INVESTIGATION REPORT FOR LNAPL CHARACTERIZATION AND VAPOR MONITORING PROGRAM

DEFENSE FUEL SUPPORT POINT NORWALK
15306 NORWALK BOULEVARD
NORWALK, CALIFORNIA

Prepared for

Defense Energy Support Center
8725 John J. Kingman Road
Fort Belvoir, Virginia 22060-6222

January 14, 2011

Prepared by

PARSONS

100 WEST WALNUT STREET • PASADENA • CALIFORNIA 91124

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ABBREVIATIONS AND ACRONYMS

µg/L	micrograms per liter
bgs	below ground surface
btoc	below top of casing
BTEX	benzene, toluene, ethylbenzene, xylenes
Calscience	Calscience Environmental Laboratories, Inc.
CHHSL	California Human Health Screening Level
CPT	Cone Penetration Test
CSM	conceptual site model
DESC	Defense Energy Support Center
DFSP	Defense Fuel Support Point
DigAlert	Underground Service Alert
DTSC	Department of Toxic Substance Control
Gregg Drilling	Gregg Drilling & Testing, Inc.
IDW	investigation-derived waste
JP	jet propellant
KMEP	Kinder Morgan Energy Partners, L.P.
LIF	laser induced fluorescence
LNAPL	light non-aqueous phase liquid
mg/kg	milligrams per kilograms
MTBE	methyl tert-butyl ether
PAH	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PPE	personal protective equipment
RWQCB	Regional Water Quality Control Board, Los Angeles Region
SFPP	Santa Fe Pacific Pipeline, L.P.
site	DFSP Norwalk Facility
SubSurface	SubSurface Surveys & Associates, Inc.
TBA	tert-butyl alcohol
TFS	truck fill stations
TPH	total petroleum hydrocarbons
USEPA	United States Environmental Protection Agency
UVOST	ultra-violet optical screening tool
VMP	vapor monitoring point
VOCs	volatile organic compounds
XeCl	xenon chloride

1 INTRODUCTION

This report presents the results of an investigation to delineate the vertical and lateral distribution of petroleum hydrocarbons in soil at the Defense Fuel Support Point (DFSP) Norwalk facility (site) located at 15306 Norwalk Boulevard, Norwalk, CA. The investigation was conducted in October 2010 and utilized cone penetration test (CPT) and an ultra-violet optical screening tool (UVOST) to help characterize soil types, stratigraphy, and presence of light non-aqueous phase liquid (LNAPL) hydrocarbons. A vapor monitoring program was also initiated to evaluate the soil vapor concentration on-site and assess whether off-gassing vapor may be migrating off-site. Uncertainties existed at the site regarding the presence or extent of residual petroleum or LNAPL. A second objective of the investigation was to better characterize the Bellflower Aquitard to evaluate its effectiveness for protecting the deeper Exposition aquifer from shallower contamination. This report has been prepared on behalf of the Defense Energy Support Center (DESC). The investigation was conducted in response to the Regional Water Quality Control Board, Los Angeles Region (RWQCB) email dated April 15, 2010. The site location map is shown on Figure 1-1.

1.1 Site Description

The DFSP Norwalk facility is a 50-acre facility consisting of 12 aboveground storage tanks that previously stored and distributed jet propellant (JP)-5 and JP-8. Aviation gasoline and JP-4 also were reportedly stored at the facility. Santa Fe Pacific Pipeline, L.P. (SFPP), an operating partner of Kinder Morgan Energy Partners, L.P. (KMEP), leases a 2-acre easement along the southern and eastern boundaries of DFSP for operation of its pipelines, which convey gasoline, diesel, and jet fuel. Within the southern easement lie three active pipelines, one of which is a 16-inch diameter pipeline, designated LS-1, that bends at the southeastern corner of the facility and continues northward within the eastern easement. An abandoned pipeline, likely owned or formerly operated by Golden West Pipeline, also runs along the eastern boundary of the site. The DESC has decommissioned the site, but SFPP pipelines continue to operate. Refer to previous reports for additional detailed background site information, which is not repeated here.

1.2 Geology & Hydrogeology

CPT were performed at the 15 UVOST locations around the site to provide basic interpretations in terms of soil behavior type and various geotechnical parameters using current published empirical correlations[1]. Soil encountered during the investigation was comprised primarily of unconsolidated fine sand, silty fine sand, and silt, with lesser concentrations of clay. The depth of investigation was approximately 80 feet below the

[1] Lunne, T., Robertson, P.K., and Powell, J.J.M, 1997. Cone Penetration Testing in geotechnical Practice, E&FN Routledge, 352 p, ISBN 0-7514-0393-8.

ground surface at each location. Figure 1-2 shows the locations of the CPTs and geologic cross-sections prepared using the CPT data. Figures 1-3 through 1-9 depict interpretations of subsurface conditions based on soil logged during this and previous investigations. The CPT logs are presented in Appendix A for those locations logged during this investigation.

The cross sections show that the unconsolidated alluvial sediments at the surface are approximately 50 feet thick and consist mostly of fine sand and silty fine sand with lesser amounts of interbedded silt and clay. A widely continuous sand unit that is approximately 15 to 18 feet thick occurs at the base of the alluvial section. With the water table generally about 30 feet below the ground surface in the site area, this lower sand unit comprises most of the semi-perched aquifer.

Underlying the basal sand of the alluvial section is a finer grained unit comprised mostly of silt and clay, with several interbedded fine sandy layers. This unit, termed the Bellflower Aquitard, is approximately 30 feet thick and generally occurs at a depth of 50 to 80 feet below the ground surface. The interpretation shown on geologic cross-sections A-A', B-B' and D-D' (Figures 1-3, 1-4, and 1-6) indicate that the Bellflower Aquitard is slightly thinner on the east side of the site and dips below the 80 foot depth of investigation to the west. Although there are several fairly continuous thin sand layers within the Bellflower, the predominance of silty and clayey layers most likely retards vertical migration of contaminants through the Aquitard. Previous investigations of this unit noted it to be organic rich, often containing wood fragments.

The Exposition aquifer is the shallowest reported regional aquifer beneath the site[2]. The sand unit at the top of this aquifer, which is reported to be about 70 feet thick in this area, is interpreted to occur at a depth of 72 below the ground surface at drilling location UV-12, as shown on the west-to-east cross-sections A-A' (Figure 1-3) and B-B' (Figure 1-4). Additional information on subsurface conditions encountered below the depth of this investigation (80 feet) for the DFSP property is available in previous reports on the DFSP site, and indicate that the Exposition aquifer is comprised primarily of fine sand and silty fine sand.

[2] California Department of Water Resources (CDWR), 1961. Bulletin No. 104 – Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County (Ground Water Geology), dated June 1961 (reprinted May 1991).

2 OBJECTIVES

The objectives of this investigation were as follows:

- Assess whether petroleum hydrocarbons were present in soil and groundwater at specific onsite areas where existing data is insufficient to determine its presence or its lateral/vertical extent;
- Confirm the presence of the Bellflower Aquitard; and
- Evaluate if soil vapors containing volatile organic compounds (VOCs) are migrating off-site to the adjacent park or residential areas.

To address the first objective, UVOST technology was used to assess the presence and relative concentrations of petroleum hydrocarbons in the underlying soil. There were 15 UVOST locations sampled during this investigation as shown on Figure 1-2.

The second objective was to assess the depth of the interface between the surficial sandy and silty alluvium and the underlying clay-rich aquitard. This objective was met using CPT data obtained simultaneously with UVOST sampling. The CPT data were collected at widely-spaced locations throughout the site and were located at the same UVOST locations (Figure 1-2).

The third objective, assessing the potential vapor exposure to neighboring residents or park users, was addressed by implementing a soil vapor monitoring program. This program was initiated by installing seven on-site vapor monitoring points (VMPs). Five VMPs were located along the site's northern border, one in the northwest corner, and one in the northeast corner (Figure 1-10). Soil gas will be sampled quarterly for one year and analyzed for VOCs via EPA Method TO-15. If the results show that there are no impacts or detections above risk-based levels, then the soil gas will only be sampled annually. If the results contain detections above the risk-based levels, then future action will be discussed with all parties.

2.1 CPT/UVOST Location Rationale

Abundant soil and groundwater analytical data have been generated from on-site investigations since 1988. The lateral and vertical extent of total petroleum hydrocarbon (TPH)-impacted soil and groundwater has been relatively well assessed. Remedial systems operating on-site since that time have significantly reduced the concentrations and extent of TPH-impacted soil and groundwater throughout the site. However, there was some uncertainty regarding the location and extent of residual TPH in soil and groundwater within specific portions of the site. Uncertainties regarding the continuity of the Bellflower Aquitard underlying the site also existed. It was proposed that these data gaps be eliminated by using a relatively rapid screening tool (UVOST technology) combined with CPT data to assess the underlying soils and residual TPH (if present).

The data gaps were identified, in part, by assessing site geologic data and recent soil and groundwater analytical data, including the most recent semiannual groundwater monitoring report[3]. Several relatively large areas on-site have been reported with no detectable TPH in groundwater during the 2009 and early 2010 sampling events. These areas, located within the site's northern portion, west-central portion, southwestern portion, and southeastern portion west of 24-inch valve area were excluded from UVOST sampling program. Due to the absence of TPH in groundwater at these locations, significant TPH concentrations were not anticipated within the associated soils. In addition, the SFPP lease area and the southeast block valve areas were excluded from this investigation.

The continuity of the Bellflower Aquitard underlying the site was also assessed at each UVOST location. For this reason, in part, the UVOST locations were widely distributed throughout the site, primarily in areas where Bellflower Aquitard data was deficient.

A brief discussion of known data gaps and rationale for choosing each UVOST location is provided in Section 3.0 of Parsons' work plan[4], dated September 14, 2010.

[3] CH2MHill, 2010, *Final First Semiannual 2010 Groundwater Monitoring Report, Defense Fuel Support Point Norwalk, California*, July 22.

[4] Parsons, 2010a.

3 FIELD ACTIVITIES

The investigations were conducted in accordance with a work plan[5] and an addendum[6] for the site. Approval of the work plan and addendum were received from the RWQCB[7]. This effort is comprised of fifteen CPT/UVOST soil locations located throughout the site, the installation of six permanent soil gas monitoring points located along the northern property line, and soil and soil gas sampling. The field work was conducted in October 2010.

3.1 Project Planning and Preparation

Preparation for fieldwork included acquisition of field equipment and permits, mobilization, and coordinating lines of communication. Parsons procured a geophysical survey subcontractor to clear the planned CPT/UVOST and VMP locations.

3.1.1 Permitting

Prior to the start of subsurface activities, soil boring permits to drive the CPT/UVOST tools into saturated soils beneath the site were obtained prior to this investigation from the Los Angeles County Department of Public Work and City of Norwalk. Well permits required for drilling and installation of VMPs were also obtained from the City of Norwalk prior to the field activities.

3.1.2 Geophysical Clearance

Underground Service Alert (DigAlert) was notified of Parsons planned subsurface activities at least 48 hours prior to the start of the field investigation. The proposed CPT/UVOST and VMP locations were clearly marked with white paint. DigAlert contacted all utility owners within the site vicinity and notified them of the subsurface investigation plans.

In addition to notifying DigAlert, each CPT/UVOST and VMP location and surrounding areas were surveyed using a combination of electromagnetic induction and ground-penetrating radar instruments to investigate and clear all boring locations for any subsurface obstructions (e.g., piping, utilities, metallic debris, etc.). SubSurface Surveys

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5 Parsons, 2010a, *LNAPL Characterization via Ultra-Violet Optical Screening Tool Technology and Vapor Monitoring Program, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California*, dated September 14.

6 Parsons, 2010b, *Addendum to the LNAPL Characterization via Ultra-Violet Optical Screening Tool Technology and Vapor Monitoring Program Work Plan, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California*, dated October 12.

7 RWQCB, 2010, *Workplan Approval for Light Non-Aqueous Phase Liquid (LNAPL) Characterization via Ultra-Violet Optical Screening Tool Technology and Vapor Monitoring Program, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP NO. 0286A, Site No. 16638)*, letter dated October 26.

& Associates, Inc. (SubSurface) conducted the geophysical survey immediately prior to the start of the field investigation. They clearly delineated all underground utility lines detected in proximity to the sampling locations.

If any utility main was identified within 3 feet of a proposed CPT/UVOST or VMP location, the planned location would be moved to an alternate point up to 3 feet away from the utility but within the cleared area surrounding the boring location. None of the planned locations were moved more than 3 feet from the original point.

3.2 CPT/UVOST® Sampling

CPT/UVOST sampling was conducted between October 25 and 27, 2010. Gregg Drilling & Testing, Inc. (Gregg Drilling) of Signal Hill, California provided the CPT rig equipped with the UVOST sampling tool. The CPT/UVOST sampling was overseen by a California-licensed Professional Geologist.

3.2.1 UVOST® System Description

The UVOST, developed by Dakota Industries, Inc., is a newer and improved version of the former technology referred to as the rapid optical screening tool (ROST™). The UVOST system has proven successful in accurately delineating the location and relative concentrations of gasoline, diesel fuel, jet fuel, hydraulic fluids, and other hydrocarbon types in the subsurface soils above and below the groundwater table. This system also differentiates between these hydrocarbon types if comingled at one location. The UVOST is the only commercially-available sensor of its type to have its performance validated by the USEPA[8]. Coupled with the CPT sensor, the UVOST survey provides real-time field screening of the physical characteristics of soil and chemical characteristics of petroleum hydrocarbons within spill areas.

3.2.2 UVOST® Technological Description

The UVOST module is mounted above a standard piezocone (penetrometer) used by a CPT truck or other direct push vehicle. The UVOST module uses the principle of fluorescence spectrometry by irradiating the soil with ultra-violet light (308 nanometers) that is generated by a xenon chloride (XeCl) excimer laser mounted within the CPT truck. The ultra-violet light is transmitted from the laser to the subsurface module through a fiber optic cable (containing 600 micrometer diameter fibers). The ultra-violet light then passes from the fiber optic cable through a small sapphire window (6.35 millimeter diameter) on the side of the module and then into the soil. Any aromatic petroleum hydrocarbons present in the soil absorb the light energy during radiation, and immediately re-emit a light (fluoresce) containing a longer wavelength. This re-emission is termed fluorescence (or laser induced fluorescence [LIF]). The "signal" light is transmitted through a fiber optic cable back up to the truck to be analyzed. The UVOST

8 United States Environmental Protection Agency (USEPA), 2003, *Using the Triad Approach to Streamline Brownfields Site Assessment and Cleanup – Brownfields Technology Primer Series,* June 2003.

system measures the intensity and emission decay at various wavelengths (350 to 500 nanometers). The measured emissions decay is used by software within the CPT rig to determine a product "signature" in real time every 2 centimeters. The petroleum hydrocarbon and soil data collected at 2 centimeter intervals provides a continuous color coded log of lithology and hydrocarbon distribution, minimizing the possibility of missing small zones of contamination and potential migration pathways.

3.2.3 Contaminants Detected with the UVOST

As noted above, the UVOST system identifies free phase and residual petroleum hydrocarbons in the subsurface soils above and below the water table. Petroleum hydrocarbon types are detected by way of the fluorescence response of their polycyclic aromatic hydrocarbon (PAH) constituents. Contaminant types detected using the UVOST system include gasoline, diesel, jet fuel (kerosene), motor oil, cutting oil, hydraulic oil, and crude oil. The detection limit for these contaminants varies between 10 and 500 milligrams per kilogram (mg/kg), depending on the contaminant and associated soil matrix type. Contaminants rarely seen with this system include extremely weathered gasoline, coal tar, creosote, bunker oil, polychlorinated biphenyls (PCBs), chlorinated solvents, and dissolved phase PAHs.

3.2.4 UVOST Calibration

As noted above, a soil sample contaminated with petroleum substances will have a fluorescence intensity that is proportional to the contaminant concentration. The concentration of the hydrocarbon fraction in soil at depth is determined by comparing its fluorescence intensity with calibration standards. The UVOST system was calibrated to these standards by Gregg Drilling prior to sampling at each UVOST location.

In addition to calibrating with known standards, soil at four UVOST locations (UV-2, UV-5, UV-10, and UV-12) was sampled and analyzed in order to compare UVOST data with the soil's petroleum hydrocarbon concentrations as measured by a fixed laboratory. Section 3.3 below provides a description of the sampling procedures. The soil samples collected at these four locations were reported by the UVOST system as containing elevated petroleum hydrocarbon concentrations. A comparison of the UVOST and laboratory data is provided in Section 4.1.1.

3.2.5 Locations and Depths

Fifteen locations (UV-1 through UV-15) within the DFSP Norwalk facility were sampled with the CPT/UVOST system in a manner identical to that described in Section 3.2. These locations are shown on Figure 1-2. A description and rationale for these locations are provided in Section 3 of Parsons' work plan[9].

[9] Parsons, 2010a.

Each CPT/UVOST location was sampled to a depth of approximately 80 feet. This relatively deep sampling was conducted in order to assess the presence and depth of the underlying Bellflower Aquitard with the CPT tool. Note that the UVOST tool is located approximately 2.5 feet higher than the CPT tool, so the total UVOST sampling depth will be that much shallower than the total CPT depth. The CPT and UVOST logs for this investigation are provided in Appendix A and B, respectively of this report.

3.2.6 CPT/UVOST Boring Backfill

Each open boring resulting from the CPT/UVOST investigation was backfilled with a cement-bentonite slurry (a 95%:5% ratio). The slurry was pumped through a tremie pipe that extended to the bottom of the open boring, thus displacing groundwater and soil debris upward and out of the boring. The tremie pipe was pulled up incrementally following successive injections of slurry. The slurry was monitored for settlement at the surface. Additional slurry was poured into the boring to compensate for any settlement.

3.3 Soil Sampling

As noted above, soil samples were collected at four locations (UV-2, UV-5, UV-10, and UV-12) immediately following completion of CPT/UVOST sampling. The UVOST data indicated the presence of elevated petroleum hydrocarbon concentrations at each of these locations at depths between 26 and 33 feet. The soil samples were collected from the depth with the highest measured UVOST petroleum hydrocarbon concentration.

The CPT/UVOST sampling rig was used to collect the soil samples. The sampling device was comprised of a stainless steel drive sampler lined with two stainless steel tubes (1-inch diameter by 6-inch length). Immediately following the collection of soil, the lower tube was capped at each end with Teflon tape and plastic caps. The capped sample was labeled, placed in a sealable plastic bag, and then immediately placed into an ice-cooled chest. The soil within the remaining upper tube was used for classification.

Note that three attempts were made to collect clayey soils at depth. The strength of the clays, however, was insufficient to drive the sampler's inner rod upward, thus preventing filling of the sampling tubes.

The collected soil samples were reviewed for classification by a California-licensed professional geologist. The soil descriptions included soil type, texture (grain size; using the Unified Soil Classification System), color (Munsell soil color system), general moisture content, and evidence of contamination.

3.4 Soil Gas Probe Installation and Sampling

Seven permanent soil gas probes (VMP-32 through VMP-38) were installed during this investigation; five along the northern site border near the outline of the dissolved plume, one in the northwest corner, and one in the northeast corner. The VMP locations are shown on Figure 1-10. Each location contained two soil vapor probes placed at depths of 5 and 15 feet.

3.4.1 Soil Gas Probe Installation Procedures

Due to the previous collection of lithologic data within the site, soil sampling and logging was not conducted prior to soil probe installation. A Geoprobe® drill rig was used to push an expendable steel point directly to a depth of 15 feet. New Teflon tubing (0.25-inch outside diameter, 0.17-inch inside diameter) attached to a soil gas filter (vapor probe) was then placed down through the open boring to the planned soil gas sampling depth. After installing the tubing and filter into the boring to a depth of 15 feet, a steel measuring tape was used to verify the depth of the boring and soil gas filter. Number 2/12 sand was then placed into the boring to fill the annular space surrounding the soil gas filter to at least 6-inches below and above the filter. The sand thickness was verified with the steel measuring tape. After the filter pack had been created, approximately 6-inches of granular bentonite (a seal) was then placed above the filter pack. Once this first layer of bentonite had been hydrated, additional granular bentonite was used to fill the boring up to the next sample interval (approximately 5.5 feet below ground surface (bgs)), then hydrated again prior to placement of an additional soil vapor probe and sand. The upper soil vapor probe was placed at a depth between approximately 5 and 5.5 feet bgs. The placement of sand and bentonite within and above this interval was conducted in a manner similar to that described above. Bentonite was used to fill the boring to a depth of approximately 0.5 feet. A sampling valve was used to cap the top of the Teflon tubing, which extended 1 to 2 feet above ground surface.

The upper portion of the Teflon tubing associated with each sampling location was housed within a well box set in concrete. The well box and supporting concrete was mounted flush with the ground surface. Tamper-resistant bolts secured the well box cover. All well boxes were permanently marked with probe identification numbers.

3.4.2 Soil Gas Sampling Procedures

Soil gas sampling was performed in general accordance with the Advisory for Active Soil Gas Investigation and updates, published by the Department of Toxic Substances Control (DTSC) and the RWQCB[10]. The installed vapor tubing and filter were allowed to set more than 24 hours prior to purging and sampling. Soil gas samples were collected from each vapor probe after purging seven tubing volumes. The purge volume used was based on the method specified in the DTSC and RWQCB soil gas sampling guidelines. After purging, soil gas samples were collected from each vapor probe in a Summa canister. Each Summa canister used during soil gas collection contained a dedicated flow regulator. The Summa canisters were filled (following purging) at a rate of less than 200 milliliters per minute. Once sampling was complete, the Summa canister was sealed and labeled (using non-volatile ink) with the sample location, sample depth, date, and time. The filled Summa canisters were transported to the laboratory (Calscience Environmental Laboratories, Inc.) immediately following testing.

10 DTSC/RWQCB, 2003, *Advisory – Active Soil Gas Investigations*, January 28.

Indications of excess soil moisture in the soil zone being sampled (as suggested by saturated soil or perched groundwater) were not encountered during drilling or soil gas sampling. Visible soil moisture or water was not observed in the tubing during purging or during soil gas sampling. Due to its apparent absence, excess soil moisture was not considered a potential threat to the viability of the collected soil gas samples.

3.5 Analytical Methods

Calscience Environmental Laboratories, Inc. (Calscience) analyzed the soil and soil gas samples collected during this investigation. Calscience is certified by the California Department of Health Services Environmental Accreditation Laboratory Program. Each collected soil sample was analyzed for the following compounds:

- TPH as gasoline using USEPA Method 8015B (modified);
- TPH as JP-5 using USEPA Method 8015B (modified); and
- VOCs using USEPA Method 8260B (via 5035).

The soil gas samples were analyzed for VOCs using United Stated Environmental Protection Agency (USEPA) Method TO-15.

Analytical data summary tables for soil and soil gas are provided in Tables 4-1 through 4-3. Copies of the final soil and soil gas laboratory reports are provided in Appendix C.

3.6 Field Variations from Work Plan

All field activities were conducted in general conformance with Parsons' sampling work plan[11] and work plan addendum[12]. The sampling locations were consistent with those proposed. Some of the locations were adjusted a few feet in the field to accommodate physical or subsurface obstructions. Other variances included the following:

- As per the work plan, soil samples were collected from UV-2, UV-10, and UV-12. In addition to these sampling locations, a soil sample was also collected at UV-5.
- Soil samples were only collected at depths between 28 and 32 feet in UV-2, UV-5, UV-10, and UV-12. The soils at these depths were reported by the UVOST system as containing elevated petroleum hydrocarbon concentrations. After multiple sampling attempts, sampling at depths greater than 32 feet was stopped. As noted in Section 3.3, the relatively low strengths of the clayey soils at deeper depths were insufficient to drive the sampler's inner rod upward during sampling, thus preventing filling of the sampling tubes.

11 Parsons, 2010a.
12 Parsons, 2010b.

- The soil sampler utilized by the CPT rig contained two stainless steel tubes (1-inch diameter by 6-inch length). Due to the relatively small quantity of soil collected, geotechnical testing of pore fluid saturation and grain size distribution was not conducted.

3.7 Equipment Decontamination

All soil sampling equipment that came into contact with potentially contaminated soil or water was carefully decontaminated to assure the quality of samples collected and prevent transference of impacted materials from the area sampled. Decontamination was conducted prior to and after each use of equipment. All sampling devices used were decontaminated according to USEPA Region IX recommended procedures.

The Geoprobe® and CPT/UVOST drilling and sampling equipment used were decontaminated using the following procedures:

- Non-phosphate detergent and tap water wash,
- Initial tap water rinse, and
- Final distilled water rinse.

The wash water and rinse water generated during the field investigation were placed into 55-gallon drums. These drums were stored within the southwestern portion of the DFSP facility (near the office area).

3.8 Investigation-Derived Waste Disposal

Different types of investigation-derived waste (IDW) were generated during the field activities, included the following:

- Used personal protective equipment (PPE),
- Disposable sampling equipment,
- Decontamination fluids, and
- Soil cuttings.

IDW was managed and disposed of in accordance with current Federal, State, and local requirements. IDW was labeled and stored in accordance with the requirements of the Los Angeles County Health Department.

Soil cuttings and decontamination water generated during field investigations were collected in properly labeled and sealed U.S. DOT approved 55-gallon drums. At the end of the field program, the drums were moved to the southwestern portion of the DESC facility. Profiling of soil cuttings and waste water was done to ensure appropriate disposal. Proper arrangements were made to haul and dispose of the IDW drums.

Used PPE and disposable equipment was double bagged and placed in a municipal refuse dumpster at the site. These wastes are not considered hazardous and were sent to a municipal landfill.

4 INVESTIGATION RESULTS

This section discusses the results from the LNAPL and soil vapor investigations.

4.1 Occurrence of Petroleum Hydrocarbons

The vertical distribution of petroleum hydrocarbons was investigated using UVOST technology. The UVOST logs are provided in Appendix B. The UVOST module, attached above the piezocone, works on the principal that PAHs, located in soil and/or groundwater, fluoresce when irradiated by ultra violet light. Different types of PAHs will fluoresce at different wave lengths leaving different characteristic signatures. Measuring the intensity and wavelength of the fluoresced PAH allows one to assess the type and relative concentration of the PAH present in the subsurface. In general, as the number of aromatic (benzene) rings increases, the fluorescent response shifts toward longer wavelengths. Therefore, lighter compounds tend to fluoresce at shorter wavelengths and heavier compounds fluoresce at longer wavelengths. The intensity of the radiation emitted by the contaminant is an indication of the relative concentration of aromatics as well as the number of aromatic rings in the compounds present. Current UVOST technology can only identify contaminants generically and only qualitative assessments are realistic.

4.1.1 UVOST and Soil Analytical Results

UV-1 Borehole location UV-1 is situated between the southern water tank and Tank 55003. Soil boring (DPT-34), sampled immediately northwest of the water tank in June 2010, indicated the presence of TPH in soil at 20 and 25 feet. The UVOST log for UV-1 (Appendix B) indicates only background levels of fluorescence down to a depth of 23 feet bgs. A relatively low magnitude spike in fluorescence at 25.8 feet indicates that a low concentration PAHs may be present. The graphic "callout" on the log at this depth indicates the waveform character of a mixture of kerosene (jet fuel) with a large Channel 1 (shorter wavelength) response and diesel fuel (longer wave lengths) with moderate Channel 3 and 4 responses. Weathering of the product maybe masking the true identity of the product, but the concentration is indicated to be low and the distribution is limited to a one or two foot smear zone near the water table. A comparison of the soil types from the CPT and UVOST indicates that the minor UVOST increases at deeper depths are associated with silt and clay layers that are interpreted to be organic rich and contain "natural" or background fluorescence. There are no PAHs indicated in the Bellflower Aquitard below the alluvial basal sand unit.

UV-2 Location UV-2 is situated immediately north of the truck fill stations (TFS) and just west of MW-15. Free product has been measured at MW-15 since 2002. The UVOST log indicates a large amplitude spike at 29.8 to 30.4 feet bgs, which is about 2 feet below the current potentiometric surface. Several smaller magnitude increases in fluorescence occur at 11-12' bgs and 18-19' bgs. The CPT log indicates that these depths are clayey silt or silty clay layers immediately above and below a sandy unit. These may be indicative of irreducible

concentrations of hydrocarbons or may be natural organic rich layers. The "callout" graph on the UVOST log indicates higher voltages in the longer wavelengths, and therefore has a different hydrocarbon character than shown at UV-1. The UV-2 waveform character is more similar to motor oil or gasoline. This may indicate a different source at the UV-2 location than at UV-1. There are no PAHs indicated on the UVOST log in the Bellflower Aquitard below the alluvial basal sand unit.

A soil sample was collected at location UV-2 at a depth of 30 feet bgs, in the exact interval of the high UV reflectance spike. The laboratory analytical results, summarized on Table 4-1 and included in Appendix C, show a concentration of 370 mg/kg TPH as gasoline range and 510 mg/kg TPH as JP-5. Considering that there is considerable overlap in the aliphatic carbon chain length of these two analyses (TPH as gasoline has a carbon range of C4 – C14 and TPH as JP-5 has a carbon range of C8 – C17), it is reasonable to conclude that the soil in this smear zone is below the cleanup standard of 1,000 mg/kg. In addition to the TPH analyses, the soil sample was also analyzed for VOCs. Table 4-2 summarizes all of detected VOCs, and shows that many aromatic hydrocarbons, including benzene, toluene, ethylbenzene, and xylenes (BTEX) constituents, were detected and contributed to the UV reflectance spike. No oxygenates (methyl tert-butyl ether [MTBE], tert-butyl alcohol [TBA], and others) were detected.

UV-3 This borehole is located at the southwest corner of the TFS. Boring DPT-4 was sampled at this location in September 2009, and revealed elevated TPH concentrations (11,000 mg/kg as gasoline and 6,100 mg/kg as JP-5) at a depth of 25 feet (deepest collected soil sample). The UVOST log indicates low concentrations with a gasoline character (longer wavelengths) at depths between 19.5 and 21.5 feet bgs. This depth corresponds to a clay and silt interval on the CPT log, and is 8 feet above the potentiometric surface. There is no increase in fluorescence at the current water table, and none in the Bellflower Aquitard.

UV-4 Location UV-4 is situated south of the TFS, north of the pump house, and just east of well MW-9. Elevated TPH concentrations have been reported in groundwater samples MW-9 (12,600 micrograms per liter (µg/l) in May 2010), which is used to help define the southeastern limits of the TPH plume that includes the former TFS. Soil boring (DPT-33), located near MW-9, was sampled at a depth of 25 feet in June 2010 and had a TPH concentration of 1,700 mg/kg as gasoline and 2,200 mg/kg as JP-5. The UVOST log indicates low concentrations of PAHs with a gasoline character at depths between 19.5 and 21 feet. This fluorescence spike occurs in a clay and silt interval that is approximately 8 feet above the current water table. The interpretation is that there are no hydrocarbons with sufficient concentration to be mobile LNAPLs below the water table.

UV-5 This borehole is located southeast of Tank 80013 between PZ-2 and GMW-10. Historical detections of free product have been encountered at depths between 24 to 28 feet below top of casing (btoc) at these two locations as well as low TPH concentrations in groundwater within this portion of the site. The UVOST log indicates a 0.3 foot layer with PAHs at a depth of 25.3 feet bgs and a 1.3 foot layer with higher concentrations at a depth of 27.8 feet. The "callout"

graphs on the UVOST log indicate higher concentrations with longer wavelengths, more characteristic of gasoline. There is no indication of PAHs below the water table.

A soil sample was collected at location UV-5 at a depth of 28 feet bgs, in the exact interval of the high UV reflectance spike. The composition of the hydrocarbon fractions was further analyzed to determine more precise characteristic of the hydrocarbons. Summary Table 4-1 indicates fairly high concentration primarily in the gasoline range.

In addition to the TPH analyses, the soil sample was also analyzed for VOCs. Like the soil analysis at UV-2, Table 4-2 shows that many aromatic compounds, including BTEX constituents, were detected (some at high concentrations) that contributed to the UV reflectance spike. No oxygenates (MTBE, TBA, and others) were detected.

A core sample from this same depth interval (28 feet bgs) was submitted to Core Lab to measure several geotechnical parameters. Because the core visually looked different on each end, the core was split and each end was analyzed separately. However, the laboratory analytical results, included in Appendix C, were quite similar. The soil type was classified as a silt with 50 to 56 percent of the grains in the silt and clay fraction, and confirms the soil behavior type interpreted on the CPT log. The moisture content varied from 16 to 19 percent, and the pore fluid saturation varied from 84 to 88 percent water and 2 to 9 percent NAPL.

Taken together, the analytical results confirm the UVOST interpretation of a one foot thick layer of hydrocarbons at the water table (28 feet bgs) with the characteristics of gasoline, with a thinner zone with lower concentrations in the overlying unsaturated (vadose) zone at a depth of 25 feet bgs. There are no indications of PAHs below the water table on the UVOST log (Appendix B).

UV-6 Borehole UV-6 is located south of Tank 80006, and between GMW-17 and GMW-42. Relatively elevated TPH concentrations remain in groundwater within the vicinity of GMW-17. Historical detects of free product have been encountered at depths between 25 to 32 feet btoc at GMW-17 and TF-11. The UVOST log indicates there are no concentrations of hydrocarbons in the soil column at this location.

UV-7 This borehole is located about 25 feet north-northwest of Tank 80006. Early 2010 groundwater data reveal uncertainty (dashed "ND" contours) regarding the limits of TPH-impacted groundwater for two contaminant plumes that are located northwest and north of Tank 80006. The UVOST log indicates that there are no residual concentrations of TPH in the soil column that are contributing to the groundwater plume. The isolated groundwater TPH plume below this tank must have migrated below the tank as a dissolved phase plume.

UV-8 Borehole UV-8 is located approximately 150 feet northwest of Tank 80007, between GMW-15 and GMW-7. Approximately 0.02 foot of free product was reported in GMW-7 in October 2009 in the *Second Semiannual 2009*

Groundwater Monitoring Report[13], but was not observed in April, July, or October of 2010. The UVOST log indicates that there are no residual concentrations of TPH in the soil column at this location that may be contributing to the dissolved phase plume.

UV-9 Borehole UV-9 is located approximately 45 feet south of Tank 80004, between GMW-45 and TF-23. Free product was reported in TF-23 in October 2009 with a thickness of 0.01 foot, but was not observed prior to this occurrence or subsequently in April, July, or October of 2010. The UVOST log indicates that there are no residual concentrations of TPH in the soil column at this location that may be contributing to the dissolved phase plume.

UV-10 Borehole UV-10 is located about 70 feet south of Tank 80008, east of TF-17, and north of TF-18. Free product was measured at TF-17 in October 2010 with a thickness of 0.47 feet. The UVOST log indicates low concentrations of PAHs with a kerosene (jet fuel) characteristic at depths between 24 - 33 feet bgs. The reflectance log indicates two separate zones of contamination at 24 to 26.5 at very low concentrations and another zone of contamination with slightly higher contamination at 32 to 33 feet.

A soil sample was collected at location UV-10 at a depth of 32 feet bgs in the interval of the relatively low UV reflectance spike (see log in Appendix B). The laboratory analytical results (Table 4-1) show a concentration of 32 mg/kg TPH as gasoline range and 3,300 mg/kg TPH as JP-5. This interval is approximately 3 feet below the current potentiometric surface. In addition to the TPH analyses, the soil sample was also analyzed for VOCs. Table 4-2 shows that many aromatic compounds, including BTEX constituents, were detected at low concentrations that contributed to the UV reflectance spike, but no oxygenate (MTBE, TBA, and others) were detected. Based on the UVOST log and the laboratory analytical results, the source for contamination at this location is jet fuel and not gasoline.

UV-11 Borehole UV-11 is located east of Tank 80008, and west of wells GMW-48, GMW-50, and GMW-51. Historically, free product was measured in all of these wells. However, the UVOST log indicates that there are no residual concentrations of TPH in the soil column at this location that may be contributing to the dissolved phase plume.

UV-12 This borehole is located along the east perimeter of the site adjacent to Holifield Park and between wells GW-15 and GW-62. Free product (0.11 feet) was measured in GW-15 and 0.18 feet of free product was measured at GMW-62 in October 2010. The UVOST log indicates a moderate UV reflectance spike at a depth of 29.8 to 30.1 feet bgs. The waveform character in the "callout" for this interval indicates kerosene (jet fuel) type source. The UVOST log does not indicate any contamination below 31 feet.

13 Parsons, 2009, *Second Semiannual 2009 Groundwater Monitoring Report, Defense Fuel Support Point Norwalk, DESC,* January 21.

A soil sample was collected at location UV-12 at a depth of 30 feet bgs, in the exact interval of the moderate UV reflectance spike. The composition of the hydrocarbon fractions was further analyzed to determine more precise characteristics of the hydrocarbons. Table 4-1 indicates that low concentrations of TPH as JP-5 were more prevalent.

In addition to the TPH analyses, the soil sample was also analyzed for VOCs. Table 4-2 shows that, like the soil analysis at UV-2, UV-5, and UV-10, many aromatic compounds, including BTEX constituents were detected (none at high concentrations) that contributed to the UV reflectance spike. No oxygenates (MTBE, TBA, and others) were detected (see Appendix C).

Taken together, the analytical results confirm the UVOST interpretation of a thin (less than one foot thick) zone near the water table (30 feet bgs) with low level concentrations of hydrocarbons with the characteristics of jet fuel. The thickness, concentration, and lack of vertical head indicate that the hydrocarbons are residual and no longer migrating. However, they may contribute to the dissolved phase plume. There is no indication of PAHs below the water table.

UV-13 Borehole UV-11 is located southeast of Tank 55004 near monitoring well GMW-53. Free product was measured in GMW-53 in April 2010 with a thickness of 0.01 foot, but was not present in July or October of 2010. Two wells located north of this plume have been used to assess the northern extent of free product and TPH concentrations in groundwater. The absence of detectable TPH in MW-16 indicates that TPH-impacted soil does not extend north past this location.

The UVOST log indicates a slight UV reflectance spike at a depth of 12 feet bgs, but this is associated with a clayey silt and silty clay unit on the CPT log. The spike is interpreted to be natural organic material. There appears to be no residual concentrations of TPH (especially jet fuel type) in the soil column at this location that may be contributing to the dissolved phase plume.

UV-14 This borehole is located south of Tank 80007 near GMW-44 and TF-15. Free product has been detected historically at TF-15 from 1996 through 2004, but has not been observed since November 2004 and has never been observed in GMW-44. The UVOST log (Appendix B) indicates that residual hydrocarbon concentrations occur near the current water table at a depth of 28.6 feet bgs. The higher concentration spike is about 0.5 feet thick and indicates a kerosene (jet fuel) waveform character. A second UV reflectance spike occurs at a depth of 31.9 to 32.6 feet and also shows a jet fuel character. Both of these layers of hydrocarbon contamination occur within a sandy interval, based on the CPT interpretation. Based on the minimal thickness of these contaminated zones, the lack of vertical head, and the moderate magnitude UV reflectance, the hydrocarbon contamination at this location is at irreducible residual levels that are no longer mobile, but may still contribute to the dissolved phase plume. No hydrocarbon NAPLs are indicated below the alluvial section in the Bellflower aquifer.

UV-15 Borehole UV-15 is located southeast of Tank 80001. This CPT/UVOST location was selected to provide a northwest area point for the site cross-section and to confirm the presence and thickness of the Bellflower Aquitard. The UVOST log indicates that there are no residual concentrations of TPH in the soil column at this location that may be contributing to the dissolved phase plume.

4.1.2 Distribution of Hydrocarbons

The following interpretations are based on the observations presented above. A review of the cross sections (Figures 1-3 through 1.9) show that residual LNAPLs occur both above the water table (vadose zone) and below the water table (saturated zone). Residual LNAPLs in the saturated zone more readily contribute to the dissolved phase contaminant plumes, which are described in more detail in the semiannual reports.

Figure 4-1 shows a conceptual site model (CSM) that integrates all of the CPT and UVOST data. The vertical and lateral extents of the contamination shown on the CSM are based on the UVOST reflectance, and since the UVOST tool detects only non-aqueous phase aromatic hydrocarbons - the plume extents shown do not depict the extent of the dissolved phase plumes. Although the UVOST tool measures UV reflectance every 0.1 foot, as shown on the logs in Appendix B, the data for modeling was reduced to the maximum reflectance value for each foot. This has the effect of exaggerating the thickness and magnitude of contamination shown on the CSM and also on the cross sections shown on Figures 1-3 through 1-9. Based on the magnitude of the UV reflectance on the UVOST logs, the thickness of the NAPL zones, and the soil analytical results, the plumes shown on the CSM are most likely at residual levels and are no longer migrating. However, these residual hydrocarbons do continue to be a source for the dissolved phase plumes. The CSM shows that the residual NAPLs are confined to a few thin layers and are not distributed throughout the entire vadose (unsaturated) zone and do not occur below the historical fluctuations in the water table.

Figure 4-2 shows a plan view of the lateral extents of hydrocarbons in the vadose zone. The limits shown were determined by statistical krieging of the UV reflectance data and were not influenced by geological interpretation. The occurrence of LNAPLs is limited to the area around and south of the TFS as indicated at locations UV-3 and UV-4. The UV waveform for the hydrocarbons in this area and interval is more like a motor oil or gasoline than jet fuel. A small area of LNAPLs above the water table is also indicated at UV-10 at very low concentration. As mentioned above, the waveform type at this location is indicative of jet fuel.

Figure 4-3 shows a plan view of the lateral extents of hydrocarbons at or below the water table. Several areas are indicated to have residual levels of NAPLs. The area extending from the TFS (UV-2) northward toward Tank 55003 (UV-1) is interpreted to be motor oil at UV-2 and low concentration of jet fuel at UV-1. This plume is also shown on cross-section F-F' (Figure 1-8). Another area with LNAPLs at or below the water table occurs southwest of Tank 80008 (UV-10) and extends westward toward Tank 80007 (UV-14). This plume is also shown on Cross-section B-B" (Figure 1-4). The UV waveform type indicates a jet fuel source, which is confirmed by the laboratory analysis for UV-10

(3,300 mg/kg as TPH as JP-5). The concentration of TPH as JP-5 appears to be lower at UV-10 than at UV-14 based on the magnitude of the UV reflectance at the two wells, but both locations appear to be at irreducible residual concentrations that are no longer mobile.

