R E P O R T

Preliminary In-Sea Geotechnical Investigation

SALTON SEA RESTORATION PROJECT

Riverside and Imperial Counties, California

Prepared for

Tetra Tech, Inc.
3475 Foothill Boulevard
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URS Project No. 27663042
February 27, 2004

Prepared by

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Subject: Preliminary In-Sea Geotechnical Investigation
Salton Sea Restoration Project
Riverside and Imperial Counties, California
URS Project No. 27663042

Dear Dr. Brownlie:

This letter transmits a report on URS Corporation's preliminary geotechnical investigation to support the selection of a preferred alternative for restoration of the Salton Sea. This investigation was undertaken in accordance with our proposal dated July 17, 2003 and your authorization dated July 24, 2003.

This report presents data that was obtained during the field exploration and laboratory testing programs for the investigation. It also provides preliminary geotechnical considerations for developing conceptual designs for the restoration project, and provides recommendations for additional studies and investigations that should take place, as the restoration concepts are further developed.

We appreciate the opportunity to assist Tetra Tech on this challenging project. If you have any questions regarding this report, or if we can be of further service, please do not hesitate to contact us.

Sincerely,

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ASTM	American Society for Testing and Materials
c’	Effective cohesion
C_α	Coefficient of Secondary Compression
C_c	Compression Index
C_r	Recompression Index
CPT	Cone Penetration Test
CR	Compression Ratio
C_v	Coefficient of Secondary Compression
c_u	Undrained Shear Strength
EIS/EIR	Environmental Impact Statement/Environmental Impact Report
E_s	Elastic Modulus
GPS	Global Positioning System
ICU	Isotropically Consolidated Undrained (Triaxial Compression Test)
LI	Liquidity Index
LL	Liquid Limit
mg/L	Milligrams per Liter
MSL	Mean Sea Level
$(N_1)_{60}$	Normalized SPT sampler blow count
NAD 83	North American Datum 1983
OCR	Overconsolidation Ratio
PI	Plasticity Index
PL	Plastic Limit
psf	Pounds per square foot
q_t	Unit tip resistance from CPT
R_f	Ratio of unit friction to tip resistance from CPT
SBT	Soil Behavior Type
SPT	Standard Penetration Test
SSA	Salton Sea Authority
tsf	Tons per square foot
U_d	Dynamic pore pressure from CPT
USCS	Unified Soil Classification System
USBR	United States Bureau of Reclamation
UU	Unconsolidated Undrained (Triaxial Compression Test)
ϕ'	Effective friction angle
σ_p'	Preconsoldation pressure
σ_v'	Vertical effective stress

This report provides the results of a preliminary geotechnical investigation performed to support the conceptual design of a preferred restoration alternative for the Salton Sea (Sea). Various alternatives have been proposed to control the salinity and the elevation of the Sea. Many of these alternatives include construction of some type of earthen structures (dikes, barriers or dams) within the area currently occupied by the Sea. These structures would reduce the evaporative surface of the Sea, and provide areas for discharge of salt water.

The preliminary geotechnical investigation was performed primarily to evaluate the foundation conditions for earthen embankments. The requirements for preparation of foundations soils for the embankments are a critical item in the conceptual designs of the restoration alternatives. Also, many of the contemplated restoration alternatives involve importing large quantities of materials for embankment construction. A secondary objective of the investigation was to evaluate the potential of obtaining suitable borrow materials from within the Sea for embankment construction.

Previous investigations within the Sea have been very limited. These past investigations have also been primarily focused at the southern end of the Sea. Drilled and sampled borings and Cone Penetrations Tests (CPTs) were utilized to further explore the subsurface conditions within the Sea for this preliminary geotechnical investigation. A self-propelled jack-up barge was utilized to provide a stable platform for the exploration activities. A total of 11 borings and 17 CPTs were completed throughout the Sea during the exploration program, to depths ranging from 30 to 150 feet below the seafloor. A series of borings and CPTs were performed along a mid-Sea alignment, trending southwest to northeast at the narrowest part of the Sea, for a probable dam or barrier location. Soil samples obtained from the borings were further characterized by laboratory testing. This testing included moisture content, bulk density, particle size, plasticity indices (Atterberg limits), strength and consolidation tests.

The preliminary investigation identified six significant stratigraphic layers below the seafloor; a seafloor deposit, a soft lacustrine deposit, an upper alluvial deposit, an upper stiff lacustrine deposit, a lower alluvial deposit, and a lower stiff lacustrine deposit. The seafloor deposit consists of Recent sediments that have most likely been deposited in the lake environment and have never been dried out or desiccated. As a result, they are soft in consistency and weak in strength. The lacustrine deposits are sediments that were laid down in ancient ephermeral lakes and have possibly gone through wetting and drying cycles. As a result, the consistencies and strengths of these materials are variable. The alluvial deposits were encountered near the shoreline of the present Sea, primarily along the western shore. The alluvial deposits do contain some fine sands and typically grade laterally (with distance from the shoreline) into the lacustrine deposits.

The soft seafloor and lacustrine deposits will have a significant impact on the design of embankments in the Sea. In the central and eastern portion of the mid-Sea alignment, these soft soils extend to depths of 40 to 45 feet. The low shear strength of the soft soils will require that they either be removed and replaced with suitable materials, strengthened *in situ*, or the embankment/structure be designed such that instabilities would not occur in the weak soils. Preliminary static stability analyses indicate that some combination of flatter embankment slopes with some overexcavation of the very soft soils may provide a stable embankment. Alternatively, ground improvement could be used to strengthen the foundation soils to allow steeper embankment slopes. However, the seismic response of the embankment may require flatter slopes, ground improvement of the embankment fills, and/or alternative concepts that are not susceptible to seismic instabilities. The soft soils are also compressible, and post-construction settlements will need to be a consideration in the design of any embankment or structure. Preliminary estimates of the settlement magnitudes and rates are provided. Preliminary engineering characterization of the soils' strengths and compressibilities are also provided for use in conceptual design.

The investigation indicates that most of the area of the Sea is immediately underlain by the soft seafloor and lacustrine deposits and areas were not identified that would have more favorable foundation conditions. Selection of favorable embankment alignments could be made based on bathymetry (to minimize height of embankment) and other environmental and political factors. Based on bathymetry and length, the mid-Sea location would provide for an optimum location to maximize reduction in evaporative surface area and minimize embankment quantities.

Large quantities of suitable materials will be required to construct the proposed embankments. The majority of the materials encountered in this investigation were fine-grained; granular materials would be preferred for embankment construction. Some granular (sandy) materials were identified within the alluvial deposits that could possibly be excavated using dredging techniques and used as borrow for embankments. These were located primarily along the western shore of the Sea. However, hydraulically placed embankment fills would be susceptible to seismically induced liquefaction.

Additional studies should be performed to support selection and design of a preferred alternative for restoration of the Sea. Conceptual designs should be developed for restoration alternatives that recognize the subbottom conditions as they are currently defined. This may involve modifications of the conceptual designs that have already been developed for the mid-Sea dam or barrier, or entirely new concepts.

The San Andreas Fault is mapped immediately east of the Sea. Seismicity data and the results of the current investigations do not preclude that active fault strands could cross the locations of planned structures. Marine geophysical surveys should be performed to evaluate the presence, or absence of faults within the Sea and the potential for fault rupture.

As the restoration concepts are further developed, additional geotechnical explorations will be warranted. The subsurface conditions encountered in those investigations could significantly influence the type of the restoration alternative and its location. These additional investigations should include marine geophysical surveys followed by in-Sea explorations. A reconnaissance level study should also be undertaken to identify potential upland borrow areas for both granular materials and riprap in the vicinity of the Sea. Subsurface explorations should then be performed in the areas identified to confirm the quality of the potential borrow materials.

The San Andreas, or other nearby faults, will produce strong ground shaking at the Sea. Seismic response studies should be performed of any proposed embankments or structures to evaluate whether suitable performance will be obtained with the conceptual designs.

SECTION 1 INTRODUCTION

This report presents the results of URS Corporation's (URS) preliminary geotechnical investigation to support selection of a preferred alternative for restoration of the Salton Sea (Sea). The Sea is located in Riverside and Imperial Counties in southern California, south of Indio and north of El Centro. The vicinity of the Sea is shown in Figure 1. The Sea is situated in a closed basin, more than 200 feet below sea (ocean) level, and has no natural outlet. The primary objective of the restoration alternative will to be control the salinity and elevation of the Sea.

This report presents results of the field explorations and laboratory testing that have been performed as part of the investigation. It also presents geotechnical considerations for conceptual development of restoration alternatives, and recommendations for additional studies that should be undertaken. This report has been prepared for Tetra Tech, Inc. and the Salton Sea Authority (SSA) for use in development of restoration alternatives.

1.1 BACKGROUND OF RESTORATION PROJECT

The current Sea was formed between 1905 and 1907 when an irrigation control structure on the Colorado River (in Mexico) was breached, allowing the entire river to flow into the Salton Basin for a period of 18 months. Since that time, agricultural drainage flows from the Imperial, Coachella, and Mexicali Valleys has sustained the Sea. Recent annual inflows have been in balance with the evaporative losses from the Sea, resulting in a fairly stable Sea elevation. However, seasonal fluctuations have contributed to alternately flooding and stranding of facilities along the shoreline. Currently, the Sea is about 35 miles long and 15 miles wide with a surface elevation of about –227 feet Mean Sea Level (MSL).

The inflows contribute four to five million tons of salt each year to the Sea. Since the Sea is a terminal body of water, the salinity of the Sea has continued to rise since it was flooded. Currently, the salinity of the Sea is about 44,000 milligrams per liter (mg/L); about 25% saltier than the ocean. Water quality issues are compounded by eutrophic (nutrient-rich) conditions that stimulate the growth in aquatic life, often resulting in the reduction of dissolved oxygen.

The Sea is a productive sport fishery and provides important migratory and resident bird habitat within the Pacific Flyway. The increasing salinity and eutrophic conditions will threaten these habitats. In addition, the fluctuations in the sea level and the deteriorating water quality have limited the potential for economic and recreational development at the Sea. To improve the environmental conditions, and promote recreational and economic development, various studies have been undertaken to evaluate restoration alternatives for the Sea.

An early investigative report was prepared in 1965, a Federal-State Reconnaissance Investigation was conducted in 1969, and a Federal-State Feasibility Study was completed in 1974 (USBR, 1974). However, a rising water surface elevation, and the consequential stabilization of salinity levels, delayed the need for salinity control measures at that time.

Further studies on the deterioration of the water quality of the Sea were initiated in the mid-1990s. A report was issued in 1998 that outlined conceptual designs for various restoration alternatives (USBR, 1998). A draft EIS/EIR was issued (Tetra Tech, 2000) that considered the environmental impacts of various restoration alternatives. Because of uncertainties on future inflows to the Sea, this draft EIS/EIR was never finalized. Since then, a number of alternative restoration schemes have been developed in response to new information and the Quantification Settlement Agreement (which will determine future inflows to the Sea) being signed by southern California water and irrigation districts.

Early in 2003, concepts were developed for a mid-Sea dam (USBR, 2003a). The dam would be located along a northeast-southwest trending alignment at the narrowest width of the Sea. The dam would allow one side of the Sea to shrink where salt water would be released to control salinity levels on the other side. The concepts developed for the mid-Sea dam included a 1) "seismic dike" consisting of an compacted earthen embankment constructed in a dewatered area, 2) a steel sheet pile cellular dam with a compacted earth dam constructed when one side of the Sea became dry, and 3) a dumped fill dike with slurry wall cutoff.

Later in 2003, concepts were developed for a mid-Sea barrier (USBR, 2003b). The barrier would only separate water of different salinities and would not have a large hydraulic head difference between the sides of the barrier. The barrier would be in an alignment similar to that proposed for the mid-Sea dam. The concepts developed for the barrier included 1) a dumped fill barrier, 2) a rock dike with a dredged fill barrier, and 3) a "beach barrier" constructed of hydraulically placed fills. Development of both the dam and the barrier concepts recognized that the subbottom conditions at the mid-Sea location were unknown and were a critical factor in the feasibility and estimated cost of the conceptual designs. The suitability of subbottom materials for use in embankment construction was another unknown that could have a major impact on the cost of the restoration schemes.

1.2 PURPOSE AND SCOPE OF PRELIMINARY INVESTIGATION

The purpose of the preliminary geotechnical investigation was to evaluate the subbottom conditions throughout the Sea. This information could then be used to support the conceptual design of a preferred restoration alternative. The scope of the investigation included the following tasks:

- Task 1 – Mobilization
- Task 2 – In-Sea Explorations
- Task 3 – Laboratory Testing
- Task 4 – Geotechnical Interpretation
- Task 5 – Geotechnical Data Report
- Task 6 – Update Conceptual Design Memos

A self-propelled jackup barge was mobilized to the Sea to provide a stable platform for the explorations. The in-Sea explorations included drilled and sampled borings and Cone Penetration Tests (CPTs). Laboratory tests were performed on samples obtained from the borings to characterize the engineering properties of the subbottom soils. The results of the field explorations and laboratory testing were used to formulate interpretations of the subbottom stratigraphy and their respective engineering properties. This report provides those interpretations, as well as detailed results of the field explorations and laboratory testing. The updated conceptual design memos will be provided in separate documents.

SECTION 2 PRELIMINARY GEOTECHNICAL INVESTIGATION

The preliminary geotechnical investigation included a review of previous investigations at the Sea, additional field explorations, and laboratory testing. It should be recognized that the scope of the investigation is preliminary and additional investigations will be warranted as the restoration concepts are further developed.

2.1 PREVIOUS INVESTIGATIONS

Previous investigations within the Sea have been very limited. These past investigations have also been primarily focused at the southern end of the Sea. However, this information was reviewed to help formulate a characterization of the subbottom materials. The following sections summarize the most significant of the previous investigations.

2.1.1 Bureau of Reclamation Investigation

A water-based exploration program was conducted to evaluate the feasibility of a 37-mile long dike structure that would impound about a 50 square mile area within the southeastern end of the Sea (USBR, 1974). This exploration program included a marine geophysical program to profile the subbottom geologic structure along part of the proposed dike alignment, a program of manually pushing ¾-inch diameter rods into the soft seafloor sediments at 60 sites, and seven borings located along the proposed dike alignment. The geophysical program provided limited results due to problems with strong multiple reflections and equipment failures. The boring program included thin-wall sampling, Standard Penetration Tests, and vane shear testing. The locations of the borings are shown in Figure 2.

This investigation found that the foundation soils of the proposed dike would be comprised primarily of lacustrine materials referred to as the Lake Cahuilla deposits. The materials typically encountered were fat clay and were primarily oxidized, exhibiting buff- to tan-brown colors. Primarily oxidized sediments would suggest a playa-type depositional environment. More sandy materials were encountered along the extreme southwest portion of the proposed dike area. Overlying the lacustrine materials, a seafloor sediment that may have been deposited subsequent to the creation of the Salton Sea was encountered. That sediment was a chemically reduced, dark gray to black, clay with infrequent thin sandy lenses.

The thickness of the soft sediments as penetrated by the hand probes ranged from less than a foot to almost 16 feet. However, it was stated that the skin friction on the rod appeared to contribute significantly to the pushing resistance and that the thickness of the soft sediments may in fact be deeper than the depth of rod penetration achieved by manually pushing.

2.1.2 Geothermal Investigations

A number of investigations have performed in the Sea related to development of the geothermal resources at the southern end of the Sea. These have included regional geophysical surveys as well as drilled holes, primarily to measure temperature gradients. A local gravity maximum is centered over part of the geothermal field (Biehler, 1971). This anomaly has been attributed to either an increase in density of sediments resulting from hydrothermal alteration, or the intrusion of dikes and sills into the sedimentary section, or a combination of these factors.

During the fall of 1985, the Lawrence Livermore National Laboratory and the Sandia National Laboratories cooperated in drilling a series of shallow (80 meters deep) holes for thermal studies in the southern Salton Sea (Lawrence Livermore National Laboratories, 1987). During this drilling program, samples of the cuttings were collected every three meters when possible. The holes penetrated sediments composed predominately of clay, silts and sands. Detailed lithological information was not available in the upper part of these boring logs.

2.1.3 Sediment Characterization Studies

A number of studies have been recently completed to evaluate the chemical characteristics of the seafloor sediments. The most extensive of these included grab samples of the seafloor sediments throughout the Sea (Levine-Fricke, 1999). Particle size analyses were performed on the grab samples collected from the seafloor. That data indicate a preponderance of sand size particles covering the seafloor, contrasting with the primarily silty sands and fine-grained sediments encountered in the current investigation. It was reported that their samples contained abundant barnacle shells and fish bones, and this may have biased the particle size analyses to the sand-size particles. The seafloor samples may have also had some sorting by currents.

Another study focused on characterizing sediments around the perimeter of the Sea that may become exposed with lower Sea levels (Agrarian Research, 2003). This study indicated barnacle beds and sandy sediments nearshore becoming finer grained with increasing water depth. The sandy and barnacle rich shorelines are subject to high wave energies that sort the sediments.

2.2 GEOTECHNICAL EXPLORATIONS

The field explorations associated with the preliminary geotechnical investigation consisted of drilling and sampling 11 offshore borings and performing 17 offshore CPTs. A summary of these explorations is provided in Table 1 and below; details are provided in Appendices A and B.

2.2.1 Equipment Utilized

A self-propelled jackup barge was mobilized from Louisiana to provide a stable working platform for the drilling and CPT operations. The barge was approximately 18 feet wide and 45 feet long with a moon-pool (opening for the drill string). The barge was jacked out of the water in depths less than about 40 feet, and anchored in deeper water. A large pontoon boat accompanied the jackup barge and provided storage for equipment and supplies. Personnel were transported to and from the barge using either the pontoon boat or a speedboat. A photograph of the barge jacked out of the water is shown in Figure 3.

The drilling was accomplished using a Mobile Sea 80-14 drill rig mounted on the jackup barge. A 4-inch diameter conductor casing was installed between the deck of the barge and the seafloor. A 3.25-inch bit and N-size drill rod were used to advance the borings. The samples were obtained by pushing thin-walled (Shelby) 3-inch diameter tube samples, driving Standard Penetration Test (SPT) samplers, and using a punch core 134-mm (5.28-inch) coring system. A photograph of the drill rig is shown in Figure 3; photographs of the SPT samples and a punch core are shown in Figure 4.

A portable CPT system was used for the CPT soundings. The drill head on the drill rig was used to push the cone and casing was used to provide lateral support to the CPT rod string from the drill head to the mud line. The soundings were conducted using a 20-ton capacity cone with a tip area of 15 square centimeters (2.3-inch^2) and a friction sleeve area of 225 square centimeters (34.9-inch^2). CPT data reduction and interpretation was provided in real-time on the barge deck. A photograph of the cone and the CPT pushing operation is shown in Figure 5.

The explorations were located using a Global Positioning System (GPS). The positions of the explorations were located using the Latitude-Longitude decimal degree, North American Datum 1983 (NAD 83) coordinate system. It is estimated that the accuracy of the horizontal locations of the explorations is $\pm$ 10-feet. Seafloor elevations were obtained by sounding the mudline with a weighted tape through the casing prior to drilling or CPT activities. The depth and elevation of the Sea bottom was recorded with respect to the Sea surface. The Sea surface was at approximately –227 feet MSL during the period of the field explorations.

2.2.2 In-Sea Borings

Eleven borings were drilled within the Sea. The locations of the borings are shown in Figure 2. The borings were numbered to be consecutive with the CPTs. The borings were advanced to elevations of between –274 and –407 feet MSL (30 to 149 feet below the seafloor). The borings were accomplished using rotary wash drilling techniques. Cuttings were flushed from the hole by circulation of a drilling fluid, which was then recirculated after the cuttings were removed in a settling basin.

All of the borings were drilled under the direction of a certified engineering geologist. Samples of the subsurface materials encountered in the borings were collected at approximately 5 to 10 foot intervals for further classification and laboratory testing. The samples were obtained using a Shelby tube sampler (in accordance with ASTM D-1587) or a SPT sampler (in accordance with ASTM D-1586). The lower portions of Boring 2 (the deepest boring) were also cored using a punch core 134-mm (5.28-inch) coring system.

Additional details on the in-Sea borings are provided in Appendix A. A key to the log of the borings is presented in Appendix A as Figure A-1, and logs of the borings are presented Figures A-2 through A-12.

2.2.3 In-Sea Cone Penetration Testing

Seventeen in-Sea CPT soundings where advanced to elevations between -270 and -332 feet MSL (32 to 67 feet below the seafloor). The locations of the CPT soundings are shown in Figure 2. The CPT provided measurements of cone bearing (q_c), sleeve (f_s) and dynamic pore water pressure (u_2) at 2.5-centimeter (0.98-inch) intervals during penetration. All CPT soundings were performed in accordance with ASTM D-5778.

Additional details of the CPT soundings are provided in Appendix B. A soil interpretation chart for the CPT data is provided in Figure B-1, and the CPT data are plotted in Figures B-2 through B-18.

2.3 LABORATORY TESTING

Samples of the subsurface materials obtained from the borings were returned to a geotechnical laboratory for testing. A summary of the laboratory testing performed is included in Table 2 and discussed below. A detailed description of the testing program, and the results of the testing, are presented on the boring logs and in Appendix C. The following sections summarize the testing performed.

2.3.1 Index Testing

Index testing was performed on the samples to further characterize and classify the materials. The testing included water content (per ASTM D-4959), bulk densities, Atterberg limits (per ASTM D-4318), particle size analyses (per ASTM D-422), percent passing the #200 sieve (per ASTM D-1140), pinhole dispersion analyses (per ASTM D-4647), and specific gravity tests (per ASTM D-854). A summary of the index testing is provided in Table 3. Results of the index testing are presented on the boring logs and in Appendix C.

Corrosivity testing was also performed on selected samples. A suite of tests including resistivity, electric conductivity and chemical analyses were performed. The results of these tests are presented in Table C-1 in Appendix C.

2.3.2 Strength Testing

A preliminary evaluation of the shear strength of the soil samples was obtained during the field program by using a Torvane™ apparatus. Both Unconsolidated Undrained (UU) and Isotropically Consolidated Undrained (ICU) triaxial compression test were performed on selected samples. The UU samples were confined using a pressure similar to the existing overburden pressures at the sample depth. A set of three ICU tests were performed on three separate specimens extracted from the same or adjacent Shelby tubes; these specimens were consolidated at pressures ranging from near existing overburden to pressures anticipated under embankment loads. The UU testing was performed in accordance with ASTM D-2850, the ICU testing was performed in accordance ASTM D-4767. A summary of the triaxial strength testing is provided in Tables 4 and 5; detailed results are provided in Appendix C.

2.3.3 Consolidation Testing

Consolidation tests were also performed on some of the samples. These consolidation tests were performed in accordance with ASTM D-2435. The results of the consolidation testing are summarized in Table 6. Detailed results from the consolidation tests are provided in Appendix C.

SECTION 3 SITE CONDITIONS

Knowledge of the site conditions has been developed from a review of the area geology, the previous investigations within the Sea, the bathymetry and topography that was available, and the field and laboratory programs undertaken for this preliminary geotechnical investigation.

3.1 GEOLOGIC SETTING

The Salton Sea currently occupies the lowest portion of the Salton Trough, a deep basin that represents the structural extension of the Gulf of California into North America. The Trough is essentially a closed basin, bounded by mountains within the Western Mojave Desert Province to the north, the Basin and Range Province to the east, and the Peninsular Range Batholith to the west. To the south, deltaic deposits of the Colorado River prevent marine inundation from the Gulf of California. A geologic map presenting the surficial geology of the area surrounding the Sea is presented in Figure 6; a legend for the geologic map is presented in Figure 7.

3.1.1 Structure

The Salton Trough is a deep structural pull-apart basin characterized by high seismicity, high geothermal activity, extensional tectonics, crustal thinning, and rapid sedimentation (Damiata et. al., 1986). The basin is bounded by major, northwest trending, strike slip faults and uplifted highlands of crystalline rock. Geophysical studies (Tarbet, 1951; Biehler et. al., 1964) suggest that upwards of 18,000 feet (3.4-miles) of sediment have accumulated in the Salton Trough since the Miocene epoch (Eberley and Standley, 1978). The central portion of the valley is underlain by a 6 to 10-mile deep trough of sedimentary and metasedimentary rocks (Fuis et. al., 1982).

3.1.2 Stratigraphy

The Salton Trough is a deep basin that has been filling with sediments since the Miocene epoch. The oldest, basal sediments, are the coarse clastic materials of the Anza Formation that where shed off the surrounding crystalline highlands. The Anza Formation outcrops at the surface along the margins of the basin. Within the southern portion of the basin, the Anza Formation interfingers and is overlain by a sequence of essentially continuous deposits including the Alverson volcanics, playa deposits of the Fish Creek Gypsum, marine and non-marine sediments of the Split Mountain Formation, marine deposits of the Imperial Formation, terrestrial deposits of the Palm Springs Formation, the Canebrake Conglomerate, and the subsequent alluvial and terrace deposits of Quaternary age. The most recent deposits within the central portion of the Trough are dominated by lacustrine, deltaic, and fluvial deposition associated with Holocene and Pleistocene stands of ancient Lake Cahuilla.

Around the margins of the Salton Trough basin, relict shoreline features mark the former high stands of ancient Lake Cahuilla. The ancient lake repeatedly filled and occupied the basin during the Holocene. The most recent, pre-Salton Sea filling is thought to have occurred about 1,650 years ago (Norris and others, 1979). The lake may have been in existence as recently a several hundred years ago (Morton, 1977). Sand and gravel deposits along the ancient shoreline have been locally mined for aggregate. Travertine deposits delineate ancient lake levels above the west side of the Sea.

The Salton Trough has been repeatedly inundated by floodwaters of the Colorado River, with subsequent drying to a playa desert surface. It is anticipated that some residual salt deposits may underlie the Sea. A report from the State of California mineralogist in 1893 described the then-dry playa as having a thin crust underlain by up to 22 feet of "black ooze containing over 50 percent water, and consisting largely of chlorides and carbonates of sodium and magnesium, the soda salts predominating, besides fine sand, iron oxide, and a small amount of organic matter." Below the ooze was hard lacustrine clay.

3.2 TECTONIC SETTING

The origin of the Salton Trough has long been associated with the late Cenozoic extension that resulted in the opening of the Gulf of California (Elders, 1972), which represents the northern extension of the East Pacific Rise spreading ridge system (Dibblee, 1954; Sharp, 1972). The extension on land occurs within a fault-bounded pull-apart basin, similar to the spreading centers within the Gulf. The Salton Trough represents the transition zone between the crustal spreading centers in the Gulf and the right lateral transform boundary between the North American and Pacific plates (Crowell and Sylvester, 1979; Crowell, 1981; Johnson et. al., 1982). Although the San Andreas fault zone is the primary element in this transform boundary, the total plate motion is distributed across a broad zone of deformation that essentially extends from the San Andreas fault to the offshore fault systems far to the west. The other primary structures in the right slip system of faults that compose the plate boundary are the San Jacinto, Imperial, Cerro Prieto, and Brawley fault zones. As a result of the active strike slip movements along the major fault systems, vertical crustal movements are produced regionally within the Salton Trough.

3.2.1 Fault Zones

The primary seismic sources in the vicinity of the Sea are the right slip faults associated with the transform plate boundary that include the San Andreas, San Jacinto and Elsinore fault systems. Within the Salton Trough, the Imperial, Brawley, and Cerro Prieto faults represent relatively short but active seismic elements of the San Andreas Fault system. More distant active faults include the San Miguel, and the Calabasas faults in northwestern Baja California, and the extensional faults of the Basin and Range province to the northeast. The locations of active faults (with displacement in the last 10,000 years) and other mapped faults in the vicinity of the Sea are shown in Figures 6 and 8.

A number of faults have also been inferred based on a significant linear trend of recorded earthquake epicenters in the vicinity (Jennings, 1994). These are generally aligned along strike slip faults having Quaternary displacement, but not necessarily with historic surface rupture. These areas have been shown as green hatched areas on Figure 6.

3.2.2 Historical Seismicity

The Salton Trough region is a very active tectonic region and as a result a high degree of seismicity is to be expected. Historical earthquakes have been cataloged dating back to the mid-1800s based on felt reports from the San Diego, Yuma, and San Bernardino regions. Since that time many moderate (M4 to M6) and large (M6 to M7) earthquakes have occurred on faults in the Salton Trough. Although there have been no larger earthquakes (M>7) historically in the basin, the length of faults and rate of movement indicate that there is the potential for large earthquakes in the region. The epicenters of recorded since 1932 earthquakes larger than M4 are shown in Figure 8.

Since 1900, several large earthquakes have occurred on the Imperial, Cerro Prieto, and various segments of the San Jacinto fault. Recent large earthquakes centered on faults in the Salton Trough are listed in Table 7.

3.3 SURFACE AND SEAFLOOR

The Sea is the largest inland body of water in California, with a current surface area of about 365 square miles. The area around the Sea is primarily in the Colorado Desert, with irrigated agricultural areas at the south and north ends of the Sea. A few residential communities are around the Sea.

3.3.1 Surrounding Topography

The Sea is located in the Salton Trough, a topographic low extending from the Gulf of California northwest into southern California. The Santa Rosa Mountains to the west, the Orocopia Mountains to the north, and the Chocolate Mountains to the east surround the Trough. The bases of these mountains are typically at elevations of 100 to 200 feet MSL to the west, and 200 to 300 feet MSL to the east. Shoreline features associated with Holocene stands of ancient Lake Cahuilla generally aoccur at elevations between 40 and 50 feet, MSL.

The Whitewater River drains the Coachella Valley and enters the Sea at its north end. Salt Creek drains the southern slope of the Orocopia Mountains and the northern end of the Chocolate Mountains and enters the northeast portion of the Sea. The San Felipe Creek is the largest drainage on the west and enters the Sea near its southwest corner. The New and Alamo Rivers drain the Imperial and Mexicali Valleys, enter the Sea at its southern end, and provide the majority of the inflow to the Sea.

The topography is very flat at the south and north ends of the Sea, with grades of 0.2 to 0.3 percent. Along the west side of the Sea, the topographic grades are 0.5 to 4.5 percent, and along the east side, the topographic grades are 1.5 to 4.0 percent.

3.3.2 Bathymetry

The surface of the Sea was at elevation –195 feet MSL after flooding ceased in 1907. The Sea level dropped to about elevation –250 feet MSL in the 1920s, and then steadily rose as additional lands were irrigated in Imperial and Riverside Counties. The surface elevation of the Sea has been nearly constant at about –227 feet MSL in the last few years.

The bathymetry of the Sea is shown in Figure 2. The Sea actually includes two basins, separated by a bathymetric high trending southwest to northeast near the middle of the Sea. The deepest part of the northern basin is an approximate elevation -276 feet MSL (a water depth of 49 feet) and the deepest part of the southern basin is elevation -275 feet MSL (a water depth of 48 feet). The seafloor slopes to the center of the basins generally at grades of 0.07 to 0.08 percent; steeper grades of 0.2 to 0.5 percent occur near the west and east shorelines.

3.4 SUBBOTTOM CONDITIONS

The preliminary investigation identified six significant stratigraphic layers below the seafloor; a seafloor deposit, a soft lacustrine deposit, an upper alluvial deposit, an upper stiff lacustrine deposit, a lower alluvial deposit, and a lower stiff lacustrine deposit. Subbottom profiles depicting the layering of these deposits are shown in Figures 9 through 13; the locations of the sections are shown on Figure 2. The layering is also shown on Figures 14 and 15, which present CPT data and interpreted Soil Behavior Types along with the Unified Soil Classification System (USCS) soil descriptions and corresponding graphic logs from the boreholes at locations where CPTs and boreholes were co-located. This comparison indicates that rapid changes in tip resistance (q_t) are a good indication of stratigraphic changes and the low friction ratios (R_f) are good indications of granular materials. These indicators were used to develop stratigraphy at the CPT locations. The materials characterizations relied primarily on descriptions from boring logs and laboratory tests, rather than SBT interpreted from the CPT data. The SBT generally agreed with the borings on whether a material was fine-grained or not, but was not relied on as to whether the material was predominantly silt or clay. No attempt was made to make a site-specific correlation between SPT N-values and CPT tip resistance due to the low number of SPTs that were performed.

Descriptions of these deposits are provided in the following sections. Photographs of samples of various deposits are shown in Figure C-1 through C-6 in Appendix C.

3.4.1 Seafloor Deposits

Seafloor deposits are generally encountered immediately below the seafloor mudline and are primarily the result of Recent deposition. These unoxidized deposits vary from dark gray to gray, high plasticity (fat) clays to silty fine sands. The consistency is typically very soft to loose. Within our explorations, the thickness of the seafloor deposit ranged from 0 to 21½ feet, with the thickest deposits occurring in the southern basin of the Sea (in Boring 4), and in the easterly part of the mid-Sea alignment (in Borings 5, and 26 and CPTs 3 and 28).

3.4.2 Soft Lacustrine Deposits

Soft lacustrine deposits underlie the seafloor deposits across the majority of the sea. The unit is generally thickest within the central portion of the Sea. These oxidized deposits are composed of light brown to dark brown, high plasticity clays. The materials range in consistency from very soft to stiff, but are predominantly very soft to soft. Within the current explorations, the thickness of the soft lacustrine deposits ranged from 0 to 26 feet, with the thickest deposits occurring in easterly part of the mid-Sea alignment (in CPT 3, CPT 27 and Boring 26) and the Whitewater River delta at the northern end of the Sea (in Boring 20).

3.4.3 Upper Alluvial Deposits

The upper alluvial deposits interfinger between the soft lacustrine and upper stiff lacustrine deposits and are typically encountered near the perimeter of the Sea, thinning toward the central portion of the Sea. The unit is typically composed of brown to grayish brown silty fine sands with interbedded silt and sand lenses. The deposit ranges in consistency from loose to dense with localized zones of cementation (as indicated by CPT interpretations). Within the limits of the explorations, the unit ranged from 0 to 26½ feet thick. The thickest deposits are encountered along the northeast (at CPT 25), southwest (in Boring 11 and CPTs 10 and 12), and west-central (at CPTs 8, 9, Boring 7, and CPTs 21 and 23) margins of the Sea.

3.4.4 Upper Stiff Lacustrine Deposits

Upper stiff lacustrine deposits are encountered across the Sea and underlie both the soft lacustrine and upper alluvial deposits. The unit is typically composed of brown to grayish brown, highly plastic clays with interbedded lenses of lean clay, silt, and silty sand. The deposit ranges in consistency from medium stiff to hard, but is predominantly stiff to very stiff. The current explorations encountered this deposit in thickness ranging from about 4 to 31½ feet. The thickest deposits were encountered along the eastern portion of the mid-Sea alignment (in Boring 2, and CPTs 27 and 28) and the southeastern portion of the Sea north of the Alamo River Delta (in Boring 17, and CPTs 15, 16, and 18).

3.4.5 Lower Alluvial Deposits

The lower alluvial deposits underlie the upper lacustrine deposits. Similar to the upper alluvial unit, the deposits are typically encountered near the perimeter of the Sea, thinning toward the central portion of the Sea. The unit is primarily composed of brown to olive gray, silty fine sand with interbedded lenses of silt and clay. The deposit ranges in consistency from medium dense to very dense. Within the limits of the explorations, the thickness of the lower alluvial deposit ranged from 0 to 22 feet. The majority of the lower alluvial deposits were encountered within the southern portion of the Sea.

3.4.6 Lower Stiff Lacustrine Deposits

The lower stiff lacustrine deposits are assumed to underlie the entire Sea at depth. The unit is similar in composition to the upper stiff lacustrine deposit, consisting of dark grayish brown to dark gray, highly plastic clay with interbedded zones and lenses of silt and silty sand. The deposit ranges in consistency from very stiff to hard, but is primarily hard. Within the limits of the explorations, the unit ranges up to 103 feet thick. The lower stiff lasuctrine deposits are anticipated to be much thicker as none of the explorations fully penetrated this deposit.

3.5 CURRENTS AND WAVES

The Sea’s currents have been studied by the University of California Davis (Cook, et.al., 1998). The currents are primarily wind driven and the predominant wind direction throughout the year at the Sea is from northwest to southeast, with a more pronounced eastward component across the southern portion of the Sea. During October 1997, the winds and currents at the Sea were measured for the UC Davis study. The average wind speed was about 3.4 miles per hour in the northern end of the Sea and ranged to more than 7.8 miles per hour in the southern end of the Sea. Water current velocities were roughly one-tenth of the wind speeds.

The north-south wind pattern results in a pattern of currents dominated by two large gyres, rotating in opposite directions in each of the two basins formed by the bathymetry. In the northern basin, the currents rotate clockwise while in the southern basin the currents rotate counterclockwise. The speed of rotation is typically higher in the southern basin. The studies indicate that the current velocity pattern at the surface of the Sea is much the same near the bottom.

Very little information is available on the wave regime in the Sea, which is also wind driven. It has been reported that waves as high as 5 feet can build during strong wind storms.

SECTION 4 POTENTIAL GEOLOGIC AND SEISMIC HAZARDS

This section provides a preliminary evaluation of the potential geologic and seismic hazards that could impact the restoration project. The primary hazards are fault rupture, strong ground shaking, soil liquefaction, and seiches. The following paragraphs qualitatively discuss these potential hazards, additional studies will be required to quantify and further define the potential hazards.

4.1 FAULTING AND SEISMIC GROUND DEFORMATIONS

An active strand of the San Andreas Fault is mapped approximately 1.8 miles east of the east end of the mid-Sea location. The nearest reach of the fault has been known to undergo longtime creep and triggered slip following nearby large earthquakes (Agnew and Wyatt, 2003). The mapped alignment of the San Andreas Fault is somewhat parallel to the long axis of the Sea and is projected to enter, or just skirt, the southeast corner of the Sea east of Bombay Beach. To the west and southwest, the active strands of the San Jacinto and Elsinore faults trend sub-parallel to the San Andreas fault at respective distances of 13.4 and 35.5 miles from the west end of the mid-Sea location. Surface delineations of historically active strands of the Imperial and Brawley faults extend to within about 15 miles of the south end of the Sea. Two bands of seismicity suggest fault zones cross the southern end of the Sea (Figure 6), one trending southwest to northeast and the other an apparent extension of the onshore mapped locations of either the San Andreas or Imperial Faults. This north-northwest trending band of seismicity is known as the Brawley Seismic Zone.

Surface rupture associated with earthquake faults is a potential hazard to the restoration project. The results of this preliminary investigation do not preclude the possibility that an active fault could cross proposed embankment locations. This potential fault rupture hazard should be further evaluated to assess the possible presence and activity of the faults. A program to investigate this potential hazard is discussed in Section 7.2 of this report.

Long term geodetic measurements indicate vertical crustal deformations along and near most of the active faults in the area (Gilmore, 1986). Locally, the Lake Cahuilla shorelines show evidence of vertical warping (Norris and others, 1979) and differences in elevation up to as much as 20 feet are indicated from northeast to southwest across the Sea (Grunsky, 1907). The geomorphic expression of the Durmid Hills (immediately east of mid-Sea location) suggests local topographic uplift along the San Andreas Fault. The rate of vertical uplift however, as indicated from the Indio Hills, suggests the vertical slip component along the San Andreas Fault is relatively low, and may be only about 3 percent of the horizontal slip rate (Norris and others, 1979). Potential seismic-induced ground deformations should be further evaluated.

4.2 GROUND SHAKING

The restoration project will likely be subjected to severe ground shaking in response to either a local or more distant large magnitude earthquakes occurring during the life of the planned project. A Probabilistic Seismic Hazard Analysis (PSHA) should be performed in future studies to estimate the recurrence and magnitude of ground motions that could be expected at the Sea. This analysis is a mathematical process that combines: (1) the probabilities of an earthquake of a particular magnitude occurring on a given source; (2) the distance of the rupture surface to the site; and (3) the attenuation of the ground motions, considering the site conditions (Kulkarni et. al., 1979). The response will be unique to the site and will need to account for near-fault directivity (Somerville et. al., 1997), soft soil effects (Idriss, 1990), and spatial incoherency, due to the size of the planned facilities.

4.3 LIQUEFACTION

Seismically induced soil liquefaction is a phenomenon in which loose to medium dense, saturated, granular materials undergo matrix rearrangement, develop high pore water pressure, and lose shear strength due to cyclic ground motions induced by earthquakes. This rearrangement and strength loss is followed by a reduction in bulk volume. Manifestations of soil liquefaction can include loss of bearing capacity for foundations, surface settlements, and tilting in level ground. Soil liquefaction can also result in instabilities and lateral spreading in embankments and areas of sloping ground.

Evaluations of the potential for soil liquefaction are typically performed using empirical methods that correlate in-situ evaluations of soil resistance (from either SPT or CPT data) with intensity of ground shaking. Rigorous analyses for the potential of soil liquefaction were not performed for this preliminary investigation due to the paucity of granular deposits that were encountered. The majority of the sediments encountered in this investigation were high plasticity clays, which would have a low potential for liquefaction. However, extensive liquefaction of granular deposits in Imperial Valley during the 1979 Imperial Valley earthquake is well documented (Youd and Bennett, 1983). Given the highly seismic area, it is likely that Recent granular deposits below the Sea would have a high liquefaction potential.

Furthermore, uncompacted embankment fills placed below the Sea level would also have a high potential to liquefy. Further studies on restoration alternatives incorporating uncompacted embankments should evaluate requirements to mitigate the effects of liquefaction of embankment materials. Alternative locations for embankments should also evaluate the presence of potentially liquefiable granular soils in the foundation.

4.4 SEICHES

Seiches are produced when seismic ground shaking causes massive wave oscillations of an enclosed water body that continue after the originating force has vanished. The frequency of the oscillations is the same as the natural frequency of the water body. Seiches can also be formed when faulting causes permanent vertical displacement beneath a body of water.

There are no documented occurrences of seiches at the Salton Sea. However, given the shallowness and seismic exposure of the Sea, it is likely that one could occur. The wave that could be generated by a seiche should be estimated in future studies. However, it is possible that the height of wind driven waves, rather than seiches, would dictate the freeboard that would be required for in-Sea embankments.

SECTION 5 PRELIMINARY ENGINEERING CHARACTERIZATION

This section provides a preliminary characterization of the engineering properties associated with the stratigraphy that was identified and discussed in Section 3.4. This characterization can be used in formulating conceptual designs for the restoration project. However, it should be recognized that the characterization is based on limited data and will need to be refined as the restoration concepts are further developed.

The sections below describe the three main engineering properties measured: index, strength and compressibility, followed by a discussion of test results specific to each unit. Table 8 provides an interpreted characterization that is recommended for use in further development of conceptual designs.

5.1 ENGINEERING PROPERTIES

5.1.1 Index Properties

Index properties of the samples include total and dry unit weight, natural water content, Atterberg limits, particle size distribution, pinhole dispersion, and specific gravity. A summary of these test results for each of the stratigraphic units is provided in Table 3. The test results in the stiff lacustrine deposits (upper and lower) and the alluvial deposits (upper and lower) were similar and are combined in the database shown in Table 3. The table lists the number of each test performed as well as the high, low, average, and median of the test results. Summaries of water contents versus depth are presented in Figures 16 through 19, grouped by areas of the Sea. A summary of all of the plasticity indices is shown in Figure 20.

The predominant Unified Soil Classification System (USCS) group symbol for a particular deposit is shown bolded in Table 3, along with the percentage of the other classifications for the samples tested. This distribution is a good indicator of the variability of the deposit.

The samples obtained were typically saturated and the water content (based on dry weight) is generally a good indicator of the soil's strength and compressibility, i.e. higher moisture contents (and correspondingly lower dry unit weights) usually indicate lower strengths and higher compressibilities.

Particle size distribution and Atterberg limits tests allow a particular soil to be categorized into different groups: clay and silt (fine-grained materials) or sand and gravel (coarse-grained materials). Atterberg limits also provide qualitative indications of the particle size; soils that are above the Atterberg limit "A" Line are clay, and those below are silt. In addition, soils are considered fine grained if they possess 50% or more silt and clay. Other soils are considered to behave as fine-grained soils if they possess 30% or more clay fraction. The Atterberg limits also indicate whether the fine-grained soil is of high or low plasticity.

Pinhole dispersion tests provide an indication of the erodibility of a particular soil. Dispersive soils differ from ordinary, erosion resistant soils, because they have a higher relative content of dissolved sodium in the pore water. Dispersive clays erode as individual colloidal clay particles go into suspension in still water, whereas considerable velocity in the eroding water is required to erode normal clays. This is particularly relevant in evaluating the potential use of materials in water retention embankments. The pinhole dispersion tests are summarized in Table C-2.

In-situ properties of the deposits include relative density (loose to very dense) for coarse-grained materials and consistency (very soft to hard) for fine-grained materials. Field tests, such as SPT, CPT, or Torvane™ tests, and manual penetration ("thumbnail test") of samples, were the main methods of interpretation of density or consistency.

Physical properties were also interpreted using the SBT classification developed by Robertson (1990) for use with CPT data. This study considered the relationship between cone tip resistance and friction ratio.

5.1.2 Strengths

The strength testing was concentrated in the soft seafloor and lacustrine deposits; the strength of these deposits will be a controlling factor in the stability of embankments constructed within the Sea. In normally to lightly overconsolidated cohesive soils, such as the seafloor and soft lacustrine deposits, the undrained shear strength (c_u) is used to evaluate the short-term stability of embankments. The undrained strength is used to simulate that the soils may be loaded rapidly enough (with an embankment) that the induced pore pressures do not dissipate enough for significant strength gain in the foundation soils. For normally consolidated soils, the c_u is often directly proportional to the effective overburden pressure (σ_v'), the ratio c_u/σ_v' is typically 0.2 to 0.4 for normally or lightly overconsolidated clays.

The c_u has been assessed for this investigation using the following techniques:

- Torvane™ tests on thin walled samples.
- Unconsolidated Undrained (UU) triaxial compression test results.
- Isotropically Consolidated Undrained (ICU) triaxial compression test results.

A plot of the Torvane™ shear strength test data versus depth is shown in Figure 21. These results are generally much higher than what was indicated by the sample's consistency, and the results of the UU and ICU tests. A summary of the UU test results is presented in Table 4. A plot of c_u versus the σ_v' at the UU sample depth (or the confining pressure for ICU results) is presented in Figure 22 for the soft deposits.

Effective stress shear strength parameters, c' (cohesion) and ϕ' (friction angle), are used to evaluate long term stability conditions. ICU (with pore pressure measurements) triaxial compression tests were performed on the cohesive soils to evaluate these parameters. A summary of these test results is provided in Table 5. Preliminary values for the effective stress shear strength parameters for use in conceptual designs were interpreted from these results, and published correlations with other material properties.

5.1.3 Compressibility

The compressibility of the subbottom deposits will be a factor in maintaining sufficient freeboard on in-Sea embankments, and in estimating ultimate quantities of materials for embankment construction. The consolidation testing was also concentrated in the soft seafloor and lacustrine deposits as the largest magnitudes of settlement will likely come from these deposits. A summary of the compressibility parameters obtained from the consolidation testing is provided in Table 6.

The compressibility characteristics of fine-grained materials have been interpreted from laboratory oedometer testing and published correlations to index properties. Correlations to index properties were used to interpret potential variability, considering the limited number of oedometer tests performed within each deposit compared to the more numerous index testing. For example, the Liquidity Index (LI) provides qualitative assessments of the compressibility of fine-grained soils.

LI is defined as:

$$\mathbf{LI = (w-PL)/PI}$$

Where: w = water content
PL = plastic limit
PI = plasticity index

A LI less than or equal to zero may indicate a heavily overconsolidated soil. A LI equal to 1.0 may indicate relatively weak and compressible materials. A LI greater than 1.0 may indicate that the material is sensitive. Soils with a LI greater than approximately 0.7 may experience significant consolidation settlements.

The parameters used to characterize compressibility are the Compression Index (C_c), Recompression Index (C_r), Overconsolidation Ratio (OCR or σ_p'/σ_v') and/or Preconsolidation Pressure (σ_p'), Coefficient of Secondary Compression (C_α) and the Coefficient Consolidation (c_v).

The C_c was interpreted as the slope of the oedometer test data in the range of the anticipated stress changes, as shown below:

$$\mathbf{C_c = \Delta e / \Delta \log \sigma_v'}$$

Where: Δe = change in void ratio
$\Delta\sigma_v'$ = change in effective vertical overburden stress

The C_r has been interpreted from the reloading portion of the laboratory oedometer testing, or taken to be the commonly adopted values of ten to twenty percent of C_c.

The Overconsolidation Ratio (OCR) and Preconsolidation Pressure (σ_p') were estimated by inspection of the strain – log σ' oedometer test data and various published correlations to index parameters.

The Compression Ratio (CR) is related to C_c as follows:

$$\mathbf{CR = C_c / (1 + e_0)}$$

Where: e_0 = initial void ratio

The CR is also commonly related to natural water content; a plot of published correlations with test data from this investigation is shown in Figure 23.

Conceptual design parameters for secondary compression have not been developed for this study. The magnitude of secondary compression should provide a relatively small contribution to overall settlement, or be part of a long-term maintenance burden, depending on the design life adopted.

The time over which settlement could occur is calculated using c_v, which is a function of soil permeability and therefore the choice of this parameter can vary considerably. For this study, the parameter was interpreted from oedometer tests and published correlations to liquid limit.

5.2 SEAFLOOR DEPOSITS

5.2.1 Index Properties

This unit consists predominantly of fine-grained materials. Most of the soils were classified as fat clay (Unified Soil Classification of CH). However, the average fines content (silt and clay) varied considerably (14 to 100 percent) and averaged about 64 percent, with the remaining fraction comprising fine sand. The plasticity of this unit is high based on an average Plasticity Index (PI) of 48%. The average water content (63%) is nearer to the average Liquid Limit (LL) of 77% relative to the average Plastic Limit (PL, 30%). Table 3 summarizes the index test data.

The consistency of fine-grained materials ranged from firm to stiff at shallow water locations and predominately soft and locally firm at deep-water locations (mid-Sea locations only). Where coarse-grained materials exist, the relative density ranged from loose to medium dense.

The SBT interpretations show similar variability between coarse- and fine-grained materials. SBT mostly ranged from clay to sand and silt mixtures as shown on the CPT plots in Appendix B (mid-Sea locations only). More variability was evident at shallow water locations.

5.2.2 Strength

The c_u of this unit ranges from about 75 to 200 pounds per square foot (psf) considering six UU triaxial compression test results and discounting one anomalous test of 800 psf. The undrained shear strength developed from four ICU triaxial compression test points (Mohr Circles) tested at a confining pressure approximately equal to effective overburden pressure ranged from 300 to 660 psf. The ICU data produced higher undrained shear strengths, when comparing the two data sets (UU and ICU).

Data from Torvane™ tests were only considered qualitatively, which shows a marked increase in undrained shear strength at shallow water locations.

Undrained shear strength for normally consolidated soils is often presented as the ratio of undrained shear strength to effective overburden stress (σ_v') for slope stability and other forms of geotechnical analyses. A c_u/σ_v' ratio of 0.35 was interpreted from the data for conceptual design. This assessment considers a design line interpreted from a scatter plot of undrained shear strength versus effective stress (refer to Figure 22) and published correlations to index parameters (also shown on Figure 22).

Data from the ICU triaxial compression tests and reference to published correlations to index tests were used to estimate peak and ultimate effective cohesion (c') and friction angle (ϕ'). A cohesion of zero psf and friction angle of 27 and 25 degrees for peak and ultimate conditions respectively were interpreted from the data. The ultimate condition is defined as the point where continuous shear defomation continues with no further changes in volume. To interpret these parameters, Mohr circle plots of shear stress versus effective stress were developed at individual sample locations and for all the samples within the unit, excluding anomalous points. Figures in Appendix C of this report provide the test results.

5.2.3 Compressibility

This unit is interpreted to be slightly overconsolidated with an OCR of 1.5 recommended for conceptual design. A graphical interpretation of the preconsolidation pressure (σ_p) using the strain versus the log of vertical effective stress (σ_v') test data was the primary method of interpretation. However, engineering judgment considering the varied geologic environment of the surface of the Sea bottom along with undrained shear strength versus depth profiles were also considered to develop this assessment. Assessment of OCR based on the water content relative to the Liquid and Plastic Limit, could suggest a different interpretation for this unit and the other fine-grained soil units. However, for conceptual design purposes, we recommend adopting normally consolidated to slightly overconsolidated conditions.

A C_C of 0.65 and C_r of 0.10 are recommended for conceptual design. The C_c data from six tests ranged from 0.23 to 1.10. One sample swelled and therefore it was discounted from further interpretation. These parameters were developed from graphical interpretations of the strain versus log of effective stress (σ_v') plots and inspection of this data relative to a plot of CR correlated to water content (refer to Figure 23). The Compression Index was also related to the commonly used expression C_C = 0.009 (LL-10). The recommended C_r was taken as 15 percent of the C_C. Table 6 summarizes the consolidation test data.

A complete discussion of potential consolidation settlement is presented elsewhere in this report. However, an average LI of 0.81 suggests a potential for significant consolidation settlement.

A coefficient of consolidation (c_v) of 15 feet squared per year (ft^2/yr) is recommended for conceptual design. However, considering the variability of this parameter, conceptual design analyses should consider using a range from 10 to 40 ft^2/yr. This parameter was developed using the relevant portions of the oedometer test data and correlation to the LL. The lab data ranged from 8 to 43 ft^2/yr. Correlations to Liquid Limit ranged from 12 to 40 ft^2/yr.

5.3 SOFT LACUSTRINE DEPOSITS

5.3.1 Index Properties

Samples tested from this unit consist of fine-grained materials classified predominantly as fat clay (CH). The plasticity of these materials is high based on the average PI of 40%. The average water content (43%) is nearer to the average PL (26%) relative to an average LL of 66%. Table 3 summarizes the index test data. The consistency was generally stiff for shallow water locations and soft to firm for deep-water locations (mid-Sea locations only).

The SBT ranged from sand and silt mixtures to clay and silt mixtures. Shallow water location appeared to exhibit a tendency towards more coarse-grained SBT interpretations as shown on the CPT plots in Appendix B (mid-Sea locations only).

5.3.2 Strength

The undrained shear strength of this unit ranges from about 350 to 1,100 psf considering six UU triaxial compression test results. The undrained shear strength developed from two ICU triaxial compression test points (Mohr Circles) tested at a confining pressure approximately equal to effective overburden stress ranged from 600 to 700 psf. Data from Torvane™ tests show a marked increase in undrained shear strength at shallow water locations.

For conceptual design purposes, a c_u/σ_v' ratio of 0.35 was interpreted from inspection of a scatter plot of undrained shear strength versus effective overburden stress (refer to Figure 22) and published correlations to index parameters (also shown on Figure 22). A cohesion of zero psf and friction angle of 25 and 23 degrees for peak and ultimate conditions respectively was interpreted from the data using Mohr circle plots of shear stress verses effective stress and correlations of angle of friction to index tests. Figures in Appendix C provide the test results.

5.3.3 Compressibility

This unit is interpreted to be normally consolidated considering graphical interpretations of the preconsolidation pressure (σ_p') and engineering judgment. A C_C of 0.35 and C_r of 0.05 are recommended for conceptual design. The C_c data from five tests ranged from 0.14 to 0.61, while data correlated to index tests range from 0.20 to 0.54. Figure 23 shows the parameters interpreted from oedometer tests relative to a plot of CR correlated to water content. An average LI of 0.6 with a median of 0.4 suggests a moderate to high potential for consolidation settlement.

A c_v of 20 feet squared per year (ft^2/yr) with a range of 10 to 40 ft^2/yr is recommended for conceptual design. The data ranged from 9 to 39 ft^2/yr discounting one anomalously high data point; correlations ranged from 15 to 25 ft^2/yr.

5.4 STIFF LACUSTRINE DEPOSITS

The test results on samples from the upper and lower stiff lacustrine units were similar, and were combined for engineering characterization purposes. In addition, the strength and compressibility properties of this unit should not significantly influence conceptual design analyses for embankment stability and consolidation settlement. Therefore, fewer laboratory tests were assigned for strength and compressibility assessments and the interpretations were not developed as thoroughly as for the overlying units.

5.4.1 Index Properties

The stiff lacustrine deposits generally consist of fine-grained materials classified predominately as fat clay (CH), but with more heterogeneity than the upper deposits. The plasticity of these materials is moderate to high based on the median PI of 34%. The average water content (32%) is nearer to the average PL (21%) relative to the average LL (55%). The consistency was generally stiff for shallow water locations and firm to stiff for deep-water locations (mid-Sea locations only).

The SBT ranged from clays to sand and silt mixtures. Shallow water location appeared to exhibit a tendency towards more coarse-grained SBT interpretations as shown on the CPT plots in Appendix B (mid. Sea locations only).

5.4.2 Strengths

The undrained shear strength of these units range from about 600 to 4,300 psf considering twenty UU triaxial compression test results and discounting three anomalously low results from an upper stiff unit that were less than 500 psf. A ratio of undrained shear strength to effective overburden stress was not developed, however the average undrained shear strength, excluding three anomalous data, is about 2,000 psf. Data from Torvane™ tests show a marked increase in undrained shear strength at shallow water locations.

ICU triaxial compression tests, which are used to estimate peak effective cohesion and angle of friction were not completed on this unit. However, considering correlations to index tests, the friction angle could be about 25 degrees.

5.4.3 Compressibility

This unit is interpreted to be overconsolidated considering graphical interpretations of the preconsolidation pressure (σ_p') and engineering judgment. A C_C of 0.14 and C_r of 0.02 are recommended for conceptual design. The c_c data from three tests ranged from 0.13 to 0.26. A median LI of 0.2 suggests a potential for low consolidation settlement. The c_v ranged from 14 to 18 ft^2/yr, discounting an anomalous result.

5.5 ALLUVIAL DEPOSITS

The test results on samples from the upper and lower alluvial deposits were similar, and were combined for engineering characterization purposes.

5.5.1 Material Properties

These units consist predominately of coarse-grained materials that comprise silty sand (SM) and poorly graded sand-silt mixture (SP-SM) with an average of 43% fines content. About one-fifth of these materials were classified as inelastic silt (ML) to low plasticity clay (CL). The relative density ranged from medium dense to dense.

The SBT, where this unit was interpreted to be was mostly correlated as sands as shown on the CPT plots in Appendix C and Table 3 (mid-Sea locations only).

5.5.2 Strength

The undrained shear strength ranged from about 900 to 5,150 psf considering the three UU triaxial compression test results completed on samples obtained within these units. ICU triaxial compression tests were not completed on these samples, however a friction angle would be about 30 degrees, considering physical characteristics.

5.5.3 Compressibility

A C_C of 0.10 and C_r of 0.02 have been interpreted using the data from one consolidation test plot.

5.6 OTHER ENGINEERING PROPERTIES

5.6.1 Corrosivity

The results of five suites of corrosity tests (resistivity, pH, electrical conductivity, cation and anions) on samples obtained at depths ranging form 6 to 16 feet below the mudline indicates that these material are very corrosive to buried metal structures with severe potential for sulfate attack on concrete and a severe potential for chloride attack. Table C-1 provides the test results.

5.6.2 Pinhole Dispersion

The results of seven pinhole dispersion tests on samples obtained at depths ranging from 1 to 25 feet below the mudline indicate the materials possess "moderate to slight" dispersion characteristic as established by ASTM D4647, Method C. The results of one sample at 25 feet below the mudline was "nondispersive". Table C-2 provides the test results.

SECTION 6 PRELIMINARY EMBANKMENT DESIGN CONSIDERATIONS

This section provides preliminary considerations for the design of embankments that may be incorporated into the restoration project. It provides a preliminary evaluation of the requirements to obtain a stable embankment, alternatives that could be used to prepare the foundation of the embankment, potential ground improvement techniques for both embankment and foundation soils, an estimate of post construction settlement magnitudes and rates, and potential in-Sea borrow sources.

6.1 EMBANKMENT STABILITY

A critical element of the embankment design will be the stability of the embankment slopes both during construction and during an earthquake. The current concepts generally incorporate embankment slopes that are at inclinations of 2½:1 (horizontal:vertical) or flatter, with seafloor deposits that had been overexcavated to a depth of 25 feet and replaced with suitable materials. The slope inclinations were selected based on engineering judgment; no specific slope stability analyses were performed. The depth of overexcavation was selected based only on the data that was available at the time, the 1974 Bureau of Reclamation investigation that was only in the southern end of the Sea, and on construction experience of the Great Salt Lake railroad causeway in the 1950s.

The results of the preliminary geotechnical investigation indicate that the soft/weak soils may extend deeper than 25 feet in the central and easterly portion of the mid-Sea alignment. Greater depths of overexcavation and replacement below planned embankments would greatly increase the cost of those embankments. Alternatively, the embankments could be constructed with flatter inclinations that would be stable. The embankment construction may also need to be staged to allow pore pressures induced by the embankment fills in the fine-grained foundation soils to dissipate, and allow the strengths to increase in the foundation soils.

Static slope stability analyses have been performed using the undrained strength test results from this investigation. These tests indicate that the c_u/σ_v' ratio for the seafloor and soft lacustrine deposits is about 0.3 to 0.4. Limited parametric analyses were performed by varying the inclination of the embankment slopes and the depths of foundation soil overexcavation. The results of these analyses are presented in Table 9. Graphical results of the stability analyses are contained in Appendix D. The results of these analyses indicate that an embankment with a crest elevation of -225 feet MSL and 2½:1 slopes would generally require 35 feet of overexcavation to be statically stable. These simplified analyses assumed a potential failure in the foundation soils and generally loose to medium dense granular embankment materials (with a friction angle of 30 degrees); some sort of rock shell would need to be incorporated into the design for 2½:1 embankment slopes to be stable. Embankments with 6:1 slopes would generally be statically stable with about 10 feet of overexcavation, and embankments with 10:1 slopes could statically be stable if placed directly on the seafloor. Less overexcavation would be required for embankments with crest elevations of -240 feet MSL, a case that was analyzed for a lower Sea level.

The static analyses assume that neither the foundation or embankment soils lose strength during an earthquake. These soils could lose strength if they were to liquefy, or have strain-softening behavior that could be exhibited in sensitive clays. It is anticipated that the majority of the foundation soils will be fine-grained and not susceptible to liquefaction. The results of the laboratory testing indicate that the seafloor and soft lacustrine deposits should not be susceptible to significant strength loss based on published empirical criteria (Seed, et al, 2001). However, uncompacted embankment fills would be susceptible to liquefaction. Dynamic response analyses (as discussed in Section 7.4) should be performed to evaluate the seismic response of the embankments and the need for ground improvement (as discussed in Section 6.3). Alternatively, consideration should be given to utilizing materials that would not loose strength during an earthquake; e.g. large blasted rock.

6.2 FOUNDATION PREPARATION

It had been assumed that 25 feet of soft (weak) foundation materials would need to be removed and replaced in the conceptual designs for the dams and barriers in the current restoration alternatives. The results of this preliminary geotechnical investigation indicate that soft soils extend to depths of 40 to 45 feet in some parts of the Sea. Alternatives to the complete overexcavation and replacement of the weak soils may be more cost-effective. These alternatives could include building the embankments with flatter side slopes with minimal overexcavation (as discussed in Section 6.1) or using ground improvement (as discussed in Section 6.3) to strengthen the foundation soils. These alternative schemes should be further evaluated as the current concepts are revised, or new concepts are developed.

6.3 GROUND IMPROVEMENT

Ground improvement techniques could be used to either strengthen the foundation soils or densify uncompacted embankment soils. A variety of innovative ground improvement methods have been developed and verified over the years, several of which would be applicable for the foundation soils and proposed embankments.

The primary problem with the foundation soils is the low strengths of the soft fine-grained seafloor and lacustrine deposits. Steeper embankment slopes could be utilized if these soils were to be strengthened. “Stone columns” could be used to increase the shear strength of the foundation soils; they would also accelerate the consolidation of the soils by allowing radial drainage of the pore water to the columns. Stone columns consist of a dense column of gravel that is typically installed using a casing that is vibrated or driven into the foundation soils. The stone columns are typically 2 to 3 feet in diameter, and are spaced at 5 to 10 feet center-to-center.

Grouting and mixing techniques could also be used to strengthen the foundation soils. Grouting techniques involve the injection of cementitious materials into the voids of the soil such that the particle structure of the majority of the soil remains intact. Grouting would probably have limited applicability for this project due to the predominantly fine-grained nature of the foundation soils. Mixing techniques would introduce the cementitious materials by physically mixing (either mechanically or hydraulically) them with the soil, completely disturbing the particle structure of the soil. Deep soil mixing and jet grouting are mixing techniques that would be applicable to the majority of the foundation soils.

Ground improvement may be required to compact embankment fills that are placed below Sea level and are uncompacted. This may be required to both maintain static stability, as well as to mitigate potential liquefaction of the fills. A number of methods have been developed to densify fill soils by vibration.

"Vibro-compaction" consists of inserting a large vibratory probe into the soil. The “vibro-wing" method consists of drilling a metal rod with a number of metal wings affixed to it into the soils with a vibratory hammer. These techniques have been found to work well on silty sands and clean sands. "Vibro-replacement" is a modification of vibro-compaction in which granular columns (stone columns) are used to backfill the hole created by the vibratory probe. As discussed above, this method can also be used on finer-grained material as it provides reinforcement to the soil and drainage for excess pore water pressures. Vibro-replacement will most likely be required in areas that have high silt and clay contents (greater than about 15 percent fines). The spacing of these techniques is typically 5 to 10 feet.

Large diameter (mammoth) sand compaction piling has been used on major overwater developments overseas; particularly to stabilize very soft clays found in north- and south-east Asia. A significant project such as the Salton Sea Restoration could generate interest from international contractors, where this technology has a wide-ranging experience base. Overwater mammoth compaction piles are typically 4 to 6 ½ feet in diameter. Two to four piles are driven simultaneously from a large barge.

Evaluation of the need and cost-effectiveness of these ground improvement techniques should be undertaken during the revision or development of alternative restoration schemes.

6.4 POST-CONSTRUCTION SETTLEMENTS

In-Sea embankments will need to be designed with some freeboard to prevent overtopping by wind- or seismically-driven waves (seiches). The design of in-Sea embankments will also need to recognize the potential for long-term settlement of the embankment due to consolidation of the underlying silts and clays. Excess pore pressures will be generated in these soils when the load of the embankment fills is placed. Surface settlements will occur as these pore pressures dissipate and the soils consolidate. In the clayier materials, this dissipation may take years, and the post-construction settlements may be several feet in magnitude. The designs could accommodate these post-construction settlements by initially overbuilding the embankment such that the freeboard is maintained when the consolidation settlements are complete, or by periodically raising the embankment as the settlements occur.

Preliminary analyses were performed to evaluate the potential magnitude of consolidation settlements. The results of these analyses are presented in Table 10. These preliminary analyses only considered the primary consolidation settlements from the seafloor and soft lacustrine deposits. It is anticipated that most of the consolidation settlements will occur in these deposits due to the large increase in effective stress (relative to existing overburden pressures) and their high compressibilities. These analyses indicate that 4 to 6 feet of settlement could occur for an embankment crest at elevation -225 feet MSL, where the soft materials were deep along the mid-Sea alignment (the stratigraphy at CPTs 3 and 29 were used for the analyses). Four to five feet of settlement are estimated for an embankment crest at elevation -240 feet MSL. These magnitudes would occur beneath the crest of the embankment, less settlement would occur beneath the slopes of the embankment. It is estimated that the average settlement across the bottom of an embankment (with side slopes at 6:1 and a crest width of 30 feet) would be about 60 to 65 percent of the magnitude at the crest cited above. This value could be used to estimate embankment quantities.

As discussed in Section 5.1.3, the rate of consolidation settlements is estimated using an estimated c_V, which typically exhibits large variabilities in laboratory testing. Large earthwork projects often incorporate test fills to better estimate settlement magnitudes and rates. Therefore, parametric analyses were performed to evaluate probable settlement rates. Since the rate becomes asymptotic with time, it is standard practice to evaluate the time for 90% of the consolidation to be complete. In addition to c_V, the other variable is the drainage path for the expelled pore water to travel. The drainage path is equal to one-half the deposit's thickness if the deposit has double drainage (i.e. it is overlain and underlain by quickly drained deposits), or equal to the deposit thickness if there is only one-way drainage. In the middle of the Sea, the alluvial layers did not appear to be continuous and the layers may only have one-way drainage.

The results of the parametric analyses for the settlement rates is shown in Table 11. These analyses indicate settlement would be complete within a couple of years for the thinner deposits, but may continue for up to 30 years for the thickest deposits.

6.5 IN-SEA BORROW SOURCES

One objective of the preliminary geotechnical investigation was to evaluate the potential for borrowing materials from within the Sea to construct embankments. These materials could be economically dredged and transported using marine dredging methods. The dredging equipment could be either with clamshell dredges with the materials transported by dump barges, or by a cutter suction dredge with the materials transported as hydraulic slurry to the embankment. The performance of dredged fills during and after construction relates directly to the nature of the borrow materials. The amount and rate of settlement of the embankment fill under its own weight, its ability to support structural loads, and appropriate techniques for soil improvement are primarily controlled by the nature of the borrow materials. Of particular interest are gradation, the amount of fines (silts and clays), and the plasticity of the materials.

Dredged fills consisting of material with high clay and silt content are characterized by high water content, low density, high compressibility, and low strength. Trafficability of the embankment surface will be very poor for these materials. As the soils consolidate with time and excess water drains off, settlement of the embankment surface will occur. Settlement may be several feet in magnitude and could occur over a period of several years. Because of these unsatisfactory initial conditions, artificial improvement of most fine-grained dredged fill soils is required either during or after placement to mitigate and/or accelerate settlements.

On the other hand, dredge fills consisting of granular (sandy) materials settle quickly, but are expected to be characterized by low relative density and high liquefaction potential. Overall, the embankment construction would best be facilitated by using materials that are relatively free of silt and clay and composed predominantly of clean sand or gravel (less than 15 percent fines). Some form of ground improvement may still be required to address the liquefaction issue, but there should be early access for construction activity and reduced post-construction settlement problems associated with sand fills.

The majority of the materials encountered in the preliminary geotechnical investigation consisted of fine-grained soils (silts and clays). The structure of the soft fine-grained soils would probably be completely disintegrated during a dredging operation such that it would become a slurry with minimal strength. The structure of the stiff fine-grained soils may be somewhat preserved during the dredging operations such that "clay balls" would remain within the fill with the stiffer consistency. However, it is anticipated that the matrix of the dredged fills would be materials of very low strength.

Sandy alluvial deposits were encountered near the seafloor in some of the explorations near the existing shoreline (see logs of Borings 7, 11 and CPTs 9, 10, 12, 23, 25). Five to ten feet of fine-grained seafloor or lacustrine deposits typically overly the sand. It would appear that the most promising areas for a sand borrow source would be along the west side of the Sea, or near the mouth of Salt Creek along the east side. It is suspected that the steeper bathymetry in these areas is indicative of a predominately sandy material near the surface. Particle size analyses on samples obtained from the sand layers encountered indicate they are fine sands with less than 20 percent silts and clays, but may be interbedded with materials with higher fines content. Ideally, it would be desirable to use coarser-grained sands and gravels than those encountered in this investigation that would drain and gain strength quicker when hydraulically placed. A compilation of the particle size analyses on the alluvial sands are presented in Figure 24.

The alluvial sand layer encountered in Boring 7 was about 20 feet thick. This layer would need to extend over about 1,000 acres (or about 1½ square miles) to provide the borrow for the 32 million cubic yards of material that was estimated for a hydraulically placed earthen barrier.

SECTION 7 FURTHER STUDIES

This investigation has been preliminary in nature and additional studies will need to be performed as the restoration concepts are further developed. This section provides a discussion of studies that have currently been identified that should be performed as the development of the preferred restoration alternative proceeds.

7.1 REVISED AND ALTERNATIVE RESTORATION CONCEPTS

The current conceptual alternatives for a mid-Sea dam or barrier were developed without knowledge of specific subbottom conditions at the proposed mid-Sea location. It had been somewhat arbitrarily assumed that 25 feet of soft/weak soils would need to be removed to prepare a foundation for embankments at the mid-Sea location, and that flat embankment side slopes would be required for seismic stability. The data obtained from the preliminary geotechnical investigation now provides specific information on the depth and consistency/strength of the foundation materials. These data should be utilized to revise the existing concepts with specific depth of removals and embankment slope inclinations required for stability. Additionally, techniques such as minimal removal of weak materials with in-situ ground improvement to strengthen the foundation soils should be evaluated.

The subbottom conditions as currently characterized by the preliminary geotechnical investigation also warrant evaluation of alternative concepts for the mid-Sea dam or barrier. Earthen dam or barrier concepts were previously considered the most economical. However, given the subbottom conditions, as they are currently characterized, structural barriers, such as precast concrete caissons or steel sheetpile structures that minimize the foundation footprint, may be more economical. It is recommended that a workshop of engineering experts, similar to what was used to develop the current dam and barrier concepts, be convened to brainstorm additional alternatives that recognize the subbottom conditions that have been characterized from the preliminary geotechnical investigation.

7.2 FAULT LOCATIONS

The San Andreas Fault is mapped 1.8 miles east of the east end of the mid-Sea location. This fault is projected to enter the Sea just east of Bombay Beach. The Imperial and Brawley faults are mapped at the southern end of the Sea. The locations of these onshore faults could all be projected into the Sea. Historical seismicity data also implies that faults do underlie the Sea, although their surface projection is unknown. These data do not preclude the possibility that an active fault could cross proposed embankment locations. This potential fault rupture hazard should be further evaluated to assess the possible presence and activity of the faults.

The in-Sea locations of the restoration alternatives are ideally suited to investigation of the potential fault rupture hazard using marine geophysical methods. Using subbottom-profiling techniques, the continuity of subbottom sediment layers can be investigated. If disruptions in the layers are identified, samples of the subbottom sediments can be obtained and age-dated to determine the recency of the disruptions. If active fault strands are identified, the restoration alternatives should avoid these locations, or if they cannot, then designs should be developed that would mitigate the consequences of fault displacements.

7.3 ADDITIONAL GEOTECHNICAL INVESTIGATIONS

As the restoration concepts are further developed, additional geotechnical explorations will be warranted. It should be recognized that the explorations completed for the preliminary geotechnical investigation are miles apart. Variations in subbottom conditions could occur between the existing exploration locations. As specific locations are identified for the restoration alternatives, the subbottom conditions will need to be further characterized in those areas. The subsurface conditions encountered in these investigations could significantly influence the type of the restoration alternative and its location.

Detailed subsurface characterization will be needed to interpret and quantify the geological variability that exists in the Salton Sea. Specifically, it will be necessary to interpret the location of potential fault traces and splays and further characterize the thickness of soft subbottom sediments. Therefore, the next phase of in-Sea geotechnical exploration should comprise geophysical surveys as discussed in Section 7.2. The geophysical surveys also provide cost-effective spatial interpretations between boring or CPT locations.

Additional marine-based explorations should follow the geophysical surveys using a jackup barge as a drilling platform. The jackup barge successfully provided a stable platform such that minimal time was lost during the preliminary investigation due to rough Sea conditions. This preliminary geotechnical investigation also used drilled and sampled borings combined with CPTs. This has provided an excellent combination of material characterization of the boring samples with the nearly continuous lithology obtained from the CPTs. In addition, consideration should be given to in-situ testing of strengths and compressibilities, such as vane shear testing and pressuremeter testing.

A substantial amount of embankment fill may need to be borrowed from upland areas. A reconnaissance level study should be undertaken to identify potential borrow areas in the vicinity of the Sea. The need will be to identify potential sources of sandy material. It is anticipated that sufficient quantities of granular materials could be identified in areas near the base of the surrounding mountains. Subsurface explorations should then be performed in the areas identified to confirm the quality of the potential borrow materials.

A large quantity of rock and riprap would also be required to construct and armor in-Sea embankments that may be part of the preferred restoration alternative. Potential sources of this rock should also be identified as part of the reconnaissance level study, followed by explorations to confirm the quality of the rock. The nearby Eagle Mountain and Mesquite mines have large quantities of rock that are in waste stockpiles and may be suitable for use as rock embankments or riprap. The quality of that rock for these uses should also be evaluated.

7.4 DYNAMIC RESPONSE OF EMBANKMENTS

The side slope inclinations of the embankments for the conceptual mid-Sea dam and barriers were based primarily on the judgment of the engineers that had developed the concepts. However, the proposed embankments are probably in an area with the highest potential seismicity in California. Furthermore, very few large earthen structures have been designed in the area. It is recommended that the conceptual designs of embankments that are developed for the restoration alternatives be validated by performing preliminary dynamic response analyses of the proposed embankment configurations.

The preliminary dynamic response analyses could be performed by evaluating the potential ground shaking at the site and selecting representative acceleration time histories of equivalent earthquakes. A finite difference program could then be used to model the response of a proposed embankment. Material parameters from similar embankment materials could be used in the preliminary analyses. These analyses would then validate the appropriateness of a conceptual design, given the seismic exposure at the Sea.

SECTION 8 UNCERTAINTIES AND LIMITATIONS

Only a very small portion of the pertinent subbottom conditions has been explored. It should be recognized that the explorations are miles apart and variations in subbottom conditions could occur between the explorations. The preliminary engineering characterization of the subbottom sediments could change based on the results of additional explorations and testing.

The Salton Sea is in one of the most seismic areas of California. It is anticipated that a major earthquake will occur on the San Andreas Fault, and other nearby faults, during the lifetime of the project. Therefore, the potential seismic hazards that could impact the project will need to be further evaluated.

Geotechnical engineering and the geologic sciences are characterized by uncertainty. Professional judgments presented here are based partly on our understanding of the proposed project, and partly on our general experience. Our engineering work and judgments rendered meet current professional standards; we do not guarantee the performance of the project in any respect.

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Table 1
Summary of In-Sea Explorations
Salton Sea Restoration Project

Exploration Designation	Exploration Type [a]	Actual Location [b]		Completed Exploration Depth (feet)	Seafloor Elevation (feet, MSL)	Bottom of Exploration (feet, MSL)
		Latitude	Longitude			
1	CPT	33.35427	-115.77464	42	-257	-299
2	Boring	33.35660	-115.77946	149	-258	-407
3	CPT	33.33546	-115.80324	59	-269	-328
4	Boring	33.30765	-115.79666	52	-268	-320
5	Boring	33.31832	-115.82606	51	-268	-319
6	Boring	33.33248	-115.85323	52	-269	-321
7	Boring	33.30029	-115.85326	50	-259	-309
8	CPT	33.30031	-115.85282	48	-259	-307
9	CPT	33.28325	-115.88024	60	-237	-297
10	CPT	33.16777	-115.79941	32	-238	-270
11	Boring	33.17413	-115.79263	31	-243	-274
12	CPT	33.18340	-115.78114	33	-253	-286
13	CPT	33.18436	-115.63680	37	-239	-276
14	Boring	33.20150	-115.66085	52	-250	-302
15	CPT	33.22700	-115.69578	50	-268	-318
16	CPT	33.30907	-115.62650	46	-233	-279
17	Boring	33.30338	-115.64420	30	-244	-274
18	CPT	33.29858	-115.65949	43	-253	-296
19	Boring	33.40553	-115.91742	52	-275	-327
20	Boring	33.49624	-116.02119	32	-254	-286
21	CPT	33.34330	-115.92782	37	-260	-297
22	CPT	33.40681	-115.83706	50	-263	-313
23	CPT	33.42945	-116.03335	44	-251	-295
24	Boring	33.42849	-116.01081	Eliminated due to weather delays		
25	CPT	33.44577	-115.86259	41	-249	-290
26	Boring	33.33562	-115.79995	52	-267	-319
27	CPT	33.34678	-115.78703	67	-266	-332
28	CPT	33.32996	-115.81600	60	-269	-329
29	CPT	33.30987	-115.83988	46	-267	-312

Notes:

a. CPT denotes Cone Penetration Test.

b. The latitudes and longitudes are NAD 83.

Table 2
Summary of Laboratory Tests Performed
Salton Sea Restoration Project

Test Type	Purpose	Number of Tests Assigned			
		Total Program	Mid-Sea [a]	North Area [b]	South Area [c]
Moisture Content (ASTM D2216)	Material Properties`	155	109	17	29
Total and Dry Densities (ASTM D2937)	Material Properties	89	63	11	15
Atterberg Limits (ASTM D-4318)	Material Properties	41	30	3	8
Particle Size Analyses (ASTM D-422)	Material Properties	39	25	3	8
Percent Passing #200 Sieve (ASTM D-1140)	Material Properties	21	13	1	7
Specific Gravity Tests (ASTM D-854)	Material Properties	7	4	0	3
Pinhole Dispersion Analyses (ASTM D-4647)	Material Properties	7	4	0	3
Unconsolidated Undrained Compression (ASTM D-2850)	Strength (Undrained)	33	21	5	7
Consolidated Undrained Triaxial Compression (ASTM D-4767)	Strength (Drained)	6	6	0	0
Consolidation (ASTM D-2435)	Compressibility	15	11	2	2

Notes:

a. Mid-Sea data from Borings 2, 4, 5, 6, 7, and 26.

b. North Area data from Borings 19 and 20.

c. South Area data from Borings 11, 14, and 17.

Table 3
Summary of Material Properties
Salton Sea Restoration Project

Test Type	Sea Floor Deposit					Soft Lacustrine Deposit					Alluvial Deposits					Stiff Lacustrine Deposits				
	No. of Tests	High	Low	Avg.	Median	No. of Tests	High	Low	Avg.	Median	No. of Tests	High	Low	Avg.	Median	No. of Tests	High	Low	Avg.	Median
Unified Soil Classification [a]	34	**91%CH** / 9% SM				31	**87% CH / 3**% ML/ 10% CL				27	**52% SM** / 15% ML / 7% CL / 7% SP-SM / 15% CH / 4%SC				64	**72% CH** / 14% CL / 9% SM / 3% ML / 2% CL-ML			
Water Content (%)	34	98	22	63	66	31	65	30	43	41	26	41	15	25	24	64	52	19	32	32
Total Unit Weight (pcf)	28	127	93	102	99	21	120	97	110	113	11	128	115	123	124	29	128	102	119	121
Dry Unit Weight (pcf)	28	102	47	64	52	21	91	61	79	80	11	106	85	98	100	29	105	71	90	91
Liquid Limit (%)	11	85	60	77	79	11	89	32	66	71	1	97	97	97	97	18	79	21	55	63
Plasticity Index (%)	11	54	40	48	52	11	58	12	40	46	1	65	65	65	65	18	54	4	34	40
Liquidity Index	11	1.59	0.20	0.81	0.72	11	1.63	0.12	0.63	0.35	1	-0.12	-0.12	-0.12	-0.12	18	1.50	0.09	0.39	0.22
Plastic Limit (%)	8	33	20	30	31	11	32	16	26	28	1	32	32	32	32	18	26	15	21	23
Sand[b] (%)	21	86	1	41	36	4	7	1	4	4	12	91	6	59	61	14	88	0	24	9
Fines[c] (%)	11	100	14	64	78	4	99	93	96	97	23	97	9	43	34	22	100	12	73	88
Specific Gravity	3	2.76	2.68	2.72	2.72	1	2.77	2.77	2.77	2.77	1	2.72	2.72	2.72	2.72	3	2.77	2.73	2.76	2.77

Notes:

a. Percentages denote that of samples tested.

b. Averages and medians may be biased as coarser samples were selected for particle size analyses.

c. Percent finer than the No. 200 seive.

d. na denotes test data not available for that stratum

Table 4
Summary of Unconsolidated Undrained Triaxial Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Water Content (%)	Liquid Limit (%)	Plasticity Index (%)	Dry Density (pcf)	Triaxial Confining Pressures (psf)	Peak Deviator Stress at Failure (psf)	Axial Strain at Failure (%)	Undrained Shear Strength, Cu (psf)
B-4	2	4.2	CH	Seafloor Deposit	78	74	41	53	500	250	13.0	125
B-4	5	21.5	CH	Seafloor Deposit	28	—	—	96	1,000	1,600	16.0	800
B-5	1	2.6	CH	Seafloor Deposit	79	85	54	54	500	350	10.0	175
B-6	1	2.8	CH	Seafloor Deposit	72	—	—	55	500	400	10.0	200
B-17	1	1.5	CH	Seafloor Deposit	98	72	44	47	500	150	10.0	75
B-19	2	5.8	CH	Seafloor Deposit	66	82	52	60	500	300	13.0	150
B-2	2	4.5	CH	Soft Lacustrine Deposit	34	70	42	88	500	2,200	7.1	1,100
B-5	5	21.6	CH	Soft Lacustrine Deposit	40	—	—	80	1,000	1,100	10.6	550
B-6	3	12.2	CH	Seafloor Deposit / Soft Lacustrine Deposit	31	—	—	91	750	700	17.7	350
B-14	2	5.7	CL	Soft Lacustrine Deposit	39	—	—	83	500	400	24.0	200
B-20	2	5.5	CH	Soft Lacustrine Deposit	37	70	44	84	500	2,100	22.5	1,050

Table 4 (continued)
Summary of Unconsolidated Undrained Triaxial Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Water Content (%)	Liquid Limit (%)	Plasticity Index (%)	Dry Density (pcf)	Triaxial Confining Pressures (psf)	Peak Deviator Stress at Failure (psf)	Axial Strain at Failure (%)	Undrained Shear Strength, Cu (psf)
B-2	4	14.8	CH	Upper Stiff Lacustrine Deposit	29	–	–	95	750	4,700	10.5	2,350
B-2	7	28.7	CH	Upper Stiff Lacustrine Deposit	29	–	–	98	1,300	2,000	13.8	1,000
B-4	11	51.5	CH	Upper Stiff Lacustrine Deposit	52	79	54	71	2,500	900	16.3	450
B-5	10	46.0	CH	Upper Stiff Lacustrine Deposit	40	–	–	84	4,500	380	21.0	190
B-6	10	46.0	CH	Upper Stiff Lacustrine Deposit	26	–	–	98	2,000	3,400	15.5	1,700
B-11	7	25.8	CH	Upper Stiff Lacustrine Deposit	50	–	–	72	1,200	1,400	8.0	700
B-14	4	16.6	CH	Upper Stiff Lacustrine Deposit	35	–	–	83	750	600	15.1	300
B-17	3	10.0	CH	Upper Stiff Lacustrine Deposit	35	66	40	87	500	2,100	10.5	1,050
B-17	5	20.0	CH	Upper Stiff Lacustrine Deposit	32	62	38	89	1,000	3,300	7.8	1,650
B-17	7	29.9	CH	Upper Stiff Lacustrine Deposit	29	75	51	96	1,500	5,100	3.9	2,550
B-19	8	36.2	CH	Upper Stiff Lacustrine Deposit	38	–	–	85	1,500	1,800	20.0	900

Table 4 (continued)
Summary of Unconsolidated Undrained Triaxial Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Water Content (%)	Liquid Limit (%)	Plasticity Index (%)	Dry Density (pcf)	Triaxial Confining Pressures (psf)	Peak Deviator Stress at Failure (psf)	Axial Strain at Failure (%)	Undrained Shear Strength, Cu (psf)
B-19	10	45.8	CH	Upper Stiff Lacustrine Deposit	43	–	–	78	2,000	1,400	18.0	700
B-20	5	21.0	CH	Upper Stiff Lacustrine Deposit	34	–	–	88	1,000	1,200	21.0	600
B-26	11	50.8	CH	Upper Stiff Lacustrine Deposit	35	–	–	85	2,500	3,400	10.0	1,700
B-2	14	68.8	SM	Lower Stiff Lacustrine Deposit	28	–	–	95	3,000	4,200	9.6	2,100
B-2	18	88.5	CH	Lower Stiff Lacustrine Deposit	31	63	40	92	4,000	3,800	9.0	1,900
B-2	24	118.7	CH	Lower Stiff Lacustrine Deposit	32	66	41	91	5,500	8,600	4.9	4,300
B-2	26	128.7	CL	Lower Stiff Lacustrine Deposit	26	44	23	98	6,000	7,700	7.7	3,850
B-2	29	148.7	CH	Lower Stiff Lacustrine Deposit	31	62	39	92	7,000	7,900	7.8	3,950
B-7	4	15.0	SC	Upper Alluvial Deposit	24	–	–	102	750	1,800	19.5	900
B-7	6	25.6	SM	Upper Alluvial Deposit	23	–	–	104	1,500	10,300	6.8	5,150
B-7	7	30.2	CH	Upper Alluvial Deposit	24	–	–	100	2,000	3,900	17.5	1,950

Table 5
Summary of Consolidated Undrained Triaxial Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Average Water Content[a] (%)	Liquid Limit (%)	Plasticity Index (%)	Average Dry Density[b] (pcf)	Effective Cohesion[c] (psf)	Effective Friction Angle[c] (degrees)
B-4	4	16	CH	Seafloor Deposit	58	76	43	62	0	32
B-5	3	11	CL/CH	Seafloor Deposit	78	–	–	55	120	24
B-6	2	7	CH	Seafloor Deposit	66	83	53	59	100	28
B-26	2, 3	5, 10	CH	Seafloor Deposit	67	83	53	61	0	30
B-4	8	36	CH	Soft Lacustrine Deposit	51	78	46	66	2200	23
B-5	4	16	CH	Soft Lacustrine Deposit	38	–	–	82	200	26
B-6	4	16	CH	Soft Lacustrine Deposit	47	89	58	106	0	30

Notes:

a. Water Content prior to consolidation.
b. Dry Density prior to consolidation.
c. See Figures C-160 through C-124 for Mohr-Coulomb Envelopes
d. See Table C-3 for additional details on ICU tests.

Table 6
Summary of Consolidation Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Water Content (%)	Liquid Limit (%)	Plasticity Index (%)	Liquidity Index	Initial Dry Density (pcf)	Initial Void Ratio	Existing Overburden Pressure (psf)	Apparent Preconsolidation Pressure (psf)	OCR	C_c	C_r	CR	RR	C_v (ft²/yr)	Remarks
B-4	3	12.0	CH	Seafloor Deposit	81.9	84	53	0.37	53	2.24	396	900	2.3	0.568	0.057	0.175	0.020	40	
B-5	2	7.0	CH	Seafloor Deposit	58.3	–	–	–	64	1.98	252	620	2.5	0.792	0.079	0.266	0.024	8	
B-5	3	10.0	CH	Seafloor Deposit	56.0	79	53	0.57	61	1.79	377	450	1.2	0.762	0.076	0.273	0.017	33	
B-17	2	5.0	ML	Seafloor Deposit	51.3	–	–	–	74	1.36	240	550	2.3	0.229	0.023	0.097	0.014	16	
B-19	1	2.0	ML	Seafloor Deposit	83.4	–	–	–	52	2.30	74	350	4.7	1.096	0.110	0.332	0.023	10	
B-26	1	2.0	ML	Seafloor Deposit	78.2	–	–	–	56	2.15	67	575	8.6	0.864	0.086	0.274	0.007	24	
B-4	9	41.0	CH	Soft Lacustrine Deposit	60.9	–	–	–	64	1.68	1461	1700	1.2	0.611	0.061	0.228	0.018	14	
B-7	2	6.0	CL/CH	Soft Lacustrine Deposit	33.6	71	47	0.20	89	0.94	304	1300	4.3	0.142	0.014	0.073	0.012	21	
B-14	2	6.0	ML	Soft Lacustrine Deposit	29.6	32	12	1.56	90	1.05	251	1300	5.2	0.097	0.010	0.048	0.003	135	
B-19	5	20.0	CH	Soft Lacustrine Deposit	52.6	–	–	–	87	0.97	848	850	1.0	0.186	0.019	0.094	0.008	39	
B-26	4	15.0	ML/CL	Soft Lacustrine Deposit	20.9	32	16	1.63	94	1.15	607	580	1.0	0.247	0.025	0.115	0.017	9	
B-7	4	15.0	SM	Upper Alluvial Deposit	24.1	97	65	-0.12	92	0.87	779	1000	1.3	0.140	0.014	0.075	0.014	6	
B-2	5	19.0	CH	Upper Stiff Lacutrine Deposit	32.5	65	42	0.23	91	0.79	1076	1200	1.1	0.111	0.011	0.062	na	14	Sample swelled upon saturation prior to consolidation test.
B-5	10	45.5	CH	Upper Stiff Lacustrine Deposit	36.7	–	–	–	75	1.29	2154	1000	0.5	0.259	0.026	0.113	0.018	18	
B-6	6	26.0	SM	Soft Lacustrine Deposit / Upper Stiff Lacustrine Deposit	25.1	–	–	–	99	0.59	1119	2000	1.8	0.130	0.001	0.008	0.001	189	

Table 7
Recent Large Earthquakes in the Salton Trough
Salton Sea Restoration Project

Fault	Year of Earthquake	Magnitude
Imperial Fault	1979	6.5
	1940	7.0
Cerro Prieto	1966	6.3
	1940	6.0
	1934	7.1
	1915	7.1
San Jacinto Zone (Elmore Ranch/Supersition Hills)	1987	6.2/6.6
(Borrego Mountain)	1968	6.7
(Arroyo Salada)	1954	6.5
(Lower Borrego Valley)	1942	6.6

Table 8
Preliminary Characterization of Material Properties
Salton Sea Restoration Project

Parameter	Symbol	Units	Seafloor Deposit	Soft Lacustrine Deposit	Alluvial Deposit	Stiff Lacustrine Deposit
Total Unit Weight	γ_t	pcf	100	110	125	120
Water Content	w	%	62	44	26	32
Undrained Shear Strength	C_u	psf	NA	NA	2700	1900
Undrained Shear Strength Ratio	C_u/σ'_{vo}	psf	0.35	0.35	NA	NA
Effective Cohesion	c'	psf	0	0	0	NA
Effective Internal Friction Angle (Peak)	ϕ'	degrees	27	25	30	NA
Effective Internal Friction Angle (Ultimate[b])	ϕ'	degrees	25	23	NA	NA
Compression Index	C_c	NA	0.65	0.35	0.10	0.14
Recompression Index	C_r	NA	0.10	0.05	0.02	0.02
Initial Void Ratio	e_o	NA	1.90	1.30	0.90	0.95
Overconsolidation Ratio	OCR	NA	1.5	1.0	NA	NA
Coefficient of Consolidation (Lab)	C_v	ft^2/year	15	20	NA	NA

Notes:

a. NA denotes insufficient information or parameter not applicable to strata.

b. Ultimate condition is defined as the point where continuous shear deformation continues with no further changes in volume.

Table 9
Results of Preliminary Embankment Stability Analyses
Salton Sea Restoration Project

Analytical Case [a]	Embankment Crest [b] (feet MSL)	Embankment Slope [c] (H:V)	Assumed Foundation Overexcavation [d] (feet)	Assumed C_u/σ'_v of Foundation Soils [e]	Calculated Static Factor of Safety [f]
1	-225	2.5:1	0	0.3	0.7
2	-225	2.5:1	0	0.4	0.9
3	-225	2.5:1	10	0.3	0.8
4	-225	2.5:1	10	0.4	1.0
5	-225	2.5:1	25	0.3	1.1
6	-225	2.5:1	25	0.4	1.3
7	-225	2.5:1	35	0.3	1.3
8	-225	2.5:1	35	0.4	1.5
9	-225	6:1	0	0.3	1.3
10	-225	6:1	0	0.4	1.7
11	-225	6:1	10	0.3	1.4
12	-225	6:1	10	0.4	1.8
13	-225	6:1	25	0.3	1.6
14	-225	6:1	25	0.4	2.0
15	-225	10:1	0	0.3	1.8
16	-225	10:1	0	0.4	2.4
17	-225	10:1	10	0.3	1.9
18	-225	10:1	10	0.4	2.4
19	-225	10:1	25	0.3	2.1
20	-225	10:1	25	0.4	2.6
21	-240	2.5:1	0	0.3	0.8
22	-240	2.5:1	0	0.4	1.0
23	-240	2.5:1	10	0.3	1.0
24	-240	2.5:1	10	0.4	1.2
25	-240	2.5:1	25	0.3	1.4

Table 9 (continued)
Results of Preliminary Embankment Stability Analyses
Salton Sea Restoration Project

Analytical Case [a]	Embankment Crest [b] (feet MSL)	Embankment Slope [c] (H:V)	Assumed Foundation Overexcavation [d] (feet)	Assumed C_u/σ'_v of Foundation Soils [e]	Calculated Static Factor of Safety [f]
26	-240	2.5:1	25	0.4	1.6
27	-240	6:1	0	0.3	1.3
28	-240	6:1	0	0.4	1.7
29	-240	6:1	10	0.3	1.5
30	-240	6:1	10	0.4	1.9
31	-240	6:1	25	0.3	1.8
32	-240	6:1	25	0.4	2.2
33	-240	10:1	0	0.3	1.9
34	-240	10:1	0	0.4	2.4
35	-240	10:1	10	0.3	2.0
36	-240	10:1	10	0.4	2.5
37	-240	10:1	25	0.3	2.3
38	-240	10:1	25	0.4	2.8

Notes:

a. Graphical outputs of stability analyses are included in Appendix D.

b. Embankment crest of -225 or -240 feet MSL assumed for Sea levels of -230 or -245 feet MSL, respectively.

c. Embankment modeled as a dam with 30 foot crest, seafloor at -270 feet MSL, and built with materials with a total unit weight of 120 pcf and a friction angle of 30 degrees (stronger materials would be required for the 2.5:1 slopes, otherwise the embankment would fail).

d. Assumed to be backfilled with granular material with total unit weight of 120 pcf and friction angle of 30 degrees.

e. C_u/σ'_v represents ratio of undrained shear strength to effective overburden pressure, assumed to be same value whether foundation soils were seafloor deposits or soft lacustrine deposits..

f. Standard of practice is to have a minimum static factor of safety of 1.5.

Table 10
Results of Prelimary Embankment Settlement Analyses
Salton Sea Restoration Project

Analytical Case	Exploration	Embankment Crest [a] (feet MSL)	Deposit	Deposit Thickness [b] (feet)	Consolidation Settlement [c] (feet)	Total Consolidation Settlement [d] (feet)	Average Consolidation Settlement [e] (feet)
1	CPT 3	-225	Seafloor Desposit	16	3.6	5.8	3.7
			Soft Lacustrine Deposit	26	2.2		
2	CPT 29	-225	Seafloor Desposit	13	3.2	4.3	2.8
			Soft Lacustrine Deposit	10	1.1		
3	CPT 3	-240	Seafloor Desposit	16	2.9	4.5	2.9
			Soft Lacustrine Deposit	26	1.6		
4	CPT 29	-240	Seafloor Desposit	13	2.8	3.7	2.3
			Soft Lacustrine Deposit	10	0.9		

Notes:

a. Embankment crest of -225 or -240 feet MSL assumed for Sea levels of -230 or -245 feet MSL, respectively.

b. As encountered in the exploration, assumes no overexcavation of soft materials.

c. Calculated at the centerline of the embankment, for a seafloor at -270 feet MSL, embankment materials with a total unit weight of 120 pcf, and a CR=0.22 and OCR=1.5 for the seafloor desposits and CR=0.15 and OCR=1.0 for the soft lacustrine deposits.

d. Does not include post-construction settlements of embankment, alluvial materials or stiff lacustrine deposits.

e. Average settlement across bottom of embankment with 30-foot crest and 6:1 side slopes.

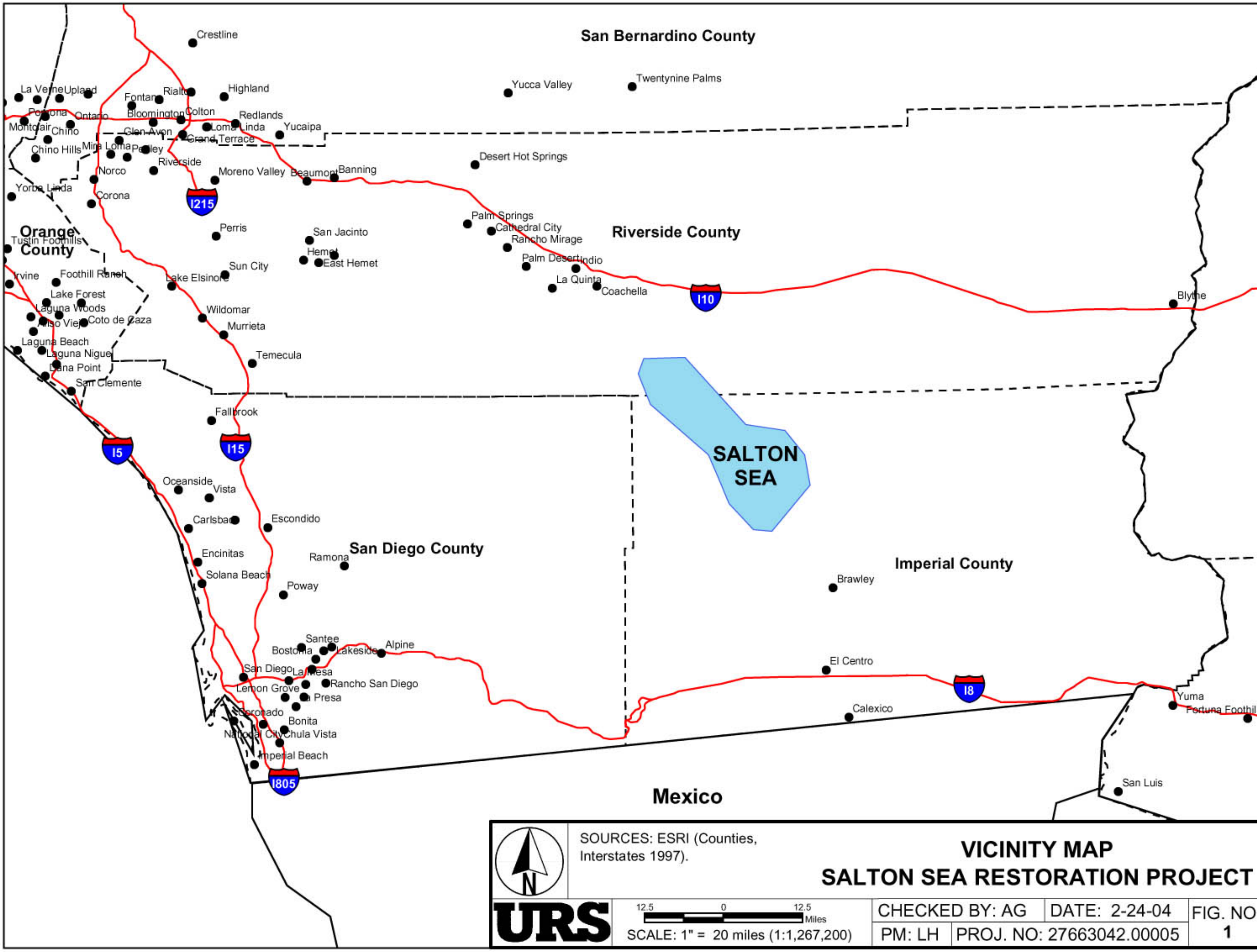
Table 11
Results of Preliminary Settlement Rate Analyses
Salton Sea Restoration Project

Drainage Path [a] (feet)	Coefficient of Consolidation [b] (ft^2/yr)	Time to 90% Consolidation (years)
5	10	0.5
	20	0.2
	40	0.1
10	10	2.0
	20	1.0
	40	0.5
20	10	7.9
	20	3.9
	40	2.0
30	10	17.7
	20	8.9
	40	4.4
40	10	31.5
	20	15.8
	40	7.9

Notes:

a. Drainage path is one-half the deposit thickness for double drainage and equal to the deposit thickness for single drainage.

b. Preliminary characterization recommends C_v of 20 ft^2/yr with a range ot 10 to 40 ft^2/yr.



SOURCES: ESRI (Counties, Interstates 1997).

VICINITY MAP
SALTON SEA RESTORATION PROJECT

URS

12.5 0 12.5 Miles

SCALE: 1" = 20 miles (1:1,267,200)

CHECKED BY: AG	DATE: 2-24-04	FIG. NO: 1
PM: LH	PROJ. NO: 27663042.00005	

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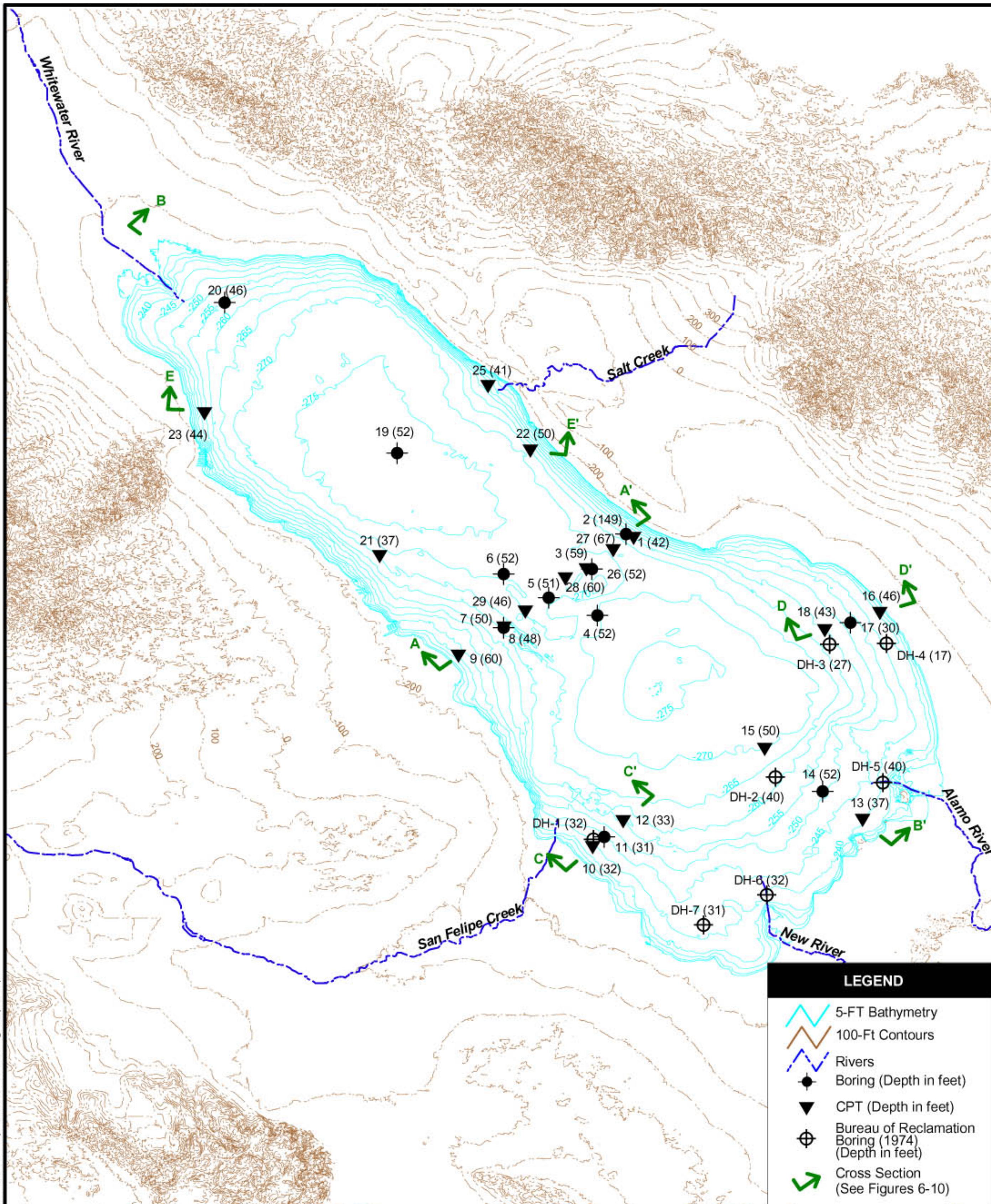

SOURCE: University of Redlands.
COORDINATE SYSTEM: Geographic North American Datum, 1983, Decimal Degrees.

PLAN OF EXPLORATIONS
SALTON SEA RESTORATION PROJECT

URS

3 0 3 6 Miles
SCALE: 1:360,000

CHECKED BY: AJ	DATE: 2-24-04	FIG. NO:
PM: LDH	PROJ. NO: 27663042.00005	2

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Drilling barge jacked up out of the water

In Sea drilling activities on Boring 2

PHOTOGRAPHS OF FIELD OPERATION
SALTON SEA RESTORATION PROJECT

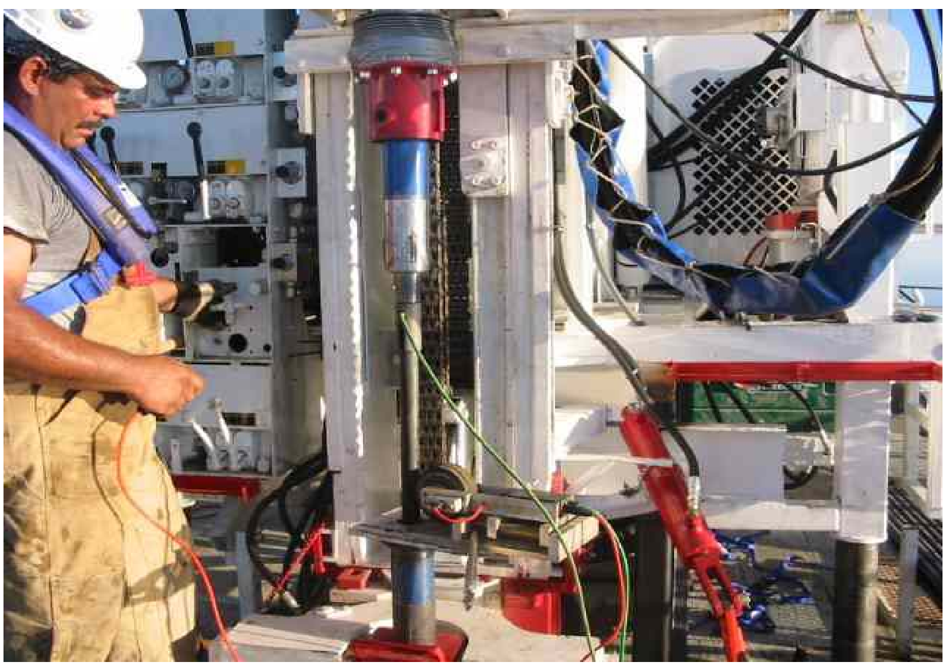
URS	CHECKED BY: AJG	DATE: 01-30-04	FIG. NO. 3
	PM: LDH	PROJ. NO.: 27663042.00005	

Standard penetration sample

Punch Core sample

PHOTOGRAPHS OF SAMPLES SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-04	FIG. NO. 4
	PM: LDH	PROJ. NO.: 27663042.00005	

20-Ton capacity cone



Performing Cone Penetration Test

PHOTOGRAPHS OF CPT OPERATION SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042.00005	5

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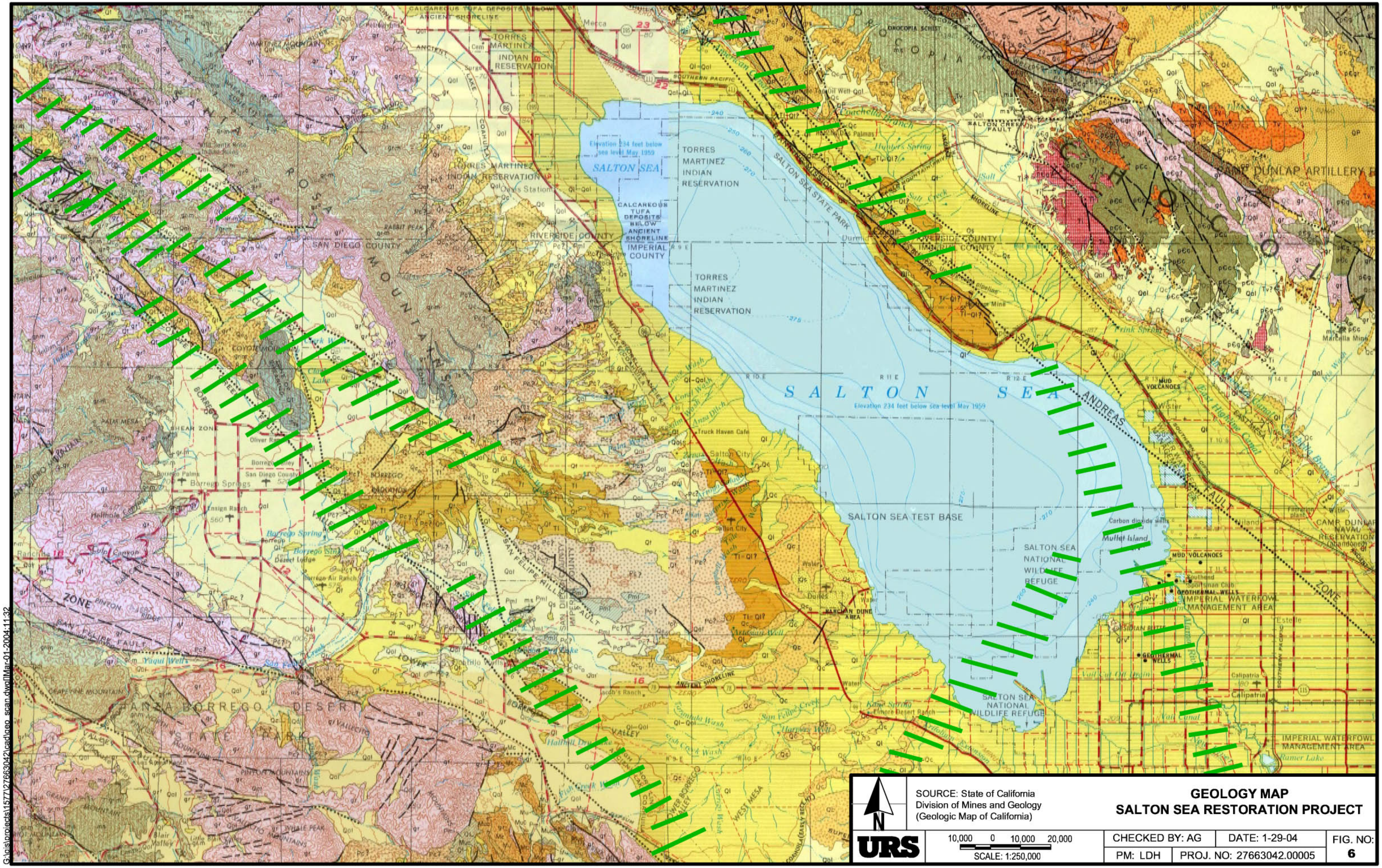


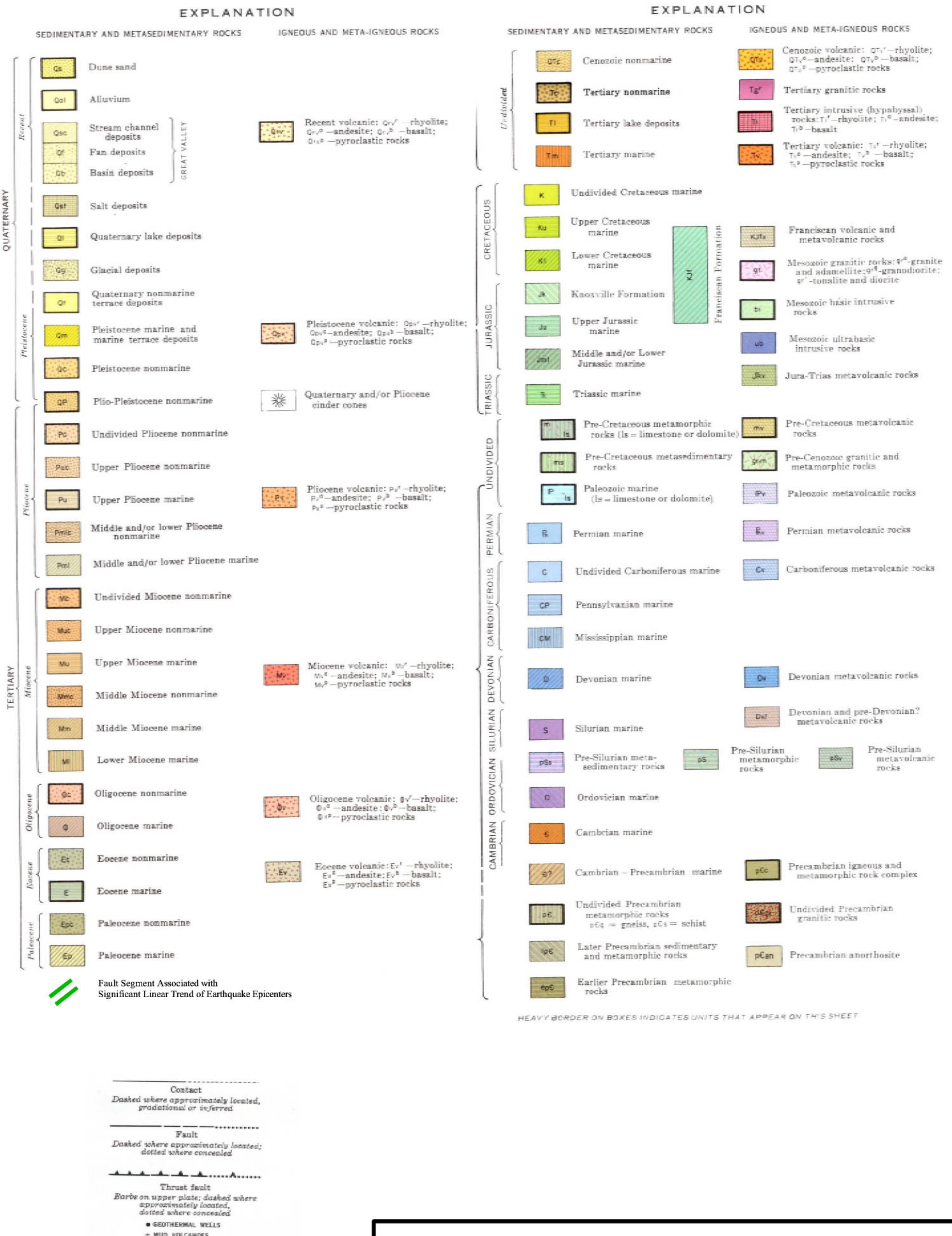
SOURCE: State of California
Division of Mines and Geology
(Geologic Map of California)

10,000 0 10,000 20,000
SCALE: 1:250,000

URS

GEOLOGY MAP
SALTON SEA RESTORATION PROJECT

CHECKED BY: AG	DATE: 1-29-04	FIG. NO:
PM: LDH	PROJ. NO: 27663042.00005	6



SOURCE: State of California
Division of Mines and Geology
(Geologic Map of California)

LEGEND FOR GEOLOGY MAP
SALTON SEA RESTORATION PROJECT

URS

NO SCALE

CHECKED BY: AG	DATE: 1-29-04	FIG. NO: 7
PM: LDH	PROJ. NO: 27663042.00001	

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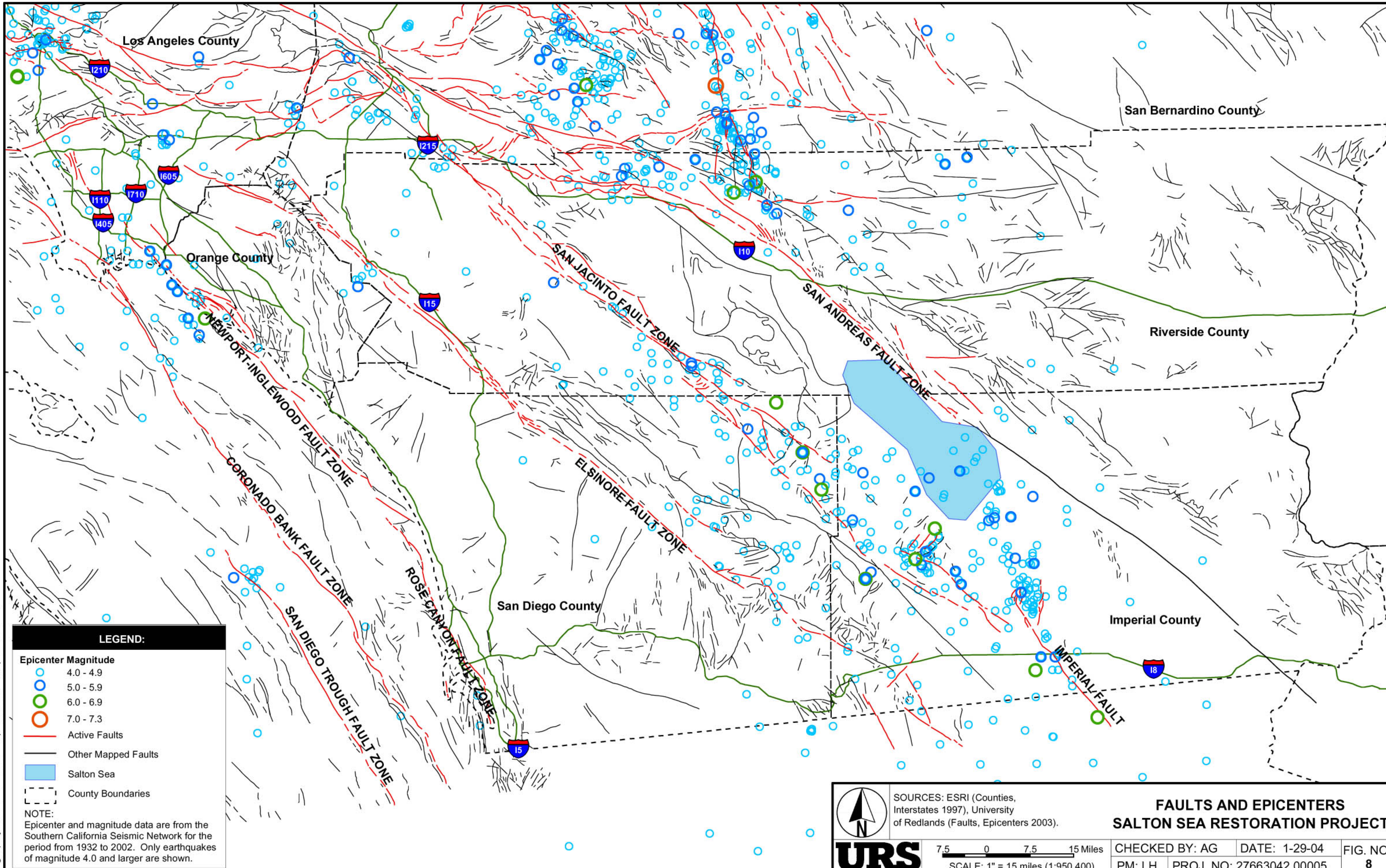


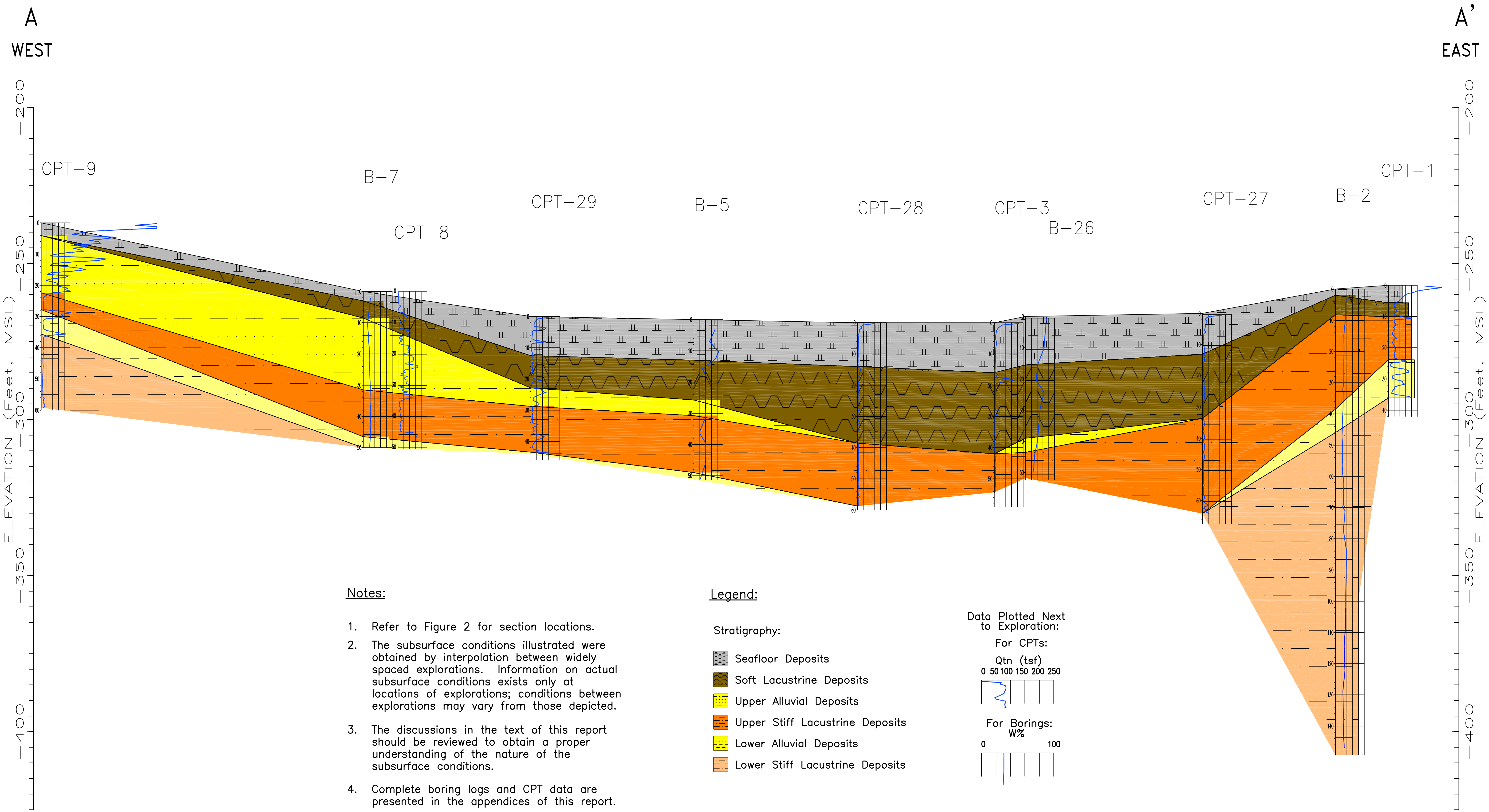
SOURCES: ESRI (Counties, Interstates 1997), University of Redlands (Faults, Epicenters 2003).

URS

FAULTS AND EPICENTERS
SALTON SEA RESTORATION PROJECT

CHECKED BY: AG	DATE: 1-29-04	FIG. NO: 8
PM: LH	PROJ. NO: 27663042.00005	

G:\gis\projects\1577\27663042\aprs\faults_and_epicenters.mxd



Notes:

1. Refer to Figure 2 for section locations.
2. The subsurface conditions illustrated were obtained by interpolation between widely spaced explorations. Information on actual subsurface conditions exists only at locations of explorations; conditions between explorations may vary from those depicted.
3. The discussions in the text of this report should be reviewed to obtain a proper understanding of the nature of the subsurface conditions.
4. Complete boring logs and CPT data are presented in the appendices of this report.

Legend:

Stratigraphy:

- Seafloor Deposits
- Soft Lacustrine Deposits
- Upper Alluvial Deposits
- Upper Stiff Lacustrine Deposits
- Lower Alluvial Deposits
- Lower Stiff Lacustrine Deposits

Data Plotted Next to Exploration:

For CPTs:
Qtn (tsf)
0 50 100 150 200 250

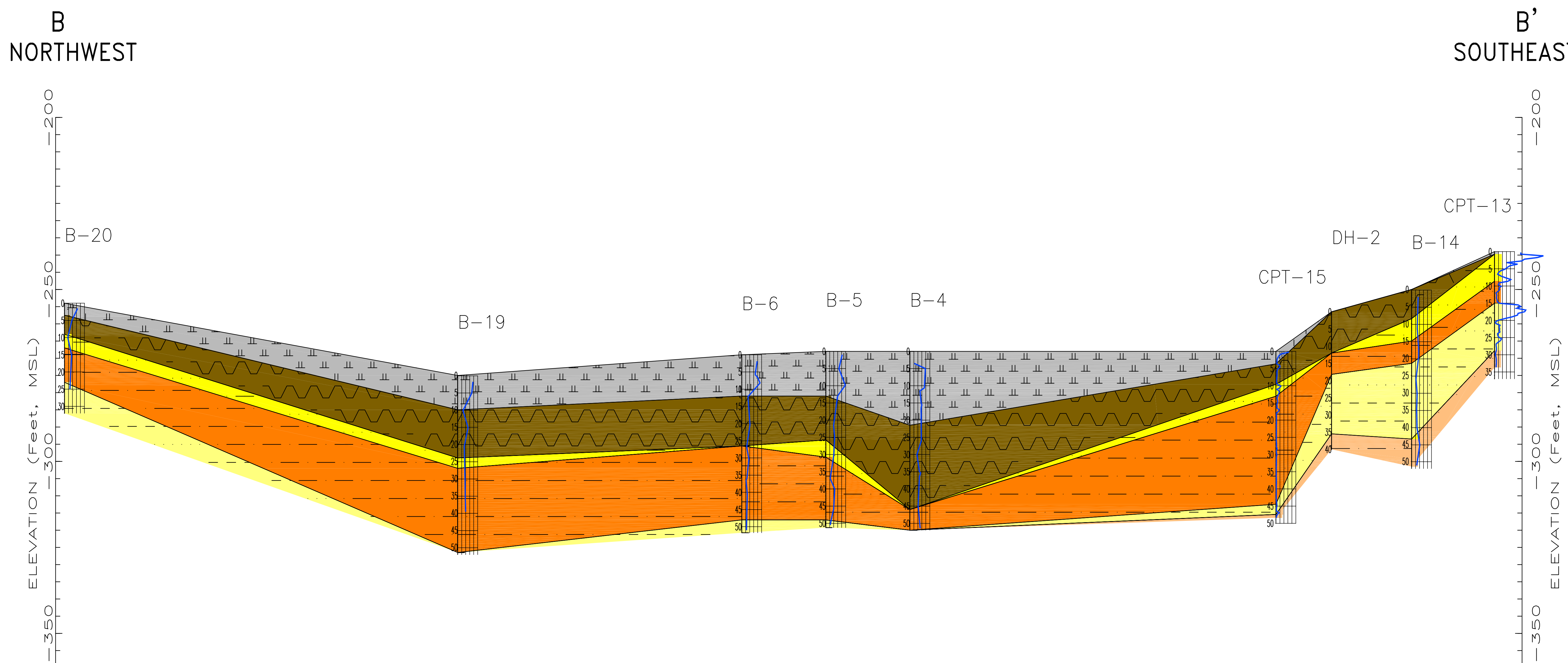
For Borings:
W%
0 100

(VERTICAL SCALE = 100 X HORIZONTAL SCALE)

GEOLOGIC CROSS SECTION A-A'
SALTON SEA RESTORATION PROJECT

URS	1500 0 1500 3000 Feet SCALE: 1"= 3000'	CHECKED BY: AG	DATE: 1-29-04	FIG. NO:
		PM: LDH	PROJ. NO: 27663042.00005	9

x:\27663042\A_SECT.DWG



Notes:

1. Refer to Figure 2 for section locations.
2. The subsurface conditions illustrated were obtained by interpolation between widely spaced explorations. Information on actual subsurface conditions exists only at locations of explorations; conditions between explorations may vary from those depicted.
3. The discussions in the text of this report should be reviewd to obtain a proper understanding of the nature of the subsurface conditions.
4. Complete boring logs and CPT data are presented in the appendices of this report.

Legend:

Stratigraphy:

- Seafloor Deposits
- Soft Lacustrine Deposits
- Upper Alluvial Deposits
- Upper Stiff Lacustrine Deposits
- Lower Alluvial Deposits
- Lower Stiff Lacustrine Deposits

Data Plotted Next to Exploration:

For CPTs:

Qtn (tsf)

0 50 100 150 200 250

For Borings:

W%

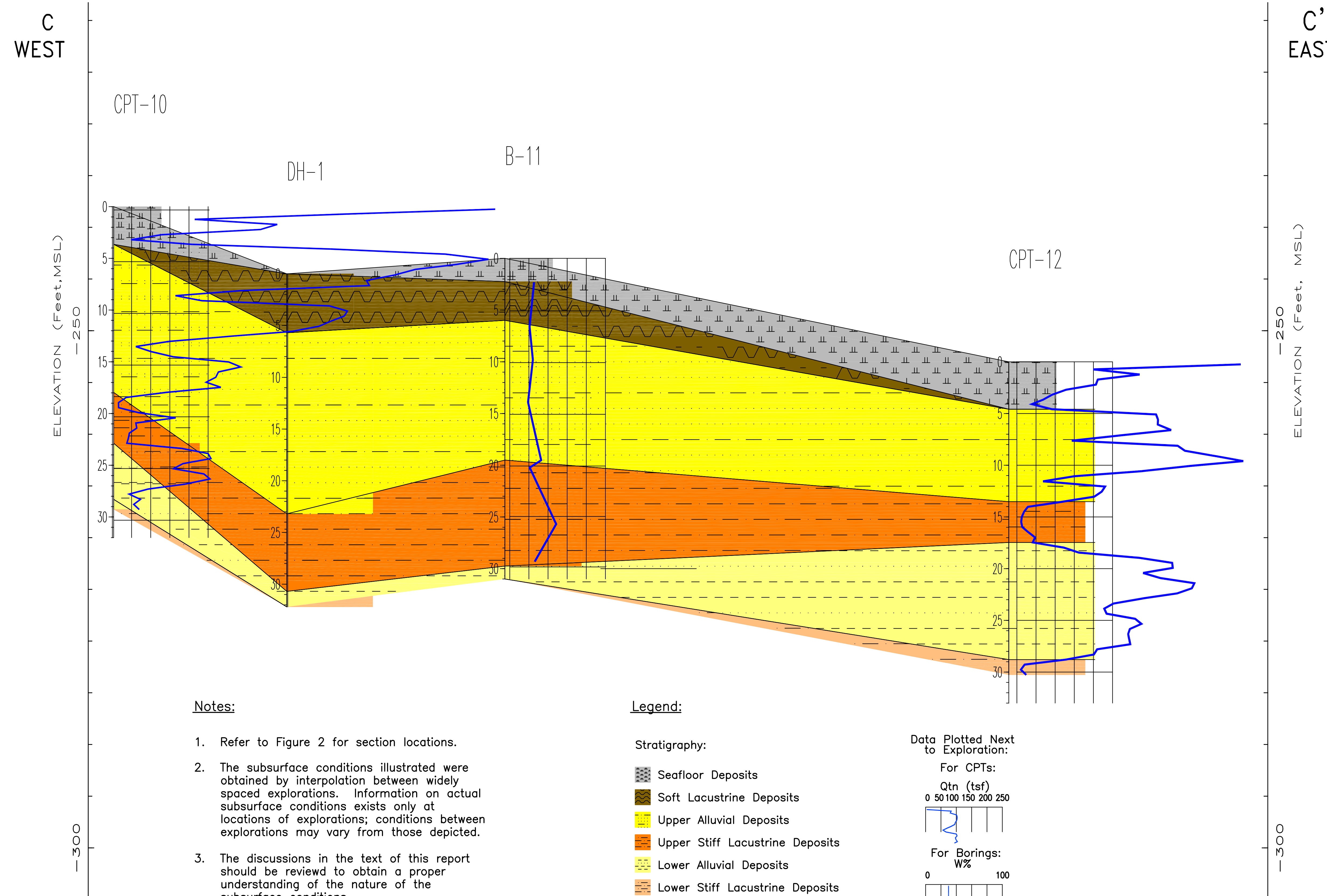
0 100

(VERTICAL SCALE = 400 X HORIZONTAL SCALE)

GEOLOGIC CROSS SECTION B-B'
SALTON SEA RESTORATION PROJECT

URS	6250 0 6250 12500 Feet SCALE: 1"= 12500'	CHECKED BY: AG	DATE: 12-10-03	FIG. NO:
		PM: LDH	PROJ. NO: 27663042.00005	10

x:\27663042\B_SECT.DWG



Notes:

1. Refer to Figure 2 for section locations.
2. The subsurface conditions illustrated were obtained by interpolation between widely spaced explorations. Information on actual subsurface conditions exists only at locations of explorations; conditions between explorations may vary from those depicted.
3. The discussions in the text of this report should be reviewd to obtain a proper understanding of the nature of the subsurface conditions.
4. Complete boring logs and CPT data are presented in the appendices of this report.

Legend:

Stratigraphy:

- Seafloor Deposits
- Soft Lacustrine Deposits
- Upper Alluvial Deposits
- Upper Stiff Lacustrine Deposits
- Lower Alluvial Deposits
- Lower Stiff Lacustrine Deposits

Data Plotted Next to Exploration:

For CPTs:

Qtn (tsf)

0 50 100 150 200 250

For Borings:

W%

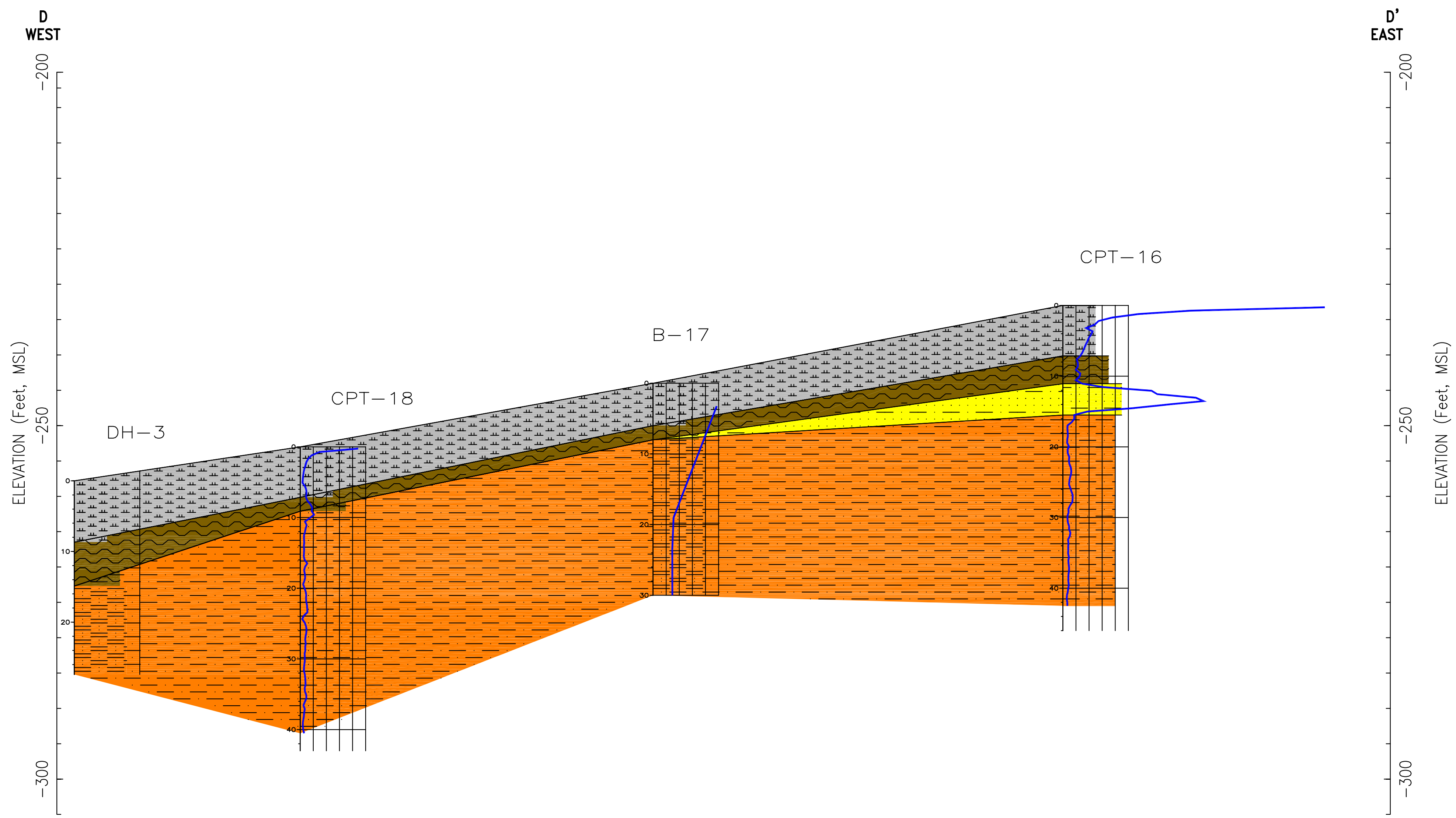
0 100

(VERTICAL SCALE = 100 X HORIZONTAL SCALE)

GEOLOGIC CROSS SECTION C-C'
SALTON SEA RESTORATION PROJECT

URS	500 0 500 1000 Feet SCALE: 1"= 1000'	CHECKED BY: AG	DATE: 1-29-04	FIG. NO:
		PM: LDH	PROJ. NO: 27663042.00005	11

x:\27663042\C_SECT.DWG



Legend:

Stratigraphy:

- Seafloor Deposits
- Soft Lacustrine Deposits
- Upper Alluvial Deposits
- Upper Stiff Lacustrine Deposits
- Lower Alluvial Deposits
- Lower Stiff Lacustrine Deposits

Data Plotted Next to Exploration:

For CPTs:

Qtn (tsf)

0 50 100 150 200 250

For Borings:

W%

0 100

Notes:

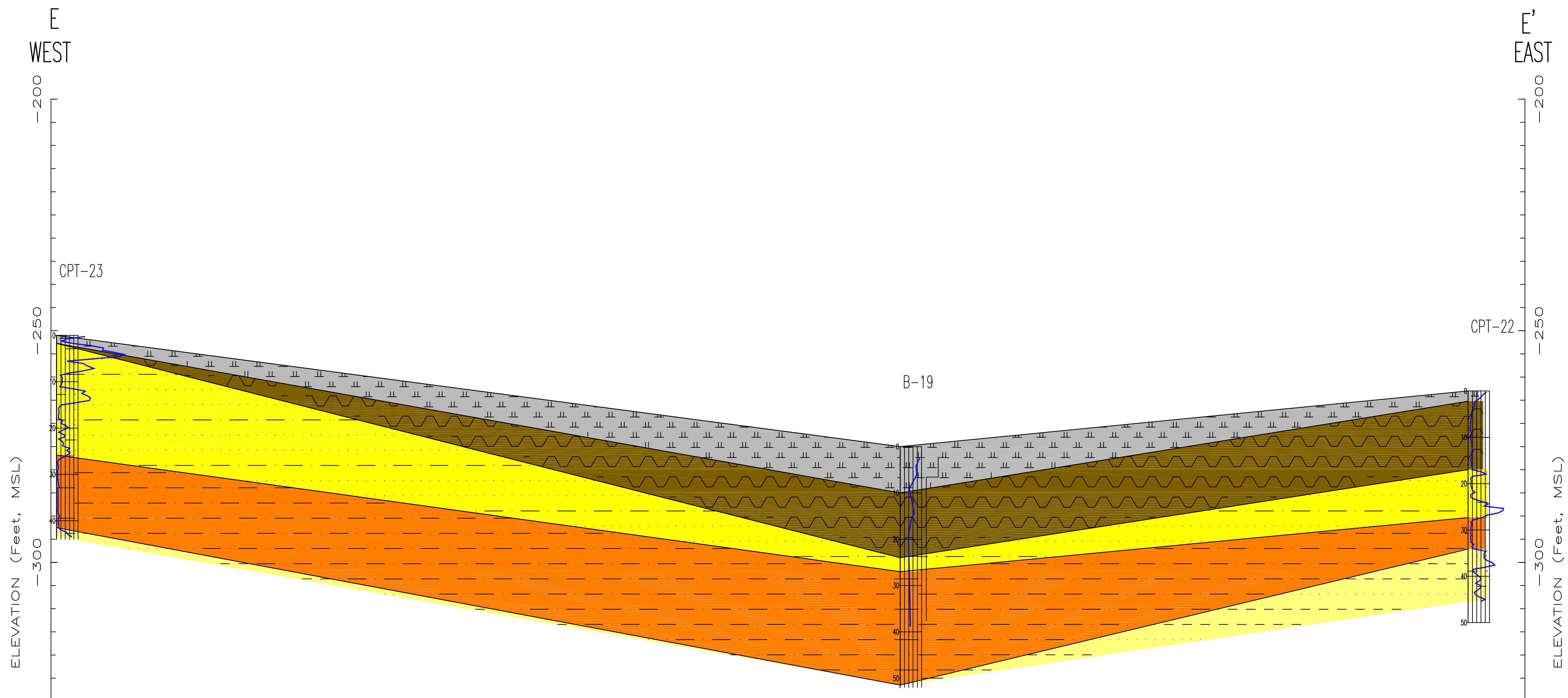
1. Refer to Figure 2 for section locations.
2. The subsurface conditions illustrated were obtained by interpolation between widely spaced explorations. Information on actual subsurface conditions exists only at locations of explorations; conditions between explorations may vary from those depicted.
3. The discussions in the text of this report should be reviewd to obtain a proper understanding of the nature of the subsurface conditions.
4. Complete boring logs and CPT data are presented in the appendices of this report.

(VERTICAL SCALE = 100 X HORIZONTAL SCALE)

GEOLOGIC CROSS SECTION D-D'
SALTON SEA RESTORATION PROJECT

URS	1000 0 1000 2000 Feet SCALE: 1"= 2000'	CHECKED BY: AG	DATE: 1-29-04	FIG. NO:
		PM: LDH	PROJ. NO: 27663042.00005	12

x:\27663042\D_SECT.DWG



Notes:

1. Refer to Figure 2 for section locations.
2. The subsurface conditions illustrated were obtained by interpolation between widely spaced explorations. Information on actual subsurface conditions exists only at locations of explorations; conditions between explorations may vary from those depicted.
3. The discussions in the text of this report should be reviewd to obtain a proper understanding of the nature of the subsurface conditions.
4. Complete boring logs and CPT data are presented in the appendices of this report.

Legend:

Stratigraphy:

- Seafloor Deposits
- Soft Lacustrine Deposits
- Upper Alluvial Deposits
- Upper Stiff Lacustrine Deposits
- Lower Alluvial Deposits
- Lower Stiff Lacustrine Deposits

Data Plotted Next to Exploration:

For CPTs:

Qtn (tsf)

0 50 100 150 200 250

For Borings:

W%

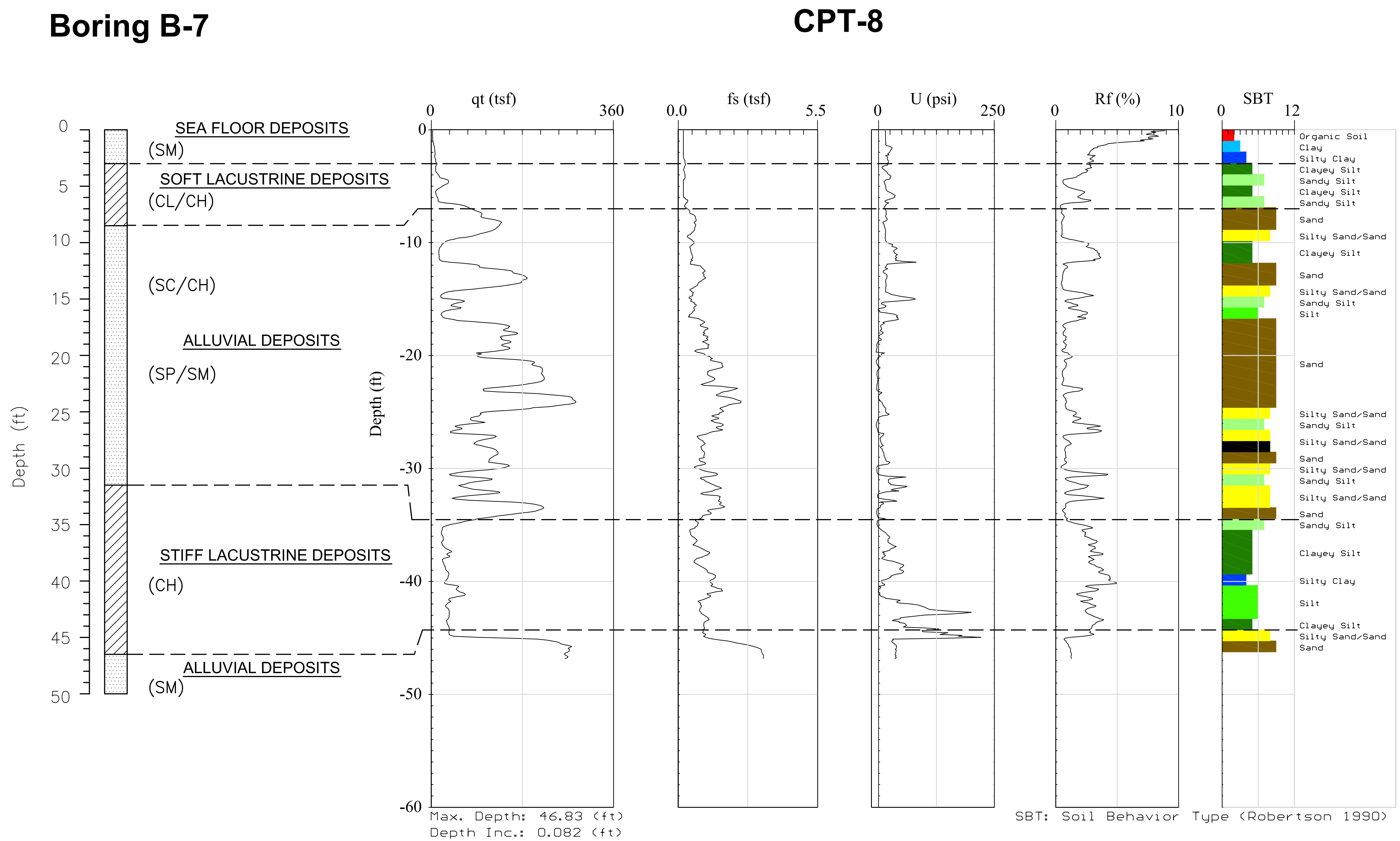
0 100

(VERTICAL SCALE = 200 X HORIZONTAL SCALE)

GEOLOGIC CROSS SECTION E-E'
SALTON SEA RESTORATION PROJECT

URS	2500 0 2500 5000 Feet SCALE: 1"= 5000'	CHECKED BY: AG	DATE: 1-29-04	FIG. NO:
		PM: LDH	PROJ. NO: 27663042.00005	13

x:\27663042\E_SECT.DWG

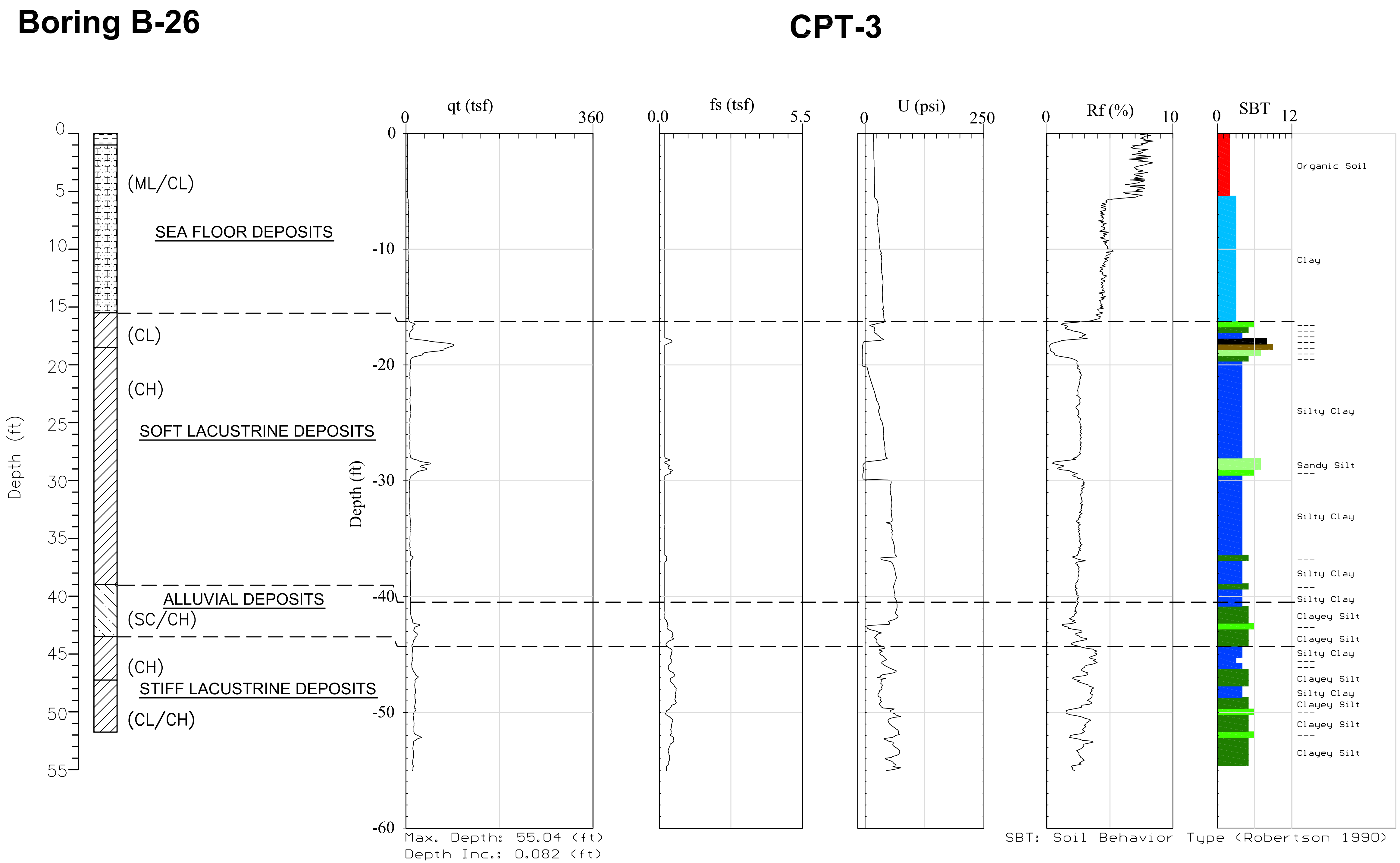


COMPARISON OF BORING 7 AND CPT 8
SALTON SEA RESTORATION PROJECT

URS

CHECKED BY: AG	DATE: 1–30–04	FIG. NO:
PM: LDH	PROJ. NO: 27663042.00002	14

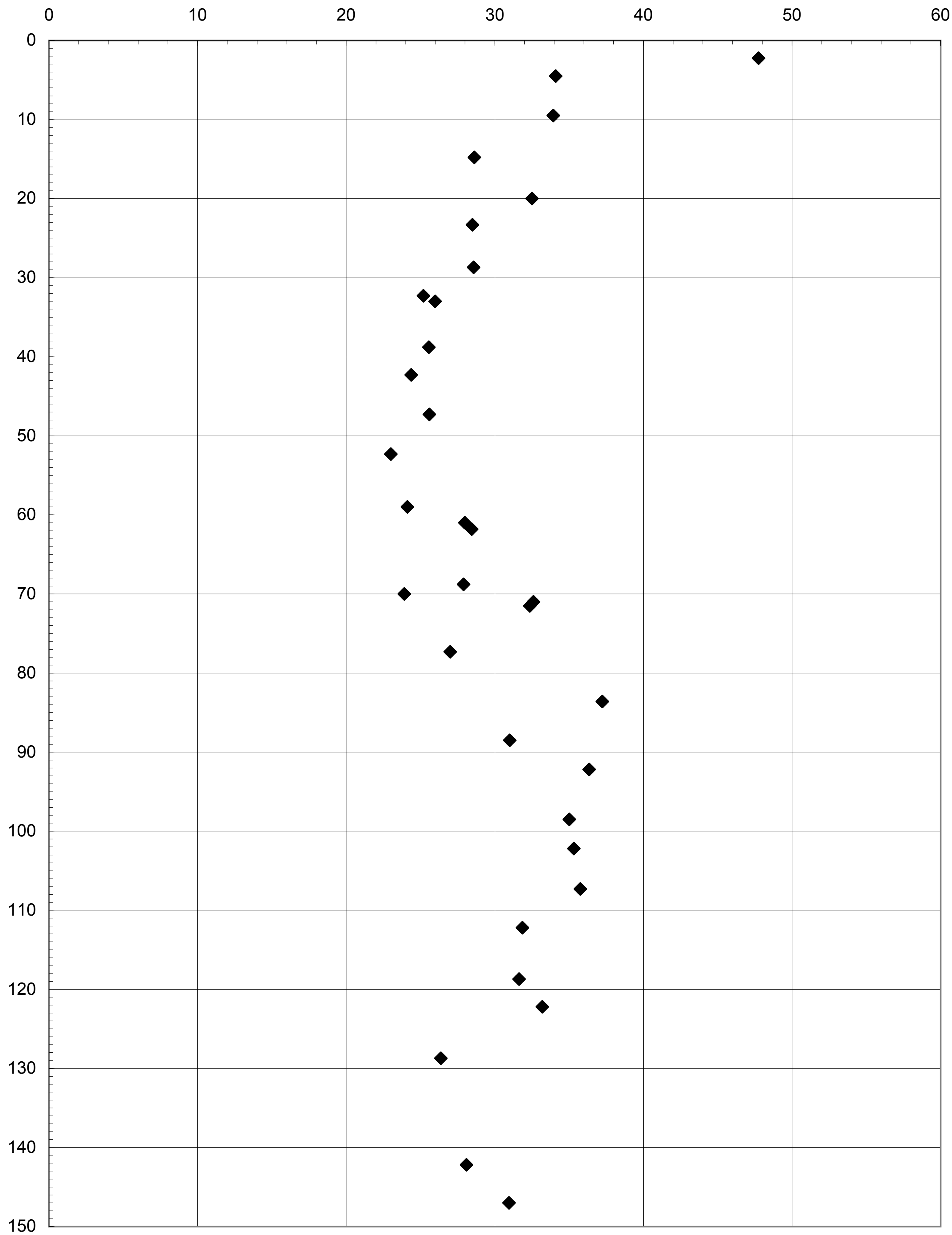
x:\27663042\CPT-BORING



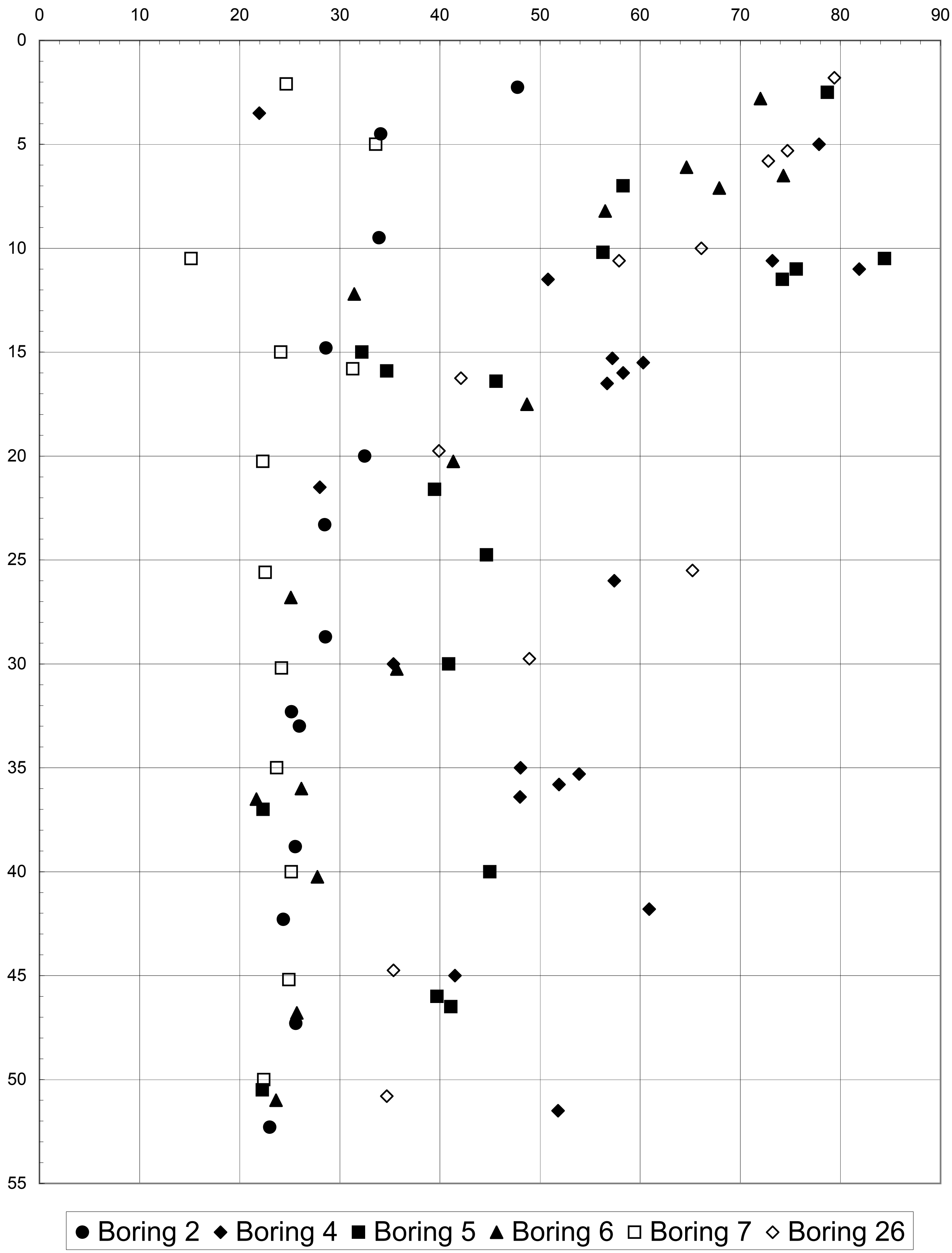
COMPARISON OF BORING 26 AND CPT 3
SALTON SEA RESTORATION PROJECT

URS	CHECKED BY: AG	DATE: 1-30-04	FIG. NO:
	PM: LDH	PROJ. NO: 27663042.00002	15

x:\27663042\CPT-BORING

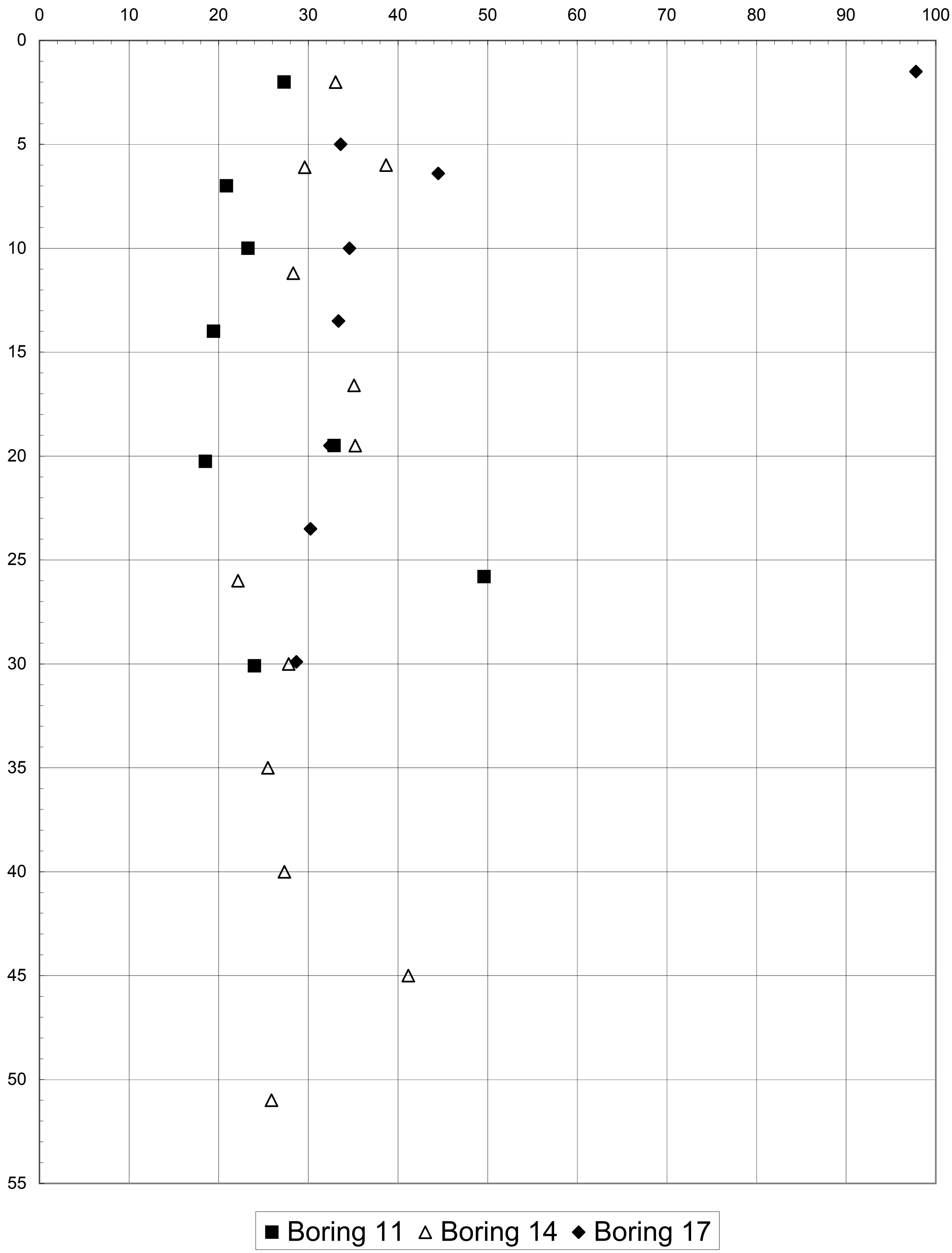


Project Name: Restoration Project	Water Content vs. Depth (Boring 2)	URS
Location: Salton Sea		Figure No. 16
Project Number: 27663042		

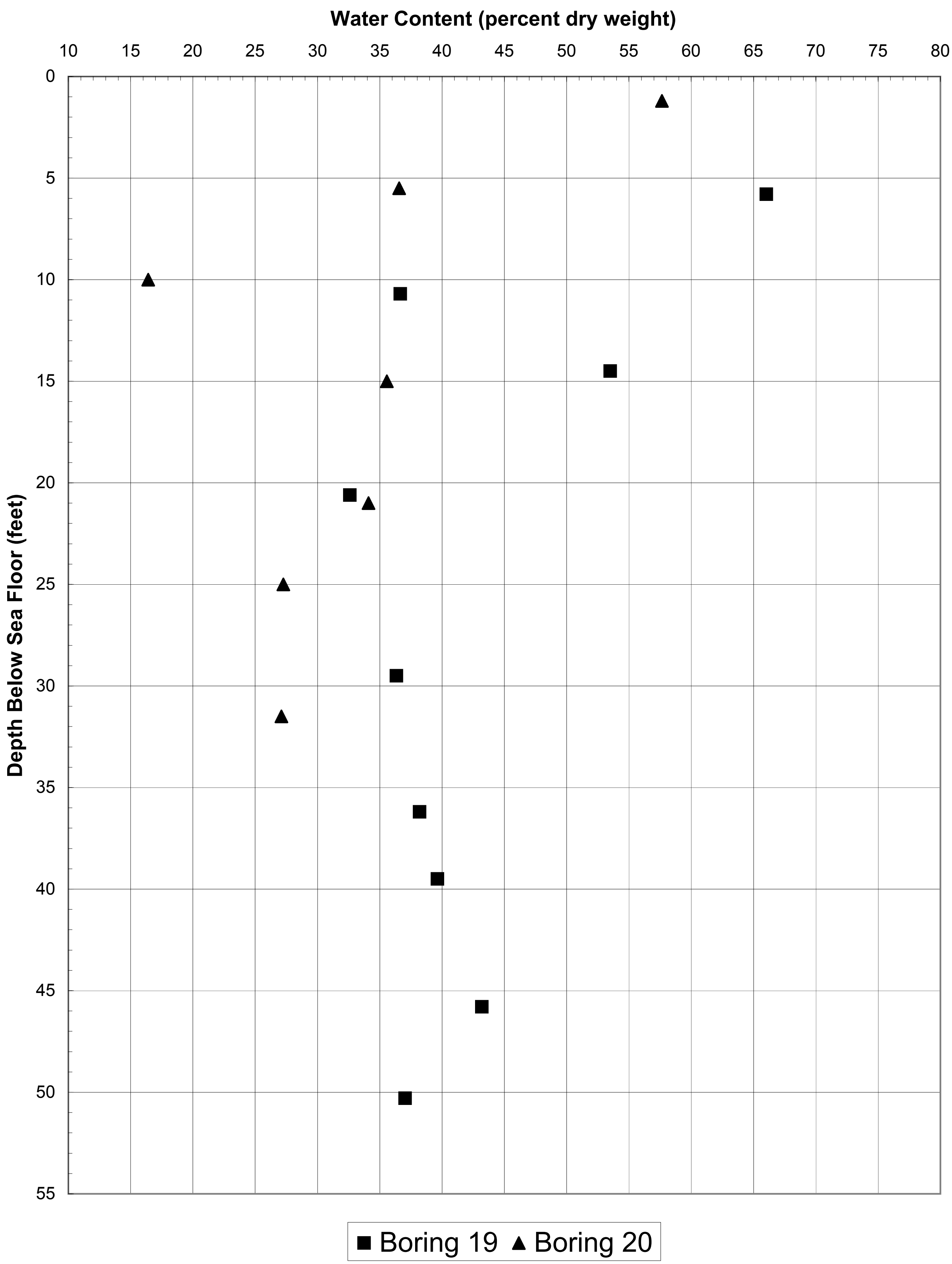


Project Name: Restoration Project	Water Content vs. Depth (Borings 2,4,5,6,7,and 26)	URS
Location: Salton Sea		Figure No. 17
Project Number: 27663042		

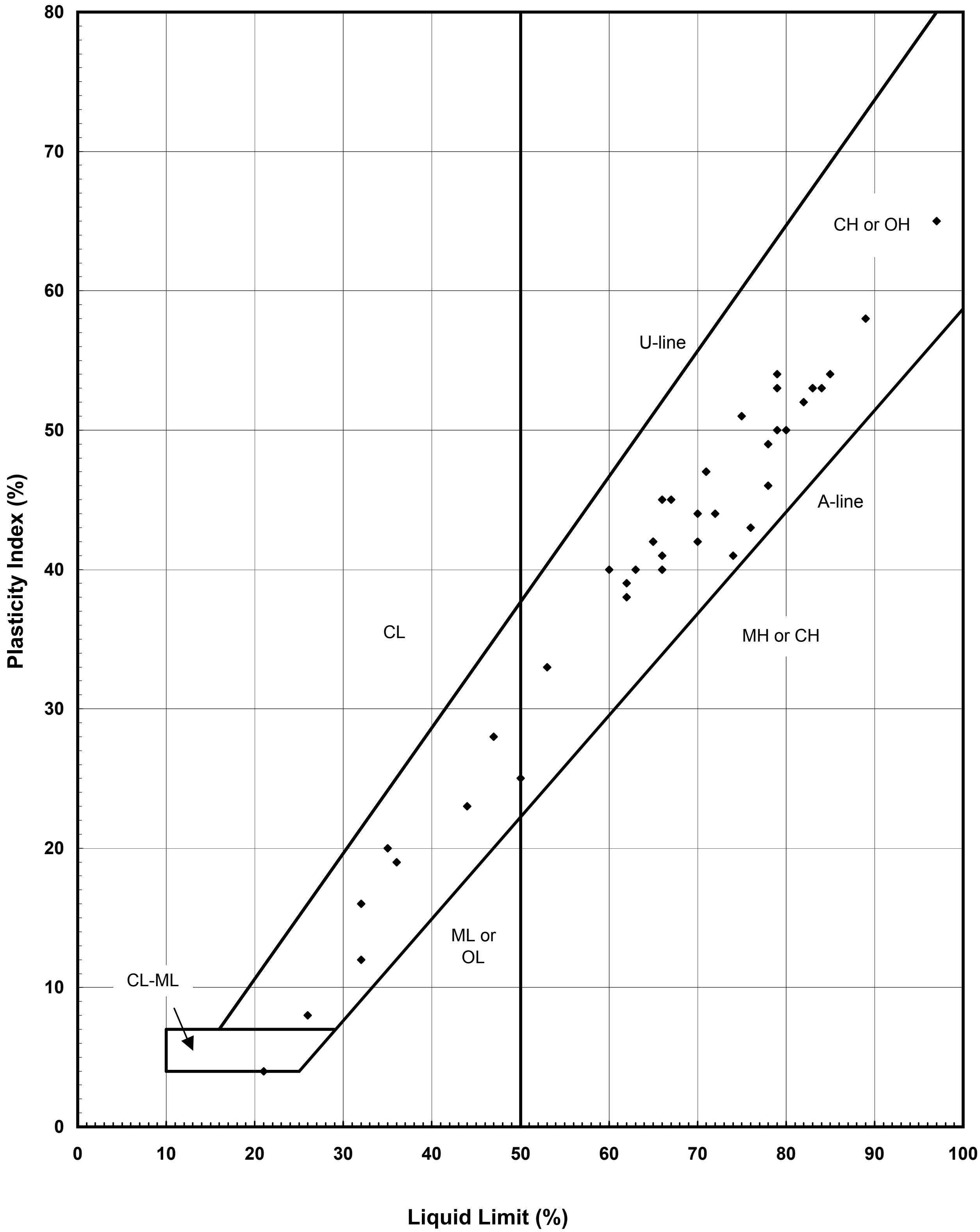
Atterberg_Limits_4



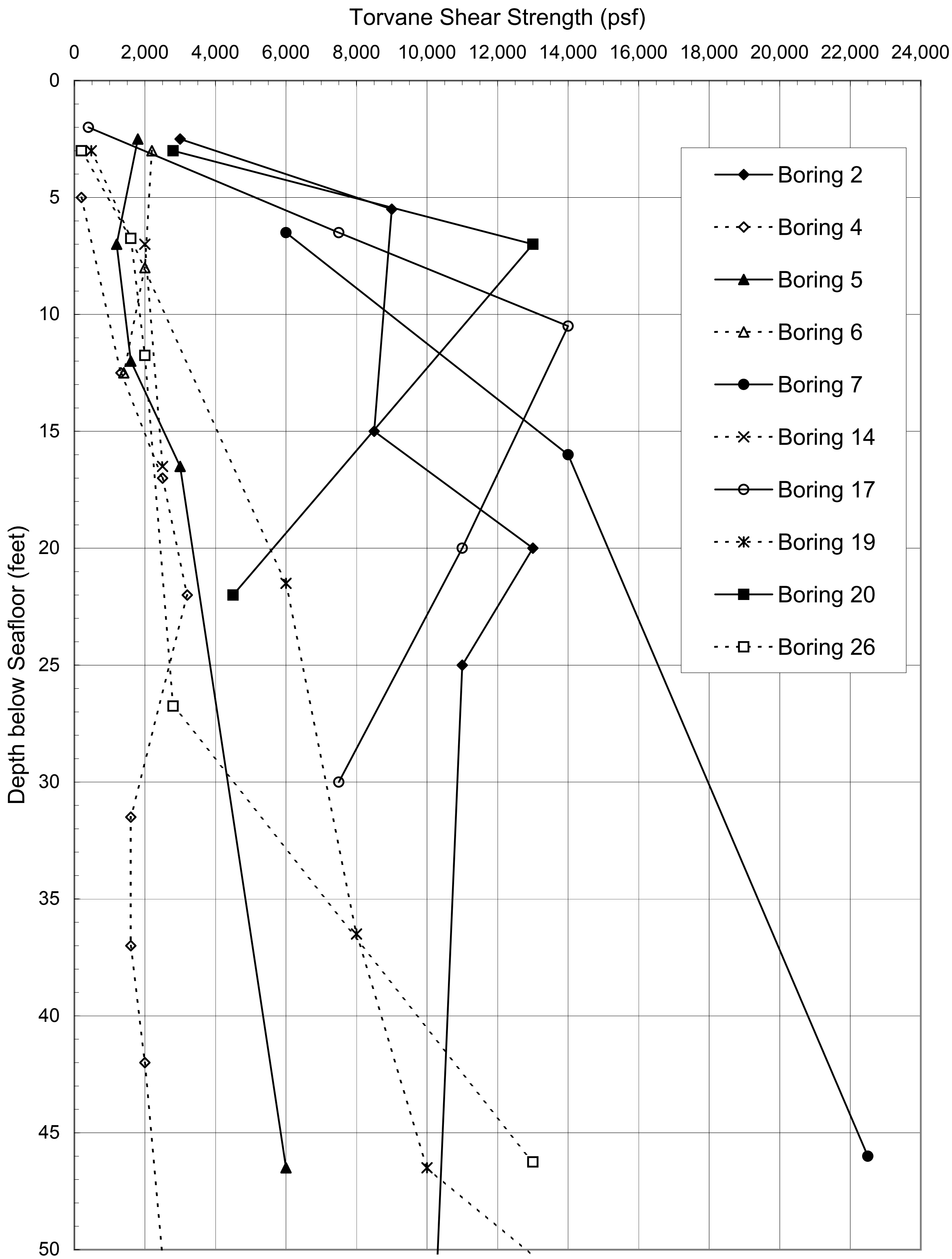
Project Name: Restoration Project	Water Content vs. Depth (Borings 11,14,and 17)	URS
Location: Salton Sea		Figure No. 18
Project Number: 27663042		



Project Name: Restoration Project	Water Content vs. Depth (Borings 19 and 20)	URS
Location: Salton Sea		Figure No. 19
Project Number: 27663042		

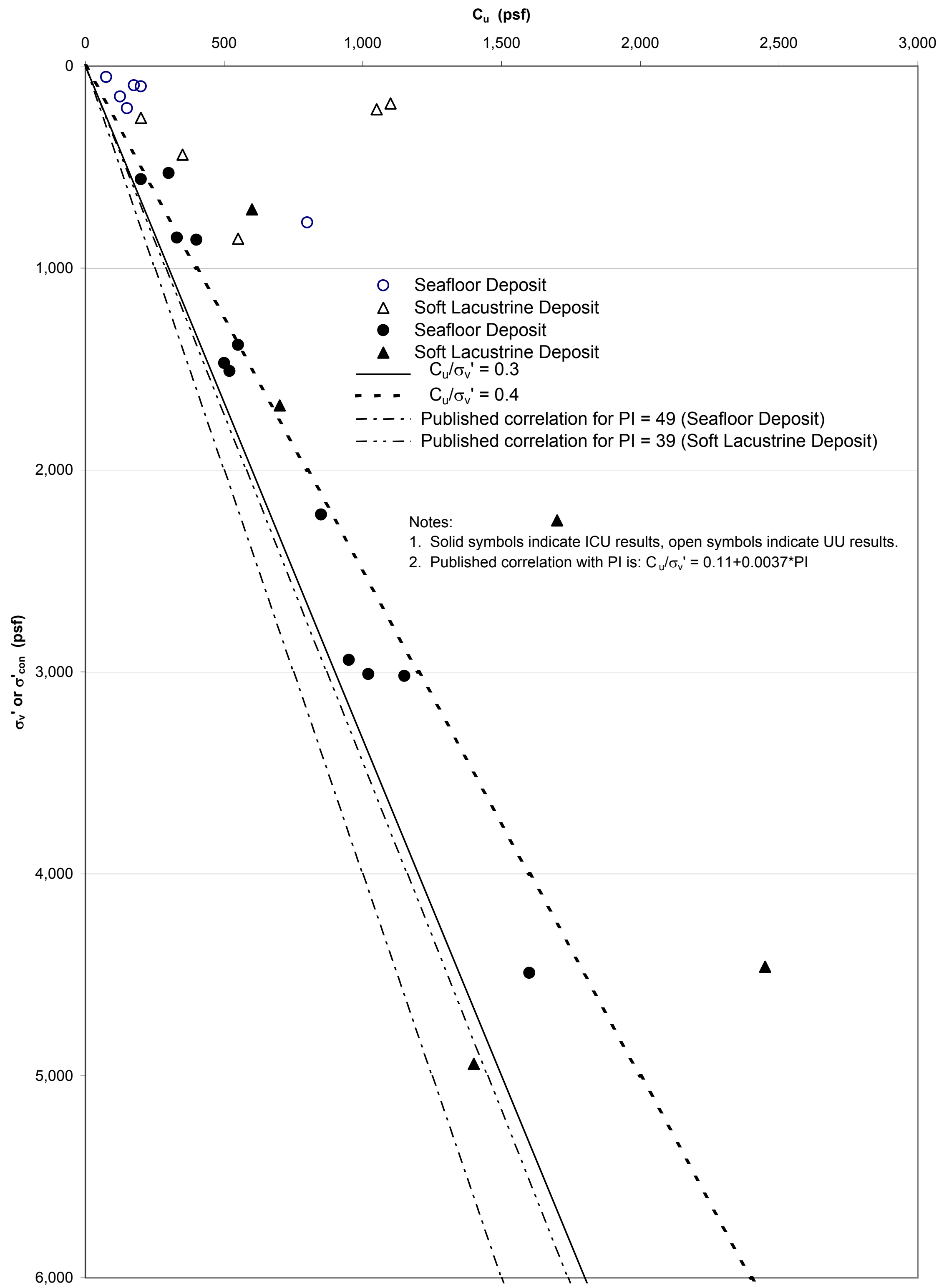


Project Name: Restoration Project	ATTERBERG LIMIT TEST RESULTS	URS
Location: Salton Sea		Figure No. 20
Project Number: 27663042		

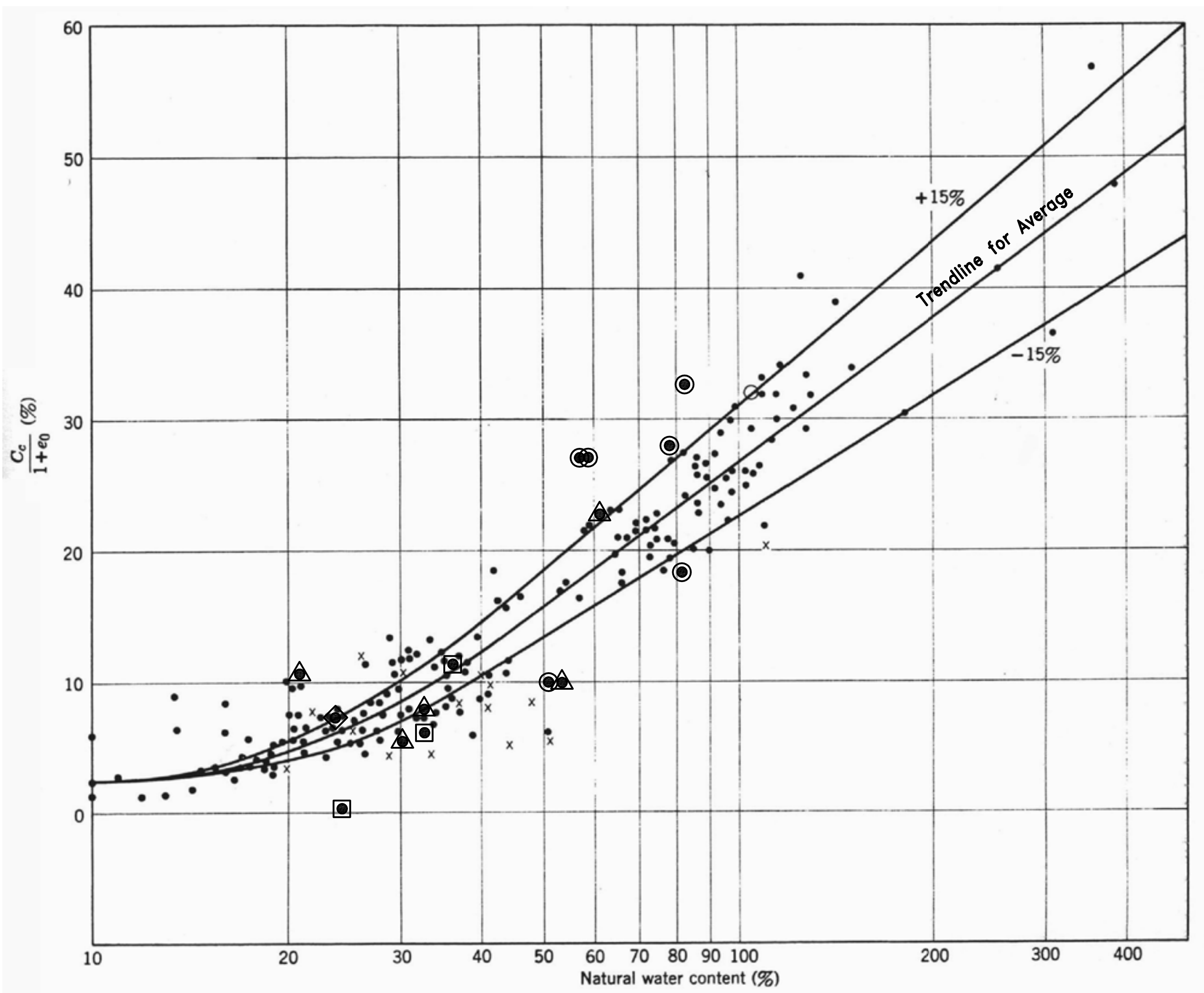


Project Name: Restoration Project	Torvane Shear Strength vs. Depth	URS
Location: Salton Sea		Figure No. 21
Project Number: 27663042		

Torvane Data_psf



Project Name: Restoration Project	Undrained Shear Strength (from UU and CU Tests) vs. Effective Stress	URS
Location: Salton Sea		Figure No. 22
Project Number: 27663042		



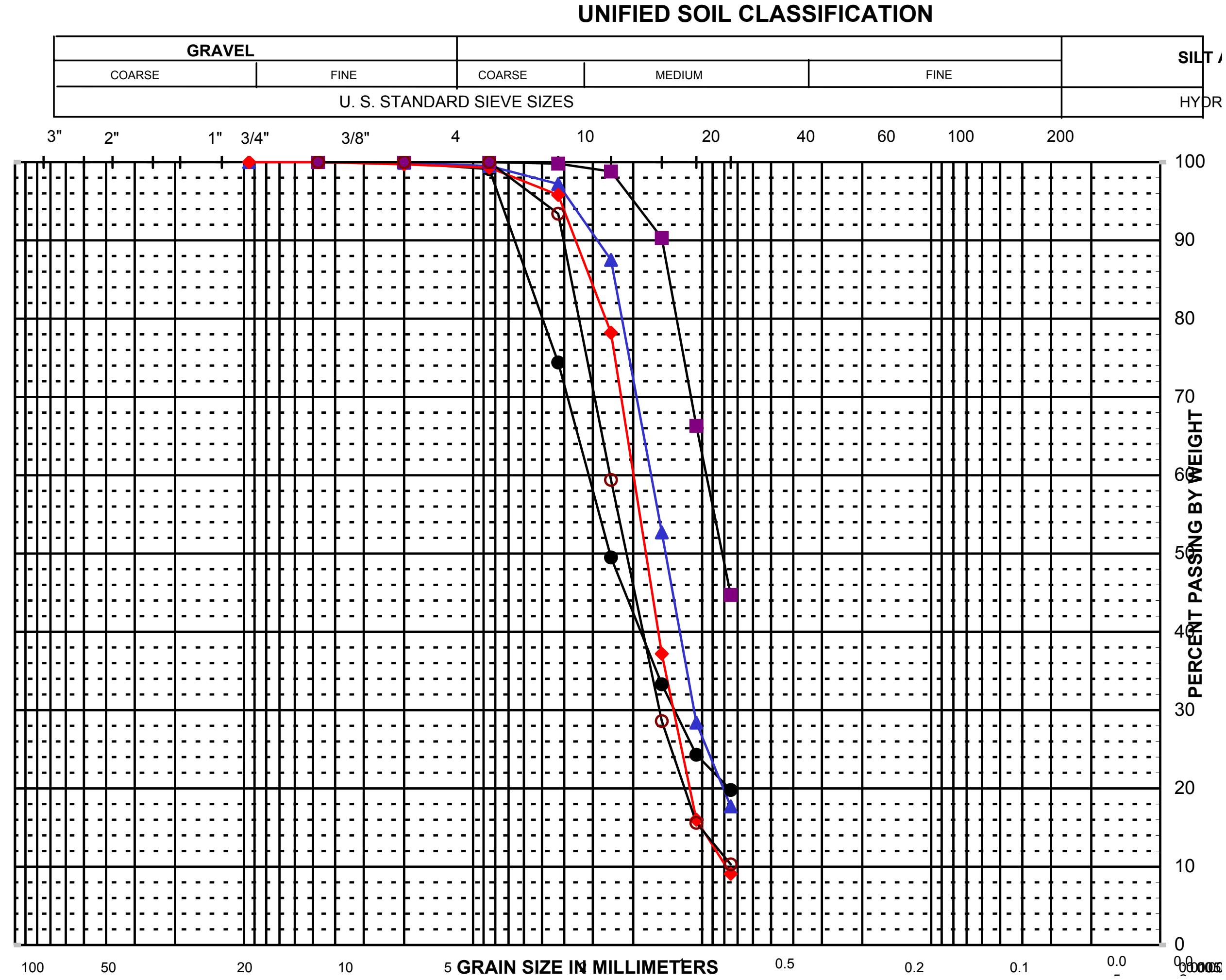
PLOTTED CONSOLIDATION TEST DATA
- SEAFLOOR DEPOSITS
- SOFT LACUSTRINE DEPOSITS
- STIFF LACUSTRINE DEPOSITS
- ALLUVIAL DEPOSITS
- x • PUBLISHED DATA

REFERENCE: LAMBE & WHITMAN (1969)

COMPRESSION RATIO VS. WATER CONTENT
SALTON SEA RESTORATION PROJECT

URS	CHECKED BY: JLW	DATE: 2–25–04	FIG. NO: 23
	PM: LDH	PROJ. NO: 27663042.00002	

x:\27663042\TEST



Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	Description and Classification
B-7	3	10.5	●	15.2	**Reddish Brown Silty SAND (SM)**
B-7	5	20.3	▲	22.3	**Reddish Brown Silty SAND (SM)**
B-7	6	25.6	♦	25.6	**Gray Poorly Graded SAND with Silt (SP-SM)**
B-11	4	9.3	■	23.3	**Olive Brown Silty SAND (SM)**
B-11	5	14	❍	19.4	**Olive Brown Poorly Graded SAND with Silt (SP-SM)**

PROJECT NAME: **Salton Sea Restoration**

PROJECT NUMBER: **27663042.00003**

PARTICLE SIZES OF IN-SEA GRANULAR MATERIALS

Figure

Eleven borings (2, 4 through 7, 11, 14, 17, 19, 20 and 26) were drilled and sampled between September 23 and October 20, 2003. The borings were numbered to be consecutive with the CPTs that were also performed for the preliminary geotechnical investigation. The borings were drilled offshore by Gregg Drilling of Signal Hill, California using a Mobile Sea 80-14 drill rig mounted on a jack-up spud barge. A photograph of the barge jacked out of the water is shown in Figure 3.

