DRAFT

GEOTECHNICAL REPORT

Chehalis Landing
2844 Jackson Highway
Lewis County, Washington

Project No. T-8643-1

Terra Associates, Inc.

Prepared for:

CRG
St. Louis, Missouri

May 3, 2022

TERRA ASSOCIATES, Inc.
Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

May 3, 2022
Project No. T-8643-1

DRAFT

Mr. Ted Knapp
CRG
2199 Innerbelt Business Center Drive
St. Louis, Missouri 63114

Subject: Geotechnical Report
Chehalis Landing
2844 Jackson Highway
Lewis County, Washington

Dear Mr. Knapp:

As requested, we have conducted a geotechnical engineering study for the subject project. The attached report presents our findings and recommendations for the geotechnical aspects of project design and construction.

In general, the native soils observed in the site explorations generally consist of one to two feet of loose organic silt with sand overlying one to five feet of soft to medium stiff silt with sand, sandy silt or clayey silt, over medium dense to dense clayey gravelly sand intermixed with silty sand to the termination depth of the test pits. The native silt and clay soils are typically low to medium plastic, although we would note that previous explorations, performed by others, indicated highly plastic clays were observed across the site at varying depths.

Below the clayey silt observed across the site, Test pits TP-20 and TP-24 appeared to be in a relatively obvious bedded formation consisting of previously observed clayey silt at the top and bedded layers of silty sands, clayey gravels and silt. Test pits TP-9, TP-11, TP-12, TP-25, TP-26, TP-104, TP-108, TP-109 and TP-111 terminated in medium stiff to very stiff sandy silt or clay.

The soil conditions observed in our recent test pits are generally consistent with those observed by others.

In our opinion, building support using standard spread footing foundations will be feasible. However, in order to gain suitable support, all foundations will need to bear on a minimum of two feet of granular structural fill following the successful completion of a preload program. We anticipate that the fill used to raise grade will be sufficient for the preload program.

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Mr. Ted Knapp
May 3, 2022

The attached report presents our recommendations regarding foundation support along with other geotechnical aspects of project design and construction. We trust the information presented in this report is sufficient for your current needs. If you have any questions or require additional information, please call.

Sincerely yours,
TERRA ASSOCIATES, INC.

Stephanie L. King, E.I.T.
Staff Engineer

Carolyn S. Decker, P.E.
President

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1.0 PROJECT DESCRIPTION

The proposed project consists of constructing an industrial complex and associated parking and infrastructure improvements. The development and grading plans were not available at the time of this report. Based on a previous site plan, the site stormwater will be collected and directed to a stormwater pond in the southern portion of the site.

We expect the building or buildings will be constructed using precast concrete tilt-up perimeter wall panels with interior isolated columns supporting roof framing. Structural loading is expected to be relatively light with isolated columns carrying loads of 75 to 150 kips, and bearing walls carrying 4 to 8 kips per foot. We expect that product loading on the slab-on-grade floor would be in the range of 350 pounds per square foot (psf).

The recommendations in the following sections of this report are based on our understanding of the design features outlined above. We should review design drawings as they become available to verify that our recommendations have been properly interpreted and to supplement them, if required.

2.0 SCOPE OF WORK

Our work was completed in accordance with our authorized proposal dated November 10, 2021. Accordingly on December 2 and 3 of 2021, we supplemented existing subsurface information at the site by observing soil and groundwater conditions in 30 test pits excavated to maximum depths of about 8 to 10 feet with a mini track-mounted excavator. On March 14 of 2022, we supplemented this data by excavating an additional 15 test pits 8 to 10 feet below current site grades. Using the results of our field study and laboratory testing along with existing subsurface data, analyses were undertaken to develop geotechnical recommendations for project design and construction. Specifically, this report addresses the following:

- Soil and groundwater conditions.
- Geologic hazards per Lewis County Code. (LCC)
- Seismic design parameters per the current International Building Code. (IBC)
- Site preparation and grading.
- Foundations.

- Floor slabs.
- Stormwater facilities.
- Infiltration feasibility.
- Drainage.
- Utilities.
- Pavements.

It should be noted that the recommendations outlined in this report regarding drainage are associated with soil strength, design earth pressures, erosion, and stability. Design and performance issues with respect to moisture as it relates to the structural environment is beyond Terra Associates' purview. A building envelope specialist or contractor should be consulted to address these issues, as needed.

3.0 SITE CONDITIONS

3.1 Surface

The site is an irregular shaped, approximately 69-acre property located at 2844 Jackson Highway in Chehalis, Washington. The approximate location of the site is shown on Figure 1.

Jackson Highway runs from northwest to southeast along the eastern property border, Rush Road runs north to south along the western border of the property and Berwick Creek is to the south of the property. The site contains several shallow ditches for stormwater management. A single-family home with related outbuildings and access occupies the northeast center of the site.

Existing surface gradients are relatively flat, sloping gently from east to west, with an overall relief of approximately 20 feet. Site vegetation consists predominantly of field grasses with lesser of tall grass and weeds.

3.2 Soils

The native soils observed in the site explorations generally consist of one to two feet of loose organic silt with sand overlying one to five feet of soft to medium stiff silt with sand, sandy silt or clayey silt, over medium dense to dense clayey gravelly sand intermixed with silty sand to the termination depth of the test pits. The native silt and clay soils are typically low to medium plastic, although we would note that previous explorations, performed by others, indicated highly plastic clays were observed across the site at varying depths.

Below the clayey silt observed across the site, Test pits TP-20 and TP-24 appeared to be in a relatively obvious bedded formation consisting of previously observed clayey silt at the top and bedded layers of silty sands, clayey gravels and silt. Test pits TP-9, TP-11, TP-12, TP-25, TP-26, TP-104, TP-108, TP-109 and TP-111 terminated in medium stiff to very stiff sandy silt or clay.

The soil conditions observed in our recent test pits are generally consistent with those observed by others.

The *Geologic Map of the Centralia 7.5 minute Quadrangle, Washington* by Andrew J. Sadowski, William E. Keller, Michael Polenz, Todd R. Lou, Recep Cakir, Elizabeth Nesbitt, Jeffrey H. Tepper, S. Andrew DuFrane, and Gabriel Legorreta Paulín (2018) shows the site soils mapped as Alluvium (Qo and Qoa). The soils we observed in our subsurface explorations are generally consistent with the descriptions of these geologic map units.

Detailed descriptions of the subsurface conditions we observed in our site explorations are presented on the Test Pit Logs in Appendix A. The explorations completed by others are in Appendix B. The approximate test pit locations are shown on Figure 2.

3.3 Groundwater

We observed light to heavy groundwater seepage between depths of approximately 1.5 to 4 feet in the 45 test pits. We would also note that the groundwater levels observed in early December 2021 were averaging about 1-foot deeper than the observations noted during our recent exploration in March 2022. We expect that groundwater levels at the site will fluctuate seasonally with highest levels occurring during the wet winter and spring months, as observed in our recent explorations.

Our recent work did not include monitoring of groundwater levels. Terracon had previously completed a study at the site that included installing four groundwater monitoring wells and observing the groundwater levels. The groundwater observations were noted during drilling on January 6 and 7, 2021 and were periodically checked manually on February 8, 2021, May 21, 2021, and July 28, 2021. Depths during drilling were inferred based on moisture difference between samples and were noted between 9.5 and 25 feet. February 2021 had water level indications of 0.75-feet to 5 feet, May 2021 water levels indicated levels between 3 and 5.25 feet, and by July 2021, two of the wells were decommissioned and water levels were recorded between 6 and 6.25 feet. The groundwater levels recorded by the manual measurements are presented as depths below grade referenced to the ground surface at the time of exploration.

3.4 Geologic Hazards

The Lewis County Code (LCC) does not specifically define geologically hazardous areas; however, we evaluated site conditions for the presence of erosion, steep slopes/landslide, seismic, volcanic, and mine hazard areas as specified in Section 17.38 of the LCC. Discussions related to erosion, landslide, and seismic hazards are given below.

3.4.1 Erosion Hazard Areas

The LCC categorizes erosion hazard areas as either severe or moderate. Chapter 17.38.640 of the LCC defines severe erosion hazard areas as "…those areas that have severe or very severe erosion potential as detailed in the soil descriptions contained in the Web Soil Survey for Lewis County, Washington, Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture."

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) maps the majority of the site soils as *Lacamas silt loam, 0 to 3 percent slopes* with a portion classified as *Reed silty clay loam* (running northwest to southeast, along Jackson Highway) and lesser of *Galvin silt loam, 0 to 8 percent slopes* (surrounding the building located at the project site address). These soils are described by the NRCS as having a slight erosion hazard, with only the portion surrounding the existing house as moderate erosion hazard. Based on the soils and relatively flat project site, the site does not meet the above criteria defining moderate or severe erosion hazard areas.

The site soils will be susceptible to erosion when exposed during construction. In our opinion, proper implementation and maintenance of Best Management Practices (BMPs) for erosion prevention and sedimentation control will adequately mitigate the erosion potential in the planned development area. Erosion protection measures as required by the Lewis County will need to be in place prior to and during grading activity on the site.

3.4.2 Steep Slope and Landslide Hazard Areas

Section 17.38.650 of the LCC defines steep slope and landslide hazard areas as:

"(1) Classification of Steep Slope Hazard Areas. Steep slope hazard areas are areas where there is not a mapped or designated landslide hazard, but where there are steep slopes equal to or greater than a 35 percent slope with a vertical relief of 10 or more feet. Steep slopes which are less than 10 feet in vertical height and are not part of a larger steep slope system, and steep slopes created through previous legal grading activity, are not regulated steep slope hazard areas. Presence of a steep slope suggests potential slope stability problems.

(2) Classification of Landslide Hazard Areas. Landslide hazard areas are those areas meeting any of the following criteria:

(a) Areas subject to previous slope failures, including areas of unstable old or recent landslides;

(b) Areas with all of the following characteristics:

(i) A slope greater than 15 percent;

(ii) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

(iii) Springs or ground water seepage;

(c) Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

(d) Slopes having gradients greater than 80 percent subject to rockfall during seismic shaking;

(e) Areas potentially unstable as a result of rapid stream incision and streambank erosion or undercutting;

(f) Areas located in a canyon, on an alluvial fan, or presently or potentially subject to inundation by debris flows or catastrophic flooding.

(3) Mapped Landslide Hazard Areas. Landslide hazard areas include the following mapped sources:

(a) Areas mapped as "unstable," "landslides," and "old landslides" in the Slope Stability Study of the Centralia-Chehalis Area, Lewis County, Washington, by Allen J. Fiksdal, Department of Natural Resources, Division of Geology and Earth Resources, 1978.

(b) Areas included in the Landslides and Landforms maps available from the Washington Department of Natural Resources Division of Geology and Earth Resources, dated July 2016 or as amended."

Based on a review of the DNR, there are documented landslides that are located northeast of the site; however, the site is relatively flat with no signs of sloughed material observed on-site, and therefore the site does not meet any criteria listed in the LCC for landslide or steep slope hazard areas.

3.4.3 Seismic Hazard Areas

Chapter 17.38.660 of the LCC defines seismic hazard areas as:

"(1) Classification of Seismic Hazard Areas. Seismic hazard areas are locations subject to severe risk of damage as a result of earthquake-induced soil liquefaction, ground shaking amplification, slope failure, settlement, or surface faulting.

(a) All structures that require a building permit within Lewis County are required to be consistent with the D1 seismic zone (as specified in the International Building Code).

(b) Active faults or trenches are considered seismic hazards.

(c) Areas of known faults and soil liquefaction hazards are depicted in Ground Response Geographic Information System data dated June 2010 and Seismogenic Features data dated April 2016 and retrieved from the Washington Department of Natural Resources Division of Geology and Earth Resources."

Liquefaction is a phenomenon where there is a reduction or complete loss of soil strength due to an increase in water pressure induced by vibrations. Liquefaction mainly affects geologically recent deposits of loose, fine-grained sands underlying the groundwater table. Soils of this nature derive their strength from intergranular friction. The generated water pressure or pore pressure essentially separates the soil grains and eliminates this intergranular friction; thus, eliminating the soil's strength. Due to the predominantly medium dense to dense consistency of the alluvial deposits underlying the site and relatively high percentages of soil fines, which give the soils cohesive strength, it is our opinion that the potential for site damage due to soil liquefaction is low.

Based on our study, it is our opinion that the risk for damage resulting from earthquake-induced slope failure, settlement, lateral spreading, or surface faulting is negligible. Therefore, in our opinion, unusual seismic hazard areas do not exist at the site, and design in accordance with local building codes for determining seismic forces would adequately mitigate project impacts associated with ground shaking.

3.4.4 Volcanic Hazard Areas

Chapter 17.38.670 of the LCC defines volcanic hazard areas as:

"(1) Classification of Volcanic Hazard Areas. Volcanic hazard areas are locations where the risk to life and property by a large volcanic event is high. For the purpose of these regulations, damage from lahars and near volcano hazards constitute the primary volcanic hazards. Volcanic tephra (ash), while disruptive and potentially dangerous, is not considered a volcanic hazard that is subject to these regulations.

(a) Volcanic hazard areas are shown on maps available from the United States Geological Service (USGS) Volcano Hazards Program."

Based on available information, no volcanic hazards are within the project site, and therefore the site does not meet any criteria listed in the LCC for volcanic hazard areas.

3.4.5 Mine Hazard Areas

Chapter 17.38.680 of the LCC defines mine hazard areas as:

"(1) Classification of Mine Hazard Areas. Mine hazard areas are those areas within 100 horizontal feet of a mine opening at the surface or which are underlain at a depth of 300 feet or less by mine workings. Known locations of historic mines are identified in the Washington State Department of Natural Resources, Division of Geology and Earth Resources, Open File Report 94-7; The Washington State Coal Mines Map Collection: A Catalog, Index, and User's Guide, by H.W. Schaase, M. Lorraine Koler, Nancy A. Eberle, and Rebecca A. Christie, 1994, 107 pages; Open File Report 84-6, Inventory of Abandoned Coal Mines in the State of Washington, by F.V. LaSalata, M.C. Meard, T.J. Walsh, and H.W. Schaase, 1985, 42 pages; and specific maps and surveys of mine workings on file with the Division of Geology and Earth Resources."

Based on a review of the DNR, no known mining operations are within 300 feet of the project site, and therefore the site does not meet any criteria listed in the LCC for mine hazard areas.

3.5 Seismic Design Parameters

Based on soil conditions observed in the subsurface explorations, and our knowledge of the area geology, per the current Seattle Building Code, site class "D" should be used in structural design.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 General

Based on our study, the primary geotechnical concerns at the site are the shallow groundwater table and compressible upper silts and clays. The soft, fine grained native soil layers observed at the site will consolidate under static dead loads imposed by the structure or structures and by product loading on structure floor slabs. To mitigate the potential for post-construction settlement due to this consolidation, we recommend preloading the building locations. Preloading will involve placing structural fill and allowing settlements to occur under this load before building construction is initiated.

After completing the preload, building construction can begin. The buildings can be supported on conventional spread footings bearing on a minimum of two feet of compacted structural fill.

The proximity of the water table to existing grade that will make it difficult to perform typical cut and fill operations for expected building and dock high construction. During the wet winter months, excavations depths of two feet or more below existing surface grades should be expected to encounter groundwater seepage. In our opinion, site grades should be raised using compacted structural fill such that dock high loading areas do not require cuts into native soils below the water table. If the site is not raised enough for clearance of groundwater, then over-excavation and replacement of some native soils will need to occur.

The site soils contain a significant amount of fines (silt- and clay-sized particles) such that they will be extremely difficult to compact as structural fill when too wet. Accordingly, the ability to use the soils from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions at the time of construction. If grading activities will take place during the winter season, the owner should be prepared to import free-draining granular material for use as structural fill and backfill.

Detailed recommendations regarding these issues and other geotechnical design considerations are provided in the following sections of this report. These recommendations should be incorporated into the final design drawings and construction specifications.

4.2 Site Preparation and Grading

To prepare the site for construction, all vegetation, organic surface soils, and demolition debris should be stripped and removed from the site. Demolition of existing structures should include removal of existing foundations and abandonment of underground septic systems and other buried utilities. Abandoned utility pipes that fall outside of new building areas can be left in place provided they are sealed to prevent intrusion of groundwater seepage and soil. Based on our test pits, surface stripping depths ranging 12 to 24 inches should be expected to remove organic topsoil. Organic topsoil will not be suitable for use as structural fill, but may be used for limited depths in nonstructural areas or for landscaping purposes. Localized areas, such as soils observed near along the southwestern border had organic inclusions to a depth of about three feet (Test Pits TP-21) will not be suitable for support of new fill or building elements. Excavation and replacement of these soils with new structural fill is recommended.

Once clearing and grubbing operations are complete, grading to establish desired building grades can be initiated. In order to achieve proper compaction of the building fill, the native subgrade must be in a relatively stable condition. If excessively soft and yielding subgrade is observed and it cannot be stabilized in place by aeration and compaction, stabilizing by the use of an additive such as cement or lime will need to be considered. Alternatively, the unstable soils can be excavated and replaced with clean granular structural fill. If the depth of excavation to remove unstable soils is excessive, use of geotextile fabric such as Mirafi 500X or equivalent in conjunction with clean granular structural fill can be considered in order to limit the depth of removal. In general, our experience has shown that a minimum of 18 inches of clean, granular structural fill over the geotextile fabric should establish a stable bearing surface.

As noted, we recommend raising existing grade across the site due to the shallow water table. We recommend spread footing foundations obtain support on a minimum of two feet of compacted granular structural fill. By raising the finish floor grade, with the exception of perimeter footings in the loading dock areas, there should be a sufficient thickness of structural fill within the building limits to provide this support. In the dock-high loading areas, overexcavation of the native soils and replacement with granular structural fill may be required. The structural fill should extend laterally from the edges of the footings a minimum distance of one-foot. The structural fill used for this purpose should consist of wet weather structural fill, as outlined later in this section, or equivalent granular material.

Our study indicates that the native soils contain a high percentage of fines (silt and clay size particles). These soils will be extremely difficult to compact as structural fill when too wet or too dry. Accordingly, the ability to use native soils from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions at the time site grading activities take place. Laboratory testing indicates that at the time of our study, in general, the soil's moisture content was above optimum for compaction. In order to use these materials for structural fill, the owner should consider drying by aeration during dry weather conditions or using an additive such as cement or lime to stabilize the soil.

If grading activities are planned during the wet winter months, and the on-site soils become too wet to achieve adequate compaction, the owner or contractor should be prepared to treat soils with lime or cement, or import wet weather structural fill. For wet weather structural fill, we recommend importing a granular soil that meets the following grading requirements:

U.S. Sieve Size	Percent Passing
6 inches	100
No. 4	75 maximum
No. 200	5 maximum*

*Based on the ¾-inch fraction.

Prior to use, Terra Associates, Inc. should examine and test all materials to be imported to the site for use as structural fill. If the building subgrade is constructed using native soils and will be exposed during wet weather, it would be advisable to place 12 inches of this granular structural fill on the building pad to prevent deterioration of the floor subgrade.

Structural fill should be placed in uniform loose layers not exceeding 12 inches and compacted to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-1557 (Modified Proctor). The moisture content of the soil at the time of compaction should be within two percent of its optimum, as determined by this ASTM standard. The native silt and clay soils should be placed in uniform loose layers not exceeding 6 inches and compacted to the above standards using sheeps foot equipment. In nonstructural areas, the degree of compaction can be reduced to 90 percent.

Preload Program

The native fine grained low to medium plasticity clayey silt was noted to be soft and based on previous laboratory test results, normally consolidated. As it is anticipated to raise the site grade to avoid over excavation and replacement of such soils, we believe the fill required to raise grade would serve as a preload prior to establishing grade. At minimum any fill material placed to establish building grades should be allowed to settle out prior to building construction. Assuming a two-foot fill depth we estimate the amount of consolidation settlement could be around one to two inches occurring over a nine-week period.

To verify the amount of settlement and the rate of movement, the preload program should be monitored by installing settlement markers. A typical settlement marker installation is shown on Figure 3. The settlement markers should be installed on the existing grade prior to placing any building fills. Once installed, elevations of both the fill height and marker should be taken daily until the full height of the building fill is in place. Once final grades are achieved, readings should continue weekly until the anticipated settlements have occurred.

It is critical that the grading contractor recognize the importance of the settlement marker installations. All efforts must be made to protect the markers from damage during fill placement. It will be nearly impossible to evaluate the progress of the surcharge program if the markers are damaged or destroyed by construction equipment. As a result, it may be necessary to install new markers and extend the surcharging period in order to ensure that settlements have ceased and building construction can begin.

4.3 Excavations

All excavations at the site associated with confined spaces, such as utility trenches, must be completed in accordance with local, state, and federal requirements. Based on regulations outlined in the Washington Industrial Safety and Health Act (WISHA), the soils would be classified as Type C soils.

For properly dewatered excavations more than 4 feet, but less than 20 feet deep, the side slopes should be laid back at a slope inclination of 1.5:1 (Horizontal:Vertical) or flatter. If there is insufficient room to complete the excavations in this manner, or if excavations greater than 20 feet in depth are planned, temporary shoring to support the excavations may be required. Properly designed and installed shoring trench boxes can be used to support utility trench excavations where required.

Groundwater seepage should be anticipated within excavations extending below depths of about one and one-half to four feet particularly during the wet winter season. Based on our study, we expect that the volume of water and rate of seepage into the excavation is expected to be moderate which would likely impact the stability of excavations that are sloped as described above. Therefore, the contractor should anticipate the use of shoring boxes in excavations deeper than about four feet. We expect that excavations that extend no more than about two to three feet below the groundwater table can be dewatered using conventional sump-pumping procedures along with a system of collection trenches. Deeper excavations may require more significant dewatering efforts.

The above information is provided solely for the benefit of the owner and other design consultants, and should not be construed to imply that Terra Associates, Inc. assumes responsibility for job site safety. It is understood that job site safety is the sole responsibility of the project contractor.

4.4 Foundations

Provided the site grade is raised to accommodate the proposed construction, the building may be supported on conventional spread footing foundations bearing on a minimum of two feet of structural fill following the completion of the preload program. Perimeter foundations exposed to the weather should be at a minimum depth of 1.5 feet below final exterior grades.

We recommend designing foundations for a net allowable bearing capacity of 2,500 psf. For short-term loads such as wind and seismic, a one-third increase in this allowable capacity can be used. With the anticipated structural loading and this bearing stress applied, estimated total settlement of one-inch may be expected with differential settlement between columns and perimeter bearing walls of about one-half inch.

With tilt up wall panel construction, the continuous strip footings are not initially uniformly loaded but rather, are subject to isolated point loading from shimming of the wall panel. This point loading causes excessive bending in the footing that can cause the footing to break or fracture. In particular, if cuts near or at the water table are required, it may be necessary to evaluate the footing as a beam on an elastic foundation subject to point loading that will be imposed by the wall panels. With support obtained on a minimum of two feet of granular structural fill, a subgrade modulus (k_s) of 110 pounds per cubic inch (pci) can be used for this analysis. If excessive bending that could cause fracturing is indicated, the footing should be stiffened to resist this bending.

For designing foundations to resist lateral loads, a base friction coefficient of 0.35 can be used. Passive earth pressures acting on the side of the footing and buried portion of the foundation stem wall can also be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 350 pcf. We recommend not including the upper 12 inches of soil in this computation because they can be affected by weather or disturbed by future grading activity. This value assumes the foundation will be constructed neat against competent fill soil or backfilled with structural fill as described in Section 4.2. The recommended value includes a safety factor of 1.5.

4.5 Slab-on-Grade Floors

Slab-on-grade floors may be supported on a subgrade prepared as recommended in Section 4.2 of this report. Immediately below the floor slab, we recommend placing a four-inch thick capillary break layer composed of clean, coarse sand or fine gravel that has less than five percent passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

The capillary break layer will not prevent moisture intrusion through the slab caused by water vapor transmission. Where moisture by vapor transmission is undesirable, such as covered floor areas, a common practice is to place a durable plastic membrane on the capillary break layer and then cover the membrane with a layer of clean sand or fine gravel to protect it from damage during construction, and aid in uniform curing of the concrete slab. It should be noted that if the sand or gravel layer overlying the membrane is saturated prior to pouring the slab, it will be ineffective in assisting uniform curing of the slab and can actually serve as a water supply for moisture seeping through the slab and affecting floor coverings. Therefore, in our opinion, covering the membrane with a layer of sand or gravel should be avoided if floor slab construction occurs during the wet winter months and the layer cannot be effectively drained.

A subgrade modulus (k_s) of 110 pounds per cubic inch (pci) can be used for floor slab design in support of rack and lift vehicle loading.

4.6 Lateral Earth Pressures for Wall Design

The magnitude of earth pressure development on below-grade walls will partly depend on the quality of the wall backfill. We recommend placing and compacting wall backfill as structural fill as described in Section 4.2 of this report. To guard against hydrostatic pressure development, wall drainage must also be installed. A typical recommended wall drainage detail is shown on Figure 4.

With wall backfill placed and compacted as recommended, and drainage properly installed, we recommend designing unrestrained walls for an active earth pressure equivalent to a fluid weighing 35 pounds per cubic foot (pcf). For restrained walls, an additional uniform load of 100 psf should be added to the 35 pcf. To account for typical traffic surcharge loading, the walls can be designed for an additional imaginary height of two feet (two-foot soil surcharge). For evaluation of wall performance under seismic loading, a uniform pressure equivalent to 8H psf, where H is the height of the below-grade portion of the wall should be applied in addition to the static lateral earth pressure. These values assume a horizontal backfill condition and that no other surcharge loading, sloping embankments, or adjacent buildings will act on the wall. If such conditions exist, then the imposed loading must be included in the wall design. Friction at the base of foundations and passive earth pressure will provide resistance to these lateral loads. Values for these parameters are provided in Section 4.2.

4.7 Stormwater Detention Pond

As discussed, development stormwater will likely be routed to a stormwater pond located in the southern portion of the site. We expect that the pond would be constructed predominantly of cuts into native soil. Based on the recent groundwater monitoring data provided by Terracon and our recent explorations observed in both December 2021 and March 2022, the functional depths of the pond during the wintertime would be limited to about two to four feet below existing ground surface.

Detention Pond

If fill berms are constructed, the berm locations should be stripped of topsoil, duff, and soils containing organic material prior to the placement of fill. The fill berms should be constructed by placing structural fill in accordance with recommendations outlined in Section 4.2 of this report. Material used to construct pond berms should consist of predominately granular soils with a maximum size of three inches and a minimum of 20 percent fines. The results of laboratory testing indicate that soils meeting this gradational requirement exist on-site. Terra Associates, Inc. should examine and test all on-site or imported materials proposed for use as berm fill prior to their use.

Because of exposure to fluctuating stored water levels, soils exposed on the interior pond slopes may be subject to some risk of periodic shallow instability or sloughing. Establishing interior slopes at a gradient of 3:1 (Horizontal: Vertical) will significantly reduce or eliminate this potential. Exterior berm slopes and interior slopes above the maximum water surface should be graded to a finished inclination no steeper than 2:1 (Horizontal: Vertical). Finished slope faces should be thoroughly compacted and vegetated to guard against erosion.

We should review the stormwater plans when they are completed and revise our recommendations, if required.

4.8 Infiltration Feasibility

Although portions of the native sand and gravel soils would generally be favorable for infiltration, there is insufficient separation between the top of the sand and gravel formation and the seasonal high groundwater table to allow for infiltration facilities. The upper silty sand and silty gravel soils have a high soil fines content and degree of consolidation such that these soils exhibit relatively low permeability. This coupled with groundwater seepage conditions observed in the test pits would preclude the use of infiltration facilities for discharge of development stormwater by infiltration, in our opinion.

4.9 Drainage

Surface

Final exterior grades should promote free and positive drainage away from the building at all times. Water must not be allowed to pond or collect adjacent to foundations, or within the immediate building area. If a positive drainage gradient cannot be provided, surface water should be collected adjacent to the structure for discharge into the site stormwater system.

Subsurface

We recommend installing perimeter foundation drains adjacent to shallow foundations where paved surfaces do not extend to building perimeter and positive drainage away from the structure is not provided. The drains can be laid to grade at an invert elevation equivalent to the bottom of footing grade. The drains can consist of four-inch diameter perforated PVC pipe that is enveloped in washed pea gravel-sized drainage aggregate. The aggregate should extend six inches above and to the sides of the pipe. Roof and foundation drains should be tightlined separately to the storm drains. All drains should be provided with cleanouts at easily accessible locations.

4.10 Utilities

Utility pipes should be bedded and backfilled in accordance with American Public Works Association (APWA) or local jurisdictional requirements. At minimum, trench backfill should be placed and compacted as structural fill, as described in Section 4.2. As noted, the native soils are extremely moisture sensitive and will require careful control of moisture to facilitate proper compaction. If utility construction takes place during the winter or if it is not feasible to properly moisture condition the excavated soil at the time of construction, it may be necessary to import suitable wet weather fill for utility trench backfilling.

4.11 Pavements

Pavement subgrades should be prepared as described in Section 4.2 of this report. Regardless of the degree of relative compaction achieved, the subgrade must be firm and relatively unyielding before paving. The subgrade should be proofrolled with heavy rubber-tired construction equipment such as a loaded ten yard dump truck to verify this condition.

The pavement design section is dependent upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected. We expect traffic at the facility will consist of cars and light trucks, along with heavy traffic in the form of semi-trucks. For design considerations, we have assumed traffic in parking and in car/light truck access pavement areas can be represented by an 18-kip Equivalent Single Axle Loading (ESAL) of 50,000 over a 20-year design life. For heavy traffic pavement areas, we have assumed an ESAL of 300,000 would be representative of the expected loading. These ESALs represent loading approximately equivalent to 3 and 18, loaded (80,000 pound GVW) semi-trucks traversing the pavement daily in each area, respectively.

With a stable subgrade prepared as recommended, we recommend the following pavement sections:

Light Traffic and Parking:

- Two inches of hot mix asphalt (HMA) over six inches of crushed rock base (CRB)
- Full depth HMA – 4 inches

Heavy Traffic:

- Three inches of HMA over eight inches of CRB
- Full depth HMA – 5.5 inches

For exterior Portland cement concrete (PCC) pavement, we recommend the following:

- 6 inches of PCC over two inches of CRB
    - 28 day compressive strength – 4,000 psi
    - Control joints spaced at a maximum of 15 feet

Soil cement stabilization or constructing a soil cement base for support of the pavement section can also be considered as an alternate to the above conventional pavement sections. Assuming a properly constructed soil cement base having a minimum thickness of 12 inches and a minimum 7-day compressive strength of 100 pounds per square inch (psi), a minimum HMA pavement thickness of 3 inches would be required for the heavy traffic areas. The design of the soil cement base should be completed using samples of the subgrade exposed at the time of construction.

The paving materials used should conform to the Washington State Department of Transportation (WSDOT) specifications for half-inch class HMA, PCC, and CRB.

Long-term pavement performance will depend on surface drainage. A poorly-drained pavement section will be subject to premature failure as a result of surface water infiltrating the subgrade soils and reducing their supporting capability. For optimum performance, we recommend surface drainage gradients of at least two percent. Some degree of longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks as they occur.

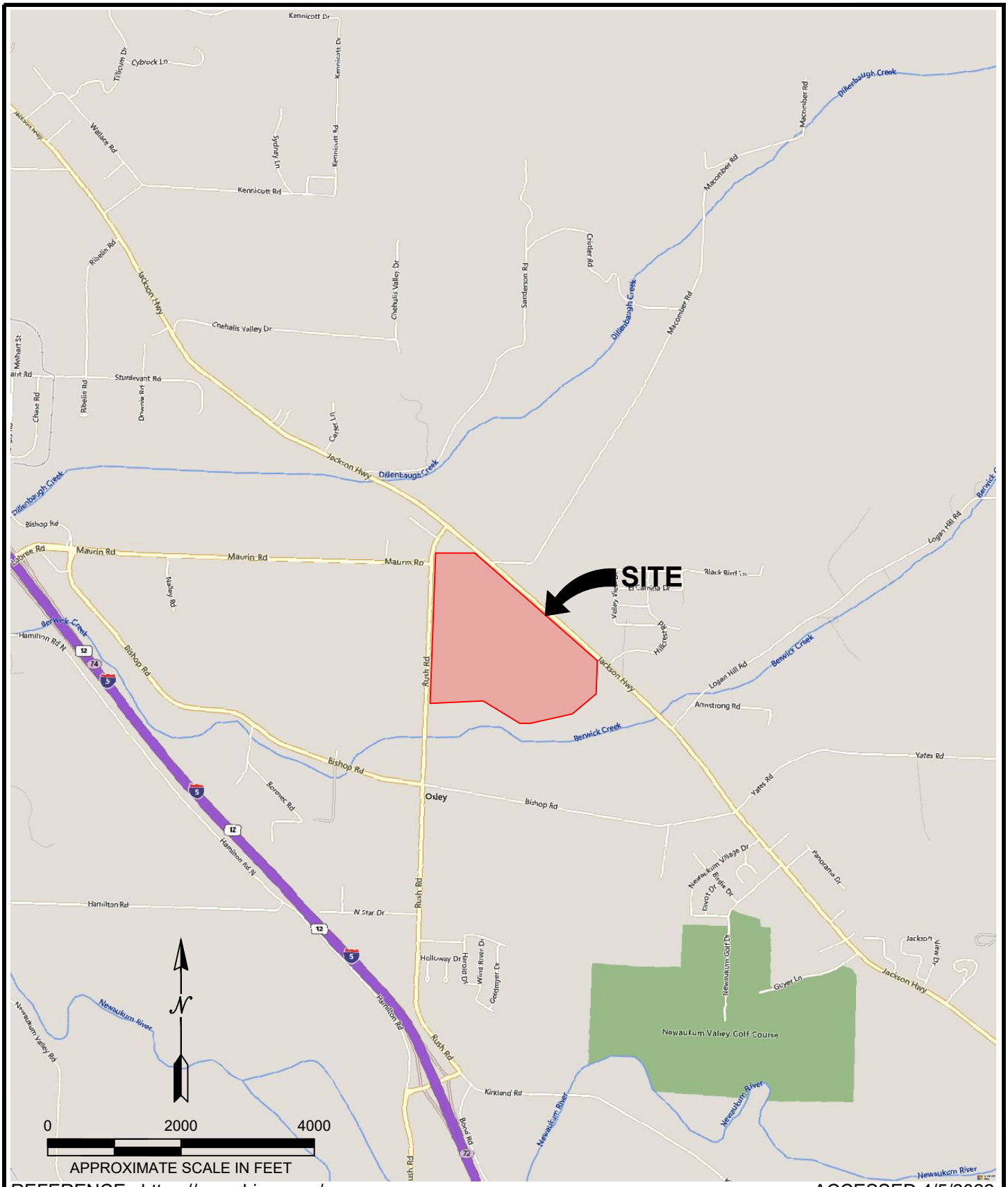
5.0 ADDITIONAL SERVICES

Terra Associates, Inc. should review the final design and specifications in order to verify that earthwork and foundation recommendations have been properly interpreted and incorporated in project design. We should also provide geotechnical services during construction in order to observe compliance with our design concepts, specifications, and recommendations. This will also allow for design changes if subsurface conditions differ from those anticipated prior to the start of construction.

6.0 LIMITATIONS

We prepared this report in accordance with generally accepted geotechnical engineering practices. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the Chehalis Landing project in Lewis County, Washington. This report is for the exclusive use of CRG and its authorized representatives. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based upon data obtained from the subsurface explorations completed onsite. Variations in soil conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, Terra Associates, Inc. should be requested to reevaluate the recommendations in this report prior to proceeding with construction.



REFERENCE: https://www.bing.com/maps ACCESSED 4/5/2022

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VICINITY MAP
CHEHALIS LANDING
CHEHALIS, WASHINGTON

Proj.No.T-8643-1	Date: MAY 2022	Figure 1

LEGEND:

- TP-1 — TERRA ASSOCIATES TEST PIT LOCATIONS (DECEMBER 2021)
- TP-1 — TERRA ASSOCIATES TEST PIT LOCATIONS (MARCH 2022)
- B-1 — TERRACON BORING LOCATIONS (EXISTING)
- CPT-1 — TERRACON CPT LOCATIONS (EXISTING)
- TP-1 — TERRACON TESTPIT LOCATIONS (EXISTING)
- GE-1 — GEOENGINEERS TEST PIT LOCATIONS (EXISTING)

REFERENCE: SITE PLAN PROVIDED BY CLIENT.

0 120 240
APPROXIMATE SCALE IN FEET

BUILDING FOOTPRINT
TOTAL = 15 SF
FF=259.60 TO 250.79±

ZONE AE
ZONE X (SHADED)
BFE 260
BFE 262

No.	Date:	Description:
1		
2		
3		
4		
5		
6		

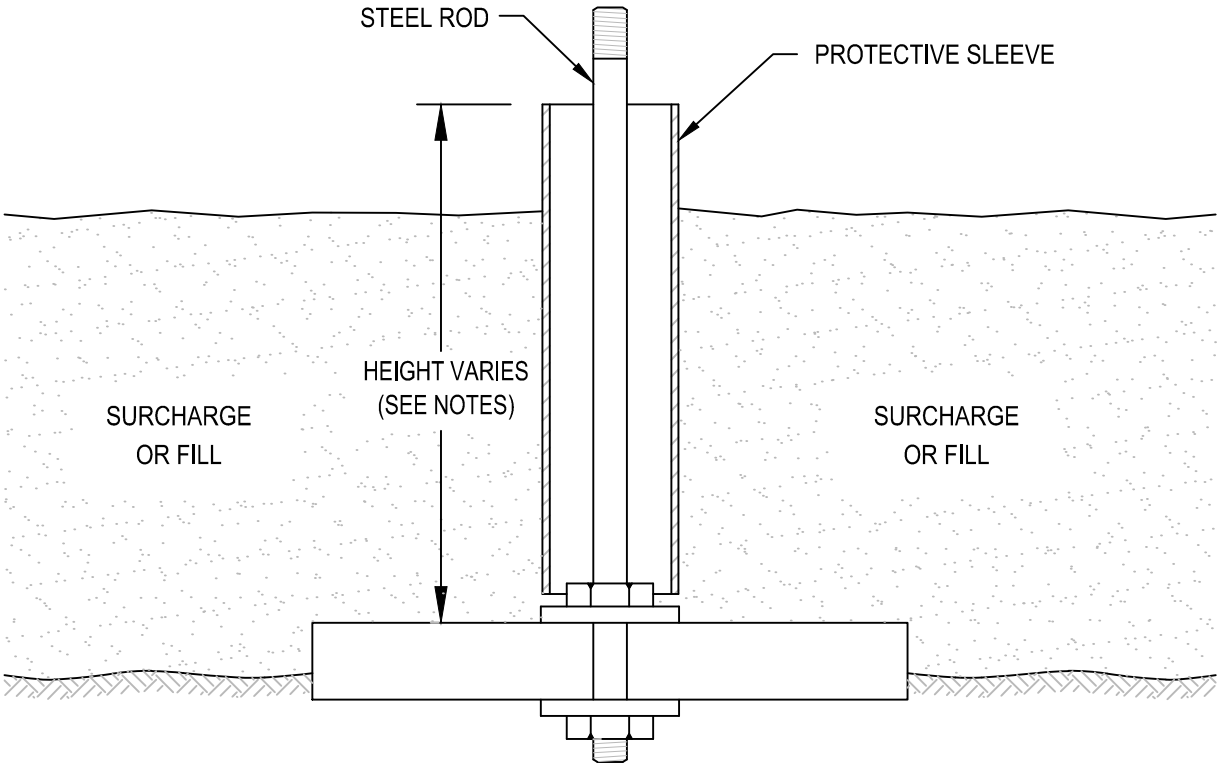
Terra Associates, Inc.
Consultants in Geotechnical Engineering, Geology and Environmental Earth Sciences
12220113th Avenue NE, Suite 130, Kirkland, Washington 98034 ✆Phone (425) 821-7777 ✆Fax (425) 821-4334

EXPLORATION LOCATIONS PLAN
CHEHALIS LANDING
CHEHALIS , WASHINGTON

Prepared by: SED
Designed by: CSD
Approved by: CSD
Date: MAY 2022

T-8643-1

FIGURE 2



NOT TO SCALE

NOTES:

1. BASE CONSISTS OF 3/4" THICK, 2'x2' PLYWOOD WITH CENTER DRILLED 5/8" DIAMETER HOLE.
2. BEDDING MATERIAL, IF REQUIRED, SHOULD CONSIST OF CLEAN COARSE SAND.
3. MARKER ROD IS 1/2" DIAMETER STEEL ROD THREADED AT BOTH ENDS.
4. MARKER ROD IS ATTACHED TO BASE BY NUT AND WASHER ON EACH SIDE OF BASE.
5. PROTECTIVE SLEEVE SURROUNDING MARKER ROD SHOULD CONSIST OF 2" DIAMETER PLASTIC TUBING. SLEEVE IS NOT ATTACHED TO ROD OR BASE.
6. ADDITIONAL SECTIONS OF STEEL ROD CAN BE CONNECTED WITH THREADED COUPLINGS.
7. ADDITIONAL SECTIONS OF PLASTIC PROTECTIVE SLEEVE CAN BE CONNECTED WITH PRESS-FIT PLASTIC COUPLINGS.
8. STEEL MARKER ROD SHOULD EXTEND AT LEAST 6" ABOVE TOP OF PLASTIC PROTECTIVE SLEEVE.
9. PLASTIC PROTECTIVE SLEEVE SHOULD EXTEND AT LEAST 1" ABOVE TOP OF FILL SURFACE.

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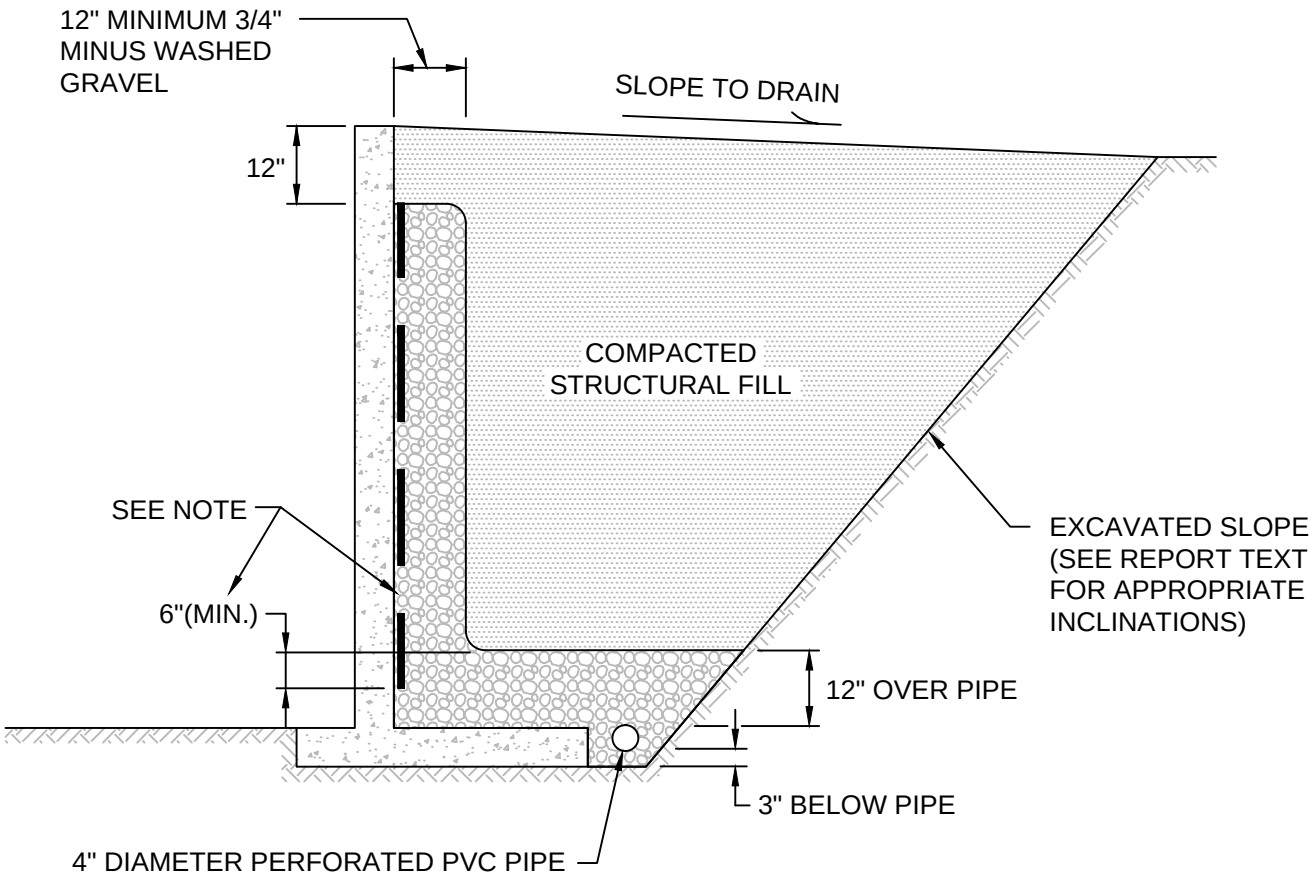
SETTLEMENT MARKER DETAIL
CHEHALIS LANDING
CHEHALIS, WASHINGTON

Proj.No.T-8643-1	Date: MAY 2022	Figure 3



NOT TO SCALE

NOTE:

MIRADRAIN G100N PREFABRICATED DRAINAGE PANELS OR SIMILAR PRODUCT CAN BE SUBSTITUTED FOR THE 12-INCH WIDE GRAVEL DRAIN BEHIND WALL. DRAINAGE PANELS SHOULD EXTEND A MINIMUM OF SIX INCHES INTO 12-INCH THICK DRAINAGE GRAVEL LAYER OVER PERFORATED DRAIN PIPE.

APPENDIX A
FIELD EXPLORATION AND LABORATORY TESTING
Chehalis Landing
Lewis County, Washington

On December 2, 2021, and December 3, 2021, we explored subsurface conditions at the site by excavating 30 test pits to depths ranging between about 8 and 10 feet using a mini track-mounted excavator. On March 14, 2022, we supplemented this information by excavating 15 test pits to depths ranging between about 8 and 10 feet using a mini track-mounted excavator. All of the subsurface explorations were approximately determined in the field by measuring, pacing, or sighting from existing surface features or using GPS coordinates obtained with handheld equipment. The approximate test pit locations are shown on Figure 2. The Test Pit Logs are presented on Figures A-2 through A-46.

A geotechnical engineer from our office conducted the field exploration. Our representative classified the soil conditions encountered, maintained a log of each test pit, obtained representative soil samples, and recorded water levels observed during excavation. All soil samples were visually classified in accordance with the Unified Soil Classification System (USCS) described on Figure A-1.

Representative soil samples obtained from the test pits were placed in closed containers and taken to our laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the individual Test Pit Log. Grain size analyses and Atterberg limit tests were performed on select samples. The results of the grain size analyses are shown on Figures A-47 and A-49. The results of the Atterberg limit tests can be found on the individual Test Pit Logs.

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS More than 50% material larger than No. 200 sieve size	**GRAVELS** More than 50% of coarse fraction is larger than No. 4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve	Clean Sands (less than 5% fines)	SW	Well-graded sands, sands with gravel, little or no fines.
			SP	Poorly-graded sands, sands with gravel, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS More than 50% material smaller than No. 200 sieve size	**SILTS AND CLAYS** Liquid Limit is less than 50%		ML	Inorganic silts, rock flour, clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity. (Lean clay)
			OL	Organic silts and organic clays of low plasticity.
	SILTS AND CLAYS Liquid Limit is greater than 50%		MH	Inorganic silts, elastic.
			CH	Inorganic clays of high plasticity. (Fat clay)
			OH	Organic clays of high plasticity.
HIGHLY ORGANIC SOILS			PT	Peat.