Figure 4-3 shows a small area of LNAPLs at the east side of the site adjacent to Holifield Park centered around UV-12. Cross sectional views of the contamination in this area are also shown on Figures 1-3, 1-4, and 1-6. As noted above for location UV-12, this plume is identified as jet fuel source based on UV waveform and laboratory analysis of a soil sample. The aerial extent of this plume is limited to the immediate area around GW-15, UV-12, and GMW-62.

A fourth area with LNAPLs near the water table is at UV-5. Although this plume is depicted on Figure 4-3 as comingled with the plume at UV-1 and UV-2, it may also be interpreted as a separate plume based on the different UV waveform character, and different reflectance magnitudes at different stratigraphic levels, as shown on cross section C-C' (Figure 1-5). The LNAPLs at the UV-5 plume are in a thin layer and most likely at irreducible residual levels that are no longer mobile, but will continue to be a source for the dissolved phase plume.

4.2 Soil Vapor Results

Laboratory soil gas samples were analyzed for VOCs and are presents on Table 4-3. The laboratory report is included in Appendix C. There were low level detections ($\leq$ 0.31 µg/L) for 11 of the VOCs analyzed by the laboratory: 2-butanone, acetone, benzene, carbon disulfide, chloroform, dichlorodifluoromethane, ethylbenzene, o-xylene, p/m-xylene, tetrachloroethene, and toluene. Benzene was detected in two samples: 0.011 µg/L in VMP-34 at 15 feet bgs and 0.0036 µg/L in VMP-38 at 15 feet bgs.

Concentrations of detected VOCs in soil gas were all below their respective screening concentrations. Vapor risk-based screening concentrations used were residential California Human Health Screening Levels (CHHSLs)[14].

[14] California Environmental Protection Agency (CalEPA), 2005. Use of California Human Health Screening Levels (CHHCLs) in Evaluation of Contaminated Properties. CalEPA OEHHA. January.

5 SUMMARY AND RECOMMENDATIONS

The objectives of this investigation were as follows:

- Assess whether petroleum hydrocarbons are present in soil and groundwater at specific on-site areas where existing data is insufficient to determine its presence or its lateral/vertical extent;
- Confirm the presence of the Bellflower Aquitard; and
- Evaluate the soil vapor concentrations and assess whether off-gassing vapor may be migrating off-site to the adjacent park users or residential areas.

5.1 Summary

The objectives of the investigation as outlined above were met by:

- Conducting CPT at 15 locations;
- Conducting UVOST at 15 locations;
- Collecting soil samples from 4 CPT locations to confirm UVOST results;
- Collecting 1 split soil sample for geotechnical parameters; and
- Collecting 14 soil gas samples from the 7 new VMPs;

Based on the CPT, UVOST, and soil analytical results, hydrocarbon NAPLs were detected at low concentrations in several areas. Where detected, the vertical extent is limited to a 1 to 2 feet thick smear zone at depths near the perched water table, as shown in the CSM depicted on Figure 4-1. Hydrocarbons were not identified at deeper depths in the saturated zone. The detected hydrocarbons are interpreted to be at less than residual saturation and are therefore no longer mobile, based on the low concentrations and lack of LNAPL displacement head. As shown on Figure 4-3, the horizontal extent of hydrocarbons in soil is limited to three specific areas on the southern portions of the site and one area on the eastern edge of the site. The hydrocarbon plume near the TFS is interpreted to have a motor oil or diesel source, and the southwestern plume is interpreted to be a gasoline type. The plume near Tank 80007 and the eastern plume probably had a jet fuel source. The statistically contoured plume extents shown on Figure 4-3 are larger than would be manually interpreted, and show a conservative maximum areal distribution.

The CPT data confirmed the presence of the Bellflower Aquitard everywhere across the site generally at a depth of 50 bgs. The thickness varies from greater than 36 feet on the

west side of the site (UV-6) and thins to 25 feet on the east side (UV-12). The Bellflower Aquitard is comprised mostly of silt and clay, with several interbedded fine sandy layers. Although there are several fairly continuous thin sand layers within the Bellflower, the predominance of silty and clayey layers most likely retards vertical migration of contaminants through the Aquitard.

Soil gas results from the first round of sampling indicate that soil gas has not been impacted with site-related VOCs above screening/action levels in the investigated area of the site along the northern property boundary, in the northwest corner, or in the northeast corner. As proposed, these wells will be sampled again in the first quarter of 2011. A comprehensive report for the vapor monitoring program results will be provide to the RWQCB once all four quarters of data has been evaluated.

5.2 Recommendations

The UVOST data indicates that there are occurrences of residual hydrocarbons in the soil column that are at irreducible concentrations. Therefore, it would not be productive to install an active extraction system to remove free product. It is recommended to utilize passive recovery with absorbent socks to remove the low volume of hydrocarbons that may accumulate in any well. This conclusion does not apply to the current extraction systems that are utilized to manage the dissolved phase plume and influence hydraulic gradients.

Three more quarter of soil gas sampling will be performed at the 7 new VMPs. A letter report will be prepared at the completion of that study to present those results and evaluate the risk of exposure.

TABLES

TABLE 4-1
Hydrocarbon Fraction In Soil Analytical Results
Defense Fuel Support Point
Norwalk, California

Analytical Parameter	Sample Date	Units	Sample Location - Depth			
			UV-2-30	UV-5-28	UV-10-32	UV-12-30
TPH as Gasoline (C4-C14)	10/27/2010	mg/kg	**370**	**26,000**	**32**	**21**
TPH as JP5 (C8-C17)	10/27/2010	mg/kg	**510**	**2,200**	**3,300**	**630**
Aliphatic Hydrocarbons (C5-C8)	10/27/2010	mg/kg	--	**14,000**	--	**52**
Aromatic Hydrocarbons (C6-C8)	10/27/2010	mg/kg	--	**2,100**	--	**15**
Aliphatic Hydrocarbons (C9-C18)	10/27/2010	mg/kg	--	**13,000**	--	**290**
Aromatic Hydrocarbons (C9-C16)	10/27/2010	mg/kg	--	**1,000**	--	**17**
Aliphatic Hydrocarbons (C19-C32)	10/27/2010	mg/kg	--	**850**	--	< 10
Aromatic Hydrocarbons (C17-C32)	10/27/2010	mg/kg	--	**32**	--	< 10

TABLE 4-2
Volatile Organic Compounds In Soil
Defense Fuel Support Point
Norwalk, California

Analytical Parameter	Sample Date	Units	Sample Location - Depth			
			UV-2-30	UV-5-28	UV-10-32	UV-12-30
1,2,4-Trimethylbenzene	10/27/2010	µg/kg	5,300	700,000	340	680
1,3,5-Trimethylbenzene	10/27/2010	µg/kg	1,800	160,000	130 J	240
Benzene	10/27/2010	µg/kg	100	110,000	2,000	1,500
Carbon Disulfide	10/27/2010	µg/kg	< 850	< 9200	< 870	34 J
Chloroform	10/27/2010	µg/kg	40 J	6,900	< 87	< 92
Ethylbenzene	10/27/2010	µg/kg	1,900	340,000	190	470
Isopropylbenzene	10/27/2010	µg/kg	340	27,000	56 J	64 J
Naphthalene	10/27/2010	µg/kg	1,100	72,000	160 J	340 J
n-Butylbenzene	10/27/2010	µg/kg	680	48,000	51 J	67 J
n-Propylbenzene	10/27/2010	µg/kg	960	87,000	100 J	120 J
o-Xylene	10/27/2010	µg/kg	2,700	460,000	190	780
p/m-Xylene	10/27/2010	µg/kg	7,400	1,300,000	560	2,100
p-Isopropyltoluene	10/27/2010	µg/kg	250	9,600	26 J	28 J
sec-Butylbenzene	10/27/2010	µg/kg	220	14,000	27 J	27 J
Toluene	10/27/2010	µg/kg	1,000	660,000	74 J	480

TABLE 4-3
Volatile Organic Compounds in Soil Vapor
Defense Fuel Support Point
Norwalk, California

Analytical Parameter	Sample Date	Units	Sample Location - Depth							
			VMP-32-05	VMP-32-15	VMP-33-05	VMP-33-15	VMP-34-05	VMP-34-15	VMP-35-05	VMP-35-15
2-Butanone	11/19/2010	µg/L	< 0.011	**0.028**	< 0.011	< 0.0060	< 0.011	< 0.011	< 0.011	< 0.0044
Acetone	11/19/2010	µg/L	**0.031**	**0.15**	< 0.012	**0.01**	< 0.012	< 0.012	< 0.011	**0.011**
Benzene	11/19/2010	µg/L	< 0.0039	< 0.0038	< 0.0041	< 0.0022	< 0.0039	**0.011**	< 0.0038	< 0.0016
Carbon Disulfide	11/19/2010	µg/L	< 0.015	< 0.015	< 0.016	< 0.0085	< 0.015	< 0.015	< 0.015	**0.0072**
Chloroform	11/19/2010	µg/L	< 0.0060	< 0.0058	< 0.0062	< 0.0033	< 0.0060	< 0.0060	< 0.0058	**0.0027**
Dichlorodifluoromethane	11/19/2010	µg/L	< 0.0061	< 0.0059	< 0.0063	< 0.0034	**0.0067**	< 0.0061	< 0.0059	< 0.0025
Ethylbenzene	11/19/2010	µg/L	< 0.0053	**0.0064**	< 0.0055	< 0.0030	< 0.0053	< 0.0053	< 0.0052	< 0.0022
o-Xylene	11/19/2010	µg/L	< 0.0053	**0.015**	< 0.0055	< 0.0030	< 0.0053	< 0.0053	< 0.0052	< 0.0022
p/m-Xylene	11/19/2010	µg/L	< 0.021	**0.024**	< 0.022	< 0.012	< 0.021	< 0.021	< 0.021	< 0.0087
Tetrachloroethene	11/19/2010	µg/L	**0.11**	**0.31**	< 0.0086	**0.016**	< 0.0083	**0.013**	< 0.0081	**0.0064**
Toluene	11/19/2010	µg/L	< 0.0046	**0.0067**	**0.0057**	**0.0071**	**0.0051**	**0.026**	< 0.0045	**0.0039**

TABLE 4-3
Volatile Organic Compounds in Soil Vapor
Defense Fuel Support Point
Norwalk, California

Analytical Parameter	Sample Date	Units	Sample Location - Depth					
			VMP-36-05	VMP-36-15	VMP-37-05	VMP-37-15	VMP-38-05	VMP-38-15
2-Butanone	11/19/2010	µg/L	< 0.0044	< 0.0044	< 0.0044	< 0.0044	**0.0081**	< 0.0044
Acetone	11/19/2010	µg/L	**0.0074**	**0.0071**	**0.0078**	**0.0048**	**0.0096**	**0.01**
Benzene	11/19/2010	µg/L	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	**0.0036**
Carbon Disulfide	11/19/2010	µg/L	< 0.0062	< 0.0062	< 0.0062	< 0.0062	< 0.0062	< 0.0062
Chloroform	11/19/2010	µg/L	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0024
Dichlorodifluoromethane	11/19/2010	µg/L	< 0.0025	< 0.0025	**0.0026**	**0.0028**	**0.0029**	< 0.0025
Ethylbenzene	11/19/2010	µg/L	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022
o-Xylene	11/19/2010	µg/L	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022
p/m-Xylene	11/19/2010	µg/L	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087	< 0.0087
Tetrachloroethene	11/19/2010	µg/L	< 0.0034	**0.0065**	< 0.0034	< 0.0034	< 0.0034	**0.014**
Toluene	11/19/2010	µg/L	**0.0033**	**0.003**	< 0.0019	**0.0023**	**0.0032**	**0.0097**

FIGURES

N

FIGURE 1-1

Site Location Map

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

K:\Depts\Dept48\DESC 07-2008 Contract\Norwalk\ACO-0011 LNAPL-VMP Investigations\Report\Figure 1-1 Site Location Map.cdr

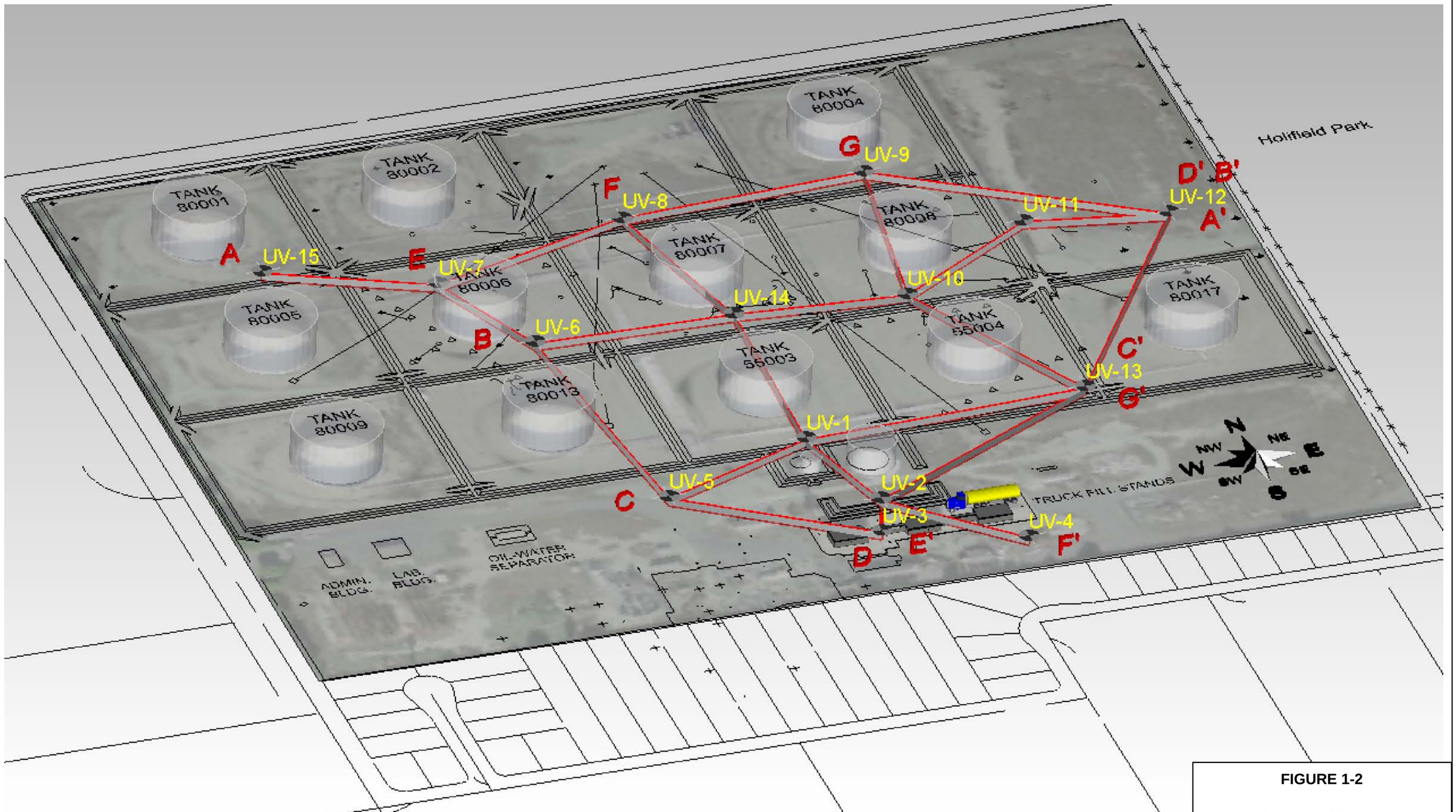

FIGURE 1-2

Location Map of Geologic Cross-Sections

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

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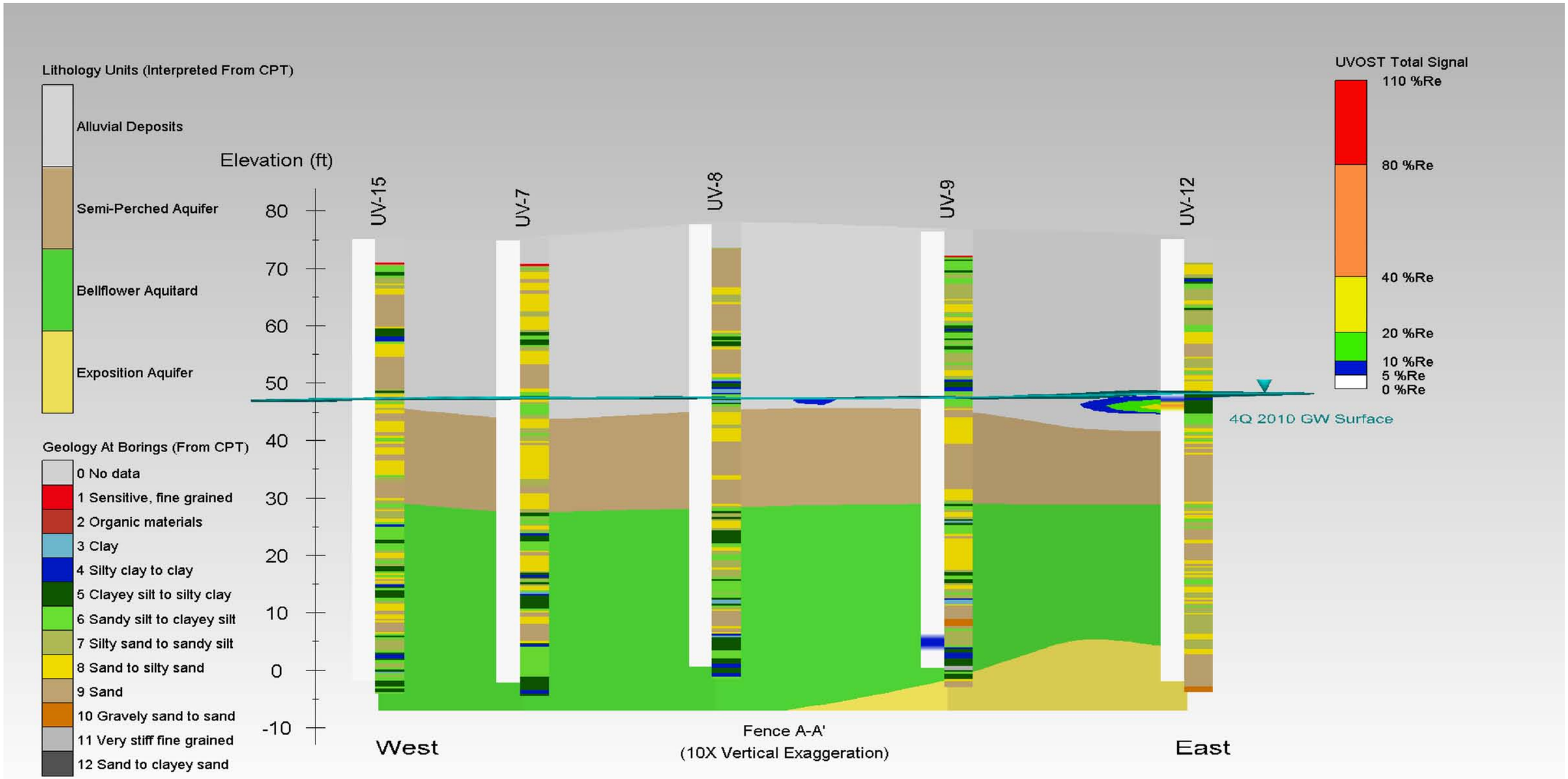

FIGURE 1-3

Geological Cross-Section A-A'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

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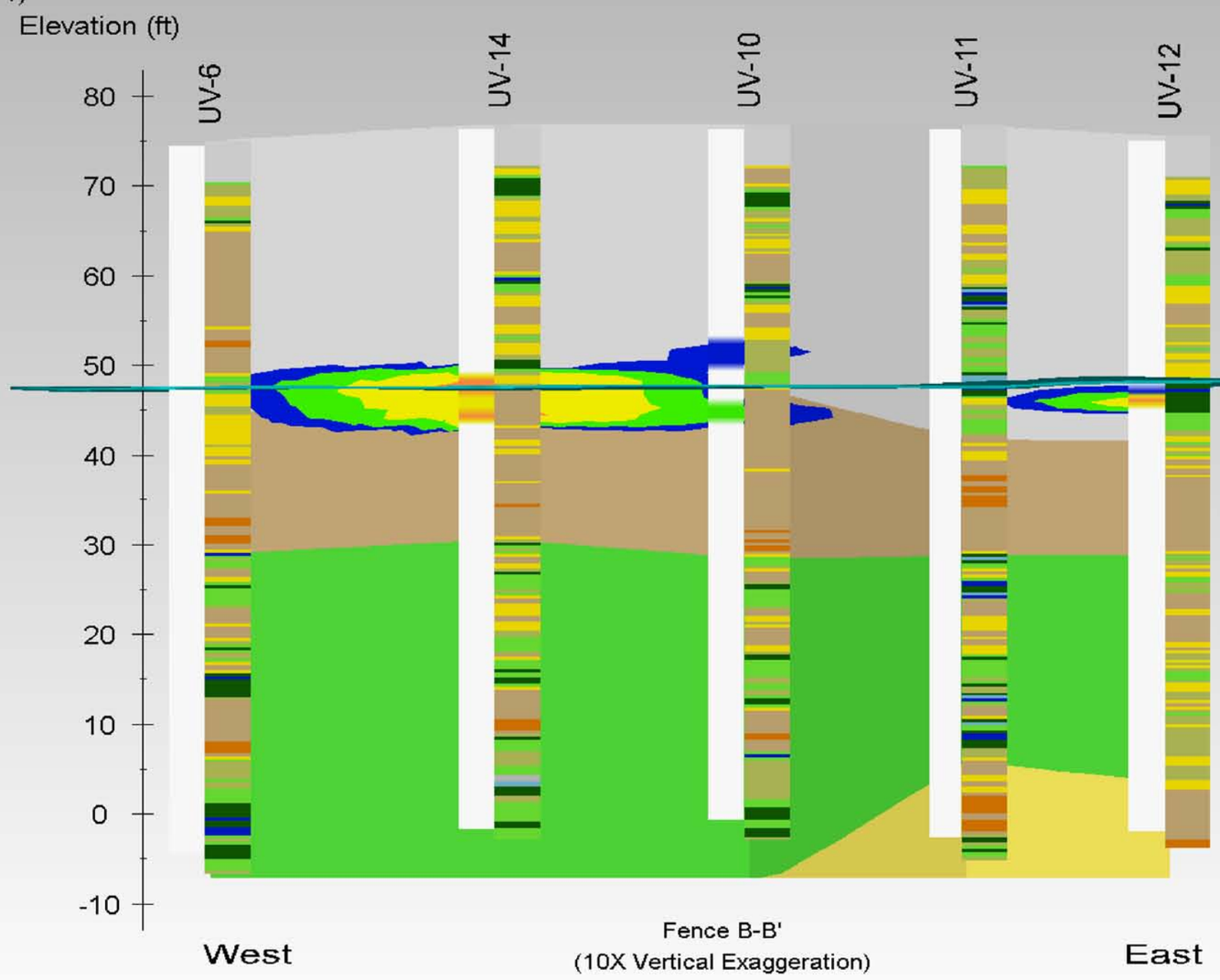
Lithology Units (Interpreted From CPT)

- Alluvial Deposits
- Semi-Perched Aquifer
- Bellflower Aquitard
- Exposition Aquifer

Geology At Borings (From CPT)

- 0 No data
- 1 Sensitive, fine grained
- 2 Organic materials
- 3 Clay
- 4 Silty clay to clay
- 5 Clayey silt to silty clay
- 6 Sandy silt to clayey silt
- 7 Silty sand to sandy silt
- 8 Sand to silty sand
- 9 Sand
- 10 Gravely sand to sand
- 11 Very stiff fine grained
- 12 Sand to clayey sand



UVOST Total Signal

- 110 %Re
- 80 %Re
- 40 %Re
- 20 %Re
- 10 %Re
- 5 %Re
- 0 %Re

FIGURE 1-4

Geological Cross-Section B-B'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

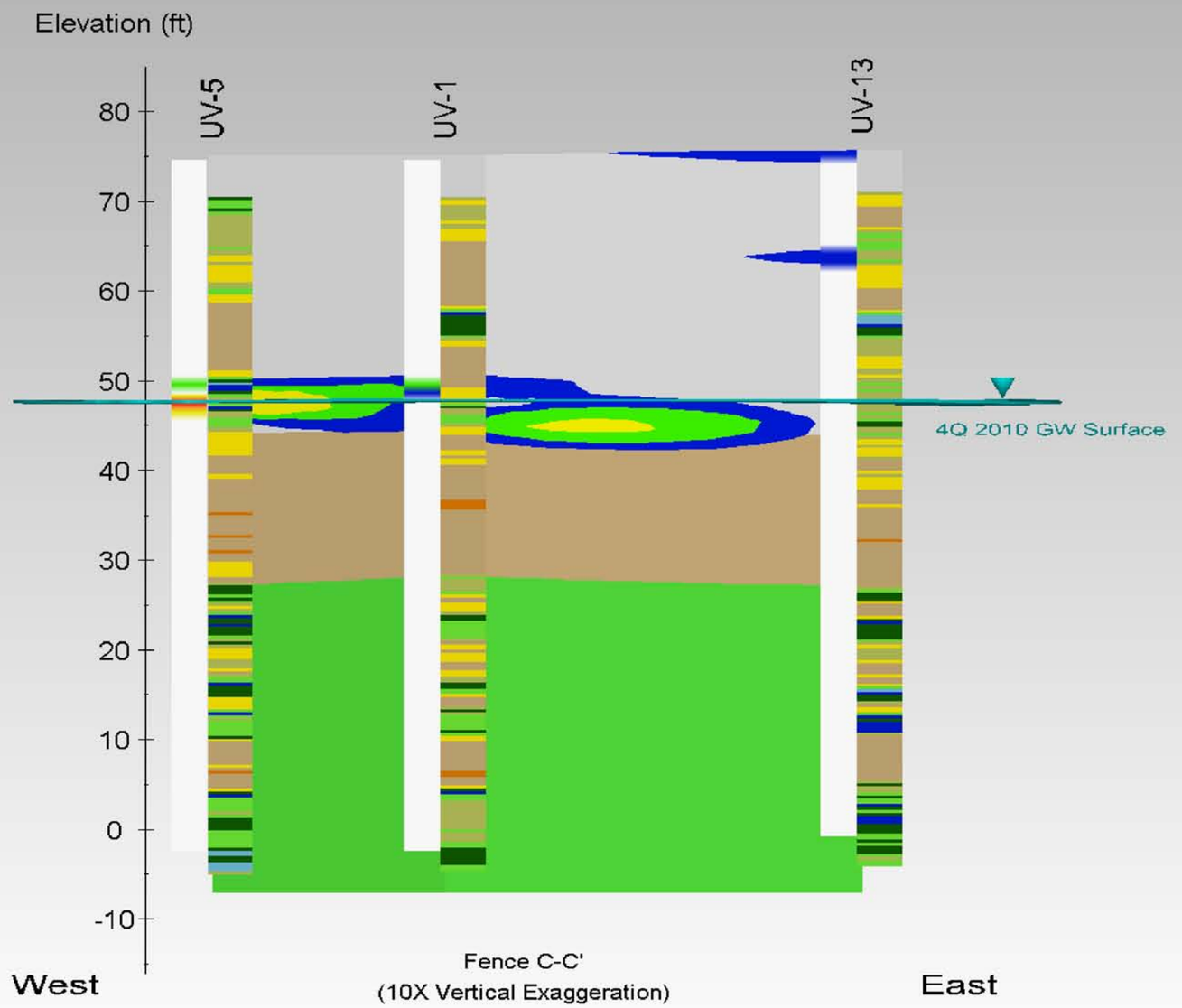
S:\ES\Bpmod\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-4_fence_a-a_with_geo_and_uvost_screen_cpt.mxd 1/6/2011 lvh

Lithology Units (Interpreted From CPT)

- Alluvial Deposits
- Semi-Perched Aquifer
- Bellflower Aquitard
- Exposition Aquifer

Geology At Borings (From CPT)

- 0 No data
- 1 Sensitive, fine grained
- 2 Organic materials
- 3 Clay
- 4 Silty clay to clay
- 5 Clayey silt to silty clay
- 6 Sandy silt to clayey silt
- 7 Silty sand to sandy silt
- 8 Sand to silty sand
- 9 Sand
- 10 Gravely sand to sand
- 11 Very stiff fine grained
- 12 Sand to clayey sand



UVOST Total Signal

- 110 %Re
- 80 %Re
- 40 %Re
- 20 %Re
- 10 %Re
- 5 %Re
- 0 %Re

FIGURE 1-5

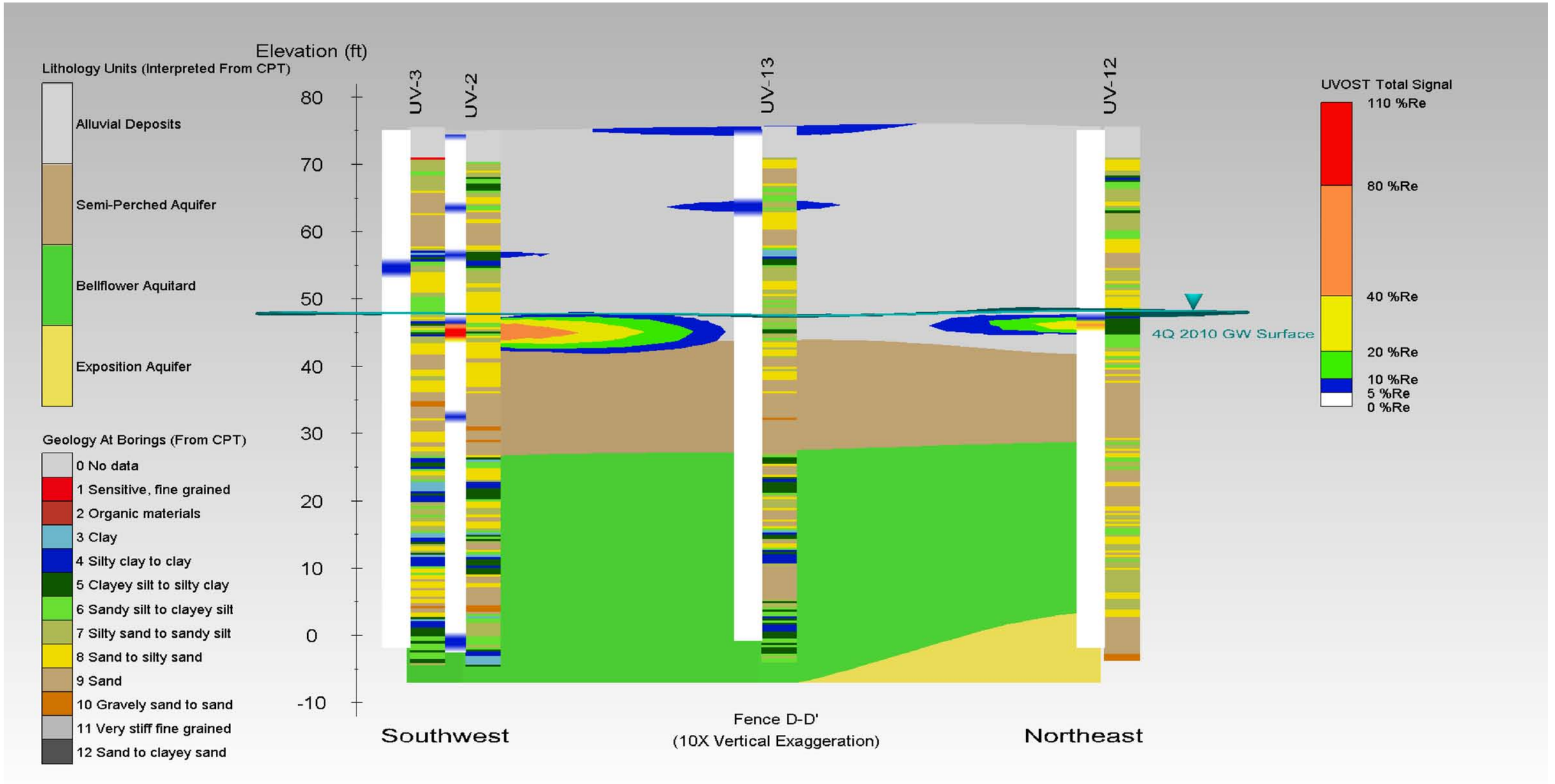
Geological Cross-Section C-C'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

S:\ESS\Ramod\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-5_fence_c-c_with_geo_and_uvost_screen_cap.mxd 1/6/2011 lvh



S:\ES\Bonnard\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-6_fence_d-d_with_geo_and_uvost_screen_cpt.mxd 1/6/2011 ivh

FIGURE 1-6

Geological Cross-Section D-D'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

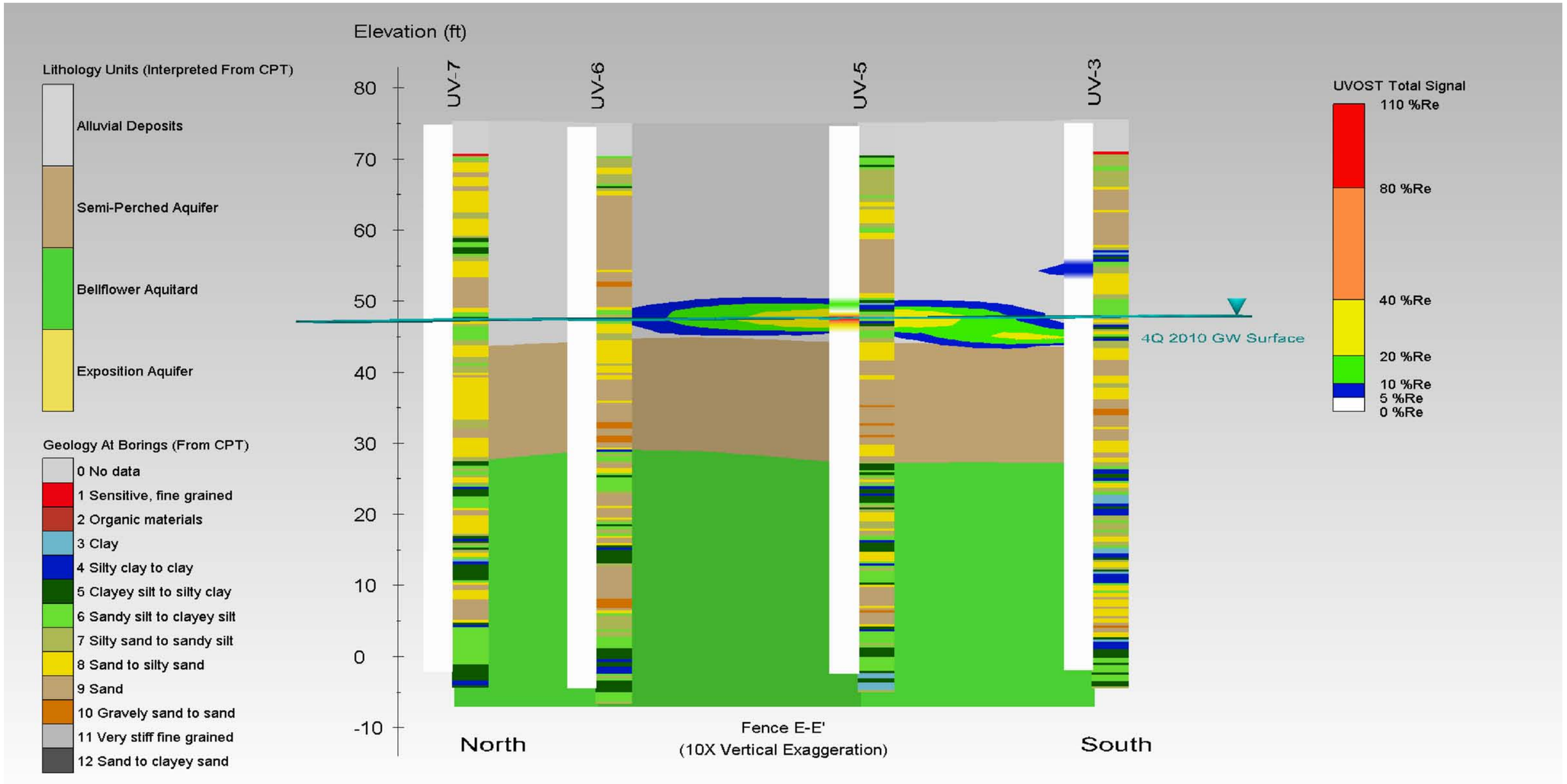


FIGURE 1-7

Geological Cross-Section E-E'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS
Pasadena, California

S:\ESS\Remed\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-7_fence_e-e_with_geo_and_uvost_screen_opt.mxd 1/6/2011 kh

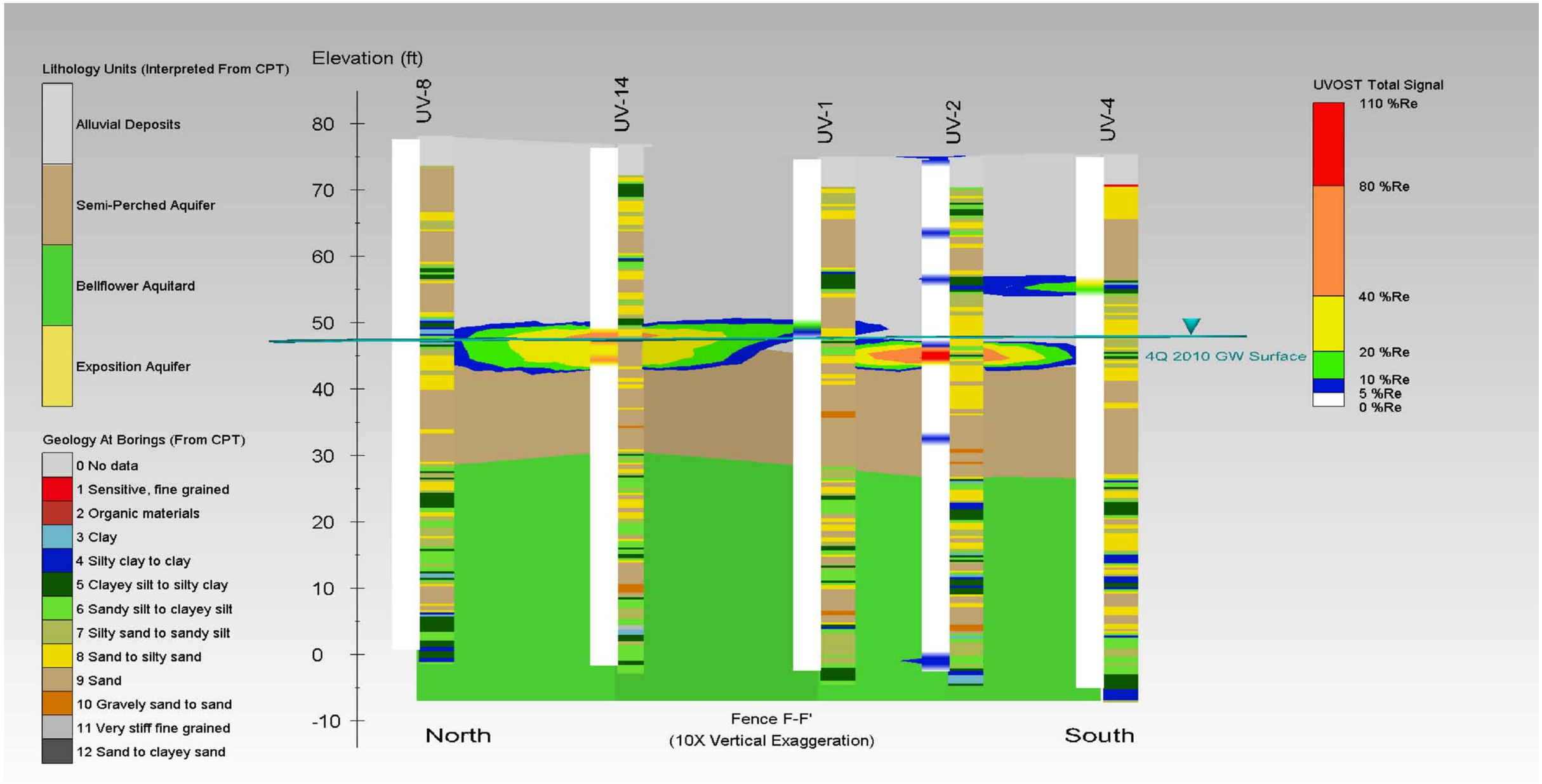


FIGURE 1-8

Geological Cross-Section F-F'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS
Pasadena, California

