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WESTON SOLUTIONS, INC.

OMEGA CHEMICAL SUPERFUND SITE
WHITTIER, CALIFORNIA

PHASE 2 GROUNDWATER CHARACTERIZATION STUDY

WESTON SOLUTIONS

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PHASE 2 GROUNDWATER CHARACTERIZATION STUDY

Contract No.: DACA45-98-D-0004
Task Order No.: 0009

June 2003

Prepared for:

U.S. Environmental Protection Agency
Region IX

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SECTION 1
INTRODUCTION

This technical memorandum summarizes the results of the Phase 1 and 2 groundwater characterization investigations performed by Weston Solutions, Inc. (formerly Roy F. Weston, Inc. (WESTON®) at the Omega Chemical (Omega) National Priorities List (NPL) site located in Whittier, California. The Phase 1 field investigation was conducted in the summer and fall of 2001, while the Phase 2 field investigation was completed in the summer of 2002. Results of the Phase 1 investigation were documented in the Phase 1 Groundwater Characterization Study (WESTON 2002a). The groundwater investigations were conducted in support of the remedial investigation (RI) of groundwater at Operable Unit Number 2 (OU-02) of the Omega Chemical Superfund site (Omega). The purpose of this technical memorandum is to document the results of groundwater sampling and lithologic exploration and to develop a conceptual model of the hydrogeologic conditions in the OU-02 area.

This document is a deliverable under Work Assignment No. 0009 of the U.S Army Corp of Engineers (Corps) Rapid Response Contract with Roy F. Weston Inc, No. DACA45-98-D-0004, in support of the United States Environmental Protection Agency (EPA) for the OU-02 Groundwater Remedial Investigation/Feasibility Study at the Omega Chemical Superfund Site.

1.1 OBJECTIVES AND SCOPE

The specific objectives of the groundwater investigation include:

- Determine the nature and extent of groundwater contamination, primarily in areas downgradient of the Omega Chemical Superfund site.
- Develop a conceptual model of the hydrogeologic conditions in the OU-02 area.
- Attempt to identify other areas of potential groundwater contamination sources.

The data collected from these field investigations will assist EPA in selecting a remedy to eliminate, reduce, or control risks to human health and the environment. The overall goal is to develop sufficient data necessary to support the selection of an approach for site remediation and ultimately reach a Record of Decision (ROD) with the Responsible Parties (RPs).

The investigations documented in the technical memorandum were conducted in general accordance with the Field Sampling Plan (FSP) (WESTON, 2001) and Quality Assurance Project Plan (QAPP) (WESTON, 2001). Deviations from those procedures are described herein.

The specific scope of the Phase 1 groundwater characterization studies included the following:

- Installation of 30 Cone Penetration Test (CPT) probes for lithologic logging.
- Collection of groundwater samples from CPT borings at 80 locations.
- Laboratory analysis of groundwater samples for volatile organic compounds (VOCs).

The Phase 2 investigation focused primarily on filling data gaps in three areas:

- Greater definition of contaminant distribution and subsurface conditions near the Omega site.
- Exploration to delineate the extent of contamination in upgradient areas to the north of the Omega site.
- Explorations in the southern and southwestern part of the study area to determine the downgradient extent of the contaminant plume.

The specific scope of the Phase 2 groundwater characterization studies included the following:

- Installation of 6 additional CPT probes and 19 hollow stem auger (HSA) boring explorations for lithologic logging.
- Installation of 18 groundwater monitoring wells for monitoring purposes and for further lithologic logging.
- Collection of groundwater samples at 34 additional CPT probe and HSA boring locations.
- Laboratory analysis of groundwater samples for volatile organic compounds (VOCs).

The 18 EPA monitoring wells installed as part of this investigation have been sampled quarterly since February 2002 along with ten wells monitored by the Omega Chemical Site PRP Organized Group (OPOG). The monitoring wells were sampled for VOCs, total and dissolved metals, cyanide, perchlorate, and 1,4-dioxane. Results of the quarterly groundwater sampling of the monitoring wells were presented in a series of reports (WESTON, 2001b, 2002a). The results from quarterly groundwater monitoring have been incorporated into this report as appropriate to assist in interpretation of the Phase 1 and 2 results.

SECTION 2
BACKGROUND

Background information was obtained from historical documents prepared by regulatory agencies and the Omega Chemical Site PRP Organized Group (OPOG) and their consultants. This summary is reproduced from the version presented in the Phase 1 report (WESTON, 2002a), with additional discussion of the local geological conditions.

2.1 SITE LOCATION AND DESCRIPTION

The Omega Chemical facility is located at 12504 and 12512 East Whittier Boulevard in Whittier, Los Angeles County, California. The city of Whittier is located 12 miles southeast of the city of Los Angeles. Approximately 85,000 people reside in the city of Whittier (www.whittierch.org). The city of Santa Fe Springs is located southwest of the facility and the community of Los Nietos is included within Santa Fe Springs. Unincorporated County of Los Angeles land is present to the northwest of the Omega site as well as farther west beyond Santa Fe Springs. The Omega Chemical Superfund site is divided into two operable units (OUs): OU-01 and OU-02. OU-01 includes the Omega Chemical facility property and extends a short distance west-southwest to Putnam Street. The OU-02 study area encompasses the area surrounding the Omega Chemical facility and extending approximately 2.2 miles to the southwest. A site location map and site features map are presented in **Figures 1** and **2**, respectively.

The facility operated as a RCRA solvent and refrigerant recycling and treatment facility, handling primarily chlorinated hydrocarbons and chlorofluorocarbons for 15 years, from approximately 1976 to 1991. Drums and bulk loads of waste solvents and chemicals from various industrial activities were processed to form commercial products. Chemical, thermal and physical treatment processes were believed to have been used to recycle the waste materials. Although the mechanism by which contaminants were released to the subsurface is not known, the release is well established by detection of elevated contaminant concentrations continuously from near ground surface to groundwater at the Omega site.

2.2 TOPOGRAPHY

The Omega Chemical facility is situated near the base of the gentle La Habra piedmont slope descending from the southwestern flank of the Puente Hills, at an elevation of approximately 220 feet above mean sea level (MSL). The piedmont slope descends toward the southwest at approximately 2.5 percent to a point approximately 2,800 feet southwest of the Omega Chemical facility. At this point, the ground surface flattens into a broad basin or plain, at an elevation of approximately 150 to 155 feet MSL. In the southwestern part of the study area, the ground surface ascends a low rise at the northwest end of the Santa Fe Springs plain, at an approximate elevation of 160 feet MSL. From there, the ground surface resumes a gentle southwestward slope, reaching approximately 145 feet MSL near the location of the Phase 2 boring farthest from the Omega site.

Topography in the area is shown on the Site Location Map (**Figure 1**), which is referenced to the USGS Whittier Quadrangle, and the elevation contours have also been plotted on **Plate 1**.

A small, channelized drainage, the Sorenson Avenue Drain, flows across the basin toward the southeast from a point near the intersection of Dice Road and Slauson Avenue. This channel bends toward the south beyond the limits of the study area to become La Canada Verde Creek, which cuts through a low gap between the Coyote Hills on the east and the Santa Fe Springs plain on the west. The approximate locations of the La Habra piedmont slope, Santa Fe Springs plain, and main drainages are shown on **Figure 2**.

2.3 REGIONAL GEOLOGICAL AND HYDROGEOLOGICAL SETTING

This discussion on the geology in the region is largely based on Bulletin 104 by the California Division of Water Resources (CDWR, 1961).

The Omega site and study area are located in the Montebello Forebay area of the Coastal Plain of Los Angeles County. The Coastal Plain is bounded on the west and south by the Pacific Ocean and by mountainous uplifts on the north, east and southeast. The Coastal Plain is underlain by an extensive groundwater basin in Los Angeles and Orange Counties.

The known water-bearing sediments in the Whittier area extend to a minimum depth of 1,000 feet below the ground surface. The identified geologic units include Recent alluvium, the Upper Pleistocene Lakewood Formation and the Lower Pleistocene San Pedro Formation. **Figure 3** shows a generalized stratigraphic column of water bearing sediments in the Whittier area.

Based on the geologic maps provided in CDWR (1961), the uppermost unit in the vicinity of Omega site consists of the "Bellflower aquiclude." The Bellflower aquiclude is defined as all the fine-grained sediments that extend from the ground surface down to the first aquifer. The Bellflower aquiclude consists primarily of clay and sandy clay to silt, and ranges from 20 to more than 60 feet in thickness in the area. CDWR (1961) includes the Bellflower aquiclude in both the Recent alluvium and the upper part of the Upper Pleistocene Lakewood Formation. In the Whittier area, the Bellflower aquiclude is assigned mainly to the Lakewood Formation except where the fine-grained sediments overlie the Gaspur aquifer (described below) and the uppermost portion of the aquifer within the basin, where the Bellflower aquiclude is assigned to Recent alluvium. Water-bearing zones locally occurring within the Bellflower aquiclude are referred to collectively and informally as the Semiperched aquifer.

In addition to the fine-grained Bellflower aquiclude, the Recent alluvium also includes a coarse-grained unit known as the Gaspur aquifer. Based on aquifer maps contained in CDWR (1961), the Gaspur aquifer is depicted occurring as an embayment within the western one-half of the study area. The south side of the embayment containing the Gaspur aquifer appears to be constrained by the uplifted Santa Fe Springs plain, which comprises the surface expression of the Santa Fe Springs anticline located along the southernmost portion of the study area. However, lithologies observed in borings advanced during the Phase 2 study suggest that the Gaspur

aquifer is restricted to the far western end of the study area, along the northwest side of the Santa Fe Springs plain (see Plate 1). In the Whittier area, the Gaspur aquifer is described as sand and gravel with a little interbedded clay, and ranging to more than 80 feet in thickness. Cross-sections in CDWR (1961) indicate that the Gaspur aquifer is locally in contact with the Bellflower aquiclude and with other aquifers along an erosional unconformity, which forms a steep surface at the edge of the Gaspur deposit. Cross sections prepared for this report have been similarly interpreted (see cross-section G-G', central left side; and cross-section H-H', left end).

The Lakewood Formation consists of non-marine deposits of Late Pleistocene age and attains a maximum thickness of 70 feet in the Whittier area. The Gage aquifer is the major water-bearing member and comprises the basal lithologic unit of the Lakewood Formation. It consists of about 20 to 40 feet of sand with some interbedded clay. Based on previous investigation at the Omega Chemical site, the Gage aquifer appears to be absent beneath the Omega site itself (England-Hargis, 1996b,c). A sand interval observed in explorations a short distance southwest of the site is believed to correlate with the Gage aquifer (England- Hargis, 1996b,c). The explorations conducted during the two phases of this investigation also suggest that the Gage aquifer is present west of the Omega Chemical site and both narrows and pinches out towards the east. The Gage aquifer does not appear to be an important source of drinking water in the Whittier area, because of elevated TDS concentrations that have been observed during previous sampling, and it further appears that none of the local water supply wells have been completed in this aquifer. Aquifer maps in CDWR (1961) depict the Gage aquifer being absent in a tongue that trends west-southwest from a point approximately 3,000 feet west of the Omega Chemical facility. The Gage may have been eroded away in that area in connection with deposition of the Gaspur aquifer sediments.

Underlying the Lakewood Formation are continental and marine sand and gravels with interbedded clay, assigned to the San Pedro Formation. The San Pedro Formation reaches a maximum thickness of 850 feet and extends to a depth of about 920 feet in the Whittier area. The San Pedro Formation unconformably underlies the Lakewood Formation. This unit has been folded across structures including the La Habra syncline, the Santa Fe Springs syncline, and along the south flank of the Puente Hills. The lower part of the San Pedro Formation crops out along the edge of the Puente Hills east-southeast of the Omega site. The San Pedro Formation has been subdivided into five named aquifers separated by clay members (CDWR, 1961). A fine-grained layer is also typically present at the top of the sequence, although in localized areas, the uppermost San Pedro Formation aquifer may be merged with the overlying aquifer, and one or more of the five aquifers are also merged in some locations.

The five aquifers defined within the San Pedro Formation include, from top to bottom, the Hollydale, the Jefferson, the Lynwood, the Silverado, and the Sunnyside. The uppermost aquifer is less extensive than the others and appears to be absent immediately beneath the Omega Chemical facility, based on the aquifer maps in CDWR (1961, Plates 14, 15, 16, 17, 18A, 19A, 20A, 21A, 22, and 23). Aquifer thickness within the San Pedro Formation generally increases with depth. Occurrence of these aquifers in the Whittier area is described in "Chapter VI, Description of Groundwater Basins, Central Basin, Geologic Features of the Whittier Area," in CDWR (1961).

Aquifer maps in CDWR (1961) indicate the Hollydale aquifer is present within the southwestern approximately two-thirds of the study area. The Hollydale is reported to be 10 to 25 feet in thickness in the Whittier area, and comprised of sand and gravel with interbedded clay. The Hollydale aquifer is believed to be merged with the overlying Gage aquifer in the southeastern part of the study area.

The Jefferson aquifer is depicted in CDWR (1961) as extending as far northeast as Whittier Boulevard (i.e., underlying the Omega site). The Jefferson aquifer is described as sand with some gravel and a little interbedded clay, and is approximately 20 to 40 feet in thickness. The Jefferson and Hollydale aquifers are reported to be merged to the northwest of the study area.

The Lynwood and Silverado aquifers extend northeast beyond the Omega site to the upper portion of the piedmont. The Lynwood aquifer is described as 50 to 100 feet of sand and gravel with some interbedded clay, while the Silverado aquifer is comprised of approximately 100 to 200 feet of sand and gravel. The Lynwood aquifer is merged with the overlying Jefferson aquifer along a narrow strip northwest of the study area.

The Sunnyside aquifer extends to the southwest edge of the Puente Hills northeast of the Omega site. The Sunnyside aquifer ranges from approximately 200 to 300 feet in thickness and is comprised of sand and gravel with interbedded clay. The sediments of both the Silverado and Sunnyside aquifers are exposed along the south flank of the Puente Hills approximately two miles to the east-southeast of the Omega site.

The Pliocene and Miocene marine sediments and sedimentary bedrock below the San Pedro Formation generally contain saline water in the area, but locally contain freshwater. These units are considered non-water bearing where exposed in the Puente Hills and include the Pliocene Pico and Repetto Formations and the Upper Miocene Puente Formation.

The major geologic structures in the area include a homocline that underlies the La Habra piedmont slope, the northwest-trending La Habra syncline underlying the alluvial basin, and the west-northwest- trending Santa Fe Springs anticline, which is situated beneath the slightly uplifted Santa Fe Springs plain. The Whittier fault is also present nearby to the northeast of the site, trending west-northwest across the southern side of the Puente Hills. Folding is generally better developed in the older and deeper lithologic units. The traces of the La Habra syncline and Santa Fe Springs anticline are shown on **Plate 1**, adapted from Plate 3A of CDWR (1961).

The La Habra syncline is located between the Puente Hills on the north and the Santa Fe Springs/Coyote Hills uplift on the south. The La Habra syncline ends toward the east against the East Coyote anticline, and fades out toward the northwest at an apparent subsurface saddle. The La Habra syncline affects the San Pedro Formation and, to a lesser extent, the Lakewood Formation sediments, and has surface expression as the axis of the basin.

The Santa Fe Springs anticline consists of a broad dome, and has folded both the San Pedro and Lakewood formation sediments. Shallow aquifers thin across the crest of the anticline, but groundwater movement is not otherwise believed to be affected.

2.4 OMEGA SITE GEOLOGY AND HYDROGEOLOGY

The geology of the Omega site and immediate vicinity has been explored with a series of soil borings and CPT explorations previous to this investigation. The location of historical borings near the site is shown in **Figure 4**. Other borings and soil gas probes installed at the Omega facility are not depicted; however, the previous explorations at the Omega site are discussed and depicted in England-Hargis (1996a, b, c) and in CDM (2001b). The Omega site is underlain by low permeability silty and clayey soils to a depth of at least 120 feet. No significant water producing sand units have been found directly beneath the Omega site in any of the explorations. A sand unit believed to correlate with the Gage aquifer has been encountered a short distance southwest of the Omega site (England- Hargis, 1996b,c).

Groundwater beneath the Omega Chemical site occurs at approximately 70 feet bgs. Locally, groundwater flow appears to be generally toward the southwest. CDM (1999) reported a local direction of groundwater flow toward the southwest with a hydraulic gradient of 0.009 ft/ft. Total dissolved solids (TDS) concentrations of greater than 3,000 mg/L were reported in shallowest groundwater samples by CDM (1999).

The hydraulic conductivity has been estimated from a slug test at well OW-1 and step-drawdown tests conducted in monitoring well OW-2. The respective hydraulic conductivity based on testing in these two locations was found to range from 0.6 to 1.6 feet per day. Well OW-1 is screened in saturated silt and clay of the Bellflower aquiclude, while OW-2 is screened primarily within sands of the presumed Gage aquifer.

2.5 WATER SUPPLY WELLS

Based on a review of England-Hargis (1996c), there are 6 water supply wells within 1.5 miles of the site **(Figure 4)**. The nearest well (02S/11W-30R3, also know as Santa Fe Springs Well No. 1) is located 1.3 miles to the west-southwest of the former Omega Chemical facility. The well is screened at 200 to 288 feet bgs and again from 300 to 900 feet bgs. Trichloroethene (TCE) (0.7 ug/L) and chloroform (1.3 ug/l) were detected in water samples from the well in October 1994. The Los Nietos water supply well (02S/11W-30Q5) is located about 1.5 miles west-southwest of the site. This well is screened from 152 to 370 feet bgs. Tetrachloroethene (PCE) and TCE were detected at unspecified concentrations in 02S/11W-30Q5 in 1986-90. The remaining wells are no longer operating, are used for irrigation, or no data was available.

The Santa Fe Springs No. 1 (SFS No.1) production well is the prime receptor in the OU-02 study area with respect to potential routes of human exposure to the affected groundwater. This well is located along the northwestern central side of the study area, at the Santa Fe Springs Fire Station on Dice Road near Burke Street. This well is perforated at depths 200 to 288 feet bgs and from 300 feet to the total depth of 900 feet bgs. Aquifers that are tapped by SFS No. 1 are believed to include the Silverado and Sunnyside aquifers, which occur within the lower part of the Lower Pleistocene San Pedro Formation.

In several years of monitoring SFS No. 1, low concentrations of chlorinated hydrocarbons including TCE, chloroform, and PCE have been detected at times. TCE and chloroform have been reported most frequently, while PCE has been reported on fewer occasions, and at lower concentrations. In the most recent sampling of SFS No. 1 in February 2003, the only VOC detected was TCE, at a concentration of 0.64 ug/L. Chloroform and PCE were not reported above the detection limit of 0.5 ug/L. Hexavalent chromium was reported at a concentration of 2.6 ug/L. The depth interval(s) from which most of the contamination may be entering the well are not established.

The production rate of SFS No. 1 ranges to approximately 1,250 gallons per minute (England-Hargis, 1996c). It is not established what affect, if any, there may be on groundwater flow directions and contaminant migration within the shallowest aquifers. Based on depth to water measurements in monitoring wells east of SFS No. 1, the gradient appears to be more southerly in the upper aquifer in the vicinity, which is not consistent with the presence of a cone of depression centered around the well.

2.6 PREVIOUS SITE INVESTIGATIONS

A series of soil gas, soil and groundwater investigations have been performed at the Omega Chemical site by a variety of consultants beginning in 1985. A removal action was completed at the Omega site in September 1995, during which more than 3,000 drums, as well as other containers and debris, were removed from the site. In addition, both structural and process equipment surfaces were decontaminated.

Subsequent to the removal action, EPA entered into a Consent Decree on February 28, 2001with a number of potentially responsible parties collectively referred to as OPOG. The Statement of Work of the Consent Decree required OPOG to design and implement a groundwater containment and mass removal treatment system in the Phase 1a Area, which corresponds to OU-01. OPOG was further directed to conduct a vadose zone Remedial Investigation/Feasibility Study (RI/FS) for contaminant releases on, at or emanating from the Omega Chemical Property, and to install three "sentinel" groundwater monitoring wells and sample quarterly for one year at locations downgradient of the Phase 1a Area and upgradient of water supply well 2S/11W-30R3 (Santa Fe Springs Well No. 1).

OPOG began additional investigation activities in November 1995. A summary of the investigation results is provided below. Data from the investigations are presented in reports and memorandums by England & Hargis (1996a, b, c), a report by C_2REM (1997), and reports by Camp Dresser & McKee (1999, 2001a and 2001b).

- Shallow soil and soil-gas sampling at the Omega facility indicated that halogenated VOCs were present in site soils. The primary contaminants detected include tetrachloroethene (PCE), trichlorofluoromethane (Freon 11), and trichlorotrifluoroethane (Freon 113). PCE concentrations in soil ranged to 510 mg/kg. Soil samples from deeper intervals collected during installation of a groundwater monitoring well (OW-1) on the Omega site also contained PCE, Freon 11, and Freon 113, as well as trichloroethene (TCE), 1,1-

dichloroethene (1,1-DCE), 1,2-dichloroethane (1,2-DCA), and 1,1,1-trichloroethane (1,1,1-TCA).

- Three phases of direct push groundwater sampling were conducted at the Omega site, in the immediate vicinity, and downgradient. The farthest sampling location was approximately one mile west-southwest of Omega. Concentrations of PCE and Freon 113 as high as 86,000 ug/L and 7,500 ug/L, respectively, were detected in groundwater beneath and a short distance downgradient of the Omega site. Lower concentrations of PCE in the 9ug/L to 580 ug/L range were detected nearby upgradient as well as farther downgradient from Omega.
- Ten groundwater monitoring wells were installed in five phases from 1995 to 2001. These wells are sampled by OPOG semiannually and are also sampled by WESTON as part of quarterly monitoring of the EPA OU-02 wells. Locations of the OPOG wells are included on **Figure 5** and **Plate 1**, and the total drilled depths and screened intervals for each are listed in **Table 1.** The highest concentrations of contaminants have been detected at OW-1, with PCE ranging to 86,000 ug/L and Freon 113 to 1,400 ug/L. PCE in OW-8 ranges to 14,000 ug/L. PCE concentrations at OW-2 and OW-3 have ranged from 620 ug/L to 2,100 ug/L. PCE concentrations at OW-4A have shown variability since monitoring began there in 2001. In May and August of 2001, PCE concentrations of 1,000 ug/L and 1,300 ug/L, respectively, were reported (CDM, 2002, Table 1-1). In November 2001, the detected PCE concentration dropped to 9.8 ug/L, and in February 2002, the reported PCE concentration was 130 ug/L (CDM, 2002, Table 1-1). In May 2002, the reported PCE concentration was 20 ug/L (WESTON, 2003). The overall trend at OW4A since monitoring began appears to be an unsteady decline in concentrations. The variability could reflect inhomogeneity in the contaminant concentrations within the migrating groundwater mass. In the first two quarters of 2002, PCE results for deeper well OW-1B ranged from about 30 to 190 ug/L and for OW-4B ranged from 2 to 28 ug/L (WESTON, 2002b, 2003). Concentrations of PCE reported for well OW-6 have ranged from approximately 25 to 150 ug/L, and at OW-5 are approximately 150 ug/L.

SECTION 3

FIELD INVESTIGATION METHODOLOGY

The field investigation documented in this memorandum consisted of the following general tasks:

- CPT explorations,
- Hollow stem auger boring explorations,
- Drilling and installation of EPA OU-02 monitoring wells,
- Groundwater sampling,
- Laboratory analysis of groundwater samples,
- Surveying.

The Phase 1 field investigations were conducted between August and November 2001. The field investigation was conducted in three sampling efforts and is summarized below.

- Completion of 30 CPT explorations (PP001, -002, -006, -010, -011, -013, -015, -017, -020, -022, -023, -029, -033, -034, -038, -039, -040, -041, -042, -046, -052, -057, -059, -063, -065, -066, -069, -070, -074, and -081).
- Collection of 81 push probe groundwater samples (PP001 through PP085). Originally proposed locations PP005, PP027, PP028, PP029, and PP031 were omitted or relocated, primarily due to their locations being outside the contaminant plume as defined during the investigation. At that time, PP005 was omitted due to data being available from other nearby sample locations, although sampling was subsequently conducted at that location during the Phase 2 investigation. PP027 was relocated and assigned a new identification (PP075). PP028 was omitted due to utility conflicts.
- GPS surveying of push probe locations.

The 18 EPA OU-02 monitoring wells were drilled and installed in December 2001 and have been sampled on a quarterly basis since then. The Phase 2 sampling was conducted from 5 August to 14 August 2002. The Phase 2 field investigation is summarized below.

- Completion of 6 CPT explorations (PP091, -092, -094, -095, -112, and -115).
- Completion of 19 hollow stem auger (HSA) borings (B086, -087, -088, -089, -090, -096, -097, -098, -099, -100, -101, -102, -103, -104, -105, -107, -108, -109, and –110).
- Collection of 34 groundwater samples (B086 through B090, PP091 through PP095, B096 through B105, PP106, B107 through B110, and PP111 through PP119).
- Land surveying of EPA well locations and elevations, and GPS surveying of Phase 2 exploration locations.

This section presented a summary of the field efforts by task, including the number and location of samples and sampling and analytical procedures. All work was conducted in general accordance with the FSP (WESTON, 2001a) and QAPP (WESTON, 2001b) submitted to and approved by USACE and EPA.

Originally, approximately 100 groundwater sampling locations and 25 CPT locations had been planned, with 40 provisional locations initially selected to provide coverage in accessible areas downgradient (west-southwest) of the Omega site at a spacing of approximately 500 to 1,000 feet between sample points. As the contamination plume was followed during the Phase 1 exploration, provisional locations determined to be beyond the limits of the contiguous plume (i.e., at or below concentrations of 5 ug/L) were omitted. The area to be explored was originally intended to extend only approximately 7,000 feet from the Omega site, to the vicinity of public supply well 2S/11W-30R3 (Santa Fe Springs Well No. 1). However, persistent detections across the southern part of the planned area of exploration prompted establishment of additional sampling points to the south. Other sample locations were added to better define plume boundaries and clarify observed concentration trends and variances. After completion of the Phase I investigation, the contaminant plume still could not be completely defined on the south to concentrations below approximately 50 ug/L. The presence of railroad right-of-way and large private tracts in the area where the southern plume boundary was anticipated to occur precluded access for sampling along this margin of the plume as then estimated.

The 18 EPA OU-02 monitoring wells were established generally in the locations and depths as planned in the Phase 1 investigation report (WESTON, 2002a). The monitoring wells were sited so as to be able to monitor groundwater concentrations over time in locations near the margins of the plume and along the approximate axis of the plume, as it was understood based on the Phase 1 results. During the Phase 2 investigation, additional data were collected to address data gaps in three areas: provide greater definition of contaminant distribution and lithologic conditions near the Omega site; constrain the upgradient limit of detectable contamination in areas north of Omega; and, locate the approximate downgradient extent of the contaminant plume.

3.1 CPT EXPLORATIONS

Thirty-six (36) CPT geophysical explorations for lithologic logging were completed at the locations noted in **Table 1** ("Lithology = CPT-X") and are included on **Figure 5**. The exploration and sampling locations are labeled using a prefix that incorporates the type of exploration ("PP" for push probe) followed by a sequential number (i.e. PP001). The CPT geophysical exploration identification matches the groundwater sample identification. The CPT borings were completed at depths ranging from 35 to 107 feet bgs. A summary of the CPT sample depths is provided in **Table 1**. The CPT records are presented in **Appendix A**.

The CPT explorations were completed using equipment owned and operated by Gregg In-Situ, Inc. of Signal Hill, California. The CPT equipment uses an electronic cone penetrometer apparatus attached at the tip of a string of steel rods. The rods are advanced using a truck-mounted CPT rig. The weight of the truck is brought to bear on the rod and cone tip, driving the cone tip through the subsurface soils. As the rod is advanced, the cone sensor transmits physical parameters to be recorded and interpreted by an on-board computer including tip resistance or cone bearing, sleeve friction, and dynamic pore pressure, at 5 cm intervals. The on-board computer plots the key parameters and generates an interpreted stratigraphic log for the borings. Lithologic interpretations are based on relationships between these three parameters, especially the sleeve friction to cone bearing ratio, which provides the friction ratio. Soil classification

using CPT data was based on empirical correlations documented in Robertson and Campanella (1989). Logs providing the results of the automated CPT logging and the corresponding lithologic interpretations were provided by Gregg In-Situ, Inc.

In most locations where CPT geophysical logging was conducted, a pore pressure dissipation (PPD) test was conducted to measure the groundwater pressure head and estimate the groundwater depth relative to the penetration depth in lieu of sounding. The results of the pore pressure dissipation tests are included with the CPT logs in **Appendix A**.

All direct push borings were abandoned by backfilling with grout made with water, Portland cement and approximately 5 percent bentonite gel, using a support truck dedicated for that purpose. A hollow rod or PVC pipe was placed back into the hole for use as a tremie pipe. The grout was pumped through the tremie pipe, filling the boring from the bottom up. The tremie pipe was withdrawn in stages as the boring filled, to avoid either free-fall of grout into water, or grouting of the tremie pipe in the hole. Once the grout reached the surface, it was allowed to settle for approximately one hour or more. The hole was topped off to within approximately six inches of the surface, and rapid-set concrete or asphalt cold patch was used for surface repair, to match the existing surface.

3.2 HOLLOW STEM AUGER EXPLORATIONS

Nineteen (19) explorations were completed using hollow stem auger drilling techniques for lithologic logging and groundwater sampling at the locations shown in **Figure 5**. The hollow stem auger boring locations are labeled using a prefix that incorporates the type of exploration ("B" for boring) followed by a sequential number (i.e. B086). The hollow stem auger borings were completed to depths ranging from 55 to 102 feet bgs. A summary of the hollow stem auger boring groundwater sampling depths is provided in **Table 1**. Copies of the exploration boring logs are presented in **Appendix B**.

Drilling and soil sampling were generally conducted as described for hollow stem auger drilling in Section 3.3. Soil samples were typically collected at five-foot depth intervals using a split spoon sampler until near groundwater, when continuous sampling was begun. Groundwater sampling from hollow stem auger borings is described in Section 3.4. Exploratory borings were abandoned upon completion using either Portland cement and bentonite grout pumped downhole or hydrated bentonite chips. Borings were patched at the surface with rapid-set concrete or asphalt cold patch to match surrounding surfaces.

3.3 MONITORING WELL INSTALLATION

Eighteen (18) monitoring wells were drilled and installed at the locations shown in **Figure 5**. Locations within the City of Whittier were established in street rights-of-way. Wells sited within the City of Santa Fe Springs were located within "parkway" areas of City property adjoining the street. The well locations are labeled using a prefix that incorporates the type of exploration ("MW" for monitoring well). The prefix is followed by a sequential number (i.e. MW09) and a

suffix "A" through "D" denoting the relative depth to the screened interval ("A" is used for the shallowest wells in the network). The EPA OU-02 monitoring wells were completed at total depths ranging from approximately 35 to 120 feet bgs. A summary of the monitoring well screen depths is provided in **Table 1**. Copies of the lithologic logs and monitoring well construction details are presented in **Appendix C**.

The drilling and well constructions were completed using equipment owned and operated by Gregg Drilling & Testing, Inc. of Signal Hill, California. Shallower wells were drilled using hollow stem auger techniques, whereas the deeper wells were installed using mud rotary drilling techniques.

Most of the wells were sampled during drilling using continuous coring methods to obtain as much detailed lithology as possible. Some borings were sampled using a split-spoon sampler either continuously or at five-foot depth intervals. Soils were logged by the field geologist working under supervision of a State of California registered geologist. Lithology was described in accordance with the Unified Soil Classification System (USCS). Soil from approximate five-foot intervals was screened for emission of organic vapors using a photoionizing detector (PID). A small amount of soil was placed in a reclosable plastic bag and vapors from the soil were allowed to collect in the headspace within the bag. The probe of the PID was then quickly inserted into the bag, and the reading was measured and recorded on the field log along with the lithologic description and the relative sample recovery. The relative soil sample recoveries and PID readings are included on the logs of the monitoring wells in **Appendix C.**

Copies of the monitoring well logs and well construction details are included in **Appendix C**. On the logs, contacts between lithologies are depicted as a dotted line at the depth where observed within a sample core. Contacts not seen (i.e., lithologic change occurred between samples or recovered portions) are depicted as a dotted line approximately between the depths where soils were recovered. Further, the USCS convention of "SW," referring to a well-graded sand, has been applied to denote fine to coarse sands encountered that may not meet the strict definition of the USCS "SW."

For hollow stem auger drilling, the hole was reamed with 10-inch outside diameter augers after completion of the pilot boring. A wood plug was placed into the lead auger to keep the inside of the augers free of loose soil. When the boring had been reamed to the target screen depth, the wood plug was knocked free using the downhole hammer and the well screen and casing were placed into the augers. Sand and sealing materials were slowly placed into the annular space as augers were removed. Before placement of the seal above the sand pack, a surge-block was used down casing to consolidate and settle the sand pack.

Where mud rotary drilling was conducted, the mud was thinned if necessary, the pipe and bit were withdrawn from the boring after reaching the target depth, and the well screen and casing were placed directly into the hole. Sand pack and sealing materials were allowed to fall through the mud and settle into place. The grout was pumped through a hose placed downhole.

Four-inch diameter well screen and casing materials were placed at most locations. However, two-inch diameter well screen and casing materials were used for nested wells completed in the

same borehole at MW04B/C and MW08B/C. Where the pilot hole was drilled deeper than the well screen was placed, the boring was backfilled with bentonite chips or pellets up to the desired level of the well bottom prior to installation. This procedure was followed at wells MW01B, MW03A, MW04C, MW08D, and MW09A. After the final grout was placed and allowed to settle, the monitoring wells were completed at the surface with a traffic-rated well box set in rapid-set concrete. Well construction materials and depths of emplacement are shown on the monitoring well logs in **Appendix C**. Screened intervals for the monitoring wells are also provided in the Summary of Exploration Data in **Table 1**.

A minimum of three days following installation, the monitoring wells were developed to remove fines or residual drilling mud by a combination of bailing, surging by swabbing across the saturated screen interval, additional bailing, and pumping. A minimum of ten casing volumes of water were removed from each well during development. Selected water quality parameters including temperature, pH, and specific conductance were monitored for stabilization tendencies while pumping the wells. Records of well development are included in **Appendix D**. After completing development, dedicated bladder pumps were installed in the wells. The pump intakes were typically placed approximately five feet above the bottom of the well. The dedicated pumps are utilized for low-flow groundwater sampling during the periodic monitoring events.

3.4 GROUNDWATER SAMPLING PROCEDURES

Groundwater samples were collected at one hundred fifteen (115) locations shown in **Figure 5**. No water samples were collected at 5 initially proposed locations during the Phase 1 investigations due either to refusal before the water table was encountered or the formation would not produce a water sample. Groundwater samples were collected using a temporary PVC well screen. Groundwater samples were collected at depths ranging from 33 to 101 feet bgs. The groundwater sample depths are summarized in **Table 1**. Field sampling records are included in **Appendix E**.

The FSP specified that groundwater sampling would be accomplished using either a HydroPunch type device, or with temporary well screens and casing. The latter method was employed in a few locations where groundwater yield was very poor in order to obtain a sample volume and in most of the hollow stem auger borings. Most of the CPT borings utilized a section of one-inch diameter temporary PVC well screen attached to a disposable cone tip and fitted to the drive head. The screen was typically five feet in length and was cut with 0.010-inch slots. Where fine-grained lithologies predominated and groundwater yield was slow, a second or third five-foot section of screen was added, to increase the yield. The sampler was advanced to the desired sampling depth or to refusal. The cone tip was disengaged and the rod was withdrawn to within approximately one foot of the top of screen. This exposed the boring sidewall adjacent to the screen, while higher intervals were sealed off by the hollow rod. For sampling using the hollow stem auger rig, a one-inch diameter temporary well screen and casing was placed into the augers, which were lifted four feet or more to expose the boring sidewall. The sample depth was recorded at the approximate midpoint of the exposed screen interval for both types of borings.

A decontaminated, stainless steel bailer or new, disposable acrylic bailer was carefully lowered to near midpoint of the screened interval so as to minimize disturbance of the sample and possible loss of volatiles. Once filled, the bailer was smoothly and rapidly retrieved to the surface. The sample was decanted from the bailer into the sample containers.

A photoionizing detector (PID) was used to screen the top of the hollow CPT rod or augers for organic vapors after collecting the sample at most locations. The readings are summarized in **Table 1**. Readings suspected to be inaccurate such as very highly elevated values likely attributable to excessive moisture are not listed. Before abandoning the sample boring, the depth to water was sounded using an electronic water level indicator. Where groundwater was observable during drilling of the hollow stem auger borings, depth to water where encountered was estimated as well. The recorded depth to water measurements from the soundings or PPD estimates are summarized in **Table 1**.

The water samples were labeled, placed in resealable plastic bags, and placed on ice in a chilled cooler. For the on-site field laboratory samples were logged on a chain-of-custody form at the time the samples were hand delivered. For samples that went to off-site analytical laboratories, the samples were carefully packed in ice and shipped, accompanied by the chain-of-custody documentation.

3.5 FIELD AND LABORATORY ANALYSIS

A total of 140 groundwater samples were submitted for laboratory analysis, including 115 groundwater field samples, 12 duplicate groundwater samples, 6 VOC trip blanks and 7 equipment rinsate blanks. Nomenclature for identification of samples followed the scheme described in the FSP. Sample names included three components separated by a dash (-) that correspond to media code/sampling period, station identification, and sample depth or type, as described below:

- The media code/period included "GW" for groundwater and three digits for the quarter and year sampled (example: GW302, signifying groundwater sampled during the third quarter of 2002.
- The station identifier included "PP" for push probe or "B" for boring, and a three digit unique number for each location (example: PP083)
- The final four digit sequence includes a first digit indicating the sample type (0 for the primary field sample, 1 for field duplicate, 2 for VOC trip blank, and 4 for equipment rinsate blank), and three digits indicating depth for field samples and duplicates or a sequential number for the other field quality assurance/quality control (QA/QC) samples (examples: 0080 signifies primary field sample from 80 feet bgs; 1080 signifies the associated duplicate sample from 80 feet bgs; 4002 signifies the second equipment rinsate blank prepared for the sampling event).