The drilling was performed utilizing a rotary wash method of drilling with a 3.25-inch- diameter tricone drill bit and N-size drill rod. The approximate locations of the in-Sea borings are shown in Figure 2. A 4-inch diameter conductor casing was installed between the deck of the barge and the seafloor and the drill string was advanced through the inside of the casing. Typically, the borings were advanced by circulating Sea water through the drill string, which in turn flushed the cuttings to the surface through the annular space inside the conductor casing and into a settling basin. After the cuttings were removed from the settling basin, the fluid was recirculated back through the drill string. At depth in Boring 2, a bentonite based drill mud was mixed and added to the drilling fluid to stabilize the boring. The borings were advanced to elevations of between –274 and –407 feet MSL (30 to 149 feet below the seafloor). A photograph of the drilling operation is shown in Figure 3.

All of the borings were drilled under the direction of a certified engineering geologist. Samples of the subsurface materials encountered in the borings were collected at approximately 5 to 10-foot intervals for further classification and laboratory testing. The samples were obtained by pushing a thin-walled (Shelby) tube sampler (in accordance with ASTM D-1587) or a split spoon SPT sampler (in accordance with ASTM D-1586). The lower portions of Boring 2 were also cored using a punch core 134-mm (5.28-inch) coring system. Photographs of the samplers used are shown in Figure 4.

Shelby tube samples were obtained using a 3-inch diameter by 30-inch long stainless steel tube attached to the end of the drill string. The tube was advanced hydraulically a distance of 24 to 30-inches by lowering the drive head and attached drill string the specified distance. At the completion of the push, the sampler was rotated two complete revolutions to shear the retained soil horizontally at the base. After removal from the boring, the recovery of the sample was measured and calculated. The visible ends of the Shelby tube were trimmed, and if fine grained, a Torvane™ test was conducted in the bottom end. After cleaning the inside of the sample tube above the recovered soil, each end was filled with molten microcrystalline wax, covered with tight-fitting end caps, and secured with tape to insure an airtight seal. The sample was then placed and stored in an upright position and protected from the elements until its transportation to the geotechnical laboratory for further classification and testing.

Standard Penetration Tests (SPT) were obtained by driving a 2-inch diameter split spoon sampler into the soil at the bottom of the borehole using a 140-pound hammer falling 30-inches. The number of blows required to drive the sampler was recorded for a total of 18-inches of penetration. The first 6-inch increment of penetration is considered to be a "seating interval" in disturbed soils or slough at the base of the borehole, and the corresponding blow count is not taken into consideration. The total number of blows for the last 12-inches of penetration, as indicated on the boring logs, was used to describe the relative density and consistency of the soil samples. Material from the inside of the sampler was classified in accordance with the United Soil Classification System and placed in plastic baggies to retain moisture content. The sample was stored and protected from the elements until its transportation to the geotechnical laboratory for further classification and testing.

Portions of Boring 2 (below 50-feet) were cored using a punch core 134-mm (5.28-inch-diameter) coring system. The punch core system consists of an inner core barrel that is placed inside the drill string and extends out in front of the bit. As the boring is advanced, the core is retained in the inner 5-foot long core barrel. At the completion of a 5-foot run, the entire core barrel is recovered on a wireline. The core is extruded from the core barrel at the surface using a hydraulic jacking system, logged and classified. Core samples were placed into a plastic sleeve, sealed, and stored until transported to the geotechnical laboratory for further classification and testing.

The soils encountered in the borings were visually classified and logged in the field. A key to the boring logs is presented in Figure A-1. Logs of the borings are presented in Figures A-2 through A-12.

Project: Salton Sea Restoration **Project Location:** Salton Sea, California **Project Number:** 27663042.00002	**Key to Log of Exploration** Sheet 1 of 1

Elevation, feet	Depth, feet	SAMPLES Type	Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10

COLUMN DESCRIPTIONS

1 Elevation: Elevation in feet referenced to mean sea level (MSL) or site datum.

2 Depth: Depth in feet below the ground surface.

3 Sample Type: Type of soil sample collected at depth interval shown; sampler symbols are explained below

4 Sample Number: Sample identification number. Unnumbered sample indicates no sample recovery.

5 Sampling Resistance: Number of blows required to advance driven sampler 12 inches beyond first 6-inch interval, or distance noted, using a 140-lb hammer with a 30-inch drop.

6 Graphic Log: Graphic depiction of subsurface material encountered; typical symbols are explained below.

7 Material Description: Description of material encountered; may include relative density/consistency, moisture, color (Munsell classification), particle size; tecture, weathering, and strength of formation material (USCS classification in parentheses).

8 Water Content: Water content of soil sample measured in laboratory, expressed as percentage of dry weight of

9 Dry Unit Weight: Dry density of soil sample measured in laboratory, in pounds per cubic foot.

10 Remarks and Other Tests: Comments and observations regarding drilling or sampling made by driller or field personnel. Other field and laboratory test results, using the following abbreviations:

LL(63): Liquid Limit (test result in percent)
PI(28): Plasticity Index (test result in percent)
WA(91): Wash Analysis (percent passing #200 sieve)
SA(94): Sieve Analysis (percent passing #200 sieve)
UU(1000): Unconsolidated Undrained Strength Test (shear strength in psf)
SG(2.77): Specific Gravity (test result)
CON: Consolidation Test
CORR: Corrosivity Tests
ICU: Isotropically Consolidated Undrained Triaxial Compression Test
PIN: Pinhole Dispersion Test

TYPICAL MATERIAL GRAPHIC SYMBOLS

GRAVEL (GW)
Well graded SAND (SW)
Poorly graded SAND (SP)
Silty SAND (SM)
Clayey SAND (SC)
Clayey SILT (ML)
CLAY (CL)
CLAY to SILT (CL/ML)
SILT (ML)
Fat clays (CH)
SAND to CLAY (SC/CL)
SAND to SILT (SM/ML)

TYPICAL SAMPLER GRAPHIC SYMBOLS

Sack or Bag sample
Standard Penetration sampler (SPT)
Core sample
Modified California sampler
Shelby Tube sampler
Acetate sleeves

OTHER GRAPHIC SYMBOLS

First water encountered at time of drilling and sampling (ATD)
Water level measured at specified time after completion of drilling and sampling
Inferred or gradational contact between strata

GENERAL NOTES

1. Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive; actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.

2. Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

URS

Project: Salton Sea Restoration **Project Location:** Salton Sea, California **Project Number:** 27663042.00002	**Log of Boring 2** Sheet 1 of 5

Date(s) Drilled	10/7/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	149.3' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-258.2' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT/Continuous core	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.35660/W115.77946		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0		2-1			SEAFLOOR DEPOSITS Soft, moist, brown to dark brown (7.5 YR-4/2) and dark greenish gray (5 GY-4/1), silty CLAY with sand (CL)	48	73	
-260						LACUSTRINE DEPOSITS Medium stiff to stiff, moist, brown to dark brown (7.5 YR-4/2) fat CLAY (CH)			
	5		2-2				34	88	UU(1100), LL(70), PI(42), CORR
-265									
	10		2-3	13		...1" silty sand lense	34		
-270									
	15		2-4			...contains trace evaporite nodules	29	96	UU(2350)
-275									
	20		2-5				32	91	SA(88), LL(65), PI(42), CON
-280						Very stiff, moist, brown to dark brown (7.5 YR-4/2), silty fat CLAY (CH) with irregular infilled fissures of greenish gray (5 GY-6/1), fine sandy CLAY (CL). Contains pale white evaporite nodules and very small gastropod shells	28		LL(67), PI(45)
	25		2-6	28					
-285			2-7			...28.25'-30' - becomes brown (7.5 YR-5/4), fine sandy CLAY to clayey fine SAND (SC/CL)	29	98	UU(1000), WA(80), SG(2.77)
	30					...return to brown (7.5 YR-5/4), silty CLAY (CL)			
-290							25		SA(94)
			2-8	52		...33'-34', brown (7.5 YR-5/4), poorly graded fine to very fine sand lense	26		SA(59)
	35					...return to CLAY (CL)			

Figure A-2

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 2

Date(s) Drilled	10/7/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	149.3' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-258.2' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT/Continuous core	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.35660/W115.77946		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-295								
			2-9					
					ALLUVIAL DEPOSITS Very dense, moist, yellowish brown (10 YR-5/4), silty fine SAND (SM)	26	96	
	40							
-300								
						24		SA(34)
			2-10	63				
	45							
-305					LACUSTRINE DEPOSITS Dense to hard, moist to wet, yellowish brown (10 YR-5/4) to brown (7.5 YR-5/4), fine sandy SILT to fat CLAY (SM/CH) - interbedded	26		WA(91)
			2-11	34	...48'-48.5'. silty sand lense			
	50							
					...increasing sand becomes silty fine SAND (SM)			
-310						23		WA(49)
	55		2-12					
-315								
			2-13			24		
	60							
					Hard, moist, dark grayish brown (19 YR-4/2), fat CLAY (CH)	28		
-320						29		
					...return to thinly interbedded silty fine SAND and fine sandy SILT (SM/ML) with localized lenses of fat CLAY (CH)			
	65							
-325								
			2-14			28	96	UU(2100), SA(40)
	70							

Figure A-2

URS

Project: Salton Sea Restoration
Project Location: Salton Sea, California
Project Number: 27663042.00002

Log of Boring 2

Date(s) Drilled	10/7/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	149.3' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-258.2' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT/Continuous core	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.35660/W115.77946		

Elevation, feet	Depth, feet	Sample Number	Blows per foot	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
		2-15		Hard, moist, dark grayish brown (10 YR-4/2), lean to fat CLAY (CL/CH)	24		LL(26), PI(8)
-330					33 32		
	75			Hard to dense, moist, dark gray (10 YR-4/1), silty fine SAND grading downwards to fat CLAY with trace sand (CH)			
-335							
		2-16	36		27		SA(97)
	80						
-340							
		2-17		Hard, moist, dark gray (10 YR-4/1), fat CLAY with thin interbeds of lean clay with trace fine sand (CH/CL)-thinly laminated	37		
	85						
-345				...localized soft sediment deformation			
		2-18			31	92	UU(1900), LL(63), PI(40)
	90						
-350					36		SA(100)
		2-19		...93.25'-93.75' - fine sandy clay lense (CL)			
	95			...95.5'-96' - fine sandy clay lense (CL)			
-355							
		2-20			35	88	LL(47), PI(28)
	100						
-360					35		
	105	2-21					

URS

Project: Salton Sea Restoration	Log of Boring 2
Project Location: Salton Sea, California	Sheet 4 of 5
Project Number: 27663042.00002	

Date(s) Drilled	10/7/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	149.3' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-258.2' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT/Continuous core	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.35660/W115.77946		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-365						...becomes very dark gray (10 YR-3/1)	36		
			2-22	8					
	110								
-370							32		
						...thinly laminated, color variation from dark gray to dark brown (10 YR-4/1 through 4/3)			
	115		2-23			...8mm offset on lamination across 0.6' zone			
-375									
			2-24				32	91	UU(4300), SA(100), LL(66), PI(41)
	120								
-380							33		
						...fine sandy CLAY lense (CH)			
			2-25						
	125					...increasing lean CLAY (CL)			
-385									
			2-26				26	98	UU(3850), LL(44), PI(23)
	130								
-390									
	135								
-395						Hard, moist, dark brown, dark brownish gray, dark gray (10 YR-4/1, 4/2, 4/3, and 3/1, 3/2, 3/3), laminated fat CLAY (CH)			
			2-27						
	140								

URS

Project: Salton Sea Restoration Project Location: Salton Sea, California Project Number: 27663042.00002	**Log of Boring 2** Sheet 5 of 5

Date(s) Drilled	10/7/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	149.3' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-258.2' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT/Continuous core	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.35660/W115.77946		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-400							28		
	145		2-28						
-405							31	92	UU(3950), SA(100) LL(62), PI(39)
			2-29						
	150					Bottom of boring at 149.3 feet below mudline (180.5 feet below sea surface)			
-410									
	155								

Project: Salton Sea Restoration	Log of Boring 4
Project Location: Salton Sea, California	Sheet 1 of 2
Project Number: 27663042.00002	

Date(s) Drilled	9/23/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	52' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-268' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.30765/W115.79666		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0		4-1			SEA FLOOR DEPOSITS Very soft, wet, dark gray SILT with fine sand (ML) to silty fine SAND (SM)			No recovery with first Shelby push (soft sediment)
-270									
			4-2				22		SA(16)
	5					...decrease in sand, becomes very soft to soft, silty CLAY (CH)	78		WA(99), UU(150) LL(74), PI(41)
-275									
	10								
			4-3				73 82 51	 53 68	 LL(84), PI(53), CON
-280									
									CORR,
	15		4-4				57 60 58 57	 62 62 63	LL(76), PI(43) ICU, SG(2.76) ICU ICU
-285									
	20								
						...increasing sand content			
			4-5			LACUSTRINE DEPOSITS Loose to medium dense, moist, light brown, clayey fine SAND to CLAY (SC/CH)	28	96	WA(62), UU(800), PIN
-290									
						Very soft to soft, wet, light brown, fat CLAY (CH)			
	25		4-6	2			57		LL(79), PI(50)
						...gray, clayey SAND lense (SC)			
-295									
						...becomes brownish gray			
	30		4-7	0		...contains thin interbeds of clayey fine sand (1-2" thick)	35		
-300									
						...becomes gray			
	35								

URS

Project:	**Salton Sea Restoration**		
Project Location:	**Salton Sea, California**		
Project Number:	**27663042.00002**		

Log of Boring 4

Date(s) Drilled	9/23/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	52' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-268' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.30765/W115.79666		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
			4-8				48 54 52 48	 66 66 67	LL(78), PI(46) ICU ICU ICU
-305									
	40								
			4-9				61	64	CON
-310									
	45		4-10	20			42		
-315						Stiff to very stiff, moist, brownish gray, fat CLAY with little fine sand (CH) ...becomes grayish brown with shell fragments			
	50		4-11				52	71	UU(450) LL(79), PI(54)
-320						Bottom of boring at 52 feet below mudline (93.5' below sea surface)			
	55								

URS

Project: Salton Sea Restoration	Log of Boring 5
Project Location: Salton Sea, California	Sheet 1 of 2
Project Number: 27663042.00002	

Date(s) Drilled	9/29/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.25' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-268' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.31832/W115.82606		

Elevation, feet	Depth, feet	Samples: Type	Samples: Number	Samples: Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0					SEA FLOOR DEPOSITS Very soft, wet, brownish gray, clayey SILT to SILT with trace sand (ML/MH)			
-270			5-1			...increasing clay, becomes silty CLAY (CL/CH)	79	54	LL(85), PI(54) SA(97), UU(200), PIN
-275	5		5-2				58	64	CON, CORR
-280	10		5-3				56 84 76 74	61 53 56 56	LL(79), PI(53), CON, ICU ICU ICU
-285	15		5-4			LACUSTRINE DEPOSITS Soft to medium stiff, moist, light brown, silty fat CLAY (CH)	35 32 35 46	80 89 84 74	LL(78), PI(49), ICU ICU ICU
-290	20		5-5			Medium stiff to stiff, moist, light brown, sandy CLAY (CL) ...decrease in sand, becomes fat CLAY (CH)	40	80	UU(550)
-295	25		5-6	17			45		
						ALLUVIAL DEPOSITS Medium dense, moist, greenish gray, poorly graded SAND to fine SAND with trace clay (SP) to clayey fine SAND (SC)			
-300	30		5-7	0		...becomes interbedded sandy CLAY (CL)	41		SA(61)
						LACUSTRINE DEPOSITS Very soft, moist, light brown, fat CLAY (CH)			
	35					Medium dense to very stiff, wet, brownish gray, clayey fine SAND to			

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 5

Date(s) Drilled	9/29/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.25' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-268' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.31832/W115.82606		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
			5-8			fine sandy CLAY (SC/CL)			
-305							22	102	SA(57)
						...increasing clay			
	40		5-9	0		Soft, wet, grayish brown, fine sandy CLAY (CL)	45		LL(35), PI(20)
-310									
						...decrease in sand, becomes silty CLAY (CL/CH)			
	45		5-10				40 41	84 72	UU(200), CON
-315									
	50		5-11	16		ALLUVIAL DEPOSITS Medium dense, moist, grayish brown, silty fine SAND (SM)	22		WA(25)
-320						Bottom of boring at 51.25' below mudline (92.25' below sea surface)			
	55								

URS

Project: Salton Sea Restoration	**Log of Boring 6**
Project Location: Salton Sea, California	Sheet 1 of 2
Project Number: 27663042.00002	

Date(s) Drilled	9/30/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.75' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-269' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.33248/W115.85323		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0		6-1			SEA FLOOR DEPOSITS Very soft, wet, gray, clayey SILT with trace sand (ML/MH)			
-270						...decrease in sand, becomes fat CLAY (CH)	72	56	UU(200), PIN
	5		6-2				65		CORR
-275							74	55	LL(60), PI(40), ICU
							68	57	LL(83), PI(53) ICU
							57	66	ICU
	10		6-3						
-280							31	91	UU(350)
						LACUSTRINE DEPOSITS Soft, wet, light brown, fat CLAY with trace sand (CH)			
	15		6-4						
-285						...gray, cemented (carbonate), fine sand lense	49		LL(89), PI(58) SA(99), SG(2.77)
	20		6-5	0/18"		Very soft, moist to wet, light brown, fat CLAY and interbedded gray, fine sandy CLAY (CH/CL)	41		
-290									
	25		6-6						
-295						Hard to very stiff, moist, light brown, fat CLAY (CH) with interbedded grayish brown to light brown, clayey SAND lense (SC)	25	99	SA(12), CON
	30		6-7	34			36		
-300						...31,25'-31.75', gray, clayey SAND lense (SC)			
	35								

Figure A-5

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 6

Date(s) Drilled	9/30/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.75' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-269' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.33248/W115.85323		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-305			6-8			...36'-37.5', grayish brown, silty fine SAND (SM)	26	101	WA(66)
							22	105	WA(18)
	40						28		WA(37)
-310			6-9	12		...40.25'-40.75', grayish brown, silty fine SAND (SM)			
						...becomes light brown, fat CLAY (CH)			
	45								
-315			6-10				26	98	SA(75), UU(1700)
						ALLUVIAL DEPOSITS Very dense, wet, medium brown, poorly graded fine SAND to silty fine SAND (SP/SM)			
	50						24		WA(32)
-320			6-11	50/5"					
						Bottom of boring at 51.75 feet below mudline (93.5 feet below sea surface)			
	55								

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 7

Sheet 1 of 2

Date(s) Drilled	9/23/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	50' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-259' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.30029 W115.85326		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0		7-1			SEA FLOOR DEPOSITS Very loose, wet, brownish gray to light brown, silty fine SAND (SM)	25	102	SA(14)
-260									
			7-2			LACUSTRINE DEPOSITS Very soft, wet, light brown, lean to fat CLAY with trace fine sand (CL/CH)			
	5						34	89	LL(71), PI(47), CON, PIN
-265									
			7-3			ALLUVIAL DEPOSITS Loose, wet, light brown, silty fine SAND (SM)	15	106	SA(20), CORR
	10								
-270									
						...locally interbedded thin clayey SAND to fat CLAY lenses (SC-CH)			
			7-4						
	15						24 31	102 92	LL(97), PI(65) WA(27), UU(900) SG(2.72), CON
-275									
			7-5			...becomes medium dense	22	104	SA(18)
	20								
-280						...increasing SAND (SP-SM)			
			7-6				23	104	UU(5150) SA(9)
	25								
-285									
			7-7						
	30					...increasing fines	24	100	UU(1950) SA(62)
-290									
						LACUSTRINE DEPOSITS Very stiff, moist, light brown to light grayish brown, fat CLAY (CH), trace fine sand and lenses of clayey silt			
			7-8	21			24		LL(53), PI(33)
	35								

URS

Project:	**Salton Sea Restoration**		**Log of Boring 7**
Project Location:	**Salton Sea, California**		Sheet 2 of 2
Project Number:	**27663042.00002**		

Date(s) Drilled	9/23/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	50' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-259' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.30029 W115.85326		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-295									
			7-9	27					
	40						25		
-300									
			7-10						
	45						25	101	SA(97), LL(66), PI(45)
-305									
						ALLUVIAL DEPOSITS Very dense, wet, light brown, fine SAND with trace silt (SM) contains interbedded SILT lenses (ML)			
			7-11	83			22		WA(62)
	50								
-310						Bottom of boring at 50 feet below mudline (82 feet below sea surface)			
	55								

URS

Project: Salton Sea Restoration
Project Location: Salton Sea, California
Project Number: 27663042.00002

Log of Boring 11

Date(s) Drilled	10/14/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	31' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-243' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.17413 W115.79263		

Elevation, feet	Depth, feet	Sample Number	Blows per foot	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0	11-1		SEA FLOOR DEPOSITS Very loose, wet, dark gray (5 Y-4/1), silty SAND with abundant shell fragments (SM)			
-245					27	97	SA(32), SG(2.68)
				LACUSTRINE DEPOSITS Loose, wet, brown (10 YR-5/3), silty fine to very fine SAND (SM) decrease in shell fragments			
		11-2					
	5			...decrease in fines			
		11-3		ALLUVIAL DEPOSITS Medium dense, wet, grayish brown (25 Y-5/2), poorly graded fine SAND (SP) and interbedded silty fine SAND (SM)			
-250					21		WA(14)
		11-4	27	...becomes brown (10 YR-5/3)			
	10			...return to poorly graded fine sand	23		SA(45)
-255							
		11-5	66		19		SA(10)
	15						
-260							
	20	11-6	37	LACUSTRINE DEPOSITS Hard, moist, brown (10 YR-5/4) to yellowish brown (10 YR-6/4), lean CLAY (CL) to fine sandy SILT (ML)	33 19		WA(91) LL(21), PI(4)
-265				...increasing fines			
	25	11-7		Hard, moist, brown (10 YR-5/3), fat CLAY with trace fine sand (CH)	50	72	UU(700), PIN
-270				...becomes gray (5 Y-5/1), lean clay			
	30	11-8		ALLUVIAL DEPOSITS Medium dense, wet, brown (10 YR-5/3), silty fine SAND (SM)	24	101	WA(38)
-275				Bottom of boring at 31 feet below mudline (47 feet below sea surface)			
	35						

URS

Project: Salton Sea Restoration Project Location: Salton Sea, California Project Number: 27663042.00002	**Log of Boring 14** Sheet 1 of 2

Date(s) Drilled	10/10/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.5' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-250' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.20150/W115.66085		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-250	0		14-1			LACUSTRINE DEPOSITS Very soft to wet, brown to dark brown (7.5 YR-4/2) to 10 YR-4/3), lean SILT with trace fine sand (ML) to lean CLAY (CL)	33	73	SA(93)
-255	5		14-2				39 30	83 90	LL(32), PI(12) UU(200), CON, PIN
-260	10		14-3			ALLUVIAL DEPOSITS Soft to loose, wet, brown to dark brown (7.5 YR-4/4), silty very fine SAND (SM) to SILT with fine sand (ML)	28	95	SA(54)
-265	15		14-4			LACUSTRINE DEPOSITS Soft to medium stiff, wet, brown (7.5 YR-4/2), lean CLAY with trace sand (CL) ...decrease in sand, becomes interbedded lean clay with thin layers of fine sandy silt to silty fine sand	35	84	LL(36), PI(19) UU(300), SG(2.73)
-270	20		14-5	16		...20.5'-21', silty fine sand lense (SM)	35		WA(95)
						ALLUVIAL DEPOSITS Medium dense, wet, brown (7.5 YR-4/2), silty fine to very fine SAND (SM) with interbedded layers of SILT with fine sand (ML)			
-275	25		14-6						
			14-6a	14			22		WA(30)
-280	30		14-7	13			28		SA(54)
-285	35		14-8	14			26		WA(54)

URS

Project: Salton Sea Restoration	Log of Boring 14
Project Location: Salton Sea, California	Sheet 2 of 2
Project Number: 27663042.00002	

Date(s) Drilled	10/10/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.5' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-250' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.20150/W115.66085		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-290	40		14-9				27		WA(29)
-295	45		14-10			LACUSTRINE DEPOSITS Very stiff, moist, brown (7.5 YR-4/2), fat CLAY (CH)	41		LL(65), PI(42)
-300	50		14-11			Medium dense, moist, brown (7.5-4/2), silty fine SAND (SM)	26	97	SA(41)
						Bottom of boring at 51.5 feet below mudline (75 feet below sea surface)			
-305	55								

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 17

Sheet 1 of 1

Date(s) Drilled	10/2/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	30.5' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-244' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.30338 W115.64420		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0		17-1			SEA FLOOR DEPOSITS Very soft, wet, gray, lean SILT to fat CLAY with fine sand (ML/CH)	98	47	LL(72), PI(44) UU(100)
-245									
			17-2						
	5								
-250						LACUSTRINE DEPOSITS Soft to medium stiff, moist, light brown, fat CLAY (CH) ...becomes stiff	33 45	89 78	LL(71), PI(47) CON, PIN
			17-3						
	10						35	87	UU(1050) LL(66), PI(40)
-255									
			17-4	10			33		
	15								
-260									
			17-5				32	89	LL(62), PI(38) SA(99), SG(2.77)
	20								
-265									
			17-6	14			30		
	25								
-270									
			17-7				29	96	UU(2550) LL(75), PI(51)
	30								
-275						Bottom of boring at 30.5 feet below mudline (47.5 feet below sea surface)			

URS

Log of Boring 19

Sheet 1 of 2

Project: Salton Sea Restoration
Project Location: Salton Sea, California
Project Number: 27663042.00002

Date(s) Drilled	10/16/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.5' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-275' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.40553 W115.91742		

Elevation, feet	Depth, feet	SAMPLES Number	Blows per foot	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0			SEA FLOOR DEPOSITS Very soft, moist to wet, dark blue gray (5 B-4/1), lean SILT with trace sand (ML) - contains localized gypsum nodules along sea floor			
-270		19-1			83	52	CON
	5	19-2		...becomes dark greenish gray (5 GY-4/1), silty CLAY to clayey SILT (ML/CL)	66	60	UU(150), LL(82), PI(52)
-275							
	10	19-3		LACUSTRINE DEPOSITS Very soft to loose, moist, dark grayish brown (2.5 YR-4/2), fat CLAY to clayey fine SAND (CH/SC)	37	85	SA(97)
-280				Very soft, moist, greenish gray (5 GY-6/1 - 5GY-5/1), fat CLAY (CH)			
	15	19-4			54		LL(50), PI(25)
-285							
	20	19-5		...becomes mottled dark grayish brown (10 YR-4/2) to dark greenish gray (5 GY-4/1)	33	87	
-290							
	25	19-6	2	ALLUVIAL DEPOSITS Medium dense, wet, dark grayish brown (10 YR-4/2), silty fine SAND to fine SAND (SM)			
-295				LACUSTRINE DEPOSITS Medium stiff, moist, dark greenish gray (5 GY-4/1), fat CLAY with fine sand (CH)			
	30	19-7	0		36		WA(94)
-300				...becomes brown (7.5 YR-5/4)			
	35						

URS

Project:	**Salton Sea Restoration**
Project Location:	**Salton Sea, California**
Project Number:	**27663042.00002**

Log of Boring 19

Date(s) Drilled	10/16/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.5' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-275' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.40553 W115.91742		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
			19-8				38	85	UU(900)
-305									
	40		19-9				40		
-310									
	45		19-10	20		...becomes mottled grayish brown (10 YR-5/2) to brown (7.5 YR-5/4)	43	78	UU(700)
-315									
	50		19-11				37	83	
-320						Bottom of boring at 51.5 feet below mudline (99.75' below sea surface)			

URS

Project: Salton Sea Restoration	Log of Boring 20
Project Location: Salton Sea, California	Sheet 1 of 1
Project Number: 27663042.00002	

Date(s) Drilled	10/17/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	32' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-254' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.49624 W116.02119		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-255	0		20-1			SEA FLOOR DEPOSITS Very soft, moist to wet, gray (5 Y-5/1), lean to fat CLAY with sand (CL/CH)	58	68	
-260	5		20-2			LACUSTRINE DEPOSITS Stiff, moist, brown (10 YR-5/3), fat CLAY (CH)	37	85	LL(70), PI(44) SA(97), UU(1050)
-265	10		20-3	44		ALLUVIAL DEPOSITS Dense, wet, olive gray (5 Y-4/2), silty fine SAND (SM)	16		
-270	15		20-4	12		LACUSTRINE DEPOSITS Stiff, moist, brown (10 YR-5/3), fat CLAY (CH) - contains small brachiopod shells	36		
						...increase in sand			
-275	20		20-5				34	88	UU(600)
-280	25		20-6	32		ALLUVIAL DEPOSITS Dense, moist, olive gray (5 Y-4/2), fine to very fine SAND with silt to silty fine SAND (SM)	27		
						...decrease in fines			
-285	30		20-7			...becomes poorly graded fine to very fine SAND (SP)	27	98	SA(34)
						Bottom of boring at 32 feet below mudline (59 feet below sea surface)			
	35								

URS

Project: Salton Sea Restoration
Project Location: Salton Sea, California
Project Number: 27663042.00002

Log of Boring 26

Date(s) Drilled	10/20/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.75' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-267' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.33562/W115.79995		

Elevation, feet	Depth, feet	Sample Number	Blows per foot	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
	0	26-1		SEA FLOOR DEPOSITS Very soft, wet, very dark gray (5 Y-3/1), SILT with fine sand (ML) strong organic odor	79	54	CON
				Very soft, moist, gray (5 Y-6/1), lean SILT (ML) to fat CLAY (CH)			
-280	5	26-2			73 75	 56	LL(83), PI(53) SA(99), ICU
-285	10	26-3		...becomes dark gray (10 YR-4/1)	66 58	61 65	ICU ICU
-290	15	26-4		LACUSTRINE DEPOSITS Very soft to stiff, moist to wet, brown to dark brown (10 YR-4/3), lean CLAY (CL)	42	80	LL(32), PI(16), CON
-295				Very soft, moist, brown to dark brown (10 YR-4/2), fat CLAY (CH)			
	20	26-5	0		40		
-300	25	26-6			65	61	LL(80), PI(50)
-305	30	26-7	0		49		
-310	35	26-8		...becomes dark greenish gray (5 GY-4/1)			

URS

Project: Salton Sea Restoration Project Location: Salton Sea, California Project Number: 27663042.00002	**Log of Boring 26** Sheet 2 of 2

Date(s) Drilled	10/20/03	Logged By	A. Greene	Checked By	A. Greene
Drilling Method	Tricone bit with rotary drilling	Drill Bit Size/Type	3.25"	Total Depth of Borehole	51.75' below mudline
Drill Rig Type	Mobile Sea 80-14	Drilling Contractor	Gregg Drilling	Approximate Surface Elevation	-267' below sea level
Elevation of Sea Surface	-227' below sea level	Sampling Method(s)	Shelby/SPT	Hammer Data	140 lbs/30" drop
Borehole Backfill	Native	Location	N33.33562/W115.79995		

Elevation, feet	Depth, feet	SAMPLES Type	SAMPLES Number	Blows per foot	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Density, pct	REMARKS AND OTHER TESTS
-315									
	40		26-9			ALLUVIAL DEPOSITS Loose to medium dense, moist, grayish brown (10 YR-5/2), interbedded clayey fine SAND to fat CLAY (SC/CH)			SA(95)
-320						LACUSTRINE DEPOSITS Stiff, moist, grayish brown (10 YR-5/2), fat CLAY (CH)			
	45		26-10	10			35		
						Stiff to medium dense, moist, gray (5 Y-6/1), fine sandy CLAY to fat CLAY (CL/CH)			
-325									
	50		26-11				35	85	WA(97), UU(1750)
						Bottom of boring at 51.75 feet below mudline (102 feet below sea surface)			
-330									
	55								

Gregg In-Situ of Signal Hill, California conducted Cone Penetration Tests (CPT) soundings with pore pressure measurements. Figure 2 shows the approximate locations of the CPTs. The CPTs were advanced to depths ranging from about 30 to 65 feet below the existing mudline. Table 1 summarizes their locations and sounding depths.

The soundings were conducted using a 20-ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85. The cone takes measurements of cone bearing, sleeve friction, and dynamic pore water pressure at 2.5-cm intervals during penetration to provide a nearly continuous geologic log. The CPT soundings are performed in accordance with ASTM standards (D 5778-95). The CPT used the tophead of the drill rig to provide thrust. When required, flush-joint support casing was set into the mud line to increase the stability of the rods and to avoid buckling of the rods. A photograph of the cone is shown in Figure 5.

Measurements of resistance encountered during sounding evaluate the variation of material types, engineering properties, and liquefaction potential of soils. Soil behavior type (SBT) and stratigraphic interpretation is based on relationships between cone bearing, sleeve friction, and pore water pressure. The friction ratio is a calculated parameter (defined by as sleeve friction divided by cone bearing) and is used to infer soil behavior type. This appendix provides the results of the CPT soundings graphically and in tabular form, along with stratigraphic and parameter interpretations processed by Gregg In-Situ. Two sets of plots are provided. The first set is a plot of tip resistance (q_t), sleeve friction (F_s), recorded dynamic pore pressure (referred to as u_2 or U_d and shown as U on the plots) friction ratio (R_f) and interpreted soil behavior type (SBT). The second set is a plot of q_t, normalized tip resistance (Q_t), normalized friction ratio (RF, shown as R_f on the plot), interpreted normalized Standard Penetration Blow Count (SPT N_{160}) and normalized Soil Behavior Type (SBT_n). A graphical comparison of CPTs performed adjacent to borings is presented in Figures 14 and 15.

Gregg In Situ CPT Interpretations as of January 7, 1999 (Release 1.00.19)

Gregg In Situ's interpretation routine should be considered a calculator of current published CPT correlations and is subject to change to reflect the current state of practice. The interpreted values are not considered valid for all soil types. The interpretations are presented only as a guide for geotechnical use and should be carefully scrutinized for consideration in any geotechnical design. Reference to current literature is strongly recommended.

The CPT interpretations are based on values of tip, sleeve friction and pore pressure averaged over a user specified interval (typically 0.25m). Note that Qt is the recorded tip value, Qc, corrected for pore pressure effects. Since all Gregg In Situ cones have equal end area friction sleeves, pore pressure corrections to sleeve friction, Fs, are not required.

The tip correction is: $Qt = Qc + (1\text{-}a) \bullet Ud$

where: *Qt* is the corrected tip load
Qc is the recorded tip load
Ud is the recorded dynamic pore pressure
a is the Net Area Ratio for the cone (typically 0.85 for Gregg In Situ cones)

Effective vertical overburden stresses are calculated based on a hydrostatic distribution of equilibrium pore pressures below the water table or from a user defined equilibrium pore pressure profile (this can be obtained from CPT dissipation tests). The stress calculations use unit weights assigned to the Soil Behavior Type zones or from a user defined unit weight profile.

Details regarding the interpretation methods for all of the interpreted parameters is given in table 1. The appropriate references referred to in table 1 are listed in table 2.

The estimated Soil Behavior Type is based on the charts developed by Robertson and Campanella shown in figure 1.

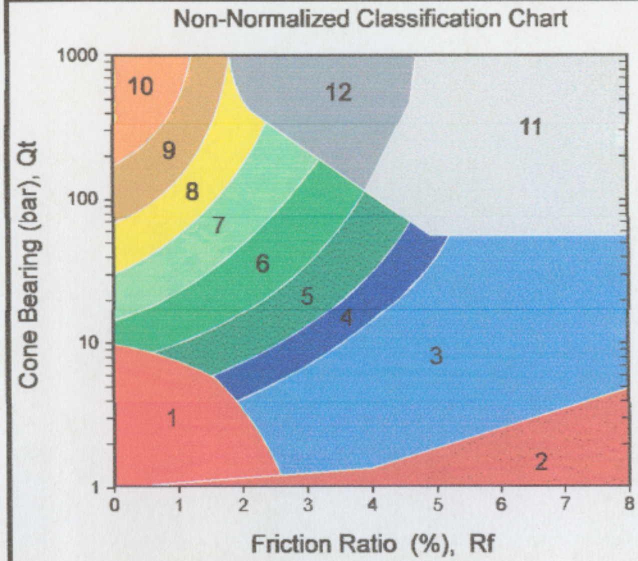
Table 1 CPT Interpretation Methods

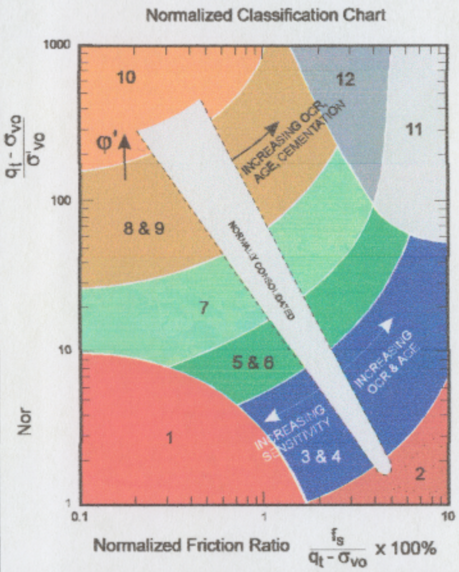
Interpreted Parameter	Description	Equation	Ref
Depth	mid layer depth		
AvgQt	Averaged corrected tip (Qt)	$AvgQt = \frac{1}{n}\sum_{i=1}^{n} Qt_i$	
AvgFs	Averaged sleeve friction (Fs)	$AvgFs = \frac{1}{n}\sum_{i=1}^{n} Fs_i$	
AvgRf	Averaged friction ratio (Rf)	$AvgRf = 100\% \bullet \frac{AvgFs}{AvgQt}$	
AvgUd	Averaged dynamic pore pressure (Ud)	$AvgUd = \frac{1}{n}\sum_{i=1}^{n} Ud_i$	
SBT	Soil Behavior Type as defined by Robertson and Campanella		1

U.Wt.	Unit Weight of soil determined from: 1) uniform value or 2) value assigned to each SBT zone 3) user supplied unit weight profile		
TStress	Total vertical overburden stress at mid layer depth	$TStress = \sum_{i=1}^{n} \gamma_i h_i$ where γ_i is layer unit weight h_i is layer thickness	
EStress	Effective vertical overburden stress at mid layer depth	$EStress = TStress - Ueq$	
Ueq	Equilibrium pore pressure determined from: 1) hydrostatic from water table depth 2) user supplied profile		
Cn	SPT N_{60} overburden correction factor	$Cn=(\sigma_v')^{-0.5}$ where σ_v' *is in tsf* $0.5 < C_n < 2.0$	
N_{60}	SPT N value at 60% energy calculated from Qt/N ratios assigned to each SBT zone		3
$(N1)_{60}$	SPT N_{60} value corrected for overburden pressure	$N1_{60} = Cn \bullet N_{60}$	3
$\Delta(N1)_{60}$	Equivalent Clean Sand Correction to $(N1)_{60}$	$\Delta(N1)_{60} = \frac{K_{SPT}}{1-K_{SPT}} \bullet (N1)_{60}$ Where: K_{SPT} is defined as: 0.0 for FC < 5% 0.0167 • (FC - 5) for 5% < FC < 35% 0.5 for FC > 35% FC - Fines Content in %	7
$(N1)_{60cs}$	Equivalent Clean Sand $(N1)_{60}$	$(N1)_{60cs} = (N1)_{60} + \Delta(N1)_{60}$	7
Su	Undrained shear strength - Nkt is use selectable	$Su = \frac{Qt - \sigma_v}{N_{kt}}$	2
k	Coefficient of permeability (assigned to each SBT zone)		6
Bq	Pore pressure parameter	$Bq = \frac{\Delta u}{Qt - \sigma_v}$	2
Qtn	Normalized Qt for Soil Behavior Type classification as defined by Robertson, 1990	$Qtn = \frac{Qt - \sigma_v}{\sigma'_v}$	4
Rfn	Normalized Rf for Soil Behavior Type classification as defined by Robertson, 1990	$Rfn = 100\% \bullet \frac{f_s}{Qt - \sigma_v}$	4
SBTn	Normalized Soil Behavior Type (slightly modified from that published by Robertson, 1990. This version includes all the soil zones of the original non-normalized SBT chart - see figure 1)		4
Qc1	Normalized Qt for seismic analysis	$qc1 = qc \bullet (Pa/\sigma_v')^{0.5}$ where: Pa = atm. pressure	5
Qc1N	Dimensionless Normalized Qt1	$qc1N = qc1 / Pa$ where: Pa = atm. pressure	

CPT Interpretations

ΔQc1N1	Equivalent clean sand correction	$\Delta qc1N = \frac{K_{CPT}}{1 - K_{CPT}} \bullet qc1N$ Where: K_{CPT} is defined as: 0.0 for FC < 5% 0.0267 • (FC - 5) for 5% < FC < 35% 0.5 for FC > 35% FC - Fines Content in %	5
Qc1Ncs	Clean Sand equivalent Qc1N	$qc1Ncs = qc1N + \Delta qc1N$	5
Ic	Soil index for estimating grain characteristics	$Ic = [(3.47 - \log Q)^2 + (\log F + 1.22)^2]^{0.5}$	5
FC	Fines content (%)	$FC = 1.75(Ic^{3.25}) - 3.7$ $FC = 100$ for $Ic > 3.5$ $FC = 0$ for $Ic < 1.26$ $FC = 5\%$ if $1.64 < Ic < 2.6$ AND $Rfn < 0.5$	8
PHI	Friction Angle	Campanella and Robertson Durunoglu and Mitchel Janbu	1
Dr	Relative Density	Ticino Sand Hokksund Sand Schmertmann 1976 Jamiolkowski - All Sands	1
OCR	Over Consolidation Ratio		1
State Parameter			9
CRR	Cyclic Resistance Ratio		7





Zone	Q_t / N	Soil Behaviour Type
1	2	sensitive fine grained
2	1	organic material
3	1	clay
4	1.5	silty clay to clay
5	2	clayey silt to silty clay
6	2.5	sandy silt to clayey silt
7	3	
8	4	and to silty sand
9	5	*sand*
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

Figure 1 Non-Normalized and Normalized Soil Behavior Type Classification Charts

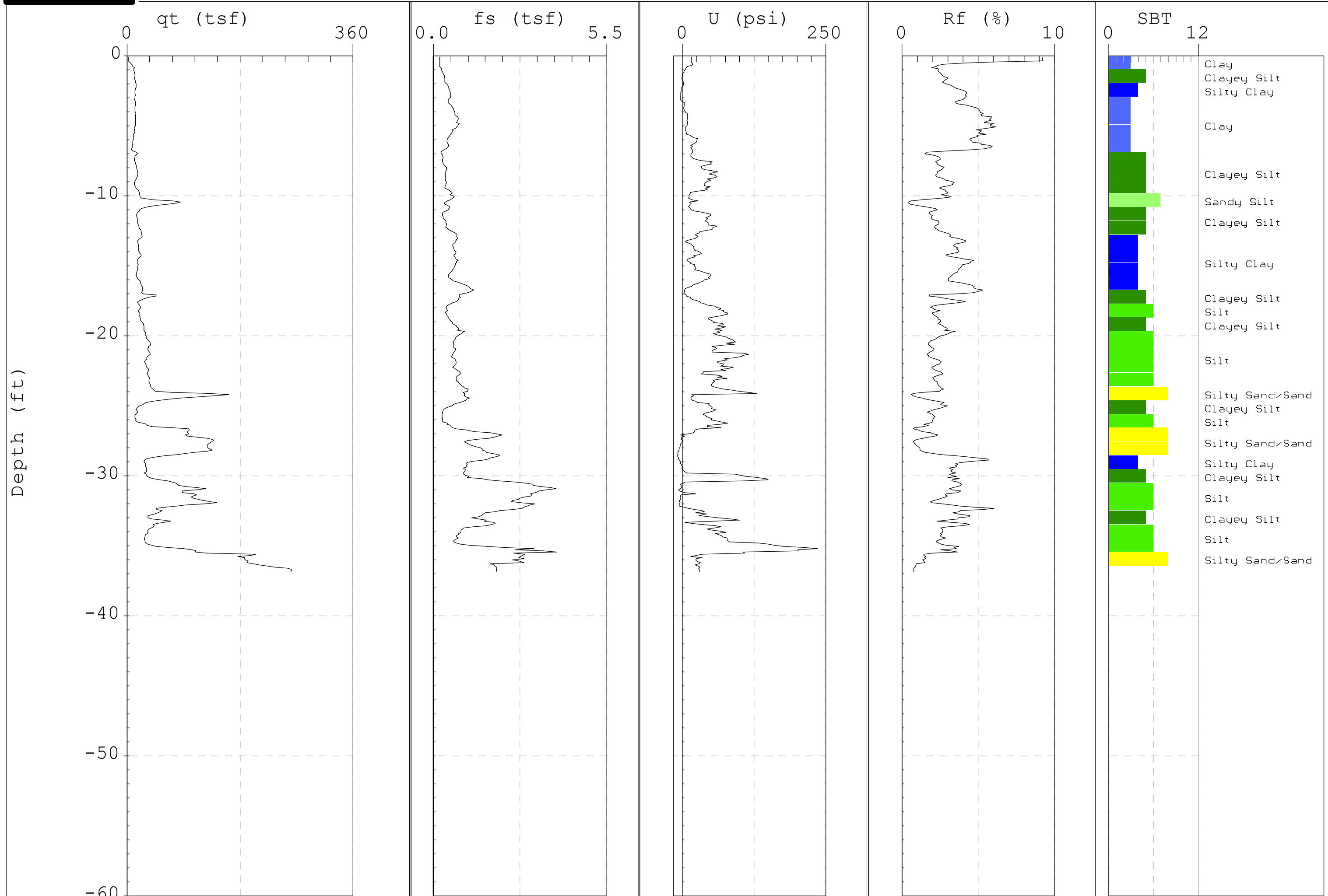
Table 2 References

No.	Reference
1	Robertson, P.K. and Campanella, R.G., 1986, "Guidelines for Use, Interpretation and Application of the CPT and CPTU", UBC, Soil Mechanics Series No. 105, Civil Eng. Dept., Vancouver, B.C., Canada
2	Robertson, P.K., Campanella, R.G., Gillespie, D. and Greig, J., 1986, "Use of Piezometer Cone Data", Proceedings of InSitu 86, ASCE Specialty Conference, Blacksburg, Virginia.
3	Robertson, P.K. and Campanella, R.G., 1989, "Guidelines for Geotechnical Design Using CPT and CPTU", UBC, Soil Mechanics Series No. 120, Civil Eng. Dept., Vancouver, B.C., Canada
4	Robertson, P.K., 1990, "Soil Classification Using the Cone Penetration Test", Canadian Geotechnical Journal, Volume 27.
5	Robertson, P.K. and Fear, C.E., 1995, "Liquefaction of Sands and its Evaluation", Keynote Lecture, First International Conference on Earthquake Geotechnical Engineering, Tokyo, Japan.
6	Gregg In Situ Internal Report
7	Robertson, P.K. and Wride, C.E., 1997, "Cyclic Liquefaction and its Evaluation Based on SPT and CPT", NCEER Workshop Paper, January 22, 1997
8	Wride, C.E. and Robertson, P.K., 1997, "Phase II Data Review Report (Massey and Kidd Sites, Fraser River Delta)", Volume 1 - Data Report (June 1997), University of Alberta.
9	Plewes, H.D., Davies, M.P. and Jefferies, M.G., 1992, "CPT Based Screening Procedure for Evaluating Liquefaction Susceptibility", 45th Canadian Geotechnical Conference, Toronto, Ontario, October 1992.

URS CORPORATION

Site: SALTON SEA
Location: CPT-01

Engineer: L. HANDFELT
Date: 10:01:03 13:46



Max. Depth: 36.83 (ft)
Depth Inc.: 0.082 (ft)

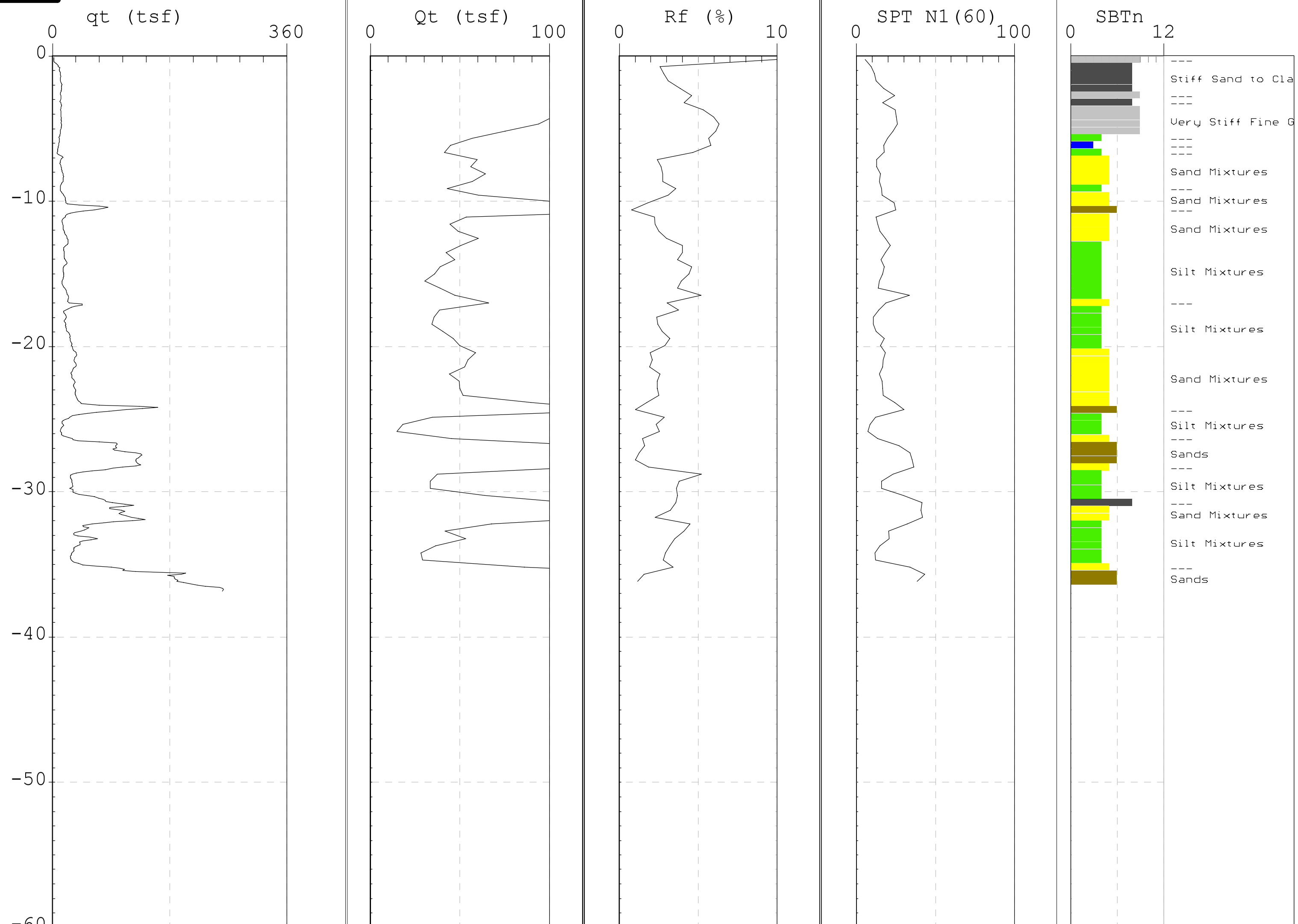
SBT: Soil Behavior Type (Robertson 1990)

GREGG

URS CORPORATION

Site: SALTON SEA
Location: CPT-01

Engineer: L. HANDFELT
Date: 10:01:03 13:46



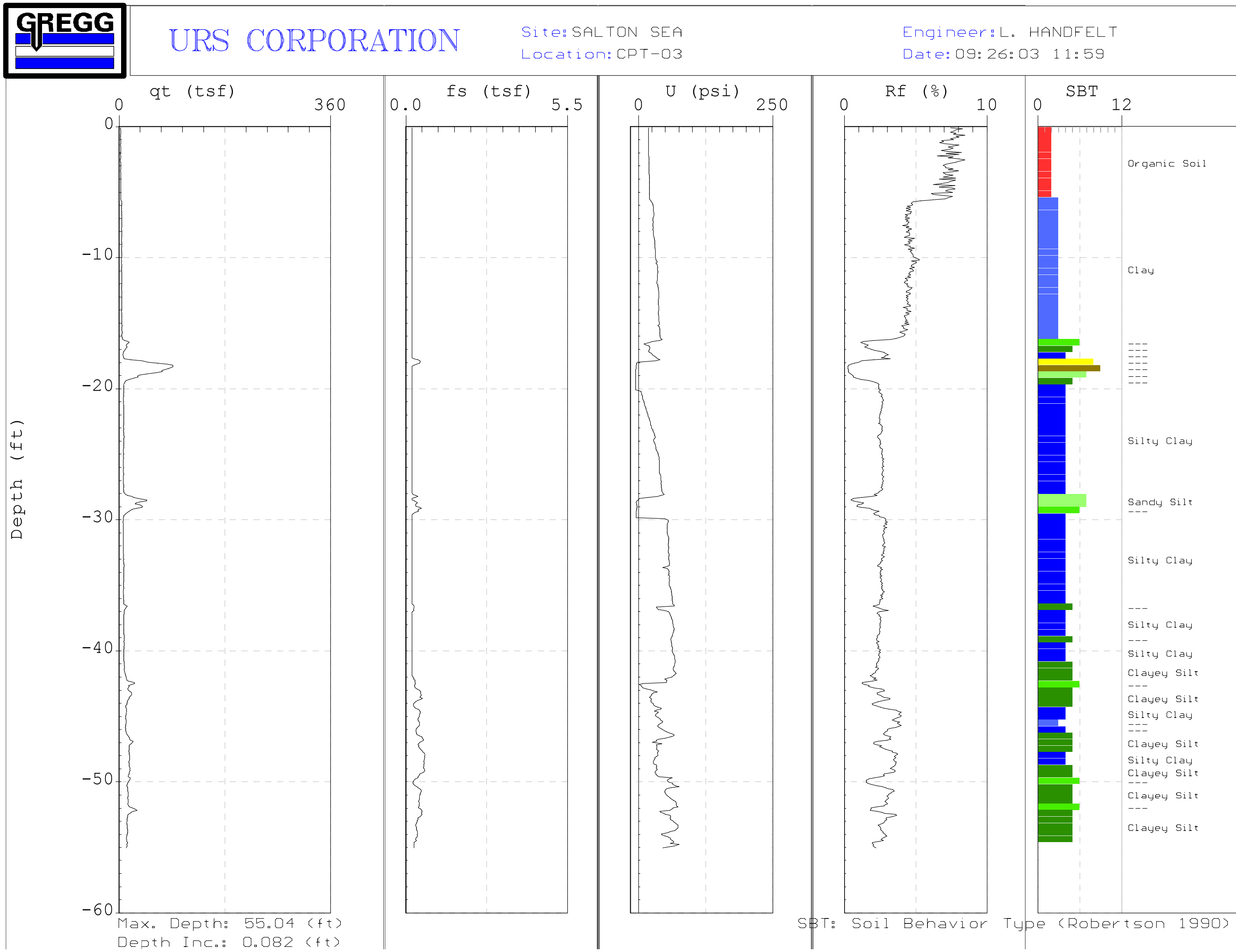
Max. Depth: 36.83 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

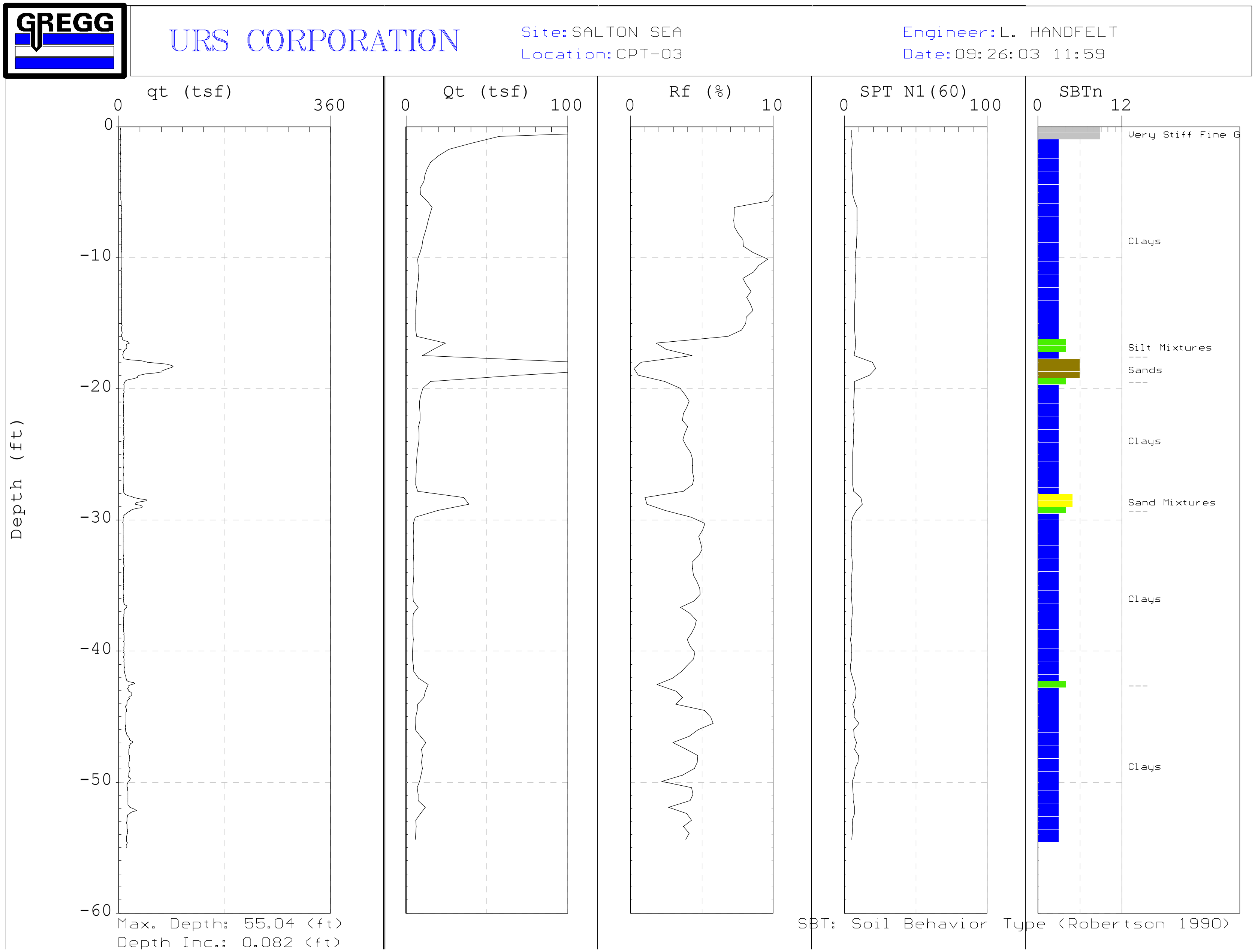
Site: SALTON SEA
Location: CPT-03

Engineer: L. HANDFELT
Date: 09:26:03 11:59



Max. Depth: 55.04 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)


GREGG
URS CORPORATION
Site: SALTON SEA
Location: CPT-03
Engineer: L. HANDFELT
Date: 09:26:03 11:59
qt (tsf)
0
360
Qt (tsf)
0
100
Rf (%)
0
10
SPT N1(60)
0
100
SBTn
0
12
Depth (ft)
0
-10
-20
-30
-40
-50
-60
Very Stiff Fine G
Clays
Silt Mixtures

Sands

Clays
Sand Mixtures

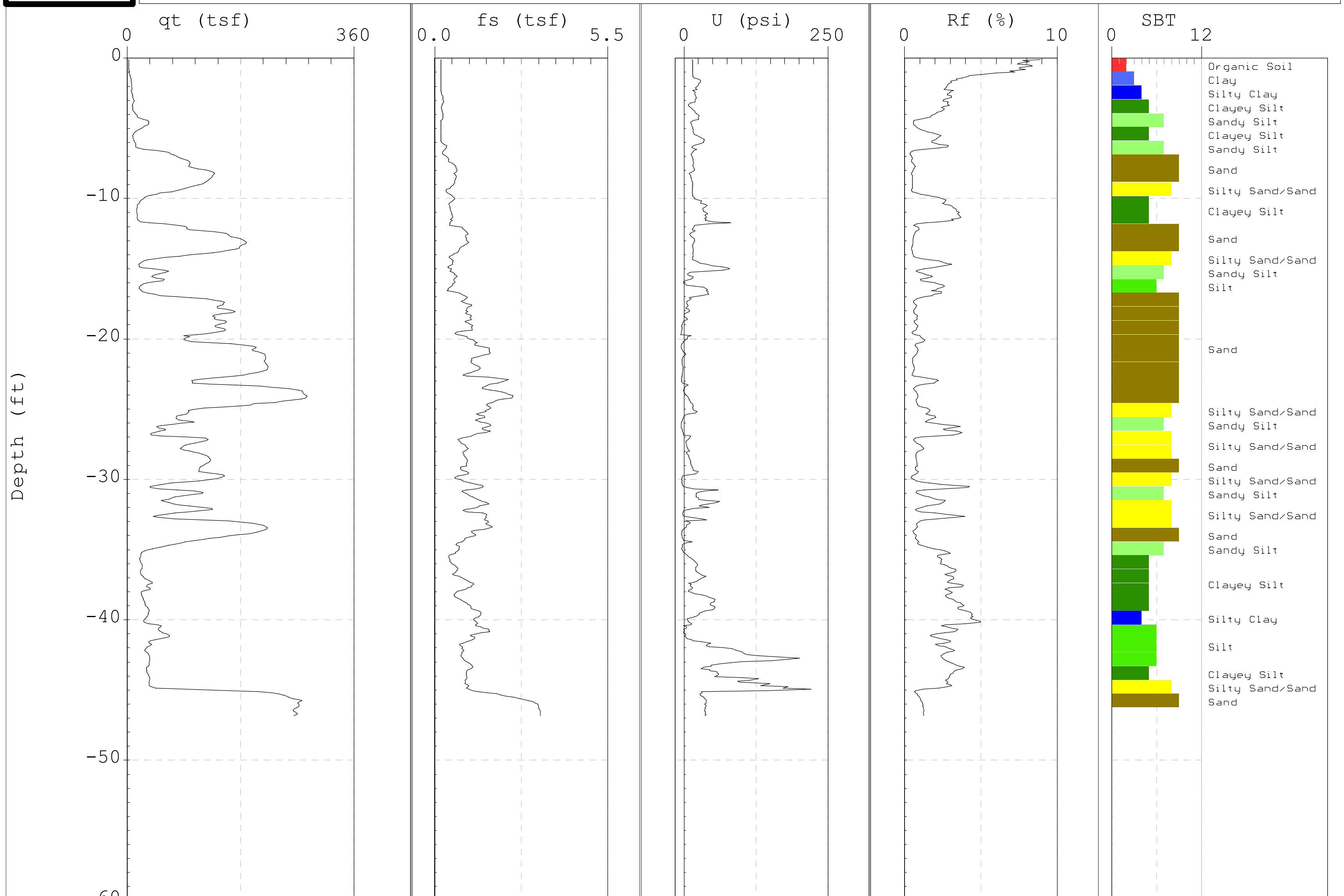
Clays

Clays
Max. Depth: 55.04 (ft)
Depth Inc.: 0.082 (ft)
SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-08

Engineer: L. HANDFELT
Date: 09:24:03 13:20



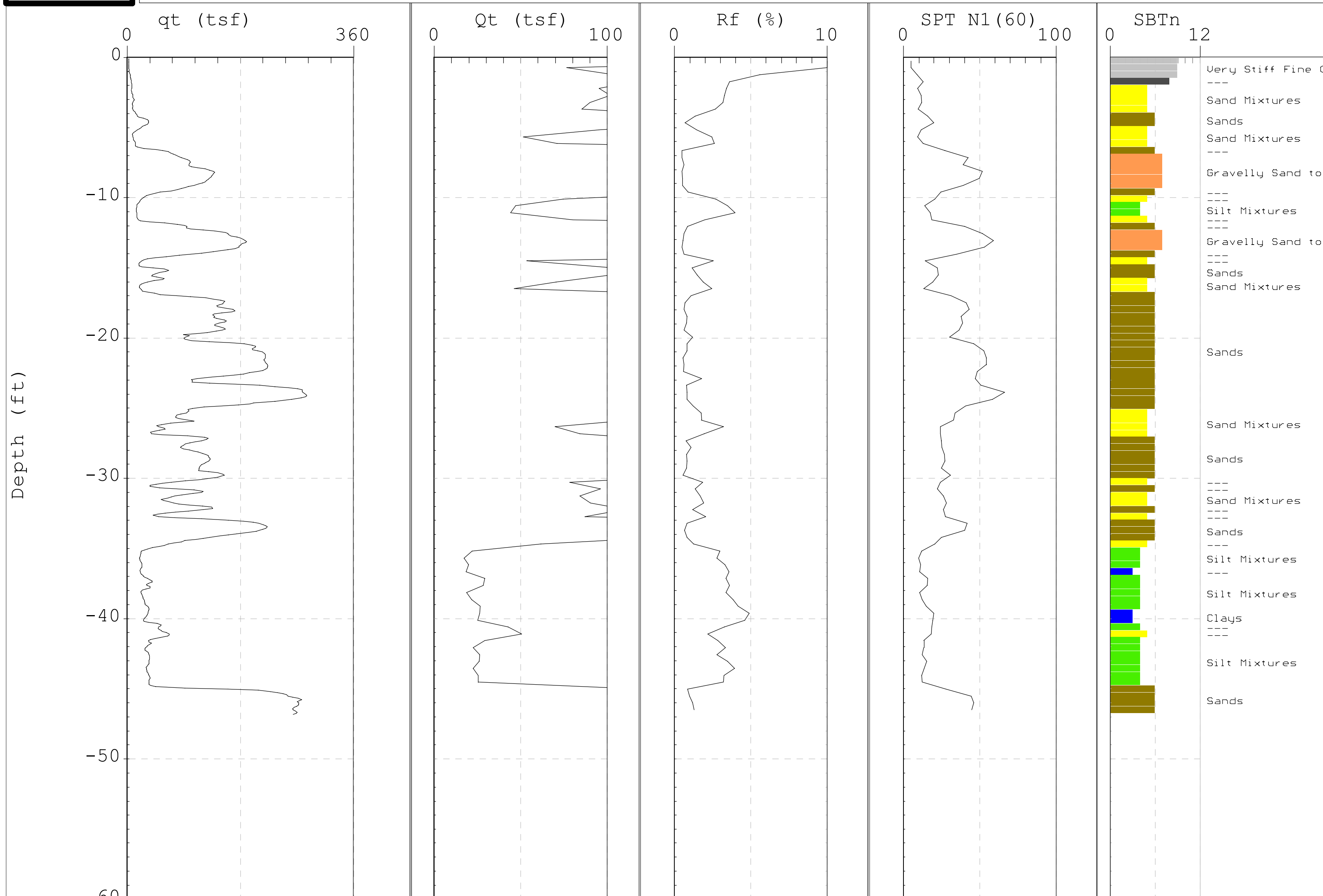
Max. Depth: 46.83 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-08

Engineer: L. HANDFELT
Date: 09:24:03 13:20



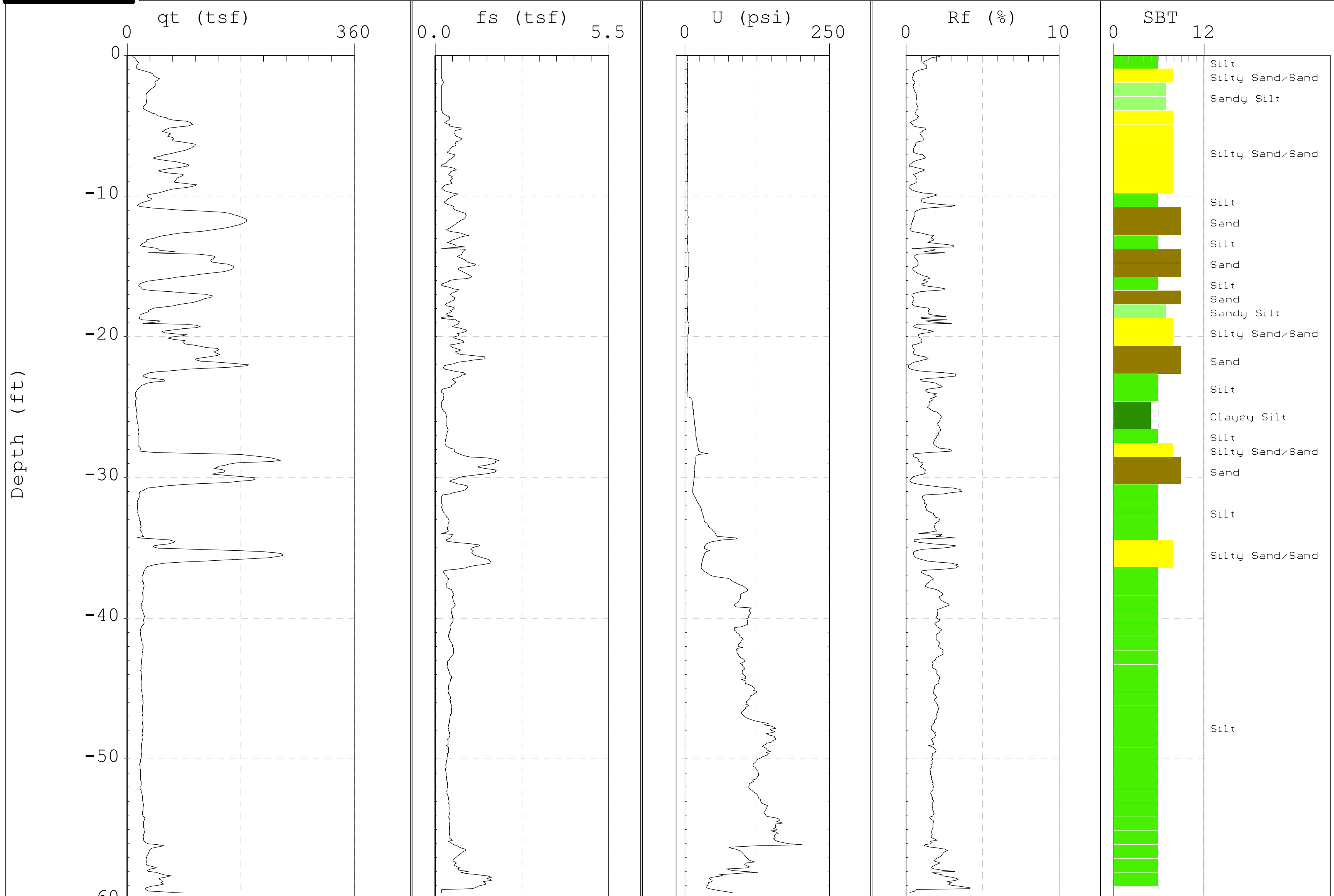
Max. Depth: 46.83 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-09

Engineer: L. HANDFELT
Date: 09:22:03 19:23



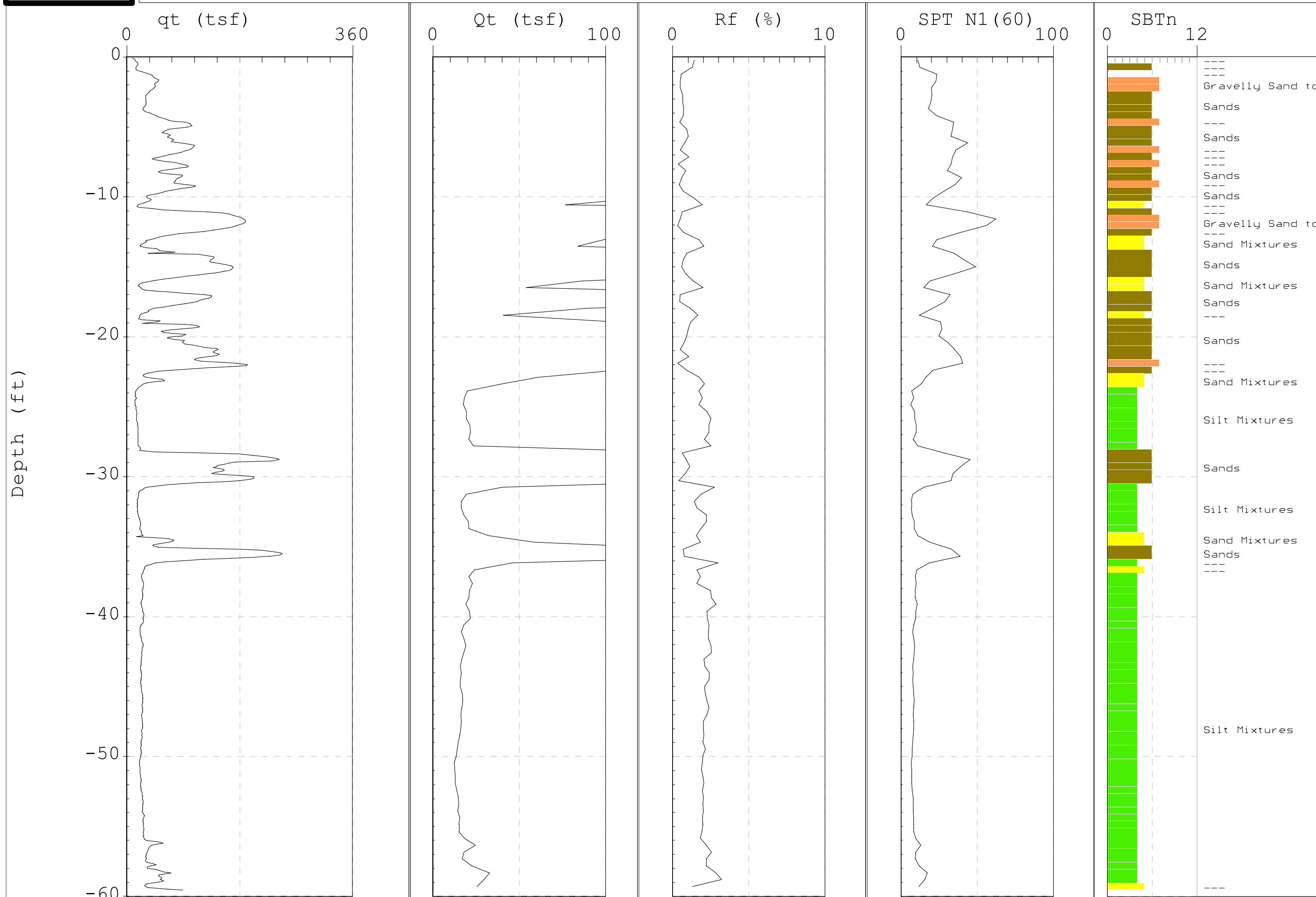
Max. Depth: 59.55 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-09

Engineer: L. HANDFELT
Date: 09:22:03 19:23



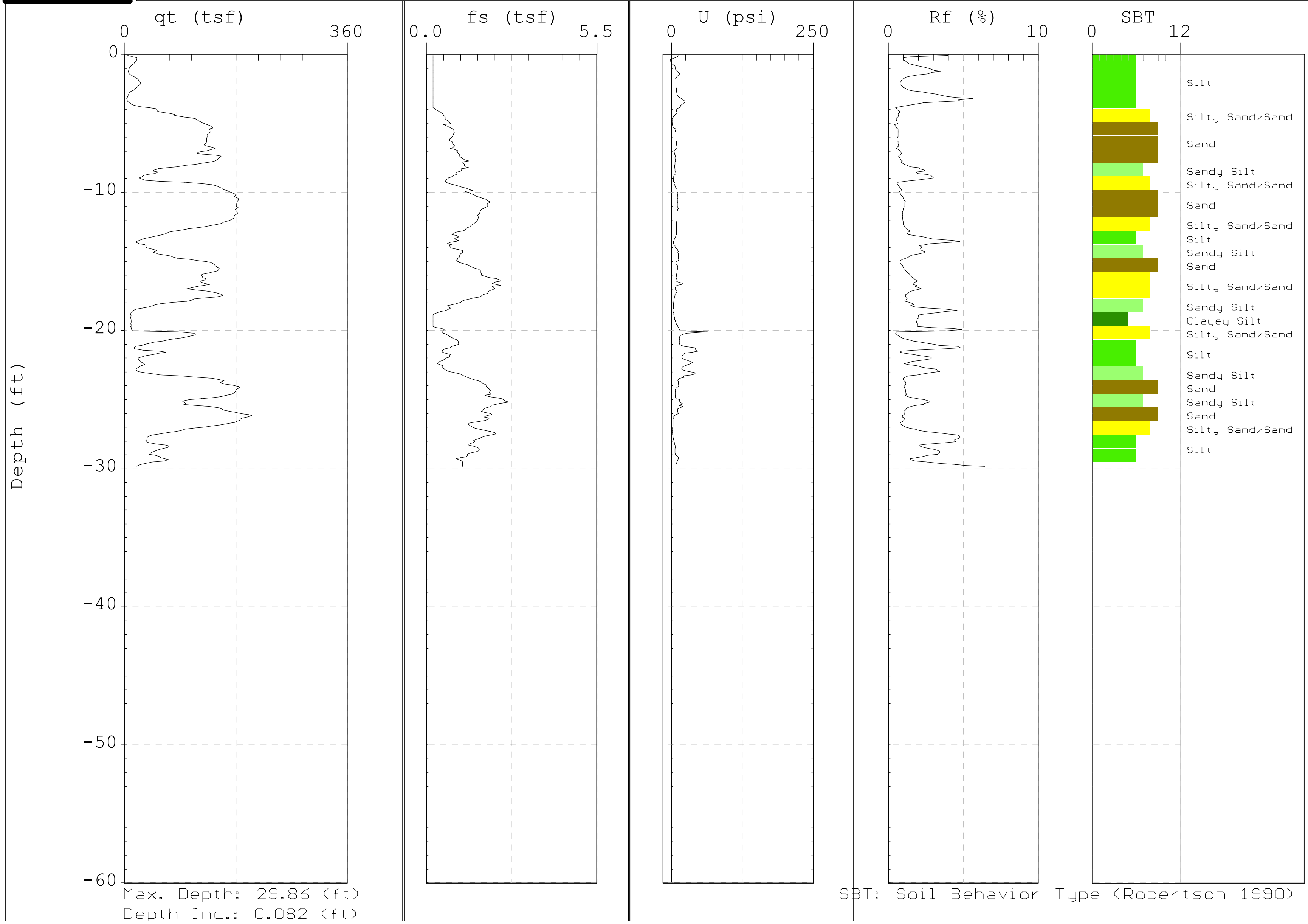
Max. Depth: 59.55 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-10

Engineer: L. HANDFELT
Date: 10:14:03 12:54



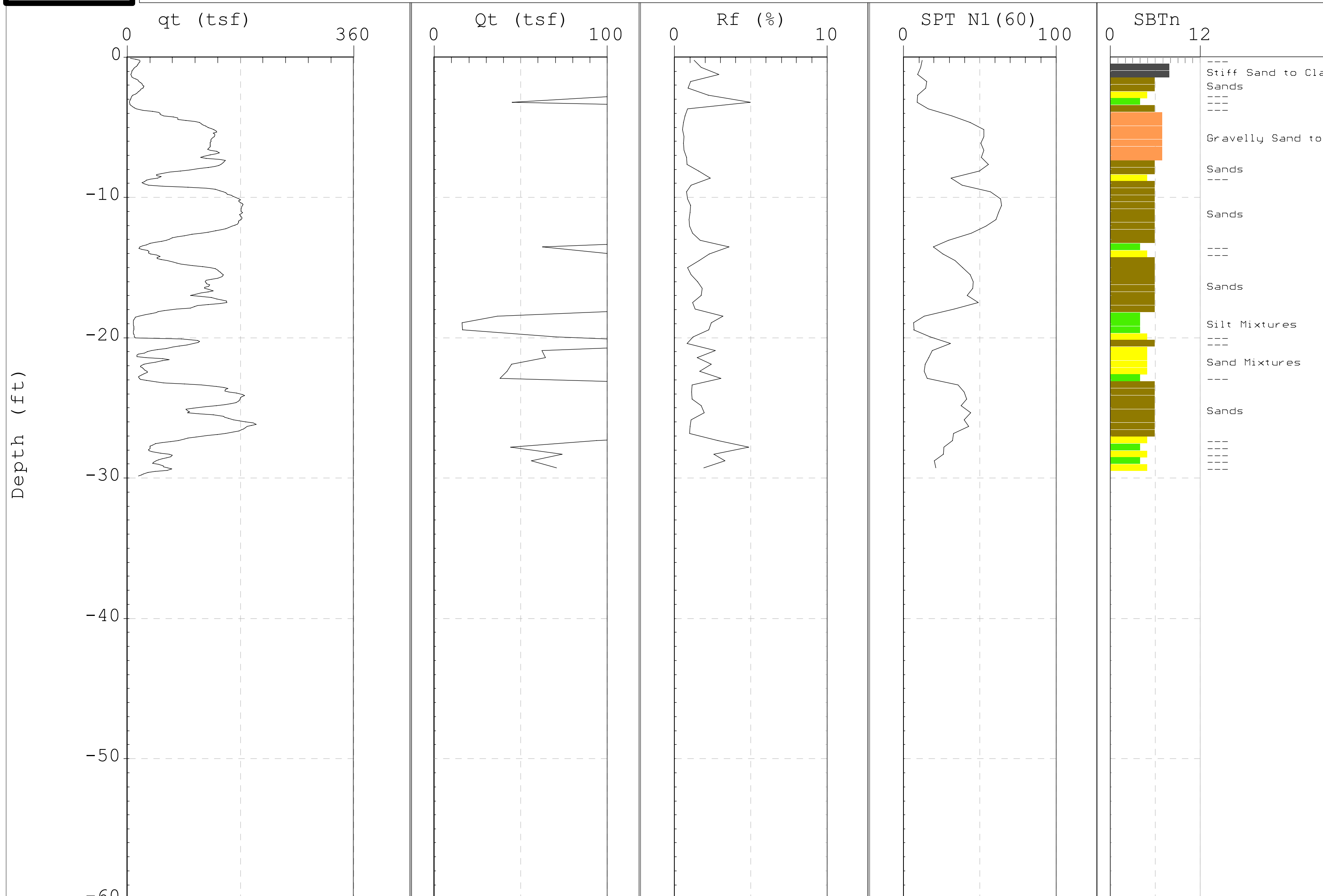
Max. Depth: 29.86 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-10

Engineer: L. HANDFELT
Date: 10:14:03 12:54



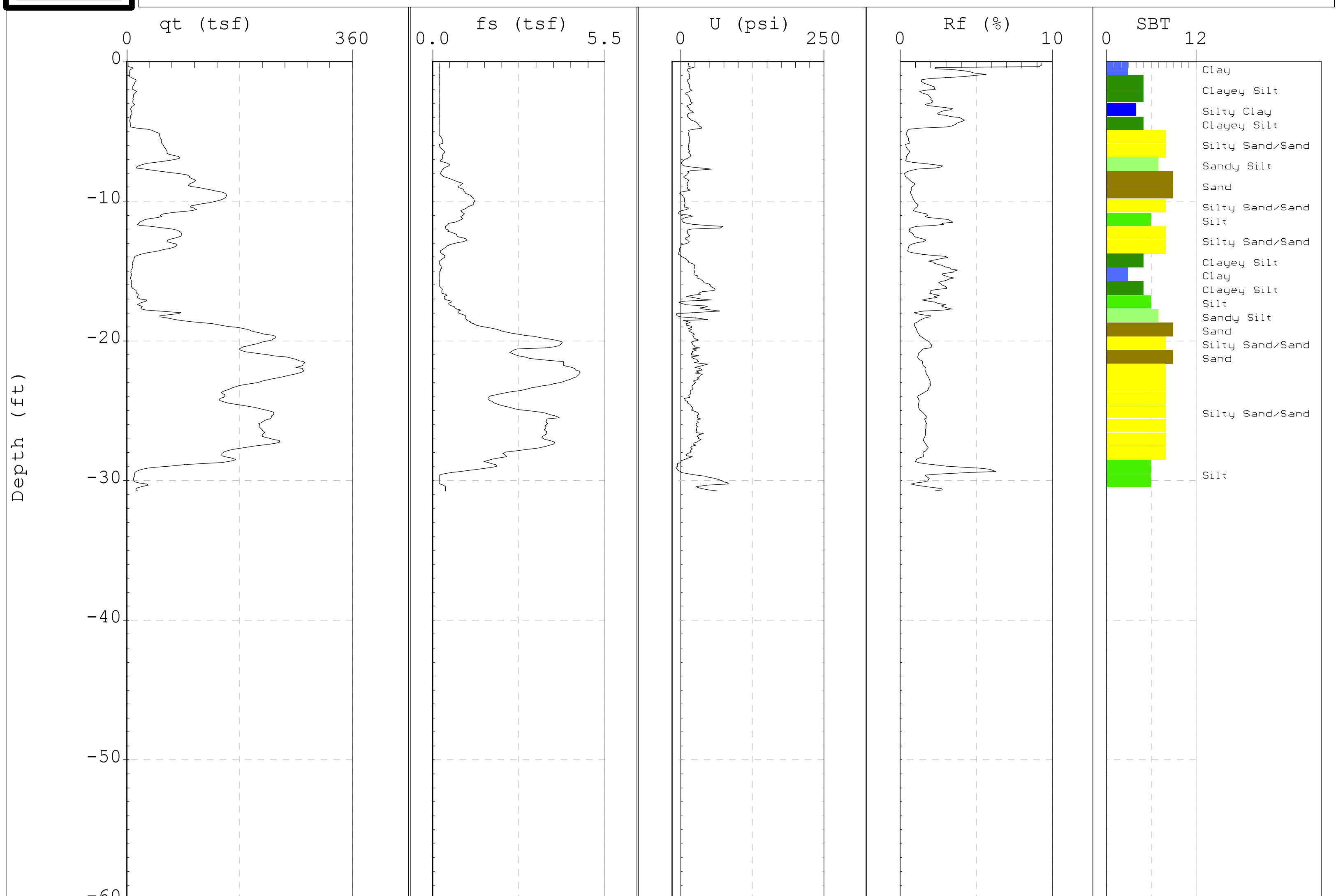
Max. Depth: 29.86 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-12

Engineer: L. HANDFELT
Date: 10:13:03 15:46



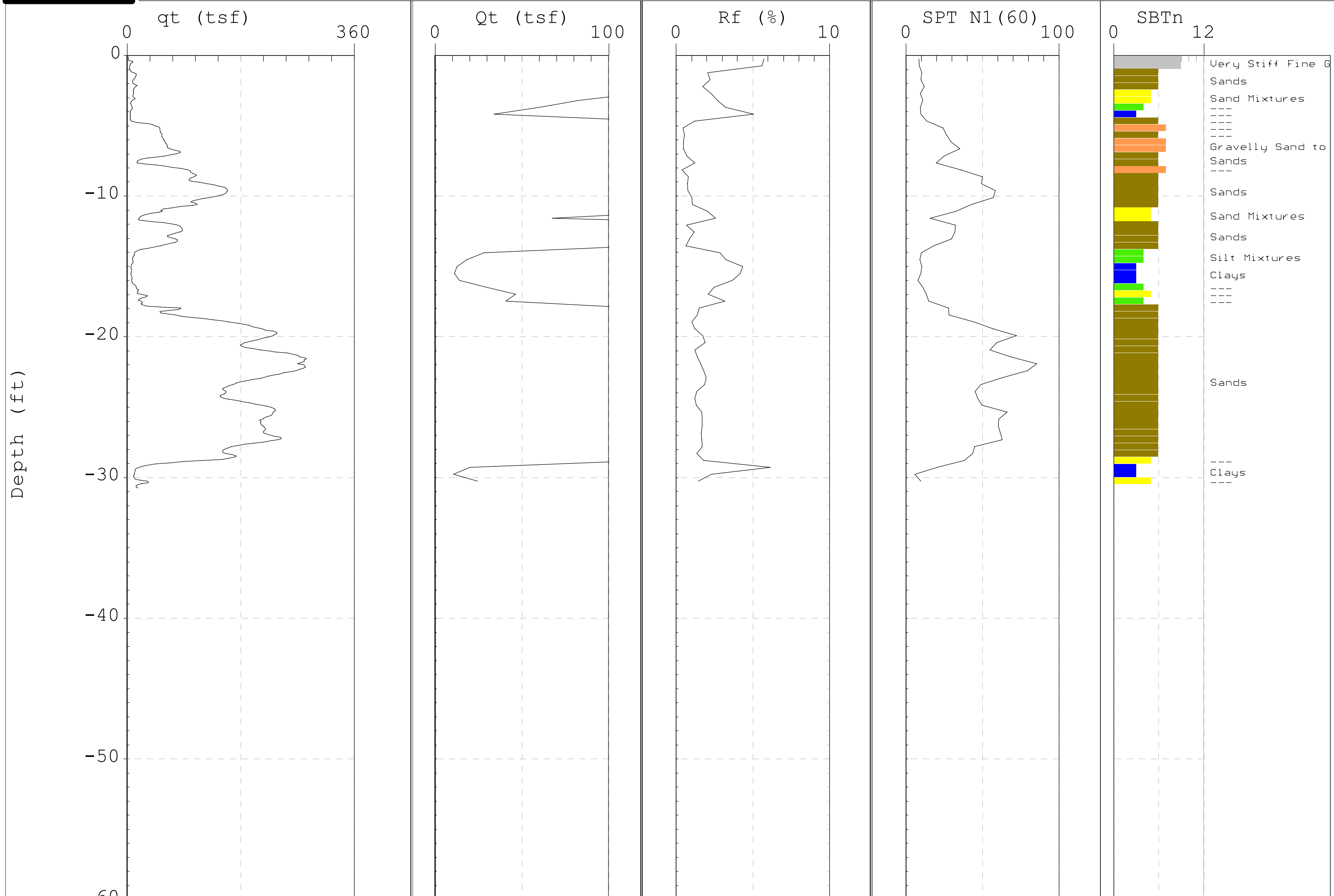
Max. Depth: 30.76 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-12

Engineer: L. HANDFELT
Date: 10:13:03 15:46



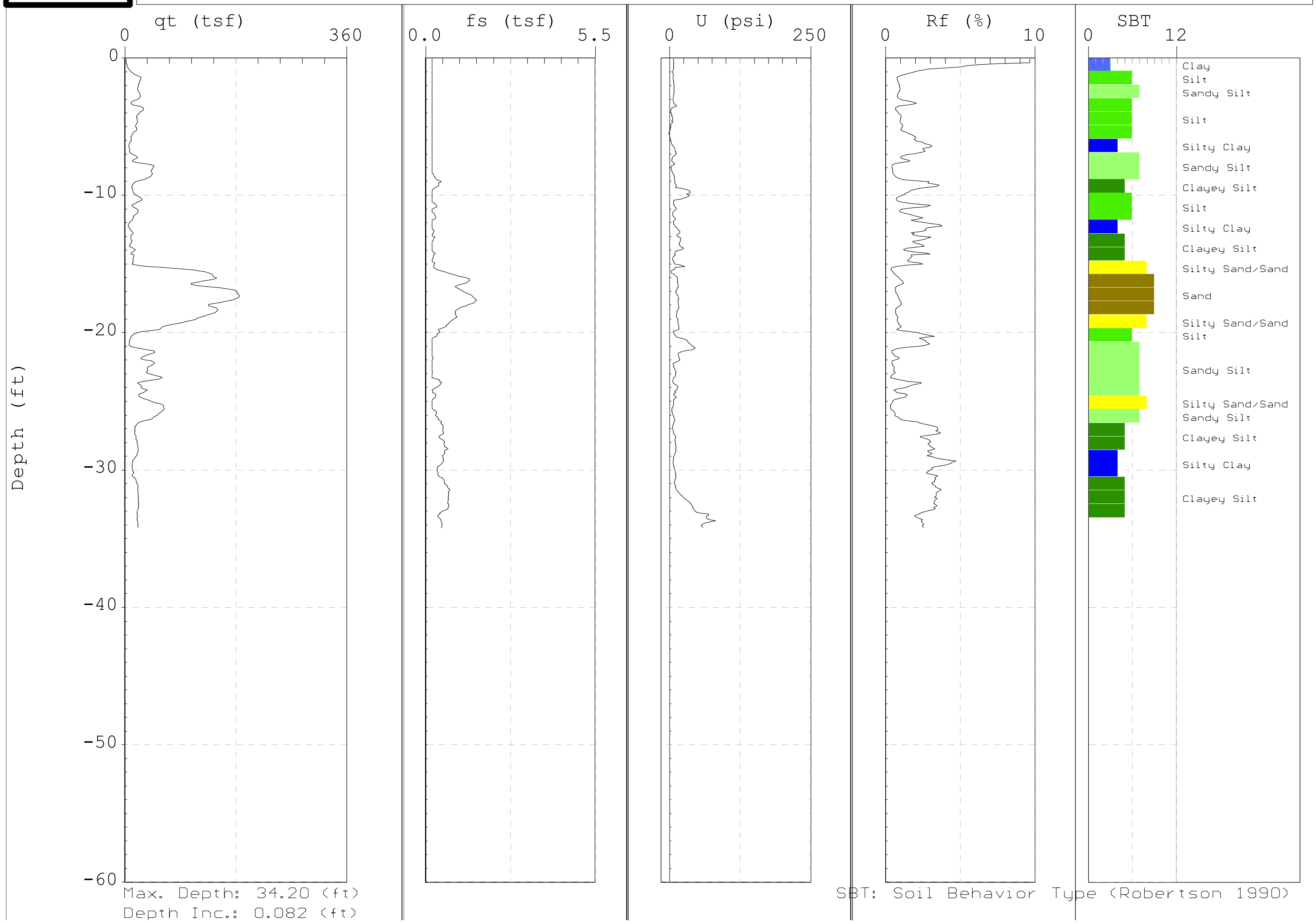
Max. Depth: 30.76 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-13

Engineer: L. HANDFELT
Date: 10:13:03 11:49



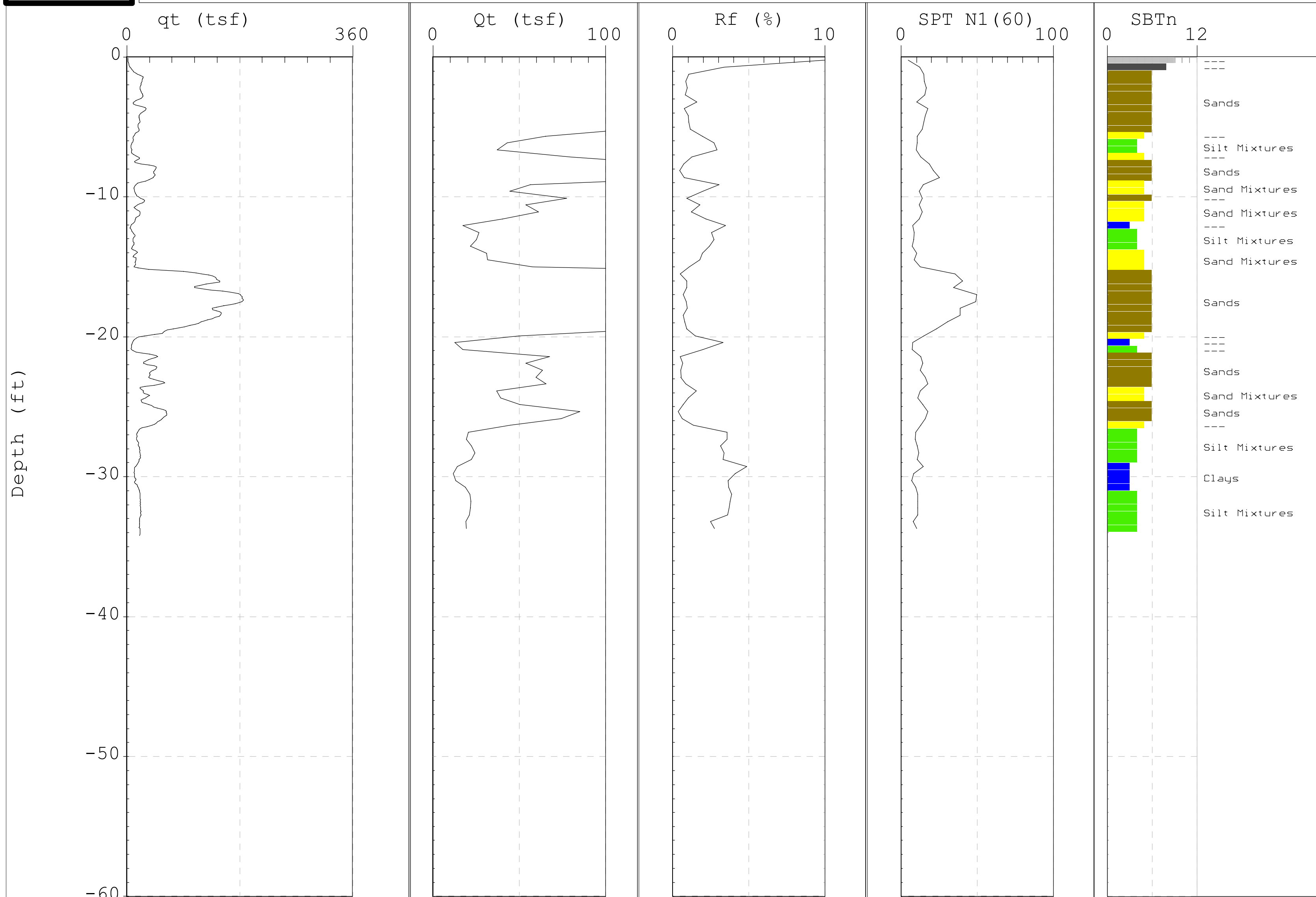
Max. Depth: 34.20 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-13

Engineer: L. HANDFELT
Date: 10:13:03 11:49



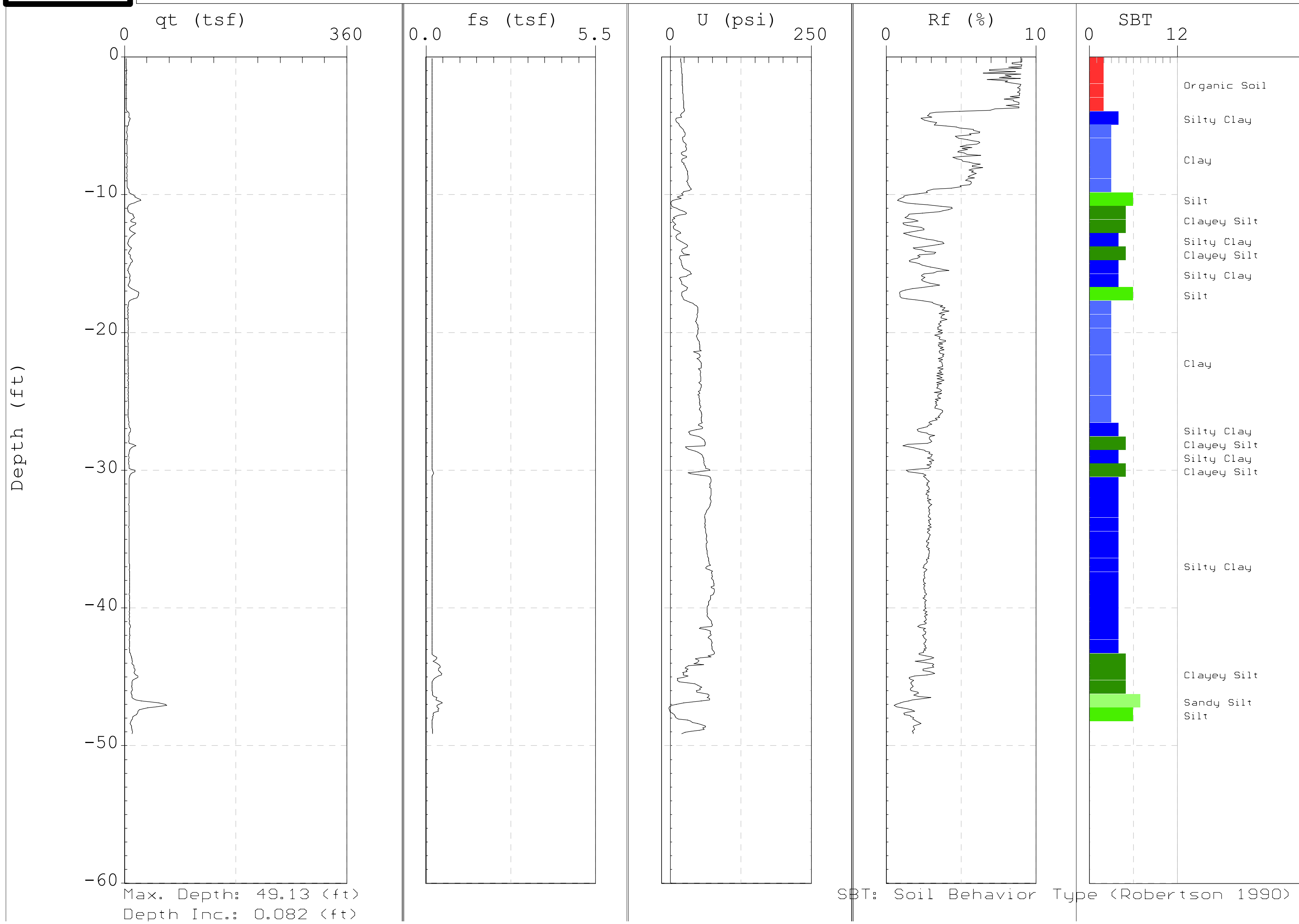
Max. Depth: 34.20 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-15

Engineer: L. HANDFELT
Date: 10:09:03 17:26



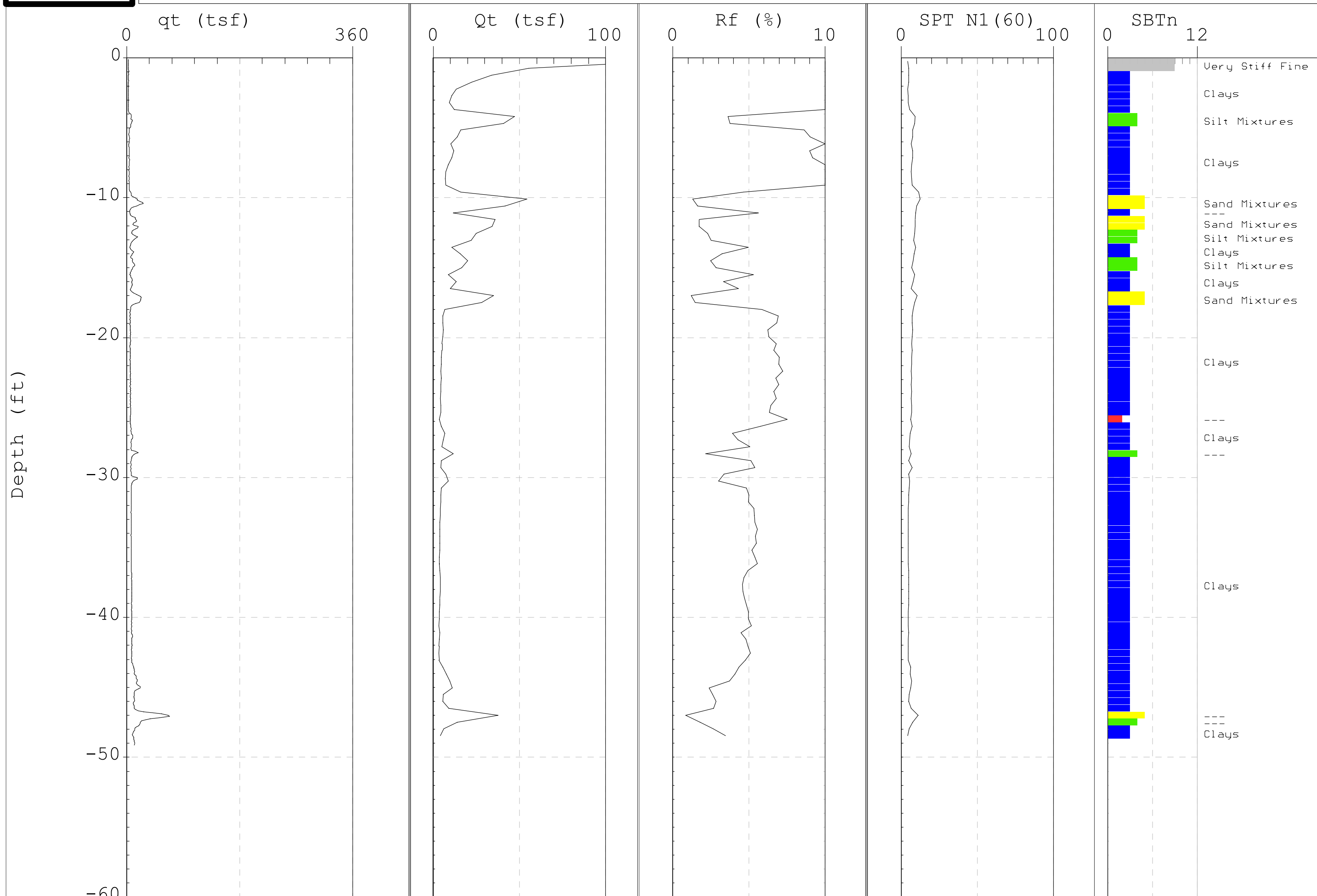
Max. Depth: 49.13 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-15

Engineer: L. HANDFELT
Date: 10:09:03 17:26



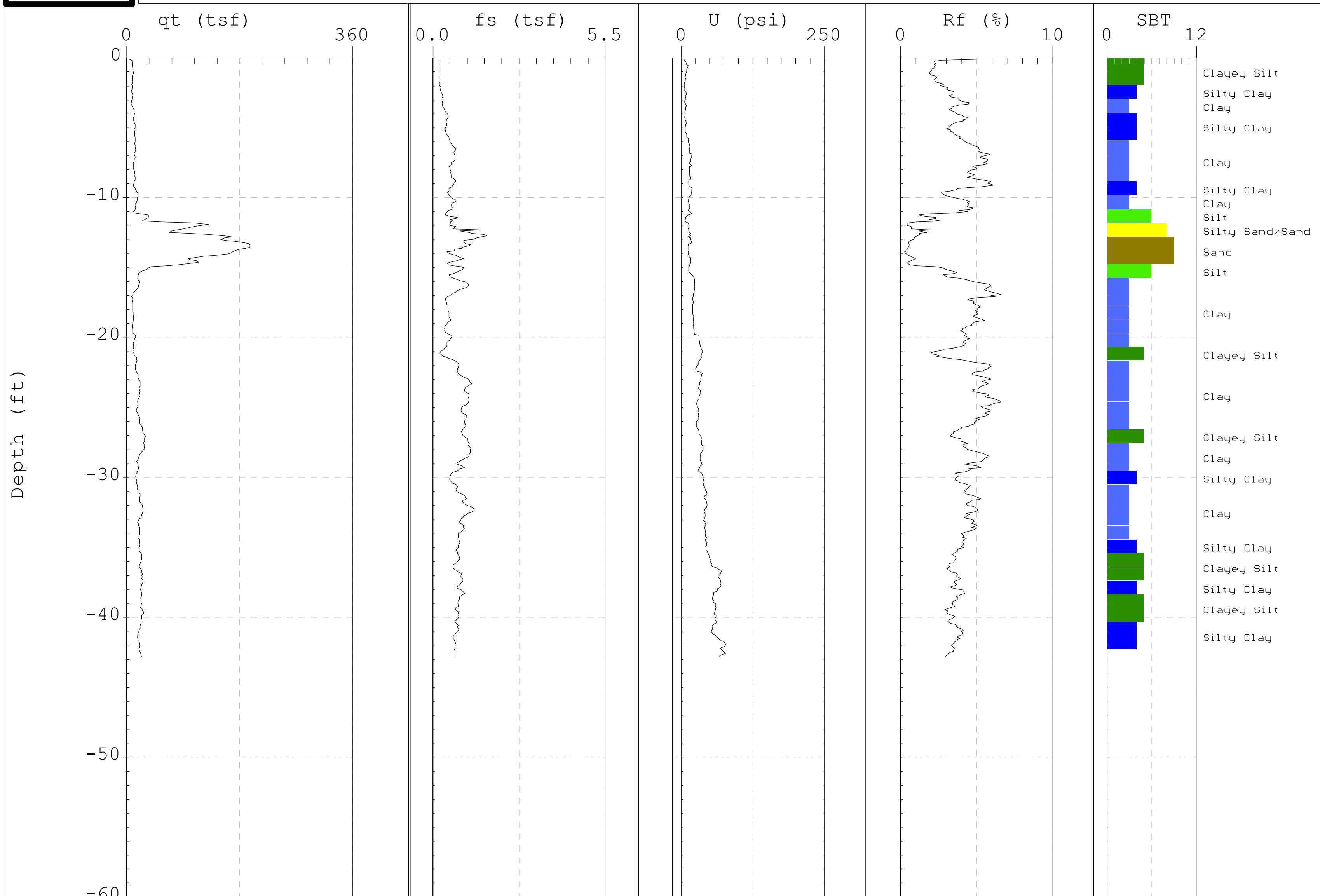
Max. Depth: 49.13 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-16

Engineer: L. HANDFELT
Date: 10:02:03 14:51



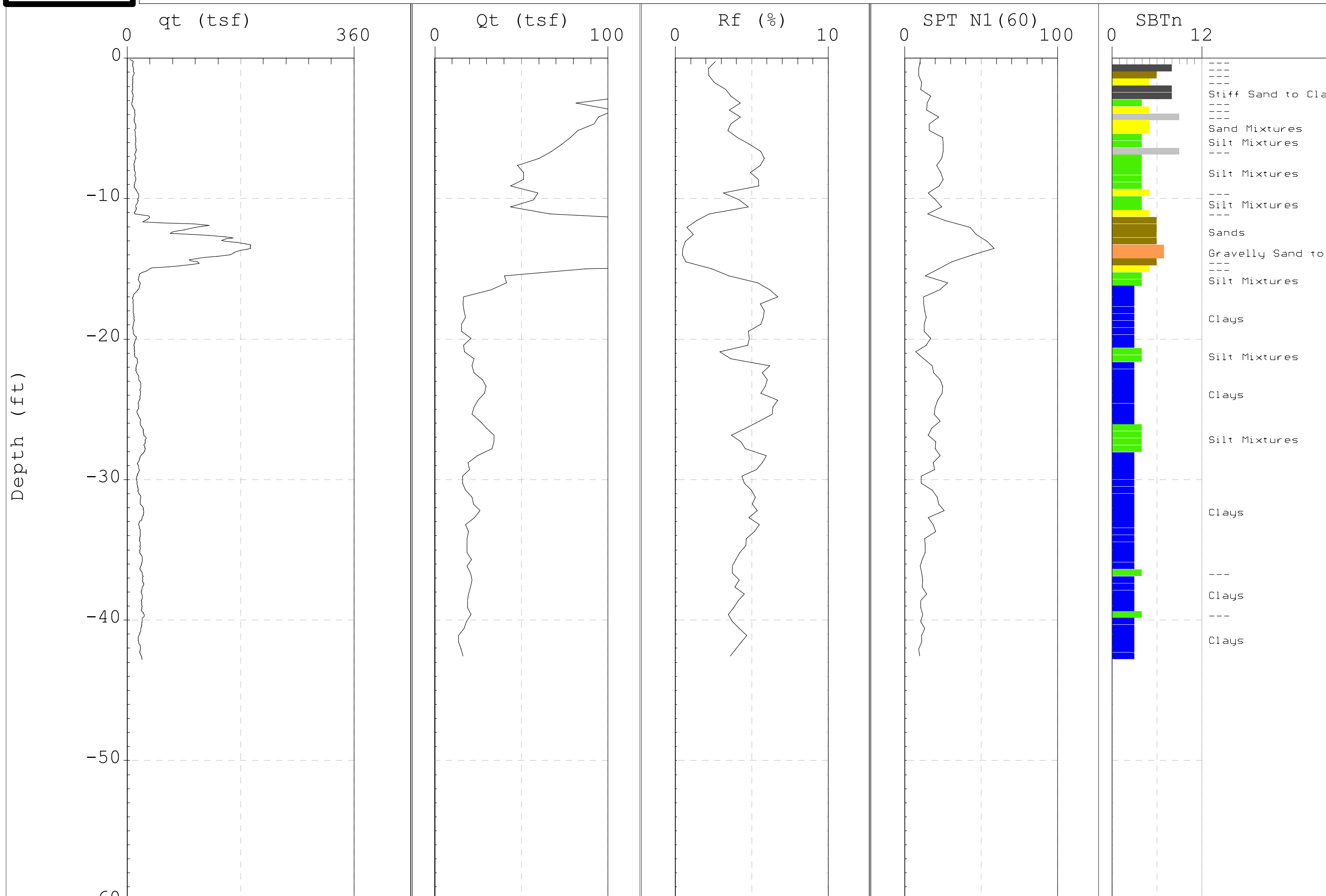
Max. Depth: 42.81 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-16

Engineer: L. HANDFELT
Date: 10:02:03 14:51



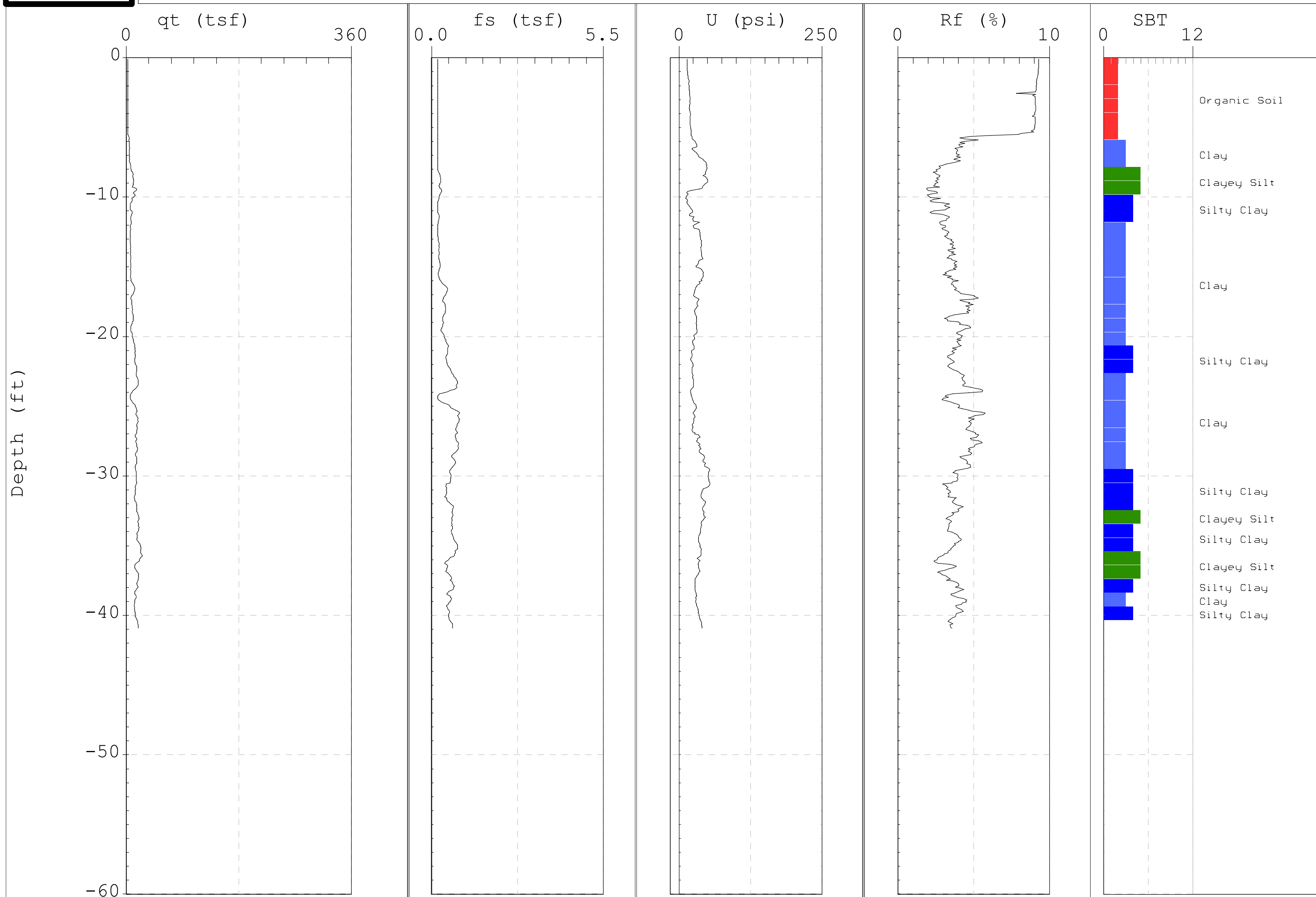
Max. Depth: 42.81 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-18

Engineer: L. HANDFELT
Date: 10:09:03 13:36



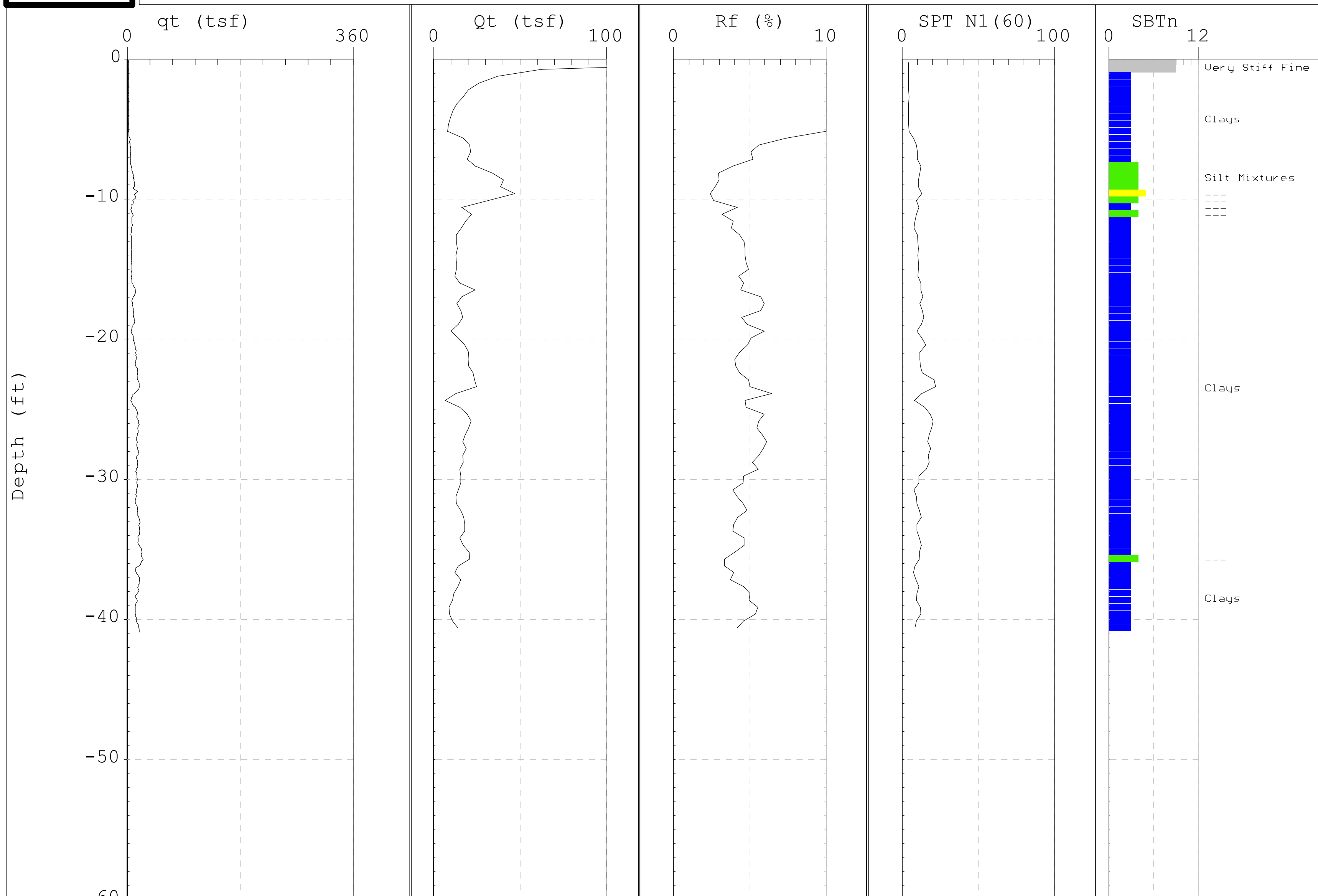
Max. Depth: 40.93 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-18

Engineer: L. HANDFELT
Date: 10:09:03 13:36



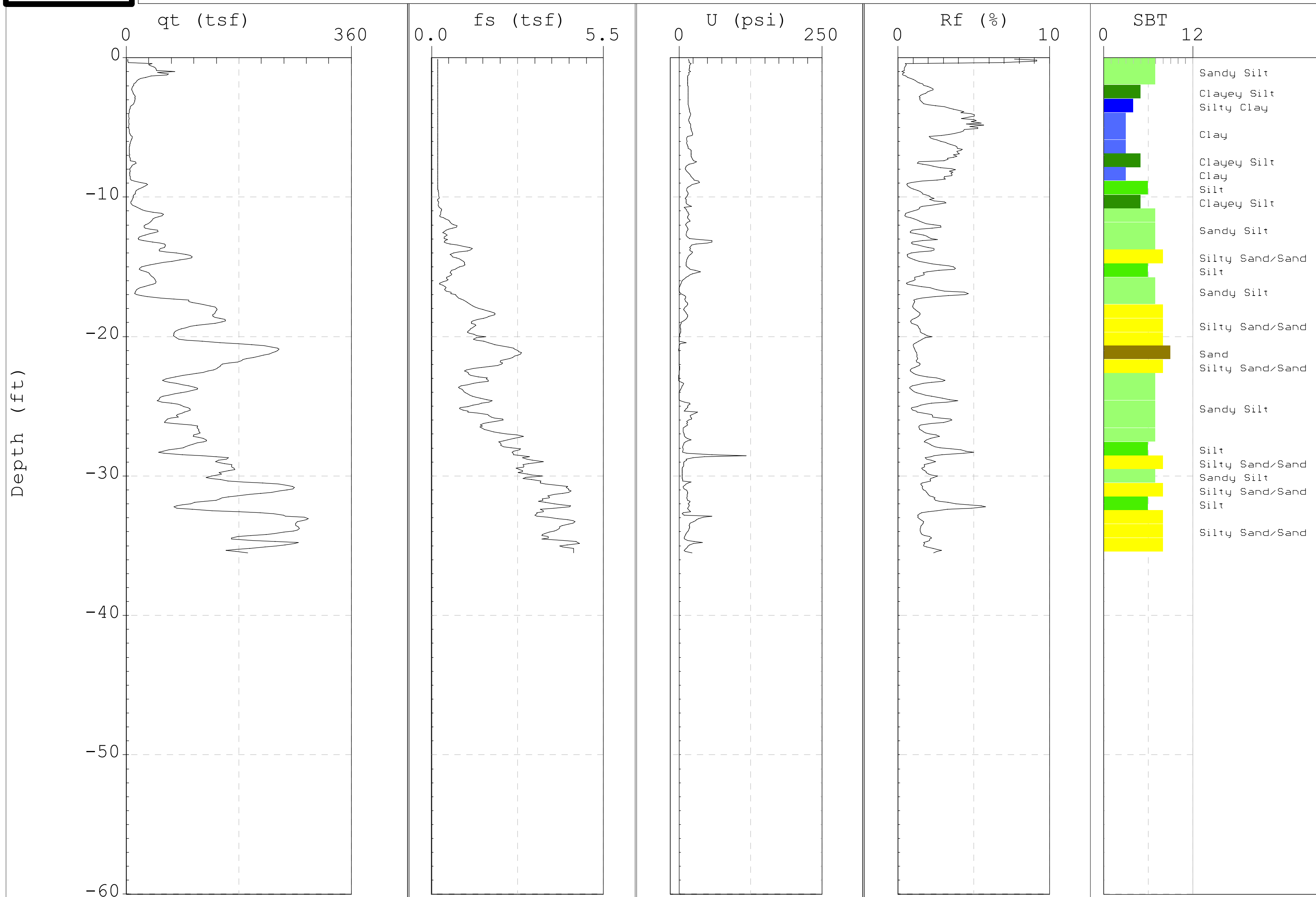
Max. Depth: 40.93 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-21

Engineer: L. HANDFELT
Date: 10:06:03 11:13



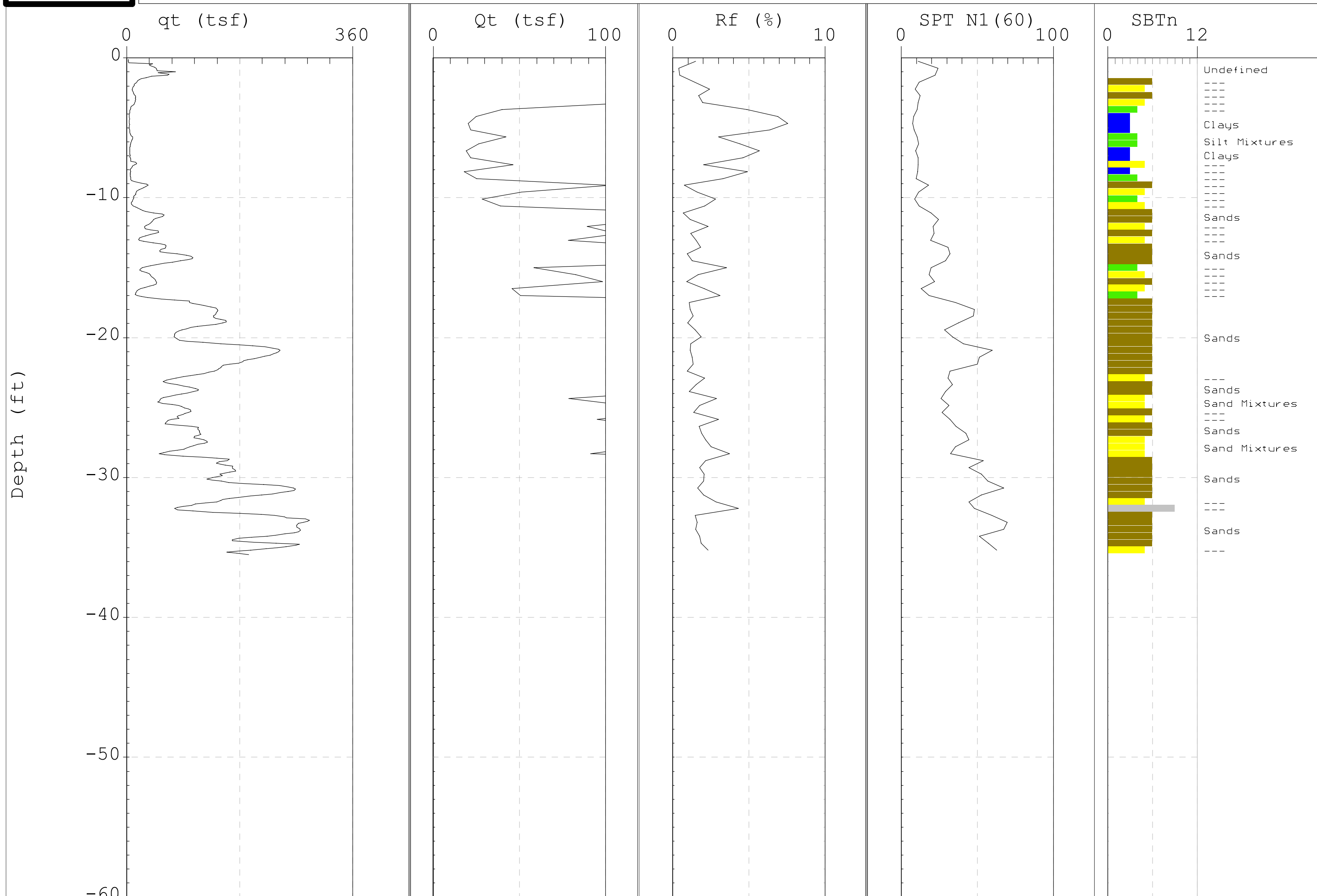
Max. Depth: 35.51 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-21

Engineer: L. HANDFELT
Date: 10:06:03 11:13



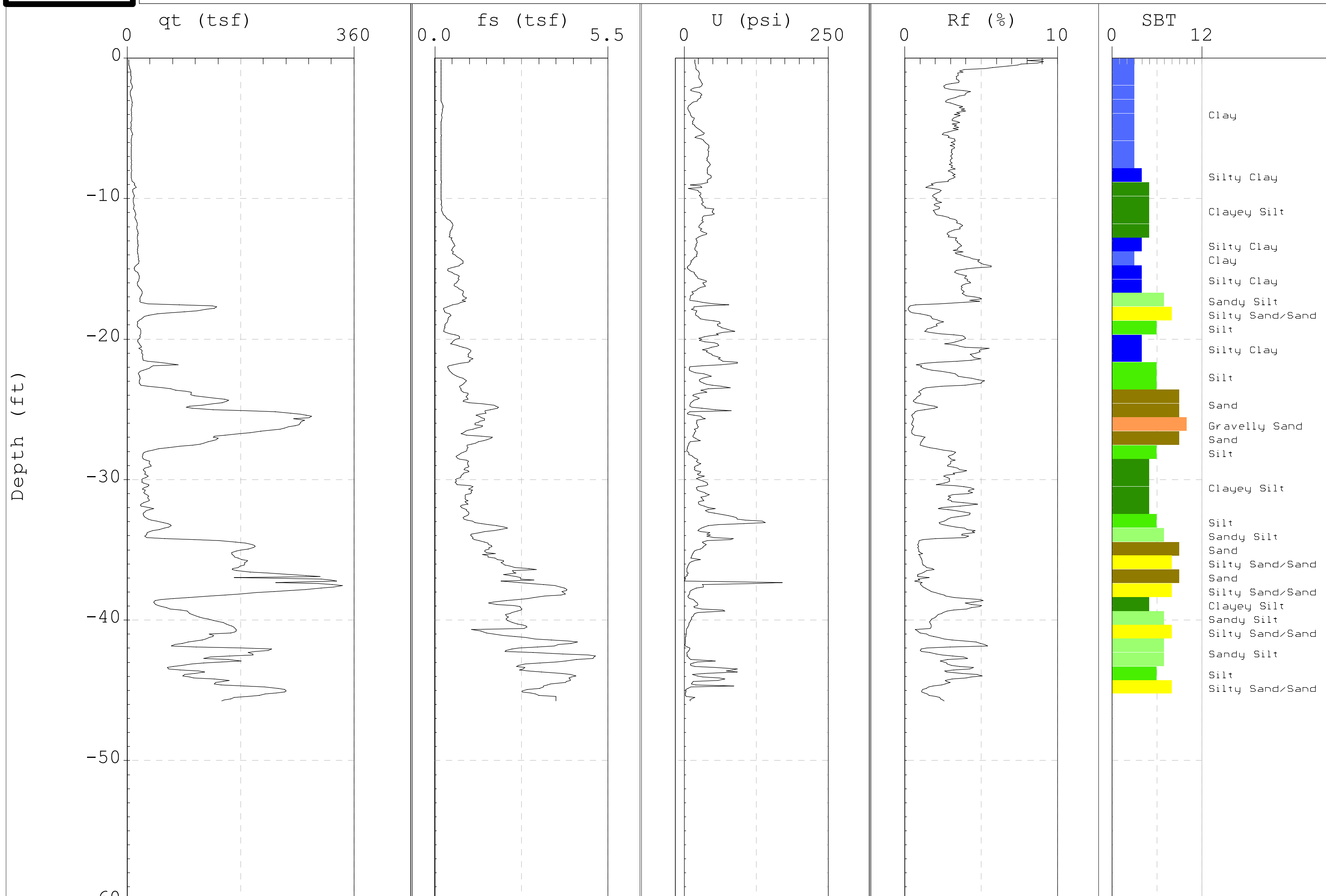
Max. Depth: 35.51 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-22

Engineer: L. HANDFELT
Date: 10:06:03 14:29



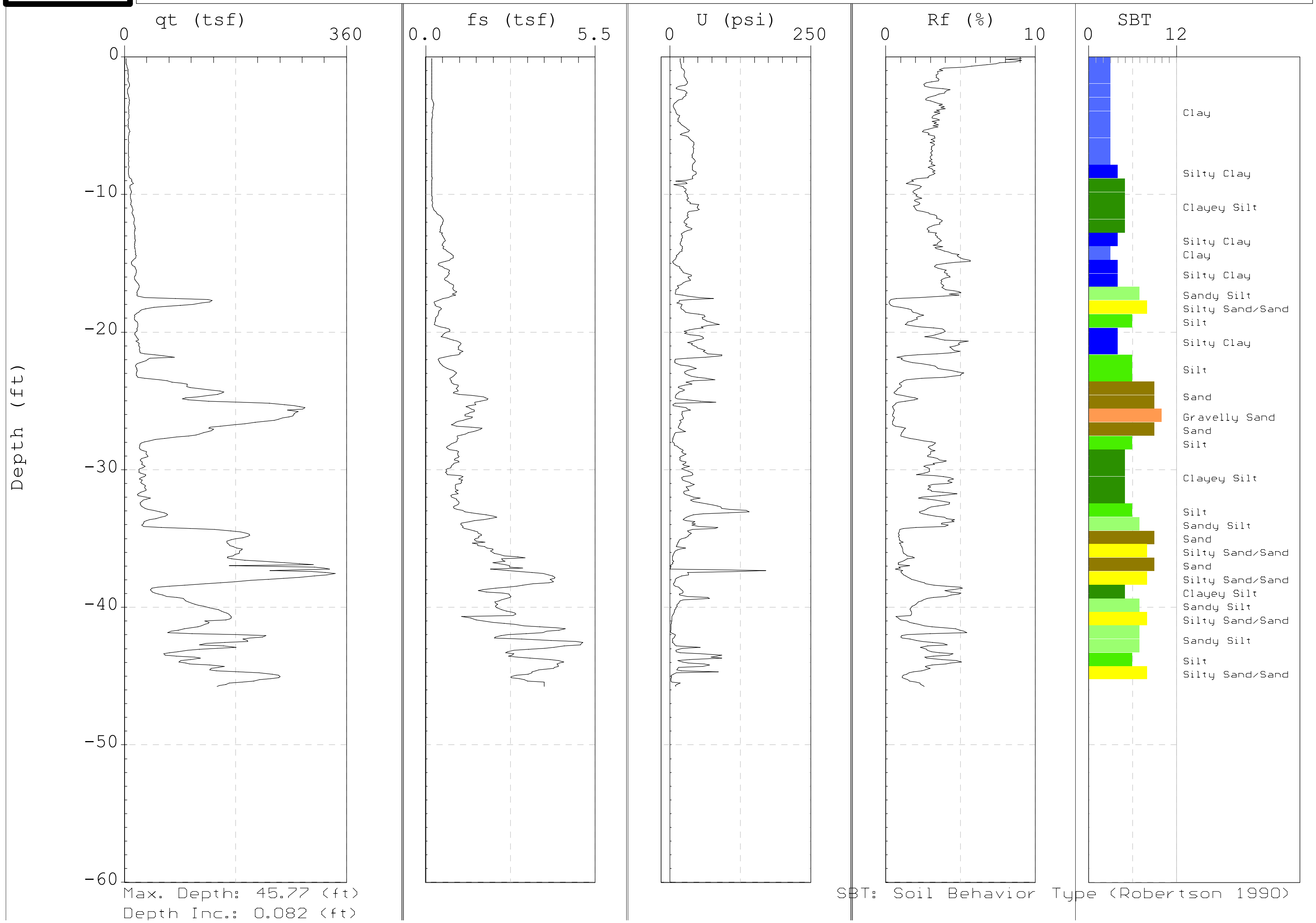
Max. Depth: 45.77 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-22

Engineer: L. HANDFELT
Date: 10:06:03 14:29



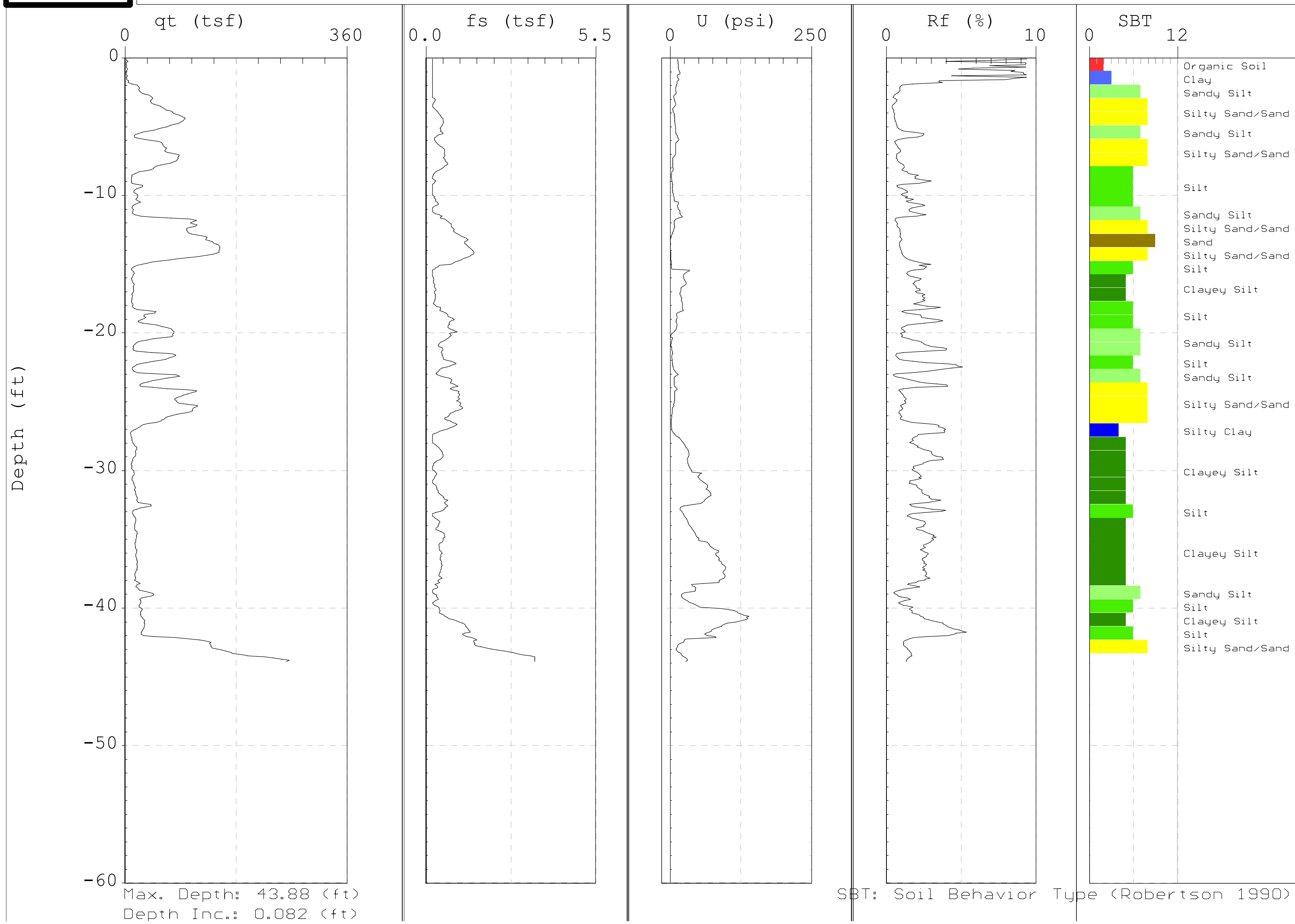
Max. Depth: 45.77 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-23

Engineer: L. HANDFELT
Date: 10:15:03 15:11



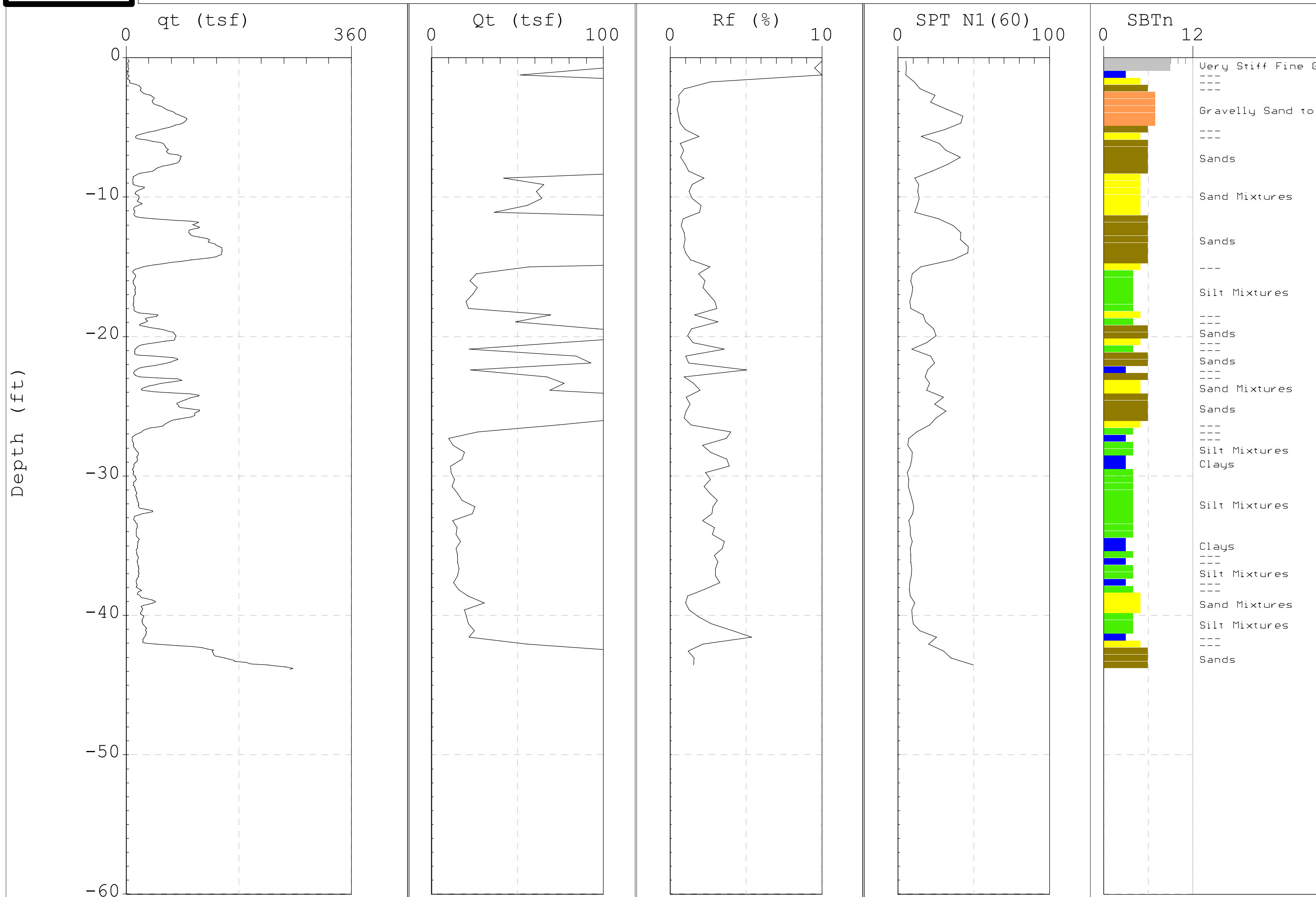
Max. Depth: 43.88 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-23

Engineer: L. HANDFELT
Date: 10:15:03 15:11



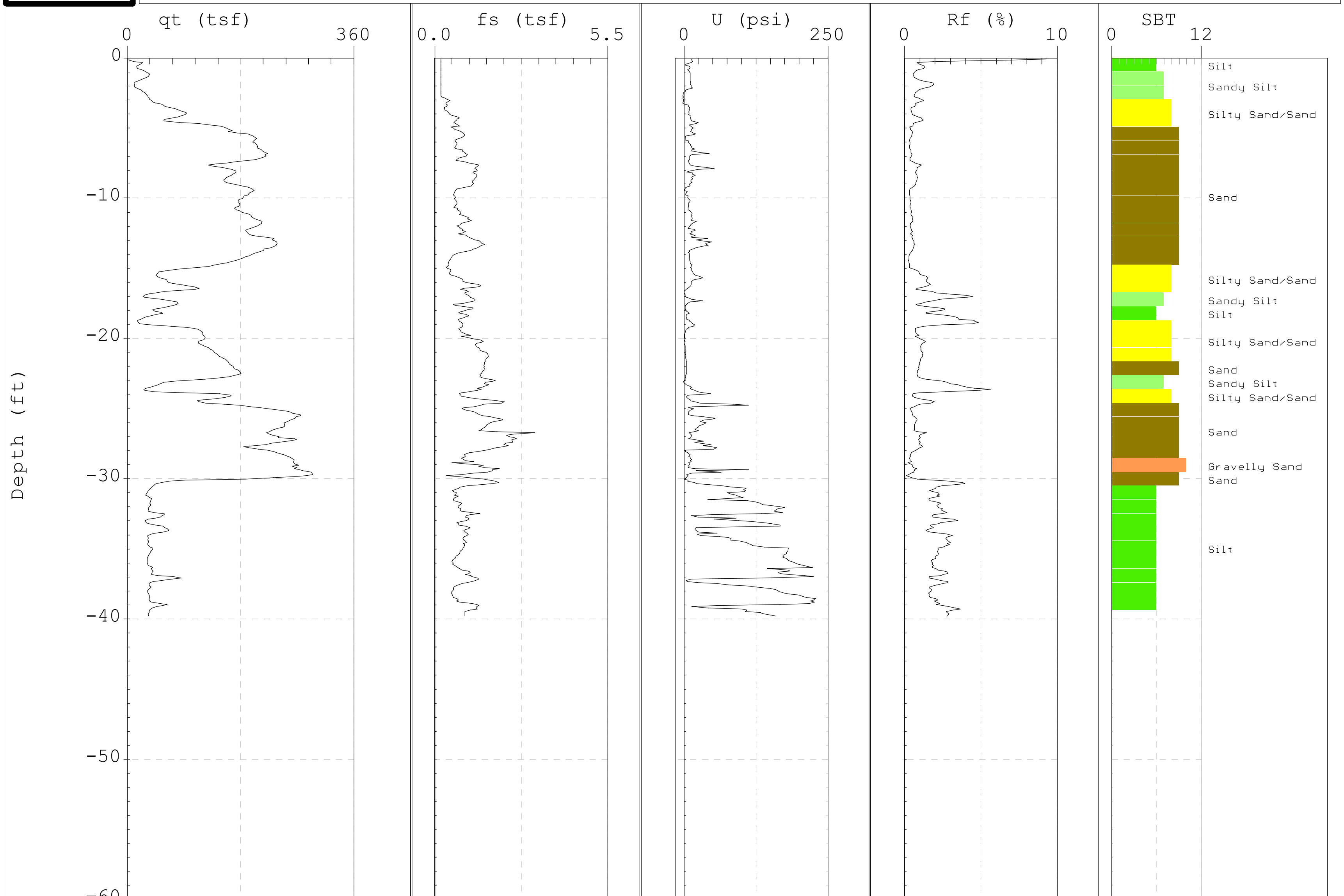
Max. Depth: 43.88 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-25

Engineer: L. HANDFELT
Date: 10:15:03 10:36



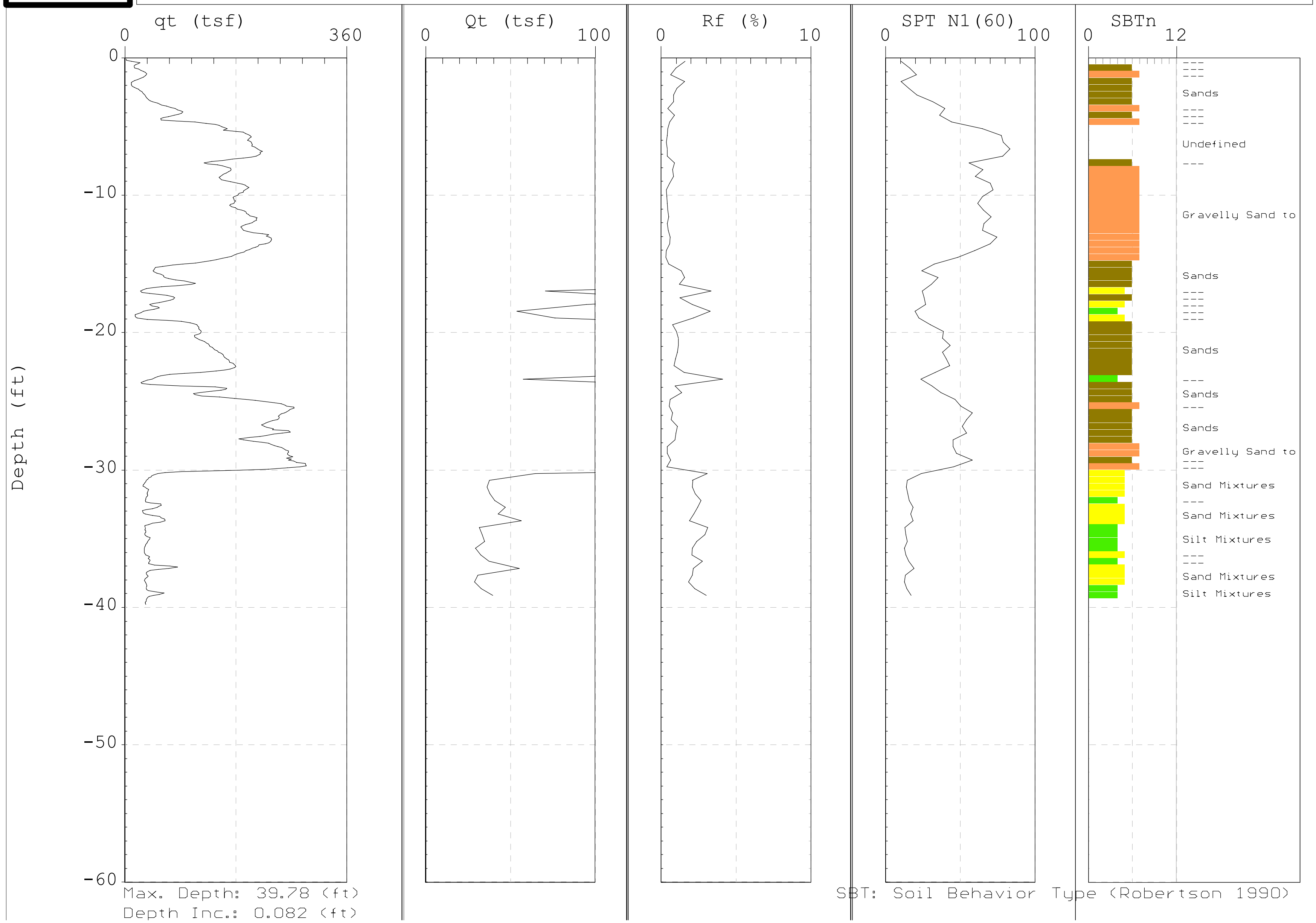
Max. Depth: 39.78 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-25

Engineer: L. HANDFELT
Date: 10:15:03 10:36



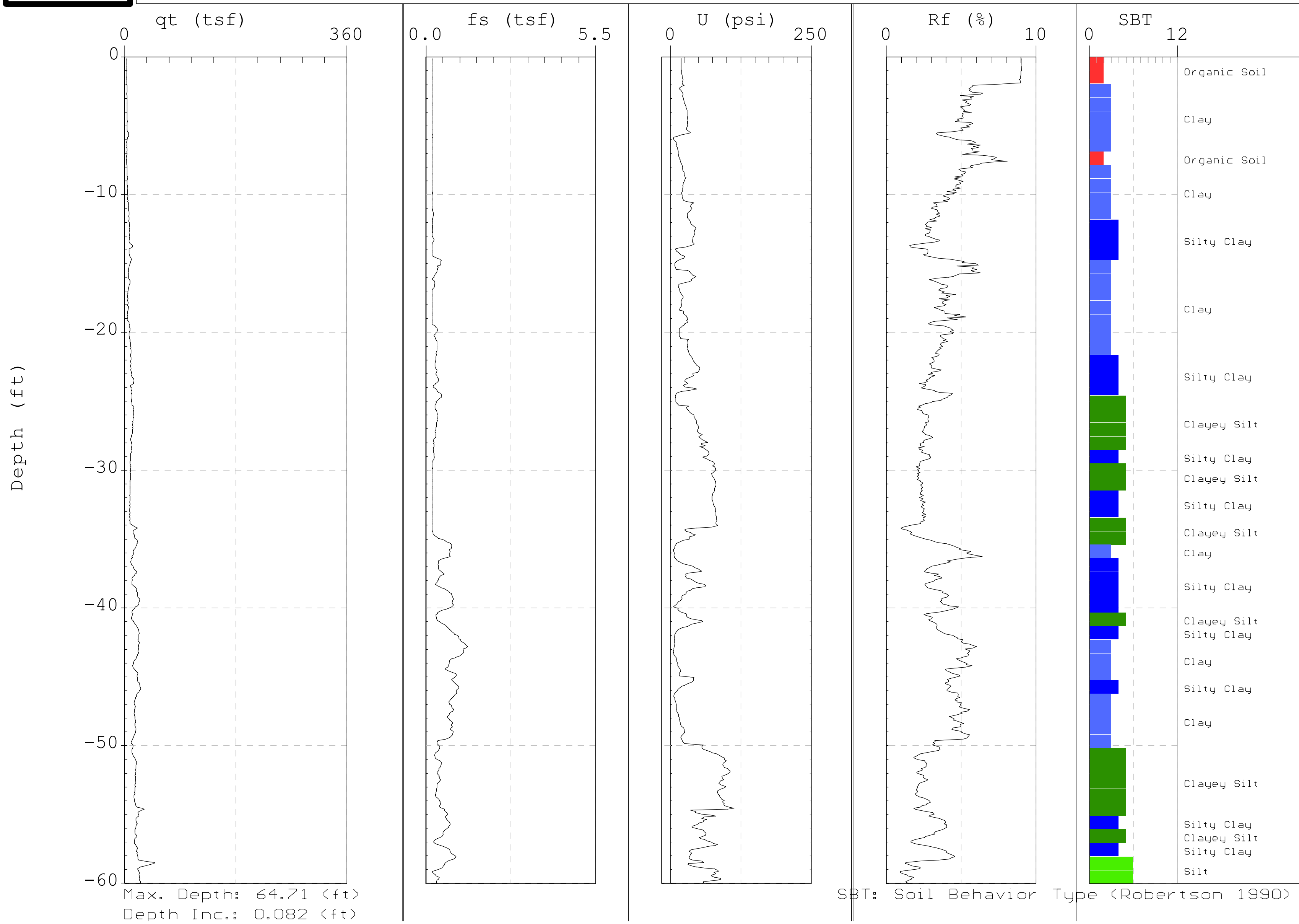
Max. Depth: 39.78 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-27

Engineer: L. HANDFELT
Date: 10:20:03 16:50



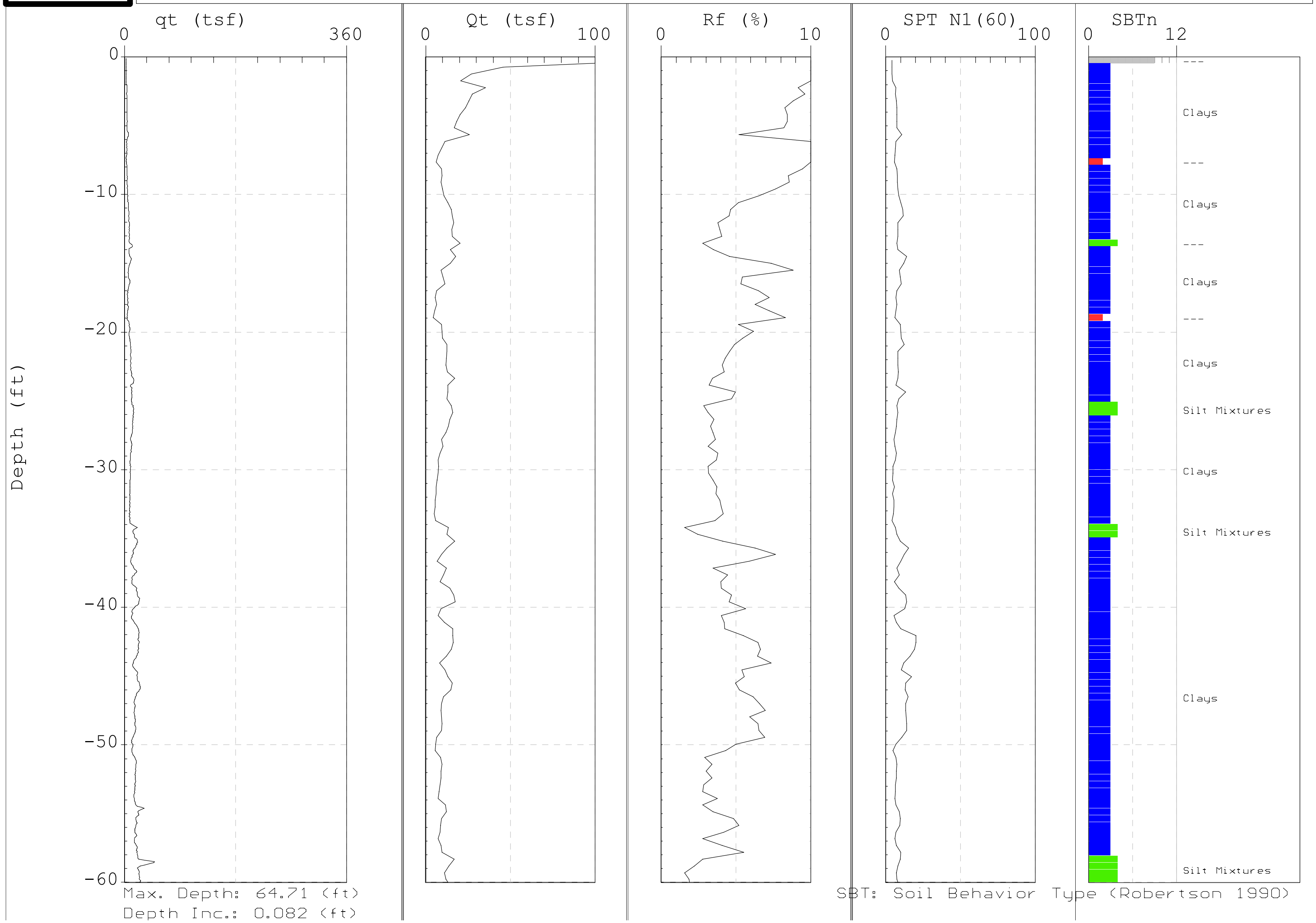
Max. Depth: 64.71 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-27

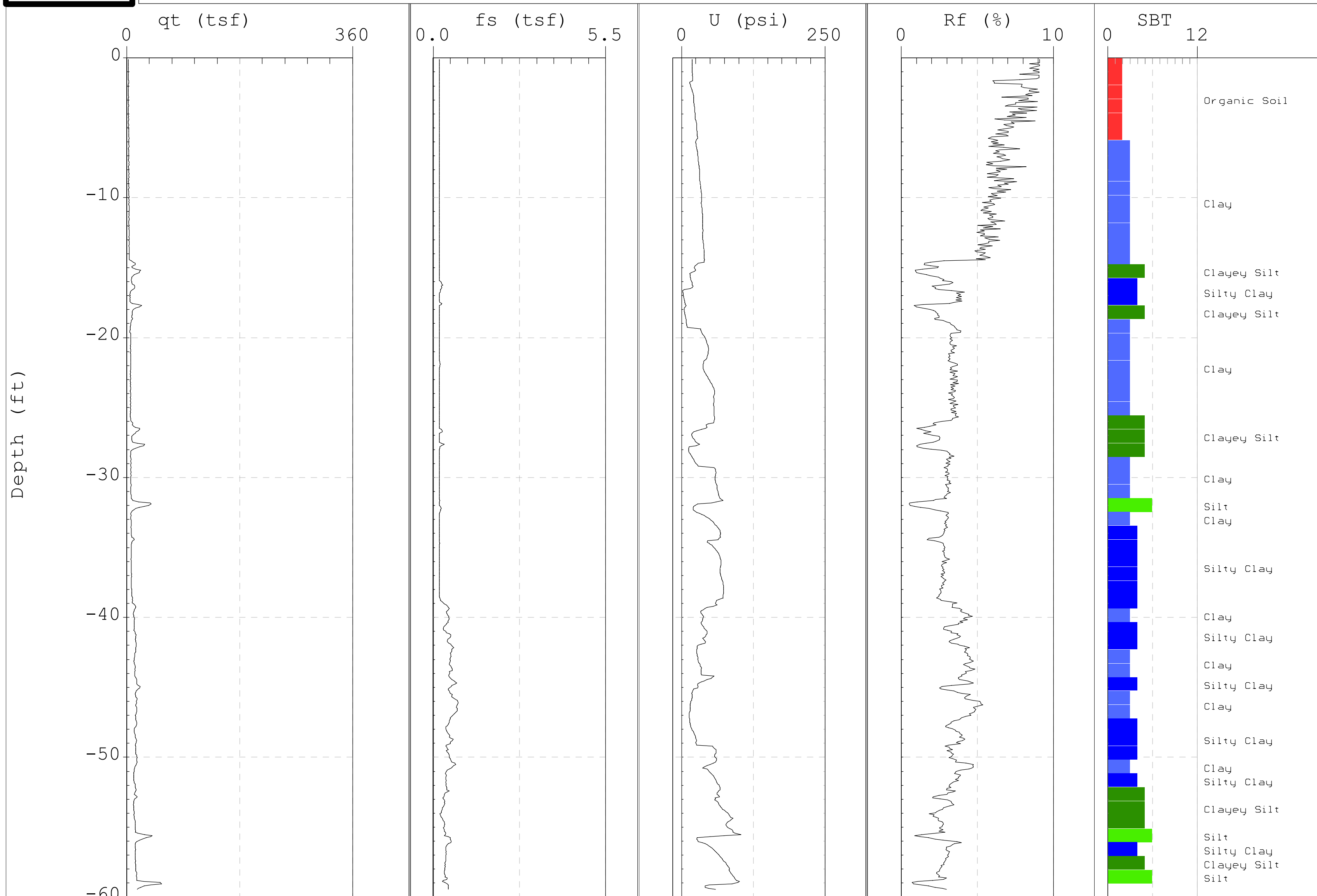
Engineer: L. HANDFELT
Date: 10:20:03 16:50



URS CORPORATION

Site: SALTON SEA
Location: CPT-28

Engineer: L. HANDFELT
Date: 10:21:03 11:58



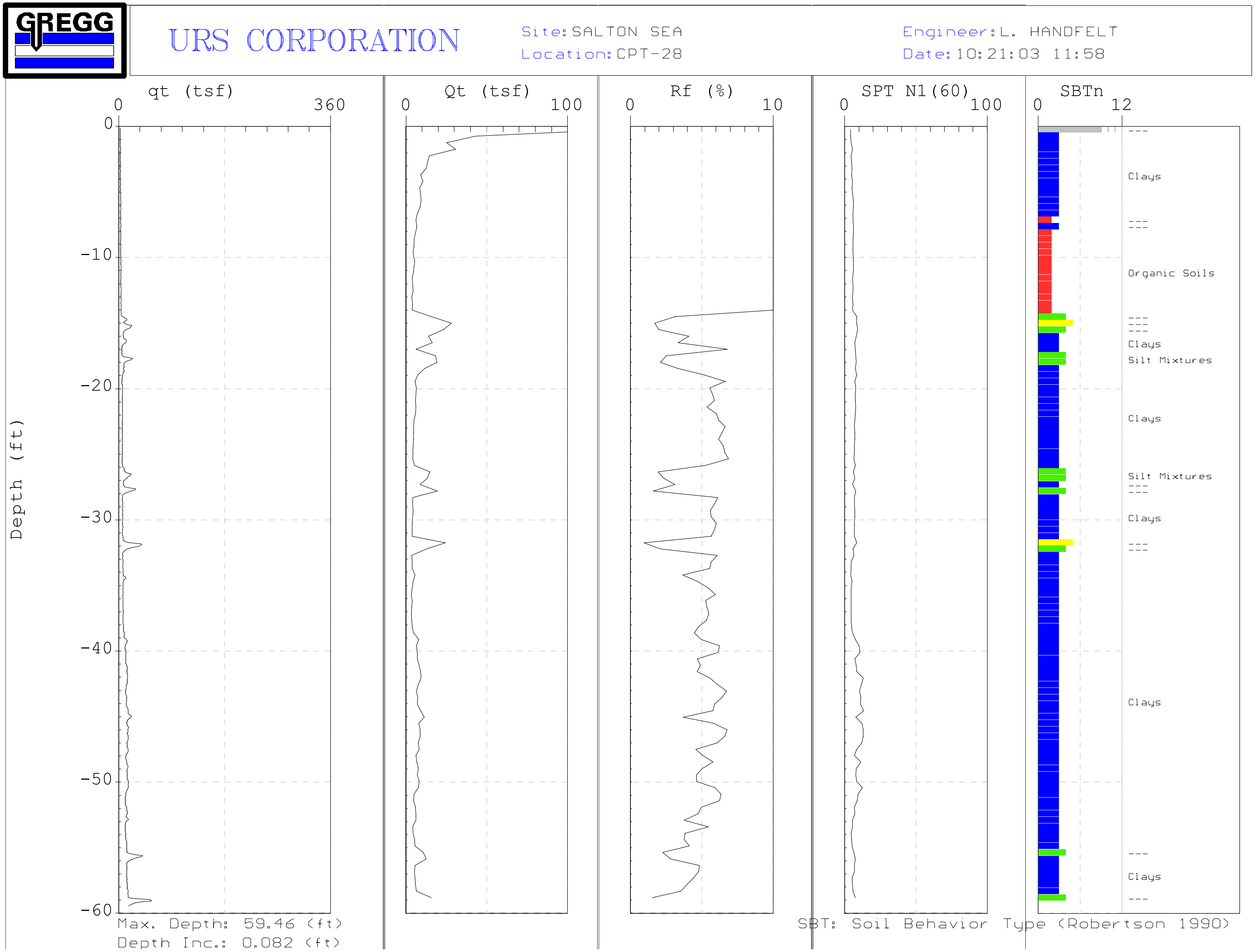
Max. Depth: 59.46 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-28