DEFINITION OF TERMS AND SYMBOLS

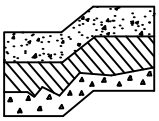
COHESIONLESS

Density	Standard Penetration Resistance in Blows/Foot
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	>50

COHESIVE

Consistancy	Standard Penetration Resistance in Blows/Foot
Very Soft	0-2
Soft	2-4
Medium Stiff	4-8
Stiff	8-16
Very Stiff	16-32
Hard	>32

I	2" OUTSIDE DIAMETER SPILT SPOON SAMPLER
‖	2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER
▼	WATER LEVEL (Date)
Tr	TORVANE READINGS, tsf
Pp	PENETROMETER READING, tsf
DD	DRY DENSITY, pounds per cubic foot
LL	LIQUID LIMIT, percent
PI	PLASTIC INDEX
N	STANDARD PENETRATION, blows per foot



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UNIFIED SOIL CLASSIFICATION SYSTEM
CHEHALIS LANDING
CHEHALIS, WASHINGTON

Proj.No.T-8643-1 | Date: MAY 2022 | Figure A-1

LOG OF TEST PIT NO. TP-1

FIGURE A-2

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0–2		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2–3		Gray clayey SILT, moist to wet, mottled, some sand. (ML) LL 30 PL 23 PI 7	Medium Stiff	33.8
4–5		Intermixed red/brown clayey GRAVEL and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (GC/SM)	Medium Dense	12.6
6–7		Red/brown SAND with silt and gravel, fine to medium sand, fine to coarse gravel, moist. (SP-SM)	Dense	
8–10		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 3.5 feet. No caving observed.		11.7

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-2

FIGURE A-3

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 2.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray gravelly SILT with clay, fine gravel, moist to wet, some sand. (GM)	Medium Dense to Dense	18.8
3		Intermixed red/brown clayey GRAVEL and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (GC/SM)		16.2
4		Red/brown CLAY with gravel, fine gravel, moist. (CH)	Medium Stiff	
6				27.8
7		Red/brown clayey, gravelly, SAND, fine to coarse gravel, fine to medium sand, moist. (SC)	Dense	
9				18.6
10		Test Pit terminated at approximately 9 feet. Heavy groundwater seepage observed at approximately 2.5 feet. No caving observed.		

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-3

FIGURE A-4

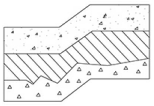
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT, moist. (ML)	Soft to Medium Stiff	38.3
3				
▼				20.6
4		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)	Medium Dense	
5		Intermixed red/brown clayey gravelly SAND and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC/SM)	Medium Dense to Dense	
6				14.7
9				14.8
		Test Pit terminated at approximately 9 feet. Light groundwater seepage observed at approximately 3.5 feet. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-4

FIGURE A-5

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT, moist, some mottling. (ML)	Soft to Medium Stiff	11
3		Red/brown gravelly SILT with clay and sand, fine to medium sand, fine to coarse gravel, moist, medium plasticity. (ML)		
▼ 4			Medium Stiff	36.2
5		LL 48 PL 34 PI 14		
6		Red/brown SAND with silt and gravel, fine to medium sand, fine to coarse gravel, moist, some mottled gray clay. (SP-SM)	Medium Dense to Dense	
9		Test Pit terminated at approximately 9 feet. Moderate groundwater seepage observed at approximately 4 feet. No caving observed.		12.9
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-5

FIGURE A-6

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT, moist, mottled, some sand. (ML)	Soft to Medium Stiff	31.7
▼ 3		Bedded layers of red/brown gravelly CLAY with sand and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (CH/SM)	Medium Dense	20.3
6		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)	Medium Dense to Dense	
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 3 feet. No caving observed.		25.4
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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Geology and
Environmental Earth Sciences

LOG OF TEST PIT NO. TP-6

FIGURE A-7

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, moist, mottled. (ML)	Soft to Medium Stiff	37.4
4 ▼		Bedded layers of red/brown clayey SAND with gravel and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)	Medium Dense to Dense	11.7
7		Intermixed red/brown clayey gravelly SAND and gray sandy SILT, fine to medium sand, fine to coarse gravel, moist, some mottling. (SC/ML)	Medium Dense to Dense	19.4
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 4 feet. No caving observed.		32.2
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-7

FIGURE A-8

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist, mottled. (ML)	Soft to Medium Stiff	36.8
2				
3		*6-inch layer of gravel observed at 3 feet. Bedded layers of red/brown clayey SAND with gravel and gray sandy SILT with clay, fine to medium sand, fine to coarse gravel, moist to wet, some mottling. (SC/ML)		
▼ 4				
5			Medium Dense	24.2
6		*6-inch layer of gravel observed at 6 feet.		
7				
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 4 feet. Pooled about 2 inches in bottom of test pit. No caving observed.		19.9
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-8

FIGURE A-9

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 1.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, moist, some mottling. (ML)	Soft to Medium Stiff	32.4
3		*6-inch layer of gravel observed at 3 feet. Bedded layers of red/brown clayey SAND with gravel and gray clayey SILT, fine to medium sand, fine to coarse gravel, moist, some mottling. (SC/ML)	Medium Dense to Dense	27.6
6		*6-inch layer of gravel observed at 6 feet.		9.4
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 1.5 feet. Pooled about 2 inches in bottom of test pit. No caving observed.		23.3
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-9

FIGURE A-10

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 1.5 feet **DEPTH TO CAVING:** 1.5 feet

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	30
2		Gray sandy SILT with clay, fine sand, wet, some black coal bits. (ML)	Soft	19.4
3		Red/brown sandy SILT, fine sand, moist, some gray clay intermixed, trace gravel. (ML)	Medium Stiff	18.3
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 1.5 feet. Slight caving observed from about 1.5 feet to 3 feet.		19.8
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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Environmental Earth Sciences

LOG OF TEST PIT NO. TP-10

FIGURE A-11

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist, some mottling. (ML)	Medium Stiff	29.2
2				
3		Bedded layers of red/brown clayey SAND with gravel and gray silty SAND, fine to medium sand, fine to coarse gravel, moist, some mottling. (SC/SM)	Medium Dense to Dense	
▼ 4				
5		*6-inch layer of gravel observed at 5 feet.		29.4
6				
7		*6-inch layer of gravel observed at 7 feet.		
8		Test Pit terminated at approximately 8 feet. Very light groundwater seepage observed at approximately 4 feet. No caving observed.		22.8
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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Environmental Earth Sciences

LOG OF TEST PIT NO. TP-11

FIGURE A-12

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 2.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray sandy SILT with clay, fine sand, moist, some to trace mottling. (ML)	Medium Stiff	25
5		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)	Medium Dense to Dense	19.1
6		Gray SILT with clay, moist, trace mottling. (ML) LL 30 PL 25 PI 5	Medium Stiff to Stiff	
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 2.5 feet. No caving observed.		27.5
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-12

FIGURE A-13

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray sandy SILT with clay, fine sand, moist, some mottling. (ML)	Soft to Medium Stiff	23.7
4 ▼			Medium Stiff	21.3
7		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)	Dense	37.7
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 4 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-13

FIGURE A-14

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray sandy SILT with clay, fine sand, moist, mottled. (ML)	Soft to Medium Stiff	21.9
3		Red/brown clayey SAND, fine to medium sand, moist. (SC)	Medium Dense to Dense	12.5
5		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)		
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 2 feet. No caving observed.		18.4
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-14

FIGURE A-15

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, wet, mottled. (ML)	Soft	33.7
3 ▼		Bedded layers of red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)	Medium Dense to Dense	10.4
7		Gray silty gravelly SAND with clay, coarse gravel, wet, mottled, some sand. (SM)		26.9
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 3 feet. Pooled bottom 3 inches of test pit. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-15

FIGURE A-16

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, moist to wet, mottled. (ML)	Soft	33.6
4		Gray silty SAND with clay, fine sand, moist, mottled. (SM)	Medium Dense to Dense	25.2
6		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)		
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 3.5 feet. Pooled bottom 3 inches of test pit. No caving observed.		17.5
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-16

FIGURE A-17

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist, mottled. (ML)	Medium Stiff	
2				32.5
▼ 3		Gray silty SAND with clay, fine sand, moist, mottled. (SM)	Medium Dense to Dense	
4				
5				21.3
6		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)		
7				18.6
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 3 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-17

FIGURE A-18

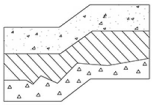
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist. (ML)	Soft	
2				
3				
▼		Gray silty SAND with clay, fine sand, moist, mottled. (SM)	Dense	22.1
4				
5		Red/brown silty SAND with clay and gravel, fine to medium sand, fine to coarse gravel, moist, scattered cobbles. (SM)	Medium Dense to Dense	16.3
6				
7		Red/brown clayey SAND with gravel, fine to coarse sand, fine gravel, moist, some gray mottled sandy clay, scattered cobbles. (SC)		14.9
8				
9		Test Pit terminated at approximately 9 feet. Moderate groundwater seepage observed at approximately 3.5 feet. No caving observed.		22.7
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-18

FIGURE A-19

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist, some mottling. (ML)	Soft	29.1
2				
3				27
4		Gray silty SAND with clay and gravel, fine sand, fine gravel, moist, some mottling. (SM)	Medium Dense	18.1
5				
6				
7		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist scattered cobbles. (SC)	Medium Dense to Dense	
8				26.7
9		Test Pit terminated at approximately 8.5 feet. Moderate groundwater seepage observed at approximately 3.5 feet. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-19

FIGURE A-20

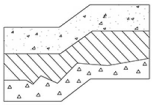
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist. (ML)	Soft	
3				33.9
▼ 4		Gray silty SAND with clay and gravel, fine to medium sand, fine to coarse gravel, moist. (SM)	Medium Dense to Dense	
5				24.2
6		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)		
7				18.5
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 3.5 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-20

FIGURE A-21

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray sandy SILT with clay, fine sand, moist, mottled. (ML)	Medium Stiff	
2				
3				25.1
▼		Gray silty SAND with clay, fine sand, moist, mottled. (SM)	Medium Dense	
4				
5				25.8
6		Gray sandy SILT, fine to medium sand, moist, mottled, some gravel. (ML) LL 34 PL 25 PI 9	Medium Stiff	23 22.9
7				
8		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)	Dense	24.1
9		Test Pit terminated at approximately 9 feet. Light groundwater seepage observed at approximately 3.5 feet. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-21

FIGURE A-22

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(6 inches organic TOPSOIL) Dark brown sandy SILT, moist, scattered roots. (ML)	Loose	
2		Dark gray CLAY with sand, fine sand, moist, some mottling and organics. (CH)	Soft to Medium stiff	46.8
▼ 3		Gray silty gravelly SAND with clay, fine to coarse sand, fine to coarse gravel, wet to saturated, scattered cobbles, some mottled gray clay. (SM)	Medium Dense	30
5			Medium Dense to Dense	25.9
7		Gray/brown sandy gravelly SAND with silt, fine to coarse gravel, fine to coarse sand, saturated, cobbles. (SP-SM)		16.3
8		Test Pit terminated at approximately 8 feet. Very heavy groundwater seepage observed at approximately 3 feet. Pooled bottom 2.5 feet of test pit. No caving observed.		12.4
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-22

FIGURE A-23

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, moist. (ML)	Soft	
2				
3		*increasing gravel content		
▼			Medium Stiff to Stiff	32.3
4				
5		Gray silty SAND with clay and gravel, fine to medium sand, fine to coarse gravel, saturated. (SM)	Medium Dense to Dense	24.4
6				
7		Red/brown SAND with gravel and silt, fine to coarse gravel, fine to coarse sand, saturated, cobbles, some silt. (SP-SM)		
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 3.5 feet. Pooled bottom 3 inches of test pit. No caving observed.		12.3
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-23

FIGURE A-24

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, moist, some mottling. (ML)	Soft	
4		Gray silty SAND with clay and gravel, fine to medium sand, fine to coarse gravel, moist. (SM)	Medium Dense to Dense	32.4
6		Bedded layers of red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, wet, cobbles. (SC/SM)		11.0
7				23.8
				28.9
9		Test Pit terminated at approximately 9 feet. Heavy groundwater seepage observed at approximately 3.5 feet. No caving observed.		19.4
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-24

FIGURE A-25

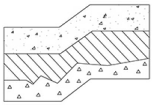
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray sandy SILT with clay, fine sand, moist. (ML)	Medium Stiff	
2		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist. (SC/SM)	Medium Dense to Dense	21
3				
▼				
4				11.9
		Gray clayey SILT with sand, fine sand, moist, some mottling. (ML)	Soft	
5				
6				27.2
		Red/brown clayey SAND with gravel, fine to medium sand, fine gravel, moist. (SC)	Medium Dense to Dense	
7				
8				21.2
		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 3.5 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-25

FIGURE A-26

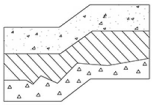
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 2, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT with sand, fine sand, wet, some mottling. (ML)	Soft	
3				11.7
▼		Red/brown gravelly SAND with silt, fine to coarse sand, fine gravel, wet, cobbles, some gray clayey SILT. (SP-SM)	Medium Dense	
4				24.6
5		Gray clayey SILT with sand, fine sand, wet, mottled. (ML)	Medium Stiff	
8				27.9
		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 3.5 feet. Pooled bottom 3 inches of test pit. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-27

FIGURE A-28

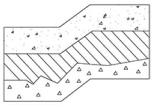
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1		Gray clayey SILT withsand, fine sand, moist to wet, some mottling. (ML)	Soft	
2				
3				36.4
▼		Gray silty SAND/sandy SILT with clay, fine sand, moist, mottled, some gravel and black staining. (SM/ML)	Stiff to Very Stiff	
4				
5				
6				22.7
7		Red/brown clayey SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SC)	Medium Dense to Dense	
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 3.5 feet. No caving observed.		19
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-28

FIGURE A-29

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
1				
				32.2
2		Gray clayey SILT with sand and gravel, fine sand, fine gravel, moist to wet, mottled. (ML)	Soft to Medium Stiff	
3				
				29.6
▼ 4		Intermixed gray/brown silty SAND with gravel and red/brown clayey gravelly SAND, fine to medium sand, fine to coarse gravel, wet, cobbles. (SM/SC)	Medium Dense to Dense	
5				
6				24.5
7				
8				20.5
		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 4 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-29

FIGURE A-30

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 3.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2		Gray clayey SILT with sand, fine sand, moist, mottled. (ML)	Soft	37.3
4		Red/brown gravelly SAND with silt, fine to medium sand, fine to coarse gravel, moist, some mottled gray clay. (SP-SM)	Medium Dense to Dense	16.8
7		*6-inch gravel layer at 7 feet.		14.7
9		Test Pit terminated at approximately 9 feet. Moderate groundwater seepage observed at approximately 3.5 feet. No caving observed.		17.3
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-30

FIGURE A-31

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: December 3, 2021 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0–2		Dark brown SILT with sand, moist, scattered roots and organic inclusions. (ML/OL)	Loose	
2–4		Gray clayey SILT wiith sand, fine sand, moist, mottled. (ML)	Medium Stiff	27.7
4–7			Very Stiff	24.3
7–10		Intermixed red/brown clayey gravelly SAND and gray silty SAND, fine to medium sand, fine to coarse gravel, moist, cobbles, some mottling. (SC/SM)	Dense	12.8
10		Test Pit terminated at approximately 10 feet. Light groundwater seepage observed at approximately 4 feet. No caving observed.		26.3

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-101

FIGURE A-32

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL, Topsoil)	Soft	
2 ▼		Gray clayey SILT wiith sand, fine sand, wet to moist, faintly mottled. (ML)	Medium Stiff	24.0
5		Red/orange SAND with silt and gravel, fine to medium sand, fine to coarse gravel, moist to wet. (SP-SM)	Medium Dense to Dense	18.5
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 2 feet. No caving observed.		12.8
9				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-102

FIGURE A-33

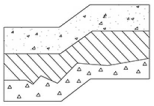
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 4 feet **DEPTH TO CAVING:** 4 to 6 feet

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL, Topsoil)		
2		Gray sandy SILT, fine to medium sand, moist, faintly mottled. (ML)	Soft	24.8
4 ▼		Red/orange silty SAND, fine to medium sand, moist, some gravel, trace gray clay. (SM)	Medium Dense	20.6
6		Intermixed red/brown and orange/gray silty SAND and SAND with silt and gravel, fine to coarse sand, fine to coasre gravel, moist, scattered cobbles, trace coal bits. (SM/SP-SM)	Medium Dense to Dense	
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 4 feet. Light caving observed from 4 to 6 feet.		11.9
9				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-103

FIGURE A-34

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)	Soft to Medium Stiff	
1		Gray sandy SILT, fine to medium sand, moist, mottled. (ML)		
2		Intermixed red/brown and orange/gray silty SAND and SAND with silt and gravel, fine to coarse sand, fine to coasre gravel, moist, scattered cobbles, trace coal bits. (SM/SP-SM)		22.6
3				
4				18.3
5			Medium Dense	
6				
7		Light Brown/gray silty SAND, fine to medium sand, moist, some coarse sand and gravel. (SM)		23.4
8		Red/orange silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, scattered cobbles. (SM)		
9		Test Pit terminated at approximately 9 feet. Light groundwater seepage observed at approximately 2 feet. No caving observed.		16.9
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-104

FIGURE A-35

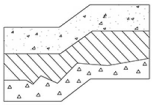
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 16 inches **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL, Topsoil)		
1				
▼		Gray SILT with sand, fine to medium sand, moist, faintly mottled. (ML)	Soft	
2				33.4
3		Red/orange silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, scattered cobbles, mottled. (SM)		
4			Medium Dense	
5		*Approximate 3-inch layer of heavily mottled soil observed at 5 feet and 6 feet.		13.8
6		Red/orange sandy CLAY with silt, fine to medium sand, moist, some gravel, mottled, medium plastic. (CL/CH)		
7			Stiff to Very Stiff	
8				
9				46.5
		Test Pit terminated at approximately 9 feet. Light to moderate groundwater seepage observed at approximately 16 inches. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-105

FIGURE A-36

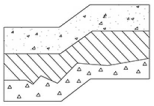
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL, Topsoil)		
2		Gray SILT with sand, fine to medium sand, wet, mottled. (ML) LL 35 PL 26 PI 9	Soft	36.7
4		Intermixed red/orange sandy CLAY, silty SAND and clayey SAND with gravel and silt, fine to coarse sand, fine to coarse gravel, moist, scattered cobbles. (CL/GM/SC)	Medium Dense	
5		*Heavy mottling and higher gravel content observed from 4 to 5 feet.		23.9
6			Dense	
8				37.9
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 2 feet. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-106

FIGURE A-37

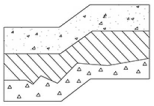
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** 0-3 feet, 5.5-7 feet

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray SILT with sand, fine to medium sand, wet, faintly mottled. (ML)	Very Soft	
2 ▼				30.2
3		Gray and red silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, scattered cobbles, mottled. (SM)		
4				
5			Medium Dense	
6				21.8
7		Gray/blue gravelly silty SAND, fine to coarse sand, fine to coarse gravel, moist. (SM)		
8		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 2 feet. Moderate caving observed from 0 to 3 feet, light caving observed from 5.5 to 7 feet.		20.6
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-107

FIGURE A-38

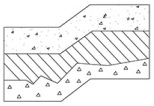
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL, Topsoil)		
1			Soft	
		Gray SILT with sand, fine to medium sand, wet, faintly mottled. (ML)		
2				27.5
▼		Gray/brown silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist. (SM)		
3				
4				23.7
5				
6			Medium Dense	
		Red/orange gravelly silty SAND, fine to medium sand, fine to coarse gravel, moist, some clay, scattered cobbles. (SM)		
7				16.1
8				
9				19.2
		Test Pit terminated at approximately 9 feet. Moderate groundwater seepage observed at approximately 2.5 feet. No caving observed.		
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-108

FIGURE A-39

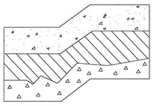
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray SILT with sand, fine to medium sand, wet, faintly mottled. (ML)	Soft	
▼ 2				36.8
3		Red/orange silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, scattered cobbles, mottled. (SM)	Medium Dense	
4				20.3
5		Gray sandy SILT, fine to medium sand, moist, some gravel, mottled. (ML) LL 42 PL 26 PI 16	Medium Stiff	
6				26.9
7		Gray/blue sandy SILT with gravel and clay, fine to medium sand, fine to coarse gravel, moist. (ML)		
8		Test Pit terminated at approximately 8 feet. Light to moderate groundwater seepage observed at approximately 2 feet. No caving observed.		28.1
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-109

FIGURE A-40

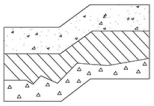
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)	Soft	
1				
2		Gray SILT with sand, fine to medium sand, wet, faintly mottled. (ML)	Soft to Medium Stiff	29.6
3				
4		Red/orange silty SAND, fine to coarse sand, moist, some gravel, scattered cobbles, mottled, weakly cemented. (SM)	Medium Dense to Dense	26.8
5		Red/orange sandy CLAY with silt and gravel, fine to medium sand, fine to coarse gravel, moist, medium plastic. (CL/CH)	Stiff	19.6
6				
7				
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 2 feet. No caving observed.		51.3
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-110

FIGURE A-41

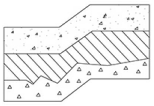
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 16 inches **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray SILT with sand, fine to medium sand, wet. (ML)	Soft	
2				25.9
3		Gray sandy SILT, fine to medium sand, moist, mottled, some clay, trace grading to some gravel. (ML)		
4				
5			Medium Stiff to Stiff	
6				33.4
7		Gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (SM)	Medium Dense to Dense	
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 16 inches. No caving observed.		17.9
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-111

FIGURE A-42

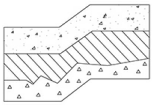
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray SILT with sand, fine to medium sand, wet. (ML)	Soft	
2 ▼				
3		Gray sandy SILT, fine to medium sand, moist, some clay, trace gravel, faintly mottled. (ML)	Medium Stiff	29.1
4				
5		Red/orange silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, some clay. (SM)	Medium Dense	31.6
6				
7		Gray sandy CLAY with silt, fine to medium sand, moist. (CL)	Medium Stiff	
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 2 feet. No caving observed.		36.1
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-112

FIGURE A-43

PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** 0 to 3 feet

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray sandy SILT, fine to medium sand, moist to wet. (ML)	Soft	
▼ 2				22.8
3		Gray sandy SILT, fine to medium sand, moist, trace gravel, faintly mottled. (ML)	Medium Stiff	
4				
5				
6				
7		Red/orange and gray silty SAND with gravel to SAND with silt and gravel, fine to coarse sand, fine to coarse gravel, moist, mottled. (SM/SP-SM)	Medium Dense to Dense	
8		Test Pit terminated at approximately 8 feet. Heavy groundwater seepage observed at approximately 2 feet. Moderate caving observed from 0 to 3 feet.		15.2
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.

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LOG OF TEST PIT NO. TP-113

FIGURE A-44

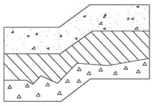
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)	Soft	
1		Gray SILT with sand, fine to medium sand, wet. (ML)		
▼ 2		Gray sandy SILT, fine to medium sand, moist, trace gravel, faintly mottled. (ML)	Medium Stiff	24.1
3				
4				
5		Red/orange and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, some clay, scattered cobbles. (SM)	Medium Dense	21.1
6		Gray gravelly silty SAND, fine to coarse sand, fine to coarse gravel, moist, scattered cobbles. (SM)	Medium Dense to Dense	
7				
8				
9		Test Pit terminated at approximately 9 feet. Light groundwater seepage observed at approximately 2 feet. No caving observed.		18.9
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-114

FIGURE A-45

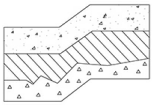
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2.5 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1		Gray SILT with sand, fine to medium sand, wet. (ML)	Soft	
2				25.8
3		Gray sandy SILT, fine to medium sand, moist, trace gravel, mottled. (ML)	Medium Stiff	34.0
4				
5		Red/orange and gray silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, some clay, mottled. (SM)	Medium Dense to Dense	24.1
6				
7				
8		Test Pit terminated at approximately 8 feet. Moderate groundwater seepage observed at approximately 2.5 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-115

FIGURE A-46

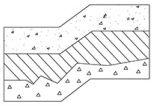
PROJECT NAME: Chehalis Landing **PROJ. NO:** T-8643-1 **LOGGED BY:** SLK

LOCATION: Chehalis, Washington **SURFACE CONDITIONS:** Thick Grass **APPROX. ELEV:** N/A

DATE LOGGED: March 14, 2022 **DEPTH TO GROUNDWATER:** 2 feet **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		Dark brown SILT with some sand, moist, scattered roots and organic inclusions. (ML/OL) (Topsoil)		
1			Soft	
		Gray SILT with sand, fine to medium sand, wet. (ML)		
▼ 2				29.6
		Gray sandy SILT, fine to medium sand, moist, some gravel, mottled. (ML)		
3				
4			Medium Dense/Stiff	
5				25.2
		Intermixed gray gravelly SILT with sand and silty gravelly, SAND, fine to medium sand, fine to coarse gravel, moist, heavily mottled. (ML/GM)		
6				
7			Medium Dense	
8				23.2
		Test Pit terminated at approximately 8 feet. Light groundwater seepage observed at approximately 2 feet. No caving observed.		
9				
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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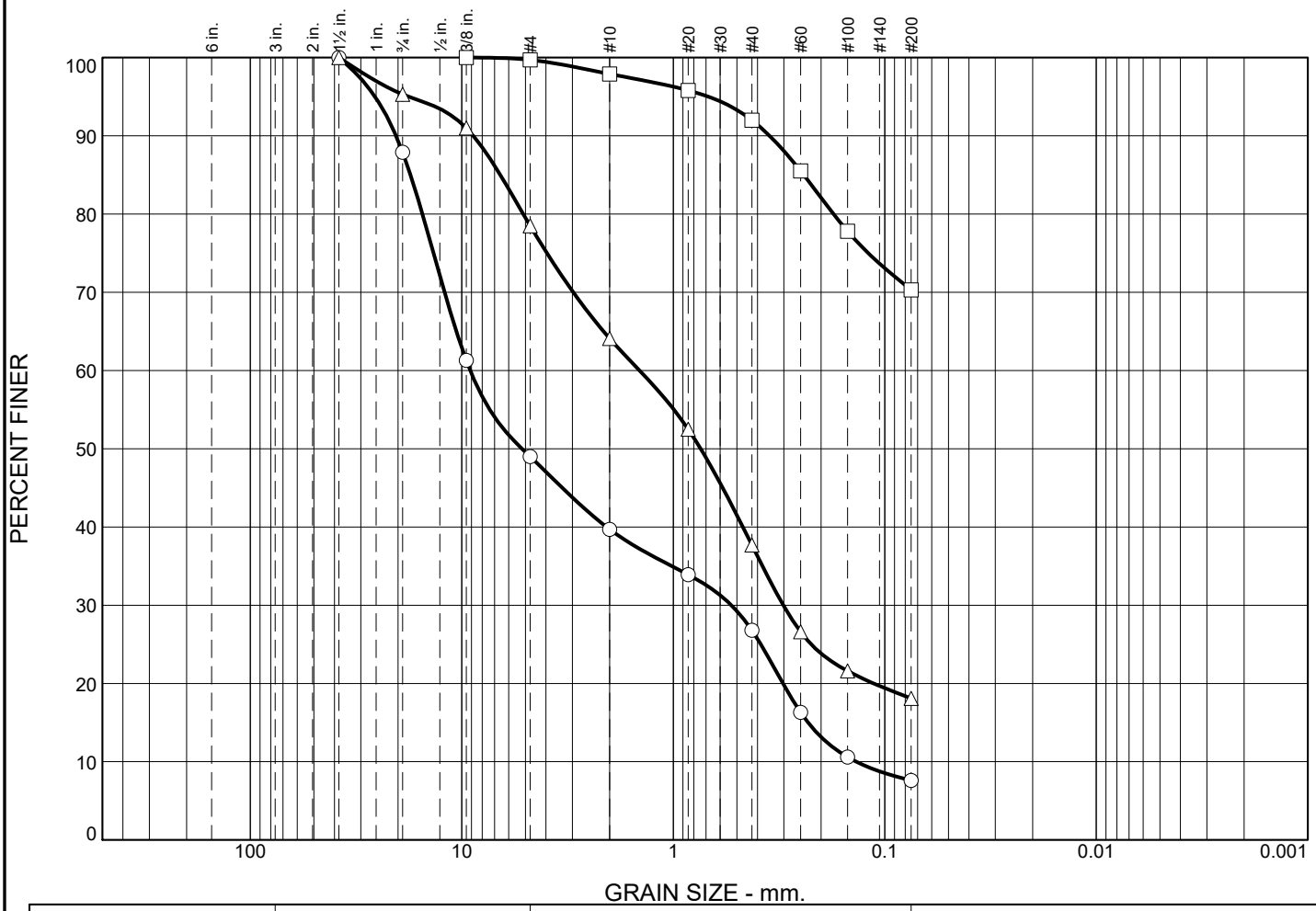
Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	12.1	38.9	9.3	12.9	19.2	7.6	
□	0.0	0.0	0.3	1.8	5.9	21.7	70.3	
△	0.0	4.7	16.8	14.4	26.4	19.6	18.1	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			17.4828	9.1227	5.1917	0.5314	0.2304	0.1364	0.23	66.87
□			0.2418							
△			6.5777	1.4446	0.7420	0.3018				

Material Description	USCS	AASHTO
○ poorly graded GRAVEL with silt and sand	GP-GM	
□ sandy SILT	ML	
△ silty SAND with gravel	SM	

Project No. T-8643-1 **Client:** CRG

Project: Chehalis Landing

Lewis County, Washington

○ **Location:** Test Pit TP-2 **Depth:** -9 feet

□ **Location:** Test Pit TP-9 **Depth:** -6 feet

△ **Location:** Test Pit TP-17 **Depth:** -7 feet

Terra Associates, Inc.

Kirkland, WA

Remarks:

○ Tested on December 22, 2021

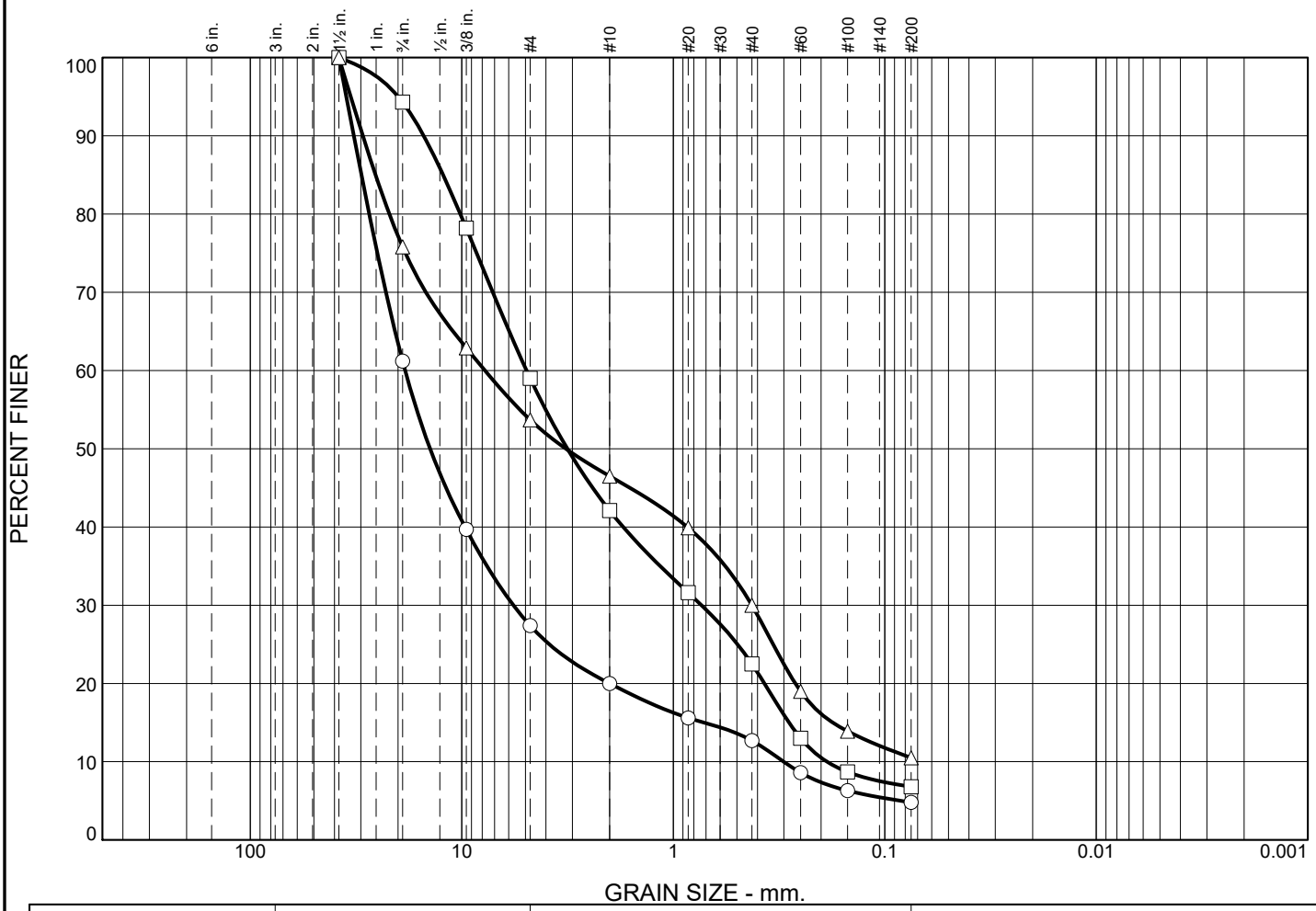
□ Tested on December 22, 2021

△ Tested on December 22, 2021

Figure A-47

Tested By: FQ

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	38.8	33.8	7.4	7.3	7.9	4.8	
□	0.0	5.7	35.3	16.9	19.6	15.7	6.8	
△	0.0	24.2	22.1	7.2	16.5	19.5	10.5	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			29.8083	18.5320	14.1239	5.7050	0.7157	0.3007	5.84	61.63
□			12.2557	4.9423	3.1683	0.7359	0.2836	0.1878	0.58	26.31
△			25.5743	7.7730	3.2225	0.4250	0.1764			

Material Description	USCS	AASHTO
○ poorly graded GRAVEL with sand	GP	
□ poorly graded SAND with silt and gravel	SW-SM	
△ poorly graded SAND with silt and gravel	SW-SM	

Project No. T-8643-1 **Client:** CRG

Project: Chehalis Landing

Lewis County, Washington

○ **Location:** Test Pit TP-22 **Depth:** -8 feet

□ **Location:** Test Pit TP-25 **Depth:** -3 feet

△ **Location:** Test Pit TP-29 **Depth:** -4 feet

Terra Associates, Inc.

Kirkland, WA

Remarks:

○ Tested on December 22, 2021

□ Tested on December 22, 2021

△ Tested on December 22, 2021

Figure A-48

Tested By: FQ

Particle Size Distribution Report

	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.5	8.5	25.1	47.4	11.5	
□	0.0	16.3	28.1	8.4	10.2	12.1	24.9	
△	0.0	32.0	10.0	4.0	23.4	11.8	18.8	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.3016	0.4337	0.3674	0.2687	0.1583			
□			20.0202	6.8440	2.8379	0.2223				
△			29.0109	5.9262	0.8379	0.4131				

Material Description	USCS	AASHTO
○ poorly graded SAND with silt	SP-SM	
□ silty gravelly SAND	SM	
△ silty gravelly SAND	SM	

Project No. T-8643-1 **Client:** CRG

Project: Chehalis Landing

Lewis County, Washington

○ **Location:** Test Pit TP-103 **Depth:** -7 feet

□ **Location:** Test Pit TP-106 **Depth:** -8 feet

△ **Location:** Test Pit TP-113 **Depth:** -5 feet

Remarks:

○ Tested on March 25, 2022

□ Tested on March 25, 2022

△ Tested on March 25, 2022

Terra Associates, Inc.

Kirkland, WA

Figure A-49

Tested By: KJ

APPENDIX B

SUBSURFACE EXPLORATIONS BY OTHERS

BORING LOG NO. B-A03

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6264° Longitude: -122.9054°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	246.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
			FAT CLAY WITH SAND (CH), with organics, brown with orangish brown, moist, very soft
	2.9	244+/-	hard, transitions to olive gray silty clay at 2.3 ft
2			**CLAYEY SAND WITH GRAVEL (SC)**, trace clay, reddish brown to dark brown, moist, dense, stratified
			medium dense, interbedded with silty clay
			orangish brown to dark reddish brown
			dark reddish brown and dark brown, wet
			dense, interbedded with clay
			interbedded with 5-inches reddish brown clayey sand with silt
	13.5	233.5+/-	
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, trace gravel, bluish gray, wet, very loose
			dark bluish gray, very dense, interbedded with soft clayey silt with sand
			hard drilling

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			12	0-0-0-1 N=0	S-1			
			18	5-18-24 N=42	S-2			
5	▽		15	18-15-11 N=26	S-3			
			9	8-13-11 N=24	S-4			
			16	8-11-16 N=27	S-5	20.4		16
			16	12-20-16 N=36	S-6			
10			15	6-15-22 N=37	S-7			
15			3	4-0-0 N=0	S-8			
			16	17-37-48 N=85	S-9			
20			9	36-50/6"	S-10			
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-08-2021 | Boring Completed: 01-08-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A03

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6264° Longitude: -122.9054°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, trace gravel, bluish gray, wet, very loose *(continued)* very dense				12	19-33-31 N=64	S-11	11.9		13
		28.5	218.5+/-									
4			**FAT CLAY (CH)**, bluish gray, wet, very stiff	30			18	5-8-11 N=19	S-12			
			trace silt, light bluish gray	35			18	9-9-15 N=24	S-13	34.9	71-26-45	
				40	▽		18	18-13-15 N=28	S-14			
		41.5	205.5+/-									
			Boring Terminated at 41.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-08-2021 | Boring Completed: 01-08-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6261° Longitude: -122.9048°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	246.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	2.0	245+/-	**FAT CLAY WITH SAND (CH)**, with organics, dark brown with orangish brown, moist, very soft, with silt
			gray with orangish brown
			CLAYEY SAND (SC), fine to medium grained, gray to reddish brown, moist, medium dense fine grained
			with gravel, reddish brown with brownish gray
			with gravel, interbedded with clay layer at 5.2 ft and 5.5 ft
			with gravel, reddish brown and brownish gray, dense
			reddish brown, wet, very dense
	13.5	233.5+/-	
			FAT CLAY WITH SAND (CH), dark brown, wet, very soft, with wood debris
	15.8	231+/-	
	16.5	230.5+/-	**FAT CLAY (CH)**, trace silt and sand, dark grayish brown, wet, very soft, with wood debris
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, medium to coarse grained, dark bluish gray, wet, very dense
			dense

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			15.6	0-0-0-2 N=0	S-1			
			18	5-8-10 N=18	S-2			
			18	7-11-14 N=25	S-3			
5			18	7-12-17 N=29	S-4			
			18	8-17-18 N=35	S-5			
			18	15-17-15 N=32	S-6	13.8		14
10	▽		13	20-23-34 N=57	S-7			
15			18	0-0-0 N=0	S-8	123.1	90-60-30	
			18	20-27-27 N=54	S-9	11.9		11
20			11	14-10-21 N=31	S-10			
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-08-2021 | Boring Completed: 01-08-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6261° Longitude: -122.9048°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3					▽		0	50/3"	S-11			
							0	24-21-23	S-12			
				30			18	11-10-13 N=23	S-13			
		32.5	214.5+/-									
4				35			18	10-11-15 N=26	S-14			
				40			0	50/6"	S-15			
		44.0	203+/-				18	12-14-19 N=33	S-16			

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium to coarse grained, dark bluish gray, wet, very dense *(continued)*

very dense, no sample recovery

dense, no sample recovery

medium dense

medium dense

FAT CLAY (CH), dark bluish gray, wet, very stiff

hard, no sample recovery

Boring Terminated at 44 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-08-2021 | Boring Completed: 01-08-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6255° Longitude: -122.9037°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	247.5+/-	**TOPSOIL**, with organics, dark brown, moist to wet, very soft
2	4.5	243.5+/-	**SANDY FAT CLAY (CH)**, trace gravel, yellowish brown to gray with orange mottling, moist, soft, with organics trace organics, medium stiff very stiff
2	11.0	237+/-	**CLAYEY SAND WITH GRAVEL (SC)**, orangish brown to brown, moist, very stiff, with silt and sand lenses rock fragements in sampler, blow counts might be overstated reddish brown, wet, hard, increase in gravel content, rock fragements in sampler, blow counts might be overstated very stiff, decrease in gravel content, sand content increasing with depth, transitions to gray sand with silt
2	17.0	231+/-	**LEAN CLAY (CL)**, dark gray, wet, very stiff to medium stiff
3	23.0	225+/-	**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GM)**, dark gray, wet, very dense only rock fragments recovered, blow counts might be overstated
			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium to coarse grained, dark grayish blue to dark gray, wet, dense

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			20	0-1-2-3 N=3	S-0			
			9	1-2-5 N=7	S-1			
			15	2-4-12 N=16	S-2			
5			13	3-8-11 N=19	S-3	19.2		35
			12	6-26-18 N=44	S-4			
			10	15-45-32 N=77	S-5			
10			15	4-8-15 N=23	S-6			
15			10	4-3-3 N=6	S-7	35.3	49-25-24	
20			3	25-50/3"	S-8			
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6255° Longitude: -122.9037° Approximate Surface Elev.: 248 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, medium to coarse grained, dark grayish blue to dark gray, wet, dense *(continued)*				6	8-14-23 N=37	S-9	15.4		11
		boring determinated due to the obstruction 30.0 218+/-	30								
		Auger Refusal at 30 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6246° Longitude: -122.9022°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	251.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
			SANDY FAT CLAY (CH), trace organics, gray and orange, moist, soft
	2.5	249.5+/-	
			SILTY CLAY (CL-ML), low to medium plasticity, olive gray, moist, medium stiff, sand content increasing with depth
	4.0	248+/-	possibly perched groundwater
2			**SANDY FAT CLAY WITH GRAVEL (CH)**, orangish brown, moist, very stiff
			stiff
			grayish brown to gray, decrease in gravel content
			very stiff, increase in gravel content, rock fragements in sampler, blow counts might be overstated
			increase in gravel content, blow count might be over stated due to rock fragments
	10.5	241.5+/-	
4			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to grayish brown, wet, very dense
			rock fragements in sampler, blow counts might be overstated
			only rock fragments recovered, blow counts might be overstated
	24.0	228+/-	
3			

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			13	0-1-1-2 N=2	S-0			
			9	1-2-2 N=4	S-1			
	▽		12	4-13-11 N=24	S-2			
5			11	5-7-7 N=14	S-3	19.0		43
			6	3-4-8 N=12	S-4			
			11	4-8-11 N=19	S-5			
10	▽		6	4-10-21 N=31	S-6			
15			6	10-25-33 N=58	S-7			
20			6	24-31-36 N=67	S-8	12.5		8
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 81215062 PROPOSED INDUSTRI.GPJ TERRACON_DATATEMPLATE.GDT 8/23/21

BORING LOG NO. B-A09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6246° Longitude: -122.9022°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3												
			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium grained, dark blue to dark gray, wet, medium dense *(continued)*				12	10-8-11 N=19	S-9			
		26.5	225.5+/-									
4			**FAT CLAY (CH)**, medium plasticity, dark grayish blue, wet, hard									
				30			18	9-12-19 N=31	S-10	30.7	58-19-39	
			very stiff									
				35			14	8-11-13 N=24	S-11			
				40			18	8-11-15 N=26	S-12	39.9	80-28-52	
			medium plasticity, dark gray to dark grayish blue	45			18	7-8-11 N=19	S-13			
				50								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6246° Longitude: -122.9022° Approximate Surface Elev.: 252 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4		**FAT CLAY (CH)**, medium plasticity, dark grayish blue, wet, hard *(continued)* 51.5 / 200.5+/-				18	8-11-13 N=24	S-14	39.2	109-29-80	
		Boring Terminated at 51.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6239° Longitude: -122.9011°

Approximate Surface Elev.: 256 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	255.5+/-									
			TOPSOIL, with organics, brown with reddish brown, moist, very soft									
			SILTY CLAY (CL-ML), with organics, gray and orange, moist, soft				16	0-1-2-4 N=3	S-0			
			trace organics				2	1-2-2 N=4	S-1			
							4	1-1-2 N=3	S-2			
		5.5	250.5+/-	5			8	1-4-10 N=14	S-3			
2			**SANDY FAT CLAY WITH GRAVEL (CH)**, orangish brown, moist, stiff, gravel content increasing with depth, rock fragments, blow counts might be over stated				8	5-10-12 N=22	S-4			
			very stiff, interbedded with gray and orange clay				13	11-12-15 N=27	S-5			
			interbedded sand with gravel, reddish brown				14	3-5-7 N=12	S-6	27.5		44
		9.0	247+/-	10								
			CLAYEY SAND (SC), low to no plasticity, yellowish brown to grayish brown with orange mottling, moist, medium dense, sand content increasing with depth									
		12.0	244+/-									
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown, moist to wet, very dense	15	▽							
			wet, only rock fragments recovered, blow counts might be overstated		▽		4	14-50/6"	S-7			
				20			9	7-24-29 N=53	S-8			
		21.5	234.5+/-									
			Boring Terminated at 21.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-A15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.8990°

Approximate Surface Elev.: 262 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	261.5+/-	**TOPSOIL**, with organics, brown to dark brown, moist, very soft to medium stiff				13	0-2-3-3 N=5	S-0			
				FAT CLAY WITH SAND (CH), trace gravel, grayish brown with orange mottling, moist, medium stiff, sand content increasing with depth				7	1-2-2 N=4	S-1			
				very stiff				14	2-6-11 N=17	S-2	26.1	63-21-42	
				trace coarse grained sand	5			13	2-7-13 N=20	S-3			
				reddish brown, interbedded with sand at 6 ft and gray and orange silty clay at 6.5 ft				12	3-7-15 N=22	S-4			
		7.0	255+/-										
2				**CLAYEY SAND WITH GRAVEL (SC)**, orangish brown, moist, very stiff				11	3-7-15 N=22	S-5			
				decreasing in gravel content, increasing in sand content	10			13	7-11-12 N=23	S-6			
				hard, rock fragments in sampler, blow content might be overstated, silty clay at the bottom of the sample	15			15	10-18-14 N=32	S-7	18.4		38
				rock fragments in sampler, blow content might be overstated	20			6	6-35-50/4"	S-8			
		21.3	240.5+/-										
				Boring Terminated at 21.3 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6258° Longitude: -122.9052°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	246.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
			FAT CLAY (CH), with organics, brownish gray with reddish brown, moist, very soft
			trace organics, olive brownish gray with brown, very stiff, with gravel
	3.5	243.5+/-	
2			**CLAYEY SAND WITH GRAVEL (SC)**, trace gravel, reddish brown to dark brown, moist, medium dense, yellow sand patches
			with gravel
			with gravel, dark reddish brown with brown
			very dense
			dense
	13.5	233.5+/-	
			SANDY FAT CLAY (CH), bluish gray, moist, medium stiff
	18.5	228.5+/-	
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, dark gray, wet, very dense

DEPTH (Ft.)	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	18	0-0-0-2 N=0	S-1			
	18	3-8-14 N=22	S-2			
	17	4-9-8 N=17	S-3			
5	14	6-6-8 N=14	S-4	20.0		16
	14	1-4-15 N=19	S-5			
	8	15-25-28 N=53	S-6			
10	14	21-25-19 N=44	S-7			
15	18	2-2-4 N=6	S-8	35.5		50
20	6	24-50/4"	S-9			
25						

WATER LEVEL OBSERVATIONS: ▽ Inferred from change in sample moisture

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6258° Longitude: -122.9052°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							12	37-42-42 N=84	S-10			
				30			0	50/4"	S-11			
		35.5	211.5+/-	35			18	18-10-12 N=22	S-12			
4				40			18	5-5-7 N=12	S-13			
		41.5	205.5+/-									

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), dark gray, wet, very dense *(continued)*

no sample recovery, gravel stuck in shoe, blowcounts may be overstated

medium dense

FAT CLAY (CH), bluish gray, wet, very stiff

stiff

Boring Terminated at 41.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6255° Longitude: -122.9046°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	247.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
	2.0	246+/-	**FAT CLAY WITH SAND (CH)**, with organics, brown with orangish brown, moist, very soft
	2.5	245.5+/-	**CLAYEY SAND (SC)**, trace gravel, dark brown with gray, moist, medium dense, stratified
	4.2	244+/-	**FAT CLAY (CH)**, olive gray, moist, very stiff trace organics, olive gray with reddish brown, with fine sand
2	6.5	241.5+/-	**CLAYEY SAND WITH GRAVEL (SC)**, reddish brown, moist, medium dense
	7.6	240.5+/-	**FAT CLAY WITH SAND (ML)**, with clay, olive grayish brown with reddish brown, moist, stiff olive gray with brown
	13.5	234.5+/-	**CLAYEY GRAVEL WITH SAND (GC)**, fine to medium grained, reddish brown, moist, dense with gravel, fine to coarse grained, brown to dark brown, moist dark brown with reddish brown
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, dark gray and bluish gray, wet, very dense
			olive gray to dark gray, dense