Duplicate samples were collected sequentially following the respective primary field samples, at a frequency of 10 percent of field samples. The VOC trip blanks were prepared in the field by filling sample bottles with deionized water, which were stored with the field samples and

submitted with each cooler of samples shipped to off-site laboratories. Rinsate blanks were prepared by pouring deionized water in and through decontaminated or new sampling equipment and collecting the rinsate in the sample containers. Rinsate blanks were collected at a frequency of 5 percent of field samples.

Analysis was performed by a combination of off-site laboratories and the EPA Region 9 mobile Field Analytical Support Project (FASP) laboratory.

The water samples were analyzed using a combination of an EPA-ESAT Field Analytical Support Project (FASP) laboratory and off-site EPA Region 9-affiliated contract laboratories. The water samples collected during the Phase 1 investigation not analyzed by the mobile FASP laboratory were analyzed by the EPA Region 9 laboratory in Richmond, California or EMAX Laboratory in Torrance, California. Samples analyzed in the on-site lab were collected in vials that were either unpreserved or preserved with hydrochloric acid. Samples analyzed at off-site laboratories were all preserved with hydrochloric acid. At least 3 sample containers were filled. The sample vials were filled to a protruding meniscus and the lids were snugly attached. The vials were inverted and lightly tapped to check for bubbles; if none were observed larger than 2 mm in diameter, the bottle was deemed acceptable for submission to the laboratory. The water samples were analyzed for VOCs by EPA Method 8260B. Compounds reported in the analyses include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE), 1,1-dichloroethene (1,1-DCE), trichlorofluoromethane (Freon 11) and trichlorotrifluoroethane (Freon 113) A summary of the groundwater analytical data for the primary compounds of concern is presented in **Table 2**. A summary of all the analytical data is included as **Appendix F**. A statistical summary of the data is included as **Table 3**. The total number of samples indicated in **Table 3** (127) reflects the 115 field samples plus the 12 duplicate samples.

3.6 SURVEYING

The push probe locations were recorded by WESTON using global positioning system (GPS) techniques, employing Pathfinder Pro XR and Pro XRS GPS instruments. The GPS survey data is provided in **Table 4**. Horizontal locations were recorded in California State Plane coordinates with a horizontal accuracy of plus or minus one to two meters and ground surface elevation accuracy of plus or minus three to six meters. Vertical elevations from the GPS survey were not considered reliable because of the relatively poor accuracy of the elevation values. For construction of cross section profiles and the summary in **Table 1**, normalized elevations interpolated from USGS topographic contours were assigned to the sample points, due to the variability in the elevation values obtained with the GPS.

The monitoring wells were surveyed for location and elevation by a licensed land surveyor (Cabrinha, Hearn and Associates [Cabrinha]). The datum for the horizontal coordinates is the California State Plane Zone 5. Vertical coordinates (elevation) correspond to the NAVD 1988 (2000 adjusted) datum. Both horizontal and vertical coordinates were recorded to 0.01 foot. The OPOG wells were surveyed by another surveyor, referencing a different elevation benchmark and datum (NAVD 1988, 1990 adjusted). In order to resolve differences in elevation between the EPA wells and the OPOG wells for plotting of groundwater gradient,

Cabrinha was contracted to survey both benchmarks and wells MW01A, MW01B, MW02A, OW4A, OW4B, and OW5, using the NAVD 1988 (2000 adjusted) datum. Elevations differences were found to range from 2.18 to 2.22 feet; therefore, the elevations for the OPOG wells have been adjusted upward 2.2 feet in **Table 1**, for calculation of groundwater elevations on the gradient map (**Figure 6**), and for preparation of the cross sections (**Plates 2 and 3**).

SECTION 4

RESULTS OF FIELD INVESTIGATIONS

This section summarizes the results of the two phases of field investigations completed between August 2001 and August 2002.

4.1 SUBSURFACE EXPLORATIONS

Subsurface geological conditions were explored by advancing 36 CPT borings and 19 hollow stem auger borings, and drilling 18 monitoring wells at the locations shown in **Figure 5** and on **Plate 1**. The CPTs were completed to depths ranging from 35 to 107 feet bgs (below ground surface). The hollow stem auger borings ranged from 55 to 102 feet in depth. Drilling for the monitoring wells extended to 45 to 150 feet bgs. In addition to the subsurface explorations completed for this study, data from historical explorations including 17 CPT borings, 10 OPOG monitoring wells and 3 water supply wells were available for interpretation of subsurface conditions. The lithology and stratigraphy in the area as depicted and described in Bulletin 104 (CDWR, 1961) were used as a framework for assigning formational and aquifer names to the lithologic units observed in the explorations.

CPT data gathered in the field consisted of cone tip resistance, resistance encountered on the friction sleeve of the cone, and measured pore pressure at the tip of the cone. Empirical relationships between CPT parameters are documented in Robertson and Campanella (1989). The CPT records and lithological interpretations based on that data are included in **Appendix A**. Logs from hollow stem auger borings and monitoring wells are presented in **Appendix B and C**.

4.1.1 Hydrogeologic Conditions

Seven general hydrogeologic units were encountered during the investigation, as correlated with regional stratigraphy outlined in CDWR (1961). The correlations are tentative and are primarily dependent on stratigraphic position and elevation of occurrence. The hydrogeologic units were distinguished based on consistent lithology, stratigraphic position, occurrence, and hydrogeologic properties. The naming conventions are followed on cross-sections A-A' through H-H' (**Plates 2 and 3**). Locations of the cross-sections are shown on **Plate 1**. Explorations located more than approximately 200 feet from the line of the cross-sections are identified on the sections as "Projected" (e.g., production well 2S/11W-30Q5).

Recent Alluvium—Undifferentiated (Qal):

The uppermost geologic unit observed consists primarily of silty sand to sand and was identified within the broad basin between the La Habra piedmont slope and the northeastern edge of the Santa Fe Springs plain (see **Plate 1**). This unit is exposed or present near the ground surface, typically forming a thin layer overlying the upper part of the Bellflower aquiclude in the central to northwestern part of the study area. This lithology also occurs as lenses within the Bellflower aquiclude or is transitional to the aquiclude in the southwestern to western portion of the study area. It can be seen on

cross sections E-E' through H-H' at elevations between approximately 130 and 155 feet MSL, with a thickness of approximately 0 to 15 feet. This unit appears to correlate with the semiperched aquifer as described in CDWR (1961), although it does not contain water where encountered in the study area.

Recent Alluvium—Gaspur Aquifer (Qal):

The Gaspur aquifer is composed of fine to medium or coarse sand with gravelly and silty intervals and few silt interbeds. With the exception of fine-grained beds, individual horizons are generally not laterally distinct and continuous, and cannot be correlated between explorations. Although aquifer maps in CDWR (1961) depict the Gaspur aquifer as being present within the central approximately one-third of the study area, covering most of the flat basin between the piedmont and Santa Fe Springs plain uplifts, the results of the Phase 2 explorations indicate that the Gaspur aquifer occurs in the far western part of the study area. The Gaspur aquifer is overlain by Recent portions of the Bellflower aquiclude. The Gaspur aquifer overlies the Pleistocene Lakewood and San Pedro formations, and appears to have steep contacts at its margins where eroded into the older units (cross sections G-G' and H-H'). The Gaspur aquifer occurs at elevations between approximately 50 and 120 feet MSL, with a thickness ranging to at least 55 feet. None of the exploratory borings conducted for this study penetrated through the Gaspur aquifer where it was present. Groundwater occurrence within the Gaspur aquifer appears to be as water table conditions (the upper portion of the unit is unsaturated and groundwater is not confined beneath a fine-grained layer). Transmissibility within this unit is expected to be relatively high.

Recent Alluvium and Upper Pleistocene Lakewood Formation—Bellflower Aquiclude (Qal/Qlw):

The Bellflower aquiclude consists primarily of silt and clay with localized, minor interbeds of sand, scattered gravel, and cemented intervals. This unit was encountered in all of the subsurface explorations and is exposed at the surface across most of the study area. The Bellflower aquiclude occurs between elevations ranging from 110 to more than 220 feet MSL in the study area, with an observed thickness of 10 to at least 70 feet. The Bellflower aquiclude is thickest in the vicinity of the Omega Chemical site and is thinner to the southwest. At the Omega site, the Bellflower aquiclude sediments appear lithologically similar to fine-grained sediments within the upper part of the San Pedro Formation. The contact between the Lakewood and San Pedro formations is distinguished here primarily by stratigraphic position relative to the projected position of the Gage aquifer. Groundwater occurs within the Bellflower aquiclude in the area of the Omega site and to the north, but transmissibility and yield are poor.

Upper Pleistocene Lakewood Formation—Gage Aquifer (Qlw):

The Gage aquifer consists of sand, silty sand, cemented sand and gravelly sand, with some silt interbeds. The upper portion is finer-grained, typically grading downward from silty sand to poorly graded fine or fine to medium sand. Coarser sand and gravel are more abundant in the lower part of the Gage aquifer. Near the Omega site, mixed lithologies including clayey sand, or silty to clayey gravel are present at the base of the unit (see cross section A-A', Plate 2). The Gage aquifer lies between the Bellflower

aquiclude and the top of the San Pedro Formation and constitutes the base of the Lakewood Formation where present. Where Gaspur aquifer sediments occur in the western part of the study area, the Gage aquifer appears to have been eroded away and is absent. Near the uplift (vicinity of the Santa Fe Springs plain, **Figure 2**; and Santa Fe Springs anticline, **Plate 1**) in the southwestern part of the study area, the coarser sediments appear to grade laterally into fine sediments with cementation and local cemented sand interbeds (see cross section H-H'). The Gage aquifer is present within most of the study area, occurring at elevations between approximately 90 and 150 feet MSL. The thickness of this unit is generally about 10 to 30 feet within the study area, but may be greater than 50 feet in the southwest-central part of the study area. The Gage aquifer is believed to be merged, or nearly so, with the underlying Hollydale aquifer in the southeastern part of the study area, and possible extension of these merged aquifers into the central part of the study area could account for the apparent increased thickness of the Gage aquifer there (cross sections E-E' and H-H'). The Hollydale aquifer sediments are similar in texture to the Gage aquifer sediments and difficult to distinguish. The Gage aquifer deposit decreases in both width and thickness toward its northeast end, forming a narrow tongue that pinches out within approximately 150 feet downgradient from the Omega site (cross sections A-A' and H-H'). The approximate extent of the Gage unit near the Omega site is depicted on Plate 1. The Gage aquifer is absent beneath the Omega site itself. The base of this unit was not defined in the majority of the exploratory CPT and hollow stem auger borings where it was encountered. However, OPOG monitoring wells OW2, OW3, OW4B and OW8 penetrate the bottom of the Gage aquifer, as do EPA monitoring wells MW04B and MW08B. Groundwater occurs under both confined and unconfined conditions within this unit, and transmissibility is relatively high except where the lithology is finer grained.

Lower Pleistocene San Pedro Formation—Undifferentiated (Qsp):

The uppermost fine-grained phase of the San Pedro Formation consists predominantly of silt and clay with localized gravelly clay to clayey gravel. This unit appears to directly underlie the Bellflower aquiclude at the Omega site, and elsewhere underlies the Gage aquifer except where the Gage may be merged with the Hollydale aquifer and the fine-grained phase is absent. Lithologically, the upper fine-grained member of the San Pedro Formation is indistinguishable from the Bellflower aquiclude, but its relative stratigraphic position was estimated by projection of the bottom of the Gage aquifer, which marks the base of the Lakewood Formation (CDWR, 1961). The lithologic and stratigraphic characteristics of the aquicludes within the San Pedro Formation are not discussed in CDWR (1961). This unit occurs at elevations between approximately 40 to 130 feet (MSL), and with an estimated thickness ranging from less than 10 feet to more than 60 feet. Other, similar aquicludes occur between aquifers deeper within the San Pedro Formation, as well. Although this unit is saturated in most places where encountered, transmissibility is anticipated to be poor.

Lower Pleistocene San Pedro Formation—Hollydale Aquifer (Qsp):

The Hollydale aquifer is the shallowest of five aquifers within the San Pedro Formation. This unit is believed to occur in the southwestern approximately two-thirds of the study area and consists predominantly of sand, gravelly sand, and silty sand with locally

interbedded silt. In areas along the southeastern part of the study area, this unit appears to be merged with the overlying Gage aquifer, or separated by thin fine-grained intervals (cross section E-E'). Elsewhere the overlying aquiclude is thicker, but appears to be locally discontinuous (cross sections G-G' and H-H'). In some areas where the Gage aquifer seems thickest, the lower portion of the sandy unit may be the Hollydale aquifer. This unit appears to occur at an elevation between approximately 30 to 90 feet MSL with a maximum thickness estimated at about 20 feet. Lithologies observed in MW08B/C, MW04B, and two or more CPT borings are believed to correspond to the Hollydale aquifer. Transmissibility of the Hollydale aquifer is expected to be relatively high.

Lower Pleistocene San Pedro Formation—Jefferson Aquifer:

The Jefferson aquifer is the next aquifer below the Hollydale aquifer. Lithologies appearing to correspond to the Jefferson aquifer were observed at MW04C, MW08D, and OW4B. This unit is comprised of primarily of well-sorted sand with localized gravel and a few thin clay to silt interbeds, and appears to be similar to but finer-grained than the overlying Hollydale aquifer. The bottom of the Jefferson aquifer was not observed with certainty in any of the exploratory borings but its depth was estimated based on aquifer maps in CDWR (1961). In the study area, the Jefferson aquifer is believed to occur at elevations between approximately 0 to 65 feet MSL, and the thickness is estimated to range from 10 to 40 feet. The sands observed in the bottom of the pilot boring for MW08D at a depth of approximately 145 to 150 feet bgs (elevation 0 to 5 feet MSL) might correlate with the upper part of the Lynwood aquifer, which is the next aquifer below the Jefferson aquifer. Transmissibility of the Jefferson aquifer is anticipated to be moderate.

The main San Pedro Formation aquifers, including the Lynwood, Silverado, and Sunnyside aquifers, were not observed in the Phase 1 and 2 explorations.

The lateral and vertical relationship between the primary geologic units is presented in the geologic profiles A-A' through H-H' **(Plates 2 and 3)**. The profiles were interpreted from the CPT logs and the logs for hollow stem auger borings and monitoring wells. Information was also obtained from logs of production wells 2S/11W-30R3 (Santa Fe Springs No. 1), 2S/11W-30Q5, and 2S/11W-32J4.

4.1.2 Groundwater Flow Conditions

Depth to water measurements taken during quarterly monitoring events are used to develop groundwater elevation maps. Elevations from both EPA and OPOG monitoring wells are included. The top of casing elevations for the OPOG wells have been increased by 2.2 feet to match the NAVD 1988 (2000 adjusted) Datum used in surveying the EPA wells, as described in Section 3.6. The groundwater elevation map for May 2002 is included herein as **Figure 6** and is the basis for this discussion of gradient. The groundwater elevations are taken from the shallowest aquifer.

Depth to water in the wells near the Omega site ranges from approximately 44 to 75 feet below ground surface (bgs), whereas farther downgradient toward Santa Fe Springs, water occurs as shallow as approximately 21 feet bgs (well MW07A).

Groundwater gradient and flow direction varies with location. In the vicinity of the Omega site, the groundwater flow direction is generally toward the west-southwest, at a relatively steep gradient of 0.008 to 0.009 ft./ft. In the vicinity of Rivera Road and Washington Blvd., the gradient flattens considerably, to 0.0008 to 0.0017 ft./ft. toward the southwest. Farther southwest, the gradient is approximately 0.0026 ft./ft. toward the southwest (along the southeastern part of the well network area) or toward the south (in the western portion of the well network area). Well locations and groundwater elevation contours for the shallow wells in the monitoring network are presented in **Figure 6**. The gradients described were measured using the contours on the scaled map.

4.2 ANALYTICAL RESULTS—NATURE OF CONTAMINATION

This section discusses the nature of groundwater contamination in the study area based on the results of the two phases of groundwater sampling, supplemented with selected results of the groundwater monitoring. Discussion of the extent of contamination is presented in the subsequent section of this report. Individual constituents are discussed which are considered most illustrative of the nature and extent of contamination in groundwater. VOCs detected in groundwater samples primarily include chlorinated hydrocarbons and Freon compounds. Results for the six primary VOCs of interest are presented in **Table 2**. **Table 3** presents a statistical summary of the constituents detected in groundwater

4.2.1 Chlorinated Hydrocarbons

The primary chlorinated hydrocarbons detected in groundwater include the following five compounds:

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- 1,1-dichloroethene (1,1-DCE)
- Cis-1,2-dichloroethene (cis-DCE)
- Chloroform

Six other chlorinated compounds were detected in groundwater, in fewer locations and in lower concentrations:

- 1,2-dichloroethane (1,2-DCA)
- 1,1-dichloroethane (1,1-DCA)
- 1,1,1-trichloroethane (1,1,1-TCA)
- Trans-1,2-dichloroethene (trans-DCE)
- 1,2-dichloropropane
- Vinyl chloride

- Methylene chloride
- Carbon tetrachloride

Occurrence of these compounds in the study area is discussed below. The percentage of samples in which the compounds were detected is included to demonstrate the relative frequency of detection of each compound within the study area. The concentrations in the groundwater samples are reported in micrograms per liter (ug/L).

Vinyl chloride was detected in only one sample, at a concentration of 11 ug/L. 1,2-dichloropropane was detected in two samples, at concentrations of 21 and 24 ug/L. Methylene chloride was detected in two locations, at concentrations of 0.8J and 3,800 ug/L. 1,1-DCA, 1,2-DCA, 1,1,1-TCA, carbon tetrachloride, and trans-DCE were detected in 11 percent or fewer of the samples analyzed and detected at concentrations in the range of 0.26 to 250 ug/L.

PCE was detected in 113 out of 127 (89%) groundwater samples, at concentrations ranging from less than 1 to 53,000 ug/L. The highest concentration from the Phase 1 and 2 explorations was detected in the sample from B109 at a depth of 70 feet bgs. Boring B109 is located just north of the alley intersecting Putnam Street, downgradient of the Omega site. PCE appears to be one of the primary chlorinated compounds that were released to soil and groundwater at the Omega Chemical site (CDM, 2001a,b). Concentrations of PCE as high as 86,000 ug/L have been detected in groundwater samples from OPOG well OW1, which is screened at approximately 62 to 78 feet bgs beneath the Omega Chemical site (CDM, 2001a). Concentrations of PCE detected in soil at the Omega Chemical facility range to 1,300 mg/kg. PCE concentrations in soil samples from deep on-site boring B-4 (near the location of OW1) were reported as 56 mg/kg at 55 feet bgs, and 27 mg/kg at 65 feet bgs. The solubility of PCE in water is given as approximately 1 in 10,000 (Merck, 1983) or 0.02% (NIOSH, 1994), indicating that PCE would occur as dense non-aqueous phase liquid (DNAPL) at concentrations above 100 to 200 mg/L (100,000 to 200,000 ug/L). PCE concentrations detected in groundwater at OW1 range to 86,000 ug/L, which approaches the soluble limit. PCE concentrations in subsurface soil range to 56,000 ug/kg at 55 feet bgs in on-site boring B-4. These concentrations are near the solubility for PCE in water, suggesting a potential that DNAPL could be present at the Omega site.

PCE is commonly used as dry cleaning solvent, chemical feedstock and metals degreaser. PCE can undergo stepwise, reductive dechlorination under anaerobic conditions to produce TCE, cis-DCE and vinyl chloride (Pankow and Cherry, 1996).

TCE was detected in 109 out of 127 (86%) groundwater samples, at concentrations ranging from less than 1 to 7,000 ug/L. The highest TCE concentration was detected at boring B103 at 66 feet bgs, which is located west of the Omega site. Relatively low concentrations of TCE, as compared to PCE, were detected in soil beneath the Omega Chemical site (CDM, 2001b). TCE concentrations in groundwater at OW1 have been reported in the 1,100 to 3,400 ug/L range.

TCE is primarily used as a metal part cleaner. TCE is also a degradation product of PCE (Pankow and Cherry, 1996)

Cis-DCE was detected in 37 out of 127 (28%) groundwater samples, at concentrations ranging from less than 1 to 1,500 ug/L. The highest cis-DCE concentration was reported for the sample at boring B103 at 66 feet bgs. Cis-DCE is a degradation product of PCE and TCE (Pankow and Cherry, 1996).

1,1-DCE was detected in 89 out of 127 (70%) groundwater samples, at concentrations ranging from less than 1 to 3,100 ug/L. The highest concentration of 1,1-DCE in this study was reported for boring B109 at 70 feet bgs. Concentrations of 1,1-DCE have been detected in soil and groundwater beneath the Omega Chemical site (CDM, 2001a,b). The maximum soil concentration of 1,1-DCE detected was 60 mg/kg at on-site boring SB-9 at 6 feet bgs. This sample may have been of soil or sediment backfill in a former sump. The highest 1,1-DCE concentration reported for known in-place soil at the Omega site is 1.3 mg/kg at 75 feet bgs in boring H-4. 1,1-DCE concentrations as high as 3,600 ug/L have been detected in OW-1. 1,1-DCE is used as chemical feedstock (Montgomery 1996).

Chloroform was detected in 54 of 127 (43%) groundwater samples, at concentrations ranging from 0.26 to 3,000 ug/L. The highest concentration was detected in the sample from PP106 at 65 feet, approximately 750 downgradient from the Omega site. Chloroform has been detected in soil and groundwater samples from the Omega Chemical site. The highest historical chloroform concentration detected in groundwater was collected from H-6 at a concentration of 22,000 ug/L.

Chloroform has been shown to decay by reductive dechlorination to form methylene chloride. Chloroform is used in the manufacture of fluorocarbon refrigerants, as an industrial solvent for natural products, pesticide, cleaning agent and in fire extinguishers (Montgomery, 1996; Pankow and Cherry, 1996).

1,1,1-TCA has been detected in soil and groundwater samples at the Omega Chemical site. The highest groundwater concentration (12,000 ug/L) was detected at OW-1. 1,1,1-TCA was detected in eight groundwater samples collected during this study at concentrations of 0.9 to 400 ug/L. 1,1,1-TCA can undergo reductive dehalogenation producing 1,1-DCA, cis-DCE, trans-DCE, chloroethane and vinyl chloride.

Methylene chloride is another compound that has been detected in soil and groundwater samples from the Omega Chemical site. As noted above, methylene chloride was detected in two of the groundwater samples collected for this study, at concentrations of 0.8J and 3,800 ug/L. The highest concentration of methylene chloride was detected at boring B109 at 79 feet bgs.

4.2.2 Freons

Both trichlorofluoromethane (Freon 11) and 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113) were detected in groundwater samples. Freon 11 was detected in 75 out of 127 (59%) groundwater samples, at concentrations ranging from less than 1 to 900 ug/L. Freon 113 was detected in 86 out of 127 (67%) groundwater samples, at concentrations ranging from less than 1 to 2,300 ug/L. Freons, also known as fluorocarbons, were used as aerosol propellant, refrigerants, solvents, and as chemical feedstocks.

4.2.3 Other Constituents

As part of the groundwater monitoring program, samples from the monitoring wells are analyzed for metals (currently on a quarterly basis) as well as some indicators of the potential for occurrence of natural attenuation processes including total organic carbon (TOC), total nitrogen, sulfate, sulfide, and methane/ethane/ethene (currently on an annual basis), in addition to VOCs. Of the analytes besides VOCs, the results for (total) chromium may be most significant with respect to groundwater impacts originating from the Omega site versus other potential contamination sources. In two quarterly sampling rounds (2002), chromium concentrations at on-site well OW1 were less than 3 ug/L. However, at other locations in the monitoring network, chromium concentrations are relatively elevated, and approach or exceed the maximum contaminant level of 50 ug/L for drinking water. These locations include MW01A (60 to 77 ug/L), OW5 (30 to 49 ug/L), MW04A (43 ug/L), MW04B (49 to 56 ug/L), MW06A (74 to 95 ug/L), and MW08A (61 to 77 ug/L).

Based on monitoring results for first quarter 2002, TOC concentrations in the monitoring wells were consistently low, ranging from approximately 2 to 14 mg/L, although 30 mg/L was reported for the deepest well MW08D. Total nitrogen ranged from 1.9 mg/L at MW09A to 50 mg/L at deep well MW04C, with concentrations above 10 mg/L at 21 of the 28 monitoring wells. Sulfate was detected in all wells, at concentrations ranging from 160 mg/L at OW5 to 970 mg/L at MW07A. Sulfide was reported only for MW04C, at a concentration of 2 mg/L. Methane, ethane, and ethene were not detected in any of the monitoring wells. Field measurement of dissolved oxygen during purging of the wells indicates that concentrations less than 0.5 mg/L occur in the deepest well MW08D and in the onsite deep well OW1B.

4.3 ANALYTICAL RESULTS—EXTENT OF CONTAMINATION

This section discusses the extent of groundwater contamination in the study area based on the results of the two phases of groundwater sampling, supplemented with selected results from the groundwater monitoring. For locations where samples were collected at multiple depths, such as at the clustered monitoring wells and the two push probe borings where samples were collected from two different depths (PP011 and PP020), the vertical distribution of contaminants is discussed. Chemical distribution maps have been prepared to illustrate the lateral distribution of the most important chlorinated solvents in the groundwater. The maps were prepared using Phase 1 and 2 data and historical data. The chemical distribution maps for selected chlorinated solvents are presented in **Figures 7 through 13**. In addition to the maps covering the overall study area, the distribution maps include larger scale maps for selected constituents that cover the immediate vicinity of the Omega Chemical facility.

The chlorinated hydrocarbon plume is well defined along its northwestern and southeastern edges by concentrations approaching 5 ug/L or less. The plume as mapped during this investigation appears to skirt the south side of production well Santa Fe Springs No. 1. This is consistent with plotted groundwater elevation contours that indicate the gradient in this area is toward the south, which could shift the northwest boundary of the plume to the south. The far southwestern end of the plume was not defined down to a concentration of 5 ug/L. The

contaminants at this end of the plume were detected to as low as 4 to 27 ug/L for PCE and 6 to 32 ug/L for TCE. Further exploration of this area was not conducted because these concentrations are lower than most of the remainder of the plume, suggesting the plume boundary does not extend significantly farther than those sample locations. Further, an apparent separate source with groundwater PCE concentrations exceeding 3,000 ug/L is present in the vicinity of Dice and Los Nietos Roads, and is commingled with the main plume from this point to the southwest.

Based on the data from this investigation as well as historical data, the highest concentrations for PCE, TCE and 1,1-DCE generally occur in the vicinity of the Omega Chemical site, and a plume containing these chemicals extends for at least 2.2 miles (11,600 feet) southwest of the site. The chlorinated solvent plumes are up to 5,000 feet in width across the southwest central portion of the plumes. The chlorinated hydrocarbon plume is fairly well correlated in the sense that observed concentrations generally exhibit consistent progression between sample points, and the primary constituents are similarly distributed. However, there are two exceptions to that general trend: 1) localized areas of lower contaminant concentrations surrounded by higher concentrations ("hot spots"); and, 2) large changes in concentrations observed over short distances perpendicular to the plume axis in areas where concentrations are high (i.e., greater than 1,000 ug/L). In some areas, distribution trends could not be defined in detail because lack of access prevented establishment of sampling points in potentially key areas (e.g., across the footprint of the Presbyterian InterCommunity Hospital near the Omega site, and in the rail switching yard within the central part of the study area). In addition, sampling points in the far southwestern part of the study area were spaced at greater distances than elsewhere, as the objective in that area was primarily to confirm declining concentrations and not to develop a detailed picture of concentration distribution.

In the case of PCE, the majority of the plume is characterized by concentrations in the 10 ug/L to 100 ug/L range, with concentrations decreasing relatively sharply along its northwestern edge, and decreasing across a broader zone on its west, southwest, and south sides. The core of the plume extending a short distance downgradient from the Omega site exhibits concentrations exceeding 1,000 ug/L, and contains a narrow finger of PCE concentrations exceeding 10,000 ug/L that persists at least 900 feet southwest from the Omega site, to the bend in the alley that intersects Washington Blvd. and Putnam Street (PP106). PCE concentrations exceeding 1,000 ug/L occur in two areas, including the immediate area extending generally downgradient from the Omega site just described and a separate pod in the southwest central part of the plume some 8,000 feet from the Omega site. Near Omega, the 1,000 ug/L concentrations form a lobe to the west-northwest that appears somewhat coincident with the extent of the Gage aquifer as defined in the explorations (Plate 1). Southwest of the lobe, concentrations decrease to the 100 ug/L range in the vicinity of the hospital building. The main part of the 1,000 ug/L concentrations extend west-southwest in a somewhat narrow band that appears to cross Washington Blvd. PCE concentrations as high as 5,100 ug/L (PP117) were observed a short distance farther to the southwest, with 1,000 ug/L concentrations becoming more laterally extensive by the vicinity of Byron Road, in an area where the groundwater gradient becomes very flat (as low as 0.0008 ft./ft.) (**Figure 6**). Concentrations of more than 100 ug/L occupy a large part of the plume. An area of concentrations below 100 ug/L surrounded by higher concentrations above 100 ug/L

appears to be present in the central part of the plume, based on three or four data points (sample coverage was limited within that area).

The TCE plume is similar in extent to the PCE plume, but is narrower and exhibits lower concentrations overall. The majority of the TCE plume is comprised of concentrations between 10 and 100 ug/L, but concentrations exceeding 100 ug/L appear to be more continuous (if less extensive) than for the PCE plume. The highest concentration parts of the TCE plume (greater than 1,000 ug/L) occur in two apparently unconnected fingers near the Omega site. The narrower and smaller occurrence is nearly coincident with the estimated extent of 10,000 ug/L PCE concentrations immediately downgradient from the Omega site. The other area of 1,000 ug/L TCE begins with a concentration of 7,000 ug/L at its northeastern end (boring B103), and continues west-southwest to southwest for approximately 3,000 feet to Chetle Avenue. Unlike PCE, TCE occurs also in a swath northwest of the Omega site (cross- and up-gradient) in concentrations ranging from approximately 200 to 960 ug/L.

The areal distribution and concentrations of Freon 11 and Freon 113 are presented in **Figures 14 through 17.** Two of these maps are larger scale versions covering the immediate vicinity of the Omega Chemical facility. Freon 11 and 113 are present in soil and groundwater beneath the Omega Chemical site. The highest groundwater concentrations of Freon 11 and Freon 113 occur downgradient of the former Omega Chemical property. The Freon plumes are well defined by groundwater samples with detected concentrations less than 2 ug/L on the north, west and south sides. The plumes of Freon 11 and Freon 113 are less extensive than the PCE and TCE plumes. The Freon plumes occupy approximately one-half to two-thirds of the area covered by the PCE and TCE plumes. Aside from the smaller downgradient extent and lower concentrations of the Freons (800 ug/L maximum for Freon 11 and 2,400 ug/L for Freon 113), the distribution of the Freons is similar to that of PCE and TCE. The southwestern end of the Freon 113 plume encompasses the area of elevated (greater than 1,000 ug/L) PCE concentrations some 8,000 feet from the Omega site. The continuous portion of the Freon 11 plume does not extend to this area, but an isolated occurrence of Freon 11 is centered around that same area.

Data on vertical distribution is primarily derived from monitoring wells screened at different depths, two push probes (PP011 and PP020) where samples were collected at two different depths, and from comparison of results from samples at different depths within an area. In most cases, contaminant concentrations are much lower at deeper intervals, particularly where intervening fine-grained units restrict downward migration. For example, PCE concentrations at OW1 (screened at 63 to 78 feet bgs) are as high as 86,000 ug/L, while at OW1B (screened at 110 to 120 feet bgs) concentrations are below 200 ug/L. A similar trend was observed at push probe PP020 (near the MW04 cluster), where PCE concentrations detected were 260 ug/L at 50 feet bgs and 160 ug/L at 73 feet bgs. At the MW08 well cluster, PCE concentrations decrease from more than 400 ug/L in MW08A (screened at 30 to 45 feet bgs), to approximately 10 ug/L in MW08B and MW08C (screened at 65 to 75 feet bgs and 87 to 92 feet bgs), to less than 1 ug/L in MW08D (screened at 110 to 120 feet bgs).

Higher concentrations detected in deeper zones were observed for certain compounds at a few locations. At push probe PP011, PCE was detected at a concentration of 8 ug/L at 59 feet, but was 40 ug/L at 72 feet. The respective TCE concentrations at PP011 were 23 ug/L and 370 ug/L.

At the MW04 cluster, PCE concentrations increase from about 100 to 250 ug/L in MW04A (screened at 43 to 53 feet bgs) to 700 to 950 ug/L in MW04B (screened at 70 to 80 feet bgs). TCE concentrations at MW04A and MW04B exhibit a similar trend, but the differences are less than for PCE. (This relationship is opposite to that observed at PP020, which was located within approximately 200 yards of the MW04 wells). Concentrations are lower in MW04C (screened at 89 to 99 feet bgs), but PCE concentrations decrease by about two orders of magnitude, while TCE concentrations decrease by about one order of magnitude. At MW08D (screened from 110 to 120 feet bgs), TCE concentrations are around 15 ug/L, whereas concentrations in MW08B and MW08C are approximately 3 ug/L. The occurrence of higher contaminant concentrations at deeper intervals in these cases may indicate that the source of the contaminants is located some distance from the sampling point (i.e., contaminants would have greater opportunity to migrate to greater depths).

Three push probe samples yielded lower concentrations than anticipated, considering the results reported for surrounding sampling points. At 55 feet bgs in PP052, which is located in the southwest-central part of the study area, the PCE concentration was reported as 5 ug/L, while nearby samples from slightly deeper intervals contained PCE in the 120 to 290 ug/L range. This may represent inverted concentrations at this location. At PP063, in the southeast-central part of the study area, the reported PCE concentration was 5.9 ug/L at 59 feet bgs, within a thick sequence of sand and gravelly sand. This concentration is a little lower than the 30 ug/L results for two nearby samples collected at similar depths. Although lithologic logging was not performed at the two nearest probe locations (PP076 and PP077), other lithologic information in the area indicates the thick saturated zone observed in PP063 is anomalous, and suggests the low PCE concentration there is due to dilution. The greatest concentration difference observed between samples was observed at PP004, located in the alley extending southwest from Putnam Street, just downgradient from monitoring well OW8 and borings B108 and B109. The PCE concentration at PP004 at 86 feet bgs was 150 ug/L. This differs considerably from the results for OW8 (screened from 60 to 80 feet bgs) where the PCE concentration is 12,000 to 14,000 ug/L, from B108 at 66 feet bgs where the PCE concentration was 5,100 ug/L, and from B109 at 70 feet bgs where the PCE concentration was 53,000 ug/L. It appears that the P004 sample was obtained from silt or clay underlying the sand aquifer at that location. The result from P004 was ignored in contouring of the PCE concentrations.

Another possible explanation for both higher concentrations being detected at deeper intervals and lower than expected concentrations at given sample points may be the potential uncertainty of VOC results obtained from grab sampling. However, most of the concentrations detected in monitoring well samples agree fairly closely with results from nearby grab sampling of Phase 1 probes.

The elevated concentrations of TCE and cis-DCE in the groundwater beneath and downgradient of the Omega Chemical facility relative to the concentrations found in on-site soil suggest that the occurrence of TCE and cis-DCE in the groundwater may reflect degradation of PCE. PCE will undergo stepwise, reductive dechlorination under the appropriate conditions to produce TCE, cis-DCE and vinyl chloride. The occurrence of distinct, mappable plumes of PCE, TCE and cis-DCE suggest that these processes may be occurring in the groundwater. The relative concentrations of PCE vs. TCE may not be indicative of PCE breakdown considering that some

of the TCE may be occurring as original, primary stage compound. The elevated cis-DCE concentrations such as were detected at B103 suggest more strongly that degradation may be taking place in selected locations.

4.4 SOURCES OF CONTAMINATION

The observed distribution pattern of PCE, TCE and 1,1-DCE concentrations in groundwater is consistent with the presence of a major source area at the Omega Chemical site. PCE is the major chemical constituent that is also found in soil beneath the Omega Chemical site. 1,1-DCE, TCE and cis-DCE are present in lesser concentrations in soil at the Omega Chemical site. The only area that PCE concentrations in excess of 10,000 ug/L were observed extends downgradient from the Omega site. However, some of the apparent "hot spots" (areas exhibiting higher contaminant concentrations) within the plume indicate potential contribution from other contaminant sources.

Six other potential source areas of chlorinated compounds in groundwater were identified or inferred during the investigation.

A separate source of TCE appears to be present north of Baldwin Place as indicated by the occurrence of TCE in one sample (PP048) at an elevated concentration of 960 ug/L, with concentrations in the 200 to 600 ug/L range extending from there toward the southwest. TCE was not detected in either of borings B096 or B097, located approximately 500 feet northwest and 400 feet northeast of PP048, respectively. The non-detect results for B096 and B097 constrain the probable source area for this TCE occurrence to the vicinity of PP048.

As previously mentioned, one of the areas where TCE concentrations exceed 1,000 ug/L begins approximately 1,000 feet west of the Omega site in the vicinity of boring B103, and extends west-southwest or southwest from there. The TCE concentration at B103 was 7,000 ug/L, which is the highest concentration of TCE detected within the study area. The upgradient end of this higher concentration pod is situated at the southwestern end of the TCE sub-plume that extends from north of Baldwin Place. The highly elevated concentration of TCE detected at B103 suggests the presence of a separate TCE source very near to the location of B103. Farther downgradient, TCE at MW01A is accompanied by chromium concentrations ranging to more than 60 ug/L. Chromium concentrations approaching this level have not been observed at or near the Omega site.

A possible source of PCE to the northwest or west of Omega is suggested by results for PP078, PP006, and B101, where respective concentrations of 2,100 ug/L, 1,100 ug/L, and 1,300 ug/L were detected, forming either an isolated occurrence or finger of concentrations greater than 1,000 ug/L. Closer to the Omega site, tending in the same direction, PCE concentrations exceeding 1,000 have been found at B108 (5,100 ug/L) and well OW2 (up to 1,500 ug/L). No samples were collected between B101 and B108, a distance of approximately 250 feet, so it is not clear whether 1,000 ug/L concentrations persist continuously. This bifurcation or isolated lobe may reflect a separate source for PCE. However, this lobe also follows the northern edge of the Gage aquifer sands very closely, so it may be a preferred migration path for contaminants

originating from Omega, with some dilution/dispersion in between the northwest lobe and the main stem (concentrations in the 400 ug/L range).

