



GREGG DRILLING, LLC.
GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

January 7, 2020

Fugro
Attn: Reza Rahimnejad

Subject: CPT Site Investigation
Laney College
Oakland, California
GREGG Project Number: D2205001

Dear Mr. Rahimnejad:

The following report presents the results of GREGG Drilling Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	<input checked="" type="checkbox"/>
2	Pore Pressure Dissipation Tests	(PPD)	<input checked="" type="checkbox"/>
3	Seismic Cone Penetration Tests	(SCPTU)	<input checked="" type="checkbox"/>
4	UVOST Laser Induced Fluorescence	(UVOST)	<input type="checkbox"/>
5	Groundwater Sampling	(GWS)	<input type="checkbox"/>
6	Soil Sampling	(SS)	<input type="checkbox"/>
7	Vapor Sampling	(VS)	<input type="checkbox"/>
8	Pressuremeter Testing	(PMT)	<input type="checkbox"/>
9	Vane Shear Testing	(VST)	<input type="checkbox"/>
10	Dilatometer Testing	(DMT)	<input type="checkbox"/>

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact me at 714-863-0988.

Sincerely,
Gregg Drilling, LLC.

CPT Reports Team
Gregg Drilling, LLC.



GREGG DRILLING, LLC.
GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (feet)	Depth of Groundwater Samples (feet)	Depth of Soil Samples (feet)	Depth of Pore Pressure Dissipation Tests (feet)
CPT-04	01/03/2020	75.13	-	-	31.3
CPT-05	01/03/2020	75.13	-	-	41.2
CPT-06	01/03/2020	75.30	-	-	-
SCPT-07	01/03/2020	75.13	-	-	57.6
CPT-08	01/02/2020	51.67	-	-	51.7



Bibliography

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Campanella, R.G. and I. Weemeees, "Development and Use of An Electrical Resistivity Cone for Groundwater
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Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from
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Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Cone Penetration Testing Procedure (CPT)

Gregg Drilling carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*.

The cone takes measurements of tip resistance (q_c), sleeve resistance (f_s), and penetration pore water pressure (u_2). Measurements are taken at either 2.5 or 5 cm intervals during penetration to provide a nearly continuous profile. CPT data reduction and basic interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored electronically for further analysis and reference. All CPT soundings are performed in accordance with revised ASTM standards (D 5778-12).

The 5mm thick porous plastic filter element is located directly behind the cone tip in the u_2 location. A new saturated filter element is used on each sounding to measure both penetration pore pressures as well as measurements during a dissipation test (PPDT). Prior to each test, the filter element is fully saturated with oil under vacuum pressure to improve accuracy.

When the sounding is completed, the test hole is backfilled according to client specifications. If grouting is used, the procedure generally consists of pushing a hollow tremie pipe with a “knock out” plug to the termination depth of the CPT hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

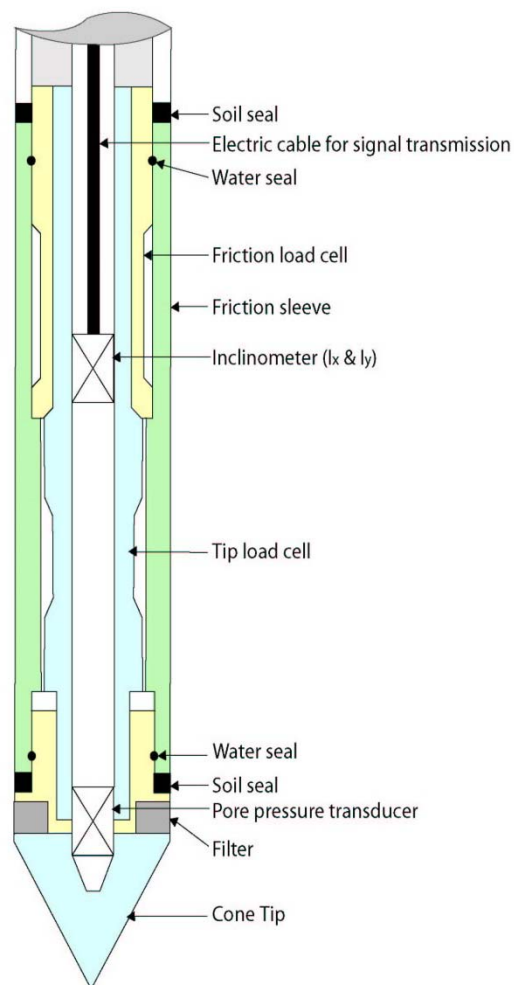


Figure CPT

Gregg 15cm² Standard Cone Specifications

Dimensions	
Cone base area	15 cm ²
Sleeve surface area	225 cm ²
Cone net area ratio	0.80
Specifications	
Cone load cell	
Full scale range	180 kN (20 tons)
Overload capacity	150%
Full scale tip stress	120 MPa (1,200 tsf)
Repeatability	120 kPa (1.2 tsf)
Sleeve load cell	
Full scale range	31 kN (3.5 tons)
Overload capacity	150%
Full scale sleeve stress	1,400 kPa (15 tsf)
Repeatability	1.4 kPa (0.015 tsf)
Pore pressure transducer	
Full scale range	7,000 kPa (1,000 psi)
Overload capacity	150%
Repeatability	7 kPa (1 psi)

Note: The repeatability during field use will depend somewhat on ground conditions, abrasion, maintenance and zero load stability.

Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected are presented in graphical and electronic form in the report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (1990). Typical plots display SBT based on the non-normalized charts of Robertson et al (1986). For CPT soundings deeper than 30m, we recommend the use of the normalized charts of Robertson (1990) which can be displayed as SBT_n, upon request. The report also includes spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBT_n and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Professor Robertson (Guide to Cone Penetration Testing, 2015). The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling & Testing Inc. does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software. Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Note that it is not always possible to clearly identify a soil type based solely on q_t , f_s , and u_2 . In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.

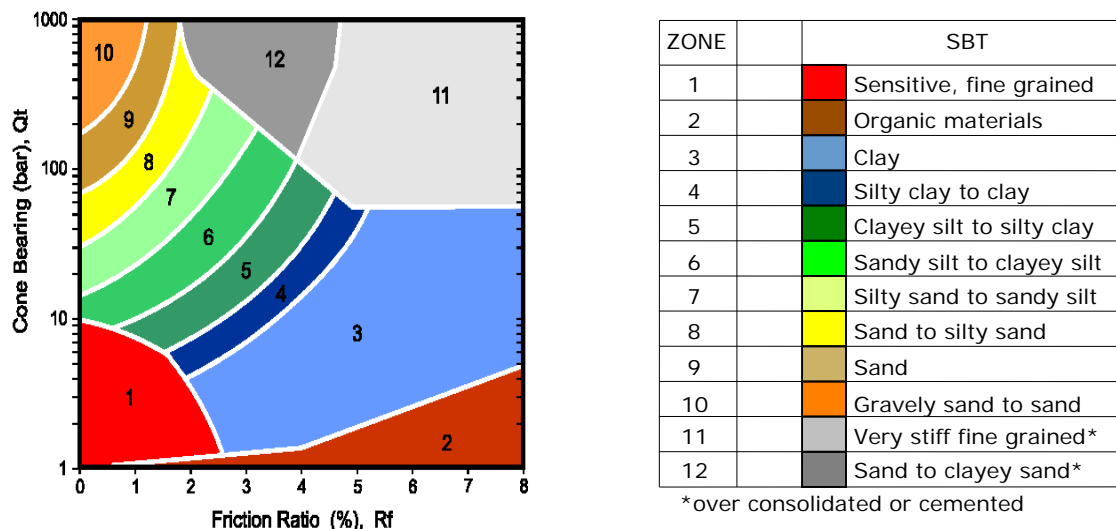


Figure SBT (After Robertson et al., 1986) – Note: Colors may vary slightly compared to plots

Cone Penetration Test (CPT) Interpretation

Gregg uses a proprietary CPT interpretation and plotting software. The software takes the CPT data and performs basic interpretation in terms of soil behavior type (SBT) and various geotechnical parameters using current published empirical correlations based on the comprehensive review by Lunne, Robertson and Powell (1997). The interpretation is presented in tabular format using MS Excel. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

The following provides a summary of the methods used for the interpretation. Many of the empirical correlations to estimate geotechnical parameters have constants that have a range of values depending on soil type, geologic origin and other factors. The software uses 'default' values that have been selected to provide, in general, conservatively low estimates of the various geotechnical parameters.

Input:

- 1 Units for display (Imperial or metric) (atm. pressure, $p_a = 0.96$ tsf or 0.1 MPa)
- 2 Depth interval to average results (ft or m). Data are collected at either 0.02 or 0.05m and can be averaged every 1, 3 or 5 intervals.
- 3 Elevation of ground surface (ft or m)
- 4 Depth to water table, z_w (ft or m) – input required
- 5 Net area ratio for cone, a (default to 0.80)
- 6 Relative Density constant, C_{Dr} (default to 350)
- 7 Young's modulus number for sands, α (default to 5)
- 8 Small strain shear modulus number
 - a. for sands, S_G (default to 180 for SBT_n 5, 6, 7)
 - b. for clays, C_G (default to 50 for SBT_n 1, 2, 3 & 4)
- 9 Undrained shear strength cone factor for clays, N_{kt} (default to 15)
- 10 Over Consolidation ratio number, k_{ocr} (default to 0.3)
- 11 Unit weight of water, (default to $\gamma_w = 62.4$ lb/ft³ or 9.81 kN/m³)

Column

- 1 Depth, z , (m) – CPT data is collected in meters
- 2 Depth (ft)
- 3 Cone resistance, q_c (tsf or MPa)
- 4 Sleeve resistance, f_s (tsf or MPa)
- 5 Penetration pore pressure, u (psi or MPa), measured behind the cone (i.e. u_2)
- 6 Other – any additional data
- 7 Total cone resistance, q_t (tsf or MPa) $q_t = q_c + u (1-a)$

8	Friction Ratio, R_f (%)	$R_f = (f_s/q_t) \times 100\%$
9	Soil Behavior Type (non-normalized), SBT	see note
10	Unit weight, γ (pcf or kN/m ³)	based on SBT, see note
11	Total overburden stress, σ_v (tsf)	$\sigma_{vo} = \sigma_z$
12	In-situ pore pressure, u_o (tsf)	$u_o = \gamma_w (z - z_w)$
13	Effective overburden stress, σ'_{vo} (tsf)	$\sigma'_{vo} = \sigma_{vo} - u_o$
14	Normalized cone resistance, Q_{tn}	$Q_{tn} = (q_t - \sigma_{vo}) / \sigma'_{vo}$
15	Normalized friction ratio, F_r (%)	$F_r = f_s / (q_t - \sigma_{vo}) \times 100\%$
16	Normalized Pore Pressure ratio, B_q	$B_q = u - u_o / (q_t - \sigma_{vo})$
17	Soil Behavior Type (normalized), SBT_n	see note
18	SBT_n Index, I_c	see note
19	Normalized Cone resistance, Q_{tn} (n varies with I_c)	see note
20	Estimated permeability, k_{SBT} (cm/sec or ft/sec)	see note
21	Equivalent SPT N_{60} , blows/ft	see note
22	Equivalent SPT $(N_1)_{60}$ blows/ft	see note
23	Estimated Relative Density, D_r , (%)	see note
24	Estimated Friction Angle, ϕ' , (degrees)	see note
25	Estimated Young's modulus, E_s (tsf)	see note
26	Estimated small strain Shear modulus, G_o (tsf)	see note
27	Estimated Undrained shear strength, s_u (tsf)	see note
28	Estimated Undrained strength ratio	s_u/σ'_v
29	Estimated Over Consolidation ratio, OCR	see note