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			21.6	0-0-0-1 N=0	S-1			
			16	6-14-11 N=25	S-2			
			16	4-9-9 N=18	S-3			
5			17	7-8-11 N=19	S-4			
			18	4-4-6 N=10	S-5			
			18	6-16-24 N=40	S-6			
10			14	27-26-24 N=50	S-7	12.3		13
15			10	24-26-30 N=56	S-8			
20			7	1-17-25 N=42	S-9			
25	▽							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6255° Longitude: -122.9046°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							15	23-37-35 N=72	S-10	14.4		10
		28.5	219.5+/-									
4			**FAT CLAY (CH)**, with silt, bluish gray, wet, very stiff	30	▽		12	5-9-10 N=19	S-11			
			stiff	35			18	2-5-9 N=14	S-12			
		36.5	211.5+/-									

WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), dark gray and bluish gray, wet, very dense *(continued)*
bluish gray to dark gray

Boring Terminated at 36.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6249° Longitude: -122.9036°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	247.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft				22.8	0-0-0-1 N=0	S-1			
			FAT CLAY (CH), with organics, gray with orangish brown, moist, very soft									
			reddish brown with olive gray, very stiff				17	5-11-13 N=24	S-2			
		3.2	245+/-									
			CLAYEY SAND WITH GRAVEL (SC), reddish brown, moist, dense				14	6-12-21 N=33	S-3	18.5		32
			dark brown with reddish brown	5								
			medium dense light reddish brown to dark brown				17	6-12-10 N=22	S-4			
			reddish brown				16	8-7-12 N=19	S-5			
2			dark brown with reddish brown, moist dense				18	10-19-25 N=44	S-6			
			medium dense	10			18	5-4-16 N=20	S-7	30.7		47
		10.3	237.5+/-									
			FAT CLAY (CH), bluish gray with trace reddish brown, moist, very stiff									
			bluish gray	15			18	4-6-9 N=15	S-8			
		17.0	231+/-									
			POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), bluish gray to dark gray, moist, very dense				1	50/6"	S-9			
3			dark gray, wet	20	▽		5	50/6"	S-10			
					▽							
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6249° Longitude: -122.9036° Approximate Surface Elev.: 248 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, bluish gray to dark gray, moist, very dense *(continued)*									
		no sample recovery				0	50/0"	S-11			
		no sample recovery				0	50/2"	S-12			
		no sample recovery	30			0	50/1"	S-13			
		no sample recovery 35.0 213+/-	35			0	50/0"	S-14			
		Boring Terminated at 35 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6243° Longitude: -122.9025°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	249.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		FAT CLAY (CH), low to medium plasticity, olive gray with orange mottling, moist, medium stiff					17	0-2-2-2 N=4	S-0			
							8	1-2-3 N=5	S-1			
		3.5	246.5+/-									
		SANDY FAT CLAY WITH GRAVEL (CH), orangish brown with gray mottling, moist, hard					8	7-17-14 N=31	S-2			
		stiff, with interbedded clay		5			9	2-4-5 N=9	S-3			
							6	3-5-9 N=14	S-4			
		8.5	241.5+/-									
2		**FAT CLAY (CH)**, light gray, moist, stiff, sand content increasing with depth, transitions to orange brown silty sand gradually					8	1-6-11 N=17	S-5			
		low to medium plasticity, olive gray with orange mottling, moist, very stiff		10			6	6-9-8 N=17	S-6			
		stiff		15			15	3-4-7 N=11	S-7	34.9	57-24-33	
		18.0	232+/-									
3		**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to grayish brown, wet, very dense										
		rock fragments in sampler, blow counts might be overstated		20			8	24-50/5"	S-8			
		22.0	228+/-									
		Auger Refusal at 22 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9020°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	250.5+/-	**TOPSOIL (ML)**, with organics, dark brown, moist, very soft
			LEAN CLAY (CL), low to medium plasticity, olive gray with orange mottling, moist, soft
			low to medium plasticity, medium stiff
			stiff, sand content increasing and clay content decreasing with depth
2	5.0	246+/-	**CLAYEY SAND WITH GRAVEL (SC)**, orangish brown, moist, medium dense, silt content increasing with depth
	6.5	244.5+/-	**FAT CLAY (CH)**, trace gravels, orangish brown, moist, stiff, gravel content increasing with depth
			very stiff, rock fragments in sampler, blow counts might be over stated
	10.0	241+/-	**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, orangish brown to grayish brown, moist, very dense
3			wet, dense
			very dense

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		11	0-0-2-3 N=2	S-0			
		10	1-2-3 N=5	S-1	41.0	49-26-23	
5		9	3-5-10 N=15	S-2			
		11	4-13-4 N=17	S-3			
		9	2-5-5 N=10	S-4			
		10	3-10-12 N=22	S-5			
10		7	7-22-33 N=55	S-6			
15		12	11-19-28 N=47	S-7			
20		9	28-50/4"	S-8			
25							

WATER LEVEL OBSERVATIONS

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Measured with water level indicator

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6240° Longitude: -122.9020° Approximate Surface Elev.: 251 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		26.5 / 224.5+/-				10	29-36-50/6"	S-9	14.3		10
		Auger Refusal at 26.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Measured with water level indicator

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6236° Longitude: -122.9015°

Approximate Surface Elev.: 253 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	252.5+/-	**TOPSOIL (ML)**, with organics, dark brown, moist, very soft
2			**SANDY FAT CLAY WITH GRAVEL (CH)**, low to medium plasticity, orangish brown with gray mottling, moist, medium stiff
			trace organics, with orange mottling
			with orange mottling, less fine roots
			very stiff, rock fragments in sampler, blow counts might be overstated
			hard, rock fragments in sampler, blow counts might be overstated
			very stiff
			stiff, decrease in gravel content
			hard, only rock fragments recovered, blow counts might be overstated
			possibly perched groundwater
			wet, transiitons to silty sand with gravel, gravel content increasing with depth
	16.5	236.5+/-	
3			**WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC)**, orangish brown to grayish brown, wet, very dense
	20.3	232.5+/-	only rock fragments recovered, blow counts might be overstated, no sample recovery
			Auger Refusal at 20.3 Feet

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		19	1-2-3-5 N=5	S-0			
		8	2-5-15 N=20	S-1			
5		10	3-12-28 N=40	S-2			
		9	3-6-12 N=18	S-3			
		14	3-4-4 N=8	S-4			
		13	4-12-22 N=34	S-5			
10							
15		13	12-16-32 N=48	S-6	18.2		12
20		0	24-50/-3"	S-7			

WATER LEVEL OBSERVATIONS: ▽ Measured with water level indicator

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6233° Longitude: -122.9010°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	253.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
2		**SILTY CLAY (CL-ML)**, low to medium plasticity, gray and orange, moist, medium stiff					19	0-2-3-4 N=5	S-0			
							8	1-2-4 N=6	S-1			
		transitions to sandy silt, gray with orange mottling					10	3-6-10 N=16	S-2			
		4.5	249.5+/-	5			9	7-10-24 N=34	S-3			
		POORLY GRADED SAND WITH GRAVEL (SP), orangish brown with gray mottling, moist, dense rock fragments in sampler, blow counts might be overstated					14	8-14-18 N=32	S-4	13.1		
		medium dense, with interbedded silt and sand					13	3-6-8 N=14	S-5			
		with interbedded sand and clay		10			13	3-5-10 N=15	S-6			
		12.5	241.5+/-		▽							
3		**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to grayish brown, wet, dense to very dense										
		blow counts might be overstated, no sample recovery		15	▽		0	50/3"	S-7			
				20			2	50/4"	S-8			
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6233° Longitude: -122.9010° Approximate Surface Elev.: 254 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		25.3 / 228.5+/- ***Boring Terminated at 25.3 Feet***				2	50/4"	S-9			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B13

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6230° Longitude: -122.9004°

Approximate Surface Elev.: 256 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	255.5+/-	**TOPSOIL**, with organics, brown to dark brown, moist, very soft
	2.0	254+/-	**SANDY FAT CLAY WITH GRAVEL (CH)**, trace organics, low plasticity, gray and orange, moist, medium stiff trace organics, with orange mottling
2	4.5	251.5+/-	**LEAN CLAY (CL)**, trace organics, gray and orange, moist, medium stiff trace organics, low to medium plasticity, olive gray with orange mottling, very stiff, sand content increasing and clay content decreasing with depth transitions to silty sand with gravel
			SANDY FAT CLAY WITH GRAVEL (CH), orangish brown, moist, very stiff rock fragments in sampler, blow counts might be overstated
			with yellowish brown with orange mottling interbedded silt wet, hard, no sample recovery, possibly due to cobbles
	14.0	242+/-	
			FAT CLAY (CH), medium plasticity, yellowish brown, wet, stiff
	18.0	238+/-	
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to grayish brown, wet, very dense
	20.8	235+/-	only rock fragments recovered, blow counts might be overstated
			Boring Terminated at 20.8 Feet

DEPTH (Ft.)	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	20	0-1-3-3 N=4	S-0			
	10	1-2-3 N=5	S-1	33.5	46-23-23	
5	11	3-4-12 N=16	S-2			
	8	3-13-14 N=27	S-3			
	11	11-13-16 N=29	S-4			
	9	10-15-7 N=22	S-5			
10	0	3-15-17	S-6			
15	12	3-4-6 N=10	S-7			
20	9	18-50/4"	S-8			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.8999°

Approximate Surface Elev.: 260 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	259.5+/-									
			TOPSOIL, with organics, brown, moist, very soft									
			SANDY FAT CLAY (CH), brown, moist, very soft				23	1-0-0 N=0	S-1			
		2.0	258+/-									
2			**CLAYEY SAND (SC)**, trace gravel, orange brown, moist, medium dense				13	7-9-16 N=25	S-2	22.9	42-22-20	38
			with gravel, brown to orange brown, very dense	5			16	16-22-29-32 N=51	S-3			
			trace gravel, orange brown, dense				5.5	4-23-23-16 N=46	S-4	21.5	33-16-17	21
			orange to orange gray, medium dense				18	4-7-8-21 N=15	S-5	21.9	31-18-13	24
		10.0	increase in gravel content 250+/-	10			22	12-12-9-9 N=21	S-6	17.8	34-21-13	3
3			**POORLY GRADED SAND WITH GRAVEL (SP)**, orange to orange gray, moist, medium dense, interbedded with 5-inches of silt		▽							
			with gravel, wet, very dense	15			10	24-34-42 N=76	S-7			
			hard drilling at 16 feet									
		20.0	240+/-	20								
4			**SANDY FAT CLAY WITH GRAVEL (CH)**, brown, wet, hard				1.5	15-17-28 N=45	S-8			
		21.5	238.5+/-									
			Boring Terminated at 21.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-28-2020 | Boring Completed: 12-28-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-B16

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.8988°

Approximate Surface Elev.: 260 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	259.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	5.5	254.5+/-	**FAT CLAY WITH SAND (CH)**, low to medium plasticity, yellowish brown with orange mottling, moist, soft, sand content increasing and clay content decreasing with depth medium stiff, transitions to olive gray to gray, with orange mottling stiff, transitions to sandy silt
2	13.0	247+/-	**SANDY FAT CLAY WITH GRAVEL (CH)**, orangish brown, moist, very stiff rock fragments in sampler, blow count might be overstated stiff transitions to olive gray with orange mottling yellowish brown to grayish brown, wet sand conent increasing with depth
3	20.3	239.5+/-	**CLAYEY SAND WITH GRAVEL (SC)**, orangish brown, wet, very dense, obstruction gravel content increasing with depth no sample recovery, possibly due to cobbles or boulders, blow counts might be overstated
			Boring Terminated at 20.3 Feet

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			16	0-1-1-2 N=2	S-0			
			7	1-2-2 N=4	S-1			
5			14	2-3-7 N=10	S-2	25.5	67-22-45	
	▽		8	2-10-15 N=25	S-3			
			8	3-5-7 N=12	S-4			
			10	3-5-7 N=12	S-5			
10			10	3-4-5 N=9	S-6			
15	▽		8	2-23-36 N=59	S-7	22.3		20
20			0	50/3"	S-8			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6249° Longitude: -122.9045°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	247.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	3.1	245+/-	**FAT CLAY WITH SAND (CH)**, with organics, brown with orangish brown, moist, very soft, with silt reddish brown with brown, very stiff with sand
2	5.6	242.5+/-	**CLAYEY SAND (SC)**, with clay, reddish brown, moist, medium dense trace gravel with gravel, reddish brown with brownish gray loose
2	6.5	241.5+/-	**FAT CLAY (CH)**, light gray with reddish brown, wet, stiff
2	8.0	240+/-	**CLAYEY SAND (SC)**, with gravel, reddish brown with brownish olive, moist, medium dense reddish brown
2	13.5	234.5+/-	**FAT CLAY (CH)**, black, stiff trace silt with silt, bluish gray
2	15.5	232.5+/-	**CLAYEY SAND WITH GRAVEL (SC)**, olive brownish gray, wet, medium dense
2	18.5	229.5+/-	**FAT CLAY (CH)**, with silt, bluish gray, wet, very stiff
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, bluish gray to dark gray, wet, very dense

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		18	0-0-1-2 N=1	S-1			
		18	5-7-11 N=18	S-2			
5		17	5-12-17 N=29	S-3			
		18	5-3-5 N=8	S-4			
		18	14-10-7 N=17	S-5A	16.8		20
		18	5-6-7 N=13	S-6			
10		18	2-4-7 N=11	S-7			
15		16	16-12-14 N=26	S-8			
20		5	44-50/6"	S-9			
		13	20-48-48 N=96	S-10	9.4		12
25							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *At 9:54 AM after completion of drilling*
- *At 10:00 AM after completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6249° Longitude: -122.9045°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, bluish gray to dark gray, wet, very dense *(continued)*				6	50/6"	S-11			
							7	5-50/5"	S-12			
			no sample recovery	30			0	50/4"	S-13			
		35.5	dark gray									
4			212.5+/-	35			14	22-35-41 N=76	S-14B S-14A			
		36.5	**FAT CLAY WITH SAND (CH)**, trace gravel, wet, hard									
			211.5+/-									
			Boring Terminated at 36.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *At 9:54 AM after completion of drilling*
- *At 10:00 AM after completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6246° Longitude: -122.9039°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	247.5+/-									
			TOPSOIL, with organics, dark brown with orangish brown, moist, very soft									
		2.0	246+/-									
			FAT CLAY WITH SAND (CH), with organics, olive grayish brown with orangish brown, moist, very soft									
		3.5	244.5+/-									
			CLAYEY SAND (SC), with clay, brownish gray with reddish brown, moist, dense, stratified				19	0-0-0-3 N=0	S-1			
							17	8-12-18 N=30	S-2			
			CLAYEY SAND WITH GRAVEL (SC), dark reddish brown to dark brown, moist, dense, stratified				16	9-17-13 N=30	S-3	15.6		16
			medium dense	5			15	6-4-7 N=11	S-4			
			dense				17	9-21-14 N=35	S-5			
		7.5	240.5+/-									
			CLAYEY SAND (SC), with clay, olive gray, very stiff				18	4-6-10 N=16	S-6	27.5		33
2		9.5	238.5+/-									
		10.5	**FAT CLAY (CH)**, with sillt and sand, olive gray with reddish brown, moist, hard 237.5+/-	10			16	5-12-21 N=33	S-7			
			CLAYEY SAND (SC), with silt, olive gray, moist, dense									
		13.5	234.5+/-									
			FAT CLAY WITH SAND (CH), bluish gray, wet, stiff, stratified	15	▽		18	2-1-12 N=13	S-8			
		18.5	229.5+/-									
			CLAYEY GRAVEL WITH SAND (GC), dark brown, wet, very dense	20			7	31-50/5"	S-9			
3			rock fragements in sampler, blowcounts might be overstated		▽							
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6246° Longitude: -122.9039°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							6	32-50/5"	S-10	9.4		16
				30			1	50/6"	S-11			
				35			2	31-50/3"	S-12			
		35.8	212.5+/-									

CLAYEY GRAVEL WITH SAND (GC), dark brown, wet, very dense *(continued)*
bluish gray, coarse gravel, rock fragements in sampler, blowcounts might be overstated

Boring Terminated at 35.75 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9029°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	DESCRIPTION
1	0.5	249.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	2.0	248+/-	**FAT CLAY WITH SAND (CH)**, with organics, dark brown with orangish brown, moist, very soft
2	5.0	245+/-	olive gray with orangish brown **CLAYEY SAND (SC)**, trace organics, grayish brown with reddish brown, moist, medium dense, with silt trace gravel, reddish brown, moist, medium dense brownish gray with dark reddish brown
2	6.0	244+/-	**FAT CLAY (CH)**, with sillt and sand, olive gray with white, moist, very stiff
2	9.5	240.5+/-	**CLAYEY SAND WITH GRAVEL (SC)**, reddish brown, moist, medium dense fine to coarse grained
2	16.3	233.5+/-	**FAT CLAY (CH)**, with silt, olive gray with reddish brown, moist, stiff light bluish gray bluish gray, hard
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, medium to coarse grained, dark bluish gray, moist, very dense no sample recovery wet

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		20	0-0-0-2 N=0	S-1			
		17	4-7-10 N=17	S-2			
		13	5-8-12 N=20	S-3			
5		16	3-5-14 N=19	S-4			
		13	17-13-16 N=29	S-5	14.9		25
		18	6-10-10 N=20	S-6			
10		17	3-3-6 N=9	S-7			
		30		ST-1			
15		18	3-19-50/4"	S-8			
20		0	50/0	S-9			
25							

WATER LEVEL OBSERVATIONS

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-06-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9029°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							3	50/6"	S-10	7.9		11
				30			9	15-27-41 N=68	S-11			
				35			9	40-50/5"	S-12			

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium to coarse grained, dark bluish gray, moist, very dense *(continued)*
dark gray, wet

dark bluish gray, silt content increased

35.9 214+/-

Boring Terminated at 35.92 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 Boring Completed: 01-06-2021

Drill Rig: D-70 Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6237° Longitude: -122.9024°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	249.5+/-									
			TOPSOIL, with organics, dark brown, moist, soft									
			SANDY FAT CLAY (CH), with organics, dark brown, moist, soft				17	2-1-1-2 N=2	S-0			
			trace organics									
			grayish brown with orange mottling, moist				8	2-5-6 N=11	S-1			
		3.0	247+/-									
			stiff, abundant rock fragments, blow counts might be overstated				7	4-4-7 N=11	S-2			
			FAT CLAY (CH), trace gravel, low to medium plasticity, olive gray with orange mottling, moist, stiff	5			10	3-5-8 N=13	S-3			
		6.0	244+/-									
2			**SANDY FAT CLAY WITH GRAVEL (CH)**, orangish brown, moist, stiff				7	5-12-13 N=25	S-4			
			abundant rock fragments, blow counts might be overstated				10	7-9-14 N=23	S-5			
			very stiff				13	4-5-9 N=14	S-6			
			olive gray with orange mottling, stiff, decrease in gravel content	10								
		13.0	237+/-									
			FAT CLAY (CH), medium plasticity, bluish gray, moist, stiff to medium stiff				17	2-3-4 N=7	S-7	40.2	68-23-45	
		17.0	233+/-	15								
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, dark gray, moist to wet, very dense									
			abundant rock fragments, blow counts might be overstated	20			10	36-50/5"	S-8			
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6237° Longitude: -122.9024°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							12	19-40-40/5"	S-9	13.1		8
		28.0	222+/-									
				30			7	10-22-50/6"	S-10			
		31.5	218.5+/-									

WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), dark gray, moist to wet, very dense *(continued)*
abundant rock fragments, blow counts might be overstated

WELL GRADED SAND WITH CLAY AND GRAVEL (SW-SC), medium to coarse grained, bluish gray to dark gray, wet, very dense

abundant rock fragments, blow counts might be overstated

Boring Terminated at 31.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6224° Longitude: -122.9002°

Approximate Surface Elev.: 256 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	255.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
	2.0	254+/-	**SANDY FAT CLAY (CH)**, with organics, dark brown, moist, very soft
			CLAYEY SAND (SC), brown, moist, dense with gravel, fine to medium grained, orange brown
	6.5	249.5+/-	
2	8.0	248+/-	**SANDY FAT CLAY (CH)**, trace gravel, fine grained, light brown to grey brown, moist, medium stiff
			CLAYEY SAND (SC), trace gravel, fine grained, orangish brown, moist, medium dense increasing sand content fine to medium grained, medium dense
	15.0	241+/-	
3			**CLAYEY SAND WITH GRAVEL (SC)**, wet, very dense, hard drilling, possibly cobble/boulder encountered
	20.1	236+/-	no sample recovery ***Boring Terminated at 20.1 Feet***

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			16	0-0-0-0 N=0	S-1			
			16	10-20-28 N=48	S-2			
			13	6-15-21 N=36	S-3			
5			7.5	10-19-11 N=30	S-4			
			15	2-4-4 N=8	S-5			
			14	4-6-9 N=15	S-6			
10			15	6-7-7 N=14	S-7			
	▽							
15			0.5	50/5"	S-8			
20			0	50/1"	S-9			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-28-2020 | Boring Completed: 12-28-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 81215062 PROPOSED INDUSTRI.GPJ TERRACON_DATATEMPLATE.GDT 8/23/21

BORING LOG NO. B-C15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.8997°

Approximate Surface Elev.: 258 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	257.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	3.5	254.5+/-	**FAT CLAY (CH)**, trace gravel, low to medium plasticity, gray and orange, moist, soft to medium stiff, trace organics trace organics, low to medium plasticity olive gray, stiff, sand content increasing and clay content decreasing with depth **CLAYEY SAND WITH GRAVEL (SC)**, orange to orangish brown, moist, very stiff, less gravel content, rock fragments, blow counts might be over stated hard, abundant rock fragments, blow counts might be overstated stiff very stiff, rock fragments, blow counts might be over stated abundant rock fragments, blow counts might be over stated
3	12.0	246+/-	**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, dark gray, wet, very dense rock fragments, blow counts might be over stated
	20.3	237.5+/-	rock fragments, blow counts might be over stated ***Boring Terminated at 20.33 Feet***

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			17	0-1-1-1 N=2	S-0			
			9	0-2-6 N=8	S-1			
			8	3-6-12 N=18	S-2			
5			14	12-17-23 N=40	S-3	14.0		27
			13	1-5-6 N=11	S-4			
			13	1-7-12 N=19	S-5			
10	▽		12	5-7-12 N=19	S-6			
15	▽		12	24-29-36 N=65	S-7	25.5		12
20			4	50/4"	S-8			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-C16

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6218° Longitude: -122.8991°

Approximate Surface Elev.: 260 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	259.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY (CH), trace gravel, low to medium plasticity, gray with orange mottling, moist, soft, trace organics				16	0-1-2-2 N=3	S-0			
			stiff				6	1-3-6 N=9	S-1			
		3.5	256.5+/-									
			POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), orange to orangish brown, moist, dense, rock fragments in sampler, blow counts might be overstated				13	9-17-21 N=38	S-2	11.6		13
			medium dense	5			3	12-10-17 N=27	S-3			
		6.5	253.5+/-									
2			**CLAYEY SAND (SC)**, orangish brown to grayish brown, moist, loose, with interbedded sand				12	2-4-4 N=8	S-4			
							15	2-3-3 N=6	S-5	32.7		48
			trace gravel, gravel content increasing with depth	10			15	2-2-4 N=6	S-6			
		13.0	247+/-		▽							
			WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), dark gray, wet, very dense									
				15	▽							
			rock fragments in sampler, blow counts might be overstated				6	22-50/6"	S-7			
3												
				20								
			no sample recovery, possibly due to cobbles or boulders,				3	31-50/6"	S-8			
		21.0	blow counts might be overstated 239+/-									
			Boring Terminated at 21 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-05-2021 | Boring Completed: 01-05-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6249° Longitude: -122.9055°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION
1		0.5	246.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2				**FAT CLAY (CH)**, with organics, reddish brown to gray, moist, very soft
				trace organics, reddish brown with olive gray, stiff, stratified olive grayish brown to grayish brown
		3.5	243.5+/-	
				FAT CLAY WITH SAND (CH), trace sand and silt, brownish gray with reddish brown, moist, stiff, stratified, interbedded with sand layer at 4.7 ft
				grayish brown, very stiff
				trace gravel, interbedded with 1-foot thick clayey sand with silt at 5.5 ft
		6.5	240.5+/-	
				FAT CLAY (CH), trace silt, olive brown with light brown, moist, stiff, small reddish brown striations
				with silt, olive grayish brown, medium stiff, trace sand, light gray sand pockets
		9.5	237.5+/-	
				CLAYEY SAND (SC), with clay, fine to coarse grained, olive gray, moist, medium dense, stratified
				with gravel, brown to reddish brown
				brownish gray with bluish gray
				interbedded with fine soft bluish gray silt layer at 15.7 ft bgs
		18.5	228.5+/-	
3				**CLAYEY GRAVEL WITH SAND (GC)**, bluish gray, wet, very dense

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			18	0-0-0-2 N=0	S-1			
			18	2-6-9 N=15	S-2			
			18	4-5-8 N=13	S-3	22.7		73
5			14	6-9-8 N=17	S-4			
			11	4-5-5 N=10	S-5	33.9		90
			18	3-3-4 N=7	S-6			
10			16	2-7-21 N=28	S-7			
	▼							
15	▽		15	6-5-15 N=20	S-8			
20	▽		15	26-41-43 N=84	S-9	13.2		19
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- ▽ *Inferred from change in sample moisture*
- ▽ *At 10:16 AM after completion of drilling*
- ▼ *At 10:21 AM after completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6249° Longitude: -122.9055°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							5	50/5"	S-10			
				30			12	26-34-43 N=77	S-11	12.7		8
				35			12	16-8-9 N=17	S-12			
4				40			17	10-9-10 N=19	S-13			
				45			18	8-8-8 N=16	S-14			
				50								

CLAYEY GRAVEL WITH SAND (GC), bluish gray, wet, very dense *(continued)*
dark gray, very dense

28.5 218.5+/-

POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), dark gray, wet, very dense

bluish gray

33.5 213.5+/-

FAT CLAY (CH), bluish gray, wet, very stiff, homogeneous

with silt and sand

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *At 10:16 AM after completion of drilling*
- *At 10:21 AM after completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 Boring Completed: 01-04-2021

Drill Rig: D-70 Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6249° Longitude: -122.9055° Approximate Surface Elev.: 247 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4		**FAT CLAY (CH)**, bluish gray, wet, very stiff, homogeneous *(continued)* 51.5 hard 195.5+/-				18	9-13-21 N=34	S-15			
		Boring Terminated at 51.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *At 10:16 AM after completion of drilling*
- *At 10:21 AM after completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D08

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9038°

Approximate Surface Elev.: 249 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	248.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY WITH SAND (CH), with organics, orangish brown to grayish brown, moist, soft				22	0-0-2-4 N=2	S-1			
		2.5	246.5+/-									
			hard				18	4-12-18 N=30	S-2			
			CLAYEY SAND WITH GRAVEL (SC), with silt, reddish brown with olive grayish brown, moist, dense, stratified fine to coarse grained				14	18-18-21 N=39	S-3			
			medium dense	5			12	10-10-11 N=21	S-4			
			trace gravel, fine to medium grained		▽		18	5-7-12 N=19	S-5			
		8.5	240.5+/-									
2			**FAT CLAY (CH)**, olive gray, moist, hard				11	7-14-17 N=31	S-6			
			olive gray with reddish brown vertical striations, very stiff	10			18	4-6-11 N=17	S-7			
			bluish gray, stiff									
			light bluish gray, stiff	15			18	4-5-9 N=14	S-8A	33.3	62-25-37	
		18.5	230.5+/-									
3			**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, fine to coarse grained, dark bluish gray, moist, very dense	20			5	50/6"	S-9			
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D08

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9038°

Approximate Surface Elev.: 249 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							0	50/3"	S-10			
				30	▽							
							14	23-39-41 N=80	S-11	17.3		
4				35			18	6-8-14 N=22	S-12			

POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), fine to coarse grained, dark bluish gray, moist, very dense *(continued)*
no sample recovery

28.5 — 220.5+/-

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), coarse grained, bluish gray to dark gray, wet, very dense, rock fragments in sampler, blow counts might be overstated

33.5 — 215.5+/-

FAT CLAY (CH), with silt, bluish gray, wet, very stiff

36.5 — 212.5+/-

Boring Terminated at 36.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6231° Longitude: -122.9022°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	251.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY (CH), with organics, orangish brown with gray, moist, very soft				12	0-0-0-2 N=0	S-1			
			trace sand, orangish brown to grayish brown, very stiff with silt, reddish brown with orangish brown, moist, stratified,				18	5-4-18 N=22	S-2			
		3.5	increased sand content, transitions to clayey sand with gravel				15	10-8-6 N=14	S-3			
			CLAYEY SAND WITH GRAVEL (SC), with clay, reddish brown, moist, medium dense, stratified	5			14	5-7-11 N=18	S-4			
			interbedded with olive brownish gray clay layer at 4.2 ft bgs									
		6.5	brownish gray with olive brownish gray									
2			**FAT CLAY (CH)**, with silt and sand, olive brownish gray with reddish brown, moist, stiff				18	3-6-7 N=13	S-5			
			reddish brown striations				18	3-4-6 N=10	S-6			
			olive gray with bluish gray, transitions to fat clay	10			18	8-12-14 N=26	S-7			
			trace sand, reddish brown with olive brownish gray, very stiff									
		13.5										
			CLAYEY SAND WITH GRAVEL (SC), with silt, reddish brown with olive brownish gray, wet, dense, stratified		▽							
			interbedded with fine sand	15			18	11-14-25 N=39	S-8			
		18.5	hard driling at 18 ft									
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, bluish gray to dark gray, wet, very dense	20			7	50/6"	S-9	12.7		12
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6231° Longitude: -122.9022°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, bluish gray to dark gray, wet, very dense *(continued)* fine to coarse grained, dark gray, dense				13	15-17-14 N=31	S-10			
		28.5	223.5+/-									
4			**FAT CLAY (CH)**, light bluish gray, wet, stiff	30			11	4-4-6 N=10	S-11			
		31.5	220.5+/-									
			Boring Terminated at 31.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.9017°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	253.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		FAT CLAY (CH), trace organics, orangish red with gray, moist, very soft					18	0-0-1-2 N=1	S-1			
		2.5	251.5+/-									
		CLAYEY SAND WITH GRAVEL (SC), reddish brown, moist, dense					18	6-19-21 N=40	S-2			
		medium dense					14	13-13-13 N=26	S-3			
		5.0	249+/-	5								
2		**LEAN CLAY (CL)**, trace sand, olive gray, moist, very stiff					16	3-6-9 N=15	S-4	20.6	41-16-25	
		interbedded with 3-inches thick reddish brown silty sand with gravel at 6.5 ft					13	14-17-11 N=28	S-5			
		trace gravel, olive grayish brown with reddish brown, moist					17	11-10-9 N=19	S-6			
		increased sand content observed										
		with sand, olive grayish brown, interbedded with sand layers		10	▽		18	3-8-10 N=18	S-7			
		13.5	240.5+/-									
		CLAYEY SAND WITH GRAVEL (SC), fine to coarse grained, dark gray with brown, wet, very dense		15	▽		12	18-35-38 N=73	S-8			
		18.5	235.5+/-									
3		**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, dark gray, wet, very dense		20			10	22-50/5"	S-9			
		rock fragements in sampler, blow counts might be overstated		25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.9017°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		25.4	228.5+/-				5	50/5"	S-10			

dark gray with brown, very dense

Boring Terminated at 25.42 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-31-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9006°

Approximate Surface Elev.: 256 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	255.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		SANDY FAT CLAY (CH), with organics, dark brown, moist, medium stiff					17	0-3-3-3 N=6	S-1			
		2.0	254+/-									
2		**CLAYEY SAND (SC)**, with gravel, light brown to orange, medium dense					17	7-9-12 N=21	S-2			
		trace gravel, fine grained, light brown to orange, moist					17	2-4-10 N=14	S-3			
		fine to medium grained, moist		5			17	10-12-14 N=26	S-4			
		6.5	249.5+/-									
		LEAN CLAY WITH GRAVEL (CL), light brown, moist, very stiff					2	11-13-11 N=24	S-5			
		8.0	248+/-									
3		**CLAYEY SAND WITH GRAVEL (SC)**, medium grained, gray, moist, medium dense, embedded clay layer					16	5-9-15 N=24	S-6			
		fine grained, light brown, dense		10	▽		17	13-15-20 N=35	S-7			
		orangish brown, very dense		15			14	11-29-40 N=69	S-8			
		gray, rock in tip		20			6	25-31-35 N=66	S-9			
		21.5	234.5+/-									
		Boring Terminated at 21.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-28-2020 | Boring Completed: 12-28-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6218° Longitude: -122.9000°

Approximate Surface Elev.: 257.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	257+/-									
			TOPSOIL, with organics, dark brown, very soft									
			SANDY LEAN CLAY (CL), trace organics, dark brown, moist, medium stiff to stiff				20	0-4-4-4 N=8	S-1			
		2.0	255.5+/-									
			CLAYEY SAND WITH GRAVEL (SC), coarse to medium grained, light brown to orange brown, moist, dense				14	7-18-21 N=39	S-2	15.4	38-18-20	24
							13	6-16-21 N=37	S-3	13.4	33-17-16	14
				5	▽		15	6-20-18 N=38	S-4			
			medium dense				15	4-6-6 N=12	S-5			
			no gravel				18	4-4-11 N=15	S-6	30.0	41-20-21	40
2			with gravel	10			16	7-10-14 N=24	S-7			
			very dense, no sample recovery	15			0	50/1"	S-8			
		20.0	237.5+/-									
4		20.8	**WELL GRADED SAND WITH GRAVEL (SW)**, coarse to medium grained, brown to blackish brown, moist, very dense 236.5+/-	20			10	30-50/4"	S-9			
			Boring Terminated at 20.83 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-28-2020 | Boring Completed: 12-28-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-D16

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6215° Longitude: -122.8995°

Approximate Surface Elev.: 259 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	258.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			CLAYEY SAND (SC), trace organics, fine grained, brown, moist, soft				24	0-4-4-4 N=8	S-1			
			trace gravel, fine grained, light brown to orange brown, moist, medium dense				12	3-4-11 N=15	S-2			
			dense, increasing sand content and broken rock stuck in tip				14	7-11-24 N=35	S-3			
		5.0	254+/-	5								
			CLAYEY SAND WITH GRAVEL (SC), fine to medium grained, light brown to orange, moist, dense				14	15-16-19 N=35	S-4			
			trace coarse sand		▽		16	12-24-10 N=34	S-5			
2		8.0	251+/-									
			CLAYEY SAND (SC), trace gravel, fine grained, brown to orange brown, moist, loose				16	3-3-5 N=8	S-6			
			medium dense, interbedded with 4-inches of sand lenses at center	10			17	4-5-12 N=17	S-7			
		15.0	244+/-									
			CLAYEY SAND WITH GRAVEL (SC), fine to medium grained, orange brown, very dense	15			8	19-50/6"	S-8			
3			hard drilling at 17 ft									
		20.0	239+/-	20								
			POORLY GRADED SAND WITH GRAVEL (SP), fine to medium grained, dark brown to blackish brown, wet, very dense				14	26-40-50/3"	S-9			
		21.3	237.5+/-									
			fine to coarse grained									
			Boring Terminated at 21.3 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-28-2020 | Boring Completed: 12-28-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9047°

Approximate Surface Elev.: 248.5 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	248+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
2	3.5	245+/-	**SANDY FAT CLAY (CH)**, dark brown to olive brownish gray, moist, very soft, stratified with silt, olive brownish gray to reddish brown, very stiff
	5.0	243.5+/-	**CLAYEY SAND WITH GRAVEL (SC)**, dark brown with reddish brown, moist, dense, stratified
	6.5	242+/-	**FAT CLAY (CH)**, bluish gray and reddish brown, moist, very stiff
	8.0	240.5+/-	**CLAYEY SAND (SC)**, with silt, fine to medium grained, reddish brown with olive brownish gray, moist, medium dense
			FAT CLAY (CH), olive gray with reddish brown vertical striations, moist, stiff wet, black striations bluish gray with reddish brown striations, wet, medium stiff
3	18.5	230+/-	**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, dark gray with olive grayish brown, moist, very dense

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		24	0-0-0-0 N=0	S-1			
		18	4-8-10 N=18	S-2	31.5		52
		8	10-19-16 N=35	S-3			
5		4	10-6-13 N=19	S-4			
		18	4-5-5 N=10	S-5			
		18	3-6-9 N=15	S-6			
10		12	5-6-8 N=14	S-7			
15		12	6-3-2 N=5	S-8			
20		4	50/6"	S-9			
25							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

At 8:47 AM after completion of drlilling

At 8:51 AM after completion of drlilling

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6240° Longitude: -122.9047°

Approximate Surface Elev.: 248.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							4	50/6"	S-10			
				30			0	50/6"	S-11			
				35			8	16-12-12 N=24	S-12			
		36.5	212+/-									

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), dark gray with olive grayish brown, moist, very dense *(continued)*
coarse grained, dark brown, very dense, rock fragments in sampler, blowcounts might be overstated

no sample recovery, gravel stuck in shoe, blowcounts might be overstated

medium dense

Boring Terminated at 36.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

At 8:47 AM after completion of drlilling

At 8:51 AM after completion of drlilling

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-31-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E08A

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6237° Longitude: -122.9042°

Approximate Surface Elev.: 249.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	249+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY WITH SAND (CH), with organics, olive grayish brown with reddish brown, moist, very soft				24	0-0-0-2 N=0	S-1			
		2.0	247.5+/-									
			CLAYEY SAND WITH GRAVEL (SC), trace organics, grayish brown to reddish brown, moist, medium dense, stratified				13	5-8-11 N=19	S-2			
			dense, gravel content increased, transitions to Clayey Gravel with Sand				11	8-16-23 N=39	S-3	15.3		18
			Refer B-E08B for blowcounts at 6.5 ft, transitions to Clayey Sand with Gravel	5								
			reddish brown with dark brown, observed increased fines content				17	7-9-21 N=30	S-5			
		8.0	241.5+/-									
2			**FAT CLAY (CH)**, with sand, olive grayish brown with reddish brown striations, moist, stiff									
		9.5	Refer B-E08B for blowcounts at 8 ft 240+/-									
			SANDY FAT CLAY (CH), olive grayish brown with reddish brown, moist, stiff	10			18	4-4-5 N=9	S-7	24.4		50
		13.5	236+/-									
			FAT CLAY (CH), bluish gray, moist, hard									
			with sand and gravel, rock fragements in sampler, blowcounts might be overstated	15			18	4-17-36 N=53	S-8			
		18.5	231+/-									
3			**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, dark gray, moist, dense									
			drilling was hard at 21.5 ft	20			4	2-3-29 N=32	S-9			
			Auger refusal at 24 ft, moved 5 ft in west direction to continue drilling and boring marked as B-E08B									
		24.0	225.5+/-									
			Auger Refusal at 24 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E08B

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6237° Longitude: -122.9042°

Approximate Surface Elev.: 249.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			Refer B-08A for blowcounts and soil component lithology									
		5.0	244.5+/-	5								
2		6.5	**CLAYEY SAND WITH GRAVEL (SC)**, with gravel, dark reddish brown, moist, medium dense trace gravel, with clay 243+/-			X	11	8-11-10 N=21	S-4			
			Refer B-08A for blowcounts and soil component lithology									
		8.0	241.5+/-									
		9.5	**FAT CLAY (CH)**, with silt and sand, olive grayish brown with reddish brown, moist, stiff 240+/-	10		X	18	2-5-5 N=10	S-6			
			Refer B-08A for blowcounts and soil component lithology									
			Refer B-08A for blowcounts and soil component lithology	15								
		20.0	229.5+/-	20		X	9	28-50/6"	S-9	12.7		5
3			**POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC)**, dark brown with grayish brown, moist, very dense, rock fragements in sampler, blowcounts might be overstated									
			drilling was hard at 24 ft	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:
Water rose to the surface in the borehole after completion of drilling

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

At completion of drilling

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E08B

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6237° Longitude: -122.9042°

Approximate Surface Elev.: 249.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3												
			POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), dark brown with grayish brown, moist, very dense, rock fragements in sampler, blowcounts might be overstated *(continued)*				6	38-50/6"	S-10			
			gray to bluish gray, wet									
			rock fragements in sampler, blowcounts might be overstated									
		28.5	221+/-									
4			**FAT CLAY (CH)**, light bluish gray, wet, stiff	30	▽		16	6-7-8 N=15	S-11			
			very stiff	35			18	7-10-18 N=28	S-12			
		36.5	213+/-									
			Boring Terminated at 36.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *At completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.9026°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	251.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
			FAT CLAY (CH), with organics, dark brown with orangish brown, moist, soft, stratified
			with sand, olive gray with orangish brown, hard
			trace organics, very stiff
	5.5	246.5+/-	dark reddish brown, interbedded with 6 inches of clayey sand with gravel at 5 ft bgs
			LEAN CLAY (CL), with sand, gray, moist, very stiff olive gray with reddish brown, medium stiff
	8.5	243.5+/-	
2			**CLAYEY SAND WITH GRAVEL (SC)**, fine to coarse grained, reddish brown to dark brown, wet, dense, stratified olive brownish gray with reddish brown striations, medium dense
	13.5	238.5+/-	
			FAT CLAY (CH), bluish gray with orangish brown, wet, stiff
	18.5	233.5+/-	
3			**CLAYEY GRAVEL WITH SAND (GC)**, dark bluish gray to dark gray, wet, very dense
			rock fragements in sampler, blowcounts might be overstated

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		19	0-0-2-3 N=2	S-1			
		15	3-16-19 N=35	S-2			
5		9	2-15-11 N=26	S-3			
		8	5-9-9 N=18	S-4			
		18	3-3-4 N=7	S-5	30.9	38-18-20	
		18	15-16-15 N=31	S-6			
10		12	3-11-11 N=22	S-7			
15		18	3-5-7 N=12	S-8			
20		6	50/6"	S-9			
25							

WATER LEVEL OBSERVATIONS

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.9026°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							0	50/2"	S-10			
				30			10	11-31-25 N=56	S-11	10.4		14
		31.5	220.5+/-									

CLAYEY GRAVEL WITH SAND (GC), dark bluish gray to dark gray, wet, very dense *(continued)*
very dense, no sample recovery, rock fragements in sampler, blowcounts might be overstated

dark gray, stratified

Boring Terminated at 31.5 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13A

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	254.5+/-									
			TOPSOIL, with organics, dark brown, very soft									
			FAT CLAY WITH SAND (CH), with organics, tannish brown to orangish brown, moist, soft			X	17	1-1-2-3 N=3	S-1			
		2.0	253+/-									
2			**FAT CLAY (CH)**, tannish brown to brown, moist, medium stiff, stratified			X	15	1-3-5-9 N=8	S-2			
		4.0	251+/-									
			Shelby tube was pushed at 3.5 ft bgs, but the sampler broke and borehole was abandoned. Moved over one foot to restart the boring.									
			Boring Terminated at 4 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:
bgs - below ground surface

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-21-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13B

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	254.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
		2.0	253+/-				24	0-0-0-0 N=0	S-1			
			FAT CLAY WITH SAND (CH), with organics, brown to tannish brown, moist, very soft									
		4.7	250.5+/-				30		S-2			
			FAT CLAY (CH), tannish brown, moist, soft									
2				5			12	9-15-28 N=43	S-3			
							17	13-27-32 N=59	S-4	19.4		18
							18	12-12-12 N=24	S-5			
		9.5	245.5+/-				18	5-7-9 N=16	S-6			
			CLAYEY SAND (SC), brown to reddish brown, moist, dense, stratified dark brown with reddish brown, interbedded with dark brown gravel layer reddish brown very dense, stratified medium dense	10								
		13.5	241.5+/-									
			FAT CLAY (CH), olive gray with reddish brown striations, moist, very stiff									
3				15			10	19-31-50/5"	S-7	16.5		10
				20			16	7-35-50/6"	S-8			
			fine to medium grained, reddish brown to brown									
		23.5	231.5+/-									
			CLAYEY GRAVEL WITH SAND (GC), with clay, brown to dark brown, moist, very dense, rock fragements in sampler, blowcounts might be overstated	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-21-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13B

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3												
			POORLY GRADED GRAVEL WITH CLAY AND SAND (GP-GC), fine to coarse grained, brown to gray, very dense, rock fragements in sampler, blowcounts might be overstated *(continued)* drilling was hard at 25 ft Drill bit broken at 30 feet, abandoning borehole. Refer B-E13C for further depths.			X	12	22-42-50/5"	S-9			
		30.0	225+/-	30								
			Boring Terminated at 30 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-21-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13C

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6221° Longitude: -122.9015° Approximate Surface Elev.: 255 (Ft.) +/- DEPTH ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		Refer B-E13A and B-E13B for depths above 30 feet	5 10 15 20 25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020	Boring Completed: 12-22-2020
Drill Rig: CME-850	Driller: Holocene
Project No.: 81215062	

BORING LOG NO. B-E13C

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

DEPTH	ELEVATION (Ft.)	MODEL LAYER	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
Refer B-E13A and B-E13B for depths above 30 feet *(continued)*												
30.0	225+/-			30								
CLAYEY GRAVEL WITH SAND (GC), olive gray to dark gray, moist, very dense, rock fragements in sampler, blowcounts might be overstated						X	9	48-50/4"	S-10	13.4		9
33.5	221.5+/-											
POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), fine to coarse grained, light bluish gray, moist, very dense		3		35		X	12	28-50/6"	S-11			
38.5	216.5+/-											
FAT CLAY (CH), with clay, very stiff				40		X	18	7-9-17 N=26	S-12	35.9	45-26-19	
hard		4		45		X	18	7-14-32 N=46	S-13			
				50								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-22-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13C

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4			**FAT CLAY (CH)**, with clay, very stiff *(continued)* very stiff				18	10-13-16 N=29	S-14			
3		53.5	201.5+/-	55			16	15-27-37 N=64	S-15	26.7		9
4		58.5	**POORLY GRADED SAND (SP)**, dark gray with bluish tint, moist, very dense 196.5+/-				18	7-12-17 N=29	S-16			
			FAT CLAY (CH), bluish gray, moist, very stiff interbedded with fine sand layer, increased sand content at bottom of sample	60								
		68.5	186.5+/-	65			18	8-12-16 N=28	S-17			
3		73.5	**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, medium to coarse grained, dark bluish gray, moist, very dense, interbedded with silt layer at 70.2 ft bgs 181.5+/-	70			12	25-50/6"	S-18			
4			**FAT CLAY (CH)**, dark bluish gray, moist, hard	75								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:
bgs - below ground surface

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-22-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13C

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6221° Longitude: -122.9015°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4												
			FAT CLAY (CH), dark bluish gray, moist, hard *(continued)* hard, organics were found at 75.5 ft bgs and 76 ft bgs				17	8-11-19 N=30	S-19		63-26-37	
			light bluish gray	80			18	8-14-16 N=30	S-20			
				85			18	8-15-17 N=32	S-21	34.2	70-24-46	
			bluish gray	90			18	9-16-21 N=37	S-22			
		93.5	161.5+/-									
			FAT CLAY (CH), gray, moist, very stiff	95			18	7-10-17 N=27	S-23	51.6	86-31-55	
				100								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-22-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E13C

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6221° Longitude: -122.9015° Approximate Surface Elev.: 255 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4		**FAT CLAY (CH)**, gray, moist, very stiff *(continued)* bluish gray, very stiff 101.5 / 153.5+/-				18	9-12-16 N=28	S-24			
		Boring Terminated at 101.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Mud Rotary

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Water level not determined, due to use of Mud Rotary Method

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-21-2020 | Boring Completed: 12-22-2020

Drill Rig: CME-850 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-E14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6218° Longitude: -122.9010°

Approximate Surface Elev.: 256.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	256+/-									
		TOPSOIL, with organics, dark brown, moist, soft										
		2.0	254.5+/-									
		FAT CLAY WITH SAND (CH), with organics, orangish brown to brown, moist, medium stiff					18	2-3-3-3 N=6	S-1			
2		**CLAYEY SAND WITH GRAVEL (SC)**, fine to medium grained, reddish brown, moist, medium dense, stratified					14	10-14-13 N=27	S-2			
							17	10-5-8 N=13	S-3			
		with 6-inches of soft gray clay 4.5 ft		5								
		with clay, reddish brown with olive gray, wet, medium dense, stratified					18	11-11-15 N=26	S-4			
		very dense, no sample recovery					0	13-19-37	S-5			
		fine to coarse grained, reddish brown with olive brown, dense					18	19-18-19 N=37	S-6			
		medium dense		10			17	11-11-7 N=18	S-7			
		13.5	243+/-									
3		**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, dark reddish brown to dark gray, wet, very dense, rock fragements in sampler, blowcounts might be overstated		15			1	50/6"	S-8			
		21.0	235.5+/-	20			10	14-50/6"	S-9			
		Boring Terminated at 21 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-11-2021 | Boring Completed: 01-11-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6270° Longitude: -122.9052°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	247.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			CLAYEY SAND (SC), with organics, dark brown, moist, very soft		▽		20.5	0-0-0-0 N=0	S-1			
			with silt, gray with orangish brown				16	4-6-11 N=17	S-2			
			trace organics, gray, wet, medium dense, stratified, with varying gravel and clay content				15	5-7-16 N=23	S-3			
			trace organics, brownish gray and reddish brown, interedded with clay, trace gravel	5			5	10-8-10 N=18	S-4			
			with gravel, trace clay				18	6-4-3 N=7	S-5			
			trace clay, dark reddish brown									
		6.8	241+/-									
2		8.0	**FAT CLAY (CH)**, olive gray to reddish brown, wet, medium stiff, black striations, with reddish brown silt and sand 240+/-									
			CLAYEY SAND WITH GRAVEL (SC), light bluish gray to dark reddish brown, wet, dense				14	5-21-25 N=46	S-6	15.9		16
			medium dense	10			9	5-12-8 N=20	S-7			
			trace gravel, dark grayish blue	15			13	5-14-20 N=34	S-8			
3		15.7	232.5+/-									
			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), medium to coarse grained, dark grayish blue, wet, dense									
			very dense	20			11	5-26-43 N=69	S-9			
		23.5	224.5+/-									
4			**FAT CLAY (CH)**, dark bluish gray, wet, very stiff	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6270° Longitude: -122.9052°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4			**FAT CLAY (CH)**, dark bluish gray, wet, very stiff *(continued)*									
					▽		11	10-12-8 N=20	S-10	40.3	60-31-29	
			trace wood debris at 30.2 ft	30								
							18	9-12-14 N=26	S-11			
			trace silt	35								
		36.5	211.5+/-				18	11-9-15 N=24	S-12			
			Boring Terminated at 36.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6264° Longitude: -122.9046°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	LOCATION / DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1	0.5	247.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft									
2	2.3	245.5+/-	**FAT CLAY (CH)**, with organics, dark brown, moist, very soft brown to brownish gray, with silt and sand trace organics, gray with reddish brown, wet, with silt		▽		24	0-0-0-0 N=0	S-1			
			CLAYEY SAND (SC), gray with reddish brown, wet, medium dense, stratified, with varying amounts of clay and gravel				18	7-11-15 N=26	S-2			
			olive gray with reddish brown, interbedded with clay				18	3-12-14 N=26	S-3			
			gray trace clay, orangish brown	5			9	5-10-14 N=24	S-4			
							9	15-18-11 N=29	S-5			
			olive grayish brown to reddish brown				18	7-11-17 N=28	S-6			
			dense, interbedded with 6-inches thick gray silty sand	10			14	5-17-29 N=46	S-7			
				15			10	10-40-19 N=59	S-8			
3	18.5	229.5+/-	**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, dark bluish gray to dark gray, wet, very dense	20			7	20-39-50/2"	S-9			
			hard drilling at 23 ft	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6264° Longitude: -122.9046°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3					▽		6	34-21-26 N=47	S-10			
				30			8	50/3"	S-11			
4		28.5	219.5+/-									
		35.1	213+/-	35			9	50/2"	S-12			

POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), dark bluish gray to dark gray, wet, very dense *(continued)*
fine to coarse grained, dense

FAT CLAY (CH), with silt, bluish gray, wet, hard

Boring Terminated at 35.1 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6261° Longitude: -122.9035°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	250.5+/-				19	0-0-0-3 N=0	S-1			
			TOPSOIL, with organics, dark brown with orangish brown, moist, very soft									
			FAT CLAY (CH), with organics, brownish gray with orangish brown, moist, very soft									
		2.5	trace organics				18	7-7-8 N=15	S-2			
			248.5+/-									
			CLAYEY SAND WITH GRAVEL (SC), reddish brown, moist, medium dense, stratified with varying quantities of clay interbedded with clay layer				18	8-11-11 N=22	S-3			
		5.5	with gravel	5			18	6-8-11 N=19	S-4			
			245.5+/-									
			FAT CLAY (CH), olive grayish brown, moist, very stiff, reddish brown and black striations				18	7-7-8 N=15	S-5			
		8.0	243+/-									
2			**CLAYEY SAND (SC)**, olive gray with reddish brown, moist, dense, trace gravel				17	6-8-27 N=35	S-6			
			with gravel				14	9-8-5 N=13	S-7			
			medium dense, interbedded with gray clay layer at 9.5 ft bgs	10								
			with clay and gravel, reddish brown with olive gray, with gravel									
		13.5	237.5+/-									
			FAT CLAY (CH), with silt, bluish gray, wet, stiff, vertical brown striations									
				15			18	5-7-5 N=12	S-8			
		18.5	232.5+/-									
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, fine to coarse grained, bluish gray, wet, very dense	20			14	13-35-41 N=76	S-9			
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6261° Longitude: -122.9035°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC)**, fine to coarse grained, bluish gray, wet, very dense *(continued)*				6	8-19-26 N=45	S-10			
			dense									
		28.5	222.5+/-									
4			**FAT CLAY (CH)**, trace silt, dark grayish blue, wet, very stiff	30			28	6-9-12 N=21	S-11			
							30		ST-1			
				35			28	5-9-14 N=23	S-12			
		36.5	214.5+/-									
			Boring Terminated at 36.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P07p

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan
Latitude: 46.6255° Longitude: -122.9023°
Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	254.5+/-	**SANDY SILT (ML)**, with organics, dark brown, moist, very soft
			FAT CLAY (CH), low to medium plasticity, dark brown, moist, soft trace organics, with orange mottling gray and orange, moist, sand content increasing and clay content decreasing with depth
	4.5	250.5+/-	medium stiff olive gray, very stiff, trace weathered rock
2			**CLAYEY SAND (SC)**, yellowish brown, moist, medium dense, with interbedded silt and clay rock fragements in sampler, blowcounts might be overstated increase in silt content increase in clay content
	10.0	245+/-	
			SANDY FAT CLAY WITH GRAVEL (CH), orangish brown, moist, hard rock fragements in sampler,
	12.5	242.5+/-	blowcounts might be overstated **CLAYEY SAND (SC)**, medium grained, reddish brown to dark gray, wet, loose, with interbedded silt, silt content increasing with depth transitions to dark gray silt
3	18.0	237+/-	**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to grayish brown, wet, very dense only rock fragments recovered, blowcounts might be overstated

INSTALLATION DETAILS: Concrete; Bentonite; Sand; Screen

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	▼		19	0-2-2-3 N=4	S-0			
			6	2-2-3 N=5	S-1			
			14	2-6-12 N=18	S-2			
5			15	9-12-11 N=23	S-3			
			15	2-4-11 N=15	S-4	25.5		41
			12	4-6-7 N=13	S-5			
10			13	4-8-29 N=37	S-6			
15	▽		15	3-3-3 N=6	S-7	37.9		43
20			10	17-34-50/5"	S-8			
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Groundwater monitoring well was installed after completion of drilling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan

Notes:
Well protrudes 3 feet above ground surface

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

▼ *On 02/08/2021*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P07p

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6255° Longitude: -122.9023°

Approximate Surface Elev.: 255 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		25.1	230+/-				0	50/1"	S-9			

refusal, no sample recovery, possibly due to cobbles or boulders, blowcounts might be overstated

Auger Refusal at 25.1 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Groundwater monitoring well was installed after completion of drilling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *Measured with water level indicator*
- *On 02/08/2021*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P08

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6250° Longitude: -122.9015°

Approximate Surface Elev.: 261 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	260.5+/-									
		TOPSOIL, with organics, brown to dark brown, moist, very soft					14	1-2-3-3 N=5	S-0			
		SANDY FAT CLAY (CH), trace organics, yellowish brown with orange mottling, moist, medium stiff, trace gravel soft					10	1-1-1 N=2	S-1			
		stiff, trace weathered gravel					8	2-6-5 N=11	S-2			
		5.0	256+/-	5								
		FAT CLAY (CH), trace weathered gravel, low to medium plasticity, yellowish brown to brown, moist, stiff					15	3-3-5 N=8	S-3			
		7.0	254+/-									
		SANDY FAT CLAY WITH GRAVEL (CH), gray and orange, moist, very stiff, gravel content increasing with depth stiff, rock fragments in sampler, blowcounts might be overstated with interbedded sand					8	6-10-12 N=22	S-4			
							15	5-6-7 N=13	S-5			
		10.0 medium stiff	251+/-	10			15	2-3-4 N=7	S-6			
2		**FAT CLAY (CH)**, low to medium plasticity, light bluish gray with orange mottling, moist, medium stiff, silt content increasing with depth										
							12		S-ST1			
		stiff		15			17	4-6-3 N=9	S-7	39.5	80-24-56	
		18.0	243+/-									
		FAT CLAY WITH SAND (CH), trace gravel, light bluish gray, moist, very stiff					9		ST-2			
		rock fragments in sampler, blowcounts might be overstated		20			15	5-7-9 N=16	S-8			
		21.5	239.5+/-									
		Boring Terminated at 21.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6243° Longitude: -122.9006°

Approximate Surface Elev.: 265 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	264.5+/-									
			TOPSOIL (ML), with organics, brown to dark brown, moist, very soft				12	1-2-3 N=5	S-0			
			FAT CLAY (CH), with organics, medium plasticity, brown to dark brown, moist, medium stiff				18	2-3-6 N=9	S-1			
			yellowish brown to orangish brown, with gray mottling trace organics, stiff				12	3-6-10 N=16	S-2			
			very stiff, increase in sand content, more gravel at the bottom of the sample	5			12	4-10-11 N=21	S-3			
			trace gravel				13	3-3-4 N=7	S-4	25.5	77-22-55	
			gray with orange and black mottling, medium stiff				14	2-5-9 N=14	S-5			
			stiff				15	2-5-8 N=13	S-6			
			increase in sand content	10			15	2-6-12 N=18	S-7			
		10.5	254.5+/-									
2			**SANDY FAT CLAY (CH)**, trace gravel, gray and orange, moist, very stiff, with interbedded sand									
			rock fragments in sampler, blowcounts might be overstated									
		13.0	252+/-									
			FAT CLAY (CH), trace gravel, medium plasticity, orange with gray mottling, moist, very stiff, silt content increasing with depth	15			16	3-5-7 N=12	S-8			
			stiff									
				20			16	2-4-7 N=11	S-9	29.5	54-21-33	
		21.5	243.5+/-									
			Boring Terminated at 21.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-04-2021 | Boring Completed: 01-04-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6238° Longitude: -122.8995°

Approximate Surface Elev.: 269.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.4	269+/-									
		0.8	268.5+/-									
			POORLY GRADED GRAVEL (GP), black, medium dense, Aggregate Base									
			FILL - SANDY SILT WITH GRAVEL (ML), trace rock fragments, brown, very stiff									
			SANDY FAT CLAY (CH), trace gravel, orange with gray mottling, moist, very stiff				18	13-7-8-8 N=15	S-0			
			dark brown to gray				10	4-6-9 N=15	S-1			
			stiff, trace weathered rock				9	4-5-7 N=12	S-2			
			increase in gravel content	5			10	2-5-7 N=12	S-3			
			with interbedded sand, trace weathered rock				15	4-5-6 N=11	S-4	34.6		63
			grayish brown with orange mottling, increase in sand content, trace rock fragments				15	3-5-8 N=13	S-5			
				10			14	3-5-8 N=13	S-6			
2												
			rock fragments in sampler, blowcounts might be overstated	15			14	4-5-7 N=12	S-7			
			orangish brown, very stiff, decrease in gravel content, trace rock fragments	20			9	5-11-7 N=18	S-8			
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6238° Longitude: -122.8995° Approximate Surface Elev.: 269.5 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2		**SANDY FAT CLAY (CH)**, trace gravel, orange with gray mottling, moist, very stiff *(continued)* 26.5 trace weathered rock, increase in sand content at the bottom 243+/- ***Boring Terminated at 26.5 Feet***				16	5-7-12 N=19	S-9			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6233° Longitude: -122.8987°

Approximate Surface Elev.: 274 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	273.5+/-									
			TOPSOIL (ML), with organics, yellowish brown to brown, moist, soft									
			SANDY FAT CLAY (CH), trace gravel, yellowish brown to orange, moist, medium stiff				17	1-2-4-4 N=6	S-0			
							9	2-3-6 N=9	S-1			
			yellowish brown with gray mottling, very stiff				12	3-6-17 N=23	S-2	18.5		63
				5			10	5-12-17 N=29	S-3			
			yellowish brown to grayish brown, rock fragments in sampler, blow counts might be overstated				14	3-6-10 N=16	S-4			
		7.5	266.5+/-				11	3-4-7 N=11	S-5			
			FAT CLAY (CH), trace gravel, orange to orangish brown, moist, stiff	10			10	4-7-13 N=20	S-6			
2			rock fragments in sampler, blow counts might be overstated									
			increase in gravel content									
			very stiff									
			yellowish brown to orangish brown, rock fragments in sampler, blow counts might be overstated	15			16	5-7-8 N=15	S-7			
				20			13	9-5-6 N=11	S-8			
			stiff, interbedded with silty clay, rock fragments in sampler, blow counts might be overstated									
				25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P11

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 46.6233° Longitude: -122.8987° Approximate Surface Elev.: 274 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2		**FAT CLAY (CH)**, trace gravel, orange to orangish brown, moist, stiff *(continued)* interbedded with clay, trace weathered rock, increase in clay and silt content at the bottom				15	4-6-7 N=13	S-9	33.4	80-26-54	
		transitions to silt with sand 29.0 245+/-				20		S-ST			
		Boring Terminated at 29 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6220° Longitude: -122.8983°

Approximate Surface Elev.: 263 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	262.5+/-									
			TOPSOIL, with organics, brown to dark brown, moist, very soft				14	0-1-1-2 N=2	S-0			
		2.0	261+/-									
			FAT CLAY (CH), trace organics, gray and orange, moist, soft				6	1-2-4 N=6	S-1			
2			**LEAN CLAY (CL)**, trace organics, bluish gray with orange mottling, medium stiff, sand content increasing with depth				13	4-5-9 N=14	S-2	22.4	49-21-28	
			orangish brown with gray mottling, stiff	5			13	3-7-19 N=26	S-3			
		6.0	257+/-									
			very stiff, rock fragments in sampler, blowcounts might be overstated				13	8-16-17 N=33	S-4			
3			**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, orangish brown to brown, moist, dense, increase in gravel content, rock fragments in sampler, blowcounts might be overstated				13	5-14-10 N=24	S-5			
			medium dense, rock fragments in sampler, blowcounts might be overstated									
		10.0	253+/-	10			10	5-7-8 N=15	S-6			
2		11.0	252+/-									
			Boring Terminated at 11 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P13

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6212° Longitude: -122.8992°

Approximate Surface Elev.: 260 (Ft.) +/-

DEPTH		ELEVATION (Ft.)
0.5	**TOPSOIL**, with organics, dark brown, moist, very soft	259.5+/-
	FAT CLAY WITH SAND (CH), with organics, dark brown, moist, medium stiff	
	trace organics, light brown too orangish brown, stiff, trace gravel	
	very stiff	
4.5	increase in sand content	255.5+/-
	CLAYEY SAND (SC), fine to medium grained, gray to light brown, moist, dense, with varying gravel content orangish brown	
	trace gravel, light brown to orangish brown, medium dense	
	orangish brown to grayish brown	
11.0		249+/-
	Boring Terminated at 11 Feet	

DEPTH (Ft.)	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.
		18	0-2-3-3 N=5	S-1
		13	0-4-6 N=10	S-2
		18	4-9-21 N=30	S-3
5		14	9-18-22 N=40	S-4
		13	20-15-10 N=25	S-5
		17	5-5-5 N=10	S-6
10		17	7-6-7 N=13	S-7

WATER LEVEL OBSERVATIONS

ATTERBERG LIMITS: LL-PL-PI

WATER CONTENT (%)

PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-29-2020 | Boring Completed: 12-29-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6208° Longitude: -122.9012°

Approximate Surface Elev.: 257 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	256.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY WITH SAND (CH), with organics, orangish brown with brown, moist, soft				19	0-1-2-2 N=3	S-1			
			olive gray to brown, moist, very stiff, stratified				18	4-9-11 N=20	S-2			
			orangish brown to brown, wet				18	2-5-17 N=22	S-3			
			olive gray to brownish gray									
		5.0	trace gravel and sand 252+/-	5			10	6-21-31 N=52	S-4			
			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), fine to coarse grained, orangish brown to brown,									
		6.5	wet, very dense 250.5+/-				18	12-17-17 N=34	S-5			
			CLAYEY SAND WITH GRAVEL (SC), fine to coarse grained, orangish brown to brown, wet, dense									
		8.0	249+/-				17	0-0-2 N=2	S-6			
			FAT CLAY WITH SAND (CH), olive gray with orangish brown, wet, soft									
2				10			17	0-0-2 N=2	S-7	31.1		74
			stratified, interbedded with sand layer	15			18	0-0-2 N=2	S-8			
			bluish gray, stiff, orangish brown vertical striations, interbedded with sand	20			18	3-4-5 N=9	S-9			
		23.5	233.5+/-									
3			**CLAYEY GRAVEL WITH SAND (GC)**, fine to medium grained, olive brownish gray to dark gray, wet, very dense	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-29-2020 | Boring Completed: 12-29-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P14

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc Bothell, WA

SITE: 2800 Jackson Highway Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6208° Longitude: -122.9012°

Approximate Surface Elev.: 257 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3							6	50/6"	S-10			
				30								
							6	7-50/6"	S-11			
		31.0	226+/-									

CLAYEY GRAVEL WITH SAND (GC), fine to medium grained, olive brownish gray to dark gray, wet, very dense *(continued)*

rock fragments in sampler, blowcounts might be overstated

rock fragments in sampler, blowcounts might be overstated

Boring Terminated at 31 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

Measured with water level indicator

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-29-2020 | Boring Completed: 12-29-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6216° Longitude: -122.9015°

Approximate Surface Elev.: 256.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	256+/-									
		TOPSOIL, with organics, dark brown, moist, soft										
		1.2	255.5+/-									
		FAT CLAY WITH SAND (CH), with organics, dark brown with orangish brown, moist, soft					14	0-0-2-2 N=2	S-1			
		CLAYEY SAND WITH GRAVEL (SC), with organics, orangish brown to dark brown, moist, very loose, with clay					18	6-5-15 N=20	S-2			
		medium dense					18	4-18-9 N=27	S-3			
		orangish brown to brown, moist, medium stiff		5			7	2-3-2 N=5	S-4	30.5		29
2		fine to coarse grained, reddish brown with brown, wet, medium dense, stratified					0	13-15-10 N=25	S-5			
							18	10-14-8 N=22	S-6			
		10.0	246.5+/-	10			18	2-4-4 N=8	S-7			
		FAT CLAY (CH), with sand, gray, wet, medium stiff										
		11.5	245+/-				18	5-17-17 N=34	S-8			
		12.5 **CLAYEY SAND WITH GRAVEL (SC)**, with clay, orangish brown and gray, wet, dense	244+/-									
		Boring Terminated at 12.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:
Water rose to the surface in the borehole after completion of drilling

WATER LEVEL OBSERVATIONS

Inferred from change in sample moisture

At completion of drilling

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P16

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6216° Longitude: -122.9025°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	253.5+/-									
			TOPSOIL, with organics, dark brown, moist, very soft									
			FAT CLAY WITH SAND (CH), with organics, olive grayish brown, wet, very soft		▽		16	0-0-0-0 N=0	S-1			
		2.2	252+/-									
			olive gray with reddish brown				18	3-8-11 N=19	S-2			
			CLAYEY SAND WITH GRAVEL (SC), with clay, reddish brown, moist, medium dense		▽							
			gray and grayish brown, wet, dense				9	2-11-22 N=33	S-3			
2			reddish brown to dark brown, stratified	5			13	11-19-16 N=35	S-4			
			medium dense				16	7-8-9 N=17	S-5			
			dense				18	16-24-17 N=41	S-6			
		10.0	244+/-	10			17	10-13-11 N=24	S-7			
			FAT CLAY (CH), with sand, olive gray, very stiff									
			reddish brown to brownish gray, hard				10	20-22-19 N=41	S-8			
		12.5	interbedded with sand layer at 12 ft 241.5+/-									
			Boring Terminated at 12.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P17

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6222° Longitude: -122.9027°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	253.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		FAT CLAY (CH), with organics, olive grayish brown, moist, very soft, with reddish brown striations					24	0-0-0-2 N=0	S-1			
		2.0	252+/-									
		CLAYEY SAND (SC), with silt, olive grayish brown with reddish brown, moist, loose, trace gravel					18	0-3-3 N=6	S-2			
		3.5	250.5+/-									
		4.0	250+/-				15.5	3-4-12 N=16	S-3			
		FAT CLAY (CH), with sand, olive gray with orangish brown, moist, very stiff										
2		**CLAYEY SAND WITH GRAVEL (SC)**, reddish brown to brown, moist, medium dense		5			9	8-16-12 N=28	S-4			
		fine to coarse grained, stratified, dark gray gravel					13	6-13-9 N=22	S-5	16.3		24
		9.0	245+/-				18	9-10-5 N=15	S-6			
		9.8	244+/-									
		FAT CLAY (CH), bluish gray, moist, stiff		10	▽		18	4-8-12 N=20	S-7			
		CLAYEY SAND (SC), with silt, olive grayish brown, wet, medium dense, stratified, with orangish brown striations										
		11.0	243+/-									
		Boring Terminated at 11 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P18

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6229° Longitude: -122.9035°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	251.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		FAT CLAY WITH SAND (CH), with organics, brown to brownish gray, moist, very soft					22	0-0-0-1 N=0	S-1			
		dark olive brown with reddish brown, moist, stiff					18	4-7-7 N=14	S-2			
		medium stiff					18	2-2-5 N=7	S-3	33.6		82
		5.0	247+/-	5								
		CLAYEY SAND (SC), with silt, dark olive brown with reddish brown, moist, medium dense					14	5-14-15 N=29	S-4			
		trace organics, trace gravel					15	4-9-15 N=24	S-5			
		with gravel, fine to coarse grained, reddish brown					18	7-6-7 N=13	S-6			
		8.3	243.5+/-									
2		**FAT CLAY (CH)**, moist, stiff		10			18	4-5-7 N=12	S-7			
		with sand										
		no sand		15			18	0-4-5 N=9	S-8	34.9	44-22-22	
		16.5	235.5+/-									
		Boring Terminated at 16.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:
Water rose to the surface in the borehole after completion of drilling

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 12-30-2020 | Boring Completed: 12-30-2020

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P19

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6224° Longitude: -122.9041°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	251.5+/-									
		TOPSOIL, with organics, brown to dark brown, moist, very soft					17	0-0-1-1 N=1	S-0			
		CLAYEY SAND WITH GRAVEL (SC), with organics, brown to dark brown, moist, very soft					11	2-2-3 N=5	S-1			
		trace organcs, with orange mottling										
		trace gravel, gray and orange					12	3-5-9 N=14	S-2			
		trace organics, medium stiff										
		interbedded with sand										
		stiff		5			12	8-9-12 N=21	S-3	22.6		35
		grayish brown, very stiff, trace weathered rock, increase in gravel content										
		olive gray with orange mottling, increase in silt content					13	5-8-15 N=23	S-4			
2		orangish brown, stiff, increase in sand and gravel content					13	3-6-7 N=13	S-5			
		moist, interbedded with sand										
		very stiff		10			14	8-15-9 N=24	S-6			
		rock fragments in sampler, blowcounts might be overstated										
		gray with orange mottling, transitions to silt										
		13.0	239+/-									
		CLAYEY SAND (SC), coarse grained, orangish brown, moist, medium dense		15			9	4-6-6 N=12	S-7	24.4		31
		16.5 fine grained, gray	235.5+/-									
		Boring Terminated at 16.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-50 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P20

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6219° Longitude: -122.9047°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.5	251.5+/-									
		TOPSOIL, with organics, dark brown, moist, very soft										
		FAT CLAY (CH), with organics, dark brown, moist, very soft					24	0-0-0-0 N=0	S-1			
		olive brownish gray with orangish brown										
		trace organics					12	0-3-4 N=7	S-2	31.8	52-20-32	
		with silt, medium stiff					18	2-4-6 N=10	S-3			
		stiff		5			15	2-5-20 N=25	S-4			
		5.7	246.5+/-				18	7-8-9 N=17	S-5			
2		**CLAYEY SAND (SC)**, light olive gray with reddish brown, moist, medium dense										
		with gravel, brownish red					7	12-15-9 N=24	S-6			
		interbedded with clay			▽							
		9.5	242.5+/-	10			18	4-5-7 N=12	S-7			
		FAT CLAY (CH), olive gray with reddish brown, wet, stiff										
		with silt and sand			▽							
				15			18	3-4-7 N=11	S-8			
		16.5	235.5+/-									
		Boring Terminated at 16.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P22

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6234° Longitude: -122.9049°

Approximate Surface Elev.: 249 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)		RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.
1	0.5	248.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft	17	0-0-0-1/-17"	S1
			FAT CLAY WITH SAND (CH), with organics, dark brown with reddish brown, moist, very soft			
			reddish brown with gray, very stiff	18	5-7-14 N=21	S-2
	3.8	245+/-		16	5-10-11 N=21	S-3
			CLAYEY SAND (SC), trace gravel, reddish brown, moist, medium dense, stratified, interbedded with clay with silt and sand layer			
			with clay, brownish gray, wet, dense	18	8-24-19 N=43	S-4
			with gravel, reddish brown to dark brown			
			trace gravel, medium dense	18	5-5-9 N=14	S-5
	8.0	241+/-	grayish brown with reddish brown			
2			**FAT CLAY (CH)**, with silt and sand, gray with brown (vertical striations), moist, very stiff	18	4-6-10 N=16	S-6
			trace silt			
			olive gray with reddish brown	17	4-8-10 N=18	S-7
			bluish gray, wet, hard	18	12-35-40 N=75	S-8
	16.2	233+/-				
			POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), trace clay, bluish gray, wet, very dense			
			dark gray	18	20-34-38 N=72	S-9
	21.5	227.5+/-				
			Boring Terminated at 21.5 Feet			

DEPTH (Ft.): 5, 10, 15, 20

WATER LEVEL OBSERVATIONS: ▽ ▽

SAMPLE TYPE: ⊠

WATER CONTENT (%)

ATTERBERG LIMITS LL-PL-PI

PERCENT FINES

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Inferred from change in sample moisture*

▽ *Measured with water level indicator*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-07-2021 | Boring Completed: 01-07-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

BORING LOG NO. B-P26p

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan
Latitude: 46.6225° Longitude: -122.9053°
Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.5	250.5+/-	**TOPSOIL**, with organics, dark brown, moist, very soft
			FAT CLAY (CH), with organics, dark brown, moist, very soft dark brown with orangish brown trace organics, olive grayish brown with reddish brown, moist, stiff, with silt and sand
	4.3	246.5+/-	olive brown, hard
			CLAYEY SAND WITH GRAVEL (SC), olive brown to orangish brown, moist, dense brownish red to reddish brown, very dense reddish brown with yellow, dense, rock fragments, interbedded sand
	8.5	242.5+/-	layer
2			**FAT CLAY (CH)**, reddish brown, moist, very stiff olive brown with silt and sand, olive grayish brown with reddish brown, stiff olive grayish brown, no silt and sand gray with reddish brown vertical striations dark gray bluish gray
	18.5	232.5+/-	
3			**CLAYEY SAND WITH GRAVEL (SC)**, medium to coarse grained, dark gray with dark bluish gray, wet, very dense

INSTALLATION DETAILS: Concrete; Bentonite; Sand Filter; Screen

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			24	0-0-0-0 N=0	S-1			
			18	0-4-5 N=9	S-2			
			18	4-14-19 N=33	S-3			
5	▼		18	10-18-33 N=51	S-4	16.8		24
			8	8-25-24 N=49	S-5			
			14	5-12-6 N=18	S-6A	33.6	74-32-42	
10			18	3-4-9 N=13	S-7	31.2		77
15			18	3-4-6 N=10	S-8			
20	▽		9	33-50/4"	S-9	13.6		16
25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Groundwater monitoring well was installed after completion of drilling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan

Notes:
Well protrudes 3 feet above ground surface

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *Measured with water level indicator*
- *On 02/08/2021*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021
Drill Rig: D-70 | Driller: Holocene
Project No.: 81215062

BORING LOG NO. B-P26p

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan
Latitude: 46.6225° Longitude: -122.9053°
Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**CLAYEY SAND WITH GRAVEL (SC)**, medium to coarse grained, dark gray with dark bluish gray, wet, very dense *(continued)* dark bluish gray, very dense, with dark bluish gray gravel				7	26-50/4"	S-10			
				30			4	50/5"	S-11			
			no sample recovery	35			0	20-50/2"	S-12			
		40.2	211+/- dark brown **FAT CLAY (CH)**, bluish gray, wet, very stiff	40			17	13-18-9 N=27	S-13			
4				45			18	7-11-16 N=27	S-14			
		48.5	202.5+/- **SANDY FAT CLAY (CL-ML)**, bluish gray, wet, very stiff	50								

Caved Material

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Groundwater monitoring well was installed after completion of drilling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *Measured with water level indicator*
- *On 02/08/2021*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021
Boring Completed: 01-06-2021
Drill Rig: D-70
Driller: Holocene
Project No.: 81215062

BORING LOG NO. B-P26p

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6225° Longitude: -122.9053°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	SAMPLE NO.	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
4			**SANDY FAT CLAY (CL-ML)**, bluish gray, wet, very stiff									
		51.5	*(continued)* 199.5+/-				18	9-8-13 N=21	S-15	29.4		53
			Boring Terminated at 51.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Groundwater monitoring well was installed after completion of drilling

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevations were interpolated from a topographic site plan.

Notes:

WATER LEVEL OBSERVATIONS

- *Inferred from change in sample moisture*
- *Measured with water level indicator*
- *On 02/08/2021*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Boring Started: 01-06-2021 | Boring Completed: 01-06-2021

Drill Rig: D-70 | Driller: Holocene

Project No.: 81215062

TEST PIT LOG NO. TP-A06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6254° Longitude: -122.9035°

Approximate Surface Elev.: 248 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, dark brown to black, moist, very soft						
		orange mottling, trace fine roots						
		1.2	247+/-					
2		**SANDY FAT CLAY (CH)**, trace fine roots, gray and orange, moist to wet, stiff						S-1
		perched groundwater above clay layer	245.5+/-					
		2.5 **FAT CLAY (CH)**, low to medium plasticity, olive gray to grayish brown, moist, stiff to very stiif						
		3.2	245+/-					
		SANDY FAT CLAY (CH), trace weathered rocks, gray with orange mottling, moist to wet, medium stiff to stiff						
		interbedded clay		5				
		interbedded gravel						
		9.0	239+/-		▽			
		WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), with cobbles, orange to orangish brown, wet, medium dense to dense		10				
		11.0	237+/-					
		Test Pit Terminated at 11 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-21-2020
Test Pit Completed: 12-21-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

TEST PIT LOG NO. TP-A09

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6245° Longitude: -122.9020°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, dark brown to black, moist, very soft						
		1.2 orange mottling, trace fine roots	251+/-					
		SANDY FAT CLAY (CH), trace fine roots, gray and orange, moist to wet, very soft to soft						S-1
		2.7 perched groundwater above the clay layer	249.5+/-					
		3.2 **SILTY CLAY (CL-ML)**, low to medium plasticity, grayish brown with orange mottling, moist, medium stiff	249+/-					
2		**SANDY FAT CLAY (CH)**, grayish brown with orange mottling, moist to wet, medium stiff, interbedded silt and gravel, sand content increases with depth		5				
		gravel lense						
		wet			▽			
		silt lense, trace gravel and weathered rock						S-2
		10.2 with gravel and cobbles 8 inch maximum grain size	242+/-	10				
		Test Pit Terminated at 10.2 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-21-2020
Test Pit Completed: 12-21-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

TEST PIT LOG NO. TP-A12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6234° Longitude: -122.9001°

Approximate Surface Elev.: 259 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.0	259+/-	**TOPSOIL**, abundant fine roots, brown to dark brown, moist to wet, very soft
			orange mottling, trace fine roots
	1.4	257.5+/-	seepage, possible perched groundwater above silt layer
2	1.4	257.5+/-	**FAT CLAY WITH SAND (CH)**, with fine roots, yellowish brown with orange mottling, wet, soft to medium stiff, clay content increases with depth
			orange with gray mottling, trace fine roots, low plasticity
			grayish brown with orange mottling
			wet
			light gray with orange mottling, low to medium plasticity
	11.0	248+/-	
			Test Pit Terminated at 11 Feet

DEPTH (Ft.): 5, 10

WATER LEVEL OBSERVATIONS: ▽ ▽

SAMPLE TYPE: S-1

RECOVERY (In.):

SAMPLE NO.: S-1

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

▽ *After 24 hours*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020

Test Pit Completed: 12-18-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-A15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6226° Longitude: -122.8987°

Approximate Surface Elev.: 261 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, dark brown to black, moist to wet, soft						
		brown to dark brown, with orange mottling, less fine roots			▽			
		seepage, possible perched groundwater						S-1
		2.0	259+/-					
2		**SANDY FAT CLAY (CH)**, trace gravel, gray and orange, moist to wet, medium stiff to stiff						
				5				S-2
		6.5	254.5+/-					
		POORLY GRADED SAND WITH CLAY AND GRAVEL (SP-SC), orangish brown, moist to wet, medium dense to dense, silt content increases with depth, with cobbles						S-3
		8.5	252.5+/-					
		SANDY FAT CLAY (CH), orangish brown to grayish brown, moist to wet, medium stiff						
				10				S-4
		10.5 trace weathered rock	250.5+/-					
		Test Pit Terminated at 10.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020

Test Pit Completed: 12-17-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-B04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6255° Longitude: -122.9051°

Approximate Surface Elev.: 247 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.0	247+/-	**TOPSOIL**, abundant fine roots, brown to dark brown, moist, very soft
			orange mottling, trace fine roots
	1.3	245.5+/-	**SANDY FAT CLAY (CH)**, trace fine roots, gray and orange, moist to wet, very soft
	2.3	244.5+/-	seepage possible perched groundwater above the clay layer
			SILTY CLAY (CL-ML), low to medium plasticity, olive gray to grayish brown, wet, medium stiff
			clay content decreases and sand content increases with depth
	4.0	243+/-	**SANDY FAT CLAY (CH)**, gray with orange mottling, moist, medium stiff
2			increase in gravel content
	6.0	241+/-	**SANDY FAT CLAY WITH GRAVEL (CH)**, trace cobbles, grayish brown with orangish brown, wet, medium stiff to stiff
			gravel lense
			silt content increases with depth
	10.5	236.5+/-	***Test Pit Terminated at 10.5 Feet***

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
				S-1
5	▽			
				S-2
10				S-3

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-21-2020	Test Pit Completed: 12-21-2020
Excavator: ECR 88	Operator: Green Earthworks
Project No.: 81215062	

TEST PIT LOG NO. TP-B08

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6243° Longitude: -122.9029°

Approximate Surface Elev.: 250 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		0						
			TOPSOIL, abundant fine roots, brown to dark brown, moist, very soft					
			orange mottling, trace fine roots, organics					S-1
		1.5	248.5+/-					
			SILTY CLAY (CL-ML), trace fine roots, low to medium plasticity, olive gray to grayish brown, moist to wet, soft to medium stiff		▽			
			seepage, possible perched groundwater					
		3.0	247+/-					
			WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), orangish brown to brown, moist to wet, medium dense to dense					S-2
			decrease in gravel content	5				
2		6.0	244+/-					
			CLAYEY SAND WITH GRAVEL (SC), orangish brown to brown, moist to wet, medium dense to dense					
			with thin bluish gray clay lenses					S-3
		9.5	240.5+/-					
			FAT CLAY WITH SAND (CH), trace gravel, gray with orange mottling, moist, medium stiff to stiff	10				S-4
		10.5	239.5+/-					
			Test Pit Terminated at 10.5 Feet					

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020

Test Pit Completed: 12-18-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-C12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6227° Longitude: -122.9012°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, brown to dark brown, moist, very soft						
		1.2	253+/-					
2		**SANDY FAT CLAY (CH)**, trace fine roots, gray and orange, wet, soft perched groundwater above the clay layer						S-1
		1.7	252.5+/-					
		SILTY CLAY (CL-ML), low to medium plasticity, olive gray to grayish brown, moist, soft to medium stiff						
		3.0	251+/-					
		WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), orange to orangish brown, moist, medium dense to dense						S-2
		grayish brown with orange mottling interbedded clay		5				S-3
		increase in silt and sand content						S-4
		10.0	244+/-					S-5
		Test Pit Terminated at 10 Feet		10				

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020

Test Pit Completed: 12-17-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-C16

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6218° Longitude: -122.8991°

Approximate Surface Elev.: 260 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.0	260+/-	**TOPSOIL**, abundant fine roots, dark brown to black, moist, very soft
			brown to dark brown, trace fine roots
	2.0	258+/-	possible perched groundwater above sandy silt with gravel layer
2			**SANDY FAT CLAY WITH GRAVEL (CH)**, gray and orange, moist to wet, medium stiff
			gravel content increases with depth
	3.0	257+/-	
			WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), with cobbles, orange to orangish brown, moist to wet, medium dense to dense
	6.0	254+/-	
			SANDY FAT CLAY (CH), trace gravel and cobbles, orangish brown, moist, soft to medium stiff
			grayish brown
	11.0	249+/-	
			Test Pit Terminated at 11 Feet

DEPTH (Ft.): 5, 10

WATER LEVEL OBSERVATIONS: ▽ While excavating

SAMPLE TYPE: S-1, S-2, S-3

RECOVERY (In.)

SAMPLE NO.

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020

Test Pit Completed: 12-17-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-E07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6238° Longitude: -122.9044°

Approximate Surface Elev.: 249 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, brown to dark brown, moist, very soft						
		0.8	248+/-					
2		**SANDY FAT CLAY (CH)**, fine roots, grayish brown with orange mottling, moist, very soft to soft						S-1
		2.0	247+/-					
		SILTY CLAY (CL-ML), low to medium plasticity, olive gray to olive gray, moist to wet, soft to medium stiff, clay content decreases and sand content increases with depth seepage, possible perched groundwater			▽			
		3.0	246+/-					
		WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), grayish brown to orangish brown, moist, dense						S-2
		6.4	242.5+/-	5				
		FAT CLAY WITH SAND (CH), light gray with orange mottling, moist, medium stiff to stiff						S-3
		orangish brown						
		sand content decreases		10				
		10.5	238.5+/-					
		FAT CLAY (CH), trace sand, gray with purple mottling, stiff, trace weathered rock						S-4
		11.5	237.5+/-					
		Test Pit Terminated at 11.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020

Test Pit Completed: 12-18-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-E10

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6229° Longitude: -122.9029°

Approximate Surface Elev.: 252 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		0.7	251.5+/-					
2		2.5	249.5+/-	5	▽			S-1
		6.5	245.5+/-					S-2
		10.0	242+/-	10				

TOPSOIL, abundant fine roots, brown to dark brown, moist, very soft

SANDY FAT CLAY (CH), fine roots, grayish brown and orange, moist to wet, very soft to soft

seepage, possible perched groundwater above gravel layer

WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), orangish brown to reddish brown, wet, dense

FAT CLAY WITH SAND (CH), gray with orange mottling, moist, medium stiff

gravel lense

Test Pit Terminated at 10 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020

Test Pit Completed: 12-18-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-E12

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6223° Longitude: -122.9017°

Approximate Surface Elev.: 254 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		0	254					
		TOPSOIL, abundant fine roots, brown to dark brown, moist, very soft						
		1.4	252.5+/-					
		SANDY FAT CLAY (CH), fine roots, grayish brown with orange mottling, moist, very soft to soft						S-1
		2.7 seepage, possible perched groundwater	251.5+/-		▽			
2		**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, brown to grayish brown, wet, dense		5				
		orangish brown to reddish brown layer 3.7 to 4.5 feet						
		7.5 test pit terminated due to the high water level	246.5+/-					
		Test Pit Terminated at 7.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020 | Test Pit Completed: 12-18-2020

Excavator: ECR 88 | Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-E15

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6214° Longitude: -122.9002°

Approximate Surface Elev.: 259 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant fine roots, dark brown, moist, very soft						
		1.3	257.5+/-					S-1
		SANDY FAT CLAY (CH), with fine roots, yellowish brown with orange mottling, moist, very soft to soft						
		3.2	256+/-					
		SILTY CLAY (CL-ML), trace fine roots, low to medium plasticity, orange and gray, moist, soft to medium stiff clay content decreases and sand content increases with depth						
		4.5	254.5+/-		▽			S-2
		CLAYEY SAND (SC), olive gray to brown, wet, loose to medium dense		5				
2		6.0	253+/-					
		WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), with cobbles, brown to orangish brown, wet, loose to medium dense						S-3
		10.5	248.5+/-	10				
		Test Pit Terminated at 10.5 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020
Test Pit Completed: 12-18-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

TEST PIT LOG NO. TP-P04

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6254° Longitude: -122.9029°

Approximate Surface Elev.: 249 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		0.0						
		TOPSOIL, abundant fine roots, brown to dark brown, moist, very soft						
		0.8	248+/-					
		orange mottling, with fine roots						
		SANDY FAT CLAY (CH), with fine roots, gray and orange, moist to wet, very soft						S-1
		2.2	247+/-					
		perched groundwater above clay layer						
2		**SILTY CLAY (CL-ML)**, low to medium plasticity, grayish brown, moist, soft to medium stiff						
		thin gravel lense						
		gray		5				
		5.5	243.5+/-					
		WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC), with cobbles, orangish brown, moist, medium dense to dense, gravel content decreases with depth						
		wet			▽			
		8.0	241+/-					
		CLAYEY SAND WITH GRAVEL (SC), orangish brown to gray, moist, dense						
		9.0	240+/-					
		SANDY FAT CLAY (CH), trace gravel, gray to dark gray, moist, very soft						
		10.0	239+/-	10				
		Test Pit Terminated at 10 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-21-2020

Test Pit Completed: 12-21-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-P05

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6239° Longitude: -122.9000°

Approximate Surface Elev.: 268 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		0						
		TOPSOIL, abundant fine roots, brown to dark brown, moist, very soft						
		1.0	267+/-					
2		**SANDY FAT CLAY (CH)**, with fine roots, gray and orange, moist to wet, very soft to soft						S-1
		seepage, possible perched groundwater above clay layer						
		1.6	266.5+/-					
		SILTY CLAY (CL-ML), trace fine roots, low to medium plasticity, orange with gray mottling, moist, soft to medium stiff						S-2
		at 2 feet, an old drainage was encountered		5				
		6.5	261.5+/-					
		LEAN CLAY (CL), trace organics, medium to high plasticity, grayish brown with orange and purple mottling, moist, medium stiff						S-3
		10.3	257.5+/-	10				
		Test Pit Terminated at 10.3 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

Difficult to locate stabilized (regional) groundwater level due to wet weather and perched groundwater flowing into the test pit

WATER LEVEL OBSERVATIONS

Long-term, steady-flow groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020

Test Pit Completed: 12-17-2020

Excavator: ECR 88

Operator: Green Earthworks

Project No.: 81215062

TEST PIT LOG NO. TP-P06

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6230° Longitude: -122.8985°

Approximate Surface Elev.: 266 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		1.0	265+/-	**TOPSOIL**, trace gravels, brown to dark brown, moist, very soft, abundant fine roots					
2		3.0	263+/-	**SANDY FAT CLAY (CH)**, trace fine roots, trace gravels, gray and orange, moist to wet, very soft to soft seepage, possible perched groundwater					S-1
		8.0	258+/-	**SILTY CLAY (CL-ML)**, trace fine roots, low to medium plasticity, orange with gray mottling, moist, soft to medium stiff, clay content decreases and sand content increases with depth orangish brown with gray mottling, trace gravel	5				S-2
		10.0	256+/-	**SANDY FAT CLAY (CH)**, low plasticity, gray, moist, medium stiff					S-3
				Test Pit Terminated at 10 Feet	10				

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

Long-term, steady-flow groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-17-2020
Test Pit Completed: 12-17-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

TEST PIT LOG NO. TP-P07

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6212° Longitude: -122.9007°

Approximate Surface Elev.: 258 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, abundant organics, reddish brown to dark brown, moist, very soft						
		1.1	257+/-					
		FAT CLAY WITH SAND (CH), trace fine roots, dark brown to grayish brown, with orange mottling, moist to wet, very soft						S-1
		3.5	254.5+/-					
2		**WELL GRADED GRAVEL WITH CLAY AND SAND (GW-GC)**, with cobbles, orangish brown to brown, moist to wet, loose to medium dense		5	▽			S-2
		7.7 test pit terminated due to the high water level	250.5+/-					
		Test Pit Terminated at 7.7 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

▽ *While excavating*

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020
Test Pit Completed: 12-18-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

TEST PIT LOG NO. TP-P08

PROJECT: Proposed Industrial Park - Chehalis PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

LOCATION See Exploration Plan

Latitude: 46.6229° Longitude: -122.9042°

Approximate Surface Elev.: 251 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	SAMPLE NO.
1		**TOPSOIL**, trace gravel, brown to dark brown, moist, very soft, abundant fine roots						
		0.8	250+/-					
2		**SANDY FAT CLAY (CH)**, with fine roots, gray and orange, moist to wet 1.5 feet, encountered a root mat seepage, possible perched groundwater						S-1
		3.0	248+/-					
		SILTY CLAY (CL-ML), trace organics, low to medium plasticity, grayish brown with orange mottling, moist, soft to medium stiff						S-2
								S-3
		7.0	244+/-	5				
		SANDY FAT CLAY (CH), trace gravel, orange, moist, soft to medium stiff						
		9.0	242+/-					
		SILTY CLAY WITH SAND (CL-ML), low to medium plasticity, gray to grayish brown, moist, stiff						S-4
		10.0	241+/-	10				
		Test Pit Terminated at 10 Feet						

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Excavation

Abandonment Method:
Backfilled with spoils

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Elevation information obtained from Google Earth

Notes:

WATER LEVEL OBSERVATIONS

Long-term, steady-flow groundwater not encountered

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

Test Pit Started: 12-18-2020
Test Pit Completed: 12-18-2020
Excavator: ECR 88
Operator: Green Earthworks
Project No.: 81215062

CPT LOG NO. CPT-A05

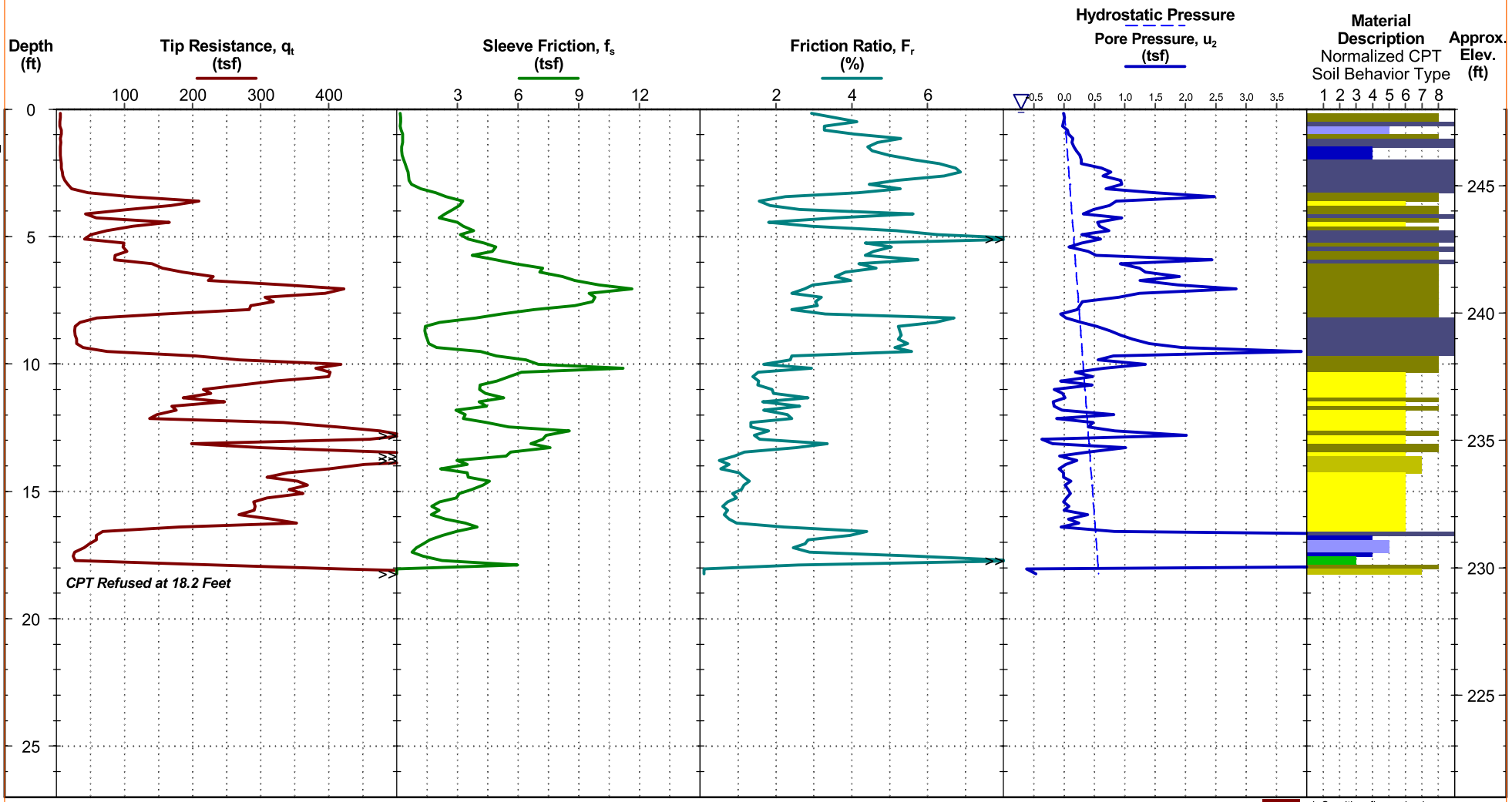
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.6257848°
Longitude: -122.9042868°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A07