With the exception of the narrow finger of 10,000 ug/L PCE extending from the Omega site, the highest concentrations of PCE observed during this investigation (4,500 ug/L at PP024 and 5,100 ug/L at PP117) were detected in the vicinity of Byron Road and Rivera Road, some 2,300 to 2,600 feet west-southwest of the Omega site. The 1,000 ug/L contour circumscribes a much broader pattern in this area. Occurrence of lower PCE concentrations in the 1,000 ug/L range that have been found between this area and the higher concentration finger extending downgradient from the Omega site suggests that an additional source to the east of Byron Road may be contributing to the PCE plume. An alternate explanation for the large lobe of high concentration PCE in this area may be that the high concentration band remains narrow where groundwater velocity is high due to a combination of steep gradient (0.009 ft./ft.) and presence of the Gage aquifer sand, and explorations may simply have missed the concentrations greater than 1,000 ug/L. In the area of the 1,000 ug/L lobe, the gradient flattens considerably (to 0.0008 ft./ft.), which would allow the high concentration area to broaden, provided that the upstream source of higher concentrations remains consistent.

There is an isolated occurrence of moderately elevated PCE concentrations in the vicinity of Rivera Road near Secura Way, defined by samples from push probes H-17 and PP067, and monitoring well MW06A. Concentrations ranging from 71 to 580 ug/L were found in a small area otherwise characterized by results in the 2 to 17 ug/L range. TCE concentrations are low. Chromium concentrations in samples from MW06A approach 75 to 100 ug/L as an accessory contaminant, constituting further evidence of a separate source in that area.

An additional source(s) of PCE (with TCE, Freon 11, Freon 113, and other chemicals) was identified in the vicinity of PP058 in the southwest part of the study area, near the intersection of Los Nietos Road and Dice Road. The PCE concentration detected at PP058 was 3,300 ug/L, whereas samples to the north and northeast of PP058 yielded results for PCE in the 100 to 200 ug/L range. Results for samples at three locations downgradient of PP058 (PP065, PP066, and B088) indicate lower concentrations in that direction.

SECTION 5

CONCLUSIONS

Weston Solutions, Inc. has completed two phases of a groundwater sampling investigation within Operable Unit 02 (OU-02) of the Omega Chemical Superfund site. This study was conducted in support of a remedial investigation (RI) of groundwater underlying the area surrounding and downgradient from the Omega facility, on behalf of the USEPA Region 9. Data have been generated from previous investigations, groundwater grab sampling from direct push and hollow stem auger borings, and from installation and quarterly sampling of monitoring wells. Based on the results of the investigation, the following conclusions are presented:

- The former Omega Chemical facility operated as a recycler for disposal of solvents and other chemicals from 1976 to 1991. Although the mechanism by which chemicals have entered the subsurface at the site is not established, a release is clearly demonstrated by the occurrence in site soils of significant concentrations of halogenated hydrocarbons extending from ground surface down to and into the groundwater. The four most prominent compounds are PCE, TCE, Freon 11, and Freon 113. Concentrations of PCE in the groundwater at onsite well OW1 have ranged up to 86,000 ug/L.

- A contaminant plume containing some or all of these chemicals extends at least 2.2 miles downgradient toward the west-southwest from Omega, with a width approaching three-fourths of a mile. The Freon 11 and Freon 113 plumes are about one-half to two-thirds the size of the PCE and TCE plumes, which are of similar extent. The plume as explored from the Omega site appears to bend slightly south at its southwest-central part, skirting the south side of production well Santa Fe Springs No. 1.

- PCE concentrations greater than 10,000 ug/L were found in a narrow finger extending at least 900 feet downgradient from Omega. Concentrations above 1,000 ug/L comprise about 5 percent of the area of the PCE plume, occurring primarily within approximately two-thirds of a mile of Omega. Most of the PCE plume is characterized by concentrations in the 10 to 100 ug/L range. Concentrations change sharply perpendicular to the presumed groundwater flow direction, particularly where high concentrations predominate.

- The Omega facility is situated at the lower end of the La Habra piedmont slope, near the point where the topography transitions to a nearly flat basin, which is reflected in the distribution of aquifers in the vicinity. No water bearing sands have been observed underlying the Omega site itself as far as a depth of 132 feet bgs. The lithology above groundwater at Omega and elsewhere on the piedmont consists of clayey silt to silty clay with a few thin gravelly lenses. Groundwater beneath the Omega site occurs mainly in saturated, fine-grained sediments, with most transmission probably occurring through gravelly layers and sandy phases. Similar fine-grained sediments near the ground surface, referred to as the Bellflower aquiclude extend southwest across the basin. The Gage aquifer is the shallowest aquifer in the vicinity of Omega, but pinches out in a relatively narrow embayment just downgradient of Omega. Of the five aquifers present

in the underlying San Pedro Formation, only the three deepest are believed to extend to or upgradient of the Omega facility. The Gage aquifer and the uppermost San Pedro Formation aquifer (the Hollydale aquifer), or the Hollydale and underlying Jefferson aquifers appear to be merged in localized areas. Typically, fine-grained aquicludes are present between the water bearing units.

- Based on measurements of depth to water within the upper aquifer from the network of monitoring wells in the northeastern half of the study area, the groundwater gradient is generally toward the west-southwest. In the area east of the Santa Fe Springs No. 1 production well, the gradient is more toward the south, which corresponds with the slight southerly bend observed in the PCE and TCE plumes in the same area. The steepness of the gradient differs somewhat by area. From the Omega site to about Lambert Road, it is relatively steep (about 0.009 ft./ft.). From Lambert Road to around Chetle Avenue, the gradient flattens to as low as 0.0008 ft./ft. In the southwestern part of the monitoring well network, the gradient is approximately 0.0026 ft./ft. Depth to water ranges from 75 feet on the upgradient side of the Omega site to 21 feet at MW07A in South Whittier, near the border with Santa Fe Springs. Depth to water is greater in areas north of the Omega site.

- Most of the groundwater samples were collected from middle or lower intervals within the Gage aquifer, or at approximately equivalent elevations in areas where the Gage aquifer is absent or grades finer. Samples were collected from deeper units (possible Hollydale and Jefferson aquifers) in a few of the monitoring wells. With a couple of exceptions (PP011 at 59 and 72 feet bgs; MW04A and MW04B at 48 and 75 feet bgs; and TCE in MW08D at 115 feet bgs), results for the deeper of multiple samples from the same location exhibit lower concentrations. Where higher concentrations are observed deeper, the most likely explanation is that the source is located some distance from the sample point, allowing contaminants to migrate to deeper intervals before being intercepted at the sample point. Where concentrations of TCE only are higher, it is possible that breakdown of PCE into daughter compound(s) may be occurring. In one case both relations were observed at two sampling locations situated within 200 feet of each other (PP020 and MW04 cluster). This suggest that the migration of contaminants is more complicated in areas like this example, where aquifer sands are interbedded with fine-grained units. Additional groundwater sampling could be conducted to further explore the degree of apparent aquifer interconnection in these areas or assess contaminant concentrations at more locations within the deeper units, and better estimate the vertical extent of the contamination.

- The basic model of contaminant distribution near the Omega site consists of saturated, fine-grained silt and clay with very high contaminant concentrations, slowly leaching or draining into the narrow upper end of a continuous, highly transmissive sand unit that becomes more laterally extensive approximately one-half mile downgradient from the Omega site. In general, the shallow to medium-depth sand aquifer (presumed Gage aquifer) contains and transmits the majority of contaminant mass within the plume downgradient of the Omega site. Steeper groundwater gradients across the upper end of the sand aquifer would foster higher groundwater velocity and contaminant migration

rate, while flatter gradients to the southwest would be expected to slow migration and allow greater lateral dispersion.

- The bulk of the chlorinated hydrocarbon plume as mapped appears to bypass the Santa Fe Springs No. 1 (SFS No. 1) production well on its southeastern side, consistent with the orientation of the groundwater gradient in the upper aquifer nearby. Low concentrations of TCE below 1 ug/L have been reported for SFS No. 1. Migration of contaminants below the first aquifer is indicated by detection in samples from the deeper probes and monitoring wells. However, concentrations in deeper zones are significantly lower than in the shallow aquifer at the same location. This may reflect attenuation as contaminants migrate through intervening fine-grained intervals. The degree of interconnection between groundwater producing units is not well established downgradient of the Omega site. The potential threat posed by the contaminant plume mapped in the upper aquifer to the 200-foot depth of SFS No. 1 where it is first perforated is not clear.

- "Hot spots" (areas of higher concentrations surrounded by lower concentrations), upgradient/cross-gradient detections, and detections of moderate concentrations of other contaminants (e.g., chromium) in some locations indicate approximately six possible additional sources for chlorinated hydrocarbon contamination in the groundwater within the OU-02 area. Two of these instances (PCE lobe of greater than 1,000 ug/L concentration west of the Omega site, and enlarged area of PCE concentrations greater than 1,000 ug/L near Byron Road) could still represent contribution from the Omega site, and may be explainable by hydrogeologic factors (geometry of Gage aquifer near the Omega site; and combined changes in steepness of gradient and aquifer extent near Washington Blvd.). Other active sites with known chlorinated hydrocarbon contamination in groundwater are present within the OU-02 study area, particularly beyond one mile from the Omega site. Most of these sites are administered under programs of the Regional Water Quality Control Board and the California Department of Toxic Substances Control. Due to greater spacing of sampling points in the farther downgradient parts of the study area, high concentration contributions from these sites were generally not observed in the data from the Phase 1 and 2 investigations.

SECTION 6

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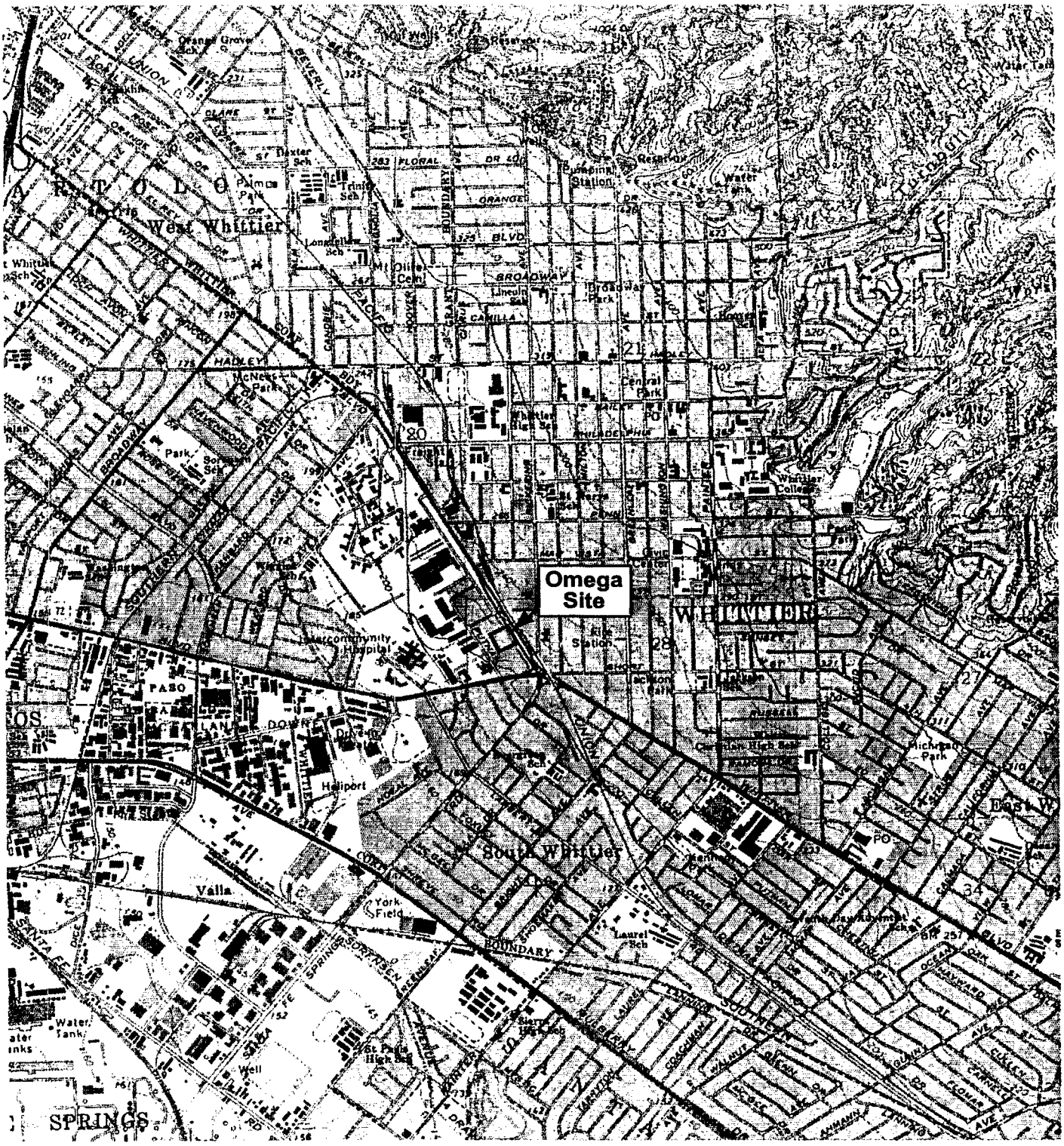
FIGURES



0 1200 2400

Scale in Feet

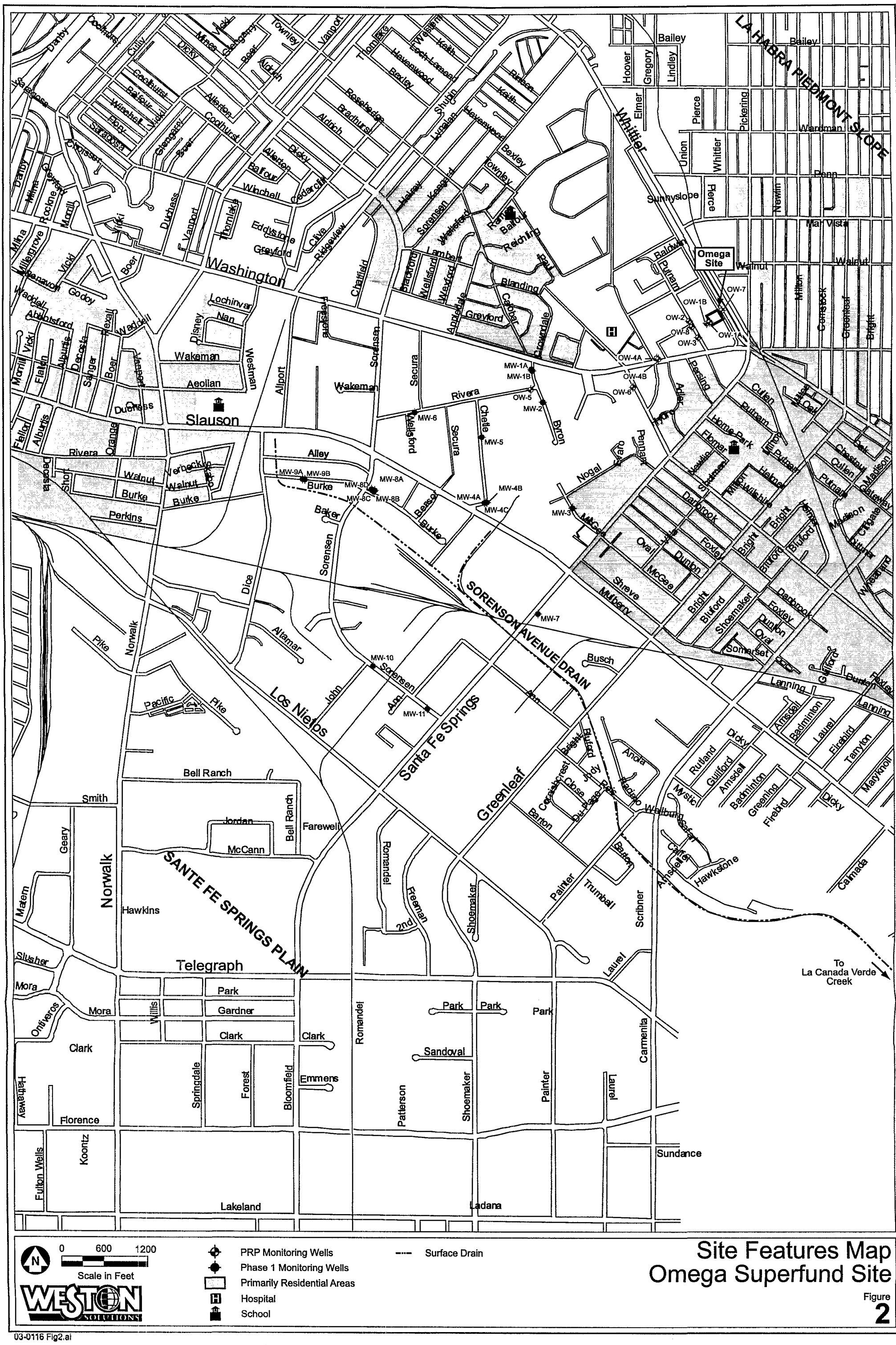
Site Location Map
Omega Superfund Site

WESTON SOLUTIONS

Figure

1

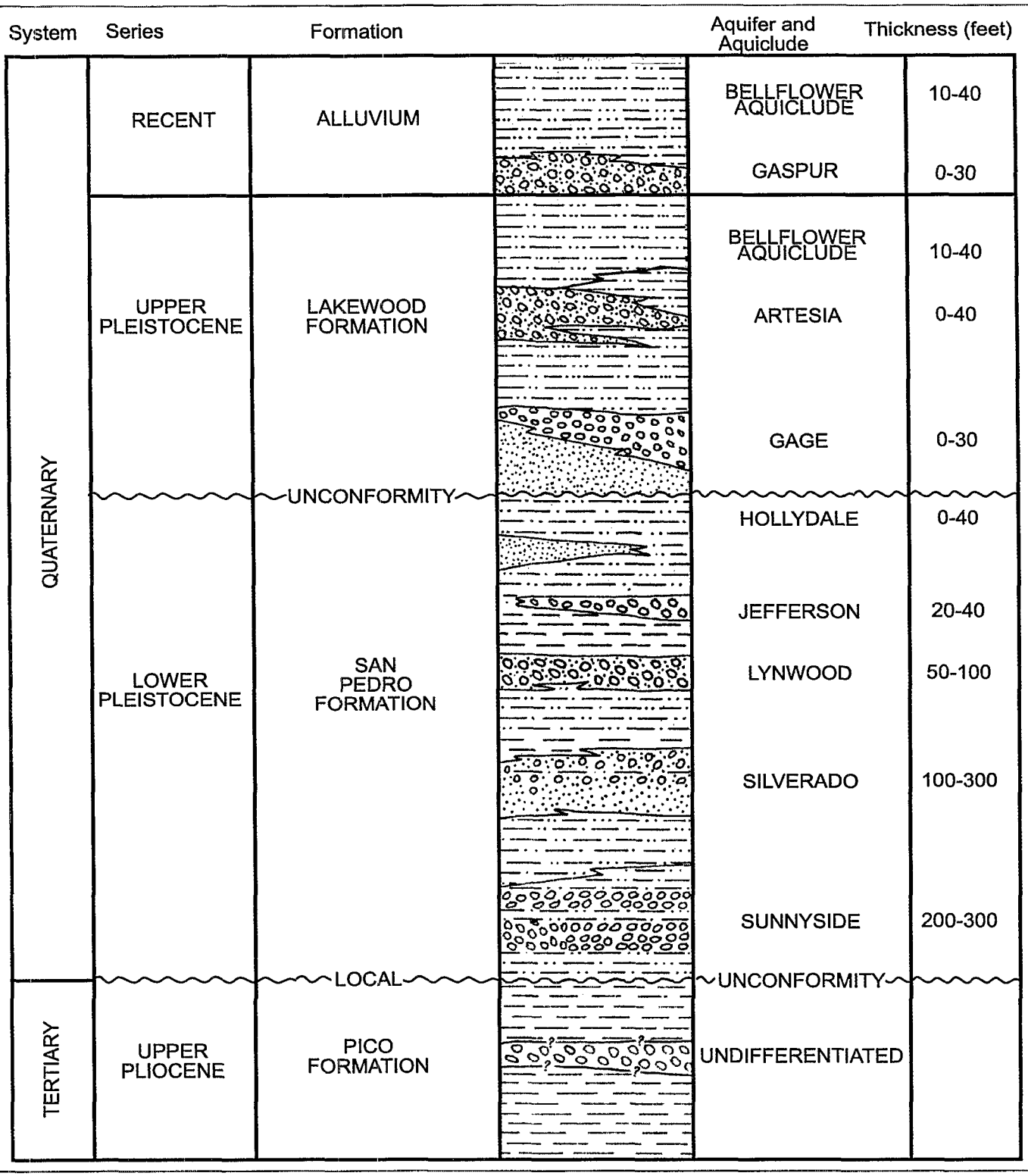
03-0116 Fig1.ai



Site Features Map
Omega Superfund Site

Figure
2

03-0116 Fig2.ai

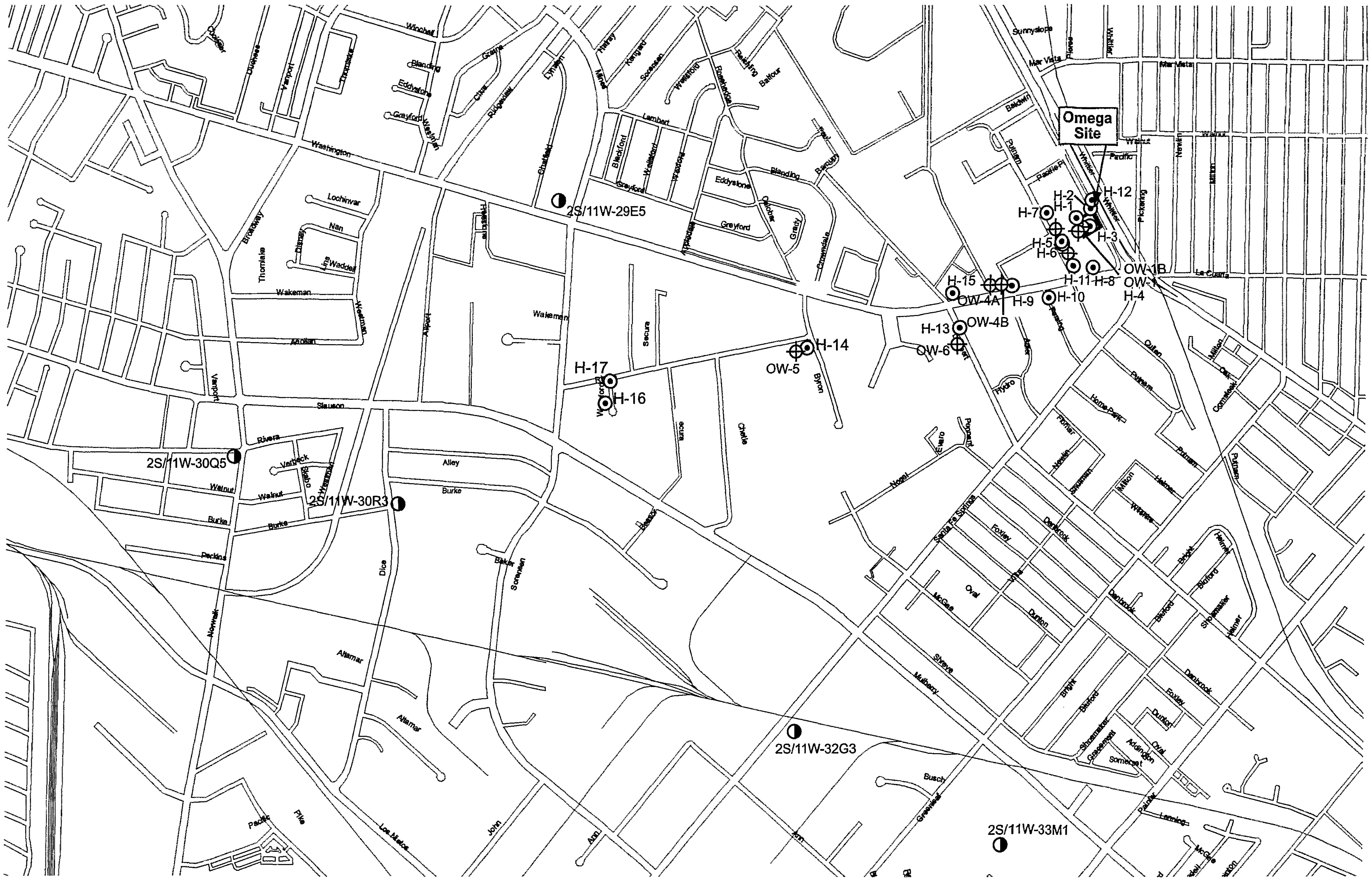


Generalized Stratigraphic Column
Whittier Area (Based on data from CDW 1961)
Omega Superfund Site

WESTON SOLUTIONS

Figure
3

03-0116 Fig3.ai



0 450 900

Scale in Feet

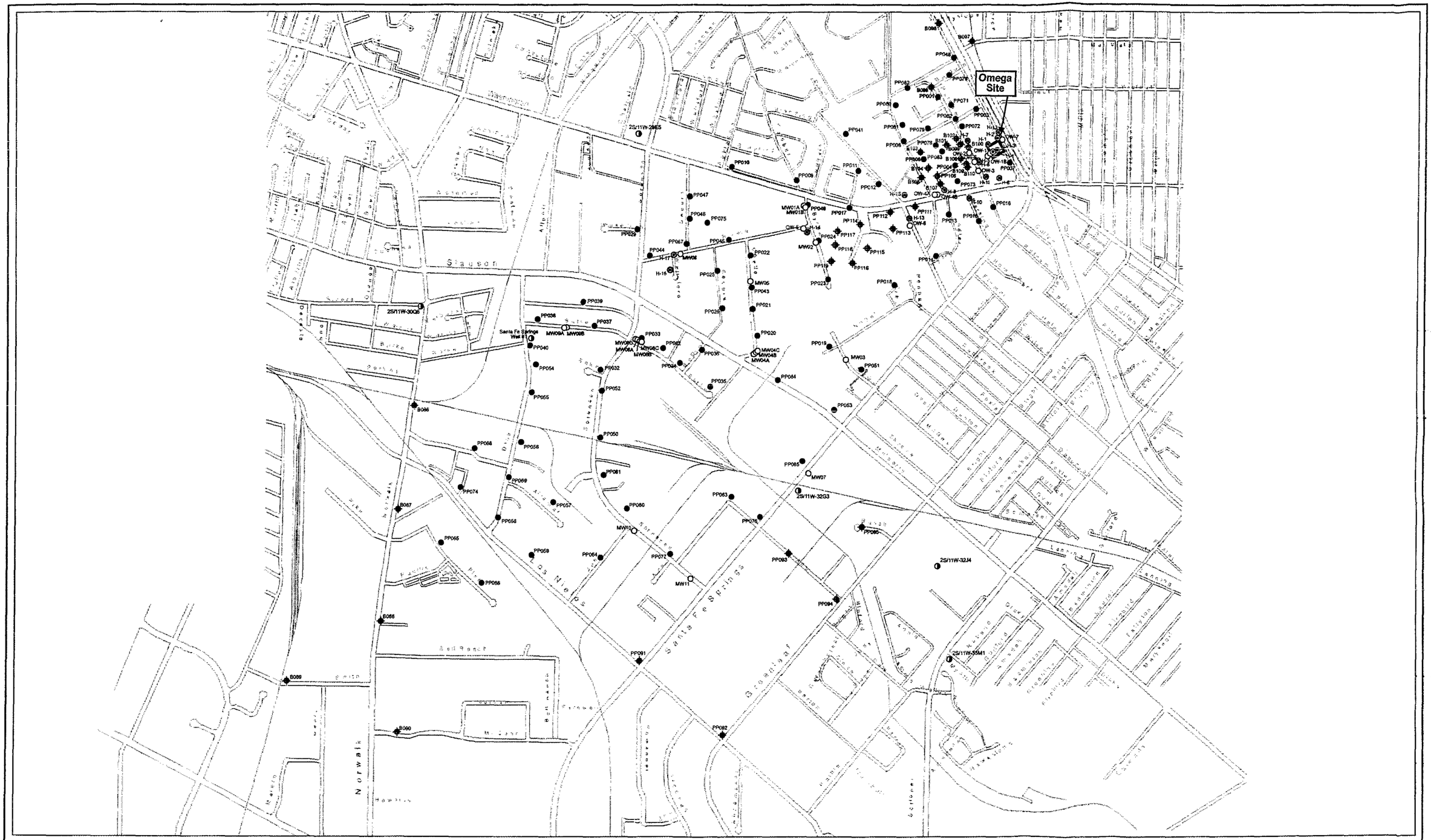
WESTON SOLUTIONS

- Existing Monitoring Wells and Number
- Production Wells and Number
- Historical Groundwater Sampling locations

Historical Groundwater Sampling Locations
Omega Superfund Site

Figure **4**

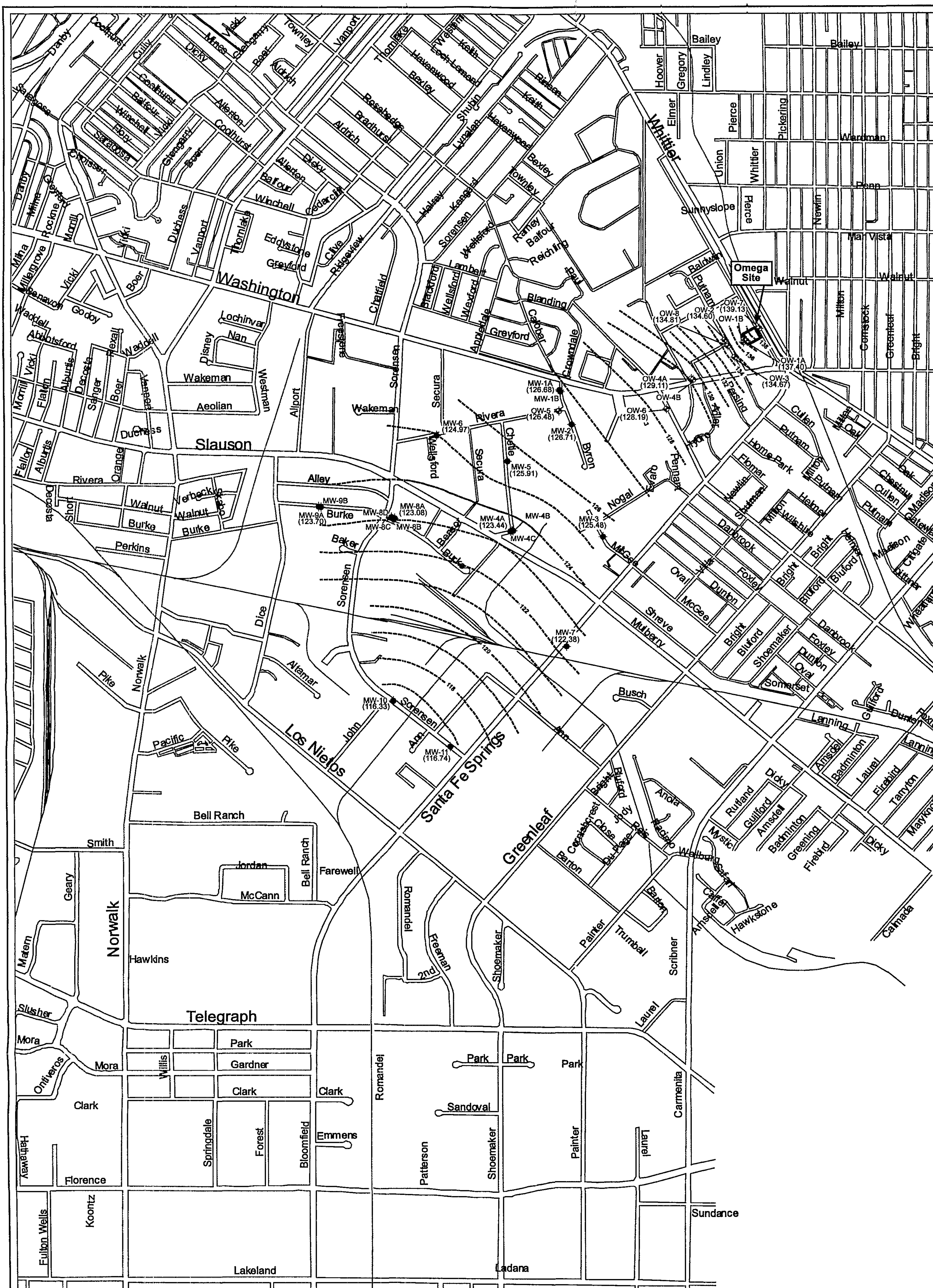
03-0116 Fig4.ai



Groundwater Sampling Locations
Omega Superfund Site

Figure
5

03-0116 Fig5.ai



PRP Monitoring Wells
Phase 1 Monitoring Wells
(116.43) Groundwater Elevation (May 2002)
----- Groundwater Elevation Contour (every foot)

Groundwater Elevations—May 2002
Omega Superfund Site

Figure
6

03-0116 Fig6.ai

Note: PCE concentrations in µg/L

0 600 1200

Scale in Feet

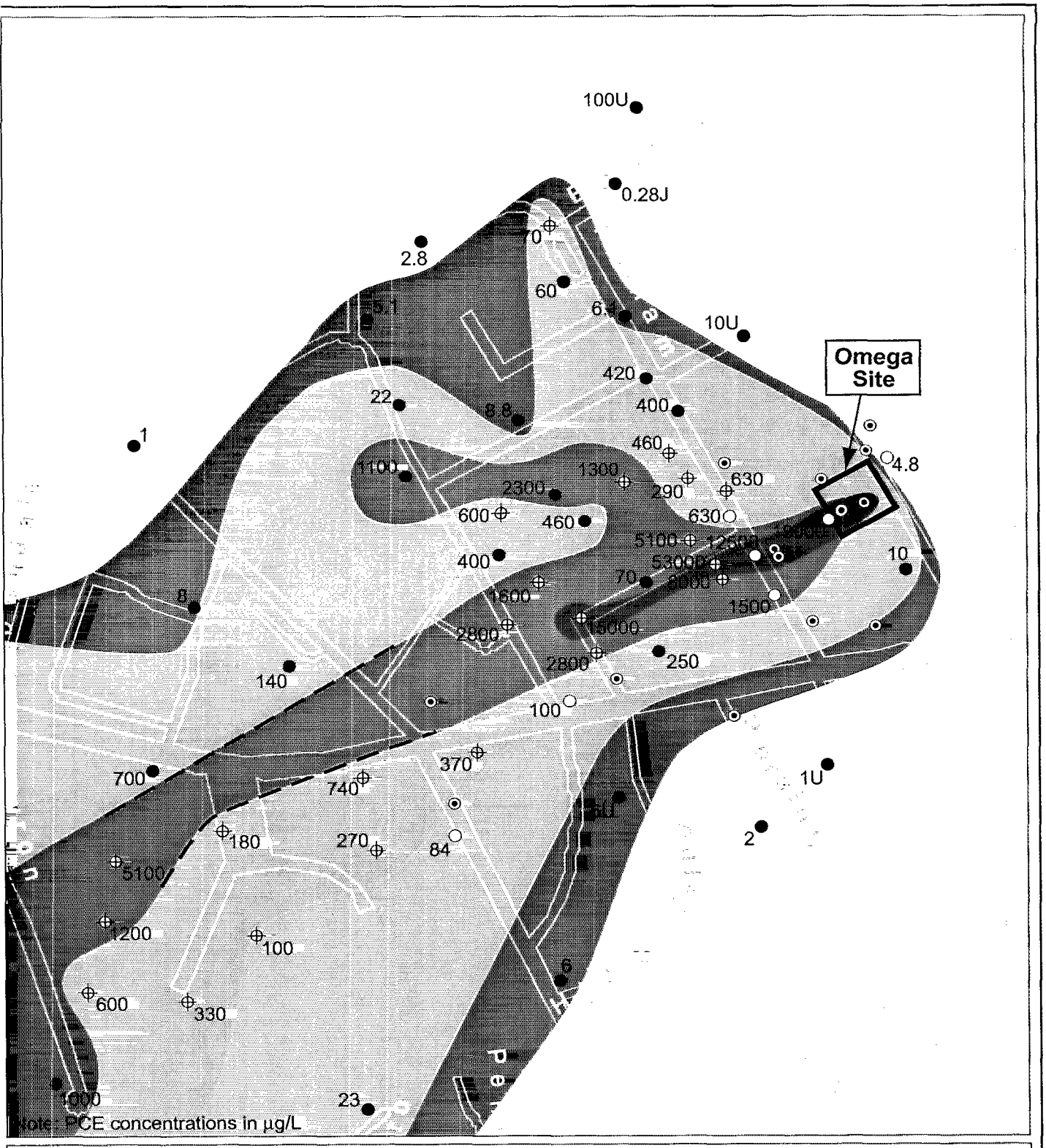
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Groundwater PCE Concentrations
Omega Superfund Site