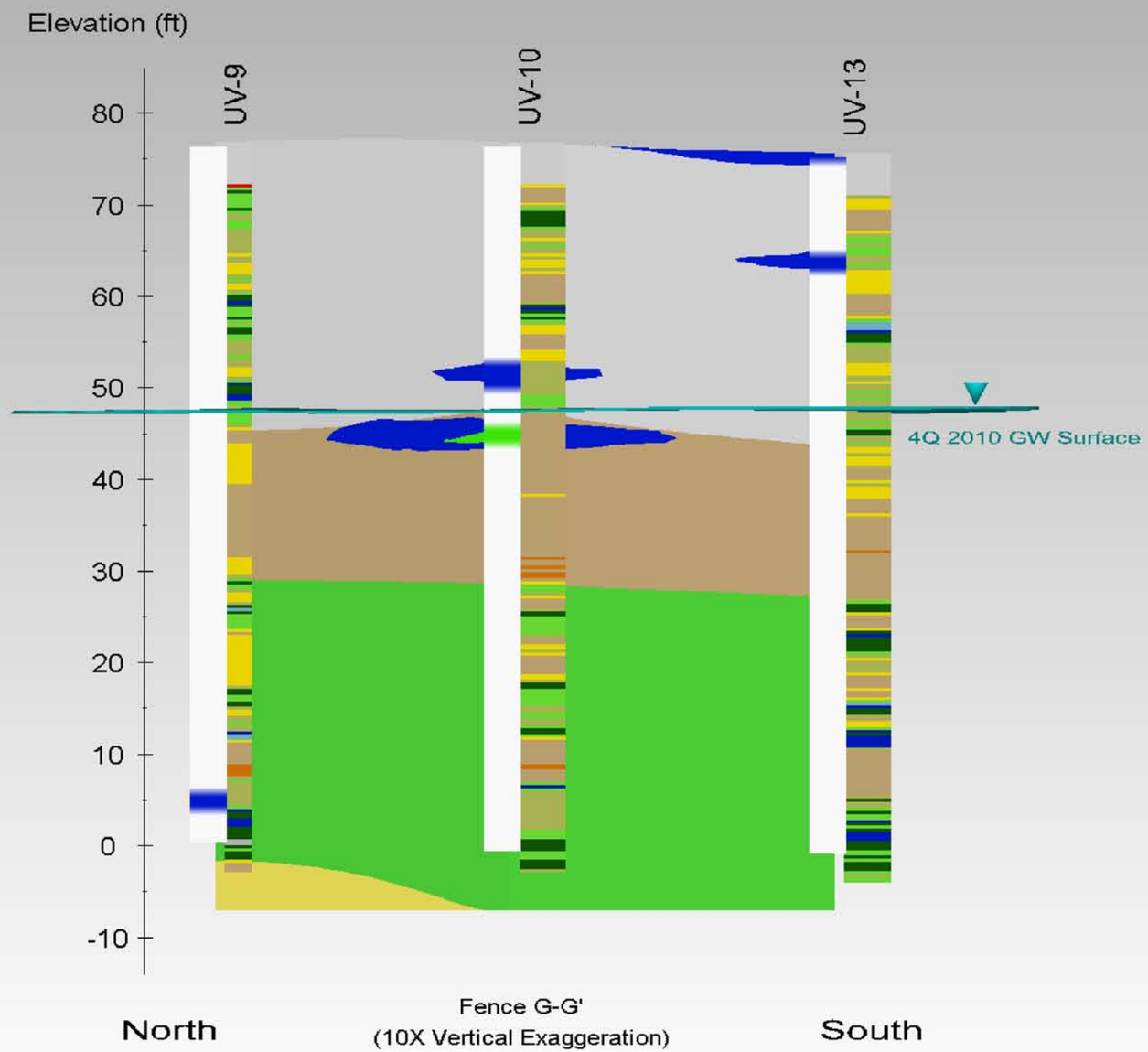
S:\FS\Norwalk\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-8_fence_f-f_with_geo_and_uvost_screen_cap.mxd 1/6/2011 lxh

Lithology Units (Interpreted From CPT)

- Alluvial Deposits
- Semi-Perched Aquifer
- Bellflower Aquitard
- Exposition Aquifer

Geology At Borings (From CPT)

- 0 No data
- 1 Sensitive, fine grained
- 2 Organic materials
- 3 Clay
- 4 Silty clay to clay
- 5 Clayey silt to silty clay
- 6 Sandy silt to clayey silt
- 7 Silty sand to sandy silt
- 8 Sand to silty sand
- 9 Sand
- 10 Gravely sand to sand
- 11 Very stiff fine grained
- 12 Sand to clayey sand



UVOST Total Signal

- 110 %Re
- 80 %Re
- 40 %Re
- 20 %Re
- 10 %Re
- 5 %Re
- 0 %Re

FIGURE 1-9

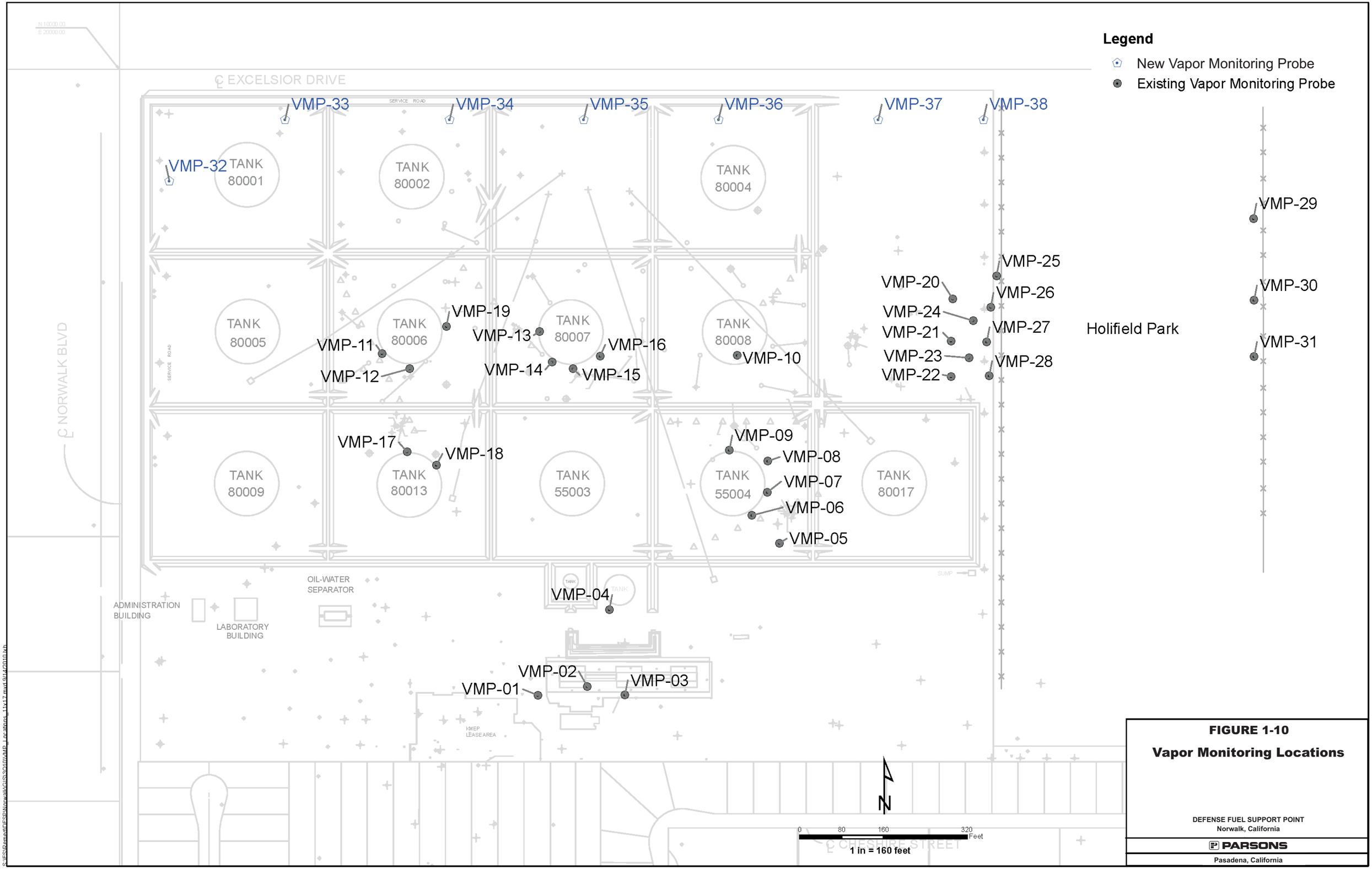
Geological Cross-Section G-G'

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS

Pasadena, California

S:\ESS\Romed\DFSP\Norwalk\CSM\Figures\1Q11\Fig1-9_fence_g-g_with_geo_and_uvost_screen_opt.mxd 1/6/2011 kh


Legend
New Vapor Monitoring Probe
Existing Vapor Monitoring Probe
℄ EXCELSIOR DRIVE
℄ NORWALK BLVD
℄ CRUSADER STREET
SERVICE ROAD
VMP-32
VMP-33
VMP-34
VMP-35
VMP-36
VMP-37
VMP-38
TANK 80001
TANK 80002
TANK 80004
TANK 80005
TANK 80006
TANK 80007
TANK 80008
TANK 80009
TANK 80013
TANK 55003
TANK 55004
TANK 80017
VMP-11
VMP-12
VMP-13
VMP-14
VMP-15
VMP-16
VMP-17
VMP-18
VMP-19
VMP-10
VMP-09
VMP-08
VMP-07
VMP-06
VMP-05
VMP-04
VMP-01
VMP-02
VMP-03
VMP-20
VMP-21
VMP-22
VMP-23
VMP-24
VMP-25
VMP-26
VMP-27
VMP-28
VMP-29
VMP-30
VMP-31
Holifield Park
ADMINISTRATION BUILDING
LABORATORY BUILDING
OIL-WATER SEPARATOR
SUMP
KMEP LEASE AREA
N
0 80 160 320 Feet
1 in = 160 feet
FIGURE 1-10
Vapor Monitoring Locations
DEFENSE FUEL SUPPORT POINT
Norwalk, California
PARSONS
Pasadena, California

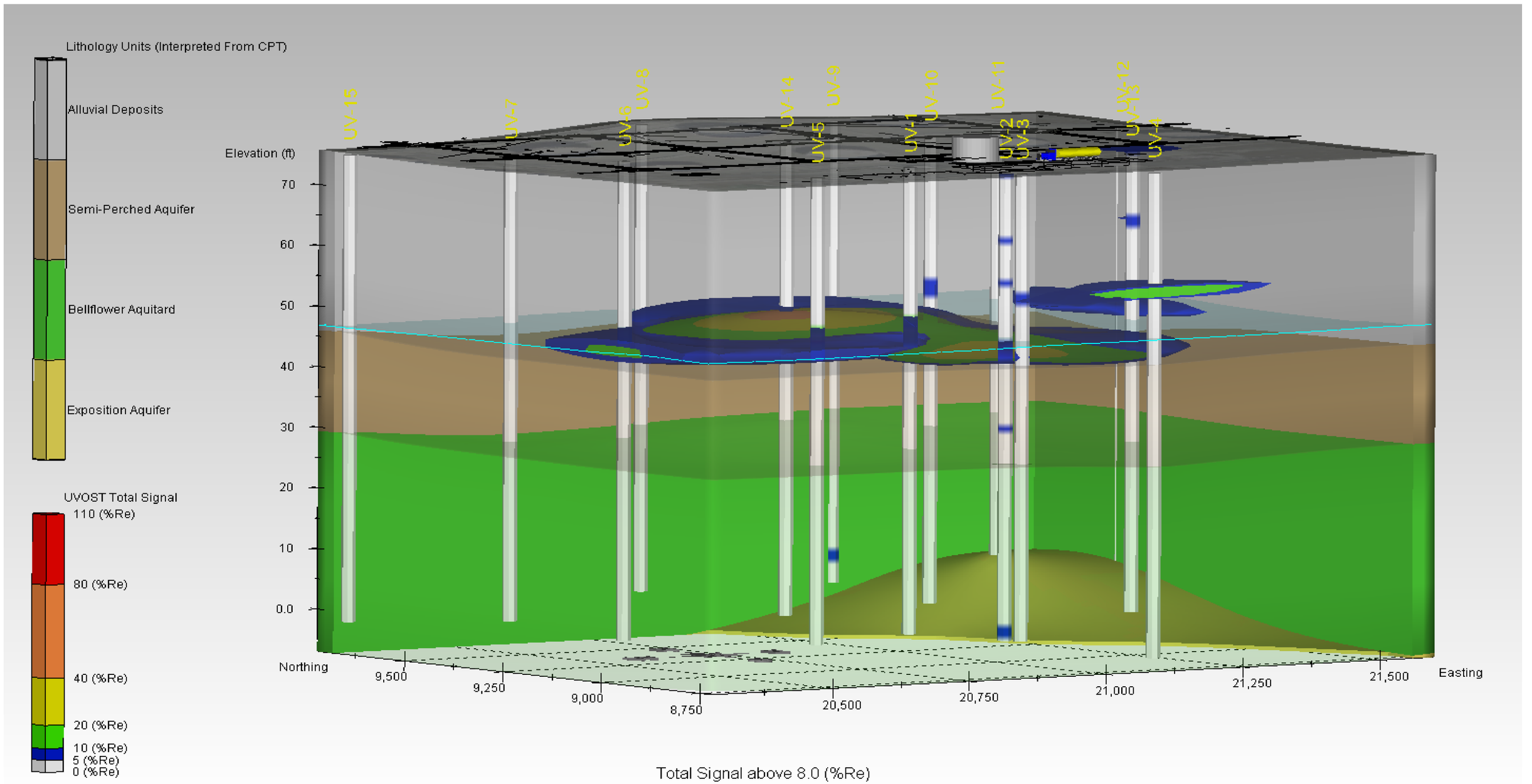


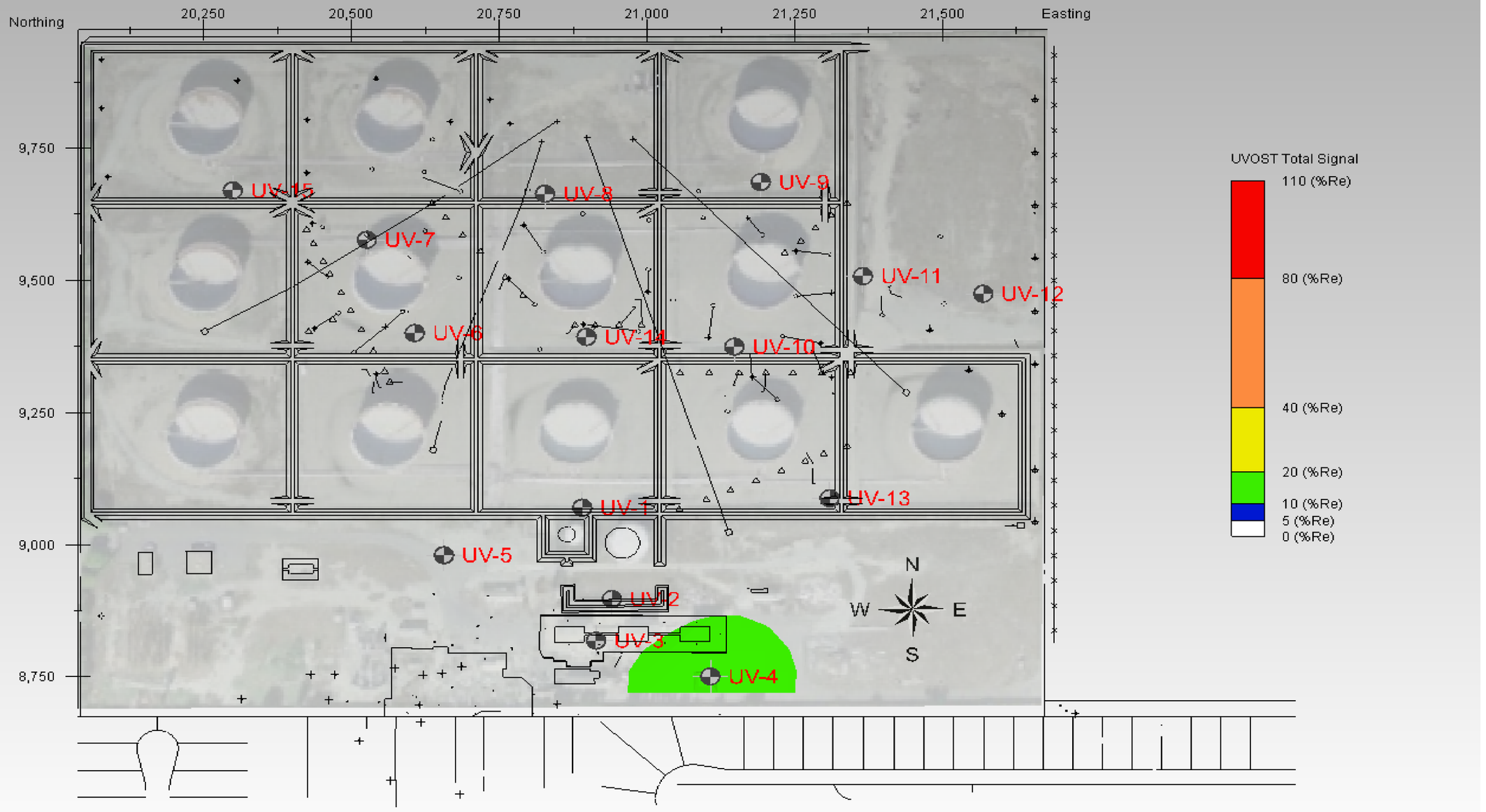
FIGURE 4-1

3-D CSM of LNAPL Distribution

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS
Pasadena, California

S:\ES\Ramos\DFSP\Norwalk\CSM\Figures\1Q11\Fig4-1_3-D_CSM_LNAPL_Distribution.mxd 1/11/2011 lxh



Total Signal above 10 (%Re)

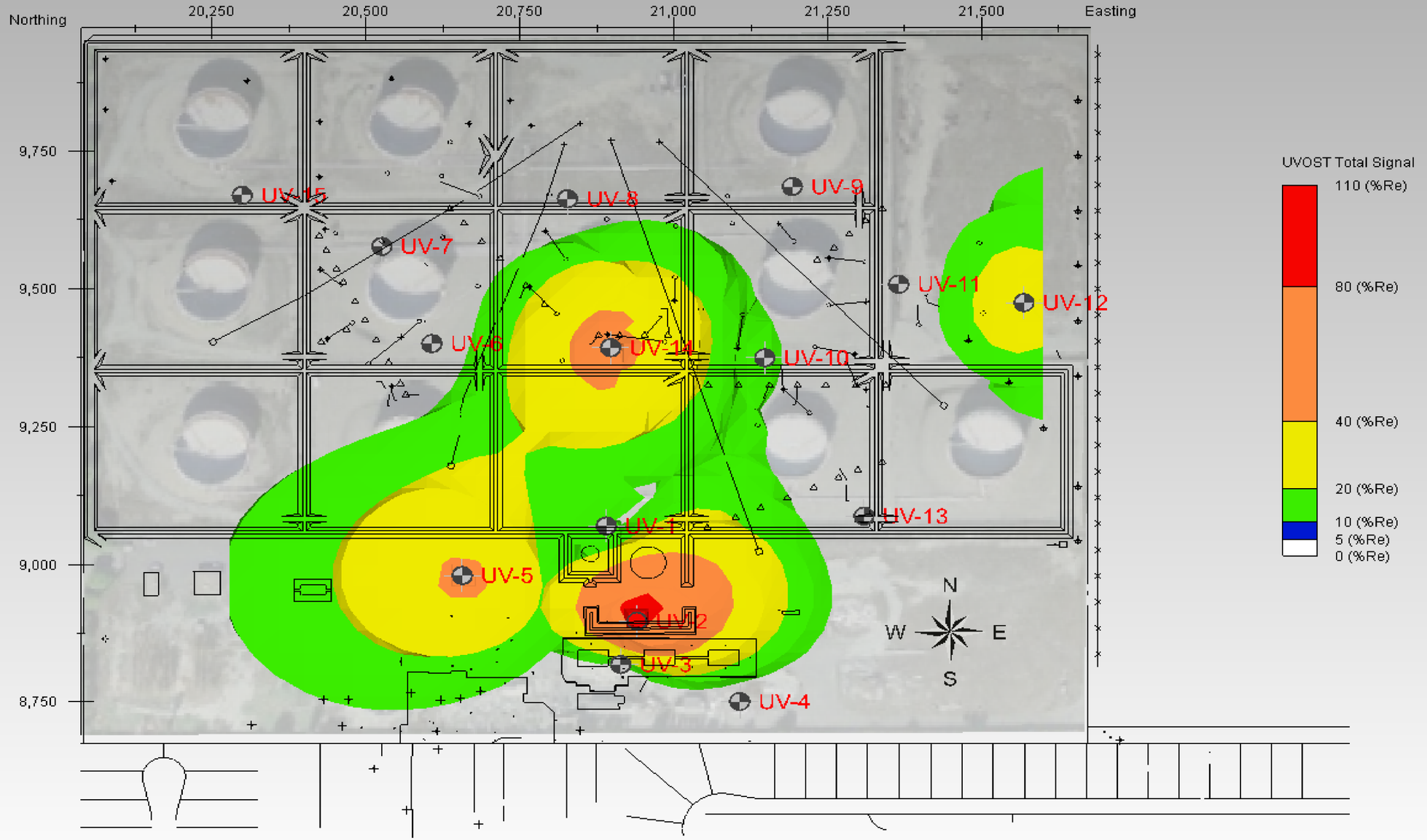
FIGURE 4-2

Distribution of LNAPLS in Vadose Zone by UVOST

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS
Pasadena, California

S:\ES\Rancho\DFSP\Norwalk\CSM\Figures\1Q11\Fig4-2_Distrib_LNAPLS_VadoseZone_UVOST.mxd 1/11/2011 lvh



Total Signal above 10 (%Re)

FIGURE 4-3

Distribution of LNAPLS near the Water Table by UVOST

DEFENSE FUEL SUPPORT POINT
Norwalk, California

PARSONS
Pasadena, California

S:\ES\Remed\DFSP\Norwalk\CSM\Figures\1Q11\Fig4-3_Distrib_LNAPLS_WaterTable_UVOST.mxd 1/11/2011 kh