Engineer: L. HANDFELT
Date: 10:21:03 11:58



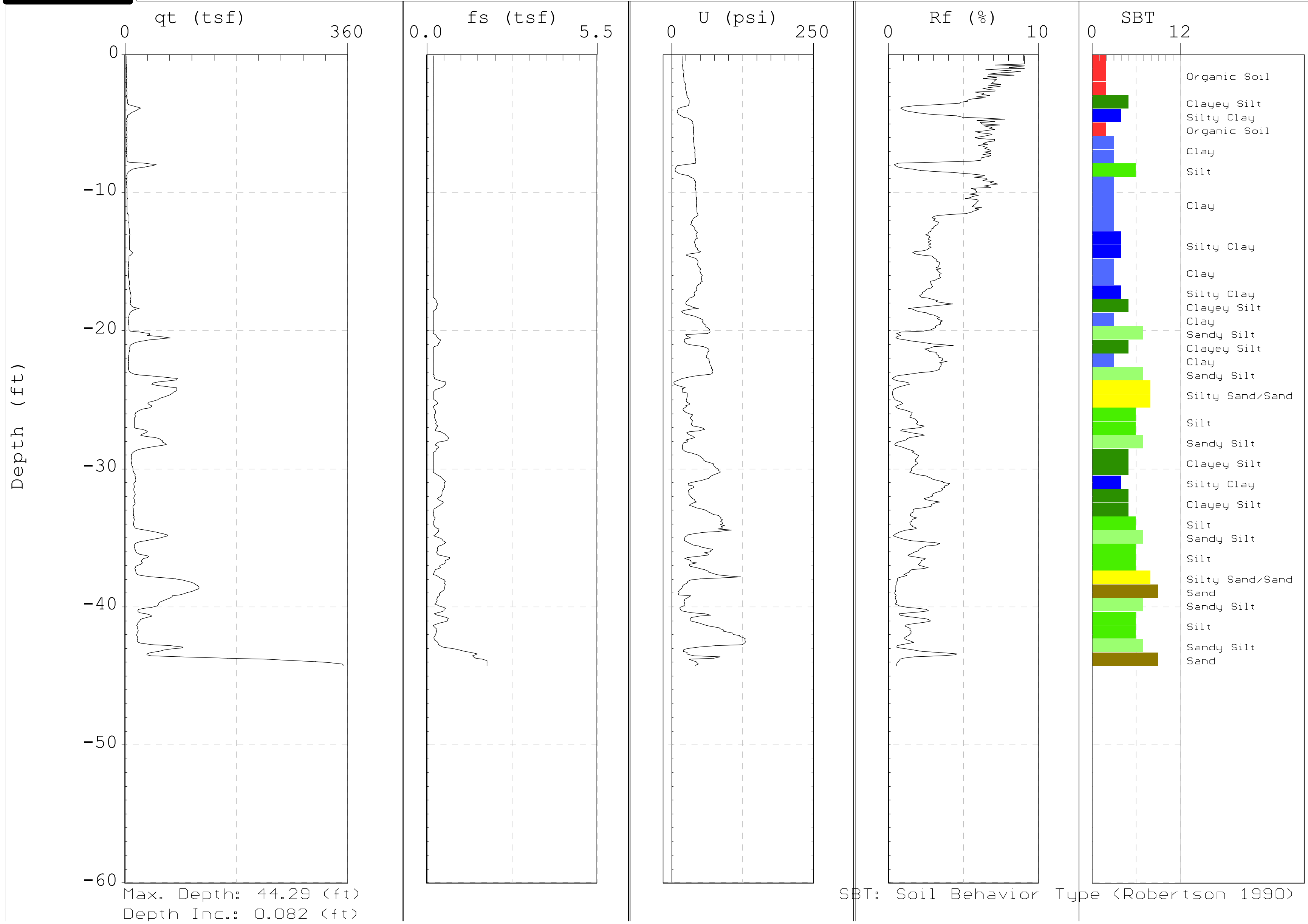
Max. Depth: 59.46 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-29

Engineer: L. HANDFELT
Date: 10:21:03 14:48



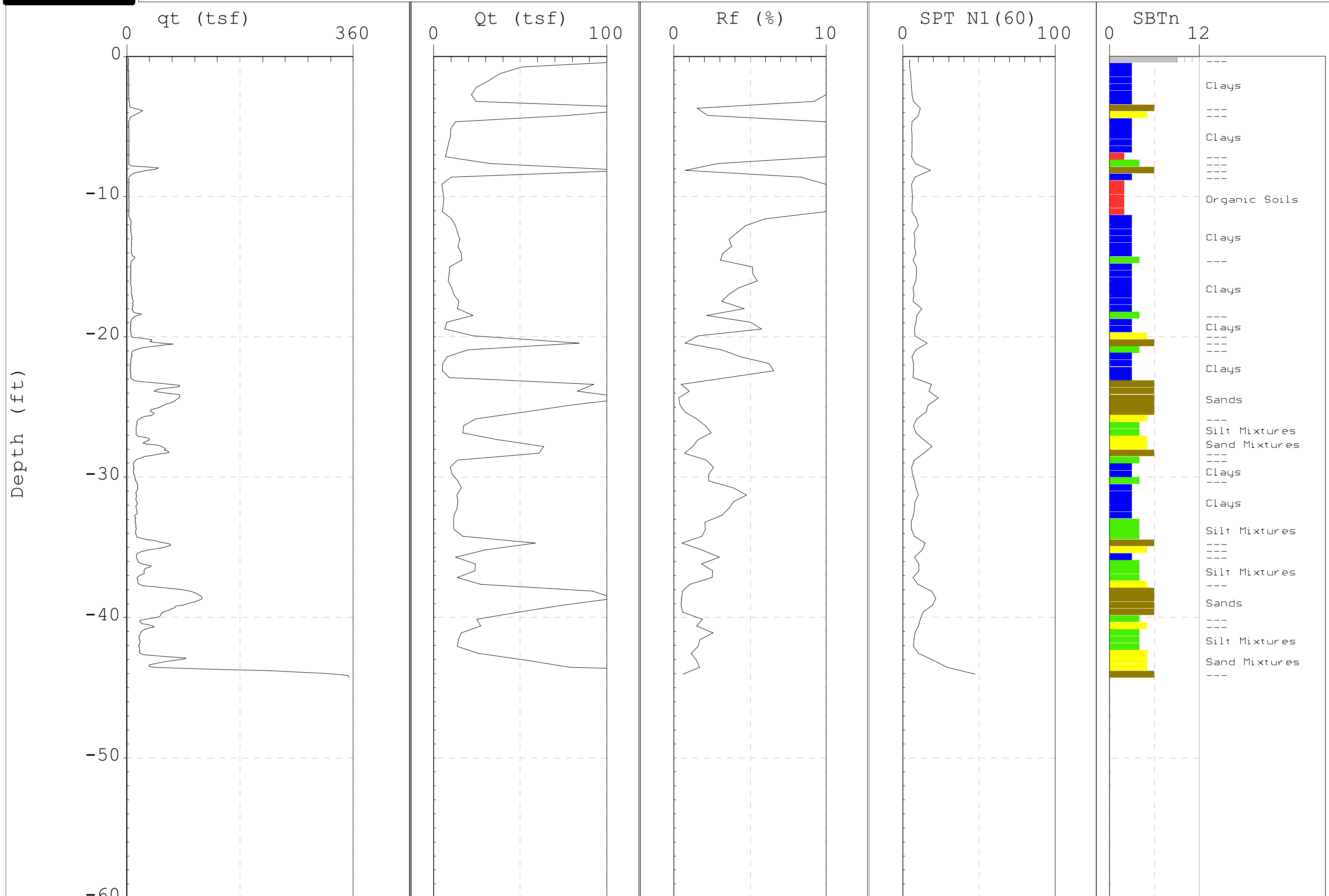
Max. Depth: 44.29 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

URS CORPORATION

Site: SALTON SEA
Location: CPT-29

Engineer: L. HANDFELT
Date: 10:21:03 14:48



Max. Depth: 44.29 (ft)
Depth Inc.: 0.082 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3032
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-01
Engineer: L. HANDFELT
CPT Date: 03/01/10
CPT Time: 13:46
CPT File: 244C01B.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -9.30 (ft): -30.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.9	0.20	7.03	36.9	2	111.4	0.97	0.01	0.96	2.00	2.7	5.5	0.15	0.00
0.74	9.6	0.22	2.30	23.9	5	114.6	0.99	0.02	0.98	2.00	4.6	9.2	0.69	0.00
1.23	12.1	0.31	2.56	3.4	5	114.6	1.02	0.03	0.99	2.00	5.8	11.6	0.88	0.00
1.72	12.9	0.36	2.83	1.5	5	114.6	1.05	0.04	1.01	2.00	6.2	12.3	0.94	0.00
2.21	13.7	0.48	3.54	-0.5	4	114.6	1.08	0.06	1.02	2.00	8.7	17.5	1.01	0.00
2.71	12.7	0.53	4.19	-5.3	3	111.4	1.11	0.07	1.04	2.00	12.2	24.3	0.93	0.00
3.20	12.9	0.48	3.73	1.2	3	111.4	1.13	0.08	1.05	2.00	12.4	24.7	0.94	0.00
3.65	12.8	0.61	4.76	7.2	3	111.4	1.16	0.09	1.07	2.00	12.2	24.4	0.93	0.00
4.10	13.1	0.70	5.31	17.9	3	111.4	1.18	0.10	1.08	2.00	12.6	25.1	0.96	0.00
4.59	13.5	0.77	5.73	20.6	3	111.4	1.21	0.12	1.10	2.00	12.9	25.9	0.98	0.00
5.09	12.5	0.70	5.60	16.3	3	111.4	1.24	0.13	1.11	2.00	12.0	24.0	0.90	0.00
5.58	10.6	0.53	5.03	27.8	3	111.4	1.27	0.14	1.13	2.00	10.1	20.2	0.74	0.00
6.07	9.3	0.44	4.74	54.6	3	111.4	1.29	0.15	1.14	2.00	9.0	17.9	0.64	0.15
6.60	9.0	0.38	4.18	38.8	3	111.4	1.32	0.16	1.16	2.00	8.6	17.2	0.61	0.14
7.14	13.3	0.29	2.16	40.9	5	114.6	1.35	0.18	1.18	2.00	6.4	12.8	0.96	0.09
7.63	13.4	0.32	2.36	99.1	5	114.6	1.38	0.19	1.19	2.00	6.4	12.8	0.96	0.09
8.12	16.0	0.40	2.51	103.7	5	114.6	1.41	0.20	1.21	2.00	7.7	15.4	1.17	0.10
8.61	15.2	0.38	2.47	119.3	5	114.6	1.44	0.22	1.22	2.00	7.3	14.6	1.10	0.10
9.10	12.4	0.39	3.15	95.6	4	114.6	1.47	0.23	1.24	2.00	7.9	15.8	0.87	0.13
9.60	17.7	0.50	2.81	67.5	5	114.6	1.49	0.24	1.25	2.00	8.5	16.9	1.30	0.12
10.09	32.8	0.57	1.73	34.9	6	114.6	1.52	0.26	1.27	1.98	12.6	24.9	2.50	0.13
10.58	56.5	0.42	0.75	30.5	8	120.9	1.55	0.27	1.28	1.93	13.5	26.1	UnDef	0.19
11.07	18.3	0.37	2.02	68.0	6	114.6	1.58	0.28	1.30	1.88	7.0	13.2	1.33	0.10
11.56	16.0	0.33	2.05	100.2	5	114.6	1.61	0.30	1.31	1.84	7.7	14.1	1.15	0.10
12.06	18.2	0.41	2.26	115.9	5	114.6	1.64	0.31	1.33	1.80	8.7	15.7	1.32	0.11
12.55	22.8	0.63	2.76	77.0	5	114.6	1.66	0.32	1.34	1.77	10.9	19.3	1.69	0.14
13.04	20.2	0.74	3.65	39.5	4	114.6	1.69	0.33	1.36	1.73	12.9	22.3	1.48	0.21
13.53	17.8	0.64	3.58	39.9	4	114.6	1.72	0.35	1.37	1.70	11.3	19.3	1.28	0.26
14.03	20.3	0.68	3.35	62.2	5	114.6	1.75	0.36	1.39	1.67	9.7	16.2	1.48	0.19
14.52	17.7	0.73	4.11	30.4	3	111.4	1.78	0.37	1.41	1.64	16.9	27.8	1.27	0.35
15.01	16.9	0.66	3.91	47.7	3	111.4	1.80	0.38	1.42	1.61	16.2	26.2	1.21	0.30
15.50	15.1	0.52	3.43	98.7	4	114.6	1.83	0.40	1.44	1.59	9.6	15.3	1.06	0.23
15.99	19.3	0.64	3.32	87.5	5	114.6	1.86	0.41	1.45	1.56	9.2	14.4	1.39	0.26
16.49	23.7	1.13	4.76	28.2	3	111.4	1.89	0.42	1.47	1.54	22.7	35.0	1.75	0.00
16.98	33.3	0.95	2.85	14.9	5	114.6	1.92	0.43	1.48	1.52	16.0	24.2	2.51	0.18
17.47	20.8	0.70	3.38	61.1	5	114.6	1.94	0.45	1.50	1.50	10.0	14.9	1.51	0.31
17.96	19.9	0.42	2.13	139.3	6	114.6	1.97	0.46	1.51	1.48	7.6	11.2	1.43	0.13
18.45	19.8	0.43	2.17	153.3	6	114.6	2.00	0.47	1.53	1.46	7.6	11.0	1.42	0.13
18.95	23.5	0.58	2.46	131.9	6	114.6	2.03	0.49	1.54	1.44	9.0	12.9	1.71	0.15
19.44	27.2	0.80	2.94	150.4	5	114.6	2.06	0.50	1.56	1.42	13.0	18.5	2.02	0.19
19.93	30.0	0.81	2.69	155.8	6	114.6	2.09	0.51	1.57	1.40	11.5	16.1	2.23	0.17
20.42	35.8	0.65	1.82	193.5	6	114.6	2.11	0.52	1.59	1.38	13.7	18.9	2.69	0.13

Gregg In Situ, Inc.
Run No: 03-1030-1241-3032
CPT File: 244C01B.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	34.0	0.67	1.96	125.6	6	114.6	2.14	0.54	1.61	1.37	13.0	17.8	2.55	0.14
21.41	33.7	0.61	1.80	227.8	6	114.6	2.17	0.55	1.62	1.35	12.9	17.4	2.53	0.13
21.90	29.3	0.70	2.38	157.4	6	114.6	2.20	0.56	1.64	1.33	11.2	15.0	2.17	0.16
22.39	33.3	0.74	2.23	148.5	6	114.6	2.23	0.58	1.65	1.32	12.7	16.8	2.48	0.15
22.88	34.4	0.77	2.24	138.5	6	114.6	2.25	0.59	1.67	1.30	13.2	17.2	2.57	0.15
23.38	36.1	0.84	2.33	122.8	6	114.6	2.28	0.60	1.68	1.29	13.8	17.9	2.71	0.16
23.87	62.2	1.04	1.67	216.0	7	117.8	2.31	0.61	1.70	1.28	19.8	25.3	UnDef	0.19
24.36	103.6	1.04	1.00	38.6	8	120.9	2.34	0.63	1.71	1.26	24.8	31.3	UnDef	0.32
24.85	26.4	0.69	2.60	93.2	6	114.6	2.37	0.64	1.73	1.25	10.1	12.7	1.93	0.23
25.34	15.4	0.30	1.95	109.9	5	114.6	2.40	0.65	1.74	1.24	7.4	9.1	1.04	0.15
25.84	13.1	0.27	2.06	111.4	5	114.6	2.43	0.67	1.76	1.22	6.3	7.7	0.85	0.12
26.33	35.9	0.49	1.36	141.5	7	117.8	2.45	0.68	1.77	1.21	11.5	13.9	UnDef	0.12
26.82	97.2	1.51	1.55	39.5	7	117.8	2.48	0.69	1.79	1.20	31.0	37.2	UnDef	0.33
27.31	123.9	1.52	1.23	0.6	8	120.9	2.51	0.71	1.81	1.19	29.7	35.3	UnDef	0.45
27.80	129.9	1.28	0.99	-8.1	8	120.9	2.54	0.72	1.82	1.18	31.1	36.6	UnDef	0.44
28.30	101.4	1.82	1.80	-16.2	7	117.8	2.57	0.74	1.84	1.17	32.4	37.7	UnDef	0.38
28.79	32.9	1.57	4.79	-12.3	3	111.4	2.60	0.75	1.85	1.16	31.5	36.4	2.42	0.00
29.28	30.0	1.03	3.44	-2.1	5	114.6	2.63	0.76	1.87	1.15	14.4	16.4	2.19	0.00
29.77	30.5	1.01	3.30	123.0	5	114.6	2.66	0.77	1.88	1.14	14.6	16.6	2.23	0.00
30.27	57.1	1.99	3.48	207.7	5	114.6	2.68	0.79	1.90	1.13	27.3	30.8	4.35	0.42
30.76	100.3	3.50	3.49	-6.7	6	114.6	2.71	0.80	1.91	1.12	38.4	43.0	7.81	0.00
31.21	99.8	3.19	3.20	8.3	6	114.6	2.74	0.81	1.93	1.11	38.2	42.4	7.76	0.00
31.66	119.8	2.69	2.24	-7.6	7	117.8	2.76	0.82	1.94	1.10	38.3	42.1	UnDef	0.00
32.15	75.2	2.93	3.89	7.7	5	114.6	2.79	0.84	1.96	1.09	36.0	39.3	5.79	0.00
32.64	44.7	1.72	3.84	81.9	5	114.6	2.82	0.85	1.97	1.08	21.4	23.2	3.35	0.00
33.14	50.8	1.63	3.21	124.3	5	114.6	2.85	0.86	1.99	1.08	24.3	26.2	3.84	0.38
33.63	38.9	1.27	3.25	120.0	5	114.6	2.88	0.88	2.00	1.07	18.6	19.9	2.89	0.00
34.12	30.9	0.80	2.59	154.2	6	114.6	2.91	0.89	2.02	1.06	11.9	12.6	2.24	0.43
34.61	29.4	0.73	2.48	230.1	6	114.6	2.93	0.90	2.03	1.05	11.3	11.9	2.12	0.40
35.10	76.1	2.41	3.16	455.3	6	114.6	2.96	0.91	2.05	1.05	29.2	30.5	5.85	0.45
35.60	167.2	2.96	1.77	124.6	8	120.9	2.99	0.93	2.06	1.04	40.0	41.6	UnDef	0.00
36.09	195.5	2.46	1.26	59.7	8	120.9	3.02	0.94	2.08	1.03	46.8	48.2	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3032
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-01
Engineer: L. HANDFELT
CPT Date: 03/01/10
CPT Time: 13:46
CPT File: 244C01B.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -9.30 (ft): -30.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.10	313.0	10.00	11	5.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-06	-0.03	466.0	2.56	12	18.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-06	-0.08	353.1	2.80	12	23.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-06	-0.08	267.6	3.08	12	24.6	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.21	5.0E-07	-0.08	221.3	3.85	12	26.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.71	5.0E-08	-0.10	167.2	4.59	11	24.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
3.20	5.0E-08	-0.09	144.6	4.09	12	24.7	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
3.65	5.0E-08	-0.07	125.5	5.24	11	24.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
4.10	5.0E-08	-0.04	115.4	5.83	11	25.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
4.59	5.0E-08	-0.04	106.4	6.29	11	25.9	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
5.09	5.0E-08	-0.05	88.3	6.21	11	24.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
5.58	5.0E-08	-0.03	66.6	5.71	11	20.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
6.07	5.0E-08	0.07	53.1	5.50	6	17.9	71.6	89.5	36.6	UnDef	UnDef	10.0	UnDef	17.9	35.8
6.60	5.0E-08	0.01	46.5	4.90	6	17.2	68.8	86.0	36.7	UnDef	UnDef	6.0	UnDef	17.2	34.4
7.14	5.0E-06	0.01	67.2	2.40	7	25.5	21.9	47.4	22.3	UnDef	UnDef	10.0	UnDef	5.2	17.9
7.63	5.0E-06	0.16	62.9	2.63	7	25.6	26.7	52.3	24.1	UnDef	UnDef	10.0	UnDef	6.0	18.8
8.12	5.0E-06	0.14	71.8	2.75	7	30.7	28.7	59.4	23.1	UnDef	UnDef	10.0	UnDef	6.6	22.0
8.61	5.0E-06	0.18	63.7	2.72	7	29.2	31.2	60.4	24.4	UnDef	UnDef	10.0	UnDef	7.0	21.6
9.10	5.0E-07	0.16	47.7	3.58	6	23.8	58.5	82.2	31.6	UnDef	UnDef	6.0	UnDef	12.7	28.5
9.60	5.0E-06	0.05	66.8	3.07	7	33.9	39.9	73.8	25.2	UnDef	UnDef	10.0	UnDef	8.7	25.6
10.09	5.0E-05	-0.01	122.7	1.81	7	62.9	18.6	81.5	13.6	44	54.3	10.0	-0.27	4.2	29.1
10.58	5.0E-03	-0.01	204.5	0.77	9	106.7	0.0	106.7	4.4	46	69.1	1.0	-0.23	0.0	26.1
11.07	5.0E-05	0.05	59.1	2.21	7	33.6	30.7	64.4	22.9	40	36.0	10.0	-0.21	5.6	18.8
11.56	5.0E-06	0.13	48.8	2.27	7	28.8	35.1	64.0	25.6	UnDef	UnDef	6.0	UnDef	7.4	21.5
12.06	5.0E-06	0.14	53.8	2.48	7	32.1	38.2	70.2	25.3	UnDef	UnDef	10.0	UnDef	8.1	23.8
12.55	5.0E-06	0.05	66.0	2.97	7	39.5	45.2	84.6	25.0	UnDef	UnDef	10.0	UnDef	9.7	29.0
13.04	5.0E-07	-0.01	55.4	3.99	6	34.2	78.6	112.7	31.1	UnDef	UnDef	10.0	UnDef	17.2	39.5
13.53	5.0E-07	-0.01	46.3	3.97	6	29.5	94.2	123.7	33.5	UnDef	UnDef	6.0	UnDef	17.5	36.8
14.03	5.0E-06	0.03	51.5	3.67	6	33.1	74.2	107.2	30.9	UnDef	UnDef	10.0	UnDef	12.3	28.5
14.52	5.0E-08	-0.03	42.8	4.57	6	28.4	113.5	141.9	36.8	UnDef	UnDef	6.0	UnDef	27.8	55.5
15.01	5.0E-08	0.00	39.5	4.38	6	26.8	107.1	133.9	37.4	UnDef	UnDef	6.0	UnDef	26.2	52.4
15.50	5.0E-07	0.12	33.5	3.90	6	23.5	93.9	117.4	38.3	UnDef	UnDef	6.0	UnDef	15.3	30.6
15.99	5.0E-06	0.07	42.6	3.67	6	29.5	95.7	125.2	33.6	UnDef	UnDef	6.0	UnDef	13.2	27.7
16.49	5.0E-08	-0.03	51.8	5.17	6	35.7	143.0	178.7	35.9	UnDef	UnDef	10.0	UnDef	35.0	70.0
16.98	5.0E-06	-0.03	72.3	3.03	7	49.5	51.7	101.2	24.1	UnDef	UnDef	10.0	UnDef	11.4	35.6
17.47	5.0E-06	0.02	42.2	3.73	6	30.5	104.2	134.7	34.0	UnDef	UnDef	6.0	UnDef	14.0	28.9
17.96	5.0E-05	0.16	39.0	2.37	7	28.7	51.9	80.6	29.1	38	31.5	6.0	-0.16	7.6	18.8
18.45	5.0E-05	0.18	37.6	2.42	7	28.1	55.8	83.9	29.9	38	30.9	6.0	-0.16	7.8	18.9
18.95	5.0E-05	0.12	44.2	2.69	7	33.0	58.3	91.3	28.9	38	35.5	6.0	-0.20	8.6	21.5
19.44	5.0E-06	0.12	50.6	3.18	6	37.8	69.1	106.9	29.2	UnDef	UnDef	10.0	UnDef	12.6	31.0
19.93	5.0E-05	0.12	54.7	2.89	7	41.1	58.3	99.4	27.0	40	41.8	10.0	-0.24	9.3	25.4
20.42	5.0E-05	0.13	64.2	1.94	7	48.4	34.1	82.5	20.5	40	46.5	10.0	-0.20	6.6	25.5

Gregg In Situ, Inc.
Run No: 03-1030-1241-3032
CPT File: 244C01B.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-05	0.07	59.5	2.09	7	45.5	38.5	84.0	22.2	40	44.7	10.0	-0.21	7.2	25.0
21.41	5.0E-05	0.17	57.5	1.93	7	44.5	35.9	80.5	21.7	40	44.1	10.0	-0.18	6.8	24.2
21.90	5.0E-05	0.12	48.2	2.57	7	38.3	55.5	93.7	27.2	38	39.7	6.0	-0.20	8.8	23.8
22.39	5.0E-05	0.10	54.0	2.39	7	42.9	48.4	91.3	24.8	40	43.0	10.0	-0.21	8.3	25.1
22.88	5.0E-05	0.08	54.6	2.39	7	43.9	48.8	92.6	24.7	40	43.7	10.0	-0.21	8.4	25.6
23.38	5.0E-05	0.06	56.4	2.49	7	45.6	51.0	96.7	24.8	40	44.8	10.0	-0.22	8.8	26.7
23.87	5.0E-04	0.08	97.5	1.73	7	77.7	29.0	106.6	15.2	42	60.0	1.0	-0.23	5.2	30.5
24.36	5.0E-03	-0.01	161.3	1.02	9	128.0	8.5	136.5	7.3	44	74.4	1.0	-0.24	1.3	32.6
24.85	5.0E-05	0.05	37.5	2.85	6	32.3	83.8	116.1	32.0	38	34.9	6.0	-0.20	10.4	23.1
25.34	5.0E-06	0.13	19.8	2.30	6	18.6	74.4	93.0	39.8	UnDef	UnDef	6.0	UnDef	9.1	18.2
25.84	5.0E-06	0.16	16.0	2.53	6	15.7	62.7	78.3	45.3	UnDef	UnDef	6.0	UnDef	7.7	15.3
26.33	5.0E-04	0.08	49.1	1.46	7	42.6	31.3	73.9	20.9	38	42.8	1.0	-0.15	5.0	18.9
26.82	5.0E-04	-0.01	136.4	1.59	9	114.1	24.6	138.7	11.6	44	71.1	1.0	-0.27	4.6	41.9
27.31	5.0E-03	-0.01	171.5	1.26	9	144.1	13.8	157.9	8.3	44	77.7	1.0	-0.26	2.0	37.3
27.80	5.0E-03	-0.02	176.3	1.01	9	149.6	7.1	156.7	6.7	44	78.8	1.0	-0.24	1.1	37.7
28.30	5.0E-04	-0.02	134.2	1.85	9	115.7	31.5	147.2	13.0	44	71.4	1.0	-0.29	5.8	43.6
28.79	5.0E-08	-0.07	40.4	5.20	1	37.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.28	5.0E-06	-0.07	35.9	3.78	6	33.6	134.4	168.0	36.6	UnDef	UnDef	6.0	UnDef	16.4	32.9
29.77	5.0E-06	0.07	35.9	3.62	6	33.9	135.6	169.5	36.0	UnDef	UnDef	6.0	UnDef	16.6	33.2
30.27	5.0E-06	0.08	69.0	3.66	6	62.9	90.4	153.4	27.1	UnDef	UnDef	10.0	UnDef	18.0	48.8
30.76	5.0E-05	-0.02	122.0	3.58	12	109.8	UnDef	UnDef	0.0	42	69.9	10.0	-0.42	UnDef	UnDef
31.21	5.0E-05	-0.02	119.5	3.29	7	108.4	71.5	179.9	19.9	42	69.6	10.0	-0.39	14.0	56.5
31.66	5.0E-04	-0.02	142.1	2.30	7	129.2	44.4	173.6	14.6	44	74.6	1.0	-0.33	8.0	50.2
32.15	5.0E-06	-0.02	86.5	4.04	6	80.4	100.4	180.8	25.8	UnDef	UnDef	10.0	UnDef	20.9	60.3
32.64	5.0E-06	0.01	49.3	4.10	6	47.5	142.5	189.9	33.1	UnDef	UnDef	6.0	UnDef	20.5	43.8
33.14	5.0E-06	0.04	55.6	3.40	6	53.6	94.1	147.6	28.9	UnDef	UnDef	10.0	UnDef	17.4	43.6
33.63	5.0E-06	0.05	41.2	3.51	6	40.7	129.4	170.1	33.5	UnDef	UnDef	6.0	UnDef	18.1	38.0
34.12	5.0E-05	0.10	31.5	2.86	6	32.1	124.1	156.3	34.8	36	34.7	6.0	-0.17	12.4	25.0
34.61	5.0E-05	0.19	29.4	2.75	6	30.3	121.3	151.6	35.4	36	33.1	6.0	-0.14	11.9	23.7
35.10	5.0E-05	0.17	80.0	3.29	7	77.9	80.3	158.2	24.0	42	60.1	10.0	-0.31	14.2	44.7
35.60	5.0E-03	0.01	177.0	1.80	9	169.9	31.0	200.9	10.8	44	82.5	1.0	-0.31	4.4	46.0
36.09	5.0E-03	0.00	204.3	1.28	9	197.1	13.1	210.2	7.3	46	86.7	1.0	-0.28	2.0	50.2

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3054
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-03
Engineer: L. HANDFELT
CPT Date: 03/26/09
CPT Time: 11:59
CPT File: 244C03.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.65 (ft): -41.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.6	0.20	7.73	41.5	2	111.4	1.31	0.01	1.30	2.00	2.5	5.0	0.10	0.00
0.74	2.6	0.20	7.83	42.1	2	111.4	1.34	0.02	1.32	2.00	2.5	4.9	0.10	0.00
1.23	2.8	0.20	7.14	42.6	2	111.4	1.36	0.03	1.33	2.00	2.7	5.4	0.12	0.00
1.72	2.7	0.20	7.41	43.1	2	111.4	1.39	0.04	1.35	2.00	2.6	5.2	0.11	0.00
2.21	2.7	0.20	7.38	43.5	2	111.4	1.42	0.05	1.36	2.00	2.6	5.2	0.10	0.00
2.71	2.6	0.20	7.58	44.0	2	111.4	1.45	0.07	1.38	2.00	2.5	5.1	0.10	0.00
3.20	2.7	0.20	7.43	44.6	2	111.4	1.47	0.08	1.40	2.00	2.6	5.2	0.10	0.00
3.65	2.8	0.20	7.15	45.1	2	111.4	1.50	0.09	1.41	2.00	2.7	5.4	0.10	0.00
4.10	2.8	0.20	7.24	45.6	2	111.4	1.52	0.10	1.42	2.00	2.7	5.3	0.10	0.00
4.59	2.8	0.20	7.15	46.0	2	111.4	1.55	0.11	1.44	2.00	2.7	5.4	0.10	0.00
5.09	2.9	0.20	6.86	46.6	2	111.4	1.58	0.12	1.45	2.00	2.8	5.6	0.11	0.00
5.58	3.5	0.20	5.71	51.8	3	111.4	1.61	0.14	1.47	2.00	3.4	6.7	0.15	0.00
6.07	4.4	0.20	4.58	62.5	3	111.4	1.63	0.15	1.49	2.00	4.2	8.4	0.22	0.00
6.60	4.5	0.20	4.46	64.6	3	111.4	1.66	0.16	1.50	2.00	4.3	8.6	0.23	0.00
7.14	4.5	0.20	4.43	61.5	3	111.4	1.69	0.17	1.52	2.00	4.3	8.7	0.23	0.00
7.63	4.5	0.20	4.42	61.9	3	111.4	1.72	0.19	1.53	2.00	4.3	8.7	0.23	0.00
8.12	4.5	0.20	4.48	63.6	3	111.4	1.75	0.20	1.55	2.00	4.3	8.6	0.22	0.00
8.61	4.4	0.20	4.56	67.7	3	111.4	1.78	0.21	1.56	2.00	4.2	8.4	0.21	0.00
9.10	4.4	0.20	4.55	69.9	3	111.4	1.80	0.22	1.58	2.00	4.2	8.4	0.21	0.00
9.60	4.2	0.20	4.73	71.8	3	111.4	1.83	0.23	1.60	2.00	4.1	8.1	0.19	0.00
10.09	4.0	0.20	5.00	74.8	3	111.4	1.86	0.25	1.61	2.00	3.8	7.7	0.17	0.00
10.58	4.2	0.20	4.78	79.1	3	111.4	1.89	0.26	1.63	1.97	4.0	7.9	0.18	0.00
11.07	4.3	0.20	4.64	80.9	3	111.4	1.91	0.27	1.64	1.92	4.1	7.9	0.19	0.00
11.56	4.6	0.20	4.39	79.7	3	111.4	1.94	0.28	1.66	1.88	4.4	8.2	0.21	0.00
12.06	4.5	0.20	4.43	81.3	3	111.4	1.97	0.30	1.67	1.84	4.3	8.0	0.20	0.00
12.55	4.4	0.20	4.51	85.9	3	111.4	1.99	0.31	1.69	1.80	4.3	7.7	0.20	0.00
13.04	4.6	0.20	4.39	86.1	3	111.4	2.02	0.32	1.70	1.77	4.4	7.7	0.20	0.00
13.53	4.5	0.20	4.44	85.0	3	111.4	2.05	0.33	1.72	1.74	4.3	7.5	0.20	0.00
14.03	4.5	0.20	4.45	85.2	3	111.4	2.08	0.34	1.73	1.71	4.3	7.4	0.19	0.00
14.52	4.7	0.20	4.29	86.1	3	111.4	2.10	0.36	1.75	1.68	4.5	7.5	0.21	0.00
15.01	4.7	0.20	4.26	87.2	3	111.4	2.13	0.37	1.76	1.65	4.5	7.4	0.21	0.00
15.50	4.8	0.20	4.15	90.4	3	111.4	2.16	0.38	1.78	1.62	4.6	7.5	0.21	0.00
15.99	5.2	0.20	3.84	93.9	3	111.4	2.19	0.39	1.80	1.60	5.0	8.0	0.24	0.00
16.49	13.6	0.20	1.48	48.9	6	114.6	2.21	0.40	1.81	1.57	5.2	8.2	0.91	0.11
16.98	10.4	0.20	1.93	46.1	5	114.6	2.24	0.42	1.83	1.55	5.0	7.7	0.65	0.13
17.47	7.3	0.21	2.91	68.5	4	114.6	2.27	0.43	1.84	1.53	4.7	7.1	0.41	0.00
17.96	58.0	0.41	0.70	22.3	8	120.9	2.30	0.44	1.86	1.50	13.9	20.9	UnDef	0.15
18.45	81.7	0.20	0.25	-11.9	8	120.9	2.33	0.46	1.87	1.48	19.6	28.9	UnDef	0.23
18.95	39.4	0.20	0.51	-12.9	7	117.8	2.36	0.47	1.89	1.46	12.6	18.3	UnDef	0.10
19.44	10.9	0.20	1.85	-13.0	5	114.6	2.39	0.48	1.90	1.44	5.2	7.5	0.68	0.12
19.93	8.3	0.20	2.42	-8.7	4	114.6	2.42	0.50	1.92	1.42	5.3	7.5	0.47	0.10
20.42	7.8	0.20	2.57	14.0	4	114.6	2.44	0.51	1.93	1.40	5.0	7.0	0.43	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3054
CPT File: 244C03.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	7.5	0.20	2.68	21.5	4	114.6	2.47	0.52	1.95	1.38	4.8	6.6	0.40	0.00
21.41	7.7	0.20	2.61	30.2	4	114.6	2.50	0.54	1.96	1.37	4.9	6.7	0.41	0.00
21.90	8.0	0.20	2.50	39.0	4	114.6	2.53	0.55	1.98	1.35	5.1	6.9	0.44	0.00
22.39	8.2	0.20	2.45	47.7	4	114.6	2.56	0.56	1.99	1.33	5.2	7.0	0.45	0.00
22.88	7.7	0.20	2.60	55.1	4	114.6	2.58	0.57	2.01	1.32	4.9	6.5	0.41	0.00
23.38	8.0	0.20	2.50	66.2	4	114.6	2.61	0.59	2.03	1.30	5.1	6.7	0.43	0.00
23.87	8.2	0.20	2.43	67.2	4	114.6	2.64	0.60	2.04	1.29	5.3	6.8	0.45	0.00
24.36	7.9	0.20	2.53	71.9	4	114.6	2.67	0.61	2.06	1.28	5.1	6.5	0.42	0.00
24.85	7.6	0.20	2.64	81.2	4	114.6	2.70	0.63	2.07	1.26	4.9	6.1	0.39	0.00
25.34	7.5	0.20	2.69	88.1	4	114.6	2.73	0.64	2.09	1.25	4.8	6.0	0.38	0.00
25.84	7.5	0.20	2.67	88.5	4	114.6	2.75	0.65	2.10	1.24	4.8	5.9	0.38	0.00
26.33	7.5	0.20	2.66	89.9	4	114.6	2.78	0.66	2.12	1.23	4.8	5.9	0.38	0.00
26.82	7.4	0.20	2.70	94.9	4	114.6	2.81	0.68	2.13	1.22	4.7	5.8	0.37	0.00
27.31	7.6	0.20	2.64	96.9	4	114.6	2.84	0.69	2.15	1.20	4.9	5.8	0.38	0.00
27.80	8.6	0.21	2.41	102.0	4	114.6	2.87	0.70	2.16	1.19	5.5	6.5	0.46	0.00
28.30	31.3	0.29	0.93	35.1	7	117.8	2.90	0.72	2.18	1.18	10.0	11.8	UnDef	0.10
28.79	34.5	0.37	1.06	-7.8	7	117.8	2.92	0.73	2.19	1.17	11.0	12.9	UnDef	0.11
29.28	19.3	0.39	2.03	-9.3	6	114.6	2.95	0.74	2.21	1.16	7.4	8.6	1.31	0.20
29.77	7.8	0.20	2.56	33.0	4	114.6	2.98	0.76	2.23	1.15	5.0	5.8	0.39	0.00
30.27	7.0	0.20	2.87	124.1	4	114.6	3.01	0.77	2.24	1.14	4.5	5.1	0.32	0.00
30.76	7.1	0.20	2.81	122.1	4	114.6	3.04	0.78	2.26	1.13	4.6	5.2	0.33	0.00
31.21	7.4	0.20	2.70	125.5	4	114.6	3.06	0.79	2.27	1.12	4.7	5.3	0.35	0.00
31.66	7.3	0.20	2.76	127.4	4	114.6	3.09	0.80	2.28	1.11	4.6	5.2	0.33	0.00
32.15	7.3	0.20	2.75	127.0	4	114.6	3.12	0.82	2.30	1.11	4.6	5.1	0.33	0.00
32.64	7.4	0.20	2.70	128.6	4	114.6	3.15	0.83	2.31	1.10	4.7	5.2	0.34	0.00
33.14	7.8	0.20	2.56	130.2	4	114.6	3.17	0.84	2.33	1.09	5.0	5.4	0.37	0.00
33.63	8.1	0.20	2.49	122.9	4	114.6	3.20	0.86	2.35	1.08	5.2	5.6	0.39	0.00
34.12	7.9	0.20	2.53	130.5	4	114.6	3.23	0.87	2.36	1.07	5.1	5.4	0.37	0.00
34.61	7.8	0.20	2.58	131.0	4	114.6	3.26	0.88	2.38	1.06	5.0	5.3	0.36	0.00
35.10	7.6	0.20	2.63	134.3	4	114.6	3.29	0.89	2.39	1.06	4.9	5.1	0.35	0.00
35.60	7.5	0.20	2.66	141.2	4	114.6	3.31	0.91	2.41	1.05	4.8	5.0	0.34	0.00
36.09	7.9	0.20	2.53	144.3	4	114.6	3.34	0.92	2.42	1.04	5.1	5.3	0.37	0.00
36.58	11.1	0.26	2.31	114.6	5	114.6	3.37	0.93	2.44	1.04	5.3	5.5	0.62	0.00
37.07	8.6	0.22	2.51	129.1	4	114.6	3.40	0.95	2.45	1.03	5.5	5.6	0.41	0.00
37.57	7.9	0.20	2.53	142.6	4	114.6	3.43	0.96	2.47	1.02	5.1	5.2	0.36	0.00
38.06	8.1	0.20	2.49	148.2	4	114.6	3.46	0.97	2.48	1.01	5.1	5.2	0.37	0.00
38.55	8.2	0.20	2.44	148.0	4	114.6	3.48	0.98	2.50	1.01	5.2	5.3	0.38	0.00
39.04	8.7	0.20	2.31	140.1	5	114.6	3.51	1.00	2.51	1.00	4.2	4.2	0.41	0.00
39.53	8.6	0.20	2.33	142.0	4	114.6	3.54	1.01	2.53	1.00	5.5	5.5	0.40	0.00
40.03	8.2	0.20	2.45	145.8	4	114.6	3.57	1.02	2.55	0.99	5.2	5.2	0.37	0.00
40.52	8.3	0.20	2.42	154.0	4	114.6	3.60	1.04	2.56	0.98	5.3	5.2	0.38	0.00
41.01	8.9	0.20	2.26	153.1	5	114.6	3.62	1.05	2.58	0.98	4.2	4.1	0.42	0.00
41.50	9.3	0.21	2.21	153.3	5	114.6	3.65	1.06	2.59	0.97	4.5	4.3	0.45	0.00
41.99	12.0	0.25	2.05	133.7	5	114.6	3.68	1.07	2.61	0.96	5.7	5.5	0.66	0.10
42.49	20.4	0.31	1.50	46.5	6	114.6	3.71	1.09	2.62	0.96	7.8	7.5	1.34	0.16
42.98	17.5	0.44	2.49	52.7	5	114.6	3.74	1.10	2.64	0.95	8.4	8.0	1.10	0.13
43.47	18.7	0.51	2.74	52.7	5	114.6	3.77	1.11	2.65	0.95	8.9	8.5	1.19	0.14
43.96	13.3	0.30	2.25	59.7	5	114.6	3.79	1.13	2.67	0.94	6.4	6.0	0.76	0.10
44.45	12.3	0.41	3.31	83.5	4	114.6	3.82	1.14	2.68	0.94	7.9	7.4	0.68	0.00
44.95	11.8	0.45	3.79	79.4	3	111.4	3.85	1.15	2.70	0.93	11.3	10.5	0.64	0.00
45.44	11.9	0.44	3.71	93.8	3	111.4	3.88	1.16	2.71	0.93	11.4	10.6	0.64	0.00
45.93	11.3	0.37	3.24	99.6	4	114.6	3.91	1.18	2.73	0.92	7.2	6.7	0.59	0.00
46.42	14.9	0.44	2.98	137.4	5	114.6	3.93	1.19	2.75	0.92	7.1	6.6	0.88	0.00
46.92	20.6	0.51	2.46	78.9	5	114.6	3.96	1.20	2.76	0.91	9.9	9.0	1.33	0.15
47.41	17.2	0.48	2.82	79.6	5	114.6	3.99	1.21	2.78	0.91	8.2	7.5	1.05	0.00
47.90	17.5	0.62	3.56	79.0	4	114.6	4.02	1.23	2.79	0.90	11.2	10.1	1.08	0.00
48.39	17.4	0.62	3.54	65.3	4	114.6	4.05	1.24	2.81	0.90	11.1	10.0	1.07	0.00
48.88	18.0	0.61	3.41	76.9	4	114.6	4.07	1.25	2.82	0.89	11.5	10.3	1.11	0.00
49.38	16.8	0.50	2.98	76.5	5	114.6	4.10	1.27	2.84	0.89	8.0	7.1	1.01	0.00
49.87	17.1	0.29	1.68	132.8	6	114.6	4.13	1.28	2.85	0.88	6.5	5.8	1.04	0.12
50.36	14.2	0.38	2.69	141.8	5	114.6	4.16	1.29	2.87	0.88	6.8	6.0	0.80	0.00
50.85	15.2	0.49	3.20	116.7	4	114.6	4.19	1.30	2.88	0.88	9.7	8.5	0.88	0.00
51.34	15.2	0.45	2.96	146.9	5	114.6	4.22	1.32	2.90	0.87	7.3	6.3	0.88	0.00
51.84	19.2	0.45	2.34	157.4	5	114.6	4.24	1.33	2.91	0.87	9.2	8.0	1.19	0.13

Gregg In Situ, Inc.
Run No: 03-1030-1241-3054
CPT File: 244C03.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
52.33	20.5	0.54	2.62	112.8	5	114.6	4.27	1.34	2.93	0.86	9.8	8.5	1.30	0.14
52.82	13.8	0.41	2.96	140.1	5	114.6	4.30	1.35	2.94	0.86	6.6	5.7	0.76	0.00
53.31	13.8	0.35	2.51	164.9	5	114.6	4.33	1.37	2.96	0.86	6.6	5.6	0.75	0.00
53.81	14.2	0.38	2.70	129.1	5	114.6	4.36	1.38	2.98	0.85	6.8	5.8	0.79	0.00
54.30	12.9	0.35	2.70	134.8	5	114.6	4.38	1.39	2.99	0.85	6.2	5.2	0.68	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3054
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-03
Engineer: L. HANDFELT
CPT Date: 03/26/09
CPT Time: 11:59
CPT File: 244C03.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.65 (ft): -41.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	-0.01	213.0	10.00	11	5.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.00	67.8	10.00	11	4.9	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.00	47.9	10.00	1	5.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	0.00	31.1	10.00	1	5.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	1.0E-15	0.00	23.9	10.00	1	5.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	1.0E-15	0.00	18.1	10.00	1	5.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	1.0E-15	0.00	15.6	10.00	1	5.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.65	1.0E-15	0.00	14.6	10.00	1	5.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
4.10	1.0E-15	0.00	12.4	10.00	1	5.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
4.59	1.0E-15	0.00	11.1	10.00	1	5.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.09	1.0E-15	0.00	10.8	10.00	1	5.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.58	5.0E-08	0.08	13.9	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.07	5.0E-08	0.17	18.5	7.30	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.60	5.0E-08	0.18	17.6	7.07	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.14	16.2	7.08	1	8.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.63	5.0E-08	0.14	15.1	7.11	1	8.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
8.12	5.0E-08	0.16	13.7	7.36	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
8.61	5.0E-08	0.21	12.4	7.66	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.10	5.0E-08	0.23	11.7	7.71	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.60	5.0E-08	0.27	10.3	8.31	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
10.09	5.0E-08	0.34	8.7	9.30	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
10.58	5.0E-08	0.37	8.9	8.69	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
11.07	5.0E-08	0.37	8.9	8.34	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
11.56	5.0E-08	0.32	9.3	7.63	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
12.06	5.0E-08	0.34	8.7	7.85	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
12.55	5.0E-08	0.41	8.0	8.17	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
13.04	5.0E-08	0.39	8.0	7.87	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
13.53	5.0E-08	0.38	7.5	8.12	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
14.03	5.0E-08	0.38	7.1	8.25	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
14.52	5.0E-08	0.37	7.2	7.81	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.01	5.0E-08	0.37	7.0	7.78	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.50	5.0E-08	0.39	7.0	7.50	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.99	5.0E-08	0.37	7.8	6.61	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
16.49	5.0E-05	-0.02	28.1	1.76	7	20.9	44.8	65.7	30.5	36	30.0	6.0	-0.12	6.1	14.3
16.98	5.0E-06	-0.05	19.5	2.47	6	15.7	62.9	78.6	41.0	UnDef	UnDef	6.0	UnDef	7.7	15.4
17.47	5.0E-07	0.06	11.8	4.22	1	11.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
17.96	5.0E-03	-0.02	125.6	0.73	9	85.2	4.9	90.2	7.0	44	62.7	1.0	-0.18	0.7	21.6
18.45	5.0E-03	-0.03	173.5	0.25	9	118.2	0.0	118.2	1.3	44	72.1	1.0	-0.12	0.0	28.9
18.95	5.0E-04	-0.06	78.6	0.54	9	56.2	6.7	62.9	9.0	42	50.7	1.0	-0.12	1.3	19.6
19.44	5.0E-06	-0.27	17.5	2.37	6	15.3	61.1	76.3	42.6	UnDef	UnDef	6.0	UnDef	7.5	14.9
19.93	5.0E-07	-0.37	11.8	3.41	4	11.5	46.0	57.5	56.5	UnDef	UnDef	3.0	UnDef	7.5	15.0
20.42	5.0E-07	-0.28	10.5	3.74	1	10.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Run No: 03-1030-1241-3054
CPT File: 244C03.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-07	-0.26	9.6	4.01	1	10.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
21.41	5.0E-07	-0.20	9.7	3.87	1	10.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
21.90	5.0E-07	-0.14	10.0	3.64	1	10.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
22.39	5.0E-07	-0.09	10.0	3.56	1	10.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
22.88	5.0E-07	-0.06	8.9	3.91	1	10.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
23.38	5.0E-07	0.01	9.2	3.70	1	10.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
23.87	5.0E-07	0.01	9.3	3.58	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
24.36	5.0E-07	0.04	8.6	3.81	1	9.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
24.85	5.0E-07	0.09	7.8	4.09	1	9.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
25.34	5.0E-07	0.14	7.4	4.23	1	9.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
25.84	5.0E-07	0.14	7.3	4.23	1	9.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
26.33	5.0E-07	0.15	7.2	4.22	1	9.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
26.82	5.0E-07	0.18	6.8	4.33	1	8.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
27.31	5.0E-07	0.18	6.9	4.21	1	9.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
27.80	5.0E-07	0.18	8.1	3.62	1	10.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
28.30	5.0E-04	-0.04	39.7	1.02	7	36.2	25.1	61.3	20.3	38	38.2	1.0	-0.11	4.1	15.9
28.79	5.0E-04	-0.08	43.3	1.16	7	39.5	27.3	66.9	20.3	38	40.7	1.0	-0.13	4.4	17.3
29.28	5.0E-05	-0.15	22.0	2.39	6	21.9	87.6	109.5	38.4	34	30.0	6.0	-0.13	8.6	17.1
29.77	5.0E-07	-0.25	6.4	4.12	1	8.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
30.27	5.0E-07	0.41	5.2	5.05	1	7.8	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
30.76	5.0E-07	0.38	5.2	4.89	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.21	5.0E-07	0.38	5.5	4.60	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.66	5.0E-07	0.41	5.2	4.80	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
32.15	5.0E-07	0.40	5.1	4.82	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
32.64	5.0E-07	0.40	5.2	4.67	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.14	5.0E-07	0.37	5.5	4.30	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.63	5.0E-07	0.30	5.7	4.11	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.12	5.0E-07	0.37	5.4	4.28	1	8.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.61	5.0E-07	0.38	5.1	4.45	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.10	5.0E-07	0.42	4.8	4.62	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.60	5.0E-07	0.47	4.6	4.76	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.09	5.0E-07	0.45	5.0	4.37	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.58	5.0E-06	0.15	8.3	3.32	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
37.07	5.0E-07	0.30	5.5	4.16	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
37.57	5.0E-07	0.44	4.7	4.46	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.06	5.0E-07	0.47	4.7	4.35	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.55	5.0E-07	0.45	4.8	4.24	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
39.04	5.0E-06	0.36	5.2	3.87	1	8.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
39.53	5.0E-07	0.38	5.0	3.97	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
40.03	5.0E-07	0.44	4.5	4.35	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
40.52	5.0E-07	0.48	4.5	4.27	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.01	5.0E-06	0.42	5.0	3.84	1	8.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.50	5.0E-06	0.39	5.3	3.64	1	8.8	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.99	5.0E-06	0.19	7.7	2.96	4	11.3	45.2	56.5	64.5	UnDef	UnDef	3.0	UnDef	5.5	11.1
42.49	5.0E-05	-0.07	15.4	1.83	6	19.2	76.7	95.9	41.6	32	30.0	6.0	-0.06	7.5	15.0
42.98	5.0E-06	-0.07	12.5	3.17	4	16.3	65.4	81.7	53.9	UnDef	UnDef	6.0	UnDef	8.0	16.0
43.47	5.0E-06	-0.07	13.4	3.43	4	17.3	69.3	86.6	53.8	UnDef	UnDef	6.0	UnDef	8.5	16.9
43.96	5.0E-06	-0.08	8.5	3.14	4	12.3	49.1	61.4	63.2	UnDef	UnDef	3.0	UnDef	6.0	12.0
44.45	5.0E-07	-0.01	7.4	4.81	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.95	5.0E-08	-0.03	6.9	5.63	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
45.44	5.0E-08	0.03	6.9	5.50	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
45.93	5.0E-07	0.05	6.3	4.95	1	10.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
46.42	5.0E-06	0.14	9.2	4.04	1	13.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
46.92	5.0E-06	-0.02	13.8	3.05	4	18.4	73.5	91.9	51.1	UnDef	UnDef	6.0	UnDef	9.0	18.0
47.41	5.0E-06	-0.02	10.8	3.68	1	15.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
47.90	5.0E-07	-0.02	11.0	4.62	1	15.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.39	5.0E-07	-0.06	10.8	4.60	1	15.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.88	5.0E-07	-0.03	11.1	4.41	1	15.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.38	5.0E-06	-0.04	10.0	3.94	1	14.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.87	5.0E-05	0.10	10.1	2.22	6	14.8	59.1	73.9	53.3	30	30.0	3.0	-0.01	5.8	11.6
50.36	5.0E-06	0.16	7.7	3.81	1	12.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
50.85	5.0E-07	0.07	8.5	4.41	1	13.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
51.34	5.0E-06	0.15	8.3	4.11	1	12.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
51.84	5.0E-06	0.13	11.2	3.00	4	16.3	65.1	81.3	55.5	UnDef	UnDef	3.0	UnDef	8.0	15.9

Gregg In Situ, Inc.
Run No: 03-1030-1241-3054
CPT File: 244C03.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
52.33	5.0E-06	0.04	12.1	3.31	4	17.3	69.2	86.5	55.4	UnDef	UnDef	3.0	UnDef	8.5	16.9
52.82	5.0E-06	0.15	7.0	4.31	1	11.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
53.31	5.0E-06	0.23	6.9	3.67	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
53.81	5.0E-06	0.11	7.1	3.90	1	11.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
54.30	5.0E-06	0.14	6.1	4.09	1	10.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3081
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-08
Engineer: L. HANDFELT
CPT Date: 03/24/09
CPT Time: 13:20
CPT File: 244C08.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -9.83 (ft): -32.3
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.5	0.20	7.95	34.1	2	111.4	1.02	0.01	1.01	2.00	2.4	4.8	0.12	0.00
0.74	2.7	0.20	7.55	34.9	2	111.4	1.05	0.02	1.03	2.00	2.5	5.1	0.13	0.00
1.23	4.7	0.20	4.28	39.9	3	111.4	1.08	0.03	1.05	2.00	4.5	9.0	0.29	0.00
1.72	6.7	0.20	2.99	62.1	3	111.4	1.10	0.04	1.06	2.00	6.4	12.8	0.45	0.00
2.21	7.1	0.20	2.86	45.1	4	114.6	1.13	0.05	1.08	2.00	4.5	9.0	0.47	0.00
2.71	8.9	0.25	2.84	46.6	4	114.6	1.16	0.07	1.09	2.00	5.7	11.4	0.62	0.00
3.20	9.3	0.26	2.75	29.1	4	114.6	1.19	0.08	1.11	2.00	5.9	11.9	0.65	0.08
3.65	9.6	0.23	2.41	37.0	5	114.6	1.21	0.09	1.12	2.00	4.6	9.1	0.67	0.08
4.10	17.2	0.27	1.55	56.8	6	114.6	1.24	0.10	1.13	2.00	6.6	13.2	1.27	0.09
4.59	32.5	0.20	0.62	31.1	7	117.8	1.27	0.12	1.15	2.00	10.4	20.8	UnDef	0.10
5.09	17.7	0.20	1.14	36.6	6	114.6	1.30	0.13	1.17	2.00	6.8	13.5	1.31	0.09
5.58	9.2	0.20	2.18	63.5	5	114.6	1.32	0.14	1.18	2.00	4.4	8.8	0.63	0.09
6.07	12.7	0.29	2.28	59.1	5	114.6	1.35	0.16	1.20	2.00	6.1	12.2	0.91	0.09
6.60	50.8	0.29	0.58	36.9	8	120.9	1.38	0.17	1.21	2.00	12.2	24.3	UnDef	0.17
7.14	88.6	0.42	0.48	35.8	8	120.9	1.42	0.19	1.23	2.00	21.2	42.4	UnDef	0.00
7.63	102.0	0.64	0.63	38.1	8	120.9	1.45	0.20	1.25	2.00	24.4	48.8	UnDef	0.00
8.12	134.4	0.67	0.50	30.3	9	124.1	1.48	0.22	1.26	2.00	25.7	51.5	UnDef	0.00
8.61	129.9	0.66	0.51	31.1	9	124.1	1.51	0.23	1.28	2.00	24.9	49.8	UnDef	0.00
9.10	102.9	0.52	0.50	34.5	9	124.1	1.54	0.25	1.29	2.00	19.7	39.4	UnDef	0.00
9.60	52.9	0.46	0.86	34.3	7	117.8	1.57	0.26	1.31	1.96	16.9	33.1	UnDef	0.18
10.09	22.6	0.57	2.52	57.4	5	114.6	1.60	0.27	1.32	1.91	10.8	20.7	1.68	0.12
10.58	15.6	0.48	3.11	82.5	5	114.6	1.62	0.29	1.34	1.87	7.5	13.9	1.12	0.15
11.07	15.3	0.54	3.55	86.9	4	114.6	1.65	0.30	1.35	1.83	9.8	17.9	1.09	0.23
11.56	27.7	0.51	1.86	109.8	6	114.6	1.68	0.31	1.37	1.79	10.6	19.0	2.08	0.12
12.06	97.3	0.81	0.83	39.2	8	120.9	1.71	0.33	1.38	1.75	23.3	40.8	UnDef	0.00
12.55	159.8	1.01	0.63	29.8	9	124.1	1.74	0.34	1.40	1.71	30.6	52.5	UnDef	0.00
13.04	186.0	1.02	0.55	40.2	9	124.1	1.77	0.36	1.41	1.68	35.6	59.8	UnDef	0.00
13.53	169.9	0.81	0.48	36.6	9	124.1	1.80	0.37	1.43	1.64	32.5	53.4	UnDef	0.00
14.03	91.1	0.56	0.61	35.9	8	120.9	1.83	0.39	1.44	1.61	21.8	35.1	UnDef	0.36
14.52	23.6	0.55	2.35	67.7	6	114.6	1.86	0.40	1.46	1.58	9.0	14.3	1.74	0.13
15.01	45.1	0.49	1.09	128.9	7	117.8	1.89	0.41	1.48	1.56	14.4	22.4	UnDef	0.13
15.50	46.8	0.66	1.41	25.5	7	117.8	1.92	0.43	1.49	1.53	14.9	22.9	UnDef	0.15
15.99	33.6	0.59	1.77	10.0	6	114.6	1.95	0.44	1.51	1.51	12.9	19.4	2.53	0.13
16.49	23.3	0.52	2.24	90.0	6	114.6	1.97	0.45	1.52	1.49	8.9	13.3	1.71	0.13
16.98	90.1	0.96	1.07	46.6	8	120.9	2.00	0.47	1.54	1.47	21.6	31.6	UnDef	0.31
17.47	150.1	1.03	0.69	13.1	9	124.1	2.03	0.48	1.55	1.44	28.7	41.5	UnDef	0.00
17.96	159.9	1.01	0.63	13.9	9	124.1	2.06	0.50	1.57	1.42	30.6	43.5	UnDef	0.00
18.45	141.7	1.13	0.80	6.2	9	124.1	2.09	0.51	1.58	1.40	27.1	38.0	UnDef	0.00
18.95	147.6	1.12	0.76	-6.1	9	124.1	2.12	0.53	1.60	1.38	28.3	39.0	UnDef	0.00
19.44	140.5	0.89	0.63	-9.6	9	124.1	2.15	0.54	1.61	1.36	26.9	36.6	UnDef	0.00
19.93	94.4	1.10	1.17	12.6	8	120.9	2.19	0.56	1.63	1.34	22.6	30.3	UnDef	0.31
20.42	181.6	1.44	0.80	-8.6	9	124.1	2.22	0.57	1.64	1.32	34.8	46.0	UnDef	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3081
CPT File: 244C08.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	210.1	1.71	0.81	0.2	9	124.1	2.25	0.59	1.66	1.31	40.2	52.6	UnDef	0.00
21.41	219.6	1.21	0.55	-6.3	9	124.1	2.28	0.60	1.68	1.29	42.1	54.3	UnDef	0.00
21.90	222.8	1.35	0.60	-5.0	9	124.1	2.31	0.62	1.69	1.27	42.7	54.4	UnDef	0.00
22.39	199.3	1.12	0.56	-6.0	9	124.1	2.34	0.63	1.71	1.26	38.2	48.0	UnDef	0.00
22.88	118.3	2.07	1.75	-8.2	7	117.8	2.37	0.65	1.72	1.24	37.8	47.0	UnDef	0.00
23.38	213.4	1.65	0.77	6.0	9	124.1	2.40	0.66	1.74	1.23	40.9	50.3	UnDef	0.00
23.87	282.1	2.29	0.81	5.8	9	124.1	2.43	0.68	1.75	1.22	54.0	65.8	UnDef	0.00
24.36	251.5	2.01	0.80	24.5	9	124.1	2.46	0.69	1.77	1.20	48.2	58.0	UnDef	0.00
24.85	141.4	1.70	1.20	36.9	8	120.9	2.49	0.71	1.78	1.19	33.8	40.3	UnDef	0.00
25.34	88.7	1.50	1.69	20.3	7	117.8	2.52	0.72	1.80	1.18	28.3	33.4	UnDef	0.29
25.84	86.9	1.50	1.72	-7.5	7	117.8	2.55	0.73	1.81	1.17	27.7	32.4	UnDef	0.29
26.33	54.0	1.64	3.04	-8.6	6	114.6	2.58	0.75	1.83	1.16	20.7	24.0	4.12	0.30
26.82	65.7	1.22	1.86	11.4	7	117.8	2.60	0.76	1.84	1.15	21.0	24.1	UnDef	0.21
27.31	112.5	0.84	0.75	10.7	8	120.9	2.63	0.77	1.86	1.14	26.9	30.6	UnDef	0.29
27.80	92.3	0.99	1.08	16.2	8	120.9	2.66	0.79	1.88	1.13	22.1	24.9	UnDef	0.24
28.30	125.0	0.95	0.76	17.9	9	124.1	2.69	0.80	1.89	1.12	23.9	26.7	UnDef	0.34
28.79	126.8	1.03	0.81	28.0	9	124.1	2.72	0.82	1.91	1.11	24.3	26.9	UnDef	0.35
29.28	117.3	0.91	0.78	42.2	8	120.9	2.75	0.83	1.92	1.10	28.1	30.8	UnDef	0.30
29.77	146.2	0.80	0.55	5.7	9	124.1	2.78	0.85	1.94	1.09	28.0	30.4	UnDef	0.43
30.27	69.2	1.24	1.79	-6.1	7	117.8	2.81	0.86	1.95	1.08	22.1	23.8	UnDef	0.21
30.76	85.7	1.11	1.29	62.8	8	120.9	2.84	0.88	1.97	1.07	20.5	21.9	UnDef	0.22
31.21	80.8	1.20	1.49	52.9	7	117.8	2.87	0.89	1.98	1.06	25.8	27.4	UnDef	0.22
31.66	72.1	1.55	2.15	99.5	7	117.8	2.90	0.90	2.00	1.05	23.0	24.3	UnDef	0.26
32.15	114.3	1.17	1.02	25.7	8	120.9	2.93	0.91	2.01	1.05	27.4	28.6	UnDef	0.30
32.64	65.7	1.63	2.48	31.8	6	114.6	2.95	0.93	2.03	1.04	25.2	26.1	5.02	0.28
33.14	199.3	1.71	0.86	15.0	9	124.1	2.98	0.94	2.04	1.03	38.2	39.3	UnDef	0.00
33.63	211.7	1.37	0.65	-4.8	9	124.1	3.01	0.96	2.06	1.02	40.5	41.4	UnDef	0.00
34.12	140.8	1.08	0.76	-5.5	9	124.1	3.05	0.97	2.07	1.01	27.0	27.3	UnDef	0.37
34.61	71.5	0.76	1.07	3.4	8	120.9	3.08	0.99	2.09	1.01	17.1	17.2	UnDef	0.16
35.10	27.8	0.69	2.48	-1.0	6	114.6	3.10	1.00	2.10	1.00	10.7	10.7	1.98	0.31
35.60	20.4	0.47	2.31	29.3	6	114.6	3.13	1.01	2.12	0.99	7.8	7.8	1.38	0.17
36.09	23.3	0.63	2.70	50.3	5	114.6	3.16	1.03	2.13	0.99	11.1	11.0	1.61	0.21
36.58	21.6	0.66	3.08	57.5	5	114.6	3.19	1.04	2.15	0.98	10.3	10.1	1.47	0.18
37.07	31.3	0.95	3.04	64.8	5	114.6	3.22	1.05	2.16	0.97	15.0	14.6	2.25	0.39
37.57	34.8	1.14	3.29	27.7	5	114.6	3.25	1.07	2.18	0.97	16.6	16.1	2.52	0.00
38.06	24.1	0.70	2.89	44.4	5	114.6	3.27	1.08	2.20	0.96	11.5	11.1	1.66	0.22
38.55	26.1	0.84	3.20	114.9	5	114.6	3.30	1.09	2.21	0.96	12.5	12.0	1.82	0.25
39.04	31.2	1.15	3.69	115.2	5	114.6	3.33	1.10	2.23	0.95	15.0	14.2	2.23	0.37
39.53	33.3	1.44	4.33	62.5	4	114.6	3.36	1.12	2.24	0.95	21.2	20.1	2.39	0.00
40.03	28.8	1.30	4.52	21.3	3	111.4	3.39	1.13	2.26	0.94	27.6	26.0	2.03	0.00
40.52	50.8	1.51	2.97	8.5	6	114.6	3.41	1.14	2.27	0.94	19.5	18.2	3.79	0.00
41.01	61.9	1.36	2.20	3.7	6	114.6	3.44	1.15	2.29	0.93	23.7	22.1	4.67	0.26
41.50	40.3	1.05	2.59	58.7	6	114.6	3.47	1.17	2.30	0.93	15.4	14.3	2.95	0.00
41.99	31.2	0.88	2.82	162.3	5	114.6	3.50	1.18	2.32	0.92	14.9	13.7	2.22	0.34
42.49	34.1	0.86	2.53	308.4	6	114.6	3.53	1.19	2.33	0.92	13.1	12.0	2.45	0.41
42.98	35.3	1.04	2.96	240.9	5	114.6	3.55	1.21	2.35	0.91	16.9	15.4	2.54	0.44
43.47	31.3	1.11	3.55	98.5	5	114.6	3.58	1.22	2.36	0.91	15.0	13.6	2.21	0.33
43.96	34.3	1.02	2.97	177.2	5	114.6	3.61	1.23	2.38	0.90	16.4	14.8	2.45	0.40
44.45	35.2	1.00	2.85	279.1	5	114.6	3.64	1.24	2.39	0.90	16.9	15.1	2.53	0.42
44.95	128.7	1.23	0.96	299.7	8	120.9	3.67	1.26	2.41	0.89	30.8	27.5	UnDef	0.29
45.44	255.7	2.40	0.94	75.6	9	124.1	3.70	1.27	2.43	0.89	49.0	43.4	UnDef	0.00
45.93	273.9	3.19	1.17	87.5	9	124.1	3.73	1.29	2.44	0.88	52.5	46.2	UnDef	0.00
46.42	267.3	3.34	1.25	84.7	9	124.1	3.76	1.30	2.46	0.88	51.2	44.9	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3081
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-08
Engineer: L. HANDFELT
CPT Date: 03/24/09
CPT Time: 13:20
CPT File: 244C08.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -9.83 (ft): -32.3
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.03	249.3	10.00	11	4.8	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.04	89.0	10.00	11	5.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-08	0.06	120.0	5.55	11	9.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-08	0.16	132.8	3.58	12	12.8	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.21	5.0E-07	0.06	108.8	3.40	7	13.5	10.3	23.9	21.2	UnDef	UnDef	10.0	UnDef	3.3	12.4
2.71	5.0E-07	0.05	115.2	3.27	7	17.1	11.6	28.7	20.2	UnDef	UnDef	10.0	UnDef	3.9	15.3
3.20	5.0E-07	-0.02	101.0	3.15	7	17.8	13.3	31.1	21.0	UnDef	UnDef	10.0	UnDef	4.3	16.2
3.65	5.0E-06	0.00	90.6	2.76	7	18.3	13.1	31.4	20.6	UnDef	UnDef	10.0	UnDef	3.2	12.4
4.10	5.0E-05	0.04	153.5	1.67	9	32.9	6.5	39.3	11.1	44	48.6	10.0	-0.28	1.5	14.7
4.59	5.0E-04	-0.01	267.3	0.64	9	62.3	0.0	62.3	2.3	46	65.2	1.0	-0.24	0.0	20.8
5.09	5.0E-05	0.00	125.6	1.23	9	33.8	5.5	39.4	10.3	44	46.2	10.0	-0.23	1.3	14.8
5.58	5.0E-06	0.10	55.2	2.54	7	17.7	20.9	38.5	25.3	UnDef	UnDef	10.0	UnDef	4.5	13.4
6.07	5.0E-06	0.06	73.1	2.55	7	24.4	20.3	44.7	22.0	UnDef	UnDef	10.0	UnDef	4.8	17.0
6.60	5.0E-03	0.00	289.3	0.59	9	97.2	0.0	97.2	1.7	46	72.6	1.0	-0.24	0.0	24.3
7.14	5.0E-03	0.00	468.2	0.49	10	169.7	0.0	169.7	0.0	48	87.3	1.0	-0.26	0.0	42.4
7.63	5.0E-03	0.00	500.9	0.64	10	195.3	0.0	195.3	0.2	48	90.2	1.0	-0.29	0.0	48.8
8.12	5.0E-02	0.00	617.0	0.51	10	257.4	0.0	257.4	0.0	50	95.0	1.0	-0.29	0.0	51.5
8.61	5.0E-02	0.00	556.8	0.52	10	248.8	0.0	248.8	0.0	50	95.0	1.0	-0.28	0.0	49.8
9.10	5.0E-02	0.00	412.3	0.51	10	197.1	0.0	197.1	0.0	48	87.6	1.0	-0.26	0.0	39.4
9.60	5.0E-04	0.00	197.1	0.89	9	101.3	0.9	102.2	5.3	46	67.7	1.0	-0.24	0.2	33.3
10.09	5.0E-06	0.02	77.0	2.71	7	42.4	35.6	78.0	22.1	UnDef	UnDef	10.0	UnDef	8.3	29.0
10.58	5.0E-06	0.09	48.7	3.47	6	28.5	64.1	92.5	30.9	UnDef	UnDef	6.0	UnDef	10.6	24.6
11.07	5.0E-07	0.10	45.7	3.98	6	27.4	90.6	118.0	33.7	UnDef	UnDef	6.0	UnDef	16.5	34.4
11.56	5.0E-05	0.08	83.3	1.98	7	48.5	25.6	74.1	17.9	42	46.5	10.0	-0.23	5.2	24.2
12.06	5.0E-03	0.00	293.5	0.85	9	166.8	0.0	166.8	3.2	46	81.9	1.0	-0.27	0.0	40.8
12.55	5.0E-02	0.00	464.6	0.64	10	268.1	0.0	268.1	0.4	48	95.0	1.0	-0.29	0.0	52.5
13.04	5.0E-02	0.00	518.3	0.55	10	305.3	0.0	305.3	0.0	48	95.0	1.0	-0.28	0.0	59.8
13.53	5.0E-02	0.00	453.4	0.48	10	273.0	0.0	273.0	0.0	48	95.0	1.0	-0.26	0.0	53.4
14.03	5.0E-03	0.00	231.7	0.63	9	143.6	0.0	143.6	2.9	46	77.7	1.0	-0.22	0.0	35.1
14.52	5.0E-05	0.03	54.5	2.55	7	36.6	44.2	80.8	25.5	40	38.4	10.0	-0.23	7.4	21.8
15.01	5.0E-04	0.06	104.9	1.14	9	68.8	13.5	82.3	11.1	42	56.5	1.0	-0.20	2.6	25.0
15.50	5.0E-04	-0.02	105.5	1.47	9	70.2	19.3	89.5	13.1	42	57.1	1.0	-0.23	3.6	26.5
15.99	5.0E-05	-0.04	72.0	1.88	7	49.5	29.4	79.0	19.0	40	47.1	10.0	-0.22	5.9	25.3
16.49	5.0E-05	0.06	47.2	2.44	7	33.9	47.5	81.4	26.8	38	36.3	6.0	-0.20	7.6	20.9
16.98	5.0E-03	0.00	189.3	1.09	9	129.3	6.4	135.7	6.8	44	74.6	1.0	-0.26	1.0	32.6
17.47	5.0E-02	-0.01	308.2	0.70	9	211.9	0.0	211.9	2.1	46	88.8	1.0	-0.26	0.0	41.5
17.96	5.0E-02	-0.01	318.6	0.64	9	222.3	0.0	222.3	1.7	46	90.2	1.0	-0.25	0.0	43.5
18.45	5.0E-02	-0.01	273.3	0.81	9	194.0	0.0	194.0	3.3	46	86.3	1.0	-0.26	0.0	38.0
18.95	5.0E-02	-0.01	276.6	0.77	9	199.1	0.0	199.1	3.0	46	87.0	1.0	-0.26	0.0	39.0
19.44	5.0E-02	-0.01	255.8	0.64	9	187.0	0.0	187.0	2.5	46	85.2	1.0	-0.23	0.0	36.6
19.93	5.0E-03	-0.01	165.8	1.19	9	123.9	11.4	135.3	8.2	44	73.4	1.0	-0.25	1.7	32.0
20.42	5.0E-02	-0.01	314.3	0.80	9	235.2	0.0	235.2	2.7	46	91.8	1.0	-0.27	0.0	46.0

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-02	-0.01	354.8	0.82	9	268.6	0.0	268.6	2.3	48	95.0	1.0	-0.29	0.0	52.6
21.41	5.0E-02	-0.01	361.7	0.56	10	277.3	0.0	277.3	0.7	48	95.0	1.0	-0.25	0.0	54.3
21.90	5.0E-02	-0.01	357.8	0.61	9	277.7	0.0	277.7	1.1	48	95.0	1.0	-0.26	0.0	54.4
22.39	5.0E-02	-0.01	311.9	0.57	9	245.4	0.0	245.4	1.3	46	93.0	1.0	-0.24	0.0	48.0
22.88	5.0E-04	-0.02	179.5	1.79	9	144.1	25.4	169.4	10.6	44	77.7	1.0	-0.31	4.9	51.9
23.38	5.0E-02	-0.01	319.7	0.78	9	257.1	0.0	257.1	2.5	48	94.3	1.0	-0.27	0.0	50.3
23.87	5.0E-02	-0.01	414.1	0.82	9	335.9	0.0	335.9	1.7	48	95.0	1.0	-0.30	0.0	65.8
24.36	5.0E-02	0.00	360.7	0.81	9	296.2	0.0	296.2	2.2	48	95.0	1.0	-0.29	0.0	58.0
24.85	5.0E-03	0.00	196.9	1.23	9	164.7	10.6	175.4	7.3	46	81.6	1.0	-0.27	1.6	41.9
25.34	5.0E-04	-0.01	119.9	1.74	9	102.4	29.6	132.0	13.4	42	68.0	1.0	-0.27	5.4	38.9
25.84	5.0E-04	-0.02	115.1	1.77	7	99.4	31.0	130.4	13.9	42	67.1	1.0	-0.27	5.7	38.1
26.33	5.0E-05	-0.04	68.9	3.20	7	61.2	72.9	134.1	25.4	40	53.2	10.0	-0.31	12.3	36.3
26.82	5.0E-04	-0.02	83.2	1.93	7	73.8	38.0	111.8	17.7	42	58.6	1.0	-0.24	6.5	30.6
27.31	5.0E-03	-0.01	142.0	0.76	9	125.2	5.1	130.3	6.5	44	73.7	1.0	-0.20	0.8	31.4
27.80	5.0E-03	-0.02	113.8	1.11	9	101.8	16.8	118.6	10.3	42	67.8	1.0	-0.21	2.4	27.3
28.30	5.0E-02	-0.01	152.4	0.78	9	136.5	4.2	140.7	6.1	44	76.2	1.0	-0.20	0.5	27.2
28.79	5.0E-02	-0.01	151.7	0.83	9	137.2	5.7	142.9	6.5	44	76.3	1.0	-0.21	0.7	27.5
29.28	5.0E-03	-0.01	137.6	0.80	9	125.8	6.7	132.5	6.9	44	73.9	1.0	-0.20	1.0	31.8
29.77	5.0E-02	-0.01	169.3	0.56	9	155.4	0.0	155.4	4.0	44	79.9	1.0	-0.18	0.0	30.4
30.27	5.0E-04	-0.03	77.1	1.86	7	73.0	39.5	112.4	18.1	42	58.2	1.0	-0.23	6.7	30.5
30.76	5.0E-03	0.00	94.6	1.34	9	89.6	25.3	114.9	13.3	42	64.1	1.0	-0.21	3.5	25.4
31.21	5.0E-04	0.00	87.7	1.55	7	83.9	31.2	115.1	15.1	42	62.2	1.0	-0.22	5.6	33.0
31.66	5.0E-04	0.02	76.9	2.24	7	74.4	50.0	124.4	20.1	42	58.8	1.0	-0.25	8.2	32.4
32.15	5.0E-03	-0.01	121.7	1.05	9	117.0	15.6	132.6	9.4	42	71.8	1.0	-0.21	2.3	30.9
32.64	5.0E-05	-0.02	67.6	2.59	7	66.8	62.3	129.0	23.1	40	55.7	10.0	-0.26	11.3	37.4
33.14	5.0E-02	-0.01	208.2	0.87	9	200.9	0.0	200.9	4.9	46	87.3	1.0	-0.24	0.0	39.3
33.63	5.0E-02	-0.01	217.9	0.66	9	211.7	0.0	211.7	3.3	46	88.8	1.0	-0.22	0.0	41.4
34.12	5.0E-02	-0.02	141.6	0.78	9	139.7	6.3	146.0	6.6	44	76.9	1.0	-0.20	0.8	28.1
34.61	5.0E-03	-0.03	69.2	1.12	9	70.4	24.8	95.2	14.8	40	57.2	1.0	-0.17	3.4	20.6
35.10	5.0E-05	-0.09	24.7	2.80	6	27.2	108.9	136.2	38.5	36	30.0	6.0	-0.16	10.7	21.3
35.60	5.0E-05	-0.07	17.1	2.72	6	19.9	79.4	99.3	45.0	32	30.0	6.0	-0.11	7.8	15.6
36.09	5.0E-06	-0.03	19.6	3.13	6	22.5	89.8	112.3	44.4	UnDef	UnDef	6.0	UnDef	11.0	22.0
36.58	5.0E-06	-0.02	17.7	3.61	4	20.7	82.7	103.4	48.7	UnDef	UnDef	6.0	UnDef	10.1	20.2
37.07	5.0E-06	-0.01	26.7	3.38	6	29.9	119.5	149.3	39.9	UnDef	UnDef	6.0	UnDef	14.6	29.2
37.57	5.0E-06	-0.04	29.6	3.63	6	33.0	131.8	164.8	39.2	UnDef	UnDef	6.0	UnDef	16.1	32.3
38.06	5.0E-06	-0.04	19.3	3.34	6	22.7	90.7	113.4	45.8	UnDef	UnDef	6.0	UnDef	11.1	22.2
38.55	5.0E-06	0.06	20.9	3.67	6	24.4	97.7	122.2	45.7	UnDef	UnDef	6.0	UnDef	12.0	23.9
39.04	5.0E-06	0.05	25.3	4.13	6	29.1	116.4	145.5	44.0	UnDef	UnDef	6.0	UnDef	14.2	28.5
39.53	5.0E-07	-0.01	26.8	4.81	1	30.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
40.03	5.0E-08	-0.06	22.5	5.12	1	26.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
40.52	5.0E-05	-0.04	41.5	3.18	6	46.5	120.5	167.1	32.0	38	45.3	6.0	-0.24	15.0	33.2
41.01	5.0E-05	-0.04	50.6	2.33	7	56.3	67.2	123.5	25.4	38	50.8	10.0	-0.21	11.4	33.4
41.50	5.0E-05	-0.01	31.6	2.84	6	36.5	138.5	175.0	34.6	36	38.4	6.0	-0.18	14.0	28.3
41.99	5.0E-06	0.10	23.5	3.18	6	28.1	112.4	140.5	41.3	UnDef	UnDef	6.0	UnDef	13.7	27.5
42.49	5.0E-05	0.24	25.7	2.82	6	30.6	122.4	152.9	38.0	36	33.3	6.0	-0.12	12.0	23.9
42.98	5.0E-06	0.16	26.3	3.29	6	31.4	125.7	157.1	39.8	UnDef	UnDef	6.0	UnDef	15.4	30.7
43.47	5.0E-06	0.03	22.7	4.02	4	27.7	110.8	138.5	45.5	UnDef	UnDef	6.0	UnDef	13.6	27.1
43.96	5.0E-06	0.10	24.9	3.32	6	30.2	121.0	151.2	40.9	UnDef	UnDef	6.0	UnDef	14.8	29.6
44.45	5.0E-06	0.20	25.4	3.18	6	30.9	123.5	154.4	39.9	UnDef	UnDef	6.0	UnDef	15.1	30.2
44.95	5.0E-03	0.06	99.4	0.99	9	112.3	19.7	132.0	10.6	42	70.6	1.0	-0.18	2.8	30.3
45.44	5.0E-02	0.00	198.0	0.95	9	221.8	4.2	226.0	5.7	46	90.1	1.0	-0.25	0.5	43.9
45.93	5.0E-02	0.00	209.8	1.18	9	236.2	11.0	247.3	6.7	46	91.9	1.0	-0.28	1.3	47.6
46.42	5.0E-02	0.00	202.2	1.27	9	229.1	15.3	244.4	7.3	46	91.0	1.0	-0.28	1.8	46.7

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3103
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-09
Engineer: L. HANDFELT
CPT Date: 03/22/09
CPT Time: 19:23
CPT File: 244C09.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -1.92 (ft): -6.3
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	14.2	0.20	1.42	8.6	6	114.6	0.21	0.01	0.20	2.00	5.4	10.8	1.12	0.00
0.74	15.9	0.20	1.26	8.6	6	114.6	0.24	0.02	0.22	2.00	6.1	12.2	1.25	0.08
1.23	36.6	0.20	0.55	8.9	7	117.8	0.27	0.03	0.24	2.00	11.7	23.4	UnDef	0.11
1.72	47.4	0.23	0.48	9.0	8	120.9	0.30	0.05	0.25	2.00	11.4	22.7	UnDef	0.15
2.21	41.9	0.21	0.49	9.1	7	117.8	0.33	0.06	0.27	2.00	13.4	26.7	UnDef	0.13
2.71	31.4	0.20	0.64	9.1	7	117.8	0.36	0.07	0.28	2.00	10.0	20.1	UnDef	0.10
3.20	30.6	0.20	0.66	9.1	7	117.8	0.38	0.09	0.30	2.00	9.8	19.5	UnDef	0.10
3.65	27.1	0.20	0.74	9.2	7	117.8	0.41	0.10	0.31	2.00	8.6	17.3	UnDef	0.09
4.10	43.1	0.29	0.68	10.6	7	117.8	0.44	0.11	0.32	2.00	13.8	27.5	UnDef	0.13
4.59	83.0	0.40	0.48	11.2	8	120.9	0.47	0.13	0.34	2.00	19.9	39.7	UnDef	0.45
5.09	78.5	0.63	0.81	10.5	8	120.9	0.50	0.14	0.36	2.00	18.8	37.6	UnDef	0.40
5.58	65.4	0.65	0.99	10.2	8	120.9	0.53	0.16	0.37	2.00	15.7	31.3	UnDef	0.26
6.07	85.5	0.73	0.86	9.9	8	120.9	0.56	0.17	0.39	2.00	20.5	40.9	UnDef	0.00
6.60	96.2	0.50	0.52	9.9	8	120.9	0.59	0.19	0.40	2.00	23.0	46.1	UnDef	0.00
7.14	52.7	0.55	1.04	9.9	7	117.8	0.62	0.20	0.42	2.00	16.8	33.6	UnDef	0.18
7.63	85.6	0.30	0.36	10.1	8	120.9	0.65	0.21	0.43	2.00	20.5	41.0	UnDef	0.00
8.12	63.9	0.55	0.86	9.9	8	120.9	0.68	0.23	0.45	2.00	15.3	30.6	UnDef	0.25
8.61	83.0	0.50	0.60	10.4	8	120.9	0.71	0.24	0.47	2.00	19.9	39.8	UnDef	0.45
9.10	93.8	0.40	0.43	12.0	8	120.9	0.74	0.26	0.48	1.97	22.5	44.2	UnDef	0.00
9.60	60.7	0.40	0.66	11.8	8	120.9	0.77	0.27	0.50	1.92	14.5	27.9	UnDef	0.22
10.09	34.6	0.48	1.38	11.5	7	117.8	0.80	0.29	0.51	1.87	11.0	20.6	UnDef	0.12
10.58	23.6	0.44	1.87	11.4	6	114.6	0.83	0.30	0.53	1.83	9.0	16.5	1.82	0.11
11.07	127.2	0.80	0.63	12.1	9	124.1	0.86	0.31	0.54	1.79	24.4	43.5	UnDef	0.00
11.56	185.4	0.89	0.48	12.9	9	124.1	0.89	0.33	0.56	1.74	35.5	61.9	UnDef	0.00
12.06	170.2	0.56	0.33	12.1	9	124.1	0.92	0.34	0.57	1.71	32.6	55.6	UnDef	0.00
12.55	96.4	0.70	0.73	11.2	8	120.9	0.95	0.36	0.59	1.67	23.1	38.6	UnDef	0.44
13.04	37.1	0.62	1.66	10.6	6	114.6	0.98	0.37	0.60	1.64	14.2	23.3	2.89	0.13
13.53	32.8	0.64	1.97	11.0	6	114.6	1.00	0.39	0.62	1.61	12.5	20.2	2.54	0.13
14.03	90.7	0.84	0.92	14.4	8	120.9	1.03	0.40	0.63	1.58	21.7	34.4	UnDef	0.34
14.52	137.7	0.95	0.69	15.2	9	124.1	1.06	0.41	0.65	1.56	26.4	41.0	UnDef	0.00
15.01	166.0	0.98	0.59	14.7	9	124.1	1.09	0.43	0.67	1.53	31.8	48.6	UnDef	0.00
15.50	119.5	1.02	0.86	13.3	8	120.9	1.12	0.44	0.68	1.50	28.6	43.0	UnDef	0.00
15.99	39.7	0.52	1.30	12.4	7	117.8	1.15	0.46	0.70	1.48	12.7	18.7	UnDef	0.12
16.49	26.2	0.50	1.89	12.0	6	114.6	1.18	0.47	0.71	1.46	10.0	14.6	2.00	0.11
16.98	115.6	0.56	0.48	11.9	9	124.1	1.21	0.48	0.73	1.44	22.1	31.8	UnDef	0.00
17.47	105.2	0.47	0.45	11.2	9	124.1	1.24	0.50	0.74	1.41	20.1	28.5	UnDef	0.37
17.96	46.3	0.52	1.13	10.7	7	117.8	1.27	0.51	0.76	1.39	14.8	20.6	UnDef	0.13
18.45	22.2	0.35	1.56	10.6	6	114.6	1.30	0.53	0.77	1.38	8.5	11.7	1.68	0.10
18.95	59.1	0.70	1.18	13.2	7	117.8	1.33	0.54	0.79	1.36	18.9	25.7	UnDef	0.16
19.44	82.5	0.83	1.01	13.6	8	120.9	1.36	0.55	0.80	1.34	19.7	26.5	UnDef	0.23
19.93	77.8	0.69	0.89	12.7	8	120.9	1.39	0.57	0.82	1.33	18.6	24.7	UnDef	0.20
20.42	97.2	0.72	0.74	12.0	8	120.9	1.42	0.58	0.83	1.31	23.3	30.5	UnDef	0.27

Gregg In Situ, Inc.
Run No: 03-1030-1241-3103
CPT File: 244C09.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	139.5	0.68	0.49	11.2	9	124.1	1.45	0.60	0.85	1.29	26.7	34.6	UnDef	0.00
21.41	126.2	1.32	1.05	10.2	8	120.9	1.48	0.61	0.87	1.28	30.2	38.6	UnDef	0.00
21.90	164.4	0.54	0.33	10.1	9	124.1	1.51	0.63	0.88	1.26	31.5	39.8	UnDef	0.00
22.39	68.9	0.61	0.88	9.7	8	120.9	1.54	0.64	0.90	1.25	16.5	20.6	UnDef	0.16
22.88	40.5	0.68	1.68	9.9	7	117.8	1.57	0.66	0.91	1.23	12.9	16.0	UnDef	0.13
23.38	27.8	0.54	1.96	10.3	6	114.6	1.60	0.67	0.93	1.22	10.7	13.0	2.10	0.13
23.87	14.8	0.23	1.54	10.9	6	114.6	1.62	0.68	0.94	1.21	5.7	6.9	1.06	0.14
24.36	14.0	0.24	1.73	22.8	5	114.6	1.65	0.70	0.96	1.20	6.7	8.0	0.99	0.13
24.85	13.8	0.21	1.49	31.0	6	114.6	1.68	0.71	0.97	1.19	5.3	6.3	0.97	0.13
25.34	15.5	0.31	2.00	33.8	5	114.6	1.71	0.72	0.99	1.18	7.4	8.7	1.10	0.15
25.84	15.7	0.35	2.22	36.7	5	114.6	1.74	0.73	1.00	1.17	7.5	8.8	1.12	0.15
26.33	17.6	0.38	2.14	40.1	5	114.6	1.77	0.75	1.02	1.16	8.4	9.7	1.26	0.17
26.82	17.9	0.38	2.13	42.8	5	114.6	1.79	0.76	1.03	1.15	8.6	9.9	1.29	0.17
27.31	17.8	0.33	1.87	46.5	6	114.6	1.82	0.77	1.05	1.14	6.8	7.8	1.28	0.17
27.80	19.9	0.46	2.29	52.1	6	114.6	1.85	0.79	1.06	1.13	7.6	8.6	1.45	0.20
28.30	131.0	0.82	0.62	58.1	9	124.1	1.88	0.80	1.08	1.12	25.1	28.1	UnDef	0.35
28.79	213.5	1.87	0.88	42.3	9	124.1	1.91	0.81	1.10	1.11	40.9	45.3	UnDef	0.00
29.28	148.2	1.62	1.10	39.1	8	120.9	1.94	0.83	1.11	1.10	35.5	39.0	UnDef	0.00
29.77	161.8	1.32	0.82	36.9	9	124.1	1.97	0.84	1.13	1.09	31.0	33.7	UnDef	0.00
30.27	156.9	0.62	0.40	34.4	9	124.1	2.00	0.86	1.14	1.08	30.1	32.4	UnDef	0.00
30.76	36.4	0.94	2.59	31.7	6	114.6	2.03	0.87	1.16	1.07	13.9	14.9	2.75	0.25
31.21	18.9	0.33	1.77	36.2	6	114.6	2.06	0.88	1.17	1.06	7.3	7.7	1.35	0.17
31.66	16.9	0.20	1.20	48.7	6	114.6	2.08	0.90	1.19	1.06	6.5	6.8	1.19	0.14
32.15	16.8	0.22	1.33	63.6	6	114.6	2.11	0.91	1.20	1.05	6.4	6.8	1.18	0.14
32.64	18.0	0.34	1.87	71.9	6	114.6	2.14	0.92	1.22	1.04	6.9	7.2	1.27	0.15
33.14	21.0	0.43	2.03	82.6	6	114.6	2.17	0.94	1.23	1.03	8.0	8.3	1.50	0.19
33.63	21.5	0.40	1.86	105.8	6	114.6	2.19	0.95	1.25	1.03	8.2	8.5	1.54	0.20
34.12	26.0	0.45	1.75	151.2	6	114.6	2.22	0.96	1.26	1.02	10.0	10.2	1.90	0.20
34.61	63.0	0.88	1.40	102.2	7	117.8	2.25	0.97	1.28	1.01	20.1	20.4	UnDef	0.16
35.10	138.5	1.19	0.86	83.8	9	124.1	2.28	0.99	1.29	1.01	26.5	26.7	UnDef	0.37
35.60	221.8	1.43	0.64	74.0	9	124.1	2.31	1.00	1.31	1.00	42.5	42.4	UnDef	0.00
36.09	64.5	1.53	2.37	66.7	6	114.6	2.34	1.02	1.32	0.99	24.7	24.5	4.97	0.26
36.58	27.6	0.49	1.78	75.6	6	114.6	2.37	1.03	1.34	0.99	10.6	10.4	2.02	0.23
37.07	24.2	0.38	1.58	145.2	6	114.6	2.40	1.04	1.35	0.98	9.3	9.1	1.74	0.22
37.57	26.2	0.37	1.39	216.7	6	114.6	2.43	1.06	1.37	0.97	10.1	9.8	1.91	0.16
38.06	25.1	0.54	2.14	238.3	6	114.6	2.45	1.07	1.38	0.97	9.6	9.3	1.81	0.23
38.55	25.1	0.57	2.26	218.8	6	114.6	2.48	1.08	1.40	0.96	9.6	9.2	1.81	0.23
39.04	23.2	0.60	2.60	212.3	5	114.6	2.51	1.09	1.42	0.96	11.1	10.6	1.65	0.20
39.53	25.4	0.52	2.04	257.7	6	114.6	2.54	1.11	1.43	0.95	9.7	9.2	1.83	0.23
40.03	26.9	0.56	2.07	249.9	6	114.6	2.57	1.12	1.45	0.94	10.3	9.7	1.95	0.26
40.52	24.0	0.49	2.03	226.1	6	114.6	2.59	1.13	1.46	0.94	9.2	8.6	1.71	0.21
41.01	21.3	0.45	2.11	208.4	6	114.6	2.62	1.15	1.48	0.93	8.2	7.6	1.49	0.17
41.50	23.1	0.47	2.04	223.5	6	114.6	2.65	1.16	1.49	0.93	8.8	8.2	1.63	0.19
41.99	25.2	0.56	2.22	213.2	6	114.6	2.68	1.17	1.51	0.92	9.6	8.9	1.80	0.22
42.49	24.1	0.56	2.33	211.4	6	114.6	2.71	1.18	1.52	0.92	9.2	8.5	1.71	0.20
42.98	23.3	0.43	1.84	230.9	6	114.6	2.74	1.20	1.54	0.91	8.9	8.1	1.64	0.18
43.47	22.2	0.40	1.80	232.2	6	114.6	2.76	1.21	1.55	0.91	8.5	7.7	1.56	0.17
43.96	22.8	0.48	2.09	234.0	6	114.6	2.79	1.22	1.57	0.90	8.7	7.9	1.60	0.18
44.45	22.6	0.48	2.11	240.7	6	114.6	2.82	1.24	1.58	0.90	8.7	7.8	1.59	0.17
44.95	22.7	0.42	1.84	272.6	6	114.6	2.85	1.25	1.60	0.90	8.7	7.8	1.59	0.17
45.44	24.4	0.46	1.90	268.6	6	114.6	2.88	1.26	1.62	0.89	9.3	8.3	1.72	0.19
45.93	25.1	0.49	1.95	248.1	6	114.6	2.90	1.27	1.63	0.89	9.6	8.5	1.77	0.20
46.42	24.7	0.52	2.09	237.2	6	114.6	2.93	1.29	1.65	0.88	9.4	8.3	1.74	0.19
46.92	24.2	0.48	1.99	237.2	6	114.6	2.96	1.30	1.66	0.88	9.3	8.1	1.70	0.18
47.41	24.5	0.44	1.80	308.4	6	114.6	2.99	1.31	1.68	0.87	9.4	8.2	1.72	0.19
47.90	24.7	0.43	1.73	350.3	6	114.6	3.02	1.33	1.69	0.87	9.5	8.2	1.74	0.19
48.39	24.1	0.44	1.82	349.1	6	114.6	3.05	1.34	1.71	0.86	9.2	8.0	1.69	0.18
48.88	23.3	0.39	1.69	326.8	6	114.6	3.07	1.35	1.72	0.86	8.9	7.7	1.62	0.17
49.38	22.6	0.42	1.87	327.6	6	114.6	3.10	1.36	1.74	0.86	8.7	7.4	1.56	0.16
49.87	22.4	0.38	1.71	303.8	6	114.6	3.13	1.38	1.75	0.85	8.6	7.3	1.54	0.16
50.36	20.7	0.35	1.67	275.4	6	114.6	3.16	1.39	1.77	0.85	7.9	6.7	1.40	0.14
50.85	21.2	0.34	1.58	289.3	6	114.6	3.19	1.40	1.78	0.84	8.1	6.9	1.44	0.14
51.34	21.8	0.36	1.67	281.8	6	114.6	3.22	1.42	1.80	0.84	8.4	7.0	1.49	0.15
51.84	22.2	0.39	1.75	256.5	6	114.6	3.24	1.43	1.82	0.84	8.5	7.1	1.52	0.15

Gregg In Situ, Inc.
Run No: 03-1030-1241-3103
CPT File: 244C09.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
52.33	22.9	0.38	1.67	274.8	6	114.6	3.27	1.44	1.83	0.83	8.8	7.3	1.57	0.16
52.82	24.6	0.43	1.74	297.2	6	114.6	3.30	1.45	1.85	0.83	9.4	7.8	1.71	0.17
53.31	25.7	0.44	1.71	320.8	6	114.6	3.33	1.47	1.86	0.83	9.8	8.1	1.79	0.18
53.81	24.9	0.44	1.77	318.4	6	114.6	3.36	1.48	1.88	0.82	9.6	7.9	1.73	0.17
54.30	27.0	0.45	1.68	368.0	6	114.6	3.38	1.49	1.89	0.82	10.3	8.5	1.89	0.20
54.79	26.4	0.46	1.74	360.3	6	114.6	3.41	1.51	1.91	0.82	10.1	8.2	1.84	0.19
55.28	26.9	0.45	1.67	357.4	6	114.6	3.44	1.52	1.92	0.81	10.3	8.4	1.88	0.19
55.77	28.0	0.48	1.73	372.2	6	114.6	3.47	1.53	1.94	0.81	10.7	8.7	1.96	0.21
56.27	44.4	0.80	1.81	256.5	7	117.8	3.50	1.54	1.95	0.80	14.2	11.4	UnDef	0.31
56.76	32.8	0.77	2.35	234.3	6	114.6	3.53	1.56	1.97	0.80	12.6	10.1	2.34	0.28
57.25	30.5	0.60	1.98	254.9	6	114.6	3.55	1.57	1.98	0.80	11.7	9.3	2.15	0.24
57.74	37.9	0.78	2.05	222.1	6	114.6	3.58	1.58	2.00	0.79	14.5	11.5	2.74	0.38
58.23	56.3	1.37	2.43	165.7	6	114.6	3.61	1.60	2.01	0.79	21.6	17.1	4.22	0.00
58.73	54.2	1.63	3.00	98.6	6	114.6	3.64	1.61	2.03	0.79	20.8	16.4	4.05	0.00
59.22	37.8	0.74	1.95	116.6	6	114.6	3.67	1.62	2.05	0.79	14.5	11.4	2.73	0.36

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3103
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-09
Engineer: L. HANDFELT
CPT Date: 03/22/09
CPT Time: 19:23
CPT File: 244C09.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -1.92 (ft): -6.3
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-05	0.00	1000.0	1.44	12	27.1	UnDef	UnDef	0.0	50	83.0	10.0	-0.45	UnDef	UnDef
0.74	5.0E-05	0.00	813.0	1.28	9	30.4	0.0	30.4	2.0	50	70.5	10.0	-0.42	0.0	12.2
1.23	5.0E-04	0.00	1000.0	0.55	10	70.2	0.0	70.2	0.0	50	87.0	1.0	-0.34	0.0	23.4
1.72	5.0E-03	0.00	1000.0	0.48	10	90.9	0.0	90.9	0.0	50	89.3	1.0	-0.33	0.0	22.7
2.21	5.0E-04	0.00	686.9	0.49	10	80.2	0.0	80.2	0.0	50	81.9	1.0	-0.30	0.0	26.7
2.71	5.0E-04	0.00	419.6	0.64	10	60.2	0.0	60.2	0.8	48	70.8	1.0	-0.28	0.0	20.1
3.20	5.0E-04	0.00	344.3	0.66	9	58.6	0.0	58.6	1.5	48	67.6	1.0	-0.26	0.0	19.5
3.65	5.0E-04	0.00	266.0	0.75	9	51.8	0.0	51.8	3.0	46	62.2	1.0	-0.25	0.0	17.3
4.10	5.0E-04	0.00	379.0	0.68	9	82.6	0.0	82.6	1.3	48	73.8	1.0	-0.27	0.0	27.5
4.59	5.0E-03	0.00	651.5	0.48	10	158.9	0.0	158.9	0.0	50	90.9	1.0	-0.29	0.0	39.7
5.09	5.0E-03	0.00	553.3	0.81	9	150.4	0.0	150.4	0.9	50	87.8	1.0	-0.33	0.0	37.6
5.58	5.0E-03	0.00	417.6	1.00	9	125.3	0.0	125.3	2.7	48	81.2	1.0	-0.32	0.0	31.3
6.07	5.0E-03	0.00	499.9	0.86	9	163.7	0.0	163.7	1.4	48	87.6	1.0	-0.32	0.0	40.9
6.60	5.0E-03	0.00	515.7	0.52	10	184.3	0.0	184.3	0.0	48	89.7	1.0	-0.28	0.0	46.1
7.14	5.0E-04	0.00	259.4	1.06	9	100.9	0.0	100.9	4.9	46	71.3	1.0	-0.28	0.0	33.6
7.63	5.0E-03	0.00	395.9	0.36	10	164.0	0.0	164.0	0.0	48	84.3	1.0	-0.22	0.0	41.0
8.12	5.0E-03	0.00	276.0	0.87	9	122.4	0.0	122.4	3.6	46	74.9	1.0	-0.27	0.0	30.6
8.61	5.0E-03	0.00	338.2	0.60	9	159.1	0.0	159.1	1.2	48	81.6	1.0	-0.25	0.0	39.8
9.10	5.0E-03	0.00	361.0	0.43	10	179.7	0.0	179.7	0.0	48	84.3	1.0	-0.23	0.0	44.2
9.60	5.0E-03	0.00	220.2	0.67	9	113.9	0.0	113.9	3.4	46	71.0	1.0	-0.22	0.0	27.9
10.09	5.0E-04	0.00	118.1	1.41	9	63.3	14.0	77.3	11.8	42	54.2	1.0	-0.24	2.6	23.3
10.58	5.0E-05	-0.01	76.1	1.94	7	42.2	24.2	66.4	18.7	40	42.6	10.0	-0.23	4.9	21.4
11.07	5.0E-02	0.00	402.9	0.63	10	222.3	0.0	222.3	0.8	48	90.2	1.0	-0.27	0.0	43.5
11.56	5.0E-02	0.00	561.4	0.48	10	316.5	0.0	316.5	0.0	50	95.0	1.0	-0.28	0.0	61.9
12.06	5.0E-02	0.00	492.5	0.33	10	284.1	0.0	284.1	0.0	48	95.0	1.0	-0.23	0.0	55.6
12.55	5.0E-03	0.00	266.3	0.74	9	157.6	0.0	157.6	2.9	46	80.3	1.0	-0.25	0.0	38.6
13.04	5.0E-05	-0.01	97.1	1.71	7	59.5	21.9	81.4	15.1	42	52.4	10.0	-0.24	4.7	28.0
13.53	5.0E-05	-0.01	82.5	2.03	7	51.7	28.4	80.1	18.3	42	48.3	10.0	-0.25	5.8	26.0
14.03	5.0E-03	0.00	225.1	0.93	9	140.7	0.0	140.7	4.9	46	77.1	1.0	-0.26	0.0	34.4
14.52	5.0E-02	0.00	330.4	0.69	9	209.5	0.0	209.5	1.8	48	88.5	1.0	-0.26	0.0	41.0
15.01	5.0E-02	0.00	384.7	0.59	10	248.1	0.0	248.1	0.7	48	93.3	1.0	-0.26	0.0	48.6
15.50	5.0E-03	0.00	266.9	0.86	9	175.6	0.0	175.6	3.7	46	83.4	1.0	-0.27	0.0	43.0
15.99	5.0E-04	-0.01	84.3	1.34	9	57.4	19.0	76.5	14.3	42	51.4	1.0	-0.20	3.5	22.2
16.49	5.0E-05	-0.01	53.2	1.98	7	37.4	34.4	71.8	23.0	40	39.1	10.0	-0.20	6.3	20.9
16.98	5.0E-02	0.00	236.1	0.49	9	162.5	0.0	162.5	1.8	46	81.2	1.0	-0.20	0.0	31.8
17.47	5.0E-02	0.00	208.0	0.46	9	145.6	0.0	145.6	2.1	46	78.0	1.0	-0.18	0.0	28.5
17.96	5.0E-04	-0.01	87.5	1.16	9	63.2	16.8	79.9	12.9	42	54.1	1.0	-0.19	3.1	23.7
18.45	5.0E-05	-0.02	39.7	1.65	7	30.0	33.6	63.6	24.8	38	32.7	6.0	-0.15	5.8	17.5
18.95	5.0E-04	-0.01	106.9	1.21	9	78.7	16.3	94.9	11.4	42	60.4	1.0	-0.21	3.1	28.7
19.44	5.0E-03	0.00	146.3	1.03	9	108.4	9.4	117.8	8.0	44	69.6	1.0	-0.23	1.4	27.9
19.93	5.0E-03	-0.01	134.2	0.91	9	100.9	8.2	109.1	7.8	44	67.5	1.0	-0.21	1.2	25.9
20.42	5.0E-03	0.00	164.1	0.75	9	124.5	1.6	126.1	5.5	44	73.6	1.0	-0.21	0.2	30.7

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-02	0.00	230.8	0.49	9	176.6	0.0	176.6	2.0	46	83.6	1.0	-0.20	0.0	34.6
21.41	5.0E-03	0.00	203.5	1.06	9	157.7	5.2	162.9	6.2	46	80.3	1.0	-0.26	0.8	39.4
21.90	5.0E-02	0.00	259.5	0.33	10	203.1	0.0	203.1	0.3	46	87.6	1.0	-0.18	0.0	39.8
22.39	5.0E-03	-0.01	104.9	0.90	9	84.2	11.8	96.0	9.6	42	62.3	1.0	-0.18	1.7	22.3
22.88	5.0E-04	-0.02	59.3	1.75	7	48.9	34.0	82.9	20.3	40	46.8	1.0	-0.19	5.5	21.5
23.38	5.0E-05	-0.02	39.2	2.07	7	33.3	50.0	83.3	27.5	38	35.8	6.0	-0.17	7.8	20.9
23.87	5.0E-05	-0.05	19.4	1.73	6	17.6	70.4	87.9	36.6	34	30.0	6.0	-0.08	6.9	13.8
24.36	5.0E-06	-0.02	17.8	1.96	6	16.4	65.7	82.1	39.8	UnDef	UnDef	6.0	UnDef	8.0	16.1
24.85	5.0E-05	0.00	17.1	1.70	6	16.0	64.1	80.1	38.7	32	30.0	6.0	-0.06	6.3	12.6
25.34	5.0E-06	0.00	19.1	2.24	6	17.8	71.4	89.2	40.2	UnDef	UnDef	6.0	UnDef	8.7	17.5
25.84	5.0E-06	0.01	19.0	2.50	6	18.0	71.8	89.8	41.7	UnDef	UnDef	6.0	UnDef	8.8	17.6
26.33	5.0E-06	0.01	21.2	2.38	6	19.9	79.6	99.5	39.0	UnDef	UnDef	6.0	UnDef	9.7	19.5
26.82	5.0E-06	0.02	21.3	2.37	6	20.1	80.6	100.7	38.9	UnDef	UnDef	6.0	UnDef	9.9	19.7
27.31	5.0E-05	0.03	20.7	2.08	6	19.8	79.3	99.2	37.7	34	30.0	6.0	-0.09	7.8	15.5
27.80	5.0E-05	0.03	23.0	2.52	6	22.0	88.0	110.0	38.3	34	30.0	6.0	-0.13	8.6	17.2
28.30	5.0E-02	0.01	161.6	0.63	9	143.4	0.0	143.4	4.7	44	77.6	1.0	-0.19	0.0	28.1
28.79	5.0E-02	0.00	259.8	0.88	9	231.5	0.0	231.5	3.9	46	91.3	1.0	-0.26	0.0	45.3
29.28	5.0E-03	0.00	176.3	1.11	9	159.2	10.4	169.6	7.3	44	80.6	1.0	-0.25	1.6	40.5
29.77	5.0E-02	0.00	189.4	0.83	9	172.3	0.8	173.2	5.2	44	82.9	1.0	-0.23	0.1	33.8
30.27	5.0E-02	0.00	180.4	0.40	9	165.7	0.0	165.7	2.4	44	81.8	1.0	-0.16	0.0	32.4
30.76	5.0E-05	0.00	39.3	2.74	6	38.1	84.4	122.5	30.8	38	39.6	6.0	-0.20	11.3	26.2
31.21	5.0E-05	0.00	19.1	1.98	6	19.7	78.8	98.5	38.6	34	30.0	6.0	-0.08	7.7	15.4
31.66	5.0E-05	0.02	16.6	1.37	6	17.5	70.0	87.4	36.8	32	30.0	6.0	-0.04	6.8	13.7
32.15	5.0E-05	0.05	16.2	1.52	6	17.3	69.0	86.3	38.4	32	30.0	6.0	-0.04	6.8	13.5
32.64	5.0E-05	0.06	17.2	2.12	6	18.3	73.3	91.6	41.4	32	30.0	6.0	-0.07	7.2	14.4
33.14	5.0E-05	0.07	20.1	2.27	6	21.2	84.9	106.1	39.3	34	30.0	6.0	-0.09	8.3	16.6
33.63	5.0E-05	0.11	20.3	2.07	6	21.6	86.4	108.0	37.9	34	30.0	6.0	-0.08	8.5	16.9
34.12	5.0E-05	0.15	24.8	1.91	6	26.0	82.9	108.9	33.5	34	30.0	6.0	-0.09	9.2	19.4
34.61	5.0E-04	0.03	62.4	1.45	7	62.5	33.4	95.9	18.1	40	53.8	1.0	-0.17	5.7	26.1
35.10	5.0E-02	0.01	137.8	0.87	9	136.3	9.4	145.7	7.4	44	76.2	1.0	-0.20	1.1	27.8
35.60	5.0E-02	0.00	218.7	0.65	9	216.7	0.0	216.7	3.3	46	89.4	1.0	-0.22	0.0	42.4
36.09	5.0E-05	0.01	61.1	2.46	7	62.6	62.1	124.7	23.7	40	53.8	10.0	-0.24	11.1	35.6
36.58	5.0E-05	0.04	24.5	1.95	6	26.6	90.9	117.5	34.0	34	30.0	6.0	-0.10	9.8	20.2
37.07	5.0E-05	0.15	20.9	1.76	6	23.2	92.6	115.8	35.5	34	30.0	6.0	-0.07	9.1	18.1
37.57	5.0E-05	0.23	22.6	1.54	7	25.0	69.7	94.7	32.6	34	30.0	6.0	-0.05	8.3	18.1
38.06	5.0E-05	0.27	21.1	2.37	6	23.7	94.8	118.6	39.0	34	30.0	6.0	-0.08	9.3	18.6
38.55	5.0E-05	0.24	20.9	2.51	6	23.6	94.4	118.0	40.0	34	30.0	6.0	-0.08	9.2	18.5
39.04	5.0E-06	0.25	18.9	2.92	6	21.7	86.7	108.4	44.1	UnDef	UnDef	6.0	UnDef	10.6	21.2
39.53	5.0E-05	0.29	20.6	2.27	6	23.6	94.3	117.9	38.9	34	30.0	6.0	-0.07	9.2	18.5
40.03	5.0E-05	0.26	21.7	2.29	6	24.9	99.4	124.3	38.1	34	30.0	6.0	-0.08	9.7	19.5
40.52	5.0E-05	0.26	18.9	2.28	6	22.1	88.4	110.4	40.5	34	30.0	6.0	-0.06	8.6	17.3
41.01	5.0E-05	0.27	16.3	2.41	6	19.5	77.9	97.4	44.2	32	30.0	6.0	-0.05	7.6	15.2
41.50	5.0E-05	0.27	17.6	2.31	6	21.0	83.8	104.8	42.1	32	30.0	6.0	-0.05	8.2	16.4
41.99	5.0E-05	0.23	19.2	2.48	6	22.7	91.0	113.7	41.5	34	30.0	6.0	-0.08	8.9	17.8
42.49	5.0E-05	0.24	18.1	2.62	6	21.7	86.7	108.4	43.4	32	30.0	6.0	-0.07	8.5	17.0
42.98	5.0E-05	0.28	17.2	2.08	6	20.8	83.2	104.1	41.2	32	30.0	6.0	-0.04	8.1	16.3
43.47	5.0E-05	0.29	16.1	2.05	6	19.8	79.1	98.9	42.2	32	30.0	6.0	-0.03	7.7	15.5
43.96	5.0E-05	0.29	16.4	2.38	6	20.2	80.7	100.9	43.9	32	30.0	6.0	-0.04	7.9	15.8
44.45	5.0E-05	0.30	16.0	2.41	6	19.9	79.7	99.6	44.5	32	30.0	6.0	-0.04	7.8	15.6
44.95	5.0E-05	0.35	15.9	2.10	6	19.9	79.6	99.4	42.8	32	30.0	6.0	-0.02	7.8	15.6
45.44	5.0E-05	0.32	17.0	2.15	6	21.2	84.9	106.1	41.8	32	30.0	6.0	-0.04	8.3	16.6
45.93	5.0E-05	0.28	17.4	2.20	6	21.7	86.9	108.6	41.7	32	30.0	6.0	-0.05	8.5	17.0
46.42	5.0E-05	0.27	16.9	2.38	6	21.3	85.1	106.4	43.3	32	30.0	6.0	-0.05	8.3	16.7
46.92	5.0E-05	0.27	16.3	2.27	6	20.8	83.1	103.9	43.3	32	30.0	6.0	-0.04	8.1	16.3
47.41	5.0E-05	0.37	16.4	2.06	6	20.9	83.5	104.4	42.0	32	30.0	6.0	-0.02	8.2	16.4
47.90	5.0E-05	0.43	16.4	1.97	6	21.0	84.0	105.0	41.4	32	30.0	6.0	-0.01	8.2	16.4
48.39	5.0E-05	0.44	15.7	2.09	6	20.4	81.6	102.0	42.9	32	30.0	6.0	0.00	8.0	16.0
48.88	5.0E-05	0.42	14.9	1.95	6	19.6	78.4	98.0	43.0	32	30.0	6.0	0.00	7.7	15.3
49.38	5.0E-05	0.43	14.3	2.16	6	19.0	75.9	94.8	45.3	32	30.0	6.0	0.00	7.4	14.8
49.87	5.0E-05	0.40	14.0	1.99	6	18.7	74.6	93.3	44.7	32	30.0	6.0	0.00	7.3	14.6
50.36	5.0E-05	0.39	12.6	1.98	6	17.1	68.6	85.7	46.8	32	30.0	6.0	0.01	6.7	13.4
50.85	5.0E-05	0.40	12.8	1.86	6	17.5	70.1	87.6	45.6	32	30.0	6.0	0.02	6.9	13.7
51.34	5.0E-05	0.38	13.1	1.96	6	17.9	71.8	89.7	45.7	32	30.0	6.0	0.01	7.0	14.1
51.84	5.0E-05	0.33	13.3	2.05	6	18.2	72.7	90.9	46.2	32	30.0	6.0	0.00	7.1	14.2

Gregg In Situ, Inc.
Run No: 03-1030-1241-3103
CPT File: 244C09.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
52.33	5.0E-05	0.34	13.6	1.94	6	18.6	74.5	93.2	44.9	32	30.0	6.0	0.00	7.3	14.6
52.82	5.0E-05	0.35	14.7	2.00	6	20.0	80.0	100.0	43.8	32	30.0	6.0	-0.01	7.8	15.7
53.31	5.0E-05	0.36	15.2	1.97	6	20.7	83.0	103.7	42.8	32	30.0	6.0	-0.01	8.1	16.2
53.81	5.0E-05	0.37	14.6	2.05	6	20.1	80.3	100.3	44.2	32	30.0	6.0	-0.01	7.9	15.7
54.30	5.0E-05	0.41	15.8	1.92	6	21.6	86.5	108.1	41.7	32	30.0	6.0	-0.01	8.5	16.9
54.79	5.0E-05	0.41	15.3	2.00	6	21.1	84.3	105.3	42.9	32	30.0	6.0	0.00	8.2	16.5
55.28	5.0E-05	0.39	15.5	1.91	6	21.4	85.5	106.9	42.1	32	30.0	6.0	-0.01	8.4	16.7
55.77	5.0E-05	0.39	16.0	1.97	6	22.2	88.6	110.8	41.8	32	30.0	6.0	-0.01	8.7	17.3
56.27	5.0E-04	0.15	26.5	1.96	6	35.0	100.0	135.0	32.7	36	37.2	1.0	-0.10	9.9	21.3
56.76	5.0E-05	0.18	18.8	2.64	6	25.7	102.9	128.7	42.7	34	30.0	6.0	-0.09	10.1	20.1
57.25	5.0E-05	0.22	17.1	2.24	6	23.8	95.2	119.0	42.2	32	30.0	6.0	-0.06	9.3	18.6
57.74	5.0E-05	0.14	21.7	2.27	6	29.4	117.8	147.2	38.0	34	32.2	6.0	-0.09	11.5	23.1
58.23	5.0E-05	0.06	33.0	2.60	6	43.6	124.7	168.3	32.7	36	43.5	6.0	-0.17	14.7	31.8
58.73	5.0E-05	0.02	31.5	3.22	6	41.8	167.4	209.2	36.4	36	42.3	6.0	-0.20	16.4	32.8
59.22	5.0E-05	0.05	21.0	2.16	6	29.0	116.1	145.1	37.9	34	31.8	6.0	-0.10	11.4	22.7

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3125
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-10
Engineer: L. HANDFELT
CPT Date: 03/14/10
CPT Time: 12:54
CPT File: 244C10.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -3.35 (ft): -11.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	15.9	0.20	1.26	8.8	6	114.6	0.36	0.01	0.35	2.00	6.1	12.2	1.24	0.08
0.74	11.8	0.20	1.70	7.9	5	114.6	0.39	0.02	0.37	2.00	5.6	11.3	0.91	0.00
1.23	7.3	0.20	2.74	24.3	4	114.6	0.41	0.03	0.38	2.00	4.7	9.3	0.55	0.00
1.72	19.8	0.20	1.01	19.1	6	114.6	0.44	0.04	0.40	2.00	7.6	15.2	1.55	0.09
2.21	22.8	0.20	0.88	17.7	6	114.6	0.47	0.06	0.41	2.00	8.7	17.5	1.79	0.09
2.71	9.6	0.20	2.09	20.8	5	114.6	0.50	0.07	0.43	2.00	4.6	9.2	0.73	0.00
3.20	4.6	0.20	4.37	42.6	3	111.4	0.53	0.08	0.44	2.00	4.4	8.8	0.32	0.09
3.65	20.2	0.20	0.99	39.6	6	114.6	0.55	0.09	0.46	2.00	7.7	15.5	1.57	0.09
4.10	61.4	0.41	0.66	19.5	8	120.9	0.58	0.11	0.47	2.00	14.7	29.4	UnDef	0.23
4.59	106.4	0.62	0.58	4.7	9	124.1	0.61	0.12	0.49	2.00	20.4	40.7	UnDef	0.00
5.09	135.1	0.71	0.52	4.7	9	124.1	0.64	0.14	0.50	2.00	25.9	51.7	UnDef	0.00
5.58	137.6	0.87	0.64	17.0	9	124.1	0.67	0.15	0.52	2.00	26.3	52.7	UnDef	0.00
6.07	133.0	0.79	0.59	18.1	9	124.1	0.70	0.17	0.53	2.00	25.5	50.9	UnDef	0.00
6.60	136.3	0.85	0.63	20.0	9	124.1	0.73	0.18	0.55	2.00	26.1	52.2	UnDef	0.00
7.14	133.6	1.03	0.77	12.6	9	124.1	0.77	0.20	0.57	2.00	25.6	51.2	UnDef	0.00
7.63	145.3	1.20	0.83	14.1	9	124.1	0.80	0.22	0.58	2.00	27.8	55.7	UnDef	0.00
8.12	78.0	1.22	1.56	12.8	7	117.8	0.83	0.23	0.60	2.00	24.9	49.8	UnDef	0.42
8.61	40.9	0.94	2.31	13.4	6	114.6	0.86	0.24	0.61	2.00	15.6	31.3	3.20	0.18
9.10	60.8	0.66	1.09	8.8	7	117.8	0.88	0.26	0.63	1.98	19.4	38.4	UnDef	0.24
9.60	154.1	1.19	0.77	16.5	9	124.1	0.91	0.27	0.64	1.92	29.5	56.8	UnDef	0.00
10.09	176.3	1.48	0.84	23.3	9	124.1	0.94	0.29	0.66	1.87	33.8	63.2	UnDef	0.00
10.58	183.2	1.95	1.07	24.8	9	124.1	0.97	0.30	0.67	1.82	35.1	64.0	UnDef	0.00
11.07	181.5	1.86	1.02	25.5	9	124.1	1.01	0.32	0.69	1.78	34.8	61.8	UnDef	0.00
11.56	180.0	1.68	0.94	21.5	9	124.1	1.04	0.33	0.70	1.74	34.5	59.9	UnDef	0.00
12.06	163.8	1.59	0.97	20.4	9	124.1	1.07	0.35	0.72	1.70	31.4	53.3	UnDef	0.00
12.55	110.3	1.30	1.18	19.3	8	120.9	1.10	0.36	0.74	1.66	26.4	44.0	UnDef	0.00
13.04	56.1	0.92	1.65	17.8	7	117.8	1.13	0.38	0.75	1.63	17.9	29.2	UnDef	0.20
13.53	24.9	0.85	3.41	9.0	5	114.6	1.15	0.39	0.77	1.60	11.9	19.1	1.90	0.18
14.03	42.3	0.94	2.21	20.0	6	114.6	1.18	0.40	0.78	1.58	16.2	25.6	3.29	0.17
14.52	67.3	1.08	1.60	27.5	7	117.8	1.21	0.41	0.80	1.55	21.5	33.4	UnDef	0.24
15.01	131.3	1.10	0.84	22.1	9	124.1	1.24	0.43	0.81	1.53	25.1	38.4	UnDef	0.00
15.50	150.1	1.61	1.08	22.8	8	120.9	1.27	0.44	0.83	1.50	35.9	53.9	UnDef	0.00
15.99	128.1	1.91	1.49	20.5	8	120.9	1.30	0.46	0.84	1.48	30.7	45.3	UnDef	0.00
16.49	128.9	2.30	1.78	28.4	7	117.8	1.33	0.47	0.86	1.46	41.1	59.9	UnDef	0.00
16.98	120.3	2.09	1.74	18.0	7	117.8	1.36	0.49	0.87	1.44	38.4	55.1	UnDef	0.00
17.47	143.0	1.71	1.20	13.1	8	120.9	1.39	0.50	0.89	1.41	34.2	48.4	UnDef	0.00
17.96	73.3	0.98	1.34	8.0	7	117.8	1.42	0.51	0.90	1.40	23.4	32.7	UnDef	0.23
18.45	20.4	0.60	2.95	7.0	5	114.6	1.45	0.53	0.92	1.38	9.8	13.4	1.51	0.26
18.95	10.1	0.21	2.06	11.0	5	114.6	1.47	0.54	0.94	1.36	4.8	6.6	0.69	0.11
19.44	10.5	0.20	1.91	19.3	5	114.6	1.50	0.55	0.95	1.35	5.0	6.7	0.72	0.11
19.93	40.9	0.48	1.17	55.2	7	117.8	1.53	0.57	0.97	1.33	13.0	17.3	UnDef	0.12
20.42	97.4	0.78	0.80	35.7	8	120.9	1.56	0.58	0.98	1.31	23.3	30.6	UnDef	0.28

Gregg In Situ, Inc.
Run No: 03-1030-1241-3125
CPT File: 244C10.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	38.0	0.98	2.57	36.2	6	114.6	1.59	0.59	1.00	1.30	14.6	18.9	2.91	0.18
21.41	40.2	0.58	1.44	88.2	7	117.8	1.62	0.61	1.01	1.28	12.8	16.5	UnDef	0.12
21.90	29.1	0.67	2.29	47.2	6	114.6	1.65	0.62	1.03	1.27	11.1	14.2	2.20	0.15
22.39	28.1	0.44	1.56	67.0	6	114.6	1.68	0.63	1.04	1.26	10.8	13.5	2.11	0.11
22.88	26.1	0.74	2.83	65.3	5	114.6	1.70	0.65	1.06	1.24	12.5	15.6	1.95	0.25
23.38	120.9	1.38	1.14	44.1	8	120.9	1.73	0.66	1.07	1.23	28.9	35.7	UnDef	0.43
23.87	170.0	1.87	1.10	26.8	8	120.9	1.76	0.67	1.09	1.22	40.7	49.6	UnDef	0.00
24.36	178.9	2.04	1.14	16.0	8	120.9	1.79	0.69	1.10	1.21	42.8	51.6	UnDef	0.00
24.85	131.1	2.27	1.73	21.4	7	117.8	1.82	0.70	1.12	1.19	41.9	50.0	UnDef	0.00
25.34	115.9	2.23	1.92	37.3	7	117.8	1.85	0.72	1.13	1.18	37.0	43.7	UnDef	0.00
25.84	176.1	1.91	1.09	24.1	9	124.1	1.88	0.73	1.15	1.17	33.7	39.5	UnDef	0.00
26.33	191.7	1.91	0.99	7.7	9	124.1	1.91	0.75	1.17	1.16	36.7	42.5	UnDef	0.00
26.82	147.5	1.45	0.98	4.9	9	124.1	1.94	0.76	1.18	1.15	28.2	32.4	UnDef	0.00
27.31	73.6	2.03	2.77	4.3	6	114.6	1.97	0.77	1.20	1.14	28.2	32.0	5.73	0.34
27.80	36.4	1.67	4.60	7.6	4	114.6	2.00	0.79	1.21	1.13	23.2	26.2	2.75	0.00
28.30	60.7	1.51	2.49	13.6	6	114.6	2.03	0.80	1.23	1.12	23.2	26.0	4.69	0.25
28.79	47.4	1.51	3.18	14.9	5	114.6	2.06	0.81	1.24	1.11	22.7	25.2	3.63	0.33
29.28	60.0	1.11	1.86	24.9	7	117.8	2.08	0.83	1.26	1.10	19.2	21.1	UnDef	0.19

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3125
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-10
Engineer: L. HANDFELT
CPT Date: 03/14/10
CPT Time: 12:54
CPT File: 244C10.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -3.35 (ft): -11.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-05	0.00	1000.0	1.29	9	30.5	0.0	30.5	1.7	50	86.3	10.0	-0.44	0.0	12.2
0.74	5.0E-06	-0.01	592.7	1.76	12	22.6	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-07	0.05	215.1	2.91	12	14.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-05	0.01	430.6	1.04	9	37.9	0.0	37.9	2.7	48	64.7	10.0	-0.33	0.0	15.2
2.21	5.0E-05	0.01	387.3	0.90	9	43.7	0.0	43.7	2.4	48	65.2	10.0	-0.30	0.0	17.5
2.71	5.0E-06	0.02	128.6	2.21	7	18.3	6.7	25.0	15.0	UnDef	UnDef	10.0	UnDef	1.8	11.0
3.20	5.0E-08	0.22	48.9	4.94	6	8.8	35.1	43.9	36.0	UnDef	UnDef	6.0	UnDef	8.8	17.6
3.65	5.0E-05	0.04	208.3	1.02	9	38.7	0.9	39.6	5.8	46	54.6	10.0	-0.26	0.2	15.7
4.10	5.0E-03	0.00	569.2	0.67	10	117.7	0.0	117.7	0.1	50	84.7	1.0	-0.31	0.0	29.4
4.59	5.0E-02	0.00	869.1	0.58	10	203.7	0.0	203.7	0.0	50	95.0	1.0	-0.33	0.0	40.7
5.09	5.0E-02	0.00	982.4	0.52	10	258.7	0.0	258.7	0.0	50	95.0	1.0	-0.34	0.0	51.7
5.58	5.0E-02	0.00	900.3	0.64	10	263.5	0.0	263.5	0.0	50	95.0	1.0	-0.35	0.0	52.7
6.07	5.0E-02	0.00	790.9	0.60	10	254.7	0.0	254.7	0.0	50	95.0	1.0	-0.33	0.0	50.9
6.60	5.0E-02	0.00	738.3	0.63	10	261.1	0.0	261.1	0.0	50	95.0	1.0	-0.33	0.0	52.2
7.14	5.0E-02	0.00	663.6	0.78	10	255.8	0.0	255.8	0.3	50	95.0	1.0	-0.34	0.0	51.2
7.63	5.0E-02	0.00	671.3	0.83	10	278.3	0.0	278.3	0.5	50	95.0	1.0	-0.35	0.0	55.7
8.12	5.0E-04	0.00	336.0	1.58	9	149.4	4.9	154.3	6.2	48	80.6	1.0	-0.36	1.0	50.8
8.61	5.0E-05	0.00	164.7	2.36	7	78.2	23.6	101.9	13.7	44	61.3	10.0	-0.35	5.3	36.6
9.10	5.0E-04	-0.01	234.1	1.10	9	116.5	2.1	118.6	5.7	46	71.9	1.0	-0.28	0.4	38.8
9.60	5.0E-02	0.00	566.4	0.77	10	290.0	0.0	290.0	0.6	50	95.0	1.0	-0.32	0.0	56.8
10.09	5.0E-02	0.00	613.9	0.84	9	322.8	0.0	322.8	0.8	50	95.0	1.0	-0.34	0.0	63.2
10.58	5.0E-02	0.00	605.6	1.07	9	326.8	0.0	326.8	1.9	50	95.0	1.0	-0.37	0.0	64.0
11.07	5.0E-02	0.00	571.1	1.03	9	315.9	0.0	315.9	1.8	50	95.0	1.0	-0.36	0.0	61.8
11.56	5.0E-02	0.00	540.3	0.94	9	306.1	0.0	306.1	1.6	50	95.0	1.0	-0.34	0.0	59.9
12.06	5.0E-02	0.00	469.9	0.98	9	272.4	0.0	272.4	2.1	48	95.0	1.0	-0.33	0.0	53.3
12.55	5.0E-03	0.00	302.4	1.19	9	179.7	0.0	179.7	4.9	46	84.1	1.0	-0.31	0.0	44.0
13.04	5.0E-04	0.00	146.4	1.68	9	89.6	19.0	108.6	11.6	44	64.1	1.0	-0.28	3.6	32.8
13.53	5.0E-06	-0.02	61.1	3.58	6	39.1	64.4	103.5	28.3	UnDef	UnDef	10.0	UnDef	12.2	31.3
14.03	5.0E-05	0.00	102.4	2.28	7	65.3	32.1	97.4	17.3	42	55.1	10.0	-0.29	6.6	32.2
14.52	5.0E-04	0.00	159.5	1.63	9	102.3	18.3	120.6	10.7	44	67.9	1.0	-0.29	3.5	36.9
15.01	5.0E-02	0.00	303.2	0.85	9	196.2	0.0	196.2	3.1	46	86.6	1.0	-0.28	0.0	38.4
15.50	5.0E-03	0.00	335.4	1.08	9	220.5	0.0	220.5	3.9	48	89.9	1.0	-0.31	0.0	53.9
15.99	5.0E-03	0.00	276.8	1.51	9	185.2	9.3	194.5	6.8	46	84.9	1.0	-0.33	1.4	46.7
16.49	5.0E-04	0.00	270.2	1.80	9	183.5	17.2	200.8	8.2	46	84.7	1.0	-0.35	3.4	63.3
16.98	5.0E-04	0.00	244.8	1.76	9	168.9	17.9	186.7	8.6	46	82.3	1.0	-0.34	3.5	58.6
17.47	5.0E-03	0.00	283.4	1.21	9	197.9	1.3	199.3	5.3	46	86.8	1.0	-0.31	0.2	48.6
17.96	5.0E-04	-0.01	140.0	1.36	9	100.1	16.3	116.5	10.3	44	67.3	1.0	-0.25	3.1	35.8
18.45	5.0E-06	-0.04	35.9	3.18	6	27.5	96.4	123.9	34.1	UnDef	UnDef	6.0	UnDef	12.8	26.2
18.95	5.0E-06	-0.07	15.9	2.41	6	13.4	53.6	67.0	44.7	UnDef	UnDef	6.0	UnDef	6.6	13.1
19.44	5.0E-06	-0.04	16.2	2.24	6	13.8	55.1	68.9	43.2	UnDef	UnDef	6.0	UnDef	6.7	13.5
19.93	5.0E-04	0.02	69.5	1.21	7	53.2	20.4	73.6	15.4	40	49.2	1.0	-0.17	3.6	21.0
20.42	5.0E-03	0.00	165.3	0.81	9	125.1	3.0	128.1	5.9	44	73.7	1.0	-0.22	0.5	31.1

Gregg In Situ, Inc.
Run No: 03-1030-1241-3125
CPT File: 244C10.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-05	0.00	61.3	2.68	7	48.3	53.1	101.4	24.6	40	46.4	10.0	-0.25	9.2	28.1
21.41	5.0E-04	0.05	63.6	1.50	7	50.5	27.2	77.8	18.1	40	47.7	1.0	-0.18	4.6	21.1
21.90	5.0E-05	0.02	44.3	2.43	7	36.2	55.2	91.4	27.6	38	38.1	6.0	-0.20	8.6	22.8
22.39	5.0E-05	0.04	41.8	1.66	7	34.6	36.2	70.8	24.2	38	36.8	6.0	-0.15	6.4	19.9
22.88	5.0E-06	0.04	37.8	3.03	6	31.8	90.3	122.2	32.7	UnDef	UnDef	6.0	UnDef	13.4	29.0
23.38	5.0E-03	0.00	180.8	1.15	9	145.7	9.9	155.6	7.4	44	78.1	1.0	-0.26	1.5	37.1
23.87	5.0E-03	0.00	249.9	1.11	9	202.8	2.1	204.8	5.4	46	87.5	1.0	-0.29	0.3	49.9
24.36	5.0E-03	0.00	257.5	1.15	9	211.1	2.5	213.6	5.4	46	88.7	1.0	-0.29	0.4	52.0
24.85	5.0E-04	0.00	184.2	1.76	9	153.2	25.3	178.4	10.3	44	79.5	1.0	-0.31	4.9	54.8
25.34	5.0E-04	0.00	159.4	1.95	9	134.1	31.9	166.0	12.2	44	75.7	1.0	-0.31	6.0	49.7
25.84	5.0E-02	0.00	238.7	1.10	9	201.7	2.9	204.6	5.5	46	87.4	1.0	-0.28	0.4	39.8
26.33	5.0E-02	0.00	254.8	1.00	9	217.4	0.0	217.4	4.7	46	89.5	1.0	-0.28	0.0	42.5
26.82	5.0E-02	-0.01	191.4	0.99	9	165.5	5.2	170.7	6.1	44	81.7	1.0	-0.25	0.6	33.0
27.31	5.0E-05	-0.01	92.5	2.84	7	81.8	59.2	141.0	20.7	42	61.5	10.0	-0.32	11.4	43.4
27.80	5.0E-07	-0.03	43.7	4.86	6	40.1	160.5	200.6	37.5	UnDef	UnDef	6.0	UnDef	26.2	52.4
28.30	5.0E-05	-0.01	73.3	2.58	7	66.4	55.8	122.2	22.1	40	55.5	10.0	-0.27	10.4	36.4
28.79	5.0E-06	-0.02	55.8	3.33	6	51.5	86.8	138.3	28.5	UnDef	UnDef	10.0	UnDef	16.3	41.5
29.28	5.0E-04	-0.01	70.1	1.92	7	64.6	40.6	105.2	19.5	40	54.8	1.0	-0.22	6.7	27.8

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3147
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-12
Engineer: L. HANDFELT
CPT Date: 03/13/10
CPT Time: 15:46
CPT File: 244C12.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.92 (ft): -26.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	4.3	0.20	4.61	34.8	3	111.4	0.83	0.01	0.82	2.00	4.2	8.3	0.28	0.00
0.74	4.5	0.20	4.50	31.3	3	111.4	0.85	0.02	0.83	2.00	4.3	8.5	0.29	0.00
1.23	10.7	0.20	1.88	32.0	5	114.6	0.88	0.03	0.85	2.00	5.1	10.2	0.78	0.00
1.72	10.1	0.20	1.99	34.6	5	114.6	0.91	0.04	0.87	2.00	4.8	9.6	0.73	0.00
2.21	12.5	0.20	1.60	30.5	5	114.6	0.94	0.06	0.88	2.00	6.0	12.0	0.93	0.00
2.71	9.8	0.20	2.05	39.1	5	114.6	0.97	0.07	0.90	2.00	4.7	9.4	0.71	0.00
3.20	8.5	0.20	2.37	31.8	4	114.6	0.99	0.08	0.91	2.00	5.4	10.8	0.60	0.00
3.65	7.5	0.20	2.67	36.3	4	114.6	1.02	0.09	0.93	2.00	4.8	9.6	0.52	0.08
4.10	5.2	0.20	3.88	42.5	3	111.4	1.04	0.10	0.94	2.00	5.0	9.9	0.33	0.09
4.59	11.8	0.20	1.69	73.0	5	114.6	1.07	0.12	0.96	2.00	5.7	11.3	0.86	0.08
5.09	48.7	0.21	0.42	32.0	8	120.9	1.10	0.13	0.97	2.00	11.7	23.3	UnDef	0.16
5.58	54.7	0.30	0.56	34.5	8	120.9	1.13	0.15	0.99	2.00	13.1	26.2	UnDef	0.19
6.07	60.0	0.25	0.41	31.1	8	120.9	1.16	0.16	1.00	2.00	14.4	28.7	UnDef	0.22
6.60	71.9	0.34	0.48	35.6	8	120.9	1.19	0.18	1.02	2.00	17.2	34.4	UnDef	0.32
7.14	52.0	0.36	0.70	9.1	8	120.9	1.23	0.19	1.03	2.00	12.4	24.9	UnDef	0.17
7.63	30.6	0.36	1.18	55.0	7	117.8	1.25	0.20	1.05	2.00	9.8	19.6	UnDef	0.11
8.12	93.4	0.35	0.38	21.7	9	124.1	1.28	0.22	1.07	2.00	17.9	35.8	UnDef	0.00
8.61	104.2	0.82	0.79	28.1	8	120.9	1.31	0.23	1.08	2.00	24.9	49.9	UnDef	0.00
9.10	129.8	0.94	0.72	23.5	9	124.1	1.34	0.25	1.10	2.00	24.9	49.7	UnDef	0.00
9.60	157.6	1.21	0.77	6.8	9	124.1	1.38	0.26	1.11	1.95	30.2	58.7	UnDef	0.00
10.09	126.5	1.29	1.02	15.4	8	120.9	1.41	0.28	1.13	1.89	30.3	57.3	UnDef	0.00
10.58	97.0	0.99	1.02	10.4	8	120.9	1.44	0.29	1.14	1.85	23.2	42.9	UnDef	0.00
11.07	47.3	0.95	2.00	18.4	6	114.6	1.46	0.31	1.16	1.81	18.1	32.7	3.67	0.19
11.56	23.3	0.56	2.40	59.4	6	114.6	1.49	0.32	1.17	1.77	8.9	15.8	1.75	0.12
12.06	78.3	0.52	0.66	51.4	8	120.9	1.52	0.33	1.19	1.73	18.8	32.5	UnDef	0.30
12.55	78.7	0.92	1.17	27.0	8	120.9	1.55	0.35	1.20	1.70	18.8	31.9	UnDef	0.31
13.04	74.8	0.64	0.85	14.7	8	120.9	1.58	0.36	1.22	1.66	17.9	29.8	UnDef	0.25
13.53	46.6	0.29	0.62	-5.8	7	117.8	1.61	0.38	1.23	1.63	14.9	24.3	UnDef	0.12
14.03	12.8	0.32	2.48	14.1	5	114.6	1.64	0.39	1.25	1.60	6.1	9.8	0.89	0.17
14.52	9.1	0.24	2.64	48.8	4	114.6	1.67	0.40	1.27	1.58	5.8	9.2	0.59	0.11
15.01	7.0	0.23	3.26	54.1	3	111.4	1.70	0.41	1.28	1.55	6.7	10.4	0.42	0.00
15.50	6.6	0.20	3.06	76.1	3	111.4	1.72	0.43	1.30	1.53	6.3	9.6	0.39	0.00
15.99	8.0	0.23	2.84	117.2	4	114.6	1.75	0.44	1.31	1.51	5.1	7.7	0.50	0.10
16.49	15.5	0.34	2.19	92.0	5	114.6	1.78	0.45	1.33	1.49	7.4	11.0	1.10	0.16
16.98	23.9	0.46	1.94	47.1	6	114.6	1.81	0.46	1.34	1.47	9.2	13.4	1.77	0.12
17.47	21.7	0.63	2.91	65.3	5	114.6	1.83	0.48	1.36	1.45	10.4	15.0	1.59	0.20
17.96	61.7	0.90	1.46	46.7	7	117.8	1.86	0.49	1.37	1.43	19.7	28.1	UnDef	0.19
18.45	83.8	1.11	1.33	39.9	8	120.9	1.89	0.50	1.39	1.41	20.1	28.3	UnDef	0.28
18.95	167.7	1.66	0.99	34.3	9	124.1	1.92	0.52	1.40	1.39	32.1	44.6	UnDef	0.00
19.44	218.7	2.66	1.22	46.2	8	120.9	1.95	0.53	1.42	1.37	52.4	71.6	UnDef	0.00
19.93	225.4	3.90	1.73	54.8	8	120.9	1.98	0.55	1.43	1.35	54.0	72.9	UnDef	0.00
20.42	187.6	3.48	1.85	56.6	8	120.9	2.01	0.56	1.45	1.33	44.9	59.9	UnDef	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3147
CPT File: 244C12.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	219.0	2.64	1.21	49.4	8	120.9	2.04	0.58	1.46	1.32	52.4	69.0	UnDef	0.00
21.41	276.5	3.80	1.37	69.7	8	120.9	2.07	0.59	1.48	1.30	66.2	86.1	UnDef	0.00
21.90	279.2	4.44	1.59	74.6	8	120.9	2.10	0.61	1.50	1.28	66.9	85.9	UnDef	0.00
22.39	262.4	4.63	1.77	73.7	8	120.9	2.13	0.62	1.51	1.27	62.8	79.7	UnDef	0.00
22.88	211.5	4.11	1.95	58.6	8	120.9	2.16	0.64	1.53	1.25	50.6	63.5	UnDef	0.00
23.38	165.9	3.06	1.84	43.5	8	120.9	2.19	0.65	1.54	1.24	39.7	49.3	UnDef	0.00
23.87	153.8	2.01	1.30	33.0	8	120.9	2.22	0.66	1.56	1.23	36.8	45.2	UnDef	0.00
24.36	161.3	1.96	1.21	27.7	8	120.9	2.25	0.68	1.57	1.21	38.6	46.9	UnDef	0.00
24.85	216.1	2.80	1.30	49.4	8	120.9	2.28	0.69	1.59	1.20	51.7	62.2	UnDef	0.00
25.34	232.3	3.82	1.65	70.3	8	120.9	2.31	0.71	1.60	1.19	55.6	66.2	UnDef	0.00
25.84	215.3	3.63	1.69	64.6	8	120.9	2.34	0.72	1.62	1.18	51.5	60.7	UnDef	0.00
26.33	216.3	3.61	1.67	63.9	8	120.9	2.37	0.74	1.63	1.17	51.8	60.4	UnDef	0.00
26.82	222.5	3.56	1.60	75.2	8	120.9	2.40	0.75	1.65	1.15	53.3	61.5	UnDef	0.00
27.31	229.0	3.79	1.65	58.5	8	120.9	2.43	0.76	1.66	1.14	54.8	62.7	UnDef	0.00
27.80	165.7	2.78	1.68	39.3	8	120.9	2.46	0.78	1.68	1.13	39.7	45.0	UnDef	0.00
28.30	162.1	2.13	1.32	23.8	8	120.9	2.49	0.79	1.70	1.12	38.8	43.6	UnDef	0.00
28.79	106.6	1.87	1.76	-9.7	7	117.8	2.52	0.81	1.71	1.11	34.0	37.9	UnDef	0.38
29.28	19.0	1.01	5.31	-1.0	3	111.4	2.55	0.82	1.73	1.10	18.2	20.1	1.32	0.00
29.77	11.3	0.20	1.77	121.3	5	114.6	2.57	0.83	1.74	1.10	5.4	6.0	0.70	0.10
30.27	23.4	0.30	1.26	131.0	6	114.6	2.60	0.85	1.76	1.09	9.0	9.8	1.66	0.12

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3147
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-12
Engineer: L. HANDFELT
CPT Date: 03/13/10
CPT Time: 15:46
CPT File: 244C12.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.92 (ft): -26.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-08	0.08	584.9	5.69	11	8.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-08	0.04	199.5	5.56	11	8.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-06	0.02	320.8	2.05	9	20.4	2.0	22.4	8.3	UnDef	UnDef	10.0	UnDef	0.6	10.8
1.72	5.0E-06	0.02	211.3	2.19	9	19.3	3.9	23.1	11.3	UnDef	UnDef	10.0	UnDef	1.1	10.8
2.21	5.0E-06	0.01	206.5	1.73	9	24.0	3.2	27.2	9.4	UnDef	UnDef	10.0	UnDef	1.0	13.0
2.71	5.0E-06	0.04	128.0	2.27	7	18.8	7.1	25.9	15.3	UnDef	UnDef	10.0	UnDef	2.0	11.3
3.20	5.0E-07	0.01	91.2	2.69	7	16.2	11.1	27.3	20.2	UnDef	UnDef	10.0	UnDef	3.7	14.5
3.65	5.0E-07	0.03	69.4	3.09	7	14.4	16.2	30.6	24.8	UnDef	UnDef	10.0	UnDef	4.8	14.4
4.10	5.0E-08	0.09	39.3	4.86	6	9.9	39.6	49.5	39.1	UnDef	UnDef	6.0	UnDef	9.9	19.8
4.59	5.0E-06	0.12	91.6	1.86	7	22.7	9.9	32.6	16.4	UnDef	UnDef	10.0	UnDef	2.7	14.0
5.09	5.0E-03	0.00	363.5	0.43	10	93.3	0.0	93.3	0.0	48	75.2	1.0	-0.23	0.0	23.3
5.58	5.0E-03	0.00	368.6	0.57	10	104.8	0.0	104.8	0.7	48	77.0	1.0	-0.25	0.0	26.2
6.07	5.0E-03	0.00	368.1	0.42	10	114.9	0.0	114.9	0.0	48	78.3	1.0	-0.23	0.0	28.7
6.60	5.0E-03	0.00	403.1	0.49	10	137.7	0.0	137.7	0.0	48	82.1	1.0	-0.25	0.0	34.4
7.14	5.0E-03	-0.01	265.6	0.71	9	99.5	0.0	99.5	2.8	46	71.6	1.0	-0.25	0.0	24.9
7.63	5.0E-04	0.02	143.3	1.23	9	58.7	7.7	66.3	9.3	44	55.4	1.0	-0.24	1.5	21.1
8.12	5.0E-02	0.00	419.9	0.38	10	178.9	0.0	178.9	0.0	48	86.4	1.0	-0.23	0.0	35.8
8.61	5.0E-03	0.00	439.3	0.80	9	199.5	0.0	199.5	1.5	48	88.6	1.0	-0.30	0.0	49.9
9.10	5.0E-02	0.00	515.9	0.73	10	248.5	0.0	248.5	0.6	48	94.1	1.0	-0.31	0.0	49.7
9.60	5.0E-02	-0.01	591.5	0.77	10	300.1	0.0	300.1	0.5	50	95.0	1.0	-0.33	0.0	58.7
10.09	5.0E-03	-0.01	448.4	1.04	9	234.4	0.0	234.4	2.6	48	91.7	1.0	-0.33	0.0	57.3
10.58	5.0E-03	-0.01	325.8	1.04	9	175.3	0.0	175.3	3.8	48	83.4	1.0	-0.30	0.0	42.9
11.07	5.0E-05	-0.01	149.3	2.06	7	83.5	23.3	106.9	13.2	44	62.1	10.0	-0.31	5.2	37.9
11.56	5.0E-05	0.03	68.3	2.56	7	40.4	36.7	77.0	22.8	40	41.3	10.0	-0.26	6.7	22.5
12.06	5.0E-03	0.01	230.4	0.67	9	132.8	0.0	132.8	3.2	46	75.4	1.0	-0.23	0.0	32.5
12.55	5.0E-03	0.00	221.8	1.19	9	130.5	5.1	135.7	6.4	46	74.9	1.0	-0.28	0.8	32.7
13.04	5.0E-03	-0.01	202.3	0.87	9	121.7	0.3	122.0	5.1	46	72.9	1.0	-0.24	0.0	29.8
13.53	5.0E-04	-0.03	119.6	0.64	9	74.3	3.5	77.9	6.7	42	58.8	1.0	-0.17	0.7	25.0
14.03	5.0E-06	-0.07	28.6	2.85	6	20.0	80.2	100.2	36.3	UnDef	UnDef	6.0	UnDef	9.8	19.6
14.52	5.0E-07	0.03	18.5	3.24	6	14.0	56.2	70.2	46.1	UnDef	UnDef	6.0	UnDef	9.2	18.3
15.01	5.0E-08	0.08	12.7	4.31	1	10.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.50	5.0E-08	0.22	11.3	4.14	1	9.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.99	5.0E-07	0.37	14.3	3.63	4	11.8	47.3	59.2	53.3	UnDef	UnDef	6.0	UnDef	7.7	15.4
16.49	5.0E-06	0.11	30.4	2.47	6	22.6	71.1	93.7	33.4	UnDef	UnDef	6.0	UnDef	10.0	21.0
16.98	5.0E-05	0.01	47.6	2.09	7	34.3	39.2	73.5	25.0	38	36.6	6.0	-0.19	6.7	20.2
17.47	5.0E-06	0.03	41.6	3.18	6	30.8	78.8	109.6	31.9	UnDef	UnDef	6.0	UnDef	12.3	27.4
17.96	5.0E-04	0.00	121.8	1.50	9	86.1	20.0	106.1	12.1	42	63.0	1.0	-0.25	3.8	31.9
18.45	5.0E-03	0.00	162.3	1.36	9	115.5	14.5	130.0	9.2	44	71.4	1.0	-0.27	2.1	30.4
18.95	5.0E-02	0.00	319.0	1.00	9	227.6	0.0	227.6	3.7	46	90.9	1.0	-0.30	0.0	44.6
19.44	5.0E-03	0.00	405.6	1.23	9	292.8	0.0	292.8	3.8	48	95.0	1.0	-0.34	0.0	71.6
19.93	5.0E-03	0.00	407.2	1.75	9	297.8	8.6	306.4	6.0	48	95.0	1.0	-0.39	1.3	74.2
20.42	5.0E-03	0.00	329.6	1.87	9	244.7	17.5	262.2	7.5	48	92.9	1.0	-0.38	2.6	62.5

Gregg In Situ, Inc.
Run No: 03-1030-1241-3147
CPT File: 244C12.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-03	0.00	375.6	1.22	9	282.0	0.0	282.0	4.1	48	95.0	1.0	-0.34	0.0	69.0
21.41	5.0E-03	0.00	463.6	1.38	9	351.7	0.0	351.7	4.0	48	95.0	1.0	-0.37	0.0	86.1
21.90	5.0E-03	0.00	457.1	1.60	9	350.9	0.2	351.1	5.0	48	95.0	1.0	-0.39	0.0	85.9
22.39	5.0E-03	0.00	419.2	1.78	9	325.9	9.5	335.4	6.1	48	95.0	1.0	-0.40	1.4	81.2
22.88	5.0E-03	0.00	329.6	1.97	9	259.7	21.5	281.2	7.9	48	94.6	1.0	-0.39	3.2	66.7
23.38	5.0E-03	0.00	252.0	1.87	9	201.4	23.3	224.7	8.9	46	87.3	1.0	-0.35	3.4	52.7
23.87	5.0E-03	0.00	228.3	1.32	9	184.7	10.1	194.8	6.9	46	84.9	1.0	-0.30	1.5	46.7
24.36	5.0E-03	0.00	234.5	1.23	9	191.7	7.0	198.7	6.3	46	85.9	1.0	-0.29	1.1	48.0
24.85	5.0E-03	0.00	308.7	1.31	9	254.1	2.4	256.5	5.4	46	94.0	1.0	-0.32	0.4	62.5
25.34	5.0E-03	0.00	325.3	1.66	9	270.4	12.8	283.2	6.7	48	95.0	1.0	-0.36	1.9	68.1
25.84	5.0E-03	0.00	295.1	1.71	9	248.0	16.6	264.6	7.3	46	93.3	1.0	-0.36	2.5	63.2
26.33	5.0E-03	0.00	290.7	1.69	9	246.7	16.5	263.2	7.3	46	93.2	1.0	-0.35	2.5	62.8
26.82	5.0E-03	0.00	293.4	1.62	9	251.4	14.2	265.6	7.0	46	93.7	1.0	-0.35	2.1	63.6
27.31	5.0E-03	0.00	296.3	1.67	9	256.3	15.9	272.1	7.2	46	94.3	1.0	-0.35	2.4	65.1
27.80	5.0E-03	0.00	209.5	1.70	9	183.7	23.5	207.2	9.2	46	84.7	1.0	-0.32	3.4	48.4
28.30	5.0E-03	-0.01	201.2	1.34	9	178.1	13.9	192.0	7.7	46	83.8	1.0	-0.29	2.1	45.6
28.79	5.0E-04	-0.02	128.9	1.80	9	116.1	32.1	148.2	13.1	44	71.6	1.0	-0.28	5.9	43.8
29.28	5.0E-08	-0.11	20.1	6.13	1	20.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.77	5.0E-06	0.23	10.5	2.29	6	12.2	48.7	60.8	52.8	UnDef	UnDef	3.0	UnDef	6.0	11.9
30.27	5.0E-05	0.11	24.6	1.42	7	24.9	51.8	76.7	30.3	36	30.0	6.0	-0.07	7.1	16.9

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3169
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-13
Engineer: L. HANDFELT
CPT Date: 03/13/10
CPT Time: 11:49
CPT File: 244C13.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -3.66 (ft): -12.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.4	0.20	8.47	15.9	2	111.4	0.39	0.01	0.38	2.00	2.3	4.5	0.16	0.00
0.74	6.4	0.20	3.14	15.0	3	111.4	0.42	0.02	0.40	2.00	6.1	12.2	0.48	0.00
1.23	19.2	0.20	1.05	13.5	6	114.6	0.44	0.03	0.41	2.00	7.3	14.7	1.50	0.08
1.72	23.9	0.20	0.84	15.9	6	114.6	0.47	0.04	0.43	2.00	9.2	18.3	1.87	0.09
2.21	21.5	0.20	0.93	18.3	6	114.6	0.50	0.06	0.44	2.00	8.2	16.5	1.68	0.09
2.71	24.4	0.20	0.82	15.4	7	117.8	0.53	0.07	0.46	2.00	7.8	15.6	UnDef	0.09
3.20	13.3	0.20	1.51	17.4	6	114.6	0.56	0.08	0.47	2.00	5.1	10.2	1.02	0.00
3.65	28.0	0.20	0.71	11.3	7	117.8	0.58	0.09	0.49	2.00	9.0	17.9	UnDef	0.09
4.10	21.3	0.20	0.94	8.0	6	114.6	0.61	0.11	0.50	2.00	8.2	16.3	1.66	0.09
4.59	19.9	0.20	1.01	9.9	6	114.6	0.64	0.12	0.52	2.00	7.6	15.2	1.54	0.09
5.09	18.4	0.20	1.09	2.4	6	114.6	0.67	0.13	0.53	2.00	7.1	14.1	1.42	0.09
5.58	11.7	0.20	1.71	-1.3	5	114.6	0.69	0.15	0.55	2.00	5.6	11.2	0.88	0.08
6.07	8.8	0.20	2.27	5.8	5	114.6	0.72	0.16	0.56	2.00	4.2	8.4	0.65	0.09
6.60	7.5	0.20	2.68	20.3	4	114.6	0.75	0.17	0.58	2.00	4.8	9.6	0.54	0.09
7.14	16.6	0.20	1.21	16.3	6	114.6	0.78	0.19	0.60	2.00	6.4	12.7	1.27	0.09
7.63	29.0	0.20	0.69	13.2	7	117.8	0.81	0.20	0.61	2.00	9.3	18.5	UnDef	0.10
8.12	44.3	0.20	0.46	7.8	8	120.9	0.84	0.21	0.63	2.00	10.6	21.2	UnDef	0.14
8.61	39.3	0.29	0.73	18.5	7	117.8	0.87	0.23	0.64	2.00	12.5	25.1	UnDef	0.12
9.10	15.3	0.44	2.86	22.8	5	114.6	0.90	0.24	0.66	2.00	7.3	14.6	1.15	0.11
9.60	12.9	0.24	1.83	64.8	5	114.6	0.93	0.25	0.67	1.99	6.2	12.3	0.96	0.09
10.09	22.9	0.20	0.88	59.7	6	114.6	0.96	0.27	0.69	1.94	8.8	17.0	1.75	0.09
10.58	17.0	0.29	1.68	16.8	6	114.6	0.98	0.28	0.71	1.89	6.5	12.3	1.28	0.10
11.07	20.0	0.23	1.16	19.8	6	114.6	1.01	0.29	0.72	1.85	7.7	14.2	1.52	0.09
11.56	14.2	0.29	2.03	17.3	5	114.6	1.04	0.30	0.74	1.81	6.8	12.3	1.05	0.10
12.06	6.9	0.20	2.91	18.3	4	114.6	1.07	0.32	0.75	1.78	4.4	7.8	0.47	0.10
12.55	10.5	0.24	2.27	36.2	5	114.6	1.10	0.33	0.77	1.74	5.0	8.8	0.76	0.14
13.04	10.3	0.25	2.41	37.5	5	114.6	1.12	0.34	0.78	1.71	4.9	8.4	0.74	0.14
13.53	9.4	0.20	2.13	42.5	5	114.6	1.15	0.36	0.80	1.68	4.5	7.6	0.66	0.12
14.03	13.4	0.24	1.79	33.1	5	114.6	1.18	0.37	0.81	1.65	6.4	10.6	0.98	0.10
14.52	14.1	0.23	1.63	15.1	6	114.6	1.21	0.38	0.83	1.62	5.4	8.7	1.03	0.10
15.01	25.5	0.26	1.04	30.3	6	114.6	1.24	0.39	0.84	1.59	9.8	15.5	1.94	0.10
15.50	121.7	0.57	0.47	12.4	9	124.1	1.27	0.41	0.86	1.57	23.3	36.5	UnDef	0.00
15.99	141.6	1.28	0.90	29.3	9	124.1	1.30	0.42	0.87	1.54	27.1	41.7	UnDef	0.00
16.49	122.9	1.12	0.91	33.5	8	120.9	1.33	0.44	0.89	1.51	29.4	44.5	UnDef	0.00
16.98	179.2	1.24	0.69	27.4	9	124.1	1.36	0.45	0.90	1.49	34.3	51.0	UnDef	0.00
17.47	178.9	1.58	0.88	34.6	9	124.1	1.39	0.47	0.92	1.46	34.3	50.1	UnDef	0.00
17.96	144.0	1.34	0.93	36.0	9	124.1	1.42	0.48	0.94	1.44	27.6	39.7	UnDef	0.00
18.45	146.0	0.98	0.67	30.3	9	124.1	1.45	0.50	0.95	1.42	28.0	39.6	UnDef	0.00
18.95	116.1	0.92	0.79	30.8	8	120.9	1.48	0.51	0.97	1.40	27.8	38.8	UnDef	0.45
19.44	72.0	0.66	0.92	35.8	8	120.9	1.51	0.53	0.98	1.38	17.2	23.7	UnDef	0.19
19.93	29.2	0.41	1.40	22.2	6	114.6	1.54	0.54	1.00	1.36	11.2	15.2	2.21	0.11
20.42	8.8	0.24	2.69	52.0	4	114.6	1.57	0.55	1.01	1.34	5.6	7.6	0.58	0.10

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	11.7	0.20	1.71	91.7	5	114.6	1.59	0.57	1.03	1.33	5.6	7.5	0.81	0.12
21.41	42.1	0.20	0.48	50.5	7	117.8	1.62	0.58	1.04	1.31	13.4	17.7	UnDef	0.09
21.90	34.6	0.21	0.61	35.8	7	117.8	1.65	0.59	1.06	1.30	11.0	14.3	UnDef	0.10
22.39	41.4	0.20	0.49	16.2	7	117.8	1.68	0.61	1.07	1.28	13.2	17.0	UnDef	0.10
22.88	40.0	0.21	0.51	23.8	7	117.8	1.71	0.62	1.09	1.27	12.8	16.2	UnDef	0.10
23.38	44.6	0.37	0.82	15.1	7	117.8	1.74	0.63	1.10	1.26	14.2	17.9	UnDef	0.11
23.87	26.4	0.38	1.45	27.4	6	114.6	1.77	0.65	1.12	1.24	10.1	12.6	1.97	0.11
24.36	28.5	0.27	0.94	21.2	7	117.8	1.80	0.66	1.14	1.23	9.1	11.2	UnDef	0.10
24.85	36.8	0.24	0.64	18.8	7	117.8	1.83	0.67	1.15	1.22	11.7	14.3	UnDef	0.10
25.34	62.1	0.21	0.34	12.4	8	120.9	1.85	0.69	1.17	1.21	14.9	17.9	UnDef	0.12
25.84	55.7	0.33	0.60	11.8	8	120.9	1.88	0.70	1.18	1.19	13.3	15.9	UnDef	0.12
26.33	34.9	0.45	1.28	18.7	7	117.8	1.91	0.72	1.20	1.18	11.1	13.2	UnDef	0.11
26.82	17.4	0.55	3.16	12.7	5	114.6	1.94	0.73	1.21	1.17	8.3	9.7	1.23	0.17
27.31	16.6	0.52	3.15	18.2	5	114.6	1.97	0.74	1.23	1.16	8.0	9.2	1.17	0.16
27.80	19.4	0.54	2.81	22.5	5	114.6	2.00	0.76	1.24	1.15	9.3	10.7	1.39	0.20
28.30	21.2	0.64	3.04	24.6	5	114.6	2.03	0.77	1.26	1.14	10.2	11.6	1.54	0.23
28.79	19.8	0.59	2.95	20.8	5	114.6	2.06	0.78	1.27	1.13	9.5	10.8	1.42	0.20
29.28	13.7	0.56	4.09	14.3	3	111.4	2.08	0.79	1.29	1.12	13.1	14.7	0.93	0.00
29.77	12.0	0.40	3.35	18.1	4	114.6	2.11	0.81	1.30	1.11	7.6	8.5	0.79	0.00
30.27	13.4	0.41	3.06	24.1	4	114.6	2.14	0.82	1.32	1.10	8.5	9.4	0.90	0.12
30.76	18.3	0.59	3.23	20.9	5	114.6	2.17	0.83	1.34	1.10	8.7	9.6	1.29	0.17
31.21	21.0	0.72	3.42	24.8	5	114.6	2.19	0.84	1.35	1.09	10.1	11.0	1.51	0.21
31.66	21.5	0.74	3.44	40.0	5	114.6	2.22	0.86	1.36	1.08	10.3	11.1	1.54	0.22
32.15	21.9	0.72	3.30	69.7	5	114.6	2.25	0.87	1.38	1.07	10.5	11.3	1.57	0.22
32.64	22.0	0.73	3.29	93.4	5	114.6	2.28	0.88	1.39	1.07	10.5	11.2	1.58	0.22
33.14	20.1	0.47	2.31	133.0	6	114.6	2.30	0.89	1.41	1.06	7.7	8.2	1.43	0.19
33.63	20.5	0.49	2.37	159.4	5	114.6	2.33	0.91	1.42	1.05	9.8	10.3	1.45	0.19

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3169
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-13
Engineer: L. HANDFELT
CPT Date: 03/13/10
CPT Time: 11:49
CPT File: 244C13.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -3.66 (ft): -12.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.06	328.8	10.00	11	4.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-08	0.01	330.2	3.36	12	12.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-05	0.00	614.4	1.07	9	36.7	0.0	36.7	1.8	50	69.3	10.0	-0.37	0.0	14.7
1.72	5.0E-05	0.00	540.5	0.86	9	45.8	0.0	45.8	1.1	50	70.6	10.0	-0.33	0.0	18.3
2.21	5.0E-05	0.01	373.9	0.95	9	41.2	0.0	41.2	2.8	48	63.9	10.0	-0.31	0.0	16.5
2.71	5.0E-04	0.00	344.2	0.84	9	46.8	0.0	46.8	2.5	48	64.5	1.0	-0.29	0.0	15.6
3.20	5.0E-05	0.01	154.0	1.58	9	25.4	4.5	30.0	10.7	44	44.5	10.0	-0.28	1.1	11.2
3.65	5.0E-04	0.00	290.1	0.73	9	53.7	0.0	53.7	2.5	46	64.0	1.0	-0.26	0.0	17.9
4.10	5.0E-05	-0.01	193.8	0.97	9	40.8	1.0	41.8	5.9	46	54.4	10.0	-0.25	0.3	16.6
4.59	5.0E-05	-0.01	161.0	1.04	9	38.1	2.7	40.8	7.5	44	50.8	10.0	-0.24	0.7	15.9
5.09	5.0E-05	-0.03	134.2	1.13	9	35.3	4.5	39.8	9.2	44	47.2	10.0	-0.23	1.1	15.2
5.58	5.0E-06	-0.05	76.0	1.82	7	22.5	12.0	34.5	18.0	UnDef	UnDef	10.0	UnDef	3.1	14.4
6.07	5.0E-06	-0.05	51.2	2.48	7	16.9	21.4	38.3	26.0	UnDef	UnDef	10.0	UnDef	4.5	13.0
6.60	5.0E-07	0.01	39.2	2.98	6	14.3	36.9	51.2	32.0	UnDef	UnDef	6.0	UnDef	7.8	17.4
7.14	5.0E-05	-0.01	85.1	1.27	9	31.8	9.7	41.5	13.8	42	39.3	10.0	-0.20	2.2	14.9
7.63	5.0E-04	-0.01	141.5	0.71	9	55.5	1.7	57.2	6.1	44	54.3	1.0	-0.19	0.4	18.9
8.12	5.0E-03	-0.01	203.8	0.47	9	84.8	0.0	84.8	2.3	46	65.5	1.0	-0.18	0.0	21.2
8.61	5.0E-04	0.00	169.1	0.74	9	75.2	0.5	75.8	5.3	44	61.1	1.0	-0.21	0.1	25.2
9.10	5.0E-06	0.00	59.8	3.04	7	29.3	39.3	68.6	26.5	UnDef	UnDef	10.0	UnDef	8.2	22.8
9.60	5.0E-06	0.11	47.3	1.97	7	24.7	26.4	51.1	24.4	UnDef	UnDef	6.0	UnDef	5.9	18.1
10.09	5.0E-05	0.05	82.4	0.92	9	43.4	9.4	52.8	11.7	42	43.3	10.0	-0.16	2.1	19.1
10.58	5.0E-05	-0.01	57.3	1.79	7	31.4	23.4	54.9	21.0	40	34.1	10.0	-0.19	4.5	16.8
11.07	5.0E-05	-0.01	65.0	1.22	7	36.2	15.3	51.5	16.1	40	38.2	10.0	-0.17	3.2	17.4
11.56	5.0E-06	-0.01	43.1	2.19	7	25.1	34.9	60.0	26.8	UnDef	UnDef	6.0	UnDef	7.0	19.3
12.06	5.0E-07	-0.03	18.4	3.44	6	12.0	48.0	59.9	47.1	UnDef	UnDef	6.0	UnDef	7.8	15.6
12.55	5.0E-06	0.04	28.6	2.53	6	18.0	68.7	86.6	34.7	UnDef	UnDef	6.0	UnDef	8.6	17.4
13.04	5.0E-06	0.04	26.8	2.71	6	17.2	69.0	86.2	36.7	UnDef	UnDef	6.0	UnDef	8.4	16.9
13.53	5.0E-06	0.06	23.3	2.42	6	15.5	61.9	77.4	37.6	UnDef	UnDef	6.0	UnDef	7.6	15.1
14.03	5.0E-06	0.02	33.1	1.96	7	21.6	39.6	61.2	29.3	UnDef	UnDef	6.0	UnDef	7.2	17.7
14.52	5.0E-05	-0.03	33.7	1.78	7	22.3	35.1	57.4	27.9	38	30.0	6.0	-0.14	5.4	14.1
15.01	5.0E-05	0.00	61.5	1.09	7	39.7	16.1	55.8	15.8	40	40.8	10.0	-0.15	3.4	19.0
15.50	5.0E-02	0.00	295.0	0.47	10	186.4	0.0	186.4	0.9	46	85.1	1.0	-0.22	0.0	36.5
15.99	5.0E-02	0.00	331.4	0.91	9	213.0	0.0	213.0	3.0	48	88.9	1.0	-0.29	0.0	41.7
16.49	5.0E-03	0.00	277.5	0.92	9	181.7	0.0	181.7	3.8	46	84.4	1.0	-0.28	0.0	44.5
16.98	5.0E-02	0.00	392.5	0.70	9	260.5	0.0	260.5	1.3	48	94.7	1.0	-0.28	0.0	51.0
17.47	5.0E-02	0.00	379.2	0.89	9	255.9	0.0	255.9	2.4	48	94.2	1.0	-0.30	0.0	50.1
17.96	5.0E-02	0.00	294.9	0.94	9	202.6	0.0	202.6	3.7	46	87.5	1.0	-0.28	0.0	39.7
18.45	5.0E-02	0.00	290.0	0.68	9	202.4	0.0	202.4	2.2	46	87.5	1.0	-0.25	0.0	39.6
18.95	5.0E-03	0.00	223.3	0.80	9	158.6	0.0	158.6	4.2	46	80.5	1.0	-0.24	0.0	38.8
19.44	5.0E-03	0.00	133.5	0.94	9	97.0	8.6	105.5	8.0	44	66.4	1.0	-0.21	1.3	25.0
19.93	5.0E-05	-0.01	51.1	1.48	7	38.8	27.4	66.3	20.5	40	40.2	10.0	-0.16	5.3	20.5
20.42	5.0E-07	0.08	13.1	3.28	4	11.6	46.3	57.9	53.5	UnDef	UnDef	6.0	UnDef	7.6	15.1

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-06	0.18	17.8	1.98	6	15.2	60.9	76.1	39.8	UnDef	UnDef	6.0	UnDef	7.5	14.9
21.41	5.0E-04	0.01	69.8	0.50	9	54.1	0.0	54.1	5.0	40	49.7	1.0	-0.09	0.0	17.7
21.90	5.0E-04	0.00	55.4	0.64	9	43.9	12.3	56.2	13.2	40	43.7	1.0	-0.09	2.3	16.6
22.39	5.0E-04	-0.01	65.4	0.51	9	52.0	8.7	60.6	10.3	40	48.5	1.0	-0.09	1.7	18.6
22.88	5.0E-04	-0.01	61.6	0.54	9	49.7	9.7	59.4	11.1	40	47.2	1.0	-0.09	1.8	18.0
23.38	5.0E-04	-0.01	67.6	0.86	9	54.8	15.1	69.9	13.1	40	50.1	1.0	-0.14	2.8	20.7
23.87	5.0E-05	-0.01	38.1	1.56	7	32.1	35.9	68.1	24.8	38	34.7	6.0	-0.14	6.2	18.8
24.36	5.0E-04	-0.02	40.4	1.00	7	34.3	22.7	57.1	19.9	38	36.6	1.0	-0.10	3.7	14.9
24.85	5.0E-04	-0.02	51.8	0.67	9	43.8	14.2	58.1	14.2	40	43.6	1.0	-0.09	2.6	16.9
25.34	5.0E-03	-0.01	87.5	0.35	9	73.3	0.0	73.3	5.0	42	58.4	1.0	-0.09	0.0	17.9
25.84	5.0E-03	-0.02	76.5	0.62	9	65.0	9.9	74.9	9.9	42	54.9	1.0	-0.12	1.4	17.3
26.33	5.0E-04	-0.02	46.0	1.36	7	40.4	30.0	70.3	21.0	38	41.3	1.0	-0.14	4.8	18.0
26.82	5.0E-06	-0.05	21.1	3.55	6	19.9	79.5	99.4	45.0	UnDef	UnDef	6.0	UnDef	9.7	19.5
27.31	5.0E-06	-0.05	19.7	3.58	6	18.9	75.6	94.5	46.3	UnDef	UnDef	6.0	UnDef	9.2	18.5
27.80	5.0E-06	-0.03	23.0	3.13	6	21.8	87.3	109.1	41.4	UnDef	UnDef	6.0	UnDef	10.7	21.4
28.30	5.0E-06	-0.03	25.0	3.36	6	23.7	94.7	118.4	41.0	UnDef	UnDef	6.0	UnDef	11.6	23.2
28.79	5.0E-06	-0.04	22.8	3.30	6	22.0	87.9	109.9	42.4	UnDef	UnDef	6.0	UnDef	10.8	21.5
29.28	5.0E-08	-0.07	14.6	4.83	1	15.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.77	5.0E-07	-0.08	12.2	4.07	1	13.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
30.27	5.0E-07	-0.05	13.7	3.64	4	14.5	57.9	72.4	54.2	UnDef	UnDef	6.0	UnDef	9.4	18.9
30.76	5.0E-06	-0.04	19.3	3.66	4	19.6	78.4	98.0	47.1	UnDef	UnDef	6.0	UnDef	9.6	19.2
31.21	5.0E-06	-0.03	22.3	3.82	6	22.4	89.6	112.0	45.1	UnDef	UnDef	6.0	UnDef	11.0	21.9
31.66	5.0E-06	-0.01	22.5	3.84	6	22.7	90.8	113.5	45.0	UnDef	UnDef	6.0	UnDef	11.1	22.2
32.15	5.0E-06	0.04	22.6	3.68	6	23.0	92.0	115.0	44.2	UnDef	UnDef	6.0	UnDef	11.3	22.5
32.64	5.0E-06	0.08	22.4	3.67	6	23.0	91.8	114.8	44.3	UnDef	UnDef	6.0	UnDef	11.2	22.5
33.14	5.0E-05	0.15	19.9	2.61	6	20.8	83.4	104.2	41.4	34	30.0	6.0	-0.10	8.2	16.3
33.63	5.0E-06	0.20	20.0	2.67	6	21.1	84.3	105.4	41.7	UnDef	UnDef	6.0	UnDef	10.3	20.6