Notes:

- 1 Soil Behavior Type (non-normalized), SBT (Lunne et al., 1997 and table below)
- 2 Unit weight, γ either constant at 119 pcf or based on Non-normalized SBT (Lunne et al., 1997 and table below)
- 3 Soil Behavior Type (Normalized), SBT_n Lunne et al. (1997)
- 4 SBT_n Index, I_c $I_c = ((3.47 - \log Q_{tn})^2 + (\log F_r + 1.22)^2)^{0.5}$
- 5 Normalized Cone resistance, Q_{tn} (n varies with I_c)

$Q_{tn} = ((q_t - \sigma_{vo})/p_a) (p_a/(\sigma'_{vo}))^n$ and recalculate I_c , then iterate:

When $I_c < 1.64$, $n = 0.5$ (clean sand)
When $I_c > 3.30$, $n = 1.0$ (clays)
When $1.64 < I_c < 3.30$, $n = (I_c - 1.64)0.3 + 0.5$
Iterate until the change in n , $\Delta n < 0.01$

6 Estimated permeability, k_{SBT} based on Normalized SBT_n (Lunne et al., 1997 and table below)

7 Equivalent SPT N_{60} , blows/ft Lunne et al. (1997)

$$\frac{(q_t/p_a)}{N_{60}} = 8.5 \left(1 - \frac{I_c}{4.6} \right)$$

8 Equivalent SPT $(N_1)_{60}$ blows/ft $(N_1)_{60} = N_{60} C_N$
where $C_N = (p_a/\sigma'_{vo})^{0.5}$

9 Relative Density, D_r , (%) $D_r^2 = Q_{tn} / C_{Dr}$
Only SBT_n 5, 6, 7 & 8 Show 'N/A' in zones 1, 2, 3, 4 & 9

10 Friction Angle, ϕ' , (degrees) $\tan \phi' = \frac{1}{2.68} \left[\log \left(\frac{q_c}{\sigma'_{vo}} \right) + 0.29 \right]$
Only SBT_n 5, 6, 7 & 8 Show 'N/A' in zones 1, 2, 3, 4 & 9

11 Young's modulus, E_s $E_s = \alpha q_t$
Only SBT_n 5, 6, 7 & 8 Show 'N/A' in zones 1, 2, 3, 4 & 9

12 Small strain shear modulus, G_o
a. $G_o = S_G (q_t \sigma'_{vo} p_a)^{1/3}$ For SBT_n 5, 6, 7
b. $G_o = C_G q_t$ For SBT_n 1, 2, 3 & 4
Show 'N/A' in zones 8 & 9

13 Undrained shear strength, s_u $s_u = (q_t - \sigma_{vo}) / N_{kt}$
Only SBT_n 1, 2, 3, 4 & 9 Show 'N/A' in zones 5, 6, 7 & 8

14 Over Consolidation ratio, OCR $\text{OCR} = k_{ocr} Q_{t1}$
Only SBT_n 1, 2, 3, 4 & 9 Show 'N/A' in zones 5, 6, 7 & 8

The following updated and simplified SBT descriptions have been used in the software:

SBT Zones

- 1 sensitive fine grained
- 2 organic soil
- 3 clay
- 4 clay & silty clay
- 5 clay & silty clay
- 6 sandy silt & clayey silt

SBT_n Zones

- 1 sensitive fine grained
- 2 organic soil
- 3 clay
- 4 clay & silty clay

7	silty sand & sandy silt	5	silty sand & sandy silt
8	sand & silty sand	6	sand & silty sand
9	sand		
10	sand	7	sand
11	very dense/stiff soil*	8	very dense/stiff soil*
12	very dense/stiff soil*	9	very dense/stiff soil*

*heavily overconsolidated and/or cemented

Track when soils fall with zones of same description and print that description (i.e. if soils fall only within SBT zones 4 & 5, print 'clays & silty clays')

Estimated Permeability (see Lunne et al., 1997)

SBT _n	Permeability (ft/sec)	(m/sec)
1	3×10^{-8}	1×10^{-8}
2	3×10^{-7}	1×10^{-7}
3	1×10^{-9}	3×10^{-10}
4	3×10^{-8}	1×10^{-8}
5	3×10^{-6}	1×10^{-6}
6	3×10^{-4}	1×10^{-4}
7	3×10^{-2}	1×10^{-2}
8	3×10^{-6}	1×10^{-6}
9	1×10^{-8}	3×10^{-9}

Estimated Unit Weight (see Lunne et al., 1997)

SBT	Approximate Unit Weight (lb/ft ³)	(kN/m ³)
1	111.4	17.5
2	79.6	12.5
3	111.4	17.5
4	114.6	18.0
5	114.6	18.0
6	114.6	18.0
7	117.8	18.5
8	120.9	19.0
9	124.1	19.5
10	127.3	20.0
11	130.5	20.5
12	120.9	19.0

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals can be used to measure equilibrium water pressure (at the time of the CPT). If conditions are hydrostatic, the equilibrium water pressure can be used to determine the approximate depth of the ground water table. A PPDT is conducted when penetration is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permeability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until it reaches equilibrium, *Figure PPDT*. This time is commonly referred to as t_{100} , the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992 and Lunne et al. 1997.

A summary of the pore pressure dissipation tests are summarized in Table 1.

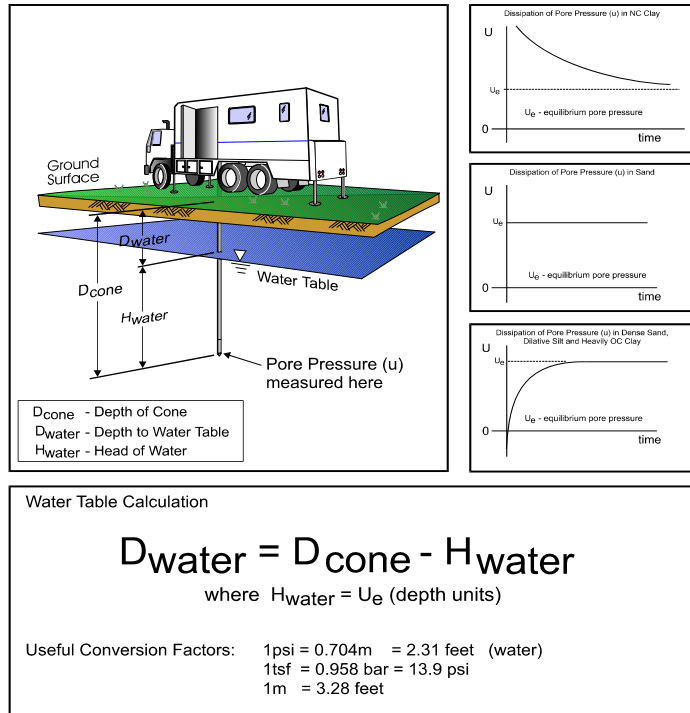


Figure PPDT

Seismic Cone Penetration Testing (SCPT)

Seismic Cone Penetration Testing (SCPT) can be conducted at various intervals during the Cone Penetration Test. Shear wave velocity (V_s) can then be calculated over a specified interval with depth. A small interval for seismic testing, such as 1-1.5m (3-5ft) allows for a detailed look at the shear wave profile with depth. Conversely, a larger interval such as 3-6m (10-20ft) allows for a more average shear wave velocity to be calculated. Gregg's cones have a horizontally active geophone located 0.2m (0.66ft) behind the tip.

To conduct the seismic shear wave test, the penetration of the cone is stopped and the rods are decoupled from the rig. An automatic hammer is triggered to send a shear wave into the soil. The distance from the source to the cone is calculated knowing the total depth of the cone and the horizontal offset distance between the source and the cone. To calculate an interval velocity, a minimum of two tests must be performed at two different depths. The arrival times between the two wave traces are compared to obtain the difference in time (Δt). The difference in depth is calculated (Δd) and velocity can be determined using the simple equation: $v = \Delta d / \Delta t$

Multiple wave traces can be recorded at the same depth to improve quality of the data.

A complete reference on seismic cone penetration tests is presented by Robertson et al. 1986 and Lunne et al. 1997.

A summary the shear wave velocities, arrival times and wave traces are provided with the report.

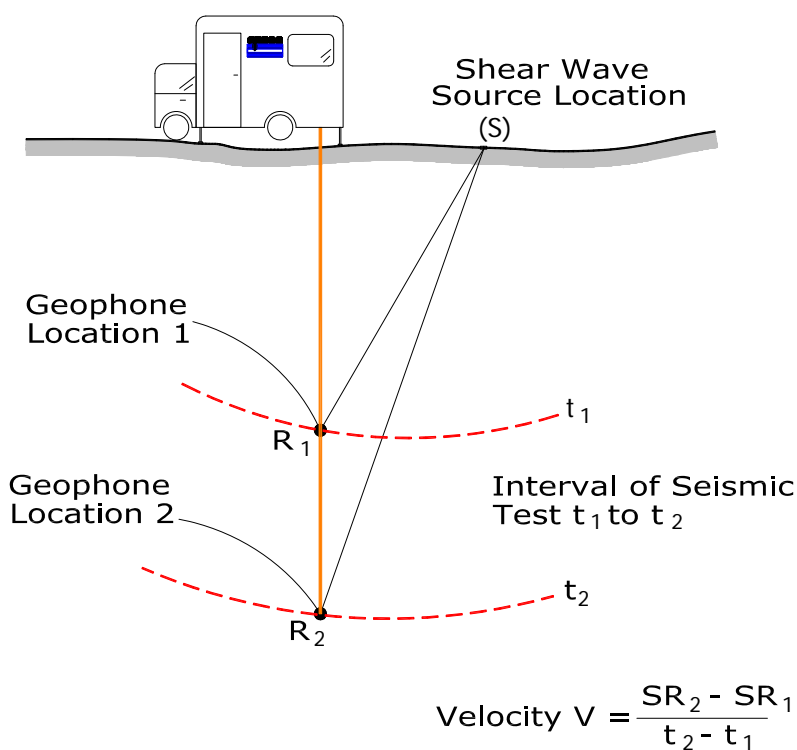


Figure SCPT

Groundwater Sampling

Gregg Drilling & Testing, Inc. conducts groundwater sampling using a sampler as shown in *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the pushing equipment to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 44.5mm (1¾ inch) hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