Figure
7

03-0116 Fig7.ai



Groundwater PCE Concentrations—Omega Vicinity
Omega Superfund Site

N

0 200 400

Scale in Feet

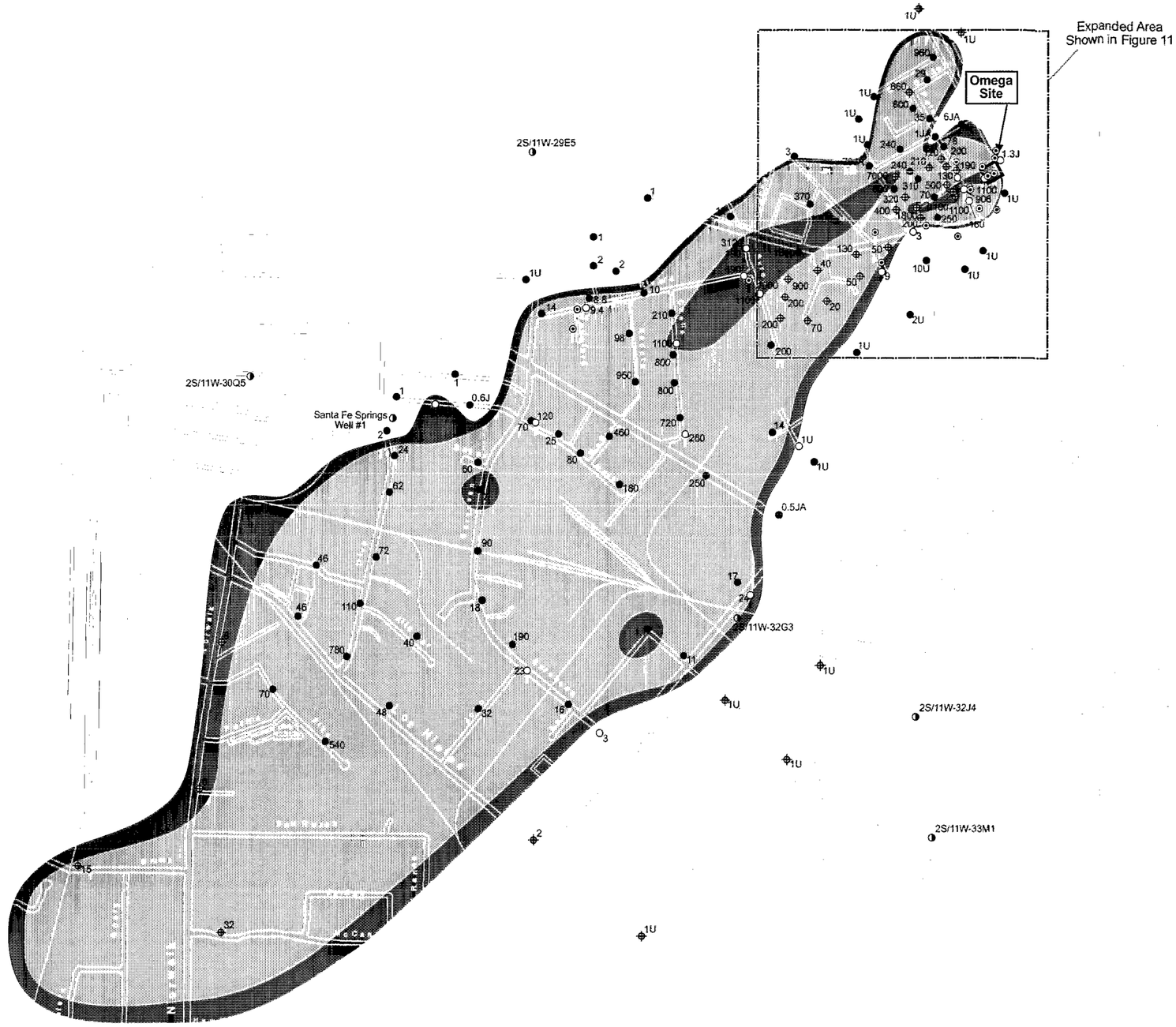
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

WESTON SOLUTIONS

Figure 8

03-0116 Fig8.ai



Note: TCE concentrations in µg/L

0 600 1200
Scale in Feet

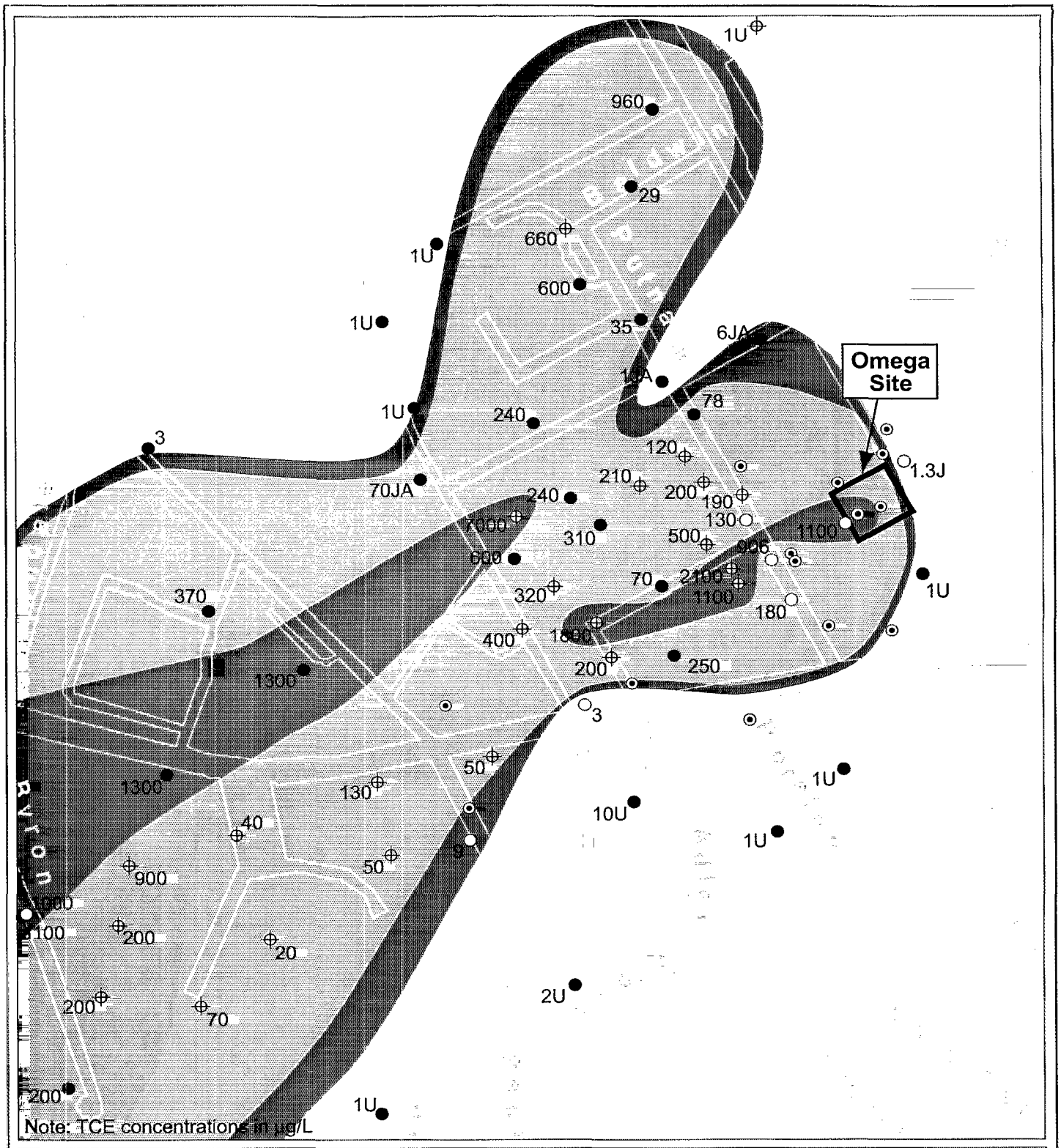
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Groundwater TCE Concentrations
Omega Superfund Site

Figure
9

03-0116 Fig9.ai



Groundwater TCE Concentrations—Omega Vicinity
Omega Superfund Site

N

0 200 400

Scale in Feet

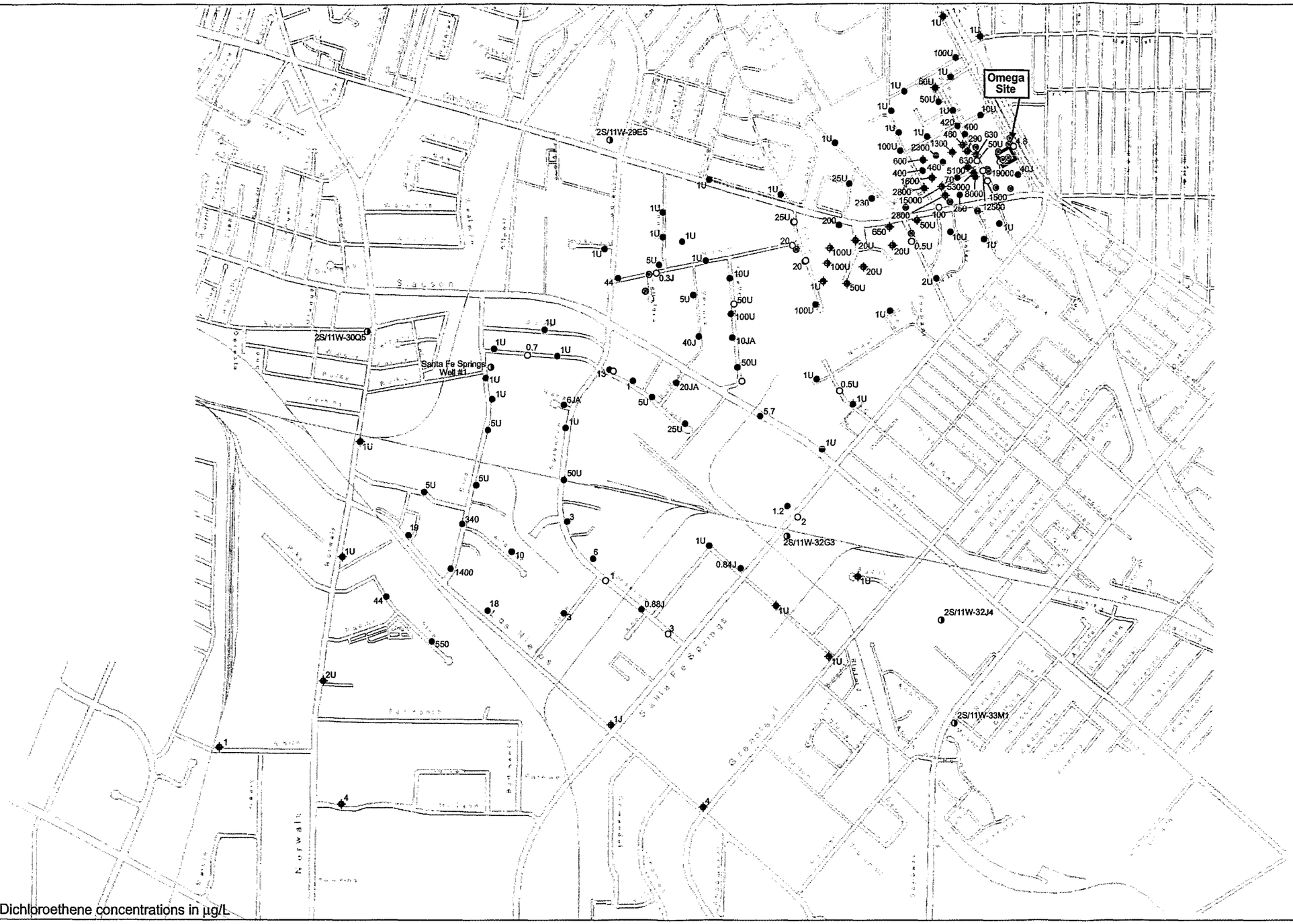
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

WESTON SOLUTIONS

Figure 10

03-0116 Fig10.ai



Note: cis-1,2-Dichloroethene concentrations in µg/L

0 600 1200
Scale in Feet

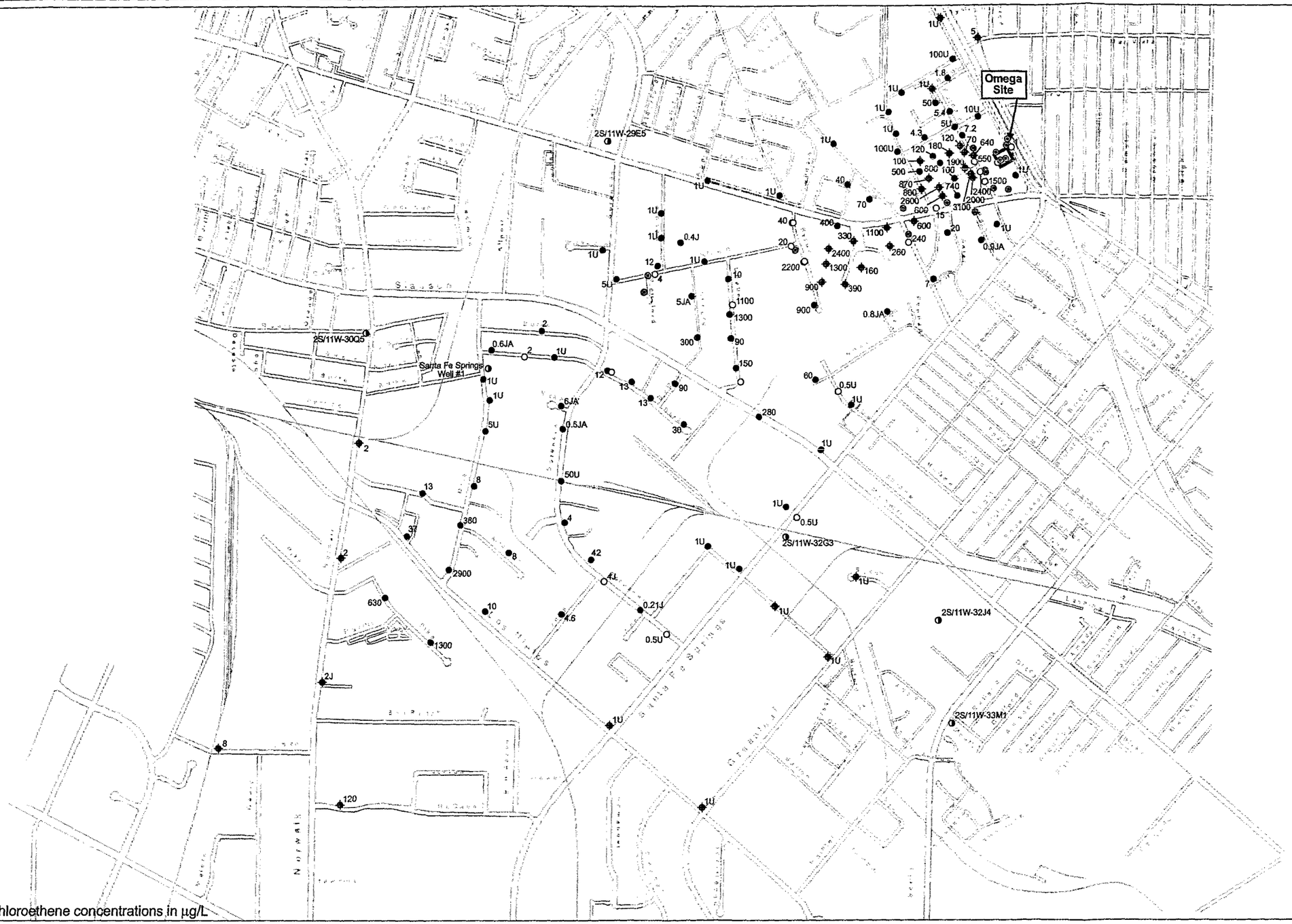
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

WESTON SOLUTIONS

Groundwater cis-1,2-Dichloroethene Concentrations
Omega Superfund Site

Figure
11

03-0116 Fig11.ai



Note: 1,1-Dichloroethene concentrations in µg/L

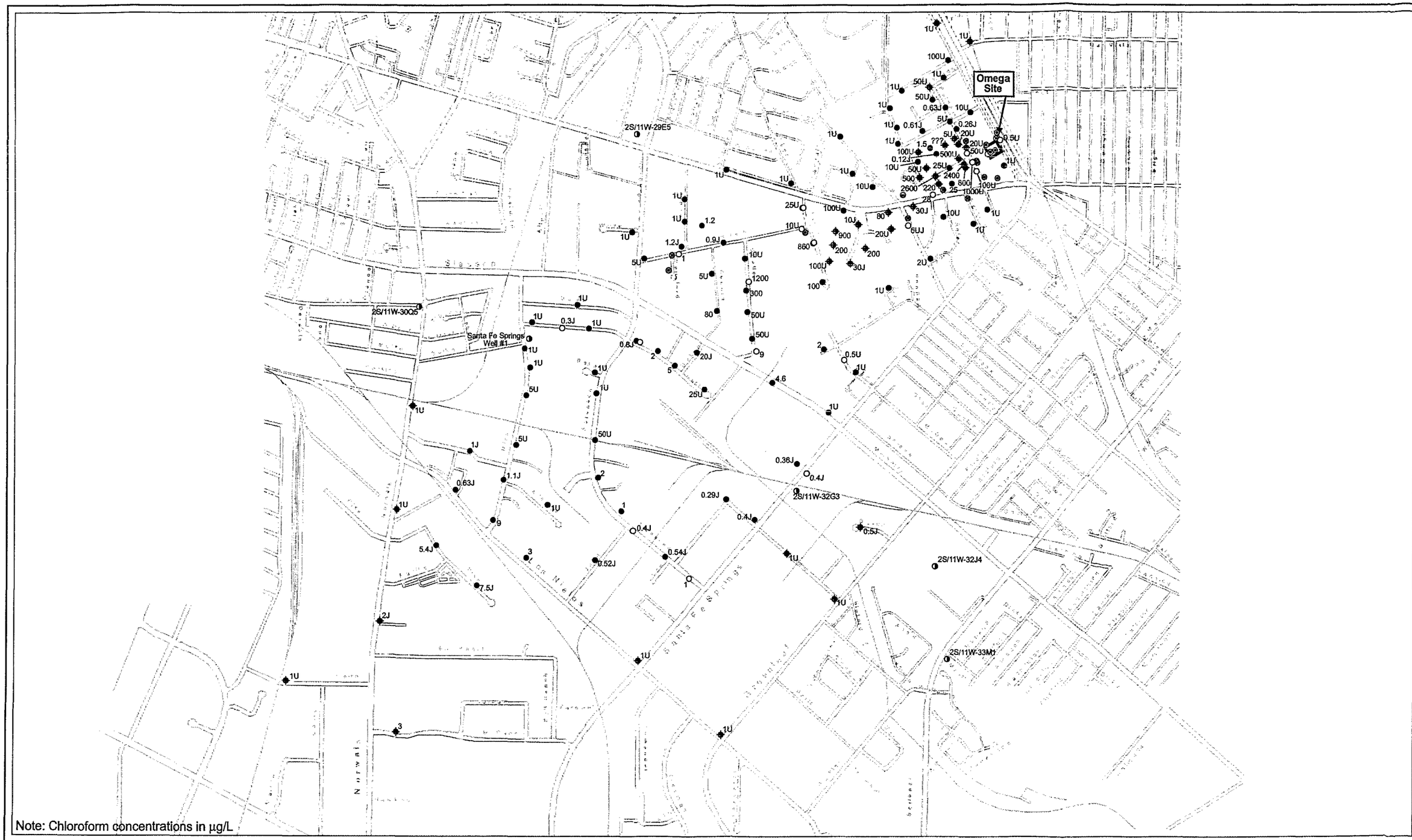
0 600 1200
Scale in Feet

- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

Groundwater 1,1-Dichloroethene Concentrations
Omega Superfund Site

Figure
12

03-0116 Fig12.ai



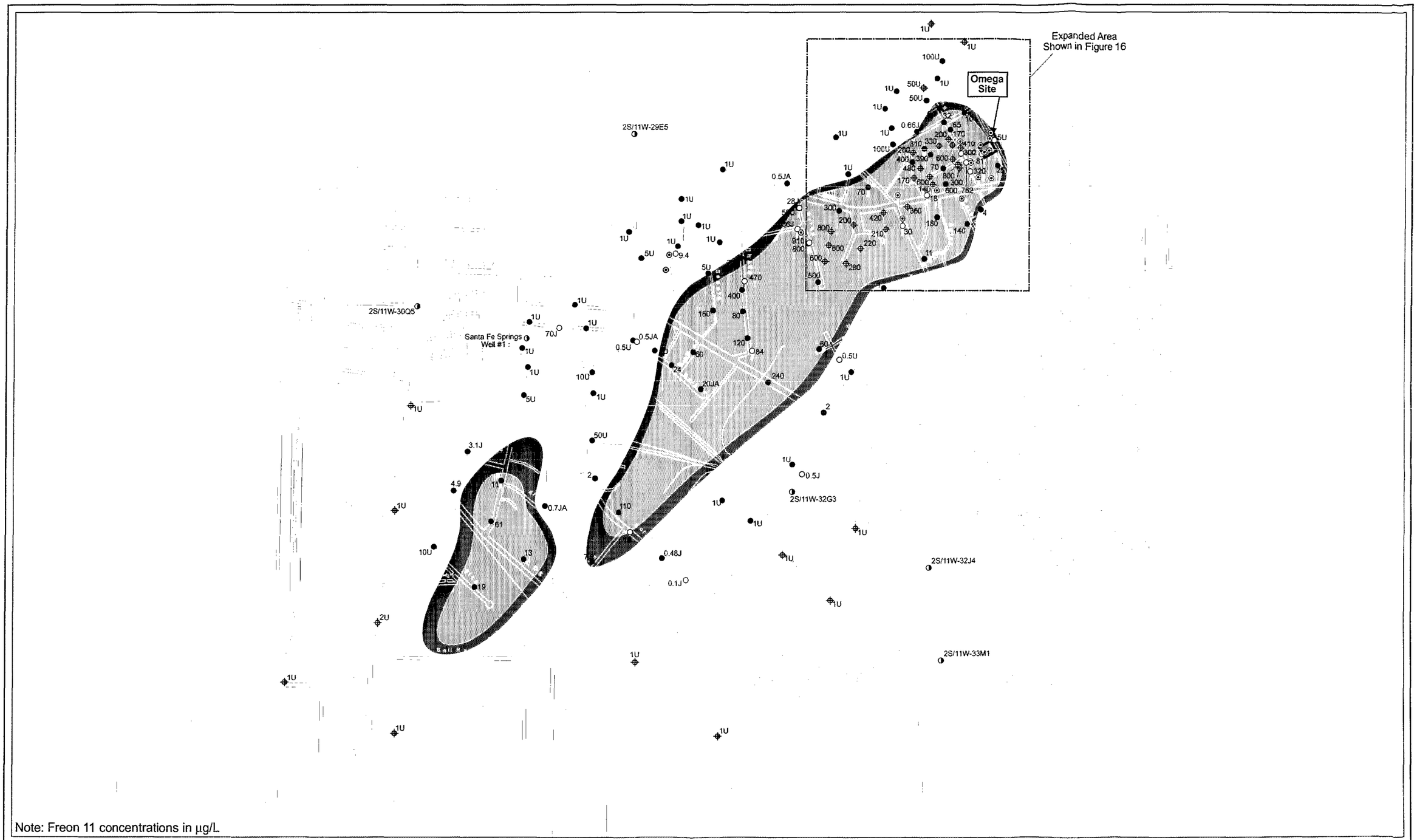
0 600 1200
Scale in Feet

- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

Groundwater Chloroform Concentrations
Omega Superfund Site

Figure
13

03-0116 Fig13.ai



Note: Freon 11 concentrations in µg/L

0 600 1200
Scale in Feet

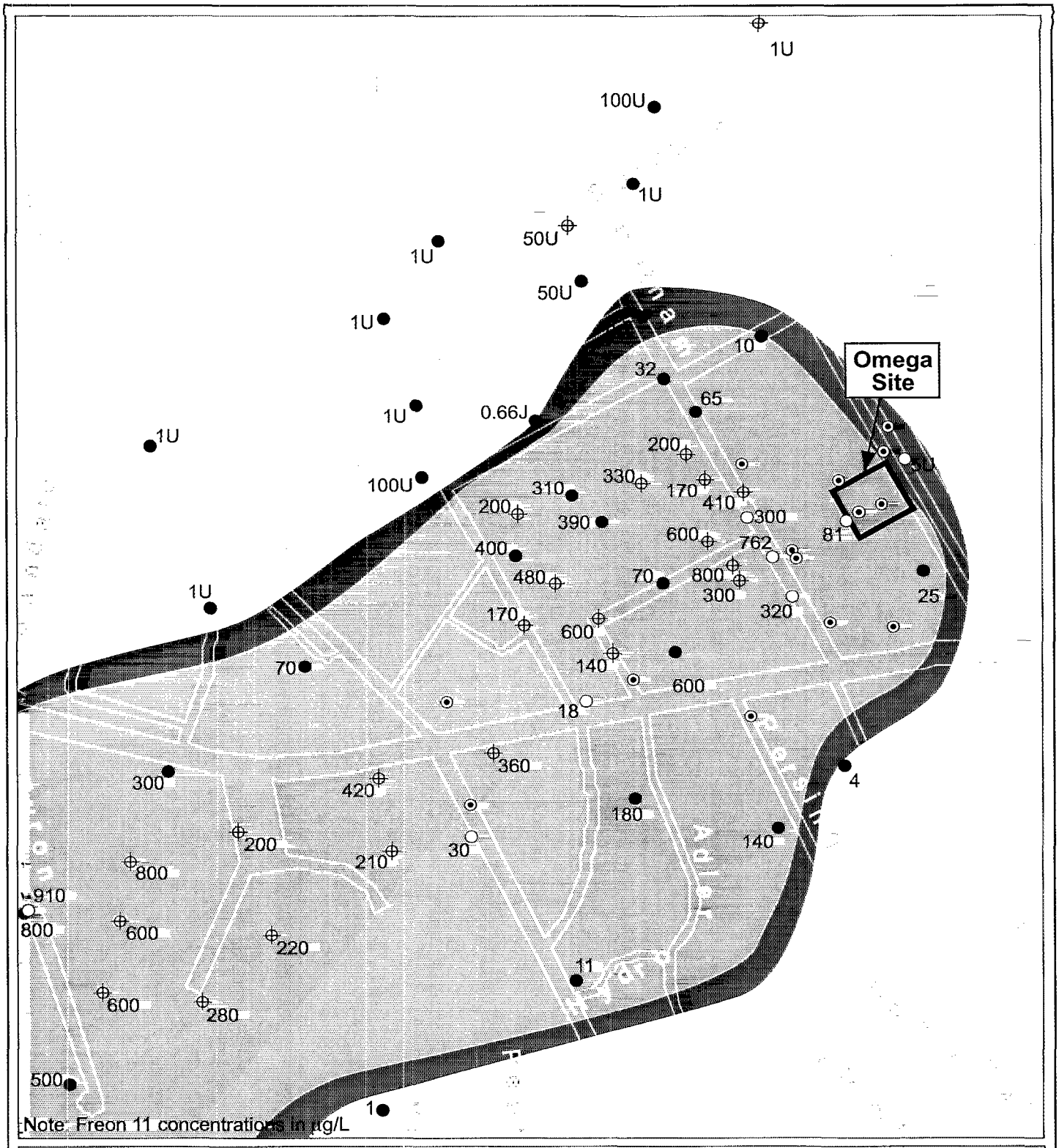
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Groundwater Freon 11 Concentrations
Omega Superfund Site

Figure
14

03-0116 Fig14.ai



Groundwater Freon 11 Concentrations—Omega Vicinity
Omega Superfund Site

0 200 400
Scale in Feet

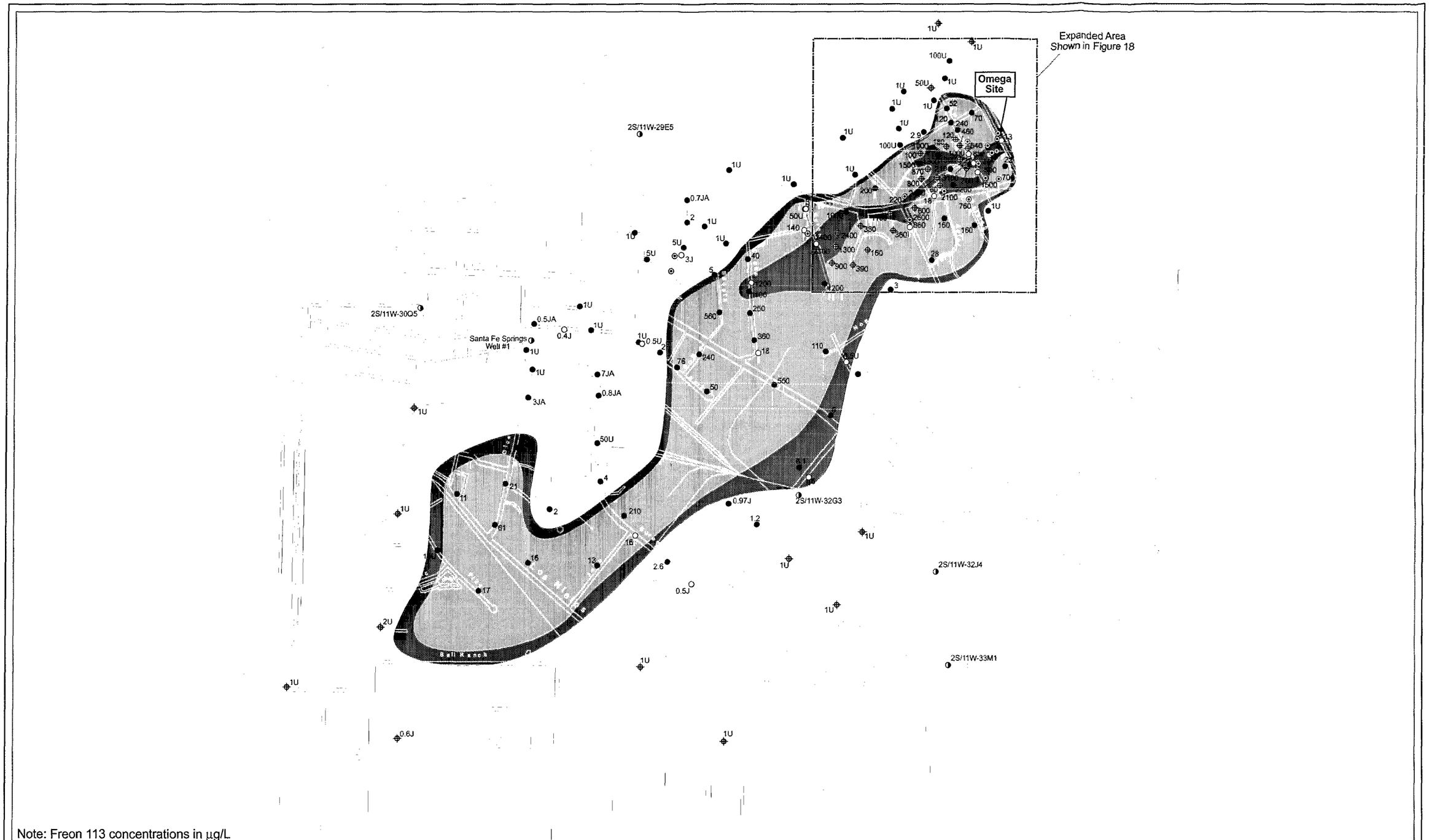
- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

WESTON SOLUTIONS

Figure 15

03-0116 Fig15.ai



Note: Freon 113 concentrations in µg/L

0 600 1200
Scale in Feet

- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Groundwater Freon 113 Concentrations
Omega Superfund Site

Figure
16

03-0116 Fig16.ai

Groundwater Freon 113 Concentrations—Omega Vicinity
Omega Superfund Site

N

0 200 400

Scale in Feet

WESTON SOLUTIONS

- Phase I CPT Well
- Historical CPT Well
- Existing Monitoring Well and Number
- Production Well and Number
- Phase II Explorations

- 5 - 9 µg/L
- 10 - 99 µg/L
- 100 - 999 µg/L
- 1,000 - 9,999 µg/L
- 10,000 + µg/L

Figure 17

03-0116 Fig17.ai

TABLES

Table 1 - Summary of Push Probe, Boring, and Monitoring Well Exploration Data								
Boring ID	Date of Completion	Surface Elevation (ft MSL)	Boring Depth (ft bgs)	Lithologic or CPT Data	Water Sample	Water Sample Depth (ft bgs)	PID (ppm)	Water Level (ft bgs)
PP001	8/16/2001	214.6	86	CPT-1	Yes	84	--	--
PP002	8/15/2001	224.3	85	CPT-2	Yes	84	--	71
PP003	8/17/2001	217.2	94	No	Yes	94	--	92
PP004	8/22/2001	191.6	88	No	Yes	86	--	86
PP006	8/16/2001	181.2	81	CPT-6	Yes	72	0	62
PP007	8/15/2001	207.9	83	No	Yes	81	--	68
PP008	8/16/2001	210.3	72	No	Yes	70	--	60
PP009	8/18/2001	147.8	49	No	Yes	47	0	36
PP010	8/18/2001	147.0	47	CPT-10	Yes	45	0.8	28
PP011	8/16/2001	166.2	74	CPT-11	Yes	59	--	52
PP011	8/16/2001	166.2	74	CPT-12	Yes	72	--	52
PP012	8/16/2001	165.1	65	No	Yes	63	--	45
PP013	8/16/2001	176.9	58	CPT-13	Yes	56	0	45
PP014	8/21/2001	174.6	54	No	Yes	52	0.2	44
PP015	8/15/2001	188.1	88	CPT-15	Yes	84	0	61
PP016	8/16/2001	194.5	82	No	Yes	80	--	81
PP017	8/18/2001	160.1	63	CPT-17	Yes	56	0.2	40
PP018	8/20/2001	154.3	60	No	Yes	58	0.2	40
PP019	8/20/2001	148.1	60	No	Yes	58	0.8	48
PP020	8/17/2001	165.2	75	CPT-20	Yes	50	0	50
PP020	8/17/2001	165.2	75	CPT-20	Yes	73	0	50
PP021	8/17/2001	168.2	60	No	Yes	58	0.5	33
PP022	8/17/2001	168.3	68	CPT-22	Yes	58	0	30
PP023	8/17/2001	138.1	64	CPT-23	Yes	63	0.5	30
PP024	8/17/2001	150.5	60	No	Yes	58	1.2	28
PP025	8/17/2001	147.6	52	No	Yes	50	--	25
PP026	8/17/2001	171.0	43	No	Yes	41	--	24
PP029	8/21/2001	142.6	47	CPT-29	Yes	45	0.2	25
PP032	8/21/2001	144.3	64	No	Yes	62	0.5	40
PP033	8/20/2001	138.3	40	CPT-33	Yes	38	0.8	34
PP034	8/20/2001	137.3	36	CPT-34	Yes	33	0.8	28
PP035	8/21/2001	142.9	38	No	Yes	36	0.2	28
PP036	8/20/2001	149.9	54	No	Yes	52	4.5	28
PP037	8/20/2001	145.4	45	No	Yes	43	0.2	26
PP038	8/21/2001	146.8	75	CPT-38	Yes	73	0.2	64
PP039	8/20/2001	139.9	35	CPT-39	Yes	33	--	22
PP040	8/21/2001	148.9	64	CPT-40	Yes	62	0.5	46
PP041	8/18/2001	173.3	72	CPT-41	Yes	65	0.2	54
PP042	8/20/2001	193.9	63	CPT-42	No	--	--	53
PP043	8/22/2001	148.8	53	No	Yes	51	--	36
PP044	8/22/2001	145.5	53	No	Yes	51	0.5	24
PP045	8/21/2001	144.6	54	No	Yes	52	--	27
PP046	8/22/2001	114.1	52	CPT-46	Yes	47	1.1	26
PP047	8/22/2001	157.0	50	No	Yes	48	0.5	28
PP048	8/22/2001	226.8	101	No	Yes	99	0.5	98
PP049	8/23/2001	151.4	65	No	Yes	63	0.8	45
PP050	8/23/2001	146.5	75	No	Yes	72	--	36
PP051	8/23/2001	135.3	57	No	Yes	55	0.2	43
PP052	8/23/2001	137.6	74	CPT-52	Yes	55	--	27
PP053	8/23/2001	137.0	51	No	Yes	49	0	25
PP054	8/23/2001	148.5	64	No	Yes	54	0	46
PP055	8/23/2001	158.6	67	No	Yes	65	0	45

Notes:

For OW and MW wells, screened interval is shown for water sample depth.

For OW and MW wells, PID and depth to water measurements are for May 2002.

Table 1 - Summary of Push Probe, Boring, and Monitoring Well Exploration Data								
Boring ID	Date of Completion	Surface Elevation (ft MSL)	Boring Depth (ft bgs)	Lithologic or CPT Data	Water Sample	Water Sample Depth (ft bgs)	PID (ppm)	Water Level (ft bgs)
PP056	8/23/2001	167.2	60	No	Yes	58	0.2	--
PP057	9/4/2001	153.2	70	CPT-57	Yes	62	0	47
PP058	9/4/2001	154.7	66	No	Yes	64	0	55
PP059	9/4/2001	158.6	94	CPT-59	Yes	63	0	59
PP060	9/4/2001	145.7	67	No	Yes	65	2	32
PP061	9/4/2001	142.9	67	No	Yes	65	0	59
PP062	9/4/2001	144.6	40	No	Yes	38	0	24
PP063	10/29/2001	141.3	103	CPT-63	Yes	59	0	23
PP064	10/29/2001	153.3	63	No	Yes	61	0	52
PP065	10/29/2001	158.0	71	CPT-65	Yes	69	218	61
PP066	10/29/2001	159.5	67	CPT-66	Yes	65	0.4	50
PP067	10/30/2001	158.9	48	No	Yes	46	0	25
PP068	10/30/2001	151.0	60	No	Yes	58	0	47
PP069	10/30/2001	140.6	90	CPT-69	Yes	60	0	52
PP070a	10/30/2001	223.4	80	No	No	--	--	--
PP070b	10/30/2001	241.1	87	No	No	--	--	--
PP070c	10/30/2001	234.0	107	CPT-70	Yes	93	0	84
PP071	10/30/2001	210.5	86	No	Yes	84	0	69
PP072	10/30/2001	208.7	90	No	Yes	88	0	73
PP073	10/31/2001	188.9	92	No	Yes	87	0	55
PP074	10/31/2001	152.1	87	CPT-74	Yes	60	0	60
PP075	10/31/2001	155.0	50	No	Yes	48	0	37
PP076a	10/31/2001	144.6	38	No	No	--	--	--
PP076b	10/31/2001	152.9	40	No	No	--	--	--
PP076	11/1/2001	161.7	59	No	Yes	56	0	32
PP077	11/1/2001	152.6	65	No	Yes	60	0	32
PP078	11/1/2001	195.8	83	No	Yes	81	0	75
PP079	11/1/2001	217.1	90	No	Yes	88	0	84
PP080	11/1/2001	199.7	81	No	Yes	71	0	--
PP081	11/1/2001	192.5	82	CPT-81	Yes	71	0	68
PP082	11/1/2001	222.9	90	No	Yes	80	0	90
PP083	11/2/2001	193.7	90	No	Yes	82	0	67
PP084	11/2/2001	132.9	55	No	Yes	47	0	26
PP085	11/2/2001	144.9	44	No	Yes	38	0	21
B086	8/13/2002	153	55	B086	Yes	53	2.4	52
B087	8/14/2002	157	66	B087	Yes	64	--	61
B088	8/14/2002	153	71	B088	Yes	69	--	66
B089	8/15/2002	145	68	B089	Yes	68	1.9	67
B090	8/15/2002	150	75	B090	Yes	70	0.9	69
PP091	8/9/2002	158	75	CPT-91	Yes	71	0.6	61
PP092	8/14/2002	156	60	CPT-92	Yes	56	0.3	48
PP093	8/9/2002	143	72	No	Yes	70	0.6	55
PP094	8/9/2002	144	72	CPT-94	Yes	70	1	59
PP095	8/14/2002	143	50	CPT-95	Yes	46	0.6	50
B096	8/6/2003	228	95	B096	Yes	93	0	89
B097	8/5/2002	236	104	B097	Yes	101	0	101
B098	8/6/2002	216	88	B098	Yes	83	6.9	82
B099	8/7/2003	205	73	B099	Yes	71	61	73
B100	8/6/2002	205	73	B100	Yes	72	51	71
B101	8/15/2002	199	76	B101	Yes	72	99	72
B102	8/15/2002	206	78	B102	Yes	76	6.8	76
B103	8/13/2002	192	67	B103	Yes	66	--	66

Notes:

For OW and MW wells, screened interval is shown for water sample depth.