APPENDIX A

CONE PENETRATION TEST DATA LOGS

GREGG

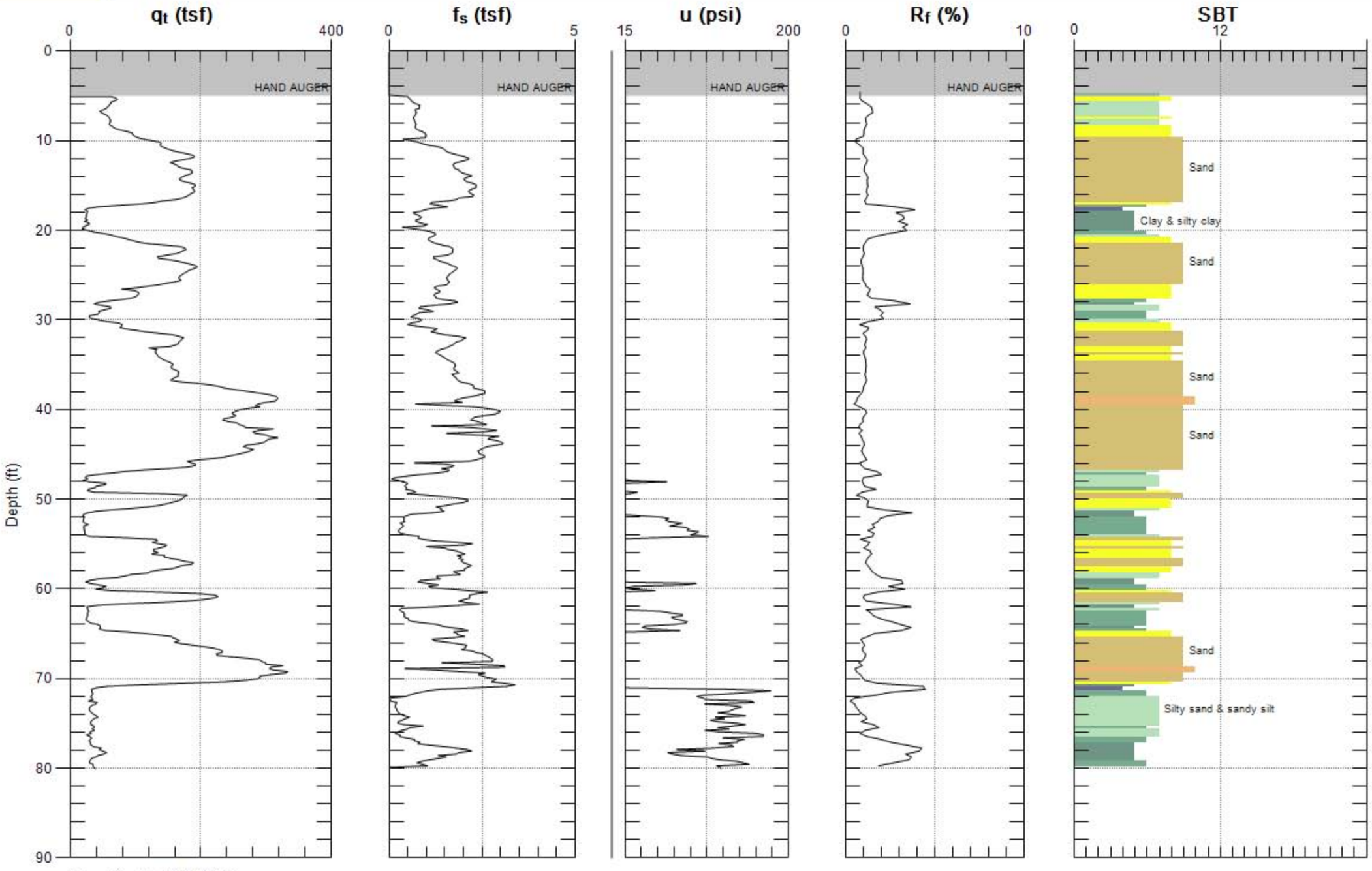
PARSONS

Site: DFSP

Sounding: UV-1

Engineer: Q.KINNEBREW

Date: 10/26/2010 02:18



Max. Depth: 80.052 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

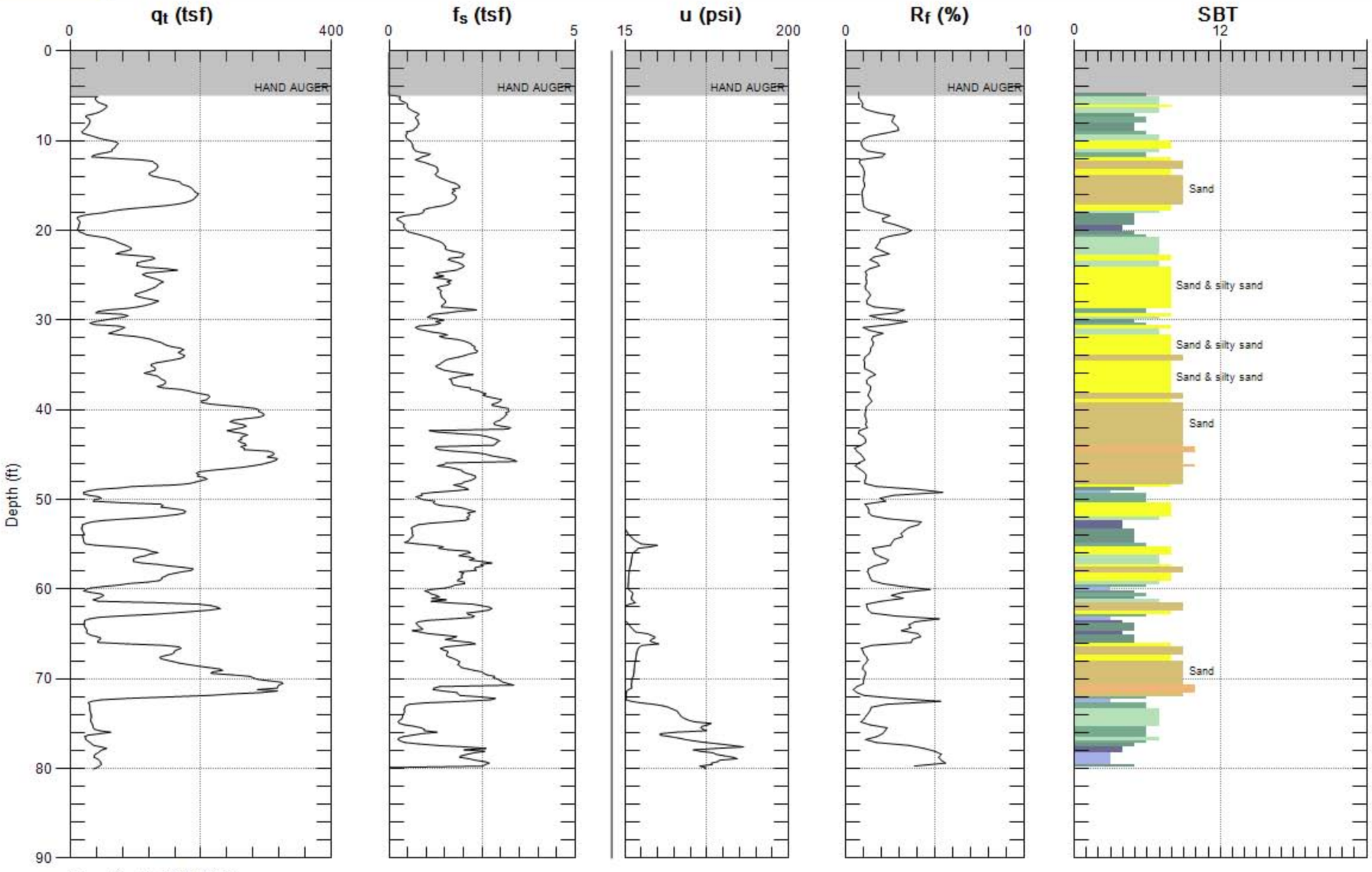
PARSONS

Site: DFSP

Sounding: UV-2

Engineer: Q.KINNEBREW

Date: 10/25/2010 01:37



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

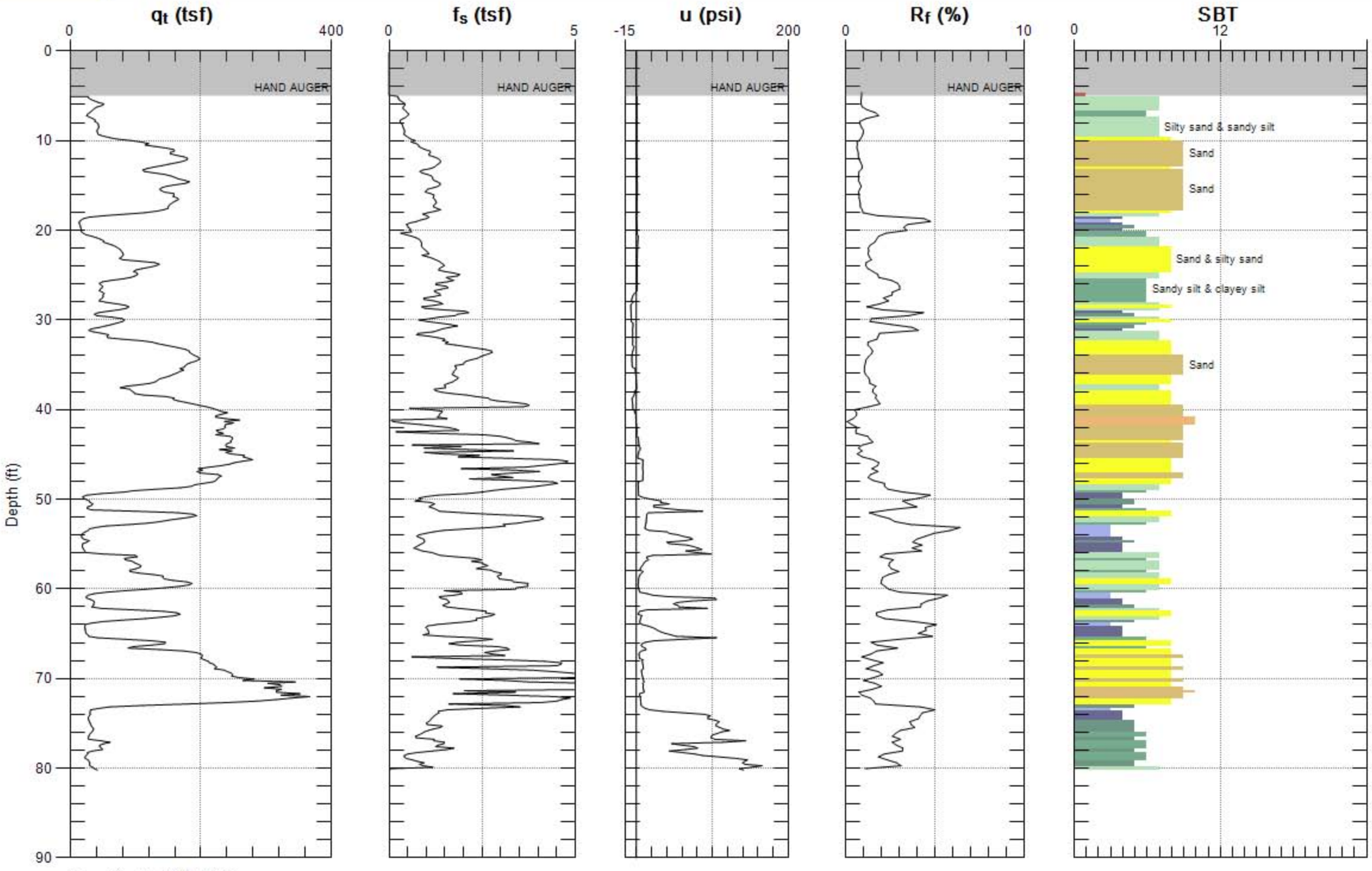
PARSONS

Site: DFSP

Sounding: UV-3

Engineer: Q.KINNEBREW

Date: 1/1/2000 01:17



Max. Depth: 80.217 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

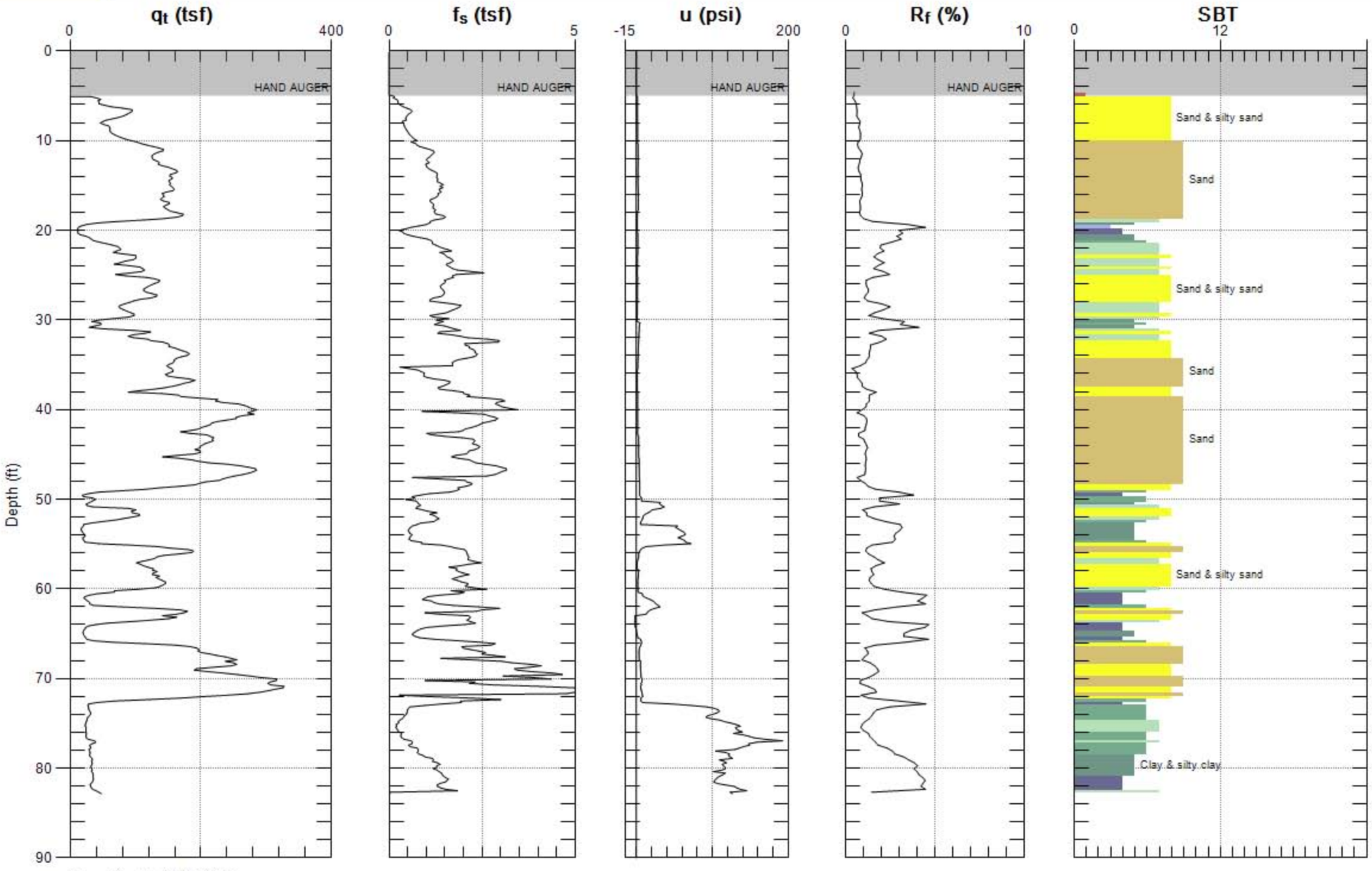
PARSONS

Site: DFSP

Sounding: UV-4

Engineer: Q.KINNEBREW

Date: 10/25/2010 03:01



Max. Depth: 82.841 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

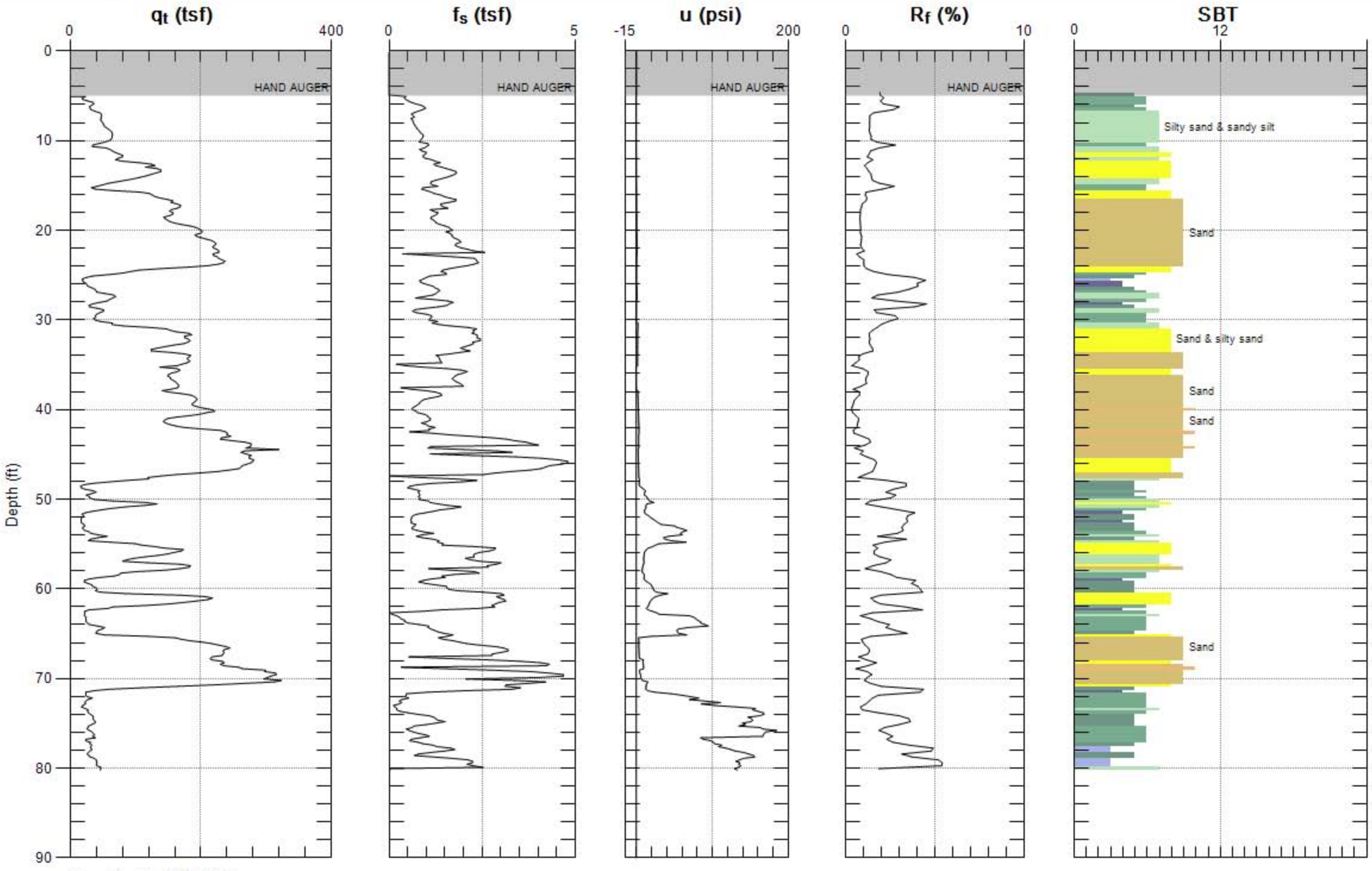
PARSONS

Site: DFSP

Sounding: UV-5

Engineer: Q.KINNEBREW

Date: 10/25/2010 01:12



Max. Depth: 80.217 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

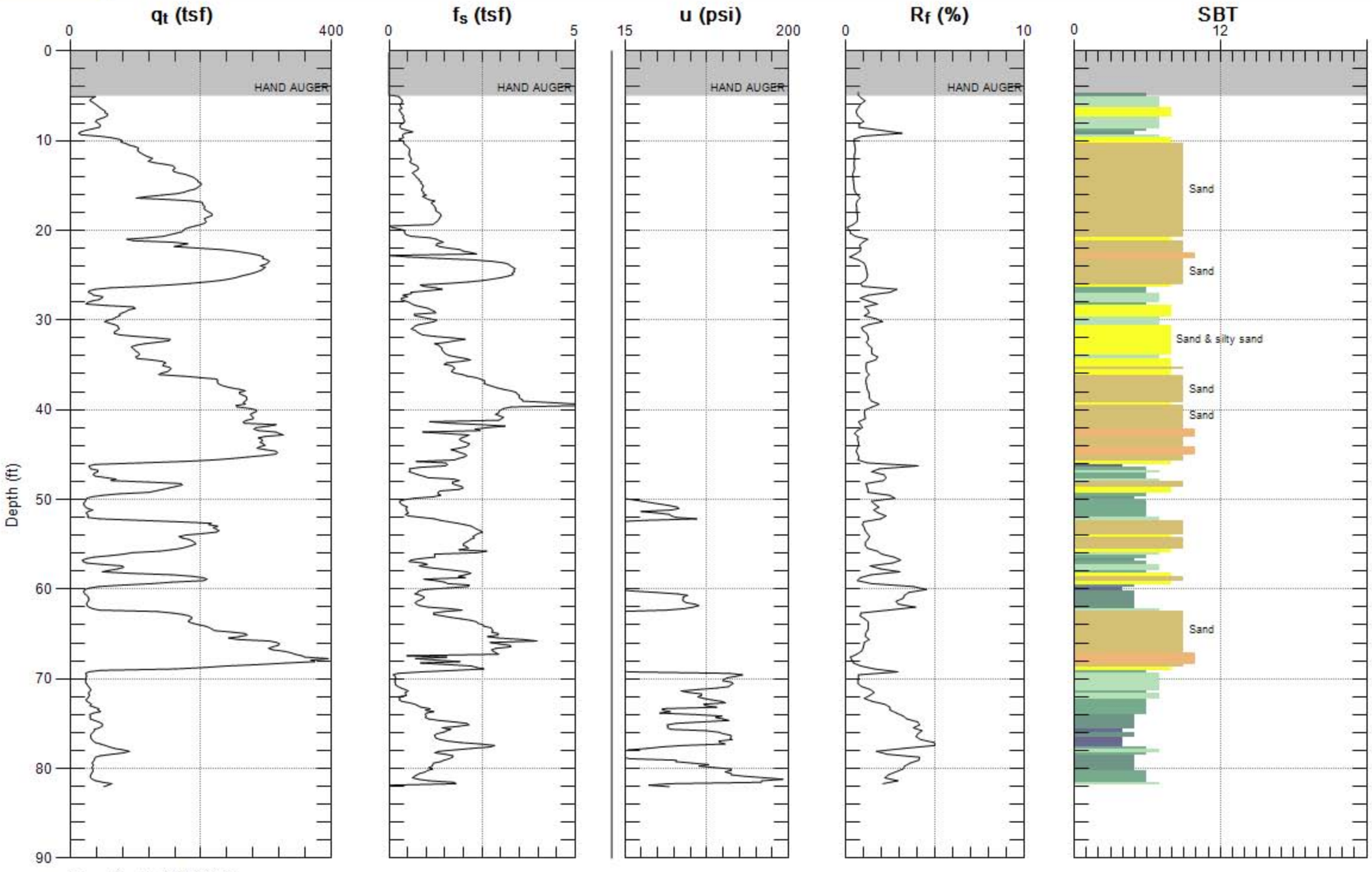
PARSONS

Site: DFSP

Sounding: UV-6

Engineer: Q.KINNEBREW

Date: 10/26/2010 04:13



Max. Depth: 82.021 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

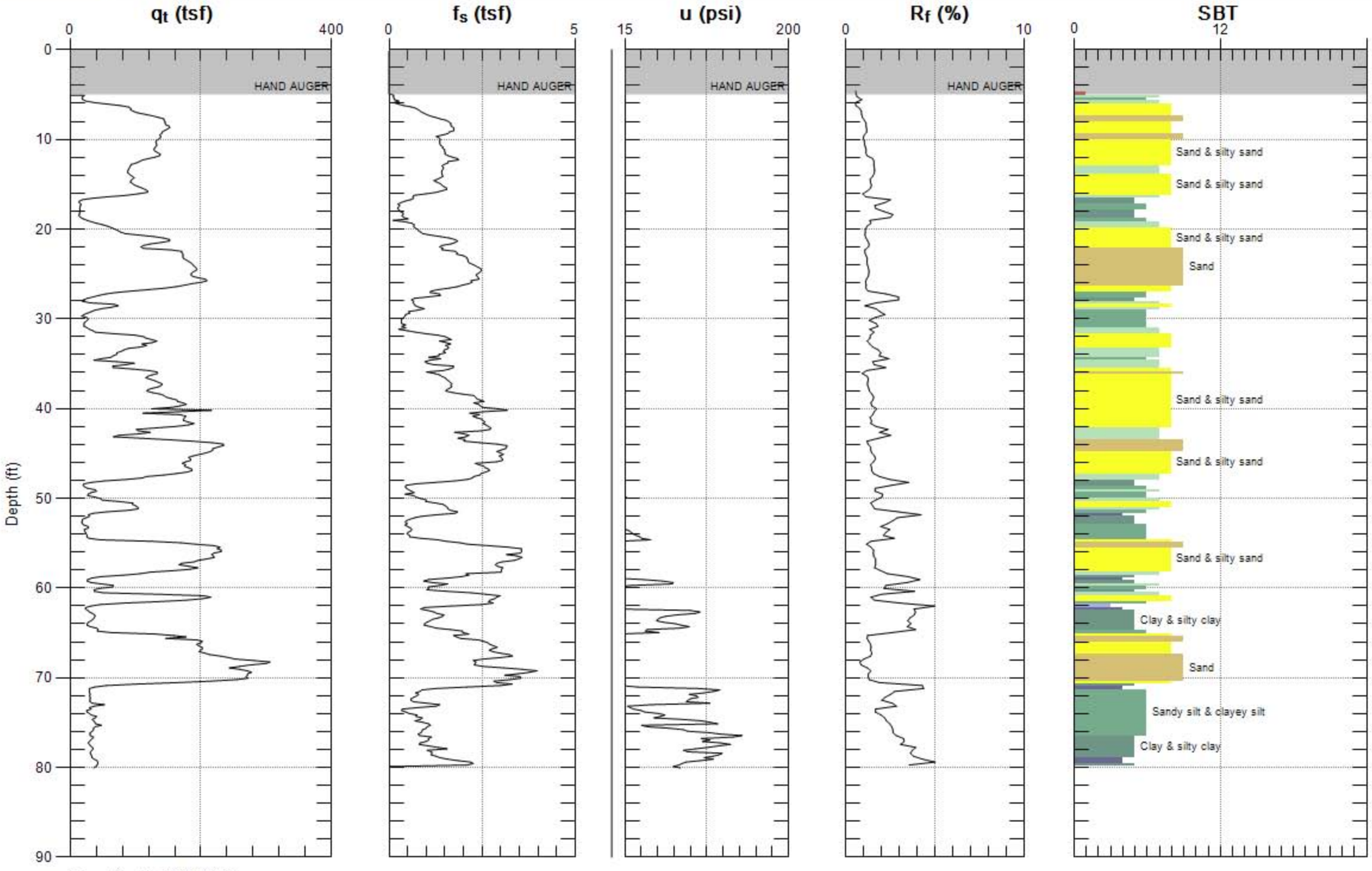
PARSONS

Site: DFSP

Sounding: UV-7

Engineer: Q.KINNEBREW

Date: 10/27/2010 09:58



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

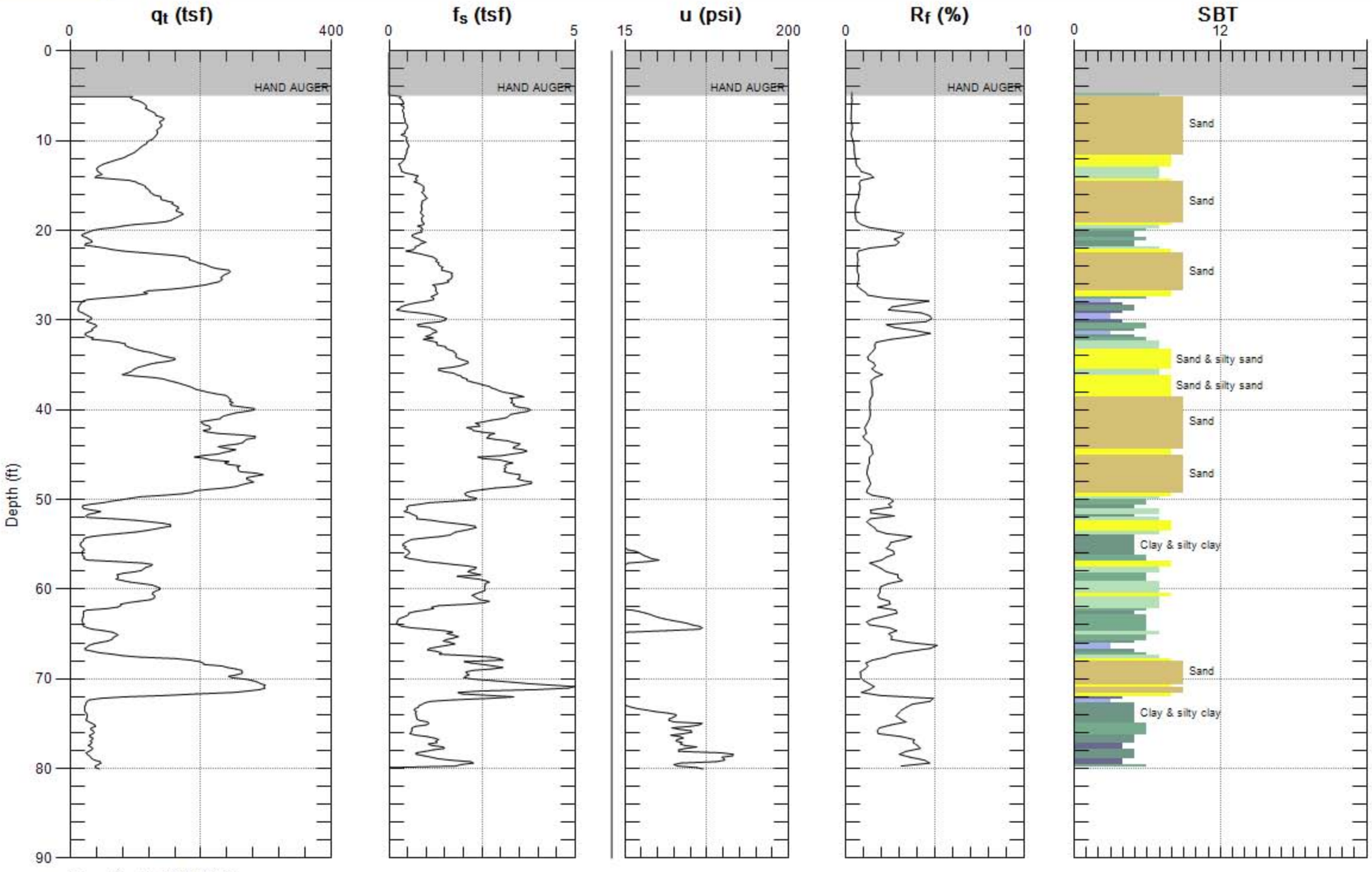
PARSONS

Site: DFSP

Sounding: UV-8

Engineer: Q.KINNEBREW

Date: 10/27/2010 08:42



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

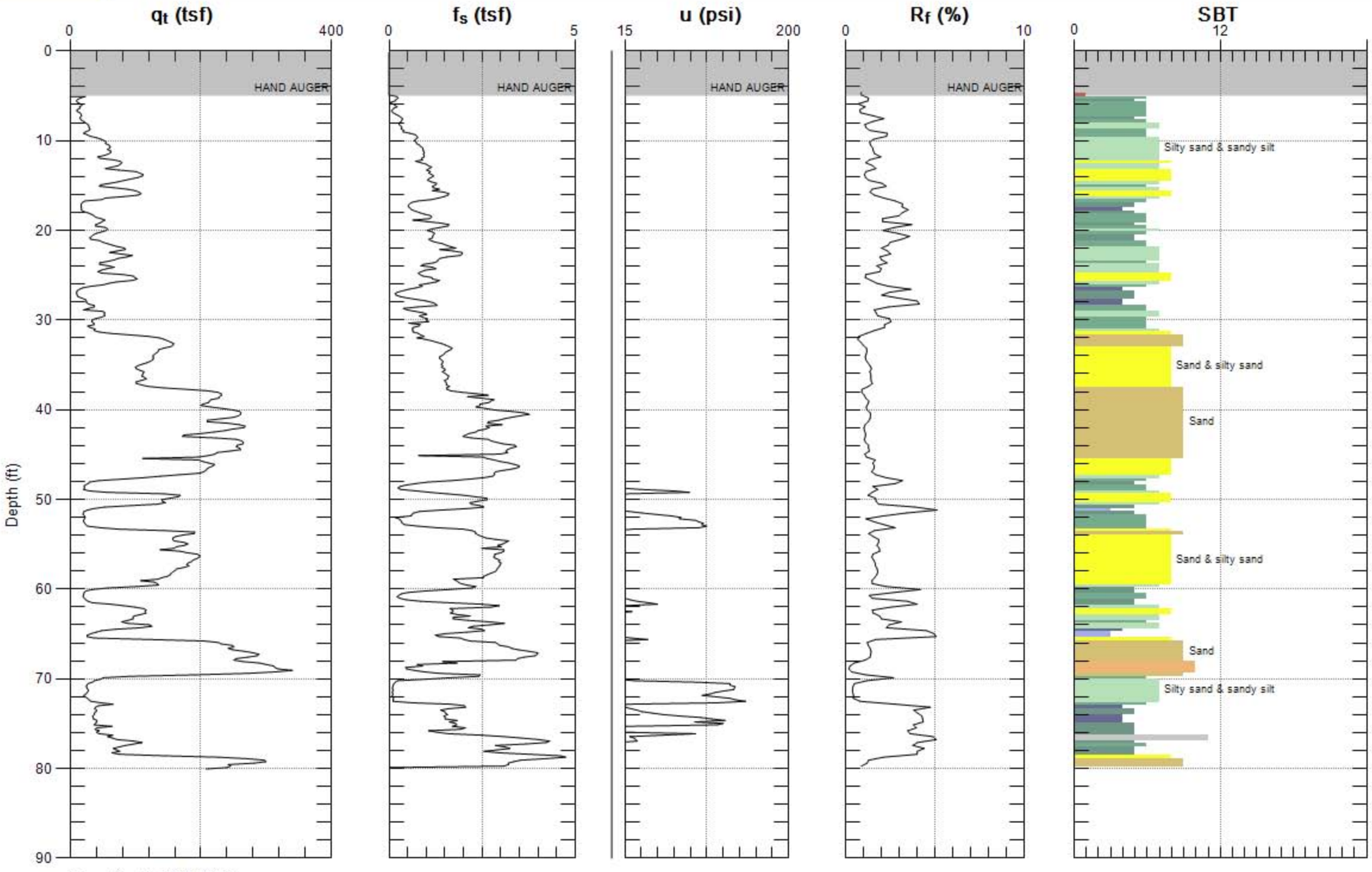
PARSONS

Site: DFSP

Sounding: UV-9

Engineer: Q.KINNEBREW

Date: 10/27/2010 07:49



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

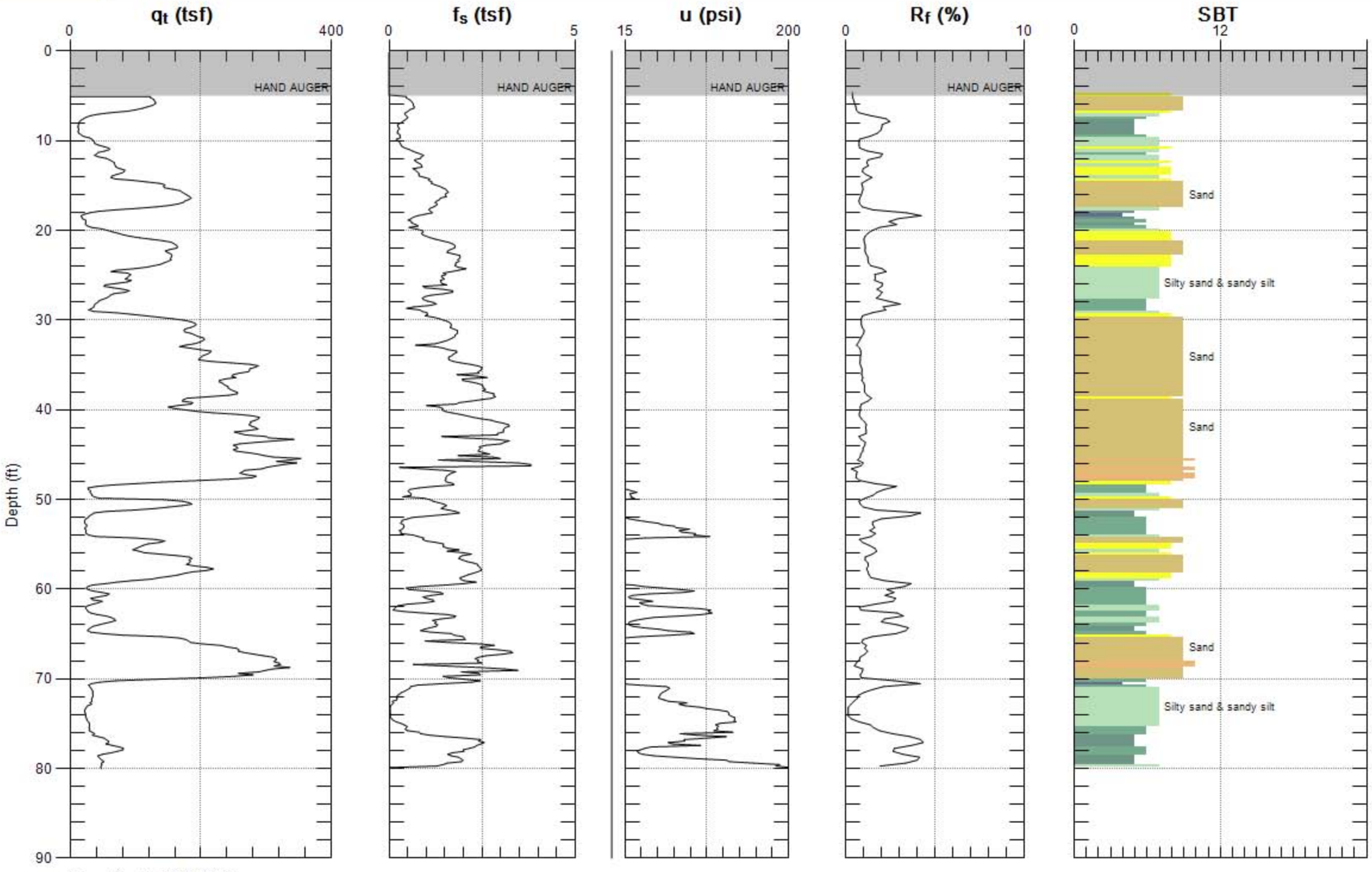
PARSONS

Site: DFSP

Sounding: UV-10

Engineer: Q.KINNEBREW

Date: 10/26/2010 11:30



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

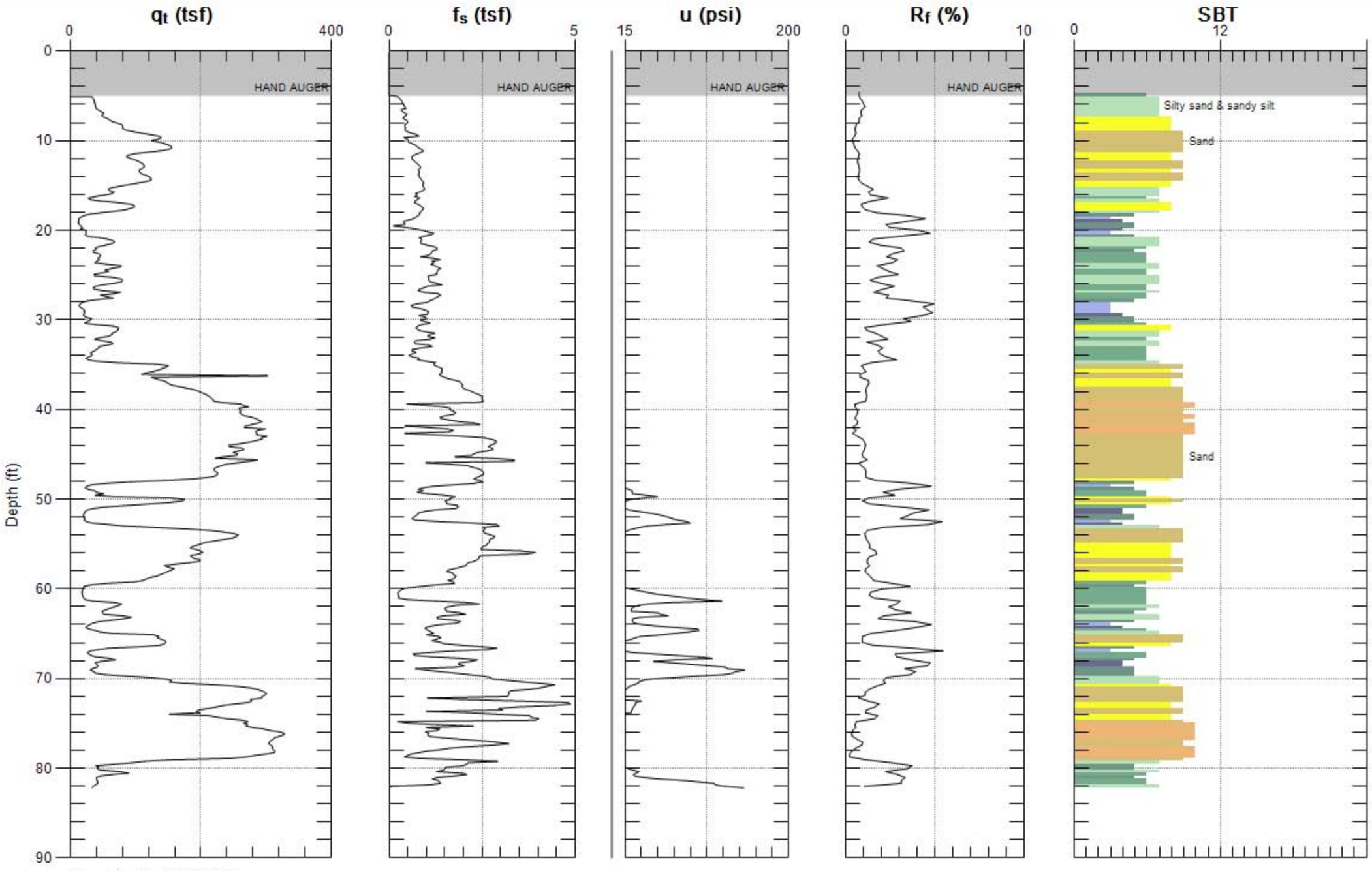
PARSONS

Site: DFSP

Sounding: UV-11

Engineer: Q.KINNEBREW

Date: 10/26/2010 08:40



Max. Depth: 82.185 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

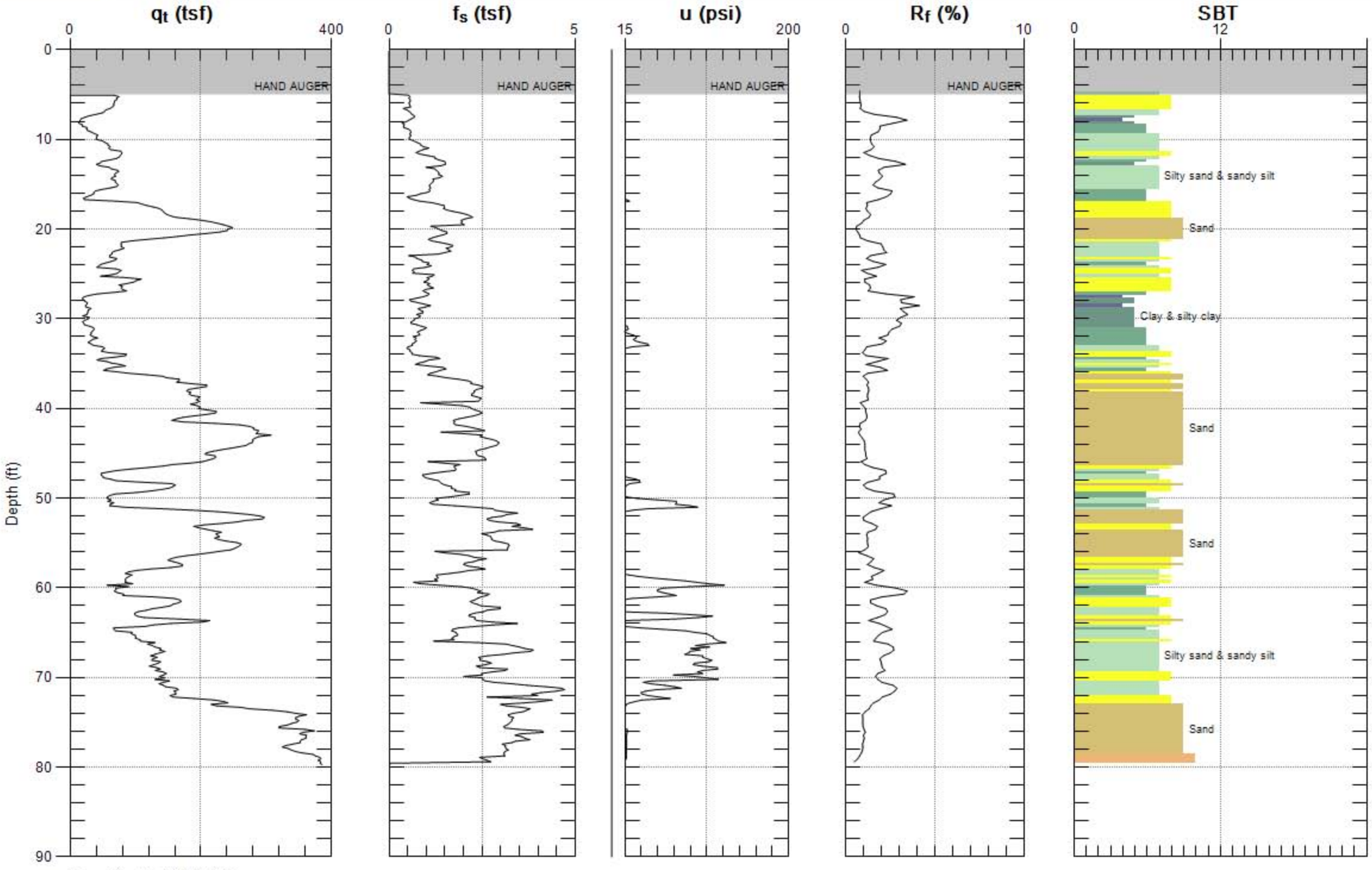
PARSONS

Site: DFSP

Sounding: UV-12

Engineer: Q.KINNEBREW

Date: 10/26/2010 09:50



Max. Depth: 79.724 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

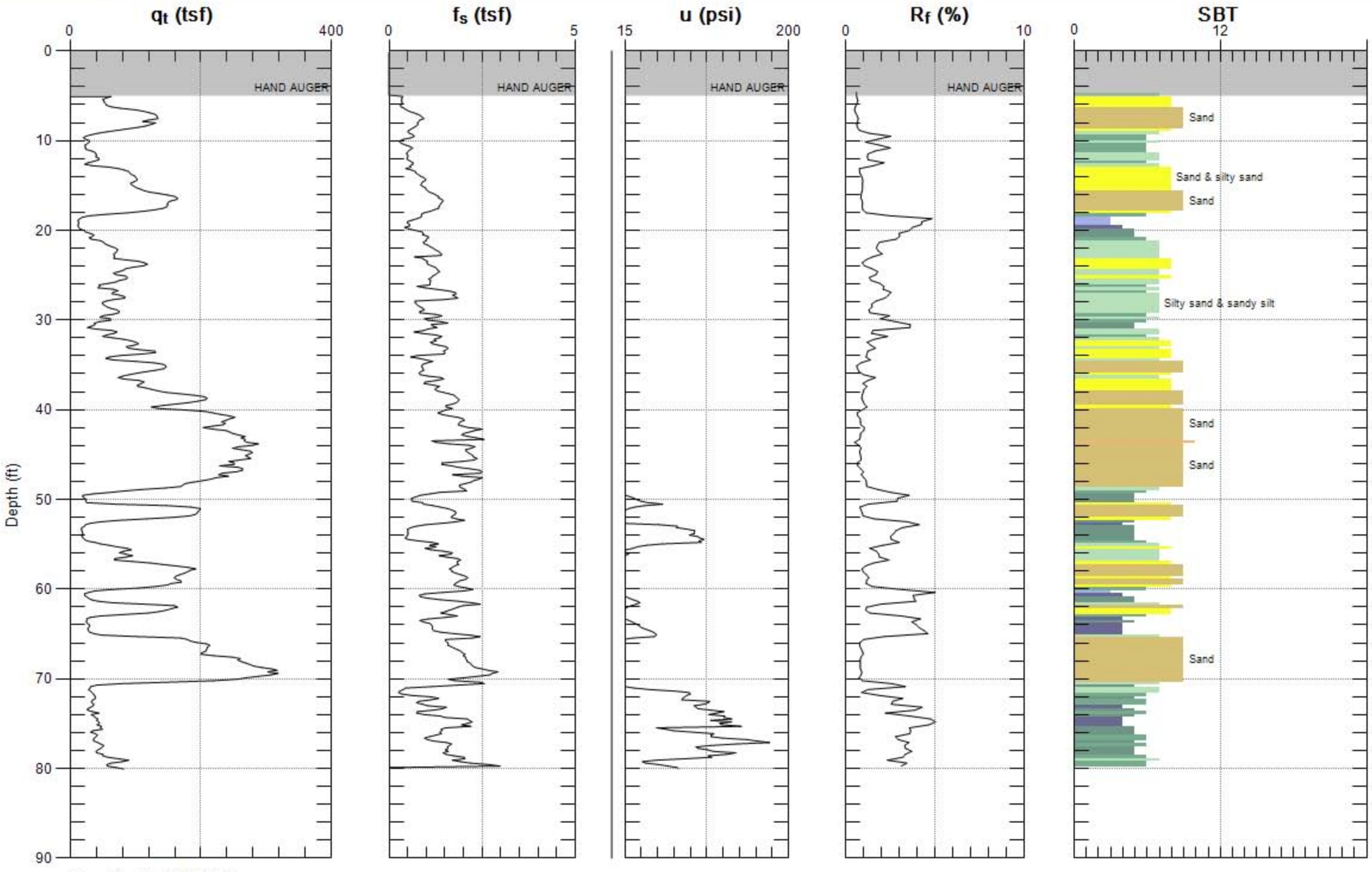
PARSONS

Site: DFSP

Sounding: UV-13

Engineer: Q.KINNEBREW

Date: 10/25/2010 02:58



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

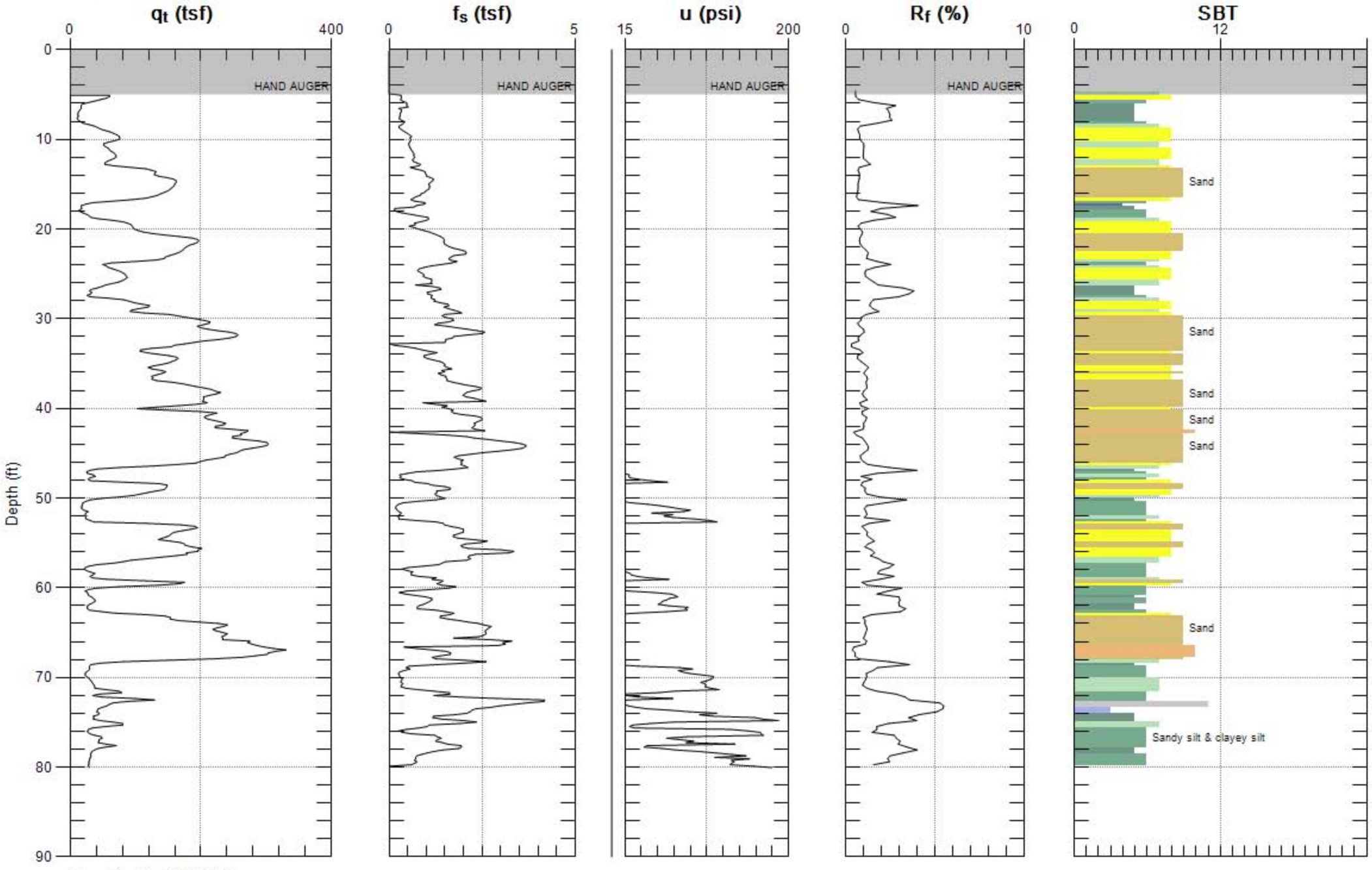
PARSONS

Site: DFSP

Sounding: UV-14

Engineer: Q.KINNEBREW

Date: 10/26/2010 12:49



Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG

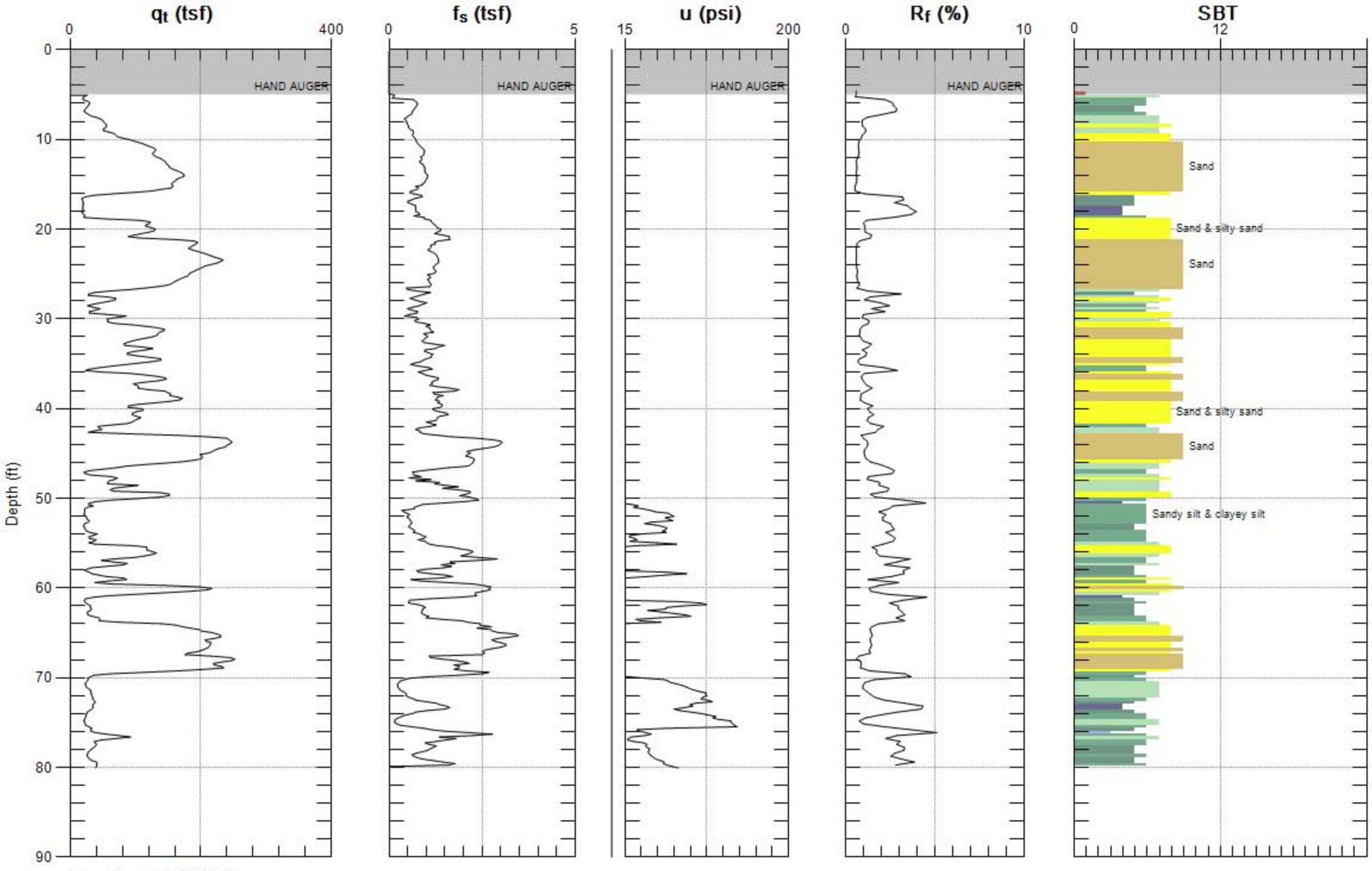
PARSONS

Site: DFSP

Sounding: UV-15

Engineer: Q.KINNEBREW

Date: 10/27/2010 06:57



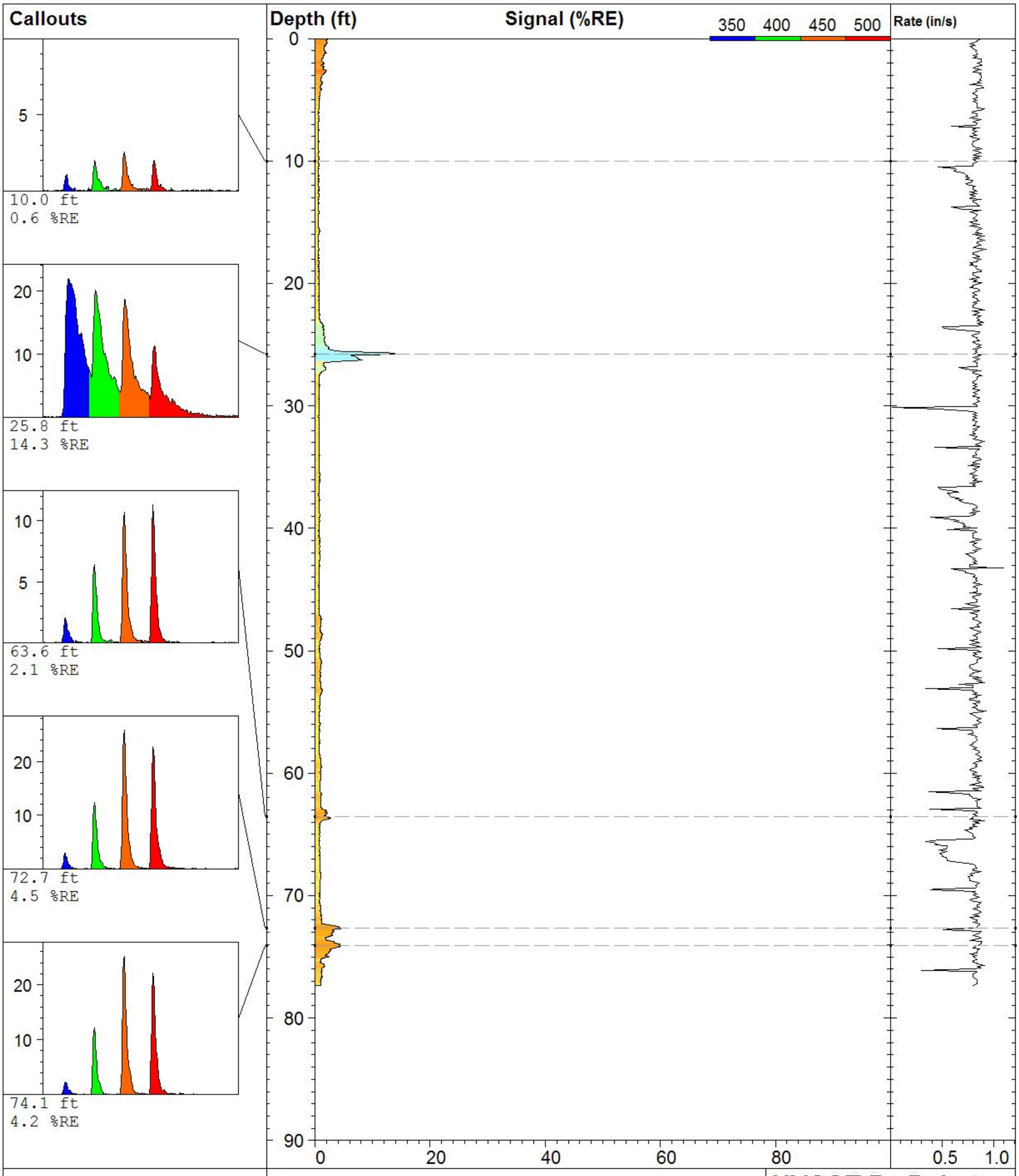
Max. Depth: 80.052 (ft)

Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B

UVOST® DATA LOGS



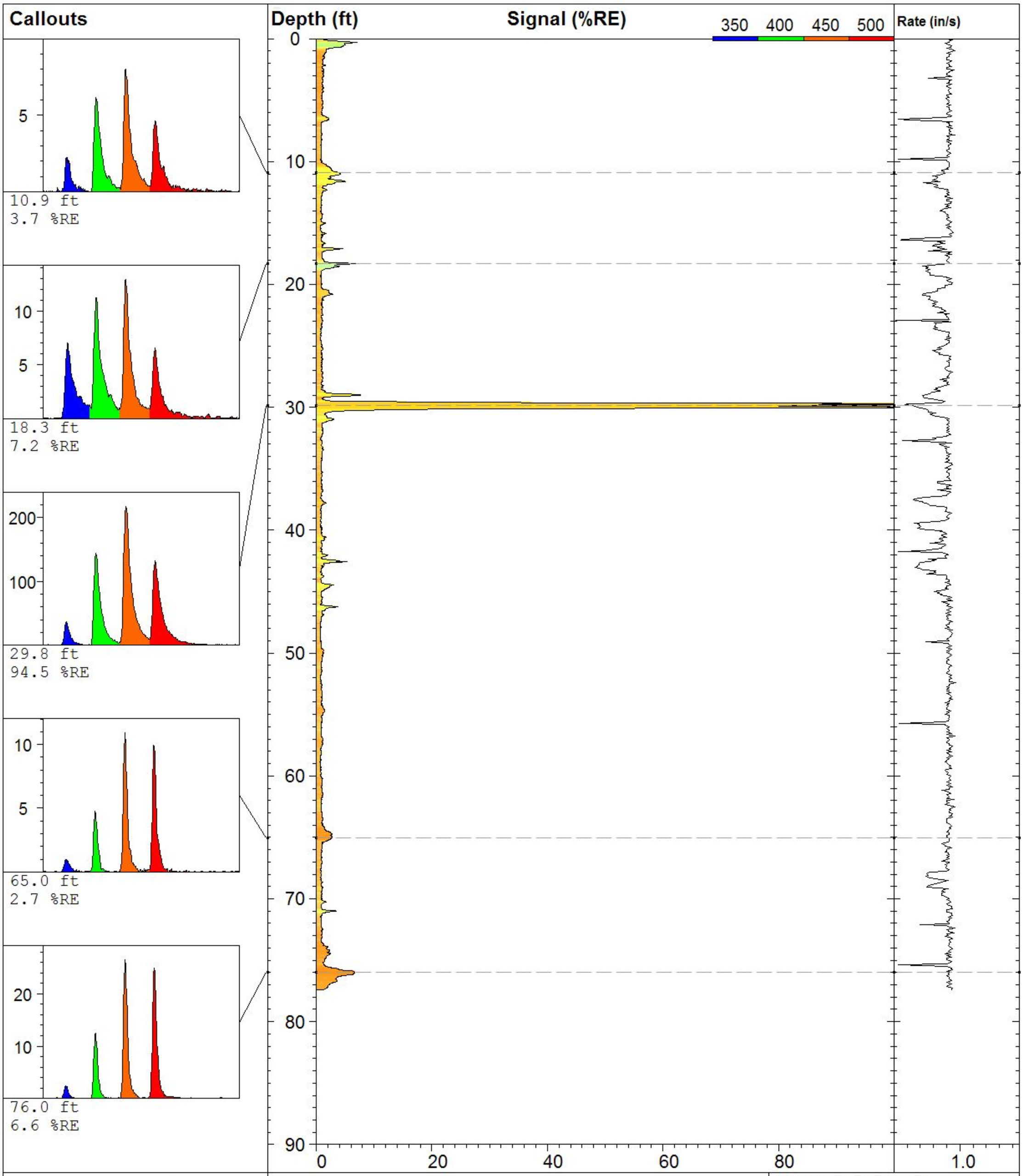
GREGG

www.greggdrilling.com

UV-1

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.33 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **14.3 % @ 25.77 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 14:41 PDT**



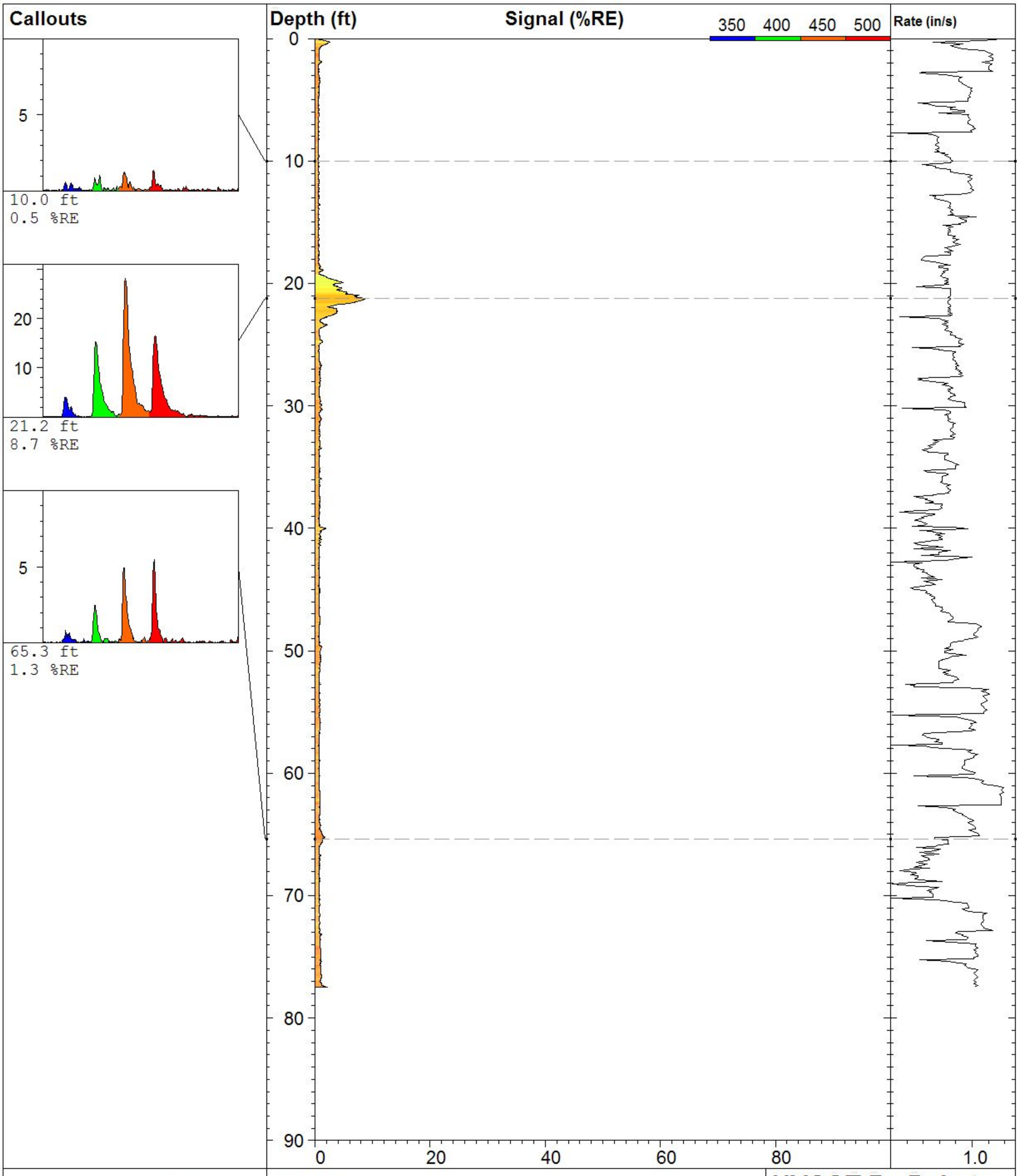
GREGG

www.greggdrilling.com

UV-2

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.39 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **109.7 % @ 29.69 ft**
Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-25 13:38 PDT**



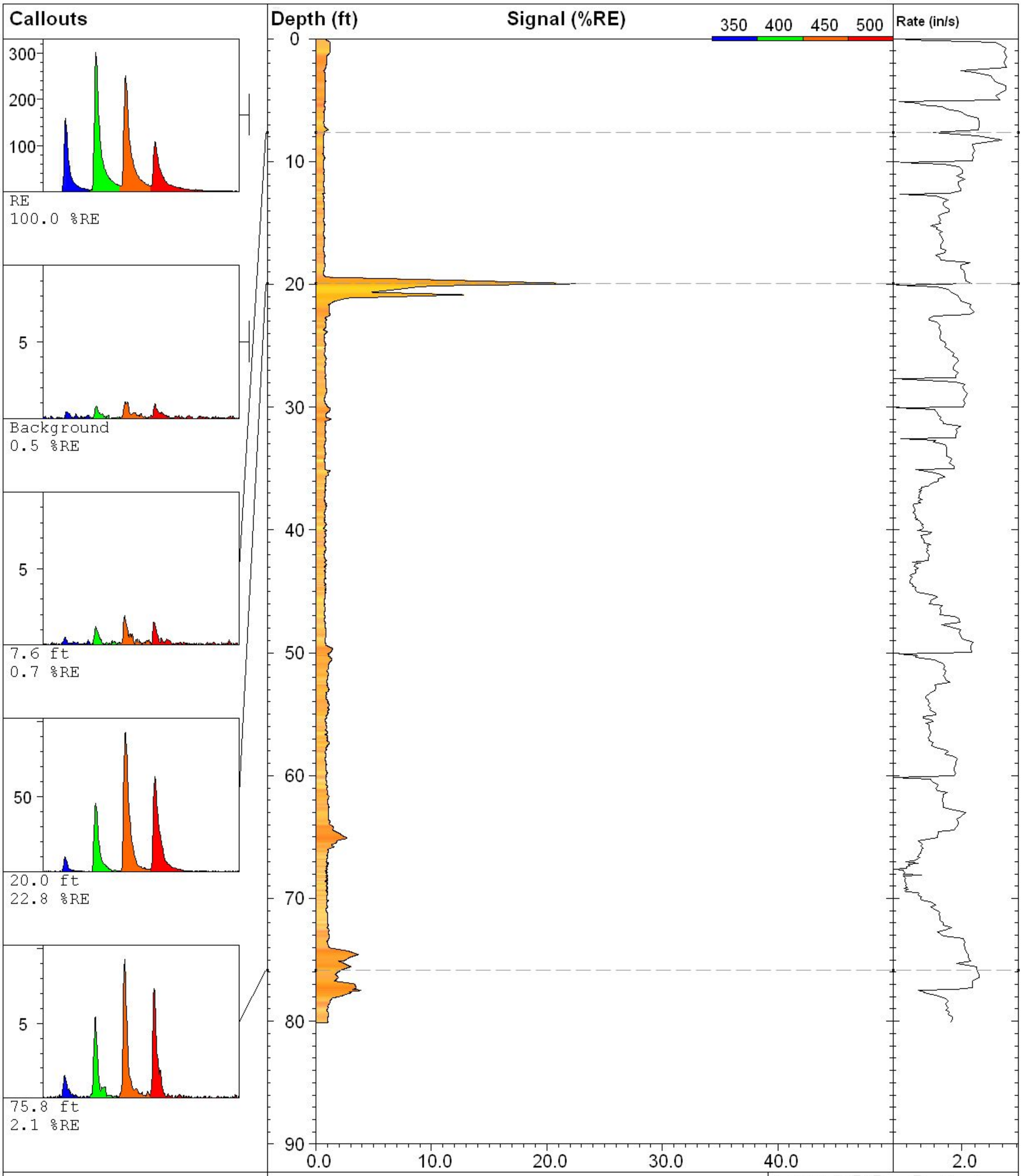
GREGG

www.greggdrilling.com

UV-3

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.48 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **8.7 % @ 21.23 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1009**	*Date & Time:* **2010-10-25 09:32 PDT**



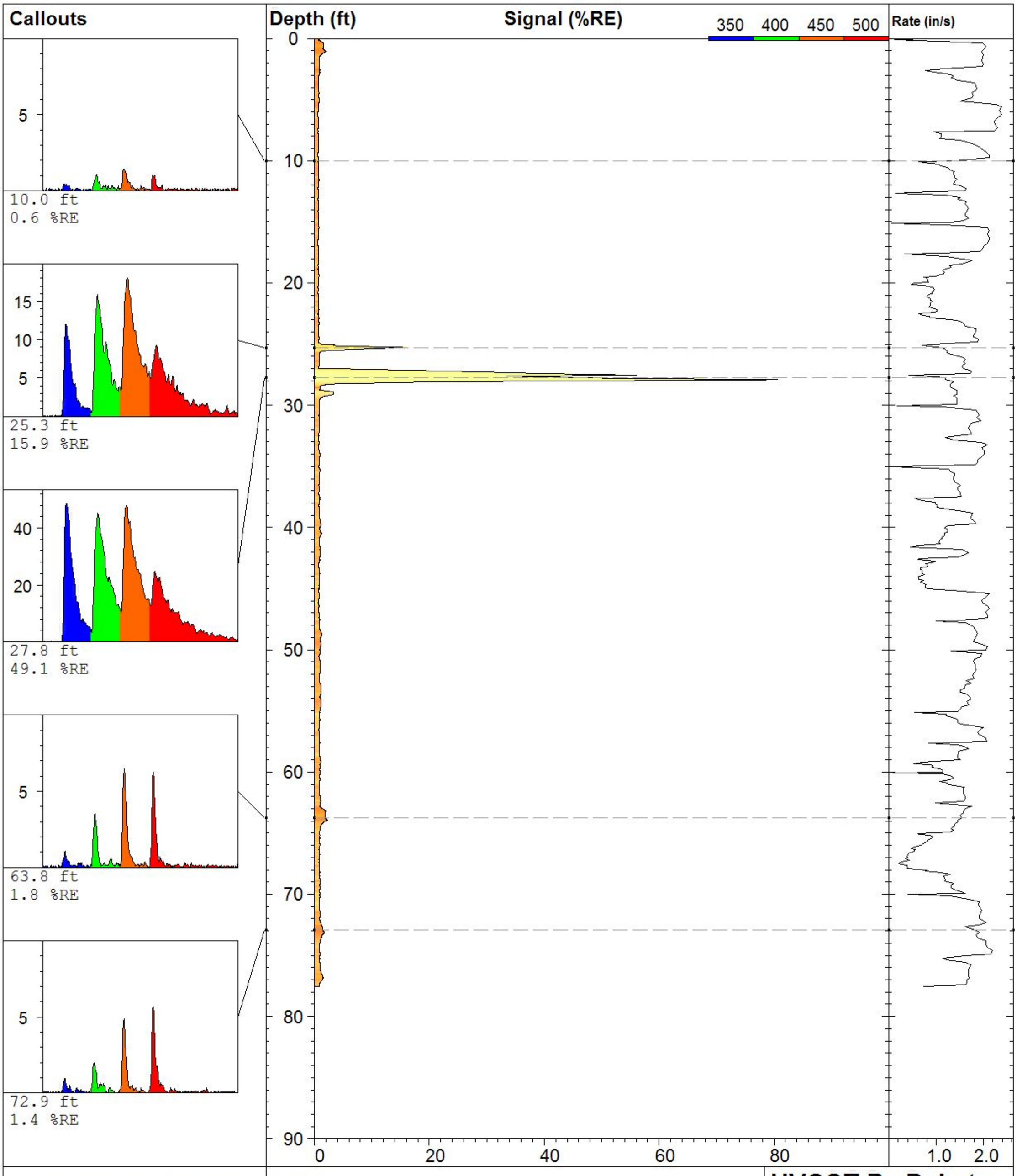
GREGG

www.greggdrilling.com

UV-4

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **80.11 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **22.8 % @ 19.96 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1009**	*Date & Time:* **2010-10-25 15:01 PDT**

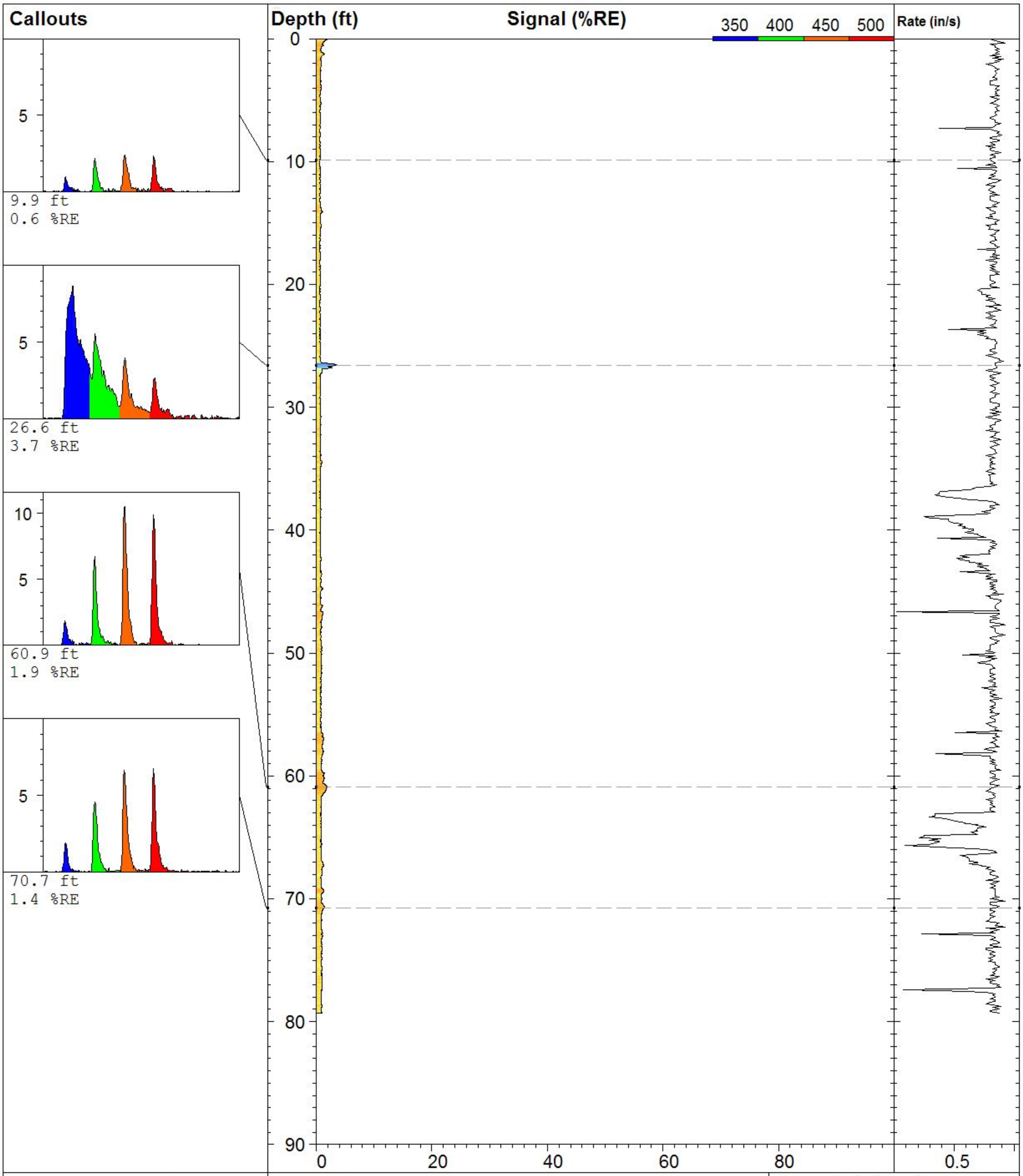


GREGG
www.greggdrilling.com

UV-5

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.52 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **80.8 % @ 27.91 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1009**	*Date & Time:* **2010-10-25 13:25 PDT**

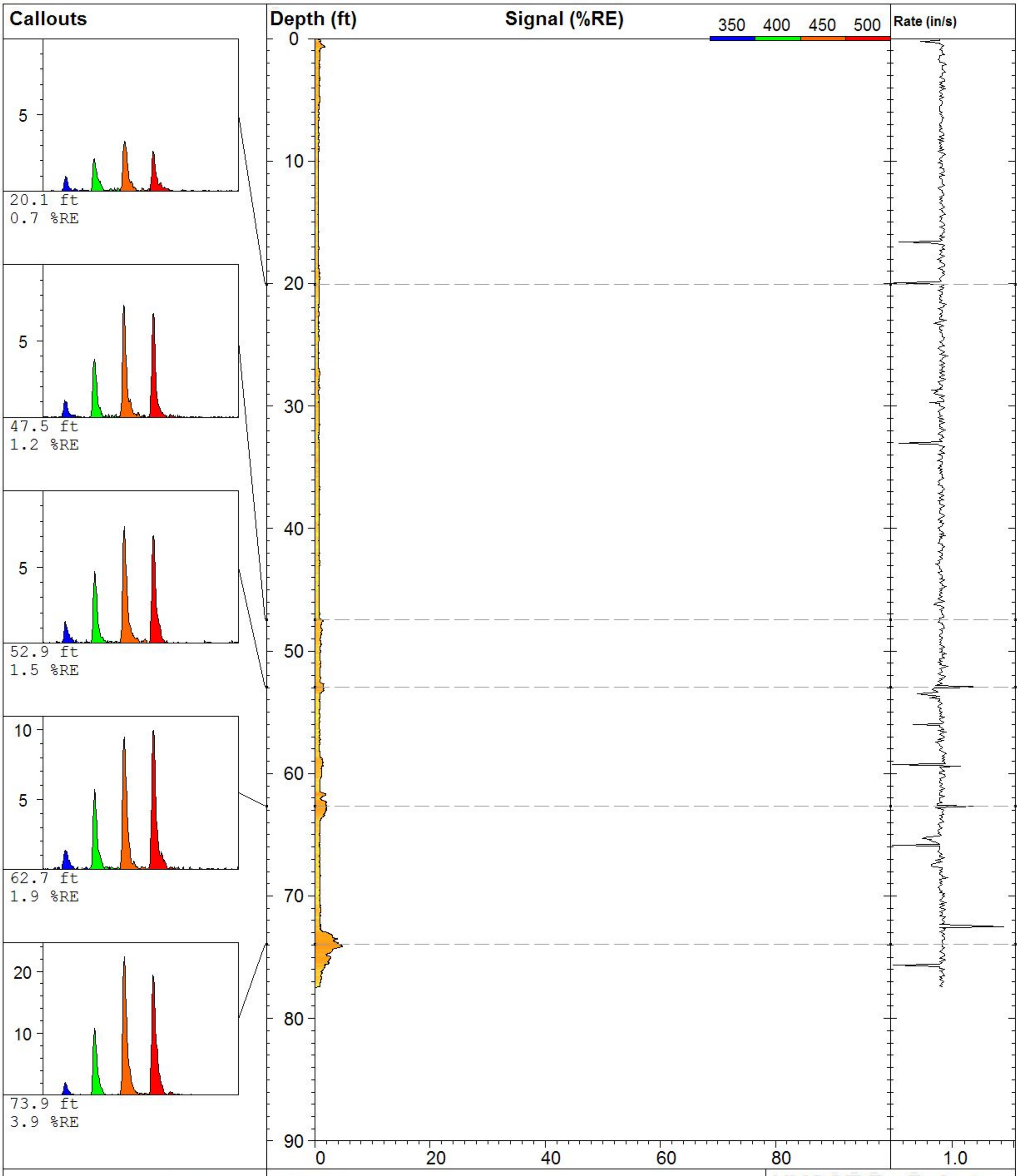


GREGG
www.greggdrilling.com

UV-6

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **79.33 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **3.7 % @ 26.58 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 16:12 PDT**



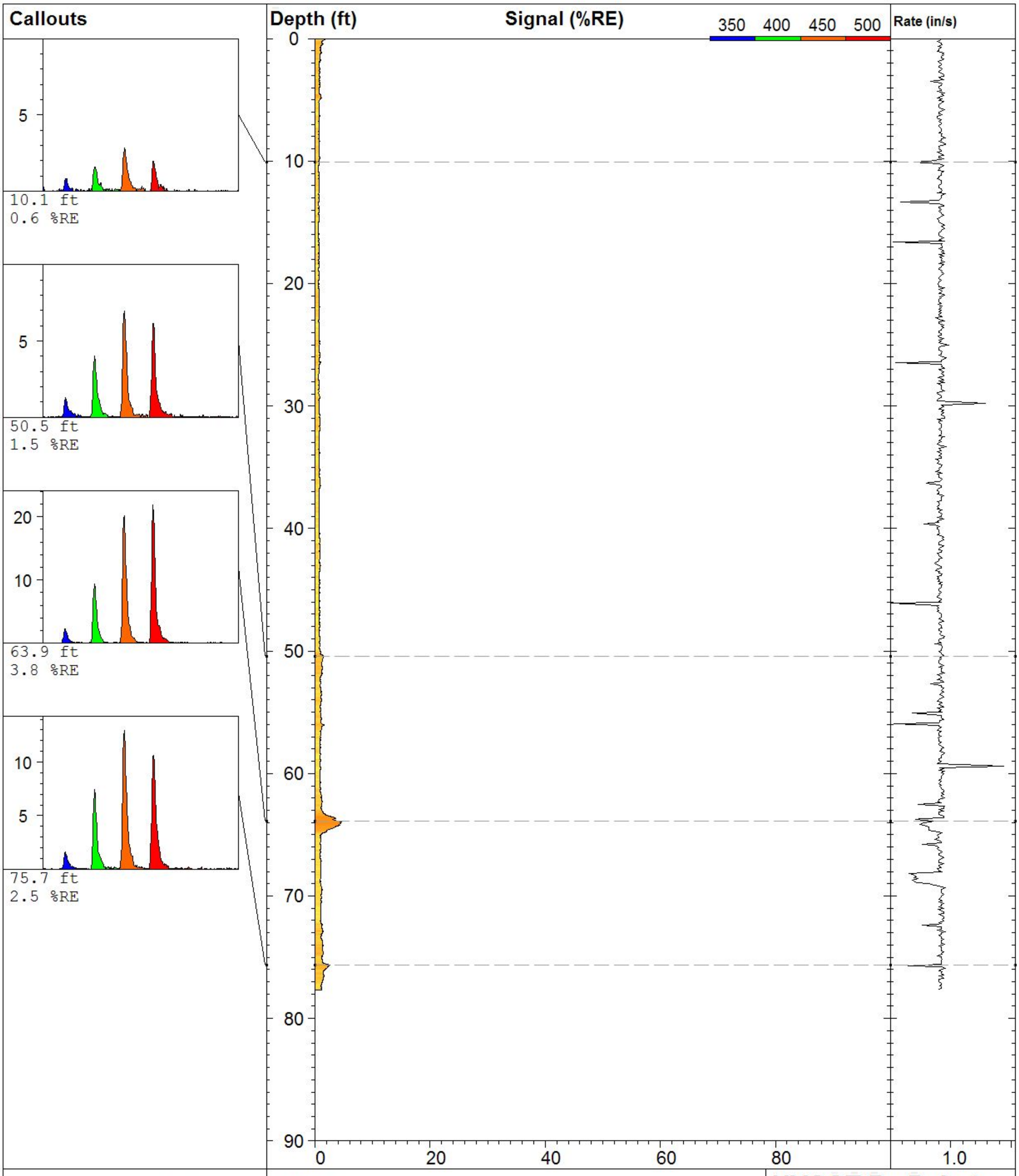
GREGG

www.greggdrilling.com

UV-7

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.44 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **4.8 % @ 74.13 ft**
Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-27 09:54 PDT**



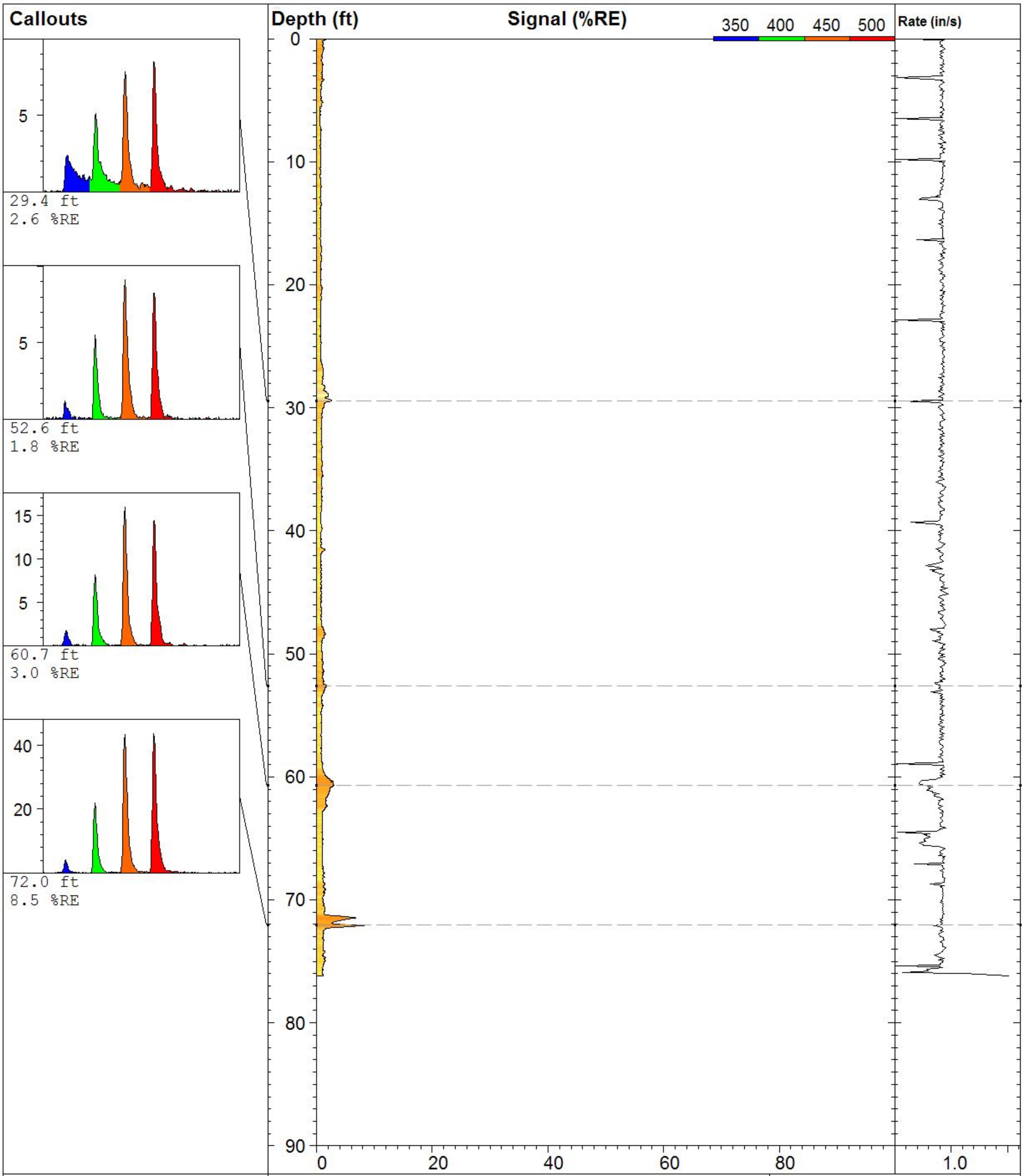
GREGG

www.greggdrilling.com

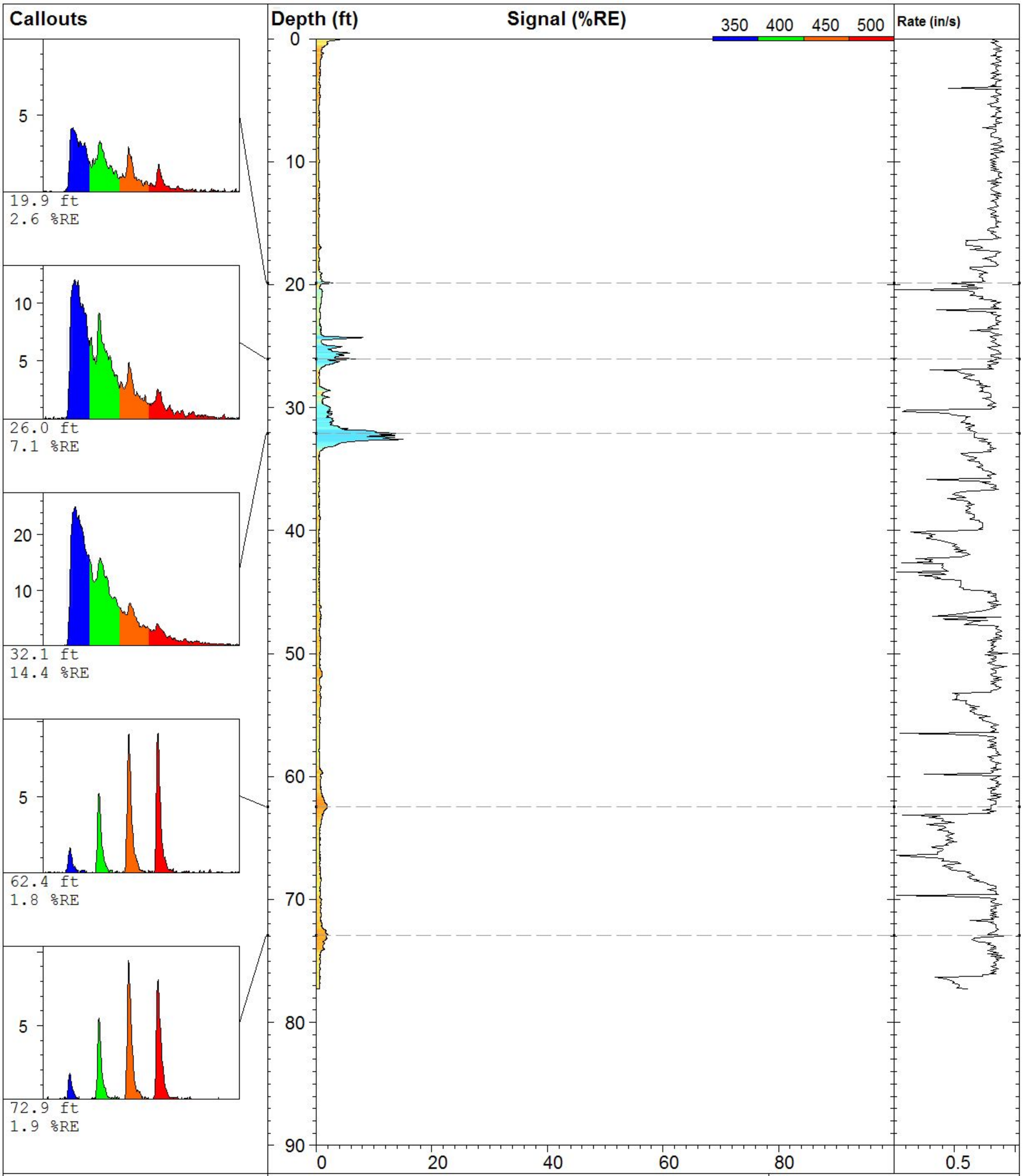
UV-8

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.68 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **4.6 % @ 63.96 ft**
Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-27 08:47 PDT**



GREGG www.greggdrilling.com	**UV-9**		**UVOST By Dakota** www.DakotaTechnologies.com
	Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **76.17 ft**
	Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **8.5 % @ 72.04 ft**
	Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-27 07:48 PDT**



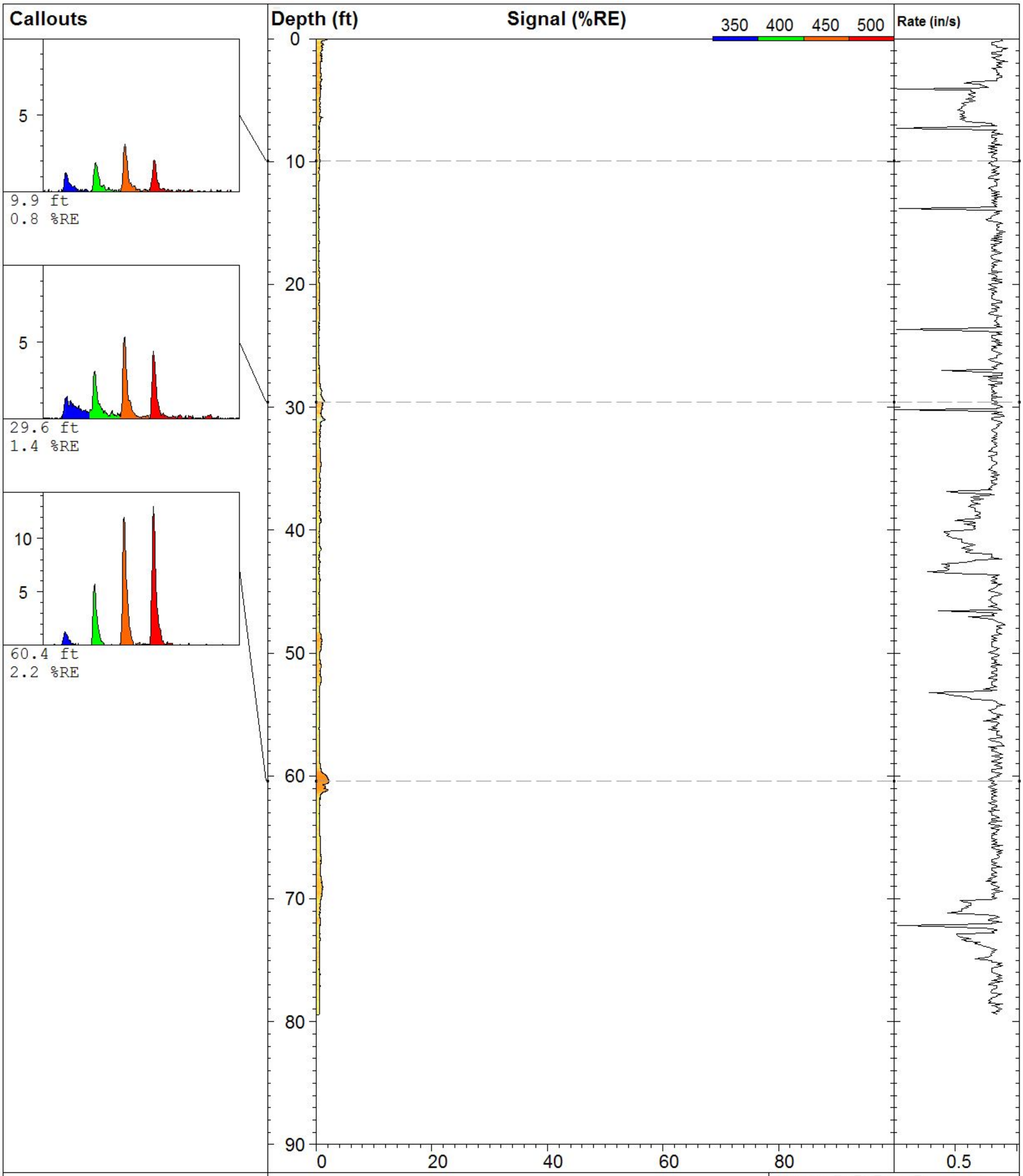
GREGG

www.greggdrilling.com

UV-10

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.26 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **15.3 % @ 32.59 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 11:36 PDT**



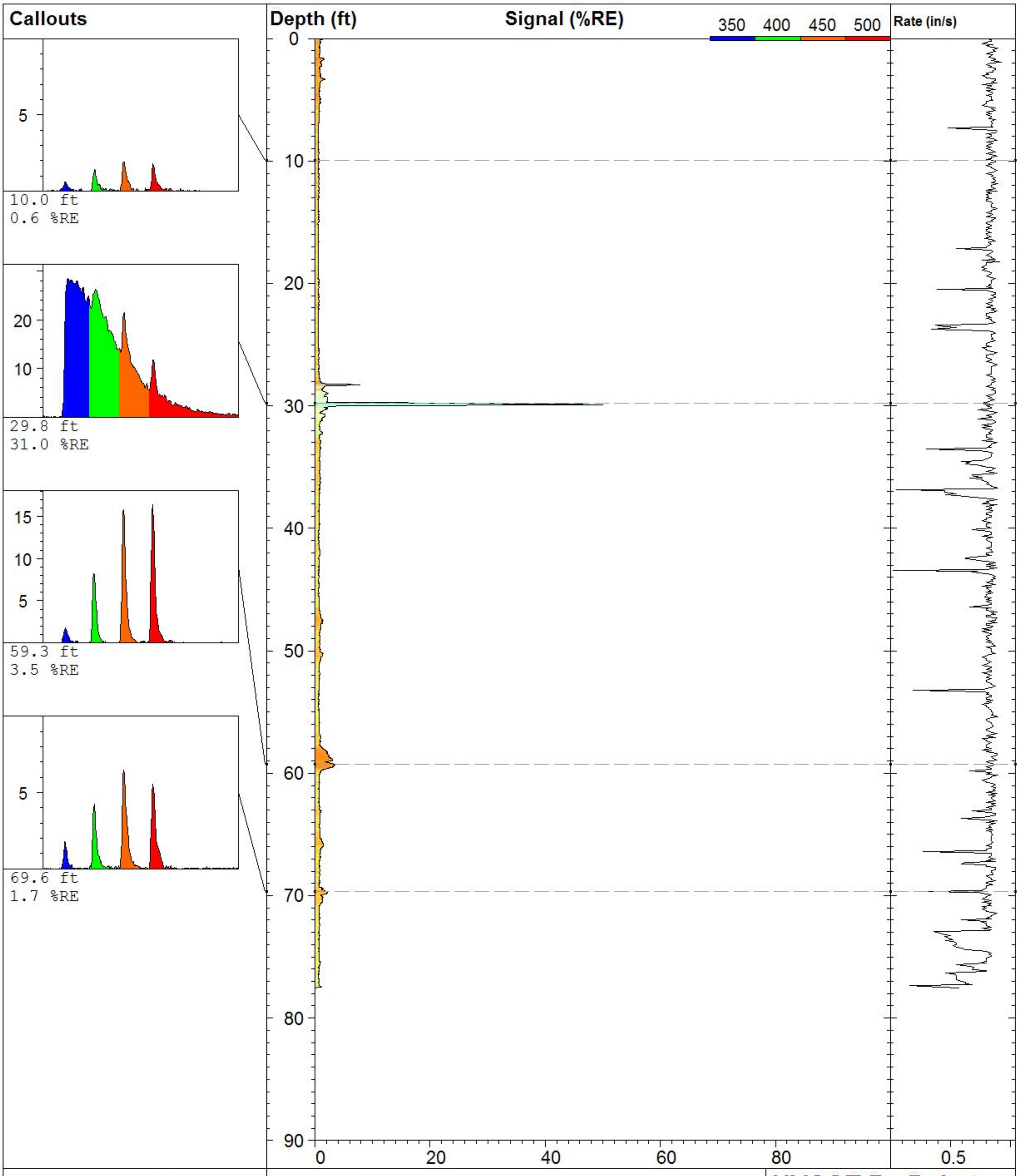
GREGG

www.greggdrilling.com

UV-11

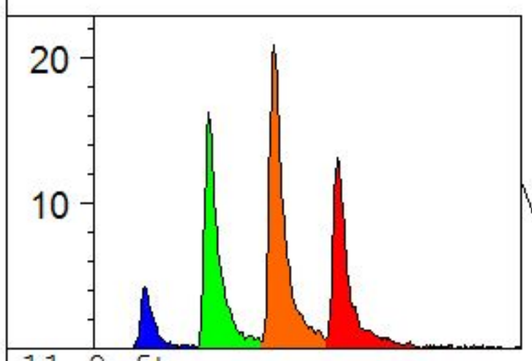
UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **79.43 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **2.2 % @ 60.53 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 08:42 PDT**