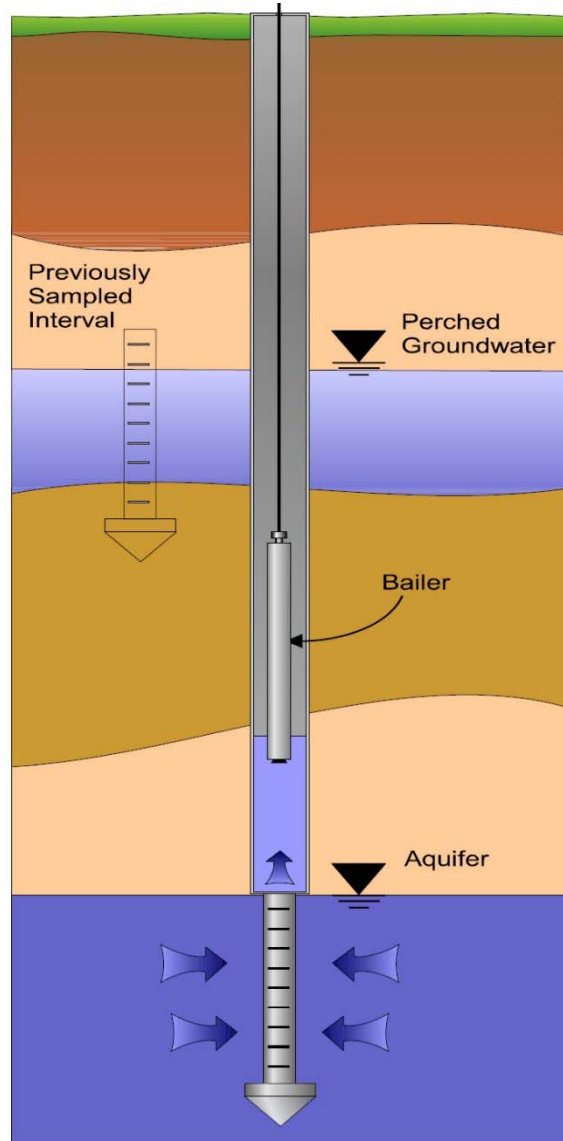


Figure GWS

For a detailed reference on direct push groundwater sampling, refer to Zemo et. al., 1992.

Soil Sampling

Gregg Drilling & Testing, Inc. uses a piston-type push-in sampler to obtain small soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using the CPT pushing equipment. Keeping the sampler closed minimizes the potential of cross contamination. The inner tip of the sampler is then retracted leaving a hollow soil sampler with inner 1¼" diameter sample tubes. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

For a detailed reference on direct push soil sampling, refer to Robertson et al, 1998.