For OW and MW wells, PID and depth to water measurements are for May 2002.

Table 1 - Summary of Push Probe, Boring, and Monitoring Well Exploration Data								
Boring ID	Date of Completion	Surface Elevation (ft MSL)	Boring Depth (ft bgs)	Lithologic or CPT Data	Water Sample	Water Sample Depth (ft bgs)	PID (ppm)	Water Level (ft bgs)
B104	8/12/2002	188	70	B104	Yes	65	0.4	63
B105	8/12/2002	183	73	B105	Yes	68	0	62
PP106	8/9/2002	189	70	No	Yes	65	0.6	62
B107	8/7/2002	187	69	B107	Yes	69	0.2	65
B108	8/16/2002	200	71	B108	Yes	66	191	67
B109	8/8/2002	199	73	B109	Yes	70	0	65
B110	8/8/2002	198	73	B110	Yes	71	1.5	67
PP111	8/9/2002	178	65	No	Yes	63	10	53
PP112	8/16/2002	171	65	CPT-112	Yes	63	0.3	29
PP113	8/16/2002	170	65	No	Yes	63	0.3	40
PP114	8/16/2002	163	65	No	Yes	63	0.3	57
PP115	8/16/2002	160	50	CPT-115	Yes	48	0.3	31
PP116	8/16/2002	158	65	No	Yes	61	0.6	33
PP117	8/8/2002	158	55	No	Yes	53	0.6	32
PP118	8/8/2002	157	57	No	Yes	55	1.3	46
PP119	8/8/2002	156	60	No	Yes	58	1	38
OW1A	6/4/1996	210	80	OW1	Yes	63-78	86	75
OW1B	6/18/1999	207	132	OW1B	Yes	110-120	0.9	75
OW2	6/17/1999	203	87	OW2	Yes	60-80	68	68
OW3	6/15/1999	199	87	OW3	Yes	63-83	164	64
OW4A	3/15/2001	185	80	OW4A	Yes	50-70	0.6	56
OW4B	3/28/2001	185	132	OW4B	Yes	112-122	0	61
OW5	8/6/2001	155	52	OW5	Yes	30-50	7.1	28
OW6	3/16/2001	173	62	OW6	Yes	38-58	8.2	45
OW7	3/13/2002	215	92	OW7	Yes	71-91	14.4	75
OW8	3/13/2002	201	81	OW8	Yes	60-80	219	66
MW01A	12/11/2001	158.35	60	MW01A	Yes	45-60	0.7	32
MW01B	12/27/2001	158.26	95	MW01B	Yes	75-85	5.3	31
MW02A	12/12/2001	154.94	60	MW02A	Yes	45-60	6.5	28
MW03A	12/12/2001	152.28	51	MW03A	Yes	38-48	0.1	27
MW04A	12/10/2001	147.39	53	MW04A	Yes	43-53	0.5	24
MW04B	12/18/2001	147.40	125	MW04B/C	Yes	70-80	0.3	24
MW04C	12/18/2001	147.39	125	MW04B/C	Yes	89-99	0	25
MW05A	12/10/2001	151.78	53	MW05A	Yes	43-53	12.7	26
MW06A	12/13/2001	150.77	48	MW06A	Yes	37-47	0	26
MW07A	12/12/2001	143.94	46	MW07A	Yes	36-46	1.6	21
MW08A	12/17/2001	150.47	45	MW08A	Yes	30-45	1.3	27
MW08B	12/26/2001	150.35	93	MW08B/C	Yes	65-75	0	27
MW08C	12/26/2001	150.35	93	MW08B/C	Yes	87-92	0	28
MW08D	12/19/2001	150.17	150	MW08D	Yes	110-120	0.2	32
MW09A	12/28/2001	149.51	90	MW09A/B	Yes	25-35	0.1	26
MW09B	12/14/2001	149.56	65	MW09B	Yes	50-60	0.4	30
MW10A	12/18/2001	147.82	65	MW10A	Yes	52-62	0.6	31
MW11A	12/13/2001	151.51	55	MW11A	Yes	40-50	0.6	35

Notes:

For OW and MW wells, screened interval is shown for water sample depth.

For OW and MW wells, PID and depth to water measurements are for May 2002.

Table 2 - Summary of Groundwater Analytical Data - PCE, TCE, 1,1-DCE, cis-DCE, Chloroform, Freon 11, Freon 113

Boring Number	Sample ID	Sample Date	Sample Depth (ft bgs)	PCE Tetrachloroethene (ug/L)	TCE Trichloroethene (ug/L)	1,1-DCE 1,1-Dichloroethene (ug/L)	cis-DCE cis-1,2-Dichloroethene (ug/L)	Chloroform (ug/L)	Freon 11 Trichlorofluoromethane (ug/L)	Freon 113 Chlorofluorocarbon-113 (ug/L)
PP001	GW301-PP001-0084	8/16/2001	84	60	600	50	50 U	50 U	50 U	50 U
PP002	GW301-PP002-0084	8/15/2001	84	420	1 JA	5 U	5 U	5 U	32	120
PP003	GW301-PP003-0094	8/17/2001	94	10 U	6 JA	10 U	10 U	10 U	10	70
PP004	GW301-PP004-0086	8/22/2001	86	150	70	100	25 U	25 U	70	210
PP006	GW301-PP006-0070	8/16/2001	70	1100	70 JA	100 U	100 U	100 U	100 U	100 U
PP007	GW301-PP007-0081	8/15/2001	81	10	1 U	1 U	1 U	1 U	25	22
PP008	GW301-PP008-0070	8/16/2001	70	400	600	500	17	10 U	400	1500
PP009	GW301-PP009-0047	8/18/2001	47	11	12	1 U	1 U	1 U	0.5 JA	1 U
PP010	GW301-PP010-0045	8/18/2001	45	1 U	1	1 U	1 U	1 U	1 U	1 U
PP011	GW301-PP011-0059	8/16/2001	59	8	23	2	1 U	25 U	1 U	1 U
PP011	GW301-PP011-0072	8/16/2001	72	40	370	40	25 U	1 U	25 U	25 U
PP012	GW301-PP012-0063	8/16/2001	63	140	1300	70	230	10 U	70	220
PP013	GW301-PP013-0056	8/16/2001	56	6 UJA	10 U	20	10 U	10 U	180	160
PP014	GW301-PP014-0052	8/21/2001	52	6	2 U	7	2 U	2 U	11	28
PP015	GW301-PP015-0084	8/15/2001	84	2	1 U	0.9 JA	1 U	1 U	140	160
PP016	GW301-PP016-0080	8/16/2001	80	1 U	1 U	1 U	1 U	1 U	4	5
PP017	GW301-PP017-0056	8/18/2001	56	700	1300	400	200	100 U	300	1000
PP018	GW301-PP018-0058	8/20/2001	58	23	1 U	0.8 JA	1 U	1 U	1	3
PP019	GW301-PP019-0058	8/20/2001	58	60	14	60	1 U	2	40	110
PP020	GW301-PP020-0050	8/17/2001	50	260	720	150	50 U	25 U	120	360
PP020	GW301-PP020-0073	8/17/2001	73	160	410	60	25 U	50 U	100	250
PP021	GW301-PP021-0058	8/17/2001	58	170	800	90	10 JA	50 U	80	250
PP022	GW301-PP022-0058	8/17/2001	58	40	210	10	10 U	10 U	7 JA	40
PP023	GW301-PP023-0063	8/17/2001	63	1000	200	900	100 U	100	500	1200
PP024	GW301-PP024-0058	8/17/2001	58	4500	1100	2300	250 U	1100	800	2300
PP025	GW301-PP025-0050	8/17/2001	50	17	98	5 JA	5 U	5 U	5 U	5
PP026	GW301-PP026-0041	8/17/2001	41	500	950	300	40 J	80	160	560
PP029	GW301-PP029-0045	8/21/2001	45	1	1 U	1 U	1 U	1 U	1 U	1 U
PP032	GW301-PP032-0062	8/21/2001	62	140	60	6 JA	6 JA	10 U	10 U	7 JA
PP033	AW301-PP033-0038	8/20/2001	38	400	70	12	13	0.8 J	1 U	1 U
PP034	GW301-PP034-0033	8/20/2001	33	42	80	13	5 U	5	24	76
PP035	GW301-PP035-0036	8/21/2001	36	50	180	30	25 U	25 U	20 JA	50
PP036	GW301-PP036-0052	8/20/2001	52	160	460	90	20 JA	20 J	60	240
PP037	GW301-PP037-0043	8/20/2001	43	4	0.6 JA	1 U	1 U	1 U	1 U	1 U
PP038	GW301-PP038-0073	8/21/2001	73	1	1	0.6 JA	1 U	1 U	1 U	0.5 JA
PP039	GW301-PP039-0033	8/20/2001	33	16	1	2	1 U	1 U	1 U	1 U
PP040	GW301-PP040-0062	8/21/2001	62	1 U	2	1 U	1 U	1 U	1 U	1 U
PP041	GW301-PP041-0065	8/18/2001	65	1	3	1 U	1 U	1 U	1 U	1 U
PP043	GW301-PP043-0051	8/22/2001	51	1500	800	1300	100 U	300	400	1100
PP044	GW301-PP044-0051	8/22/2001	51	66	14	5 U	44	5 U	5 U	5 U
PP045	GW301-PP045-0052	8/21/2001	52	4	10	1 U	1 U	0.9 J	1 U	1 U

A - Value is less than Quantitation Limit.

J - The amount detected is an estimated value.

U - This compound was analyzed for, but not detected.

Table 2 - Summary of Groundwater Analytical Data - PCE, TCE, 1,1-DCE, cis-DCE, Chloroform, Freon 11, Freon 113

Boring Number	Sample ID	Sample Date	Sample Depth (ft bgs)	PCE Tetrachloroethene (ug/L)	TCE Trichloroethene (ug/L)	1,1-DCE 1,1-Dichloroethene (ug/L)	cis-DCE cis-1,2-Dichloroethene (ug/L)	Chloroform (ug/L)	Freon 11 Trichlorofluoromethane (ug/L)	Freon 113 Chlorofluorocarbon-113 (ug/L)
PP046	GW301-PP046-0047	8/22/2001	47	2	2	1 U	1 U	1 U	1 U	2
PP047	GW301-PP047-0048	8/22/2001	48	1	1	1 U	1 U	1 U	1 U	0.7 JA
PP048	GW301-PP048-0099	8/22/2001	99	100 U	900	100 U	100 U	100 U	100 U	100 U
PP049	GW301-PP049-0065	8/23/2001	65	30 JA	190	50 U	50 U	50 U	50 U	50 U
PP050	GW301-PP050-0072	8/23/2001	72	290	90	50 U	50 U	50 U	50 U	50 U
PP051	GW301-PP051-0055	8/23/2001	55	1	1 U	1 U	1 U	1 U	1 U	1 U
PP052	GW301-PP052-0055	8/23/2001	55	5	7	0.5 JA	1 U	1 U	1 U	0.8 JA
PP053	GW301-PP053-0049	8/23/2001	49	22	0.6 JA	1 U	1 U	1 U	2	6
PP054	GW301-PP054-0062	8/23/2001	62	2	24	1 U	1 U	1 U	1 U	1 U
PP055	GW301-PP055-0065	8/23/2001	65	120	62	5 U	5 U	5 U	5 U	3 JA
PP056	GW301-PP056-0058	8/23/2001	58	58	72	8	5 U	5 U	6	7
PP057	GW301-PP057-0062	9/4/2001	62	110	40	8	10	1 U	0.7 JA	2
PP058	GW301-PP058-0064	9/4/2001	64	3300	780	2900	1400	9	61	61
PP059	GW301-PP059-0063	9/4/2001	63	80	48	10	18	3	13	16
PP060	GW301-PP060-0065	9/4/2001	65	150	190	42	6	1	110	210
PP061	GW301-PP061-0065	9/4/2001	65	46	18	4	3	2	2	4
PP062	GW301-PP062-0038	9/4/2001	38	250	25	13	1	2	0.5 JA	2
PP063	GW401-PP063-0059	10/29/2001	59	5.9	1.7	1 U	1 U	0.29 J	1 U	0.97 J
PP064	GW401-PP064-0061	10/29/2001	61	45	32	4.6	3	0.52 J	7.9	13
PP065	GW401-PP065-0069	10/29/2001	69	86	70	630	44	5.4 J	10 U	10 U
PP066	GW401-PP066-0065	10/29/2001	65	850	540	1300	550	7.5 J	19	17
PP067	GW401-PP067-0046	10/30/2001	46	540	8.8	12	5 U	1.2 J	5 U	5 U
PP068	GW401-PP068-0058	10/30/2001	58	45	46	13	5 U	1 J	3.1 J	5.9
PP069	GW401-PP069-0060	10/30/2001	60	200	110	380	340	1.1 J	11	21
PP070	GW401-PP070-0093	10/30/2001	93	0.28 J	29	1.8	1 U	1 U	1 U	1 U
PP071	GW401-PP071-0084	10/30/2001	84	6.1	35	5.4	1 U	0.63 J	6.7	52
PP072	GW401-PP072-0088	10/30/2001	88	400	78 E	7.2	0.54 J	0.26 J	65	240
PP073	GW401-PP073-0087	10/31/2001	87	420	250	740	50 U	26 J	600	2200 U
PP074	GW401-PP074-0072	10/31/2001	72	35	46	37	19	0.63 J	4.9	11
PP075	GW401-PP075-0048	10/31/2001	48	5.5	2	0.4 J	1 U	1.2	1 U	1 U
PP076	GW401-PP076-0056	11/1/2001	56	32	11	1 U	0.84 J	0.4 J	1 U	1.2 U
PP077	GW401-PP077-0060	11/1/2001	60	34	16	0.21 J	0.88 J	0.54 J	0.48 J	2.6
PP078	GW401-PP078-0081	11/1/2001	81	2300	240	120	1.6	1.5	310	1000
PP079	GW401-PP079-0088	11/1/2001	88	8.8	240	4.3	1 U	0.61 J	0.66 J	2.9
PP080	GW401-PP080-0071	11/1/2001	71	5.1	1 U	1 U	1 U	1 U	1 U	1 U
PP081	GW401-PP081-0071	11/1/2001	71	22	1 U	1 U	1 U	1 U	1 U	1 U
PP082	GW401-PP082-0080	11/1/2001	80	2.8	1 U	1 U	1 U	1 U	1 U	1 U
PP083	GW401-PP083-0082	11/2/2001	82	460	310	800	0.28 J	1.1	390	1300
PP084	GW401-PP084-0047	11/2/2001	47	320	250	280	5.7	4.6	240	550
PP085	GW401-PP085-0038	11/2/2001	38	53	17	1 U	1.2	0.36 J	1 U	6.1
B086	GW302-B086-0053		53	34 J	11	2	1 U	1 U	1 U	1 U

A - Value is less than Quantitation Limit.

J - The amount detected is an estimated value.

U - This compound was analyzed for, but not detected.

Table 2 - Summary of Groundwater Analytical Data - PCE, TCE, 1,1-DCE, cis-DCE, Chloroform, Freon 11, Freon 113

Boring Number	Sample ID	Sample Date	Sample Depth (ft bgs)	PCE Tetrachloroethene (ug/L)	TCE Trichloroethene (ug/L)	1,1-DCE 1,1-Dichloroethene (ug/L)	cis-DCE cis-1,2-Dichloroethene (ug/L)	Chloroform (ug/L)	Freon 11 Trichlorofluoromethane (ug/L)	Freon 113 Chlorofuorocarbon-113 (ug/L)
B087	GW302-B087-0064		64	38	6	2	1 U	1 U	1 U	1 U
B088	GW302-B088-0069		69	4	6	2 J	2 U	2 J	2 U	2 U
B089	GW302-B089-0068		68	11	15	8	1	1 U	1 U	1 U
B090	GW302-B090-0070		70	27	32	120	4	3	1 U	1 J
PP091	GW302-PP091-0071		71	5	2	1 U	1 J	1 U	1 U	1 U
PP092	GW302-PP092-0056		56	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PP093	GW302-PP093-0070		70	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PP094	GW302-PP094-0070		70	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PP095	GW302-PP095-0046		46	1 U	1 U	1 U	1 U	0.5 J	1 U	1 U
B096	GW302-B096-0093		93	1 U	1 U	1 U	1 U	1 U	1 U	1 U
B097	GW302-B097-0101		101	1 U	1 U	5	1 U	1 U	1 U	1 U
B098	GW302-B098-0083		83	70	660	50	50 U	50 U	50 U	50 U
B099	GW302-B099-0071		71	290	200	70	20 U	20 U	170	460
B100	GW302-B100-0072		72	630	190	640	20 U	20 U	410	690
B101	GW302-B101-0072		72	1300	210	180	10 U	10 U	330	1400
B102	GW302-B102-0076		76	460	120	120	5 U	5 U	200	820
B103	GW302-B103-0066		66	600	7000	100	1500	100 U	200	300
B104	GW302-B104-0065		65	1600	320	870	50 U	50 U	480	1300
B105	GW302-B105-0068		68	2800	400	800	10	500	170	300
PP106	GW302-PP106-0065		65	15000	1800	2400	50 U	3000	600	1100
B107	GW302-B107-0069		69	1300	440	600	20 U	500	60	40
B108	GW302-B108-0066		66	5100	500	1900	500 U	220	600	1800
B109	GW302-B109-0070		70	53000	2100	3100	100 U	500 U	800	1700
B110	GW302-B110-0071		71	8000	1100	2000	100 U	2400	300	500
PP111	GW302-PP111-0063		63	370	50	600	50 U	30 J	360	870
PP112	GW302-PP112-0063		63	740	130	1100	50 U	80	420	1100
PP113	GW302-PP113-0063		63	270	50	360	20 U	20 U	210	470
PP114	GW302-PP114-0063		63	180	40	330	20 U	10 J	200	480
PP115	GW302-PP115-0048		48	100	20	160	20 U	20 U	220	430
PP116	GW302-PP116-0061		61	330	70	390	50 U	30 J	280	610
PP117	GW302-PP117-0053		53	5100	900	2400	100 U	900	900	2000
PP118	GW302-PP118-0055		55	1200	200	1300	100 U	200	600	1300
PP119	GW302-PP119-0058		58	600	200	900	100 U	100 U	600	1300

Notes:

A: Value is less than the quatitation limit.

J: The amount detected is an estimated value.

U: This compound was analyzed for, but not detected.

A - Value is less than Quantitation Limit. J - The amount detected is an estimated value. U - This compound was analyzed for, but not detected.

Table 3 - Statistical Summary of Phase 1 and 2 Groundwater Analytical Data

Compound	Mean (ug/L)	Median (ug/L)	Standard Deviation (ug/L)	GeoMean (ug/L)	Minimun Detected Conc. (ug/L)	Maximun Detected Conc. (ug/L)	Number Detections	Number Samples	% Detected
1,1,1-Trichloroethane	90.4	13.5	150.8	14.80	0.90	400.00	8	102	7.8
1,1,2-Trichloroethane	4.0	4.0	--	4.00	4.00	4.00	1	102	1.0
1,1-Dichloroethane	47.3	10.0	70.0	10.80	0.50	240.00	18	127	14.2
1,1-Dichloroethene	421.5	70.0	709.3	59.90	0.20	3100.00	89	127	70.1
1,2,4-Trimethylbenzene	17.0	17.0	--	17.00	17.00	17.00	1	25	4.0
1,2-Dichloroethane	86.1	5.6	207.1	6.00	0.20	900.00	20	127	15.7
1,2-Dichloropropane	22.5	22.5	2.1	22.40	21.00	24.00	2	45	4.4
1,3,5-Trimethylbenzene	3.4	3.4	--	3.40	3.40	3.40	1	25	4.0
2-Butanone	3.0	3.0	--	3.00	3.00	3.00	1	25	4.0
Acetone	158.7	53.0	248.9	43.10	3.00	700.00	11	63	17.5
Benzene	0.6	0.6	0.3	0.50	0.20	1.00	5	127	3.9
Carbon Tetrachloride	0.5	0.3	0.4	0.40	0.24	0.99	3	127	2.4
Chlorobenzene	0.7	0.7	--	0.70	0.70	0.70	1	127	0.8
Chloroform	198.0	2.0	556.0	6.80	0.30	3000.00	54	127	42.5
cis-1,2-Dichloroethene	141.0	10.0	345.4	13.00	0.30	1500.00	36	127	28.3
Methylene Chloride	1900.0	1900.0	266.0	55.00	0.80	3800.00	2	102	2.0
m,p-xylenes	7.0	7.0	--	7.00	7.00	7.00	1	127	0.4
n-Butylbenzene	5.2	5.2	--	5.20	5.20	5.20	1	25	4.0
sec-butylbenzene	4.2	4.2	--	4.20	4.20	4.20	1	25	4.0
Tetrachloroethene	1169.0	110.0	5280.0	87.40	0.30	53000.00	113	127	89.0
Toluene	1.4	0.9	1.3	0.90	0.30	4.20	12	127	9.4
trans-1,2-Dichloroethene	13.5	1.8	25.2	2.90	0.30	80.00	10	127	7.9
Trichloroethene	331.7	72.0	759.9	67.80	0.50	7000.00	109	127	85.8
Trichlorofluoromethane	193.2	110.0	222.0	54.70	0.30	900.00	75	127	59.1
Trichlorotrifluoroethane	437.0	195.0	578.0	77.10	0.50	2300.00	86	127	67.7
Vinyl Chloride	7.1	5.2	3.4	6.60	5.10	11.00	3	127	2.4

Table 4-Summary of Push Probe, Boring and Monitoring Well Survey Data
Ground Surface Coordinates

Boring ID	CA State Plane, NAD 83, Zone 6-0406		UTM Coordinates, NAD-83, Zone 11		SurfaceElevation (ft)	Casing Elevation
	Easting (feet)	Northing (feet)	Easting (m)	Northing (m)	(NGVD-83)	(ft)
PP001	6017004.375	2301813.733	403329.424	3759485.806	214.6	--
PP002	6017258.040	2301503.281	403407.380	3759391.753	224.3	--
PP003	6017554.960	2301633.738	403497.573	3759432.139	217.2	--
PP004	6017248.180	2300852.455	403405.769	3759193.425	191.6	--
PP006	6016512.297	2301195.488	403180.810	3759296.372	181.2	--
PP007	6018044.686	2300884.116	403648.398	3759204.777	207.9	--
PP008	6016797.094	2300943.243	403268.128	3759220.122	210.3	--
PP009	6014967.904	2300661.035	402711.374	3759130.218	147.8	--
PP010	6014034.820	2300862.879	402426.630	3759189.724	147.0	--
PP011	6015856.574	2300784.337	402981.890	3759169.691	166.2	--
PP011	6015856.574	2300784.337	402981.890	3759169.691	166.2	--
PP012	6016146.963	2300593.123	403070.781	3759112.049	165.1	--
PP013	6017157.558	2300168.302	403379.621	3758984.768	176.9	--
PP014	6016969.156	2299580.978	403323.471	3758805.406	174.6	--
PP015	6017593.883	2300065.762	403512.789	3758954.458	188.1	--
PP016	6017799.269	2300267.672	403574.938	3759016.420	194.5	--
PP017	6015721.078	2300262.247	402941.721	3759010.319	160.1	--
PP018	6016369.637	2299174.704	403141.666	3758680.330	154.3	--
PP019	6015425.707	2298314.951	402855.889	3758416.341	148.1	--
PP020	6014392.178	2298481.006	402540.615	3758464.726	165.2	--
PP020	6014392.178	2298481.006	402540.615	3758464.726	165.2	--
PP021	6014329.112	2298857.636	402520.592	3758579.352	168.2	--
PP022	6014299.482	2299611.225	402509.951	3758808.909	168.3	--
PP023	6015412.560	2299263.847	402849.852	3758705.444	138.1	--
PP024	6015276.967	2299811.198	402807.365	3758871.933	150.5	--
PP025	6013821.722	2299401.425	402364.826	3758743.960	147.6	--
PP026	6013890.077	2298872.704	402386.785	3758583.003	171.0	--
PP029	6012654.257	2299992.579	402007.831	3758921.588	142.6	--
PP032	6012112.436	2298014.624	401846.969	3758317.739	144.3	--
PP033	6012710.988	2298460.877	402028.395	3758454.995	138.3	--
PP034	6013268.573	2298104.989	402199.054	3758347.748	137.3	--
PP035	6013709.989	2297765.041	402334.283	3758245.110	142.9	--
PP036	6013595.911	2298286.033	402298.408	3758403.613	149.9	--
PP037	6012024.429	2298635.328	401818.825	3758506.681	145.4	--
PP038	6011199.679	2298732.280	401567.314	3758534.458	146.8	--
PP039	6011861.875	2298968.184	401768.582	3758607.756	139.9	--
PP040	6011088.485	2298361.217	401534.226	3758421.156	148.9	--
PP041	6015677.405	2301299.881	402926.194	3759326.394	173.3	--
PP042	6016344.590	2301594.623	403128.855	3759417.631	193.9	--
PP043	6014311.023	2299162.464	402514.428	3758672.195	148.8	--
PP044	6012832.694	2299623.382	402062.991	3758809.474	145.5	--
PP045	6013987.020	2299837.607	402414.259	3758877.219	144.6	--
PP046	6013416.153	2300137.521	402239.673	3758967.382	114.1	--
PP047	6013420.334	2300447.516	402240.283	3759061.847	157.0	--
PP048	6017236.482	2302367.639	403398.962	3759655.078	226.8	--
PP049	6015122.857	2300310.601	402759.339	3759023.772	151.4	--
PP050	6012110.727	2297052.534	401848.508	3758024.584	146.5	--
PP051	6015894.192	2297992.436	402999.328	3758319.073	135.3	--
PP052	6012132.862	2297716.529	401853.831	3758226.953	137.6	--
PP053	6015493.660	2297418.918	402878.513	3758143.463	137.0	--
PP054	6011174.828	2298093.338	401561.109	3758339.717	148.5	--
PP055	6011113.967	2297698.558	401543.409	3758219.296	158.6	--
PP056	6010963.633	2296994.842	401499.108	3758004.550	167.2	--
PP057	6011421.931	2296139.309	401635.928	3758407.661	153.2	--
PP058	6010623.133	2295926.873	401397.642	3757678.407	154.7	--
PP059	6011106.117	2295388.026	401545.962	3757515.252	158.6	--
PP060	6012492.316	2296040.815	401966.945	3757717.126	145.7	--
PP061	6012155.022	2296517.517	401863.150	3757861.657	142.9	--
PP062	6013021.486	2298314.586	402123.318	3758411.084	145	--
PP063	6544565.965	1806252.594	402391.995	3757742.879	141.3	--

Boring ID	CA State Plane, NAD 83, Zone 6-0406		UTM Coordinates, NAD-83, Zone 11		SurfaceElevation (ft)	Casing Elevation
	Easting (feet)	Northing (feet)	Easting (m)	Northing (m)	(NGVD-83)	(ft)
PP064	6542922.736	1805544.867	401889.212	3757532.114	153.3	--
PP065	6540546.752	1805633.754	401165.525	3757566.246	158.0	--
PP066	6540970.055	1805230.588	401293.307	3757442.148	159.5	--
PP067	6543968.046	1809812.627	402220.376	3758829.378	158.9	--
PP068	6541077.120	1806991.342	401331.153	3757978.324	151.0	--
PP069	6541506.392	1806515.048	401460.537	3757831.925	140.6	--
PP070	6547742.151	1812274.558	403377.637	3759568.313	223.4	--
PP070A	6548153.265	1812742.074	403504.289	3759709.542	241.1	--
PP070B	6547490.699	1813109.801	403303.501	3759823.554	234.0	--
PP071	6547746.868	1811765.270	403377.562	3759413.122	210.5	--
PP072	6547926.742	1811465.428	403431.478	3759321.227	208.7	--
PP073	6547878.366	1810815.655	403414.809	3759123.388	188.9	--
PP074	6540964.012	1806253.859	401294.501	3757753.951	152.1	--
PP075	6544286.752	1810138.487	402318.452	3758927.720	155.0	--
PP076	6544990.361	1806143.008	402520.981	3757708.230	144.6	--
PP076A	6540074.306	1807670.230	401027.614	3758188.153	152.9	--
PP076B	6539899.147	1806482.397	400970.720	3757826.745	161.7	--
PP077	6543741.678	1805676.646	402139.130	3757569.837	152.6	--
PP078	6547515.560	1811255.271	403305.569	3759258.414	195.8	--
PP079	6547498.895	1811538.223	403301.332	3759344.678	217.1	--
PP080	6546972.391	1811806.669	403141.706	3759428.035	199.7	--
PP081	6547017.951	1811625.880	403155.051	3759372.814	192.5	--
PP082	6547127.186	1812016.644	403189.494	3759491.554	222.9	--
PP083	6547625.031	1811158.190	403338.636	3759228.509	193.7	--
PP084	6545564.656	1807963.067	402701.366	3758261.088	132.9	--
PP085	6545846.040	1806738.881	402783.470	3757887.250	144.9	--
Boring ID			UTM Coordinates, NAD-83, Zone 11		SurfaceElevation (ft)	Casing Elevation
	Longitude	Latitude	Easting (m)	Northing (m)	(NGVD-83)	(ft)
B086	-118.071173050	33.959561445	401053.426	3758188.450	153.000	--
B087	-118.071790537	33.956227939	400984.479	3757748.247	157.000	--
B088	-118.072624686	33.951421042	400911.521	3757273.761	153.000	--
B089	-118.076483836	33.948912398	400503.785	3757021.208	145.000	--
B090	-118.071782538	33.947032827	400988.606	3756804.155	150.000	--
PP091	-118.060390404	33.949991838	402041.924	3757104.379	158.000	--
PP092	-118.055819745	33.947239494	402409.090	3756792.998	156.000	--
PP093	-118.053254967	33.954038721	402689.028	3757560.800	143.000	--
PP094	-118.051053305	33.952533491	402898.982	3757372.146	144.000	--
PP095	-118.049818283	33.955145791	403125.164	3757630.784	143.000	--
B096	-118.046753997	33.974482897	403325.908	3759798.845	228.000	--
B097	-118.044614917	33.973533871	403470.664	3759716.405	236.000	--
B098	-118.046660312	33.971858253	403297.995	3759524.262	216.000	--
B099	-118.045392816	33.969904137	403435.350	3759303.499	205.000	--
B100	-118.045088740	33.969618472	403455.734	3759272.399	205.000	--
B101	-118.046146712	33.969605940	403364.315	3759281.145	199.000	--
B102	-118.045608491	33.969861616	403405.757	3759308.374	206.000	--
B103	-118.047208877	33.969264970	403246.713	3759249.030	192.000	--
B104	-118.046846141	33.968733416	403279.819	3759183.468	188.000	--
B105	-118.047003397	33.968271304	403253.205	3759144.520	183.000	--
PP106	-118.046431049	33.968465639	403318.767	3759150.362	189.000	--
B107	-118.046314798	33.968145598	403333.697	3759117.256	187.000	--
B108	-118.045334685	33.969095559	403433.686	3759216.889	200.000	--
B109	-118.045207599	33.968916771	403441.998	3759201.185	199.000	--
B110	-118.045062878	33.968699901	403448.594	3759189.310	198.000	--
PP111	-118.047212897	33.967331344	403224.324	3759022.622	178.000	--
PP112	-118.048912761	33.966971749	403118.185	3758999.763	171.000	--
PP113	-118.048633598	33.966568618	403131.168	3758929.008	170.000	--
PP114	-118.050017725	33.966536364	402991.605	3758950.429	163.000	--
PP115	-118.049715746	33.966075864	403020.166	3758849.165	160.000	--
PP116	-118.050405873	33.965045580	402958.499	3758785.550	158.000	--
PP117	-118.051150116	33.966252135	402890.683	3758920.895	158.000	--
PP118	-118.051338245	33.965853815	402881.293	3758860.543	157.000	--
PP119	-118.051493686	33.965431137	402863.587	3758793.856	156.000	--

Boring ID	CA State Plane, NAD 83, Zone 5-0405		UTM Coordinates, NAD-83, Zone 11		SurfaceElevation (ft)	Casing Elevation
	Easting (feet)	Northing (feet)	Easting (m)	Northing (m)	(NGVD-83)	(ft)
OW1A	4274702.0	4101351.3	403554.4	3759242.1	207.79	210.30
OW1B	4274666.4	4101331.7	403543.4	3759236.3	205.18	204.98
OW2	4274396.2	4101362.0	403461.2	3759246.6	201.40	200.10
OW3	427538.0	4101113.0	403503.4	3759170.1	196.88	196.33
OW4A	4273942.3	4100784.2	403320.6	3759071.9	182.73	182.47
OW4B	4273932.3	4100782.7	403317.6	3759071.9	182.63	182.22
OW5	4272058.3	4100291.9	402744.6	3758929.8	152.68	151.96
OW6	4273577.3	4100352.7	403207.7	3758942.3	170.94	170.54
OW7	4274466.7	4101548.4	403482.2	3759209.0	199.03	198.42
OW8	4274850.7	4101548.4	403600.4	3759301.6	213.34	212.01
Boring ID	CA State Plane, NAD 83, Zone 5-0405		UTM Coordinates, NAD-83, Zone 11		SurfaceElevation (ft)	Casing Elevation
	Easting (feet)	Northing (feet)	Easting (m)	Northing (m)	(NGVD-83)	(ft)
MW01A	1810463.95	6545699.98	402750.022	3759022.693	158.35	158.21
MW01B	1810455.70	6545700.32	402750.101	3759020.178	158.26	158.09
MW02A	1809964.58	6545867.74	402799.655	3758870.039	154.94	154.74
MW03A	1808348.66	6546316.93	402931.725	3758376.343	152.28	151.99
MW04A	1808423.50	6545021.69	402537.294	3758402.991	147.39	147.20
MW04B	1808429.39	6545029.86	402539.801	3758404.761	147.40	147.23
MW04C	1808429.24	6545030.08	402539.867	3758404.715	147.39	147.10
MW05A	1809423.29	6544954.77	402519.871	3758707.820	151.78	151.57
MW06A	1809792.84	6543947.29	402213.994	3758823.411	150.77	150.63
MW07A	1806750.60	6545809.21	402772.283	3757890.930	143.94	143.65
MW08A	1808596.87	6543338.71	402025.013	3758460.810	150.47	150.25
MW08B	1808587.09	6543350.61	402028.610	3758457.795	150.35	150.11
MW08C	1808587.20	6543350.14	402028.467	3758457.830	150.35	150.14
MW08D	1808601.04	6543327.15	402021.503	3758462.115	150.17	150.02
MW09A	1808749.19	6542302.52	401709.742	3758510.296	149.51	149.37
MW09B	1808748.33	6542310.17	401712.071	3758510.012	149.56	149.34
MW10A	1805921.36	6543347.18	402019.655	3757645.570	147.82	147.71
MW11A	1805271.75	6544162.15	402266.044	3757445.220	151.51	151.20

Notes:

CA State Plane, NAD 83, Zone 6 - 0406, U.S. Survey Feet

CA State Plane, NAD 83, Zone 5 - 0405, U.S. Survey Feet

UTM Coordinates, NAD 83, Zone 11, Meters

APPENDIX A

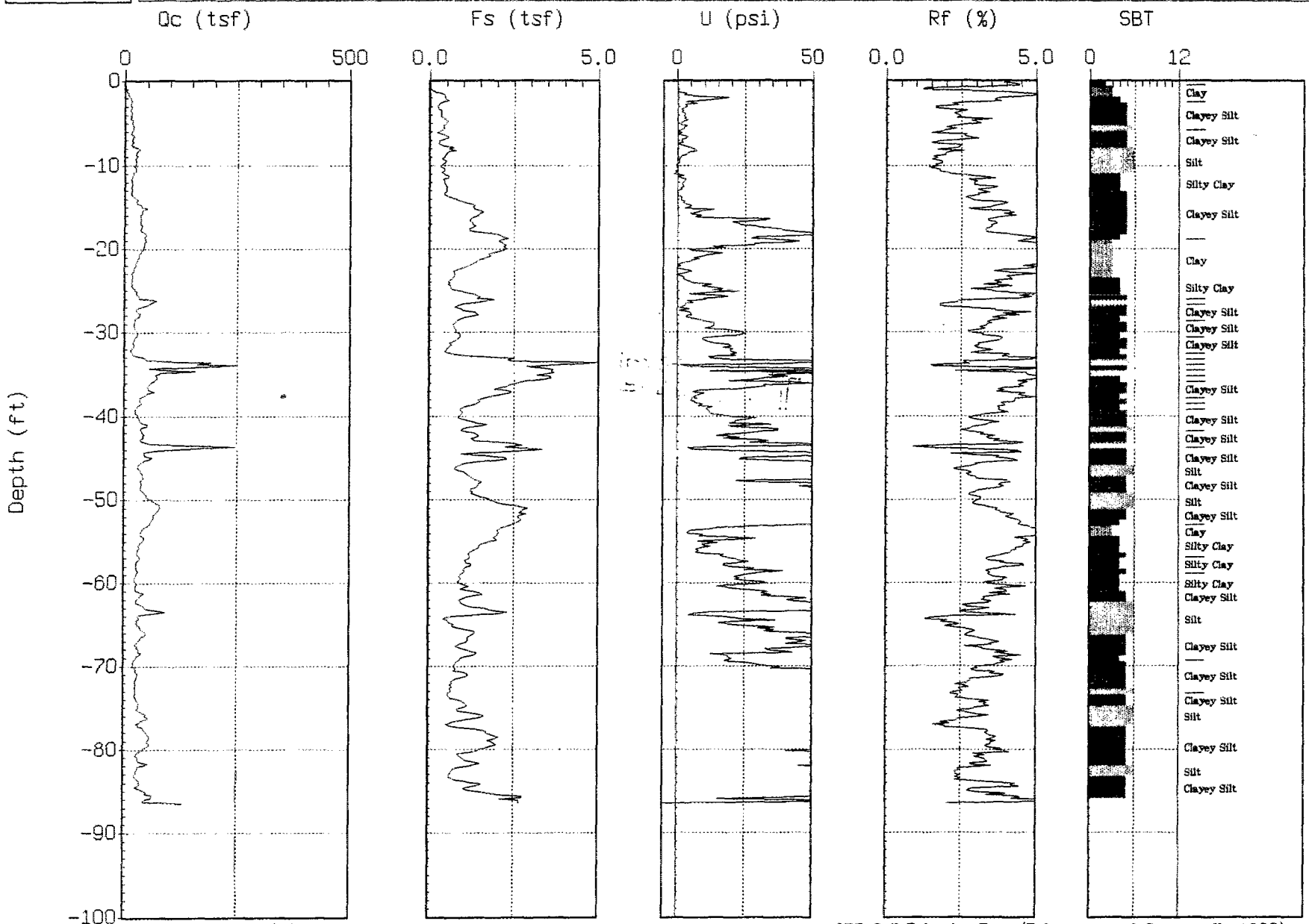
CPT BORING LOGS

GREGG

WESTON INC.