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3196
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-15
Engineer: L. HANDFELT
CPT Date: 03/09/10
CPT Time: 17:26
CPT File: 244C15.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.34 (ft): -40.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.3	0.20	8.84	44.2	2	111.4	1.28	0.01	1.27	2.00	2.2	4.3	0.08	0.00
0.74	2.5	0.20	8.07	45.9	2	111.4	1.31	0.02	1.29	2.00	2.4	4.8	0.09	0.00
1.23	2.5	0.20	7.89	48.2	2	111.4	1.33	0.03	1.30	2.00	2.4	4.9	0.10	0.00
1.72	2.5	0.20	8.10	49.2	2	111.4	1.36	0.04	1.32	2.00	2.4	4.7	0.09	0.00
2.21	2.3	0.20	8.91	51.2	2	111.4	1.39	0.05	1.33	2.00	2.2	4.3	0.07	0.00
2.71	2.3	0.20	8.78	52.2	2	111.4	1.42	0.07	1.35	2.00	2.2	4.4	0.07	0.00
3.20	2.3	0.20	8.56	54.5	2	111.4	1.44	0.08	1.36	2.00	2.2	4.5	0.07	0.00
3.65	2.5	0.20	7.91	56.4	2	111.4	1.47	0.09	1.38	2.00	2.4	4.9	0.09	0.00
4.10	6.3	0.20	3.17	48.2	3	111.4	1.49	0.10	1.39	2.00	6.1	12.1	0.39	0.09
4.59	7.3	0.20	2.75	26.3	4	114.6	1.52	0.11	1.41	2.00	4.7	9.3	0.46	0.09
5.09	4.4	0.20	4.53	45.2	3	111.4	1.55	0.13	1.42	2.00	4.2	8.5	0.23	0.00
5.58	3.7	0.20	5.42	58.3	3	111.4	1.58	0.14	1.44	2.00	3.5	7.1	0.17	0.00
6.07	3.5	0.20	5.70	54.8	3	111.4	1.60	0.15	1.45	2.00	3.4	6.7	0.15	0.00
6.60	3.9	0.20	5.14	62.8	3	111.4	1.63	0.16	1.47	2.00	3.7	7.5	0.18	0.00
7.14	3.9	0.20	5.13	54.5	3	111.4	1.66	0.18	1.49	2.00	3.7	7.5	0.18	0.00
7.63	3.6	0.20	5.55	52.6	3	111.4	1.69	0.19	1.50	2.00	3.5	6.9	0.15	0.00
8.12	3.5	0.20	5.81	66.6	3	111.4	1.72	0.20	1.52	2.00	3.3	6.6	0.14	0.00
8.61	3.5	0.20	5.69	72.4	3	111.4	1.74	0.21	1.53	2.00	3.4	6.7	0.14	0.00
9.10	3.7	0.20	5.45	71.6	3	111.4	1.77	0.22	1.55	2.00	3.5	7.0	0.15	0.00
9.60	6.2	0.20	3.24	72.1	3	111.4	1.80	0.24	1.56	2.00	5.9	11.8	0.35	0.00
10.09	17.3	0.20	1.16	40.2	6	114.6	1.83	0.25	1.58	2.00	6.6	13.2	1.24	0.09
10.58	14.2	0.20	1.41	5.7	6	114.6	1.86	0.26	1.59	1.96	5.5	10.7	0.99	0.09
11.07	5.5	0.20	3.62	42.4	3	111.4	1.88	0.27	1.61	1.91	5.3	10.1	0.29	0.00
11.56	13.6	0.20	1.47	27.8	6	114.6	1.91	0.29	1.63	1.87	5.2	9.8	0.94	0.09
12.06	13.6	0.20	1.47	15.4	6	114.6	1.94	0.30	1.64	1.83	5.2	9.5	0.93	0.09
12.55	10.8	0.20	1.86	27.5	5	114.6	1.97	0.31	1.66	1.79	5.2	9.3	0.71	0.13
13.04	10.1	0.20	1.99	27.7	5	114.6	2.00	0.32	1.67	1.76	4.8	8.5	0.65	0.14
13.53	6.2	0.20	3.26	59.5	3	111.4	2.02	0.34	1.69	1.72	5.9	10.2	0.33	0.00
14.03	8.3	0.20	2.41	52.4	4	114.6	2.05	0.35	1.70	1.69	5.3	9.0	0.50	0.11
14.52	10.2	0.20	1.96	47.0	5	114.6	2.08	0.36	1.72	1.66	4.9	8.2	0.65	0.13
15.01	9.2	0.20	2.18	47.4	5	114.6	2.11	0.37	1.73	1.63	4.4	7.2	0.57	0.12
15.50	6.0	0.20	3.34	73.3	3	111.4	2.14	0.39	1.75	1.61	5.8	9.2	0.31	0.00
15.99	8.3	0.20	2.43	50.7	4	114.6	2.16	0.40	1.76	1.58	5.3	8.3	0.49	0.10
16.49	6.9	0.20	2.90	55.0	4	114.6	2.19	0.41	1.78	1.56	4.4	6.9	0.38	0.00
16.98	18.9	0.20	1.06	56.2	6	114.6	2.22	0.43	1.79	1.53	7.3	11.1	1.34	0.09
17.47	16.1	0.20	1.24	54.2	6	114.6	2.25	0.44	1.81	1.51	6.2	9.3	1.11	0.10
17.96	5.8	0.20	3.46	100.4	3	111.4	2.28	0.45	1.83	1.49	5.5	8.3	0.28	0.00
18.45	5.3	0.20	3.79	111.9	3	111.4	2.30	0.46	1.84	1.47	5.1	7.5	0.24	0.00
18.95	5.4	0.20	3.73	107.8	3	111.4	2.33	0.47	1.86	1.45	5.1	7.5	0.24	0.00
19.44	5.7	0.20	3.53	111.5	3	111.4	2.36	0.49	1.87	1.43	5.4	7.8	0.27	0.00
19.93	5.7	0.20	3.54	112.9	3	111.4	2.39	0.50	1.89	1.42	5.4	7.7	0.26	0.00
20.42	5.5	0.20	3.66	112.4	3	111.4	2.41	0.51	1.90	1.40	5.2	7.3	0.24	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3196
CPT File: 244C15.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	5.6	0.20	3.60	120.8	3	111.4	2.44	0.52	1.92	1.38	5.3	7.4	0.25	0.00
21.41	5.4	0.20	3.68	115.4	3	111.4	2.47	0.53	1.93	1.37	5.2	7.1	0.24	0.00
21.90	5.5	0.20	3.66	118.8	3	111.4	2.50	0.55	1.95	1.35	5.3	7.1	0.24	0.00
22.39	5.4	0.20	3.70	124.6	3	111.4	2.52	0.56	1.96	1.34	5.2	6.9	0.23	0.00
22.88	5.6	0.20	3.56	122.7	3	111.4	2.55	0.57	1.98	1.32	5.4	7.1	0.25	0.00
23.38	5.6	0.20	3.60	123.0	3	111.4	2.58	0.58	1.99	1.31	5.3	7.0	0.24	0.00
23.87	5.7	0.20	3.49	124.8	3	111.4	2.60	0.60	2.01	1.30	5.5	7.1	0.25	0.00
24.36	5.7	0.20	3.51	118.2	3	111.4	2.63	0.61	2.03	1.28	5.5	7.0	0.25	0.00
24.85	5.9	0.20	3.40	119.3	3	111.4	2.66	0.62	2.04	1.27	5.6	7.2	0.26	0.00
25.34	6.0	0.20	3.35	121.3	3	111.4	2.69	0.63	2.06	1.26	5.7	7.2	0.26	0.00
25.84	5.5	0.20	3.64	127.4	3	111.4	2.71	0.64	2.07	1.25	5.3	6.6	0.22	0.00
26.33	6.4	0.20	3.15	127.9	3	111.4	2.74	0.66	2.09	1.24	6.1	7.5	0.29	0.00
26.82	8.0	0.20	2.50	121.6	4	114.6	2.77	0.67	2.10	1.22	5.1	6.3	0.42	0.00
27.31	7.6	0.20	2.64	88.0	4	114.6	2.80	0.68	2.12	1.21	4.9	5.9	0.38	0.00
27.80	6.9	0.20	2.90	136.6	4	114.6	2.83	0.69	2.13	1.20	4.4	5.3	0.33	0.00
28.30	12.2	0.20	1.64	95.8	5	114.6	2.85	0.71	2.15	1.19	5.9	7.0	0.75	0.11
28.79	6.9	0.20	2.90	122.3	4	114.6	2.88	0.72	2.16	1.18	4.4	5.2	0.32	0.00
29.28	6.8	0.20	2.96	137.5	3	111.4	2.91	0.73	2.18	1.17	6.5	7.6	0.31	0.00
29.77	9.1	0.20	2.23	148.4	5	114.6	2.94	0.74	2.19	1.16	4.4	5.1	0.50	0.00
30.27	10.6	0.23	2.14	118.8	5	114.6	2.97	0.76	2.21	1.15	5.1	5.9	0.61	0.10
30.76	7.3	0.20	2.75	165.2	4	114.6	2.99	0.77	2.22	1.14	4.6	5.3	0.34	0.00
31.21	7.1	0.20	2.81	163.8	4	114.6	3.02	0.78	2.24	1.13	4.6	5.2	0.33	0.00
31.66	7.3	0.20	2.76	166.1	4	114.6	3.05	0.79	2.25	1.12	4.6	5.2	0.34	0.00
32.15	7.1	0.20	2.82	164.5	4	114.6	3.07	0.81	2.27	1.11	4.5	5.1	0.32	0.00
32.64	6.9	0.20	2.90	158.3	4	114.6	3.10	0.82	2.28	1.11	4.4	4.9	0.30	0.00
33.14	7.0	0.20	2.85	144.2	4	114.6	3.13	0.83	2.30	1.10	4.5	4.9	0.31	0.00
33.63	6.9	0.20	2.89	142.0	4	114.6	3.16	0.84	2.31	1.09	4.4	4.8	0.30	0.00
34.12	6.9	0.20	2.88	142.5	4	114.6	3.19	0.86	2.33	1.08	4.4	4.8	0.30	0.00
34.61	7.1	0.20	2.84	146.6	4	114.6	3.22	0.87	2.35	1.07	4.5	4.8	0.31	0.00
35.10	7.2	0.20	2.77	148.5	4	114.6	3.24	0.88	2.36	1.06	4.6	4.9	0.32	0.00
35.60	7.2	0.20	2.78	147.9	4	114.6	3.27	0.90	2.38	1.06	4.6	4.9	0.32	0.00
36.09	7.1	0.20	2.84	151.9	4	114.6	3.30	0.91	2.39	1.05	4.5	4.7	0.30	0.00
36.58	7.4	0.20	2.71	158.0	4	114.6	3.33	0.92	2.41	1.04	4.7	4.9	0.33	0.00
37.07	7.8	0.20	2.57	156.5	4	114.6	3.36	0.93	2.42	1.03	5.0	5.2	0.36	0.00
37.57	7.9	0.20	2.54	169.8	4	114.6	3.38	0.95	2.44	1.03	5.0	5.2	0.36	0.00
38.06	8.0	0.20	2.51	176.1	4	114.6	3.41	0.96	2.45	1.02	5.1	5.2	0.37	0.00
38.55	7.9	0.20	2.55	175.4	4	114.6	3.44	0.97	2.47	1.01	5.0	5.1	0.35	0.00
39.04	7.8	0.20	2.58	170.9	4	114.6	3.47	0.99	2.48	1.01	5.0	5.0	0.34	0.00
39.53	7.7	0.20	2.59	158.7	4	114.6	3.50	1.00	2.50	1.00	4.9	4.9	0.34	0.00
40.03	7.7	0.20	2.59	151.7	4	114.6	3.53	1.01	2.51	0.99	4.9	4.9	0.34	0.00
40.52	7.6	0.20	2.62	153.2	4	114.6	3.55	1.02	2.53	0.99	4.9	4.8	0.33	0.00
41.01	7.9	0.20	2.54	168.5	4	114.6	3.58	1.04	2.54	0.98	5.0	4.9	0.34	0.00
41.50	8.3	0.20	2.41	147.3	4	114.6	3.61	1.05	2.56	0.98	5.3	5.2	0.38	0.00
41.99	7.9	0.20	2.53	161.5	4	114.6	3.64	1.06	2.58	0.97	5.1	4.9	0.34	0.00
42.49	7.7	0.20	2.59	168.9	4	114.6	3.67	1.08	2.59	0.96	4.9	4.8	0.33	0.00
42.98	7.8	0.20	2.56	173.6	4	114.6	3.69	1.09	2.61	0.96	5.0	4.8	0.33	0.00
43.47	10.3	0.28	2.72	150.9	4	114.6	3.72	1.10	2.62	0.95	6.6	6.3	0.53	0.00
43.96	12.8	0.35	2.76	108.9	5	114.6	3.75	1.11	2.64	0.95	6.1	5.8	0.72	0.00
44.45	15.7	0.44	2.79	64.1	5	114.6	3.78	1.13	2.65	0.94	7.5	7.1	0.96	0.00
44.95	18.4	0.38	2.06	48.8	6	114.6	3.81	1.14	2.67	0.94	7.1	6.6	1.17	0.14
45.44	11.9	0.21	1.72	78.7	5	114.6	3.84	1.15	2.68	0.93	5.7	5.3	0.65	0.09
45.93	11.5	0.21	1.79	120.2	5	114.6	3.86	1.17	2.70	0.93	5.5	5.1	0.61	0.09
46.42	13.2	0.29	2.17	156.7	5	114.6	3.89	1.18	2.71	0.92	6.3	5.8	0.74	0.10
46.92	51.9	0.42	0.81	50.4	7	117.8	3.92	1.19	2.73	0.92	16.6	15.2	UnDef	0.12
47.41	25.8	0.36	1.39	0.0	6	114.6	3.95	1.20	2.74	0.91	9.9	9.0	1.75	0.22
47.90	14.0	0.23	1.61	30.6	6	114.6	3.98	1.22	2.76	0.91	5.4	4.9	0.80	0.10
48.39	9.9	0.20	2.03	115.8	5	114.6	4.01	1.23	2.78	0.90	4.7	4.3	0.47	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3196
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-15
Engineer: L. HANDFELT
CPT Date: 03/09/10
CPT Time: 17:26
CPT File: 244C15.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.34 (ft): -40.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.11	164.5	10.00	11	4.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.12	65.3	10.00	11	4.8	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.17	40.1	10.00	1	4.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	0.20	26.4	10.00	1	4.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	1.0E-15	0.31	15.9	10.00	1	4.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	1.0E-15	0.32	13.1	10.00	1	4.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	1.0E-15	0.37	11.5	10.00	1	4.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
3.65	1.0E-15	0.36	12.0	10.00	1	4.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
4.10	5.0E-08	0.02	48.1	4.15	6	12.1	39.2	51.3	33.6	UnDef	UnDef	6.0	UnDef	11.1	23.2
4.59	5.0E-07	-0.10	51.1	3.48	6	14.0	28.9	42.9	30.3	UnDef	UnDef	10.0	UnDef	6.8	16.1
5.09	5.0E-08	0.00	23.0	6.96	1	8.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.58	5.0E-08	0.18	15.5	9.44	1	7.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.07	5.0E-08	0.13	12.8	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.60	5.0E-08	0.22	14.0	8.85	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.10	12.8	8.94	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.63	5.0E-08	0.07	10.3	10.00	1	6.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.12	5.0E-08	0.32	8.7	10.00	1	6.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.61	5.0E-08	0.41	8.4	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.10	5.0E-08	0.36	8.5	10.00	1	7.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.60	5.0E-08	0.16	18.6	4.58	1	11.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
10.09	5.0E-05	-0.02	62.3	1.30	7	33.1	15.8	48.9	17.1	40	36.3	10.0	-0.17	3.3	16.6
10.58	5.0E-05	-0.11	47.5	1.62	7	27.3	23.4	50.6	22.3	40	30.0	6.0	-0.17	4.3	15.0
11.07	5.0E-08	-0.08	13.3	5.50	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
11.56	5.0E-05	-0.06	41.0	1.71	7	24.9	27.8	52.8	24.7	38	30.0	6.0	-0.16	4.8	14.6
12.06	5.0E-05	-0.10	39.0	1.72	7	24.3	29.3	53.7	25.5	38	30.0	6.0	-0.16	4.9	14.5
12.55	5.0E-06	-0.09	28.3	2.27	6	18.9	60.0	79.0	33.5	UnDef	UnDef	6.0	UnDef	8.4	17.7
13.04	5.0E-06	-0.10	24.9	2.48	6	17.3	69.3	86.6	36.7	UnDef	UnDef	6.0	UnDef	8.5	17.0
13.53	5.0E-08	0.04	12.3	4.85	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
14.03	5.0E-07	-0.01	17.9	3.20	6	13.8	55.1	68.9	46.5	UnDef	UnDef	6.0	UnDef	9.0	18.0
14.52	5.0E-06	-0.03	22.5	2.46	6	16.7	66.6	83.3	38.4	UnDef	UnDef	6.0	UnDef	8.2	16.3
15.01	5.0E-06	-0.04	18.9	2.83	6	14.7	58.8	73.5	43.6	UnDef	UnDef	6.0	UnDef	7.2	14.4
15.50	5.0E-08	0.14	10.0	5.18	1	9.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.99	5.0E-07	-0.03	15.2	3.29	4	12.8	51.1	63.9	50.3	UnDef	UnDef	6.0	UnDef	8.3	16.7
16.49	5.0E-07	-0.01	11.5	4.24	1	10.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
16.98	5.0E-05	0.00	39.3	1.20	7	28.4	23.2	51.6	21.8	38	31.2	6.0	-0.11	4.4	15.5
17.47	5.0E-05	-0.01	31.7	1.44	7	23.8	32.5	56.3	26.6	38	30.0	6.0	-0.11	5.3	14.6
17.96	5.0E-08	0.37	7.8	5.70	1	8.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
18.45	5.0E-08	0.55	6.5	6.70	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
18.95	5.0E-08	0.50	6.4	6.60	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.44	5.0E-08	0.49	6.8	6.04	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.93	5.0E-08	0.50	6.6	6.10	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
20.42	5.0E-08	0.53	6.0	6.55	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Run No: 03-1030-1241-3196
CPT File: 244C15.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-08	0.59	6.0	6.40	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
21.41	5.0E-08	0.56	5.6	6.73	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
21.90	5.0E-08	0.59	5.5	6.71	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
22.39	5.0E-08	0.66	5.2	6.92	1	7.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
22.88	5.0E-08	0.60	5.4	6.51	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
23.38	5.0E-08	0.62	5.1	6.70	1	7.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
23.87	5.0E-08	0.60	5.3	6.38	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
24.36	5.0E-08	0.54	5.1	6.52	1	7.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
24.85	5.0E-08	0.52	5.2	6.20	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
25.34	5.0E-08	0.52	5.2	6.08	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
25.84	5.0E-08	0.68	4.4	7.16	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
26.33	5.0E-08	0.53	5.5	5.54	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
26.82	5.0E-07	0.32	7.8	3.83	1	9.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
27.31	5.0E-07	0.13	7.1	4.18	1	9.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
27.80	5.0E-07	0.52	5.9	4.91	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
28.30	5.0E-06	0.09	13.3	2.14	6	14.2	57.0	71.2	46.7	UnDef	UnDef	6.0	UnDef	7.0	13.9
28.79	5.0E-07	0.41	5.6	4.97	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
29.28	5.0E-08	0.55	5.3	5.19	1	7.8	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
29.77	5.0E-06	0.39	8.3	3.28	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
30.27	5.0E-06	0.20	10.1	2.96	4	12.0	47.9	59.8	57.7	UnDef	UnDef	3.0	UnDef	5.9	11.7
30.76	5.0E-07	0.68	5.6	4.68	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.21	5.0E-07	0.70	5.3	4.86	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.66	5.0E-07	0.69	5.3	4.74	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
32.15	5.0E-07	0.71	5.0	4.97	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
32.64	5.0E-07	0.70	4.6	5.27	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.14	5.0E-07	0.56	4.7	5.14	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.63	5.0E-07	0.56	4.5	5.31	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.12	5.0E-07	0.56	4.4	5.33	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.61	5.0E-07	0.58	4.4	5.22	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.10	5.0E-07	0.57	4.5	5.01	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.60	5.0E-07	0.57	4.4	5.09	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.09	5.0E-07	0.63	4.1	5.33	1	7.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.58	5.0E-07	0.62	4.4	4.92	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
37.07	5.0E-07	0.55	4.8	4.50	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
37.57	5.0E-07	0.63	4.8	4.43	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.06	5.0E-07	0.66	4.8	4.38	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.55	5.0E-07	0.68	4.6	4.52	1	7.8	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
39.04	5.0E-07	0.66	4.4	4.67	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
39.53	5.0E-07	0.58	4.2	4.73	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
40.03	5.0E-07	0.53	4.2	4.75	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
40.52	5.0E-07	0.55	4.0	4.90	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.01	5.0E-07	0.63	4.1	4.66	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.50	5.0E-07	0.43	4.5	4.27	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
41.99	5.0E-07	0.58	4.0	4.69	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
42.49	5.0E-07	0.66	3.8	4.93	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
42.98	5.0E-07	0.68	3.8	4.84	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
43.47	5.0E-07	0.32	6.0	4.26	1	9.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
43.96	5.0E-06	0.08	8.1	3.90	1	11.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.45	5.0E-06	-0.05	10.6	3.67	1	14.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.95	5.0E-05	-0.08	12.8	2.59	6	16.9	67.6	84.6	50.2	32	30.0	6.0	-0.07	6.6	13.2
45.44	5.0E-06	-0.03	7.0	2.54	4	10.9	43.5	54.4	64.4	UnDef	UnDef	3.0	UnDef	5.3	10.7
45.93	5.0E-06	0.14	6.5	2.70	4	10.4	41.6	52.0	67.5	UnDef	UnDef	3.0	UnDef	5.1	10.2
46.42	5.0E-06	0.23	7.9	3.07	4	11.9	47.6	59.5	64.6	UnDef	UnDef	3.0	UnDef	5.8	11.6
46.92	5.0E-04	-0.02	40.2	0.88	7	46.5	27.7	74.2	19.0	38	45.3	1.0	-0.09	4.6	19.8
47.41	5.0E-05	-0.13	18.1	1.65	6	23.0	91.9	114.9	37.2	34	30.0	6.0	-0.08	9.0	18.0
47.90	5.0E-05	-0.18	8.2	2.25	4	12.4	49.6	62.1	58.5	30	30.0	3.0	-0.02	4.9	9.7
48.39	5.0E-06	0.14	4.8	3.42	1	8.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3224
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-16
Engineer: L. HANDFELT
CPT Date: 03/02/10
CPT Time: 14:51
CPT File: 244C16.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -1.98 (ft): -6.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	7.9	0.20	2.53	18.8	4	114.6	0.22	0.01	0.21	2.00	5.1	10.1	0.62	0.00
0.74	9.6	0.20	2.09	25.3	5	114.6	0.25	0.02	0.23	2.00	4.6	9.2	0.75	0.00
1.23	9.4	0.20	2.12	19.2	5	114.6	0.27	0.03	0.24	2.00	4.5	9.0	0.73	0.00
1.72	8.7	0.21	2.47	15.3	4	114.6	0.30	0.04	0.26	2.00	5.5	11.1	0.67	0.00
2.21	8.2	0.26	3.15	16.3	4	114.6	0.33	0.06	0.27	2.00	5.2	10.4	0.63	0.00
2.71	8.9	0.31	3.47	19.3	3	111.4	0.36	0.07	0.29	2.00	8.5	17.1	0.68	0.00
3.20	7.7	0.31	4.03	17.9	3	111.4	0.39	0.08	0.30	2.00	7.4	14.8	0.59	0.00
3.65	11.0	0.37	3.36	18.0	4	114.6	0.41	0.09	0.32	2.00	7.0	14.1	0.85	0.08
4.10	11.8	0.47	4.01	16.1	3	111.4	0.44	0.10	0.33	2.00	11.3	22.5	0.91	0.00
4.59	12.0	0.44	3.63	19.7	3	111.4	0.46	0.12	0.35	2.00	11.5	23.1	0.93	0.00
5.09	12.6	0.41	3.22	17.3	4	114.6	0.49	0.13	0.36	2.00	8.1	16.1	0.97	0.09
5.58	12.9	0.49	3.79	24.8	3	111.4	0.52	0.14	0.38	2.00	12.3	24.7	0.99	0.09
6.07	13.1	0.59	4.49	32.0	3	111.4	0.55	0.15	0.39	2.00	12.5	25.1	1.00	0.00
6.60	13.2	0.70	5.30	36.1	3	111.4	0.58	0.17	0.41	2.00	12.6	25.2	1.01	0.00
7.14	12.6	0.70	5.52	39.4	3	111.4	0.61	0.18	0.43	2.00	12.1	24.2	0.96	0.00
7.63	10.8	0.56	5.20	36.8	3	111.4	0.63	0.19	0.44	2.00	10.4	20.7	0.82	0.18
8.12	12.3	0.57	4.62	35.5	3	111.4	0.66	0.20	0.46	2.00	11.8	23.5	0.93	0.17
8.61	13.1	0.67	5.12	34.5	3	111.4	0.69	0.22	0.47	2.00	12.5	25.1	0.99	0.26
9.10	11.9	0.61	5.13	35.8	3	111.4	0.72	0.23	0.49	2.00	11.4	22.8	0.90	0.22
9.60	16.8	0.50	2.98	41.4	5	114.6	0.74	0.24	0.50	2.00	8.0	16.1	1.28	0.11
10.09	16.9	0.67	3.98	31.3	3	111.4	0.77	0.25	0.52	1.99	16.2	32.1	1.29	0.16
10.58	13.8	0.62	4.50	33.9	3	111.4	0.80	0.27	0.53	1.94	13.2	25.7	1.04	0.29
11.07	21.5	0.46	2.15	33.5	6	114.6	0.83	0.28	0.55	1.90	8.2	15.6	1.65	0.11
11.56	46.7	0.64	1.38	19.9	7	117.8	0.85	0.29	0.56	1.85	14.9	27.7	UnDef	0.16
12.06	104.0	0.78	0.75	31.5	8	120.9	0.88	0.30	0.58	1.81	24.9	45.1	UnDef	0.00
12.55	116.1	1.36	1.17	33.8	8	120.9	0.91	0.32	0.59	1.77	27.8	49.2	UnDef	0.00
13.04	170.3	1.13	0.66	39.3	9	124.1	0.94	0.33	0.61	1.73	32.6	56.5	UnDef	0.00
13.53	188.5	0.93	0.49	31.2	9	124.1	0.97	0.35	0.63	1.69	36.1	61.1	UnDef	0.00
14.03	145.6	0.65	0.45	31.5	9	124.1	1.01	0.36	0.64	1.66	27.9	46.2	UnDef	0.00
14.52	102.5	0.68	0.66	37.3	8	120.9	1.04	0.38	0.66	1.62	24.5	39.9	UnDef	0.00
15.01	37.6	0.87	2.31	31.4	6	114.6	1.06	0.39	0.67	1.60	14.4	23.0	2.93	0.15
15.50	18.6	0.61	3.29	44.8	5	114.6	1.09	0.41	0.69	1.57	8.9	14.0	1.40	0.20
15.99	19.7	1.00	5.07	55.4	3	111.4	1.12	0.42	0.70	1.55	18.8	29.1	1.48	0.00
16.49	16.1	0.92	5.73	54.0	3	111.4	1.15	0.43	0.72	1.53	15.4	23.5	1.20	0.00
16.98	9.0	0.52	5.80	48.9	3	111.4	1.18	0.44	0.73	1.50	8.6	13.0	0.63	0.00
17.47	9.2	0.44	4.81	48.0	3	111.4	1.20	0.45	0.75	1.48	8.8	13.0	0.64	0.00
17.96	9.7	0.49	5.06	47.7	3	111.4	1.23	0.47	0.76	1.46	9.3	13.7	0.68	0.00
18.45	10.5	0.53	5.04	48.5	3	111.4	1.26	0.48	0.78	1.45	10.1	14.6	0.74	0.00
18.95	9.6	0.46	4.82	49.5	3	111.4	1.28	0.49	0.79	1.43	9.2	13.1	0.66	0.00
19.44	9.8	0.40	4.11	52.3	3	111.4	1.31	0.50	0.81	1.41	9.3	13.2	0.68	0.00
19.93	13.1	0.57	4.32	70.0	3	111.4	1.34	0.51	0.83	1.39	12.6	17.5	0.94	0.00
20.42	11.0	0.45	4.13	76.3	3	111.4	1.37	0.53	0.84	1.38	10.5	14.5	0.77	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	11.5	0.29	2.52	83.6	5	114.6	1.39	0.54	0.86	1.36	5.5	7.5	0.80	0.12
21.41	14.9	0.49	3.25	79.3	4	114.6	1.42	0.55	0.87	1.35	9.5	12.8	1.08	0.17
21.90	14.7	0.81	5.53	67.1	3	111.4	1.45	0.56	0.89	1.33	14.0	18.7	1.06	0.00
22.39	15.7	0.81	5.12	71.1	3	111.4	1.48	0.58	0.90	1.32	15.1	19.9	1.14	0.00
22.88	19.3	1.06	5.52	80.1	3	111.4	1.51	0.59	0.92	1.30	18.4	24.0	1.42	0.00
23.38	21.0	1.15	5.45	73.2	3	111.4	1.53	0.60	0.93	1.29	20.1	26.0	1.56	0.00
23.87	20.8	1.08	5.17	76.1	3	111.4	1.56	0.61	0.95	1.28	20.0	25.5	1.54	0.00
24.36	18.7	1.14	6.11	70.1	3	111.4	1.59	0.62	0.96	1.27	17.9	22.6	1.37	0.00
24.85	17.4	1.00	5.74	65.6	3	111.4	1.62	0.64	0.98	1.25	16.7	20.9	1.27	0.00
25.34	17.0	0.97	5.71	70.8	3	111.4	1.64	0.65	0.99	1.24	16.3	20.2	1.23	0.00
25.84	20.7	1.04	5.02	66.1	3	111.4	1.67	0.66	1.01	1.23	19.8	24.4	1.52	0.00
26.33	23.8	1.02	4.26	65.3	3	111.4	1.70	0.67	1.02	1.22	22.8	27.8	1.77	0.35
26.82	27.6	0.94	3.42	74.5	5	114.6	1.73	0.68	1.04	1.21	13.2	16.0	2.07	0.00
27.31	27.9	1.12	4.02	82.3	4	114.6	1.75	0.70	1.06	1.20	17.8	21.3	2.09	0.00
27.80	27.6	1.18	4.27	87.3	4	114.6	1.78	0.71	1.07	1.19	17.6	20.9	2.07	0.00
28.30	21.5	1.17	5.41	79.7	3	111.4	1.81	0.72	1.09	1.18	20.6	24.3	1.58	0.00
28.79	17.5	0.88	5.06	79.8	3	111.4	1.84	0.74	1.10	1.17	16.7	19.5	1.25	0.00
29.28	18.5	0.88	4.75	74.8	3	111.4	1.86	0.75	1.12	1.16	17.7	20.5	1.33	0.00
29.77	15.4	0.59	3.80	84.6	3	111.4	1.89	0.76	1.13	1.15	14.8	17.0	1.08	0.00
30.27	15.6	0.61	3.91	91.4	3	111.4	1.92	0.77	1.15	1.14	15.0	17.0	1.10	0.00
30.76	17.5	0.77	4.38	97.0	3	111.4	1.95	0.78	1.16	1.13	16.7	18.9	1.24	0.00
31.21	20.9	0.96	4.59	99.6	3	111.4	1.97	0.79	1.18	1.12	20.0	22.4	1.51	0.00
31.66	21.2	1.00	4.70	100.8	3	111.4	2.00	0.81	1.19	1.11	20.3	22.7	1.54	0.00
32.15	25.6	1.25	4.87	99.6	3	111.4	2.02	0.82	1.21	1.11	24.6	27.2	1.89	0.00
32.64	24.0	1.06	4.41	95.2	3	111.4	2.05	0.83	1.22	1.10	23.0	25.2	1.76	0.00
33.14	18.7	0.89	4.76	96.2	3	111.4	2.08	0.84	1.24	1.09	17.9	19.5	1.33	0.00
33.63	20.4	0.97	4.76	97.1	3	111.4	2.11	0.85	1.25	1.08	19.5	21.1	1.46	0.00
34.12	20.1	0.83	4.13	99.1	3	111.4	2.13	0.87	1.27	1.07	19.2	20.7	1.43	0.00
34.61	20.4	0.84	4.12	101.5	3	111.4	2.16	0.88	1.28	1.07	19.6	20.9	1.46	0.00
35.10	20.3	0.78	3.83	102.1	4	114.6	2.19	0.89	1.30	1.06	13.0	13.8	1.45	0.00
35.60	23.5	0.83	3.55	113.6	5	114.6	2.22	0.90	1.31	1.05	11.2	11.8	1.70	0.24
36.09	21.7	0.73	3.35	121.1	5	114.6	2.25	0.92	1.33	1.05	10.4	10.9	1.56	0.21
36.58	22.8	0.75	3.26	152.5	5	114.6	2.27	0.93	1.35	1.04	10.9	11.3	1.64	0.22
37.07	24.5	0.93	3.79	153.7	4	114.6	2.30	0.94	1.36	1.03	15.6	16.1	1.78	0.26
37.57	24.8	0.88	3.53	159.3	5	114.6	2.33	0.95	1.38	1.02	11.9	12.2	1.80	0.26
38.06	23.1	0.91	3.95	141.4	4	114.6	2.36	0.97	1.39	1.02	14.8	15.0	1.66	0.00
38.55	23.2	0.87	3.75	128.7	4	114.6	2.39	0.98	1.41	1.01	14.8	14.9	1.66	0.00
39.04	23.2	0.80	3.44	136.2	5	114.6	2.41	0.99	1.42	1.00	11.1	11.1	1.66	0.22
39.53	25.5	0.78	3.07	136.8	5	114.6	2.44	1.01	1.44	1.00	12.2	12.2	1.85	0.26
40.03	23.5	0.78	3.34	139.7	5	114.6	2.47	1.02	1.45	0.99	11.2	11.1	1.68	0.22
40.52	22.1	0.78	3.54	131.8	5	114.6	2.50	1.03	1.47	0.98	10.6	10.4	1.57	0.19
41.01	19.0	0.77	4.04	126.8	3	111.4	2.53	1.04	1.48	0.98	18.2	17.8	1.32	0.00
41.50	18.1	0.68	3.74	153.9	4	114.6	2.55	1.06	1.50	0.97	11.6	11.3	1.24	0.00
41.99	20.6	0.71	3.45	171.5	5	114.6	2.58	1.07	1.51	0.97	9.9	9.5	1.44	0.00
42.49	21.6	0.70	3.24	168.2	5	114.6	2.61	1.08	1.53	0.96	10.3	9.9	1.52	0.18

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3224
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-16
Engineer: L. HANDFELT
CPT Date: 03/02/10
CPT Time: 14:51
CPT File: 244C16.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -1.98 (ft): -6.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-07	0.05	1000.0	2.60	12	15.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-06	0.06	484.8	2.15	12	18.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-06	0.04	286.1	2.19	9	18.1	2.4	20.5	9.4	UnDef	UnDef	10.0	UnDef	0.7	9.8
1.72	5.0E-07	0.03	186.3	2.56	7	16.6	4.9	21.5	13.6	UnDef	UnDef	10.0	UnDef	1.8	12.9
2.21	5.0E-07	0.03	135.9	3.28	12	15.7	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.71	5.0E-08	0.04	122.0	3.61	12	17.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
3.20	5.0E-08	0.03	89.0	4.24	11	14.8	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
3.65	5.0E-07	0.02	113.5	3.49	7	21.1	15.9	37.0	21.1	UnDef	UnDef	10.0	UnDef	5.2	19.3
4.10	5.0E-08	0.02	107.9	4.16	11	22.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
4.59	5.0E-08	0.02	99.0	3.78	12	23.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
5.09	5.0E-07	0.01	93.9	3.35	7	24.2	21.3	45.5	22.5	UnDef	UnDef	10.0	UnDef	6.7	22.8
5.58	5.0E-08	0.03	87.1	3.95	6	24.7	29.5	54.2	25.4	UnDef	UnDef	10.0	UnDef	12.7	37.4
6.07	5.0E-08	0.05	81.5	4.69	11	25.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
6.60	5.0E-08	0.06	75.4	5.54	11	25.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.07	66.9	5.80	11	24.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
7.63	5.0E-08	0.07	53.1	5.52	6	20.7	83.0	103.7	36.6	UnDef	UnDef	10.0	UnDef	20.7	41.5
8.12	5.0E-08	0.06	57.0	4.88	6	23.5	77.2	100.7	33.7	UnDef	UnDef	10.0	UnDef	21.7	45.2
8.61	5.0E-08	0.05	57.4	5.40	6	25.1	100.2	125.3	35.2	UnDef	UnDef	10.0	UnDef	25.1	50.1
9.10	5.0E-08	0.06	49.1	5.46	6	22.8	91.3	114.2	37.6	UnDef	UnDef	6.0	UnDef	22.8	45.7
9.60	5.0E-06	0.05	66.6	3.12	7	32.1	38.7	70.8	25.5	UnDef	UnDef	10.0	UnDef	8.3	24.4
10.09	5.0E-08	0.03	63.6	4.17	6	32.3	64.2	96.5	29.9	UnDef	UnDef	10.0	UnDef	22.9	55.0
10.58	5.0E-08	0.04	49.1	4.77	6	26.3	105.1	131.3	35.4	UnDef	UnDef	6.0	UnDef	25.7	51.4
11.07	5.0E-05	0.02	74.5	2.23	7	39.9	27.7	67.6	20.3	40	41.0	10.0	-0.24	5.4	21.0
11.56	5.0E-04	0.00	157.7	1.41	9	84.8	12.0	96.8	9.6	44	62.5	1.0	-0.27	2.3	30.0
12.06	5.0E-03	0.00	338.3	0.76	9	184.3	0.0	184.3	2.1	48	84.8	1.0	-0.27	0.0	45.1
12.55	5.0E-03	0.00	360.8	1.18	9	201.0	0.0	201.0	4.1	48	87.3	1.0	-0.33	0.0	49.2
13.04	5.0E-02	0.00	507.2	0.66	10	288.4	0.0	288.4	0.3	48	95.0	1.0	-0.30	0.0	56.5
13.53	5.0E-02	0.00	537.0	0.49	10	312.1	0.0	312.1	0.0	50	95.0	1.0	-0.28	0.0	61.1
14.03	5.0E-02	0.00	396.9	0.45	10	236.1	0.0	236.1	0.0	48	91.9	1.0	-0.24	0.0	46.2
14.52	5.0E-03	0.01	267.8	0.67	9	163.0	0.0	163.0	2.5	46	81.3	1.0	-0.24	0.0	39.9
15.01	5.0E-05	0.01	93.2	2.38	7	58.8	33.9	92.7	18.7	42	52.0	10.0	-0.28	6.8	29.8
15.50	5.0E-06	0.04	43.2	3.50	6	28.6	81.4	110.1	32.7	UnDef	UnDef	6.0	UnDef	12.1	26.1
15.99	5.0E-08	0.06	44.4	5.38	1	29.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
16.49	5.0E-08	0.06	34.8	6.17	1	24.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
16.98	5.0E-08	0.10	17.8	6.66	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
17.47	5.0E-08	0.09	17.5	5.54	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
17.96	5.0E-08	0.09	18.3	5.79	1	14.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
18.45	5.0E-08	0.08	19.4	5.72	1	14.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
18.95	5.0E-08	0.09	16.9	5.57	1	13.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
19.44	5.0E-08	0.10	16.8	4.75	1	13.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
19.93	5.0E-08	0.12	22.9	4.81	1	17.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
20.42	5.0E-08	0.16	18.2	4.72	1	14.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-06	0.17	18.7	2.87	6	15.3	61.1	76.4	44.1	UnDef	UnDef	6.0	UnDef	7.5	14.9
21.41	5.0E-07	0.12	24.5	3.60	6	19.7	78.8	98.5	42.4	UnDef	UnDef	6.0	UnDef	12.8	25.7
21.90	5.0E-08	0.09	23.4	6.14	1	19.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
22.39	5.0E-08	0.09	24.8	5.65	1	20.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
22.88	5.0E-08	0.09	30.2	5.99	1	24.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.38	5.0E-08	0.07	32.5	5.88	1	26.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.87	5.0E-08	0.07	31.5	5.59	1	26.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
24.36	5.0E-08	0.07	27.4	6.68	1	23.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
24.85	5.0E-08	0.07	24.9	6.33	1	21.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
25.34	5.0E-08	0.08	23.7	6.32	1	20.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
25.84	5.0E-08	0.06	28.8	5.46	1	24.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
26.33	5.0E-08	0.05	32.9	4.59	6	28.4	113.7	142.2	41.1	UnDef	UnDef	6.0	UnDef	27.8	55.7
26.82	5.0E-06	0.05	37.8	3.64	6	32.6	130.5	163.1	35.3	UnDef	UnDef	6.0	UnDef	16.0	31.9
27.31	5.0E-07	0.06	37.4	4.29	6	32.7	130.6	163.3	37.9	UnDef	UnDef	6.0	UnDef	21.3	42.6
27.80	5.0E-07	0.06	36.4	4.57	6	32.1	128.2	160.3	39.4	UnDef	UnDef	6.0	UnDef	20.9	41.8
28.30	5.0E-08	0.07	27.3	5.91	1	24.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
28.79	5.0E-08	0.09	21.3	5.65	1	20.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.28	5.0E-08	0.07	22.2	5.28	1	20.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.77	5.0E-08	0.11	17.8	4.33	1	17.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
30.27	5.0E-08	0.12	17.8	4.46	1	17.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
30.76	5.0E-08	0.12	19.8	4.93	1	19.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
31.21	5.0E-08	0.10	23.8	5.07	1	22.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
31.66	5.0E-08	0.10	23.9	5.19	1	23.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
32.15	5.0E-08	0.08	28.9	5.29	1	27.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
32.64	5.0E-08	0.08	26.5	4.82	1	25.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
33.14	5.0E-08	0.11	19.8	5.35	1	20.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
33.63	5.0E-08	0.10	21.4	5.31	1	21.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
34.12	5.0E-08	0.10	20.7	4.62	1	21.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
34.61	5.0E-08	0.10	20.8	4.60	1	21.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
35.10	5.0E-07	0.10	20.4	4.30	1	21.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
35.60	5.0E-06	0.11	23.5	3.92	6	24.2	96.6	120.8	44.5	UnDef	UnDef	6.0	UnDef	11.8	23.6
36.09	5.0E-06	0.13	21.3	3.74	6	22.2	88.9	111.1	45.6	UnDef	UnDef	6.0	UnDef	10.9	21.7
36.58	5.0E-06	0.17	22.1	3.63	6	23.2	92.7	115.9	44.4	UnDef	UnDef	6.0	UnDef	11.3	22.7
37.07	5.0E-07	0.15	23.6	4.18	4	24.7	98.8	123.5	45.5	UnDef	UnDef	6.0	UnDef	16.1	32.2
37.57	5.0E-06	0.16	23.5	3.90	6	24.8	99.4	124.2	44.4	UnDef	UnDef	6.0	UnDef	12.2	24.3
38.06	5.0E-07	0.15	21.5	4.40	1	23.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
38.55	5.0E-07	0.13	21.2	4.18	1	22.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
39.04	5.0E-06	0.14	20.9	3.84	4	22.7	91.0	113.7	46.4	UnDef	UnDef	6.0	UnDef	11.1	22.3
39.53	5.0E-06	0.12	22.9	3.40	6	24.9	99.6	124.5	42.7	UnDef	UnDef	6.0	UnDef	12.2	24.4
40.03	5.0E-06	0.14	20.6	3.73	6	22.8	91.1	113.9	46.2	UnDef	UnDef	6.0	UnDef	11.1	22.3
40.52	5.0E-06	0.13	19.0	3.99	4	21.3	85.2	106.5	48.9	UnDef	UnDef	6.0	UnDef	10.4	20.8
41.01	5.0E-08	0.15	15.8	4.66	1	18.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
41.50	5.0E-07	0.21	14.7	4.35	1	17.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
41.99	5.0E-06	0.21	16.9	3.94	1	19.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
42.49	5.0E-06	0.20	17.5	3.69	4	20.3	81.3	101.6	49.2	UnDef	UnDef	6.0	UnDef	9.9	19.9

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3251
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-18
Engineer: L. HANDFELT
CPT Date: 03/09/10
CPT Time: 13:36
CPT File: 244C18.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.92 (ft): -26.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.2	0.20	9.28	33.1	2	111.4	0.83	0.01	0.82	2.00	2.1	4.1	0.11	0.00
0.74	2.2	0.20	9.27	33.8	2	111.4	0.85	0.02	0.83	2.00	2.1	4.1	0.10	0.00
1.23	2.2	0.20	9.22	36.2	2	111.4	0.88	0.03	0.85	2.00	2.1	4.2	0.10	0.00
1.72	2.2	0.20	9.14	40.1	2	111.4	0.91	0.04	0.87	2.00	2.1	4.2	0.10	0.00
2.21	2.2	0.20	9.11	42.0	2	111.4	0.94	0.05	0.88	2.00	2.1	4.2	0.10	0.00
2.71	2.3	0.20	8.80	43.9	2	111.4	0.96	0.07	0.90	2.00	2.2	4.4	0.11	0.00
3.20	2.2	0.20	9.07	44.1	2	111.4	0.99	0.08	0.91	2.00	2.1	4.2	0.10	0.00
3.65	2.2	0.20	9.09	42.8	2	111.4	1.02	0.09	0.93	2.00	2.1	4.2	0.10	0.00
4.10	2.2	0.20	9.01	45.6	2	111.4	1.04	0.10	0.94	2.00	2.1	4.3	0.09	0.00
4.59	2.2	0.20	9.05	45.0	2	111.4	1.07	0.11	0.96	2.00	2.1	4.2	0.09	0.00
5.09	2.2	0.20	8.96	48.0	2	111.4	1.10	0.12	0.97	2.00	2.1	4.3	0.09	0.00
5.58	3.7	0.20	5.48	51.4	3	111.4	1.12	0.14	0.99	2.00	3.5	7.0	0.20	0.00
6.07	4.6	0.20	4.33	67.2	3	111.4	1.15	0.15	1.00	2.00	4.4	8.9	0.28	0.00
6.60	5.1	0.20	3.92	63.2	3	111.4	1.18	0.16	1.02	2.00	4.9	9.8	0.31	0.00
7.14	5.1	0.20	3.93	87.7	3	111.4	1.21	0.17	1.03	2.00	4.9	9.8	0.31	0.00
7.63	6.4	0.20	3.11	110.4	3	111.4	1.24	0.19	1.05	2.00	6.2	12.3	0.42	0.10
8.12	9.0	0.23	2.51	108.7	4	114.6	1.26	0.20	1.07	2.00	5.8	11.6	0.62	0.10
8.61	11.1	0.29	2.62	110.3	5	114.6	1.29	0.21	1.08	2.00	5.3	10.6	0.78	0.10
9.10	11.2	0.27	2.39	101.8	5	114.6	1.32	0.22	1.10	2.00	5.4	10.8	0.79	0.10
9.60	14.0	0.30	2.16	45.1	5	114.6	1.35	0.24	1.11	2.00	6.7	13.4	1.01	0.10
10.09	10.3	0.23	2.26	31.2	5	114.6	1.38	0.25	1.13	2.00	5.0	9.9	0.72	0.11
10.58	6.3	0.20	3.20	40.6	3	111.4	1.41	0.26	1.14	1.95	6.0	11.7	0.39	0.00
11.07	8.3	0.22	2.62	49.6	4	114.6	1.43	0.28	1.16	1.91	5.3	10.1	0.55	0.12
11.56	7.6	0.24	3.12	62.3	3	111.4	1.46	0.29	1.17	1.86	7.2	13.5	0.49	0.11
12.06	6.9	0.20	2.94	65.1	3	111.4	1.49	0.30	1.19	1.83	6.6	12.1	0.44	0.10
12.55	6.2	0.20	3.23	84.0	3	111.4	1.52	0.31	1.20	1.79	5.9	10.6	0.38	0.00
13.04	6.4	0.22	3.47	88.7	3	111.4	1.54	0.32	1.22	1.76	6.1	10.8	0.39	0.00
13.53	6.8	0.24	3.55	89.5	3	111.4	1.57	0.34	1.23	1.73	6.5	11.3	0.42	0.00
14.03	6.7	0.24	3.52	91.1	3	111.4	1.60	0.35	1.25	1.70	6.4	10.9	0.41	0.00
14.52	7.1	0.26	3.61	85.3	3	111.4	1.63	0.36	1.27	1.67	6.8	11.3	0.44	0.00
15.01	7.2	0.27	3.72	80.1	3	111.4	1.65	0.37	1.28	1.64	6.9	11.3	0.44	0.00
15.50	7.1	0.23	3.20	97.4	3	111.4	1.68	0.38	1.30	1.61	6.8	11.0	0.43	0.00
15.99	8.5	0.31	3.63	87.2	3	111.4	1.71	0.40	1.31	1.59	8.2	13.0	0.54	0.00
16.49	12.9	0.49	3.79	68.1	3	111.4	1.73	0.41	1.33	1.57	12.3	19.3	0.89	0.17
16.98	9.6	0.44	4.62	63.4	3	111.4	1.76	0.42	1.34	1.54	9.2	14.2	0.63	0.00
17.47	8.5	0.39	4.62	75.8	3	111.4	1.79	0.43	1.36	1.52	8.1	12.3	0.53	0.00
17.96	9.8	0.45	4.61	68.2	3	111.4	1.82	0.44	1.37	1.50	9.4	14.1	0.64	0.00
18.45	10.6	0.39	3.66	68.0	3	111.4	1.84	0.46	1.39	1.48	10.2	15.1	0.70	0.00
18.95	9.6	0.37	3.82	70.3	3	111.4	1.87	0.47	1.40	1.46	9.2	13.5	0.62	0.00
19.44	7.5	0.33	4.36	71.8	3	111.4	1.90	0.48	1.42	1.44	7.2	10.3	0.45	0.00
19.93	10.0	0.40	4.04	63.3	3	111.4	1.93	0.49	1.43	1.43	9.6	13.6	0.65	0.00
20.42	12.3	0.50	4.03	57.2	3	111.4	1.95	0.50	1.45	1.41	11.8	16.6	0.83	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3251
CPT File: 244C18.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	14.0	0.52	3.70	56.3	3	111.4	1.98	0.52	1.46	1.39	13.4	18.6	0.96	0.00
21.41	14.0	0.48	3.42	50.2	4	114.6	2.01	0.53	1.48	1.37	8.9	12.3	0.96	0.16
21.90	14.6	0.51	3.48	54.7	4	114.6	2.04	0.54	1.50	1.36	9.3	12.7	1.00	0.16
22.39	16.4	0.62	3.77	53.2	4	114.6	2.07	0.55	1.51	1.34	10.5	14.1	1.15	0.20
22.88	17.4	0.75	4.29	56.6	3	111.4	2.09	0.57	1.53	1.33	16.6	22.1	1.22	0.00
23.38	18.5	0.82	4.42	59.2	3	111.4	2.12	0.58	1.54	1.31	17.7	23.2	1.31	0.00
23.87	10.9	0.55	5.10	49.0	3	111.4	2.15	0.59	1.56	1.30	10.4	13.5	0.70	0.00
24.36	6.9	0.21	3.12	52.9	3	111.4	2.18	0.60	1.57	1.29	6.6	8.5	0.37	0.00
24.85	12.9	0.50	3.89	65.8	3	111.4	2.20	0.62	1.59	1.27	12.3	15.7	0.85	0.00
25.34	16.1	0.82	5.09	62.4	3	111.4	2.23	0.63	1.60	1.26	15.5	19.5	1.11	0.00
25.84	17.9	0.87	4.85	61.4	3	111.4	2.26	0.64	1.62	1.25	17.2	21.5	1.25	0.00
26.33	17.4	0.82	4.72	56.0	3	111.4	2.29	0.65	1.63	1.24	16.7	20.6	1.21	0.00
26.82	16.1	0.79	4.93	61.2	3	111.4	2.31	0.66	1.65	1.23	15.4	18.9	1.10	0.00
27.31	15.4	0.79	5.14	77.1	3	111.4	2.34	0.68	1.66	1.22	14.7	17.9	1.04	0.00
27.80	17.1	0.86	5.02	83.6	3	111.4	2.37	0.69	1.68	1.21	16.4	19.8	1.18	0.00
28.30	15.8	0.74	4.70	89.3	3	111.4	2.39	0.70	1.70	1.20	15.1	18.1	1.07	0.00
28.79	16.4	0.72	4.38	101.1	3	111.4	2.42	0.71	1.71	1.19	15.7	18.6	1.12	0.00
29.28	14.9	0.69	4.61	111.0	3	111.4	2.45	0.72	1.73	1.18	14.3	16.8	1.00	0.00
29.77	15.7	0.60	3.84	119.6	3	111.4	2.48	0.74	1.74	1.17	15.0	17.5	1.06	0.00
30.27	15.9	0.61	3.80	120.8	4	114.6	2.50	0.75	1.76	1.16	10.2	11.8	1.08	0.00
30.76	14.9	0.47	3.18	111.9	4	114.6	2.53	0.76	1.77	1.15	9.5	10.9	0.99	0.13
31.21	14.1	0.48	3.38	91.5	4	114.6	2.56	0.77	1.79	1.14	9.0	10.2	0.92	0.00
31.66	13.8	0.50	3.63	98.3	4	114.6	2.58	0.78	1.80	1.13	8.8	9.9	0.90	0.00
32.15	16.8	0.67	4.01	99.3	3	111.4	2.61	0.80	1.82	1.12	16.1	18.0	1.13	0.00
32.64	18.2	0.67	3.70	99.7	4	114.6	2.64	0.81	1.83	1.11	11.6	12.9	1.25	0.00
33.14	19.5	0.66	3.37	96.7	5	114.6	2.67	0.82	1.85	1.10	9.3	10.3	1.34	0.19
33.63	19.9	0.66	3.33	88.8	5	114.6	2.70	0.84	1.86	1.09	9.5	10.4	1.37	0.19
34.12	17.7	0.66	3.73	84.0	4	114.6	2.73	0.85	1.88	1.09	11.3	12.3	1.20	0.00
34.61	18.7	0.75	3.99	79.9	3	111.4	2.75	0.86	1.89	1.08	17.9	19.3	1.28	0.00
35.10	23.0	0.82	3.58	87.6	5	114.6	2.78	0.87	1.91	1.07	11.0	11.8	1.62	0.24
35.60	23.9	0.72	3.02	86.6	5	114.6	2.81	0.89	1.92	1.06	11.5	12.2	1.69	0.26
36.09	18.8	0.49	2.63	79.3	5	114.6	2.84	0.90	1.94	1.06	9.0	9.5	1.28	0.17
36.58	14.7	0.49	3.37	81.0	4	114.6	2.87	0.91	1.95	1.05	9.4	9.8	0.94	0.00
37.07	19.2	0.58	3.01	75.1	5	114.6	2.89	0.92	1.97	1.04	9.2	9.6	1.30	0.17
37.57	17.8	0.66	3.70	65.4	4	114.6	2.92	0.94	1.98	1.03	11.4	11.8	1.19	0.00
38.06	16.5	0.67	4.04	65.7	3	111.4	2.95	0.95	2.00	1.03	15.8	16.3	1.09	0.00
38.55	14.9	0.56	3.79	69.2	3	111.4	2.98	0.96	2.02	1.02	14.3	14.6	0.95	0.00
39.04	13.2	0.57	4.31	69.3	3	111.4	3.00	0.97	2.03	1.01	12.6	12.8	0.81	0.00
39.53	13.1	0.54	4.08	76.1	3	111.4	3.03	0.99	2.05	1.01	12.6	12.7	0.81	0.00
40.03	14.9	0.55	3.72	81.9	4	114.6	3.06	1.00	2.06	1.00	9.5	9.5	0.95	0.00
40.52	18.6	0.64	3.44	90.9	4	114.6	3.09	1.01	2.08	0.99	11.9	11.8	1.24	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3251
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-18
Engineer: L. HANDFELT
CPT Date: 03/09/10
CPT Time: 13:36
CPT File: 244C18.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.92 (ft): -26.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.16	221.6	10.00	11	4.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.17	72.5	10.00	11	4.1	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.22	43.0	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	0.30	30.5	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	1.0E-15	0.34	23.4	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	1.0E-15	0.36	19.8	10.00	1	4.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	1.0E-15	0.38	15.6	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.65	1.0E-15	0.34	13.3	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
4.10	1.0E-15	0.41	11.8	10.00	1	4.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
4.59	1.0E-15	0.39	10.2	10.00	1	4.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.09	1.0E-15	0.46	9.2	10.00	1	4.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.58	5.0E-08	0.24	18.6	7.91	1	7.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.07	5.0E-08	0.32	23.4	5.77	1	8.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.60	5.0E-08	0.24	24.3	5.10	1	9.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.44	22.3	5.16	1	9.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.63	5.0E-08	0.46	27.9	3.86	6	12.3	49.3	61.6	41.2	UnDef	UnDef	6.0	UnDef	12.3	24.7
8.12	5.0E-07	0.30	39.1	2.92	6	17.3	43.2	60.5	31.7	UnDef	UnDef	6.0	UnDef	9.3	20.9
8.61	5.0E-06	0.24	46.2	2.97	6	21.2	40.4	61.7	29.6	UnDef	UnDef	6.0	UnDef	7.4	18.0
9.10	5.0E-06	0.21	44.1	2.71	6	21.5	38.7	60.2	29.1	UnDef	UnDef	6.0	UnDef	7.2	18.0
9.60	5.0E-06	0.02	53.3	2.39	7	26.9	30.7	57.6	25.0	UnDef	UnDef	10.0	UnDef	6.7	20.2
10.09	5.0E-06	-0.02	35.8	2.61	6	19.8	48.4	68.2	31.6	UnDef	UnDef	6.0	UnDef	7.9	17.8
10.58	5.0E-08	0.03	18.5	4.12	1	12.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
11.07	5.0E-07	0.06	24.9	3.17	6	15.5	61.9	77.3	40.2	UnDef	UnDef	6.0	UnDef	10.1	20.2
11.56	5.0E-08	0.13	21.2	3.87	4	13.8	55.1	68.9	46.2	UnDef	UnDef	6.0	UnDef	13.5	27.0
12.06	5.0E-08	0.15	18.2	3.74	4	12.4	49.6	62.0	48.7	UnDef	UnDef	6.0	UnDef	12.1	24.3
12.55	5.0E-08	0.30	15.0	4.27	1	10.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
13.04	5.0E-08	0.32	15.0	4.57	1	11.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
13.53	5.0E-08	0.30	15.6	4.62	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
14.03	5.0E-08	0.31	14.6	4.63	1	11.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
14.52	5.0E-08	0.26	15.2	4.68	1	11.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.01	5.0E-08	0.22	14.9	4.84	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.50	5.0E-08	0.32	14.1	4.20	1	11.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.99	5.0E-08	0.21	17.2	4.54	1	13.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
16.49	5.0E-08	0.07	27.3	4.38	6	19.7	78.9	98.7	43.5	UnDef	UnDef	6.0	UnDef	19.3	38.6
16.98	5.0E-08	0.08	18.6	5.65	1	14.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
17.47	5.0E-08	0.15	15.4	5.85	1	12.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
17.96	5.0E-08	0.09	18.0	5.66	1	14.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
18.45	5.0E-08	0.08	19.2	4.43	1	15.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
18.95	5.0E-08	0.10	16.5	4.75	1	13.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
19.44	5.0E-08	0.15	11.6	5.85	1	10.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.93	5.0E-08	0.07	16.4	5.01	1	13.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
20.42	5.0E-08	0.03	20.6	4.79	1	17.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-08	0.02	23.2	4.31	1	19.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
21.41	5.0E-07	0.01	22.6	3.99	4	18.8	75.2	94.1	45.5	UnDef	UnDef	6.0	UnDef	12.3	24.5
21.90	5.0E-07	0.02	23.2	4.05	4	19.4	77.6	97.0	45.3	UnDef	UnDef	6.0	UnDef	12.7	25.3
22.39	5.0E-07	0.01	25.9	4.31	4	21.6	86.4	108.0	44.3	UnDef	UnDef	6.0	UnDef	14.1	28.2
22.88	5.0E-08	0.02	27.0	4.87	1	22.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.38	5.0E-08	0.02	28.2	5.00	1	23.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.87	5.0E-08	0.00	14.8	6.35	1	13.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
24.36	5.0E-08	0.02	7.8	4.56	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
24.85	5.0E-08	0.04	17.4	4.69	1	16.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
25.34	5.0E-08	0.02	22.2	5.91	1	19.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
25.84	5.0E-08	0.02	24.5	5.55	1	22.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
26.33	5.0E-08	0.01	23.2	5.43	1	21.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
26.82	5.0E-08	0.02	20.8	5.76	1	19.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
27.31	5.0E-08	0.06	19.3	6.06	1	18.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
27.80	5.0E-08	0.06	21.5	5.83	1	20.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
28.30	5.0E-08	0.08	19.2	5.55	1	18.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
28.79	5.0E-08	0.10	19.6	5.14	1	19.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.28	5.0E-08	0.14	17.2	5.51	1	17.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
29.77	5.0E-08	0.15	18.0	4.56	1	17.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
30.27	5.0E-07	0.15	18.0	4.51	1	18.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
30.76	5.0E-07	0.14	16.2	3.84	4	16.7	66.7	83.3	51.5	UnDef	UnDef	6.0	UnDef	10.9	21.7
31.21	5.0E-07	0.09	14.9	4.13	1	15.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
31.66	5.0E-07	0.11	14.3	4.46	1	15.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
32.15	5.0E-08	0.09	17.8	4.75	1	18.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
32.64	5.0E-07	0.08	19.2	4.32	1	19.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
33.14	5.0E-06	0.07	20.4	3.91	4	21.0	84.1	105.1	47.1	UnDef	UnDef	6.0	UnDef	10.3	20.6
33.63	5.0E-06	0.05	20.6	3.85	4	21.3	85.1	106.4	46.7	UnDef	UnDef	6.0	UnDef	10.4	20.8
34.12	5.0E-07	0.05	17.7	4.41	1	18.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
34.61	5.0E-08	0.04	18.5	4.68	1	19.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
35.10	5.0E-06	0.04	23.2	4.07	4	24.1	96.3	120.4	45.4	UnDef	UnDef	6.0	UnDef	11.8	23.6
35.60	5.0E-06	0.04	23.8	3.42	6	24.9	99.5	124.3	42.1	UnDef	UnDef	6.0	UnDef	12.2	24.3
36.09	5.0E-06	0.03	17.8	3.10	6	19.4	77.7	97.1	46.1	UnDef	UnDef	6.0	UnDef	9.5	19.0
36.58	5.0E-07	0.05	12.9	4.19	1	15.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
37.07	5.0E-06	0.02	17.7	3.54	4	19.6	78.2	97.8	48.4	UnDef	UnDef	6.0	UnDef	9.6	19.1
37.57	5.0E-07	0.00	15.9	4.42	1	18.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
38.06	5.0E-08	0.00	14.3	4.92	1	16.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
38.55	5.0E-08	0.01	12.4	4.73	1	14.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
39.04	5.0E-08	0.01	10.4	5.58	1	13.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
39.53	5.0E-08	0.03	10.3	5.30	1	13.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
40.03	5.0E-07	0.04	11.9	4.67	1	14.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
40.52	5.0E-07	0.05	15.4	4.12	1	18.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3273
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-21
Engineer: L. HANDFELT
CPT Date: 03/06/10
CPT Time: 11:13
CPT File: 244C21.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -10.00 (ft): -32.8
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	14.5	0.20	1.38	42.1	6	114.6	1.04	0.01	1.03	2.00	5.5	11.1	1.08	0.00
0.74	50.4	0.20	0.40	43.0	8	120.9	1.07	0.02	1.05	2.00	12.1	24.2	UnDef	0.16
1.23	46.1	0.20	0.43	37.5	8	120.9	1.10	0.03	1.06	2.00	11.0	22.1	UnDef	0.14
1.72	15.3	0.20	1.31	35.2	6	114.6	1.13	0.05	1.08	2.00	5.8	11.7	1.13	0.08
2.21	9.4	0.20	2.12	36.9	5	114.6	1.15	0.06	1.09	2.00	4.5	9.0	0.66	0.00
2.71	13.1	0.20	1.53	36.9	5	114.6	1.18	0.07	1.11	2.00	6.3	12.5	0.95	0.00
3.20	11.5	0.20	1.74	38.0	5	114.6	1.21	0.09	1.12	2.00	5.5	11.0	0.82	0.00
3.65	5.5	0.20	3.64	41.8	3	111.4	1.24	0.10	1.14	2.00	5.3	10.6	0.34	0.09
4.10	4.3	0.20	4.62	44.6	3	111.4	1.26	0.11	1.15	2.00	4.2	8.3	0.25	0.00
4.59	3.9	0.20	5.08	42.8	3	111.4	1.29	0.12	1.17	2.00	3.8	7.6	0.21	0.00
5.09	4.3	0.20	4.64	49.1	3	111.4	1.32	0.13	1.18	2.00	4.1	8.3	0.24	0.00
5.58	7.7	0.20	2.61	43.7	4	114.6	1.34	0.15	1.20	2.00	4.9	9.8	0.51	0.09
6.07	6.4	0.20	3.12	32.9	3	111.4	1.37	0.16	1.21	2.00	6.1	12.3	0.40	0.10
6.60	5.0	0.20	4.01	45.4	3	111.4	1.40	0.17	1.23	2.00	4.8	9.6	0.29	0.00
7.14	5.8	0.20	3.45	52.7	3	111.4	1.43	0.18	1.25	2.00	5.6	11.1	0.35	0.00
7.63	11.4	0.20	1.76	43.6	5	114.6	1.46	0.20	1.26	2.00	5.5	10.9	0.80	0.09
8.12	5.6	0.20	3.56	33.8	3	111.4	1.49	0.21	1.28	2.00	5.4	10.8	0.33	0.00
8.61	7.7	0.20	2.62	58.5	4	114.6	1.51	0.22	1.29	2.00	4.9	9.8	0.49	0.12
9.10	28.2	0.20	0.71	53.4	7	117.8	1.54	0.23	1.31	2.00	9.0	18.0	UnDef	0.10
9.60	15.4	0.22	1.44	34.2	6	114.6	1.57	0.25	1.32	2.00	5.9	11.8	1.10	0.09
10.09	9.6	0.22	2.32	29.1	5	114.6	1.60	0.26	1.34	1.96	4.6	9.0	0.64	0.15
10.58	13.2	0.24	1.83	33.3	5	114.6	1.63	0.27	1.35	1.91	6.3	12.1	0.93	0.10
11.07	45.2	0.30	0.65	35.8	7	117.8	1.66	0.29	1.37	1.87	14.4	27.0	UnDef	0.13
11.56	43.5	0.47	1.09	38.8	7	117.8	1.69	0.30	1.39	1.83	13.9	25.3	UnDef	0.14
12.06	31.9	0.70	2.20	31.9	6	114.6	1.71	0.31	1.40	1.79	12.2	21.8	2.41	0.14
12.55	39.8	0.44	1.11	31.3	7	117.8	1.74	0.33	1.42	1.75	12.7	22.2	UnDef	0.13
13.04	30.4	0.44	1.46	90.8	6	114.6	1.77	0.34	1.43	1.72	11.7	20.0	2.29	0.11
13.53	59.2	1.04	1.76	50.4	7	117.8	1.80	0.35	1.45	1.68	18.9	31.8	UnDef	0.23
14.03	83.4	0.78	0.93	47.4	8	120.9	1.83	0.37	1.46	1.65	20.0	33.0	UnDef	0.31
14.52	77.8	0.96	1.24	31.8	8	120.9	1.86	0.38	1.48	1.62	18.6	30.2	UnDef	0.29
15.01	26.5	0.87	3.28	40.7	5	114.6	1.89	0.40	1.49	1.59	12.7	20.2	1.97	0.19
15.50	37.8	0.59	1.57	54.0	7	117.8	1.92	0.41	1.51	1.56	12.1	18.9	UnDef	0.13
15.99	46.0	0.40	0.87	13.9	7	117.8	1.95	0.42	1.52	1.54	14.7	22.6	UnDef	0.13
16.49	23.1	0.44	1.89	2.0	6	114.6	1.97	0.44	1.54	1.52	8.9	13.4	1.69	0.11
16.98	26.2	0.75	2.85	17.2	5	114.6	2.00	0.45	1.55	1.49	12.5	18.7	1.93	0.17
17.47	103.5	1.11	1.07	30.2	8	120.9	2.03	0.46	1.57	1.47	24.8	36.5	UnDef	0.41
17.96	142.4	1.58	1.11	23.4	8	120.9	2.06	0.48	1.58	1.45	34.1	49.4	UnDef	0.00
18.45	141.9	1.89	1.33	32.6	8	120.9	2.09	0.49	1.60	1.43	34.0	48.5	UnDef	0.00
18.95	142.1	1.36	0.96	13.1	9	124.1	2.12	0.51	1.62	1.41	27.2	38.3	UnDef	0.00
19.44	87.6	1.25	1.42	6.6	8	120.9	2.15	0.52	1.63	1.39	21.0	29.1	UnDef	0.31
19.93	78.5	1.42	1.81	2.8	7	117.8	2.18	0.53	1.65	1.37	25.1	34.3	UnDef	0.29
20.42	161.5	1.85	1.14	7.2	8	120.9	2.21	0.55	1.66	1.35	38.7	52.2	UnDef	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	239.5	2.70	1.13	0.5	9	124.1	2.24	0.56	1.68	1.33	45.9	61.1	UnDef	0.00
21.41	207.8	2.62	1.26	1.6	8	120.9	2.27	0.58	1.69	1.32	49.8	65.5	UnDef	0.00
21.90	163.9	2.16	1.32	2.2	8	120.9	2.30	0.59	1.71	1.30	39.2	51.0	UnDef	0.00
22.39	133.1	1.24	0.93	2.4	9	124.1	2.33	0.61	1.72	1.28	25.5	32.7	UnDef	0.00
22.88	77.1	1.55	2.01	-0.1	7	117.8	2.36	0.62	1.74	1.27	24.6	31.2	UnDef	0.29
23.38	85.3	1.27	1.49	12.3	7	117.8	2.39	0.63	1.75	1.26	27.2	34.2	UnDef	0.27
23.87	99.3	1.03	1.04	4.4	8	120.9	2.42	0.65	1.77	1.24	23.8	29.5	UnDef	0.29
24.36	56.1	1.54	2.75	1.6	6	114.6	2.45	0.66	1.78	1.23	21.5	26.4	4.29	0.26
24.85	81.7	1.40	1.71	37.0	7	117.8	2.48	0.68	1.80	1.22	26.1	31.8	UnDef	0.27
25.34	94.4	1.25	1.33	45.1	8	120.9	2.51	0.69	1.82	1.20	22.6	27.2	UnDef	0.29
25.84	71.4	2.06	2.89	44.2	6	114.6	2.53	0.70	1.83	1.19	27.3	32.6	5.51	0.36
26.33	97.1	1.64	1.69	28.6	7	117.8	2.56	0.72	1.85	1.18	31.0	36.6	UnDef	0.34
26.82	115.2	2.14	1.85	19.0	7	117.8	2.59	0.73	1.86	1.17	36.8	43.0	UnDef	0.00
27.31	121.2	2.55	2.10	32.3	7	117.8	2.62	0.74	1.88	1.16	38.7	44.9	UnDef	0.00
27.80	98.1	2.39	2.44	17.6	7	117.8	2.65	0.76	1.89	1.15	31.3	36.0	UnDef	0.45
28.30	75.1	2.70	3.59	80.0	5	114.6	2.68	0.77	1.91	1.14	35.9	41.0	5.79	0.00
28.79	151.6	3.22	2.12	43.7	7	117.8	2.71	0.78	1.92	1.13	48.4	54.7	UnDef	0.00
29.28	168.6	2.91	1.73	16.7	8	120.9	2.74	0.80	1.94	1.12	40.4	45.2	UnDef	0.00
29.77	150.7	3.08	2.04	13.6	7	117.8	2.77	0.81	1.95	1.11	48.1	53.4	UnDef	0.00
30.27	163.7	3.27	2.00	23.6	7	117.8	2.79	0.83	1.97	1.10	52.3	57.5	UnDef	0.00
30.76	260.7	4.20	1.61	23.0	8	120.9	2.82	0.84	1.98	1.09	62.4	68.1	UnDef	0.00
31.21	213.8	4.15	1.94	33.7	8	120.9	2.85	0.85	2.00	1.08	51.2	55.4	UnDef	0.00
31.66	141.2	3.62	2.57	36.7	7	117.8	2.88	0.87	2.01	1.08	45.1	48.5	UnDef	0.00
32.15	89.6	4.06	4.53	38.2	11	130.5	2.91	0.88	2.03	1.07	85.8	91.5	UnDef	0.00
32.64	212.9	3.43	1.61	46.0	8	120.9	2.94	0.90	2.04	1.06	51.0	53.9	UnDef	0.00
33.14	282.6	4.30	1.52	69.8	8	120.9	2.97	0.91	2.06	1.05	67.7	70.9	UnDef	0.00
33.63	274.6	4.15	1.51	42.5	8	120.9	3.00	0.92	2.07	1.04	65.7	68.4	UnDef	0.00
34.12	226.7	3.69	1.63	29.0	8	120.9	3.03	0.94	2.09	1.03	54.3	56.0	UnDef	0.00
34.61	220.9	4.26	1.93	49.6	8	120.9	3.06	0.95	2.10	1.02	52.9	54.2	UnDef	0.00
35.10	208.6	4.39	2.10	32.2	7	117.8	3.09	0.97	2.12	1.02	66.6	67.7	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3273
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-21
Engineer: L. HANDFELT
CPT Date: 03/06/10
CPT Time: 11:13
CPT File: 244C21.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -10.00 (ft): -32.8
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-05	0.02	1000.0	1.49	12	27.7	UnDef	UnDef	0.0	50	83.6	10.0	-0.46	UnDef	UnDef
0.74	5.0E-03	0.01	1000.0	0.41	10	96.6	0.0	96.6	0.0	50	95.0	1.0	-0.31	0.0	24.2
1.23	5.0E-03	0.00	1000.0	0.45	10	88.3	0.0	88.3	0.0	50	92.8	1.0	-0.32	0.0	22.1
1.72	5.0E-05	0.00	294.3	1.42	9	29.2	0.9	30.1	6.1	46	56.3	10.0	-0.33	0.2	11.9
2.21	5.0E-06	0.01	136.3	2.42	7	18.1	7.0	25.1	15.4	UnDef	UnDef	10.0	UnDef	1.9	11.0
2.71	5.0E-06	0.00	161.5	1.68	9	25.1	4.7	29.7	10.9	UnDef	UnDef	10.0	UnDef	1.4	13.9
3.20	5.0E-06	0.01	118.9	1.95	7	22.0	7.5	29.5	14.5	UnDef	UnDef	10.0	UnDef	2.1	13.1
3.65	5.0E-08	0.04	43.6	4.69	6	10.6	42.2	52.8	36.9	UnDef	UnDef	6.0	UnDef	10.6	21.1
4.10	5.0E-08	0.08	28.3	6.51	1	8.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
4.59	5.0E-08	0.06	22.0	7.54	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.09	5.0E-08	0.12	22.6	6.68	1	8.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.58	5.0E-07	0.03	43.5	3.16	6	14.7	34.4	49.1	31.2	UnDef	UnDef	6.0	UnDef	7.6	17.5
6.07	5.0E-08	-0.04	31.9	3.97	6	12.3	49.2	61.4	39.3	UnDef	UnDef	6.0	UnDef	12.3	24.6
6.60	5.0E-08	0.05	21.1	5.56	1	9.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.14	5.0E-08	0.09	23.8	4.57	1	11.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
7.63	5.0E-06	0.01	50.6	2.02	7	21.8	21.9	43.7	23.8	UnDef	UnDef	10.0	UnDef	5.0	15.9
8.12	5.0E-08	-0.05	19.8	4.84	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
8.61	5.0E-07	0.09	27.7	3.27	6	14.7	58.6	73.3	38.7	UnDef	UnDef	6.0	UnDef	9.8	19.5
9.10	5.0E-04	0.01	113.8	0.75	9	54.1	4.5	58.6	7.9	42	51.2	1.0	-0.17	0.9	18.9
9.60	5.0E-05	-0.02	55.6	1.60	7	29.4	20.2	49.6	20.2	40	32.9	10.0	-0.18	4.0	15.8
10.09	5.0E-06	-0.05	30.9	2.78	6	18.5	71.1	89.6	34.7	UnDef	UnDef	6.0	UnDef	8.9	18.0
10.58	5.0E-06	-0.03	42.5	2.09	7	24.8	33.1	57.9	26.4	UnDef	UnDef	6.0	UnDef	6.8	18.9
11.07	5.0E-04	-0.01	152.0	0.68	9	82.7	1.0	83.7	5.4	44	61.8	1.0	-0.19	0.2	27.2
11.56	5.0E-04	0.00	139.1	1.13	9	77.6	9.2	86.8	9.0	44	60.0	1.0	-0.23	1.8	27.1
12.06	5.0E-05	-0.01	96.2	2.32	7	55.7	30.0	85.8	18.1	42	50.5	10.0	-0.28	6.1	27.9
12.55	5.0E-04	-0.01	116.4	1.16	9	68.1	11.6	79.7	10.5	42	56.3	1.0	-0.22	2.2	24.4
13.04	5.0E-05	0.05	84.3	1.54	7	51.1	19.9	71.0	15.5	42	48.0	10.0	-0.21	4.3	24.3
13.53	5.0E-04	0.00	162.5	1.81	9	97.4	20.2	117.7	11.4	44	66.5	1.0	-0.30	3.8	35.6
14.03	5.0E-03	0.00	222.2	0.95	9	134.7	0.3	135.0	5.1	46	75.8	1.0	-0.26	0.0	33.0
14.52	5.0E-03	-0.01	199.1	1.27	9	123.3	8.6	131.9	7.4	46	73.3	1.0	-0.28	1.3	31.5
15.01	5.0E-06	-0.01	62.3	3.53	6	41.3	64.8	106.1	27.9	UnDef	UnDef	10.0	UnDef	12.5	32.7
15.50	5.0E-04	0.00	87.9	1.66	7	57.9	23.3	81.2	15.7	42	51.6	1.0	-0.23	4.1	23.0
15.99	5.0E-04	-0.02	104.4	0.91	9	69.3	9.9	79.2	9.7	42	56.8	1.0	-0.18	1.9	24.5
16.49	5.0E-05	-0.07	48.6	2.06	7	34.3	37.4	71.6	24.5	38	36.6	6.0	-0.20	6.5	19.9
16.98	5.0E-06	-0.04	54.0	3.08	6	38.3	60.6	98.9	28.0	UnDef	UnDef	10.0	UnDef	11.6	30.4
17.47	5.0E-03	-0.01	219.7	1.09	9	149.0	3.8	152.9	5.9	46	78.7	1.0	-0.27	0.6	37.0
17.96	5.0E-03	-0.01	294.8	1.13	9	202.0	0.0	202.0	4.7	46	87.4	1.0	-0.30	0.0	49.4
18.45	5.0E-03	0.00	285.1	1.35	9	198.3	5.0	203.4	5.9	46	86.9	1.0	-0.32	0.8	49.3
18.95	5.0E-02	-0.01	277.1	0.97	9	195.7	0.0	195.7	4.1	46	86.5	1.0	-0.28	0.0	38.3
19.44	5.0E-03	-0.02	164.4	1.46	9	118.9	16.8	135.7	9.6	44	72.2	1.0	-0.28	2.4	31.5
19.93	5.0E-04	-0.02	142.9	1.86	9	105.1	26.8	131.9	12.6	44	68.7	1.0	-0.29	5.0	39.3
20.42	5.0E-03	-0.01	290.7	1.16	9	213.5	0.0	213.5	4.9	46	89.0	1.0	-0.31	0.0	52.2

Gregg In Situ, Inc.
Run No: 03-1030-1241-3273
CPT File: 244C21.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-02	-0.01	421.5	1.14	9	312.4	0.0	312.4	3.3	48	95.0	1.0	-0.34	0.0	61.1
21.41	5.0E-03	-0.01	355.8	1.28	9	267.6	0.0	267.6	4.6	48	95.0	1.0	-0.34	0.0	65.5
21.90	5.0E-03	-0.01	272.9	1.33	9	208.4	6.1	214.5	6.1	46	88.3	1.0	-0.32	0.9	51.9
22.39	5.0E-02	-0.01	215.4	0.95	9	167.2	1.1	168.2	5.2	46	82.0	1.0	-0.26	0.1	32.8
22.88	5.0E-04	-0.02	120.4	2.08	7	95.8	34.8	130.6	15.0	42	66.0	1.0	-0.29	6.3	37.5
23.38	5.0E-04	-0.02	130.7	1.54	9	104.8	22.8	127.6	11.7	44	68.6	1.0	-0.26	4.3	38.5
23.87	5.0E-03	-0.02	149.3	1.06	9	120.6	10.8	131.4	8.1	44	72.6	1.0	-0.23	1.6	31.1
24.36	5.0E-05	-0.03	81.0	2.88	7	67.4	57.6	125.0	22.3	42	56.0	10.0	-0.30	10.7	37.1
24.85	5.0E-04	-0.01	117.3	1.76	7	97.3	29.4	126.8	13.7	42	66.5	1.0	-0.26	5.4	37.1
25.34	5.0E-03	0.00	133.2	1.37	9	111.2	19.7	130.9	10.6	44	70.3	1.0	-0.25	2.8	30.0
25.84	5.0E-05	-0.01	97.9	2.99	7	83.3	60.3	143.6	20.7	42	62.0	10.0	-0.33	11.6	44.2
26.33	5.0E-04	-0.01	131.9	1.74	9	112.2	28.7	140.9	12.6	44	70.6	1.0	-0.28	5.3	42.0
26.82	5.0E-04	-0.01	154.2	1.90	9	131.9	31.3	163.3	12.2	44	75.2	1.0	-0.30	5.9	48.9
27.31	5.0E-04	-0.01	159.5	2.15	7	137.6	37.7	175.3	13.1	44	76.4	1.0	-0.33	7.0	51.9
27.80	5.0E-04	-0.01	126.0	2.51	7	110.3	48.6	158.8	16.5	44	70.1	1.0	-0.33	8.5	44.5
28.30	5.0E-06	0.01	93.9	3.73	7	83.7	84.5	168.2	23.8	UnDef	UnDef	10.0	UnDef	18.8	59.7
28.79	5.0E-04	0.00	190.0	2.16	9	167.6	37.5	205.1	11.8	44	82.1	1.0	-0.35	7.1	61.7
29.28	5.0E-03	-0.01	207.9	1.76	9	184.7	25.4	210.1	9.5	46	84.9	1.0	-0.32	3.7	48.9
29.77	5.0E-04	-0.01	182.3	2.08	9	163.7	36.3	200.0	11.8	44	81.4	1.0	-0.34	6.8	60.3
30.27	5.0E-04	-0.01	195.0	2.03	9	176.4	34.5	210.9	11.1	46	83.5	1.0	-0.34	6.6	64.1
30.76	5.0E-03	0.00	307.2	1.63	9	278.5	14.2	292.7	6.8	46	95.0	1.0	-0.35	2.1	70.3
31.21	5.0E-03	0.00	247.4	1.97	9	226.6	30.1	256.7	9.4	46	90.7	1.0	-0.36	4.4	59.8
31.66	5.0E-04	-0.01	159.8	2.62	7	148.5	53.7	202.2	14.9	44	78.6	1.0	-0.36	9.6	58.1
32.15	1.0E-15	-0.01	98.5	4.69	11	93.5	UnDef	UnDef	0.0	42	65.3	1.0	-0.50	UnDef	UnDef
32.64	5.0E-03	0.00	234.3	1.64	9	220.1	21.1	241.2	8.3	46	89.9	1.0	-0.33	3.1	57.0
33.14	5.0E-03	0.00	307.1	1.54	9	289.8	11.4	301.2	6.4	46	95.0	1.0	-0.35	1.7	72.6
33.63	5.0E-03	0.00	293.6	1.53	9	279.4	12.5	291.8	6.6	46	95.0	1.0	-0.34	1.9	70.2
34.12	5.0E-03	-0.01	238.2	1.65	9	228.9	21.8	250.7	8.3	46	91.0	1.0	-0.33	3.2	59.2
34.61	5.0E-03	0.00	228.4	1.96	9	221.4	32.7	254.1	9.8	46	90.1	1.0	-0.35	4.7	58.9
35.10	5.0E-04	-0.01	212.4	2.14	9	207.6	39.7	247.3	11.0	46	88.2	1.0	-0.36	7.6	75.3

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3295
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-22
Engineer: L. HANDFELT
CPT Date: 03/06/10
CPT Time: 14:29
CPT File: 244C22.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -10.97 (ft): -36.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.4	0.20	8.27	43.3	2	111.4	1.14	0.01	1.13	2.00	2.3	4.6	0.10	0.00
0.74	4.4	0.20	4.59	50.8	3	111.4	1.17	0.02	1.15	2.00	4.2	8.4	0.26	0.00
1.23	5.8	0.20	3.43	59.8	3	111.4	1.19	0.03	1.16	2.00	5.6	11.2	0.37	0.00
1.72	6.5	0.20	3.10	69.8	3	111.4	1.22	0.04	1.18	2.00	6.2	12.4	0.42	0.00
2.21	6.1	0.20	3.26	43.3	3	111.4	1.25	0.05	1.19	2.00	5.9	11.8	0.39	0.00
2.71	5.9	0.20	3.41	65.2	3	111.4	1.27	0.07	1.21	2.00	5.6	11.3	0.37	0.08
3.20	7.6	0.24	3.15	30.2	3	111.4	1.30	0.08	1.22	2.00	7.3	14.6	0.51	0.08
3.65	6.6	0.24	3.70	18.0	3	111.4	1.33	0.09	1.24	2.00	6.3	12.7	0.42	0.09
4.10	6.7	0.22	3.35	31.7	3	111.4	1.35	0.10	1.25	2.00	6.4	12.8	0.43	0.09
4.59	6.1	0.20	3.31	37.0	3	111.4	1.38	0.11	1.27	2.00	5.9	11.7	0.38	0.10
5.09	6.5	0.20	3.10	64.2	3	111.4	1.41	0.12	1.28	2.00	6.2	12.4	0.41	0.10
5.58	7.0	0.20	2.89	63.1	4	114.6	1.44	0.14	1.30	2.00	4.5	8.9	0.44	0.10
6.07	6.3	0.20	3.17	90.7	3	111.4	1.46	0.15	1.31	2.00	6.1	12.1	0.39	0.10
6.60	6.5	0.20	3.10	96.9	3	111.4	1.49	0.16	1.33	2.00	6.2	12.4	0.40	0.10
7.14	6.6	0.20	3.03	93.9	3	111.4	1.52	0.18	1.35	2.00	6.3	12.7	0.41	0.10
7.63	6.5	0.20	3.09	99.5	3	111.4	1.55	0.19	1.36	2.00	6.2	12.4	0.39	0.10
8.12	6.5	0.20	3.08	95.9	3	111.4	1.58	0.20	1.38	2.00	6.2	12.5	0.40	0.10
8.61	7.4	0.21	2.79	98.5	4	114.6	1.60	0.21	1.39	2.00	4.7	9.4	0.46	0.11
9.10	11.6	0.20	1.73	47.6	5	114.6	1.63	0.22	1.41	2.00	5.6	11.1	0.80	0.09
9.60	9.9	0.20	2.03	62.0	5	114.6	1.66	0.24	1.42	2.00	4.7	9.5	0.66	0.10
10.09	9.9	0.21	2.10	71.8	5	114.6	1.69	0.25	1.44	2.00	4.7	9.4	0.65	0.11
10.58	10.5	0.22	2.07	91.1	5	114.6	1.72	0.26	1.45	1.95	5.1	9.8	0.71	0.11
11.07	12.8	0.28	2.22	101.4	5	114.6	1.75	0.28	1.47	1.90	6.1	11.7	0.89	0.11
11.56	14.4	0.48	3.36	72.3	4	114.6	1.77	0.29	1.49	1.86	9.2	17.1	1.01	0.22
12.06	15.5	0.54	3.50	63.0	4	114.6	1.80	0.30	1.50	1.82	9.9	18.0	1.10	0.24
12.55	16.7	0.49	2.92	73.2	5	114.6	1.83	0.31	1.52	1.78	8.0	14.3	1.19	0.15
13.04	16.6	0.58	3.47	49.5	4	114.6	1.86	0.33	1.53	1.75	10.6	18.5	1.18	0.25
13.53	16.4	0.58	3.54	46.1	4	114.6	1.89	0.34	1.55	1.71	10.5	17.9	1.16	0.31
14.03	17.5	0.67	3.83	47.7	4	114.6	1.92	0.35	1.56	1.68	11.2	18.8	1.24	0.36
14.52	17.0	0.85	5.03	26.0	3	111.4	1.94	0.37	1.58	1.65	16.3	26.9	1.20	0.00
15.01	12.6	0.50	3.97	22.1	3	111.4	1.97	0.38	1.59	1.63	12.1	19.6	0.85	0.00
15.50	18.6	0.72	3.89	52.1	4	114.6	2.00	0.39	1.61	1.60	11.9	19.0	1.33	0.37
15.99	16.8	0.67	4.01	82.9	3	111.4	2.03	0.40	1.62	1.58	16.0	25.3	1.18	0.28
16.49	22.2	0.84	3.77	47.7	4	114.6	2.05	0.41	1.64	1.55	14.2	22.0	1.61	0.34
16.98	21.0	0.93	4.41	26.4	3	111.4	2.08	0.43	1.65	1.53	20.1	30.8	1.51	0.44
17.47	72.3	0.67	0.93	91.5	8	120.9	2.11	0.44	1.67	1.51	17.3	26.1	UnDef	0.21
17.96	96.6	0.33	0.35	43.6	9	124.1	2.14	0.46	1.68	1.48	18.5	27.4	UnDef	0.34
18.45	24.7	0.45	1.80	71.6	6	114.6	2.17	0.47	1.70	1.46	9.5	13.8	1.80	0.12
18.95	16.5	0.34	2.09	141.9	5	114.6	2.20	0.48	1.72	1.44	7.9	11.4	1.14	0.16
19.44	21.0	0.39	1.87	162.7	6	114.6	2.23	0.49	1.73	1.42	8.1	11.5	1.50	0.12
19.93	18.5	0.70	3.77	76.5	4	114.6	2.25	0.51	1.75	1.40	11.8	16.6	1.30	0.27
20.42	20.1	0.74	3.70	121.5	4	114.6	2.28	0.52	1.76	1.39	12.8	17.8	1.42	0.31

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	23.6	1.10	4.67	96.6	3	111.4	2.31	0.53	1.78	1.37	22.6	30.9	1.70	0.00
21.41	30.2	1.12	3.70	154.6	5	114.6	2.34	0.55	1.79	1.35	14.4	19.6	2.23	0.38
21.90	48.2	0.53	1.09	83.0	7	117.8	2.37	0.56	1.81	1.34	15.4	20.6	UnDef	0.13
22.39	19.9	0.56	2.83	63.2	5	114.6	2.40	0.57	1.82	1.32	9.5	12.6	1.40	0.28
22.88	19.6	0.93	4.72	71.5	3	111.4	2.42	0.58	1.84	1.31	18.8	24.6	1.37	0.00
23.38	46.3	0.84	1.80	116.7	7	117.8	2.45	0.60	1.85	1.29	14.8	19.1	UnDef	0.16
23.87	103.9	0.98	0.95	58.3	8	120.9	2.48	0.61	1.87	1.28	24.9	31.8	UnDef	0.32
24.36	150.3	1.08	0.72	40.0	9	124.1	2.51	0.63	1.88	1.26	28.8	36.4	UnDef	0.00
24.85	123.9	1.87	1.51	76.6	8	120.9	2.54	0.64	1.90	1.25	29.7	37.0	UnDef	0.00
25.34	273.1	1.48	0.54	38.6	10	127.3	2.57	0.66	1.92	1.23	43.6	53.8	UnDef	0.00
25.84	275.0	1.42	0.52	57.1	10	127.3	2.60	0.67	1.93	1.22	43.9	53.6	UnDef	0.00
26.33	243.0	1.26	0.52	49.5	9	124.1	2.63	0.69	1.95	1.21	46.5	56.1	UnDef	0.00
26.82	158.2	1.31	0.83	39.6	9	124.1	2.66	0.70	1.96	1.19	30.3	36.2	UnDef	0.00
27.31	124.6	1.35	1.08	33.0	8	120.9	2.69	0.72	1.98	1.18	29.8	35.2	UnDef	0.42
27.80	49.9	1.01	2.02	14.0	6	114.6	2.72	0.73	1.99	1.17	19.1	22.4	3.78	0.18
28.30	24.8	0.75	3.03	33.3	5	114.6	2.75	0.74	2.01	1.16	11.9	13.8	1.76	0.34
28.79	35.3	1.05	2.97	54.2	5	114.6	2.78	0.76	2.02	1.15	16.9	19.4	2.60	0.33
29.28	28.3	1.00	3.53	50.6	5	114.6	2.81	0.77	2.04	1.14	13.6	15.5	2.04	0.45
29.77	28.0	0.80	2.84	60.2	5	114.6	2.84	0.78	2.05	1.13	13.4	15.2	2.01	0.43
30.27	28.8	0.84	2.93	82.8	5	114.6	2.86	0.80	2.07	1.12	13.8	15.5	2.08	0.45
30.76	26.8	1.15	4.30	64.6	4	114.6	2.89	0.81	2.08	1.11	17.1	19.0	1.91	0.00
31.21	33.0	0.97	2.94	79.9	5	114.6	2.92	0.82	2.10	1.10	15.8	17.4	2.40	0.46
31.66	26.1	0.95	3.65	67.0	5	114.6	2.94	0.83	2.11	1.10	12.5	13.7	1.85	0.34
32.15	32.7	0.99	3.04	103.1	5	114.6	2.97	0.84	2.13	1.09	15.7	17.1	2.38	0.00
32.64	29.7	0.98	3.30	198.1	5	114.6	3.00	0.86	2.14	1.08	14.2	15.4	2.14	0.44
33.14	62.1	1.64	2.65	197.2	6	114.6	3.03	0.87	2.16	1.07	23.8	25.5	4.73	0.29
33.63	41.5	1.74	4.20	74.2	5	114.6	3.06	0.88	2.17	1.06	19.9	21.2	3.08	0.00
34.12	66.8	1.23	1.84	131.4	7	117.8	3.09	0.90	2.19	1.06	21.3	22.5	UnDef	0.21
34.61	194.5	1.72	0.88	78.7	9	124.1	3.12	0.91	2.20	1.05	37.3	39.1	UnDef	0.00
35.10	174.1	1.67	0.96	44.0	9	124.1	3.15	0.93	2.22	1.04	33.3	34.7	UnDef	0.00
35.60	180.3	1.94	1.08	37.7	9	124.1	3.18	0.94	2.24	1.03	34.5	35.6	UnDef	0.00
36.09	180.6	2.41	1.34	16.7	8	120.9	3.21	0.96	2.25	1.02	43.2	44.2	UnDef	0.00
36.58	217.8	2.56	1.18	12.8	9	124.1	3.24	0.97	2.27	1.02	41.7	42.4	UnDef	0.00
37.07	279.9	2.66	0.95	68.5	9	124.1	3.27	0.99	2.28	1.01	53.6	54.0	UnDef	0.00
37.57	315.7	3.78	1.20	97.6	9	124.1	3.30	1.00	2.30	1.00	60.5	60.4	UnDef	0.00
38.06	193.9	4.00	2.06	21.6	7	117.8	3.33	1.02	2.31	0.99	61.9	61.4	UnDef	0.00
38.55	59.1	2.44	4.13	36.0	5	114.6	3.36	1.03	2.33	0.99	28.3	27.9	4.46	0.00
39.04	60.9	2.57	4.22	69.1	5	114.6	3.38	1.04	2.34	0.98	29.1	28.6	4.60	0.00
39.53	103.4	2.39	2.31	61.1	7	117.8	3.41	1.05	2.36	0.97	33.0	32.1	UnDef	0.42
40.03	140.2	2.39	1.71	25.4	8	120.9	3.44	1.07	2.37	0.97	33.6	32.5	UnDef	0.00
40.52	169.3	2.35	1.39	13.8	8	120.9	3.47	1.08	2.39	0.96	40.5	38.9	UnDef	0.00
41.01	145.0	2.12	1.46	7.8	8	120.9	3.50	1.10	2.40	0.95	34.7	33.1	UnDef	0.00
41.50	101.9	3.99	3.92	4.7	5	114.6	3.53	1.11	2.42	0.95	48.8	46.3	7.87	0.00
41.99	170.4	2.78	1.63	16.7	8	120.9	3.56	1.12	2.44	0.94	40.8	38.5	UnDef	0.00
42.49	168.2	4.55	2.70	14.4	7	117.8	3.59	1.14	2.45	0.94	53.7	50.3	UnDef	0.00
42.98	134.2	3.57	2.66	49.2	7	117.8	3.62	1.15	2.47	0.93	42.8	39.9	UnDef	0.00
43.47	87.2	2.89	3.31	159.3	6	114.6	3.65	1.17	2.48	0.93	33.4	31.0	6.69	0.00
43.96	105.2	4.29	4.08	91.1	5	114.6	3.67	1.18	2.50	0.92	50.4	46.4	8.12	0.00
44.45	154.8	3.89	2.52	80.0	7	117.8	3.70	1.19	2.51	0.92	49.4	45.3	UnDef	0.00
44.95	241.9	3.05	1.26	11.6	8	120.9	3.73	1.21	2.53	0.91	57.9	52.8	UnDef	0.00
45.44	185.0	3.65	1.97	19.3	7	117.8	3.76	1.22	2.54	0.91	59.1	53.5	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3295
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-22
Engineer: L. HANDFELT
CPT Date: 03/06/10
CPT Time: 14:29
CPT File: 244C22.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -10.97 (ft): -36.0
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.17	213.7	10.00	11	4.6	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-08	0.14	177.4	6.26	11	8.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	5.0E-08	0.15	154.3	4.32	11	11.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-08	0.19	124.5	3.82	12	12.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.21	5.0E-08	0.03	90.4	4.09	11	11.8	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
2.71	5.0E-08	0.18	69.6	4.35	6	11.3	21.0	32.2	29.4	UnDef	UnDef	10.0	UnDef	7.7	19.0
3.20	5.0E-08	-0.04	80.8	3.80	6	14.6	18.2	32.8	25.8	UnDef	UnDef	10.0	UnDef	7.7	22.4
3.65	5.0E-08	-0.13	59.2	4.63	6	12.7	34.4	47.0	32.4	UnDef	UnDef	10.0	UnDef	10.7	23.3
4.10	5.0E-08	-0.05	53.1	4.20	6	12.8	34.9	47.7	32.4	UnDef	UnDef	10.0	UnDef	10.8	23.6
4.59	5.0E-08	-0.02	42.1	4.27	6	11.7	46.8	58.6	36.0	UnDef	UnDef	6.0	UnDef	11.7	23.4
5.09	5.0E-08	0.14	40.7	3.95	6	12.4	49.6	62.0	35.4	UnDef	UnDef	6.0	UnDef	12.4	24.8
5.58	5.0E-07	0.12	40.5	3.64	6	13.4	47.7	61.1	34.3	UnDef	UnDef	6.0	UnDef	8.5	17.4
6.07	5.0E-08	0.31	32.6	4.12	6	12.1	48.5	60.7	39.5	UnDef	UnDef	6.0	UnDef	12.1	24.3
6.60	5.0E-08	0.34	30.6	4.03	6	12.4	49.5	61.9	40.2	UnDef	UnDef	6.0	UnDef	12.4	24.8
7.14	5.0E-08	0.31	29.1	3.93	6	12.7	50.8	63.4	40.7	UnDef	UnDef	6.0	UnDef	12.7	25.4
7.63	5.0E-08	0.35	26.3	4.06	6	12.4	49.7	62.1	43.0	UnDef	UnDef	6.0	UnDef	12.4	24.8
8.12	5.0E-08	0.33	24.8	4.06	6	12.5	49.9	62.4	44.1	UnDef	UnDef	6.0	UnDef	12.5	25.0
8.61	5.0E-07	0.29	27.2	3.57	6	14.1	56.4	70.5	40.4	UnDef	UnDef	6.0	UnDef	9.4	18.8
9.10	5.0E-06	0.01	44.4	2.01	7	22.2	26.7	48.9	25.4	UnDef	UnDef	6.0	UnDef	5.8	16.9
9.60	5.0E-06	0.06	34.6	2.44	6	18.9	44.4	63.3	31.3	UnDef	UnDef	6.0	UnDef	7.4	16.8
10.09	5.0E-06	0.10	32.6	2.53	6	18.9	53.0	71.9	32.6	UnDef	UnDef	6.0	UnDef	8.1	17.5
10.58	5.0E-06	0.16	33.5	2.48	6	20.1	51.3	71.4	31.9	UnDef	UnDef	6.0	UnDef	8.0	17.9
11.07	5.0E-06	0.15	40.1	2.57	6	23.9	46.3	70.1	29.7	UnDef	UnDef	6.0	UnDef	8.2	19.9
11.56	5.0E-07	0.06	43.6	3.84	6	26.1	88.6	114.8	33.9	UnDef	UnDef	6.0	UnDef	15.9	33.0
12.06	5.0E-07	0.03	45.4	3.96	6	27.6	91.9	119.5	33.8	UnDef	UnDef	6.0	UnDef	16.7	34.7
12.55	5.0E-06	0.05	47.3	3.28	6	29.1	62.7	91.8	30.6	UnDef	UnDef	6.0	UnDef	10.6	24.9
13.04	5.0E-07	0.00	45.0	3.91	6	28.4	93.2	121.6	33.7	UnDef	UnDef	6.0	UnDef	17.1	35.6
13.53	5.0E-07	-0.01	42.6	4.00	6	27.5	107.7	135.2	34.8	UnDef	UnDef	6.0	UnDef	17.8	35.8
14.03	5.0E-07	0.00	44.1	4.31	6	28.8	115.1	143.9	35.5	UnDef	UnDef	6.0	UnDef	18.8	37.5
14.52	5.0E-08	-0.05	41.1	5.68	1	27.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.01	5.0E-08	-0.08	28.1	4.70	1	20.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.50	5.0E-07	0.00	42.6	4.36	6	29.1	116.6	145.7	36.2	UnDef	UnDef	6.0	UnDef	19.0	38.0
15.99	5.0E-08	0.07	36.6	4.56	6	25.8	103.4	129.2	39.2	UnDef	UnDef	6.0	UnDef	25.3	50.6
16.49	5.0E-07	-0.01	48.5	4.15	6	33.7	107.5	141.2	33.5	UnDef	UnDef	6.0	UnDef	20.0	42.0
16.98	5.0E-08	-0.04	44.3	4.89	6	31.4	125.7	157.1	37.4	UnDef	UnDef	6.0	UnDef	30.8	61.5
17.47	5.0E-03	0.02	159.3	0.96	9	106.5	6.1	112.6	7.0	44	69.1	1.0	-0.23	0.9	27.0
17.96	5.0E-02	0.00	207.5	0.35	9	140.2	0.0	140.2	1.4	46	77.0	1.0	-0.16	0.0	27.4
18.45	5.0E-05	0.02	48.1	1.98	7	35.3	37.2	72.5	24.2	38	37.4	6.0	-0.18	6.5	20.4
18.95	5.0E-06	0.19	29.7	2.41	6	23.3	73.4	96.7	33.4	UnDef	UnDef	6.0	UnDef	10.3	21.7
19.44	5.0E-05	0.18	38.0	2.10	7	29.3	46.7	76.0	28.0	38	32.0	6.0	-0.14	7.2	18.6
19.93	5.0E-07	0.04	32.0	4.29	6	25.4	101.8	127.2	40.5	UnDef	UnDef	6.0	UnDef	16.6	33.2
20.42	5.0E-07	0.11	34.2	4.18	6	27.2	109.0	136.2	39.0	UnDef	UnDef	6.0	UnDef	17.8	35.5

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-08	0.06	39.9	5.17	1	31.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
21.41	5.0E-06	0.11	51.0	4.01	6	40.0	107.6	147.5	32.3	UnDef	UnDef	10.0	UnDef	16.4	36.0
21.90	5.0E-04	0.02	82.1	1.15	9	63.1	18.1	81.2	13.3	42	54.1	1.0	-0.18	3.3	23.9
22.39	5.0E-06	0.01	30.7	3.22	6	25.8	103.2	129.0	36.8	UnDef	UnDef	6.0	UnDef	12.6	25.3
22.88	5.0E-08	0.02	29.4	5.39	1	25.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.38	5.0E-04	0.04	73.4	1.91	7	58.6	34.5	93.1	18.9	40	52.0	1.0	-0.22	5.8	24.9
23.87	5.0E-03	0.00	166.0	0.97	9	130.1	6.7	136.8	6.8	44	74.8	1.0	-0.23	1.0	32.8
24.36	5.0E-02	0.00	236.1	0.73	9	185.9	0.0	185.9	3.5	46	85.1	1.0	-0.24	0.0	36.4
24.85	5.0E-03	0.00	189.3	1.54	9	151.4	18.6	170.1	9.1	44	79.2	1.0	-0.30	2.7	39.8
25.34	5.0E+00	0.00	412.5	0.55	10	330.0	0.0	330.0	0.2	48	95.0	1.0	-0.26	0.0	53.8
25.84	5.0E+00	0.00	405.5	0.52	10	328.4	0.0	328.4	0.1	48	95.0	1.0	-0.26	0.0	53.6
26.33	5.0E-02	0.00	349.6	0.52	10	286.8	0.0	286.8	0.6	48	95.0	1.0	-0.24	0.0	56.1
26.82	5.0E-02	0.00	221.4	0.84	9	184.7	0.0	184.7	4.5	46	84.9	1.0	-0.25	0.0	36.2
27.31	5.0E-03	-0.01	169.9	1.10	9	144.0	10.3	154.2	7.5	44	77.7	1.0	-0.25	1.5	36.8
27.80	5.0E-05	-0.03	64.6	2.14	7	57.1	44.8	102.0	21.5	40	51.2	10.0	-0.23	8.5	30.9
28.30	5.0E-06	-0.04	29.6	3.41	6	28.1	112.6	140.7	38.3	UnDef	UnDef	6.0	UnDef	13.8	27.5
28.79	5.0E-06	-0.01	43.0	3.23	6	39.7	98.7	138.3	31.7	UnDef	UnDef	6.0	UnDef	15.6	35.1
29.28	5.0E-06	-0.02	33.2	3.92	6	31.6	126.5	158.1	38.5	UnDef	UnDef	6.0	UnDef	15.5	30.9
29.77	5.0E-06	-0.01	32.2	3.16	6	31.0	123.9	154.9	35.8	UnDef	UnDef	6.0	UnDef	15.2	30.3
30.27	5.0E-06	0.02	32.7	3.25	6	31.6	126.6	158.2	36.0	UnDef	UnDef	6.0	UnDef	15.5	31.0
30.76	5.0E-07	0.00	29.5	4.82	1	29.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
31.21	5.0E-06	0.01	36.7	3.23	6	35.6	123.6	159.2	34.1	UnDef	UnDef	6.0	UnDef	16.5	33.9
31.66	5.0E-06	0.00	27.9	4.12	6	28.0	112.1	140.1	42.2	UnDef	UnDef	6.0	UnDef	13.7	27.4
32.15	5.0E-06	0.04	35.2	3.34	6	34.9	139.4	174.3	35.2	UnDef	UnDef	6.0	UnDef	17.1	34.1
32.64	5.0E-06	0.15	31.2	3.67	6	31.4	125.6	157.1	38.5	UnDef	UnDef	6.0	UnDef	15.4	30.7
33.14	5.0E-05	0.07	67.9	2.78	7	65.2	66.0	131.2	23.8	40	55.0	10.0	-0.26	11.7	37.2
33.63	5.0E-06	0.00	43.6	4.53	6	43.2	173.0	216.2	36.4	UnDef	UnDef	6.0	UnDef	21.2	42.3
34.12	5.0E-04	0.03	71.2	1.93	7	69.1	42.9	112.0	19.3	40	56.7	1.0	-0.22	7.1	29.6
34.61	5.0E-02	0.00	210.3	0.90	9	199.5	0.3	199.8	5.1	46	87.1	1.0	-0.25	0.0	39.1
35.10	5.0E-02	0.00	184.6	0.97	9	177.0	6.0	183.1	6.2	44	83.6	1.0	-0.24	0.7	35.4
35.60	5.0E-02	-0.01	188.3	1.10	9	181.9	9.3	191.2	6.8	44	84.4	1.0	-0.26	1.1	36.7
36.09	5.0E-03	-0.01	185.6	1.36	9	180.8	17.7	198.4	8.3	44	84.2	1.0	-0.28	2.6	46.8
36.58	5.0E-02	-0.01	221.1	1.19	9	216.4	8.6	225.0	6.4	46	89.4	1.0	-0.28	1.0	43.4
37.07	5.0E-02	0.00	280.7	0.96	9	275.9	0.0	275.9	4.0	46	95.0	1.0	-0.28	0.0	54.0
37.57	5.0E-02	0.00	312.1	1.21	9	308.8	0.0	308.8	4.8	46	95.0	1.0	-0.32	0.0	60.4
38.06	5.0E-04	-0.01	187.7	2.10	9	188.3	40.8	229.1	11.7	44	85.4	1.0	-0.34	7.7	69.1
38.55	5.0E-06	-0.02	54.2	4.38	6	57.0	163.4	220.4	32.8	UnDef	UnDef	10.0	UnDef	24.1	52.0
39.04	5.0E-06	0.00	55.2	4.47	6	58.4	167.9	226.3	32.8	UnDef	UnDef	10.0	UnDef	24.7	53.3
39.53	5.0E-04	0.00	94.8	2.39	7	98.5	56.0	154.5	18.6	42	66.9	1.0	-0.29	9.4	41.6
40.03	5.0E-03	-0.01	128.0	1.75	9	132.7	35.7	168.4	12.9	44	75.4	1.0	-0.27	5.0	37.4
40.52	5.0E-03	-0.01	153.1	1.42	9	159.2	24.0	183.2	9.9	44	80.6	1.0	-0.27	3.5	42.4
41.01	5.0E-03	-0.02	129.0	1.50	9	135.5	28.9	164.3	11.6	44	76.0	1.0	-0.26	4.1	37.2
41.50	5.0E-06	-0.02	88.5	4.06	11	94.6	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
41.99	5.0E-03	-0.01	148.3	1.67	9	157.2	32.4	189.6	11.4	44	80.2	1.0	-0.28	4.6	43.1
42.49	5.0E-04	-0.01	144.6	2.76	7	154.3	66.5	220.8	16.3	44	79.7	1.0	-0.36	11.7	62.0
42.98	5.0E-04	-0.01	113.4	2.73	7	122.4	67.4	189.8	18.3	42	73.1	1.0	-0.33	11.4	51.3
43.47	5.0E-05	0.03	71.7	3.46	7	79.1	99.8	178.9	25.9	40	60.6	10.0	-0.32	16.6	47.6
43.96	5.0E-06	0.00	86.2	4.23	11	94.9	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
44.45	5.0E-04	0.00	126.9	2.58	7	138.8	62.8	201.6	16.7	44	76.7	1.0	-0.33	11.0	56.2
44.95	5.0E-03	-0.01	197.6	1.28	9	215.7	15.7	231.3	7.5	46	89.3	1.0	-0.28	2.3	55.1
45.44	5.0E-04	-0.01	148.7	2.01	9	164.0	44.5	208.5	13.0	44	81.4	1.0	-0.31	8.2	61.7

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3317
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-23
Engineer: L. HANDFELT
CPT Date: 03/15/10
CPT Time: 15:11
CPT File: 244C23.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.19 (ft): -23.6
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.8	0.20	7.27	30.6	2	111.4	0.75	0.01	0.74	2.00	2.6	5.3	0.16	0.00
0.74	2.9	0.20	6.89	33.9	2	111.4	0.78	0.02	0.76	2.00	2.8	5.6	0.17	0.00
1.23	2.6	0.20	7.72	32.9	2	111.4	0.81	0.03	0.78	2.00	2.5	5.0	0.14	0.00
1.72	8.4	0.20	2.38	28.8	4	114.6	0.83	0.04	0.79	2.00	5.4	10.8	0.61	0.00
2.21	22.9	0.20	0.88	21.8	6	114.6	0.86	0.06	0.81	2.00	8.8	17.5	1.76	0.09
2.71	38.3	0.21	0.55	17.0	7	117.8	0.89	0.07	0.82	2.00	12.2	24.5	UnDef	0.12
3.20	44.9	0.25	0.56	19.3	7	117.8	0.92	0.08	0.84	2.00	14.3	28.6	UnDef	0.14
3.65	64.8	0.27	0.42	12.5	8	120.9	0.95	0.10	0.85	2.00	15.5	31.0	UnDef	0.26
4.10	86.3	0.45	0.52	15.4	8	120.9	0.97	0.11	0.86	2.00	20.7	41.3	UnDef	0.00
4.59	90.3	0.55	0.60	18.5	8	120.9	1.00	0.12	0.88	2.00	21.6	43.3	UnDef	0.00
5.09	56.3	0.48	0.85	21.3	8	120.9	1.03	0.14	0.90	2.00	13.5	27.0	UnDef	0.20
5.58	19.4	0.40	2.08	26.2	6	114.6	1.06	0.15	0.91	2.00	7.4	14.8	1.47	0.09
6.07	51.8	0.32	0.63	27.7	8	120.9	1.09	0.16	0.93	2.00	12.4	24.8	UnDef	0.17
6.60	65.8	0.56	0.85	21.6	8	120.9	1.12	0.18	0.94	2.00	15.8	31.5	UnDef	0.27
7.14	85.9	0.59	0.69	14.6	8	120.9	1.16	0.20	0.96	2.00	20.6	41.1	UnDef	0.00
7.63	69.0	0.65	0.95	9.8	8	120.9	1.18	0.21	0.98	2.00	16.5	33.0	UnDef	0.29
8.12	35.1	0.41	1.18	9.1	7	117.8	1.21	0.22	0.99	2.00	11.2	22.4	UnDef	0.12
8.61	11.4	0.23	1.98	4.5	5	114.6	1.24	0.24	1.01	2.00	5.4	10.9	0.81	0.09
9.10	18.0	0.24	1.35	8.1	6	114.6	1.27	0.25	1.02	2.00	6.9	13.8	1.34	0.09
9.60	17.7	0.20	1.13	9.3	6	114.6	1.30	0.26	1.04	1.95	6.8	13.2	1.31	0.09
10.09	19.4	0.26	1.34	14.4	6	114.6	1.33	0.28	1.05	1.91	7.4	14.2	1.45	0.09
10.58	17.9	0.33	1.87	29.1	6	114.6	1.36	0.29	1.07	1.86	6.9	12.8	1.32	0.10
11.07	12.7	0.22	1.72	36.8	5	114.6	1.38	0.30	1.08	1.82	6.1	11.1	0.91	0.10
11.56	63.5	0.52	0.82	35.4	8	120.9	1.41	0.31	1.10	1.78	15.2	27.1	UnDef	0.21
12.06	111.2	0.79	0.71	15.7	8	120.9	1.44	0.33	1.11	1.74	26.6	46.4	UnDef	0.00
12.55	102.4	0.93	0.91	11.7	8	120.9	1.47	0.34	1.13	1.71	24.5	41.8	UnDef	0.00
13.04	130.0	1.24	0.96	2.0	8	120.9	1.50	0.36	1.14	1.67	31.1	52.0	UnDef	0.00
13.53	149.1	1.31	0.88	0.6	9	124.1	1.53	0.37	1.16	1.64	28.6	46.8	UnDef	0.00
14.03	150.8	1.51	1.00	1.0	9	124.1	1.56	0.39	1.17	1.61	28.9	46.4	UnDef	0.00
14.52	95.6	1.25	1.31	2.7	8	120.9	1.59	0.40	1.19	1.58	22.9	36.1	UnDef	0.43
15.01	25.6	0.63	2.44	3.8	6	114.6	1.62	0.42	1.21	1.55	9.8	15.2	1.92	0.13
15.50	13.0	0.21	1.62	56.5	5	114.6	1.65	0.43	1.22	1.53	6.2	9.5	0.91	0.11
15.99	11.8	0.23	1.96	56.5	5	114.6	1.68	0.44	1.24	1.50	5.6	8.5	0.81	0.14
16.49	14.0	0.27	1.90	56.2	5	114.6	1.71	0.45	1.25	1.48	6.7	9.9	0.98	0.14
16.98	13.1	0.29	2.22	41.7	5	114.6	1.73	0.47	1.27	1.46	6.3	9.2	0.91	0.16
17.47	11.5	0.29	2.47	45.1	5	114.6	1.76	0.48	1.28	1.44	5.5	8.0	0.78	0.13
17.96	12.6	0.33	2.63	49.5	5	114.6	1.79	0.49	1.30	1.42	6.1	8.6	0.87	0.14
18.45	37.6	0.57	1.53	37.4	7	117.8	1.82	0.51	1.31	1.41	12.0	16.9	UnDef	0.12
18.95	27.7	0.81	2.92	25.7	5	114.6	1.85	0.52	1.33	1.39	13.3	18.4	2.07	0.19
19.44	54.2	0.73	1.35	25.7	7	117.8	1.88	0.53	1.34	1.37	17.3	23.7	UnDef	0.16
19.93	78.2	0.86	1.10	11.5	8	120.9	1.91	0.55	1.36	1.35	18.7	25.3	UnDef	0.22
20.42	44.8	0.64	1.43	5.3	7	117.8	1.94	0.56	1.37	1.34	14.3	19.1	UnDef	0.13

Gregg In Situ, Inc.
Run No: 03-1030-1241-3317
CPT File: 244C23.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	14.7	0.45	3.08	3.9	5	114.6	1.96	0.57	1.39	1.32	7.0	9.3	1.02	0.16
21.41	52.3	0.51	0.98	7.8	7	117.8	1.99	0.59	1.41	1.30	16.7	21.8	UnDef	0.13
21.90	58.9	0.68	1.15	7.5	7	117.8	2.02	0.60	1.42	1.29	18.8	24.2	UnDef	0.15
22.39	16.2	0.71	4.37	10.9	3	111.4	2.05	0.61	1.44	1.28	15.5	19.8	1.13	0.00
22.88	45.1	0.39	0.86	23.9	7	117.8	2.08	0.63	1.45	1.26	14.4	18.2	UnDef	0.11
23.38	52.6	0.77	1.46	15.3	7	117.8	2.11	0.64	1.47	1.25	16.8	21.0	UnDef	0.15
23.87	48.1	0.89	1.86	20.7	7	117.8	2.14	0.65	1.48	1.24	15.4	19.0	UnDef	0.16
24.36	104.1	1.05	1.01	17.7	8	120.9	2.17	0.67	1.50	1.22	24.9	30.5	UnDef	0.31
24.85	83.9	1.06	1.26	17.3	8	120.9	2.20	0.68	1.51	1.21	20.1	24.3	UnDef	0.23
25.34	111.2	1.13	1.02	11.1	8	120.9	2.22	0.70	1.53	1.20	26.6	31.9	UnDef	0.34
25.84	89.3	0.81	0.90	6.4	8	120.9	2.25	0.71	1.54	1.19	21.4	25.3	UnDef	0.22
26.33	56.4	0.75	1.33	4.4	7	117.8	2.28	0.73	1.56	1.17	18.0	21.1	UnDef	0.15
26.82	22.5	0.81	3.58	5.2	4	114.6	2.31	0.74	1.57	1.16	14.4	16.7	1.61	0.28
27.31	9.9	0.28	2.79	18.4	4	114.6	2.34	0.75	1.59	1.15	6.3	7.3	0.61	0.00
27.80	12.2	0.21	1.71	47.1	5	114.6	2.37	0.76	1.61	1.14	5.8	6.7	0.79	0.11
28.30	17.7	0.40	2.27	65.4	5	114.6	2.40	0.78	1.62	1.13	8.5	9.6	1.23	0.17
28.79	16.7	0.53	3.18	74.8	5	114.6	2.43	0.79	1.64	1.13	8.0	9.0	1.14	0.15
29.28	11.7	0.36	3.06	70.5	4	114.6	2.45	0.80	1.65	1.12	7.5	8.3	0.74	0.00
29.77	12.0	0.22	1.83	80.5	5	114.6	2.48	0.82	1.67	1.11	5.7	6.3	0.76	0.11
30.27	14.0	0.30	2.17	112.7	5	114.6	2.51	0.83	1.68	1.10	6.7	7.4	0.92	0.12
30.76	13.0	0.23	1.76	132.3	5	114.6	2.54	0.84	1.70	1.09	6.2	6.8	0.84	0.11
31.21	15.8	0.34	2.15	150.3	5	114.6	2.56	0.85	1.71	1.08	7.6	8.2	1.06	0.13
31.66	17.8	0.46	2.58	160.9	5	114.6	2.59	0.86	1.73	1.08	8.5	9.2	1.22	0.16
32.15	21.8	0.62	2.86	137.6	5	114.6	2.62	0.88	1.74	1.07	10.4	11.2	1.54	0.22
32.64	29.4	0.63	2.14	52.4	6	114.6	2.65	0.89	1.76	1.06	11.3	12.0	2.14	0.24
33.14	13.4	0.27	2.02	53.2	5	114.6	2.67	0.90	1.77	1.05	6.4	6.8	0.86	0.11
33.63	17.0	0.39	2.30	69.6	5	114.6	2.70	0.92	1.79	1.05	8.2	8.5	1.15	0.14
34.12	15.9	0.36	2.28	85.5	5	114.6	2.73	0.93	1.80	1.04	7.6	7.9	1.06	0.13
34.61	19.2	0.57	2.96	103.1	5	114.6	2.76	0.94	1.82	1.03	9.2	9.5	1.32	0.16
35.10	17.1	0.50	2.94	134.5	5	114.6	2.79	0.95	1.83	1.02	8.2	8.4	1.15	0.14
35.60	17.5	0.43	2.44	174.6	5	114.6	2.82	0.97	1.85	1.02	8.4	8.5	1.18	0.14
36.09	18.2	0.49	2.67	191.0	5	114.6	2.84	0.98	1.86	1.01	8.7	8.8	1.23	0.15
36.58	19.3	0.48	2.49	204.3	5	114.6	2.87	0.99	1.88	1.00	9.3	9.3	1.32	0.16
37.07	19.3	0.48	2.51	222.3	5	114.6	2.90	1.01	1.89	1.00	9.2	9.2	1.31	0.16
37.57	16.6	0.45	2.69	218.9	5	114.6	2.93	1.02	1.91	0.99	8.0	7.9	1.10	0.13
38.06	19.5	0.38	1.97	170.3	6	114.6	2.96	1.03	1.93	0.98	7.5	7.4	1.33	0.16
38.55	22.4	0.29	1.31	99.7	6	114.6	2.98	1.04	1.94	0.98	8.6	8.4	1.55	0.19
39.04	39.6	0.31	0.78	49.0	7	117.8	3.01	1.06	1.96	0.97	12.7	12.3	UnDef	0.10
39.53	24.7	0.27	1.10	80.2	6	114.6	3.04	1.07	1.97	0.97	9.5	9.1	1.73	0.14
40.03	25.6	0.41	1.62	201.0	6	114.6	3.07	1.08	1.99	0.96	9.8	9.4	1.80	0.24
40.52	26.6	0.59	2.21	300.3	6	114.6	3.10	1.10	2.00	0.96	10.2	9.7	1.88	0.26
41.01	31.8	1.11	3.48	254.7	5	114.6	3.13	1.11	2.02	0.95	15.2	14.4	2.29	0.38
41.50	29.4	1.36	4.64	178.9	3	111.4	3.15	1.12	2.03	0.94	28.2	26.6	2.10	0.00
41.99	52.8	1.34	2.54	145.3	6	114.6	3.18	1.13	2.05	0.94	20.2	19.0	3.97	0.31
42.49	134.5	1.59	1.18	45.3	8	120.9	3.21	1.15	2.06	0.93	32.2	30.1	UnDef	0.37
42.98	154.4	2.26	1.46	27.8	8	120.9	3.24	1.16	2.08	0.93	37.0	34.3	UnDef	0.00
43.47	214.6	3.34	1.56	53.7	8	120.9	3.27	1.18	2.09	0.92	51.4	47.4	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3317
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-23
Engineer: L. HANDFELT
CPT Date: 03/15/10
CPT Time: 15:11
CPT File: 244C23.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -7.19 (ft): -23.6
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.10	333.3	9.99	11	5.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.14	117.9	9.41	11	5.6	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.14	59.5	10.00	11	5.0	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.72	5.0E-07	0.01	178.3	2.64	7	16.1	5.2	21.4	14.2	UnDef	UnDef	10.0	UnDef	2.0	12.7
2.21	5.0E-05	-0.01	397.2	0.91	9	43.8	0.0	43.8	2.4	48	65.8	10.0	-0.31	0.0	17.5
2.71	5.0E-04	-0.01	546.0	0.56	10	73.4	0.0	73.4	0.0	50	77.6	1.0	-0.29	0.0	24.5
3.20	5.0E-04	-0.01	534.6	0.57	10	85.9	0.0	85.9	0.0	50	79.5	1.0	-0.29	0.0	28.6
3.65	5.0E-03	-0.01	672.0	0.43	10	124.1	0.0	124.1	0.0	50	88.0	1.0	-0.28	0.0	31.0
4.10	5.0E-03	0.00	788.7	0.53	10	165.3	0.0	165.3	0.0	50	94.3	1.0	-0.32	0.0	41.3
4.59	5.0E-03	0.00	728.7	0.61	10	173.0	0.0	173.0	0.0	50	93.8	1.0	-0.32	0.0	43.3
5.09	5.0E-03	0.00	403.8	0.86	9	107.9	0.0	107.9	2.1	48	78.7	1.0	-0.30	0.0	27.0
5.58	5.0E-05	-0.01	121.6	2.20	7	37.1	14.3	51.5	15.4	44	46.8	10.0	-0.30	3.1	18.0
6.07	5.0E-03	0.00	308.7	0.64	9	99.2	0.0	99.2	1.8	46	73.7	1.0	-0.25	0.0	24.8
6.60	5.0E-03	0.00	359.9	0.86	9	126.1	0.0	126.1	2.5	48	79.3	1.0	-0.29	0.0	31.5
7.14	5.0E-03	-0.01	433.8	0.70	9	164.6	0.0	164.6	0.9	48	85.7	1.0	-0.29	0.0	41.1
7.63	5.0E-03	-0.01	323.3	0.97	9	132.2	0.0	132.2	3.4	48	78.4	1.0	-0.30	0.0	33.0
8.12	5.0E-04	-0.02	151.4	1.22	9	67.2	7.8	75.0	8.9	44	58.1	1.0	-0.25	1.6	24.0
8.61	5.0E-06	-0.09	42.7	2.23	7	21.8	31.3	53.1	27.1	UnDef	UnDef	6.0	UnDef	6.4	17.3
9.10	5.0E-05	-0.05	66.9	1.45	7	34.4	16.8	51.3	17.3	40	37.3	10.0	-0.19	3.6	17.3
9.60	5.0E-05	-0.05	62.3	1.22	7	33.7	15.1	48.9	16.6	40	36.1	10.0	-0.17	3.2	16.4
10.09	5.0E-05	-0.03	65.8	1.44	7	36.3	17.9	54.2	17.4	40	38.2	10.0	-0.19	3.7	17.9
10.58	5.0E-05	-0.01	57.4	2.02	7	32.6	27.8	60.4	22.2	40	35.2	10.0	-0.21	5.2	17.9
11.07	5.0E-06	0.01	37.7	1.93	7	22.7	33.0	55.7	27.2	UnDef	UnDef	6.0	UnDef	6.5	17.7
11.56	5.0E-03	0.00	197.2	0.84	9	110.7	0.1	110.8	5.0	46	70.2	1.0	-0.23	0.0	27.1
12.06	5.0E-03	-0.01	333.6	0.72	9	189.8	0.0	189.8	2.0	48	85.6	1.0	-0.27	0.0	46.4
12.55	5.0E-03	-0.01	293.8	0.92	9	171.0	0.0	171.0	3.6	46	82.7	1.0	-0.28	0.0	41.8
13.04	5.0E-03	-0.01	358.9	0.97	9	212.6	0.0	212.6	3.0	48	88.9	1.0	-0.31	0.0	52.0
13.53	5.0E-02	-0.01	395.9	0.89	9	239.0	0.0	239.0	2.3	48	92.2	1.0	-0.31	0.0	46.8
14.03	5.0E-02	-0.01	384.6	1.01	9	236.9	0.0	236.9	3.0	48	92.0	1.0	-0.32	0.0	46.4
14.52	5.0E-03	-0.01	233.6	1.33	9	147.5	7.7	155.2	6.9	46	78.4	1.0	-0.30	1.2	37.2
15.01	5.0E-05	-0.05	57.7	2.61	7	38.9	44.8	83.7	25.1	40	40.2	10.0	-0.25	7.7	22.9
15.50	5.0E-06	0.05	26.4	1.86	7	19.4	51.3	70.7	32.2	UnDef	UnDef	6.0	UnDef	7.9	17.4
15.99	5.0E-06	0.05	22.8	2.29	6	17.3	69.2	86.5	37.2	UnDef	UnDef	6.0	UnDef	8.5	16.9
16.49	5.0E-06	0.04	27.0	2.16	6	20.3	65.5	85.8	33.6	UnDef	UnDef	6.0	UnDef	9.1	19.0
16.98	5.0E-06	0.00	24.3	2.56	6	18.7	74.9	93.6	37.6	UnDef	UnDef	6.0	UnDef	9.2	18.3
17.47	5.0E-06	0.01	20.4	2.92	6	16.3	65.2	81.5	42.6	UnDef	UnDef	6.0	UnDef	8.0	16.0
17.96	5.0E-06	0.02	22.0	3.06	6	17.6	70.5	88.1	41.9	UnDef	UnDef	6.0	UnDef	8.6	17.2
18.45	5.0E-04	0.00	70.7	1.60	7	51.7	26.3	78.1	17.6	40	48.4	1.0	-0.20	4.5	21.4
18.95	5.0E-06	-0.02	49.8	3.13	6	37.7	68.9	106.6	29.2	UnDef	UnDef	6.0	UnDef	12.5	30.9
19.44	5.0E-04	-0.01	98.2	1.40	9	72.7	20.7	93.3	13.3	42	58.1	1.0	-0.22	3.8	27.5
19.93	5.0E-03	-0.01	139.5	1.13	9	103.5	12.1	115.6	8.9	44	68.3	1.0	-0.23	1.8	27.1
20.42	5.0E-04	-0.03	76.3	1.50	7	58.5	25.0	83.5	16.2	42	51.9	1.0	-0.20	4.4	23.5

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-06	-0.10	22.1	3.55	6	18.9	75.8	94.7	44.1	UnDef	UnDef	6.0	UnDef	9.3	18.5
21.41	5.0E-04	-0.02	85.7	1.02	9	66.8	15.5	82.3	12.1	42	55.7	1.0	-0.18	2.9	24.7
21.90	5.0E-04	-0.02	94.6	1.20	9	74.3	18.3	92.6	12.4	42	58.8	1.0	-0.20	3.4	27.7
22.39	5.0E-08	-0.08	23.0	5.01	1	20.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
22.88	5.0E-04	-0.02	68.6	0.90	9	55.7	15.8	71.5	13.3	40	50.5	1.0	-0.14	2.9	21.1
23.38	5.0E-04	-0.02	78.9	1.52	7	64.4	26.8	91.2	16.0	42	54.7	1.0	-0.21	4.7	25.7
23.87	5.0E-04	-0.02	70.4	1.94	7	58.3	36.9	95.1	19.5	40	51.8	1.0	-0.22	6.1	25.1
24.36	5.0E-03	-0.01	152.6	1.03	9	124.7	9.8	134.5	7.7	44	73.6	1.0	-0.23	1.5	32.0
24.85	5.0E-03	-0.01	119.7	1.30	9	99.4	19.2	118.5	11.1	42	67.1	1.0	-0.23	2.7	27.1
25.34	5.0E-03	-0.01	156.5	1.04	9	130.4	9.8	140.2	7.6	44	74.9	1.0	-0.23	1.5	33.4
25.84	5.0E-03	-0.02	122.4	0.93	9	103.6	11.0	114.6	8.6	42	68.3	1.0	-0.20	1.6	27.0
26.33	5.0E-04	-0.03	74.6	1.39	7	64.8	26.3	91.1	15.8	40	54.8	1.0	-0.19	4.7	25.8
26.82	5.0E-07	-0.07	27.3	3.99	6	25.6	102.5	128.1	42.1	UnDef	UnDef	6.0	UnDef	16.7	33.4
27.31	5.0E-07	-0.13	10.1	3.65	1	11.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
27.80	5.0E-06	-0.01	12.9	2.12	6	13.7	54.7	68.3	47.3	UnDef	UnDef	6.0	UnDef	6.7	13.4
28.30	5.0E-06	0.03	19.7	2.63	6	19.7	78.8	98.5	41.7	UnDef	UnDef	6.0	UnDef	9.6	19.3
28.79	5.0E-06	0.05	18.1	3.72	4	18.4	73.7	92.2	48.7	UnDef	UnDef	6.0	UnDef	9.0	18.0
29.28	5.0E-07	0.06	11.5	3.87	1	12.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
29.77	5.0E-06	0.09	11.6	2.31	6	13.0	51.9	64.9	50.7	UnDef	UnDef	3.0	UnDef	6.3	12.7
30.27	5.0E-06	0.16	13.9	2.65	6	15.0	60.2	75.2	48.9	UnDef	UnDef	6.0	UnDef	7.4	14.7
30.76	5.0E-06	0.23	12.4	2.19	6	13.9	55.4	69.3	48.5	UnDef	UnDef	3.0	UnDef	6.8	13.6
31.21	5.0E-06	0.23	15.5	2.56	6	16.7	66.9	83.7	46.1	UnDef	UnDef	6.0	UnDef	8.2	16.4
31.66	5.0E-06	0.22	17.6	3.02	6	18.7	74.9	93.6	46.0	UnDef	UnDef	6.0	UnDef	9.2	18.3
32.15	5.0E-06	0.13	21.9	3.25	6	22.8	91.2	113.9	42.9	UnDef	UnDef	6.0	UnDef	11.2	22.3
32.64	5.0E-05	0.00	30.1	2.35	6	30.5	89.4	119.9	32.9	36	33.3	6.0	-0.15	10.4	22.4
33.14	5.0E-06	-0.01	11.9	2.52	6	13.8	55.2	69.0	51.6	UnDef	UnDef	3.0	UnDef	6.8	13.5
33.63	5.0E-06	0.03	15.7	2.74	6	17.4	69.7	87.1	46.9	UnDef	UnDef	6.0	UnDef	8.5	17.1
34.12	5.0E-06	0.07	14.2	2.76	6	16.2	64.8	81.0	49.0	UnDef	UnDef	6.0	UnDef	7.9	15.8
34.61	5.0E-06	0.09	17.5	3.45	4	19.4	77.5	96.9	48.2	UnDef	UnDef	6.0	UnDef	9.5	19.0
35.10	5.0E-06	0.17	15.0	3.51	4	17.1	68.6	85.7	51.6	UnDef	UnDef	6.0	UnDef	8.4	16.8
35.60	5.0E-06	0.24	15.2	2.90	6	17.5	69.8	87.3	48.3	UnDef	UnDef	6.0	UnDef	8.5	17.1
36.09	5.0E-06	0.27	15.7	3.16	6	18.0	72.0	90.0	49.1	UnDef	UnDef	6.0	UnDef	8.8	17.6
36.58	5.0E-06	0.27	16.6	2.93	6	19.0	75.9	94.9	46.7	UnDef	UnDef	6.0	UnDef	9.3	18.6
37.07	5.0E-06	0.31	16.3	2.96	6	18.8	75.3	94.1	47.2	UnDef	UnDef	6.0	UnDef	9.2	18.4
37.57	5.0E-06	0.36	13.5	3.27	4	16.1	64.5	80.7	52.8	UnDef	UnDef	6.0	UnDef	7.9	15.8
38.06	5.0E-05	0.20	16.1	2.32	6	18.8	75.4	94.2	43.9	32	30.0	6.0	-0.05	7.4	14.7
38.55	5.0E-05	0.06	18.6	1.51	6	21.4	85.7	107.1	35.7	34	30.0	6.0	-0.05	8.4	16.8
39.04	5.0E-04	-0.01	34.6	0.84	7	37.7	26.8	64.5	20.5	38	39.3	1.0	-0.07	4.3	16.6
39.53	5.0E-05	0.02	20.2	1.26	7	23.3	62.6	86.0	32.3	34	30.0	6.0	-0.05	7.6	16.8
40.03	5.0E-05	0.19	20.8	1.84	6	24.1	96.3	120.4	36.0	34	30.0	6.0	-0.06	9.4	18.9
40.52	5.0E-05	0.31	21.4	2.50	6	24.9	99.4	124.3	39.5	34	30.0	6.0	-0.08	9.7	19.5
41.01	5.0E-06	0.21	25.8	3.86	6	29.5	118.1	147.6	42.5	UnDef	UnDef	6.0	UnDef	14.4	28.9
41.50	5.0E-08	0.14	23.4	5.20	1	27.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
41.99	5.0E-05	0.05	43.7	2.70	7	48.5	87.6	136.1	29.1	38	46.5	6.0	-0.21	12.8	31.8
42.49	5.0E-03	0.00	114.4	1.21	9	122.9	22.9	145.8	10.9	42	73.2	1.0	-0.22	3.3	33.3
42.98	5.0E-03	-0.01	130.1	1.49	9	140.2	29.4	169.6	11.5	44	77.0	1.0	-0.26	4.2	38.5
43.47	5.0E-03	0.00	179.7	1.58	9	193.6	27.4	221.0	9.6	44	86.2	1.0	-0.29	4.0	51.4

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3350
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-25
Engineer: L. HANDFELT
CPT Date: 03/15/10
CPT Time: 10:36
CPT File: 244C25.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -6.86 (ft): -22.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	13.3	0.20	1.51	23.3	5	114.6	0.72	0.01	0.71	2.00	6.3	12.7	1.00	0.00
0.74	20.8	0.20	0.96	21.0	6	114.6	0.74	0.02	0.73	2.00	8.0	16.0	1.61	0.09
1.23	32.1	0.20	0.62	25.0	7	117.8	0.77	0.03	0.74	2.00	10.3	20.5	UnDef	0.10
1.72	13.6	0.20	1.47	26.3	6	114.6	0.80	0.05	0.76	2.00	5.2	10.4	1.02	0.00
2.21	20.1	0.20	1.00	16.0	6	114.6	0.83	0.06	0.77	2.00	7.7	15.4	1.54	0.09
2.71	32.9	0.26	0.79	-2.7	7	117.8	0.86	0.07	0.79	2.00	10.5	21.0	UnDef	0.10
3.20	49.3	0.40	0.80	4.7	7	117.8	0.89	0.09	0.80	2.00	15.7	31.5	UnDef	0.16
3.65	80.4	0.35	0.44	21.9	8	120.9	0.91	0.10	0.82	2.00	19.2	38.5	UnDef	0.42
4.10	81.3	0.62	0.77	24.5	8	120.9	0.94	0.11	0.83	2.00	19.5	38.9	UnDef	0.43
4.59	99.0	0.70	0.70	36.3	8	120.9	0.97	0.13	0.85	2.00	23.7	47.4	UnDef	0.00
5.09	162.8	0.70	0.43	31.8	9	124.1	1.00	0.14	0.86	2.00	31.2	62.4	UnDef	0.00
5.58	200.3	0.85	0.42	17.1	9	124.1	1.03	0.16	0.88	2.00	38.4	76.7	UnDef	0.00
6.07	204.0	0.68	0.33	24.1	9	124.1	1.06	0.17	0.89	2.00	39.1	78.2	UnDef	0.00
6.60	215.6	0.87	0.40	47.7	9	124.1	1.10	0.19	0.91	2.00	41.3	82.6	UnDef	0.00
7.14	204.2	0.83	0.41	21.6	9	124.1	1.13	0.20	0.93	2.00	39.1	78.2	UnDef	0.00
7.63	145.6	1.28	0.88	53.2	9	124.1	1.16	0.22	0.94	2.00	27.9	55.8	UnDef	0.00
8.12	169.6	1.30	0.76	34.2	9	124.1	1.19	0.23	0.96	2.00	32.5	65.0	UnDef	0.00
8.61	156.7	1.26	0.80	31.8	9	124.1	1.22	0.25	0.97	2.00	30.0	60.0	UnDef	0.00
9.10	184.1	1.04	0.56	15.9	9	124.1	1.25	0.26	0.99	1.94	35.3	68.6	UnDef	0.00
9.60	194.8	0.63	0.32	9.3	9	124.1	1.28	0.28	1.00	1.89	37.3	70.6	UnDef	0.00
10.09	179.5	0.68	0.38	20.0	9	124.1	1.31	0.29	1.02	1.84	34.4	63.3	UnDef	0.00
10.58	175.4	0.68	0.39	18.2	9	124.1	1.34	0.31	1.03	1.80	33.6	60.4	UnDef	0.00
11.07	190.4	0.86	0.45	30.3	9	124.1	1.37	0.33	1.05	1.75	36.5	64.0	UnDef	0.00
11.56	209.7	1.03	0.49	36.2	9	124.1	1.40	0.34	1.06	1.71	40.2	68.8	UnDef	0.00
12.06	199.4	0.81	0.41	29.9	9	124.1	1.43	0.36	1.08	1.68	38.2	64.1	UnDef	0.00
12.55	200.9	0.96	0.48	32.6	9	124.1	1.47	0.37	1.09	1.64	38.5	63.2	UnDef	0.00
13.04	235.4	1.41	0.60	84.3	9	124.1	1.50	0.39	1.11	1.61	45.1	72.6	UnDef	0.00
13.53	224.5	1.28	0.57	49.0	9	124.1	1.53	0.40	1.13	1.58	43.0	67.9	UnDef	0.00
14.03	195.2	0.63	0.32	21.1	9	124.1	1.56	0.42	1.14	1.55	37.4	58.0	UnDef	0.00
14.52	160.8	0.46	0.29	26.0	9	124.1	1.59	0.43	1.16	1.52	30.8	46.9	UnDef	0.00
15.01	88.1	0.45	0.51	31.0	8	120.9	1.62	0.45	1.17	1.50	21.1	31.6	UnDef	0.28
15.50	49.9	0.64	1.28	53.6	7	117.8	1.65	0.46	1.19	1.47	15.9	23.5	UnDef	0.15
15.99	73.7	1.13	1.54	31.2	7	117.8	1.68	0.47	1.20	1.45	23.5	34.2	UnDef	0.26
16.49	86.9	1.02	1.18	9.1	8	120.9	1.71	0.49	1.22	1.43	20.8	29.8	UnDef	0.29
16.98	35.3	1.13	3.19	13.7	5	114.6	1.73	0.50	1.23	1.41	16.9	23.9	2.68	0.22
17.47	74.8	0.91	1.21	22.8	8	120.9	1.76	0.52	1.25	1.39	17.9	24.9	UnDef	0.22
17.96	49.4	0.99	2.00	11.4	6	114.6	1.79	0.53	1.26	1.38	18.9	26.0	3.81	0.17
18.45	29.7	0.92	3.09	12.7	5	114.6	1.82	0.54	1.28	1.36	14.2	19.3	2.23	0.22
18.95	42.3	0.86	2.04	32.0	6	114.6	1.85	0.55	1.29	1.34	16.2	21.7	3.23	0.15
19.44	115.7	0.86	0.74	7.8	9	124.1	1.88	0.57	1.31	1.33	22.2	29.4	UnDef	0.40
19.93	121.0	1.21	1.00	3.2	8	120.9	1.91	0.58	1.32	1.31	29.0	37.9	UnDef	0.45
20.42	120.2	1.36	1.13	3.7	8	120.9	1.94	0.60	1.34	1.29	28.8	37.2	UnDef	0.46

Gregg In Situ, Inc.
Run No: 03-1030-1241-3350
CPT File: 244C25.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	138.5	1.57	1.13	5.4	8	120.9	1.97	0.61	1.36	1.28	33.2	42.4	UnDef	0.00
21.41	154.2	1.65	1.07	9.0	8	120.9	2.00	0.63	1.37	1.26	36.9	46.7	UnDef	0.00
21.90	166.3	1.58	0.95	10.9	9	124.1	2.03	0.64	1.39	1.25	31.9	39.8	UnDef	0.00
22.39	177.3	1.50	0.85	10.4	9	124.1	2.06	0.66	1.40	1.23	34.0	41.9	UnDef	0.00
22.88	110.6	1.68	1.52	3.2	8	120.9	2.09	0.67	1.42	1.22	26.5	32.3	UnDef	0.42
23.38	39.7	1.54	3.89	19.7	5	114.6	2.12	0.68	1.43	1.21	19.0	23.0	3.01	0.00
23.87	105.9	0.97	0.91	51.8	8	120.9	2.15	0.70	1.45	1.20	25.4	30.3	UnDef	0.29
24.36	128.3	1.72	1.34	31.3	8	120.9	2.18	0.71	1.46	1.18	30.7	36.4	UnDef	0.00
24.85	201.5	1.18	0.59	95.2	9	124.1	2.21	0.73	1.48	1.17	38.6	45.3	UnDef	0.00
25.34	266.3	1.42	0.53	31.1	9	124.1	2.24	0.74	1.49	1.16	51.0	59.2	UnDef	0.00
25.84	257.3	1.94	0.75	91.8	9	124.1	2.27	0.76	1.51	1.15	49.3	56.6	UnDef	0.00
26.33	241.9	1.55	0.64	56.9	9	124.1	2.30	0.77	1.52	1.14	46.3	52.7	UnDef	0.00
26.82	231.5	2.47	1.07	28.9	9	124.1	2.33	0.79	1.54	1.13	44.3	49.9	UnDef	0.00
27.31	247.2	2.41	0.98	60.1	9	124.1	2.36	0.80	1.56	1.12	47.3	52.8	UnDef	0.00
27.80	207.8	1.87	0.90	75.0	9	124.1	2.39	0.82	1.57	1.11	39.8	44.0	UnDef	0.00
28.30	250.8	0.97	0.39	21.7	10	127.3	2.42	0.83	1.59	1.10	40.0	43.8	UnDef	0.00
28.79	267.1	1.06	0.40	24.7	10	127.3	2.45	0.85	1.60	1.08	42.6	46.2	UnDef	0.00
29.28	274.5	1.74	0.63	89.6	9	124.1	2.48	0.87	1.62	1.07	52.6	56.5	UnDef	0.00
29.77	259.8	0.98	0.38	13.2	10	127.3	2.51	0.88	1.63	1.07	41.5	44.2	UnDef	0.00
30.27	57.3	1.68	2.93	62.4	6	114.6	2.54	0.90	1.65	1.06	22.0	23.2	4.38	0.32
30.76	34.9	0.68	1.94	223.2	6	114.6	2.57	0.91	1.66	1.05	13.4	14.0	2.59	0.17
31.21	33.3	0.67	2.00	203.1	6	114.6	2.60	0.92	1.68	1.04	12.8	13.3	2.46	0.19
31.66	36.9	0.74	2.00	267.8	6	114.6	2.62	0.93	1.69	1.04	14.2	14.7	2.75	0.18
32.15	35.2	0.86	2.45	379.5	6	114.6	2.65	0.94	1.71	1.03	13.5	13.9	2.60	0.29
32.64	50.7	1.12	2.20	140.0	6	114.6	2.68	0.96	1.72	1.02	19.4	19.8	3.84	0.21
33.14	37.3	0.84	2.26	320.6	6	114.6	2.71	0.97	1.74	1.02	14.3	14.5	2.77	0.24
33.63	59.4	1.02	1.71	63.3	7	117.8	2.74	0.98	1.75	1.01	19.0	19.1	UnDef	0.18
34.12	33.8	0.96	2.85	135.8	5	114.6	2.76	1.00	1.77	1.00	16.2	16.2	2.48	0.00
34.61	34.0	0.95	2.80	266.0	6	114.6	2.79	1.01	1.78	1.00	13.0	12.9	2.49	0.00
35.10	38.3	0.84	2.19	412.7	6	114.6	2.82	1.02	1.80	0.99	14.7	14.5	2.84	0.24
35.60	32.6	0.65	1.98	404.8	6	114.6	2.85	1.04	1.81	0.98	12.5	12.3	2.38	0.24
36.09	34.6	0.63	1.82	468.9	6	114.6	2.88	1.05	1.83	0.98	13.3	12.9	2.54	0.19
36.58	39.4	0.99	2.50	391.3	6	114.6	2.91	1.06	1.84	0.97	15.1	14.6	2.92	0.35
37.07	62.4	1.26	2.02	227.0	7	117.8	2.93	1.07	1.86	0.96	19.9	19.2	UnDef	0.22
37.57	36.0	0.75	2.09	211.4	6	114.6	2.96	1.09	1.88	0.96	13.8	13.2	2.64	0.26
38.06	33.3	0.56	1.67	399.7	6	114.6	2.99	1.10	1.89	0.95	12.8	12.2	2.43	0.19
38.55	35.7	0.69	1.92	505.7	6	114.6	3.02	1.11	1.91	0.95	13.7	13.0	2.62	0.23
39.04	49.2	1.32	2.69	229.6	6	114.6	3.05	1.13	1.92	0.94	18.8	17.8	3.69	0.37

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3350
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-25
Engineer: L. HANDFELT
CPT Date: 03/15/10
CPT Time: 10:36
CPT File: 244C25.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -6.86 (ft): -22.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	5.0E-06	0.00	1000.0	1.60	12	25.4	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	5.0E-05	0.00	1000.0	1.00	10	39.9	0.0	39.9	0.5	50	78.3	10.0	-0.41	0.0	16.0
1.23	5.0E-04	0.00	965.7	0.64	10	61.5	0.0	61.5	0.0	50	83.2	1.0	-0.35	0.0	20.5
1.72	5.0E-05	0.01	280.2	1.57	9	26.1	1.5	27.5	7.0	46	53.7	10.0	-0.34	0.4	10.8
2.21	5.0E-05	-0.01	329.2	1.04	9	38.5	0.0	38.5	3.7	48	61.3	10.0	-0.31	0.0	15.4
2.71	5.0E-04	-0.03	446.8	0.81	9	63.0	0.0	63.0	1.5	48	72.6	1.0	-0.31	0.0	21.0
3.20	5.0E-04	-0.01	567.0	0.82	9	94.4	0.0	94.4	0.8	50	81.6	1.0	-0.33	0.0	31.5
3.65	5.0E-03	0.00	809.5	0.44	10	153.9	0.0	153.9	0.0	50	93.7	1.0	-0.30	0.0	38.5
4.10	5.0E-03	0.00	722.1	0.78	10	155.8	0.0	155.8	0.1	50	92.2	1.0	-0.35	0.0	38.9
4.59	5.0E-03	0.00	779.8	0.71	10	189.7	0.0	189.7	0.0	50	95.0	1.0	-0.34	0.0	47.4
5.09	5.0E-02	0.00	1000.0	0.43	10	311.9	0.0	311.9	0.0	50	95.0	1.0	-0.32	0.0	62.4
5.58	5.0E-02	0.00	1000.0	0.43	10	383.7	0.0	383.7	0.0	50	95.0	1.0	-0.32	0.0	76.7
6.07	5.0E-02	0.00	1000.0	0.34	10	390.8	0.0	390.8	0.0	50	95.0	1.0	-0.30	0.0	78.2
6.60	5.0E-02	0.00	1000.0	0.41	10	413.0	0.0	413.0	0.0	50	95.0	1.0	-0.31	0.0	82.6
7.14	5.0E-02	0.00	996.8	0.41	10	391.2	0.0	391.2	0.0	50	95.0	1.0	-0.31	0.0	78.2
7.63	5.0E-02	0.00	659.6	0.89	9	278.8	0.0	278.8	0.8	50	95.0	1.0	-0.35	0.0	55.8
8.12	5.0E-02	0.00	719.4	0.77	10	324.9	0.0	324.9	0.1	50	95.0	1.0	-0.35	0.0	65.0
8.61	5.0E-02	0.00	623.8	0.81	10	300.2	0.0	300.2	0.6	50	95.0	1.0	-0.34	0.0	60.0
9.10	5.0E-02	0.00	691.5	0.57	10	350.4	0.0	350.4	0.0	50	95.0	1.0	-0.31	0.0	68.6
9.60	5.0E-02	0.00	692.0	0.33	10	360.5	0.0	360.5	0.0	50	95.0	1.0	-0.26	0.0	70.6
10.09	5.0E-02	0.00	604.4	0.38	10	323.5	0.0	323.5	0.0	50	95.0	1.0	-0.26	0.0	63.3
10.58	5.0E-02	0.00	561.6	0.39	10	308.4	0.0	308.4	0.0	50	95.0	1.0	-0.26	0.0	60.4
11.07	5.0E-02	0.00	581.4	0.46	10	326.8	0.0	326.8	0.0	50	95.0	1.0	-0.28	0.0	64.0
11.56	5.0E-02	0.00	611.9	0.49	10	351.7	0.0	351.7	0.0	50	95.0	1.0	-0.29	0.0	68.8
12.06	5.0E-02	0.00	556.9	0.41	10	327.3	0.0	327.3	0.0	50	95.0	1.0	-0.26	0.0	64.1
12.55	5.0E-02	0.00	538.0	0.48	10	322.9	0.0	322.9	0.0	50	95.0	1.0	-0.27	0.0	63.2
13.04	5.0E-02	0.01	606.3	0.60	10	370.9	0.0	370.9	0.0	50	95.0	1.0	-0.30	0.0	72.6
13.53	5.0E-02	0.00	555.9	0.57	10	346.9	0.0	346.9	0.0	50	95.0	1.0	-0.29	0.0	67.9
14.03	5.0E-02	0.00	465.3	0.33	10	296.1	0.0	296.1	0.0	48	95.0	1.0	-0.23	0.0	58.0
14.52	5.0E-02	0.00	369.1	0.29	10	239.6	0.0	239.6	0.0	48	92.3	1.0	-0.20	0.0	46.9
15.01	5.0E-03	0.00	193.7	0.52	9	129.0	0.0	129.0	2.9	46	74.6	1.0	-0.19	0.0	31.6
15.50	5.0E-04	0.01	104.9	1.33	9	72.0	17.5	89.5	12.3	42	57.9	1.0	-0.22	3.3	26.8
15.99	5.0E-04	0.00	151.9	1.57	9	104.7	19.0	123.8	10.8	44	68.6	1.0	-0.28	3.6	37.8
16.49	5.0E-03	-0.01	174.6	1.20	9	121.7	10.1	131.8	7.9	44	72.9	1.0	-0.26	1.5	31.3
16.98	5.0E-06	-0.02	66.9	3.36	7	48.8	64.6	113.4	26.3	UnDef	UnDef	10.0	UnDef	13.2	37.1
17.47	5.0E-03	-0.01	141.8	1.24	9	102.0	13.9	115.8	9.5	44	67.8	1.0	-0.24	2.0	27.0
17.96	5.0E-05	-0.02	90.1	2.08	7	66.5	33.9	100.4	17.6	42	55.6	10.0	-0.26	7.0	33.0
18.45	5.0E-06	-0.03	51.4	3.29	6	39.5	74.3	113.8	29.5	UnDef	UnDef	10.0	UnDef	13.3	32.6
18.95	5.0E-05	-0.01	72.9	2.13	7	55.5	37.4	93.0	20.1	40	50.4	10.0	-0.24	7.3	29.1
19.44	5.0E-02	-0.01	200.4	0.75	9	150.3	0.0	150.3	4.4	46	78.9	1.0	-0.23	0.0	29.4
19.93	5.0E-03	-0.01	204.2	1.01	9	155.1	3.7	158.8	5.9	46	79.8	1.0	-0.26	0.6	38.5
20.42	5.0E-03	-0.01	197.9	1.15	9	152.2	7.8	159.9	6.8	46	79.3	1.0	-0.27	1.2	38.4

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-03	-0.01	223.1	1.15	9	173.2	5.5	178.7	6.2	46	83.0	1.0	-0.28	0.8	43.2
21.41	5.0E-03	-0.01	243.0	1.09	9	190.7	1.9	192.6	5.4	46	85.8	1.0	-0.28	0.3	46.9
21.90	5.0E-02	-0.01	256.3	0.96	9	203.3	0.0	203.3	4.4	46	87.6	1.0	-0.27	0.0	39.8
22.39	5.0E-02	-0.01	267.0	0.86	9	214.2	0.0	214.2	3.7	46	89.1	1.0	-0.27	0.0	41.9
22.88	5.0E-03	-0.01	161.7	1.55	9	132.1	21.3	153.4	10.2	44	75.3	1.0	-0.28	3.1	35.4
23.38	5.0E-06	-0.02	54.9	4.11	6	46.9	115.8	162.7	31.6	UnDef	UnDef	10.0	UnDef	18.4	41.4
23.87	5.0E-03	0.00	148.6	0.93	9	124.0	8.1	132.1	7.3	44	73.4	1.0	-0.22	1.2	31.6
24.36	5.0E-03	0.00	176.9	1.37	9	148.7	16.2	164.9	8.7	44	78.6	1.0	-0.28	2.4	38.8
24.85	5.0E-02	0.01	274.0	0.59	9	231.3	0.0	231.3	1.9	46	91.3	1.0	-0.23	0.0	45.3
25.34	5.0E-02	0.00	355.5	0.54	10	302.4	0.0	302.4	0.6	48	95.0	1.0	-0.25	0.0	59.2
25.84	5.0E-02	0.01	336.6	0.76	9	289.3	0.0	289.3	2.2	48	95.0	1.0	-0.27	0.0	56.6
26.33	5.0E-02	0.00	310.0	0.65	9	269.3	0.0	269.3	1.8	46	95.0	1.0	-0.25	0.0	52.7
26.82	5.0E-02	0.00	290.8	1.08	9	255.2	0.0	255.2	4.5	46	94.1	1.0	-0.30	0.0	49.9
27.31	5.0E-02	0.00	304.7	0.99	9	269.9	0.0	269.9	3.8	46	95.0	1.0	-0.29	0.0	52.8
27.80	5.0E-02	0.00	251.0	0.91	9	224.8	0.0	224.8	4.2	46	90.5	1.0	-0.26	0.0	44.0
28.30	5.0E+00	0.00	297.8	0.39	10	268.8	0.0	268.8	0.2	46	95.0	1.0	-0.20	0.0	43.8
28.79	5.0E+00	0.00	311.3	0.40	10	283.5	0.0	283.5	0.2	46	95.0	1.0	-0.21	0.0	46.2
29.28	5.0E-02	0.00	314.2	0.64	9	288.7	0.0	288.7	1.7	46	95.0	1.0	-0.25	0.0	56.5
29.77	5.0E+00	0.00	292.0	0.38	10	270.9	0.0	270.9	0.2	46	95.0	1.0	-0.20	0.0	44.2
30.27	5.0E-05	0.01	61.2	3.06	7	59.3	78.0	137.3	26.3	40	52.3	10.0	-0.28	12.8	36.0
30.76	5.0E-05	0.16	35.6	2.09	7	35.8	63.6	99.5	29.0	38	37.9	6.0	-0.14	9.4	23.4
31.21	5.0E-05	0.15	33.4	2.17	7	34.0	71.3	105.2	30.4	38	36.3	6.0	-0.14	9.8	23.1
31.66	5.0E-05	0.19	36.8	2.16	7	37.4	65.4	102.8	28.8	38	39.1	6.0	-0.14	9.7	24.3
32.15	5.0E-05	0.31	34.5	2.65	6	35.4	95.9	131.4	32.3	38	37.5	6.0	-0.14	11.7	25.5
32.64	5.0E-05	0.06	50.1	2.32	7	50.7	61.1	111.8	25.5	38	47.8	10.0	-0.20	10.3	30.2
33.14	5.0E-05	0.24	35.6	2.44	6	37.0	82.1	119.1	30.8	38	38.8	6.0	-0.14	11.0	25.5
33.63	5.0E-04	0.00	57.6	1.80	7	58.6	43.6	102.2	21.0	40	52.0	1.0	-0.19	7.0	26.1
34.12	5.0E-06	0.08	31.1	3.10	6	33.1	132.6	165.7	36.1	UnDef	UnDef	6.0	UnDef	16.2	32.4
34.61	5.0E-05	0.21	30.9	3.06	6	33.1	132.3	165.4	36.0	36	35.6	6.0	-0.16	12.9	25.9
35.10	5.0E-05	0.31	34.7	2.36	6	37.1	82.1	119.2	30.8	38	38.8	6.0	-0.13	11.0	25.5
35.60	5.0E-05	0.36	28.8	2.17	6	31.4	88.5	119.9	32.6	36	34.1	6.0	-0.09	10.5	22.8
36.09	5.0E-05	0.40	30.3	1.99	7	33.1	73.3	106.3	30.8	36	35.6	6.0	-0.08	9.8	22.8
36.58	5.0E-05	0.28	34.4	2.70	6	37.4	105.6	143.0	32.7	38	39.1	6.0	-0.15	12.6	27.2
37.07	5.0E-04	0.09	55.4	2.12	7	58.9	55.8	114.7	23.2	40	52.1	1.0	-0.20	8.4	27.6
37.57	5.0E-05	0.14	30.4	2.27	6	33.8	91.6	125.4	32.4	36	36.2	6.0	-0.13	11.1	24.4
38.06	5.0E-05	0.35	27.6	1.84	7	31.1	73.7	104.8	31.3	36	33.8	6.0	-0.07	9.6	21.7
38.55	5.0E-05	0.42	29.4	2.10	6	33.1	84.5	117.6	31.9	36	35.6	6.0	-0.08	10.6	23.6
39.04	5.0E-05	0.11	41.0	2.87	6	45.3	100.9	146.2	30.8	38	44.6	6.0	-0.20	13.5	31.2

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3372
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-27
Engineer: L. HANDFELT
CPT Date: 03/20/10
CPT Time: 16:50
CPT File: 244C27.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -11.73 (ft): -38.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.2	0.20	9.05	45.0	2	111.4	1.22	0.01	1.21	2.00	2.1	4.2	0.08	0.00
0.74	2.2	0.20	9.03	45.7	2	111.4	1.24	0.02	1.23	2.00	2.1	4.3	0.08	0.00
1.23	2.2	0.20	8.99	48.2	2	111.4	1.27	0.03	1.24	2.00	2.1	4.3	0.08	0.00
1.72	2.3	0.20	8.63	50.6	2	111.4	1.30	0.04	1.26	2.00	2.2	4.5	0.08	0.00
2.21	3.6	0.20	5.65	44.1	3	111.4	1.33	0.05	1.27	2.00	3.4	6.8	0.18	0.00
2.71	3.5	0.20	5.77	51.5	3	111.4	1.35	0.07	1.29	2.00	3.3	6.7	0.17	0.00
3.20	3.7	0.20	5.42	57.5	3	111.4	1.38	0.08	1.30	2.00	3.5	7.1	0.19	0.00
3.65	3.9	0.20	5.18	66.2	3	111.4	1.41	0.09	1.32	2.00	3.7	7.4	0.20	0.00
4.10	3.9	0.20	5.19	69.4	3	111.4	1.43	0.10	1.33	2.00	3.7	7.4	0.19	0.00
4.59	3.9	0.20	5.09	71.9	3	111.4	1.46	0.11	1.35	2.00	3.8	7.5	0.20	0.00
5.09	3.8	0.20	5.25	69.2	3	111.4	1.49	0.12	1.36	2.00	3.7	7.3	0.19	0.00
5.58	5.7	0.21	3.74	53.5	3	111.4	1.51	0.14	1.38	2.00	5.4	10.9	0.33	0.00
6.07	3.8	0.20	5.28	20.0	3	111.4	1.54	0.15	1.39	2.00	3.6	7.3	0.18	0.00
6.60	3.4	0.20	5.95	30.2	3	111.4	1.57	0.16	1.41	2.00	3.2	6.5	0.14	0.00
7.14	3.2	0.20	6.35	35.2	2	111.4	1.60	0.17	1.42	2.00	3.0	6.0	0.12	0.00
7.63	3.0	0.20	6.62	44.5	2	111.4	1.63	0.19	1.44	2.00	2.9	5.8	0.11	0.00
8.12	3.8	0.20	5.22	52.3	3	111.4	1.65	0.20	1.46	2.00	3.7	7.4	0.18	0.00
8.61	4.1	0.20	4.89	60.1	3	111.4	1.68	0.21	1.47	2.00	3.9	7.9	0.19	0.00
9.10	4.1	0.20	4.87	54.8	3	111.4	1.71	0.22	1.49	2.00	3.9	7.9	0.19	0.00
9.60	4.5	0.20	4.54	50.3	3	111.4	1.74	0.23	1.50	2.00	4.3	8.5	0.22	0.00
10.09	4.9	0.20	4.10	49.9	3	111.4	1.76	0.25	1.52	2.00	4.7	9.4	0.25	0.00
10.58	5.7	0.20	3.49	79.0	3	111.4	1.79	0.26	1.53	1.97	5.5	10.8	0.32	0.00
11.07	6.6	0.22	3.30	81.6	3	111.4	1.82	0.27	1.55	1.92	6.3	12.1	0.38	0.00
11.56	7.0	0.23	3.30	71.9	3	111.4	1.85	0.28	1.56	1.88	6.7	12.6	0.41	0.00
12.06	7.5	0.21	2.79	87.5	4	114.6	1.87	0.30	1.58	1.84	4.8	8.8	0.45	0.11
12.55	7.4	0.21	2.87	101.2	4	114.6	1.90	0.31	1.59	1.80	4.7	8.5	0.44	0.11
13.04	7.7	0.23	3.00	94.9	4	114.6	1.93	0.32	1.61	1.76	4.9	8.7	0.46	0.00
13.53	9.8	0.21	2.19	87.5	5	114.6	1.96	0.33	1.62	1.73	4.7	8.1	0.62	0.13
14.03	7.8	0.20	2.57	30.1	4	114.6	1.99	0.35	1.64	1.70	5.0	8.5	0.47	0.11
14.52	9.3	0.33	3.54	48.2	3	111.4	2.01	0.36	1.66	1.67	8.9	14.8	0.58	0.00
15.01	8.2	0.45	5.46	20.7	3	111.4	2.04	0.37	1.67	1.64	7.9	12.9	0.50	0.00
15.50	6.2	0.35	5.73	61.8	3	111.4	2.07	0.38	1.69	1.62	5.9	9.5	0.33	0.00
15.99	6.8	0.25	3.68	93.5	3	111.4	2.10	0.40	1.70	1.59	6.6	10.4	0.38	0.00
16.49	7.5	0.28	3.75	44.3	3	111.4	2.12	0.41	1.72	1.57	7.2	11.2	0.43	0.00
16.98	5.4	0.21	3.80	41.1	3	111.4	2.15	0.42	1.73	1.54	5.2	8.0	0.26	0.00
17.47	5.1	0.20	3.97	49.1	3	111.4	2.18	0.43	1.75	1.52	4.8	7.4	0.23	0.00
17.96	5.5	0.20	3.64	45.3	3	111.4	2.21	0.44	1.76	1.50	5.3	7.9	0.26	0.00
18.45	5.1	0.20	3.93	49.8	3	111.4	2.23	0.46	1.78	1.48	4.9	7.2	0.23	0.00
18.95	4.8	0.20	4.19	69.3	3	111.4	2.26	0.47	1.79	1.46	4.6	6.7	0.20	0.00
19.44	7.6	0.27	3.54	54.2	3	111.4	2.29	0.48	1.81	1.44	7.2	10.4	0.42	0.00
19.93	7.9	0.34	4.28	37.3	3	111.4	2.32	0.49	1.82	1.43	7.5	10.8	0.45	0.00
20.42	8.2	0.32	3.84	56.2	3	111.4	2.34	0.50	1.84	1.41	7.9	11.1	0.47	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	9.8	0.36	3.65	70.4	3	111.4	2.37	0.52	1.86	1.39	9.4	13.1	0.59	0.00
21.41	10.0	0.34	3.43	76.3	3	111.4	2.40	0.53	1.87	1.38	9.6	13.2	0.61	0.00
21.90	10.0	0.32	3.18	91.6	4	114.6	2.43	0.54	1.89	1.36	6.4	8.7	0.61	0.00
22.39	10.0	0.31	3.05	112.3	4	114.6	2.45	0.55	1.90	1.34	6.4	8.6	0.61	0.00
22.88	10.8	0.34	3.20	104.9	4	114.6	2.48	0.57	1.92	1.33	6.9	9.1	0.66	0.00
23.38	13.8	0.39	2.79	69.6	5	114.6	2.51	0.58	1.93	1.31	6.6	8.7	0.91	0.15
23.87	11.5	0.28	2.47	75.0	5	114.6	2.54	0.59	1.95	1.30	5.5	7.2	0.72	0.12
24.36	11.6	0.44	3.82	37.4	3	111.4	2.57	0.60	1.96	1.29	11.1	14.3	0.72	0.00
24.85	11.4	0.41	3.58	23.3	3	111.4	2.59	0.62	1.98	1.27	10.9	13.9	0.70	0.00
25.34	13.4	0.30	2.26	57.4	5	114.6	2.62	0.63	1.99	1.26	6.4	8.1	0.87	0.13
25.84	14.4	0.37	2.55	86.6	5	114.6	2.65	0.64	2.01	1.25	6.9	8.6	0.94	0.14
26.33	13.4	0.37	2.78	104.4	5	114.6	2.68	0.65	2.02	1.24	6.4	7.9	0.85	0.13
26.82	12.9	0.33	2.58	113.7	5	114.6	2.71	0.67	2.04	1.22	6.2	7.6	0.82	0.12
27.31	11.9	0.31	2.63	118.8	5	114.6	2.73	0.68	2.05	1.21	5.7	6.9	0.74	0.11
27.80	10.2	0.27	2.61	134.6	5	114.6	2.76	0.69	2.07	1.20	4.9	5.9	0.60	0.00
28.30	11.1	0.26	2.32	136.7	5	114.6	2.79	0.71	2.09	1.19	5.3	6.3	0.66	0.11
28.79	9.9	0.26	2.67	151.4	4	114.6	2.82	0.72	2.10	1.18	6.3	7.5	0.57	0.00
29.28	9.1	0.23	2.49	163.5	4	114.6	2.85	0.73	2.12	1.17	5.8	6.8	0.50	0.00
29.77	9.4	0.20	2.14	180.4	5	114.6	2.88	0.74	2.13	1.16	4.5	5.2	0.53	0.09
30.27	9.4	0.20	2.14	173.0	5	114.6	2.90	0.76	2.15	1.15	4.5	5.2	0.52	0.09
30.76	8.9	0.20	2.26	181.4	5	114.6	2.93	0.77	2.16	1.14	4.3	4.8	0.48	0.00
31.21	8.5	0.20	2.35	182.1	4	114.6	2.96	0.78	2.18	1.13	5.4	6.2	0.45	0.00
31.66	8.5	0.20	2.36	174.2	4	114.6	2.98	0.79	2.19	1.12	5.4	6.1	0.44	0.00
32.15	8.4	0.20	2.38	171.9	4	114.6	3.01	0.81	2.21	1.11	5.4	6.0	0.43	0.00
32.64	8.2	0.20	2.43	180.7	4	114.6	3.04	0.82	2.22	1.11	5.3	5.8	0.42	0.00
33.14	8.0	0.20	2.50	186.2	4	114.6	3.07	0.83	2.24	1.10	5.1	5.6	0.40	0.00
33.63	8.4	0.20	2.39	187.8	4	114.6	3.10	0.84	2.25	1.09	5.3	5.8	0.42	0.00
34.12	15.9	0.20	1.26	131.1	6	114.6	3.12	0.86	2.27	1.08	6.1	6.6	1.02	0.13
34.61	14.8	0.26	1.78	85.6	5	114.6	3.15	0.87	2.28	1.07	7.1	7.6	0.93	0.12
35.10	19.7	0.62	3.18	51.7	5	114.6	3.18	0.88	2.30	1.06	9.4	10.0	1.32	0.18
35.60	17.0	0.81	4.73	17.6	3	111.4	3.21	0.90	2.31	1.06	16.3	17.2	1.11	0.00
36.09	13.3	0.76	5.72	16.6	3	111.4	3.24	0.91	2.33	1.05	12.8	13.4	0.81	0.00
36.58	10.4	0.44	4.27	37.4	3	111.4	3.26	0.92	2.34	1.04	10.0	10.4	0.57	0.00
37.07	14.8	0.42	2.83	105.2	5	114.6	3.29	0.93	2.36	1.04	7.1	7.4	0.92	0.00
37.57	15.9	0.51	3.21	73.2	4	114.6	3.32	0.94	2.37	1.03	10.2	10.4	1.01	0.00
38.06	12.1	0.36	3.00	106.8	4	114.6	3.35	0.96	2.39	1.02	7.7	7.9	0.70	0.00
38.55	17.9	0.55	3.10	105.9	5	114.6	3.38	0.97	2.41	1.02	8.5	8.7	1.16	0.00
39.04	21.1	0.84	3.96	55.6	4	114.6	3.40	0.98	2.42	1.01	13.5	13.6	1.42	0.00
39.53	23.5	0.88	3.73	34.4	4	114.6	3.43	1.00	2.44	1.00	15.0	15.0	1.60	0.00
40.03	15.4	0.67	4.35	28.2	3	111.4	3.46	1.01	2.45	1.00	14.7	14.6	0.95	0.00
40.52	12.1	0.35	2.86	67.8	5	114.6	3.49	1.02	2.47	0.99	5.8	5.8	0.69	0.00
41.01	15.1	0.48	3.17	107.6	4	114.6	3.52	1.03	2.48	0.98	9.6	9.5	0.92	0.00
41.50	21.9	0.76	3.46	42.1	5	114.6	3.54	1.05	2.50	0.98	10.5	10.2	1.46	0.00
41.99	23.1	1.01	4.38	18.9	3	111.4	3.57	1.06	2.51	0.97	22.1	21.5	1.56	0.00
42.49	23.0	1.21	5.28	18.2	3	111.4	3.60	1.07	2.53	0.97	22.0	21.2	1.55	0.00
42.98	22.3	1.25	5.60	14.9	3	111.4	3.63	1.08	2.54	0.96	21.3	20.5	1.49	0.00
43.47	19.9	1.04	5.23	20.2	3	111.4	3.65	1.10	2.56	0.96	19.1	18.3	1.30	0.00
43.96	14.3	0.75	5.24	30.0	3	111.4	3.68	1.11	2.57	0.95	13.7	13.0	0.85	0.00
44.45	16.7	0.72	4.34	39.7	3	111.4	3.71	1.12	2.59	0.95	16.0	15.1	1.04	0.00
44.95	20.6	0.93	4.52	66.7	3	111.4	3.74	1.13	2.61	0.94	19.7	18.5	1.35	0.00
45.44	23.2	0.96	4.12	74.0	4	114.6	3.76	1.14	2.62	0.94	14.8	13.8	1.55	0.00
45.93	24.0	1.02	4.25	30.4	3	111.4	3.79	1.16	2.64	0.93	23.0	21.4	1.62	0.00
46.42	18.4	0.88	4.77	17.4	3	111.4	3.82	1.17	2.65	0.93	17.6	16.3	1.17	0.00
46.92	16.1	0.79	4.88	24.1	3	111.4	3.85	1.18	2.67	0.92	15.4	14.2	0.98	0.00
47.41	16.1	0.84	5.23	27.9	3	111.4	3.87	1.19	2.68	0.92	15.5	14.2	0.98	0.00
47.90	16.4	0.73	4.48	35.8	3	111.4	3.90	1.20	2.70	0.91	15.7	14.3	1.00	0.00
48.39	17.1	0.85	4.95	43.1	3	111.4	3.93	1.22	2.71	0.91	16.4	14.8	1.05	0.00
48.88	17.7	0.85	4.78	57.1	3	111.4	3.96	1.23	2.73	0.90	16.9	15.3	1.10	0.00
49.38	13.9	0.71	5.09	46.8	3	111.4	3.98	1.24	2.74	0.90	13.3	12.0	0.80	0.00
49.87	12.3	0.40	3.25	93.5	4	114.6	4.01	1.25	2.76	0.89	7.9	7.0	0.66	0.00
50.36	12.1	0.37	3.09	156.2	4	114.6	4.04	1.27	2.77	0.89	7.7	6.9	0.65	0.00
50.85	16.0	0.33	2.08	215.2	5	114.6	4.07	1.28	2.79	0.88	7.7	6.8	0.96	0.11
51.34	18.6	0.49	2.64	217.9	5	114.6	4.10	1.29	2.81	0.88	8.9	7.8	1.16	0.13
51.84	17.7	0.39	2.23	238.5	5	114.6	4.12	1.30	2.82	0.88	8.5	7.4	1.08	0.12

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Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
52.33	17.4	0.45	2.59	212.8	5	114.6	4.15	1.32	2.84	0.87	8.3	7.3	1.06	0.00
52.82	17.1	0.37	2.16	211.4	5	114.6	4.18	1.33	2.85	0.87	8.2	7.1	1.03	0.12
53.31	16.4	0.33	2.01	196.6	5	114.6	4.21	1.34	2.87	0.86	7.9	6.8	0.98	0.11
53.81	15.4	0.39	2.54	208.9	5	114.6	4.24	1.36	2.88	0.86	7.4	6.3	0.89	0.00
54.30	19.7	0.47	2.40	229.3	5	114.6	4.27	1.37	2.90	0.85	9.4	8.1	1.23	0.13
54.79	25.0	0.65	2.61	135.7	5	114.6	4.29	1.38	2.91	0.85	12.0	10.2	1.66	0.18
55.28	19.6	0.68	3.47	145.4	4	114.6	4.32	1.39	2.93	0.85	12.5	10.6	1.22	0.00
55.77	18.9	0.75	3.96	104.8	4	114.6	4.35	1.41	2.94	0.84	12.1	10.2	1.17	0.00
56.27	17.4	0.58	3.31	140.0	4	114.6	4.38	1.42	2.96	0.84	11.1	9.3	1.04	0.00
56.76	17.0	0.36	2.13	138.5	5	114.6	4.41	1.43	2.97	0.84	8.2	6.8	1.01	0.11
57.25	18.6	0.52	2.79	157.1	5	114.6	4.43	1.45	2.99	0.83	8.9	7.4	1.13	0.00
57.74	20.1	0.83	4.12	83.2	3	111.4	4.46	1.46	3.00	0.83	19.2	15.9	1.25	0.00
58.23	28.0	0.83	2.96	99.2	5	114.6	4.49	1.47	3.02	0.82	13.4	11.0	1.88	0.21
58.73	31.7	0.55	1.74	109.9	6	114.6	4.52	1.48	3.04	0.82	12.1	10.0	2.17	0.27
59.22	23.2	0.28	1.19	182.9	6	114.6	4.55	1.50	3.05	0.82	8.9	7.3	1.50	0.15
59.71	24.7	0.38	1.55	175.7	6	114.6	4.58	1.51	3.07	0.81	9.5	7.7	1.61	0.17
60.20	26.2	0.47	1.78	167.1	6	114.6	4.60	1.52	3.08	0.81	10.0	8.1	1.73	0.18
60.69	56.4	0.63	1.12	129.9	7	117.8	4.63	1.53	3.10	0.81	18.0	14.5	UnDef	0.15
61.19	81.7	0.97	1.19	82.6	8	120.9	4.66	1.55	3.11	0.80	19.6	15.7	UnDef	0.18
61.68	34.5	0.72	2.08	44.4	6	114.6	4.69	1.56	3.13	0.80	13.2	10.6	2.39	0.31
62.17	23.9	0.52	2.18	138.5	6	114.6	4.72	1.58	3.14	0.80	9.1	7.3	1.53	0.15
62.66	60.7	0.65	1.07	114.9	7	117.8	4.75	1.59	3.16	0.79	19.4	15.4	UnDef	0.15
63.16	38.2	0.79	2.06	173.3	6	114.6	4.78	1.60	3.17	0.79	14.6	11.6	2.68	0.38
63.65	89.1	1.12	1.25	31.7	8	120.9	4.80	1.62	3.19	0.79	21.3	16.8	UnDef	0.21
64.14	82.9	1.02	1.23	18.4	8	120.9	4.83	1.63	3.20	0.78	19.9	15.6	UnDef	0.19

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3372
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-27
Engineer: L. HANDFELT
CPT Date: 03/20/10
CPT Time: 16:50
CPT File: 244C27.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -11.73 (ft): -38.5
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.20	166.0	10.00	11	4.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.21	54.0	10.00	1	4.3	UnDef	UnDef	100.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.27	31.9	10.00	1	4.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	0.32	24.3	10.00	1	4.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	5.0E-08	0.05	41.1	9.01	1	6.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	5.0E-08	0.15	32.1	9.44	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	5.0E-08	0.21	29.6	8.65	1	7.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.65	5.0E-08	0.30	27.6	8.13	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
4.10	5.0E-08	0.34	24.2	8.25	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
4.59	5.0E-08	0.36	22.0	8.09	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.09	5.0E-08	0.34	18.7	8.60	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.58	5.0E-08	0.07	30.5	5.09	1	10.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.07	5.0E-08	-0.34	15.2	8.88	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
6.60	5.0E-08	-0.26	11.1	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.14	1.0E-15	-0.21	8.9	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.63	1.0E-15	-0.04	7.5	10.00	1	5.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.12	5.0E-08	0.08	11.0	9.16	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.61	5.0E-08	0.17	11.5	8.28	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.10	5.0E-08	0.09	10.8	8.32	1	7.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.60	5.0E-08	0.03	11.6	7.44	1	8.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
10.09	5.0E-08	0.01	12.8	6.39	1	9.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
10.58	5.0E-08	0.24	15.3	5.07	1	11.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
11.07	5.0E-08	0.21	17.6	4.56	1	12.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
11.56	5.0E-08	0.13	18.2	4.48	1	12.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
12.06	5.0E-07	0.20	19.1	3.72	4	13.6	54.2	67.8	47.6	UnDef	UnDef	6.0	UnDef	8.8	17.7
12.55	5.0E-07	0.29	17.8	3.86	4	13.0	52.1	65.2	49.6	UnDef	UnDef	6.0	UnDef	8.5	17.0
13.04	5.0E-07	0.24	17.9	4.01	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
13.53	5.0E-06	0.14	23.4	2.74	6	16.5	66.1	82.6	39.2	UnDef	UnDef	6.0	UnDef	8.1	16.2
14.03	5.0E-07	-0.12	16.8	3.44	4	13.0	51.9	64.9	49.0	UnDef	UnDef	6.0	UnDef	8.5	16.9
14.52	5.0E-08	-0.02	20.2	4.52	1	15.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.01	5.0E-08	-0.17	16.7	7.26	1	13.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
15.50	5.0E-08	0.06	10.7	8.63	1	9.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.99	5.0E-08	0.26	12.0	5.31	1	10.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
16.49	5.0E-08	-0.06	13.1	5.24	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
16.98	5.0E-08	-0.14	7.8	6.31	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
17.47	5.0E-08	-0.07	6.7	6.98	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
17.96	5.0E-08	-0.11	7.4	6.08	1	8.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
18.45	5.0E-08	-0.08	6.3	6.98	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
18.95	5.0E-08	0.15	5.4	7.94	1	6.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
19.44	5.0E-08	-0.02	11.0	5.07	1	10.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.93	5.0E-08	-0.12	11.3	6.06	1	11.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
20.42	5.0E-08	-0.01	11.7	5.37	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Run No: 03-1030-1241-3372
CPT File: 244C27.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-08	0.05	14.4	4.82	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
21.41	5.0E-08	0.07	14.5	4.51	1	13.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
21.90	5.0E-07	0.13	14.1	4.20	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
22.39	5.0E-07	0.21	13.7	4.03	1	13.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
22.88	5.0E-07	0.16	14.6	4.16	1	14.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
23.38	5.0E-06	0.02	19.6	3.41	6	17.8	71.1	88.9	45.8	UnDef	UnDef	6.0	UnDef	8.7	17.4
23.87	5.0E-06	0.04	15.1	3.17	4	14.6	58.5	73.1	49.8	UnDef	UnDef	6.0	UnDef	7.2	14.3
24.36	5.0E-08	-0.09	14.9	4.91	1	14.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
24.85	5.0E-08	-0.14	14.2	4.64	1	14.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
25.34	5.0E-06	-0.02	17.2	2.81	6	16.6	66.4	83.0	45.3	UnDef	UnDef	6.0	UnDef	8.1	16.2
25.84	5.0E-06	0.06	18.4	3.12	6	17.6	70.5	88.2	45.6	UnDef	UnDef	6.0	UnDef	8.6	17.3
26.33	5.0E-06	0.12	16.3	3.48	4	16.2	64.6	80.8	49.7	UnDef	UnDef	6.0	UnDef	7.9	15.8
26.82	5.0E-06	0.15	15.4	3.26	4	15.5	62.1	77.6	50.0	UnDef	UnDef	6.0	UnDef	7.6	15.2
27.31	5.0E-06	0.18	13.5	3.41	4	14.2	56.7	70.8	53.4	UnDef	UnDef	6.0	UnDef	6.9	13.9
27.80	5.0E-06	0.29	10.8	3.58	1	12.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
28.30	5.0E-06	0.26	11.8	3.10	4	12.9	51.7	64.6	55.0	UnDef	UnDef	3.0	UnDef	6.3	12.6
28.79	5.0E-07	0.37	9.9	3.73	1	11.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
29.28	5.0E-07	0.48	8.6	3.62	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
29.77	5.0E-06	0.53	8.8	3.08	4	10.7	42.9	53.6	61.7	UnDef	UnDef	3.0	UnDef	5.2	10.5
30.27	5.0E-06	0.50	8.6	3.09	4	10.6	42.2	52.8	62.6	UnDef	UnDef	3.0	UnDef	5.2	10.3
30.76	5.0E-06	0.59	7.7	3.37	1	9.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
31.21	5.0E-07	0.63	7.1	3.60	1	9.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
31.66	5.0E-07	0.59	6.9	3.64	1	9.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
32.15	5.0E-07	0.59	6.7	3.72	1	9.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
32.64	5.0E-07	0.66	6.3	3.86	1	8.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
33.14	5.0E-07	0.72	6.0	4.04	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.63	5.0E-07	0.68	6.3	3.80	1	8.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
34.12	5.0E-05	0.14	14.9	1.57	6	16.8	67.0	83.8	40.5	32	30.0	6.0	-0.02	6.6	13.1
34.61	5.0E-06	0.03	13.4	2.26	6	15.5	62.1	77.7	47.3	UnDef	UnDef	6.0	UnDef	7.6	15.2
35.10	5.0E-06	-0.04	18.7	3.79	4	20.5	81.9	102.4	48.4	UnDef	UnDef	6.0	UnDef	10.0	20.0
35.60	5.0E-08	-0.13	15.4	5.82	1	17.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
36.09	5.0E-08	-0.18	11.1	7.56	1	13.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
36.58	5.0E-08	-0.16	7.8	6.22	1	10.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
37.07	5.0E-06	0.08	12.4	3.63	1	15.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
37.57	5.0E-07	-0.01	13.3	4.05	1	16.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
38.06	5.0E-07	0.11	9.1	4.15	1	12.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
38.55	5.0E-06	0.06	14.9	3.82	1	17.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
39.04	5.0E-07	-0.04	18.0	4.72	1	20.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
39.53	5.0E-07	-0.07	20.1	4.37	1	23.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
40.03	5.0E-08	-0.13	11.8	5.62	1	15.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
40.52	5.0E-06	-0.04	8.5	4.02	1	11.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
41.01	5.0E-07	0.08	11.2	4.14	1	14.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
41.50	5.0E-06	-0.06	17.5	4.12	1	20.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
41.99	5.0E-08	-0.10	18.4	5.18	1	21.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
42.49	5.0E-08	-0.10	18.1	6.26	1	21.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
42.98	5.0E-08	-0.11	17.2	6.69	1	20.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
43.47	5.0E-08	-0.12	14.9	6.40	1	18.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
43.96	5.0E-08	-0.15	9.6	7.06	1	13.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.45	5.0E-08	-0.10	11.6	5.58	1	15.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.95	5.0E-08	-0.03	14.9	5.52	1	18.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
45.44	5.0E-07	-0.02	17.0	4.92	1	21.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
45.93	5.0E-08	-0.08	17.5	5.05	1	21.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
46.42	5.0E-08	-0.14	12.5	6.01	1	16.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
46.92	5.0E-08	-0.16	10.4	6.42	1	14.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
47.41	5.0E-08	-0.15	10.3	6.88	1	14.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
47.90	5.0E-08	-0.13	10.4	5.88	1	14.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.39	5.0E-08	-0.10	10.8	6.43	1	15.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.88	5.0E-08	-0.07	11.2	6.16	1	15.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.38	5.0E-08	-0.13	8.0	7.13	1	12.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.87	5.0E-07	0.02	6.6	4.83	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
50.36	5.0E-07	0.26	6.4	4.64	1	10.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
50.85	5.0E-06	0.33	9.4	2.79	4	13.9	55.5	69.4	58.7	UnDef	UnDef	3.0	UnDef	6.8	13.6
51.34	5.0E-06	0.28	11.2	3.38	4	16.0	63.9	79.9	57.6	UnDef	UnDef	3.0	UnDef	7.8	15.6
51.84	5.0E-06	0.34	10.4	2.91	4	15.1	60.6	75.7	56.9	UnDef	UnDef	3.0	UnDef	7.4	14.8