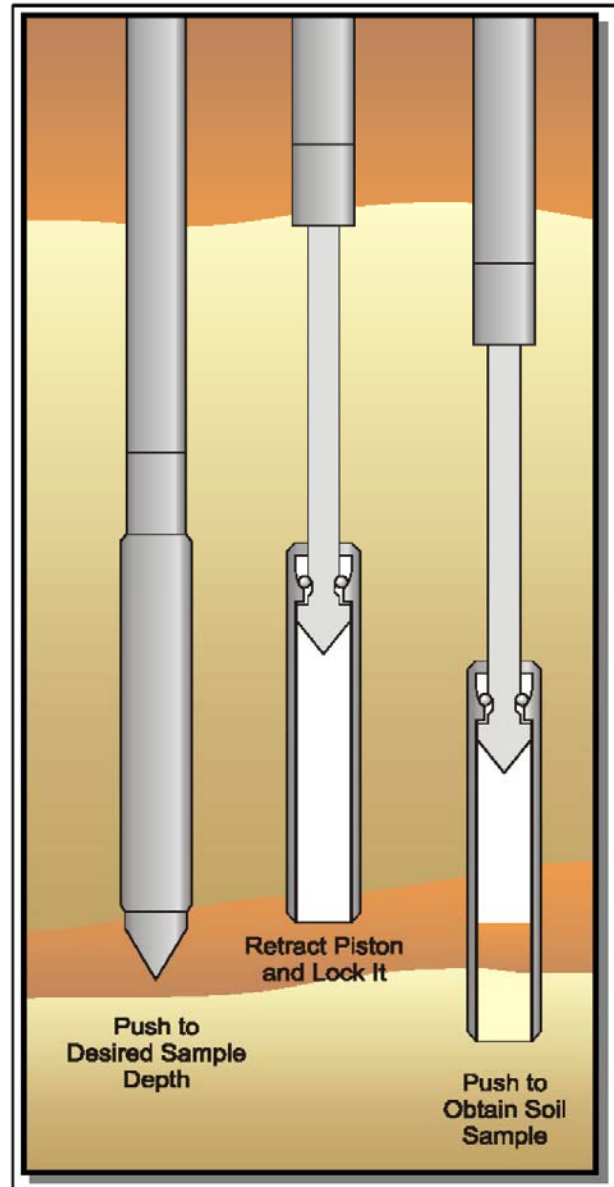


Figure SS

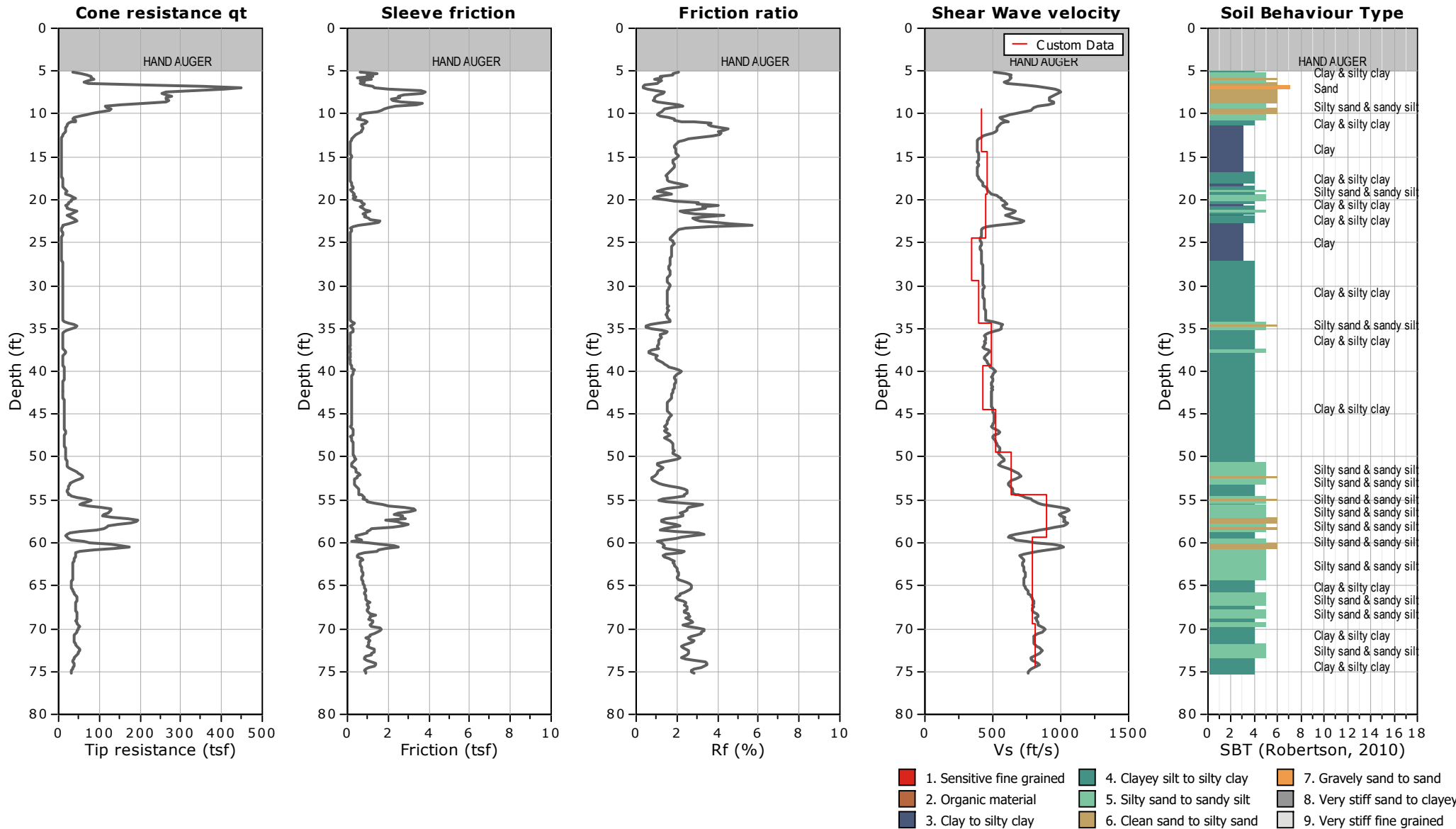


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



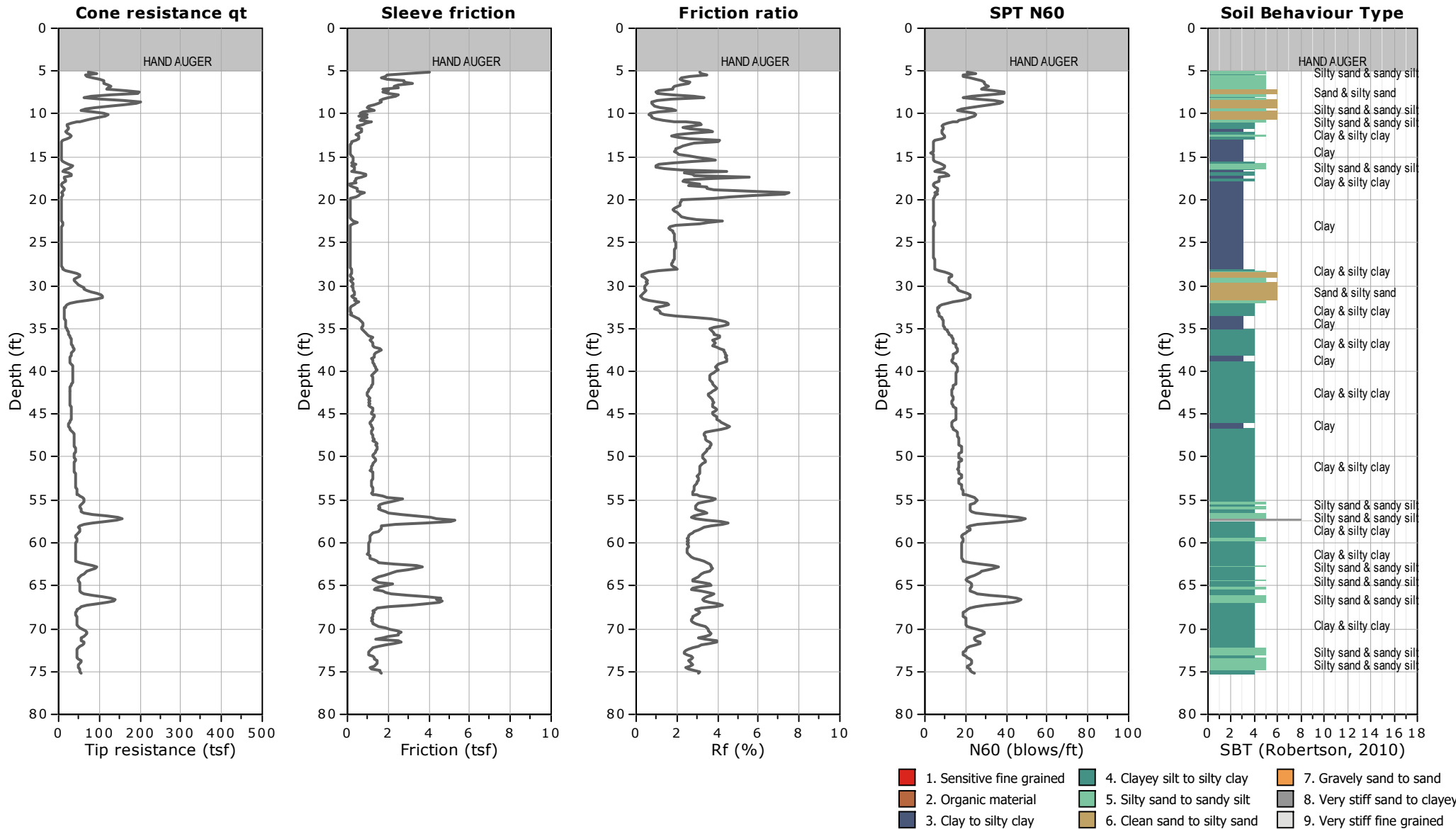


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



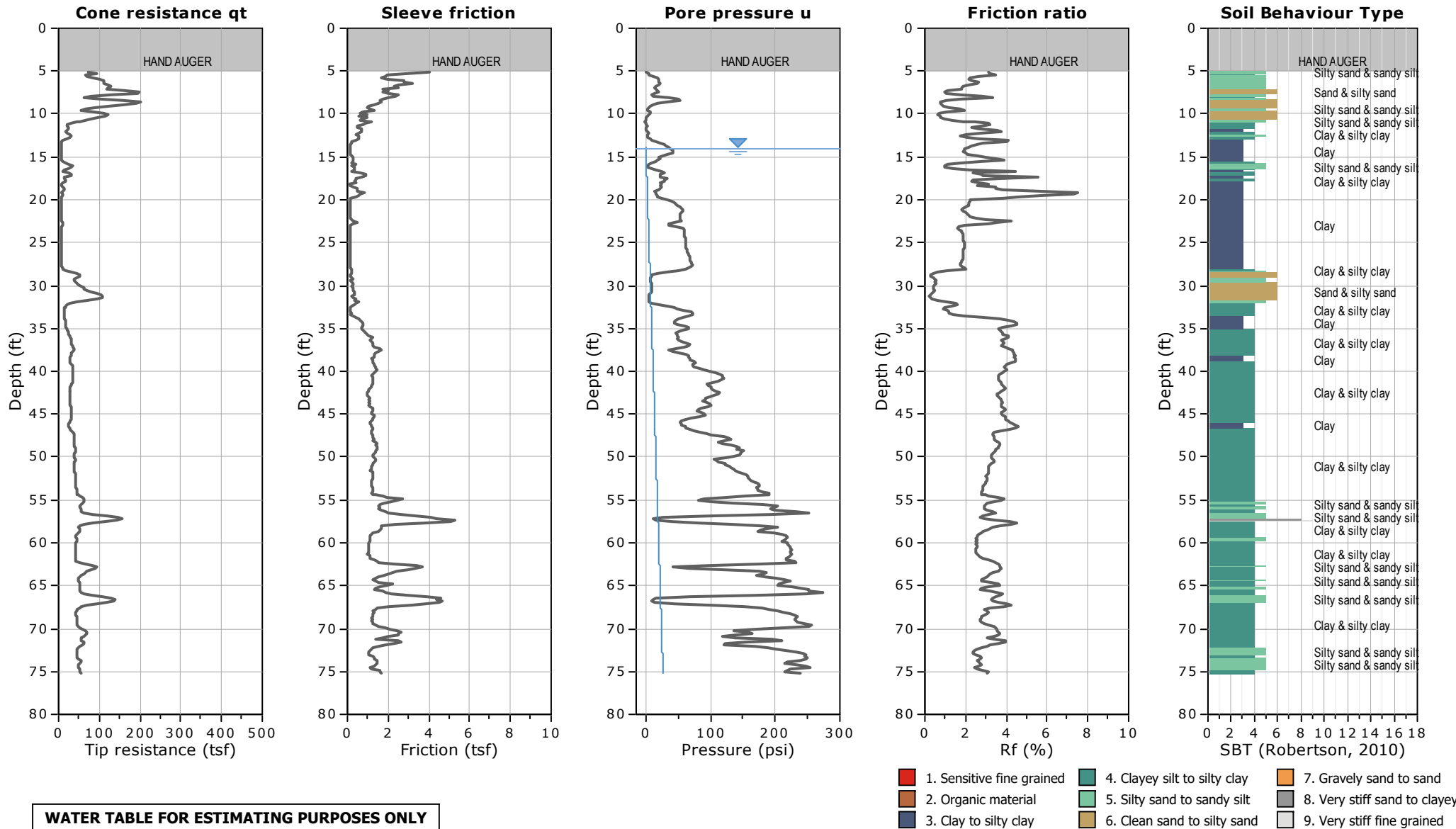


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



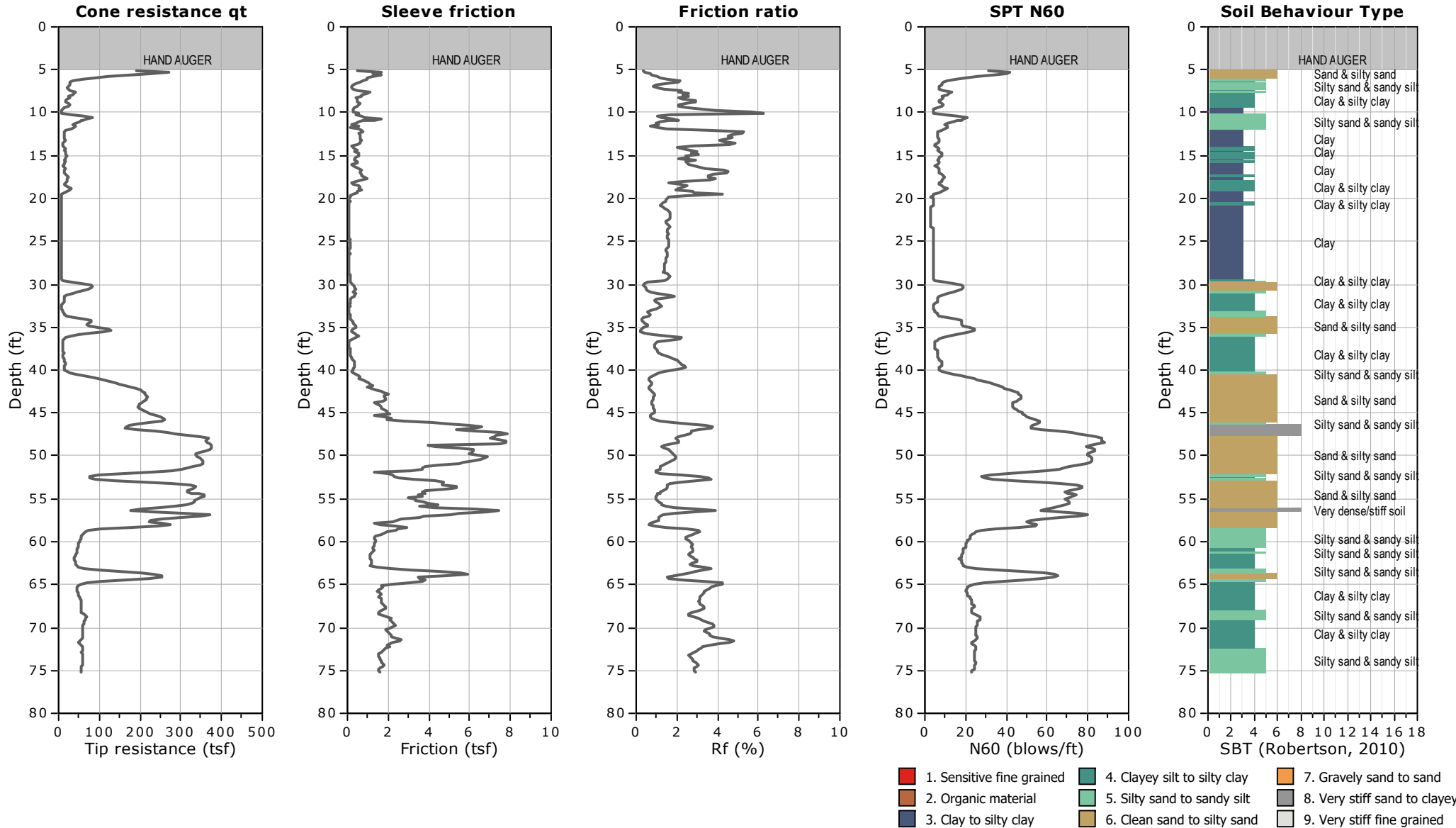


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



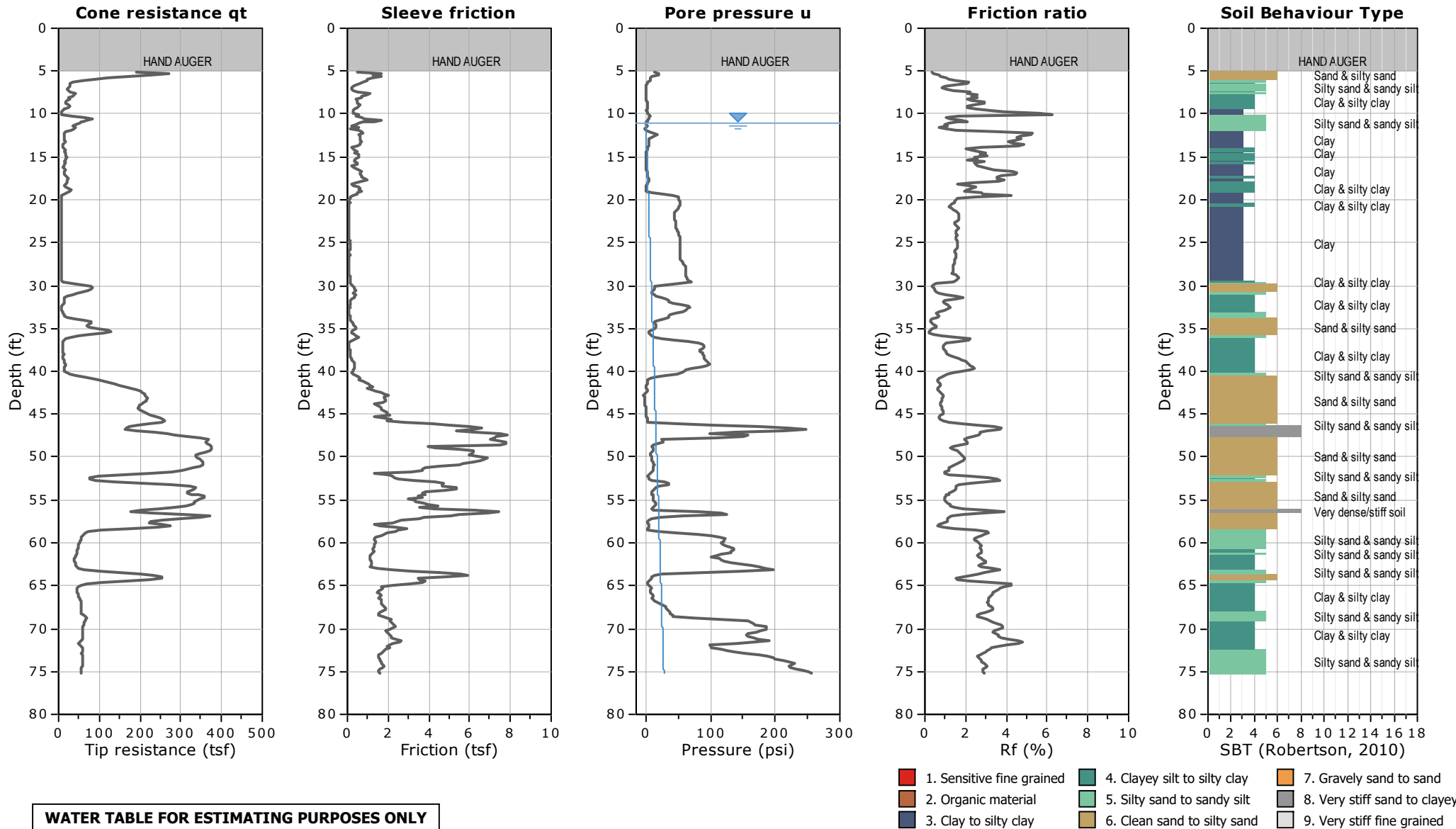


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



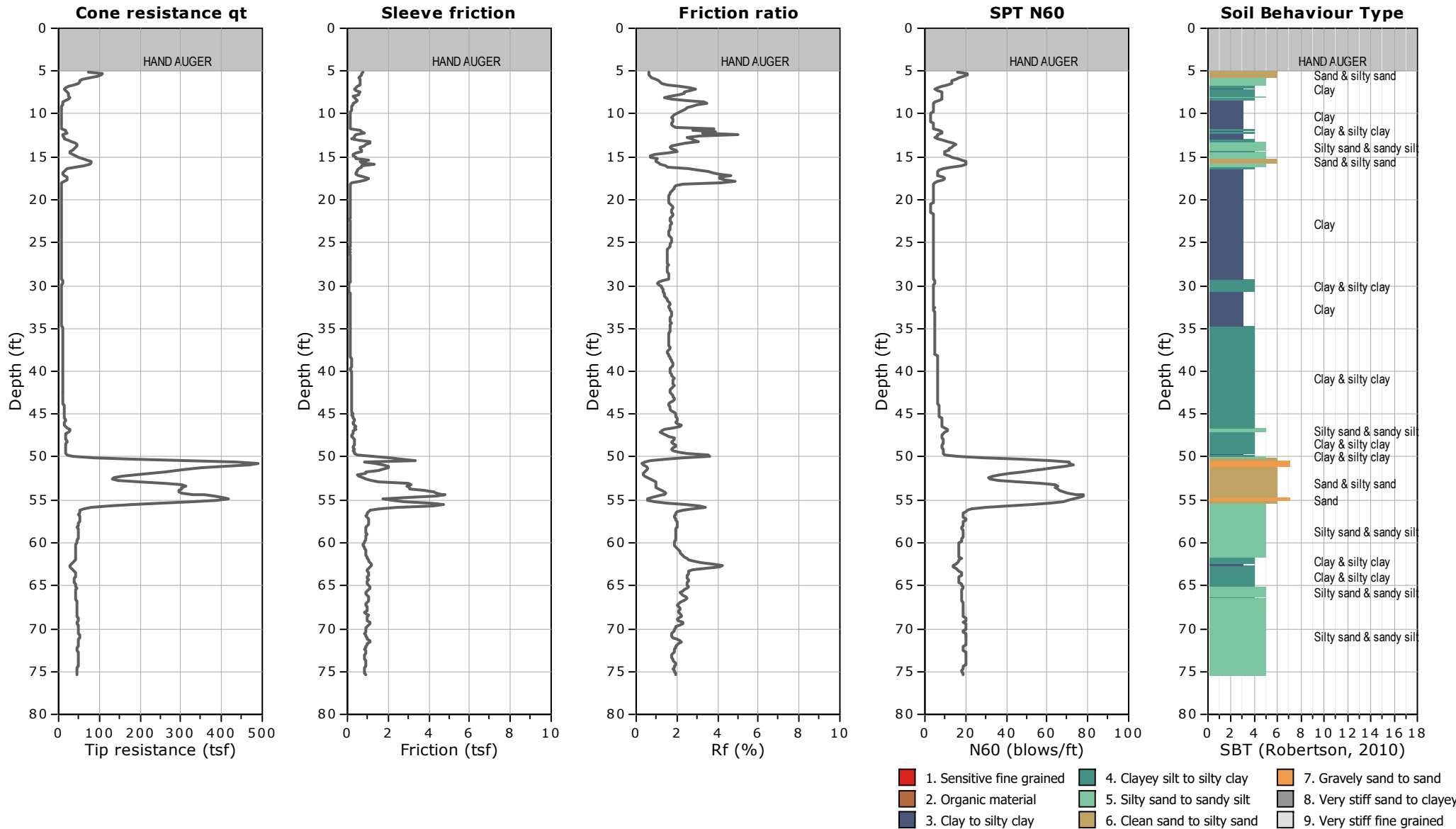