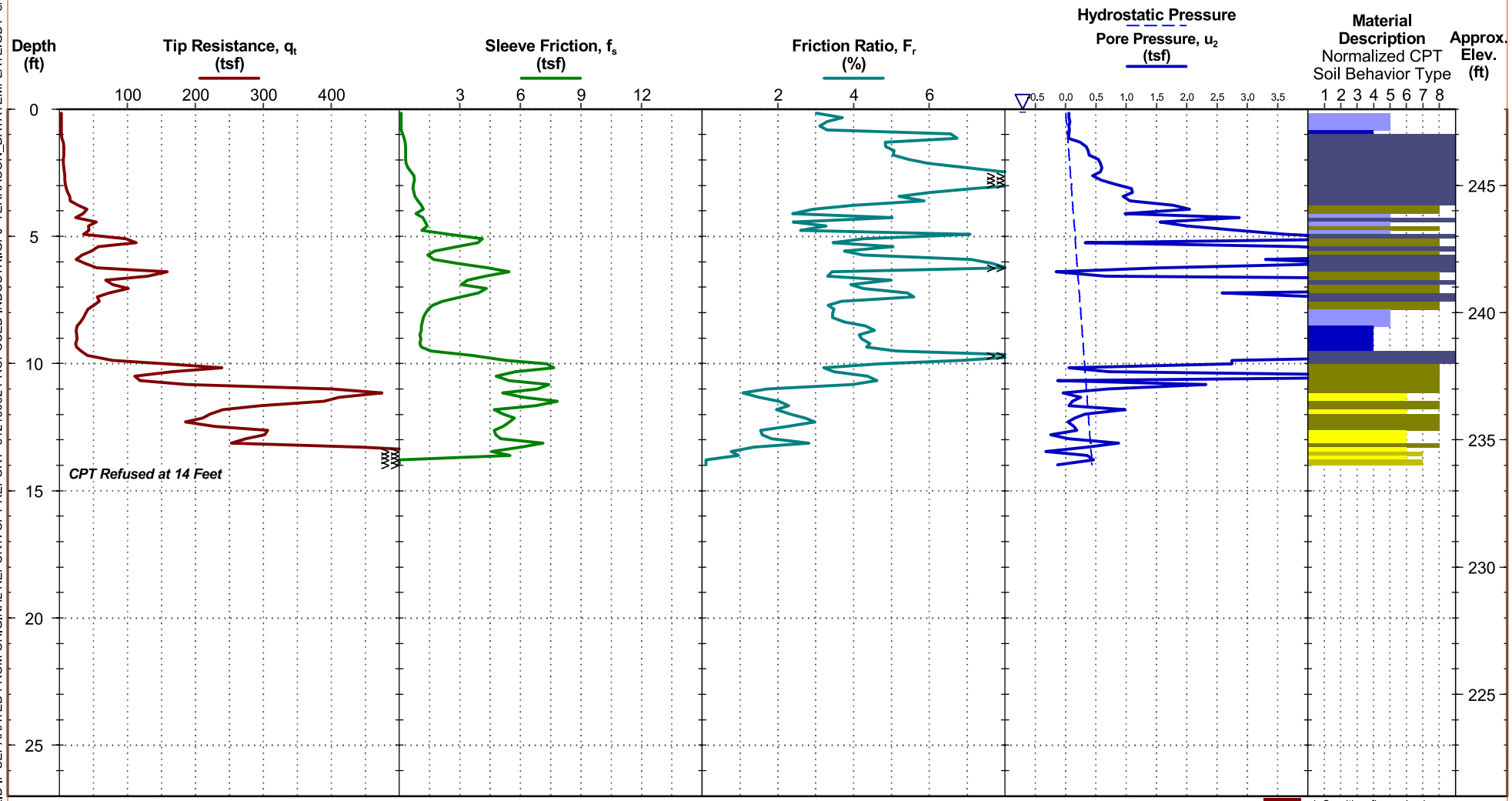
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.6251743°
Longitude: -122.9032261°

SITE: 2800 Jackson Highway
Chehalis, WA



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A08

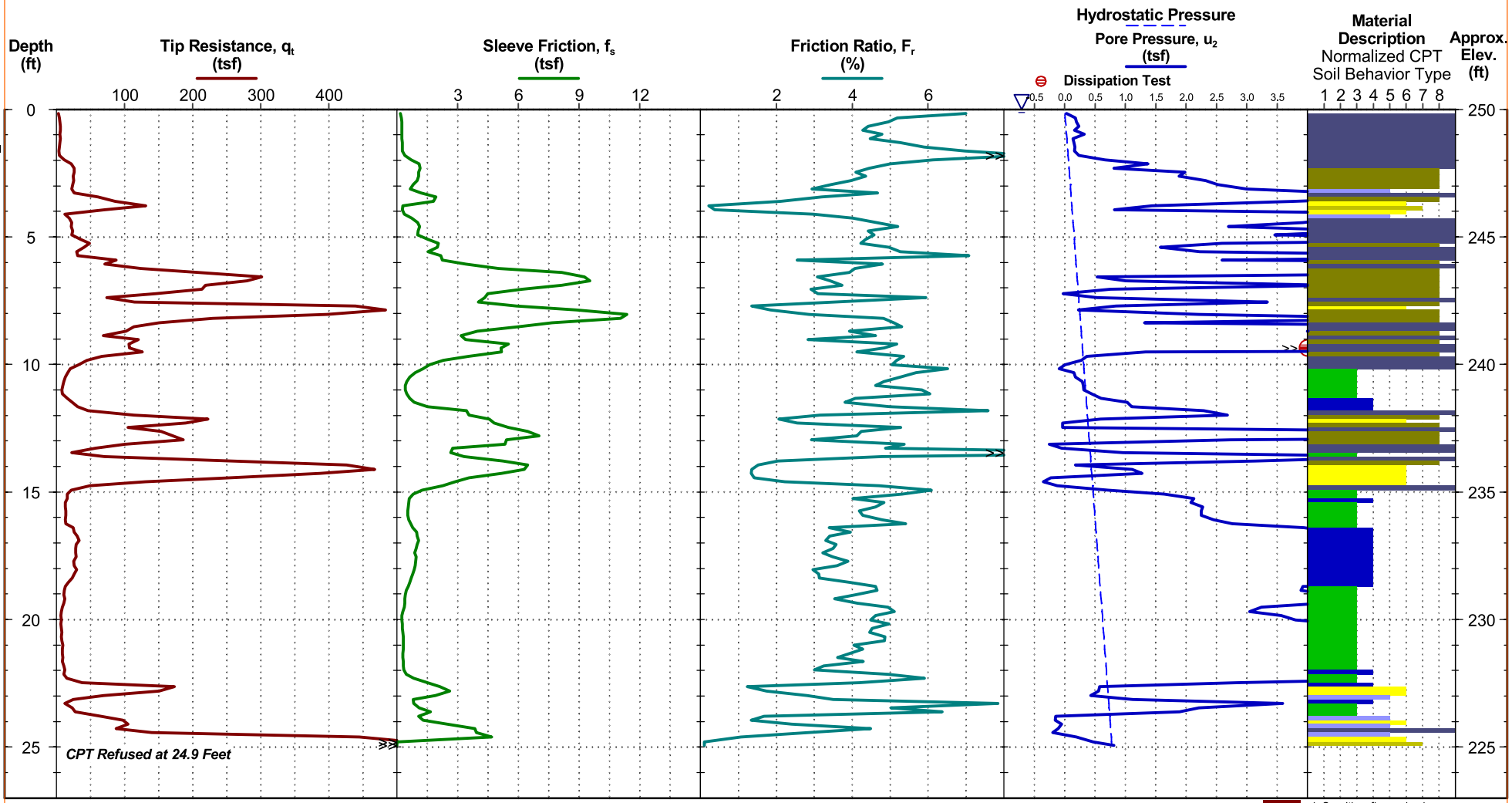
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 250 ft +/-
Latitude: 46.6248705°
Longitude: -122.9026954°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
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5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A09

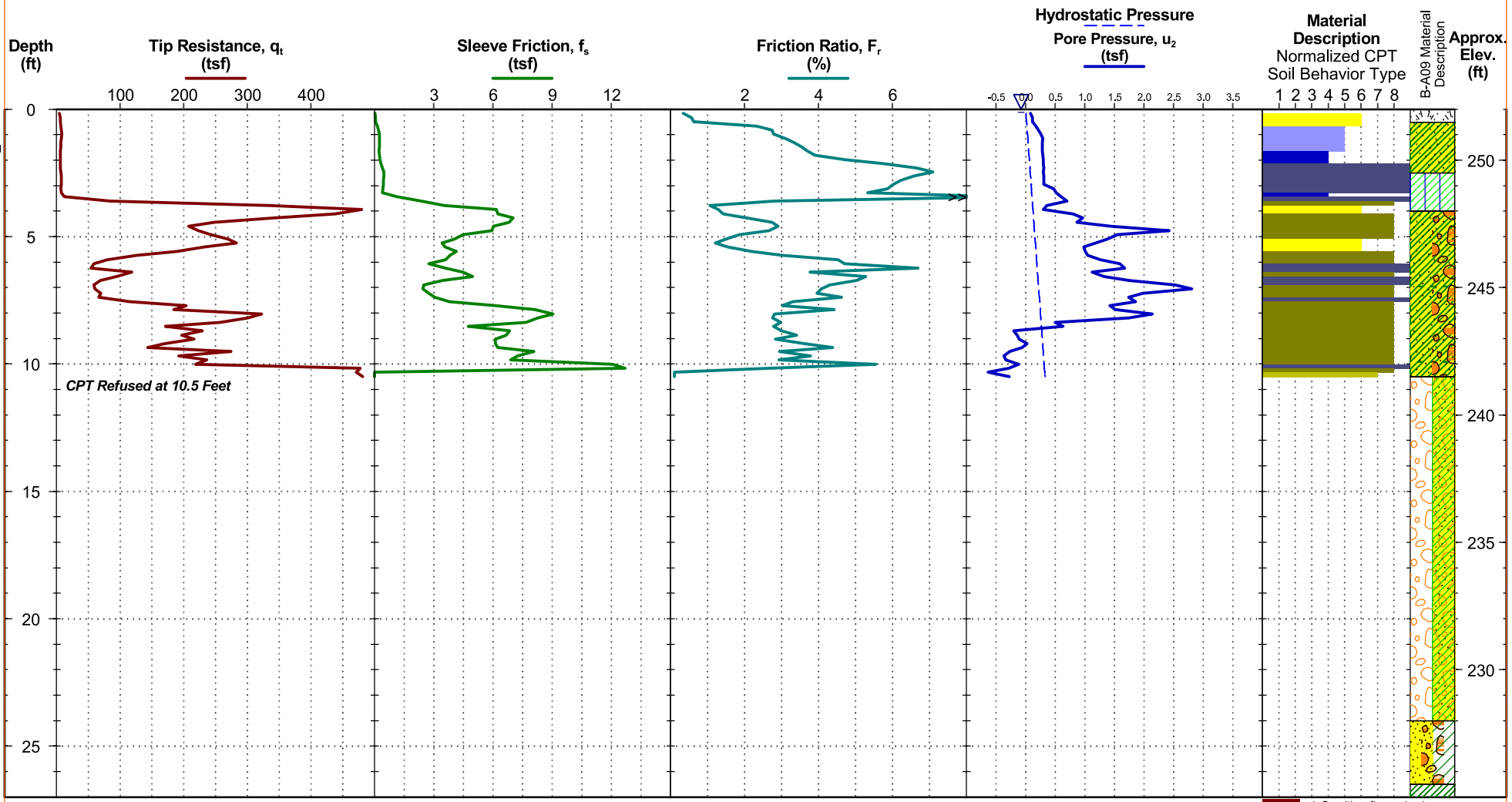
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 252 ft +/- Adjacent Test: B-A09
Latitude: 46.6245668°
Longitude: -122.9021679°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

See B-A09 for the adjacent test's full details.
Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A09

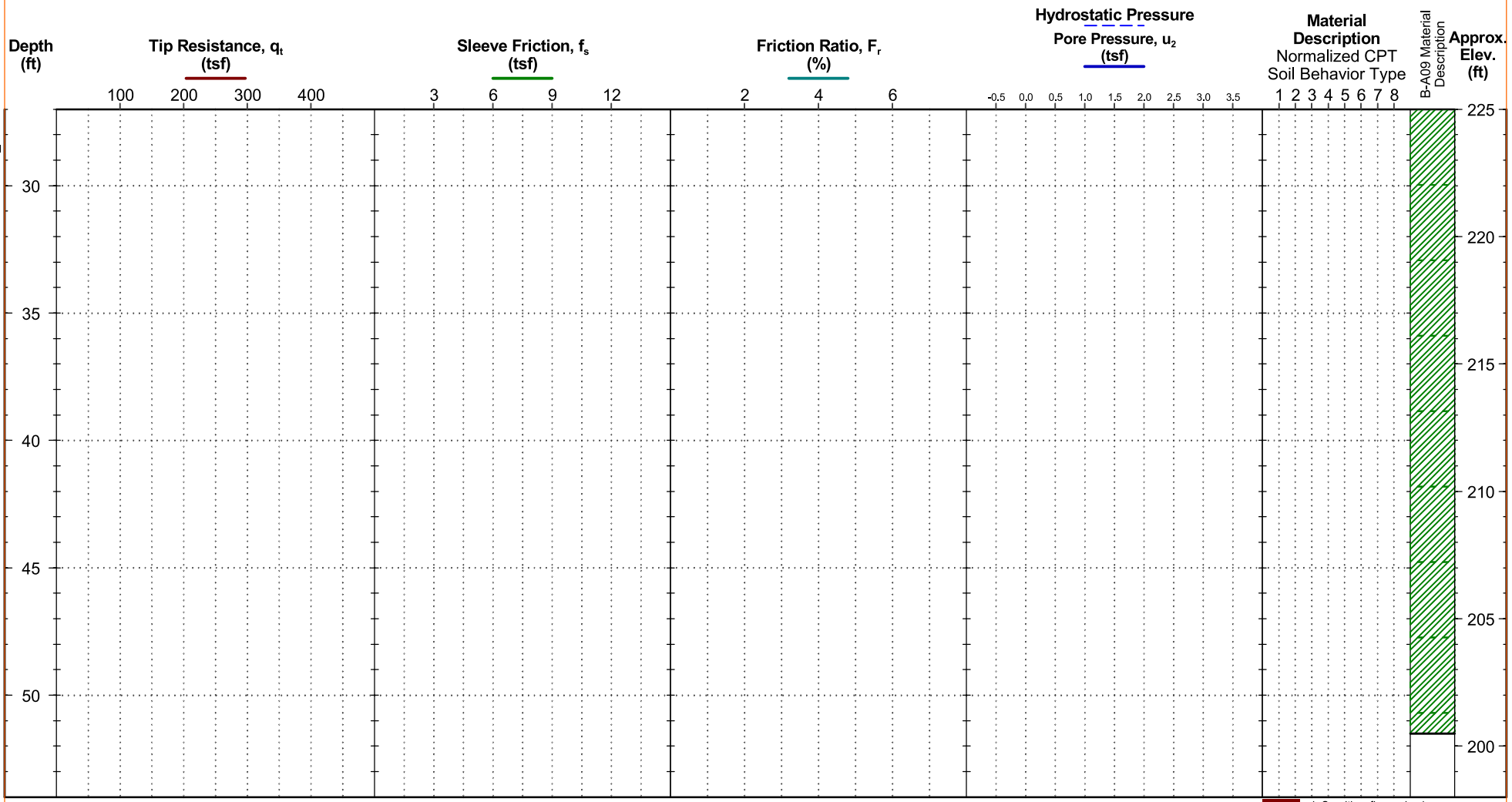
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 252 ft +/- Adjacent Test: B-A09
Latitude: 46.6245668°
Longitude: -122.9021679°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

See B-A09 for the adjacent test's full details.
Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A10

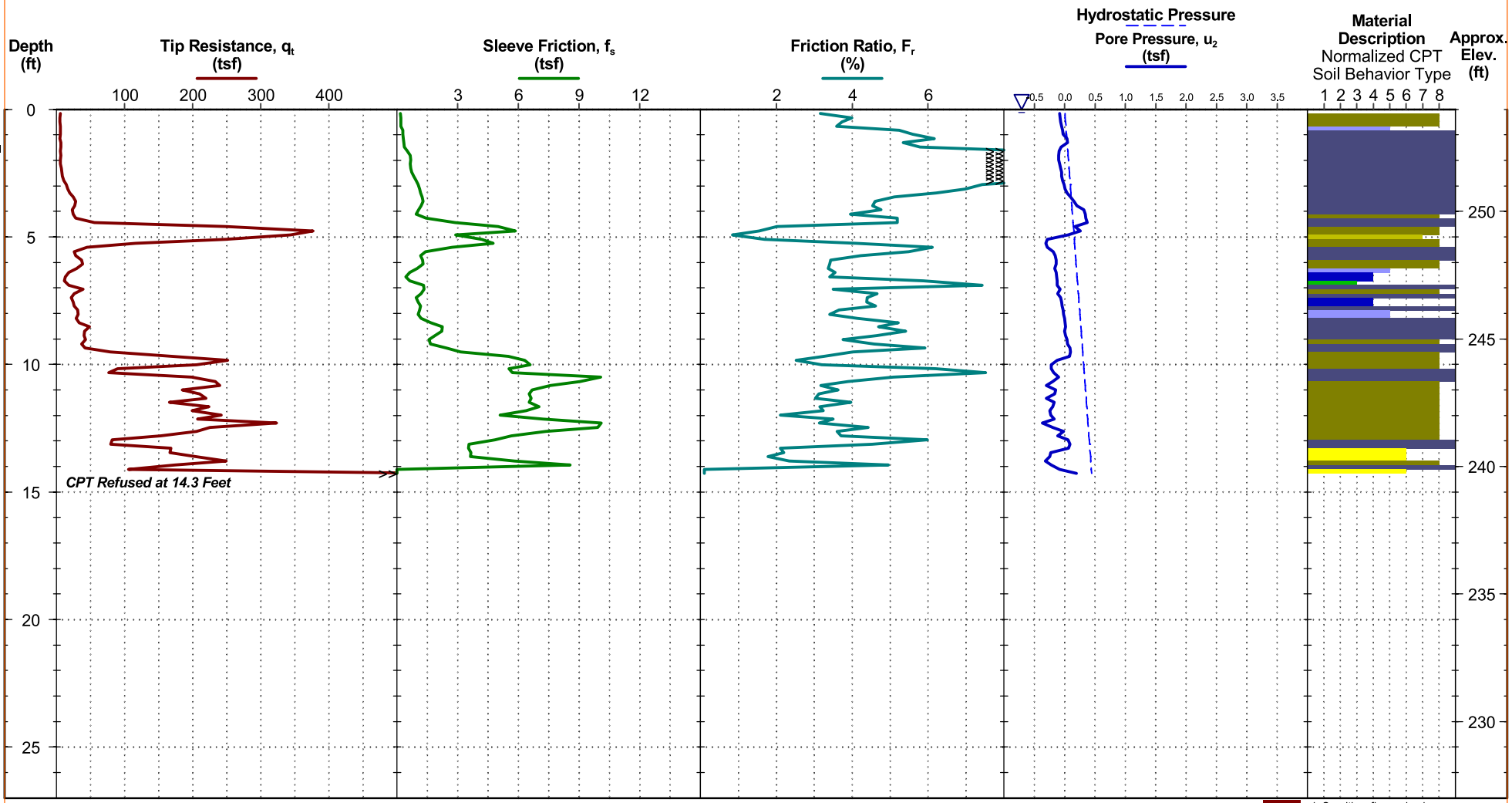
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 254 ft +/-
Latitude: 46.624262°
Longitude: -122.9016368°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
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6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A12

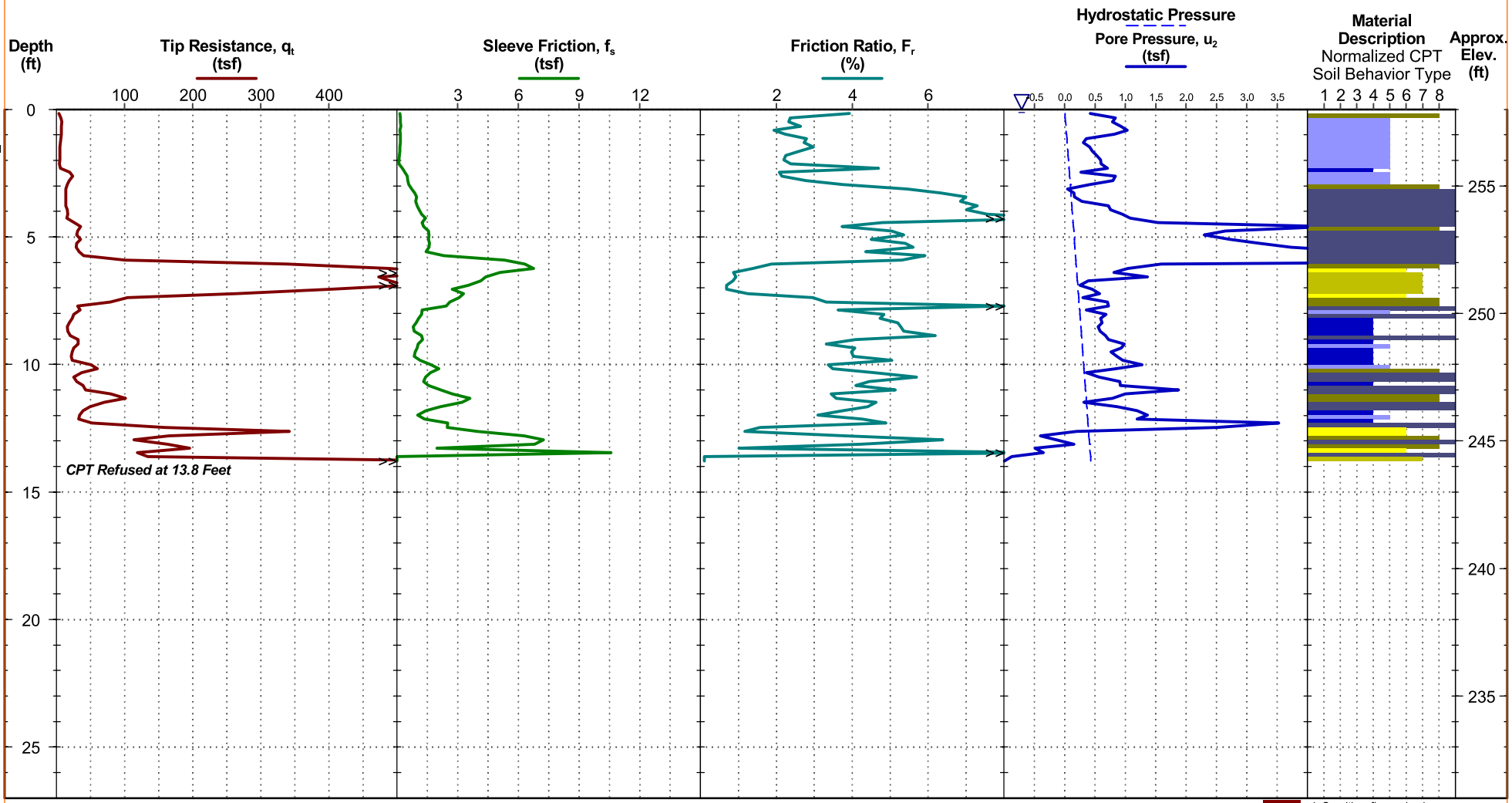
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 258 ft +/-
Latitude: 46.6236537°
Longitude: -122.9005756°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
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5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A13

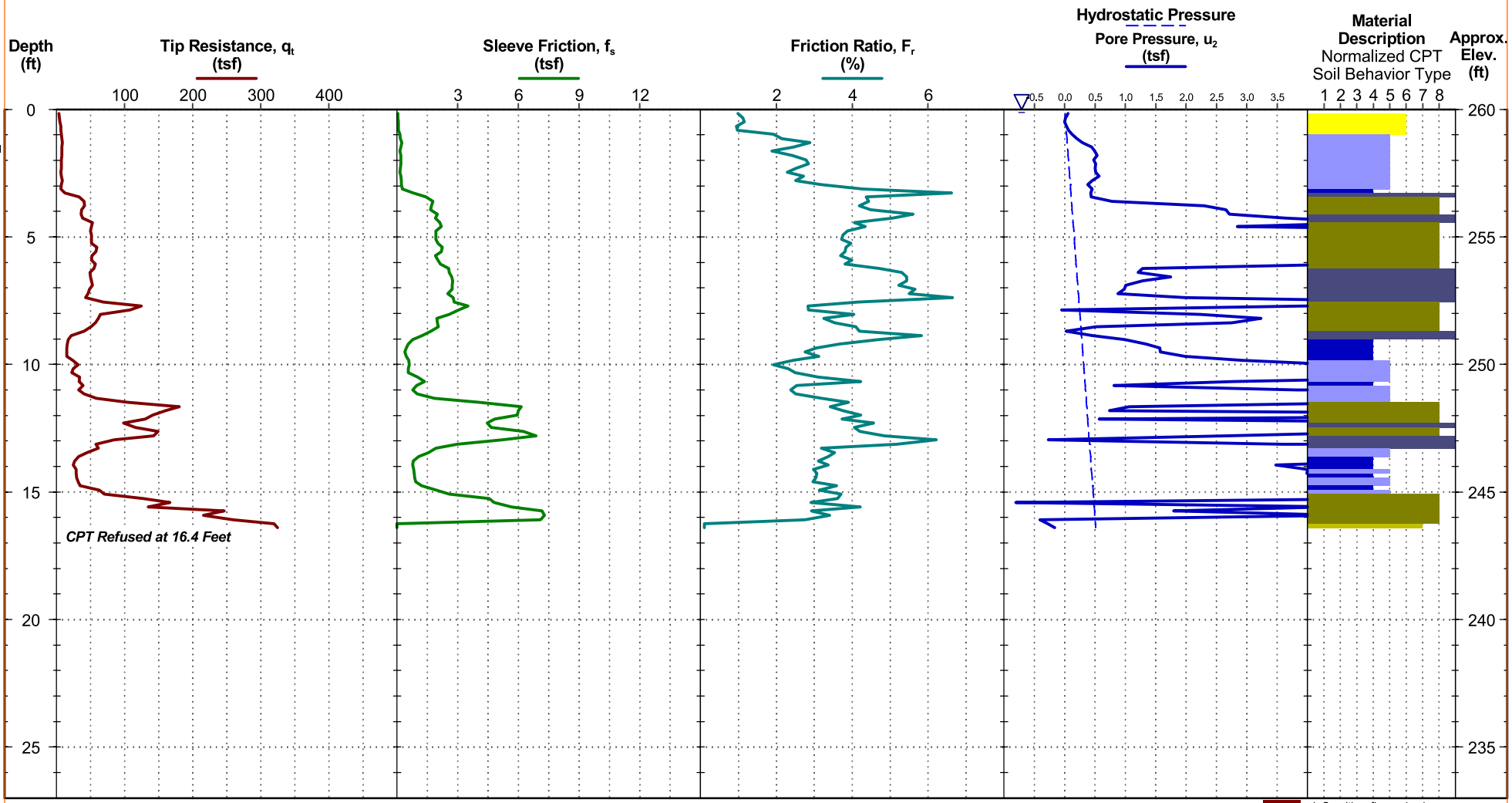
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 260 ft +/-
Latitude: 46.6233487°
Longitude: -122.9000447°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
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5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/5/2021
CPT Completed: 1/5/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A14

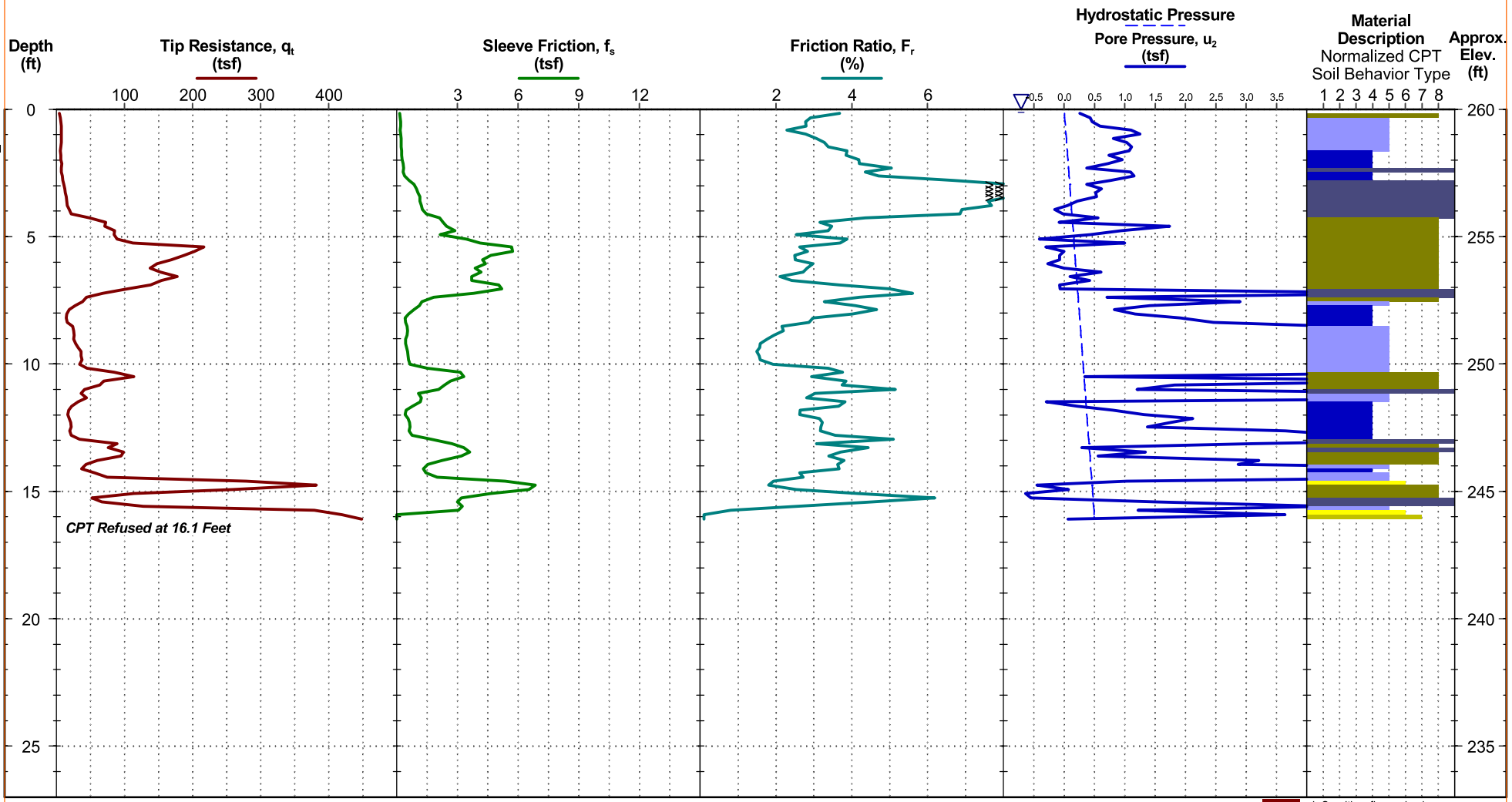
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 260 ft +/-
Latitude: 46.6230283°
Longitude: -122.8994909°

SITE: 2800 Jackson Highway
Chehalis, WA



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/5/2021
CPT Completed: 1/5/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-A16

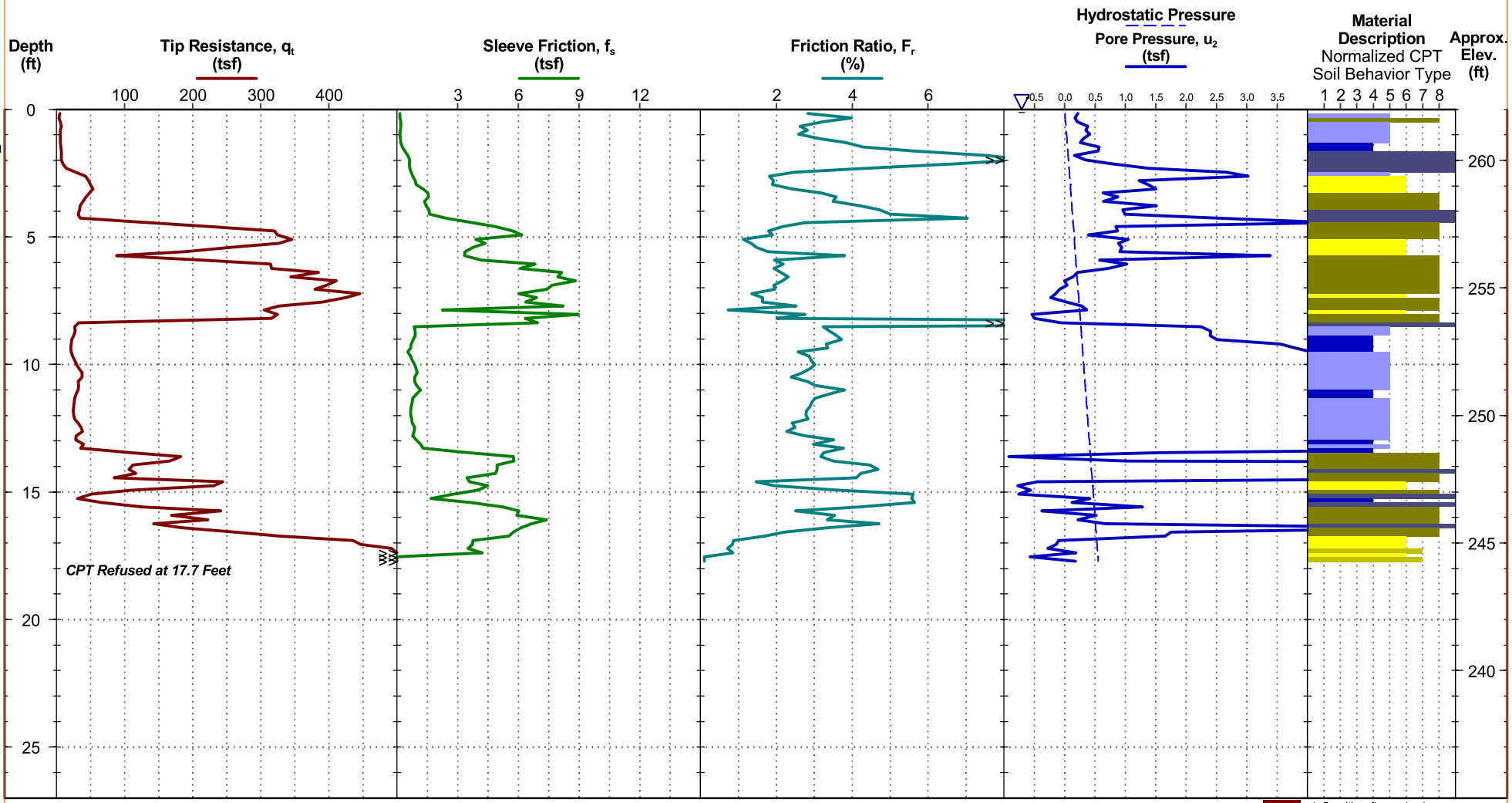
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 262 ft +/-
Latitude: 46.6224005°
Longitude: -122.8983966°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/4/2021
CPT Completed: 1/4/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT 81215062 PROPOSED INDUSTRI.GPJ TERRACON_DATATEMPLATE.GDT 8/19/21

CPT LOG NO. CPT-B06

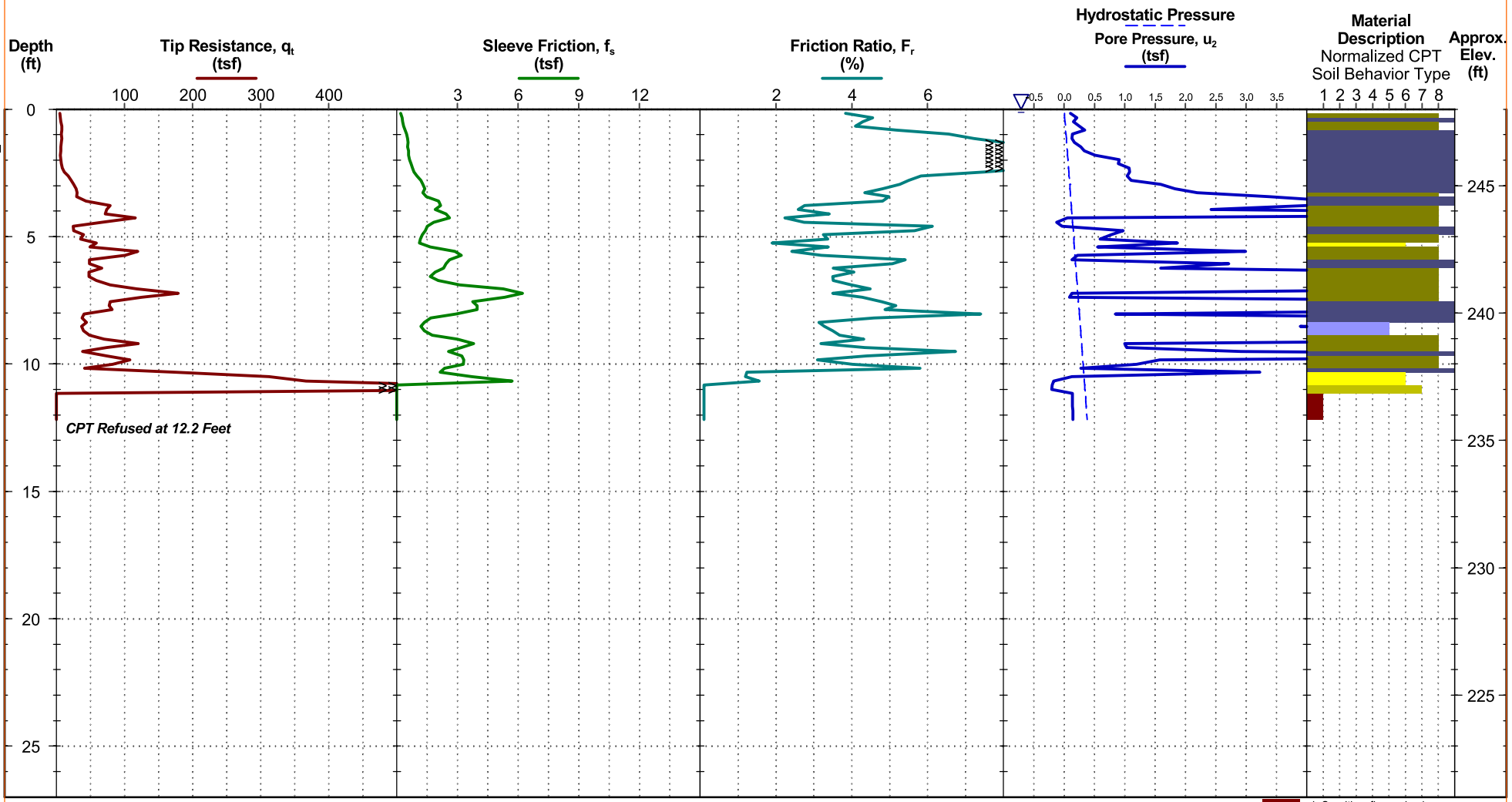
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.625174°
Longitude: -122.9041238°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/8/2021
CPT Completed: 1/8/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-B08

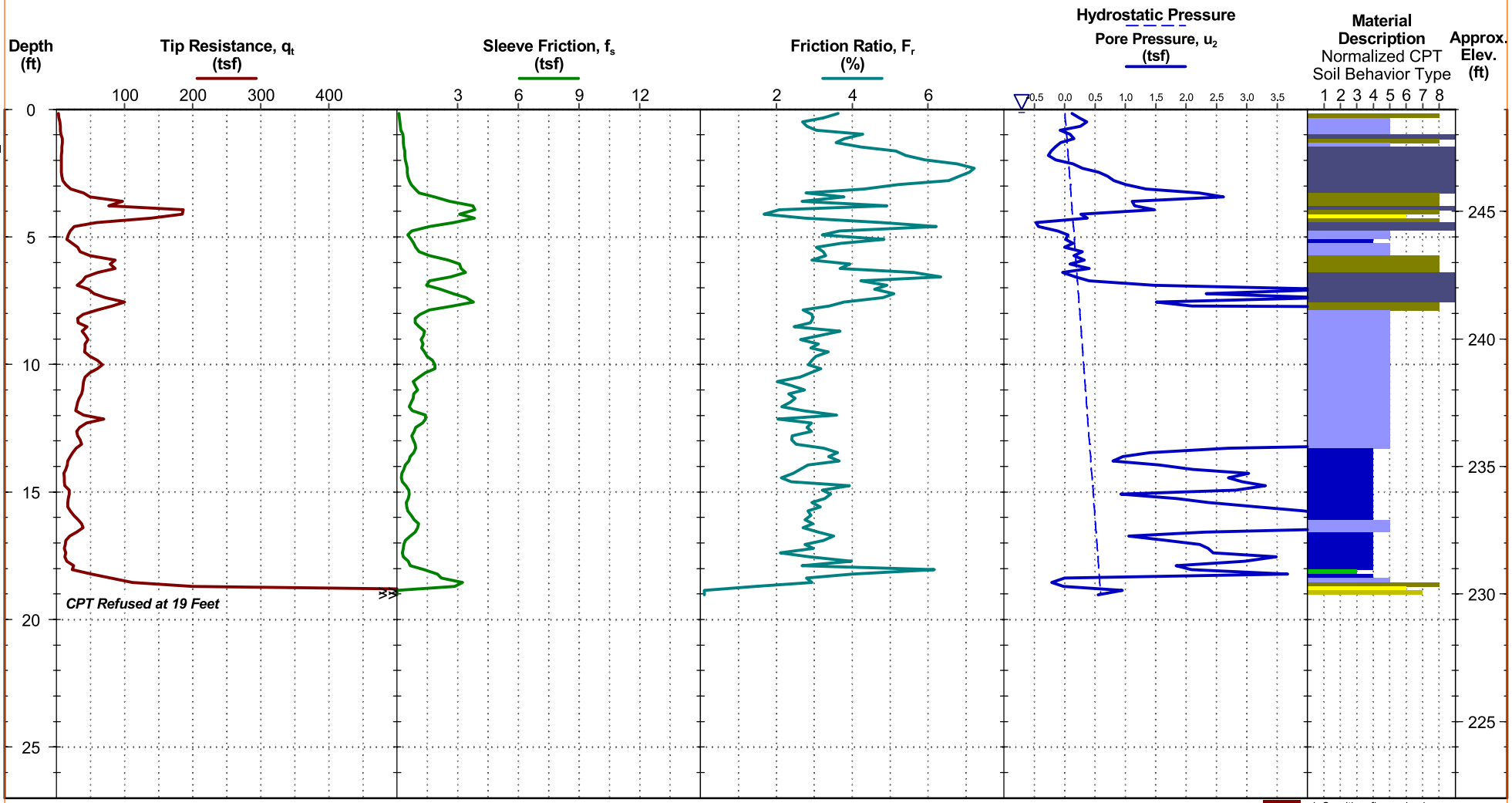
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 249 ft +/-
Latitude: 46.6245647°
Longitude: -122.9030629°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/8/2021
CPT Completed: 1/8/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-B15

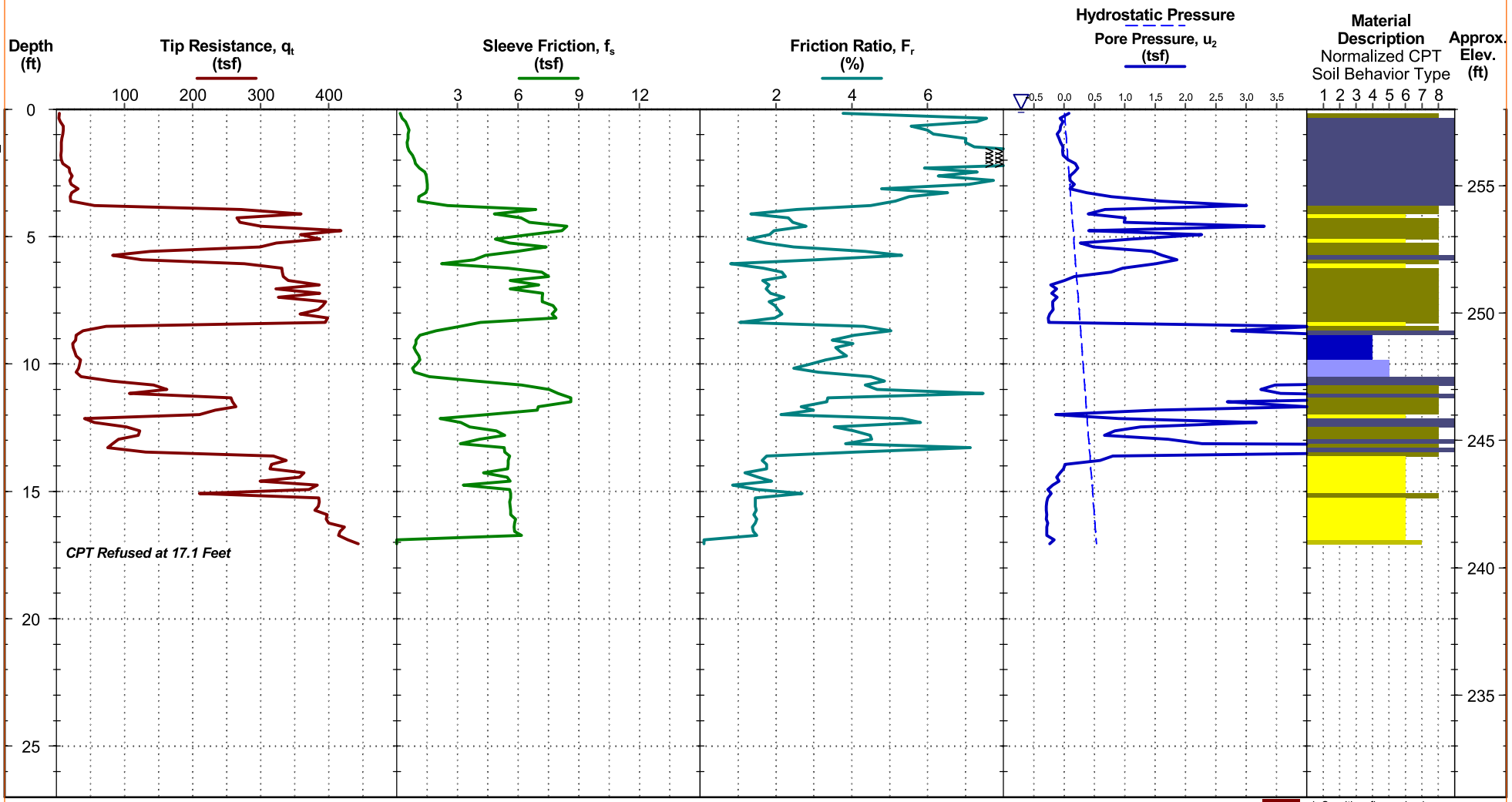
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 258 ft +/-
Latitude: 46.6224108°
Longitude: -122.8993127°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/4/2021
CPT Completed: 1/4/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C04