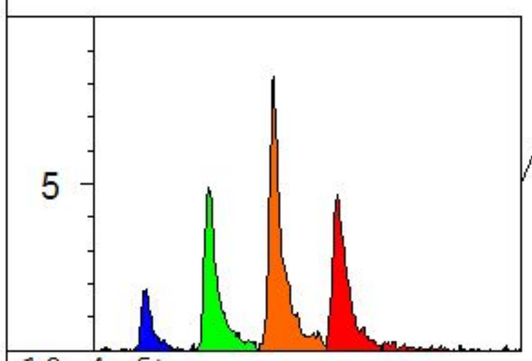


GREGG www.greggdrilling.com	**UV-12**		**UVOST By Dakota** www.DakotaTechnologies.com
	Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.51 ft**
	Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **50.6 % @ 29.90 ft**
	Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 09:48 PDT**

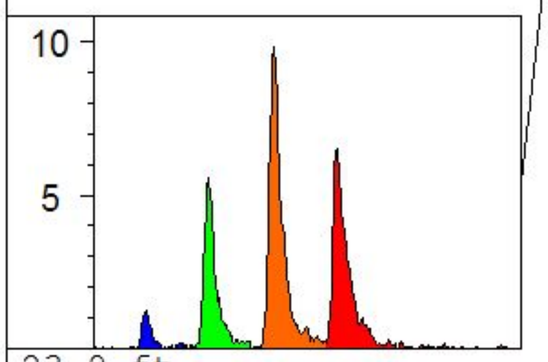
Callouts



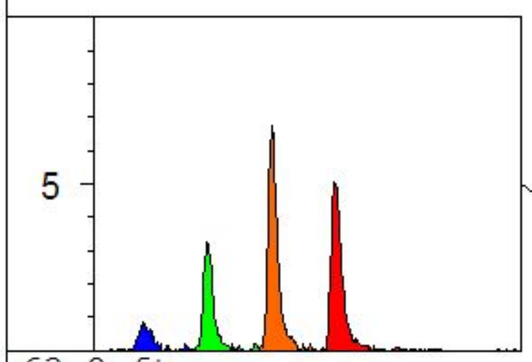
11.9 ft
7.4 %RE



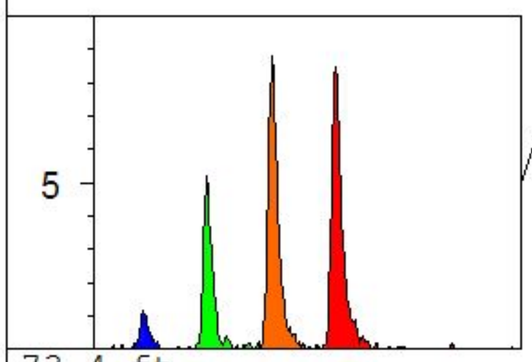
19.4 ft
2.5 %RE



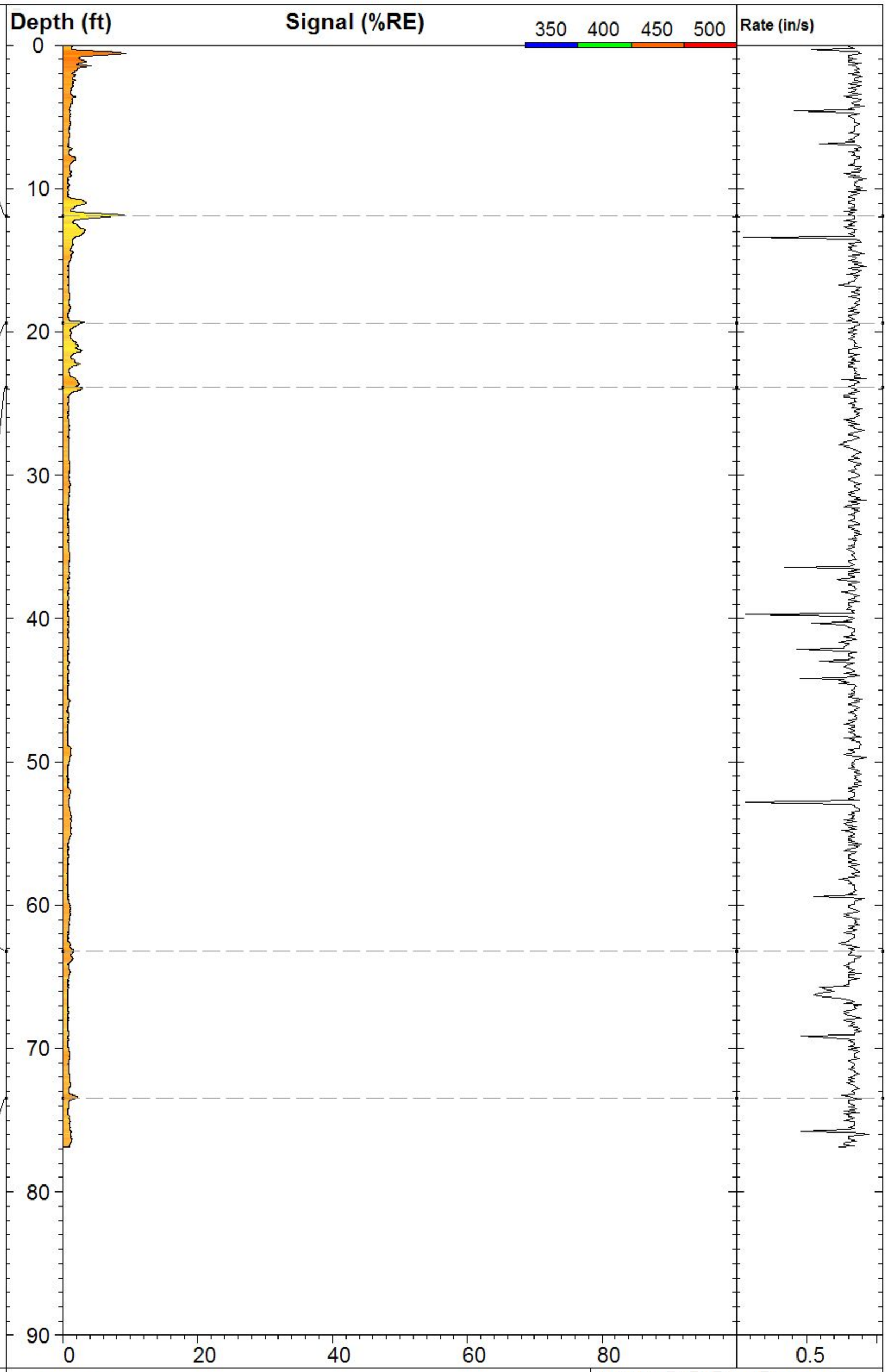
23.9 ft
2.8 %RE



63.2 ft
1.5 %RE



73.4 ft
2.2 %RE

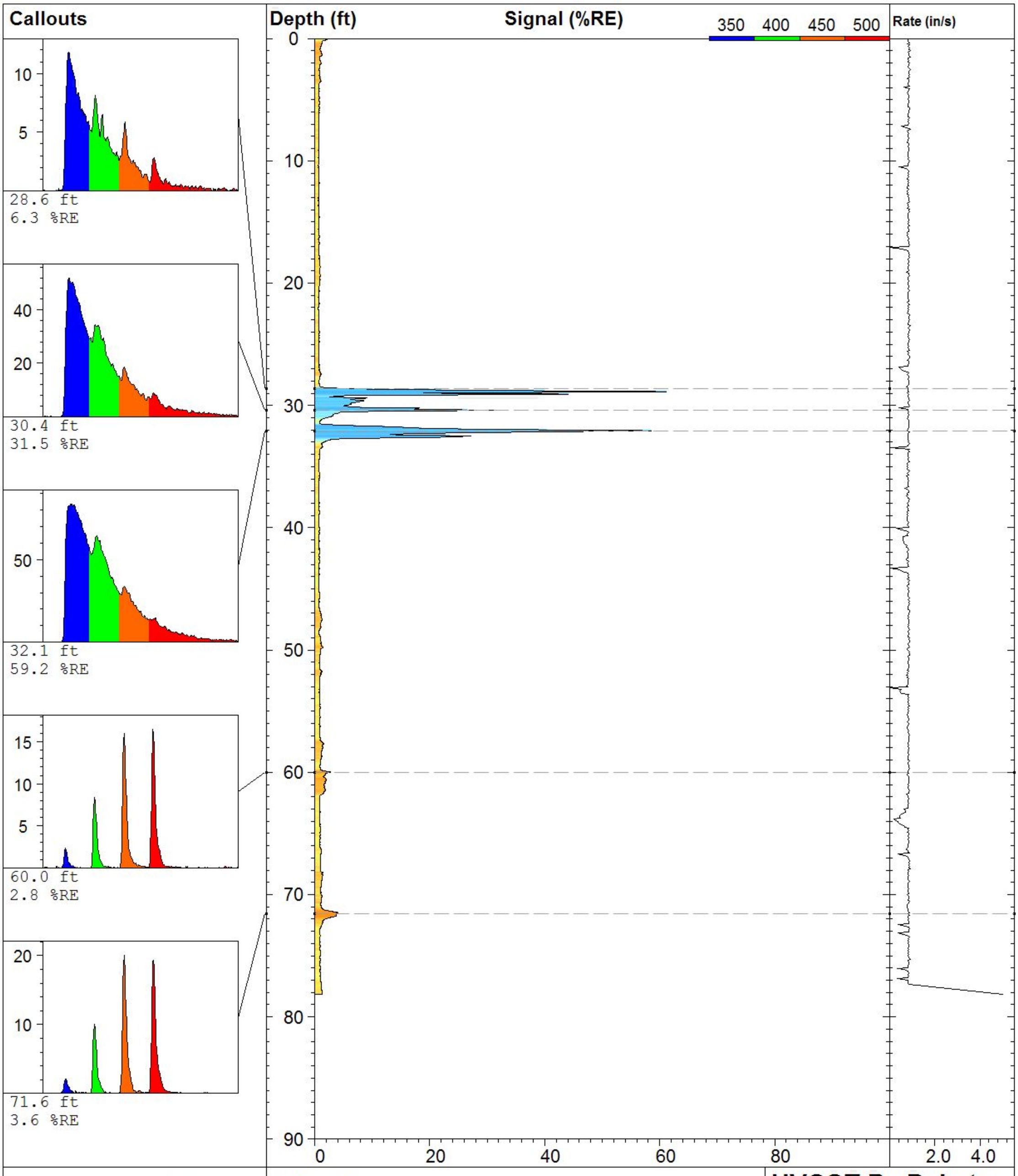


UV-13

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **76.88 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **9.4 % @ 0.58 ft**
Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-25 14:55 PDT**

GREGG
www.greggdrilling.com

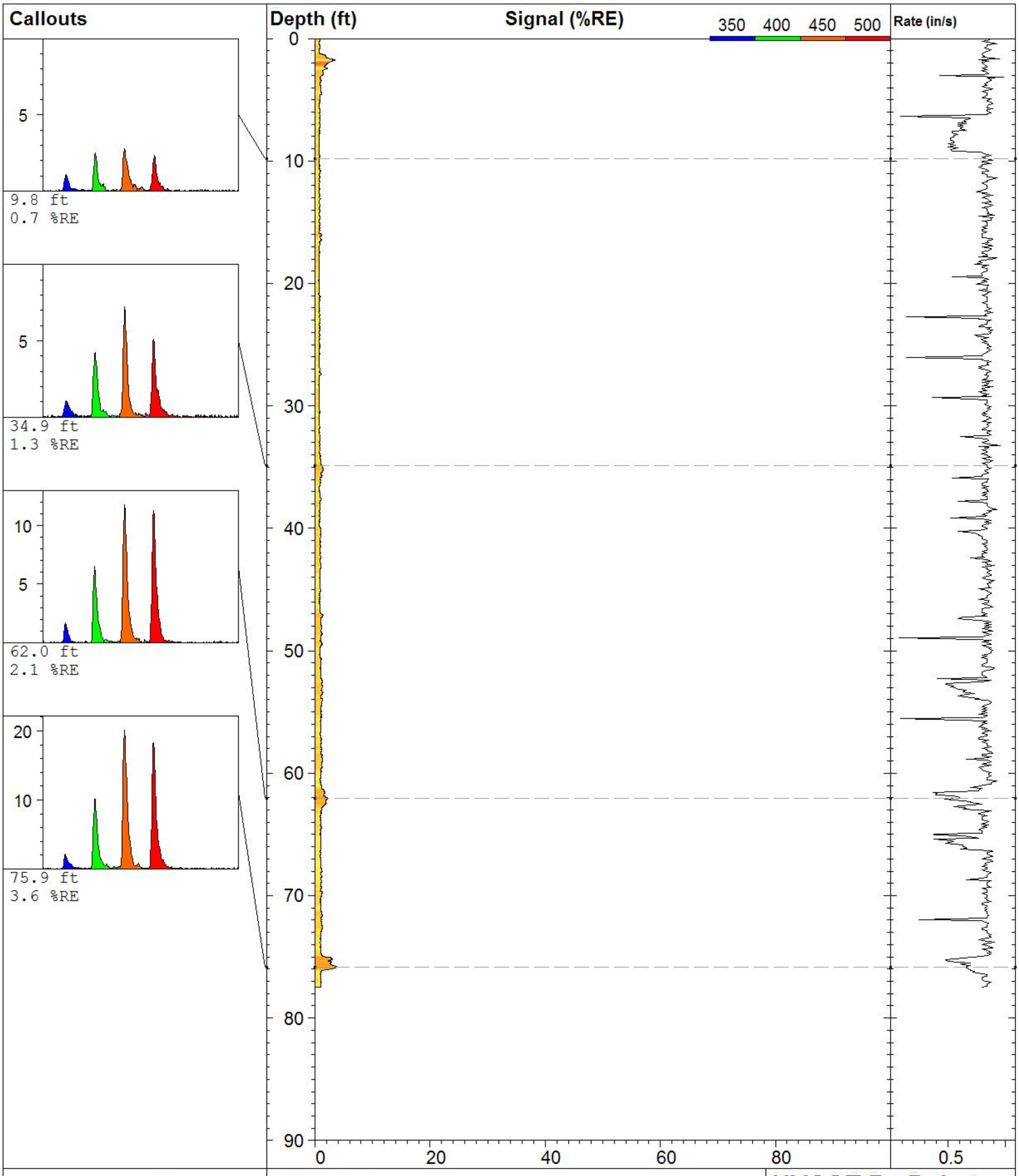


GREGG
www.greggdrilling.com

UV-14

UVOST By Dakota
www.DakotaTechnologies.com

Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **78.17 ft**
Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **62.7 % @ 28.87 ft**
Job: **10-344**	*Operator/Unit:* **CHRIS/UVOST1007**	*Date & Time:* **2010-10-26 12:54 PDT**



GREGG www.greggdrilling.com	**UV-15**		**UVOST By Dakota** www.DakotaTechnologies.com
	Site: **DFSP**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **77.50 ft**
	Client: **PARSONS**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **3.7 % @ 75.78 ft**
	Job: **344**	*Operator/Unit:* **EC/UVOST1007**	*Date & Time:* **2010-10-27 06:56 PDT**

APPENDIX C

LABORATORY ANALYTICAL REPORTS

Calscience Environmental Laboratories, Inc.

November 11, 2010

Mary Lucas
Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Subject: **Calscience Work Order No.: 10-10-2159**
Client Reference: DFSP Norwalk / 747565

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/27/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Ranjit K. J. Clarke

Calscience Environmental
Laboratories, Inc.
Ranjit Clarke
Project Manager

Calscience Environmental Laboratories, Inc.

ACCREDITED IN ACCORDANCE WITH nelac

Work Order Case Narrative

Project Name: **DFSP Norwalk / 747565**
Calscience Work Order Number: **10-10-2159**

1. Subcontract Analyses:

   This report contains only the analyses performed by Calscience Environmental Labs, Inc. The following analyses were subcontracted to Core Labs:

   - pore fluid saturation using American Petroleum Institute Method RP40
   - grain size distribution using ASTM International Methods D422 /D4464.

   Results for the above analyses will be submitted under separate cover.

2. TPH Fraction (EPH/VPH) – EPA 8015B(M) / EPA 8260B(M):

   An e-mail was received from Parsons, Inc. on 10/28/10 specifying that only the following samples required EPH/VPH analysis:

   UV-5-28
   UV-12-30

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-5-28	**10-10-2159-1-A**	**10/27/10 11:47**	**Solid**	**GC 27**	**10/30/10**	**11/01/10 11:40**	**101030B02**

Parameter	Result	RL	DF	Qual	Units
TPH as JP5	2200	25	5		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	109	61-145	

UV-2-30	**10-10-2159-2-A**	**10/27/10 12:18**	**Solid**	**GC 27**	**10/30/10**	**10/30/10 21:36**	**101030B02**

Comment(s): -The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons are also present (or were detected).

Parameter	Result	RL	DF	Qual	Units
TPH as JP5	510	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	98	61-145	

UV-12-30	**10-10-2159-3-A**	**10/27/10 13:19**	**Solid**	**GC 27**	**10/30/10**	**10/30/10 21:54**	**101030B02**

Comment(s): -The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons are also present (or were detected).

Parameter	Result	RL	DF	Qual	Units
TPH as JP5	630	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	102	61-145	

UV-10-32	**10-10-2159-4-A**	**10/27/10 13:49**	**Solid**	**GC 27**	**10/30/10**	**11/01/10 11:58**	**101030B02**

Comment(s): -The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons are also present (or were detected).

Parameter	Result	RL	DF	Qual	Units
TPH as JP5	3300	50	10		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	112	61-145	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-295-43**	**N/A**	**Solid**	**GC 27**	**10/30/10**	**10/30/10 19:49**	**101030B02**

Parameter	Result	RL	DF	Qual	Units
TPH as JP5	ND	5.0	1		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	97	61-145	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 3550B
		Method:	EPA 8015B (M) EPH
		Units:	mg/kg
Project: DFSP Norwalk / 747565			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-5-28	**10-10-2159-1-A**	**10/27/10 11:47**	**Solid**	**GC 50**	**10/28/10**	**10/29/10 16:01**	**101028L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aliphatic Hydrocarbons (C9-C18)	13000	5000	2500	500		Aromatic Hydrocarbons (C9-C16)	1000	500	250	50	
Aliphatic Hydrocarbons (C19-C32)	850	200	100	20		Aromatic Hydrocarbons (C17-C32)	32	10	5.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1-Chlorooctadecane	113	40-140		o-Terphenyl	44	40-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-12-30	**10-10-2159-3-A**	**10/27/10 13:19**	**Solid**	**GC 50**	**10/28/10**	**10/29/10 16:32**	**101028L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aliphatic Hydrocarbons (C9-C18)	290	100	50	10		Aromatic Hydrocarbons (C9-C16)	17	10	5.0	1	
Aliphatic Hydrocarbons (C19-C32)	ND	10	5.0	1		Aromatic Hydrocarbons (C17-C32)	ND	10	5.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1-Chlorooctadecane	110	40-140		o-Terphenyl	96	40-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-13-033-26**	**N/A**	**Solid**	**GC 50**	**10/28/10**	**10/29/10 14:13**	**101028L01**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aliphatic Hydrocarbons (C9-C18)	ND	10	5.0	1		Aromatic Hydrocarbons (C9-C16)	ND	10	5.0	1	
Aliphatic Hydrocarbons (C19-C32)	ND	10	5.0	1		Aromatic Hydrocarbons (C17-C32)	ND	10	5.0	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1-Chlorooctadecane	112	40-140		o-Terphenyl	86	40-140	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8015B (M)

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-5-28	**10-10-2159-1-H**	**10/27/10 11:47**	**Solid**	**GC 29**	**10/27/10**	**11/01/10 12:04**	**101101B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	26000	1100	4580		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	107	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-2-30	**10-10-2159-2-F**	**10/27/10 12:18**	**Solid**	**GC 29**	**10/27/10**	**11/01/10 12:39**	**101101B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	370	42	169		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-12-30	**10-10-2159-3-F**	**10/27/10 13:19**	**Solid**	**GC 18**	**10/27/10**	**11/02/10 17:45**	**101101B03**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	21	12	46		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-10-32	**10-10-2159-4-F**	**10/27/10 13:49**	**Solid**	**GC 18**	**10/27/10**	**11/02/10 18:23**	**101101B03**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	32	11	43.6		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5035
		Method:	EPA 8015B (M)

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-3,095**	**N/A**	**Solid**	**GC 29**	**11/01/10**	**11/01/10 10:19**	**101101B01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	80	60-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-285-3,107**	**N/A**	**Solid**	**GC 18**	**11/01/10**	**11/02/10 05:43**	**101101B03**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	10	40		mg/kg

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	89	60-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-5-28	**10-10-2159-1-H**	**10/27/10 11:47**	**Solid**	**GC/MS V V**	**10/27/10**	**10/29/10 21:26**	**101029L02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	46000	5900	916		c-1,3-Dichloropropene	ND	920	170	916	
Benzene	110000	920	120	916		t-1,3-Dichloropropene	ND	1800	1700	916	
Bromobenzene	ND	920	190	916		Ethylbenzene	340000	9200	1400	9160	
Bromochloromethane	ND	1800	1300	916		2-Hexanone	ND	18000	5100	916	
Bromodichloromethane	ND	920	130	916		Isopropylbenzene	27000	920	110	916	
Bromoform	ND	4600	610	916		p-Isopropyltoluene	9600	920	110	916	
Bromomethane	ND	18000	1700	916		Methylene Chloride	ND	9200	4700	916	
2-Butanone	ND	18000	8800	916		4-Methyl-2-Pentanone	ND	18000	1900	916	
n-Butylbenzene	48000	920	200	916		Naphthalene	72000	9200	300	916	B
sec-Butylbenzene	14000	920	95	916		n-Propylbenzene	87000	1800	940	916	
tert-Butylbenzene	ND	920	110	916		Styrene	ND	920	190	916	
Carbon Disulfide	ND	9200	160	916		1,1,1,2-Tetrachloroethane	ND	920	300	916	
Carbon Tetrachloride	ND	920	290	916		1,1,2,2-Tetrachloroethane	ND	1800	210	916	
Chlorobenzene	ND	920	140	916		Tetrachloroethene	ND	920	160	916	
Chloroethane	ND	1800	380	916		Toluene	660000	9200	1400	9160	
Chloroform	6900	920	160	916		1,2,3-Trichlorobenzene	ND	1800	190	916	
Chloromethane	ND	18000	2700	916		1,2,4-Trichlorobenzene	ND	1800	170	916	
2-Chlorotoluene	ND	920	110	916		1,1,1-Trichloroethane	ND	920	230	916	
4-Chlorotoluene	ND	920	96	916		1,1,2-Trichloroethane	ND	920	220	916	
Dibromochloromethane	ND	1800	180	916		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9200	430	916	
1,2-Dibromo-3-Chloropropane	ND	4600	3400	916		Trichloroethene	ND	1800	170	916	
1,2-Dibromoethane	ND	920	410	916		Trichlorofluoromethane	ND	9200	140	916	
Dibromomethane	ND	920	640	916		1,2,3-Trichloropropane	ND	1800	600	916	
1,2-Dichlorobenzene	ND	920	120	916		1,2,4-Trimethylbenzene	700000	18000	1100	9160	
1,3-Dichlorobenzene	ND	920	150	916		1,3,5-Trimethylbenzene	160000	1800	90	916	B
1,4-Dichlorobenzene	ND	920	140	916		Vinyl Acetate	ND	9200	6800	916	
Dichlorodifluoromethane	ND	1800	180	916		Vinyl Chloride	ND	920	200	916	
1,1-Dichloroethane	ND	920	150	916		p/m-Xylene	1300000	18000	1800	9160	
1,2-Dichloroethane	ND	920	160	916		o-Xylene	460000	9200	1100	9160	
1,1-Dichloroethene	ND	920	130	916		Methyl-t-Butyl Ether (MTBE)	ND	1800	120	916	
c-1,2-Dichloroethene	ND	920	260	916		Tert-Butyl Alcohol (TBA)	ND	18000	14000	916	
t-1,2-Dichloroethene	ND	920	230	916		Diisopropyl Ether (DIPE)	ND	920	230	916	
1,2-Dichloropropane	ND	920	240	916		Ethyl-t-Butyl Ether (ETBE)	ND	920	200	916	
1,3-Dichloropropane	ND	920	160	916		Tert-Amyl-Methyl Ether (TAME)	ND	920	120	916	
2,2-Dichloropropane	ND	4600	420	916		Ethanol	ND	460000	92000	916	
1,1-Dichloropropene	ND	1800	200	916							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	107	79-133		1,2-Dichloroethane-d4	99	71-155	
1,4-Bromofluorobenzene	104	80-120		Toluene-d8	106	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-2-30	**10-10-2159-2-F**	**10/27/10 12:18**	**Solid**	**GC/MS V V**	**10/27/10**	**10/29/10 11:56**	**101028L04**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	4200	540	84.7		c-1,3-Dichloropropene	ND	85	15	84.7	
Benzene	100	85	11	84.7		t-1,3-Dichloropropene	ND	170	160	84.7	
Bromobenzene	ND	85	18	84.7		Ethylbenzene	1900	85	13	84.7	
Bromochloromethane	ND	170	120	84.7		2-Hexanone	ND	1700	470	84.7	
Bromodichloromethane	ND	85	12	84.7		Isopropylbenzene	340	85	10	84.7	
Bromoform	ND	420	56	84.7		p-Isopropyltoluene	250	85	9.8	84.7	
Bromomethane	ND	1700	160	84.7		Methylene Chloride	ND	850	440	84.7	
2-Butanone	ND	1700	810	84.7		4-Methyl-2-Pentanone	ND	1700	170	84.7	
n-Butylbenzene	680	85	19	84.7		Naphthalene	1100	850	28	84.7	B
sec-Butylbenzene	220	85	8.7	84.7		n-Propylbenzene	960	170	87	84.7	
tert-Butylbenzene	ND	85	10	84.7		Styrene	ND	85	17	84.7	
Carbon Disulfide	ND	850	15	84.7		1,1,1,2-Tetrachloroethane	ND	85	28	84.7	
Carbon Tetrachloride	ND	85	27	84.7		1,1,2,2-Tetrachloroethane	ND	170	20	84.7	
Chlorobenzene	ND	85	13	84.7		Tetrachloroethene	ND	85	14	84.7	
Chloroethane	ND	170	35	84.7		Toluene	1000	85	13	84.7	
Chloroform	40	85	15	84.7	J	1,2,3-Trichlorobenzene	ND	170	17	84.7	
Chloromethane	ND	1700	250	84.7		1,2,4-Trichlorobenzene	ND	170	15	84.7	
2-Chlorotoluene	ND	85	9.9	84.7		1,1,1-Trichloroethane	ND	85	21	84.7	
4-Chlorotoluene	ND	85	8.8	84.7		1,1,2-Trichloroethane	ND	85	20	84.7	
Dibromochloromethane	ND	170	17	84.7		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	850	40	84.7	
1,2-Dibromo-3-Chloropropane	ND	420	310	84.7		Trichloroethene	ND	170	15	84.7	
1,2-Dibromoethane	ND	85	38	84.7		Trichlorofluoromethane	ND	850	13	84.7	
Dibromomethane	ND	85	59	84.7		1,2,3-Trichloropropane	ND	170	55	84.7	
1,2-Dichlorobenzene	ND	85	11	84.7		1,2,4-Trimethylbenzene	5300	170	9.9	84.7	
1,3-Dichlorobenzene	ND	85	14	84.7		1,3,5-Trimethylbenzene	1800	170	8.4	84.7	
1,4-Dichlorobenzene	ND	85	13	84.7		Vinyl Acetate	ND	850	630	84.7	
Dichlorodifluoromethane	ND	170	16	84.7		Vinyl Chloride	ND	85	18	84.7	
1,1-Dichloroethane	ND	85	13	84.7		p/m-Xylene	7400	170	17	84.7	
1,2-Dichloroethane	ND	85	14	84.7		o-Xylene	2700	85	9.7	84.7	
1,1-Dichloroethene	ND	85	12	84.7		Methyl-t-Butyl Ether (MTBE)	ND	170	11	84.7	
c-1,2-Dichloroethene	ND	85	24	84.7		Tert-Butyl Alcohol (TBA)	ND	1700	1300	84.7	
t-1,2-Dichloroethene	ND	85	21	84.7		Diisopropyl Ether (DIPE)	ND	85	21	84.7	
1,2-Dichloropropane	ND	85	23	84.7		Ethyl-t-Butyl Ether (ETBE)	ND	85	18	84.7	
1,3-Dichloropropane	ND	85	15	84.7		Tert-Amyl-Methyl Ether (TAME)	ND	85	11	84.7	
2,2-Dichloropropane	ND	420	39	84.7		Ethanol	ND	42000	8500	84.7	
1,1-Dichloropropene	ND	170	19	84.7							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	96	79-133		1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	101	80-120		Toluene-d8	102	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-12-30	**10-10-2159-3-F**	**10/27/10 13:19**	**Solid**	**GC/MS V V**	**10/27/10**	**10/29/10 12:22**	**101028L04**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	4600	590	92.1		c-1,3-Dichloropropene	ND	92	17	92.1	
Benzene	1500	92	12	92.1		t-1,3-Dichloropropene	ND	180	180	92.1	
Bromobenzene	ND	92	19	92.1		Ethylbenzene	470	92	14	92.1	
Bromochloromethane	ND	180	130	92.1		2-Hexanone	ND	1800	520	92.1	
Bromodichloromethane	ND	92	14	92.1		Isopropylbenzene	64	92	11	92.1	J
Bromoform	ND	460	61	92.1		p-Isopropyltoluene	28	92	11	92.1	J
Bromomethane	ND	1800	170	92.1		Methylene Chloride	ND	920	480	92.1	
2-Butanone	ND	1800	880	92.1		4-Methyl-2-Pentanone	ND	1800	190	92.1	
n-Butylbenzene	67	92	20	92.1	J	Naphthalene	340	920	30	92.1	B,J
sec-Butylbenzene	27	92	9.5	92.1	J	n-Propylbenzene	120	180	94	92.1	J
tert-Butylbenzene	ND	92	11	92.1		Styrene	ND	92	19	92.1	
Carbon Disulfide	34	920	16	92.1	J	1,1,1,2-Tetrachloroethane	ND	92	31	92.1	
Carbon Tetrachloride	ND	92	29	92.1		1,1,2,2-Tetrachloroethane	ND	180	21	92.1	
Chlorobenzene	ND	92	14	92.1		Tetrachloroethene	ND	92	16	92.1	
Chloroethane	ND	180	38	92.1		Toluene	480	92	14	92.1	
Chloroform	ND	92	16	92.1		1,2,3-Trichlorobenzene	ND	180	19	92.1	
Chloromethane	ND	1800	270	92.1		1,2,4-Trichlorobenzene	ND	180	17	92.1	
2-Chlorotoluene	ND	92	11	92.1		1,1,1-Trichloroethane	ND	92	23	92.1	
4-Chlorotoluene	ND	92	9.6	92.1		1,1,2-Trichloroethane	ND	92	22	92.1	
Dibromochloromethane	ND	180	18	92.1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	920	43	92.1	
1,2-Dibromo-3-Chloropropane	ND	460	340	92.1		Trichloroethene	ND	180	17	92.1	
1,2-Dibromoethane	ND	92	41	92.1		Trichlorofluoromethane	ND	920	14	92.1	
Dibromomethane	ND	92	65	92.1		1,2,3-Trichloropropane	ND	180	60	92.1	
1,2-Dichlorobenzene	ND	92	12	92.1		1,2,4-Trimethylbenzene	680	180	11	92.1	
1,3-Dichlorobenzene	ND	92	15	92.1		1,3,5-Trimethylbenzene	240	180	9.1	92.1	
1,4-Dichlorobenzene	ND	92	14	92.1		Vinyl Acetate	ND	920	690	92.1	
Dichlorodifluoromethane	ND	180	18	92.1		Vinyl Chloride	ND	92	20	92.1	
1,1-Dichloroethane	ND	92	15	92.1		p/m-Xylene	2100	180	19	92.1	
1,2-Dichloroethane	ND	92	16	92.1		o-Xylene	780	92	11	92.1	
1,1-Dichloroethene	ND	92	13	92.1		Methyl-t-Butyl Ether (MTBE)	ND	180	12	92.1	
c-1,2-Dichloroethene	ND	92	26	92.1		Tert-Butyl Alcohol (TBA)	ND	1800	1400	92.1	
t-1,2-Dichloroethene	ND	92	23	92.1		Diisopropyl Ether (DIPE)	ND	92	23	92.1	
1,2-Dichloropropane	ND	92	25	92.1		Ethyl-t-Butyl Ether (ETBE)	ND	92	20	92.1	
1,3-Dichloropropane	ND	92	16	92.1		Tert-Amyl-Methyl Ether (TAME)	ND	92	12	92.1	
2,2-Dichloropropane	ND	460	42	92.1		Ethanol	ND	46000	9200	92.1	
1,1-Dichloropropene	ND	180	20	92.1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	91	79-133		1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	100	80-120		Toluene-d8	100	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	ug/kg
Project: DFSP Norwalk / 747565			Page 4 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-10-32	**10-10-2159-4-F**	**10/27/10 13:49**	**Solid**	**GC/MS V V**	**10/27/10**	**10/29/10 12:49**	**101028L04**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	4400	560	87.3		c-1,3-Dichloropropene	ND	87	16	87.3	
Benzene	2000	87	12	87.3		t-1,3-Dichloropropene	ND	170	170	87.3	
Bromobenzene	ND	87	18	87.3		Ethylbenzene	190	87	14	87.3	
Bromochloromethane	ND	170	120	87.3		2-Hexanone	ND	1700	490	87.3	
Bromodichloromethane	ND	87	13	87.3		Isopropylbenzene	56	87	10	87.3	J
Bromoform	ND	440	58	87.3		p-Isopropyltoluene	26	87	10	87.3	J
Bromomethane	ND	1700	160	87.3		Methylene Chloride	ND	870	450	87.3	
2-Butanone	ND	1700	830	87.3		4-Methyl-2-Pentanone	ND	1700	180	87.3	
n-Butylbenzene	51	87	19	87.3	J	Naphthalene	160	870	28	87.3	B,J
sec-Butylbenzene	27	87	9.0	87.3	J	n-Propylbenzene	100	170	89	87.3	J
tert-Butylbenzene	ND	87	11	87.3		Styrene	ND	87	18	87.3	
Carbon Disulfide	ND	870	15	87.3		1,1,1,2-Tetrachloroethane	ND	87	29	87.3	
Carbon Tetrachloride	ND	87	28	87.3		1,1,2,2-Tetrachloroethane	ND	170	20	87.3	
Chlorobenzene	ND	87	13	87.3		Tetrachloroethene	ND	87	15	87.3	
Chloroethane	ND	170	36	87.3		Toluene	74	87	13	87.3	J
Chloroform	ND	87	15	87.3		1,2,3-Trichlorobenzene	ND	170	18	87.3	
Chloromethane	ND	1700	250	87.3		1,2,4-Trichlorobenzene	ND	170	16	87.3	
2-Chlorotoluene	ND	87	10	87.3		1,1,1-Trichloroethane	ND	87	22	87.3	
4-Chlorotoluene	ND	87	9.1	87.3		1,1,2-Trichloroethane	ND	87	21	87.3	
Dibromochloromethane	ND	170	17	87.3		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	870	41	87.3	
1,2-Dibromo-3-Chloropropane	ND	440	320	87.3		Trichloroethene	ND	170	16	87.3	
1,2-Dibromoethane	ND	87	39	87.3		Trichlorofluoromethane	ND	870	14	87.3	
Dibromomethane	ND	87	61	87.3		1,2,3-Trichloropropane	ND	170	57	87.3	
1,2-Dichlorobenzene	ND	87	11	87.3		1,2,4-Trimethylbenzene	340	170	10	87.3	
1,3-Dichlorobenzene	ND	87	14	87.3		1,3,5-Trimethylbenzene	130	170	8.6	87.3	J
1,4-Dichlorobenzene	ND	87	13	87.3		Vinyl Acetate	ND	870	650	87.3	
Dichlorodifluoromethane	ND	170	17	87.3		Vinyl Chloride	ND	87	19	87.3	
1,1-Dichloroethane	ND	87	14	87.3		p/m-Xylene	560	170	18	87.3	
1,2-Dichloroethane	ND	87	15	87.3		o-Xylene	190	87	10	87.3	
1,1-Dichloroethene	ND	87	12	87.3		Methyl-t-Butyl Ether (MTBE)	ND	170	12	87.3	
c-1,2-Dichloroethene	ND	87	25	87.3		Tert-Butyl Alcohol (TBA)	ND	1700	1300	87.3	
t-1,2-Dichloroethene	ND	87	22	87.3		Diisopropyl Ether (DIPE)	ND	87	22	87.3	
1,2-Dichloropropane	ND	87	23	87.3		Ethyl-t-Butyl Ether (ETBE)	ND	87	19	87.3	
1,3-Dichloropropane	ND	87	15	87.3		Tert-Amyl-Methyl Ether (TAME)	ND	87	11	87.3	
2,2-Dichloropropane	ND	440	40	87.3		Ethanol	ND	44000	8700	87.3	
1,1-Dichloropropene	ND	170	19	87.3							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	94	79-133		1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	100	80-120		Toluene-d8	101	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-025-20,715**	**N/A**	**Solid**	**GC/MS V V**	**10/28/10**	**10/29/10 04:00**	**101028L04**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	5000	640	100		c-1,3-Dichloropropene	ND	100	18	100	
Benzene	ND	100	13	100		t-1,3-Dichloropropene	ND	200	190	100	
Bromobenzene	ND	100	21	100		Ethylbenzene	ND	100	15	100	
Bromochloromethane	ND	200	140	100		2-Hexanone	ND	2000	560	100	
Bromodichloromethane	ND	100	15	100		Isopropylbenzene	ND	100	12	100	
Bromoform	ND	500	66	100		p-Isopropyltoluene	ND	100	12	100	
Bromomethane	ND	2000	180	100		Methylene Chloride	ND	1000	520	100	
2-Butanone	ND	2000	960	100		4-Methyl-2-Pentanone	ND	2000	200	100	
n-Butylbenzene	ND	100	22	100		Naphthalene	43	1000	33	100	J
sec-Butylbenzene	ND	100	10	100		n-Propylbenzene	ND	200	100	100	
tert-Butylbenzene	ND	100	12	100		Styrene	ND	100	21	100	
Carbon Disulfide	ND	1000	18	100		1,1,1,2-Tetrachloroethane	ND	100	33	100	
Carbon Tetrachloride	ND	100	32	100		1,1,2,2-Tetrachloroethane	ND	200	23	100	
Chlorobenzene	ND	100	15	100		Tetrachloroethene	ND	100	17	100	
Chloroethane	ND	200	42	100		Toluene	ND	100	15	100	
Chloroform	ND	100	17	100		1,2,3-Trichlorobenzene	ND	200	20	100	
Chloromethane	ND	2000	290	100		1,2,4-Trichlorobenzene	ND	200	18	100	
2-Chlorotoluene	ND	100	12	100		1,1,1-Trichloroethane	ND	100	25	100	
4-Chlorotoluene	ND	100	10	100		1,1,2-Trichloroethane	ND	100	24	100	
Dibromochloromethane	ND	200	20	100		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	47	100	
1,2-Dibromo-3-Chloropropane	ND	500	370	100		Trichloroethene	ND	200	18	100	
1,2-Dibromoethane	ND	100	45	100		Trichlorofluoromethane	ND	1000	16	100	
Dibromomethane	ND	100	70	100		1,2,3-Trichloropropane	ND	200	65	100	
1,2-Dichlorobenzene	ND	100	13	100		1,2,4-Trimethylbenzene	ND	200	12	100	
1,3-Dichlorobenzene	ND	100	16	100		1,3,5-Trimethylbenzene	ND	200	9.9	100	
1,4-Dichlorobenzene	ND	100	15	100		Vinyl Acetate	ND	1000	750	100	
Dichlorodifluoromethane	ND	200	19	100		Vinyl Chloride	ND	100	21	100	
1,1-Dichloroethane	ND	100	16	100		p/m-Xylene	ND	200	20	100	
1,2-Dichloroethane	ND	100	17	100		o-Xylene	ND	100	11	100	
1,1-Dichloroethene	ND	100	14	100		Methyl-t-Butyl Ether (MTBE)	ND	200	13	100	
c-1,2-Dichloroethene	ND	100	28	100		Tert-Butyl Alcohol (TBA)	ND	2000	1500	100	
t-1,2-Dichloroethene	ND	100	25	100		Diisopropyl Ether (DIPE)	ND	100	25	100	
1,2-Dichloropropane	ND	100	27	100		Ethyl-t-Butyl Ether (ETBE)	ND	100	21	100	
1,3-Dichloropropane	ND	100	18	100		Tert-Amyl-Methyl Ether (TAME)	ND	100	13	100	
2,2-Dichloropropane	ND	500	46	100		Ethanol	ND	50000	10000	100	
1,1-Dichloropropene	ND	200	22	100							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	79-133		1,2-Dichloroethane-d4	98	71-155	
1,4-Bromofluorobenzene	102	80-120		Toluene-d8	101	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	ug/kg
Project: DFSP Norwalk / 747565			Page 6 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-025-20,733**	**N/A**	**Solid**	**GC/MS V V**	**10/29/10**	**10/29/10 16:36**	**101029L02**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	5000	640	100		c-1,3-Dichloropropene	ND	100	18	100	
Benzene	ND	100	13	100		t-1,3-Dichloropropene	ND	200	190	100	
Bromobenzene	ND	100	21	100		Ethylbenzene	ND	100	15	100	
Bromochloromethane	ND	200	140	100		2-Hexanone	ND	2000	560	100	
Bromodichloromethane	ND	100	15	100		Isopropylbenzene	ND	100	12	100	
Bromoform	ND	500	66	100		p-Isopropyltoluene	ND	100	12	100	
Bromomethane	ND	2000	180	100		Methylene Chloride	ND	1000	520	100	
2-Butanone	ND	2000	960	100		4-Methyl-2-Pentanone	ND	2000	200	100	
n-Butylbenzene	ND	100	22	100		Naphthalene	54	1000	33	100	J
sec-Butylbenzene	ND	100	10	100		n-Propylbenzene	ND	200	100	100	
tert-Butylbenzene	ND	100	12	100		Styrene	ND	100	21	100	
Carbon Disulfide	ND	1000	18	100		1,1,1,2-Tetrachloroethane	ND	100	33	100	
Carbon Tetrachloride	ND	100	32	100		1,1,2,2-Tetrachloroethane	ND	200	23	100	
Chlorobenzene	ND	100	15	100		Tetrachloroethene	ND	100	17	100	
Chloroethane	ND	200	42	100		Toluene	20	100	15	100	J
Chloroform	ND	100	17	100		1,2,3-Trichlorobenzene	23	200	20	100	J
Chloromethane	ND	2000	290	100		1,2,4-Trichlorobenzene	22	200	18	100	J
2-Chlorotoluene	12	100	12	100	J	1,1,1-Trichloroethane	ND	100	25	100	
4-Chlorotoluene	11	100	10	100	J	1,1,2-Trichloroethane	ND	100	24	100	
Dibromochloromethane	ND	200	20	100		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	47	100	
1,2-Dibromo-3-Chloropropane	ND	500	370	100		Trichloroethene	ND	200	18	100	
1,2-Dibromoethane	ND	100	45	100		Trichlorofluoromethane	ND	1000	16	100	
Dibromomethane	ND	100	70	100		1,2,3-Trichloropropane	ND	200	65	100	
1,2-Dichlorobenzene	ND	100	13	100		1,2,4-Trimethylbenzene	32	200	12	100	J
1,3-Dichlorobenzene	ND	100	16	100		1,3,5-Trimethylbenzene	13	200	9.9	100	J
1,4-Dichlorobenzene	ND	100	15	100		Vinyl Acetate	ND	1000	750	100	
Dichlorodifluoromethane	ND	200	19	100		Vinyl Chloride	ND	100	21	100	
1,1-Dichloroethane	ND	100	16	100		p/m-Xylene	49	200	20	100	J
1,2-Dichloroethane	ND	100	17	100		o-Xylene	17	100	11	100	J
1,1-Dichloroethene	ND	100	14	100		Methyl-t-Butyl Ether (MTBE)	ND	200	13	100	
c-1,2-Dichloroethene	ND	100	28	100		Tert-Butyl Alcohol (TBA)	ND	2000	1500	100	
t-1,2-Dichloroethene	ND	100	25	100		Diisopropyl Ether (DIPE)	ND	100	25	100	
1,2-Dichloropropane	ND	100	27	100		Ethyl-t-Butyl Ether (ETBE)	ND	100	21	100	
1,3-Dichloropropane	ND	100	18	100		Tert-Amyl-Methyl Ether (TAME)	ND	100	13	100	
2,2-Dichloropropane	ND	500	46	100		Ethanol	ND	50000	10000	100	
1,1-Dichloropropene	ND	200	22	100							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	97	79-133		1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	102	80-120		Toluene-d8	100	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5035
		Method:	EPA 8260B
		Units:	ug/kg
Project: DFSP Norwalk / 747565			Page 7 of 7