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.30 ft, Date: 1/3/2020



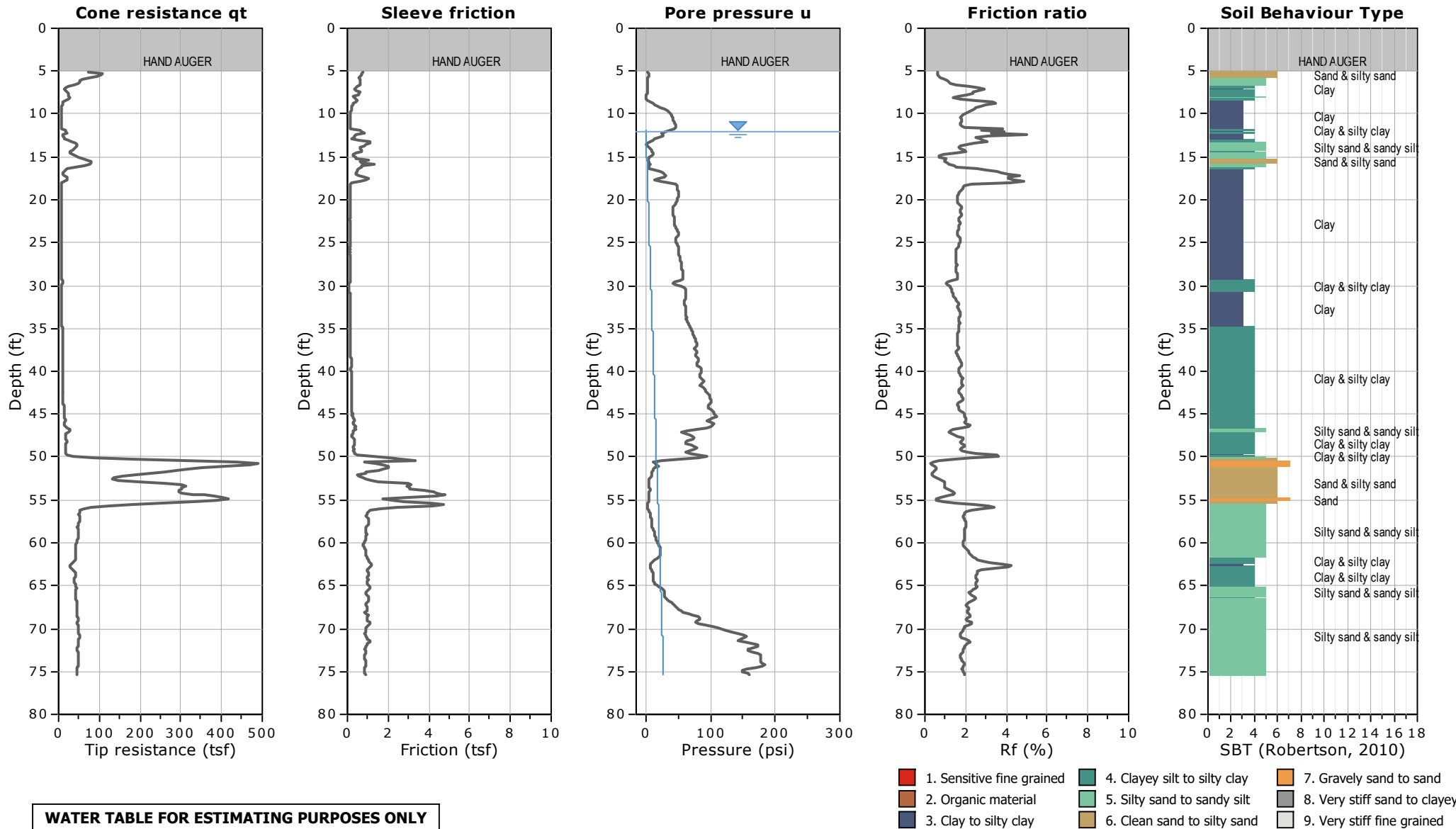


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.30 ft, Date: 1/3/2020



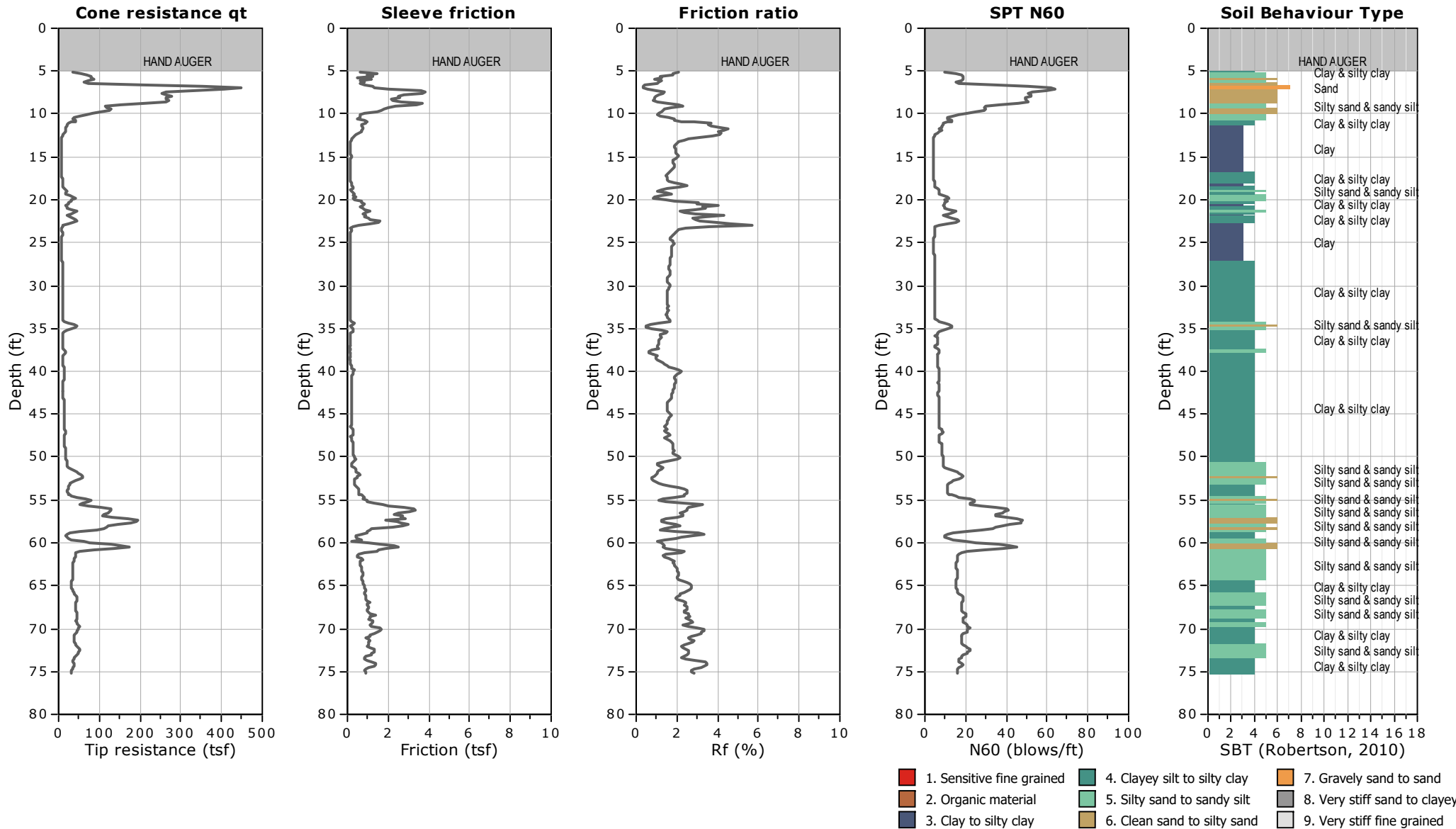


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



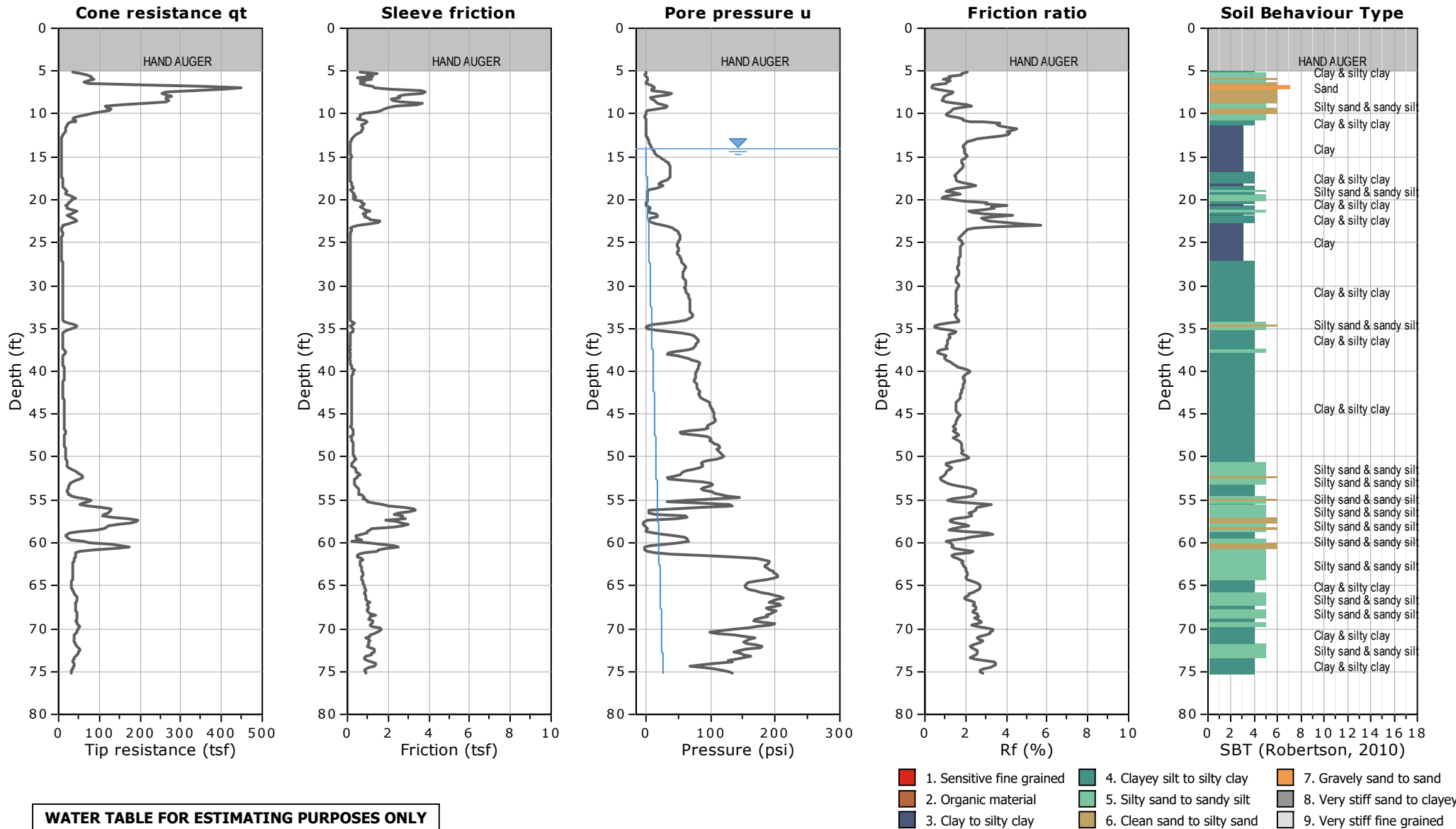


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 75.13 ft, Date: 1/3/2020



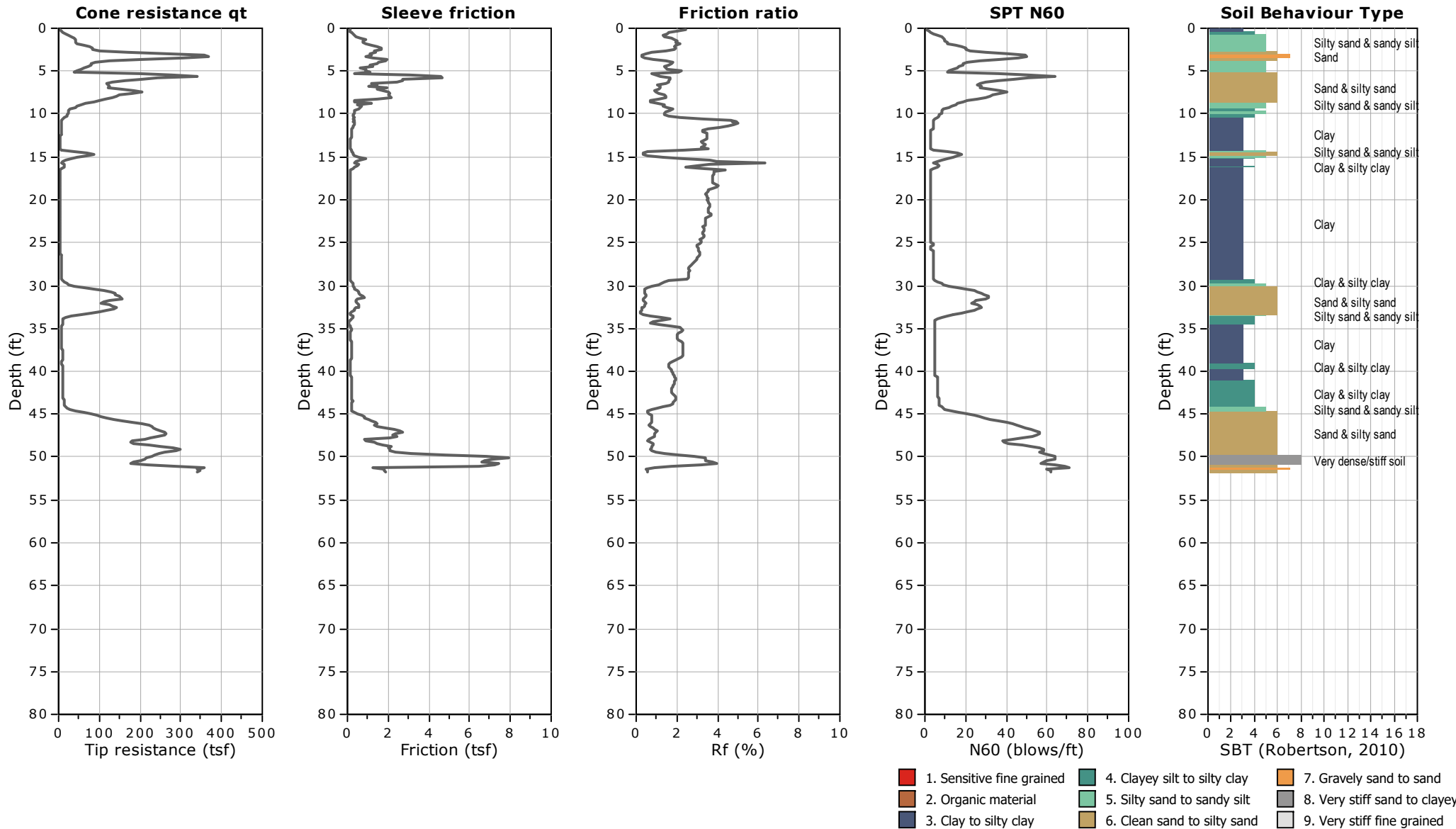


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

Total depth: 51.67 ft, Date: 1/2/2020



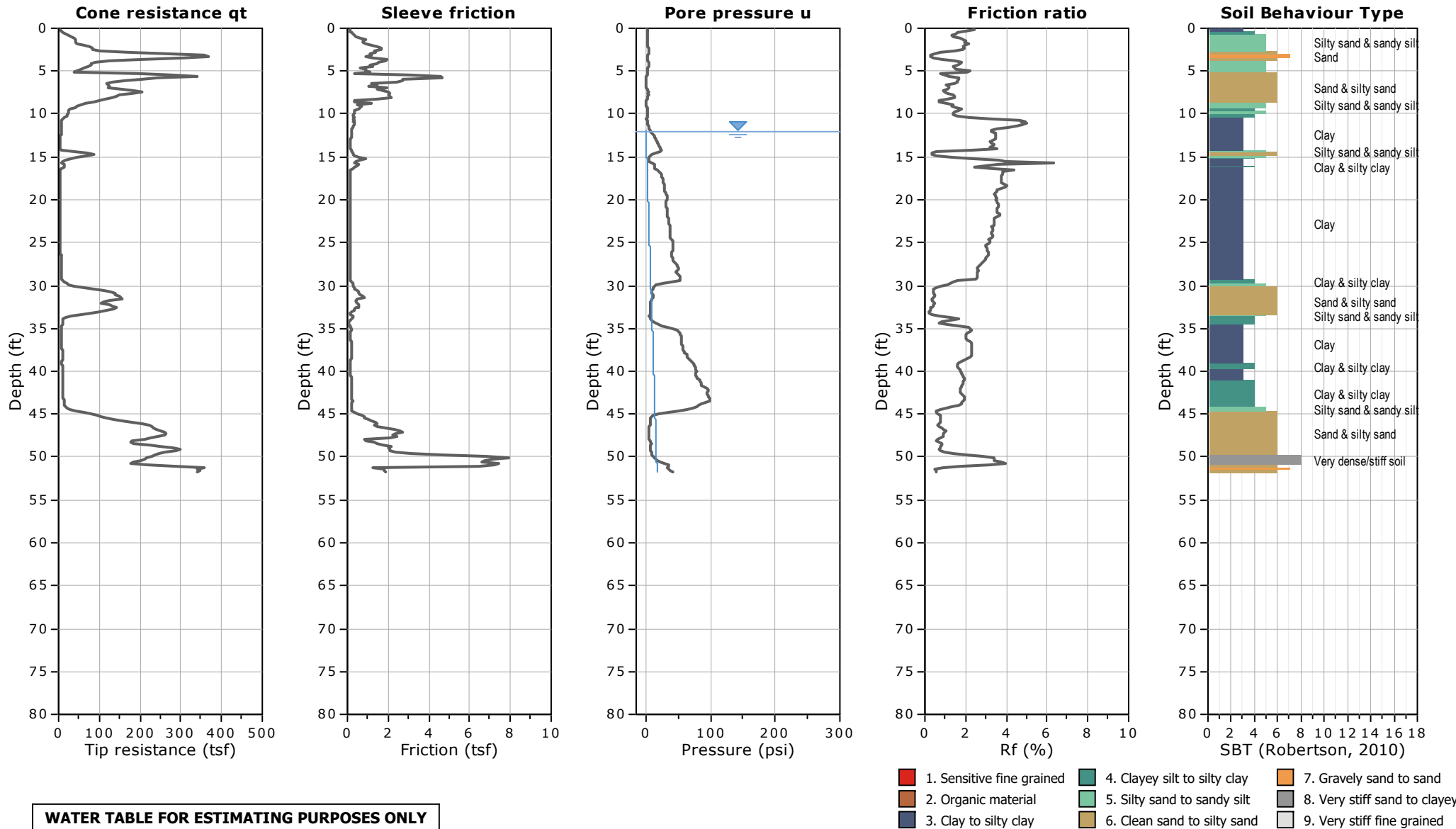


CLIENT: FUGRO

SITE: LANEY COLLEGE, OAKLAND, CA

FIELD REP: REZA RAHIMNEJAD

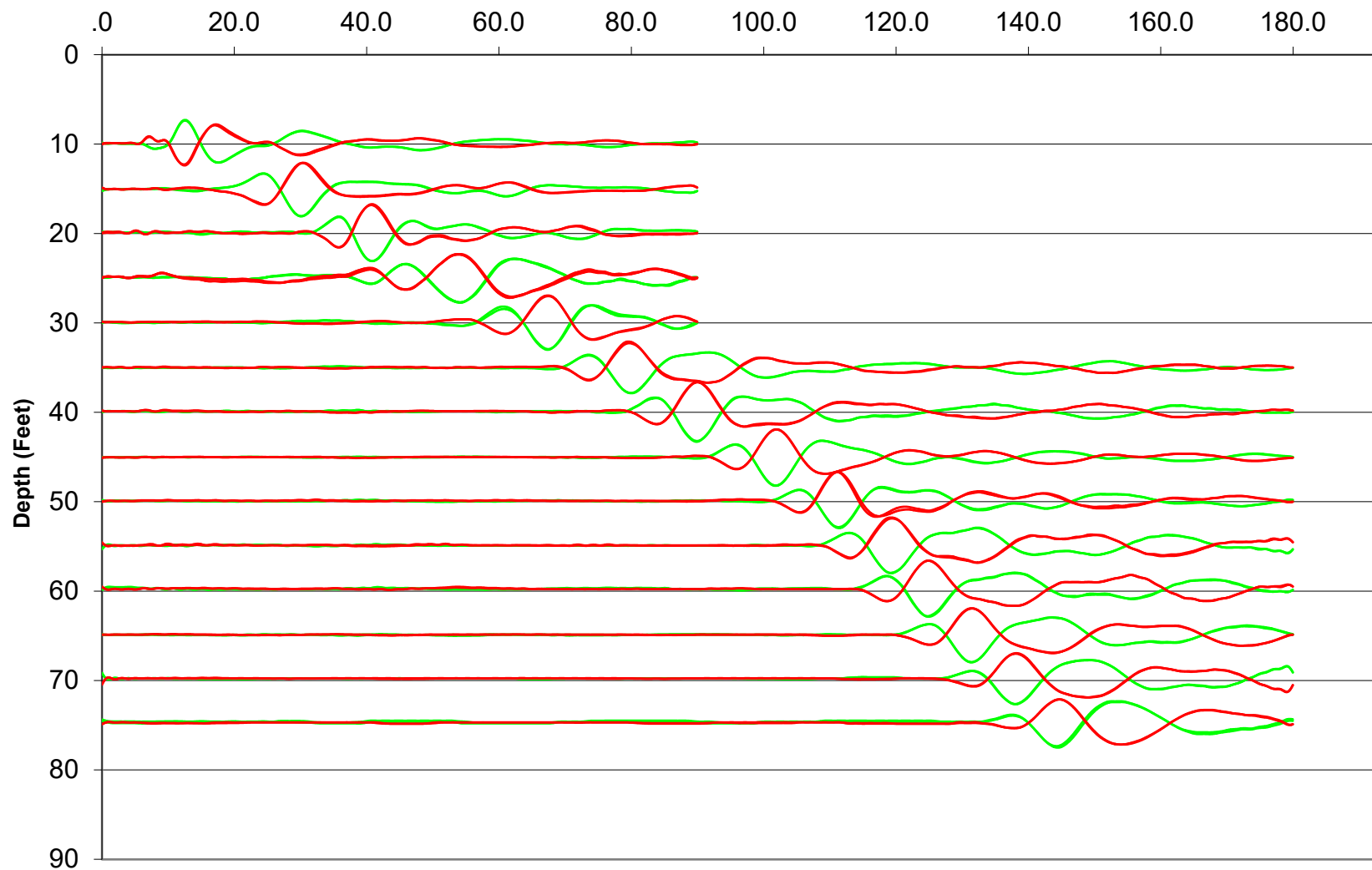
Total depth: 51.67 ft, Date: 1/2/2020





Waveforms for Sounding SCPT-07

Time (ms)





Shear Wave Velocity Calculations

Laney College

SCPT-07

Geophone Offset: 0.66 Feet

Source Offset: 1.67 Feet

01/03/20

Test Depth (Feet)	Geophone Depth (Feet)	Waveform Ray Path (Feet)	Incremental Distance (Feet)	Characteristic Arrival Time (ms)	Incremental Time Interval (ms)	Interval Velocity (Ft/Sec)	Interval Depth (Feet)
10.01	9.35	9.49	9.49	14.8000			
15.09	14.43	14.53	5.03	27.0000	12.2000	412.6	11.89
20.01	19.35	19.42	4.90	37.7000	10.7000	457.7	16.89
25.10	24.44	24.50	5.07	49.0500	11.3500	446.7	21.90
30.02	29.36	29.41	4.91	63.5000	14.4500	339.9	26.90
35.10	34.44	34.49	5.08	76.2500	12.7500	398.3	31.90
40.03	39.37	39.40	4.92	86.2000	9.9500	494.1	36.91
45.11	44.45	44.48	5.08	98.1500	11.9500	425.2	41.91
50.03	49.37	49.40	4.92	107.6500	9.5000	517.7	46.91
55.12	54.46	54.48	5.08	115.6000	7.9500	639.3	51.92
60.04	59.38	59.40	4.92	121.1000	5.5000	894.4	56.92
65.12	64.46	64.49	5.08	127.5500	6.4500	788.1	61.92
70.05	69.39	69.41	4.92	133.8000	6.2500	787.2	66.93
75.13	74.47	74.49	5.08	140.0500	6.2500	813.4	71.93



GREGG DRILLING & TESTING

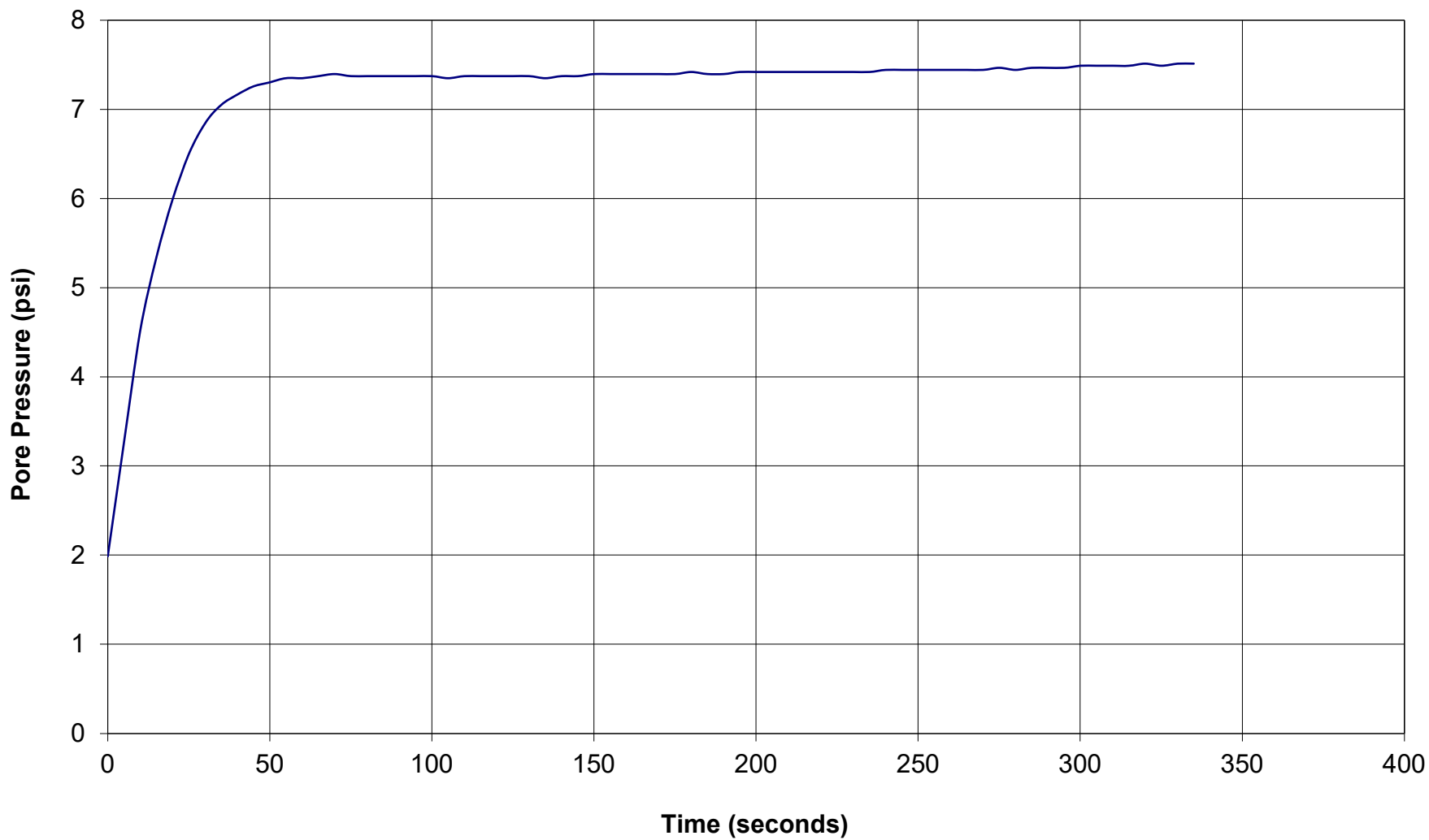
Pore Pressure Dissipation Test

Sounding: CPT-04

Depth (ft): 31.33

Site: Laney College

Engineer: Reza Rahimnejad





GREGG DRILLING & TESTING

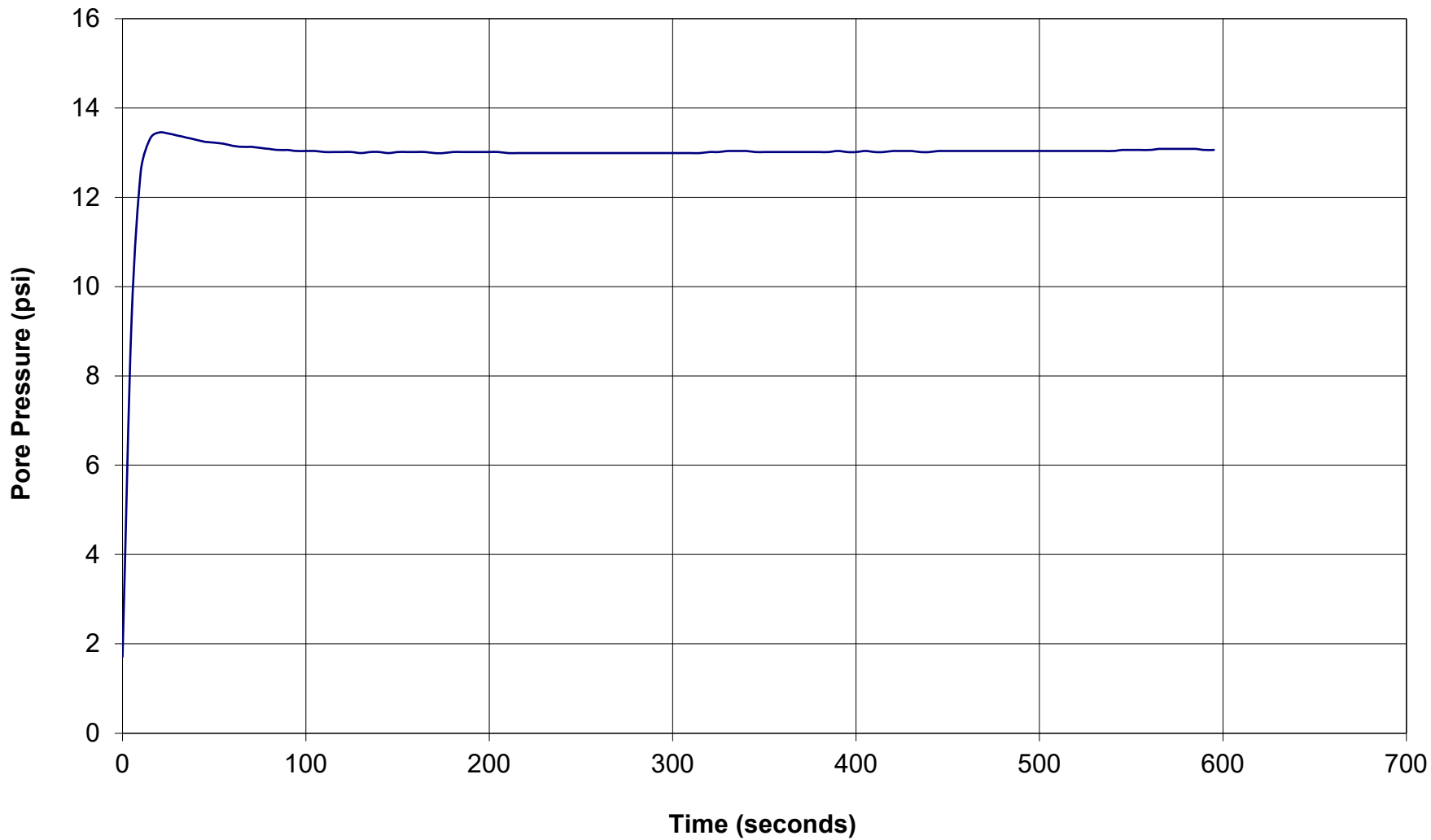
Pore Pressure Dissipation Test

Sounding: CPT-05

Depth (ft): 41.17

Site: Laney College

Engineer: Reza Rahimnejad





GREGG DRILLING & TESTING

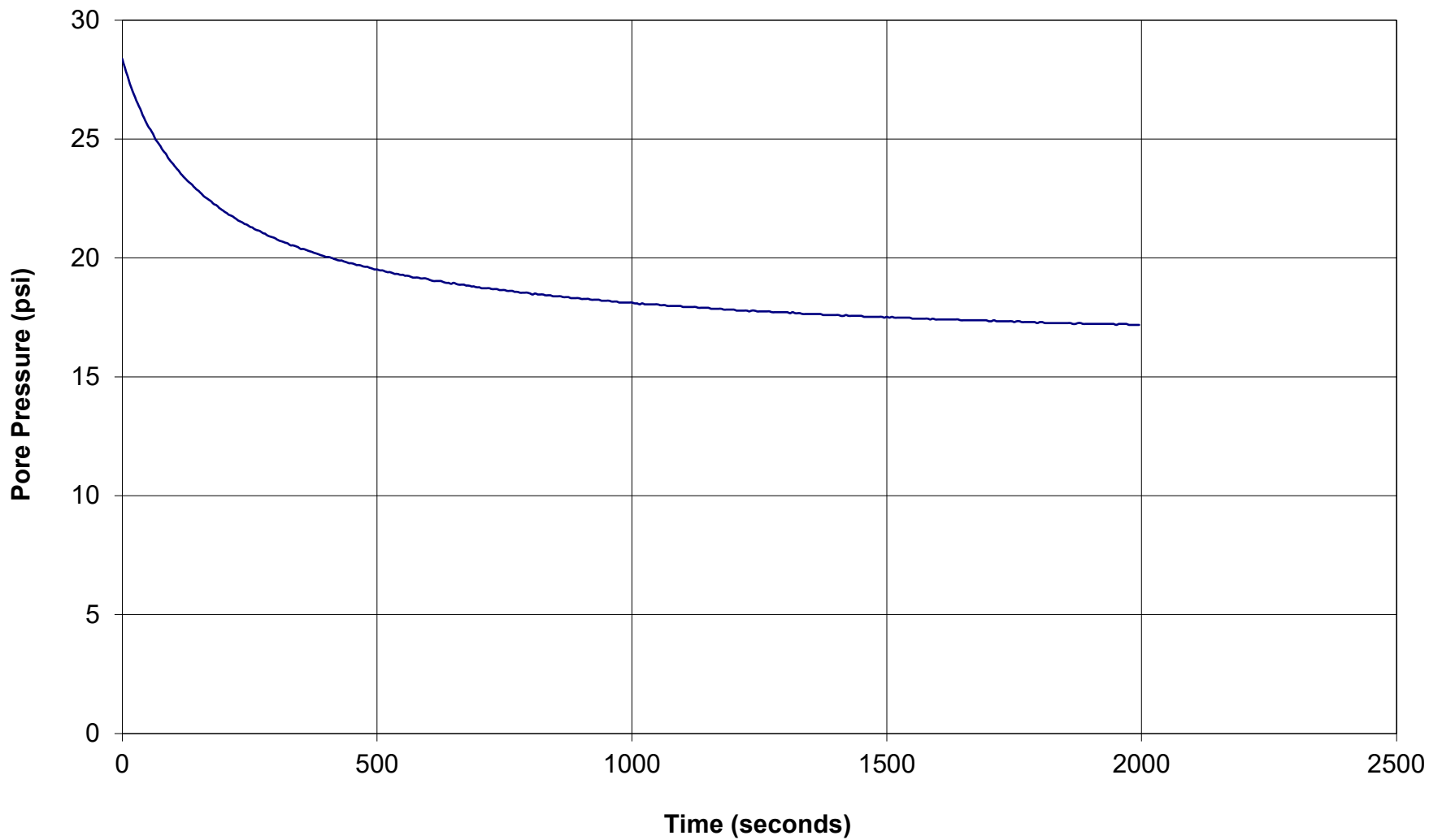
Pore Pressure Dissipation Test

Sounding: CPT-08

Depth (ft): 51.67

Site: Laney College

Engineer: Reza Rahimnejad





GREGG DRILLING & TESTING

Pore Pressure Dissipation Test

Sounding: SCPT-07
Depth (ft): 57.58
Site: Laney College
Engineer: Reza Rahimnejad

