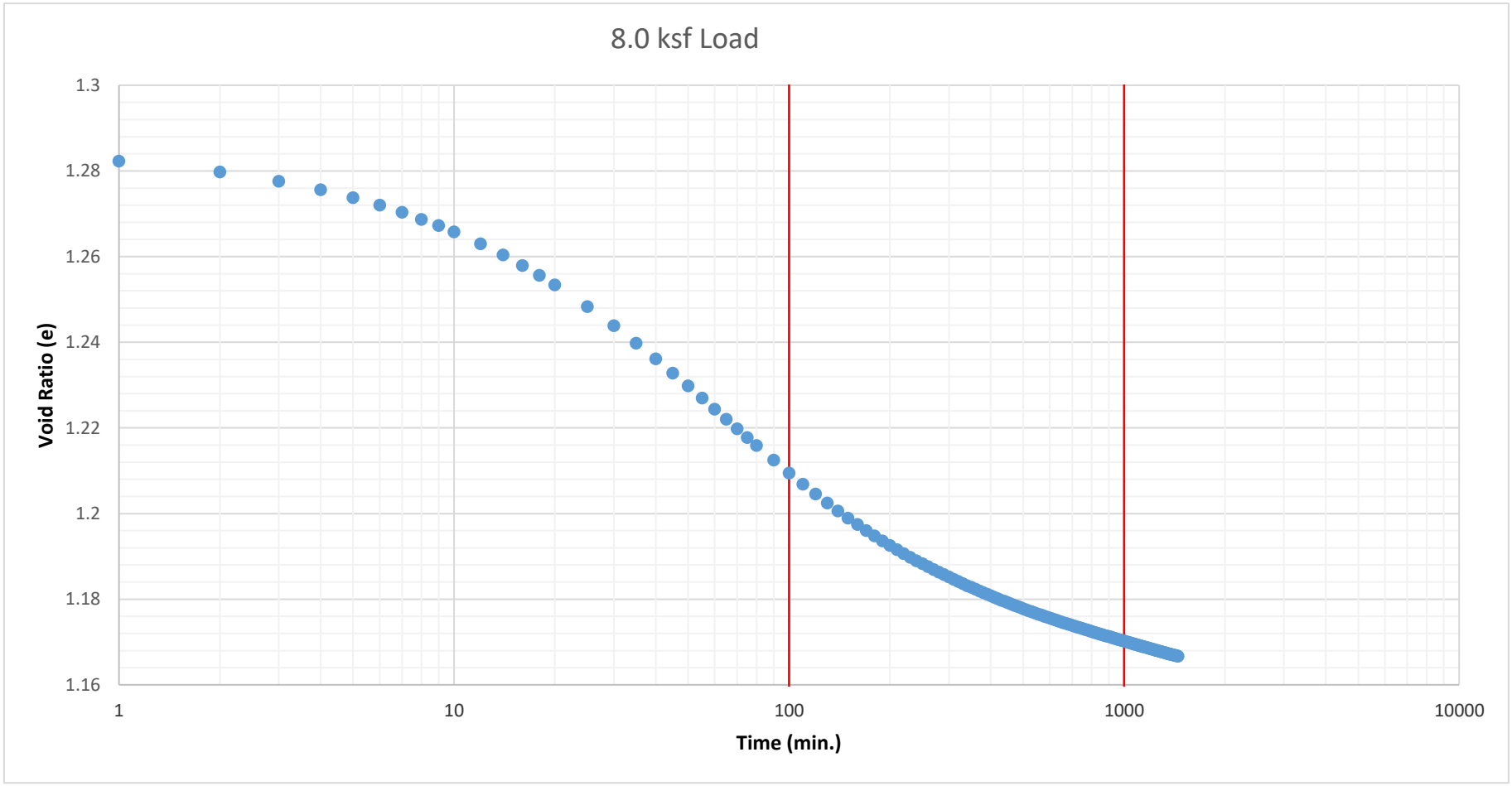
	C_α=	1.3374	-	1.2983	=	0.0391

Figure 9g

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf



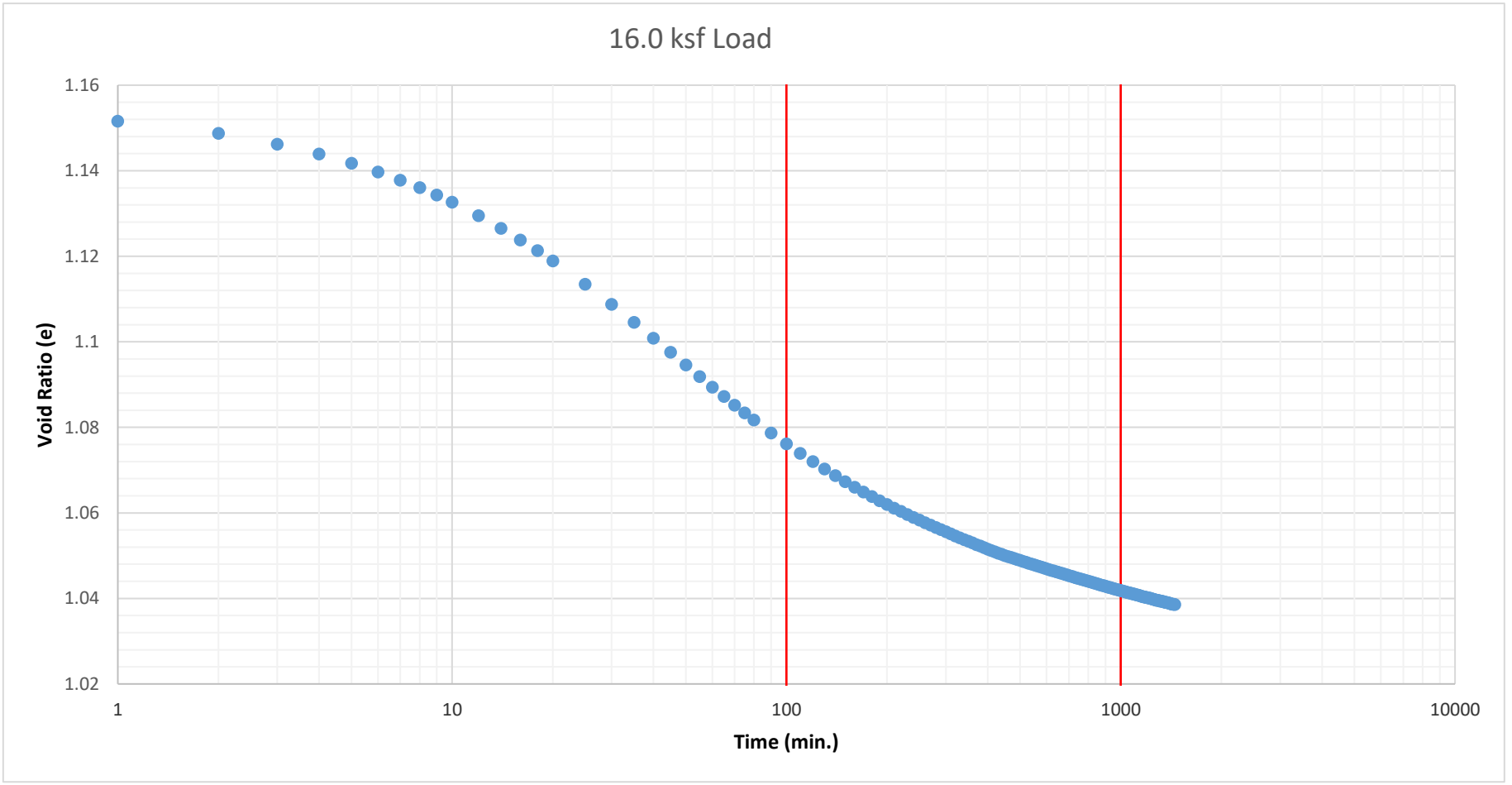
	C_α=	1.2095	-	1.1702	=	0.0393

Figure 9h

GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf

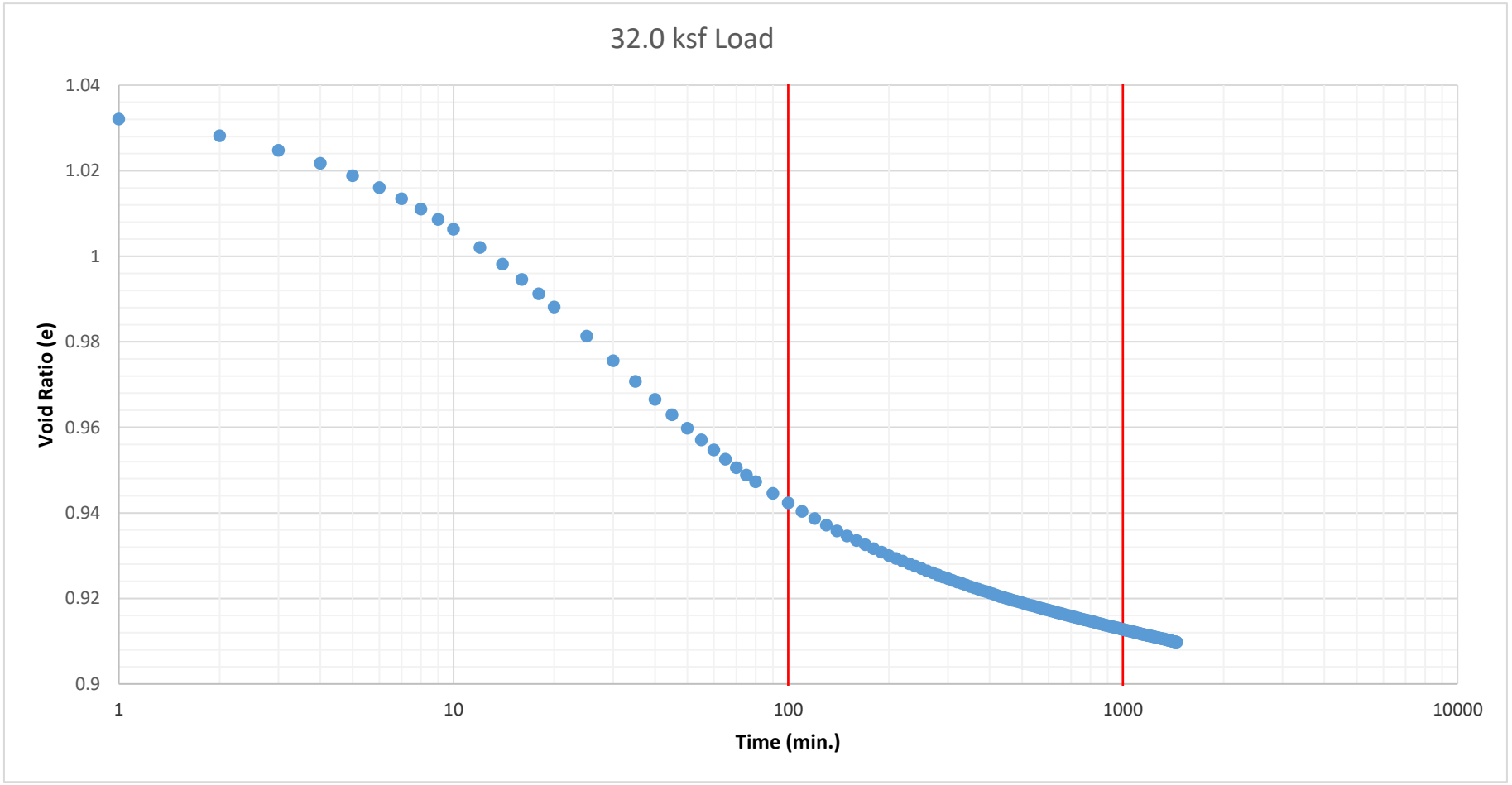


	C_α=	1.0761	-	1.0418	=	0.0343

Figure 9i

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

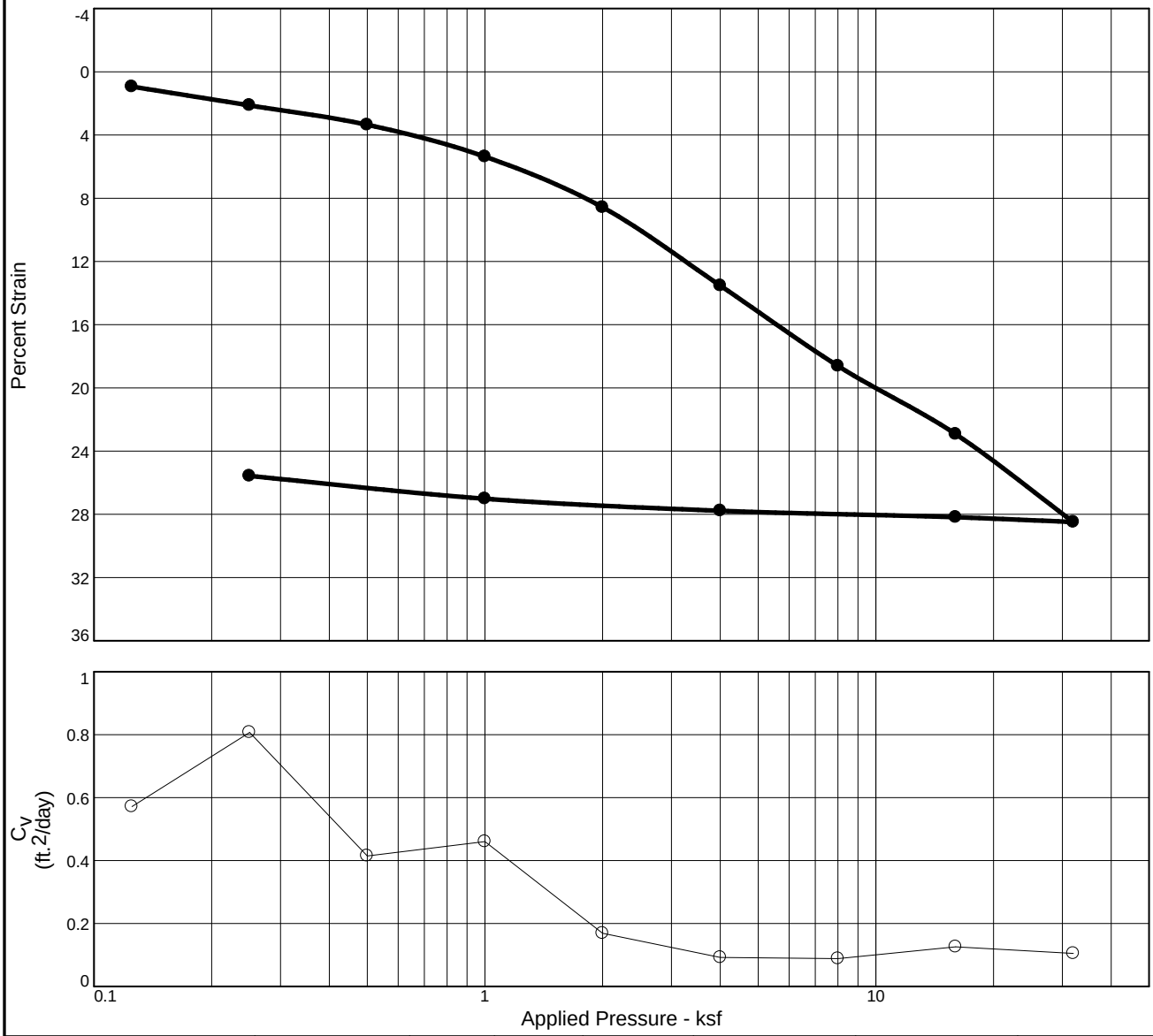
					Natural	
Project Name:	Anchor-Longview	Sample Number	30-32	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	30-32 feet	Saturation	92.5	%
Exploration Number:	SU02-B-05	Soil Description	ML	Dry Density	59.5	pcf



	C_α=	0.9423	-	0.9127	=	0.0296

Figure 9j

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
92.5 %	63.3 %	59.5	43	9	2.656	ML		1.816

MATERIAL DESCRIPTION

Dark grayish brown, SILT

Project No. 2012-113 **Client:** Anchor QEA

Project: Millenium Bulk Terminals - Longview

Source of Sample: SU07-B-02 **Depth:** 20 **Sample Number:** 20-22

Remarks:

HWA GeoSciences Inc. DBE/MWBE

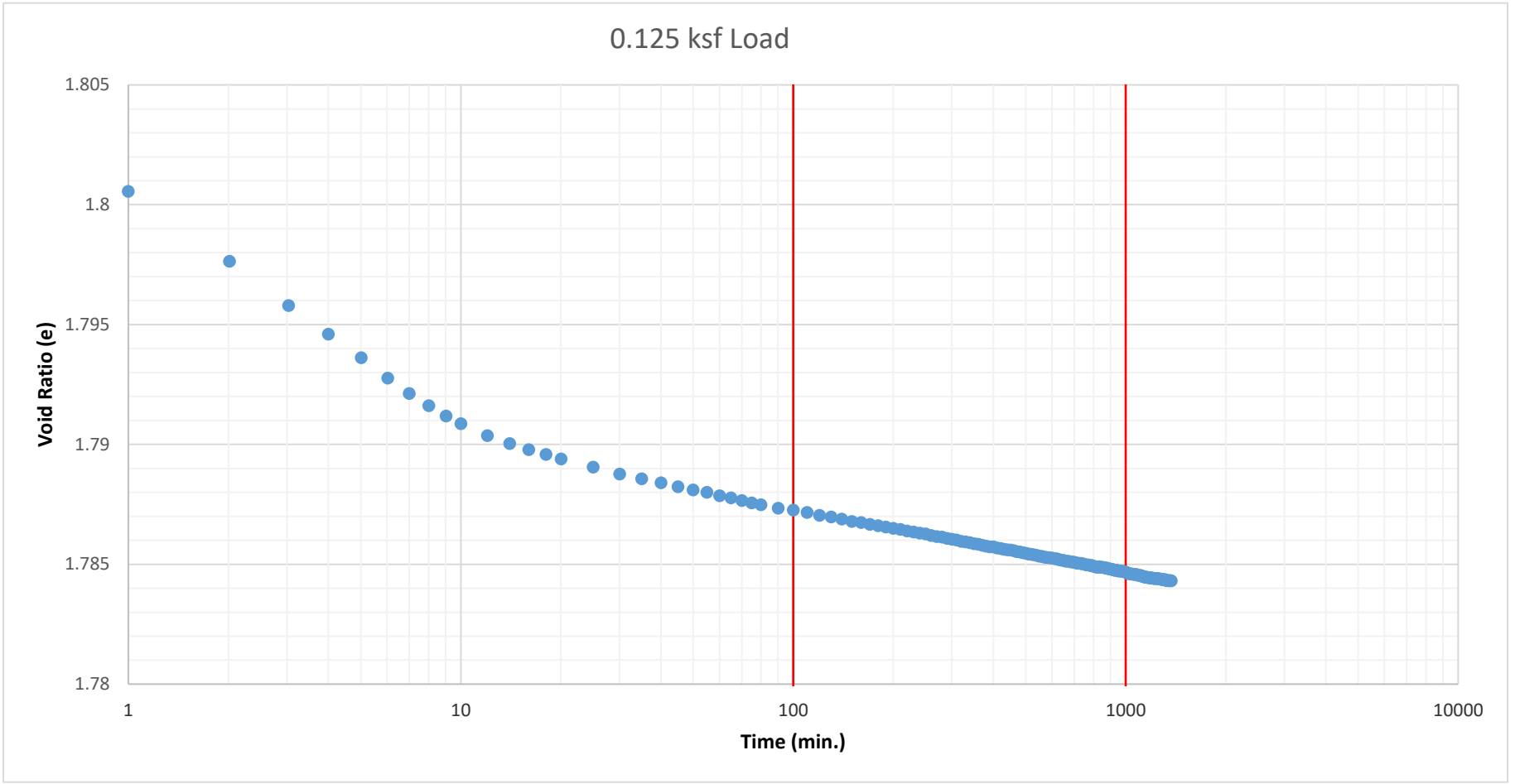
Figure 10a

Tested By: DW **Checked By:** SEG

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf

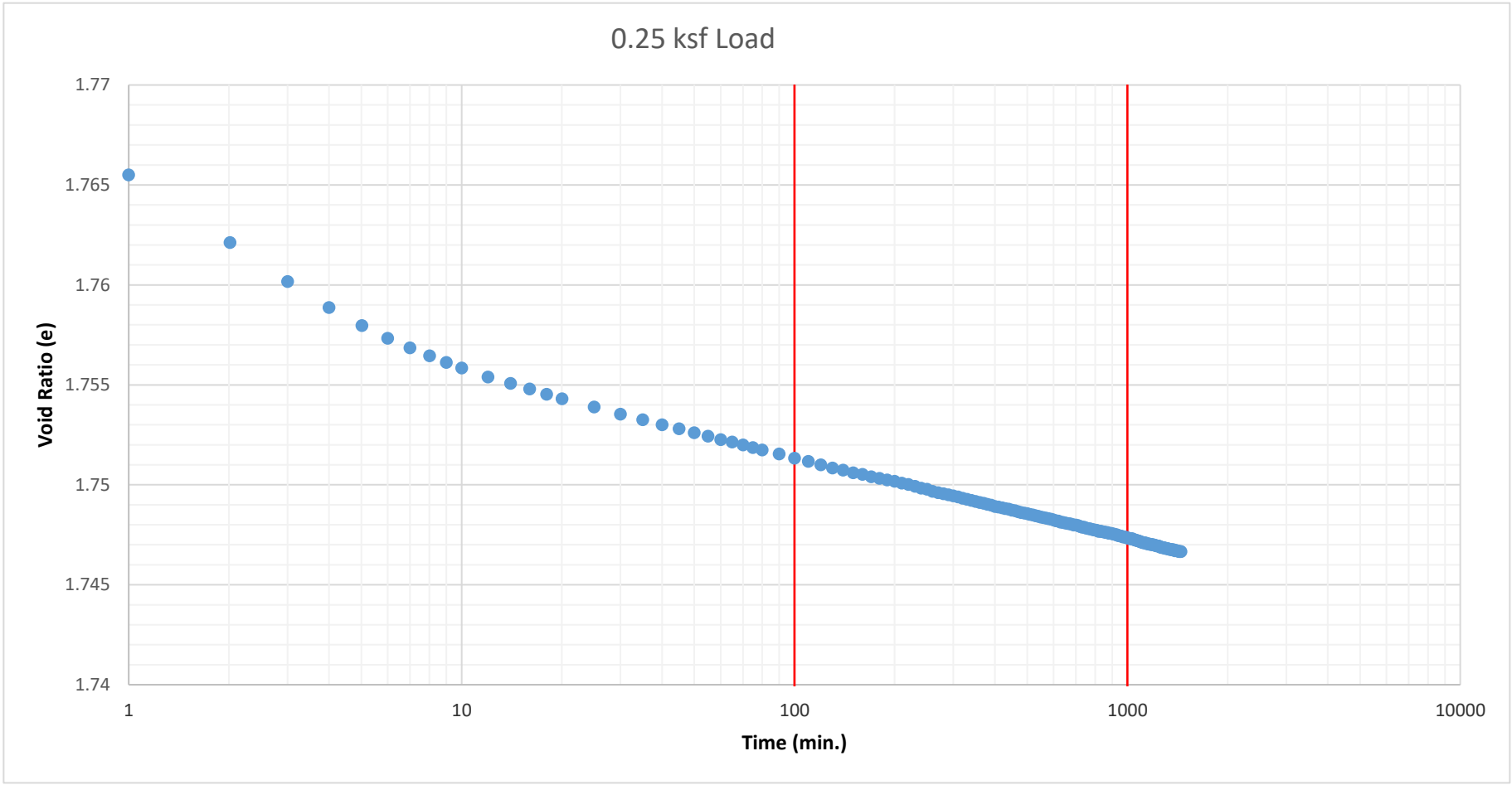


	C_α=	1.7873	-	1.7847	=	0.0026

Figure 10b

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



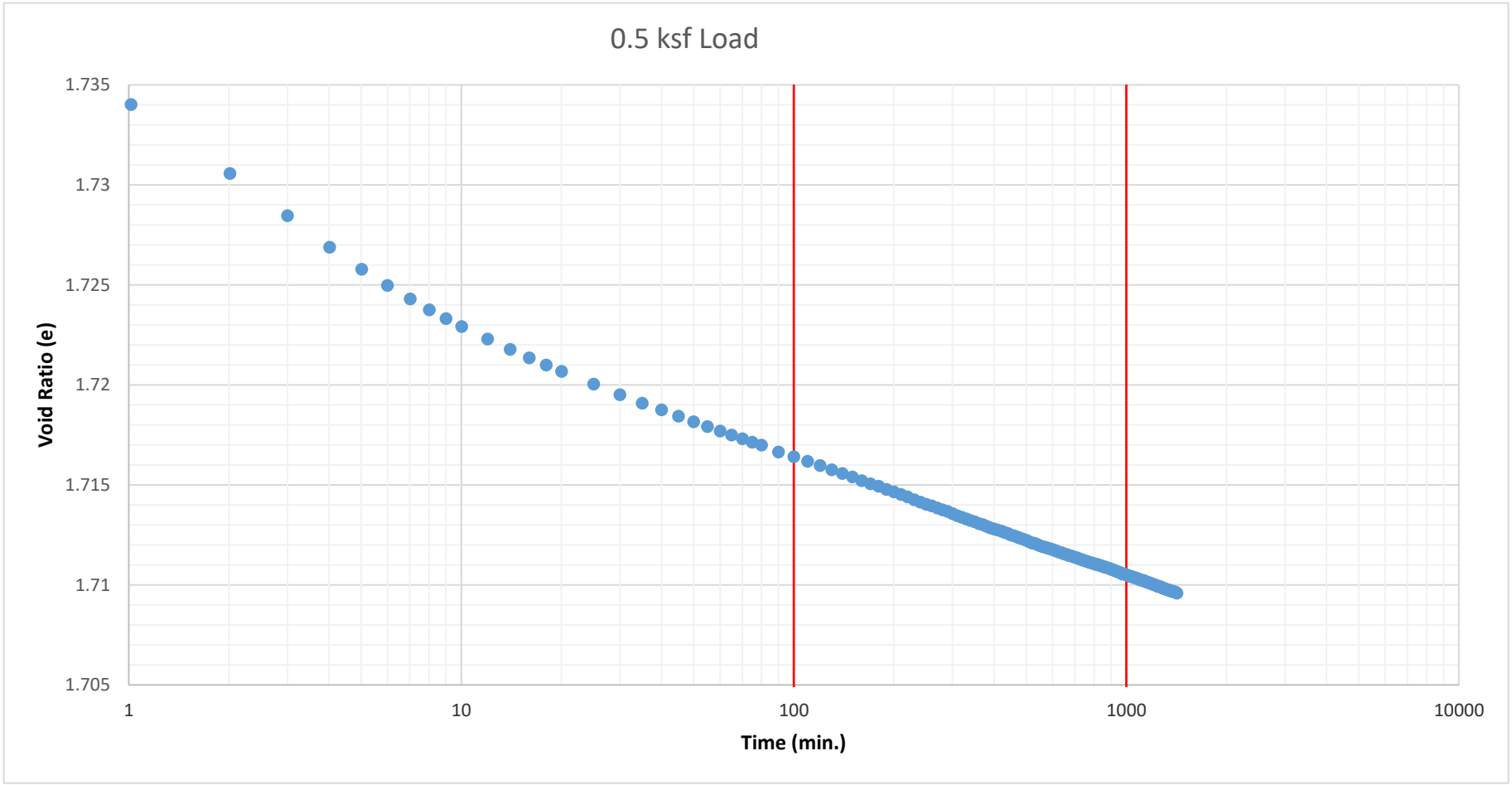
	C_α=	1.7513	-	1.7473	=	0.0040

Figure 10c

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



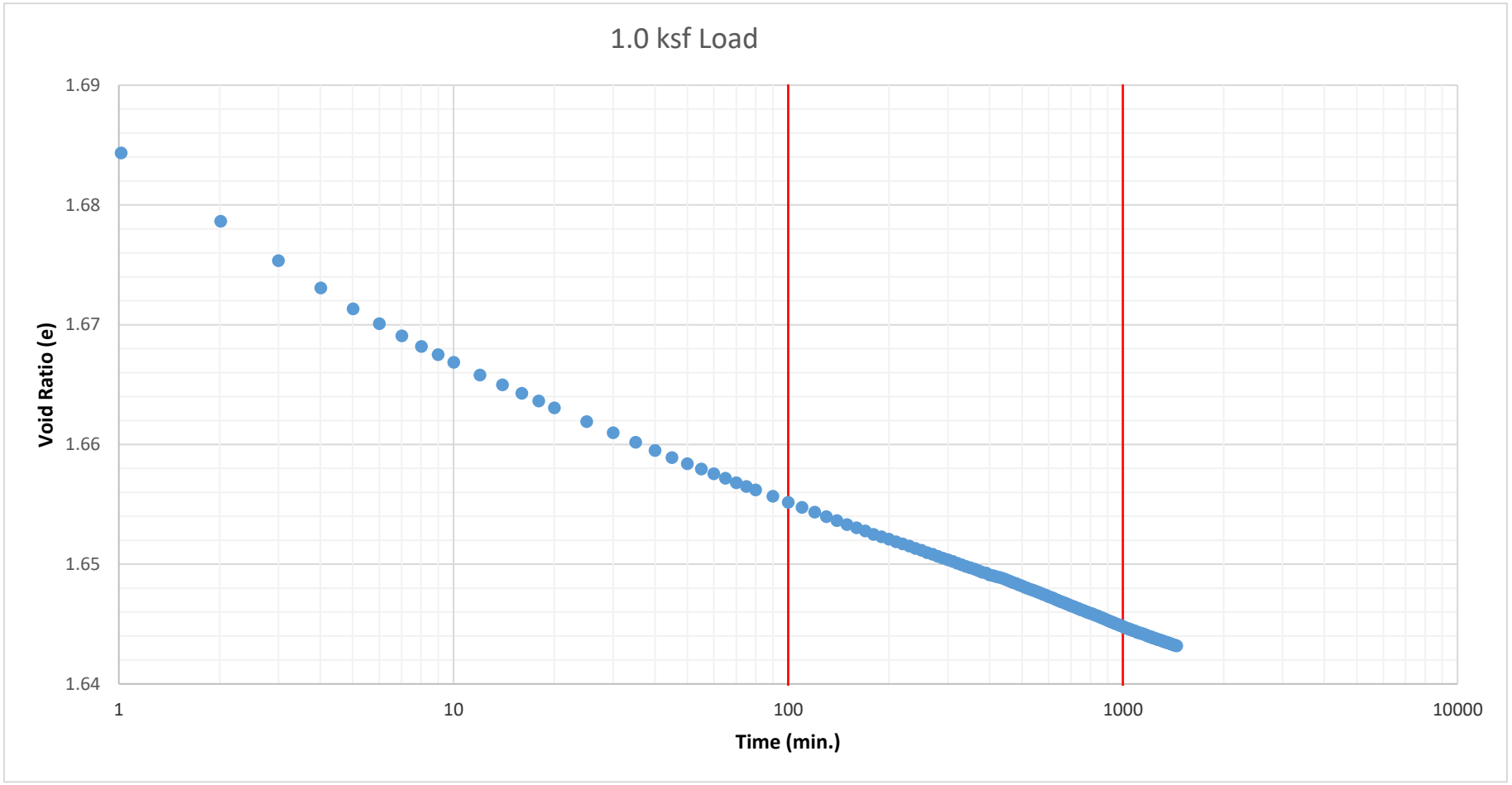
	C_α=	1.7164	-	1.7105	=	0.0059

Figure 10d

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



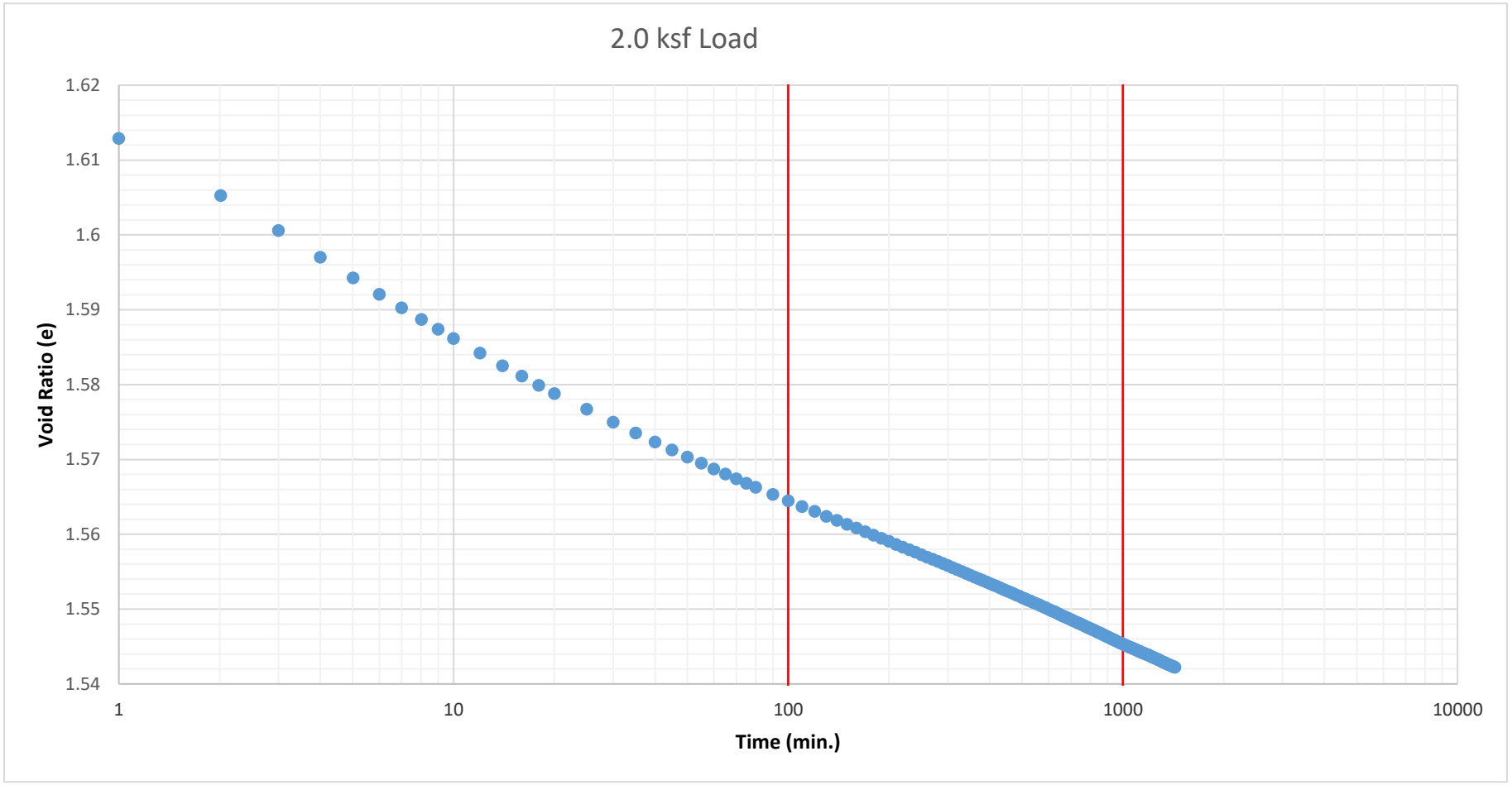
	C_α=	1.6552	-	1.6448	=	0.0104

Figure 10e

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf

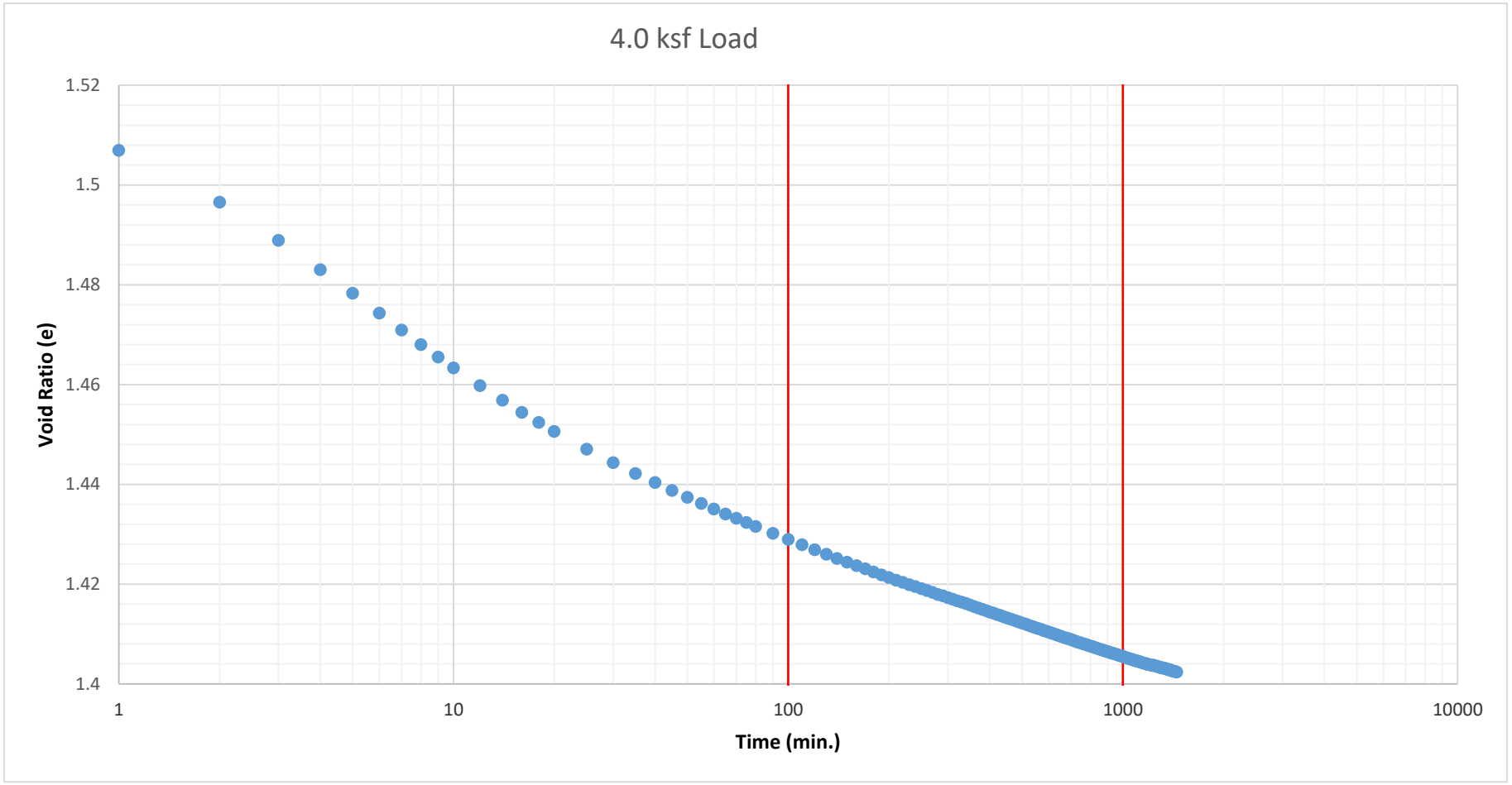


	C_α=	1.5645	-	1.5453	=	0.0192

Figure 10f

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



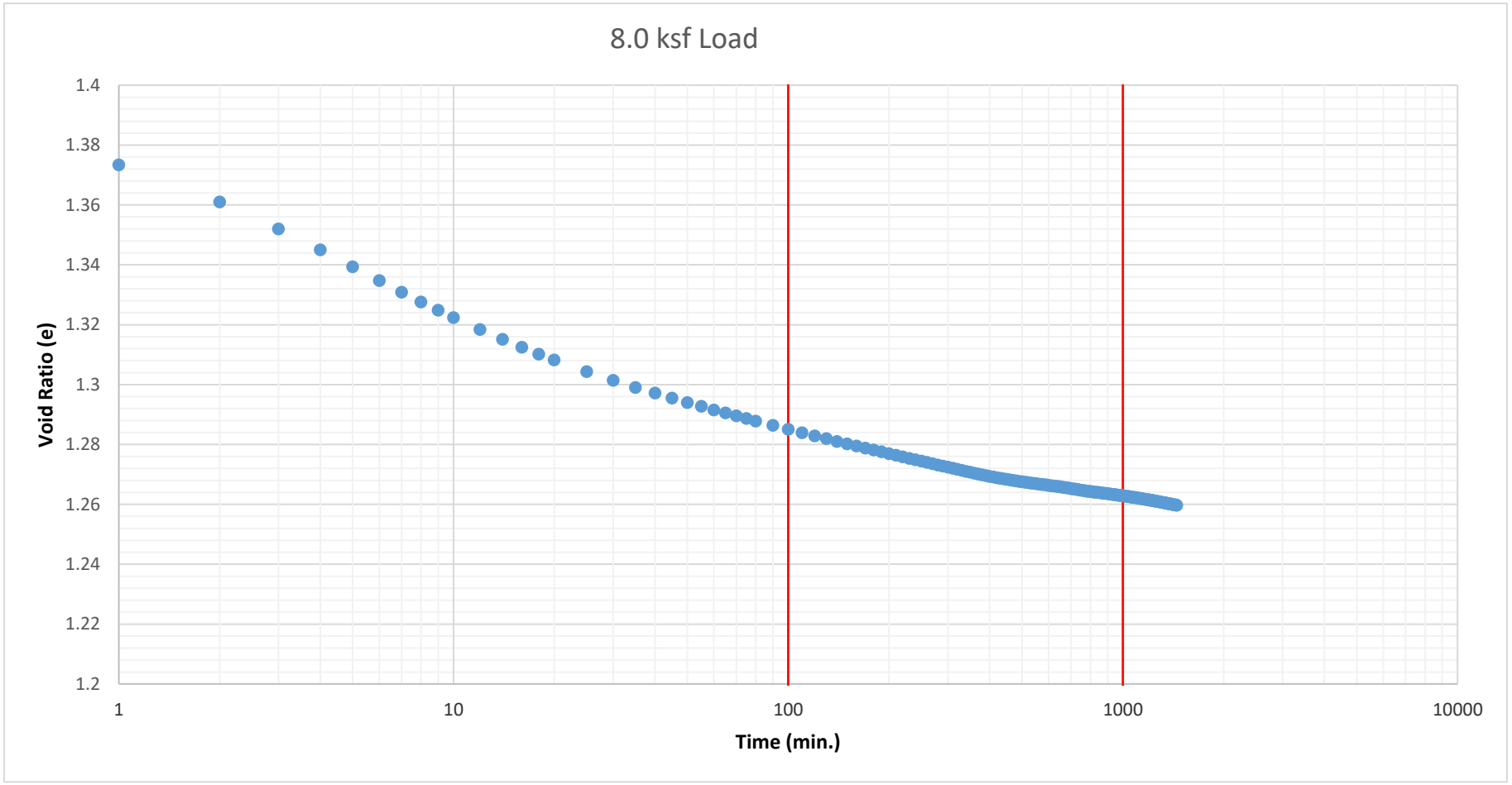
	C_α=	1.4290	-	1.4055	=	0.0235

Figure 10g

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf

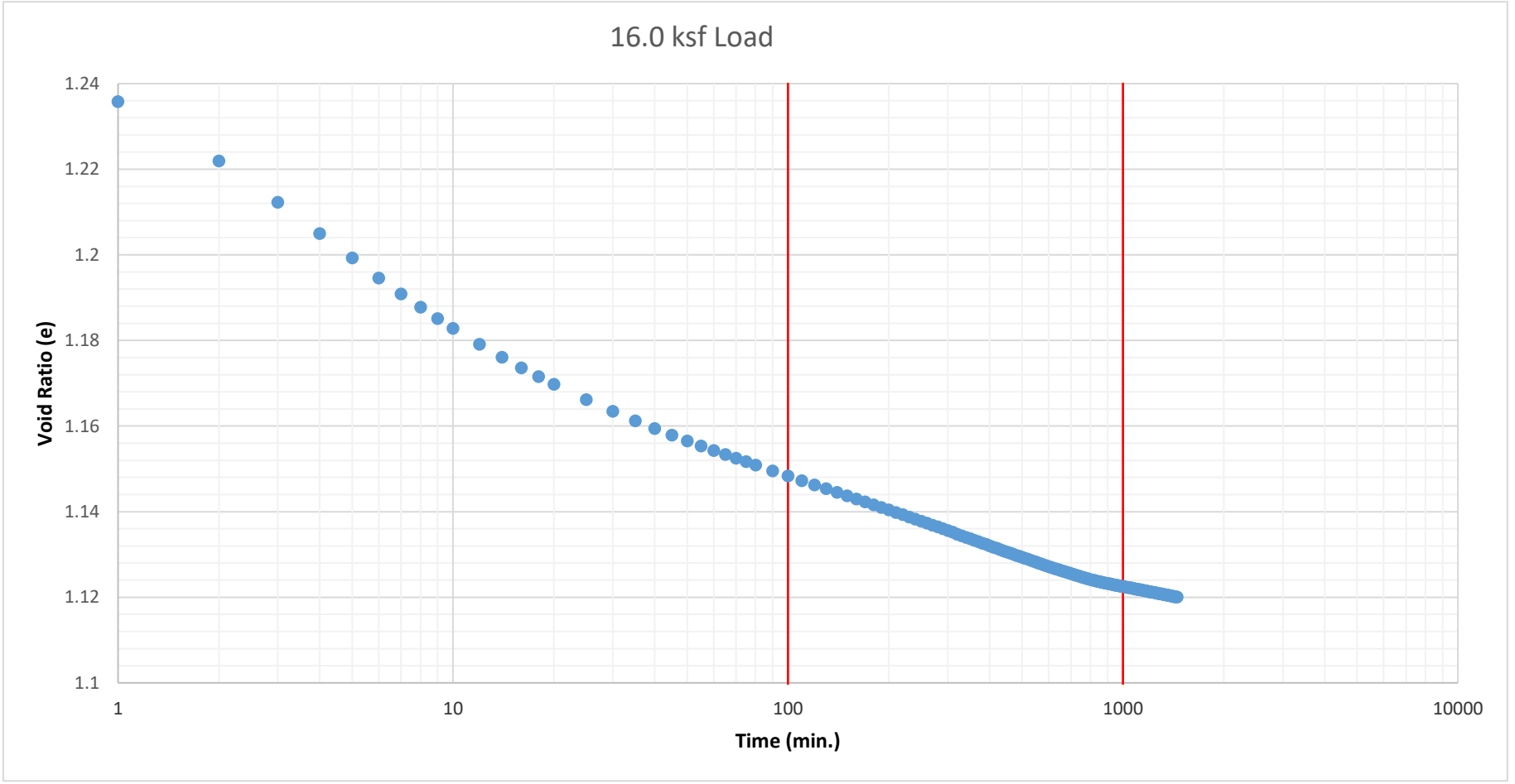


	C_α=	1.2850	-	1.2628	=	0.0222

Figure 10h

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



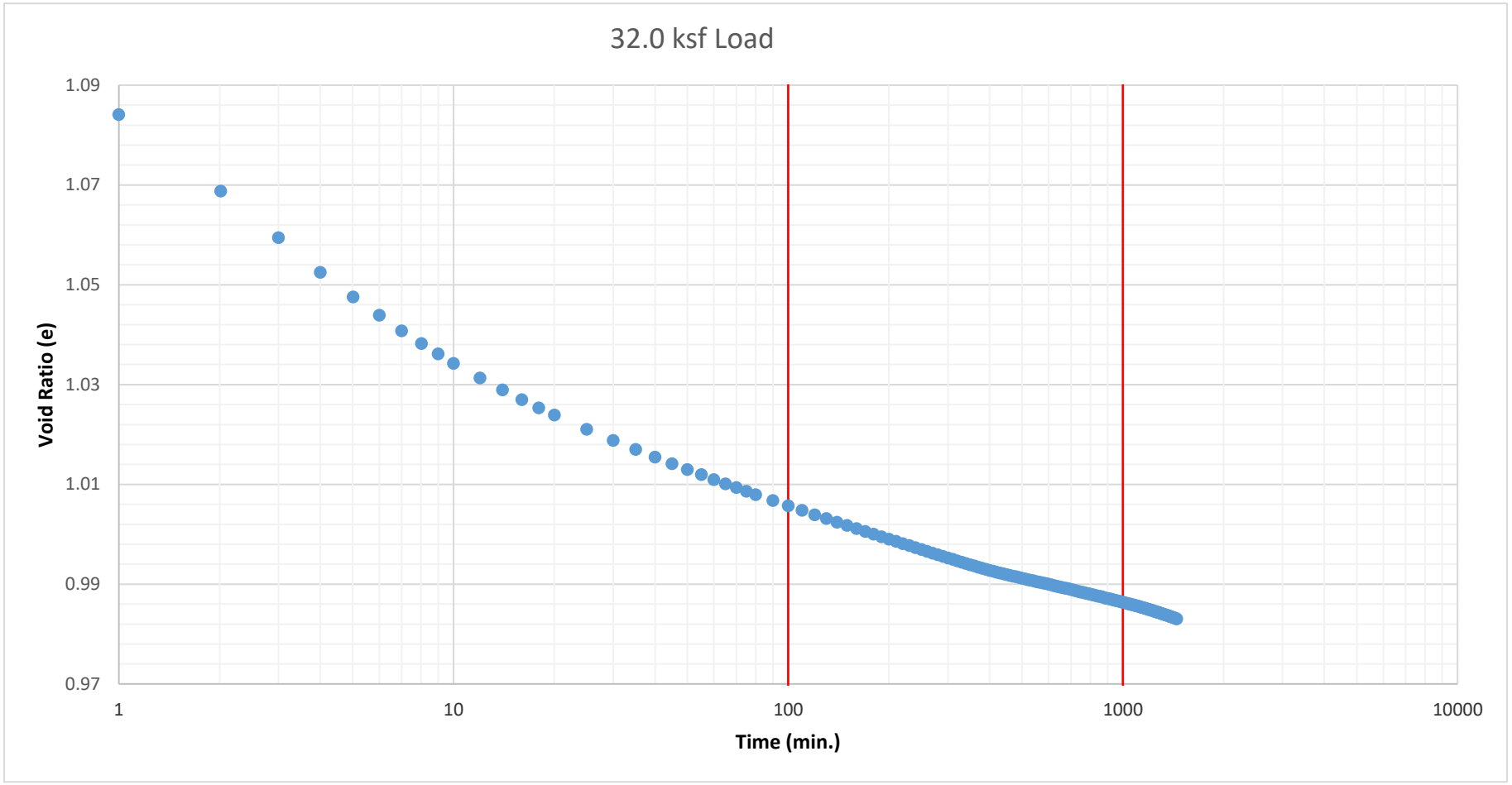
	C_α=	1.1483	-	1.1225	=	0.0258

Figure 10i

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	20-22	Moisture Content	63.3	%
Project Number:	2012-113 T500	Sample Depth	20-22 feet	Saturation	92.5	%
Exploration Number:	SU07-B-02	Soil Description	ML	Dry Density	59.5	pcf



	C_α=	1.0057	-	0.9864	=	0.0193

Figure 10j

HWA | GEOSCIENCES INC.
DBE/MWBE

November 12, 2020
HWA Project No. 2012-113-23 Task 500

Anchor QEA, LLC
6720 SW Macadam Avenue, Suite 125
Portland, Oregon 97219

Attention: Ms. Nicole LaFranchise

Subject: **Materials Laboratory Report**
Soil Index, Consolidation, Permeability and Triaxial Strength Testing
Millennium Bulk Terminals - Longview
Client Project No.: 190730-01.02

Dear Ms. LaFranchise;

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached Figures. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

SAMPLE DESCRIPTION: The subject samples were delivered to our laboratory on February 17 and 26, 2020 by Anchor QEA personnel. The samples were delivered in Shelby tubes and were designated with exploration ID, sample number, and depth of sampling. The soil samples were classified using visual-manual methods. The descriptions may be found on the attached Summary of Material Properties, Figure 1.

MOISTURE CONTENT OF SOIL: The moisture content of the soil samples (percent by dry mass) were determined in general accordance with ASTM D2216. The results are shown on Figure 1.

MOISTURE CONTENT, ASH, AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105^0 C) and ash content method 'C' (burned at 440^0 C). The results are percent by weight of dry soil and are summarized on Figure 1.

SPECIFIC GRAVITY OF SOILS: The specific gravity of selected samples of soil was determined using method ASTM D854. The test results are shown on the attached Summary of Material Properties, Figure 1.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): The plasticity index of each specified sample was tested using method ASTM D4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index of Soils Report, Figure 2.

CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION OF SOILS: Selected samples were tested in general accordance with method ASTM D4767 to determine the shear strength characteristics of the soil. The samples were extruded from Shelby tubes and then the test specimens were trimmed to obtain a cylindrical test sample with a length to diameter ratio between 2:1 and 2.5:1. The specimens were carefully weighed and measured prior to testing.

Three trials were run at varying confining stresses specified by the client. Each sample was run using a single specimen to perform a multi-stage shear test.

The multi-stage method was performed by first consolidating the sample at the lowest specified confining pressure. The sample was then sheared until the change in pore pressure was at or near its estimated peak. After reaching the peak change in pore pressure, the shear phase was terminated, and the specimen was reconsolidated at the middle consolidation pressure. Under the second consolidation pressure the sample was again sheared until the change in pore pressure was at or near its estimated peak, at which point the shear was terminated. The sample was reconsolidated a third and final time under the highest confining pressure and shearing was performed to sample failure, concluding the test.

The Consolidated Undrained test results are summarized and plotted graphically in Figures 3-6.

ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOIL: The consolidation properties of selected soil samples were measured in general accordance with ASTM D 2435. Saturation was maintained by inundation of the sample throughout the test. The samples were subjected to increasing increments of total stress, the duration of which was selected to exceed the time required for completion of primary consolidation as defined in the Standard, Method B. Consolidation loads for sample PDI-SU06-B-01-25-27 were maintained for a period of 24-hours to collect sufficient data for use in the estimation of secondary consolidation. Unloading of the samples was carried out incrementally. The primary and secondary compression test results are presented on the attached Consolidation Test Report, Figures 7a-9.

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA also makes no warranty as to how representative either the samples tested or the test results obtained are to actual field conditions. It is a well-established fact that sampling methods present varying degrees of disturbance that affect sample representativeness.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

Sincerely,

HWA GEOSCIENCES INC.

Daniel Walton
Materials Laboratory Supervisor

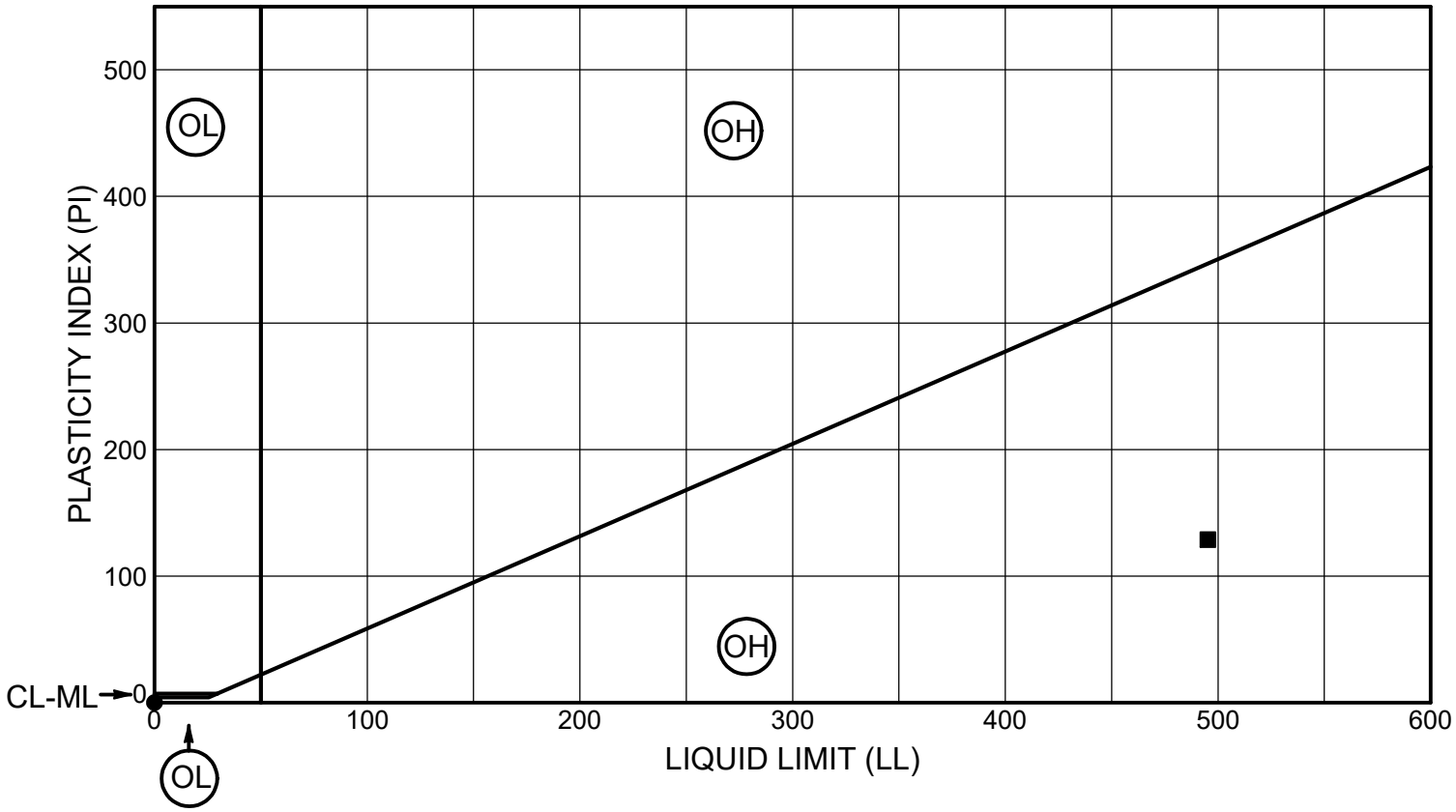
Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist
Vice President

Attachments:

Figure 1	Summary of Material Properties
Figure 2	Liquid Limit, Plastic Limit and Plasticity Index of Soils
Figures 3-6	Consolidated Undrained Triaxial Compression Test for Cohesive Soils
Figures 7a-9	Consolidation Test Report

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU06-B-01,25-27	25.0	27.0	47.7									ML	Dark grayish brown, SILT
SU06-B-03,45-47	45.0	47.0	74.2	7.6								ML	Dark grayish-brown, SILT
SU07-B-01,10-12	10.0	12.0	41.6		2.654	31	31	NP				ML	Dark gray, SILT
SU07-B-03,10-12	10.0	12.0	313.1		2.336	495	367	128				OH	Dark brown, organic SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	SU07-B-01	10-12	10.0 - 12.0	(ML) Dark gray, SILT	42	NP	NP	NP	
■	SU07-B-03	10-12	10.0 - 12.0	(OH) Dark brown, organic SILT	313	495	367	128	

HWA GeoSciences Inc.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

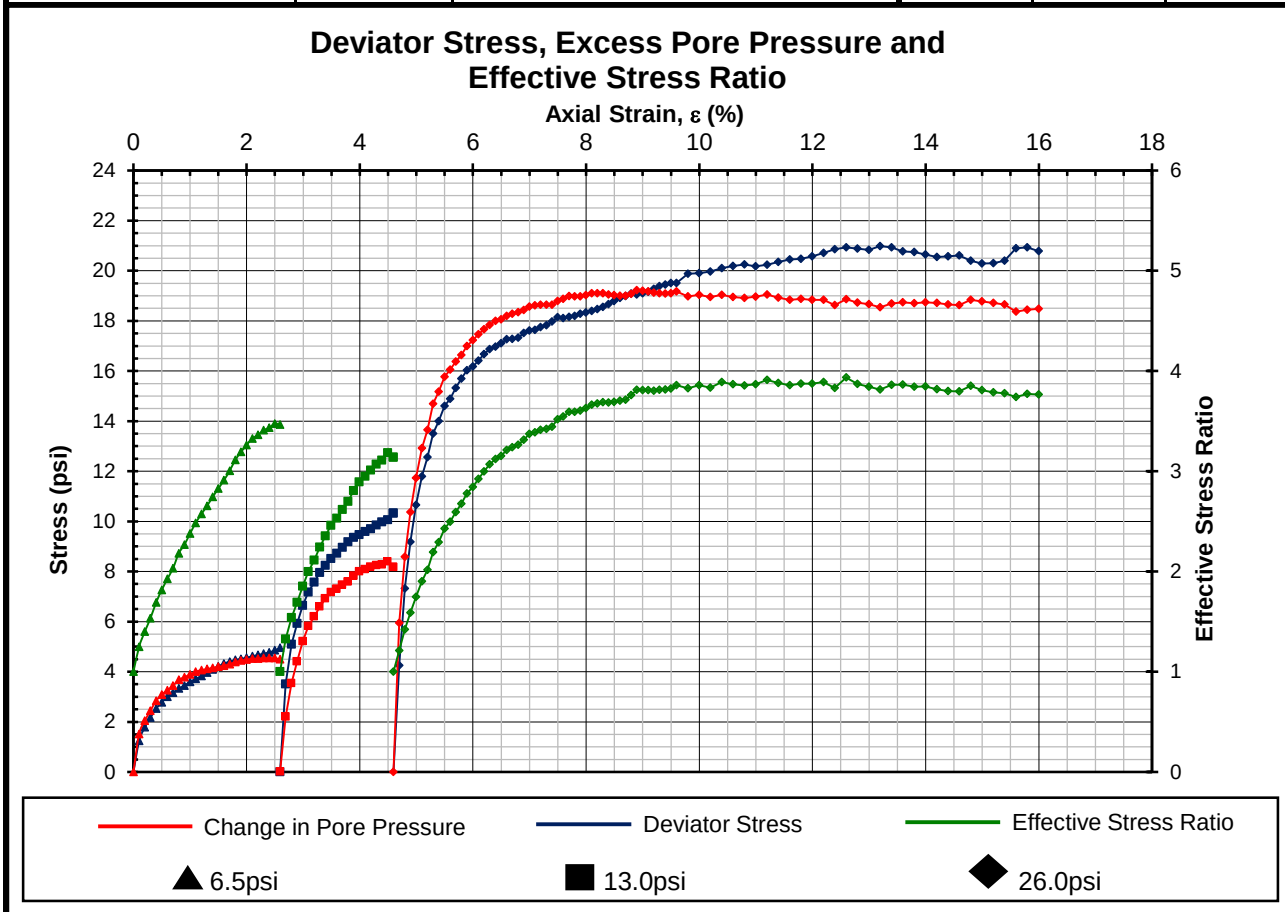
LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

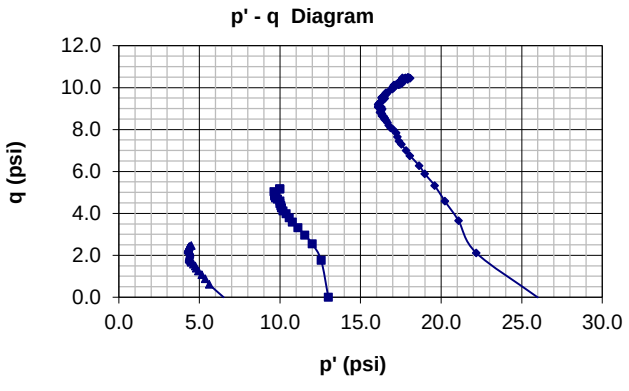
PROJECT NO.: 2012-113 T500 FIGURE: 2

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor QEA - Longview			Date:	8/13/2020	
Project No.:	2012-113 T500		Exploration ID:		SU06-B01	
Technician:	DW		Sample No:		25-27	
Sample Description:	Dark grayish brown, SILT			Sample Depth, ft:	25-27	
Confining Pressures:	**6.5psi**	**13.0psi**	**26.0psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	47.7%	Final Moisture:		39.7%	6.5psi	13.0psi	26.0psi
Initial Wet Density, pcf:	108.7				605	882	685
Initial Dry Density, pcf:	73.6						



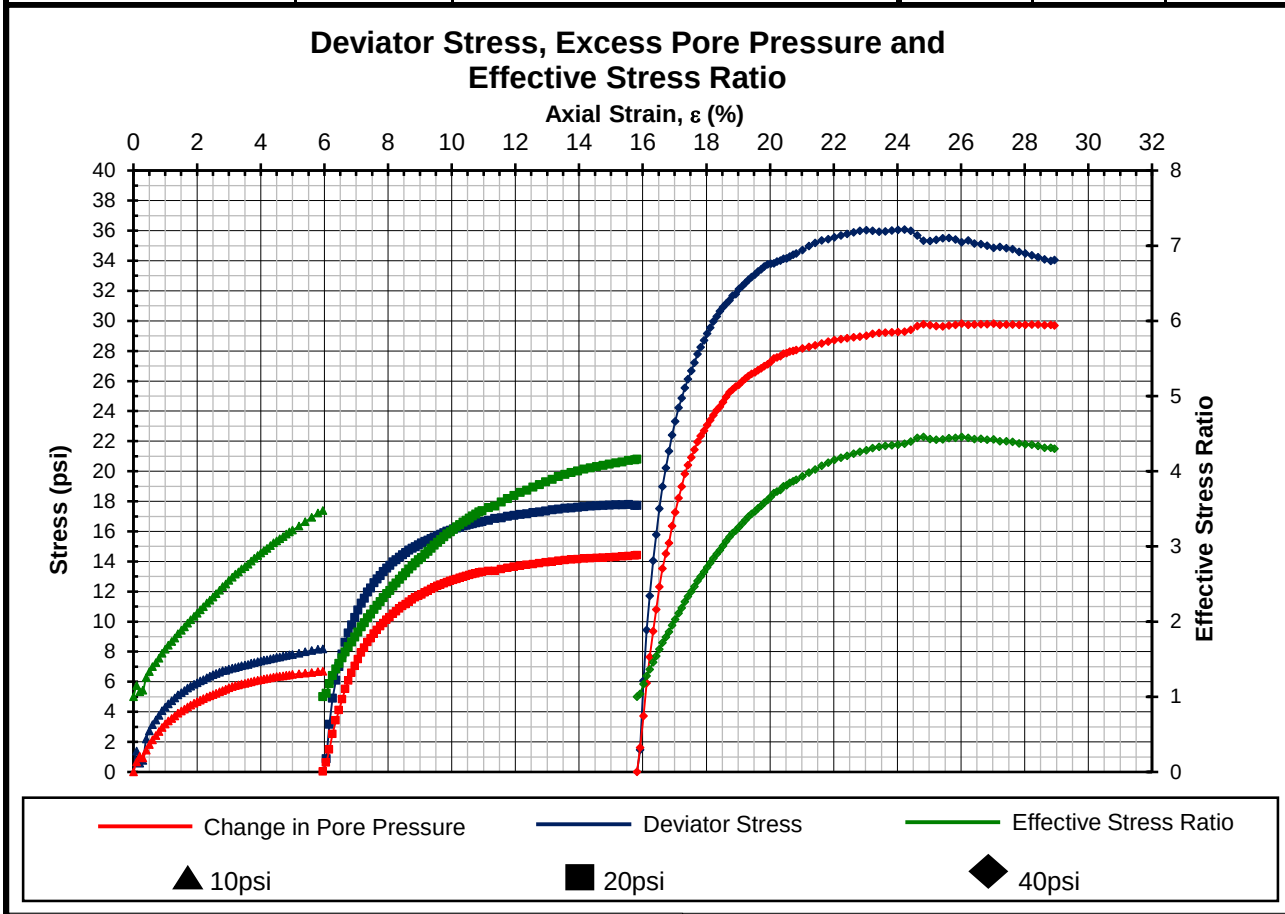


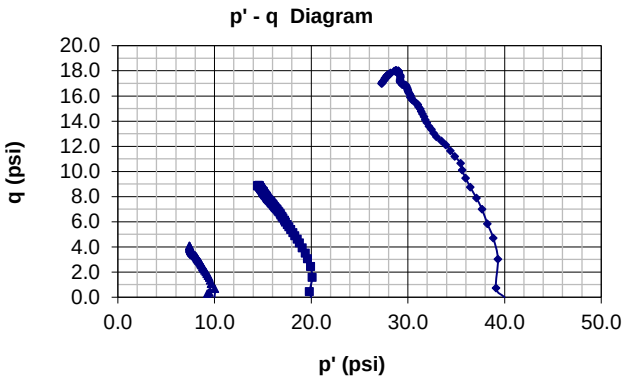
Reviewed by: S. Greene Figure 3

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor - Longview			Date:	10/19/2020	
Project No.:	2012-113 T500		Exploration ID:		SU06-B-03	
Technician:	DW		Sample No:		45-47	
Sample Description:	Dark grayish brown, SILT (ML)			Sample Depth, ft:	45-47	
Confining Pressures:	**10psi**	**20psi**	**40psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	74.2%	Final Moisture:		51.2%	10psi	20psi	40psi
Initial Wet Density, pcf:	93.9				128	242	313
Initial Dry Density, pcf:	53.9						





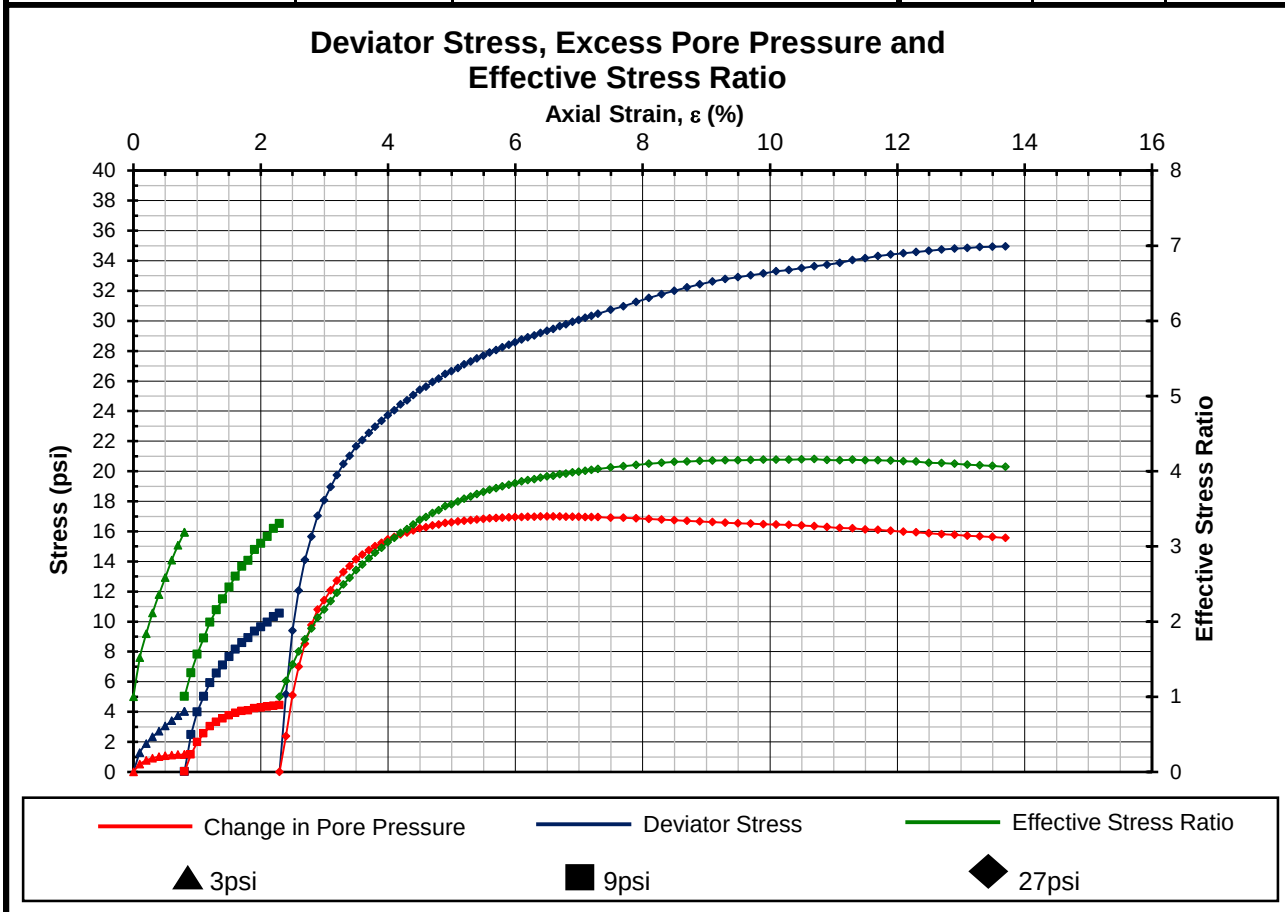
Reviewed by: S. Greene

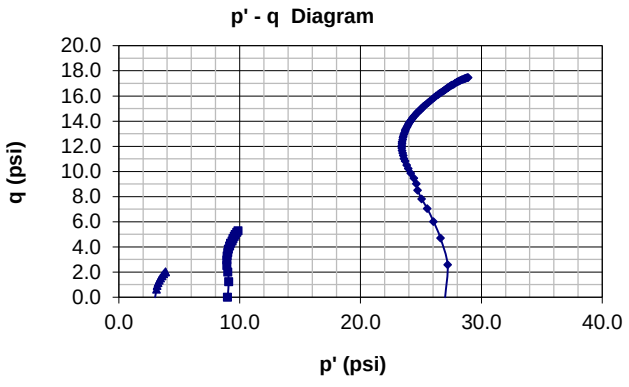
Figure 4

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor-Longview			Date:	10/8/2020	
Project No.:	2012-113 T500		Exploration ID:		SU07-B-01	
Technician:	DW		Sample No:		10-12	
Sample Description:	Dark gray, SILT (ML)			Sample Depth, ft:	10-12	
Confining Pressures:	**3psi**	**9psi**	**27psi**	Consolidation T50 Values (minutes)		
Initial Moisture:	51.2%	Final Moisture:	40.3%	3psi	9psi	27psi
Initial Wet Density, pcf:	111.9			40	40	40
Initial Dry Density, pcf:	74.0					





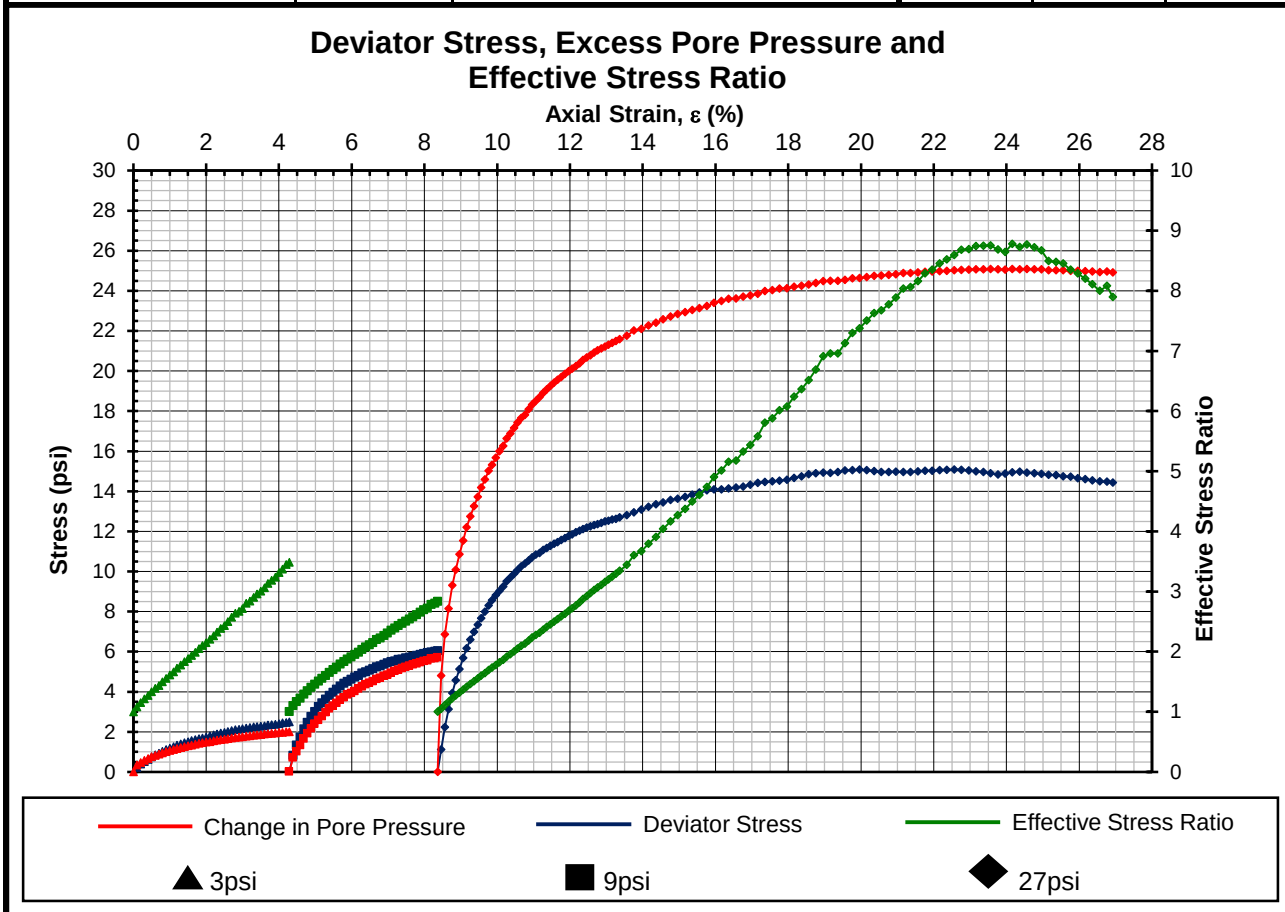
Reviewed by: S. Greene

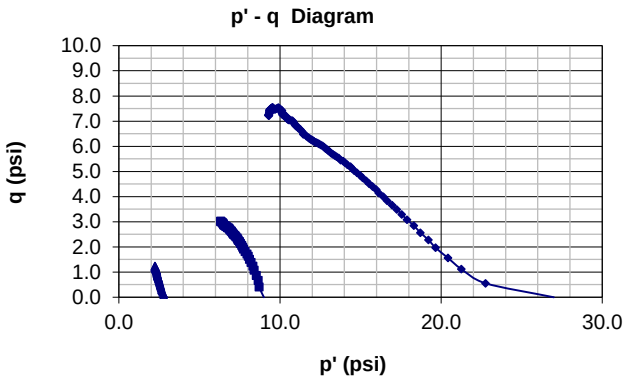
Figure 5

HWA GeoSciences Inc - Materials Testing Laboratory

Consolidated-Undrained Triaxial Compression Test for Cohesive Soils (ASTM D 4767)

Project Name:	Anchor-Longview			Date:	9/14/2020	
Project No.:	2012-113 T500		Exploration ID:		SU07-B-03	
Technician:	DW		Sample No:		10-12	
Sample Description:	Dark brown, organic SILT (OH)			Sample Depth, ft:	10-12	
Confining Pressures:	**3psi**	**9psi**	**27psi**		Consolidation T50 Values (minutes)	
Initial Moisture:	313.1%	Final Moisture:		171.6%	3psi	9psi	27psi
Initial Wet Density, pcf:	70.6				312	312	392
Initial Dry Density, pcf:	17.1						

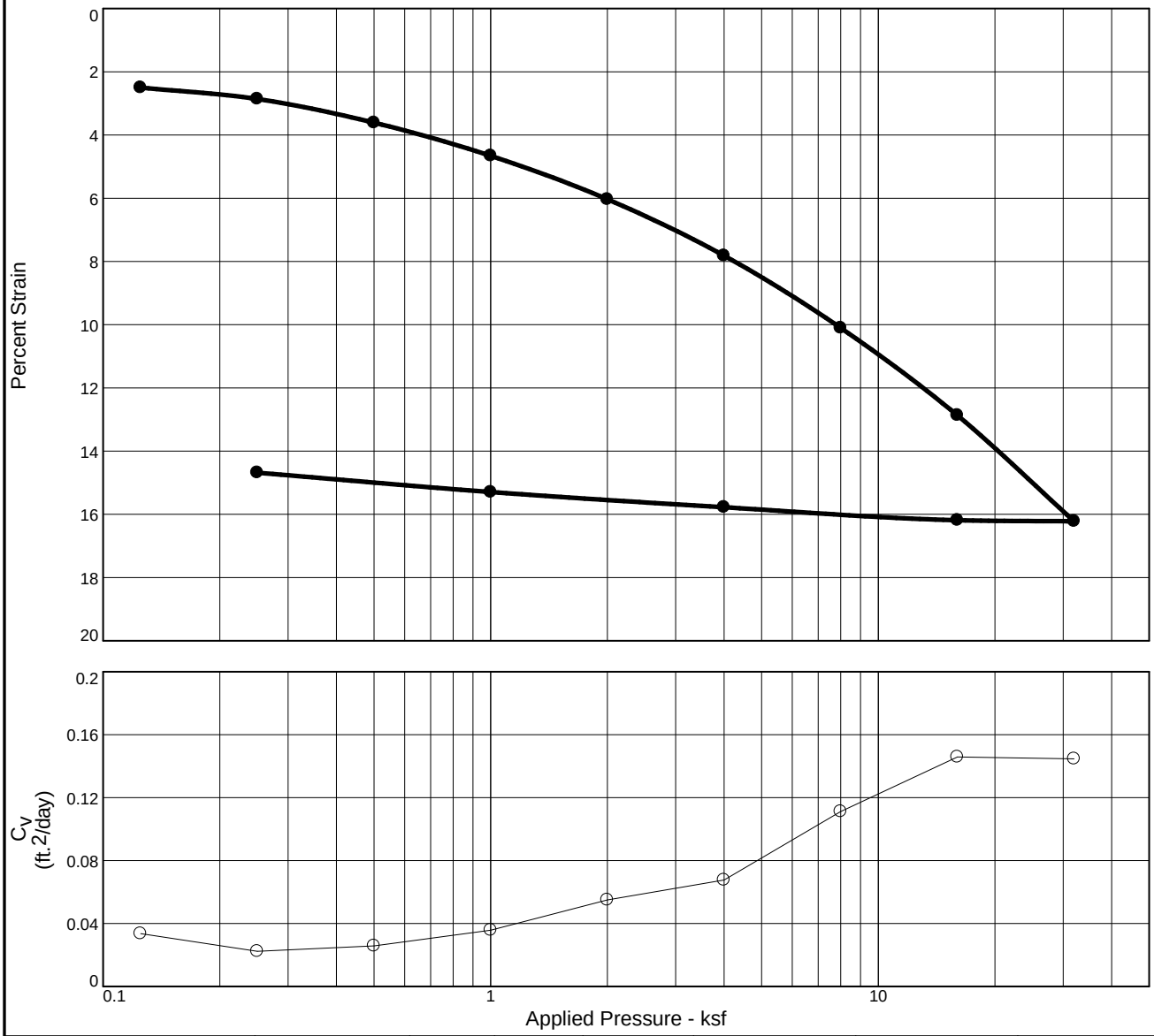




Reviewed by: S. Greene

Figure 6

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
112.7 %	47.7 %	74.6			2.65	ML		1.122

MATERIAL DESCRIPTION

Dark grayish brown, SILT

Project No. 2012-113 **Client:** Anchor QEA

Project: Millenium Bulk Terminals - Longview

Source of Sample: SU06-B-01 **Depth:** 25 **Sample Number:** 25-27

Remarks:

*Specific gravity information is assumed

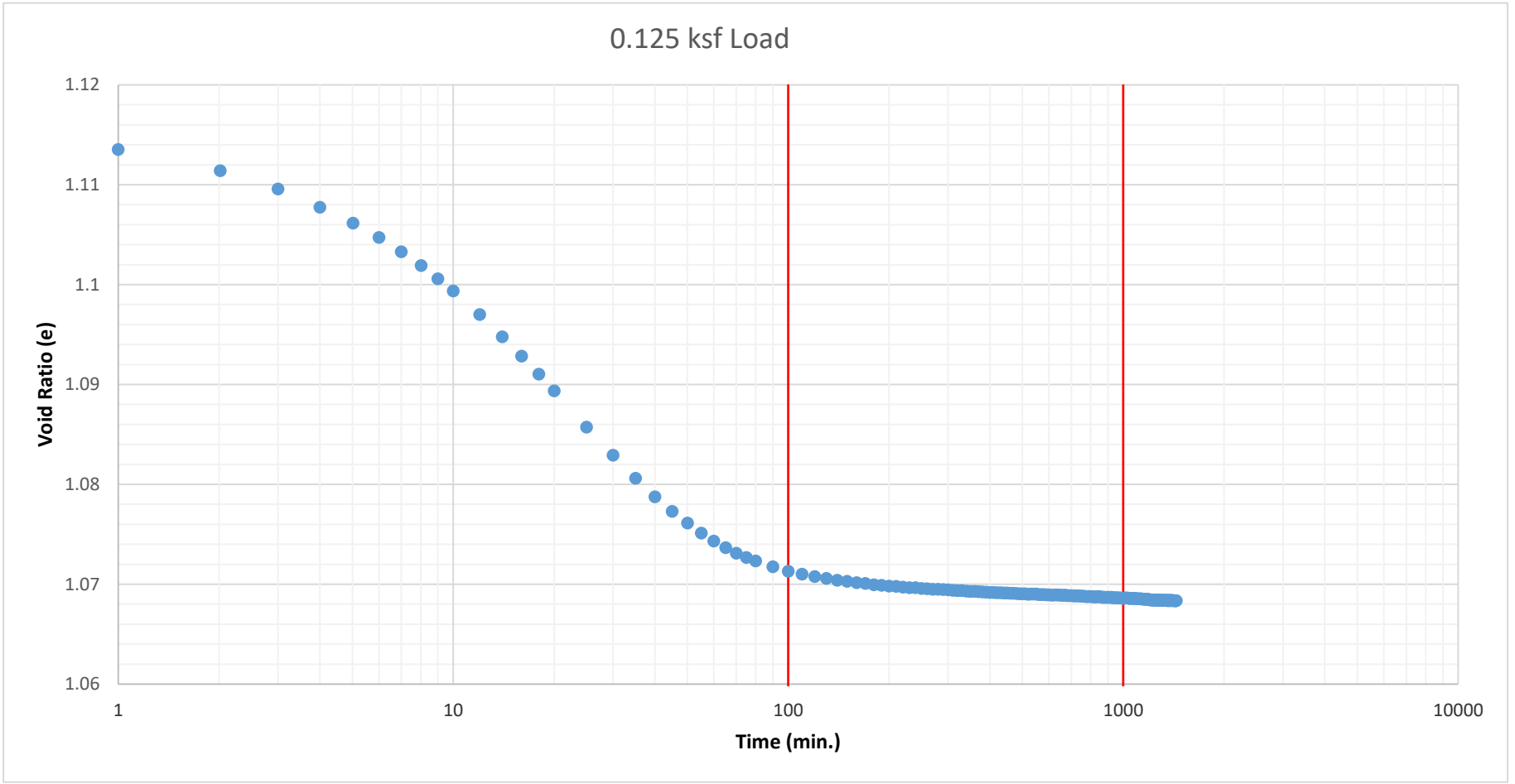
HWA GeoSciences Inc. DBE/MWBE

Figure 7a

Tested By: DW **Checked By:** SEG

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



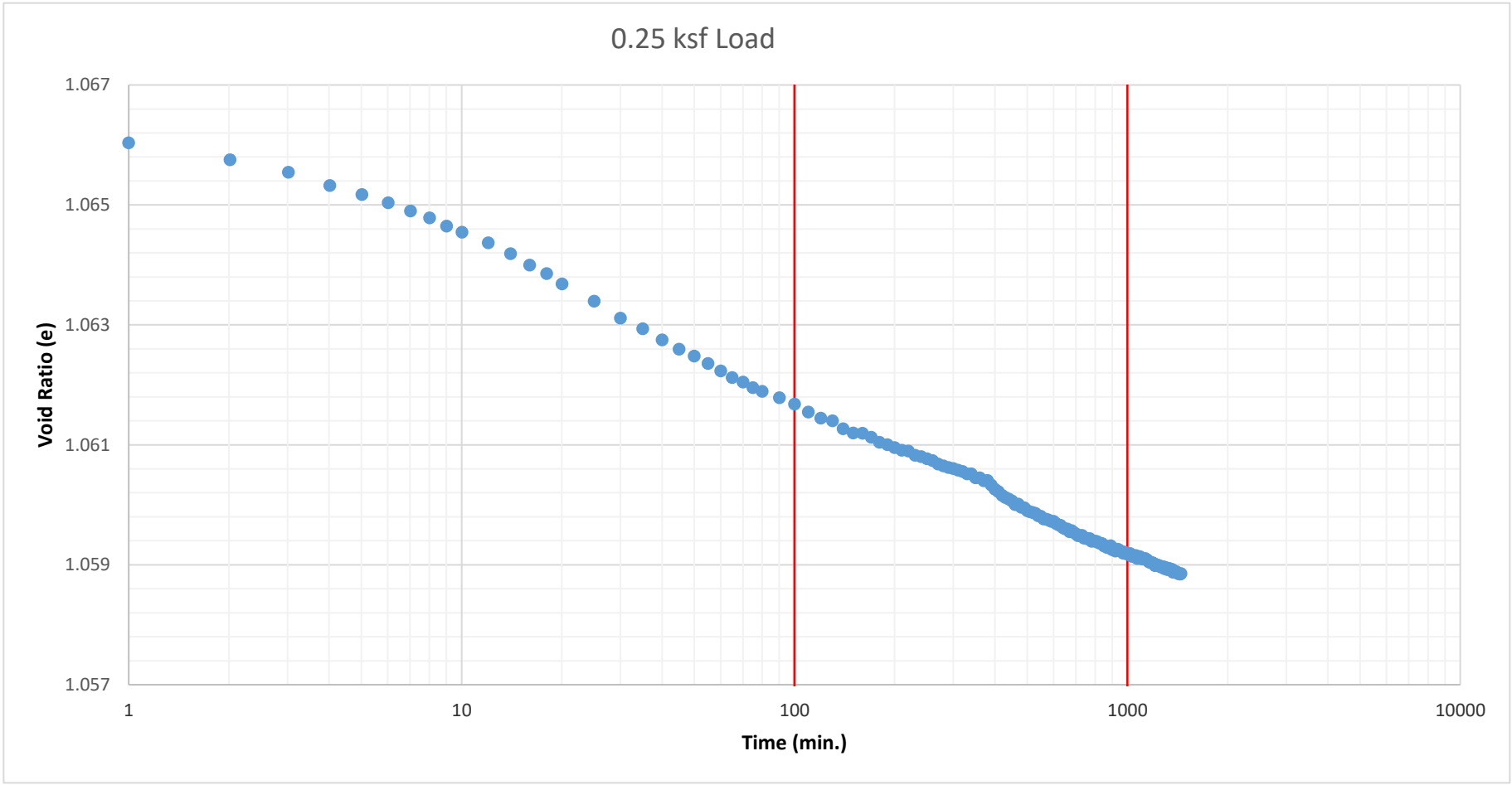
	C_α=	1.0713	-	1.0686	=	0.0027

Figure 7b

GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf

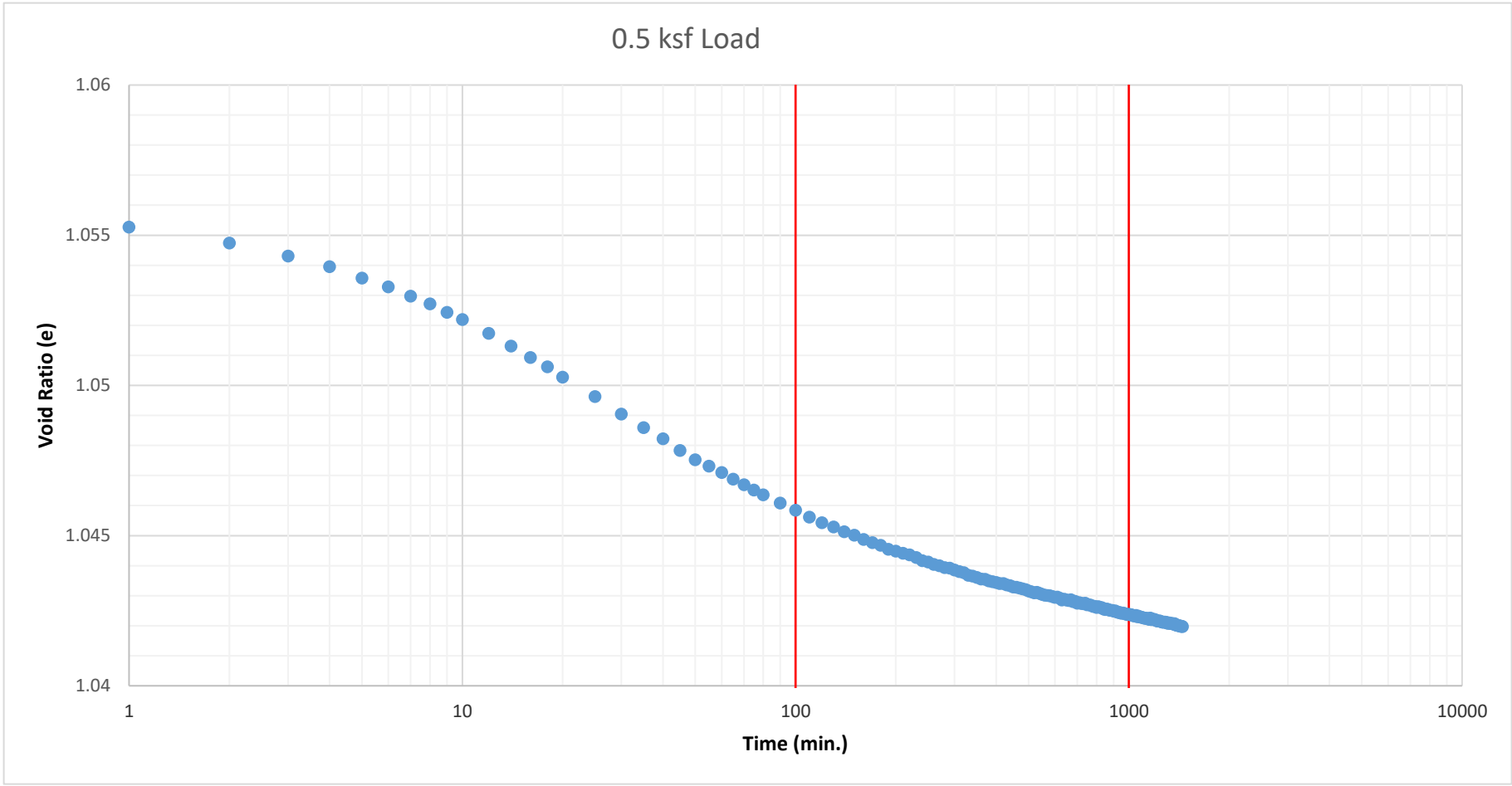


	C_α=	1.0617	-	1.0592	=	0.0025

Figure 7c

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



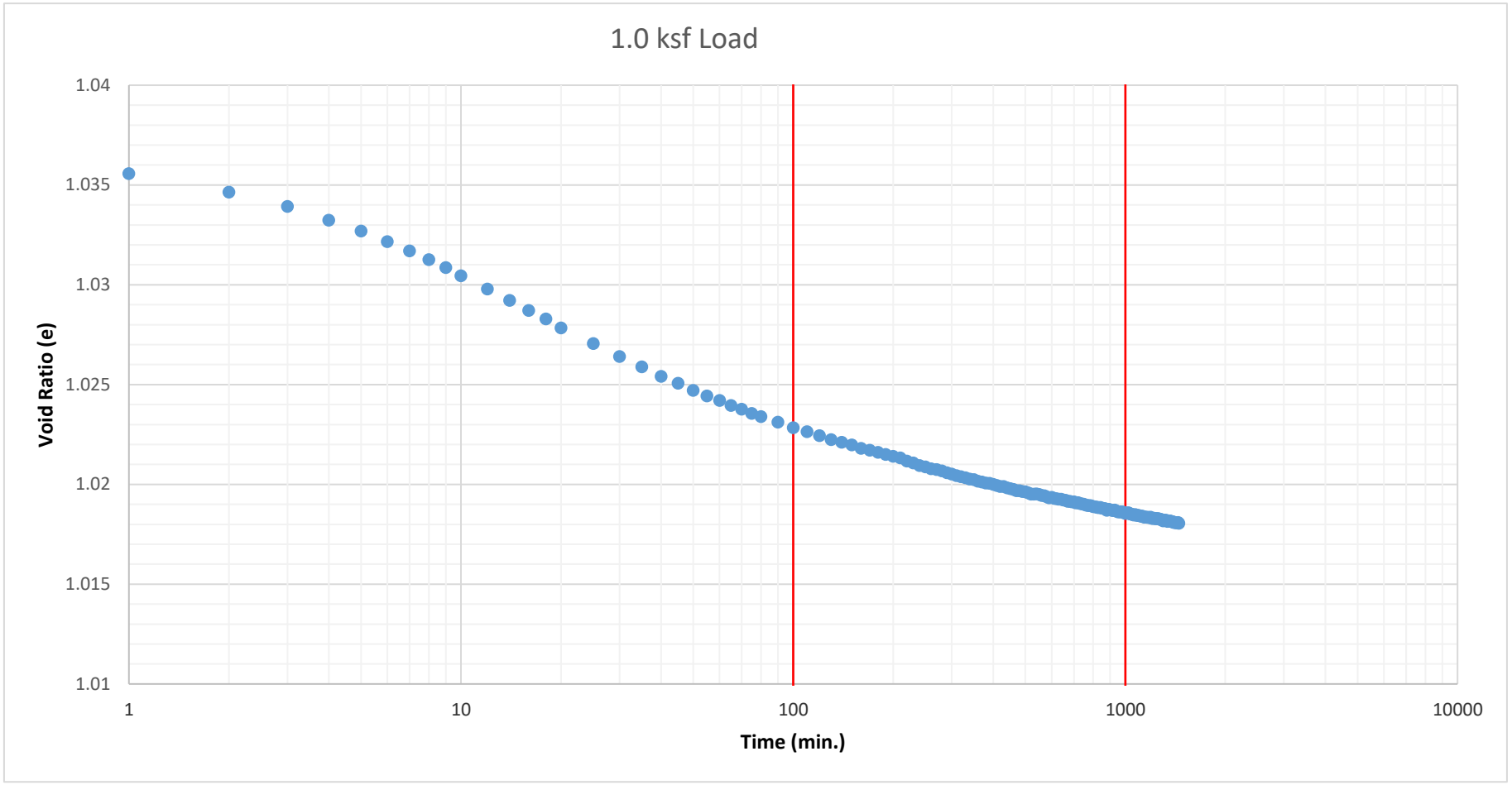
	C_α=	1.0458	-	1.0424	=	0.0035

Figure 7d

GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf

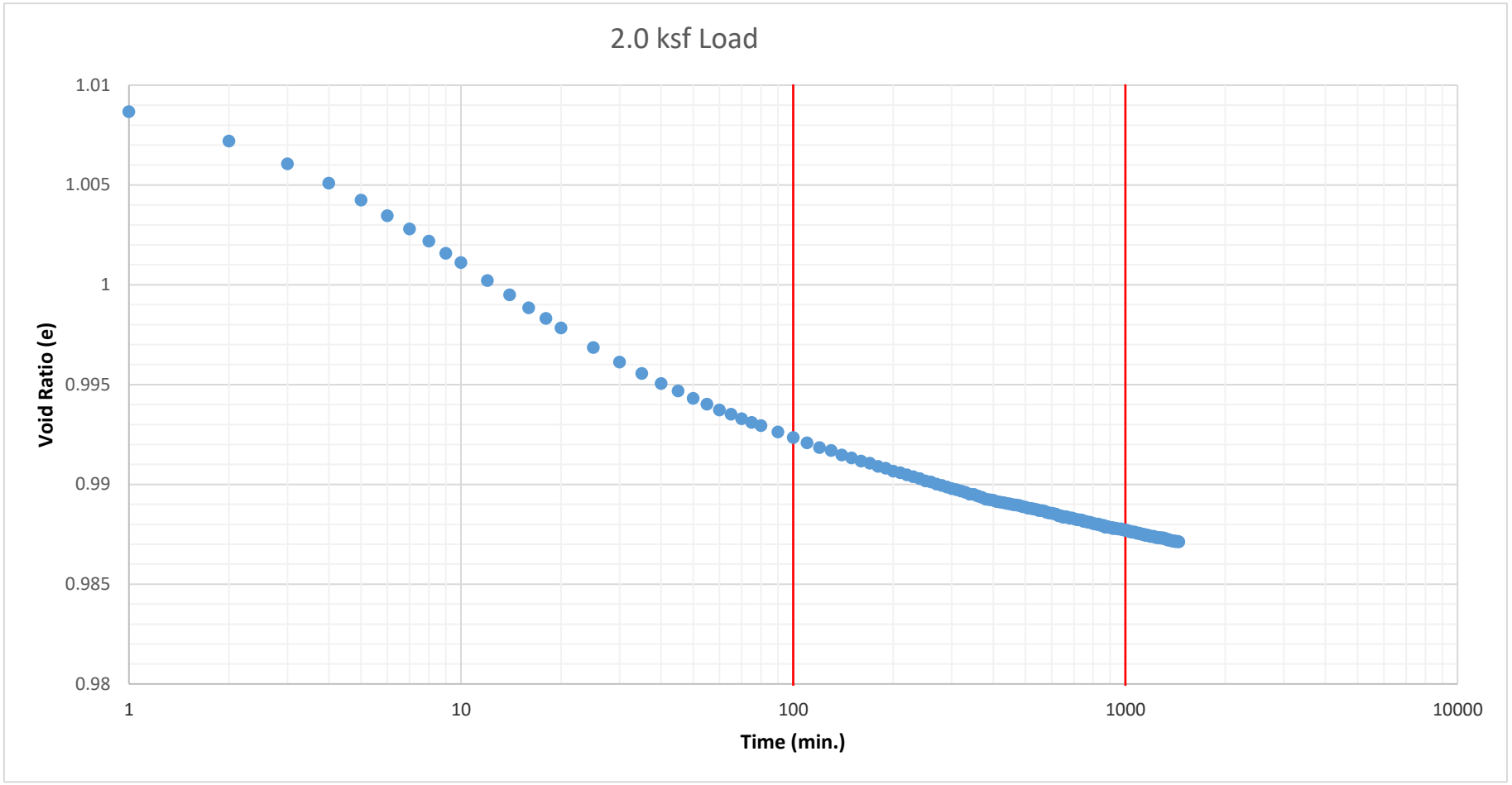


	C_α=	1.0228	-	1.0185	=	0.0043

Figure 7e

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf

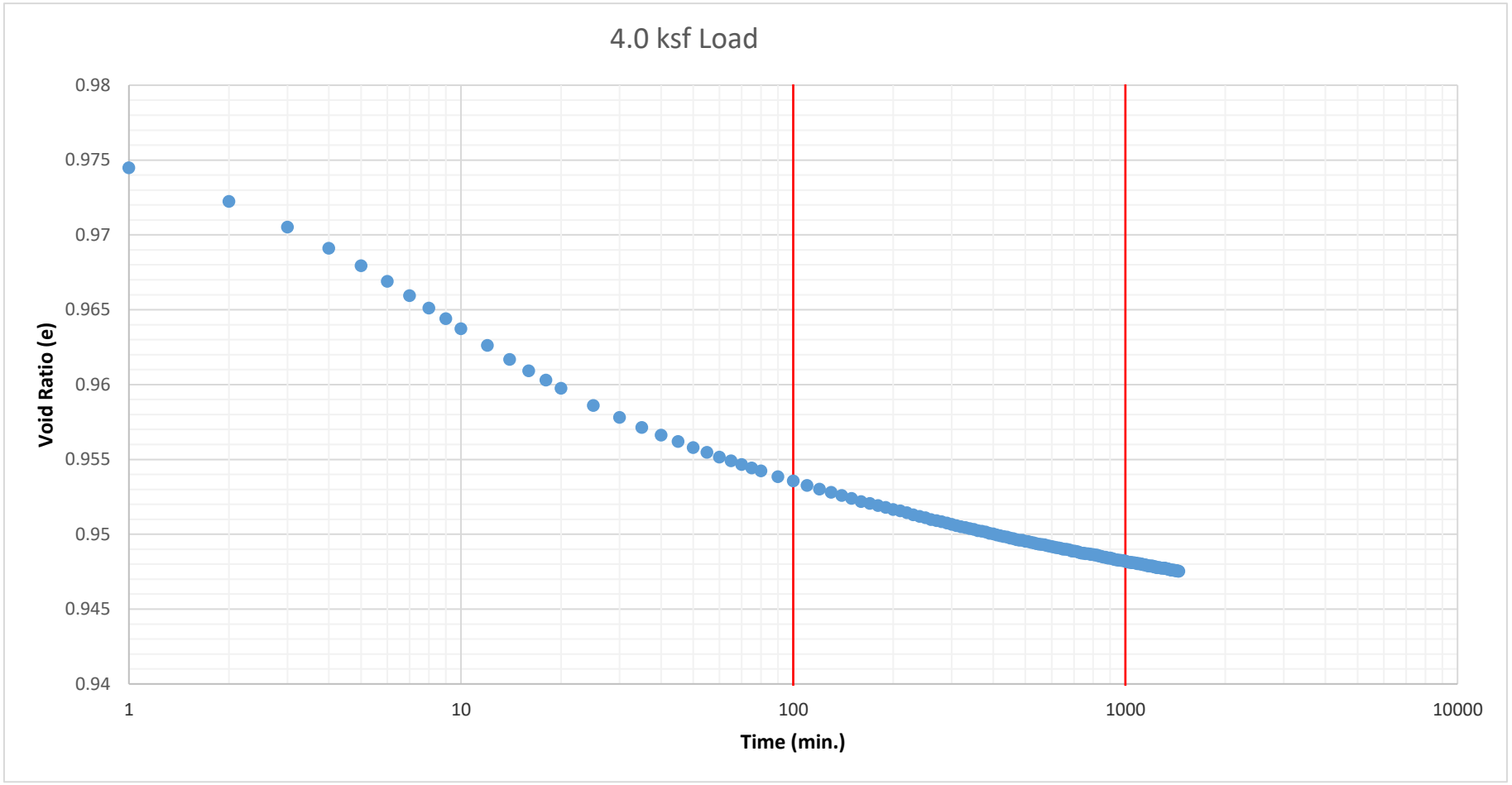


	C_α=	0.9923	-	0.9877	=	0.0046

Figure 7f

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



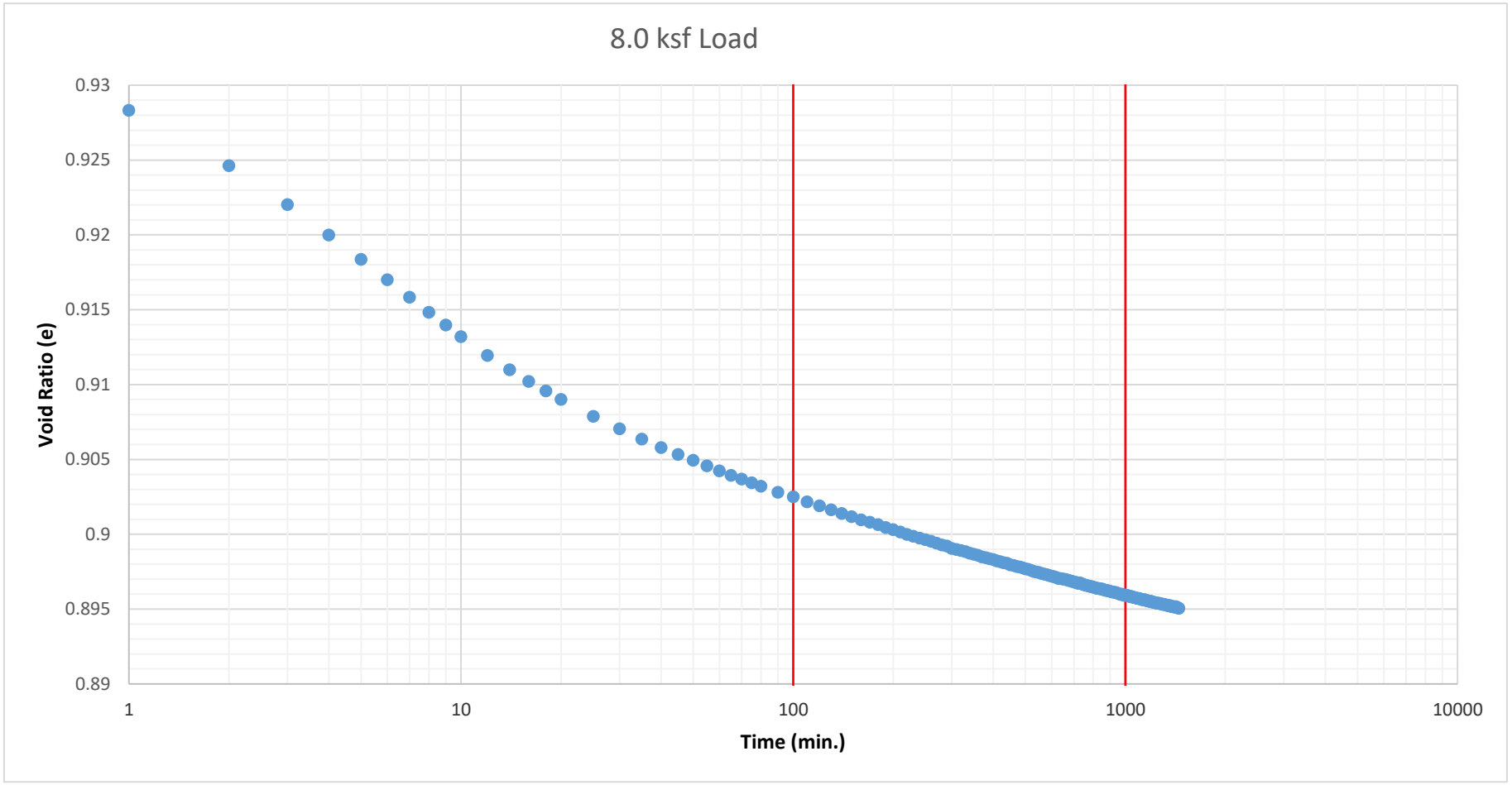
	C_α=	0.9536	-	0.9482	=	0.0054

Figure 7g

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



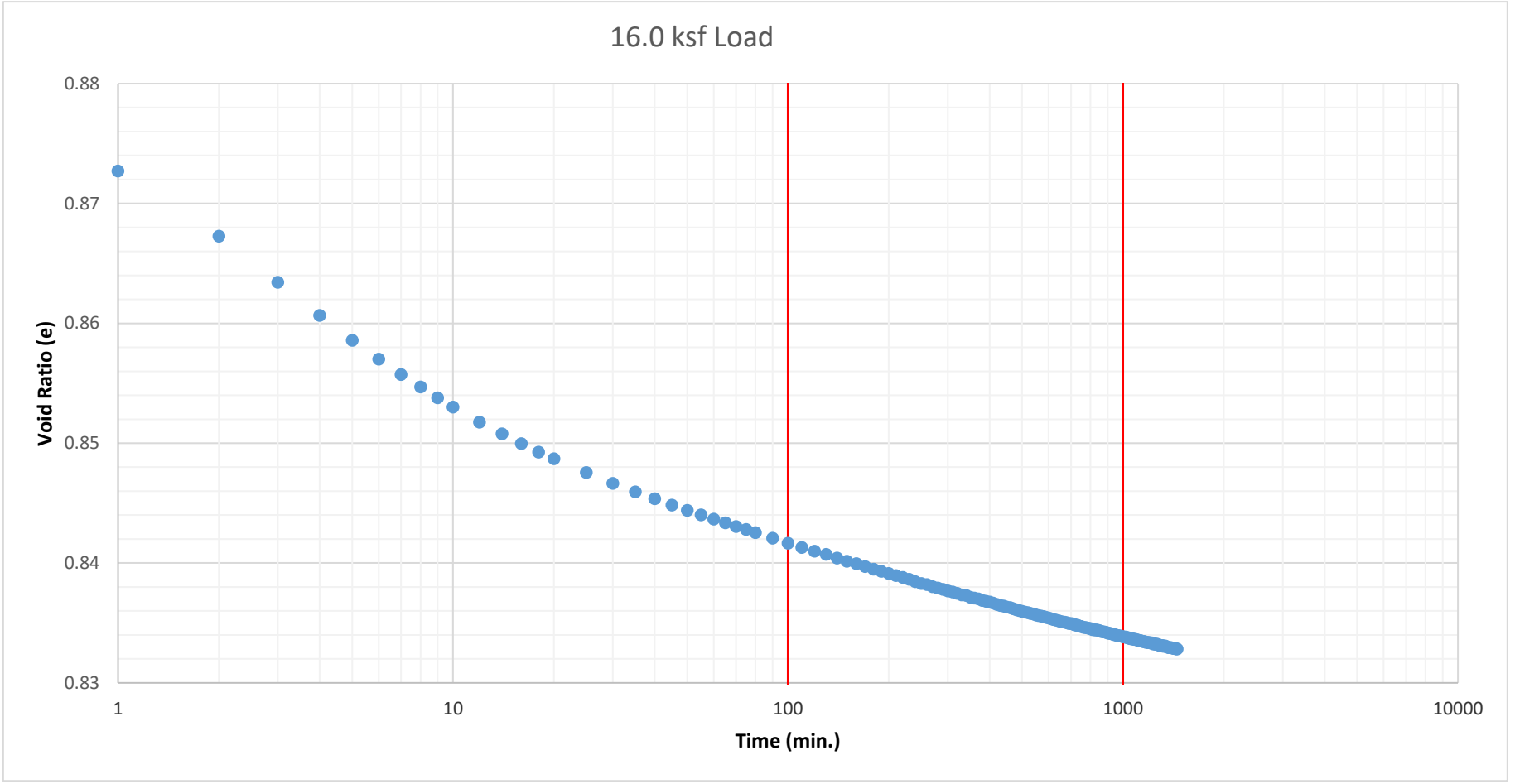
	C_α=	0.9025	-	0.8959	=	0.0066

Figure 7h

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



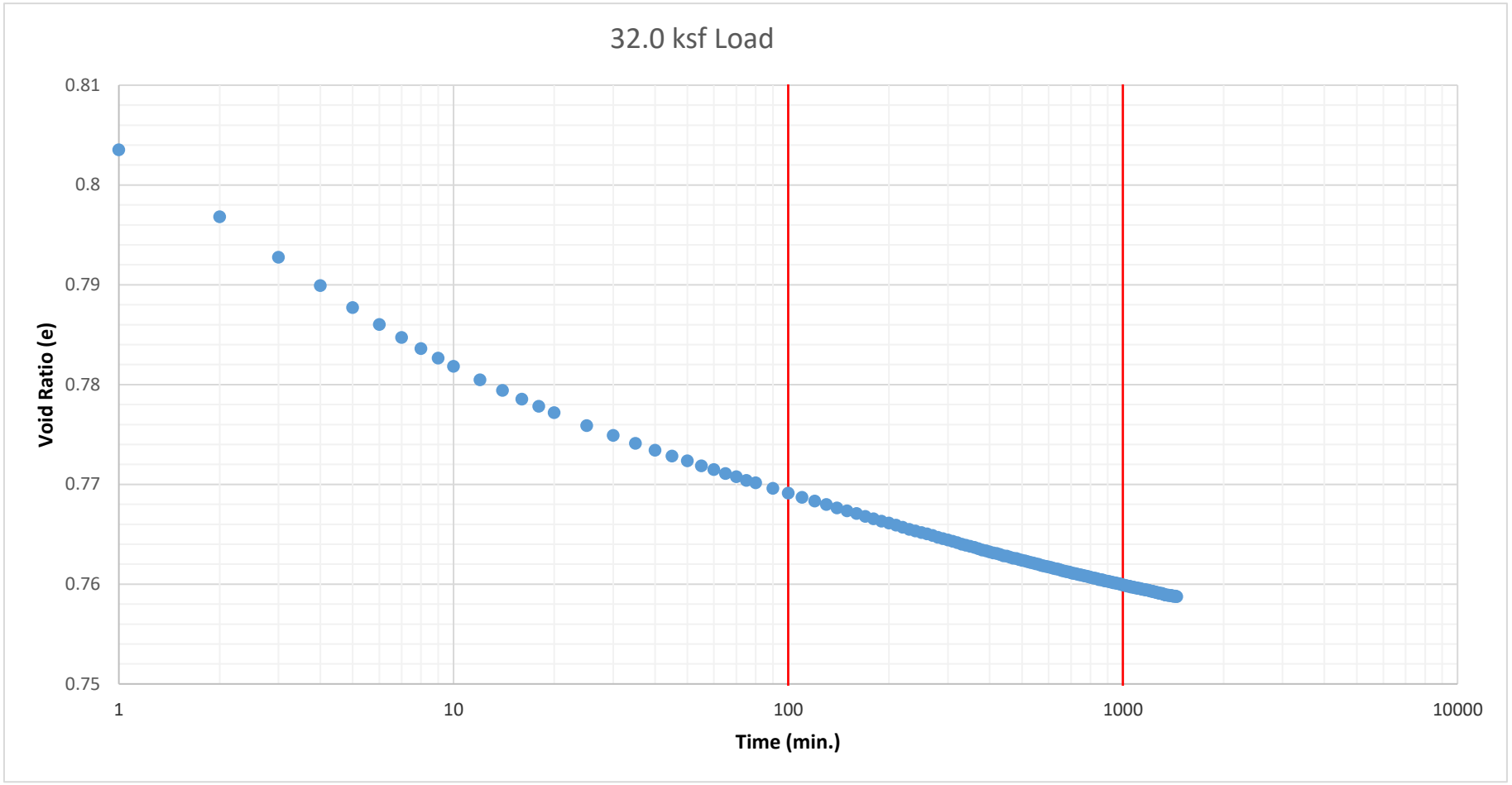
	C_α=	0.8416	-	0.8338	=	0.0078

Figure 7i

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

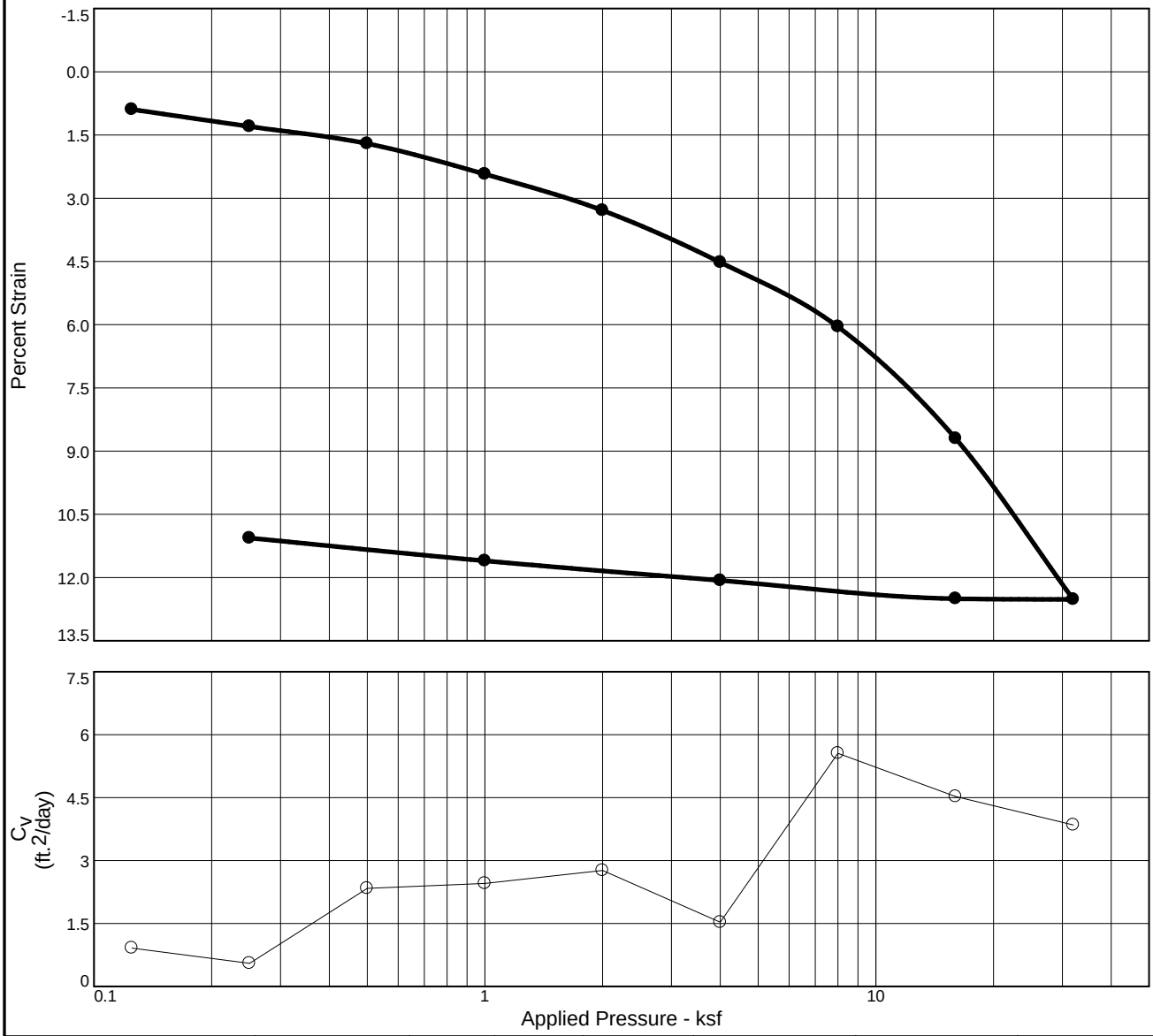
					Natural	
Project Name:	Anchor-Longview	Sample Number	25-27	Moisture Content	47.7	%
Project Number:	2012-113 T500	Sample Depth	25-27 feet	Saturation	112.7	%
Exploration Number:	SU06-B-01	Soil Description	ML	Dry Density	74.6	pcf



	C_α=	0.7691	-	0.7599	=	0.0092

Figure 7j

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
112.7 %	51.2 %	73.2			2.654	ML		1.206

MATERIAL DESCRIPTION

Dark gray, SILT

Project No. 2012-113 **Client:** Anchor QEA

Project: Millenium Bulk Terminals - Longview

Source of Sample: SU07-B-01 **Depth:** 10 **Sample Number:** 10-12

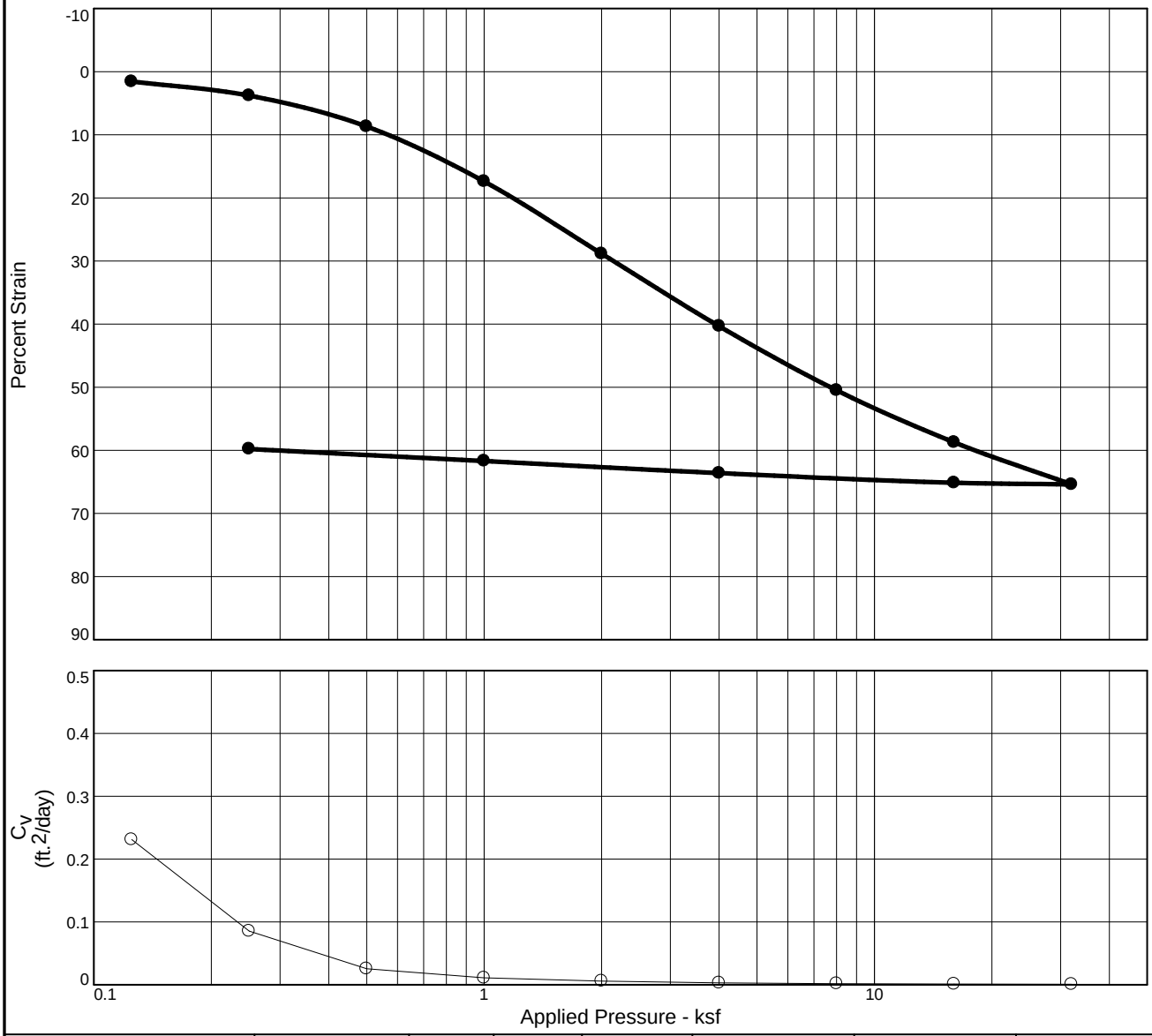
Remarks:

HWA GeoSciences Inc. DBE/MWBE

Figure 8

Tested By: DW **Checked By:** SEG

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
92.2 %	313.1 %	16.2	495	128	2.336	OL/OH		7.935

MATERIAL DESCRIPTION

Very dark brown, organic SILT

Project No. 2012-113 **Client:** Anchor QEA

Project: Millenium Bulk Terminals - Longview

Source of Sample: SU07-B-03 **Depth:** 10 **Sample Number:** 10-12

Remarks:

HWA GeoSciences Inc. DBE/MWBE

Figure 9

Tested By: DW **Checked By:** SEG

HWA GEOSCIENCES INC.
DBE/MWBE

January 6, 2021
HWA Project No. 2012-113-23 Task 500

Anchor QEA, LLC
6720 SW Macadam Avenue, Suite 125
Portland, Oregon 97219

Attention: Ms. Nicole LaFranchise

Subject: **Materials Laboratory Report**
Soil Index and Consolidation Testing
Millennium Bulk Terminals - Longview
Client Project No.: 190730-01.02

Dear Ms. LaFranchise;

In accordance with your request, HWA GeoSciences Inc. (HWA) performed laboratory testing for the above referenced project. Herein we present the results of our laboratory analyses, which are summarized on the attached Figures. The laboratory testing program was performed in general accordance with your instructions and appropriate ASTM Standards as outlined below.

SAMPLE DESCRIPTION: Per the client's request, additional testing was performed on archived samples delivered to our laboratory on February 26, 2020 by Anchor QEA personnel. The sample descriptions may be found on the attached Summary of Material Properties, Figure 1.

MOISTURE CONTENT, ASH, AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105^0 C) and ash content method 'C' (burned at 440^0 C). The results are percent by weight of dry soil and are summarized on Figure 1.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): The plasticity index of each specified sample was tested using method ASTM D4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index of Soils Report, Figure 2.

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA also makes no warranty as to how representative either the samples tested or the test results obtained are to actual field conditions. It is a well-established fact that sampling methods present varying degrees of disturbance that affect sample representativeness.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

Sincerely,

HWA GEOSCIENCES INC.

Stephen Wright
Materials Laboratory Manager

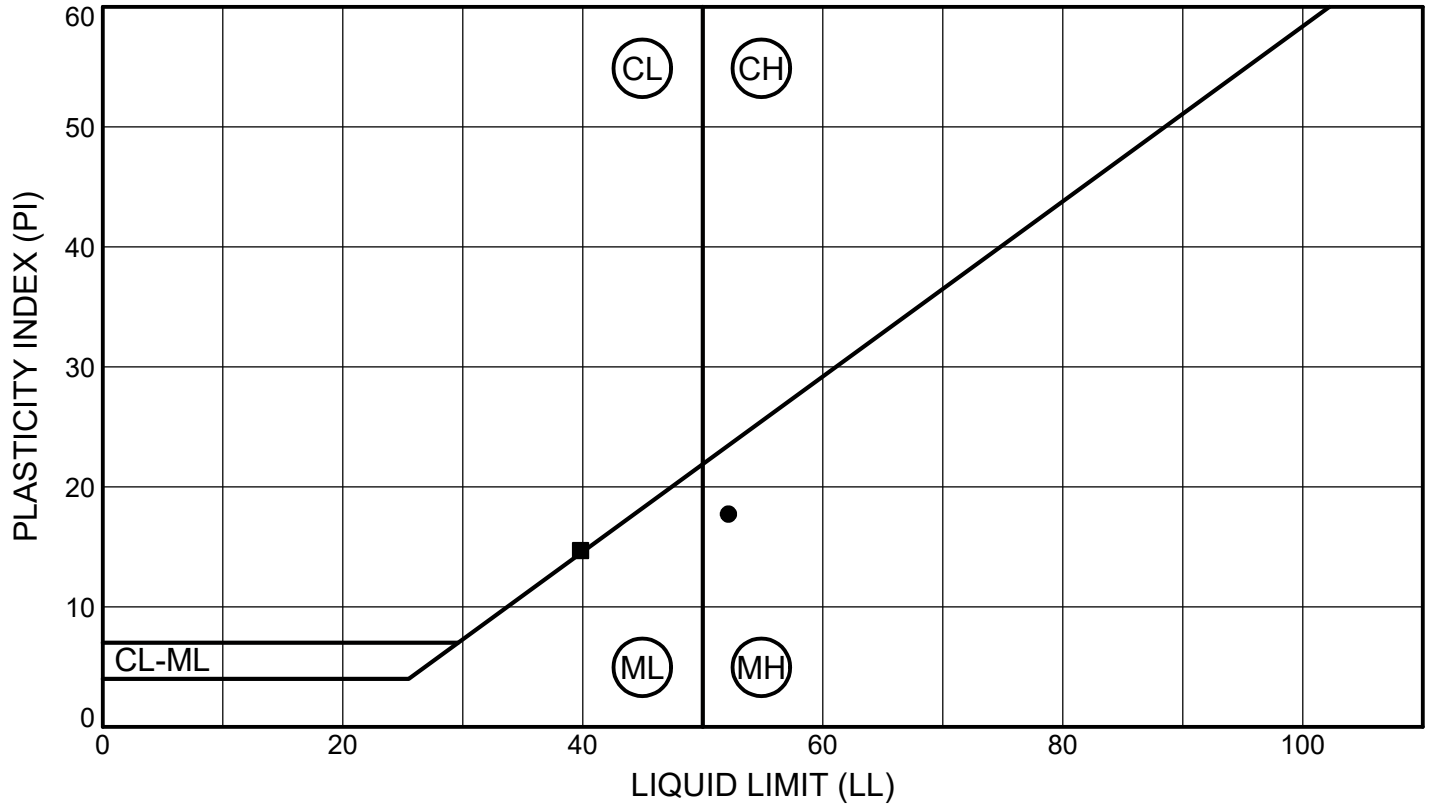
Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist
Vice President

Attachments:

Figure 1	Summary of Material Properties
Figure 2	Liquid Limit, Plastic Limit and Plasticity Index of Soils

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
SU06-B-02,36-37	36.0	37.0	73.5			52	34	18				MH	Dark grayish-brown, elastic SILT
SU06-B-03,50-55	50.0	55.0	86.9	10.9								OL	Grayish-brown, organic SILT
SU06-B-04,43-46	43.0	46.0	83.6	10.3		94	74	20				OH	Dark grayish-brown, organic SILT
SU06-B-05,20-25	20.0	25.0	34.6			40	25	15				CL	Olive-brown, lean CLAY
SU06-B-07,46-54	46.0	54.0	77.8	9.3		90	50	40				OH	Olive-brown, organic SILT
SU07-B-01,30-35	30.0	35.0	79.7	9.1								OL	Dark grayish-brown, organic SILT
SU07-B-01,35-40	35.0	40.0	98.6	8.8		118	71	47				OH	Dark brown, organic SILT
SU07-B-03,15-20	15.0	20.0	93.4	9.0		55	42	13				OH	Dark grayish-brown, organic SILT
SU07-B-03,20-25.3	20.0	25.3	97.2	13.2								OL	Dark grayish-brown, organic SILT
SU07-B-03,30-32	30.0	32.0	101.0	10.2	2.619	95	45	50				OH	Very dark brown, organic SILT
SU07-B-04,25-30	25.0	30.0	91.7	7.1								OL	Dark grayish-brown, organic SILT
SU07-B-04,45-50	45.0	50.0	79.9	10.0								OL	Dark grayish-brown, organic SILT
SU07-B-04,50-52	50.0	52.0	91.0	6.9		73	45	28				OH	Dark grayish-brown, organic SILT
SU10-B-01,25-30	25.0	30.0	54.4	6.2		73	41	32				OH	Grayish-brown, organic SILT

Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



SYMBOL	SAMPLE		DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
●	SU06-B-02	36-37	36.0 - 37.0	(MH) Dark grayish-brown, elastic SILT	73	52	34	18	
■	SU06-B-05	20-25	20.0 - 25.0	(CL) Olive-brown, lean CLAY	35	40	25	15	

HWA GeoSciences Inc.

Laboratory Testing for Anchor QEA
Millennium Bulk Terminals
Longview, WA
Client Project No.: 190730-01.02

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
METHOD ASTM D4318

PROJECT NO.: 2012-113 T500 FIGURE: 2

Client:	Anchor QEA, LLC.	**Date:**	March 10, 2022
Address:	720 Olive Way	**Project:**	Q.C. - NWA Alcoa
	Seattle, WA 98101	**Project #:**	22B017-01
Attn:	Rebecca Gardner	**Sample #:**	B22-0181 - 0194
Revised on:		**Date sampled:**	March 22 & 23, 2022

As requested MTC, Inc. has performed the following test(s) on the sample referenced above. The testing was performed in accordance with current applicable AASHTO or ASTM standards as indicated below. The results obtained in our laboratory were as follows below or on the attached pages:

	Test(s) Performed:	Test Results		Test(s) Performed:	Test Results
X	Sieve Analysis	See Attached Reports		Sulfate Soundness	
	Proctor			Bulk Density & Voids	
	Sand Equivalent			WSDOT Degradation	
	Fracture Count			LA Abrasion	
X	Moisture Content	See Attached Report	X	Specific Gravity, Soils	See Attached Report
	Specific Gravity, Coarse		X	Organic Content	See Attached Report
	Specific Gravity, Fine				
	Hydrometer Analysis				
X	Atterberg Limits	See Attached Reports			

If you have any questions concerning the test results, the procedures used, or if we can be of any further assistance please call on us at the number below.

Alex Eifrig

Respectfully Submitted,
Alex Eifrig
WABO Supervising Laboratory Technician

Moisture Content - ASTM C566, ASTM D2216

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Date Received: March 2, 2022
Date Tested: March 4, 2022

Client: Anchor QEA, LLC.
Sampled by: Client
Tested by: K. Mendez

Sample #	Location	Tare	Wet + Tare	Dry + Tare	Wgt. Of Moisture	Wgt. Of Soil	% Moisture
B22-0181	B02 - 4 - 9	722.3	1843.3	1622.7	220.6	900.4	24.5%
B22-0182	B02 - 0 - 1.5	719.4	1291.5	1182.5	109.0	463.1	23.5%
B22-0183	B02 - 1.5 - 4	688.9	1200.5	1124.5	76.0	435.6	17.4%
B22-0184	B02 - 9 - 14	699.0	1194.6	1006.9	187.7	307.9	61.0%
B22-0185	B02 - 14 - 20.5	420.5	1298.6	1043.9	254.7	623.4	40.9%
B22-0187	B01 - 6 - 8.8	414.3	1122.1	864.5	257.6	450.2	57.2%
B22-0188	B01 - 10.5 - 12.7	737.1	2315.7	1730.5	585.2	993.4	58.9%
B22-0189	B01 - 16.5 - 20	380.1	964.7	854.3	110.4	474.2	23.3%
B22-0191	B01 - 26.5 - 30	394.7	692.6	546.3	146.3	151.6	96.5%
B22-0192	B01 - 30 - 31.5	413.7	787.4	634.5	152.9	220.8	69.2%
B22-0193	B01 - 31.5 - 41.5	411.7	1139.2	863.8	275.4	452.1	60.9%
B22-0194	B01(2) - 41 - 50	764.7	2126.4	1677.8	448.6	913.1	49.1%

Reviewed by: Alex Eifrig

Alex Eifrig

Soil Specific Gravity - ASTM D854

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Date Received: March 2, 2022
Date Tested: March 7, 2022

Client: Anchor QEA, LLC.
Sampled by: Client
Tested by: A. Eifrig

Sample #	Location	Tare	Dry Soil + Tare	Mass of Dry Soil	Pycno ID	Mass of Pycno	Volume of Pycno	Density of Water @ Tx	Mass of Pycno filled w/ water & soils	Mass of Pycno filled w/ water	Temp. of Water, 0.1 *C	SpG of Soils	Temp. Correction Factor	Corrected SpG
B22-0182	B02 - 0 - 1.5	584.02	690.24	106.22	TSA-015	187.6	499.5	0.99860	752.21	686.40	18.0	2.628509	1.00039	2.6295341
B22-0184	B02 - 9 - 14	510.40	584.91	74.51	TSA-011	190.3	499.5	0.99860	733.97	689.17	18.0	2.5078554	1.00039	2.5088335
B22-0188	B01 - 10.5 - 12.7	497.79	571.63	73.84	TSA-014	192.3	499.5	0.99860	736.31	691.09	18.0	2.5799446	1.00039	2.5809507
B22-0189	B01 - 16.5 - 20	498.37	603.64	105.27	TSA-021	183.4	499.4	0.99860	748.06	682.13	18.0	2.6758462	1.00039	2.6768898
B22-0194	B01(2) - 41 - 50	509.76	584.35	74.59	TSA-017	187.9	499.4	0.99860	728.87	686.59	18.0	2.3085172	1.00039	2.3094175
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
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				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
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				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A
				0.0		#N/A	#N/A	#N/A		#N/A		#N/A	#N/A	#N/A

Reviewed by: Alex Eifrig

Alex Eifrig

MATERIALS TESTING & CONSULTING, INC.

Sieve Report

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Client: Anchor QEA, LLC.
Source: B02 - 4 - 9
Sample#: B22-0181

Date Received: 2-Mar-22
Sampled By: Client
Date Tested: 4-Mar-22
Tested By: K. Mendez

Unified Soil Classification System, ASTM-2487
SP, Poorly graded Sand
Sample Color:
gray

ACCREDITED
Certificate #: 1366.01

ASTM D2216, ASTM D2419, ASTM D4318, ASTM D5281

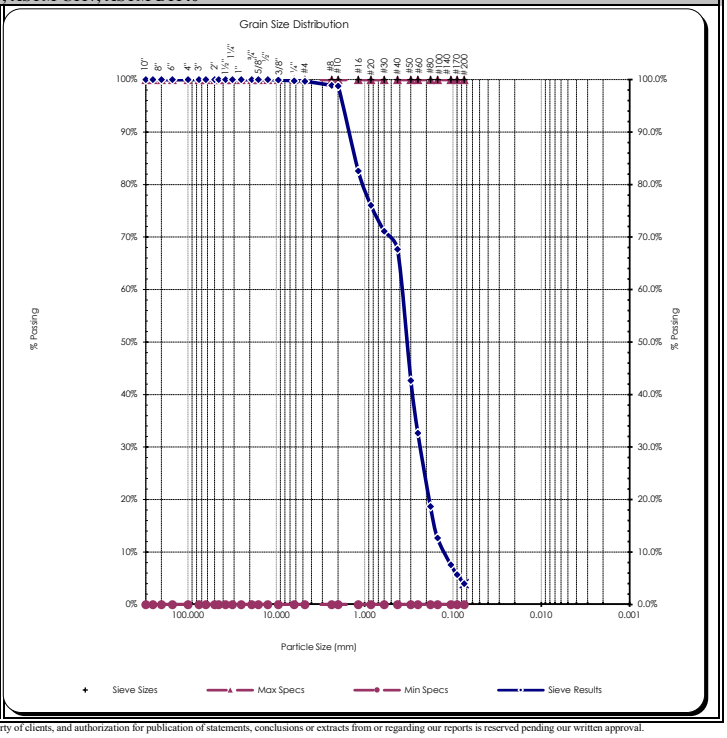
Specifications
No Specs

Sample Meets Specs ? N/A

$D_{(5)}$ =	0.084	mm	% Gravel =	0.3%	Coeff. of Curvature, C_C = 1.14
$D_{(10)}$ =	0.127	mm	% Sand =	95.7%	Coeff. of Uniformity, C_U = 3.05
$D_{(15)}$ =	0.162	mm	% Silt & Clay =	4.0%	Fineness Modulus = 1.92
$D_{(30)}$ =	0.237	mm	Liquid Limit =	n/a	Plastic Limit = n/a
$D_{(50)}$ =	0.337	mm	Plasticity Index =	n/a	Moisture %, as sampled = n/a
$D_{(60)}$ =	0.387	mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =
$D_{(90)}$ =	1.556	mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =
Dust Ratio =	1/17		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =

ASTM C136, ASTM D6913, ASTM C117, ASTM D1140

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%	100.0%	0.0%
10.00"	250.00		100%	100.0%	0.0%
8.00"	200.00		100%	100.0%	0.0%
6.00"	150.00		100%	100.0%	0.0%
4.00"	100.00		100%	100.0%	0.0%
3.00"	75.00		100%	100.0%	0.0%
2.50"	63.00		100%	100.0%	0.0%
2.00"	50.00	100%	100%	100.0%	0.0%
1.75"	45.00		100%	100.0%	0.0%
1.50"	37.50		100%	100.0%	0.0%
1.25"	31.50		100%	100.0%	0.0%
1.00"	25.00	100%	100%	100.0%	0.0%
3/4"	19.00	100%	100%	100.0%	0.0%
5/8"	16.00		100%	100.0%	0.0%
1/2"	12.50	100%	100%	100.0%	0.0%
3/8"	9.50	100%	100%	100.0%	0.0%
1/4"	6.30		100%	100.0%	0.0%
#4	4.75	100%	100%	100.0%	0.0%
#8	2.36		99%	100.0%	0.0%
#10	2.00	99%	99%	100.0%	0.0%
#16	1.18		83%	100.0%	0.0%
#20	0.850		76%	100.0%	0.0%
#30	0.600		71%	100.0%	0.0%
#40	0.425	68%	68%	100.0%	0.0%
#50	0.300		43%	100.0%	0.0%
#60	0.250		33%	100.0%	0.0%
#80	0.180		19%	100.0%	0.0%
#100	0.150	13%	13%	100.0%	0.0%
#140	0.106		8%	100.0%	0.0%
#170	0.090		6%	100.0%	0.0%
#200	0.075	4.0%	4.0%	100.0%	0.0%



Comments:

Reviewed by: Alex Eifrig
Alex Eifrig

MATERIALS TESTING & CONSULTING, INC.

Sieve Report

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Client: Anchor QEA, LLC.
Source: B02 - 1.5 - 4
Sample#: B22-0183

Date Received: 2-Mar-22
Sampled By: Client
Date Tested: 4-Mar-22
Tested By: K. Mendez

Unified Soil Classification System, ASTM-2487
SP-SM, Poorly graded Sand with Silt
Sample Color:
gray

ACCREDITED
Certificate #: 1366.01

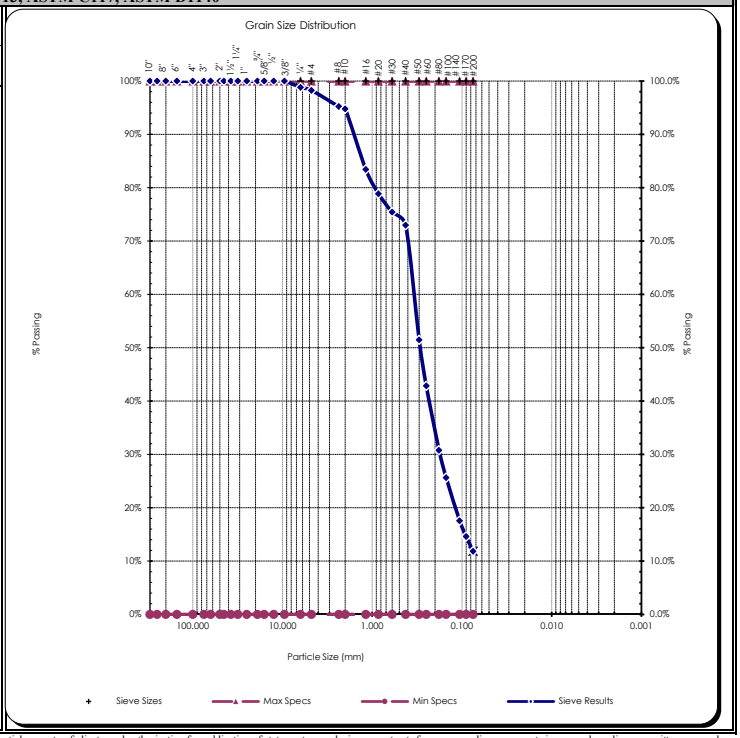
ASTM D2216, ASTM D2419, ASTM D4318, ASTM D5281

Specifications
No Specs
Sample Meets Specs ? N/A

$D_{(5)}$ =	0.032	mm	% Gravel =	1.7%	Coeff. of Curvature, C_C = 1.39
$D_{(10)}$ =	0.063	mm	% Sand =	86.4%	Coeff. of Uniformity, C_U = 5.53
$D_{(15)}$ =	0.092	mm	% Silt & Clay =	11.9%	Fineness Modulus = 1.71
$D_{(30)}$ =	0.175	mm	Liquid Limit =	n/a	Plastic Limit = n/a
$D_{(50)}$ =	0.291	mm	Plasticity Index =	n/a	Moisture %, as sampled = n/a
$D_{(60)}$ =	0.349	mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =
$D_{(90)}$ =	1.655	mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =
Dust Ratio =	13/80		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =

ASTM C136, ASTM D6913, ASTM C117, ASTM D1140

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%	100.0%	0.0%
10.00"	250.00		100%	100.0%	0.0%
8.00"	200.00		100%	100.0%	0.0%
6.00"	150.00		100%	100.0%	0.0%
4.00"	100.00		100%	100.0%	0.0%
3.00"	75.00		100%	100.0%	0.0%
2.50"	63.00		100%	100.0%	0.0%
2.00"	50.00	100%	100%	100.0%	0.0%
1.75"	45.00		100%	100.0%	0.0%
1.50"	37.50		100%	100.0%	0.0%
1.25"	31.50		100%	100.0%	0.0%
1.00"	25.00	100%	100%	100.0%	0.0%
3/4"	19.00	100%	100%	100.0%	0.0%
5/8"	16.00		100%	100.0%	0.0%
1/2"	12.50	100%	100%	100.0%	0.0%
3/8"	9.50	100%	100%	100.0%	0.0%
1/4"	6.30		99%	100.0%	0.0%
#4	4.75	98%	98%	100.0%	0.0%
#8	2.36		95%	100.0%	0.0%
#10	2.00	95%	95%	100.0%	0.0%
#16	1.18		83%	100.0%	0.0%
#20	0.850		79%	100.0%	0.0%
#30	0.600		75%	100.0%	0.0%
#40	0.425	73%	73%	100.0%	0.0%
#50	0.300		51%	100.0%	0.0%
#60	0.250		43%	100.0%	0.0%
#80	0.180		31%	100.0%	0.0%
#100	0.150	26%	26%	100.0%	0.0%
#140	0.106		18%	100.0%	0.0%
#170	0.090		15%	100.0%	0.0%
#200	0.075	11.9%	11.9%	100.0%	0.0%



Comments:

Reviewed by: Alex Eifrig
Alex Eifrig

MATERIALS TESTING & CONSULTING, INC.

ASTM D4318 - Liquid Limit, Plastic Limit and Plasticity Index of Soils

Project:	Q.C. - NWA Alcoa	**Date Received:**	2-Mar-22	**Visual Soils Classification**	
Project #:	22B017-01	**Sampled By:**	Client	Clayey Silt	
Client:	Anchor QEA, LLC.	**Date Tested:**	4-Mar-22	**Sample Color**	
Source:	B02 - 26.5 - 29	**Tested By:**	K. Mendez	gray	
Sample #:	B22-0186				

ACCREDITED
Certificate #: 1366.01

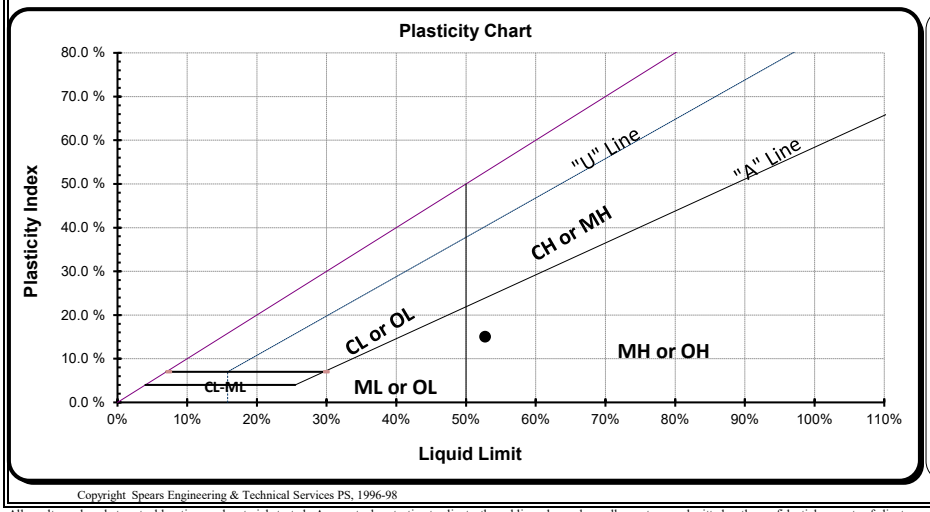
Liquid Limit Determination

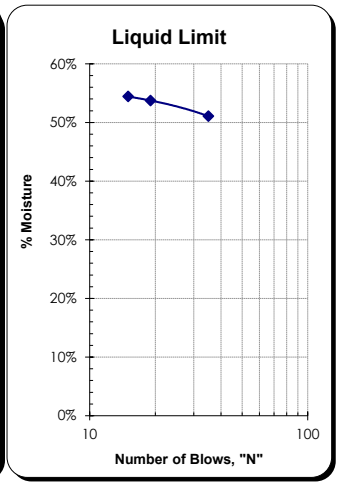
	#1	#2	#3	#4	#5	#6
Weight of Wet Soils + Pan:	25.54	28.79	33.53			
Weight of Dry Soils + Pan:	21.74	23.88	28.38			
Weight of Pan:	14.30	14.74	18.92			
Weight of Dry Soils:	7.44	9.14	9.46			
Weight of Moisture:	3.80	4.91	5.15			
% Moisture:	51.1 %	53.7 %	54.4 %			
Number of Blows:	35	19	15			

Liquid Limit @ 25 Blows: 52.7 %
Plastic Limit: 37.7 %
Plasticity Index, I_P: 15.0 %

Plastic Limit Determination

	#1	#2	#3	#4	#5	#6
Weight of Wet Soils + Pan:	34.95	37.02				
Weight of Dry Soils + Pan:	33.16	34.52				
Weight of Pan:	28.35	27.98				
Weight of Dry Soils:	4.81	6.54				
Weight of Moisture:	1.79	2.50				
% Moisture:	37.2 %	38.2 %				





Comments: _____

Reviewed by: Alex Eifrig

Alex Eifrig

MATERIALS TESTING & CONSULTING, INC.

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Date Received: March 2, 2022
Date Tested: March 4, 2022

Client: Anchor QEA, LLC.
Sampled by: Client
Tested by: A. Eifrig

Moisture Content - ASTM C566, ASTM D2216

Sample #	Location	Tare	Wet + Tare	Dry + Tare	Wgt. Of Moisture	Wgt. Of Soil	% Moisture
B22-0186	B02 - 26.5 - 29	378.8	1452.0	1015.4	436.6	636.6	68.6%
B22-0190	B01 - 21.5 - 25	417.6	1879.2	1279.6	599.6	862.0	69.6%

Organic Content - ASTM D2974

Sample #	Location	Tare	Soil + Tare, Pre-Ignition	Soil + Tare, Post Ignition	% Organics
B22-0186	B02 - 26.5 - 29	46.74	99.26	94.19	0.097
B22-0190	B01 - 21.5 - 25	51.84	122.10	121.87	0.003

Reviewed by: Alex Eifrig

Alex Eifrig

MATERIALS TESTING & CONSULTING, INC.

Sieve Report

Project: Q.C. - NWA Alcoa
Project #: 22B017-01
Client: Anchor QEA, LLC.
Source: B01 - 16.5 - 20
Sample#: B22-0189

Date Received: 2-Mar-22
Sampled By: Client
Date Tested: 4-Mar-22
Tested By: K. Mendez

Unified Soil Classification System, ASTM-2487
SM, Silty Sand
Sample Color:
gray

ACCREDITED
Certificate #: 1366.01

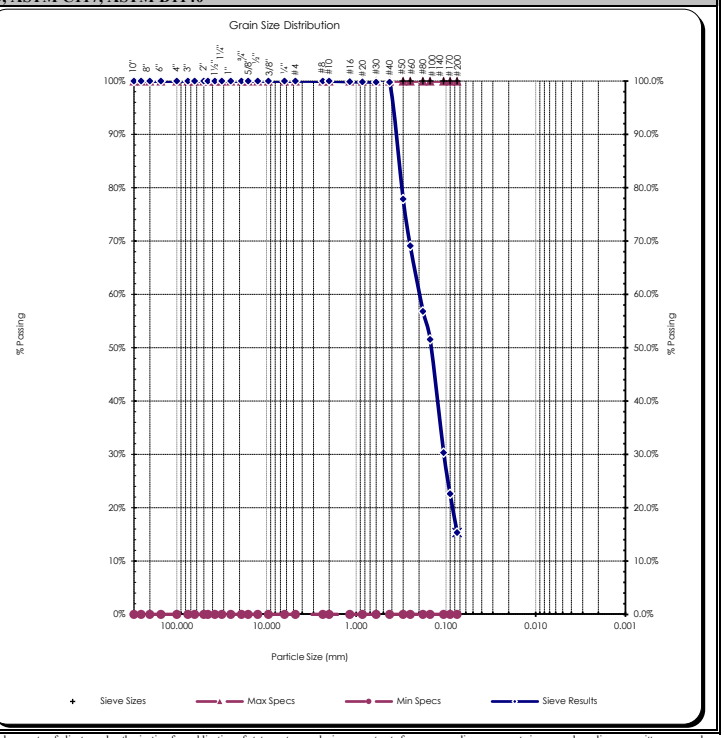
ASTM D2216, ASTM D2419, ASTM D4318, ASTM D5281

Specifications
No Specs
Sample Meets Specs ? N/A

$D_{(5)}$ =	0.024	mm	% Gravel =	0.0%	Coeff. of Curvature, C_C = 1.15
$D_{(10)}$ =	0.049	mm	% Sand =	84.6%	Coeff. of Uniformity, C_U = 4.06
$D_{(15)}$ =	0.073	mm	% Silt & Clay =	15.4%	Fineness Modulus = 0.71
$D_{(30)}$ =	0.105	mm	Liquid Limit =	n/a	Plastic Limit = n/a
$D_{(50)}$ =	0.147	mm	Plasticity Index =	n/a	Moisture %, as sampled = n/a
$D_{(60)}$ =	0.198	mm	Sand Equivalent =	n/a	Req'd Sand Equivalent =
$D_{(90)}$ =	0.369	mm	Fracture %, 1 Face =	n/a	Req'd Fracture %, 1 Face =
Dust Ratio =	2/13		Fracture %, 2+ Faces =	n/a	Req'd Fracture %, 2+ Faces =

ASTM C136, ASTM D6913, ASTM C117, ASTM D1140

Sieve Size US	Sieve Size Metric	Actual Cumulative Percent Passing	Interpolated Cumulative Percent Passing	Specs Max	Specs Min
12.00"	300.00		100%	100.0%	0.0%
10.00"	250.00		100%	100.0%	0.0%
8.00"	200.00		100%	100.0%	0.0%
6.00"	150.00		100%	100.0%	0.0%
4.00"	100.00		100%	100.0%	0.0%
3.00"	75.00		100%	100.0%	0.0%
2.50"	63.00		100%	100.0%	0.0%
2.00"	50.00	100%	100%	100.0%	0.0%
1.75"	45.00		100%	100.0%	0.0%
1.50"	37.50		100%	100.0%	0.0%
1.25"	31.50		100%	100.0%	0.0%
1.00"	25.00	100%	100%	100.0%	0.0%
3/4"	19.00	100%	100%	100.0%	0.0%
5/8"	16.00		100%	100.0%	0.0%
1/2"	12.50	100%	100%	100.0%	0.0%
3/8"	9.50	100%	100%	100.0%	0.0%
1/4"	6.30		100%	100.0%	0.0%
#4	4.75	100%	100%	100.0%	0.0%
#8	2.36		100%	100.0%	0.0%
#10	2.00	100%	100%	100.0%	0.0%
#16	1.18		100%	100.0%	0.0%
#20	0.850		100%	100.0%	0.0%
#30	0.600		100%	100.0%	0.0%
#40	0.425	100%	100%	100.0%	0.0%
#50	0.300		78%	100.0%	0.0%
#60	0.250		69%	100.0%	0.0%
#80	0.180		57%	100.0%	0.0%
#100	0.150	52%	52%	100.0%	0.0%
#140	0.106		30%	100.0%	0.0%
#170	0.090		23%	100.0%	0.0%
#200	0.075	15.4%	15.4%	100.0%	0.0%



Comments:

Reviewed by: Alex Eifrig
Alex Eifrig

ASTM D4318 - Liquid Limit, Plastic Limit and Plasticity Index of Soils

Project:	Q.C. - NWA Alcoa	**Date Received:**	2-Mar-22
Project #:	22B017-01	**Sampled By:**	Client
Client:	Anchor QEA, LLC.	**Date Tested:**	4-Mar-22
Source:	B01 - 20.5 - 30	**Tested By:**	K. Mendez
Sample #:	B22-0191		

Visual Soils Classification
Silt with Clay
Sample Color
brown

ACCREDITED
Certificate #: 1366.01

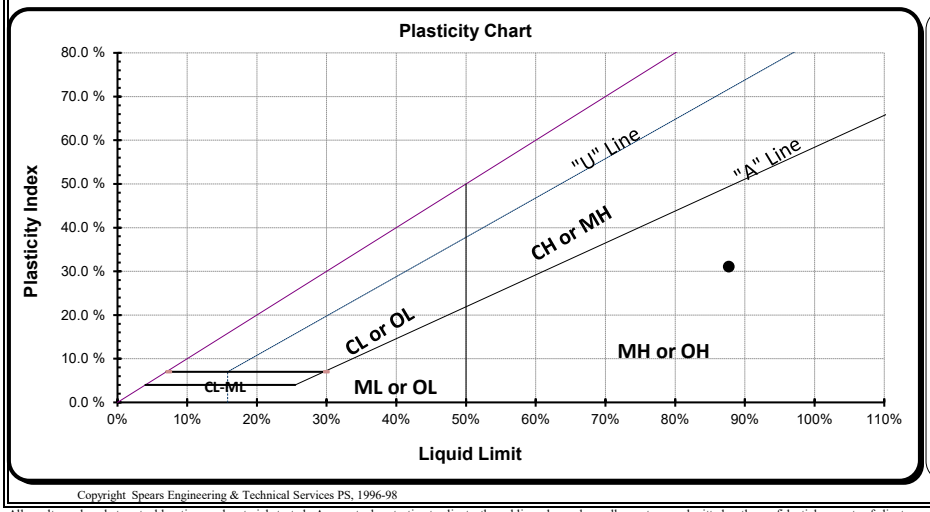
Liquid Limit Determination

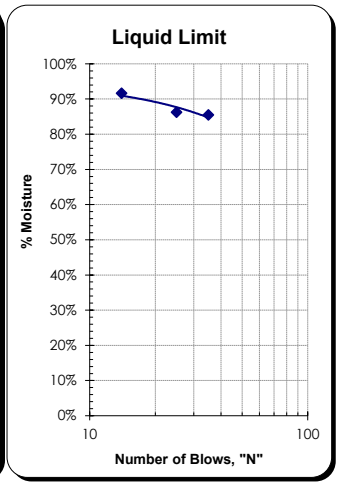
	#1	#2	#3	#4	#5	#6
Weight of Wet Soils + Pan:	28.50	28.30	36.15			
Weight of Dry Soils + Pan:	22.20	22.03	28.39			
Weight of Pan:	14.83	14.76	19.92			
Weight of Dry Soils:	7.37	7.27	8.47			
Weight of Moisture:	6.30	6.27	7.76			
% Moisture:	85.5 %	86.2 %	91.6 %			
Number of Blows:	35	25	14			

Liquid Limit @ 25 Blows: 87.7 %
Plastic Limit: 56.6 %
Plasticity Index, I_P: 31.0 %

Plastic Limit Determination

	#1	#2	#3	#4	#5	#6
Weight of Wet Soils + Pan:	34.26	34.63				
Weight of Dry Soils + Pan:	32.04	32.33				
Weight of Pan:	28.07	28.32				
Weight of Dry Soils:	3.97	4.01				
Weight of Moisture:	2.22	2.30				
% Moisture:	55.9 %	57.4 %				





Comments: _____

Reviewed by: Alex Eifrig

Alex Eifrig

Attachment A5
CPT Report – ConeTec

PRESENTATION OF SITE INVESTIGATION RESULTS

PDI Longview CPT

Prepared for:

Anchor QEA

ConeTec Job No: 20-59-20521

Project Start Date: 19-FEB-2020
Project End Date: 22-FEB-2020
Report Date: 29-FEB-2020

Prepared by:

ConeTec Inc.
1508 O st SW – Unit 104
Auburn, WA 98001

Tel: (253) 397-4861

Email: ConeTecWA@conetec.com
www.conetec.com
www.conetecdataservices.com

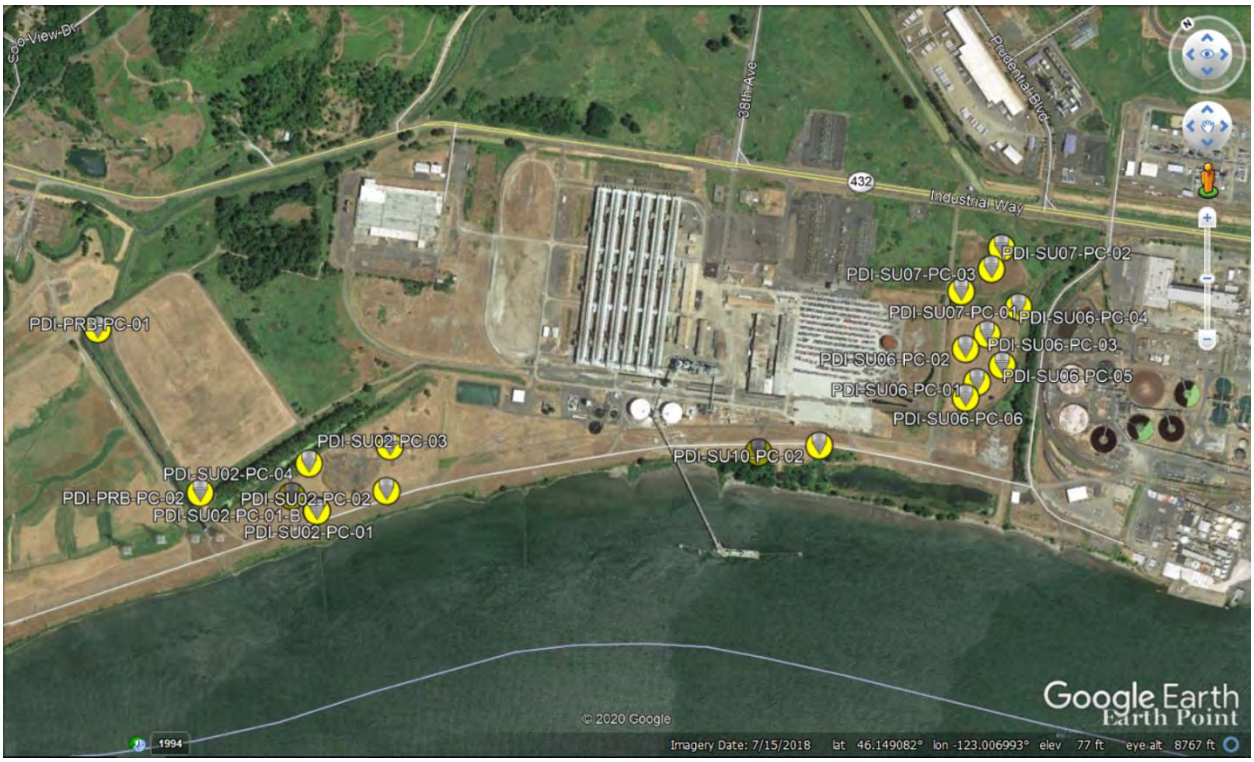
Introduction

The enclosed report presents the results of the site investigation program conducted by ConeTec Inc. for Anchor QEA at the Millennium Bulk Terminals Facility in Longview WA. The program consisted of cone penetration tests.

Project Information

Project	
Client	Anchor QEA
Project	PDI Longview CPT
ConeTec project number	20-59-20521

A map from Google Earth including the CPT test locations is presented below.



Rig Description	Deployment System	Test Type
20Ton Earth Anchor Rig	Integrated Push Cylinders	CPTu

Coordinates		
Test Type	Collection Method	EPSG Number
CPTu	Consumer Grade GPS	4326

Cone Penetration Test (CPT)	
Depth reference	Depths are referenced to the existing ground surface at the time of each test.
Tip and sleeve data offset	0.1 meter This has been accounted for in the CPT data files.
Additional plots	Advanced plots with Ic, Su(Nkt), Phi and N(60)Ic as well as Soil Behavior Type (SBT) Scatter plots have been included in the data release package.

Cone Penetrometers Used for this Project						
Cone Description	Cone Number	Cross Sectional Area (cm^2)	Sleeve Area (cm^2)	Tip Capacity (bar)	Sleeve Capacity (bar)	Pore Pressure Capacity (psi)
AD537:T1500F15U500	537	15	225	1500	15	500
Cone 537 was used for all CPT soundings						

Interpretation Tables	
Additional information	The Normalized Soil Behavior Type Chart based on Q_{tn} (SBT Qtn) (Robertson 2009) was used to classify the soil for this project. A detailed set of calculated CPT interpretations have been generated and are provided in Excel format files in the release folder. The CPT parameter calculations are based on values of corrected tip (q_t), sleeve friction (f_s) and pore pressure (u_2) at each data point. Effective stresses are calculated based on unit weights that have been assigned to the individual soil behavior type zones and the assumed equilibrium pore pressure profile.

Limitations

This report has been prepared for the exclusive use of Anchor QEA (Client) for the project titled “PDI Longview CPT”. The report’s contents may not be relied upon by any other party without the express written permission of ConeTec Inc. (ConeTec). ConeTec has provided site investigation services, prepared the factual data reporting, and provided geotechnical parameter calculations consistent with current best practices. No other warranty, expressed or implied, is made.

The information presented in the report document and the accompanying data set pertain to the specific project, site conditions and objectives described to ConeTec by the Client. In order to properly understand the factual data, assumptions and calculations, reference must be made to the documents provided and their accompanying data sets, in their entirety.

The cone penetration tests (CPTu) are conducted using an integrated electronic piezocone penetrometer and data acquisition system manufactured by Adara Systems Ltd. of Richmond, British Columbia, Canada.

ConeTec's piezocone penetrometers are compression type designs in which the tip and friction sleeve load cells are independent and have separate load capacities. The piezocones use strain gauged load cells for tip and sleeve friction and a strain gauged diaphragm type transducer for recording pore pressure. The piezocones also have a platinum resistive temperature device (RTD) for monitoring the temperature of the sensors, an accelerometer type dual axis inclinometer and a geophone sensor for recording seismic signals. All signals are amplified down hole within the cone body and the analog signals are sent to the surface through a shielded cable.

ConeTec penetrometers are manufactured with various tip, friction and pore pressure capacities in both 10 cm^2 and 15 cm^2 tip base area configurations in order to maximize signal resolution for various soil conditions. The specific piezocone used for each test is described in the CPT summary table presented in the first Appendix. The 15 cm^2 penetrometers do not require friction reducers as they have a diameter larger than the deployment rods. The 10 cm^2 piezocones use a friction reducer consisting of a rod adapter extension behind the main cone body with an enlarged cross sectional area (typically 44 mm diameter over a length of 32 mm with tapered leading and trailing edges) located at a distance of 585 mm above the cone tip.

The penetrometers are designed with equal end area friction sleeves, a net end area ratio of 0.8 and cone tips with a 60 degree apex angle.

All ConeTec piezocones can record pore pressure at various locations. Unless otherwise noted, the pore pressure filter is located directly behind the cone tip in the "u_2" position (ASTM Type 2). The filter is 6 mm thick, made of porous plastic (polyethylene) having an average pore size of 125 microns (90-160 microns). The function of the filter is to allow rapid movements of extremely small volumes of water needed to activate the pressure transducer while preventing soil ingress or blockage.

The piezocone penetrometers are manufactured with dimensions, tolerances and sensor characteristics that are in general accordance with the current ASTM D5778 standard. ConeTec's calibration criteria also meet or exceed those of the current ASTM D5778 standard. An illustration of the piezocone penetrometer is presented in Figure CPTu.

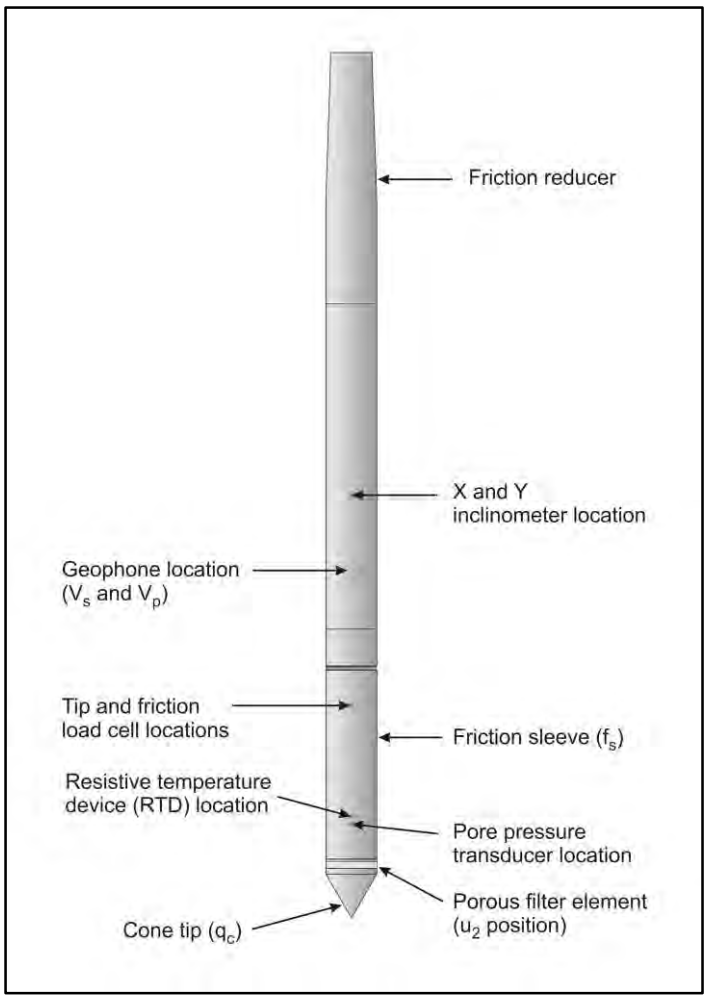


Figure CPTu. Piezocone Penetrometer (15 cm^2)

The ConeTec data acquisition systems consist of a Windows based computer and a signal conditioner and power supply interface box with a 16 bit (or greater) analog to digital (A/D) converter. The data is recorded at fixed depth increments using a depth wheel attached to the push cylinders or by using a spring loaded rubber depth wheel that is held against the cone rods. The typical recording intervals are either 2.5 cm or 5.0 cm depending on project requirements; custom recording intervals are possible. The system displays the CPTu data in real time and records the following parameters to a storage media during penetration:

- Depth
- Uncorrected tip resistance (q_c)
- Sleeve friction (f_s)
- Dynamic pore pressure (u)
- Additional sensors such as resistivity, passive gamma, ultra violet induced fluorescence, if applicable

All testing is performed in accordance to ConeTec's CPT operating procedures which are in general accordance with the current ASTM D5778 standard.

Prior to the start of a CPTu sounding a suitable cone is selected, the cone and data acquisition system are powered on, the pore pressure system is saturated with either glycerin or silicone oil and the baseline readings are recorded with the cone hanging freely in a vertical position.

The CPTu is conducted at a steady rate of 2 cm/s, within acceptable tolerances. Typically one meter length rods with an outer diameter of 1.5 inches are added to advance the cone to the sounding termination depth. After cone retraction final baselines are recorded.

Additional information pertaining to ConeTec's cone penetration testing procedures:

- Each filter is saturated in silicone oil or glycerin under vacuum pressure prior to use
- Recorded baselines are checked with an independent multi-meter
- Baseline readings are compared to previous readings
- Soundings are terminated at the client's target depth or at a depth where an obstruction is encountered, excessive rod flex occurs, excessive inclination occurs, equipment damage is likely to take place, or a dangerous working environment arises
- Differences between initial and final baselines are calculated to ensure zero load offsets have not occurred and to ensure compliance with ASTM standards

The interpretation of piezocone data for this report is based on the corrected tip resistance (q_t), sleeve friction (f_s) and pore water pressure (u). The interpretation of soil type is based on the correlations developed by Robertson (1990) and Robertson (2009). It should be noted that it is not always possible to accurately identify a soil type based on these parameters. In these situations, experience, judgment and an assessment of other parameters may be used to infer soil behavior type.

The recorded tip resistance (q_c) is the total force acting on the piezocone tip divided by its base area. The tip resistance is corrected for pore pressure effects and termed corrected tip resistance (q_t) according to the following expression presented in Robertson et al, 1986:

$$q_t = q_c + (1\text{-}a) \bullet u_2$$

where: q_t is the corrected tip resistance
q_c is the recorded tip resistance
u_2 is the recorded dynamic pore pressure behind the tip (u_2 position)
a is the Net Area Ratio for the piezocone (0.8 for ConeTec probes)

The sleeve friction (f_s) is the frictional force on the sleeve divided by its surface area. As all ConeTec piezocones have equal end area friction sleeves, pore pressure corrections to the sleeve data are not required.

The dynamic pore pressure (u) is a measure of the pore pressures generated during cone penetration. To record equilibrium pore pressure, the penetration must be stopped to allow the dynamic pore pressures to stabilize. The rate at which this occurs is predominantly a function of the permeability of the soil and the diameter of the cone.

The friction ratio (Rf) is a calculated parameter. It is defined as the ratio of sleeve friction to the tip resistance expressed as a percentage. Generally, saturated cohesive soils have low tip resistance, high

friction ratios and generate large excess pore water pressures. Cohesionless soils have higher tip resistances, lower friction ratios and do not generate significant excess pore water pressure.

A summary of the CPTu soundings along with test details and individual plots are provided in the appendices. A set of interpretation files were generated for each sounding based on published correlations and are provided in Excel format in the data release folder. Information regarding the interpretation methods used is also included in the data release folder.

For additional information on CPTu interpretations, refer to Robertson et al. (1986), Lunne et al. (1997), Robertson (2009), Mayne (2013, 2014) and Mayne and Peuchen (2012).

The cone penetration test is halted at specific depths to carry out pore pressure dissipation (PPD) tests, shown in Figure PPD-1. For each dissipation test the cone and rods are decoupled from the rig and the data acquisition system measures and records the variation of the pore pressure (u) with time (t).

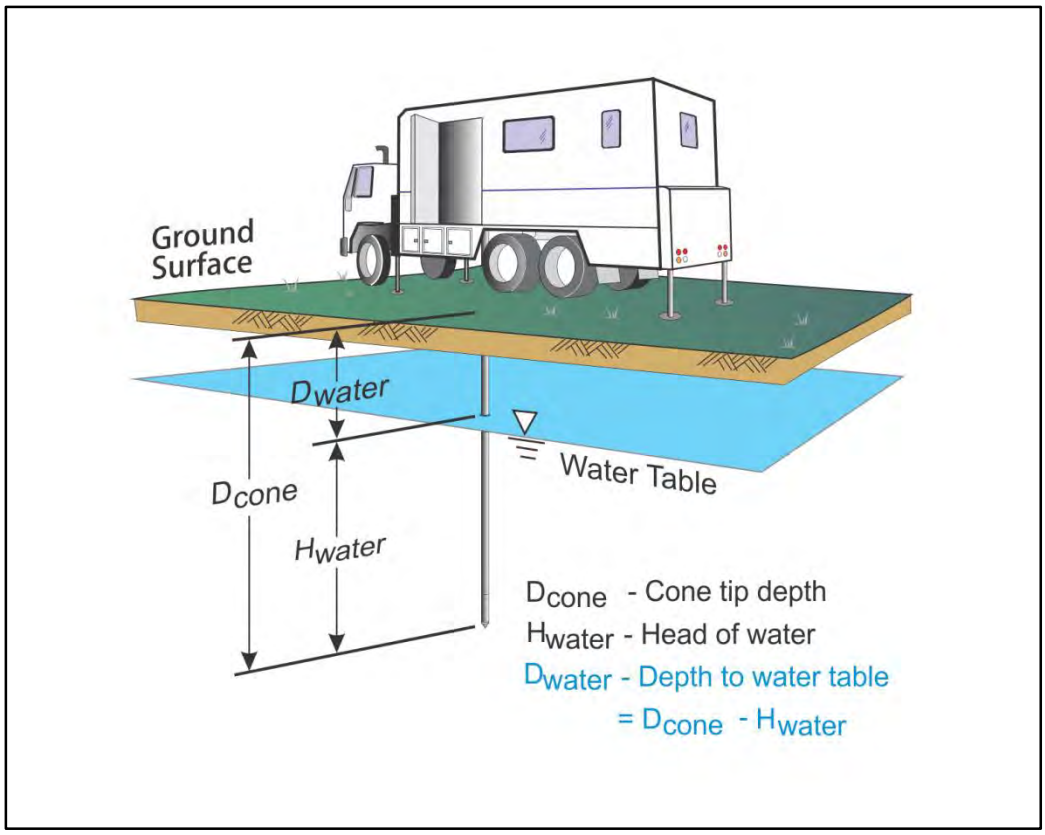


Figure PPD-1. Pore pressure dissipation test setup

Pore pressure dissipation data can be interpreted to provide estimates of ground water conditions, permeability, consolidation characteristics and soil behavior.

The typical shapes of dissipation curves shown in Figure PPD-2 are very useful in assessing soil type, drainage, in situ pore pressure and soil properties. A flat curve that stabilizes quickly is typical of a freely draining sand. Undrained soils such as clays will typically show positive excess pore pressure and have long dissipation times. Dilative soils will often exhibit dynamic pore pressures below equilibrium that then rise over time. Overconsolidated fine-grained soils will often exhibit an initial dilatory response where there is an initial rise in pore pressure before reaching a peak and dissipating.

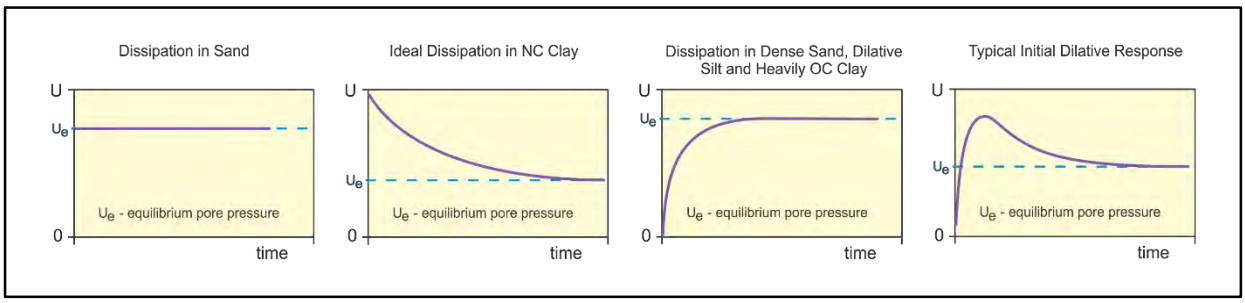


Figure PPD-2. Pore pressure dissipation curve examples

In order to interpret the equilibrium pore pressure (u_{eq}) and the apparent phreatic surface, the pore pressure should be monitored until such time as there is no variation in pore pressure with time as shown for each curve of Figure PPD-2.

In fine grained deposits the point at which 100% of the excess pore pressure has dissipated is known as t_{100}. In some cases this can take an excessive amount of time and it may be impractical to take the dissipation to t_{100}. A theoretical analysis of pore pressure dissipations by Teh and Houlsby (1991) showed that a single curve relating degree of dissipation versus theoretical time factor (T*) may be used to calculate the coefficient of consolidation (c_h) at various degrees of dissipation resulting in the expression for c_h shown below.

$$c_h = \frac{T^* \cdot a^2 \cdot \sqrt{I_r}}{t}$$

Where:

T* is the dimensionless time factor (Table Time Factor)
a is the radius of the cone
I_r is the rigidity index
t is the time at the degree of consolidation

Table Time Factor. T* versus degree of dissipation (Teh and Houlsby, 1991)

Degree of Dissipation (%)	20	30	40	50	60	70	80
T* (u_2)	0.038	0.078	0.142	0.245	0.439	0.804	1.60

The coefficient of consolidation is typically analyzed using the time (t_{50}) corresponding to a degree of dissipation of 50% (u_{50}). In order to determine t_{50}, dissipation tests must be taken to a pressure less than u_{50}. The u_{50} value is half way between the initial maximum pore pressure and the equilibrium pore pressure value, known as u_{100}. To estimate u_{50}, both the initial maximum pore pressure and u_{100} must be known or estimated. Other degrees of dissipations may be considered, particularly for extremely long dissipations.

At any specific degree of dissipation the equilibrium pore pressure (u at t_{100}) must be estimated at the depth of interest. The equilibrium value may be determined from one or more sources such as measuring the value directly (u_{100}), estimating it from other dissipations in the same profile, estimating the phreatic surface and assuming hydrostatic conditions, from nearby soundings, from client provided information, from site observations and/or past experience, or from other site instrumentation.

For calculations of c_h (Teh and Houlsby, 1991), t_{50} values are estimated from the corresponding pore pressure dissipation curve and a rigidity index (I_r) is assumed. For curves having an initial dilatory response in which an initial rise in pore pressure occurs before reaching a peak, the relative time from the peak value is used in determining t_{50}. In cases where the time to peak is excessive, t_{50} values are not calculated.

Due to possible inherent uncertainties in estimating I_r, the equilibrium pore pressure and the effect of an initial dilatory response on calculating t_{50}, other methods should be applied to confirm the results for c_h.

Additional published methods for estimating the coefficient of consolidation from a piezocone test are described in Burns and Mayne (1998, 2002), Jones and Van Zyl (1981), Robertson et al. (1992) and Sully et al. (1999).

A summary of the pore pressure dissipation tests and dissipation plots are presented in the relevant appendix.

ASTM D5778-12, 2012, "Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils", ASTM, West Conshohocken, US.

Burns, S.E. and Mayne, P.W., 1998, "Monotonic and dilatory pore pressure decay during piezocone tests", Canadian Geotechnical Journal 26 (4): 1063-1073.

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Jones, G.A. and Van Zyl, D.J.A., 1981, "The piezometer probe: a useful investigation tool", Proceedings, 10th International Conference on Soil Mechanics and Foundation Engineering, Vol. 3, Stockholm: 489-495.

Lunne, T., Robertson, P.K. and Powell, J. J. M., 1997, "Cone Penetration Testing in Geotechnical Practice", Blackie Academic and Professional.

Mayne, P.W., 2013, "Evaluating yield stress of soils from laboratory consolidation and in-situ cone penetration tests", Sound Geotechnical Research to Practice (Holtz Volume) GSP 230, ASCE, Reston/VA: 406-420.

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Mayne, P.W. and Peuchen, J., 2012, "Unit weight trends with cone resistance in soft to firm clays", Geotechnical and Geophysical Site Characterization *4,* Vol. 1 (Proc. ISC-4, Pernambuco), CRC Press, London: 903-910.

Robertson, P.K., 1990, "Soil Classification Using the Cone Penetration Test", Canadian Geotechnical Journal, Volume 27: 151-158.

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Robertson, P.K., Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of InSitu 86, ASCE Specialty Conference, Blacksburg, Virginia.

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Sully, J.P., Robertson, P.K., Campanella, R.G. and Woeller, D.J., 1999, "An approach to evaluation of field CPTU dissipation data in overconsolidated fine-grained soils", Canadian Geotechnical Journal, 36(2): 369-381.

Teh, C.I., and Houlsby, G.T., 1991, "An analytical study of the cone penetration test in clay", Geotechnique, 41(1): 17-34.

The appendices listed below are included in the report:

- Cone Penetration Test Summary and Standard Cone Penetration Test Plots
- Cone Penetration Test Advanced Plots
- Cone Penetration Test Soil Behavior Type Scatter Plots
- Pore Pressure Dissipation Summary and Pore Pressure Dissipation Plots

Cone Penetration Test Summary and Standard Cone Penetration Test Plots

CONETEC

Job No:	20-59-20521
Client:	Anchor QEA
Project:	PDI Longview CPT
Start Date:	19-Feb-2020
End Date:	22-Feb-2020

CONE PENETRATION TEST SUMMARY

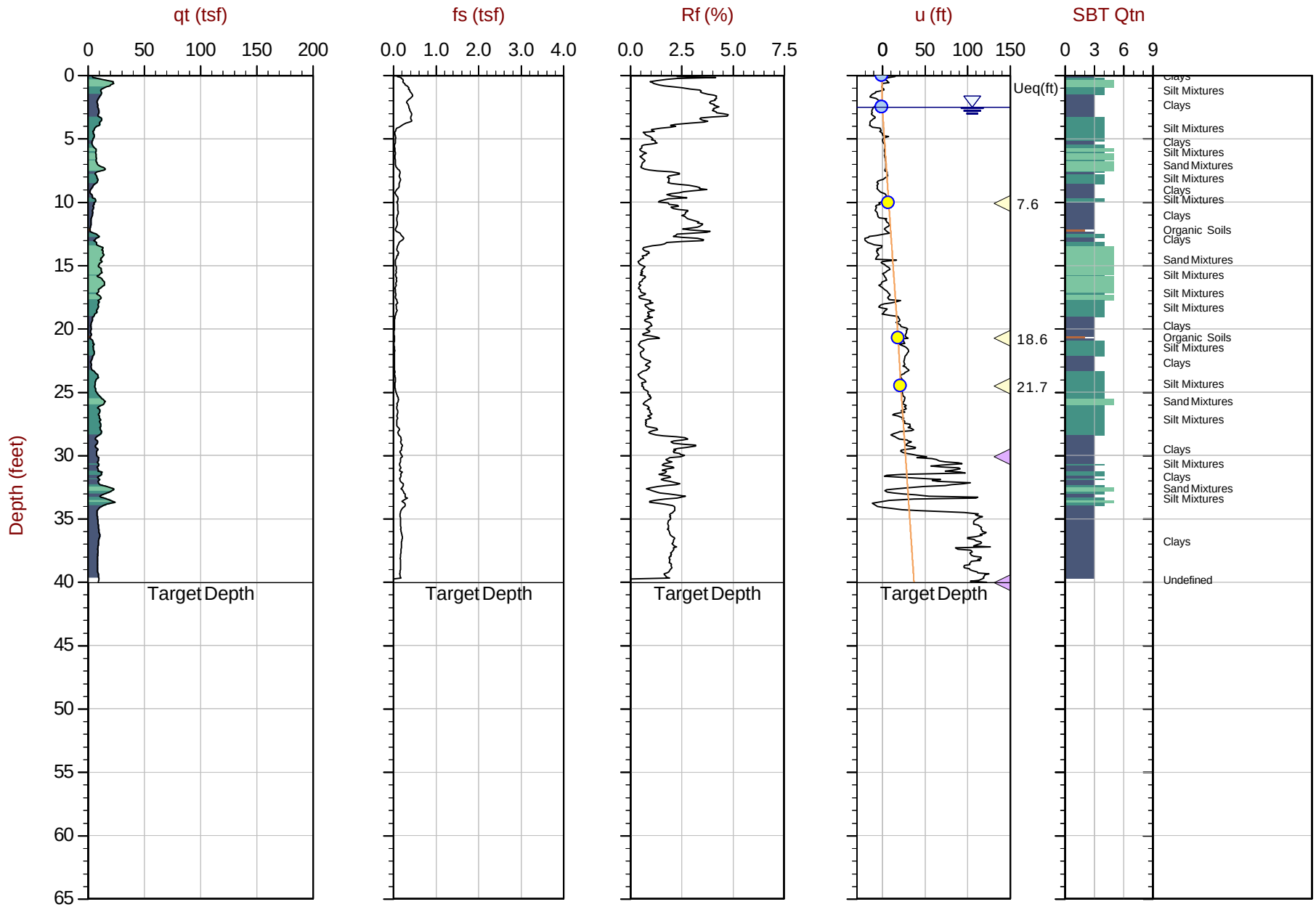
Sounding ID	File Name	Date	Cone	Assumed Phreatic Surface[1] (ft)	Final Depth (ft)	Latitude[3] (Deg)	Longitude[3] (Deg)	Refer to Notation Number
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01	20-Feb-2020	537:T1500F15U500	2.5	40.0	46.14707	-123.01508	
PDI-PRB-PC-02	20-59-20521_CP_PRB-PC-02	20-Feb-2020	537:T1500F15U500	7.0	40.0	46.14277	-123.01512	
PDI-SU02-PC-01	20-59-20521_CP_SU02-PC-01	19-Feb-2020	537:T1500F15U500	9.5	33.1	46.14102	-123.01230	
PDI-SU02-PC-01-B	20-59-20521_CP_SU02-PC-01-B	19-Feb-2020	537:T1500F15U500	9.5	40.0	46.14104	-123.01230	2
PDI-SU02-PC-02	20-59-20521_CP_SU02-PC-02	19-Feb-2020	537:T1500F15U500	10.6	40.0	46.14055	-123.01010	
PDI-SU02-PC-03	20-59-20521_CP_SU02-PC-03	20-Feb-2020	537:T1500F15U500	3.9	40.1	46.14134	-123.00925	
PDI-SU02-PC-04	20-59-20521_CP_SU02-PC-04	20-Feb-2020	537:T1500F15U500	3.9	40.0	46.14200	-123.01171	2
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05	20-Feb-2020	537:T1500F15U500	13.9	50.4	46.14160	-123.01272	
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01	21-Feb-2020	537:T1500F15U500	3.6	60.0	46.13543	-122.99242	
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02	21-Feb-2020	537:T1500F15U500	2.9	60.1	46.13618	-122.99214	
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03	21-Feb-2020	537:T1500F15U500	3.7	60.1	46.13619	-122.99130	
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04	21-Feb-2020	537:T1500F15U500	10.7	60.6	46.13631	-122.98997	
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05	22-Feb-2020	537:T1500F15U500	6.7	60.2	46.13543	-122.99145	
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06	22-Feb-2020	537:T1500F15U500	2.9	60.1	46.13528	-122.99300	
PDI-SU07-PC-01	20-59-20521_CP_SU07-PC-01	22-Feb-2020	537:T1500F15U500	0.7	40.3	46.13729	-122.99122	
PDI-SU07-PC-02	20-59-20521_CP_SU07-PC-02	22-Feb-2020	537:T1500F15U500	1.9	40.9	46.13761	-122.98936	
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03	22-Feb-2020	537:T1500F15U500	1.1	50.0	46.13734	-122.99001	
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01	19-Feb-2020	537:T1500F15U500	16.5	50.0	46.13678	-122.99950	
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02	19-Feb-2020	537:T1500F15U500	15.9	50.0	46.13617	-122.99776	
Totals	19 soundings				916.3			

1. Phreatic surface based on pore pressure dissipation test unless otherwise noted. Equilibrium pore pressure profile (Ueq) applied to interpretation tables
2. Phreatic surface based on adjacent CPT sounding. Equilibrium pore pressure profile (Ueq) applied to interpretation tables
3. Coordinates were collected using a handheld GPS - WGS 84 Lat/Long

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 16:48
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_PRB-PC-01.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14707 Long: -123.01508

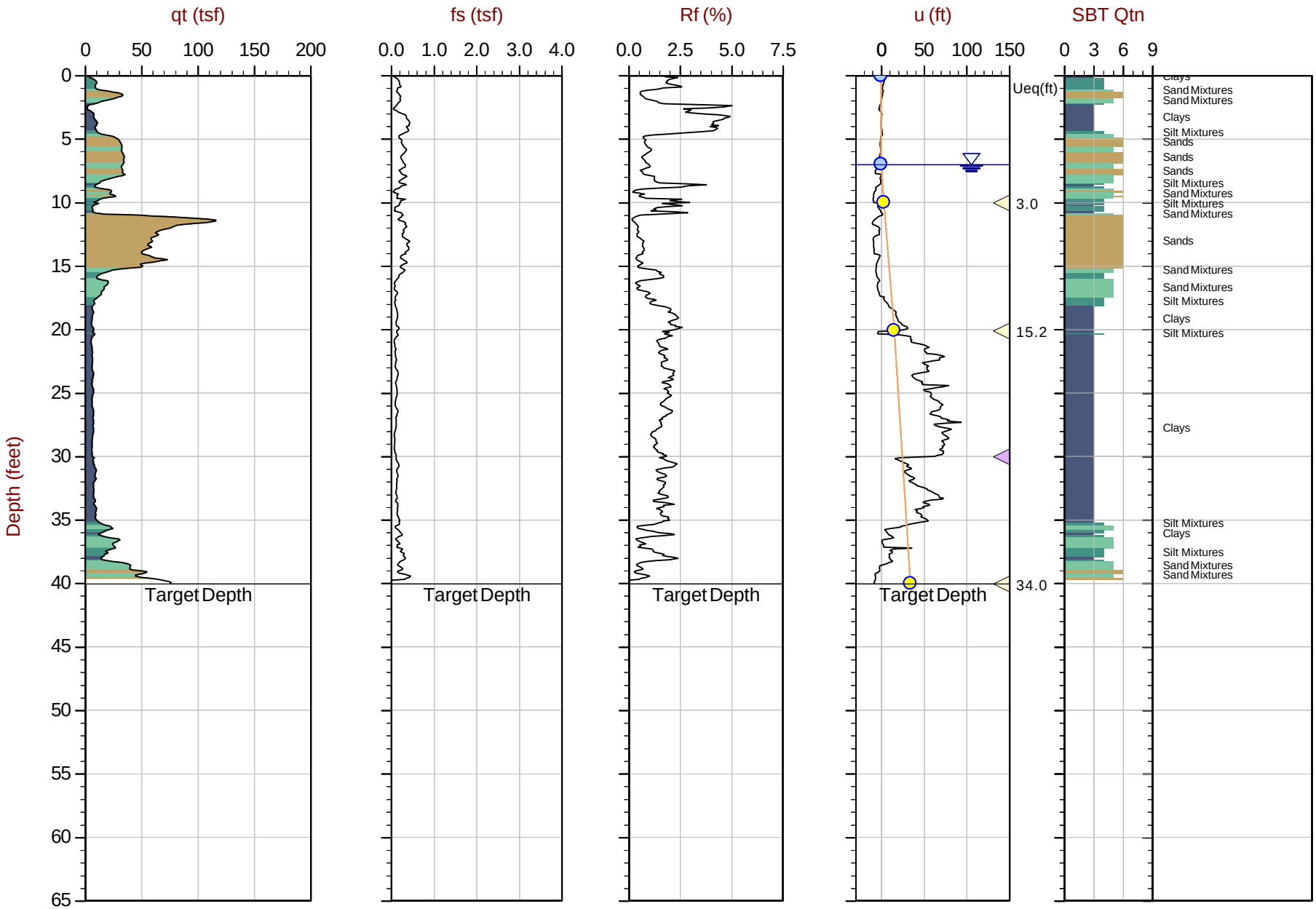
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 14:58
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_PRB-PC-02.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14277 Long: -123.01512

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

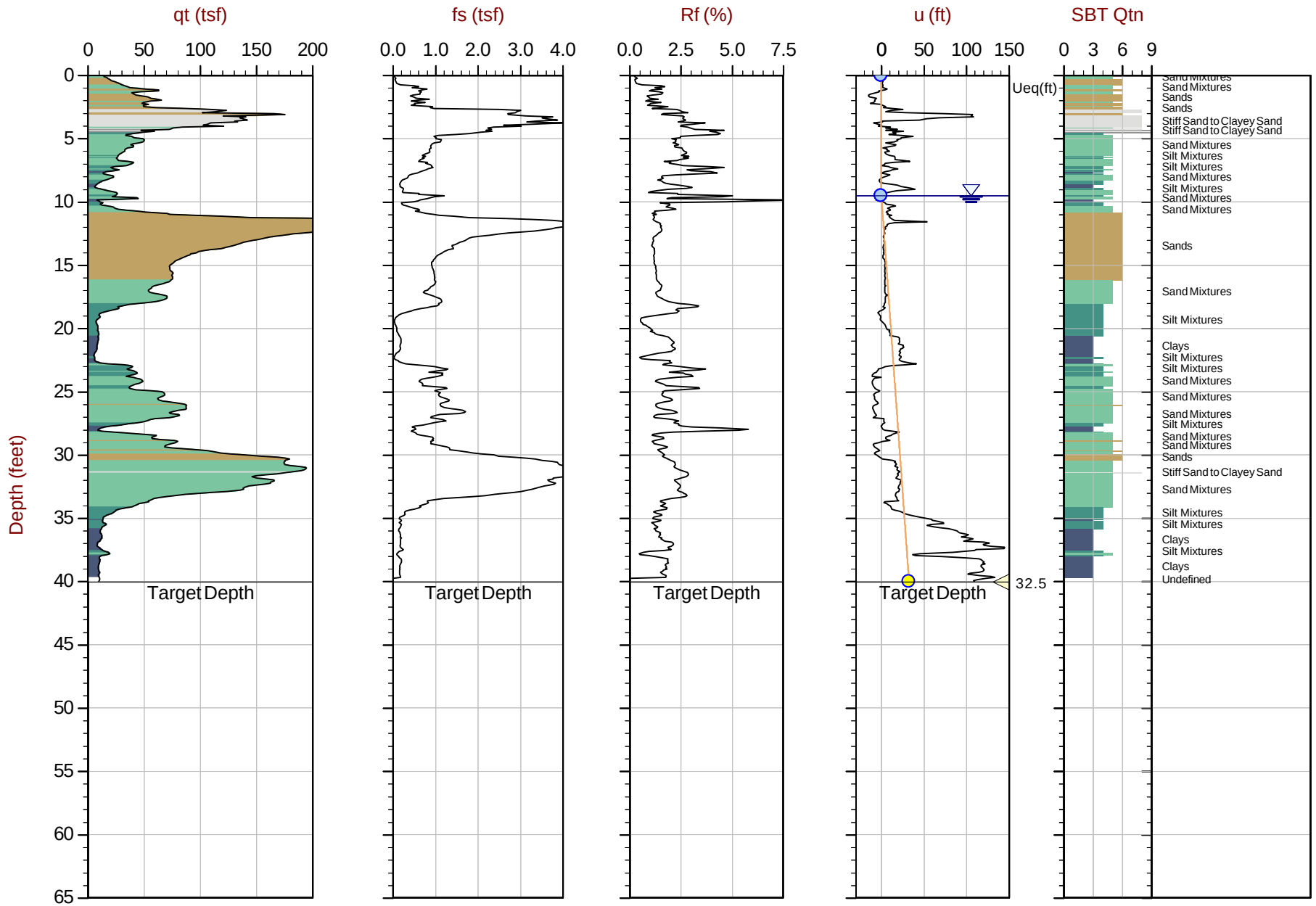
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 15:41
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01-B
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-01-B.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14104 Long: -123.01230

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

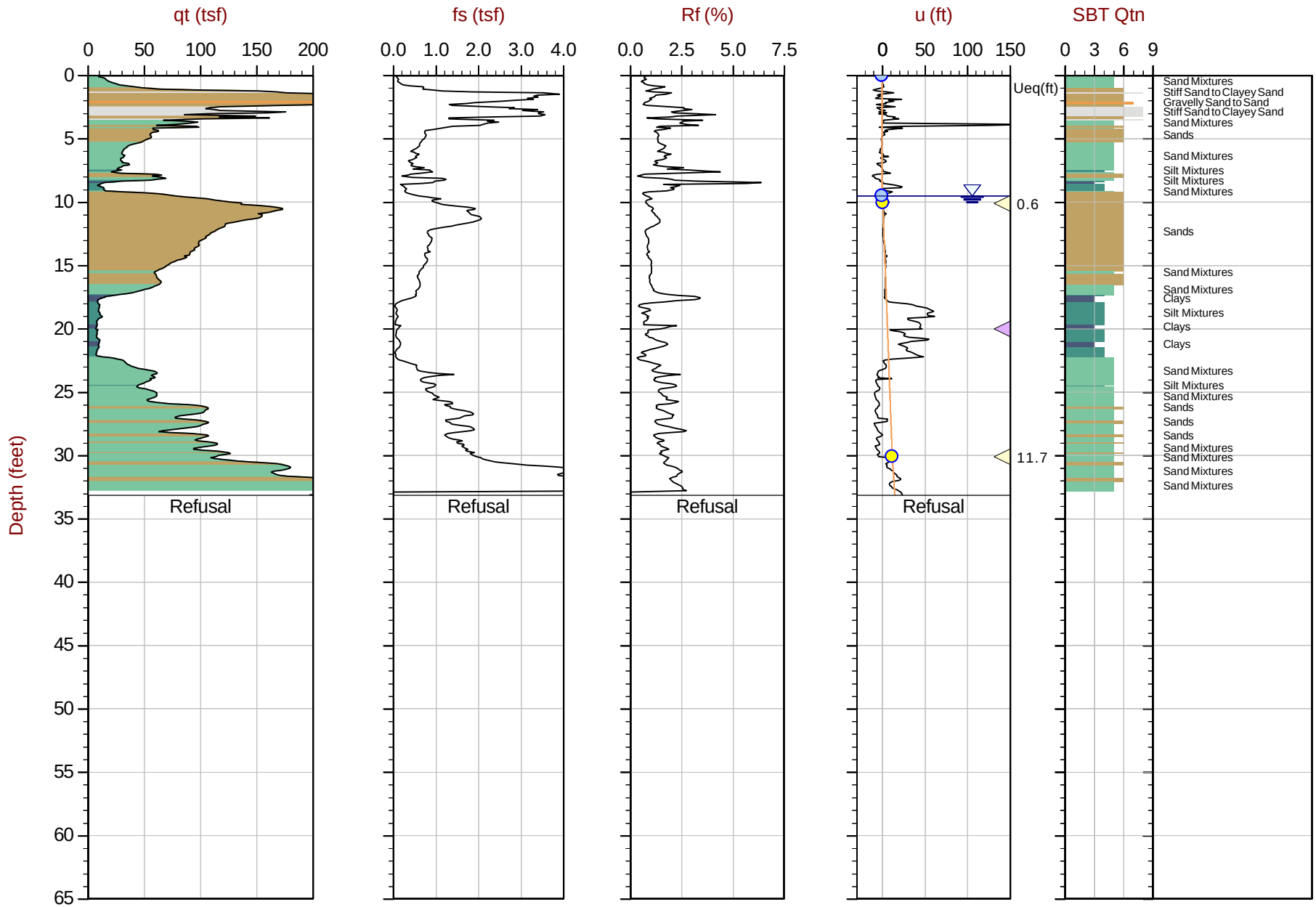
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 14:11
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500



Max Depth: 10.100 m / 33.14 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-01.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14102 Long: -123.01230

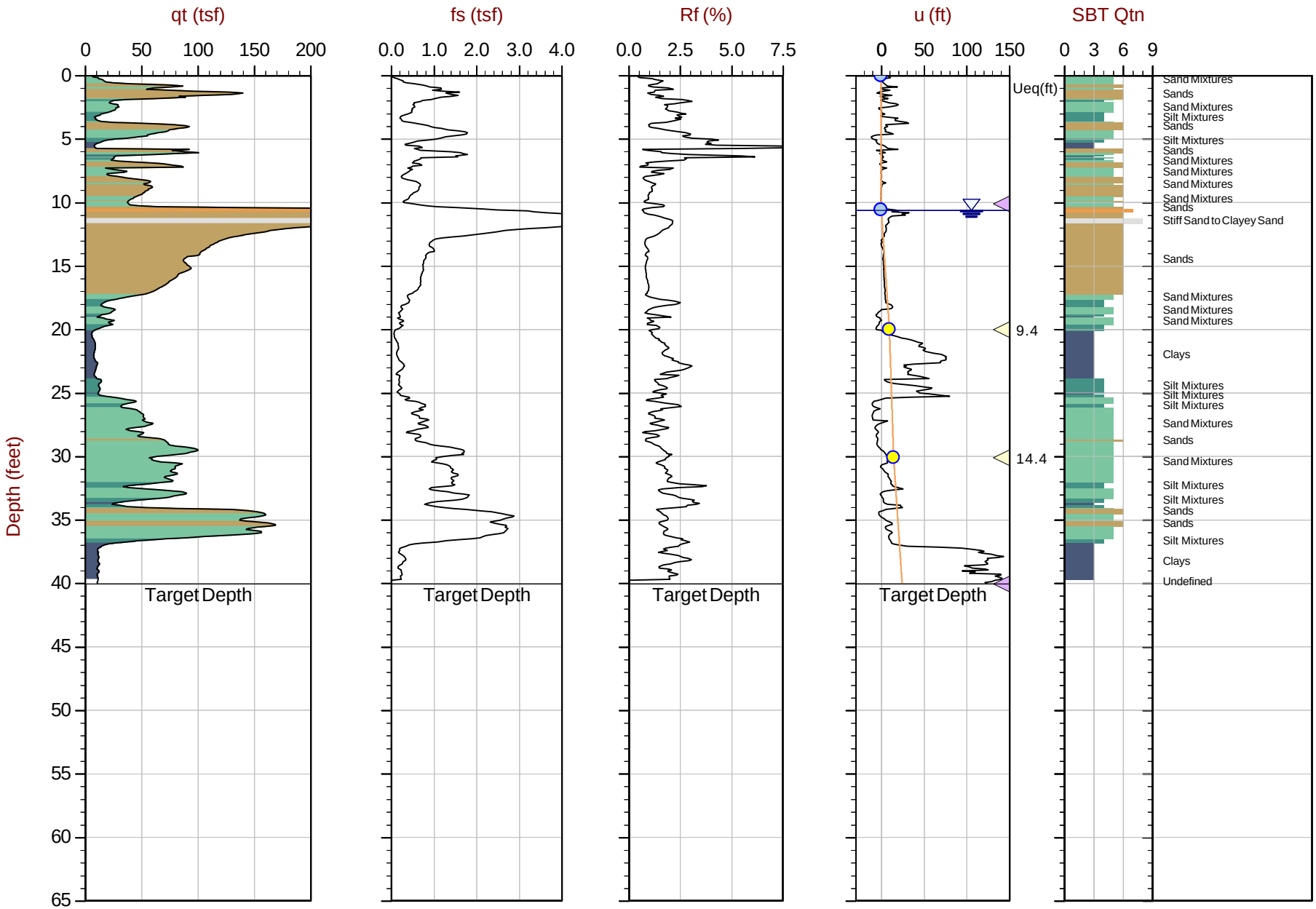
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 16:56
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-02.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14055 Long: -123.01010

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

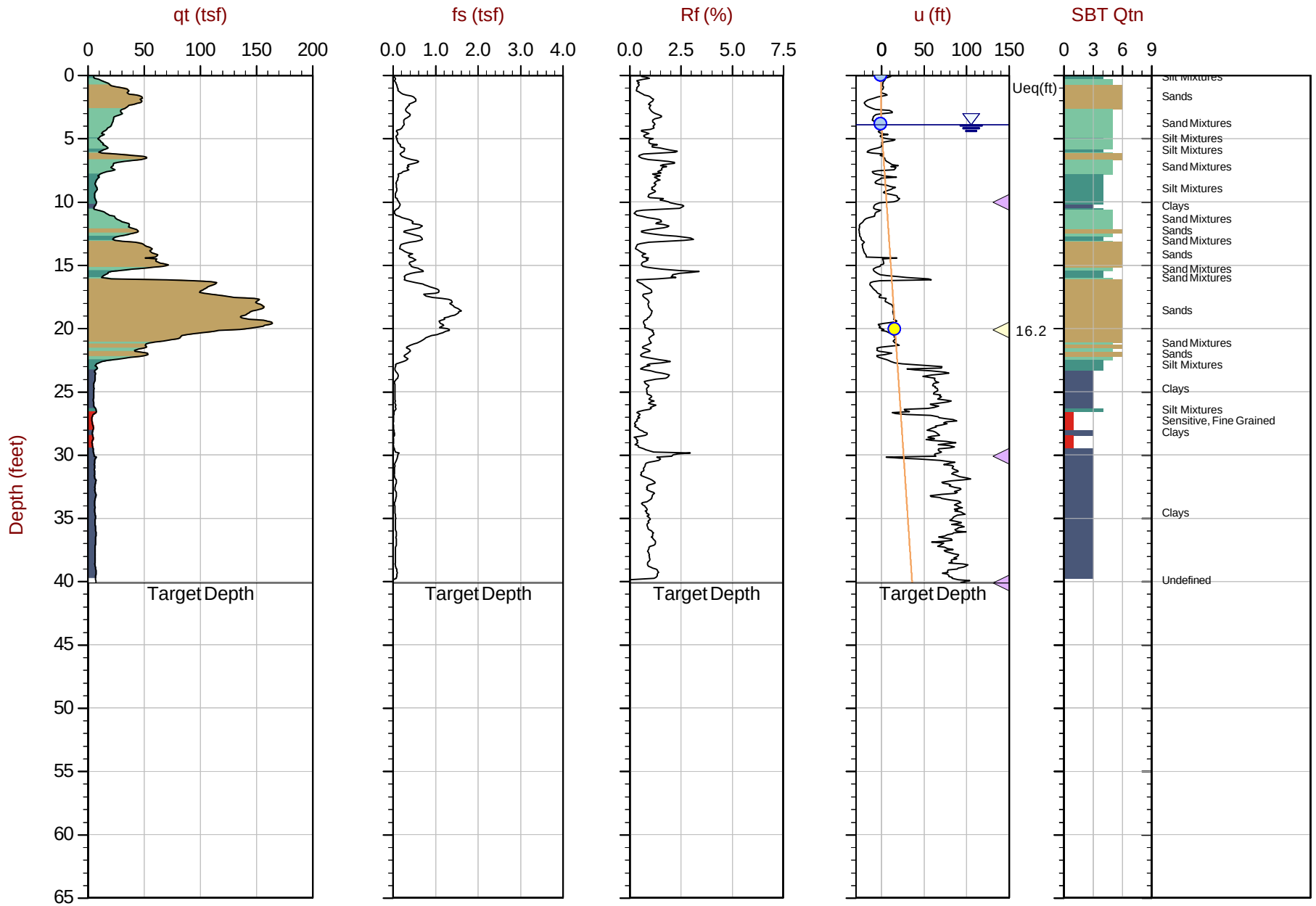
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 08:10
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500



Max Depth: 12.225 m / 40.11 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-03.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14134 Long: -123.00925

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

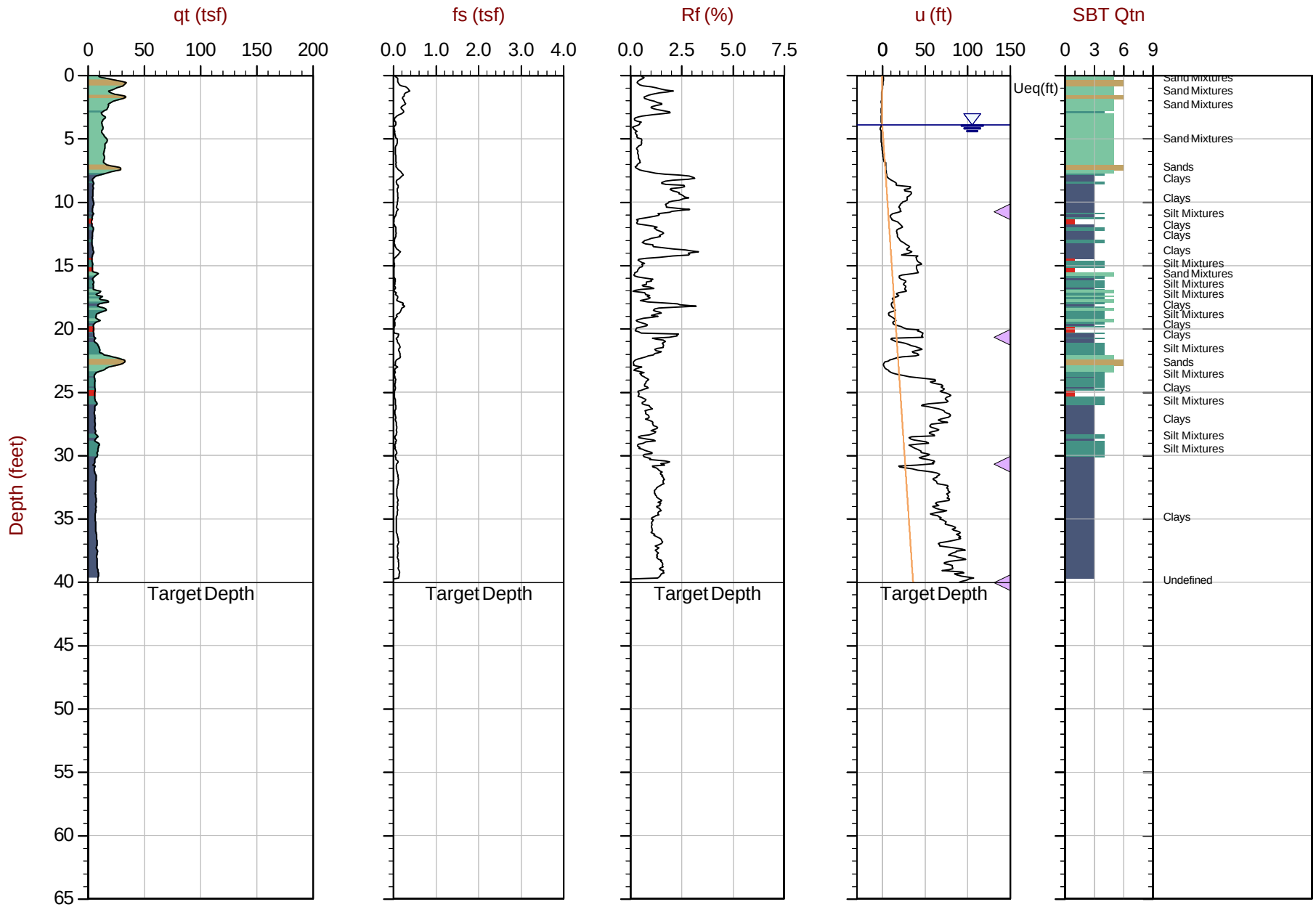
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 10:28
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-04.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14200 Long: -123.01171

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

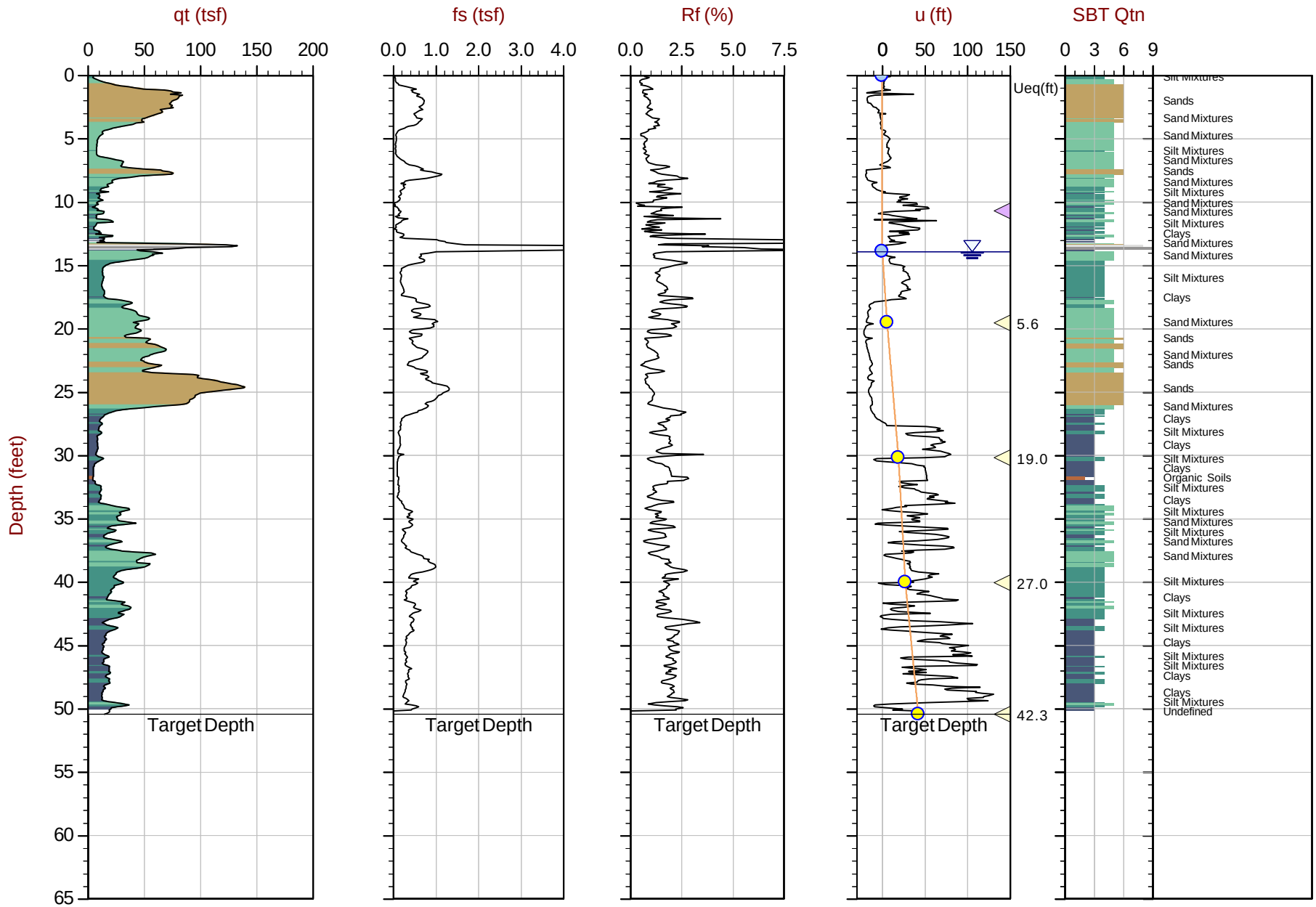
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 12:59
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500



Max Depth: 15.375 m / 50.44 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-05.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14160 Long: -123.01272

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

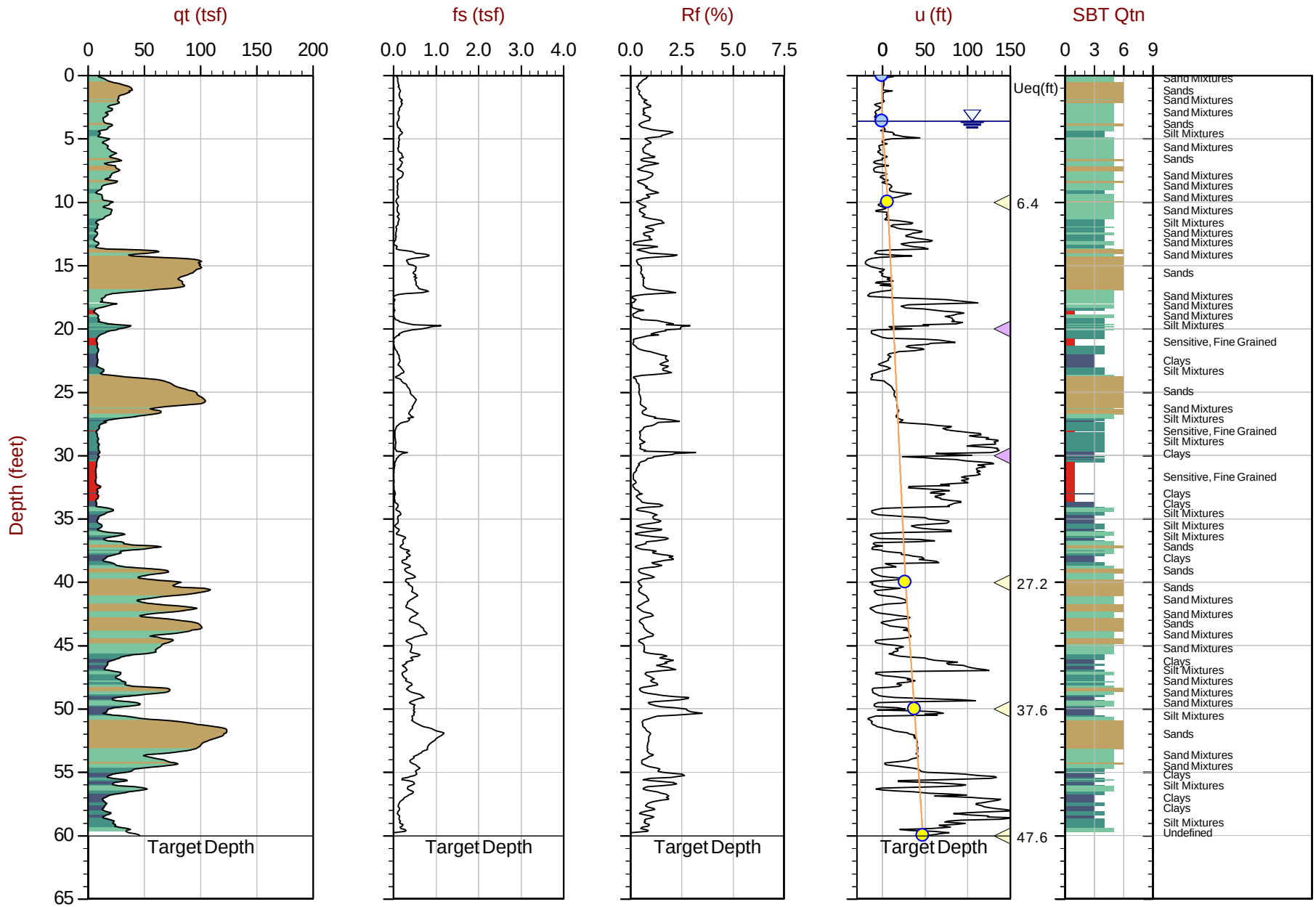
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 09:33
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500



Max Depth: 18.300 m / 60.04 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-01.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13543 Long: -122.99242

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

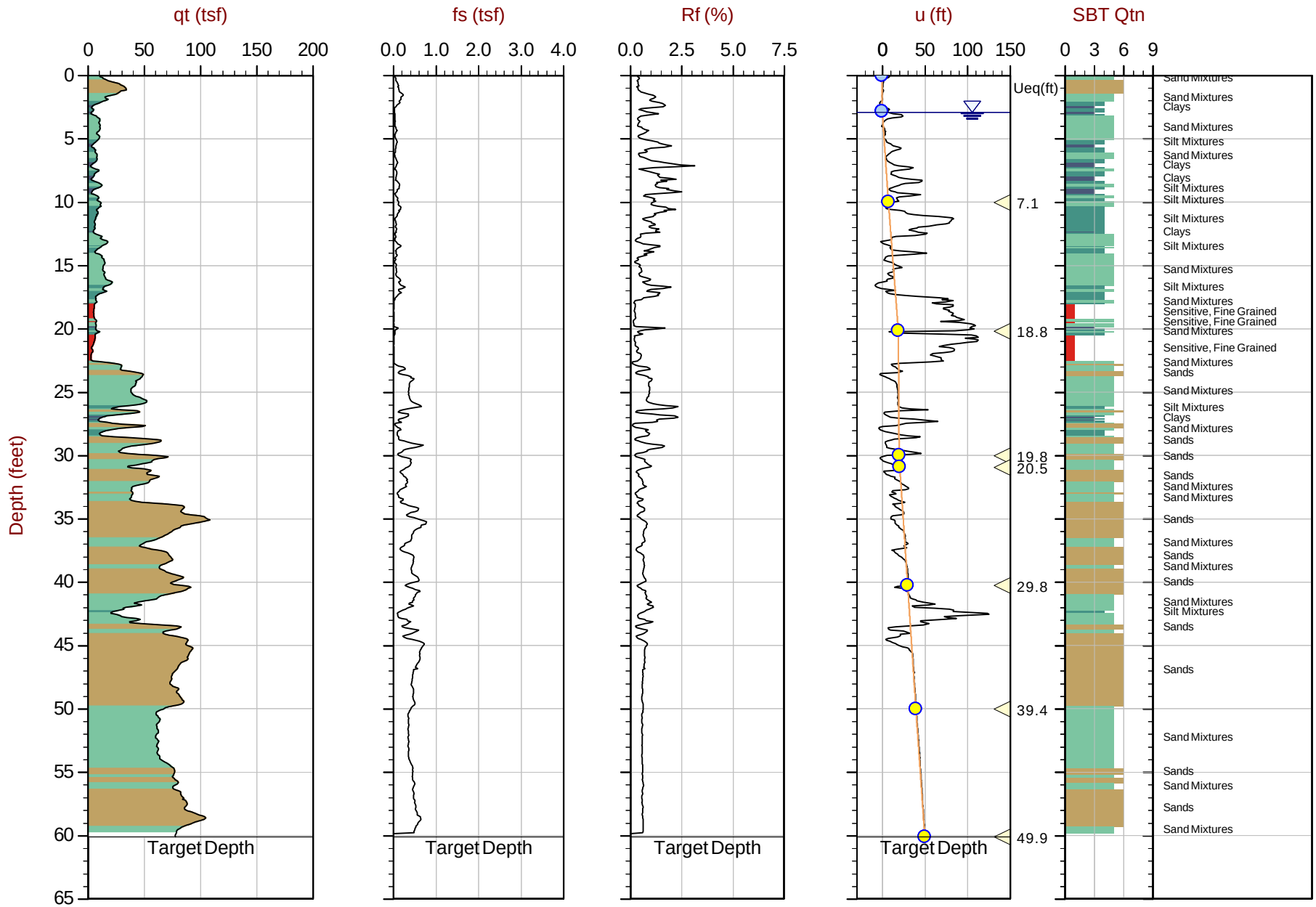
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 12:05
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-02.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13618 Long: -122.99214

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

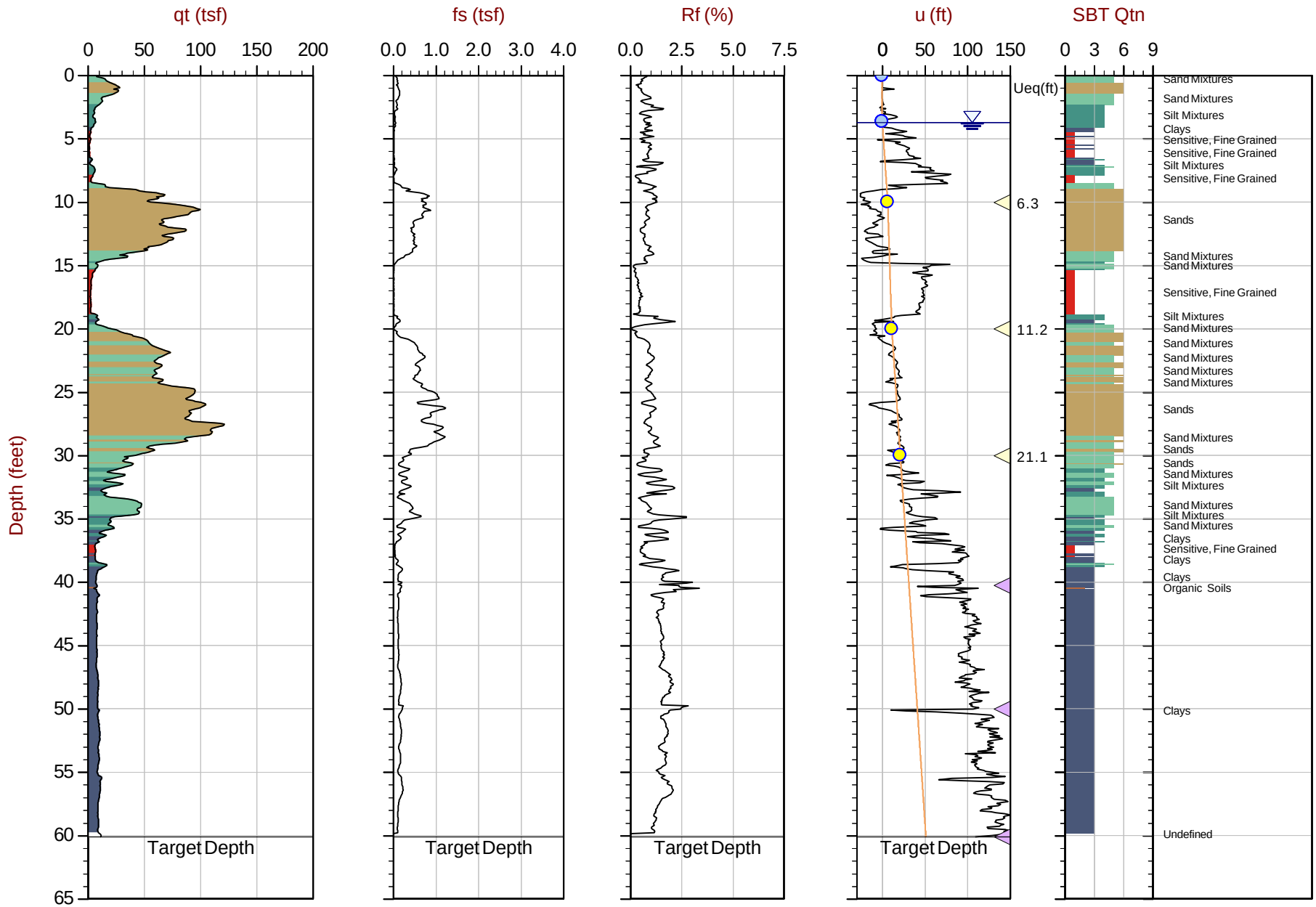
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 13:59
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-03.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13619 Long: -122.99130

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

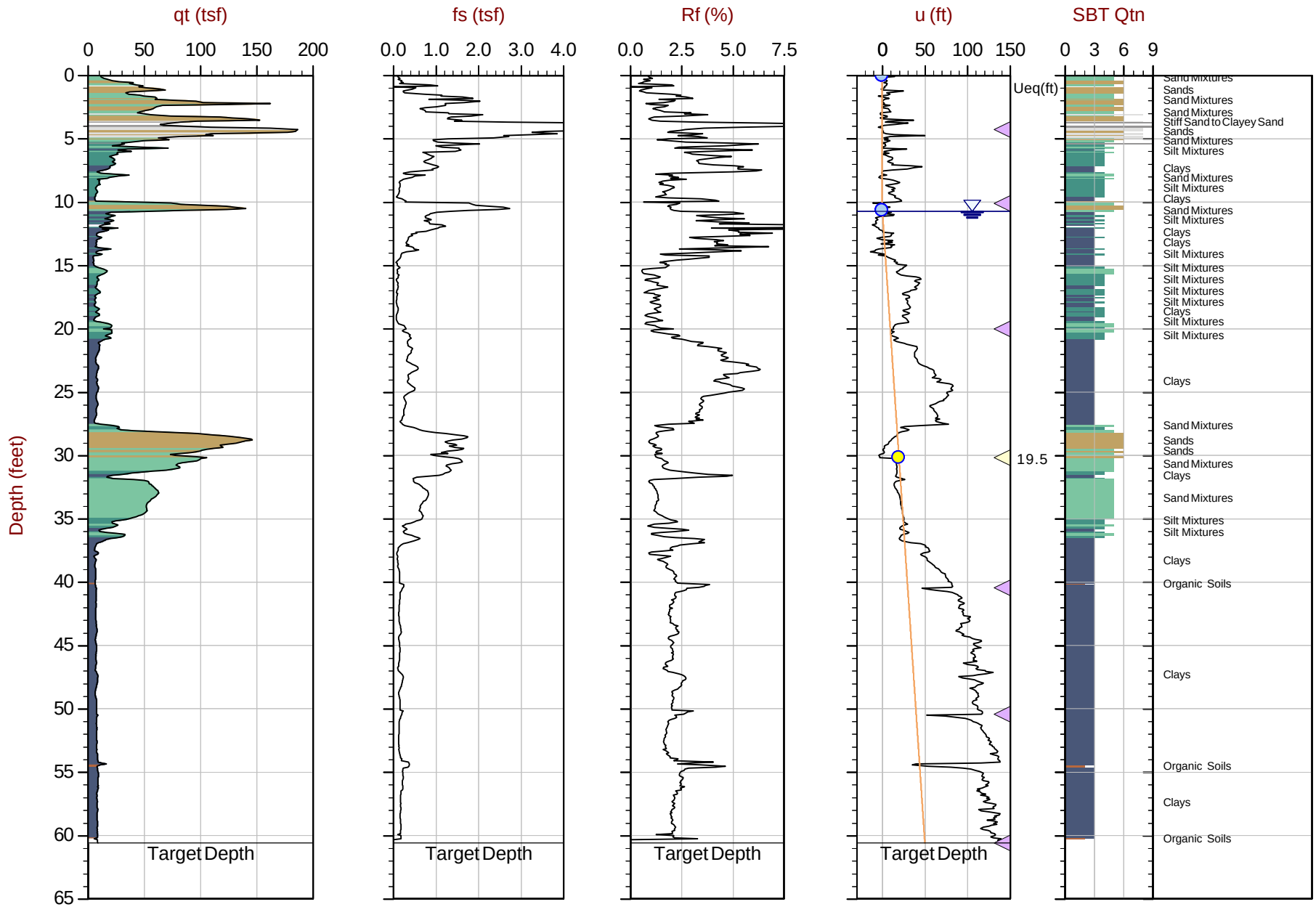
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 15:56
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500



Max Depth: 18.475 m / 60.61 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-04.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13631 Long: -122.98997

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

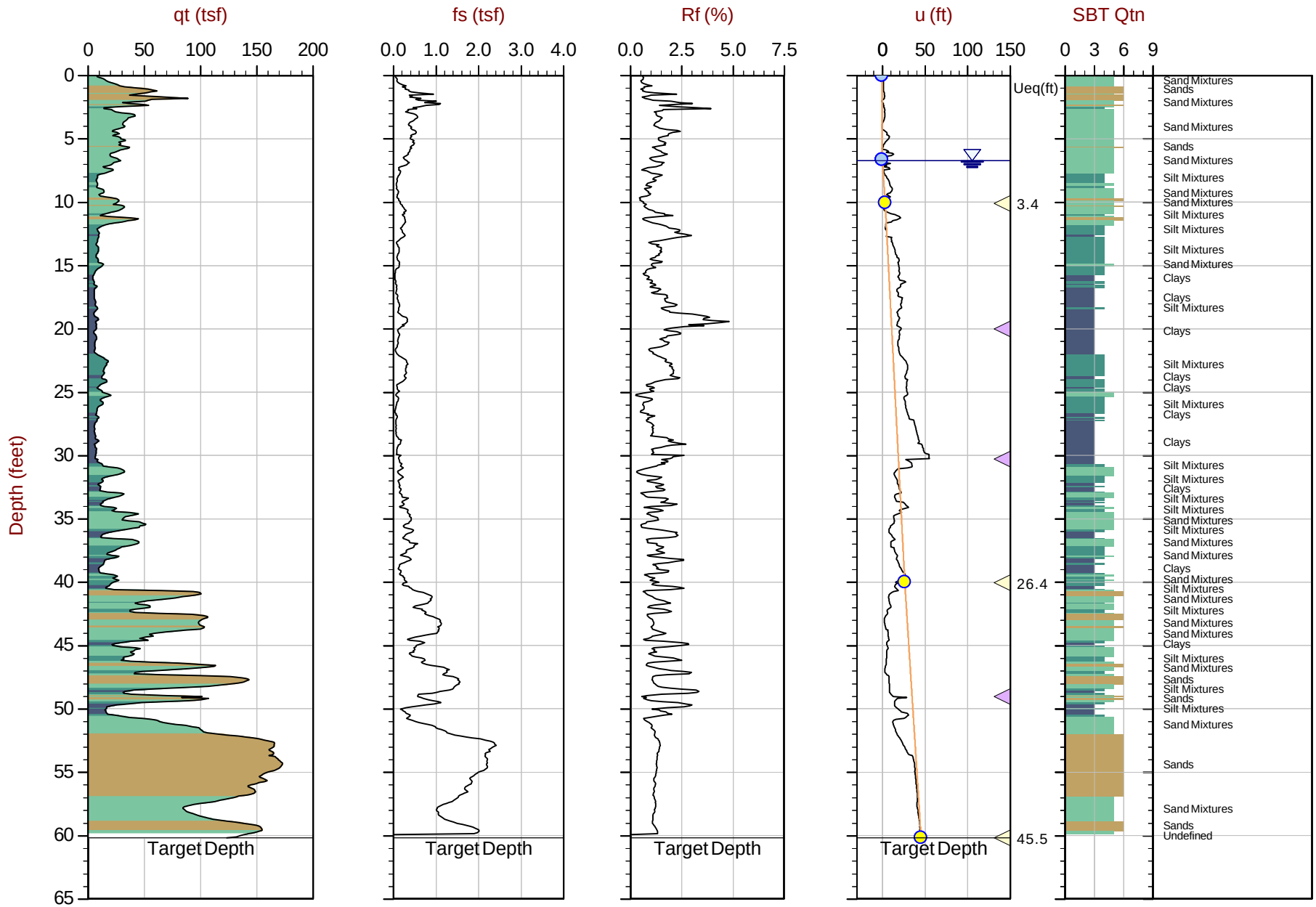
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 07:20
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500



Max Depth: 18.350 m / 60.20 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-05.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13543 Long: -122.99145

Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Equilibrium Profile (Ueq)

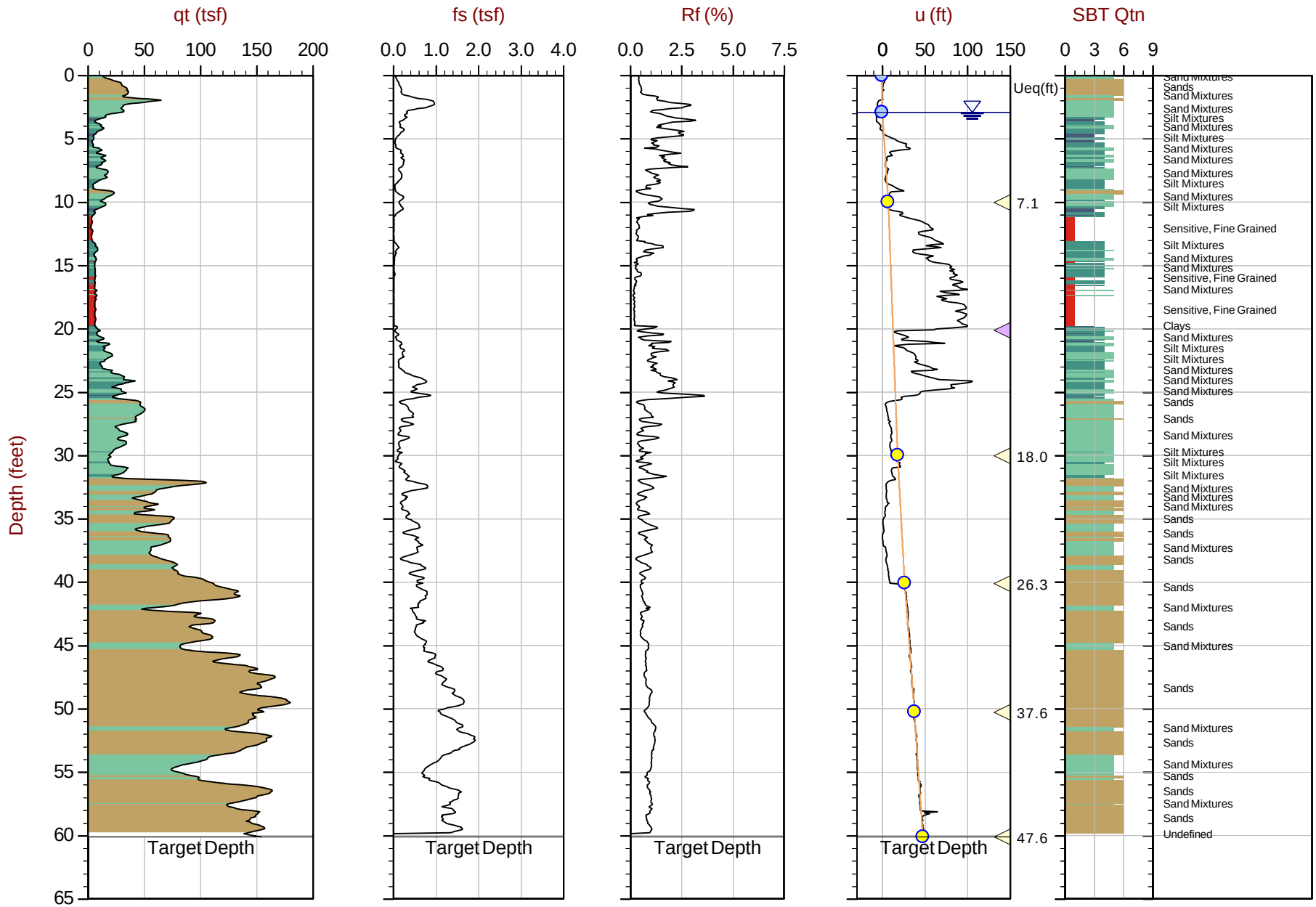
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 09:47
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-06.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13528 Long: -122.99300

Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Equilibrium Profile (Ueq)

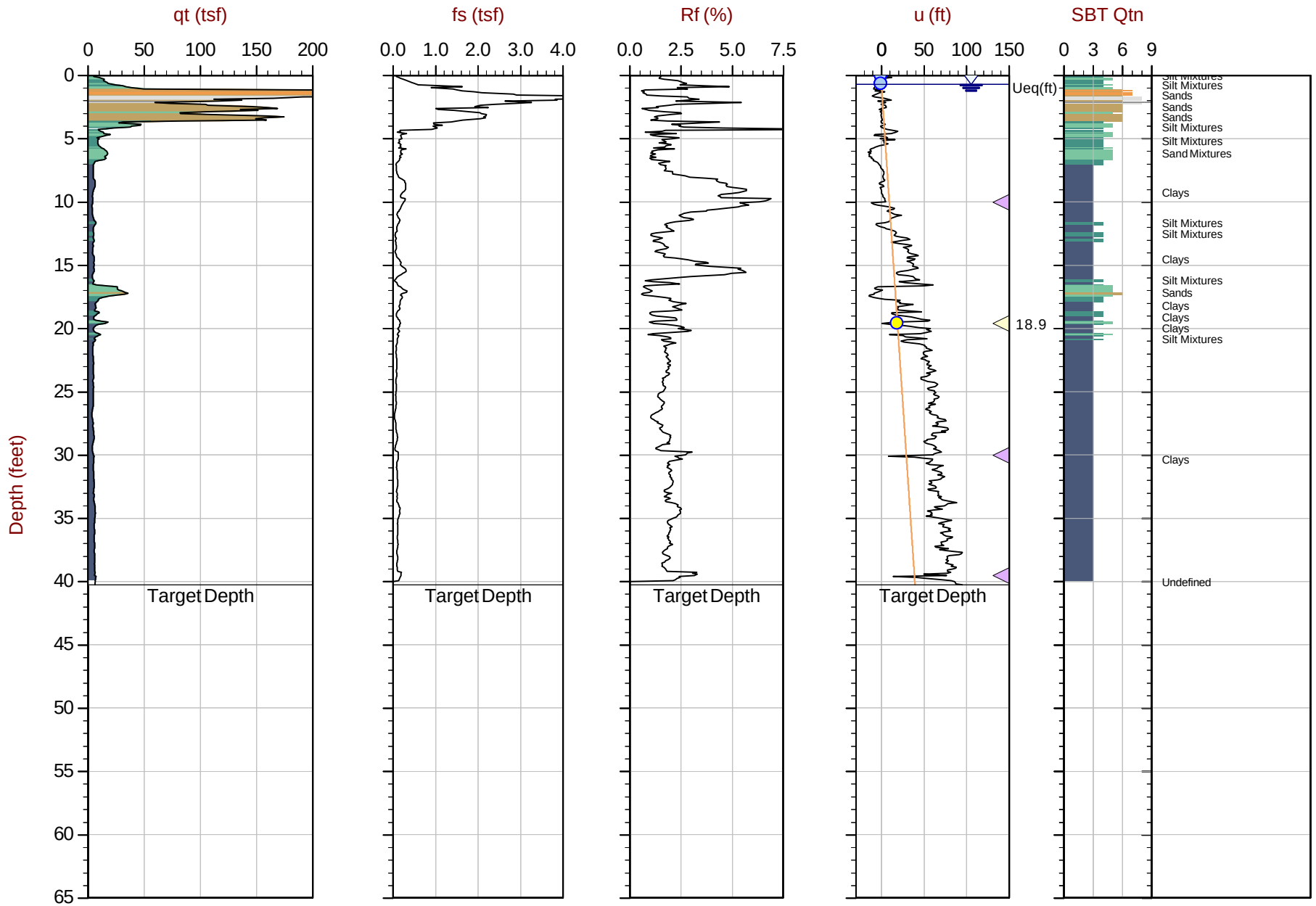
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 11:41
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500



Max Depth: 12.275 m / 40.27 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-01.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13729 Long: -122.99122

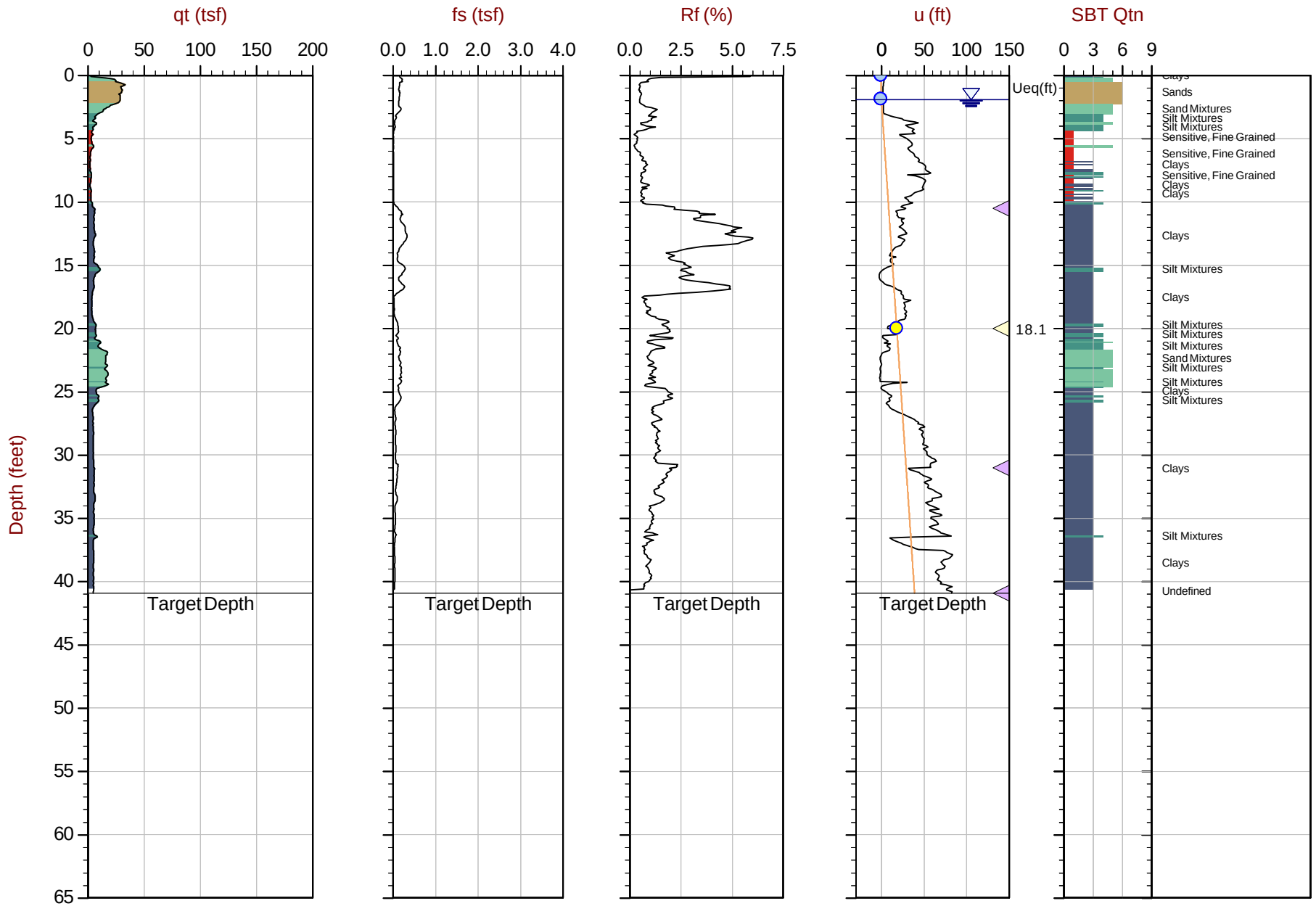
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 17:21
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.475 m / 40.93 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-02.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13761 Long: -122.98936

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

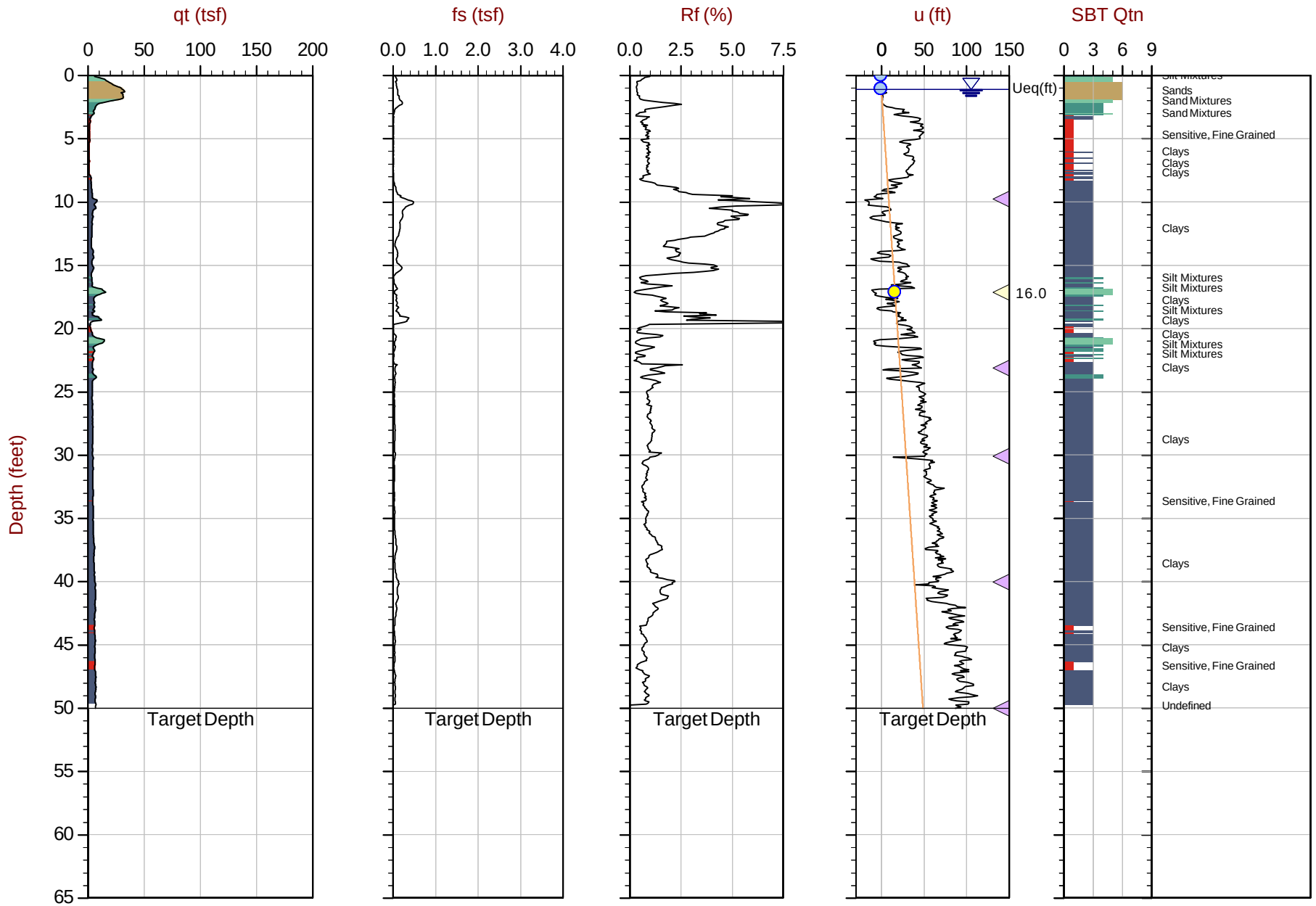
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 14:06
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-03.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13734 Long: -122.99001

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

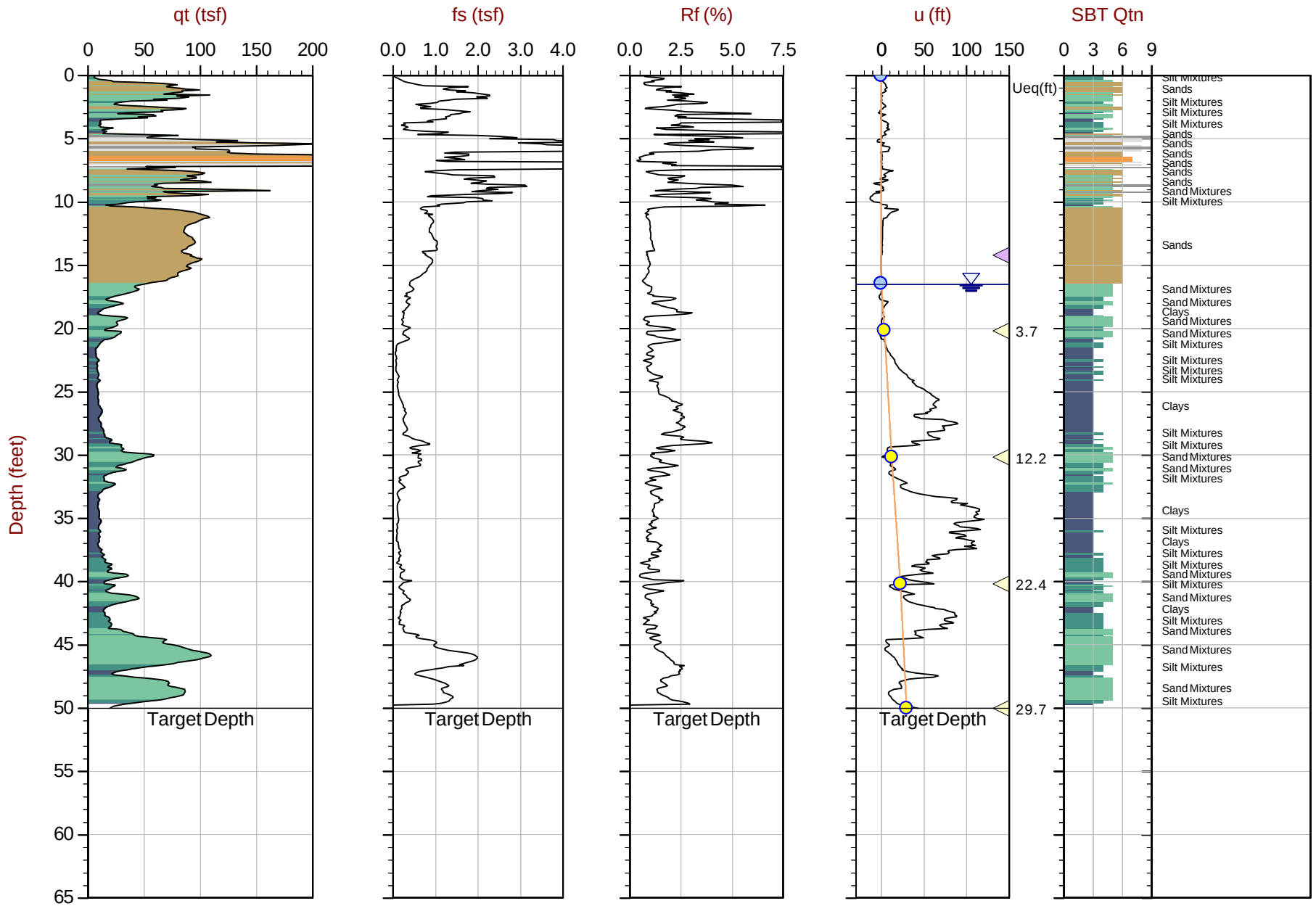
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 09:50
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU10-PC-01.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13678 Long: -122.99950

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

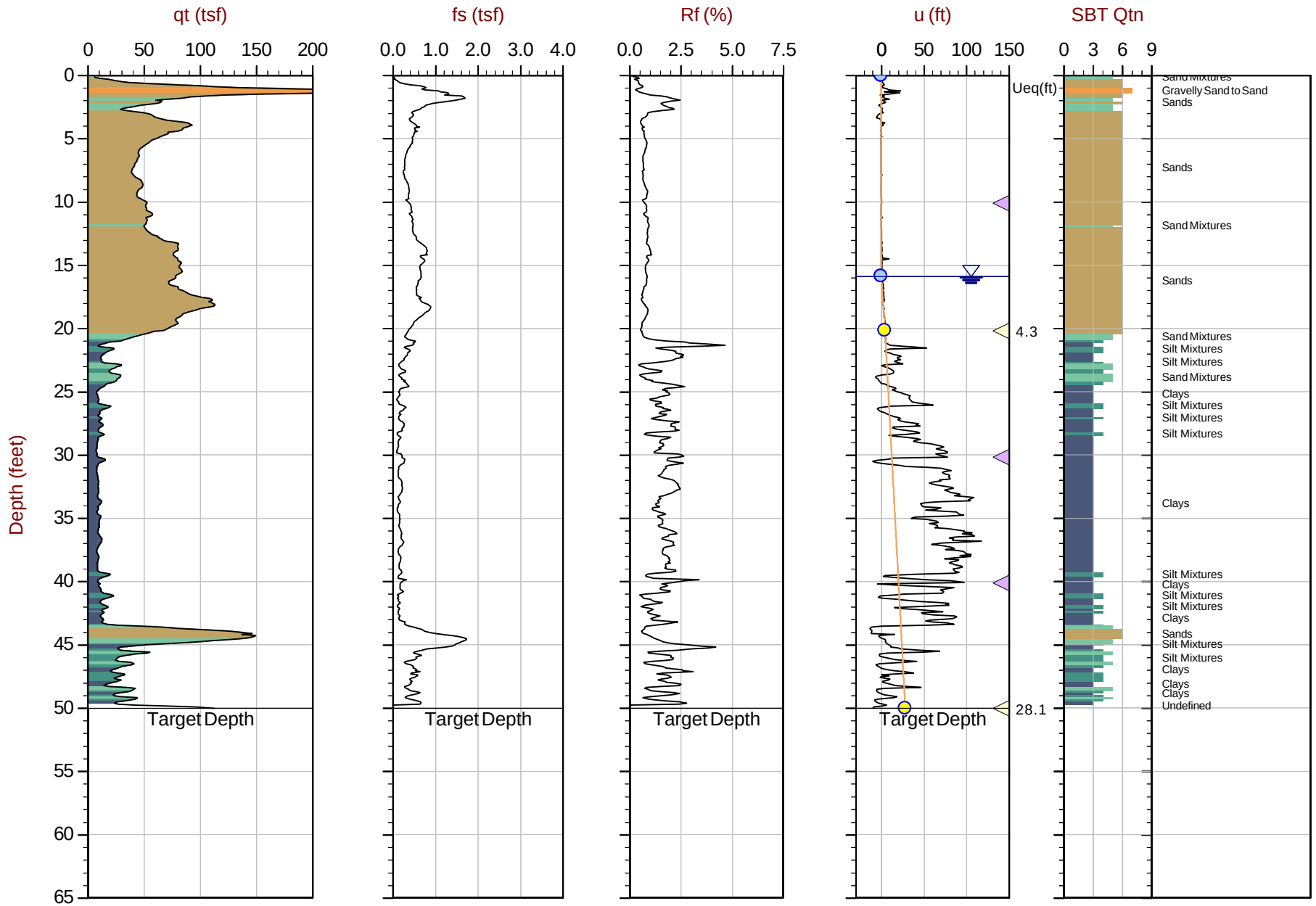
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 11:36
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU10-PC-02.COR
Unit Wt: SBTQtn (PKR2009)

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13617 Long: -122.99776

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

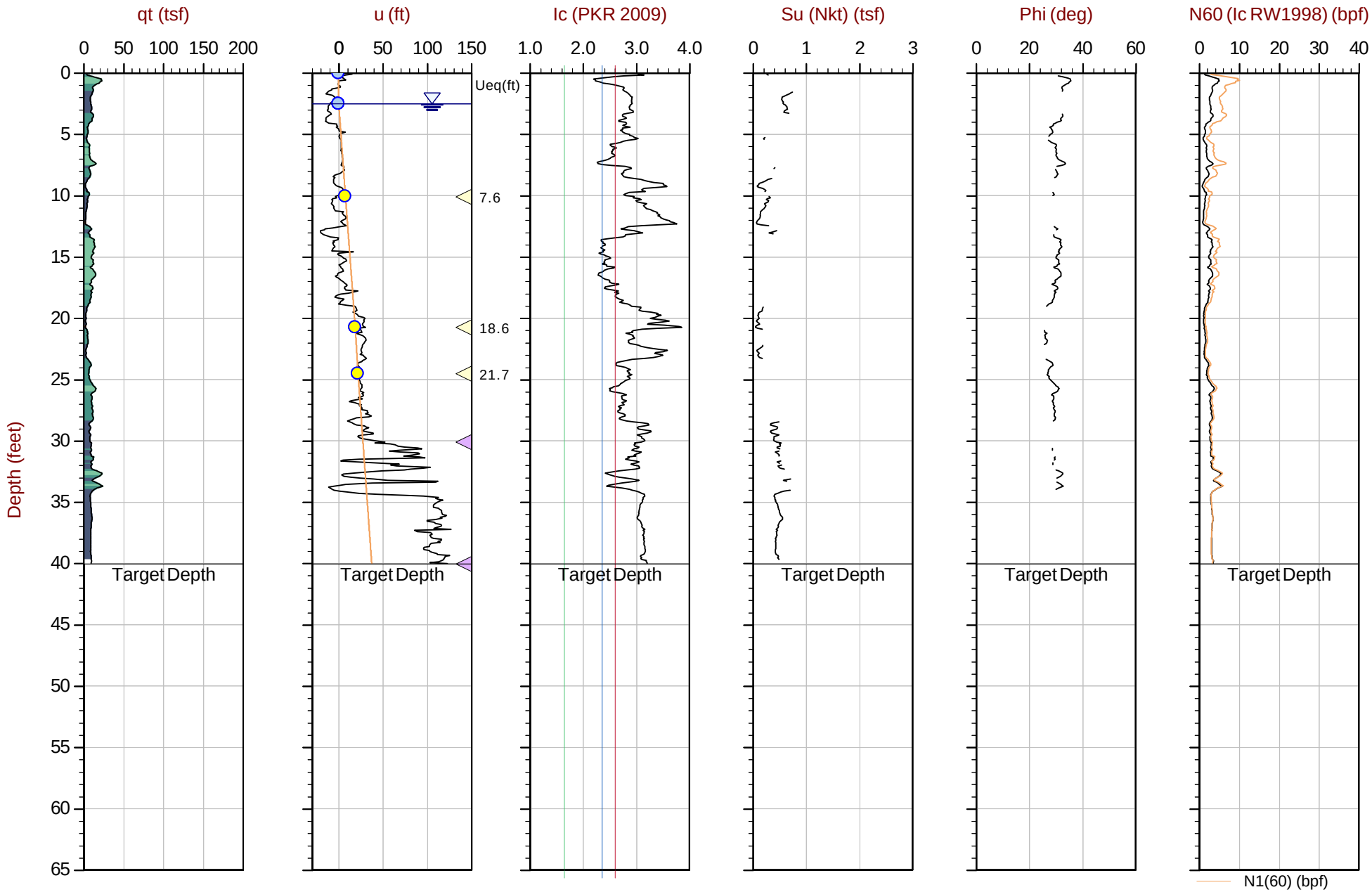
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Cone Penetration Test Advanced Plots

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 16:48
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_PRB-PC-01.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14707 Long: -123.01508

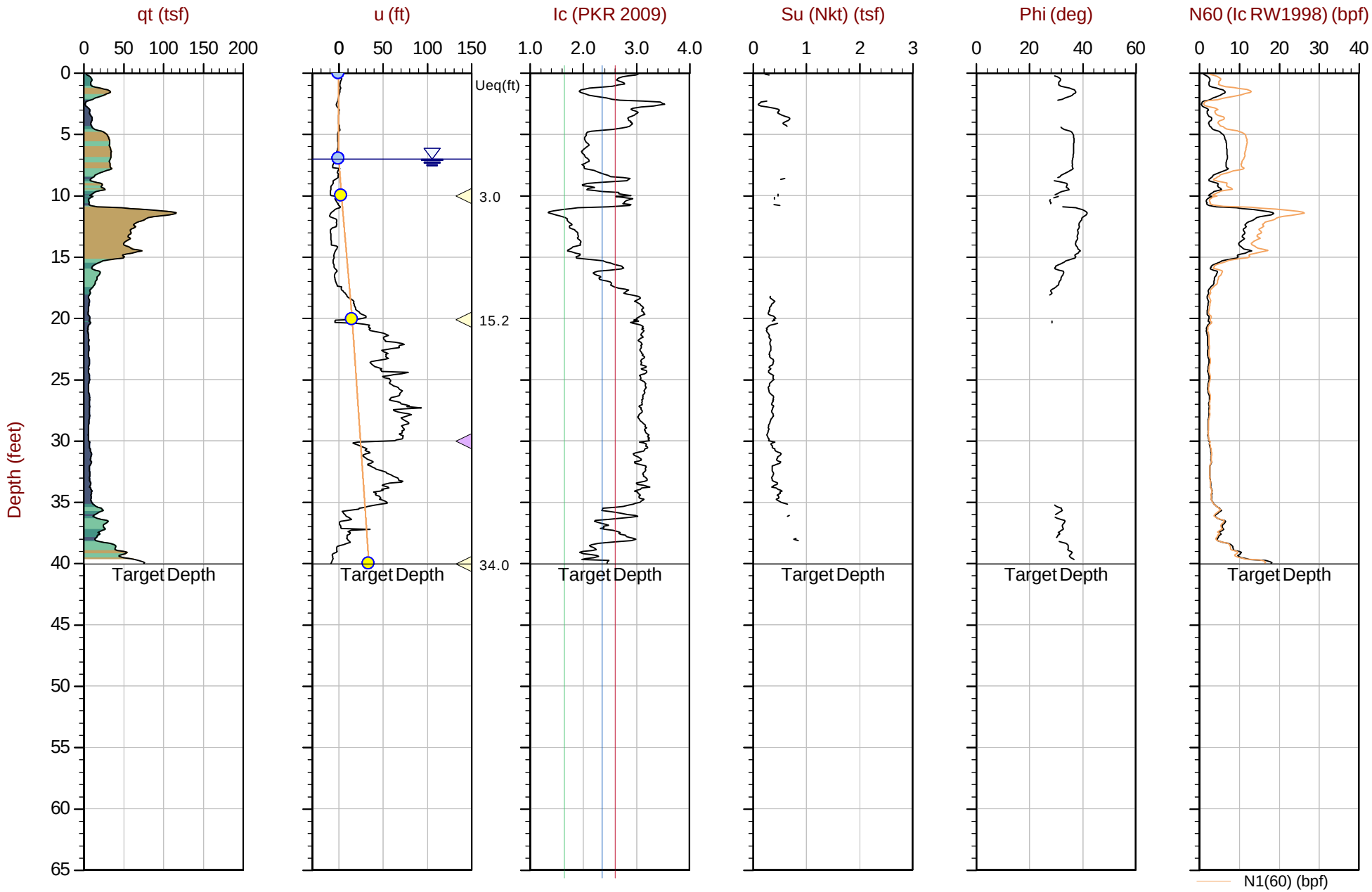
Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 14:58
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_PRB-PC-02.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14277 Long: -123.01512

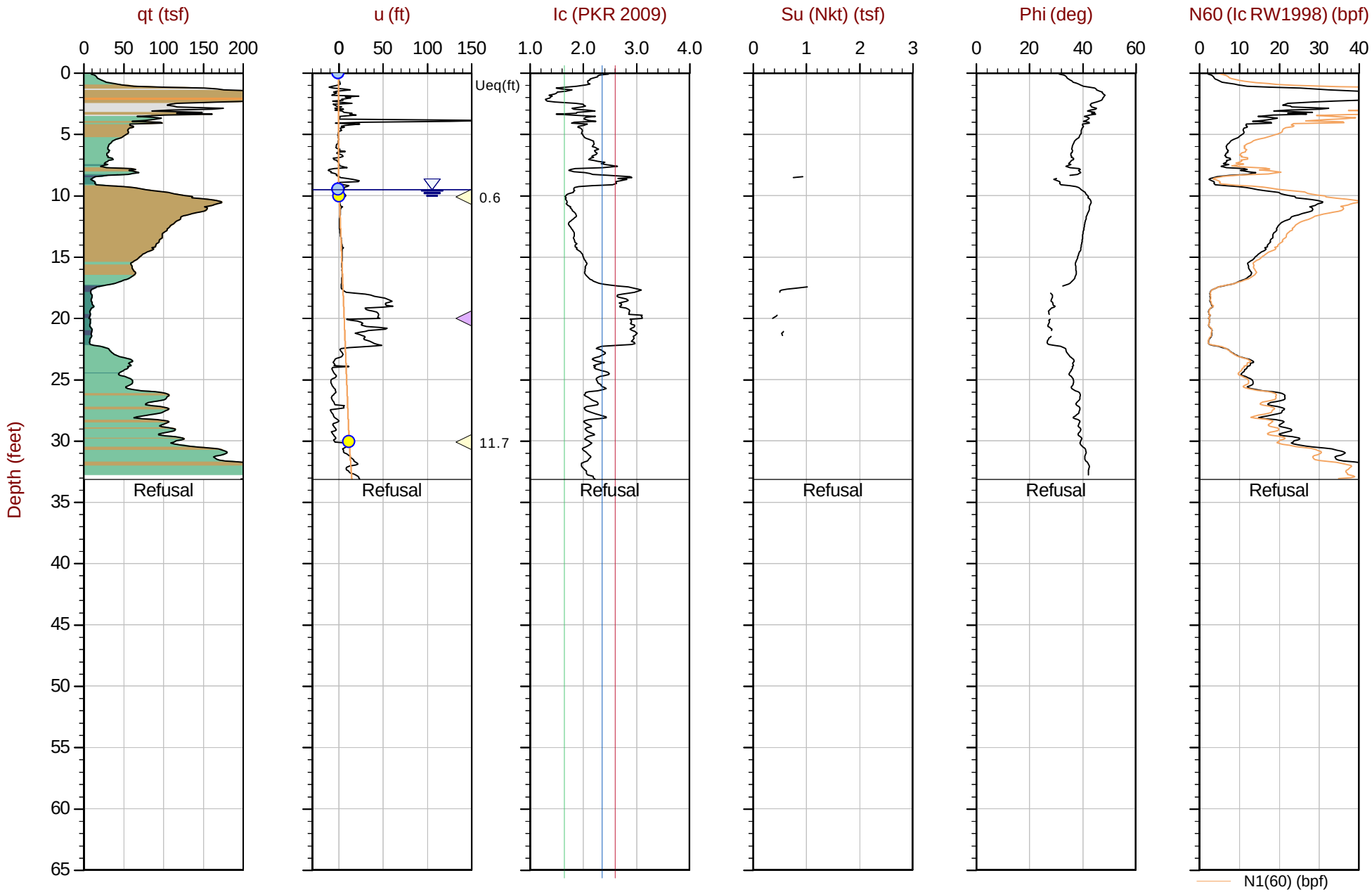
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 14:11
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500



Max Depth: 10.100 m / 33.14 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-01.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14102 Long: -123.01230

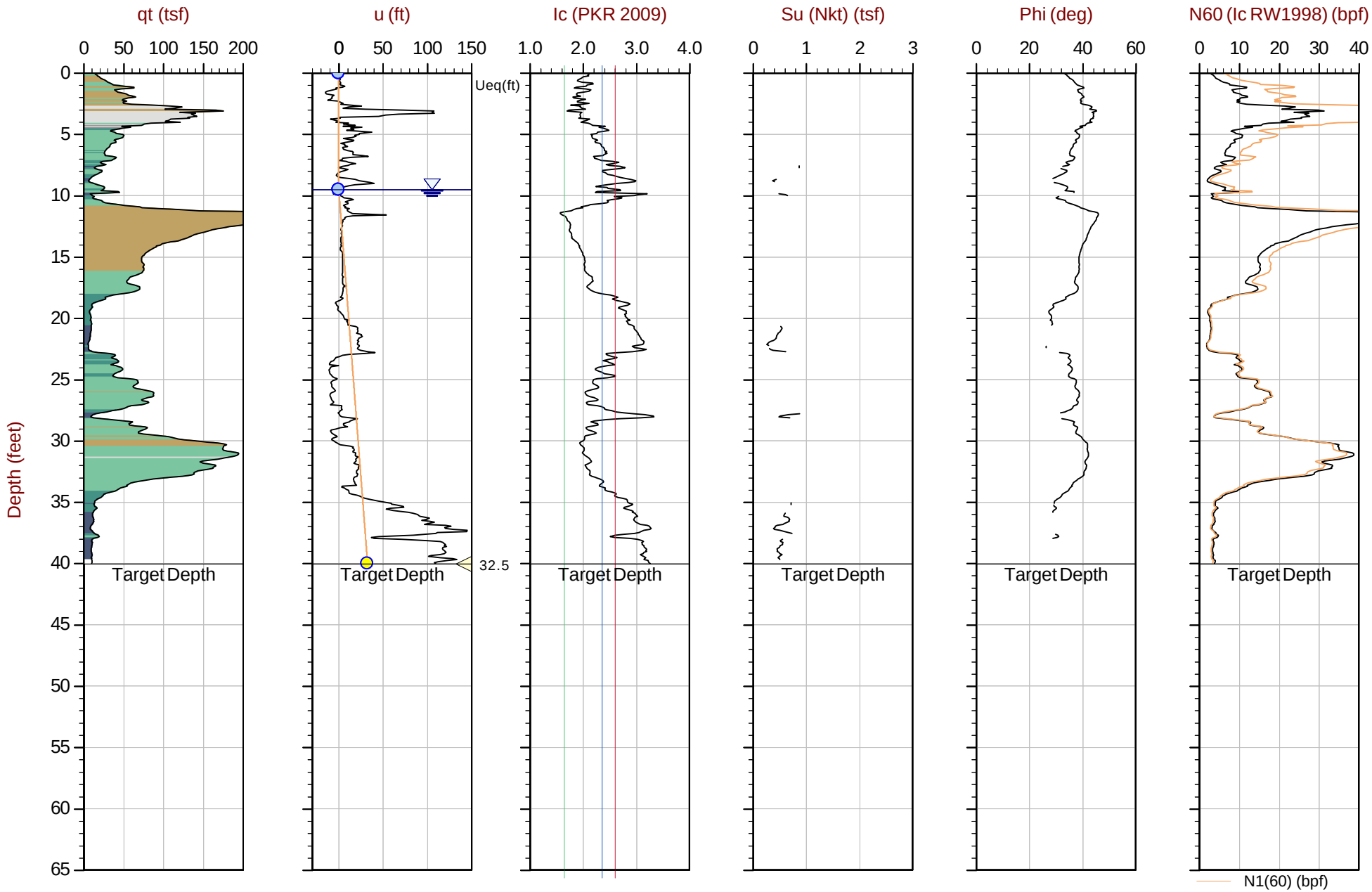
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 15:41
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01-B
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-01-B.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14104 Long: -123.01230

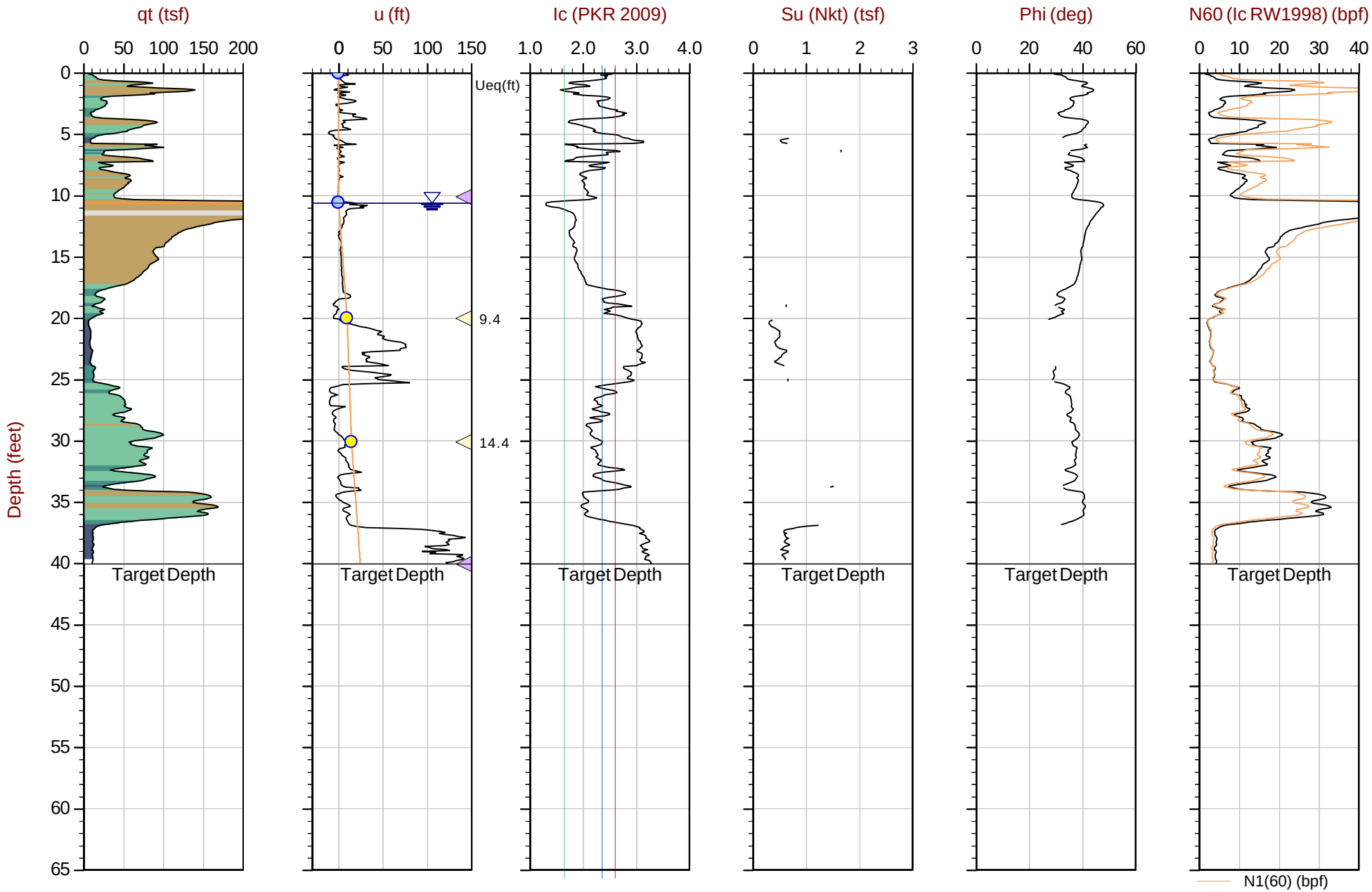
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 16:56
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-02.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14055 Long: -123.01010

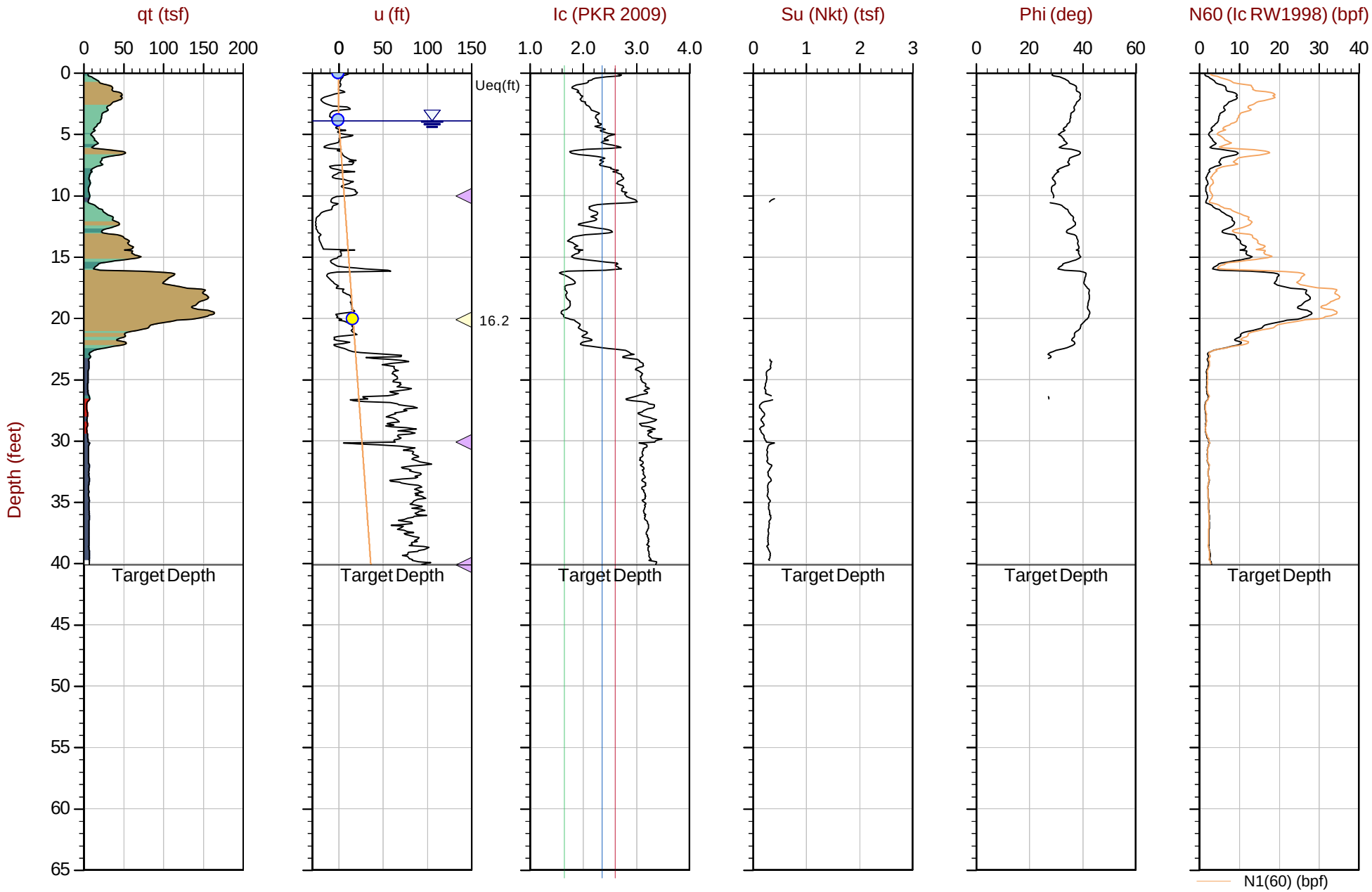
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 08:10
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500



Max Depth: 12.225 m / 40.11 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-03.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14134 Long: -123.00925

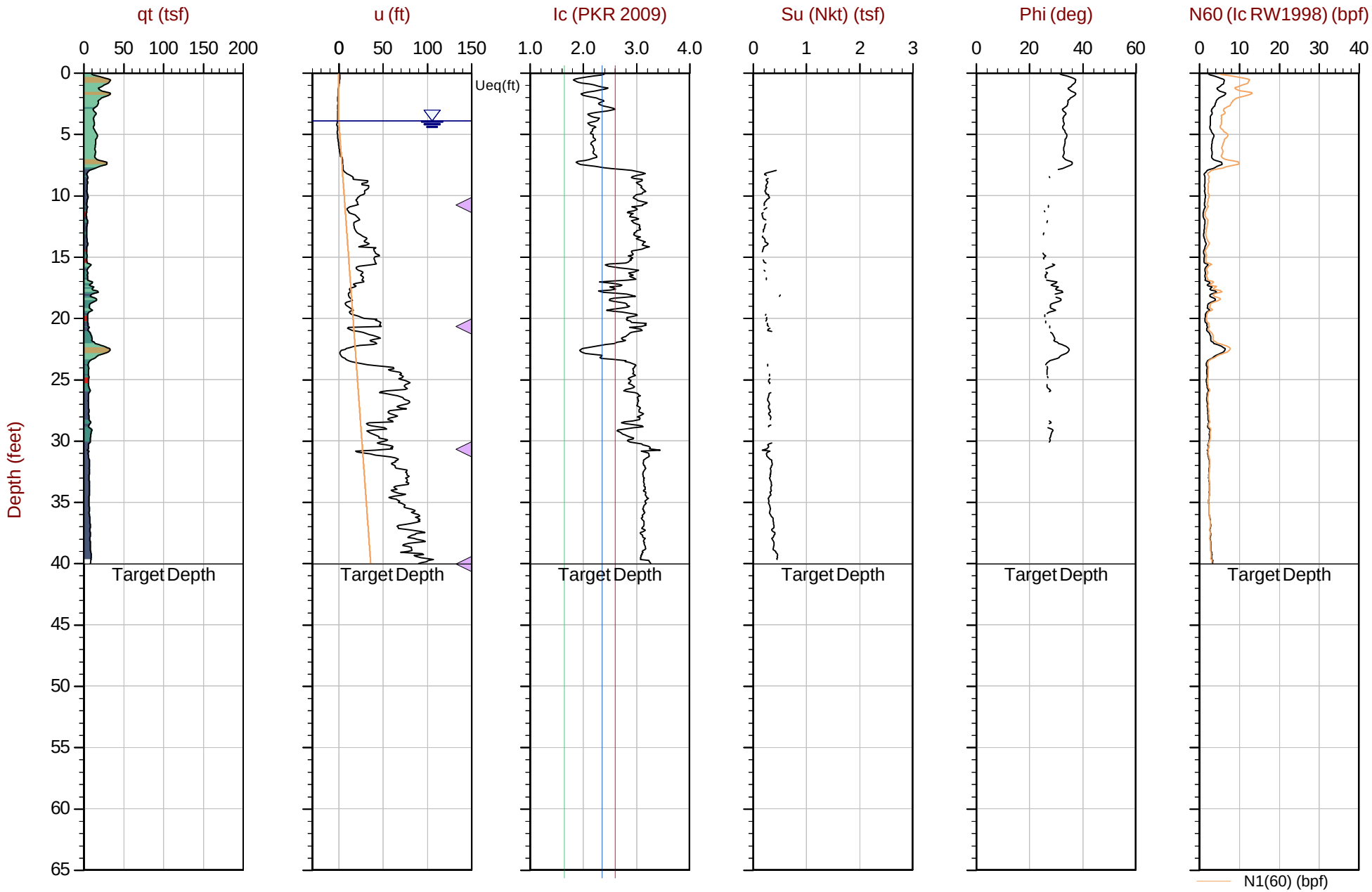
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 10:28
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500



Max Depth: 12.200 m / 40.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-04.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14200 Long: -123.01171

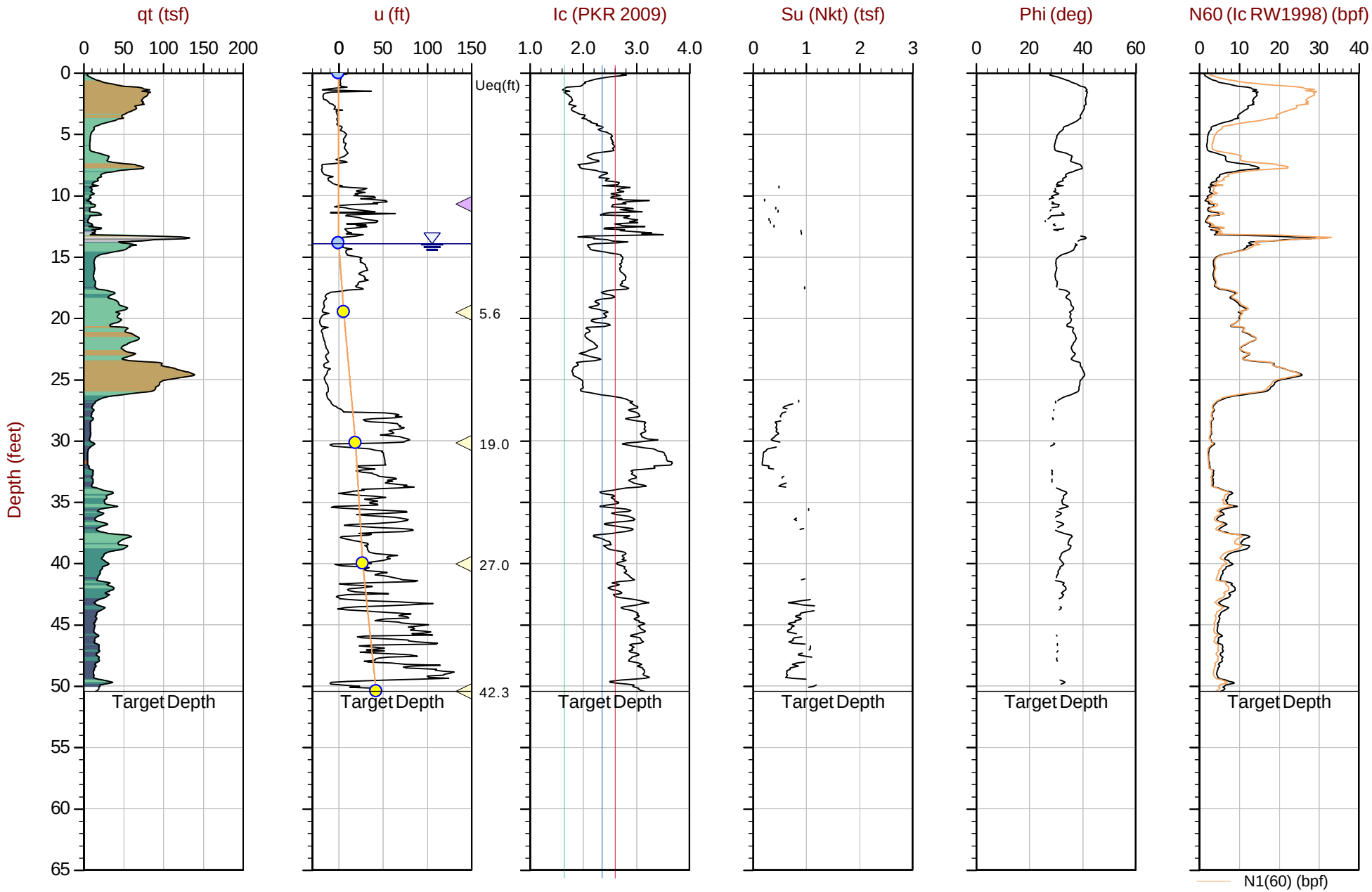
Equilibrium Pore Pressure (Ueq) Assumed Ueq Dissipation, Ueq achieved Dissipation, Ueq not achieved Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 12:59
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500



Max Depth: 15.375 m / 50.44 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU02-PC-05.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.14160 Long: -123.01272

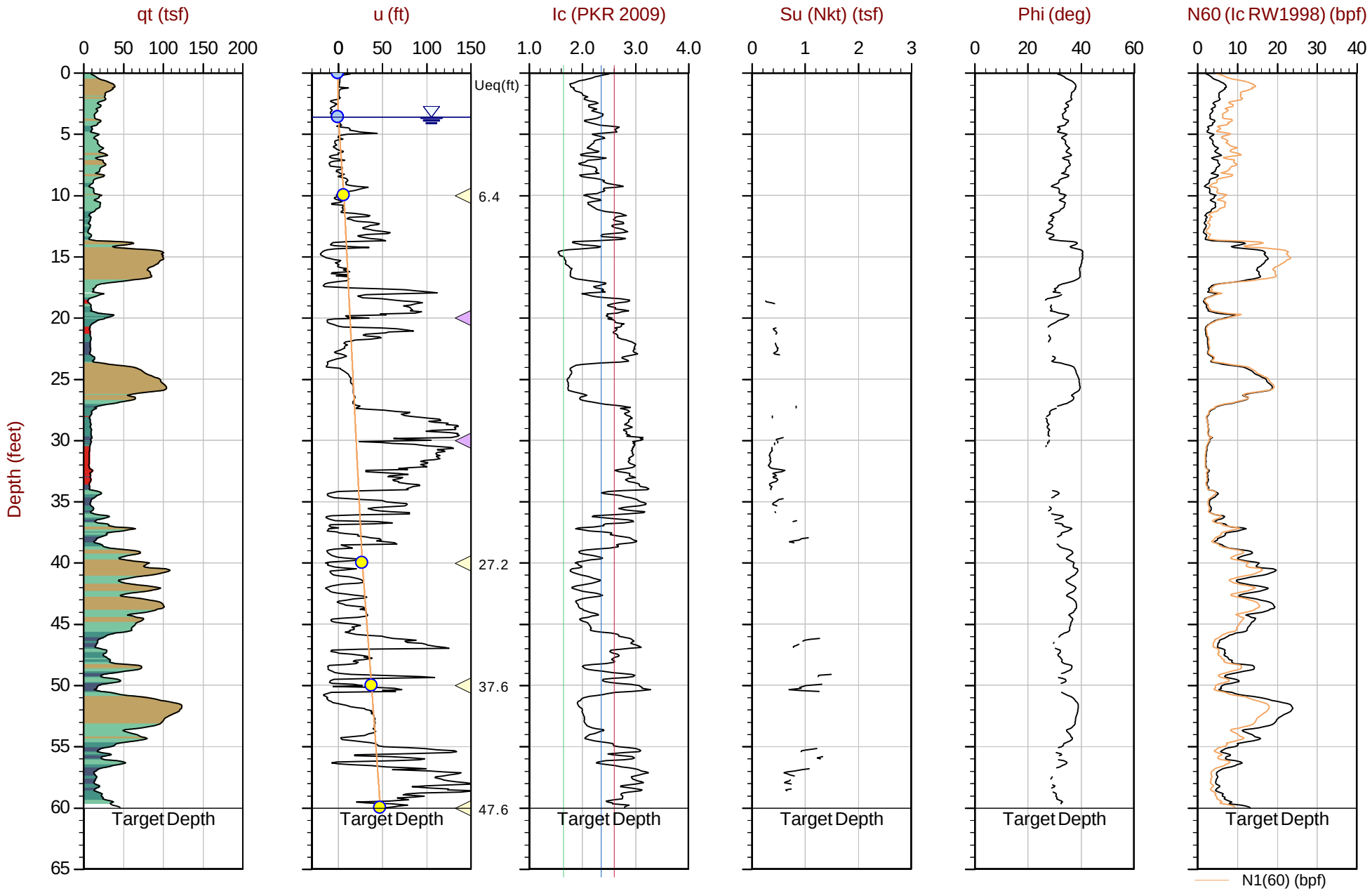
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 09:33
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500



Max Depth: 18.300 m / 60.04 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-01.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13543 Long: -122.99242

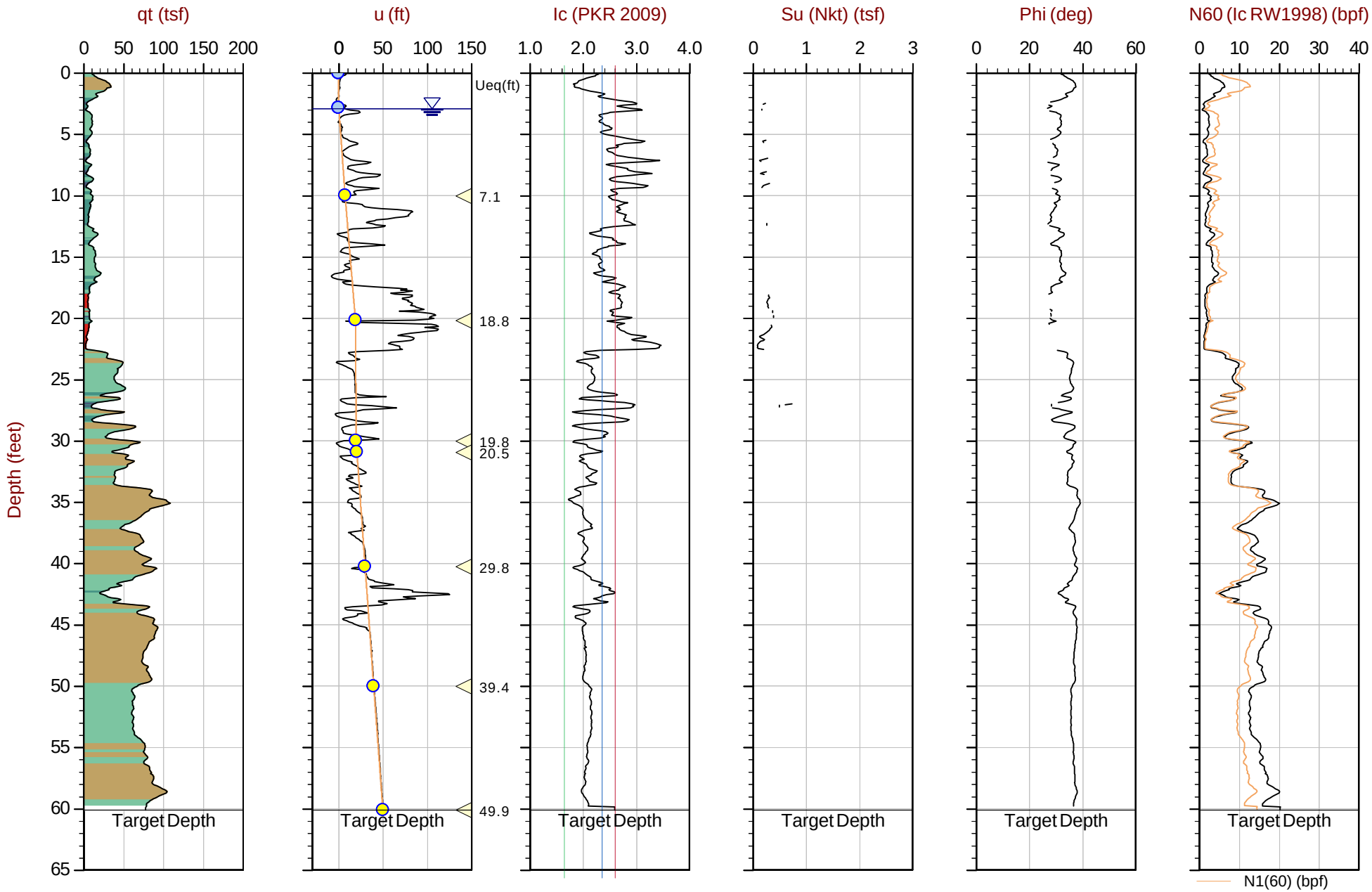
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 12:05
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-02.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13618 Long: -122.99214

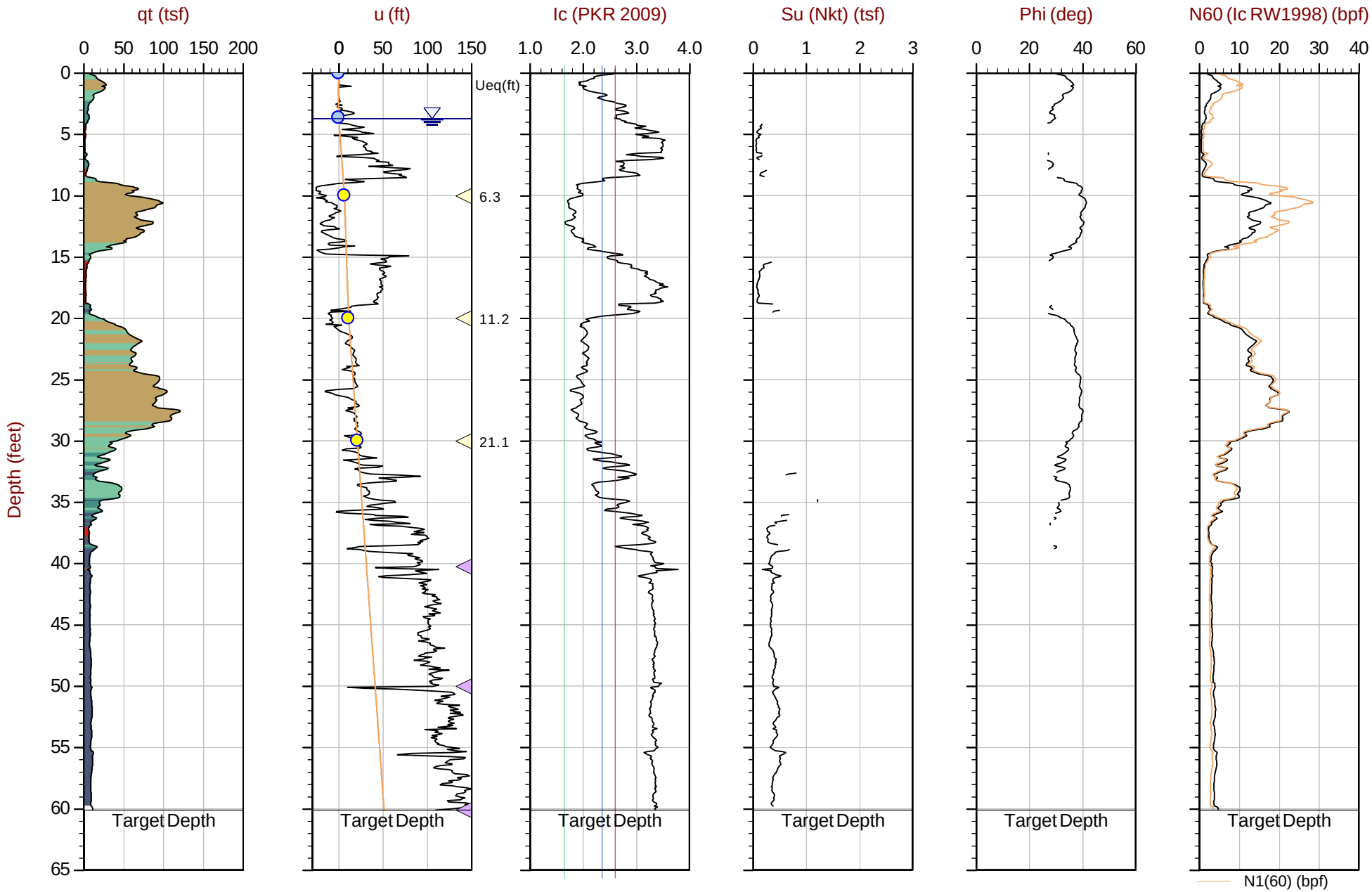
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 13:59
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-03.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13619 Long: -122.99130

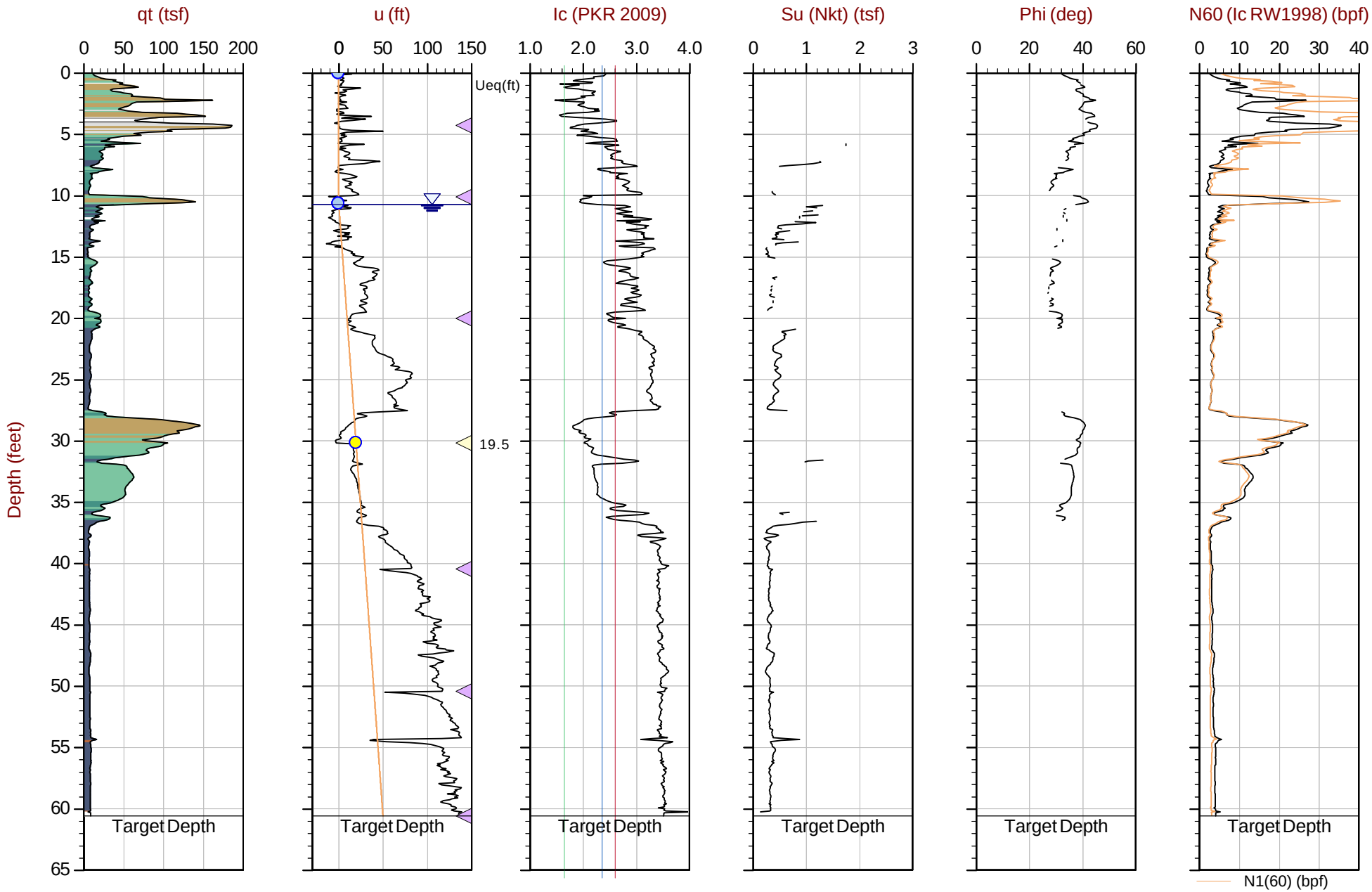
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 15:56
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500



Max Depth: 18.475 m / 60.61 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-04.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13631 Long: -122.98997

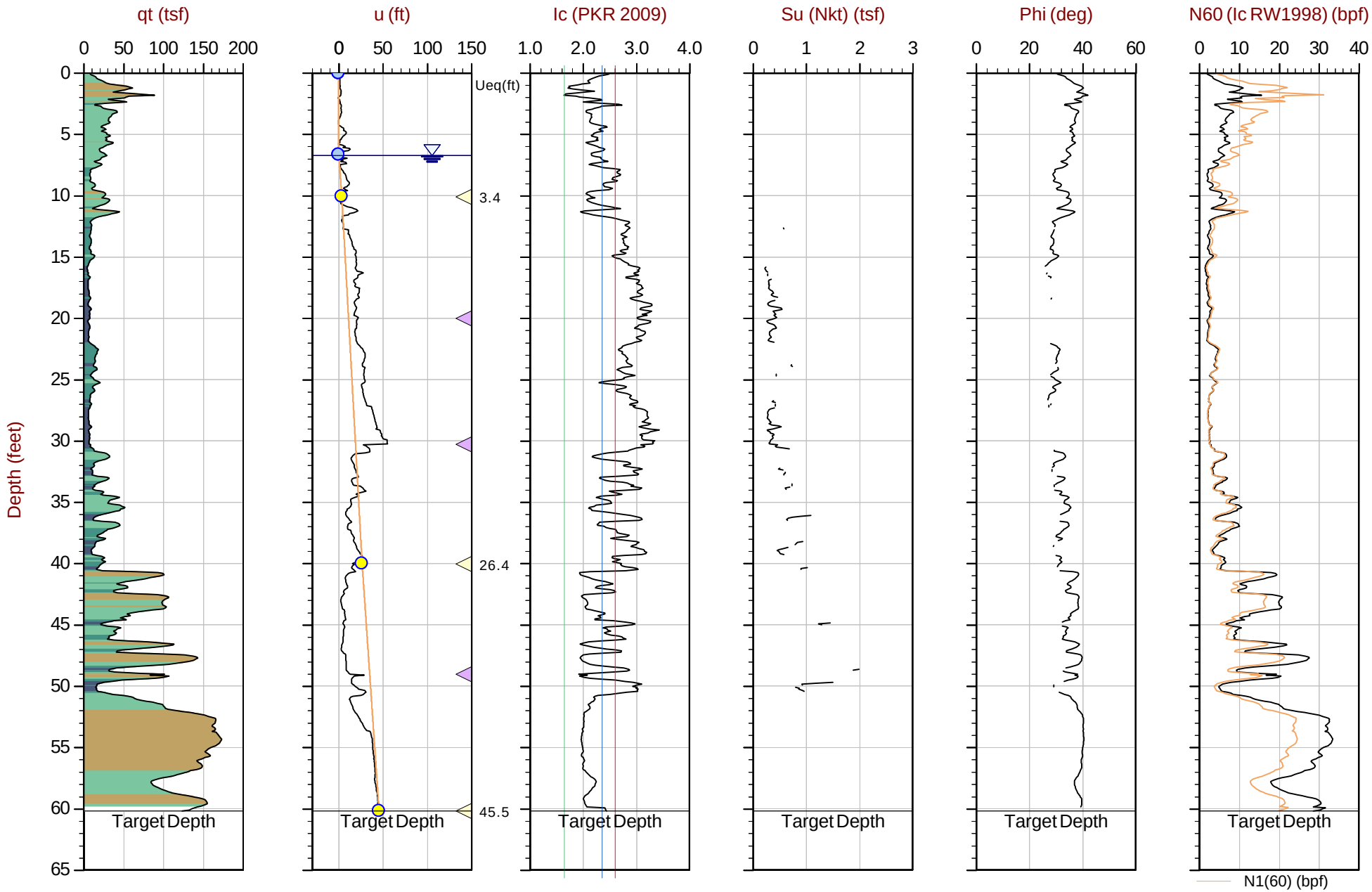
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 07:20
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500



Max Depth: 18.350 m / 60.20 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-05.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13543 Long: -122.99145

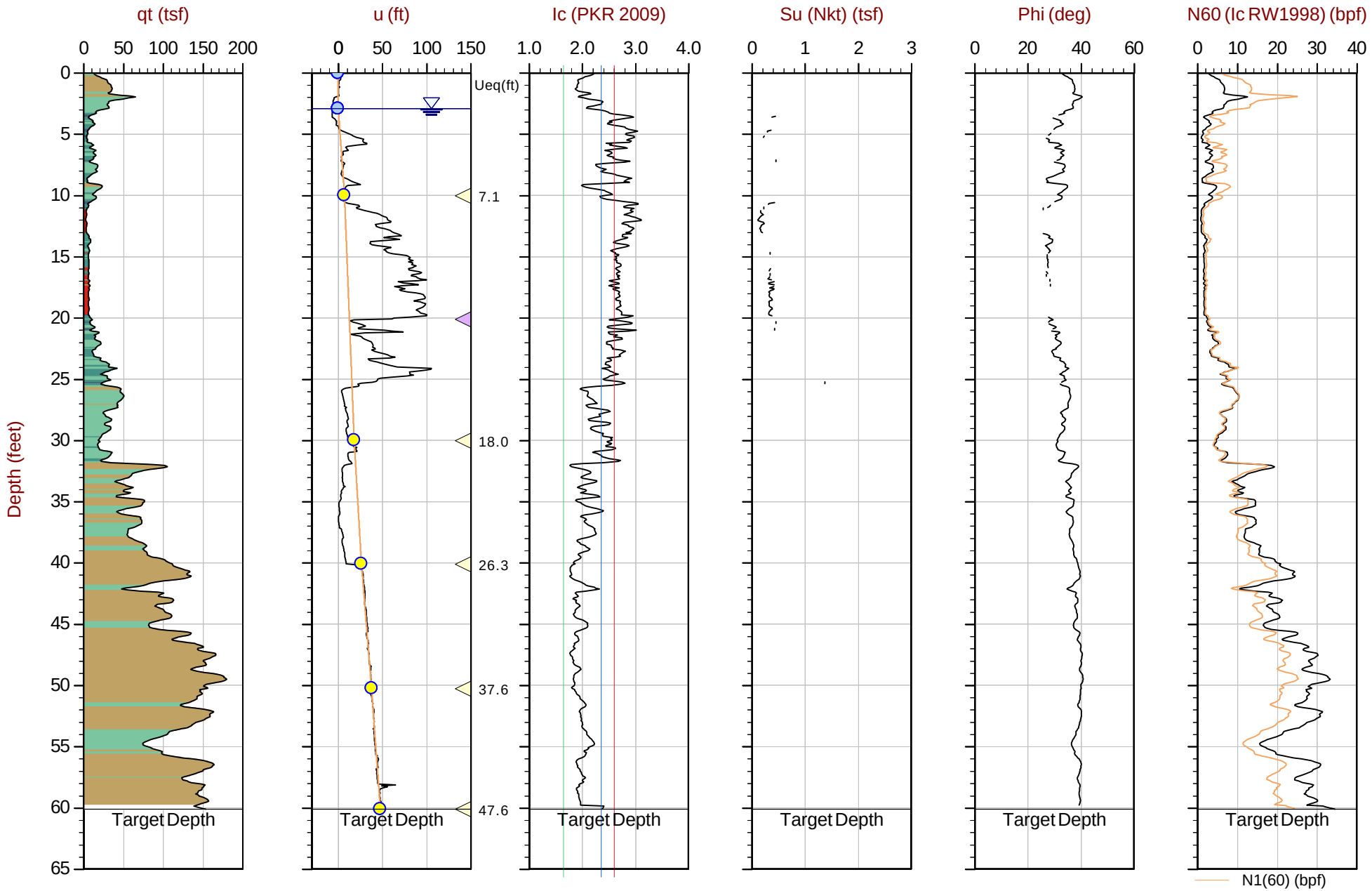
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 09:47
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500



Max Depth: 18.325 m / 60.12 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU06-PC-06.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13528 Long: -122.99300

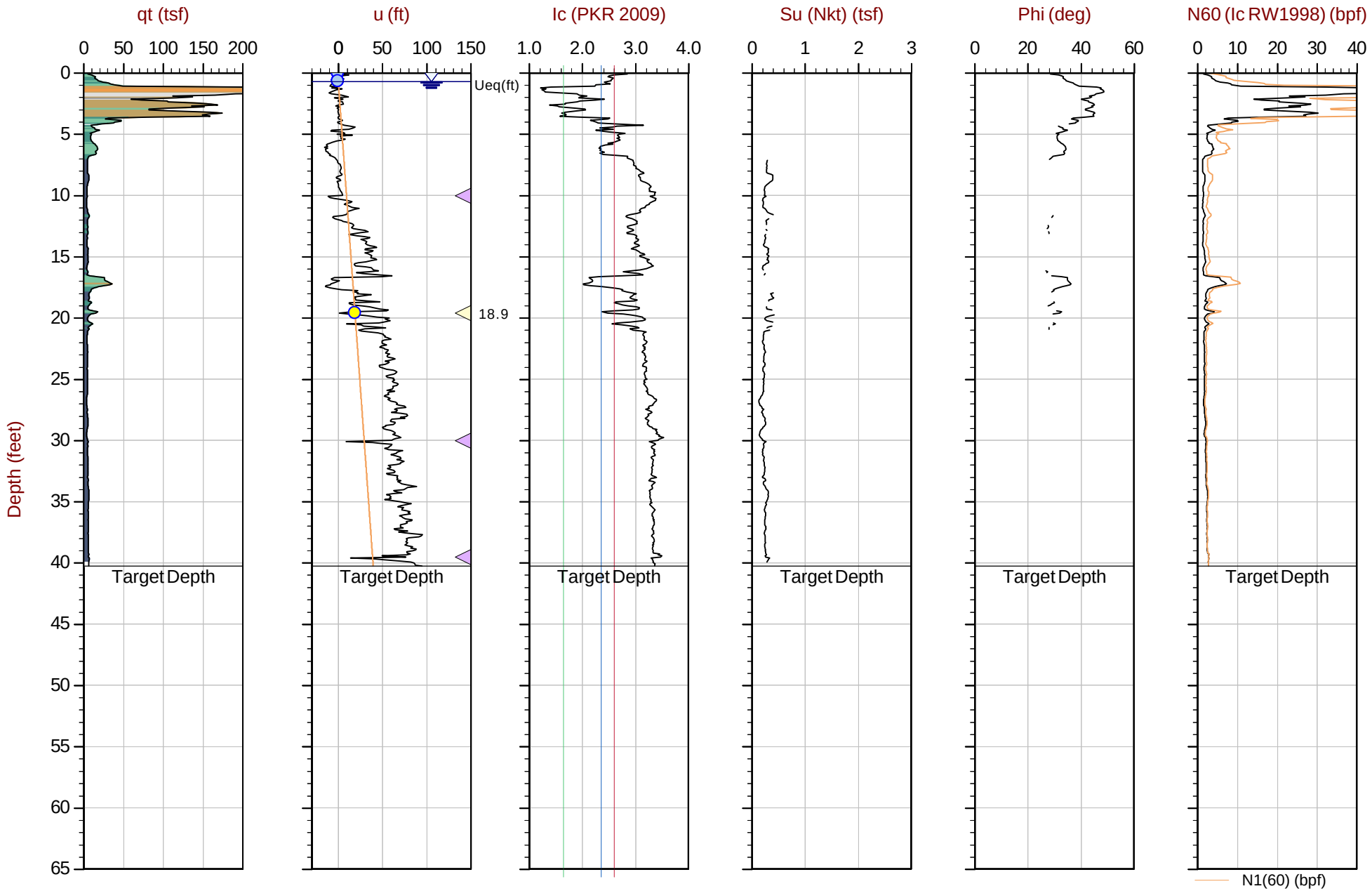
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 11:41
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500



Max Depth: 12.275 m / 40.27 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-01.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13729 Long: -122.99122

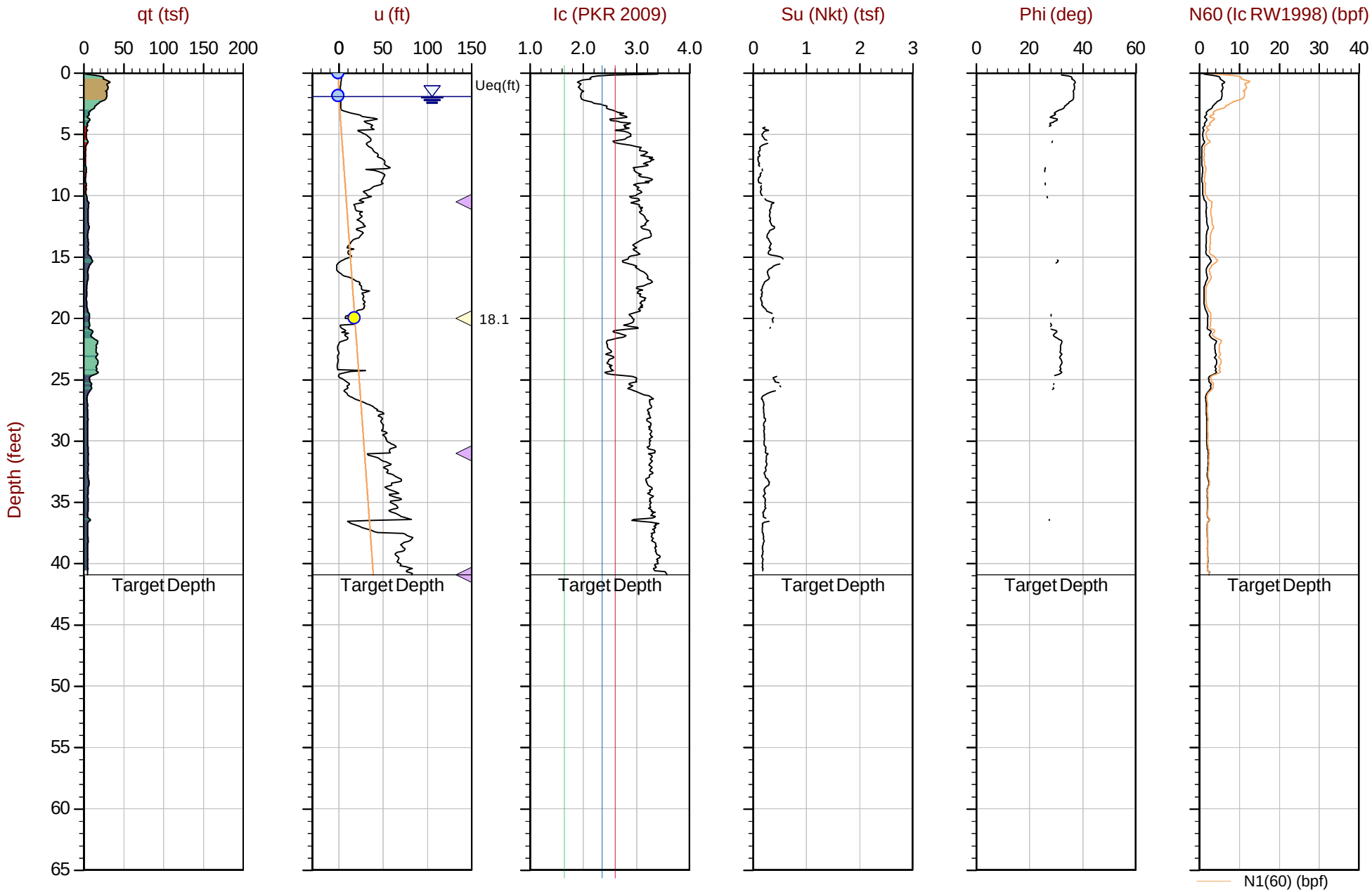
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 17:21
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500



Max Depth: 12.475 m / 40.93 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-02.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13761 Long: -122.98936

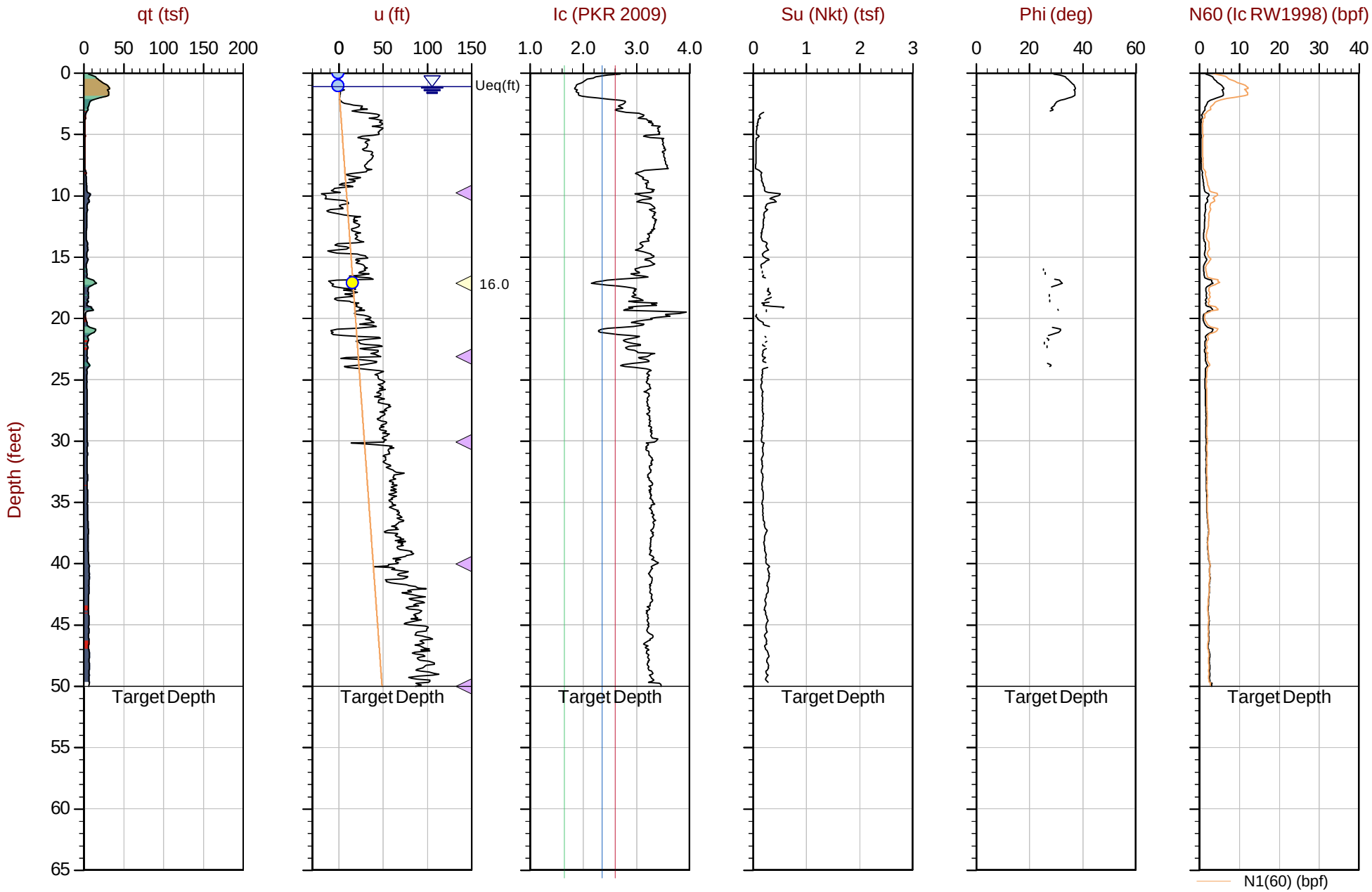
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-22 14:06
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU07-PC-03.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13734 Long: -122.99001

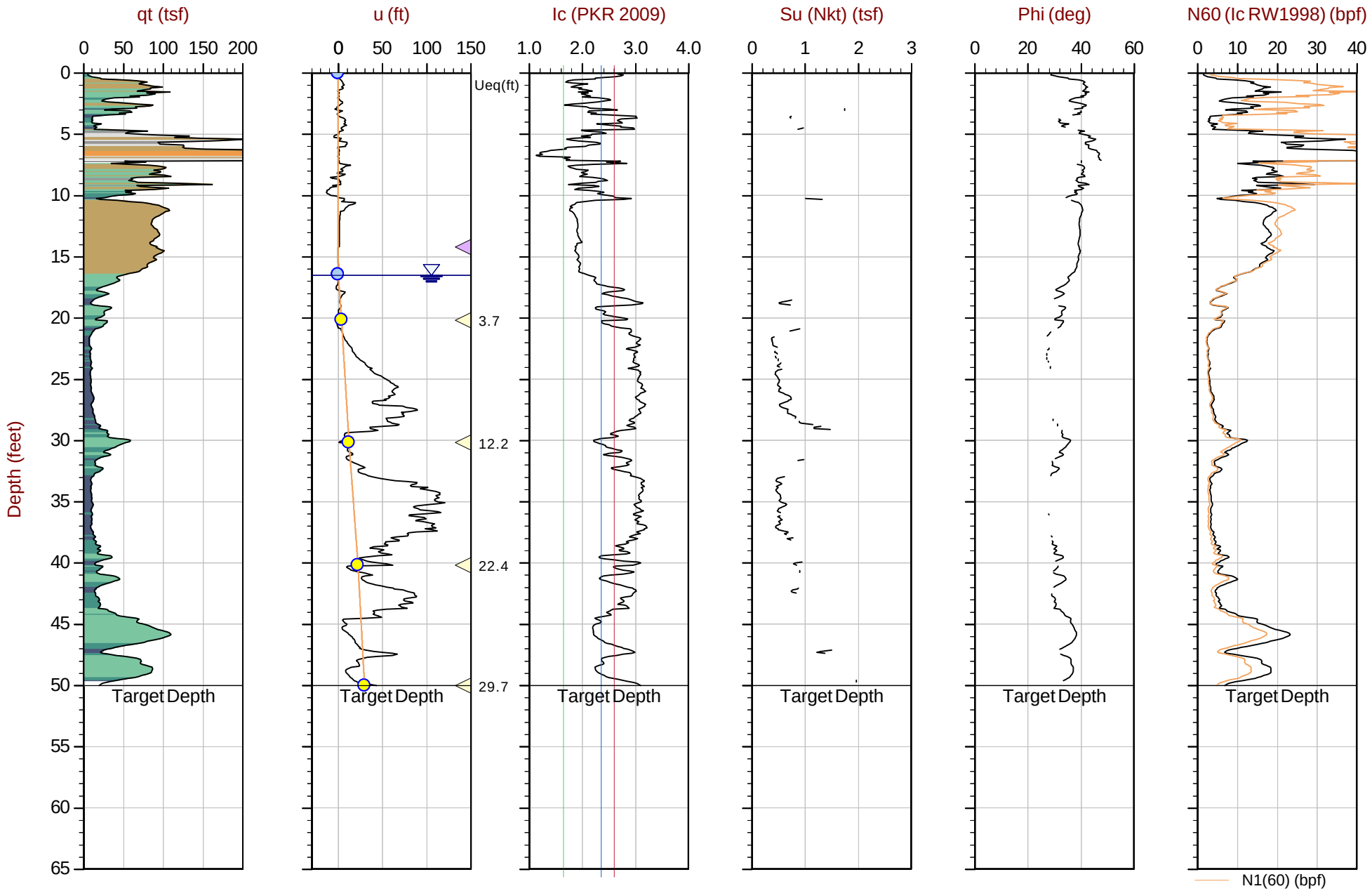
Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 09:50
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU10-PC-01.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13678 Long: -122.99950

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

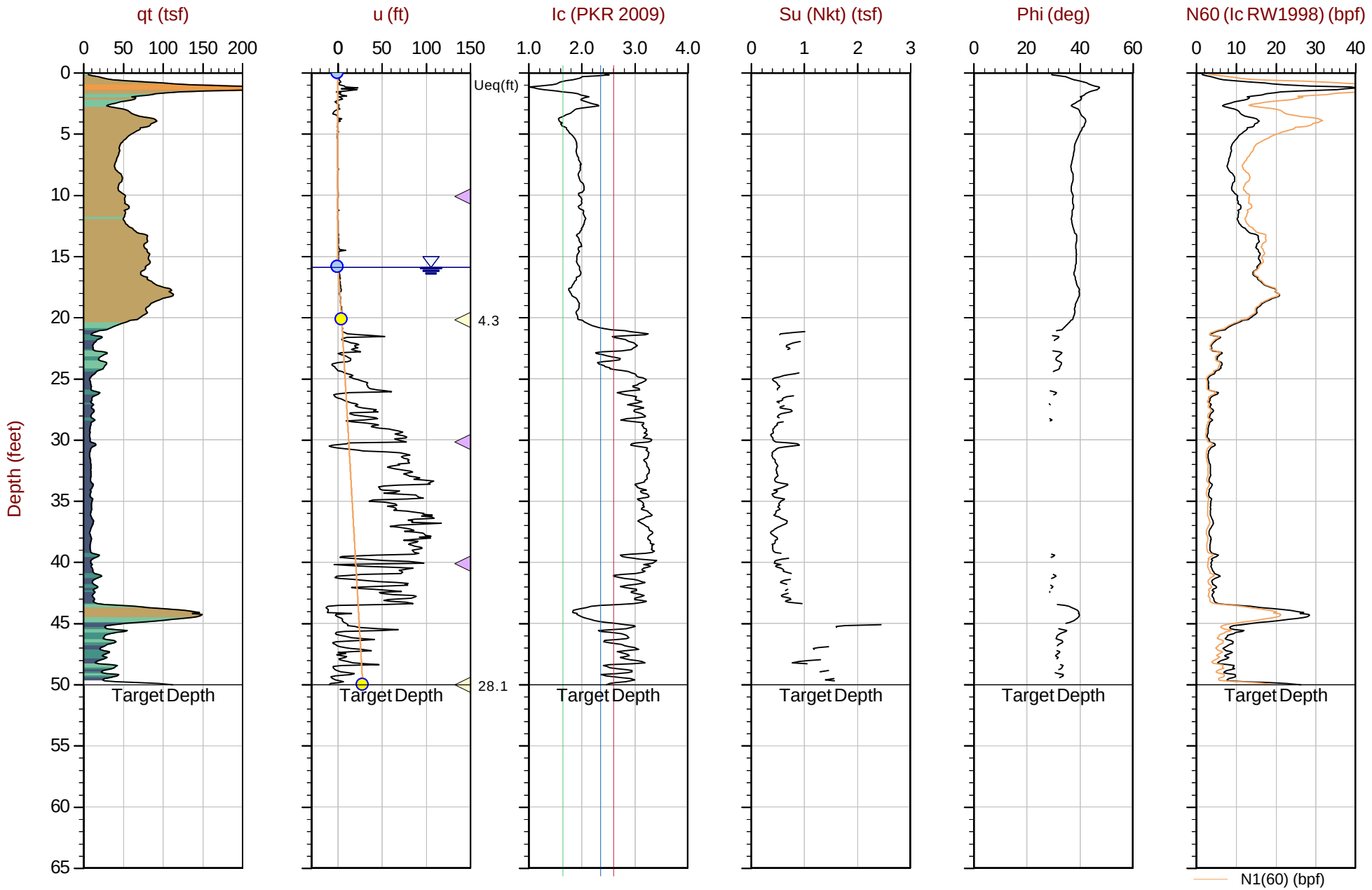
The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-19 11:36
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500



Max Depth: 15.250 m / 50.03 ft
Depth Inc: 0.025 m / 0.082 ft
Avg Int: Every Point

File: 20-59-20521_CP_SU10-PC-02.COR
Unit Wt: SBTQtn (PKR2009)
Su Nkt: 15.0

SBT: Robertson, 2009 and 2010
Coords: Lat: 46.13617 Long: -122.99776

Equilibrium Pore Pressure (Ueq) | Assumed Ueq | Dissipation, Ueq achieved | Dissipation, Ueq not achieved | Equilibrium Profile (Ueq)

The reported coordinates were acquired from hand-held GPS equipment and are only approximate locations. The coordinates should not be used for design purposes.

Cone Penetration Test Soil Behavior Type Plots

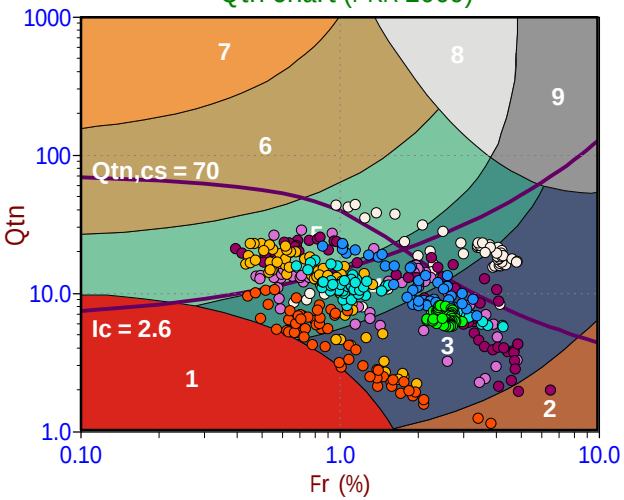
CONETEC

Anchor QEA

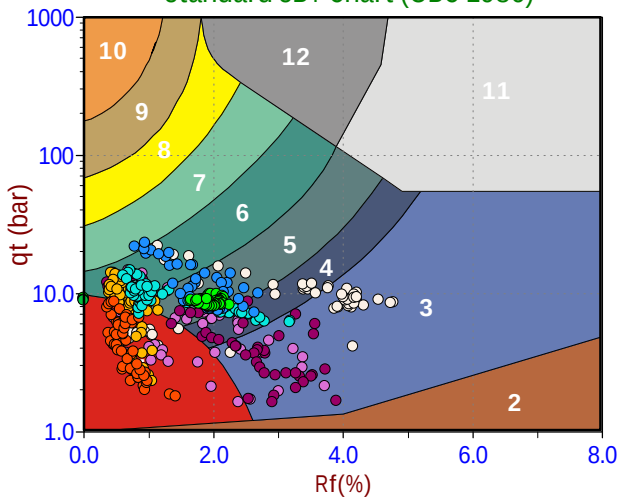
Job No: 20-59-20521
Date: 2020-02-20 16:48
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500

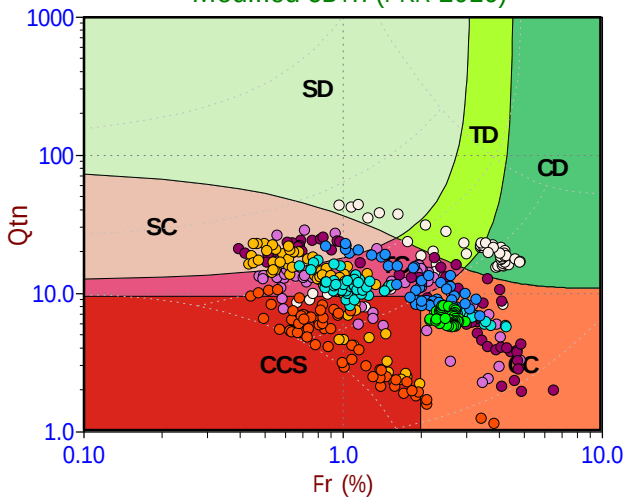
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

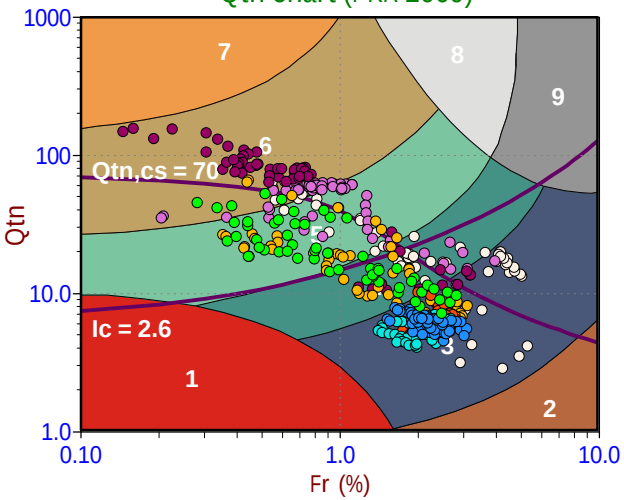
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

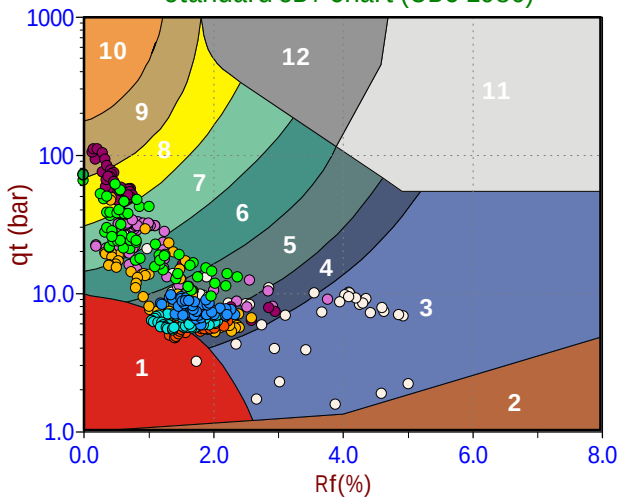
Job No: 20-59-20521
Date: 2020-02-20 14:58
Site: PDI Longview CPT

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500

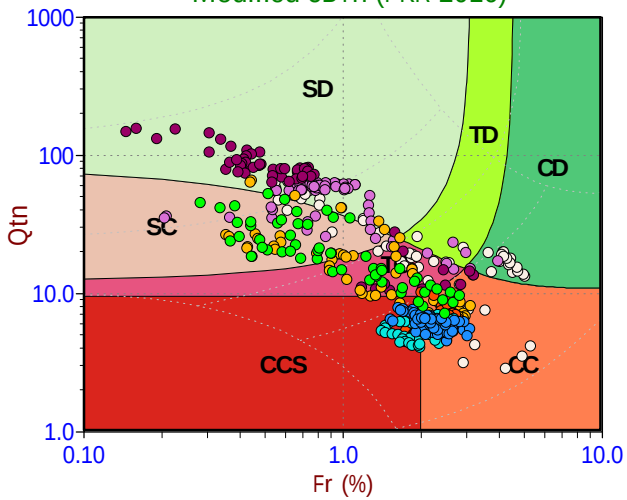
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

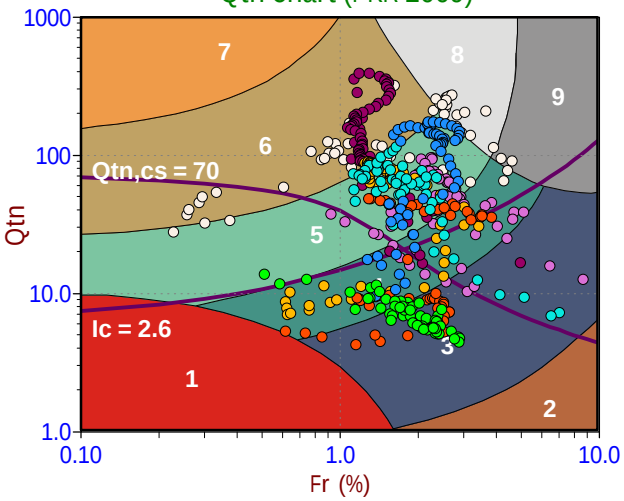
CONETEC

Anchor QEA

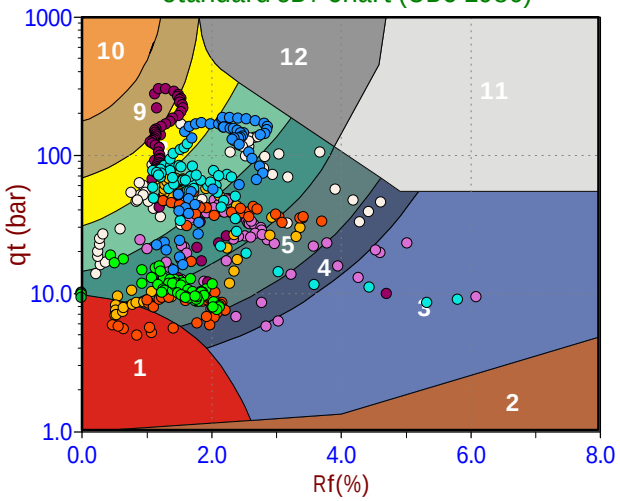
Job No: 20-59-20521
Date: 2020-02-19 15:41
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01-B
Cone: 537:T1500F15U500

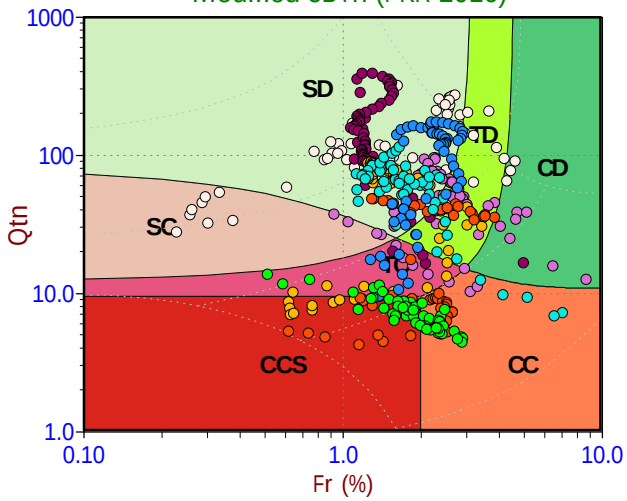
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

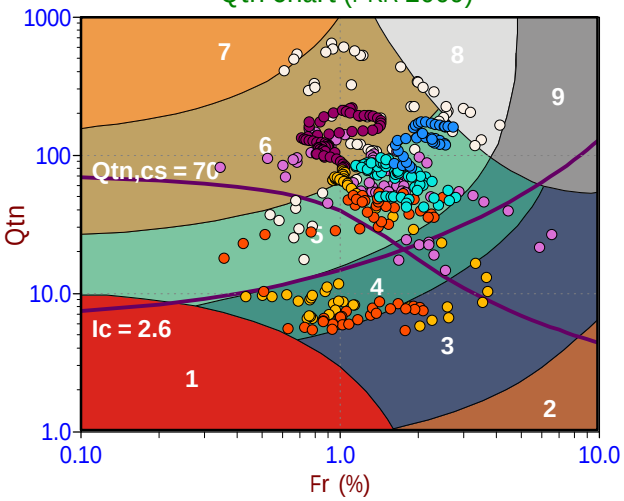
CONETEC

Anchor QEA

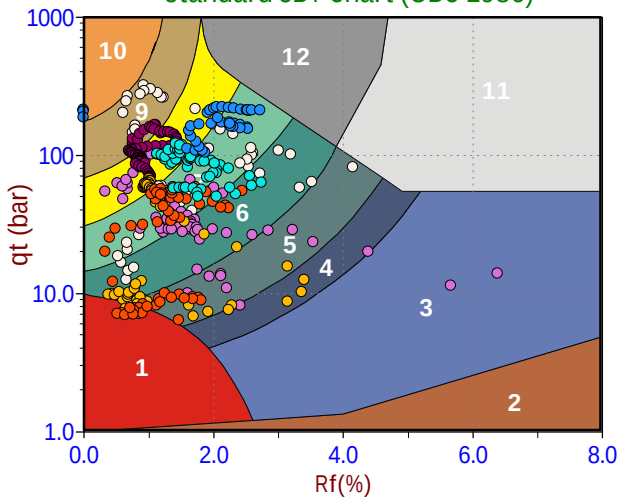
Job No: 20-59-20521
Date: 2020-02-19 14:11
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500

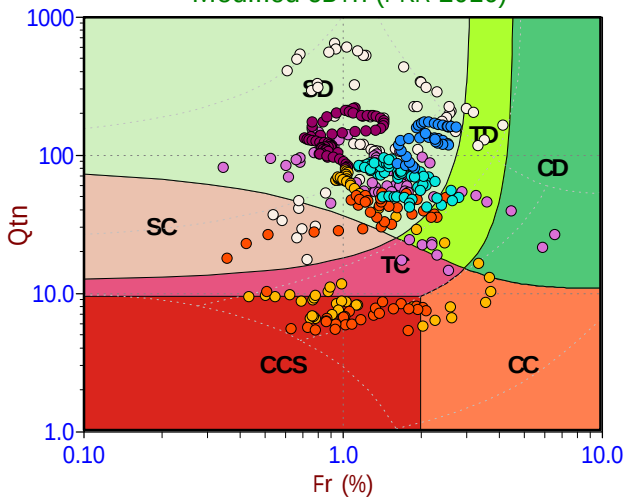
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

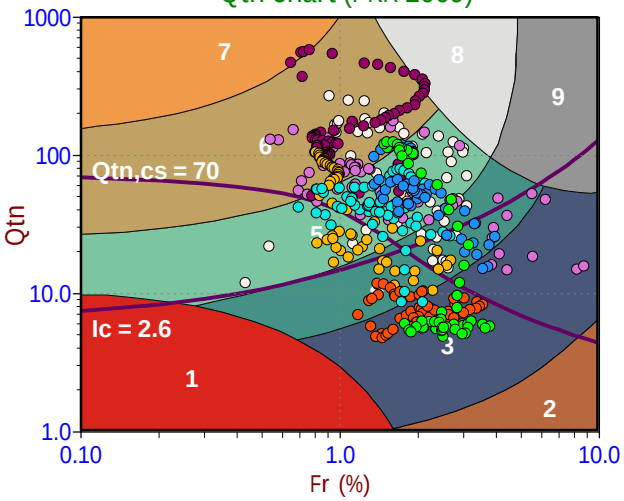
CONETEC

Anchor QEA

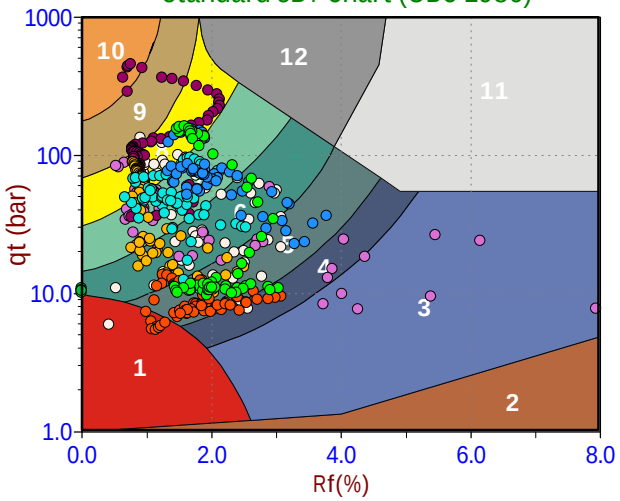
Job No: 20-59-20521
Date: 2020-02-19 16:56
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500

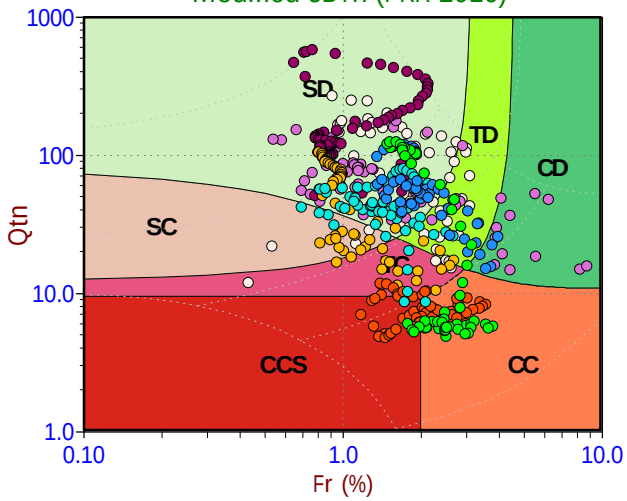
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

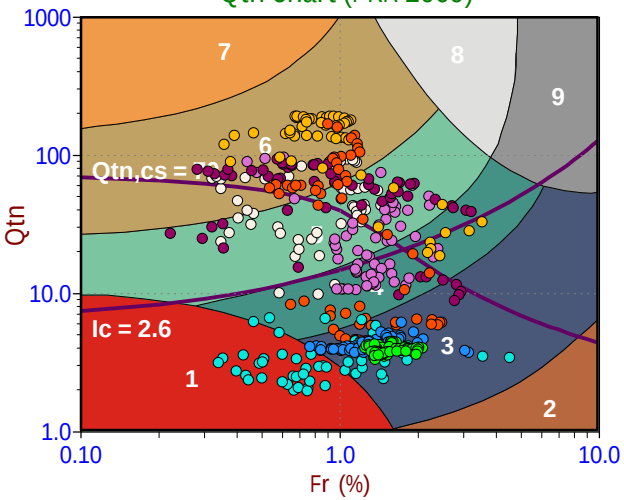
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

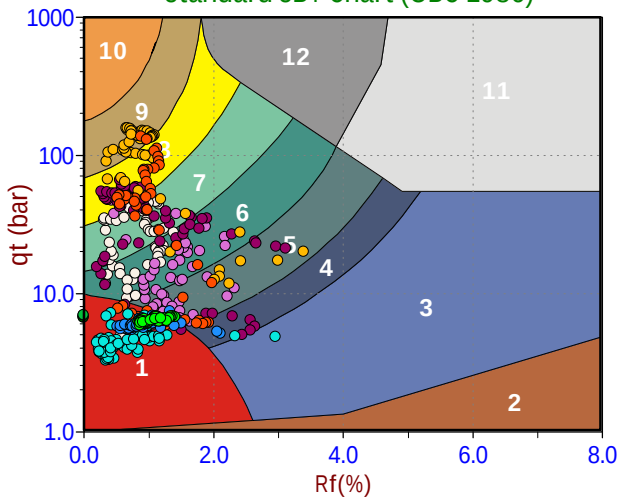
Job No: 20-59-20521
Date: 2020-02-20 08:10
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500

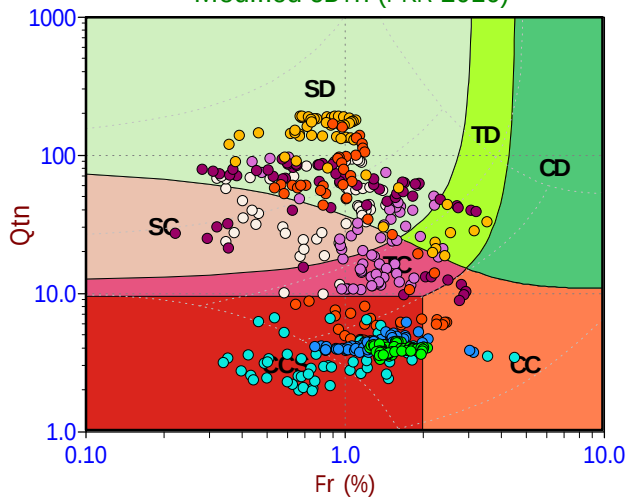
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges
- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend
- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend
- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

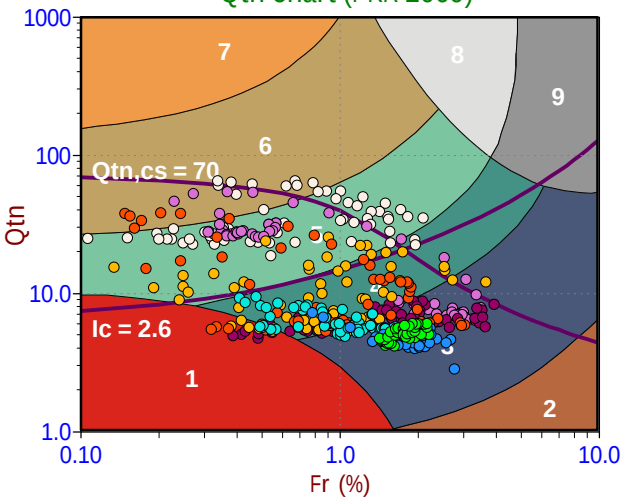
CONETEC

Anchor QEA

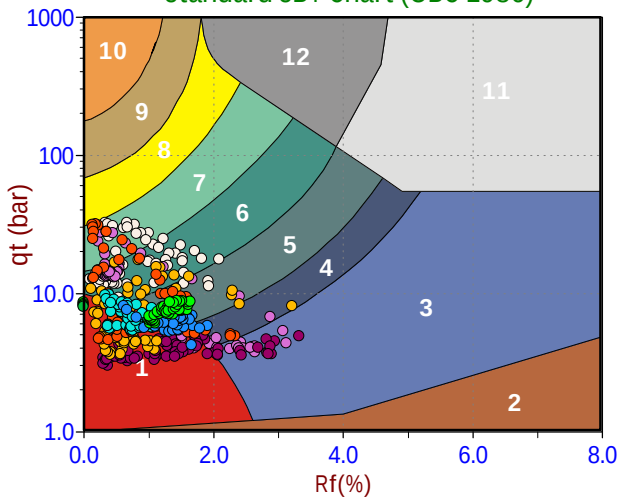
Job No: 20-59-20521
Date: 2020-02-20 10:28
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500

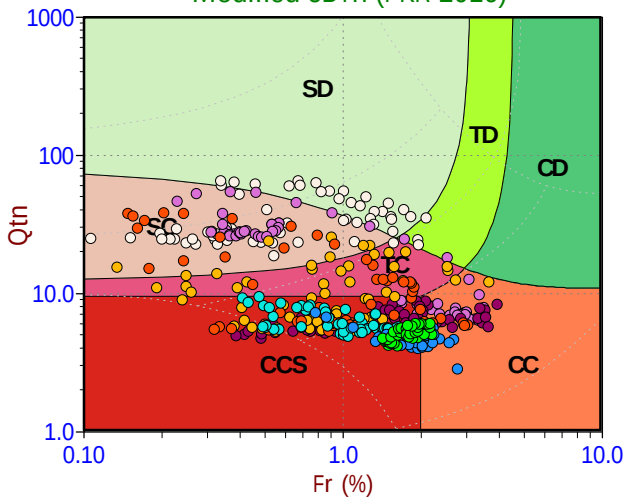
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

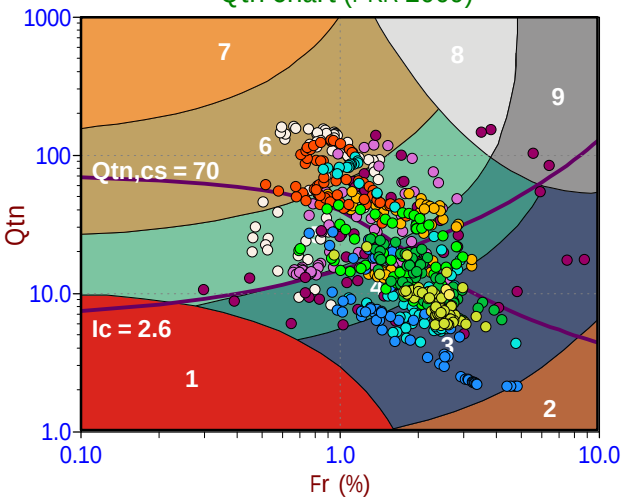
CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-20 12:59
Site: PDI Longview CPT

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



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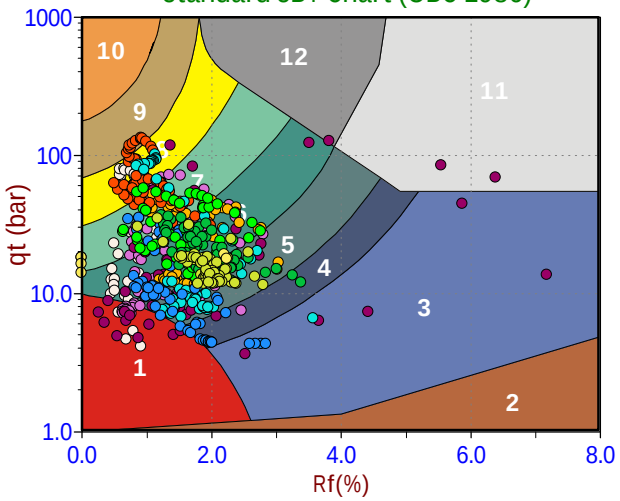

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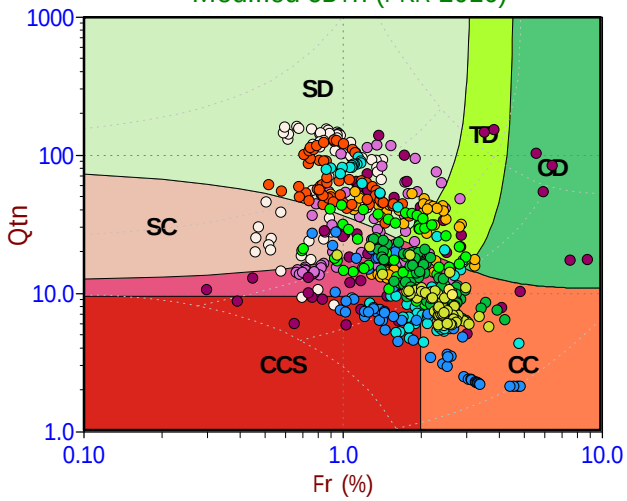


Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

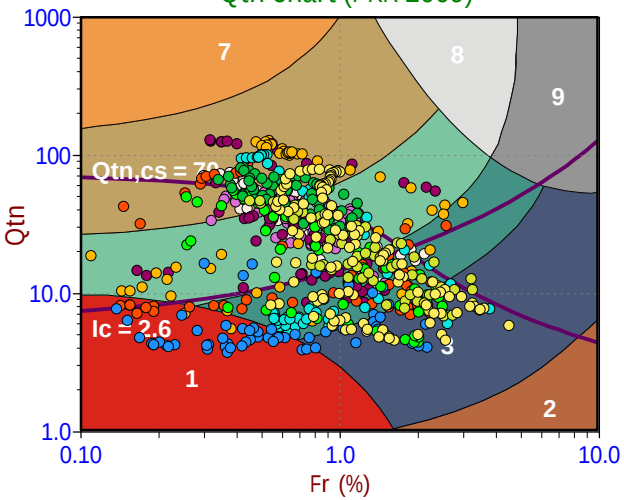
CONETEC

Anchor QEA

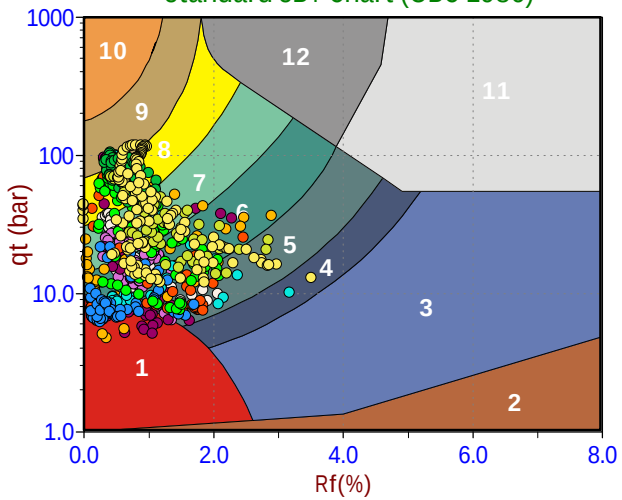
Job No: 20-59-20521
Date: 2020-02-21 09:33
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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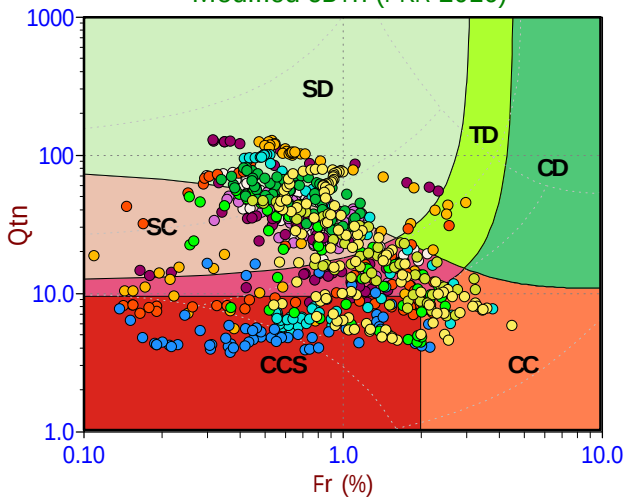

Depth Ranges

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- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

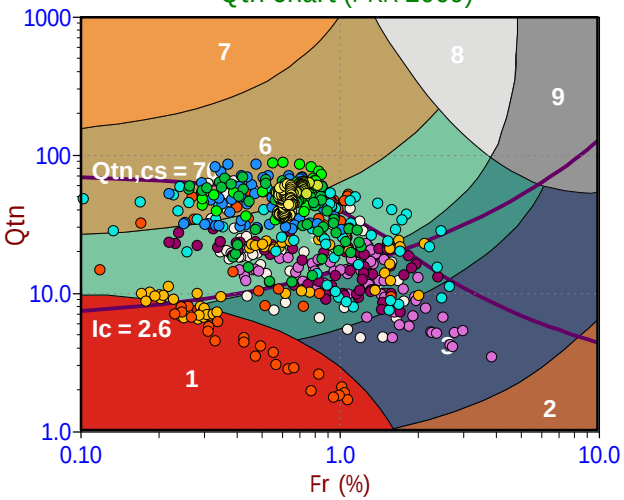
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

Job No: 20-59-20521
Date: 2020-02-21 12:05
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



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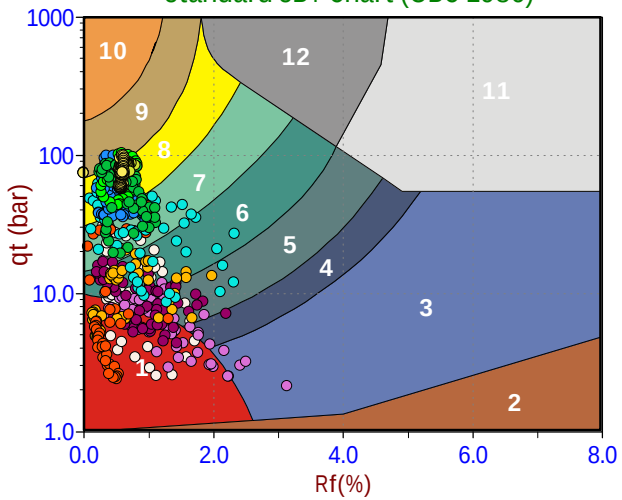

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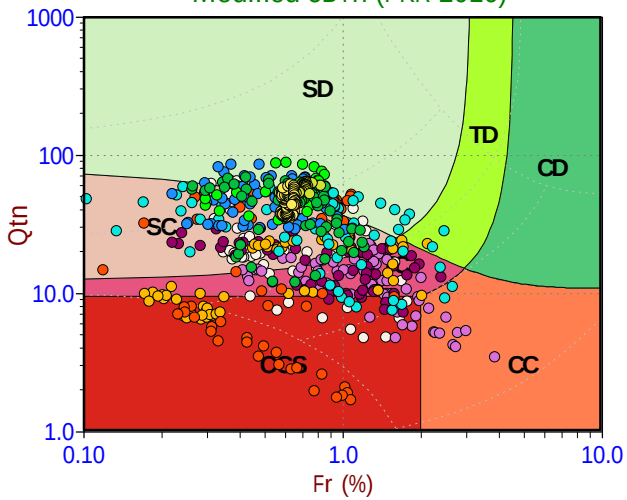

Depth Ranges

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- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

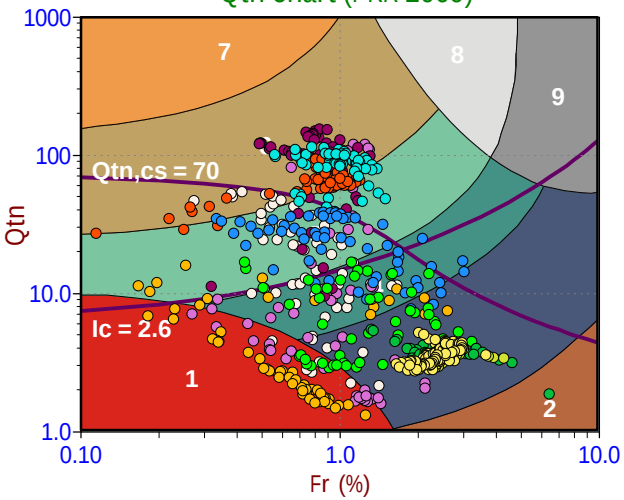
CONETEC

Anchor QEA

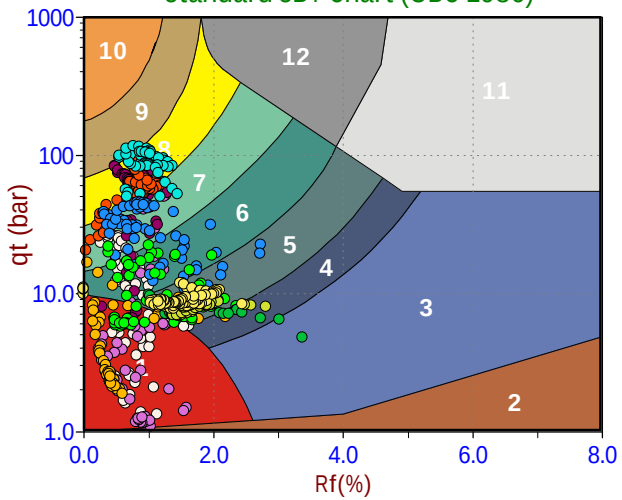
Job No: 20-59-20521
Date: 2020-02-21 13:59
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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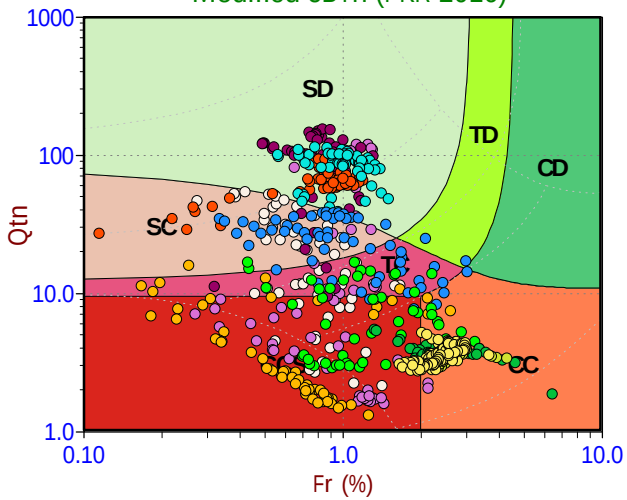

Depth Ranges

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- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

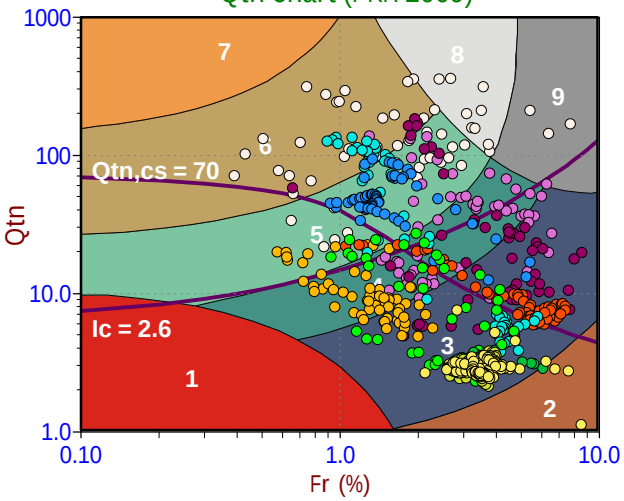
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

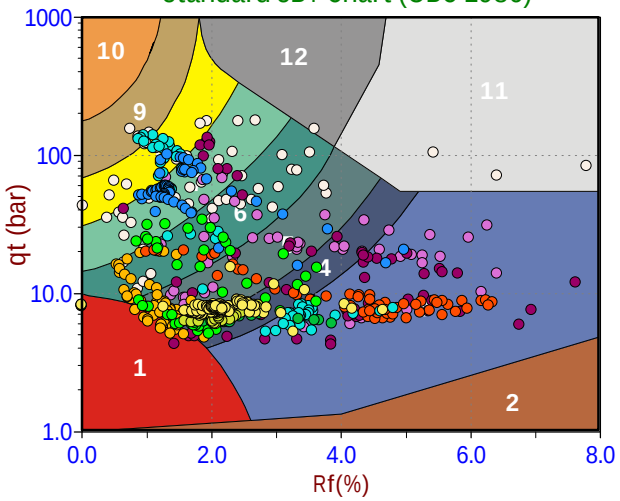
Job No: 20-59-20521
Date: 2020-02-21 15:56
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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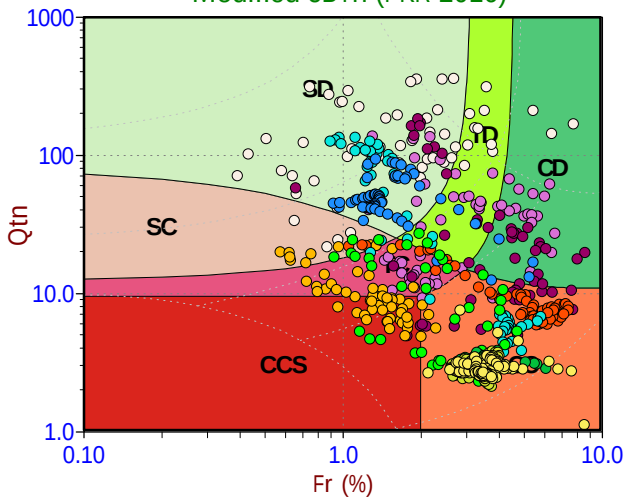

Depth Ranges

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- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

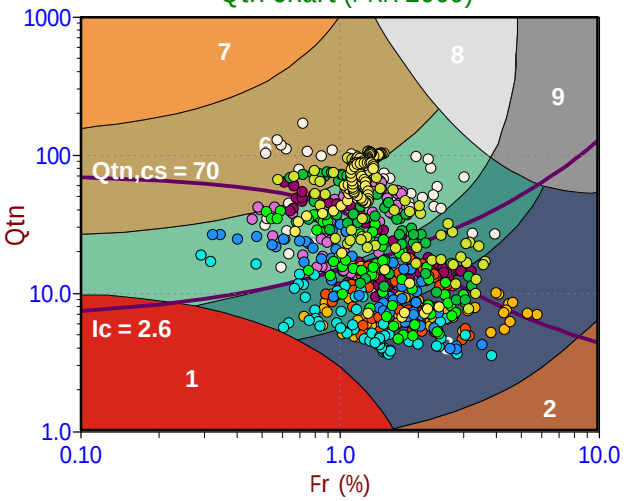
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

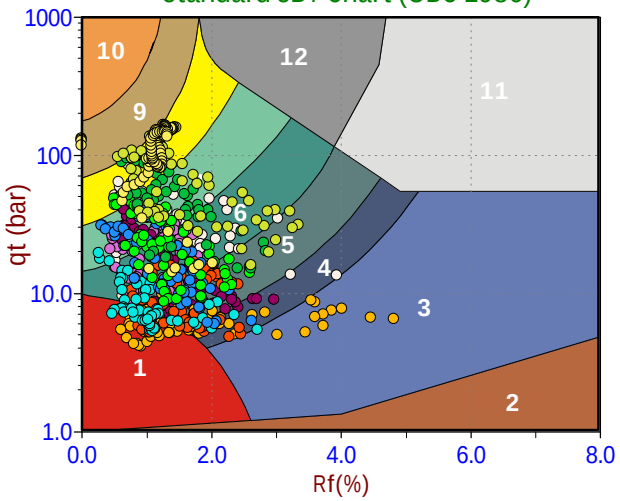
Job No: 20-59-20521
Date: 2020-02-22 07:20
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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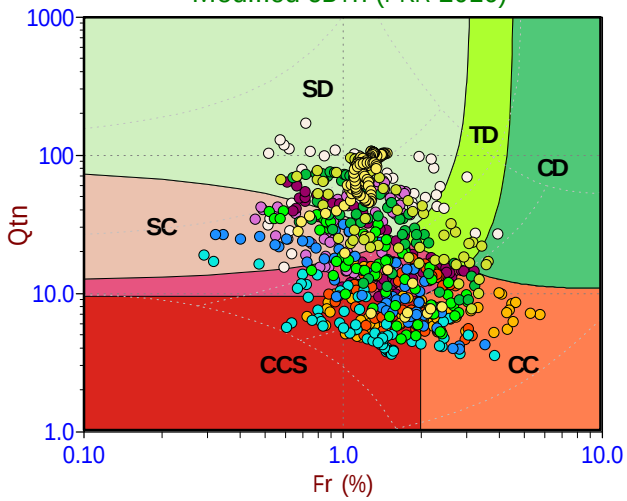

Depth Ranges

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- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

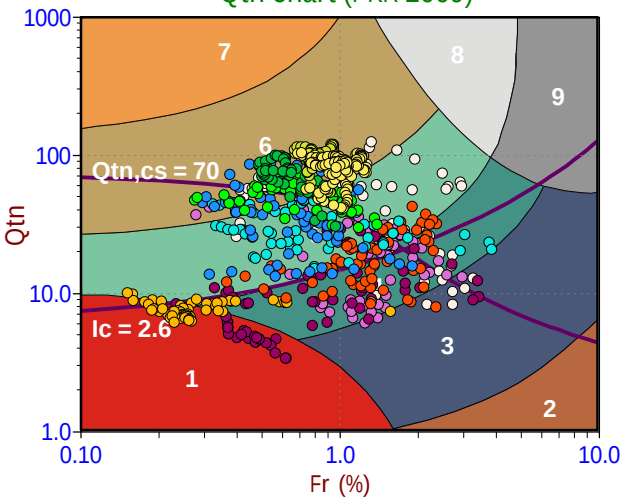
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

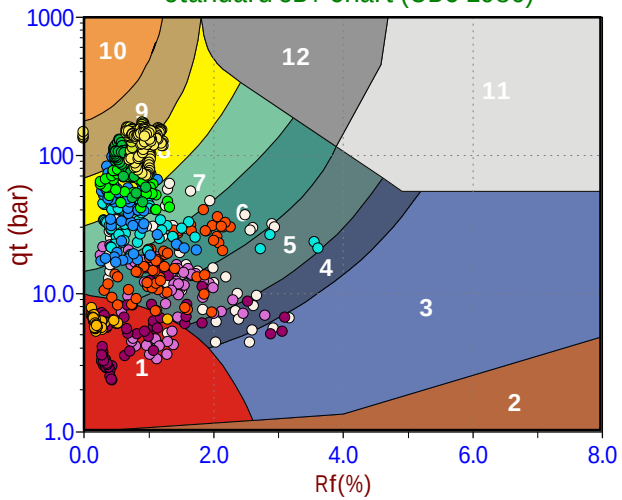
Job No: 20-59-20521
Date: 2020-02-22 09:47
Site: PDI Longview CPT

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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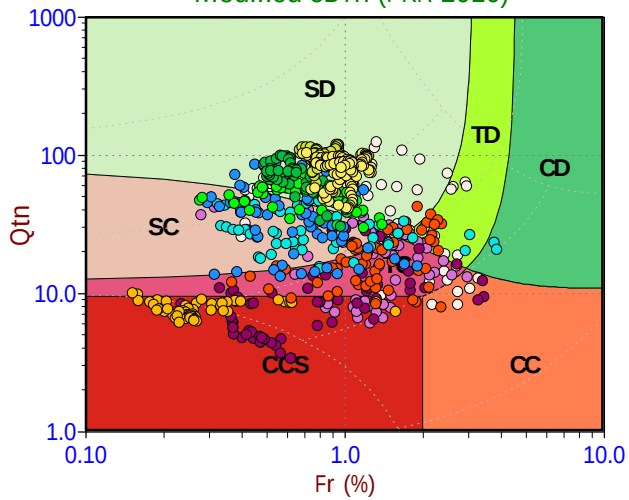


Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

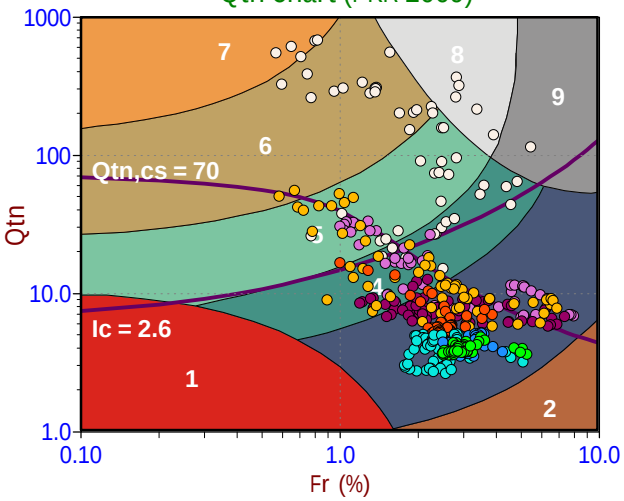
CONETEC

Anchor QEA

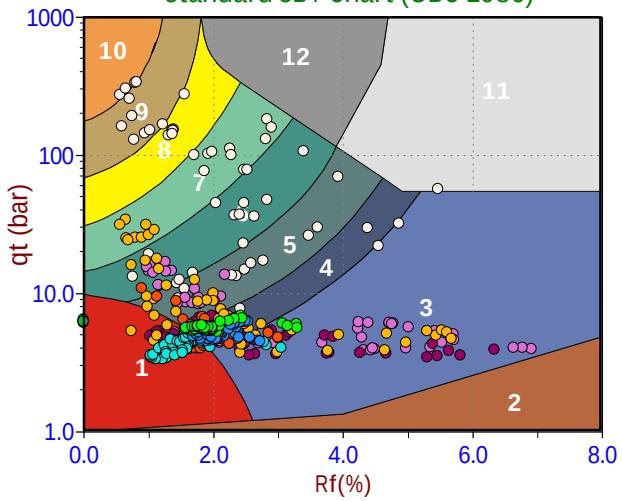
Job No: 20-59-20521
Date: 2020-02-22 11:41
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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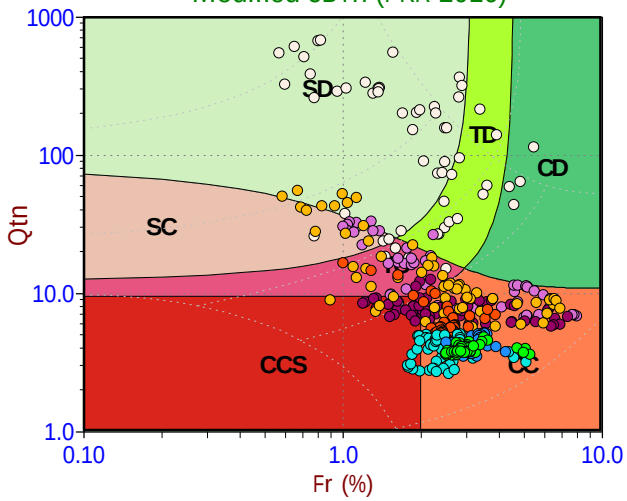


Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

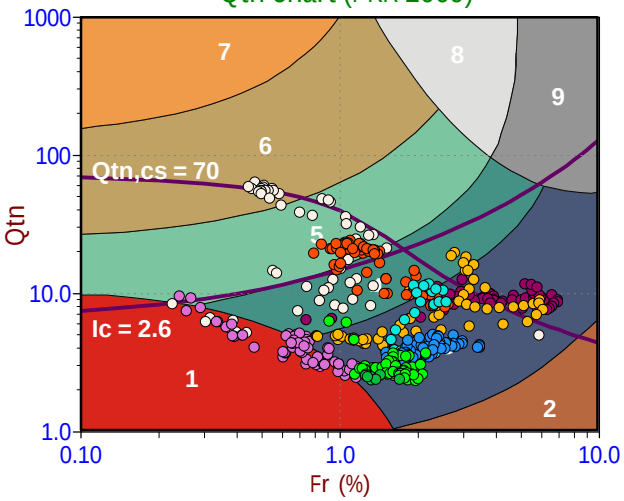
CONETEC

Anchor QEA

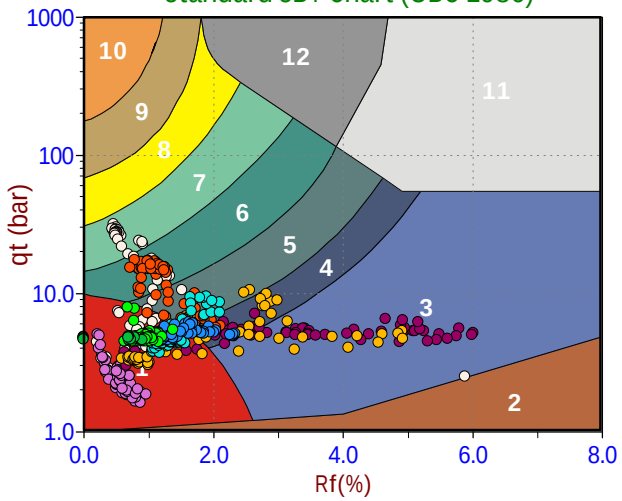
Job No: 20-59-20521
Date: 2020-02-22 17:21
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500

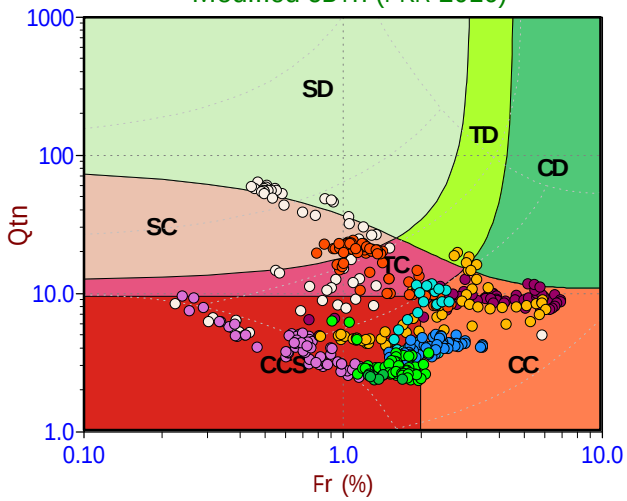
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

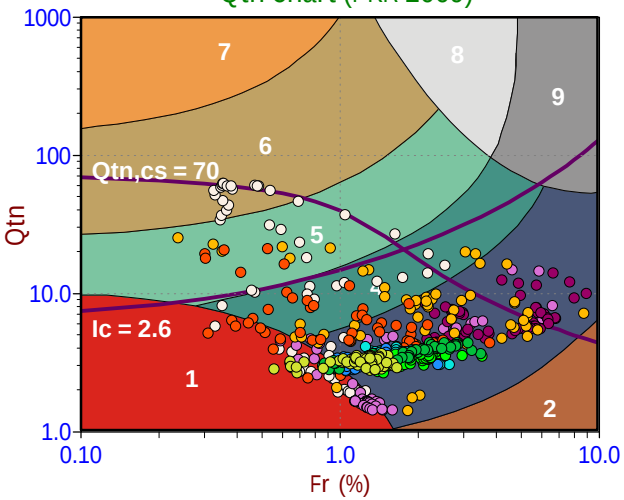
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

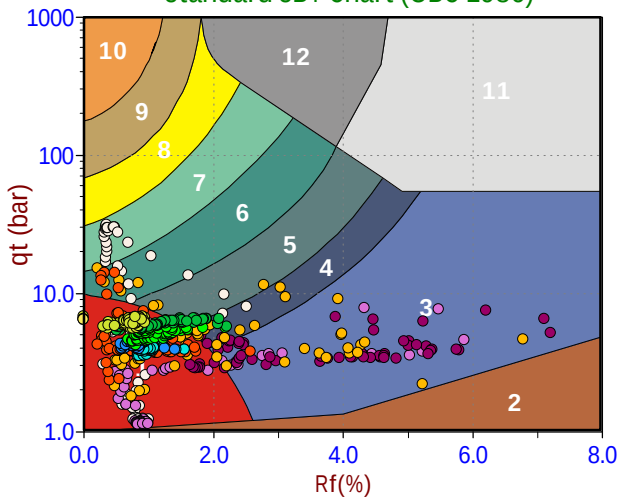
Job No: 20-59-20521
Date: 2020-02-22 14:06
Site: PDI Longview CPT

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500

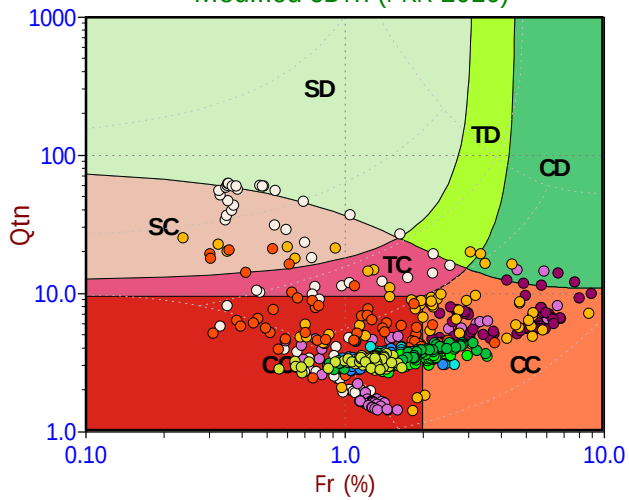
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
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- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

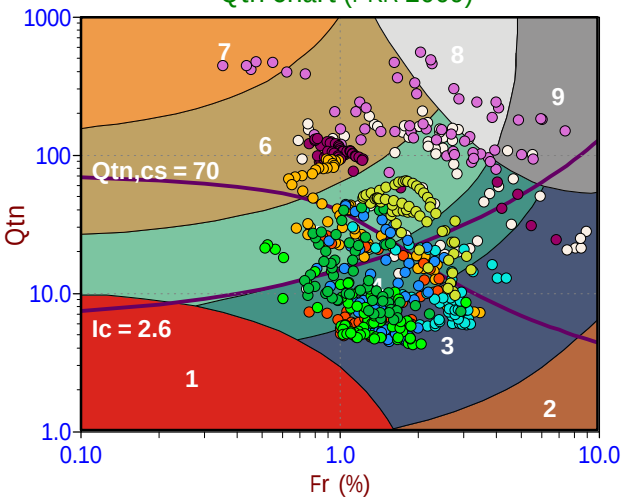
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

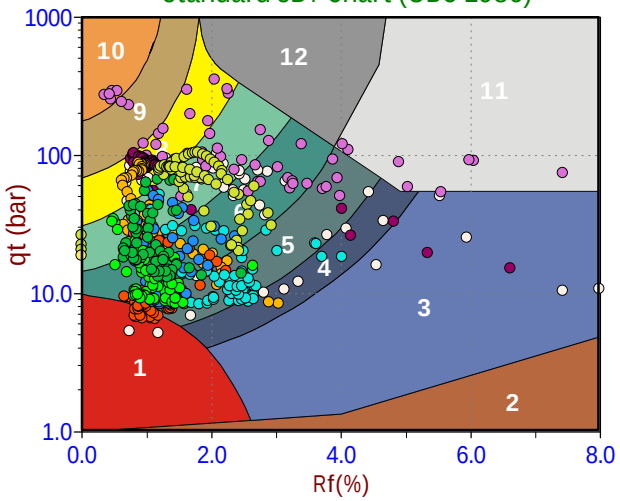
Job No: 20-59-20521
Date: 2020-02-19 09:50
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500

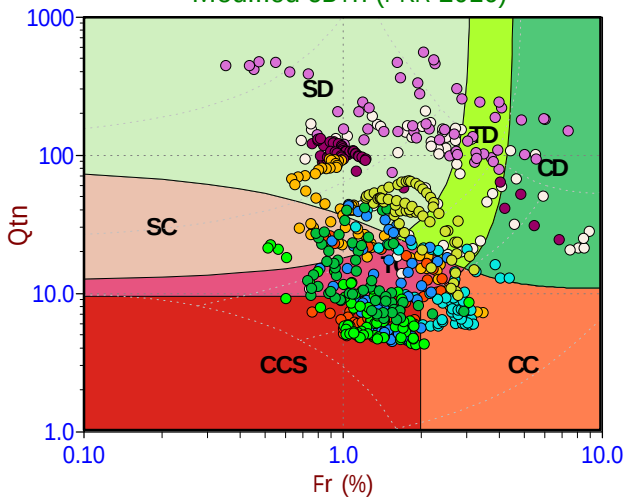
Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



Modified SBTn (PKR 2016)



Depth Ranges
- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend
- Sensitive, Fine Grained
- Organic Soils
- Clays
- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend
- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

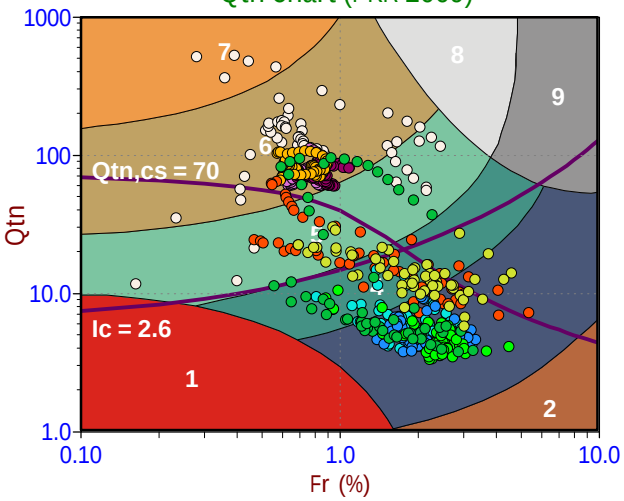
Legend
- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Anchor QEA

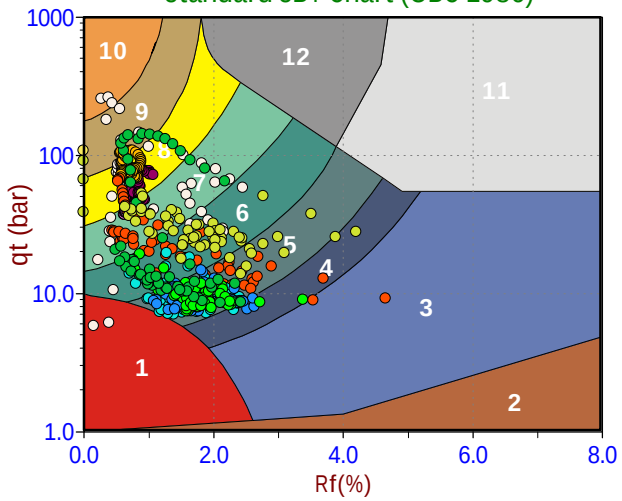
Job No: 20-59-20521
Date: 2020-02-19 11:36
Site: PDI Longview CPT

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500

Qtn Chart (PKR 2009)



Standard SBT Chart (UBC 1986)



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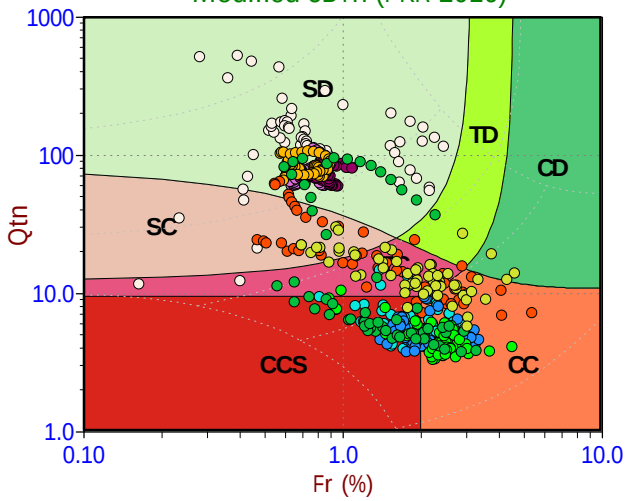

Depth Ranges

- >0.0 to 5.0 ft
- >5.0 to 10.0 ft
- >10.0 to 15.0 ft
- >15.0 to 20.0 ft
- >20.0 to 25.0 ft
- >25.0 to 30.0 ft
- >30.0 to 35.0 ft
- >35.0 to 40.0 ft
- >40.0 to 45.0 ft
- >45.0 to 50.0 ft
- >50.0 ft

Legend

- Sensitive, Fine Grained
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- Silt Mixtures
- Sand Mixtures
- Sands
- Gravelly Sand to Sand
- Stiff Sand to Clayey Sand
- Very Stiff Fine Grained

Legend

- Sensitive Fines
- Organic Soil
- Clay
- Silty Clay
- Clayey Silt
- Silt
- Sandy Silt
- Silty Sand/Sand
- Sand
- Gravelly Sand
- Stiff Fine Grained
- Cemented Sand

Legend

- CCS (Cont. sensitive clay like)
- CC (Cont. clay like)
- TC (Cont. transitional)
- SC (Cont. sand like)
- CD (Dil. clay like)
- TD (Dil. transitional)
- SD (Dil. sand like)

Pore Pressure Dissipation Summary and

Pore Pressure Dissipation Plots

CONETEC

Job No:	20-59-20521
Client:	Anchor QEA
Project:	PDI Longview CPT
Start Date:	19-Feb-20
End Date:	22-Feb-20

CPTu PORE PRESSURE DISSIPATION SUMMARY

Sounding ID	File Name	Cone Area (cm^2)	Duration (s)	Test Depth (ft)	Estimated Equilibrium Pore Pressure U_{eq} (ft)	Calculated Phreatic Surface (ft)
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01.PPD	15.0	295	10.1	7.6	2.5
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01.PPD	15.0	310	20.8	18.6	2.1
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01.PPD	15.0	145	24.5	21.7	2.8
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01.PPD	15.0	360	30.1		
PDI-PRB-PC-01	20-59-20521_CP_PRB-PC-01.PPD	15.0	1035	40.0		
PDI-PRB-PC-02	20-59-20521_CP_PRB-PC-02.PPD	15.0	810	10.0	3.0	7.0
PDI-PRB-PC-02	20-59-20521_CP_PRB-PC-02.PPD	15.0	935	20.1	15.2	4.9
PDI-PRB-PC-02	20-59-20521_CP_PRB-PC-02.PPD	15.0	400	30.0		
PDI-PRB-PC-02	20-59-20521_CP_PRB-PC-02.PPD	15.0	300	40.0	34.0	6.0
PDI-SU02-PC-01	20-59-20521_CP_SU02-PC-01.PPD	15.0	325	10.1	0.6	9.5
PDI-SU02-PC-01	20-59-20521_CP_SU02-PC-01.PPD	15.0	1100	20.0		
PDI-SU02-PC-01	20-59-20521_CP_SU02-PC-01.PPD	15.0	340	30.1	11.7	18.4
PDI-SU02-PC-01-B	20-59-20521_CP_SU02-PC-01-B.PPD	15.0	750	40.0	32.6	7.5
PDI-SU02-PC-02	20-59-20521_CP_SU02-PC-02.PPD	15.0	210	10.1		
PDI-SU02-PC-02	20-59-20521_CP_SU02-PC-02.PPD	15.0	405	20.0	9.4	10.6
PDI-SU02-PC-02	20-59-20521_CP_SU02-PC-02.PPD	15.0	310	30.1	14.4	15.7
PDI-SU02-PC-02	20-59-20521_CP_SU02-PC-02.PPD	15.0	955	40.0		
PDI-SU02-PC-03	20-59-20521_CP_SU02-PC-03.PPD	15.0	1455	10.0		
PDI-SU02-PC-03	20-59-20521_CP_SU02-PC-03.PPD	15.0	305	20.1	16.2	3.9
PDI-SU02-PC-03	20-59-20521_CP_SU02-PC-03.PPD	15.0	1095	30.1		
PDI-SU02-PC-03	20-59-20521_CP_SU02-PC-03.PPD	15.0	1740	40.1		
PDI-SU02-PC-04	20-59-20521_CP_SU02-PC-04.PPD	15.0	1745	10.7		
PDI-SU02-PC-04	20-59-20521_CP_SU02-PC-04.PPD	15.0	575	20.7		
PDI-SU02-PC-04	20-59-20521_CP_SU02-PC-04.PPD	15.0	605	30.7		
PDI-SU02-PC-04	20-59-20521_CP_SU02-PC-04.PPD	15.0	2245	40.0		
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05.PPD	15.0	1305	10.7		
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05.PPD	15.0	305	19.5	5.6	13.9
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05.PPD	15.0	320	30.2	19.0	11.2
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05.PPD	15.0	515	40.0	27.0	13.0
PDI-SU02-PC-05	20-59-20521_CP_SU02-PC-05.PPD	15.0	300	50.4	42.3	8.1
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	300	10.0	6.4	3.6
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	645	20.0		
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	1900	30.0		
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	295	40.0	27.2	12.8
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	335	50.0	37.7	12.4
PDI-SU06-PC-01	20-59-20521_CP_SU06-PC-01.PPD	15.0	315	60.0	47.7	12.4
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	520	10.0	7.2	2.9

Job No:	20-59-20521
Client:	Anchor QEA
Project:	PDI Longview CPT
Start Date:	19-Feb-20
End Date:	22-Feb-20

CPTu PORE PRESSURE DISSIPATION SUMMARY

Sounding ID	File Name	Cone Area (cm^2)	Duration (s)	Test Depth (ft)	Estimated Equilibrium Pore Pressure U_{eq} (ft)	Calculated Phreatic Surface (ft)
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	300	20.2	18.8	1.3
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	305	30.0	19.8	10.3
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	175	30.9	20.5	10.4
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	310	40.3	29.8	10.5
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	310	50.0	39.4	10.6
PDI-SU06-PC-02	20-59-20521_CP_SU06-PC-02.PPD	15.0	460	60.1	49.9	10.2
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	300	10.0	6.3	3.7
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	305	20.0	11.2	8.9
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	525	30.0	21.1	8.9
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	730	40.3		
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	1060	50.0		
PDI-SU06-PC-03	20-59-20521_CP_SU06-PC-03.PPD	15.0	320	60.1		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	165	4.3		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	305	10.1		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	305	20.0		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	305	30.2	19.5	10.6
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	1615	40.4		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	510	50.4		
PDI-SU06-PC-04	20-59-20521_CP_SU06-PC-04.PPD	15.0	1800	60.6		
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	320	10.1	3.4	6.7
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	305	20.0		
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	2400	30.3		
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	310	40.0	26.4	13.6
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	610	49.0		
PDI-SU06-PC-05	20-59-20521_CP_SU06-PC-05.PPD	15.0	305	60.2	45.5	14.7
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	305	10.0	7.1	2.9
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	340	20.1		
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	300	30.0	18.0	12.0
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	335	40.1	26.3	13.8
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	305	50.3	37.7	12.6
PDI-SU06-PC-06	20-59-20521_CP_SU06-PC-06.PPD	15.0	310	60.1	47.6	12.5
PDI-SU07-PC-01	20-59-20521_CP_SU07-PC-01.PPD	15.0	850	10.0		
PDI-SU07-PC-01	20-59-20521_CP_SU07-PC-01.PPD	15.0	400	19.6	18.9	0.7
PDI-SU07-PC-01	20-59-20521_CP_SU07-PC-01.PPD	15.0	2430	30.0		
PDI-SU07-PC-01	20-59-20521_CP_SU07-PC-01.PPD	15.0	1645	39.5		
PDI-SU07-PC-02	20-59-20521_CP_SU07-PC-02.PPD	15.0	410	10.5		
PDI-SU07-PC-02	20-59-20521_CP_SU07-PC-02.PPD	15.0	315	20.0	18.1	1.9

Job No:	20-59-20521
Client:	Anchor QEA
Project:	PDI Longview CPT
Start Date:	19-Feb-20
End Date:	22-Feb-20

CPTu PORE PRESSURE DISSIPATION SUMMARY

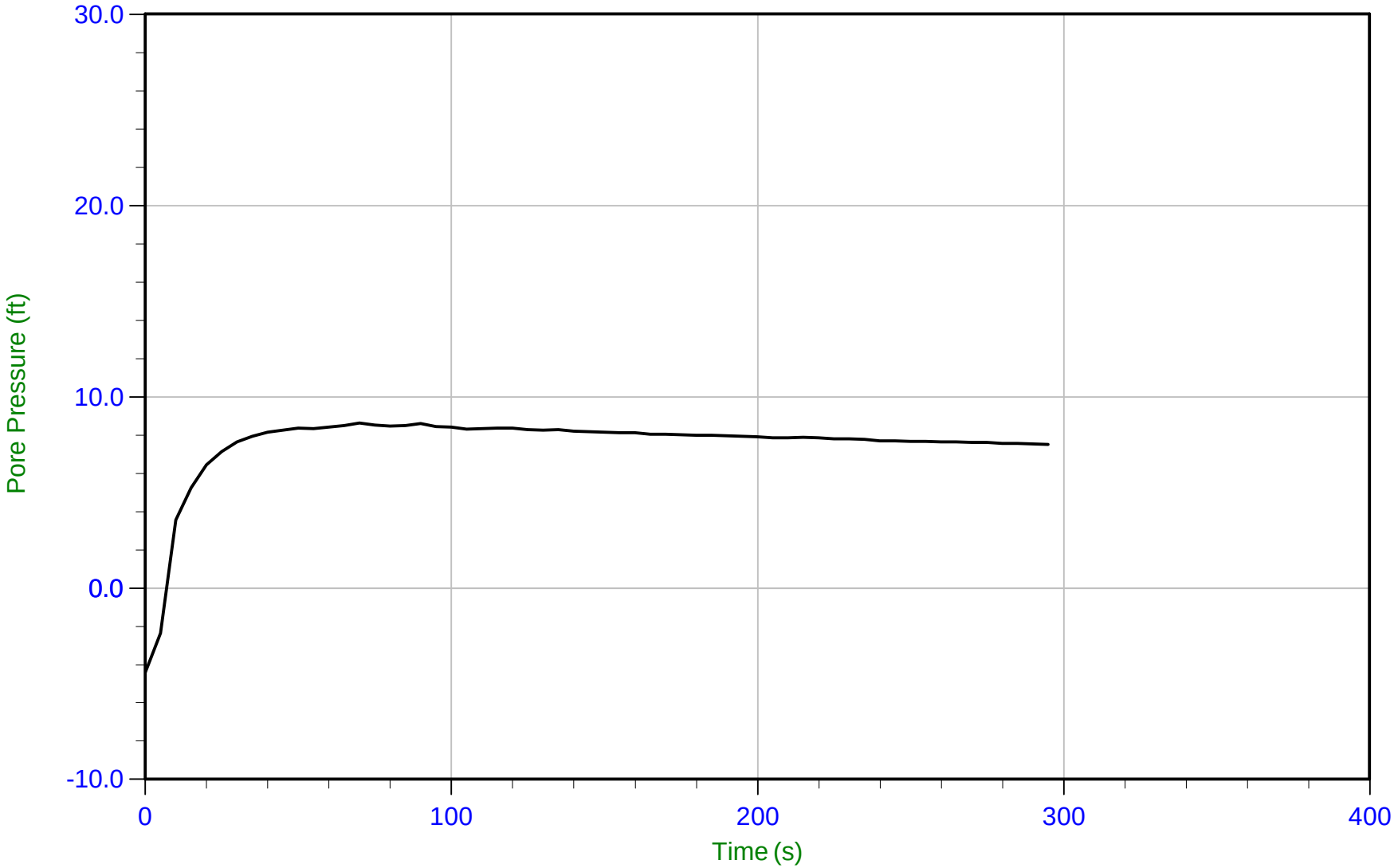
Sounding ID	File Name	Cone Area (cm^2)	Duration (s)	Test Depth (ft)	Estimated Equilibrium Pore Pressure U_{eq} (ft)	Calculated Phreatic Surface (ft)
PDI-SU07-PC-02	20-59-20521_CP_SU07-PC-02.PPD	15.0	1250	31.0		
PDI-SU07-PC-02	20-59-20521_CP_SU07-PC-02.PPD	15.0	2325	40.9		
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	300	9.8		
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	305	17.1	16.0	1.1
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	235	23.1		
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	2700	30.1		
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	2070	40.0		
PDI-SU07-PC-03	20-59-20521_CP_SU07-PC-03.PPD	15.0	850	50.0		
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01.PPD	15.0	330	14.2		
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01.PPD	15.0	395	20.2	3.7	16.5
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01.PPD	15.0	320	30.2	12.2	18.0
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01.PPD	15.0	405	40.2	22.4	17.8
PDI-SU10-PC-01	20-59-20521_CP_SU10-PC-01.PPD	15.0	335	50.0	29.8	20.3
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02.PPD	15.0	300	10.1		
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02.PPD	15.0	300	20.2	4.3	15.9
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02.PPD	15.0	305	30.2		
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02.PPD	15.0	1055	40.1		
PDI-SU10-PC-02	20-59-20521_CP_SU10-PC-02.PPD	15.0	375	50.0	28.1	21.9
Totals (min)			1038			

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 16:48
Site: PDI Longview CP

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-01.PPD
Depth: 3.075 m / 10.088 ft
Duration: 295.0 s

U Min: -4.4 ft
U Max: 8.6 ft

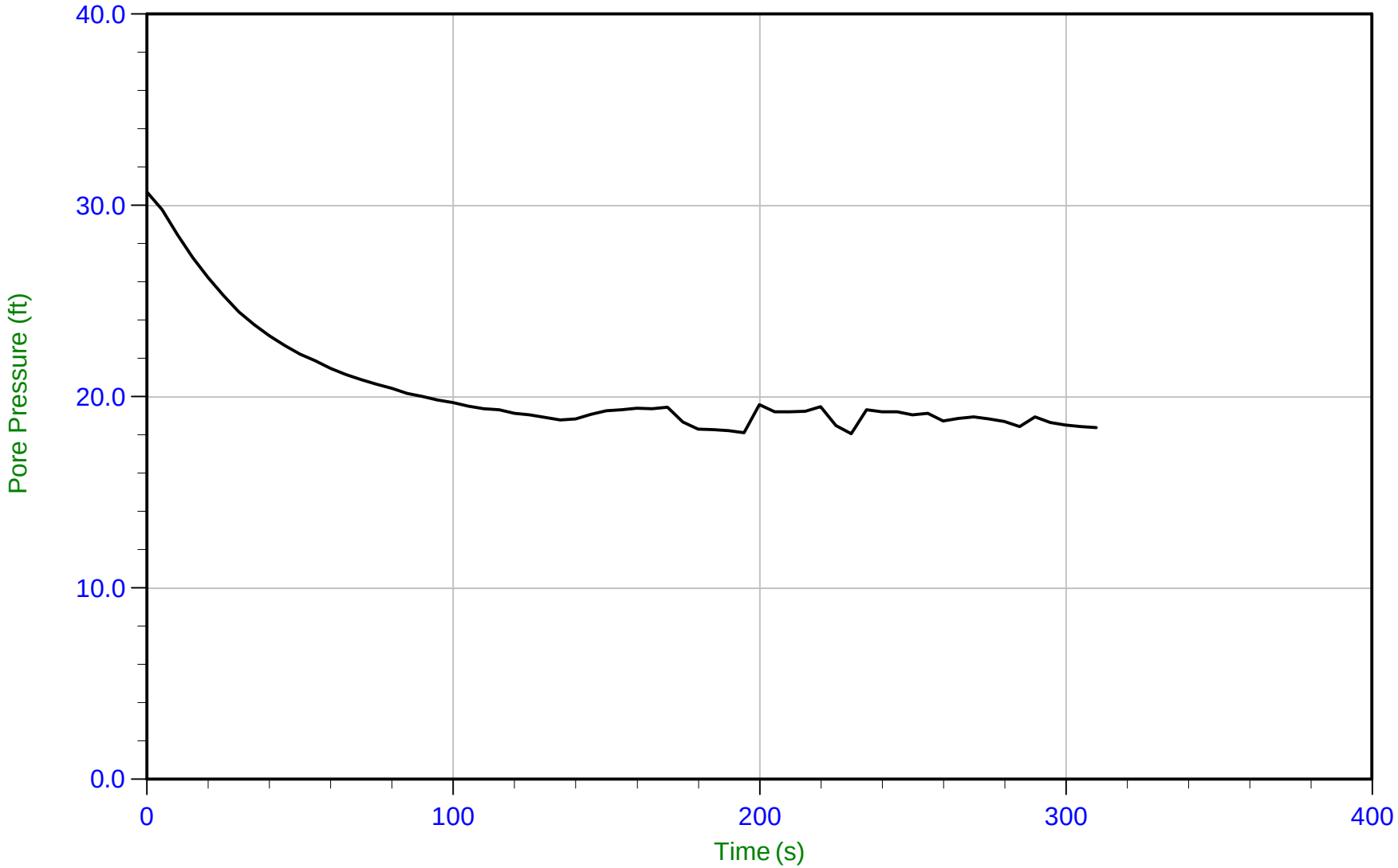
WT: 0.771 m / 2.529 ft
Ueq: 7.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 16:48
Site: PDI Longview CP

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-01.PPD
Depth: 6.325 m / 20.751 ft
Duration: 310.0 s

U Min: 18.1 ft
U Max: 30.7 ft

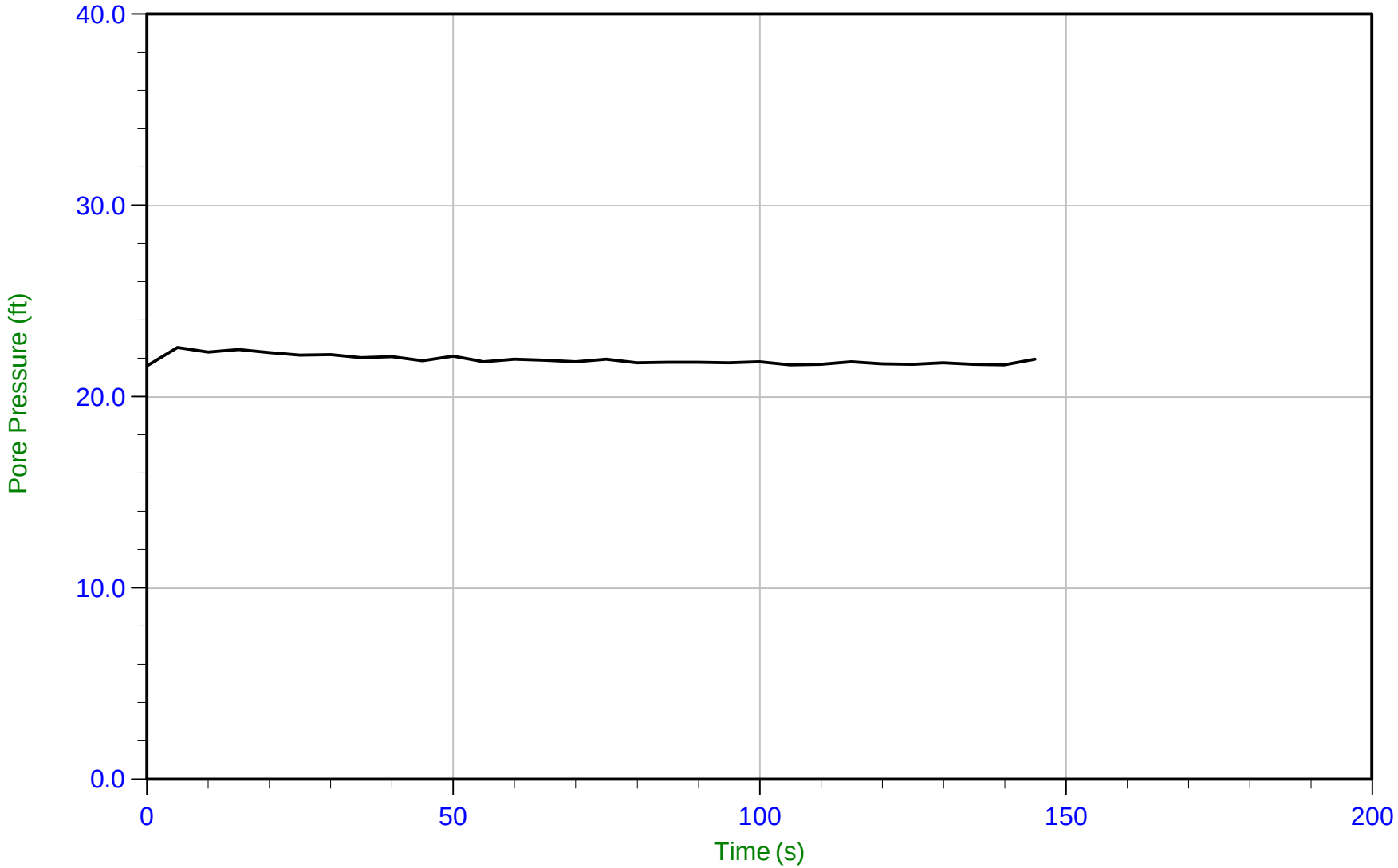
WT: 0.654 m / 2.146 ft
Ueq: 18.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 16:48
Site: PDI Longview CP

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-01.PPD
Depth: 7.475 m / 24.524 ft
Duration: 145.0 s

U Min: 21.6 ft
U Max: 22.6 ft

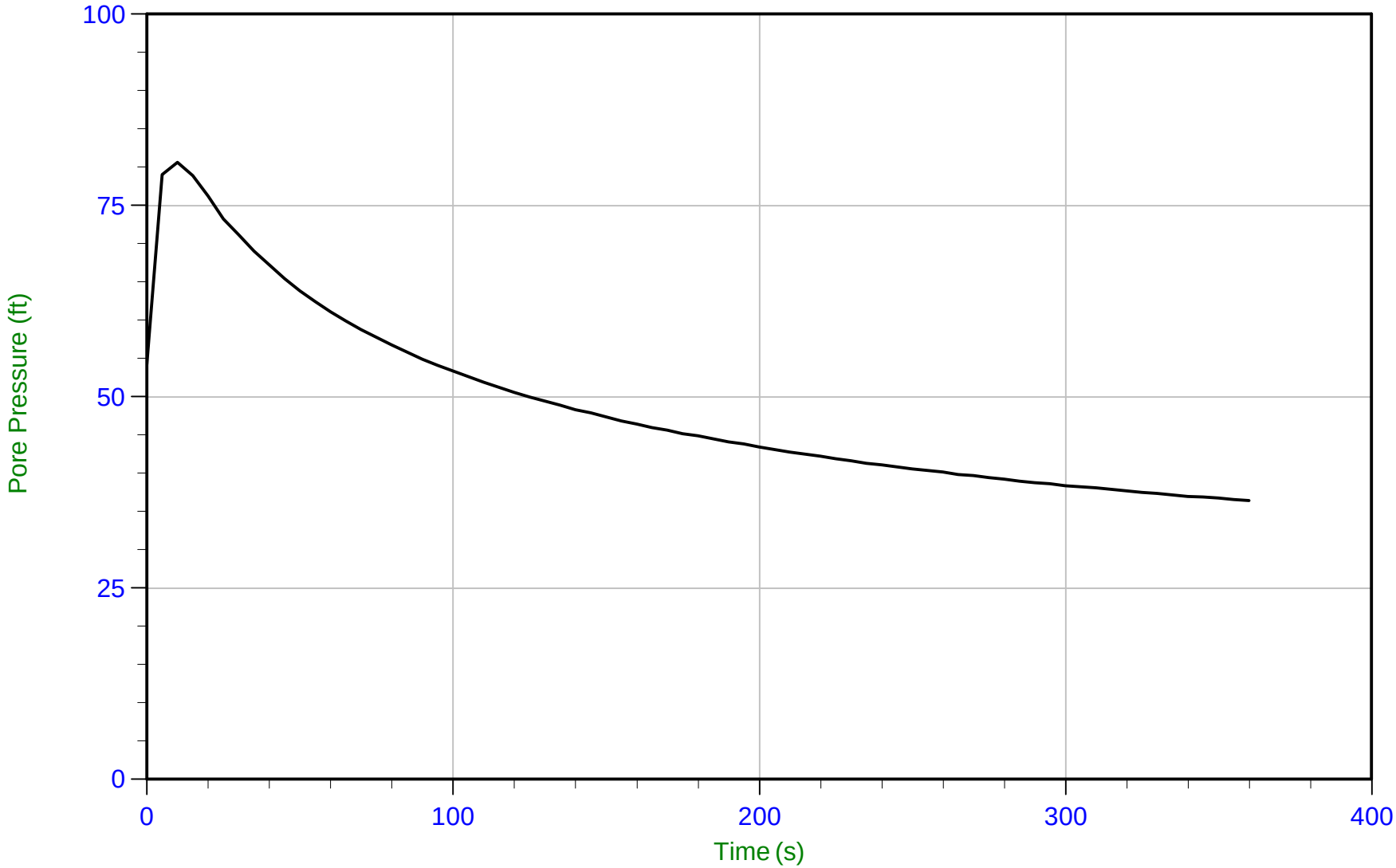
WT: 0.847 m / 2.779 ft
Ueq: 21.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 16:48
Site: PDI Longview CP

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-01.PPD
Depth: 9.175 m / 30.101 ft
Duration: 360.0 s

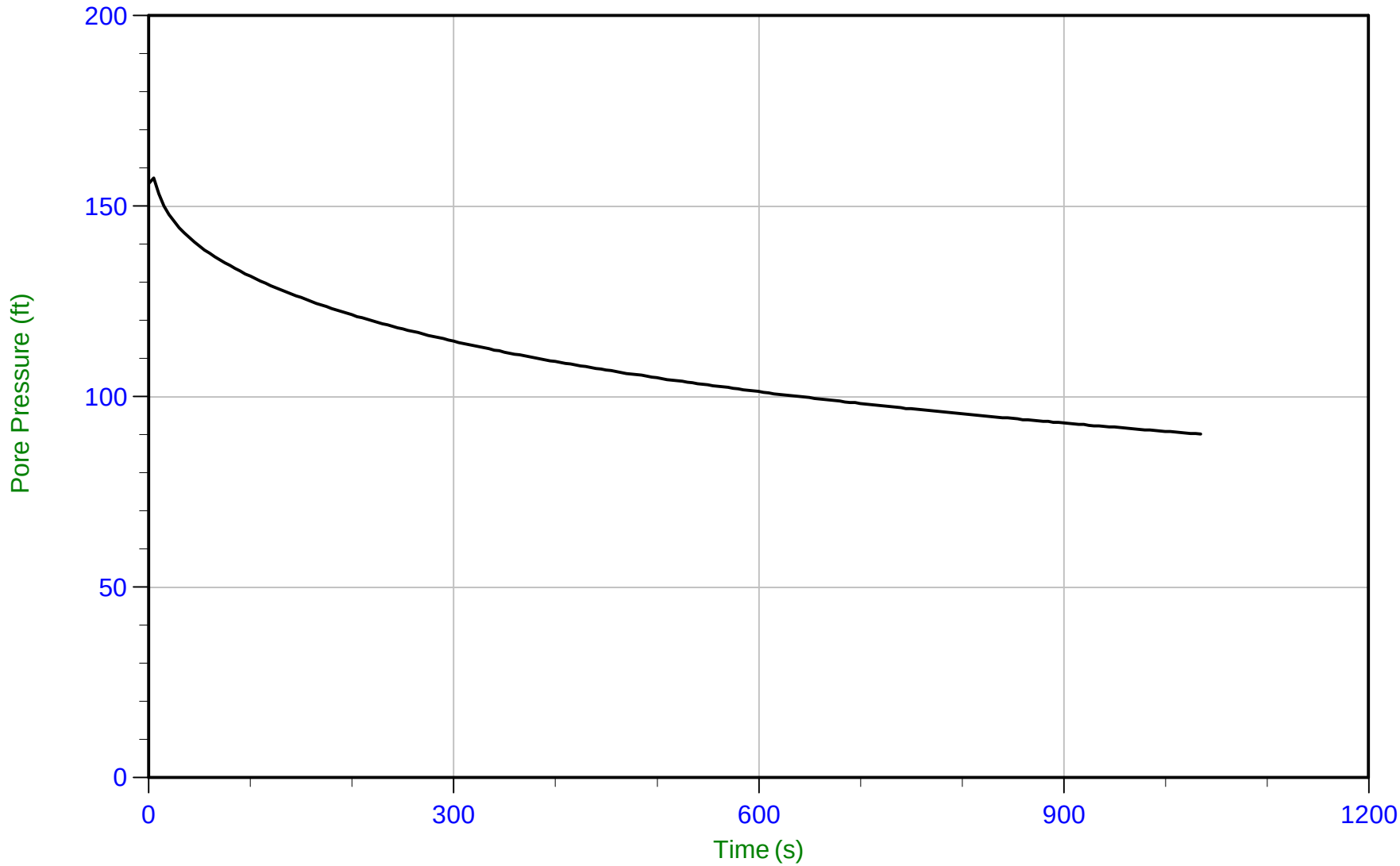
U Min: 36.4 ft
U Max: 80.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 16:48
Site: PDI Longview CP

Sounding: PDI-PRB-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-01.PPD
Depth: 12.200 m / 40.026 ft
Duration: 1035.0 s

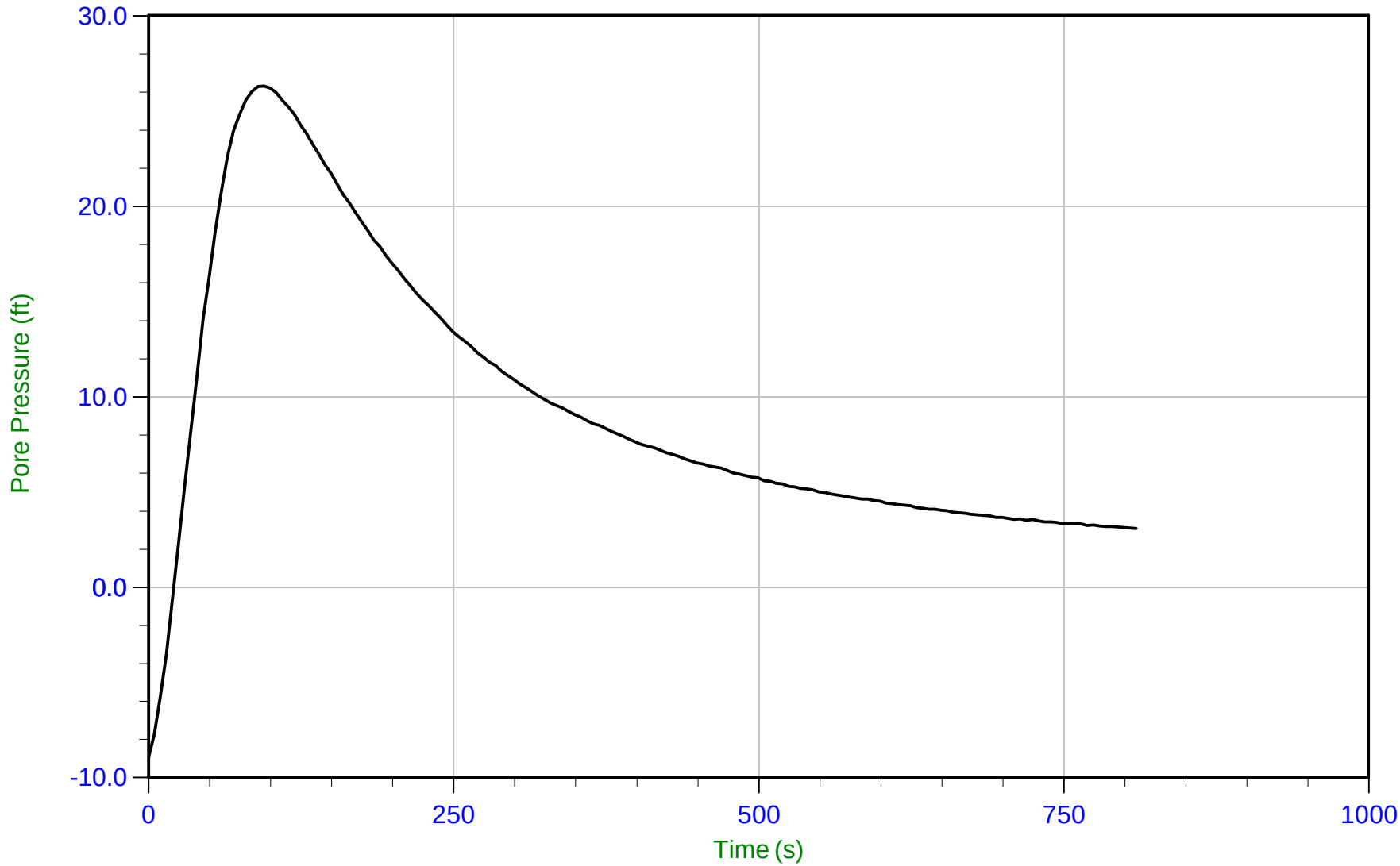
U Min: 90.2 ft
U Max: 157.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 14:58
Site: PDI Longview CP

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-02.PPD
Depth: 3.050 m / 10.006 ft
Duration: 810.0 s

U Min: -8.9 ft
U Max: 26.3 ft

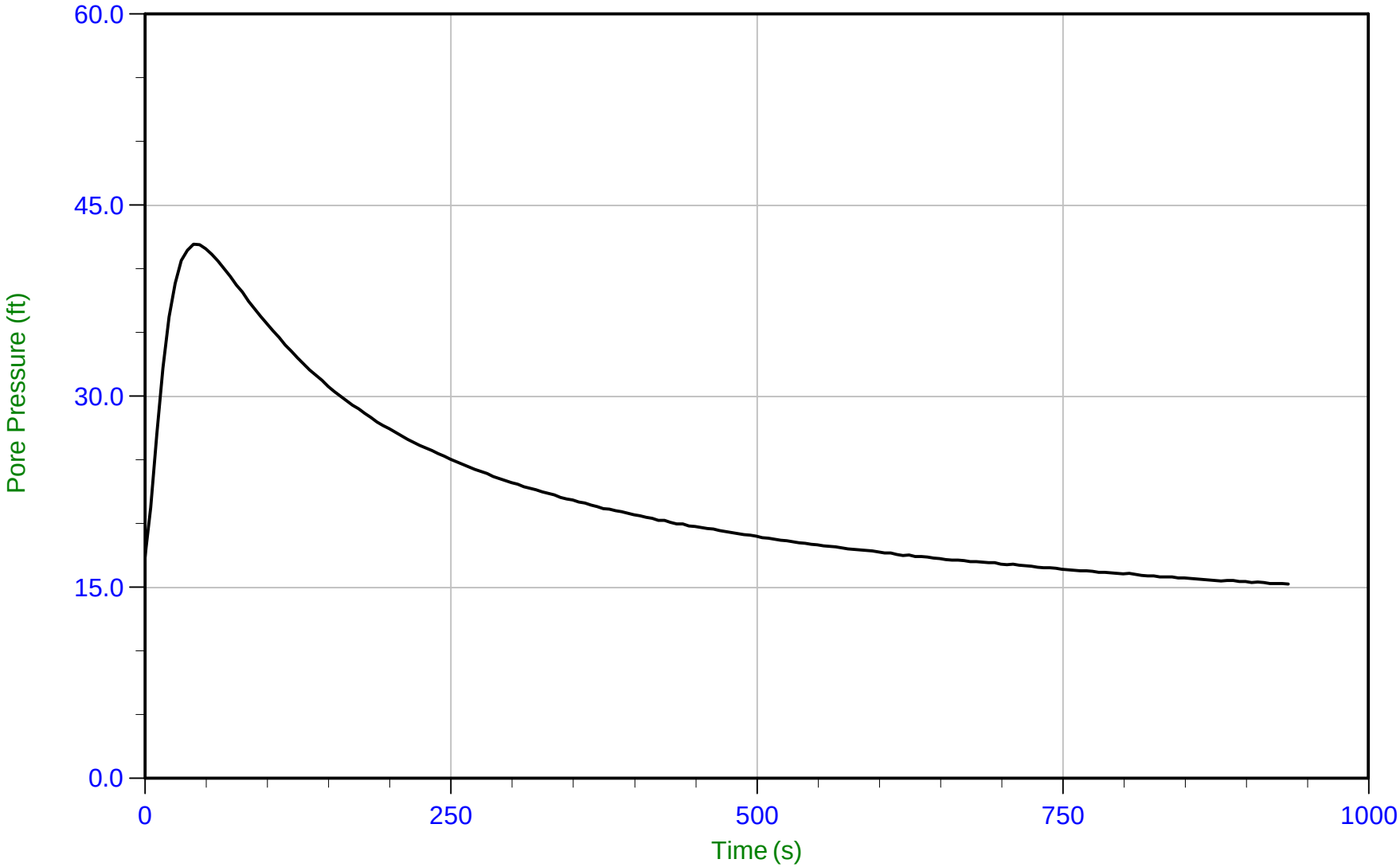
WT: 2.129 m / 6.985 ft
Ueq: 3.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 14:58
Site: PDI Longview CP

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-02.PPD
Depth: 6.125 m / 20.095 ft
Duration: 935.0 s

U Min: 15.3 ft
U Max: 42.0 ft

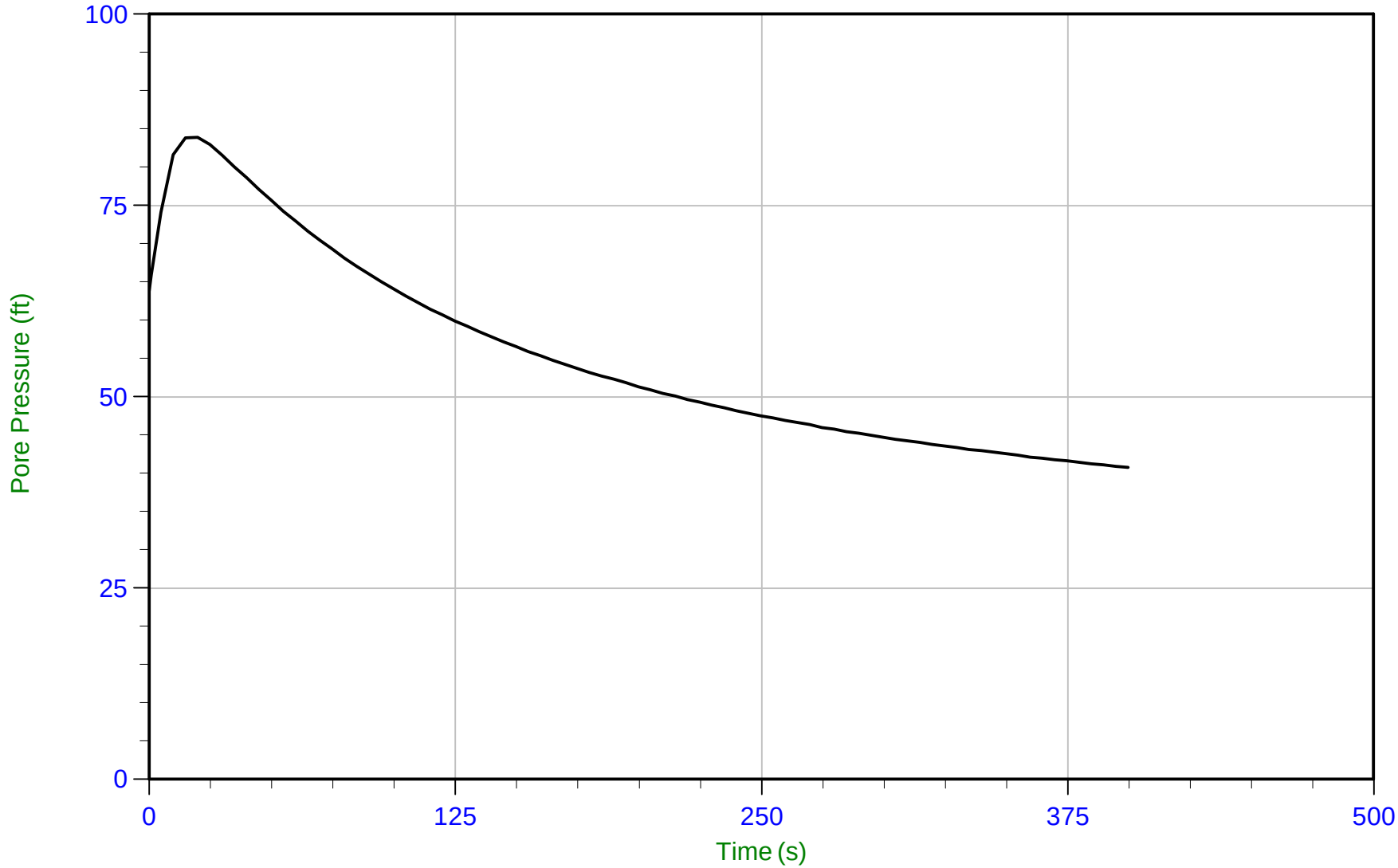
WT: 1.500 m / 4.921 ft
Ueq: 15.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 14:58
Site: PDI Longview CP

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-02.PPD
Depth: 9.150 m / 30.019 ft
Duration: 400.0 s

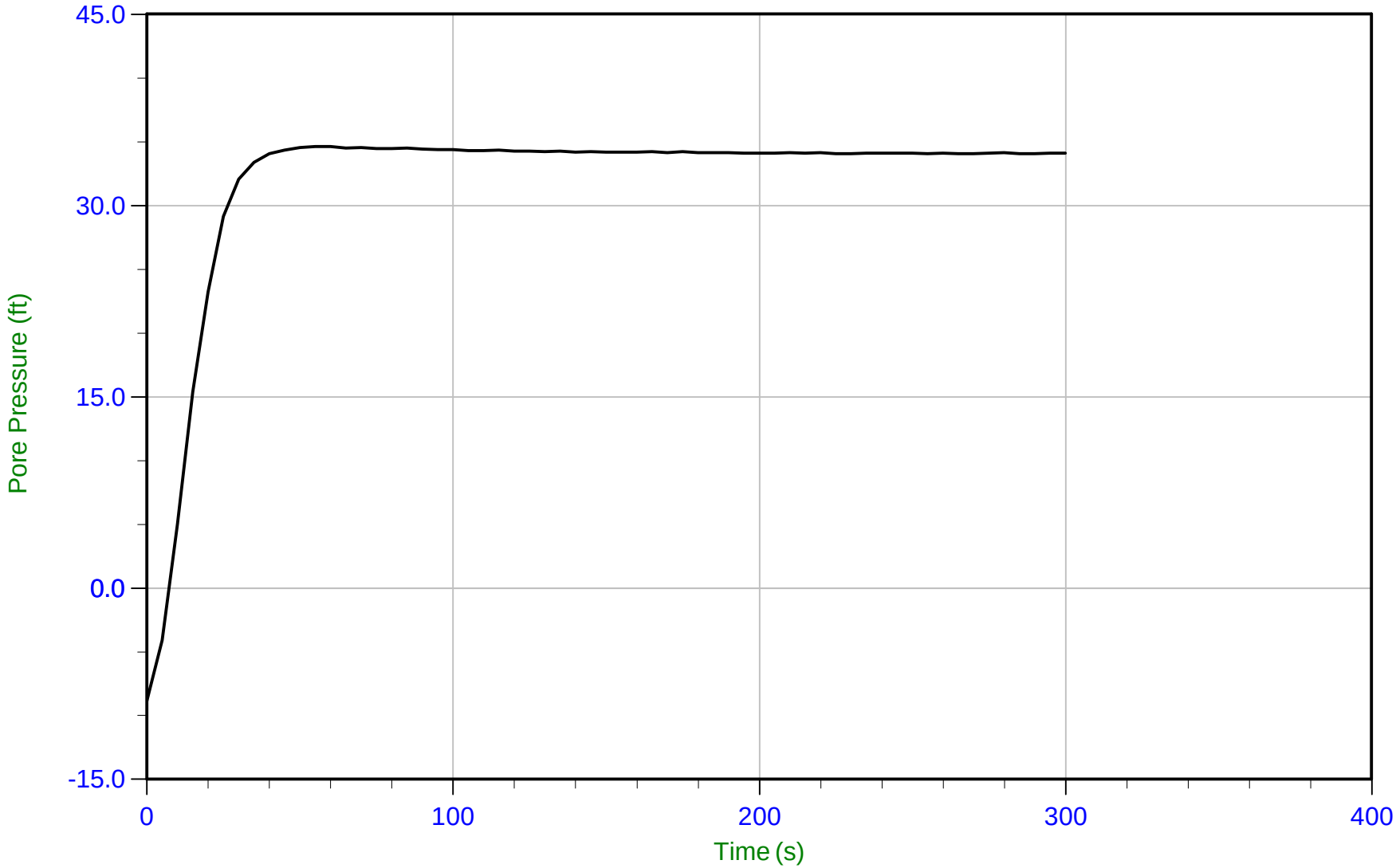
U Min: 40.7 ft
U Max: 83.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 14:58
Site: PDI Longview CP

Sounding: PDI-PRB-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_PRB-PC-02.PPD
Depth: 12.200 m / 40.026 ft
Duration: 300.0 s

U Min: -8.9 ft
U Max: 34.6 ft

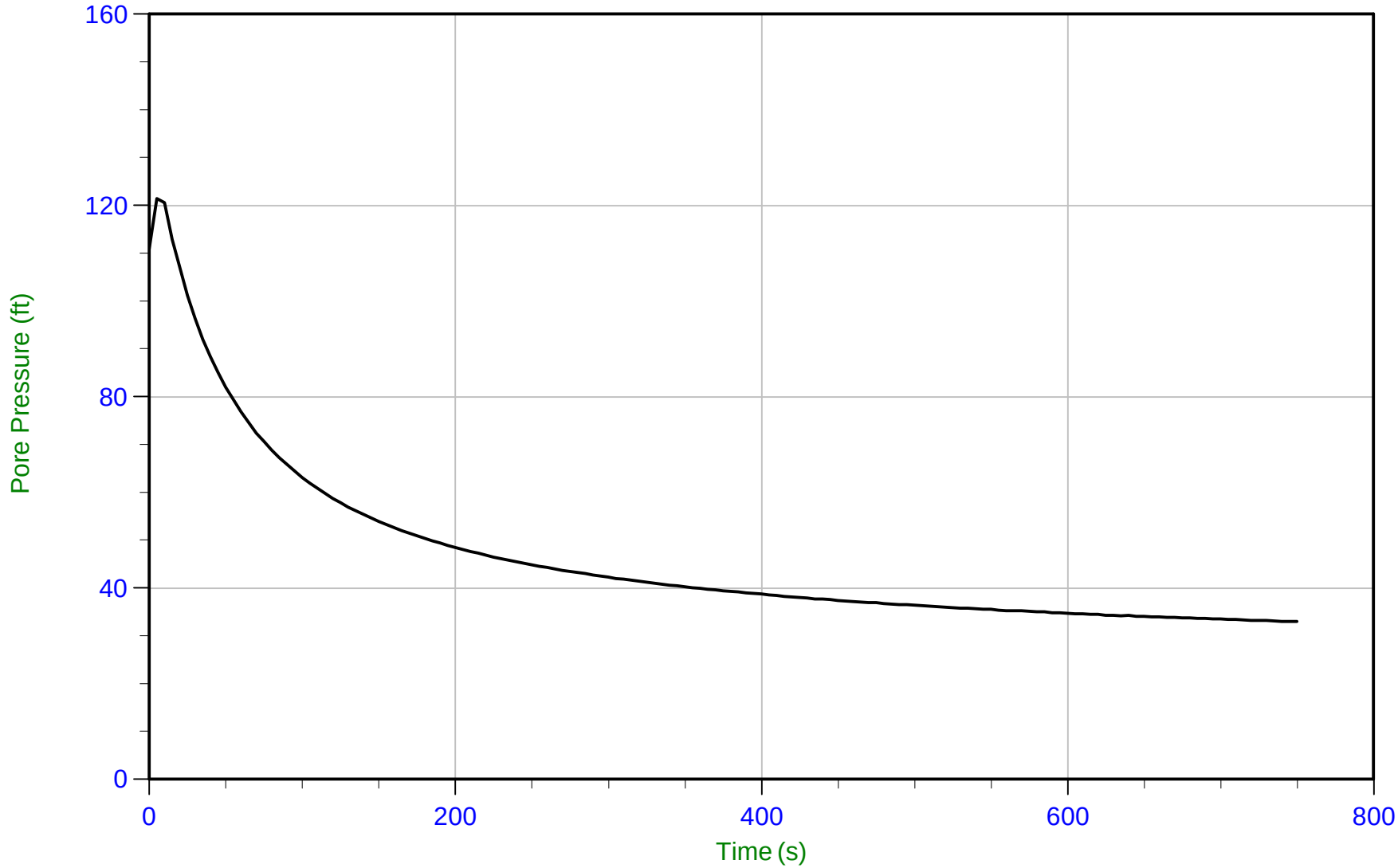
WT: 1.824 m / 5.984 ft
Ueq: 34.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 15:41
Site: PDI Longview CP

Sounding: PDI-SU02-PC-01-B
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-01-B.PPD
Depth: 12.200 m / 40.026 ft
Duration: 750.0 s

U Max: 121.4 ft

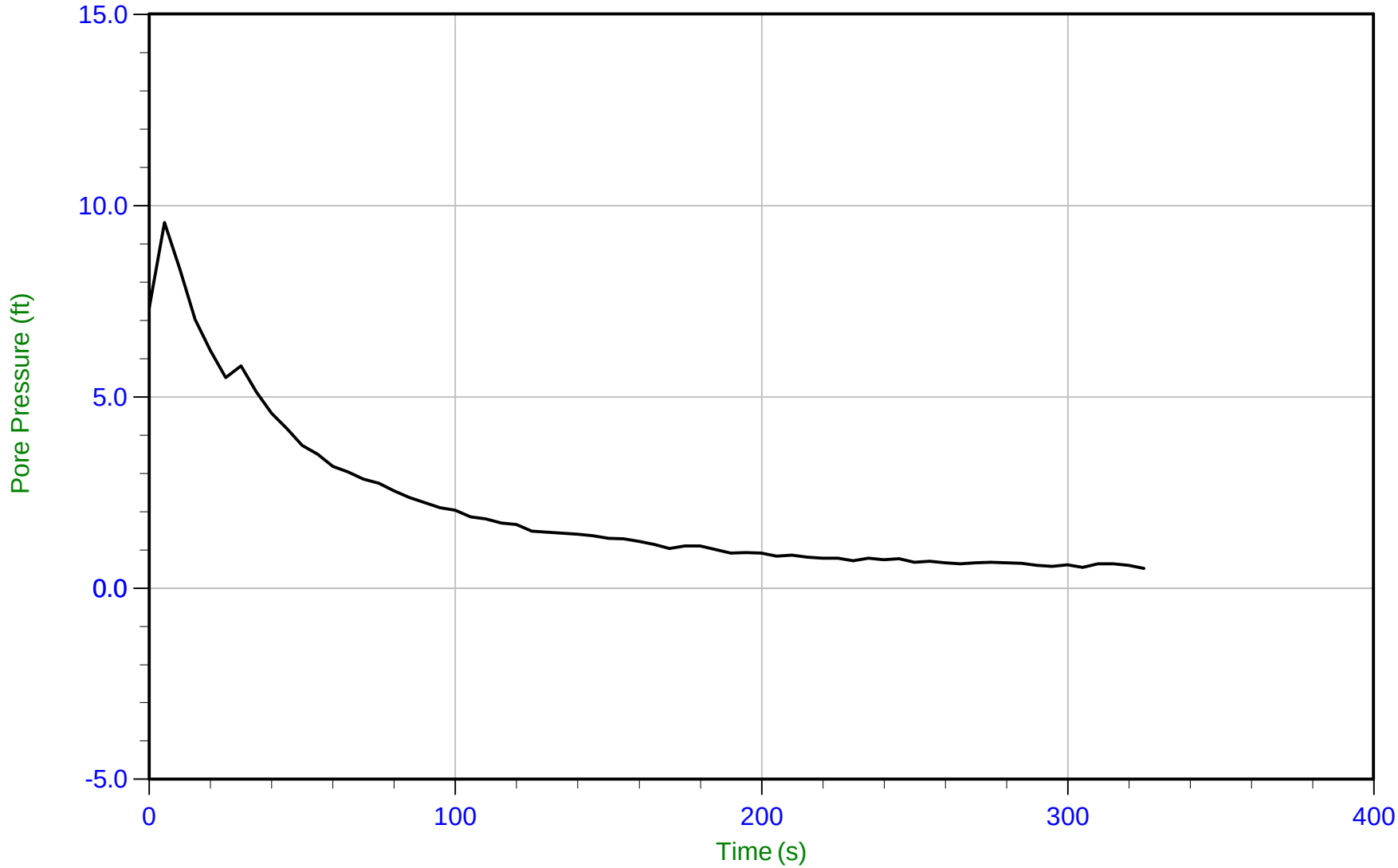
WT: 2.276 m / 7.467 ft
Ueq: 32.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 14:11
Site: PDI Longview CP

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-01.PPD
Depth: 3.075 m / 10.088 ft
Duration: 325.0 s

U Min: 0.5 ft
U Max: 9.6 ft

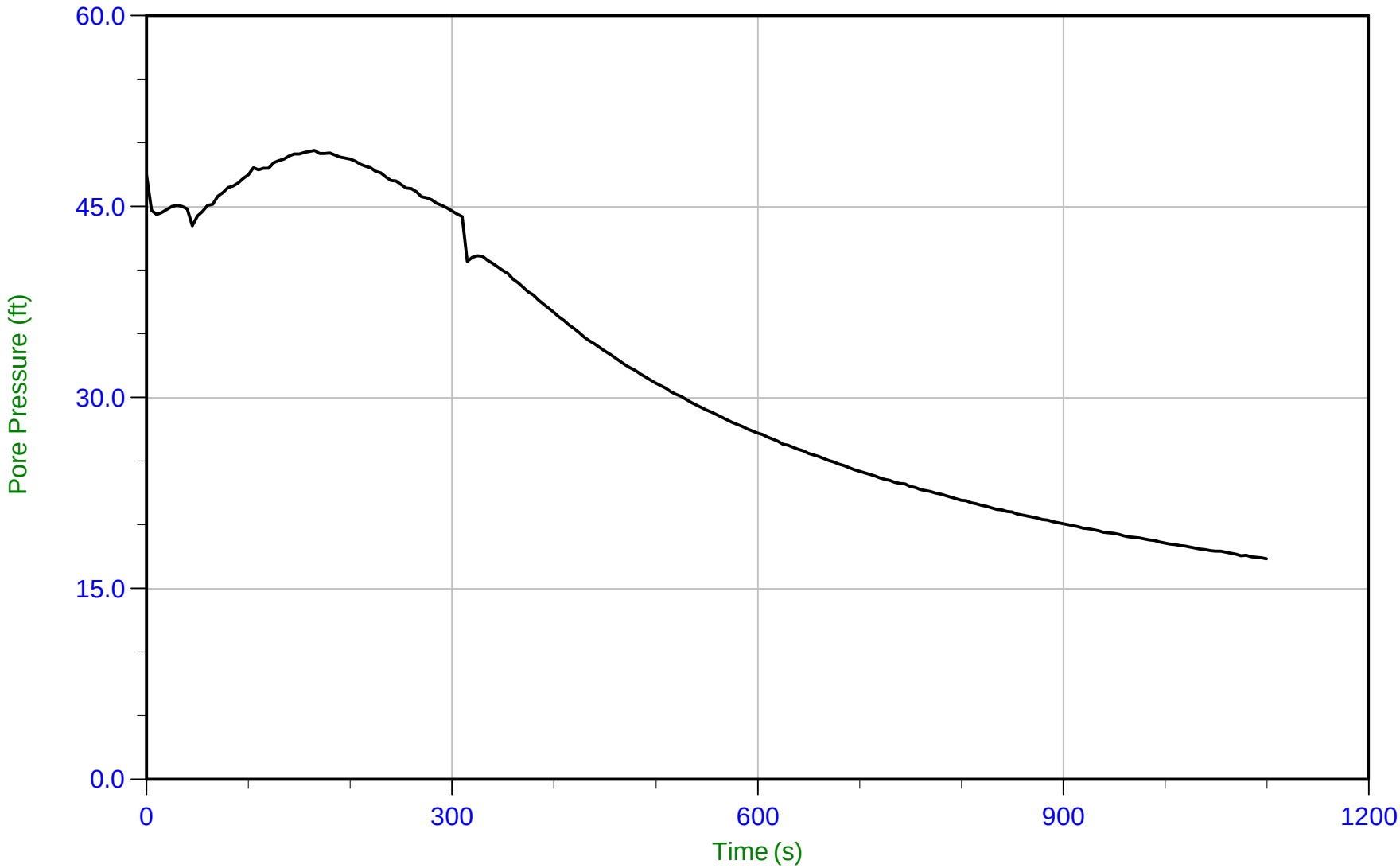
WT: 2.898 m / 9.508 ft
Ueq: 0.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 14:11
Site: PDI Longview CP

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-01.PPD
Depth: 6.100 m / 20.013 ft
Duration: 1100.0 s

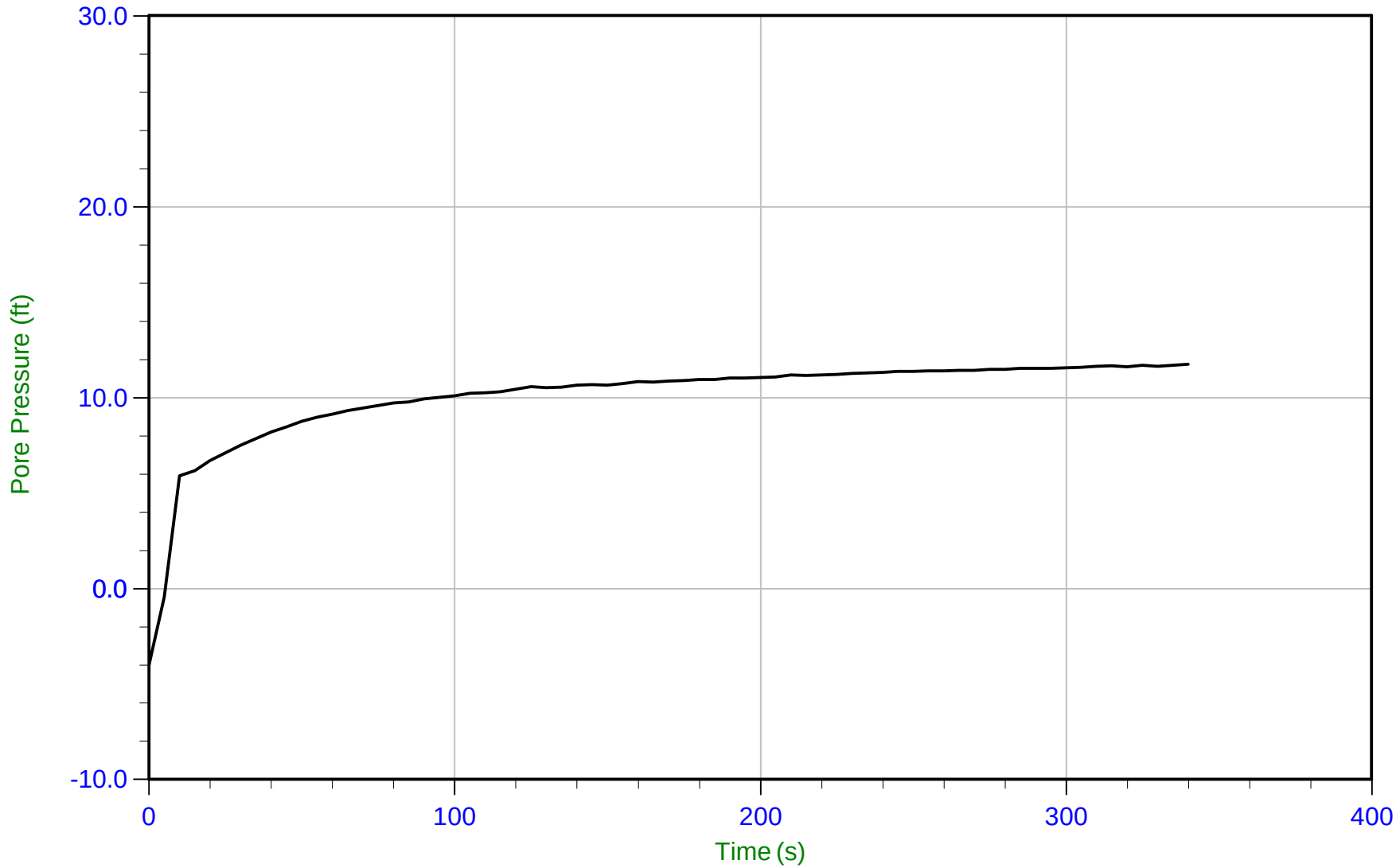
U Mid: 17.3 ft
U Max: 49.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 14:11
Site: PDI Longview CP

Sounding: PDI-SU02-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-01.PPD
Depth: 9.175 m / 30.101 ft
Duration: 340.0 s

U Min: -4.0 ft
U Max: 11.7 ft

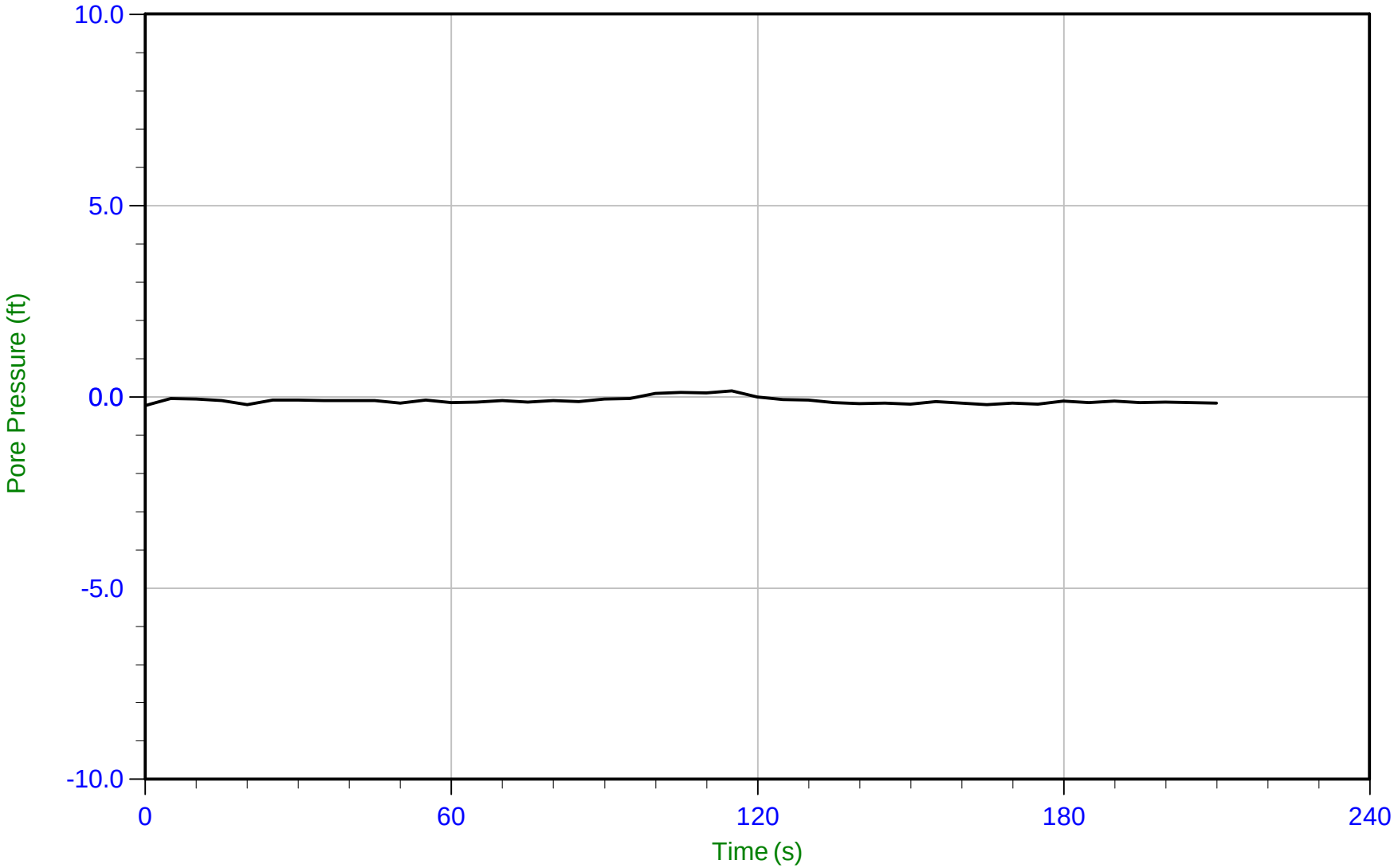
WT: 5.604 m / 18.386 ft
Ueq: 11.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 16:56
Site: PDI Longview CP

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-02.PPD
Depth: 3.075 m / 10.088 ft
Duration: 210.0 s

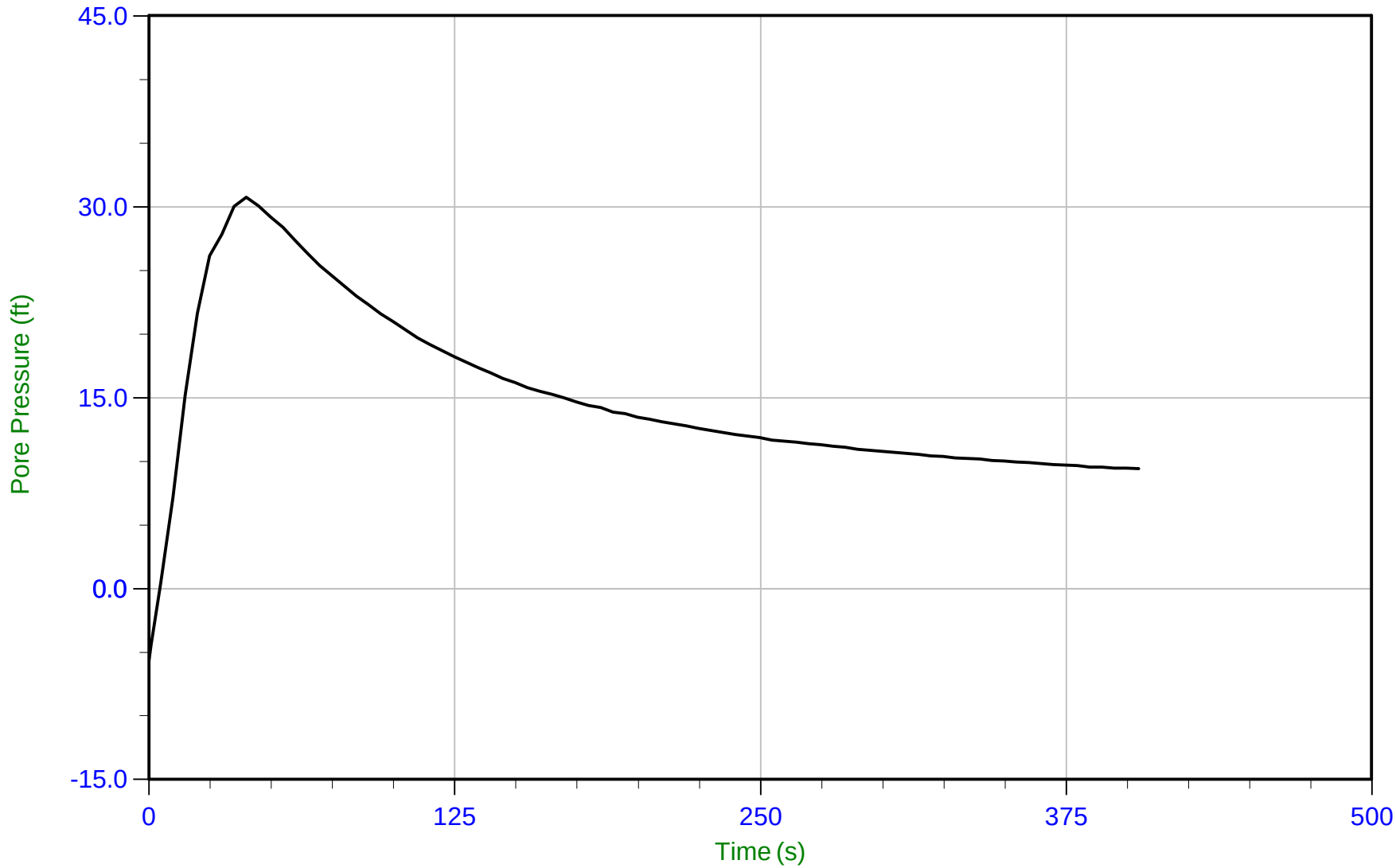
U Min: -0.2 ft
U Max: 0.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 16:56
Site: PDI Longview CP

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-02.PPD
Depth: 6.100 m / 20.013 ft
Duration: 405.0 s

U Hyd: -5.7 ft
U Max: 30.7 ft

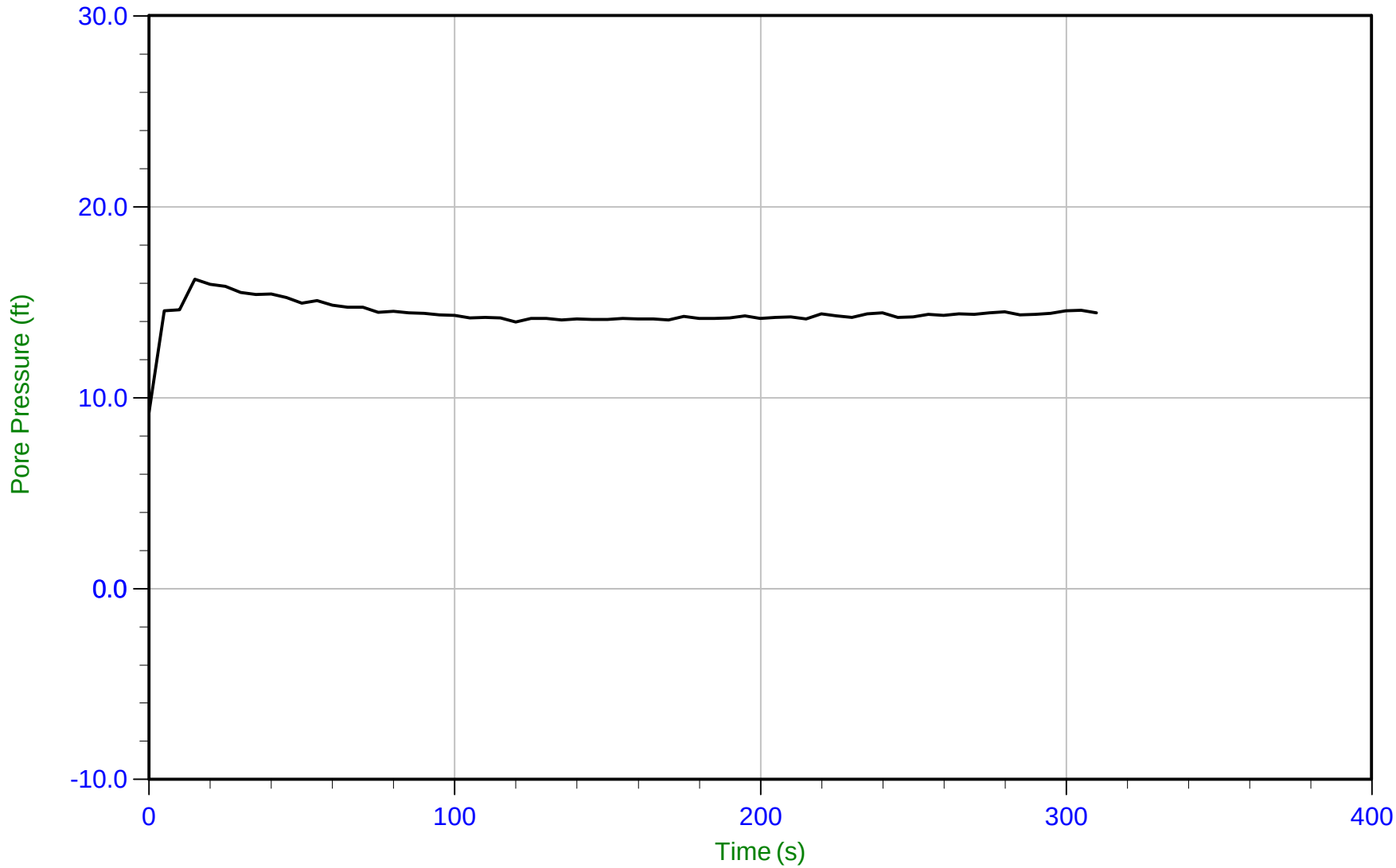
WT: 3.229 m / 10.594 ft
Ueq: 9.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 16:56
Site: PDI Longview CP

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-02.PPD
Depth: 9.175 m / 30.101 ft
Duration: 310.0 s

U Hyd: 9.2 ft
U Max: 16.2 ft

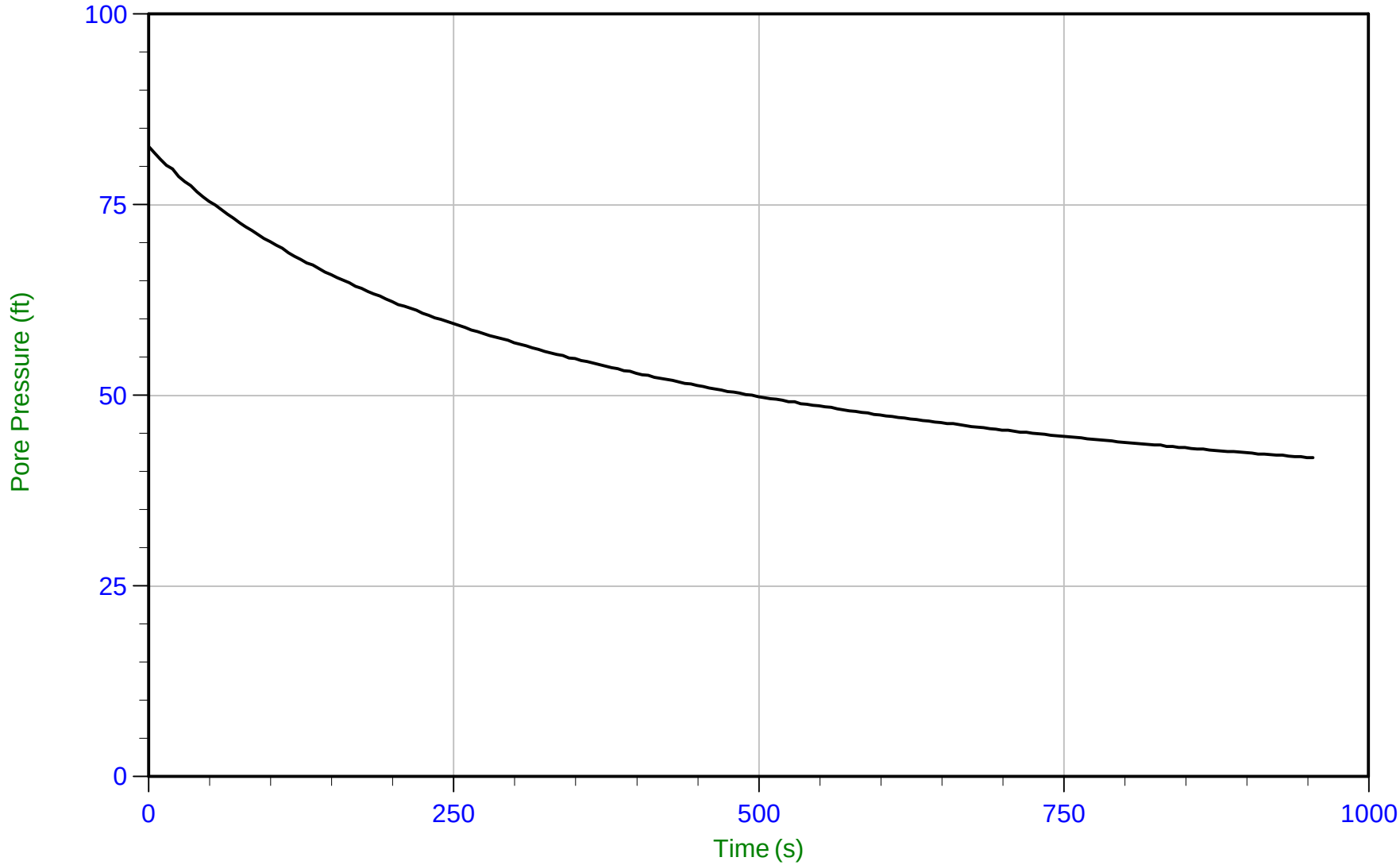
WT: 4.780 m / 15.682 ft
Ueq: 14.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 16:56
Site: PDI Longview CP

Sounding: PDI-SU02-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

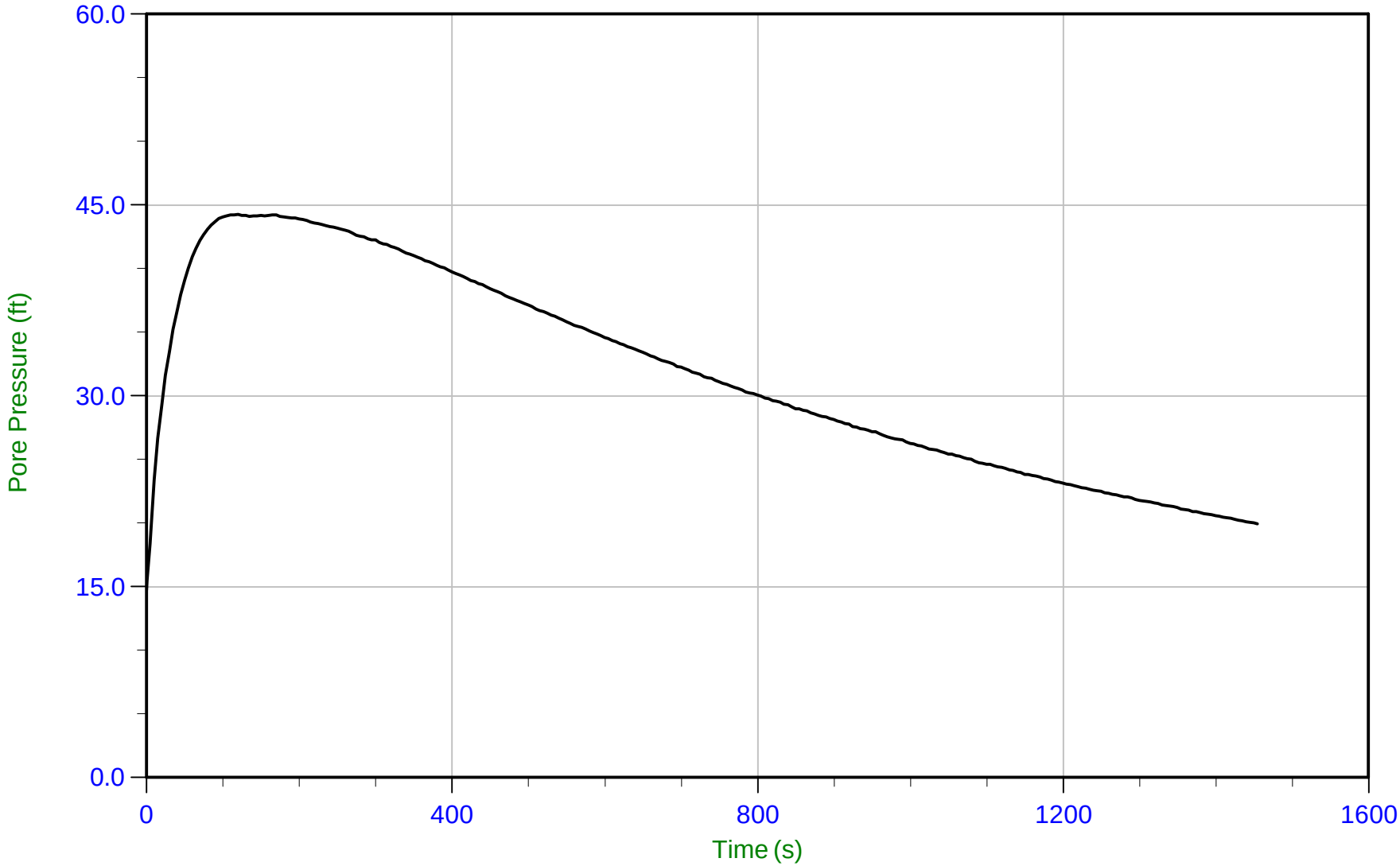
Filename: 20-59-20521_CP_SU02-PC-02.PPD
Depth: 12.200 m / 40.026 ft
Duration: 955.0 s

U Min: 41.8 ft
U Max: 82.7 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 08:10
Site: PDI Longview CP

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-03.PPD
Depth: 3.050 m / 10.006 ft
Duration: 1455.0 s

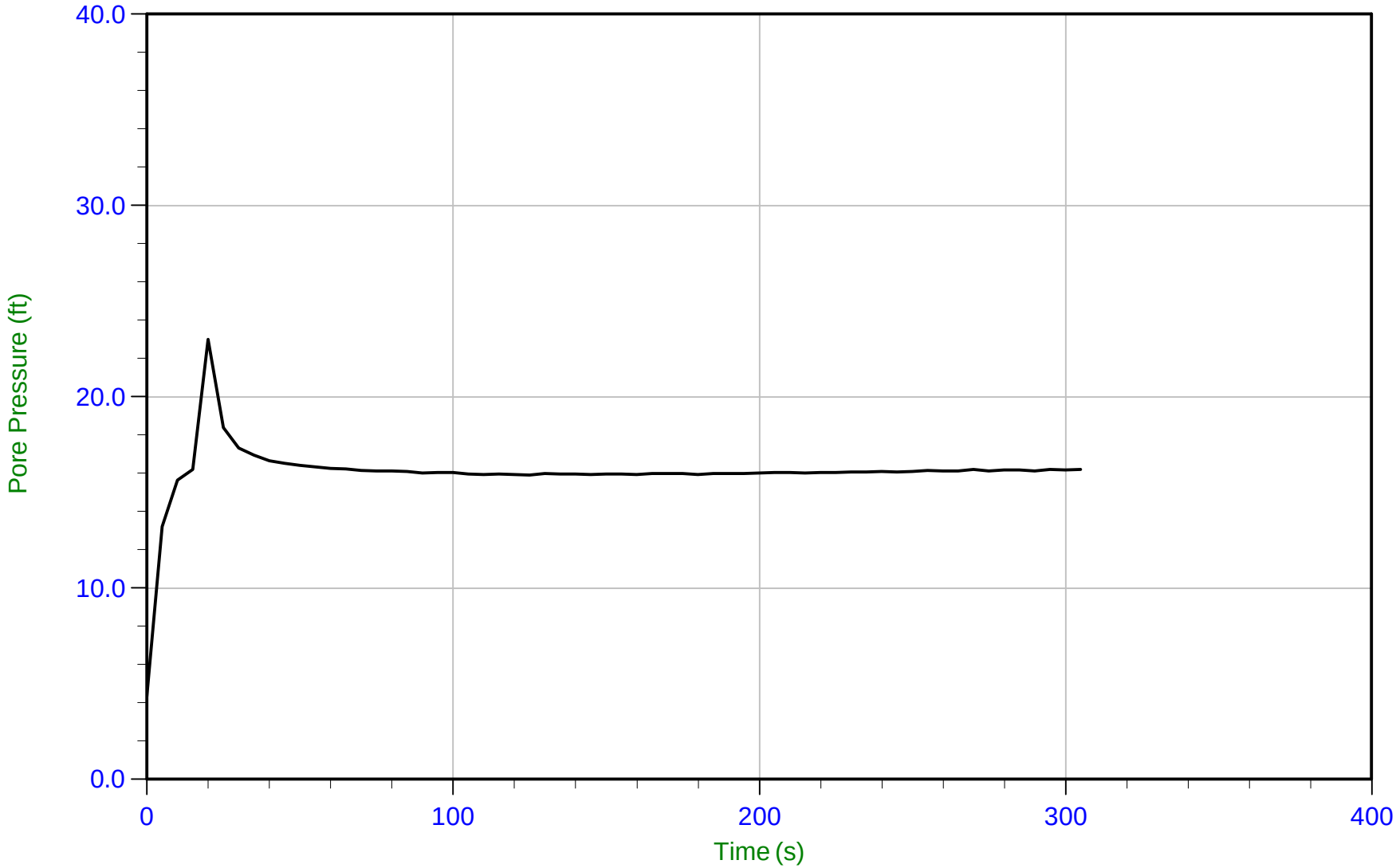
U Hyd: 14.7 ft
U Max: 44.3 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 08:10
Site: PDI Longview CP

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-03.PPD
Depth: 6.125 m / 20.095 ft
Duration: 305.0 s

U Hyd: 4.3 ft
U Max: 23.0 ft

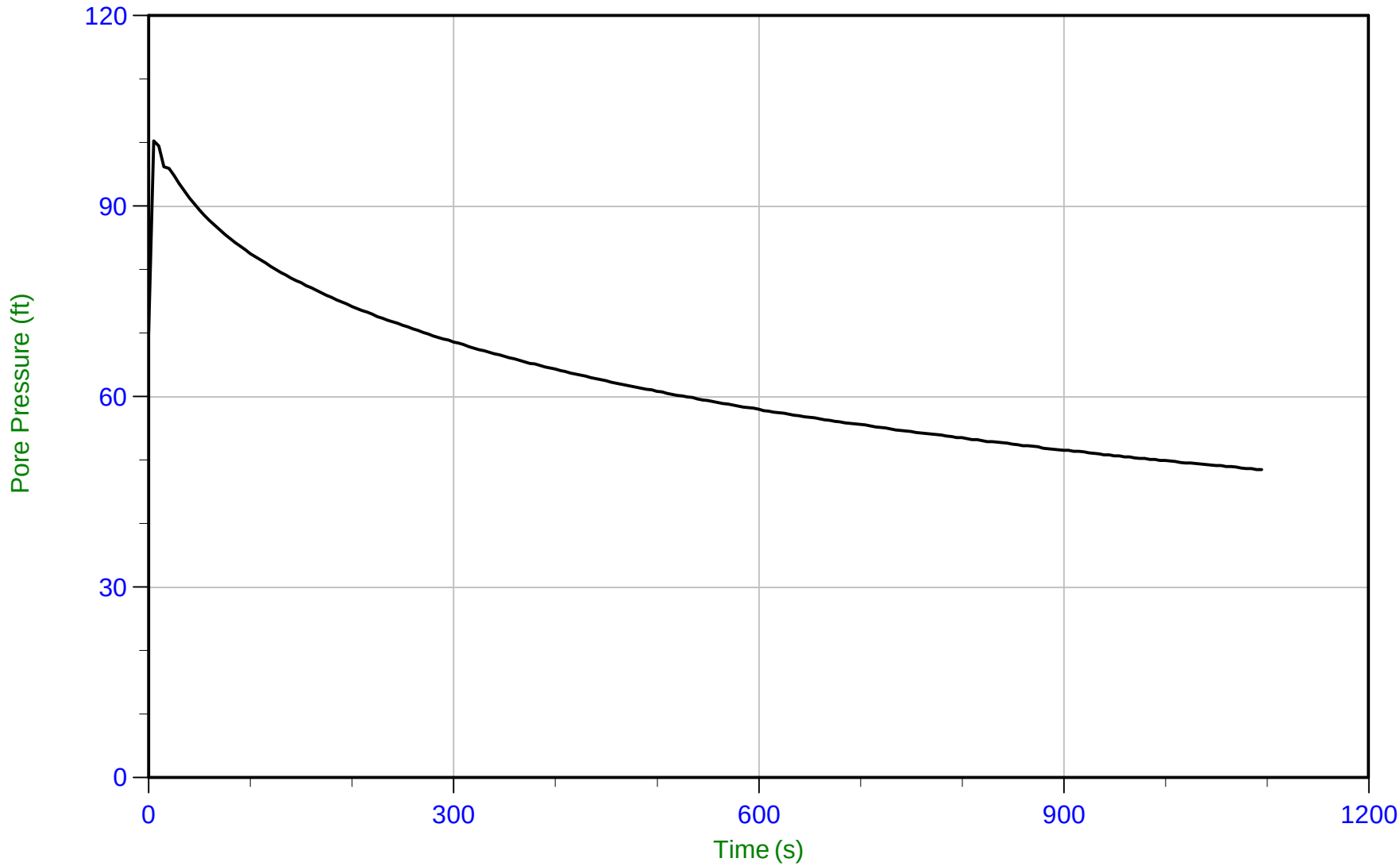
WT: 1.181 m / 3.875 ft
Ueq: 16.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 08:10
Site: PDI Longview CP

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

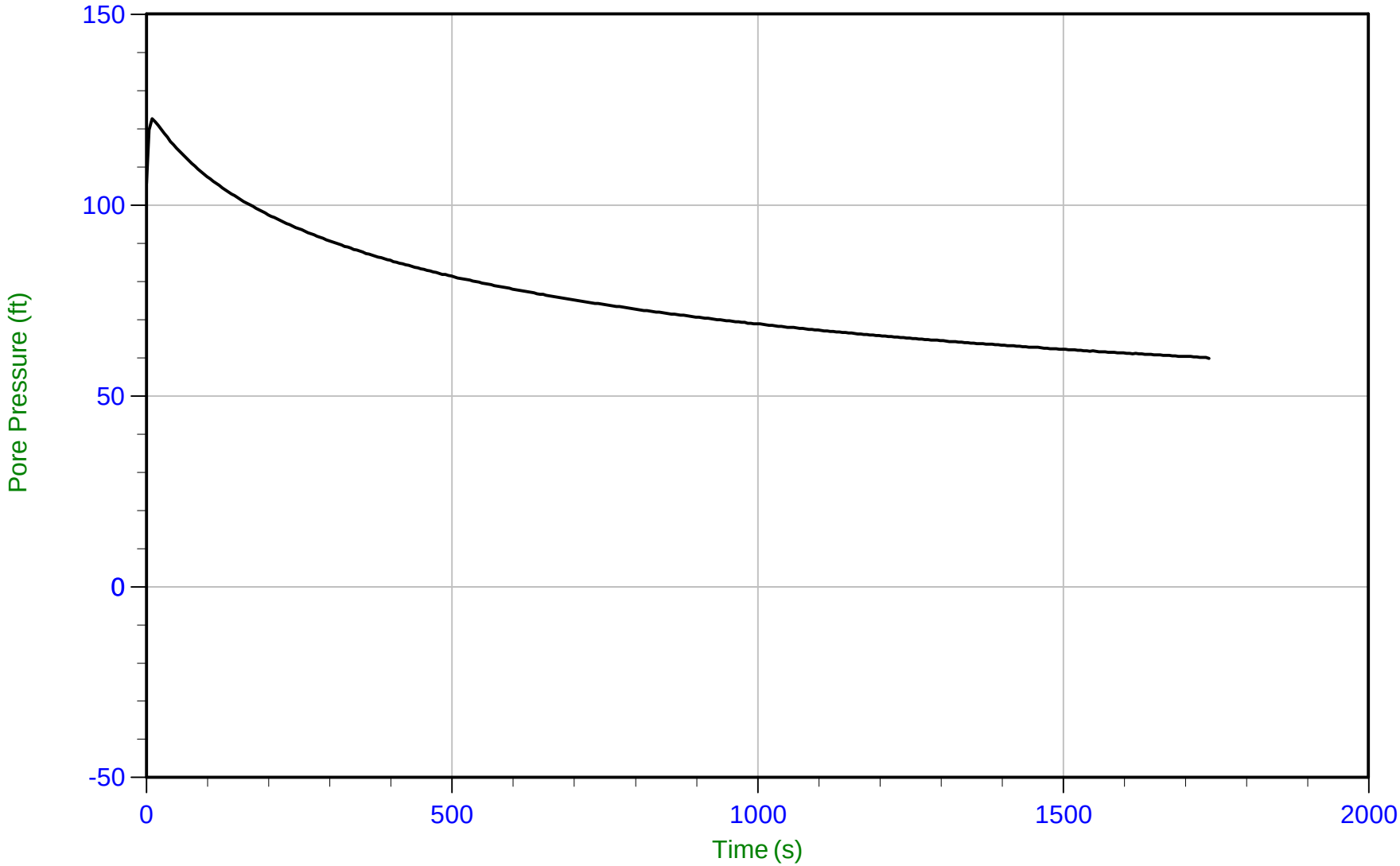
Filename: 20-59-20521_CP_SU02-PC-03.PPD
Depth: 9.175 m / 30.101 ft
Duration: 1095.0 s

U Hyd: 48.5 ft
U Max: 100.2 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 08:10
Site: PDI Longview CP

Sounding: PDI-SU02-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

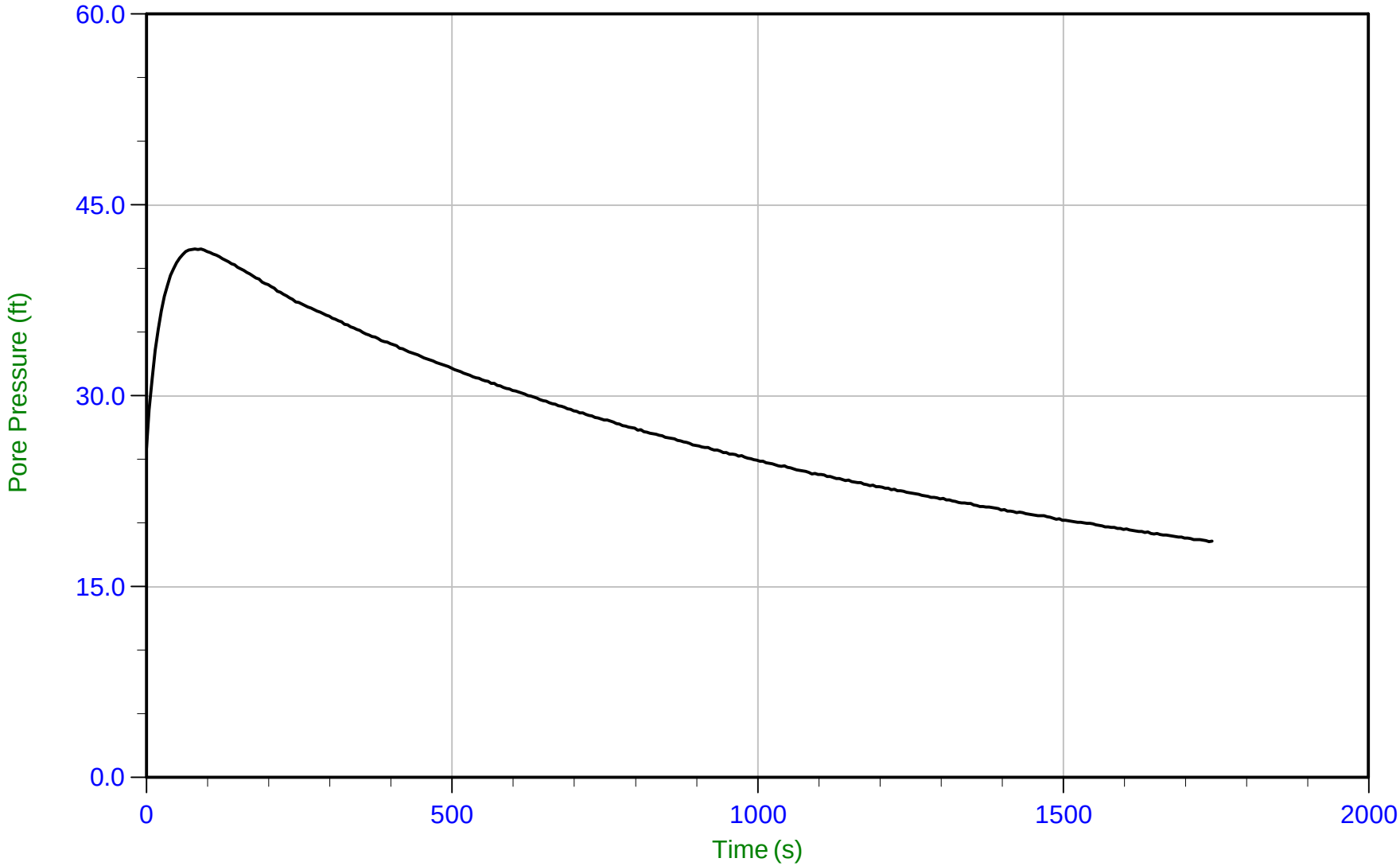
Filename: 20-59-20521_CP_SU02-PC-03.PPD
Depth: 12.225 m / 40.108 ft
Duration: 1740.0 s

U Min: 59.8 ft
U Max: 122.7 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 10:28
Site: PDI Longview CP

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-04.PPD
Depth: 3.275 m / 10.745 ft
Duration: 1745.0 s

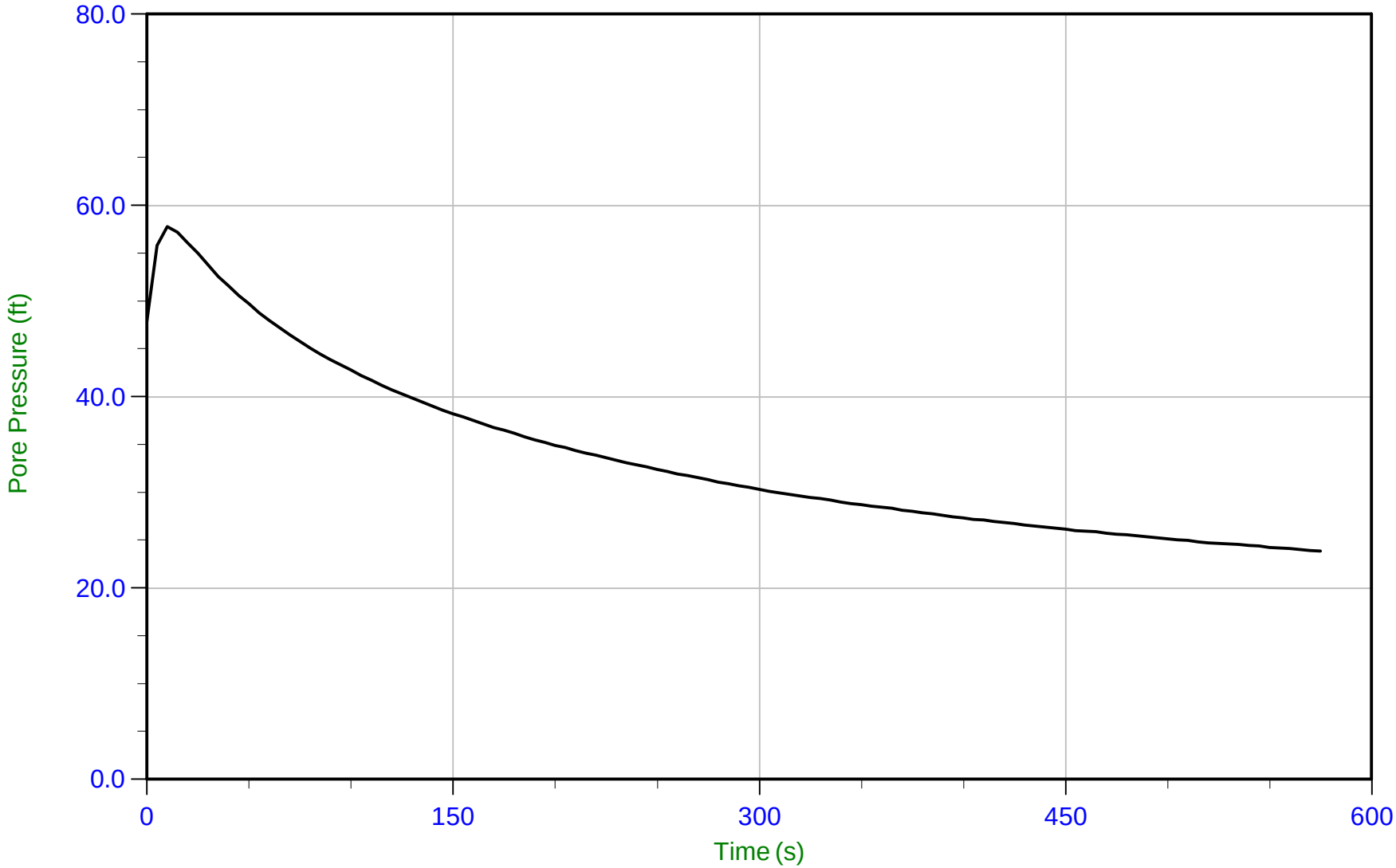
U Hyd: 18.5 ft
U Max: 41.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 10:28
Site: PDI Longview CP

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-04.PPD
Depth: 6.300 m / 20.669 ft
Duration: 575.0 s

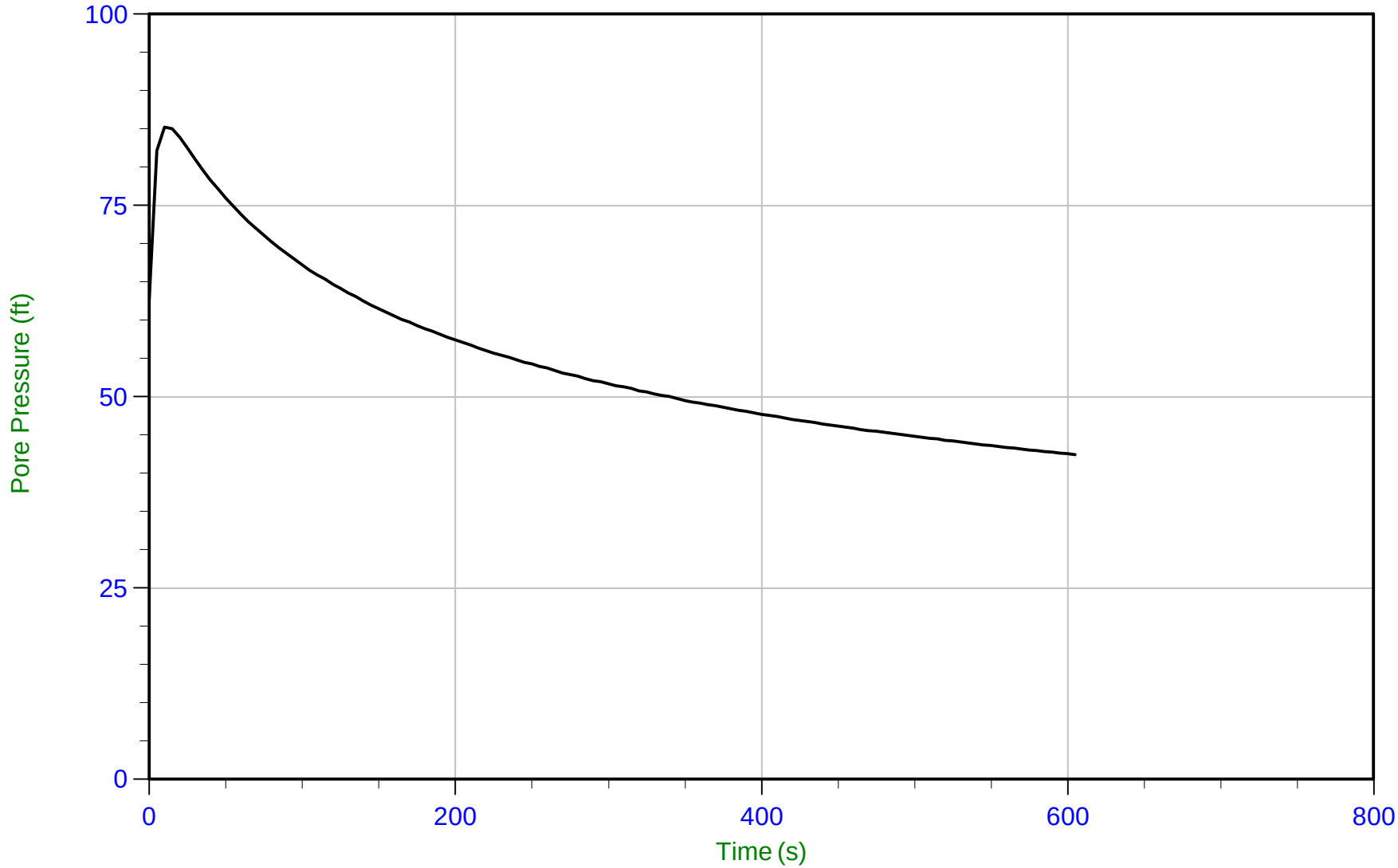
U Mid: 23.9 ft
U Max: 57.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 10:28
Site: PDI Longview CP

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

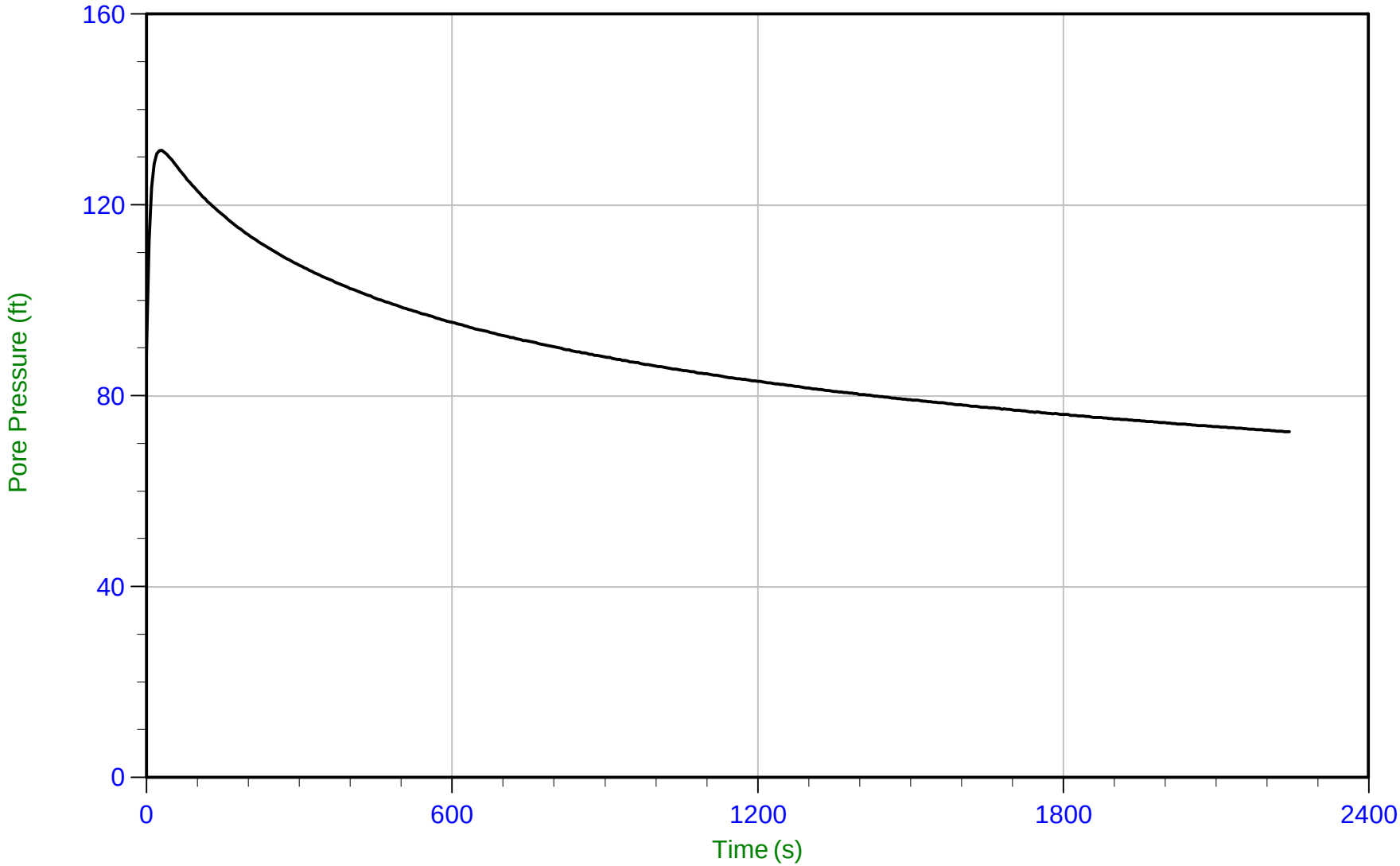
Filename: 20-59-20521_CP_SU02-PC-04.PPD
Depth: 9.350 m / 30.675 ft
Duration: 605.0 s

U Mid: 42.4 ft
U Max: 85.2 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 10:28
Site: PDI Longview CP

Sounding: PDI-SU02-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-04.PPD
Depth: 12.200 m / 40.026 ft
Duration: 2245.0 s

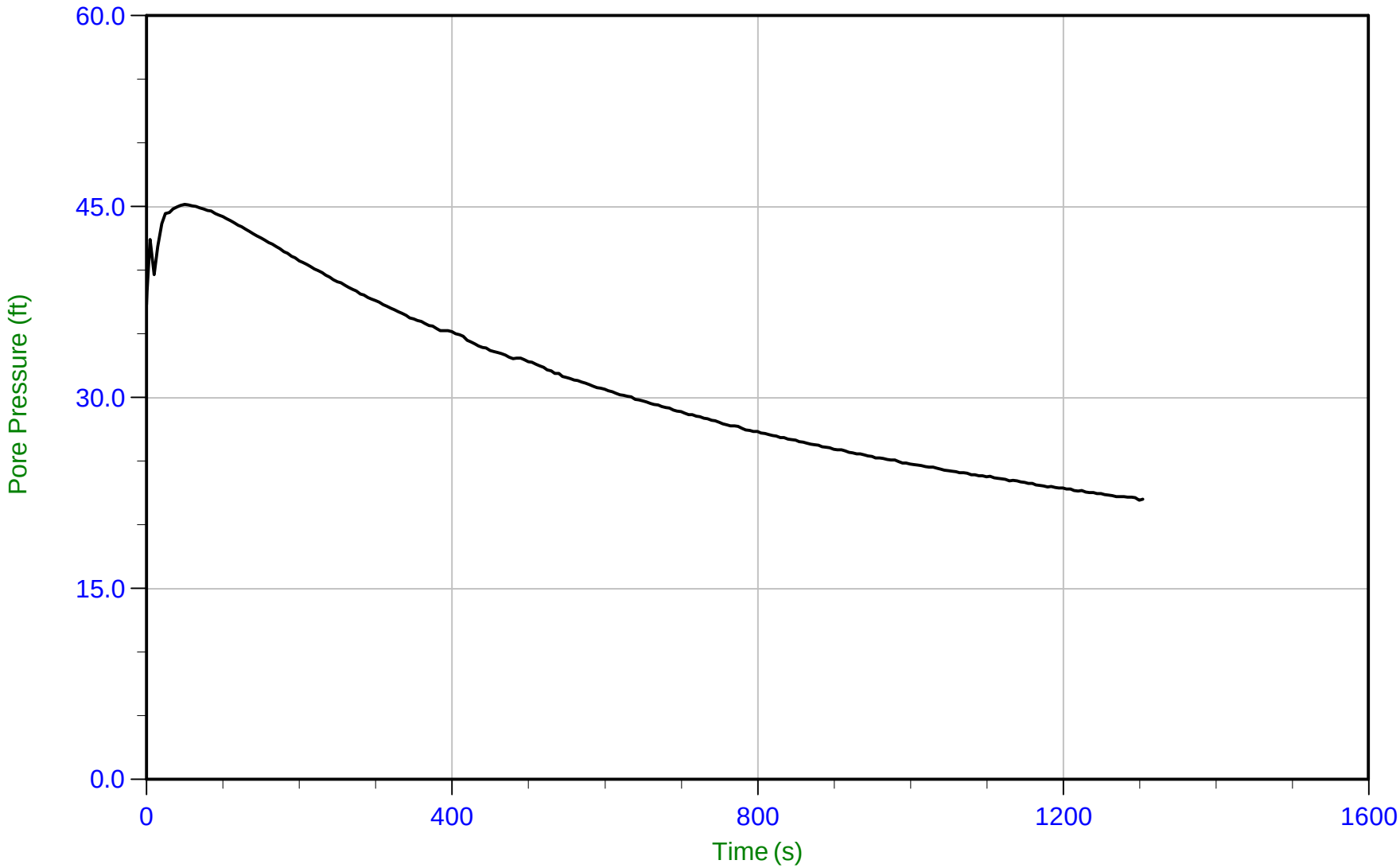
U Mid: 72.5 ft
U Max: 131.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 12:59
Site: PDI Longview CP

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-05.PPD
Depth: 3.250 m / 10.663 ft
Duration: 1305.0 s

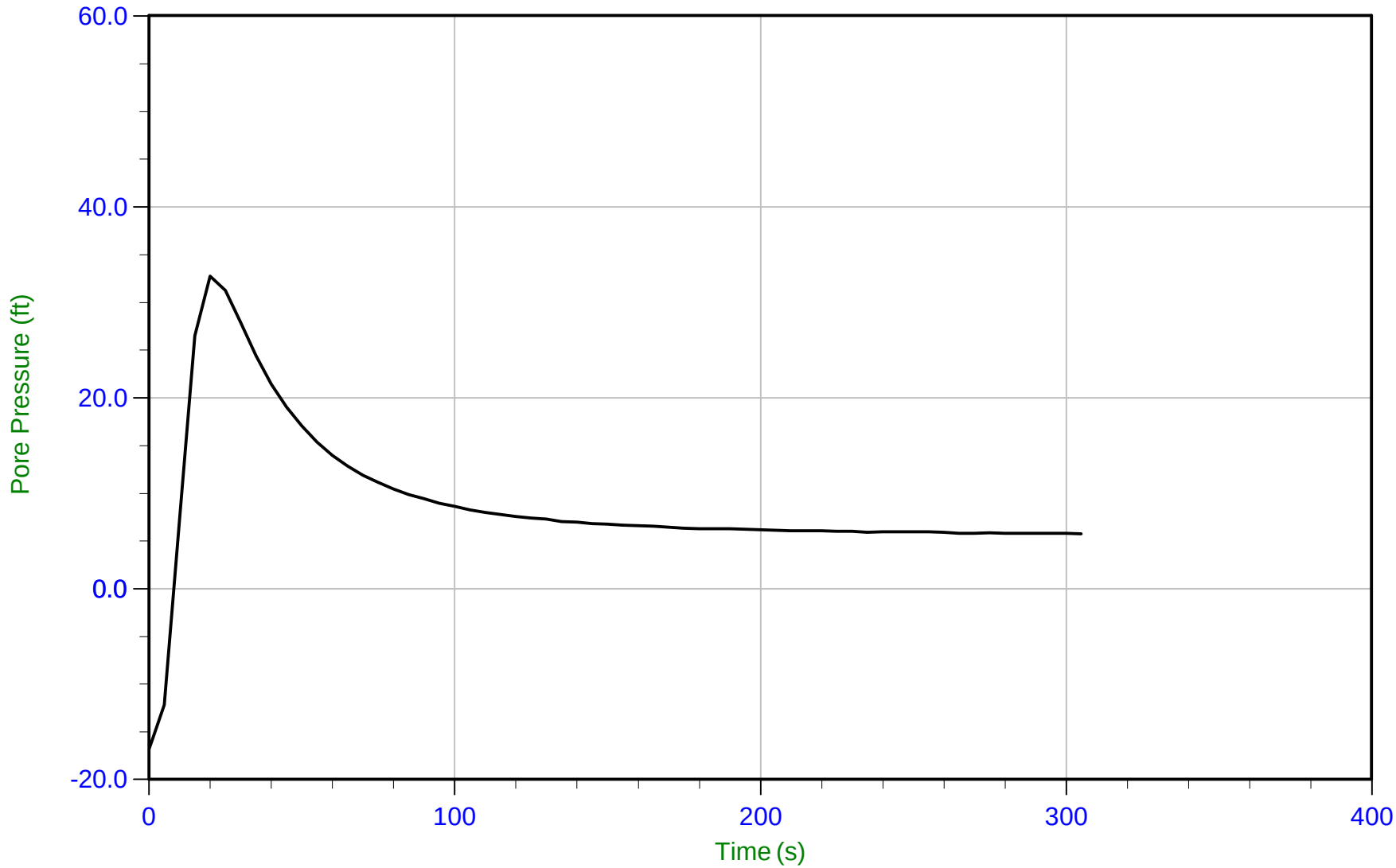
U Hyd: 22.0 ft
U Max: 45.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 12:59
Site: PDI Longview CP

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-05.PPD
Depth: 5.950 m / 19.521 ft
Duration: 305.0 s

U Min: -16.9 ft
U Max: 32.7 ft

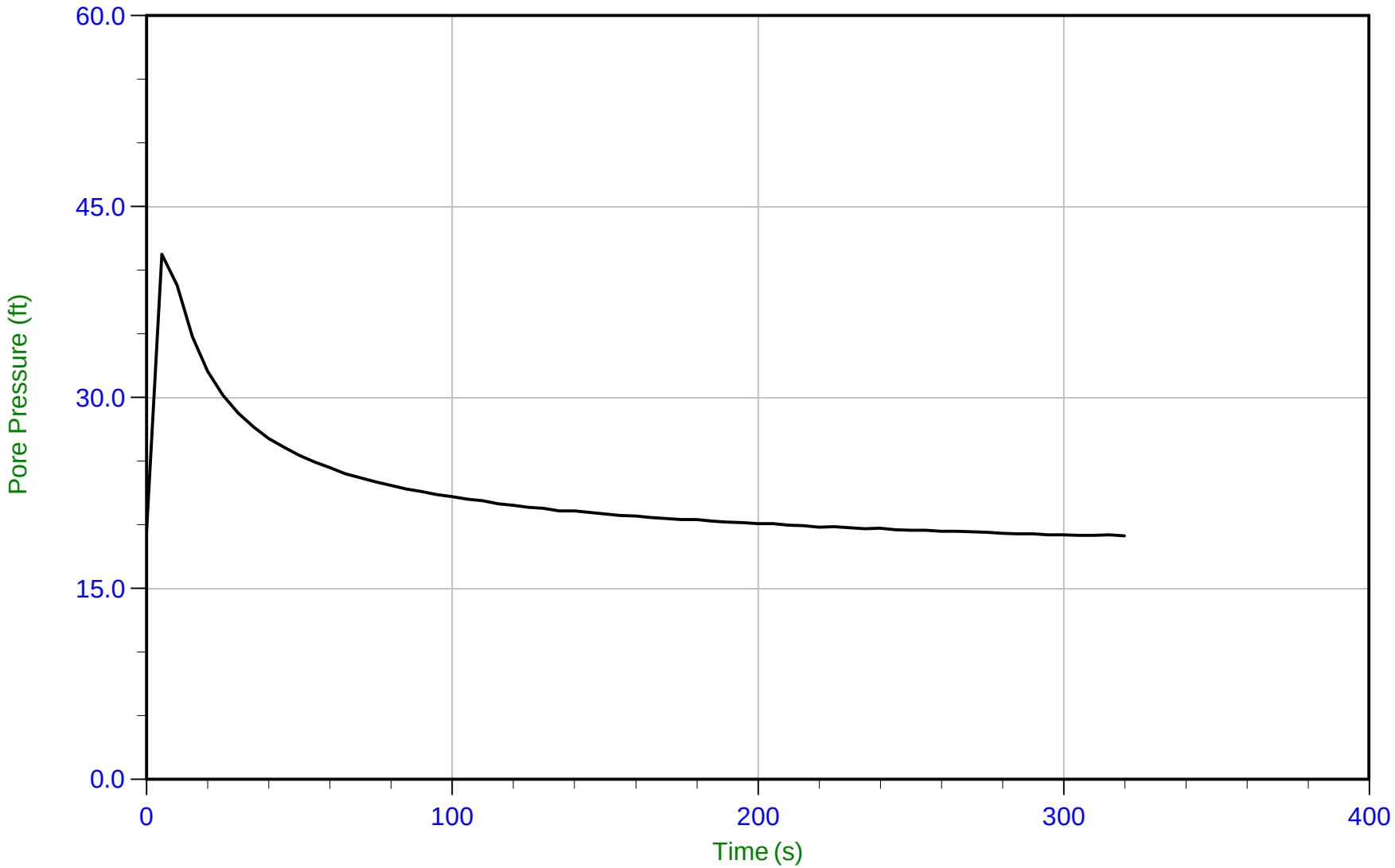
WT: 4.231 m / 13.881 ft
Ueq: 5.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 12:59
Site: PDI Longview CP

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-05.PPD
Depth: 9.200 m / 30.183 ft
Duration: 320.0 s

U Hyd: 19.1 ft
U Max: 41.2 ft

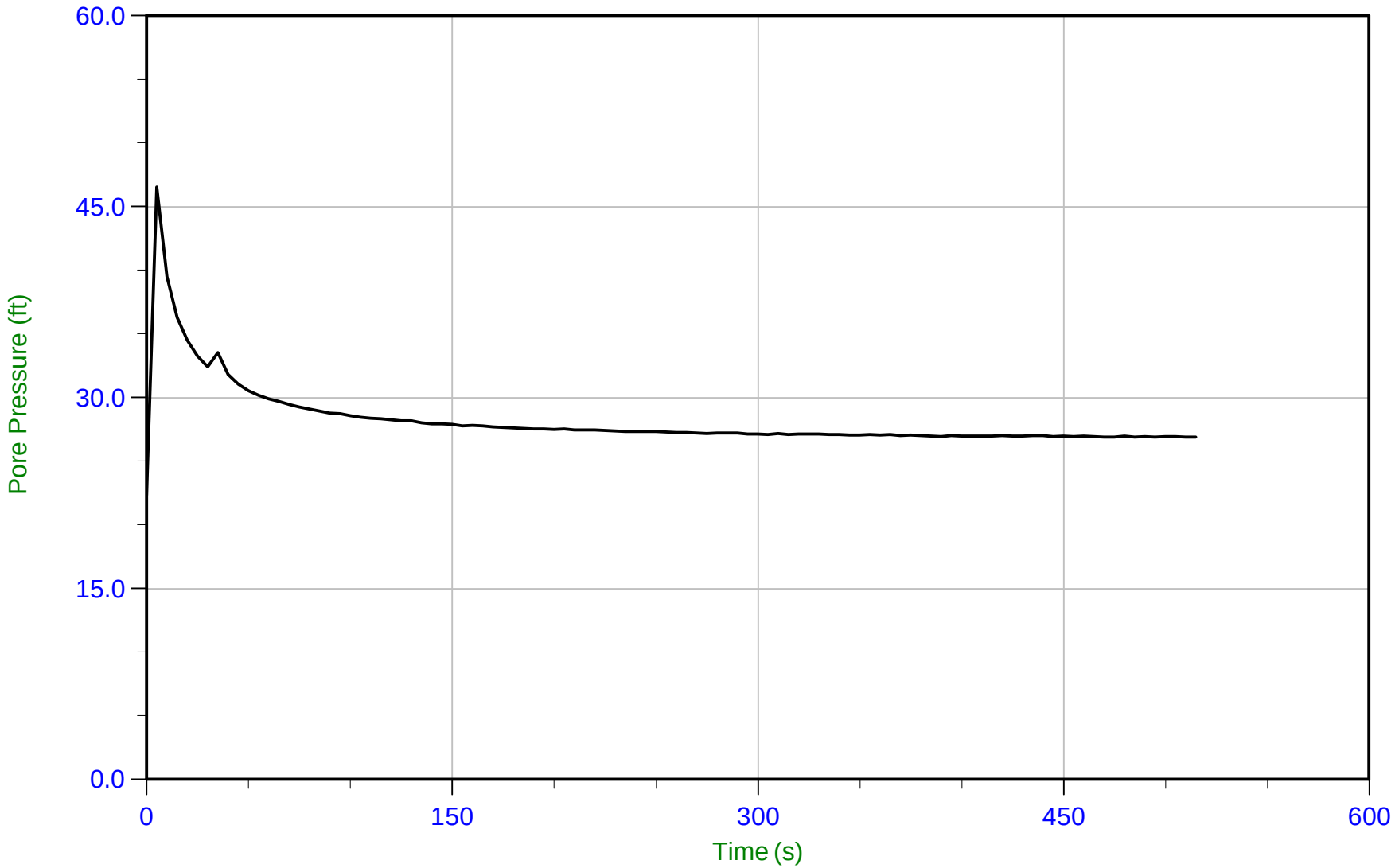
WT: 3.405 m / 11.171 ft
Ueq: 19.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 12:59
Site: PDI Longview CP

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-05.PPD
Depth: 12.200 m / 40.026 ft
Duration: 515.0 s

U Init: 22.3 ft
U Max: 46.6 ft

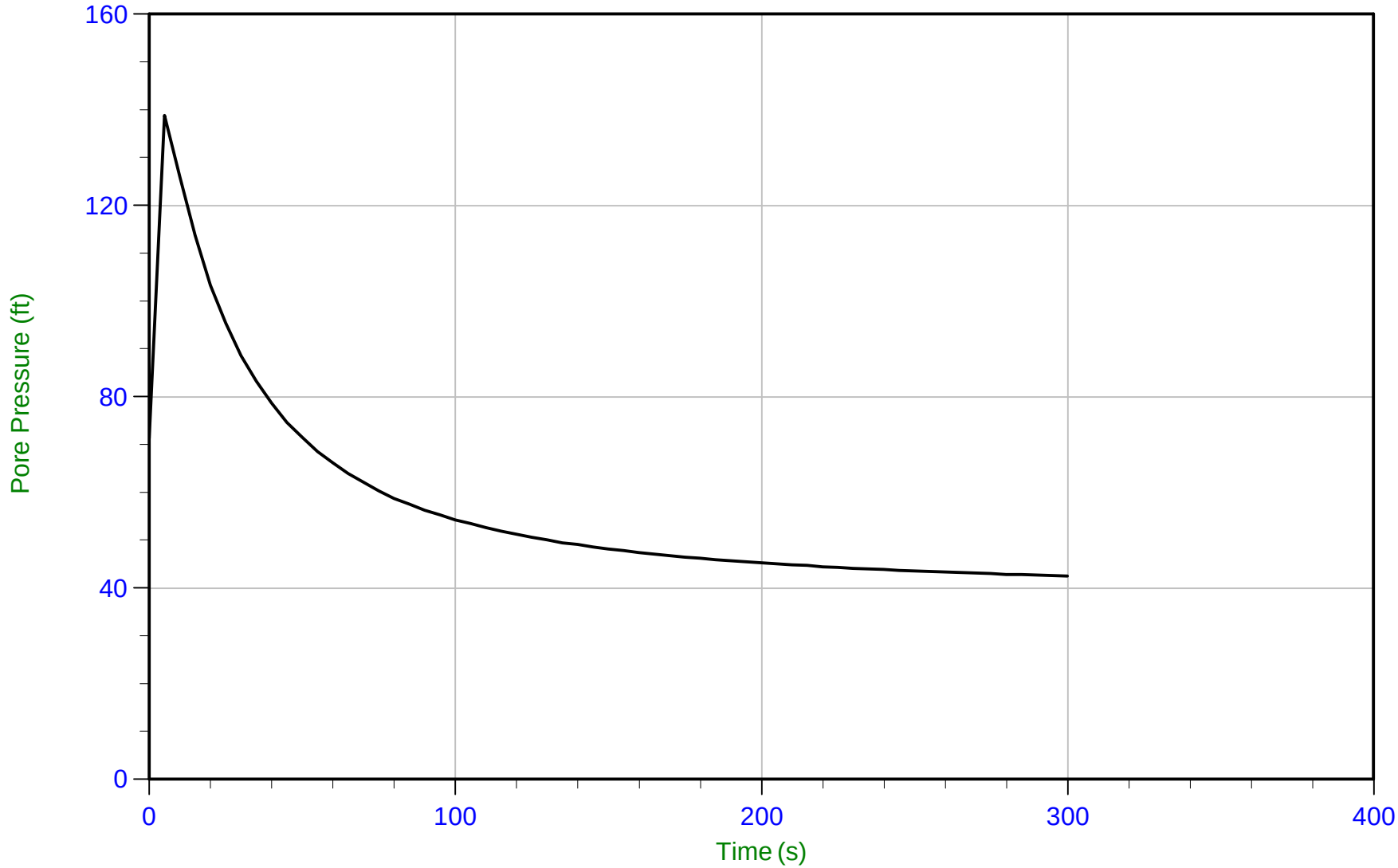
WT: 3.960 m / 12.992 ft
Ueq: 27.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/20/2020 12:59
Site: PDI Longview CP

Sounding: PDI-SU02-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU02-PC-05.PPD
Depth: 15.375 m / 50.442 ft
Duration: 300.0 s

U Init: 42.5 ft
U Max: 138.9 ft

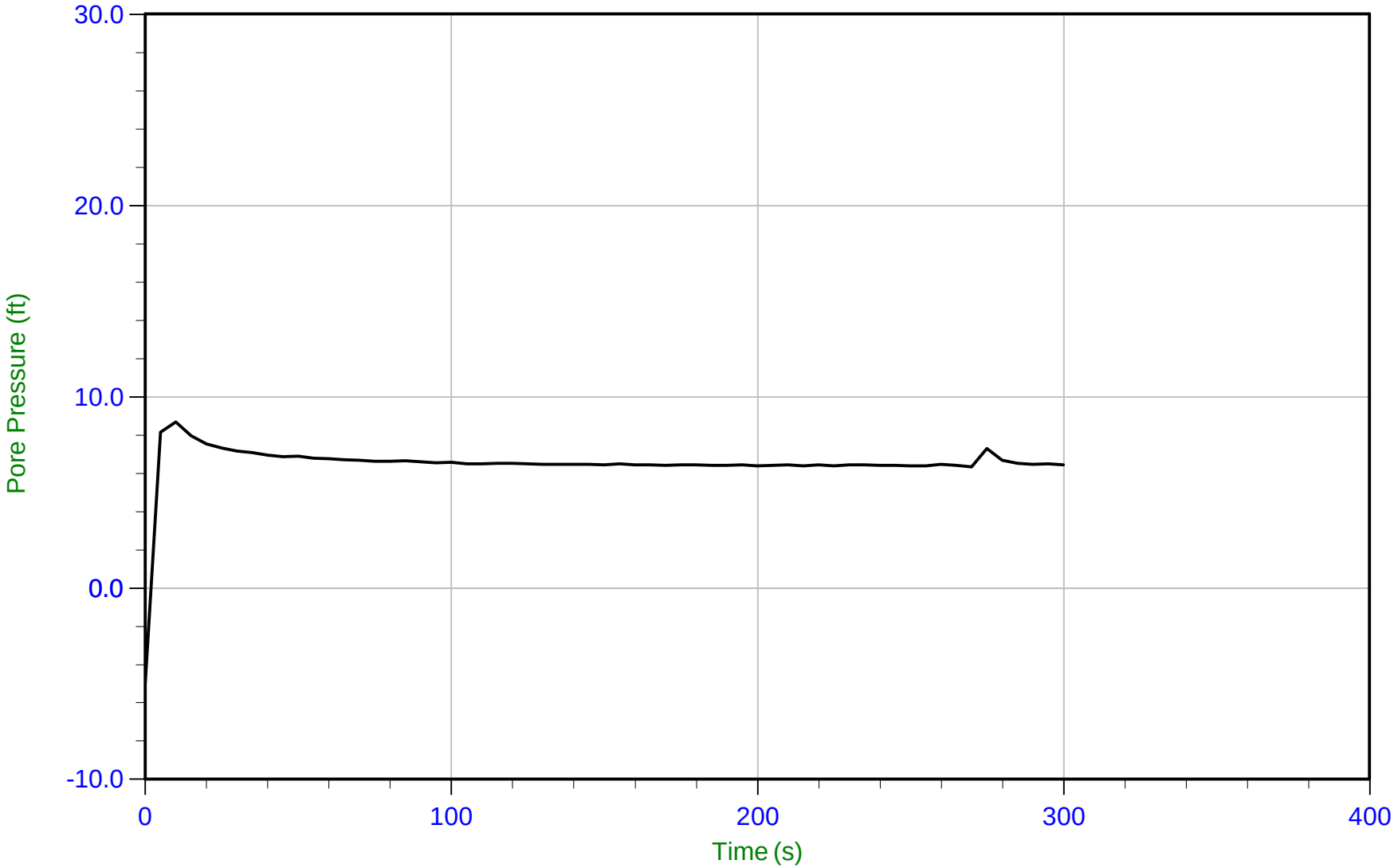
WT: 2.483 m / 8.146 ft
Ueq: 42.3 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 3.050 m / 10.006 ft
Duration: 300.0 s

U Min: -5.0 ft
U Max: 8.7 ft

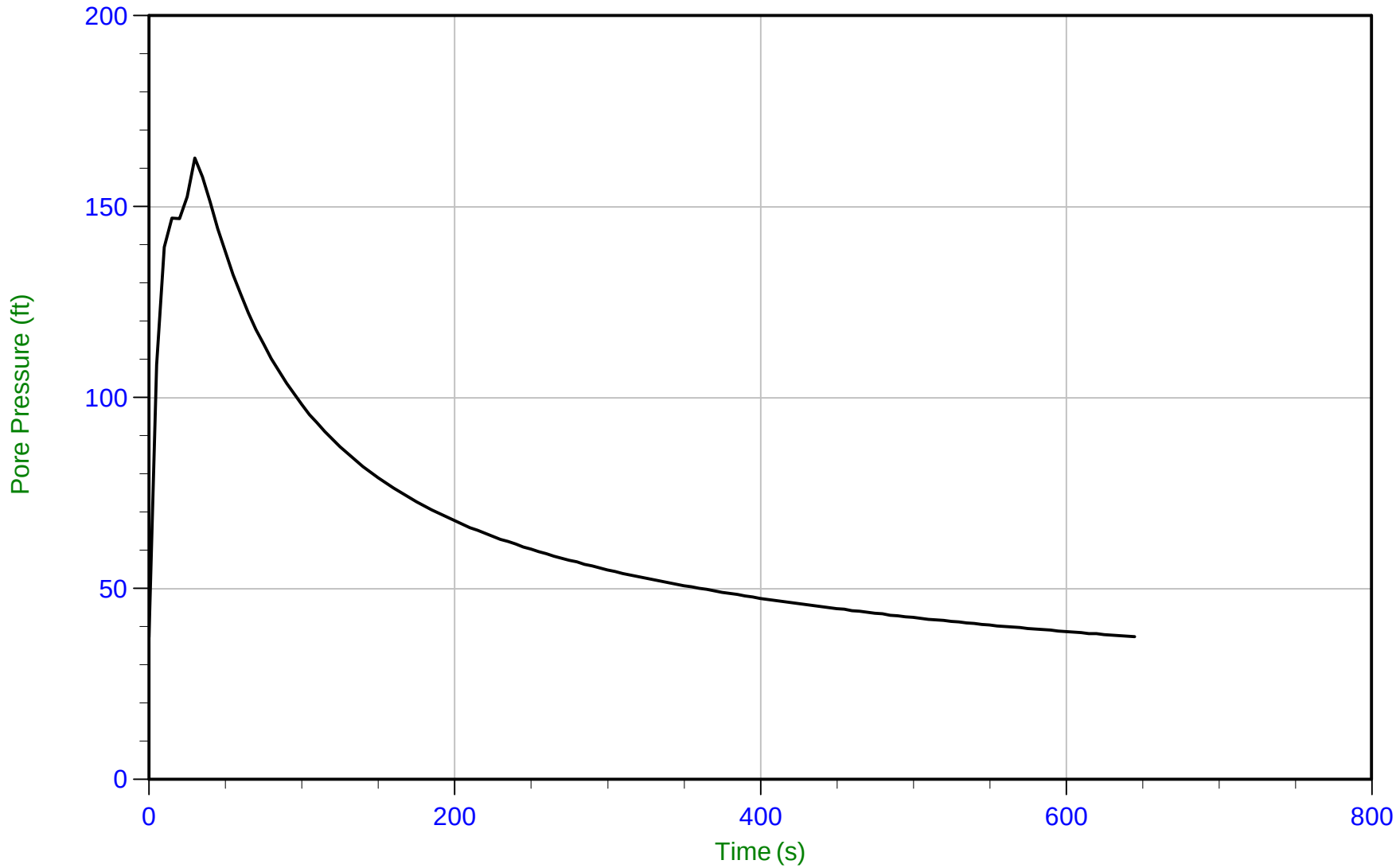
WT: 1.101 m / 3.612 ft
Ueq: 6.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 6.100 m / 20.013 ft
Duration: 645.0 s

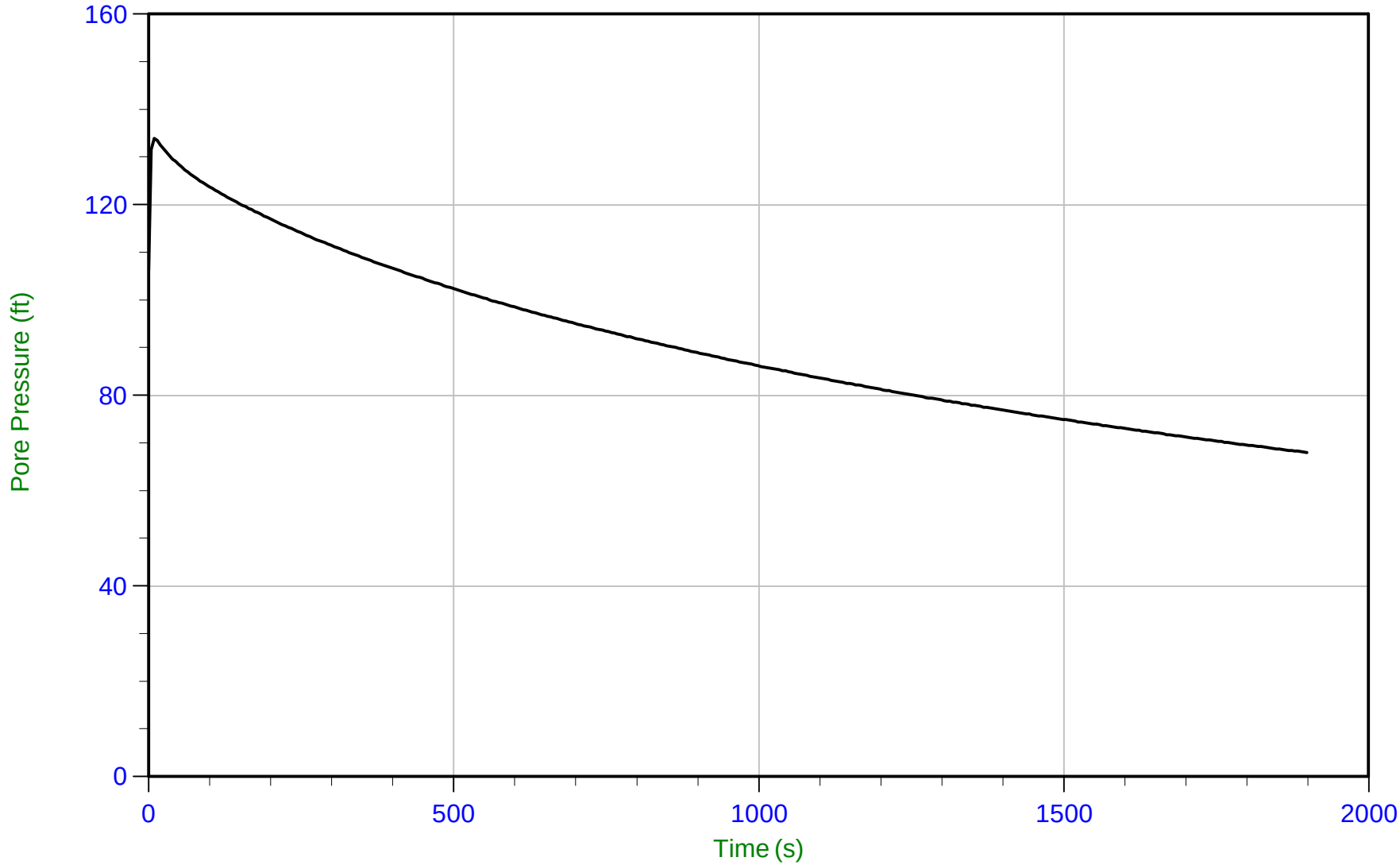
U Mid: 37.3 ft
U Max: 162.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 9.150 m / 30.019 ft
Duration: 1900.0 s

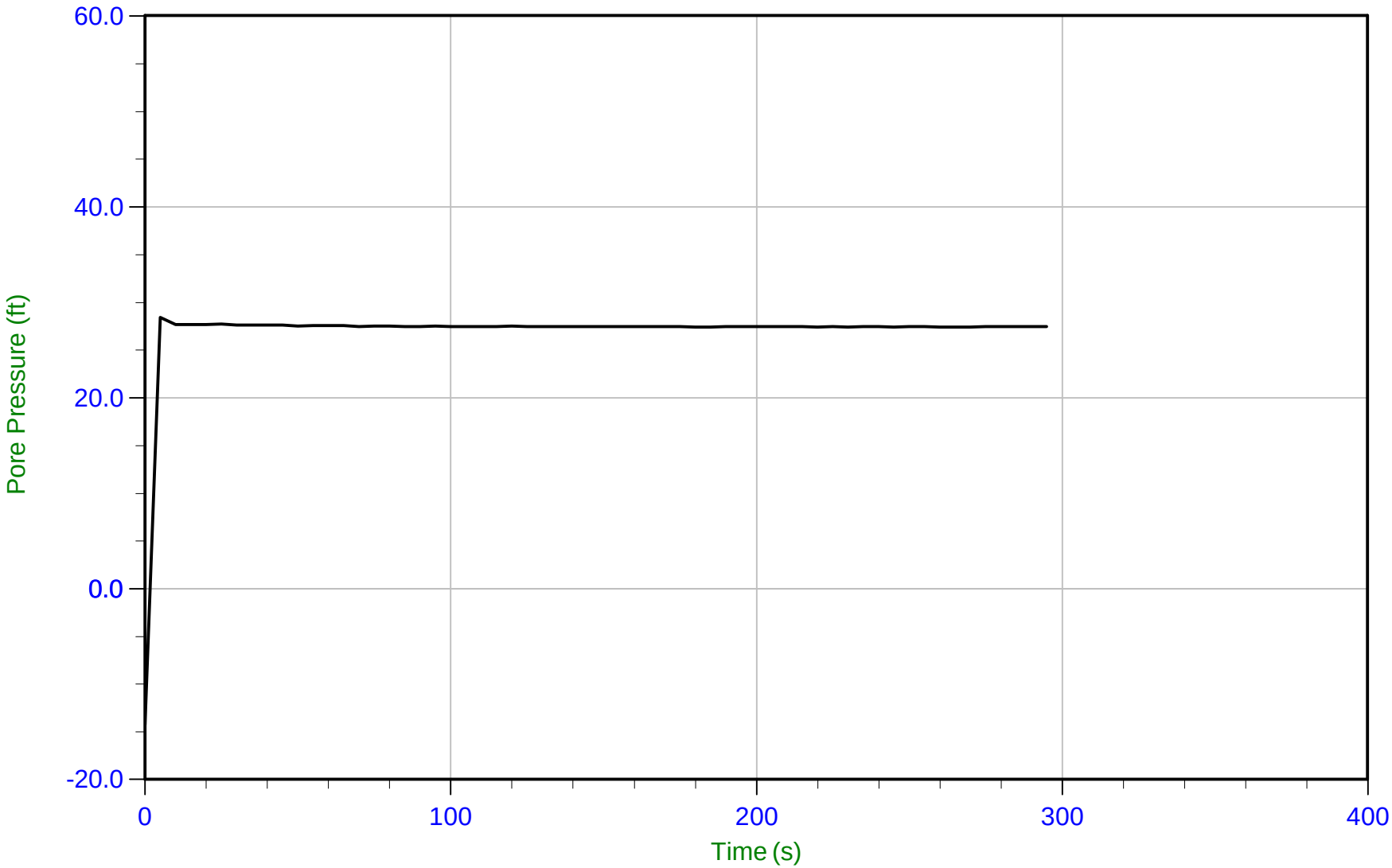
U Mid: 68.0 ft
U Max: 133.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 12.200 m / 40.026 ft
Duration: 295.0 s

U Min: -14.3 ft
U Max: 28.4 ft

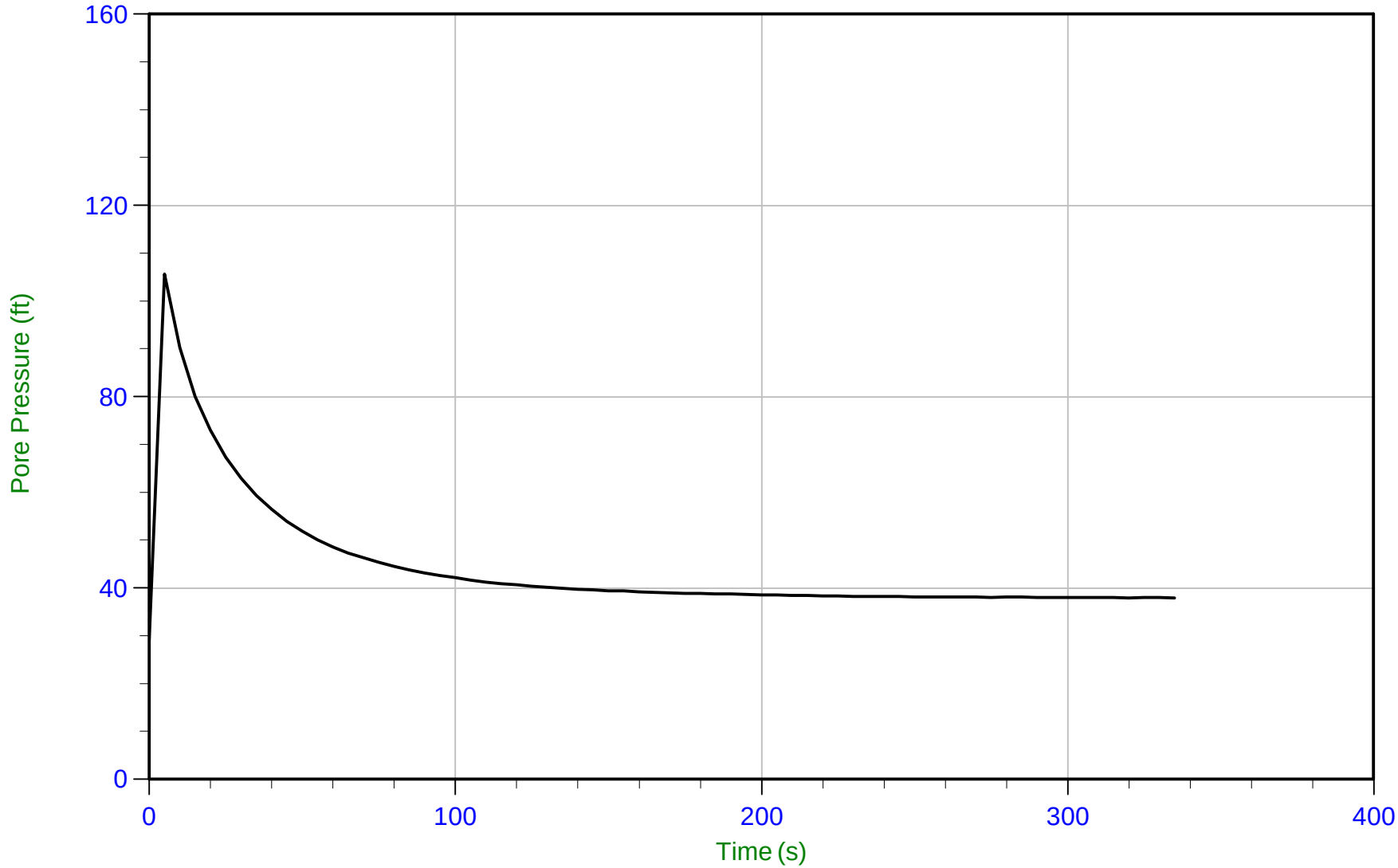
WT: 3.907 m / 12.818 ft
Ueq: 27.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 15.250 m / 50.032 ft
Duration: 335.0 s

U Mid: 29.1 ft
U Max: 105.7 ft

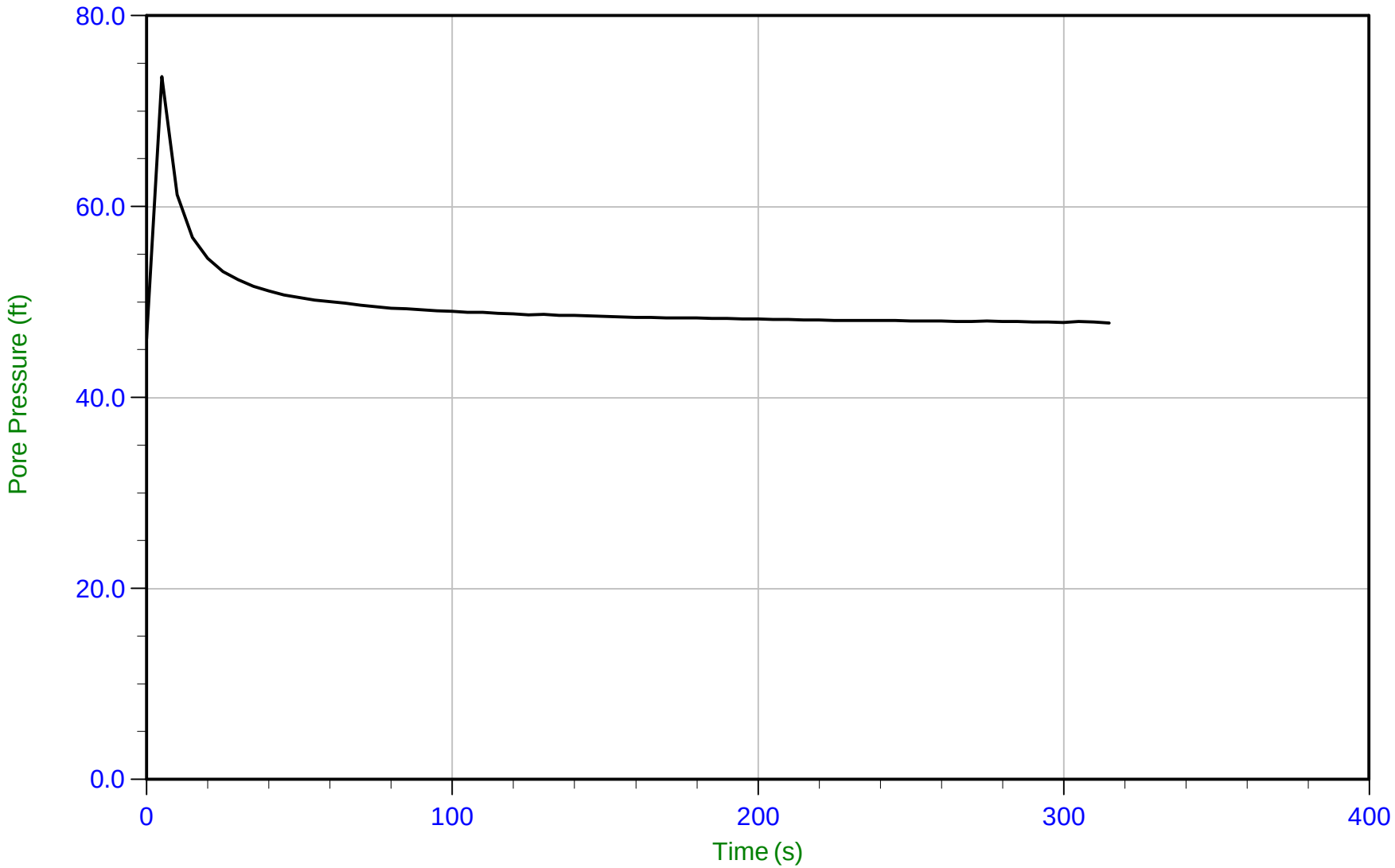
WT: 3.767 m / 12.359 ft
Ueq: 37.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 09:33
Site: PDI Longview CP

Sounding: PDI-SU06-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-01.PPD
Depth: 18.300 m / 60.039 ft
Duration: 315.0 s

U Mid: 46.2 ft
U Max: 73.6 ft

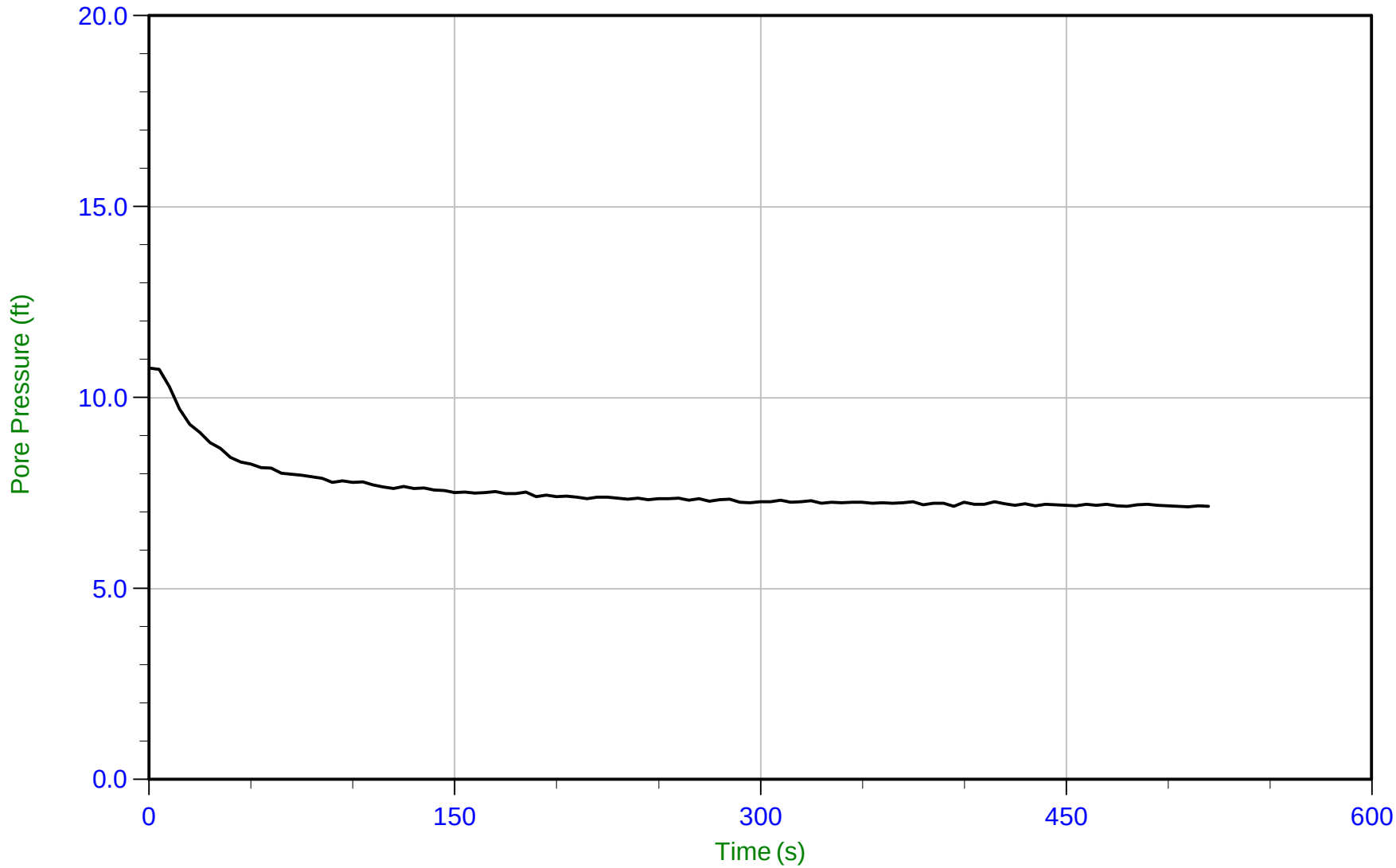
WT: 3.769 m / 12.365 ft
Ueq: 47.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 3.050 m / 10.006 ft
Duration: 520.0 s

U Min: 7.1 ft
U Max: 10.8 ft

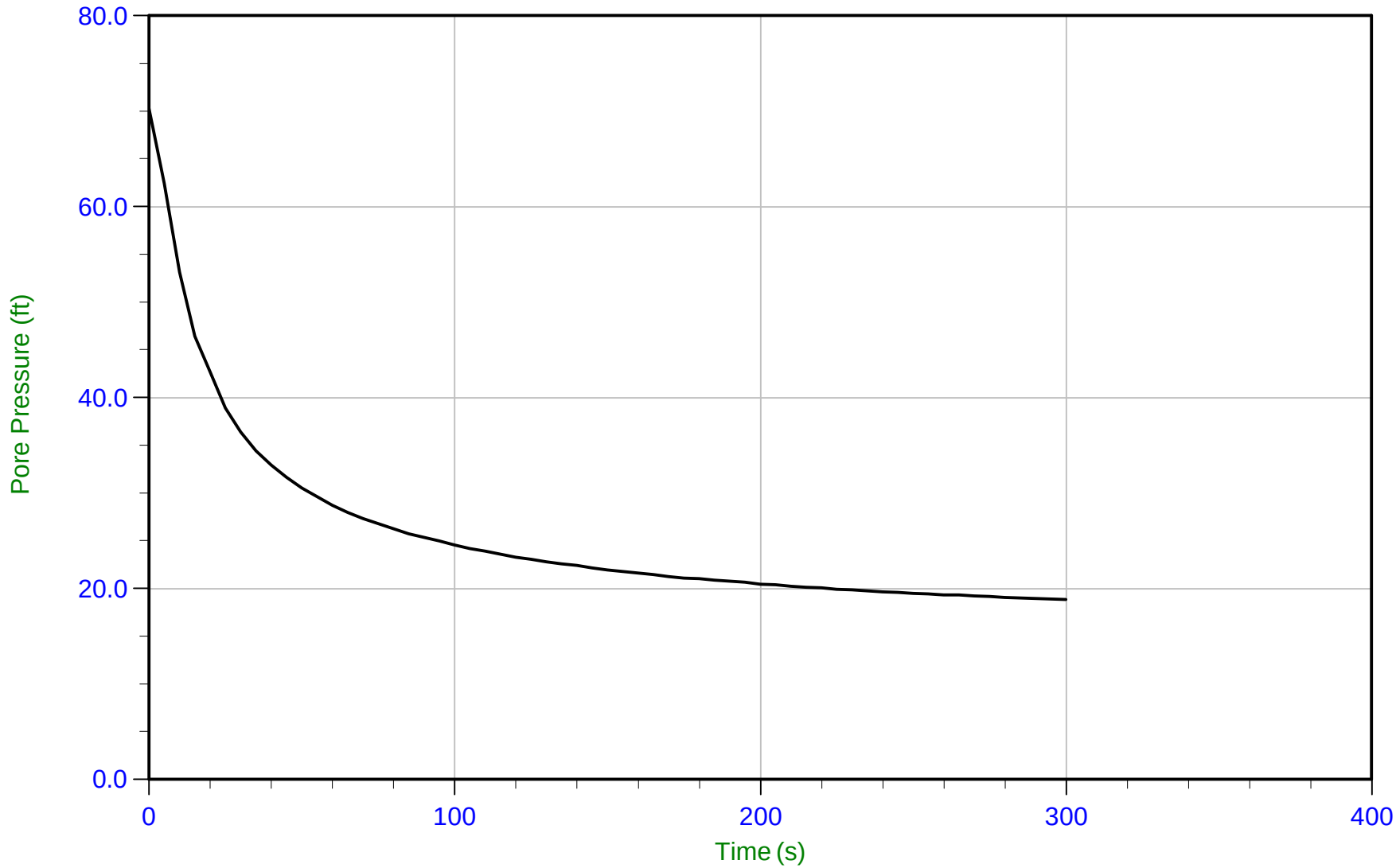
WT: 0.870 m / 2.854 ft
Ueq: 7.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 6.150 m / 20.177 ft
Duration: 300.0 s

U Hyd: 18.9 ft
U Max: 70.3 ft

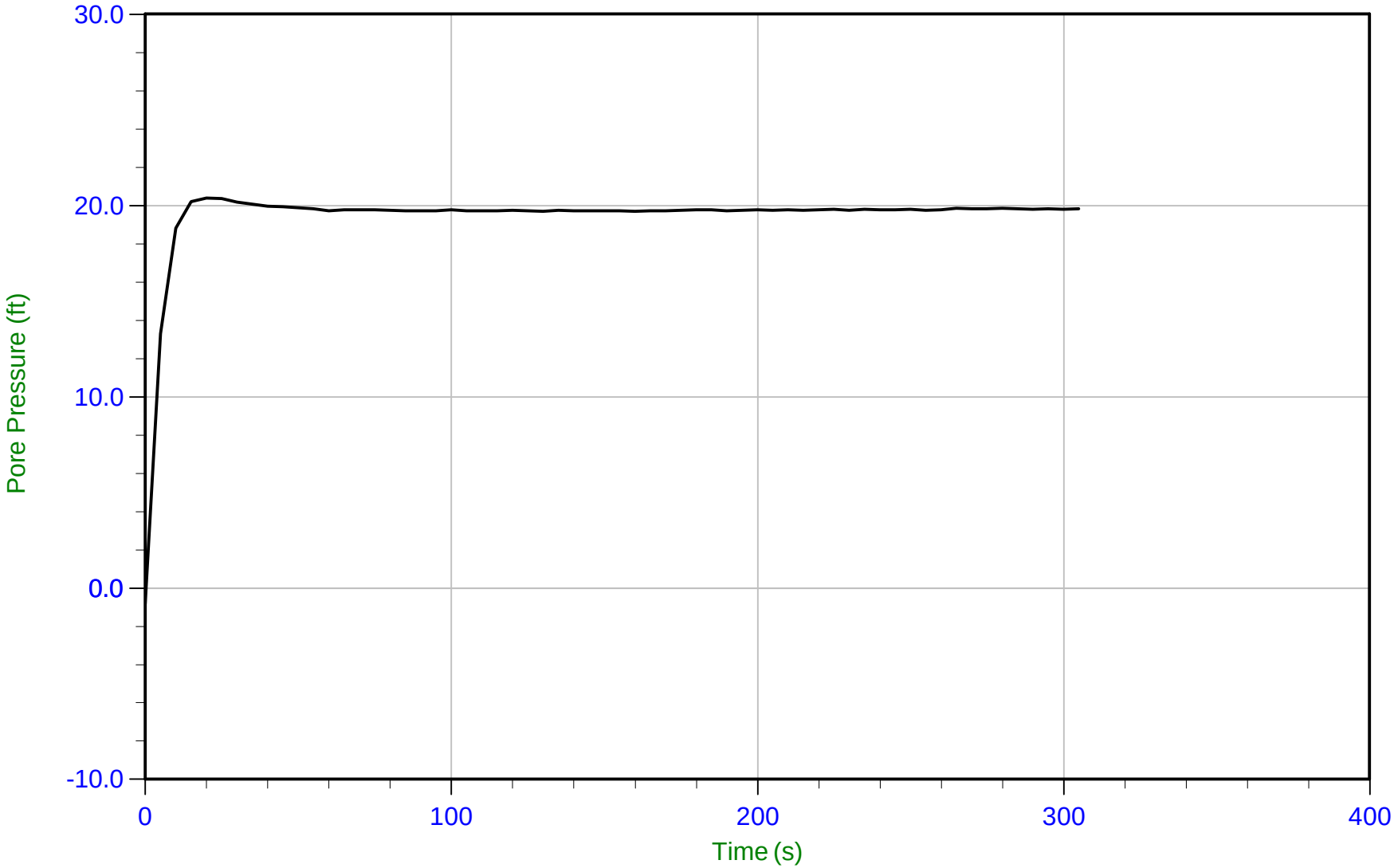
WT: 0.408 m / 1.339 ft
Ueq: 18.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 9.150 m / 30.019 ft
Duration: 305.0 s

U Min: -0.8 ft
U Max: 20.4 ft

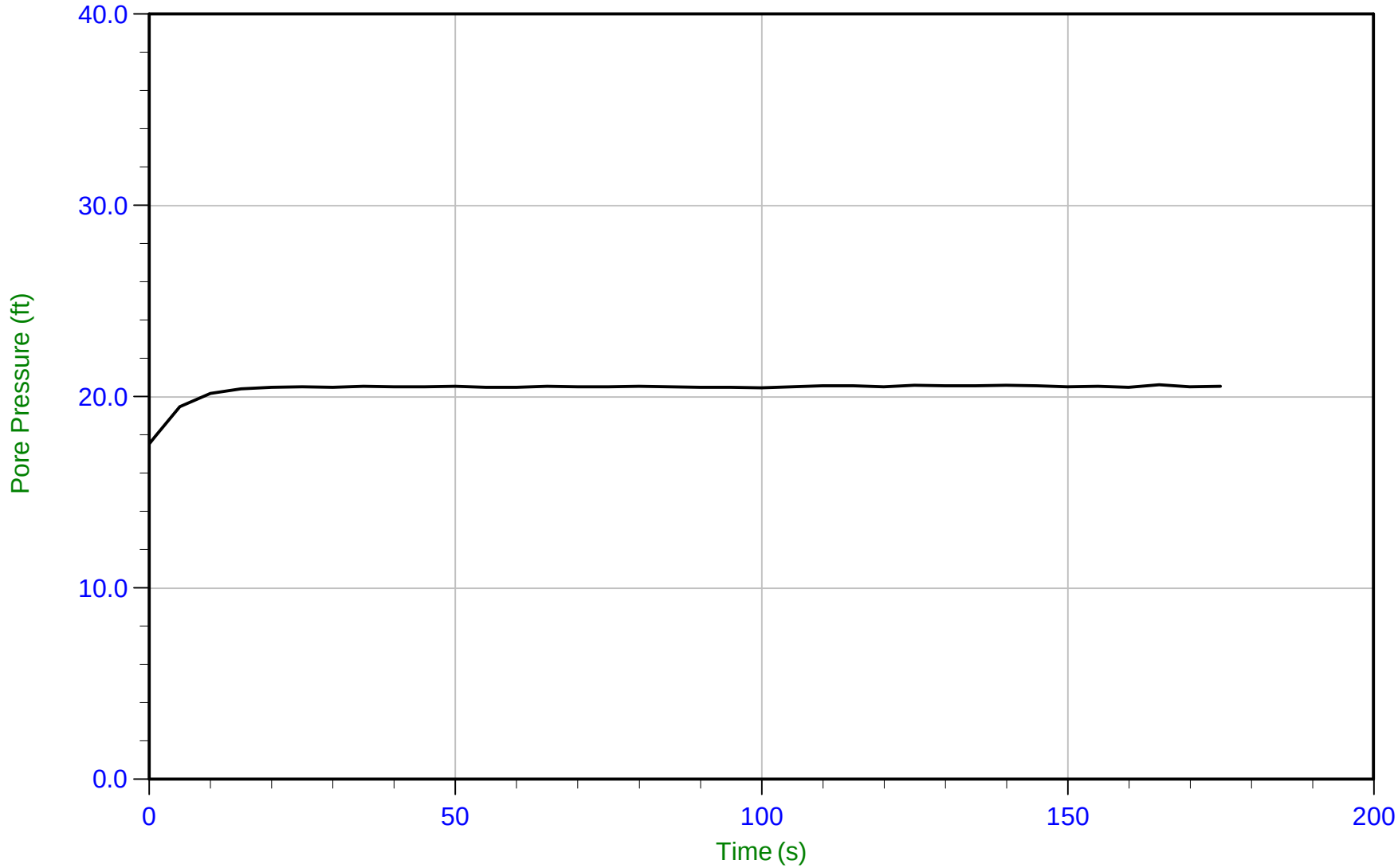
WT: 3.125 m / 10.253 ft
Ueq: 19.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 9.425 m / 30.922 ft
Duration: 175.0 s

U Hyd: 17.5 ft
U Max: 20.6 ft

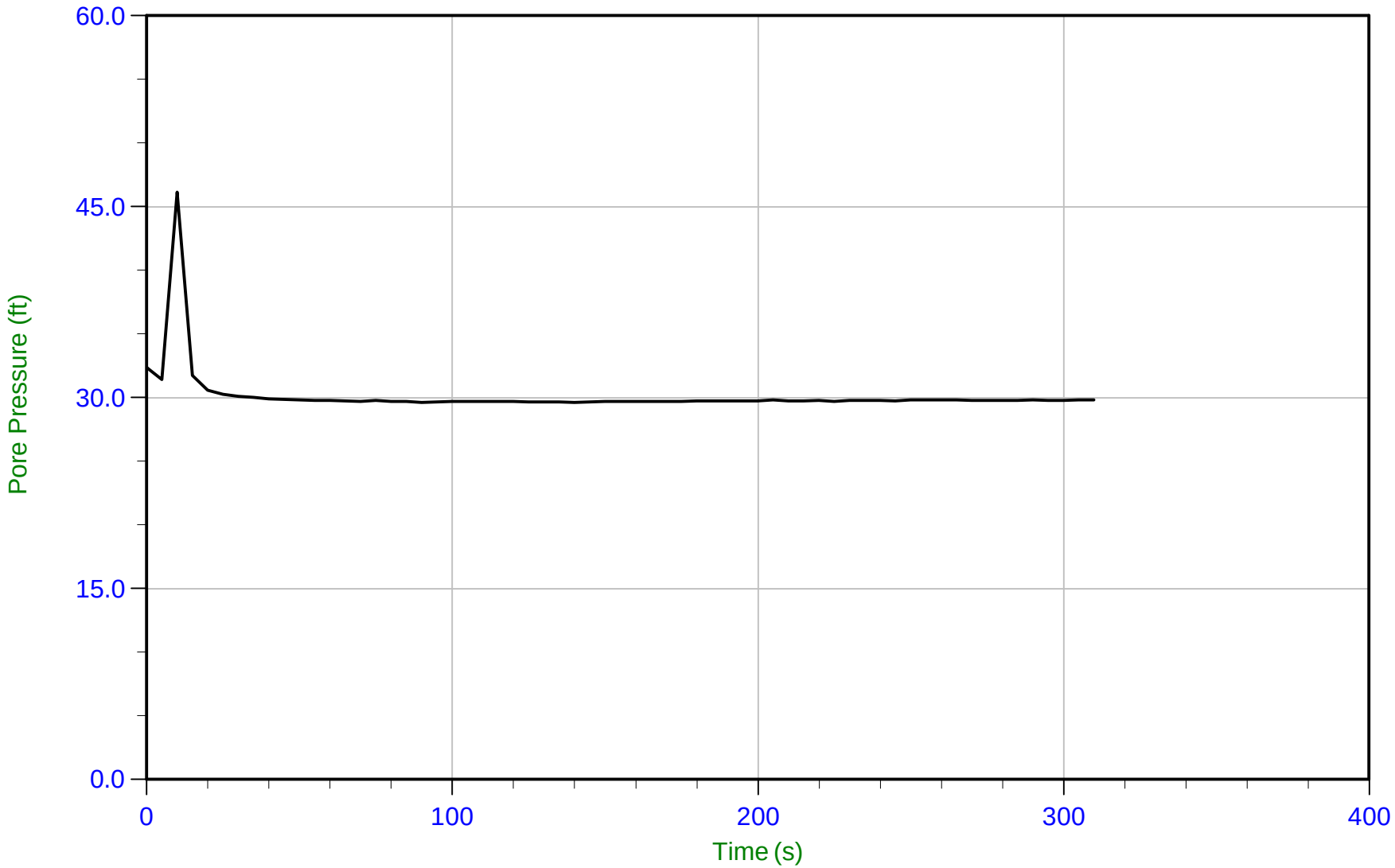
WT: 3.178 m / 10.426 ft
Ueq: 20.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 12.275 m / 40.272 ft
Duration: 310.0 s

U Hyd: 29.6 ft
U Max: 46.1 ft

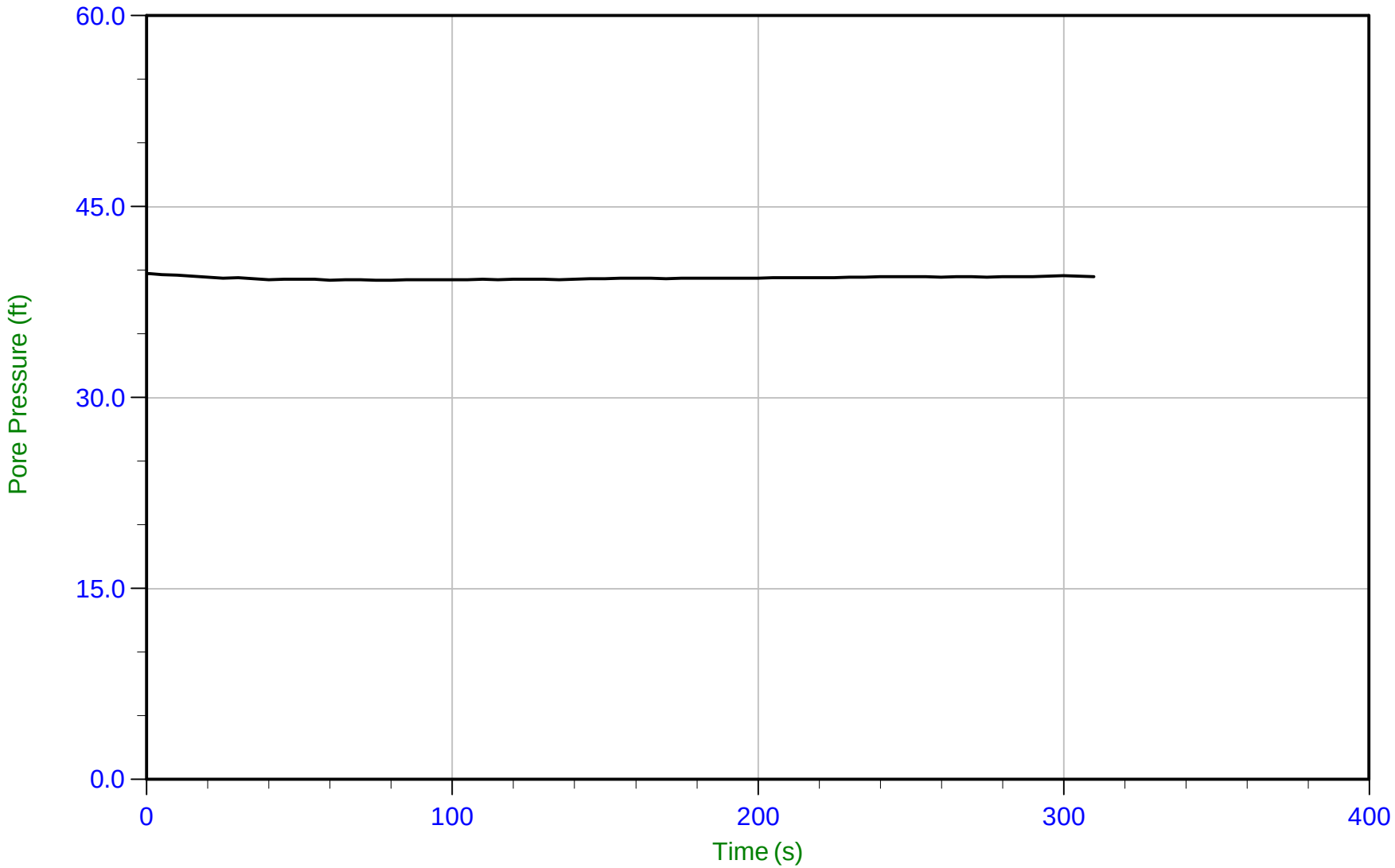
WT: 3.193 m / 10.476 ft
Ueq: 29.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 15.250 m / 50.032 ft
Duration: 310.0 s

U Min: 39.2 ft
U Max: 39.8 ft

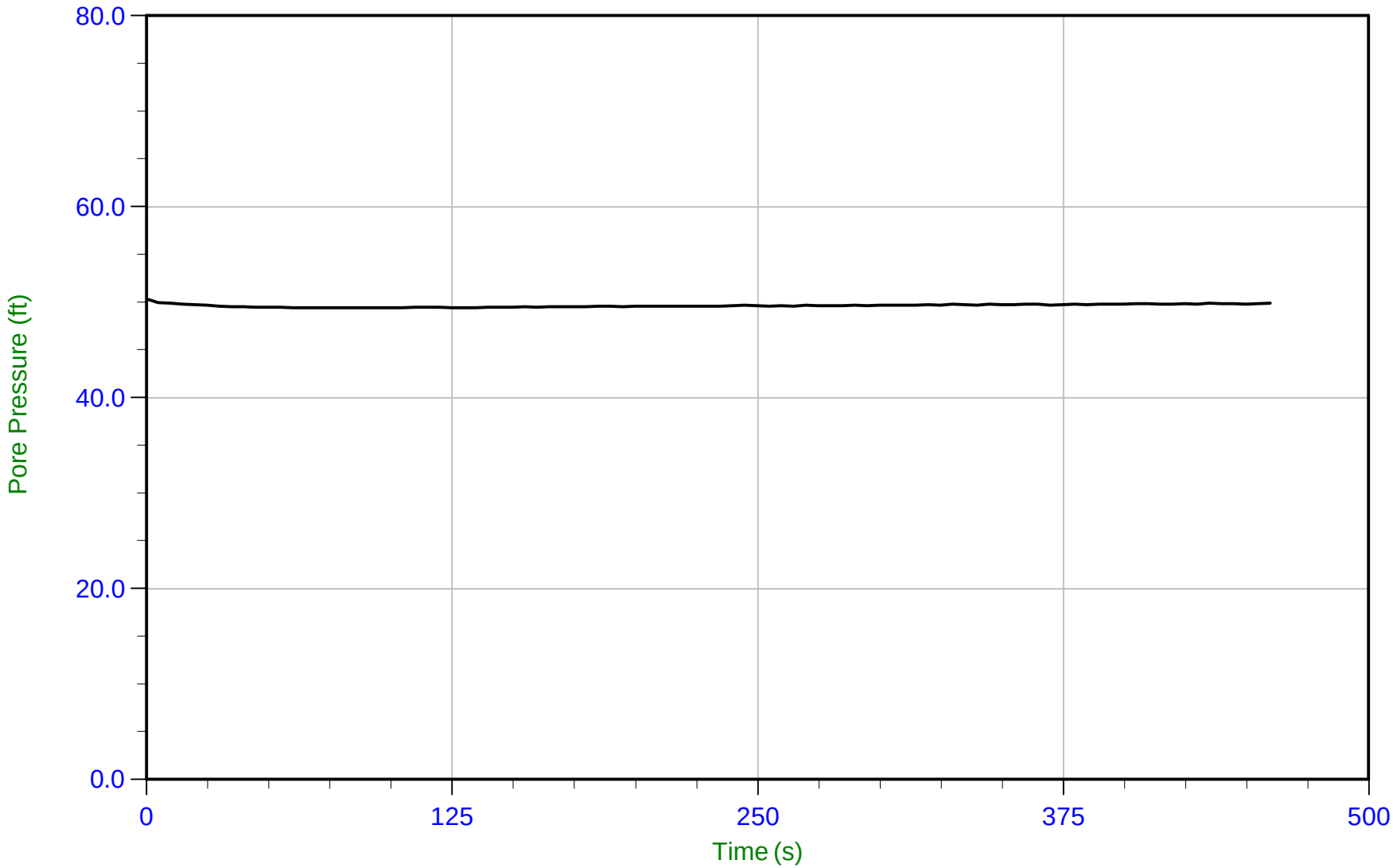
WT: 3.235 m / 10.613 ft
Ueq: 39.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 12:05
Site: PDI Longview CP

Sounding: PDI-SU06-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-02.PPD
Depth: 18.325 m / 60.121 ft
Duration: 460.0 s

U Min: 49.4 ft
U Max: 50.3 ft

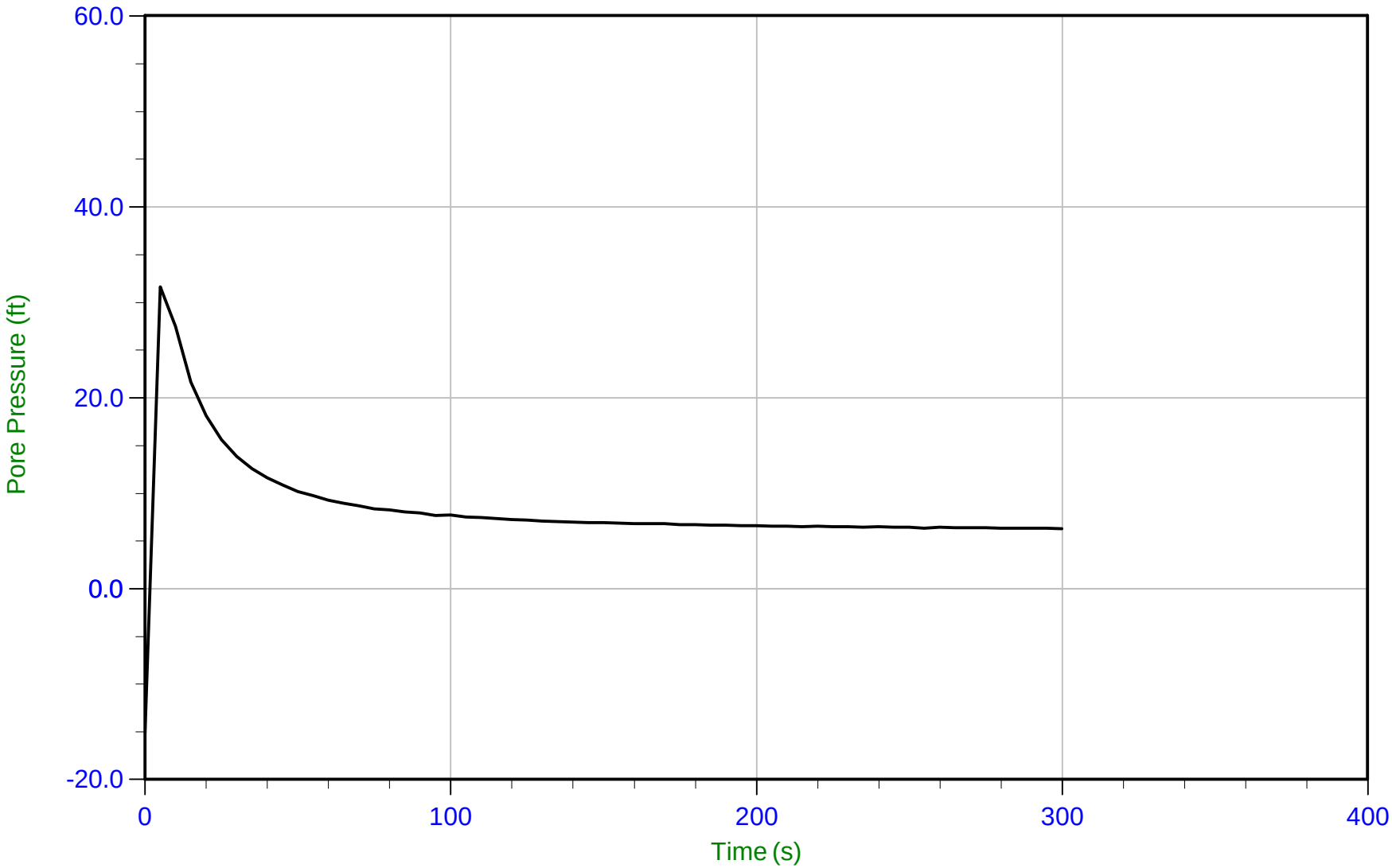
WT: 3.120 m / 10.236 ft
Ueq: 49.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 3.050 m / 10.006 ft
Duration: 300.0 s

U Hd: -15.1 ft
U Max: 31.6 ft

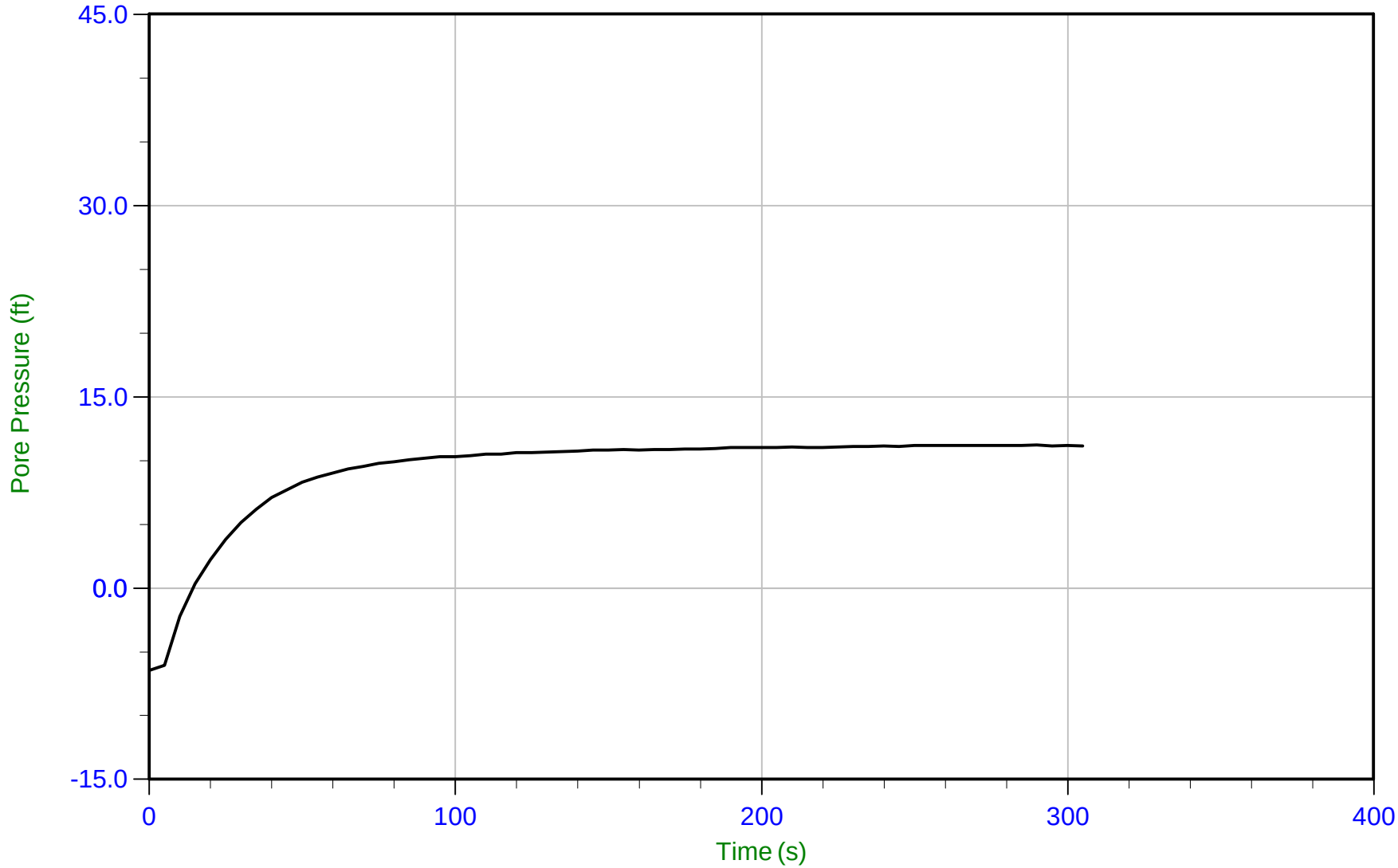
WT: 1.118 m / 3.668 ft
Ueq: 6.3 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 6.100 m / 20.013 ft
Duration: 305.0 s

U0: -6.4 ft
U Max: 11.2 ft

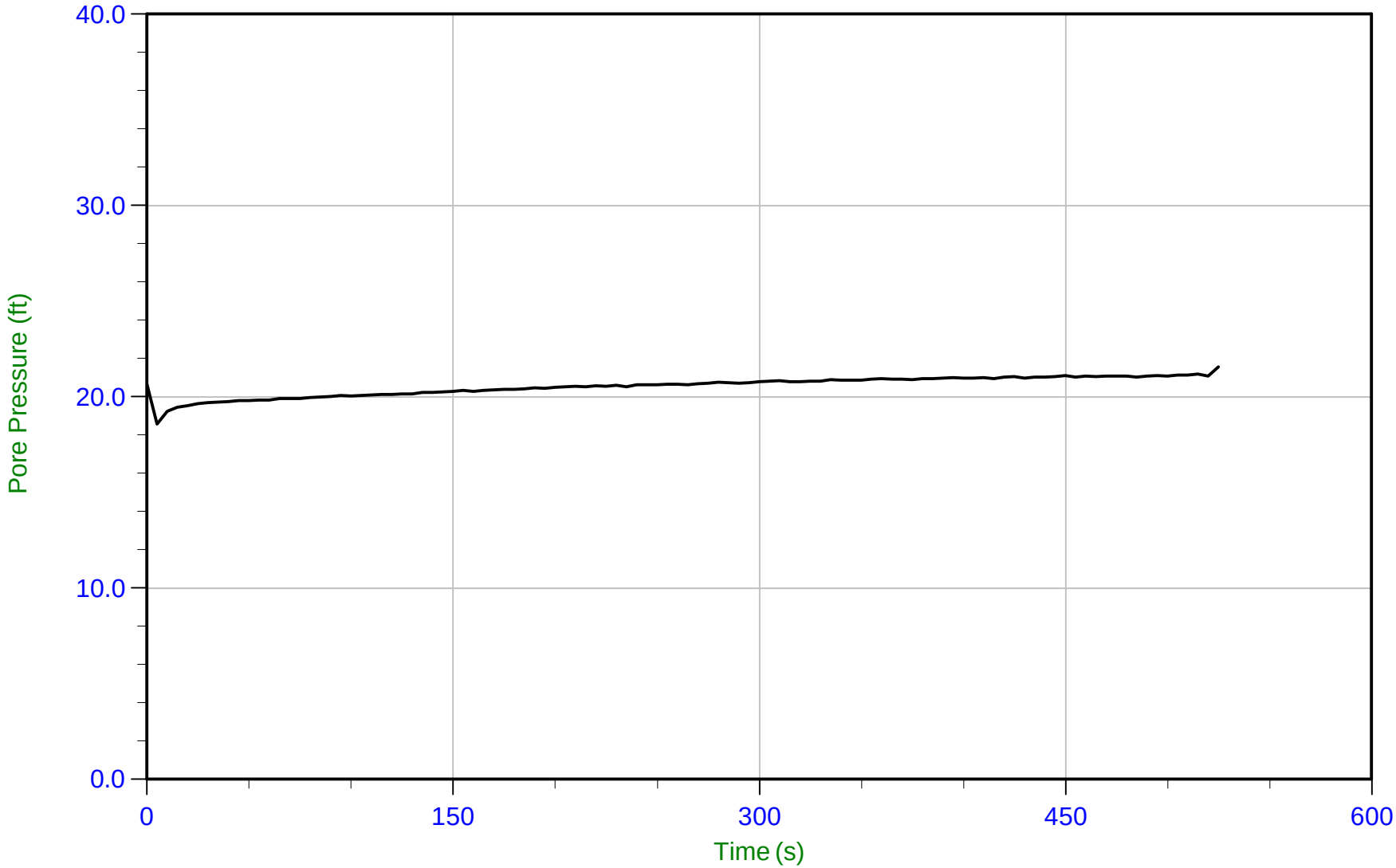
WT: 2.698 m / 8.852 ft
Ueq: 11.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 9.150 m / 30.019 ft
Duration: 525.0 s

U Hyd: 18.6 ft
U Max: 21.6 ft

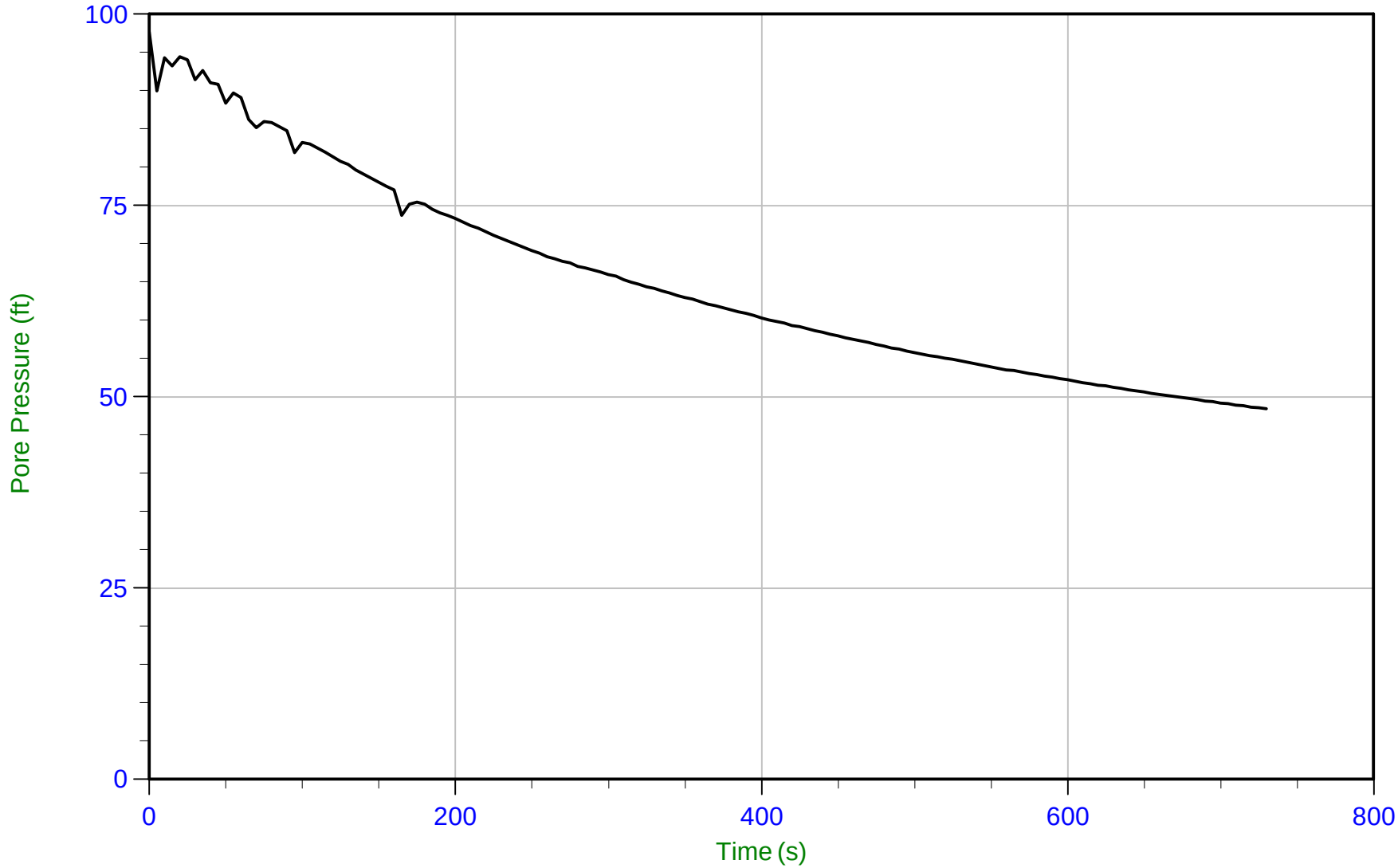
WT: 2.717 m / 8.914 ft
Ueq: 21.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 12.275 m / 40.272 ft
Duration: 730.0 s

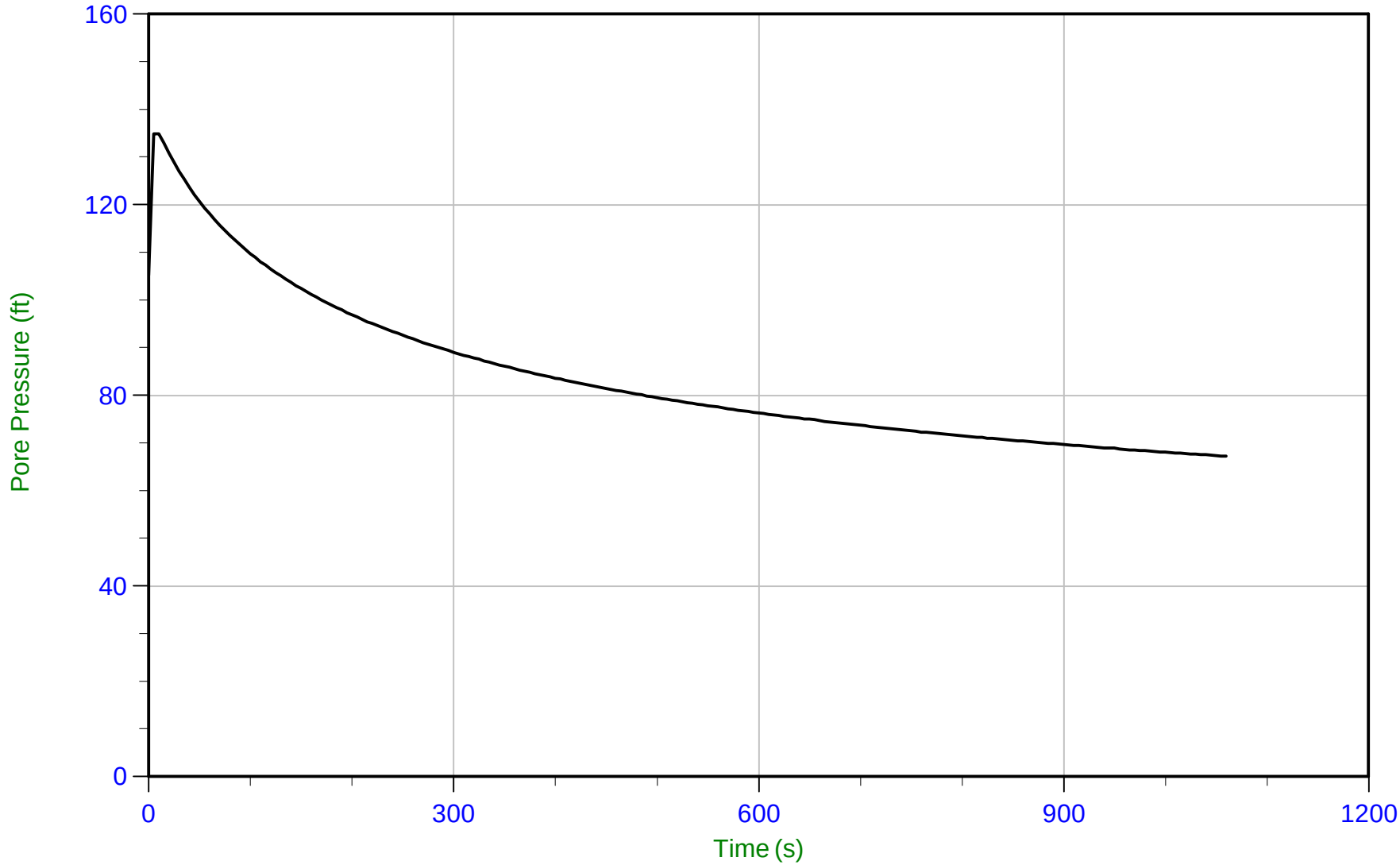
U Min: 48.4 ft
U Max: 97.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 15.250 m / 50.032 ft
Duration: 1060.0 s

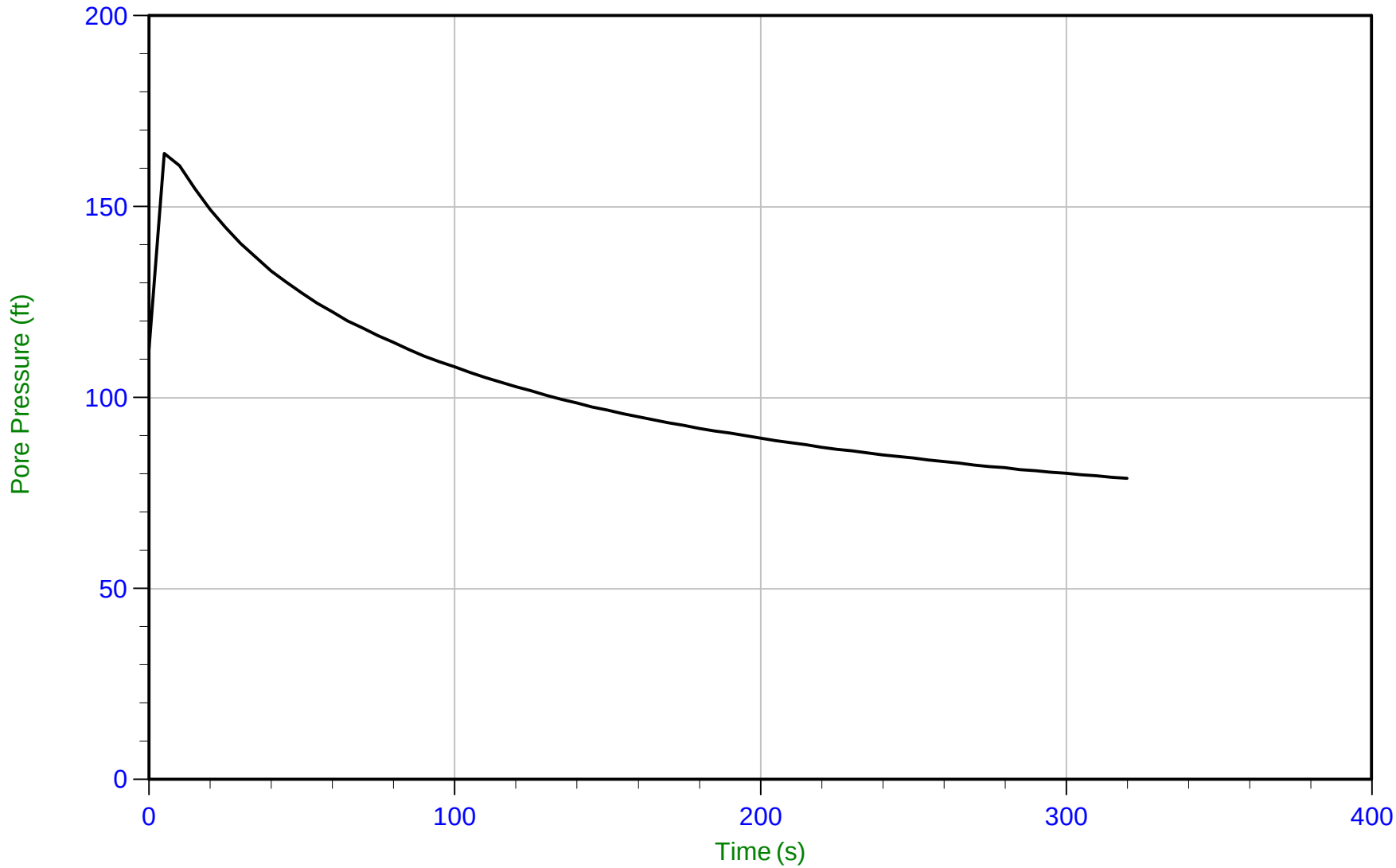
U Hyd: 67.2 ft
U Max: 134.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 13:59
Site: PDI Longview CP

Sounding: PDI-SU06-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

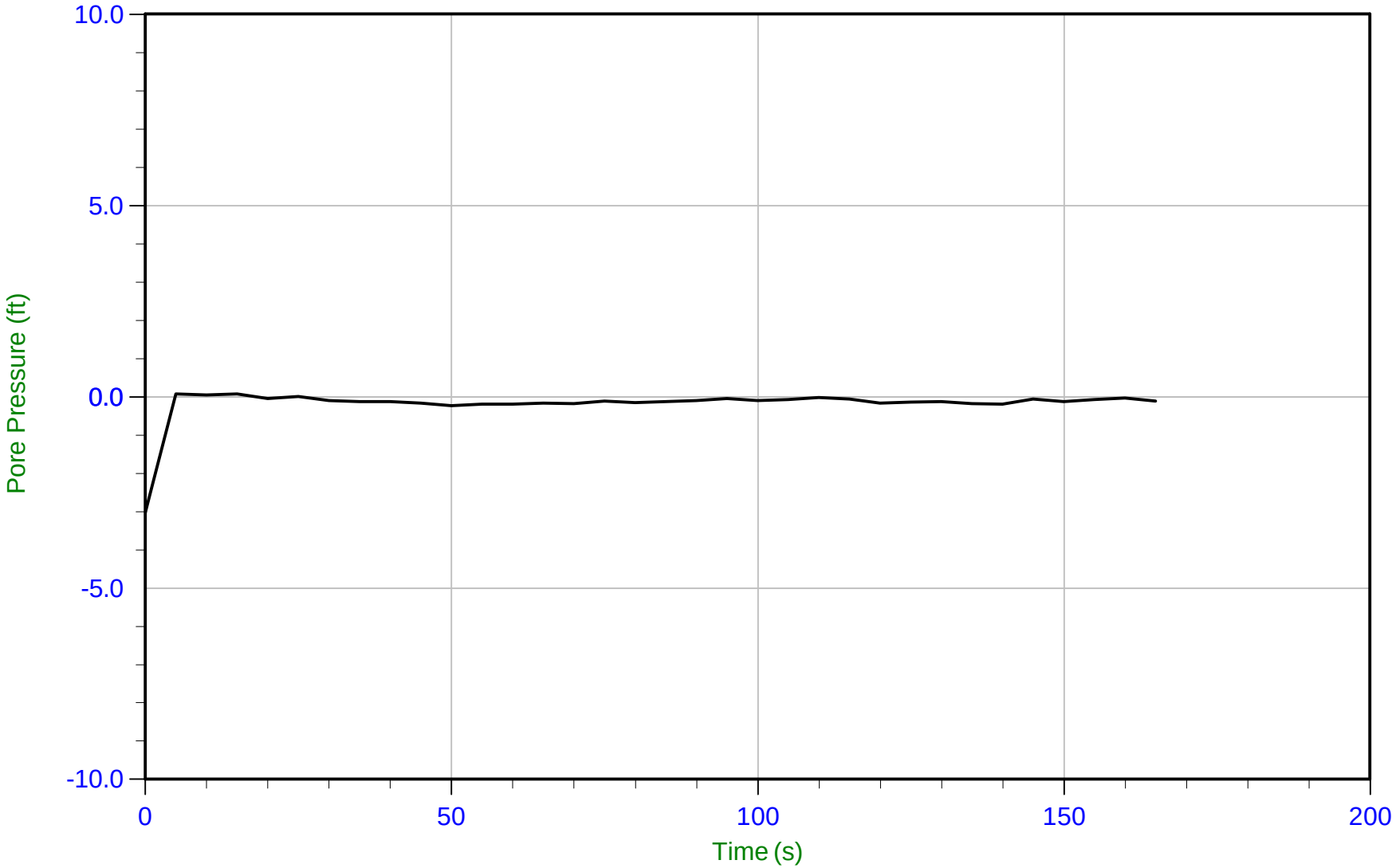
Filename: 20-59-20521_CP_SU06-PC-03.PPD
Depth: 18.325 m / 60.121 ft
Duration: 320.0 s

U Hyd: 78.8 ft
U Max: 163.9 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 1.300 m / 4.265 ft
Duration: 165.0 s

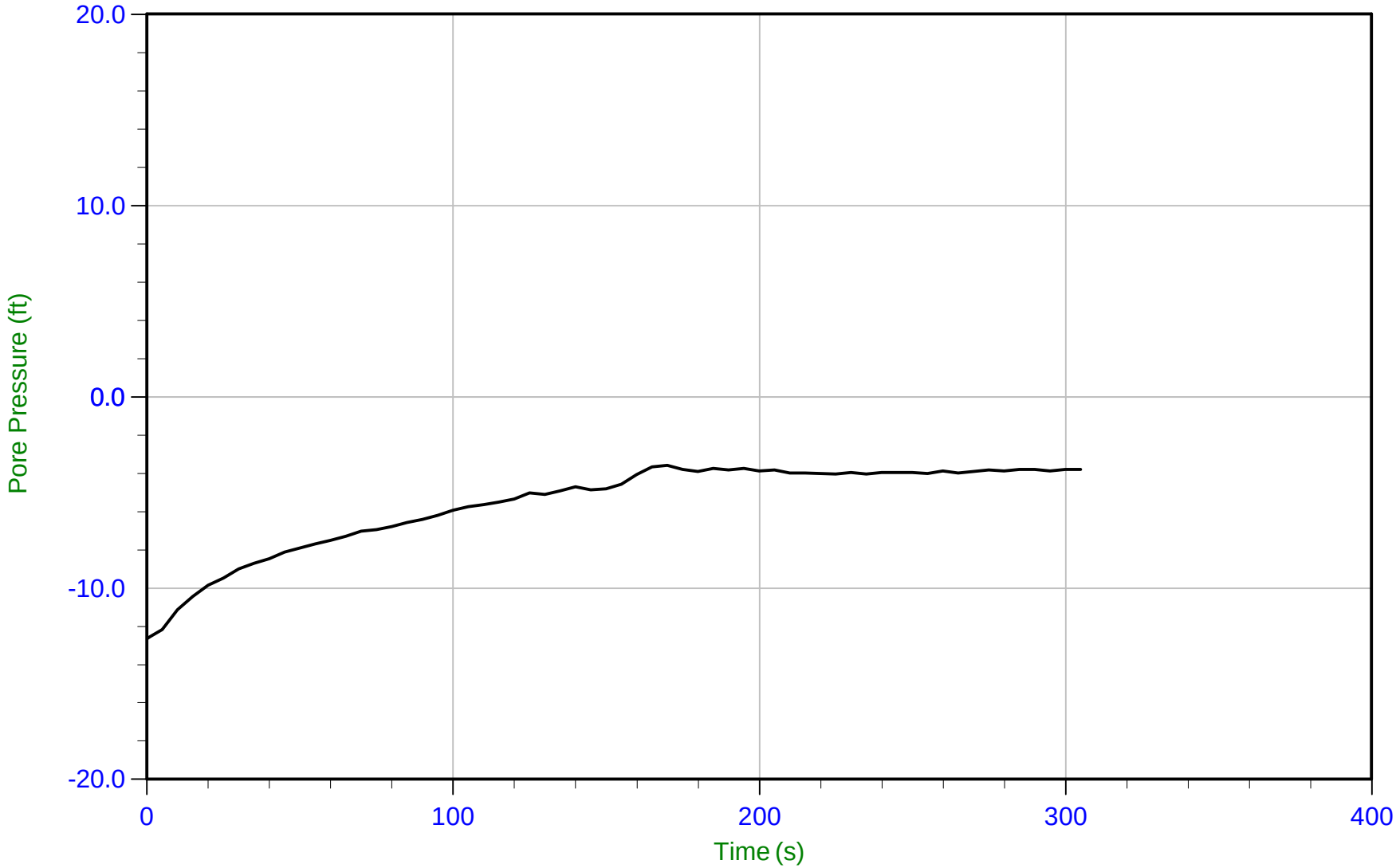
U Min: -3.0 ft
U Max: 0.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 3.075 m / 10.088 ft
Duration: 305.0 s

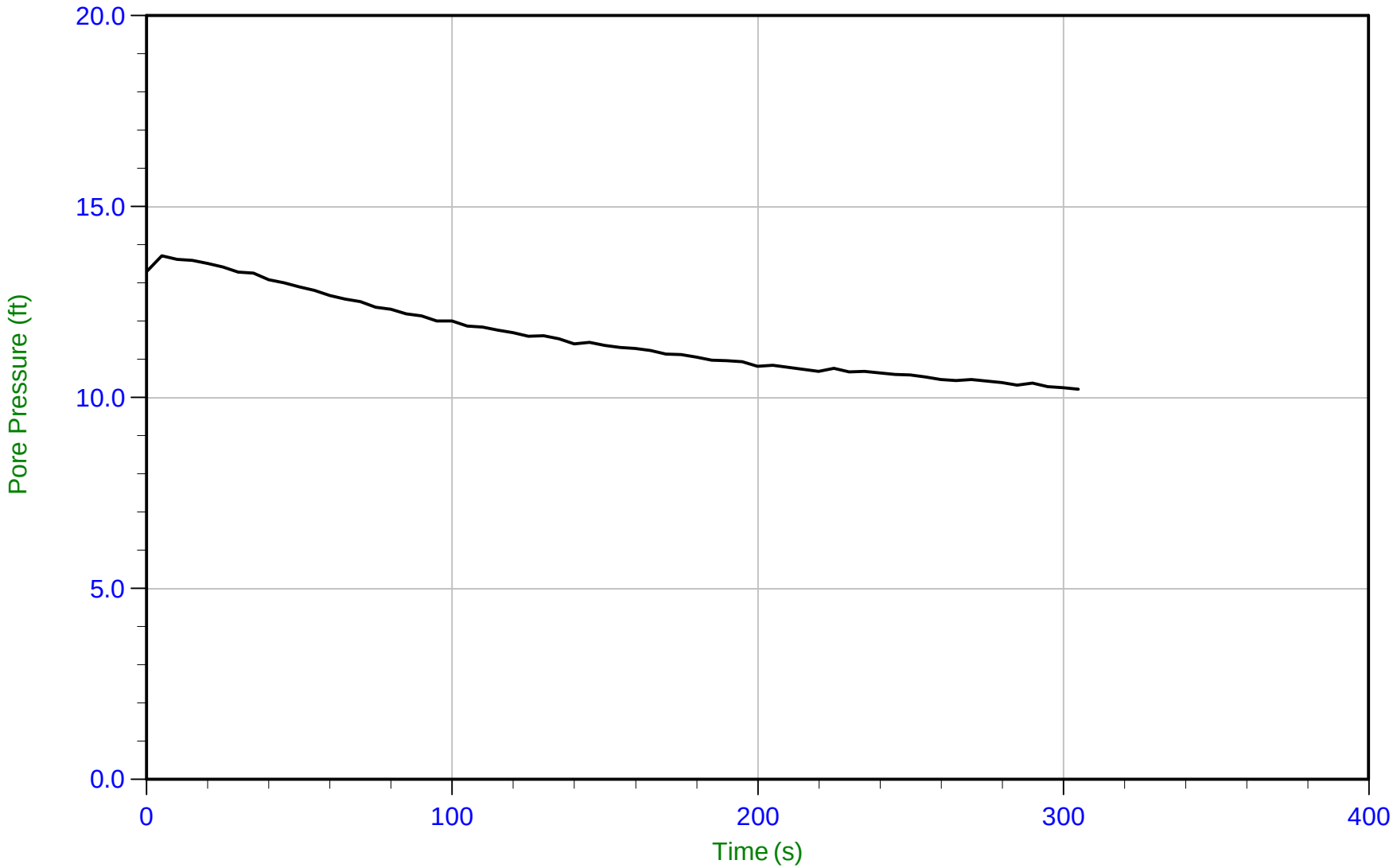
U Min: -12.7 ft
U Max: -3.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 6.100 m / 20.013 ft
Duration: 305.0 s

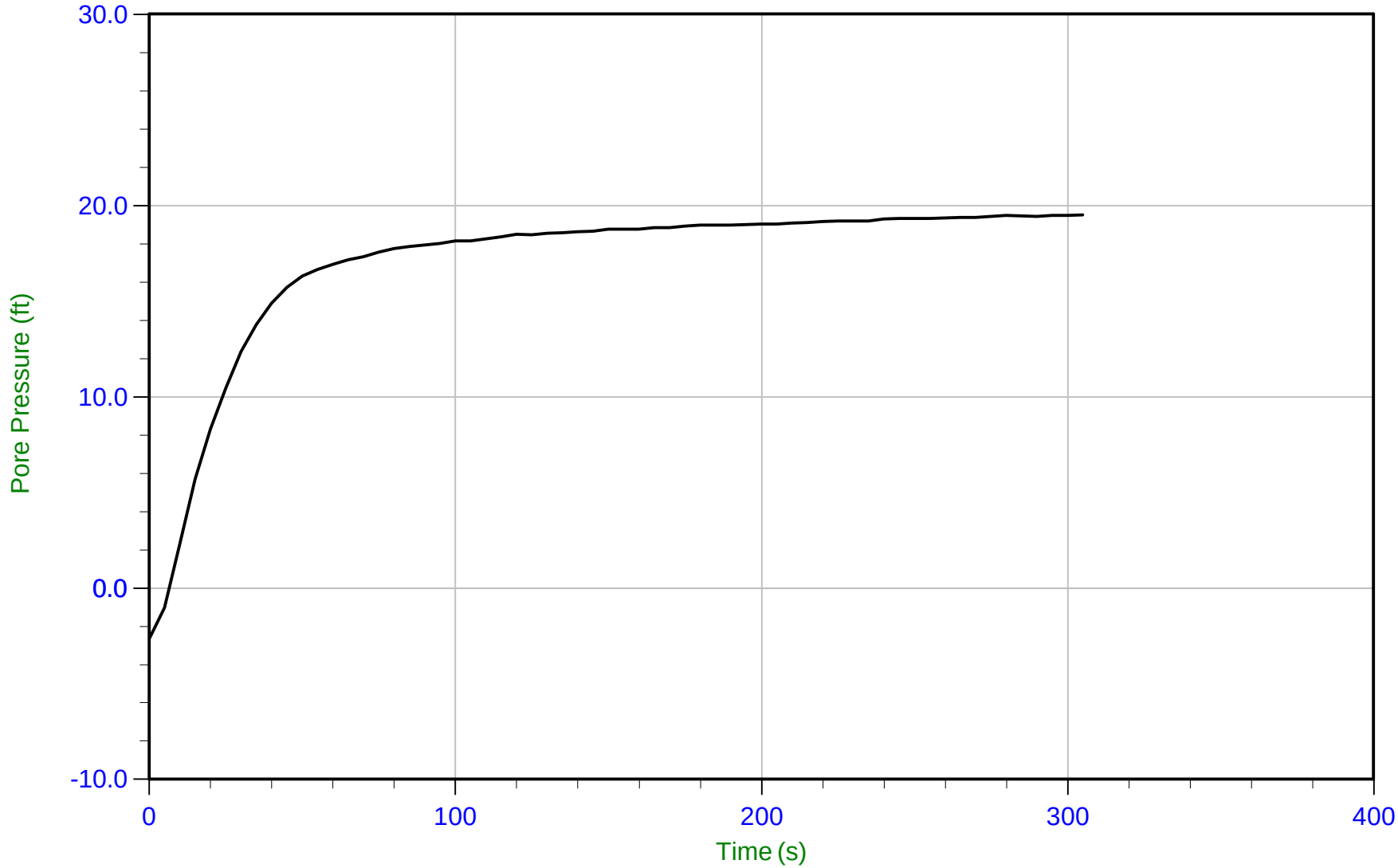
U Min: 10.2 ft
U Max: 13.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 9.200 m / 30.183 ft
Duration: 305.0 s

U Min: -2.7 ft
U Max: 19.5 ft

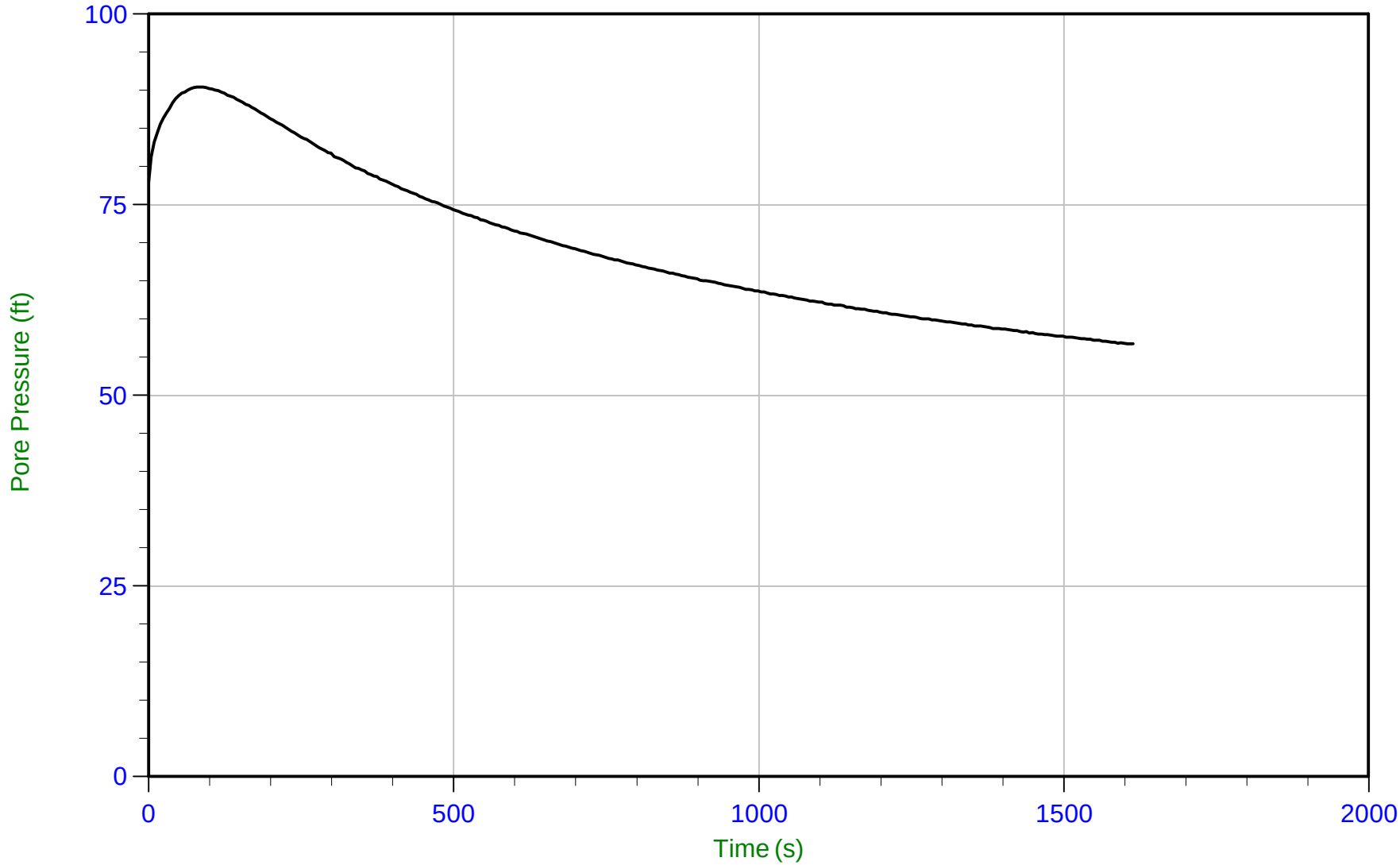
WT: 3.246 m / 10.649 ft
Ueq: 19.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

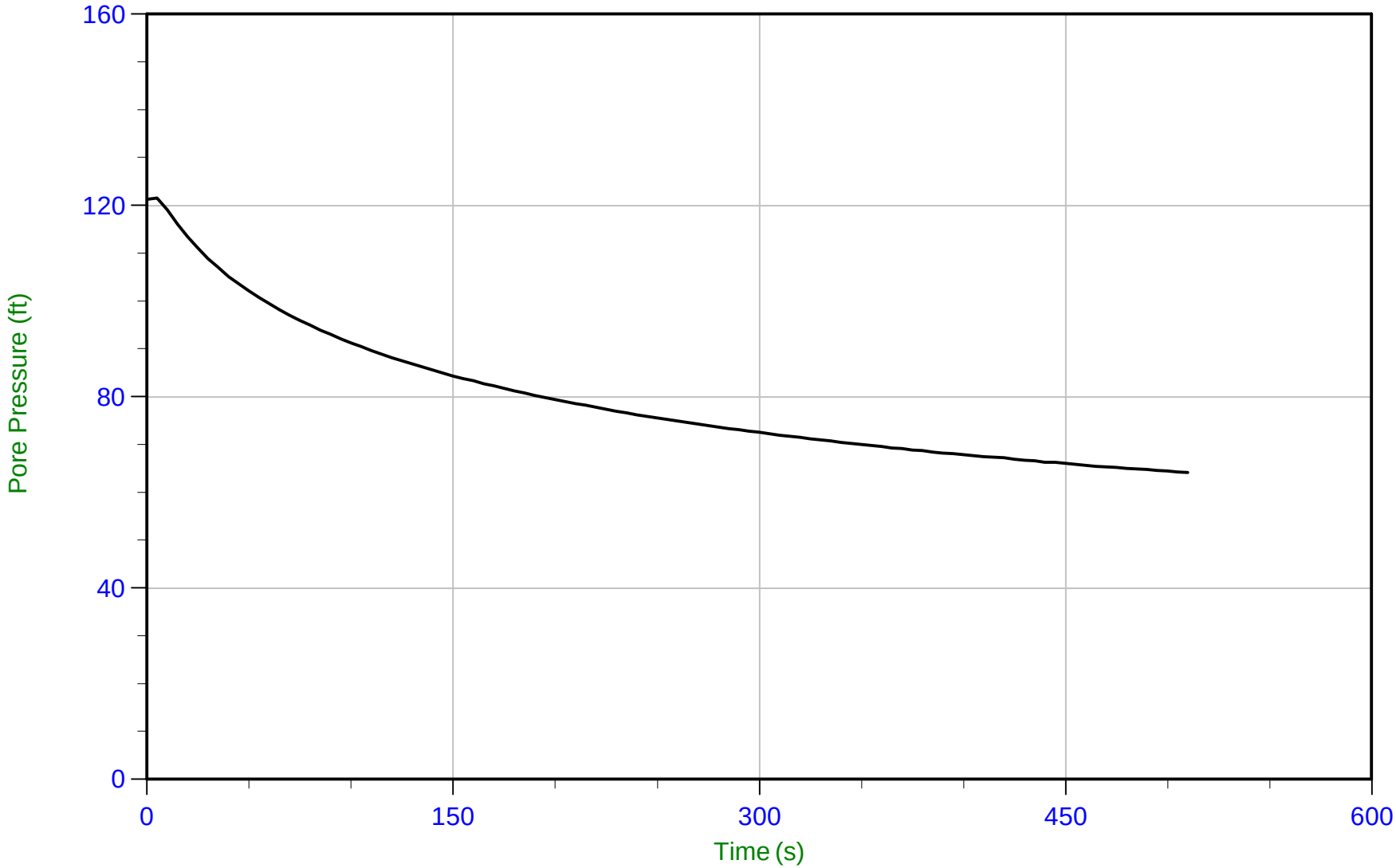
Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 12.325 m / 40.436 ft
Duration: 1615.0 s

U Mid: 56.7 ft
U Max: 90.4 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 15.375 m / 50.442 ft
Duration: 510.0 s

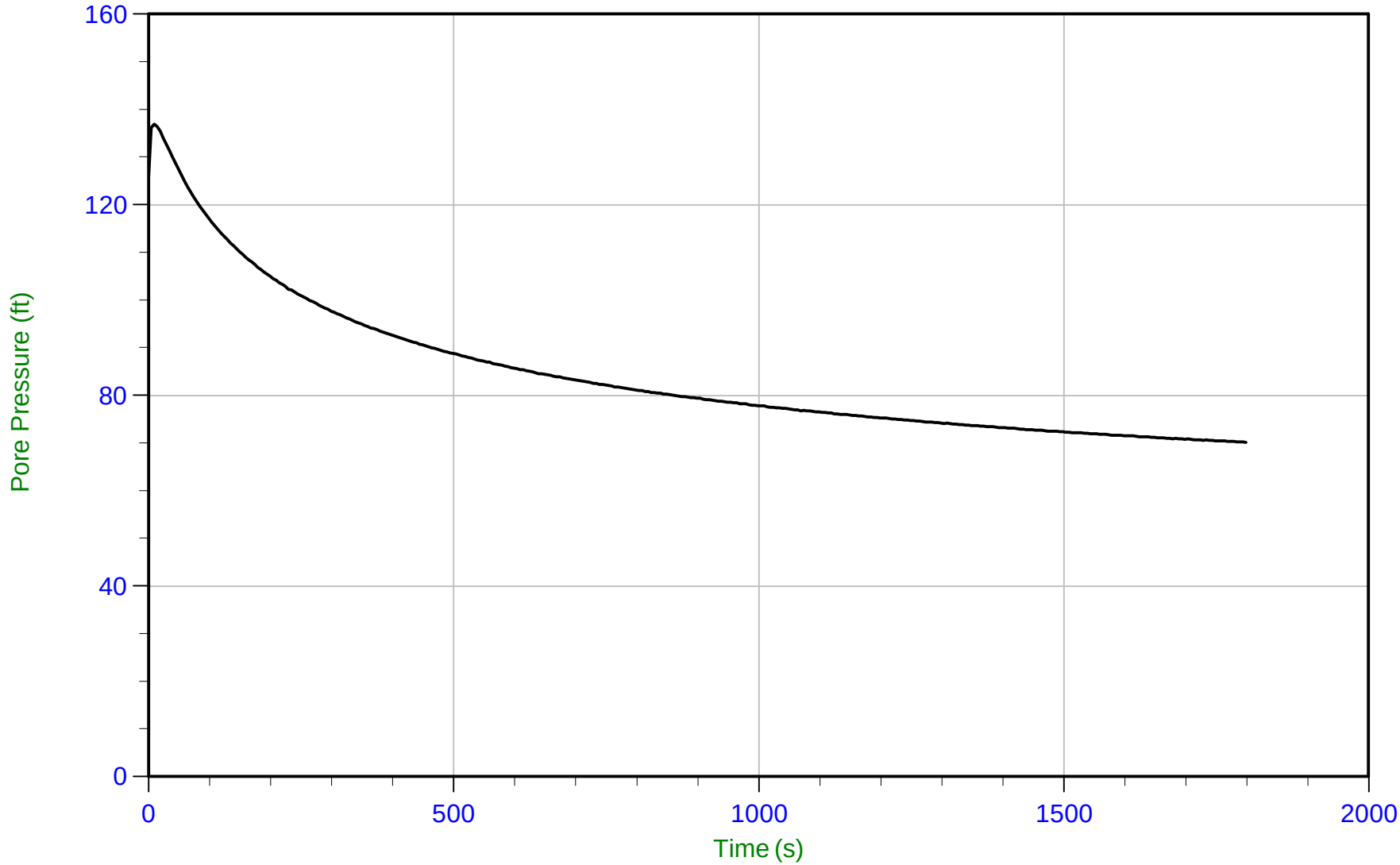
U Mid: 64.1 ft
U Max: 121.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/21/2020 15:56
Site: PDI Longview CP

Sounding: PDI-SU06-PC-04
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-04.PPD
Depth: 18.475 m / 60.613 ft
Duration: 1800.0 s

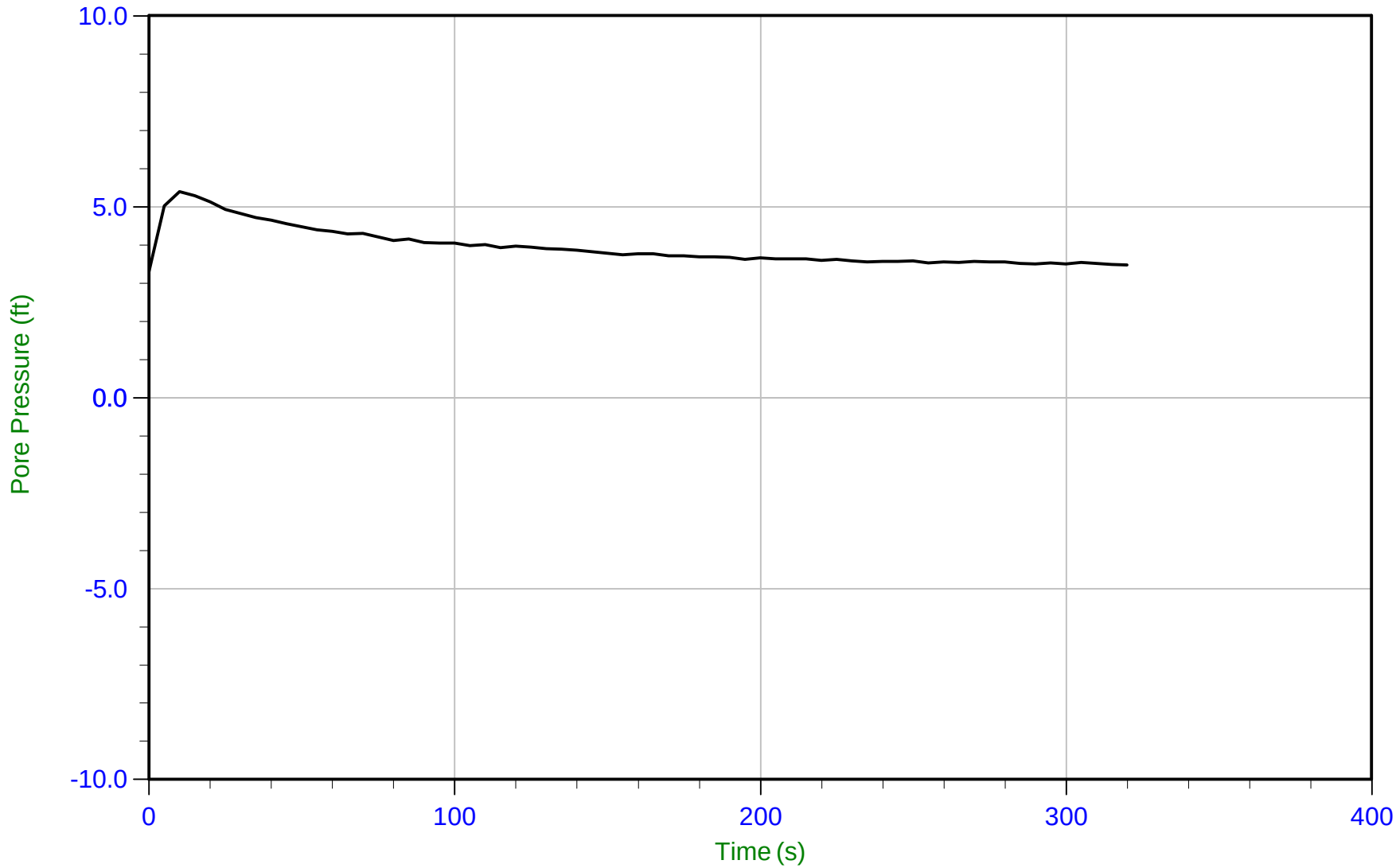
U Min: 70.1 ft
U Max: 137.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 3.075 m / 10.088 ft
Duration: 320.0 s

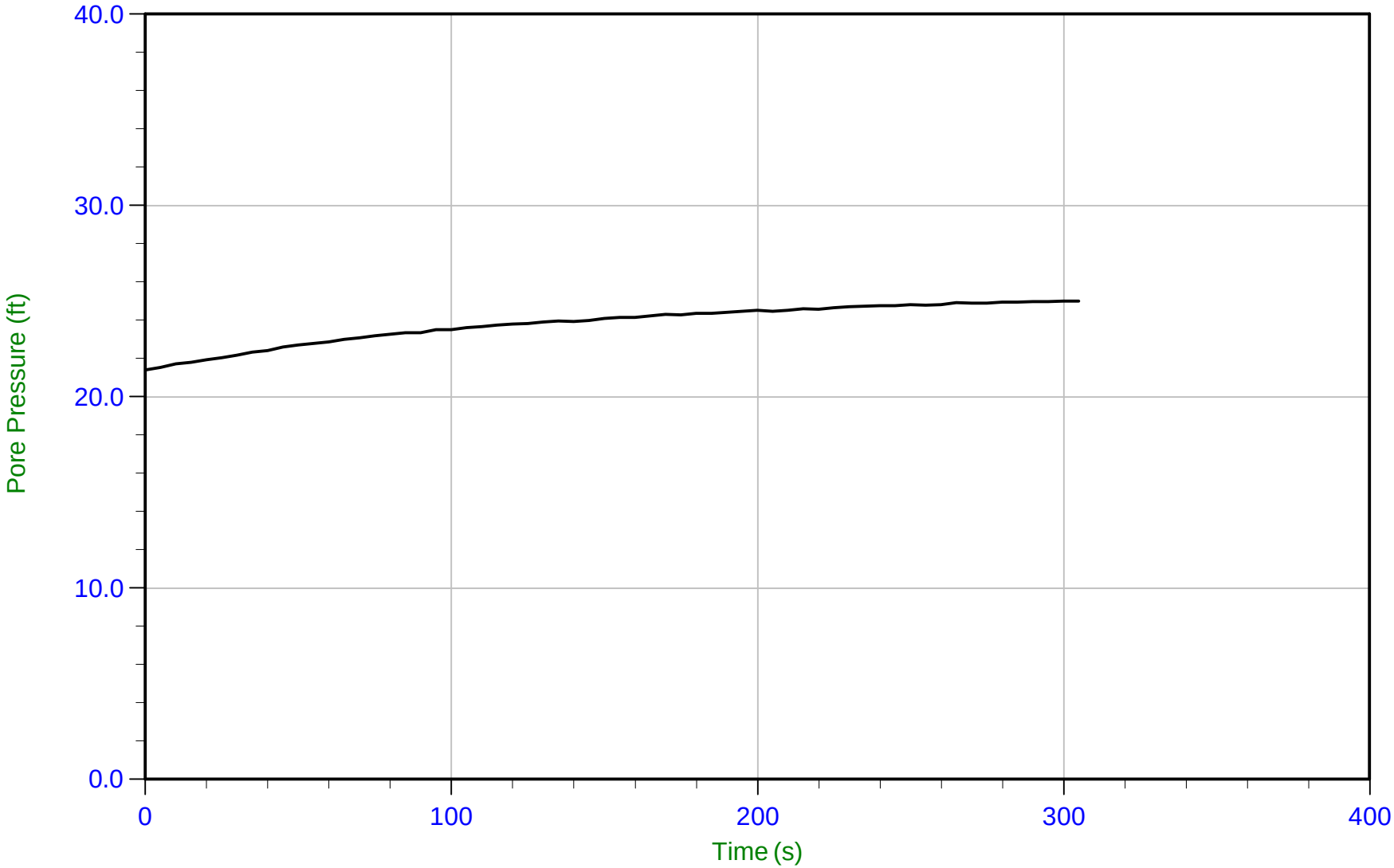
U Min: 3.3 ft
U Max: 5.4 ft

WT: 2.029 m / 6.657 ft
Ueq: 3.4 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 6.100 m / 20.013 ft
Duration: 305.0 s

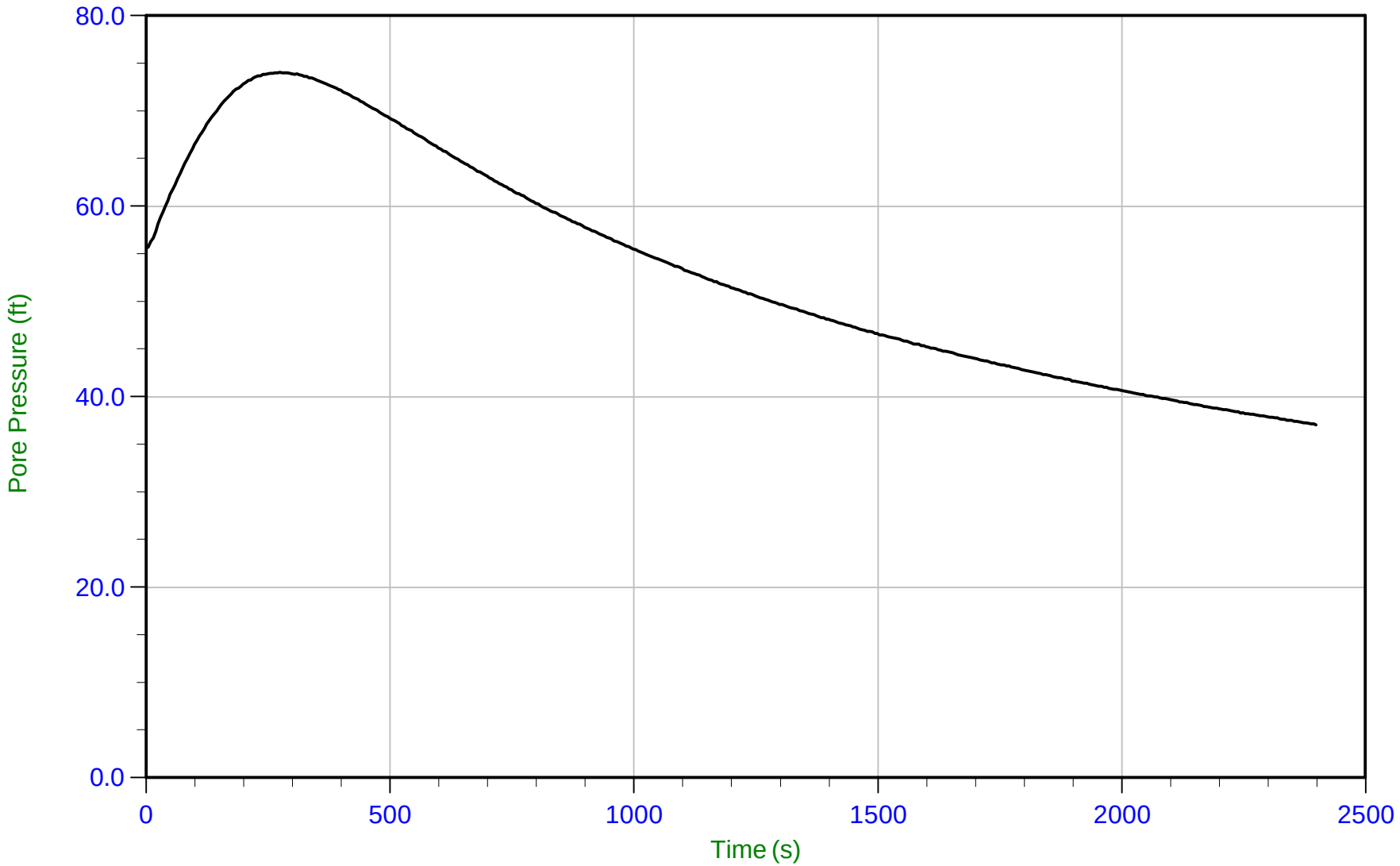
U Min: 21.4 ft
U Max: 25.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 9.225 m / 30.265 ft
Duration: 2400.0 s

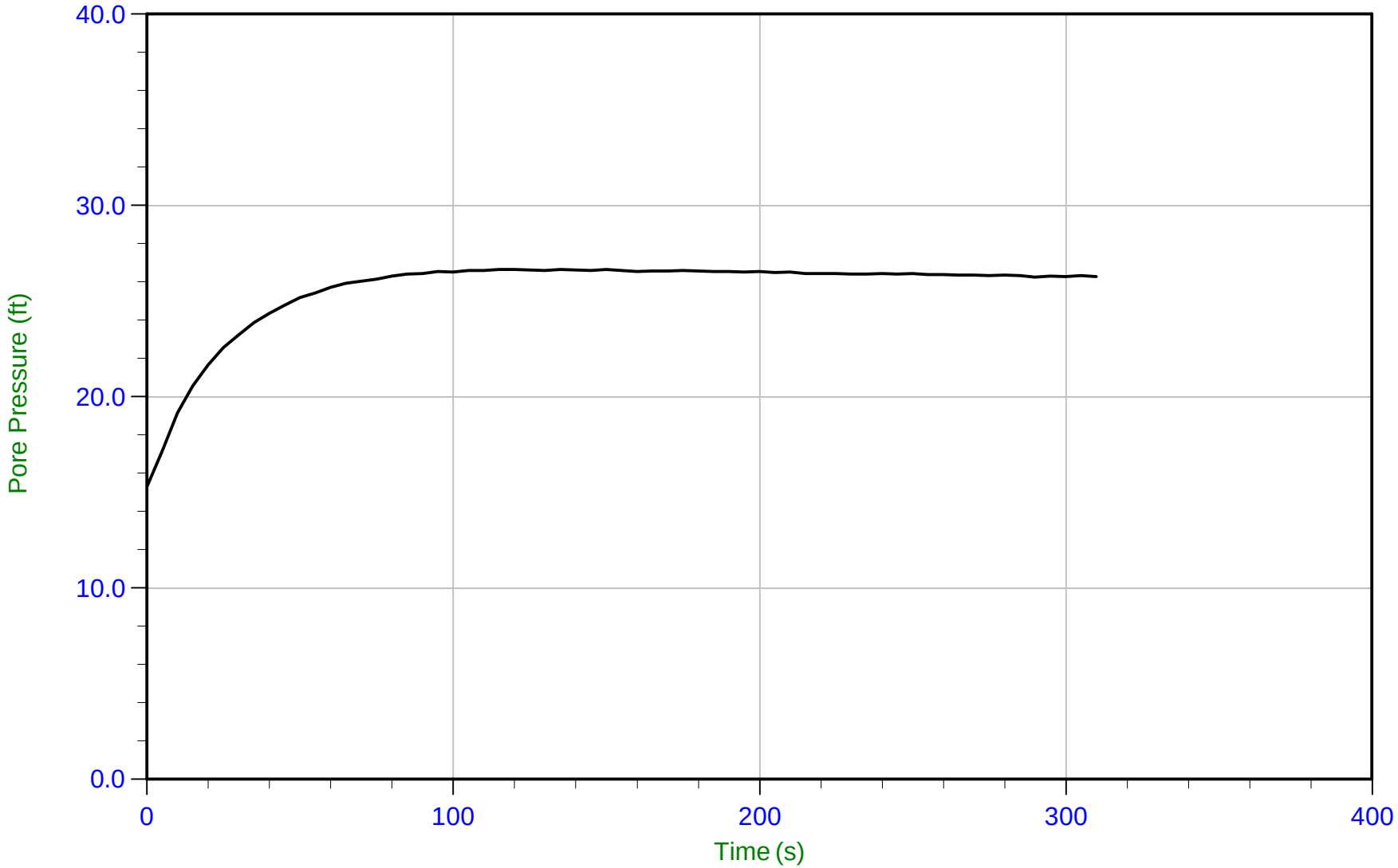
U Min: 37.0 ft
U Max: 74.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 12.200 m / 40.026 ft
Duration: 310.0 s

U Hyd: 15.3 ft
U Max: 26.7 ft

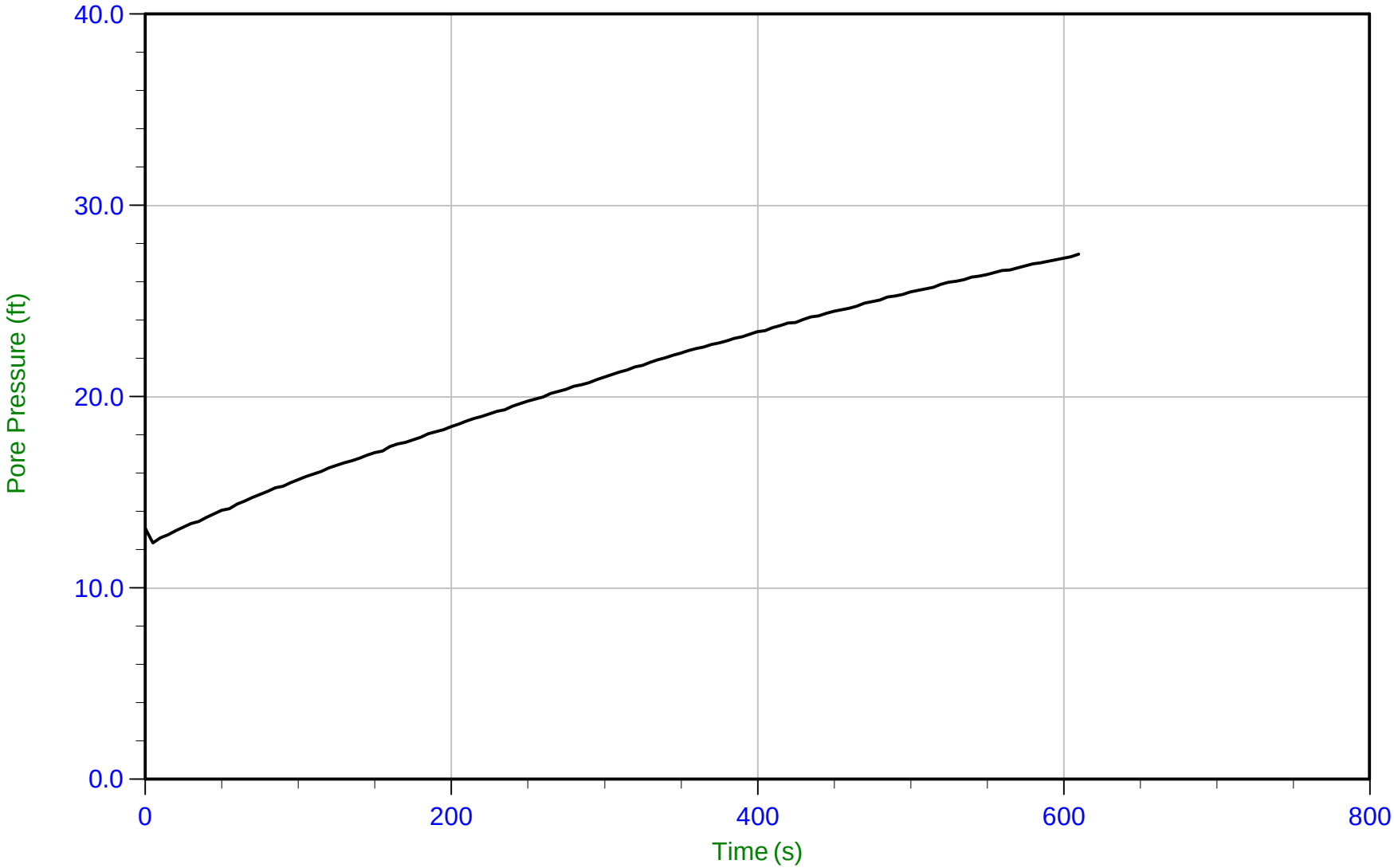
WT: 4.155 m / 13.632 ft
Ueq: 26.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 14.950 m / 49.048 ft
Duration: 610.0 s

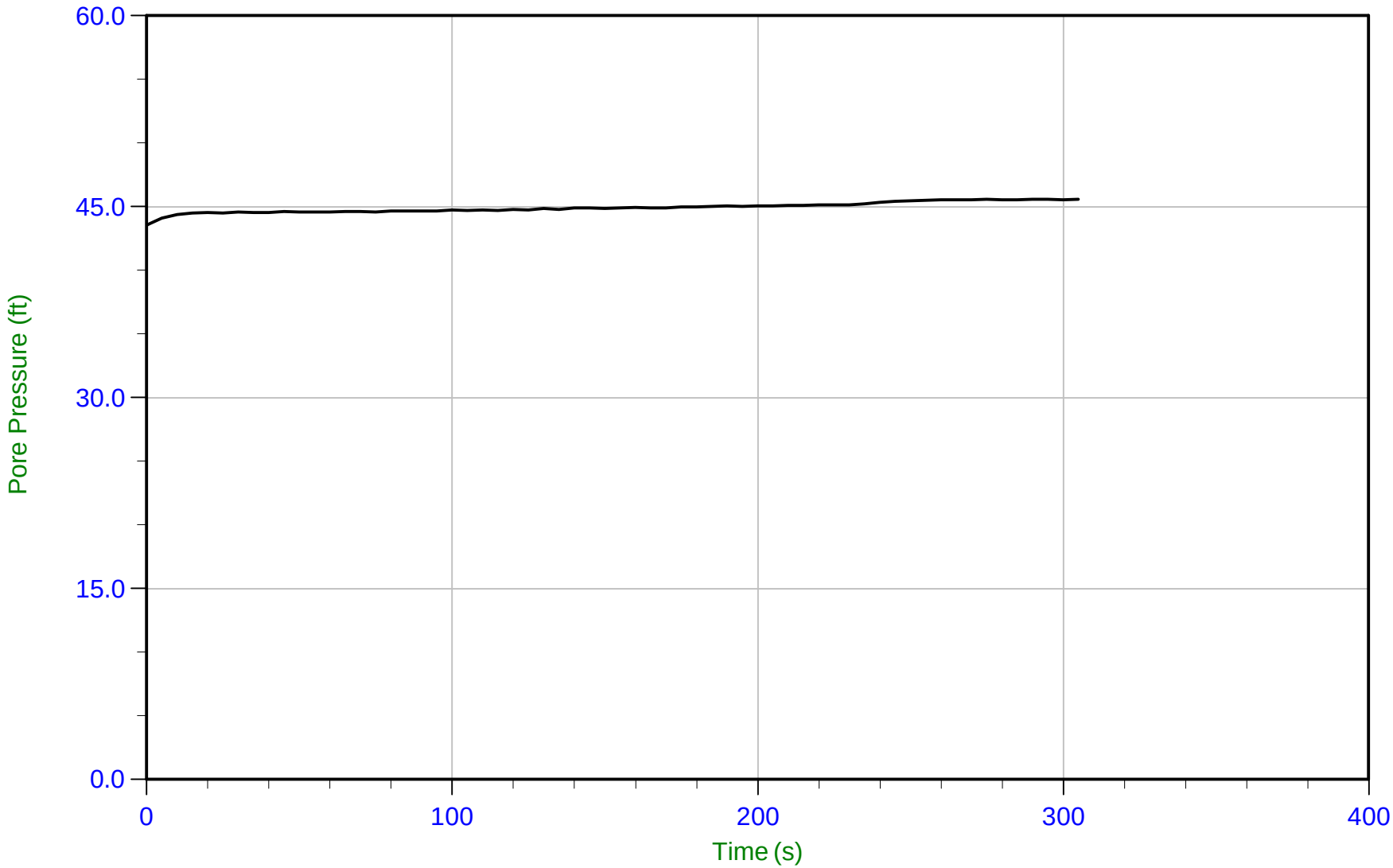
U Min: 12.4 ft
U Max: 27.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 07:20
Site: PDI Longview CP

Sounding: PDI-SU06-PC-05
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-05.PPD
Depth: 18.350 m / 60.203 ft
Duration: 305.0 s

U Hyd: 43.5 ft
U Max: 45.6 ft

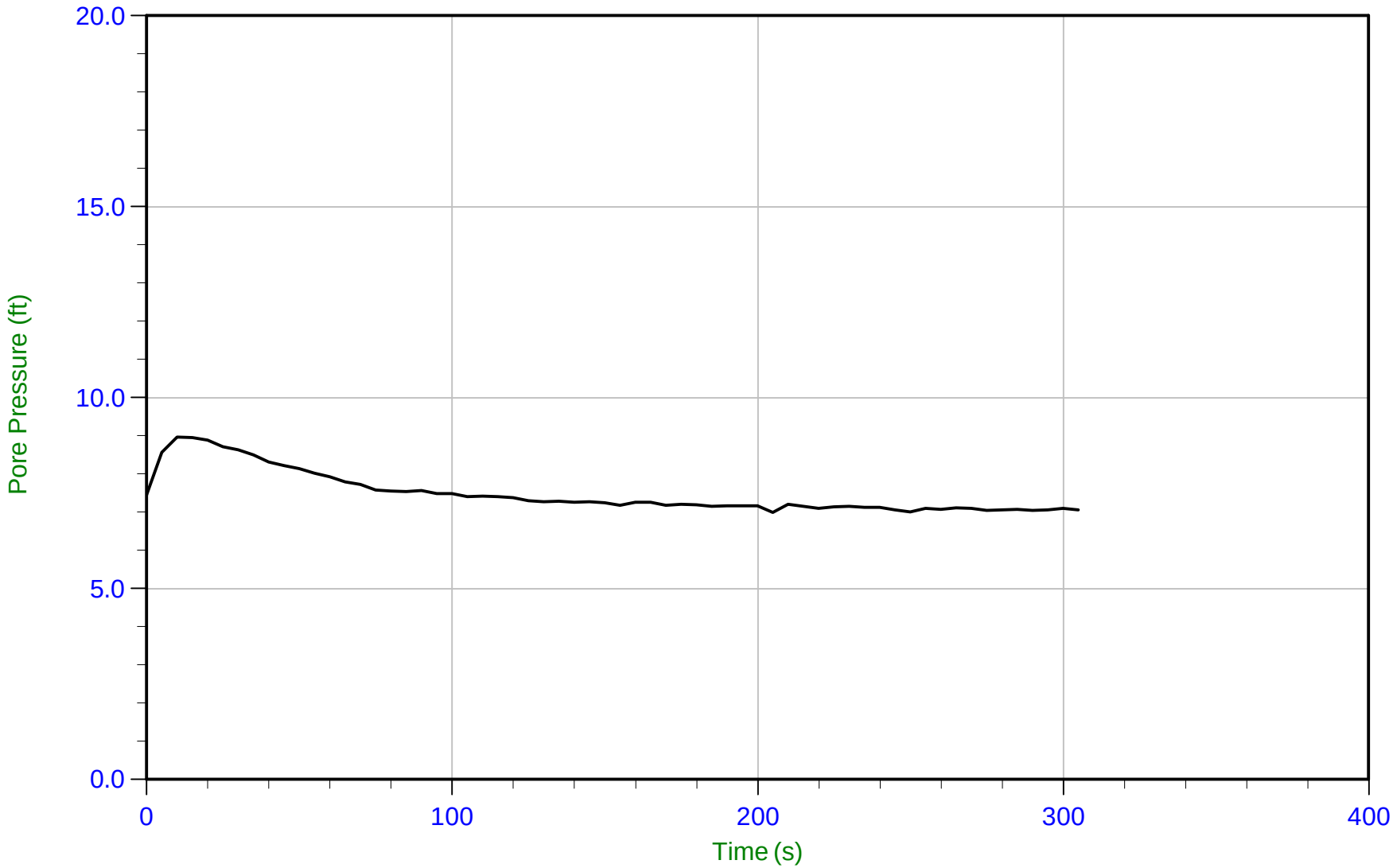
WT: 4.475 m / 14.682 ft
Ueq: 45.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 3.050 m / 10.006 ft
Duration: 305.0 s

U Hyd: 7.0 ft
U Max: 9.0 ft

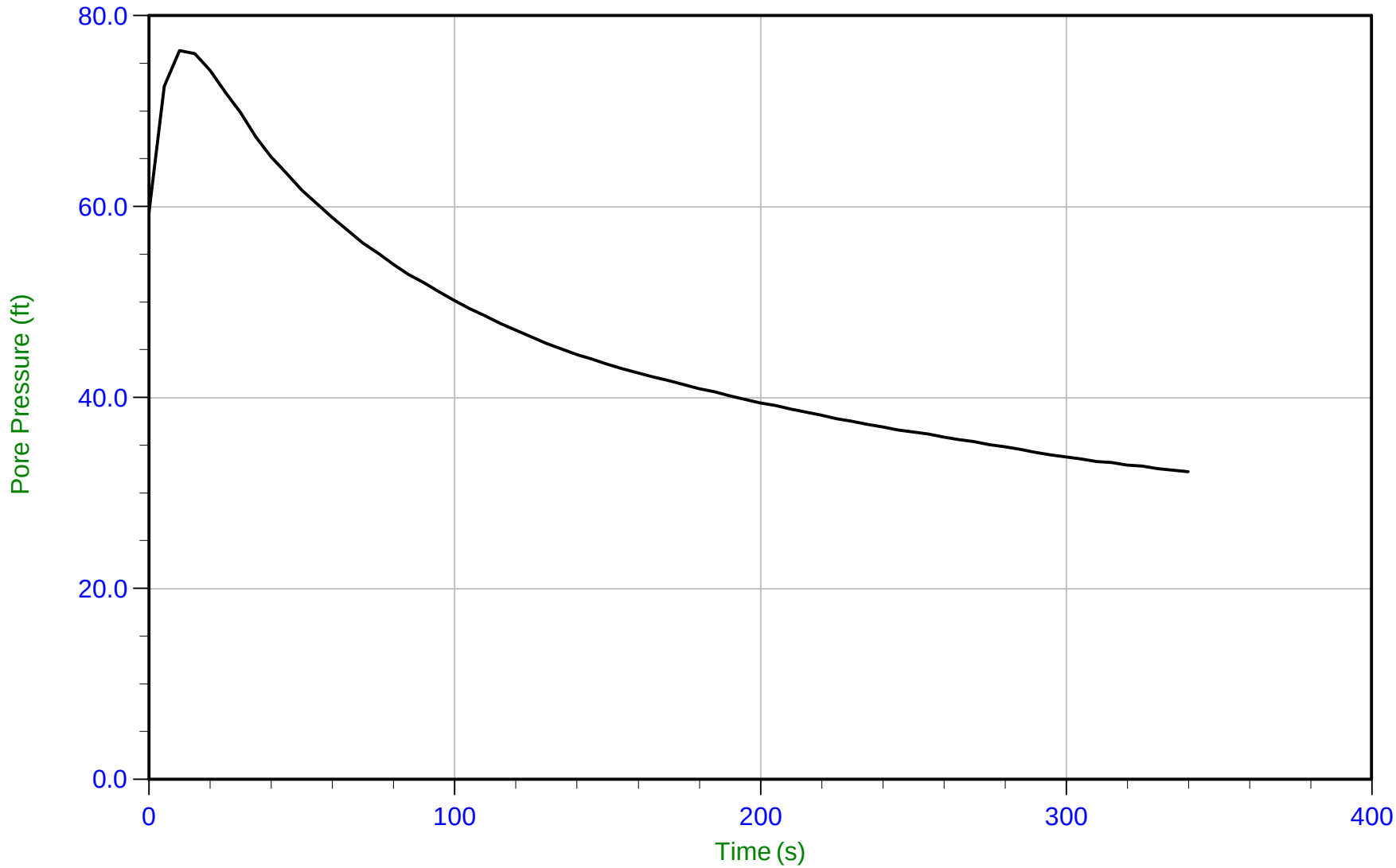
WT: 0.888 m / 2.913 ft
Ueq: 7.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

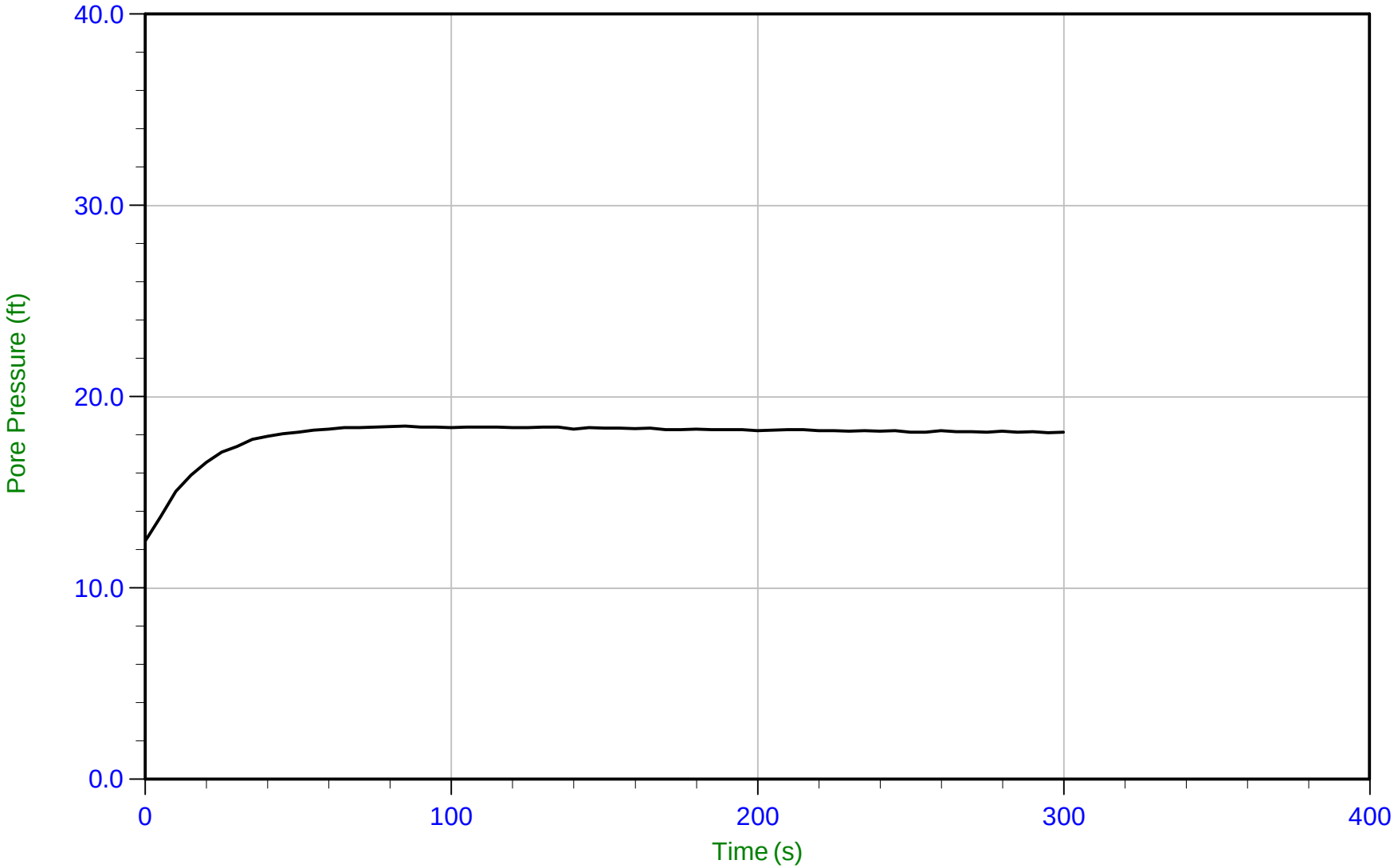
Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 6.125 m / 20.095 ft
Duration: 340.0 s

U Mid: 32.2 ft
U Max: 76.3 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 9.150 m / 30.019 ft
Duration: 300.0 s

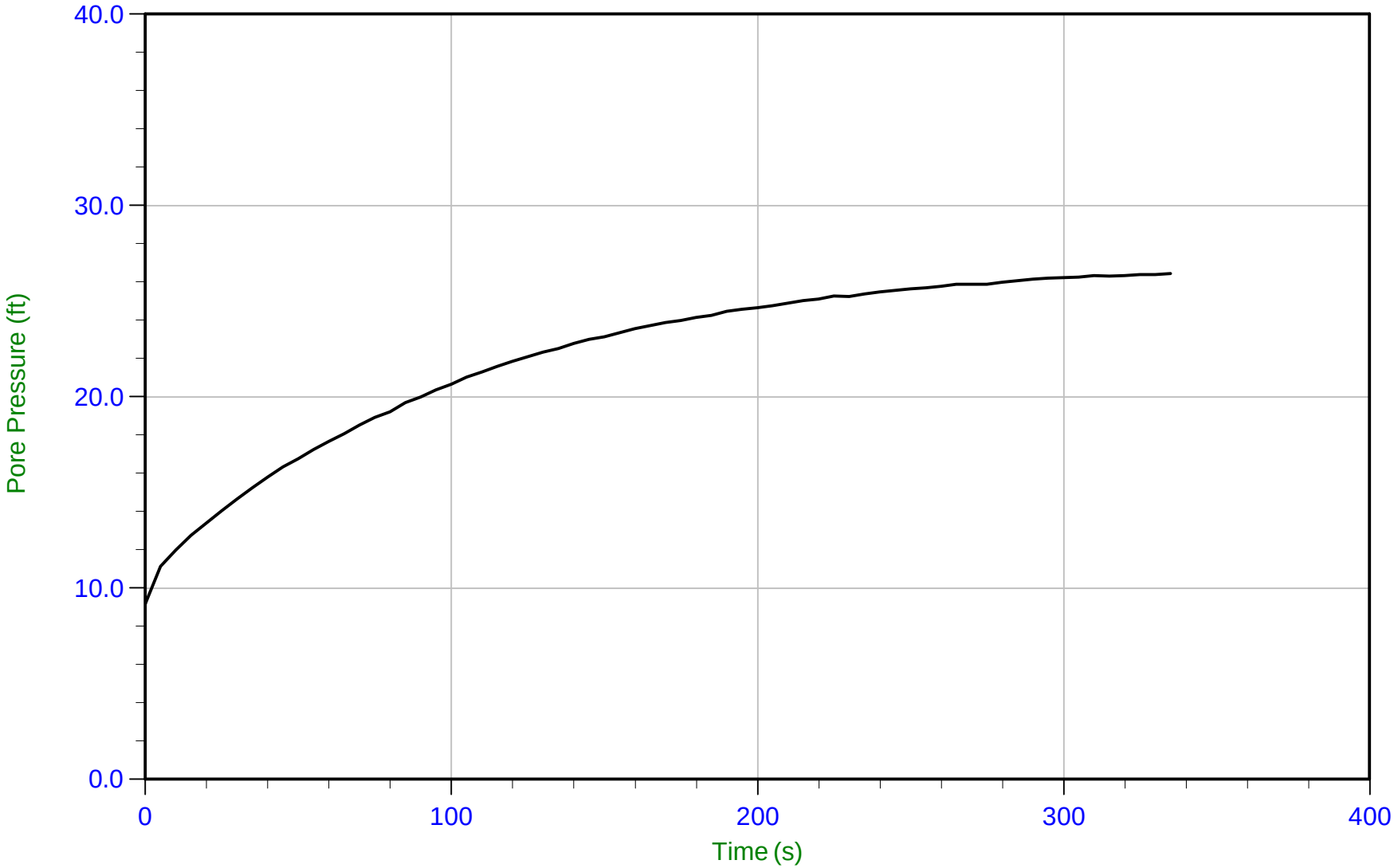
U Init: 12.5 ft
U Max: 18.5 ft

WT: 3.657 m / 11.998 ft
Ueq: 18.0 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 12.225 m / 40.108 ft
Duration: 335.0 s

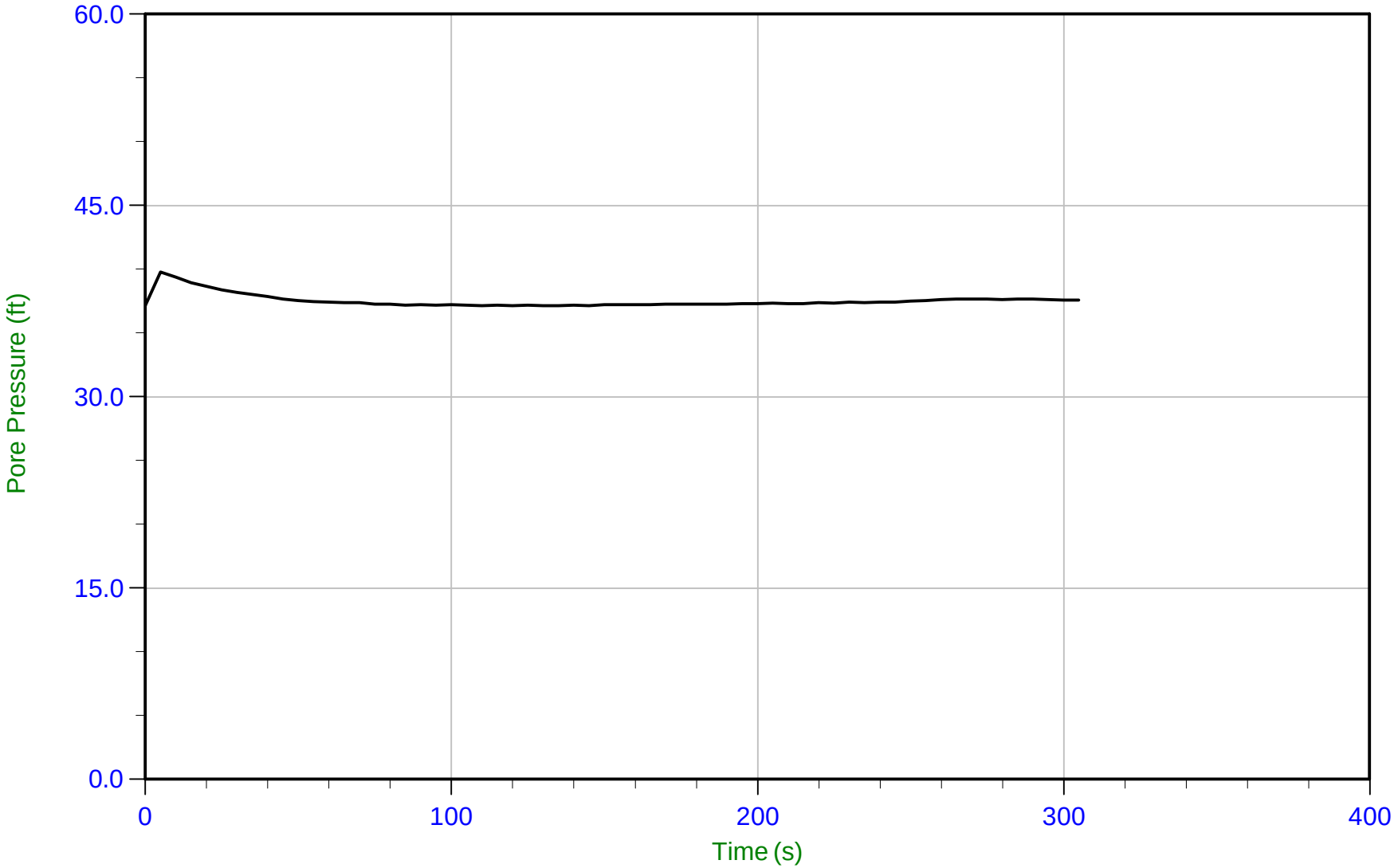
U Hyd: 9.2 ft
U Max: 26.4 ft

WT: 4.215 m / 13.829 ft
Ueq: 26.3 ft

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 15.325 m / 50.278 ft
Duration: 305.0 s

U Hyd: 37.1 ft
U Max: 39.8 ft

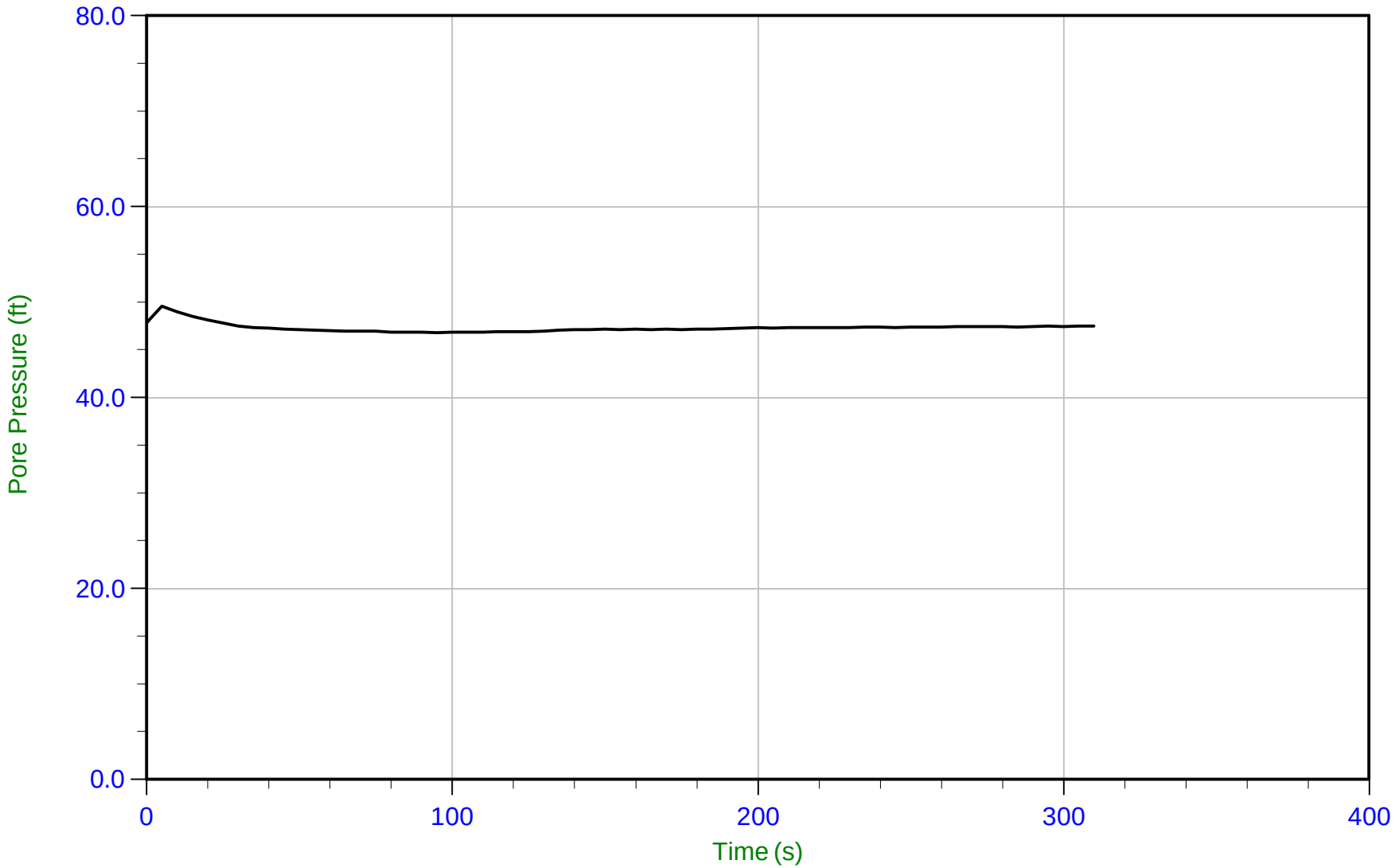
WT: 3.842 m / 12.605 ft
Ueq: 37.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 09:47
Site: PDI Longview CP

Sounding: PDI-SU06-PC-06
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU06-PC-06.PPD
Depth: 18.325 m / 60.121 ft
Duration: 310.0 s

U Min: 46.8 ft
U Max: 49.6 ft

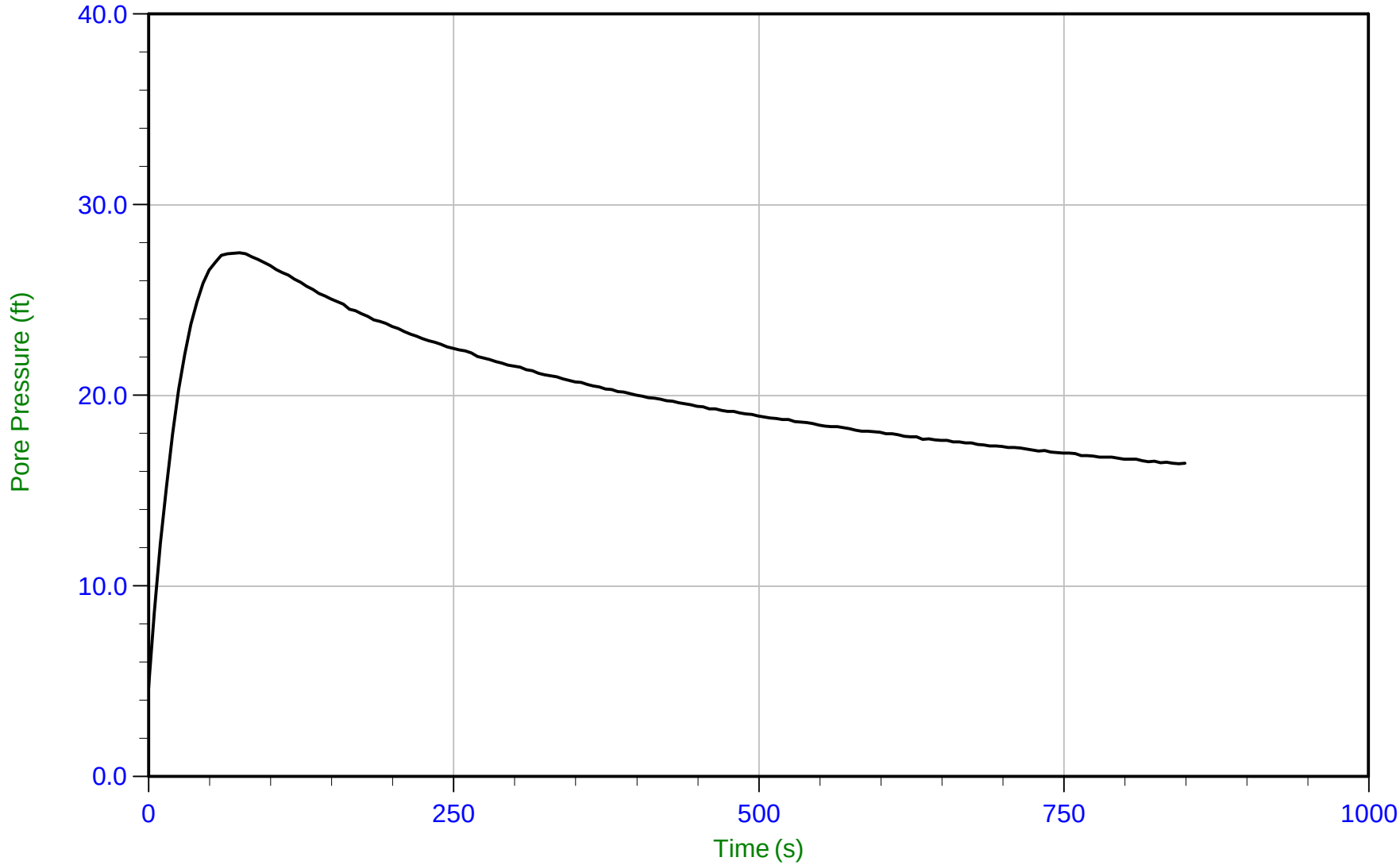
WT: 3.812 m / 12.506 ft
Ueq: 47.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 11:41
Site: PDI Longview CP

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-01.PPD
Depth: 3.050 m / 10.006 ft
Duration: 850.0 s

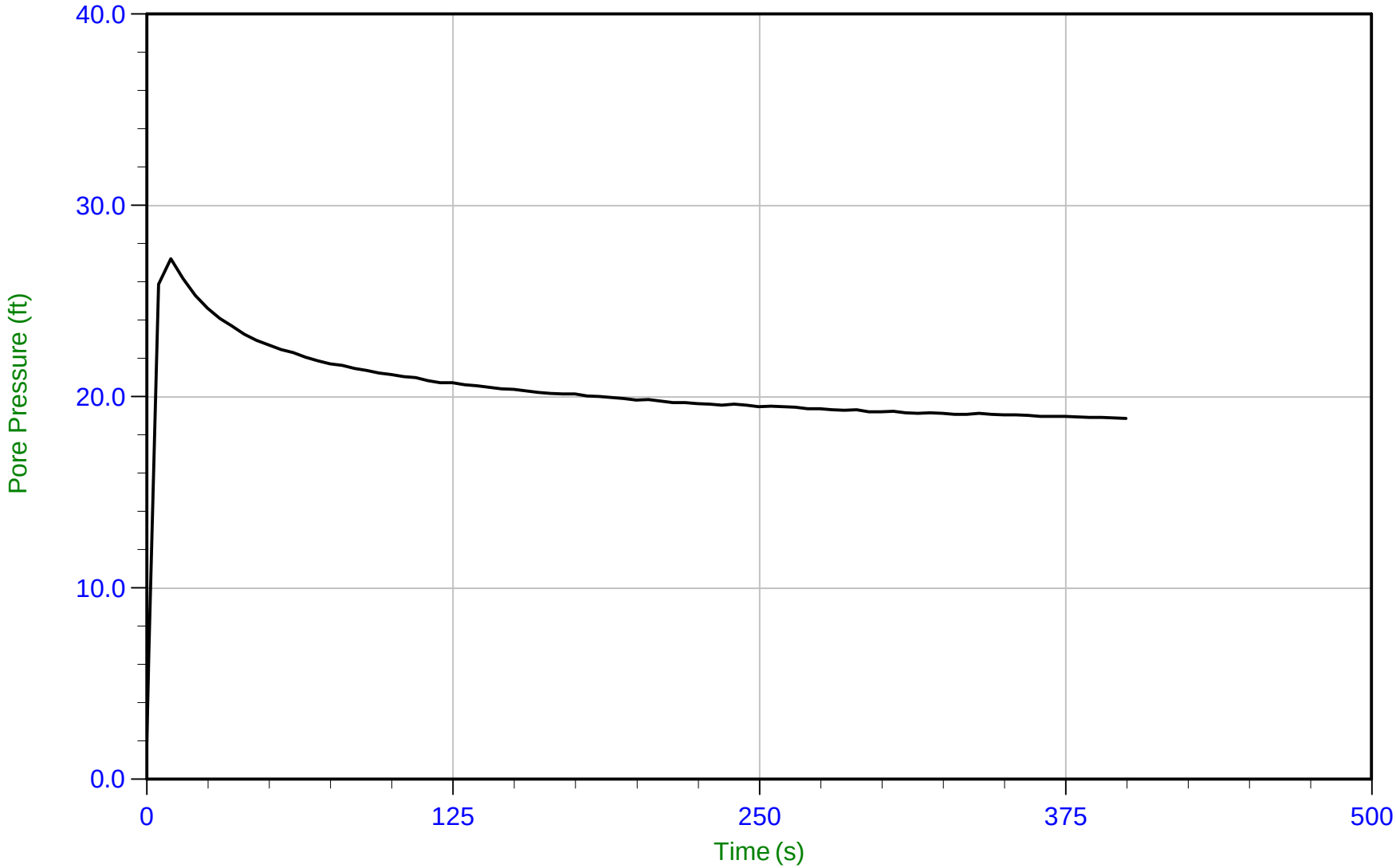
U Mid: 4.6 ft
U Max: 27.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 11:41
Site: PDI Longview CP

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-01.PPD
Depth: 5.975 m / 19.603 ft
Duration: 400.0 s

U Min: 1.9 ft
U Max: 27.2 ft

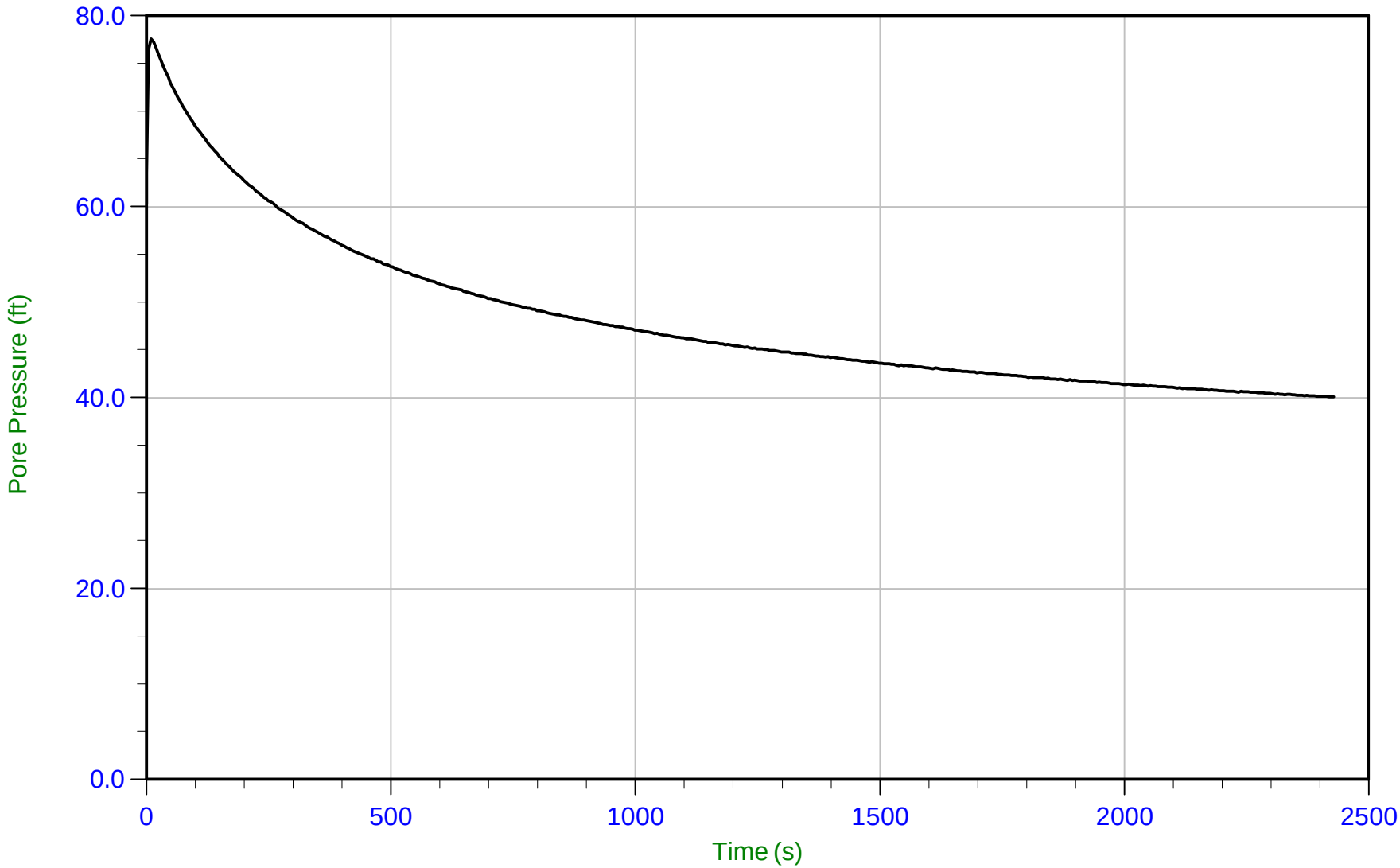
WT: 0.207 m / 0.679 ft
Ueq: 18.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 11:41
Site: PDI Longview CP

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-01.PPD
Depth: 9.150 m / 30.019 ft
Duration: 2430.0 s

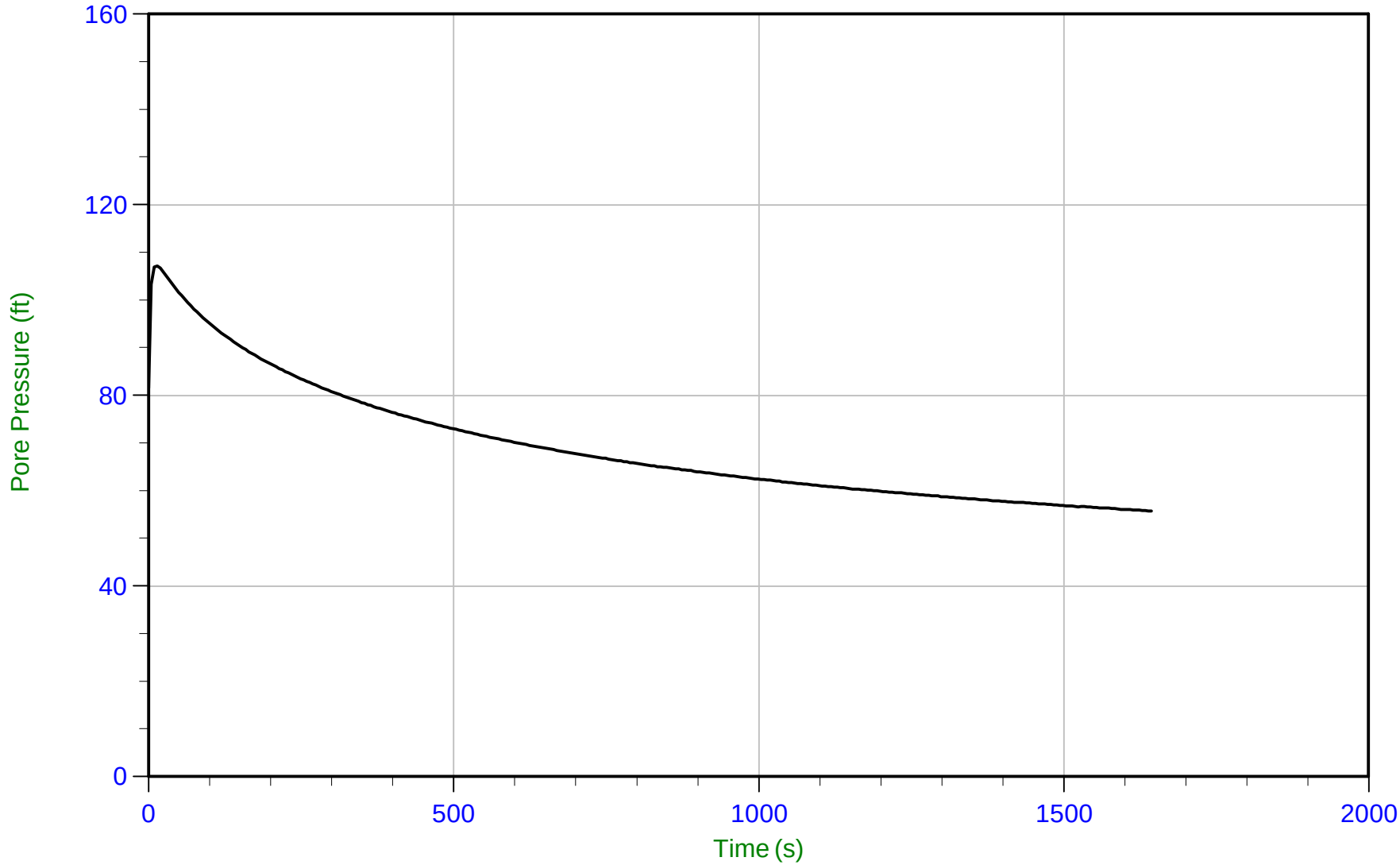
U Min: 40.1 ft
U Max: 77.6 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 11:41
Site: PDI Longview CP

Sounding: PDI-SU07-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-01.PPD
Depth: 12.050 m / 39.534 ft
Duration: 1645.0 s

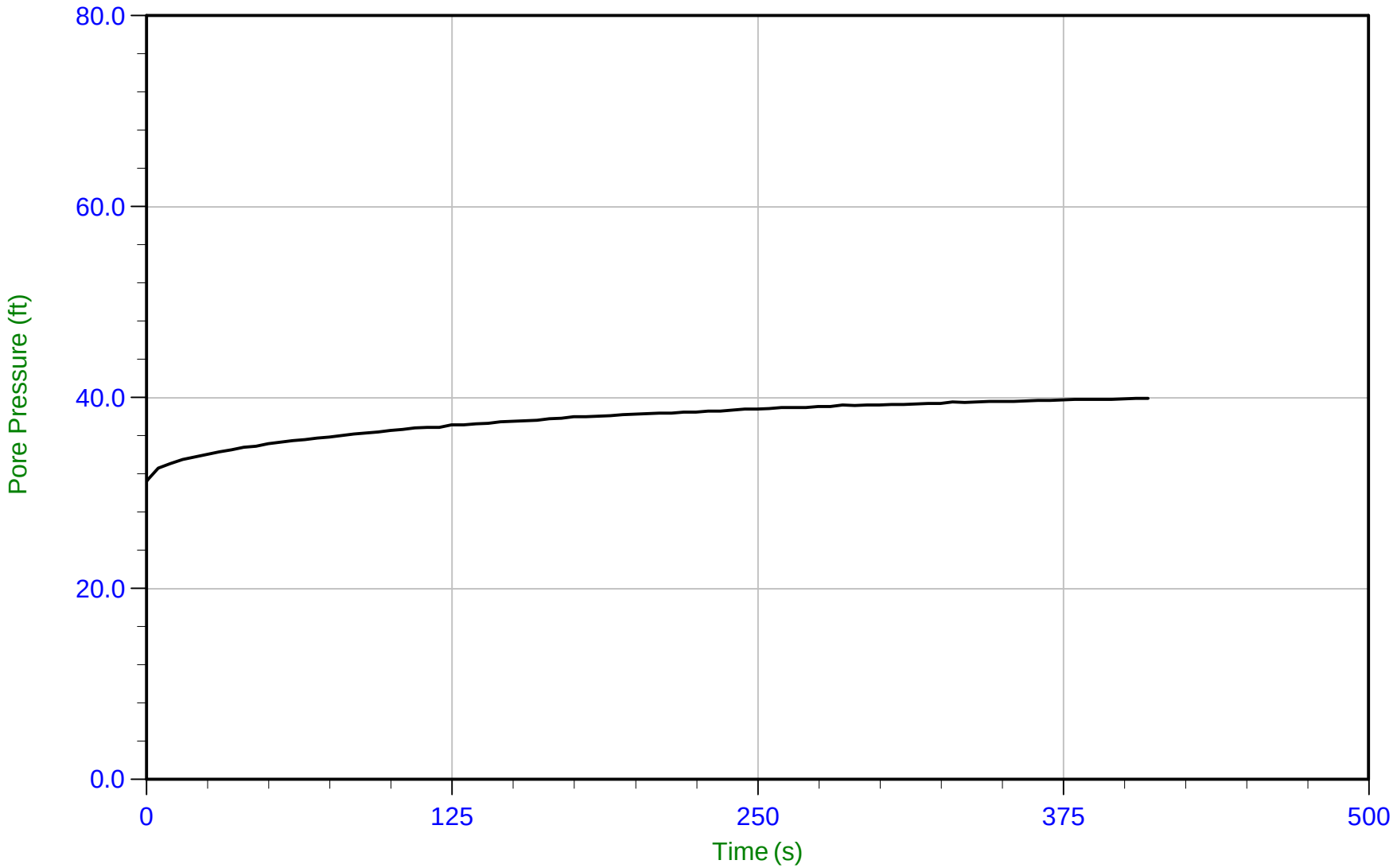
U Mid: 55.7 ft
U Max: 107.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 17:21
Site: PDI Longview CP

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-02.PPD
Depth: 3.200 m / 10.499 ft
Duration: 410.0 s

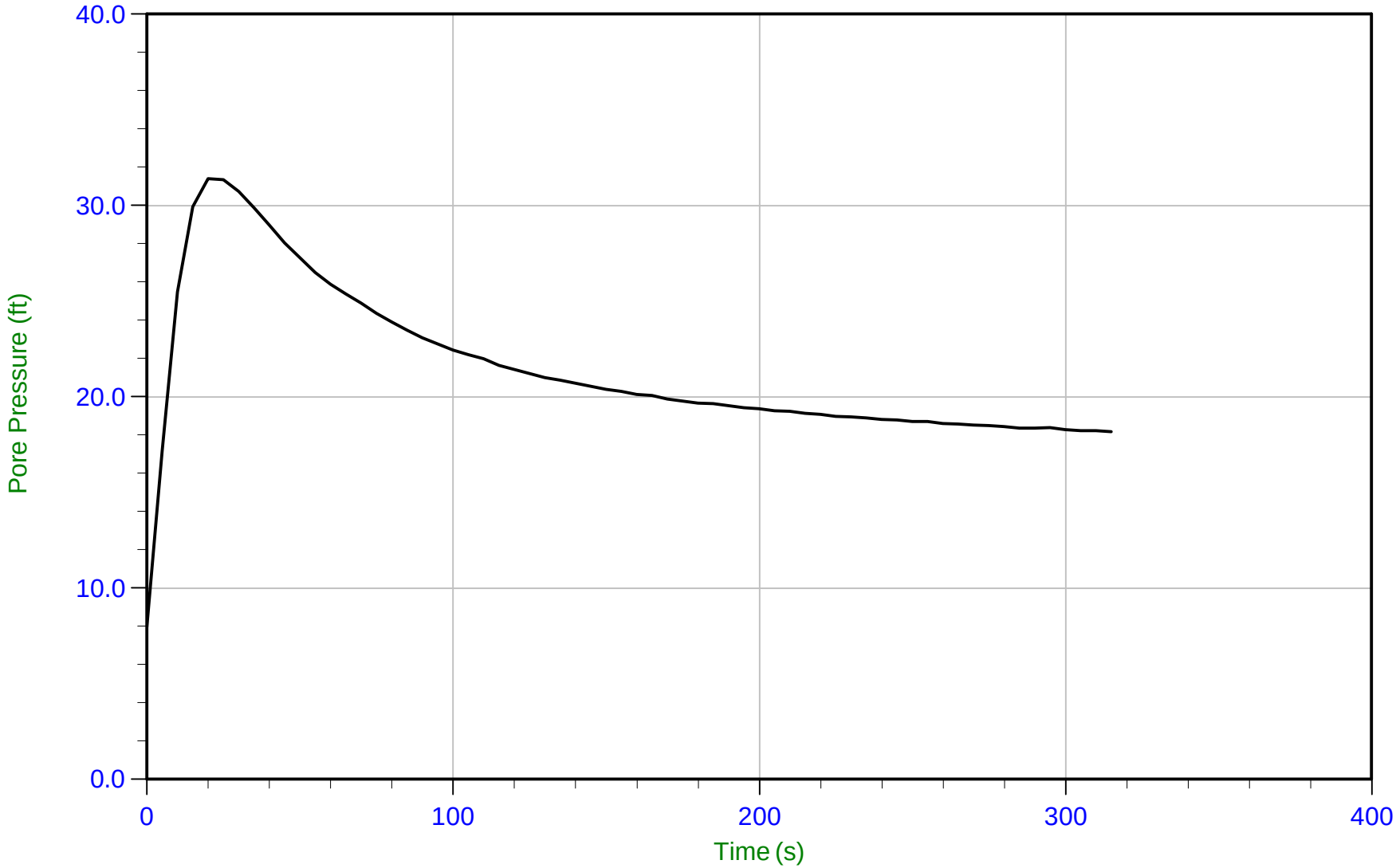
U Hyd: 31.2 ft
U Max: 39.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 17:21
Site: PDI Longview CP

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-02.PPD
Depth: 6.100 m / 20.013 ft
Duration: 315.0 s

U Hyd: 8.0 ft
U Max: 31.4 ft

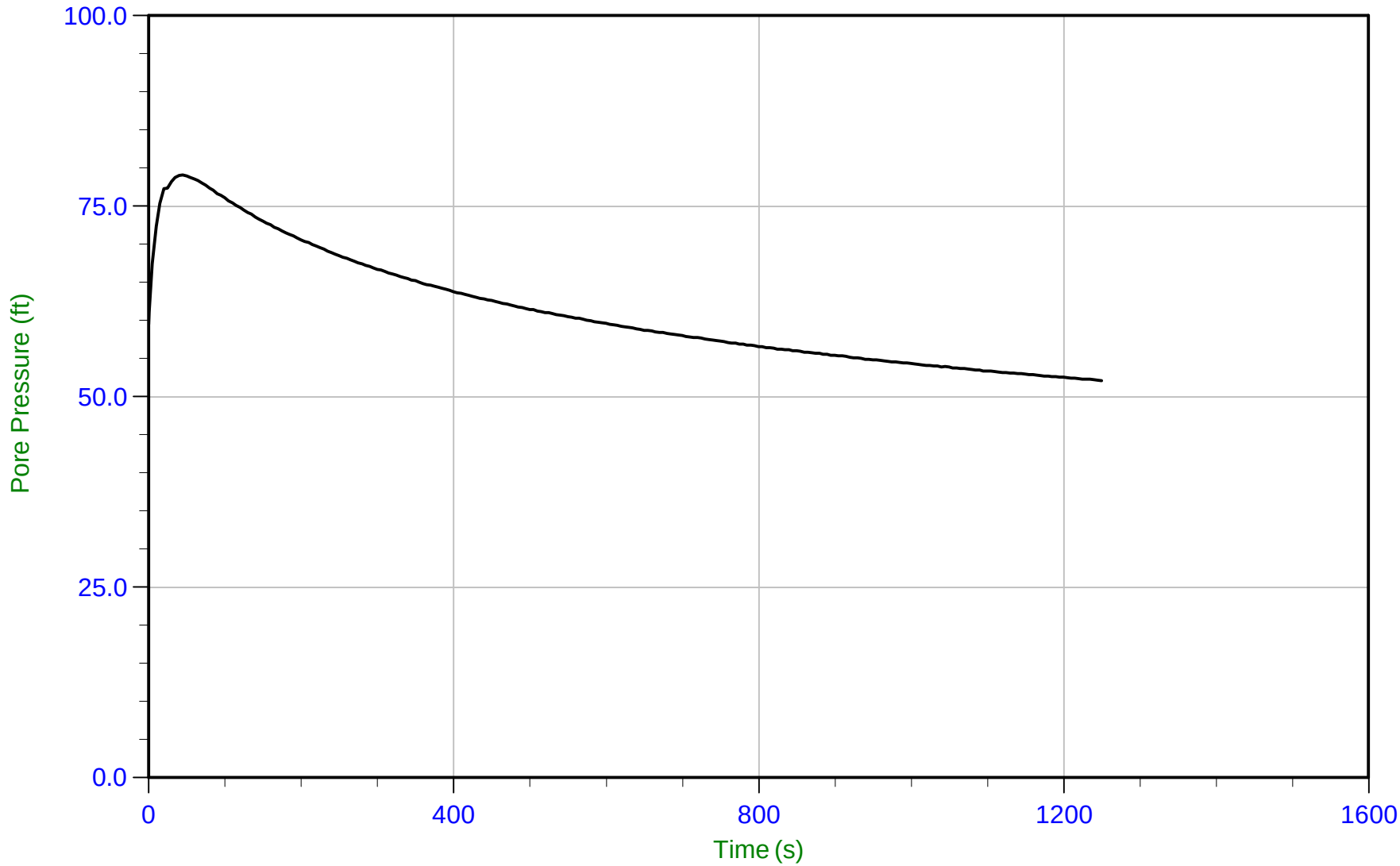
WT: 0.571 m / 1.873 ft
Ueq: 18.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 17:21
Site: PDI Longview CP

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-02.PPD
Depth: 9.450 m / 31.004 ft
Duration: 1250.0 s

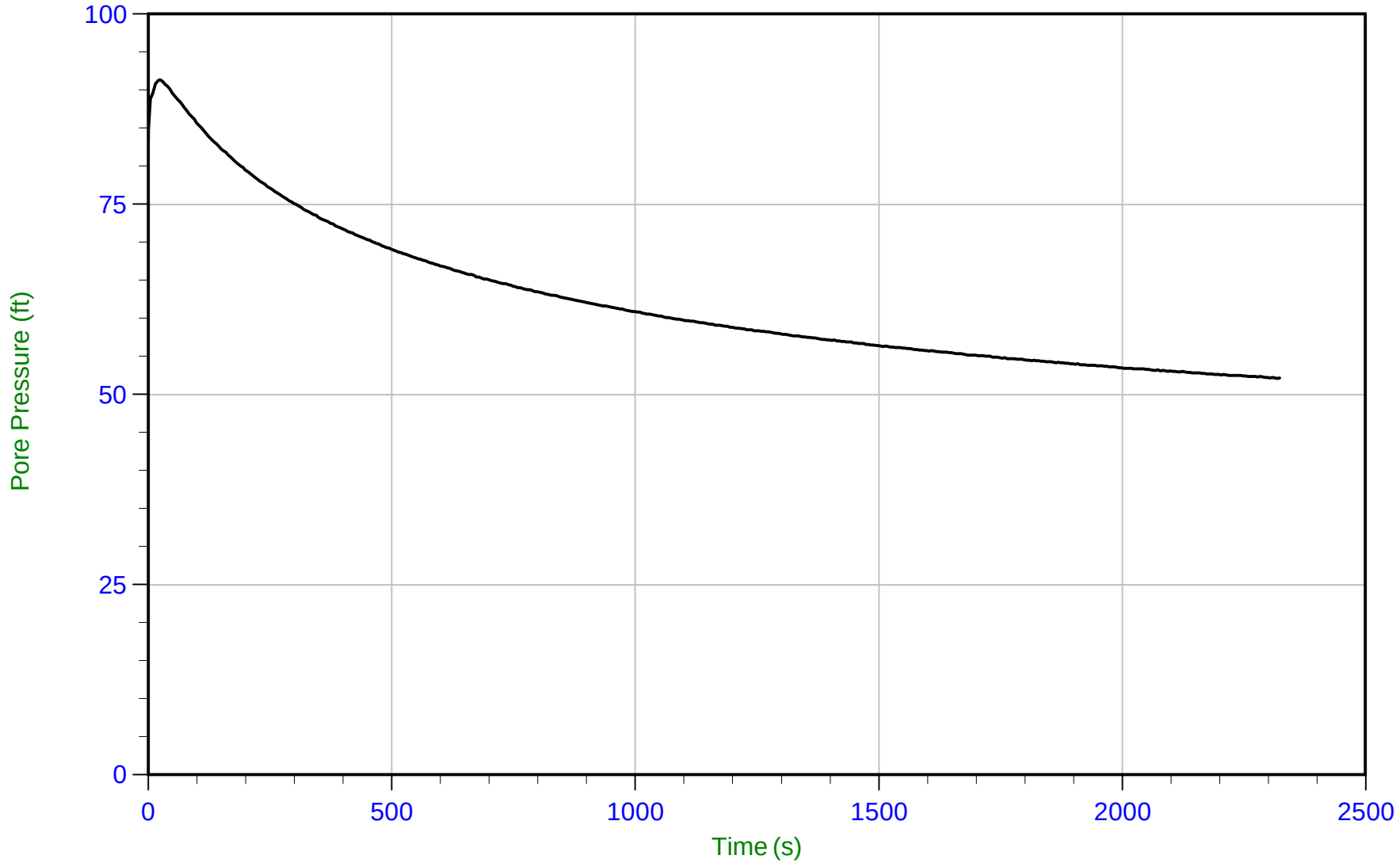
U Hyd: 52.1 ft
U Max: 79.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 17:21
Site: PDI Longview CP

Sounding: PDI-SU07-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-02.PPD
Depth: 12.475 m / 40.928 ft
Duration: 2325.0 s

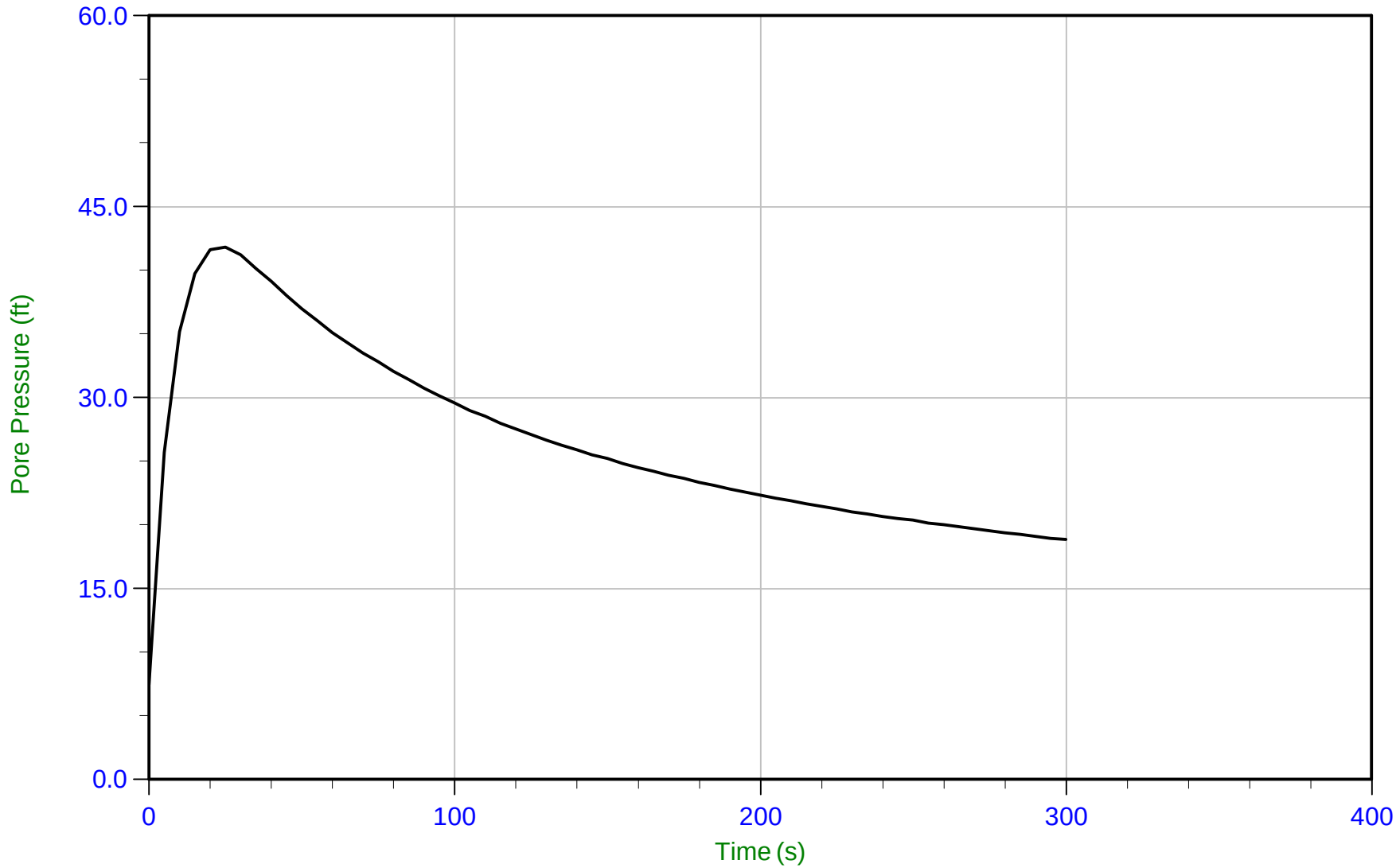
U Hyd: 52.1 ft
U Max: 91.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 2.975 m / 9.760 ft
Duration: 300.0 s

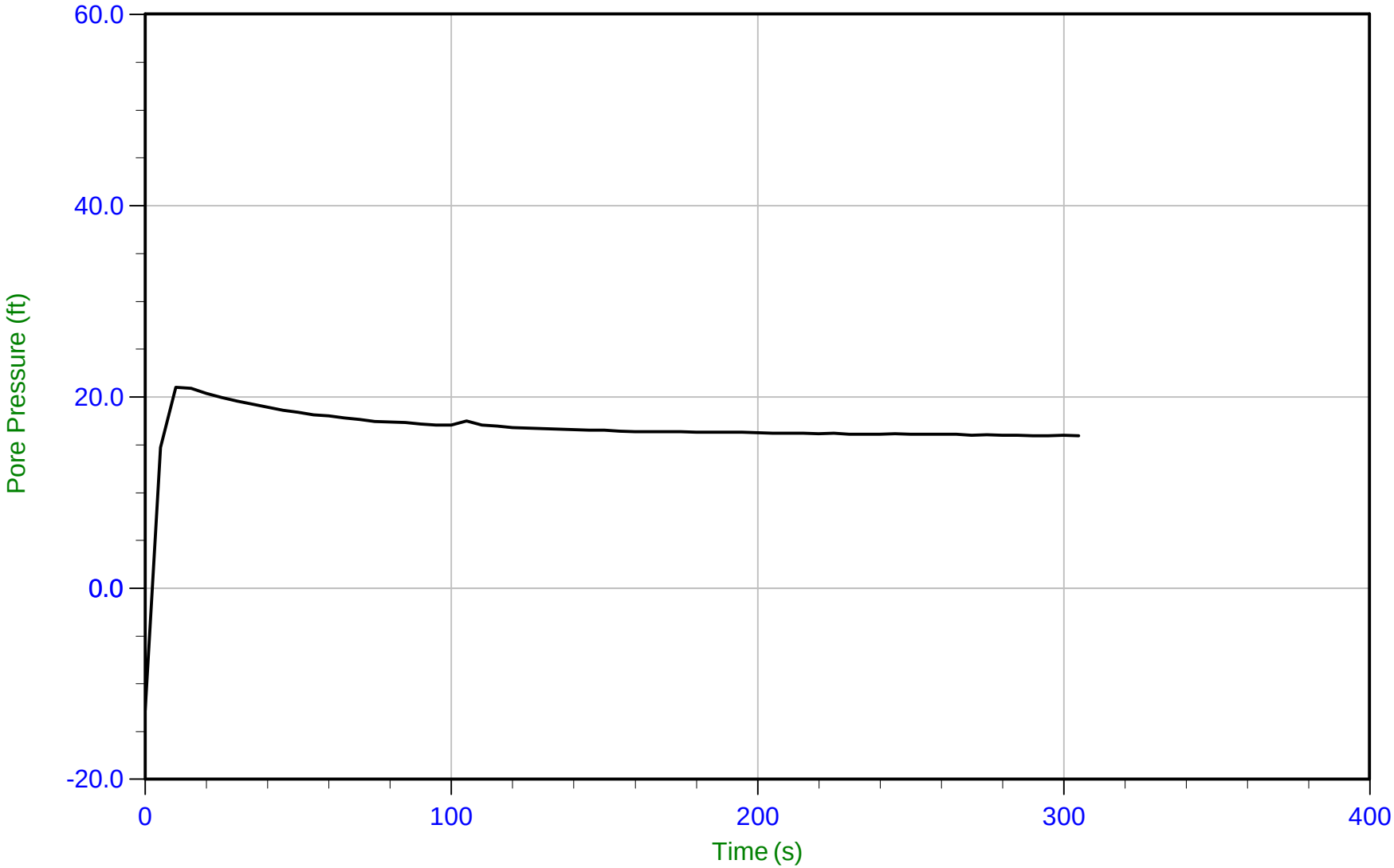
U Mid: 7.5 ft
U Max: 41.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 5.225 m / 17.142 ft
Duration: 305.0 s

U Min: -12.8 ft
U Max: 21.0 ft

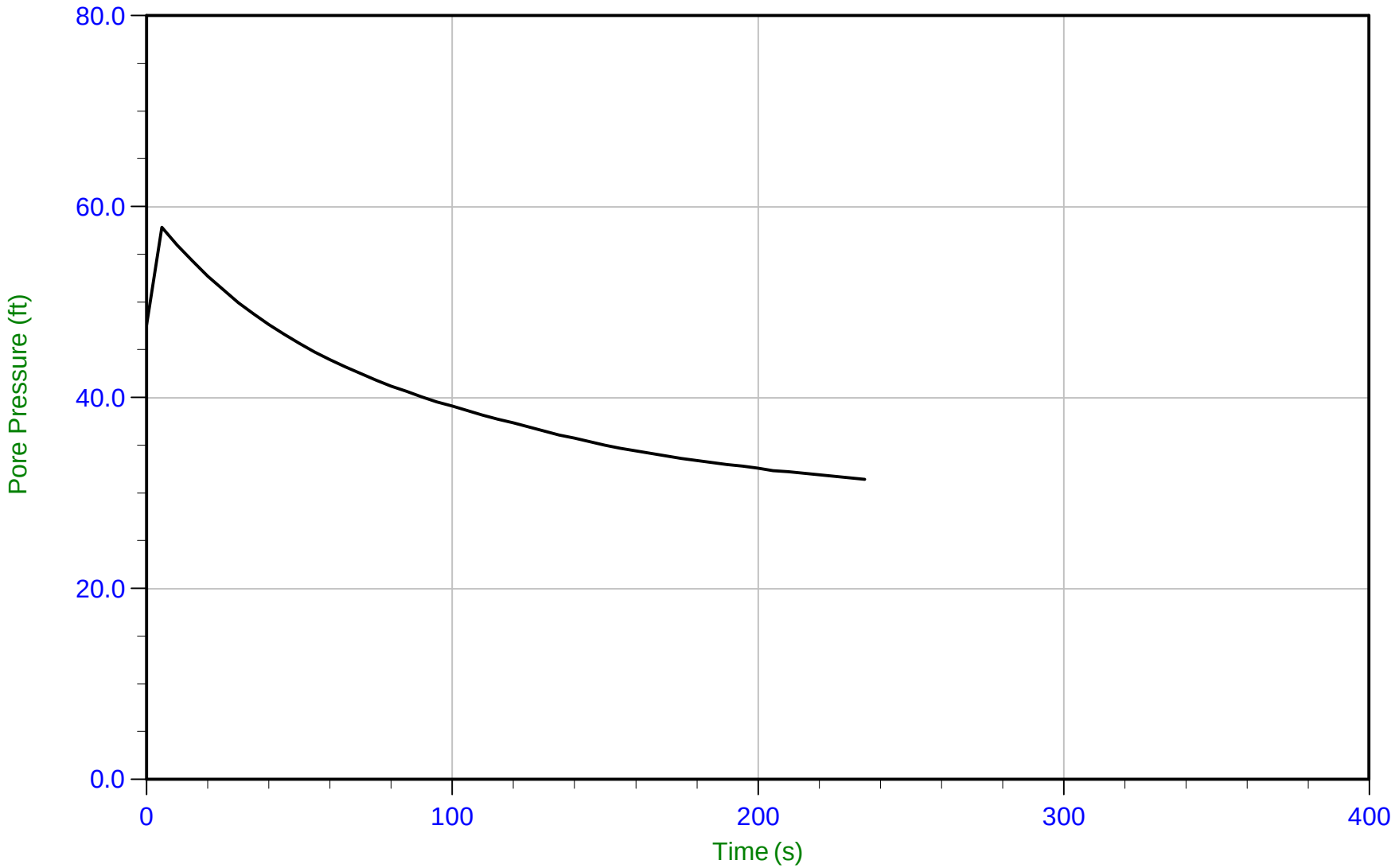
WT: 0.334 m / 1.096 ft
Ueq: 16.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 7.050 m / 23.130 ft
Duration: 235.0 s

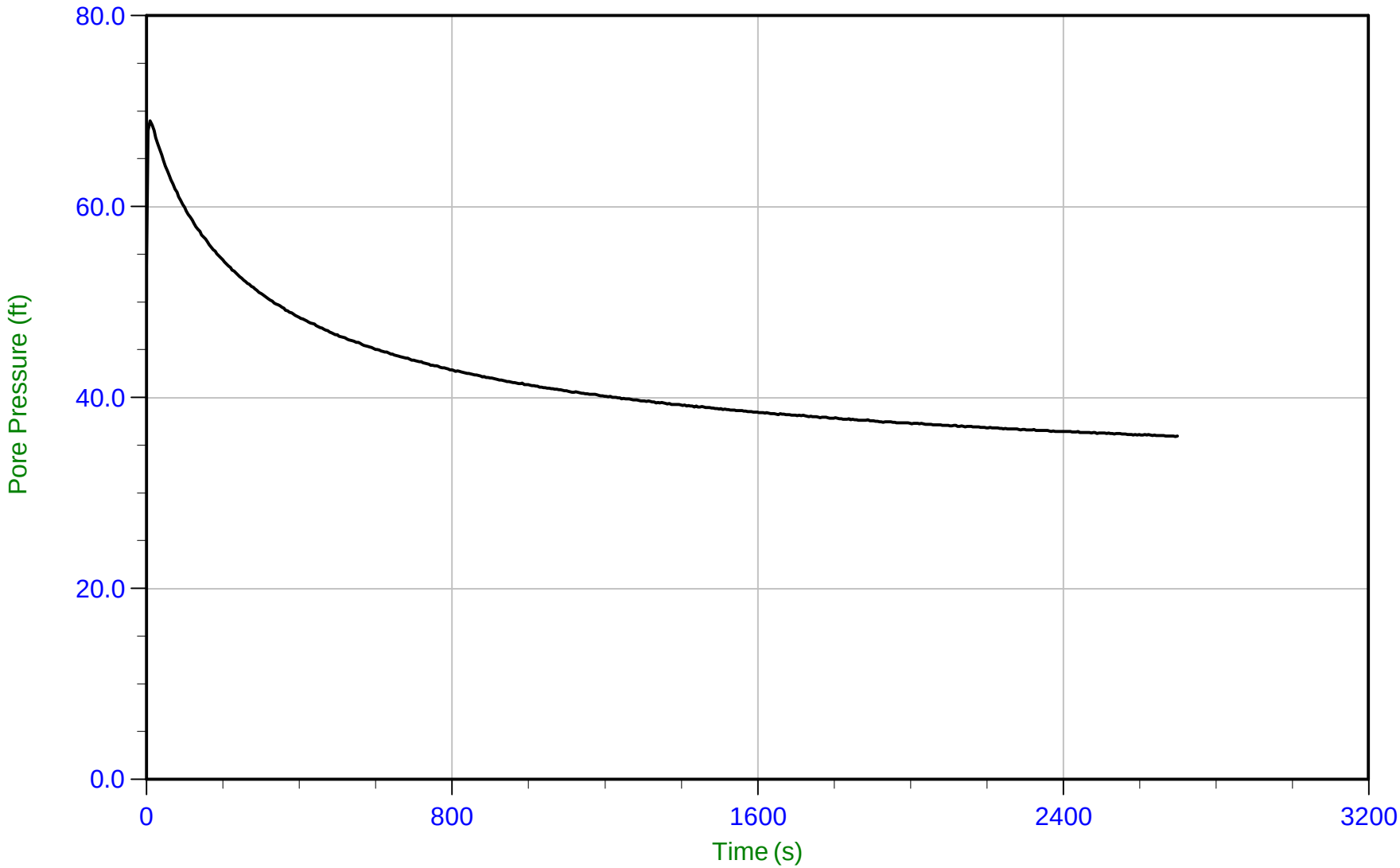
U Mid: 31.5 ft
U Max: 57.9 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 9.175 m / 30.101 ft
Duration: 2700.0 s

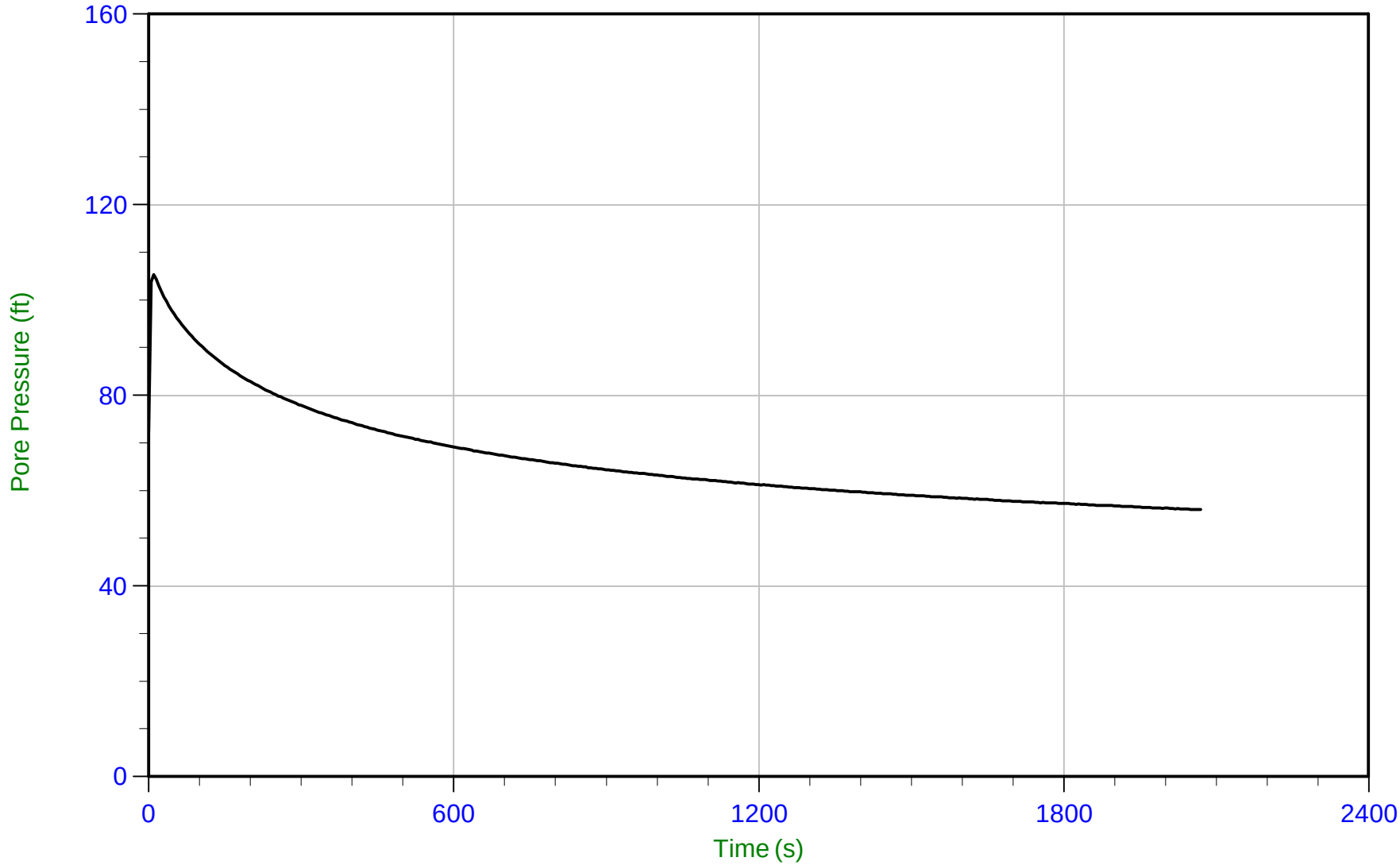
U Mid: 35.9 ft
U Max: 69.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 12.200 m / 40.026 ft
Duration: 2070.0 s

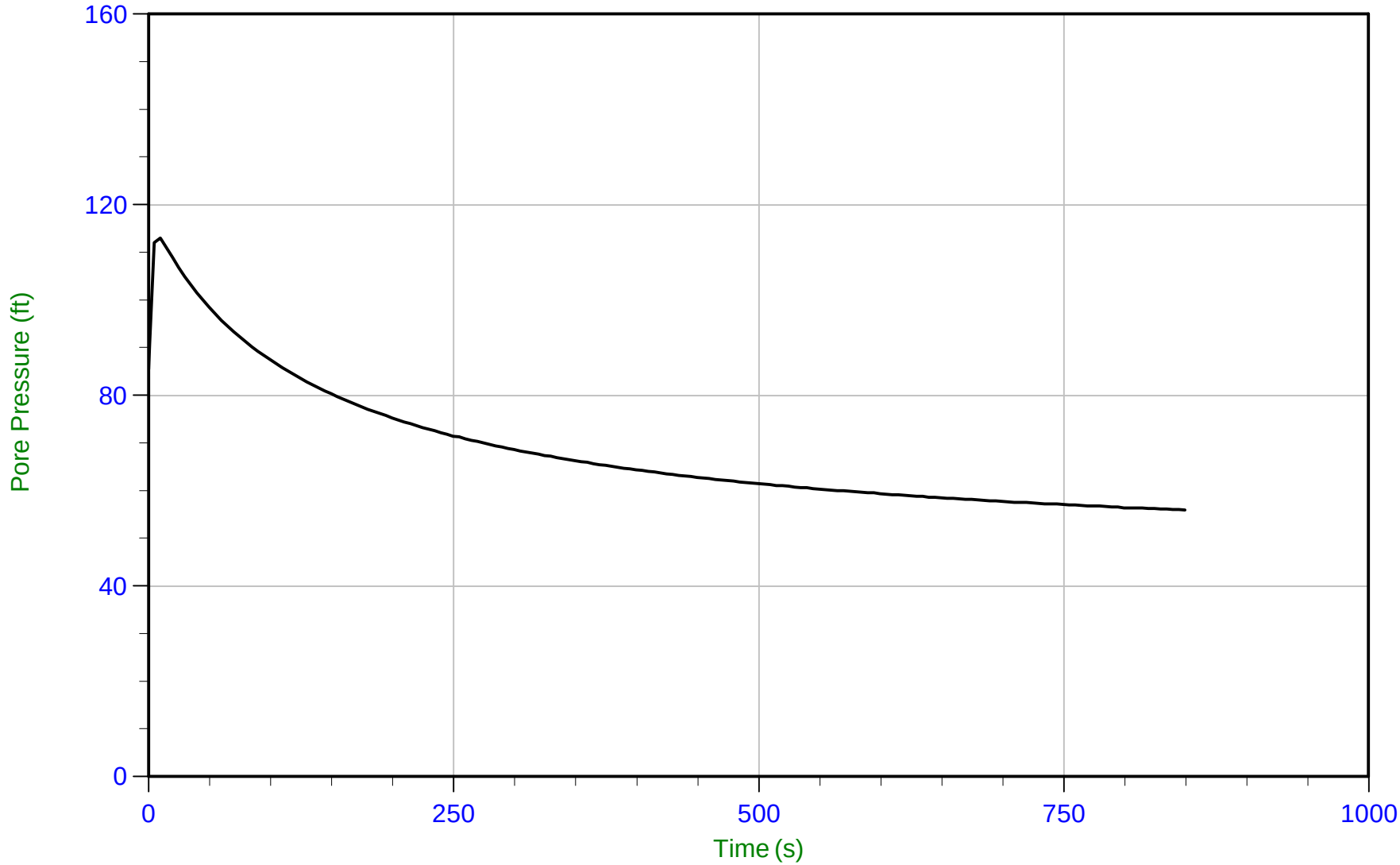
U Mid: 56.0 ft
U Max: 105.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/22/2020 14:06
Site: PDI Longview CP

Sounding: PDI-SU07-PC-03
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU07-PC-03.PPD
Depth: 15.250 m / 50.032 ft
Duration: 850.0 s

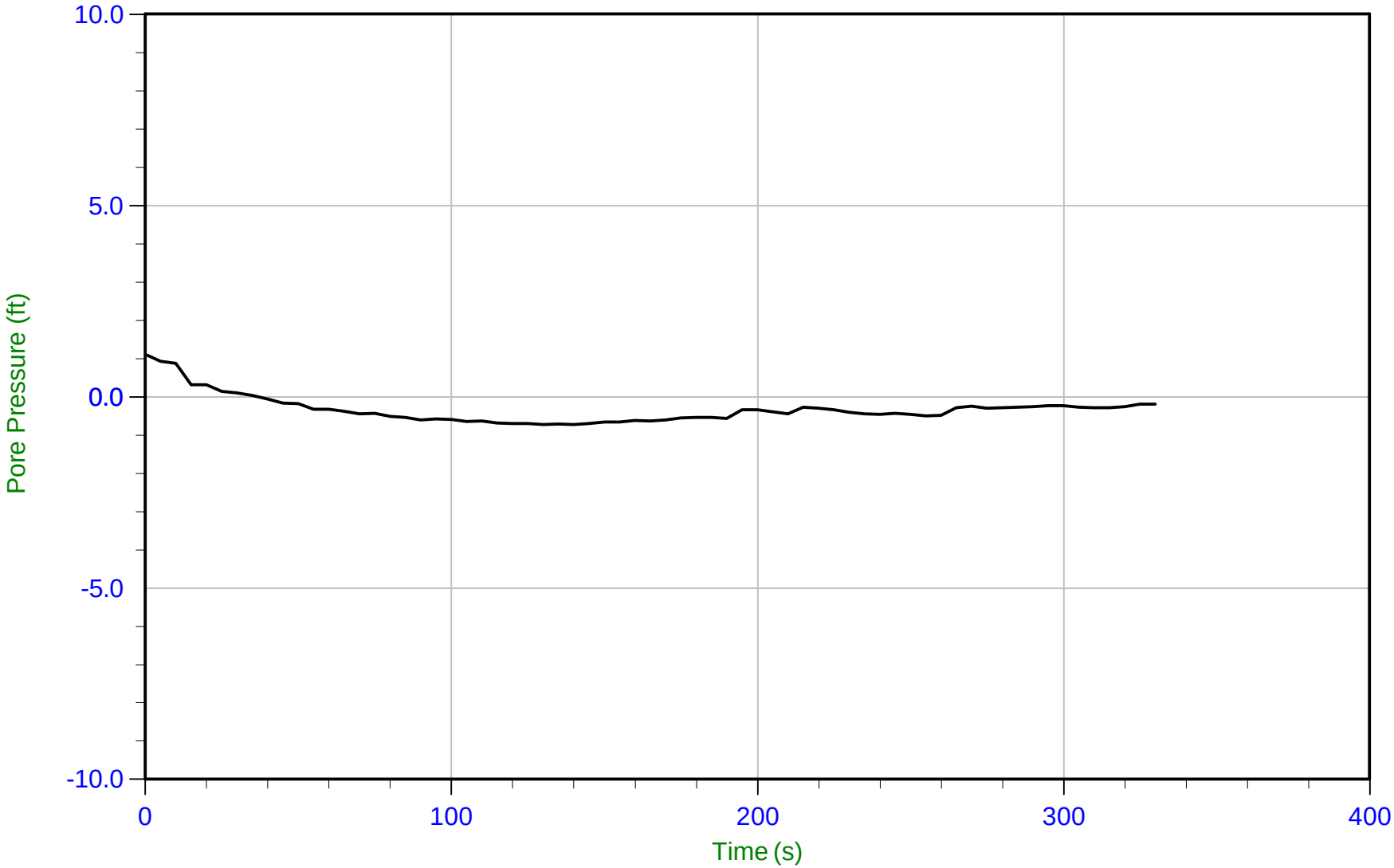
U Hyd: 56.0 ft
U Max: 113.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 09:50
Site: PDI Longview CP

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-01.PPD
Depth: 4.325 m / 14.189 ft
Duration: 330.0 s

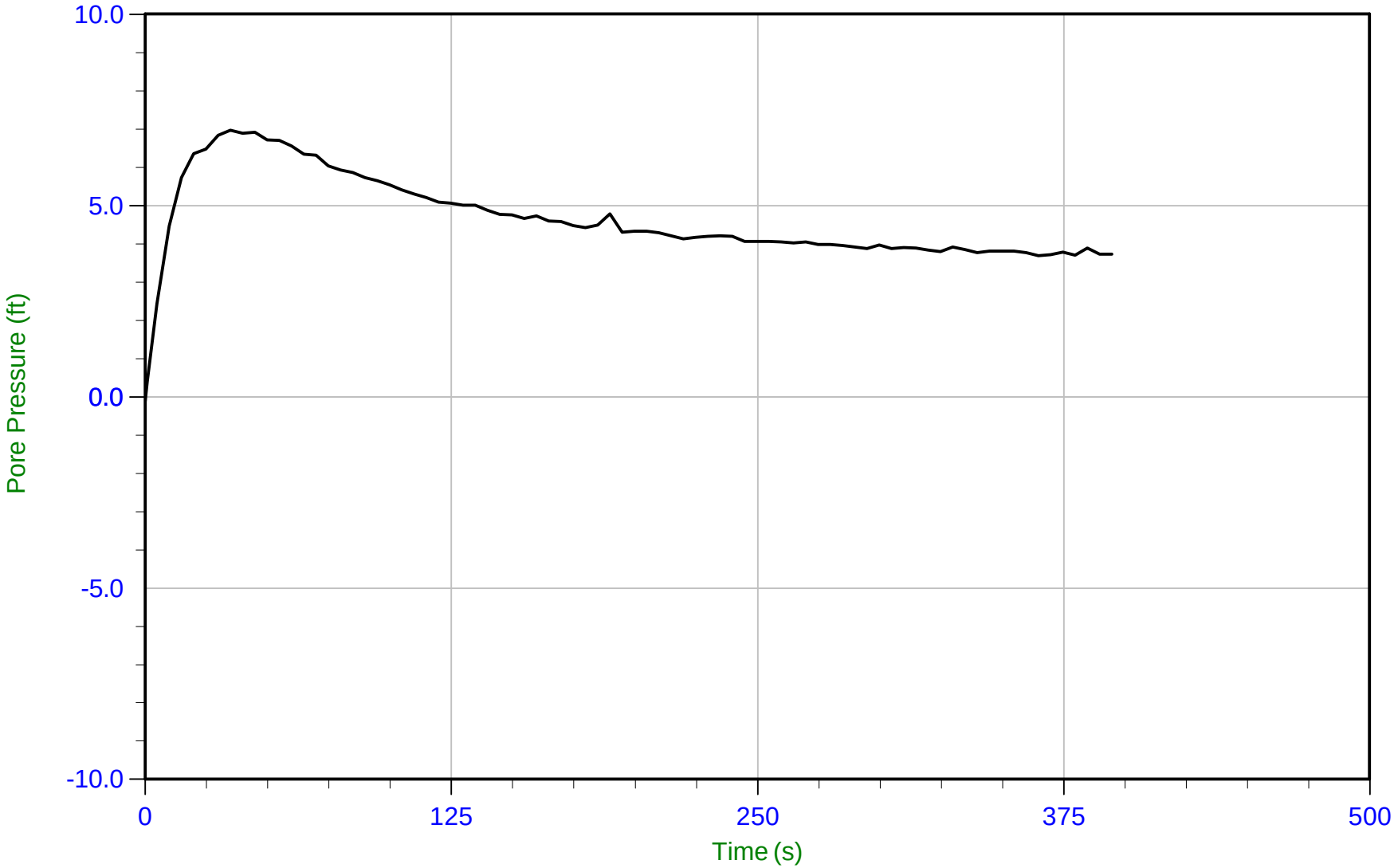
U Min: -0.7 ft
U Max: 1.1 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 09:50
Site: PDI Longview CP

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-01.PPD
Depth: 6.150 m / 20.177 ft
Duration: 395.0 s

U Min: -0.1 ft
U Max: 7.0 ft

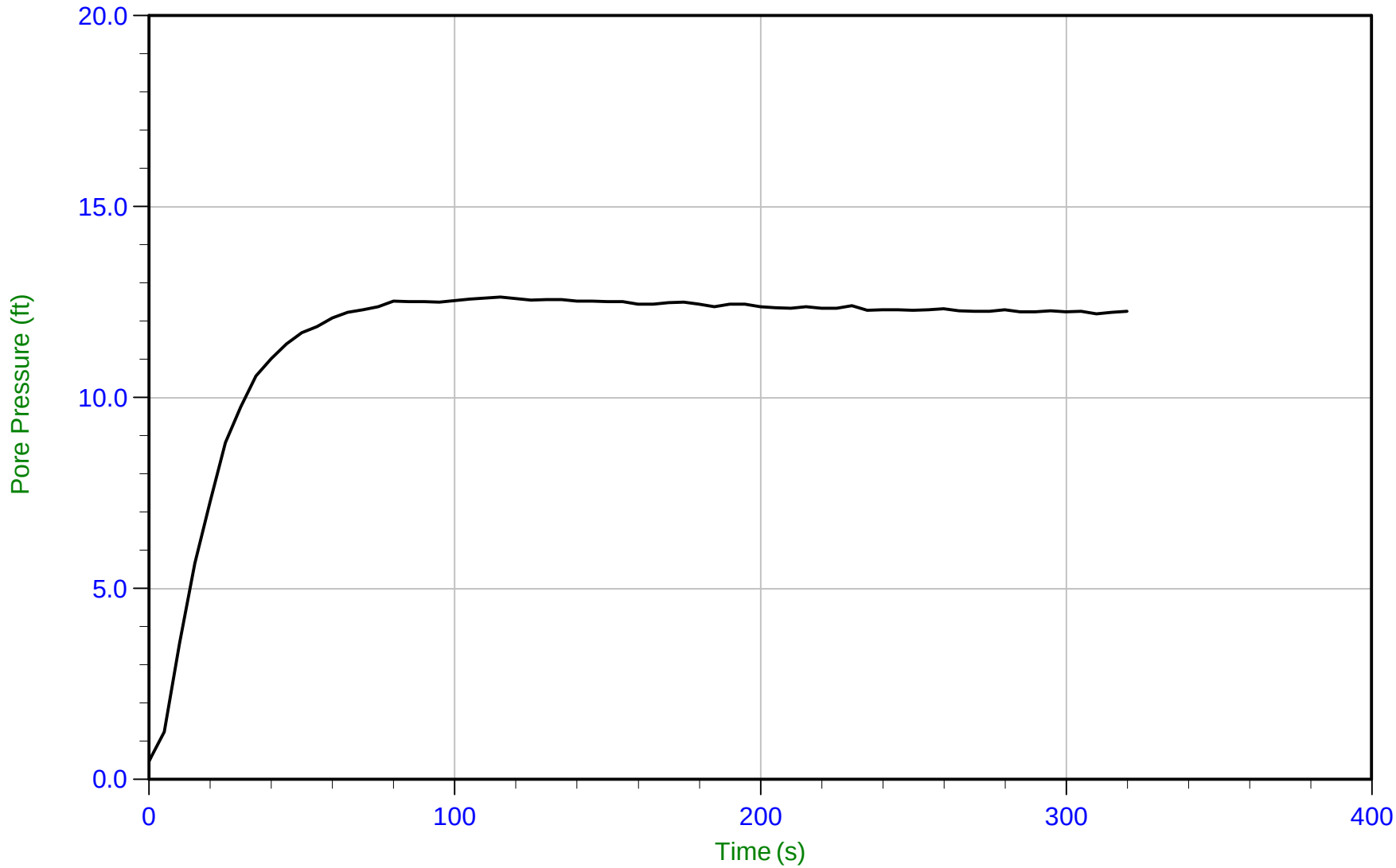
WT: 5.016 m / 16.456 ft
Ueq: 3.7 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 09:50
Site: PDI Longview CP

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-01.PPD
Depth: 9.200 m / 30.183 ft
Duration: 320.0 s

U Min: 0.5 ft
U Max: 12.6 ft

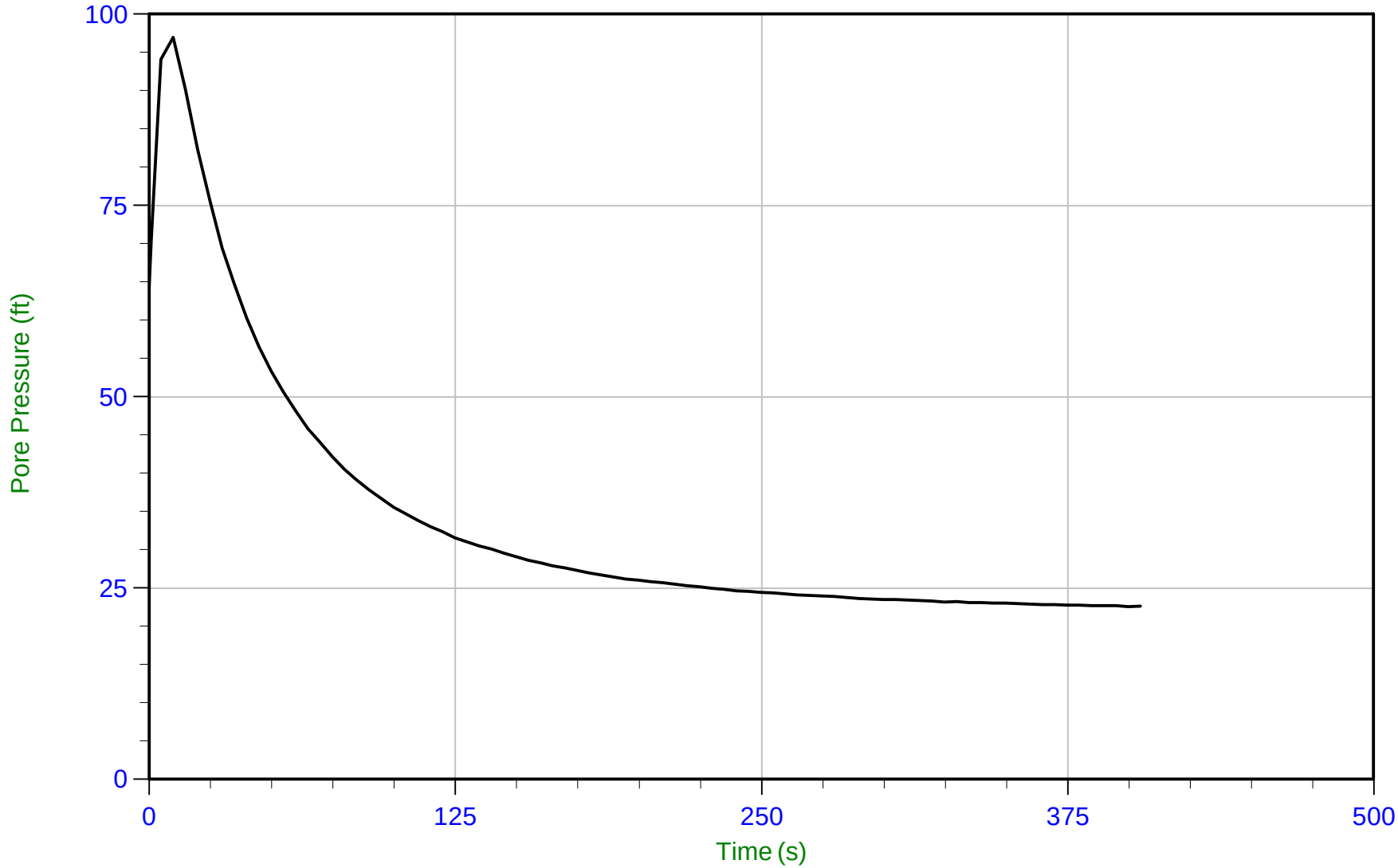
WT: 5.479 m / 17.976 ft
Ueq: 12.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 09:50
Site: PDI Longview CP

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-01.PPD
Depth: 12.250 m / 40.190 ft
Duration: 405.0 s

U Init: 22.6 ft
U Max: 96.9 ft

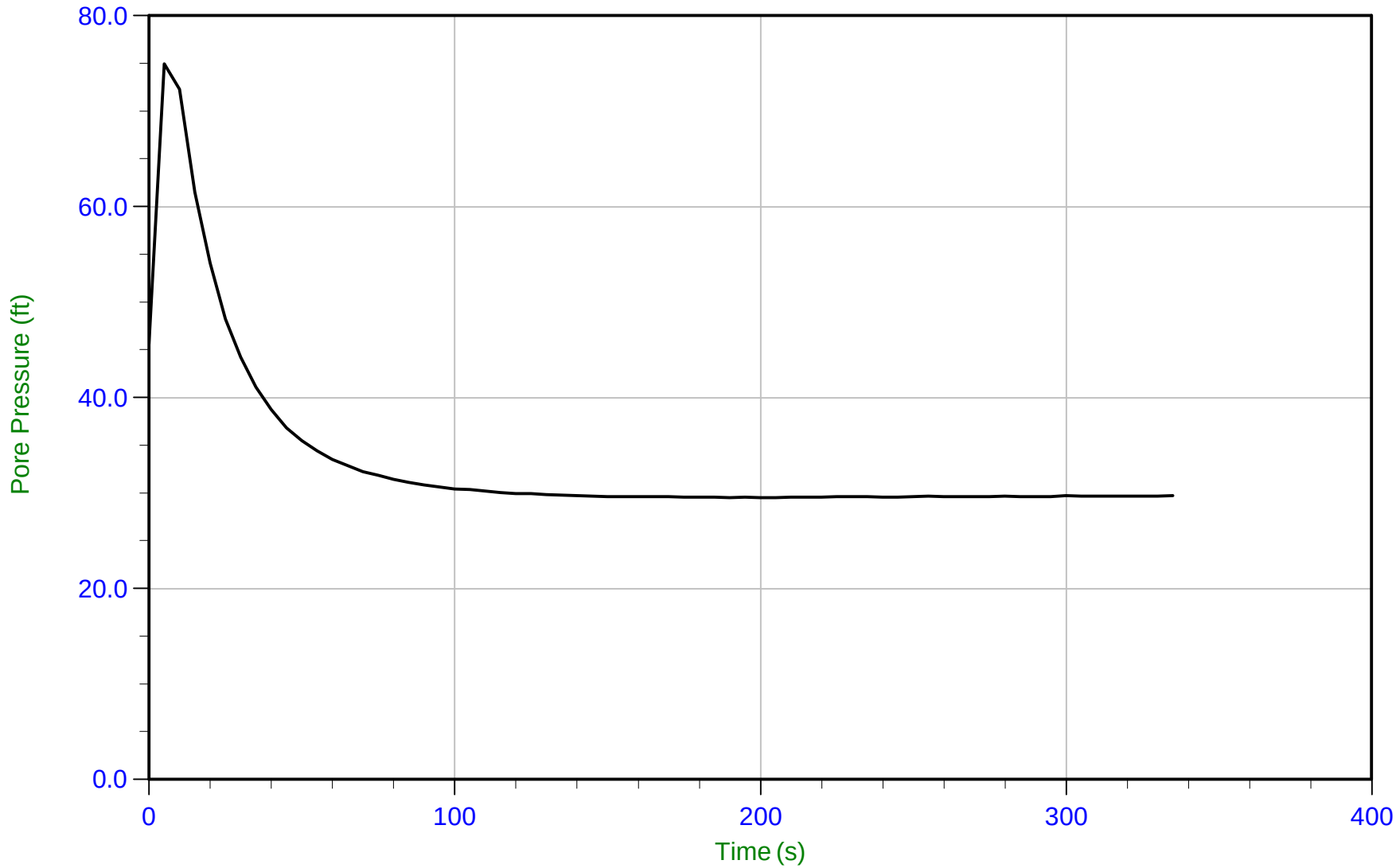
WT: 5.427 m / 17.805 ft
Ueq: 22.4 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 09:50
Site: PDI Longview CP

Sounding: PDI-SU10-PC-01
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-01.PPD
Depth: 15.250 m / 50.032 ft
Duration: 335.0 s

U Min: 29.5 ft
U Max: 75.0 ft

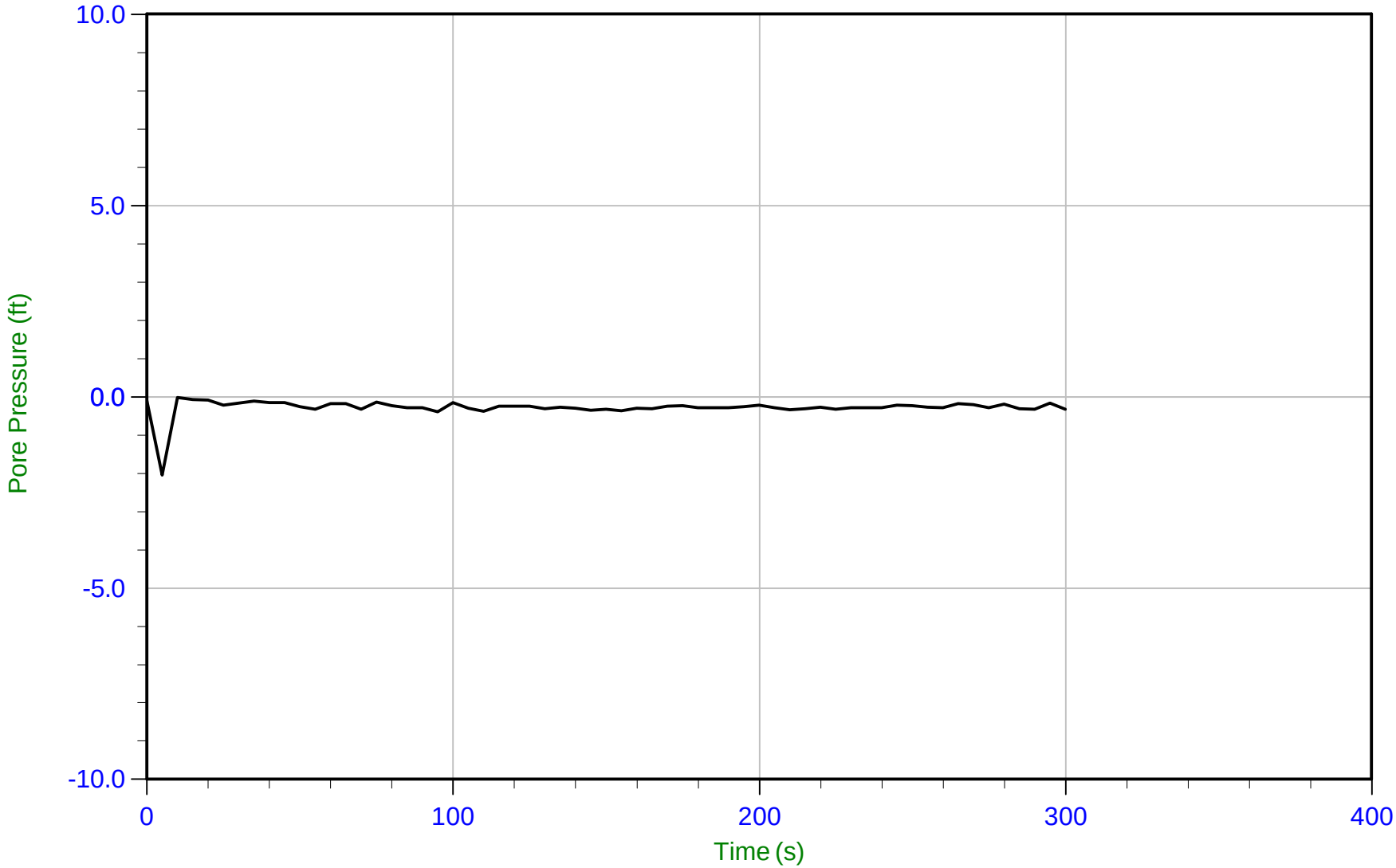
WT: 6.177 m / 20.266 ft
Ueq: 29.8 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 11:36
Site: PDI Longview CP

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-02.PPD
Depth: 3.075 m / 10.088 ft
Duration: 300.0 s

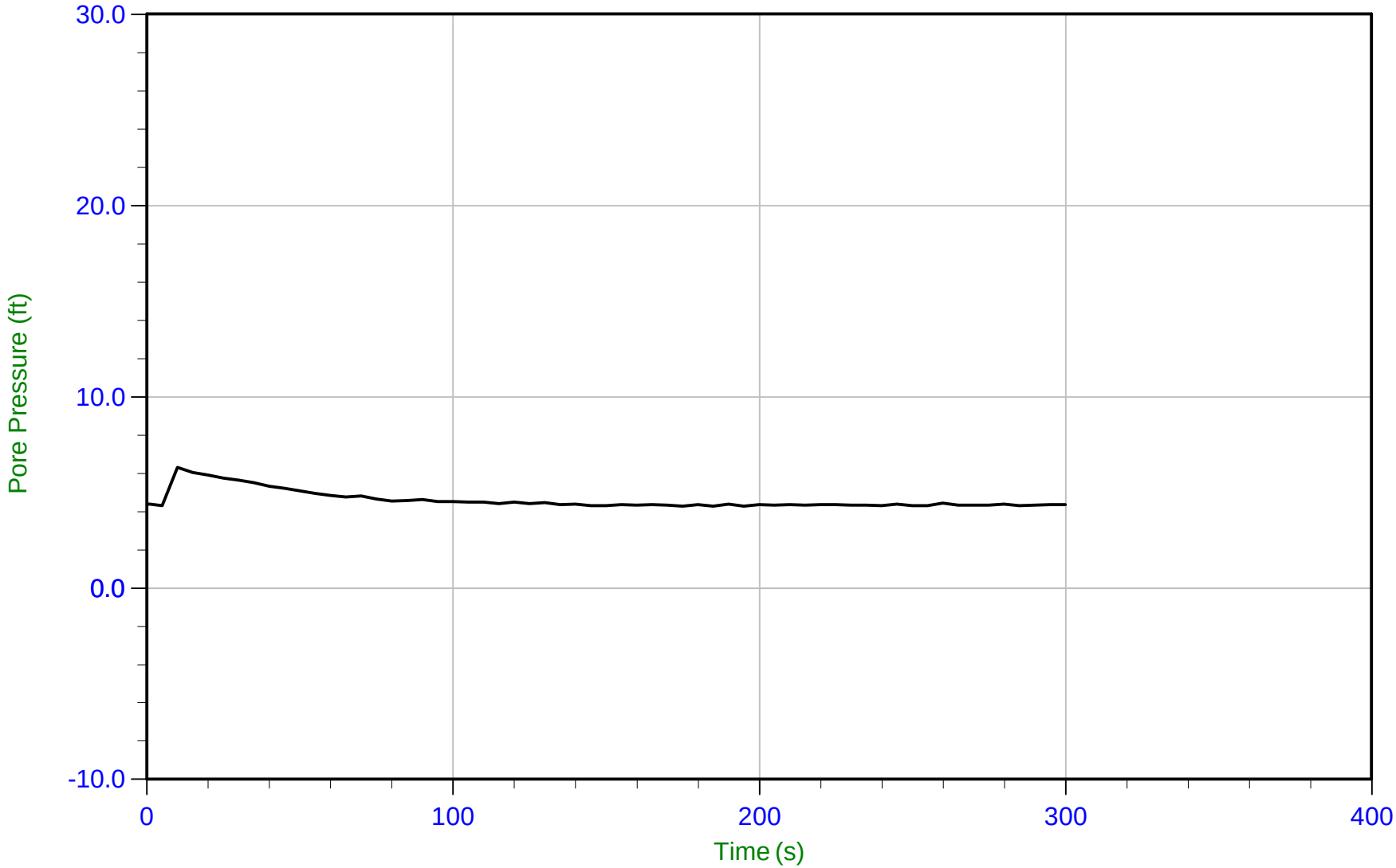
U Min: -2.0 ft
U Max: -0.0 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 11:36
Site: PDI Longview CP

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-02.PPD
Depth: 6.150 m / 20.177 ft
Duration: 300.0 s

U Mid: 4.3 ft
U Max: 6.3 ft

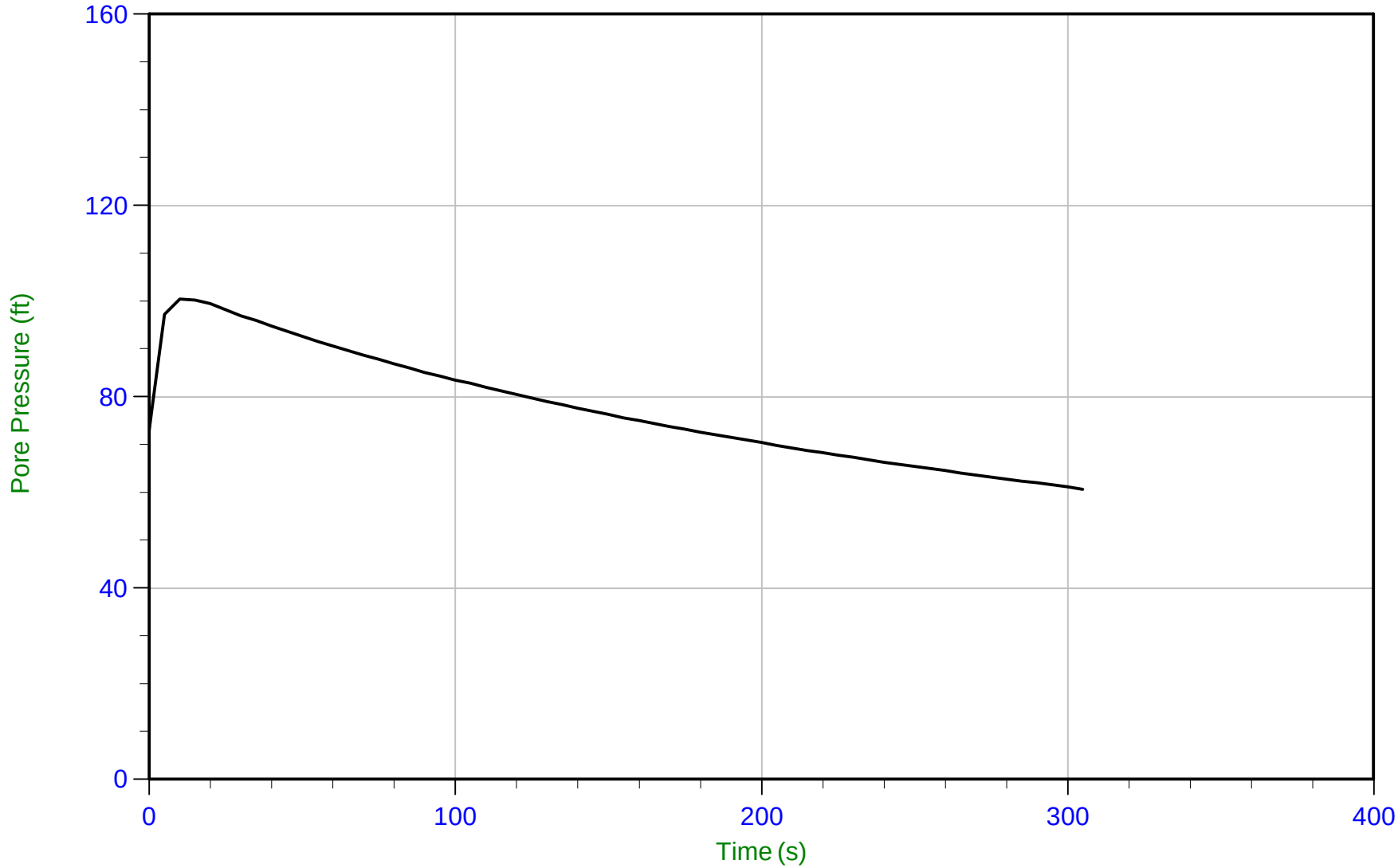
WT: 4.839 m / 15.876 ft
Ueq: 4.3 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 11:36
Site: PDI Longview CP

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-02.PPD
Depth: 9.200 m / 30.183 ft
Duration: 305.0 s

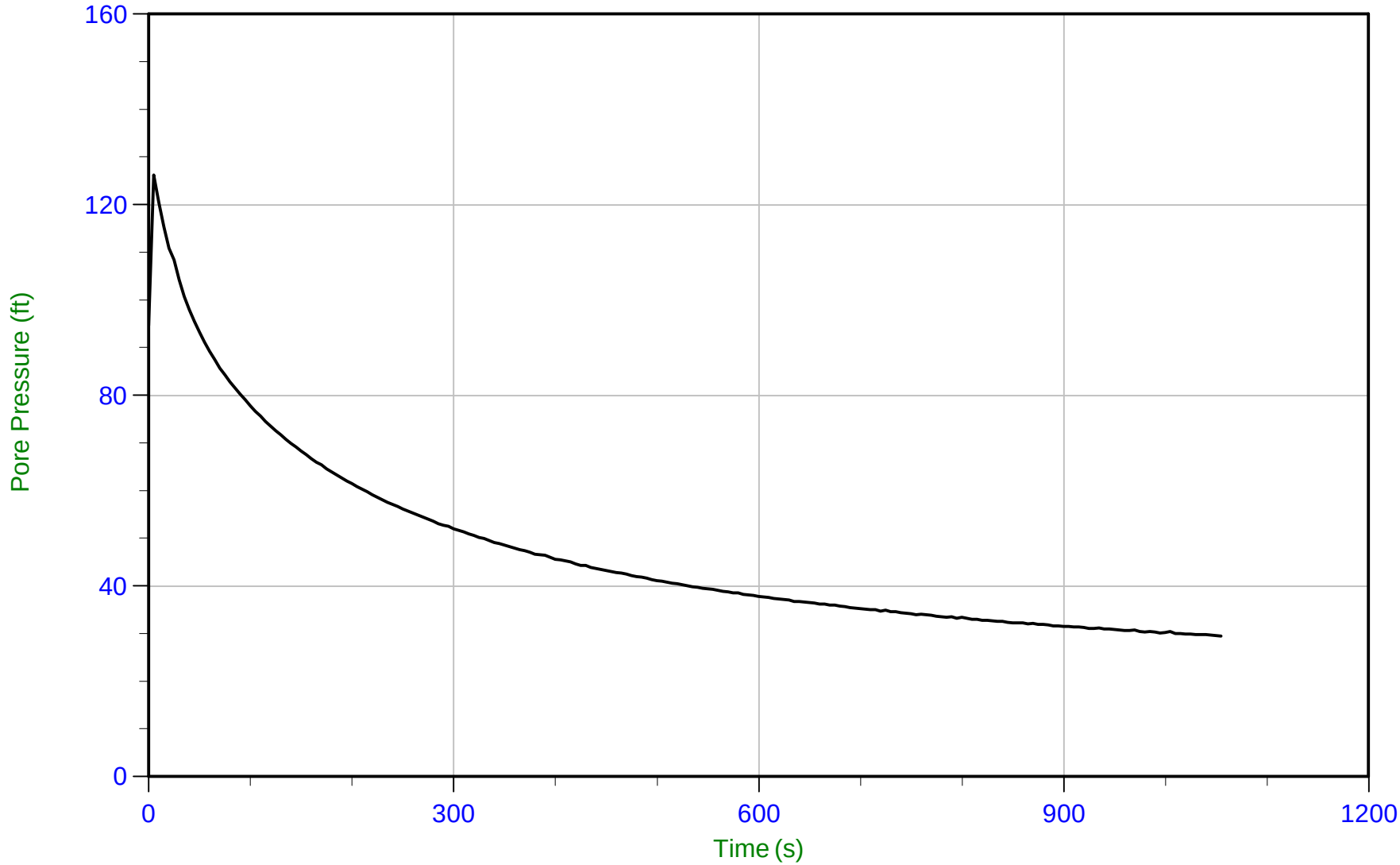
U Hyd: 60.7 ft
U Max: 100.5 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 11:36
Site: PDI Longview CP

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-02.PPD
Depth: 12.225 m / 40.108 ft
Duration: 1055.0 s

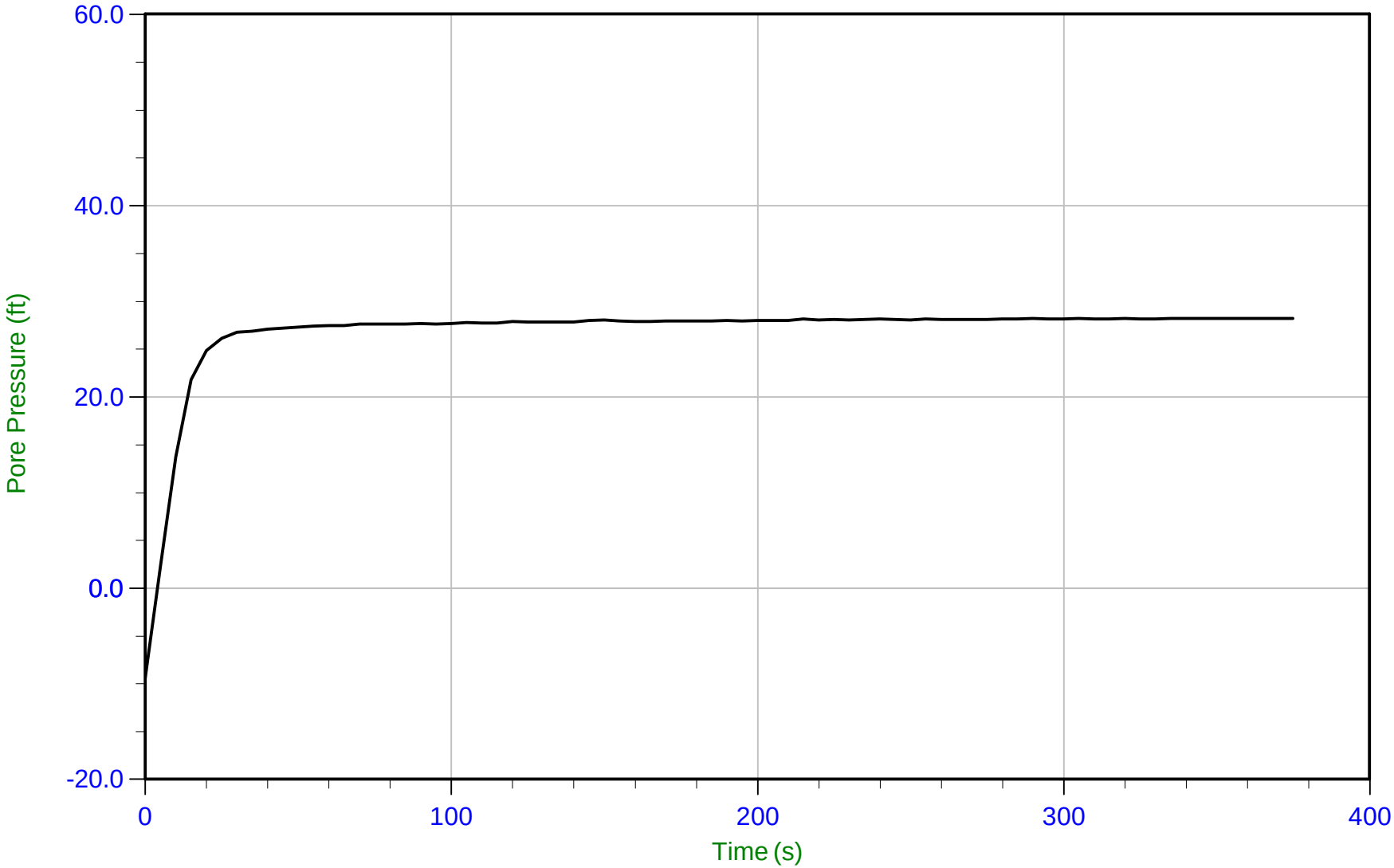
U Mid: 29.5 ft
U Max: 126.2 ft

CONETEC

Anchor QEA

Job No: 20-59-20521
Date: 02/19/2020 11:36
Site: PDI Longview CP

Sounding: PDI-SU10-PC-02
Cone: 537:T1500F15U500 Area=15 cm²



Trace Summary:

Filename: 20-59-20521_CP_SU10-PC-02.PPD
Depth: 15.250 m / 50.032 ft
Duration: 375.0 s

U Hyd: -9.4 ft
U Max: 28.2 ft

WT: 6.673 m / 21.893 ft
Ueq: 28.1 ft