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-025-20,760**	**N/A**	**Solid**	**GC/MS V V**	**11/01/10**	**11/02/10 04:52**	**101101L04**

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acetone	ND	5000	640	100		c-1,3-Dichloropropene	ND	100	18	100	
Benzene	ND	100	13	100		t-1,3-Dichloropropene	ND	200	190	100	
Bromobenzene	ND	100	21	100		Ethylbenzene	ND	100	15	100	
Bromochloromethane	ND	200	140	100		2-Hexanone	ND	2000	560	100	
Bromodichloromethane	ND	100	15	100		Isopropylbenzene	ND	100	12	100	
Bromoform	ND	500	66	100		p-Isopropyltoluene	ND	100	12	100	
Bromomethane	200	2000	180	100	J	Methylene Chloride	ND	1000	520	100	
2-Butanone	ND	2000	960	100		4-Methyl-2-Pentanone	ND	2000	200	100	
n-Butylbenzene	ND	100	22	100		Naphthalene	37	1000	33	100	J
sec-Butylbenzene	ND	100	10	100		n-Propylbenzene	ND	200	100	100	
tert-Butylbenzene	ND	100	12	100		Styrene	ND	100	21	100	
Carbon Disulfide	ND	1000	18	100		1,1,1,2-Tetrachloroethane	ND	100	33	100	
Carbon Tetrachloride	ND	100	32	100		1,1,2,2-Tetrachloroethane	ND	200	23	100	
Chlorobenzene	ND	100	15	100		Tetrachloroethene	ND	100	17	100	
Chloroethane	ND	200	42	100		Toluene	ND	100	15	100	
Chloroform	ND	100	17	100		1,2,3-Trichlorobenzene	ND	200	20	100	
Chloromethane	ND	2000	290	100		1,2,4-Trichlorobenzene	ND	200	18	100	
2-Chlorotoluene	ND	100	12	100		1,1,1-Trichloroethane	ND	100	25	100	
4-Chlorotoluene	ND	100	10	100		1,1,2-Trichloroethane	ND	100	24	100	
Dibromochloromethane	ND	200	20	100		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	47	100	
1,2-Dibromo-3-Chloropropane	ND	500	370	100		Trichloroethene	ND	200	18	100	
1,2-Dibromoethane	ND	100	45	100		Trichlorofluoromethane	ND	1000	16	100	
Dibromomethane	ND	100	70	100		1,2,3-Trichloropropane	ND	200	65	100	
1,2-Dichlorobenzene	ND	100	13	100		1,2,4-Trimethylbenzene	ND	200	12	100	
1,3-Dichlorobenzene	ND	100	16	100		1,3,5-Trimethylbenzene	ND	200	9.9	100	
1,4-Dichlorobenzene	ND	100	15	100		Vinyl Acetate	ND	1000	750	100	
Dichlorodifluoromethane	ND	200	19	100		Vinyl Chloride	ND	100	21	100	
1,1-Dichloroethane	ND	100	16	100		p/m-Xylene	ND	200	20	100	
1,2-Dichloroethane	ND	100	17	100		o-Xylene	ND	100	11	100	
1,1-Dichloroethene	ND	100	14	100		Methyl-t-Butyl Ether (MTBE)	ND	200	13	100	
c-1,2-Dichloroethene	ND	100	28	100		Tert-Butyl Alcohol (TBA)	ND	2000	1500	100	
t-1,2-Dichloroethene	ND	100	25	100		Diisopropyl Ether (DIPE)	ND	100	25	100	
1,2-Dichloropropane	ND	100	27	100		Ethyl-t-Butyl Ether (ETBE)	ND	100	21	100	
1,3-Dichloropropane	ND	100	18	100		Tert-Amyl-Methyl Ether (TAME)	ND	100	13	100	
2,2-Dichloropropane	ND	500	46	100		Ethanol	ND	50000	10000	100	
1,1-Dichloropropene	ND	200	22	100							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	101	79-133		1,2-Dichloroethane-d4	103	71-155	
1,4-Bromofluorobenzene	101	80-120		Toluene-d8	101	80-120	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	10/27/10
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5030B
		Method:	EPA 8260B (M) VPH
		Units:	ug/kg

Project: DFSP Norwalk / 747565

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-5-28	**10-10-2159-1-A**	**10/27/10 11:47**	**Solid**	**GC/MS UU**	**10/28/10**	**11/03/10 14:57**	**101103L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aliphatic Hydrocarbons (C5-C8)	1400000	500000	5000		Aromatic Hydrocarbons (C6-C8)	2100000	25000	5000	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Toluene-d8	105	75-125			Toluene-d8-TPPH	104	75-125		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UV-12-30	**10-10-2159-3-B**	**10/27/10 13:19**	**Solid**	**GC/MS UU**	**10/28/10**	**11/03/10 15:24**	**101103L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aliphatic Hydrocarbons (C5-C8)	52000	10000	100		Aromatic Hydrocarbons (C6-C8)	15000	500	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Toluene-d8	103	75-125			Toluene-d8-TPPH	103	75-125		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-13-035-69**	**N/A**	**Solid**	**GC/MS UU**	**11/03/10**	**11/03/10 13:34**	**101103L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Aliphatic Hydrocarbons (C5-C8)	ND	10000	100		Aromatic Hydrocarbons (C6-C8)	ND	500	100	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Toluene-d8	100	75-125			Toluene-d8-TPPH	99	75-125		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UV-12-30	**Solid**	**GC 27**	**10/30/10**	**11/01/10**	**101030S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as JP5	516	511	64-130	1	0-15	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 3550B
Method: EPA 8015B (M) EPH

Project DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UV-12-30	**Solid**	**GC 50**	**10/28/10**	**10/29/10**	**101028S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aliphatic Hydrocarbons (C9-C18)	0	0	40-140	35	0-50	3
Aliphatic Hydrocarbons (C19-C32)	107	99	40-140	8	0-50	
Aromatic Hydrocarbons (C9-C16)	79	54	40-140	15	0-50	
Aromatic Hydrocarbons (C17-C32)	105	99	40-140	6	0-50	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: 10/27/10
Work Order No: 10-10-2159
Preparation: EPA 5030B
Method: EPA 8260B (M) VPH

Project DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UV-12-30	**Solid**	**GC/MS UU**	**10/28/10**	**11/03/10**	**101103S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aliphatic Hydrocarbons (C5-C8)	25	26	65-135	1	0-30	3
Aromatic Hydrocarbons (C6-C8)	19	17	65-135	8	0-30	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.		Date Received:	N/A
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-295-43	**Solid**	**GC 27**	**10/30/10**	**10/30/10**	**101030B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as JP5	95	91	75-123	4	0-12	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received:	N/A
Work Order No:	10-10-2159
Preparation:	EPA 3550B
Method:	EPA 8015B (M) EPH

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-033-26	**Solid**	**GC 50**	**10/28/10**	**10/29/10**	**101028L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aliphatic Hydrocarbons (C9-C18)	128	113	40-140	13	0-25	
Aliphatic Hydrocarbons (C19-C32)	108	92	40-140	15	0-25	
Aromatic Hydrocarbons (C9-C16)	95	90	40-140	6	0-25	
Aromatic Hydrocarbons (C17-C32)	95	89	40-140	6	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received:	N/A
Work Order No:	10-10-2159
Preparation:	EPA 5035
Method:	EPA 8015B (M)

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-3,095	**Solid**	**GC 29**	**11/01/10**	**11/01/10**	**101101B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	113	113	55-139	0	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received:	N/A
Work Order No:	10-10-2159
Preparation:	EPA 5035
Method:	EPA 8015B (M)

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-285-3,107	**Solid**	**GC 18**	**11/01/10**	**11/02/10**	**101101B03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	90	91	55-139	2	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-025-20,715	**Solid**	**GC/MS V V**	**10/28/10**	**10/29/10**	**101028L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	96	97	80-120	73-127	1	0-20	
Carbon Tetrachloride	95	93	65-137	53-149	1	0-20	
Chlorobenzene	97	98	80-120	73-127	2	0-20	
1,2-Dibromoethane	104	104	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	94	95	80-120	73-127	1	0-20	
1,2-Dichloroethane	102	104	80-120	73-127	2	0-20	
1,1-Dichloroethene	96	96	68-128	58-138	0	0-20	
Ethylbenzene	96	98	80-120	73-127	2	0-20	
Toluene	96	99	80-120	73-127	3	0-20	
Trichloroethene	89	93	80-120	73-127	5	0-20	
Vinyl Chloride	105	103	67-127	57-137	2	0-20	
Methyl-t-Butyl Ether (MTBE)	101	99	70-124	61-133	2	0-20	
Tert-Butyl Alcohol (TBA)	101	107	73-121	65-129	6	0-20	
Diisopropyl Ether (DIPE)	100	97	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	102	99	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	99	100	74-122	66-130	1	0-20	
Ethanol	93	104	51-135	37-149	11	0-27	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-025-20,733	**Solid**	**GC/MS V V**	**10/29/10**	**10/29/10**	**101029L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	96	96	80-120	73-127	0	0-20	
Carbon Tetrachloride	96	96	65-137	53-149	0	0-20	
Chlorobenzene	100	99	80-120	73-127	0	0-20	
1,2-Dibromoethane	104	105	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	99	97	80-120	73-127	2	0-20	
1,2-Dichloroethane	103	102	80-120	73-127	0	0-20	
1,1-Dichloroethene	94	94	68-128	58-138	0	0-20	
Ethylbenzene	100	99	80-120	73-127	1	0-20	
Toluene	98	98	80-120	73-127	0	0-20	
Trichloroethene	90	89	80-120	73-127	2	0-20	
Vinyl Chloride	102	101	67-127	57-137	1	0-20	
Methyl-t-Butyl Ether (MTBE)	99	99	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	101	99	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	93	94	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	100	101	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	103	103	74-122	66-130	0	0-20	
Ethanol	83	82	51-135	37-149	2	0-27	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-10-2159
Preparation: EPA 5035
Method: EPA 8260B

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-025-20,760	**Solid**	**GC/MS V V**	**11/01/10**	**11/02/10**	**101101L04**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	97	98	80-120	73-127	1	0-20	
Carbon Tetrachloride	87	88	65-137	53-149	2	0-20	
Chlorobenzene	97	98	80-120	73-127	1	0-20	
1,2-Dibromoethane	103	105	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	95	96	80-120	73-127	2	0-20	
1,2-Dichloroethane	103	105	80-120	73-127	2	0-20	
1,1-Dichloroethene	93	95	68-128	58-138	2	0-20	
Ethylbenzene	97	97	80-120	73-127	0	0-20	
Toluene	97	97	80-120	73-127	1	0-20	
Trichloroethene	87	88	80-120	73-127	1	0-20	
Vinyl Chloride	109	109	67-127	57-137	0	0-20	
Methyl-t-Butyl Ether (MTBE)	96	99	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	101	91	73-121	65-129	10	0-20	
Diisopropyl Ether (DIPE)	96	97	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	99	101	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	98	100	74-122	66-130	2	0-20	
Ethanol	102	83	51-135	37-149	21	0-27	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.		Date Received:	N/A
100 West Walnut Street		Work Order No:	10-10-2159
Pasadena, CA 91124-0002		Preparation:	EPA 5030B
		Method:	EPA 8260B (M) VPH

Project: DFSP Norwalk / 747565

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-035-69	**Solid**	**GC/MS UU**	**11/03/10**	**11/03/10**	**101103L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aliphatic Hydrocarbons (C5-C8)	104	88	65-135	18	0-30	
Aromatic Hydrocarbons (C6-C8)	101	100	65-135	1	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-10-2159

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Calscience Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

WO # / LAB USE ONLY: 10-2159

Date: 10.27.10

Page: 1 of 1

LABORATORY CLIENT: Parsons

ADDRESS: 100 W. Walnut Street

CITY: Pasadena STATE: CA ZIP: 91124

TEL: 626.665.8336 E-MAIL:

CLIENT PROJECT NAME / NUMBER: DFSP-Norwalk/747565

P.O. NO.:

PROJECT CONTACT: Mary Lucas

SAMPLER(S): (PRINT) Quin Kinnebrew

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	*TPH (g) or GRO	TPH (d) or DRO or (C6-C36) or (C6-C44)	*TPH (JP-5)	BTEX / MTBE (8260) or ( )	*VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	Air - VOCs (TO-14A) or (TO-15)	Air - TPH (g) [TO-3]	TPH Fraction	Pore Fluid Saturation	Grain Size Distribution
1	UV-5-28	10.27.10	1147	Soil	10				X		X		X											X	X	X
2	UV-2-30	↓	1218	↓	8				X		X		X											X		
3	UV-12-30	↓	1319	↓	8				X		X		X											X		
4	UV-10-32	↓	1349	↓	8				X		X		X											X		

Relinquished by: (Signature) Quin Kinnebrew	Received by: (Signature/Affiliation) Milton L Gradella	Date: 10.27.10	Time: 1359
Relinquished by: (Signature) Milton L Gradella	Received by: (Signature/Affiliation) Dannyle CEL	Date: 10/27/10	Time: 14:35
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

06/01/10 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-10-2159

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Parsons DATE: 10/27/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.8 °C + 0.5 °C (CF) = 2.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Initial:** bL

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** bL

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** PC

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☑ WSC 10-27-10	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (2 5) ☑EnCores® (6) ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na**

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** PC

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WSC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** WSC

Ranjit Clarke

From: Lucas, Mary [Mary.Lucas@parsons.com]
Sent: Thursday, October 28, 2010 11:30 AM
To: Ranjit Clarke
Subject: RE: DFSP Norwalk / 747565 (10/27/10)

Thanks Ranjit-
Let's just analyze UV-5 and UV-12 for EPH/VPH breakdown.
M

From: Ranjit Clarke [mailto:RClarke@calscience.com]
Sent: Thursday, October 28, 2010 10:03 AM
To: Lucas, Mary
Subject: COC: DFSP Norwalk / 747565 (10/27/10)

Mary,

Attached is the COC for the samples collected on 10/27/10. Also attached are the RL/MDL lists for the EPH, VPH and Carbon Chain we discussed. Often "TPH Fractionation" refers to the EPH/VPH breakdown. Please check with the regulator to see if you require the EPH/VPH (aromatic/aliphatic breakdown) or if a simple carbon chain would suffice. The carbon chain would only be $55 while the EPA/VPH combo would be approximately $300.

Thanks,

Ranjit Clarke
Project Manager
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 714-895-5494 x222
Fax: 714-894-7501
RClarke@calscience.com

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

January 10, 2011

Mary Lucas
Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Subject: **Calscience Work Order No.: 10-11-1740**
Client Reference: DFSP-Norwalk / VMP

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/22/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Ranjit K. J. Clarke

Calscience Environmental
Laboratories, Inc.
Ranjit Clarke
Project Manager

Calscience Environmental Laboratories, Inc.

ACCREDITED IN ACCORDANCE WITH nelac

Work Order Case Narrative

Project Name: **DFSP-Norwalk / VMP**
Calscience Work Order Number: **10-11-1740**

1. Unit Conversion:

   The original report for this SDG submitted all sample results in ppb (v/v) units. The results in this supplemental report are submitted in ug/L. No other changes have been made to the results previously reported.

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-32-05-111910	**10-11-1740-1-A**	**11/19/10 12:30**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 19:38**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.031	0.012	2.45		t-1,3-Dichloropropene	ND	0.011	2.45	
Benzene	ND	0.0039	2.45		Ethyl-t-Butyl Ether (ETBE)	ND	0.020	2.45	
Benzyl Chloride	ND	0.019	2.45		Ethylbenzene	ND	0.0053	2.45	
Bromodichloromethane	ND	0.0082	2.45		4-Ethyltoluene	ND	0.0060	2.45	
Bromoform	ND	0.013	2.45		Hexachloro-1,3-Butadiene	ND	0.039	2.45	
Bromomethane	ND	0.0048	2.45		2-Hexanone	ND	0.015	2.45	
2-Butanone	ND	0.011	2.45		Methyl-t-Butyl Ether (MTBE)	ND	0.018	2.45	
Carbon Disulfide	ND	0.015	2.45		Methylene Chloride	ND	0.043	2.45	
Carbon Tetrachloride	ND	0.0077	2.45		4-Methyl-2-Pentanone	ND	0.015	2.45	
Chlorobenzene	ND	0.0056	2.45		o-Xylene	ND	0.0053	2.45	
Chloroethane	ND	0.0032	2.45		p/m-Xylene	ND	0.021	2.45	
Chloroform	ND	0.0060	2.45		Styrene	ND	0.016	2.45	
Chloromethane	ND	0.0025	2.45		Tert-Amyl-Methyl Ether (TAME)	ND	0.020	2.45	
Dibromochloromethane	ND	0.010	2.45		Tert-Butyl Alcohol (TBA)	ND	0.015	2.45	
Dichlorodifluoromethane	ND	0.0061	2.45		Tetrachloroethene	0.11	0.0083	2.45	
Diisopropyl Ether (DIPE)	ND	0.020	2.45		Toluene	ND	0.0046	2.45	
1,1-Dichloroethane	ND	0.0050	2.45		Trichloroethene	ND	0.0066	2.45	
1,1-Dichloroethene	ND	0.0049	2.45		Trichlorofluoromethane	ND	0.014	2.45	
1,2-Dibromoethane	ND	0.0094	2.45		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.028	2.45	
Dichlorotetrafluoroethane	ND	0.034	2.45		1,1,1-Trichloroethane	ND	0.0067	2.45	
1,2-Dichlorobenzene	ND	0.0074	2.45		1,1,2-Trichloroethane	ND	0.0067	2.45	
1,2-Dichloroethane	ND	0.0050	2.45		1,3,5-Trimethylbenzene	ND	0.0060	2.45	
1,2-Dichloropropane	ND	0.0057	2.45		1,1,2,2-Tetrachloroethane	ND	0.017	2.45	
1,3-Dichlorobenzene	ND	0.0074	2.45		1,2,4-Trimethylbenzene	ND	0.018	2.45	
1,4-Dichlorobenzene	ND	0.0074	2.45		1,2,4-Trichlorobenzene	ND	0.036	2.45	
c-1,3-Dichloropropene	ND	0.0056	2.45		Vinyl Acetate	ND	0.017	2.45	
c-1,2-Dichloroethene	ND	0.0049	2.45		Vinyl Chloride	ND	0.0031	2.45	
t-1,2-Dichloroethene	ND	0.0049	2.45						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	95	57-129		1,2-Dichloroethane-d4	93	47-137	
Toluene-d8	91	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L
Project: DFSP-Norwalk / VMP			Page 2 of 19

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-32-15-111910	**10-11-1740-2-A**	**11/19/10 12:35**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 20:26**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.15	0.011	2.37		t-1,3-Dichloropropene	ND	0.011	2.37	
Benzene	ND	0.0038	2.37		Ethyl-t-Butyl Ether (ETBE)	ND	0.020	2.37	
Benzyl Chloride	ND	0.018	2.37		Ethylbenzene	0.0064	0.0051	2.37	
Bromodichloromethane	ND	0.0079	2.37		4-Ethyltoluene	ND	0.0058	2.37	
Bromoform	ND	0.012	2.37		Hexachloro-1,3-Butadiene	ND	0.038	2.37	
Bromomethane	ND	0.0046	2.37		2-Hexanone	ND	0.015	2.37	
2-Butanone	0.028	0.010	2.37		Methyl-t-Butyl Ether (MTBE)	ND	0.017	2.37	
Carbon Disulfide	ND	0.015	2.37		Methylene Chloride	ND	0.041	2.37	
Carbon Tetrachloride	ND	0.0075	2.37		4-Methyl-2-Pentanone	ND	0.015	2.37	
Chlorobenzene	ND	0.0055	2.37		o-Xylene	0.015	0.0051	2.37	
Chloroethane	ND	0.0031	2.37		p/m-Xylene	0.024	0.021	2.37	
Chloroform	ND	0.0058	2.37		Styrene	ND	0.015	2.37	
Chloromethane	ND	0.0024	2.37		Tert-Amyl-Methyl Ether (TAME)	ND	0.020	2.37	
Dibromochloromethane	ND	0.010	2.37		Tert-Butyl Alcohol (TBA)	ND	0.014	2.37	
Dichlorodifluoromethane	ND	0.0059	2.37		Tetrachloroethene	0.31	0.0080	2.37	
Diisopropyl Ether (DIPE)	ND	0.020	2.37		Toluene	0.0067	0.0045	2.37	
1,1-Dichloroethane	ND	0.0048	2.37		Trichloroethene	ND	0.0064	2.37	
1,1-Dichloroethene	ND	0.0047	2.37		Trichlorofluoromethane	ND	0.013	2.37	
1,2-Dibromoethane	ND	0.0091	2.37		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.027	2.37	
Dichlorotetrafluoroethane	ND	0.033	2.37		1,1,1-Trichloroethane	ND	0.0065	2.37	
1,2-Dichlorobenzene	ND	0.0071	2.37		1,1,2-Trichloroethane	ND	0.0065	2.37	
1,2-Dichloroethane	ND	0.0048	2.37		1,3,5-Trimethylbenzene	ND	0.0058	2.37	
1,2-Dichloropropane	ND	0.0055	2.37		1,1,2,2-Tetrachloroethane	ND	0.016	2.37	
1,3-Dichlorobenzene	ND	0.0071	2.37		1,2,4-Trimethylbenzene	ND	0.017	2.37	
1,4-Dichlorobenzene	ND	0.0071	2.37		1,2,4-Trichlorobenzene	ND	0.035	2.37	
c-1,3-Dichloropropene	ND	0.0054	2.37		Vinyl Acetate	ND	0.017	2.37	
c-1,2-Dichloroethene	ND	0.0047	2.37		Vinyl Chloride	ND	0.0030	2.37	
t-1,2-Dichloroethene	ND	0.0047	2.37						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	93	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	92	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-33-05-111910	**10-11-1740-3-A**	**11/19/10 13:20**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 21:14**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.012	2.54		t-1,3-Dichloropropene	ND	0.012	2.54	
Benzene	ND	0.0041	2.54		Ethyl-t-Butyl Ether (ETBE)	ND	0.021	2.54	
Benzyl Chloride	ND	0.020	2.54		Ethylbenzene	ND	0.0055	2.54	
Bromodichloromethane	ND	0.0085	2.54		4-Ethyltoluene	ND	0.0062	2.54	
Bromoform	ND	0.013	2.54		Hexachloro-1,3-Butadiene	ND	0.041	2.54	
Bromomethane	ND	0.0049	2.54		2-Hexanone	ND	0.016	2.54	
2-Butanone	ND	0.011	2.54		Methyl-t-Butyl Ether (MTBE)	ND	0.018	2.54	
Carbon Disulfide	ND	0.016	2.54		Methylene Chloride	ND	0.044	2.54	
Carbon Tetrachloride	ND	0.0080	2.54		4-Methyl-2-Pentanone	ND	0.016	2.54	
Chlorobenzene	ND	0.0058	2.54		o-Xylene	ND	0.0055	2.54	
Chloroethane	ND	0.0034	2.54		p/m-Xylene	ND	0.022	2.54	
Chloroform	ND	0.0062	2.54		Styrene	ND	0.016	2.54	
Chloromethane	ND	0.0026	2.54		Tert-Amyl-Methyl Ether (TAME)	ND	0.021	2.54	
Dibromochloromethane	ND	0.011	2.54		Tert-Butyl Alcohol (TBA)	ND	0.015	2.54	
Dichlorodifluoromethane	ND	0.0063	2.54		Tetrachloroethene	ND	0.0086	2.54	
Diisopropyl Ether (DIPE)	ND	0.021	2.54		Toluene	0.0057	0.0048	2.54	
1,1-Dichloroethane	ND	0.0051	2.54		Trichloroethene	ND	0.0068	2.54	
1,1-Dichloroethene	ND	0.0050	2.54		Trichlorofluoromethane	ND	0.014	2.54	
1,2-Dibromoethane	ND	0.0098	2.54		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.029	2.54	
Dichlorotetrafluoroethane	ND	0.036	2.54		1,1,1-Trichloroethane	ND	0.0069	2.54	
1,2-Dichlorobenzene	ND	0.0076	2.54		1,1,2-Trichloroethane	ND	0.0069	2.54	
1,2-Dichloroethane	ND	0.0051	2.54		1,3,5-Trimethylbenzene	ND	0.0062	2.54	
1,2-Dichloropropane	ND	0.0059	2.54		1,1,2,2-Tetrachloroethane	ND	0.017	2.54	
1,3-Dichlorobenzene	ND	0.0076	2.54		1,2,4-Trimethylbenzene	ND	0.019	2.54	
1,4-Dichlorobenzene	ND	0.0076	2.54		1,2,4-Trichlorobenzene	ND	0.038	2.54	
c-1,3-Dichloropropene	ND	0.0058	2.54		Vinyl Acetate	ND	0.018	2.54	
c-1,2-Dichloroethene	ND	0.0050	2.54		Vinyl Chloride	ND	0.0032	2.54	
t-1,2-Dichloroethene	ND	0.0050	2.54						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	92	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-33-15-111910	**10-11-1740-4-A**	**11/19/10 13:30**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 22:02**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.010	0.0065	1.36		t-1,3-Dichloropropene	ND	0.0062	1.36	
Benzene	ND	0.0022	1.36		Ethyl-t-Butyl Ether (ETBE)	ND	0.011	1.36	
Benzyl Chloride	ND	0.011	1.36		Ethylbenzene	ND	0.0030	1.36	
Bromodichloromethane	ND	0.0046	1.36		4-Ethyltoluene	ND	0.0033	1.36	
Bromoform	ND	0.0070	1.36		Hexachloro-1,3-Butadiene	ND	0.022	1.36	
Bromomethane	ND	0.0026	1.36		2-Hexanone	ND	0.0084	1.36	
2-Butanone	ND	0.0060	1.36		Methyl-t-Butyl Ether (MTBE)	ND	0.0098	1.36	
Carbon Disulfide	ND	0.0085	1.36		Methylene Chloride	ND	0.024	1.36	
Carbon Tetrachloride	ND	0.0043	1.36		4-Methyl-2-Pentanone	ND	0.0084	1.36	
Chlorobenzene	ND	0.0031	1.36		o-Xylene	ND	0.0030	1.36	
Chloroethane	ND	0.0018	1.36		p/m-Xylene	ND	0.012	1.36	
Chloroform	ND	0.0033	1.36		Styrene	ND	0.0087	1.36	
Chloromethane	ND	0.0014	1.36		Tert-Amyl-Methyl Ether (TAME)	ND	0.011	1.36	
Dibromochloromethane	ND	0.0058	1.36		Tert-Butyl Alcohol (TBA)	ND	0.0082	1.36	
Dichlorodifluoromethane	ND	0.0034	1.36		Tetrachloroethene	0.016	0.0046	1.36	
Diisopropyl Ether (DIPE)	ND	0.011	1.36		Toluene	0.0071	0.0026	1.36	
1,1-Dichloroethane	ND	0.0028	1.36		Trichloroethene	ND	0.0037	1.36	
1,1-Dichloroethene	ND	0.0027	1.36		Trichlorofluoromethane	ND	0.0076	1.36	
1,2-Dibromoethane	ND	0.0052	1.36		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.016	1.36	
Dichlorotetrafluoroethane	ND	0.019	1.36		1,1,1-Trichloroethane	ND	0.0037	1.36	
1,2-Dichlorobenzene	ND	0.0041	1.36		1,1,2-Trichloroethane	ND	0.0037	1.36	
1,2-Dichloroethane	ND	0.0028	1.36		1,3,5-Trimethylbenzene	ND	0.0033	1.36	
1,2-Dichloropropane	ND	0.0031	1.36		1,1,2,2-Tetrachloroethane	ND	0.0093	1.36	
1,3-Dichlorobenzene	ND	0.0041	1.36		1,2,4-Trimethylbenzene	ND	0.010	1.36	
1,4-Dichlorobenzene	ND	0.0041	1.36		1,2,4-Trichlorobenzene	ND	0.020	1.36	
c-1,3-Dichloropropene	ND	0.0031	1.36		Vinyl Acetate	ND	0.0096	1.36	
c-1,2-Dichloroethene	ND	0.0027	1.36		Vinyl Chloride	ND	0.0017	1.36	
t-1,2-Dichloroethene	ND	0.0027	1.36						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	92	57-129		1,2-Dichloroethane-d4	103	47-137	
Toluene-d8	94	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-34-05-111910	**10-11-1740-5-A**	**11/19/10 13:45**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 22:50**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.012	2.44		t-1,3-Dichloropropene	ND	0.011	2.44	
Benzene	ND	0.0039	2.44		Ethyl-t-Butyl Ether (ETBE)	ND	0.020	2.44	
Benzyl Chloride	ND	0.019	2.44		Ethylbenzene	ND	0.0053	2.44	
Bromodichloromethane	ND	0.0082	2.44		4-Ethyltoluene	ND	0.0060	2.44	
Bromoform	ND	0.013	2.44		Hexachloro-1,3-Butadiene	ND	0.039	2.44	
Bromomethane	ND	0.0047	2.44		2-Hexanone	ND	0.015	2.44	
2-Butanone	ND	0.011	2.44		Methyl-t-Butyl Ether (MTBE)	ND	0.018	2.44	
Carbon Disulfide	ND	0.015	2.44		Methylene Chloride	ND	0.042	2.44	
Carbon Tetrachloride	ND	0.0077	2.44		4-Methyl-2-Pentanone	ND	0.015	2.44	
Chlorobenzene	ND	0.0056	2.44		o-Xylene	ND	0.0053	2.44	
Chloroethane	ND	0.0032	2.44		p/m-Xylene	ND	0.021	2.44	
Chloroform	ND	0.0060	2.44		Styrene	ND	0.016	2.44	
Chloromethane	ND	0.0025	2.44		Tert-Amyl-Methyl Ether (TAME)	ND	0.020	2.44	
Dibromochloromethane	ND	0.010	2.44		Tert-Butyl Alcohol (TBA)	ND	0.015	2.44	
Dichlorodifluoromethane	0.0067	0.0060	2.44		Tetrachloroethene	ND	0.0083	2.44	
Diisopropyl Ether (DIPE)	ND	0.020	2.44		Toluene	0.0051	0.0046	2.44	
1,1-Dichloroethane	ND	0.0049	2.44		Trichloroethene	ND	0.0066	2.44	
1,1-Dichloroethene	ND	0.0048	2.44		Trichlorofluoromethane	ND	0.014	2.44	
1,2-Dibromoethane	ND	0.0094	2.44		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.028	2.44	
Dichlorotetrafluoroethane	ND	0.034	2.44		1,1,1-Trichloroethane	ND	0.0067	2.44	
1,2-Dichlorobenzene	ND	0.0073	2.44		1,1,2-Trichloroethane	ND	0.0067	2.44	
1,2-Dichloroethane	ND	0.0049	2.44		1,3,5-Trimethylbenzene	ND	0.0060	2.44	
1,2-Dichloropropane	ND	0.0056	2.44		1,1,2,2-Tetrachloroethane	ND	0.017	2.44	
1,3-Dichlorobenzene	ND	0.0073	2.44		1,2,4-Trimethylbenzene	ND	0.018	2.44	
1,4-Dichlorobenzene	ND	0.0073	2.44		1,2,4-Trichlorobenzene	ND	0.036	2.44	
c-1,3-Dichloropropene	ND	0.0055	2.44		Vinyl Acetate	ND	0.017	2.44	
c-1,2-Dichloroethene	ND	0.0048	2.44		Vinyl Chloride	ND	0.0031	2.44	
t-1,2-Dichloroethene	ND	0.0048	2.44						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	96	57-129		1,2-Dichloroethane-d4	104	47-137	
Toluene-d8	96	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-34-15-111910	**10-11-1740-6-A**	**11/19/10 13:50**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 23:38**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.012	2.46		t-1,3-Dichloropropene	ND	0.011	2.46	
Benzene	0.011	0.0039	2.46		Ethyl-t-Butyl Ether (ETBE)	ND	0.021	2.46	
Benzyl Chloride	ND	0.019	2.46		Ethylbenzene	ND	0.0053	2.46	
Bromodichloromethane	ND	0.0082	2.46		4-Ethyltoluene	ND	0.0060	2.46	
Bromoform	ND	0.013	2.46		Hexachloro-1,3-Butadiene	ND	0.039	2.46	
Bromomethane	ND	0.0048	2.46		2-Hexanone	ND	0.015	2.46	
2-Butanone	ND	0.011	2.46		Methyl-t-Butyl Ether (MTBE)	ND	0.018	2.46	
Carbon Disulfide	ND	0.015	2.46		Methylene Chloride	ND	0.043	2.46	
Carbon Tetrachloride	ND	0.0077	2.46		4-Methyl-2-Pentanone	ND	0.015	2.46	
Chlorobenzene	ND	0.0057	2.46		o-Xylene	ND	0.0053	2.46	
Chloroethane	ND	0.0032	2.46		p/m-Xylene	ND	0.021	2.46	
Chloroform	ND	0.0060	2.46		Styrene	ND	0.016	2.46	
Chloromethane	ND	0.0025	2.46		Tert-Amyl-Methyl Ether (TAME)	ND	0.021	2.46	
Dibromochloromethane	ND	0.010	2.46		Tert-Butyl Alcohol (TBA)	ND	0.015	2.46	
Dichlorodifluoromethane	ND	0.0061	2.46		Tetrachloroethene	0.013	0.0083	2.46	
Diisopropyl Ether (DIPE)	ND	0.021	2.46		Toluene	0.026	0.0046	2.46	
1,1-Dichloroethane	ND	0.0050	2.46		Trichloroethene	ND	0.0066	2.46	
1,1-Dichloroethene	ND	0.0049	2.46		Trichlorofluoromethane	ND	0.014	2.46	
1,2-Dibromoethane	ND	0.0095	2.46		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.028	2.46	
Dichlorotetrafluoroethane	ND	0.034	2.46		1,1,1-Trichloroethane	ND	0.0067	2.46	
1,2-Dichlorobenzene	ND	0.0074	2.46		1,1,2-Trichloroethane	ND	0.0067	2.46	
1,2-Dichloroethane	ND	0.0050	2.46		1,3,5-Trimethylbenzene	ND	0.0060	2.46	
1,2-Dichloropropane	ND	0.0057	2.46		1,1,2,2-Tetrachloroethane	ND	0.017	2.46	
1,3-Dichlorobenzene	ND	0.0074	2.46		1,2,4-Trimethylbenzene	ND	0.018	2.46	
1,4-Dichlorobenzene	ND	0.0074	2.46		1,2,4-Trichlorobenzene	ND	0.037	2.46	
c-1,3-Dichloropropene	ND	0.0056	2.46		Vinyl Acetate	ND	0.017	2.46	
c-1,2-Dichloroethene	ND	0.0049	2.46		Vinyl Chloride	ND	0.0031	2.46	
t-1,2-Dichloroethene	ND	0.0049	2.46						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	95	57-129		1,2-Dichloroethane-d4	106	47-137	
Toluene-d8	90	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-35-05-111910	**10-11-1740-7-A**	**11/19/10 14:20**	**Air**	**GC/MS ZZ**	**N/A**	**11/24/10 00:26**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.011	2.38		t-1,3-Dichloropropene	ND	0.011	2.38	
Benzene	ND	0.0038	2.38		Ethyl-t-Butyl Ether (ETBE)	ND	0.020	2.38	
Benzyl Chloride	ND	0.018	2.38		Ethylbenzene	ND	0.0052	2.38	
Bromodichloromethane	ND	0.0080	2.38		4-Ethyltoluene	ND	0.0058	2.38	
Bromoform	ND	0.012	2.38		Hexachloro-1,3-Butadiene	ND	0.038	2.38	
Bromomethane	ND	0.0046	2.38		2-Hexanone	ND	0.015	2.38	
2-Butanone	ND	0.011	2.38		Methyl-t-Butyl Ether (MTBE)	ND	0.017	2.38	
Carbon Disulfide	ND	0.015	2.38		Methylene Chloride	ND	0.041	2.38	
Carbon Tetrachloride	ND	0.0075	2.38		4-Methyl-2-Pentanone	ND	0.015	2.38	
Chlorobenzene	ND	0.0055	2.38		o-Xylene	ND	0.0052	2.38	
Chloroethane	ND	0.0031	2.38		p/m-Xylene	ND	0.021	2.38	
Chloroform	ND	0.0058	2.38		Styrene	ND	0.015	2.38	
Chloromethane	ND	0.0025	2.38		Tert-Amyl-Methyl Ether (TAME)	ND	0.020	2.38	
Dibromochloromethane	ND	0.010	2.38		Tert-Butyl Alcohol (TBA)	ND	0.014	2.38	
Dichlorodifluoromethane	ND	0.0059	2.38		Tetrachloroethene	ND	0.0081	2.38	
Diisopropyl Ether (DIPE)	ND	0.020	2.38		Toluene	ND	0.0045	2.38	
1,1-Dichloroethane	ND	0.0048	2.38		Trichloroethene	ND	0.0064	2.38	
1,1-Dichloroethene	ND	0.0047	2.38		Trichlorofluoromethane	ND	0.013	2.38	
1,2-Dibromoethane	ND	0.0091	2.38		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.027	2.38	
Dichlorotetrafluoroethane	ND	0.033	2.38		1,1,1-Trichloroethane	ND	0.0065	2.38	
1,2-Dichlorobenzene	ND	0.0072	2.38		1,1,2-Trichloroethane	ND	0.0065	2.38	
1,2-Dichloroethane	ND	0.0048	2.38		1,3,5-Trimethylbenzene	ND	0.0058	2.38	
1,2-Dichloropropane	ND	0.0055	2.38		1,1,2,2-Tetrachloroethane	ND	0.016	2.38	
1,3-Dichlorobenzene	ND	0.0072	2.38		1,2,4-Trimethylbenzene	ND	0.018	2.38	
1,4-Dichlorobenzene	ND	0.0072	2.38		1,2,4-Trichlorobenzene	ND	0.035	2.38	
c-1,3-Dichloropropene	ND	0.0054	2.38		Vinyl Acetate	ND	0.017	2.38	
c-1,2-Dichloroethene	ND	0.0047	2.38		Vinyl Chloride	ND	0.0030	2.38	
t-1,2-Dichloroethene	ND	0.0047	2.38						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	96	57-129		1,2-Dichloroethane-d4	102	47-137	
Toluene-d8	93	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-35-05-111910 Dup	**10-11-1740-8-A**	**11/19/10 14:21**	**Air**	**GC/MS ZZ**	**N/A**	**11/24/10 01:14**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.013	0.013	2.67		t-1,3-Dichloropropene	ND	0.012	2.67	
Benzene	ND	0.0043	2.67		Ethyl-t-Butyl Ether (ETBE)	ND	0.022	2.67	
Benzyl Chloride	ND	0.021	2.67		Ethylbenzene	ND	0.0058	2.67	
Bromodichloromethane	ND	0.0089	2.67		4-Ethyltoluene	ND	0.0066	2.67	
Bromoform	ND	0.014	2.67		Hexachloro-1,3-Butadiene	ND	0.043	2.67	
Bromomethane	ND	0.0052	2.67		2-Hexanone	ND	0.016	2.67	
2-Butanone	ND	0.012	2.67		Methyl-t-Butyl Ether (MTBE)	ND	0.019	2.67	
Carbon Disulfide	ND	0.017	2.67		Methylene Chloride	ND	0.046	2.67	
Carbon Tetrachloride	ND	0.0084	2.67		4-Methyl-2-Pentanone	ND	0.016	2.67	
Chlorobenzene	ND	0.0061	2.67		o-Xylene	0.0069	0.0058	2.67	
Chloroethane	ND	0.0035	2.67		p/m-Xylene	ND	0.023	2.67	
Chloroform	ND	0.0065	2.67		Styrene	ND	0.017	2.67	
Chloromethane	ND	0.0028	2.67		Tert-Amyl-Methyl Ether (TAME)	ND	0.022	2.67	
Dibromochloromethane	ND	0.011	2.67		Tert-Butyl Alcohol (TBA)	ND	0.016	2.67	
Dichlorodifluoromethane	ND	0.0066	2.67		Tetrachloroethene	ND	0.0091	2.67	
Diisopropyl Ether (DIPE)	ND	0.022	2.67		Toluene	0.016	0.0050	2.67	
1,1-Dichloroethane	ND	0.0054	2.67		Trichloroethene	ND	0.0072	2.67	
1,1-Dichloroethene	ND	0.0053	2.67		Trichlorofluoromethane	ND	0.015	2.67	
1,2-Dibromoethane	ND	0.010	2.67		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.031	2.67	
Dichlorotetrafluoroethane	ND	0.037	2.67		1,1,1-Trichloroethane	ND	0.0073	2.67	
1,2-Dichlorobenzene	ND	0.0080	2.67		1,1,2-Trichloroethane	ND	0.0073	2.67	
1,2-Dichloroethane	ND	0.0054	2.67		1,3,5-Trimethylbenzene	ND	0.0066	2.67	
1,2-Dichloropropane	ND	0.0062	2.67		1,1,2,2-Tetrachloroethane	ND	0.018	2.67	
1,3-Dichlorobenzene	ND	0.0080	2.67		1,2,4-Trimethylbenzene	ND	0.020	2.67	
1,4-Dichlorobenzene	ND	0.0080	2.67		1,2,4-Trichlorobenzene	ND	0.040	2.67	
c-1,3-Dichloropropene	ND	0.0061	2.67		Vinyl Acetate	ND	0.019	2.67	
c-1,2-Dichloroethene	ND	0.0053	2.67		Vinyl Chloride	ND	0.0034	2.67	
t-1,2-Dichloroethene	ND	0.0053	2.67						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	96	57-129		1,2-Dichloroethane-d4	104	47-137	
Toluene-d8	94	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.	Date Received:	11/22/10
100 West Walnut Street	Work Order No:	10-11-1740
Pasadena, CA 91124-0002	Preparation:	N/A
	Method:	EPA TO-15
	Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-35-15-111910	**10-11-1740-9-A**	**11/19/10 14:30**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 02:31**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.011	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	0.0072	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	0.0027	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	0.0064	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0039	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	89	57-129		1,2-Dichloroethane-d4	86	47-137	
Toluene-d8	92	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-Field Blank-111910	**10-11-1740-10-A**	**11/19/10 14:33**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 03:19**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.022	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0023	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	91	57-129		1,2-Dichloroethane-d4	87	47-137	
Toluene-d8	93	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.	Date Received:	11/22/10
100 West Walnut Street	Work Order No:	10-11-1740
Pasadena, CA 91124-0002	Preparation:	N/A
	Method:	EPA TO-15
	Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-36-05-111910	**10-11-1740-11-A**	**11/19/10 14:55**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 04:08**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.0074	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0033	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	91	57-129		1,2-Dichloroethane-d4	89	47-137	
Toluene-d8	93	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.	Date Received:	11/22/10
100 West Walnut Street	Work Order No:	10-11-1740
Pasadena, CA 91124-0002	Preparation:	N/A
	Method:	EPA TO-15
	Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-36-15-111910	**10-11-1740-12-A**	**11/19/10 15:00**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 04:58**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.0071	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	0.0065	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0030	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	57-129		1,2-Dichloroethane-d4	92	47-137	
Toluene-d8	94	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-37-05-111910	**10-11-1740-13-A**	**11/19/10 15:20**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 05:48**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.0078	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	0.0026	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	ND	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	57-129		1,2-Dichloroethane-d4	94	47-137	
Toluene-d8	94	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-37-15-111910	**10-11-1740-14-A**	**11/19/10 15:25**	**Air**	**GC/MS YY**	**N/A**	**11/23/10 02:04**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.0048	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	0.0028	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0023	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	102	57-129		1,2-Dichloroethane-d4	99	47-137	
Toluene-d8	97	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-38-05-111910	**10-11-1740-15-A**	**11/19/10 15:50**	**Air**	**GC/MS YY**	**N/A**	**11/23/10 02:54**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.0096	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	0.0081	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	0.0029	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0032	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	57-129		1,2-Dichloroethane-d4	101	47-137	
Toluene-d8	98	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
VMP-38-15-111910	**10-11-1740-16-A**	**11/19/10 15:55**	**Air**	**GC/MS YY**	**N/A**	**11/23/10 03:45**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	0.010	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	0.0036	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	0.014	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	0.0097	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	57-129		1,2-Dichloroethane-d4	100	47-137	
Toluene-d8	99	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-8,841**	**N/A**	**Air**	**GC/MS ZZ**	**N/A**	**11/22/10 13:05**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	ND	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	101	57-129		1,2-Dichloroethane-d4	112	47-137	
Toluene-d8	98	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-8,848**	**N/A**	**Air**	**GC/MS YY**	**N/A**	**11/22/10 14:45**	**101122L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	ND	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	106	57-129		1,2-Dichloroethane-d4	103	47-137	
Toluene-d8	97	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Parsons, Inc.		Date Received:	11/22/10
100 West Walnut Street		Work Order No:	10-11-1740
Pasadena, CA 91124-0002		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ug/L