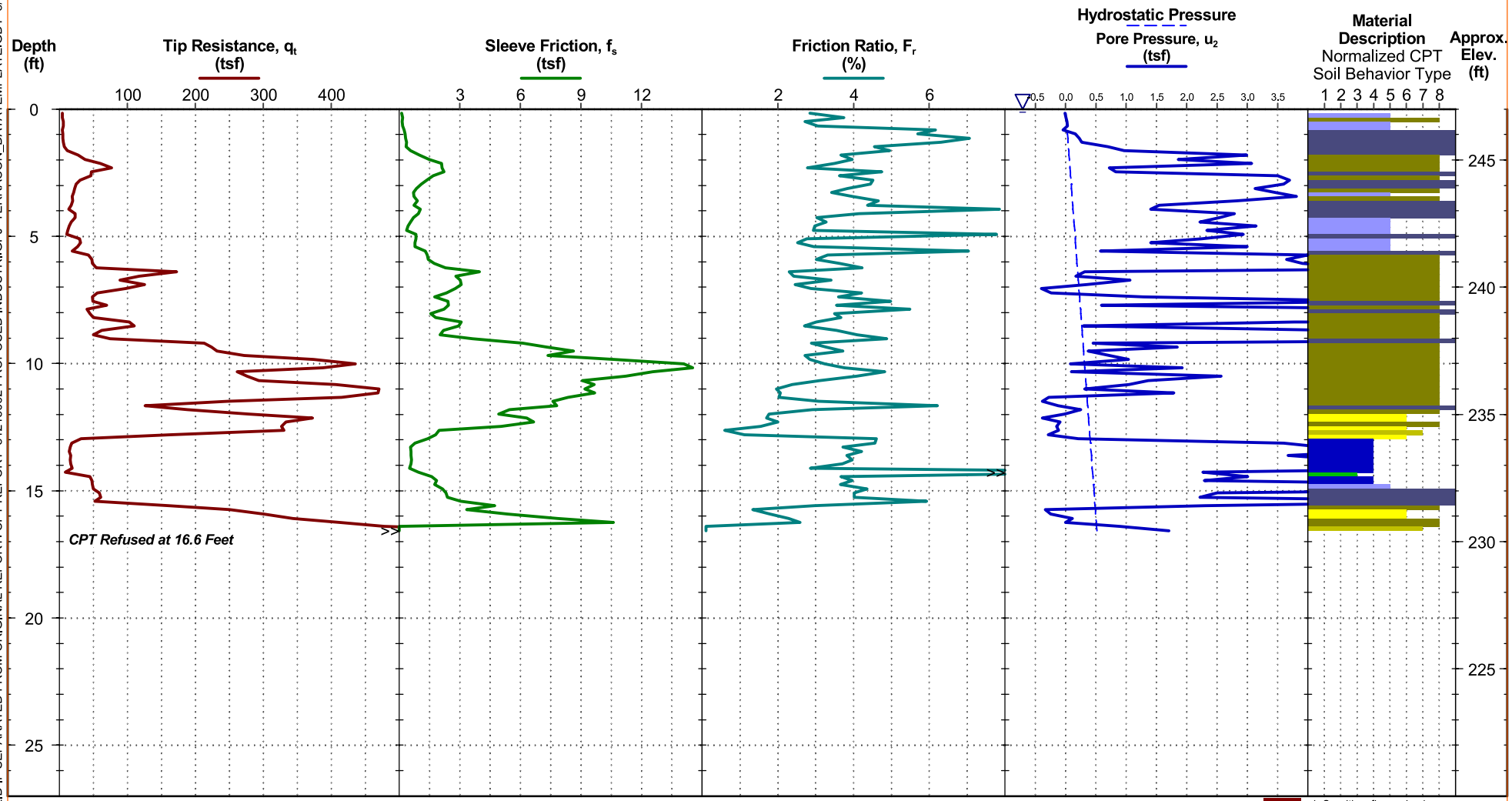
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 247 ft +/-
Latitude: 46.6254784°
Longitude: -122.9055557°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/8/2021
CPT Completed: 1/8/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C05

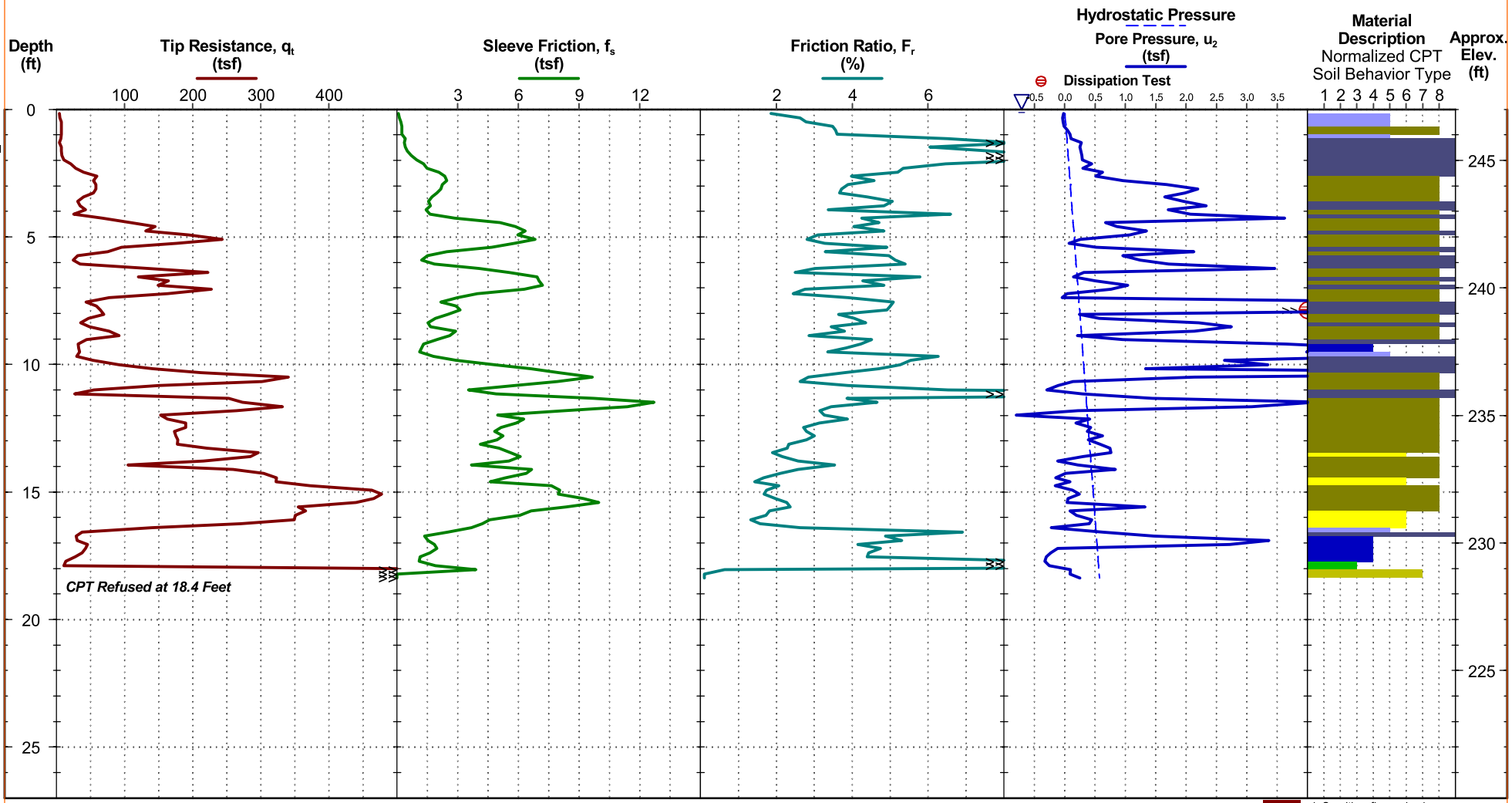
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 247 ft +/-
Latitude: 46.6251728°
Longitude: -122.9050238°

SITE: 2800 Jackson Highway
Chehalis, WA



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
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4 Silt mixtures - clayey silt to silty clay
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6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C08

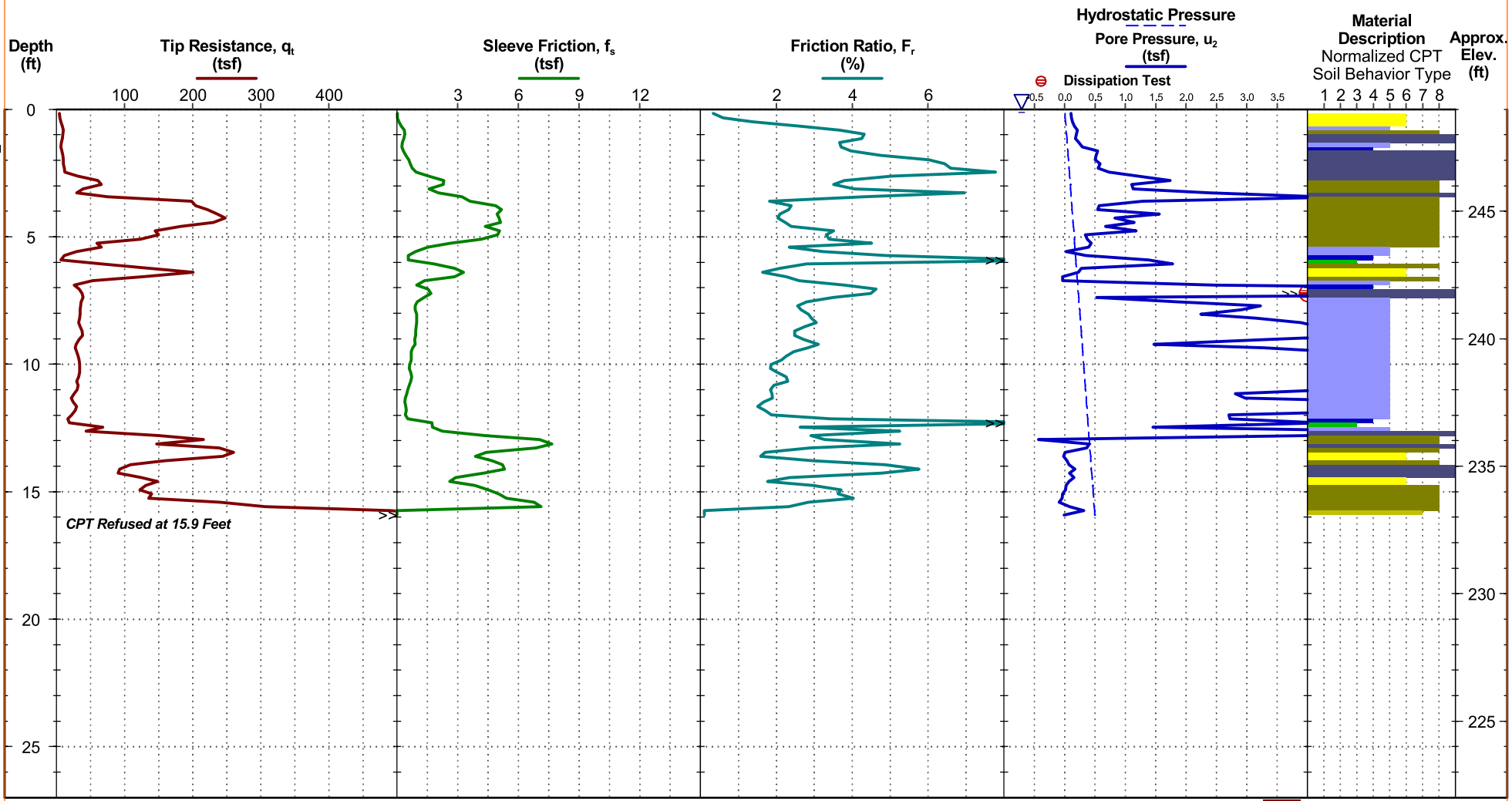
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 249 ft +/-
Latitude: 46.6242585°
Longitude: -122.9034323°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/8/2021
CPT Completed: 1/8/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C11

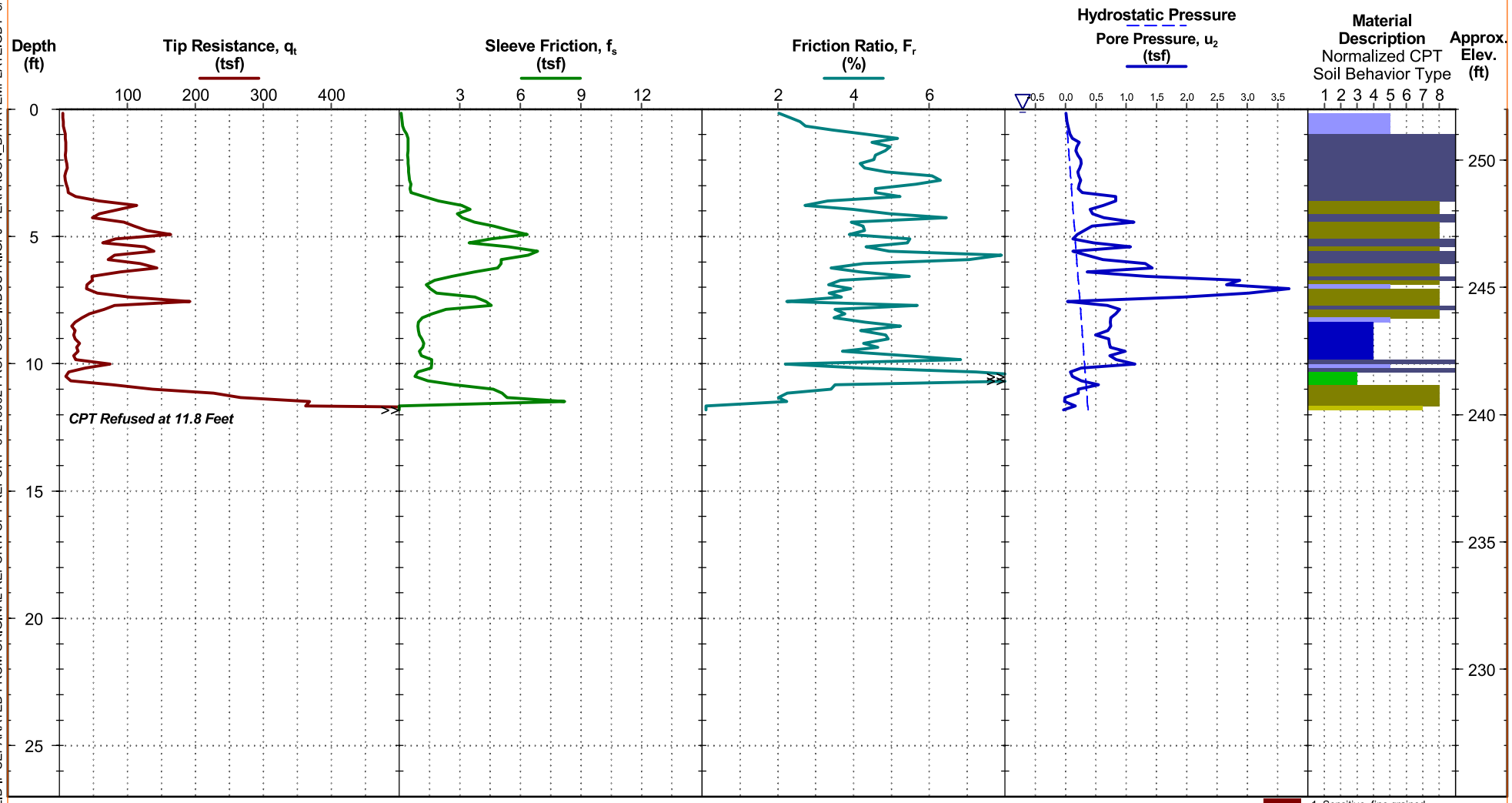
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

SITE: 2800 Jackson Highway
Chehalis, WA

Approx. Surface Elev: 252 ft +/-
Latitude: 46.6233455°
Longitude: -122.9018433°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C12

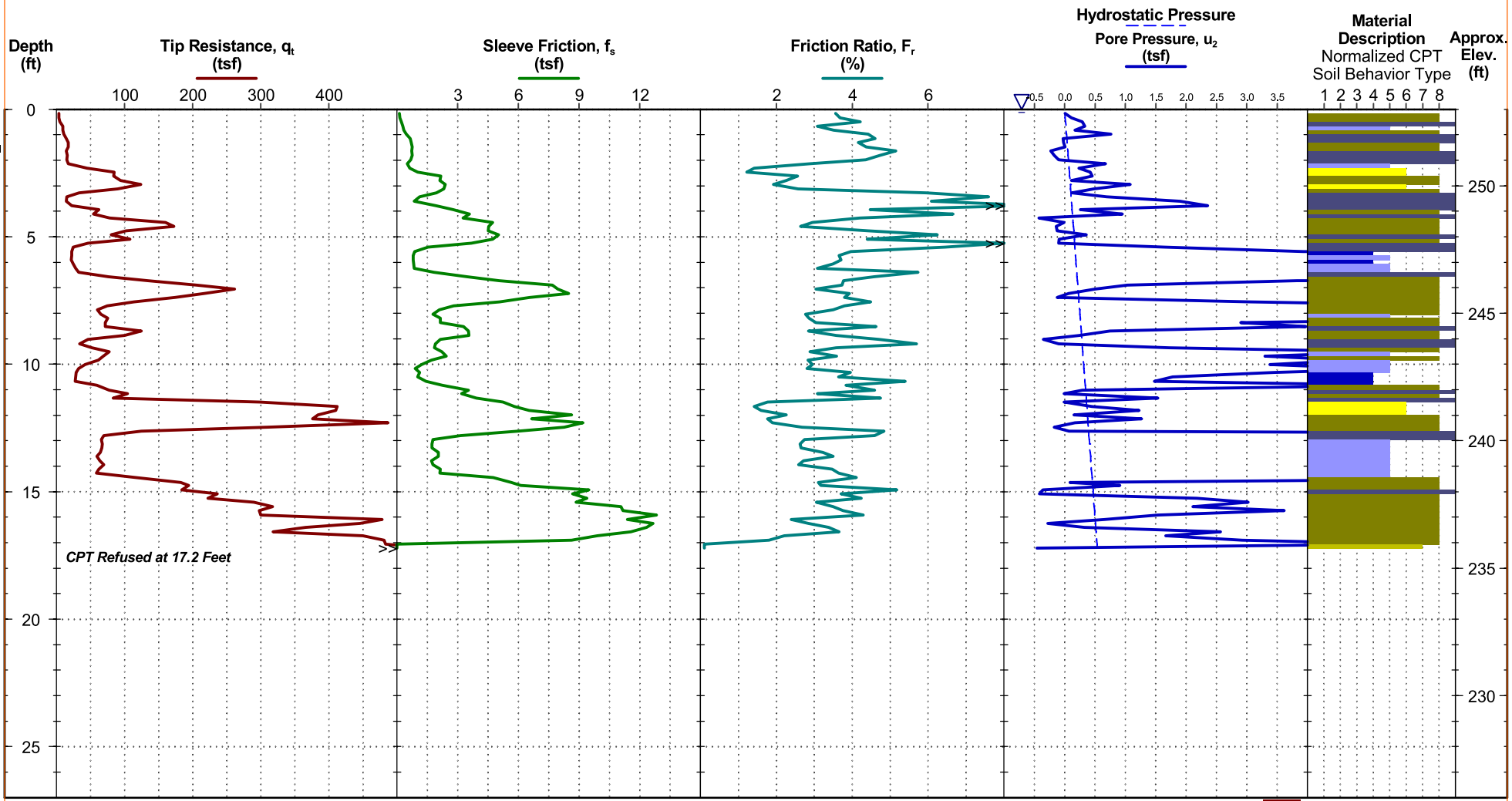
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

SITE: 2800 Jackson Highway
Chehalis, WA

Approx. Surface Elev: 253 ft +/-
Latitude: 46.6230418°
Longitude: -122.9013125°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C13

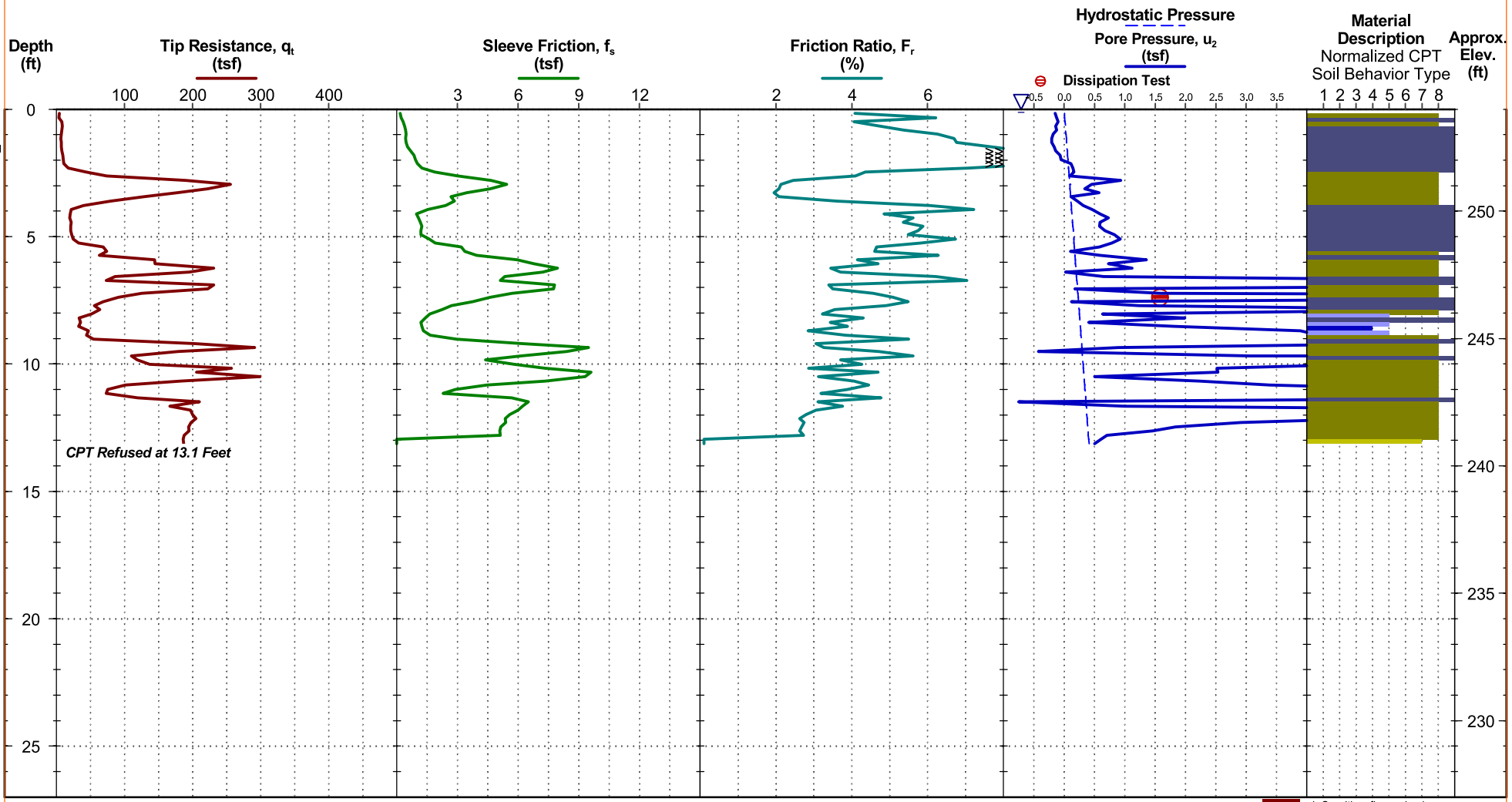
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 254 ft +/-
Latitude: 46.6227367°
Longitude: -122.9007816°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/5/2021
CPT Completed: 1/5/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-C13a

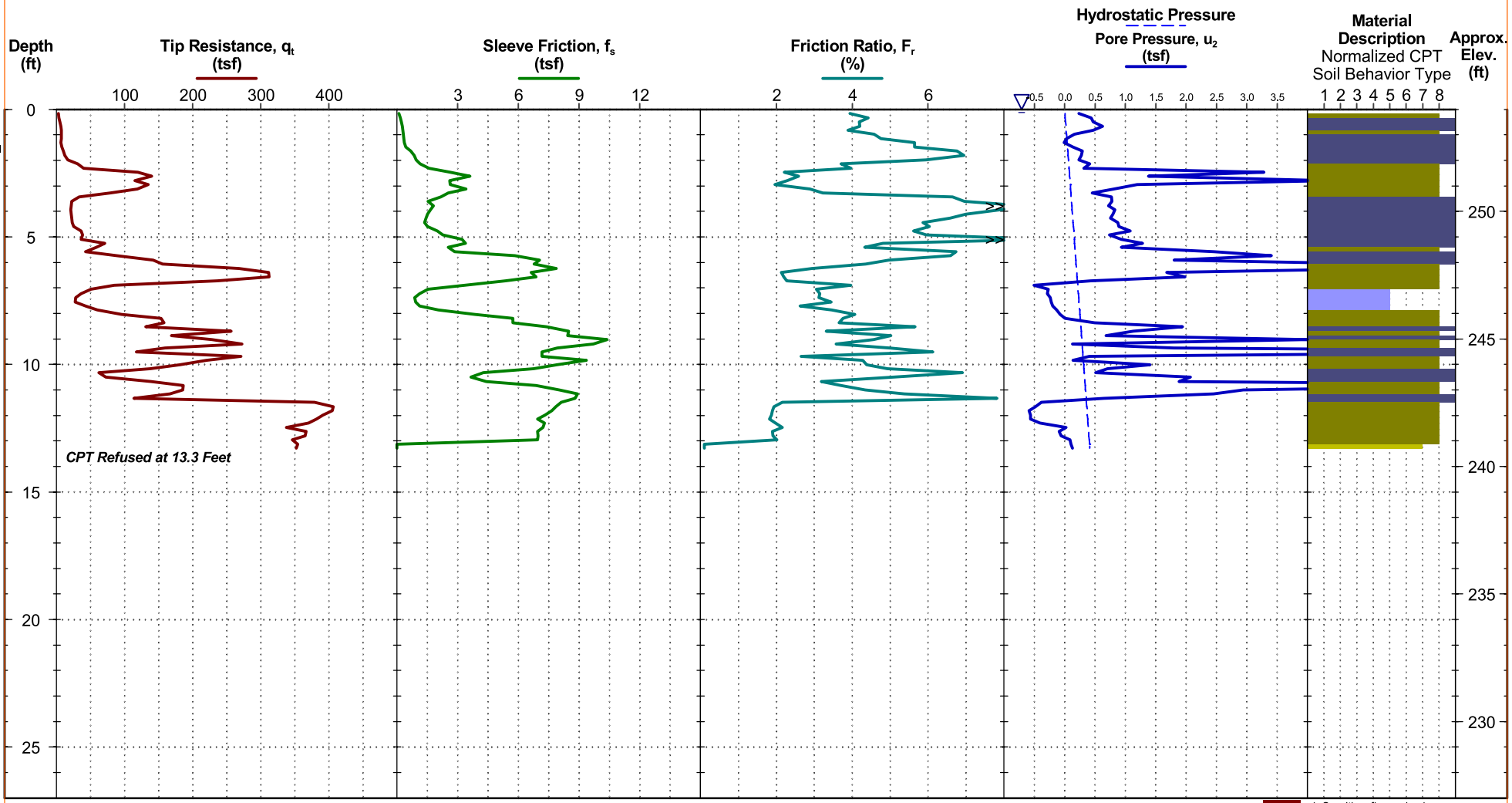
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 254 ft +/-
Latitude: 46.6227367°
Longitude: -122.9007816°

SITE: 2800 Jackson Highway
Chehalis, WA



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/5/2021
CPT Completed: 1/5/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D05

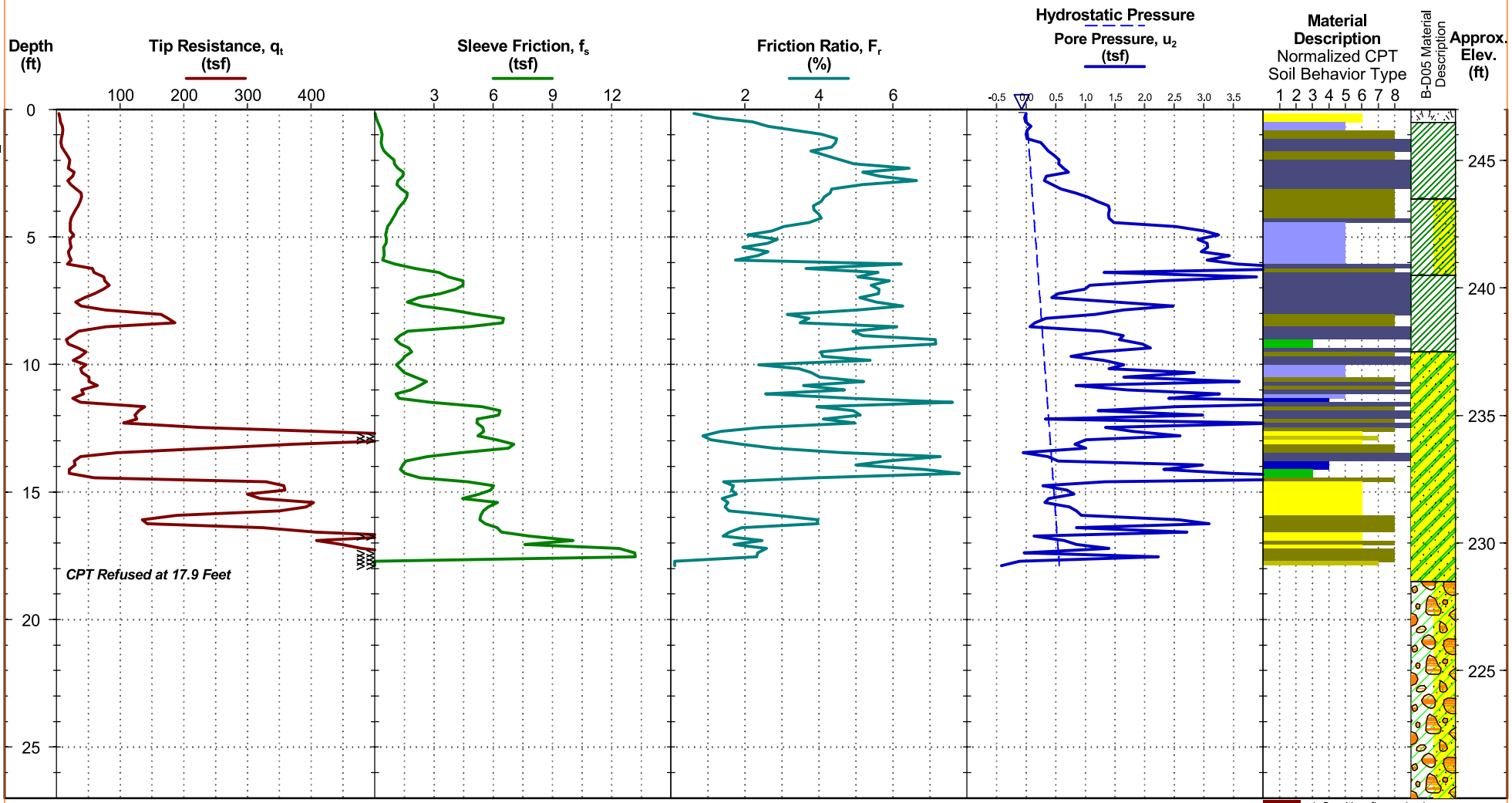
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 247 ft +/- Adjacent Test: B-D05
Latitude: 46.6248628°
Longitude: -122.9053908°



1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

See B-D05 for the adjacent test's full details.
Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D05

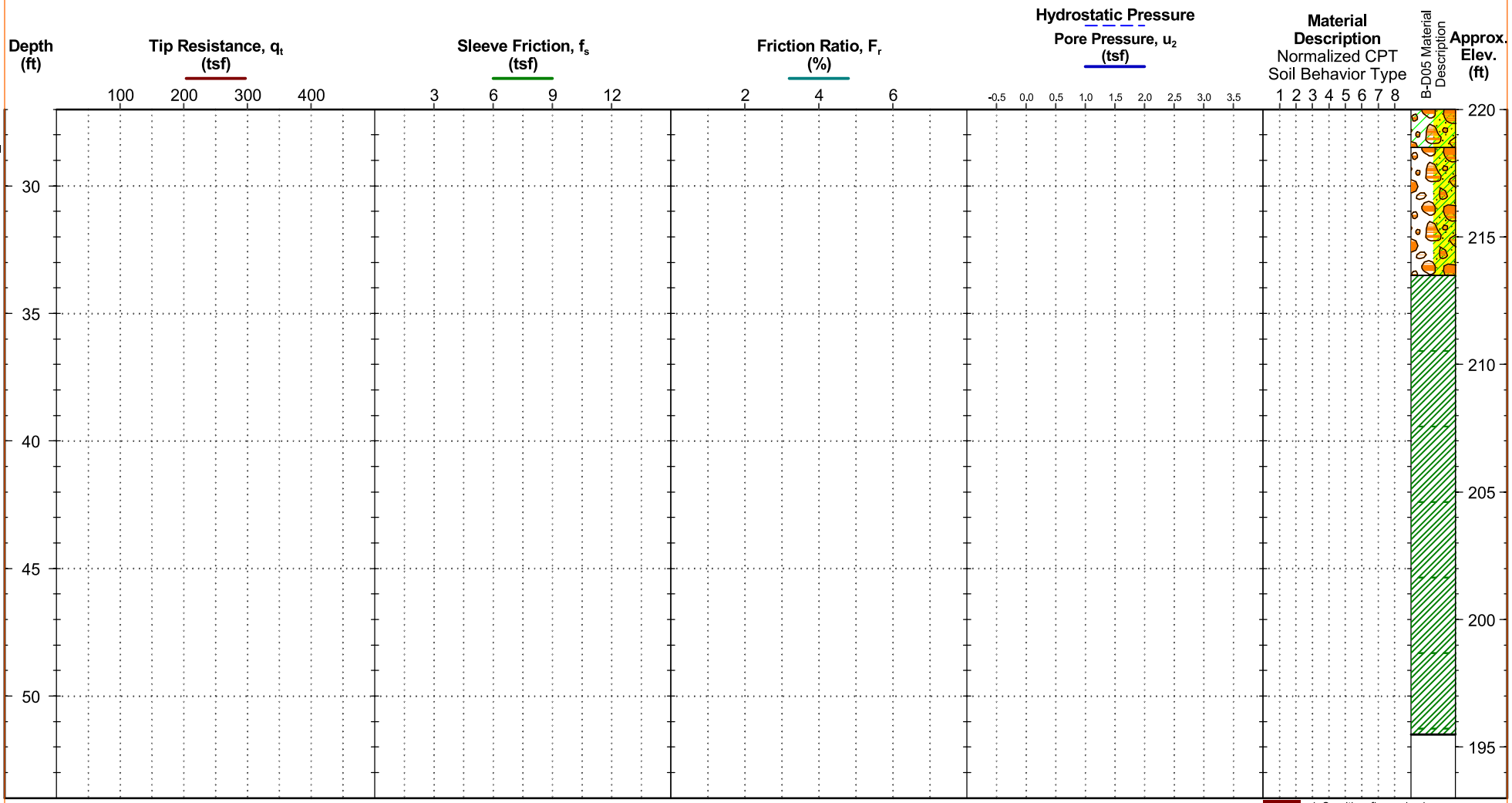
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 247 ft +/- Adjacent Test: B-D05
Latitude: 46.6248628°
Longitude: -122.9053908°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

See B-D05 for the adjacent test's full details.
Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/7/2021
CPT Completed: 1/7/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D06

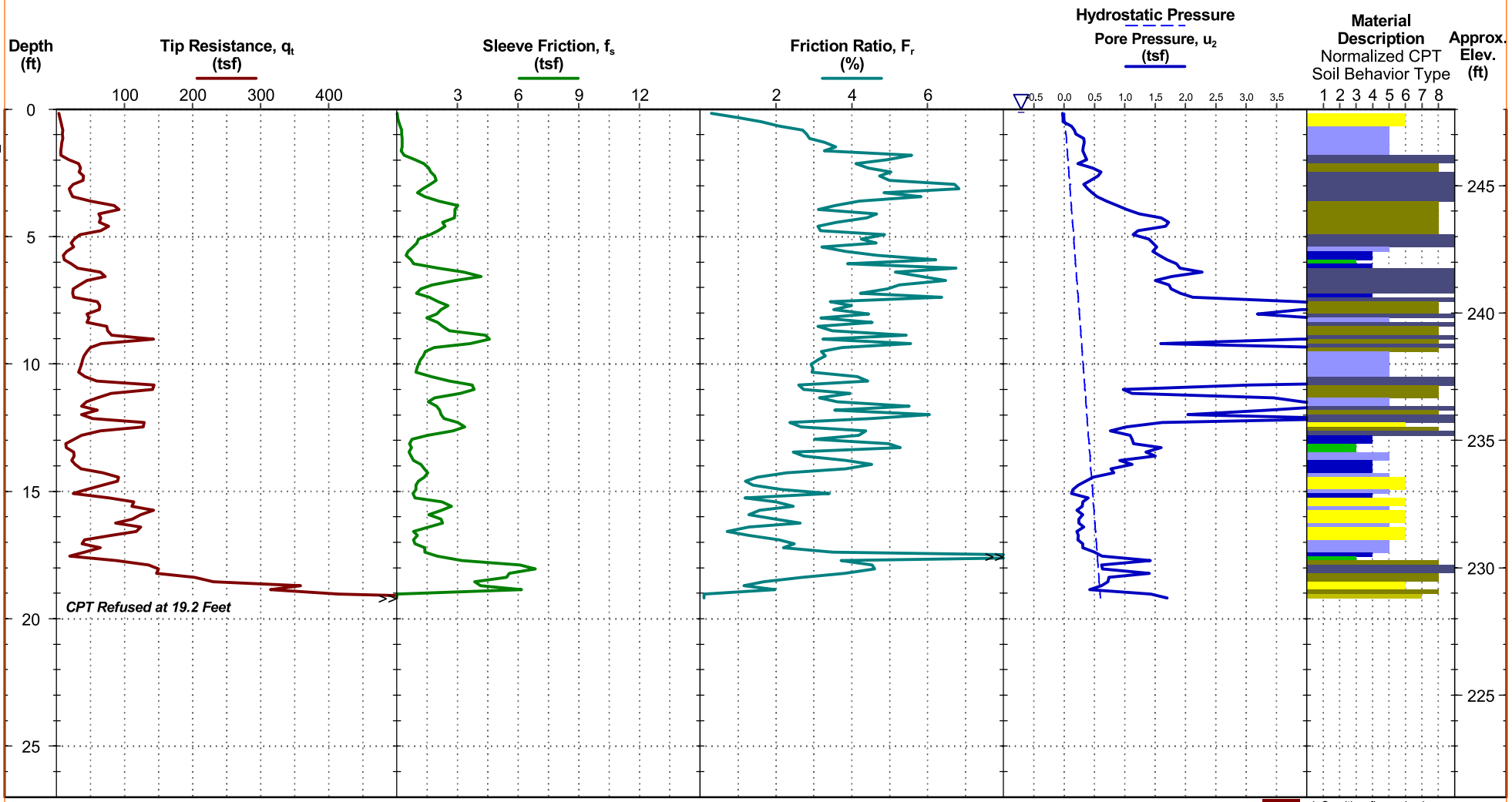
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.6245579°
Longitude: -122.9048602°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D07

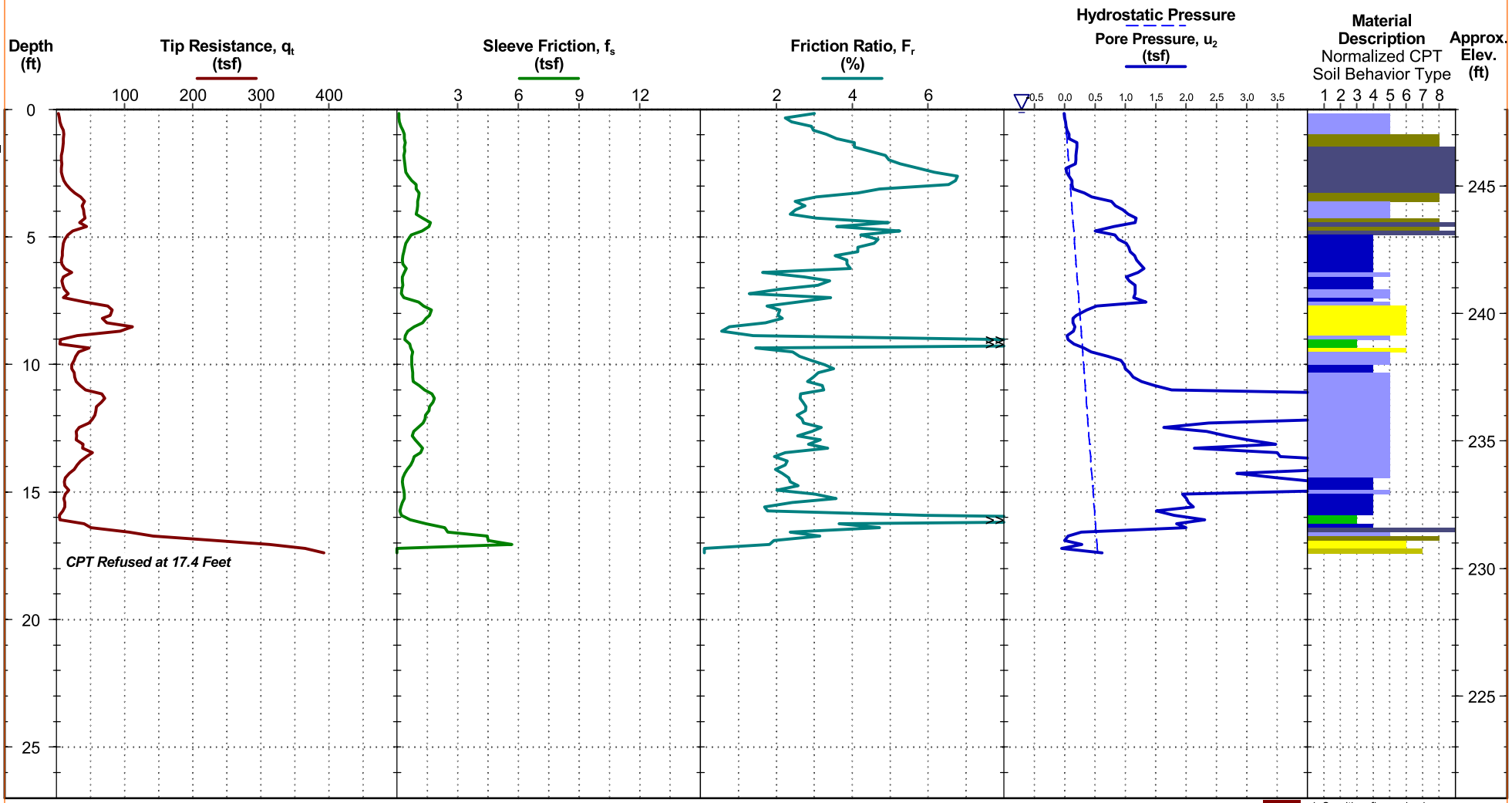
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.6242524°
Longitude: -122.9043301°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D09

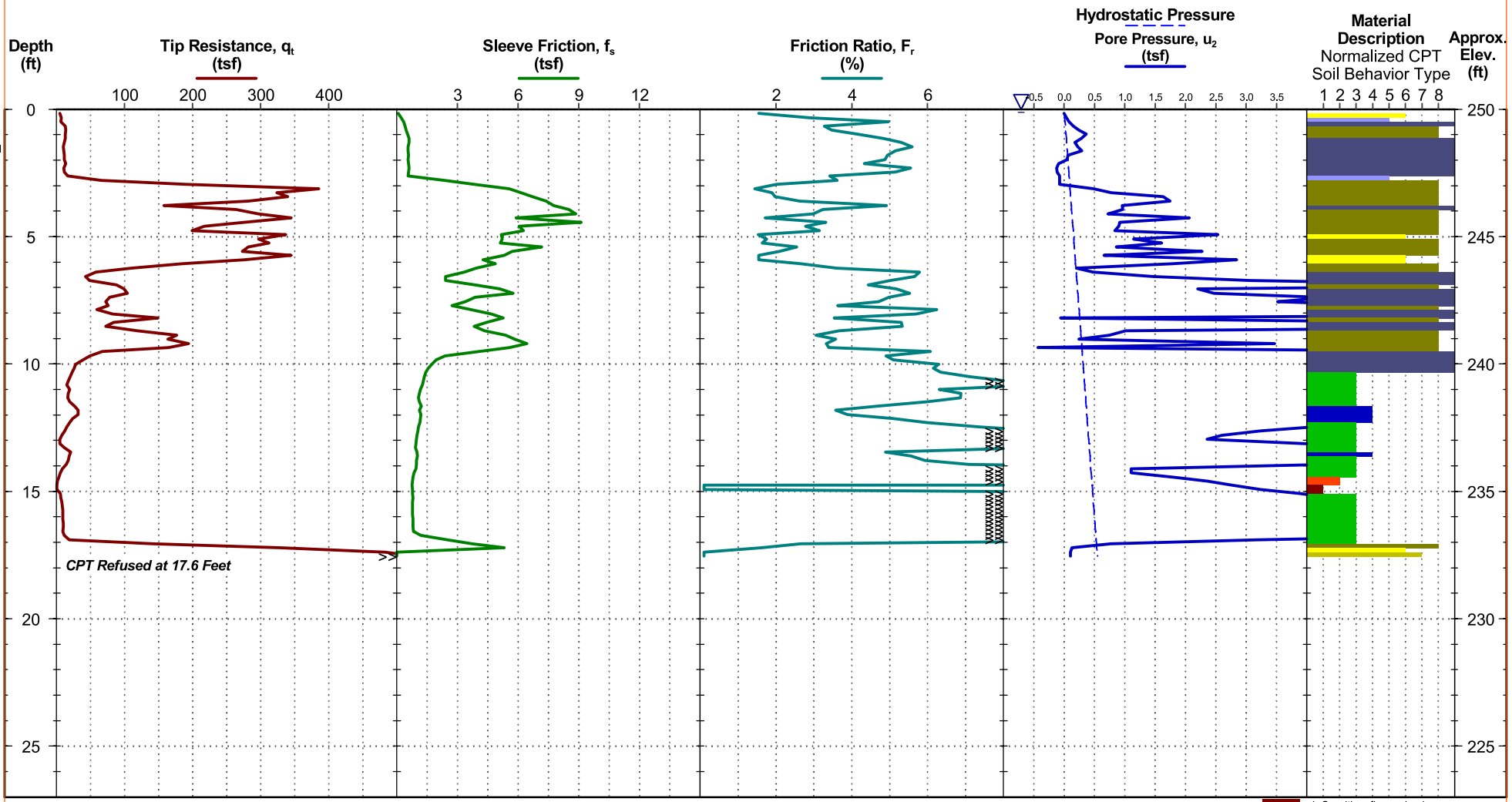
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 250 ft +/-
Latitude: 46.6236449°
Longitude: -122.9032719°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D10

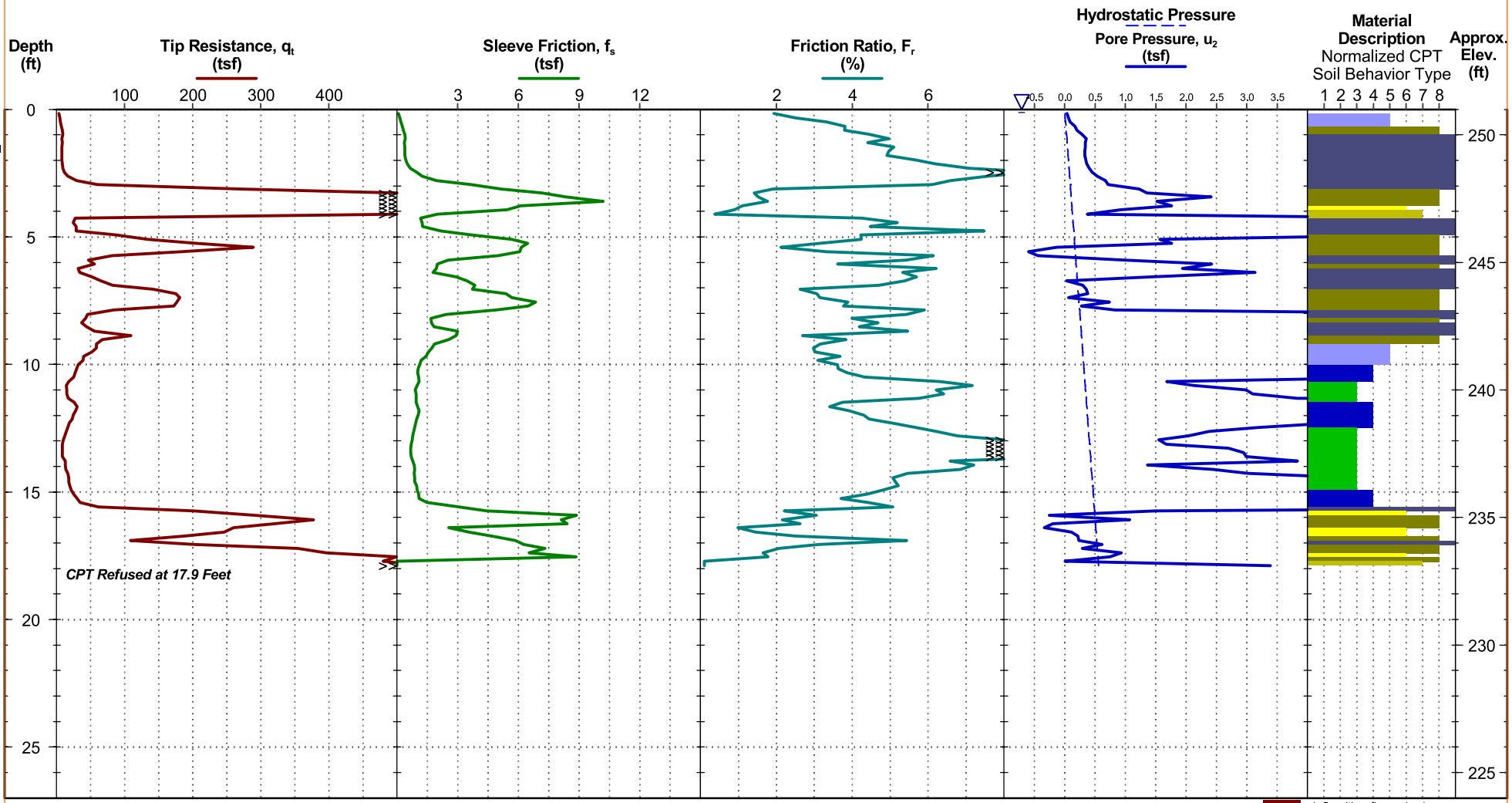
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 251 ft +/-
Latitude: 46.6233401°
Longitude: -122.9027408°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D13

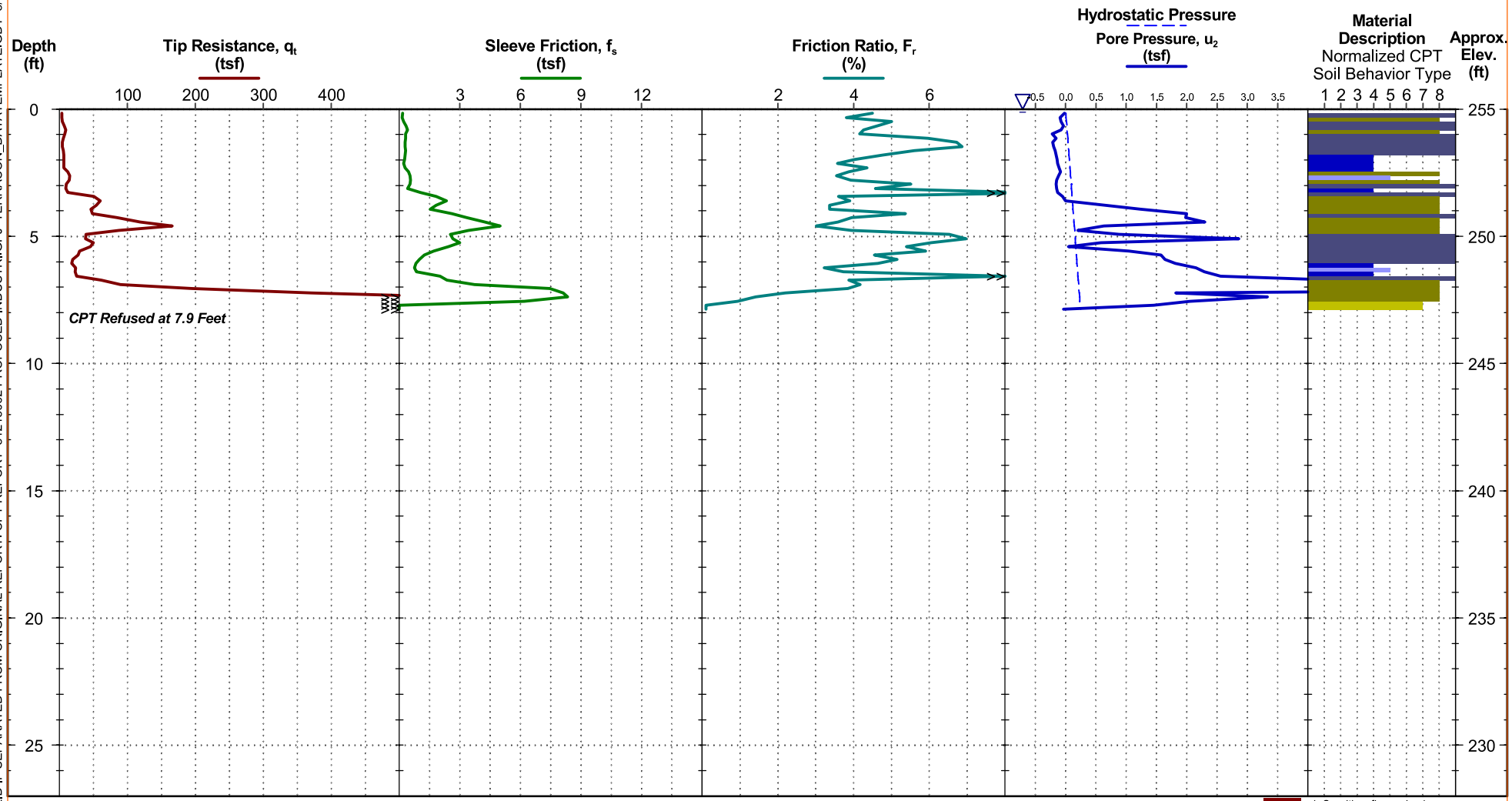
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 255 ft +/-
Latitude: 46.6224268°
Longitude: -122.9011486°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/4/2021
CPT Completed: 1/4/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-D13a

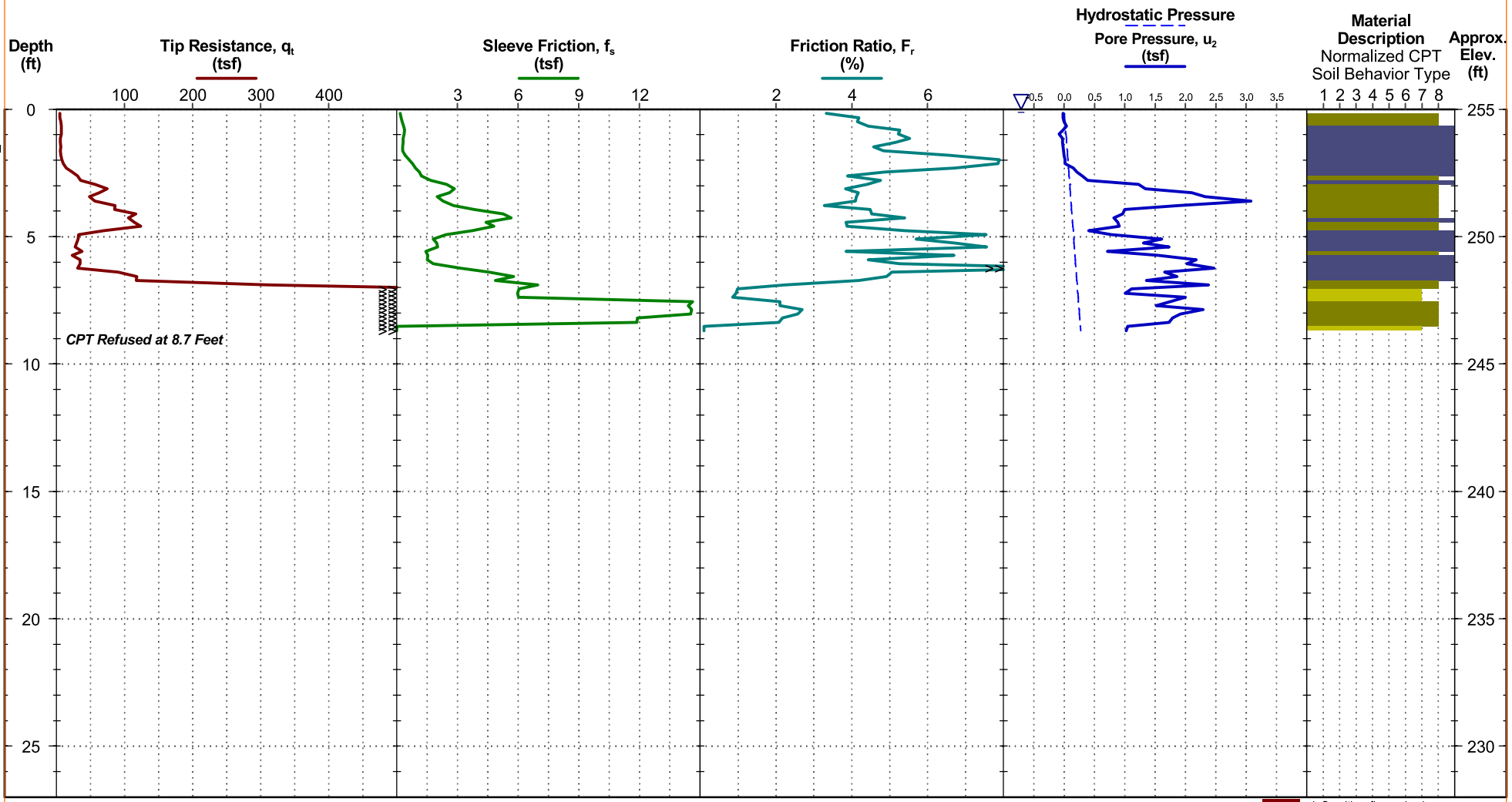
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 255 ft +/-
Latitude: 46.6224268°
Longitude: -122.9011486°

SITE: 2800 Jackson Highway
Chehalis, WA



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1263

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/4/2021
CPT Completed: 1/4/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E06

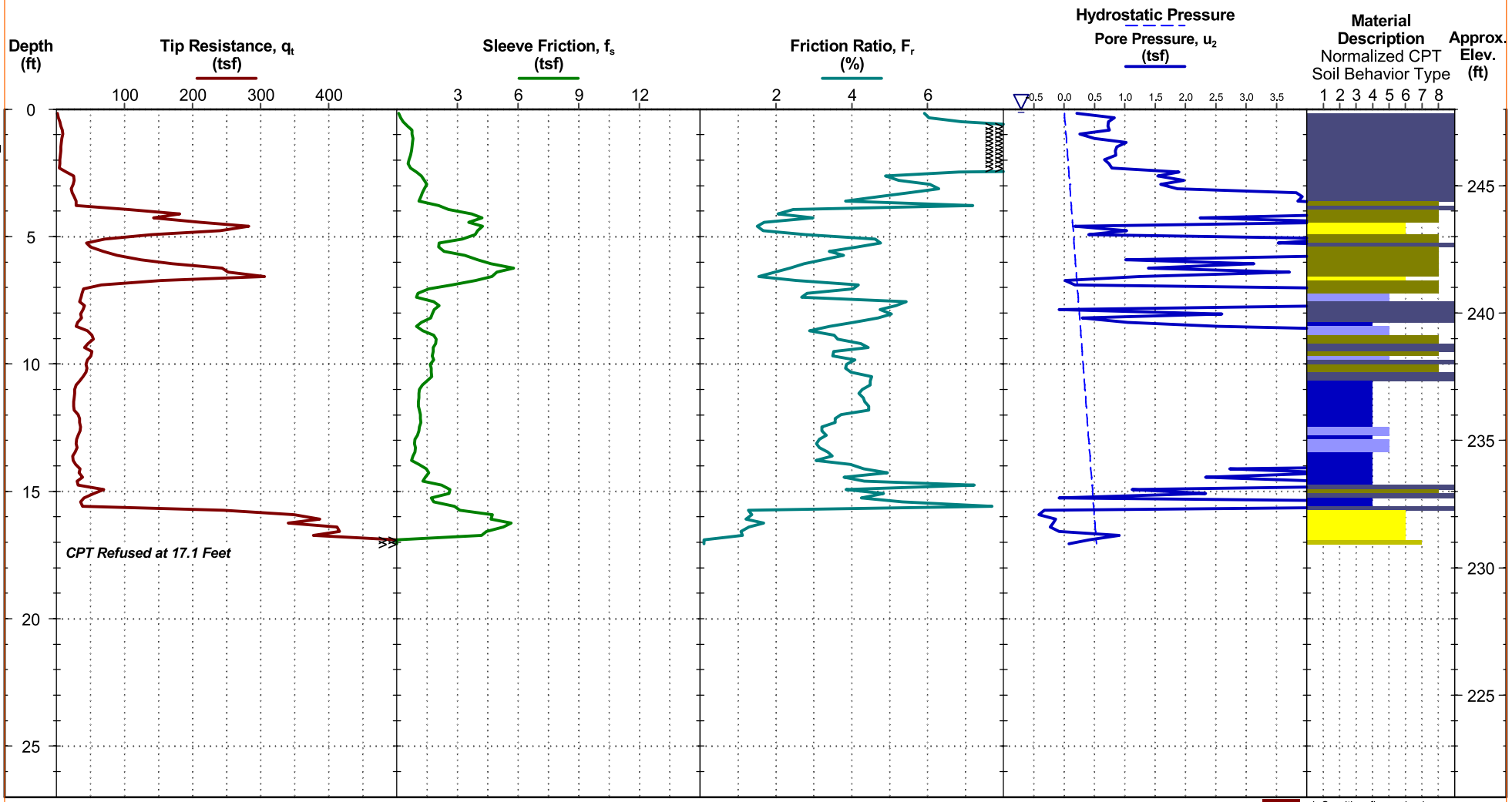
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 248 ft +/-
Latitude: 46.624257°
Longitude: -122.9052389°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E09

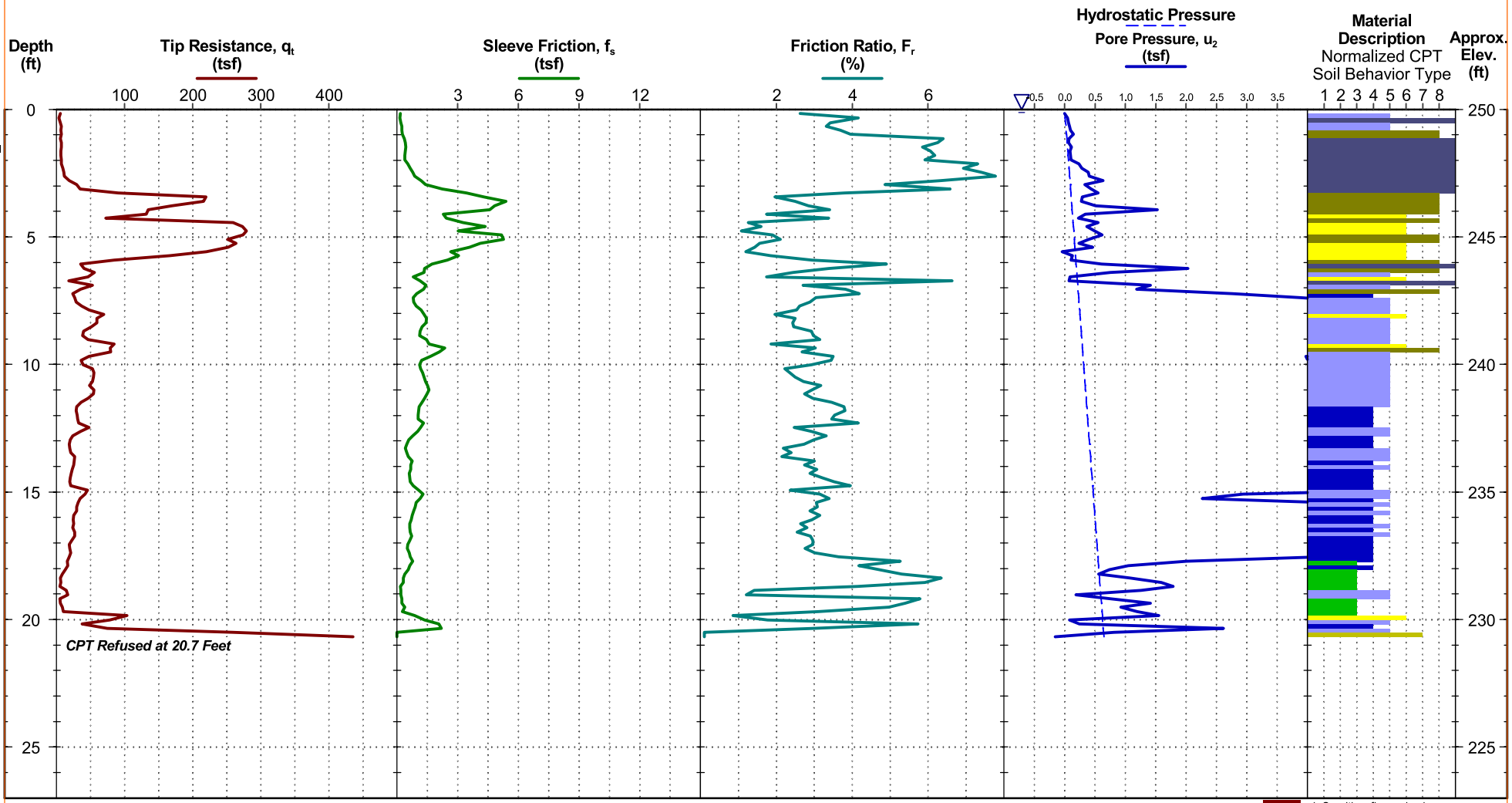
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 250 ft +/-
Latitude: 46.623344°
Longitude: -122.9036505°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E10

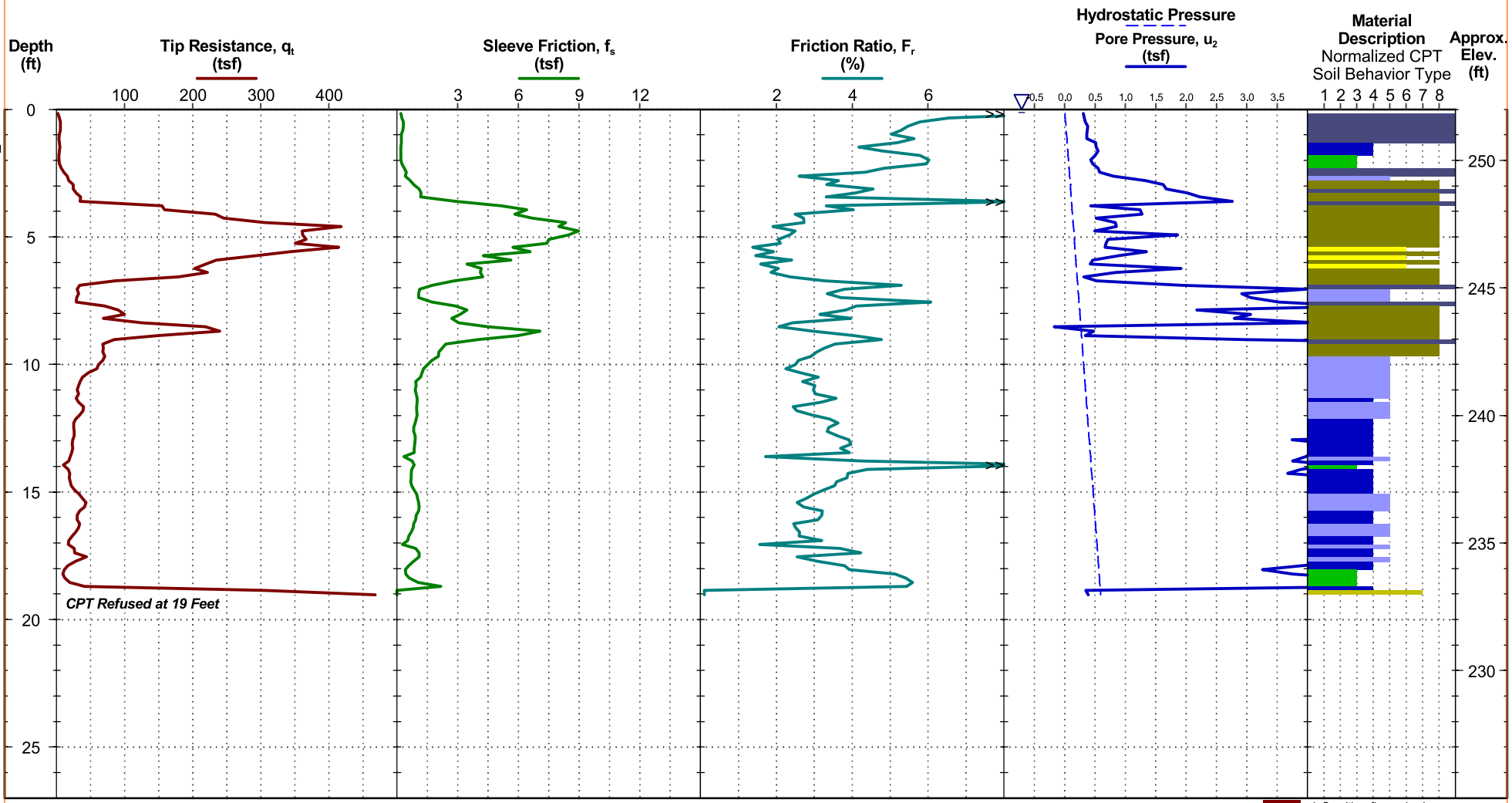
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 252 ft +/-
Latitude: 46.6230392°
Longitude: -122.9031195°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E12

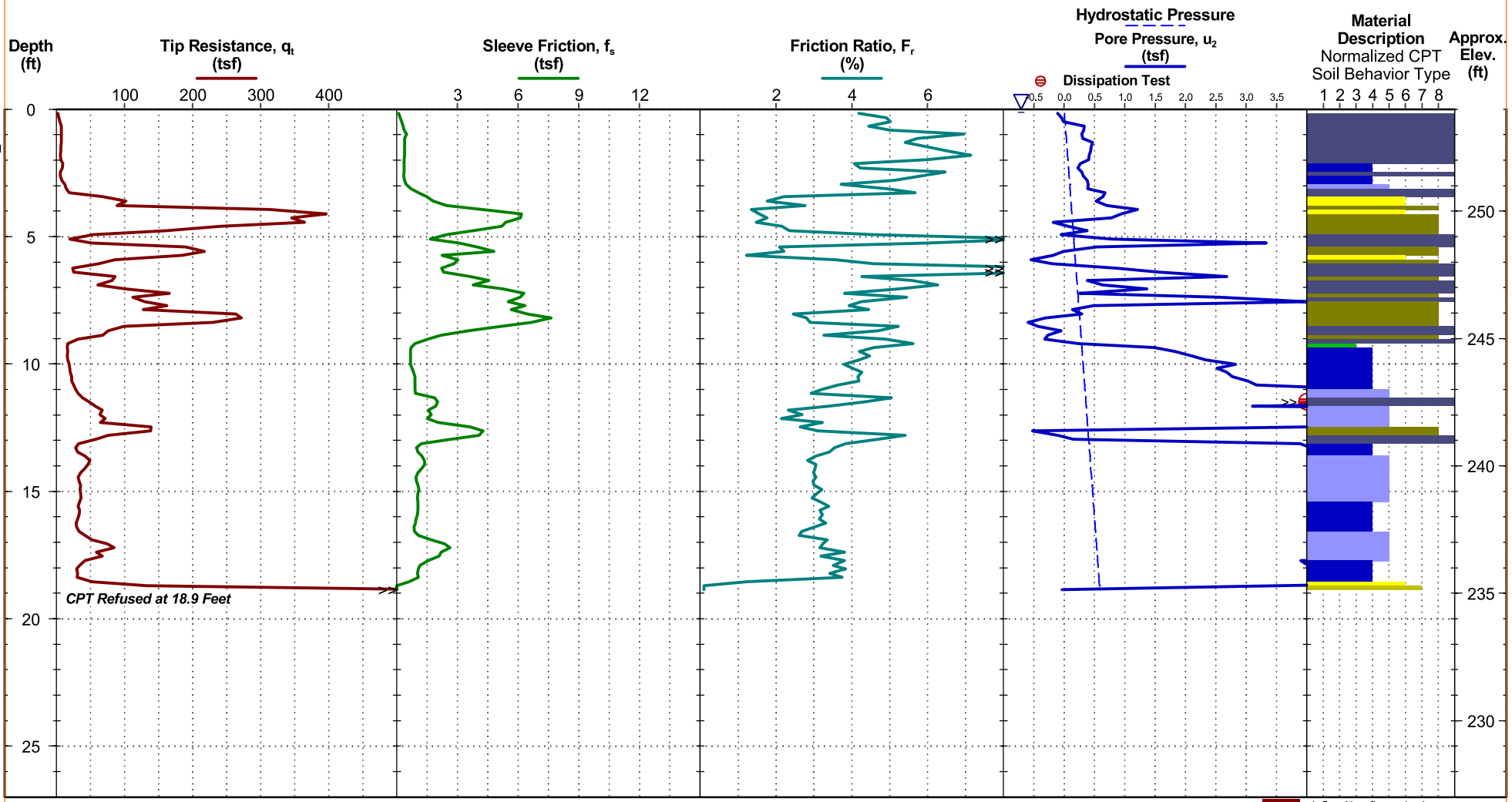
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 254 ft +/-
Latitude: 46.6224309°
Longitude: -122.9020582°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E15

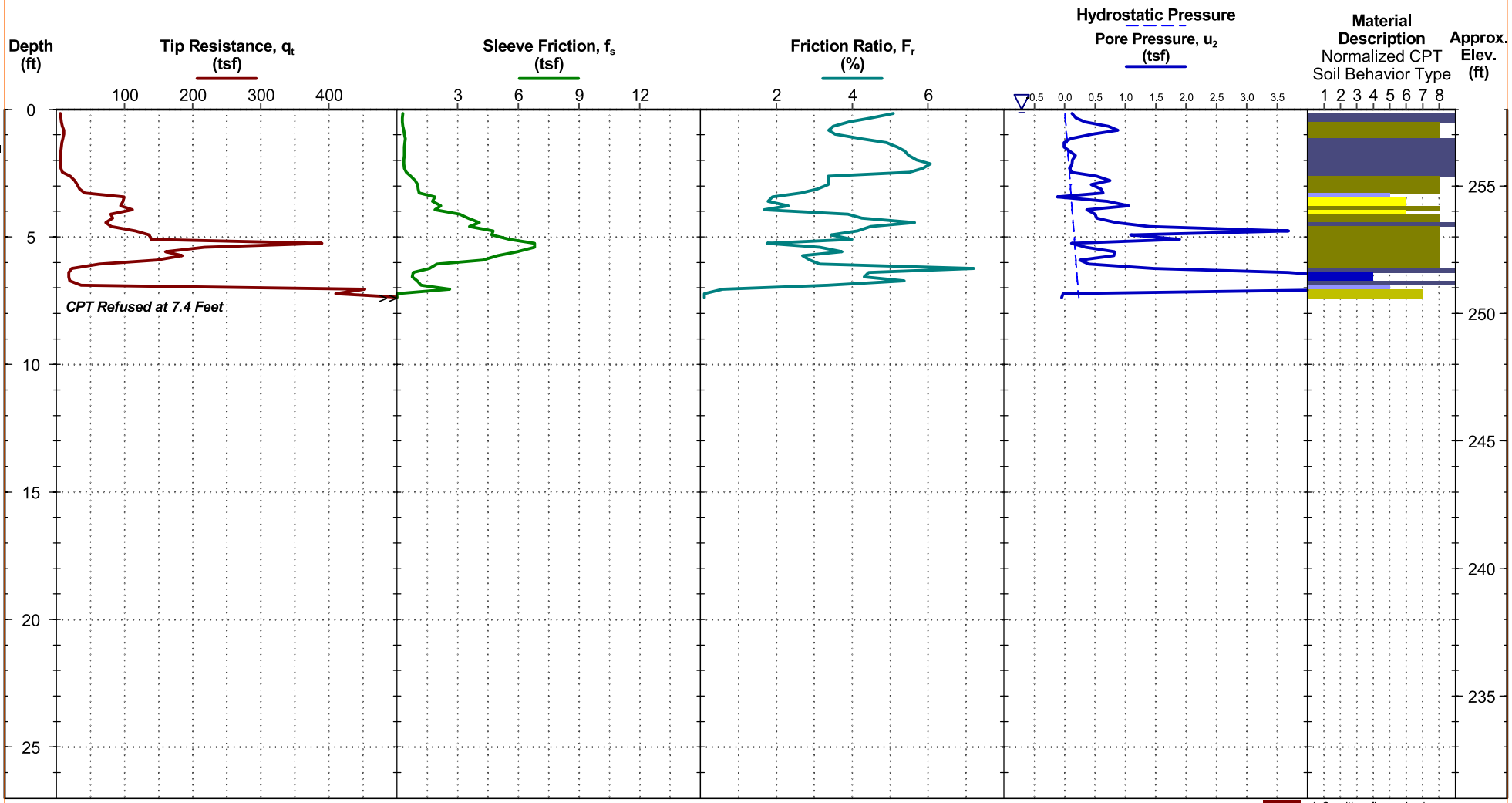
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 258 ft +/-
Latitude: 46.6214938°
Longitude: -122.9004278°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/6/2021
CPT Completed: 1/6/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

CPT LOG NO. CPT-E16

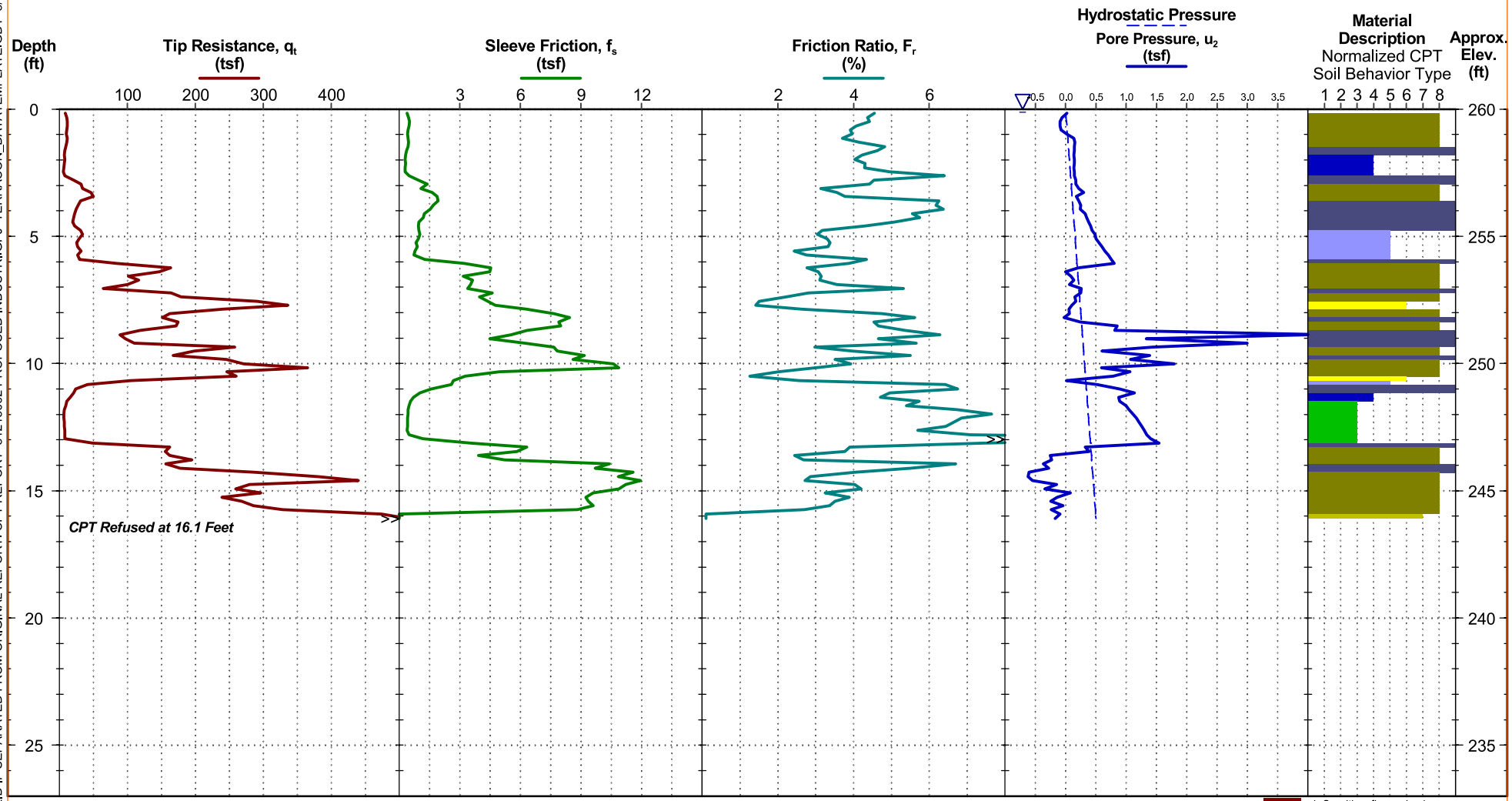
PROJECT: Proposed Industrial Park - Chehalis
PWI Site

CLIENT: Puget Western Inc
Bothell, WA

SITE: 2800 Jackson Highway
Chehalis, WA

TEST LOCATION: See Exploration Plan

Approx. Surface Elev: 260 ft +/-
Latitude: 46.6211756°
Longitude: -122.8998769°



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).
Elevations were interpolated from a topographic site plan.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

WATER LEVEL OBSERVATION
▽ 0 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. DDG1394

Terracon
21905 64th Ave W, Ste 100
Mountlake Terrace, WA

CPT Started: 1/5/2021
CPT Completed: 1/5/2021
Rig: Track
Operator: InSitu
Project No.: 81215062

HWA | GEOSCIENCES INC.
DBE/MWBE

February 16, 2021
HWA Project No. 2012-045-23 Task 21

Terracon
21905 64th Avenue West, Suite 100
Mountlake Terrace, Washington 98043

Attention: Mr. Pete Palmerson, P.E.

Subject: **Materials Laboratory Report**
Centralia Costco
Client Project No. 81205225

Dear Mr. Palmerson;

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

SAMPLE DESCRIPTION: The subject samples were delivered to our laboratory on January 11 by Terracon personnel. The samples were delivered in 2.8-inch diameter Shelby tubes and were designated with the exploration number and depth. Each sample was extruded, photographed, and classified for engineering purposes using visual-manual methods. The descriptions may be found on the attached Figures. Photographic Shelby tube logs appear on Figures 8 through 11.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): Samples were tested using method ASTM D 4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index report, Figure 2.

MOISTURE CONTENT, ASH, AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105° C) and ash content method 'C' (burned at 440° C). The test results are summarized in the attached Summary of Material Properties, Figure 1.

ONE DIMENSIONAL CONSOLIDATION PROPERTIES OF SOIL: The consolidation properties of selected soil samples were measured in general accordance with ASTM D 2435. Saturation was maintained by inundation of the sample throughout the test. The samples were subjected to increasing increments of total stress, the duration of which was selected to exceed the time required for completion of primary consolidation as defined in the Standard, Method B. Loads on sample B-B02A were maintained for a period of 24-hours to collect sufficient data for use in the estimation of secondary consolidation. Unloading of the samples was carried out incrementally. The test results are presented on the attached Consolidation Test Report, Figures 3 through 6. Secondary compression data is presented on Figures 7a through 7i.

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

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

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

HWA GEOSCIENCES INC.

Daniel Walton
Materials Laboratory Supervisor

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

Attachments:

Figure 1	Summary of Material Properties
Figure 2	Liquid Limit, Plastic Limit and Plasticity Index of Soils
Figures 3-7i	Consolidation Test Report
Figures 8-11	Shelby Tube Extrusion Log

EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	ATTERBERG LIMITS (%)			% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
						LL	PL	PI					
B-B02A,	15.0	17.3	106.9	15.0		149	76	73				OH	Dark grayish brown, organic SILT
B-E13,	2.0	4.2	35.7			75	32	43				CH	Light olive brown, fat CLAY
B-P03,	33.0	34.4	50.5			110	52	58				MH	Gray, elastic SILT
B-P06,	32.0	34.2	25.5			45	36	9				ML	Dark gray, sandy SILT

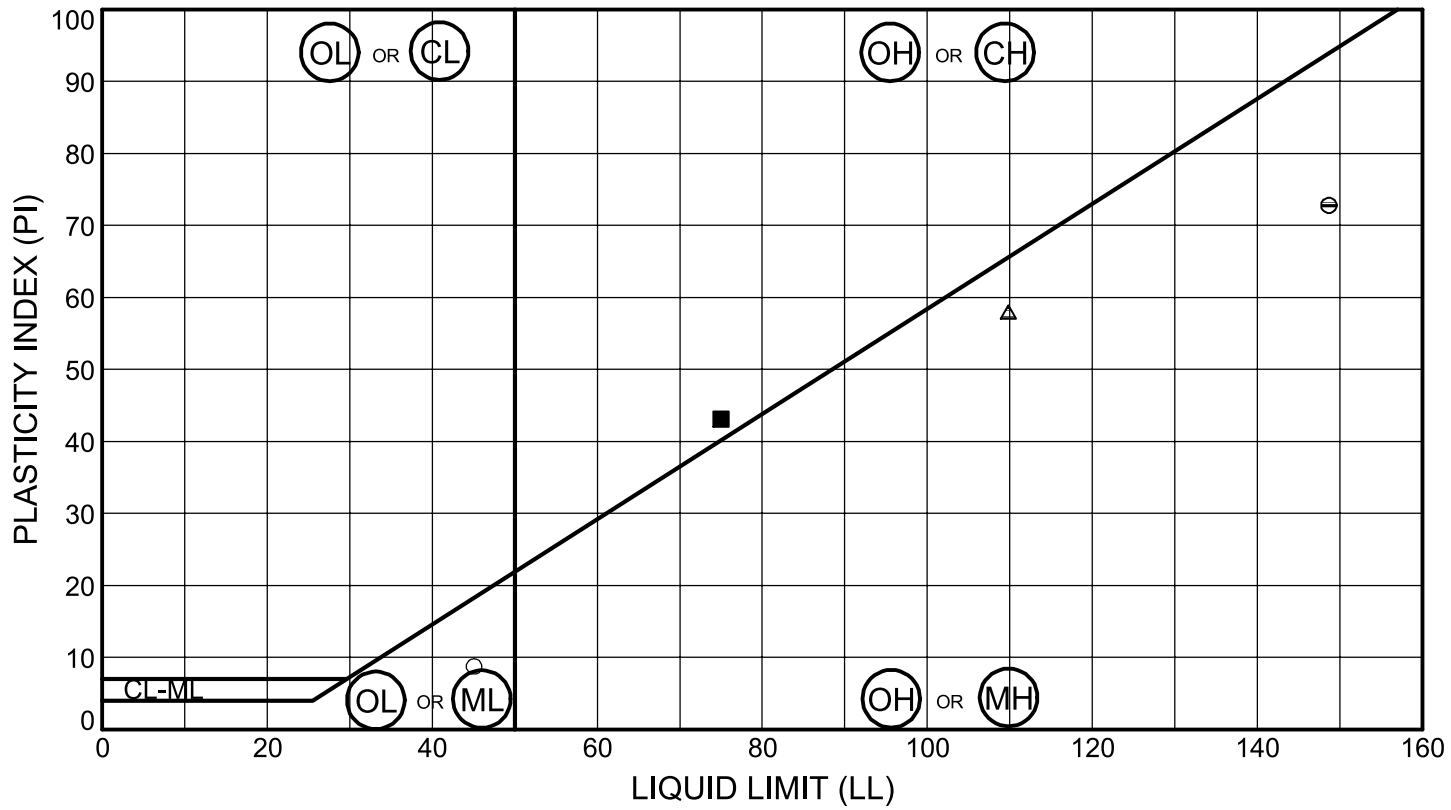
Notes: 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.

GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

SUMMARY OF
MATERIAL PROPERTIES

PROJECT NO.: 2012-045 T21 FIGURE: 1



SYMBOL	SAMPLE	DEPTH (ft)	CLASSIFICATION	% MC	LL	PL	PI	% Fines
⊖	B-B02A	15.0 - 17.3	(OH) Dark grayish brown, organic SILT	107	149	76	73	
■	B-E13	2.0 - 4.2	(CH) Light olive brown, fat CLAY	36	75	32	43	
△	B-P03	33.0 - 34.4	(MH) Gray, elastic SILT	51	110	52	58	
○	B-P06	32.0 - 34.2	(ML) Dark gray, sandy SILT	25	45	36	9	

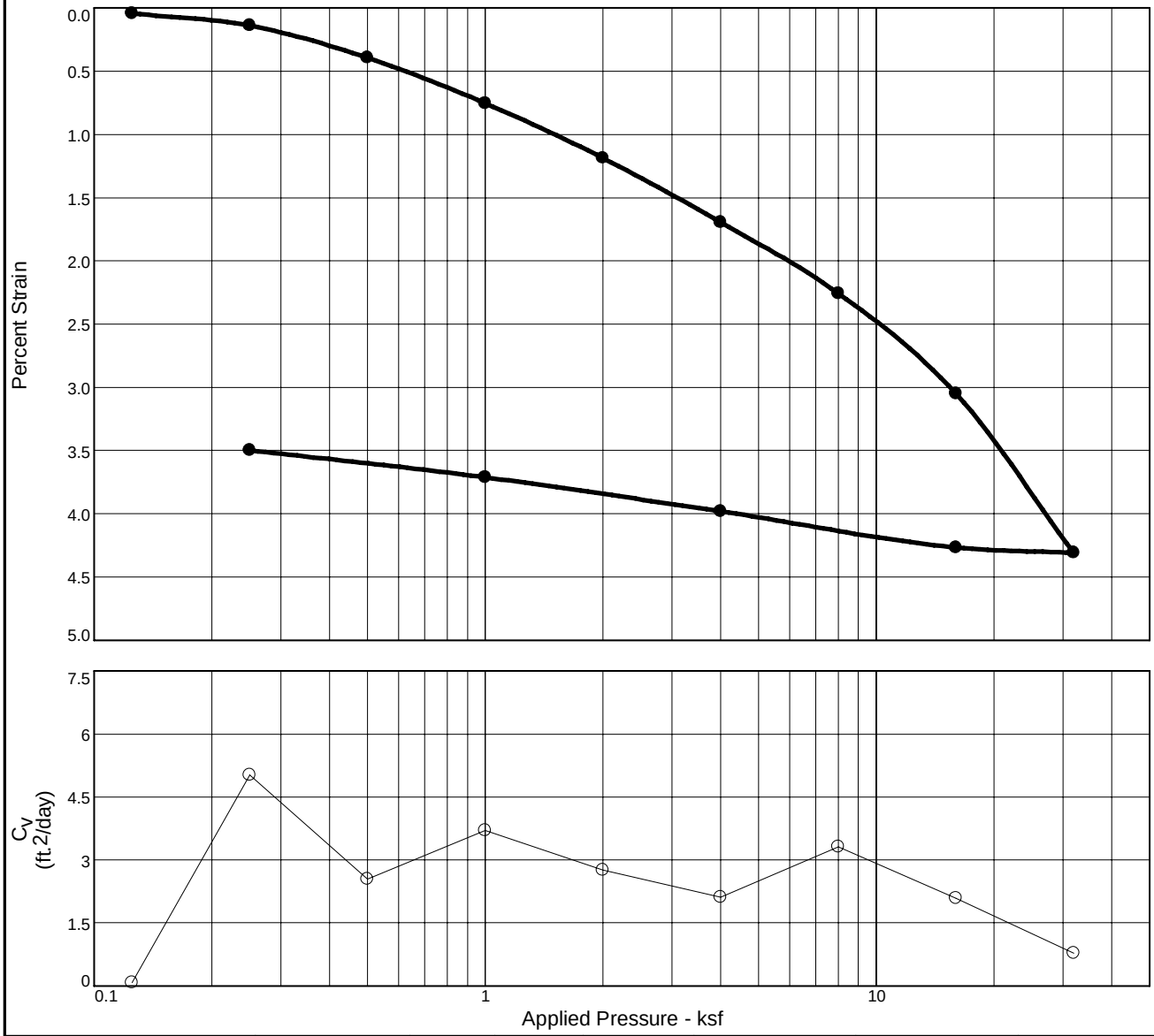
HWA GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

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

PROJECT NO.: 2012-045 T21 FIGURE: 2

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
90.4 %	25.5 %	95.8	45	9	2.65	ML		0.746

MATERIAL DESCRIPTION

Dark gray, sandy SILT

Project No. 2012-045 **Client:** Terracon

Project: Centralia Costco

Source of Sample: B-P06 **Depth:** 32

HWA GeoSciences Inc. DBE/MWBE

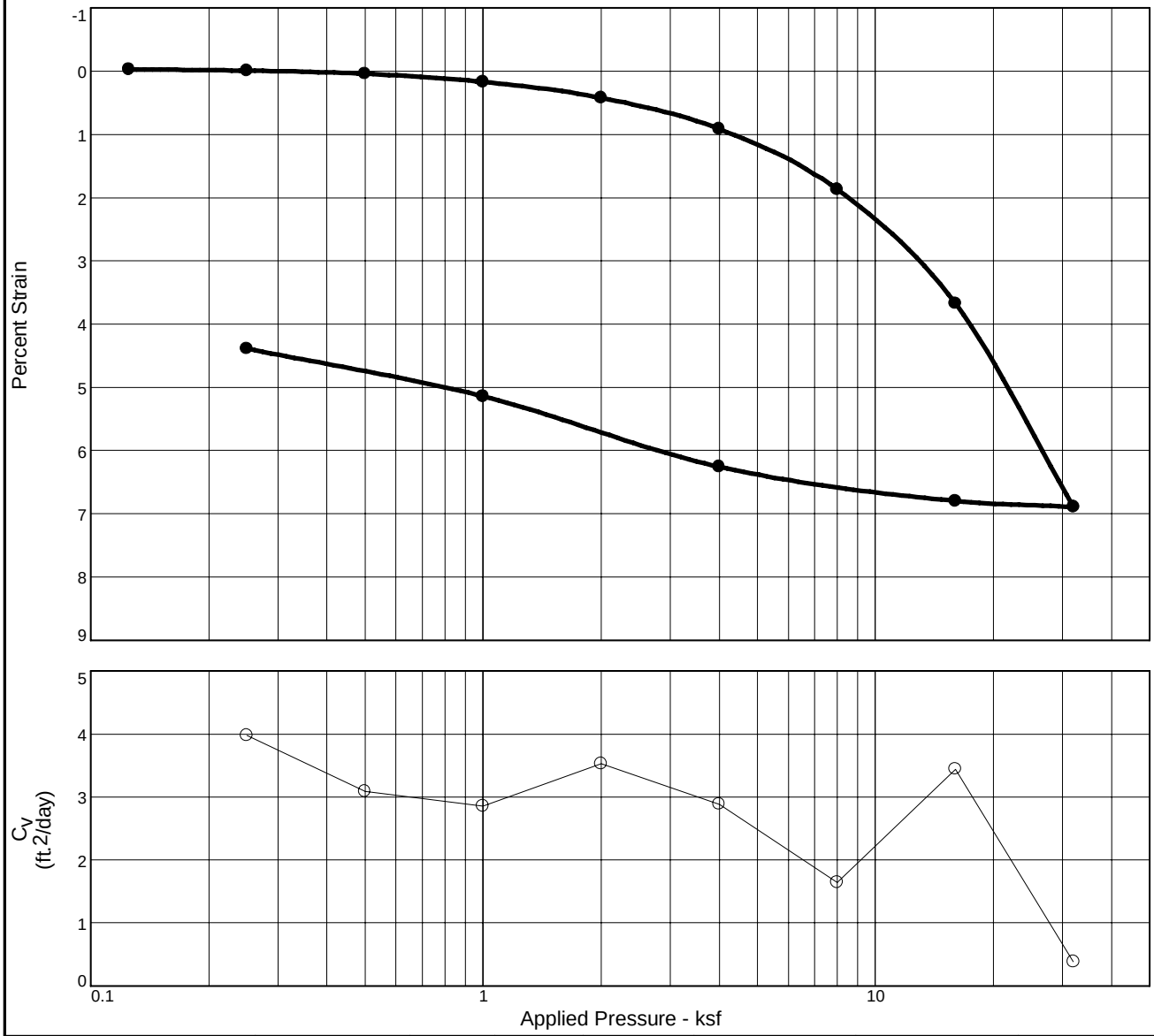
Remarks:

*Specific gravity is assumed

Figure 3

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

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
92.8 %	50.5 %	67.7	110	58	2.65	MH		1.442

MATERIAL DESCRIPTION

Gray, elastic SILT

Project No. 2012-045 **Client:** Terracon

Project: Centralia Costco

Source of Sample: B-P03 **Depth:** 33

Remarks:

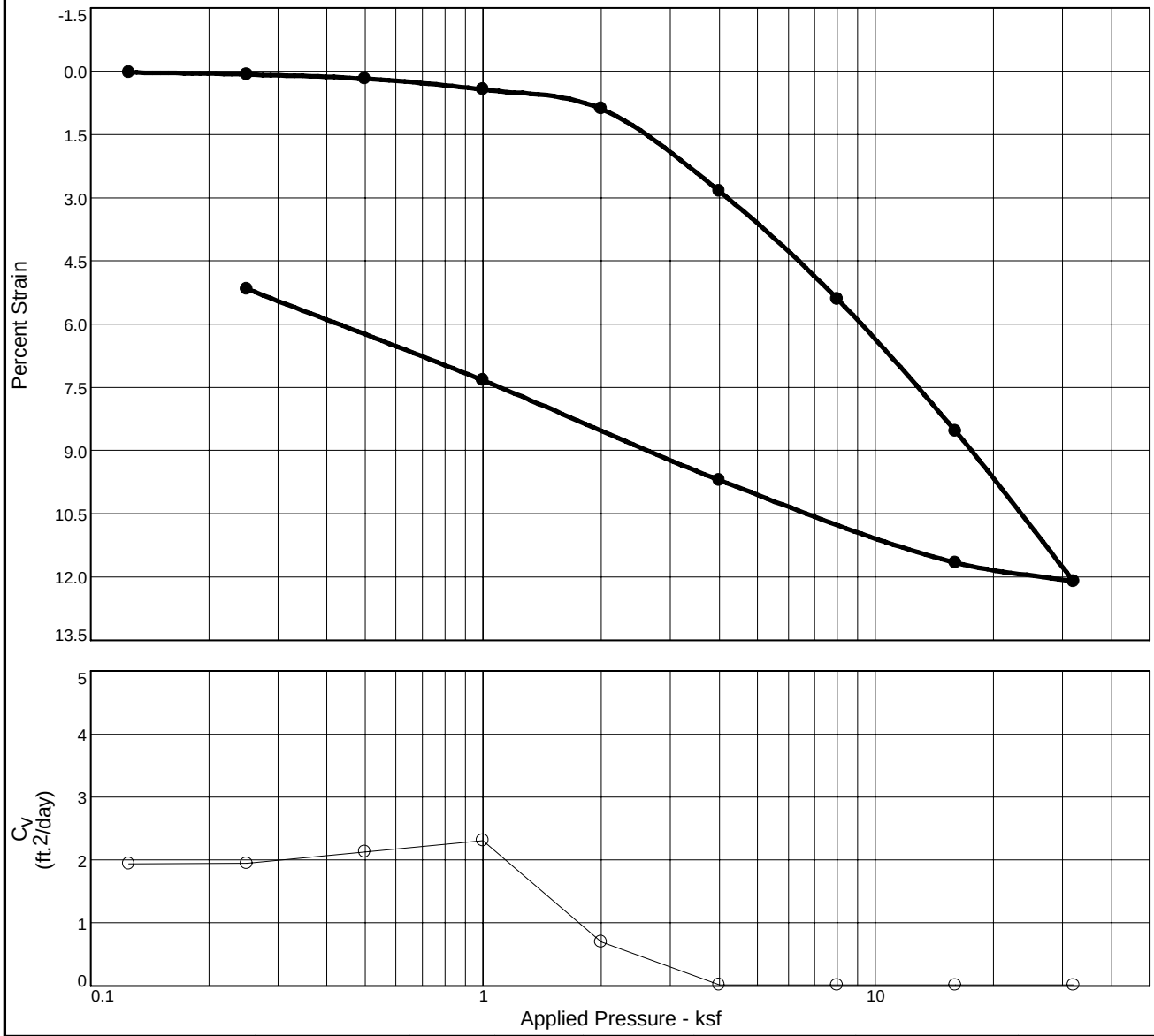
*Specific gravity is assumed

GeoSciences Inc. DBE/MWBE

Figure 4

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

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
98.6 %	34.5 %	85.8	75	43	2.65	CH		0.928

MATERIAL DESCRIPTION

Olive brown, fat CLAY

Project No. 2012-045 **Client:** Terracon

Project: Centralia Costco

Source of Sample: B-E13 **Depth:** 2

HWA GeoSciences Inc. DBE/MWBE

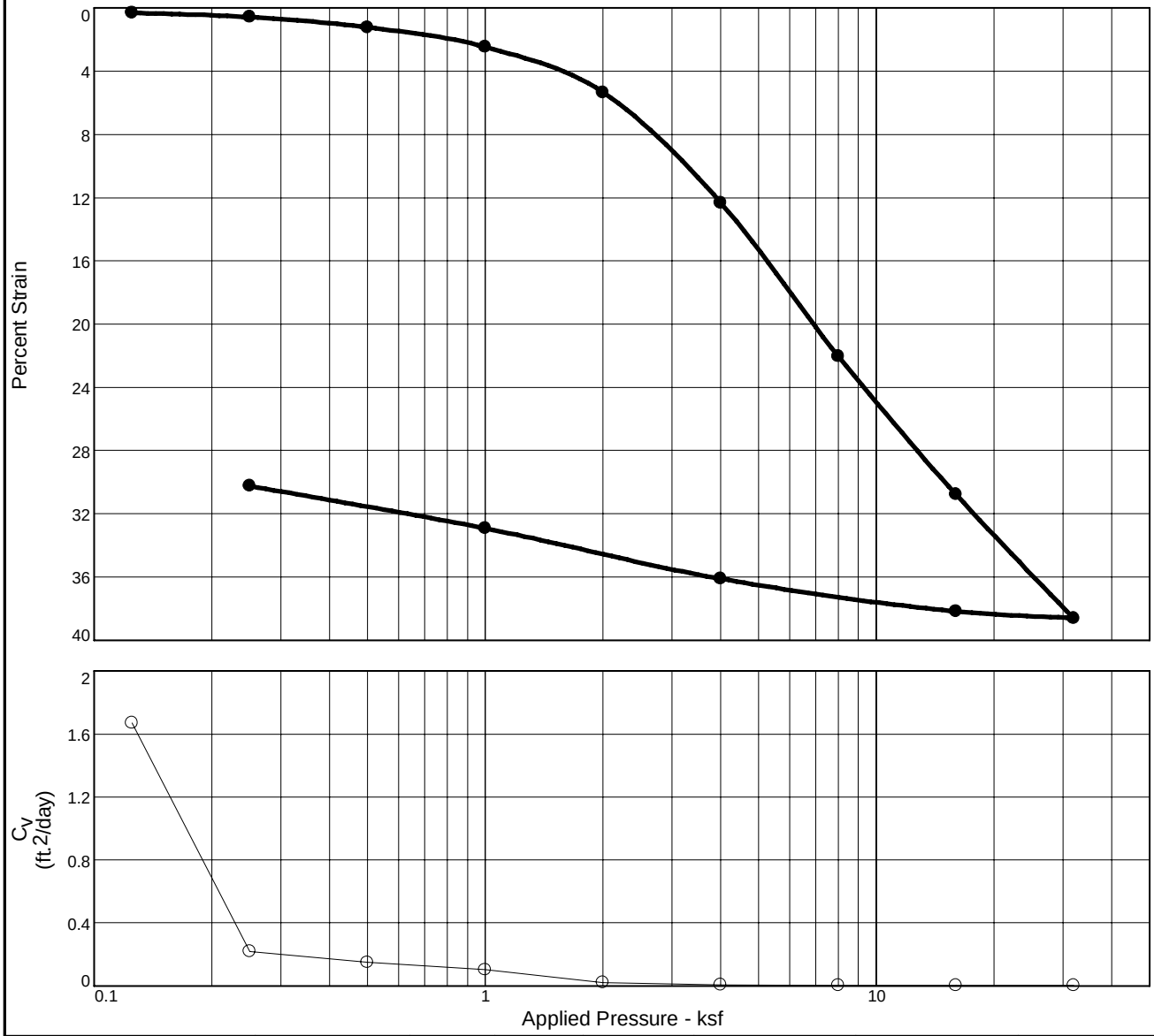
Remarks:

*Specific gravity is assumed

Figure 5

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

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							
102.7 %	91.4 %	44.3	149	73	1.5	OH		1.335

MATERIAL DESCRIPTION

Dark grayish brown, organic SILT

Project No. 2012-045 **Client:** Terracon

Project: Centralia Costco

Source of Sample: B-B02A **Depth:** 15

HWA GeoSciences Inc. DBE/MWBE

Remarks:

*Specific gravity is assumed

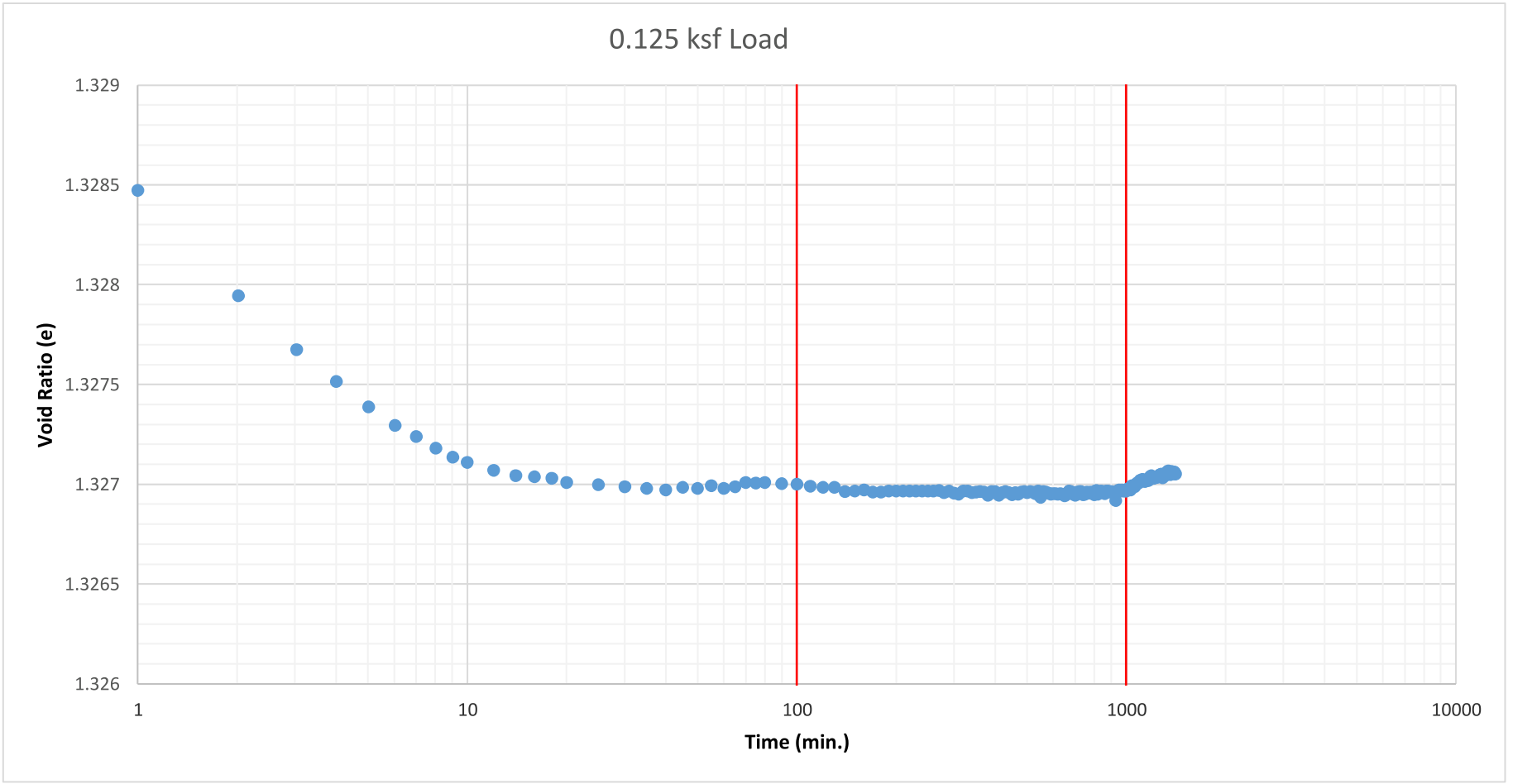
Figure 6

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

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf



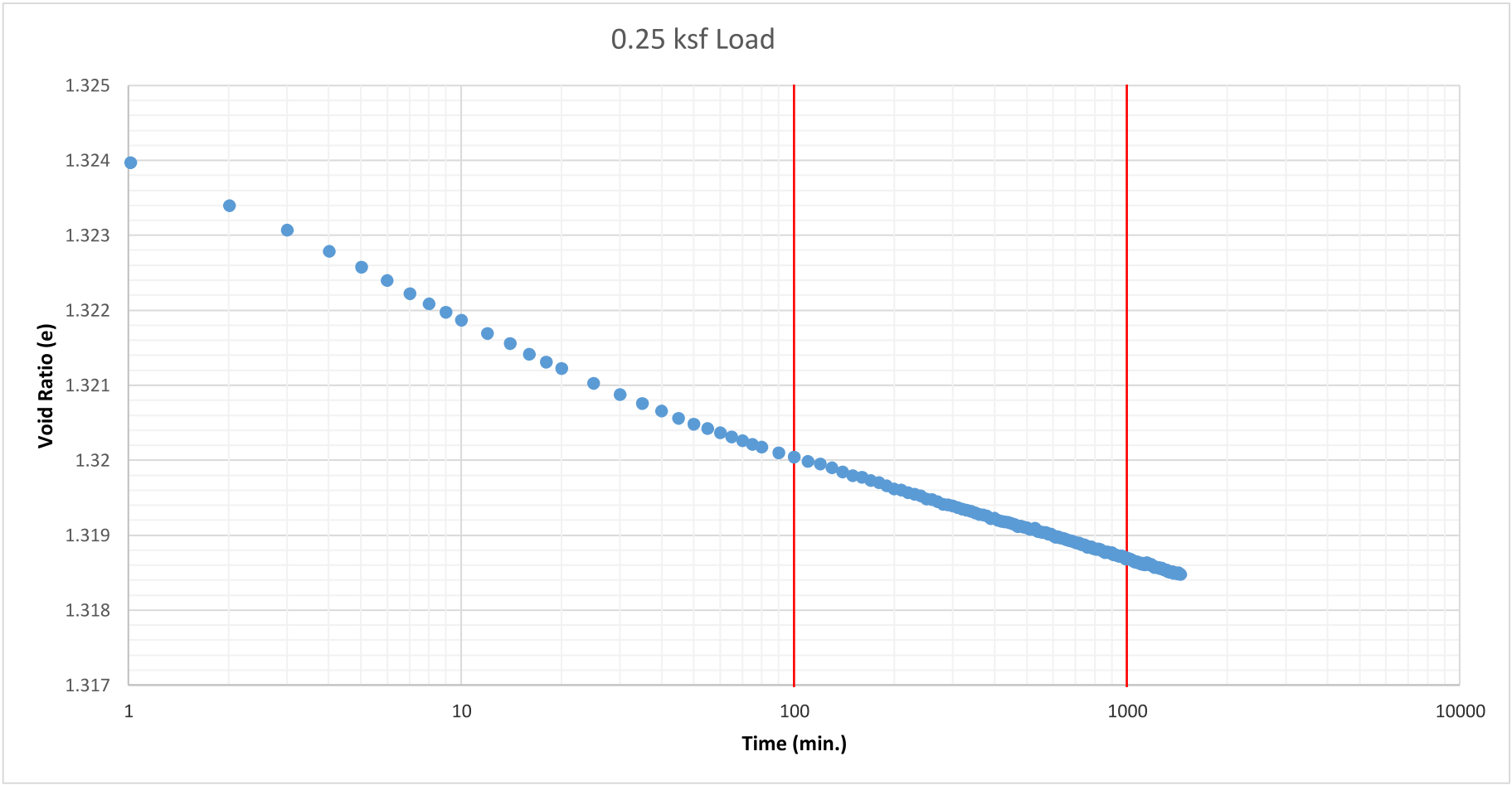
	C_α=	1.3270	-	1.3270	=	0.0000

Figure: 7a

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf



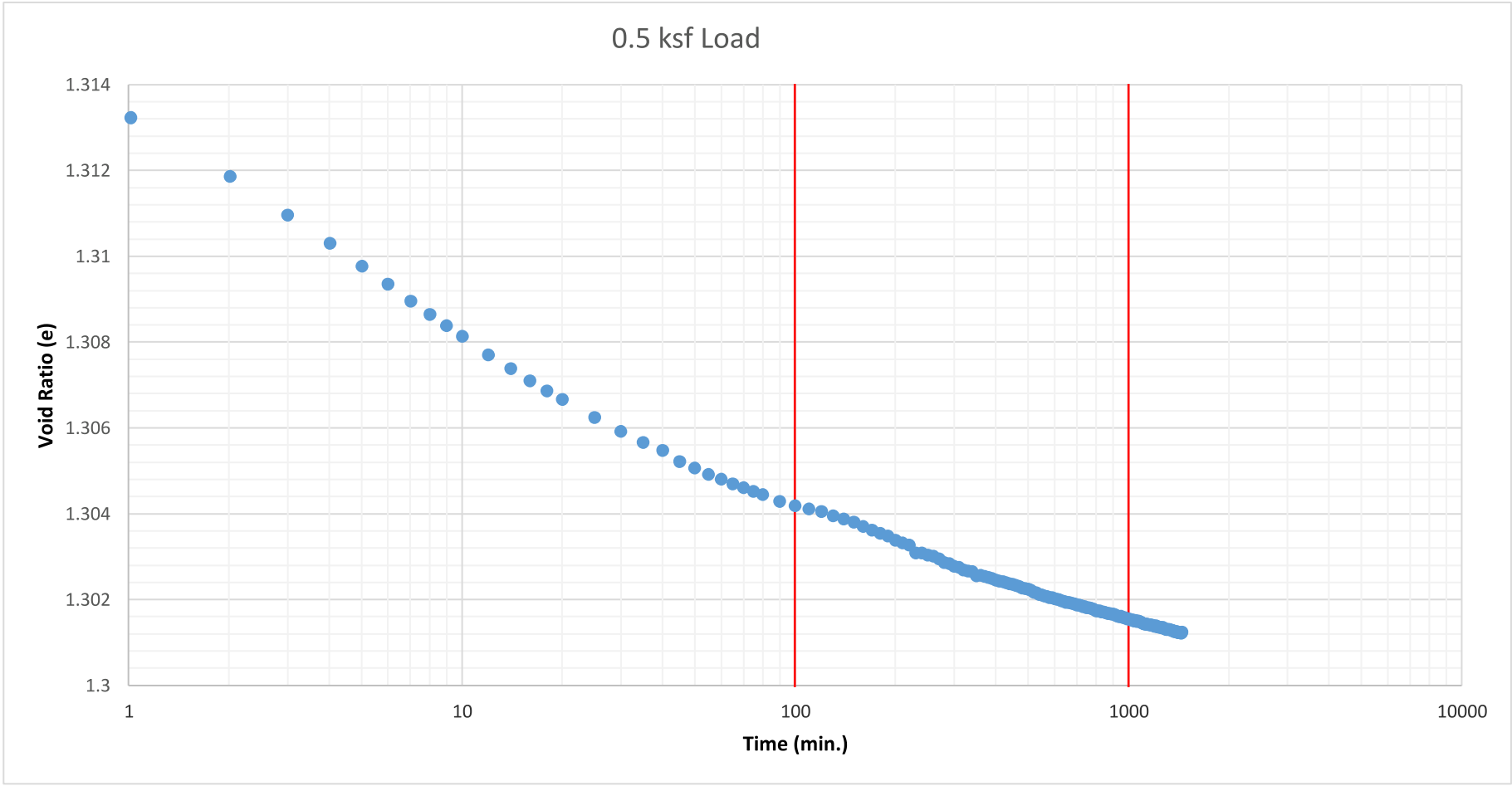
	C_α=	1.3200	-	1.3187	=	0.0014

Figure: 7b

HWA GeoSciences Inc.

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

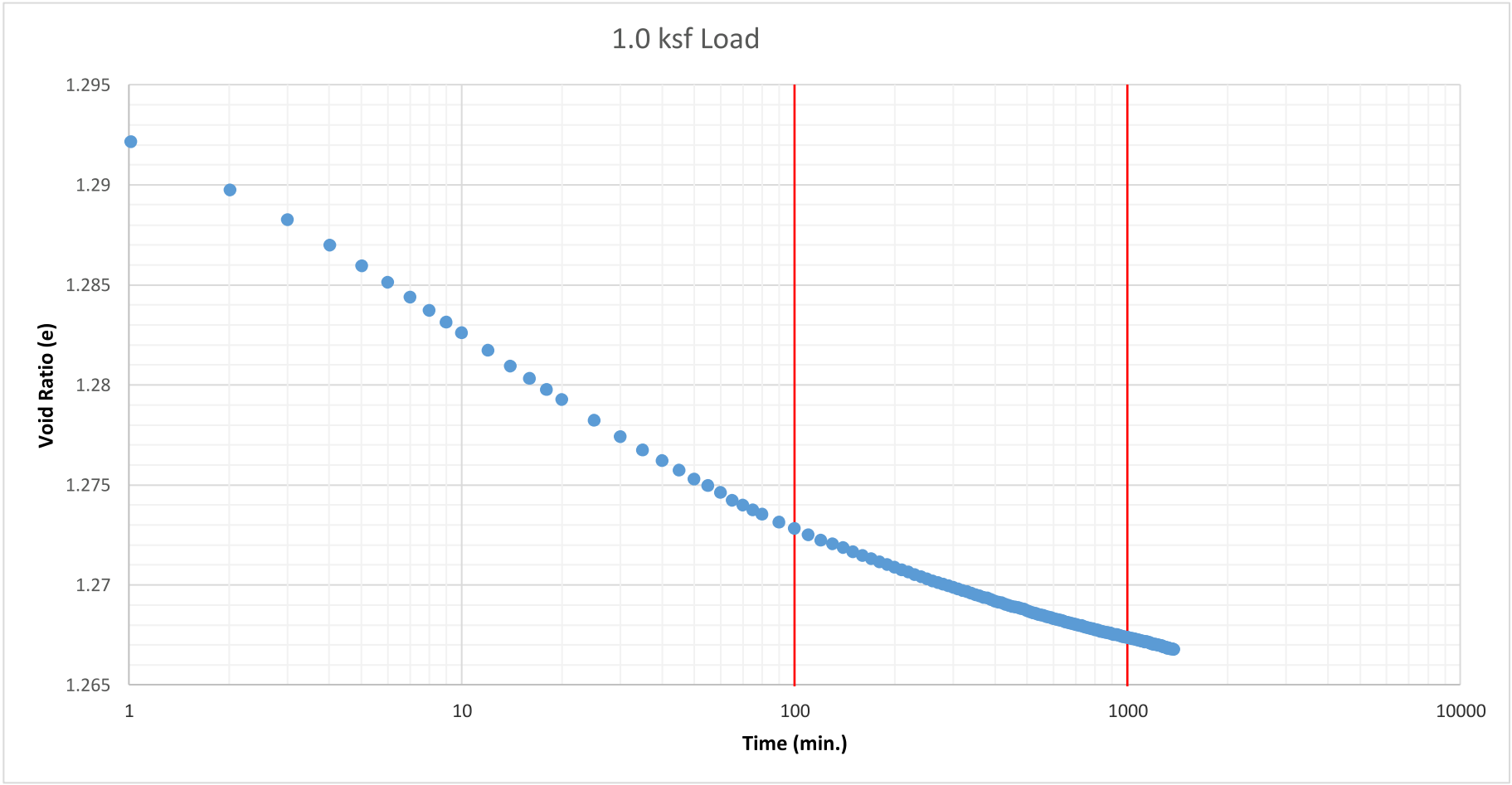


	C_α=	1.3042	-	1.3016	=	0.0026

Figure: 7c

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

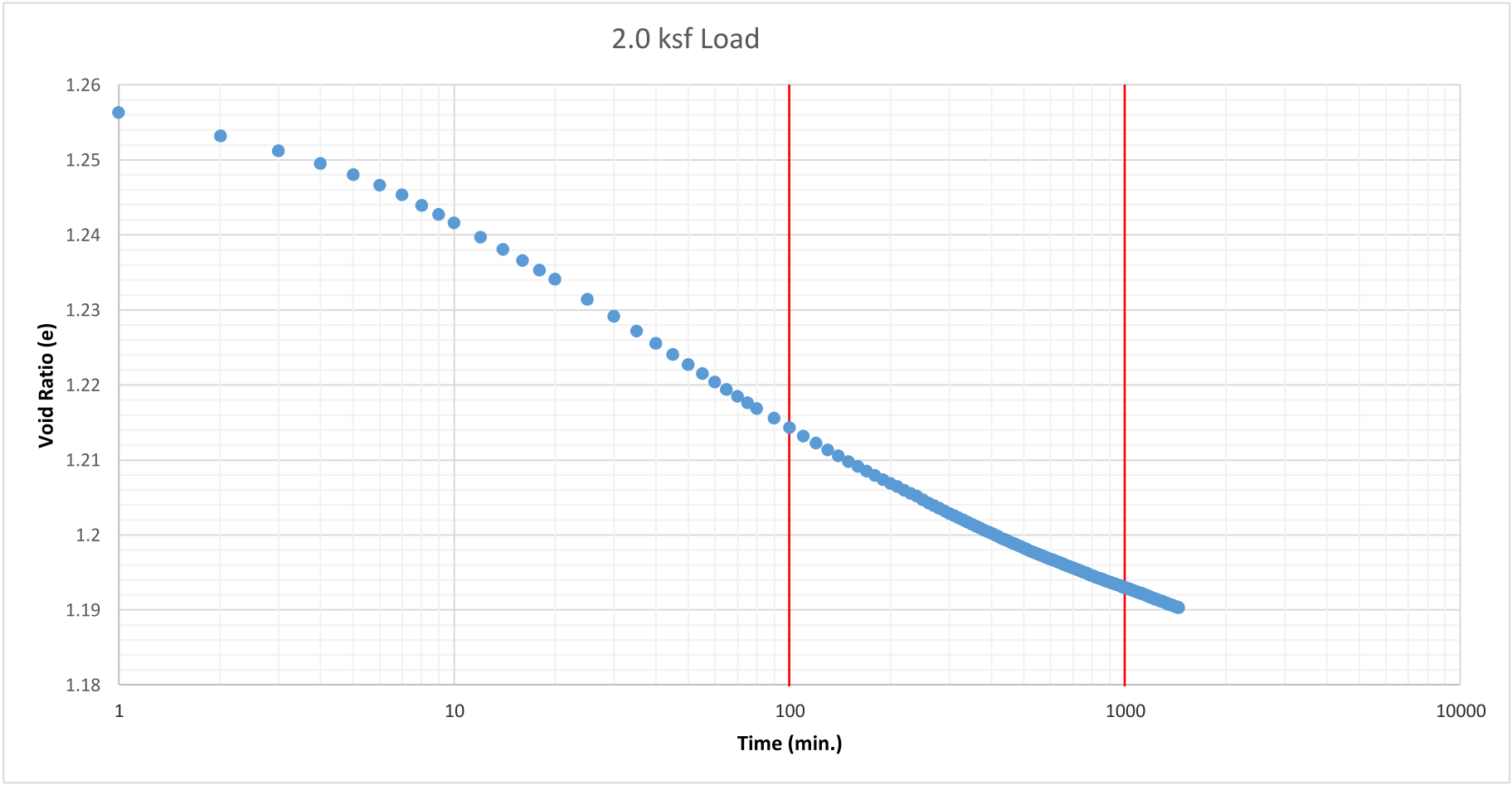


	C_α=	1.2728	-	1.2674	=	0.0055

Figure: 7d

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

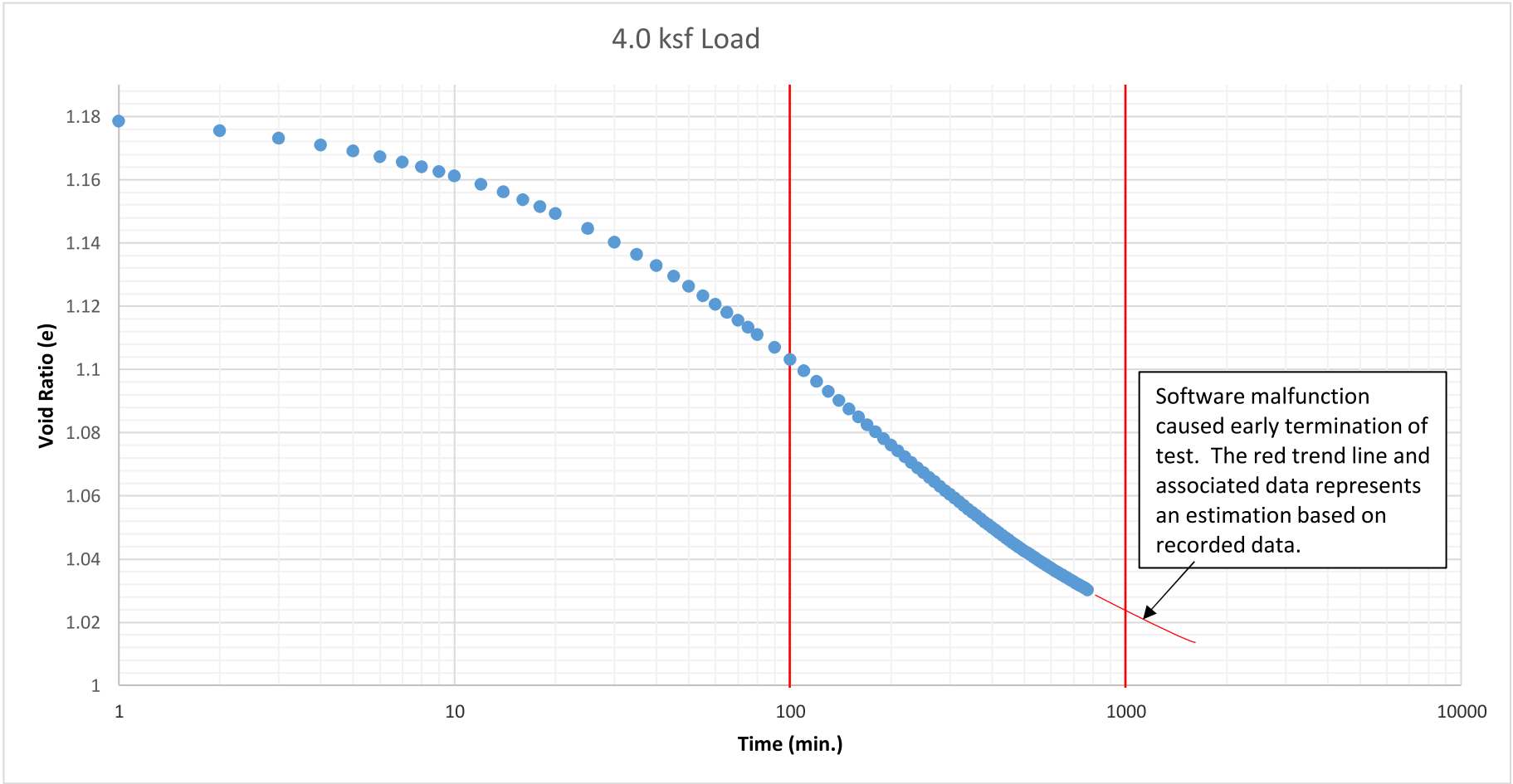


	C_α=	1.2143	-	1.1930	=	0.0213

Figure: 7e

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

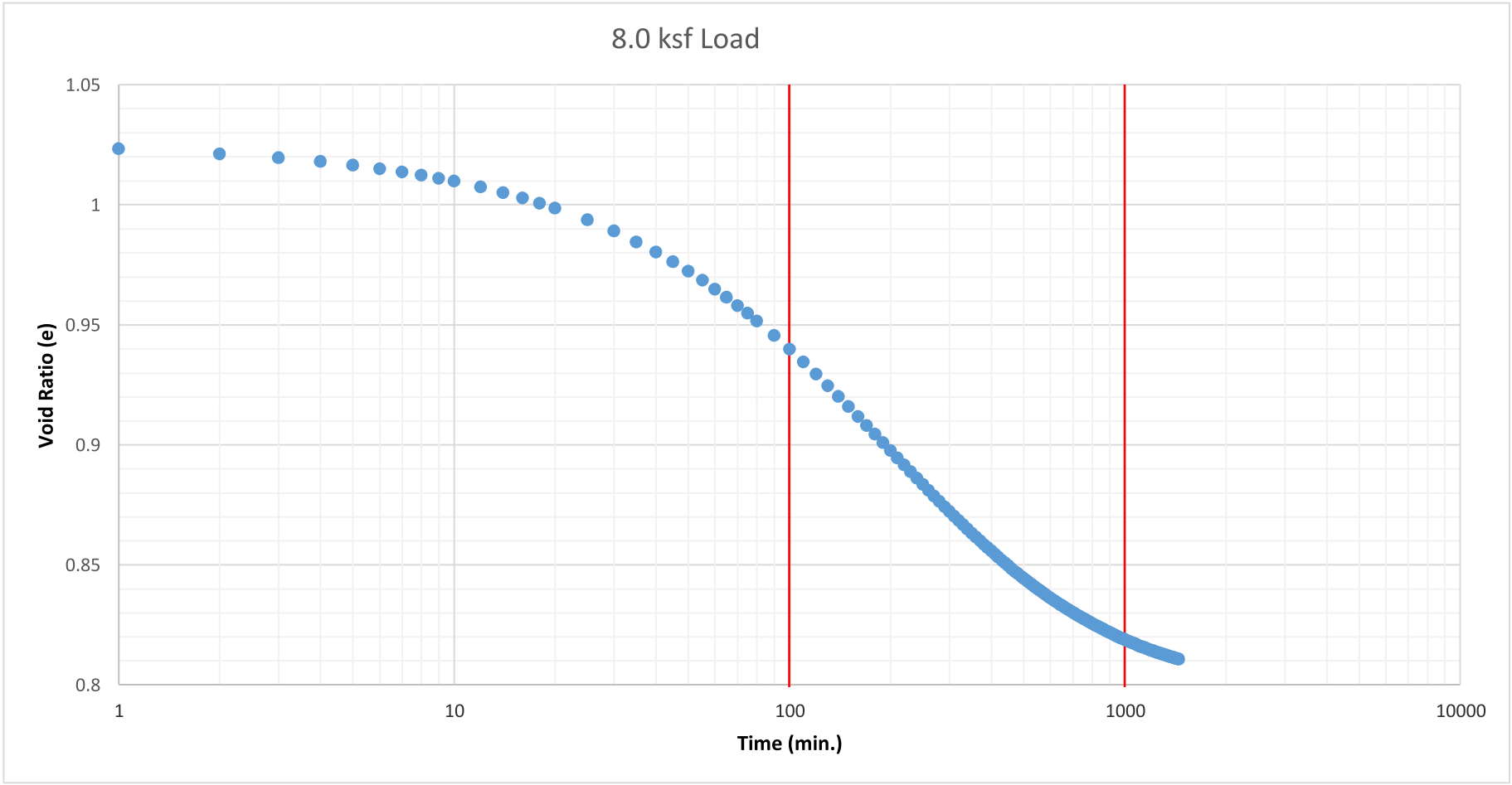


	C_α=	1.1031	-	1.0240	=	0.0791	

Figure: 7f

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

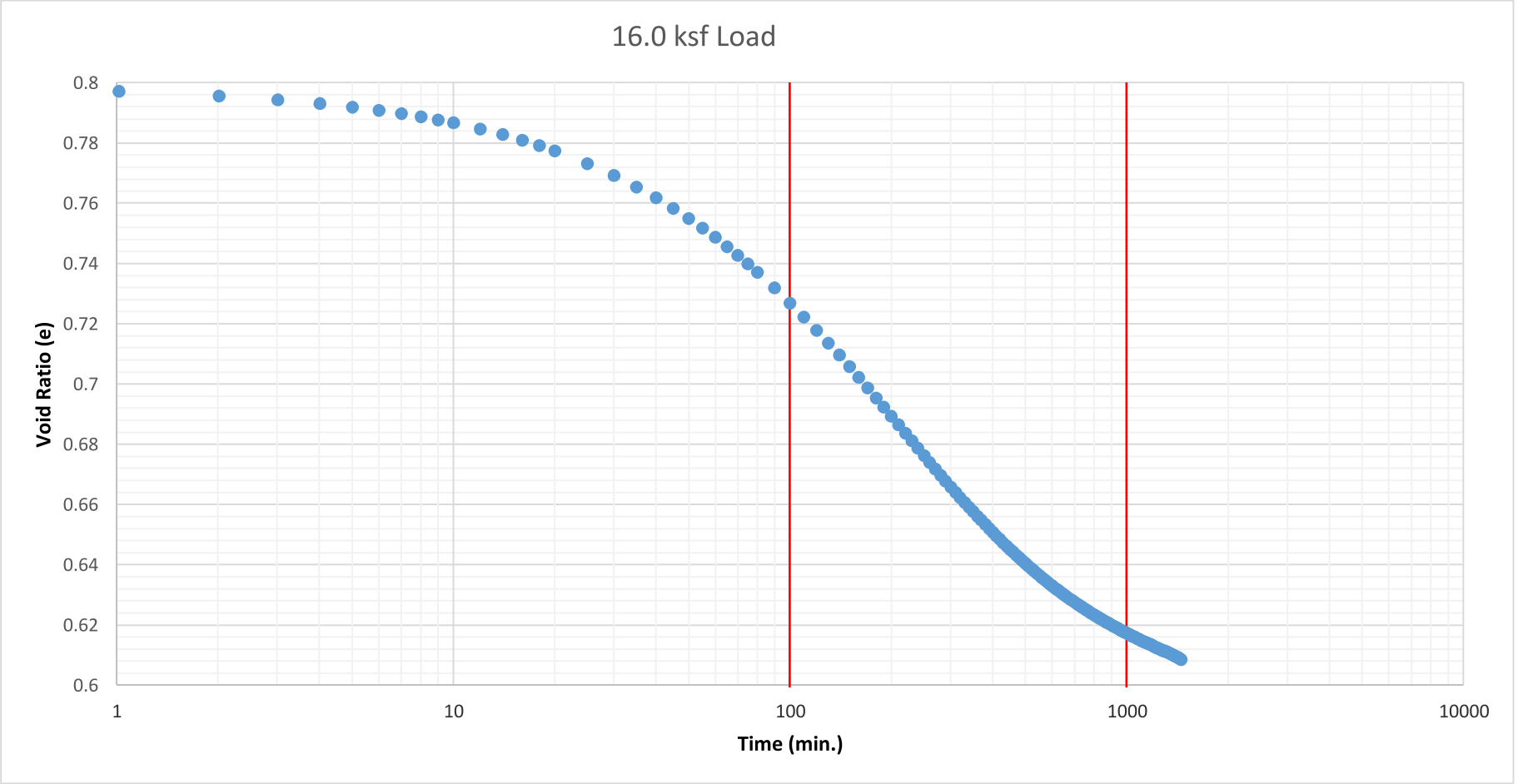


	C_α=	0.9399	-	0.8188	=	0.1210

Figure: 7g

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf

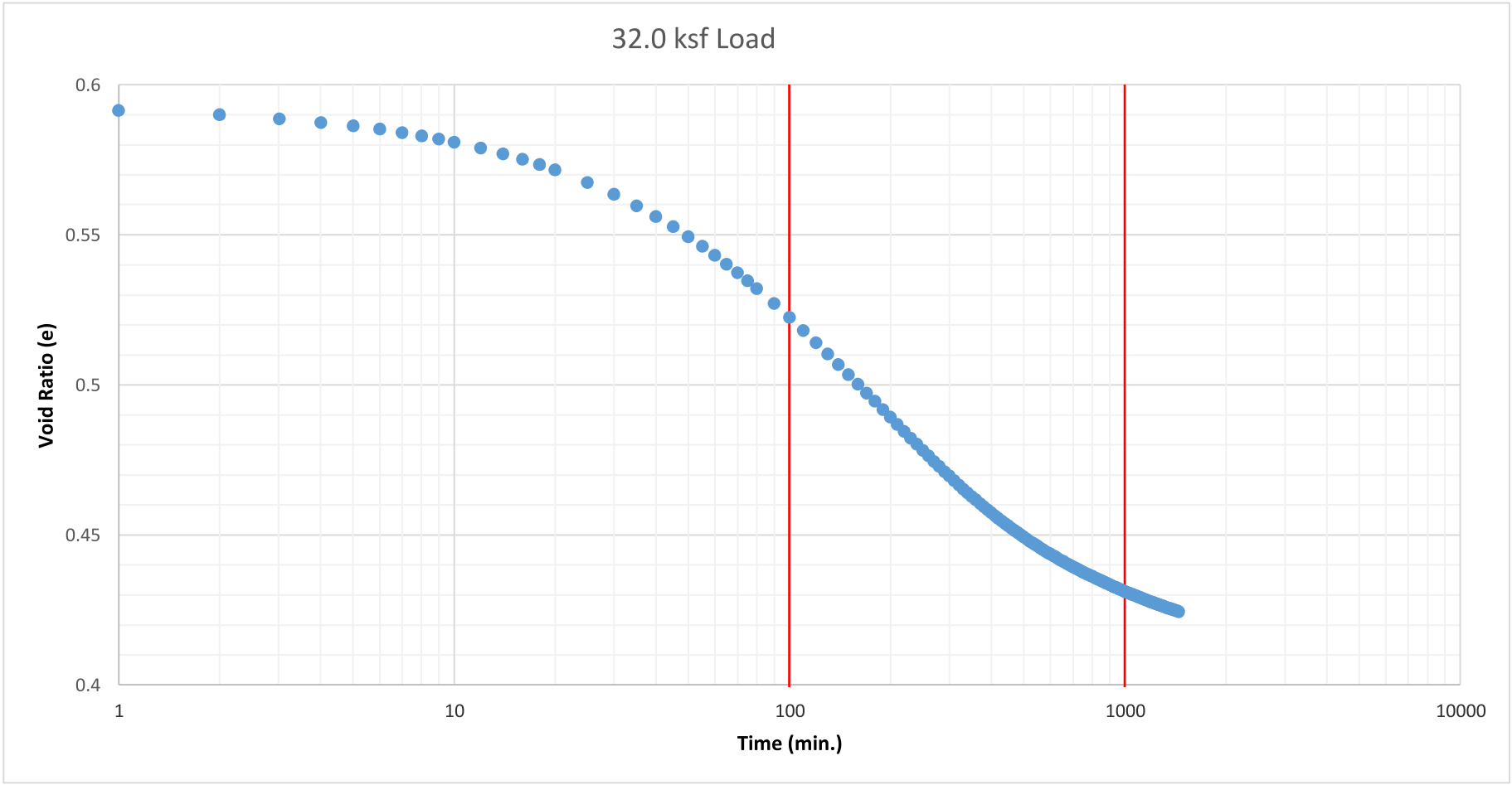


	C_α=	0.7268	-	0.6172	=	0.1096

Figure: 7h

ONE DIMENSIONAL CONSOLIDATION OF SOIL ASTM D2435
SECONDARY COMPRESSION

					Natural	
Project Name:	Centralia Costco	Sample Number	-	Moisture Content	91.4	%
Project Number:	2012-045 T21	Sample Depth	15 feet	Saturation	102.7	%
Exploration Number:	B-B02A	Soil Description	OH	Dry Density	44.3	pcf



	C_α=	0.5224	-	0.4311	=	0.0913

Figure: 7i

SAMPLE		DEPTH (ft)
B-B02A		15.0 - 17.3

Top

Bottom

Olive gray, SILT with sand (ML)	Grayish brown, SILT with organics (ML)		Reddish brown, SILT with sand (ML)	Grayish brown, lean clay (CL)	Dark grayish brown, organic SILT (OH)

Light grayish brown, SILT with sand (ML)

Tested Portion

HWA GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

SHELBY TUBE
EXTRUSION LOG

PROJECT NO.: 2012-045 T21 FIGURE: 8

SAMPLE		DEPTH (ft)
B-E13		2.0 - 4.2

Top

Bottom

Brown, fat CLAY (CH) mixed with Bentonite	Yellowish brown, fat CLAY (CH)	Olive brown, fat CLAY (CH)	Reddish brown, fat CLAY with sand (CH)	Yellowish brown, SILT (ML)

Tested Portion

HWA GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

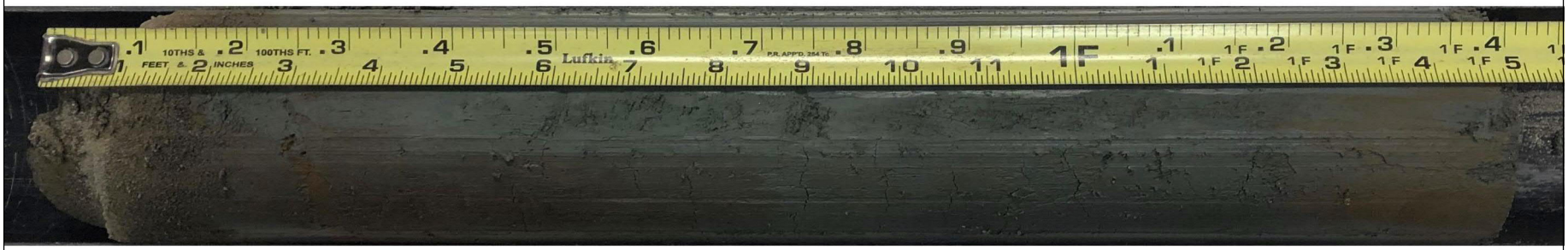
SHELBY TUBE
EXTRUSION LOG

PROJECT NO.: 2012-045 T21 FIGURE: 9

SAMPLE		DEPTH (ft)
B-P03		33.0 - 34.4

Top

Bottom



Olive brown, silty SAND (SM)	Gray, elastic SILT (MH)

Tested Portion

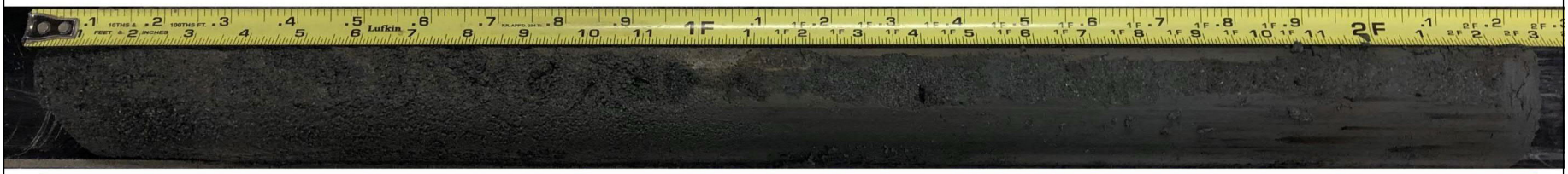
GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

SHELBY TUBE
EXTRUSION LOG

PROJECT NO.: 2012-045 T21 FIGURE: 10

SAMPLE		DEPTH (ft)
B-P06		32.0 - 34.2



Dark gray, poorly graded SAND (SP)	Dark gray, poorly graded SAND with silt (SP-SM)	Dark gray, sandy SILT (ML)	Dark gray, silty SAND (SM)	Dark gray, sandy SILT (ML)	

Tested Portion

Dark gray, lean CLAY (CL)

GeoSciences Inc.

MLT for Terracon
Centralia Costco
Client Project No. 81205225

SHELBY TUBE
EXTRUSION LOG

PROJECT NO.: 2012-045 T21 FIGURE: 11