Gregg In Situ, Inc.
Run No: 03-1030-1241-3372
CPT File: 244C27.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
52.33	5.0E-06	0.29	10.0	3.40	1	14.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
52.82	5.0E-06	0.29	9.7	2.87	4	14.5	57.9	72.4	58.3	UnDef	UnDef	3.0	UnDef	7.1	14.2
53.31	5.0E-06	0.27	9.1	2.70	4	13.9	55.6	69.4	58.8	UnDef	UnDef	3.0	UnDef	6.8	13.6
53.81	5.0E-06	0.33	8.2	3.50	1	12.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
54.30	5.0E-06	0.28	11.3	3.06	4	16.5	65.9	82.4	55.8	UnDef	UnDef	3.0	UnDef	8.1	16.1
54.79	5.0E-06	0.06	15.0	3.15	4	20.8	83.3	104.1	49.9	UnDef	UnDef	6.0	UnDef	10.2	20.4
55.28	5.0E-07	0.11	11.0	4.44	1	16.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
55.77	5.0E-07	0.02	10.4	5.14	1	15.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
56.27	5.0E-07	0.11	9.2	4.42	1	14.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
56.76	5.0E-06	0.11	8.8	2.87	4	13.9	55.7	69.6	60.7	UnDef	UnDef	3.0	UnDef	6.8	13.6
57.25	5.0E-06	0.14	9.8	3.67	1	15.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
57.74	5.0E-08	-0.03	10.7	5.30	1	16.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
58.23	5.0E-06	0.00	16.0	3.52	4	22.6	90.3	112.9	50.4	UnDef	UnDef	6.0	UnDef	11.0	22.1
58.73	5.0E-05	0.01	18.3	2.03	6	25.5	101.9	127.4	39.6	34	30.0	6.0	-0.08	10.0	19.9
59.22	5.0E-05	0.14	12.5	1.48	6	18.6	74.4	93.0	43.2	32	30.0	6.0	0.00	7.3	14.6
59.71	5.0E-05	0.12	13.3	1.90	6	19.7	78.7	98.3	45.1	32	30.0	6.0	-0.03	7.7	15.4
60.20	5.0E-05	0.10	14.2	2.16	6	20.8	83.2	104.0	45.4	32	30.0	6.0	-0.05	8.1	16.3
60.69	5.0E-04	0.02	33.7	1.22	7	44.5	46.2	90.7	24.1	38	44.1	1.0	-0.10	6.8	21.3
61.19	5.0E-03	-0.01	49.7	1.26	7	64.2	39.9	104.1	19.3	38	54.6	1.0	-0.14	5.0	20.7
61.68	5.0E-05	-0.06	19.1	2.41	6	27.0	108.1	135.1	41.1	34	30.0	6.0	-0.11	10.6	21.2
62.17	5.0E-05	0.06	12.2	2.71	4	18.6	74.4	93.1	52.1	32	30.0	3.0	-0.05	7.3	14.6
62.66	5.0E-04	0.01	35.2	1.16	7	47.1	43.6	90.8	23.0	38	45.7	1.0	-0.10	6.6	22.0
63.16	5.0E-05	0.07	20.9	2.35	6	29.6	118.2	147.8	39.1	34	32.3	6.0	-0.10	11.6	23.1
63.65	5.0E-03	-0.03	52.2	1.32	7	68.6	42.0	110.7	19.2	40	56.5	1.0	-0.15	5.2	22.0
64.14	5.0E-03	-0.03	47.9	1.30	7	63.6	42.9	106.5	20.1	38	54.3	1.0	-0.14	5.2	20.8

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3400
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-28
Engineer: L. HANDFELT
CPT Date: 03/21/10
CPT Time: 11:58
CPT File: 244C28.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.73 (ft): -41.7
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.2	0.20	8.97	43.3	2	111.4	1.32	0.01	1.31	2.00	2.1	4.3	0.07	0.00
0.74	2.3	0.20	8.83	43.7	2	111.4	1.34	0.02	1.33	2.00	2.2	4.4	0.07	0.00
1.23	2.3	0.20	8.79	44.5	2	111.4	1.37	0.03	1.34	2.00	2.2	4.4	0.07	0.00
1.72	2.9	0.20	6.85	38.0	2	111.4	1.40	0.04	1.36	2.00	2.8	5.6	0.12	0.00
2.21	2.4	0.20	8.45	42.0	2	111.4	1.43	0.05	1.37	2.00	2.3	4.5	0.08	0.00
2.71	2.5	0.20	8.00	48.4	2	111.4	1.45	0.07	1.39	2.00	2.4	4.8	0.08	0.00
3.20	2.7	0.20	7.54	50.5	2	111.4	1.48	0.08	1.40	2.00	2.5	5.1	0.09	0.00
3.65	2.5	0.20	8.04	53.2	2	111.4	1.51	0.09	1.42	2.00	2.4	4.8	0.08	0.00
4.10	2.7	0.20	7.31	55.3	2	111.4	1.53	0.10	1.43	2.00	2.6	5.3	0.10	0.00
4.59	2.8	0.20	7.25	59.4	2	111.4	1.56	0.11	1.45	2.00	2.6	5.3	0.10	0.00
5.09	2.9	0.20	6.94	62.1	2	111.4	1.59	0.12	1.46	2.00	2.8	5.5	0.10	0.00
5.58	3.2	0.20	6.28	63.1	3	111.4	1.61	0.14	1.48	2.00	3.1	6.1	0.13	0.00
6.07	3.2	0.20	6.18	58.3	3	111.4	1.64	0.15	1.49	2.00	3.1	6.2	0.13	0.00
6.60	3.0	0.20	6.59	63.0	2	111.4	1.67	0.16	1.51	2.00	2.9	5.8	0.11	0.00
7.14	3.0	0.20	6.66	67.0	2	111.4	1.70	0.17	1.53	2.00	2.9	5.8	0.10	0.00
7.63	3.2	0.20	6.17	70.1	3	111.4	1.73	0.19	1.54	2.00	3.1	6.2	0.12	0.00
8.12	3.2	0.20	6.28	72.5	3	111.4	1.76	0.20	1.56	2.00	3.1	6.1	0.11	0.00
8.61	3.1	0.20	6.53	73.7	2	111.4	1.78	0.21	1.57	2.00	2.9	5.9	0.10	0.00
9.10	3.1	0.20	6.39	76.4	2	111.4	1.81	0.22	1.59	2.00	3.0	6.0	0.11	0.00
9.60	3.1	0.20	6.41	79.6	2	111.4	1.84	0.23	1.60	2.00	3.0	6.0	0.10	0.00
10.09	3.4	0.20	5.87	80.5	3	111.4	1.87	0.25	1.62	2.00	3.3	6.5	0.12	0.00
10.58	3.5	0.20	5.71	81.2	3	111.4	1.89	0.26	1.63	1.97	3.4	6.6	0.13	0.00
11.07	3.5	0.20	5.74	83.8	3	111.4	1.92	0.27	1.65	1.92	3.3	6.4	0.13	0.00
11.56	3.3	0.20	6.03	84.9	3	111.4	1.95	0.28	1.66	1.88	3.2	6.0	0.11	0.00
12.06	3.5	0.20	5.68	85.5	3	111.4	1.98	0.30	1.68	1.84	3.4	6.2	0.12	0.00
12.55	3.7	0.20	5.46	85.9	3	111.4	2.00	0.31	1.70	1.80	3.5	6.3	0.13	0.00
13.04	3.5	0.20	5.77	86.9	3	111.4	2.03	0.32	1.71	1.77	3.3	5.9	0.12	0.00
13.53	3.8	0.20	5.28	89.7	3	111.4	2.06	0.33	1.73	1.74	3.6	6.3	0.14	0.00
14.03	3.7	0.20	5.39	91.3	3	111.4	2.08	0.34	1.74	1.71	3.6	6.1	0.13	0.00
14.52	8.6	0.20	2.33	82.3	4	114.6	2.11	0.36	1.76	1.68	5.5	9.2	0.52	0.11
15.01	14.0	0.20	1.43	53.8	6	114.6	2.14	0.37	1.77	1.65	5.4	8.9	0.95	0.10
15.50	12.3	0.20	1.63	35.6	5	114.6	2.17	0.38	1.79	1.62	5.9	9.5	0.81	0.12
15.99	8.5	0.25	2.97	41.1	4	114.6	2.20	0.39	1.80	1.59	5.4	8.6	0.50	0.00
16.49	9.9	0.25	2.54	24.2	5	114.6	2.23	0.41	1.82	1.57	4.7	7.4	0.61	0.12
16.98	5.3	0.20	3.78	8.7	3	111.4	2.25	0.42	1.83	1.54	5.1	7.8	0.24	0.00
17.47	11.4	0.23	2.00	14.6	5	114.6	2.28	0.43	1.85	1.52	5.4	8.3	0.73	0.14
17.96	12.0	0.20	1.67	12.2	5	114.6	2.31	0.44	1.86	1.50	5.8	8.6	0.78	0.14
18.45	8.5	0.20	2.36	16.4	4	114.6	2.34	0.46	1.88	1.48	5.4	8.0	0.49	0.10
18.95	6.4	0.20	3.15	20.7	3	111.4	2.37	0.47	1.90	1.46	6.1	8.9	0.32	0.00
19.44	5.5	0.20	3.64	70.0	3	111.4	2.39	0.48	1.91	1.44	5.3	7.6	0.25	0.00
19.93	6.1	0.20	3.26	93.2	3	111.4	2.42	0.49	1.93	1.42	5.9	8.4	0.30	0.00
20.42	6.1	0.20	3.31	103.7	3	111.4	2.45	0.51	1.94	1.41	5.8	8.2	0.29	0.00

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	6.0	0.20	3.34	107.8	3	111.4	2.47	0.52	1.96	1.39	5.7	8.0	0.28	0.00
21.41	6.4	0.20	3.15	99.9	3	111.4	2.50	0.53	1.97	1.37	6.1	8.4	0.31	0.00
21.90	6.2	0.21	3.45	87.6	3	111.4	2.53	0.54	1.99	1.36	5.9	8.1	0.29	0.00
22.39	5.9	0.20	3.39	92.6	3	111.4	2.56	0.55	2.00	1.34	5.7	7.6	0.27	0.00
22.88	5.7	0.20	3.50	108.6	3	111.4	2.58	0.57	2.02	1.33	5.5	7.3	0.25	0.00
23.38	5.9	0.20	3.42	124.1	3	111.4	2.61	0.58	2.03	1.32	5.6	7.4	0.26	0.00
23.87	6.0	0.20	3.34	132.0	3	111.4	2.64	0.59	2.05	1.30	5.7	7.5	0.27	0.00
24.36	5.9	0.20	3.41	129.7	3	111.4	2.67	0.60	2.06	1.29	5.6	7.3	0.26	0.00
24.85	5.9	0.20	3.42	129.9	3	111.4	2.69	0.61	2.08	1.28	5.6	7.2	0.25	0.00
25.34	5.8	0.20	3.47	131.5	3	111.4	2.72	0.63	2.09	1.26	5.5	7.0	0.24	0.00
25.84	6.7	0.20	2.99	131.2	3	111.4	2.75	0.64	2.11	1.25	6.4	8.0	0.32	0.00
26.33	13.9	0.21	1.53	97.8	6	114.6	2.78	0.65	2.13	1.24	5.3	6.6	0.89	0.14
26.82	12.7	0.23	1.82	46.4	5	114.6	2.80	0.66	2.14	1.23	6.1	7.5	0.79	0.12
27.31	9.8	0.21	2.17	54.6	5	114.6	2.83	0.68	2.16	1.22	4.7	5.7	0.56	0.10
27.80	18.1	0.24	1.33	41.9	6	114.6	2.86	0.69	2.17	1.20	6.9	8.3	1.22	0.14
28.30	6.3	0.20	3.18	36.2	3	111.4	2.89	0.70	2.19	1.19	6.0	7.2	0.27	0.00
28.79	6.5	0.20	3.11	52.8	3	111.4	2.92	0.71	2.20	1.18	6.2	7.3	0.28	0.00
29.28	6.7	0.20	3.00	111.8	3	111.4	2.94	0.73	2.22	1.17	6.4	7.5	0.30	0.00
29.77	6.7	0.20	3.01	136.5	3	111.4	2.97	0.74	2.23	1.16	6.4	7.4	0.29	0.00
30.27	6.5	0.20	3.09	137.2	3	111.4	3.00	0.75	2.25	1.15	6.2	7.2	0.28	0.00
30.76	6.6	0.20	3.04	143.4	3	111.4	3.03	0.76	2.26	1.15	6.3	7.2	0.29	0.00
31.21	6.7	0.20	2.97	149.6	3	111.4	3.05	0.77	2.28	1.14	6.5	7.3	0.30	0.00
31.66	20.2	0.20	1.00	134.4	6	114.6	3.08	0.78	2.29	1.13	7.7	8.7	1.37	0.11
32.15	19.4	0.24	1.22	50.2	6	114.6	3.10	0.80	2.31	1.12	7.4	8.3	1.31	0.15
32.64	6.6	0.20	3.05	85.4	3	111.4	3.13	0.81	2.32	1.11	6.4	7.1	0.28	0.00
33.14	6.8	0.20	2.94	125.0	3	111.4	3.16	0.82	2.34	1.10	6.5	7.2	0.29	0.00
33.63	6.9	0.20	2.89	149.1	4	114.6	3.19	0.83	2.35	1.09	4.4	4.8	0.30	0.00
34.12	8.1	0.20	2.48	155.2	4	114.6	3.22	0.85	2.37	1.09	5.2	5.6	0.39	0.00
34.61	8.5	0.20	2.38	117.3	4	114.6	3.24	0.86	2.38	1.08	5.4	5.9	0.42	0.00
35.10	7.1	0.20	2.82	136.3	4	114.6	3.27	0.87	2.40	1.07	4.5	4.9	0.31	0.00
35.60	6.9	0.20	2.90	152.8	4	114.6	3.30	0.89	2.41	1.06	4.4	4.7	0.29	0.00
36.09	7.2	0.20	2.77	158.7	4	114.6	3.33	0.90	2.43	1.06	4.6	4.9	0.31	0.00
36.58	7.2	0.20	2.77	155.0	4	114.6	3.36	0.91	2.45	1.05	4.6	4.8	0.31	0.00
37.07	7.3	0.20	2.74	159.3	4	114.6	3.39	0.92	2.46	1.04	4.7	4.9	0.31	0.00
37.57	7.3	0.20	2.74	166.4	4	114.6	3.41	0.94	2.48	1.03	4.7	4.8	0.31	0.00
38.06	7.7	0.20	2.61	169.1	4	114.6	3.44	0.95	2.49	1.03	4.9	5.0	0.34	0.00
38.55	8.6	0.21	2.48	159.3	4	114.6	3.47	0.96	2.51	1.02	5.5	5.6	0.41	0.00
39.04	11.6	0.39	3.38	130.5	4	114.6	3.50	0.98	2.52	1.01	7.4	7.5	0.65	0.00
39.53	11.5	0.46	4.04	83.1	3	111.4	3.53	0.99	2.54	1.01	11.0	11.1	0.64	0.00
40.03	11.6	0.49	4.25	85.5	3	111.4	3.55	1.00	2.55	1.00	11.1	11.1	0.64	0.00
40.52	11.7	0.40	3.39	83.9	4	114.6	3.58	1.01	2.57	0.99	7.5	7.5	0.65	0.00
41.01	12.9	0.43	3.32	99.8	4	114.6	3.61	1.03	2.58	0.99	8.3	8.1	0.75	0.00
41.50	14.1	0.50	3.53	92.4	4	114.6	3.64	1.04	2.60	0.98	9.0	8.9	0.84	0.00
41.99	15.0	0.59	3.94	72.0	3	111.4	3.67	1.05	2.61	0.98	14.4	14.0	0.91	0.00
42.49	13.5	0.57	4.27	62.2	3	111.4	3.69	1.06	2.63	0.97	12.9	12.5	0.78	0.00
42.98	11.9	0.54	4.56	67.0	3	111.4	3.72	1.07	2.65	0.96	11.4	11.0	0.66	0.00
43.47	12.8	0.56	4.41	77.0	3	111.4	3.75	1.09	2.66	0.96	12.2	11.7	0.72	0.00
43.96	12.7	0.53	4.19	88.1	3	111.4	3.77	1.10	2.68	0.95	12.1	11.6	0.71	0.00
44.45	15.3	0.64	4.17	97.4	3	111.4	3.80	1.11	2.69	0.95	14.6	13.9	0.92	0.00
44.95	18.6	0.56	3.03	59.7	5	114.6	3.83	1.12	2.71	0.94	8.9	8.4	1.18	0.00
45.44	14.0	0.56	4.03	43.3	3	111.4	3.86	1.14	2.72	0.94	13.4	12.6	0.81	0.00
45.93	15.7	0.75	4.76	39.2	3	111.4	3.89	1.15	2.74	0.93	15.0	14.0	0.94	0.00
46.42	15.4	0.76	4.95	34.8	3	111.4	3.91	1.16	2.75	0.93	14.7	13.7	0.92	0.00
46.92	14.6	0.65	4.47	31.7	3	111.4	3.94	1.17	2.77	0.92	14.0	12.9	0.85	0.00
47.41	14.9	0.51	3.46	33.7	4	114.6	3.97	1.18	2.78	0.92	9.5	8.7	0.87	0.00
47.90	13.1	0.42	3.22	40.6	4	114.6	4.00	1.20	2.80	0.91	8.4	7.7	0.73	0.00
48.39	13.1	0.51	3.93	53.5	3	111.4	4.02	1.21	2.81	0.91	12.5	11.4	0.73	0.00
48.88	14.8	0.56	3.78	59.6	3	111.4	4.05	1.22	2.83	0.90	14.1	12.8	0.86	0.00
49.38	14.2	0.44	3.14	133.5	4	114.6	4.08	1.23	2.85	0.90	9.0	8.1	0.81	0.00
49.87	15.5	0.51	3.30	136.3	4	114.6	4.11	1.25	2.86	0.90	9.9	8.8	0.91	0.00
50.36	15.7	0.64	4.05	127.6	3	111.4	4.14	1.26	2.88	0.89	15.0	13.4	0.93	0.00
50.85	12.0	0.50	4.16	102.4	3	111.4	4.16	1.27	2.89	0.89	11.5	10.2	0.62	0.00
51.34	11.0	0.41	3.71	128.9	3	111.4	4.19	1.28	2.91	0.88	10.6	9.3	0.55	0.00
51.84	12.5	0.42	3.33	144.6	4	114.6	4.22	1.30	2.92	0.88	8.0	7.0	0.66	0.00

Gregg In Situ, Inc.
Run No: 03-1030-1241-3400
CPT File: 244C28.COR

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
52.33	13.9	0.45	3.22	150.2	4	114.6	4.25	1.31	2.94	0.87	8.9	7.7	0.77	0.00
52.82	13.8	0.34	2.49	141.2	5	114.6	4.27	1.32	2.95	0.87	6.6	5.8	0.76	0.00
53.31	10.9	0.35	3.25	149.9	4	114.6	4.30	1.33	2.97	0.87	6.9	6.0	0.53	0.00
53.81	11.3	0.27	2.40	174.8	5	114.6	4.33	1.35	2.98	0.86	5.4	4.7	0.56	0.00
54.30	12.3	0.28	2.31	197.1	5	114.6	4.36	1.36	3.00	0.86	5.9	5.1	0.64	0.00
54.79	13.2	0.36	2.69	182.7	5	114.6	4.39	1.37	3.01	0.85	6.3	5.4	0.71	0.00
55.28	16.8	0.37	2.22	210.3	5	114.6	4.42	1.39	3.03	0.85	8.1	6.8	0.99	0.11
55.77	28.4	0.51	1.80	90.2	6	114.6	4.44	1.40	3.04	0.85	10.9	9.2	1.92	0.23
56.27	13.7	0.46	3.34	105.2	4	114.6	4.47	1.41	3.06	0.84	8.7	7.4	0.74	0.00
56.76	13.5	0.41	3.06	139.4	4	114.6	4.50	1.42	3.08	0.84	8.6	7.2	0.72	0.00
57.25	13.6	0.40	2.94	164.2	5	114.6	4.53	1.44	3.09	0.83	6.5	5.4	0.73	0.00
57.74	14.2	0.38	2.67	185.7	5	114.6	4.56	1.45	3.11	0.83	6.8	5.6	0.77	0.00
58.23	15.1	0.37	2.43	198.5	5	114.6	4.58	1.46	3.12	0.83	7.2	6.0	0.84	0.00
58.73	23.9	0.38	1.58	219.5	6	114.6	4.61	1.48	3.14	0.82	9.2	7.5	1.55	0.16

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3400
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-28
Engineer: L. HANDFELT
CPT Date: 03/21/10
CPT Time: 11:58
CPT File: 244C28.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.73 (ft): -41.7
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.04	152.6	10.00	11	4.3	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.04	51.3	10.00	1	4.4	UnDef	UnDef	100.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.05	30.2	10.00	1	4.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	-0.11	36.2	10.00	1	5.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	1.0E-15	-0.07	17.5	10.00	1	4.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	1.0E-15	0.12	15.9	10.00	1	4.8	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	1.0E-15	0.15	15.0	10.00	1	5.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.65	1.0E-15	0.25	11.1	10.00	1	4.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
4.10	1.0E-15	0.24	12.1	10.00	1	5.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
4.59	1.0E-15	0.34	10.7	10.00	1	5.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.09	1.0E-15	0.37	10.5	10.00	1	5.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.58	5.0E-08	0.31	11.6	10.00	1	6.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
6.07	5.0E-08	0.20	10.8	10.00	1	6.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
6.60	1.0E-15	0.33	8.5	10.00	1	5.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.14	1.0E-15	0.43	7.5	10.00	1	5.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.63	5.0E-08	0.43	8.1	10.00	1	6.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.12	5.0E-08	0.49	7.2	10.00	1	6.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
8.61	1.0E-15	0.56	6.1	10.00	1	5.9	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
9.10	1.0E-15	0.60	5.9	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
9.60	1.0E-15	0.68	5.5	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
10.09	5.0E-08	0.58	6.3	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
10.58	5.0E-08	0.56	6.2	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
11.07	5.0E-08	0.62	5.8	10.00	1	6.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
11.56	5.0E-08	0.71	4.9	10.00	1	6.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
12.06	5.0E-08	0.64	5.3	10.00	1	6.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
12.55	5.0E-08	0.59	5.4	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
13.04	5.0E-08	0.69	4.5	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
13.53	5.0E-08	0.62	5.3	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
14.03	5.0E-08	0.68	4.8	10.00	1	6.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
14.52	5.0E-07	0.13	18.3	3.09	6	14.1	56.5	70.6	45.6	UnDef	UnDef	6.0	UnDef	9.2	18.4
15.01	5.0E-05	-0.01	32.3	1.69	7	22.6	35.8	58.4	28.0	38	30.0	6.0	-0.13	5.5	14.4
15.50	5.0E-06	-0.07	26.5	1.98	6	19.5	56.3	75.8	32.8	UnDef	UnDef	6.0	UnDef	8.3	17.8
15.99	5.0E-07	-0.08	16.0	4.01	1	13.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
16.49	5.0E-06	-0.14	18.8	3.28	6	15.1	60.5	75.7	46.0	UnDef	UnDef	6.0	UnDef	7.4	14.8
16.98	5.0E-08	-0.51	7.3	6.58	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
17.47	5.0E-06	-0.15	21.0	2.50	6	16.9	67.7	84.7	39.8	UnDef	UnDef	6.0	UnDef	8.3	16.6
17.96	5.0E-06	-0.15	21.8	2.07	6	17.6	70.5	88.2	36.7	UnDef	UnDef	6.0	UnDef	8.6	17.3
18.45	5.0E-07	-0.22	13.5	3.25	4	12.3	49.2	61.5	52.7	UnDef	UnDef	6.0	UnDef	8.0	16.1
18.95	5.0E-08	-0.31	8.5	5.02	1	9.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.44	5.0E-08	0.09	6.5	6.42	1	7.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.93	5.0E-08	0.26	7.5	5.38	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
20.42	5.0E-08	0.36	7.1	5.56	1	8.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-08	0.40	6.8	5.69	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
21.41	5.0E-08	0.30	7.3	5.20	1	8.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
21.90	5.0E-08	0.20	6.8	5.82	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
22.39	5.0E-08	0.26	6.1	5.97	1	7.8	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
22.88	5.0E-08	0.44	5.6	6.38	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
23.38	5.0E-08	0.57	5.6	6.17	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
23.87	5.0E-08	0.62	5.7	5.96	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
24.36	5.0E-08	0.62	5.3	6.24	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
24.85	5.0E-08	0.62	5.1	6.34	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
25.34	5.0E-08	0.66	4.9	6.56	1	7.1	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
25.84	5.0E-08	0.50	6.2	5.08	1	8.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
26.33	5.0E-05	0.08	17.1	1.91	6	16.8	67.3	84.2	40.2	34	30.0	6.0	-0.06	6.6	13.2
26.82	5.0E-06	-0.07	15.0	2.34	6	15.3	61.2	76.5	45.5	UnDef	UnDef	6.0	UnDef	7.5	15.0
27.31	5.0E-06	-0.06	10.3	3.05	4	11.6	46.6	58.2	57.9	UnDef	UnDef	3.0	UnDef	5.7	11.4
27.80	5.0E-05	-0.06	22.1	1.58	6	21.3	65.3	86.6	33.2	34	30.0	6.0	-0.09	7.4	15.8
28.30	5.0E-08	-0.31	4.9	5.86	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
28.79	5.0E-08	-0.16	5.0	5.66	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
29.28	5.0E-08	0.34	5.1	5.37	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
29.77	5.0E-08	0.55	5.0	5.44	1	7.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
30.27	5.0E-08	0.58	4.6	5.76	1	7.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
30.76	5.0E-08	0.62	4.7	5.62	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.21	5.0E-08	0.65	4.8	5.43	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
31.66	5.0E-05	0.11	21.8	1.18	7	22.3	47.0	69.2	30.4	34	30.0	6.0	-0.04	6.4	15.1
32.15	5.0E-05	-0.05	20.5	1.45	6	21.3	68.7	90.0	33.6	34	30.0	6.0	-0.07	7.6	16.0
32.64	5.0E-08	0.10	4.3	5.77	1	7.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.14	5.0E-08	0.43	4.5	5.47	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
33.63	5.0E-07	0.61	4.5	5.35	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.12	5.0E-07	0.51	5.7	4.13	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
34.61	5.0E-07	0.24	6.1	3.84	1	9.0	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.10	5.0E-07	0.48	4.4	5.22	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
35.60	5.0E-07	0.65	4.1	5.55	1	7.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.09	5.0E-07	0.65	4.3	5.14	1	7.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
36.58	5.0E-07	0.62	4.3	5.17	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
37.07	5.0E-07	0.64	4.3	5.10	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
37.57	5.0E-07	0.70	4.2	5.15	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.06	5.0E-07	0.66	4.5	4.72	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
38.55	5.0E-07	0.48	5.4	4.14	1	8.6	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
39.04	5.0E-07	0.19	8.3	4.84	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
39.53	5.0E-08	0.01	8.1	5.84	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
40.03	5.0E-08	0.01	8.1	6.12	1	11.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
40.52	5.0E-07	0.01	8.1	4.87	1	11.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
41.01	5.0E-07	0.06	9.1	4.61	1	12.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
41.50	5.0E-07	0.03	10.1	4.75	1	13.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
41.99	5.0E-08	-0.03	10.8	5.22	1	14.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
42.49	5.0E-08	-0.07	9.2	5.88	1	12.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
42.98	5.0E-08	-0.07	7.6	6.63	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
43.47	5.0E-08	-0.03	8.3	6.24	1	12.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
43.96	5.0E-08	0.01	8.1	5.97	1	11.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.45	5.0E-08	0.03	10.3	5.56	1	14.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
44.95	5.0E-06	-0.06	13.1	3.82	1	17.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
45.44	5.0E-08	-0.13	9.0	5.56	1	12.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
45.93	5.0E-08	-0.13	10.3	6.33	1	14.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
46.42	5.0E-08	-0.15	9.9	6.64	1	14.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
46.92	5.0E-08	-0.17	9.1	6.12	1	13.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
47.41	5.0E-07	-0.16	9.2	4.71	1	13.4	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
47.90	5.0E-07	-0.17	7.6	4.64	1	11.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.39	5.0E-08	-0.13	7.5	5.68	1	11.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
48.88	5.0E-08	-0.09	8.8	5.20	1	13.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.38	5.0E-07	0.13	8.2	4.41	1	12.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
49.87	5.0E-07	0.12	9.1	4.50	1	13.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
50.36	5.0E-08	0.10	9.2	5.50	1	13.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
50.85	5.0E-08	0.04	6.1	6.39	1	10.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
51.34	5.0E-08	0.16	5.3	5.98	1	9.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
51.84	5.0E-07	0.19	6.4	5.02	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef

Gregg In Situ, Inc.
Run No: 03-1030-1241-3400
CPT File: 244C28.COR

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
52.33	5.0E-07	0.18	7.4	4.63	1	11.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
52.82	5.0E-06	0.15	7.2	3.60	1	11.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
53.31	5.0E-07	0.26	4.9	5.38	1	9.2	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
53.81	5.0E-06	0.36	5.2	3.89	1	9.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
54.30	5.0E-06	0.40	5.8	3.58	1	10.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
54.79	5.0E-06	0.30	6.4	4.02	1	11.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
55.28	5.0E-06	0.29	8.9	3.00	4	14.0	55.9	69.9	61.0	UnDef	UnDef	3.0	UnDef	6.8	13.7
55.77	5.0E-05	-0.01	17.1	2.13	6	23.5	94.0	117.5	41.5	32	30.0	6.0	-0.08	9.2	18.4
56.27	5.0E-07	0.02	6.5	4.96	1	11.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
56.76	5.0E-07	0.14	6.3	4.59	1	11.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
57.25	5.0E-06	0.22	6.3	4.41	1	11.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
57.74	5.0E-06	0.28	6.6	3.93	1	11.5	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
58.23	5.0E-06	0.29	7.2	3.50	1	12.2	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
58.73	5.0E-05	0.19	13.1	1.96	6	19.3	77.1	96.4	45.8	32	30.0	6.0	-0.02	7.5	15.1

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3422
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-29
Engineer: L. HANDFELT
CPT Date: 03/21/10
CPT Time: 14:48
CPT File: 244C29.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.10 (ft): -39.7
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
0.25	2.2	0.20	9.05	45.0	2	111.4	1.25	0.01	1.25	2.00	2.1	4.2	0.08	0.00
0.74	2.4	0.20	8.48	44.6	2	111.4	1.28	0.02	1.26	2.00	2.3	4.5	0.09	0.00
1.23	2.7	0.20	7.56	47.6	2	111.4	1.31	0.03	1.28	2.00	2.5	5.1	0.11	0.00
1.72	2.9	0.20	6.89	49.1	2	111.4	1.34	0.04	1.29	2.00	2.8	5.6	0.13	0.00
2.21	2.9	0.20	6.86	55.7	2	111.4	1.36	0.05	1.31	2.00	2.8	5.6	0.12	0.00
2.71	3.1	0.20	6.51	59.7	2	111.4	1.39	0.07	1.32	2.00	3.0	5.9	0.14	0.00
3.20	3.6	0.20	5.50	68.0	3	111.4	1.42	0.08	1.34	2.00	3.5	7.0	0.18	0.00
3.65	13.3	0.20	1.50	56.8	6	114.6	1.44	0.09	1.35	2.00	5.1	10.2	0.95	0.08
4.10	13.5	0.20	1.48	25.2	6	114.6	1.47	0.10	1.37	2.00	5.2	10.4	0.97	0.08
4.59	3.4	0.20	5.89	65.1	3	111.4	1.50	0.11	1.38	2.00	3.3	6.5	0.15	0.00
5.09	3.0	0.20	6.60	87.0	2	111.4	1.52	0.13	1.40	2.00	2.9	5.8	0.12	0.00
5.58	3.1	0.20	6.46	89.0	2	111.4	1.55	0.14	1.41	2.00	3.0	5.9	0.12	0.00
6.07	3.1	0.20	6.41	88.4	2	111.4	1.58	0.15	1.43	2.00	3.0	6.0	0.12	0.00
6.60	3.1	0.20	6.41	91.1	2	111.4	1.61	0.16	1.45	2.00	3.0	6.0	0.12	0.00
7.14	3.0	0.20	6.64	94.2	2	111.4	1.64	0.18	1.46	2.00	2.9	5.8	0.11	0.00
7.63	8.7	0.20	2.31	96.7	5	114.6	1.67	0.19	1.48	2.00	4.1	8.3	0.56	0.10
8.12	28.3	0.20	0.71	22.9	7	117.8	1.69	0.20	1.49	2.00	9.0	18.1	UnDef	0.10
8.61	4.2	0.20	4.79	44.3	3	111.4	1.72	0.21	1.51	2.00	4.0	8.0	0.20	0.00
9.10	3.0	0.20	6.72	93.4	2	111.4	1.75	0.23	1.52	2.00	2.9	5.7	0.10	0.00
9.60	3.3	0.20	6.14	96.3	3	111.4	1.78	0.24	1.54	2.00	3.1	6.3	0.12	0.00
10.09	3.5	0.20	5.70	98.1	3	111.4	1.81	0.25	1.55	2.00	3.4	6.7	0.14	0.00
10.58	3.5	0.20	5.74	99.9	3	111.4	1.83	0.26	1.57	1.95	3.3	6.5	0.13	0.00
11.07	3.5	0.20	5.80	101.3	3	111.4	1.86	0.27	1.59	1.91	3.3	6.3	0.13	0.00
11.56	5.3	0.20	3.77	101.8	3	111.4	1.89	0.29	1.60	1.87	5.1	9.5	0.27	0.00
12.06	6.3	0.20	3.20	81.6	3	111.4	1.91	0.30	1.62	1.83	6.0	11.0	0.35	0.00
12.55	6.8	0.20	2.93	93.3	3	111.4	1.94	0.31	1.63	1.79	6.5	11.7	0.39	0.00
13.04	7.6	0.20	2.64	101.4	4	114.6	1.97	0.32	1.65	1.76	4.9	8.5	0.45	0.11
13.53	7.4	0.20	2.72	94.4	4	114.6	2.00	0.34	1.66	1.72	4.7	8.1	0.43	0.10
14.03	8.4	0.20	2.40	104.5	4	114.6	2.03	0.35	1.68	1.69	5.3	9.0	0.51	0.11
14.52	8.7	0.20	2.31	80.7	5	114.6	2.05	0.36	1.69	1.66	4.2	6.9	0.53	0.11
15.01	6.1	0.20	3.31	105.4	3	111.4	2.08	0.37	1.71	1.63	5.8	9.5	0.32	0.00
15.50	6.1	0.20	3.30	113.6	3	111.4	2.11	0.39	1.72	1.61	5.8	9.4	0.32	0.00
15.99	5.9	0.20	3.40	121.3	3	111.4	2.14	0.40	1.74	1.58	5.7	9.0	0.30	0.00
16.49	7.0	0.20	2.88	115.7	4	114.6	2.17	0.41	1.75	1.56	4.5	6.9	0.38	0.00
16.98	7.9	0.20	2.55	98.4	4	114.6	2.19	0.42	1.77	1.54	5.0	7.7	0.45	0.10
17.47	9.4	0.22	2.38	82.4	5	114.6	2.22	0.44	1.79	1.51	4.5	6.8	0.58	0.11
17.96	9.2	0.32	3.44	62.4	3	111.4	2.25	0.45	1.80	1.49	8.8	13.1	0.56	0.00
18.45	14.1	0.25	1.78	65.6	5	114.6	2.28	0.46	1.82	1.47	6.7	9.9	0.94	0.16
18.95	6.4	0.20	3.13	94.8	3	111.4	2.30	0.47	1.83	1.45	6.1	8.9	0.33	0.00
19.44	5.9	0.20	3.38	131.1	3	111.4	2.33	0.49	1.85	1.43	5.7	8.1	0.29	0.00
19.93	15.3	0.20	1.32	150.7	6	114.6	2.36	0.50	1.86	1.42	5.9	8.3	1.04	0.11
20.42	50.5	0.34	0.68	60.7	8	120.9	2.39	0.51	1.88	1.40	12.1	16.9	UnDef	0.12

Depth (ft)	AvgQt (tsf)	AvgFs (tsf)	AvgRf (%)	AvgUd (ft)	SBT	U.Wt. pcf	TStress (tsf)	EStress (tsf)	Ueq (tsf)	Cn	N60 (blows/ft)	(N1)60 (blows/ft)	Su (tsf)	CRR
20.92	14.0	0.36	2.58	77.5	5	114.6	2.42	0.53	1.89	1.38	6.7	9.3	0.93	0.16
21.41	7.2	0.20	2.80	146.4	4	114.6	2.45	0.54	1.91	1.36	4.6	6.2	0.38	0.00
21.90	5.8	0.20	3.45	145.8	3	111.4	2.47	0.55	1.92	1.35	5.6	7.5	0.27	0.00
22.39	5.7	0.20	3.53	156.2	3	111.4	2.50	0.56	1.94	1.33	5.4	7.2	0.25	0.00
22.88	8.4	0.20	2.41	163.2	4	114.6	2.53	0.58	1.95	1.32	5.4	7.1	0.47	0.00
23.38	63.1	0.29	0.46	60.8	8	120.9	2.56	0.59	1.97	1.30	15.1	19.7	UnDef	0.13
23.87	58.1	0.56	0.97	24.7	7	117.8	2.59	0.60	1.98	1.29	18.5	23.9	UnDef	0.14
24.36	80.4	0.25	0.31	50.4	8	120.9	2.62	0.62	2.00	1.27	19.2	24.5	UnDef	0.17
24.85	57.5	0.23	0.39	60.9	8	120.9	2.65	0.63	2.02	1.26	13.8	17.3	UnDef	0.11
25.34	40.0	0.27	0.68	62.1	7	117.8	2.68	0.65	2.03	1.25	12.8	15.9	UnDef	0.10
25.84	20.5	0.26	1.27	59.3	6	114.6	2.70	0.66	2.05	1.23	7.9	9.7	1.42	0.11
26.33	15.5	0.26	1.68	80.0	6	114.6	2.73	0.67	2.06	1.22	5.9	7.2	1.02	0.15
26.82	15.4	0.31	1.99	95.7	5	114.6	2.76	0.68	2.08	1.21	7.4	8.9	1.01	0.15
27.31	31.1	0.45	1.45	86.7	6	114.6	2.79	0.70	2.09	1.20	11.9	14.3	2.26	0.12
27.80	52.5	0.61	1.17	74.4	7	117.8	2.82	0.71	2.11	1.19	16.8	19.9	UnDef	0.14
28.30	51.0	0.33	0.64	43.9	8	120.9	2.85	0.72	2.12	1.18	12.2	14.4	UnDef	0.11
28.79	14.1	0.23	1.66	75.4	5	114.6	2.88	0.74	2.14	1.16	6.8	7.9	0.90	0.13
29.28	10.7	0.20	1.87	130.3	5	114.6	2.90	0.75	2.15	1.15	5.1	5.9	0.63	0.10
29.77	11.8	0.20	1.70	175.2	5	114.6	2.93	0.76	2.17	1.14	5.7	6.5	0.71	0.11
30.27	14.9	0.27	1.80	182.7	5	114.6	2.96	0.78	2.18	1.14	7.1	8.1	0.96	0.13
30.76	16.8	0.53	3.16	122.9	5	114.6	2.99	0.79	2.20	1.13	8.0	9.0	1.10	0.15
31.21	14.9	0.57	3.80	78.6	3	111.4	3.01	0.80	2.21	1.12	14.3	16.0	0.95	0.00
31.66	15.3	0.49	3.22	69.7	4	114.6	3.04	0.81	2.23	1.11	9.8	10.9	0.98	0.00
32.15	15.1	0.42	2.80	87.5	5	114.6	3.07	0.82	2.24	1.10	7.2	8.0	0.96	0.13
32.64	14.4	0.38	2.66	88.5	5	114.6	3.10	0.84	2.26	1.09	6.9	7.5	0.90	0.12
33.14	13.6	0.21	1.55	157.1	6	114.6	3.12	0.85	2.27	1.08	5.2	5.6	0.84	0.11
33.63	14.6	0.24	1.62	200.3	6	114.6	3.15	0.86	2.29	1.08	5.6	6.0	0.92	0.12
34.12	16.1	0.26	1.64	202.0	6	114.6	3.18	0.88	2.30	1.07	6.2	6.6	1.04	0.14
34.61	55.1	0.32	0.58	128.0	8	120.9	3.21	0.89	2.32	1.06	13.2	14.0	UnDef	0.11
35.10	40.8	0.48	1.19	55.9	7	117.8	3.24	0.90	2.34	1.05	13.0	13.7	UnDef	0.12
35.60	15.9	0.41	2.61	117.9	5	114.6	3.27	0.92	2.35	1.04	7.6	7.9	1.01	0.13
36.09	24.6	0.38	1.53	142.5	6	114.6	3.30	0.93	2.37	1.04	9.4	9.8	1.71	0.20
36.58	29.5	0.65	2.21	73.6	6	114.6	3.32	0.94	2.38	1.03	11.3	11.6	2.09	0.39
37.07	19.1	0.40	2.11	94.6	6	114.6	3.35	0.96	2.40	1.02	7.3	7.5	1.26	0.16
37.57	24.0	0.27	1.13	187.8	6	114.6	3.38	0.97	2.41	1.02	9.2	9.4	1.65	0.13
38.06	93.5	0.53	0.57	97.5	8	120.9	3.41	0.98	2.43	1.01	22.4	22.6	UnDef	0.18
38.55	117.4	0.57	0.49	41.6	9	124.1	3.44	1.00	2.44	1.00	22.5	22.5	UnDef	0.23
39.04	91.2	0.41	0.45	43.2	8	120.9	3.47	1.01	2.46	0.99	21.8	21.7	UnDef	0.15
39.53	61.8	0.30	0.49	53.0	8	120.9	3.50	1.03	2.47	0.99	14.8	14.6	UnDef	0.12
40.03	36.8	0.50	1.35	40.5	7	117.8	3.53	1.04	2.49	0.98	11.7	11.5	UnDef	0.14
40.52	33.4	0.42	1.25	103.4	7	117.8	3.56	1.05	2.50	0.97	10.6	10.4	UnDef	0.13
41.01	23.6	0.55	2.34	92.9	6	114.6	3.59	1.07	2.52	0.97	9.0	8.7	1.60	0.21
41.50	20.3	0.27	1.33	184.2	6	114.6	3.61	1.08	2.54	0.96	7.8	7.5	1.33	0.16
41.99	19.9	0.27	1.34	261.2	6	114.6	3.64	1.09	2.55	0.96	7.6	7.3	1.30	0.15
42.49	25.4	0.31	1.24	295.9	6	114.6	3.67	1.11	2.57	0.95	9.7	9.3	1.74	0.20
42.98	74.9	0.81	1.09	85.2	8	120.9	3.70	1.12	2.58	0.95	17.9	17.0	UnDef	0.17
43.47	68.4	1.53	2.24	109.5	7	117.8	3.73	1.13	2.60	0.94	21.8	20.5	UnDef	0.28
43.96	308.4	1.91	0.62	93.4	9	124.1	3.76	1.15	2.61	0.93	59.1	55.2	UnDef	0.00

Gregg In Situ, Inc.
Interpretation Output - Release 1.00.19e
Run No: 03-1030-1241-3422
Job No: 03-244sh
Client: URS Corporation
Project: CPT Site Investigation
Site: SALTON SEA
Location: CPT-29
Engineer: L. HANDFELT
CPT Date: 03/21/10
CPT Time: 14:48
CPT File: 244C29.COR
Northing (m): 0.000
Easting (m): 0.000
Elevation (m): 0.000

Water Table (m): -12.10 (ft): -39.7
Su Nkt used: 12.50
Averaging Increment (m): 0.15
Phi Method : Robertson and Campanella, 1983
Dr Method : Jamiolkowski - All Sands
State Parameter M: 1.20
Used Unit Weights Assigned to Soil Zones
Values of 1.0E9 or UnDef are printed for parameters that are not valid for the material type (SBT)

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
0.25	1.0E-15	0.16	159.8	10.00	11	4.2	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
0.74	1.0E-15	0.12	60.0	10.00	11	4.5	UnDef	UnDef	0.0	UnDef	UnDef	10.0	UnDef	UnDef	UnDef
1.23	1.0E-15	0.15	44.6	10.00	1	5.1	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
1.72	1.0E-15	0.15	37.4	10.00	1	5.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.21	1.0E-15	0.28	28.8	10.00	1	5.6	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
2.71	1.0E-15	0.32	25.5	10.00	1	5.9	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.20	5.0E-08	0.35	28.5	8.99	1	7.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
3.65	5.0E-05	0.04	132.5	1.69	9	25.5	6.2	31.8	12.3	44	43.4	10.0	-0.27	1.4	11.6
4.10	5.0E-05	-0.05	119.1	1.66	9	25.9	7.1	33.1	13.1	44	42.2	10.0	-0.26	1.6	12.0
4.59	5.0E-08	0.34	16.7	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
5.09	1.0E-15	0.87	12.0	10.00	1	5.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
5.58	1.0E-15	0.88	11.2	10.00	1	5.9	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
6.07	1.0E-15	0.86	10.3	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
6.60	1.0E-15	0.92	9.3	10.00	1	6.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.14	1.0E-15	1.07	7.9	10.00	1	5.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
7.63	5.0E-06	0.22	37.1	2.87	6	16.6	44.4	61.0	32.3	UnDef	UnDef	6.0	UnDef	6.9	15.2
8.12	5.0E-04	-0.03	132.1	0.75	9	54.3	2.8	57.1	6.9	44	53.5	1.0	-0.19	0.6	18.7
8.61	5.0E-08	-0.05	11.5	8.13	1	8.0	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
9.10	1.0E-15	1.13	5.4	10.00	1	5.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
9.60	5.0E-08	0.99	6.2	10.00	1	6.3	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
10.09	5.0E-08	0.88	6.8	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
10.58	5.0E-08	0.93	6.3	10.00	1	6.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
11.07	5.0E-08	0.99	5.8	10.00	1	6.5	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
11.56	5.0E-08	0.46	12.0	5.84	1	9.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
12.06	5.0E-08	0.21	14.6	4.60	1	11.2	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
12.55	5.0E-08	0.26	15.7	4.10	1	12.0	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
13.04	5.0E-07	0.27	17.4	3.56	4	13.1	52.3	65.4	48.8	UnDef	UnDef	6.0	UnDef	8.5	17.1
13.53	5.0E-07	0.24	16.0	3.74	4	12.4	49.7	62.1	51.4	UnDef	UnDef	6.0	UnDef	8.1	16.2
14.03	5.0E-07	0.25	18.1	3.17	6	13.8	55.4	69.2	46.1	UnDef	UnDef	6.0	UnDef	9.0	18.1
14.52	5.0E-06	0.12	18.3	3.02	6	14.1	56.6	70.7	45.2	UnDef	UnDef	6.0	UnDef	6.9	13.8
15.01	5.0E-08	0.40	10.6	5.04	1	9.7	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.50	5.0E-08	0.46	10.3	5.05	1	9.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
15.99	5.0E-08	0.54	9.4	5.33	1	9.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
16.49	5.0E-07	0.39	11.7	4.17	1	10.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
16.98	5.0E-07	0.23	13.4	3.53	4	11.8	47.3	59.2	54.2	UnDef	UnDef	6.0	UnDef	7.7	15.4
17.47	5.0E-06	0.11	16.5	3.11	6	14.0	55.9	69.8	47.7	UnDef	UnDef	6.0	UnDef	6.8	13.7
17.96	5.0E-08	0.02	15.5	4.55	1	13.4	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
18.45	5.0E-06	0.02	25.5	2.13	6	20.3	73.1	93.4	34.3	UnDef	UnDef	6.0	UnDef	9.5	19.4
18.95	5.0E-08	0.27	8.7	4.89	1	9.1	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.44	5.0E-08	0.62	7.4	5.58	1	8.3	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
19.93	5.0E-05	0.22	26.0	1.56	7	21.3	44.7	65.9	30.4	36	30.0	6.0	-0.07	6.1	14.4
20.42	5.0E-03	0.00	94.0	0.71	9	69.1	8.3	77.4	9.0	42	56.7	1.0	-0.15	1.2	18.1

Depth (ft)	k (cm/s)	Bq	Qtn	Rfn	SBTn	Qc1N	DeltaQc1N	Qc1Ncs	Fc (%)	Phi (Deg)	Dr (%)	OCR	State Param	Del(n1)60	(N1)60cs
20.92	5.0E-06	0.05	22.0	3.12	6	18.9	75.6	94.5	42.1	UnDef	UnDef	6.0	UnDef	9.3	18.5
21.41	5.0E-07	0.56	8.8	4.24	1	9.6	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
21.90	5.0E-08	0.79	6.0	6.02	1	7.7	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
22.39	5.0E-08	0.93	5.6	6.32	1	7.4	UnDef	UnDef	100.0	UnDef	UnDef	1.5	UnDef	UnDef	UnDef
22.88	5.0E-07	0.53	10.2	3.44	1	10.8	UnDef	UnDef	100.0	UnDef	UnDef	3.0	UnDef	UnDef	UnDef
23.38	5.0E-03	0.00	102.9	0.48	9	80.5	0.0	80.5	5.0	42	61.1	1.0	-0.13	0.0	19.7
23.87	5.0E-04	-0.02	92.0	1.02	9	73.2	15.2	88.4	11.4	42	58.3	1.0	-0.18	2.9	26.7
24.36	5.0E-03	-0.01	126.1	0.32	9	100.1	0.0	100.1	3.5	44	67.3	1.0	-0.11	0.0	24.5
24.85	5.0E-03	0.00	86.9	0.41	9	70.8	0.0	70.8	5.0	42	57.4	1.0	-0.10	0.0	17.3
25.34	5.0E-04	0.00	57.9	0.73	9	48.8	14.5	63.3	13.6	40	46.7	1.0	-0.11	2.7	18.6
25.84	5.0E-05	-0.01	27.1	1.46	7	24.7	44.7	69.4	29.1	36	30.0	6.0	-0.10	6.5	16.2
26.33	5.0E-05	0.03	19.0	2.04	6	18.5	74.1	92.6	39.0	34	30.0	6.0	-0.08	7.2	14.5
26.82	5.0E-06	0.07	18.5	2.43	6	18.3	73.0	91.3	41.8	UnDef	UnDef	6.0	UnDef	8.9	17.9
27.31	5.0E-05	0.02	40.6	1.59	7	36.4	37.9	74.4	24.1	38	38.3	6.0	-0.14	6.7	20.9
27.80	5.0E-04	0.00	70.0	1.23	7	61.0	23.6	84.6	15.5	40	53.1	1.0	-0.17	4.2	24.1
28.30	5.0E-03	-0.02	66.5	0.68	9	58.7	12.9	71.6	11.7	40	52.0	1.0	-0.12	1.8	16.2
28.79	5.0E-06	0.02	15.2	2.08	6	16.1	64.3	80.4	43.5	UnDef	UnDef	6.0	UnDef	7.9	15.7
29.28	5.0E-06	0.24	10.4	2.56	4	12.1	48.5	60.6	54.7	UnDef	UnDef	3.0	UnDef	5.9	11.9
29.77	5.0E-06	0.37	11.6	2.26	6	13.2	53.0	66.2	50.3	UnDef	UnDef	3.0	UnDef	6.5	13.0
30.27	5.0E-06	0.29	15.4	2.25	6	16.6	66.2	82.8	44.4	UnDef	UnDef	6.0	UnDef	8.1	16.2
30.76	5.0E-06	0.12	17.5	3.84	4	18.5	73.9	92.4	49.9	UnDef	UnDef	6.0	UnDef	9.0	18.1
31.21	5.0E-08	0.02	14.9	4.76	1	16.3	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
31.66	5.0E-07	0.00	15.2	4.02	1	16.7	UnDef	UnDef	100.0	UnDef	UnDef	6.0	UnDef	UnDef	UnDef
32.15	5.0E-06	0.04	14.6	3.52	4	16.3	65.0	81.3	52.3	UnDef	UnDef	6.0	UnDef	8.0	15.9
32.64	5.0E-06	0.04	13.4	3.40	4	15.4	61.4	76.8	53.5	UnDef	UnDef	6.0	UnDef	7.5	15.0
33.14	5.0E-05	0.25	12.3	2.01	6	14.4	57.6	72.0	47.5	32	30.0	3.0	-0.01	5.6	11.3
33.63	5.0E-05	0.35	13.3	2.07	6	15.4	61.6	77.1	46.2	32	30.0	6.0	0.00	6.0	12.1
34.12	5.0E-05	0.31	14.8	2.04	6	16.9	67.5	84.4	43.8	32	30.0	6.0	-0.02	6.6	13.2
34.61	5.0E-03	0.03	58.3	0.61	9	57.2	14.1	71.2	12.4	40	51.2	1.0	-0.09	2.0	16.0
35.10	5.0E-04	-0.02	41.5	1.29	7	42.0	34.2	76.1	21.8	38	42.4	1.0	-0.13	5.3	19.0
35.60	5.0E-06	0.11	13.8	3.28	4	16.2	64.9	81.2	52.4	UnDef	UnDef	6.0	UnDef	7.9	15.9
36.09	5.0E-05	0.10	22.9	1.77	6	25.0	84.4	109.4	33.9	34	30.0	6.0	-0.08	9.1	18.9
36.58	5.0E-05	0.00	27.8	2.50	6	29.7	118.9	148.7	35.0	36	32.5	6.0	-0.15	11.6	23.3
37.07	5.0E-05	0.04	16.4	2.56	6	19.1	76.4	95.4	44.9	32	30.0	6.0	-0.09	7.5	14.9
37.57	5.0E-05	0.17	21.3	1.31	7	23.9	59.9	83.8	31.8	34	30.0	6.0	-0.04	7.6	16.9
38.06	5.0E-03	0.01	91.7	0.59	9	92.3	8.6	100.9	8.2	42	65.0	1.0	-0.13	1.3	23.9
38.55	5.0E-02	-0.01	114.4	0.50	9	115.1	2.7	117.8	5.9	42	71.3	1.0	-0.14	0.3	22.9
39.04	5.0E-03	-0.01	86.8	0.47	9	88.8	0.0	88.8	5.0	42	63.9	1.0	-0.11	0.0	21.7
39.53	5.0E-03	-0.01	56.8	0.52	9	59.7	13.2	72.8	11.8	40	52.5	1.0	-0.08	1.9	16.5
40.03	5.0E-04	-0.04	32.0	1.49	7	35.3	49.2	84.5	26.8	36	37.4	1.0	-0.12	6.6	18.1
40.52	5.0E-04	0.02	28.3	1.40	7	31.8	50.4	82.2	28.0	36	34.4	1.0	-0.09	6.5	16.8
41.01	5.0E-05	0.02	18.7	2.76	6	22.3	89.4	111.7	43.4	34	30.0	6.0	-0.11	8.7	17.5
41.50	5.0E-05	0.19	15.4	1.62	6	19.1	76.4	95.5	40.1	32	30.0	6.0	-0.02	7.5	15.0
41.99	5.0E-05	0.35	14.8	1.64	6	18.6	74.4	93.0	41.0	32	30.0	6.0	0.00	7.3	14.6
42.49	5.0E-05	0.31	19.7	1.44	6	23.7	84.1	107.7	34.2	34	30.0	6.0	-0.02	8.8	18.1
42.98	5.0E-03	0.00	63.6	1.14	7	69.3	28.1	97.4	15.8	40	56.8	1.0	-0.16	3.7	20.7
43.47	5.0E-04	0.01	57.1	2.37	7	62.9	65.2	128.1	24.1	40	54.0	1.0	-0.22	9.6	30.1
43.96	5.0E-02	0.00	265.6	0.63	9	281.8	0.0	281.8	2.3	46	95.0	1.0	-0.23	0.0	55.2

Samples obtained from the borings were transported to a URS geotechnical laboratory for further examination and testing. The primary purposes of the laboratory testing were to evaluate physical and engineering characteristics, reconcile field descriptions with more accurate laboratory assessments, and confirm CPT soil behavior correlations. Photographs of samples obtained from the various strata identified in the investigation are presented in Figures C-1 through C-6.

The laboratory tests were performed on representative soil samples in general accordance with test methods of the American Society for Testing and Materials (ASTM) and included the following:

- Water content and dry density (ASTM D2216); the test results are presented on the boring logs at the corresponding sample depth and summarized in Figures 16 through 19, following the report text. Water content data is also plotted versus depth for each boring and presented on Figures C-7 through C-17.
- Particle size distribution (ASTM D422); the test results are plotted as gradation curves on Figures C-18 through C-56 and the percentage of fines passing a Standard No. 200 sieve (denoted by SA or WA) are presented on the boring logs at the corresponding sample depth.
- Atterberg Limits (ASTM D4318-95a); the test results are presented on the boring logs. A Plasticity Chart is present as Figure 20, following the report text. The limits are also shown in Figures C-7 through C-17.
- A suite of tests were performed to evaluate the corrosivity of the soils. The results of these tests are presented in Table C-1.
- Pinhole Dispersion Analyses (ASTM D-4647); the test results are summarized in Table C-2.
- Specific Gravity Tests (ASTM D-854); the test results are summarized in Table 3.
- One-dimensional consolidation tests (ASTM D2435-96); the test results are presented on Figures C-57 through C-72.
- Unconsolidated Undrained Compression (ASTM D-2850); the test results are presented on the boring logs at the corresponding sample depth and as plots of peak deviator stress versus axial strain as presented on Figures C-73 through C-105. Plots of undrained shear strength versus effective stress are presented as Figure 22, following the report text.
- Consolidated Undrained Triaxial Compression (ASTM D-4767)); the test results are presented on Figures C-106 through C-126 as: a) plots of Mohr Circles at Peak Deviator Stress, b) plots of p'–q, and c) plots of Deviator Stress, Changes in Pore Pressure and Obliquity versus Axial Stress. Sketches of the failure of the tested specimens are presented in Figures C-127 through C-133. A summary of data obtained from the ICU tests are presented in Table C-3. The pore pressures during the tests were measured at the bottom of the specimen.

Table C-1
Summary of Corrosivity Test Data
Salton Sea Restoration Project

Boring			2	4	5	6	7
Sample No.			**2**	**4**	**2**	**2**	**3**
Depth (feet)			**6.5**	**16.0**	**7.0**	**6.3**	**10.0**
Resistivity:		**units**					
as-received		ohm-cm	130	41	30	43	109
saturated		ohm-cm	100	35	30	43	105
pH			8.3	7.7	7.7	8.0	7.6
Electrical Conductivity		mS/cm	8.30	24.00	23.30	24.20	4.60
Chemical Analyses:							
Cations:							
calcium	Ca^{2+}	mg/kg	3,327	1,751	2,926	1,972	1,299
magnesium	Mg^{2+}	mg/kg	180	199	540	243	182
sodium	Na^{1+}	mg/kg	7,286	28,233	39,702	28,541	4,212
Anions:							
carbonate	CO_3^{2-}	mg/kg	ND	ND	12	ND	ND
bicarbonate	HCO_3^{1-}	mg/kg	195	488	143	427	116
chloride	Cl^{1-}	mg/kg	7,198	39,438	48,990	36,429	5,163
sulfate	SO_4^{2-}	mg/kg	13,999	10,151	25,582	15,621	5,545

Notes:

a. Electrical conductivity in millisiemens/cm and chemical analysis were made on 1:5 soil-to-water extract.

b. mg/kg = milligrams per kilogram (parts per million) of dry soil.

c. ND = not detected.

Table C-2
Summary of Pinhole Dispersion Test Data
Salton Sea Restoration Project

Boring	Sample No.	Depth (feet)	Soil Deposits	USCS	Dispersion Classification [a]	Dispersion Characteristic [a]
B4	5	21.2	Soft Lacustrine Deposit	SC/CH	ND3	Moderate to Slight
B5	1	1.5	Seafloor Deposit	ML/MH	ND3	Moderate to Slight
B6	1	2.5	Seafloor Deposit	ML/MH	ND4	Moderate to Slight
B7	2	4.2	Soft Lacustrine Deposit	CL/CH	ND3	Moderate to Slight
B11	7	25.4	Soft Lacustrine Deposit	CH	ND2	Nondispersive
B14	2	6.3	Soft Lacustrine Deposit	ML/CL	ND3	Moderate to Slight
B17	2	5.5	Seafloor Deposit	ML/CH	ND4	Moderate to Slight

Notes:
a. Evaluated by criteria for Method A,
ASTM D4647.

Table C-3
Summary of Consolidated Undrained Triaxial Test Data
Salton Sea Restoration Project

Exploration Number	Sample Number	Sample Depth (ft)	Unified Soil Classification	Strata	Water Content (%)		Total Density (pcf)		Triaxial Confining Pressure (psf)	At End of Consolidation			Strain Rate during Shear (%/hr)	At Peak Deviator Stress			
					Initially	After Consol-idation	Initially	After Consol-idation		Axial Strain (%)	Volumetric Strain (%)	B Factor [b] (%)		Axial Strain (%)	$(\sigma'_1 + \sigma'_3)/2$ (psf)	$(\sigma'_1 - \sigma'_3)/2$ (psf)	A Factor [c]
B-4	4a	15.5	CH	Seafloor Deposit	60	57	100	103	860	1.8	7.1	98.0	0.3	4.1	731	385	0.673
	4b	16.0	CH		58	41	98	113	2,220	6.6	24.1	100.0	0.3	8.6	1,462	842	0.949
	4c	16.5	CH		57	32	99	121	4,490	9.7	31.1	100.0	0.3	8.9	3,009	1,598	0.964
B-4	8a	35.3	CH	Soft Lacustrine Deposit	54	48	101	106	1,680	4.5	12.2	98.0	0.5	5.2	1,270	679	0.805
	8b	35.8	CH		52	41	100	110	4,940	3.8	18.4	100.0	0.5	8.2	3,310	1,352	1.103
	8c	36.4	CH		48	46	99	98	9,850	11.8	13.5	100.0	0.3	8.7	12,537	1,651	-0.314
B-5	3a	10.5	CH	Seafloor Deposit	84	67	98	101	530	4.5	12.2	100.0	0.3	4.9	474	287	0.602
	3b	11.0	CH		76	60	99	104	1,380	6.6	13.4	90.0	0.3	5.3	1,226	549	0.643
	3c	11.5	CH		74	52	98	107	3,010	8.9	20.4	96.1	0.3	2.2	2,576	1,021	0.712
B-5	4a	15.0	CH	Soft Lacustrine Deposit	32	28	117	124	710	2.6	8.0	96.0	0.3	17.3	902	570	0.328
	4b [d]	15.9	CH		35	38	113	118	2,250	1.8	2.5	96.0	0.3	17.9	4,362	2,461	0.070
	4c	16.4	CH		46	39	108	115	4,460	4.2	10.3	96.0	0.2	9.7	3,388	1,674	0.821
B-6	2a	6.5	CH	Seafloor Deposit	74	57	96	103	850	3.7	16.3	100.0	0.3	7.8	758	326	0.640
	2b	7.1	CH		68	48	95	110	1,510	7.8	23.6	96.0	0.3	9.1	916	513	1.066
	2c	7.6	CH		57	42	103	113	3,020	7.0	17.7	95.0	0.3	11.1	2,012	1,120	0.939
B-6	4a	16.0	CH	Soft Lacustrine Deposit	47	NA	105	NA	1,180	2.8	6.3	98.0	0.6	11.1	1,086	611	0.577
	4b	16.5	CH		47	NA	106	NA	2,940	4.8	10.2	98.0	0.6	11.1	2,047	1,313	0.839
	4c	17.0	CH		47	NA	106	NA	5,880	8.9	16.0	94.1	0.6	11.0	3,064	1,495	1.440
B-26	2a	5.3	CH	Seafloor Deposit	86	74	99	100	560	4.0	8.3	96.1	0.2	3.2	460	230	0.721
	3b	10.0	CH		66	48	101	109	1,470	6.7	17.8	94.5	0.2	10.2	888	499	1.082
	3c	10.6	CH		58	41	103	112	2,940	6.6	19.0	96.3	0.3	6.7	1,824	945	1.089

Notes:

a. Expressed as a percentage of dry weight.

b. B Factor is the ratio of the change in pore pressure to the change in isotropic stress ($\Delta u/\Delta\sigma$).

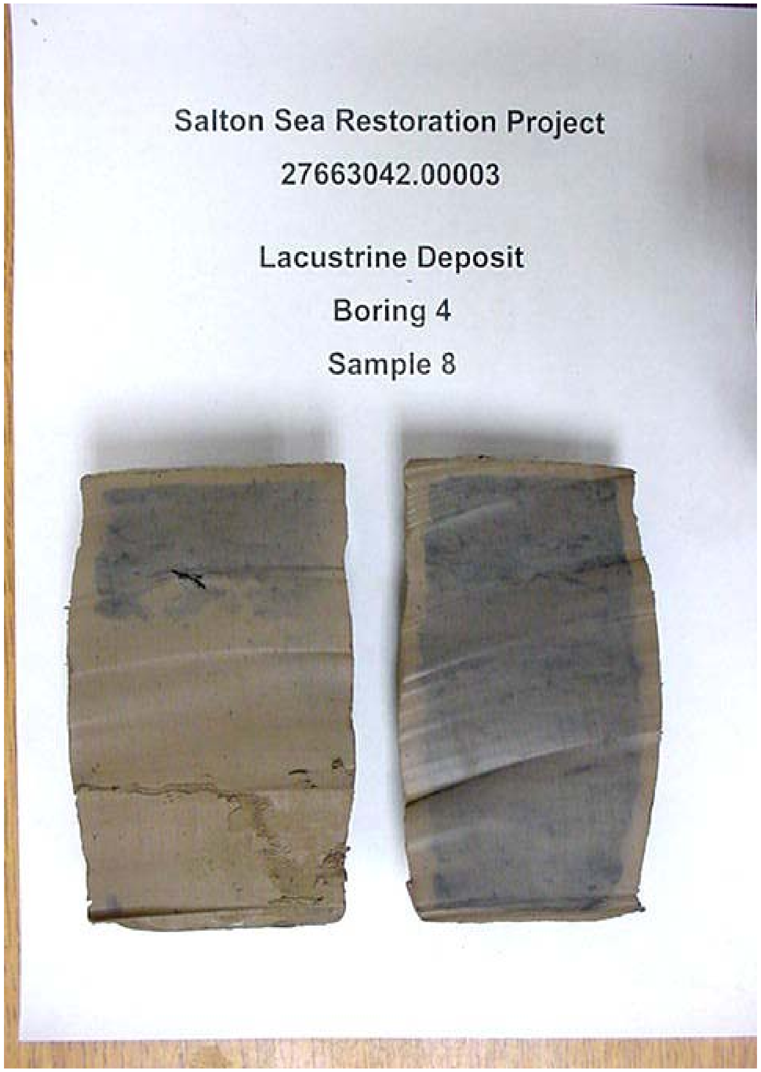
c. A Factor is the ratio of the change in pore pressure to the change in major principal stress ($\Delta u/\Delta\sigma_1$).

d. The upper part of specimen from B-5-4b included a clayey sand and was not considered in the strength envelope.

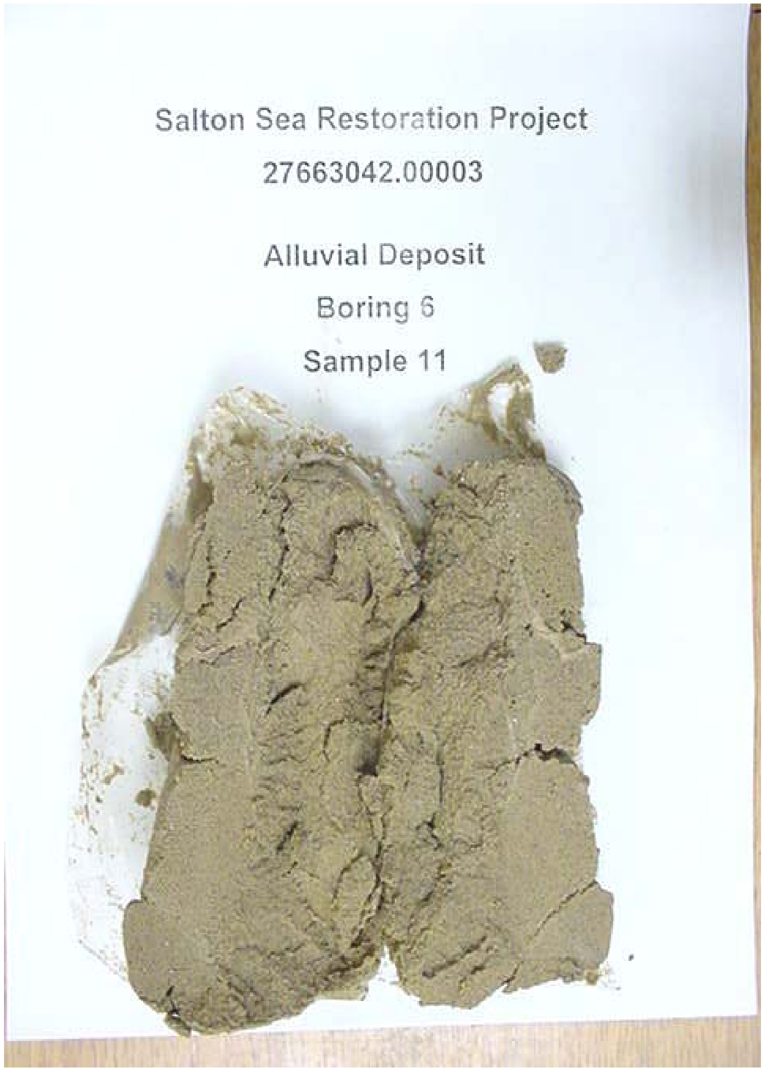
e. $\sigma'1$ and $\sigma'3$ denote major and minor principal stressess, respectively.

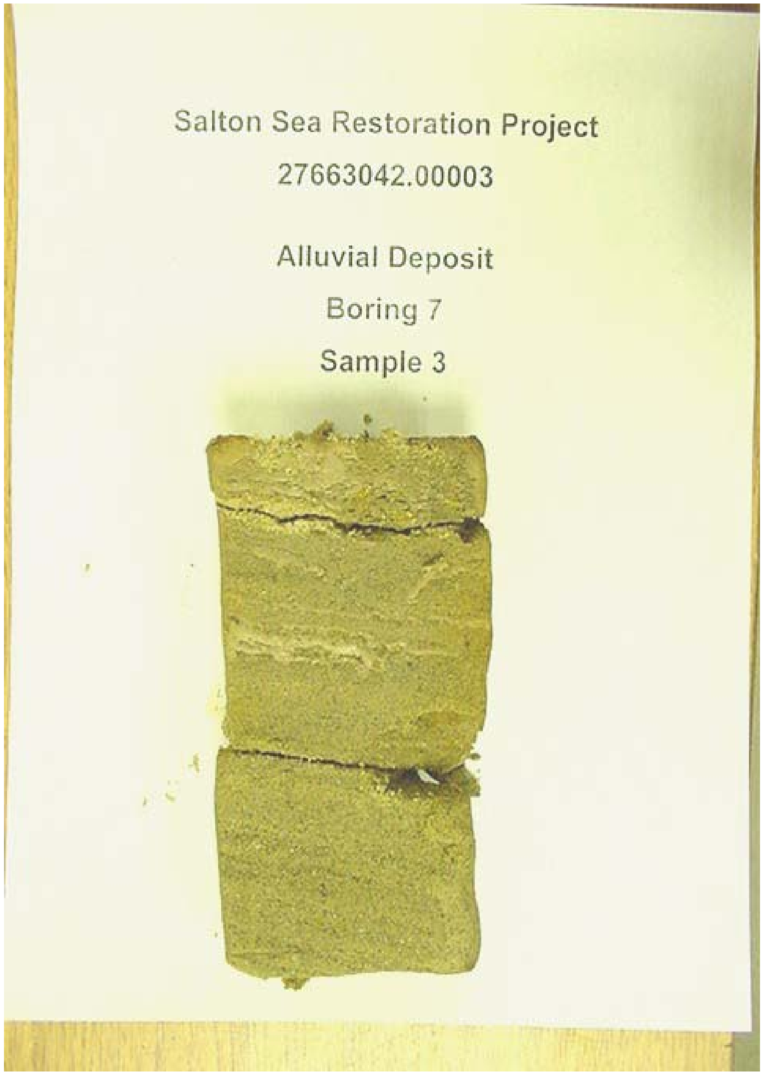
SAMPLE PHOTOGRAPHS SEAFLOOR DEPOSITS SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-1
	PM: LDH	PROJ. NO.: 27663042.00005	

sample pics figs



SAMPLE PHOTOGRAPHS SOFT LACUSTRINE DEPOSITS SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-2
	PM: LDH	PROJ. NO.: 27663042.00005	





SAMPLE PHOTOGRAPHS UPPER ALLUVIAL DEPOSITS SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-3
	PM: LDH	PROJ. NO.: 27663042.00005	

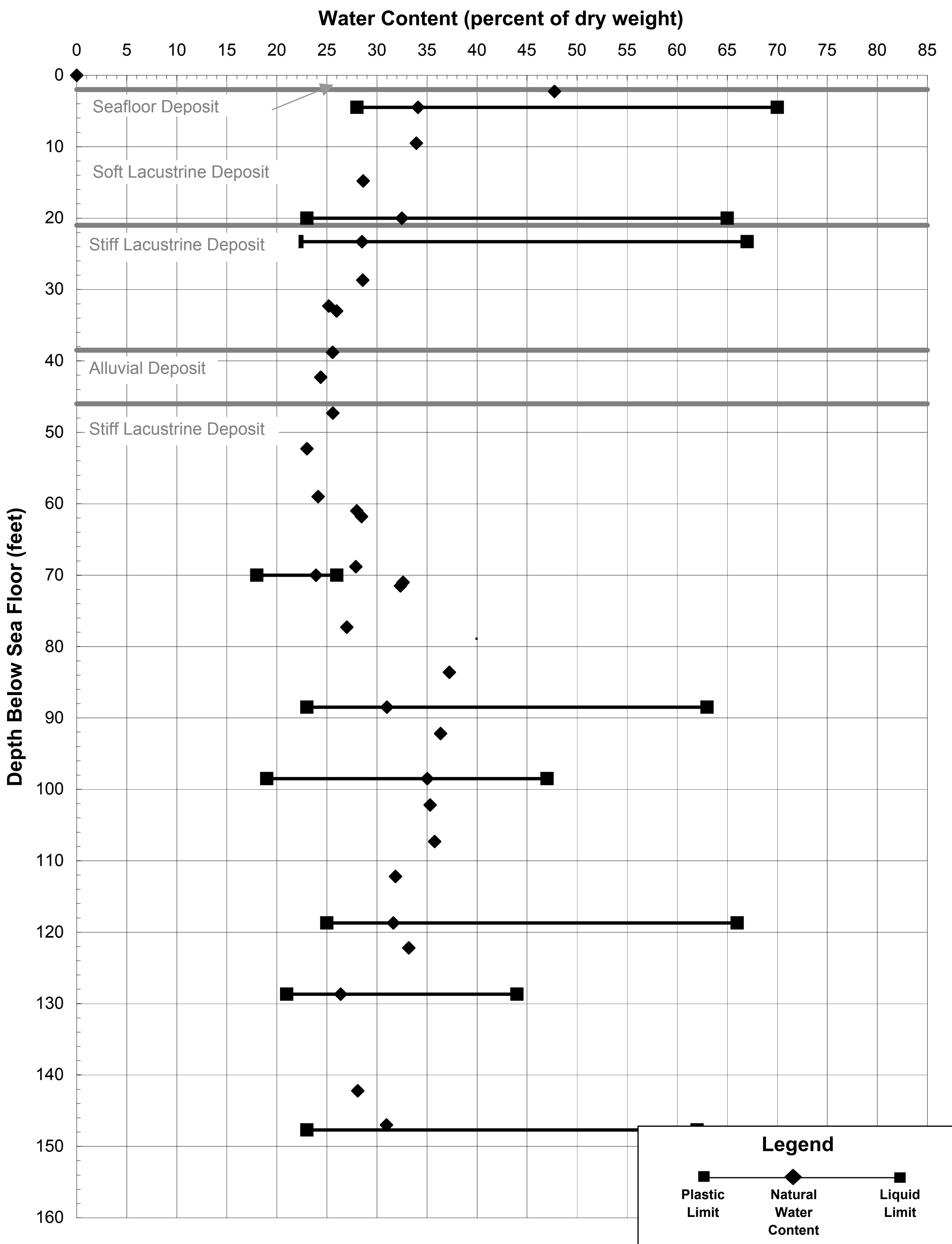
SAMPLE PHOTOGRAPHS
UPPER STIFF LACUSTRINE DEPOSITS
SALTON SEA RESTORATION PROJECT

URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-4
	PM: LDH	PROJ. NO.: 27663042.00005	

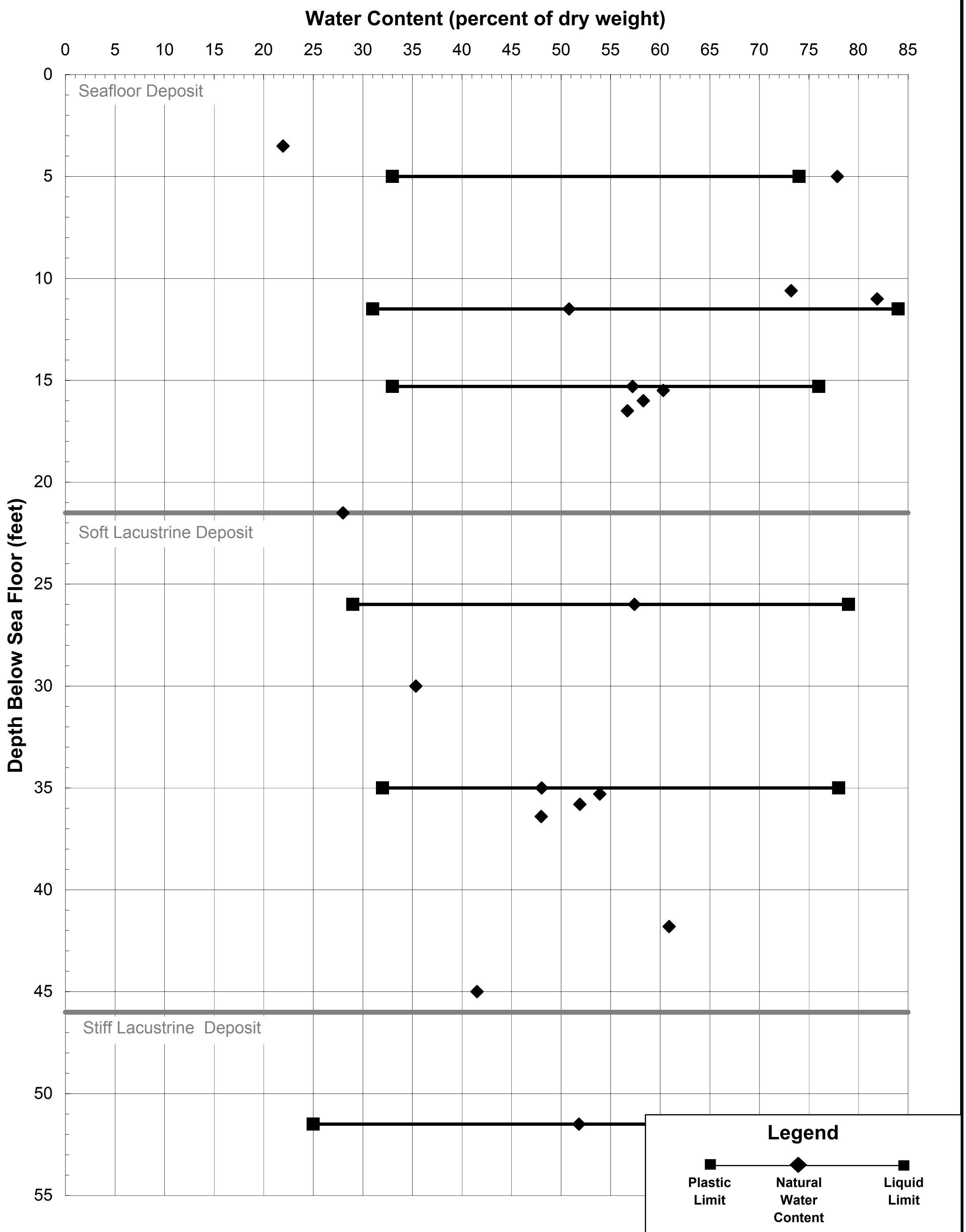
SAMPLE PHOTOGRAPHS LOWER ALLUVIAL DEPOSITS SALTON SEA RESTORATION PROJECT			
URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-5
	PM: LDH	PROJ. NO.: 27663042.00005	

SAMPLE PHOTOGRAPHS
LOWER STIFF LACUSTRINE DEPOSITS
SALTON SEA RESTORATION PROJECT

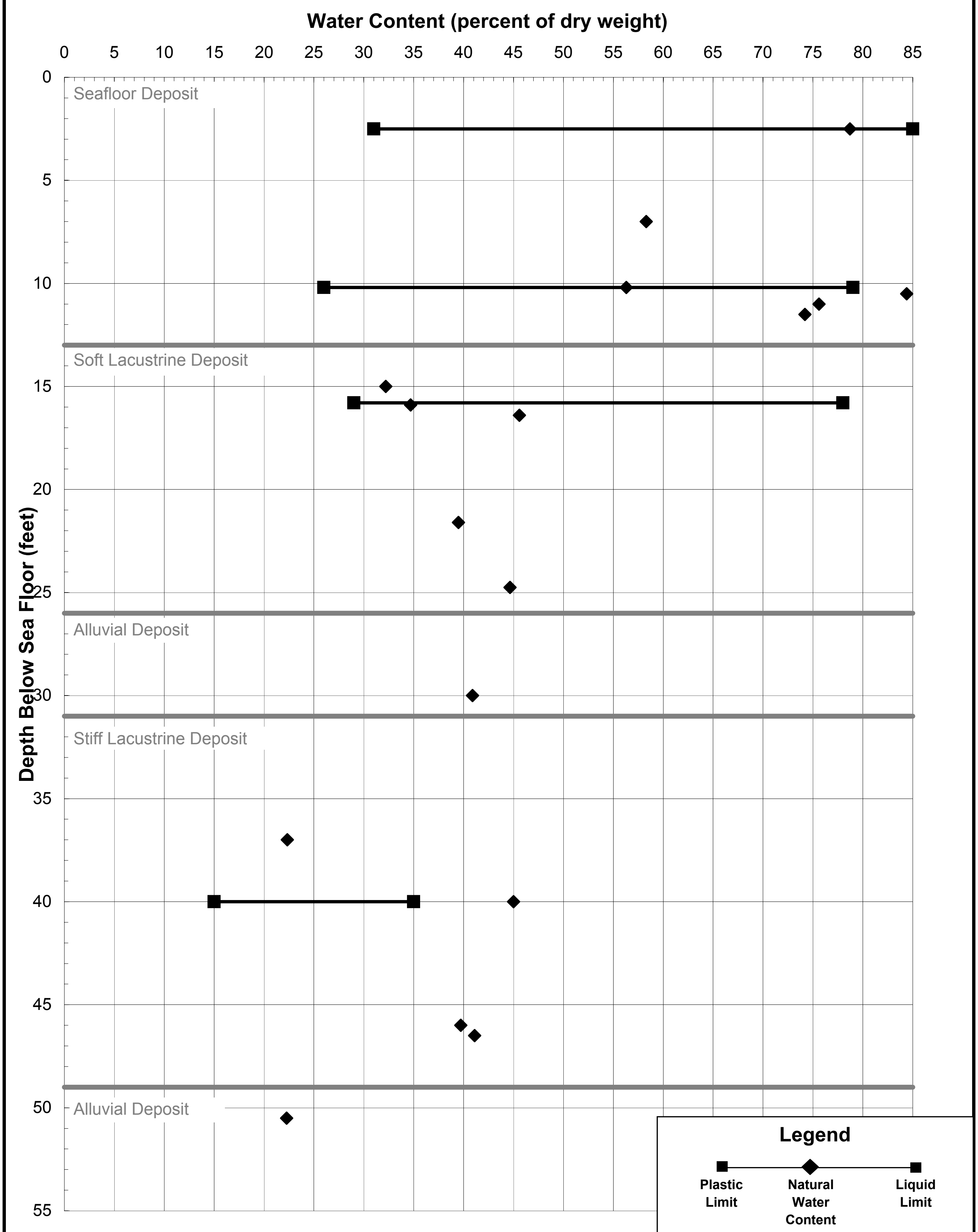
URS	CHECKED BY: AJG	DATE: 01-30-03	FIG. NO. C-6
	PM: LDH	PROJ. NO.: 27663042.00005	



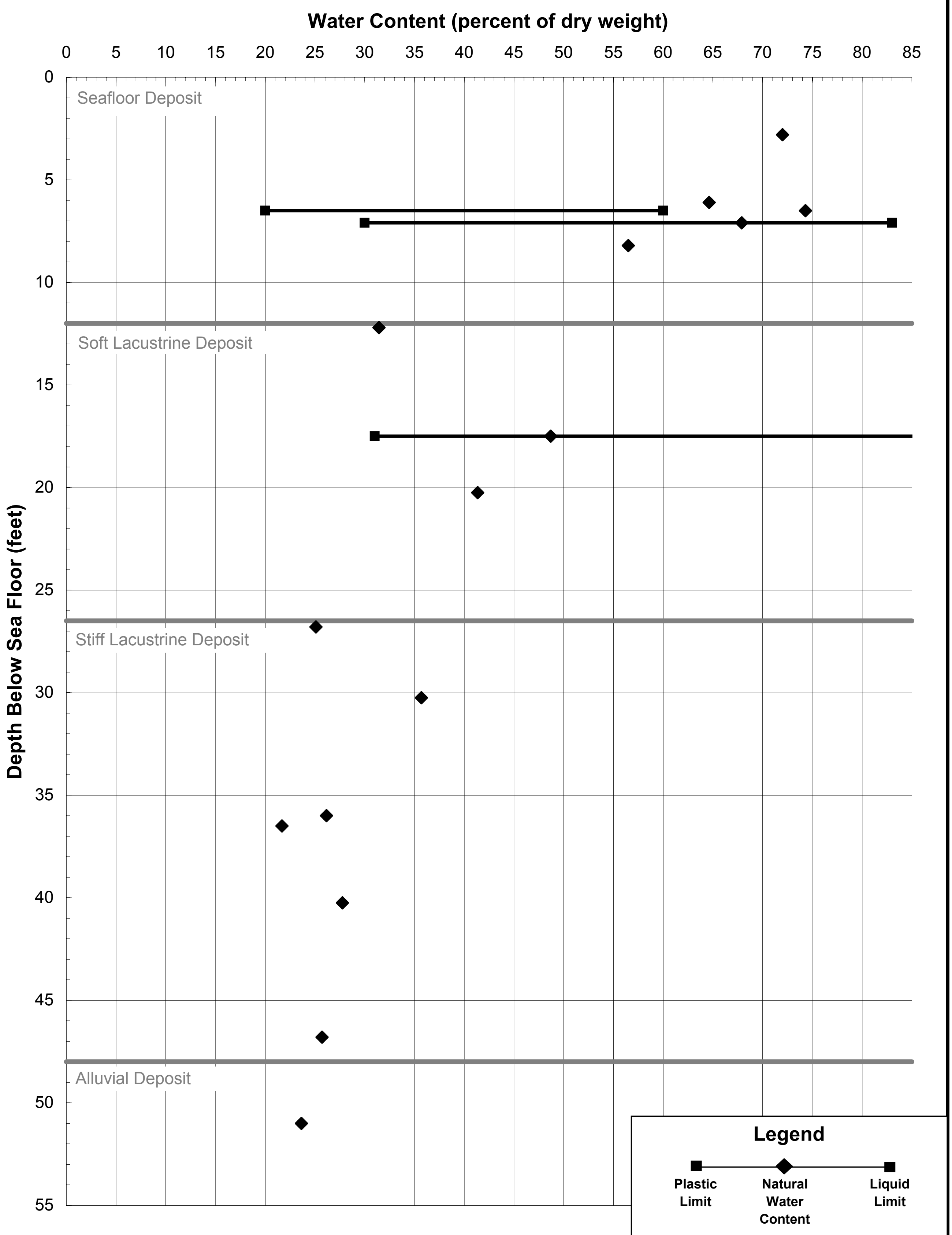
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 2)	URS
Location: Salton Sea		Figure No. C-7
Project Number: 27663042		



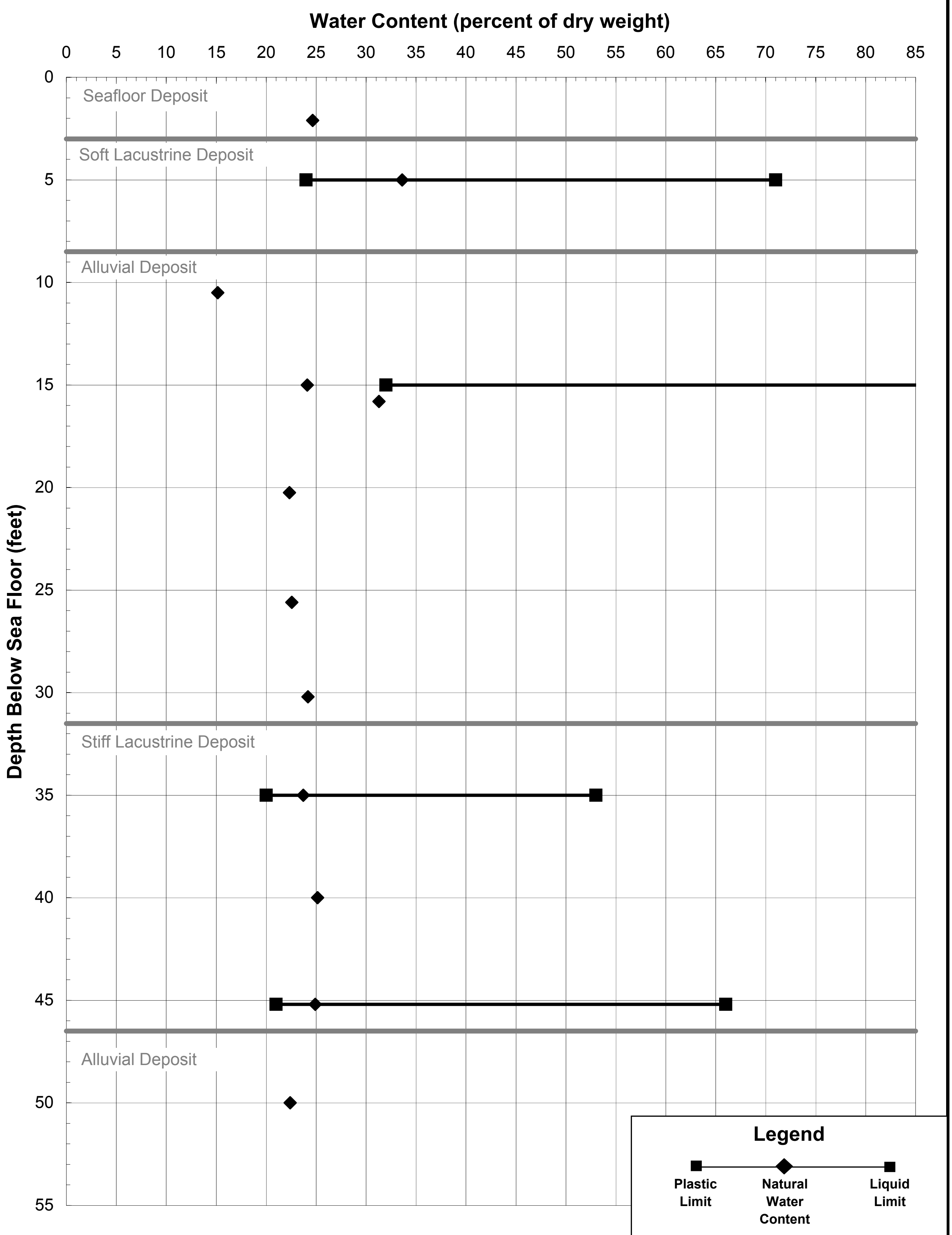
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 4)	URS
Location: Salton Sea		Figure No. C-8
Project Number: 27663042		



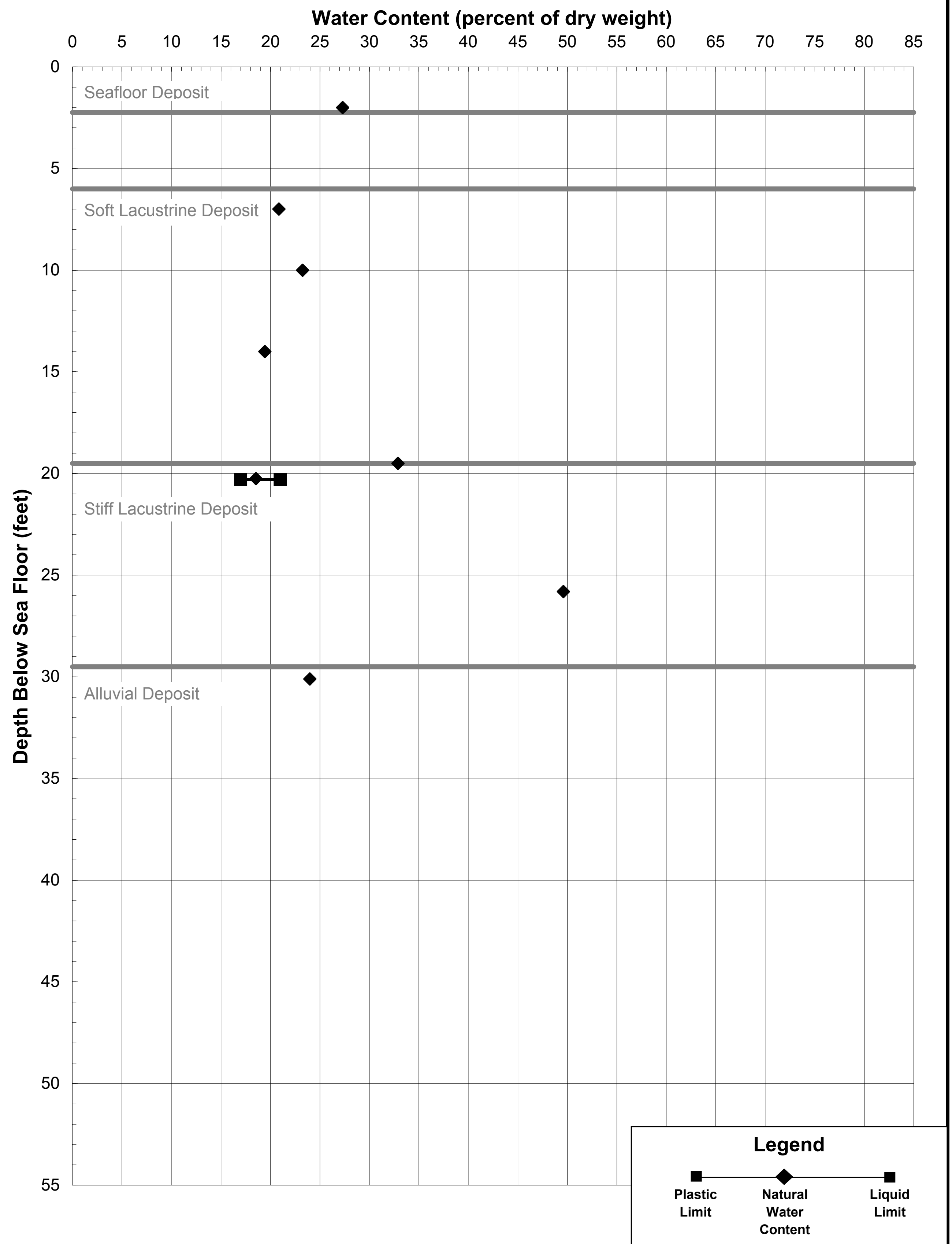
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 5)	URS
Location: Salton Sea		Figure No. C-9
Project Number: 27663042		



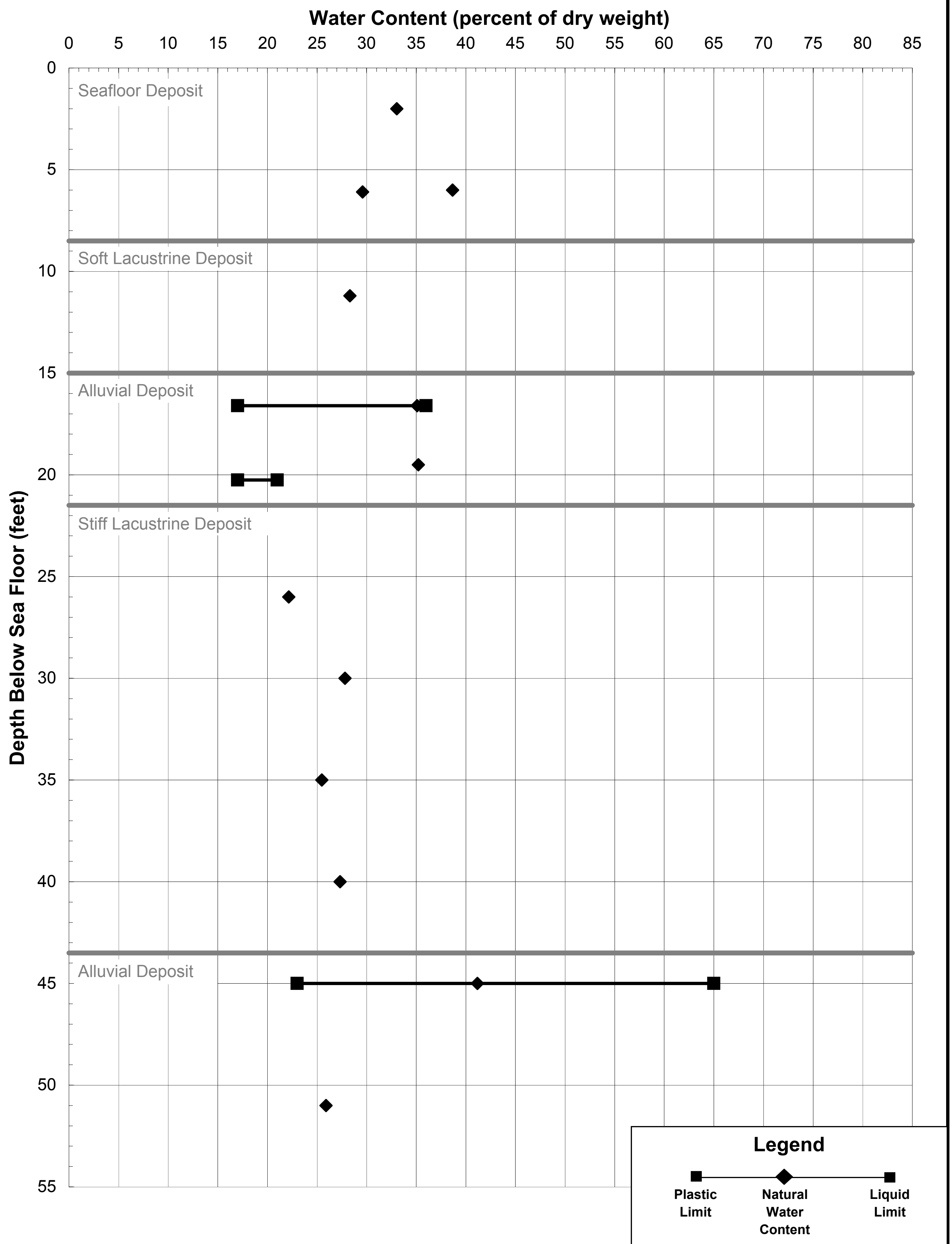
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 6)	URS
Location: Salton Sea		Figure No. C-10
Project Number: 27663042		



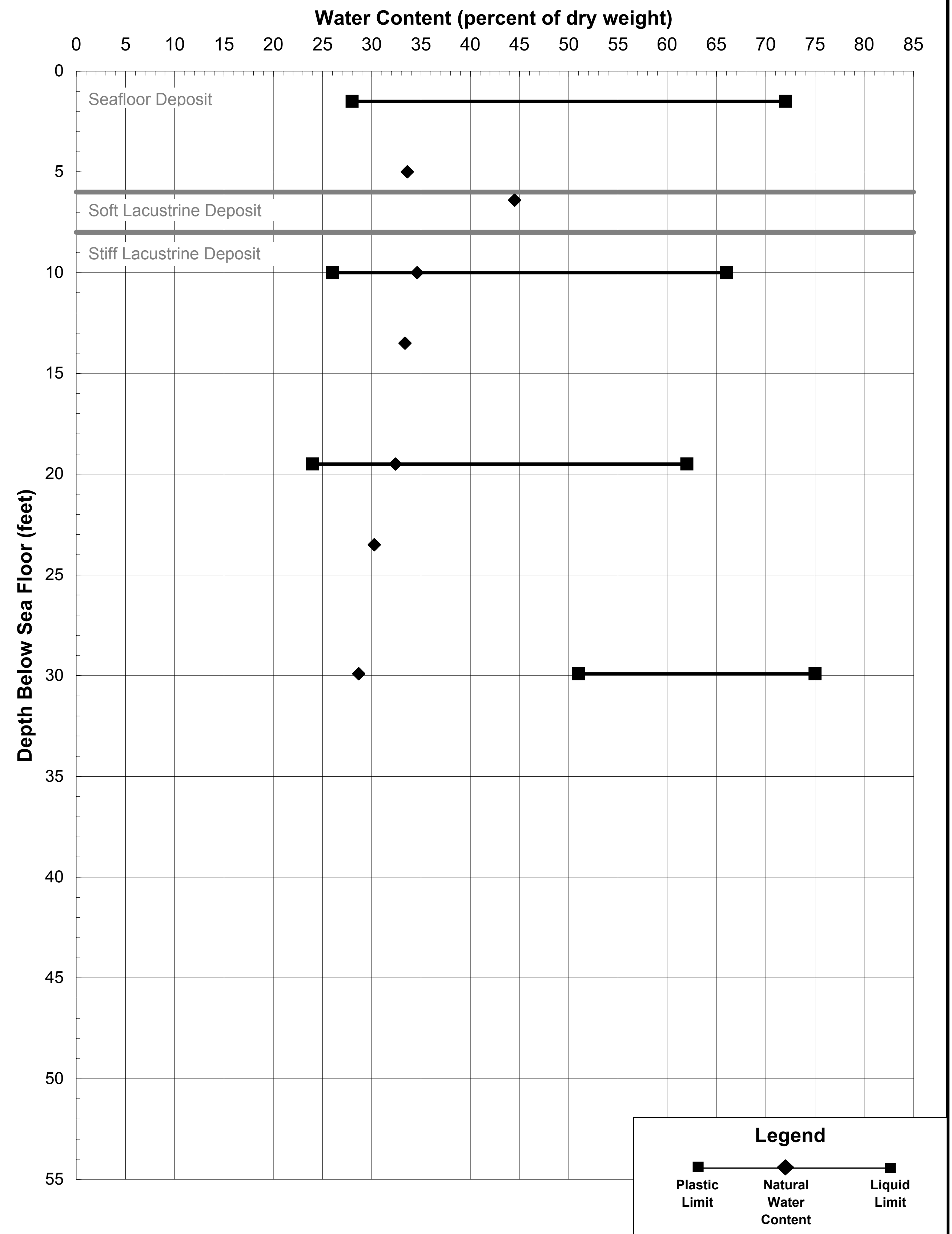
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 7)	URS
Location: Salton Sea		Figure No. C-11
Project Number: 27663042		



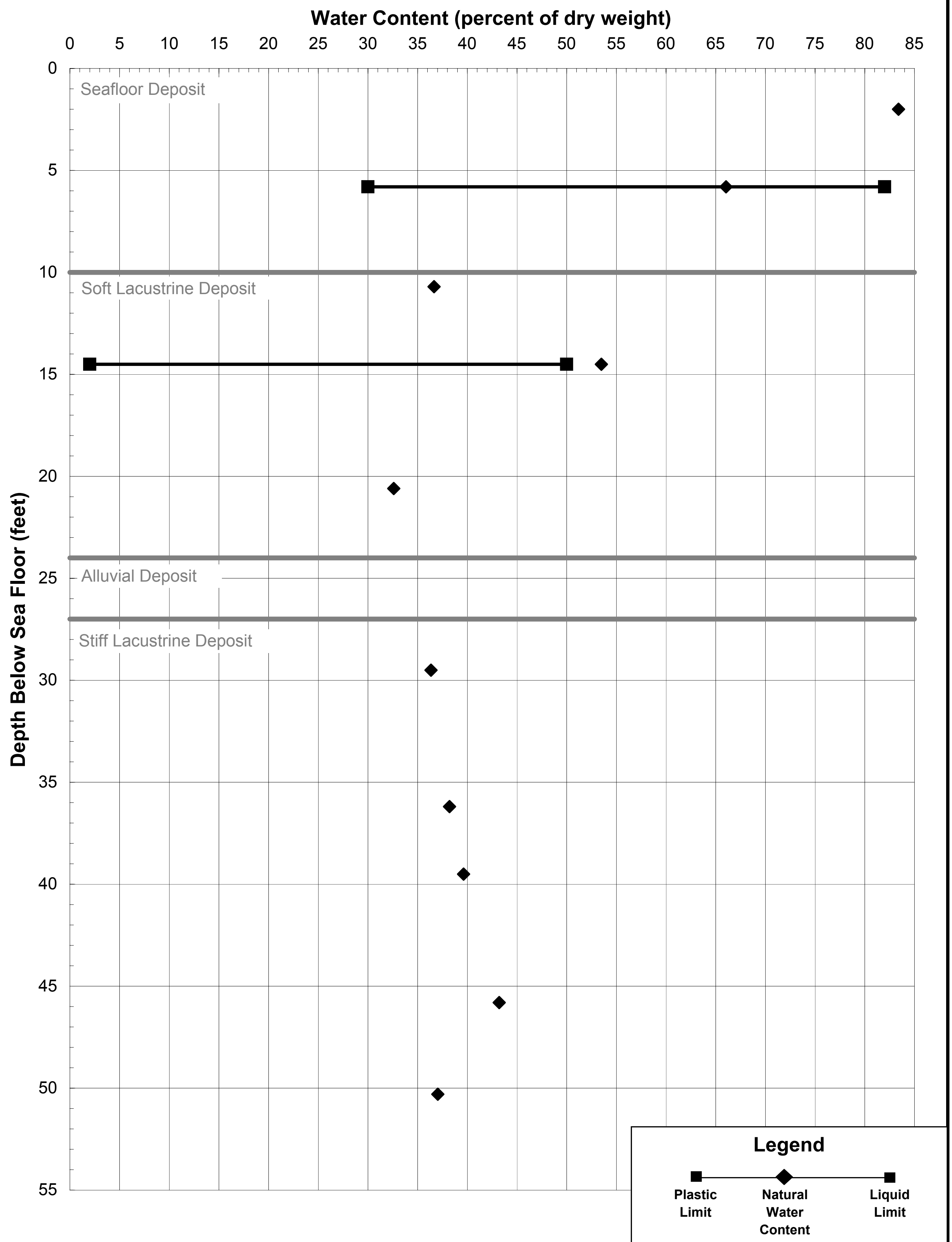
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 11)	URS
Location: Salton Sea		Figure No. C-12
Project Number: 27663042		



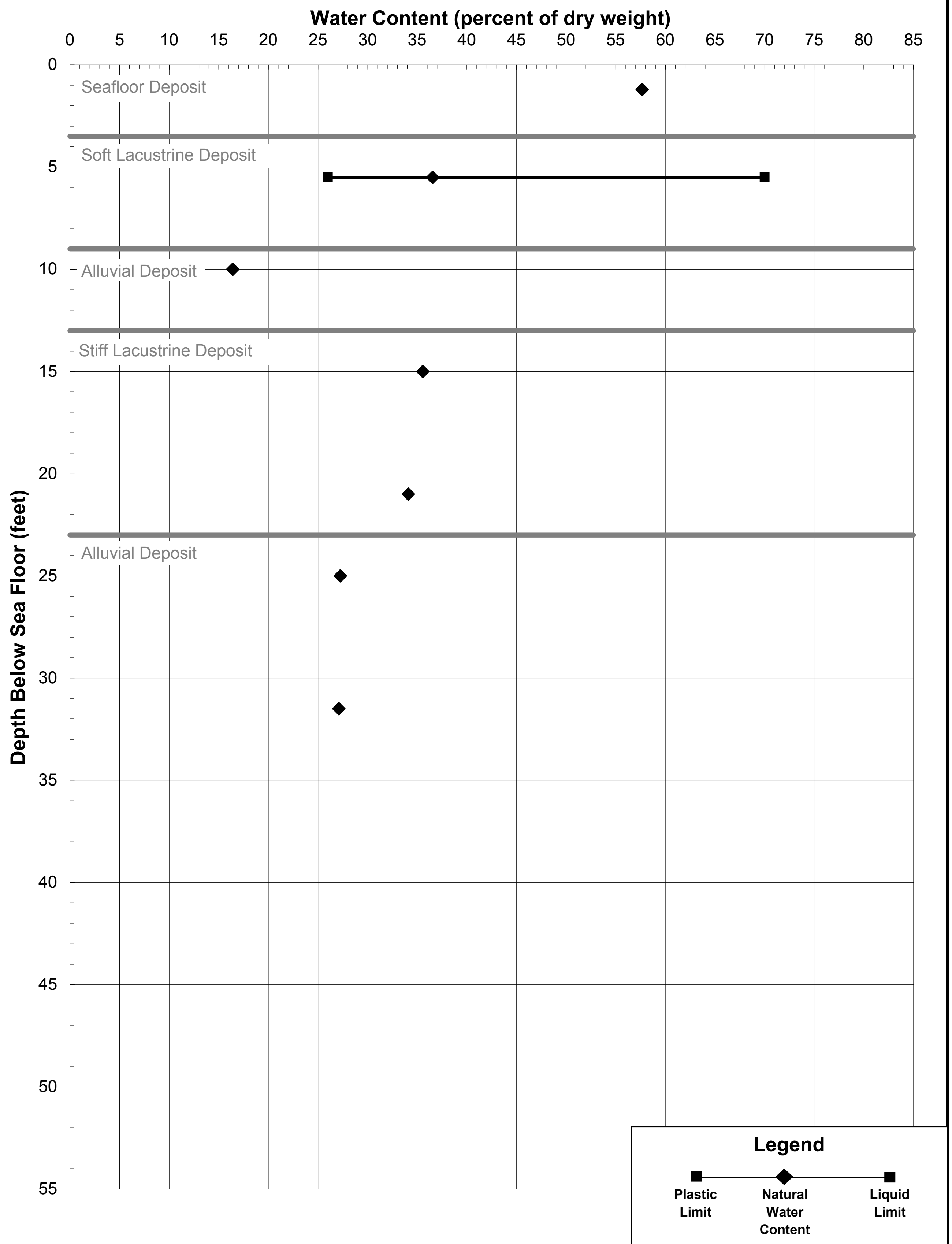
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 14)	URS
Location: Salton Sea		Figure No. C-13
Project Number: 27663042		



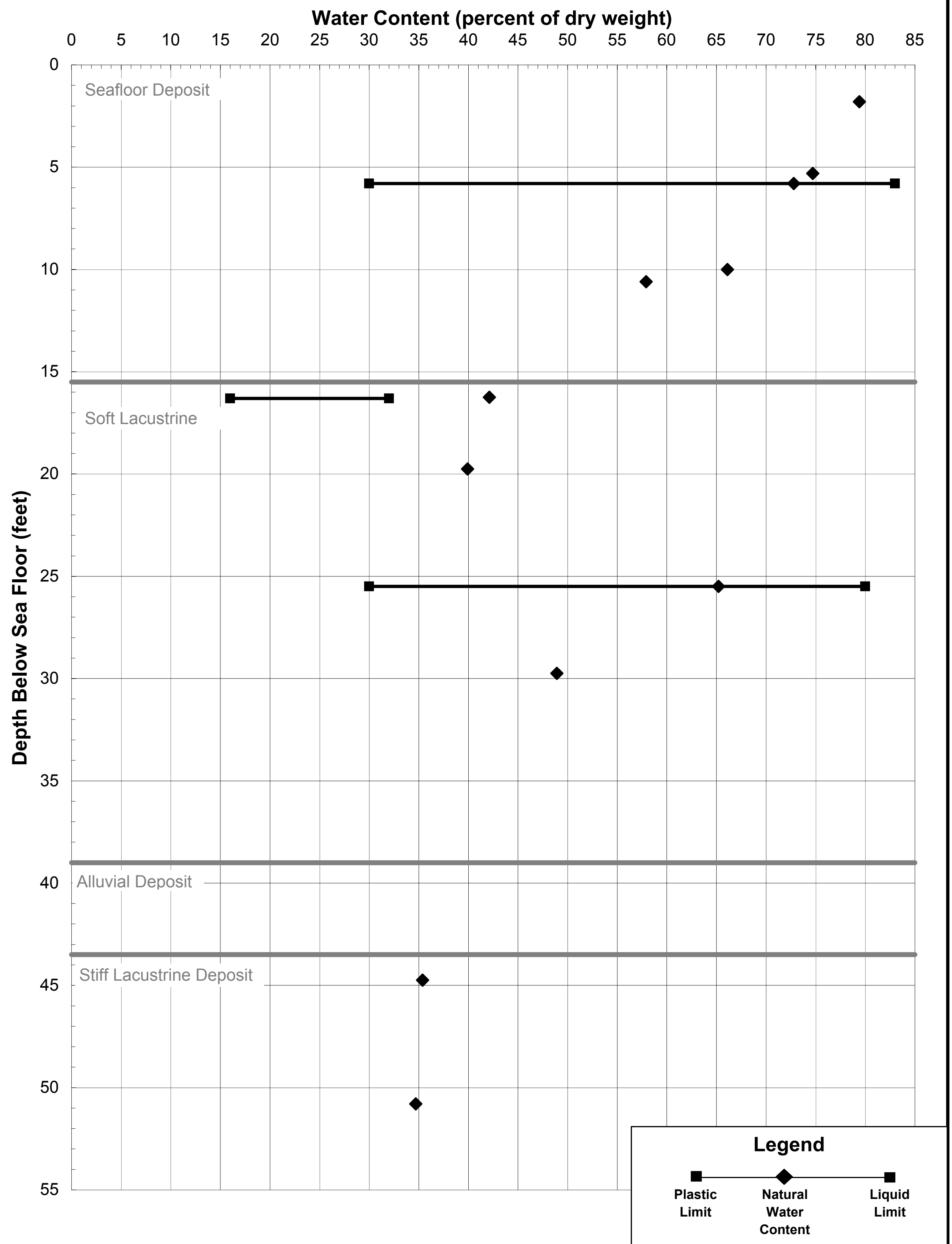
Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 17)	URS
Location: Salton Sea		Figure No. C-14
Project Number: 27663042		



Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 19)	URS
Location: Salton Sea		Figure No. C-15
Project Number: 27663042		

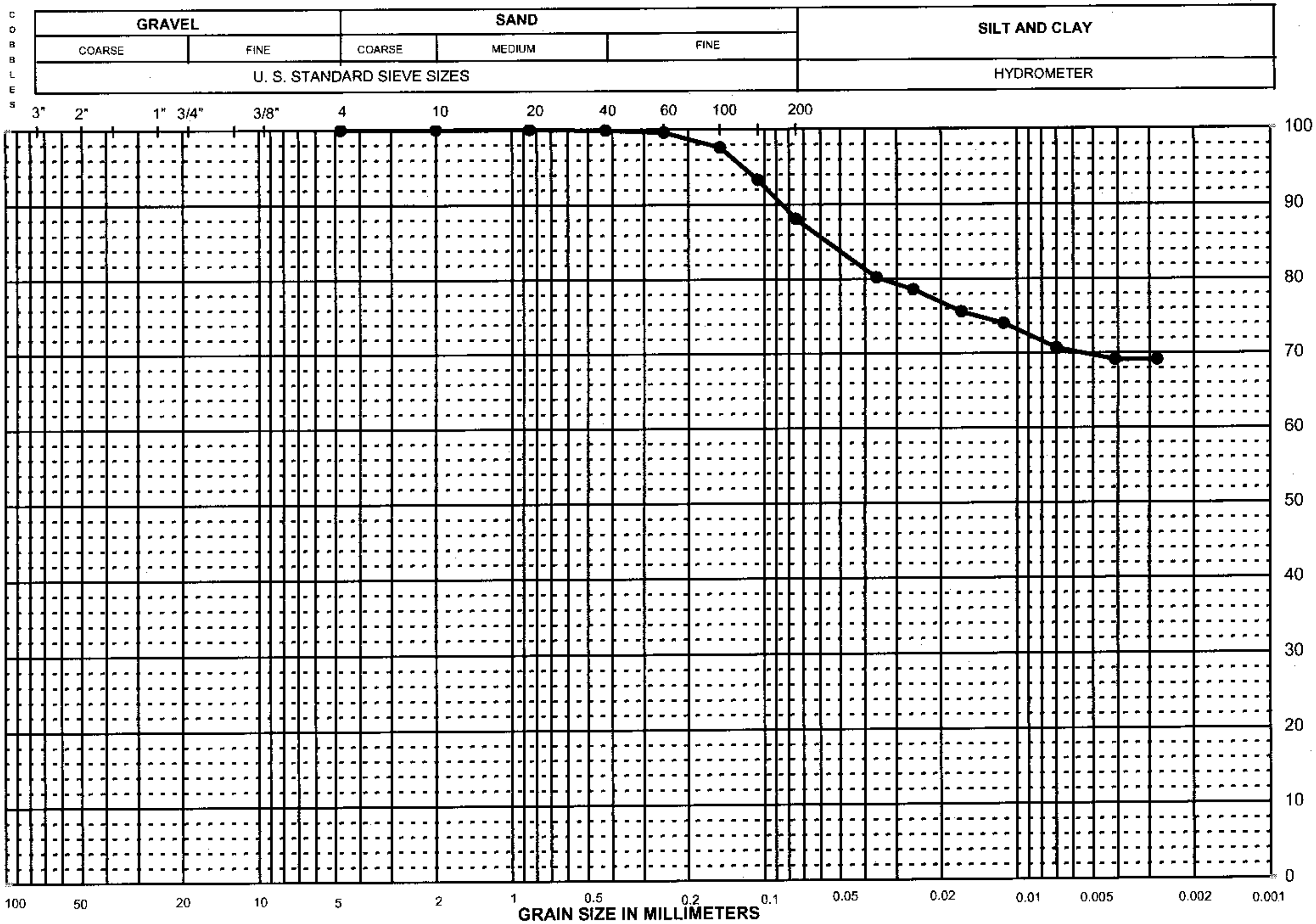


Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 20)	URS	
Location: Salton Sea		Figure No. C-16	
Project Number: 27663042			



Project Name: Restoration Project	Water Content and Plasticity Indices vs. Depth (Boring 26)	URS
Location: Salton Sea		Figure No. C-17
Project Number: 27663042		

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.6
#100	0.150	97.6
#140	0.106	93.3
#200	0.075	88.1
Hydrometer Analysis	0.0360	80.2
	0.0257	78.6
	0.0166	75.6
	0.0113	74.0
	0.0070	70.7
	0.0041	69.1
	0.0028	69.1

% Cobbles	
% Gravel	0.0
% Sand	11.9
% Fines	88.1
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	5	20.0	●	32.5	65	42	69	Reddish Brown CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

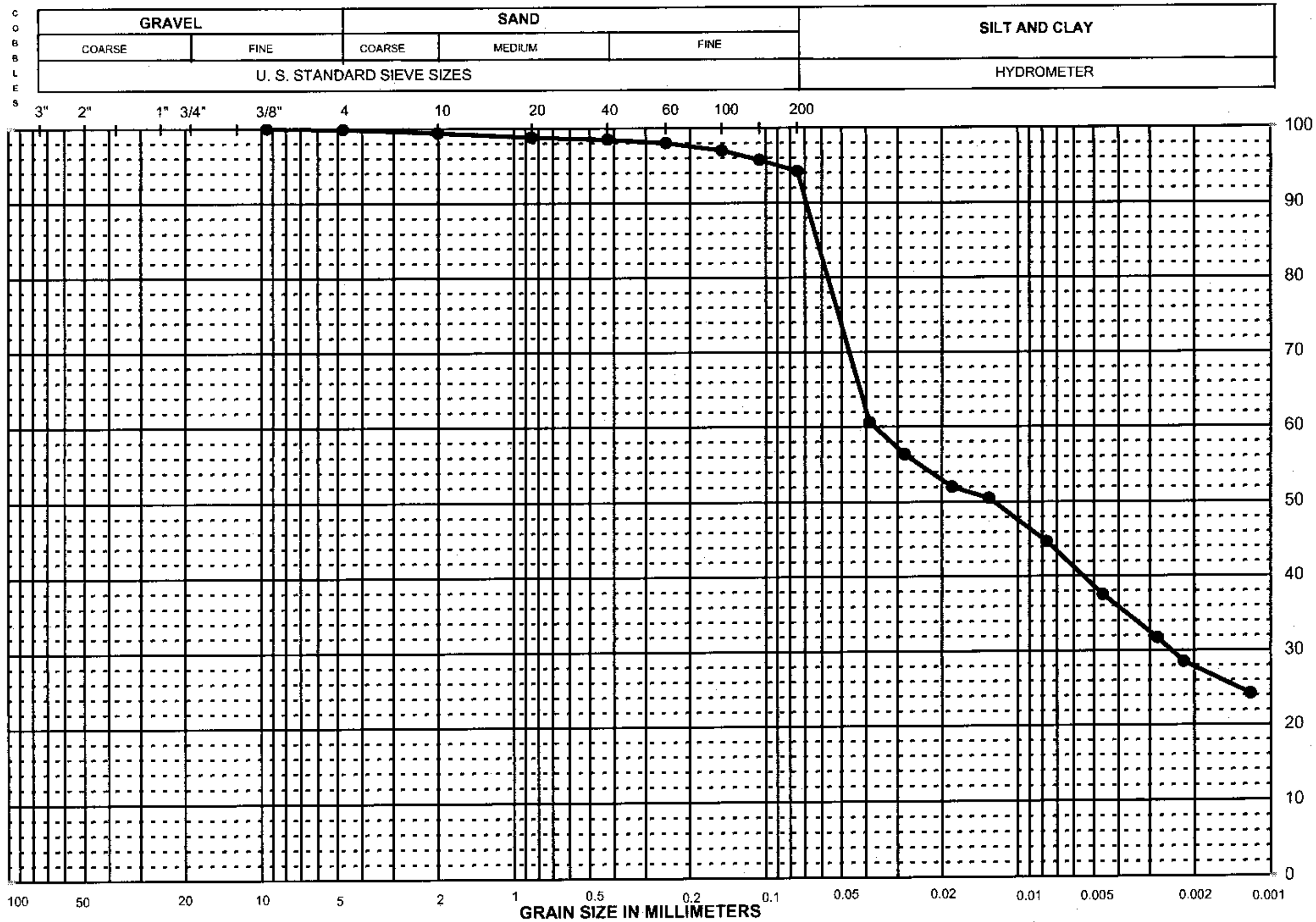
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-18

sa_ssrb2@20

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	100.0
#4	4.75	99.9
#10	2.00	99.4
#20	0.850	98.8
#40	0.425	98.5
#60	0.250	98.0
#100	0.150	97.0
#140	0.106	95.7
#200	0.075	94.2
Hydrometer Analysis	0.0388	60.6
	0.0281	56.3
	0.0182	52.0
	0.0130	50.5
	0.0077	44.7
	0.0046	37.5
	0.0028	31.7
	0.0022	28.5
	0.0012	24.2

% Cobbles	
% Gravel	0.1
% Sand	5.7
% Fines	94.2
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	8,1	32.3	●	25.2			28	Brown CLAY (CL)

PROJECT NAME: Salton Sea Restoration

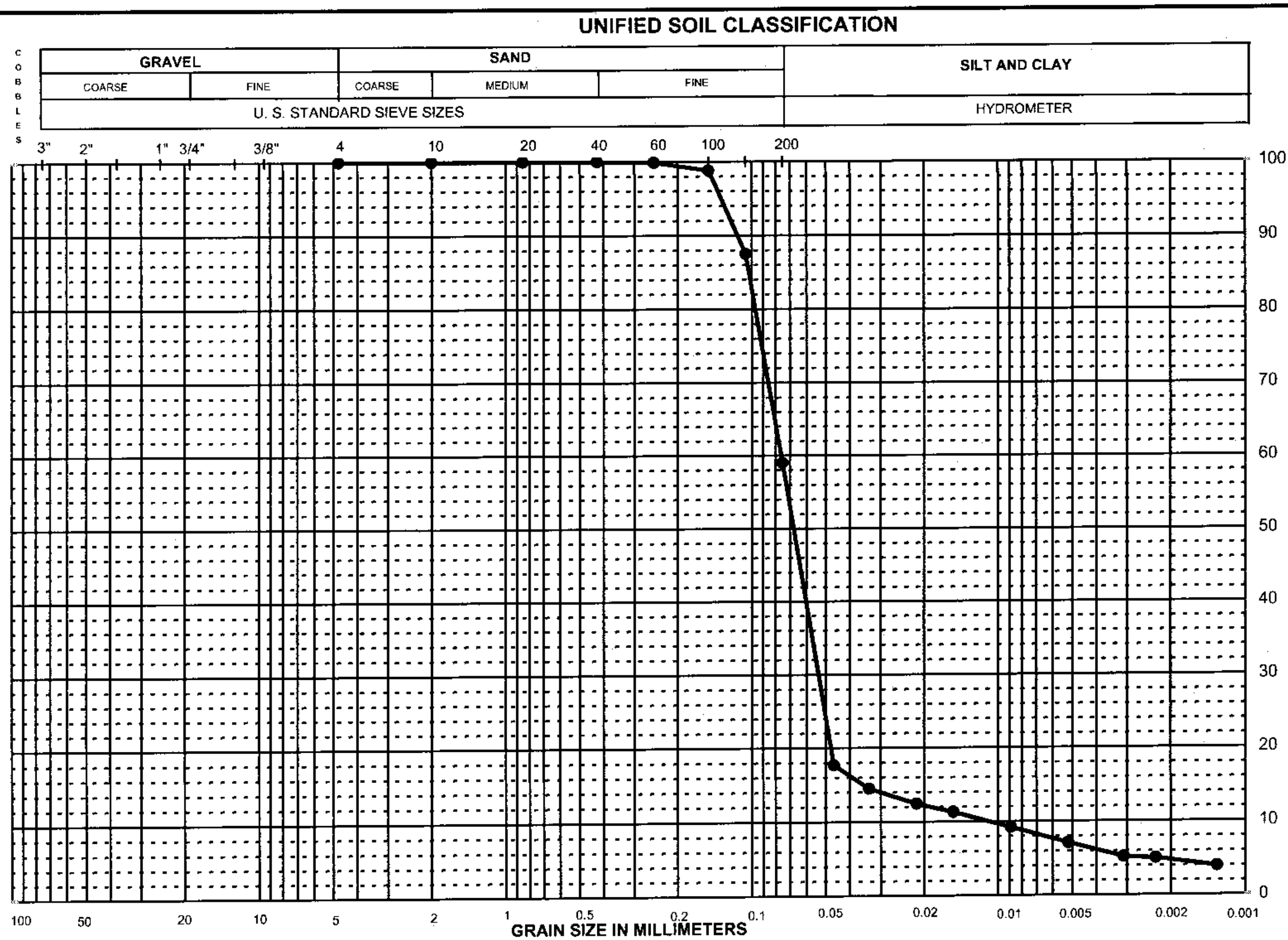
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-19

sa_ssrb2@32



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	99.9
#100	0.150	98.8
#140	0.106	87.5
#200	0.075	59.0
Hydrometer Analysis	0.0465	17.7
	0.0335	14.5
	0.0214	12.4
	0.0152	11.3
	0.0089	9.2
	0.0052	7.1
	0.0031	5.2
	0.0023	5.0
	0.0013	3.9

% Cobbles	
% Gravel	0.0
% Sand	41.0
% Fines	59.0
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	8,2	33.0	●	26.0			5	Brown Sandy SILT (ML)

PROJECT NAME: **Salton Sea Restoration**

PROJECT NUMBER: **27663042.00003**

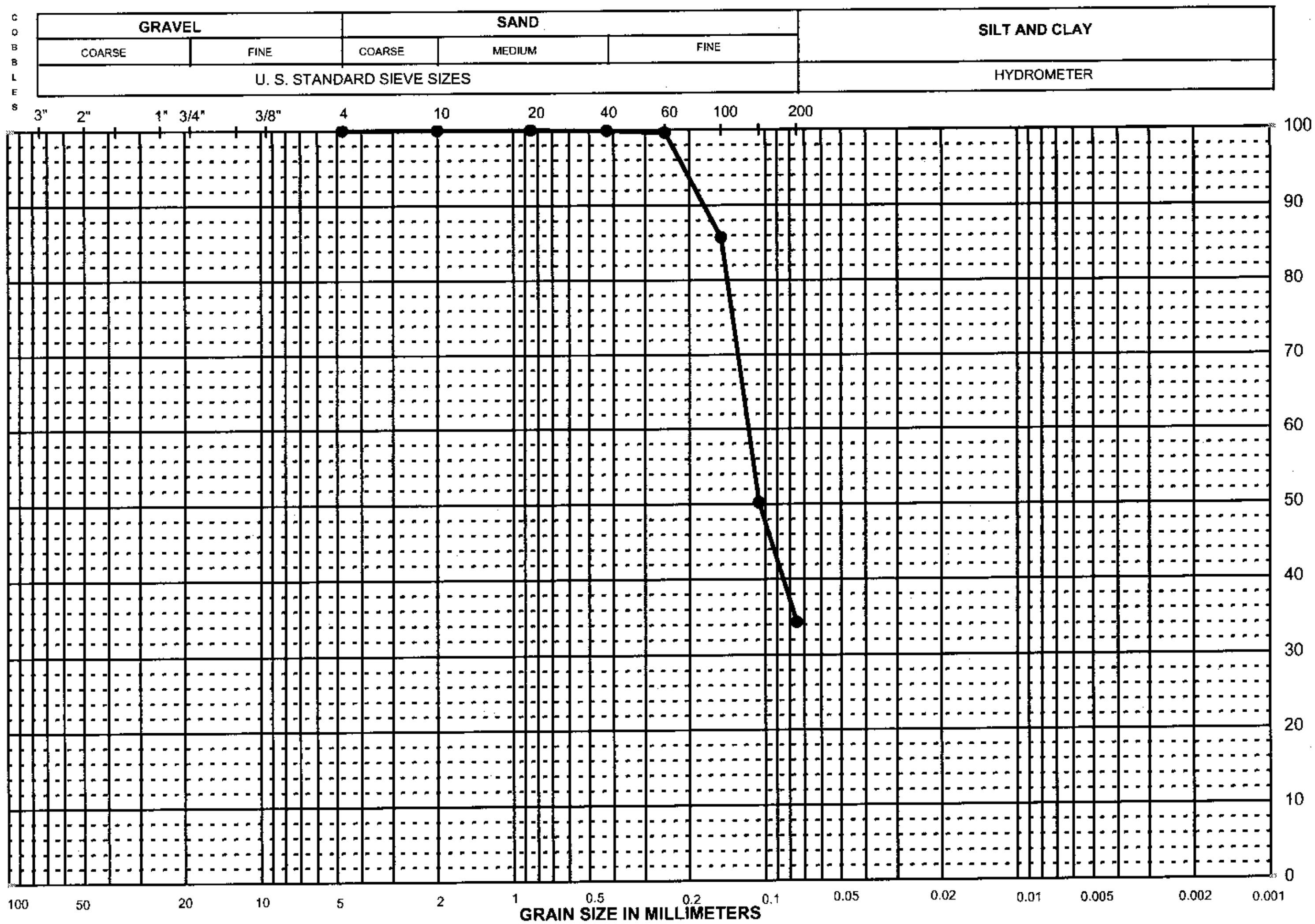
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-20

sa_ssrb2@33

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.6
#100	0.150	85.7
#140	0.106	50.2
#200	0.075	34.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	65.7
% Fines	34.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	10	42.3	●	24.4				Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

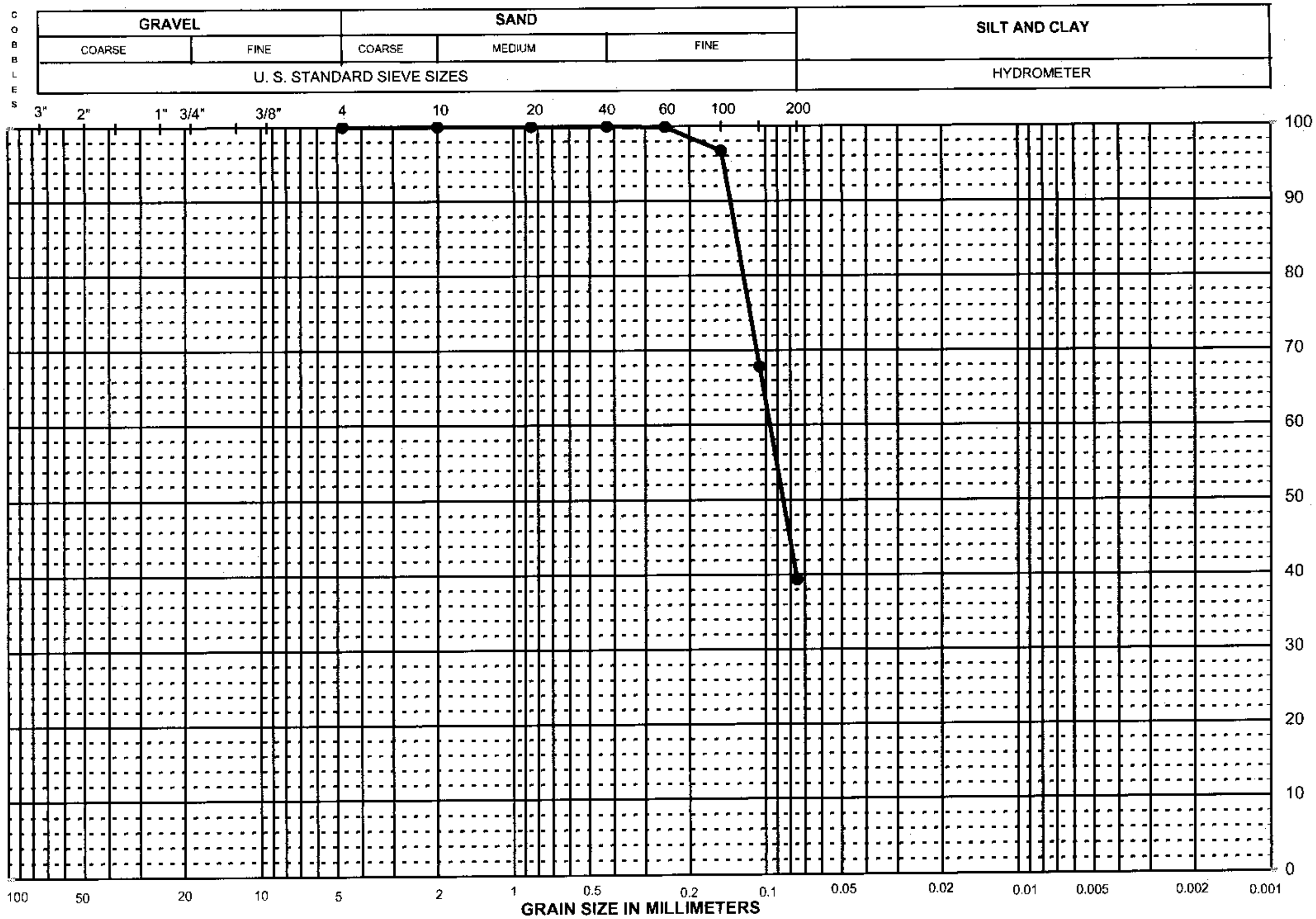
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-21

sa_ssrb2@42

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	99.9
#100	0.150	96.7
#140	0.106	67.8
#200	0.075	39.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	60.7
% Fines	39.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	14	68.8	●	27.9		NP		Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

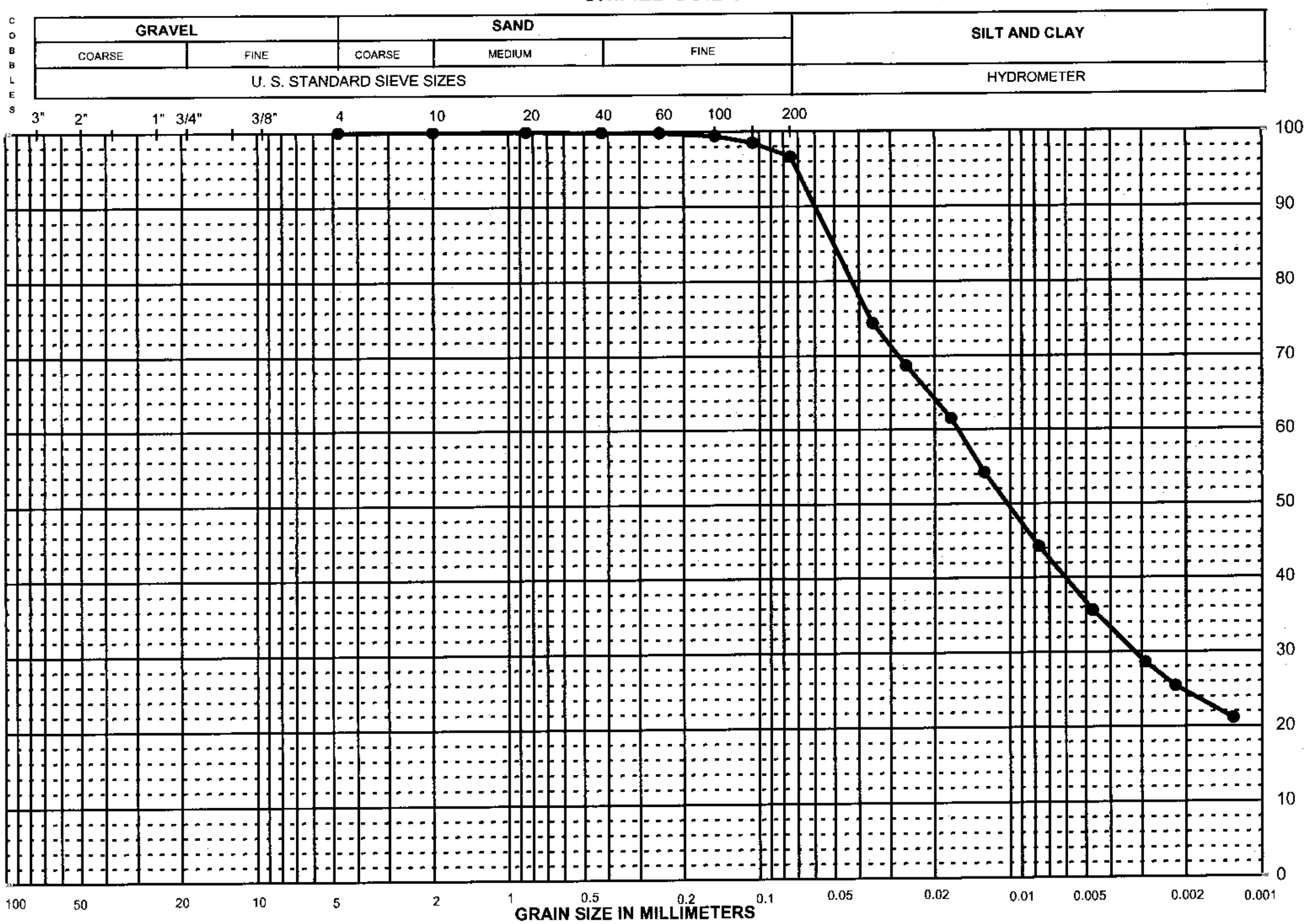
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-22

sa_ssrb2@69

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.8
#100	0.150	99.4
#140	0.106	98.5
#200	0.075	96.6
Hydrometer Analysis	0.0353	74.4
	0.0260	68.7
	0.0172	61.5
	0.0127	54.2
	0.0077	44.2
	0.0047	35.6
	0.0029	28.6
	0.0022	25.4
	0.0013	21.1

% Cobbles	
% Gravel	0.0
% Sand	3.4
% Fines	96.6
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	16	77.3	●	27.0			25	BrownCLAY (CL)

PROJECT NAME: **Salton Sea Restoration**

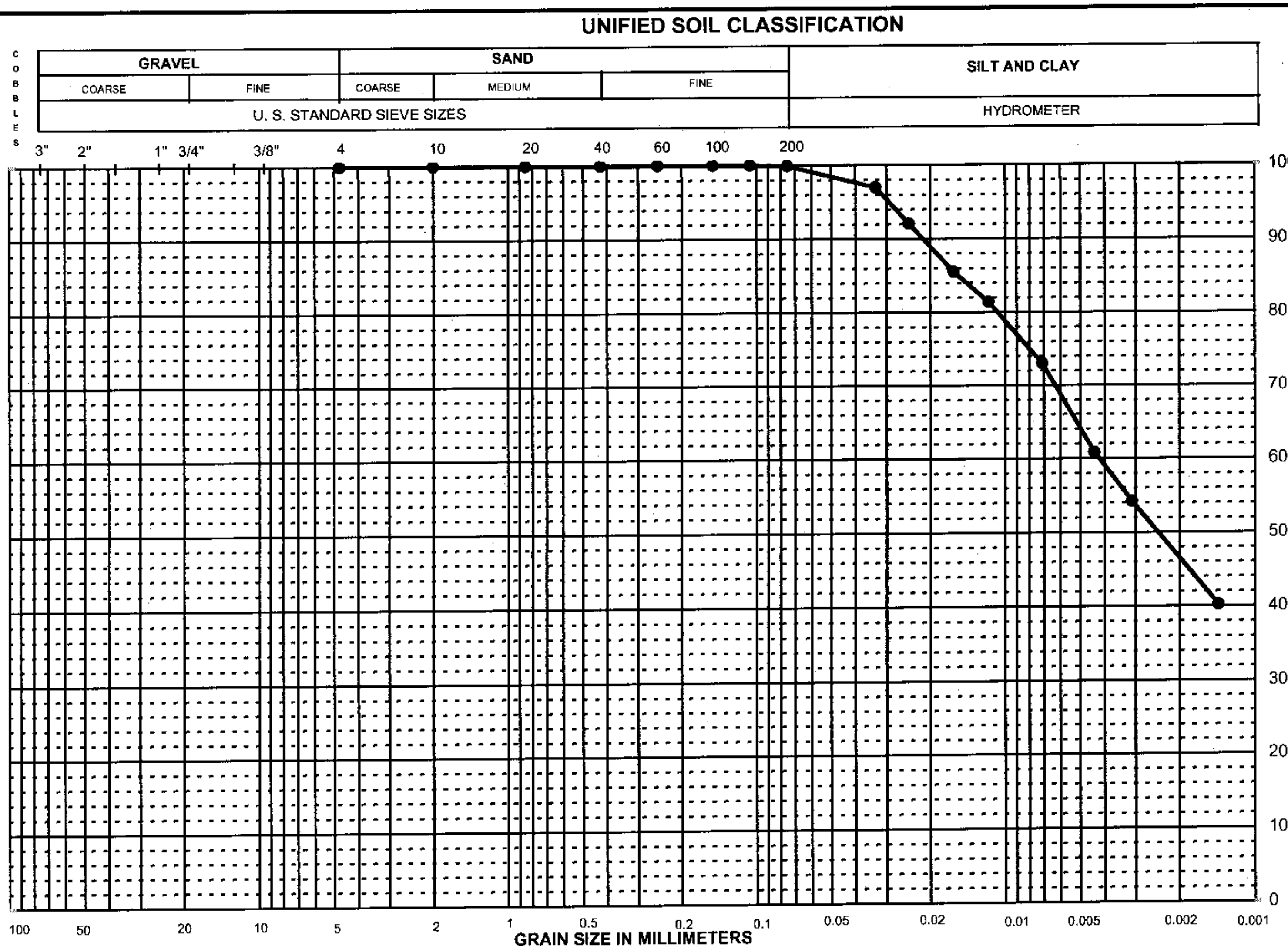
PROJECT NUMBER: **27663042.00003**

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-23

sa_ssrb2@77



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	100.0
#100	0.150	100.0
#140	0.106	100.0
#200	0.075	99.9
Hydrometer Analysis	0.0332	97.0
	0.0244	92.1
	0.0161	85.5
	0.0117	81.4
	0.0071	73.0
	0.0044	60.8
	0.0031	54.2
	0.0014	40.2

% Cobbles	
% Gravel	0.0
% Sand	0.1
% Fines	99.9
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	19	92.2	●	36.4				Gray CLAY(CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

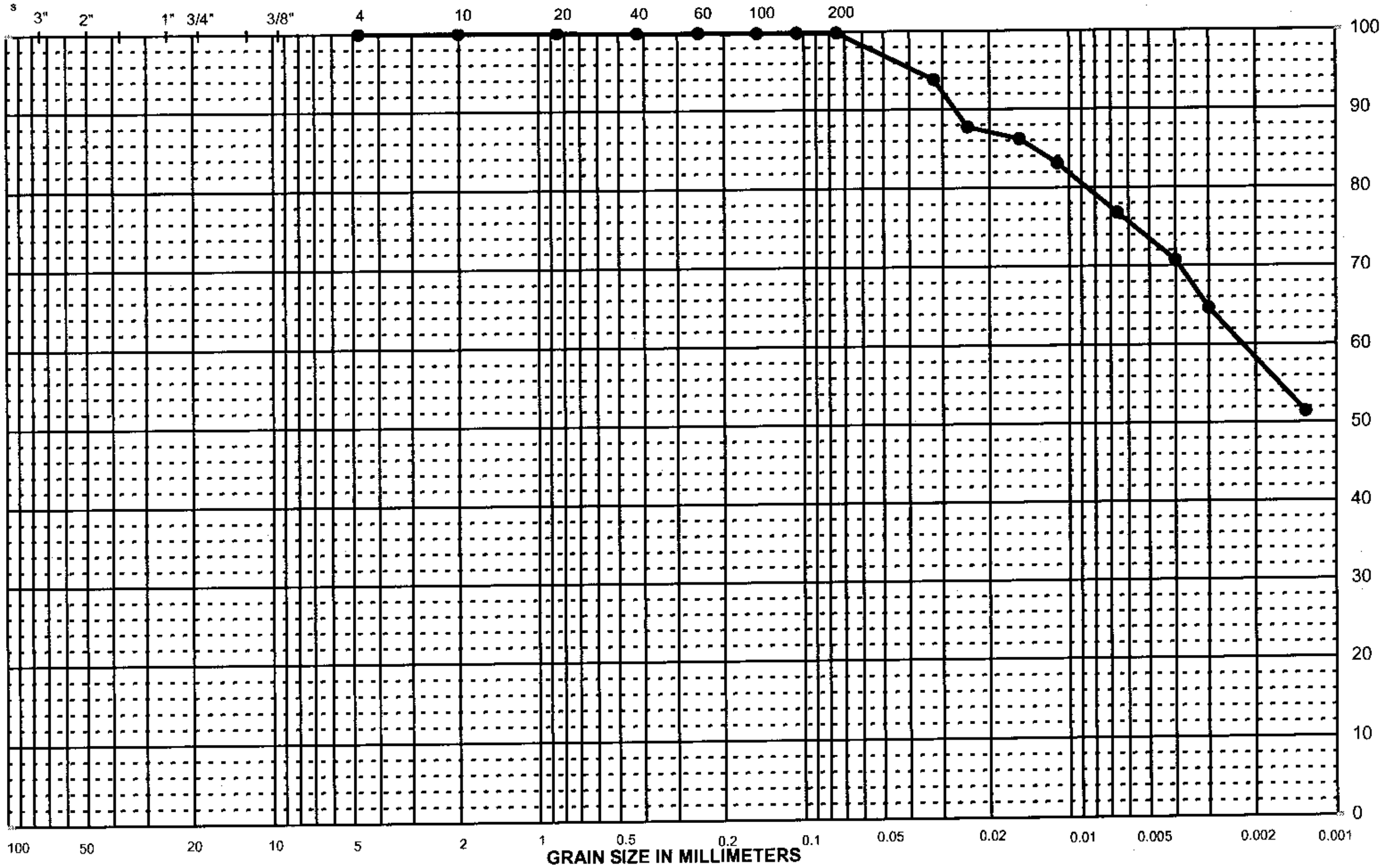
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-24

sa_ssrb2@92

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.9
#100	0.150	99.8
#140	0.106	99.8
#200	0.075	99.8
Hydrometer Analysis	0.0324	93.8
	0.0241	87.7
	0.0154	86.2
	0.0111	83.1
	0.0066	76.8
	0.0040	70.7
	0.0030	64.6
	0.0013	51.4

% Cobbles	
% Gravel	0.0
% Sand	0.2
% Fines	99.8
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	24	119.0	●	31.6	66	41	58	Gray CLAY (CH)

PROJECT NAME: **Salton Sea Restoration**

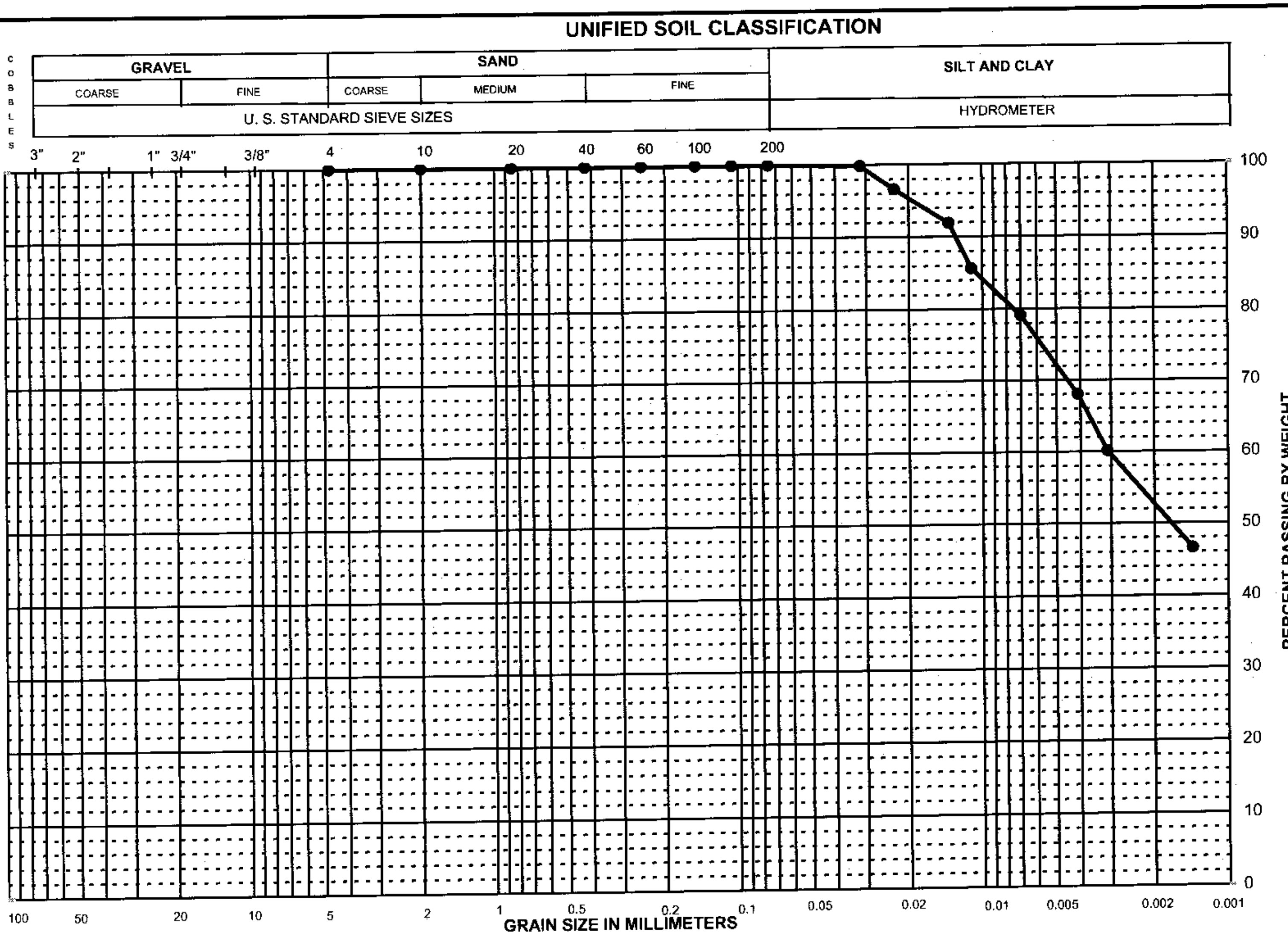
PROJECT NUMBER: **27663042.00003**

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-25

sa_ssrb2@119



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	100.0
#100	0.150	100.0
#140	0.106	100.0
#200	0.075	100.0
Hydrometer Analysis	0.0315	99.8
	0.0229	96.6
	0.0137	91.9
	0.0111	85.6
	0.0070	79.1
	0.0041	68.0
	0.0031	60.1
	0.0014	46.6

% Cobbles	
% Gravel	0.0
% Sand	0.0
% Fines	100.0
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-2	29	149.0	●	31.0	62	39	53	Gray CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

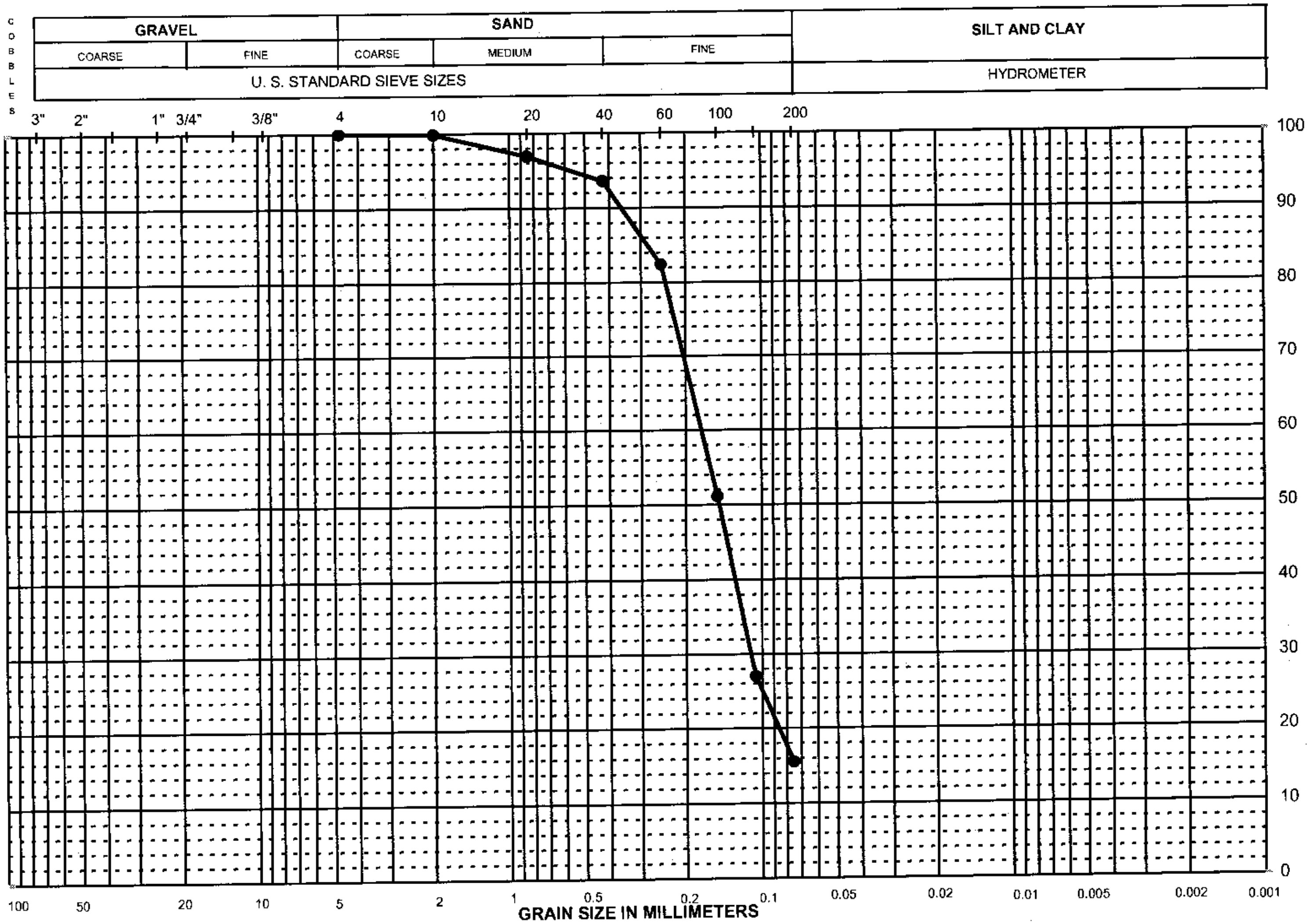
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-26

sa_ssrb2@149

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	96.9
#40	0.425	93.6
#60	0.250	82.4
#100	0.150	51.1
#140	0.106	27.0
#200	0.075	15.5
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	84.5
% Fines	15.5
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-4	2	3.5	●	22.0				Brown silty Sand (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

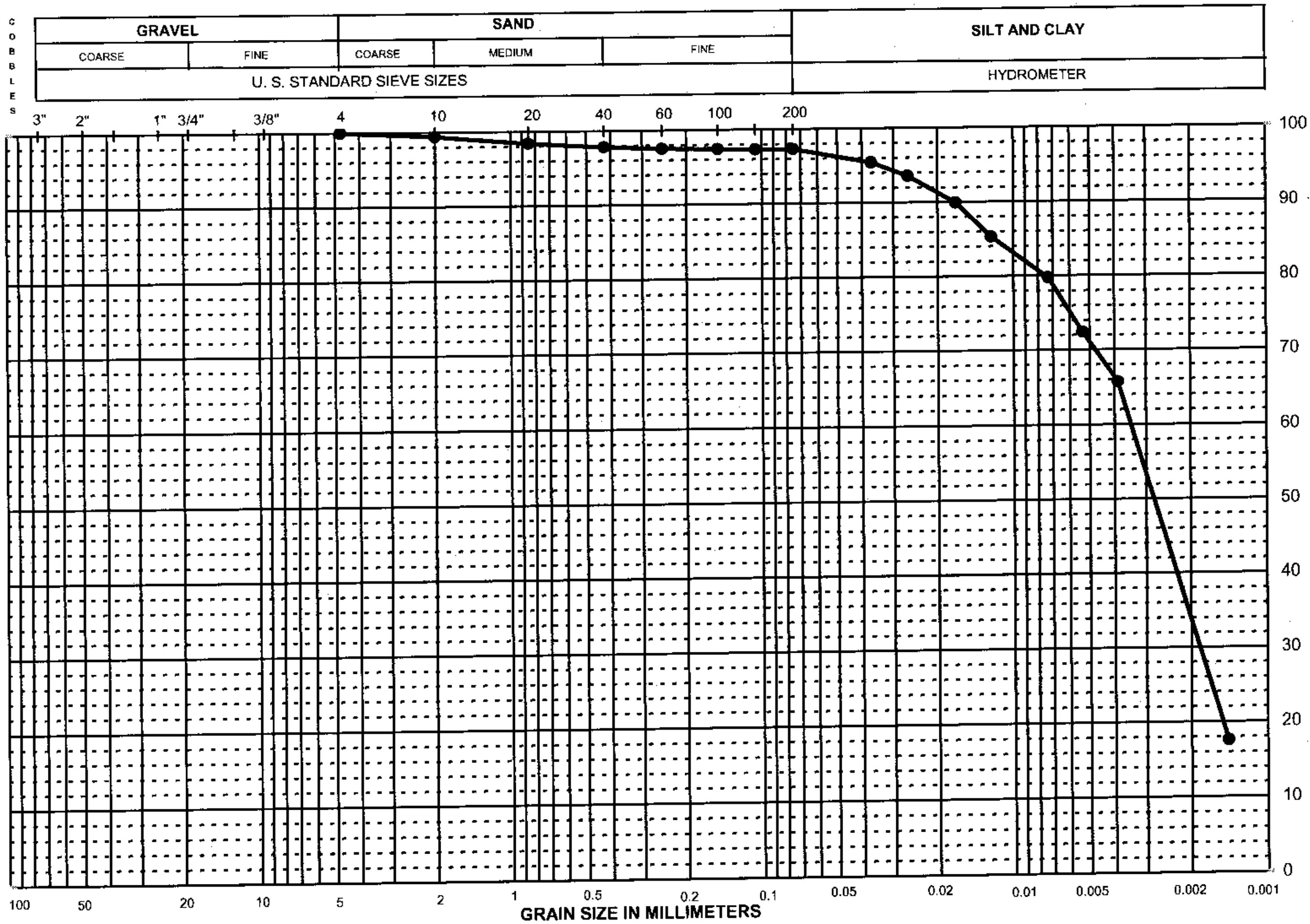
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-27

sa_ssrb4@3

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.4
#20	0.850	98.4
#40	0.425	97.8
#60	0.250	97.5
#100	0.150	97.4
#140	0.106	97.3
#200	0.075	97.3
Hydrometer Analysis	0.0368	95.4
	0.0263	93.6
	0.0170	89.9
	0.0123	85.3
	0.0073	79.8
	0.0053	72.4
	0.0039	65.7
	0.0014	17.6

% Cobbles	
% Gravel	0.0
% Sand	2.7
% Fines	97.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-5	1	2.0	●	78.7	85	54	33	Blueish Gray CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

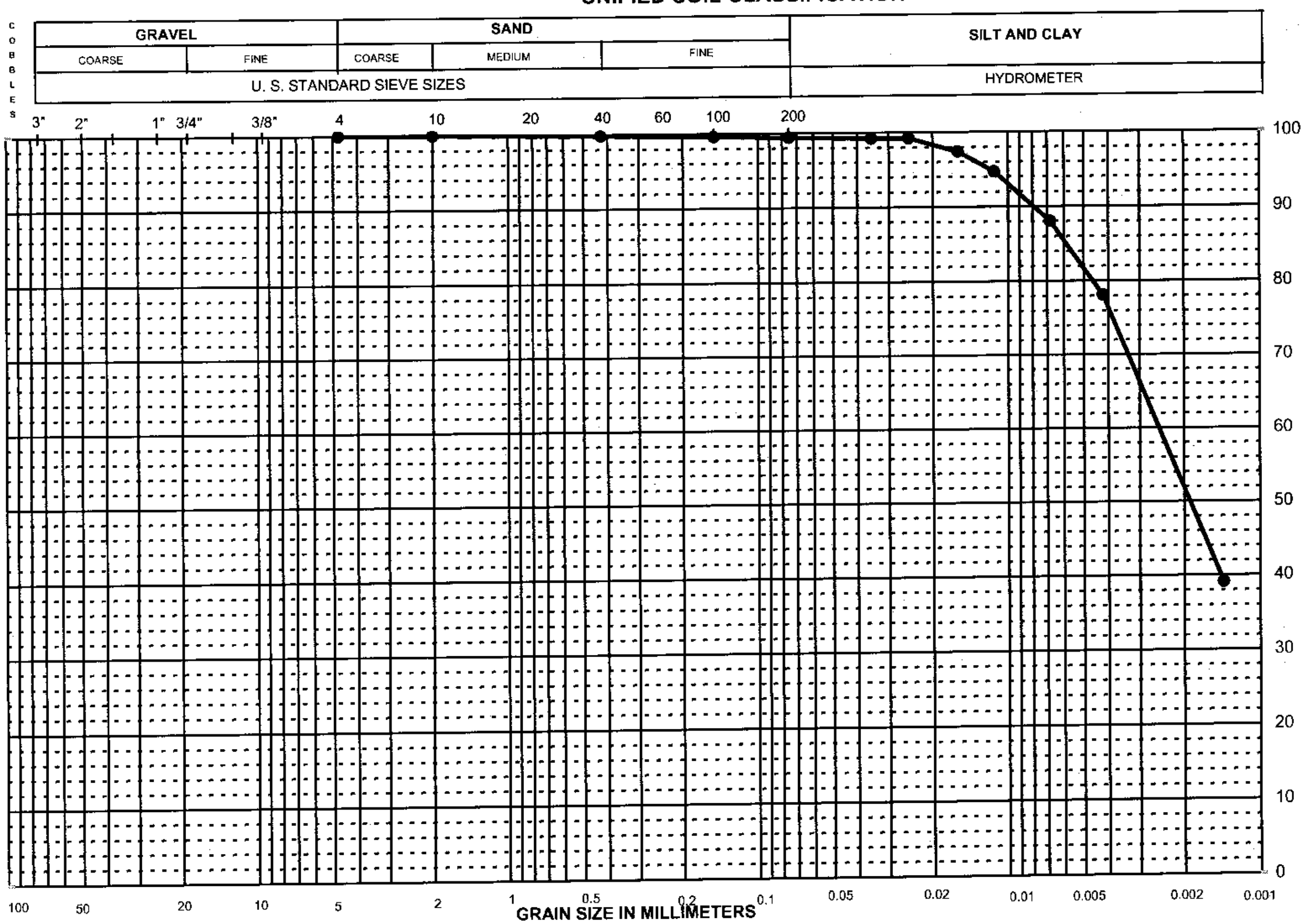
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-28

sa_ssrb5@2

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
#4	4.750	100.0
#10	2.000	100.0
#40	0.425	99.8
#100	0.150	99.6
#200	0.075	99.4
Hydrometer Analysis	0.0352	99.2
	0.0249	99.2
	0.0159	97.4
	0.0114	94.7
	0.0068	88.0
	0.0042	78.1
	0.0014	39.1

% Cobbles	
% Gravel	0.0
% Sand	0.6
% Fines	99.4
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-5	4	16.0	●		78	49	51	Gray CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

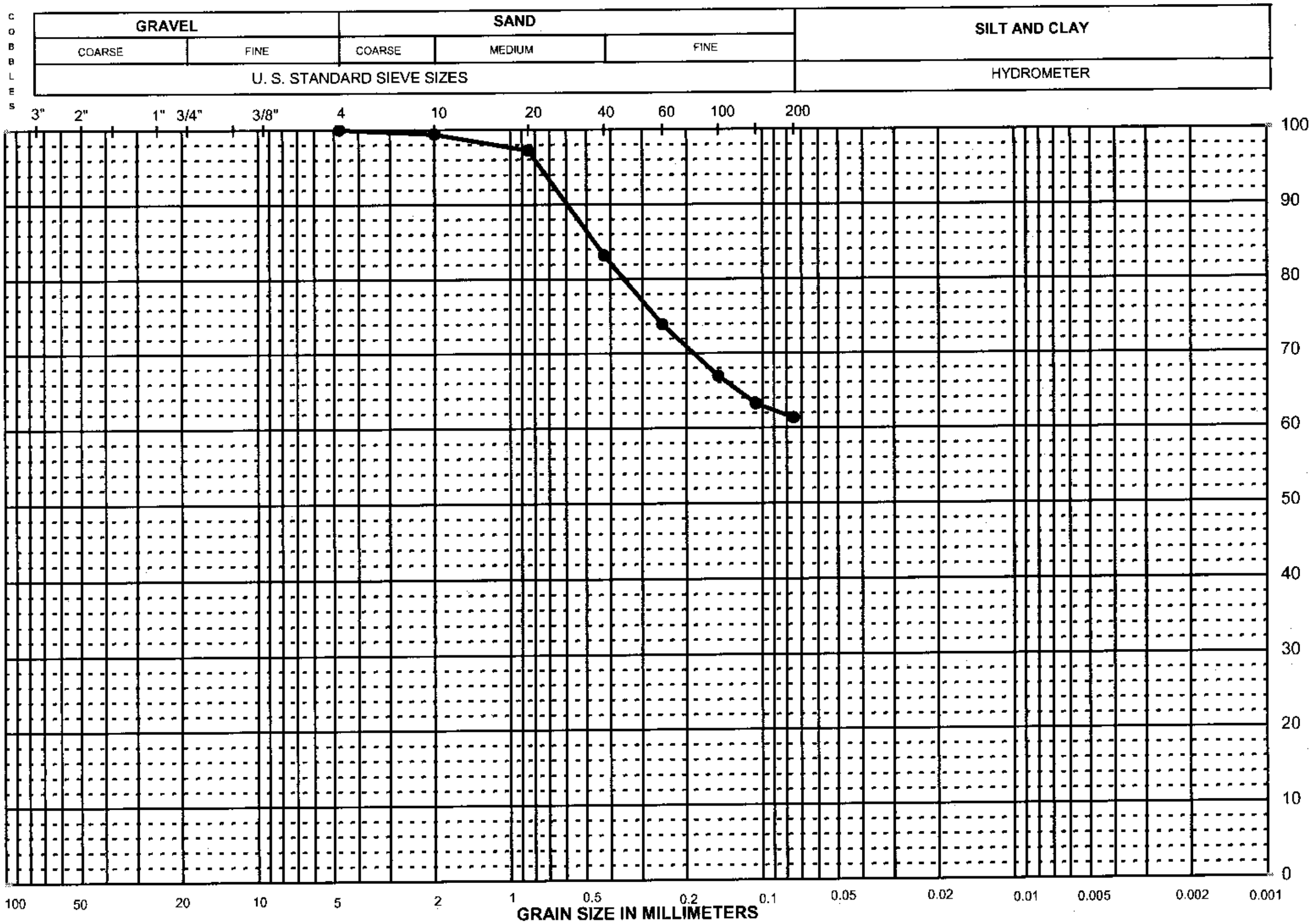
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-29

sa_ssrb5@16

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.4
#20	0.850	97.2
#40	0.425	83.2
#60	0.250	73.9
#100	0.150	66.9
#140	0.106	63.2
#200	0.075	61.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	38.7
% Fines	61.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-5	7	29.8	●	40.9				Olive gray sandy Clay (CL)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

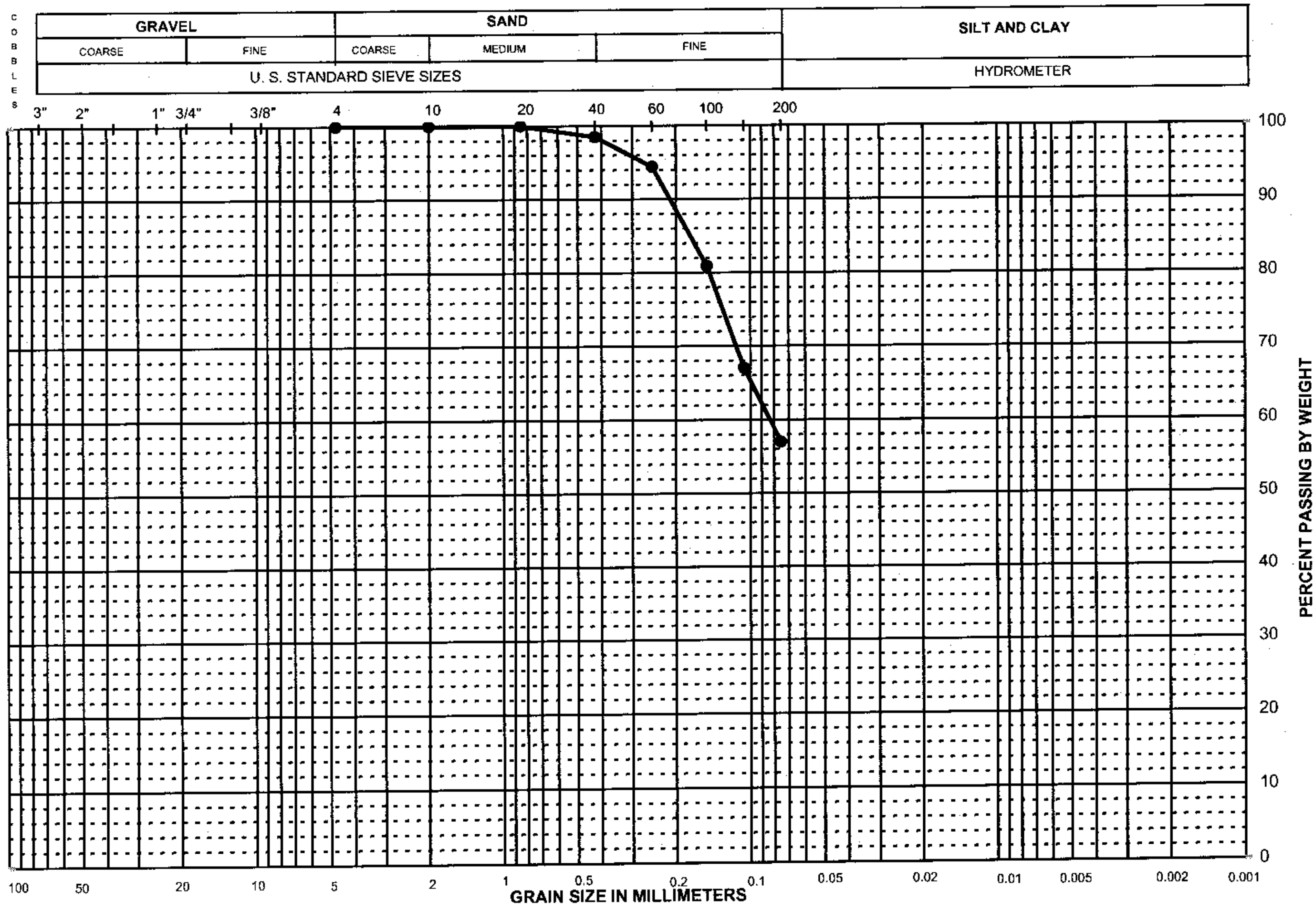
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-30

sa_ssrb5@30

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	98.5
#60	0.250	94.4
#100	0.150	80.9
#140	0.106	67.0
#200	0.075	57.0
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	43.0
% Fines	57.0
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-5	8	37.0	●	22.3				Reddish Brown Sandy CLAY (CL)

PROJECT NAME: Salton Sea Restoration

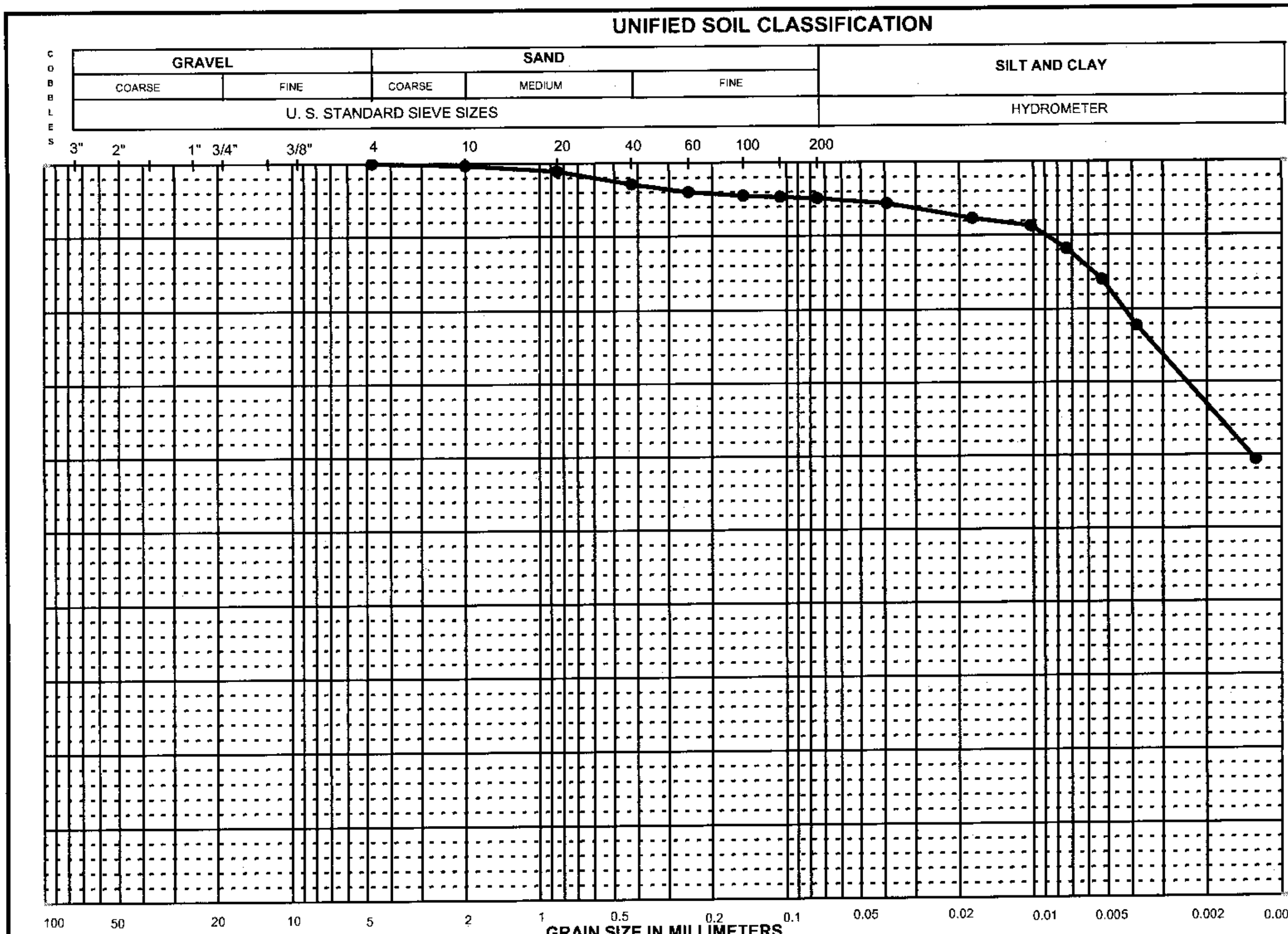
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-31

sa_ssrb5@37



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.7
#20	0.850	98.9
#40	0.425	97.1
#60	0.250	96.0
#100	0.150	95.5
#140	0.106	95.3
#200	0.075	95.1
Hydrometer Analysis	0.0393	94.4
	0.0177	92.3
	0.0103	91.3
	0.0074	88.2
	0.0053	84.0
	0.0038	77.8
	0.0013	59.3

% Cobbles	
% Gravel	0.0
% Sand	4.9
% Fines	95.1
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-6	2	6.5	●	74.3	60	40	67	Blueish Gray CLAY (CH)

PROJECT NAME: Salton Sea Restoration

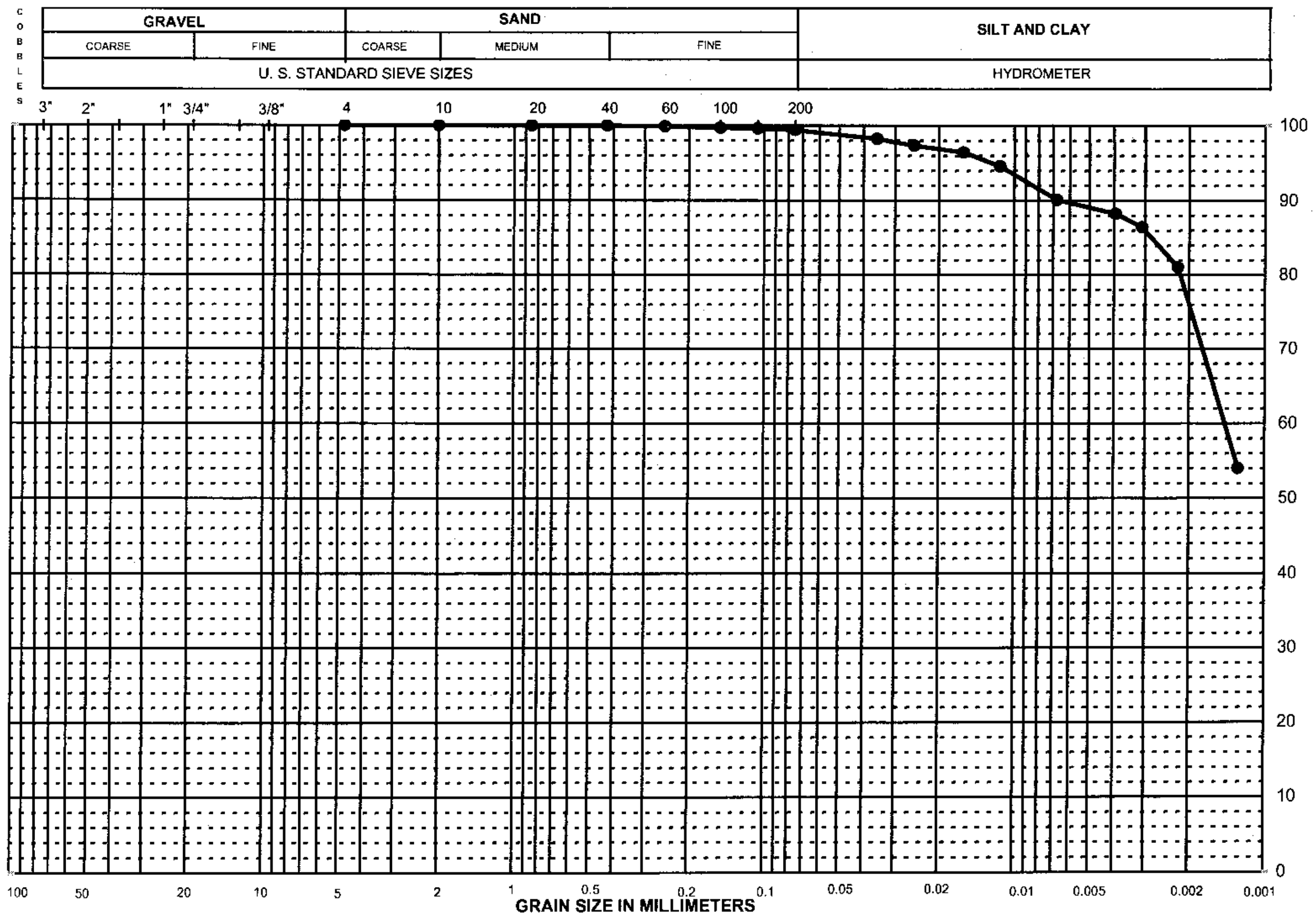
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-32

sa_ssrb6@7



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	99.9
#100	0.150	99.7
#140	0.106	99.6
#200	0.075	99.4
Hydrometer Analysis	0.0354	98.2
	0.0251	97.3
	0.0160	96.4
	0.0114	94.6
	0.0068	90.1
	0.0039	88.3
	0.0031	86.5
	0.0022	81.0
	0.0013	54.0

% Cobbles	
% Gravel	0.0
% Sand	0.6
% Fines	99.4
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-6	4	17.5	●	48.7	89	58	76	Reddish Brown CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

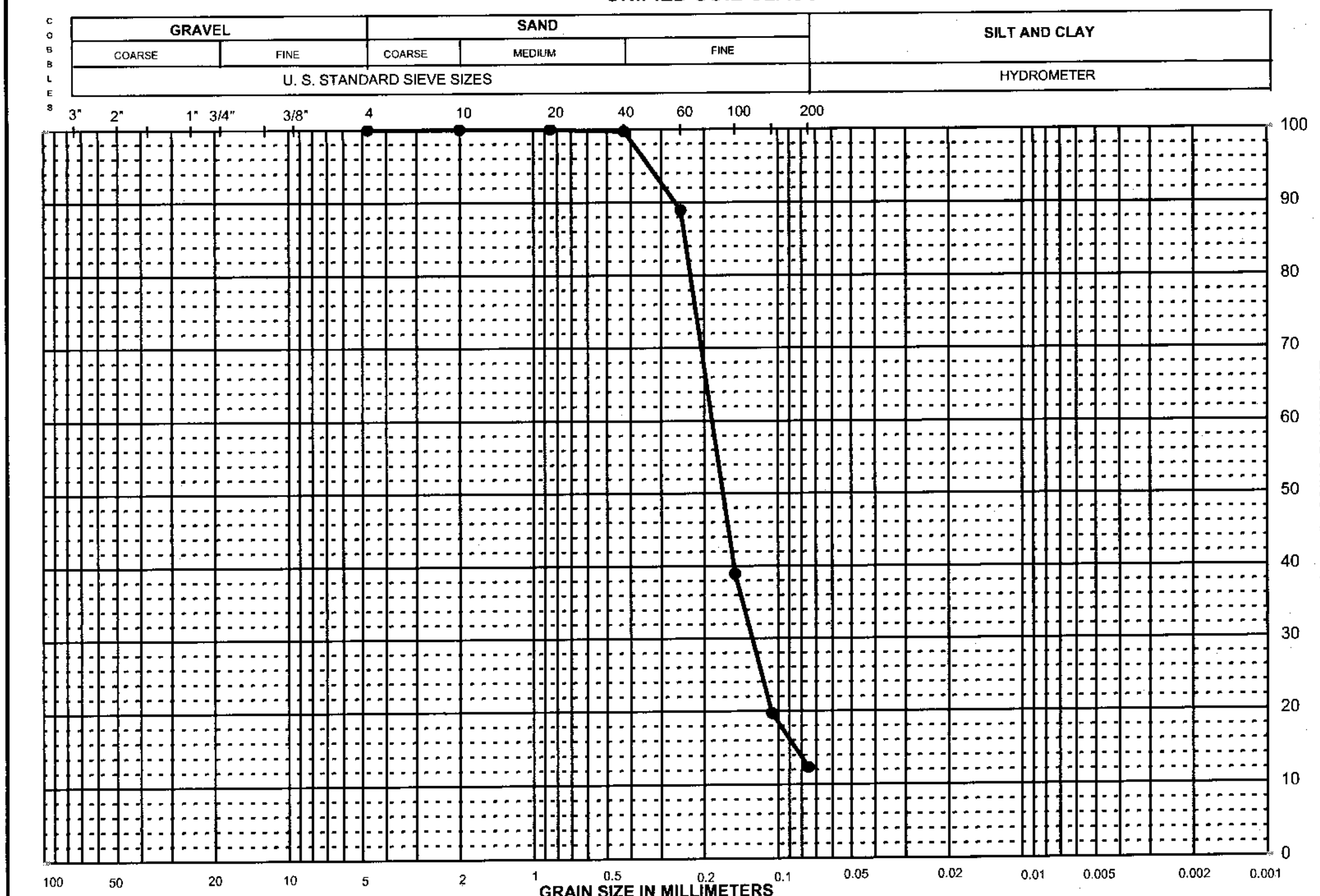
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-33

sa_ssrb6@18

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.7
#60	0.250	88.9
#100	0.150	38.9
#140	0.106	19.7
#200	0.075	12.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	87.7
% Fines	12.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-6	6	26.8	●	25.1				Gray Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

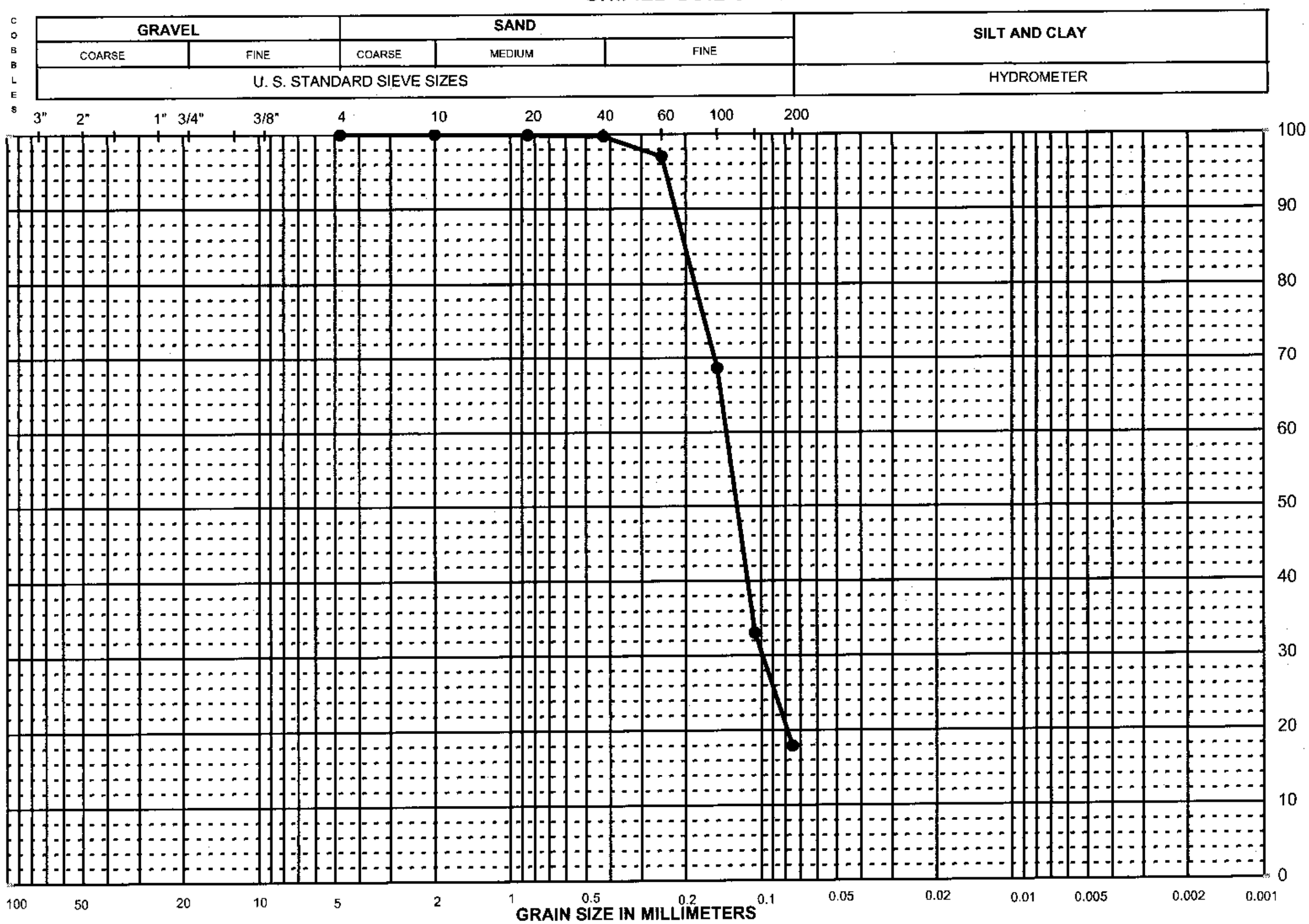
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-34

sa_ssrb6@27

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.9
#40	0.425	99.7
#60	0.250	97.0
#100	0.150	68.6
#140	0.106	33.0
#200	0.075	17.9
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	82.1
% Fines	17.9
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-6	8	36.5	●	21.7				Reddish Brown Silty SAND (SM)

PROJECT NAME: **Salton Sea Restoration**

PROJECT NUMBER: **27663042.00003**

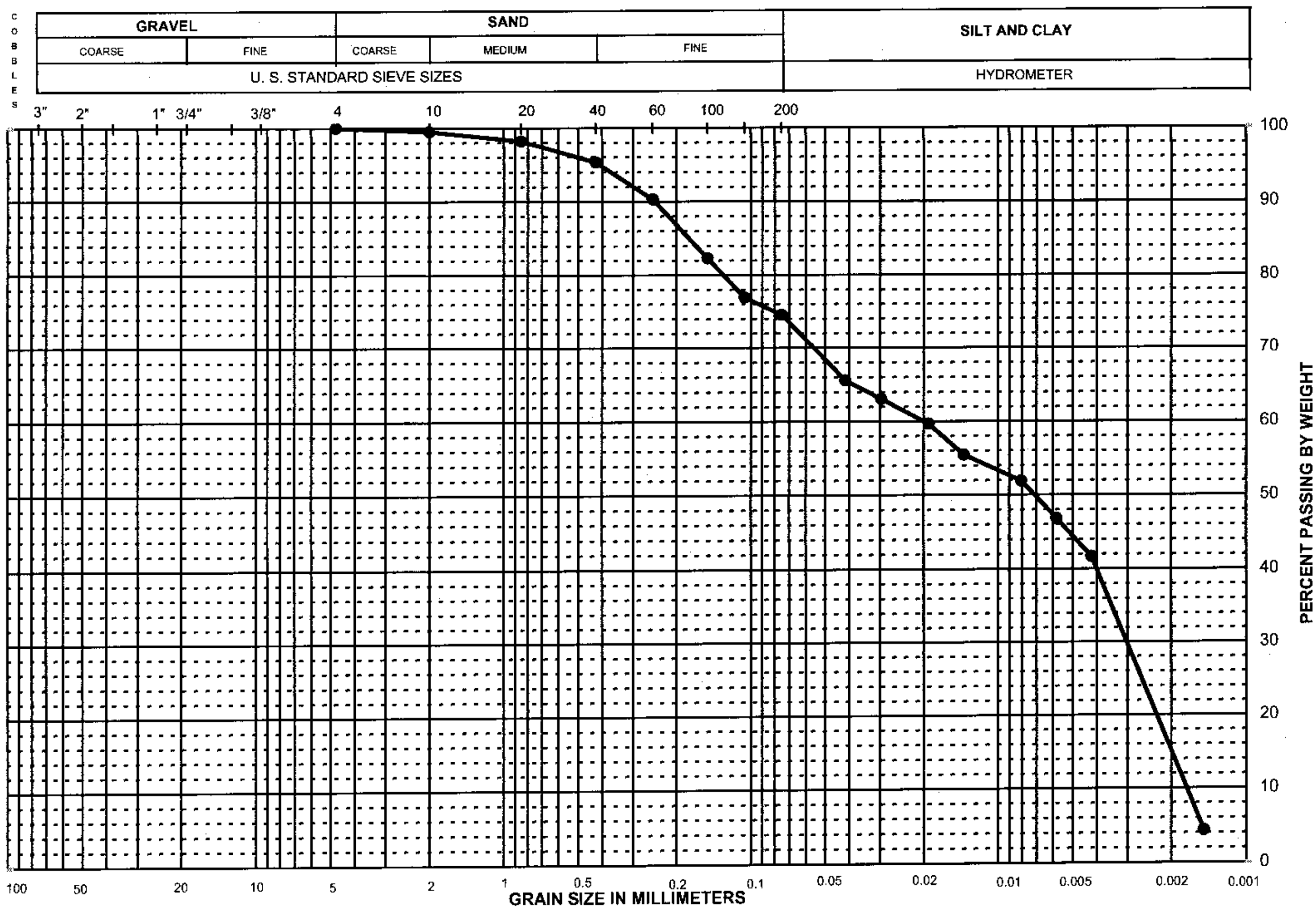
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-35

sa_ssrb6@37

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.5
#20	0.850	98.2
#40	0.425	95.3
#60	0.250	90.3
#100	0.150	82.3
#140	0.106	76.9
#200	0.075	74.5
Hydrometer Analysis	0.0414	65.6
	0.0297	63.0
	0.0191	59.7
	0.0137	55.4
	0.0081	51.9
	0.0058	46.8
	0.0042	41.7
	0.0015	4.3

% Cobbles	
% Gravel	0.0
% Sand	25.5
% Fines	74.5
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-6	10	46.8	●				15	Brown to Grayish Brown Sandy CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

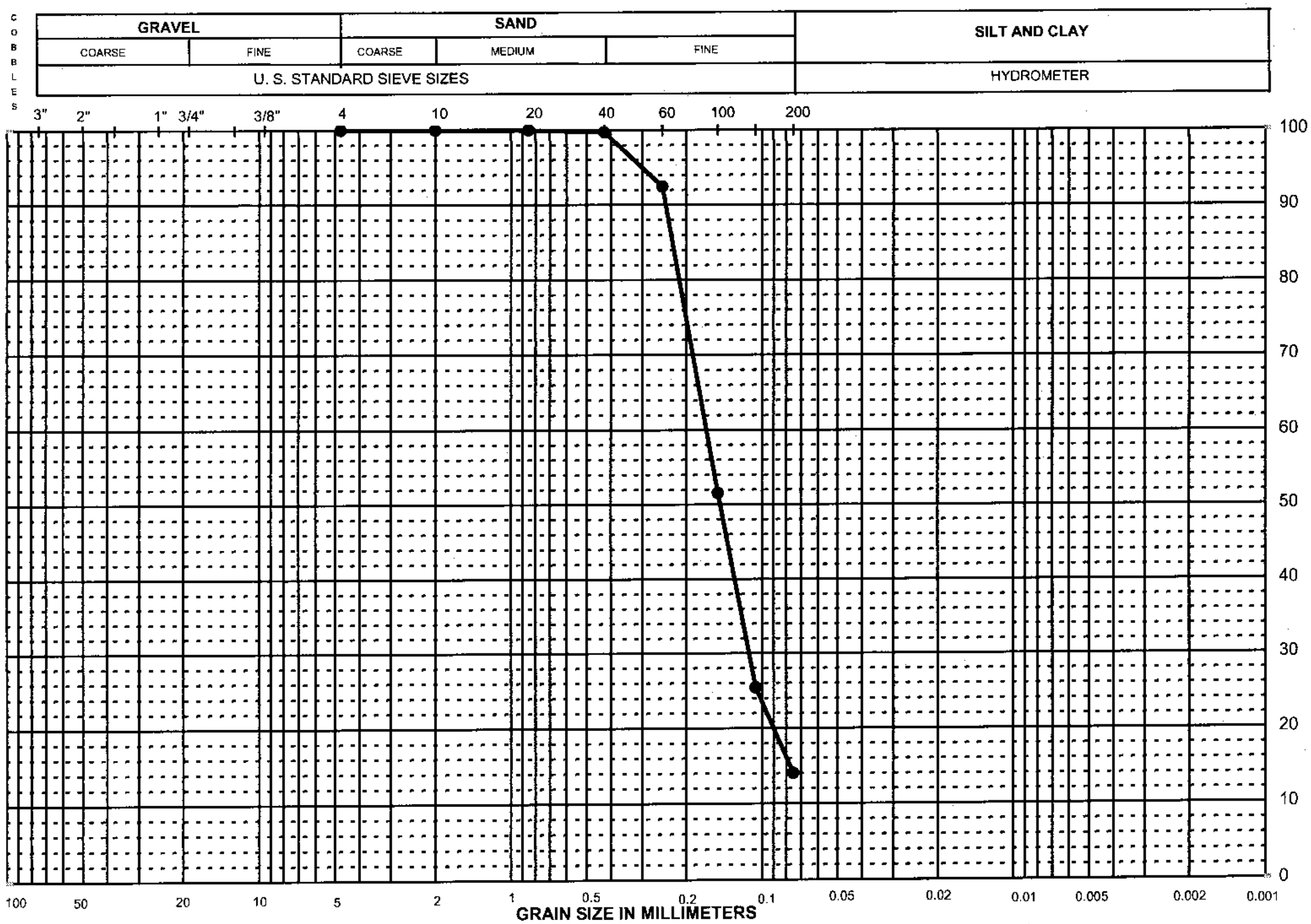
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-36

sa_ssrb6@47

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.7
#60	0.250	92.4
#100	0.150	51.5
#140	0.106	25.4
#200	0.075	14.0
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	86.0
% Fines	14.0
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	1	2.1	●	24.7				Gray Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

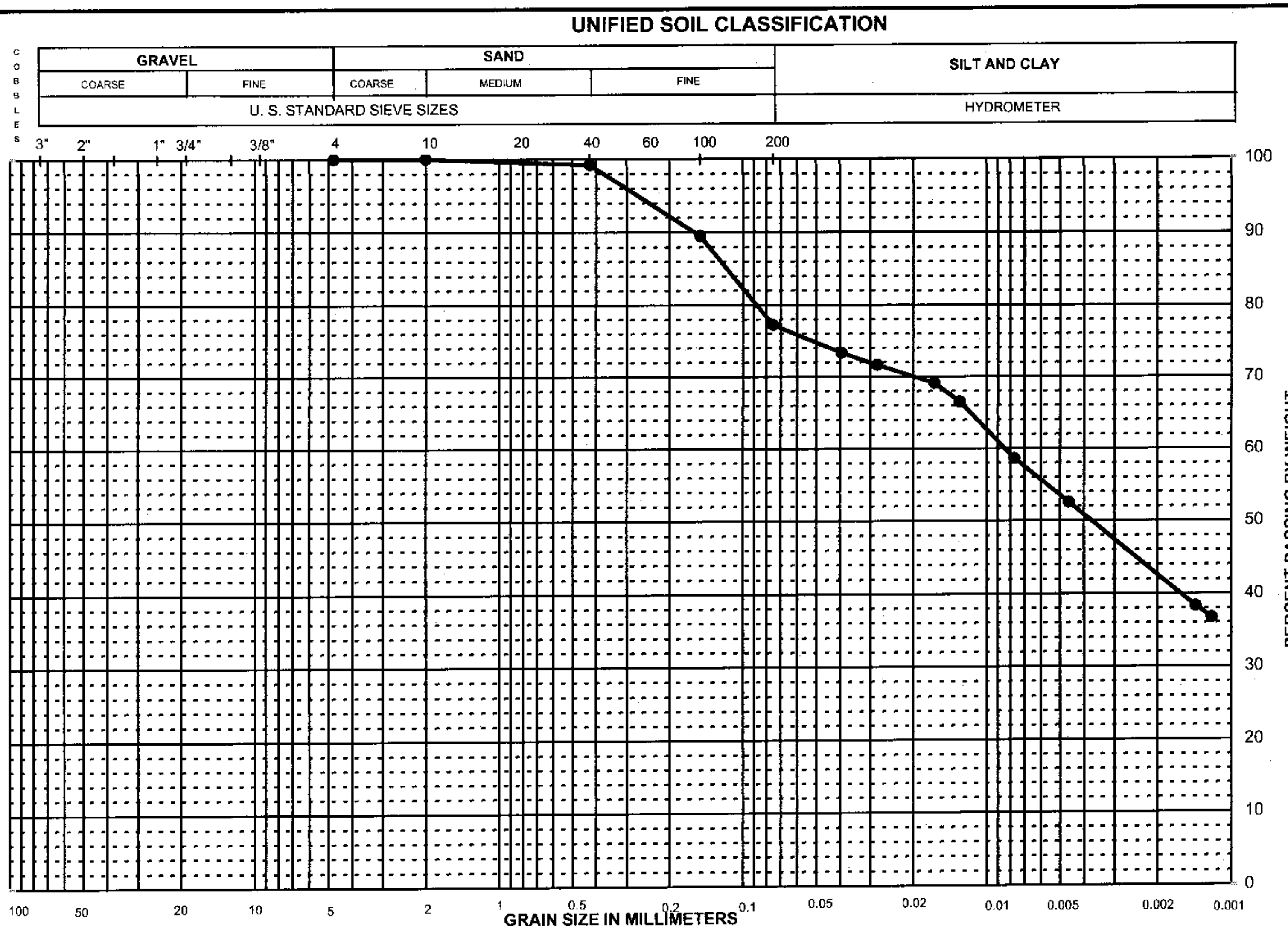
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-37

sa_ssrb7@2



Sieve No.	Dia. mm	% Finer
#4	4.750	100.0
#10	2.000	100.0
#40	0.425	99.2
#100	0.150	89.5
#200	0.075	77.2
Hydrometer Analysis	0.0394	73.3
	0.0281	71.6
	0.0164	69.1
	0.0129	66.5
	0.0077	58.6
	0.0046	52.5
	0.0014	38.3
	0.0012	36.7

% Cobbles	
% Gravel	0.0
% Sand	22.8
% Fines	77.2
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	2	5.0	●	31.2	71	47	42	Gray CLAY with Sand (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

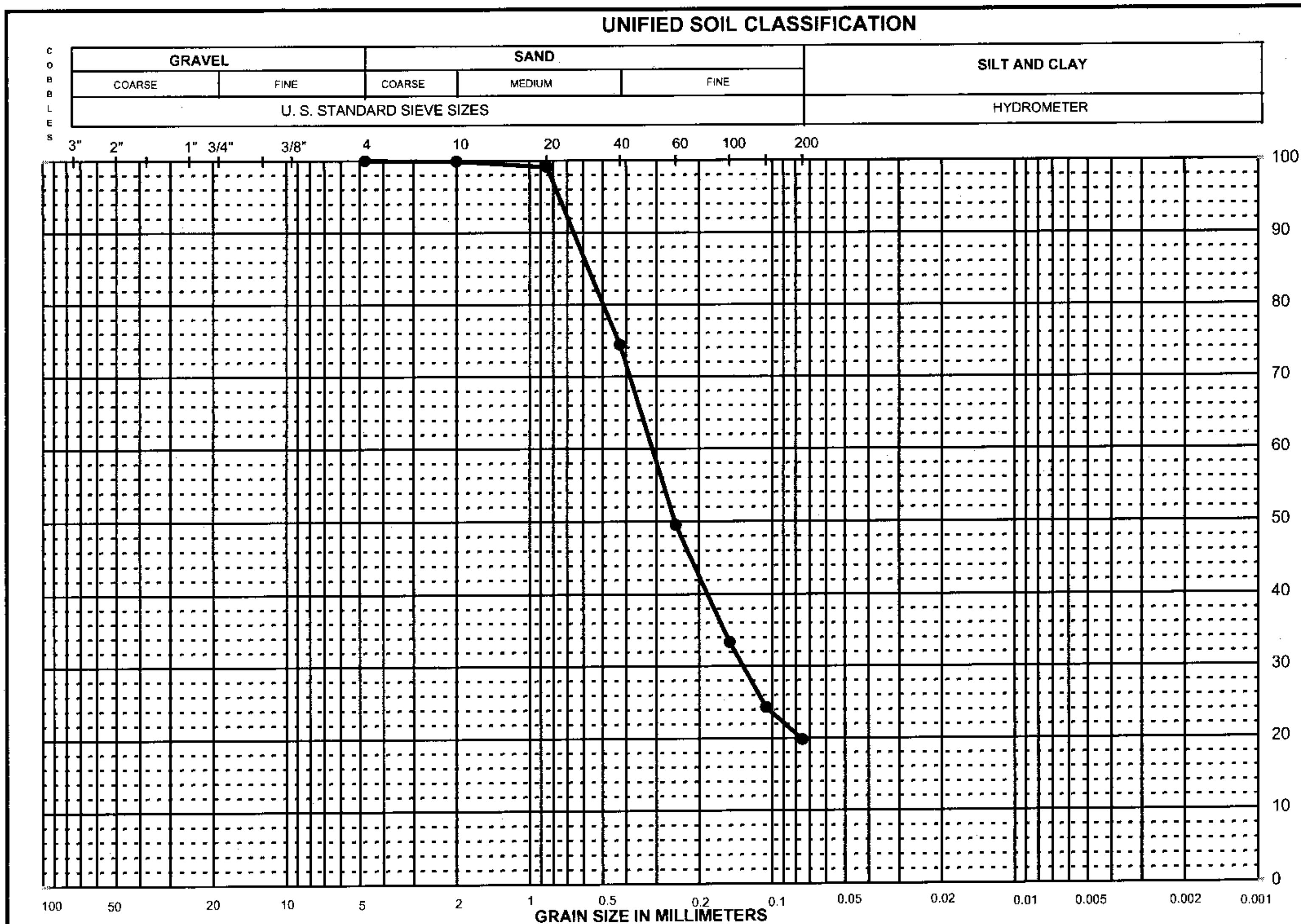
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-38

sa_ssrb7@5

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	99.1
#40	0.425	74.4
#60	0.250	49.5
#100	0.150	33.3
#140	0.106	24.3
#200	0.075	19.8
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	80.2
% Fines	19.8
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	3	10.5	●	15.2				Reddish Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

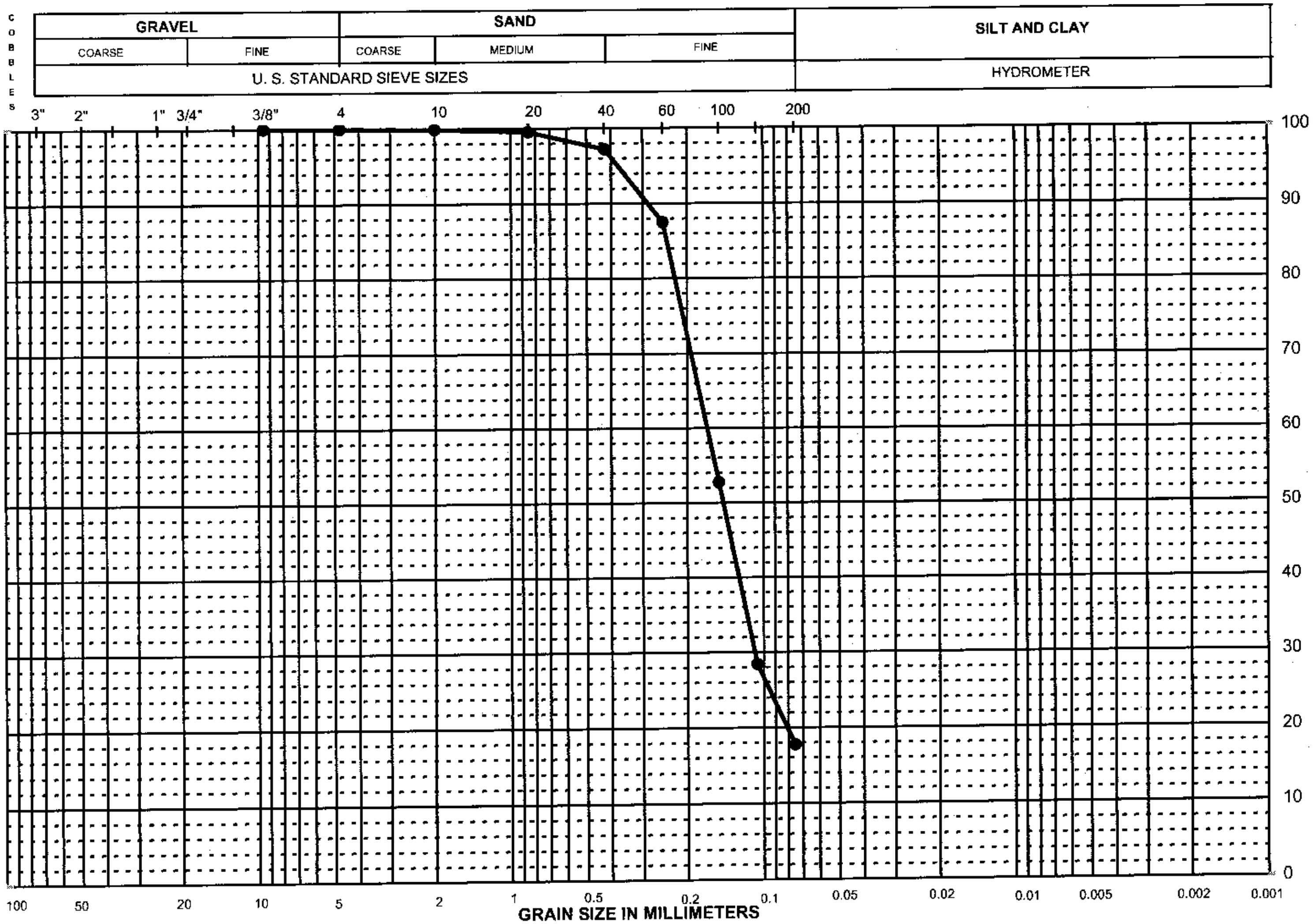
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-39

sa_ssrb7@10

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	100.0
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	99.5
#40	0.425	97.2
#60	0.250	87.5
#100	0.150	52.7
#140	0.106	28.4
#200	0.075	17.7
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	82.3
% Fines	17.7
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	5	20.3	●	22.3				Reddish Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

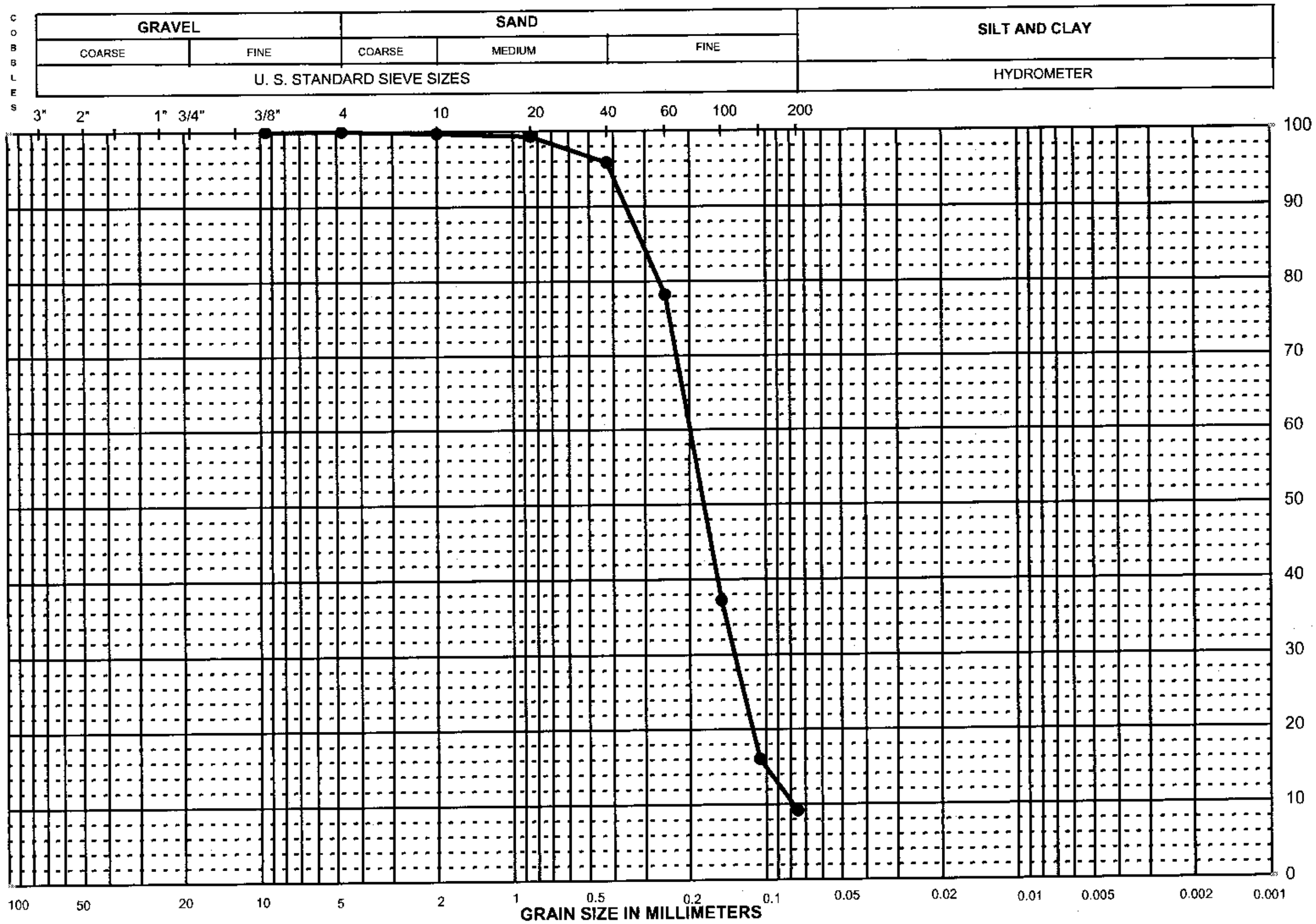
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-40

sa_ssrb7@22

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	100.0
#4	4.75	100.0
#10	2.00	99.7
#20	0.850	99.3
#40	0.425	95.8
#60	0.250	78.2
#100	0.150	37.2
#140	0.106	16.0
#200	0.075	9.1
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	90.9
% Fines	9.1
D_{60}	0.2
D_{30}	0.15
D_{10}	0.079
C_u	2.5
C_c	1.4

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	6	25.6	●	25.6				Gray Poorly Graded SAND with Silt (SP-SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

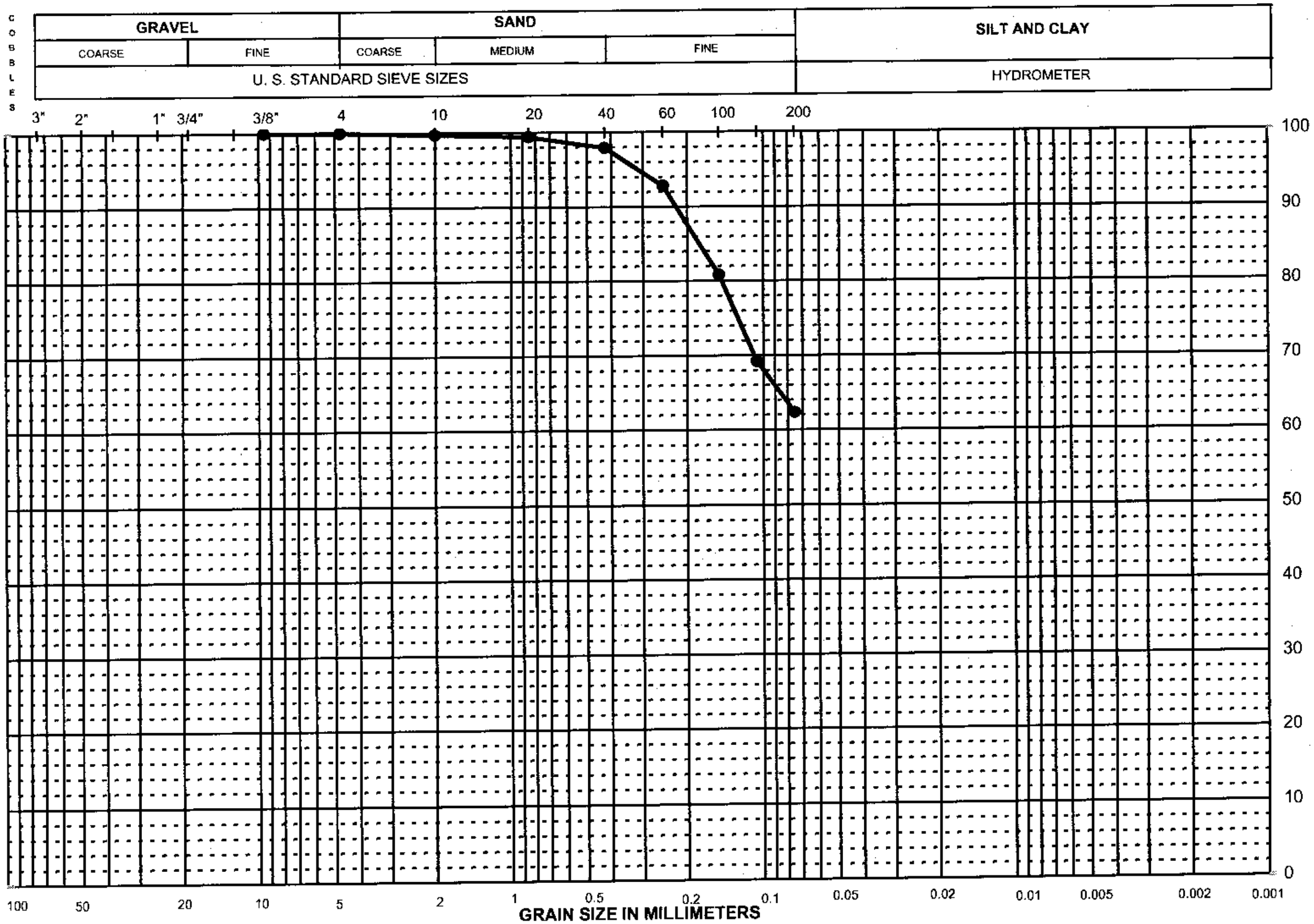
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-41

sa_ssrb7@26

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	100.0
#4	4.75	100.0
#10	2.00	99.7
#20	0.850	99.4
#40	0.425	97.9
#60	0.250	92.8
#100	0.150	80.8
#140	0.106	69.2
#200	0.075	62.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	37.7
% Fines	62.3
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	7	30.2	●	24.2				Gray Sandy CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

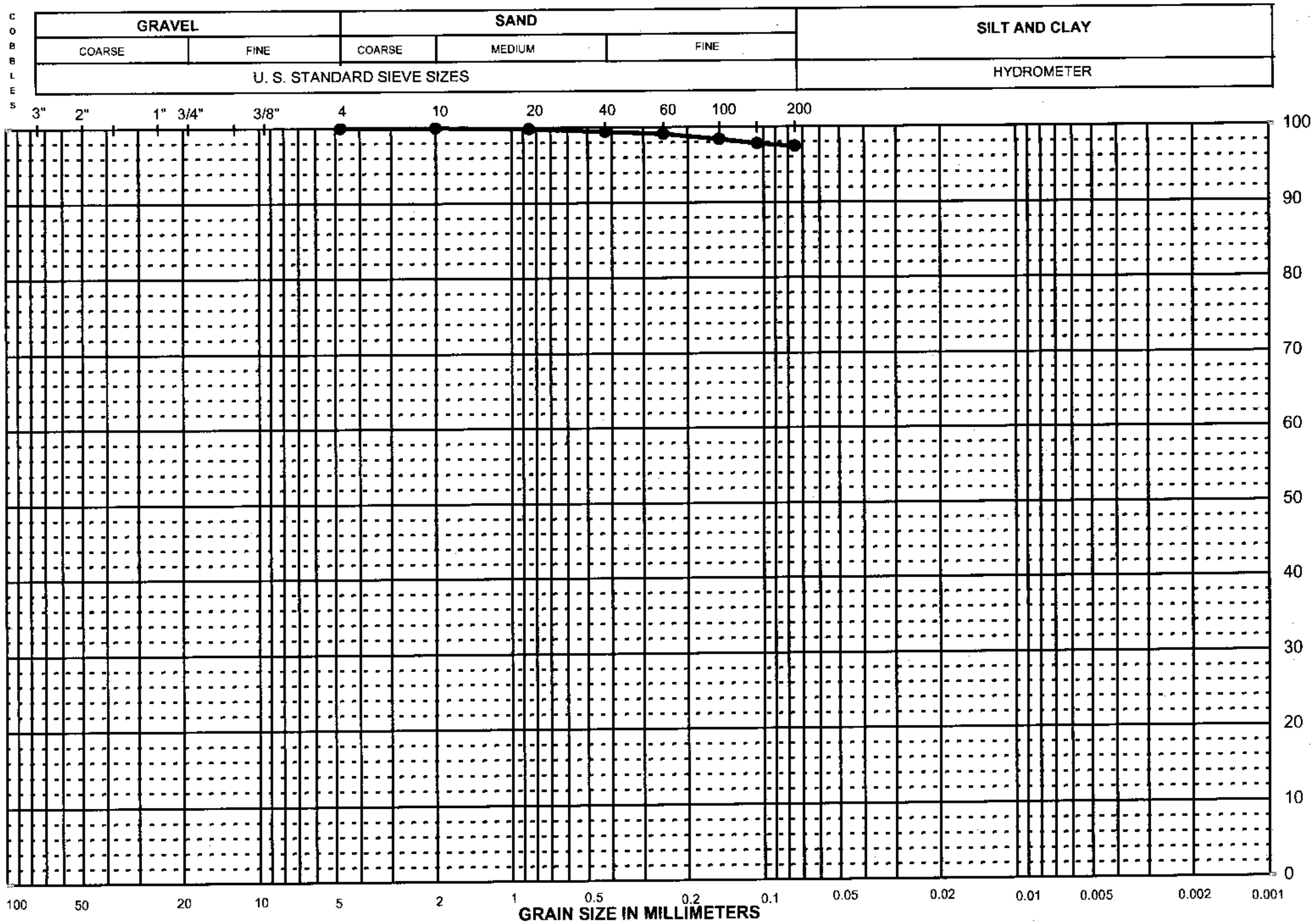
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-42

sa_ssrb7@30

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.8
#40	0.425	99.4
#60	0.250	99.1
#100	0.150	98.4
#140	0.106	97.8
#200	0.075	97.4
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	2.6
% Fines	97.4
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-7	10	45.2	●	24.9	66	45		Reddish Brown CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

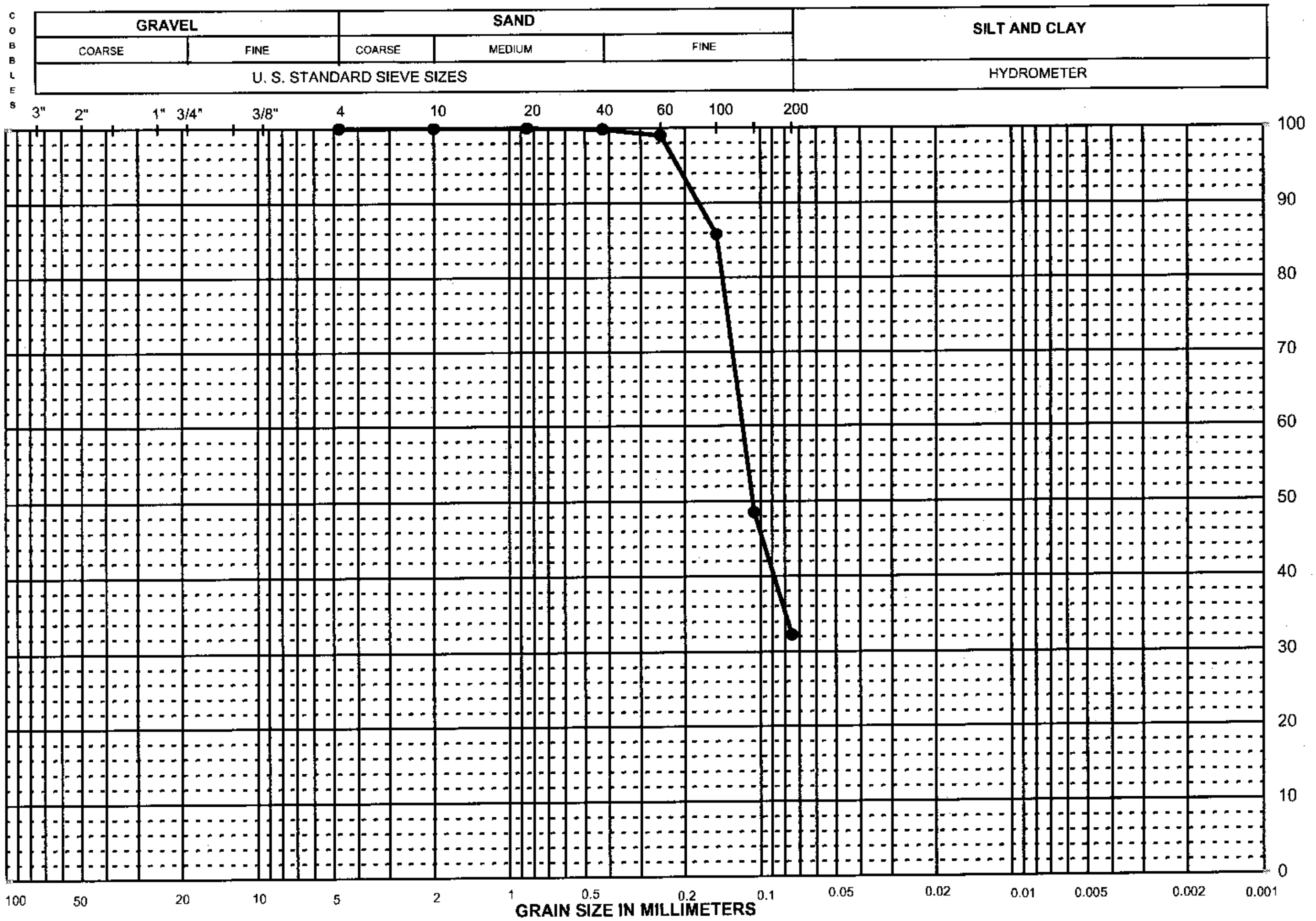
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-43

sa_ssrb7@45

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.8
#60	0.250	99.0
#100	0.150	85.8
#140	0.106	48.5
#200	0.075	32.2
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	67.8
% Fines	32.2
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-11	1	2.0	●	27.3				Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

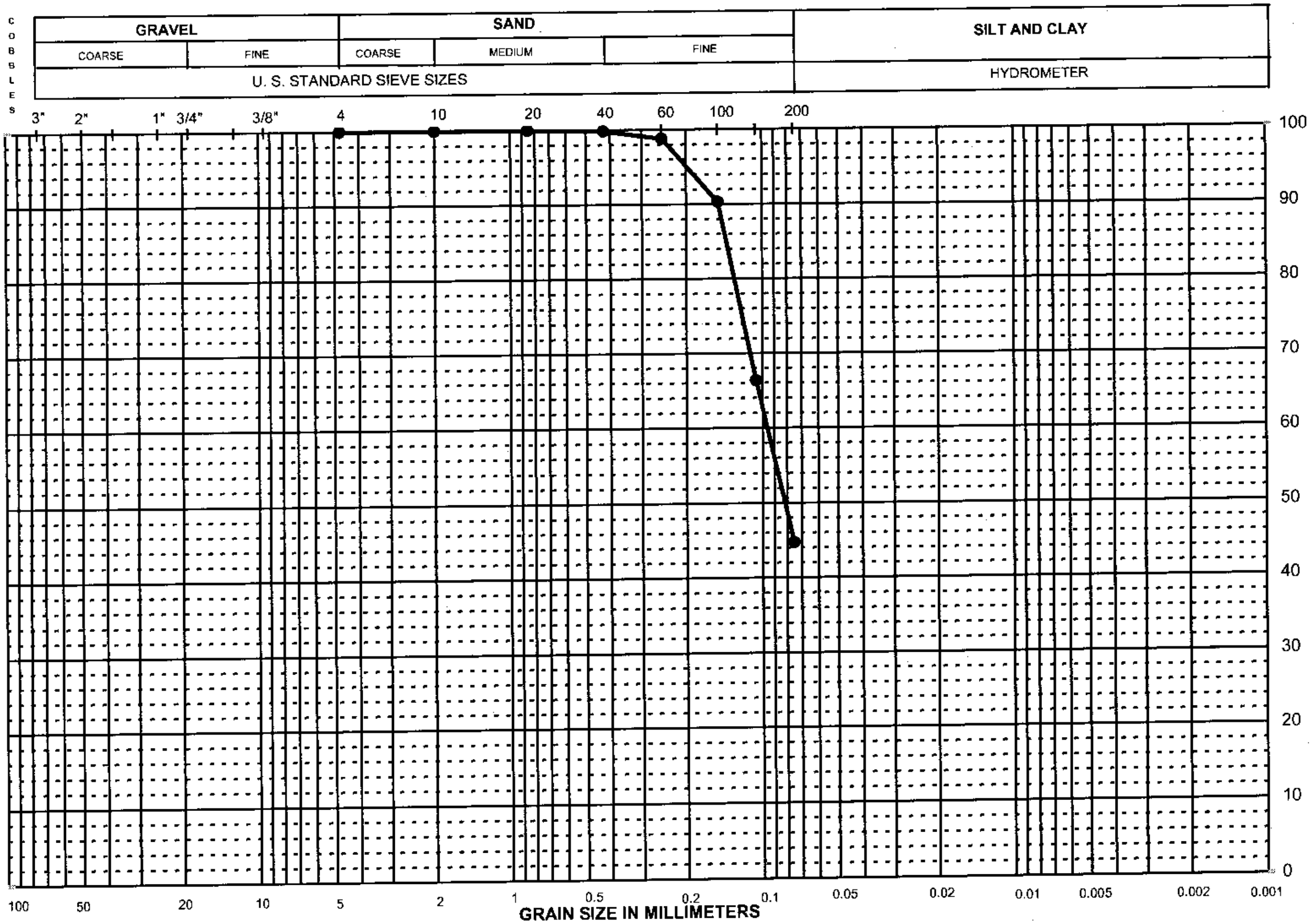
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-44

sa_ssrb11@2

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.8
#60	0.250	98.8
#100	0.150	90.3
#140	0.106	66.3
#200	0.075	44.7
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	55.3
% Fines	44.7
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-11	4	9.3	●	23.3				Olive Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

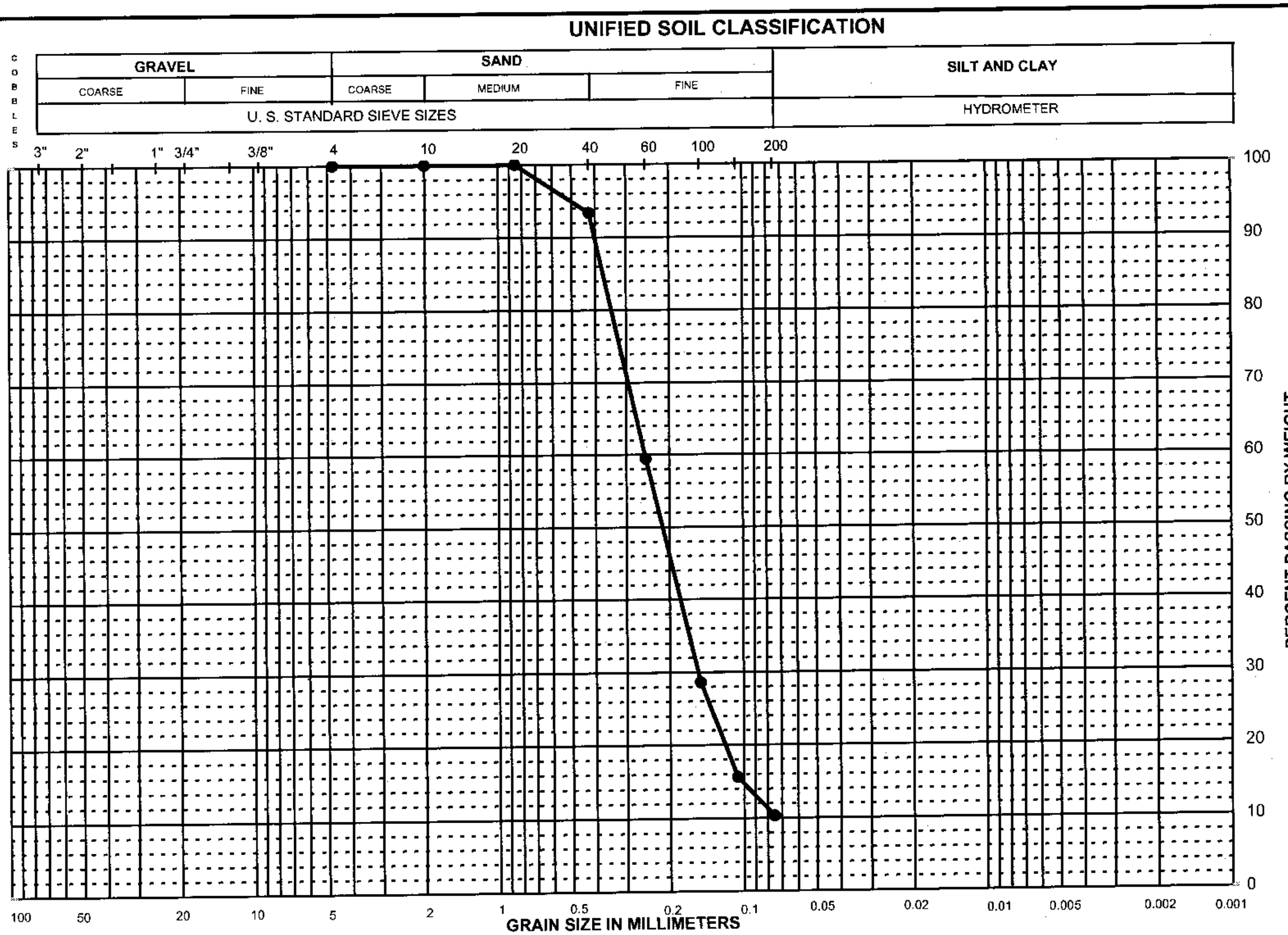
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-45

sa_ssrb11@9



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	93.4
#60	0.250	59.4
#100	0.150	28.6
#140	0.106	15.6
#200	0.075	10.3
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	89.7
% Fines	10.3
D_{60}	0.26
D_{30}	0.17
D_{10}	0.072
C_u	3.6
C_c	1.5

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-11	5	14.0	●	19.4				Olive Brown Poorly Graded SAND with Silt (SP-SM)

PROJECT NAME: Salton Sea Restoration

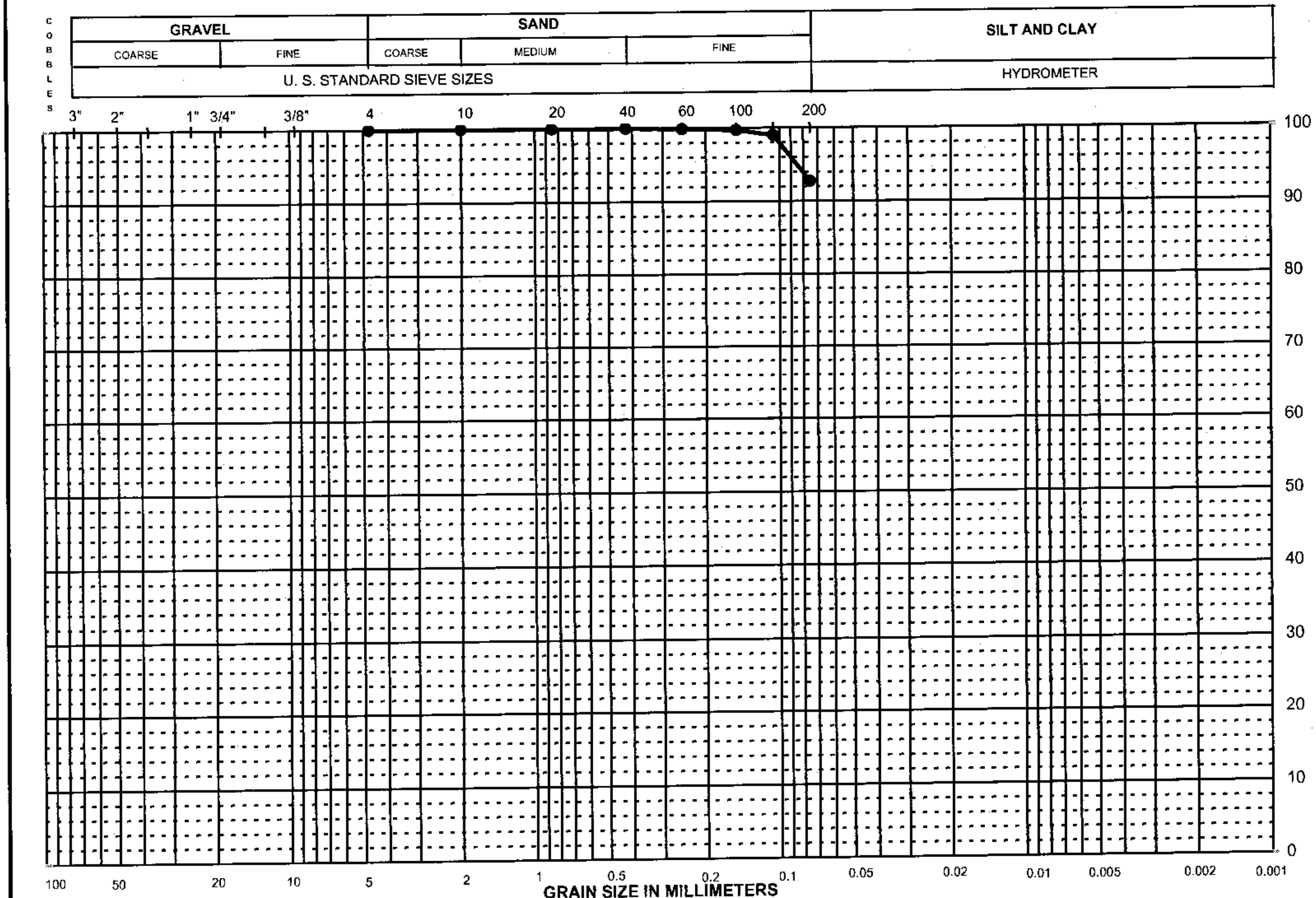
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-46

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	100.0
#60	0.250	99.9
#100	0.150	99.7
#140	0.106	99.0
#200	0.075	92.7
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	7.3
% Fines	92.7
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-14	1	2.0	●	33.0				Brown SILT (ML)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

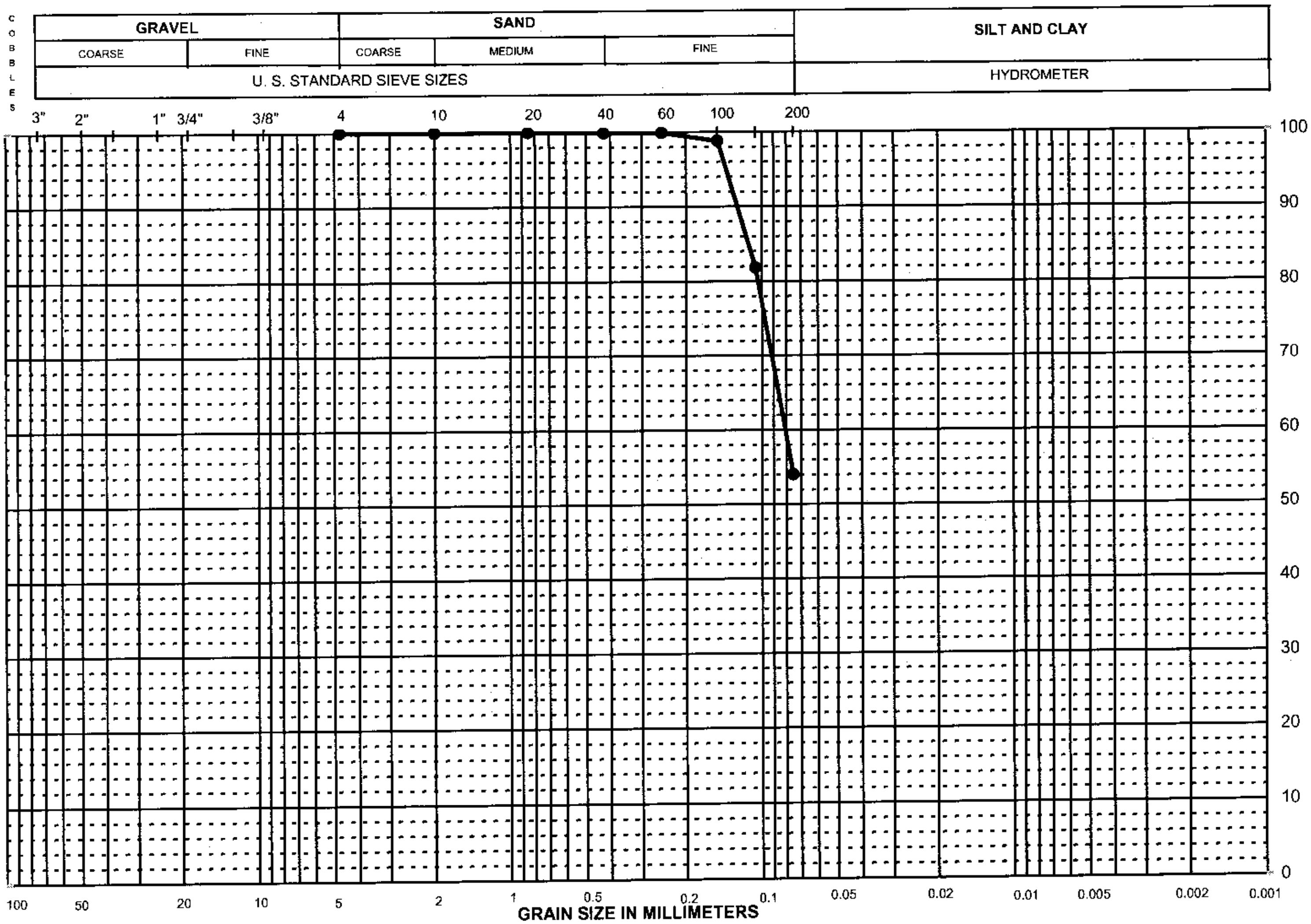
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-47

sa_ssrb14@2

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.9
#100	0.150	98.8
#140	0.106	81.8
#200	0.075	54.0
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	46.0
% Fines	54.0
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-14	3	11.2	●	28.3				Reddish Brown Sandy SILT (ML)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

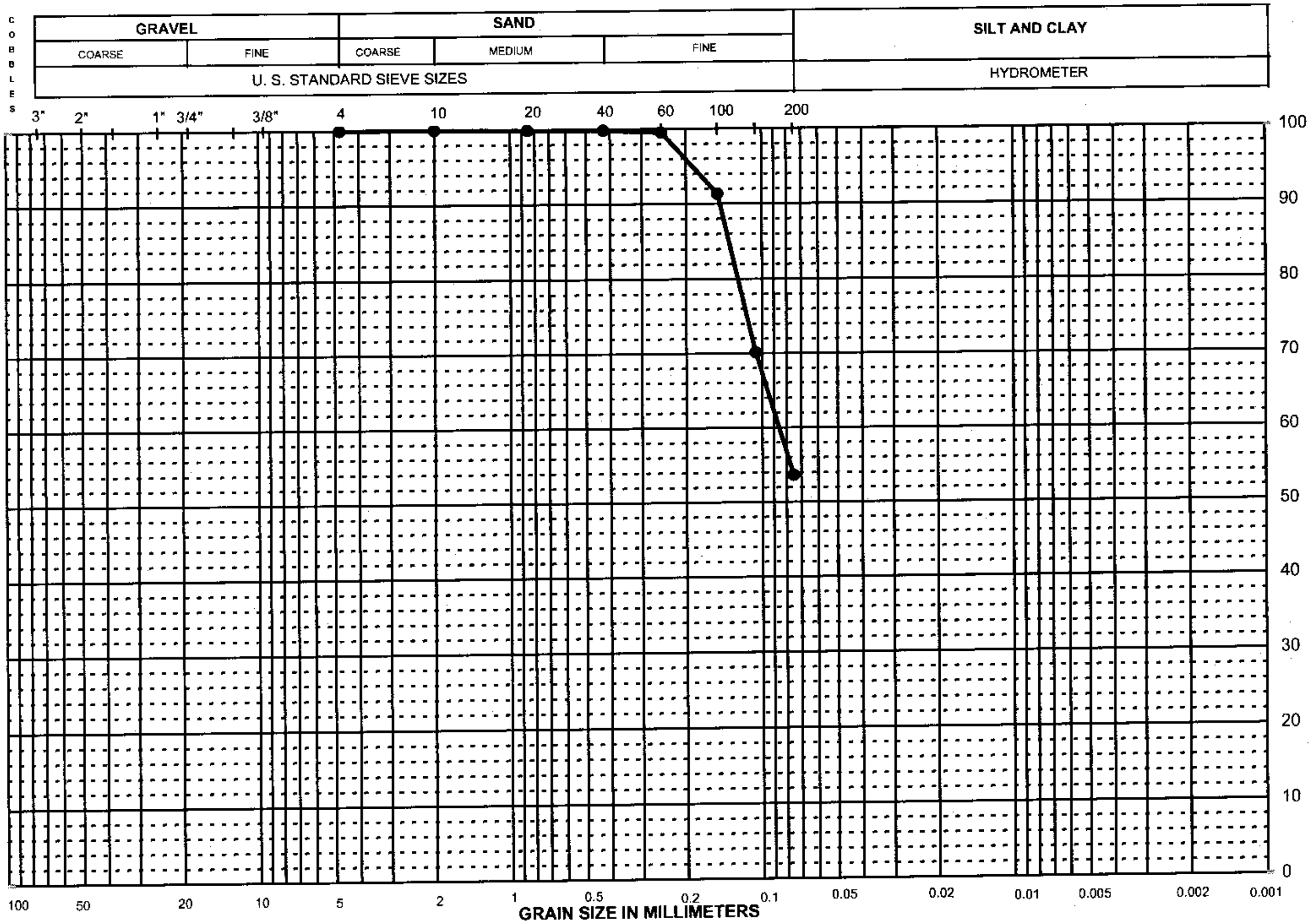
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-48

sa_ssrb14@11

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.9
#40	0.425	99.8
#60	0.250	99.5
#100	0.150	91.3
#140	0.106	70.1
#200	0.075	53.6
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	46.4
% Fines	53.6
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-14	7	29.5	●	27.8				Brown Sandy SILT (ML)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

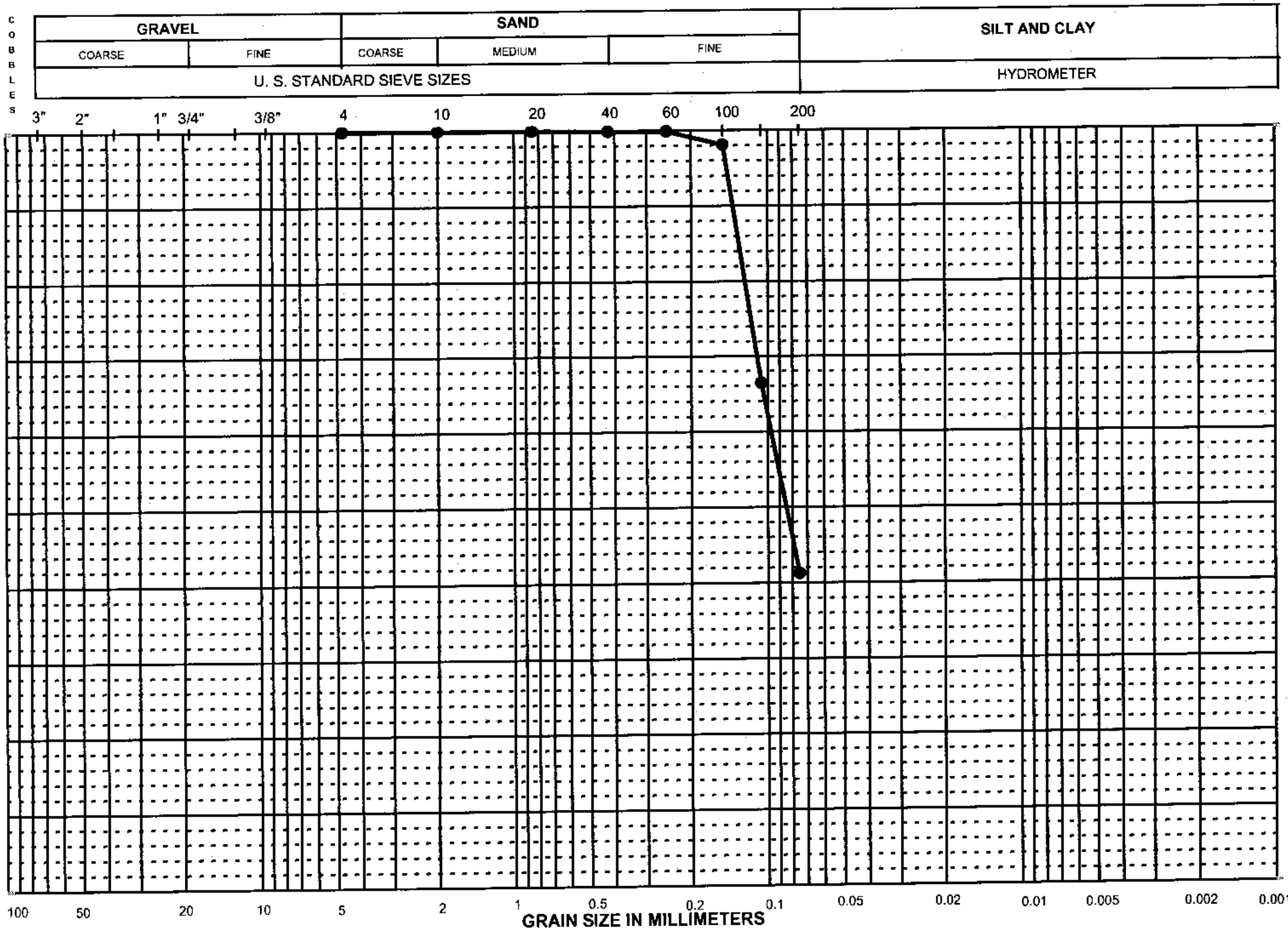
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-49

sa_ssrb14@29

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.9
#100	0.150	98.1
#140	0.106	66.4
#200	0.075	41.2
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	58.8
% Fines	41.2
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-14	11	51.0	●	25.9				Reddish Brown Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

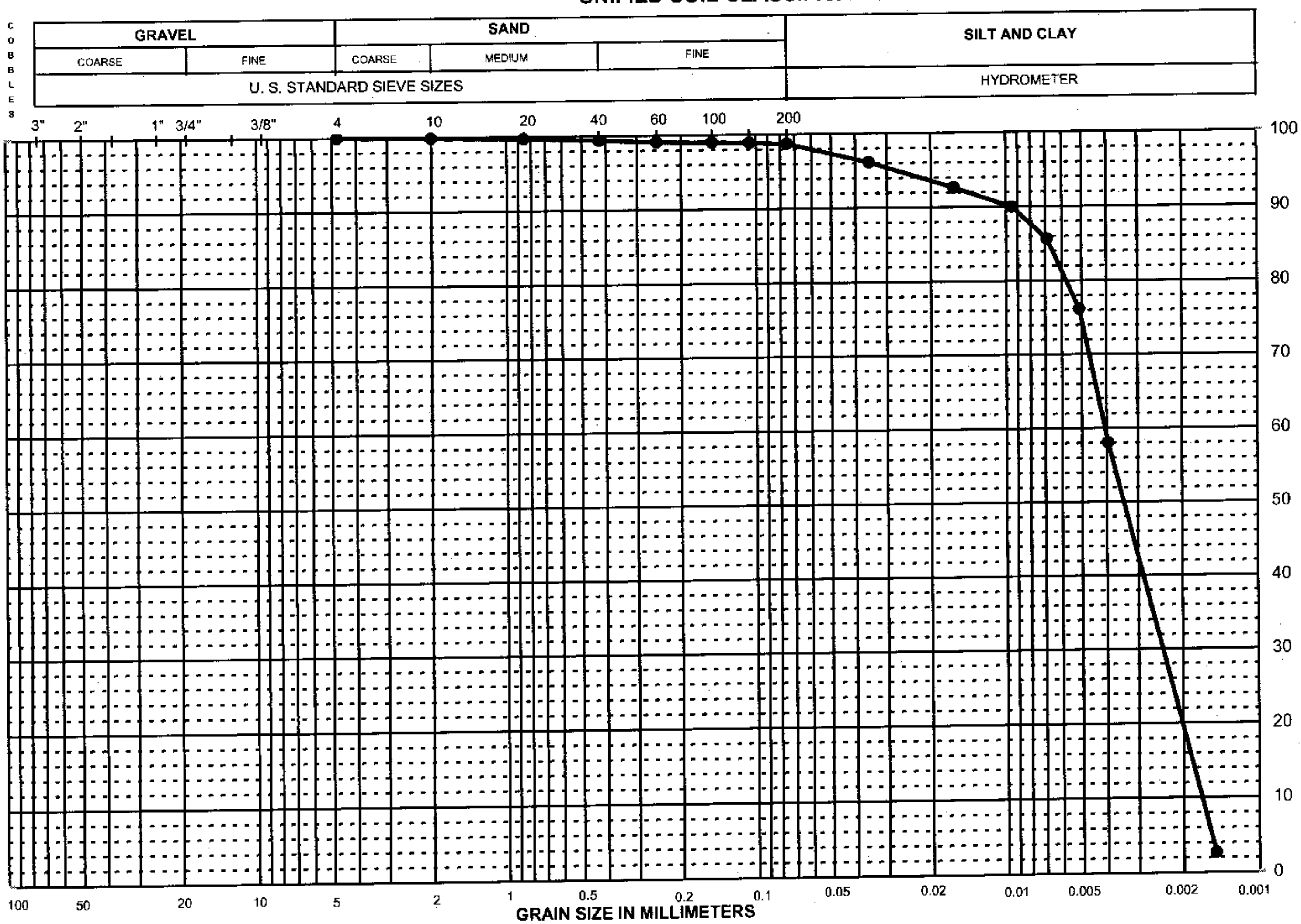
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-50

sa_ssrb14@51

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	99.9
#20	0.850	99.7
#40	0.425	99.4
#60	0.250	99.1
#100	0.150	99.0
#140	0.106	98.9
#200	0.075	98.7
Hydrometer Analysis	0.0354	96.1
	0.0162	92.7
	0.0095	90.0
	0.0069	85.7
	0.0051	76.2
	0.0039	58.0
	0.0015	2.7

% Cobbles	
% Gravel	0.0
% Sand	1.3
% Fines	98.7
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-17	5	20.0	●	32.4	62	38	19	Reddish Brown CLAY (CH)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

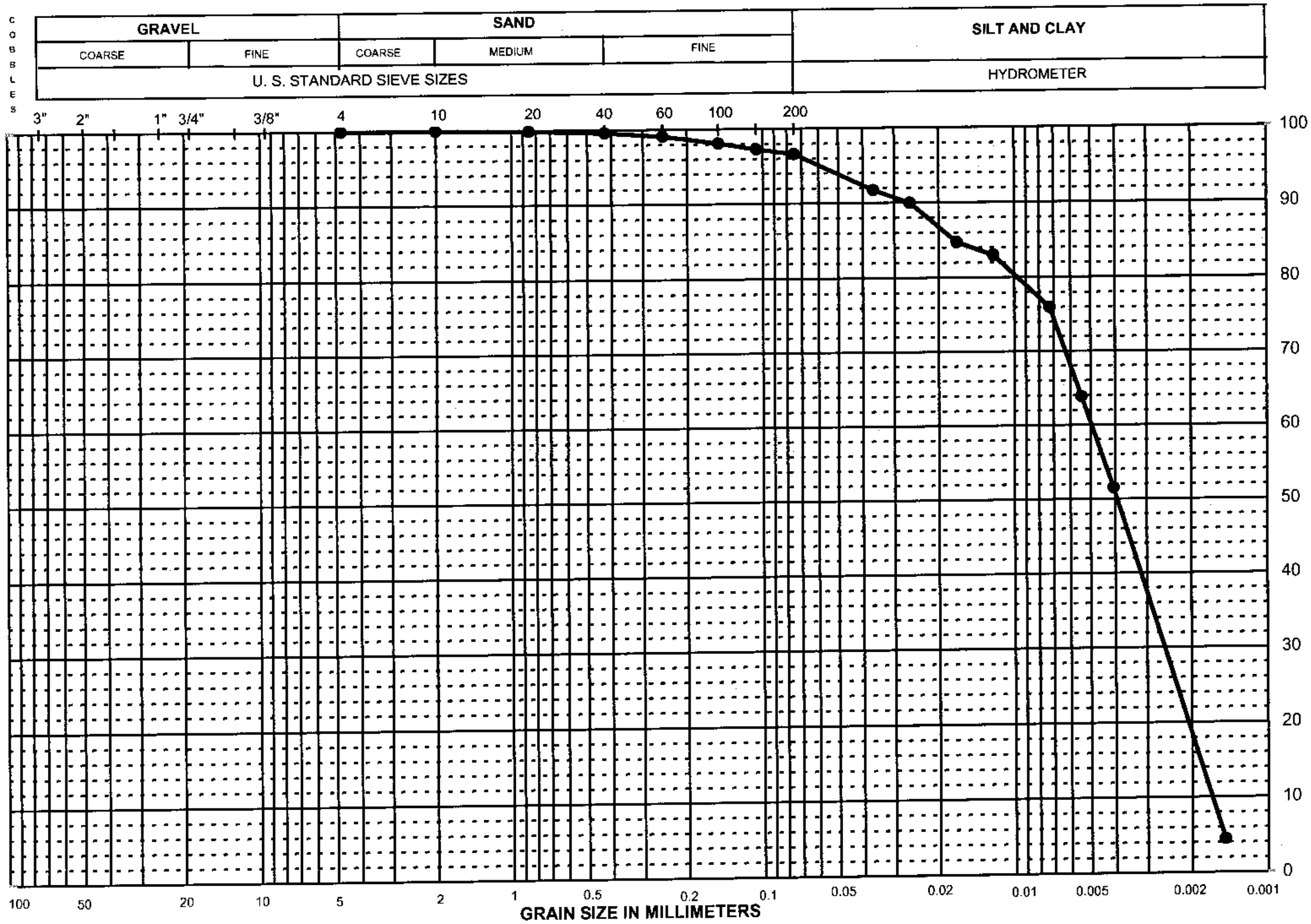
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-51

sa_ssrb17@20

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.9
#40	0.425	99.6
#60	0.250	99.1
#100	0.150	98.1
#140	0.106	97.3
#200	0.075	96.6
Hydrometer Analysis	0.0364	91.7
	0.0260	89.9
	0.0170	84.7
	0.0121	83.0
	0.0073	76.0
	0.0054	63.8
	0.0041	51.5
	0.0015	4.4

% Cobbles	
% Gravel	0.0
% Sand	3.4
% Fines	96.6
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-19	3	10.7	●				18	Olive Gray CLAY (CH)

PROJECT NAME: **Salton Sea Restoration**

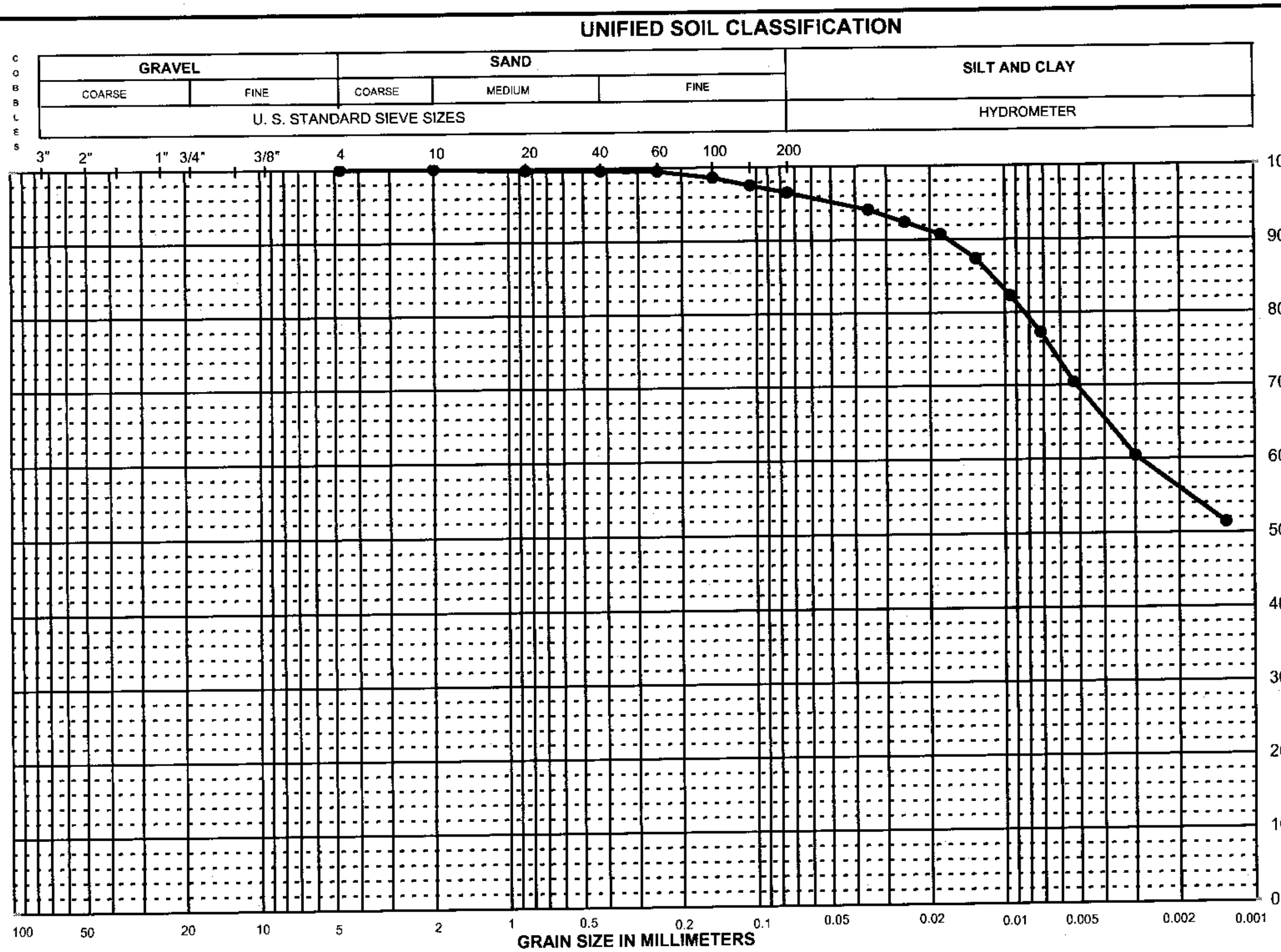
PROJECT NUMBER: **27663042.00003**

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-52

sa_ssrb19@11



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.7
#40	0.425	99.6
#60	0.250	99.5
#100	0.150	98.6
#140	0.106	97.5
#200	0.075	96.5
Hydrometer Analysis	0.0354	94.1
	0.0253	92.4
	0.0181	90.7
	0.0131	87.4
	0.0095	82.3
	0.0072	77.3
	0.0053	70.4
	0.0030	60.4
	0.0013	51.4

% Cobbles	
% Gravel	0.0
% Sand	3.5
% Fines	96.5
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-20	2	5.5	●	36.6	70	40	56	Brown to Grayish CLAY (CH)

PROJECT NAME: Salton Sea Restoration

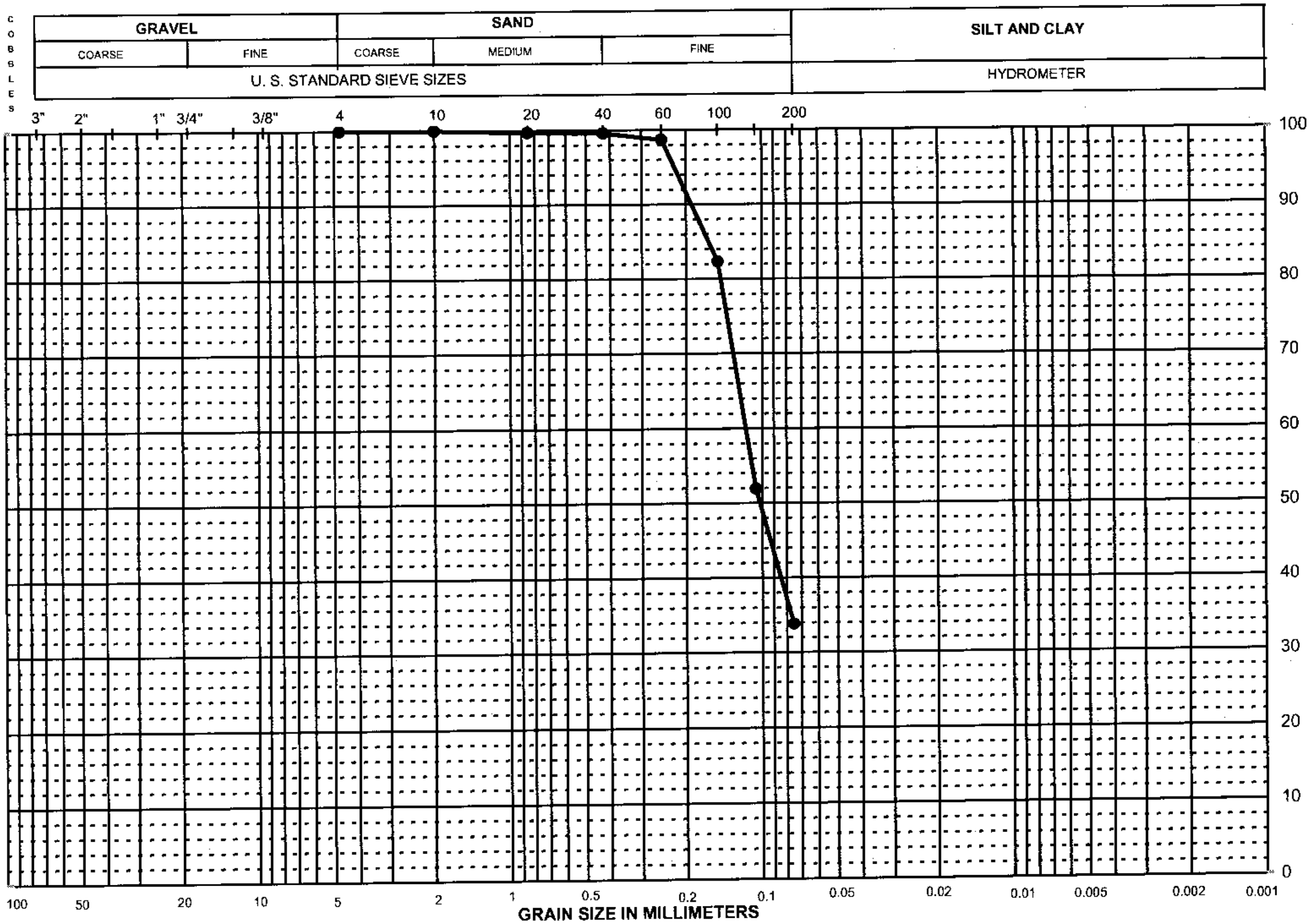
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-53

sa_ssrb20@5



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.7
#40	0.425	99.6
#60	0.250	98.7
#100	0.150	82.3
#140	0.106	51.9
#200	0.075	33.8
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	66.2
% Fines	33.8
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-20	7	31.5	●	27.1				Gray Silty SAND (SM)

PROJECT NAME: Salton Sea Restoration

PROJECT NUMBER: 27663042.00003

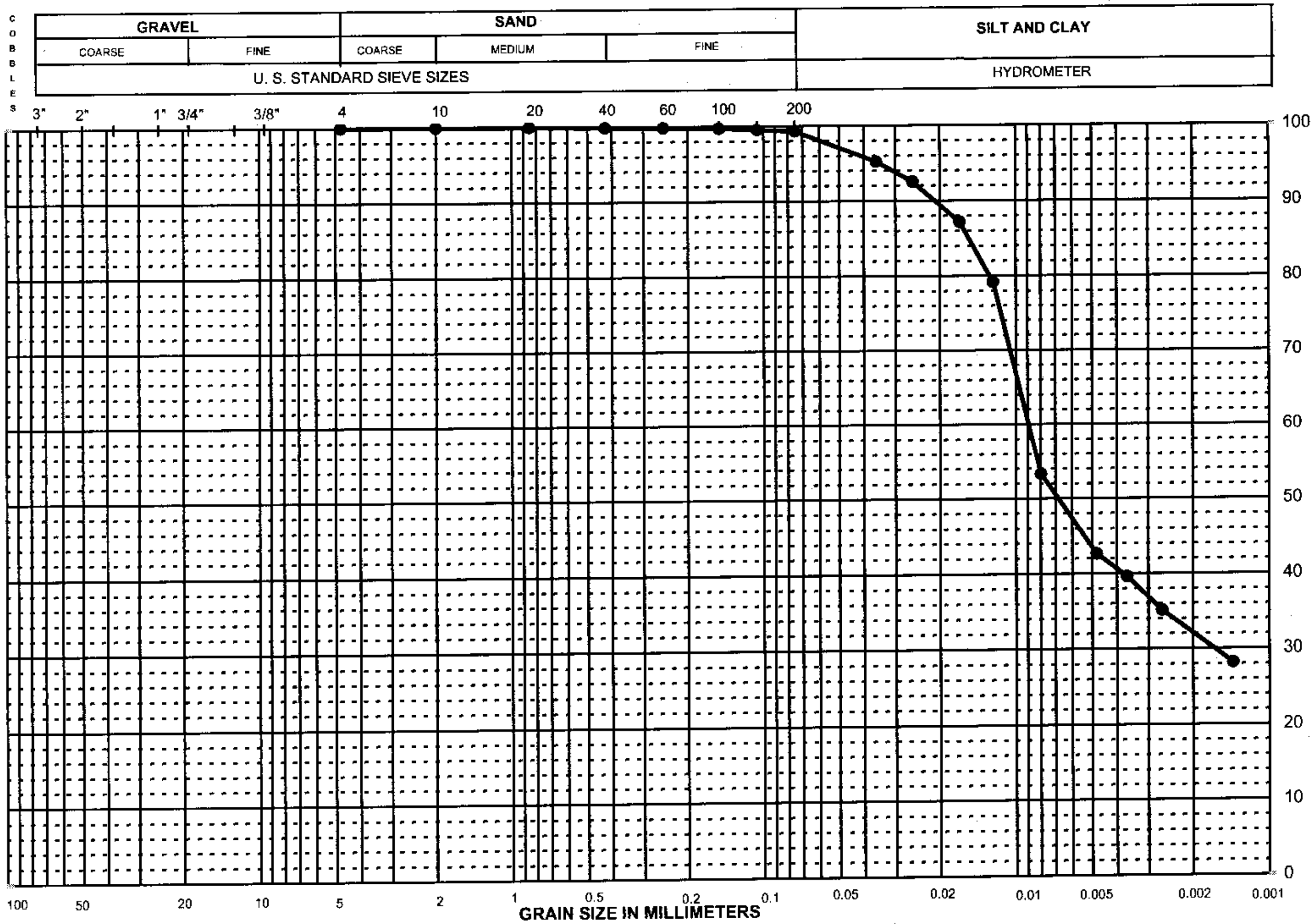
PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-54

sa_ssrb20@32

UNIFIED SOIL CLASSIFICATION



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	100.0
#40	0.425	99.9
#60	0.250	99.8
#100	0.150	99.7
#140	0.106	99.5
#200	0.075	99.3
Hydrometer Analysis	0.0357	95.2
	0.0256	92.5
	0.0167	87.2
	0.0123	79.1
	0.0080	53.3
	0.0048	42.6
	0.0036	39.6
	0.0027	35.1
	0.0014	28.2
% Cobbles		
% Gravel		0.0
% Sand		0.7
% Fines		99.3
D_{60}		
D_{30}		
D_{10}		
C_u		
C_c		

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-26	2	5.8	●	72.8	83	53	32	Dark Brown CLAY (CH)

PROJECT NAME: Salton Sea Restoration

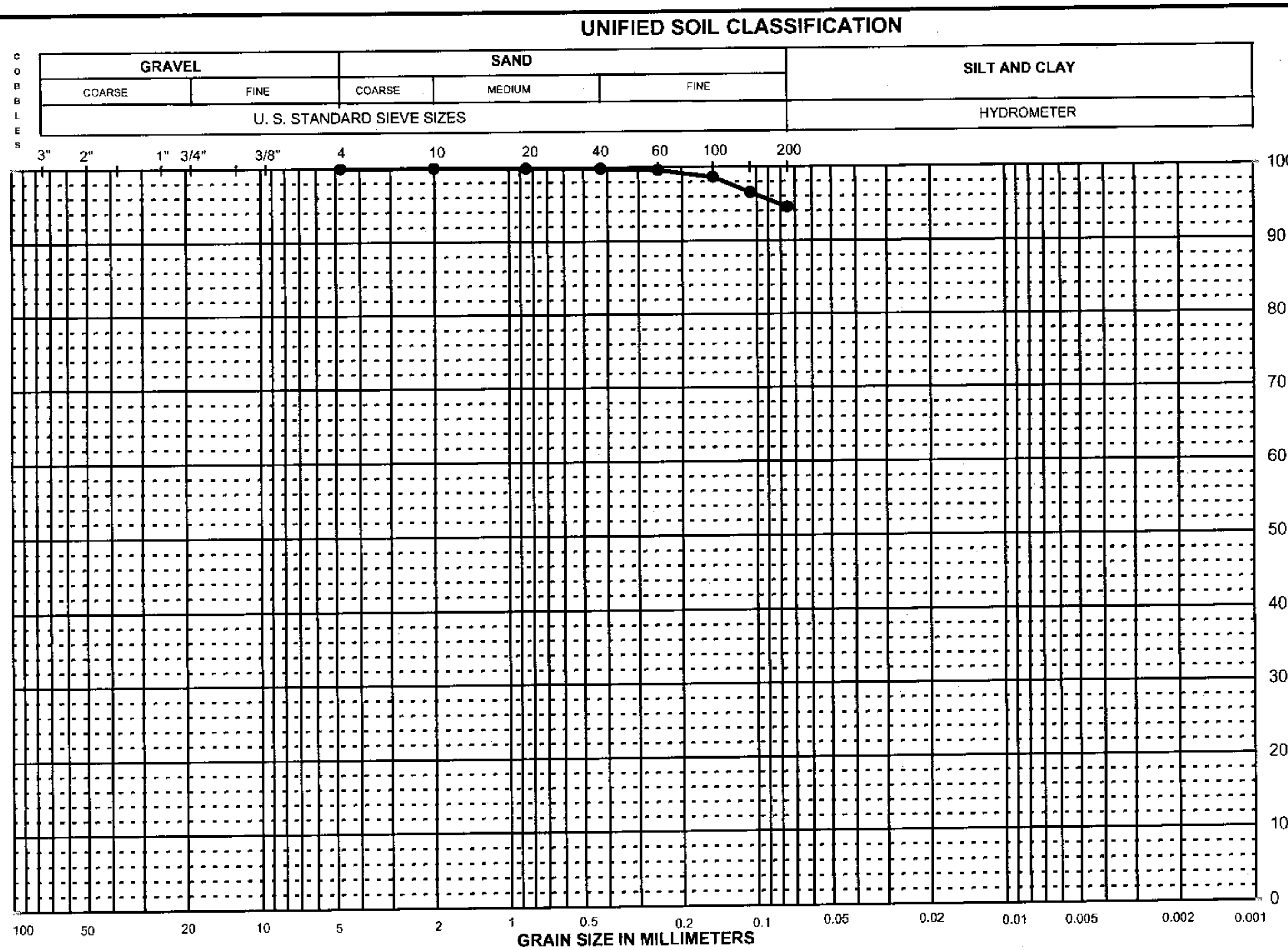
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-55

sa_ssrb26@6



Sieve No.	Dia. mm	% Finer
3"	75.0	
2"	50.0	
1 1/2"	37.5	
1"	25.0	
3/4"	19.00	
1/2"	12.50	
3/8"	9.50	
#4	4.75	100.0
#10	2.00	100.0
#20	0.850	99.9
#40	0.425	99.8
#60	0.250	99.6
#100	0.150	98.6
#140	0.106	96.5
#200	0.075	94.5
Hydrometer Analysis		

% Cobbles	
% Gravel	0.0
% Sand	5.5
% Fines	94.5
D_{60}	
D_{30}	
D_{10}	
C_u	
C_c	

Exploration	Sample No.	Depth (ft)	SYMBOL	Wn (%)	LL	PI	% Clay	Description and Classification
B-26	9	40.7	●					Gray to Olive Gray CLAY (CH)

PROJECT NAME: Salton Sea Restoration

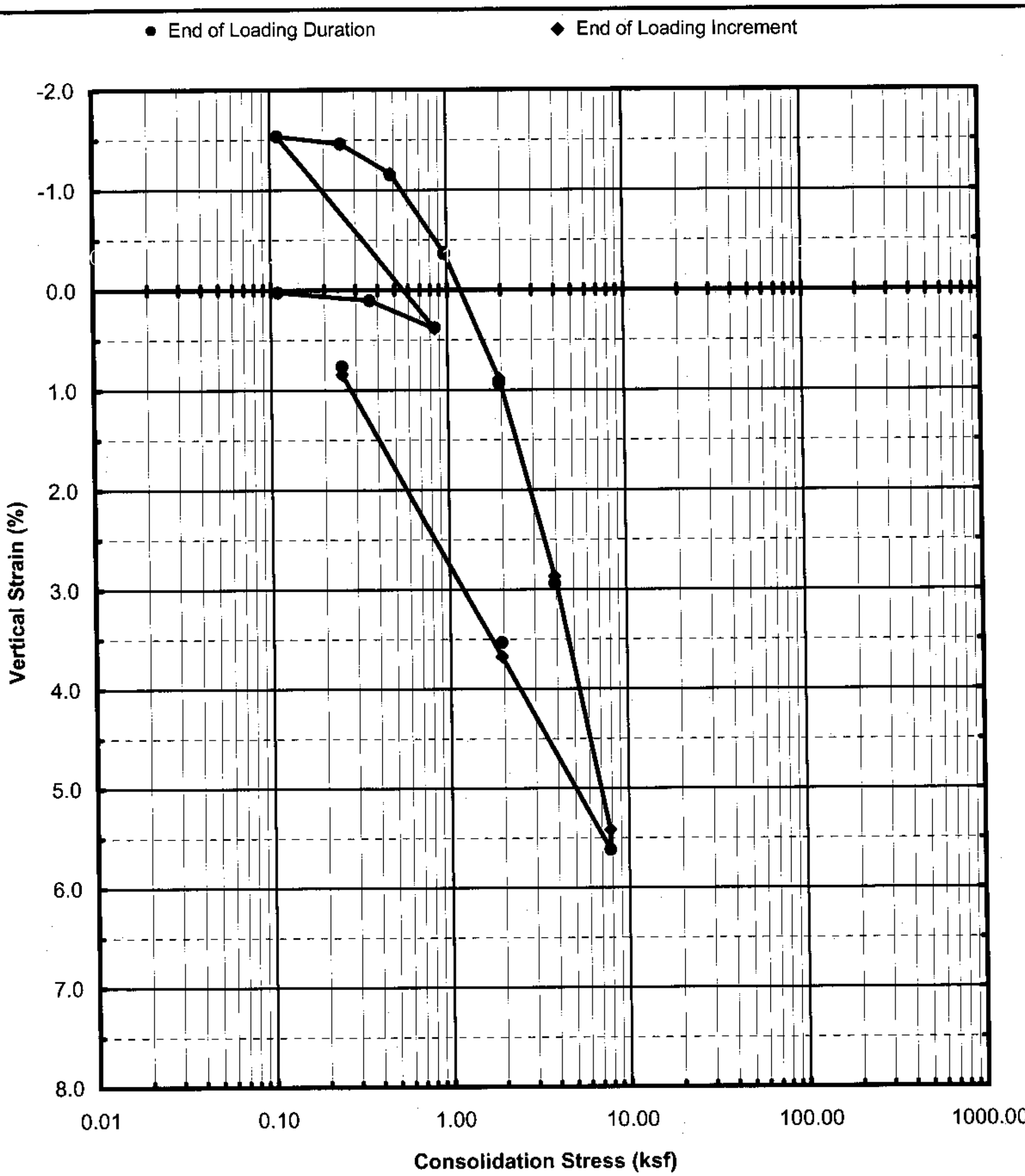
PROJECT NUMBER: 27663042.00003

PARTICLE-SIZE DISTRIBUTION CURVES

URS

Figure No. C-56

sa_ssrb26@41



Exploration No.: **B-2** Sample No.: **5** Depth (ft.): **20.0**

Description/ Classification: **Reddish brown Clay (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	32.5	120.9	91.2	0.79	101.9	1.349	2.870	2.75	65	42
Final:	34.3	120.0	89.4	0.92	102.7	1.377		assumed		

Project Name: Restoration Project

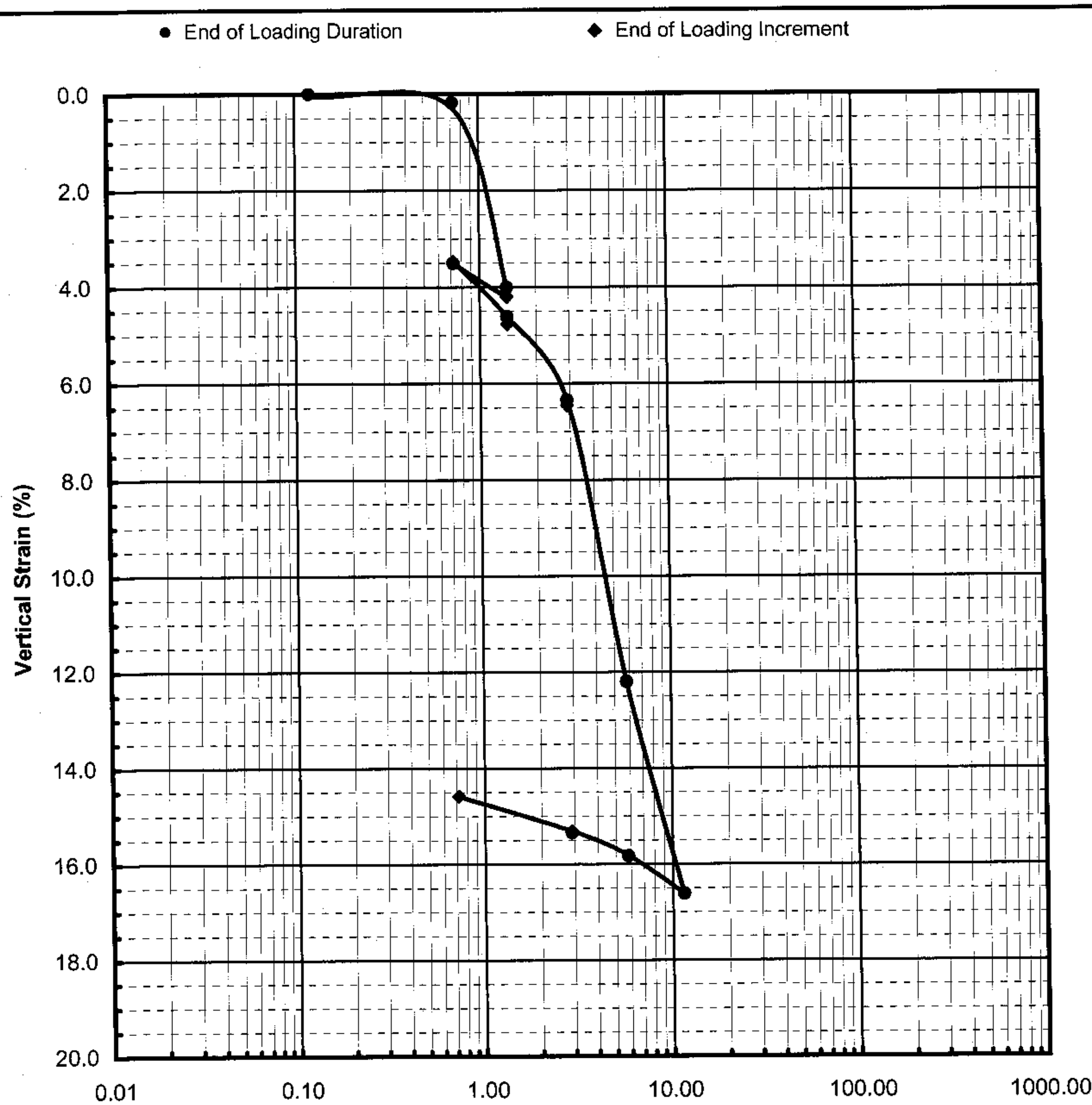
Location: Salton Sea

Project Number: 27663042

Consolidation Test

URS

Figure No.
C-57



Exploration No.: **B-4** Sample No.: **3** Depth (ft.): **11.0**

Description/ Classification: **Grayish Brown CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	81.9	96.1	52.9	2.24	100.4	5.988	2.885	2.75	84	53
Final:	42.7	112.1	78.5	1.18	99.4	5.155		assumed		

Project Name: Restoration Project

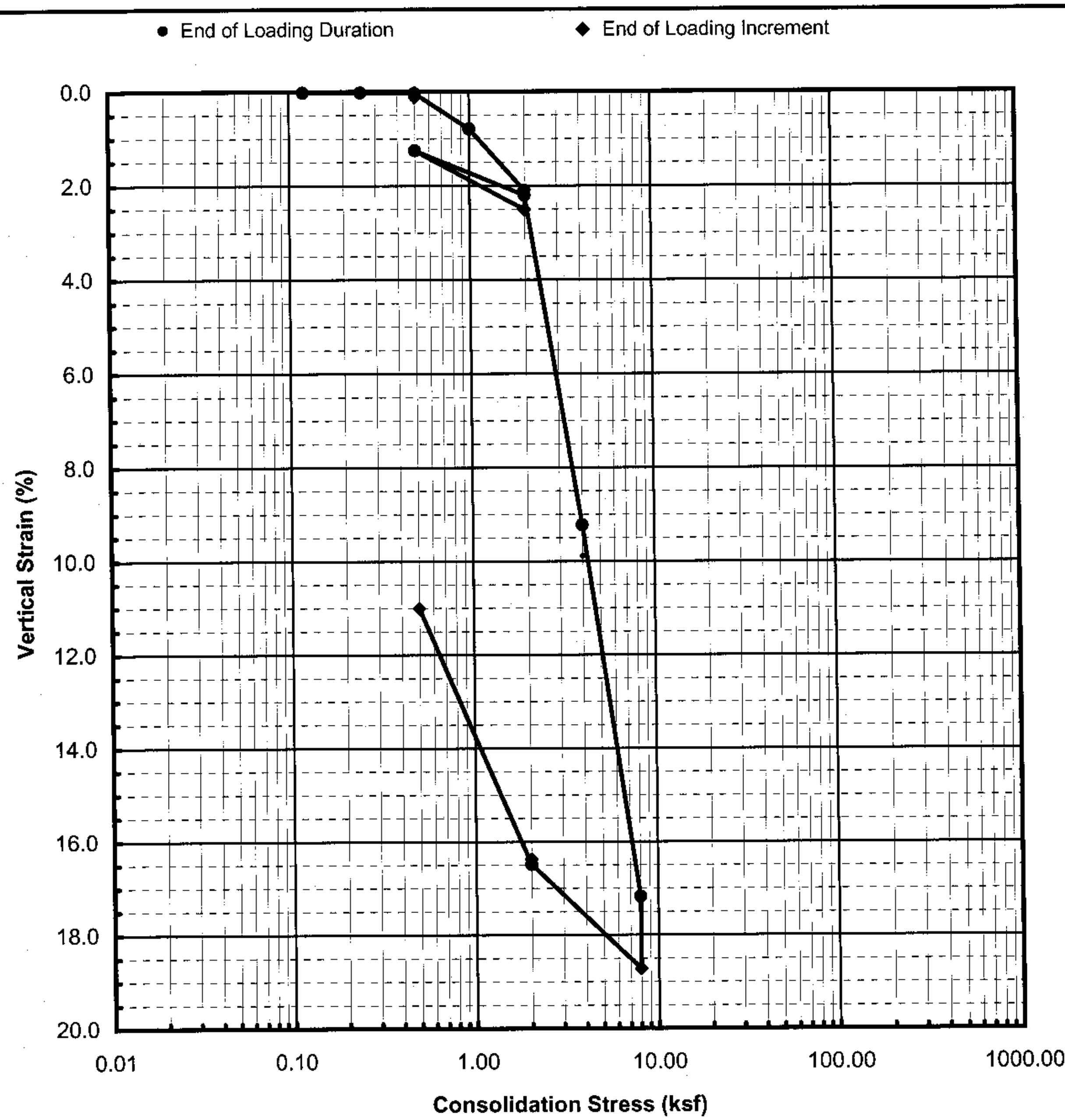
Location: Salton Sea

Project Number: 27663042

Consolidation Test

URS

Figure No.
C-58



Exploration No.: **B-4** Sample No.: **9** Depth (ft.): **41.8**

Description/ Classification: **Brown CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	60.9	102.8	63.9	1.68	99.6	0.885	2.504	2.75		
Final:	51.4	105.0	69.4	1.47	96.1	0.815		assumed		

Project Name: Restoration Project

Location: Salton Sea

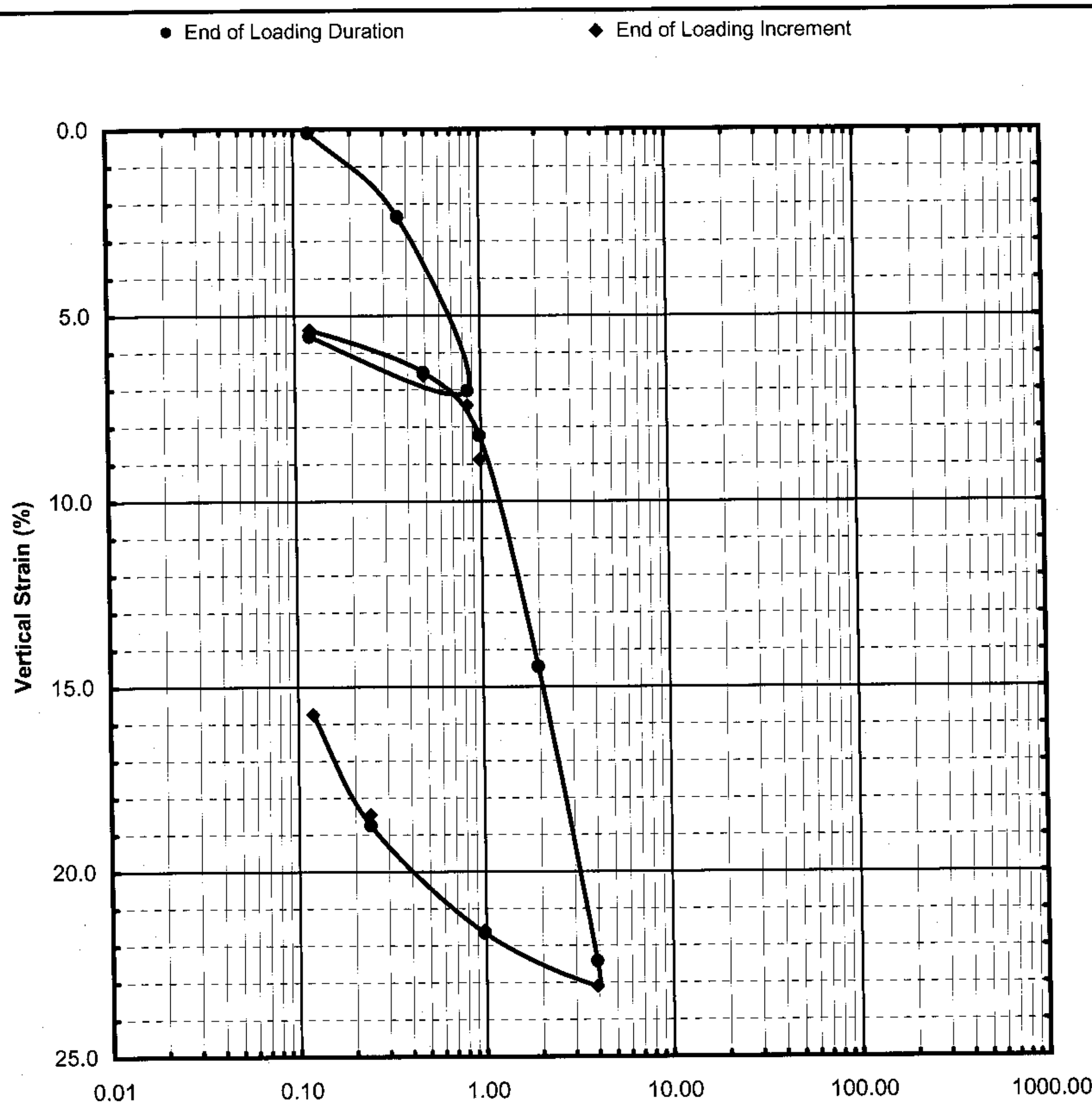
Project Number: 27663042

Consolidation Test

URS

Figure No.
C-59

Od_ssb4@42



Exploration No.: **B-5** Sample No.: **2** Depth (ft.): **7.0**

Description/ Classification: **Blueish gray Clay (CH), very soft, wet**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	58.3	100.9	63.8	1.98	94.9	1.370	2.869	2.75		
Final:	58.3	106.4	67.2	1.55	103.4	1.152		assumed		

Project Name: Restoration Project

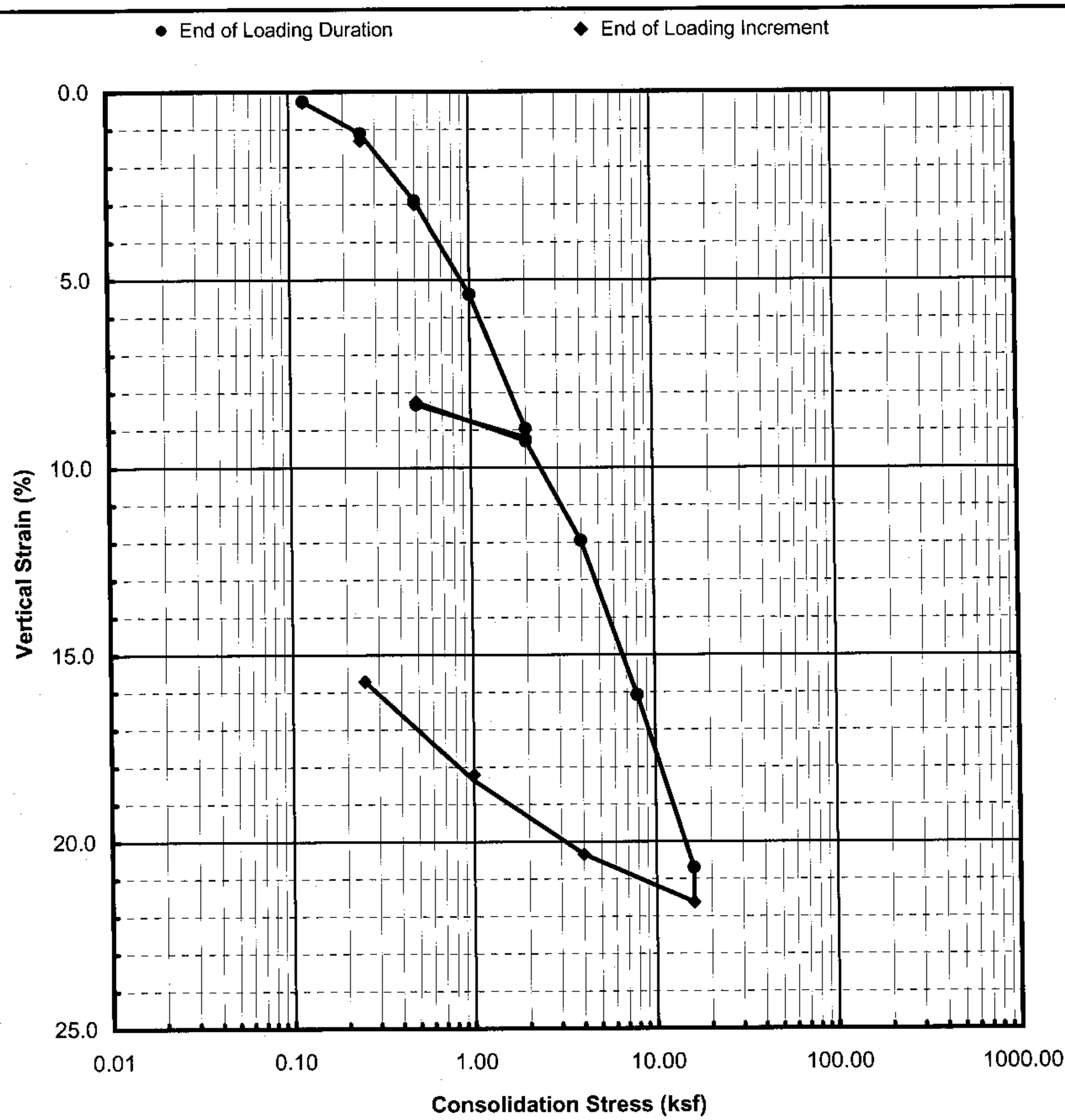
Location: Salton Sea

Project Number: 27663042

Consolidation Test

URS

Figure No. C-60



Exploration No.: **B-5** Sample No.: **10** Depth (ft.): **46.5**

Description/ Classification: **Gray Sandy CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	41.1	102.1	72.4	1.22	82.6	0.800	2.873	2.75		
Final:	32.0	119.6	90.6	0.89	98.8	0.639		assumed		

Project Name: Restoration Project

Location: Salton Sea

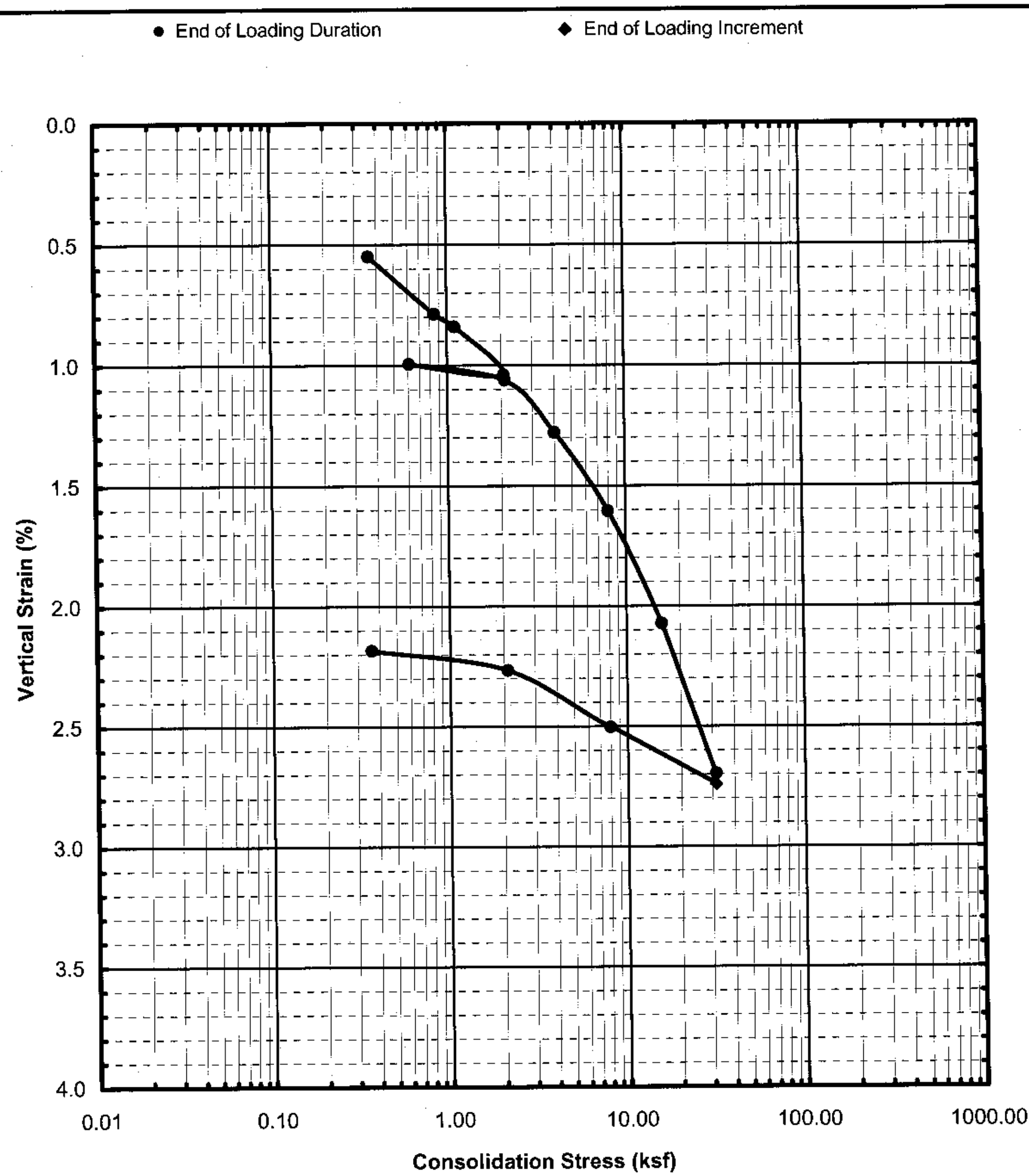
Project Number: 27663042

Consolidation Test

URS

Figure No. C-62

Od_ssb5@47

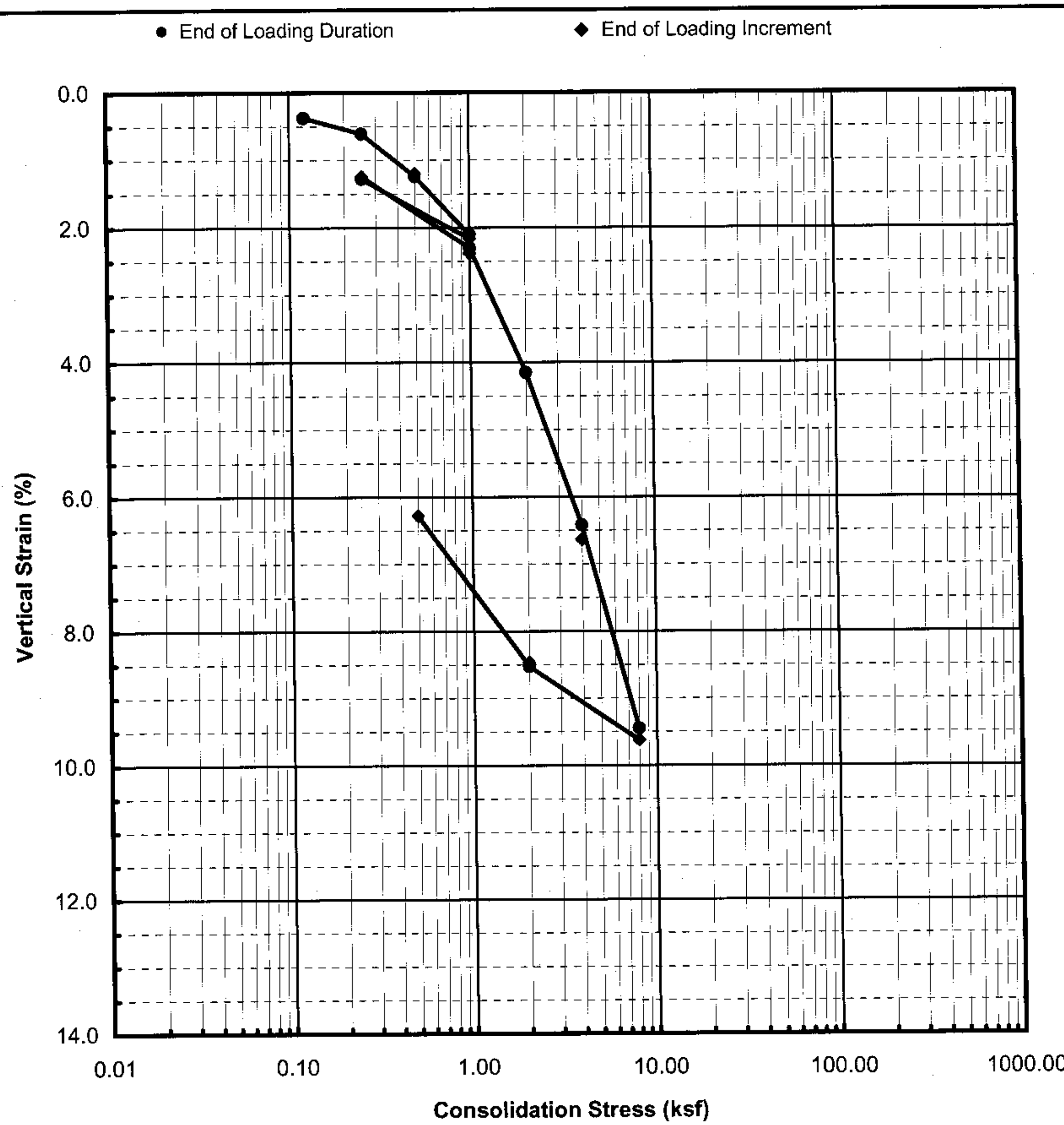


Exploration No.: **B-6** Sample No.: **6** Depth (ft.): **27.0**

Description/ Classification: **Gray Silty SAND (SM)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	25.1	123.8	98.9	0.59	94.3	1.346	2.870	2.75		
Final:	25.3	126.4	100.9	0.70	99.6	1.320		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		Figure No. C-63
Project Number: 27663042		

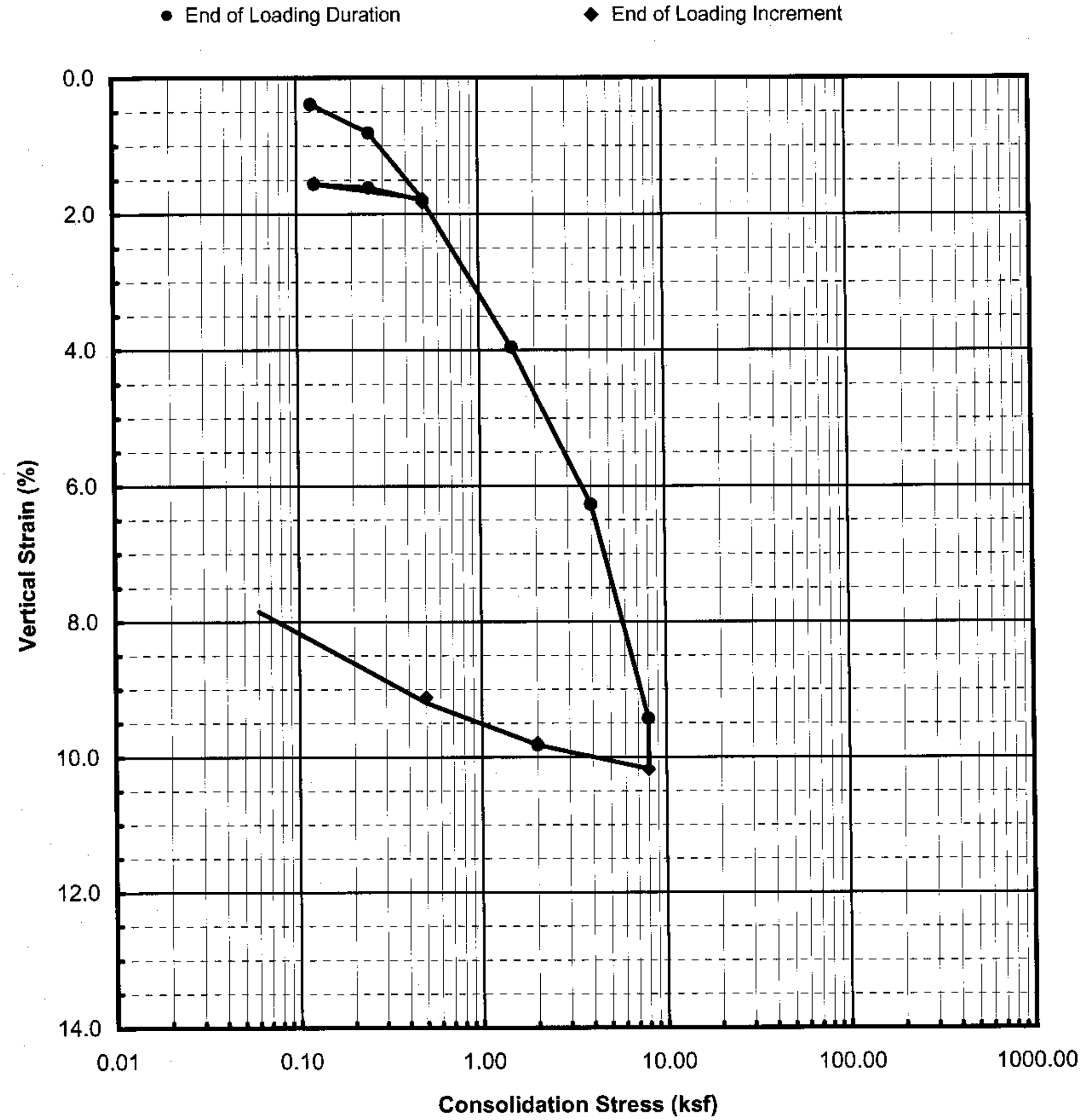


Exploration No.: **B-7** Sample No.: **4** Depth (ft.): **15.8**

Description/ Classification: **Reddish Brown CLAY with Sand (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	31.3	120.4	91.7	#VALUE!	99.0	0.508	2.870	2.75	97	65
Final:	31.3	123.5	94.1	0.82	104.7	0.496		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		Figure No. C-65
Project Number: 27663042		



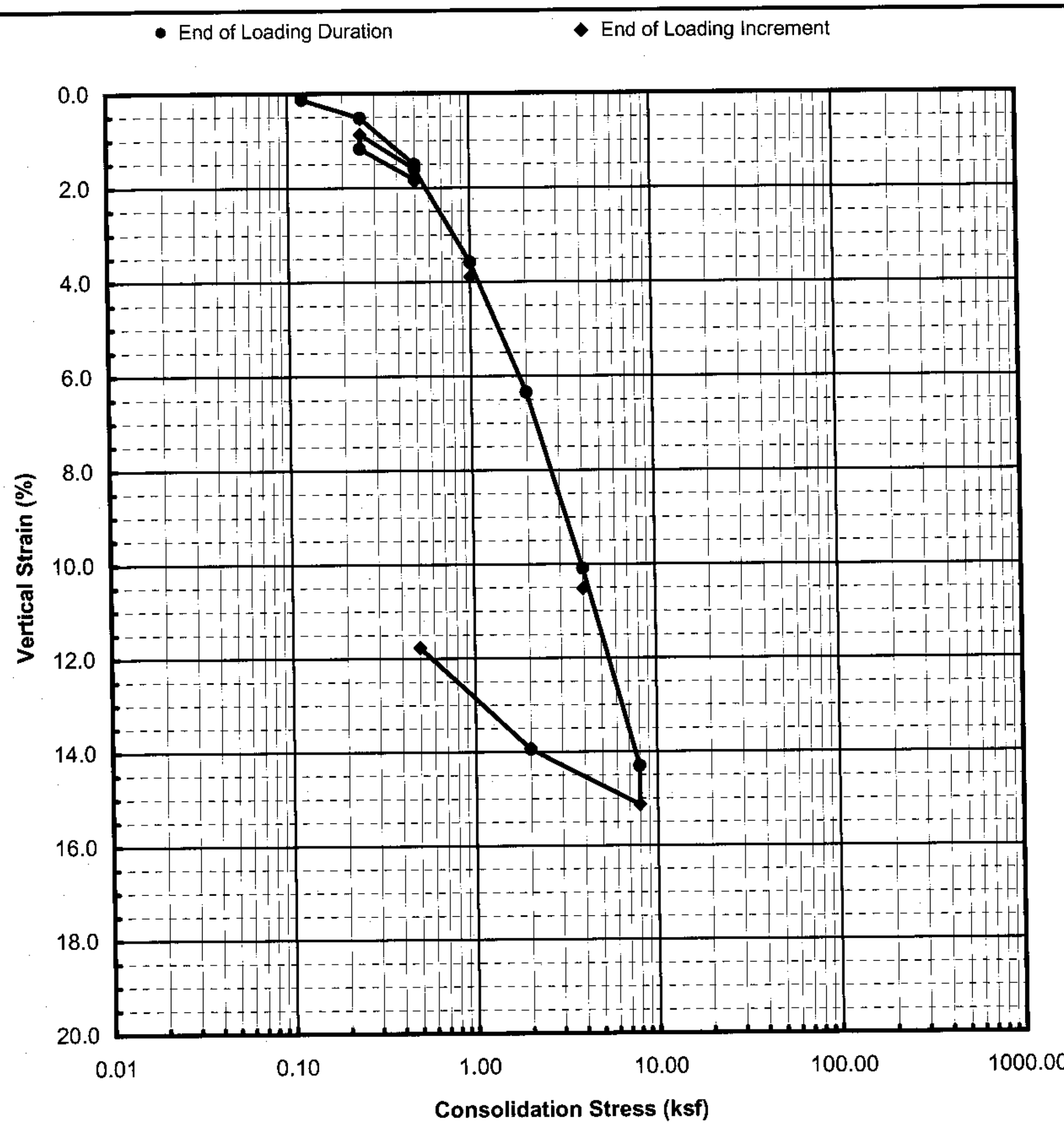
Exploration No.: **B-14** Sample No.: **2** Depth (ft.): **6.1**

Description/ Classification: **Reddish Brown CLAY (CL)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	29.6	116.9	90.2	1.05	90.4	1.357	2.870	2.75	32	12
Final:	29.6	122.8	94.8	0.81	100.6	1.244		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		Figure No. C-66
Project Number: 27663042		

Od_ssb14@6

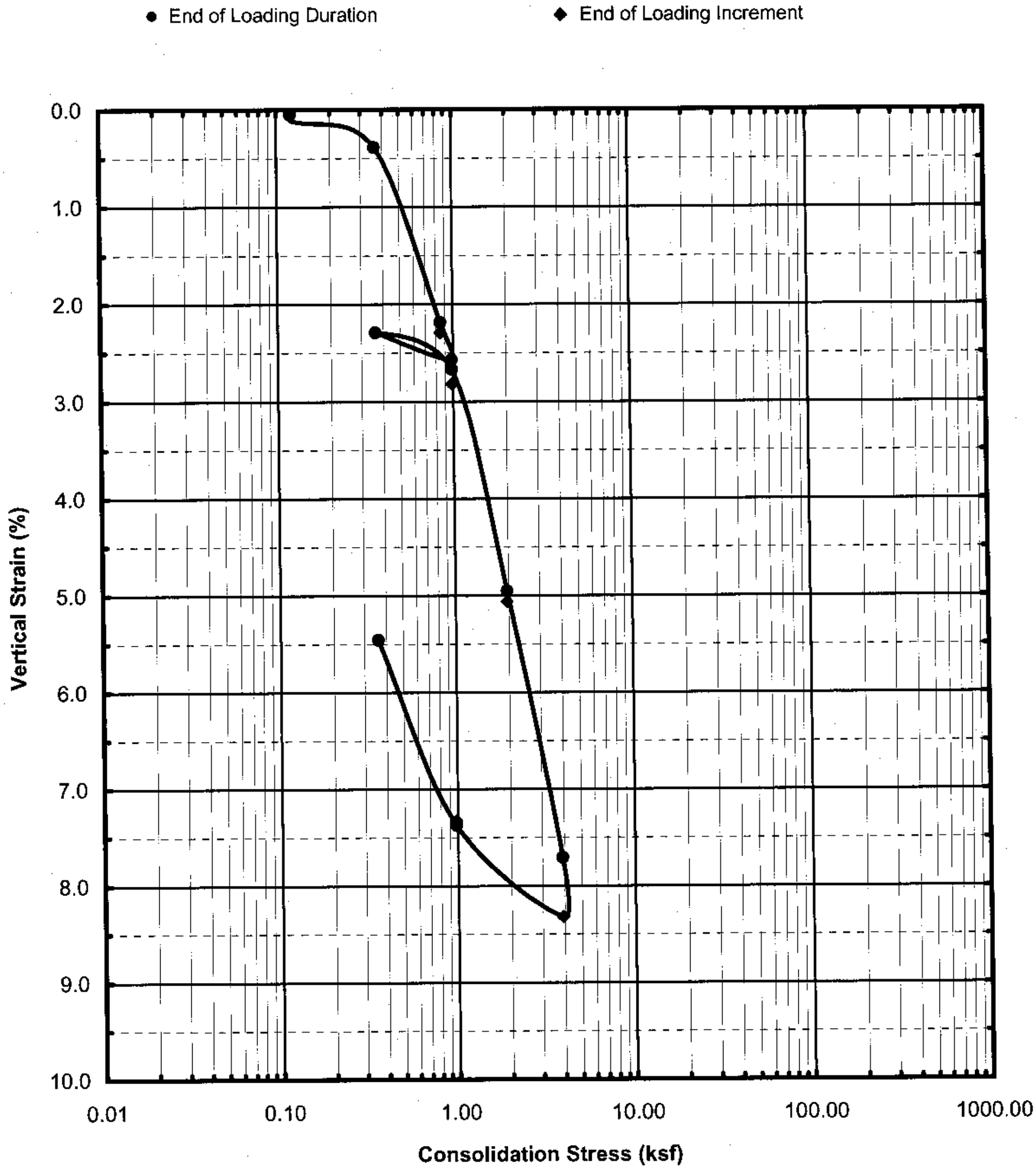


Exploration No.: **B-17** Sample No.: **2** Depth (ft.): **6.4**

Description/ Classification: **Grayish Brown CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	44.5	112.3	77.7	1.42	100.6	0.750	2.875	2.78		
Final:	39.2	115.5	83.0	1.09	100.1	0.702		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		Figure No. C-67
Project Number: 27663042		



Exploration No.: **B-19** Sample No.: **5** Depth (ft.): **20.6**

Description/ Classification: **Olive gray Clay (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	32.6	115.6	87.2	0.97	92.8	1.345	2.869	2.75		
Final:	42.6	115.3	80.8	1.12	104.5	1.310		assumed		

Project Name: Restoration Project

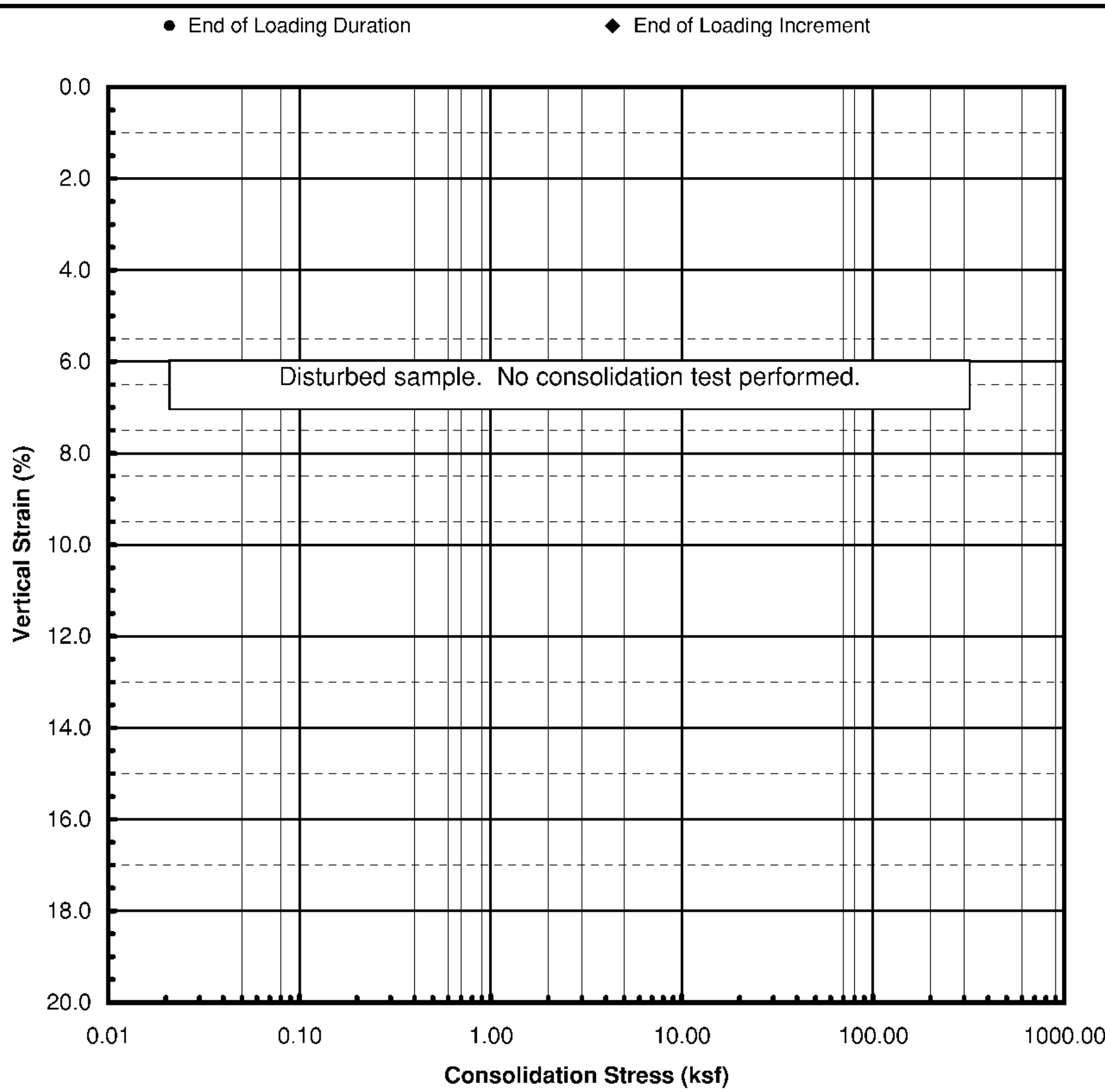
Location: Salton Sea

Project Number: 27663042

Consolidation Test

URS

Figure No. C-69

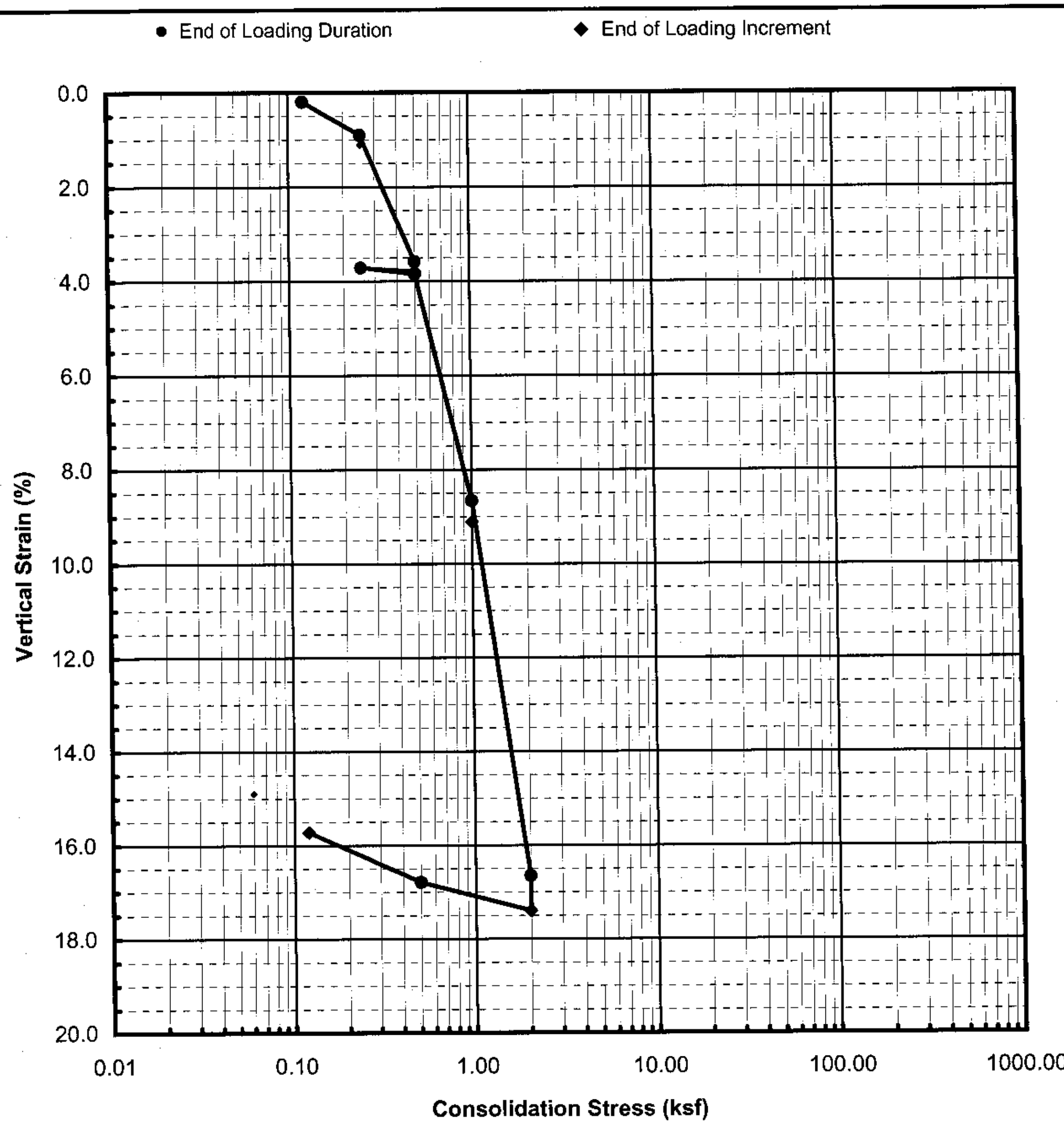


Exploration No.: **B-20** Sample No.: **1** Depth (ft.): **2.0**

Description/ Classification: **Blueish Gray CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	79.4	97.1	54.2	2.13	100.8	1.369	2.869	2.75		
Final:	61.7	102.9	63.6	1.69	100.2	1.165		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		C-70
Project Number: 27663042		



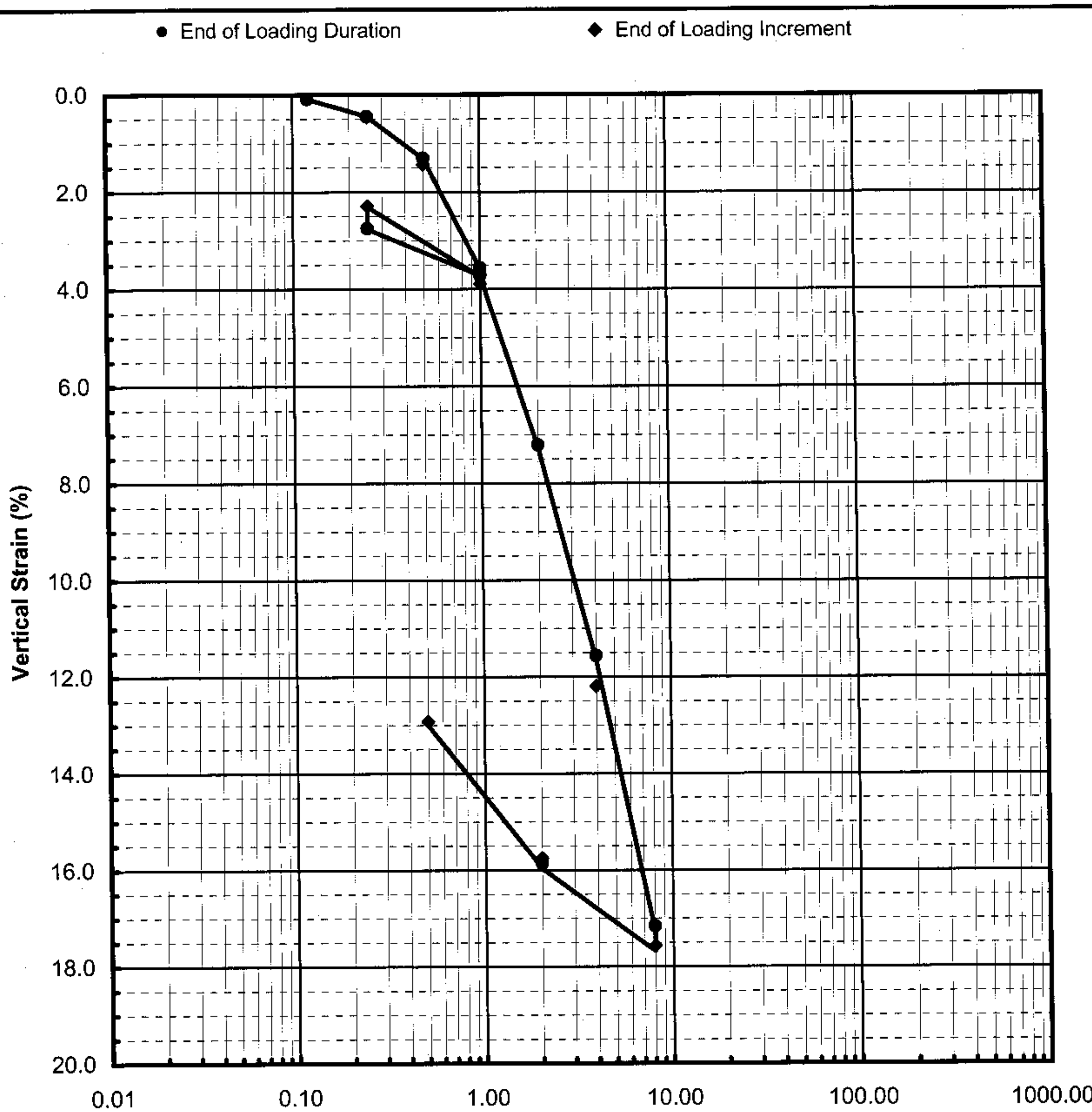
Exploration No.: **B-26** Sample No.: **1** Depth (ft.): **1.8**

Description/ Classification: **Blueish Gray CLAY (CH)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	79.4	97.1	54.2	2.13	100.8	1.369	2.869	2.75		
Final:	61.7	102.9	63.6	1.69	100.2	1.165		assumed		

Project Name: Restoration Project	**Consolidation Test**	URS
Location: Salton Sea		C-71
Project Number: 27663042		

Od_ssb26@2



Exploration No.: **B-26** Sample No.: **4** Depth (ft.): **16.3**

Description/ Classification: **Reddish Brown CLAY (CL)**

	Water Content, %	Total Unit Weight, pcf	Dry Unit Weight, pcf	Void Ratio	Saturation %	Height inches	Diameter inches	Specific Gravity	Liquid Limit	Plasticity Index
Initial:	42.1	113.1	79.6	0.57	100.4	0.781	2.874	2.75	32	16
Final:	34.4	117.4	87.4	0.96	98.3	0.711		assumed		

Project Name: Restoration Project

Location: Salton Sea

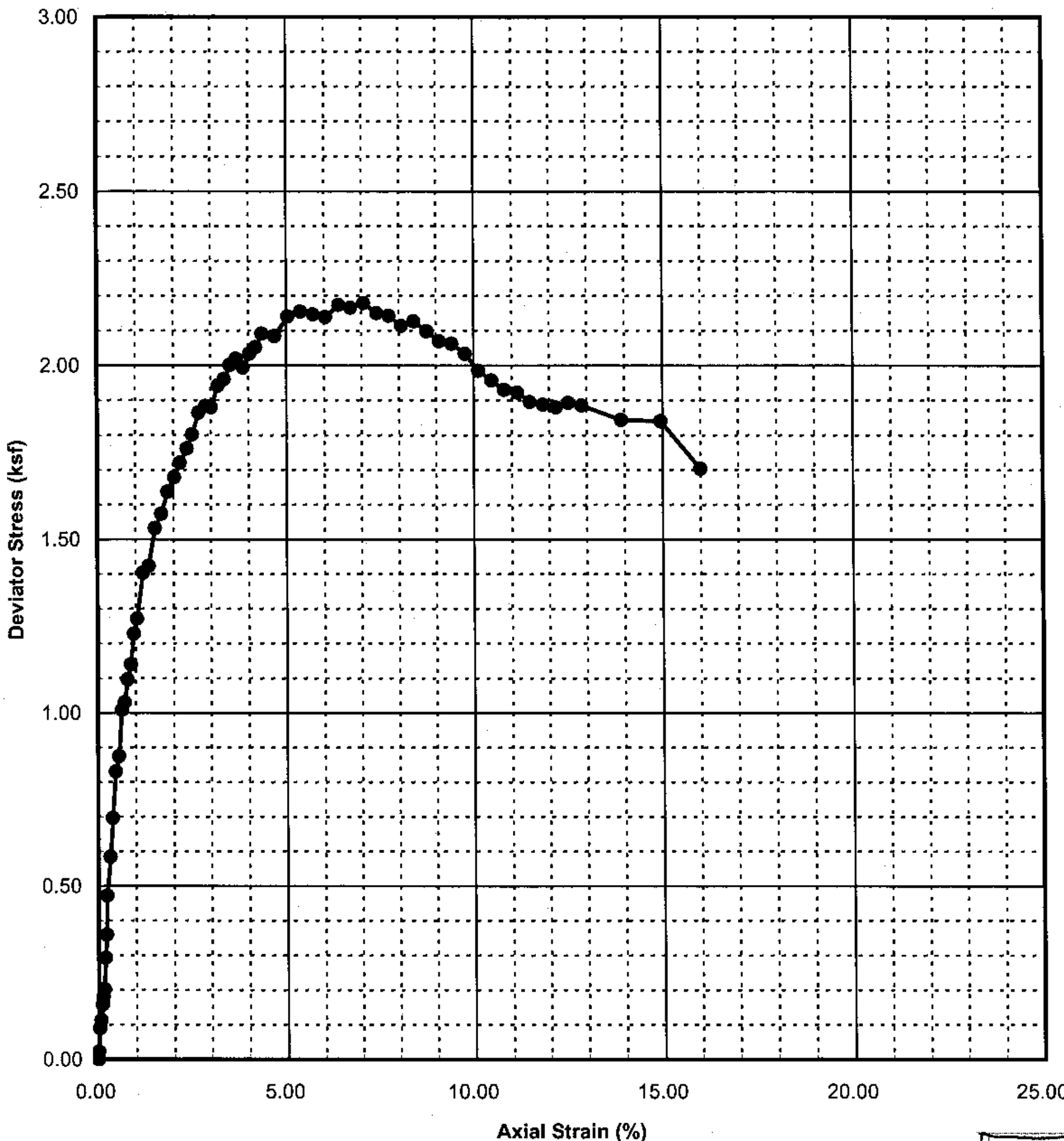
Project Number: 27663042

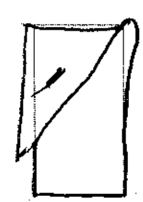
Consolidation Test

URS

Figure No. C-72

Od_ssb26@16





FAILURE SKETCH

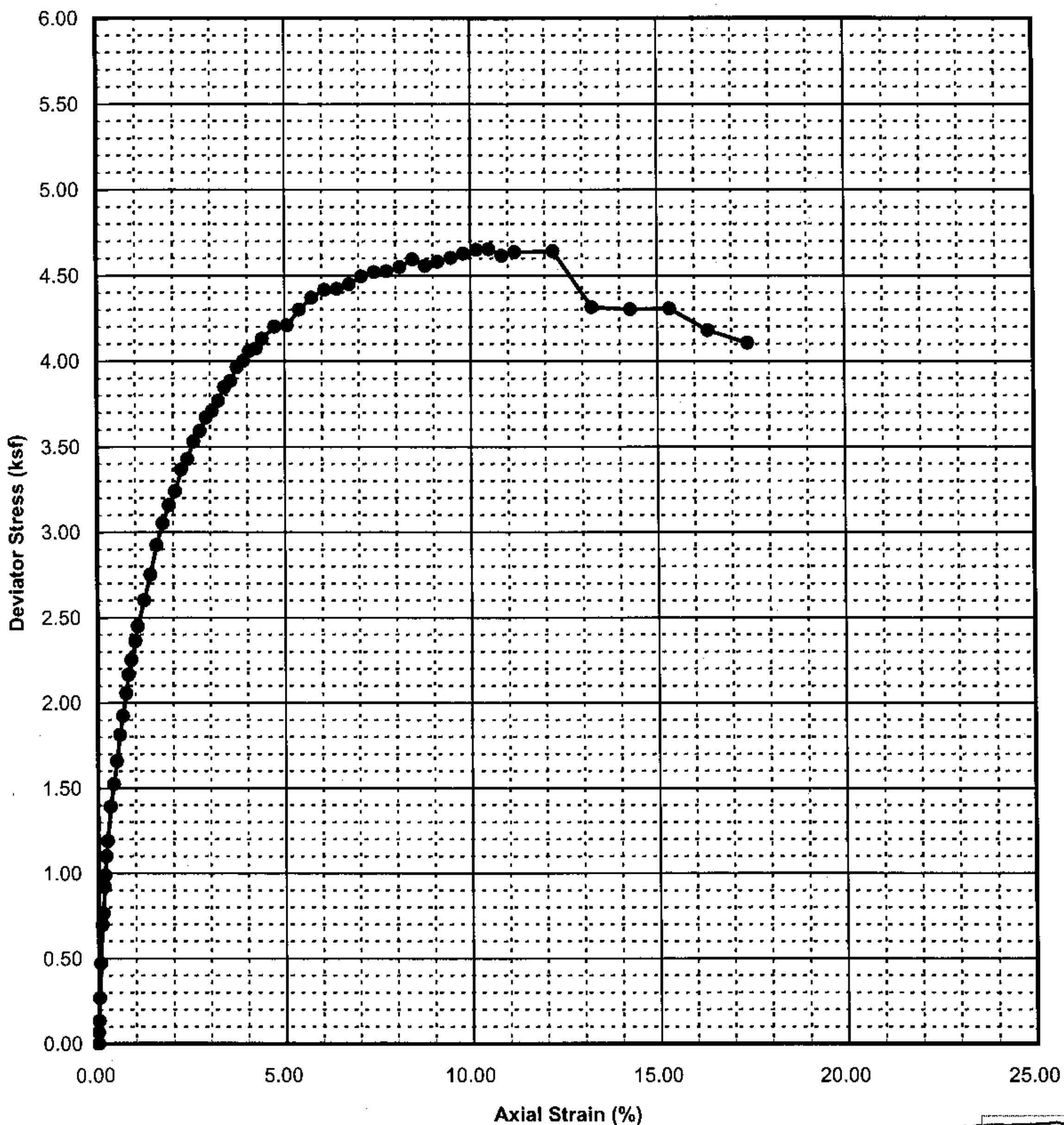
Cell Pressure (ksf) = 0.50
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.08

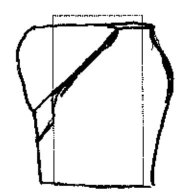
Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	34.1	70	42	6.010	2.854	117.7
Pre-Shear:				6.005	2.852	118.0

Exploration Number: B-2	Depth (feet): 4.5	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-73
Project Number: 27663042		

uu_ssb2@4





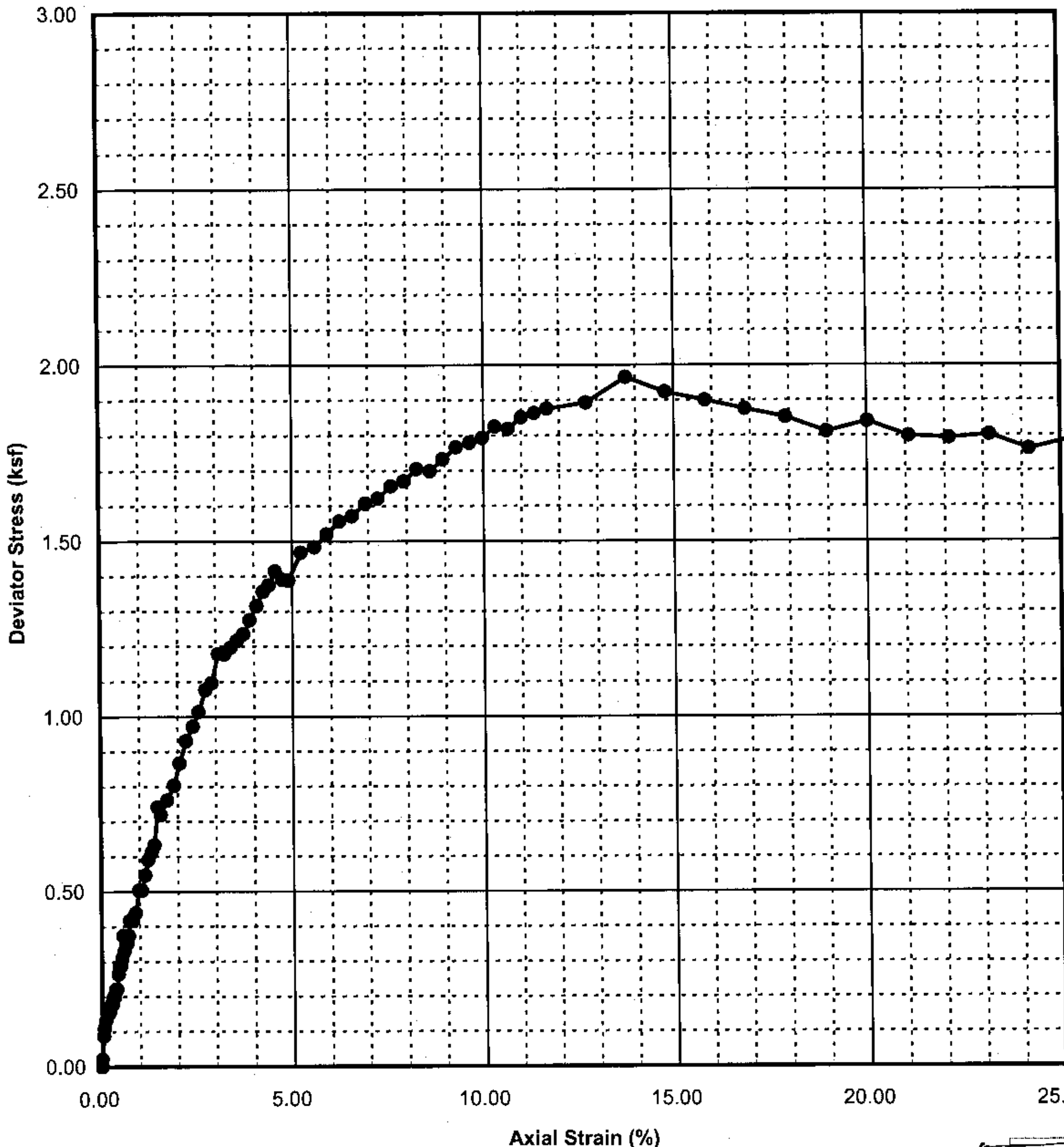
FAILURE SKETCH

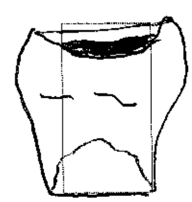
Cell Pressure (ksf) = 0.75
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.10

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	28.6			6.017	2.857	122.8
Pre-Shear:				6.011	2.854	123.2

Exploration Number: B-2	Depth (feet): 14.8	Description: Reddish Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-74
Project Number: 27663042		

uu_ssb2@15





FAILURE SKETCH

Cell Pressure (ksf) = 1.30

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): -0.50

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	28.6			6.003	2.864	125.4
Pre-Shear:				6.033	2.878	123.5

Exploration Number: B-2	Depth (feet): 28.7	Description: Reddish Brown Sandy CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

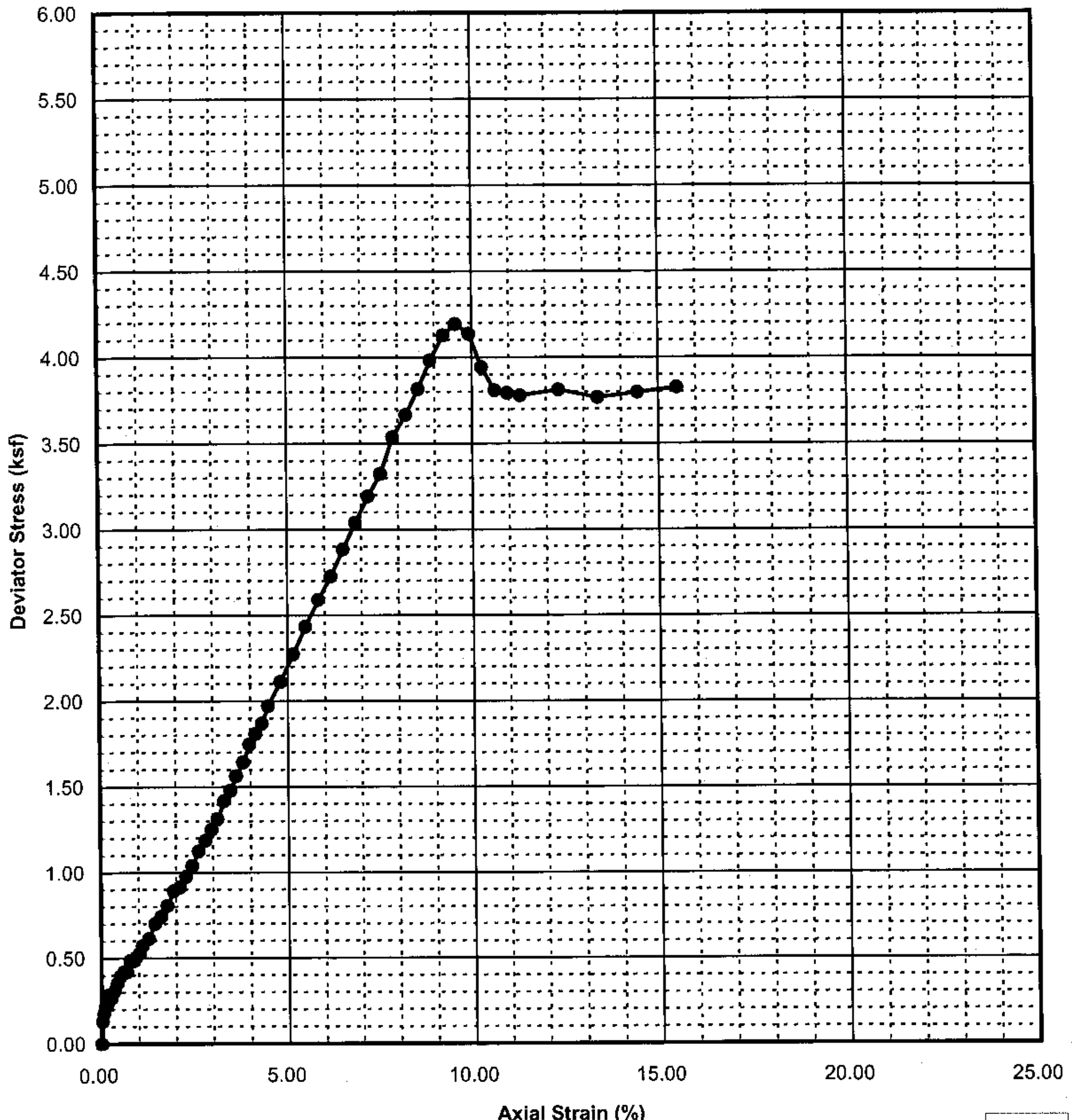
Project Number: 27663042

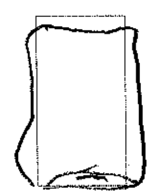
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-75

uu_ssb2@29





FAILURE SKETCH

Cell Pressure (ksf) = 3.00

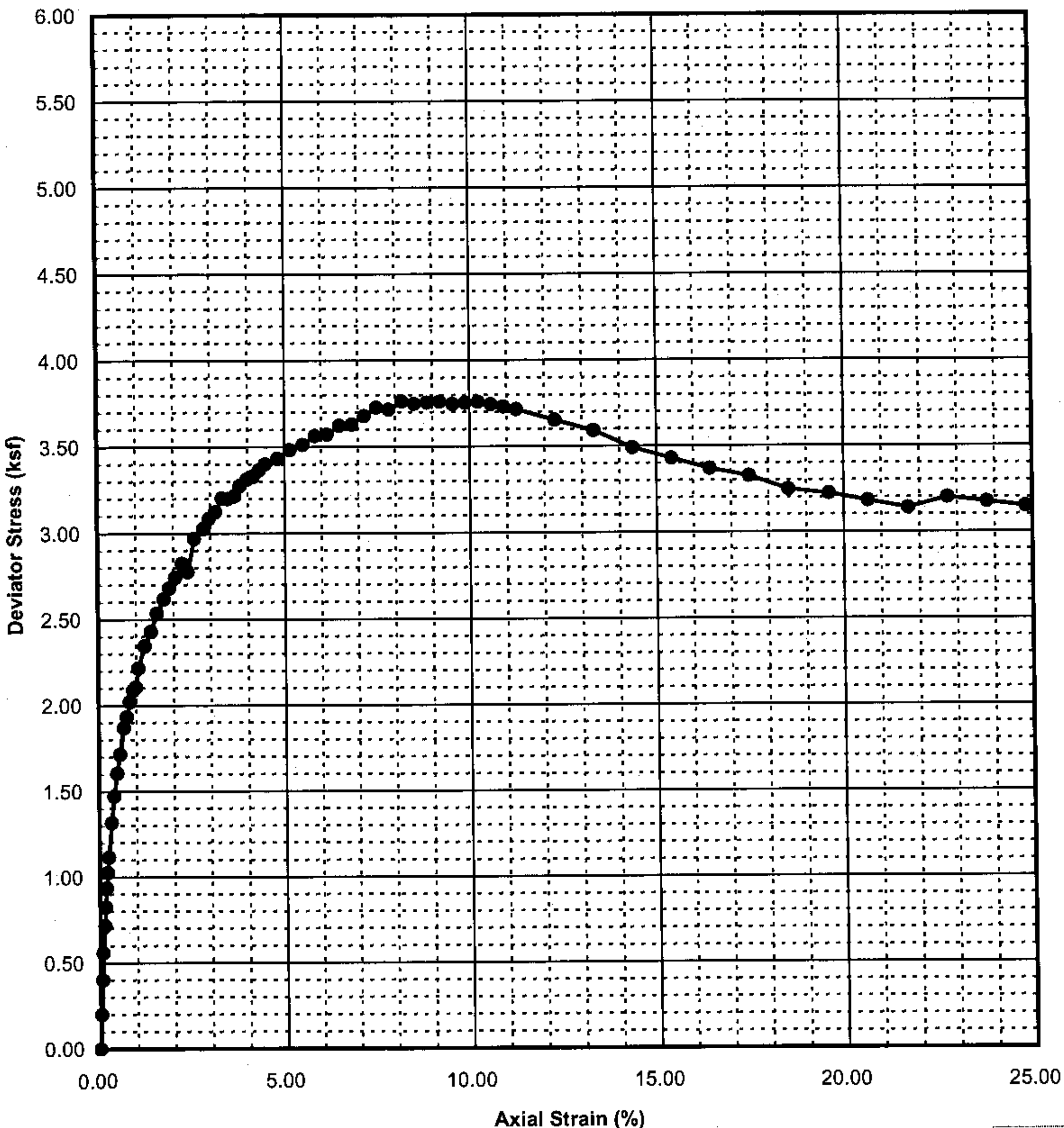
Strain Rate (%/min) = 1.0

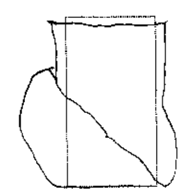
Axial Strain during confinement (%): 0.05

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	27.9			5.964	2.876	122.1
Pre-Shear:				5.961	2.875	122.2

Exploration Number: B-2	Depth (feet): 68.8	Description: Brown Silty SAND (SM)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-76
Project Number: 27663042		

uu_ssb2@70





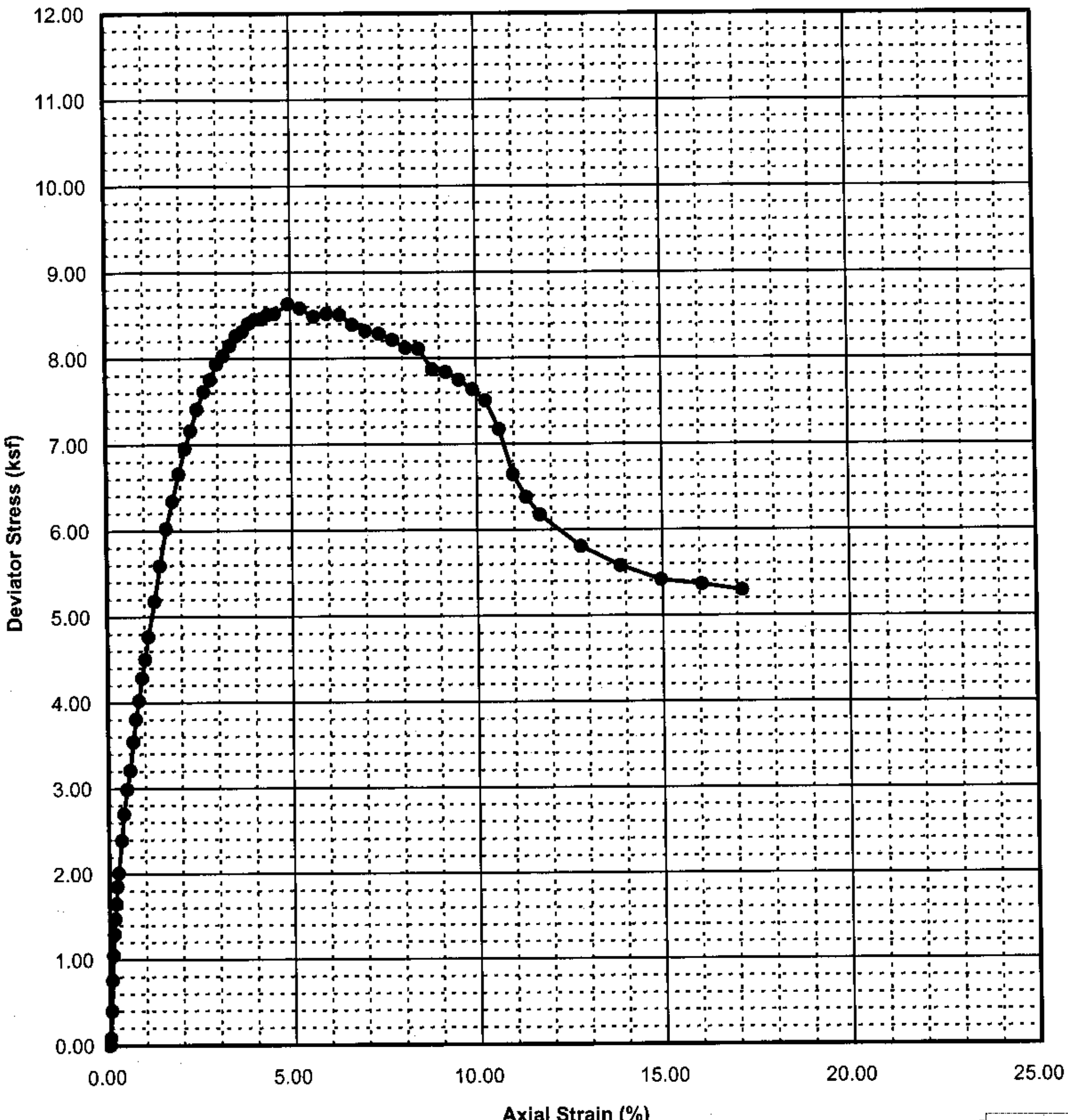
FAILURE SKETCH

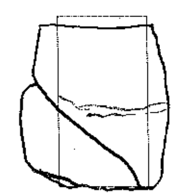
Cell Pressure (ksf) = 4.00
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.17

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	31.0	63	40	6.030	2.866	121.0
Pre-Shear:				6.020	2.861	121.6

Exploration Number: B-2	Depth (feet): 88.5	Description: Dark Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-77
Project Number: 27663042		

uu_ssb2@89





FAILURE SKETCH

Cell Pressure (ksf) = 5.50

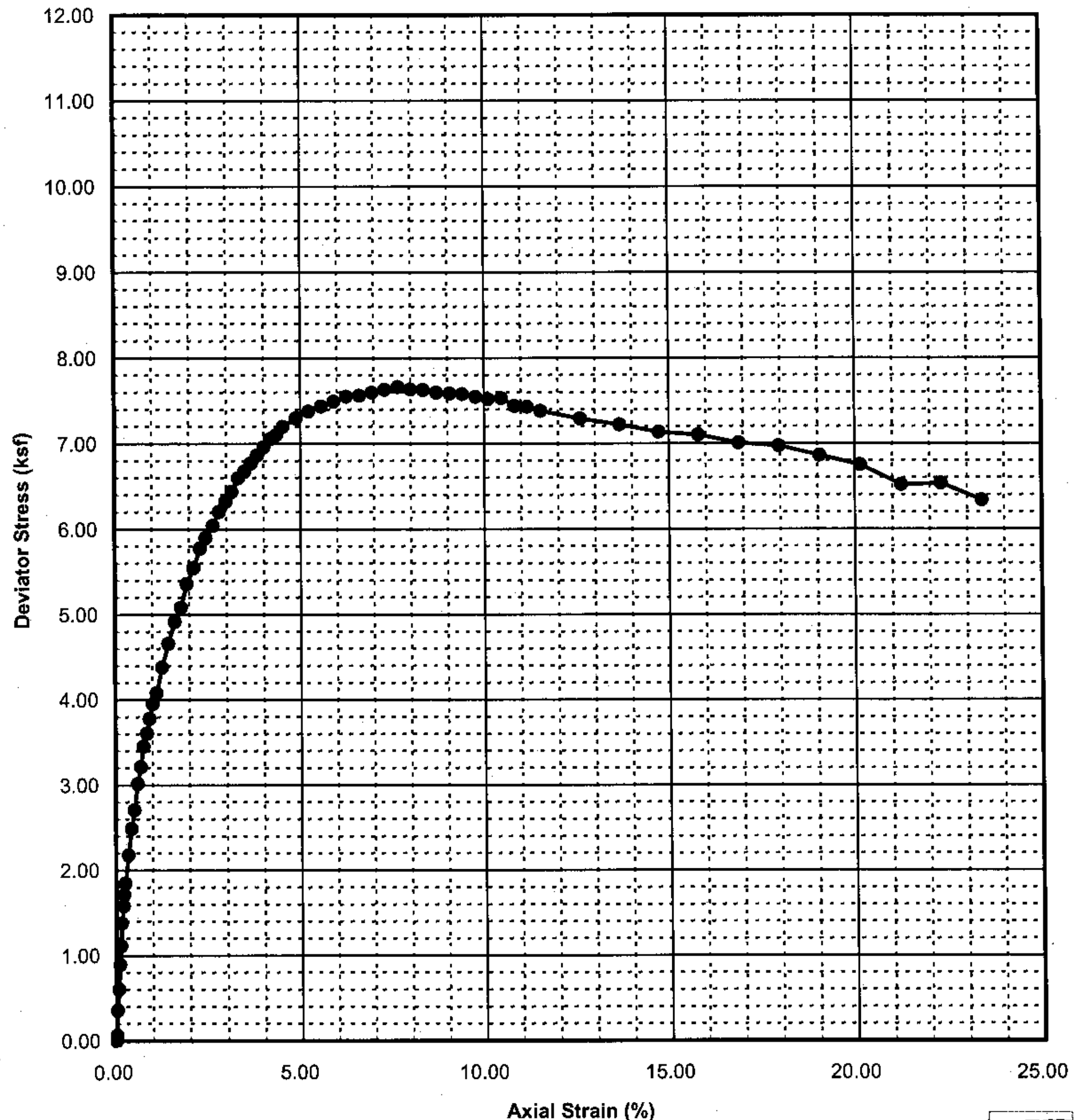
Strain Rate (%/min) = 1.0

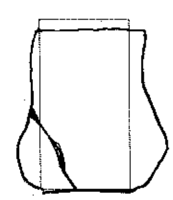
Axial Strain during confinement (%): 0.23

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	31.6	66	41	5.741	2.866	120.2
Pre-Shear:				5.728	2.860	121.0

Exploration Number: B-2	Depth (feet): 118.7	Description: Gray CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-78
Project Number: 27663042		

uu_ssb2@119





FAILURE SKETCH

Cell Pressure (ksf) = 6.00

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.43

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	26.4	44	23	5.856	2.879	124.3
Pre-Shear:				5.831	2.867	125.9

Exploration Number: B-2	Depth (feet): 128.7	Description: Brown CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

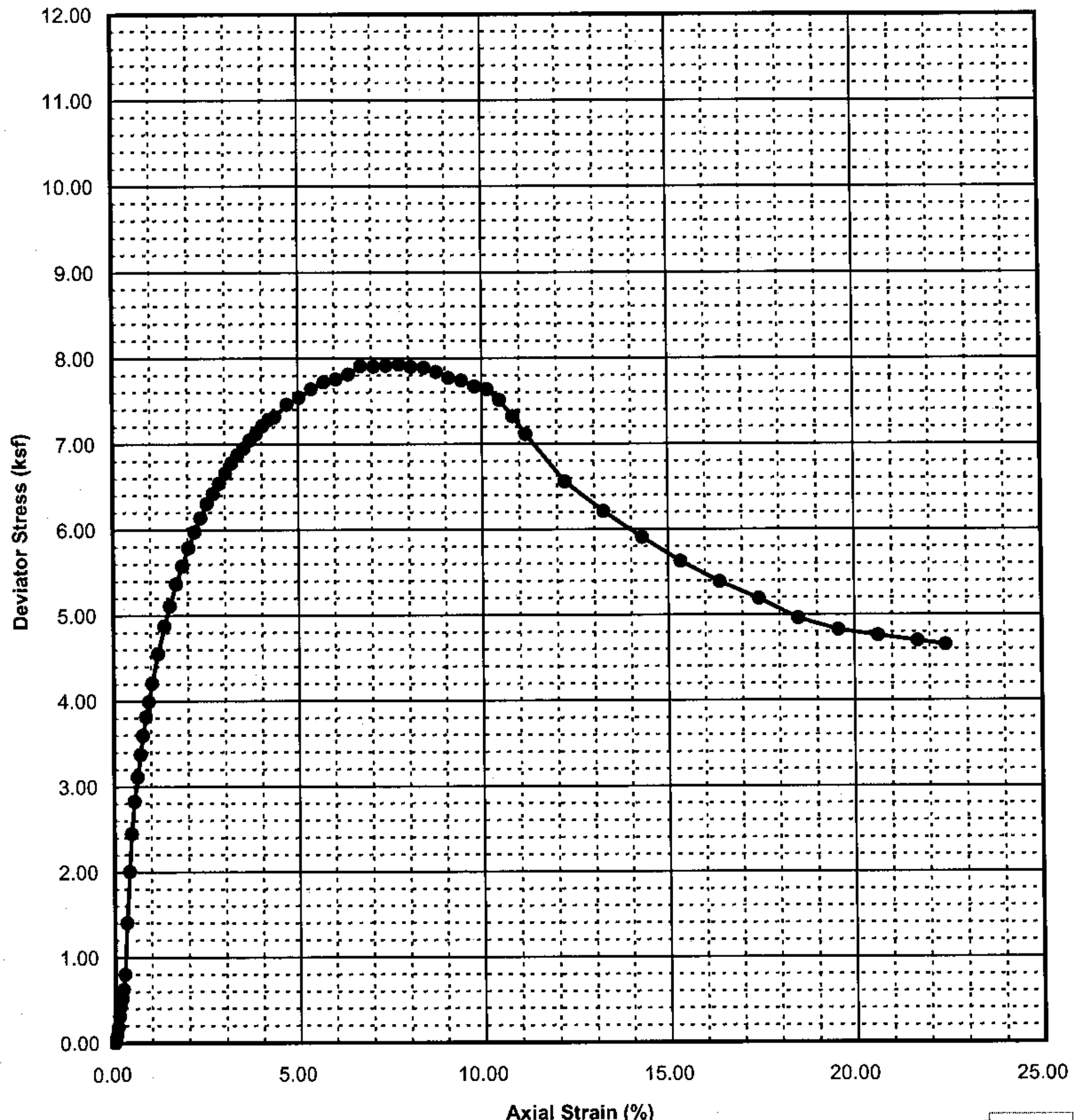
Project Number: 27663042

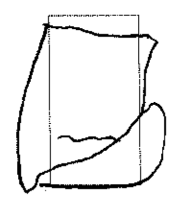
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-79

uu_ssb2@129





FAILURE SKETCH

Cell Pressure (ksf) = 6.60

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.43

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	31.0	62	39	6.002	2.875	120.6
Pre-Shear:				5.976	2.863	122.2

Exploration Number: B-2	Depth (feet): 148.7	Description: Gray CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

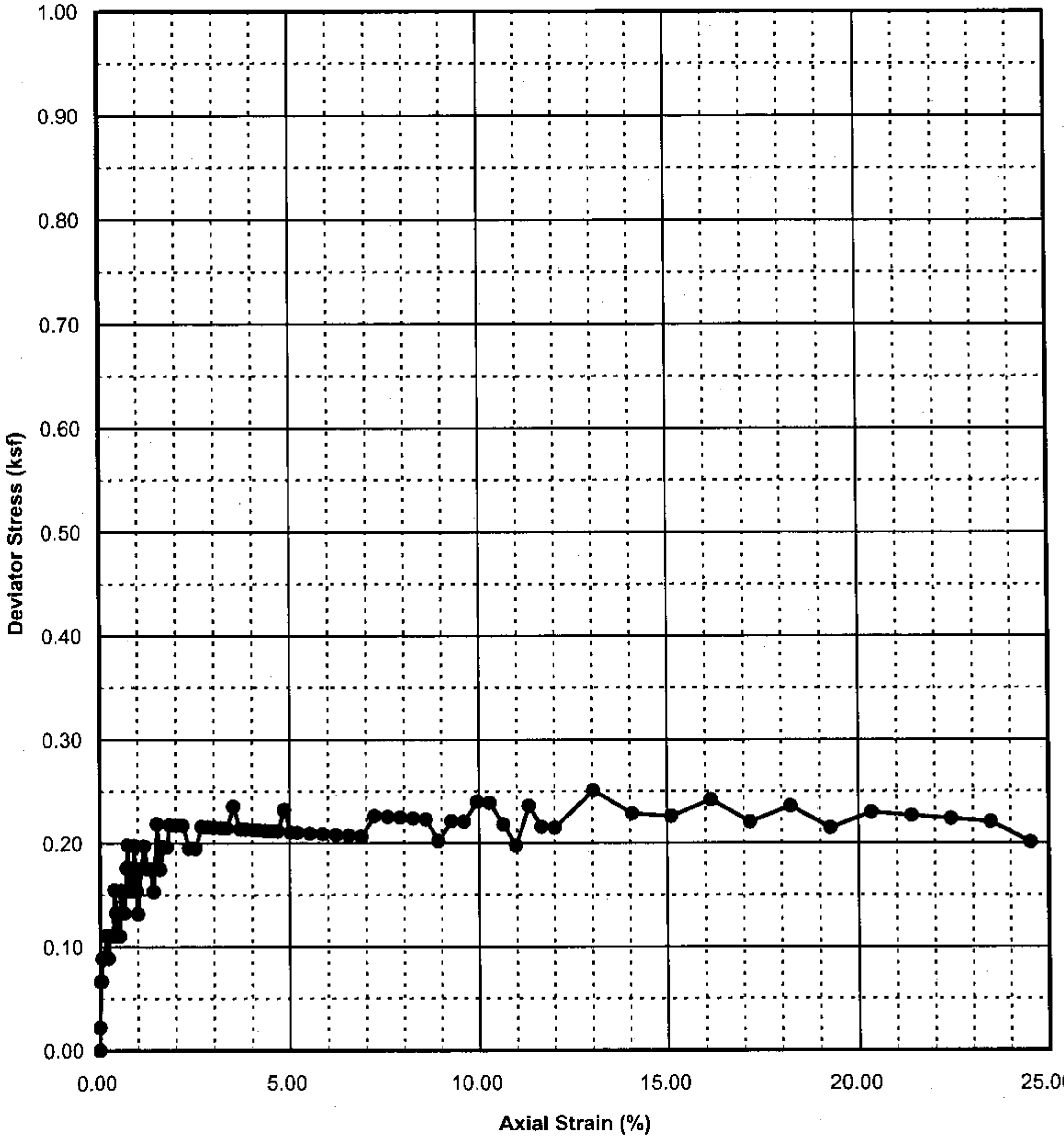
Project Number: 27663042

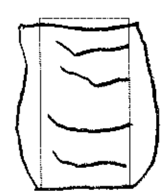
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-80

uu_ssb2@149





FAILURE SKETCH

Cell Pressure (ksf) = 0.49

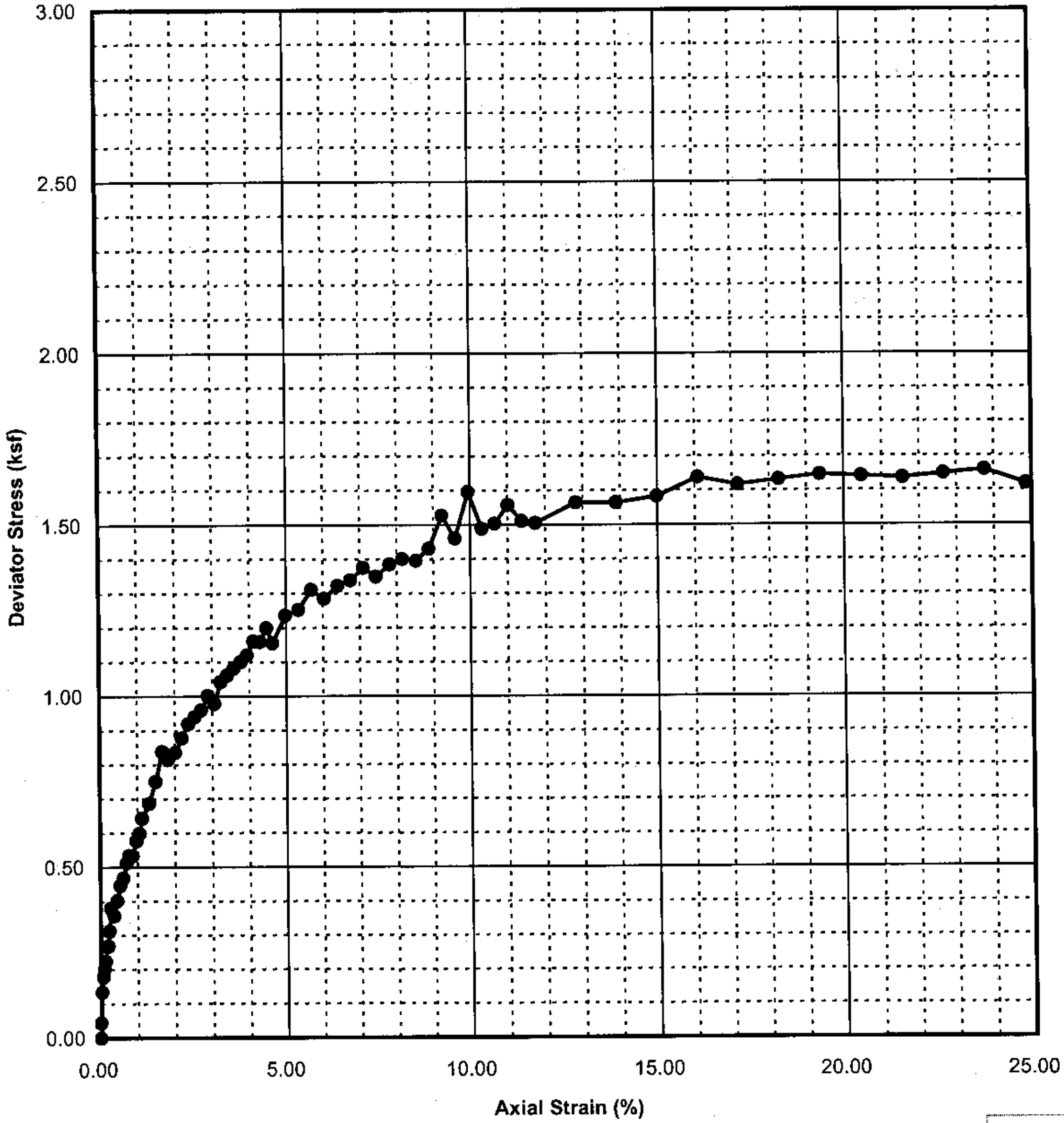
Strain Rate (%/min) = 1.0

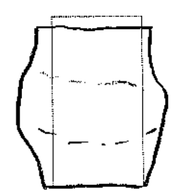
Axial Strain during confinement (%): -0.17

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	77.9	77	41	6.020	2.870	94.5
Pre-Shear:				6.030	2.875	94.1

Exploration Number: B-4	Depth (feet): 4.2	Description: Gray CLAY (CH), very soft, wet, slumping
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-81
Project Number: 27663042		

uu_ssb4@4





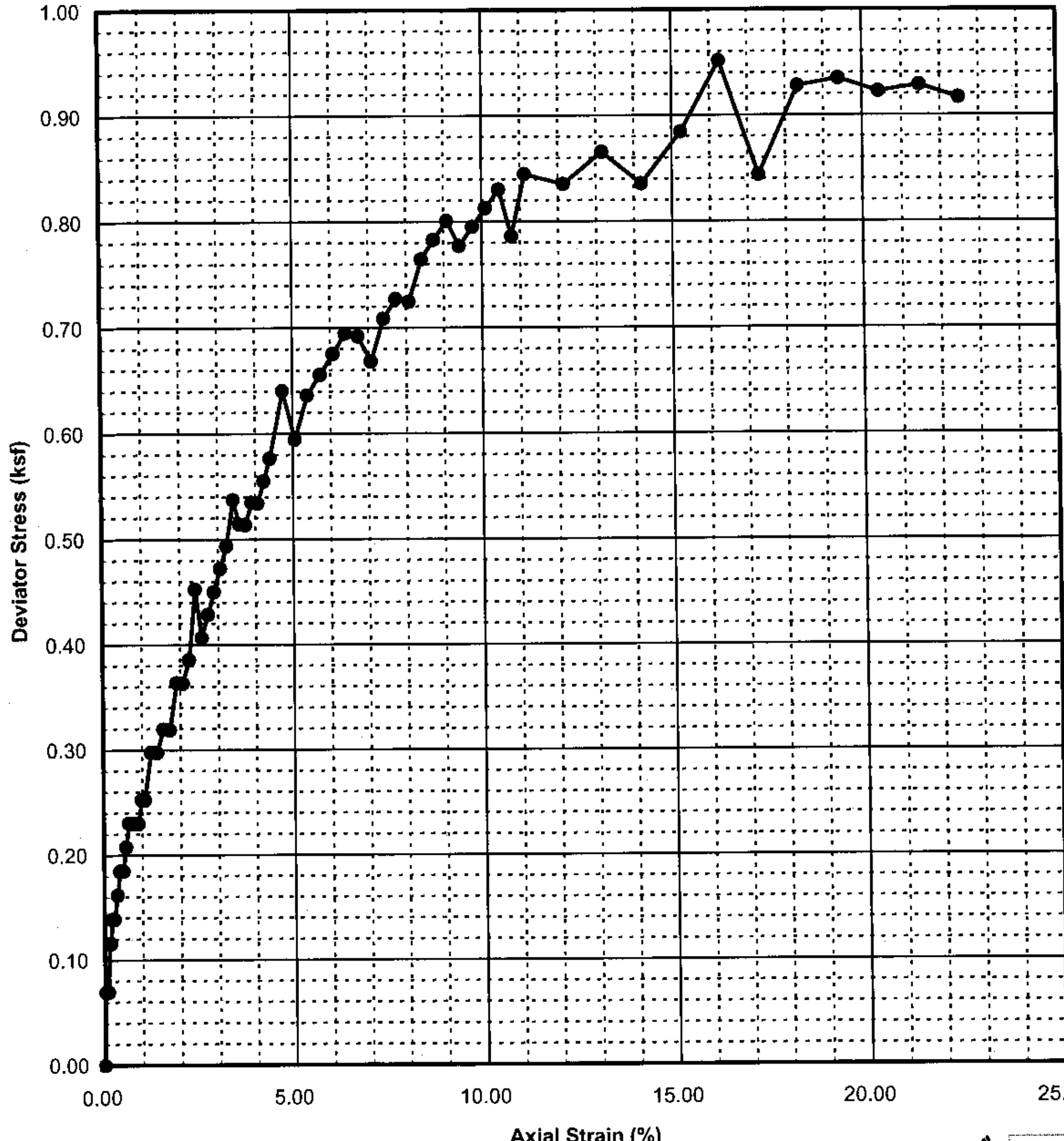
FAILURE SKETCH

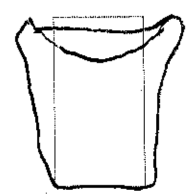
Cell Pressure (ksf) = 0.99
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.10

Test Number	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	28.0			5.763	2.862	123.4
Pre-Shear:				5.757	2.859	123.8

Exploration Number: B-4	Depth (feet): 21.5	Description: Reddish Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-82
Project Number: 27663042		

uu_ssb4@21





FAILURE SKETCH

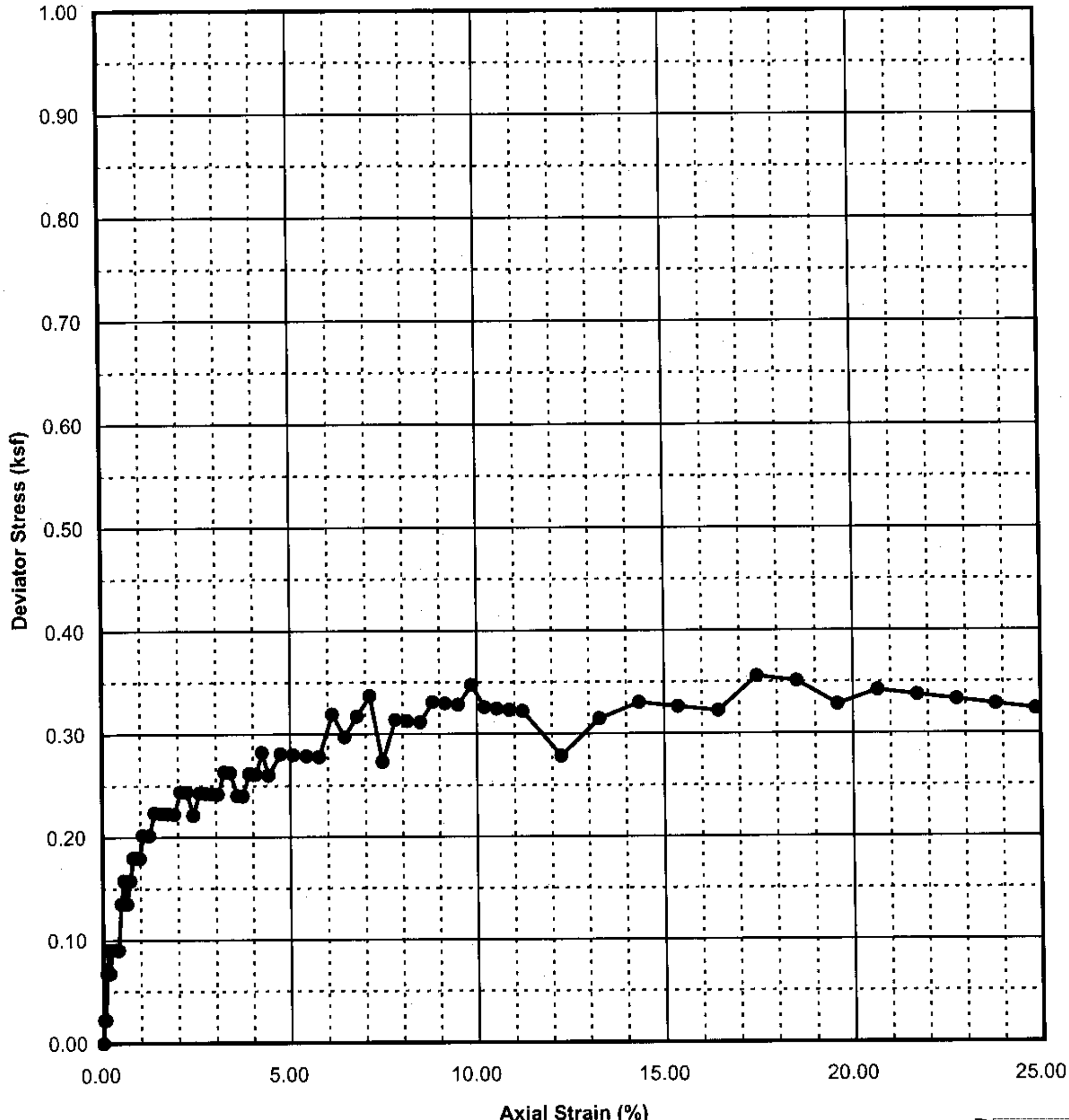
Cell Pressure (ksf) = 2.51
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): -0.86

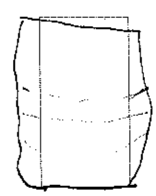
Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	51.8	79	54	6.025	2.788	108.1
Pre-Shear:				6.077	2.812	105.3

Exploration Number: B-4	Depth (feet): 51.5	Description: Grayish Brown CLAY (CH)

Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-83
Project Number: 27663042		

uu_ssb4@52





FAILURE SKETCH

Cell Pressure (ksf) = 0.50

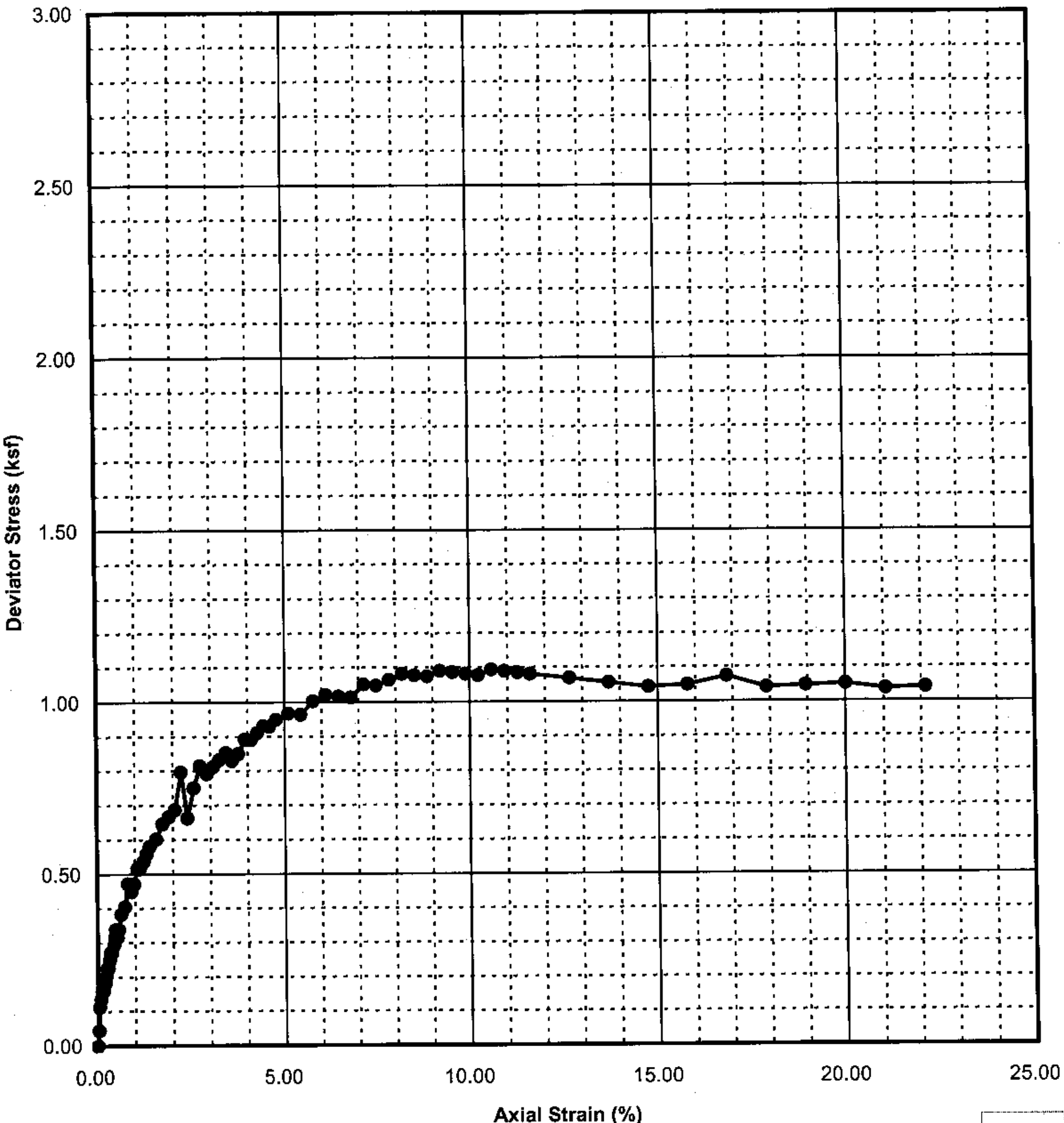
Strain Rate (%/min) = 1.0

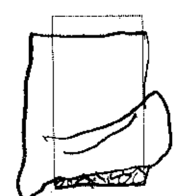
Axial Strain during confinement (%): 0.03

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	78.7	85	54	5.997	2.845	96.1
Pre-Shear:				5.995	2.844	96.1

Exploration Number: B-5	Depth (feet): 2.0	Description: Blueish Gray CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-84
Project Number: 27663042		

uu_ssb5@2





FAILURE SKETCH

Cell Pressure (ksf) = 0.99
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.05

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	39.5			6.004	2.847	111.7
Pre-Shear:				6.001	2.846	111.9

Exploration Number: B-5	Depth (feet): 21.6	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

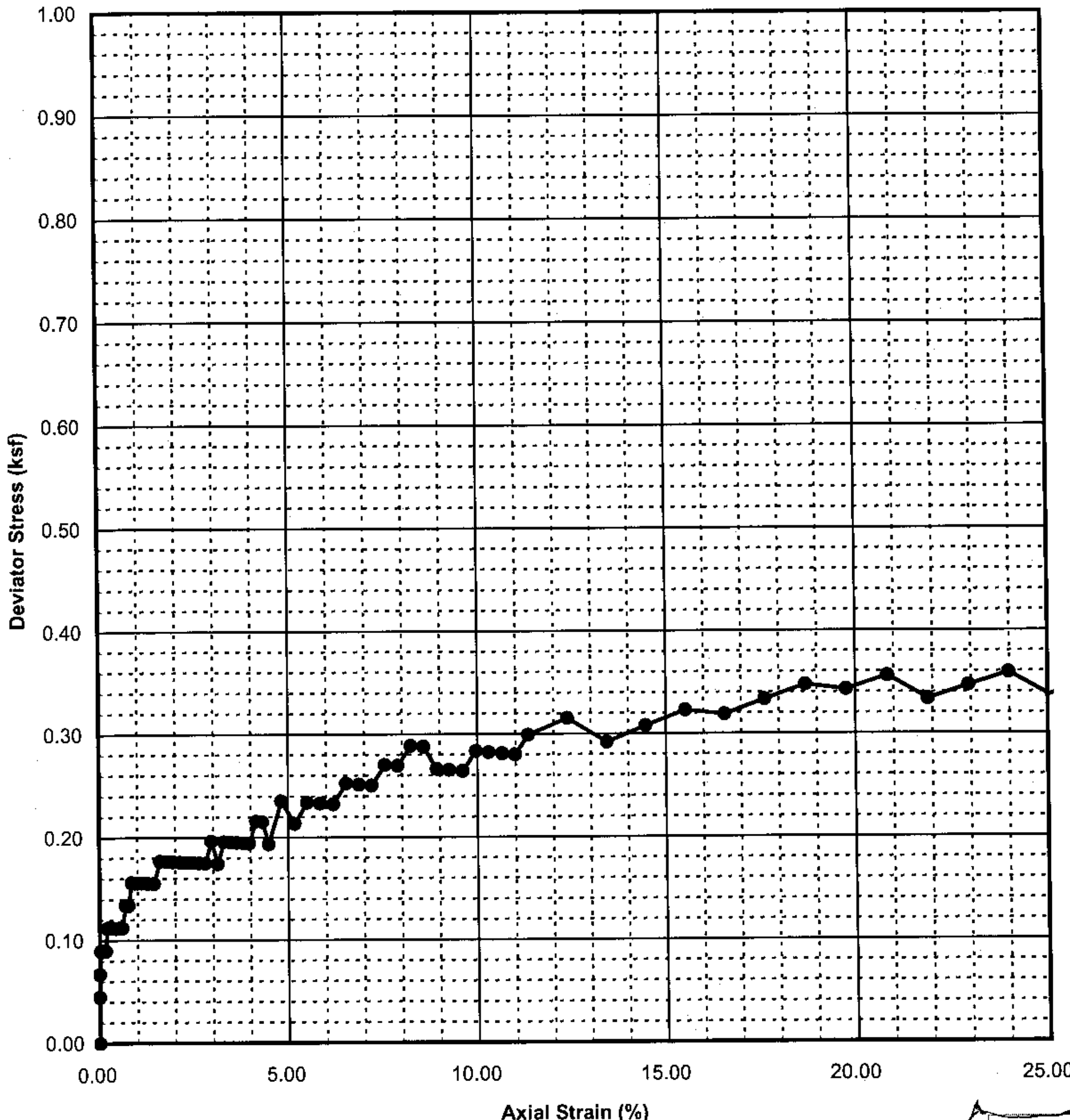
Project Number: 27663042

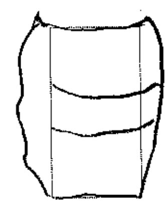
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-85

uu_ssb5@21





FAILURE SKETCH

Cell Pressure (ksf) = 4.51

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.50

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	39.7			6.000	2.870	116.7
Pre-Shear:				5.970	2.856	118.5

Exploration Number: B-5 | Depth (feet): 46.0 | Description: Gray Sandy CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

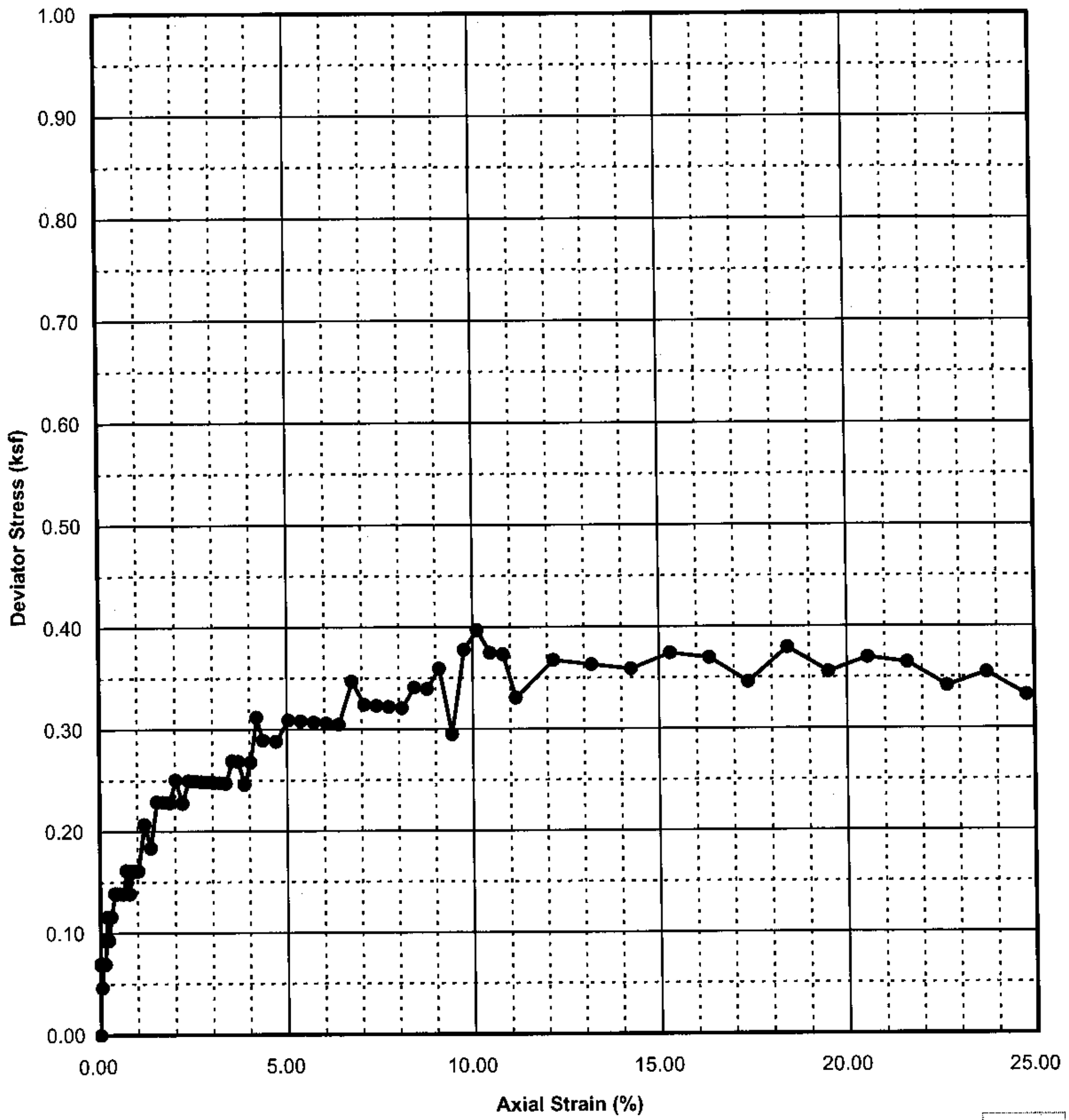
Project Number: 27663042

Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-86

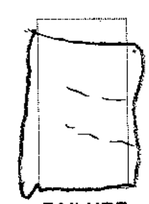
uu ssb5@46



Cell Pressure (ksf) = 0.50

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): -0.27

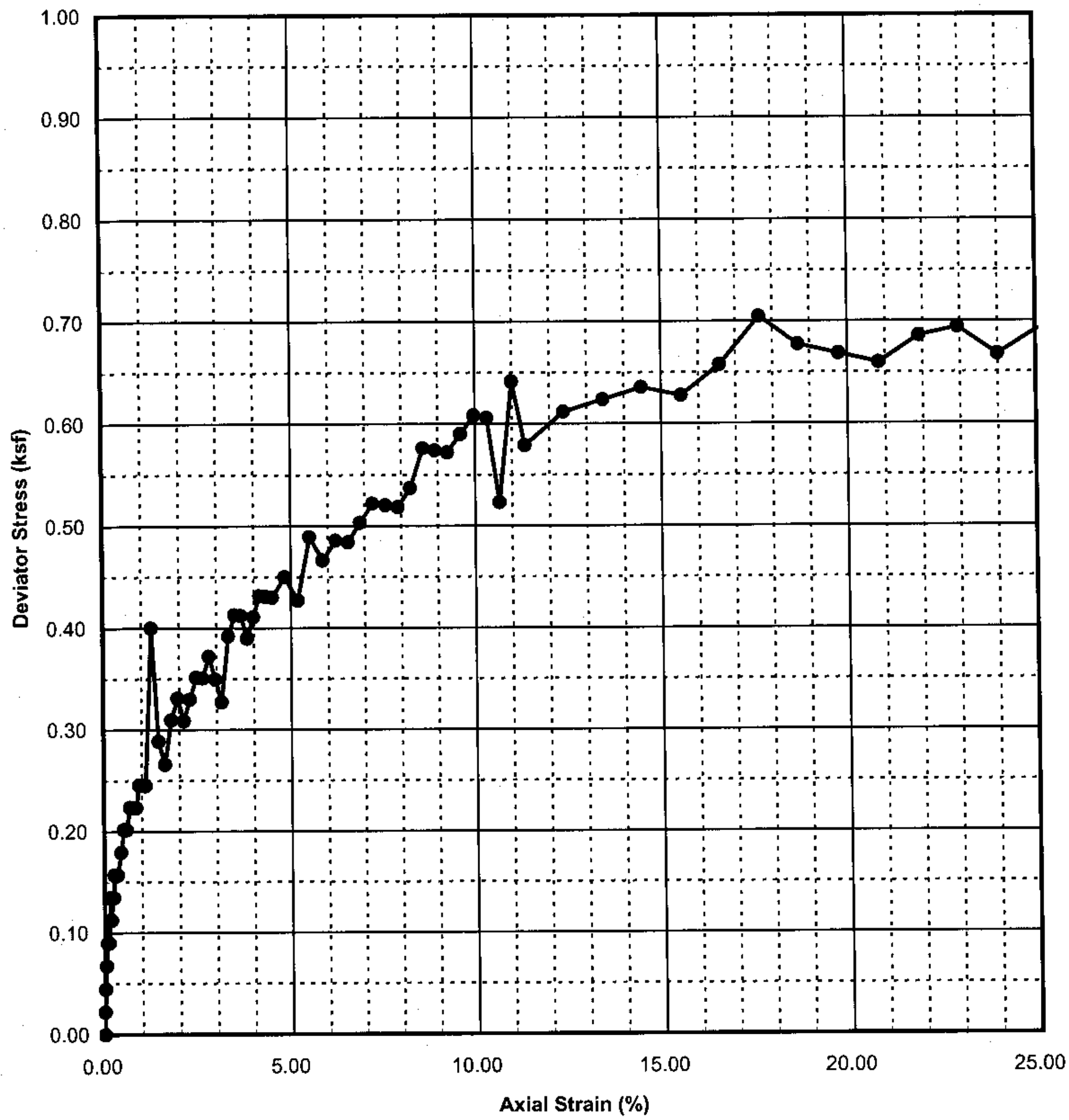


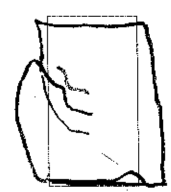
FAILURE SKETCH

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	72.0			6.000	2.801	95.4
Pre-Shear:				6.016	2.808	94.6

Exploration Number: B-6	Depth (feet): 2.8	Description: Gray CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-87
Project Number: 27663042		

uu_ssb6@3





FAILURE SKETCH

Cell Pressure (ksf) = 0.75

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.02

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	31.4			5.968	2.854	120.0
Pre-Shear:				5.967	2.854	120.1

Exploration Number: B-6	Depth (feet): 12.2	Description: Grayish Brown Sandy CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

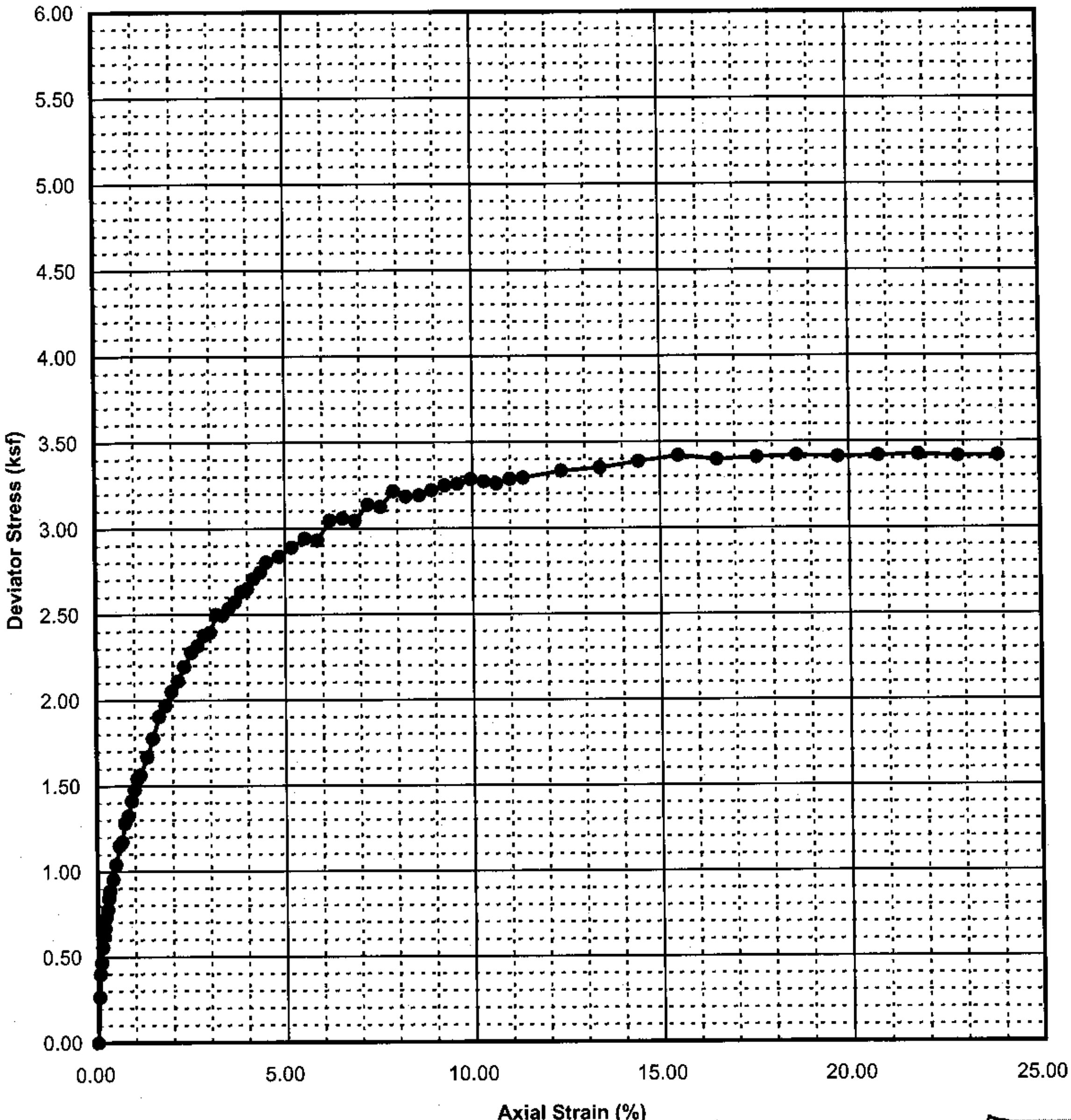
Project Number: 27663042

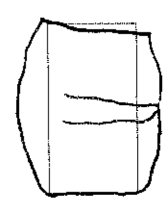
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-88

uu_ssb6@12





FAILURE SKETCH

Cell Pressure (ksf) = 2.00

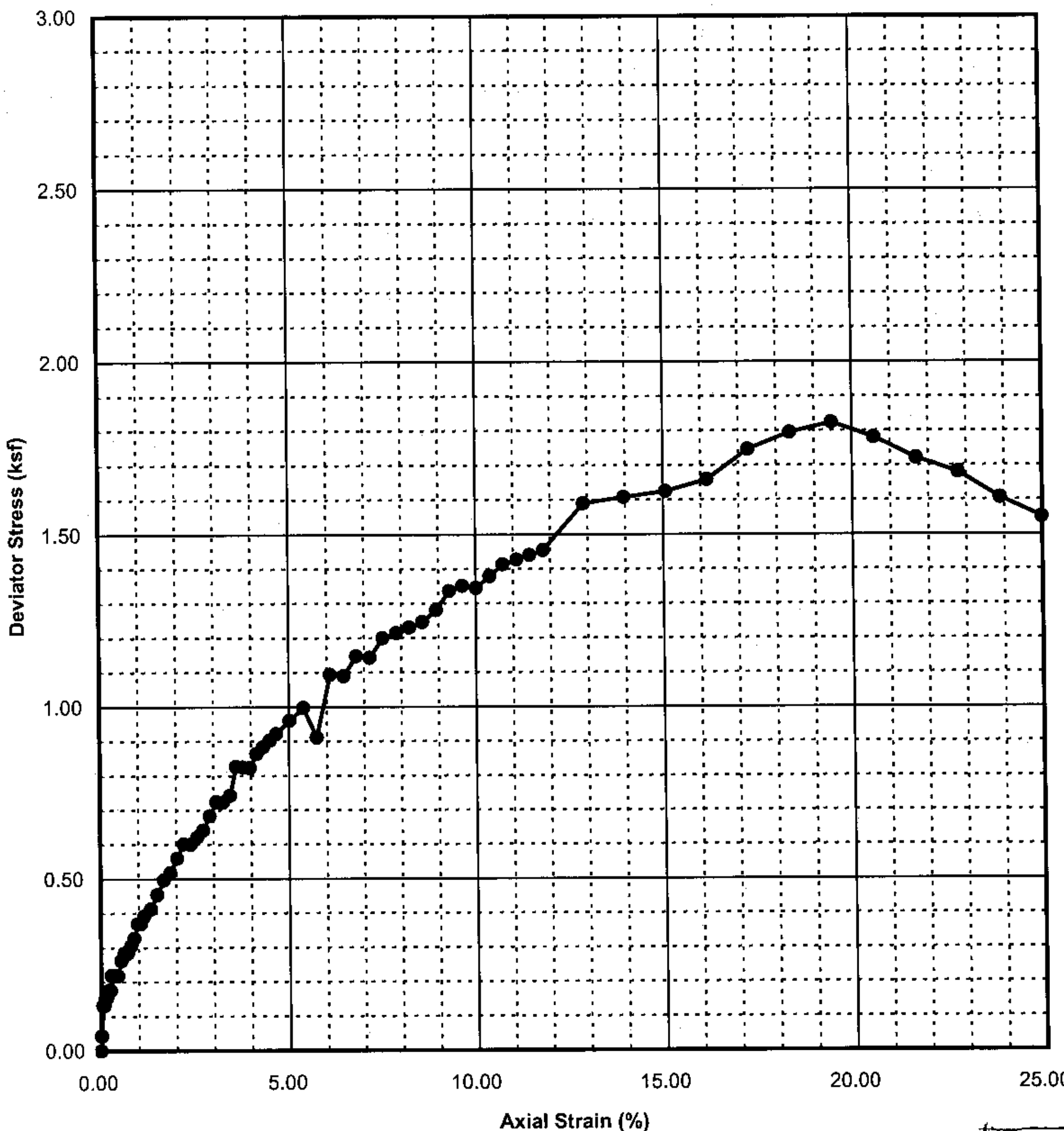
Strain Rate (%/min) = 1.0

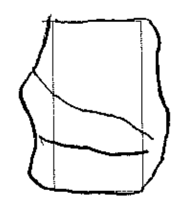
Axial Strain during confinement (%): 0.38

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	25.7			6.017	2.882	123.2
Pre-Shear:				5.994	2.871	124.7

Exploration Number: B-6	Depth (feet): 46.8	Description: Brown to Grayish Brown Sandy CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-89
Project Number: 27663042		

uu_ssb6@47





FAILURE SKETCH

Cell Pressure (ksf) = 0.75

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.03

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	24.1	97	65	5.715	2.889	126.5
Pre-Shear:				5.713	2.888	126.7

Exploration Number: B-7	Depth (feet): 15.0	Description: Grayish Brown Clayey SAND (SC)

Project Name: Restoration Project

Location: Salton Sea

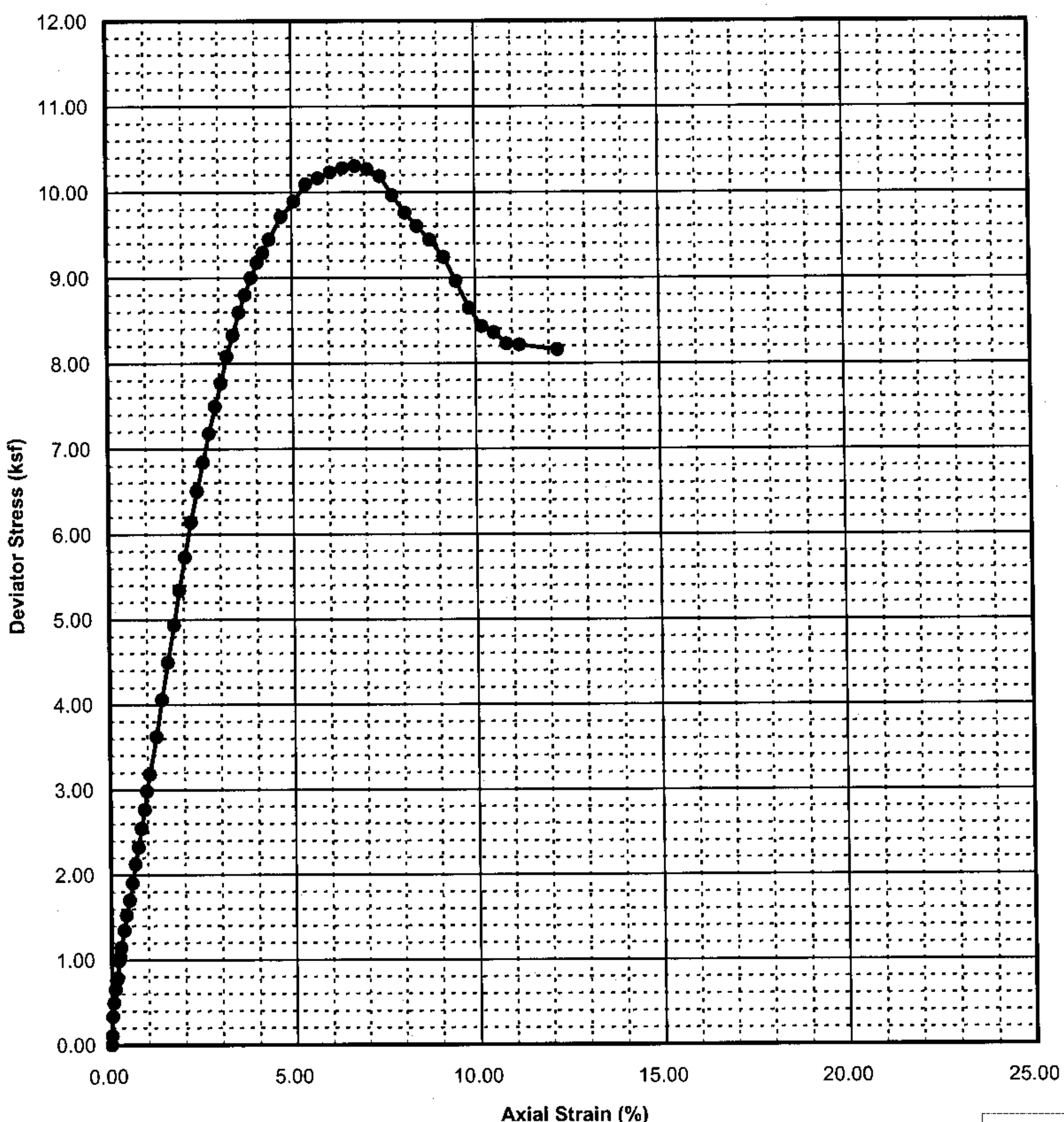
Project Number: 27663042

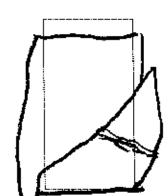
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-90

uu_ssb7@15





FAILURE SKETCH

Cell Pressure (ksf) = 1.50

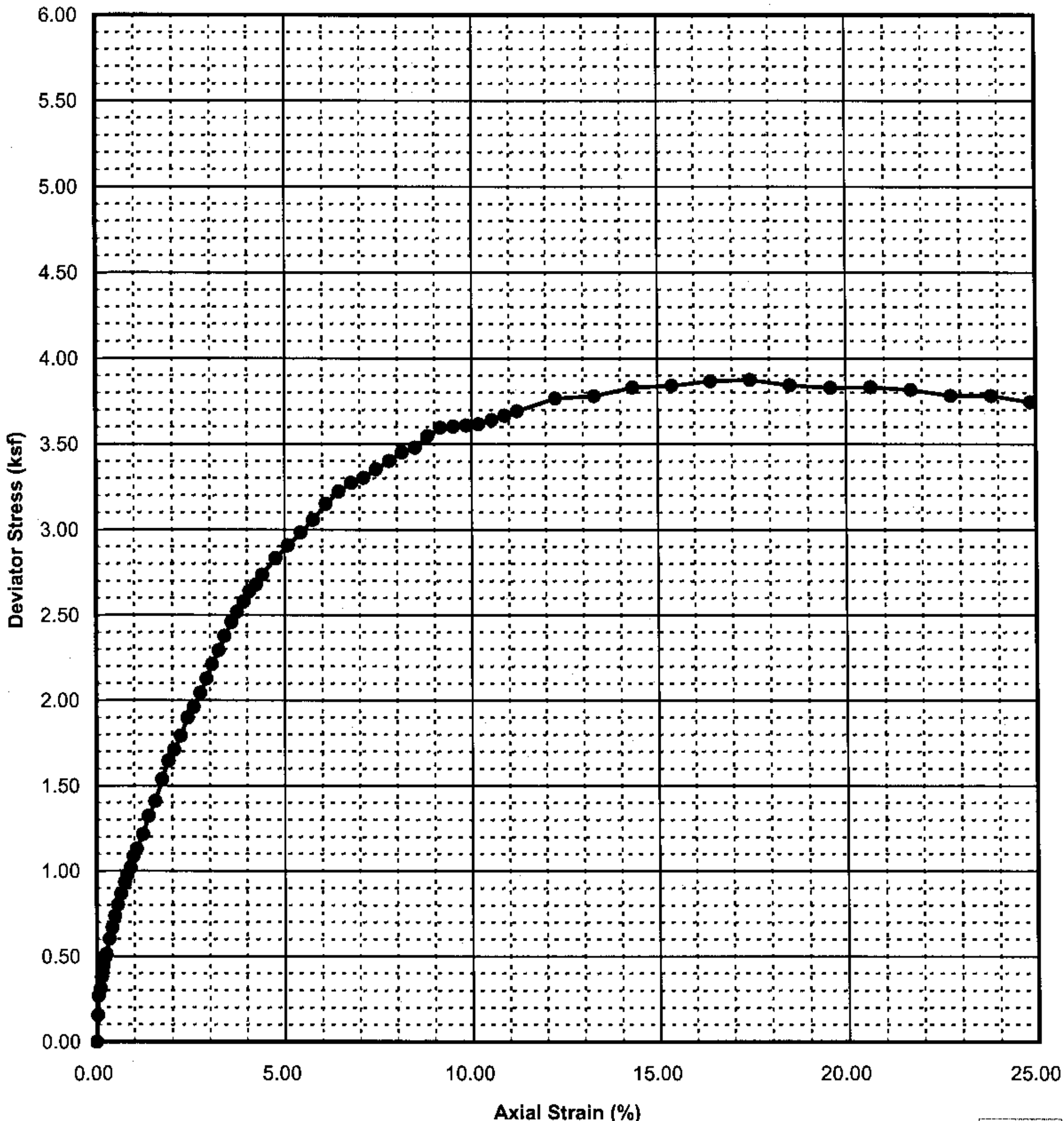
Strain Rate (%/min) = 1.0

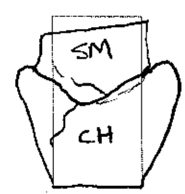
Axial Strain during confinement (%): 0.03

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	22.6			5.996	2.855	127.7
Pre-Shear:				5.994	2.854	127.8

Exploration Number: B-7	Depth (feet): 25.6	Description: Gray Silty SAND (SM)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-91
Project Number: 27663042		

uu_ssb7@26





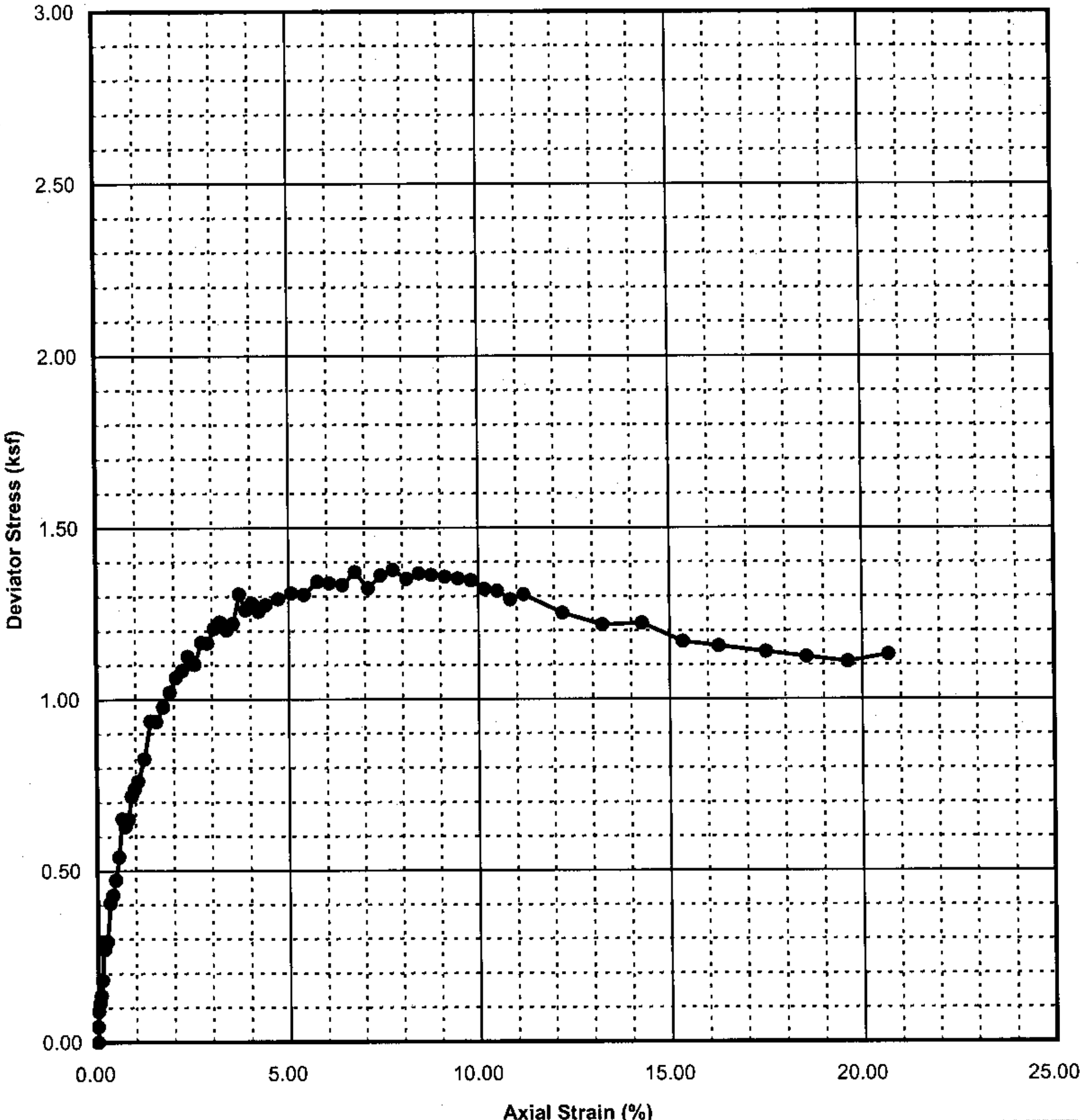
FAILURE SKETCH

Cell Pressure (ksf) = 2.00
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.20

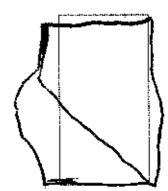
Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	24.2			5.980	2.869	124.3
Pre-Shear:				5.968	2.863	125.1

Exploration Number: B-7	Depth (feet): 30.2	Description: Gray Sandy CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-92
Project Number: 27663042		

uu_ssb7@30



Cell Pressure (ksf) = 1.20
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.12



FAILURE SKETCH

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	49.6			6.018	2.850	107.8
Pre-Shear:				6.011	2.847	108.1

Exploration Number: B-11	Depth (feet): 25.8	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

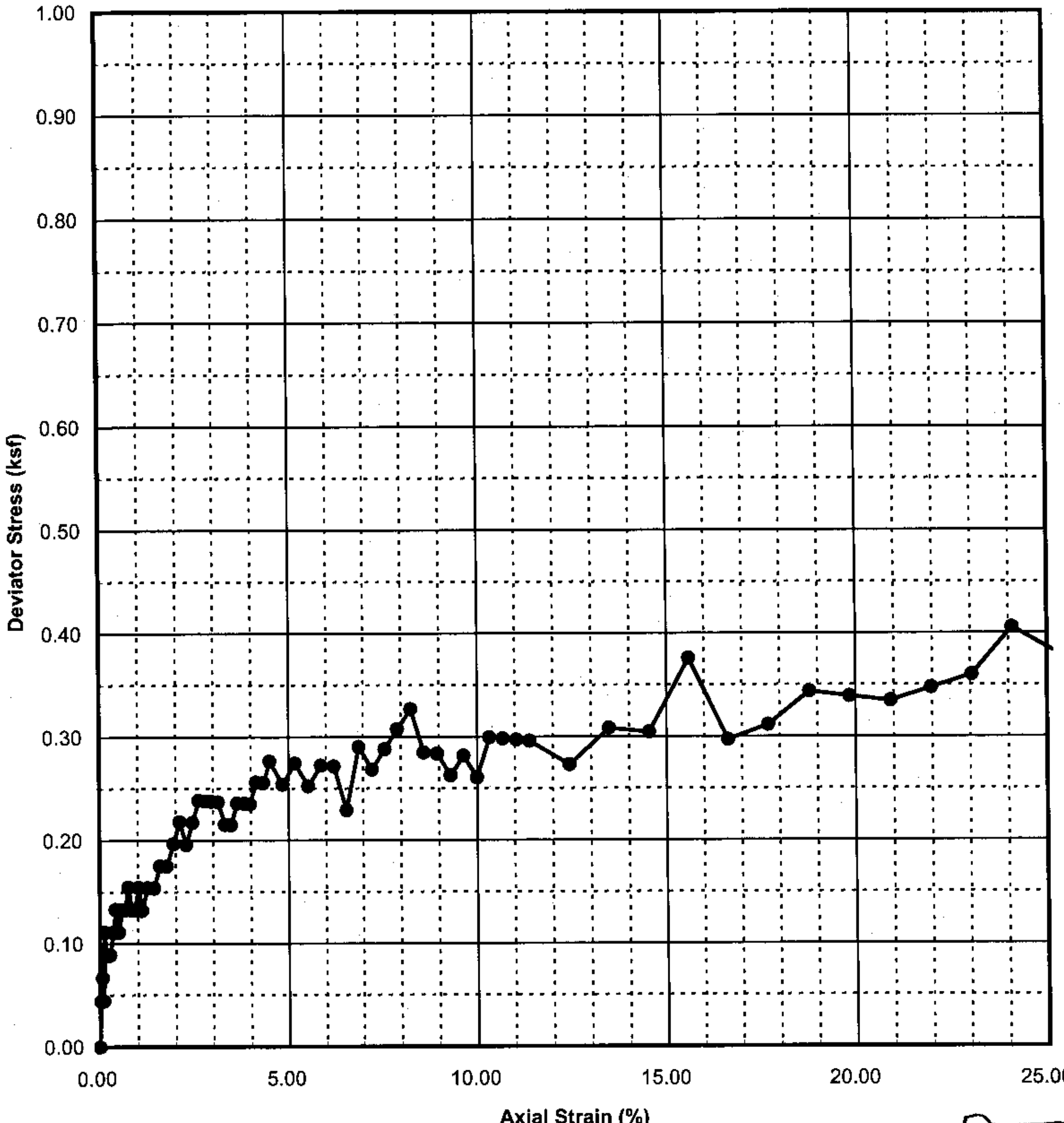
Project Number: 27663042

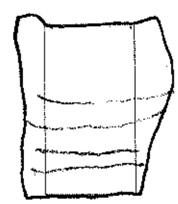
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-93

uu_ssb11@26





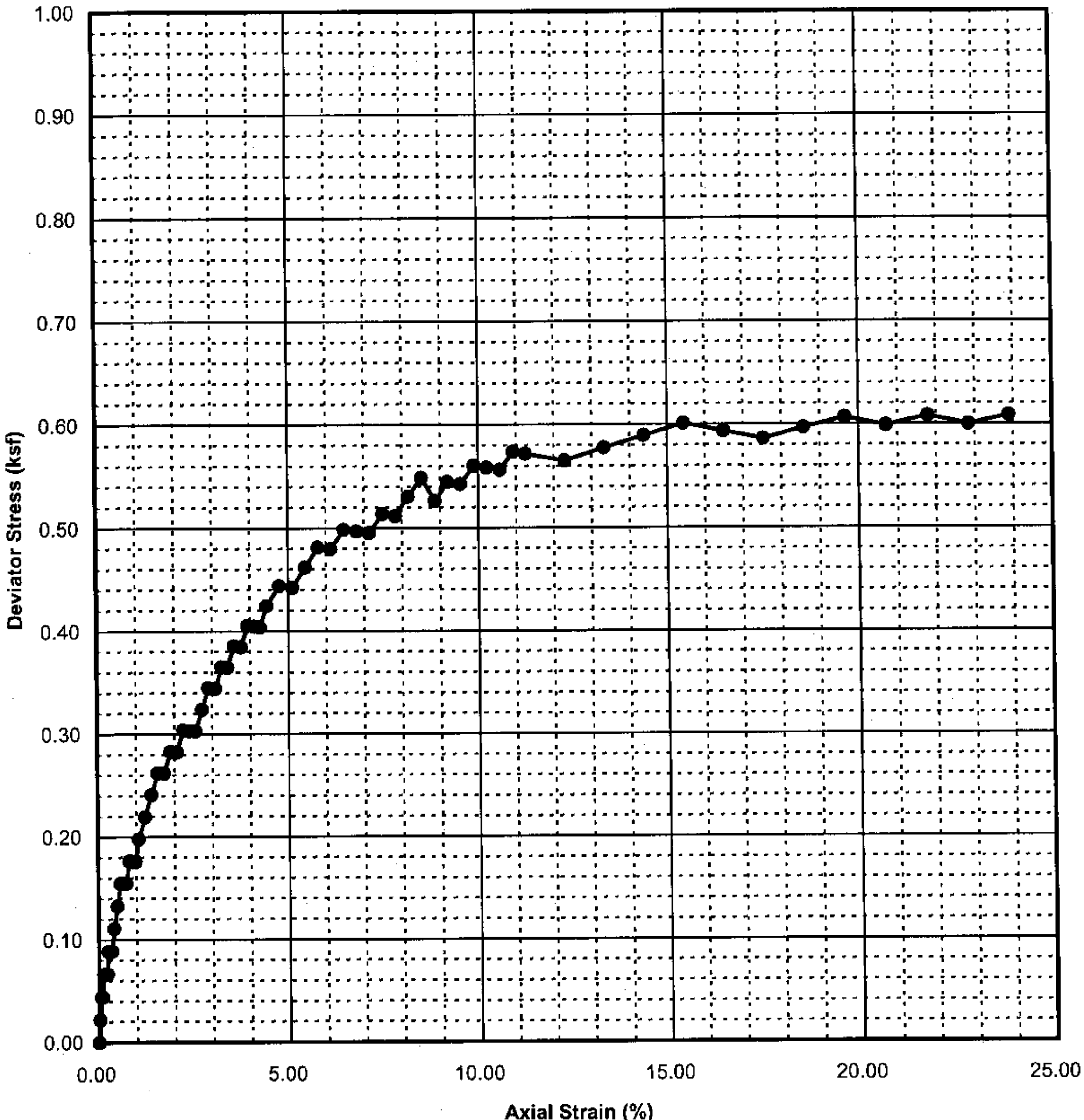
FAILURE SKETCH

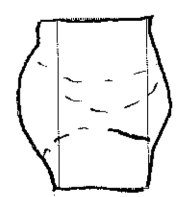
Cell Pressure (ksf) = 0.50
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.02

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	38.7	32	12	5.951	2.870	114.5
Pre-Shear:				5.950	2.870	114.6

Exploration Number: B-14	Depth (feet): 5.7	Description: Brown CLAY (CL), wet, very soft, slumping
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-94
Project Number: 27663042		

uu_ssb14@6





FAILURE SKETCH

Cell Pressure (ksf) = 0.75

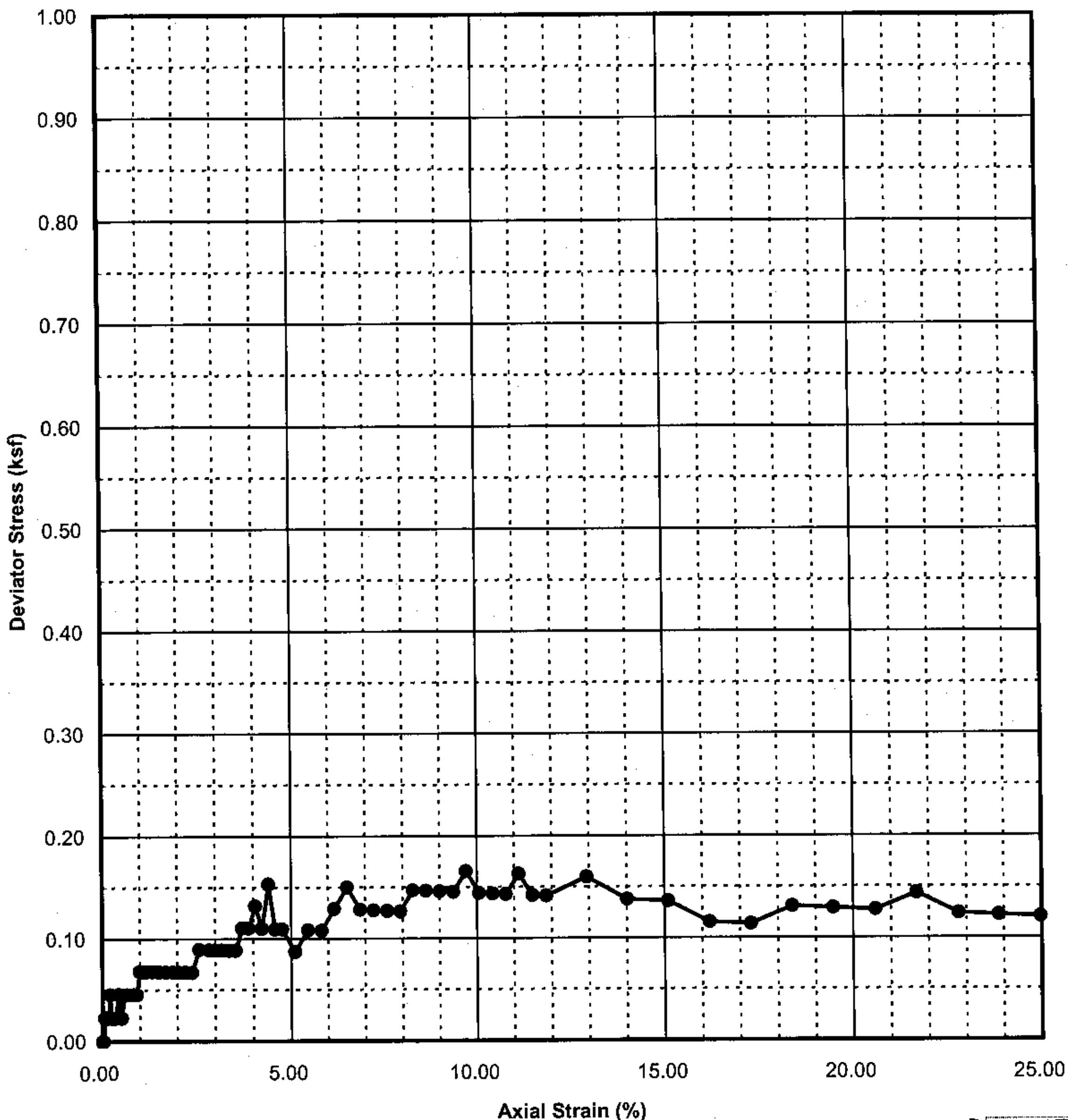
Strain Rate (%/min) = 1.0

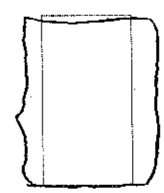
Axial Strain during confinement (%): 0.08

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	35.1	36	19	5.982	2.876	112.8
Pre-Shear:				5.977	2.874	113.0

Exploration Number: B-14	Depth (feet): 16.6	Description: Reddish Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-95
Project Number: 27663042		

uu_ssb14@17





FAILURE SKETCH

Cell Pressure (ksf) = 0.50

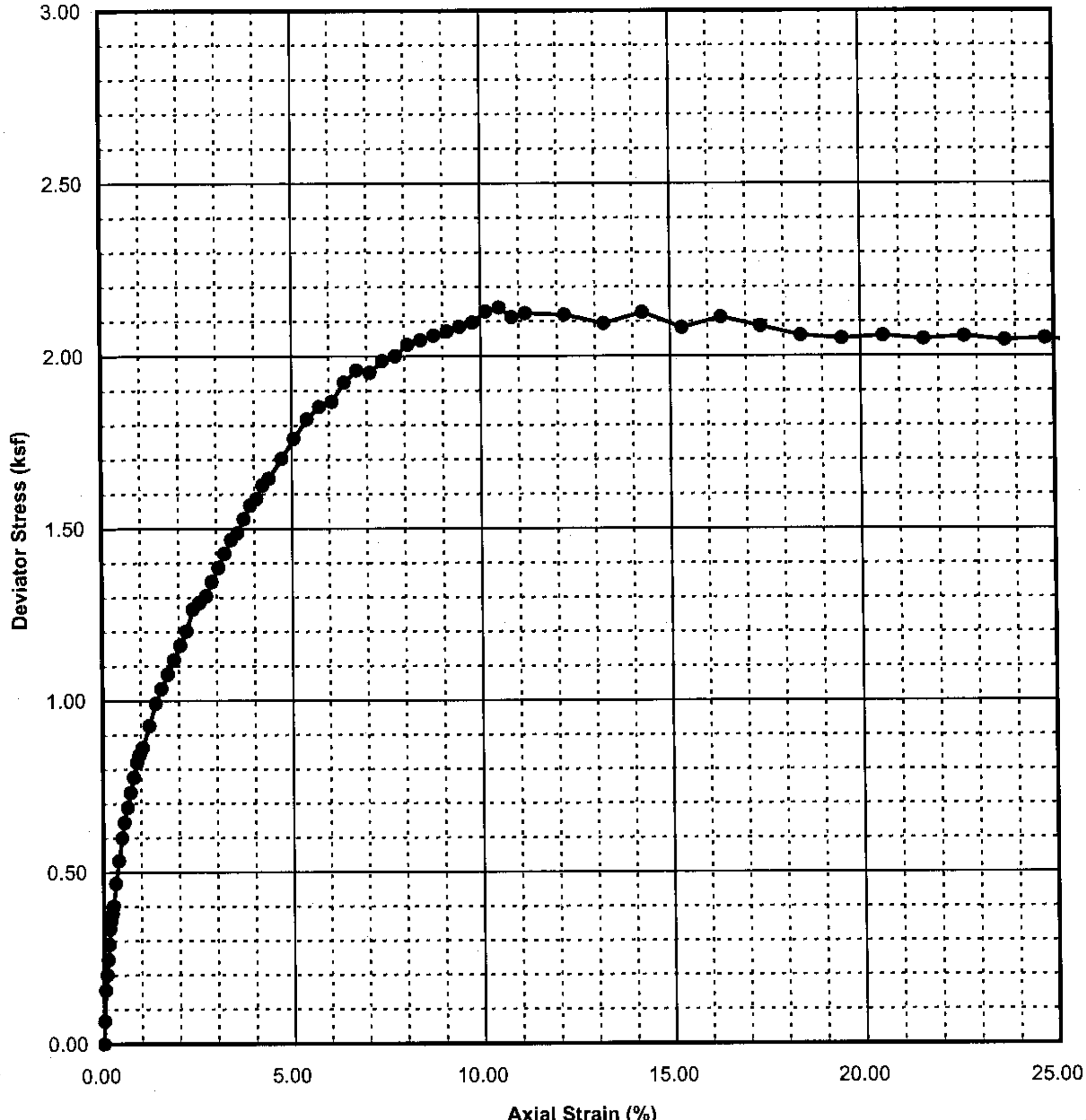
Strain Rate (%/min) = 1.0

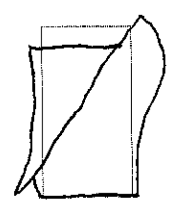
Axial Strain during confinement (%): 1.45

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	97.8	72	44	5.850	2.870	92.7
Pre-Shear:				5.765	2.828	96.8

Exploration Number: B-17	Depth (feet): 1.5	Description: Gray CLAY (CH), wet, very soft, slumping
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-96
Project Number: 27663042		

uu_ssb17@2





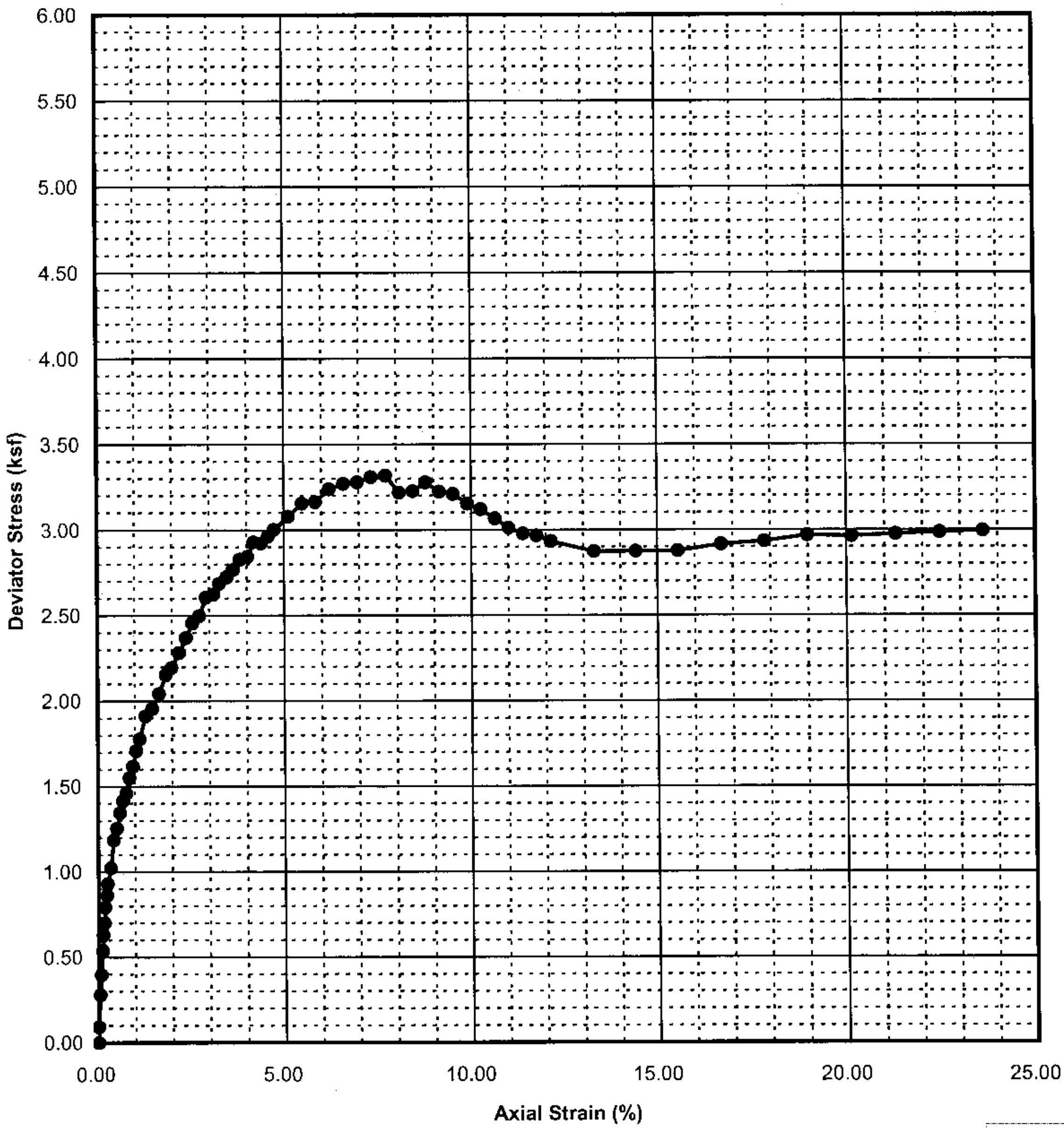
FAILURE SKETCH

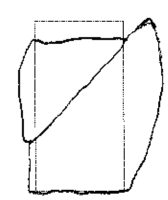
Cell Pressure (ksf) = 0.50
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.17

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	34.6	66	40	6.014	2.869	117.1
Pre-Shear:				6.004	2.864	117.7

Exploration Number: B-17	Depth (feet): 10.0	Description: Reddish Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-97
Project Number: 27663042		

uu_ssb17@10





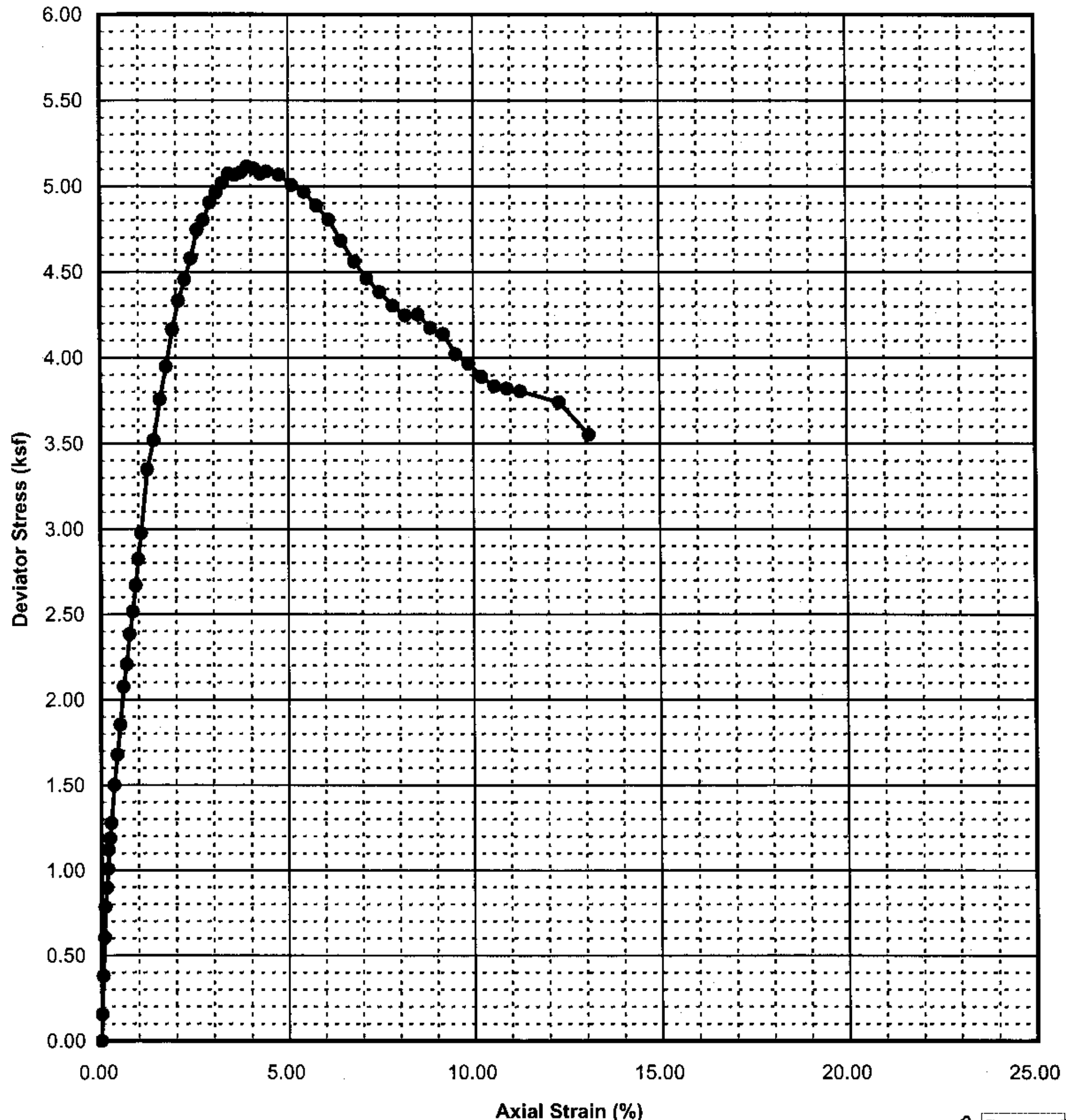
FAILURE SKETCH

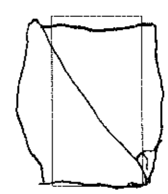
Cell Pressure (ksf) = 0.99
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.07

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	32.4	62	38	5.487	2.805	117.8
Pre-Shear:				5.483	2.803	118.0

Exploration Number: B-17	Depth (feet): 20.0	Description: Reddish Brown CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-98
Project Number: 27663042		

uu_ssb17@20





FAILURE SKETCH

Cell Pressure (ksf) = 1.50

Strain Rate (%/min) = 1.0

Axial Strain during confinement (%): 0.18

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	28.7	75	51	6.013	2.863	123.2
Pre-Shear:				6.002	2.858	123.9

Exploration Number: B-17	Depth (feet): 29.9	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

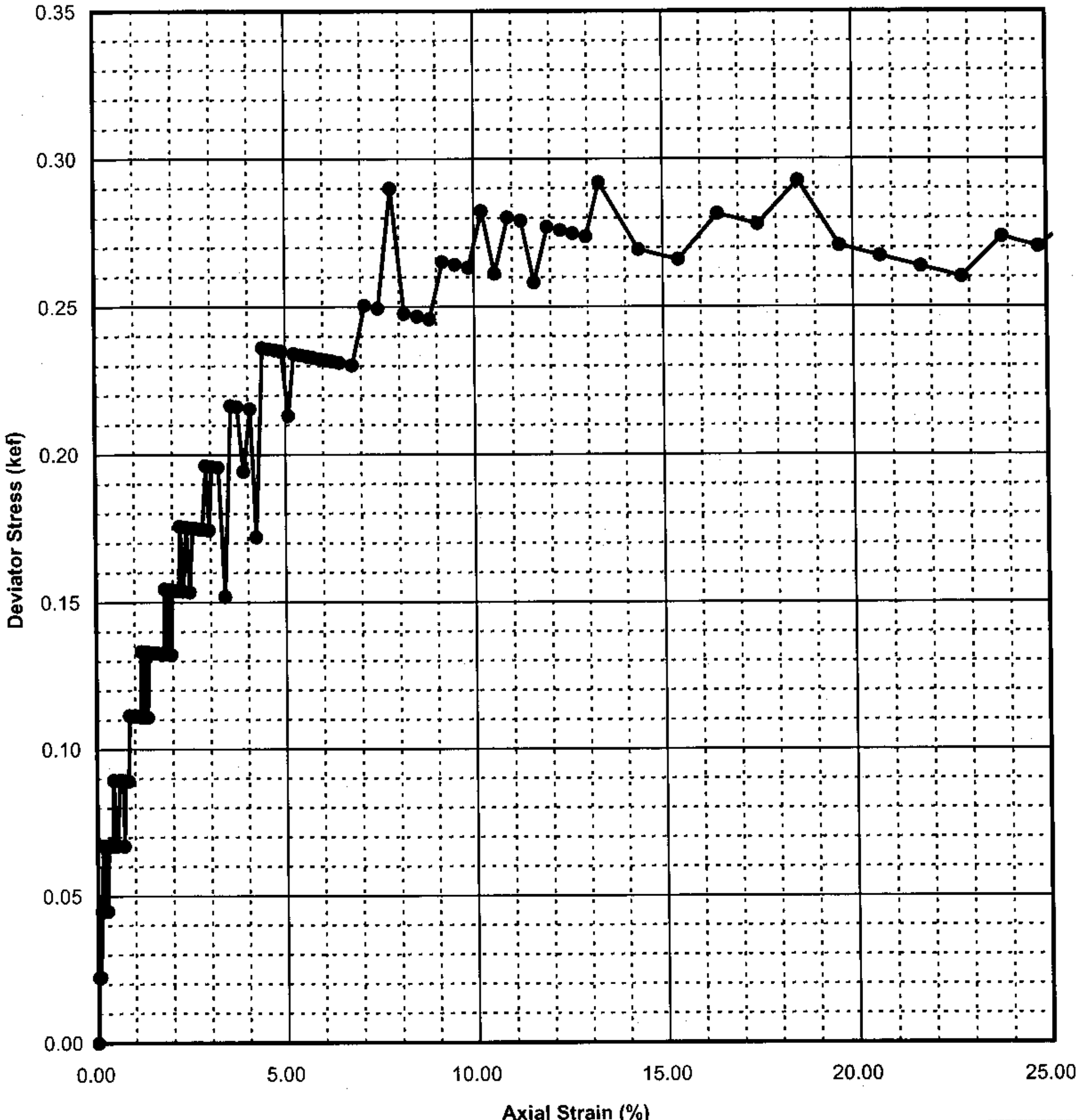
Project Number: 27663042

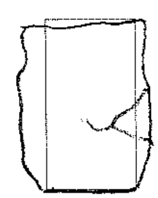
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-99

uu_ssb17@30





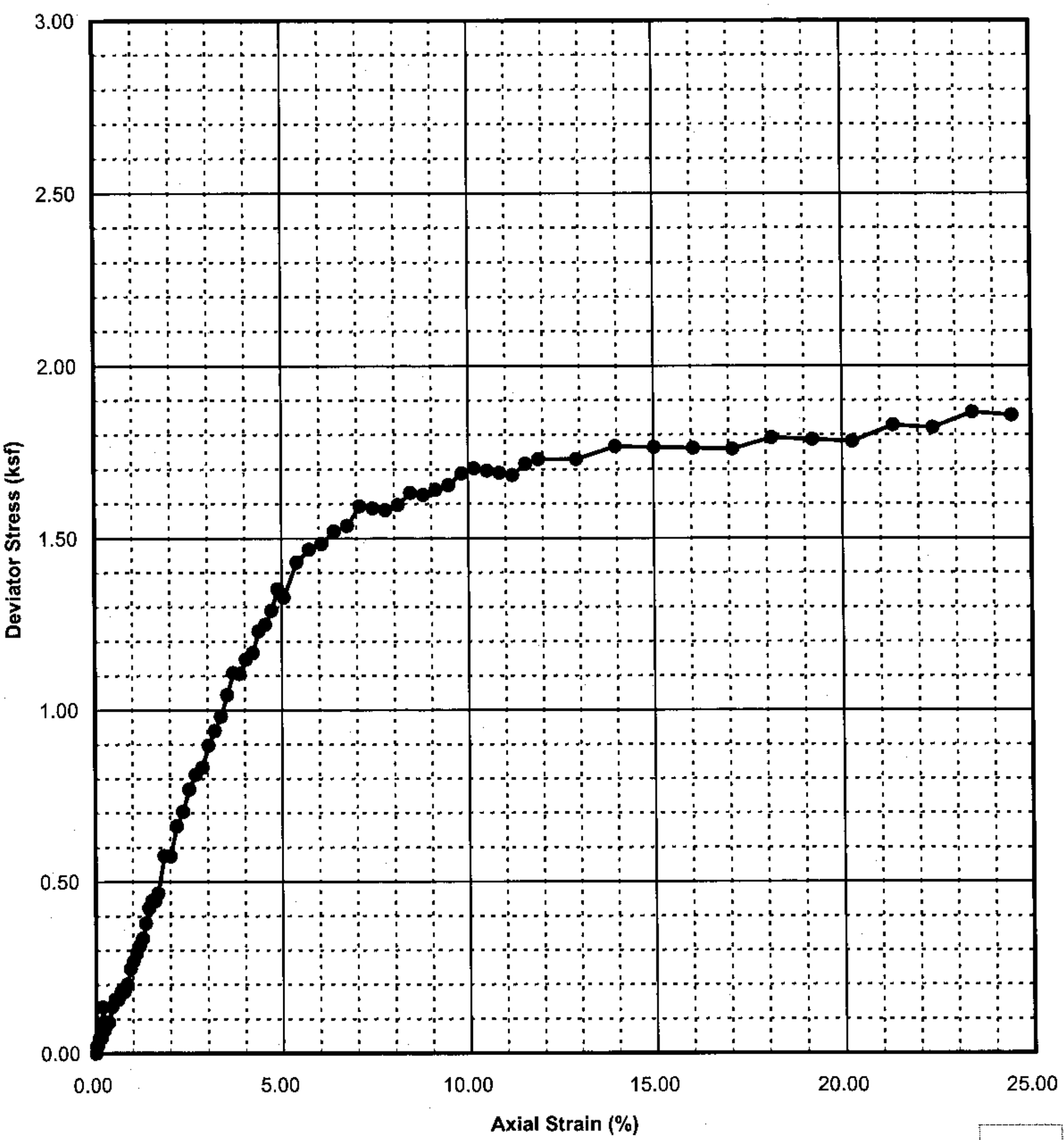
FAILURE SKETCH

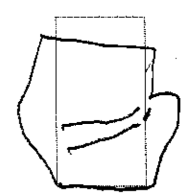
Cell Pressure (ksf) = 0.49
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): -0.03

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	66.0	82	52	5.992	2.856	99.8
Pre-Shear:				5.994	2.857	99.7

Exploration Number: B-19	Depth (feet): 5.8	Description: Gray CLAY (CH)
Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-100
Project Number: 27663042		

uu_ssb19@6





FAILURE SKETCH

Cell Pressure (ksf) = 1.50
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.27

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	38.2			6.007	2.858	116.8
Pre-Shear:				5.991	2.850	117.7

Exploration Number: B-19	Depth (feet): 36.2	Description: Gray CLAY with sand (CH)

Project Name: Restoration Project

Location: Salton Sea

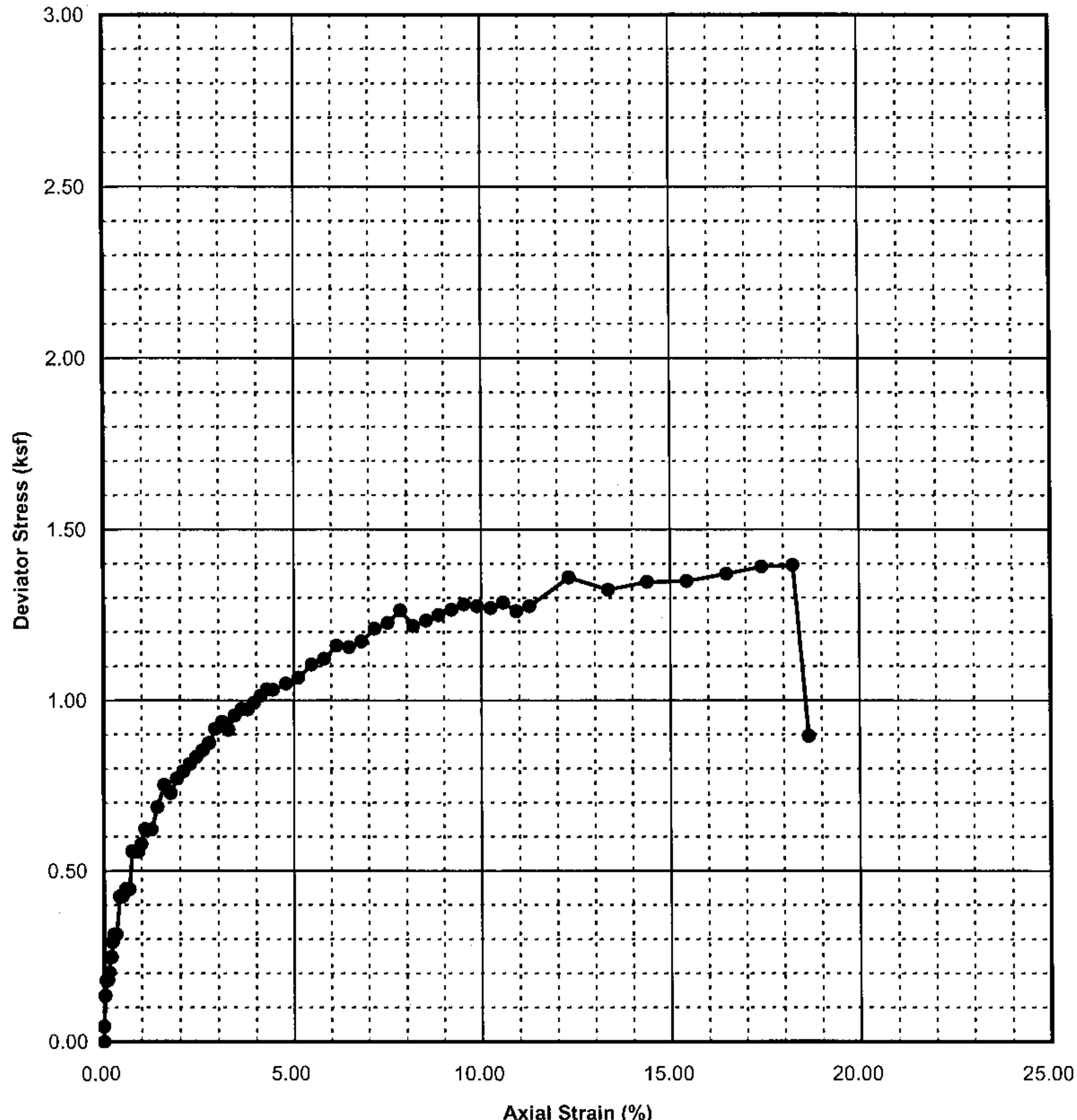
Project Number: 27663042

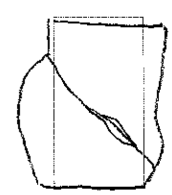
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-101

uu_ssb19@36





FAILURE SKETCH

Cell Pressure (ksf) = 2.00
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.20

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	43.2			6.013	2.862	111.0
Pre-Shear:				6.001	2.856	111.7

Exploration Number: B-19	Depth (feet): 45.8	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

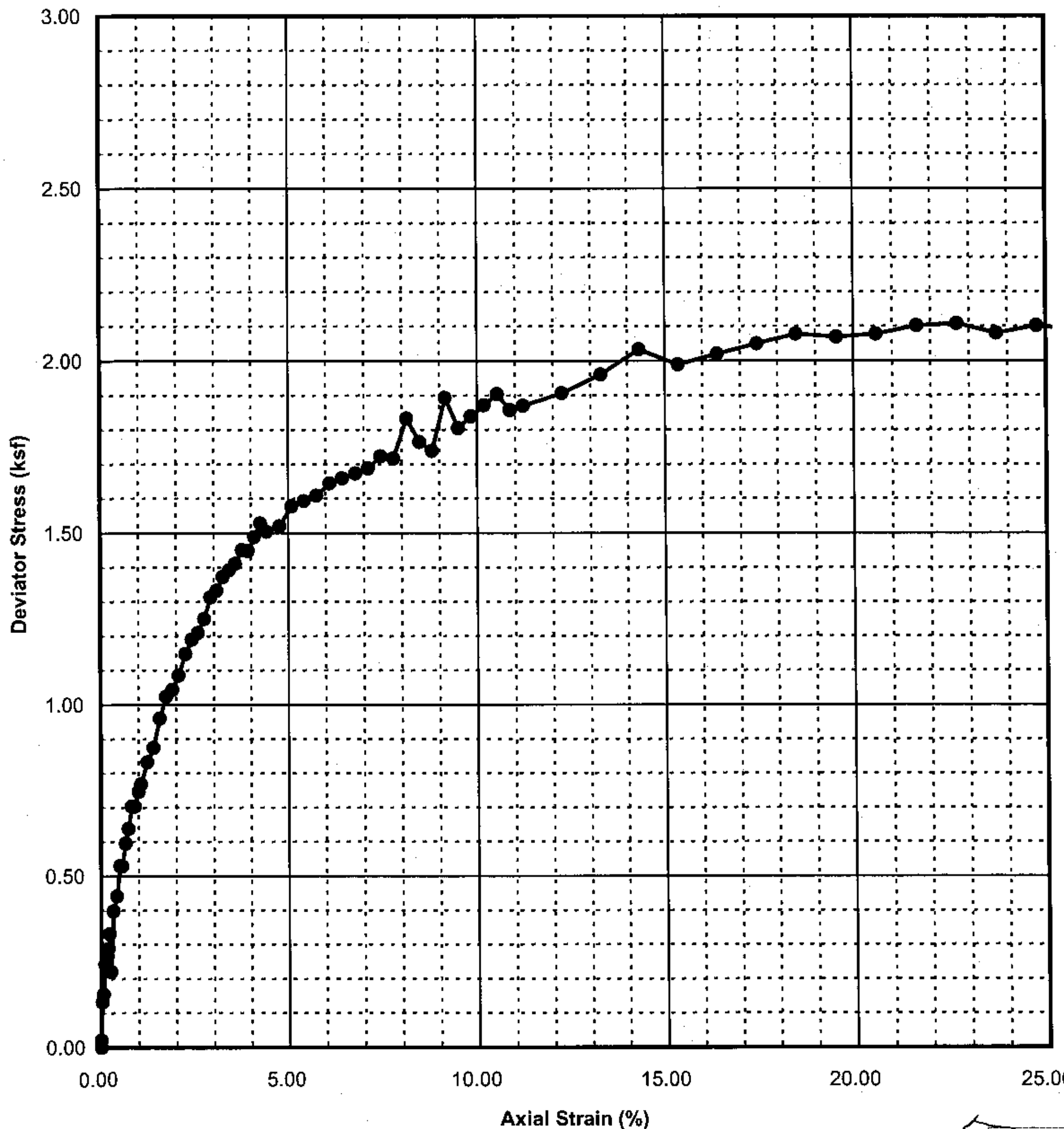
Project Number: 27663042

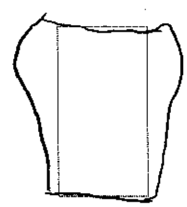
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-102

uu_ssb19@46





FAILURE SKETCH

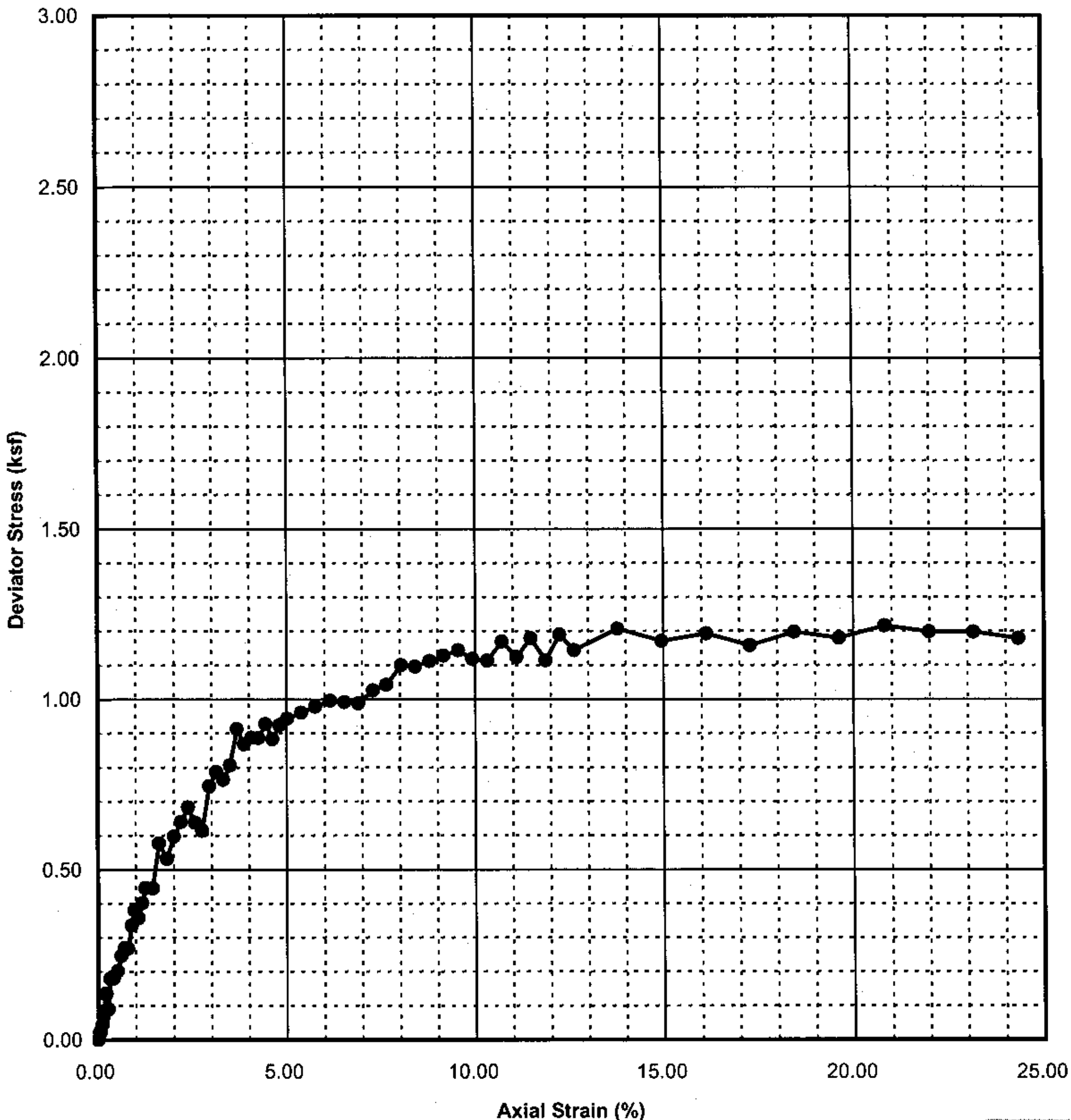
Cell Pressure (ksf) = 0.50
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.08

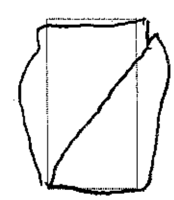
Test Number 1	Water Content (%)	LL	Pi	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	36.6	70	44	6.042	2.878	115.3
Pre-Shear:				6.037	2.876	115.6

Exploration Number: B-20	Depth (feet): 5.5	Description: Gbrown to Grayish CLAY (CH)

Project Name: Restoration Project	Unconsolidated Undrained Triaxial Compression Test	URS
Location: Salton Sea		Figure No. C-103
Project Number: 27663042		

uu_ssb20@6





FAILURE SKETCH

Cell Pressure (ksf) = 0.99
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.04

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	34.1			5.377	2.850	118.4
Pre-Shear:				5.375	2.849	118.5

Exploration Number: B-20	Depth (feet): 21.0	Description: Gray CLAY (CH)

Project Name: Restoration Project

Location: Salton Sea

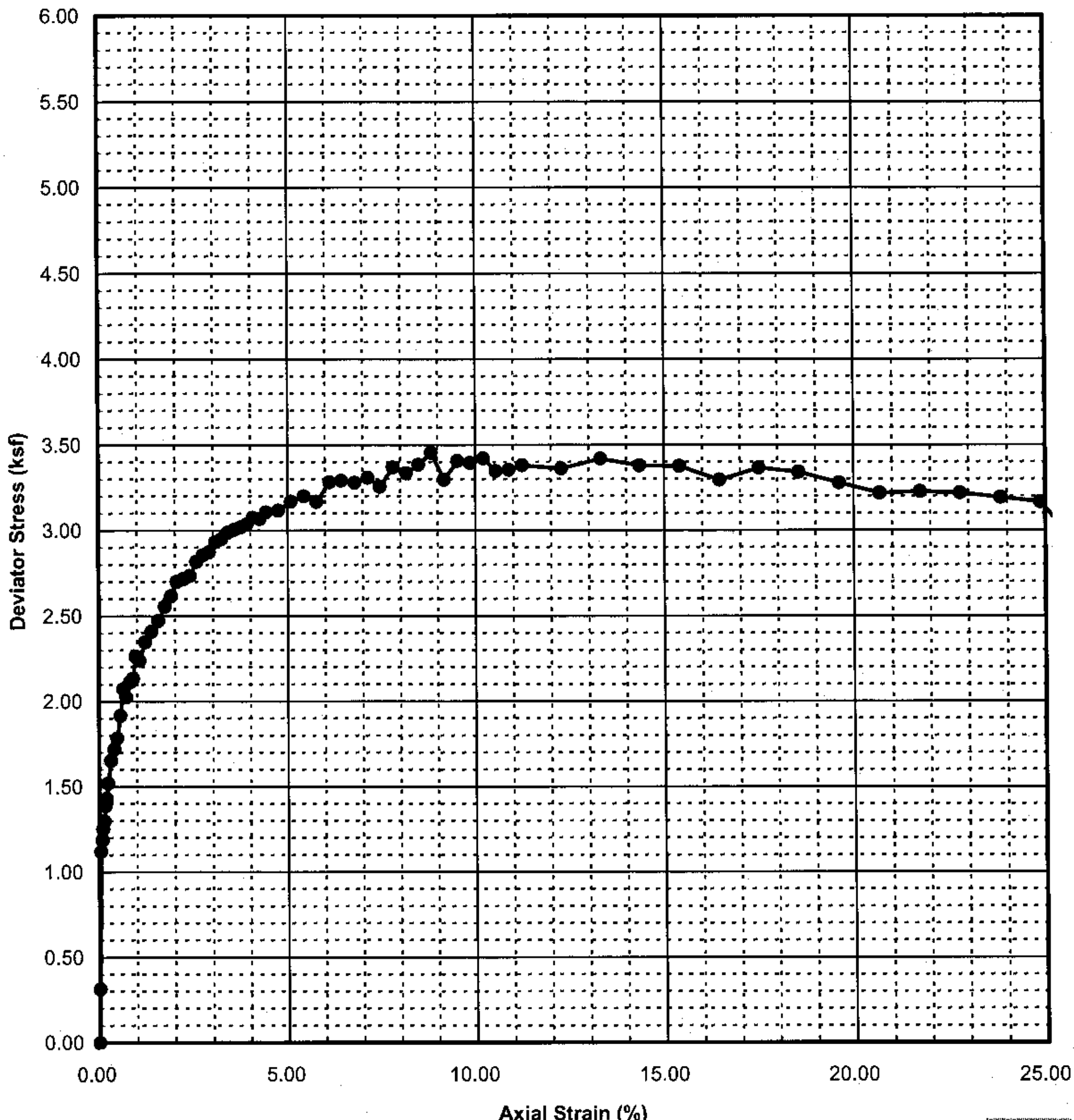
Project Number: 27663042

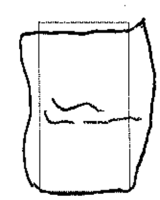
Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-104

uu_ssb20@21





FAILURE SKETCH

Cell Pressure (ksf) = 2.51
Strain Rate (%/min) = 1.0
Axial Strain during confinement (%): 0.17

Test Number 1	Water Content (%)	LL	PI	Length (in)	Diameter (in)	Wet Unit Weight (pcf)
Initial:	34.7			6.000	2.865	114.6
Pre-Shear:				5.990	2.860	115.1

Exploration Number: B-26	Depth (feet): 50.8	Description: Reddish Brown CLAY (CH)

Project Name: Restoration Project

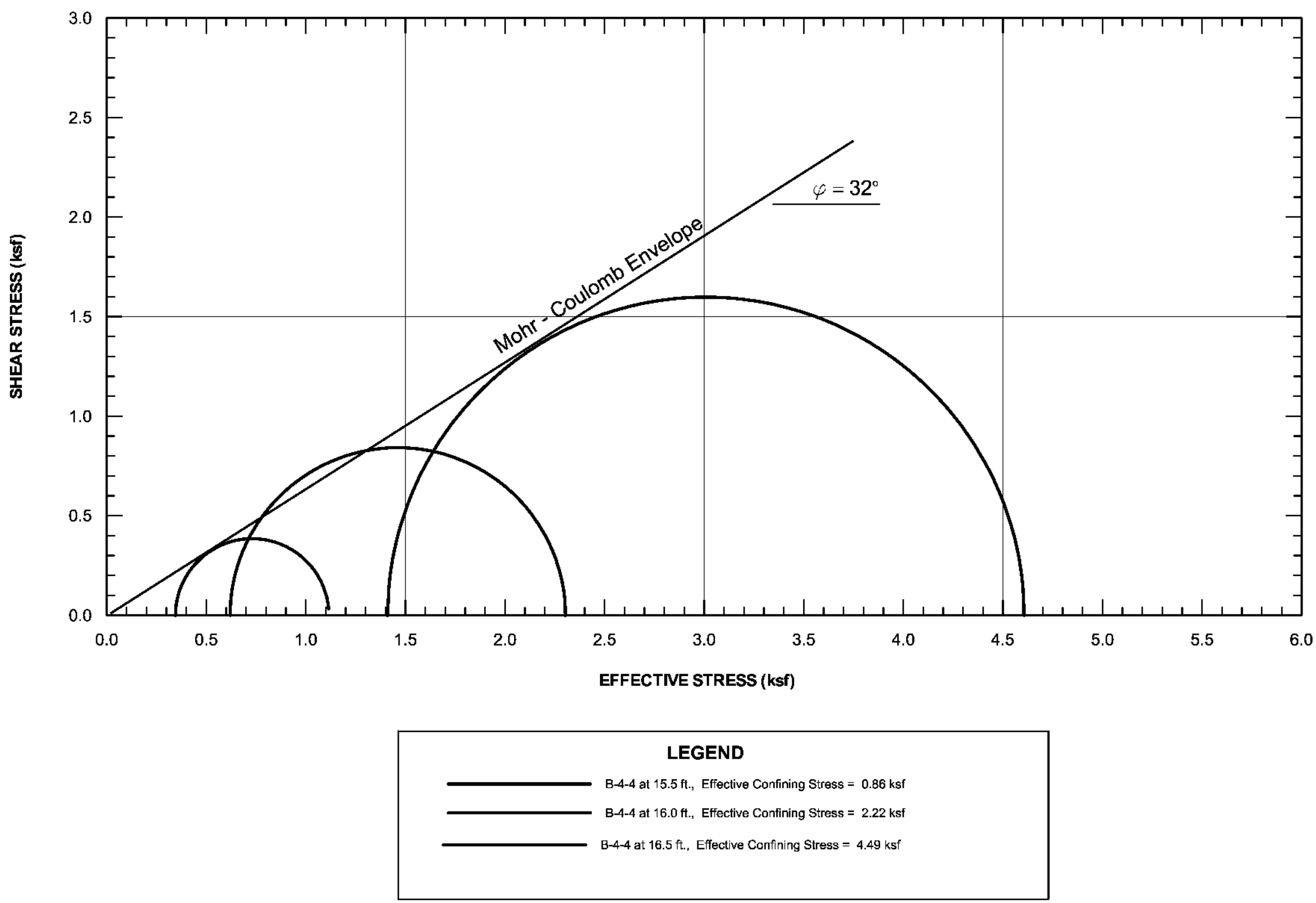
Location: Salton Sea

Project Number: 27663042

Unconsolidated Undrained Triaxial Compression Test

URS

Figure No. C-105

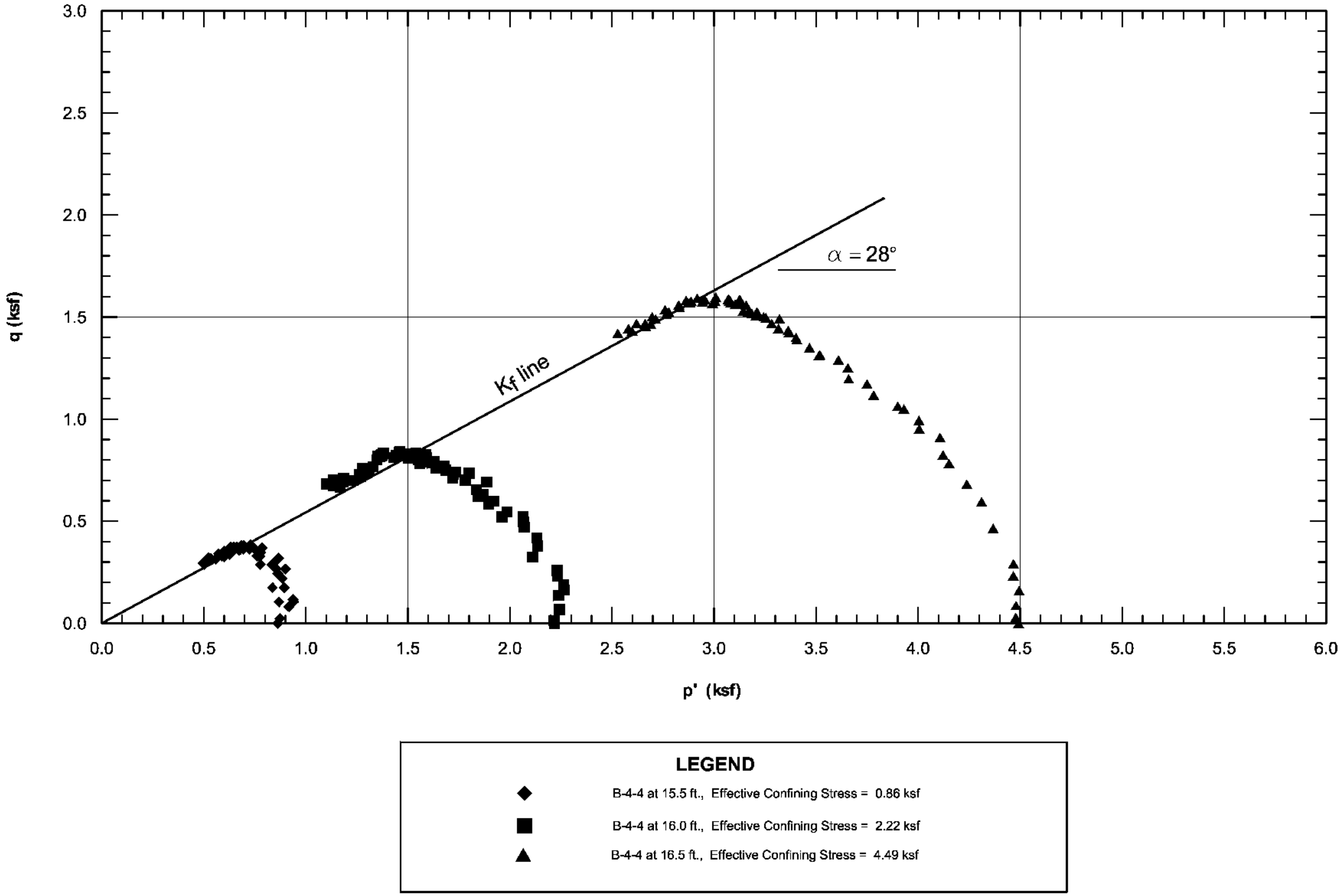


MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: November 2003	Project Name: Salton Sea Restoration	Fig.: C-106

mcd_ssb4@16.grf

URS

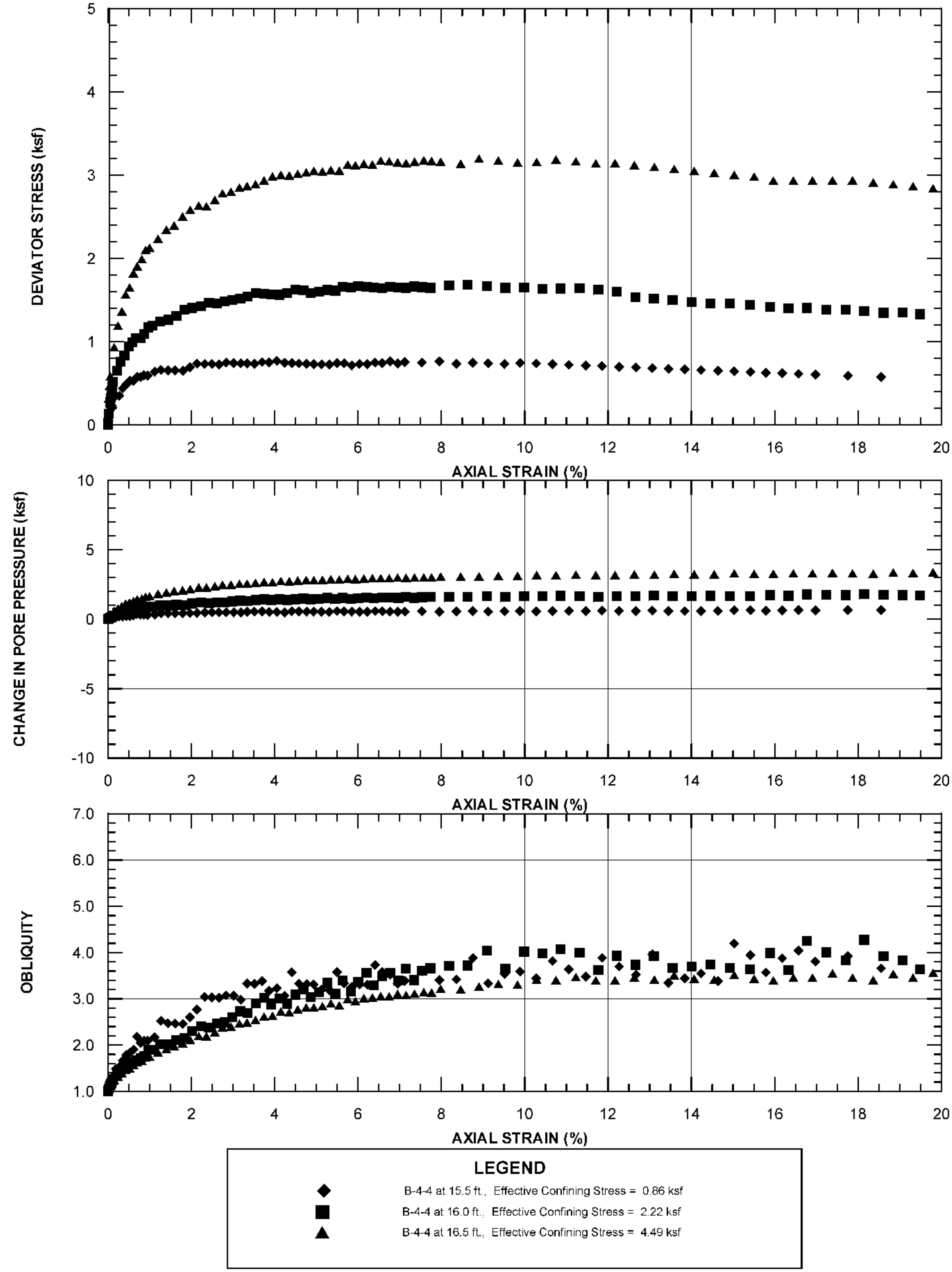


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: November 2003	Project Name: Salton Sea Restoration	Fig.: C - 107

pq_ssb4@16.grf

URS

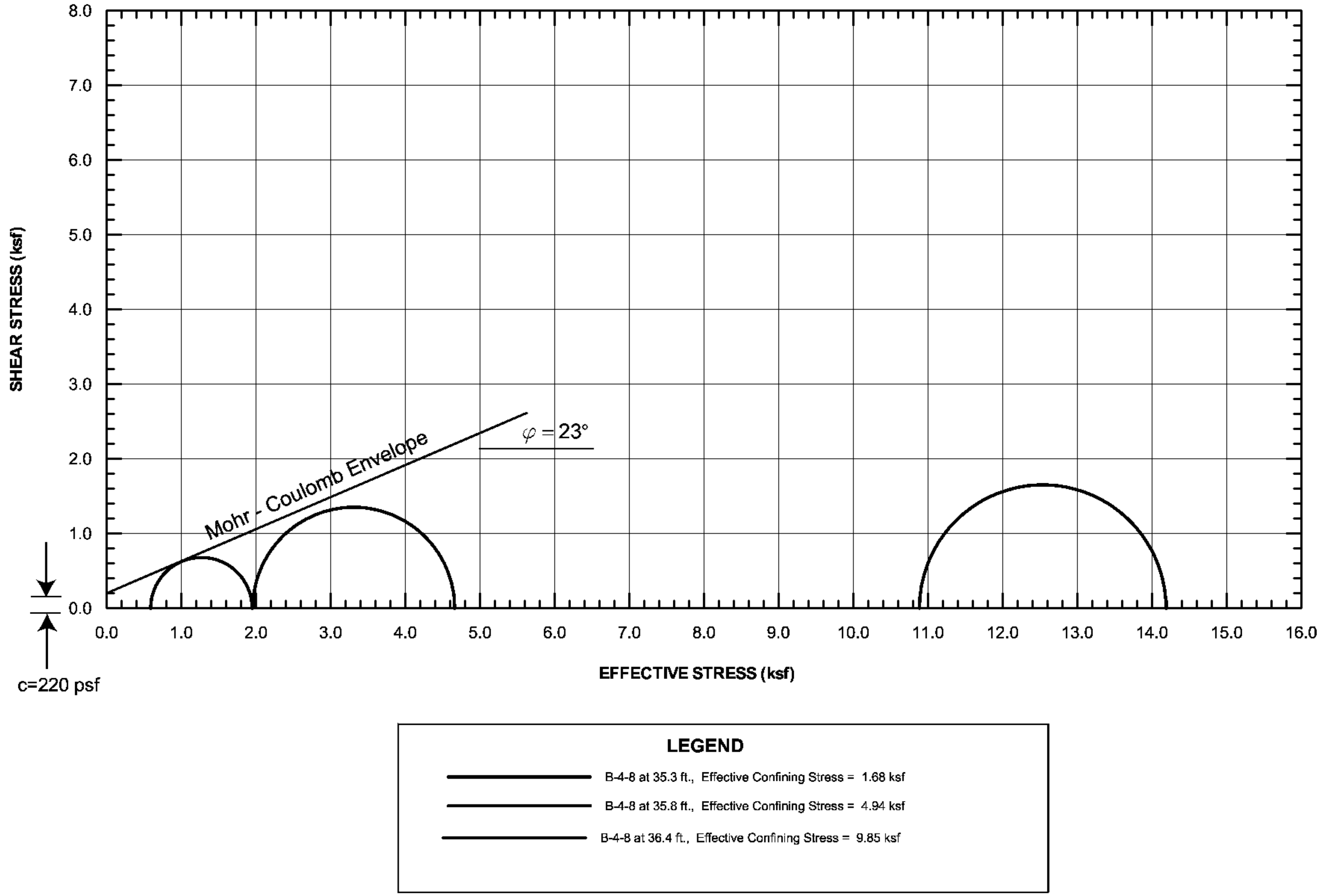


RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: Nov 2003	Project Name: Salton Sea Restoration	Fig.: C - 108

ss_ssb4@16.grf

URS

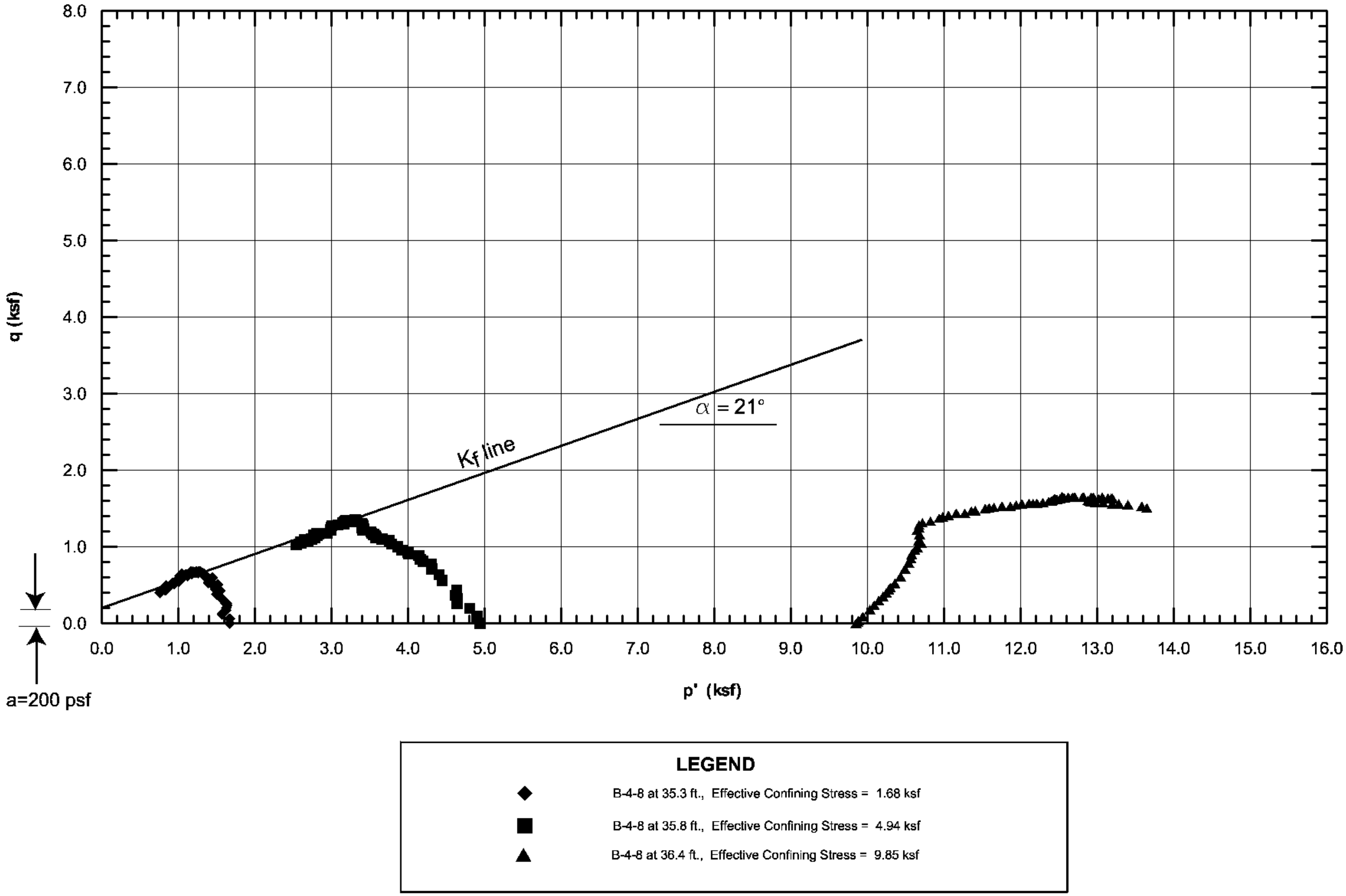


MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: November 2003	Project Name: Salton Sea Restoration	Fig.: C - 109

mcd_ssb4@36.grf

URS

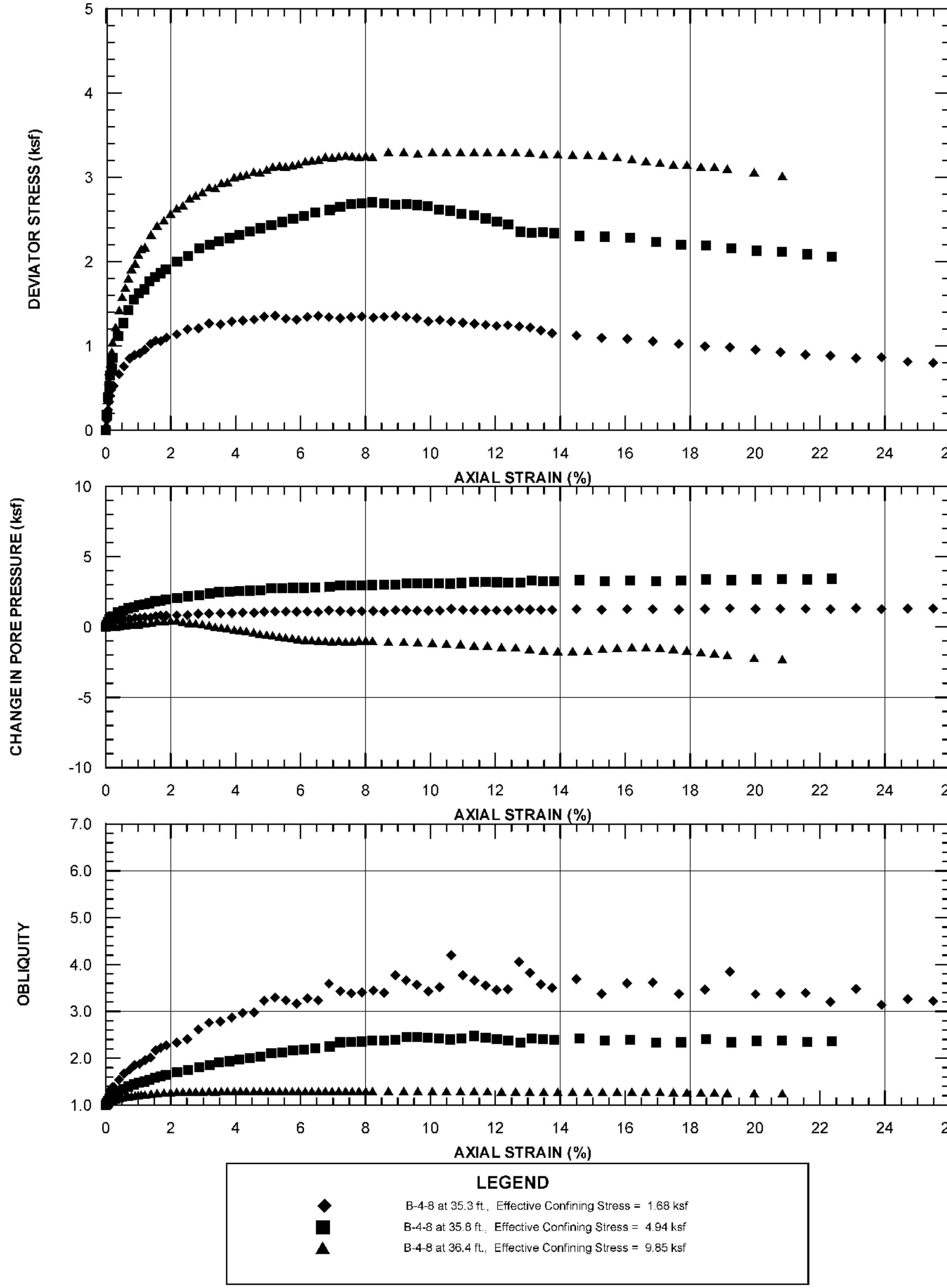


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: November 2003	Project Name: Salton Sea Restoration	Fig.: C - 110

pq_ssb4@36.grf

URS

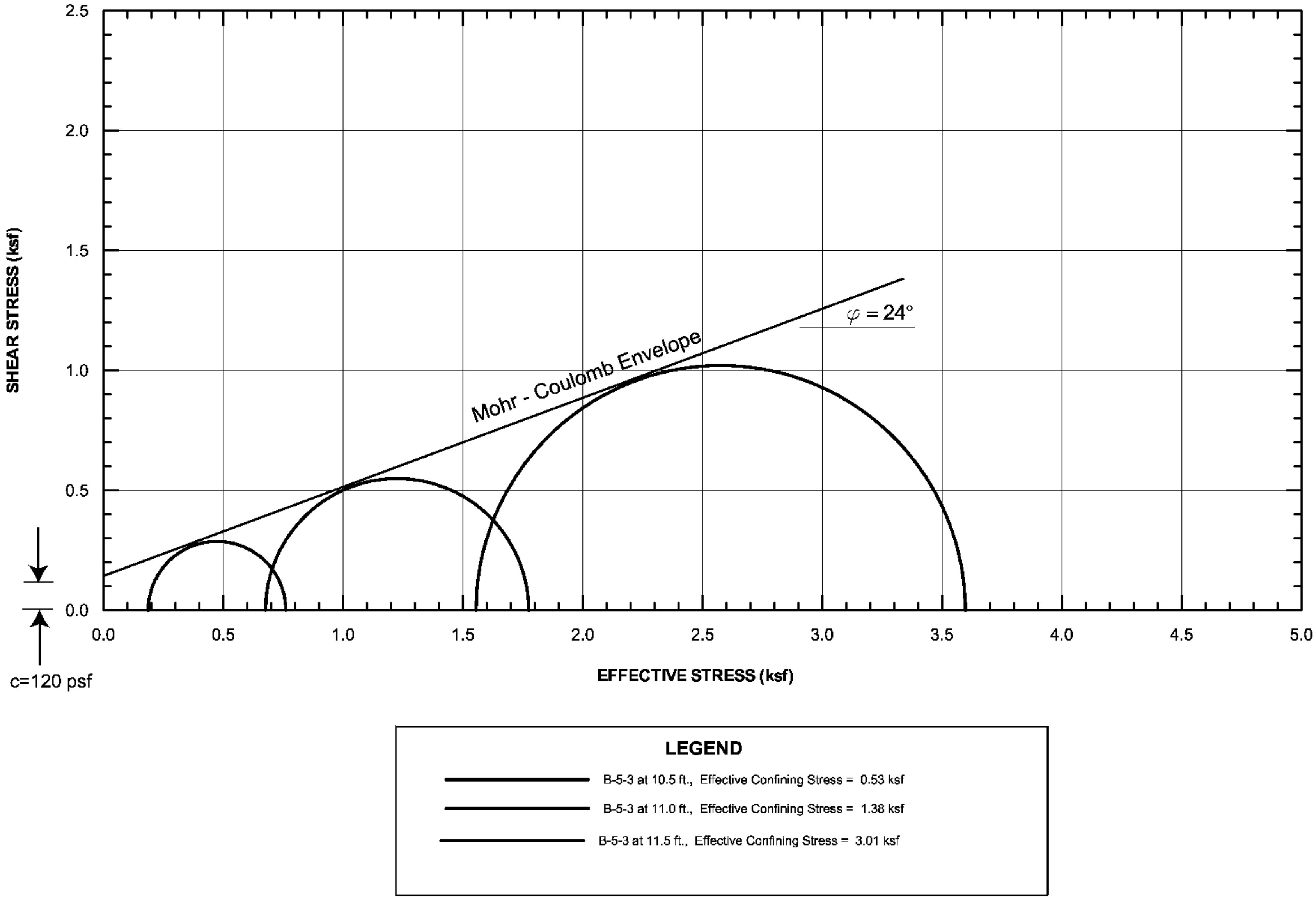


RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: Nov 2003	Project Name: Salton Sea Restoration	Fig.: C - 111

ss_ssb4@36.grf

URS

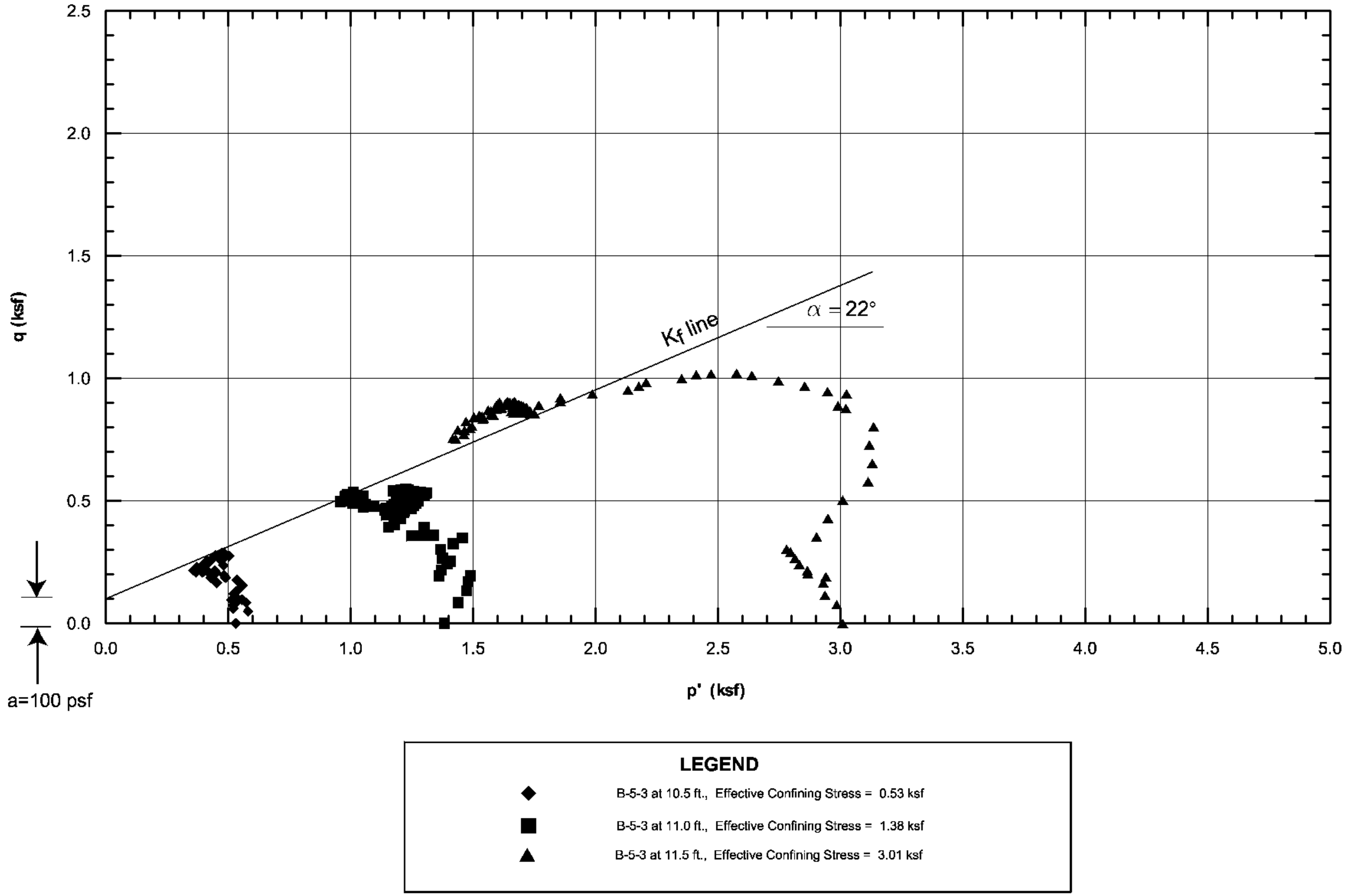


MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: January 2004	Project Name: Salton Sea Restoration	Fig.: C-112

mcd_ssb5@10.grf

URS

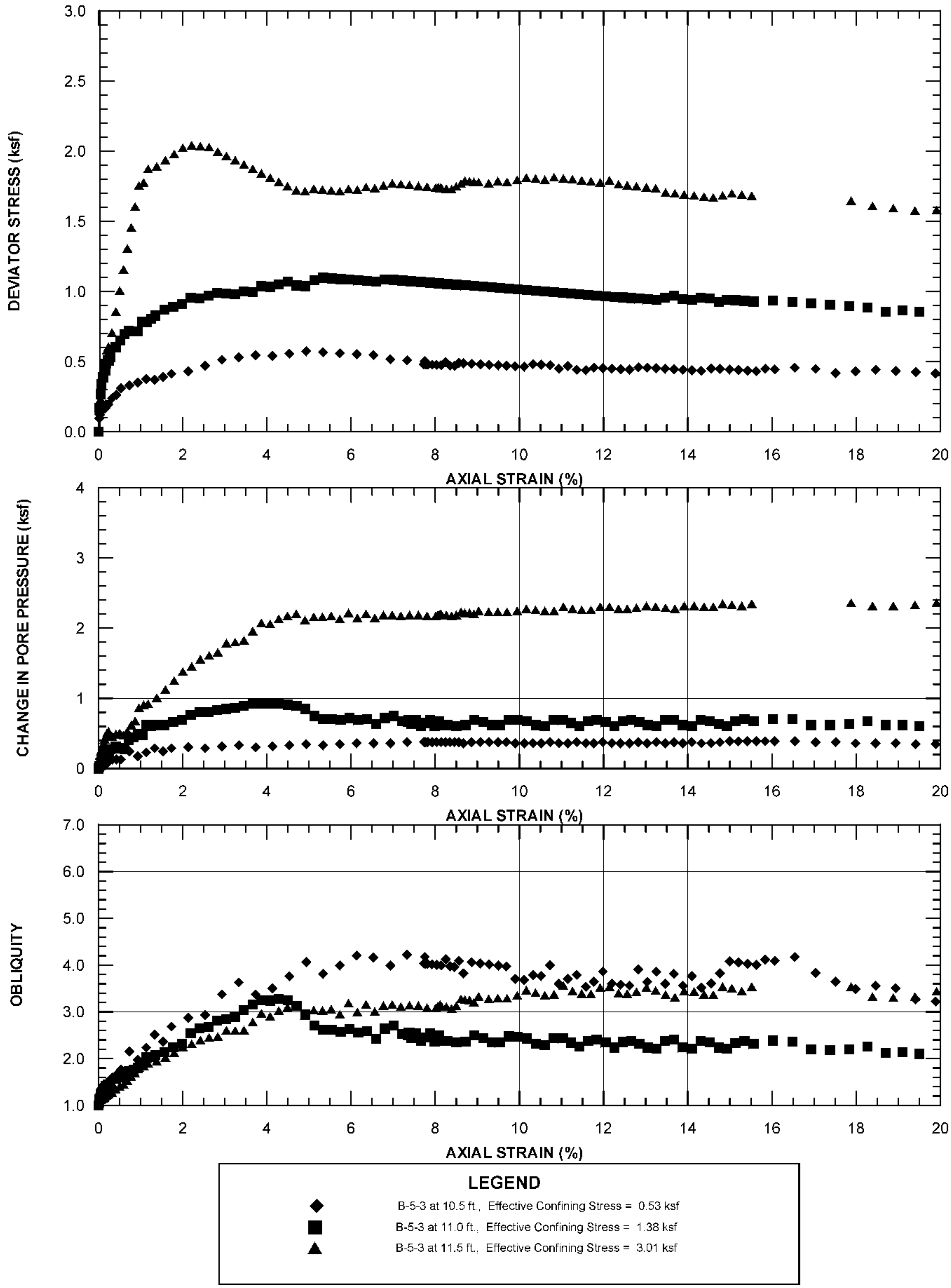


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: January 2004	Project Name: Salton Sea Restoration	Fig.: C-113

pq_ssb5@10.grf

URS

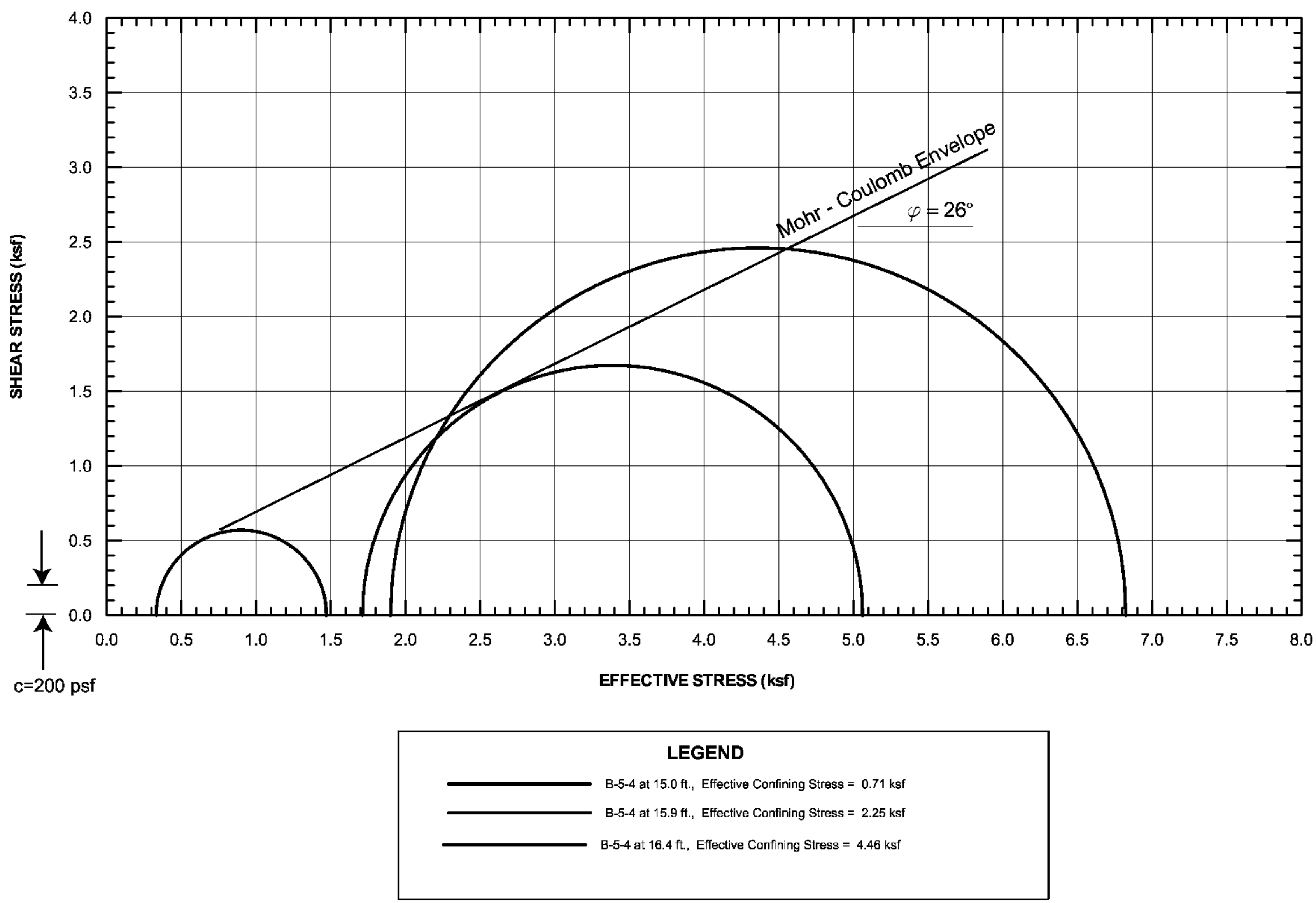


RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: Jan 2004	Project Name: Salton Sea Restoration	Fig.: C-114

ss_ssb5@10.grf

URS

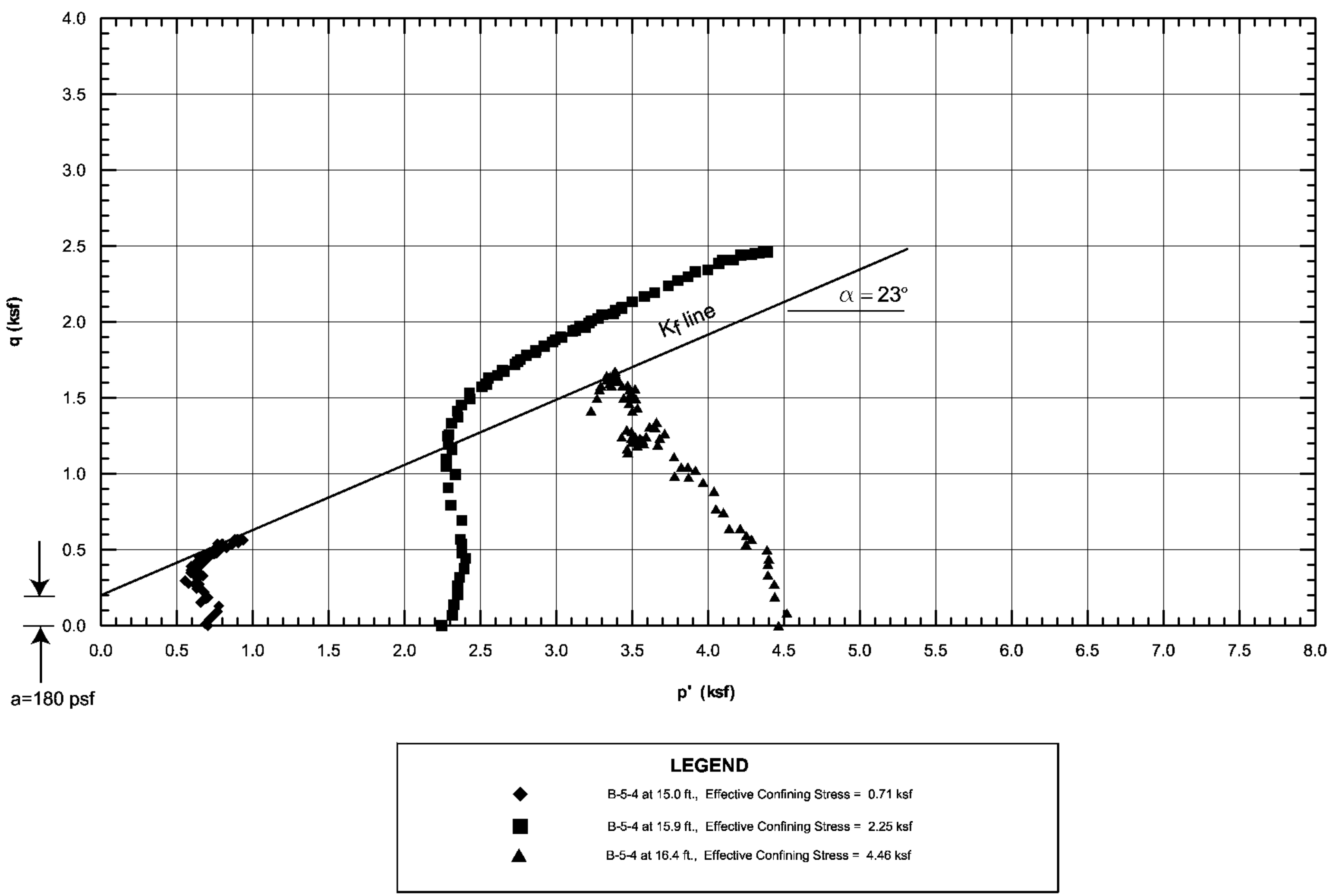


MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: January 2004	Project Name: Salton Sea Restoration	Fig.: C-115

mcd_ssb5@15.grf

URS

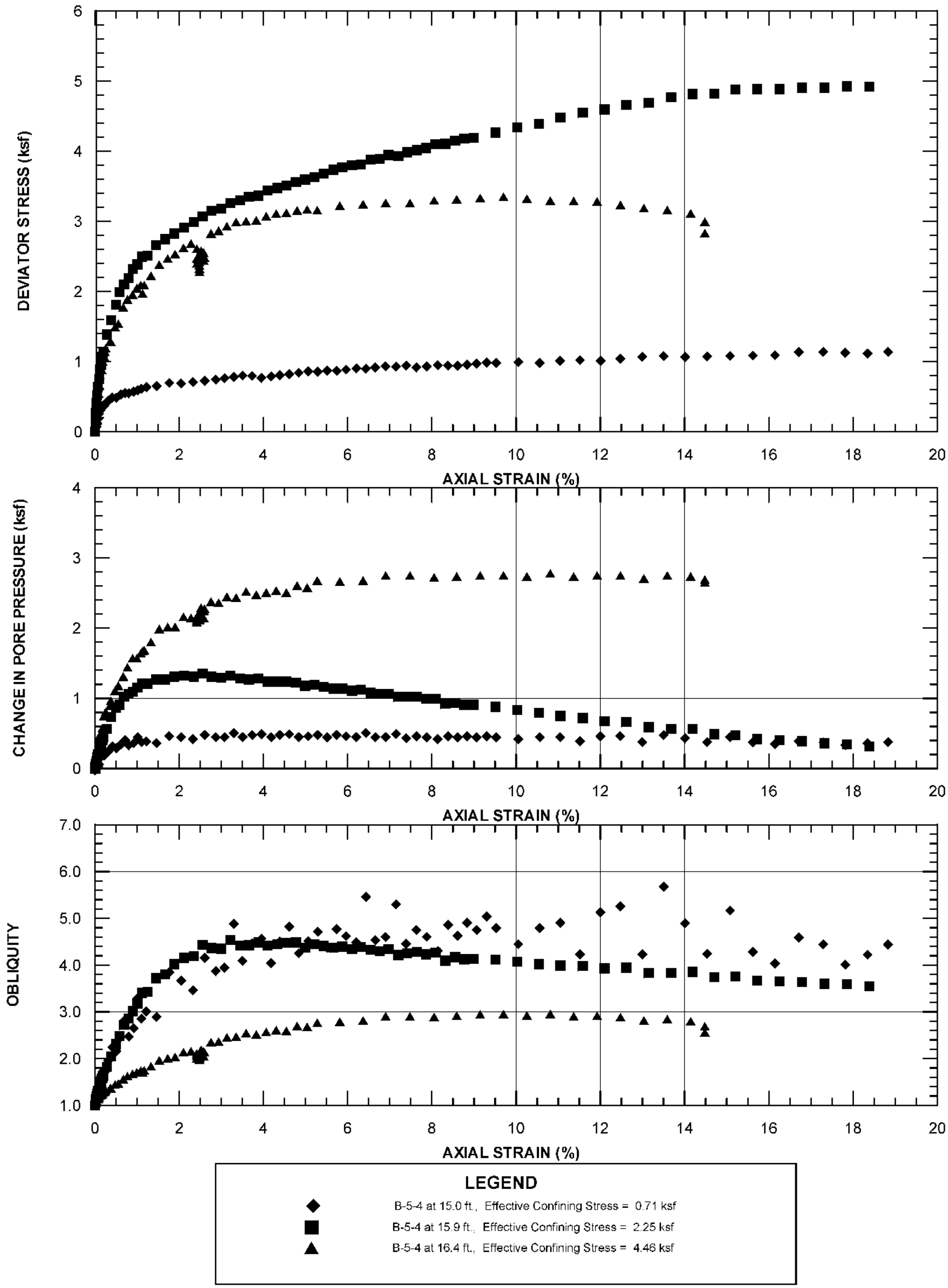


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: January 2004	Project Name: Salton Sea Restoration	Fig.: C-116

pq_ssb5@15.grf

URS

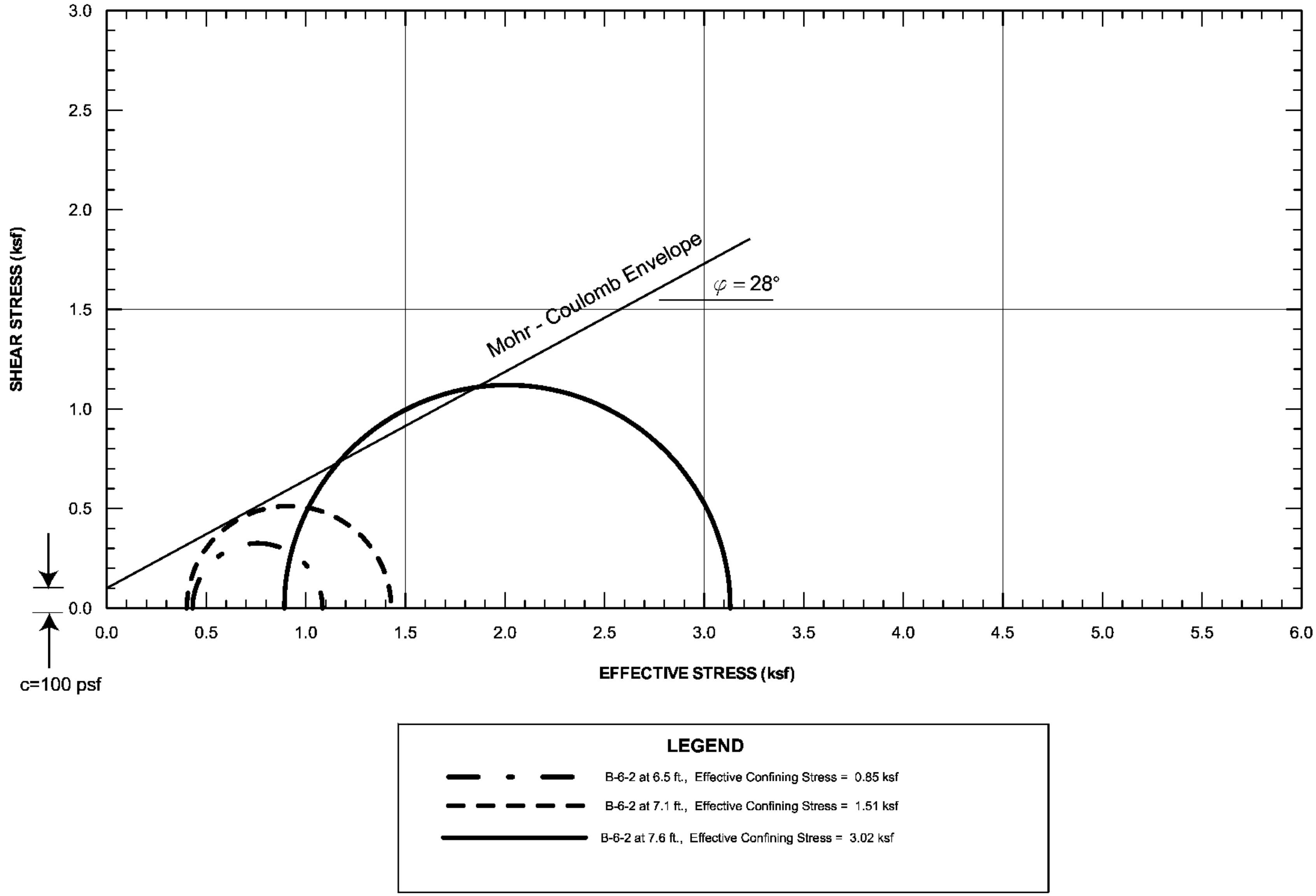


RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: Jan 2004	Project Name: Salton Sea Restoration	Fig.: C-117

ss_ssb5@15.grf

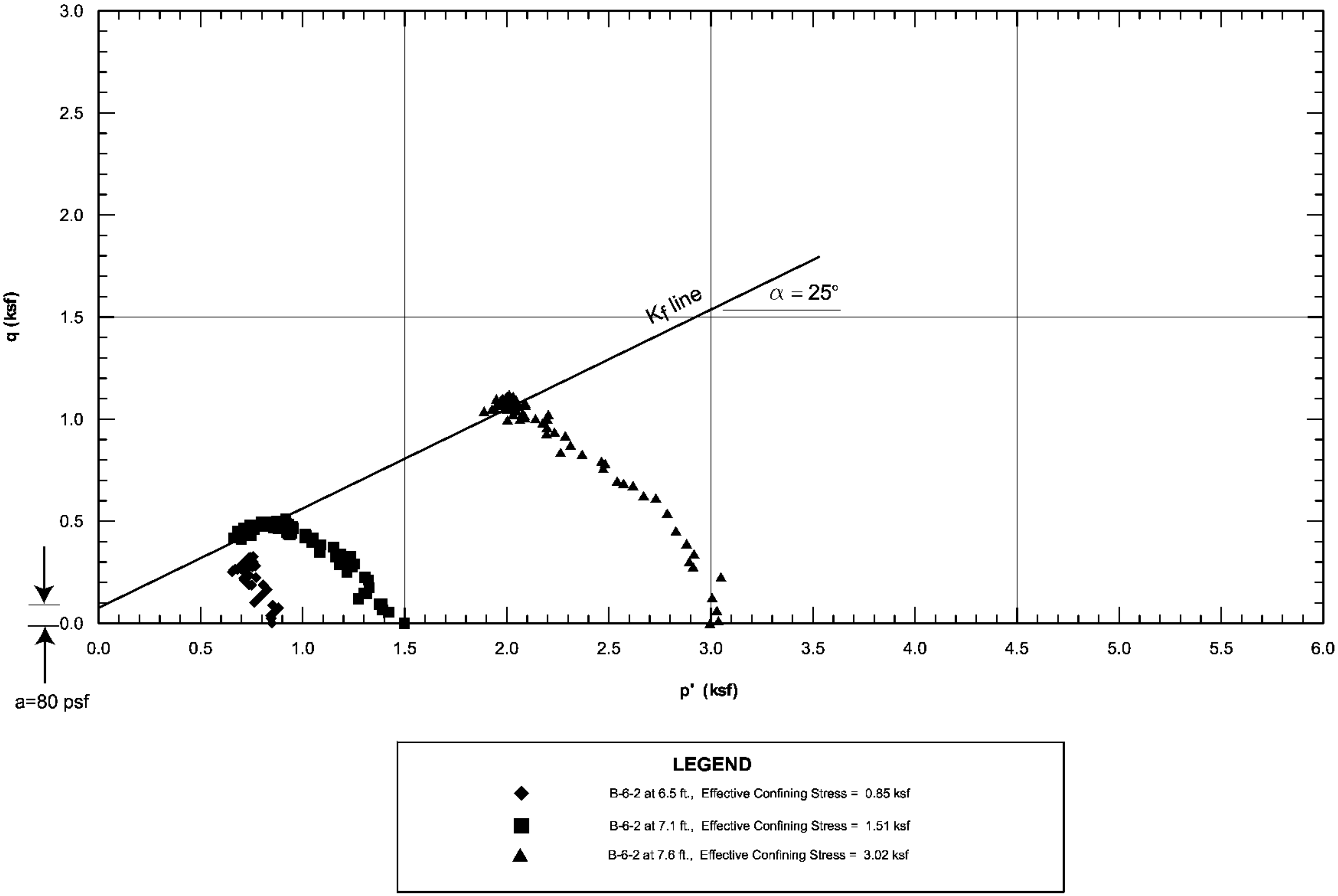
URS



MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS			
Project No.: 27663042.00003	Date: December 2003	Project Name: Salton Sea Restoration	Fig.: C - 118

mcd_ssb6@7.grf

URS

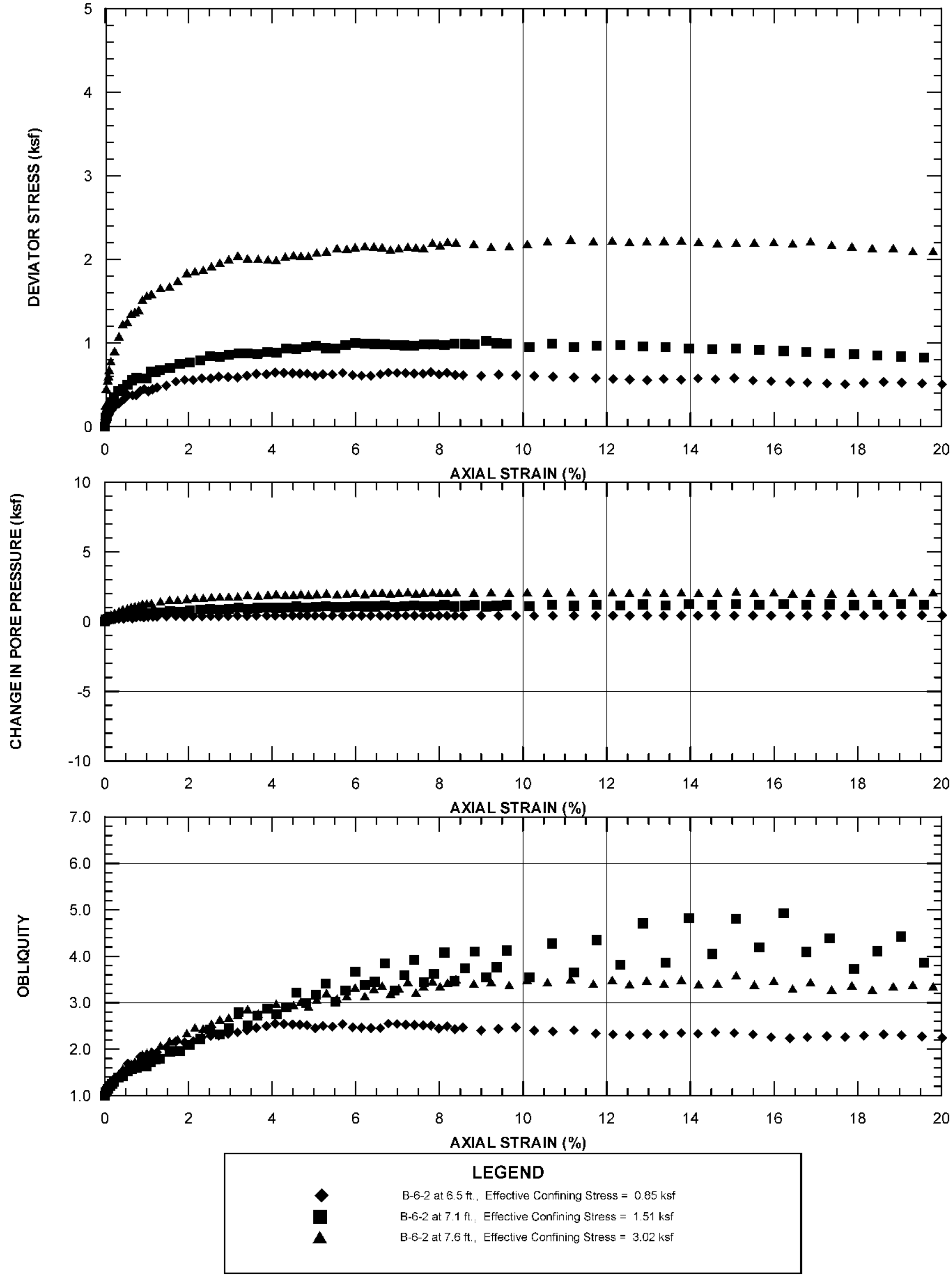


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: December 2003	Project Name: Salton Sea Restoration	Fig.: C - 119

pq_ssb6@7.grf

URS

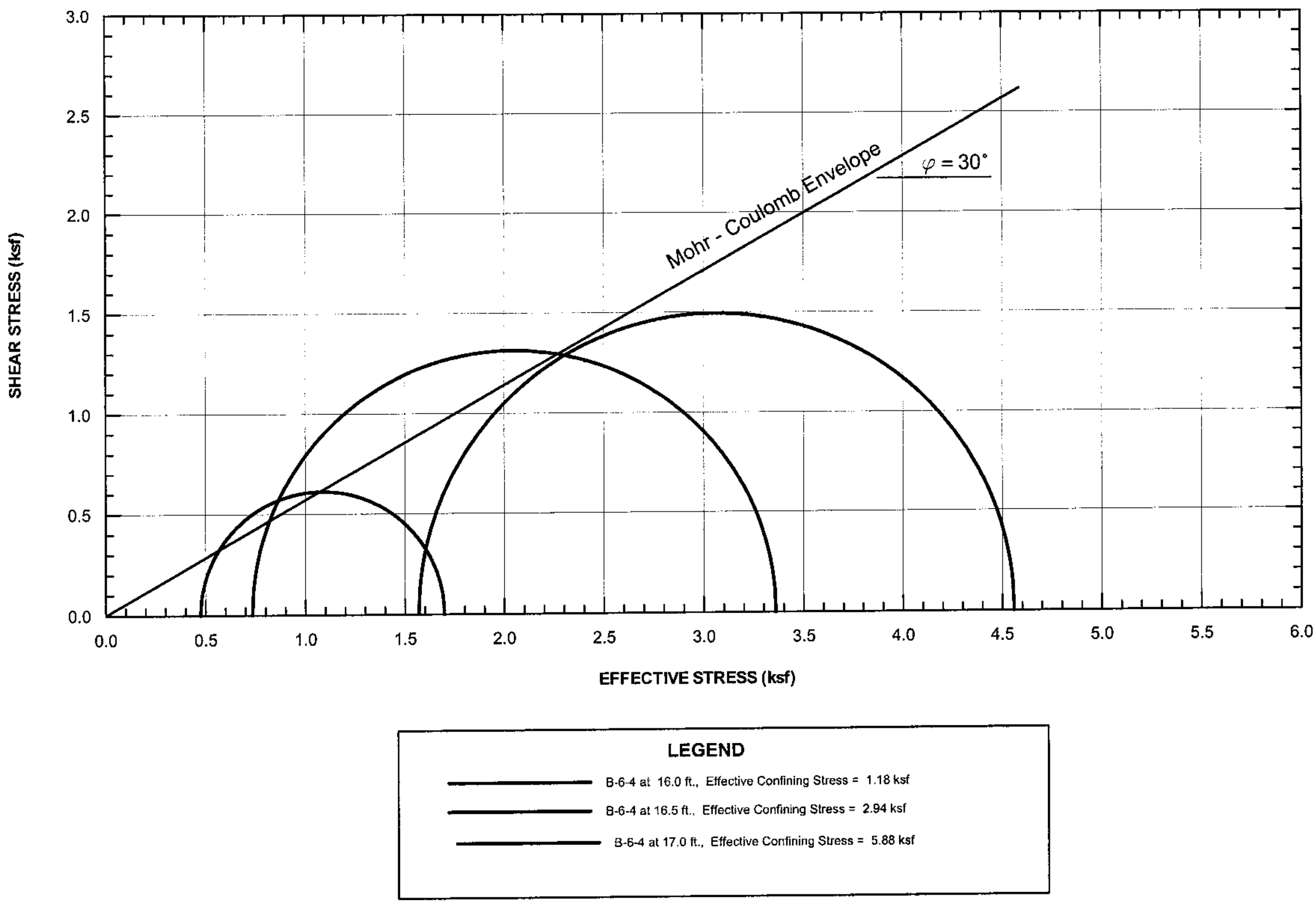


RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: Dec 2003	Project Name: Salton Sea Restoration	Fig.: C - 120

ss_ssb6@7.grf

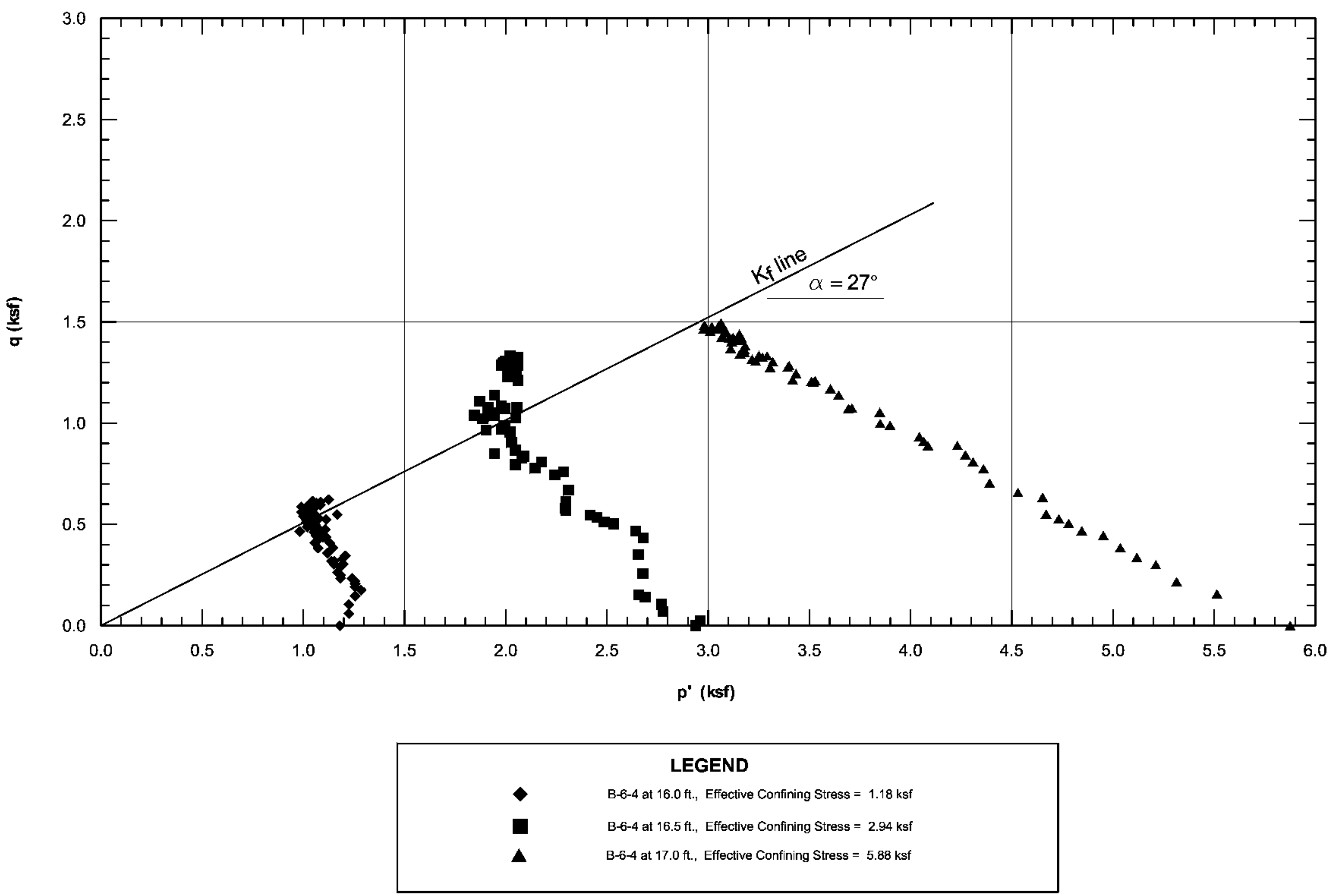
URS



MOHR CIRCLES AT PEAK DEVIATOR STRESS FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS			
Project No.: 27663042.00003	Date: February 2004	Project Name: Salton Sea Restoration	Fig.: C-121

mcd_ssb6@16.grf

URS

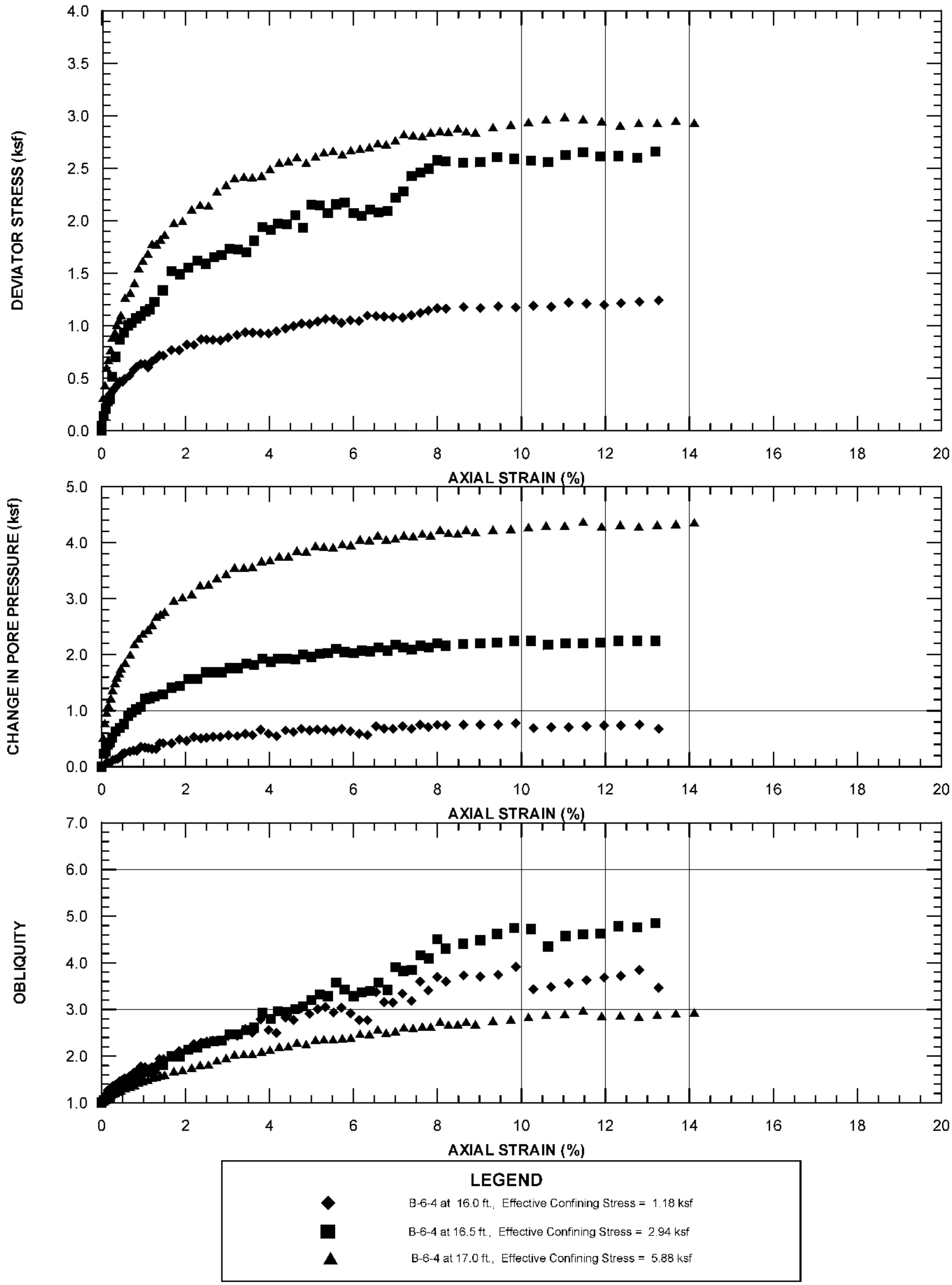


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: February 2004	Project Name: Salton Sea Restoration	Fig.: C-122

pq_ssb6@16.grf

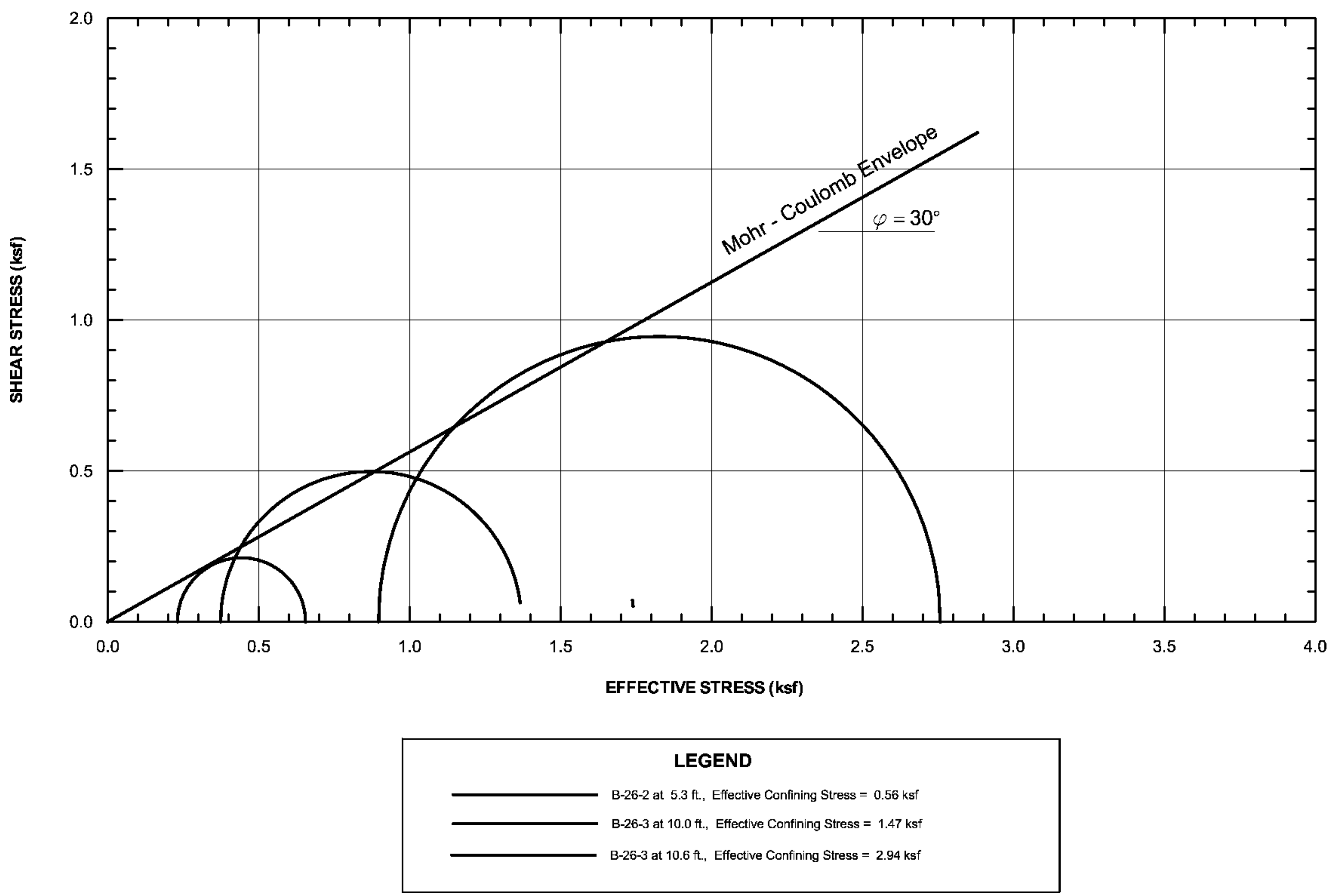
URS



RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS			
Project No.: 27663042.00003	Date: Feb 2004	Project Name: Salton Sea Restoration	Fig.: C-123

ss_ssb6@16.grf

URS

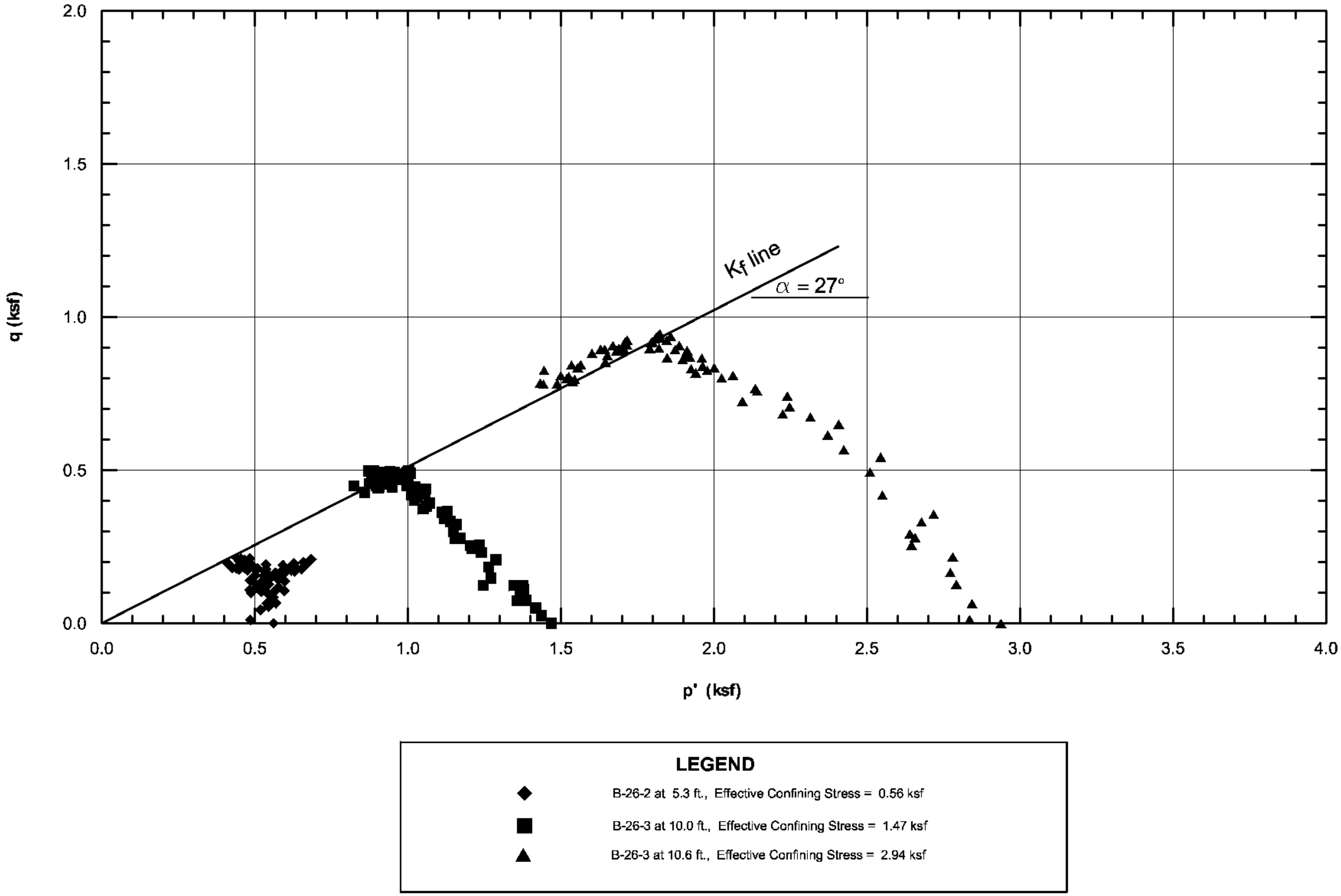


MOHR CIRCLES AT MAXIMUM OBLIQUITY FOR ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

Project No.: 27663042.00003	Date: February 2004	Project Name: Salton Sea Restoration	Fig.: C-124

mco_ssb26@5.grf

URS

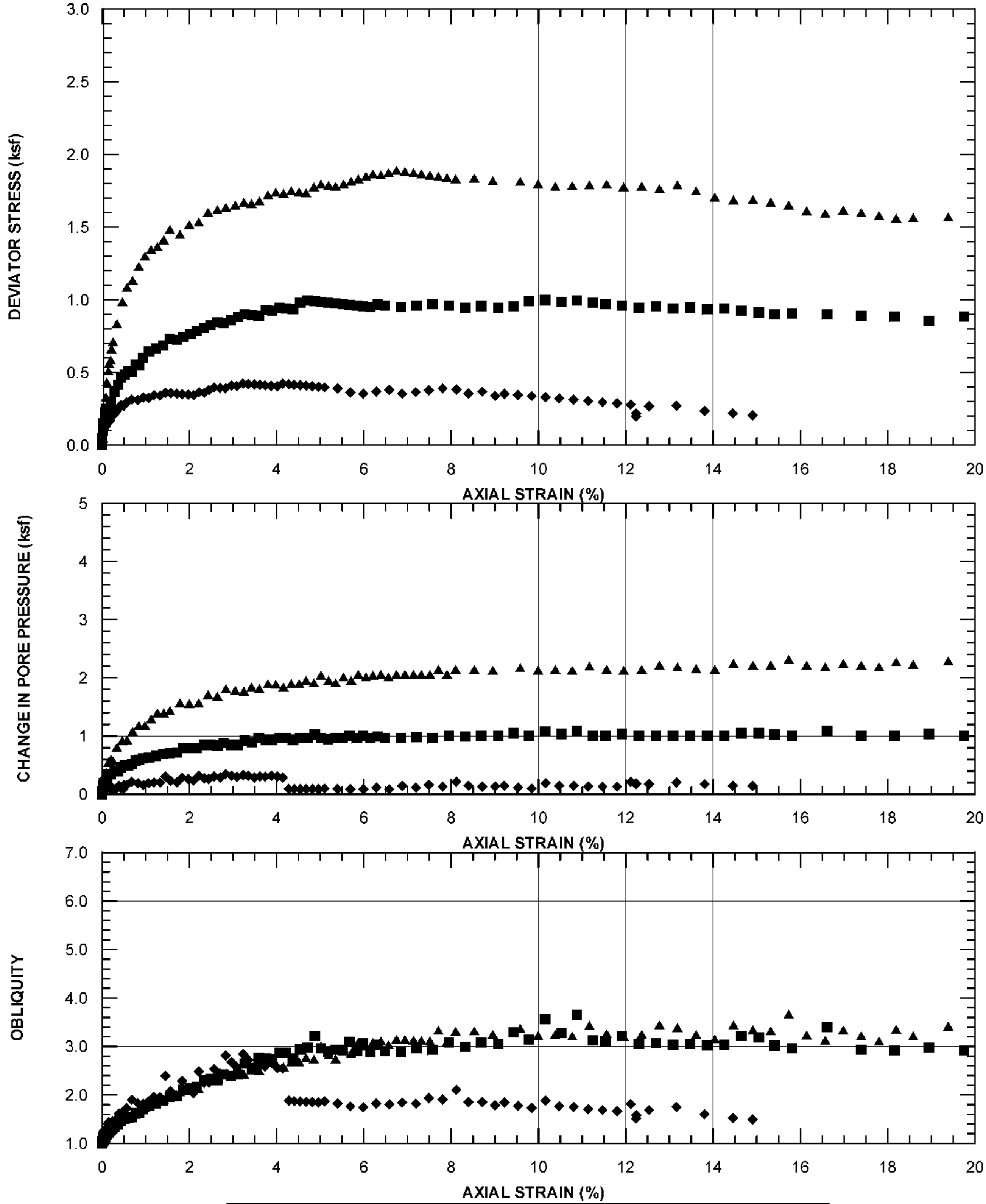


p' - q PLOT OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TEST RESULTS

Project No.: 27663042.00003	Date: February 2004	Project Name: Salton Sea Restoration	Fig.: C-125

pq_ssb26@5.grf

URS



LEGEND

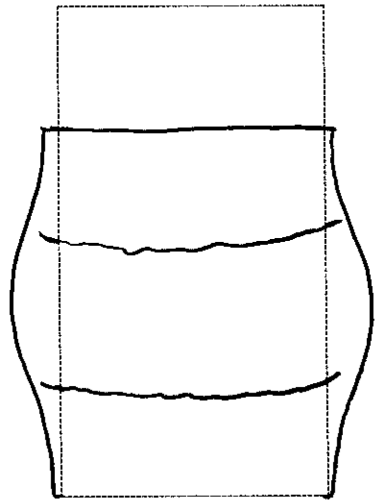
- ◆ B-26-2 at 5.3 ft., Effective Confining Stress = 0.56 ksf
- ■ B-26-3 at 10.0 ft., Effective Confining Stress = 1.47 ksf
- ▲ B-26-3 at 10.6 ft., Effective Confining Stress = 2.94 ksf

RESULTS OF ISOTROPICALLY CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS

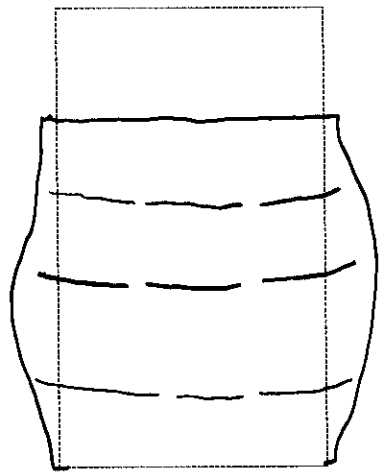
Project No.: 27663042.00003	Date: Feb 2004	Project Name: Salton Sea Restoration	Fig.: C-126

ss_ssb26@5.grf

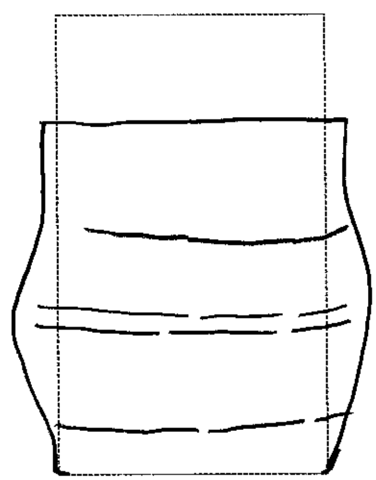
URS



Sample 4-4a at 15.5 feet



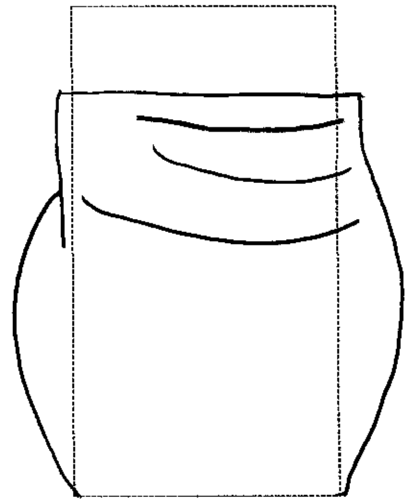
Sample 4-4b at 16.0 feet



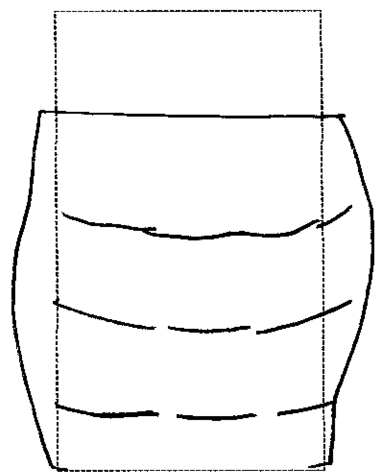
Sample 4-4c at 16.5 feet

FAILURE SKETCHES FROM ICU TESTS
BORING 4 @ 16 FEET
SALTON SEA RESTORATION PROJECT

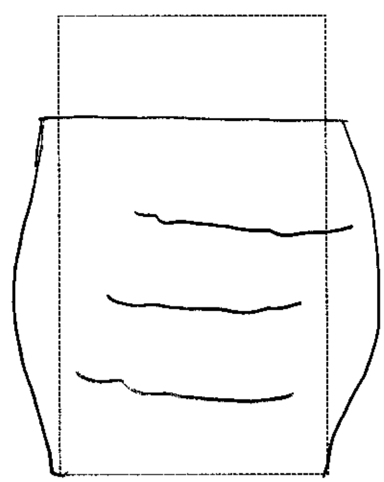
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-127



Sample 4-8a at 35.3 feet

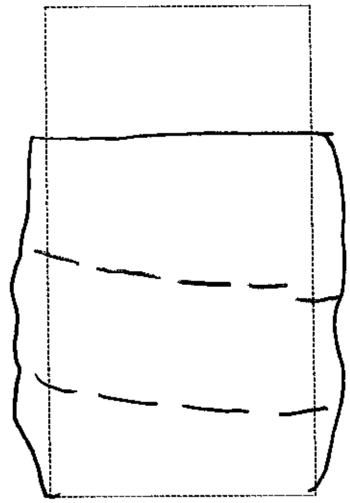


Sample 4-8b at 35.8 feet

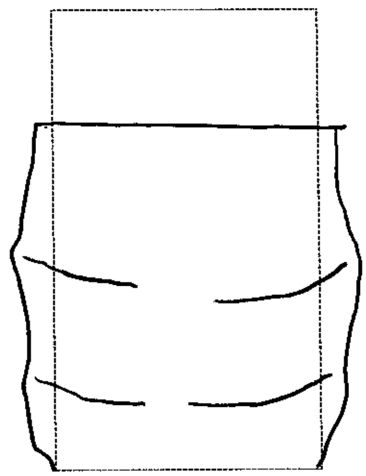


Sample 4-8c at 36.4 feet

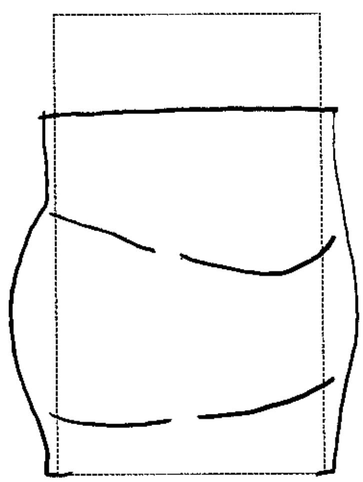
FAILURE SKETCHES FROM ICU TESTS BORING 4 @ 36 FEET SALTON SEA RESTORATION PROJECT				
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-128



Sample 5-3a at 10.5 feet



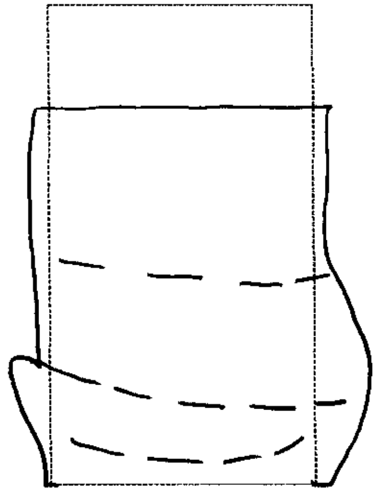
Sample 5-3b at 11.0 feet



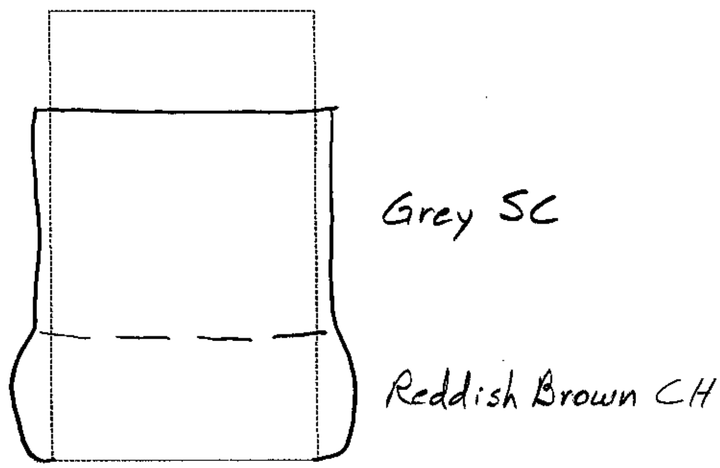
Sample 5-3c at 11.5 feet

FAILURE SKETCHES FROM ICU TESTS
BORING 5 @ 11 FEET
SALTON SEA RESTORATION PROJECT

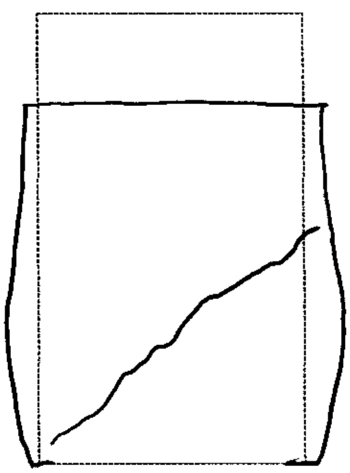
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-129



Sample 5-4a at 15.0 feet

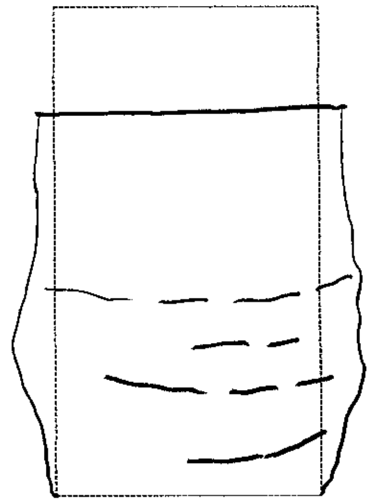


Sample 5-4b at 15.9 feet

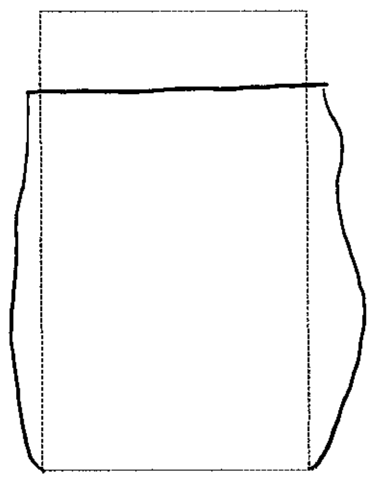


Sample 5-4c at 16.4 feet

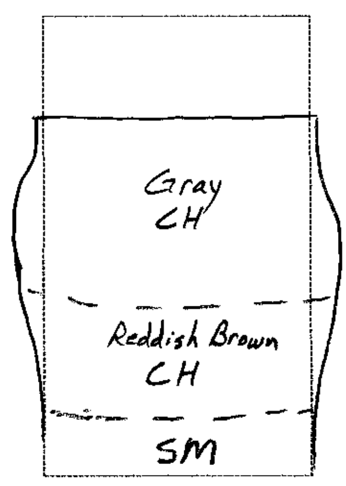
FAILURE SKETCHES FROM ICU TESTS BORING 5 @ 16 FEET SALTON SEA RESTORATION PROJECT				
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-130



Sample 6-2a at 6.5 feet

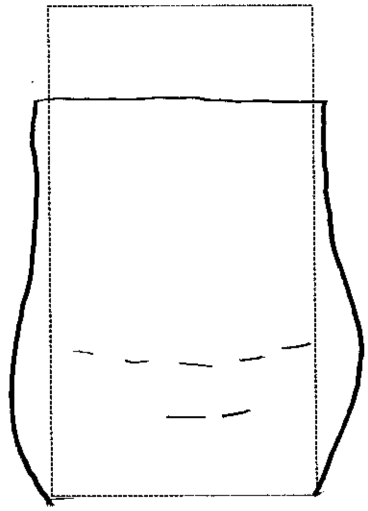


Sample 6-2b at 7.1 feet

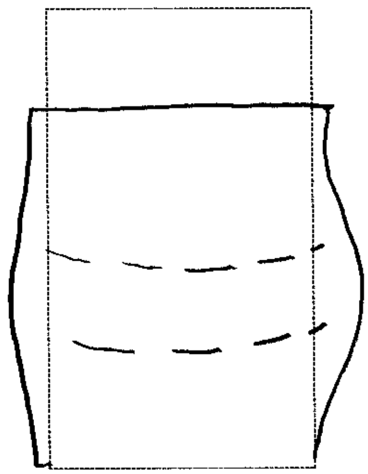


Sample 6-2c at 7.6 feet

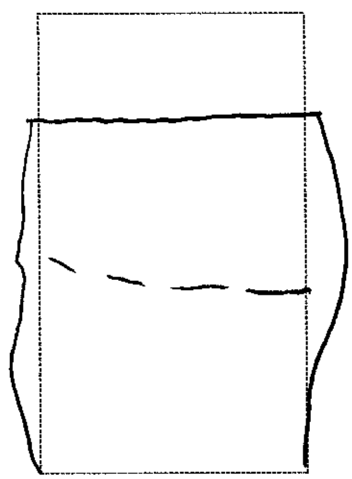
FAILURE SKETCHES FROM ICU TESTS BORING 6 @ 7 FEET SALTON SEA RESTORATION PROJECT				
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-131



Sample 6-4a at 16.0 feet

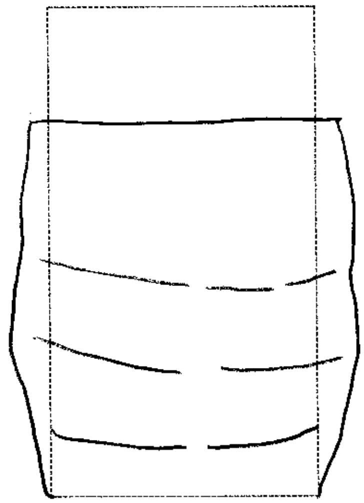


Sample 6-4b at 16.5 feet

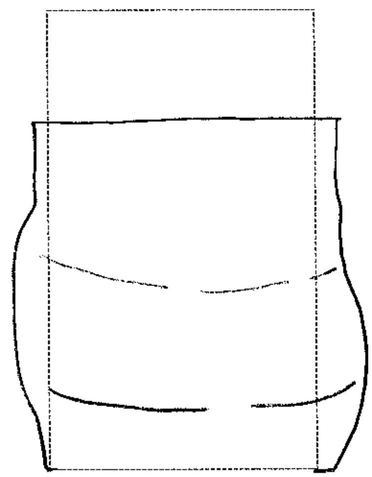


Sample 6-4c at 17.0 feet

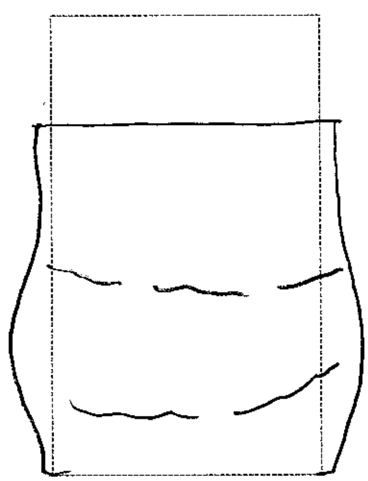
FAILURE SKETCHES FROM ICU TESTS BORING 6 @ __ FEET SALTON SEA RESTORATION PROJECT				
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-132



Sample 26-2a at 5.3 feet



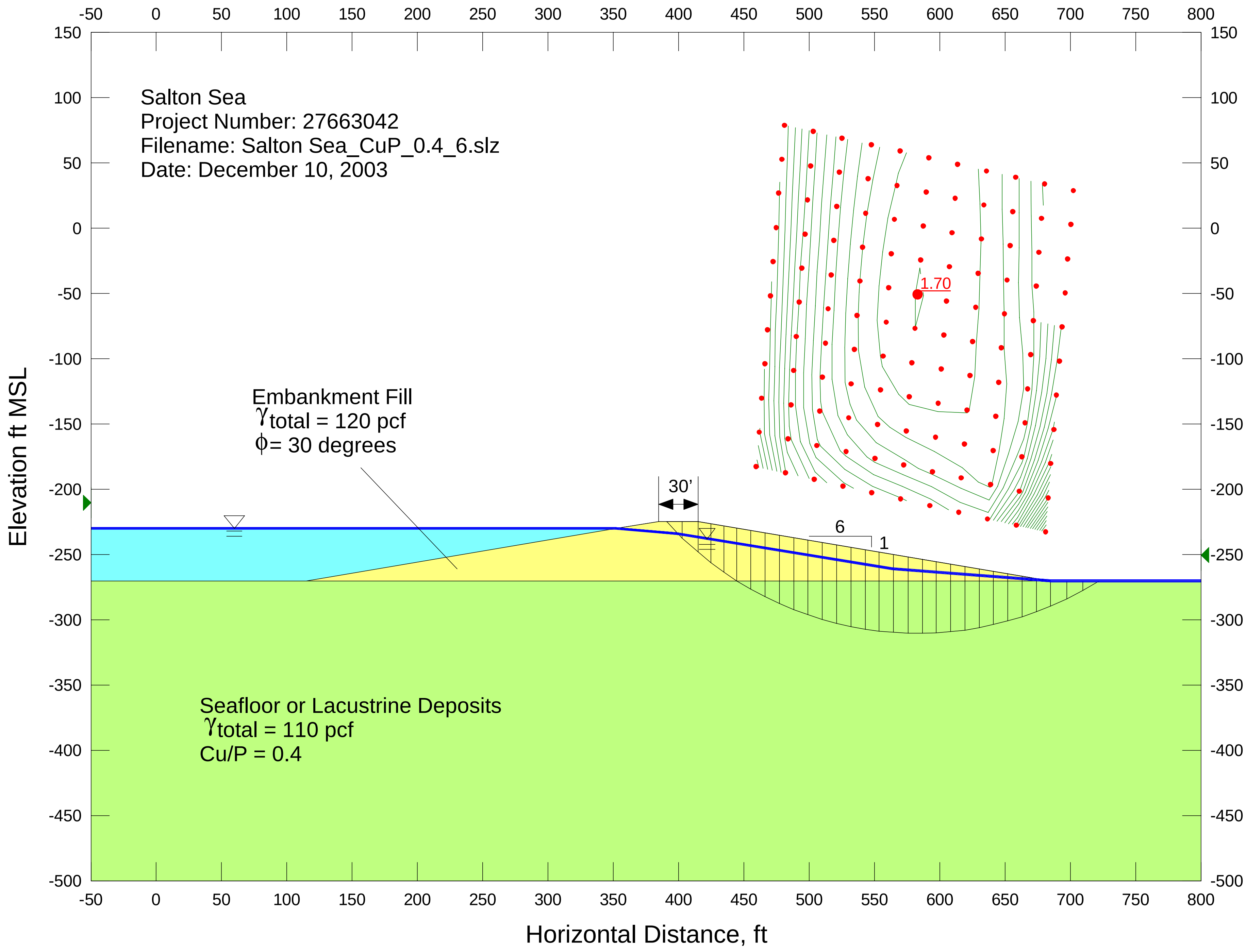
Sample 26-3b at 10.0 feet



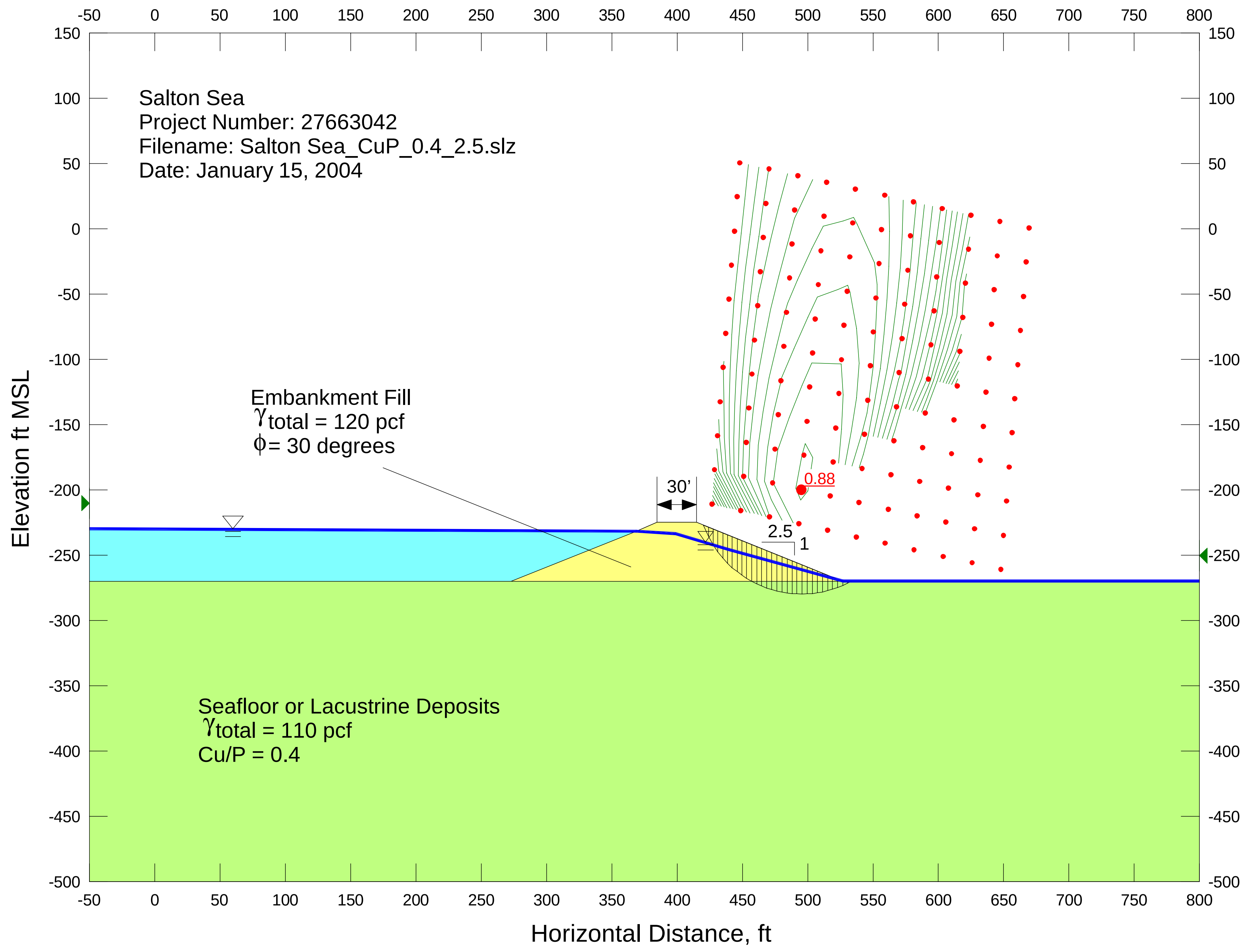
Sample 26-3c at 10.6 feet

FAILURE SKETCHES FROM ICU TESTS
BORING 26 @ 5 & 10 FEET
SALTON SEA RESTORATION PROJECT

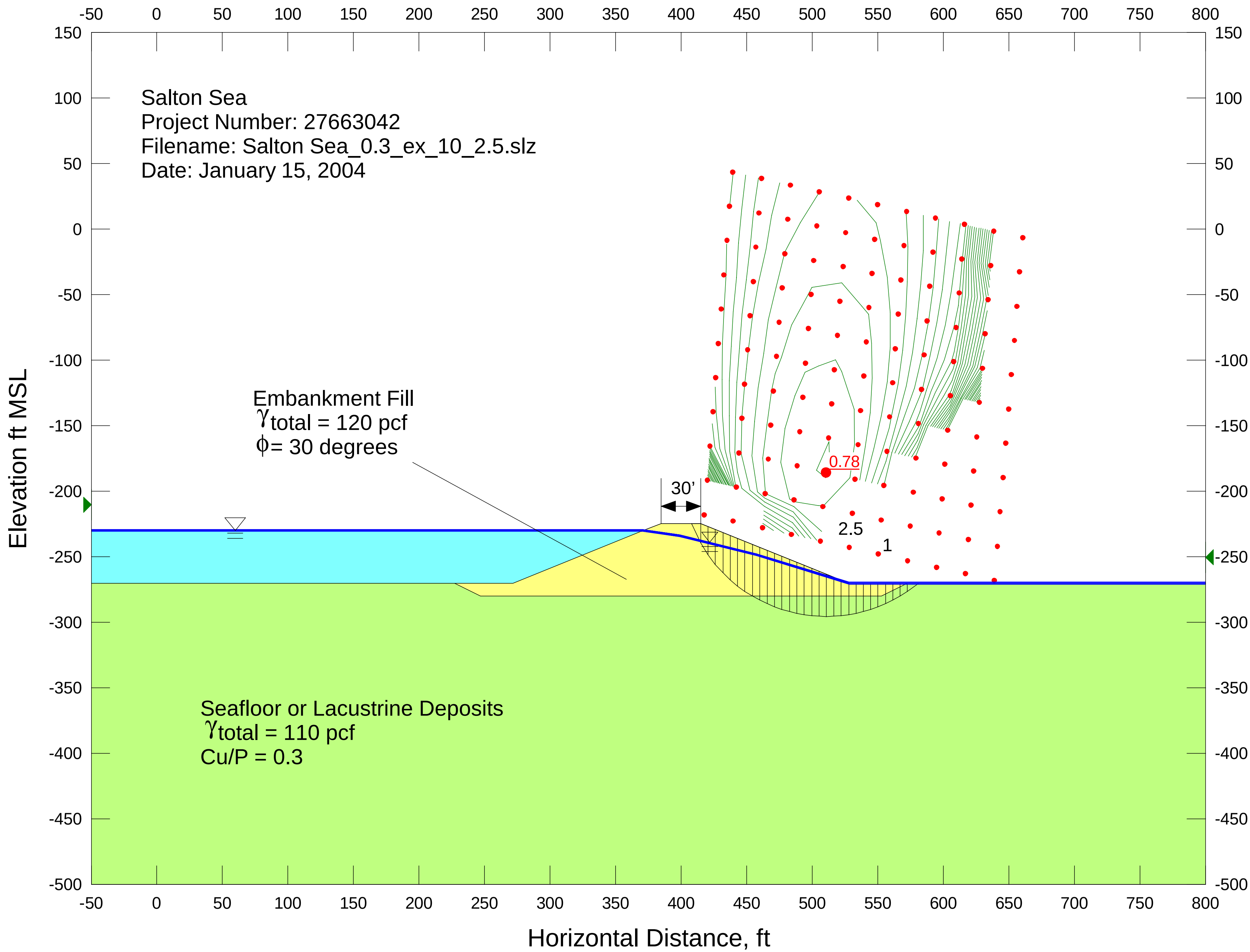
URS	CHECKED BY: JW		DATE: 02-26-04	FIG. NO.
	PM: LDH	PROJ. NO.: 27663042		C-133

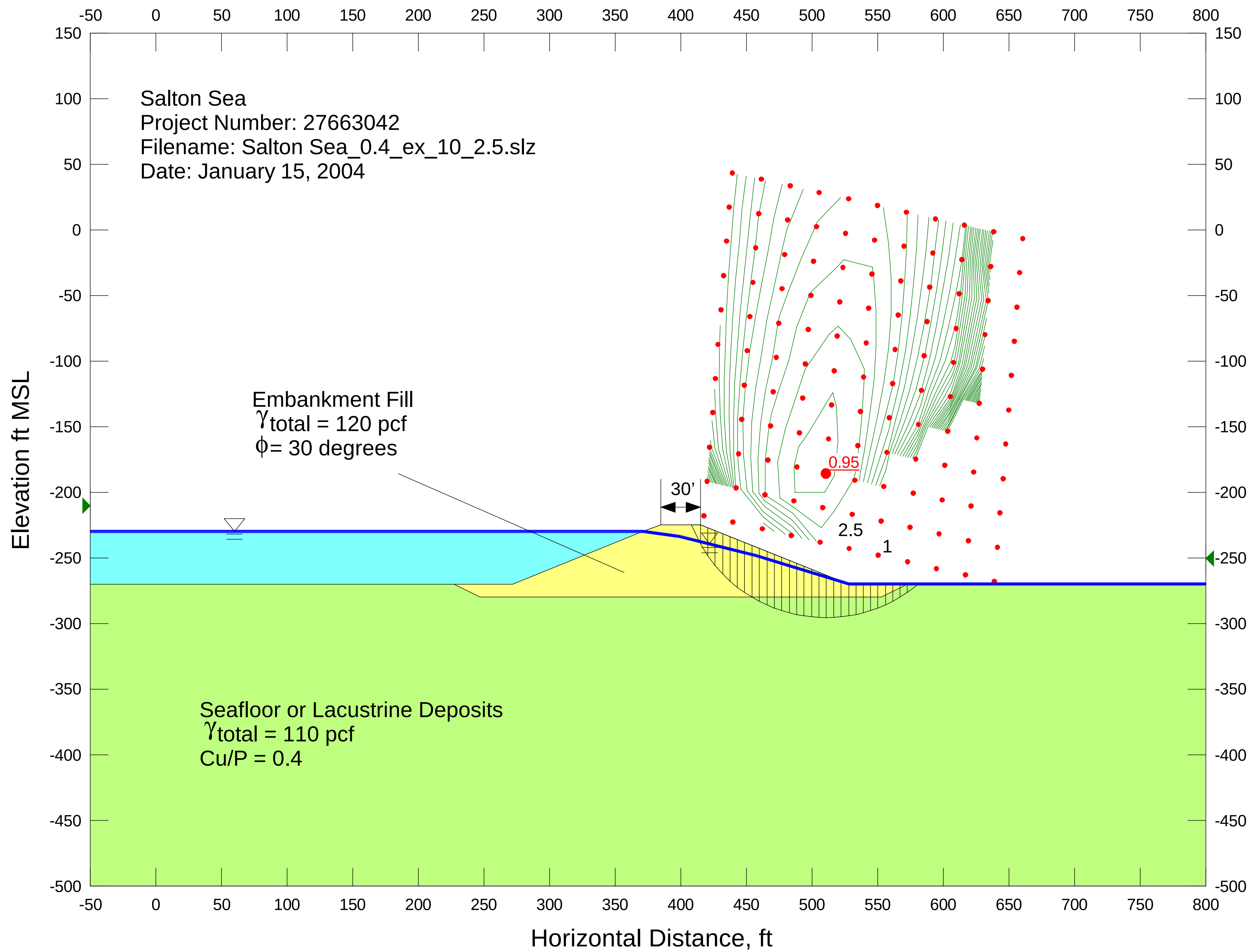


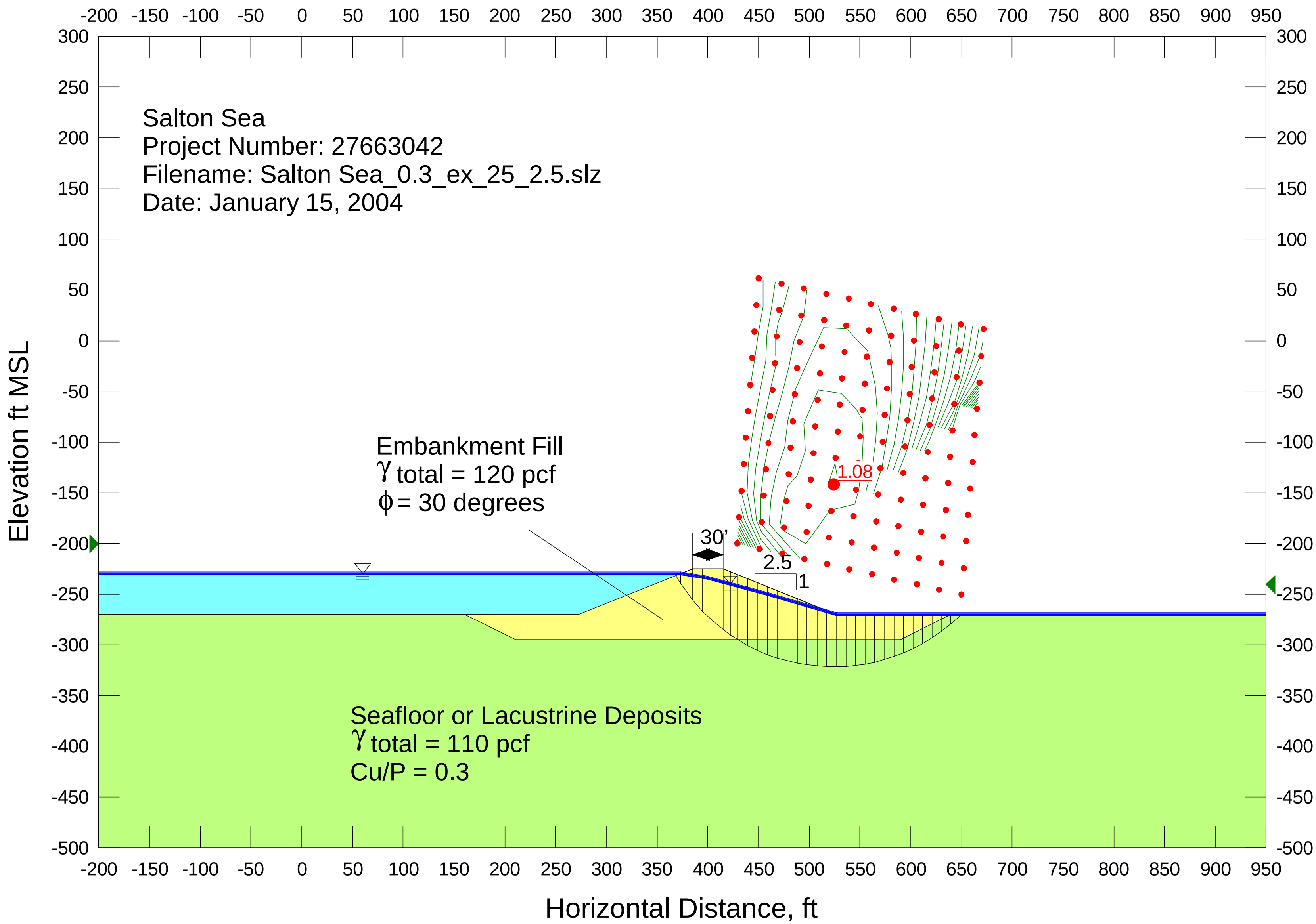
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4_6.slz
Date: December 10, 2003
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
30'
6
1
1.70
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft
-50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
150
100
50
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
-500

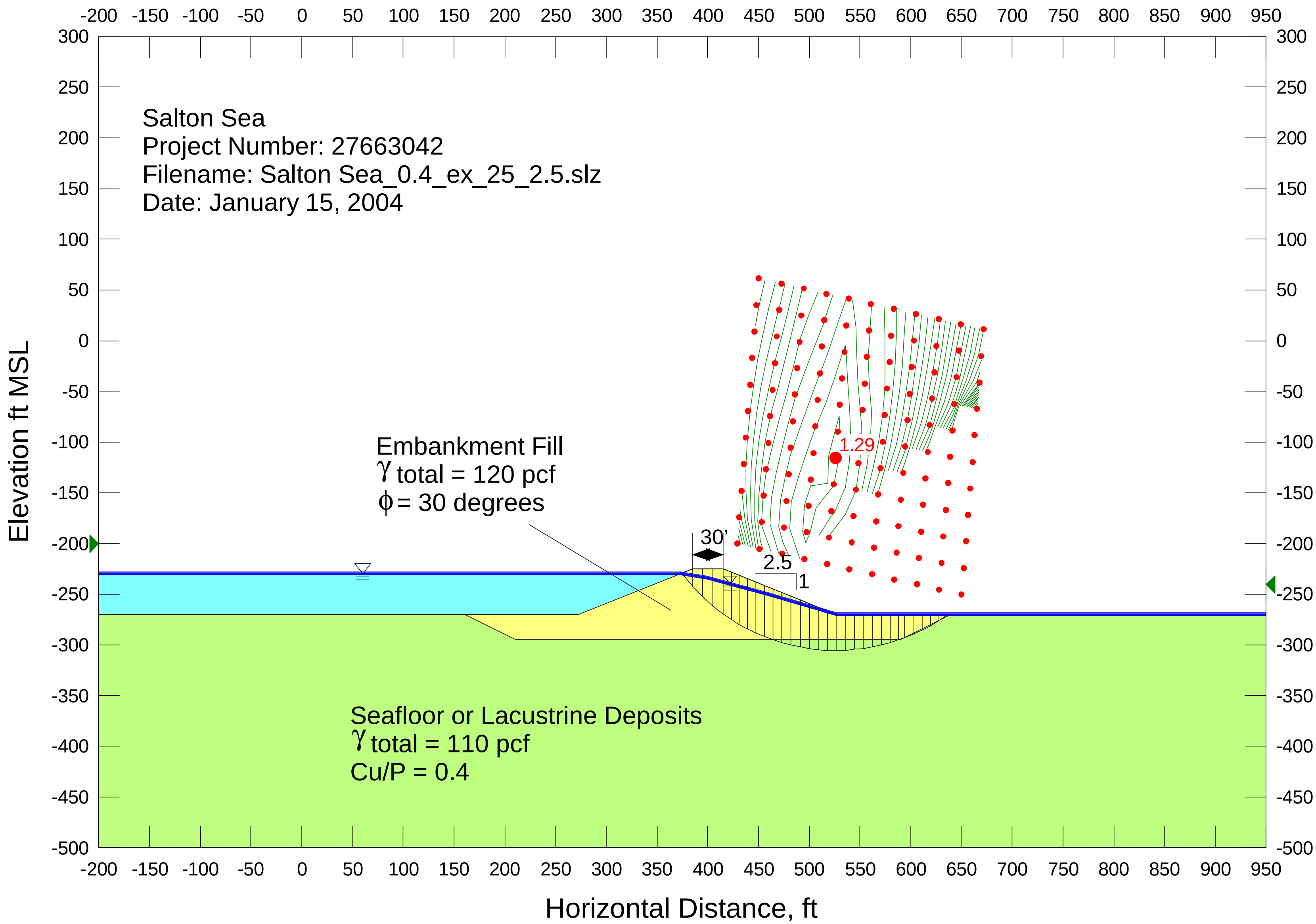


Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
30'
0.88
2.5
1
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft

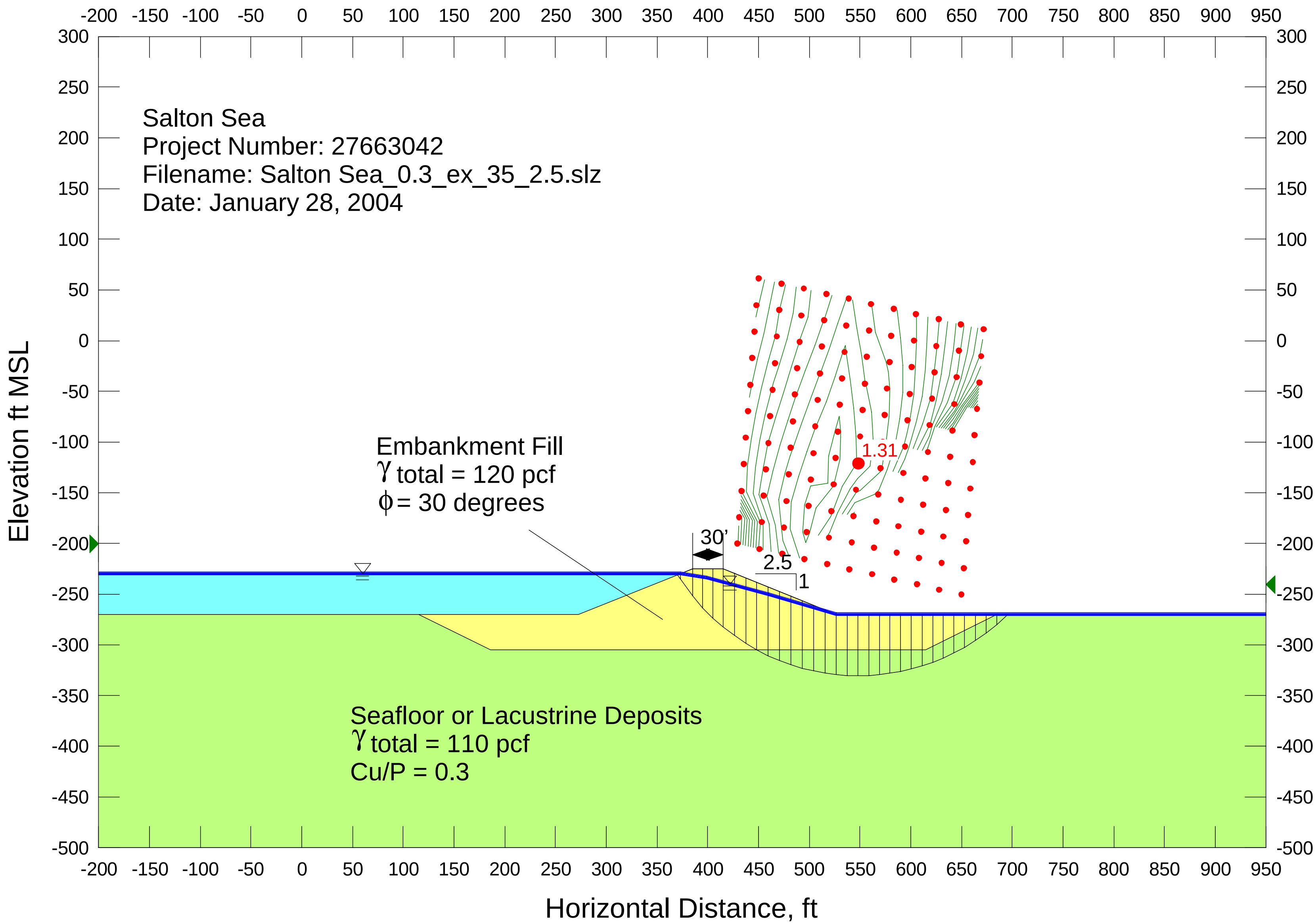

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
0.78
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft
-50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
150
100
50
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
-500


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
30'
0.95
2.5
1
Elevation ft MSL
Horizontal Distance, ft

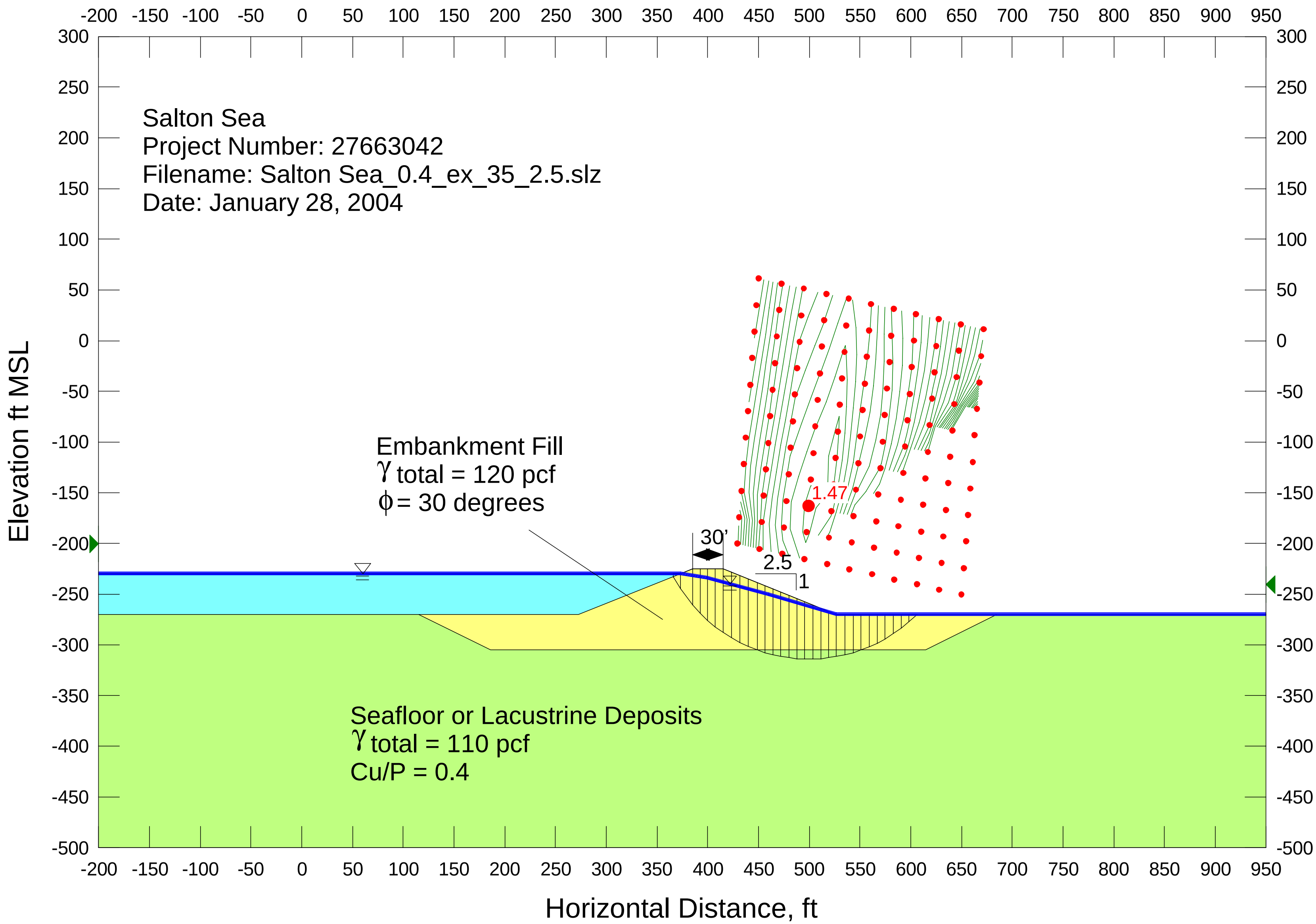

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25_2.5.slz
Date: January 15, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
1.08
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft

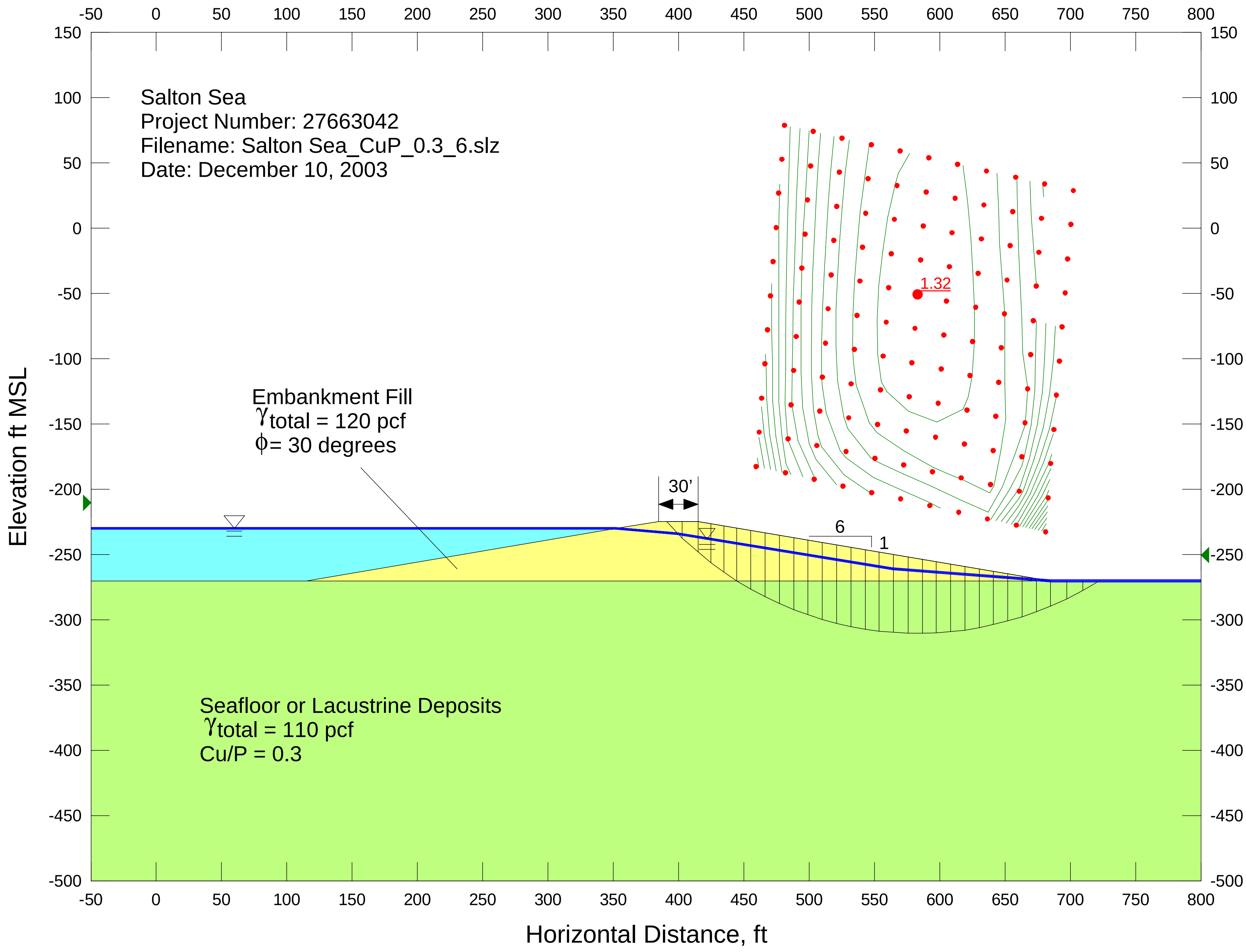


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25_2.5.slz
Date: January 15, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
2.5
1
1.29
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
300
250
200
150
100
50
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
-500

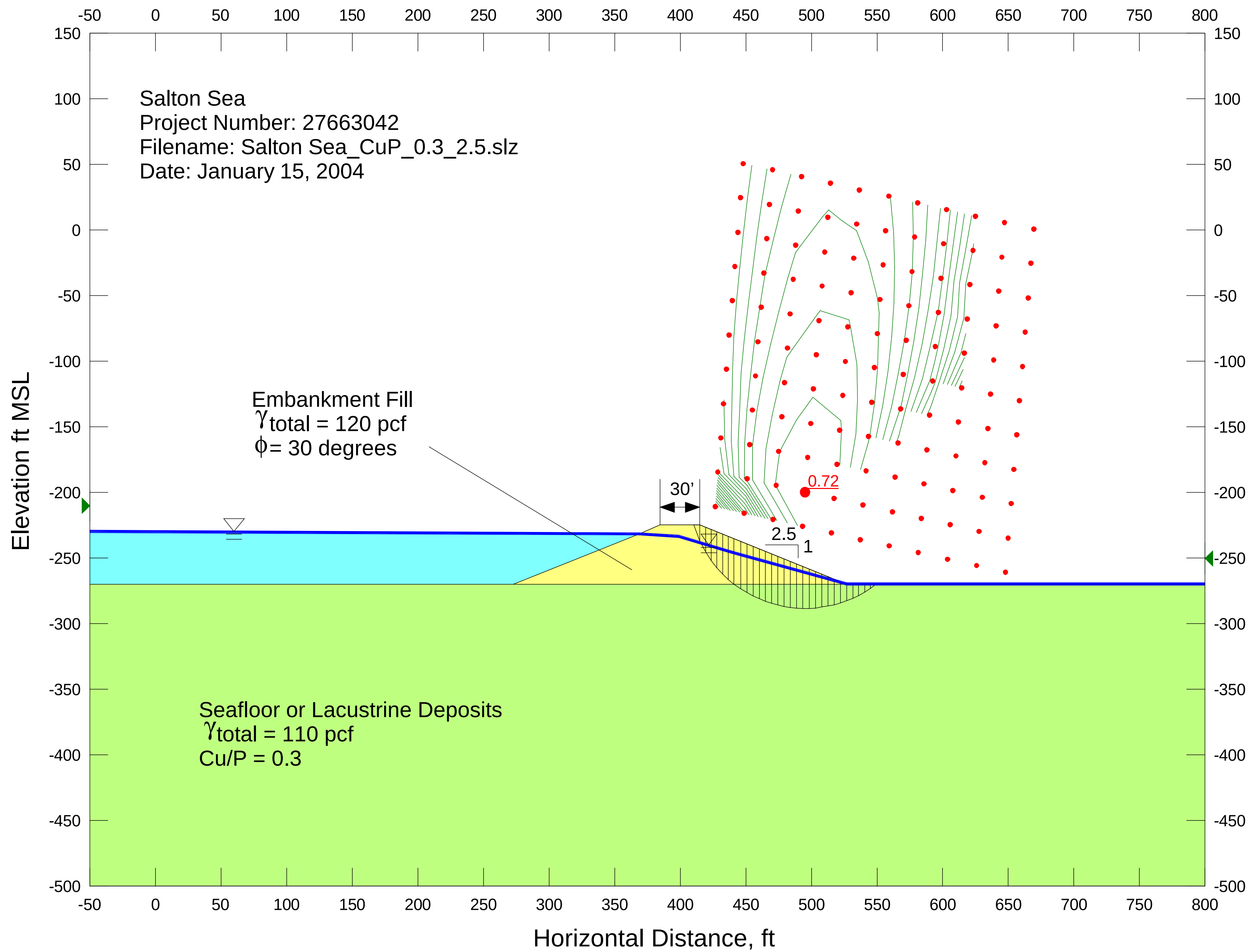


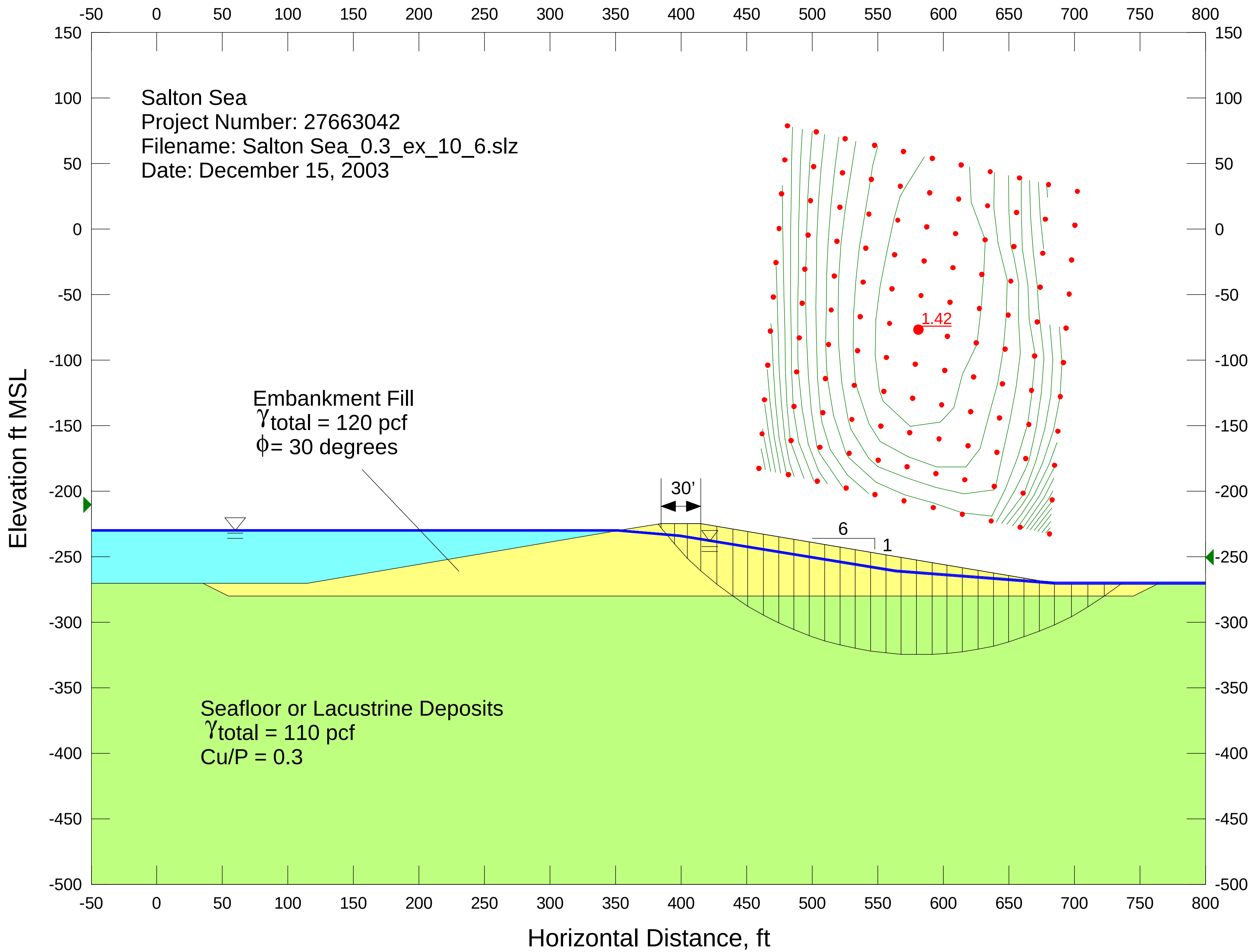
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_35_2.5.slz
Date: January 28, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
1.31
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_35_2.5.slz
Date: January 28, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
1.47
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft

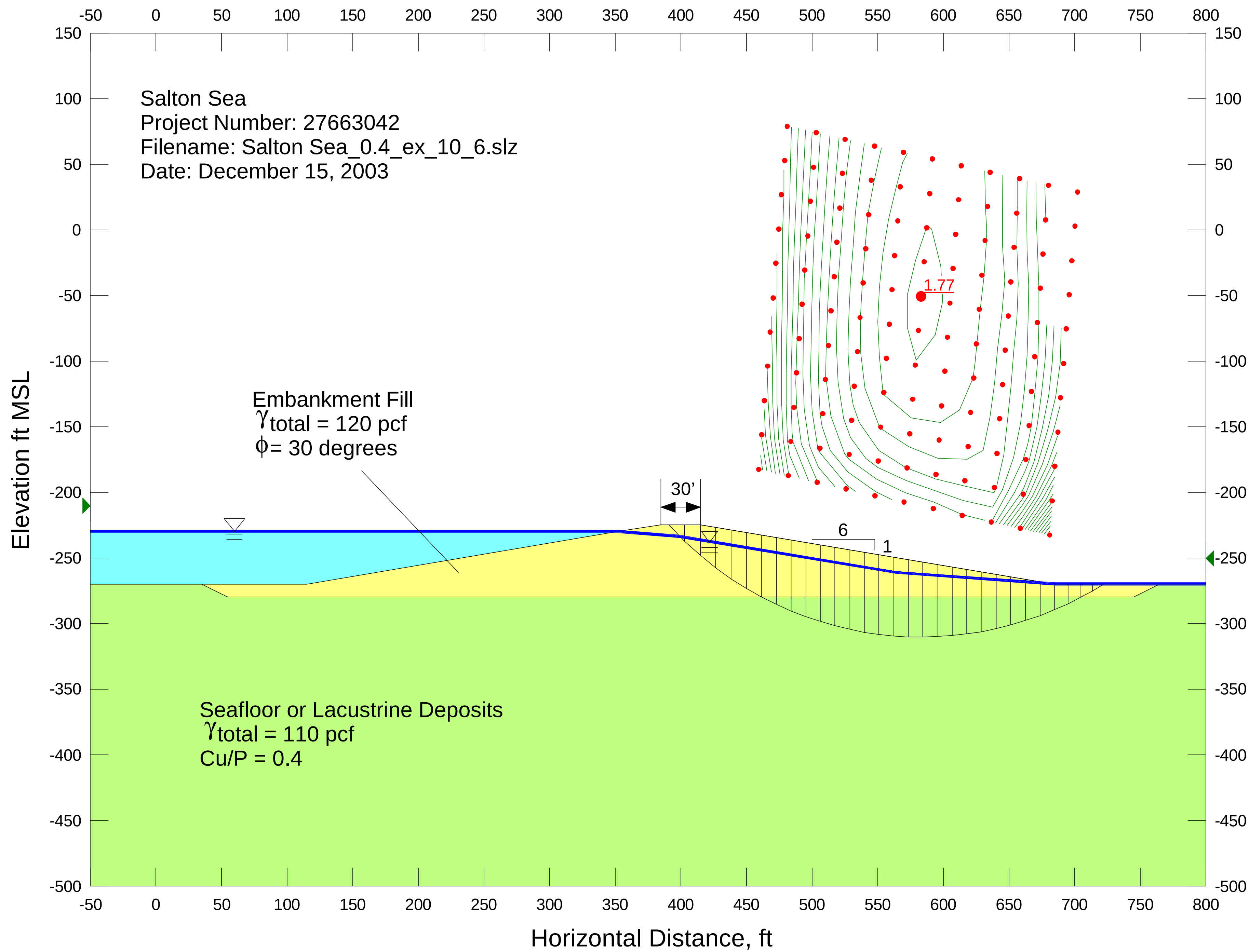


Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3_6.slz
Date: December 10, 2003
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
30'
6
1
1.32
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft

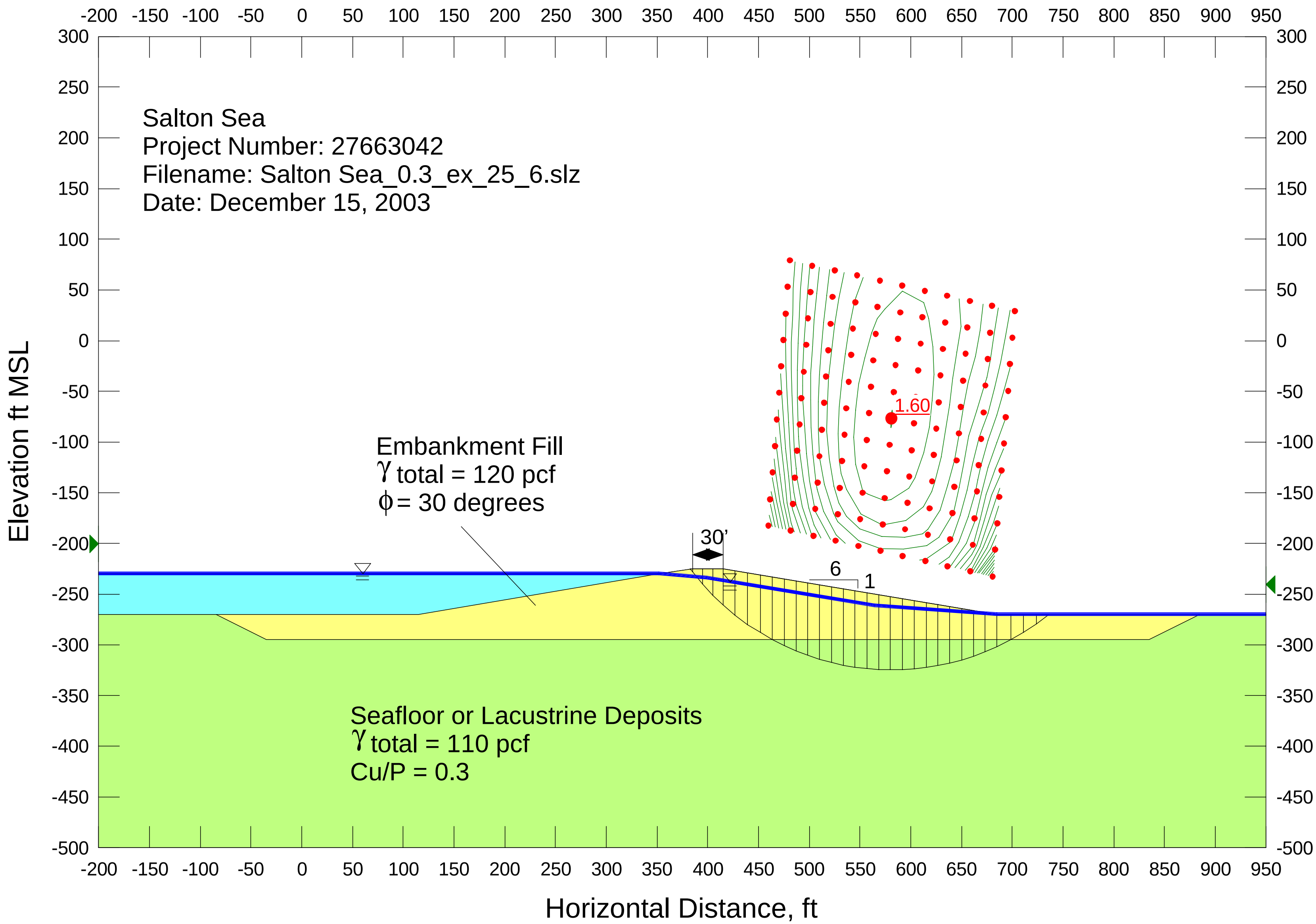

Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
0.72
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft

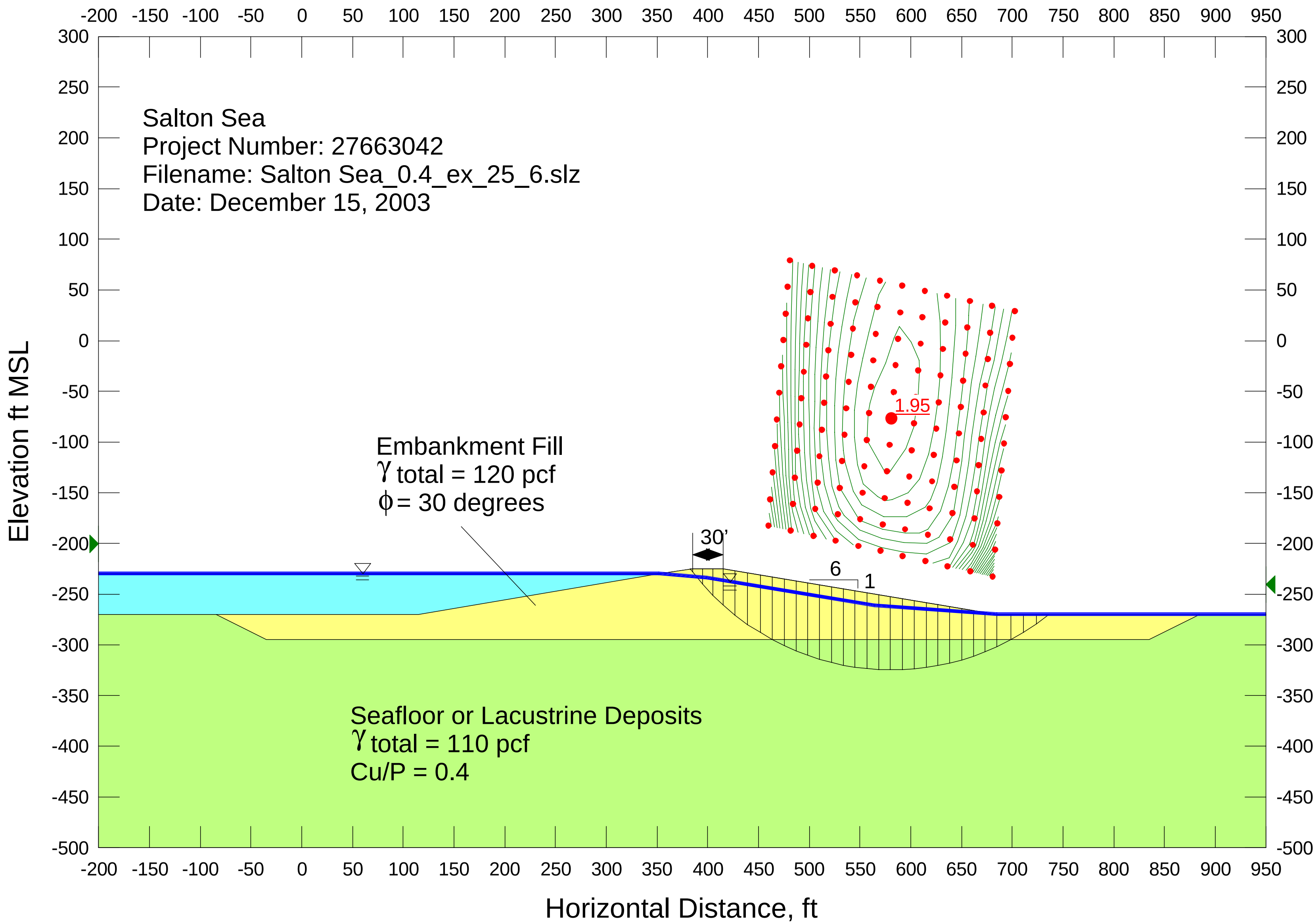


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10_6.slz
Date: December 15, 2003
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
1.42
30'
6
1
Elevation ft MSL
Horizontal Distance, ft

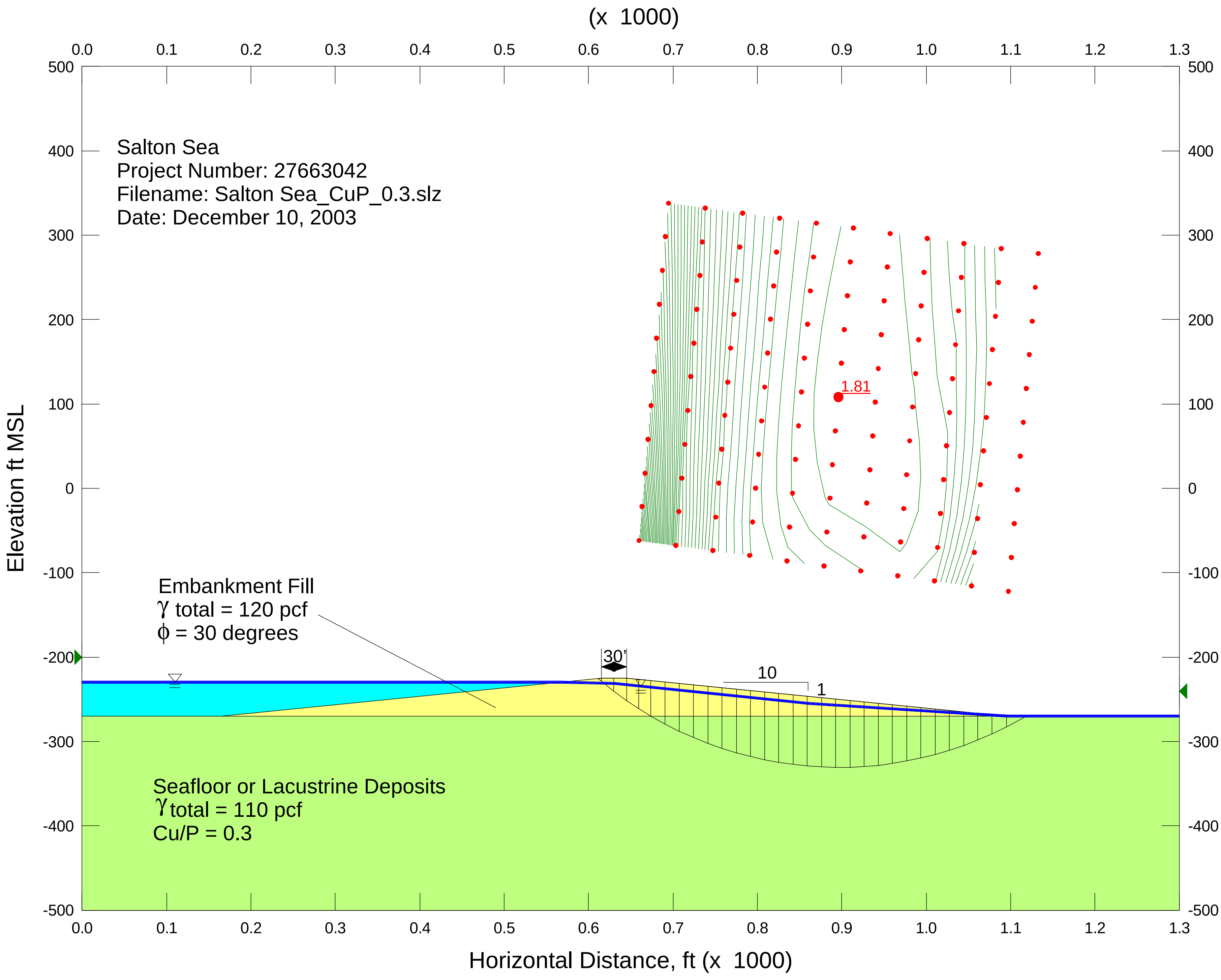


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10_6.slz
Date: December 15, 2003
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
1.77
30'
6
1
Elevation ft MSL
Horizontal Distance, ft

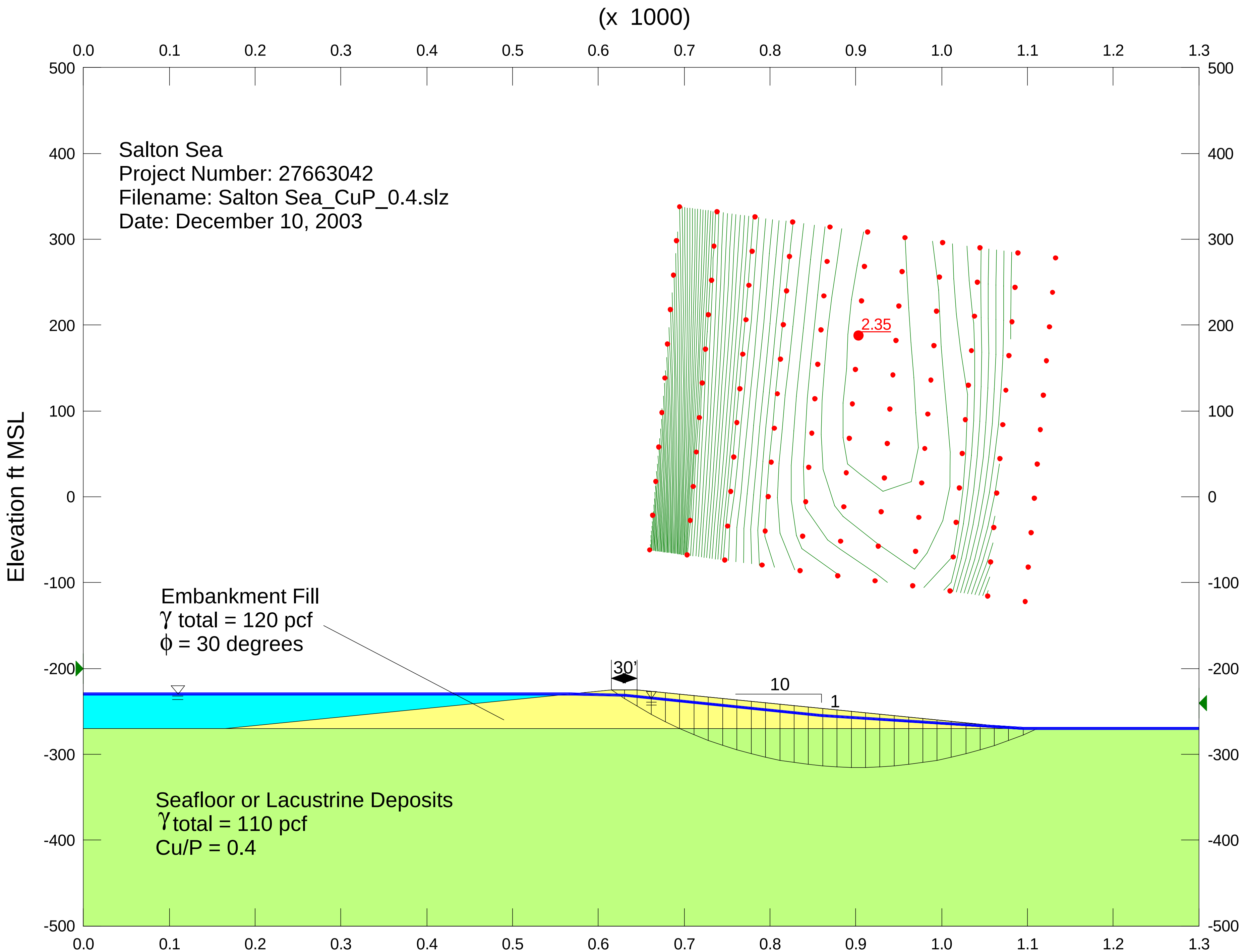

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25_6.slz
Date: December 15, 2003
Embankment Fill
γ total = 120 pcf
ϕ= 30 degrees
30'
6
1
1.60
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft



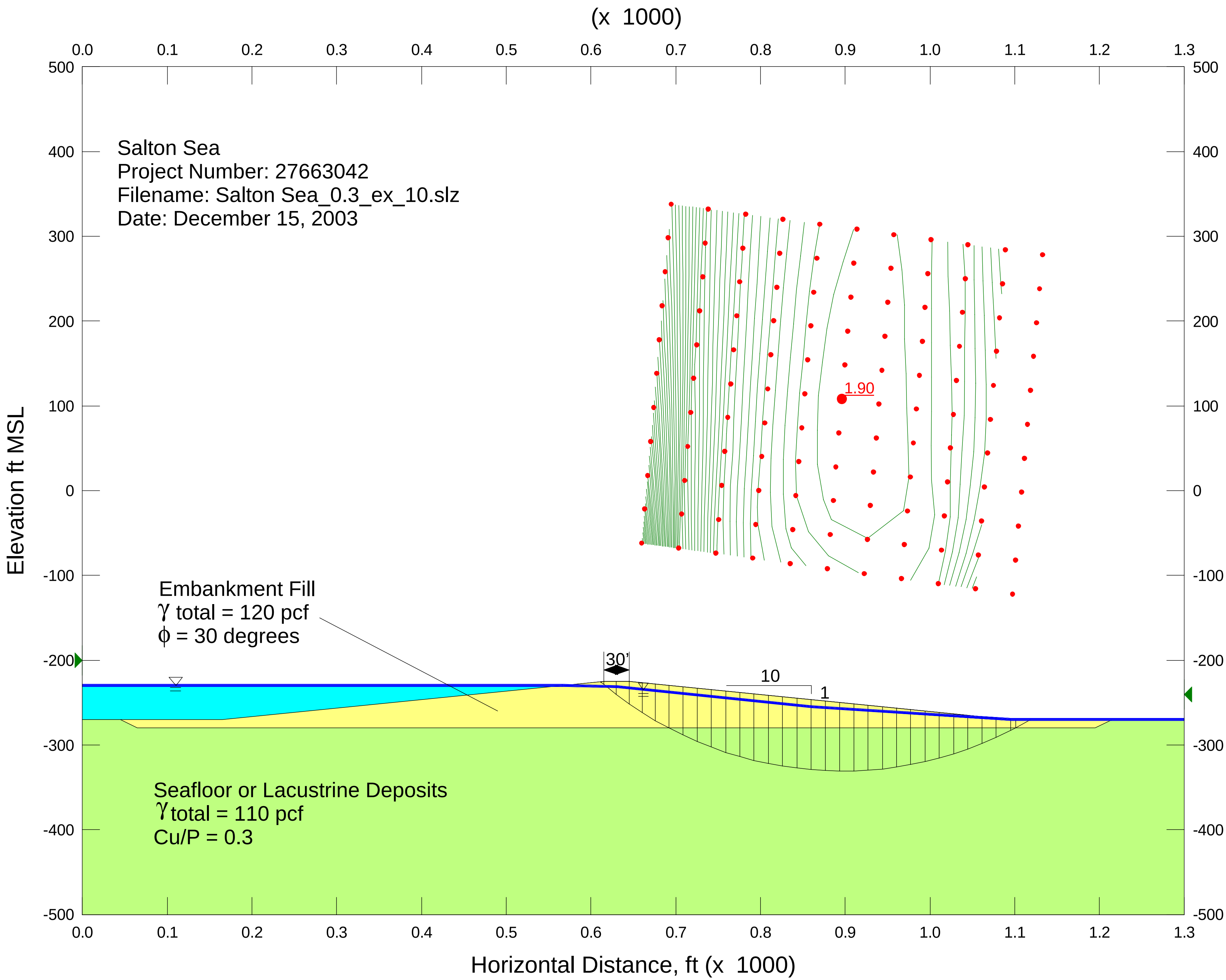
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25_6.slz
Date: December 15, 2003
Embankment Fill
γ total = 120 pcf
ϕ= 30 degrees
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
1.95
30'
6
1
Elevation ft MSL
Horizontal Distance, ft



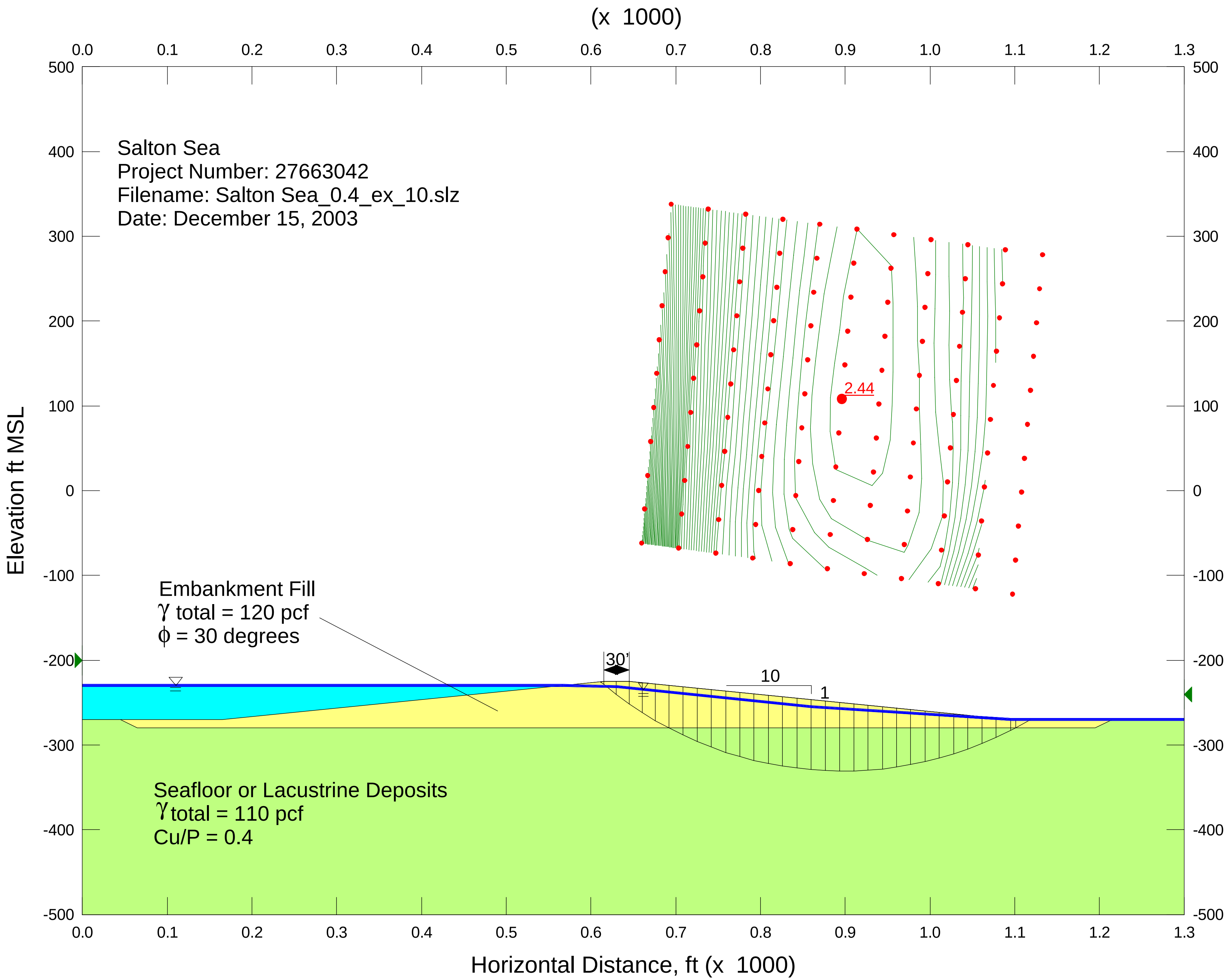
(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3.slz
Date: December 10, 2003
1.81
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)

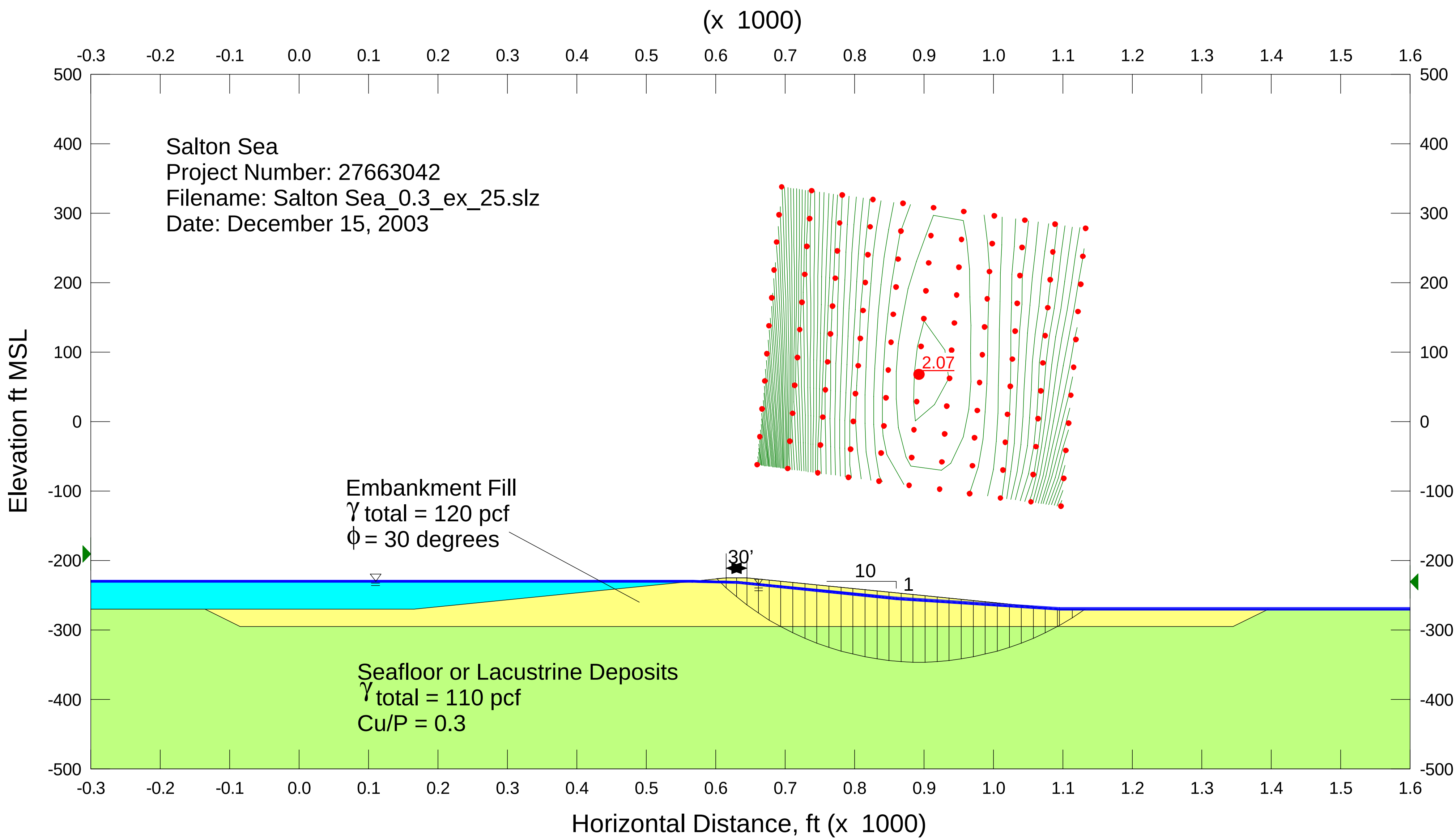


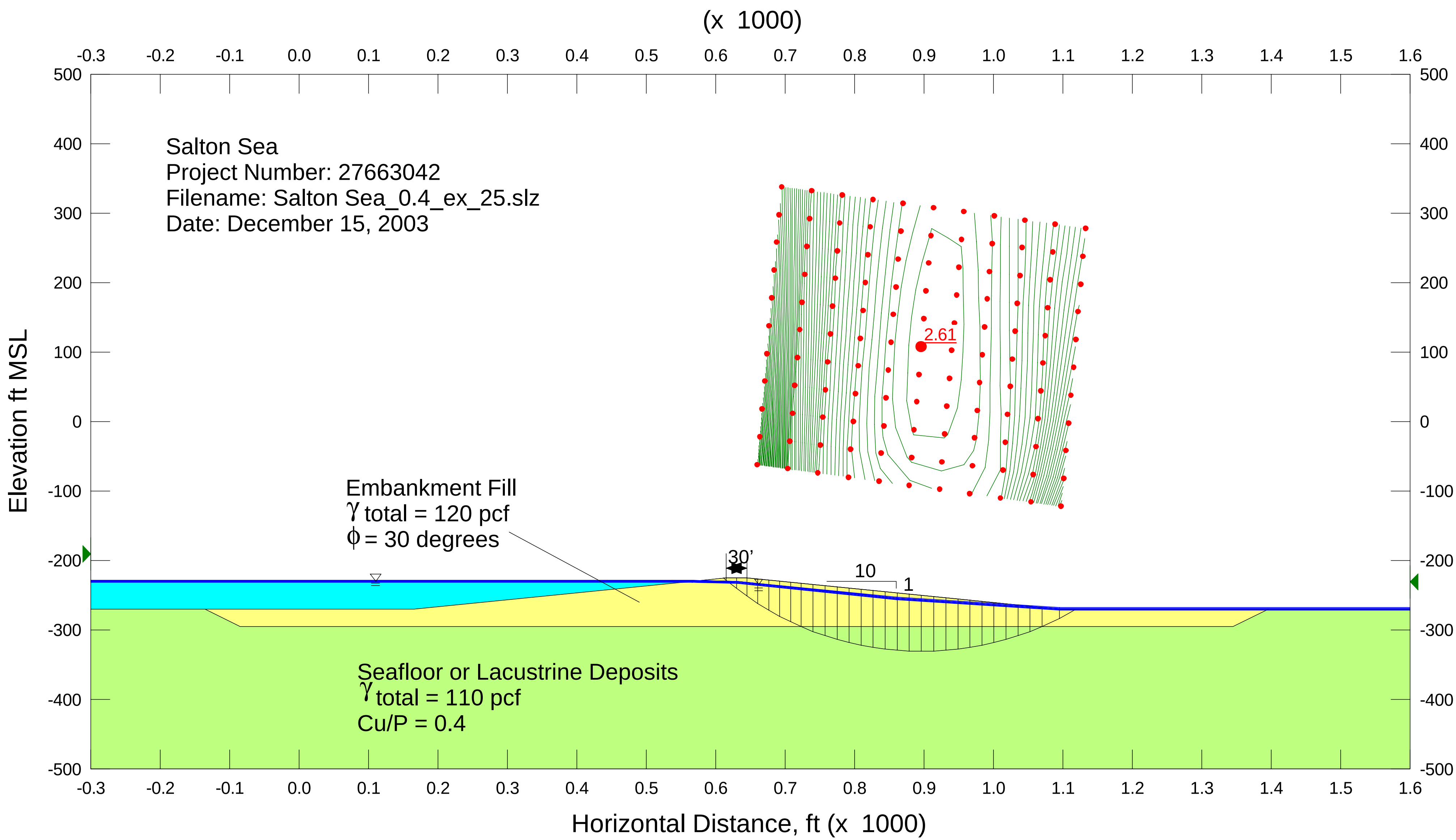
(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4.slz
Date: December 10, 2003
2.35
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft (x 1000)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
500
400
300
200
100
0
-100
-200
-300
-400
-500



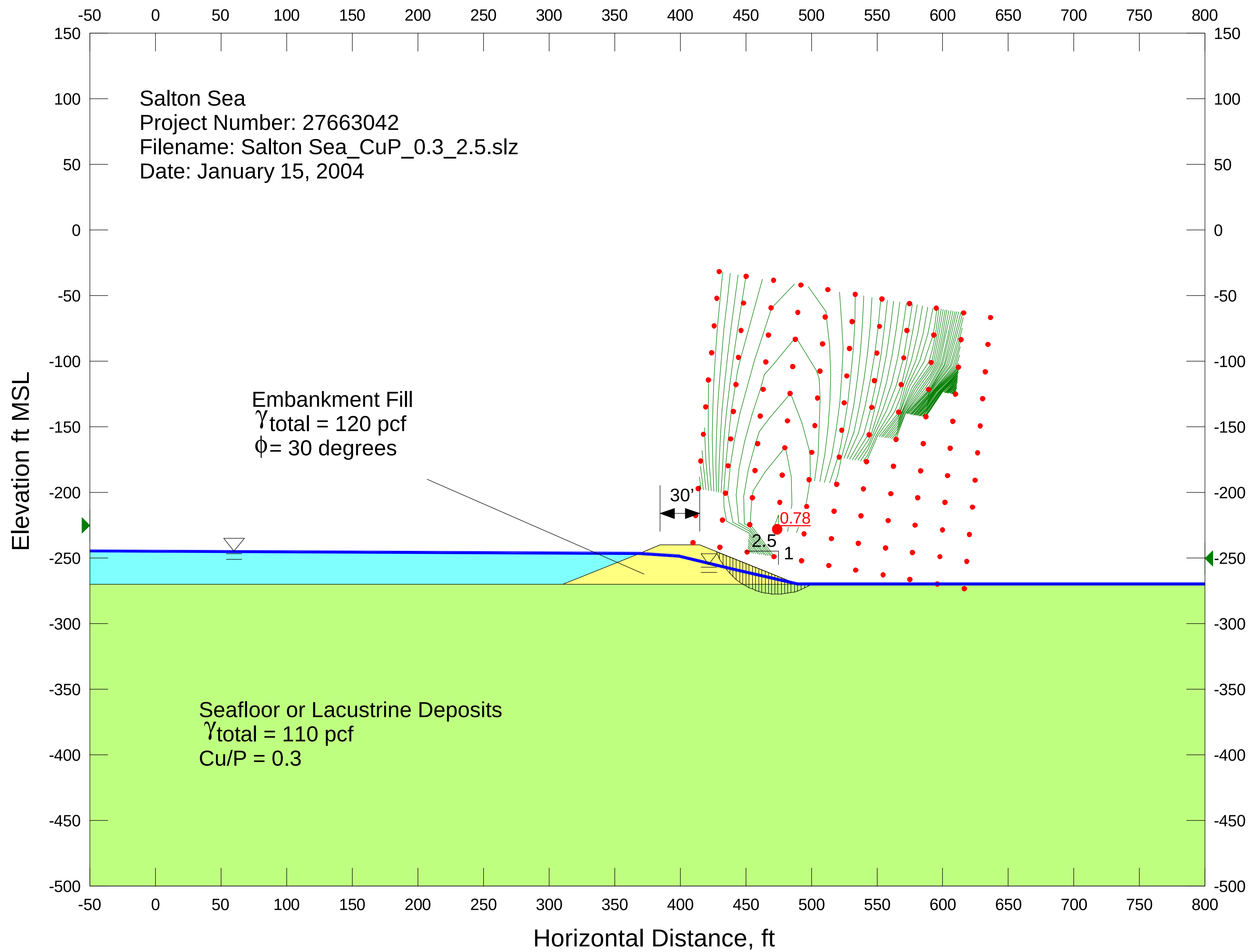
(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10.slz
Date: December 15, 2003
1.90
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)

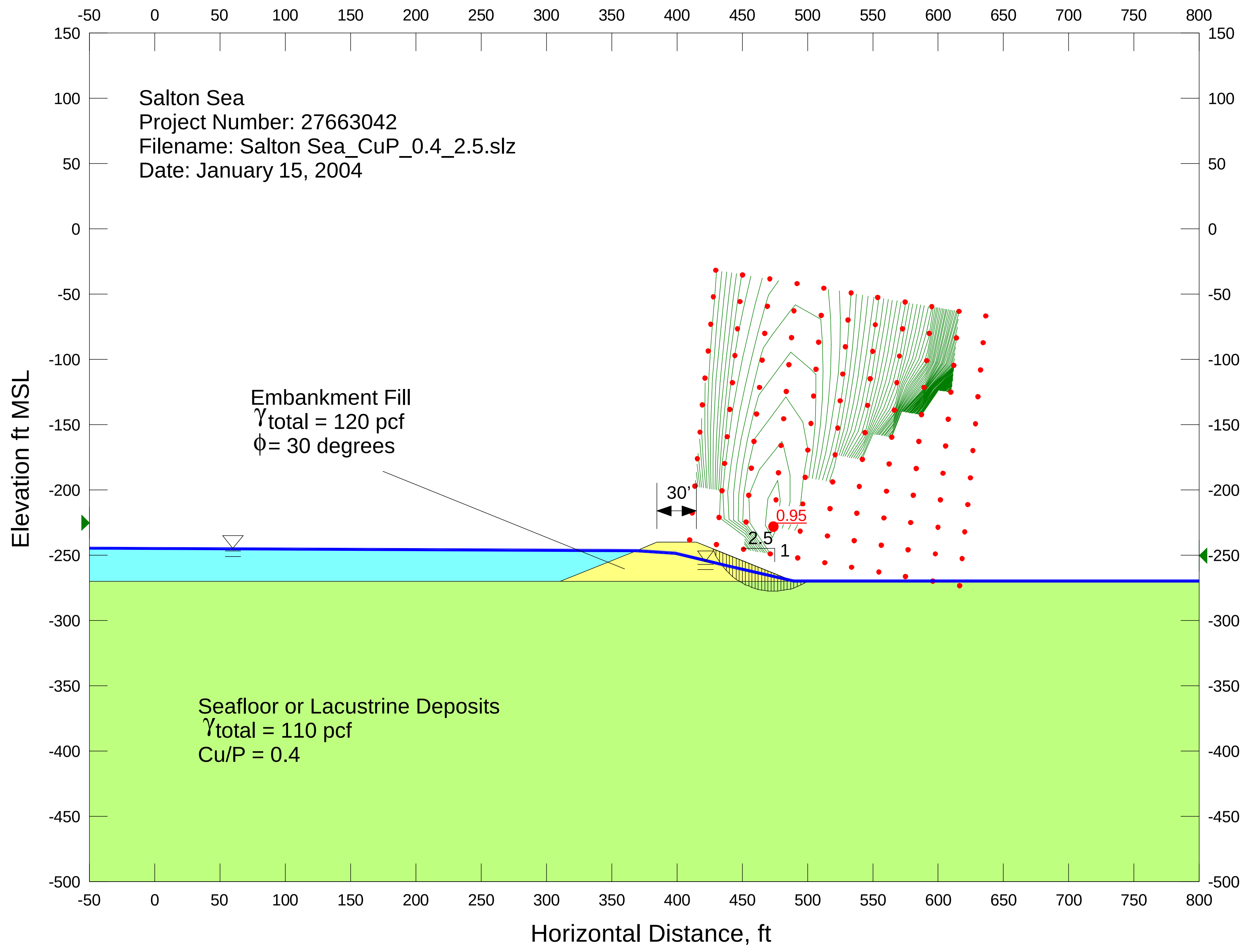

(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10.slz
Date: December 15, 2003
2.44
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft (x 1000)


(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25.slz
Date: December 15, 2003
2.07
Embankment Fill
γ total = 120 pcf
φ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)
-0.3
-0.2
-0.1
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
500
400
300
200
100
0
-100
-200
-300
-400
-500

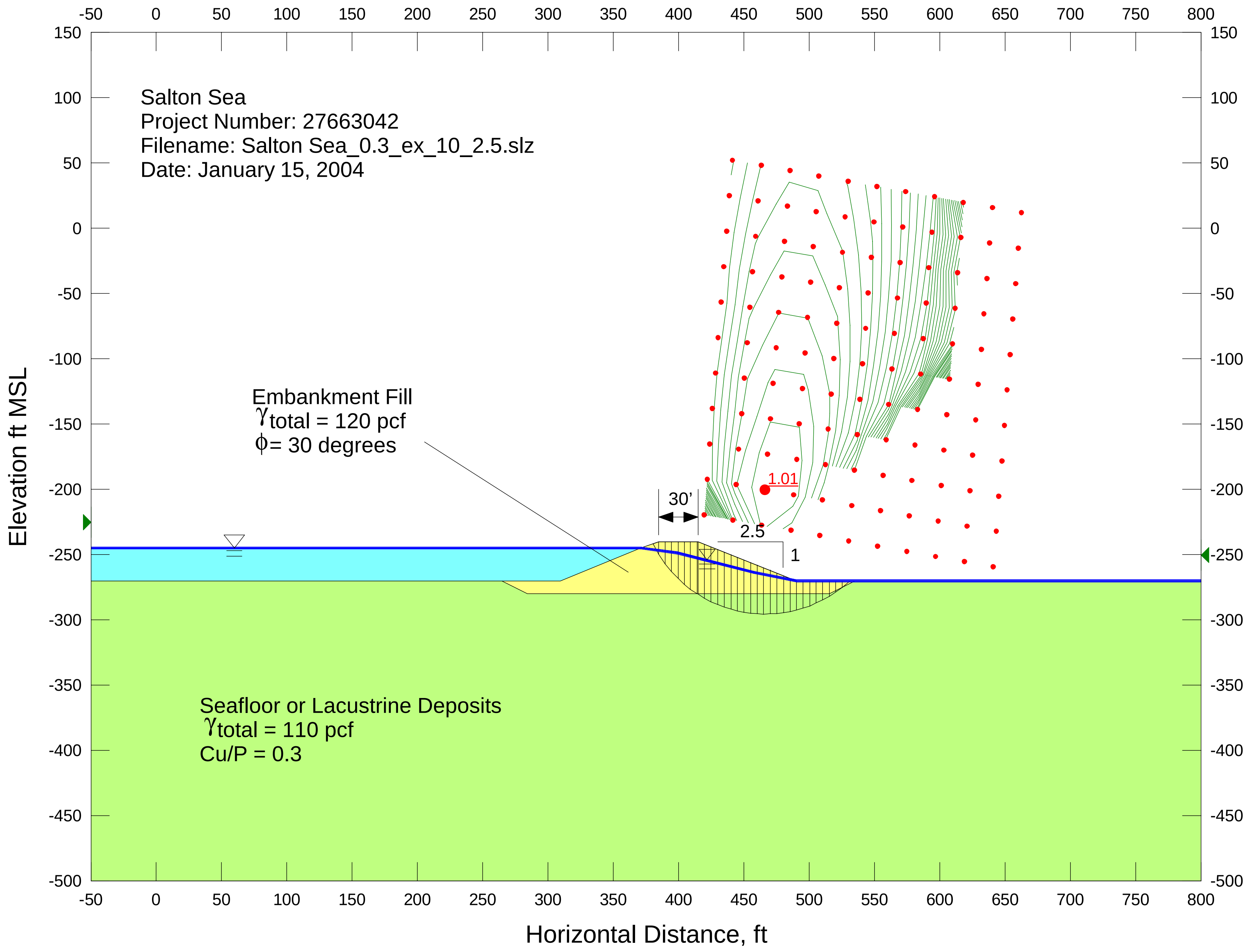


(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25.slz
Date: December 15, 2003
2.61
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft (x 1000)
-0.3
-0.2
-0.1
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
500
400
300
200
100
0
-100
-200
-300
-400
-500

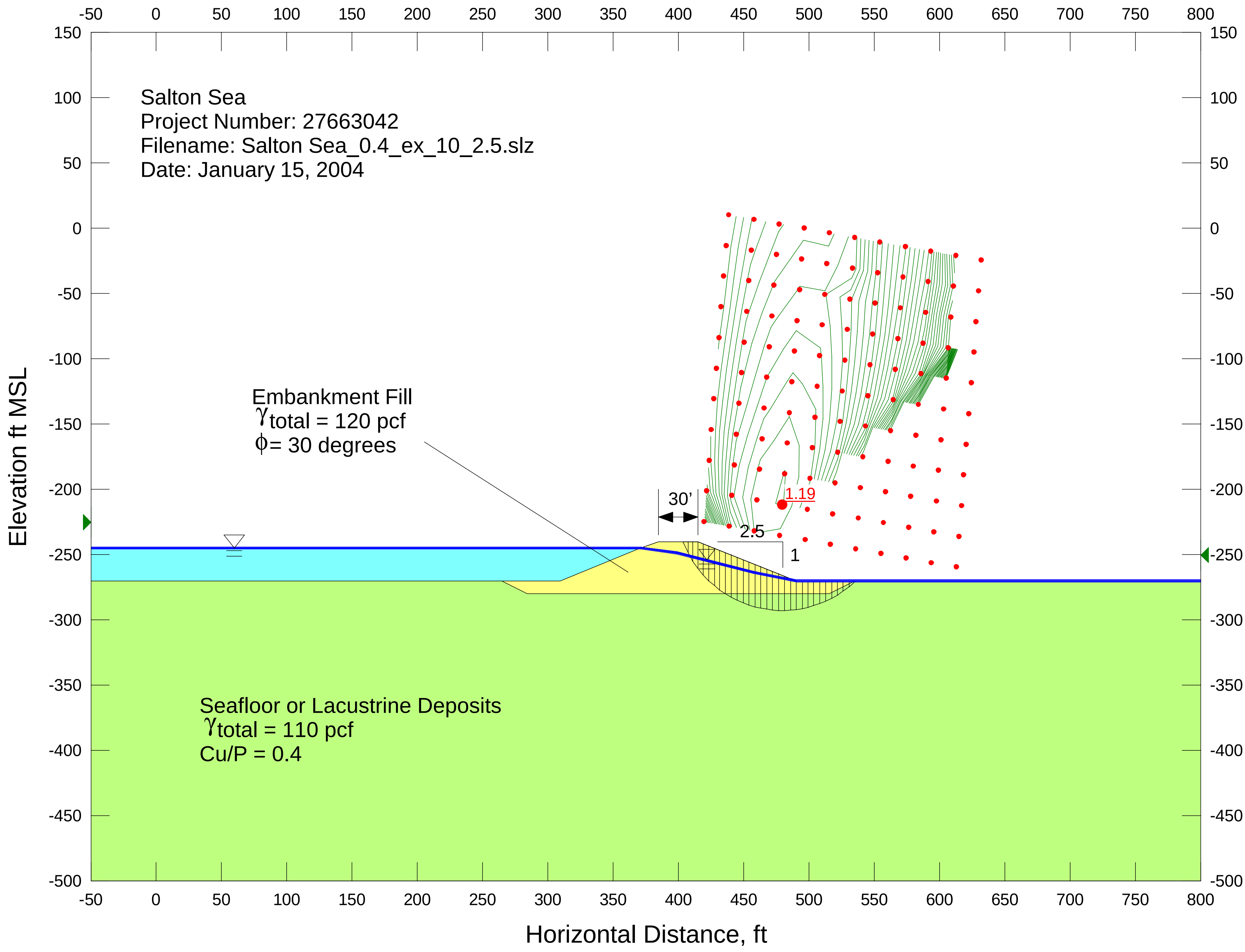

Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
30'
0.78
2.5
1
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft
-50
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
150
100
50
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
-500

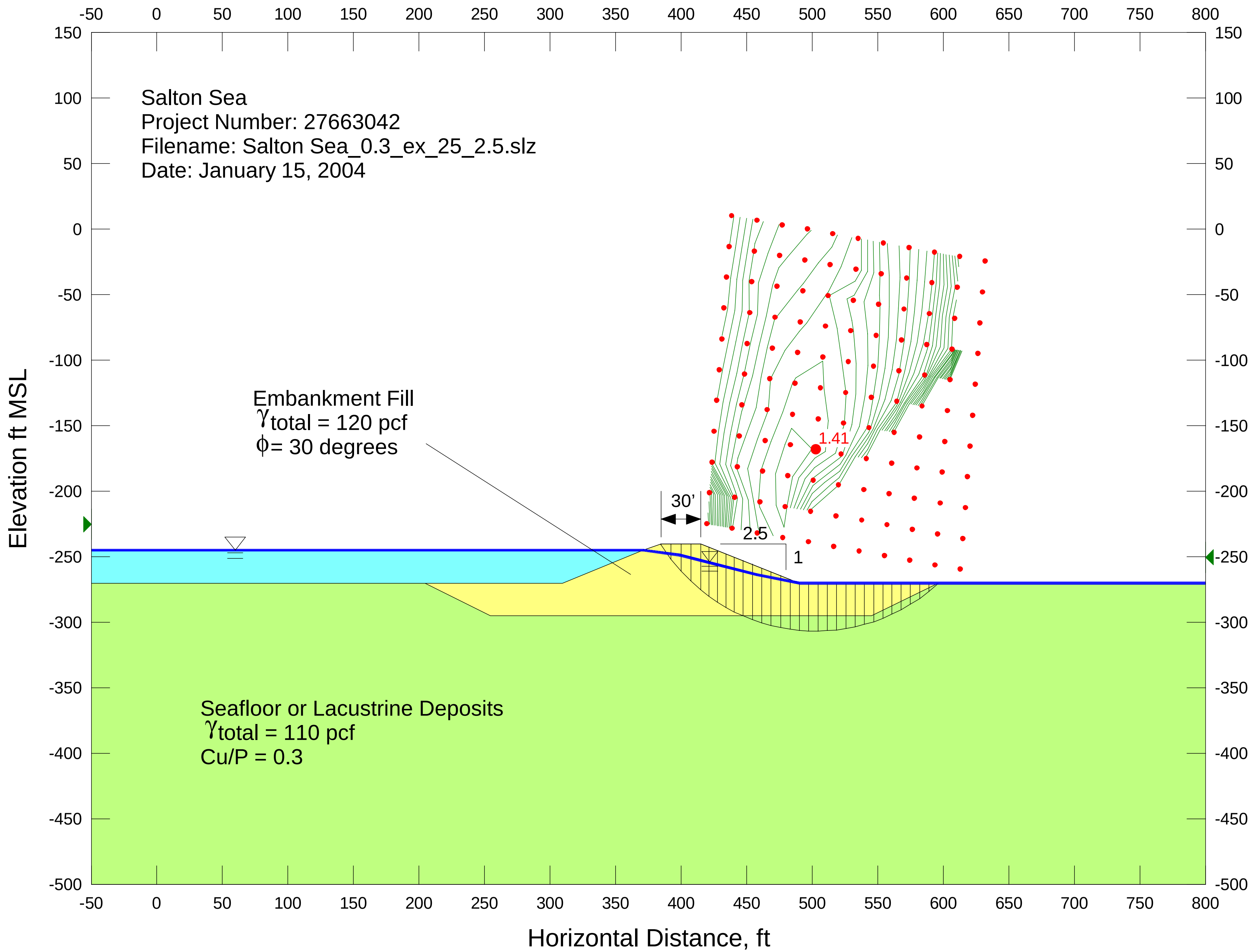


Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
30'
0.95
2.5
1
Elevation ft MSL
Horizontal Distance, ft

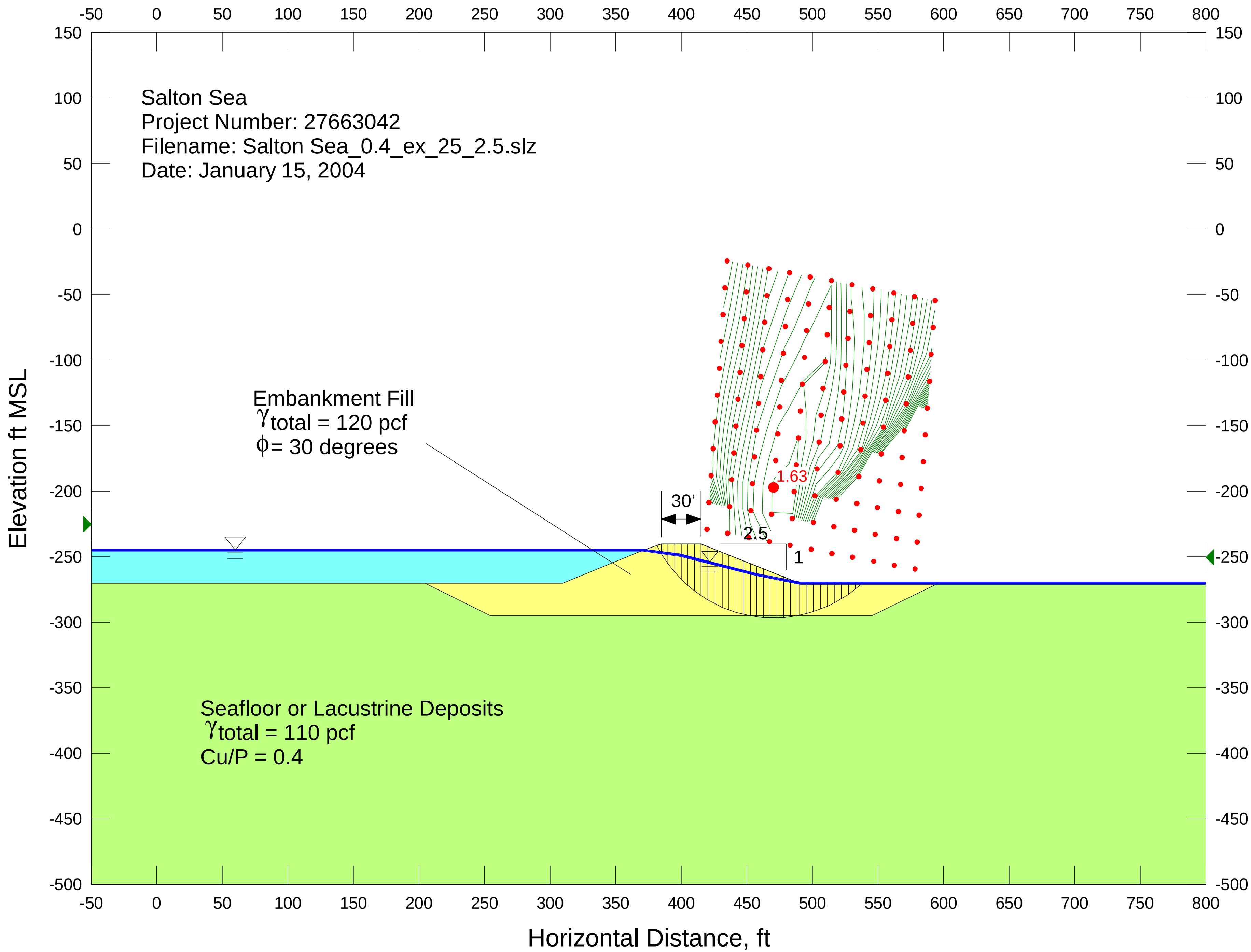


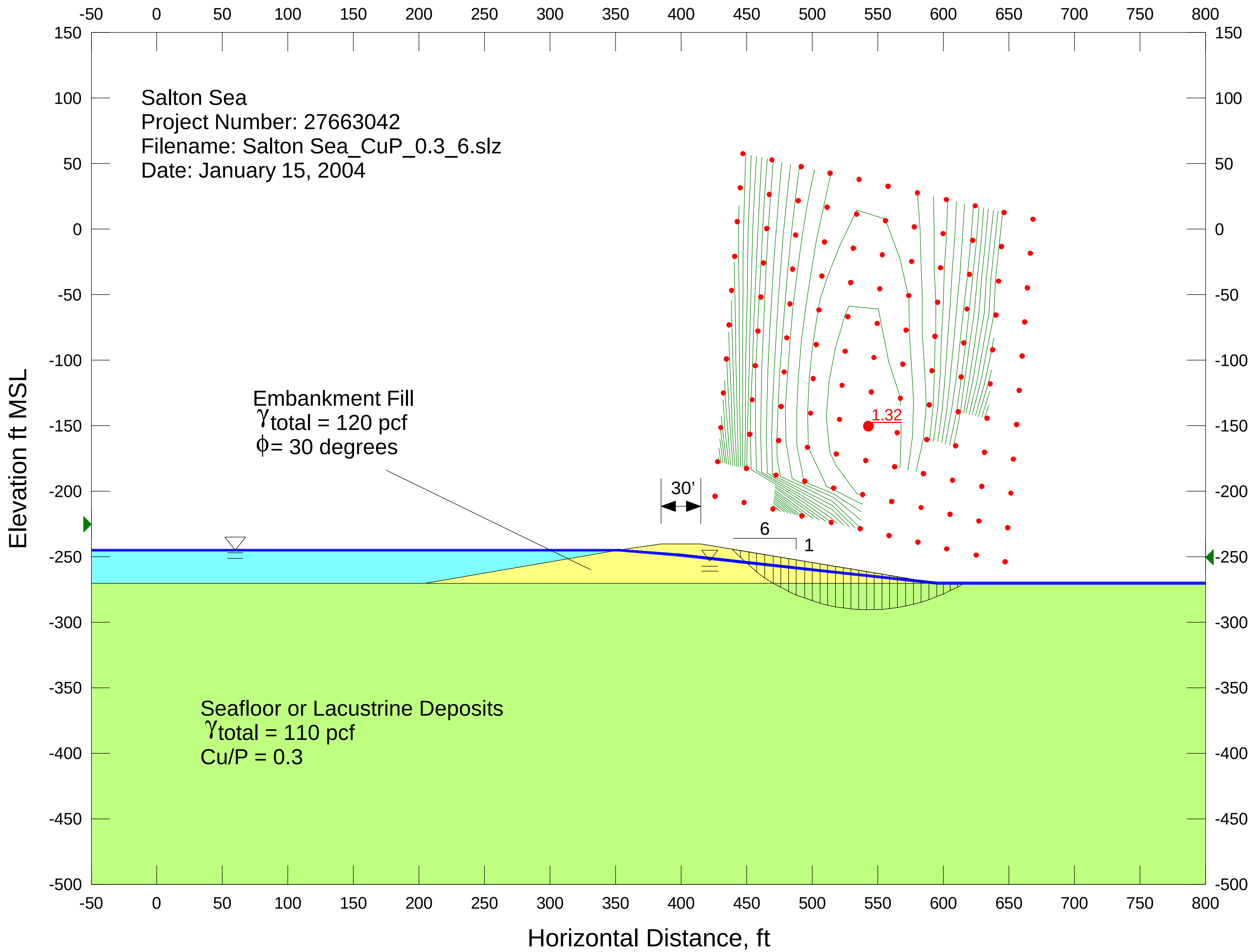
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
1.01
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
1.19
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft
-50 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800
150 100 50 0 -50 -100 -150 -200 -250 -300 -350 -400 -450 -500

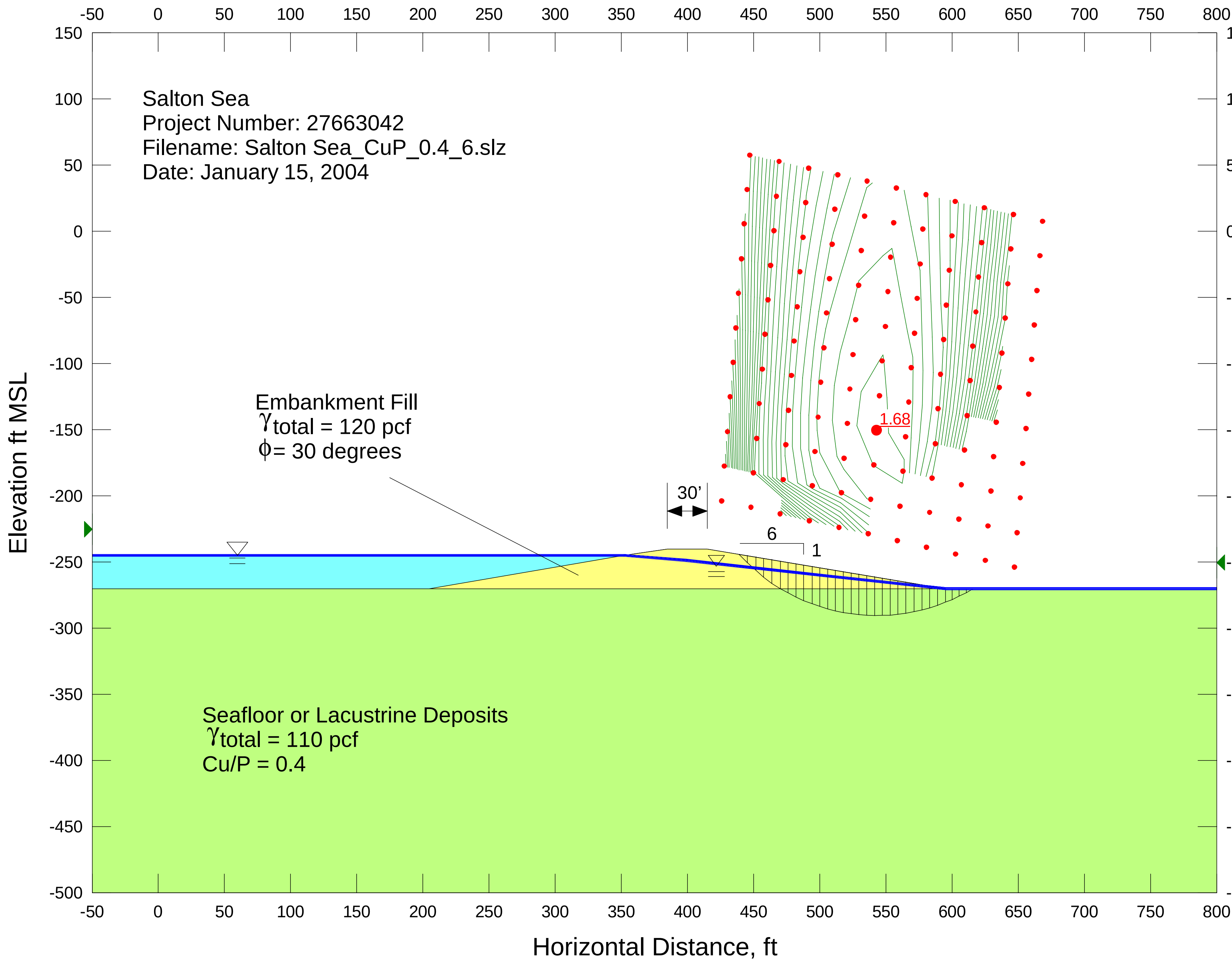


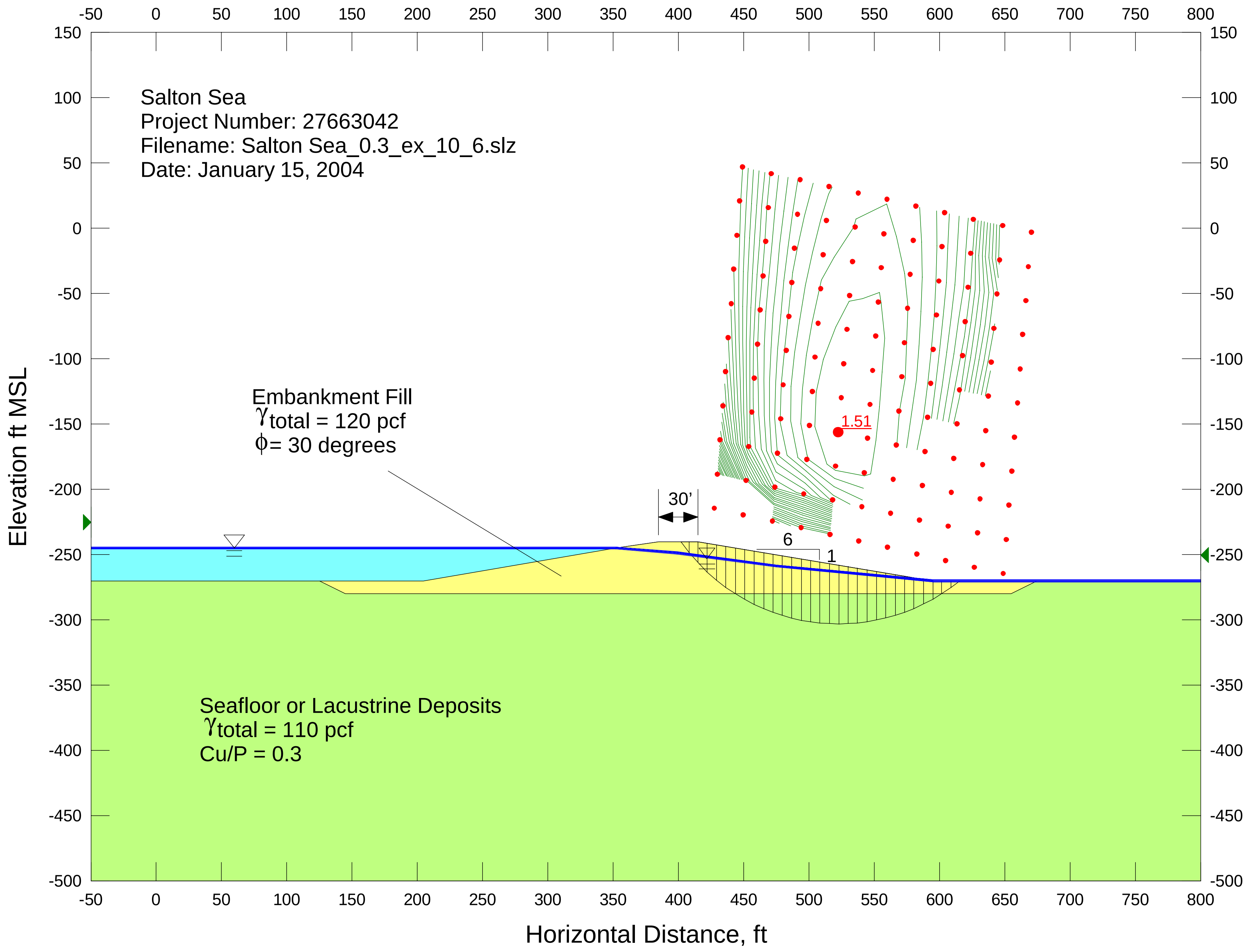
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
1.41
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft

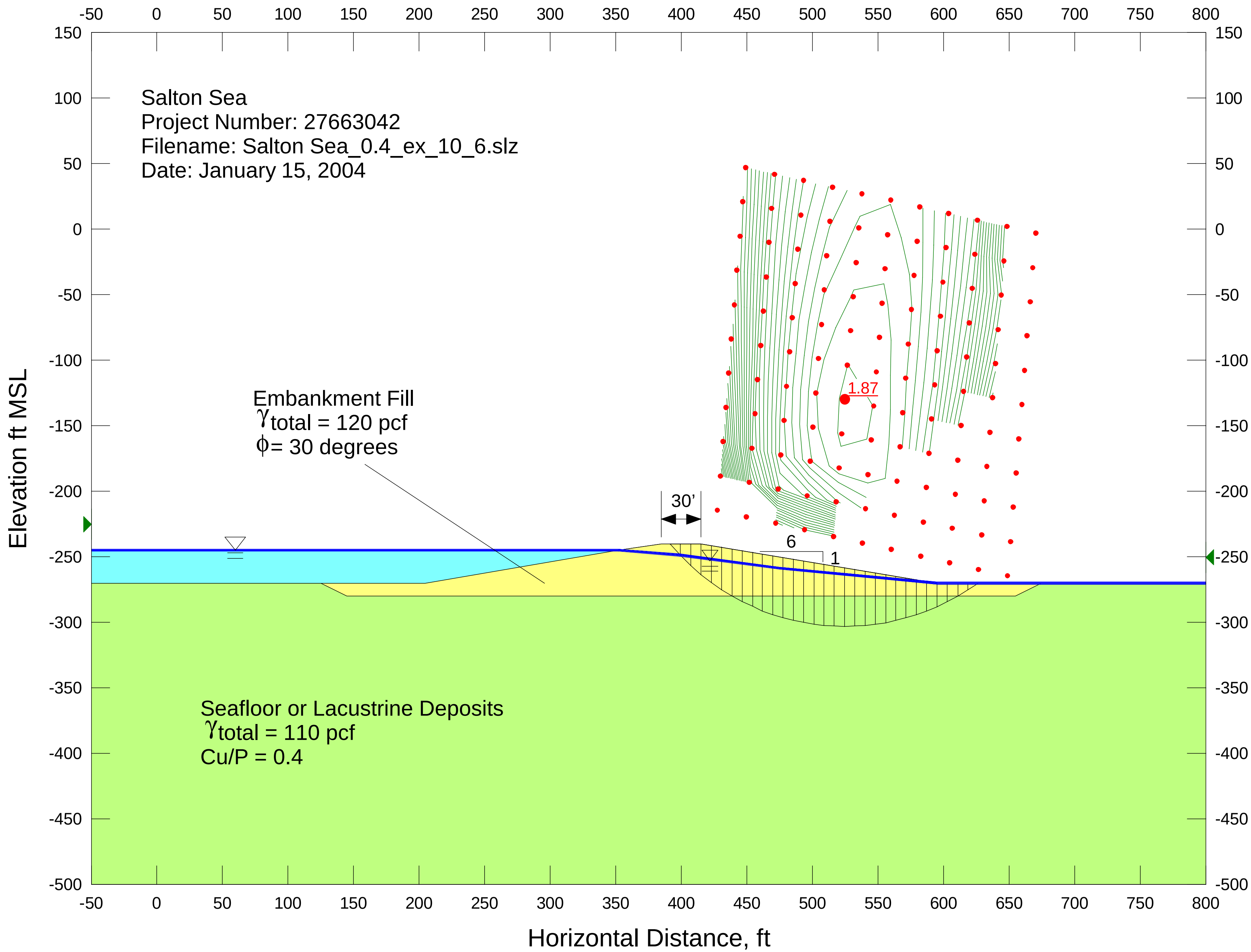

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25_2.5.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
1.63
30'
2.5
1
Elevation ft MSL
Horizontal Distance, ft

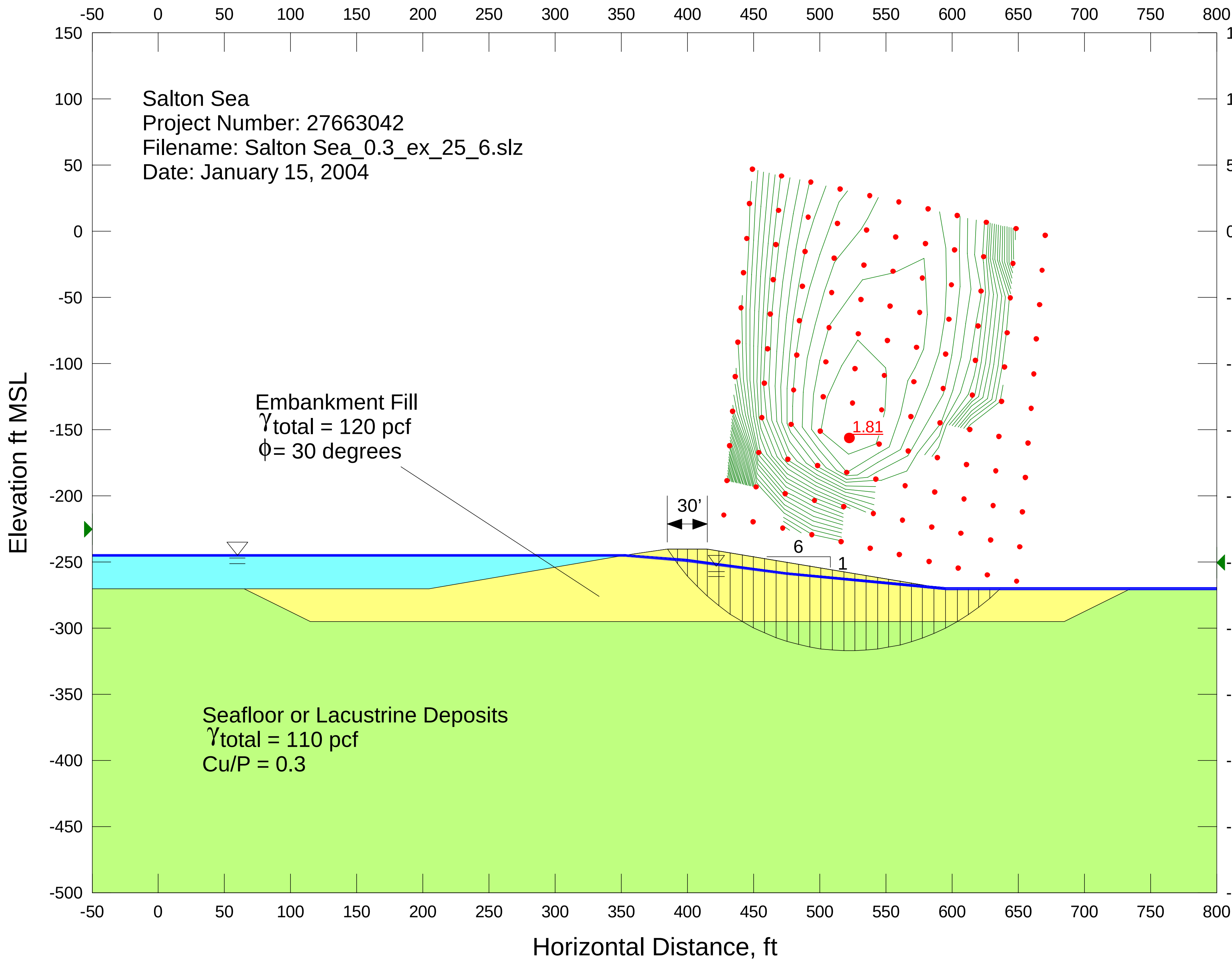


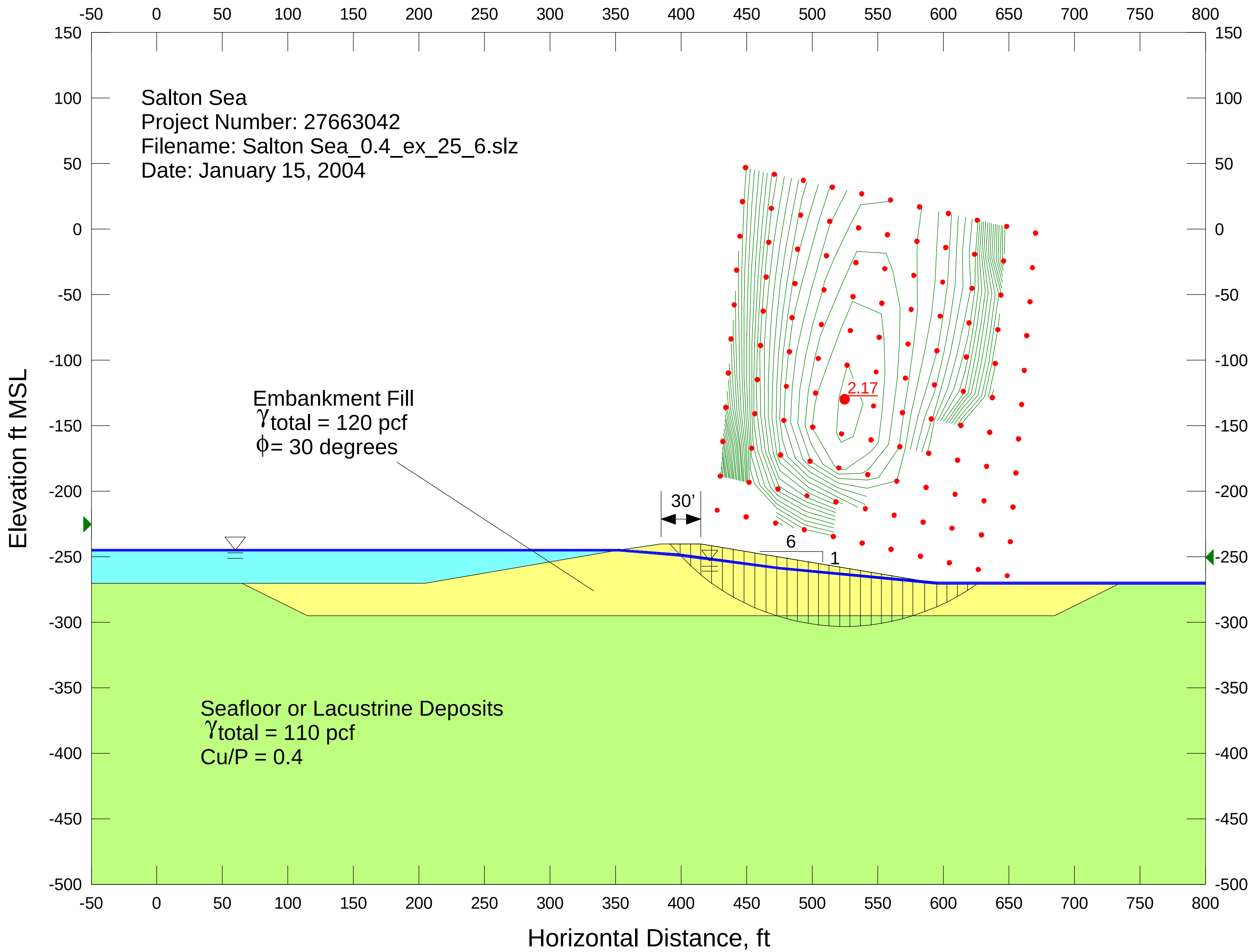
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
30'
6
1
1.32
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft

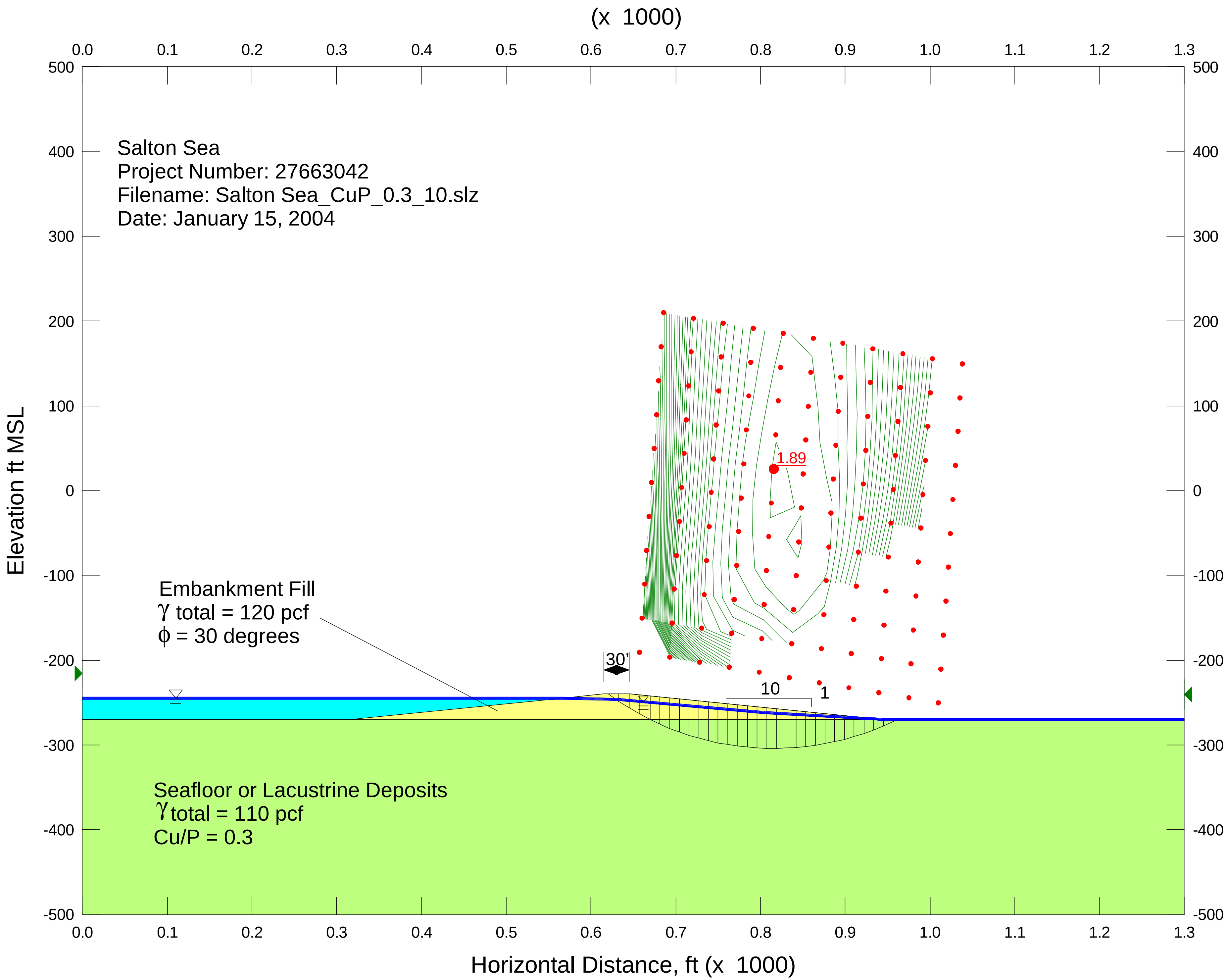

Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
30'
6
1
1.68
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
1.51
30'
6
1
Elevation ft MSL
Horizontal Distance, ft

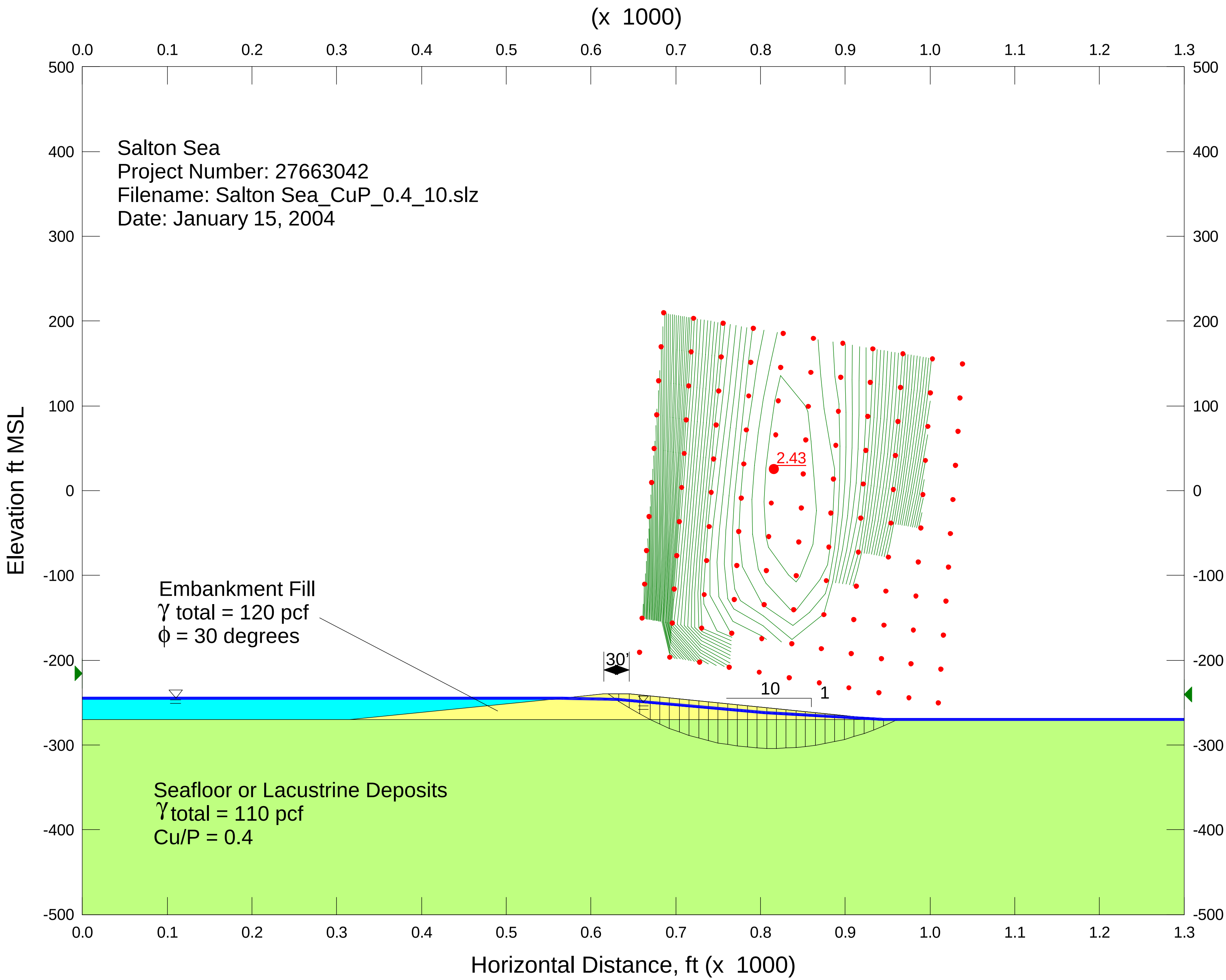

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
1.87
30'
6
1
Elevation ft MSL
Horizontal Distance, ft

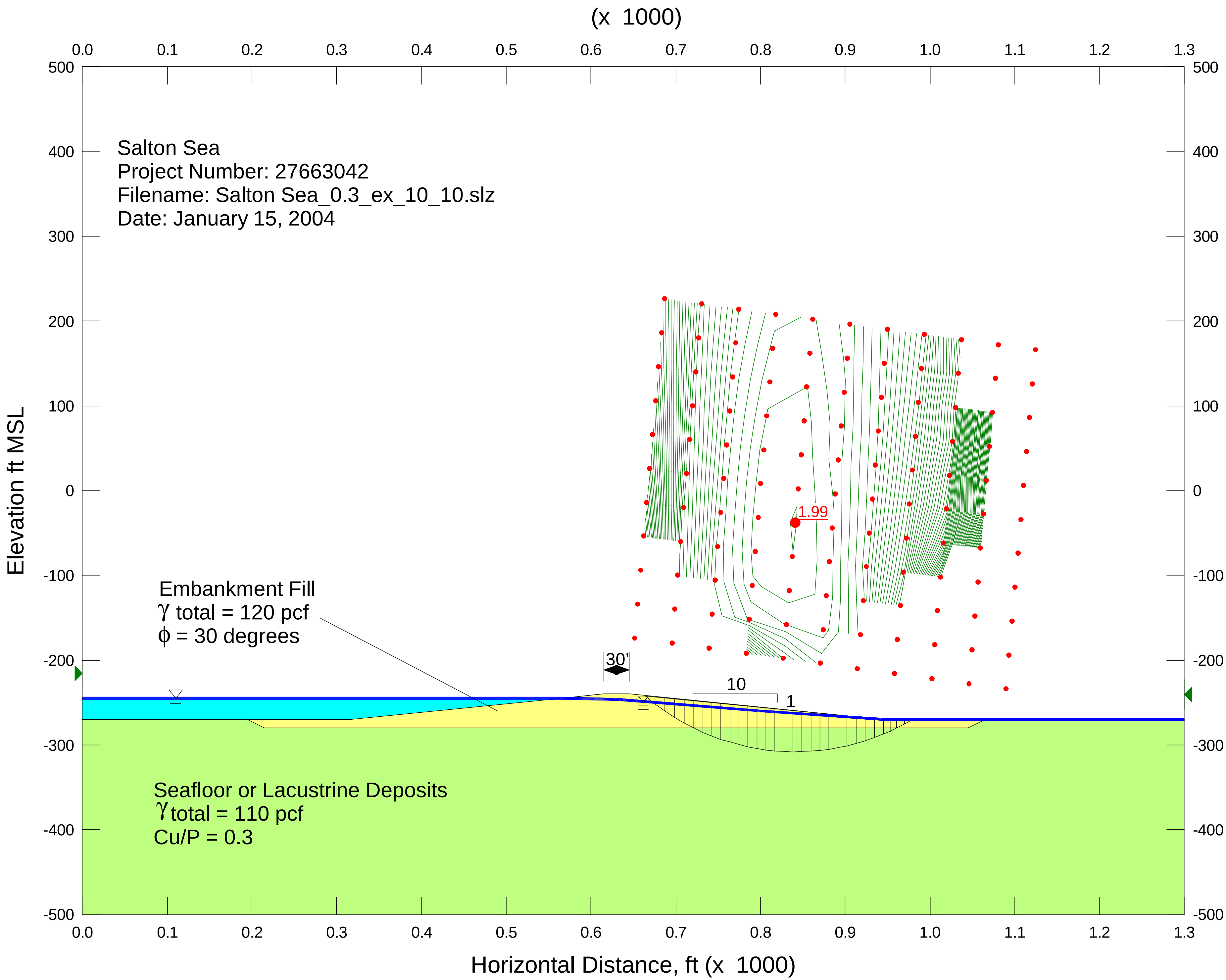

Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
φ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.3
1.81
30'
6
1
Elevation ft MSL
Horizontal Distance, ft


Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25_6.slz
Date: January 15, 2004
Embankment Fill
γtotal = 120 pcf
ϕ= 30 degrees
Seafloor or Lacustrine Deposits
γtotal = 110 pcf
Cu/P = 0.4
2.17
30'
6
1
Elevation ft MSL
Horizontal Distance, ft

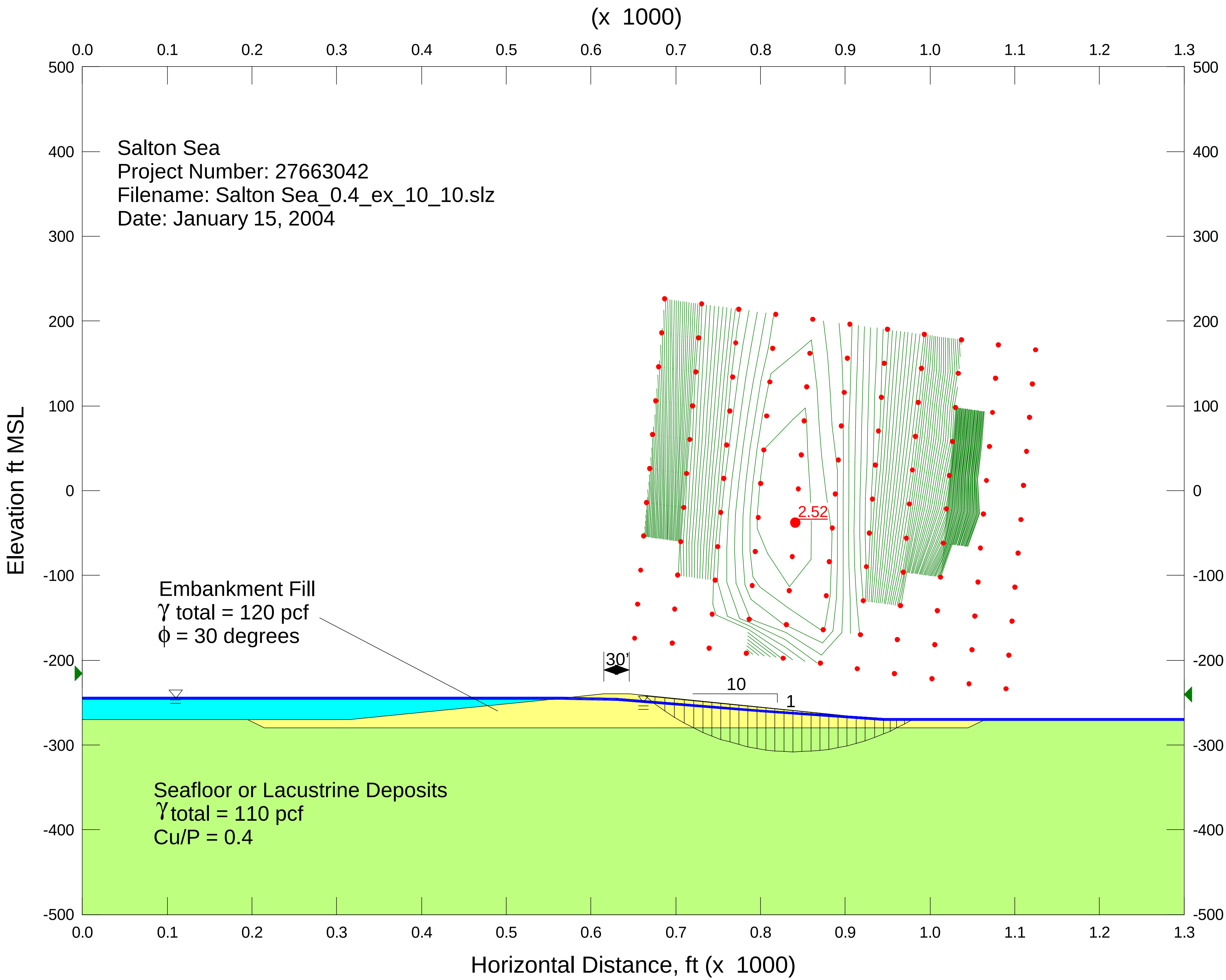


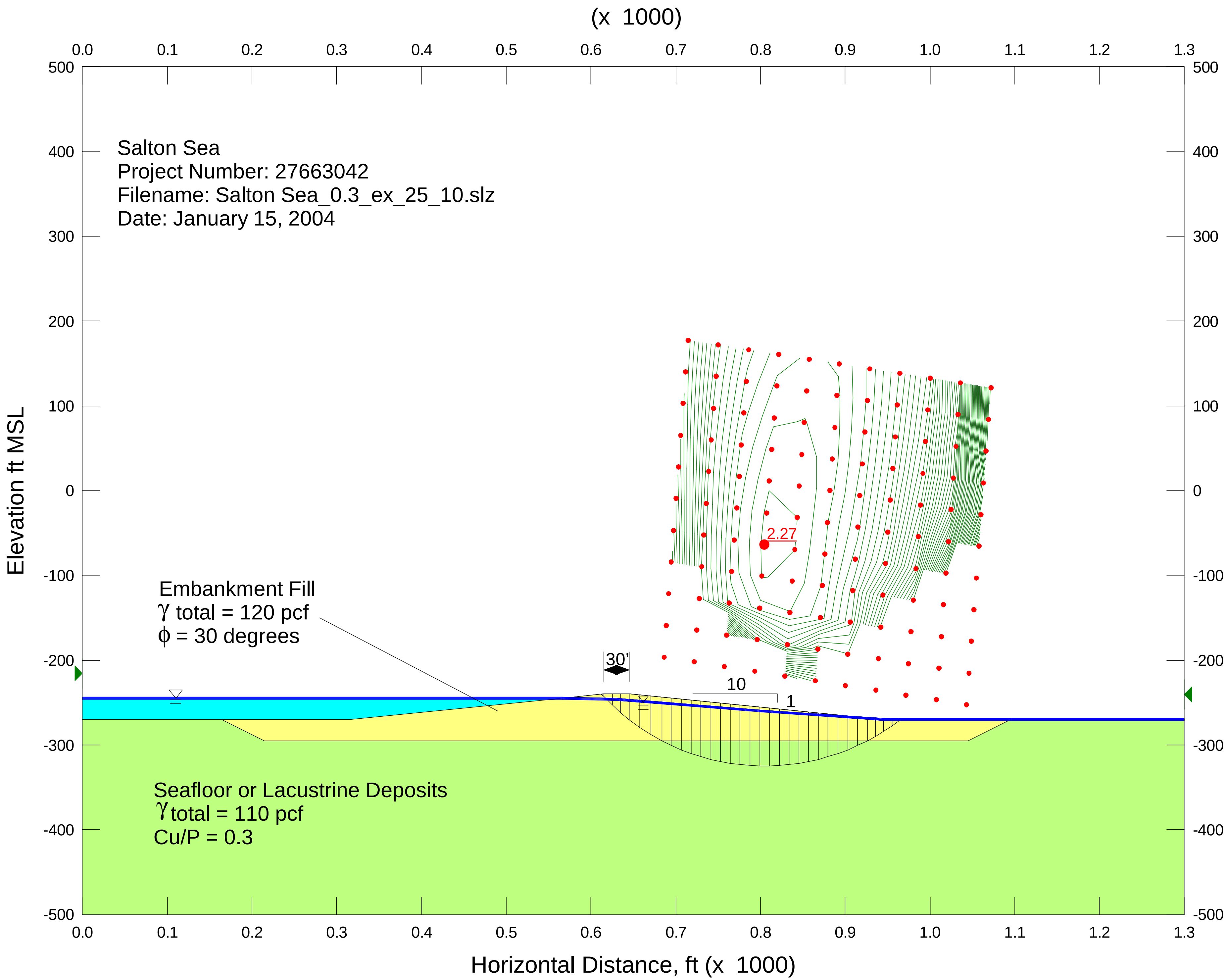
(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.3_10.slz
Date: January 15, 2004
1.89
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)

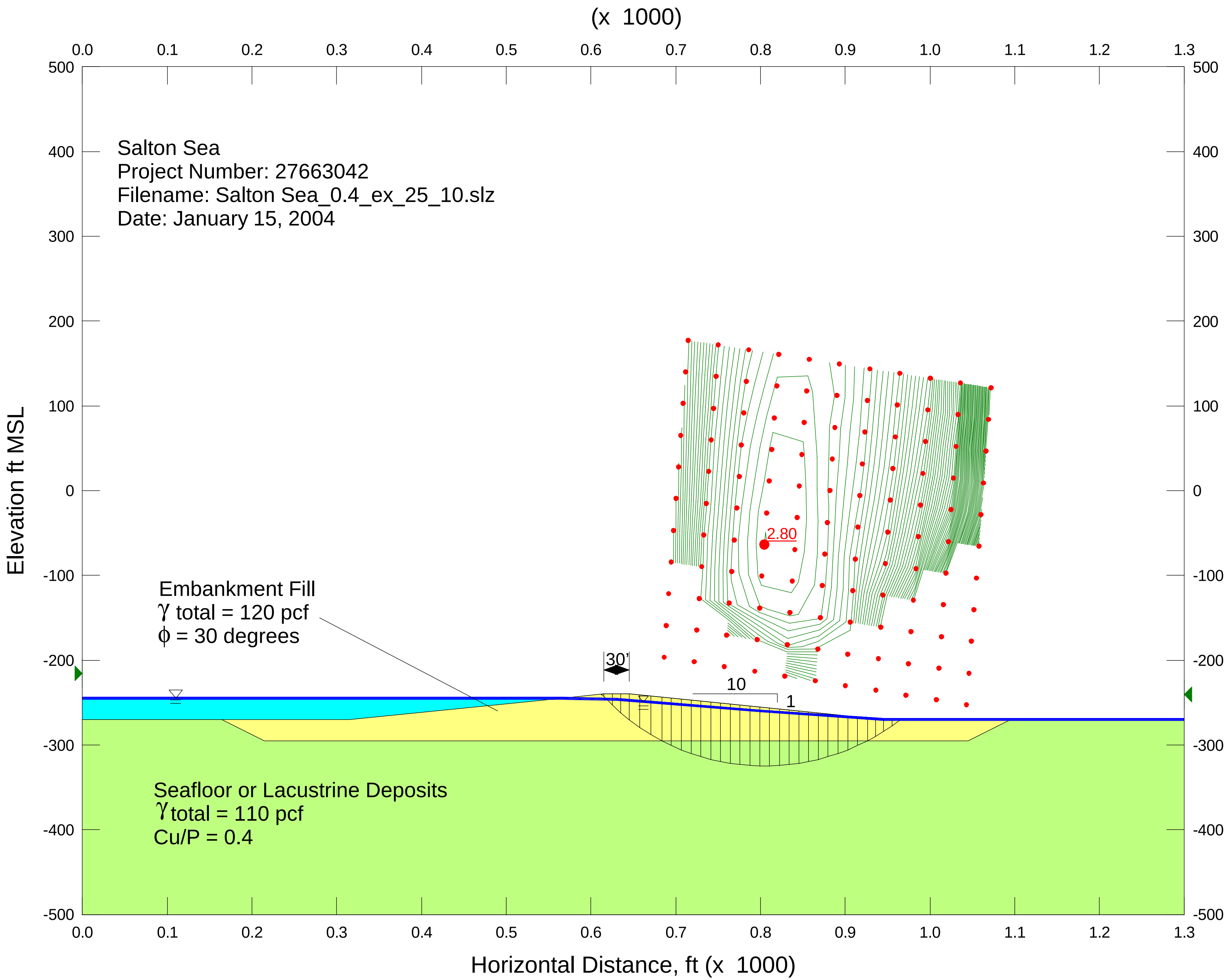

(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_CuP_0.4_10.slz
Date: January 15, 2004
2.43
Embankment Fill
γ total = 120 pcf
φ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft (x 1000)



(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_10_10.slz
Date: January 15, 2004
1.99
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)


(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_10_10.slz
Date: January 15, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
10
1
2.52
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
Elevation ft MSL
Horizontal Distance, ft (x 1000)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
500
400
300
200
100
0
-100
-200
-300
-400
-500


(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.3_ex_25_10.slz
Date: January 15, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
30'
2.27
10
1
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.3
Elevation ft MSL
Horizontal Distance, ft (x 1000)



(x 1000)
Salton Sea
Project Number: 27663042
Filename: Salton Sea_0.4_ex_25_10.slz
Date: January 15, 2004
Embankment Fill
γ total = 120 pcf
ϕ = 30 degrees
Seafloor or Lacustrine Deposits
γ total = 110 pcf
Cu/P = 0.4
2.80
30'
10
1
Elevation ft MSL
Horizontal Distance, ft (x 1000)