Project: DFSP-Norwalk / VMP

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**095-01-021-8,856**	**N/A**	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10 15:56**	**101123L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Acetone	ND	0.0048	1		t-1,3-Dichloropropene	ND	0.0045	1	
Benzene	ND	0.0016	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.0084	1	
Benzyl Chloride	ND	0.0078	1		Ethylbenzene	ND	0.0022	1	
Bromodichloromethane	ND	0.0034	1		4-Ethyltoluene	ND	0.0025	1	
Bromoform	ND	0.0052	1		Hexachloro-1,3-Butadiene	ND	0.016	1	
Bromomethane	ND	0.0019	1		2-Hexanone	ND	0.0061	1	
2-Butanone	ND	0.0044	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Carbon Disulfide	ND	0.0062	1		Methylene Chloride	ND	0.017	1	
Carbon Tetrachloride	ND	0.0031	1		4-Methyl-2-Pentanone	ND	0.0061	1	
Chlorobenzene	ND	0.0023	1		o-Xylene	ND	0.0022	1	
Chloroethane	ND	0.0013	1		p/m-Xylene	ND	0.0087	1	
Chloroform	ND	0.0024	1		Styrene	ND	0.0064	1	
Chloromethane	ND	0.0010	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.0084	1	
Dibromochloromethane	ND	0.0043	1		Tert-Butyl Alcohol (TBA)	ND	0.0061	1	
Dichlorodifluoromethane	ND	0.0025	1		Tetrachloroethene	ND	0.0034	1	
Diisopropyl Ether (DIPE)	ND	0.0084	1		Toluene	ND	0.0019	1	
1,1-Dichloroethane	ND	0.0020	1		Trichloroethene	ND	0.0027	1	
1,1-Dichloroethene	ND	0.0020	1		Trichlorofluoromethane	ND	0.0056	1	
1,2-Dibromoethane	ND	0.0038	1		1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.011	1	
Dichlorotetrafluoroethane	ND	0.014	1		1,1,1-Trichloroethane	ND	0.0027	1	
1,2-Dichlorobenzene	ND	0.0030	1		1,1,2-Trichloroethane	ND	0.0027	1	
1,2-Dichloroethane	ND	0.0020	1		1,3,5-Trimethylbenzene	ND	0.0025	1	
1,2-Dichloropropane	ND	0.0023	1		1,1,2,2-Tetrachloroethane	ND	0.0069	1	
1,3-Dichlorobenzene	ND	0.0030	1		1,2,4-Trimethylbenzene	ND	0.0074	1	
1,4-Dichlorobenzene	ND	0.0030	1		1,2,4-Trichlorobenzene	ND	0.015	1	
c-1,3-Dichloropropene	ND	0.0023	1		Vinyl Acetate	ND	0.0070	1	
c-1,2-Dichloroethene	ND	0.0020	1		Vinyl Chloride	ND	0.0013	1	
t-1,2-Dichloroethene	ND	0.0020	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	102	57-129		1,2-Dichloroethane-d4	113	47-137	
Toluene-d8	96	78-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-11-1740
Preparation: N/A
Method: EPA TO-15

Project: DFSP-Norwalk / VMP

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-8,848	**Air**	**GC/MS YY**	**N/A**	**11/22/10**	**101122L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	100	107	60-156	44-172	7	0-40	
Carbon Tetrachloride	104	112	64-154	49-169	7	0-32	
1,2-Dibromoethane	126	141	54-144	39-159	12	0-36	
1,2-Dichlorobenzene	112	118	34-160	13-181	5	0-47	
1,2-Dichloroethane	99	100	69-153	55-167	1	0-30	
1,2-Dichloropropane	97	104	67-157	52-172	7	0-35	
1,4-Dichlorobenzene	119	126	36-156	16-176	5	0-47	
c-1,3-Dichloropropene	111	118	61-157	45-173	6	0-35	
Ethylbenzene	125	139	52-154	35-171	11	0-38	
o-Xylene	127	141	52-148	36-164	10	0-38	
p/m-Xylene	127	141	42-156	23-175	11	0-41	
Tetrachloroethene	122	137	56-152	40-168	12	0-40	
Toluene	123	139	56-146	41-161	12	0-43	
Trichloroethene	101	108	63-159	47-175	7	0-34	
1,1,2-Trichloroethane	101	108	65-149	51-163	6	0-37	
Vinyl Chloride	102	103	45-177	23-199	1	0-36	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-11-1740
Preparation: N/A
Method: EPA TO-15

Project: DFSP-Norwalk / VMP

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-8,841	**Air**	**GC/MS ZZ**	**N/A**	**11/22/10**	**101122L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	104	105	60-156	44-172	0	0-40	
Carbon Tetrachloride	111	113	64-154	49-169	1	0-32	
1,2-Dibromoethane	118	118	54-144	39-159	0	0-36	
1,2-Dichlorobenzene	103	97	34-160	13-181	6	0-47	
1,2-Dichloroethane	108	111	69-153	55-167	3	0-30	
1,2-Dichloropropane	109	110	67-157	52-172	1	0-35	
1,4-Dichlorobenzene	102	96	36-156	16-176	5	0-47	
c-1,3-Dichloropropene	118	119	61-157	45-173	1	0-35	
Ethylbenzene	106	105	52-154	35-171	1	0-38	
o-Xylene	107	105	52-148	36-164	1	0-38	
p/m-Xylene	105	106	42-156	23-175	0	0-41	
Tetrachloroethene	114	115	56-152	40-168	1	0-40	
Toluene	105	106	56-146	41-161	1	0-43	
Trichloroethene	107	107	63-159	47-175	1	0-34	
1,1,2-Trichloroethane	107	107	65-149	51-163	0	0-37	
Vinyl Chloride	106	109	45-177	23-199	2	0-36	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Date Received: N/A
Work Order No: 10-11-1740
Preparation: N/A
Method: EPA TO-15

Project: DFSP-Norwalk / VMP

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-021-8,856	**Air**	**GC/MS ZZ**	**N/A**	**11/23/10**	**101123L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	103	104	60-156	44-172	1	0-40	
Carbon Tetrachloride	113	114	64-154	49-169	1	0-32	
1,2-Dibromoethane	115	118	54-144	39-159	3	0-36	
1,2-Dichlorobenzene	95	99	34-160	13-181	4	0-47	
1,2-Dichloroethane	109	109	69-153	55-167	1	0-30	
1,2-Dichloropropane	105	107	67-157	52-172	2	0-35	
1,4-Dichlorobenzene	94	99	36-156	16-176	5	0-47	
c-1,3-Dichloropropene	115	113	61-157	45-173	2	0-35	
Ethylbenzene	102	106	52-154	35-171	4	0-38	
o-Xylene	103	107	52-148	36-164	4	0-38	
p/m-Xylene	100	105	42-156	23-175	4	0-41	
Tetrachloroethene	115	117	56-152	40-168	2	0-40	
Toluene	103	107	56-146	41-161	3	0-43	
Trichloroethene	105	107	63-159	47-175	2	0-34	
1,1,2-Trichloroethane	99	106	65-149	51-163	7	0-37	
Vinyl Chloride	90	95	45-177	23-199	5	0-36	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-11-1740

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Calscience Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

☐ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

Date 11-19-10

Page 1 of 2

LABORATORY CLIENT: Parsons

ADDRESS: 100 W. Walnut St

CITY: Pasadena STATE: CA ZIP:

TEL: 626-665-8336 E-MAIL: mary.lucas@parsons.com

CLIENT PROJECT NAME / NUMBER: DFSP-Norwalk / VMP

P.O. NO.: 747576

PROJECT CONTACT: Mary Lucas

LAB USE ONLY: 1 1 - 1 7 4 0

SAMPLER(S): (PRINT) Glenn Androsko

COELT LOG CODE

COOLER RECEIPT TEMP= °C

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING FORMS ☐ COELT EDF ☐

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	FIELD POINT NAME (FOR COELT EDF)	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (g)	TPH (d) or (C6-C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260B) or ( )	VOCs (8260B)	Oxygenates (8260B)	Encore Prep (5035)	SVOCs (8270C)	Pesticides (8081A)	PCBs (8082)	PNAs (8310) or (8270C)	T22 Metals (6010B/747X)	Cr(VI) [7196A or 7199 or 218.6]	VOCs (TO-14A) or (TO-15)	TPH (g) [TO-3]+			
1	VMP-32-05-111910		11-19-10	1230	Air	1														X				
2	VMP-32-15-111910			1235		1														X				
3	VMP-33-05-111910			1320		1														X				
4	VMP-33-15-111910			1330		1														X				
5	VMP-34-05-111910			1345		1														X				
6	VMP-34-15-111910			1350		1														X				
7	VMP-35-05-111910			1420		1														X				
8	VMP-35-05-111910 Dup			1421		1														X				
9	VMP-35-15-111910			1430		1														X				
10	VMP-Field Blank-111910		↓	1433	↓	1														X				

Relinquished by: (Signature) Glenn Androsko	Received by: (Signature/Affiliation)	Date: 11/22/10	Time: 1020
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 11/22/10	Time: 1100
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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05/01/07 Revision

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☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

Date 11-19-10

Page 2 of 2

LABORATORY CLIENT: Parsons

ADDRESS: 100 W. Walnut St

CITY: Pasadena STATE: CA ZIP:

TEL: 626-665-8336 E-MAIL: mary.lucas@parsons.com

CLIENT PROJECT NAME / NUMBER: DFSP - Norwalk / VMP

P.O. NO.: 747576

PROJECT CONTACT: Mary Lucas

SAMPLER(S): (PRINT) Glenn Androsko

COELT LOG CODE: ☐☐☐☐

COOLER RECEIPT: TEMP= °C

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING FORMS ☐ COELT EDF ☐ _____

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONL	SAMPLE ID	FIELD POINT NAME (FOR COELT EDF)	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH (g)	TPH (d) or (C7-C36) or (C7-C44)	TPH ( )	BTEX / MTBE (8260B) or ( )	VOCs (8260B)	Oxygenates (8260B)	Encore Prep (5035)	SVOCs (8270C)	Pesticides (8081A)	PCBs (8082)	PNAs (8310) or (8270C)	T22 Metals (6010B/747X)	Cr(VI) [7196A or 7199 or 218.6]	VOCs (TO-14A) or (TO-15)	TPH (g) [TO-3]+			
11	VMP-36-05-111910		11-19-10	1455	Air	1														X				
12	VMP-36-15-111910			1500		1														X				
13	VMP-37-05-111910			1520		1														X				
14	VMP-37-15-111910			1525		1														X				
15	VMP-38-05-111910			1550		1														X				
16	VMP-38-15-111910			1555		1														X				
17																								

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Glenn Androsko	CEL	11/22/10	1020
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
		11/22/10	1100
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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10/01/07 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-11-1 7 4 0

SAMPLE RECEIPT FORM

Cooler 0 of 0

CLIENT: Parsons, Inc.

DATE: 11/22/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____•____ °C + 0.5 °C (CF) = ____•____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter **Initial:** AP

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☑ N/A **Initial:** AP

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** RS

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na**

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☑Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** RS

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** RL

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** RL

Calscience
Environmental
Laboratories, Inc.

Supplemental Report 1

November 15, 2010

Subcontract analyses are reported as a stand-alone report.

Mary Lucas
Parsons, Inc.
100 West Walnut Street
Pasadena, CA 91124-0002

Subject: **Calscience Work Order No.: 10-10-2159**
Client Reference: DFSP Norwalk / 747565

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 10/27/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Ranjit K. J. Clarke

Calscience Environmental
Laboratories, Inc.
Ranjit Clarke
Project Manager

Calscience Environmental Laboratories, Inc.

ACCREDITED IN ACCORDANCE WITH nelac

Work Order Case Narrative

Project Name: **DFSP Norwalk / 747565**
Calscience Work Order Number: **10-10-2159**

1. Subcontract Analyses:

   This report contains only the analyses performed by Core Laboratories. The following analyses are included:

   - pore fluid saturation using American Petroleum Institute Method RP40
   - grain size distribution using ASTM International Methods D422 /D4464.

   Three sleeves were submitted to Core Labs in order to have enough sample volume to perform the required analyses. Upon visual inspection, Core determined that two of the sleeves, though collected from the same sampling point, appeared to be very dissimilar in composition. As a result, Core Labs felt that it was prudent to analyze these sleeves as individual samples. The results for both sleeves are included herein.

   As mentioned in the narrative of the Core report, the physical results for the aliquots obtained from the two sleeves were fairly similar. It may be possible to take the average of the two results and use that number as being representative of the sample.

Calscience Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

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Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

WO # / LAB USE ONLY: 10-2159

Date: 10.27.10

Page: 1 of 1

LABORATORY CLIENT: Parsons

ADDRESS: 100 W. Walnut Street

CITY: Pasadena STATE: CA ZIP: 91124

TEL: 626.665.8336 E-MAIL:

CLIENT PROJECT NAME / NUMBER: DFSP-Norwalk/747565

P.O. NO.:

PROJECT CONTACT: Mary Lucas

SAMPLER(S): (PRINT) Quin Kinnebrew

TURNAROUND TIME:
☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	*TPH (g) or GRO	TPH (d) or DRO or (C6-C36) or (C6-C44)	*TPH (JP-5)	BTEX / MTBE (8260) or ( )	*VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010/747X)	Cr(VI) [7196 or 7199 or 218.6]	Air - VOCs (TO-14A) or (TO-15)	Air - TPH (g) [TO-3]	TPH Fraction	Pore Fluid Saturation	Grain Size Distribution
1	UV-5-28	10.27.10	1147	Soil	10				X		X		X											X	X	X
2	UV-2-30	↓	1218	↓	8				X		X		X											X		
3	UV-12-30	↓	1319	↓	8				X		X		X											X		
4	UV-10-32	↓	1349	↓	8				X		X		X											X		

Relinquished by: (Signature) Quin Kinnebrew	Received by: (Signature/Affiliation) Milton L Gradella	Date: 10.27.10	Time: 1359
Relinquished by: (Signature) Milton L Gradella	Received by: (Signature/Affiliation) Dannyle CEL	Date: 10/27/10	Time: 14:35
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

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06/01/10 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-10-2159

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Parsons DATE: 10/27/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.8 °C + 0.5 °C (CF) = 2.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter **Initial:** bL

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A **Initial:** bL

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** PC

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☑ WSC 10-27-10	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☑Sleeve (2 5) ☑EnCores® (6) ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na**

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** PC

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WSC

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** WSC

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

November 12, 2010

Ranjit Clarke
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92641-1432

Re: Physical Properties Analyses
Project: 10-10-2159
CL File No: 410094EN

Dear Mr. Clarke:

The final results of the pore fluid saturation and particle-size distribution determinations performed upon the sample from your 10-10-2159 Project are presented in the attached file. The portions of the sample were not as dissimilar as they appeared from a quick visual examination. I have included the results for both of the sample portions tested but will bill for a single sample..

Appropriate ASTM, EPA or API methodologies were used for this project and SOP's are available on request. The sample was used up during the course of the testing.

We appreciate the opportunity to be of service to Calscience Environmental Laboratories, Inc. and trust these data will prove beneficial in the development of this project. Please do not hesitate to contact us (661-325-5657) if you have any questions regarding these results, or we can be of any additional service.

Sincerely,
Core Laboratories

Jeffry L. Smith
ARP-Supervisor

Petroleum Services Division
3437 Landco Dr.
Bakersfield, California 93308
Tel: 661-325-5657
Fax: 661-325-5808
www.corelab.com

Encl.

PORE FLUID SATURATION DATA

PETROLEUM SERVICES

Calscience Environmental Laboratories, Inc.

Core Lab File No: 410094EN

Project No: 10-10-2159

		METHODS:	API RP 40 / ASTM D2216	API RP 40		API RP 40		API RP 40	
SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	MOISTURE CONTENT, percent	DENSITY, g/cc		POROSITY, %Vb (2)		PORE FLUID SATURATIONS, % Pv (3)	
				DRY BULK	GRAIN	TOTAL	AIR FILLED	WATER	NAPL
UV-5-28-B	NA	V	19.3	1.74	2.69	35.4	1.1	87.6	9.4
UV-5-28-D	NA	V	15.7	1.80	2.69	32.9	4.5	84.1	2.3

(1) Sample Orientation: H = horizontal; V = vertical

(2) Total Porosity = no pore fluids in place; all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids

(3) Water = 0.9996 g/cc, Hydrocarbon = 0.80 g/cc;

Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

SIEVE and LASER PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422/D4464M)

Petroleum Services

Co. : Calscience Environmental Laboratories, Inc.
Proj. No. : 10-10-2159

Core Lab File No : 57111-410094EN
Date : 11/4/2010

Sample ID	Grain Size Description (Mean from Folk)	Median Grain Size, mm	Component Percentages								Silt & Clay
				Sand Size							
			Gravel	VCoarse	Coarse	Medium	Fine	VFine	Silt	Clay	
UV-5-28-B	silt	0.05	0.20	2.03	4.22	9.81	11.96	15.31	48.98	7.49	56.5
UV-5-28-D	silt	0.06	0.00	0.57	2.17	8.34	17.13	22.07	42.46	7.26	49.7

Company : Calscience Environmental Laboratories, Inc.
Proj. No. : 10-10-2159

C.L. File No. : 57111-410094EN
Date : 11/4/2010

Sieve and Laser Particle Size Analysis (Metric)

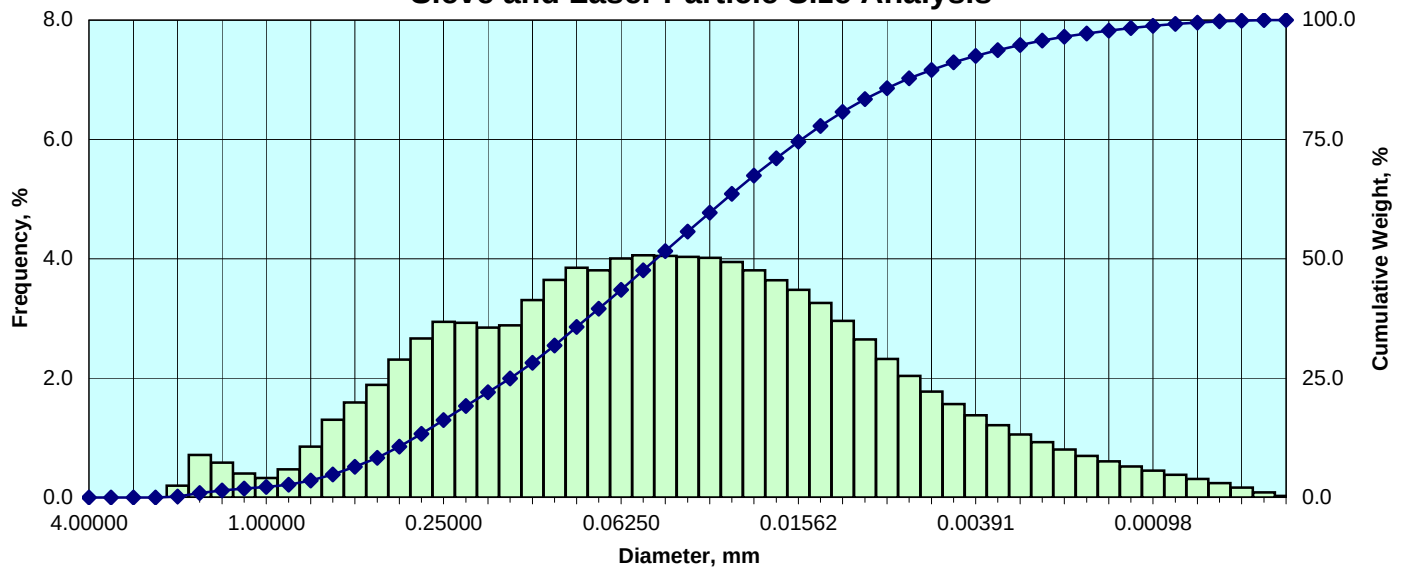
Sample ID	Component Percentages								Percentiles										Sorting Statistics (Folk)				
	Gravel	Sand					Fines		Particle Diameter (mm)										Median	Mean	Sorting	Skew.	Kurt.
		vcgr	cgr	mgr	fgr	vfgr	silt	clay	5	10	16	25	40	50	75	84	90	95	mm	mm	ϕ		
UV-5-28-B	0.20	2.03	4.22	9.81	11.96	15.31	48.98	7.49	0.5814 cgr	0.3696 mgr	0.2532 mgr	0.1478 fgr	0.0727 vfgr	0.0473 silt	0.0153 silt	0.0089 silt	0.0053 silt	0.0027 clay	0.047 silt	0.047 silt	2.385 v. Poor	0.033 near sym	0.972 mesokurtic
UV-5-28-D	0.00	0.57	2.17	8.34	17.13	22.07	42.46	7.26	0.3704 mgr	0.2636 mgr	0.1980 fgr	0.1392 fgr	0.0867 vfgr	0.0630 vfgr	0.0212 silt	0.0111 silt	0.0058 silt	0.0026 clay	0.063 vfgr	0.052 silt	2.123 v. Poor	0.245 fine	1.079 mesokurtic

** Particle-size distribution pattern precludes calculation of these statistical parameters

Company : Calscience Environmental Laboratories, Inc.
Proj. No. : 10-10-2159

CL File No. : 57111-410094EN
Sample ID : UV-5-28-B

Sieve and Laser Particle Size Analysis



Particle Size Distribution

	Diameter				Weight %	
	[US Mesh]	[in.]	[mm]	[ϕ]	[Incl.]	[Cum.]
Granule	5	0.157480	4.00000	-2.00	0.000	0.00
	6	0.132425	3.36359	-1.75	0.000	0.00
	7	0.111355	2.82843	-1.50	0.000	0.00
	8	0.093638	2.37841	-1.25	0.001	0.00
	10	0.078740	2.00000	-1.00	0.198	0.20
V Crse Sand	12	0.066212	1.68179	-0.75	0.712	0.91
	14	0.055678	1.41421	-0.50	0.584	1.49
	16	0.046819	1.18921	-0.25	0.404	1.90
	18	0.039370	1.00000	0.00	0.328	2.23
Coarse Sand	20	0.033106	0.84090	0.25	0.473	2.70
	25	0.027839	0.70711	0.50	0.852	3.55
	30	0.023410	0.59460	0.75	1.300	4.85
	35	0.019685	0.50000	1.00	1.591	6.44
Medium Sand	40	0.016553	0.42045	1.25	1.889	8.33
	45	0.013919	0.35355	1.50	2.311	10.64
	50	0.011705	0.29730	1.75	2.666	13.31
	60	0.009843	0.25000	2.00	2.942	16.25
Fine Sand	70	0.008277	0.21022	2.25	2.926	19.18
	80	0.006960	0.17678	2.50	2.847	22.02
	100	0.005852	0.14865	2.75	2.884	24.91
	120	0.004921	0.12500	3.00	3.307	28.22
V. Fine Sand	140	0.004138	0.10511	3.25	3.648	31.86
	170	0.003480	0.08839	3.50	3.850	35.71
	200	0.002926	0.07433	3.75	3.805	39.52
Silt	230	0.002461	0.06250	4.00	4.007	43.53
	270	0.002069	0.05256	4.25	4.061	47.59
	325	0.001740	0.04419	4.50	4.051	51.64
	400	0.001463	0.03716	4.75	4.032	55.67
	450	0.001230	0.03125	5.00	4.014	59.68
	500	0.001035	0.02628	5.25	3.946	63.63
	635	0.000870	0.02210	5.50	3.806	67.44
		0.000732	0.01858	5.75	3.642	71.08
		0.000615	0.01562	6.00	3.480	74.56
		0.000517	0.01314	6.25	3.262	77.82
		0.000435	0.01105	6.50	2.958	80.78
		0.000366	0.00929	6.75	2.650	83.43
		0.000308	0.00781	7.00	2.323	85.75
		0.000259	0.00657	7.25	2.038	87.79
		0.000217	0.00552	7.50	1.777	89.57
		0.000183	0.00465	7.75	1.567	91.13
		0.000154	0.00391	8.00	1.375	92.51
Clay		0.000129	0.00328	8.25	1.211	93.72
		0.000109	0.00276	8.50	1.057	94.78
		0.000091	0.00232	8.75	0.925	95.70
		0.000077	0.00195	9.00	0.805	96.51
		0.000065	0.00164	9.25	0.697	97.20
		0.000054	0.00138	9.50	0.605	97.81
		0.000046	0.00116	9.75	0.522	98.33
		0.000038	0.00098	10.00	0.450	98.78
		0.000032	0.00082	10.25	0.382	99.16
		0.000027	0.00069	10.50	0.313	99.48
		0.000023	0.00058	10.75	0.242	99.72
		0.000019	0.00049	11.00	0.169	99.89
		0.000016	0.00041	11.25	0.085	99.97
		0.000015	0.00038	11.50	0.026	100.00

Sorting Statistics (Folk)

Parameter	Trask	Inman	Folk
Median	Silt sized		
(in)	0.0019	0.0019	0.0019
(mm)	0.0473	0.0473	0.0473
Mean	Silt sized		
(in)	0.0032	0.0019	0.0019
(mm)	0.0816	0.0475	0.0474
Sorting	V. Poor		
	3.113	0.188	2.385
Skewness	Near symmetrical		
	1.004	0.111	0.033
Kurtosis	Mesokurtic		
	0.182	0.611	0.972

Component Percentages

Gravel	Sand	Silt	Clay	Silt + Clay
0.20	39.32	52.99	7.49	60.48

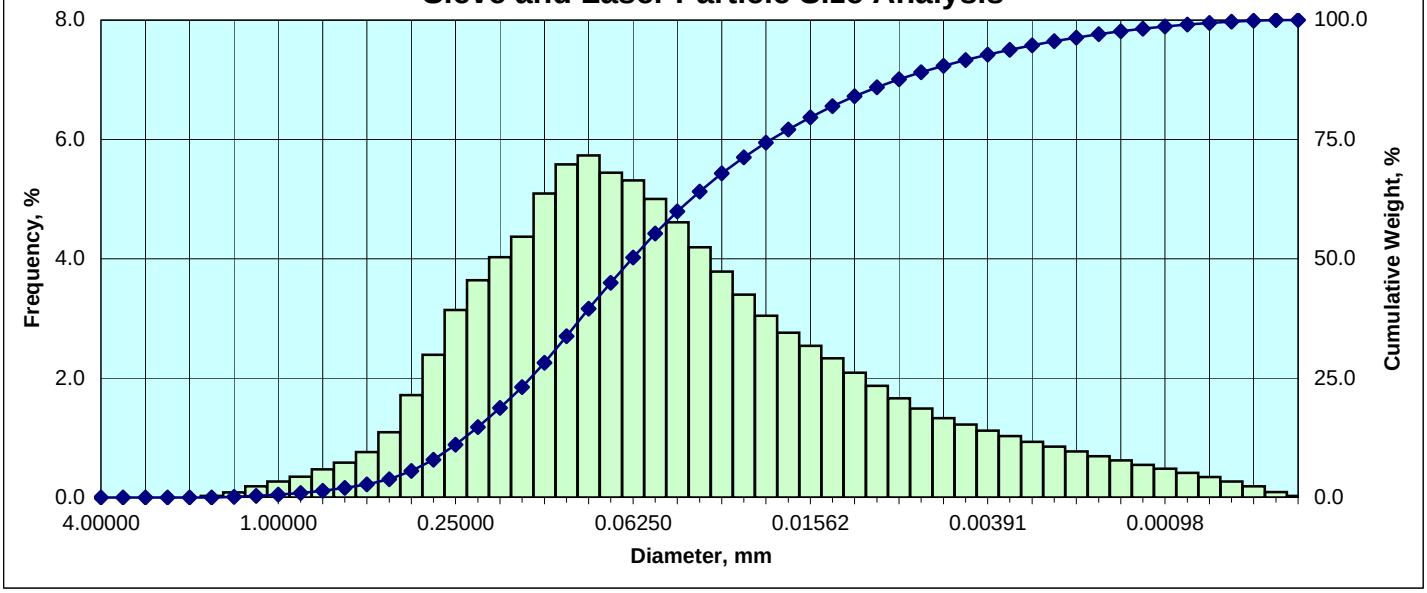
Percentile [Weight, %]	Particle Diameter [in.]	[mm]	[phi]
5	0.0229	0.5814	0.7824
10	0.0146	0.3696	1.4360
16	0.0100	0.2532	1.9818
25	0.0058	0.1478	2.7578
40	0.0029	0.0727	3.7828
50	0.0019	0.0473	4.4020
75	0.0006	0.0153	6.0346
84	0.0004	0.0089	6.8093
90	0.0002	0.0053	7.5654
95	0.0001	0.0027	8.5575

** Distribution pattern precludes calculation of these statistical parameters.

Company : Calscience Environmental Laboratories, Inc.
Proj. No. : 10-10-2159

CL File No. : 57111-410094EN
Sample ID : UV-5-28-D

Sieve and Laser Particle Size Analysis



Particle Size Distribution	Diameter				Weight %	
	[US Mesh]	[in.]	[mm]	[ϕ]	[Incl.]	[Cum.]
Granule	5	0.157480	4.00000	-2.00	0.000	0.00
	6	0.132425	3.36359	-1.75	0.000	0.00
	7	0.111355	2.82843	-1.50	0.000	0.00
	8	0.093638	2.37841	-1.25	0.000	0.00
	10	0.078740	2.00000	-1.00	0.000	0.00
V Crse Sand	12	0.066212	1.68179	-0.75	0.028	0.03
	14	0.055678	1.41421	-0.50	0.086	0.11
	16	0.046819	1.18921	-0.25	0.190	0.30
	18	0.039370	1.00000	0.00	0.267	0.57
Coarse Sand	20	0.033106	0.84090	0.25	0.351	0.92
	25	0.027839	0.70711	0.50	0.472	1.39
	30	0.023410	0.59460	0.75	0.586	1.98
	35	0.019685	0.50000	1.00	0.759	2.74
Medium Sand	40	0.016553	0.42045	1.25	1.093	3.83
	45	0.013919	0.35355	1.50	1.713	5.54
	50	0.011705	0.29730	1.75	2.389	7.93
	60	0.009843	0.25000	2.00	3.144	11.08
Fine Sand	70	0.008277	0.21022	2.25	3.640	14.72
	80	0.006960	0.17678	2.50	4.026	18.75
	100	0.005852	0.14865	2.75	4.368	23.11
	120	0.004921	0.12500	3.00	5.093	28.21
V. Fine Sand	140	0.004138	0.10511	3.25	5.580	33.79
	170	0.003480	0.08839	3.50	5.732	39.52
	200	0.002926	0.07433	3.75	5.444	44.96
Silt	230	0.002461	0.06250	4.00	5.316	50.28
	270	0.002069	0.05256	4.25	5.004	55.28
	325	0.001740	0.04419	4.50	4.612	59.90
	400	0.001463	0.03716	4.75	4.191	64.09
	450	0.001230	0.03125	5.00	3.783	67.87
	500	0.001035	0.02628	5.25	3.399	71.27
	635	0.000870	0.02210	5.50	3.047	74.31
		0.000732	0.01858	5.75	2.762	77.08
		0.000615	0.01562	6.00	2.543	79.62
		0.000517	0.01314	6.25	2.331	81.95
		0.000435	0.01105	6.50	2.090	84.04
		0.000366	0.00929	6.75	1.873	85.91
		0.000308	0.00781	7.00	1.660	87.58
		0.000259	0.00657	7.25	1.489	89.06
		0.000217	0.00552	7.50	1.332	90.40
		0.000183	0.00465	7.75	1.224	91.62
		0.000154	0.00391	8.00	1.120	92.74
Clay		0.000129	0.00328	8.25	1.032	93.77
		0.000109	0.00276	8.50	0.934	94.71
		0.000091	0.00232	8.75	0.854	95.56
		0.000077	0.00195	9.00	0.771	96.33
		0.000065	0.00164	9.25	0.692	97.02
		0.000054	0.00138	9.50	0.620	97.64
		0.000046	0.00116	9.75	0.546	98.19
		0.000038	0.00098	10.00	0.482	98.67
		0.000032	0.00082	10.25	0.413	99.08
		0.000027	0.00069	10.50	0.342	99.43
		0.000023	0.00058	10.75	0.266	99.69
		0.000019	0.00049	11.00	0.185	99.88
		0.000016	0.00041	11.25	0.093	99.97
		0.000015	0.00038	11.50	0.029	100.00

Sorting Statistics (Folk)			
Parameter	Trask	Inman	Folk
Median	Very fine sand sized		
(in)	0.0025	0.0025	0.0025
(mm)	0.0630	0.0630	0.0630
Mean	Silt sized		
(in)	0.0032	0.0018	0.0020
(mm)	0.0802	0.0469	0.0517
Sorting	V. Poor		
	2.563	0.237	2.123
Skewness	Finely skewed		
	0.862	0.490	0.245
Kurtosis	Mesokurtic		
	0.229	0.720	1.079

Component Percentages				
Gravel	Sand	Silt	Clay	Silt + Clay
0.00	44.96	47.78	7.26	55.04

Percentile	Particle Diameter		
[Weight, %]	[in.]	[mm]	[phi]
5	0.0146	0.3704	1.4329
10	0.0104	0.2636	1.9233
16	0.0078	0.1980	2.3367
25	0.0055	0.1392	2.8451
40	0.0034	0.0867	3.5270
50	0.0025	0.0630	3.9890
75	0.0008	0.0212	5.5611
84	0.0004	0.0111	6.4946
90	0.0002	0.0058	7.4226
95	0.0001	0.0026	8.5837

** Distribution pattern precludes calculation of these statistical parameters.

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

TO: Core Labs

CHAIN OF CUSTODY RECORD

DATE: 10/27/10

PAGE: 1 OF 1

LABORATORY CLIENT: Calscience Environmental Laboratories, Inc.	CLIENT PROJECT NAME / NUMBER: 10-10-2159
ADDRESS: 7440 Lincoln Way	PROJECT CONTACT: Ranjit Clarke
CITY: Garden Grove, CA 92841-1427	SAMPLER(S): (PRINT)
TEL: (714) 895-5494 / E-MAIL: rclarke@calscience.com	P.O. NO.: / QUOTE NO.: / LAB USE ONLY: 410094

TURNAROUND TIME

☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ Normal

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)

☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ____/____/____

SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	Pore Fluid Saturation API RP40	Grain Size Distribution ASTM D422/D1140
	UV-5-28	10/27/10	11:47	S	3	X	X

Relinquished by: (Signature) (CALSCIENCE)	Received by / Affiliation: (Signature) ~~FedEx~~ GSO 515249825	Date: 10/28/10	Time: 1600
Relinquished by: (Signature)	Received by / Affiliation: (Signature) Jeff Smith / CoreLab	Date: 10/29/10	Time: 830
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time: