GEOTECHNICAL SUBSURFACE INVESTIGATION
DATA REPORT
(REVISION NO. 1)

CGG Combined Operating License Application (COLA) Project
Calvert Cliffs Nuclear Power Plant (CCNPP)
Calvert County, Maryland

April 13, 2007

Prepared By:

SCHNABEL ENGINEERING NORTH, LLC
Gaithersburg, Maryland
(Schnabel Project No. 06120048)

Submitted To:

BECHTEL POWER CORPORATION
Frederick, Maryland
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Binder No. 2 of 3

Including:

Appendix F: Cone Penetration Testing (CPT)
Appendix G: Borehole Geophysics
Appendix H: SPT Hammer Energy Study

CPT REPORT
Presentation of In Situ Testing Program Results
ConeTec, Inc.
August 31, 2006

PRESENTATION OF IN SITU TESTING PROGRAM RESULTS

Revision 1

Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

July 11 through 31, 2006

Prepared for:

Schnabel Engineering
Gaithersburg, MD

Prepared by:

CONETEC

ConeTec Inc.
Charles City, Virginia

November 13, 2006

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1.0 INTRODUCTION

This report presents the results of a peizo cone penetrometer testing (CPTU) program carried out at the site of the proposed nuclear power plant structure adjacent to the existing Calvert Cliffs Nuclear Power Plant. The work was performed under subcontract to Schnabel Engineering, Inc. of Gaithersburg, Maryland. The CPTU program took place during the period of July 11th through 31st, 2006.

A total of sixty-three CPTU and SCPTU soundings were completed at selected locations. The majority of the CPT soundings encountered refusal conditions before the target termination depth was achieved. In several locations, the CPT was continued below the refusal depths after pre-drilling operations were conducted. The CPT testing was performed to evaluate in situ geotechnical as well as seismic criteria. CPT sounding locations were selected and numbered under the direction and supervision of Mr. Bill Bradfield of Schnabel Engineering.

2.0 FIELD EQUIPMENT AND PROCEDURES

2.1 CONE PENETRATION TESTING

The cone penetrometer tests were carried out using an integrated electronic seismic piezo cone. The piezo cone used was a compression model cone penetrometer with a 15 cm^2 tip and a 225 cm^2 friction sleeve. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85. The piezo cone dimensions and the operating procedure were in accordance with ASTM Standard D-5778-95. A diagram of the cone penetrometer used for this project is shown as Figure 1.

Pore pressure filter elements, made of porous plastic, were saturated under a vacuum using silicone oil as the saturating fluid. The pore pressure element was six millimeters thick and was located immediately behind the tip (the U_2 location) for all soundings.

The cone was advanced using a unitized, track-mounted, purpose-built 15 ton CPT rig. The following data were recorded every five centimeters (approximately every 2 inches) as the cone was advanced into the ground:

- Tip Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (U)

The field data recorded is included on the attached CD.

Before each sounding a complete set of analog baseline readings are taken with an integated multi-meter and compared with the digitized value on the computer screen. This provides a check on the analog to digital conversion board.

Evaluation of the analog baselines is key to consistent readings. The baseline data should be stable and should not wander excessively during the course of a sounding. Baseline data can be used to apply corrections to the cone data where necessary. For this project, the baseline shift from sounding to sounding was small, typically less than 0.1% of full scale, and no data corrections were applied.

During seismic testing, the seismic signals were recorded using a geophone mounted in the cone as shown in Figure 1 and an up-hole integrated digital oscilloscope. A sledge hammer hit against a beam was used for the seismic source. Normal reaction for the beam was provided by the dead weight of the rig placed upon the beam. A schematic of the shear wave testing configuration is shown in Figure 2.

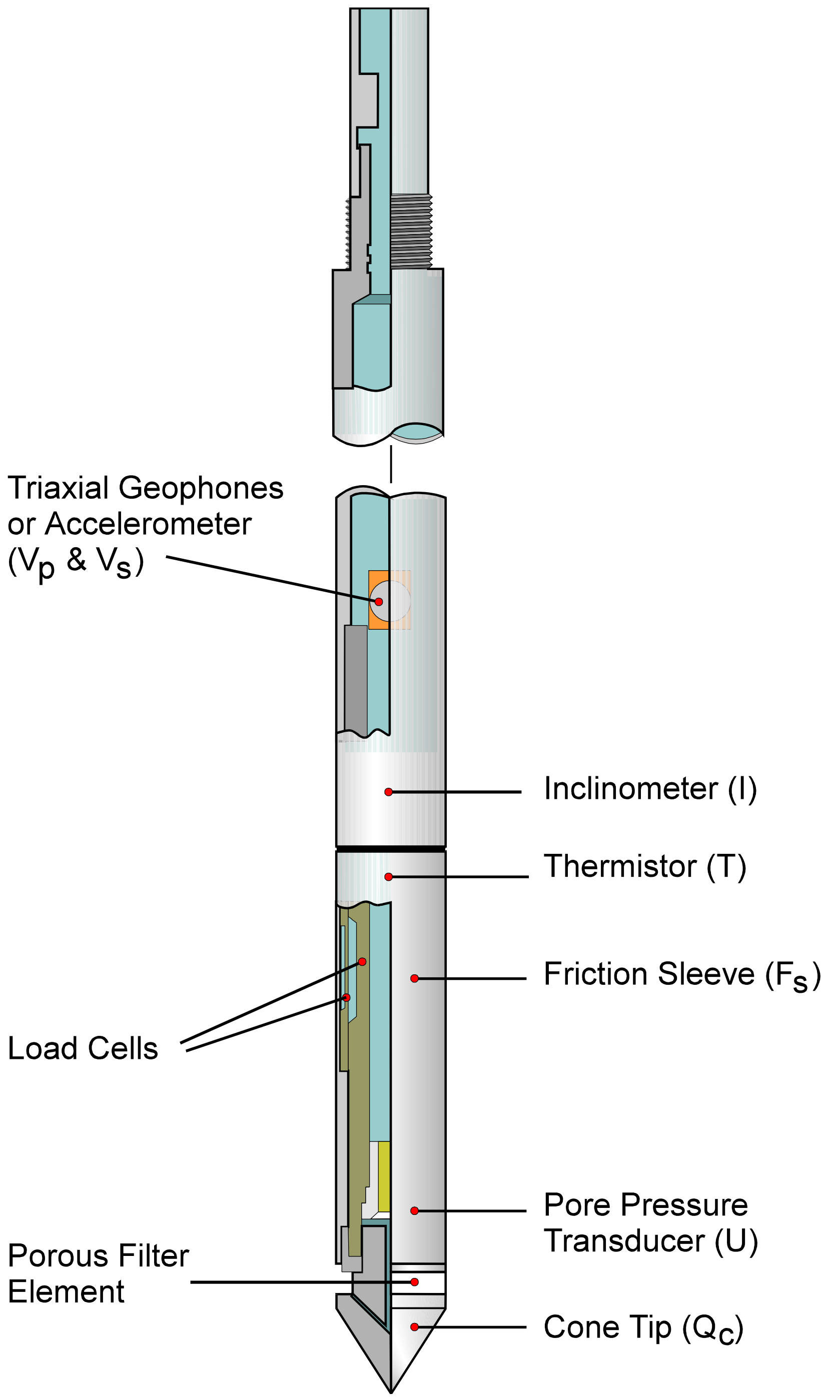


FIGURE 1 - TYPICAL CONE PENETROMETER

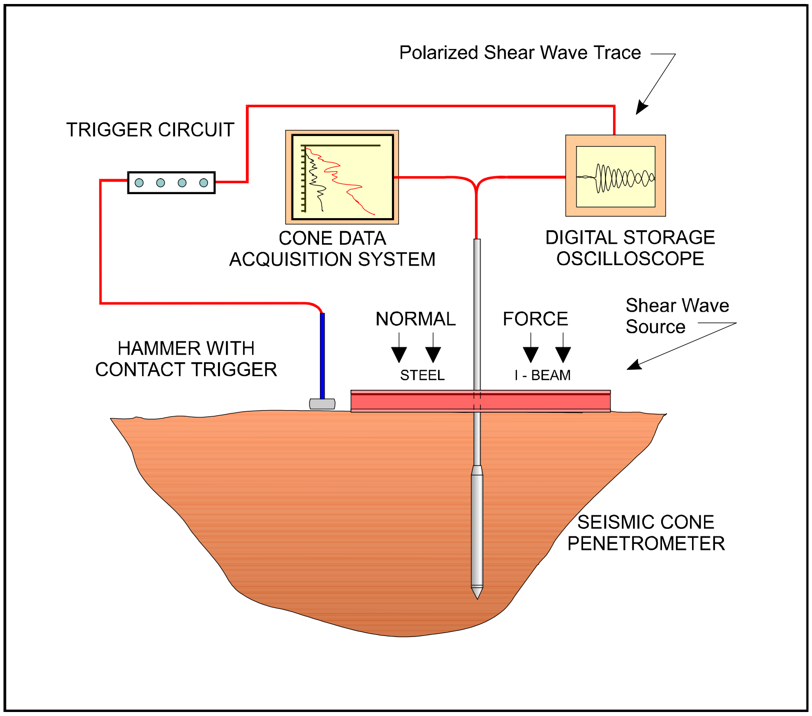


FIGURE 2 - SCHEMATIC OF SHEAR WAVE TESTING CONFIGURATION

2.2 PORE PRESSURE DISSIPATION TESTS

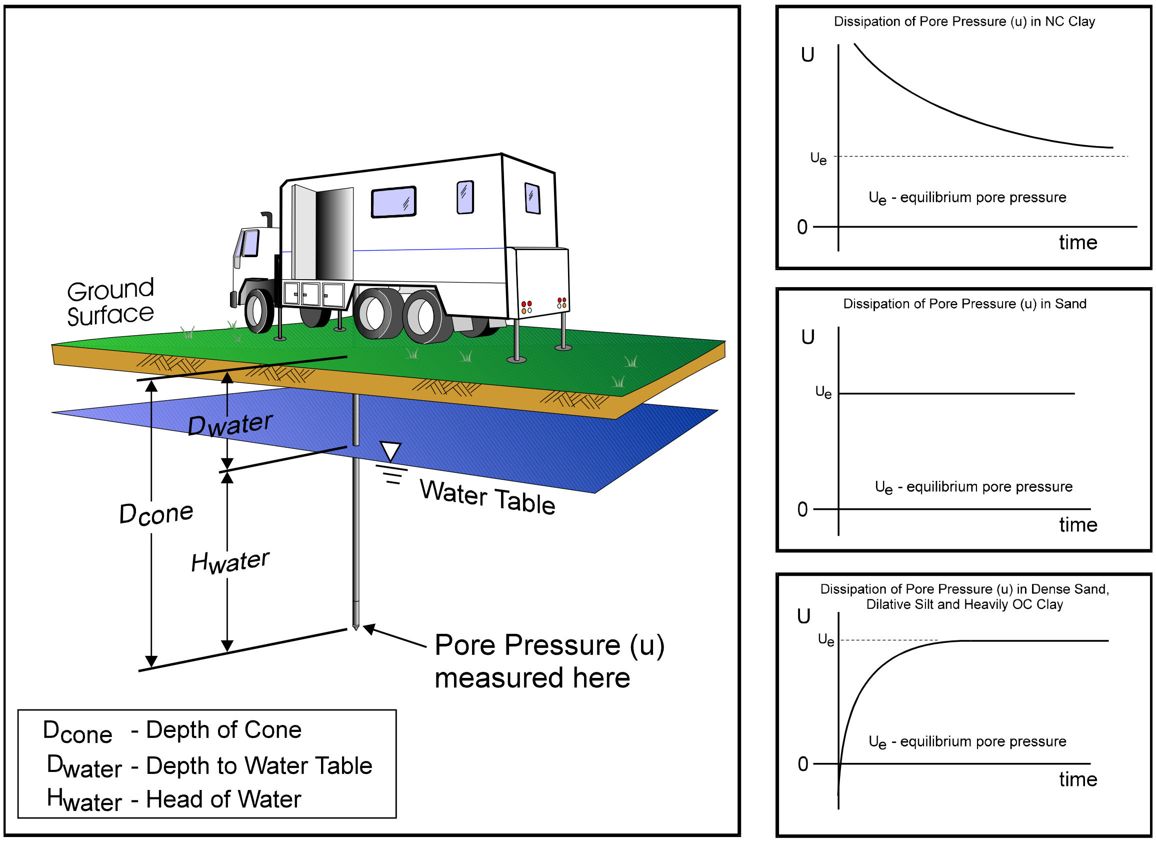
When cone penetration is stopped, the piezo cone essentially becomes a piezometer. While stopped, pore water pressures are automatically recorded at five-second intervals and the readings are stored in a dissipation file. Dissipation data can then be plotted onto a dissipation curve consisting of pore water pressure (U) verses time (t). The shapes of dissipation curves are very useful in evaluating soil type, drainage and in situ static water level.

A flat curve that stabilizes quickly (i.e. less than 30 seconds) is typical of a free draining sand. In this case, the final measured pore water pressure is the static in situ water pressure.

Soils that generate excess dynamic pore water pressure during penetration will dissipate this excess pressure when penetration stops. The shape of the dissipation curve and the time of dissipation can be used to estimate c_h, the coefficient of consolidation that can in turn be used to calculate K_h, the horizontal permeability.

Figure 3 shows some idealized shapes of various pore water pressure dissipation curves. The reader is referred Robertson et. al., 1992 to reference dissipation test data analytical techniques.

Estimation of Ground Water Table from CPT Dissipation Tests



Water Table Calculation

$$D_{water} = D_{cone} - H_{water}$$

where $H_{water} = U_e$ (depth units)

Useful Conversion Factors: 1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

FIGURE 3 - TYPICAL DISSIPATION TESTS

3.0 CONE PENETRATION TEST DATA AND INTERPRETATION

3.1 ANALYSIS OF PIEZOCONE DATA - GENERAL

A total of sixty three CPT soundings, involving approximately 2555 feet of CPTU testing and 996 feet of SCPTU soundings were completed.

The interpretation of cone data is based on the relationship between cone bearing, qc, sleeve friction, fs, and penetration pore water pressure, U. The friction ratio, Rf , (sleeve friction divided by cone bearing) is a calculated parameter which is used to infer soil behavior type. 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.

The interpretation of soils encountered on this project was carried out using established correlations presented in Appendix D. It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and U. Occasionally soils will fall within different soil categories on the classification charts. In these situations, experience and judgment and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type. Computer tabulations of the interpreted soil types along with certain other geotechnical parameters for each cone hole is presented in Appendix B.

Each of the parameters measured in the sounding is discussed briefly below. A detailed explanation of CPTU testing and interpretation of the results can be found in Robertson et. al. 1992.

TIP RESISTANCE (q_c): The resistance to penetration, measured at the cone tip, provides an accurate profile of subsurface strata. The recorded tip resistance is a composite of the penetration resistance of the soils located five to ten cone diameters (7 to 14 inches) in front of and behind the tip. The actual resistance "sensed" by the tip depends on the soil properties and on the relative stiffness of the layers encountered. Tip resistance is often corrected for pore pressure effects when testing in soft saturated cohesive soils.

For this project the correction was made and the tip resistance shown, q_t is the corrected tip resistance.

The correction used is: $q_t = q_c + (1-a)U$

Where:
- q_t = corrected tip resistance
- q_c = measured tip resistance
- a = net area ratio for cone (0.85 for this project)
- U = dynamic pore water pressure measured behind tip

SLEEVE FRICTION (f_s) The resistance recorded on the friction sleeve, is a measure of the remolded strength of the soil. Values of sleeve friction in very soft soils (such as peat) may fluctuate due to the measured force being small relative to the capacity of the measuring load cell.

FRICTION RATIO (R_f) The ratio of sleeve friction to tip resistance expressed as a percentage, is an indicator of soil type. Cohesive soils generally have friction ratios that are greater than two, while sands and non-plastic silts have friction ratios that are lower than two.

PORE PRESSURE (U) Dynamic pore water pressure is measured during penetration. Dynamic pore water pressure data can be found in the .cor and .xls files. Static pore water pressure is measured when cone penetration is stopped. The measured dynamic pore water pressure changes with the location of the porous filter and negative readings are possible when the filter is located behind the tip.

It is important to note that the CPT classifies soil by physical behavior, not by grain size; therefore, the CPT classification should be verified against samples obtained from a conventional drilling program. While the CPT soil classification may not always be accurate in terms of the actual label it applies to a particular soil, it is very accurate in grouping soils with similar mechanical properties.

Table 1 presents a summary of the CPT sounding, including sounding depth.

3.2 CONE PLOTS

The data from the sounding was plotted using the computer program ScreenZ4. The CPT plot is included in Appendix A. ScreenZ4 was developed by ConeTec Inc. and it incorporates soil behavior type (SBT) classification as part of the plot. The soil classification is based on the classification chart reproduced chart in Appendix D.

3.3 PORE PRESSURE DISSIPATION TEST RESULTS

When conducting CPT investigations, pore water pressure dissipations are automatically recorded during pauses in penetration. The pore water pressure data is recorded at five second intervals. Pore pressure dissipation test plots are included in Appendix C. Usually, the water table depths used in the data interpretation are derived from the pore water pressure dissipation tests in freely draining layers below the water table. Because the predominant soil profile on this site consisted of silts and clays below the water table (within the exploration depths), it was not practical to record dissipation data until hydrostatic pressure was achieved on every sounding location. This was realized very early in testing program. This was then discussed with Schnabel representatives and it was decided to

Table 1: Sounding Information Table

Sounding ID	Filename	Depth (ft)	Date	Dissipation (minutes)	Estimated Water Table (ft)	Comments
C-301	948cp51	52.33	24-Jul		48	seismic
C-302	948cp05	61.68	12-Jul	121	53	
C-302-2	948cp57	55.28	26-Jul		53	
C-302-2a	948cp58	137.96	26-Jul	4	53	85 ft predrill
C-303	948cp04	25.43	12-Jul		25	
C-303a	948cp54	47.08	25-Jul		15	45 ft predrill
C-303a-1	948cp55	71.36	25-Jul		15	50 ft predrill
C-303b	948cp56	123.36	25-Jul	18	15	80 ft predrill
C-304	948cp03	26.74	12-Jul	18	25	seismic
C-305	948cp06	74.31	12-Jul		28	
C-306	948cp08	56.92	12-Jul	45	53	
C-306a	948cp59	102.53	27-Jul		53	80 ft predrill
C-307	948cp07	75.29	12-Jul		30	seismic
C-308	948cp25	48.23	17-Jul		27	seismic
C-309	948cp24	70.05	17-Jul	26	27	
C-311	948cp02	34.94	11-Jul		30	
C-312	948cp01	56.43	11-Jul		35	
C-313	948cp23	37.24	17-Jul		35	
C-314	948cp22	39.53	17-Jul		35	
C-401	948cp11	28.05	13-Jul		30	seismic
C-401-2a	948cp60	81.86	27-Jul		30	55 ft predrill, seismic
C-401-2b	948cp61	131.23	27-Jul	26	30	85 ft predrill, seismic
C-402	948cp10	34.45	13-Jul	61	30	
C-403	948cp52	43.80	24-Jul		35	
C-404	948cp20	80.05	14-Jul	14	72	seismic
C-405	948cp43	40.03	20-Jul		25	
C-406	914cp15	15.58	13-Jul	33	16	
C-407	948cp12	32.32	13-Jul	87	22	seismic
C-407-2a	948cp62	96.29	28-Jul	10	22	50 ft predrill, seismic
C-407-b	948cp63	142.39	31-Jul	5	22	95 ft predrill, seismic
C-408	948cp21	77.43	17-Jul		27	seismic
C-408a	948cp53	98.26	24-Jul		77	98 ft predrill, no casing
C-408-2a	948cp64	123.69	31-Jul		77	105 ft predrill, seismic
C-409	948cp49	80.54	21-Jul	50	34	
C-411	948cp50	80.38	24-Jul	76	34	
C-412	948cp44	76.77	20-Jul		18	
C-413	948cp28	13.62	18-Jul		see footnote	
C-414	948cp29	62.50	18-Jul	55	17	
C-415	948cp14	20.01	13-Jul		see footnote	
C-701	948cp46	29.53	21-Jul	1	see footnote	
C-701a	948cp48	28.05	21-Jul		see footnote	offset 15 ft
C-702	948cp45	20.34	21-Jul		see footnote	
C-703	948cp19	32.64	14-Jul	23	see footnote	
C-704	948cp17	48.23	14-Jul		22	
C-705	948cp18	33.96	14-Jul		see footnote	
C-706	948cp09	50.03	13-Jul		50	
C-707	948cp16	19.52	14-Jul		see footnote	
C-708	948cp42	50.03	20-Jul		22	
C-709	948cp38	50.03	19-Jul		36	
C-710	948cp31	21.16	18-Jul		see footnote	
C-711	948cp40	34.94	20-Jul		24	
C-712	948cp35	29.69	19-Jul	10	see footnote	
C-713	948cp13	41.83	13-Jul		see footnote	
C-714	948cp37	85.14	19-Jul	19	14	
C-715	948cp32	57.25	18-Jul		40	
C-716	948cp41	20.51	20-Jul		see footnote	
C-717	948cp33	66.60	19-Jul	50	18	
C-718	948cp36	34.12	19-Jul		see footnote	
C-719	948cp34	11.97	19-Jul		see footnote	
C-720	948cp39	70.70	20-Jul	60	21	
C-721	948cp27	52.00	18-Jul		30	
C-722	948cp30	38.39	18-Jul		see footnote	
C-723	948cp26	68.73	18-Jul	9	50	

Footnote: Sounding terminated above estimated water table depth

Table 2: Dissipation Test Summary

Sounding ID	Test Depth (ft)	Duration (minutes)	c_h (cm^2/min)
C-302	34.94	121	3.24
C-302-2a	127.46	4	4.148
C-303b	97.11	18	20.281
C-304	16.57	18	0.962
C-306	46.1	45	0.338
C-309	59.06	26	0.532
C-401-2b	128.12	25	6.246
C-402	21.33	61	0.936
C-404	66.11	14	1.551
C-406	13.12	33	3.401
C-407	11.15	18	1.419
C-407	13.78	31	2.651
C-407	18.54	40	0.31
C-407-2a	87.27	10	25.961
C-407-b	116.8	5	3.378
C-409	59.06	50	0.268
C-411	56.76	60	0.207
C-411	70.37	16	0.831
C-414	44.46	55	0.237
C-701	29.2	1	331.65
C-703	20.01	23	0.65
C-712	26.25	10	4.72
C-714	57.09	19	0.77
C-717	50.85	50	0.287
C-720	51.67	60	0.222
C-723	38.55	9	1.756

correlate groundwater information with nearby monitoring wells. At the time of this report, the well information was not made available. The water table depths used in the data correlations and sounding logs should be considered approximate. There were several soundings that also refused above the suspected water table. The water table was arbitrarily set to 100 ft (i.e. significantly below the termination depth) for data processing purposes.

3.4 SHEAR WAVE VELOCITY MEASUREMENTS

Shear wave velocity measurements were conducted in thirteen CPT soundings The shear wave measurements were taken on approximately 5-ft intervals in the soundings. Tabular summaries of the results and shear wave velocity plots are presented in Appendix B.

3.5 CPT DATA PROCESSING

The electronic data files were processed using the program CPTSumm. CPTSumm is a program developed by ConeTec to calculate common engineering parameters from CPT data. The processed data files are included on the data CD. The calculations used are summarized in the table in Appendix D. Each calculation is derived according to the referenced article.

For this project, a piezometric surface depths used in the data interpretation calculations are given in Table 1, as well as in the header of each .xls file.

Several pore pressure dissipation tests were conducted at this site. The dissipation test summary is presented in Table 2, and the plots are presented in Appendix C.

5.0 REFERENCES

Robertson, P.K., 1989, “Soil Classification using the Cone Penetration Test”, Canadian Geotechnical Journal, vol. 27, pages 151-158.

Robertson, P.K., Sully, J., Woeller, D.G., Lunne, T., Powell, J.M., and Gillespie, D.J., 1992, “Estimating Coefficient of Consolidation from Piezocone Tests”, Canadian Geotechnical Journal, vol. 29, pages 539-550.

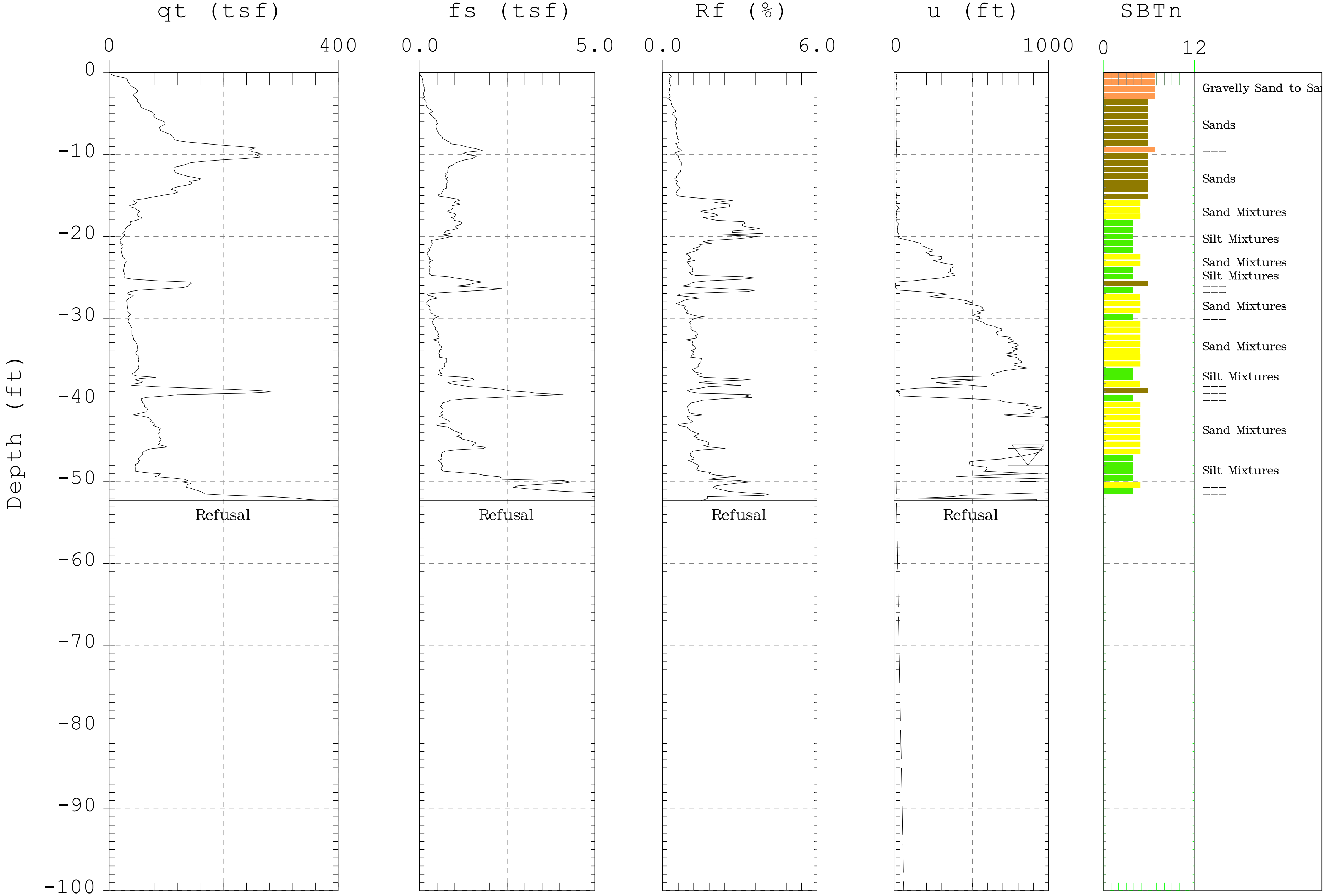
APPENDIX A
CPT PLOTS

Presentation of In Situ Testing Program Results
ConeTec, Inc.
November 13, 2006

Schnabel Engineering

Sounding: C-301
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:24:06 12:24



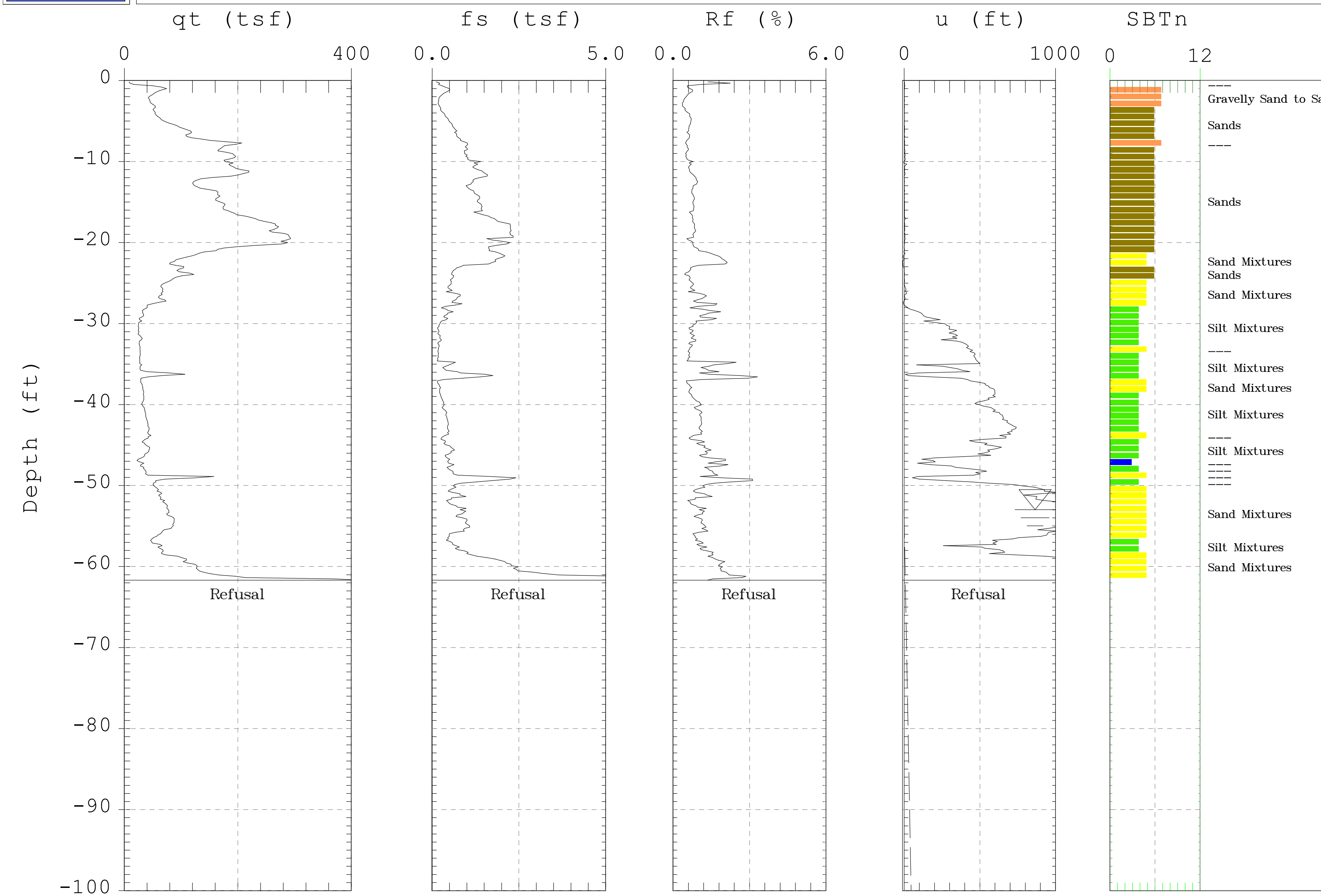
Max. Depth: 52.33 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-302
Location: C C N P P

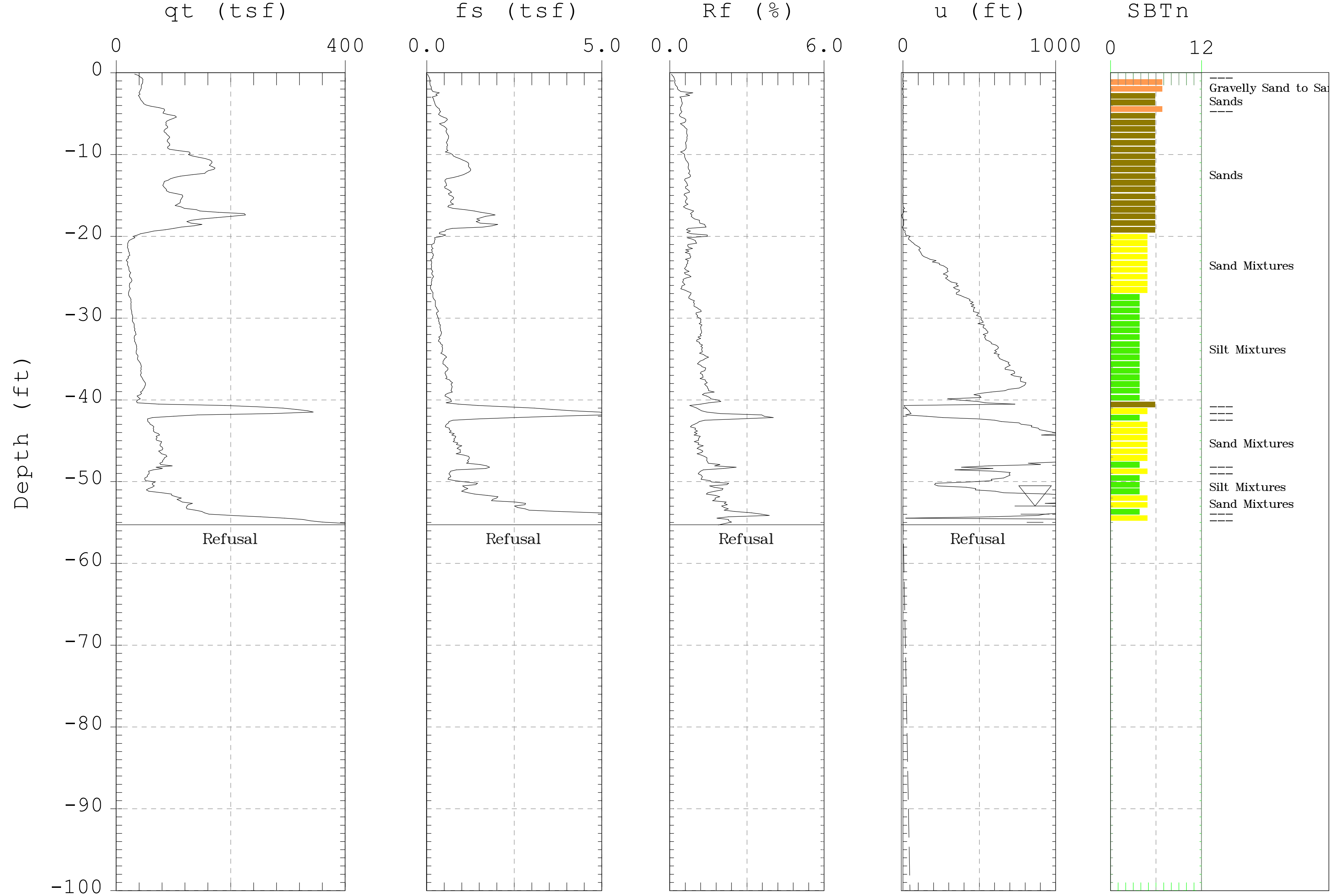
Cone: STD 20T AD-195
Date: 07:12:06 10:00



Max. Depth: 61.68 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec | Schnabel Engineering | Sounding: C-302-2 | Location: C C N P P | Cone: STD 20T AD-195 | Date: 07:26:06 07:54



Max. Depth: 55.28 (ft)
Depth Inc.: 0.164 (ft)

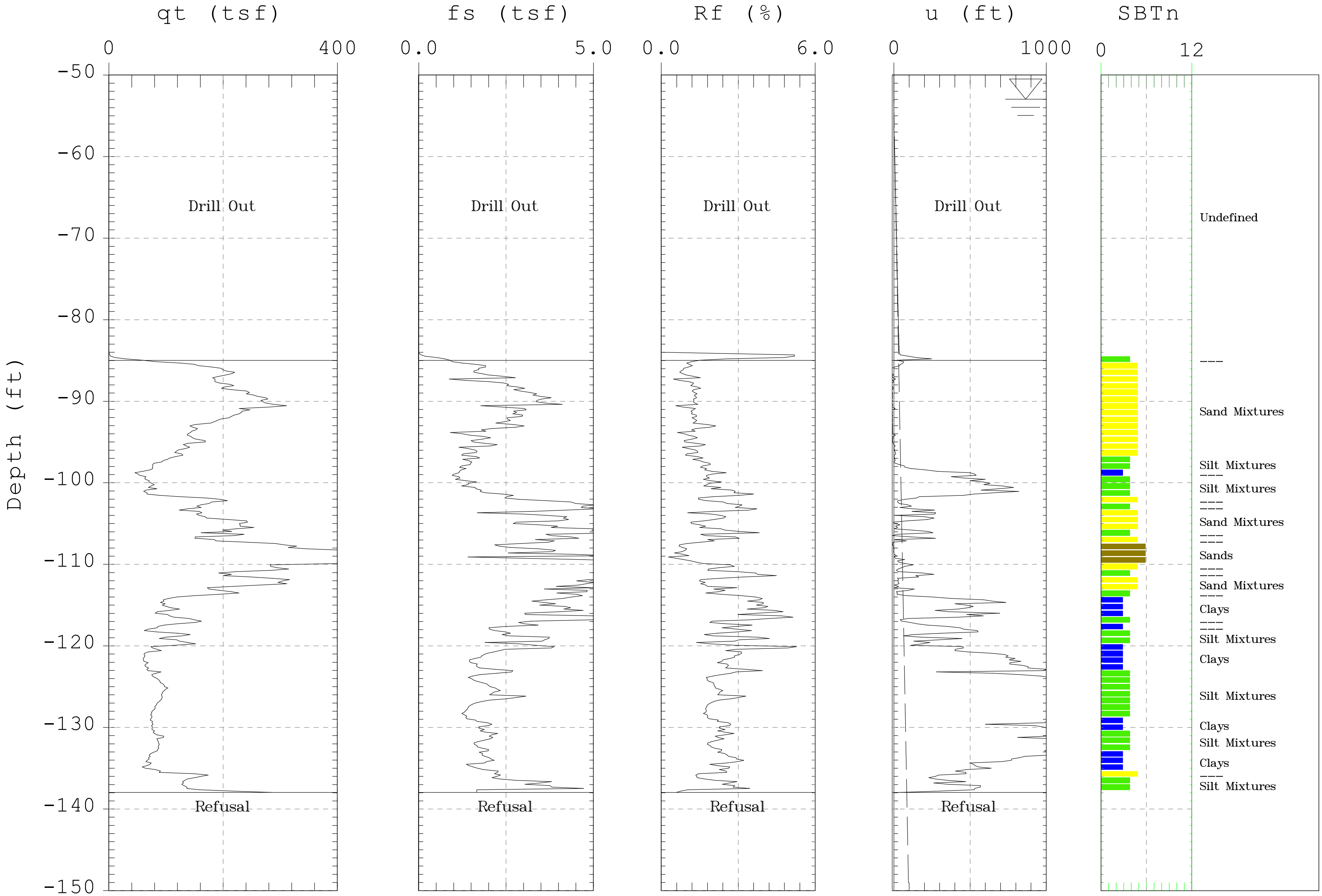
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

CONETEC

Schnabel Engineering

Sounding: C-302-2a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:26:06 10:40



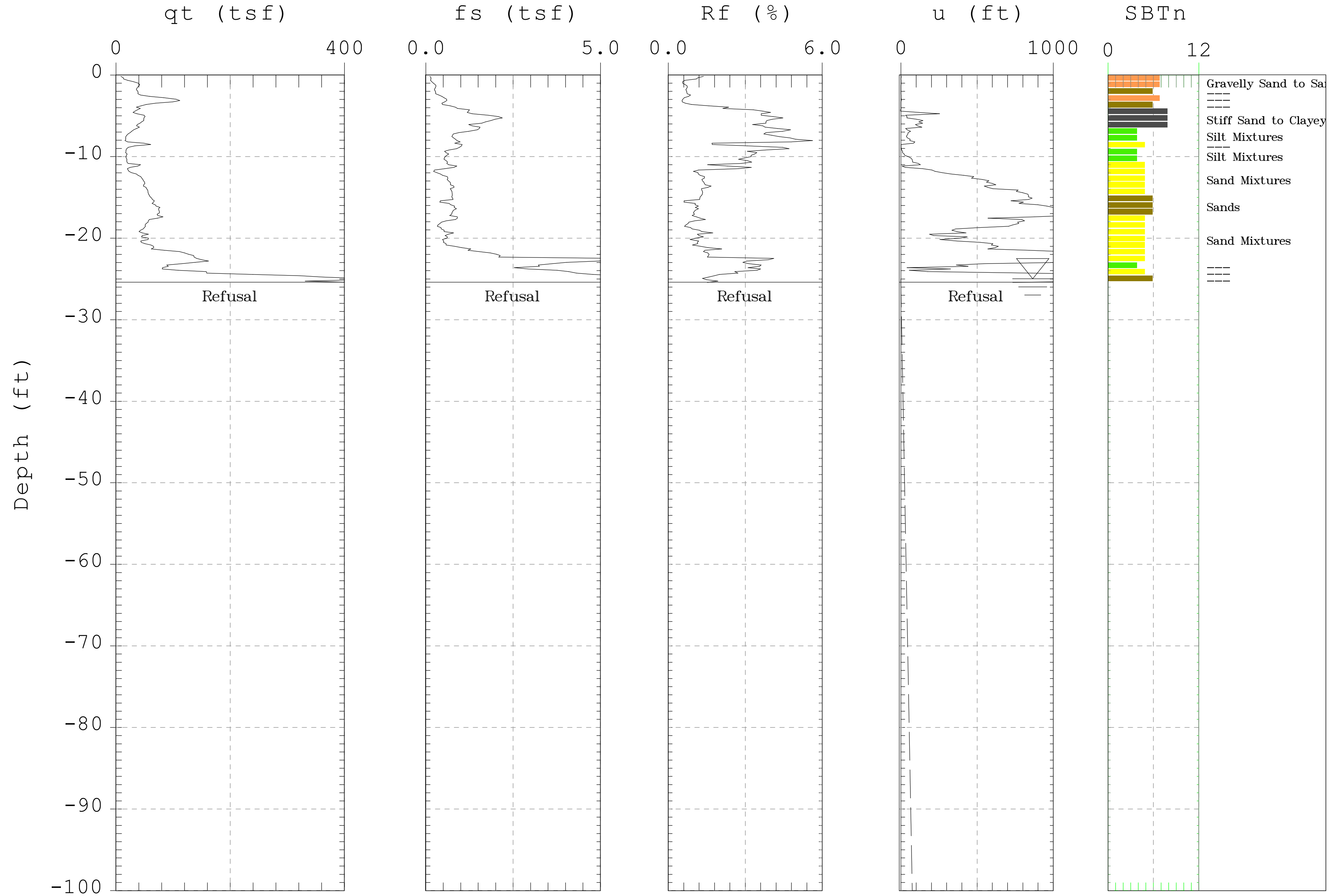
Max. Depth: 137.96 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-303
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:12:06 09:01



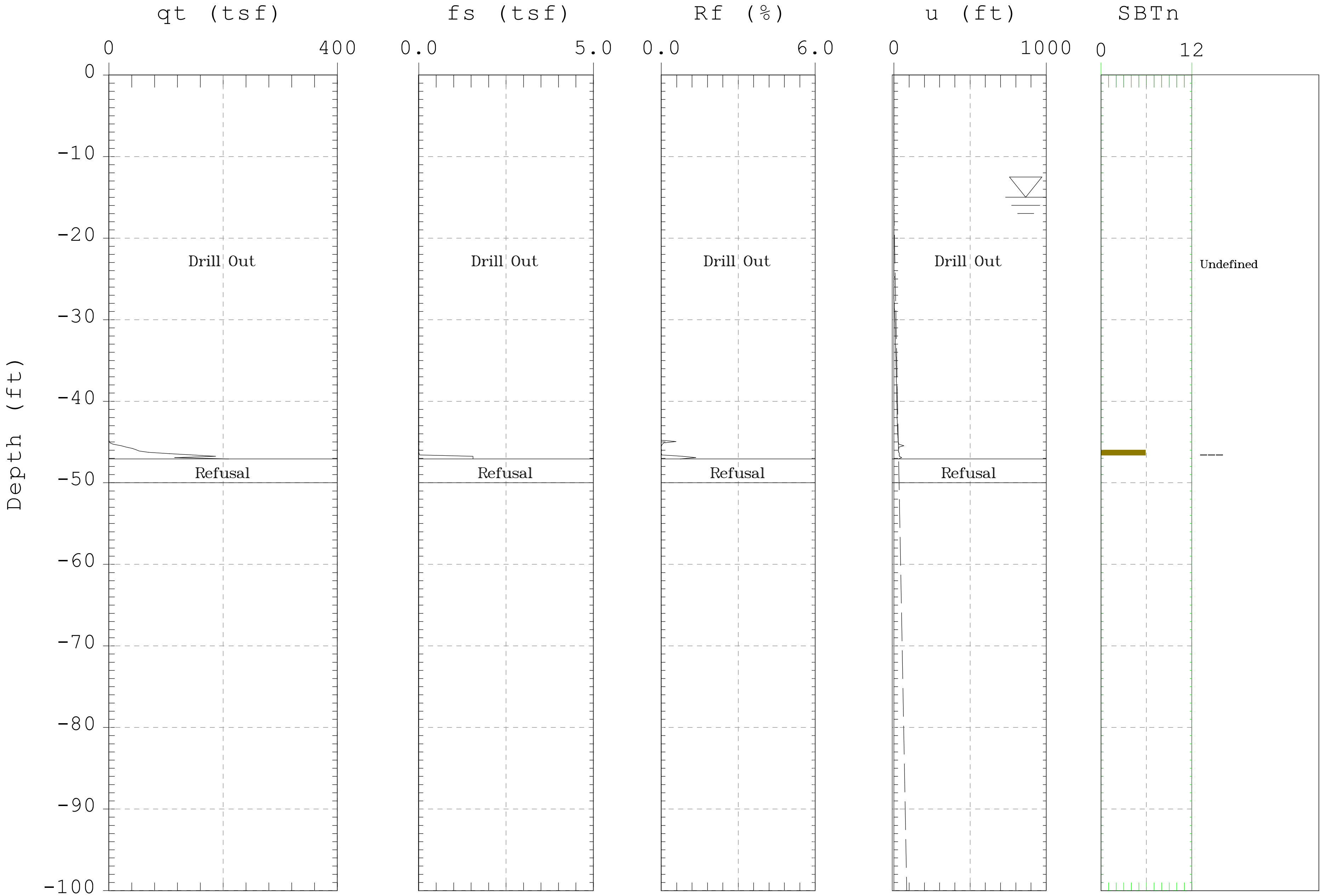
Max. Depth: 25.43 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-303a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:25:06 10:27



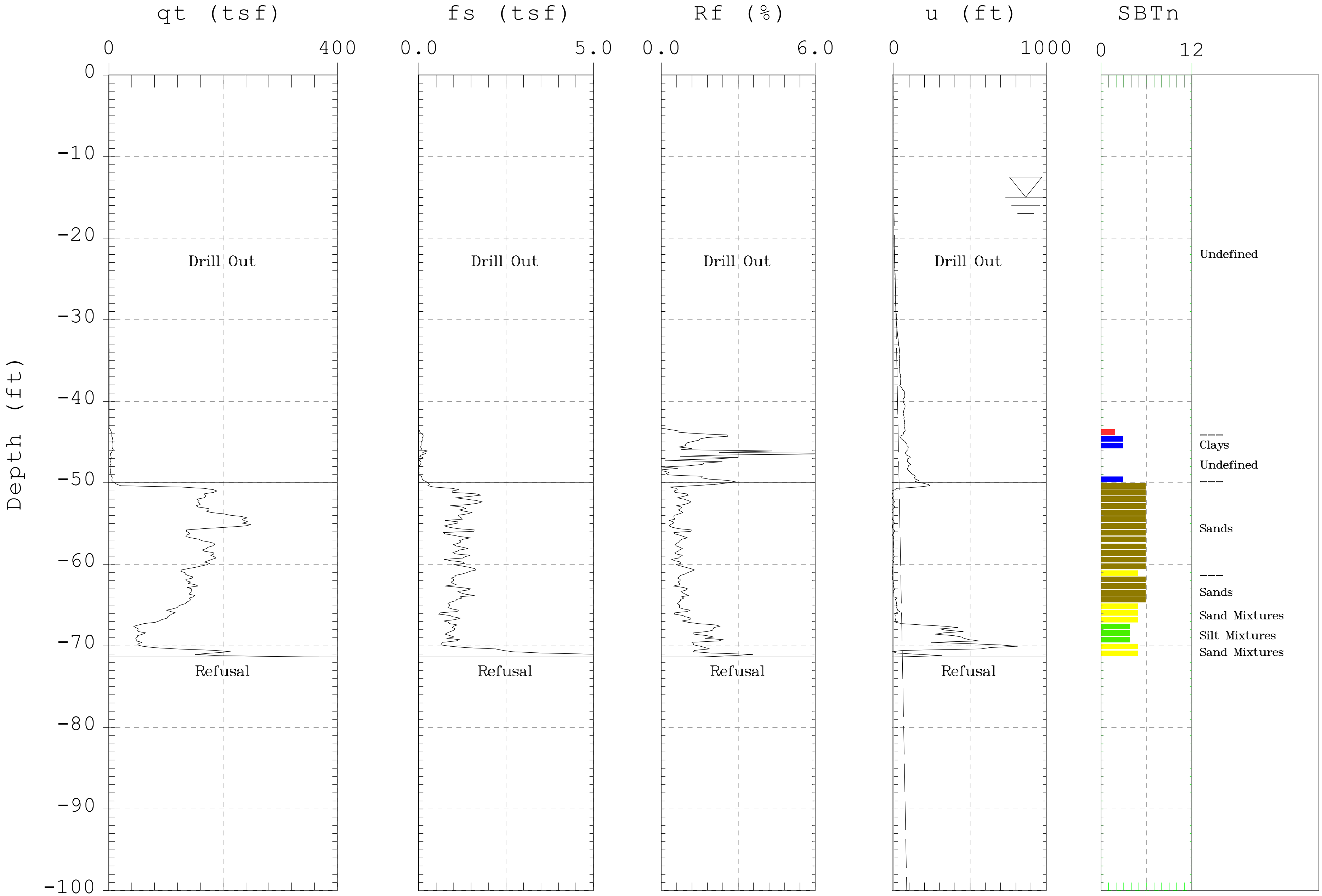
Max. Depth: 47.08 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-303a-1
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:25:06 12:56



Max. Depth: 71.36 (ft)
Depth Inc.: 0.164 (ft)

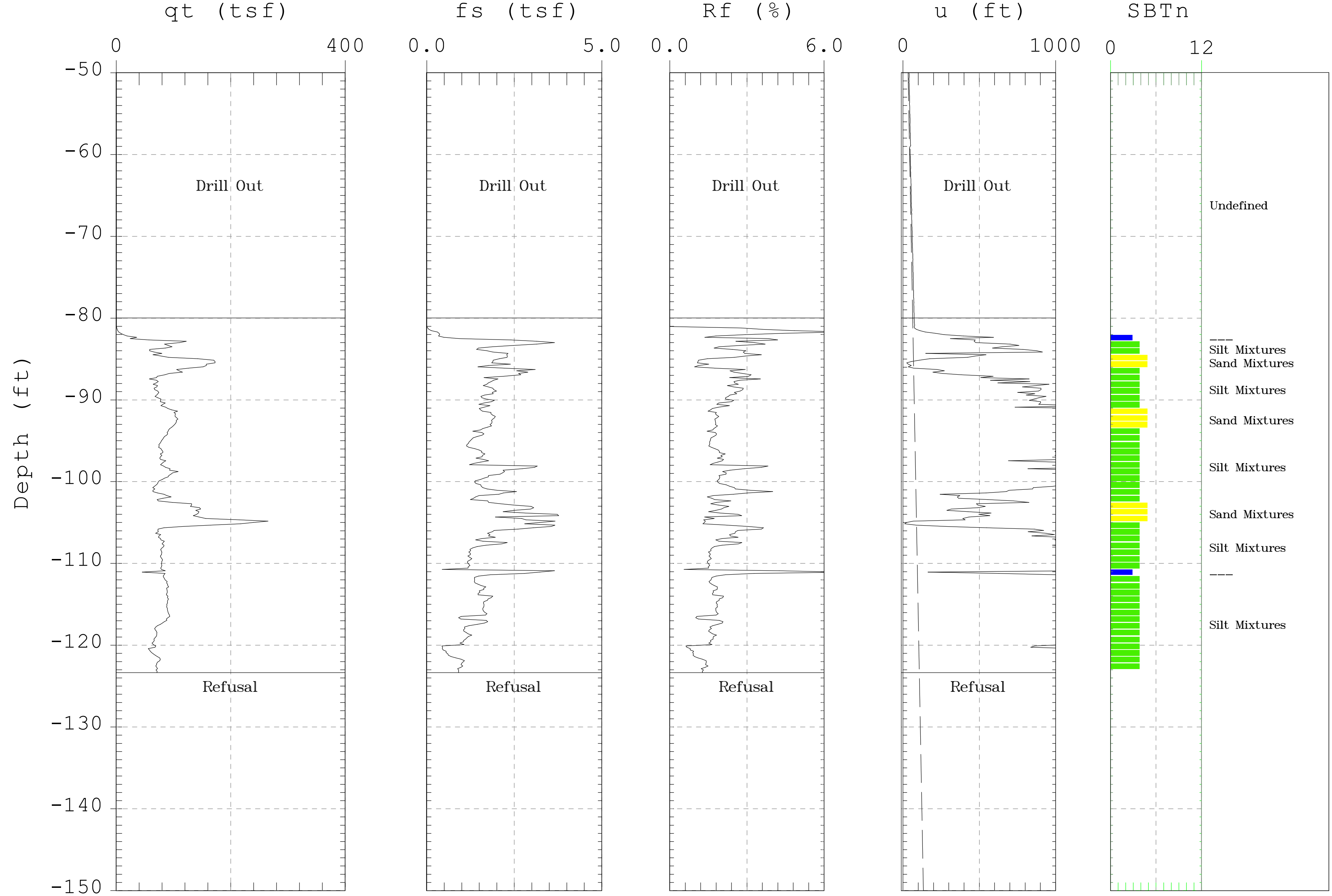
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-303b
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:25:06 15:32



Max. Depth: 123.36 (ft)
Depth Inc.: 0.164 (ft)

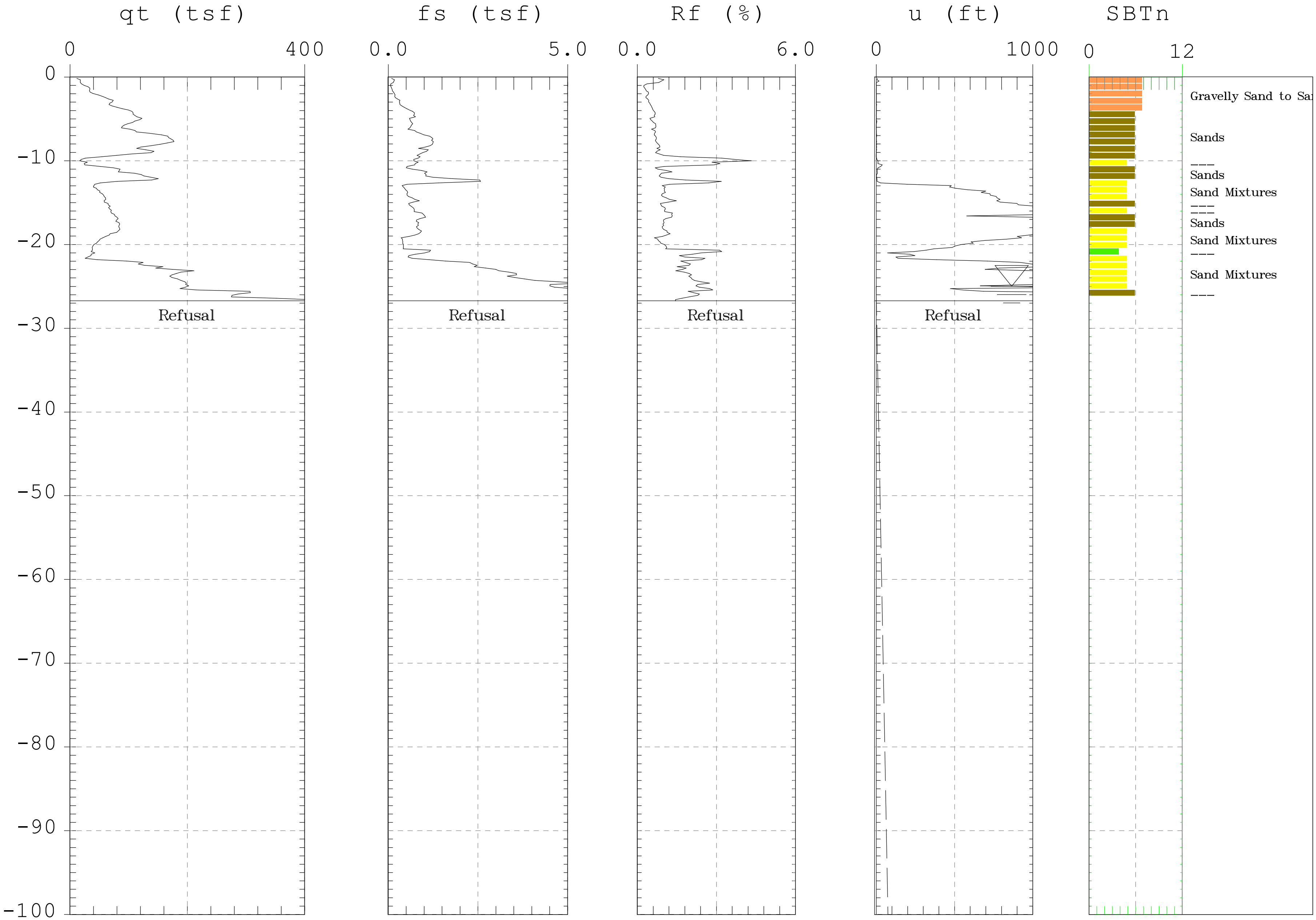
SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Schnabel Engineering

Sounding: C-304
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:12:06 07:36



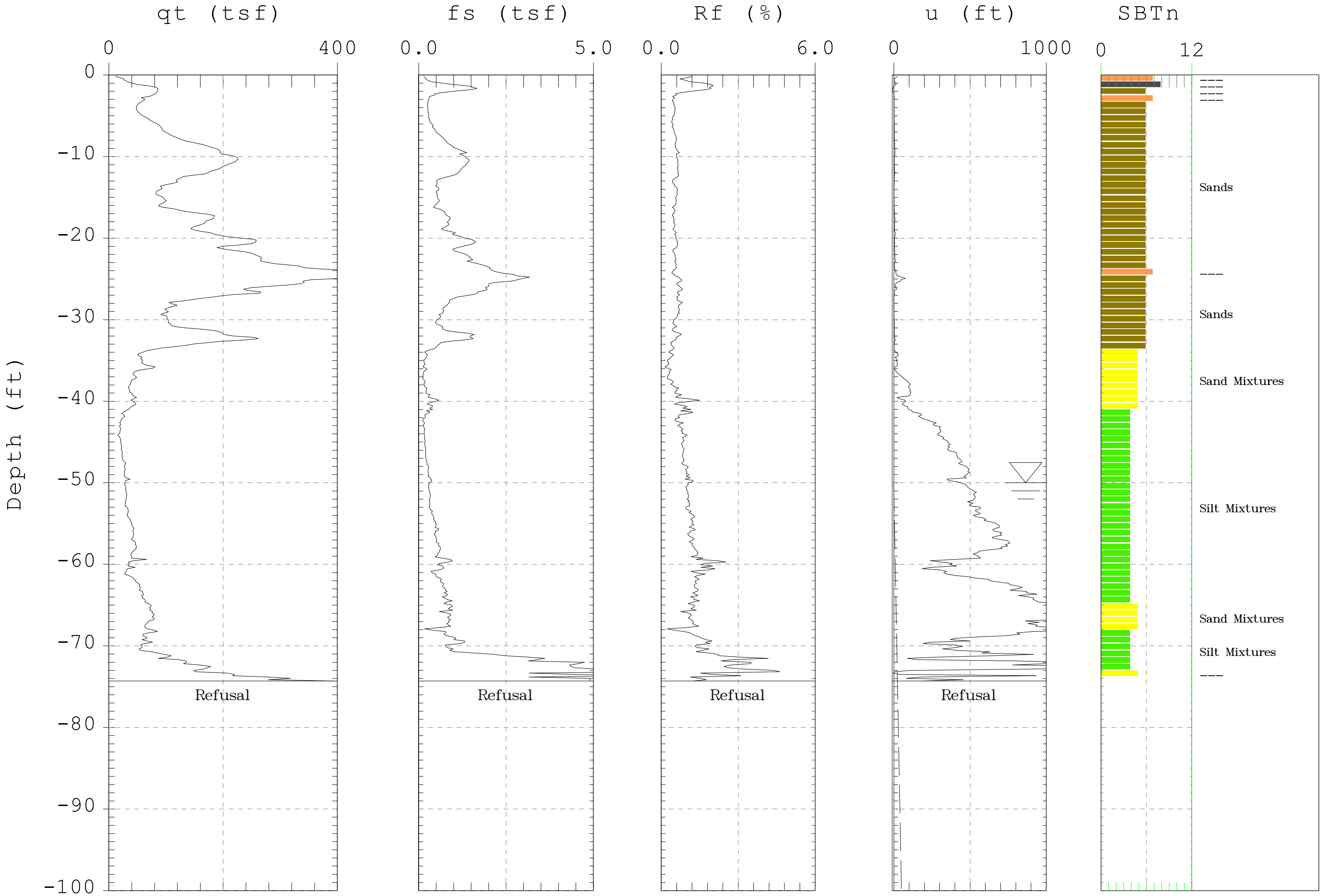
Max. Depth: 26.74 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-305
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:12:06 13:14



Max. Depth: 74.31 (ft)
Depth Inc.: 0.164 (ft)

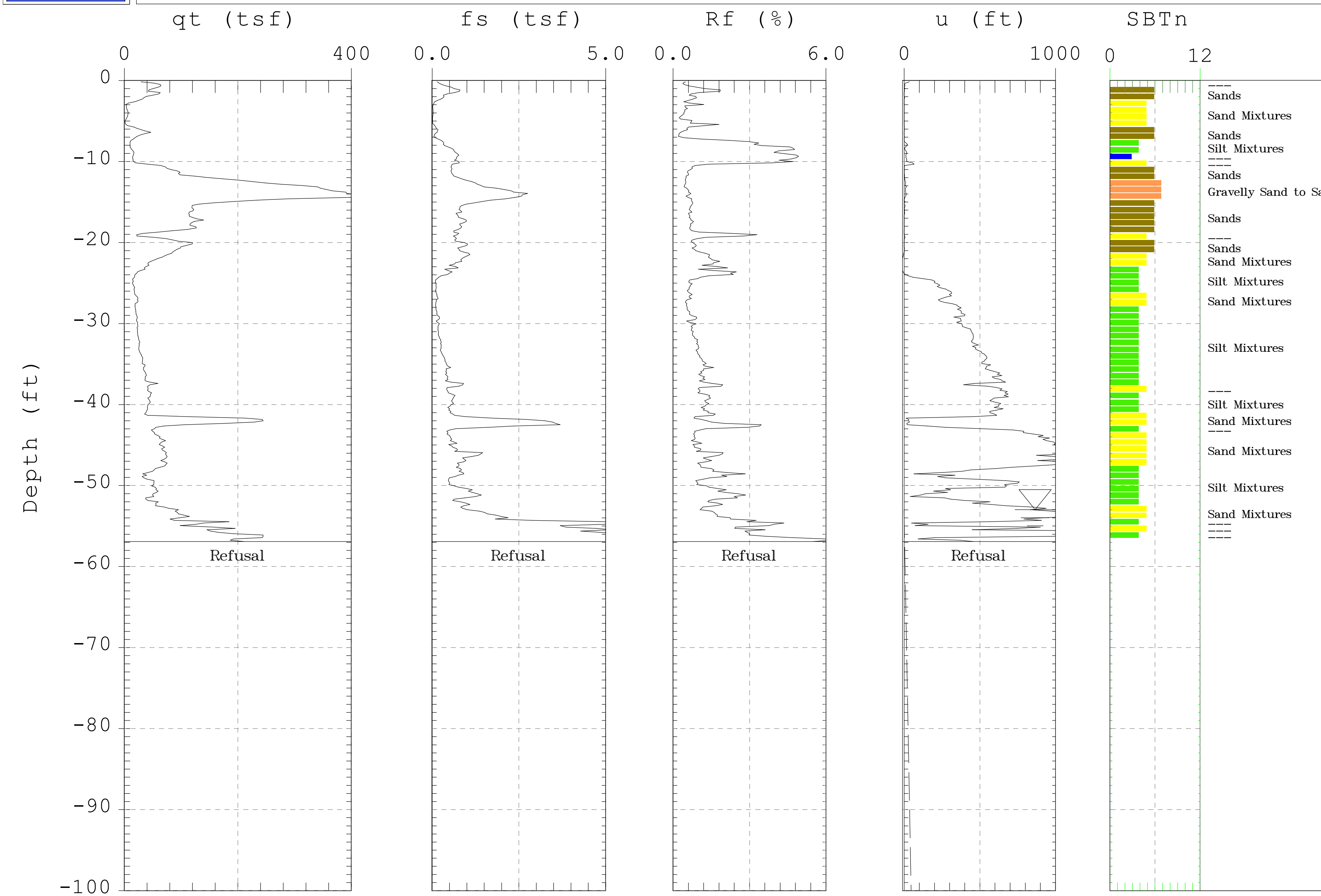
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-306
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:12:06 16:33



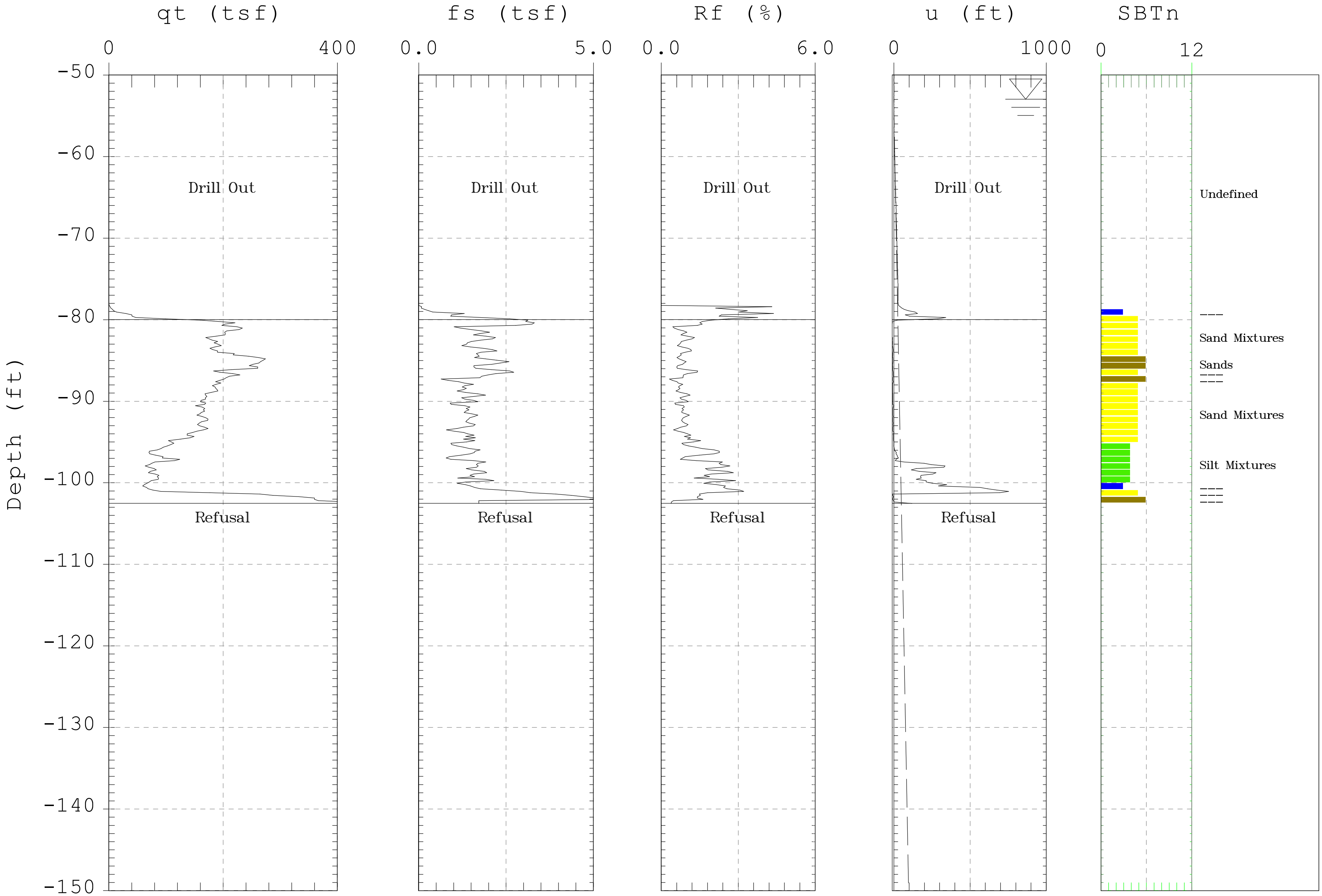
Max. Depth: 56.92 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-306a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:27:06 07:13



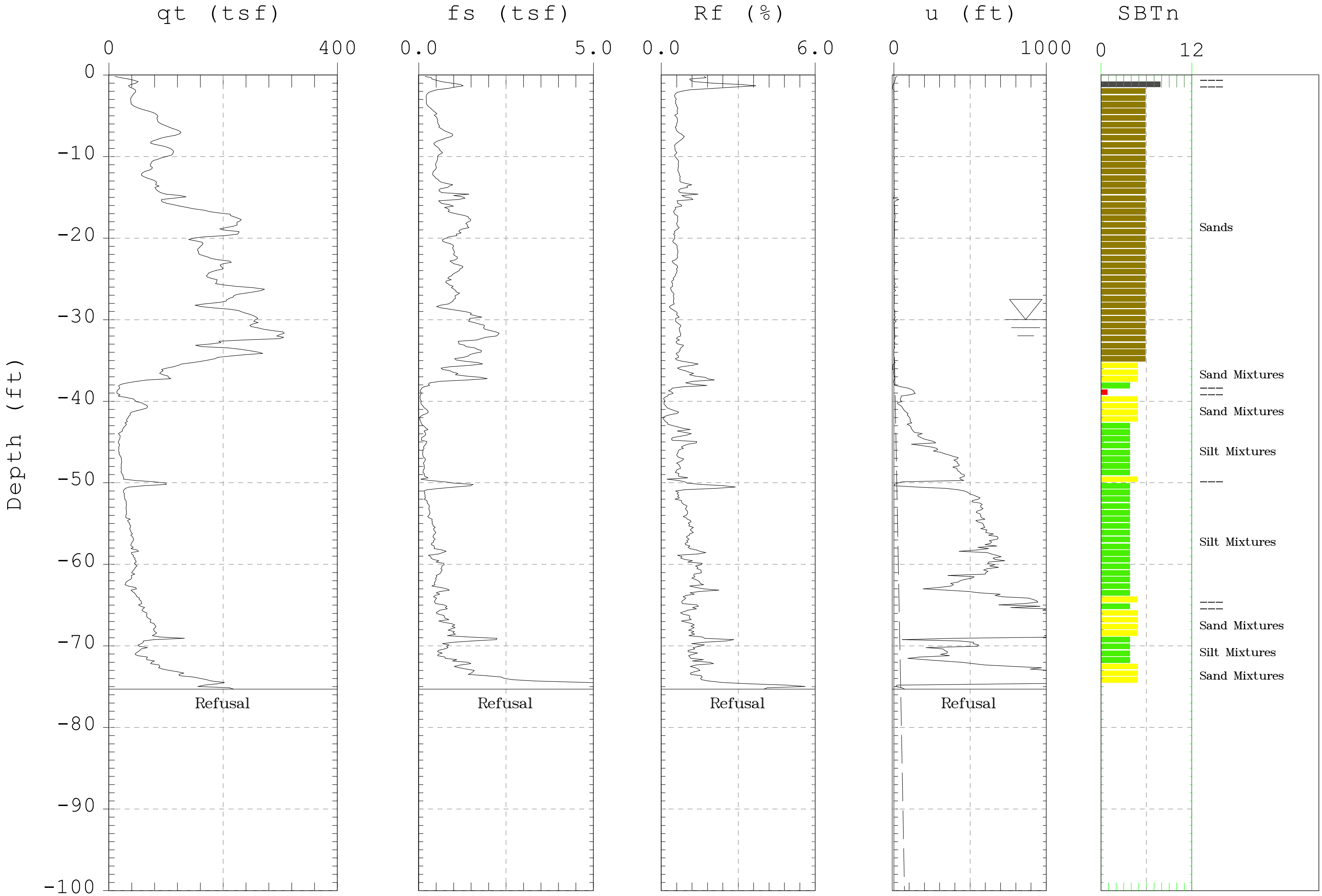
Max. Depth: 102.53 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-307
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:12:06 14:47



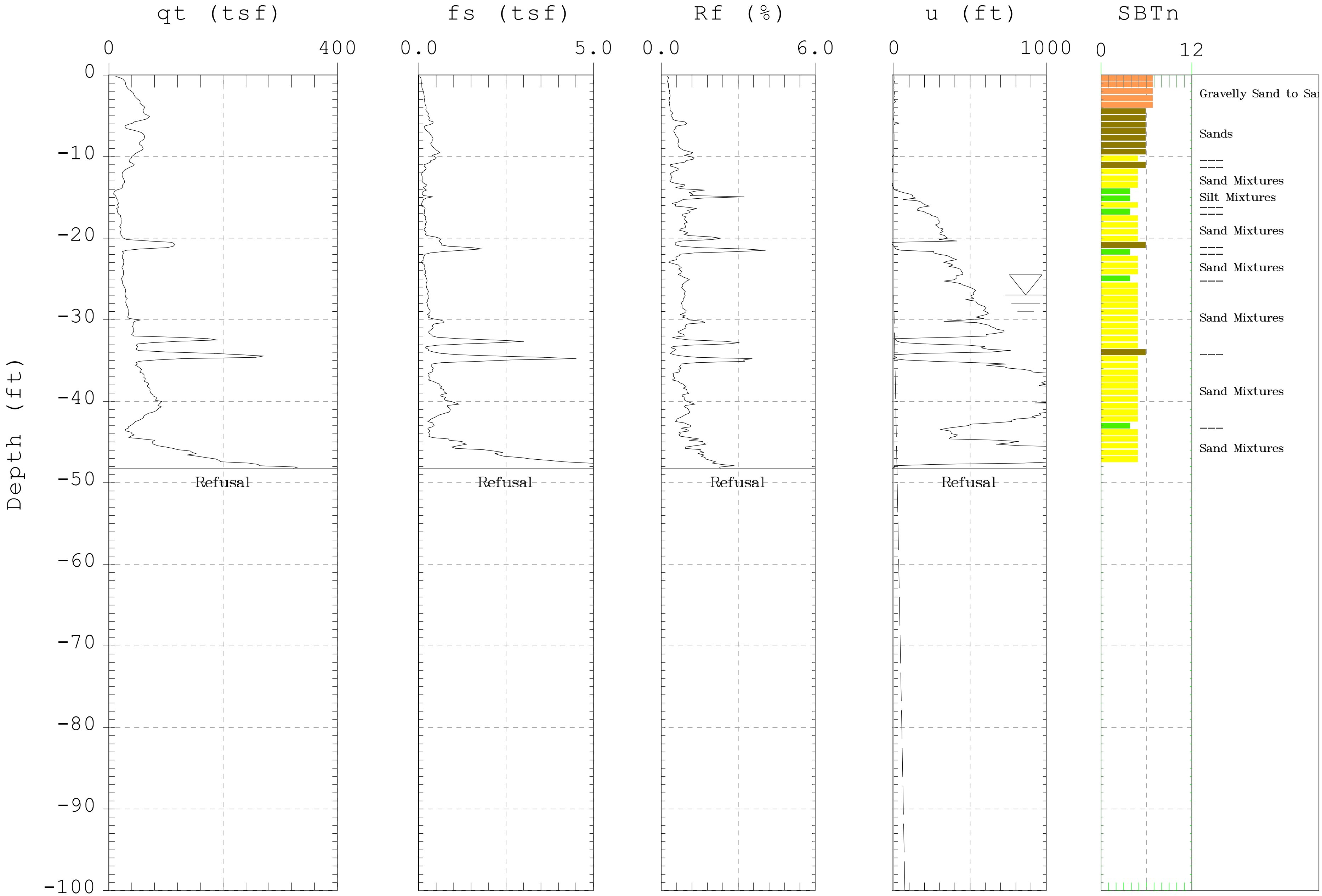
Max. Depth: 75.29 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-308
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:17:06 14:58



Max. Depth: 48.23 (ft)
Depth Inc.: 0.164 (ft)

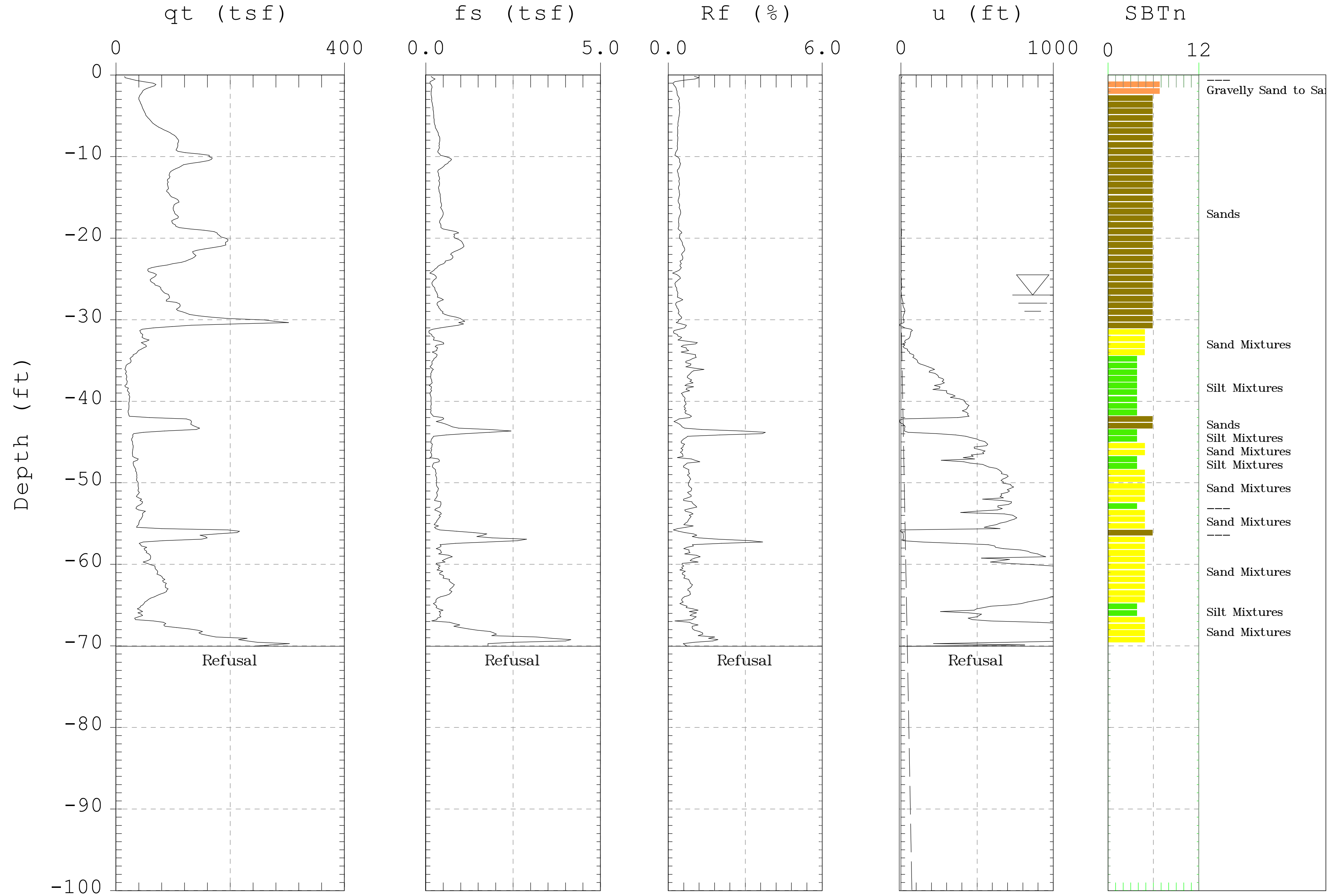
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-309
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:17:06 13:13



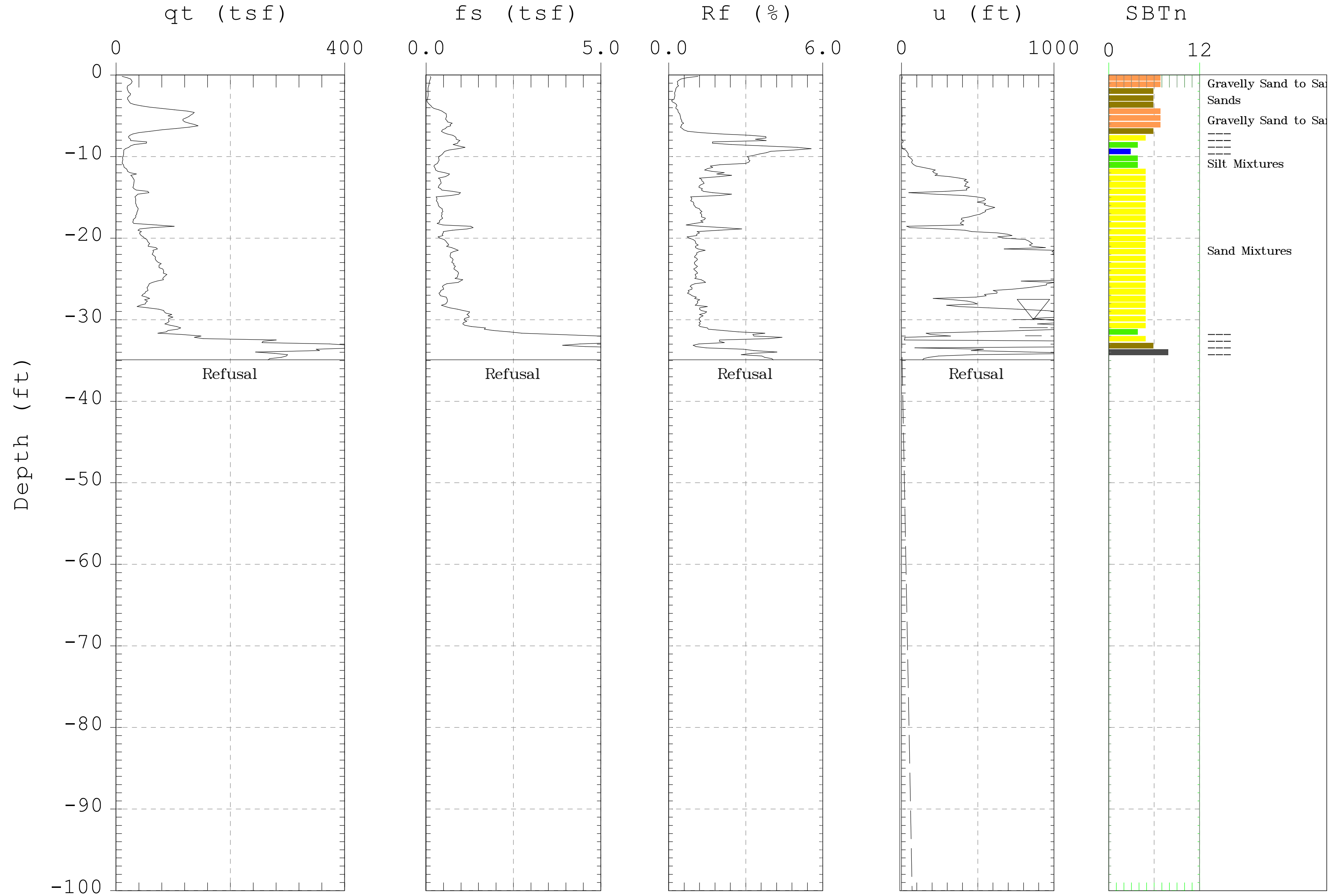
Max. Depth: 70.05 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-311
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:11:06 16:17

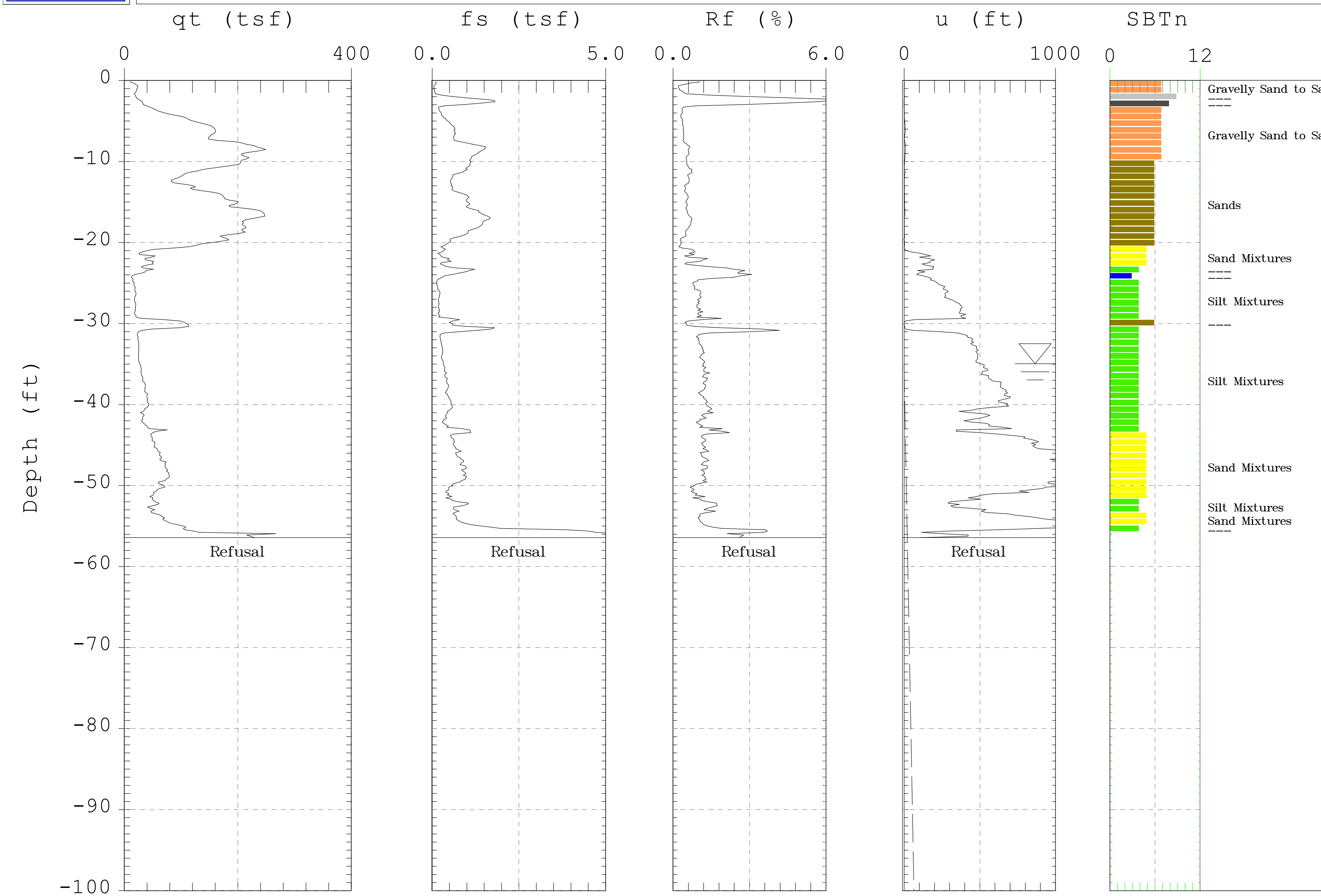


Max. Depth: 34.94 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

CONETEC

Schnabel Engineering Sounding: C-312 Location: C C N P P Cone: STD 20T AD-195 Date: 07:11:06 15:11



Max. Depth: 56.43 (ft)

Depth Inc.: 0.164 (ft)

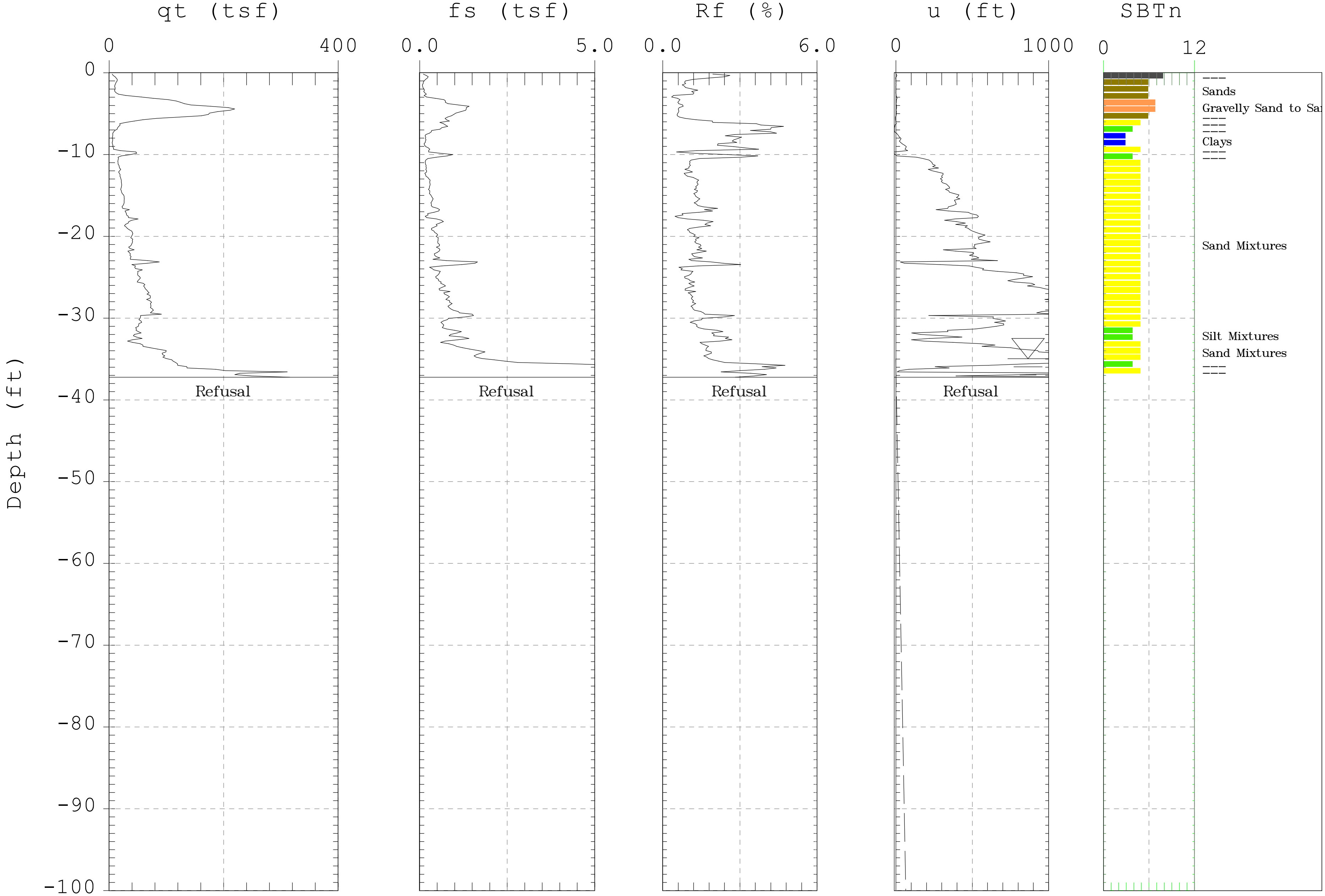
SBT: Soil Behavior Type (Robertson 1990)

Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-313
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:17:06 12:11



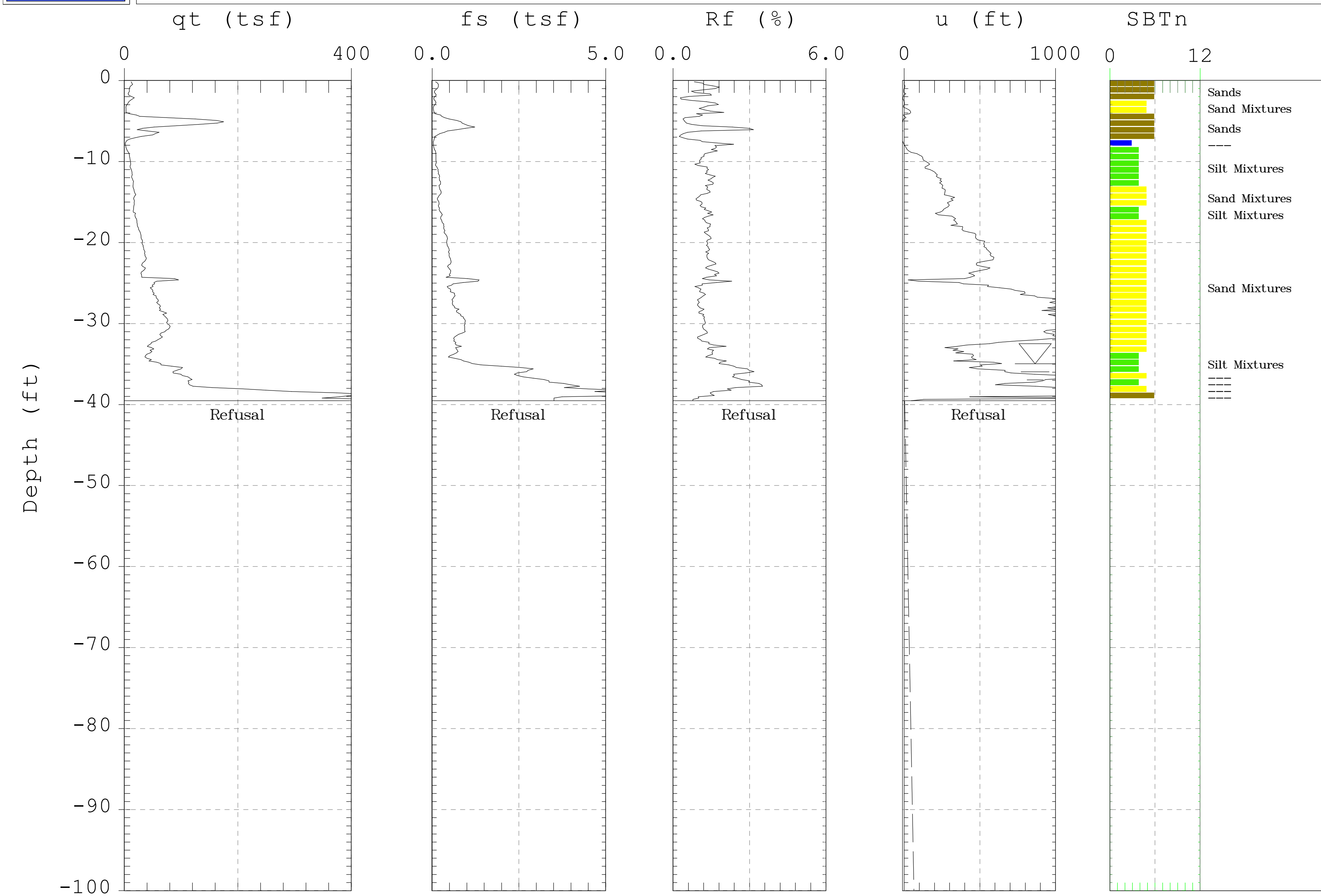
Max. Depth: 37.24 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-314
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:17:06 11:14



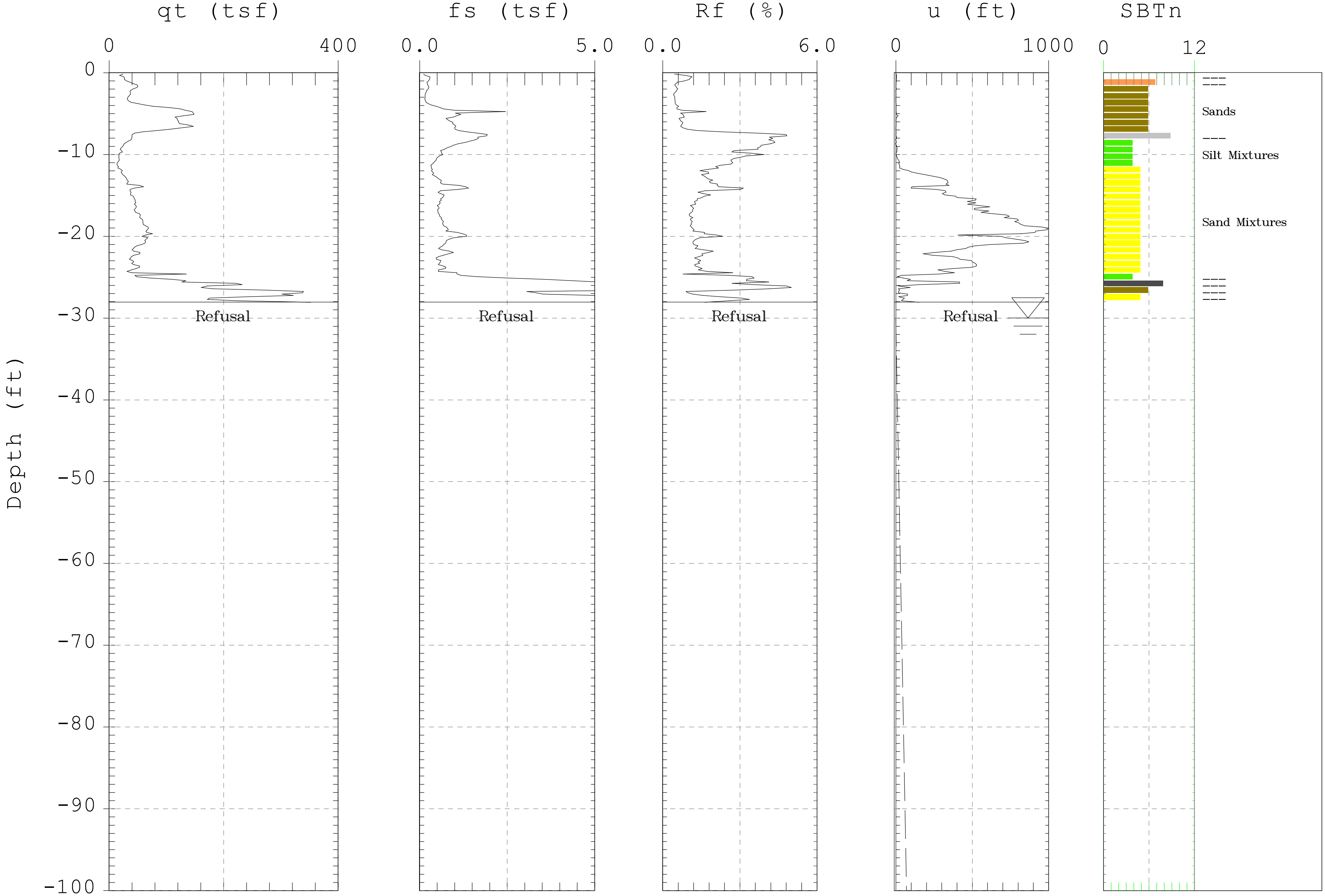
Max. Depth: 39.53 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-401
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 10:28



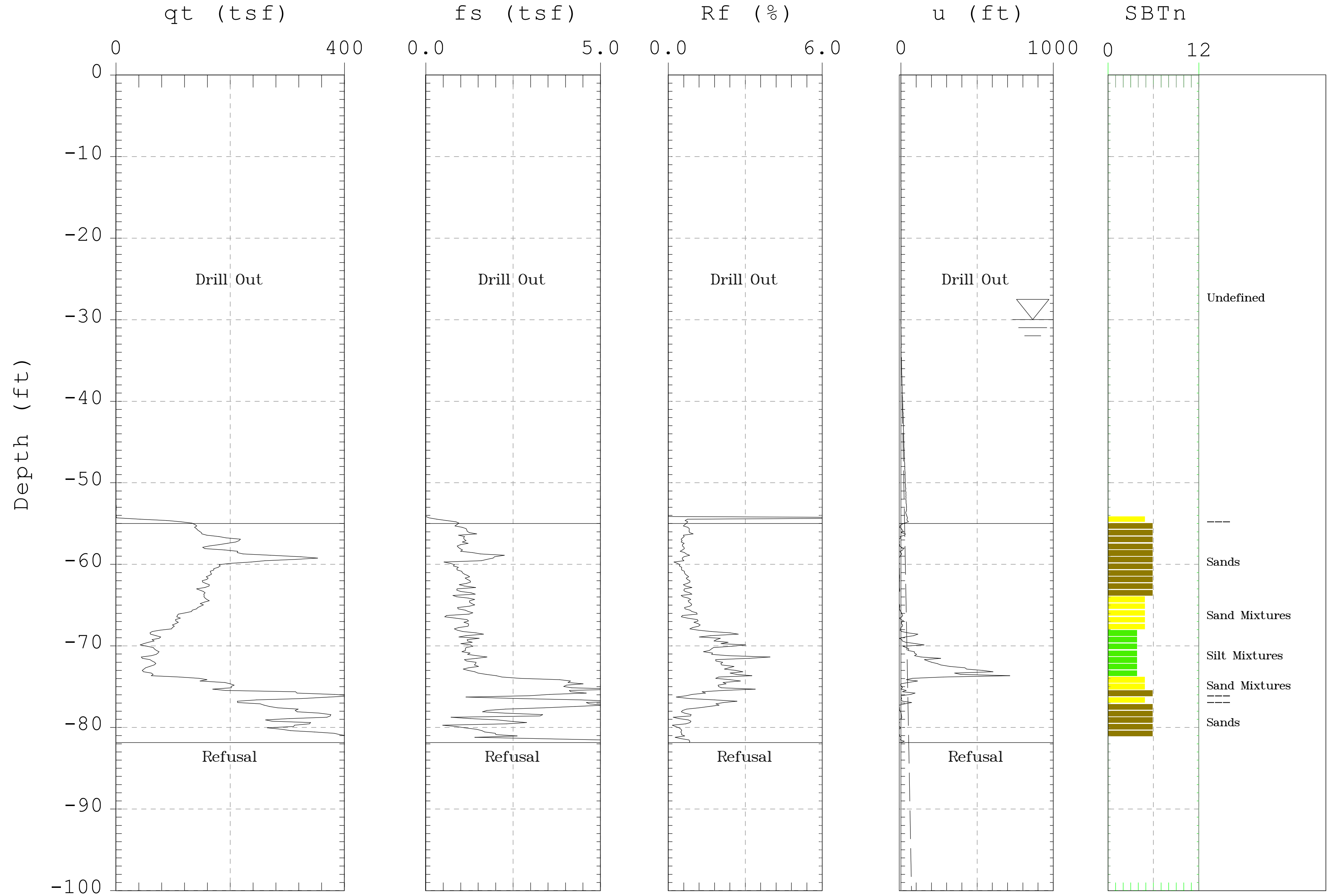
Max. Depth: 28.05 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-401-2a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:27:06 12:21



Max. Depth: 81.86 (ft)
Depth Inc.: 0.164 (ft)

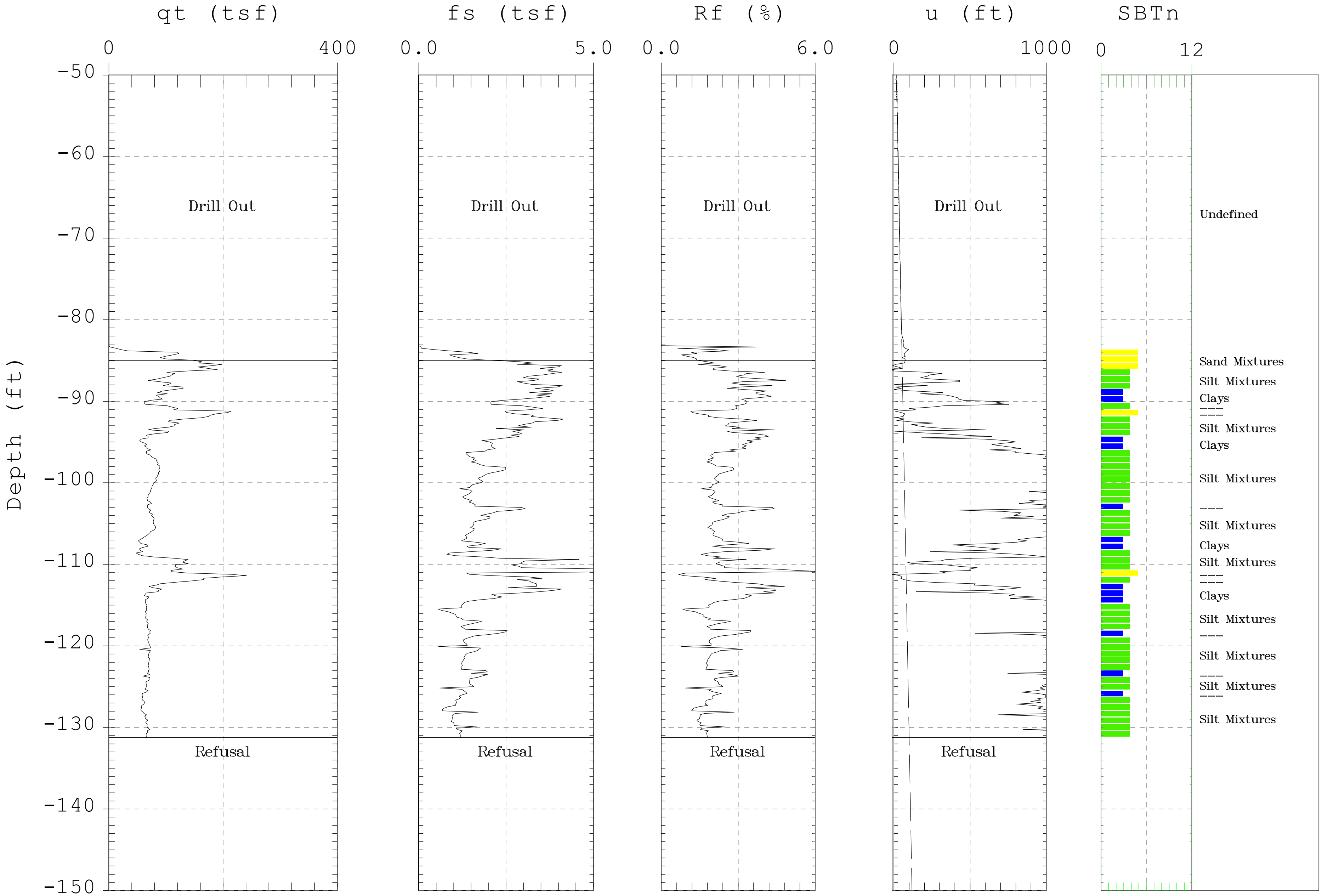
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-401-2b
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:27:06 15:04



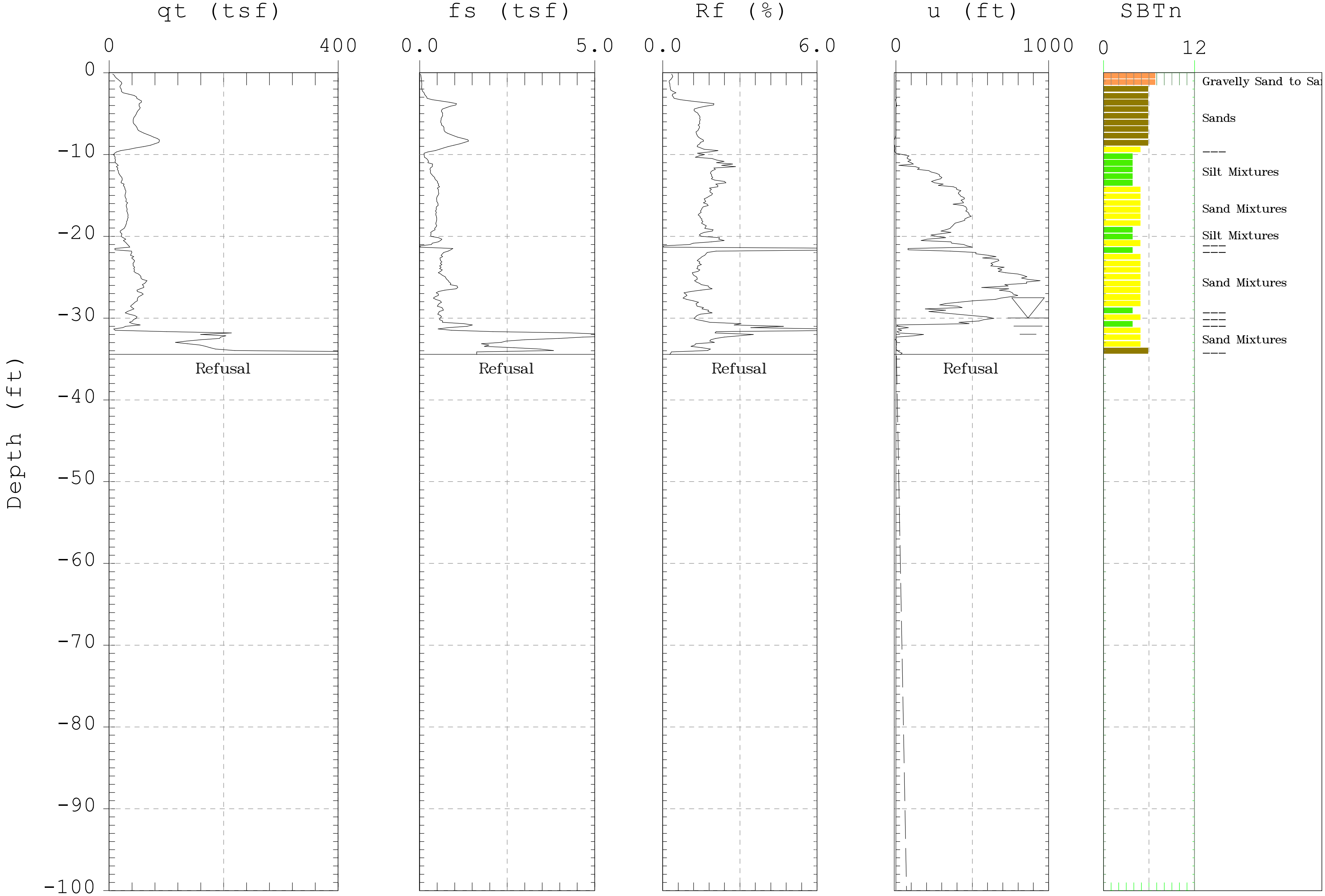
Max. Depth: 131.23 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-402
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 08:45



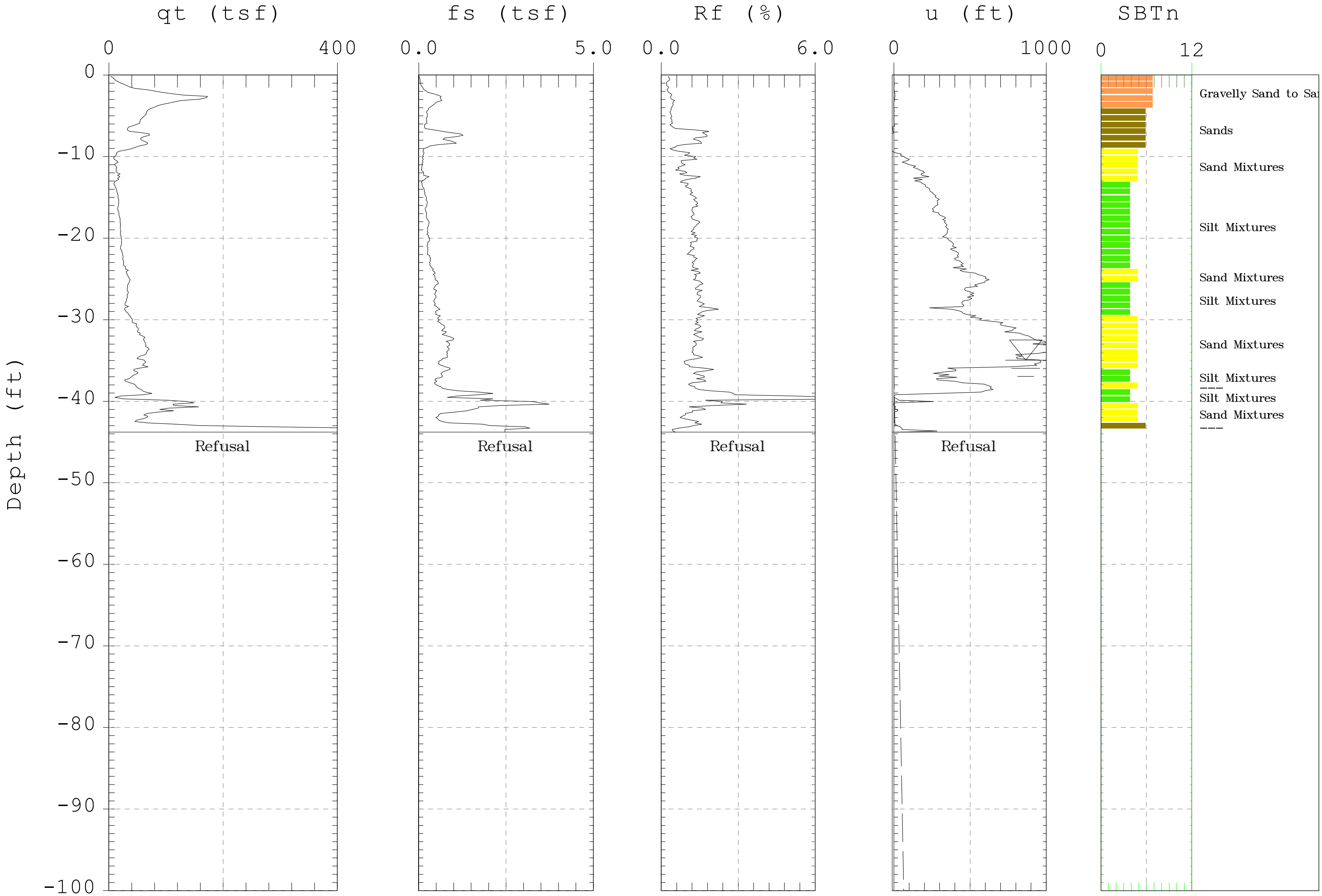
Max. Depth: 34.45 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-403
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:24:06 14:30



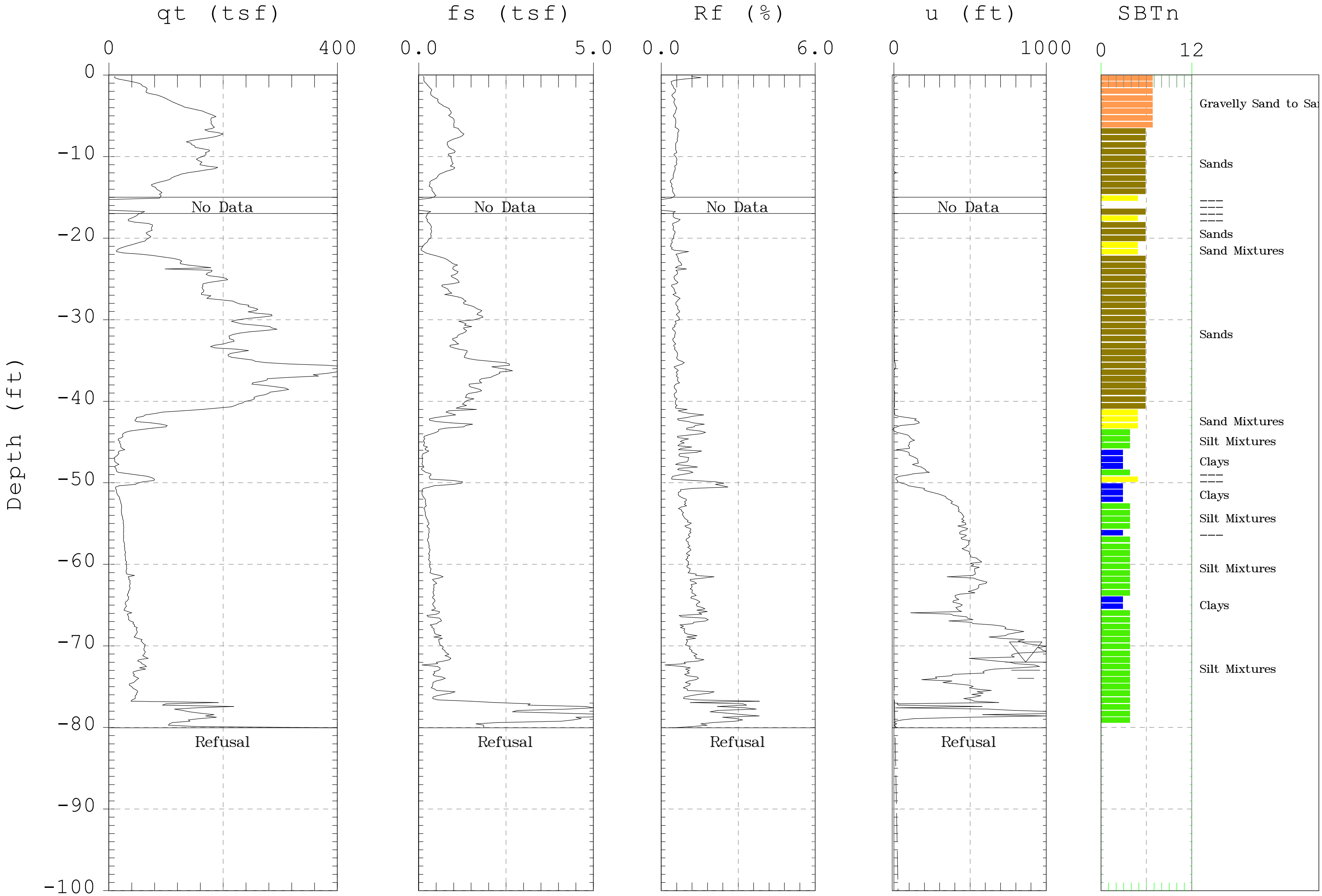
Max. Depth: 43.80 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-404
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:14:06 11:17



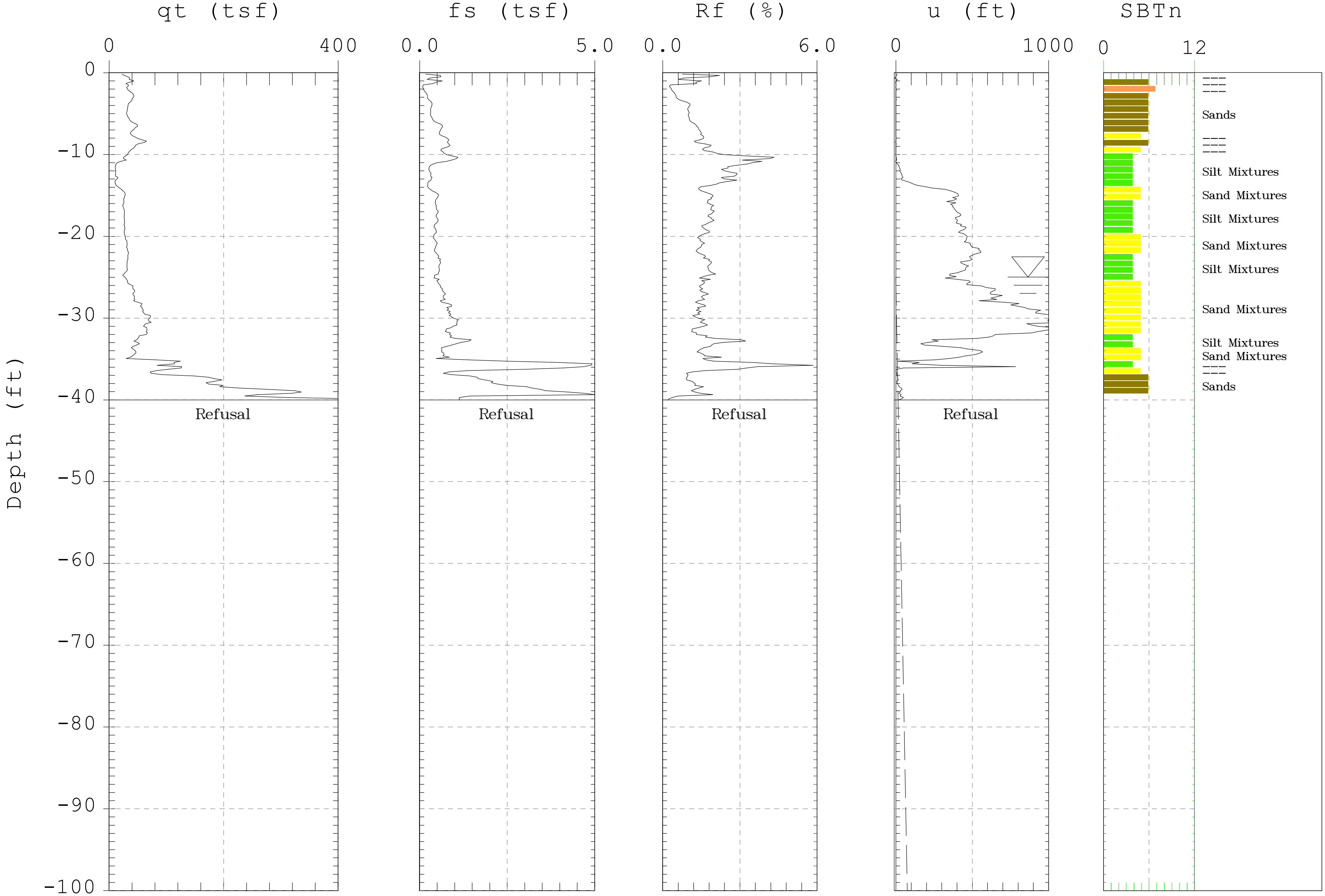
Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-405
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:20:06 15:03



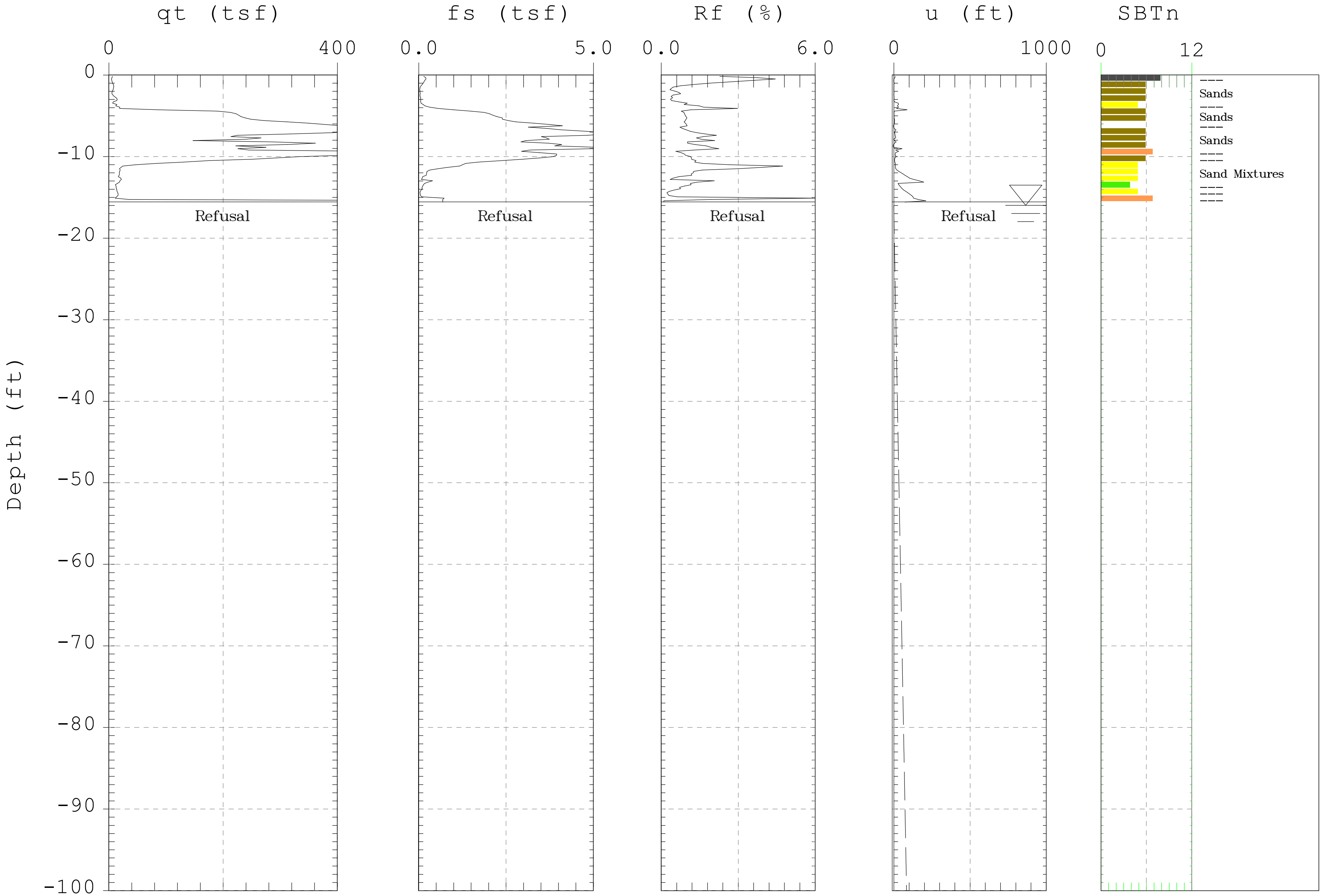
Max. Depth: 40.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-406
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 15:51



Max. Depth: 15.58 (ft)
Depth Inc.: 0.164 (ft)

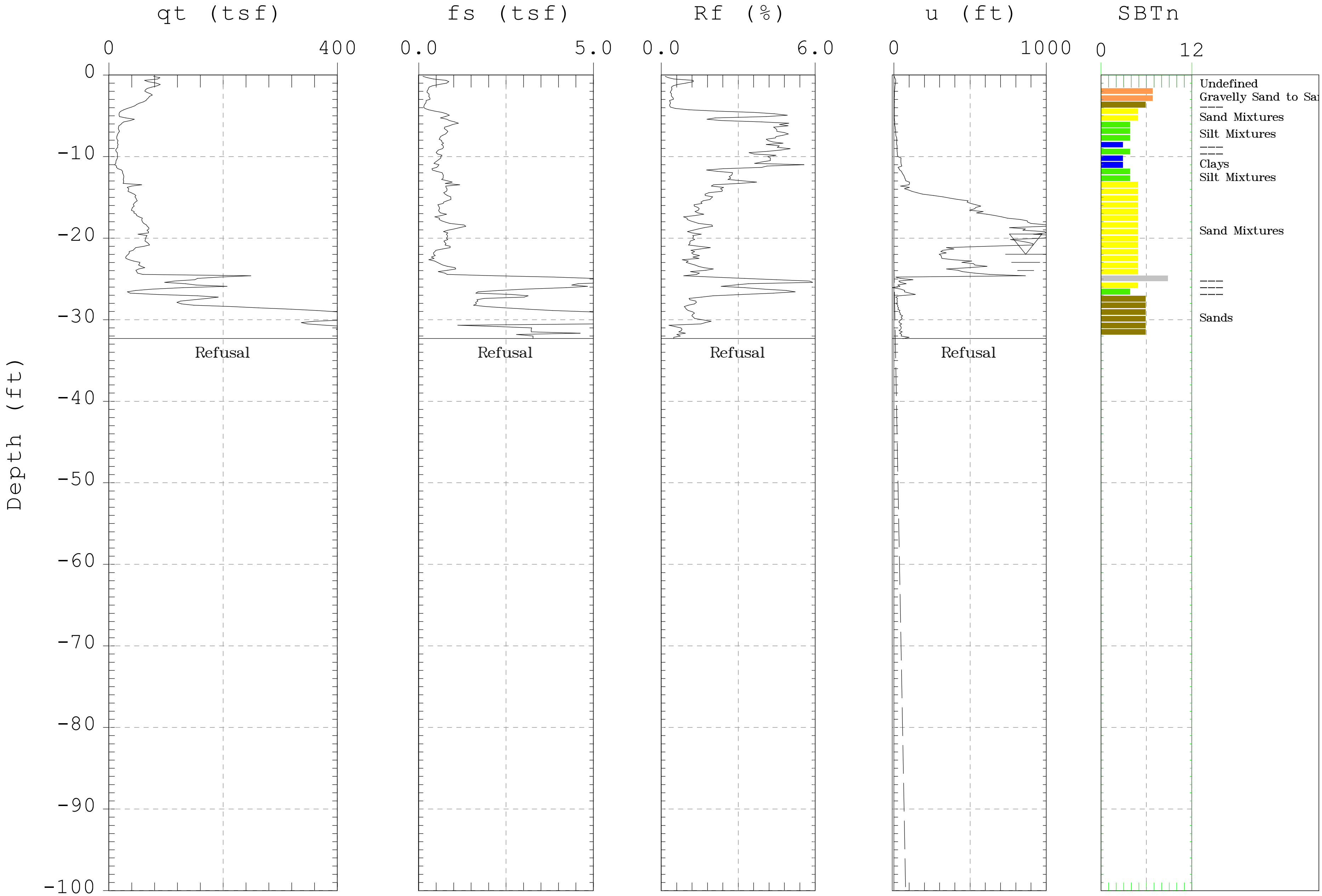
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

CONETEC

Schnabel Engineering

Sounding: C-407
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 11:25



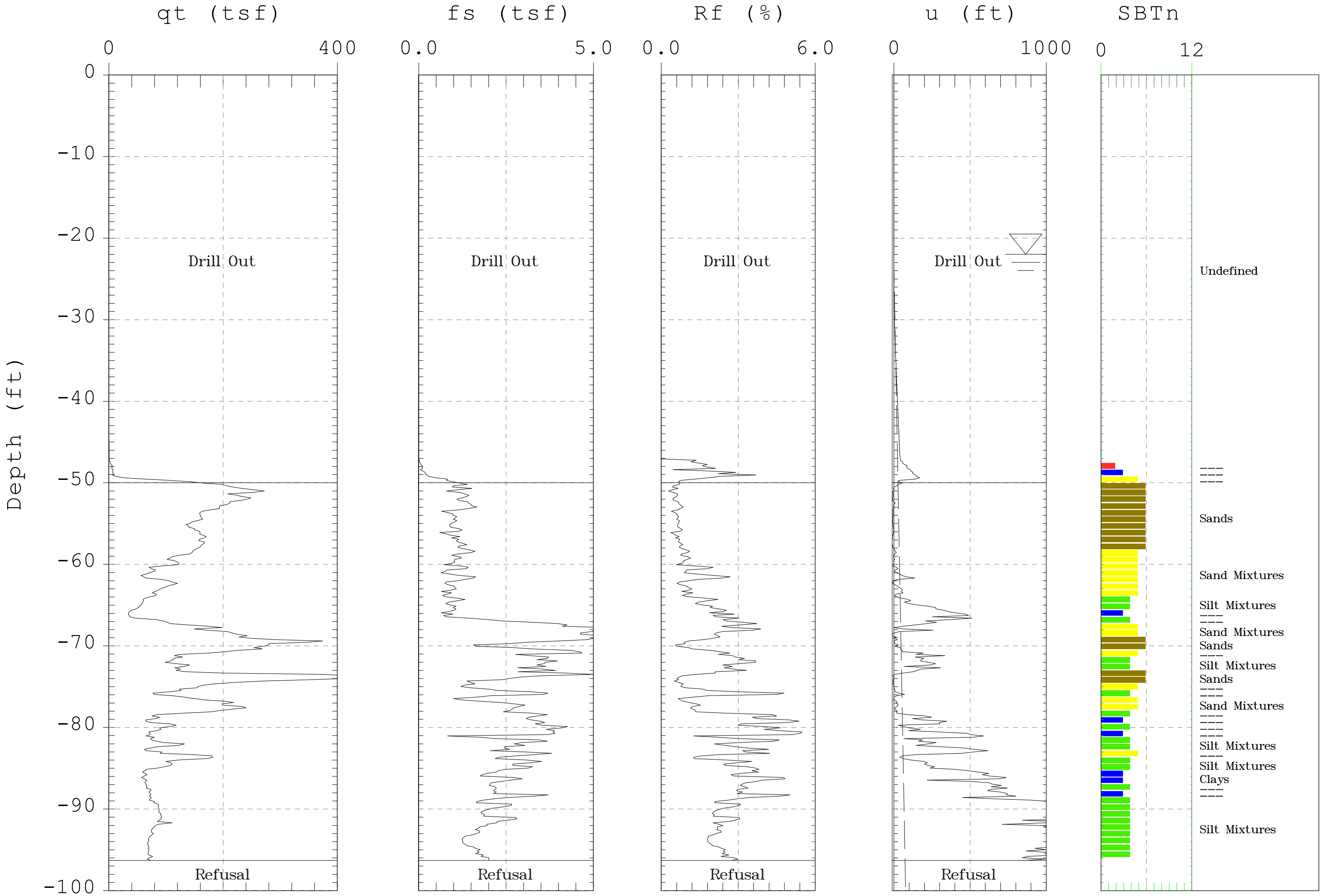
Max. Depth: 32.32 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-407-2a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:28:06 07:49



Max. Depth: 96.29 (ft)
Depth Inc.: 0.164 (ft)

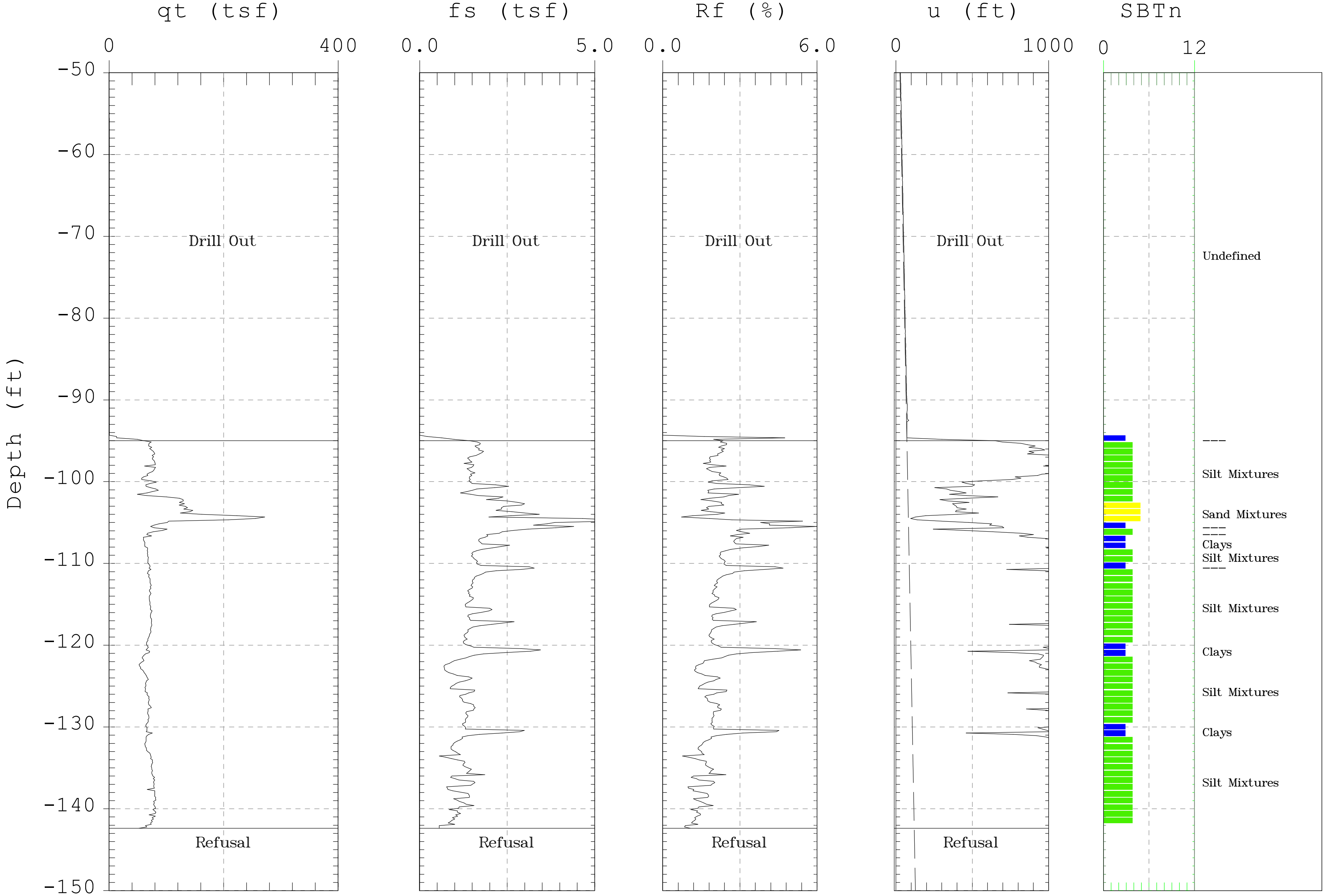
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-407-b
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:31:06 09:33



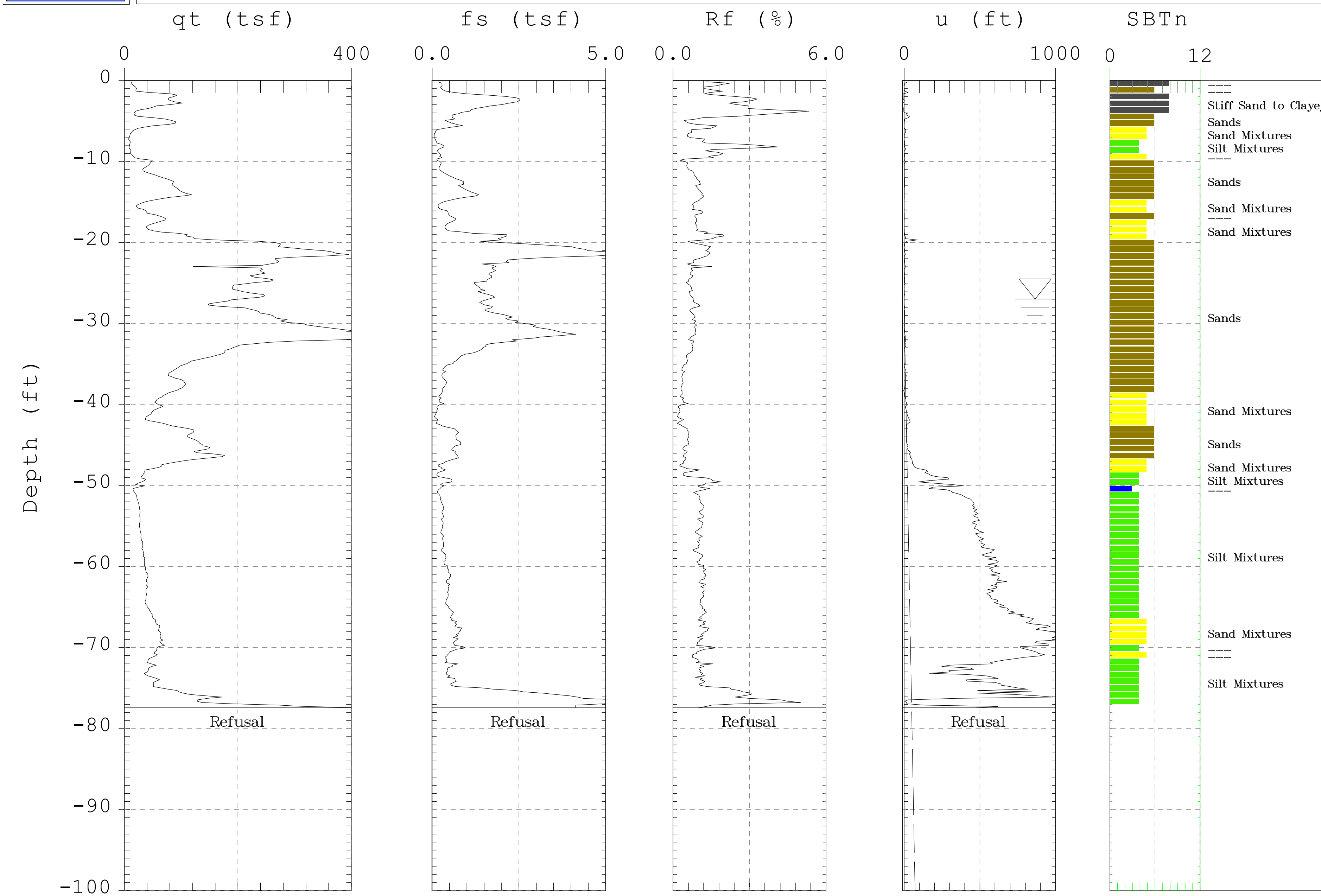
Max. Depth: 142.39 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-408
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:17:06 09:33



Max. Depth: 77.43 (ft)
Depth Inc.: 0.164 (ft)

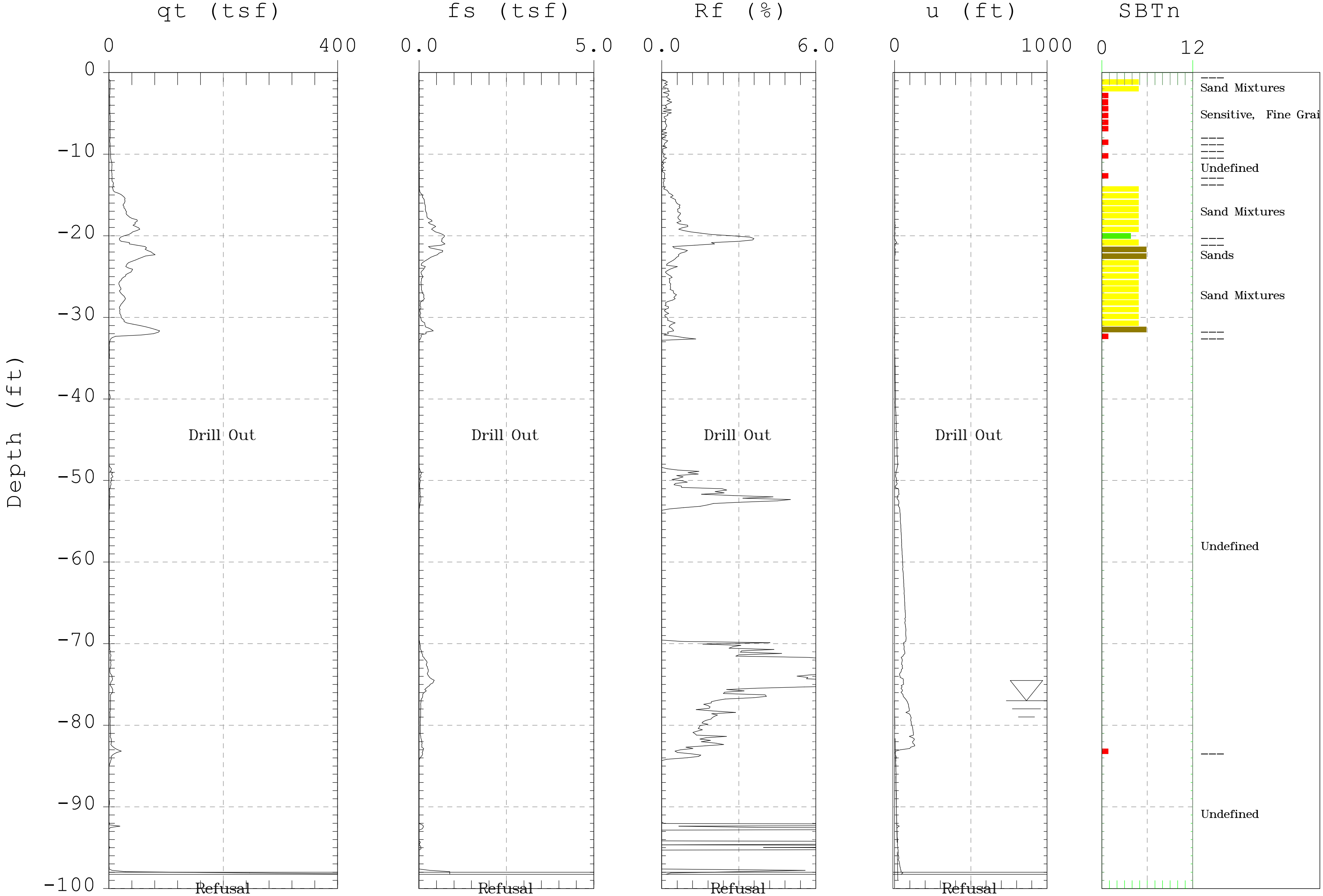
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-408a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:24:06 16:52



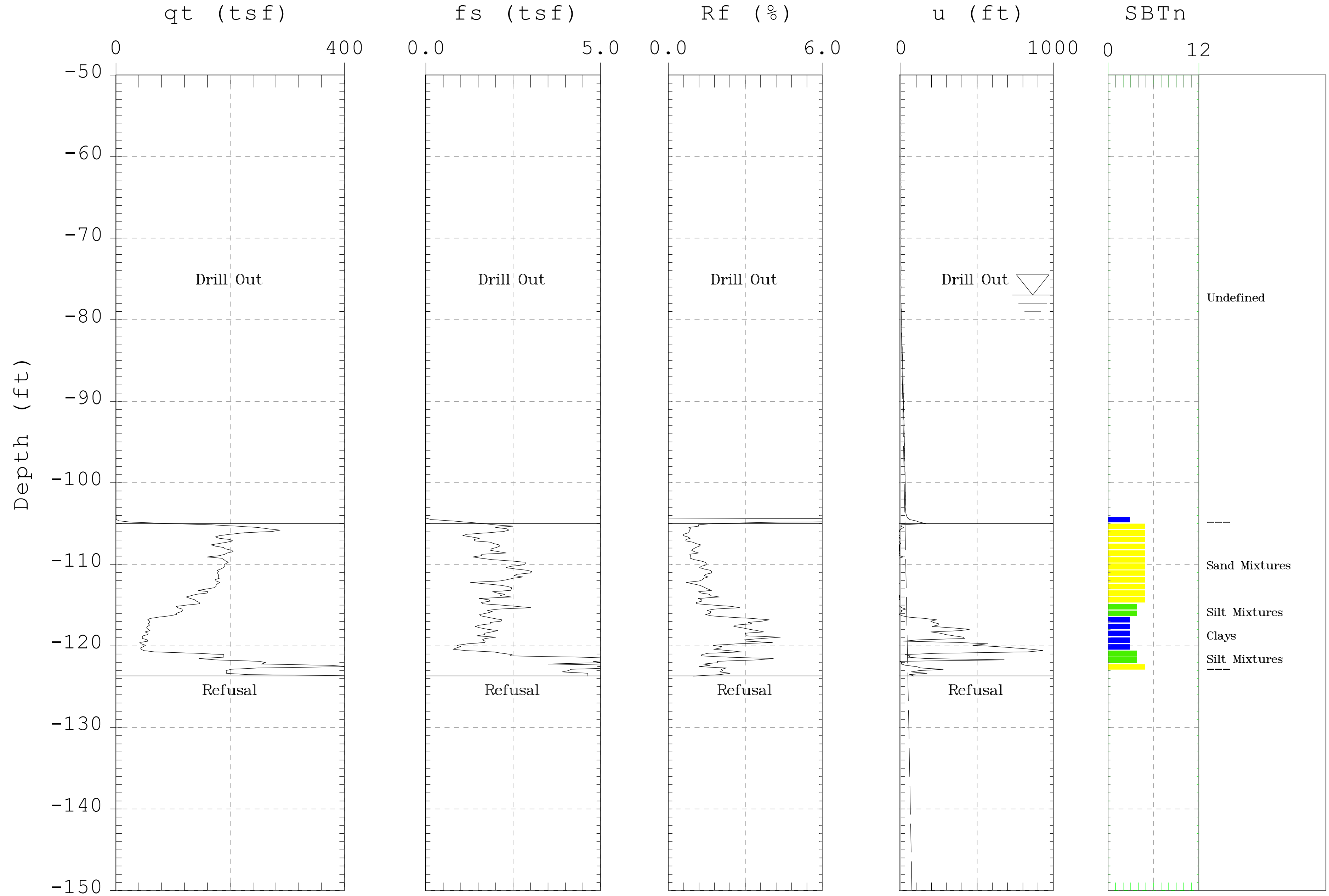
Max. Depth: 98.26 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-408-2a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:31:06 15:16



Max. Depth: 123.69 (ft)
Depth Inc.: 0.164 (ft)

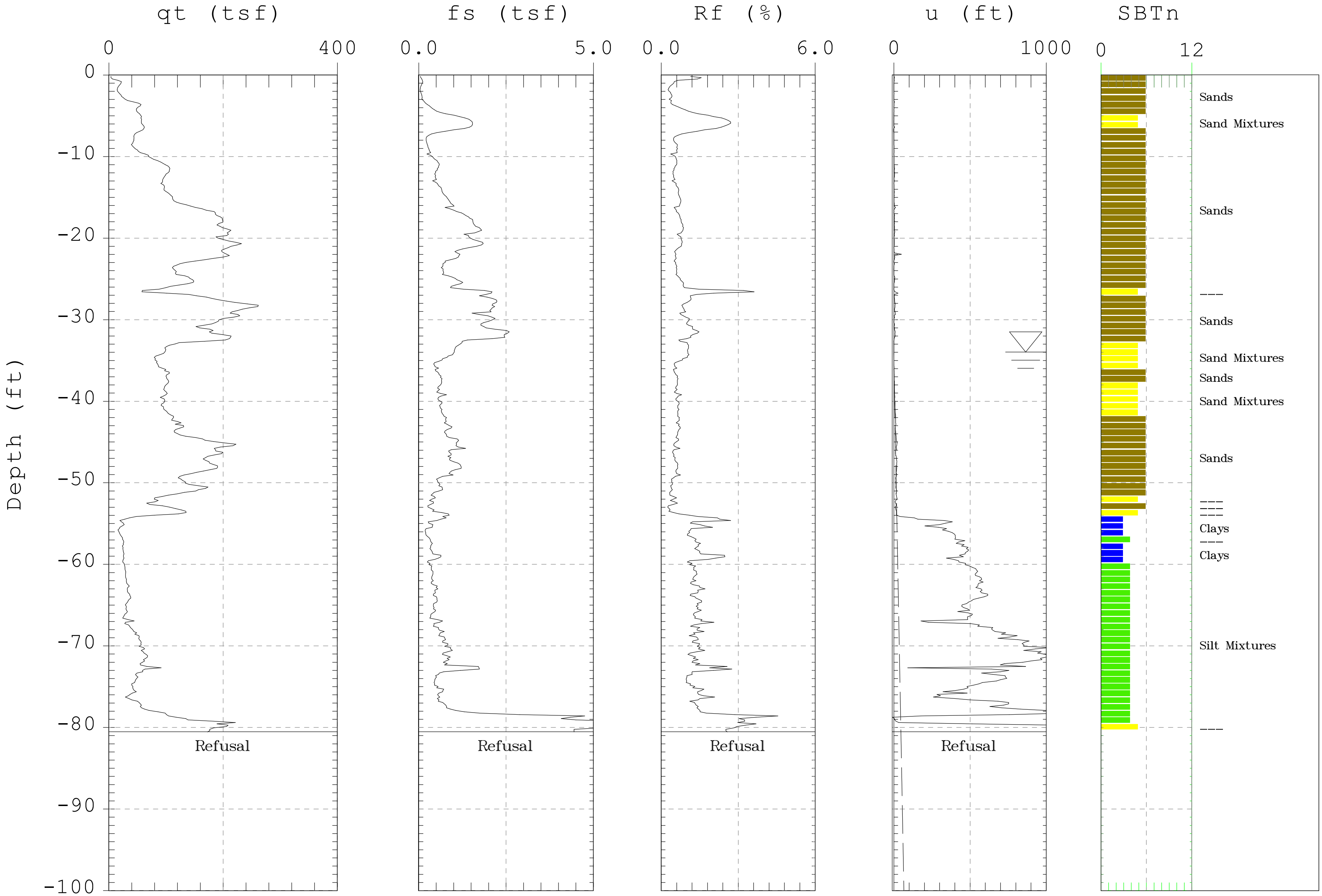
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-409
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:21:06 11:02



Max. Depth: 80.54 (ft)
Depth Inc.: 0.164 (ft)

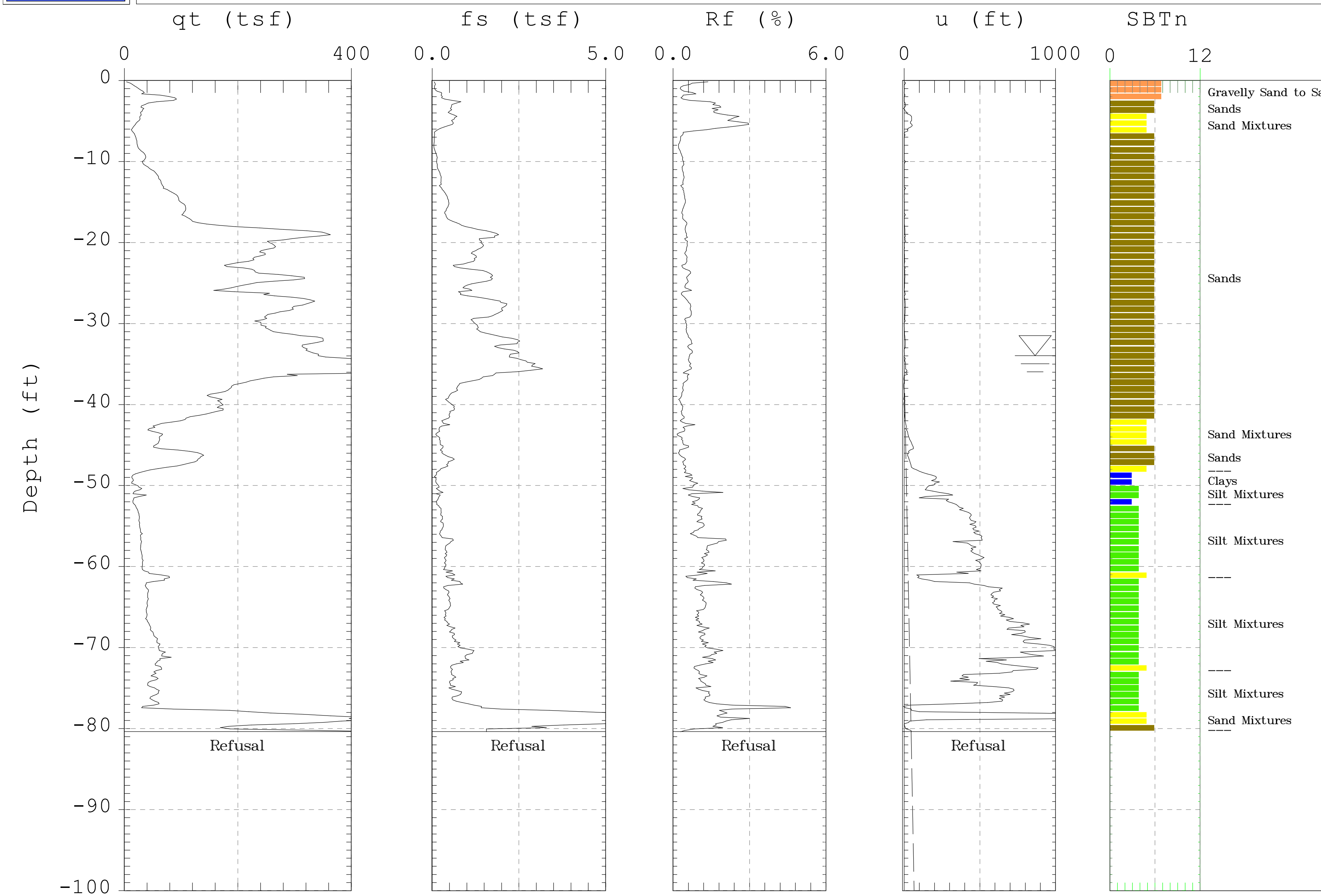
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

CONETEC

Schnabel Engineering

Sounding: C-411
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:24:06 09:36



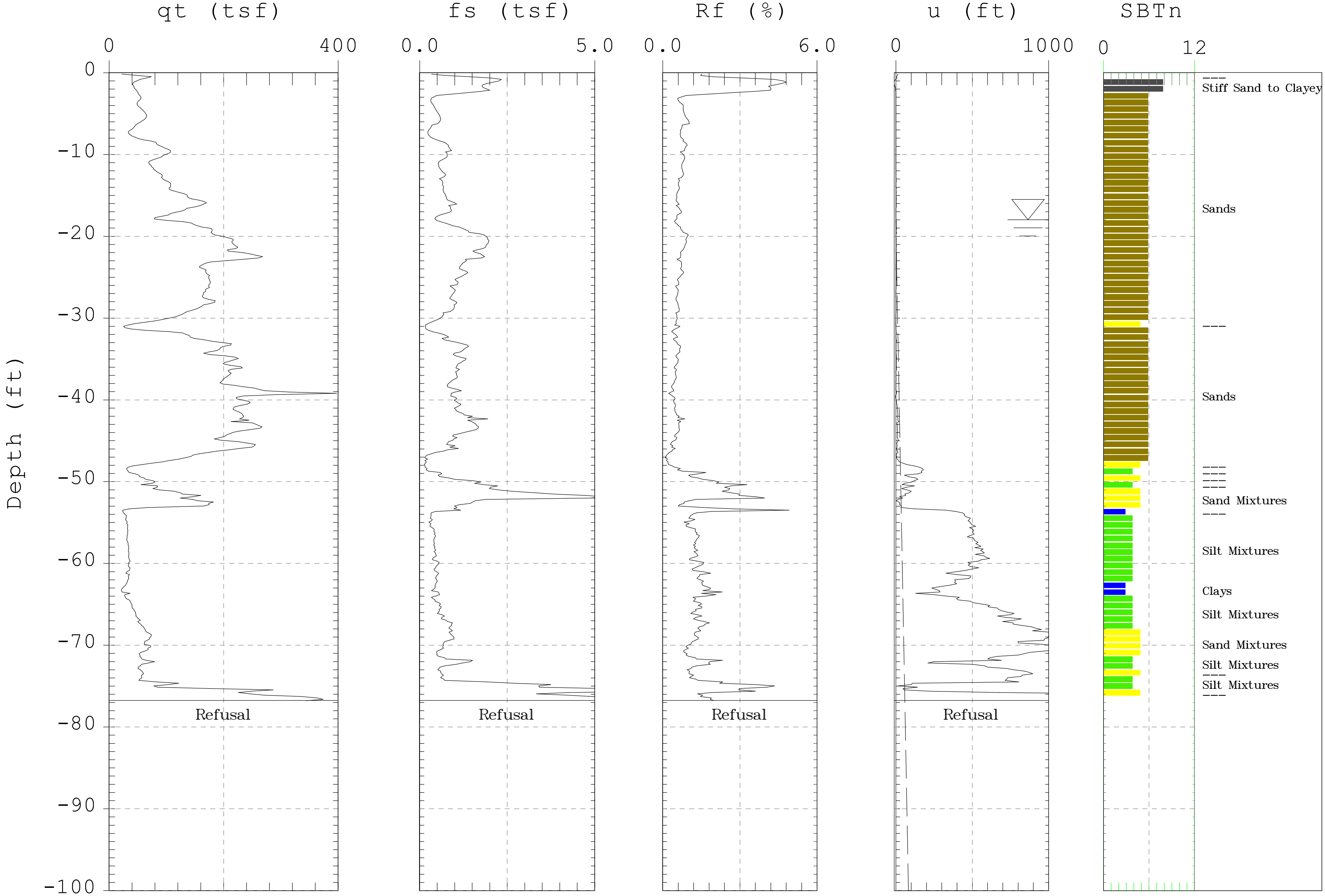
Max. Depth: 80.38 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-412
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:20:06 15:57

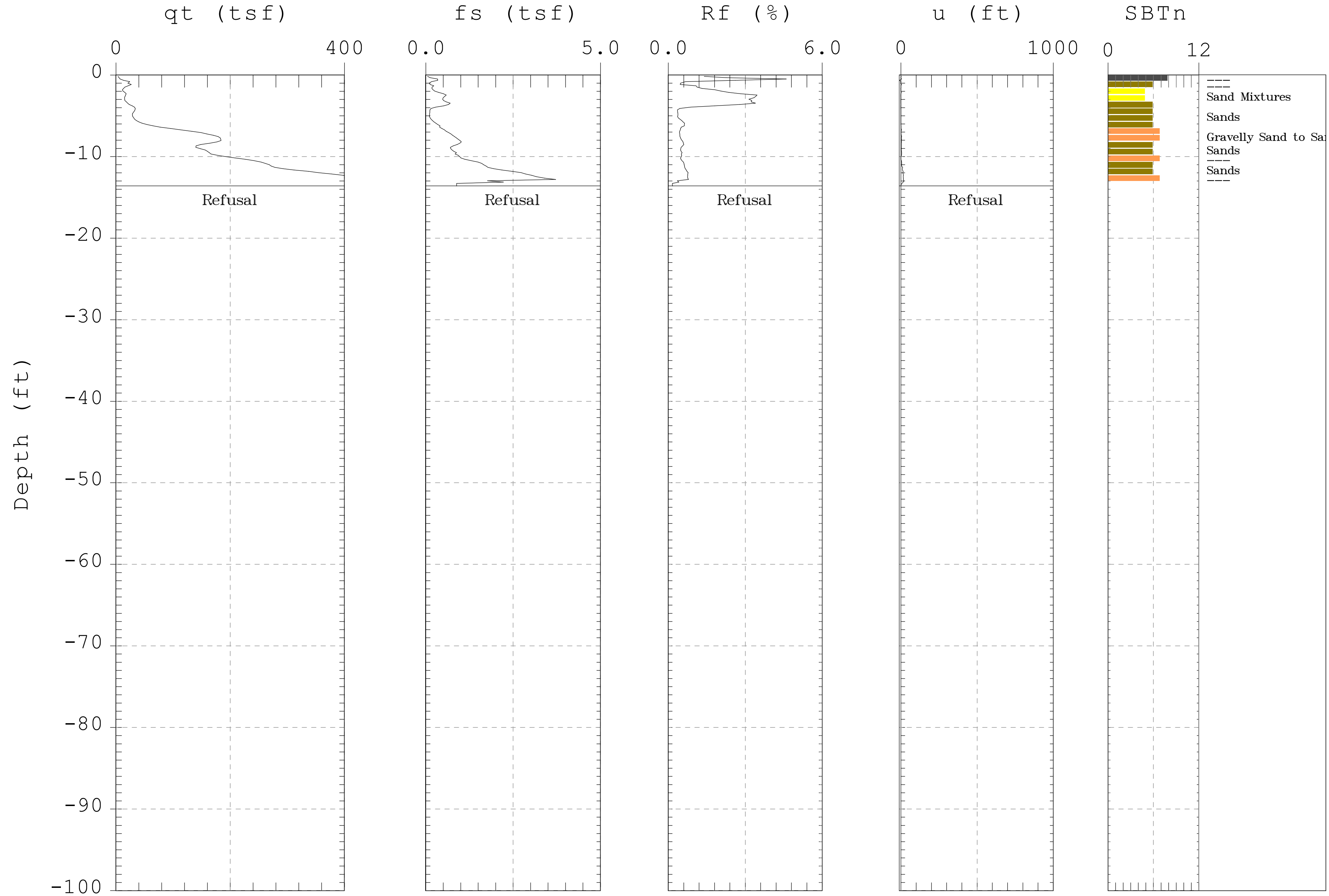


Max. Depth: 76.77 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering — Sounding: C-413 — Location: C C N P P — Cone: STD 20T AD-195 — Date: 07:18:06 10:04



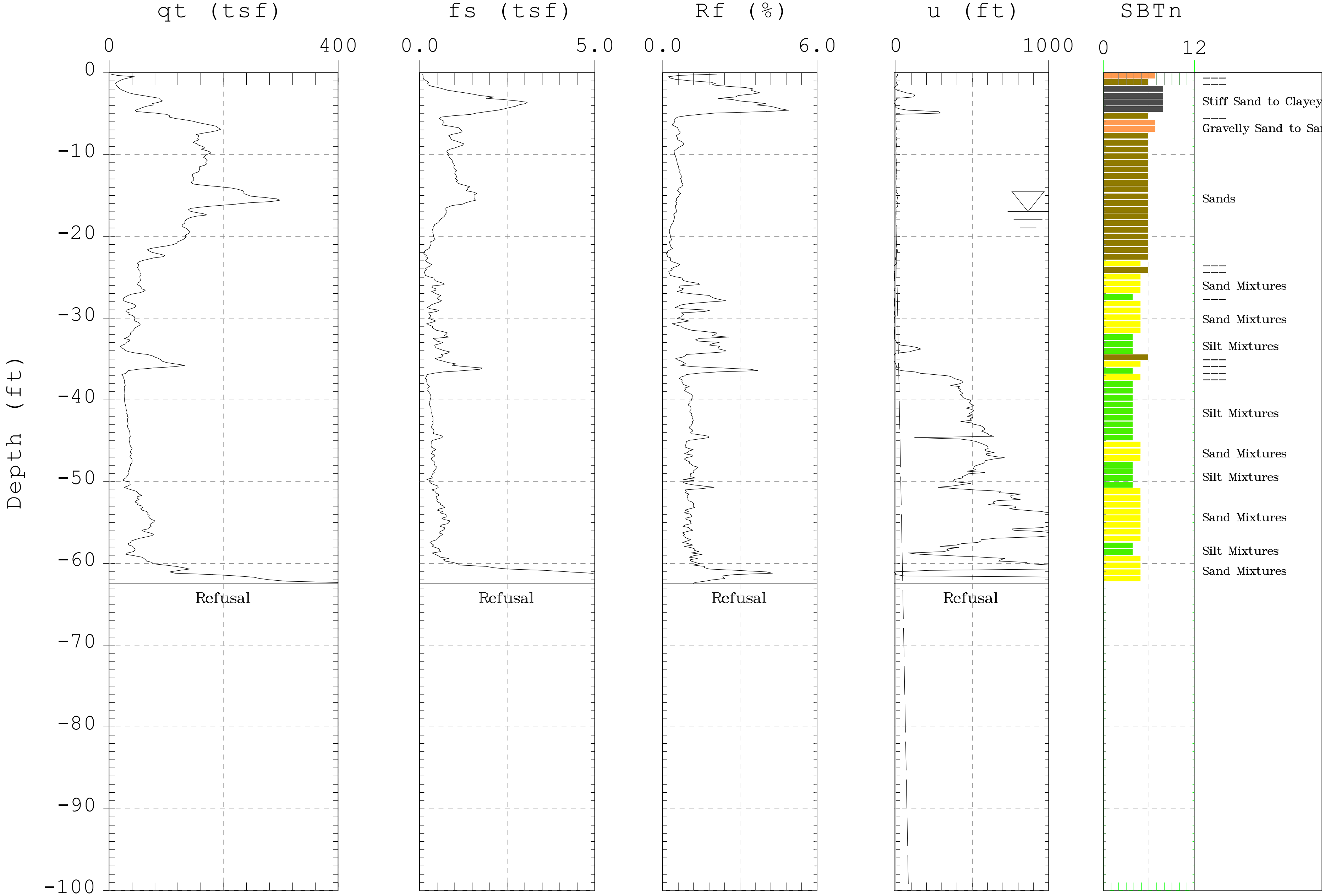
Max. Depth: 13.62 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-414
Location: C C N P P

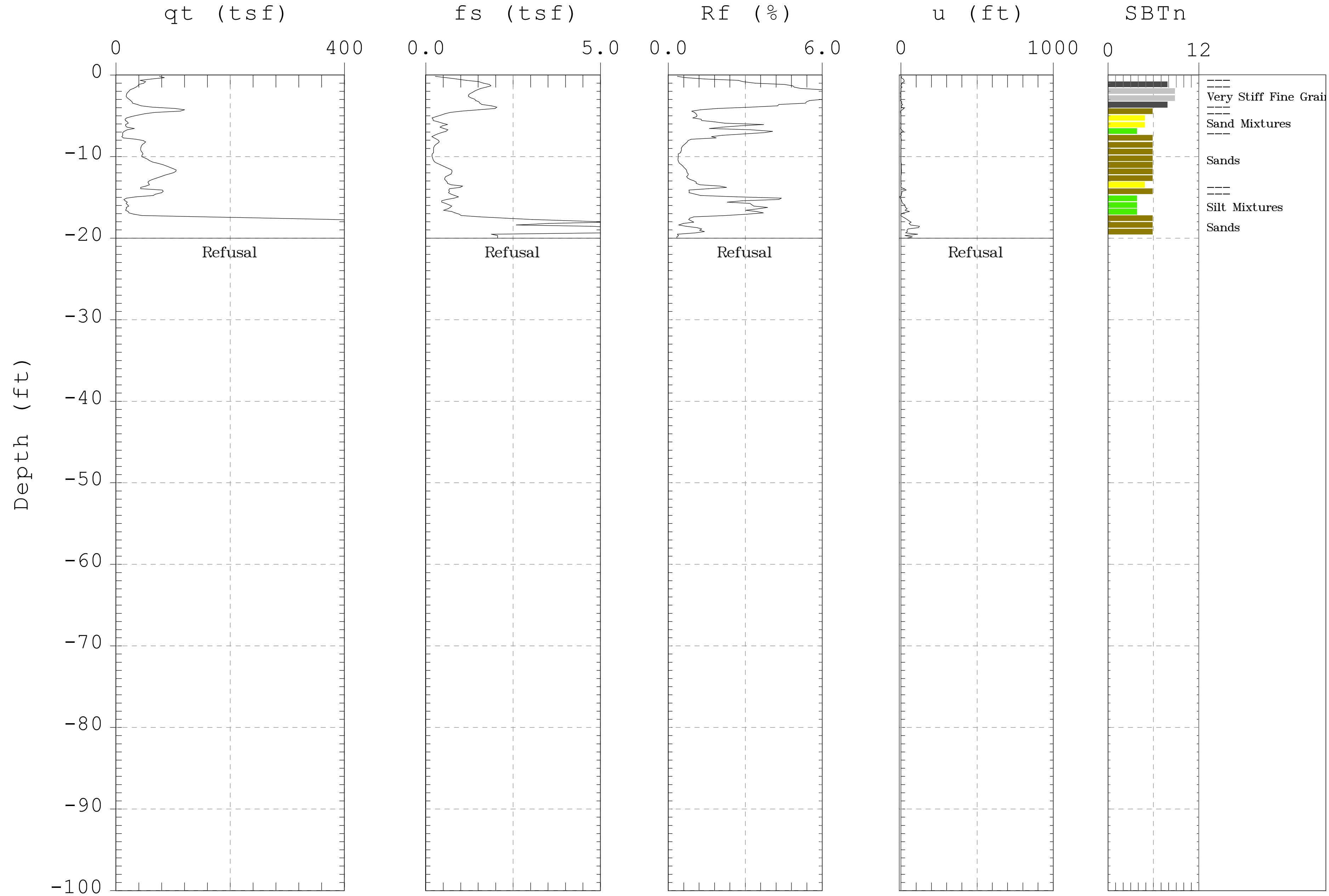
Cone: STD 20T AD-195
Date: 07:18:06 10:41



Max. Depth: 62.50 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering — Sounding: C-415 — Location: C C N P P — Cone: STD 20T AD-195 — Date: 07:13:06 14:50



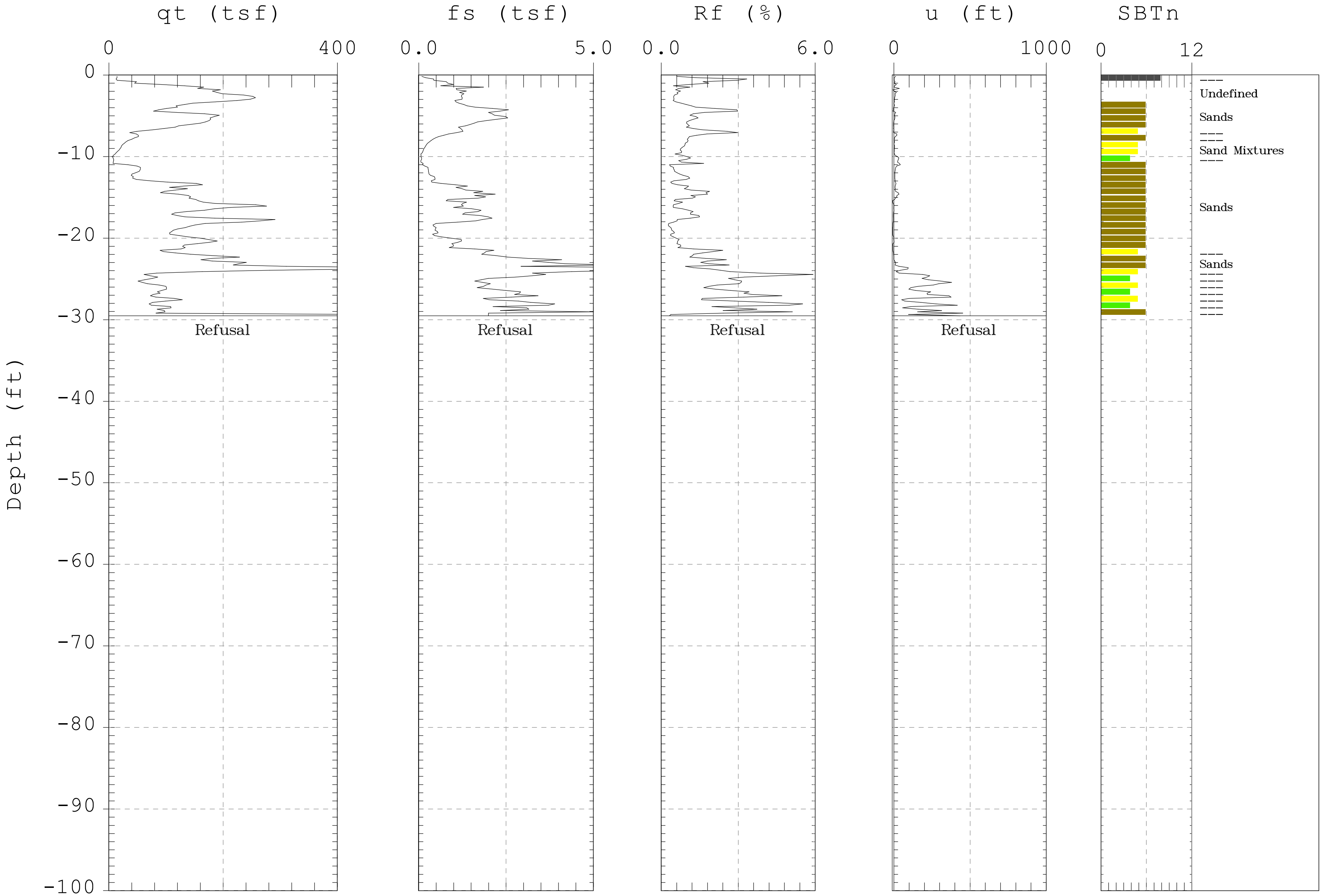
Max. Depth: 20.01 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-701
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:21:06 08:39



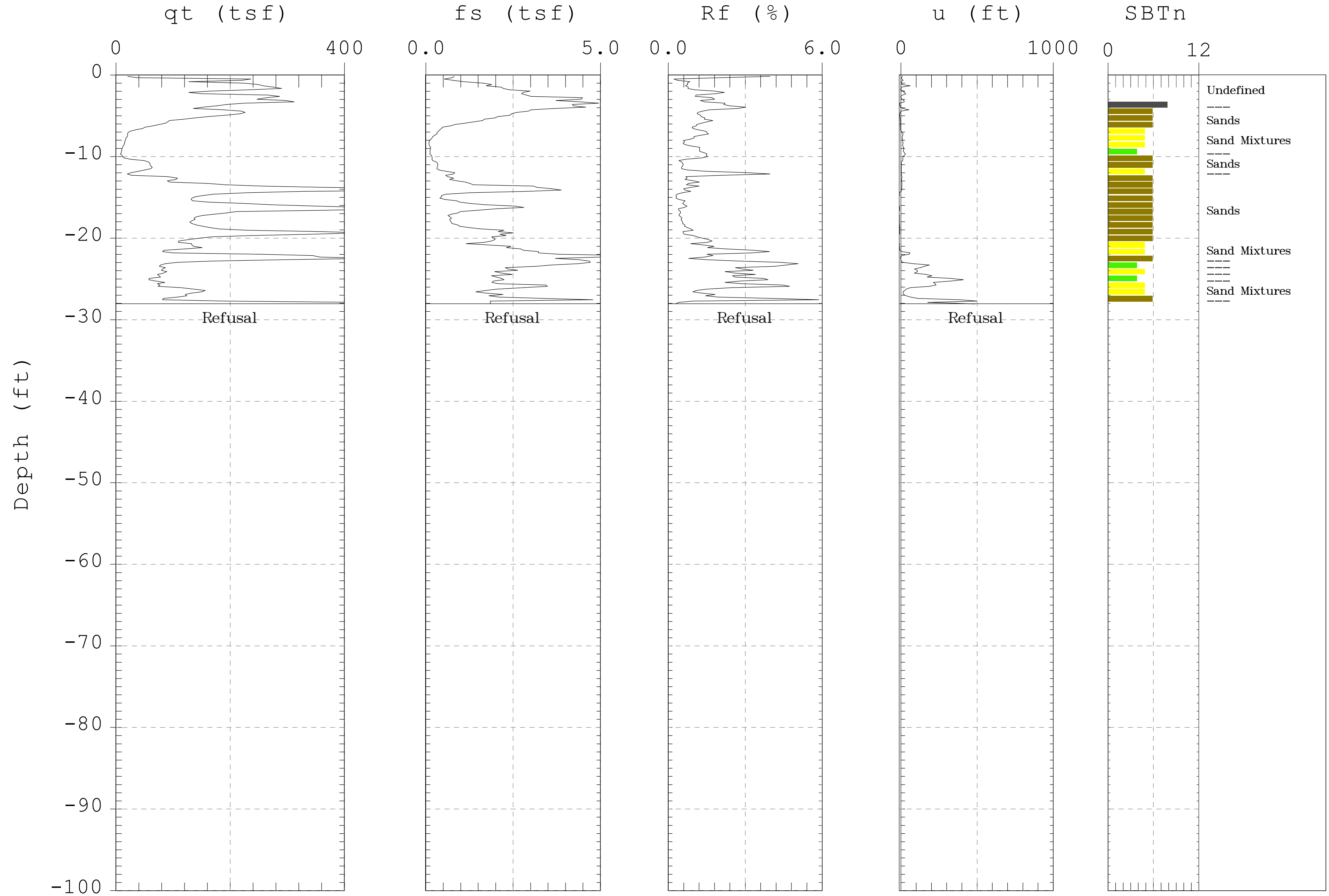
Max. Depth: 29.53 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-701a
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:21:06 09:15



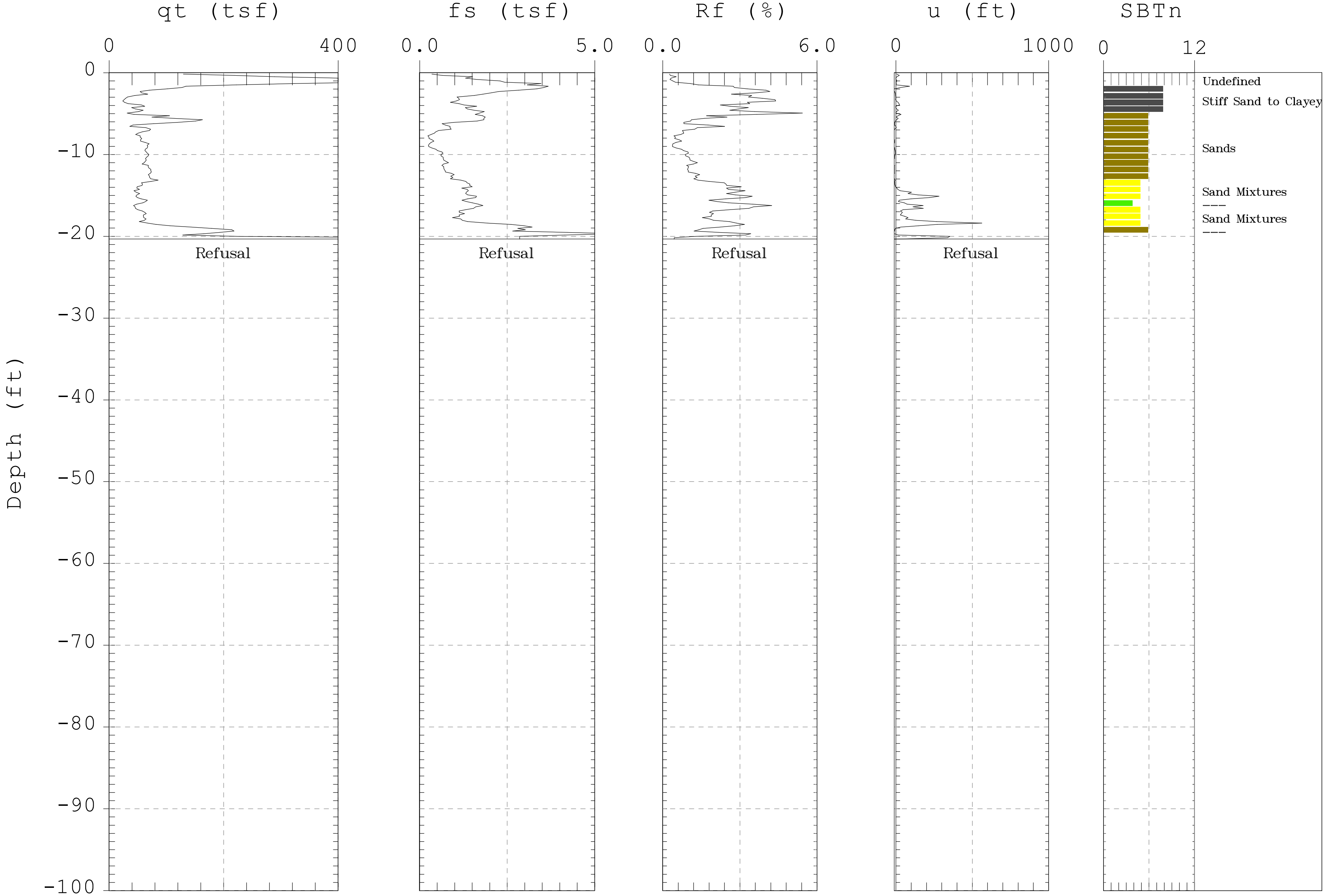
Max. Depth: 28.05 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-702
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:21:06 08:09



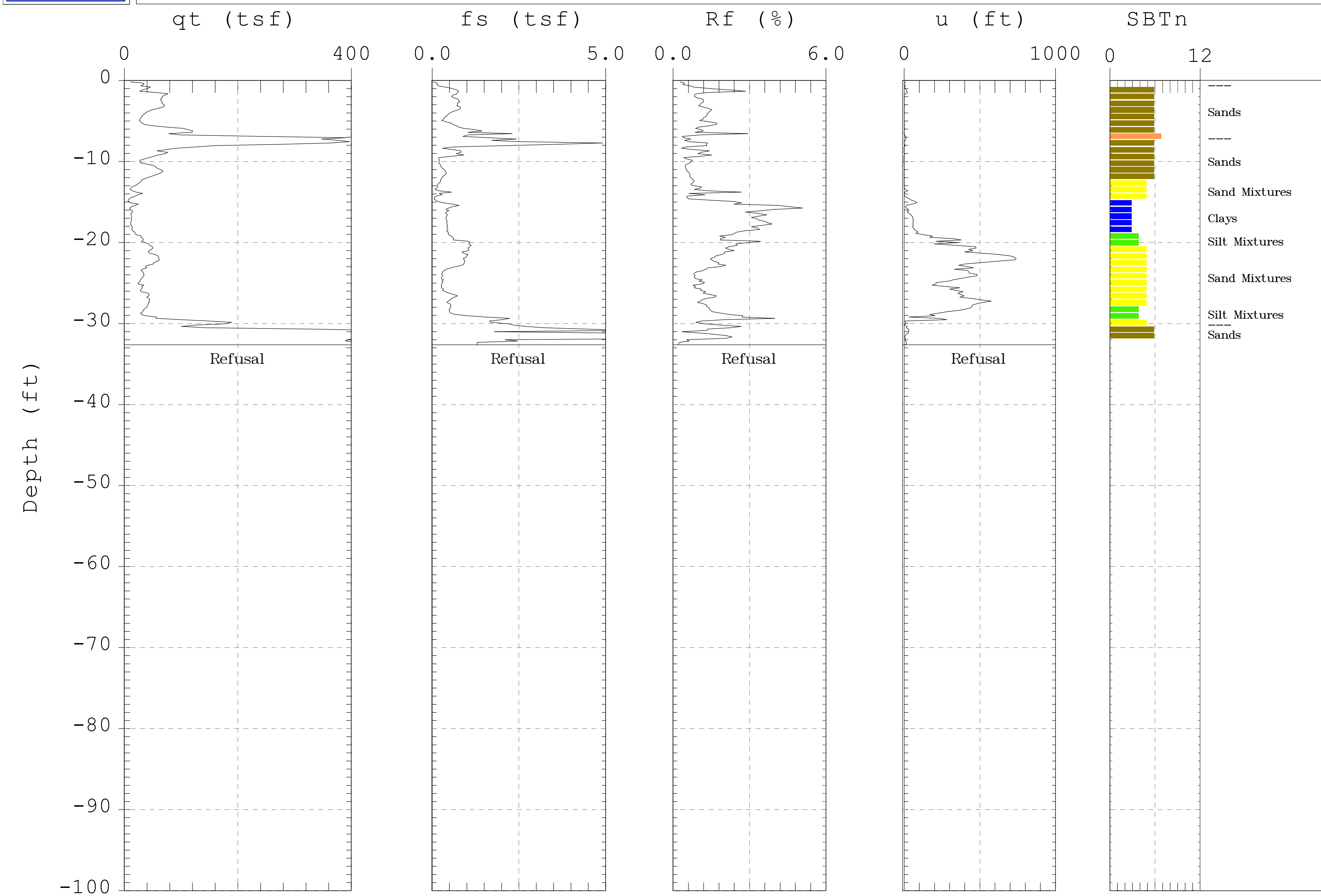
Max. Depth: 20.34 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-703
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:14:06 10:10



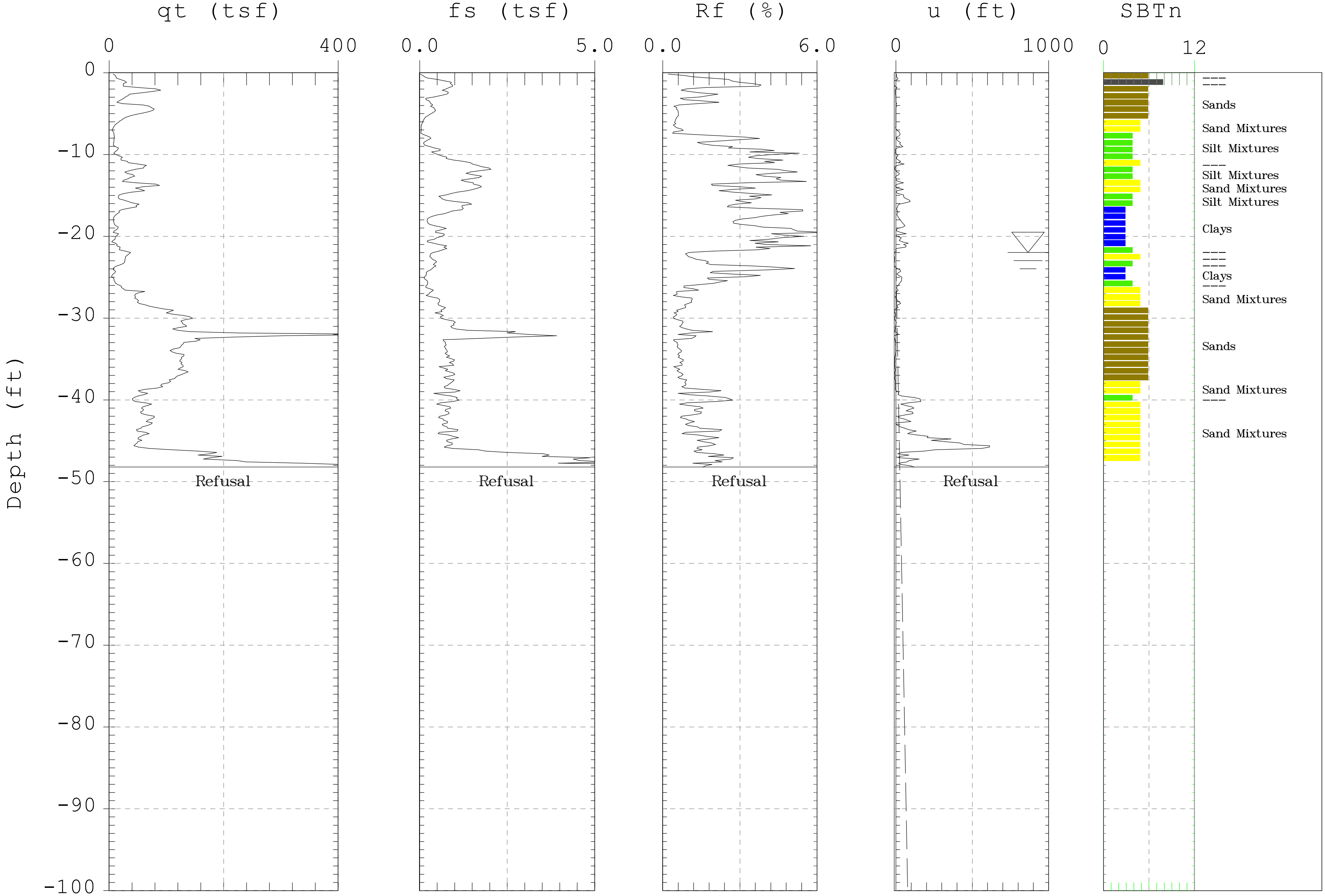
Max. Depth: 32.64 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-704
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:14:06 08:15



Max. Depth: 48.23 (ft)
Depth Inc.: 0.164 (ft)

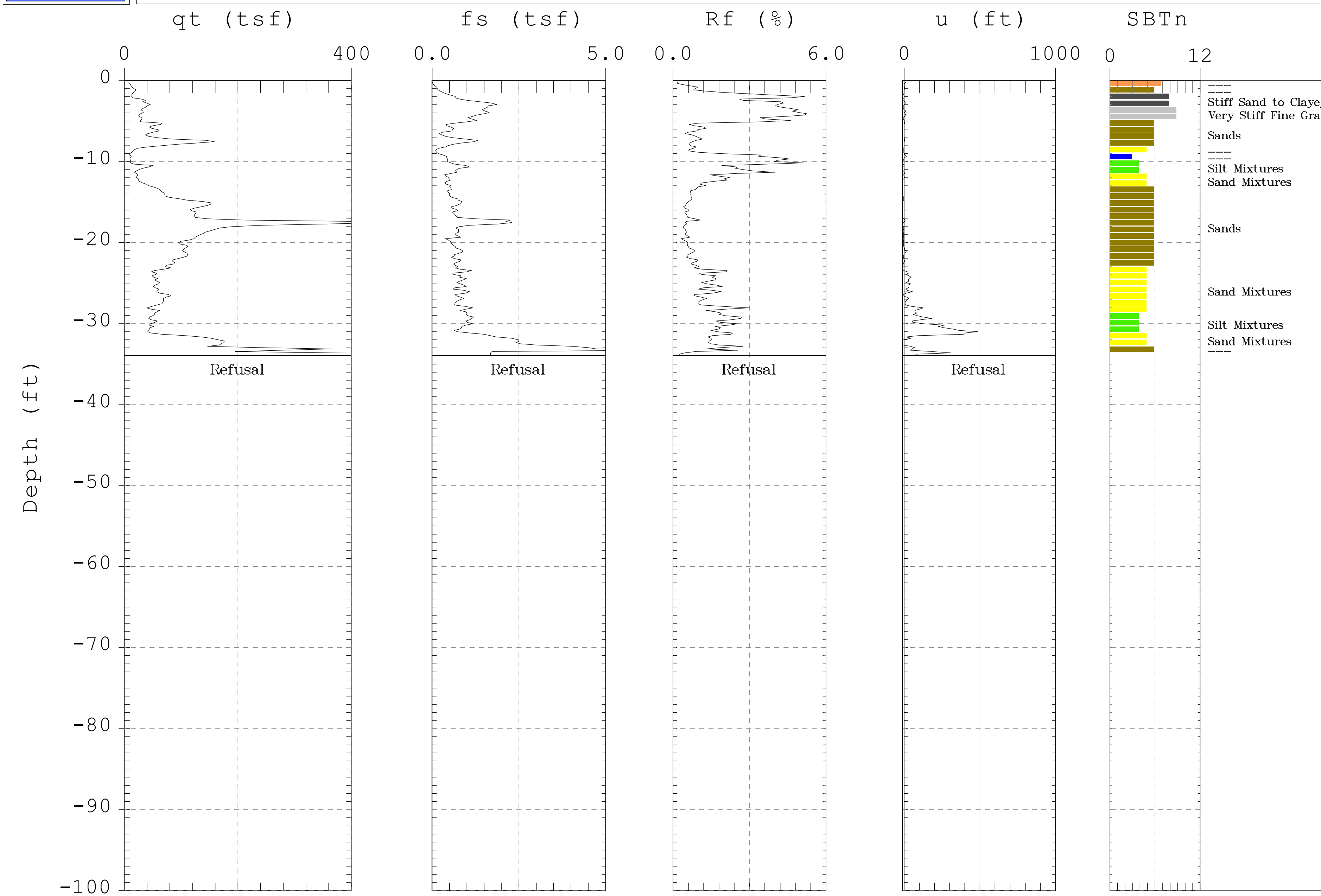
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

CONETEC

Schnabel Engineering

Sounding: C-705
Location: C C N P P

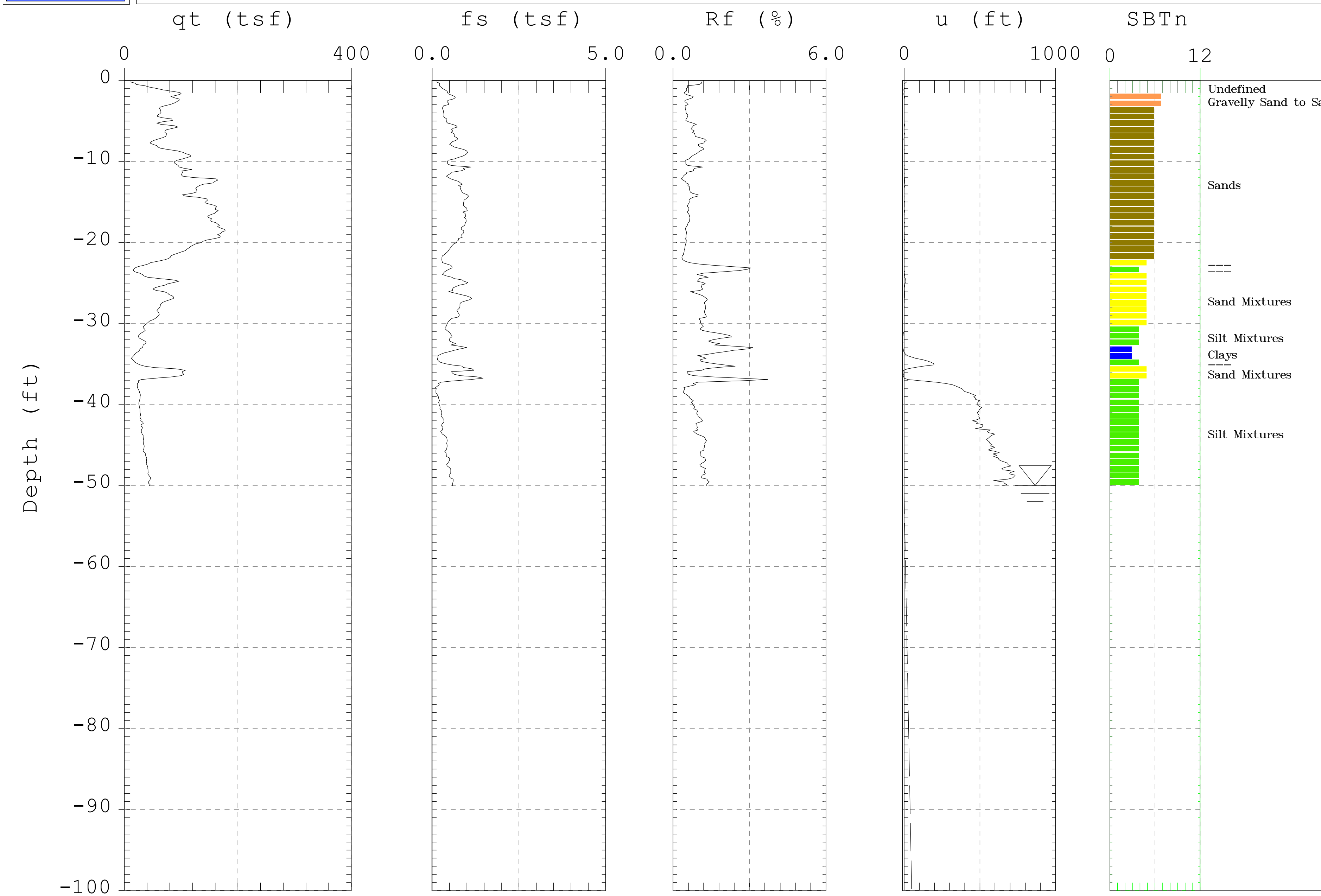
Cone: STD 20T AD-195
Date: 07:14:06 09:06



Max. Depth: 33.96 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering	Sounding: C-706	Location: C C N P P	Cone: STD 20T	AD-195
			Date: 07:13:06	07:41



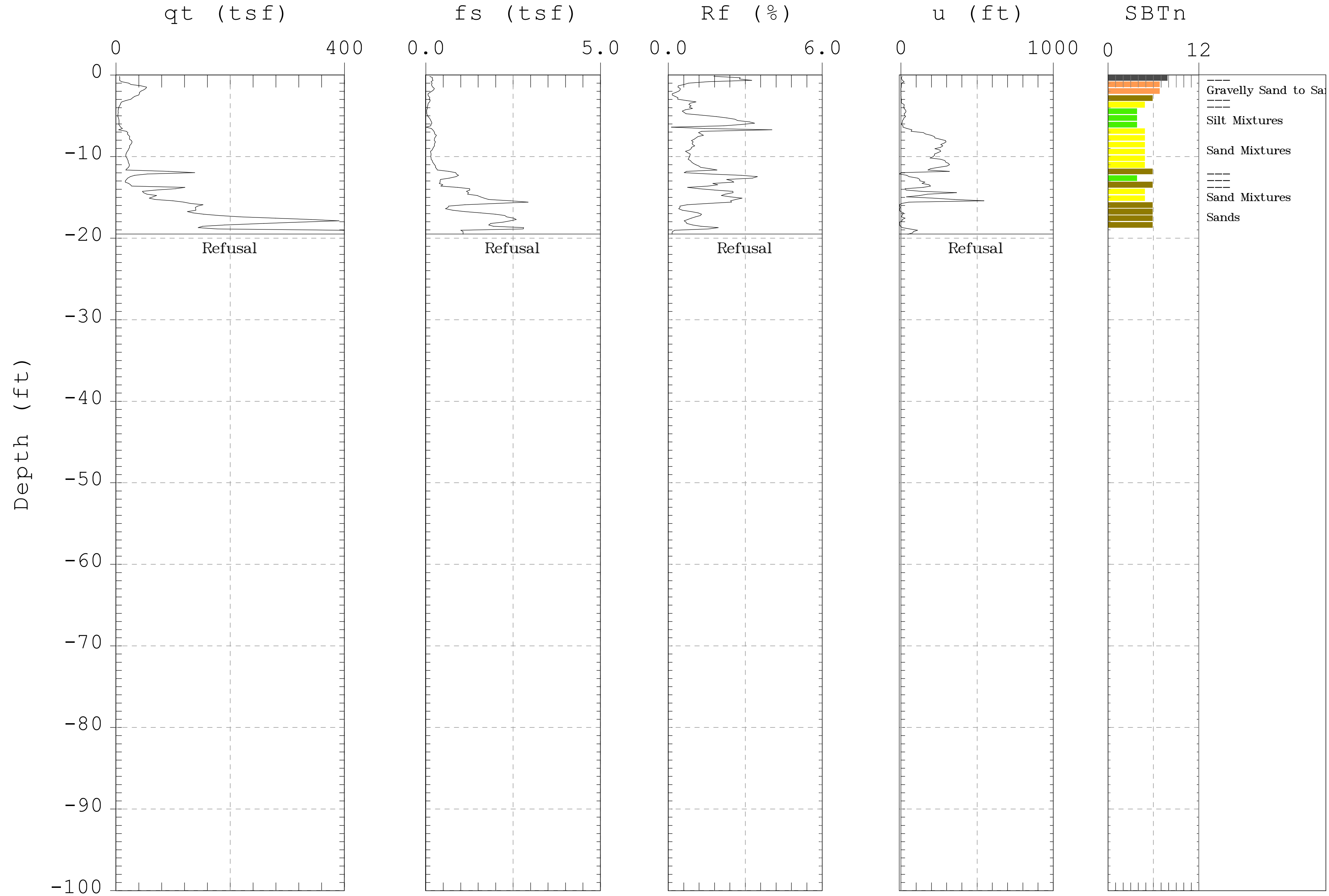
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-707
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:14:06 07:22



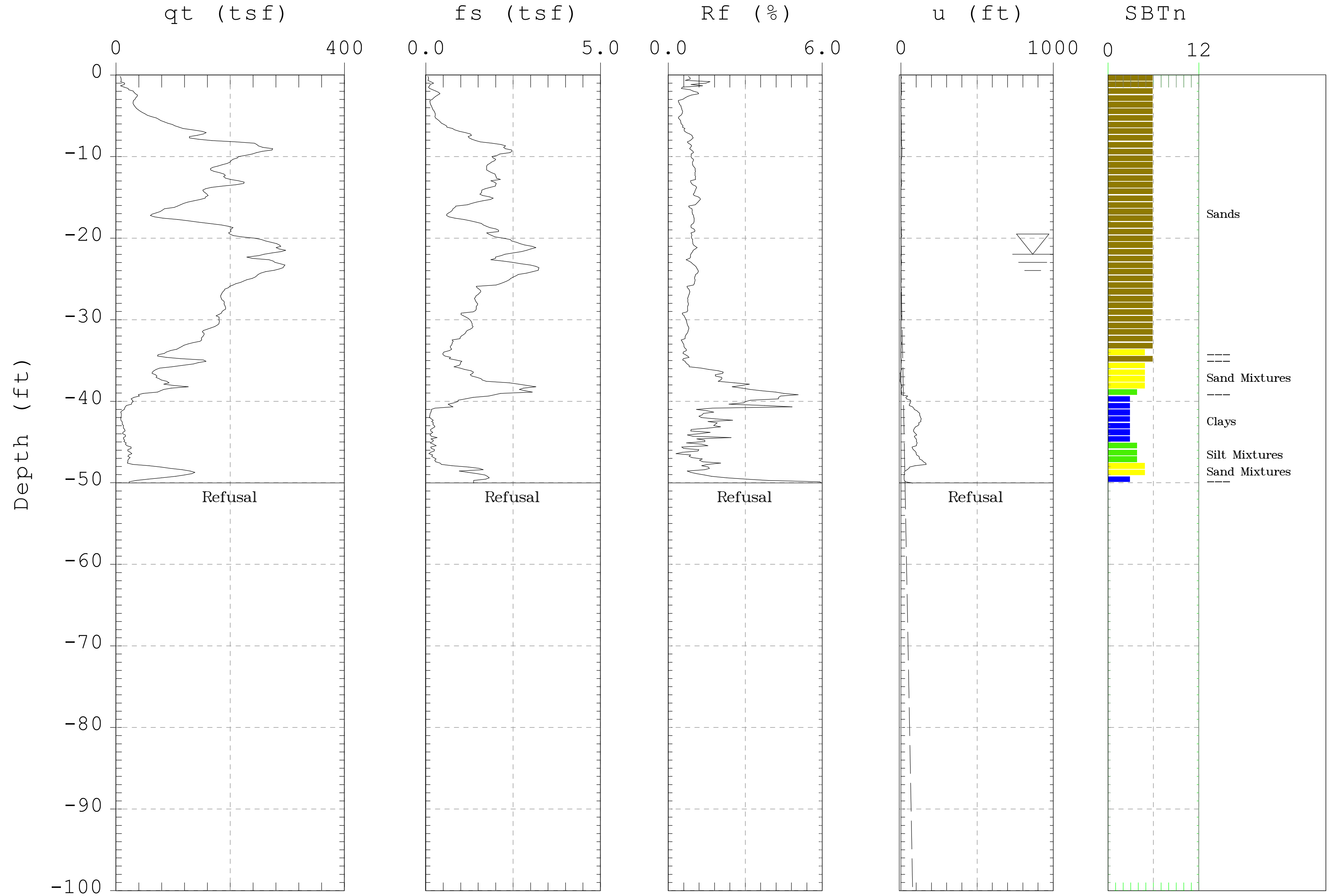
Max. Depth: 19.52 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-708
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:20:06 13:40



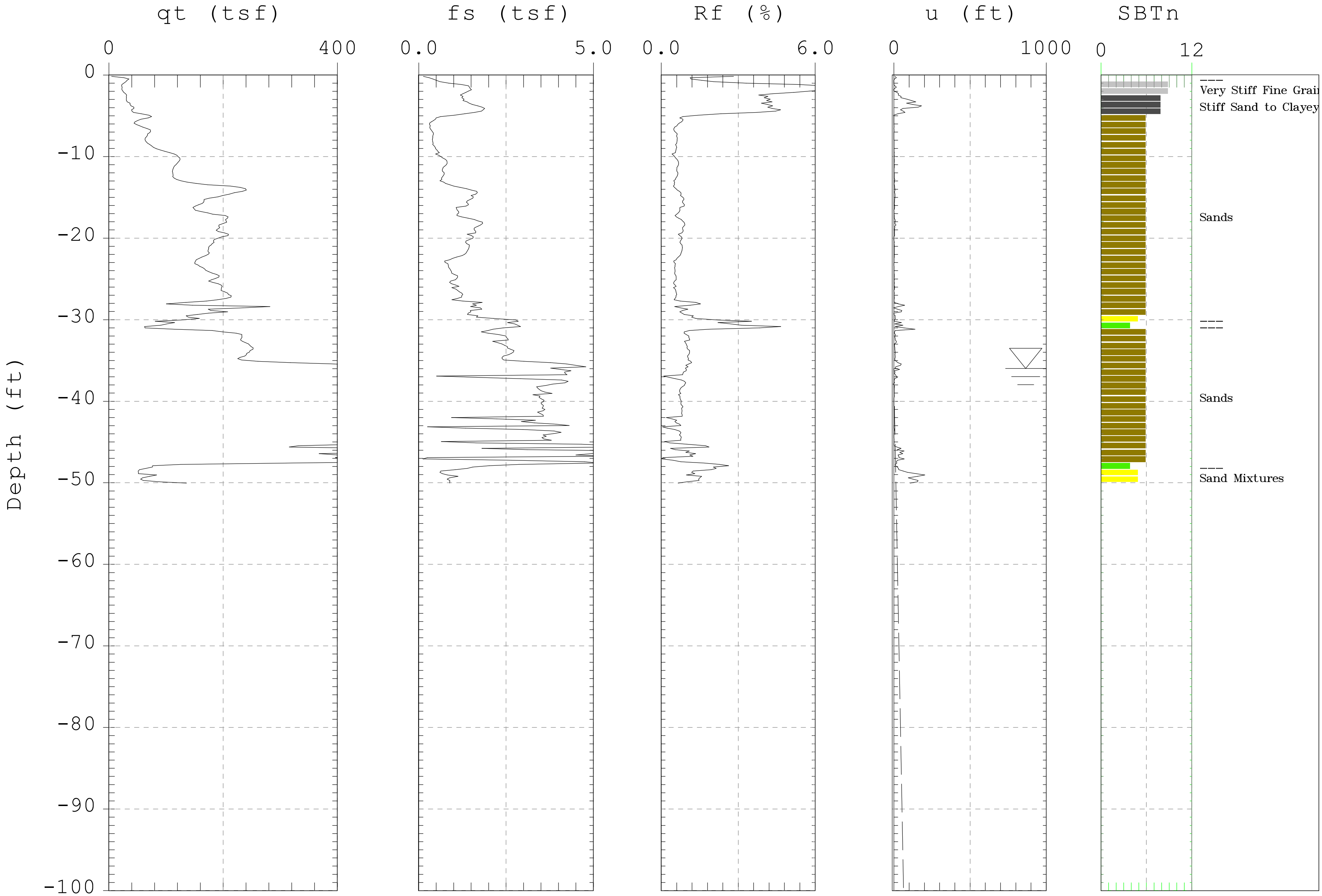
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-709
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:19:06 15:41



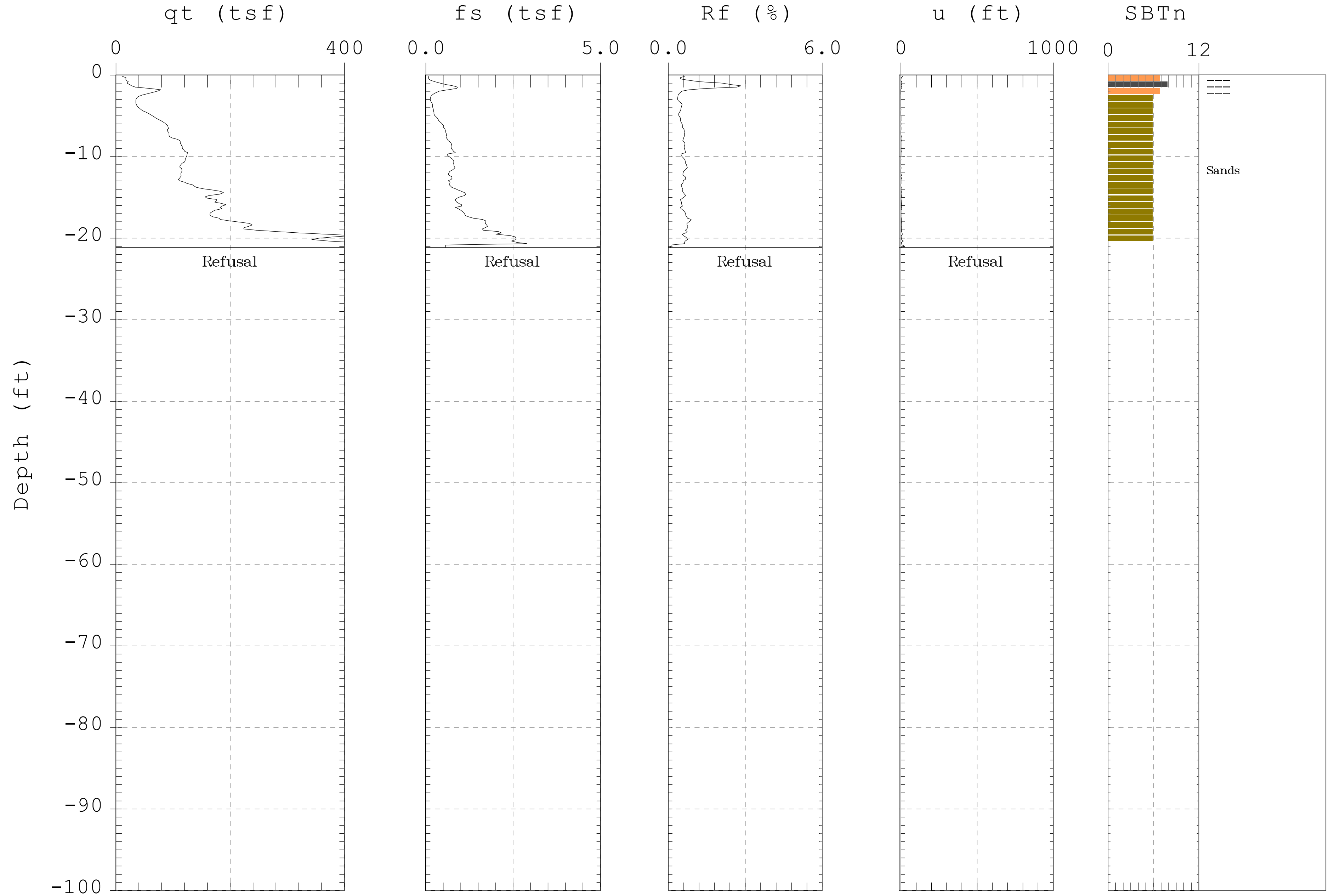
Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-710
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:18:06 14:18



Max. Depth: 21.16 (ft)
Depth Inc.: 0.164 (ft)

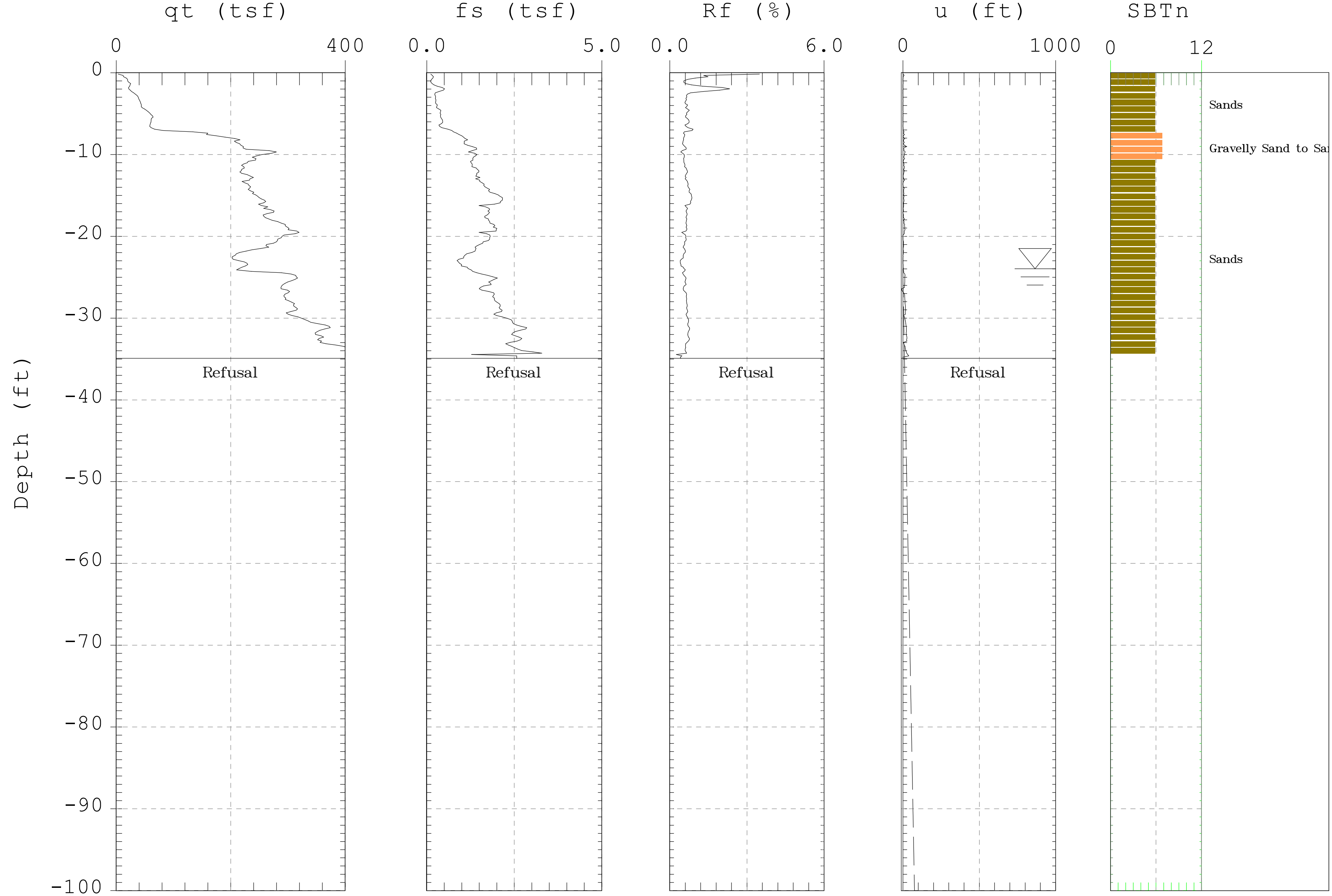
SBT: Soil Behavior Type (Robertson 1990)

CONETEC

Schnabel Engineering

Sounding: C-711
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:20:06 10:57



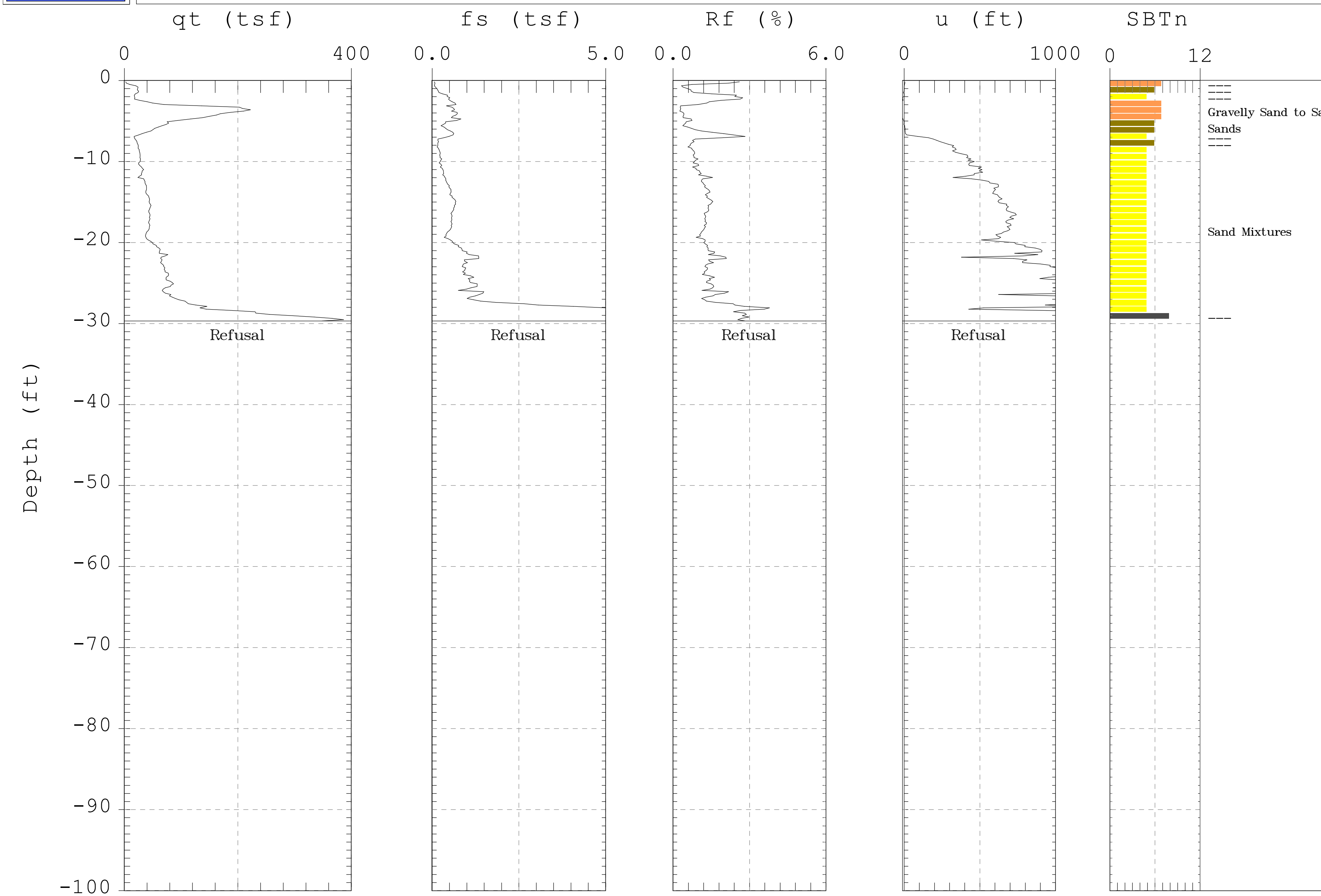
Max. Depth: 34.94 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-712
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:19:06 10:27



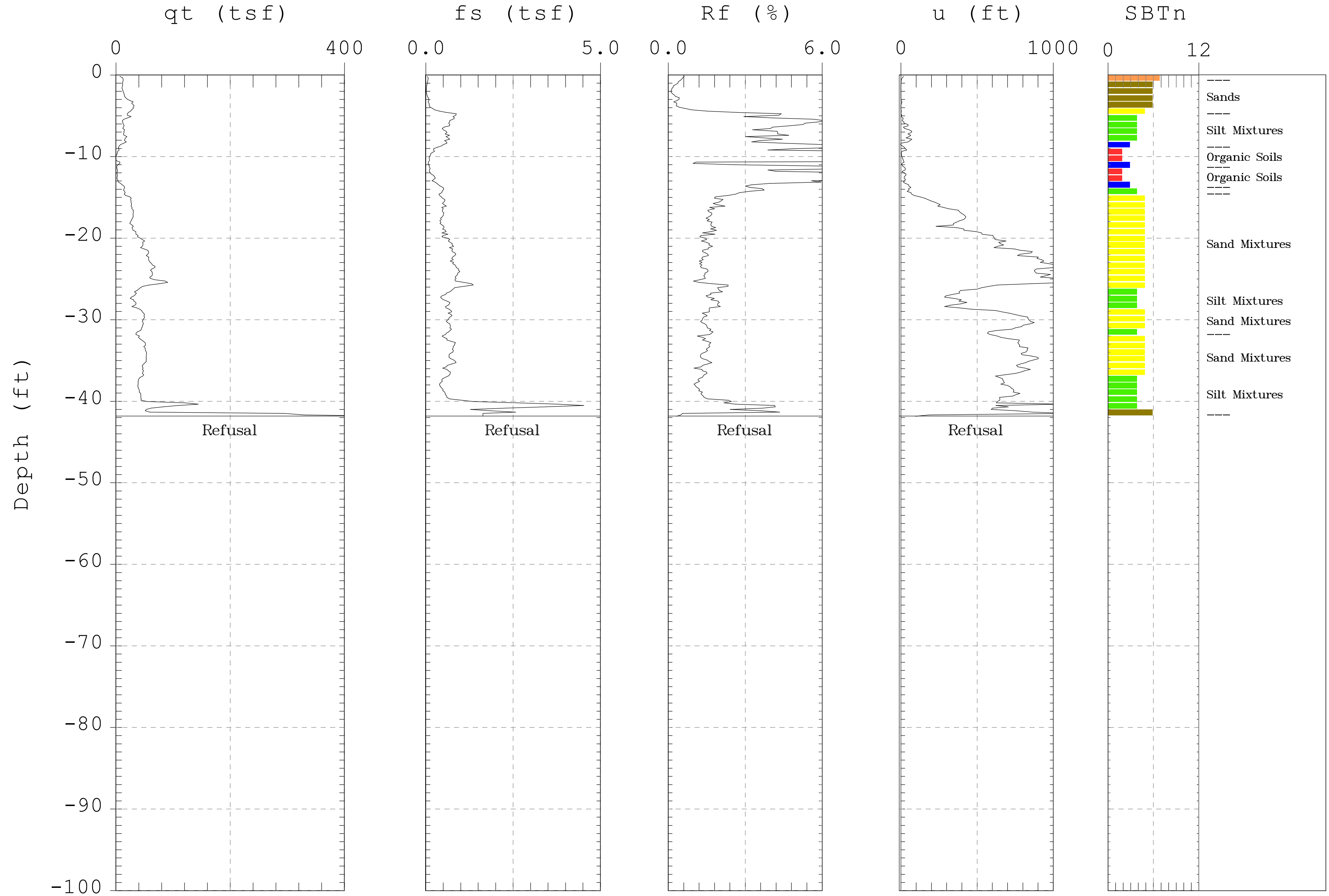
Max. Depth: 29.69 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-713
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 14:03



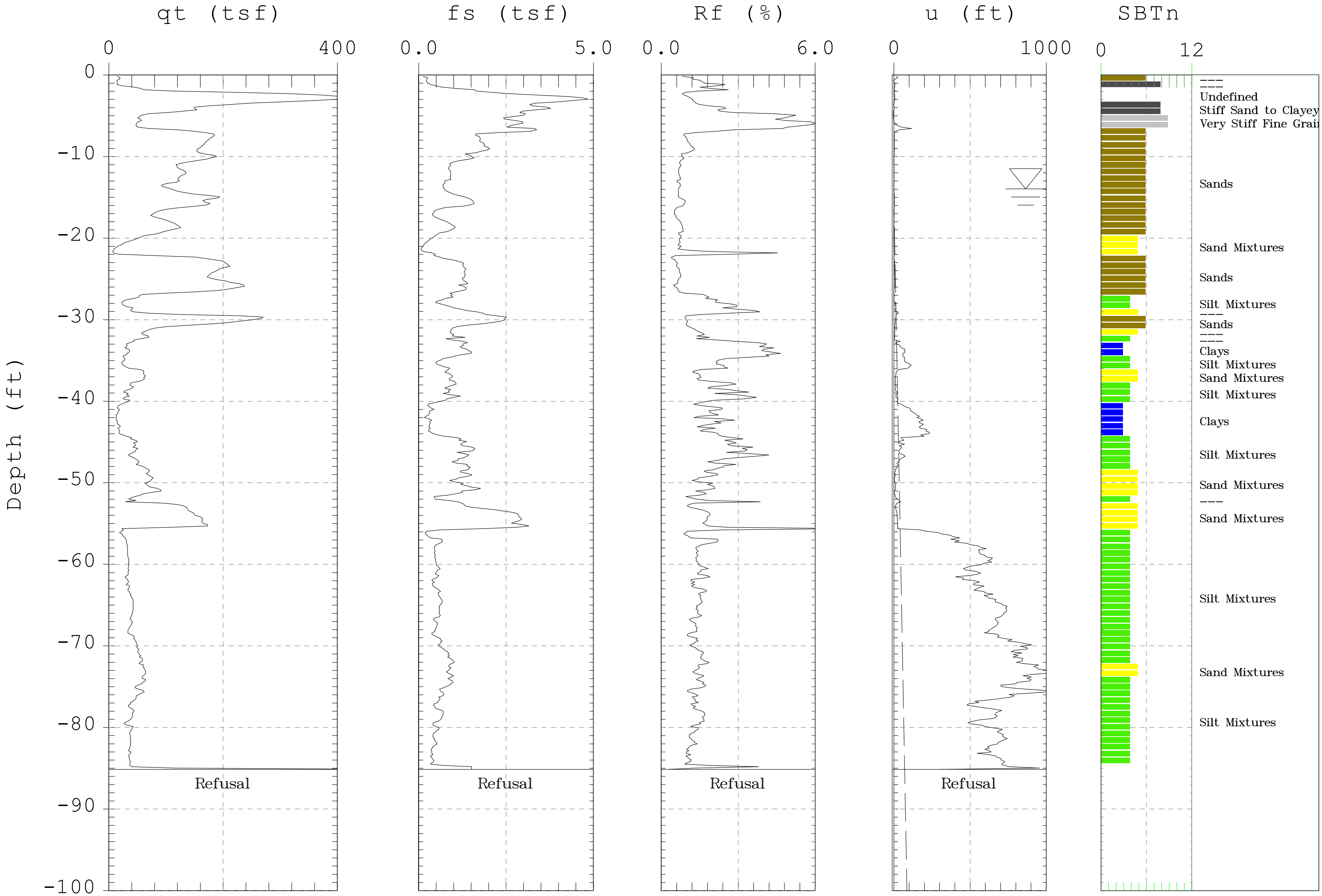
Max. Depth: 41.83 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-714
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:19:06 14:19



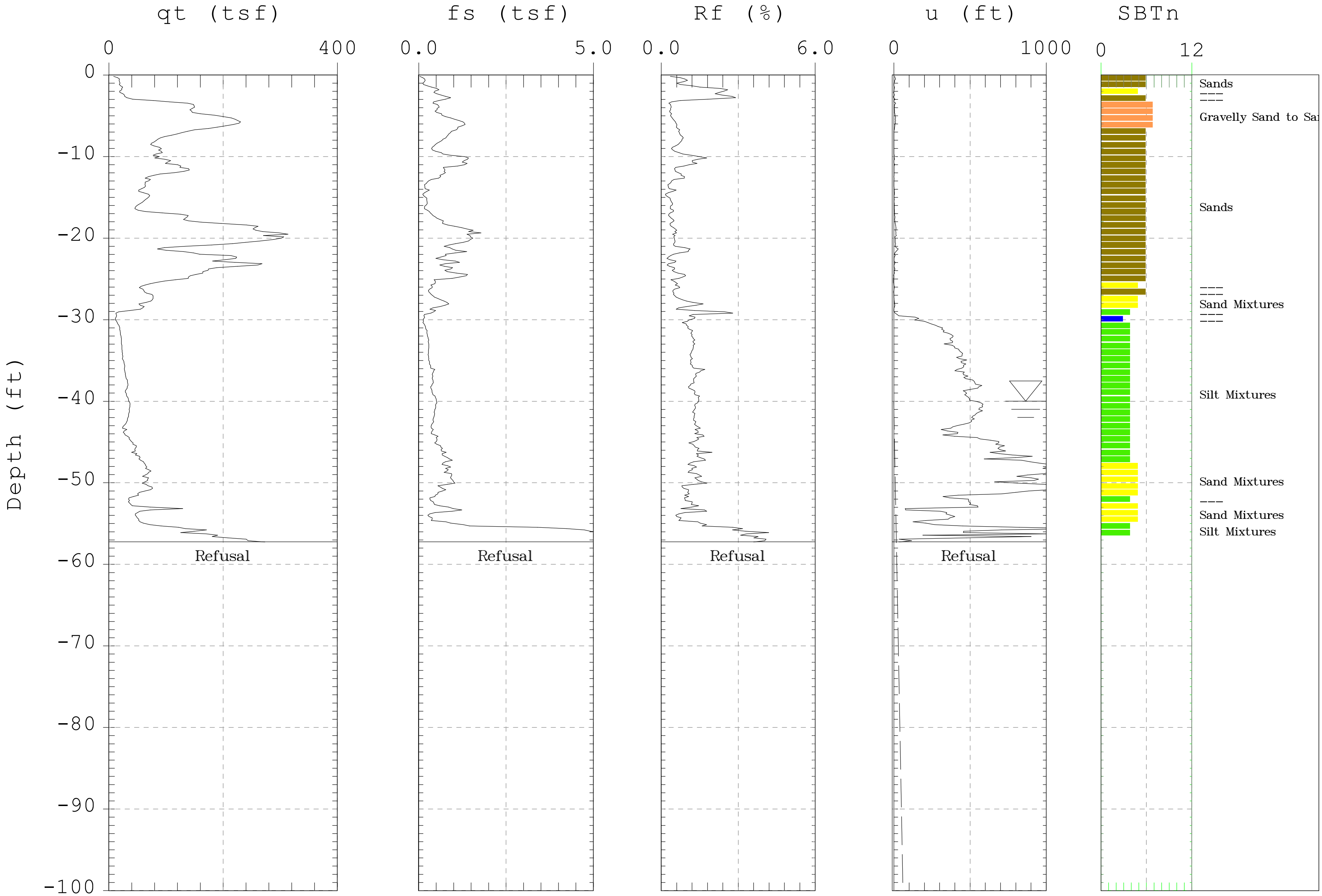
Max. Depth: 85.14 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-715
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:18:06 15:27



Max. Depth: 57.25 (ft)
Depth Inc.: 0.164 (ft)

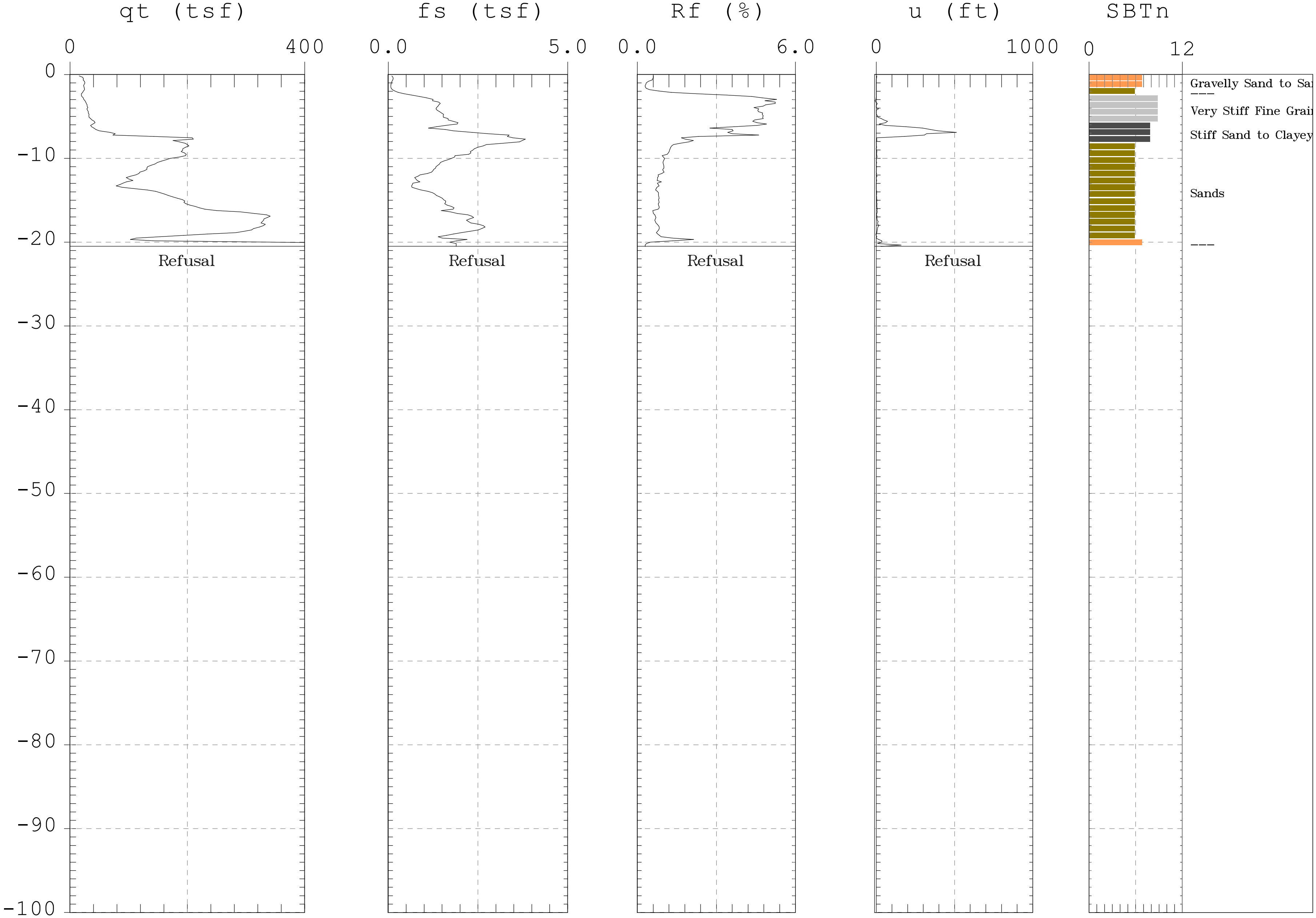
SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

ConeTec

Schnabel Engineering

Sounding: C-716
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:20:06 12:09



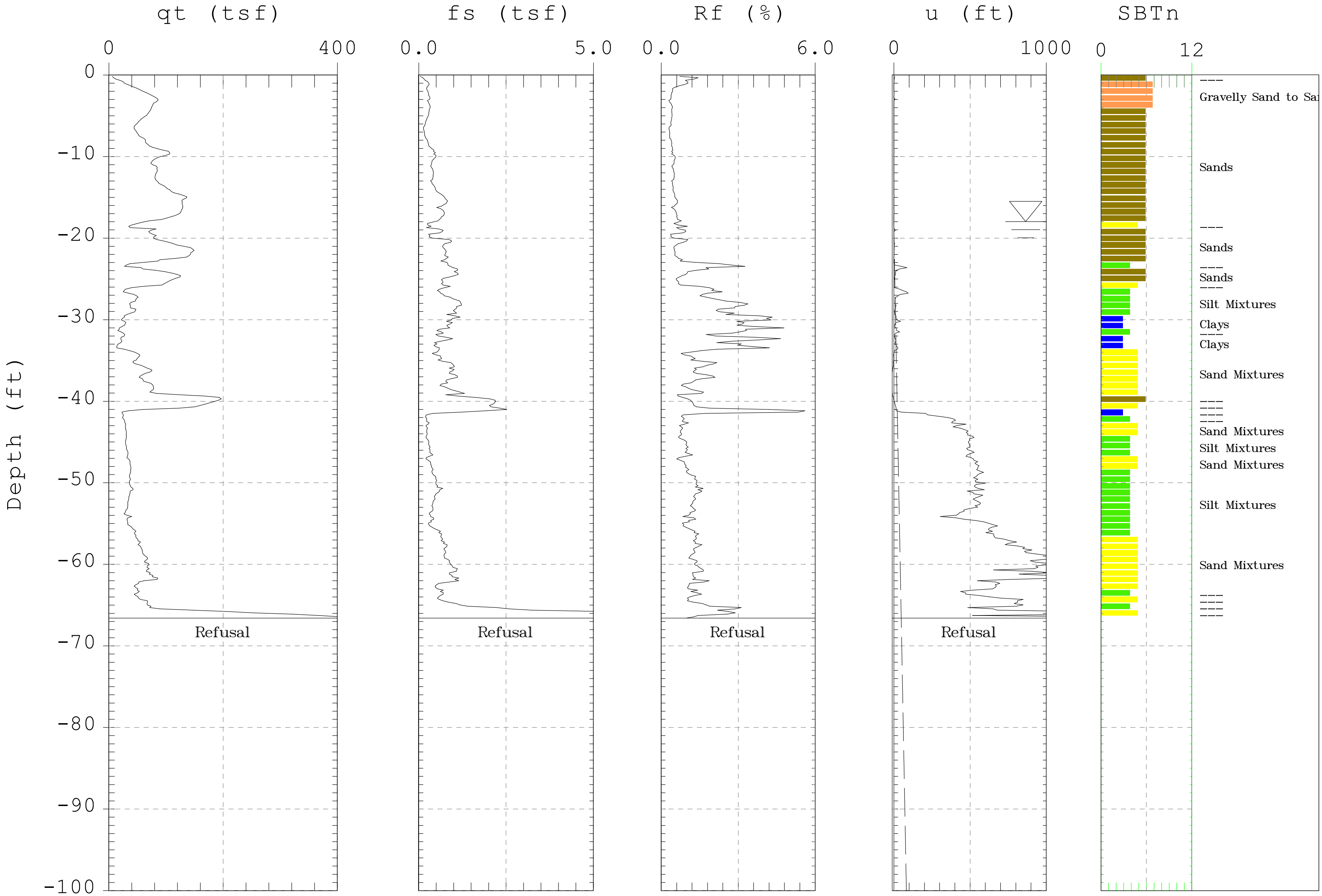
Max. Depth: 20.51 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-717
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:19:06 07:39



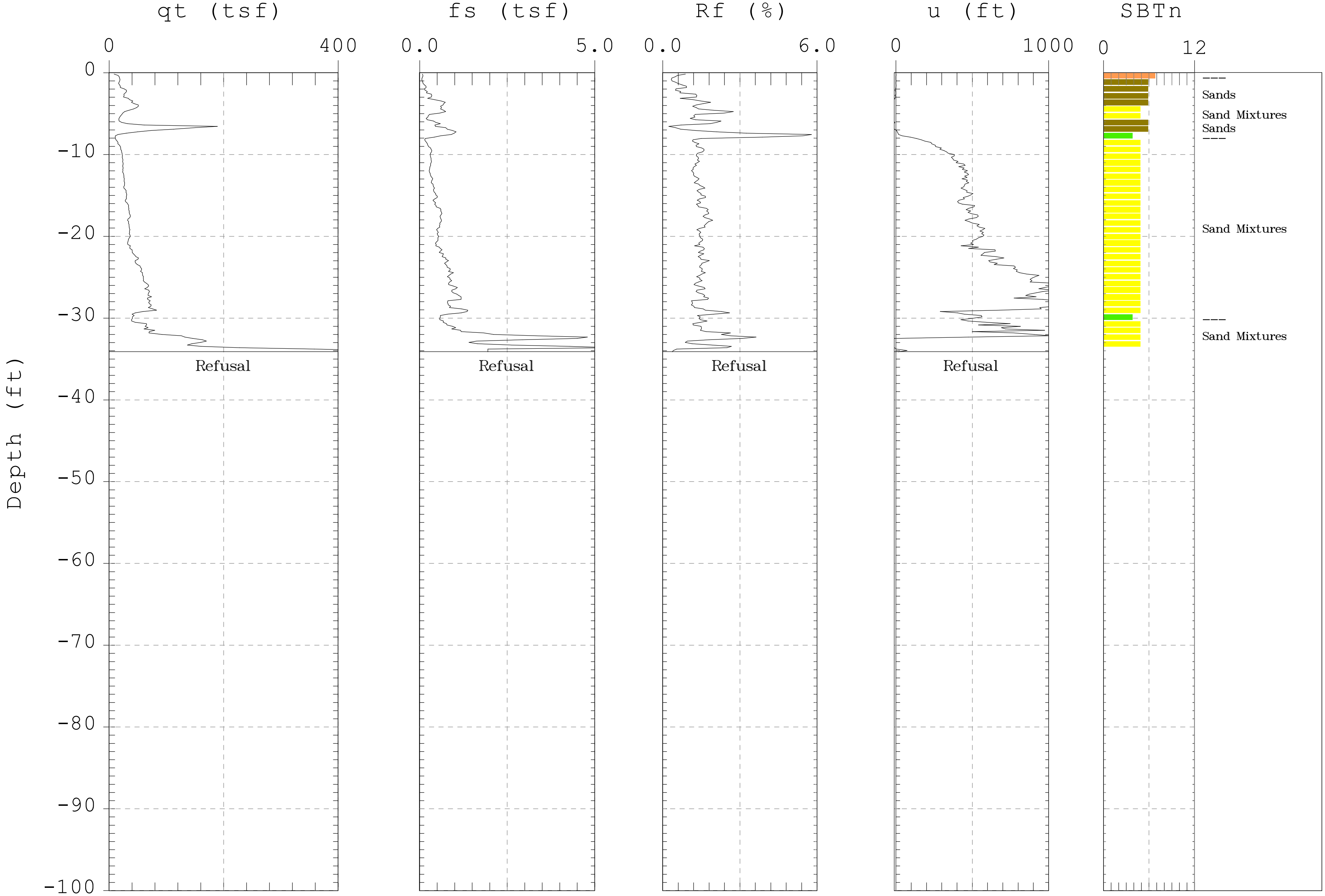
Max. Depth: 66.60 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-718
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:19:06 11:26



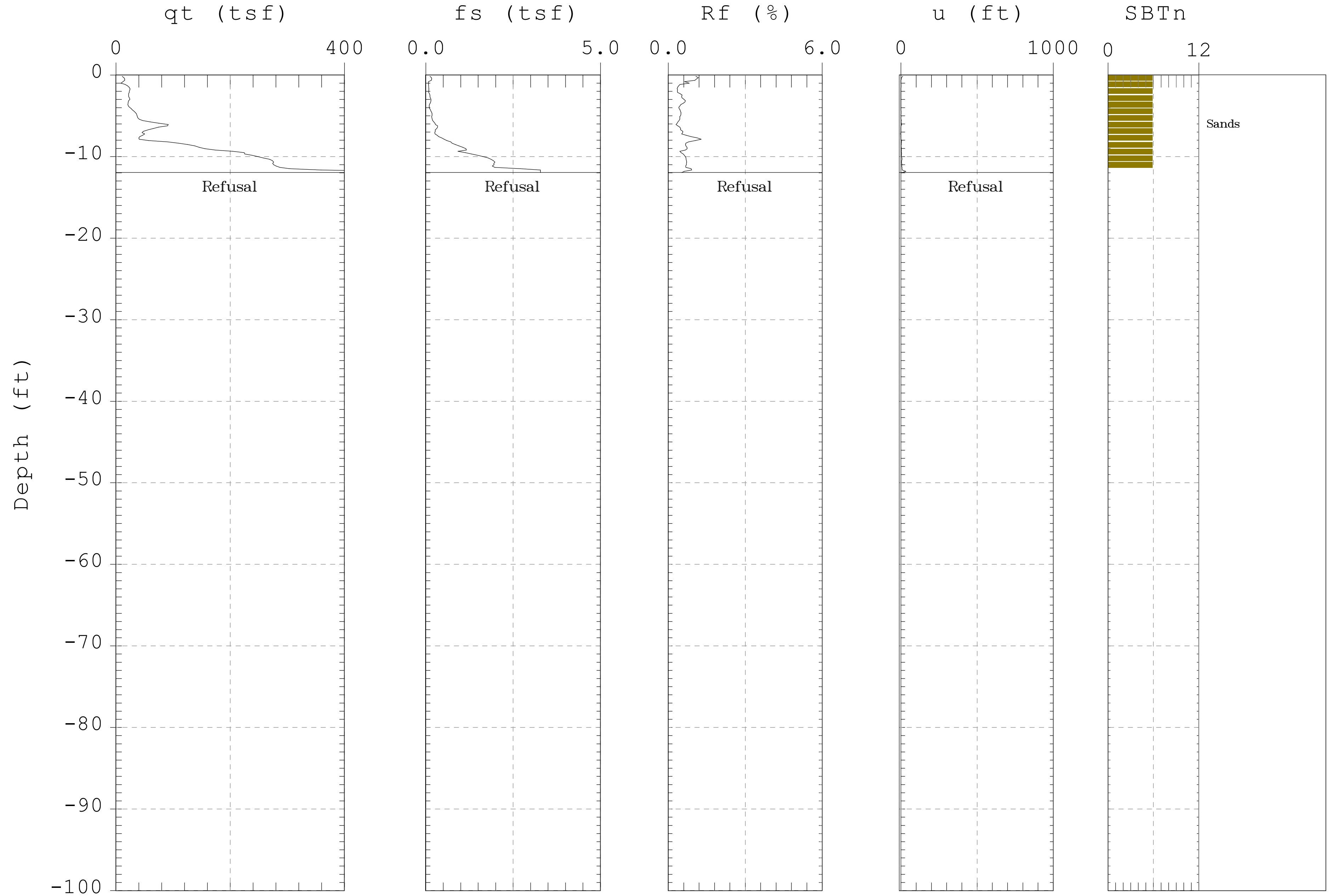
Max. Depth: 34.12 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-719
Location: C C N P P

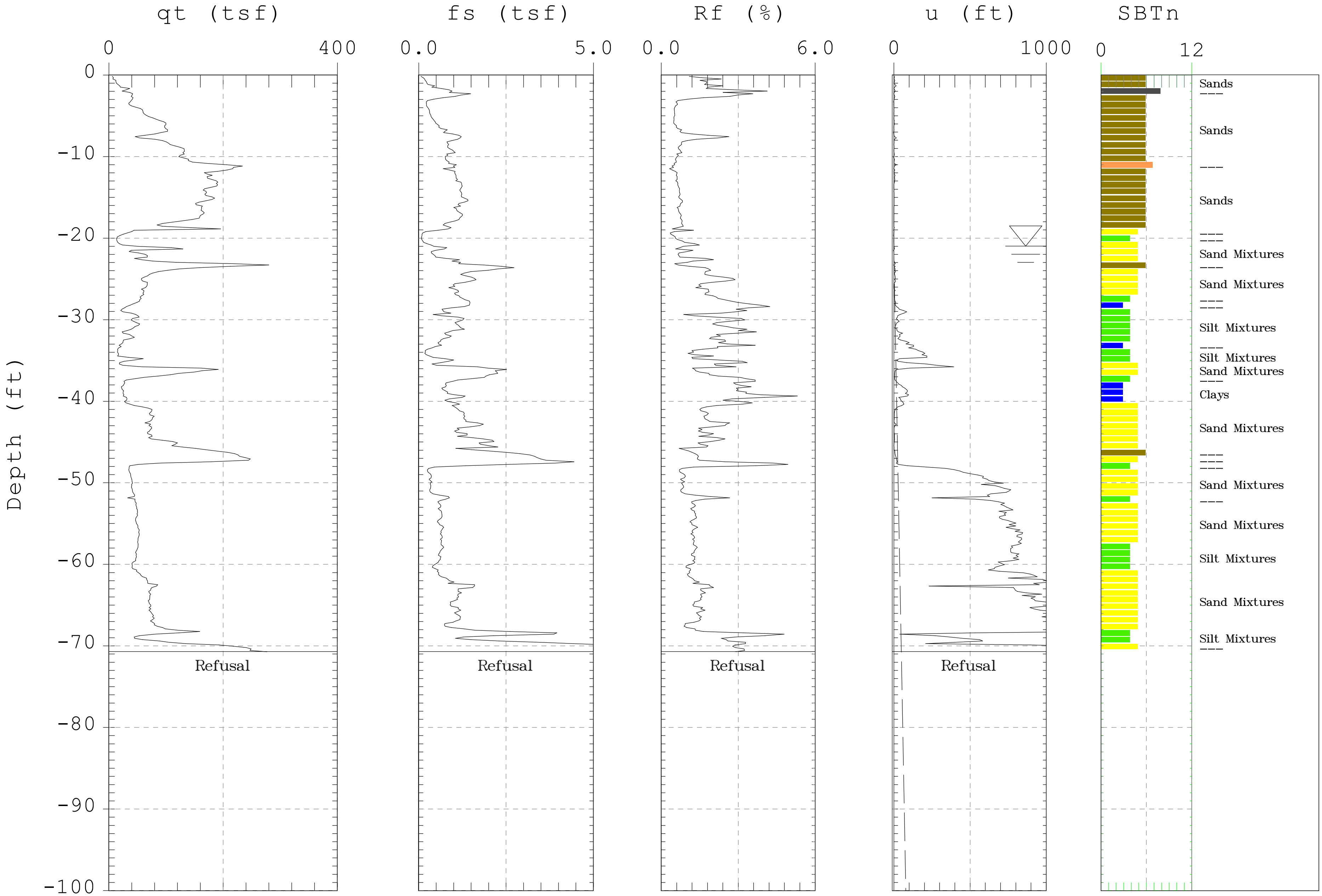
Cone: STD 20T AD-195
Date: 07:19:06 09:44



Max. Depth: 11.97 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering   Sounding: C-720   Location: C C N P P   Cone: STD 20T   AD-195   Date: 07:20:06   08:17



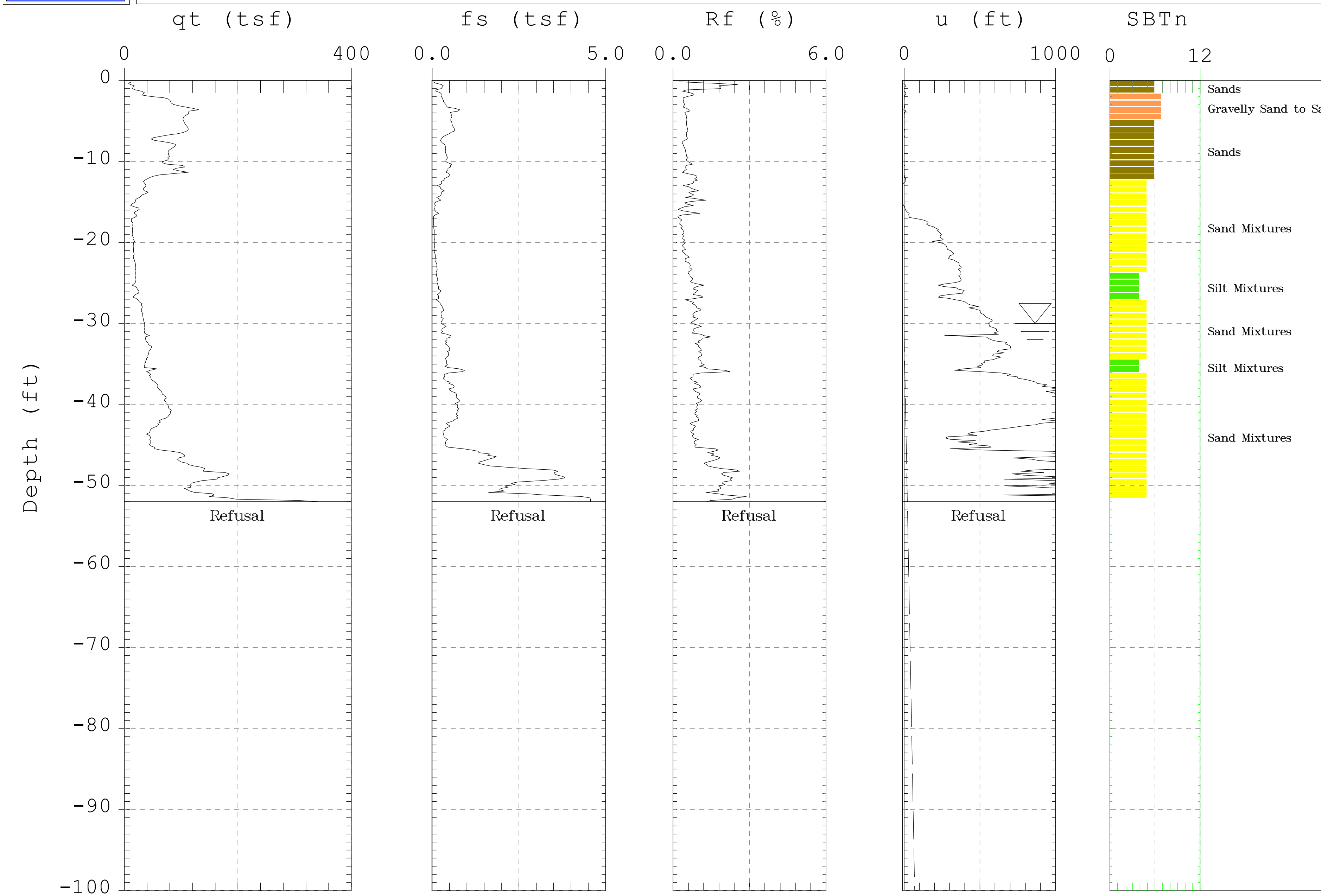
Max. Depth: 70.70 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-721
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:18:06 09:07



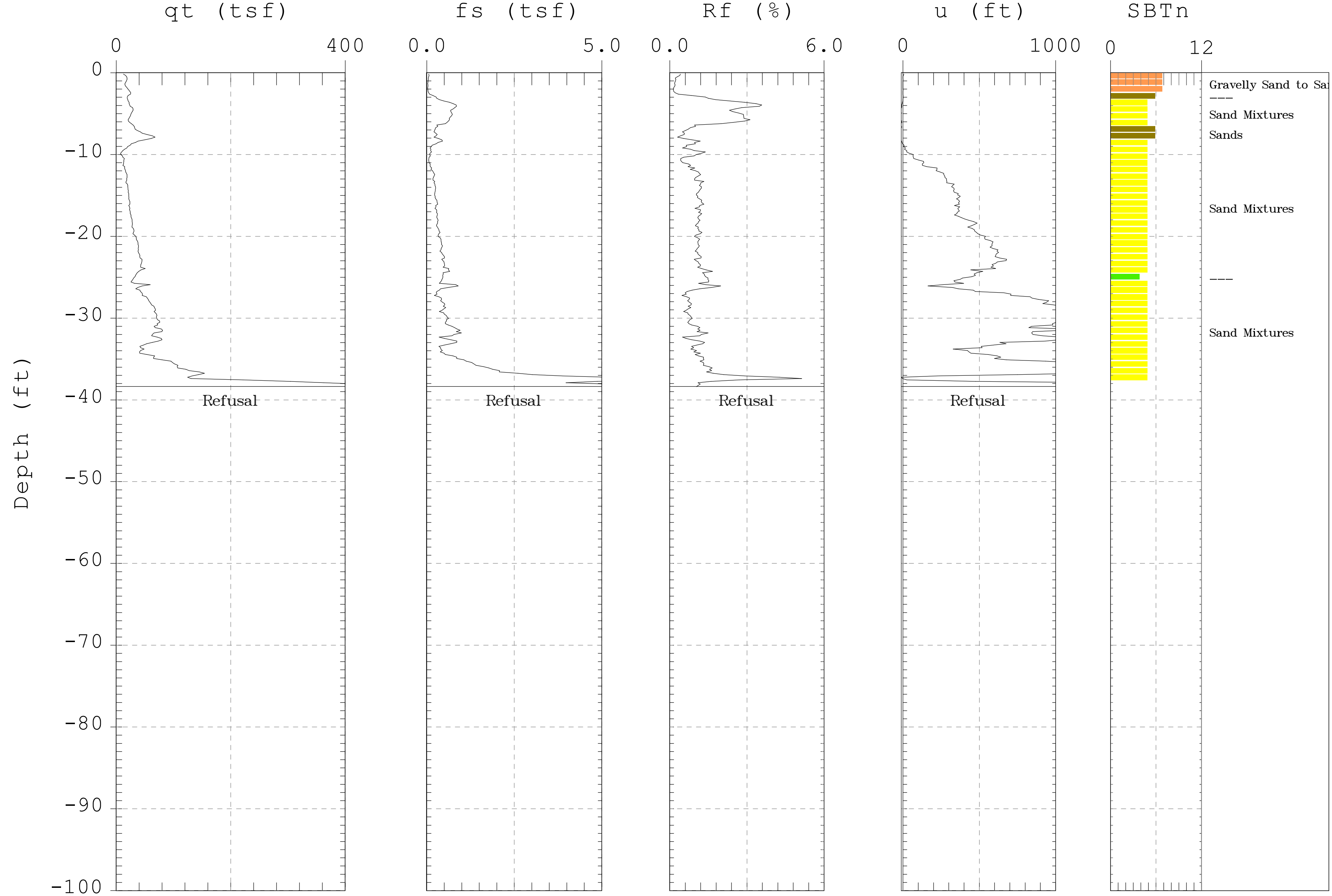
Max. Depth: 52.00 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

Schnabel Engineering

Sounding: C-722
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:18:06 12:45



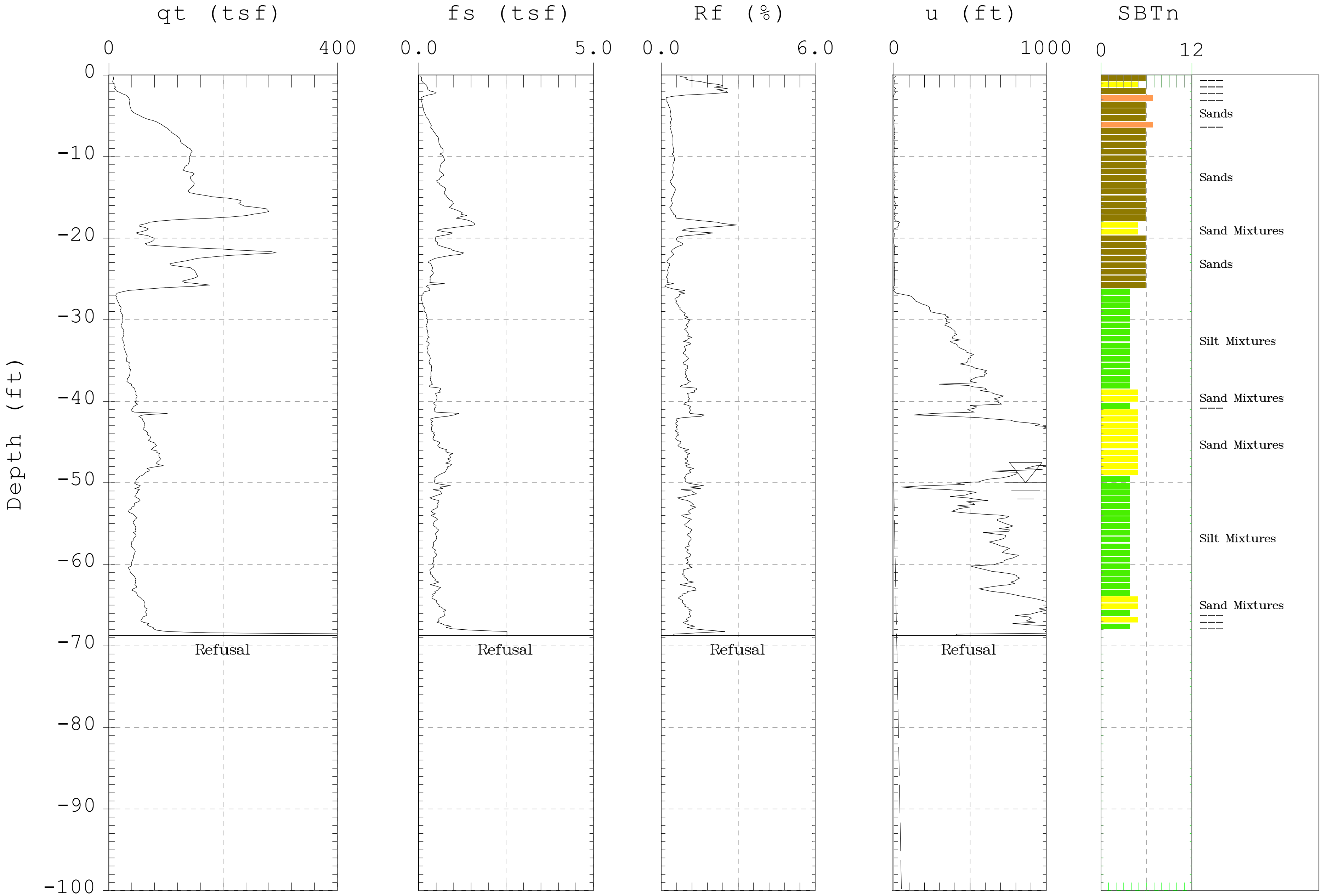
Max. Depth: 38.39 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Schnabel Engineering

Sounding: C-723
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:18:06 07:35



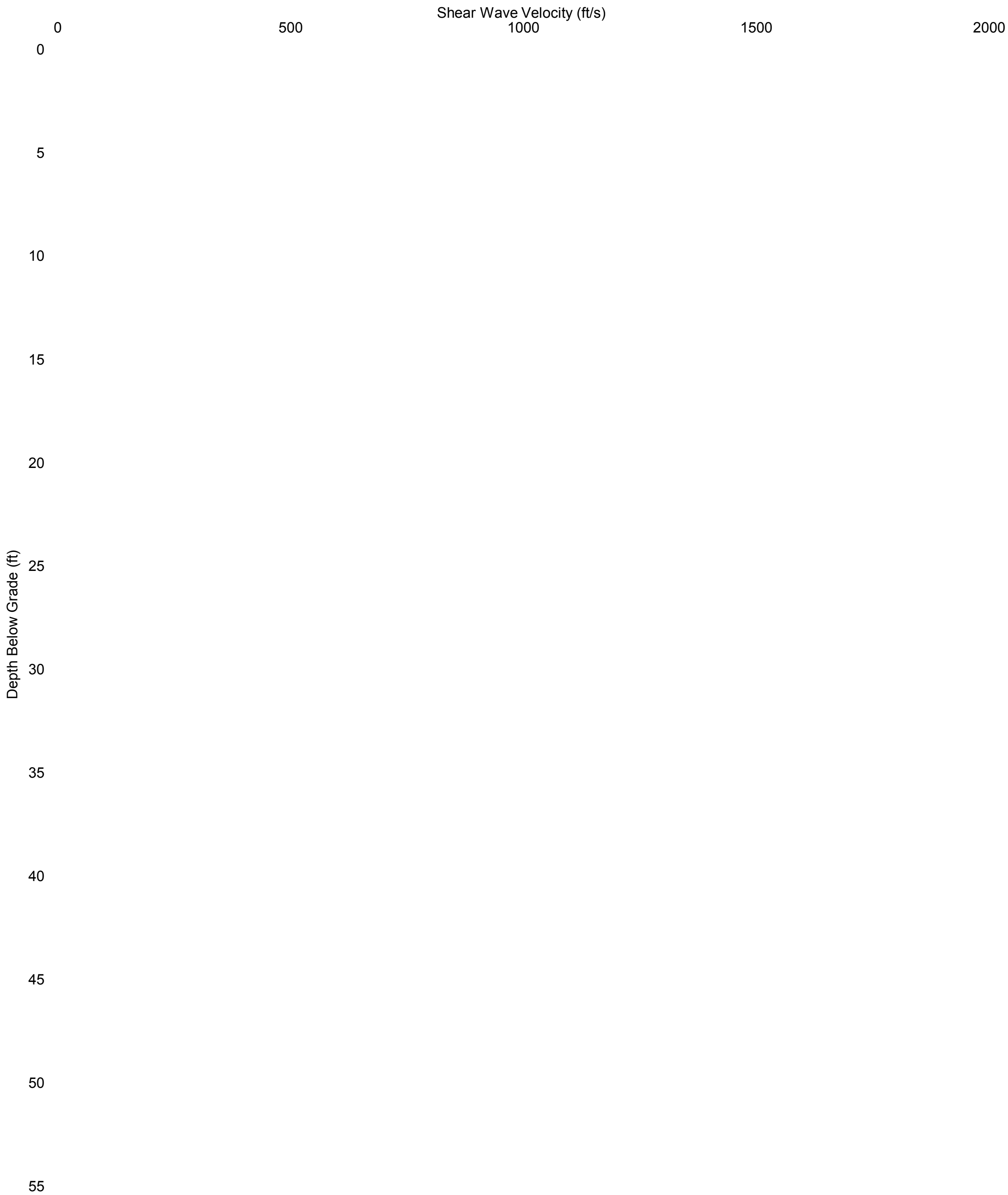
Max. Depth: 68.73 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)
Estimated Phreatic Surface

APPENDIX B
SHEAR WAVE VELOCITY TEST DATA

Presentation of In Situ Testing Program Results
ConeTec, Inc.
November 13, 2006

Shear Wave Velocity- C-301
CCNPP
06-948
July 24, 2006



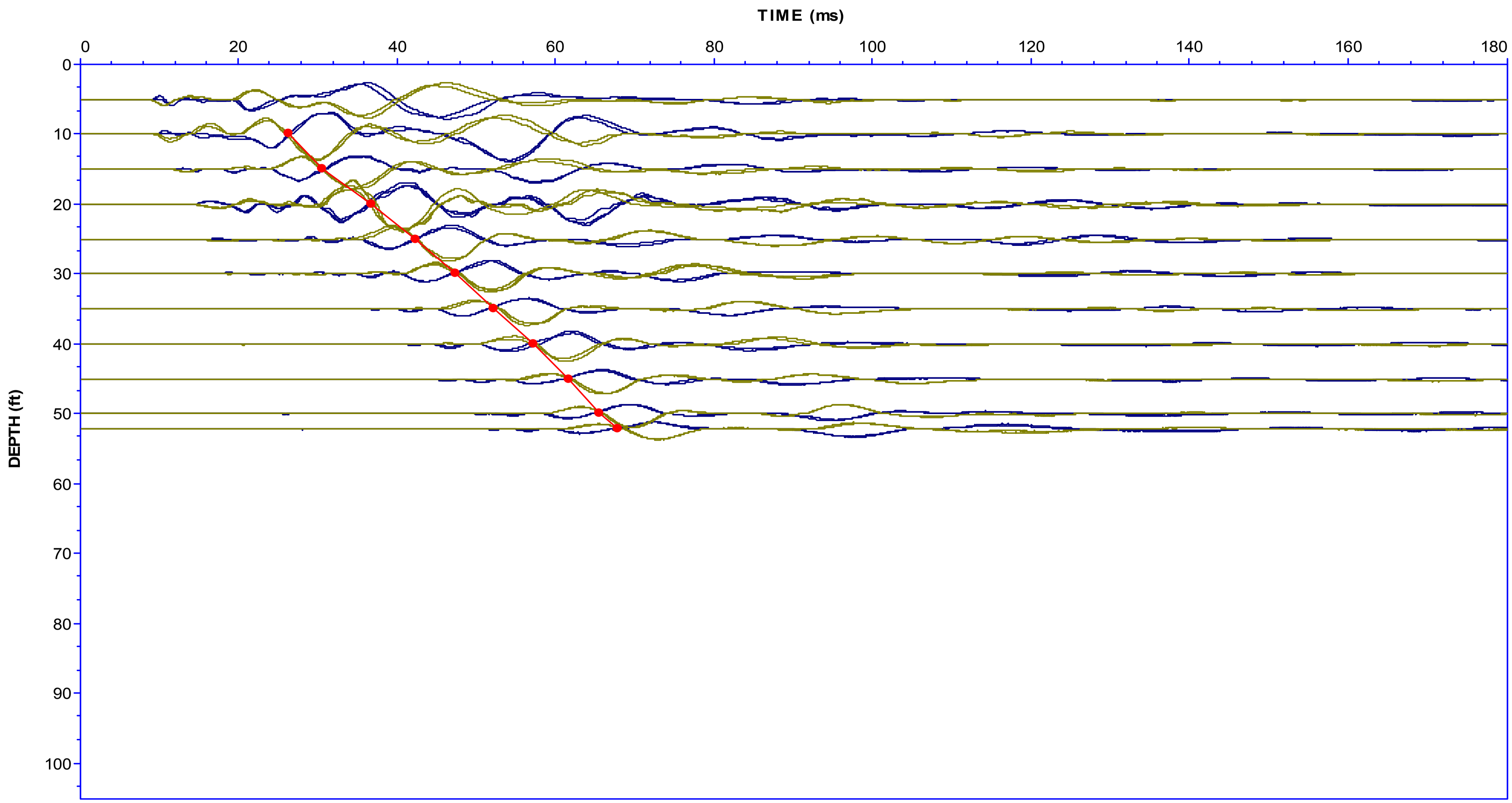
ConeTec Shear Wave Velocity Data Reduction Sheet

Hole:	C-301
Location:	CCNPP
Cone:	AD-195
Date:	24-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

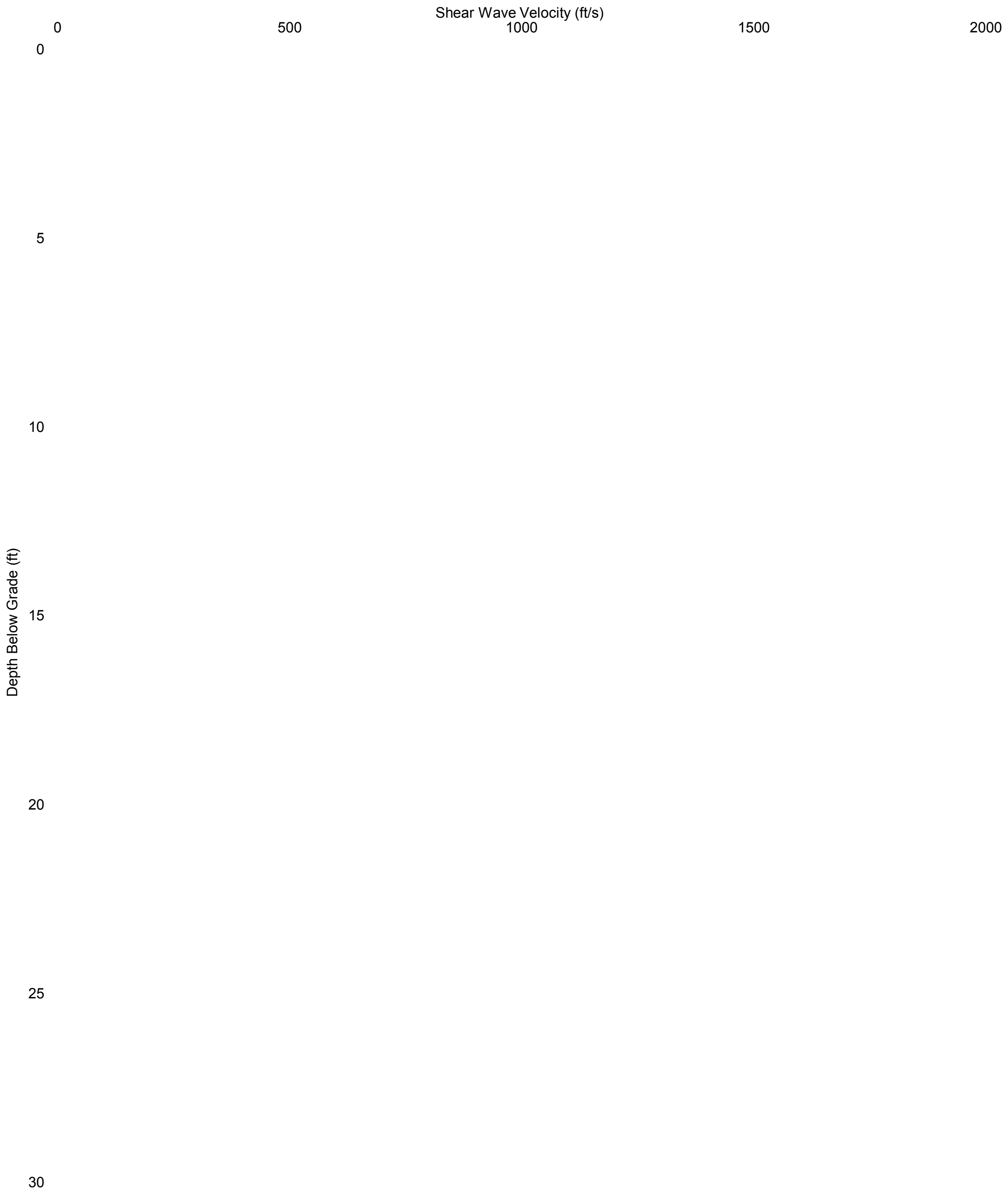
Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	4.43	299.7	983.3	3.62	11.89
6.10	5.90	6.28	6.04	229.0	751.2	5.15	16.90
7.65	7.45	7.75	5.65	261.0	856.1	6.67	21.90
9.15	8.95	9.20	5.02	288.9	947.7	8.20	26.90
10.70	10.50	10.72	4.83	313.4	1028.2	9.72	31.91
12.20	12.00	12.19	5.02	293.4	962.5	11.25	36.91
13.75	13.55	13.72	4.49	340.8	1118.1	12.77	41.91
15.25	15.05	15.20	3.73	398.0	1305.9	14.30	46.92
15.90	15.70	15.85	2.45	263.0	863.0	15.37	50.44

Job No: 06-948 | Client: Schnabel Engineering | Project Title: CCNPP | Operator: TS-SL | Hole: C301- ALT | Site: C C N P P

Date: 07:24:06 12:24 | Cone: STD 20T AD-195



Shear Wave Velocity- C-304
CCNPP
06-948
July 12, 2006

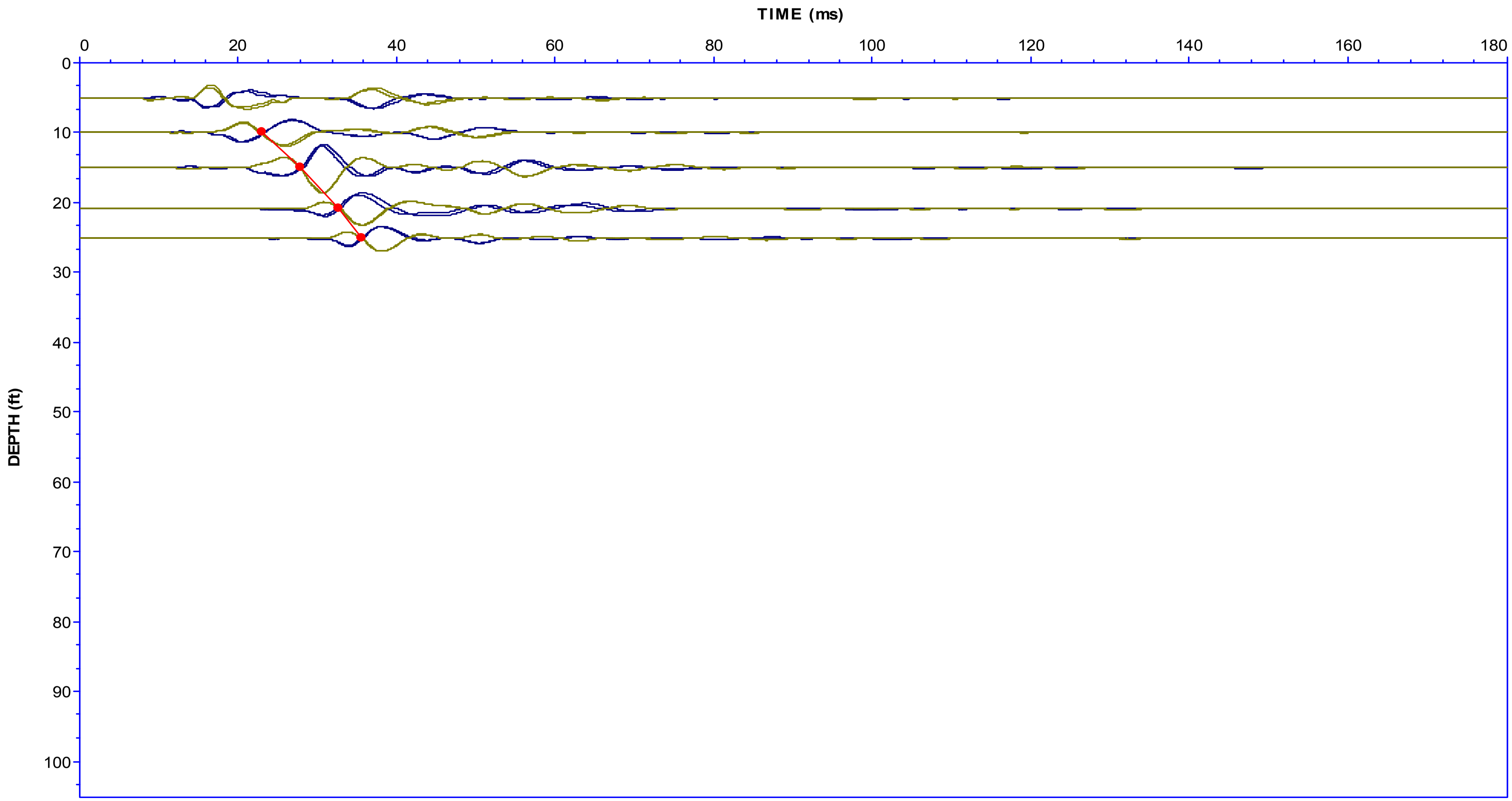


ConeTec Shear Wave Velocity Data Reduction Sheet

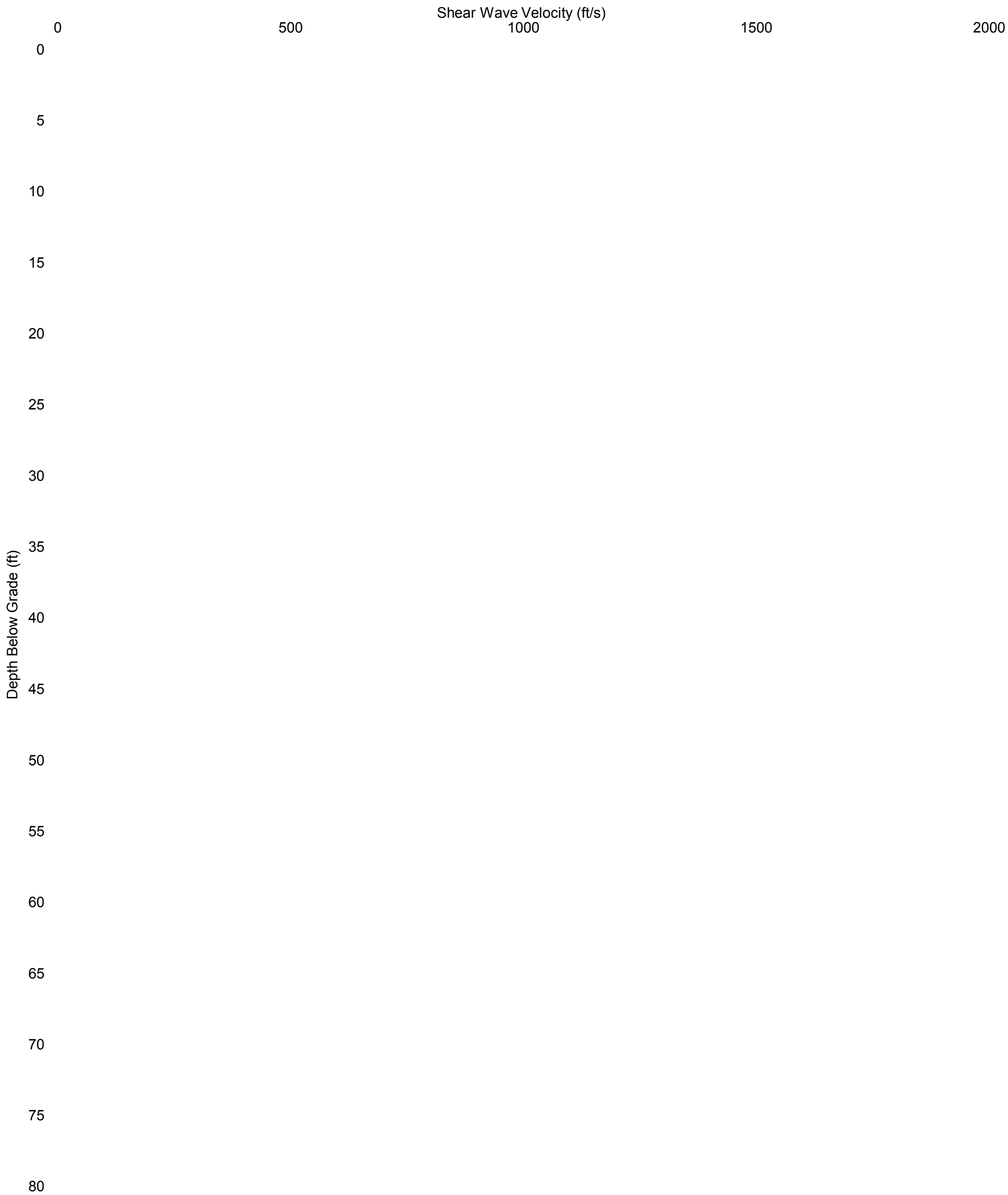
Hole:	C-304
Location:	CCNPP
Cone:	AD195
Date:	12-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	4.69	282.9	928.0	3.62	11.89
6.40	6.20	6.56	4.87	341.8	1121.4	5.30	17.39
7.65	7.45	7.75	2.98	399.5	1310.7	6.83	22.39

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: 304-ALT	Site: C C N P P
Date: 07:12:06 07:36	Cone: STD 20T AD-195				



Shear Wave Velocity- C-307
CCNPP
06-948
July 12, 2006

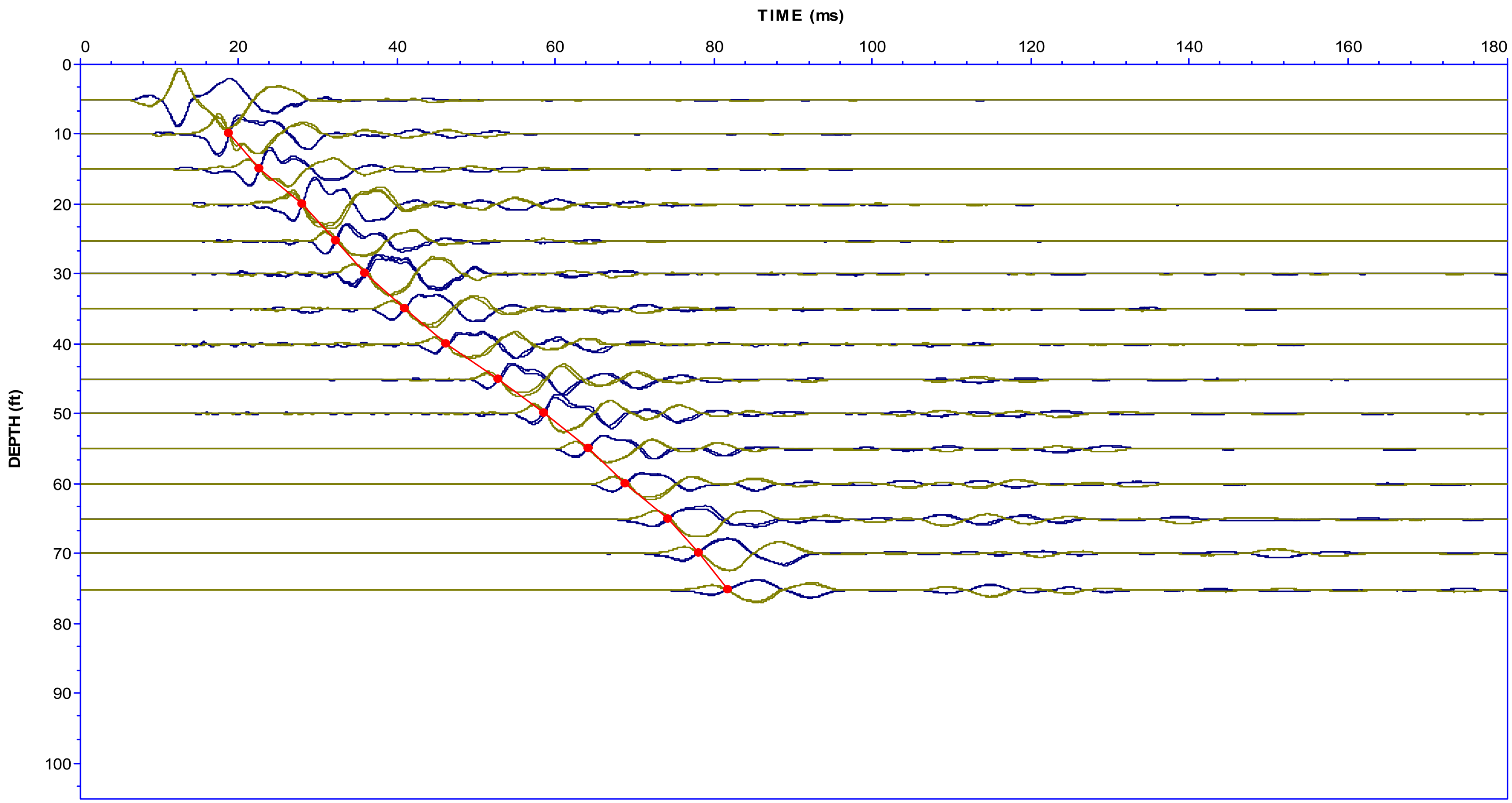


ConeTec Shear Wave Velocity Data Reduction Sheet

Hole:	C-307
Location:	CCNPP
Cone:	AD195
Date:	12-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	3.96	335.5	1100.7	3.62	11.89
6.10	5.90	6.28	5.36	257.7	845.4	5.15	16.90
7.75	7.55	7.85	4.23	371.5	1218.7	6.72	22.06
9.15	8.95	9.20	3.83	354.0	1161.2	8.25	27.07
10.70	10.50	10.72	4.84	313.0	1026.8	9.72	31.91
12.20	12.00	12.19	5.31	277.6	910.6	11.25	36.91
13.75	13.55	13.72	6.57	232.8	763.7	12.77	41.91
15.25	15.05	15.20	5.88	252.2	827.6	14.30	46.92
16.80	16.60	16.74	5.46	281.0	922.0	15.82	51.92
18.30	18.10	18.23	4.74	313.9	1029.9	17.35	56.92
19.85	19.65	19.77	5.35	287.8	944.3	18.87	61.92
21.35	21.15	21.26	3.86	386.2	1267.0	20.40	66.93
22.90	22.70	22.80	3.62	426.2	1398.1	21.92	71.93

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C307-ALT	Site: C C N P P
Date: 07:12:06 14:47	Cone: STD 20T AD-195				



Shear Wave Velocity- C-308
CCNPP
06-948
July 17, 2006

Shear Wave Velocity (ft/s)

0 500 1000 1500 2000

Depth Below Grade (ft)

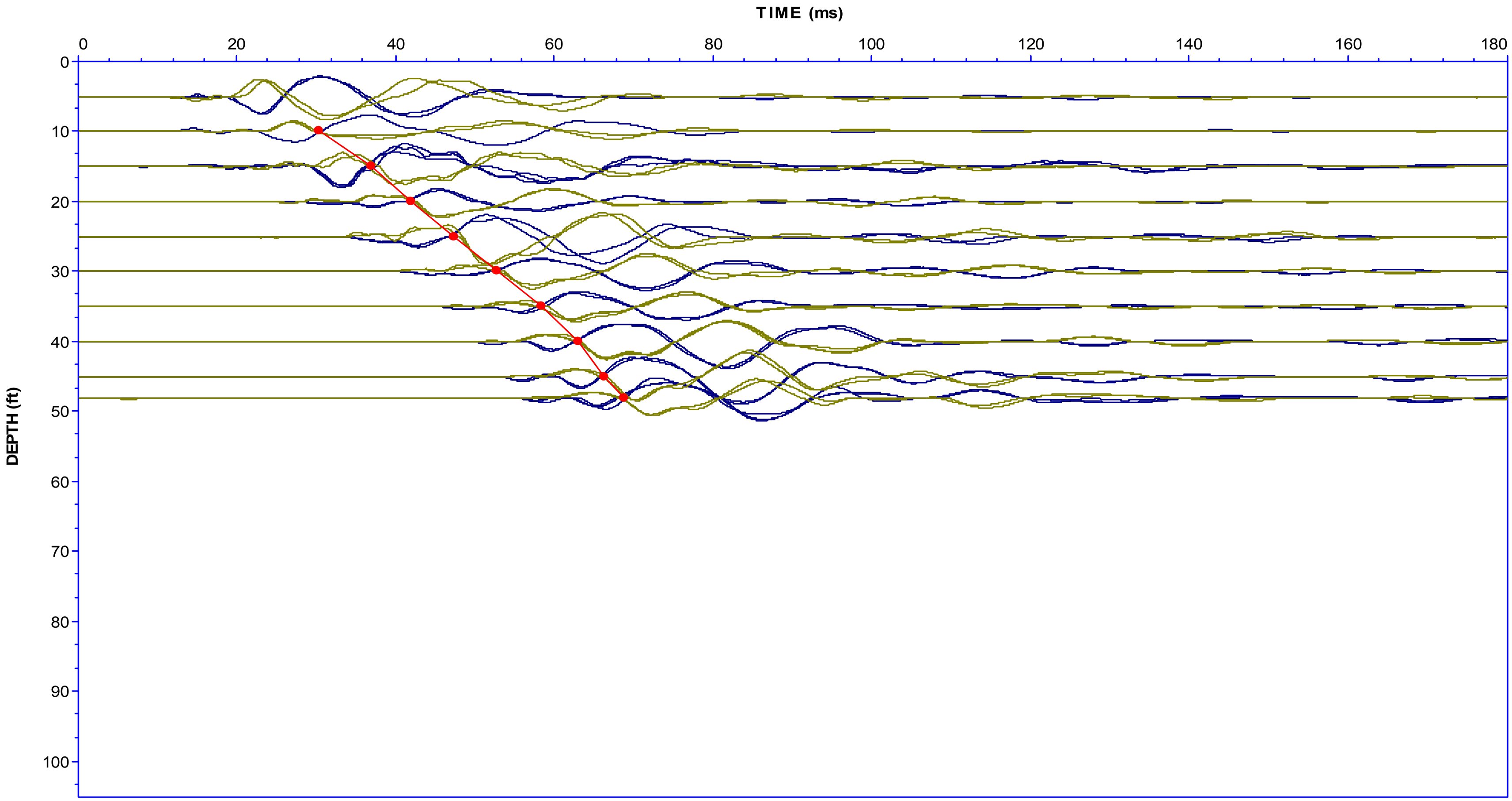
0
5
10
15
20
25
30
35
40
45
50

ConeTec Shear Wave Velocity Data Reduction Sheet

Hole:	C-308
Location:	CCNPP
Cone:	AD195
Date:	17-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	6.75	196.7	645.5	3.62	11.89
6.10	5.90	6.28	4.93	280.5	920.2	5.15	16.90
7.65	7.45	7.75	5.41	272.7	894.6	6.67	21.90
9.15	8.95	9.20	5.31	272.9	895.4	8.20	26.90
10.70	10.50	10.72	5.69	265.8	871.9	9.72	31.91
12.20	12.00	12.19	4.59	321.3	1054.1	11.25	36.91
13.75	13.55	13.72	3.33	459.5	1507.6	12.77	41.91
14.70	14.50	14.66	2.52	372.9	1223.5	14.02	46.01

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-308	Site: C C N P P
Date: 07:17:06 14:58	Cone: STD 20T AD-195				



Shear Wave Velocity- C-401
CCNPP
06-948
July 13, 2006

Shear Wave Velocity (ft/s)

0 500 1000 1500 2000

Depth Below Grade (ft)

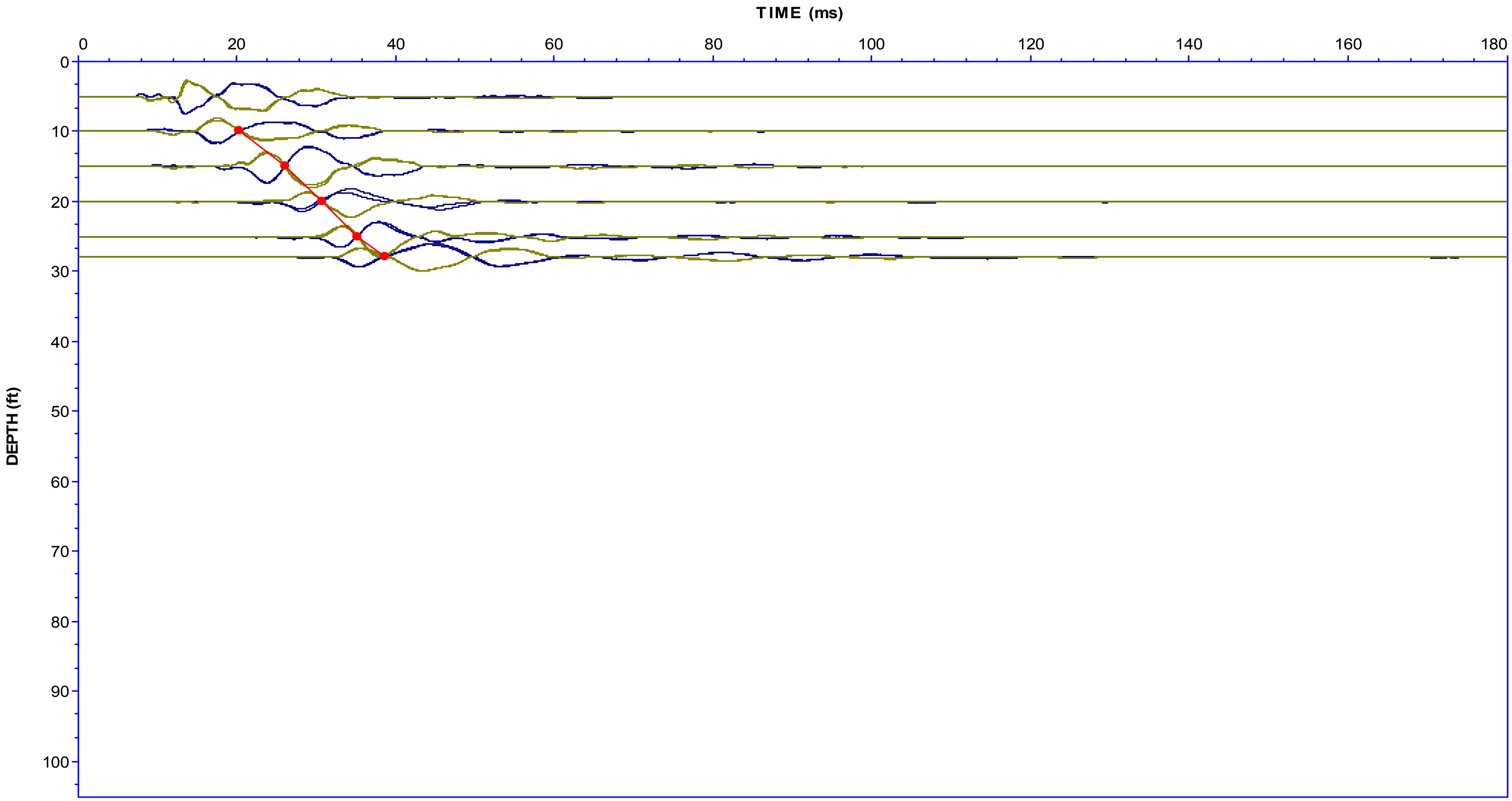
0
5
10
15
20
25
30

ConeTec Shear Wave Velocity Data Reduction Sheet

Hole:	C-401
Location:	CCNPP
Cone:	AD195
Date:	13-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	5.79	229.3	752.4	3.62	11.89
6.10	5.90	6.28	4.59	301.0	987.6	5.15	16.90
7.65	7.45	7.75	4.44	332.0	1089.1	6.67	21.90
8.55	8.35	8.62	3.66	237.1	777.8	7.90	25.92

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C401-ALT	Site: C C N P P
Date: 07:13:06 10:28	Cone: STD 20T AD-195				



Shear Wave Velocity- C-401-2a
CCNPP
06-948
July 27, 2006

Shear Wave Velocity (ft/s)

0 500 1000 1500 2000

Depth Below Grade (ft)

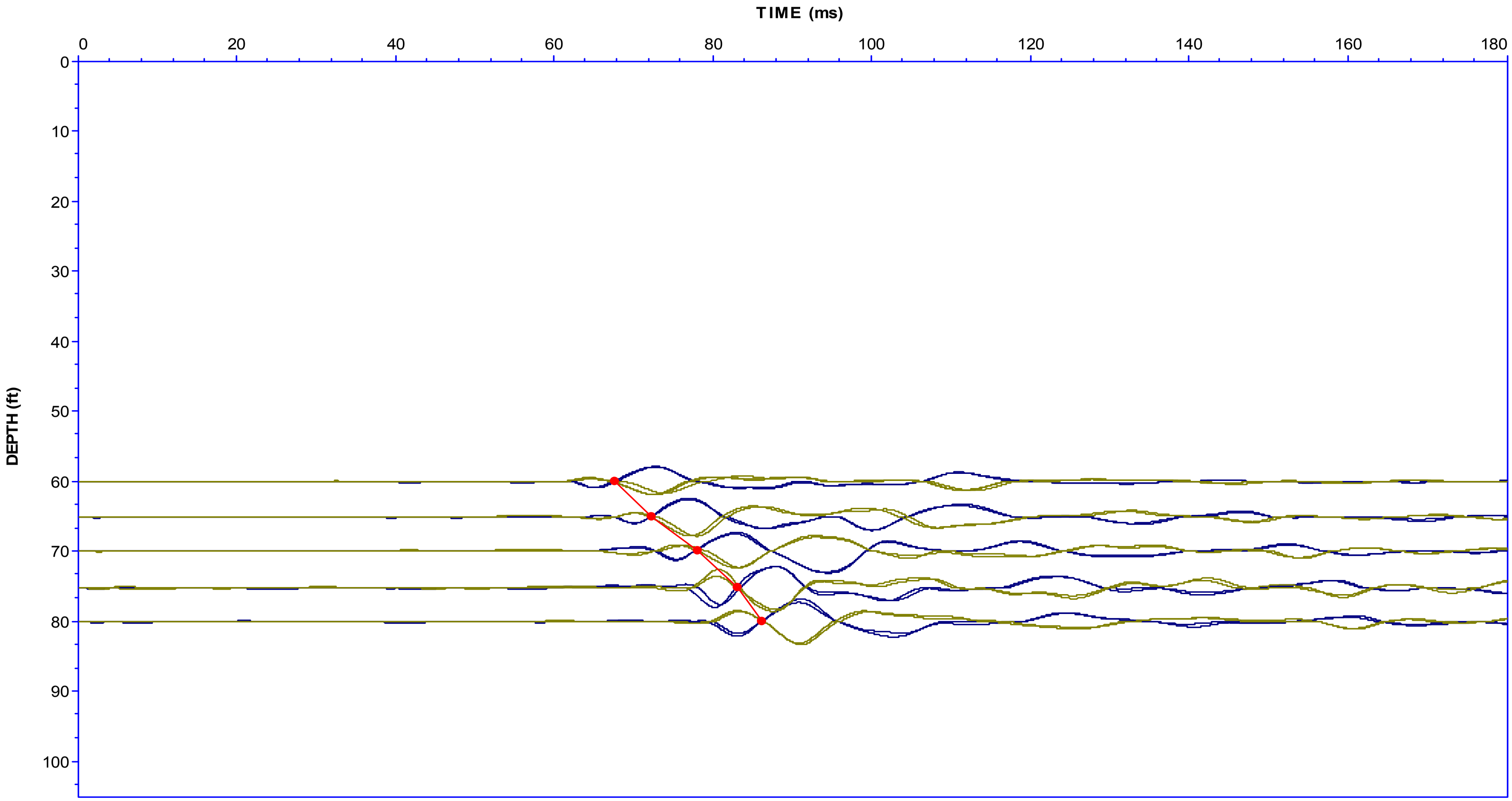
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85

ConeTec Shear Wave Velocity Data Reduction Sheet

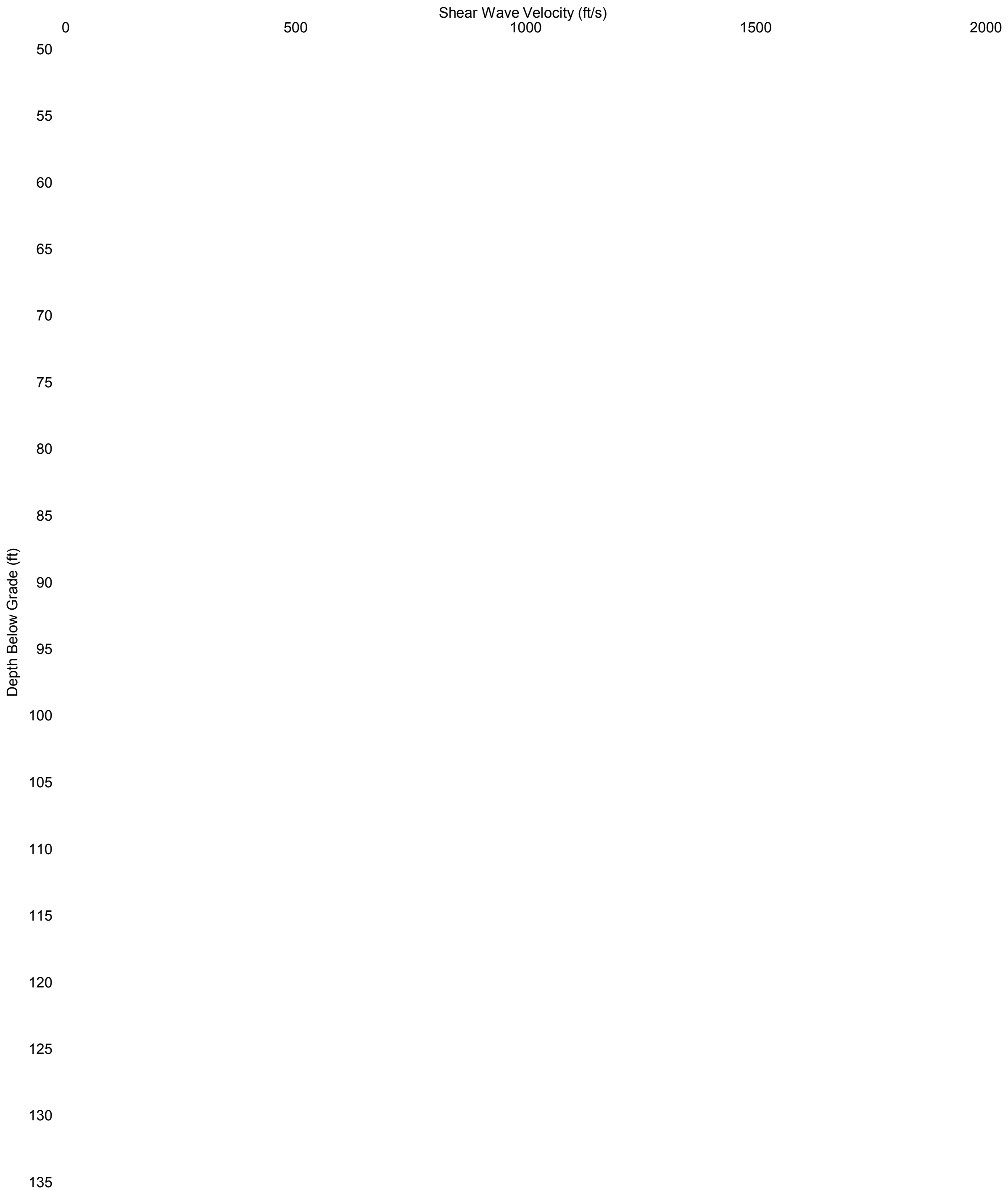
Hole:	C-401-2a	
Location:	CCNPP	
Cone:	AD195	
Date:	27-Jul-06	
Source:	Beam	
Source Depth	0.00	m
Source Offset	2.15	m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
18.30	18.10	18.23					
19.85	19.65	19.77	4.45	346.2	1135.7	18.87	61.92
21.35	21.15	21.26	5.98	249.4	818.4	20.40	66.93
22.90	22.70	22.80	5.02	307.2	1007.8	21.92	71.93
24.40	24.20	24.30	3.06	487.7	1600.1	23.45	76.93

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-401-2A	Site: C C N P P
Date: 07:27:06 12:21	Cone: STD 20T AD-195				



Shear Wave Velocity- C-401-2b
CCNPP
06-948
July 27, 2006

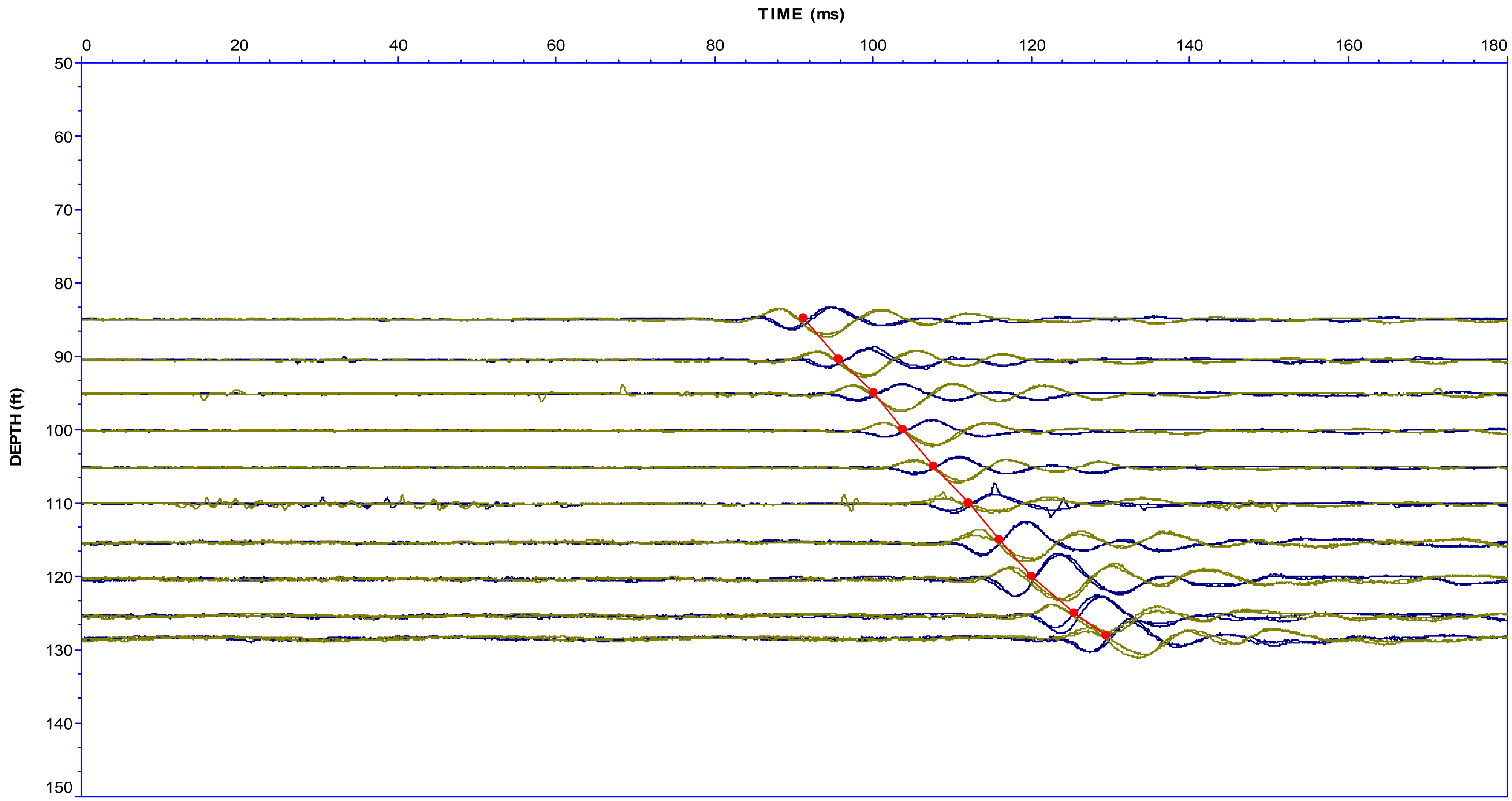


ConeTec Shear Wave Velocity Data Reduction Sheet

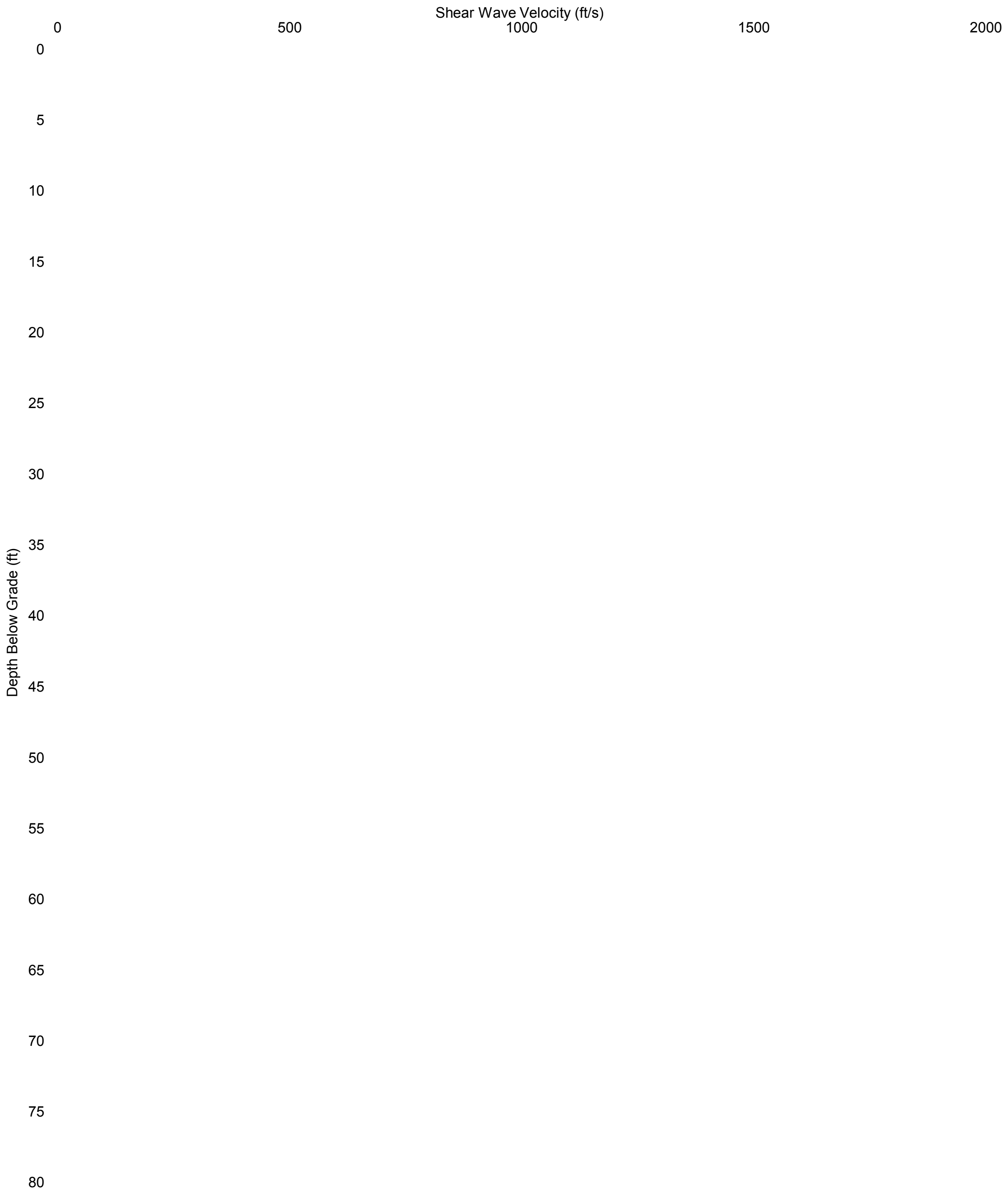
Hole: C-401-2b
Location: CCNPP
Cone: AD195
Date: 27-Jul-06
Source: Beam
Source Depth 0.00 m
Source Offset 2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
25.90	25.70	25.79					
27.55	27.35	27.43	4.38	375.6	1232.4	26.52	87.02
29.00	28.80	28.88	4.49	322.4	1057.6	28.07	92.11
30.50	30.30	30.38	3.63	412.5	1353.5	29.55	96.95
32.05	31.85	31.92	3.77	410.2	1345.7	31.07	101.95
33.55	33.35	33.42	4.54	330.0	1082.8	32.60	106.95
35.10	34.90	34.97	3.86	400.5	1313.9	34.12	111.96
36.60	36.40	36.46	4.06	369.2	1211.2	35.65	116.96
38.15	37.95	38.01	5.31	291.2	955.3	37.17	121.96
39.05	38.85	38.91	4.11	218.8	718.0	38.40	125.98

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-401-2B	Site: C C N P P
Date: 07:27:06 15:04	Cone: STD 20T AD-195				



Shear Wave Velocity- C-404
CCNPP
06-948
July 14, 2006

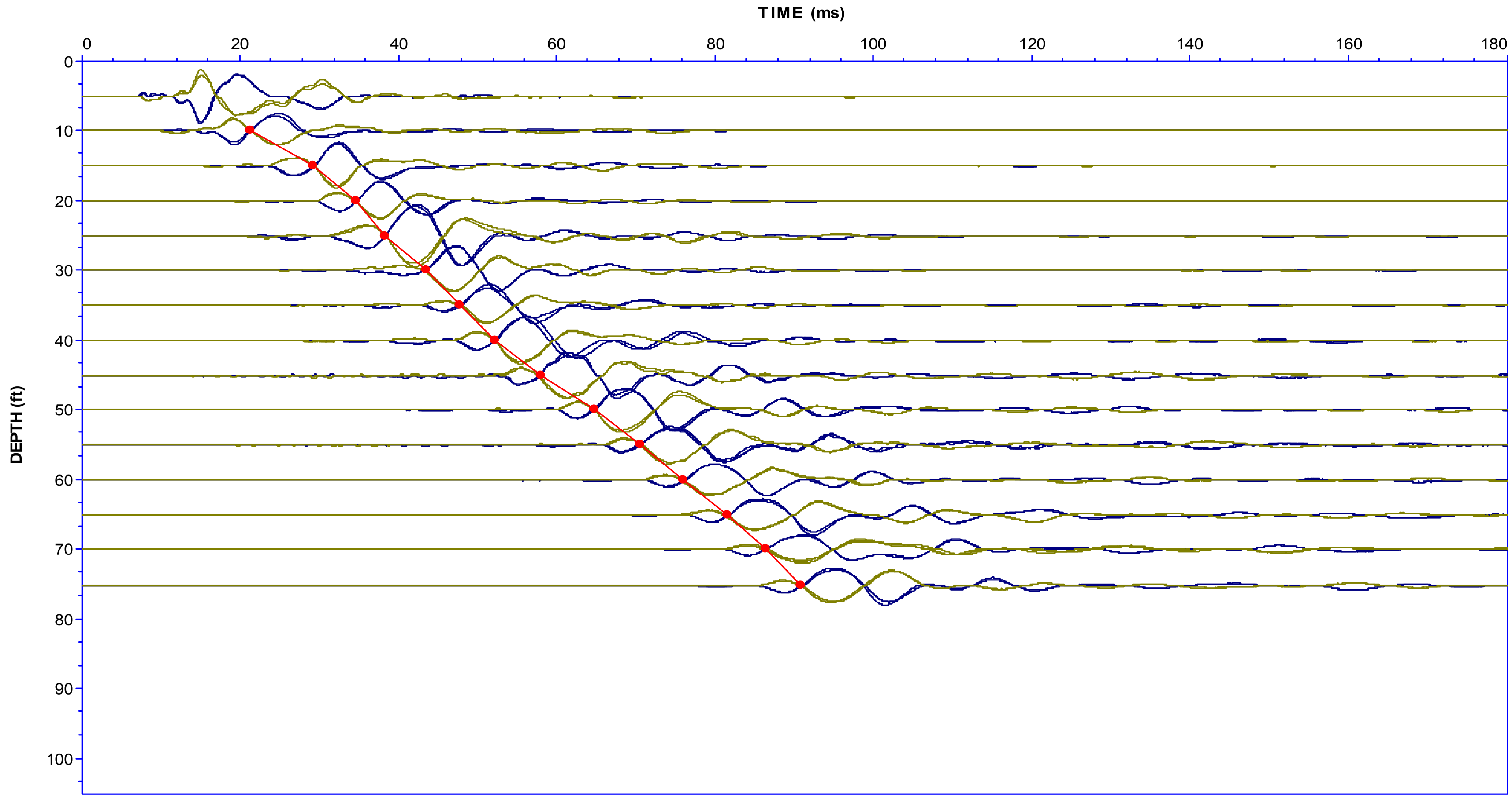


ConeTec Shear Wave Velocity Data Reduction Sheet

Hole: C-404
Location: CCNPP
Cone: AD195
Date: 14-Jul-06
Source: Beam
Source Depth 0.00 m
Source Offset 2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	8.06	164.6	540.1	3.62	11.89
6.10	5.90	6.28	5.39	256.6	841.8	5.15	16.90
7.65	7.45	7.75	3.63	405.9	1331.5	6.67	21.90
9.15	8.95	9.20	5.21	278.2	912.6	8.20	26.90
10.70	10.50	10.72	4.34	348.5	1143.4	9.72	31.91
12.20	12.00	12.19	4.39	335.4	1100.5	11.25	36.91
13.75	13.55	13.72	5.75	265.8	872.0	12.77	41.91
15.25	15.05	15.20	6.80	218.0	715.3	14.30	46.92
16.80	16.60	16.74	5.84	262.8	862.2	15.82	51.92
18.30	18.10	18.23	5.36	277.8	911.5	17.35	56.92
19.85	19.65	19.77	5.46	281.8	924.6	18.87	61.92
21.35	21.15	21.26	4.92	303.1	994.4	20.40	66.93
22.90	22.70	22.80	4.49	343.4	1126.6	21.92	71.93

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-404-ALT	Site: C C N P P
Date: 07:14:06 11:17	Cone: STD 20T AD-195				



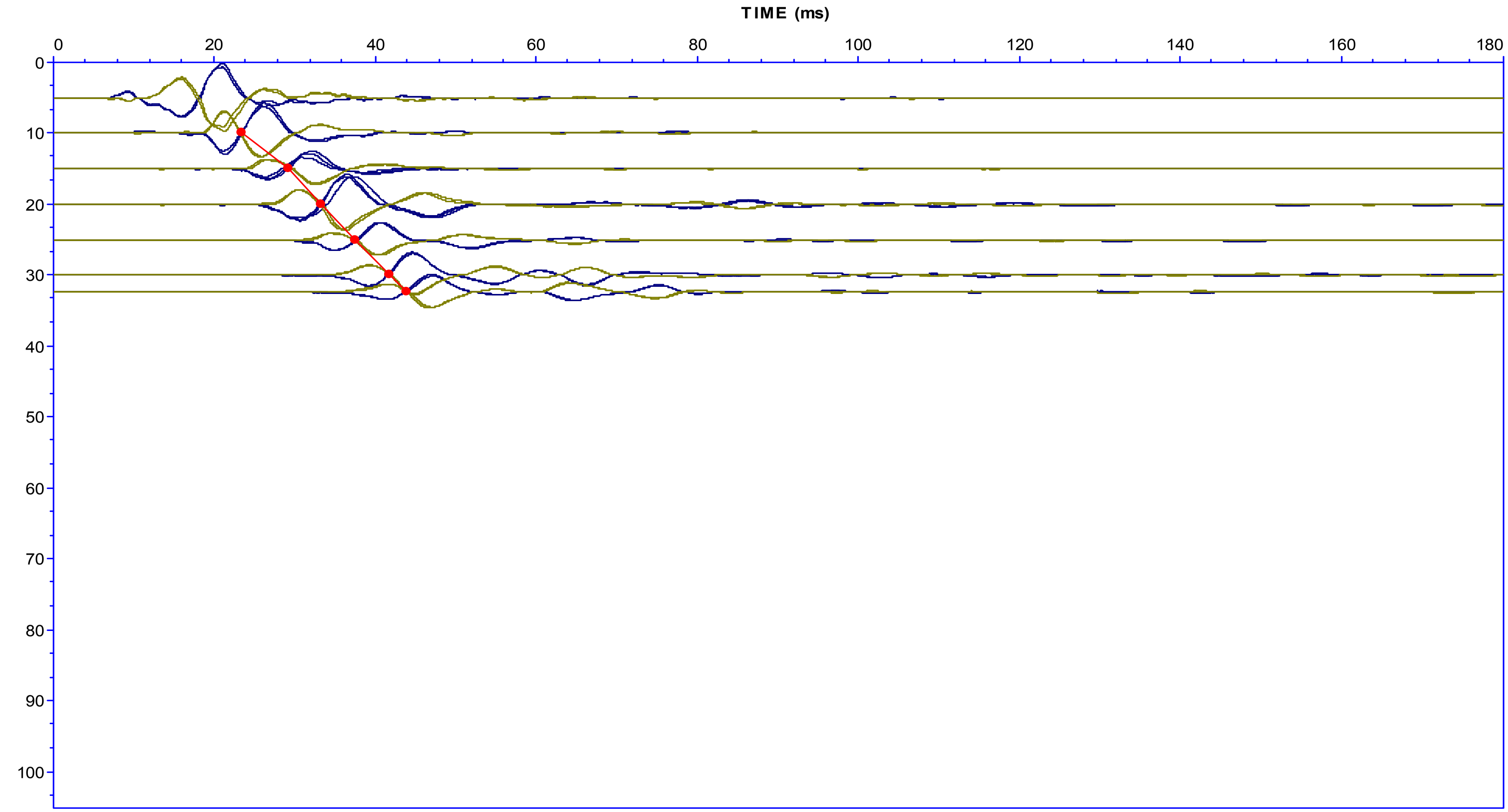
Shear Wave Velocity- C-407
CCNPP
06-948
July 13, 2006

ConeTec Shear Wave Velocity Data Reduction Sheet

Hole:	C-407
Location:	CCNPP
Cone:	AD195
Date:	13-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	5.94	223.5	733.4	3.62	11.89
6.10	5.90	6.28	3.87	357.2	1172.0	5.15	16.90
7.65	7.45	7.75	4.25	347.1	1138.6	6.67	21.90
9.15	8.95	9.20	4.34	334.1	1096.0	8.20	26.90
9.85	9.65	9.89	2.03	335.8	1101.6	9.30	30.51

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C407-ALT	Site: C C N P P
Date: 07:13:06 11:25	Cone: STD 20T AD-195				



Shear Wave Velocity- C-407-2a
CCNPP
06-948
July 28, 2006

Shear Wave Velocity (ft/s)

0 500 1000 1500 2000 2500

Depth Below Grade (ft)

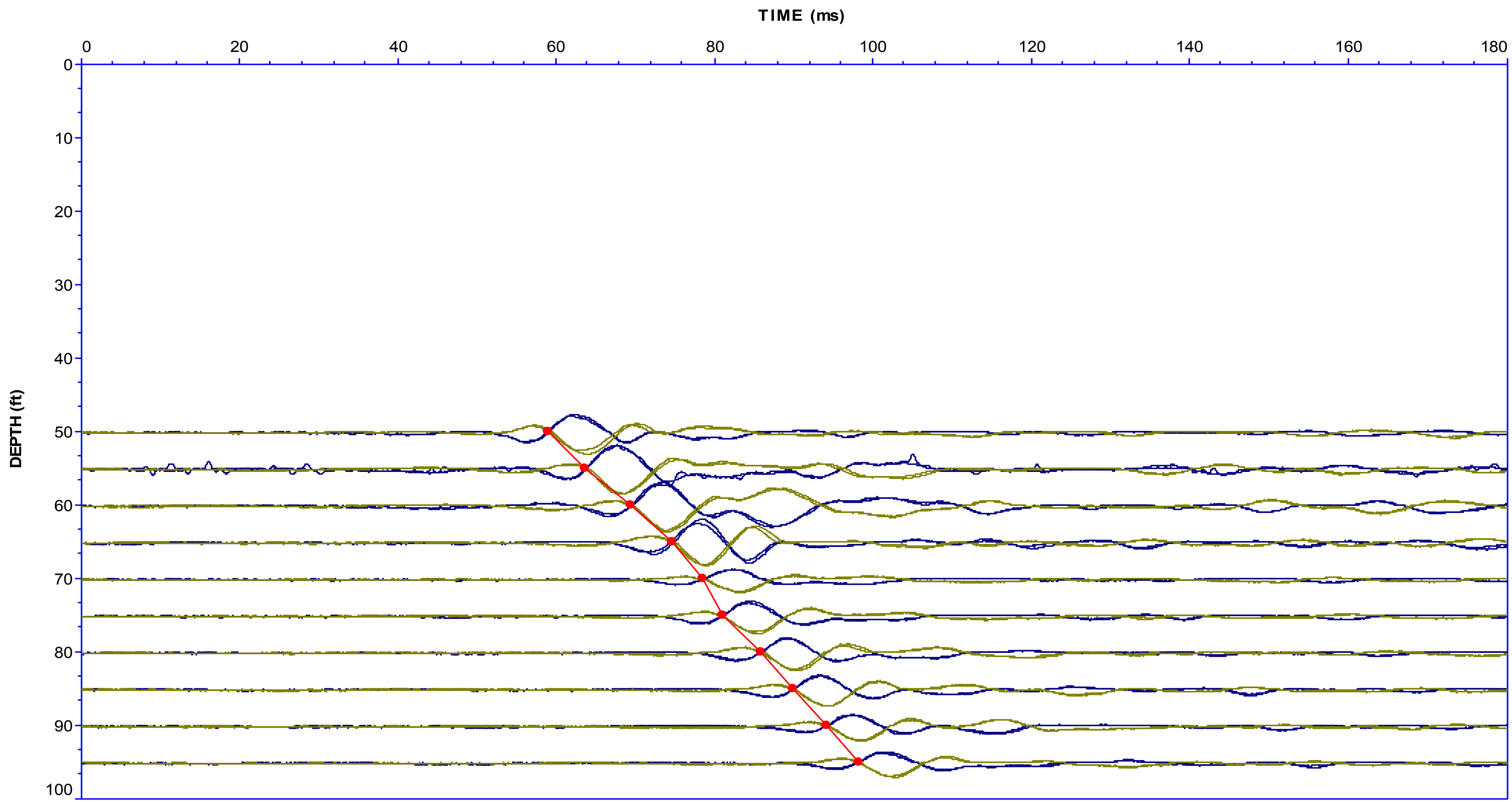
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

ConeTec Shear Wave Velocity Data Reduction Sheet

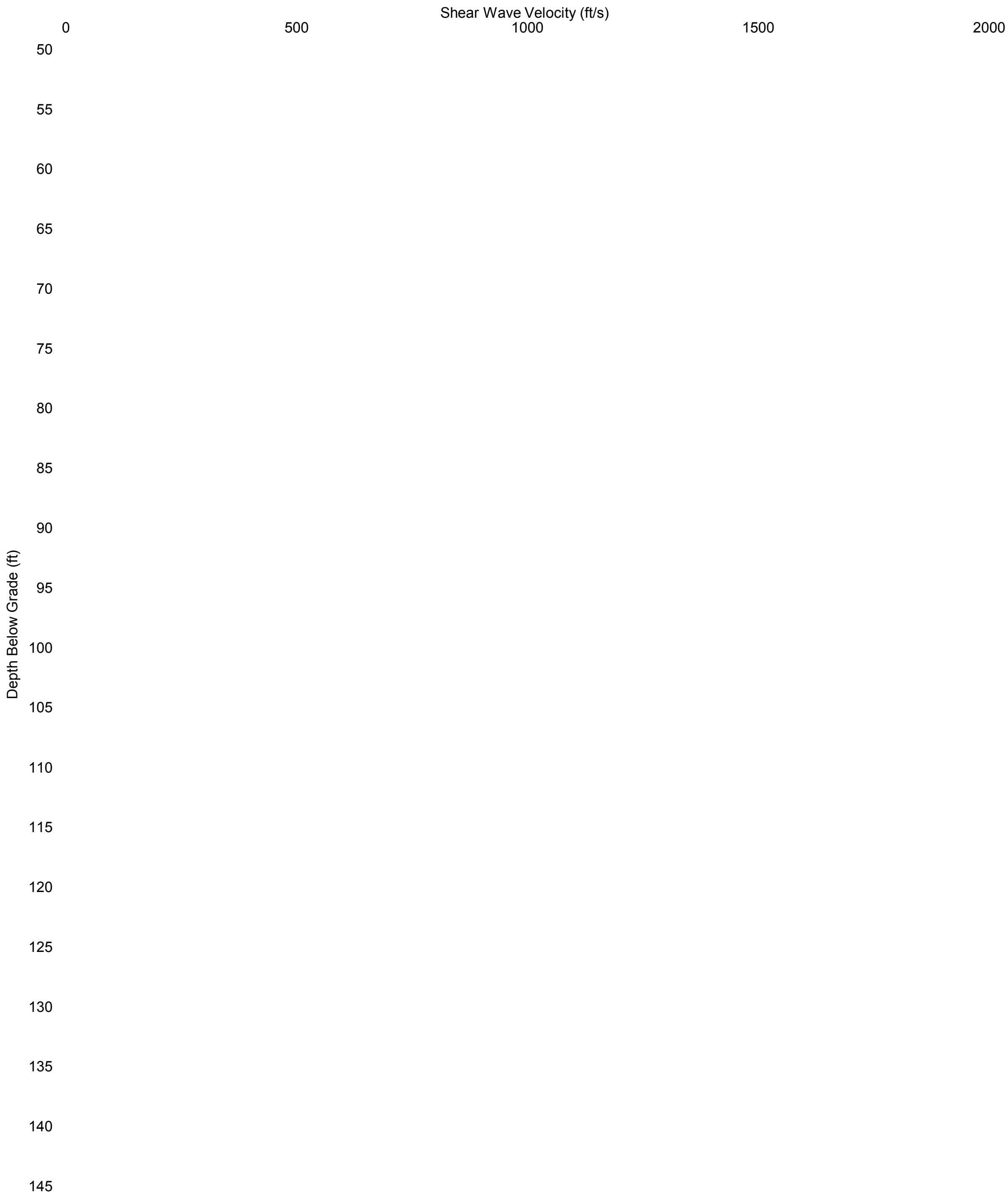
Hole: C-407-2a
Location: CCNPP
Cone: AD195
Date: 28-Jul-06
Source: Beam
Source Depth 0.00 m
Source Offset 2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
15.25	15.05	15.20					
16.80	16.60	16.74	4.65	330.3	1083.8	15.82	51.92
18.30	18.10	18.23	5.79	257.2	843.9	17.35	56.92
19.85	19.65	19.77	5.25	293.3	962.3	18.87	61.92
21.35	21.15	21.26	3.77	395.7	1298.3	20.40	66.93
22.90	22.70	22.80	2.51	614.4	2015.6	21.92	71.93
24.40	24.20	24.30	4.89	305.8	1003.2	23.45	76.93
25.95	25.75	25.84	4.05	381.4	1251.4	24.97	81.94
27.45	27.25	27.33	4.24	352.4	1156.3	26.50	86.94
29.00	28.80	28.88	4.01	385.1	1263.6	28.03	91.94

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-407-2A	Site: C C N P P
Date: 07:28:06 07:49	Cone: STD 20T AD-195				



Shear Wave Velocity- C-407-b
CCNPP
06-948
July 31, 2006

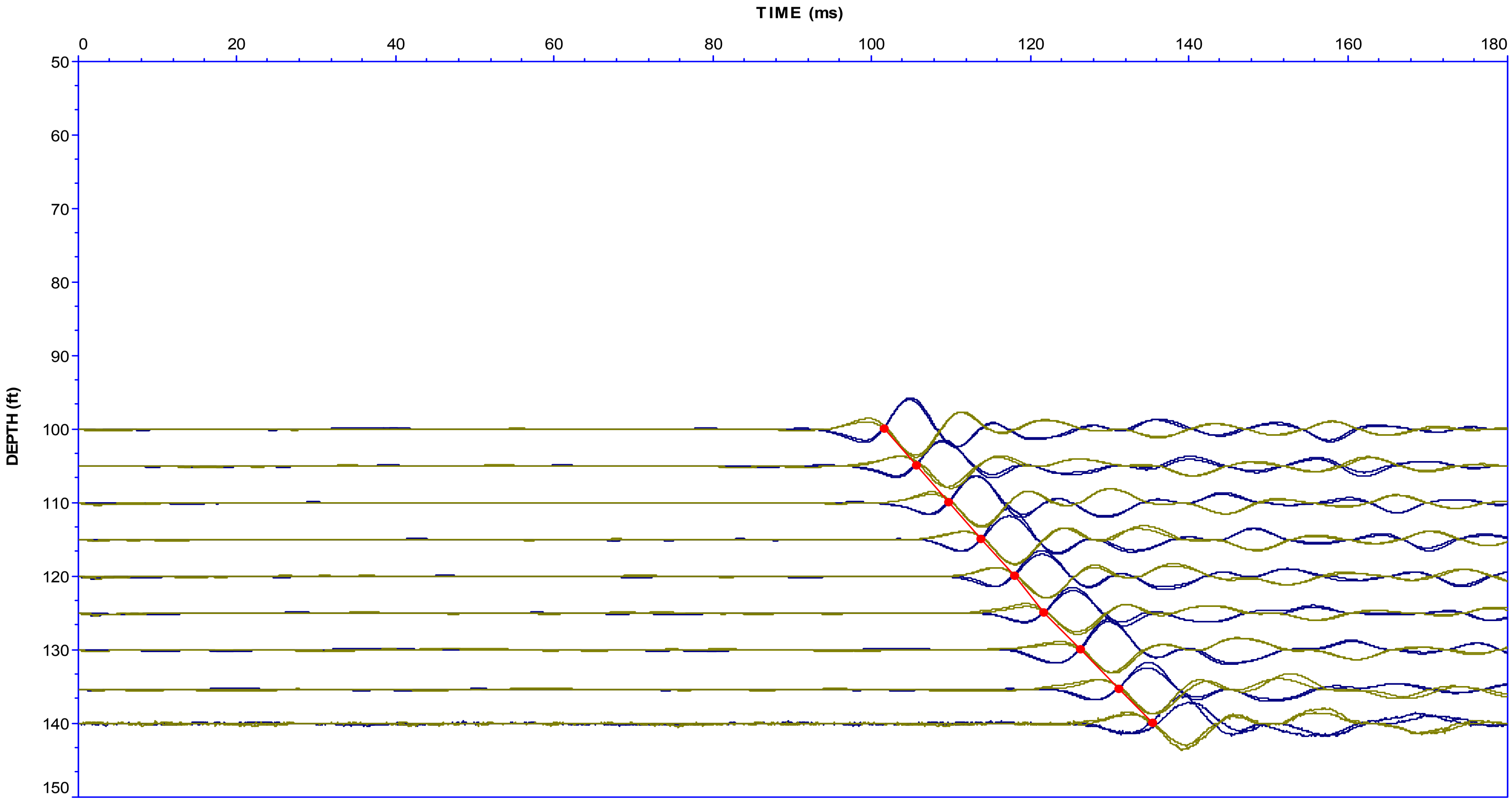


ConeTec Shear Wave Velocity Data Reduction Sheet

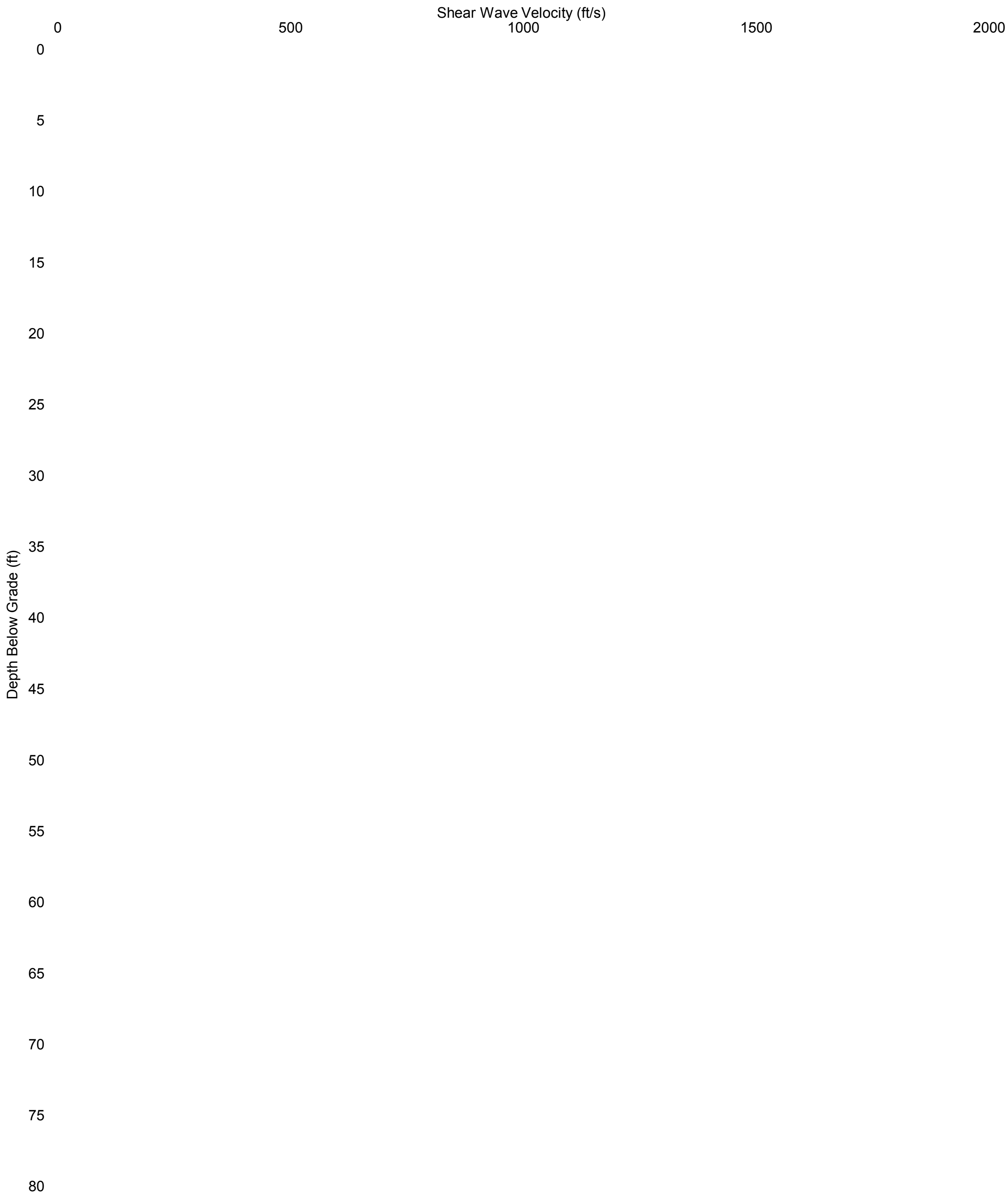
Hole:	C-407-b
Location:	CCNPP
Cone:	AD195
Date:	31-Jul-06
Source:	Beam
Source Depth	0.00 m
Source Offset	2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
30.50	30.30	30.38					
32.05	31.85	31.92	4.02	384.7	1262.0	31.07	101.95
33.55	33.35	33.42	4.19	357.6	1173.3	32.60	106.95
35.10	34.90	34.97	3.93	394.0	1292.6	34.12	111.96
36.60	36.40	36.46	4.38	342.0	1122.0	35.65	116.96
38.15	37.95	38.01	3.63	426.7	1400.0	37.17	121.96
39.65	39.45	39.51	4.59	326.6	1071.6	38.70	126.97
41.30	41.10	41.16	4.83	341.2	1119.5	40.27	132.13
42.70	42.50	42.55	4.30	325.3	1067.1	41.80	137.14

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C407-b	Site: C C N P P
Date: 07:31:06 09:33	Cone: STD 20T AD-195				



Shear Wave Velocity- C-408
CCNPP
06-948
July 17, 2006

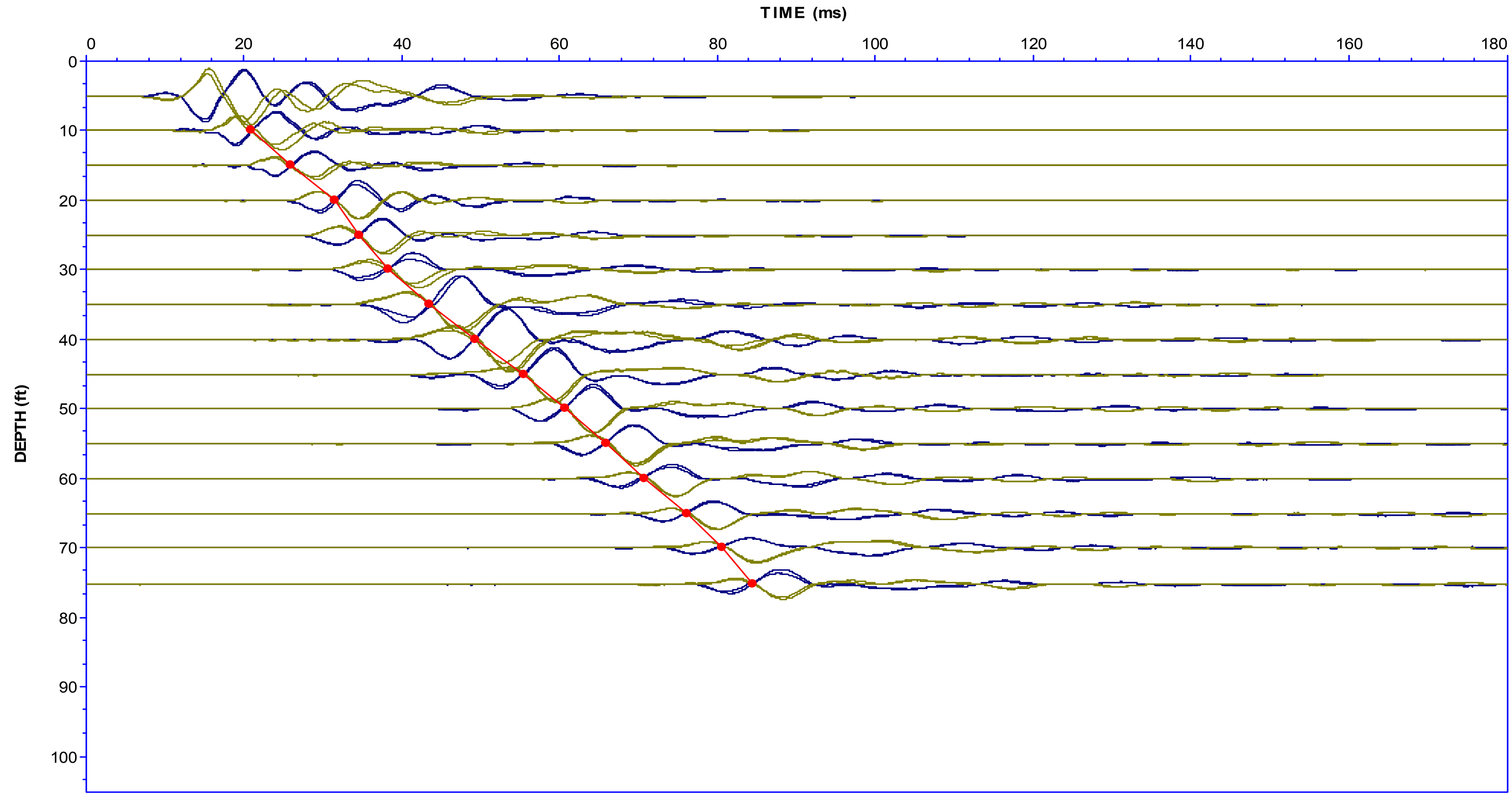


ConeTec Shear Wave Velocity Data Reduction Sheet

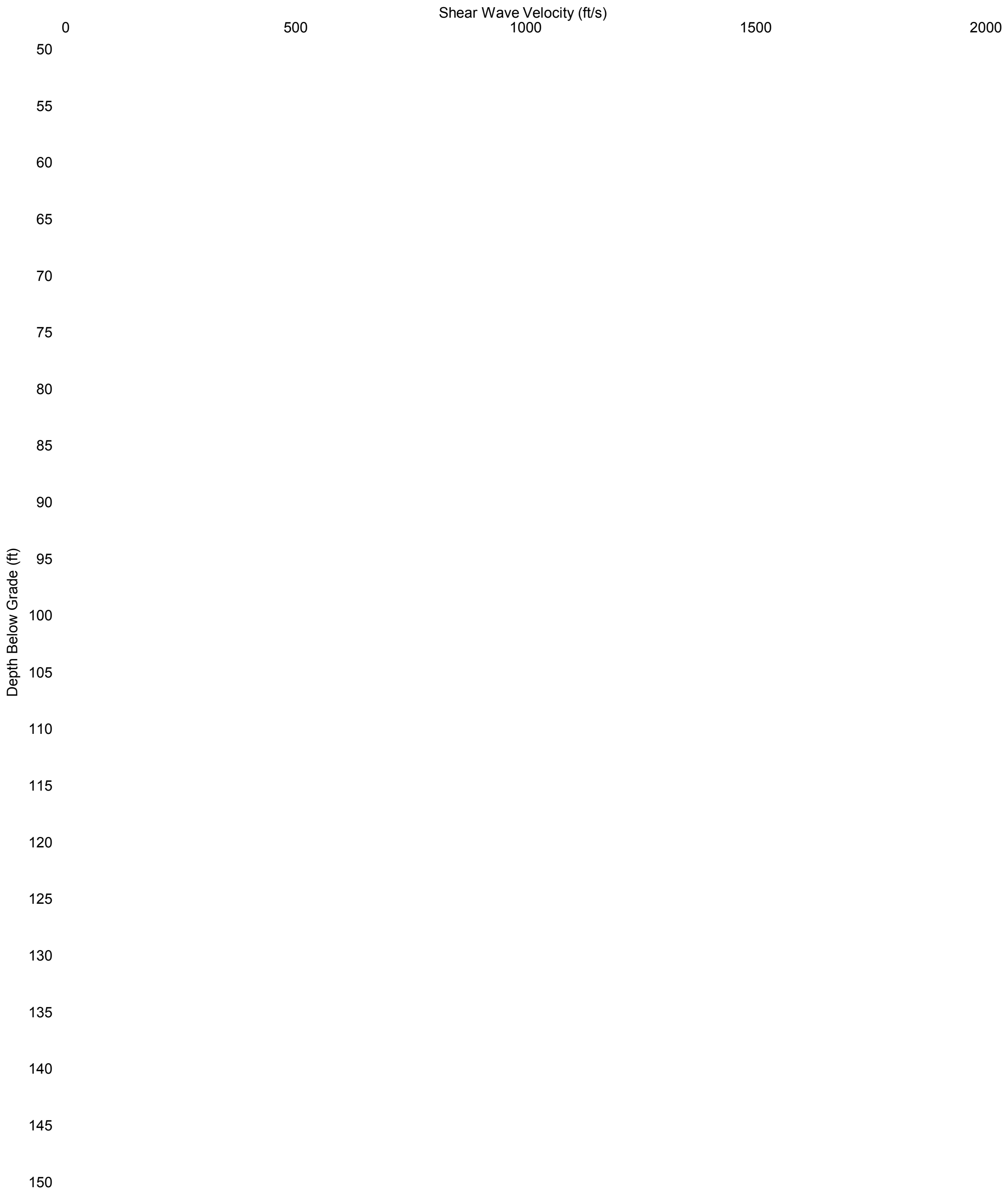
Hole: C-408
Location: CCNPP
Cone: AD195
Date: 17-Jul-06
Source: Beam
Source Depth 0.00 m
Source Offset 2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
3.05	2.85	3.57					
4.60	4.40	4.90	4.97	267.0	875.8	3.62	11.89
6.10	5.90	6.28	5.69	242.8	796.5	5.15	16.90
7.65	7.45	7.75	3.00	492.0	1614.2	6.67	21.90
9.15	8.95	9.20	3.62	400.7	1314.7	8.20	26.90
10.70	10.50	10.72	5.32	284.4	932.9	9.72	31.91
12.20	12.00	12.19	5.68	259.4	850.9	11.25	36.91
13.75	13.55	13.72	6.33	241.5	792.2	12.77	41.91
15.25	15.05	15.20	5.07	292.5	959.6	14.30	46.92
16.80	16.60	16.74	5.35	287.0	941.6	15.82	51.92
18.30	18.10	18.23	4.84	307.9	1010.0	17.35	56.92
19.85	19.65	19.77	5.23	294.6	966.4	18.87	61.92
21.35	21.15	21.26	4.53	329.4	1080.8	20.40	66.93
22.90	22.70	22.80	3.86	399.3	1310.1	21.92	71.93

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C-408-ALT	Site: C C N P P
Date: 07:17:06 09:33	Cone: STD 20T AD-195				



Shear Wave Velocity- C-408-2a
CCNPP
06-948
July 31, 2006

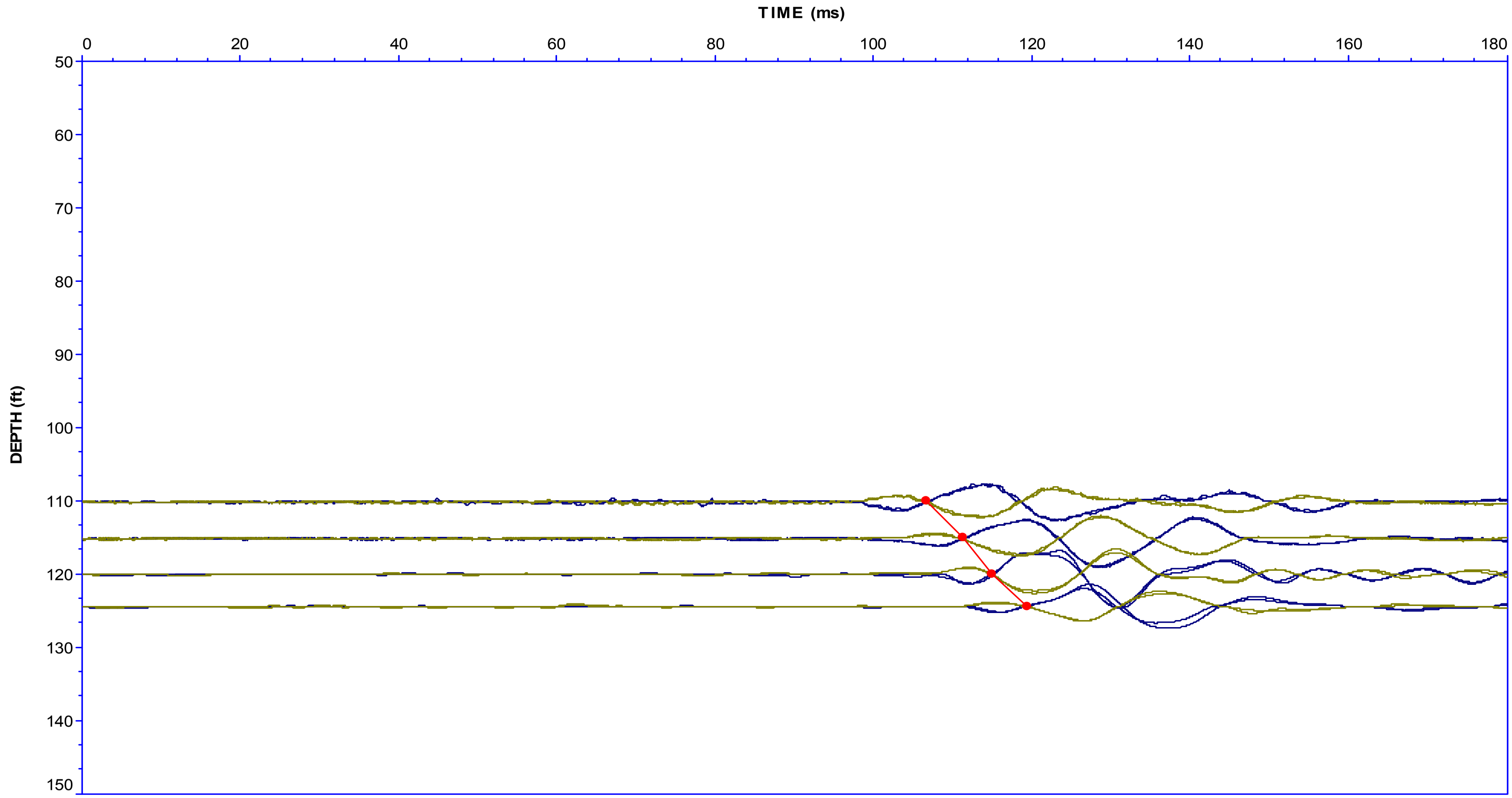


ConeTec Shear Wave Velocity Data Reduction Sheet

Hole: C-408-2a
Location: CCNPP
Cone: AD195
Date: 31-Jul-06
Source: Beam
Source Depth 0.00 m
Source Offset 2.15 m

Tip Depth (m)	Geophone Depth(m)	Travel Path (m)	Interval time (ms)	Velocity (m/s)	Velocity (ft/s)	Interval Depth (m)	Interval Depth (ft)
0.00							
33.55	33.35	33.42					
35.10	34.90	34.97	4.73	327.2	1073.4	34.12	111.96
36.60	36.40	36.46	3.76	397.9	1305.5	35.65	116.96
37.95	37.75	37.81	4.44	303.4	995.5	37.07	121.64

Job No: 06-948	Client: Schnabel Engineering	Project Title: CCNPP	Operator: TS-SL	Hole: C408-2a	Site: C C N P P
Date: 07:31:06 15:16	Cone: STD 20T AD-195				



APPENDIX C
PORE PRESSURE DISSIPATION TESTS

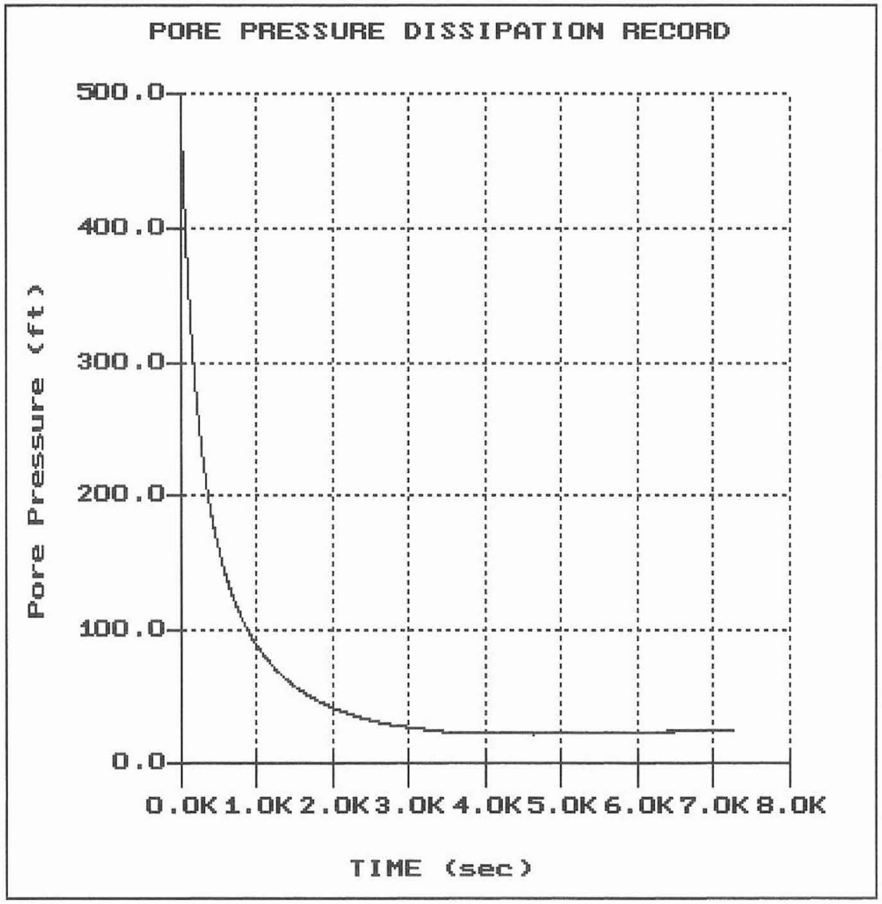
Presentation of In Situ Testing Program Results
ConeTec, Inc.
November 13, 2006

Schnabel

Hole: C-302
Location:C C N P P

Cone:STD 20T AD-195
Date:07:12:06 10:00

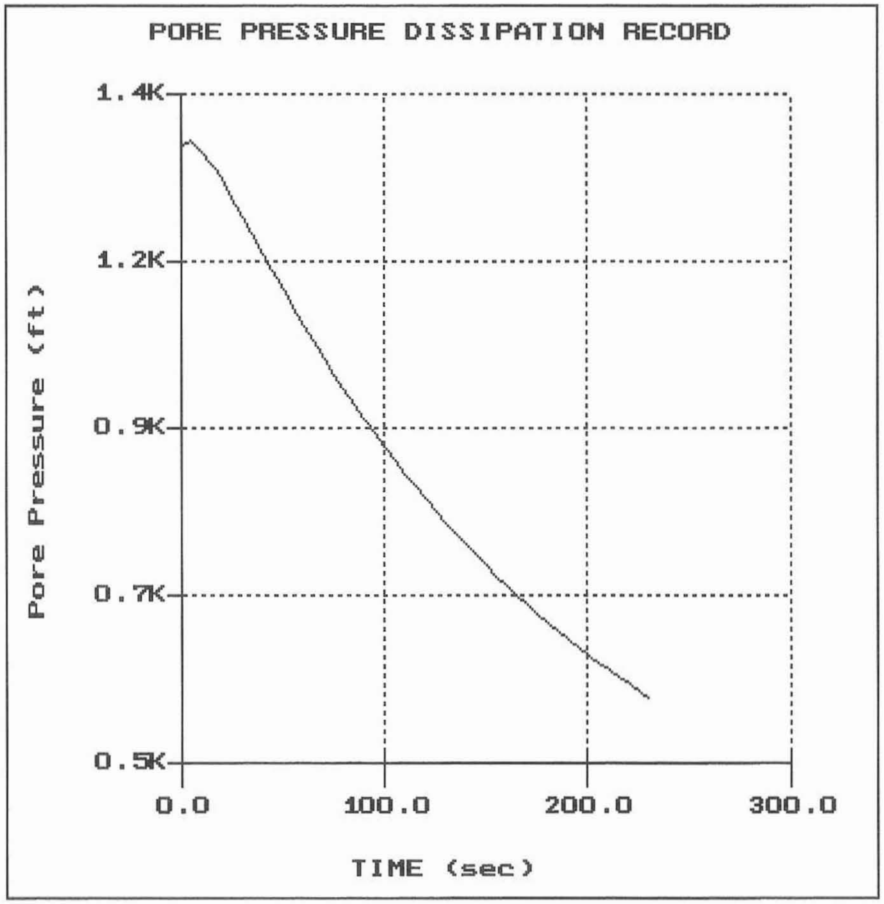
File: 948CP05.PPD
Depth (m): 10.65
(ft): 34.94
Duration : 7240.0s
U-min: 21.68 4635.0s
U-max: 494.11 0.0s



Schnabel

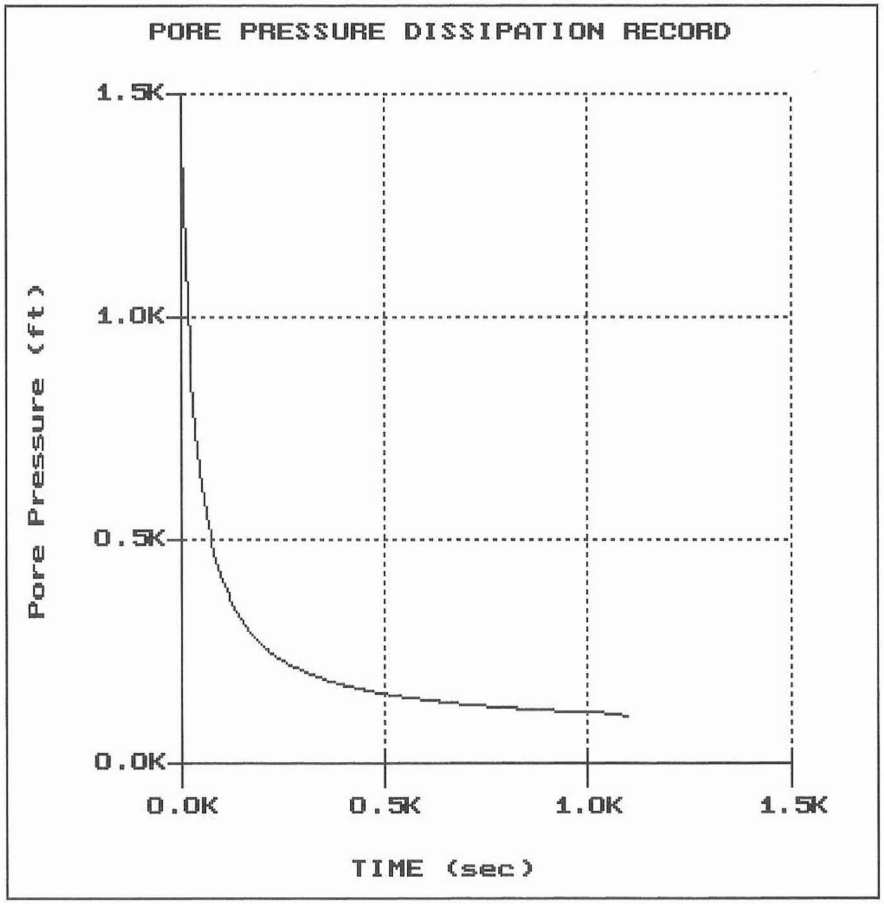
Hole: C-302-2a
Location:C C N P P

Cone:STD 20T AD-195
Date:07:26:06 10:40



File: 948CP58.PPD
Depth (m): 38.85
(ft): 127.46
Duration : 230.0s
U-min: 587.87 230.0s
U-max: 1338.07 5.0s

Schnabel	Hole: C-303b Location:C C N P P	Cone:STD 20T AD-195 Date:07:25:06 15:32

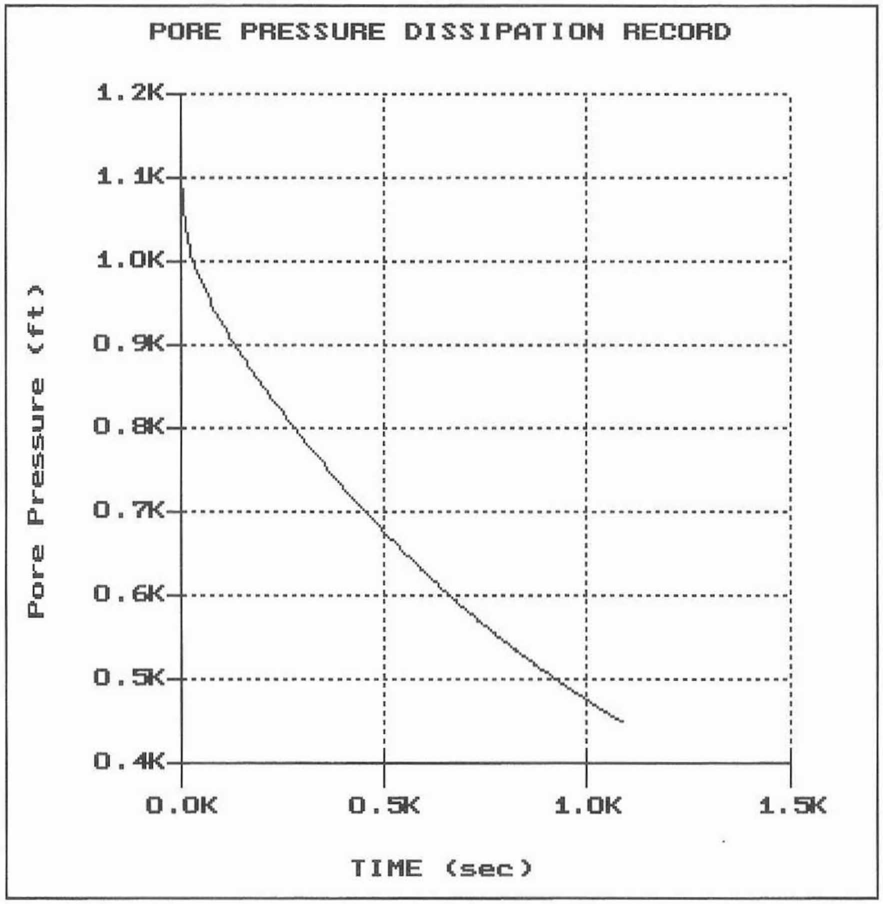


File: 948CP56.PPD
Depth (m): 29.60
(ft): 97.11
Duration : 1095.0s
U-min: 103.57 1095.0s
U-max: 1401.43 0.0s

Schnabel

Hole: C-304
Location:C C N P P

Cone:STD 20T AD-195
Date:07:12:06 07:36

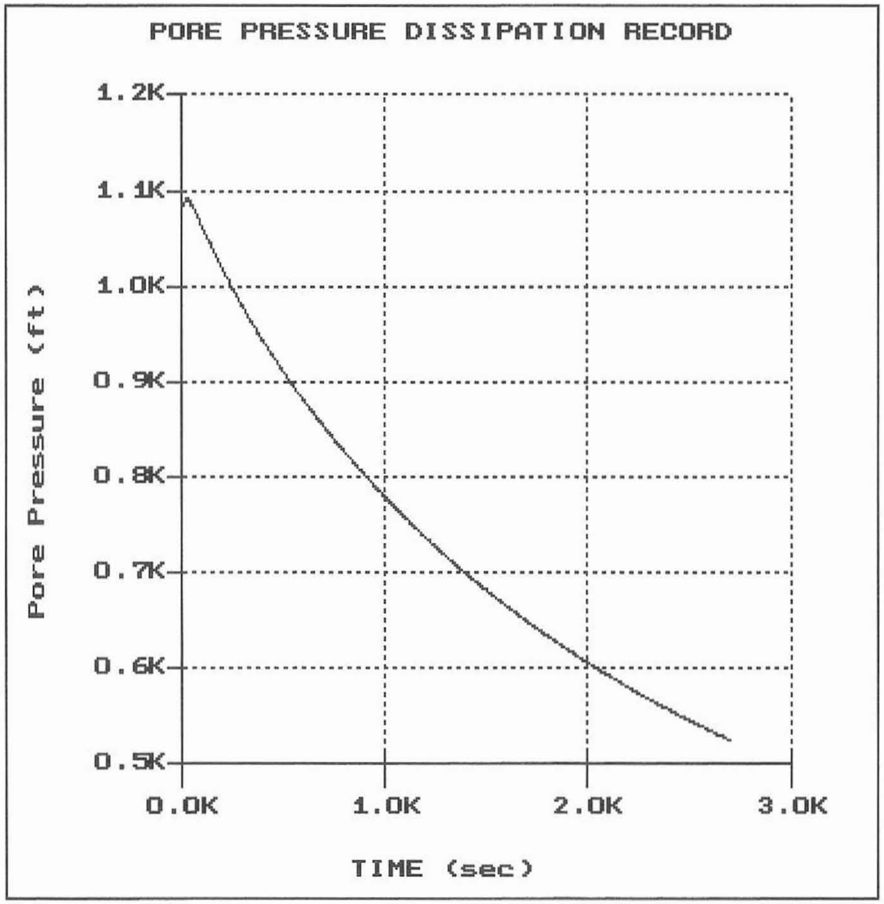


File: 948CP03.PPD
Depth (m): 5.05
(ft): 16.57
Duration : 1085.0s
U-min: 449.39 1085.0s
U-max: 1112.82 0.0s

Schnabel

Hole: C-306
Location:C C N P P

Cone:STD 20T AD-195
Date:07:12:06 16:33

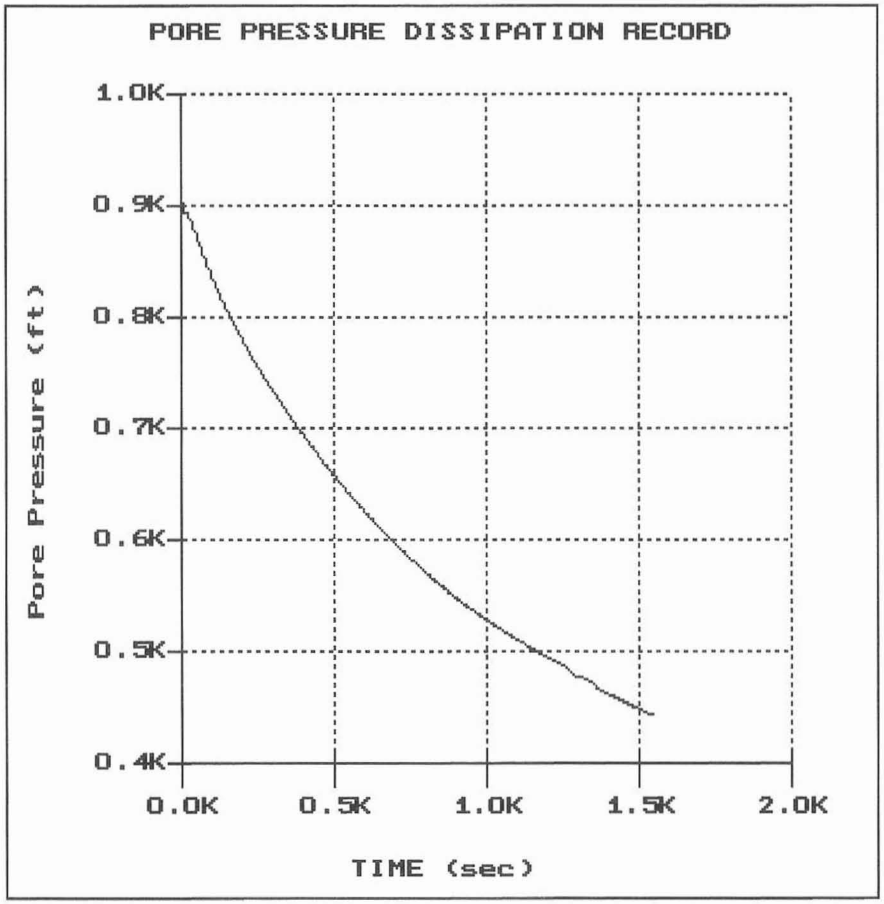


File: 948CP08.PPD
Depth (m): 14.05
(ft): 46.10
Duration : 2700.0s
U-min: 523.72 2700.0s
U-max: 1132.71 0.0s

Schnabel

Hole: C-309
Location:C C N P P

Cone:STD 20T AD-195
Date:07:17:06 13:13



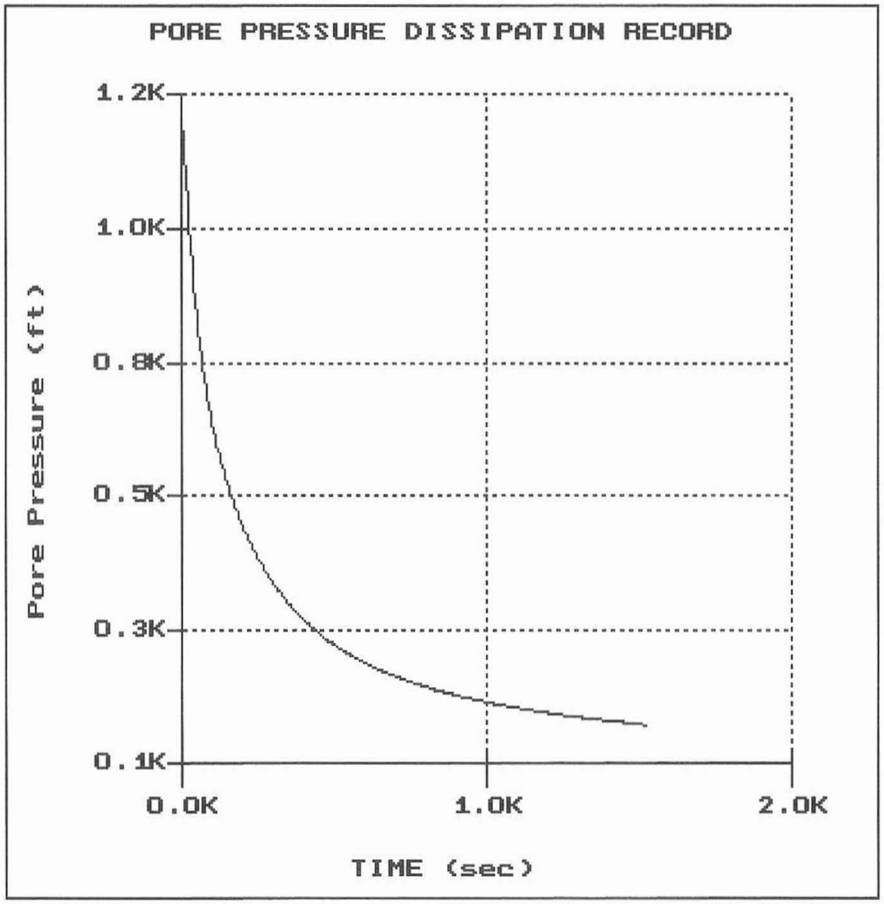
File: 948CP24.PPD
Depth (m): 18.00
(ft): 59.06
Duration : 1545.0s
U-min: 442.72 1545.0s
U-max: 911.73 0.0s

Schnabel

Hole: C-401-2b
Location:C C N P P

Cone:STD 20T AD-195
Date:07:27:06 15:04

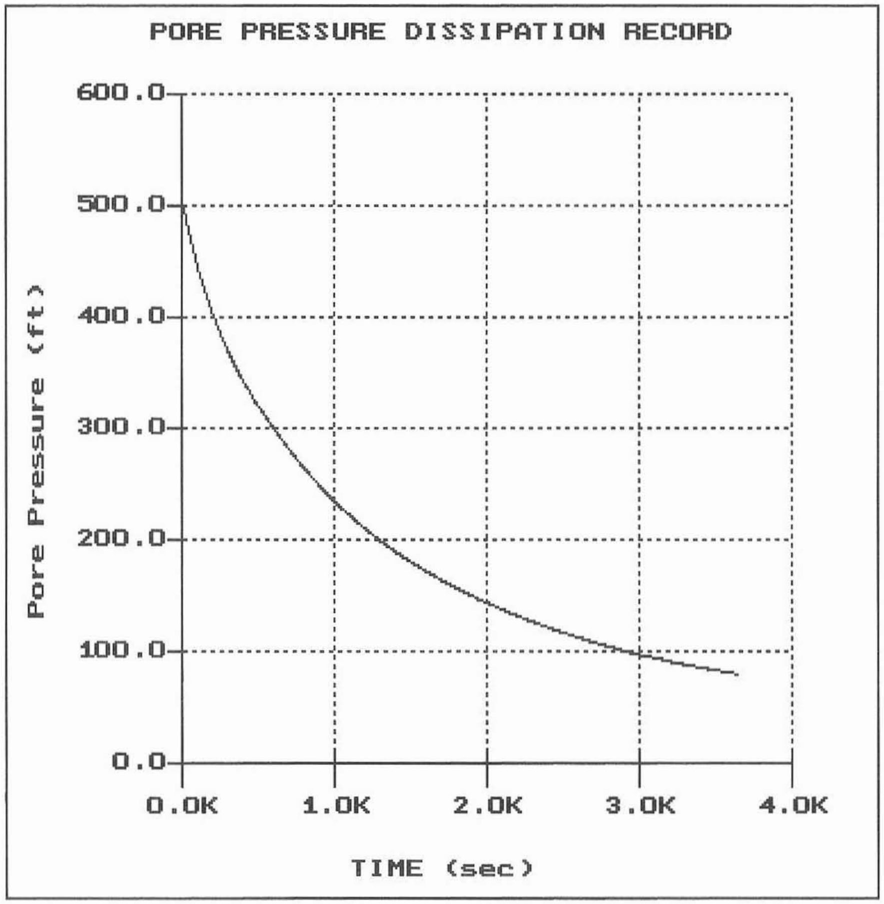
File: 948CP61.PPD
Depth (m): 39.05
(ft): 128.12
Duration : 1525.0s
U-min: 159.27 1525.0s
U-max: 1149.75 0.0s



Schnabel

Hole: C-402
Location: C C N P P

Cone: STD 20T AD-195
Date: 07:13:06 08:45

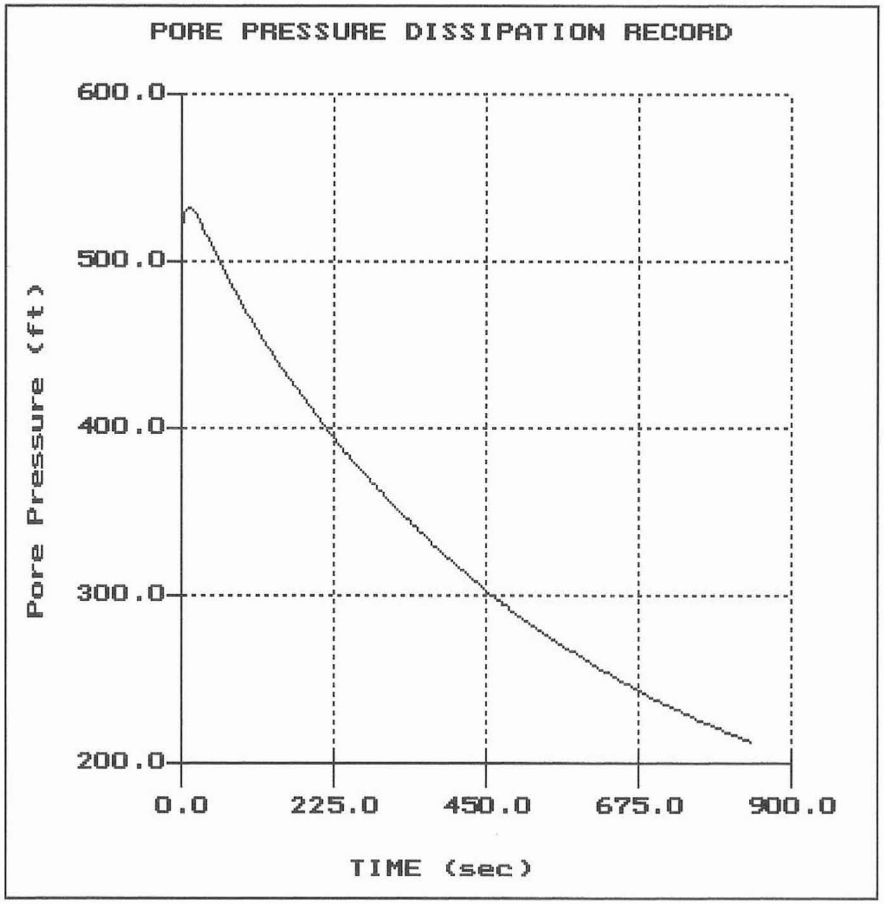


File: 948CP10.PPD
Depth (m): 6.50
(ft): 21.33
Duration : 3635.0s
U-min: 79.92 3635.0s
U-max: 518.37 0.0s

Schnabel

Hole: C-404
Location:C C N P P

Cone:STD 20T AD-195
Date:07:14:06 11:17



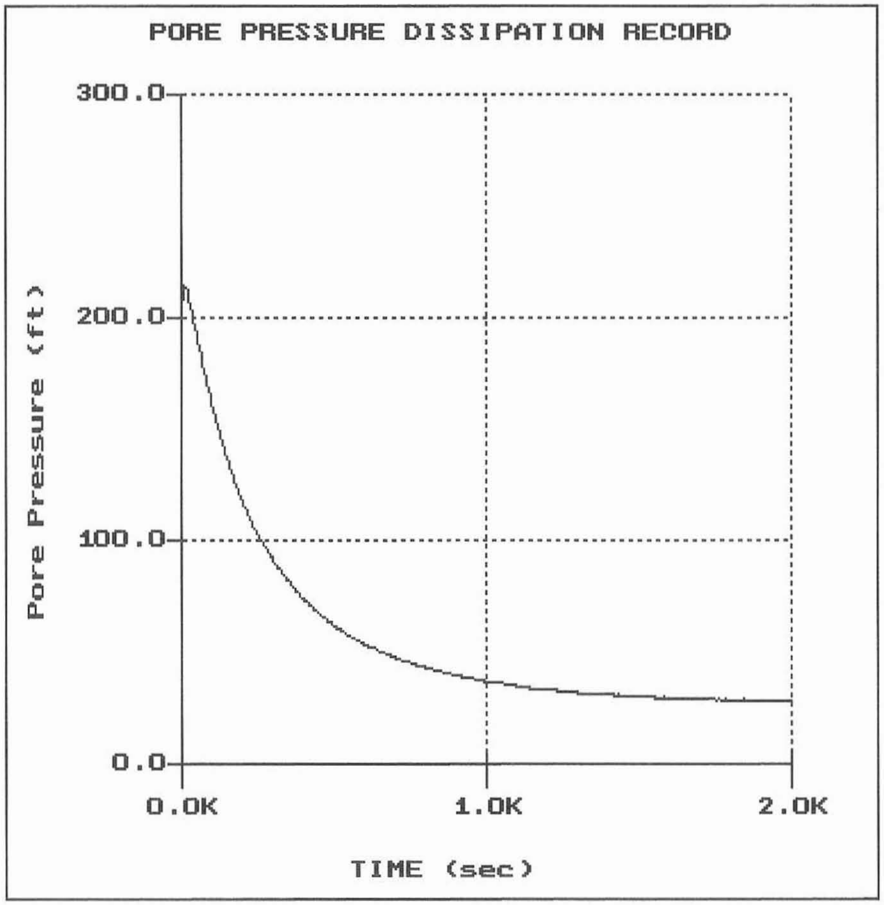
File: 948CP20.PPD
Depth (m): 20.15
(ft): 66.11
Duration : 840.0s
U-min: 212.49 840.0s
U-max: 532.36 10.0s

Schnabel

Hole: C-406
Location:C C N P P

Cone:STD 20T AD-195
Date:07:13:06 15:51

File: 948CP15.PPD
Depth (m): 4.00
(ft): 13.12
Duration : 2000.0s
U-min: 28.44 1980.0s
U-max: 214.70 5.0s

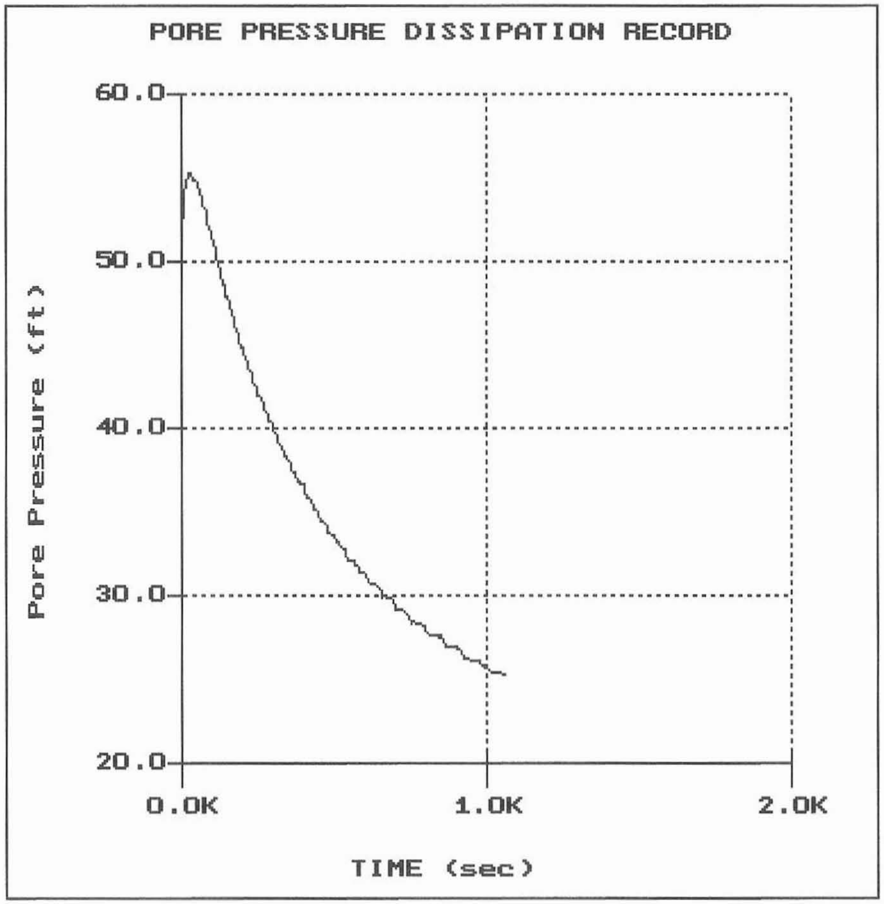


Schnabel

Hole: C-407
Location:C C N P P

Cone:STD 20T AD-195
Date:07:13:06 11:25

File: 948CP12.PPD
Depth (m): 3.40
(ft): 11.15
Duration : 1060.0s
U-min: 25.25 1060.0s
U-max: 55.33 30.0s

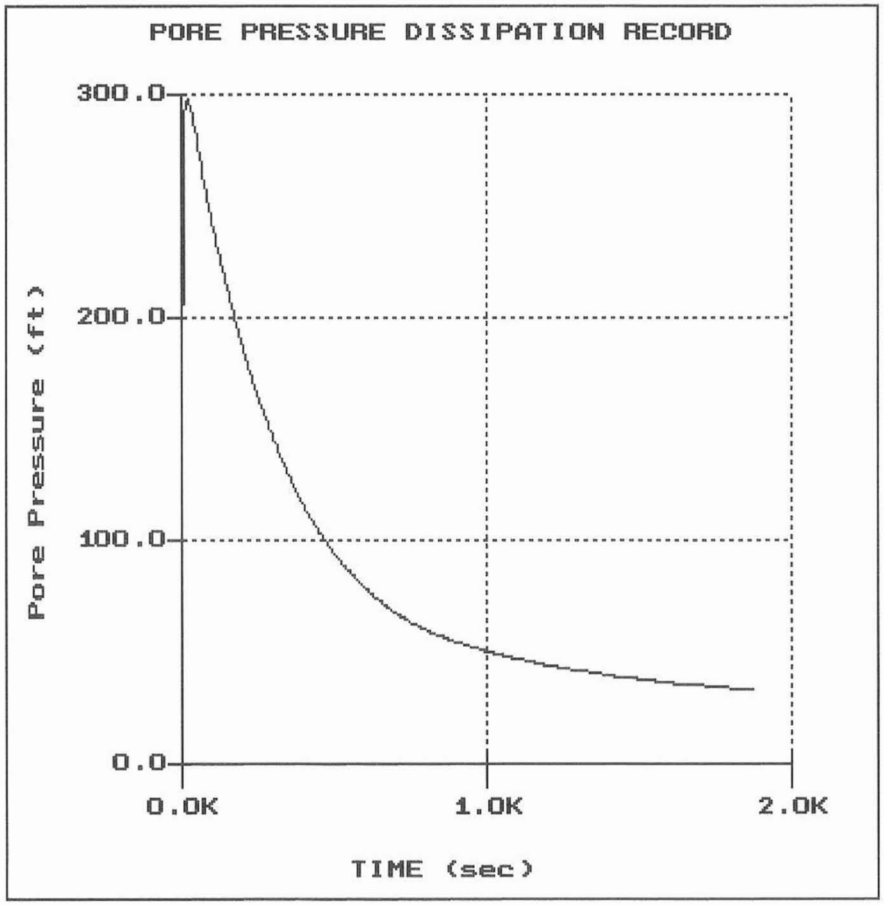


Schnabel

Hole: C-407
Location:C C N P P

Cone:STD 20T AD-195
Date:07:13:06 11:25

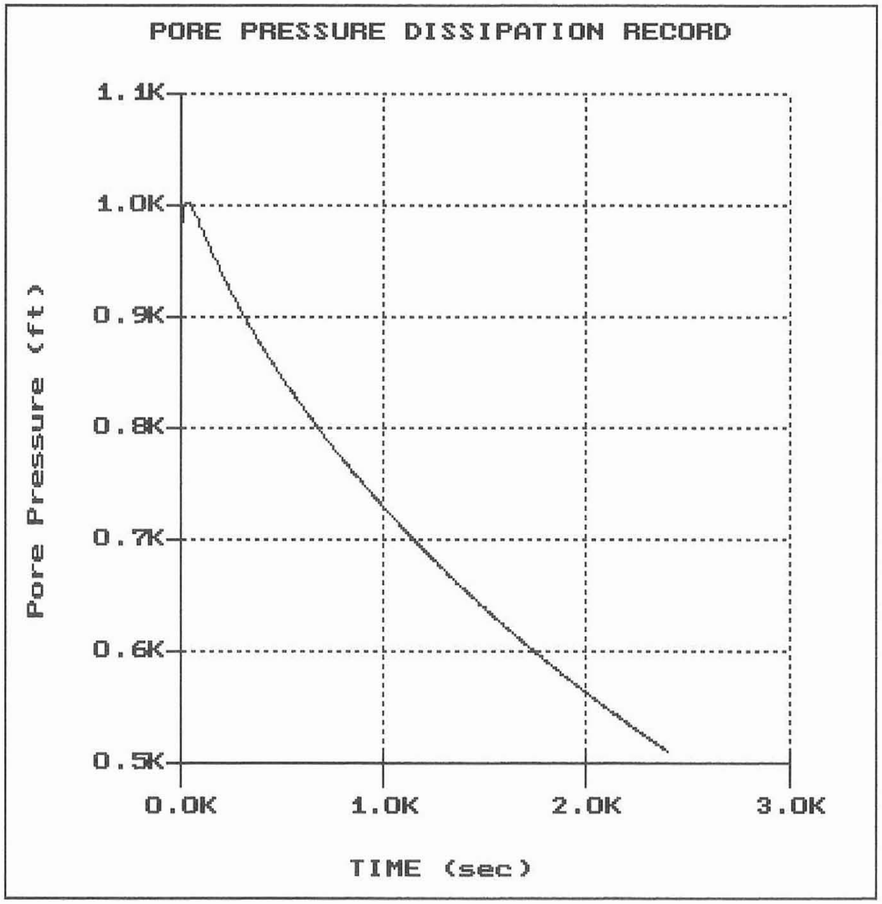
File: 948CP12.PPD
Depth (m): 4.20
(ft): 13.78
Duration : 1870.0s
U-min: 33.13 1865.0s
U-max: 298.18 20.0s



Schnabel

Hole: C-407
Location:C C N P P

Cone:STD 20T AD-195
Date:07:13:06 11:25



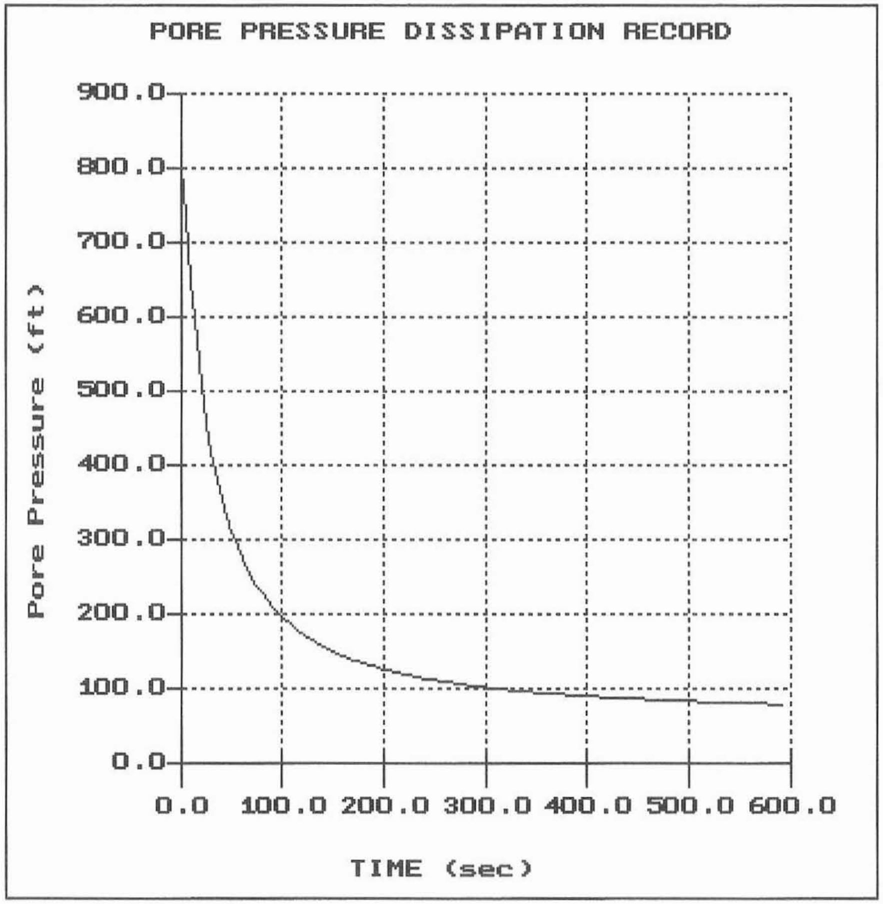
File: 948CP12.PPD
Depth (m): 5.65
(ft): 18.54
Duration : 2400.0s
U-min: 510.30 2400.0s
U-max: 1024.03 0.0s

Schnabel

Hole: C-407-2a
Location:C C N P P

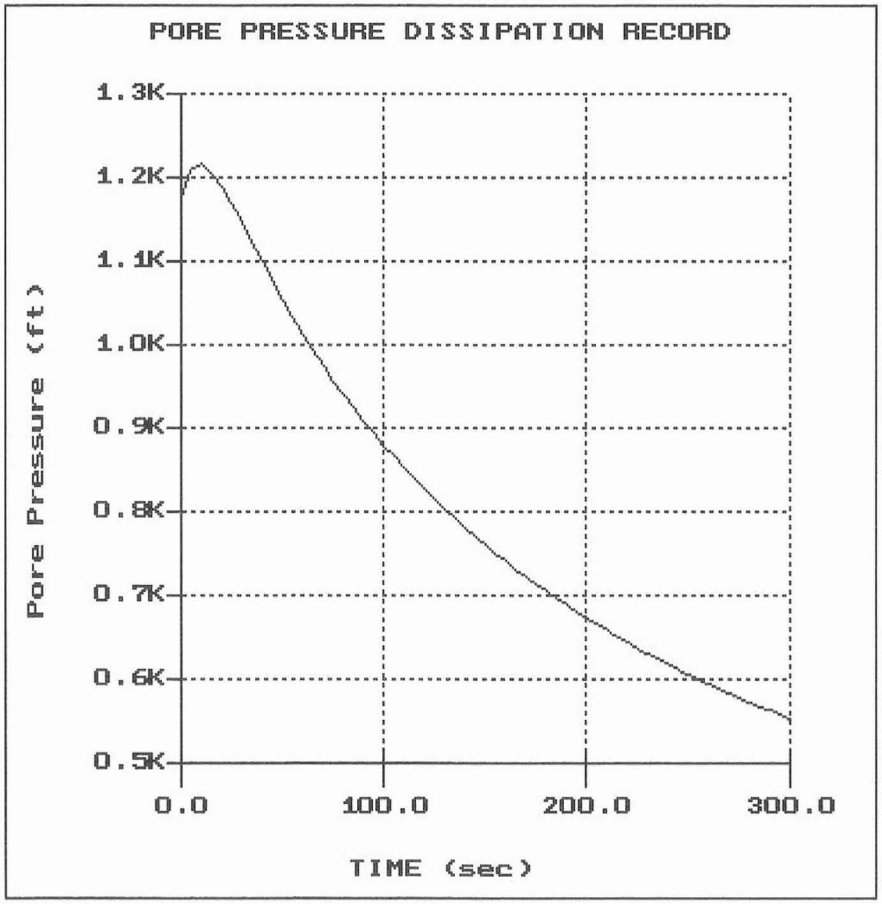
Cone:STD 20T AD-195
Date:07:28:06 07:49

File: 948CP62.PPD
Depth (m): 26.60
(ft): 87.27
Duration : 590.0s
U-min: 79.54 590.0s
U-max: 802.81 0.0s



Schnabel	Hole: C-407-b	Cone:STD 20T AD-195
	Location:C C N P P	Date:07:31:06 09:33

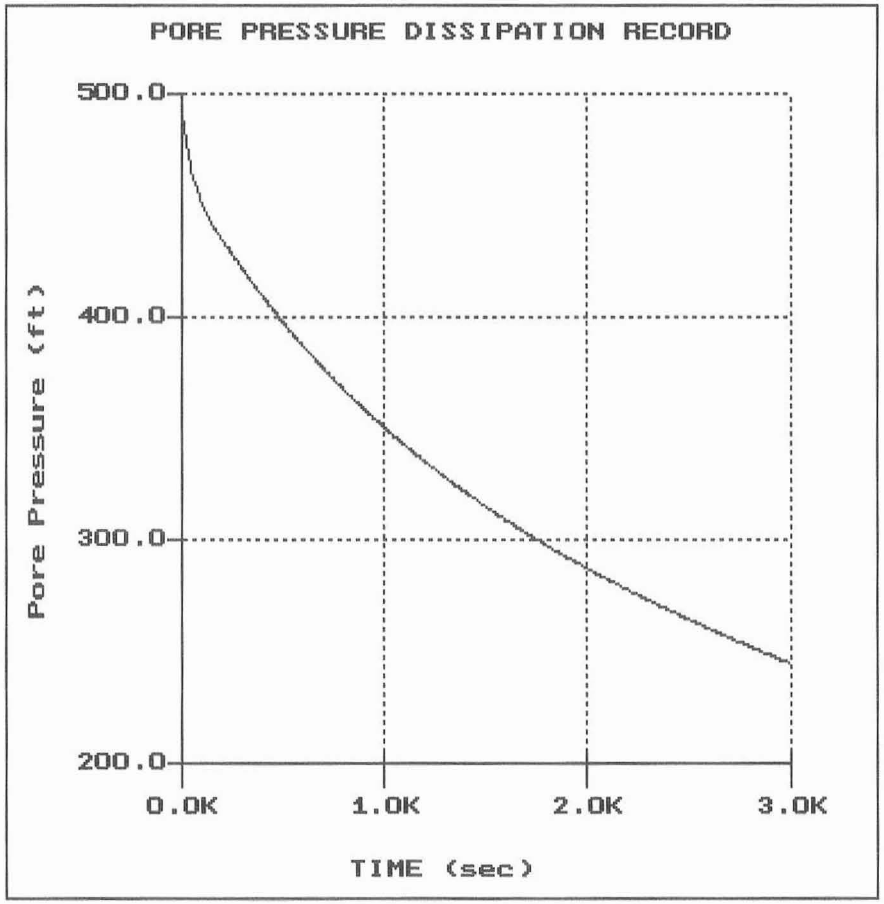
File: 948CP63.PPD
Depth (m): 35.60
(ft): 116.80
Duration : 300.0s
U-min: 552.16 300.0s
U-max: 1215.92 10.0s



Schnabel

Hole: C-409
Location:C C N P P

Cone:STD 20T AD-195
Date:07:21:06 11:02

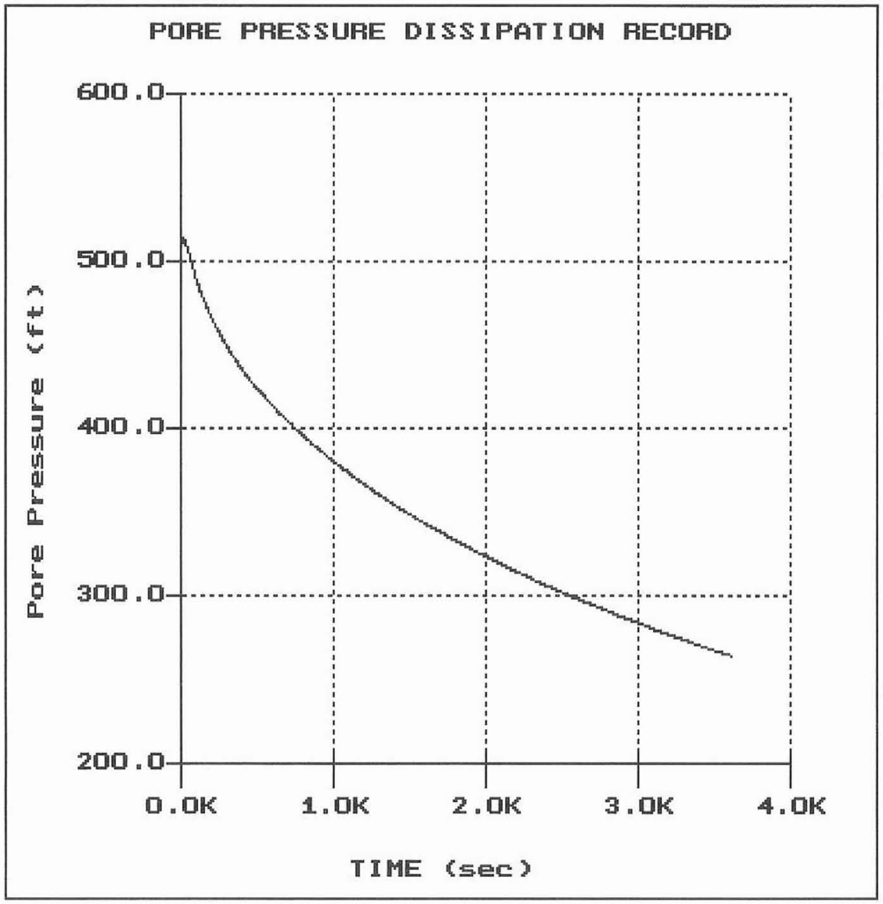


File: 948CP49.PPD
Depth (m): 18.00
(ft): 59.06
Duration : 2990.0s
U-min: 244.78 2990.0s
U-max: 489.18 5.0s

Schnabel

Hole: C-411
Location:C C N P P

Cone:STD 20T AD-195
Date:07:24:06 09:36

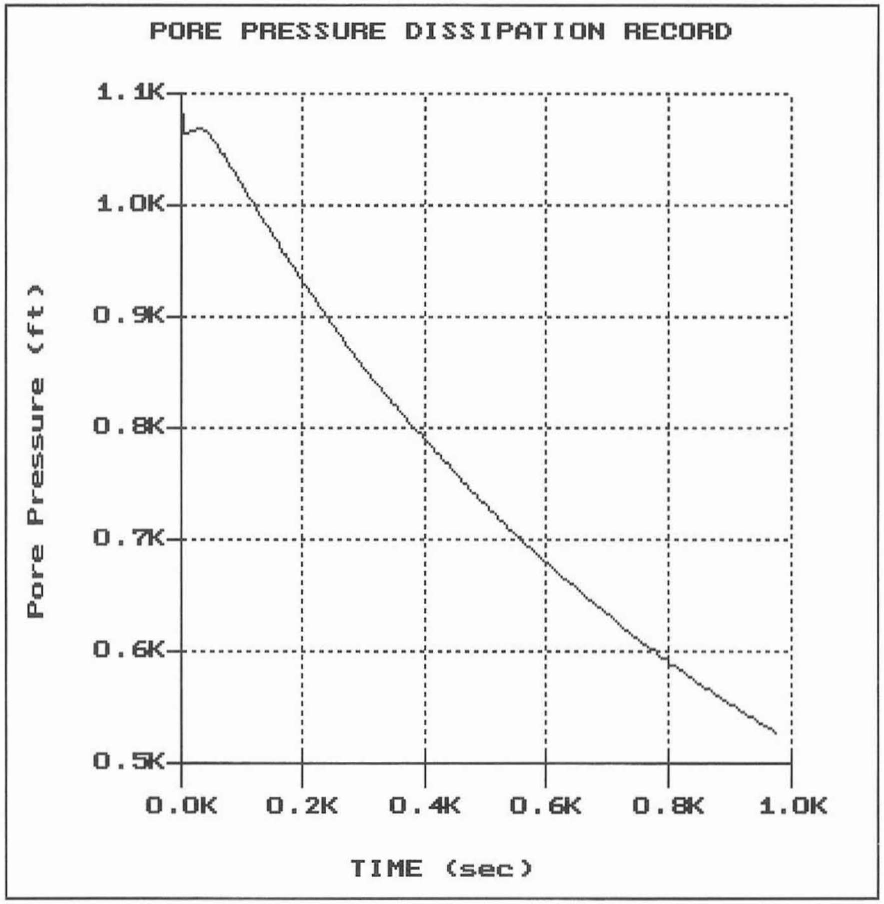


File: 948CP50.PPD
Depth (m): 17.30
(ft): 56.76
Duration : 3605.0s
U-min: 264.30 3605.0s
U-max: 515.32 0.0s

Schnabel

Hole: C-411
Location:C C N P P

Cone:STD 20T AD-195
Date:07:24:06 09:36



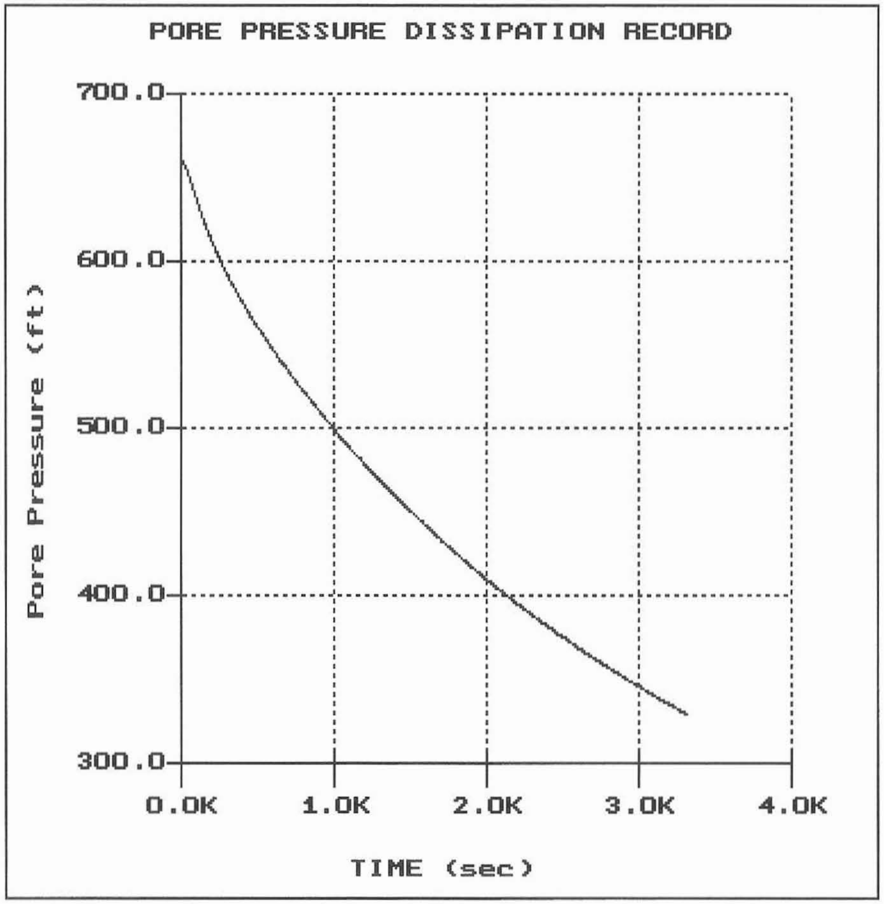
File: 948CP50.PPD
Depth (m): 21.45
(ft): 70.37
Duration : 975.0s
U-min: 527.57 975.0s
U-max: 1097.47 0.0s

Schnabel

Hole: C-414
Location:C C N P P

Cone:STD 20T AD-195
Date:07:18:06 10:41

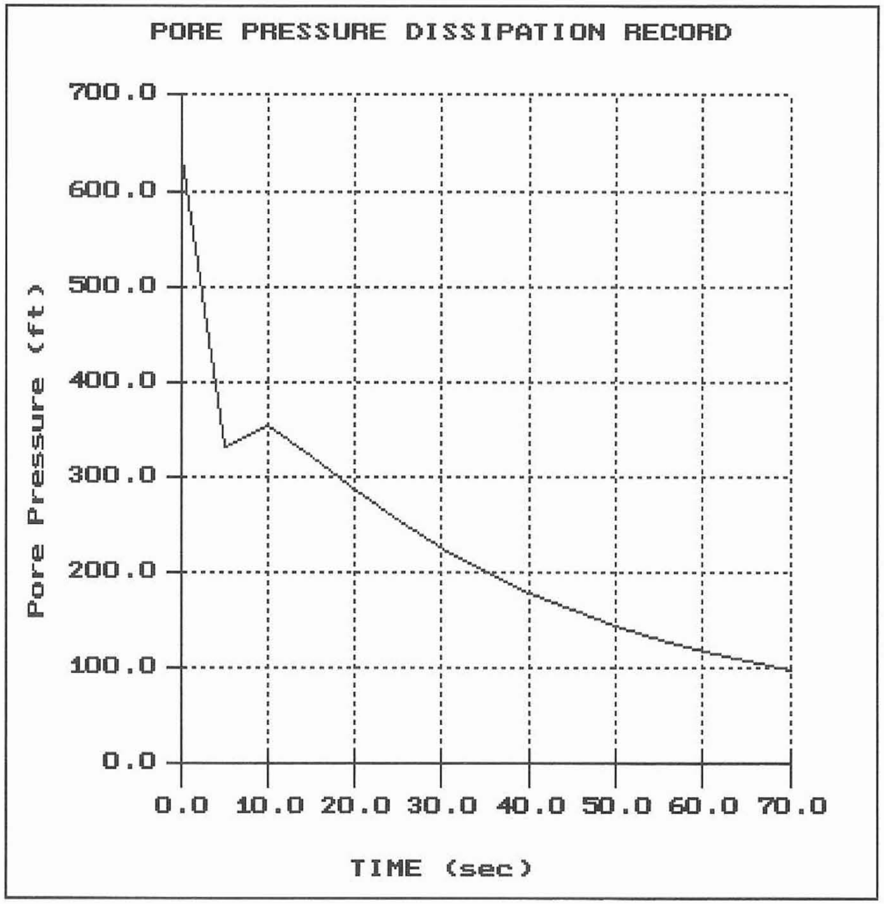
File: 948CP29.PPD
Depth (m): 13.55
(ft): 44.46
Duration : 3310.0s
U-min: 329.44 3310.0s
U-max: 661.32 5.0s



Schnabel

Hole: C-701
Location:C C N P P

Cone:STD 20T AD-195
Date:07:21:06 08:39

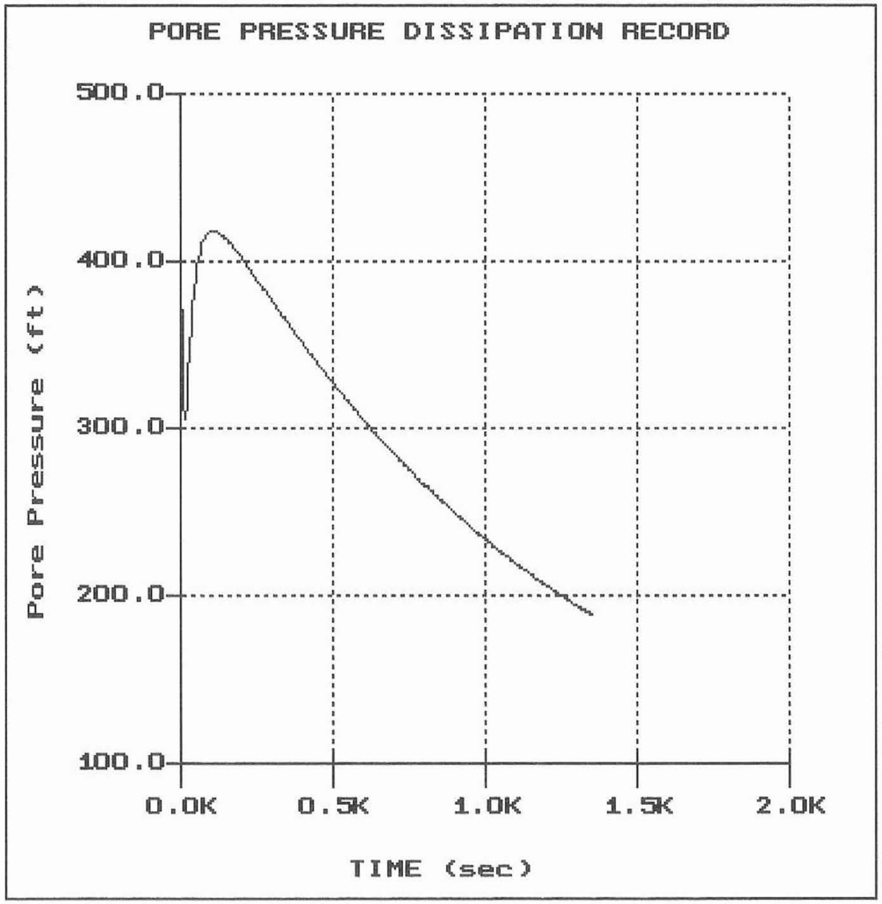


File: 948CP46.PPD
Depth (m): 8.90
(ft): 29.20
Duration : 70.0s
U-min: 97.61 70.0s
U-max: 634.10 0.0s

Schnabel

Hole: C-703
Location:C C N P P

Cone:STD 20T AD-195
Date:07:14:06 10:10

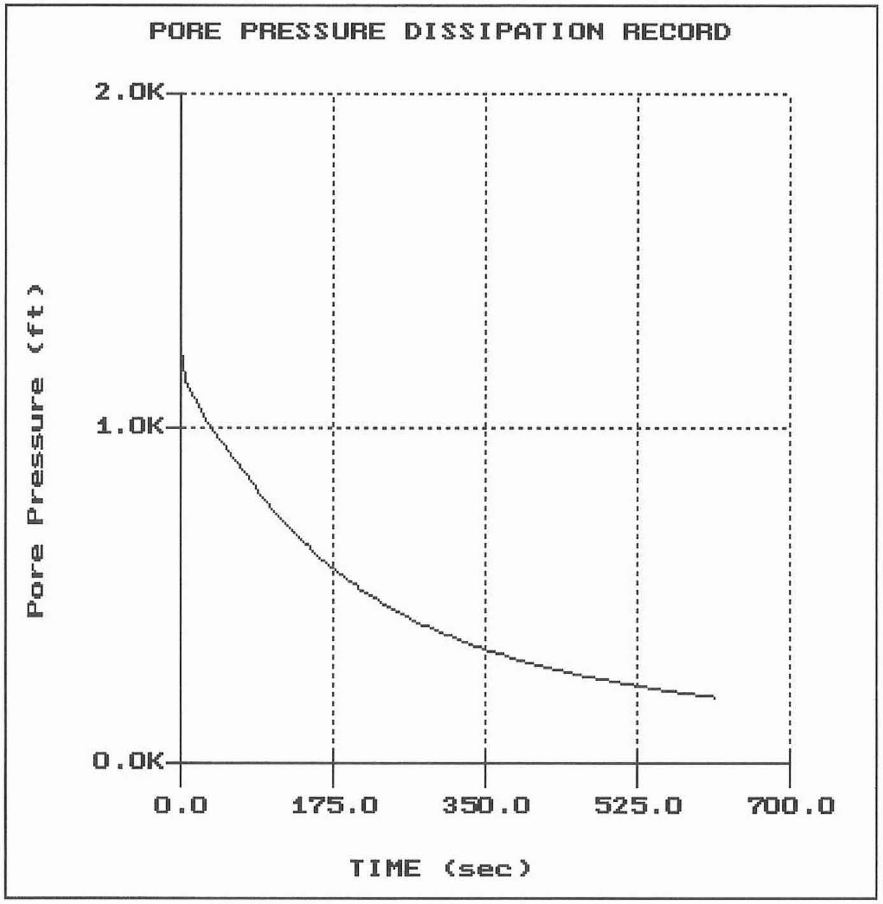


File: 948CP19.PPD
Depth (m): 6.10
(ft): 20.01
Duration : 1350.0s
U-min: 188.42 1350.0s
U-max: 418.09 105.0s

Schnabel

Hole: C-712
Location:C C N P P

Cone:STD 20T AD-195
Date:07:19:06 10:27



File: 948CP35.PPD
Depth (m): 8.00
(ft): 26.25
Duration : 615.0s
U-min: 196.82 615.0s
U-max: 1241.45 0.0s