Site : OMEGA
Location : CPT-1

ENGINEER: B. CLARKE
Date : 08:16:01 13:24



Max. Depth: 86.45 (ft)

Depth Inc.: 0.164 (ft)

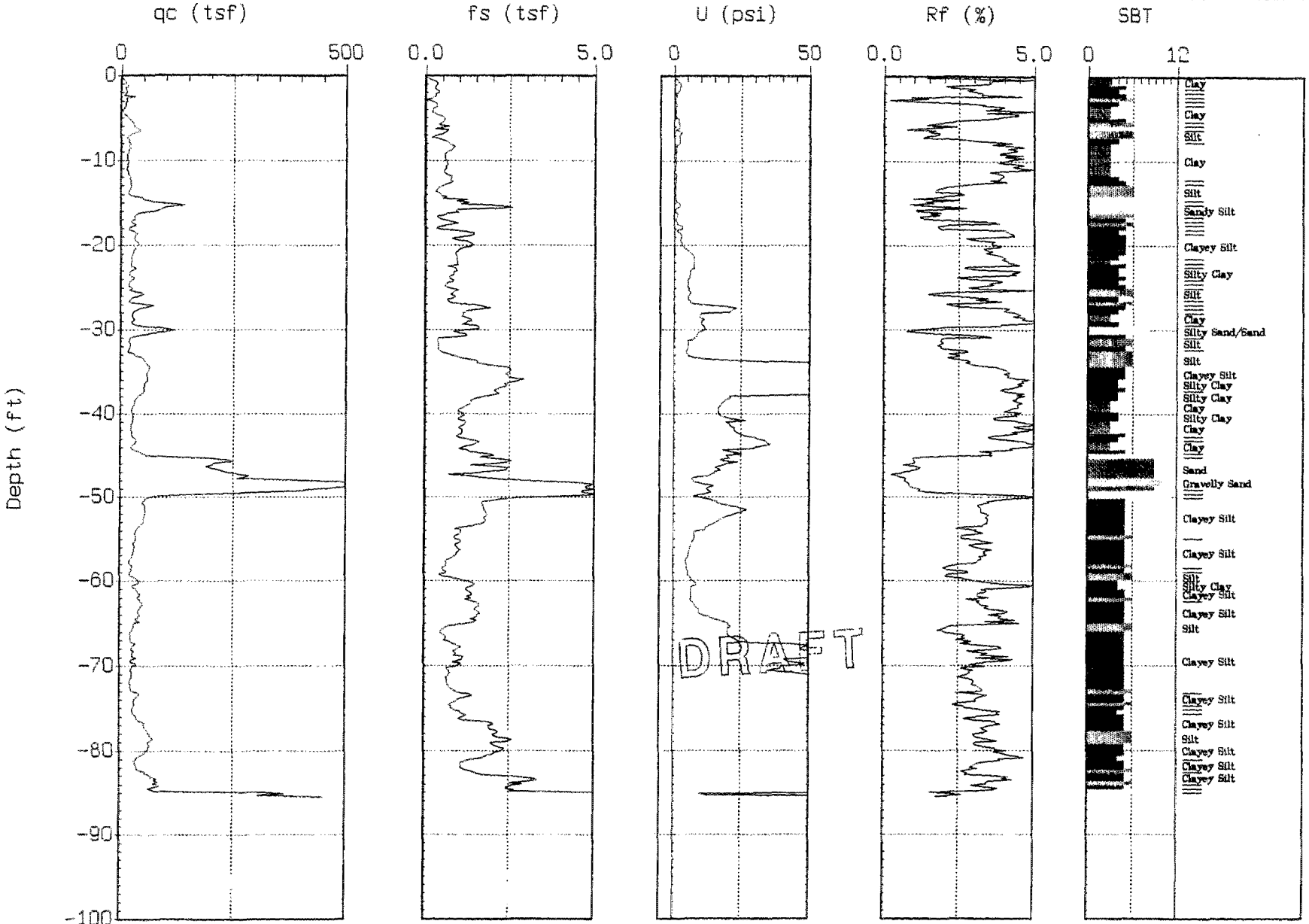
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-2

Geologist : B.CLARKE
Date : 08:15:01 23:33



Max. Depth: 85.46 (ft)

Depth Inc.: 0.164 (ft)

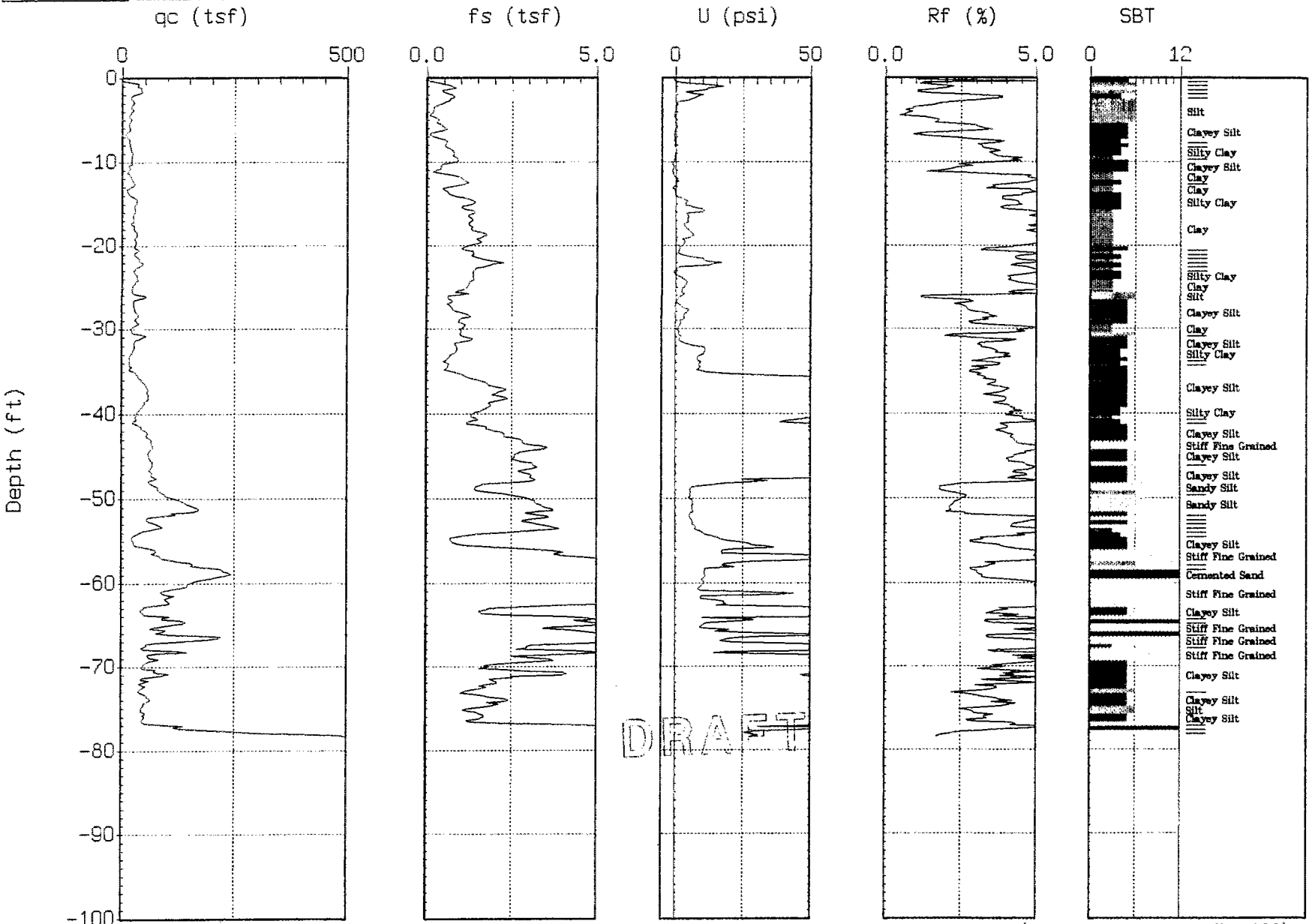
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-6

Geologist : B.CLARKE
Date : 08:16:01 22:13



DRAFT

Max. Depth: 78.41 (ft)

Depth Inc.: 0.164 (ft)

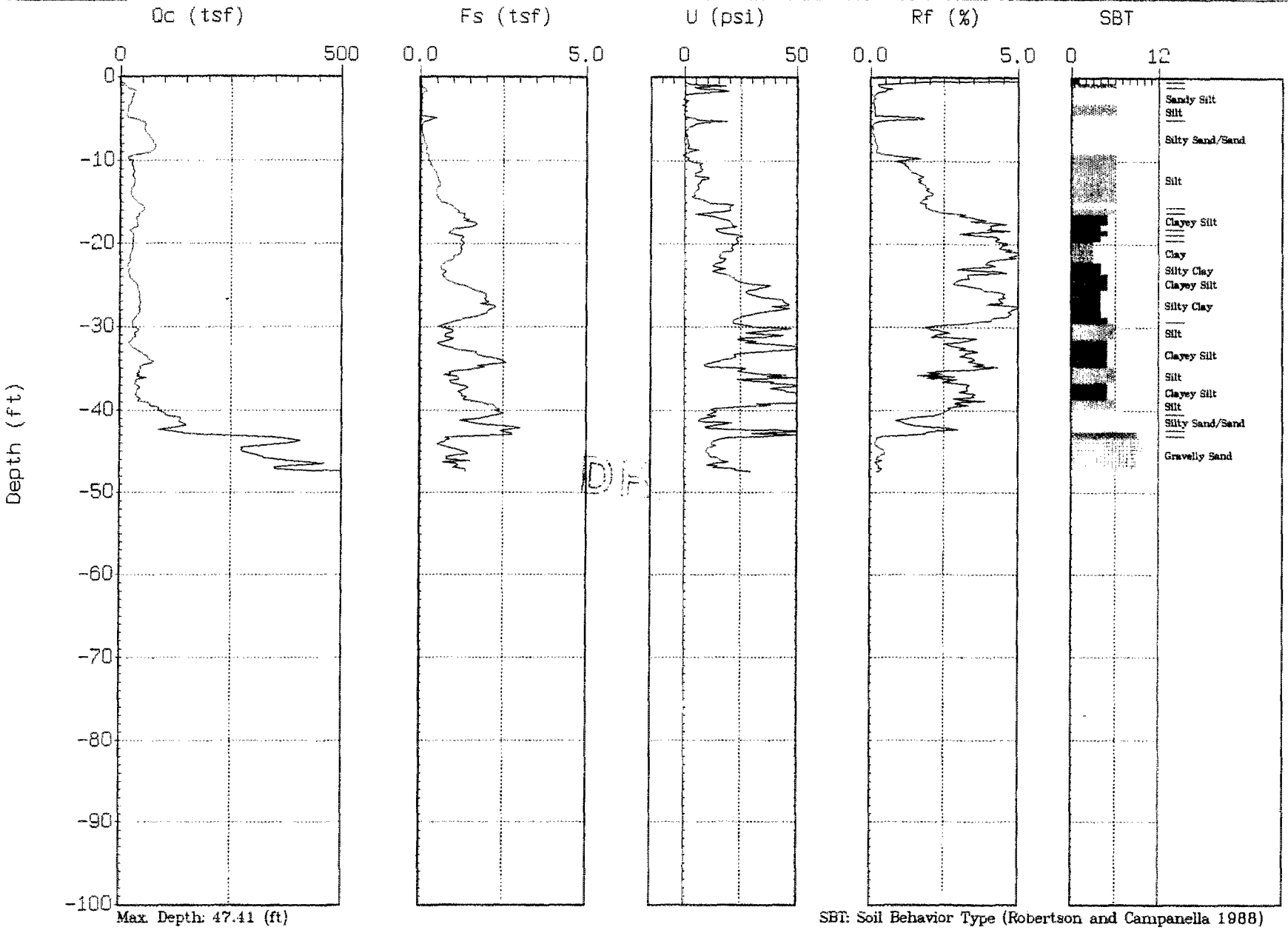
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON INC.

Site : OMEGA
Location : CPT-10

GEOLOGIST: B. CLARKE
Date : 08:18:01 11:30



Max. Depth: 47.41 (ft)

Depth Inc.: 0.164 (ft)

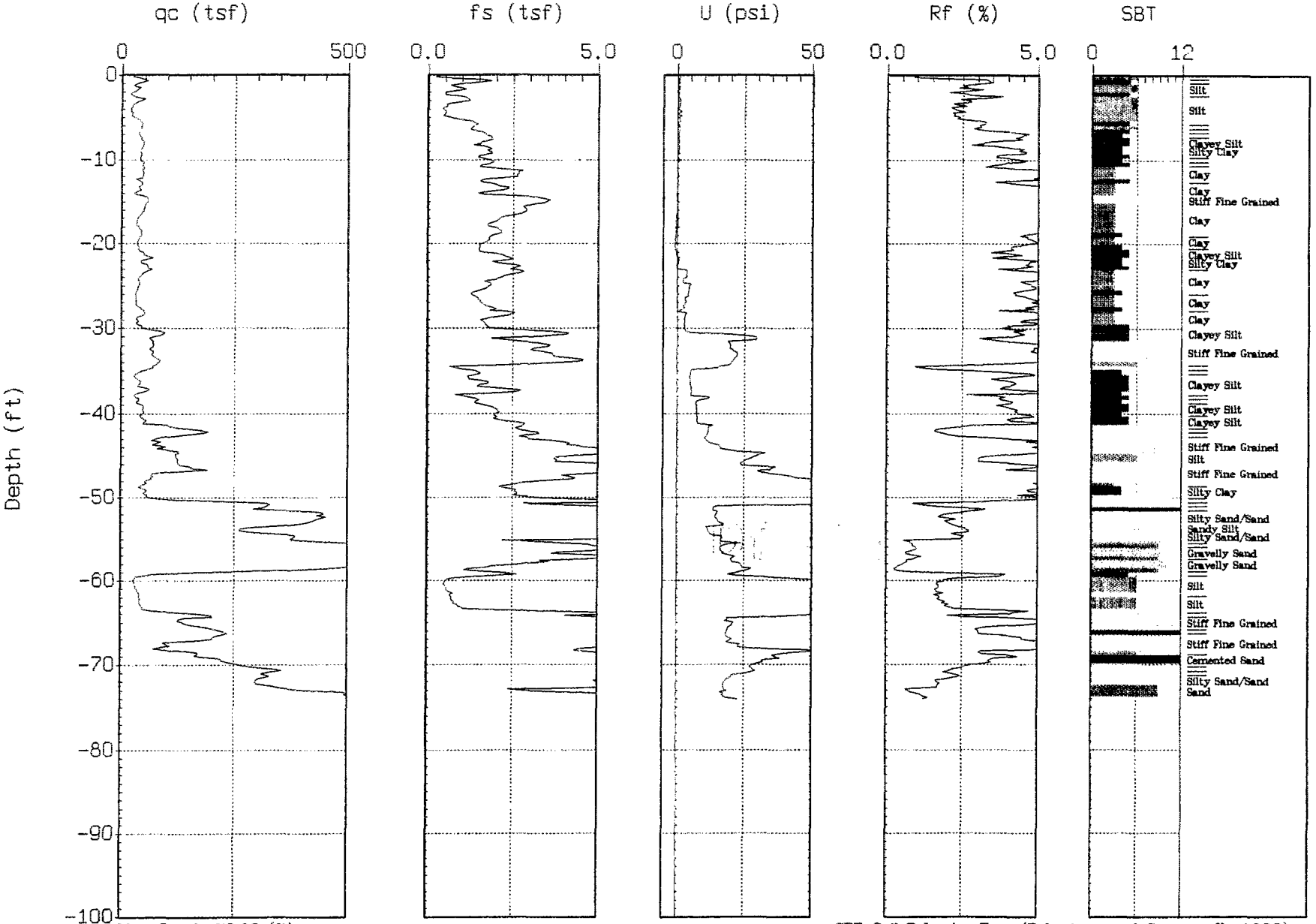
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-11

Geologist : B.CLARKE
Date : 08:17:01 01:29



Max. Depth: 73.98 (ft)

Depth Inc.: 0.164 (ft)

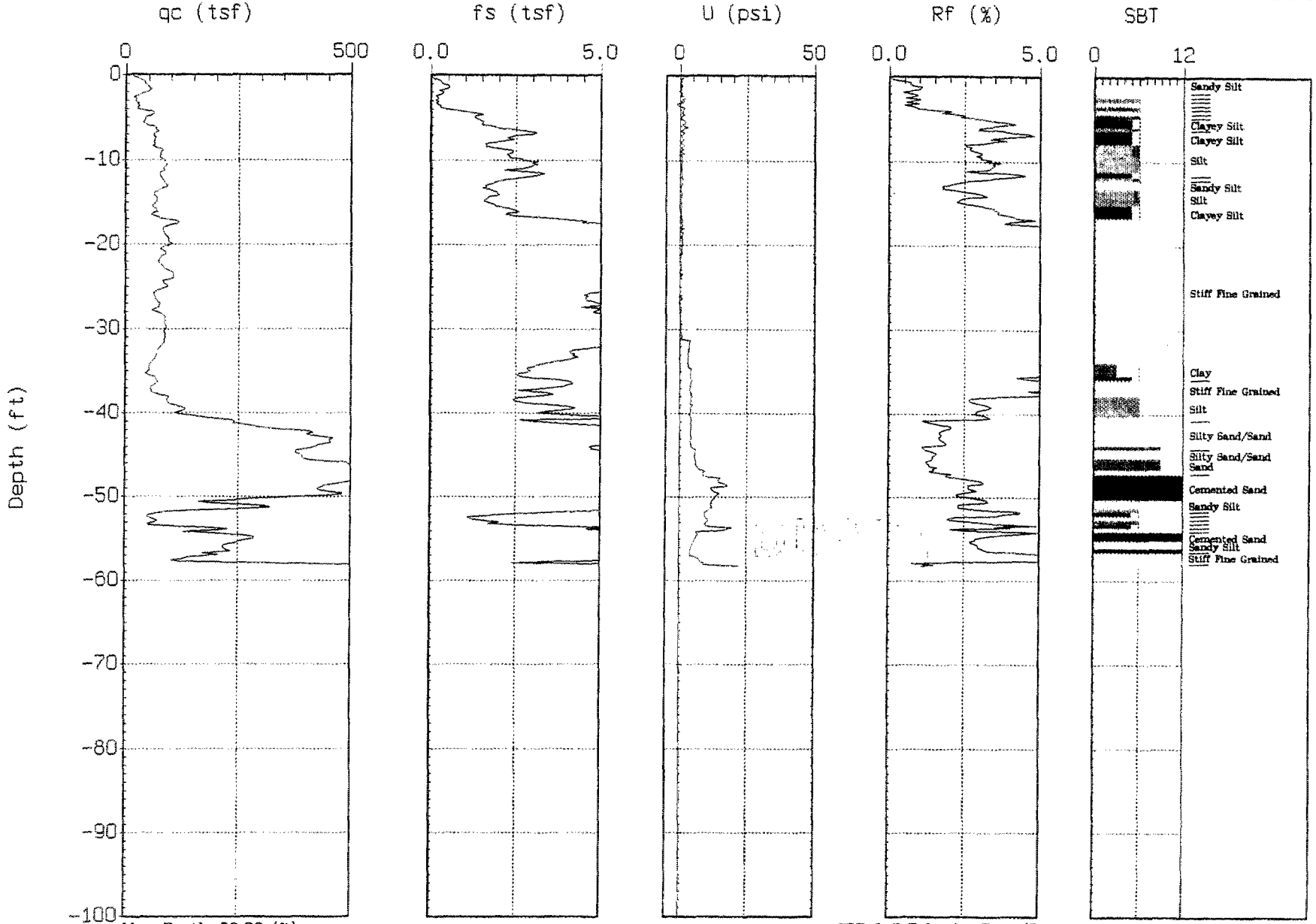
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-~~8~~ PP012

Geologist : B.CLARKE
Date : 08:17:01 03:14



Max. Depth: 58.23 (ft)

Depth Inc.: 0.164 (ft)

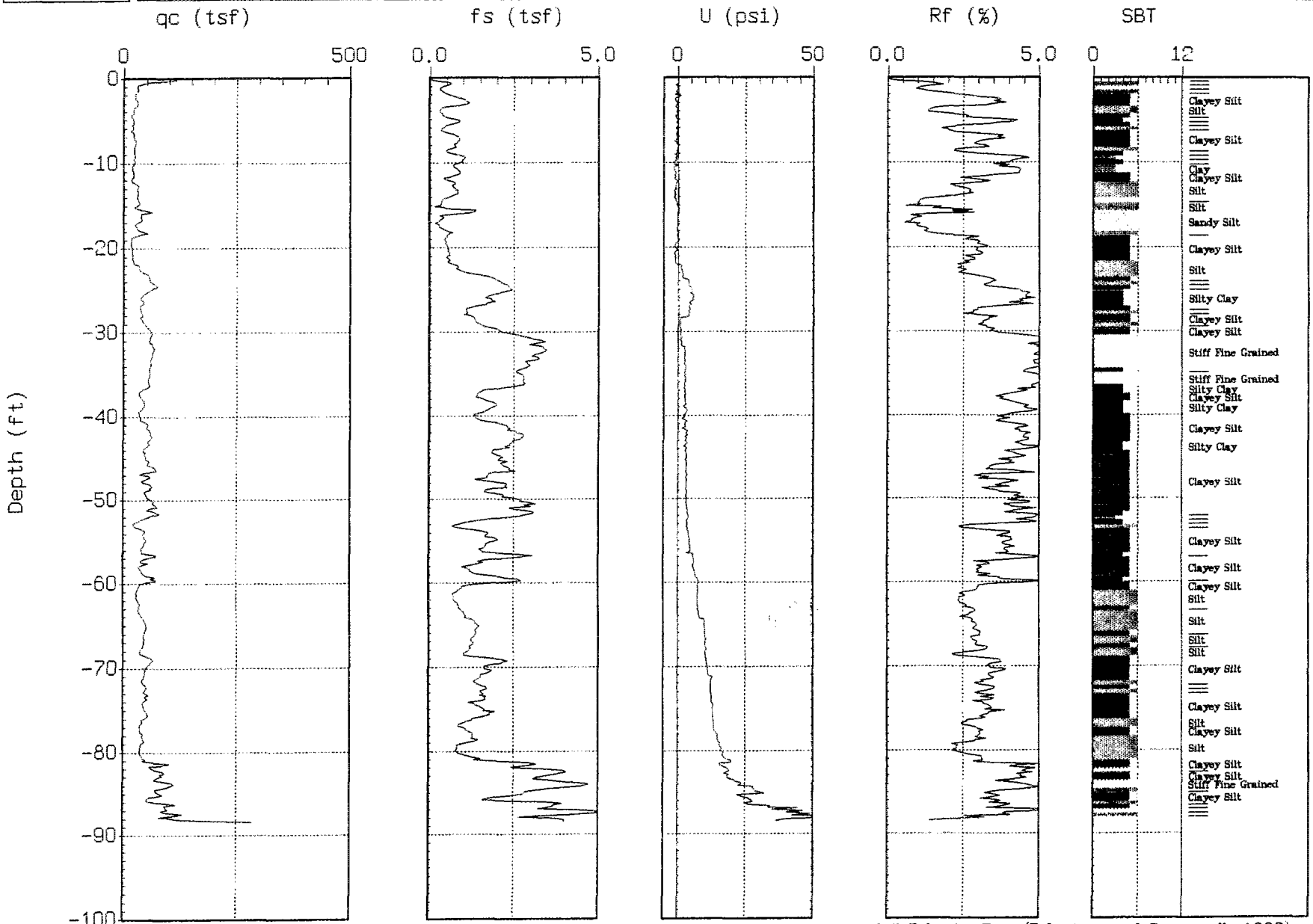
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-15

Geologist : B.CLARKE
Date : 08:16:01 03:05



Max. Depth: 88.42 (ft)

Depth Inc.: 0.164 (ft)

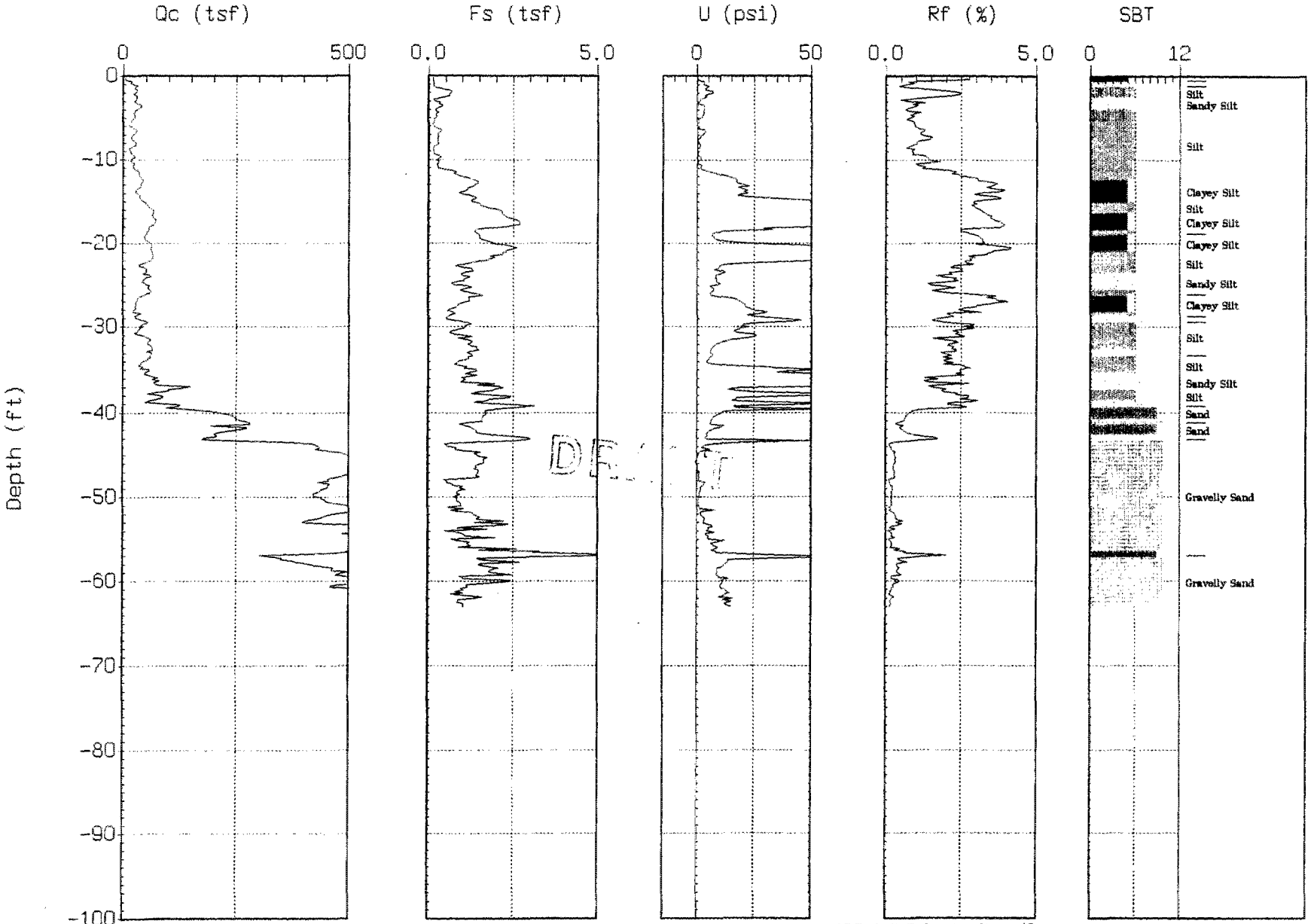
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON INC.

Site : OMEGA
Location : CPT-17

GEOLOGIST: B. CLARKE
Date : 08:18:01 09:14



Max. Depth: 62.99 (ft)

Depth Inc.: 0.164 (ft)

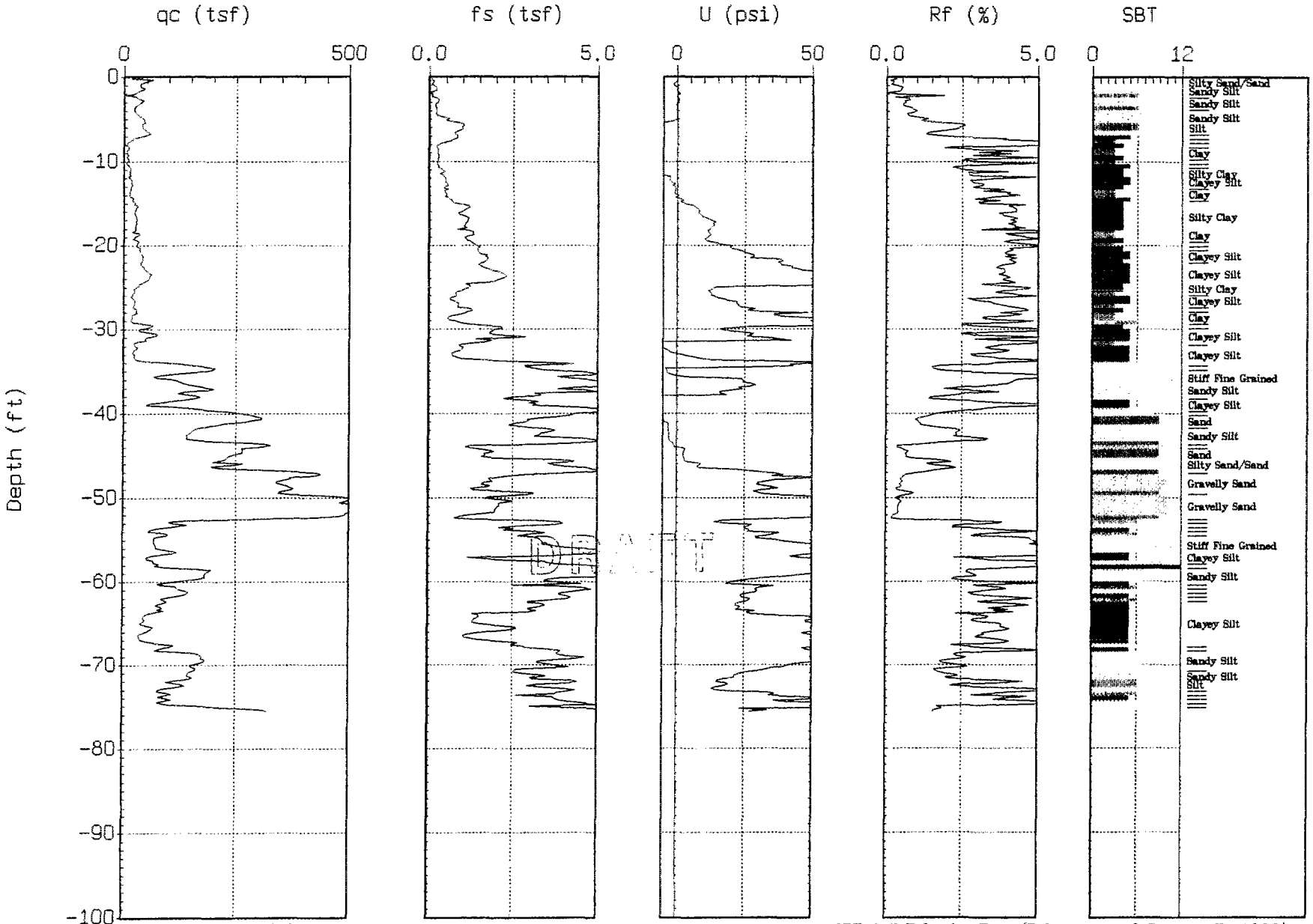
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-20

Geologist : B.CLARKE
Date : 08:18:01 01:10



Max. Depth: 75.62 (ft)

Depth Inc.: 0.164 (ft)

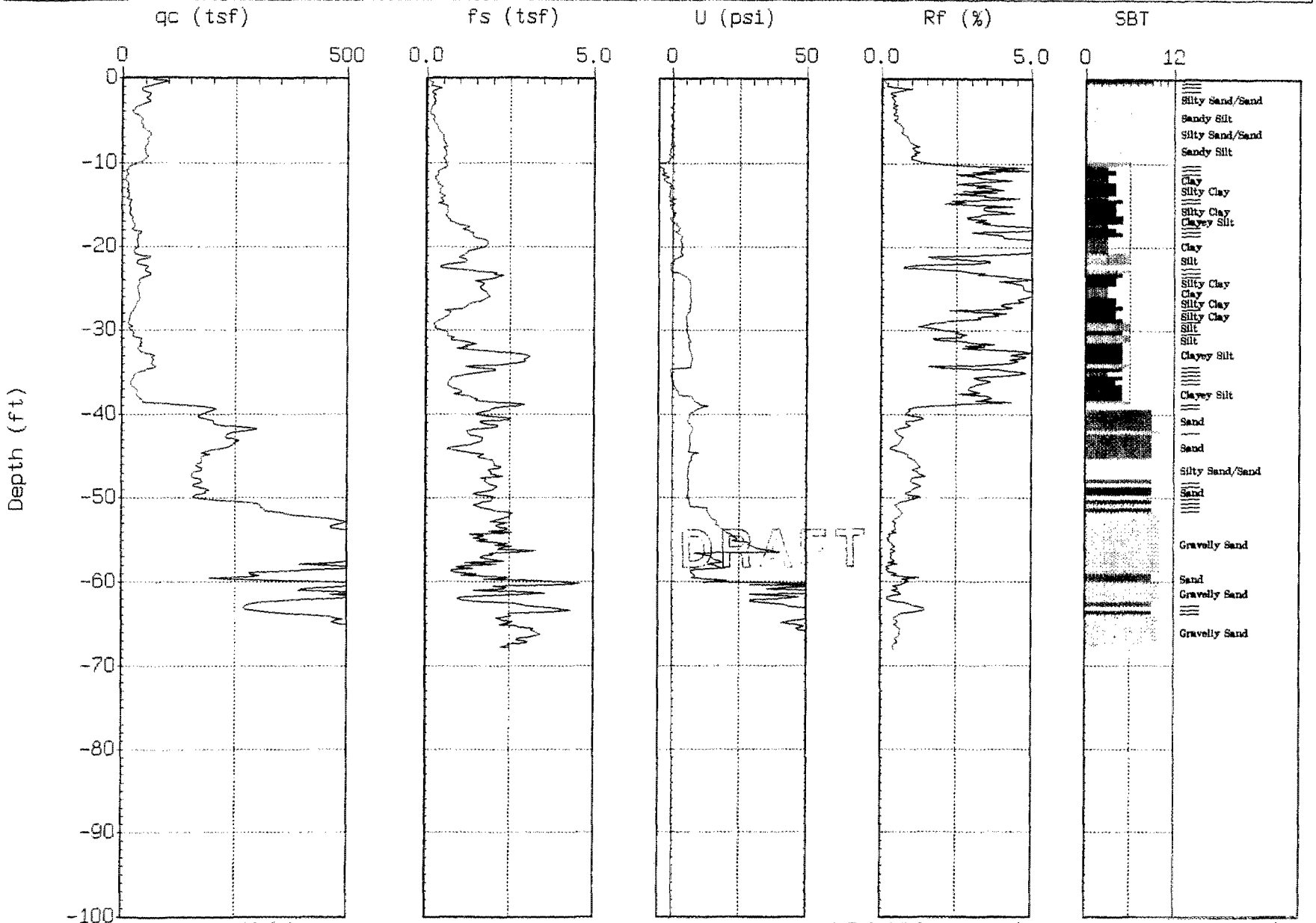
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-22

Geologist : B.CLARKE
Date : 08:18:01 00:02



Max. Depth: 68.08 (ft)

Depth Inc.: 0.164 (ft)

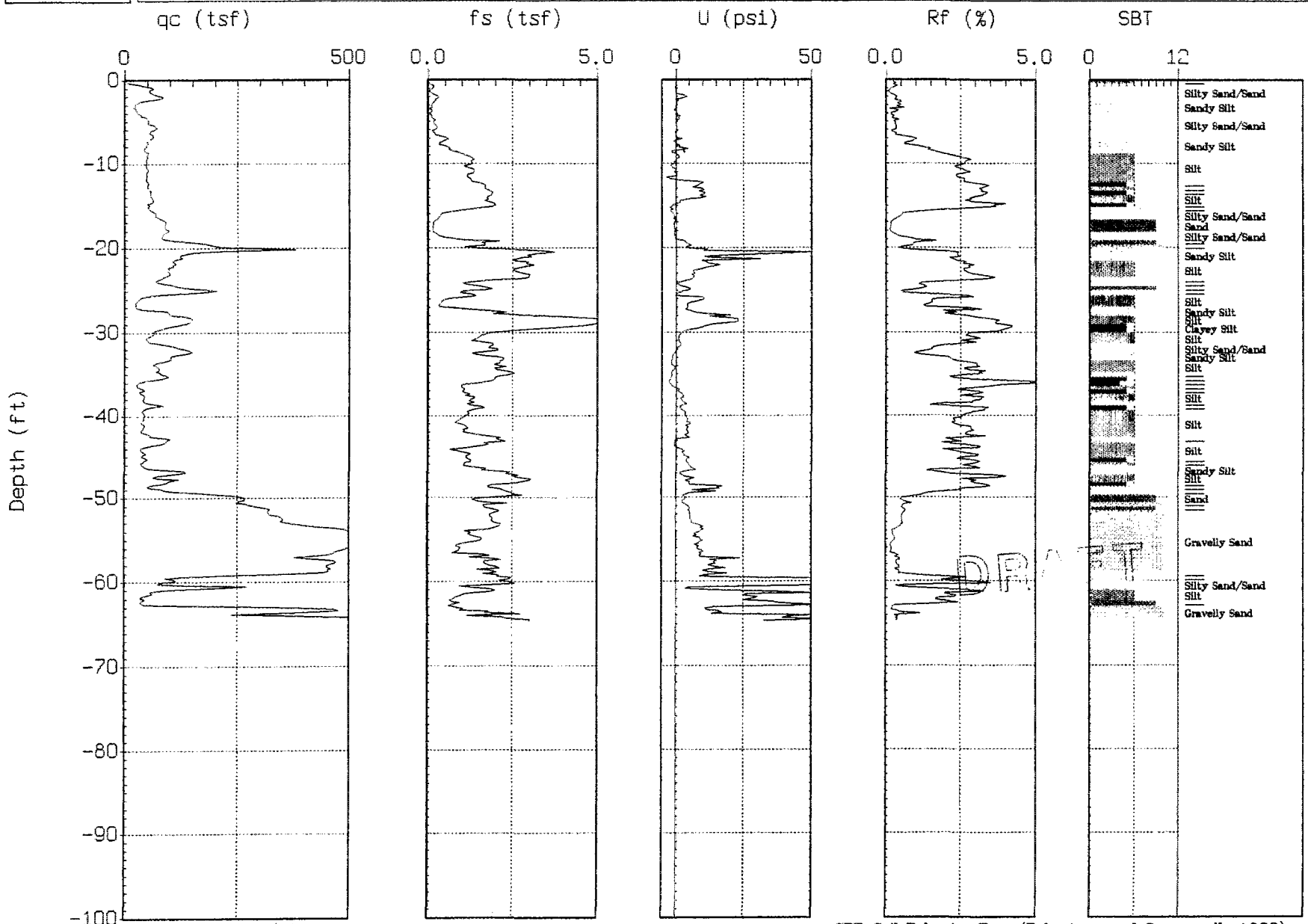
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-23

Geologist : B.CLARKE
Date : 08:17:01 20:59



Max. Depth: 64.63 (ft)

Depth Inc.: 0.164 (ft)

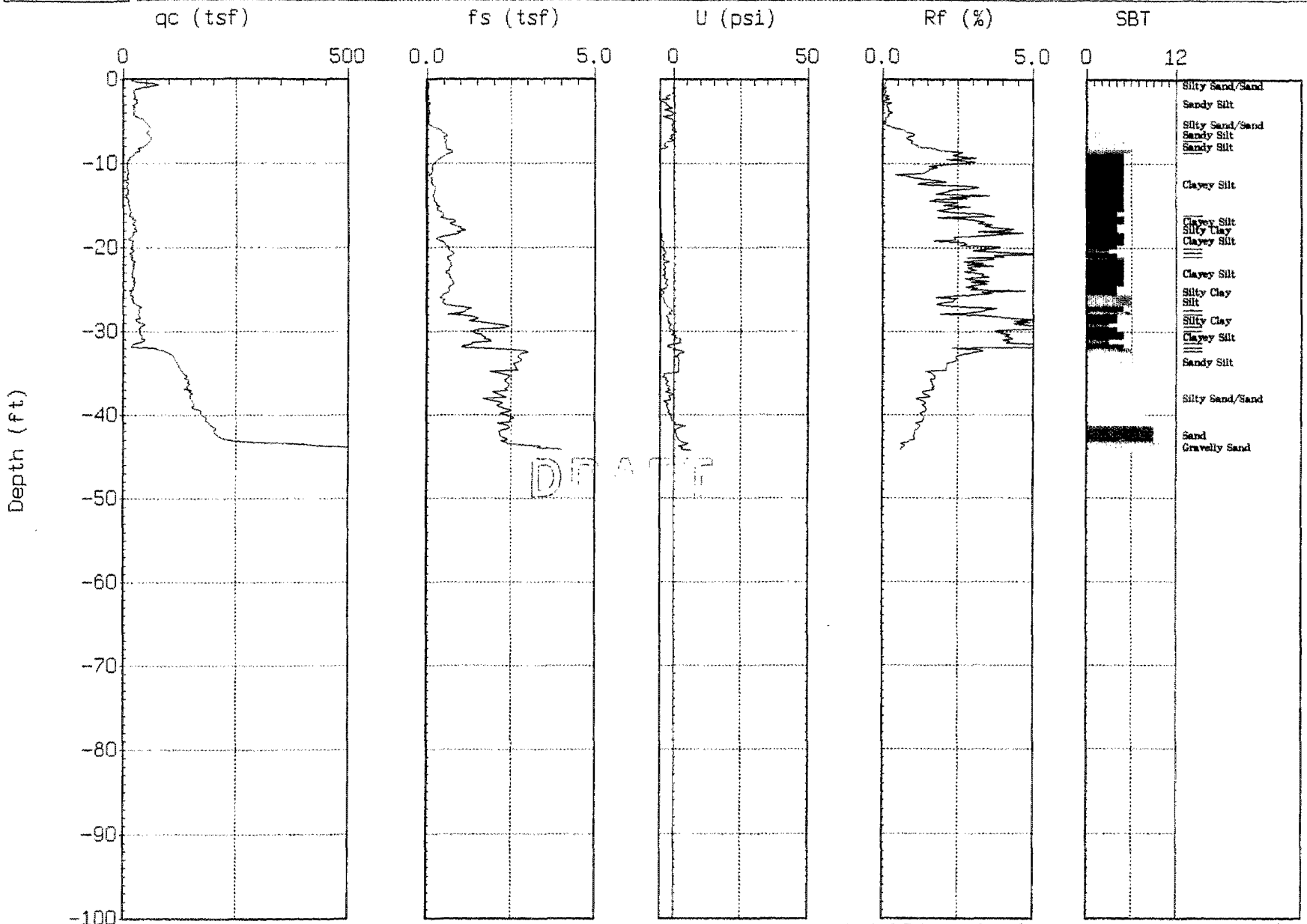
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-29

Geologist : B.CLARKE
Date : 08:22:01 01:21



Max. Depth: 44.29 (ft)

Depth Inc.: 0.164 (ft)

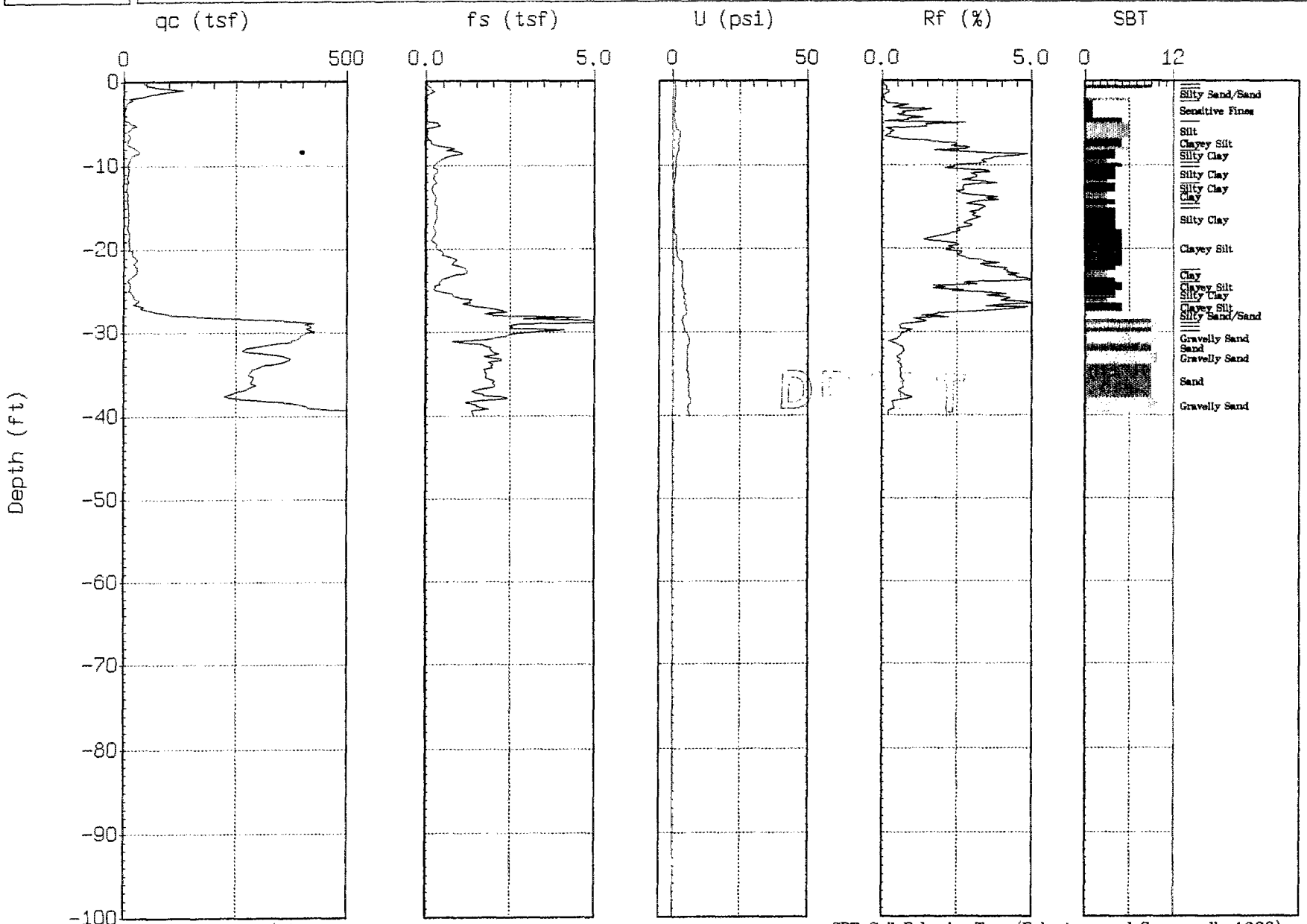
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-33

Geologist : B.CLARKE
Date : 08:20:01 01:23



Max. Depth: 40.03 (ft)

Depth Inc.: 0.164 (ft)

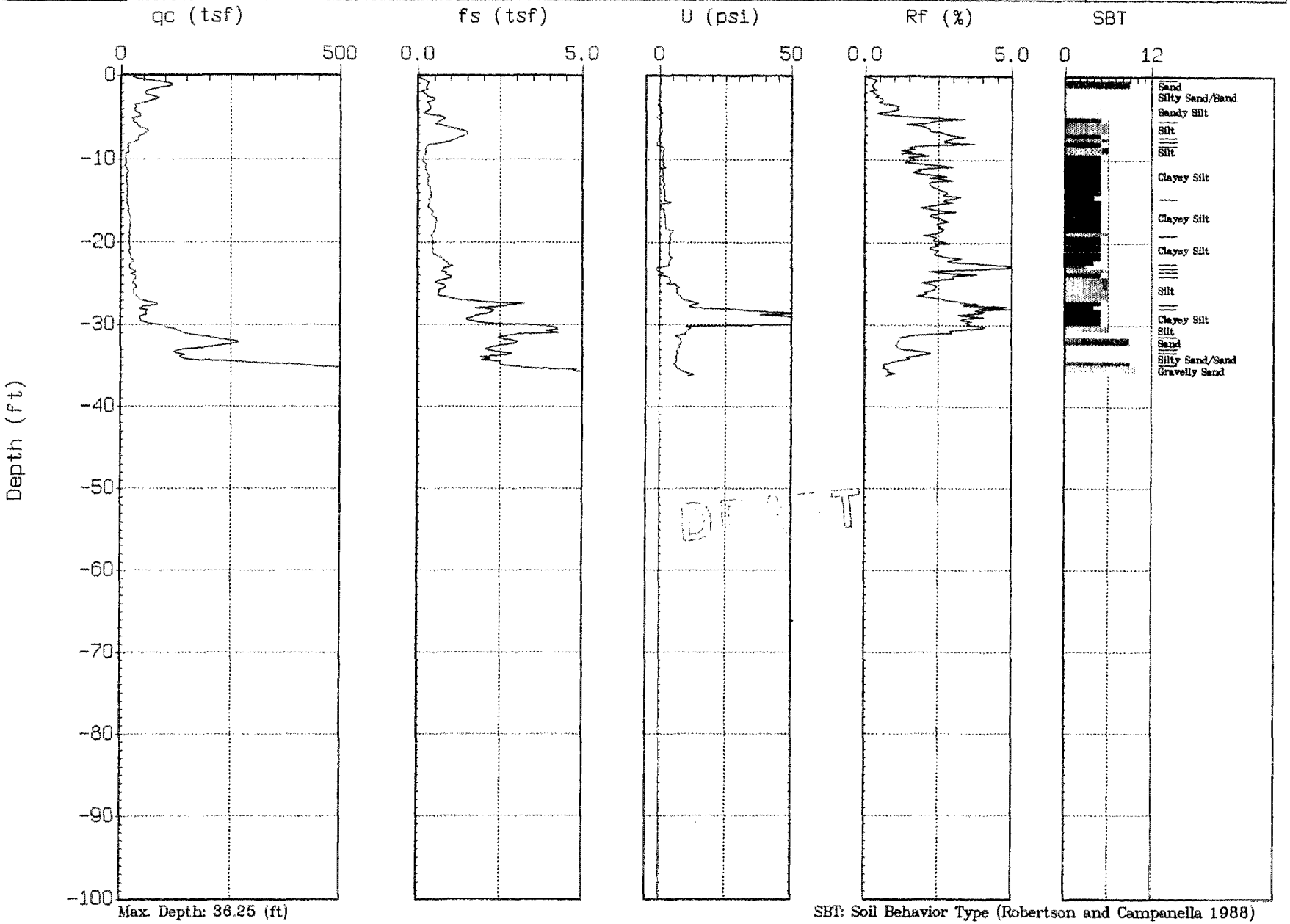
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-34

Geologist : B.CLARKE
Date : 08:21:01 00:32



Max. Depth: 36.25 (ft)

Depth Inc.: 0.164 (ft)

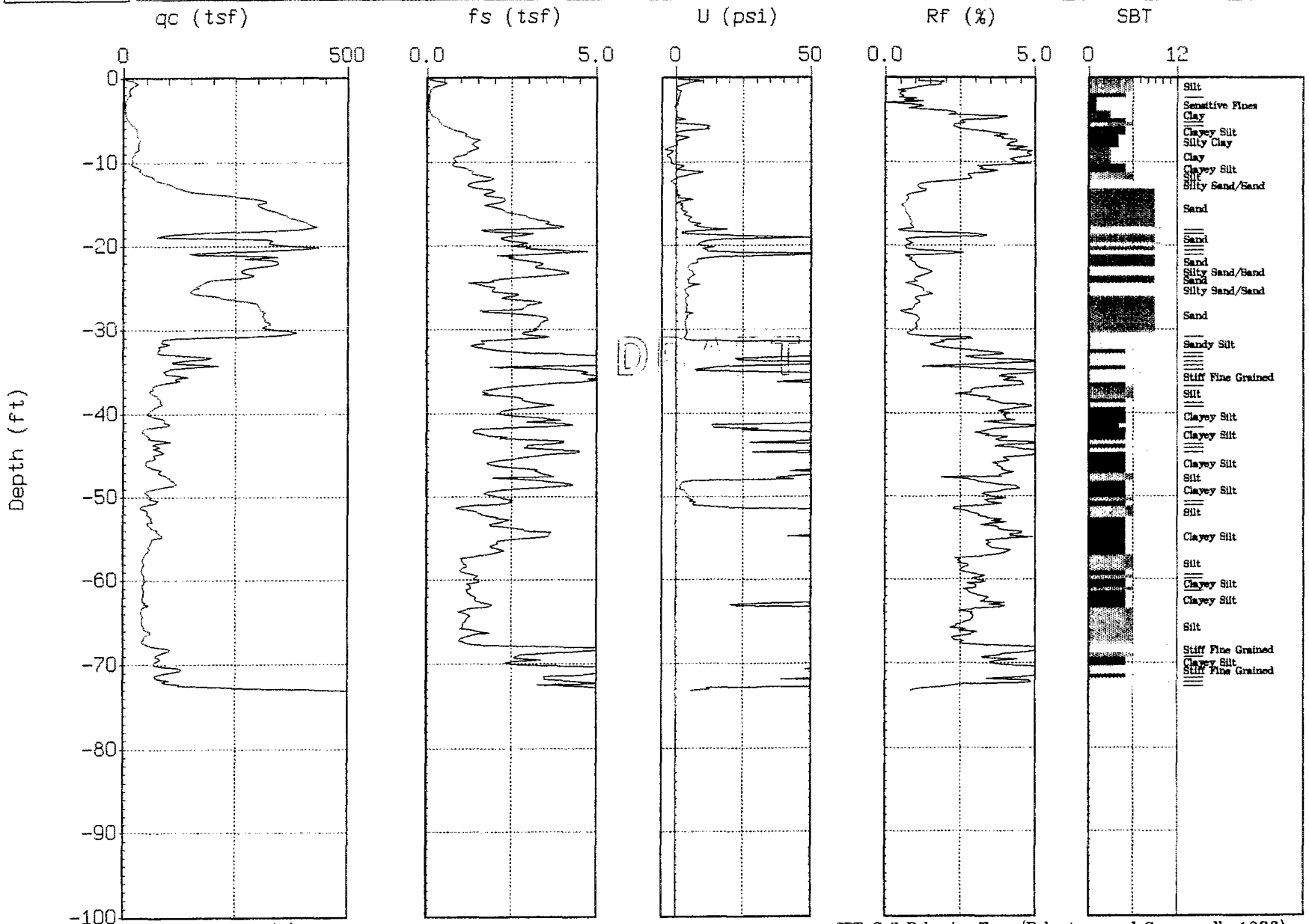
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-38

Geologist : B.CLARKE
Date : 08:21:01 20:58



Max. Depth: 73.16 (ft)

Depth Inc.: 0.164 (ft)

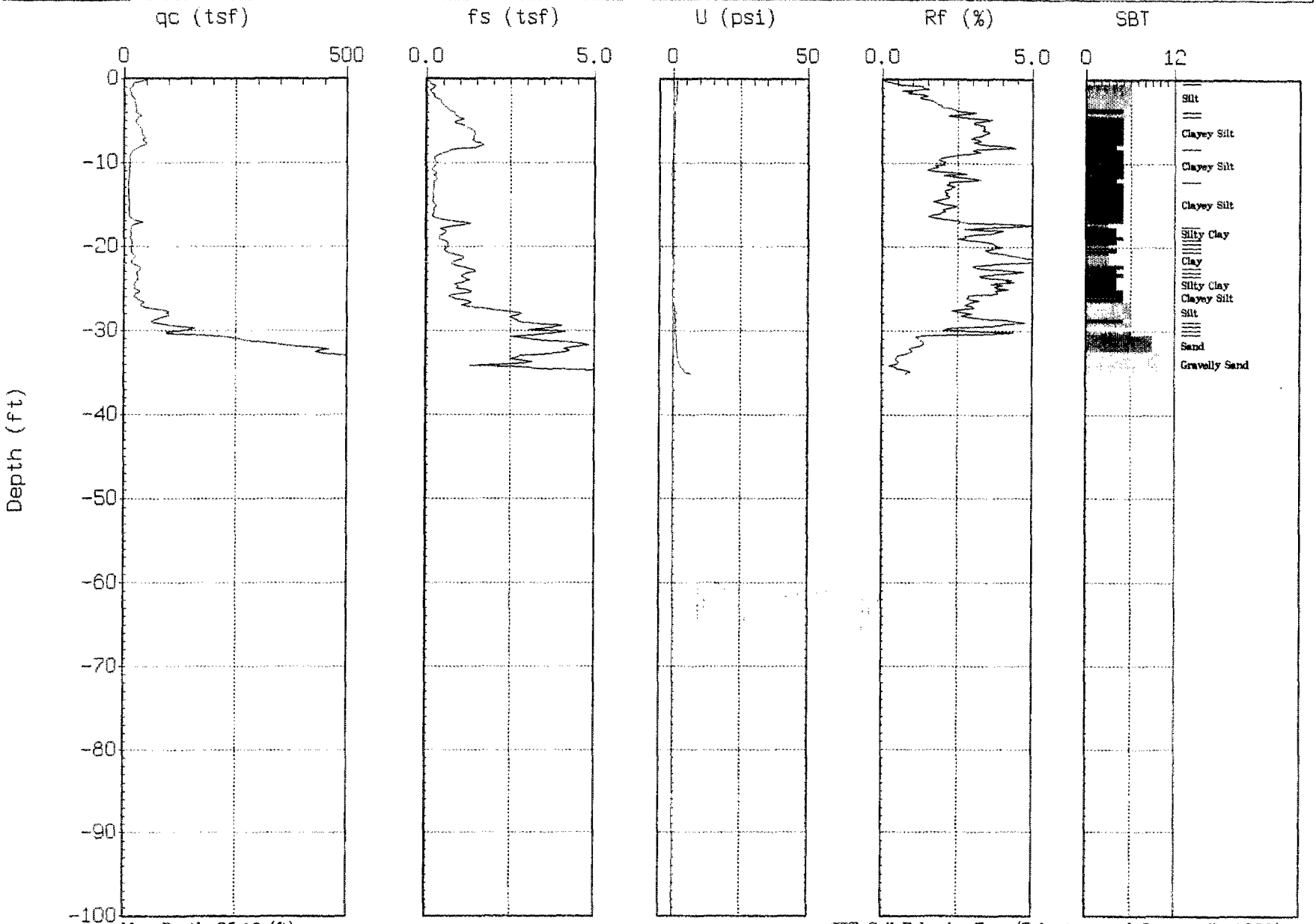
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-39

Geologist : B.CLARKE
Date : 08:21:01 03:06



Max. Depth: 35.10 (ft)

Depth Inc.: 0.164 (ft)

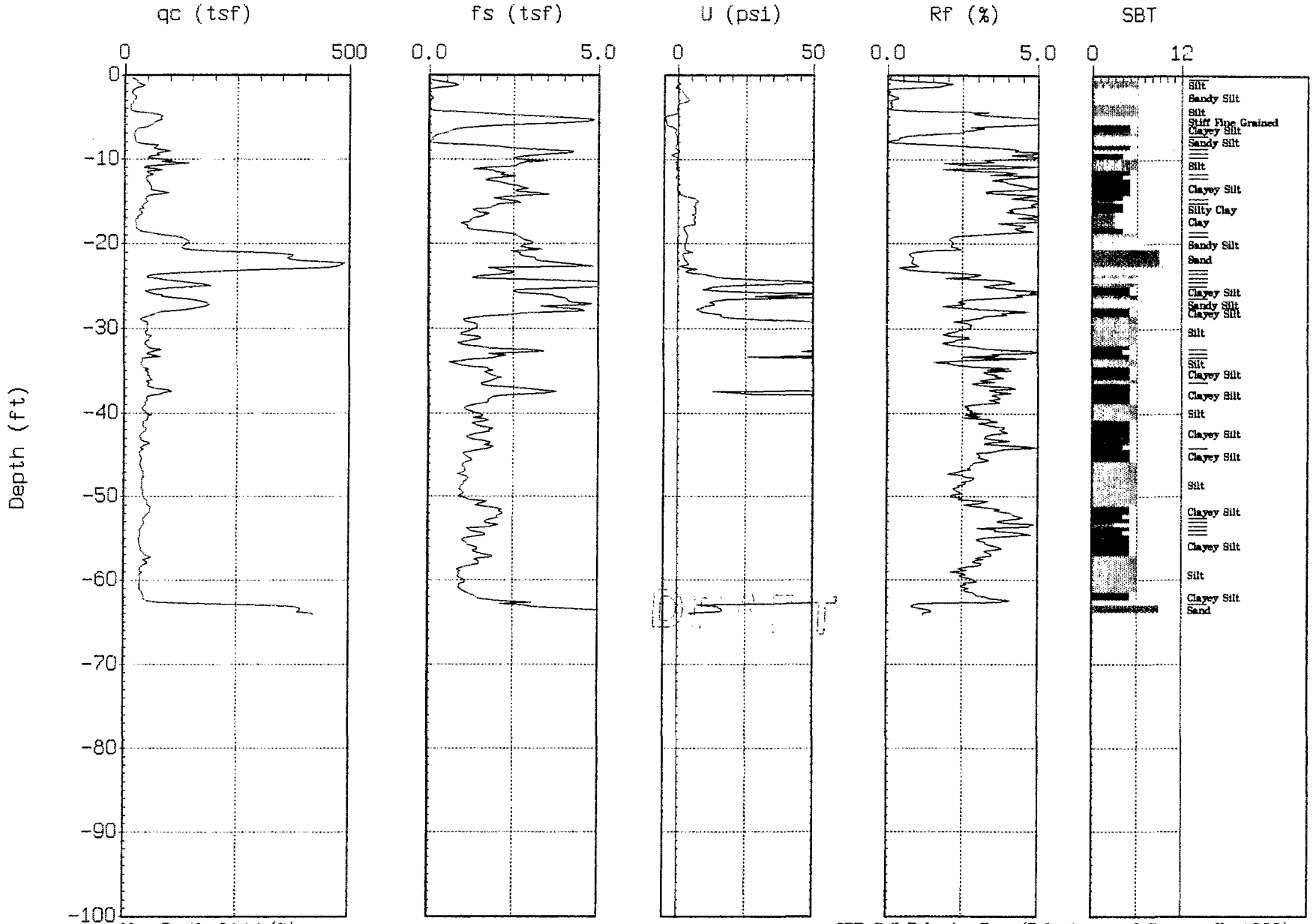
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-40

Geologist : B.CLARKE
Date : 08:21:01 22:15



Max. Depth: 64.14 (ft)

Depth Inc.: 0.164 (ft)

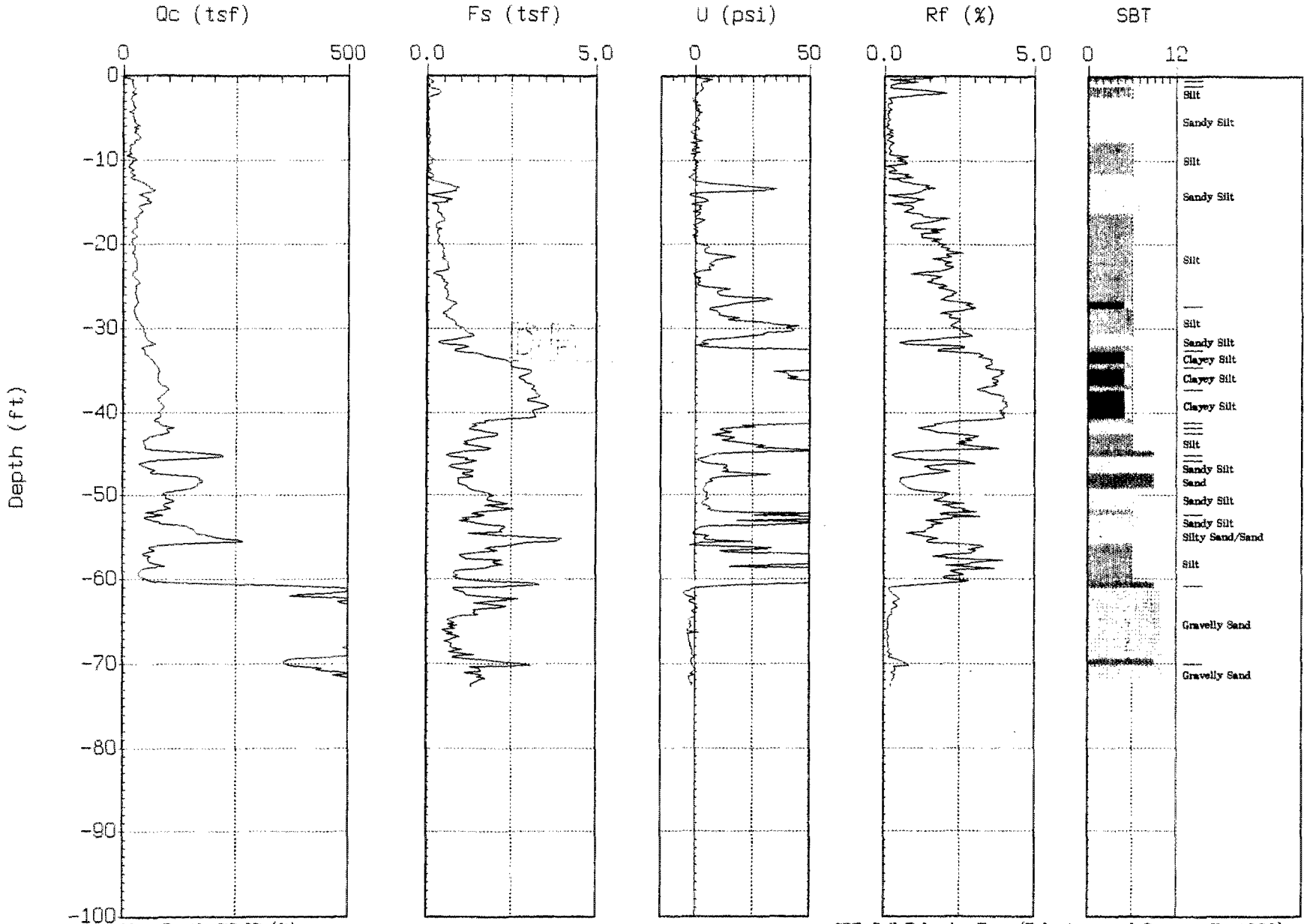
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON INC.

Site : OMEGA
Location : CPT-41

GEOLOGIST: B. CLARKE
Date : 08:18:01 14:06



Max. Depth: 72.67 (ft)

Depth Inc.: 0.164 (ft)

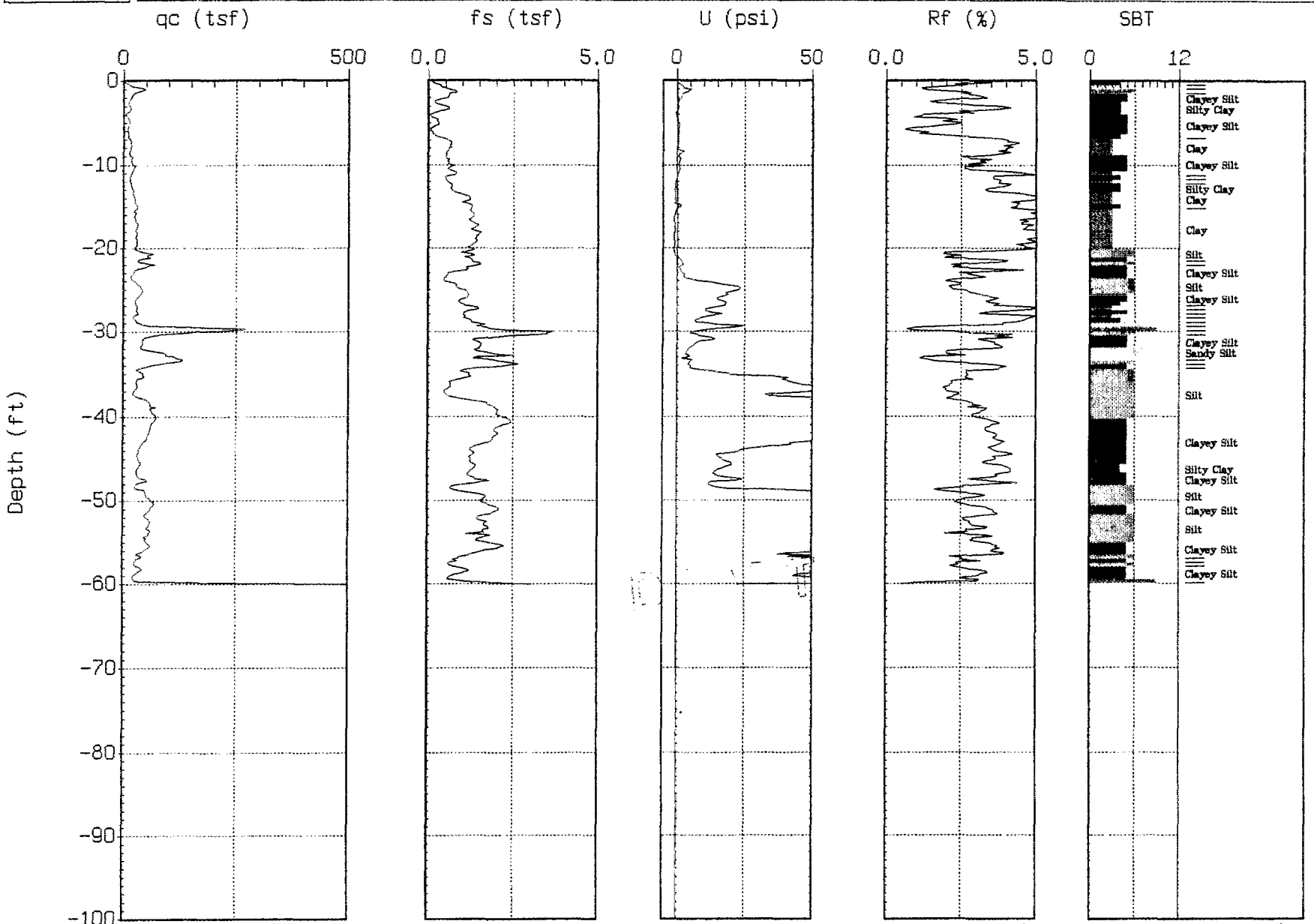
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-42

Geologist : B.CLARKE
Date : 08:20:01 19:45



Max. Depth: 60.04 (ft)

Depth Inc.: 0.164 (ft)

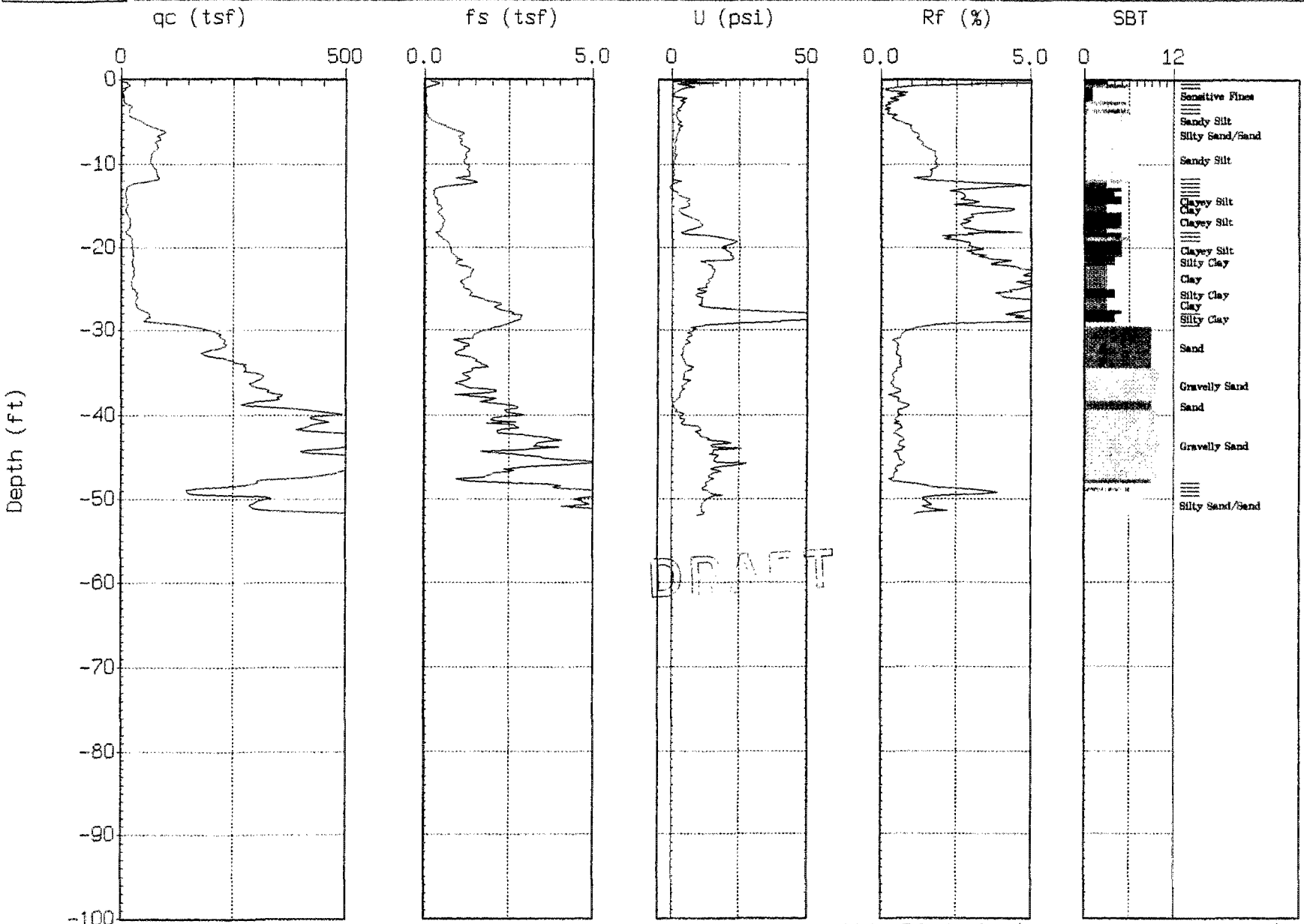
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-46

Geologist : B.CLARKE
Date : 08:22:01 22:22



Max. Depth: 52.00 (ft)

Depth Inc.: 0.164 (ft)

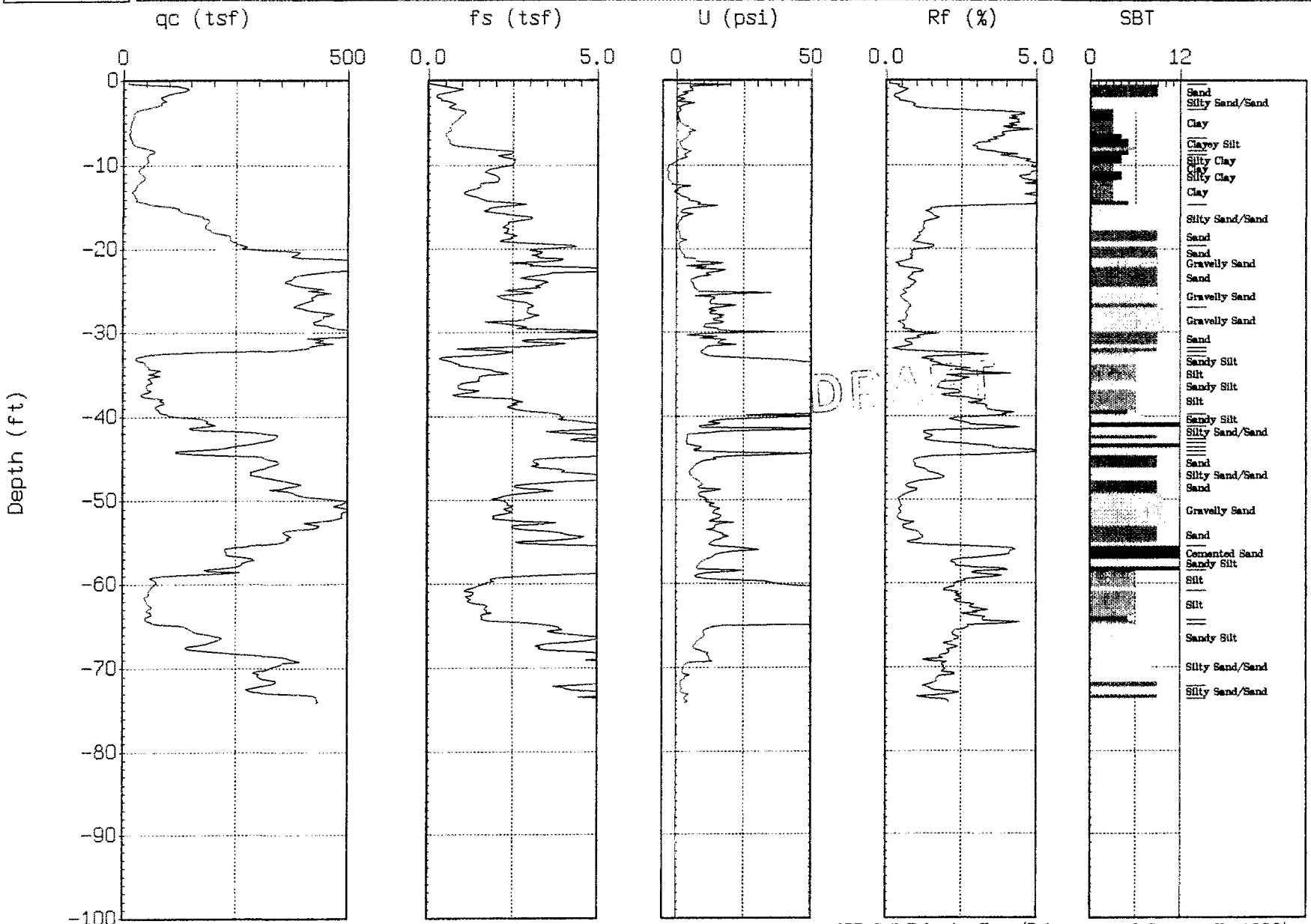
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-52

Geologist : B.CLARKE
Date : 08:23:01 22:06



Max. Depth: 74.15 (ft)

Depth Inc.: 0.164 (ft)

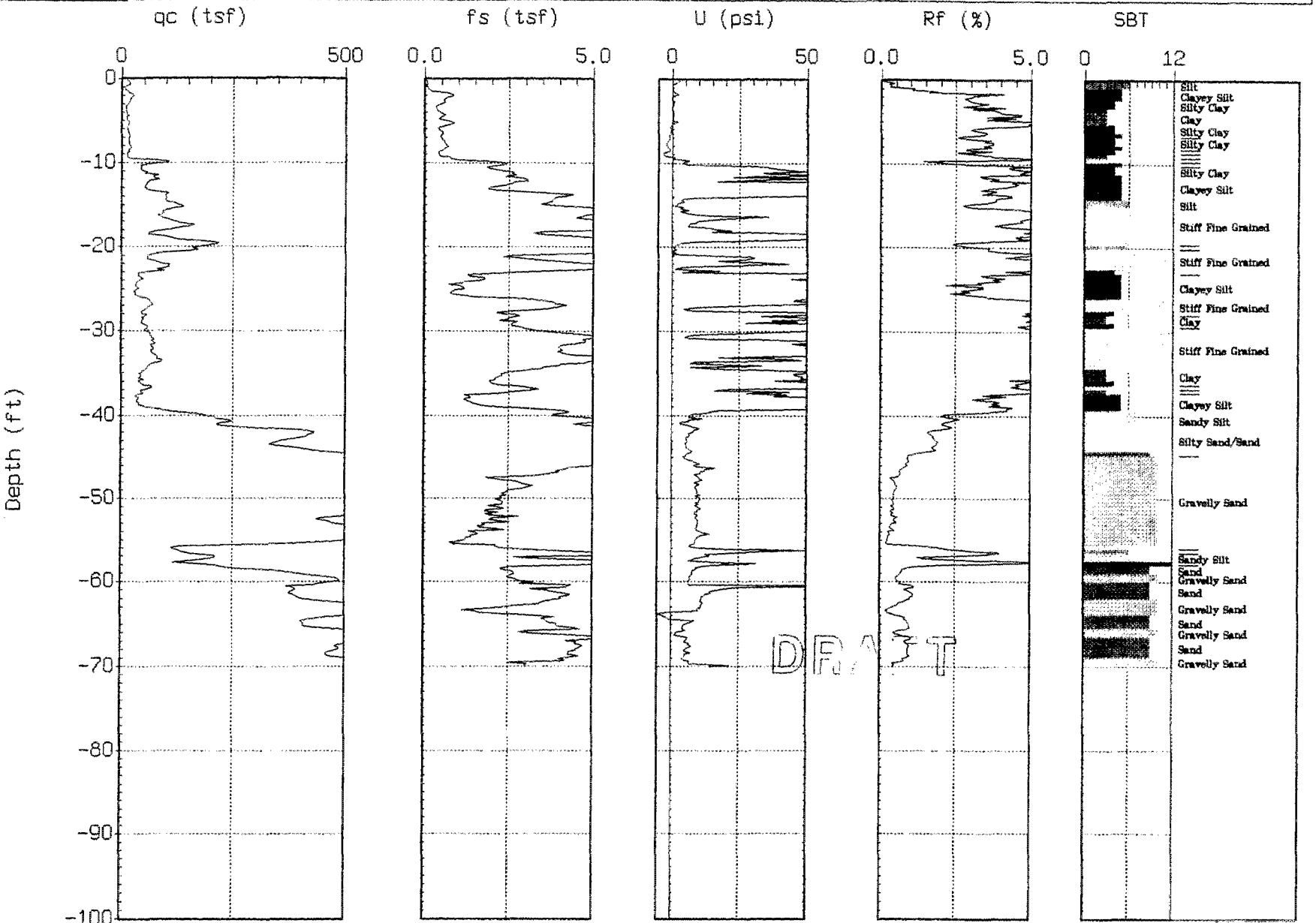
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-57

Geologist : B. CLARKE
Date : 09:04:01 20:23



Max. Depth: 70.05 (ft)

Depth Inc.: 0.164 (ft)

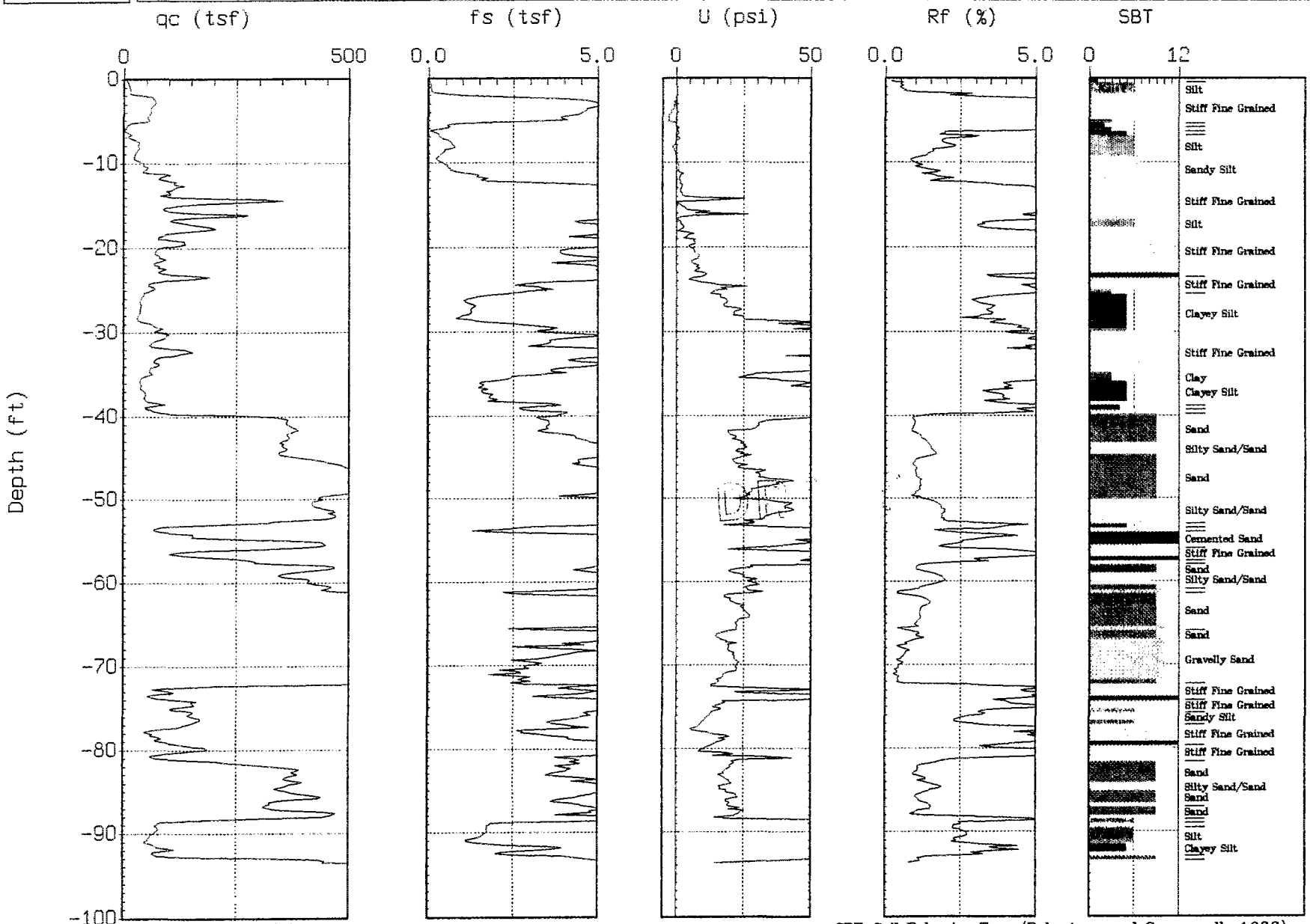
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA
Location : CPT-59

Geologist : B. CLARKE
Date : 09:04:01 22:54



Max. Depth: 93.67 (ft)

Depth Inc.: 0.164 (ft)

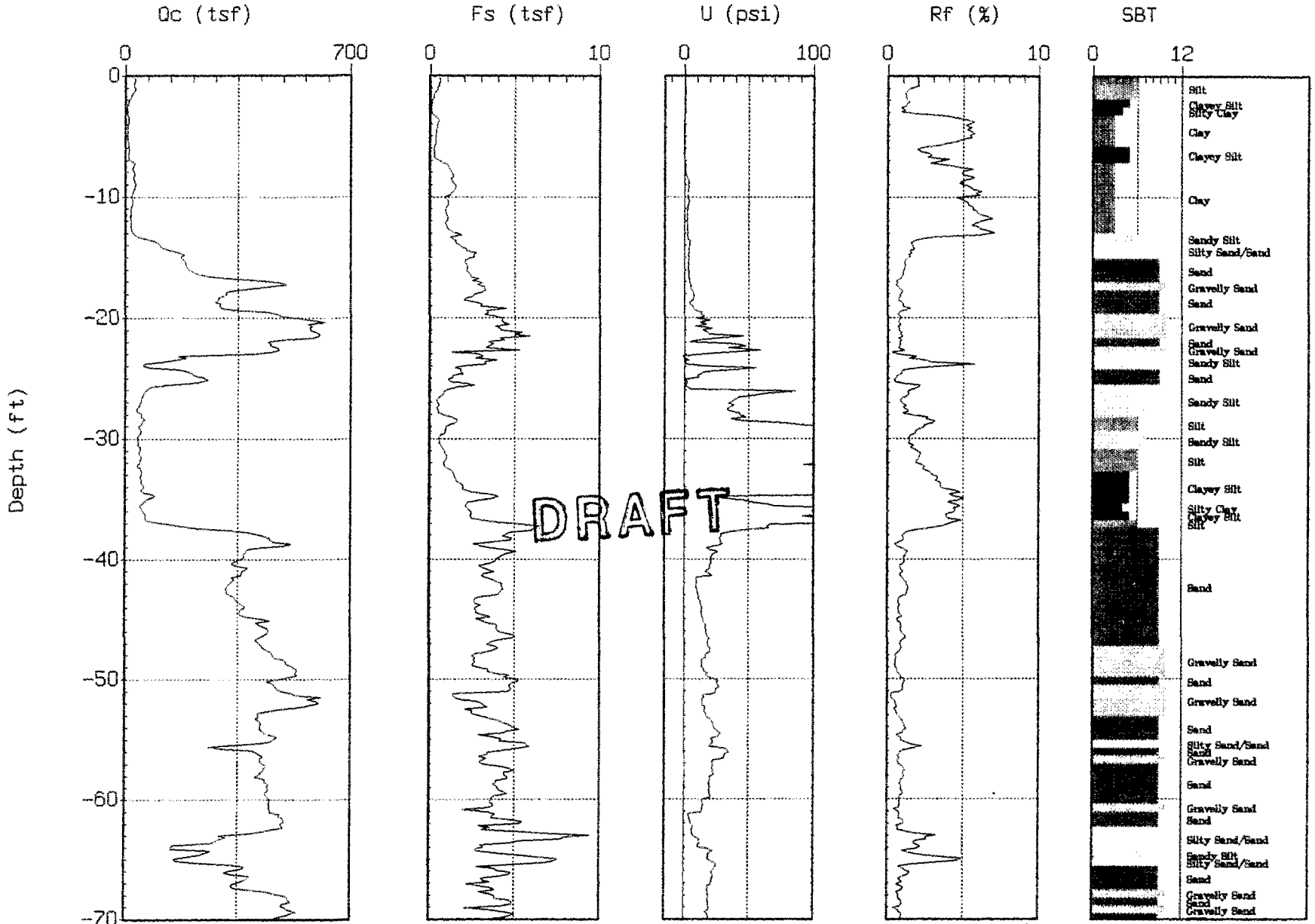
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-63

Geologist : B. CLARKE
Date : 10:29:01 08:48



Max. Depth: 103.51 (ft)

Depth Inc.: 0.164 (ft)

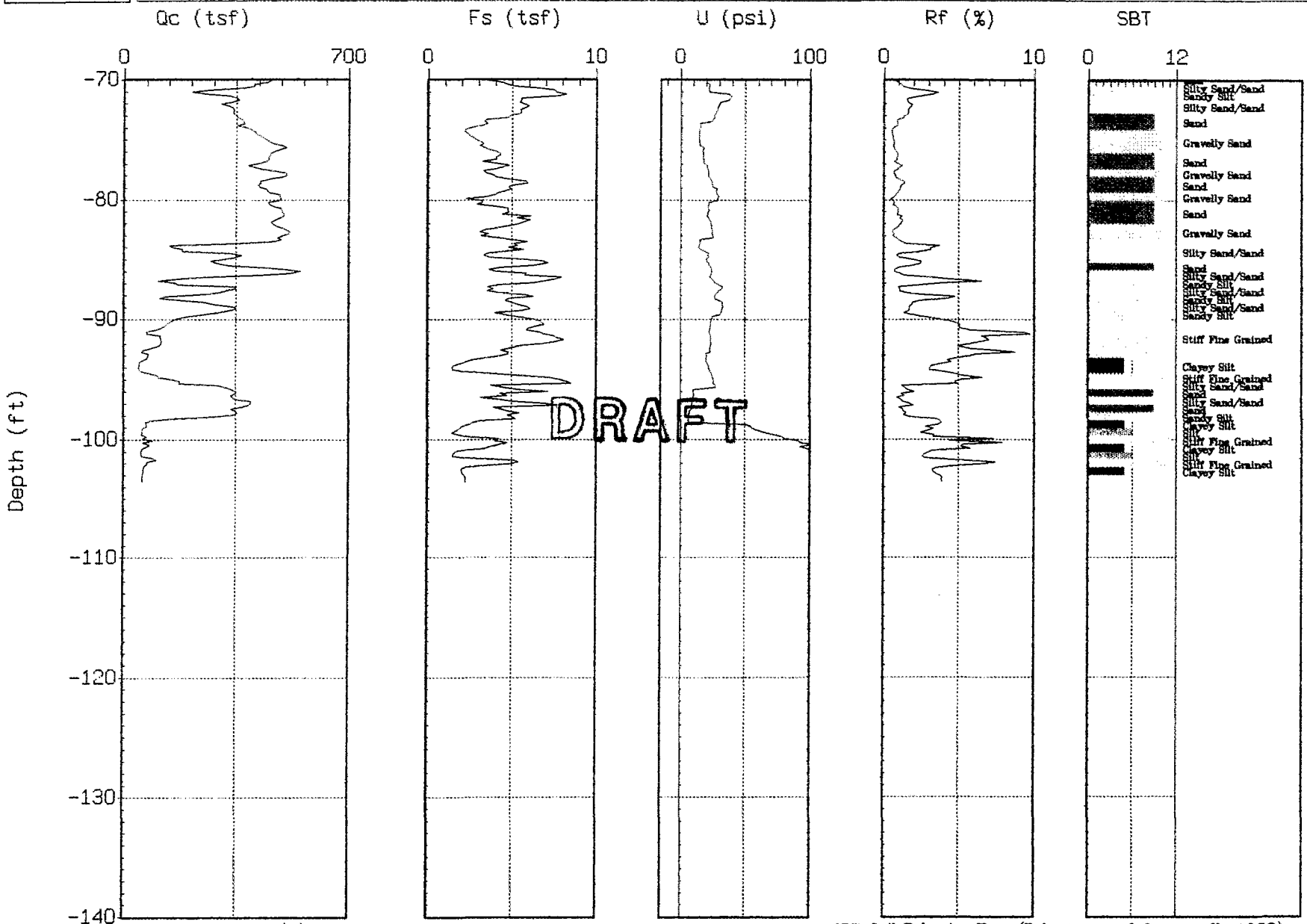
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-63

Geologist : B. CLARKE
Date : 10:29:01 08:48



Max. Depth: 103.51 (ft)

Depth Inc.: 0.164 (ft)

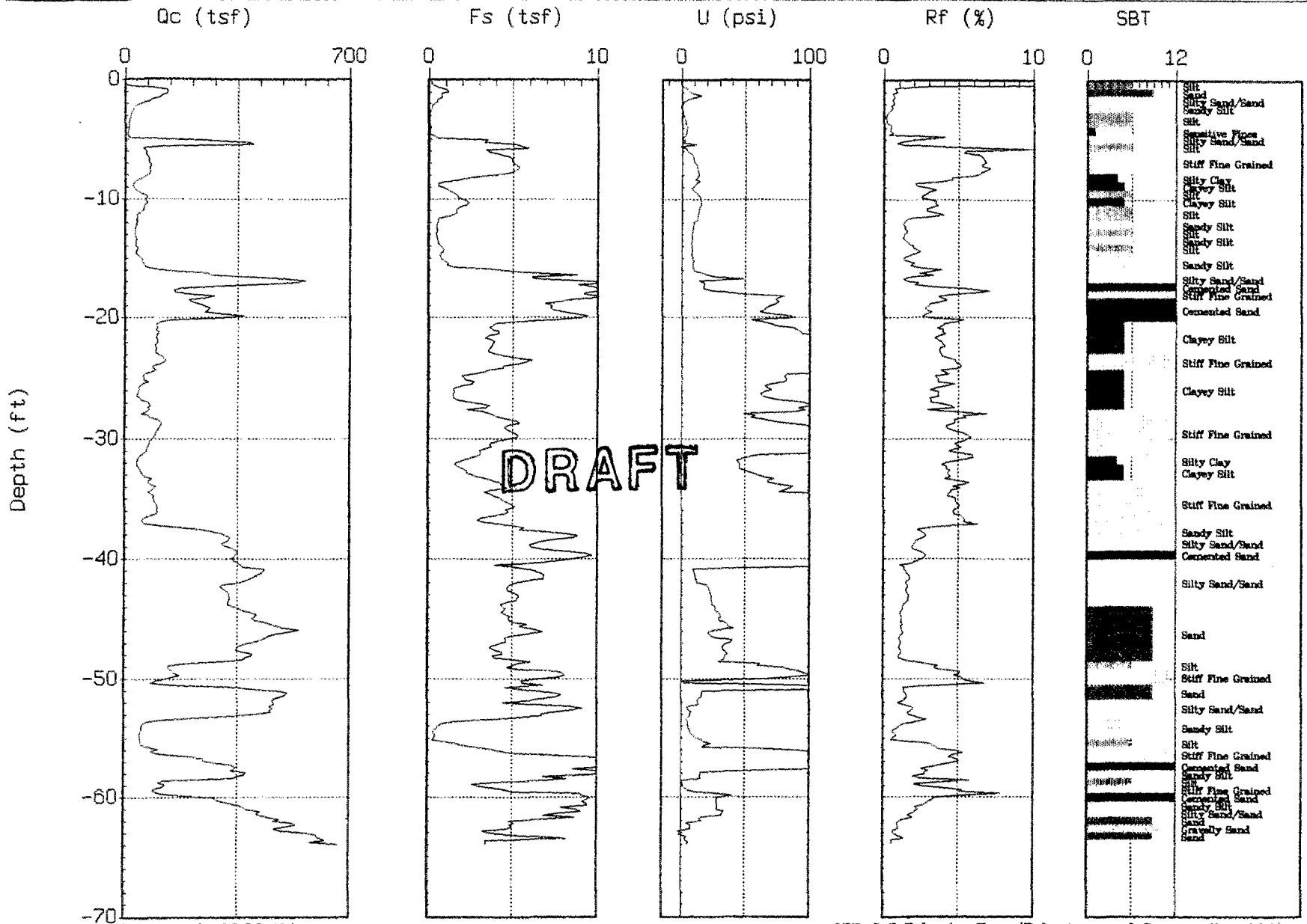
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-65

Geologist : B. CLARKE
Date : 10:29:01 11:54



Max. Depth: 63.98 (ft)

Depth Inc.: 0.164 (ft)

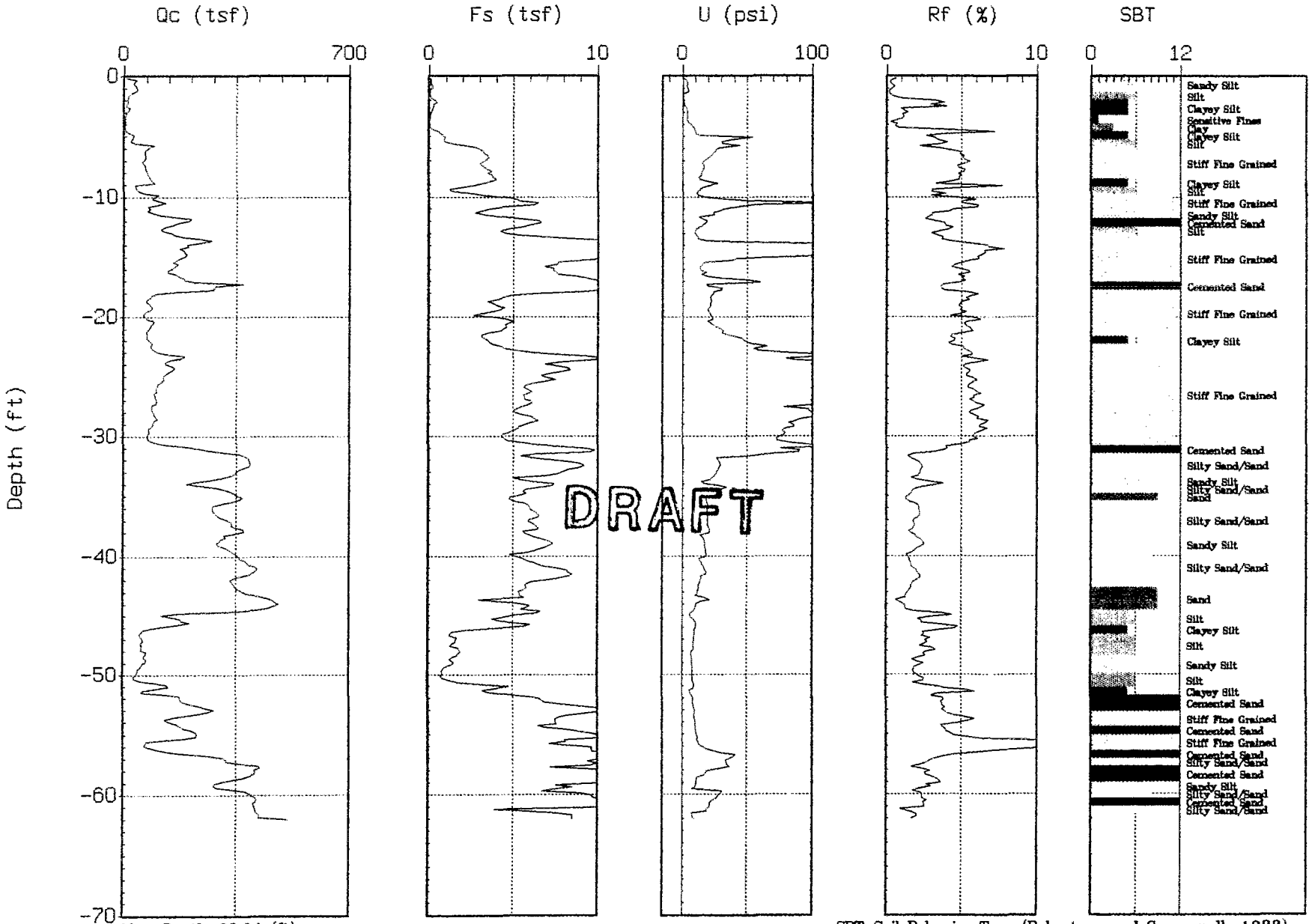
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-66

Geologist : B. CLARKE
Date : 10:29:01 13:44



Max. Depth: 62.01 (ft)

Depth Inc.: 0.164 (ft)

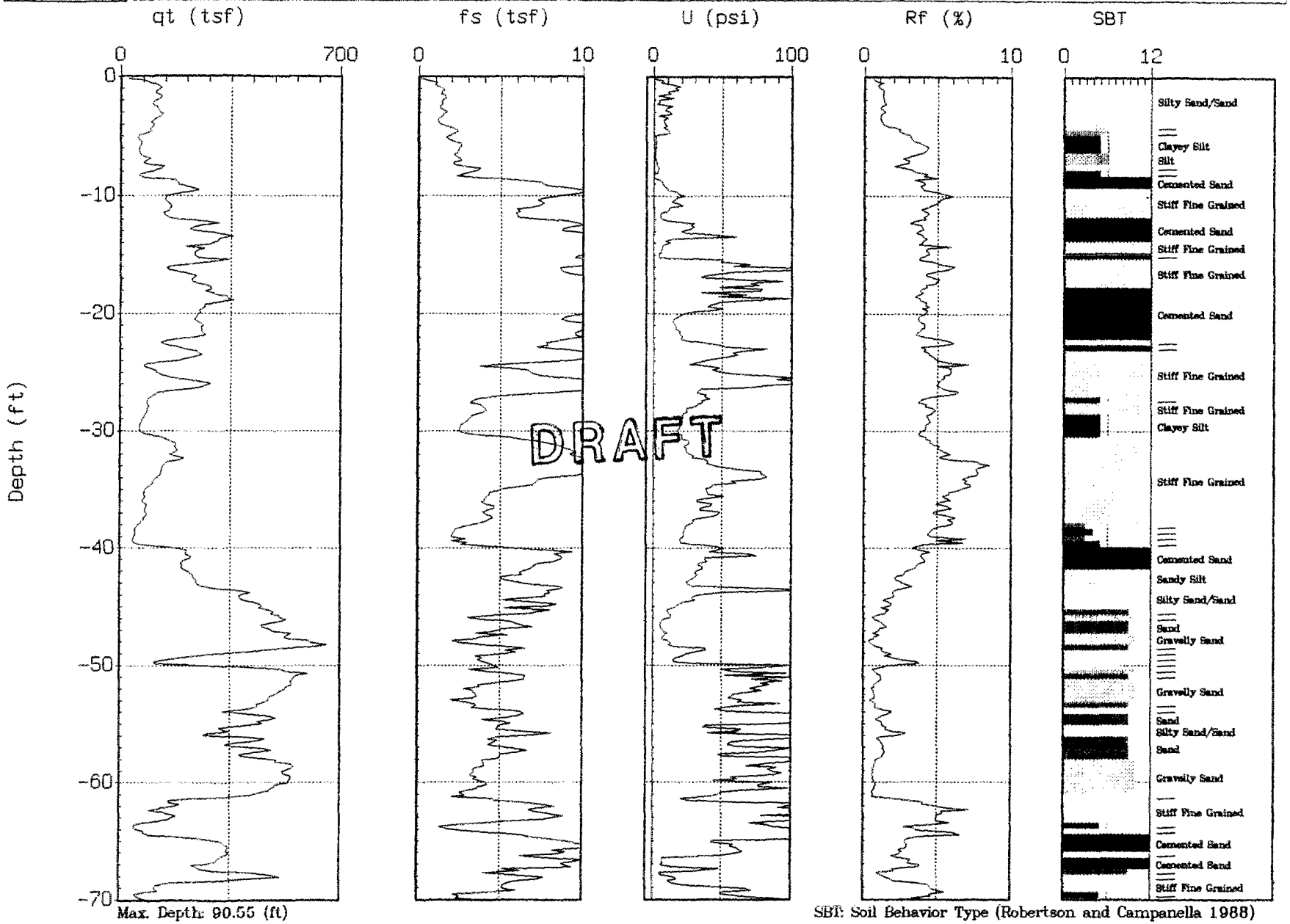
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-69

Geologist : B. CLARKE
Date : 10:30:01 09:29



Max. Depth: 90.55 (ft)

Depth Inc.: 0.164 (ft)

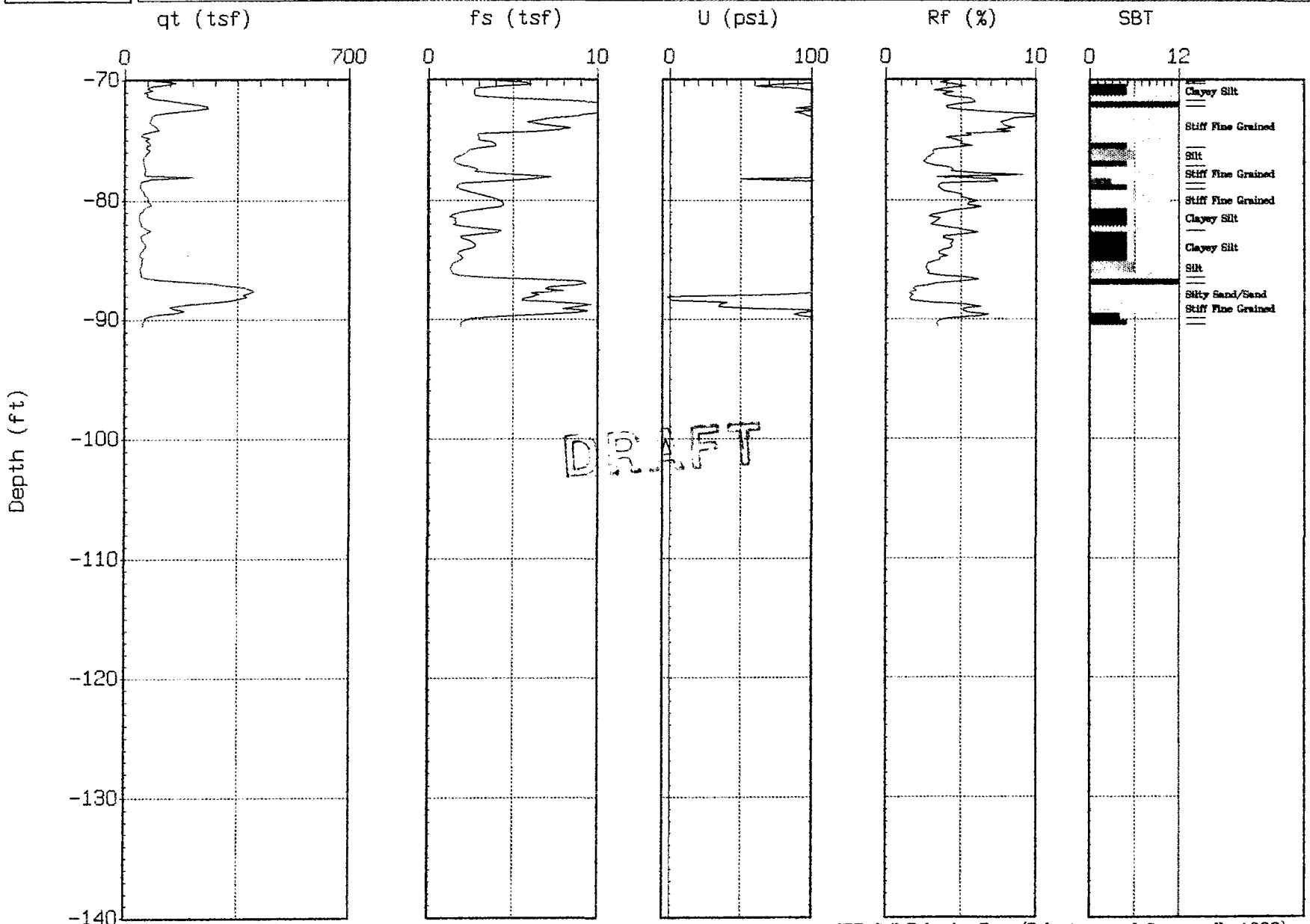
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-69

Geologist : B. CLARKE
Date : 10:30:01 09:29



Max. Depth: 90.55 (ft)

Depth Inc.: 0.164 (ft)

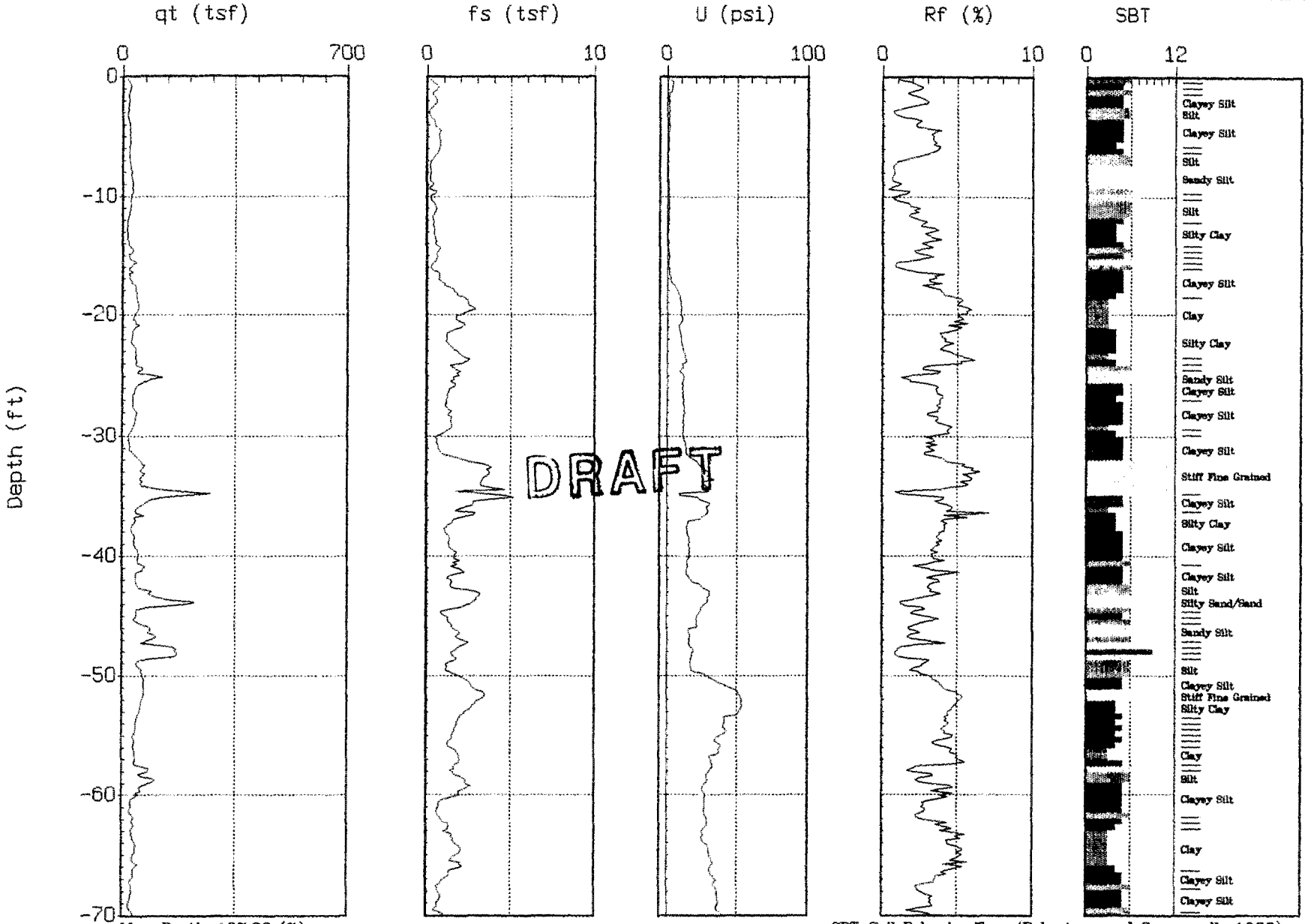
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : ~~CPT 71~~ PP070

Geologist : B. CLARKE
Date : 10:30:01 13:31



Max. Depth: 107.28 (ft)

Depth Inc.: 0.164 (ft)

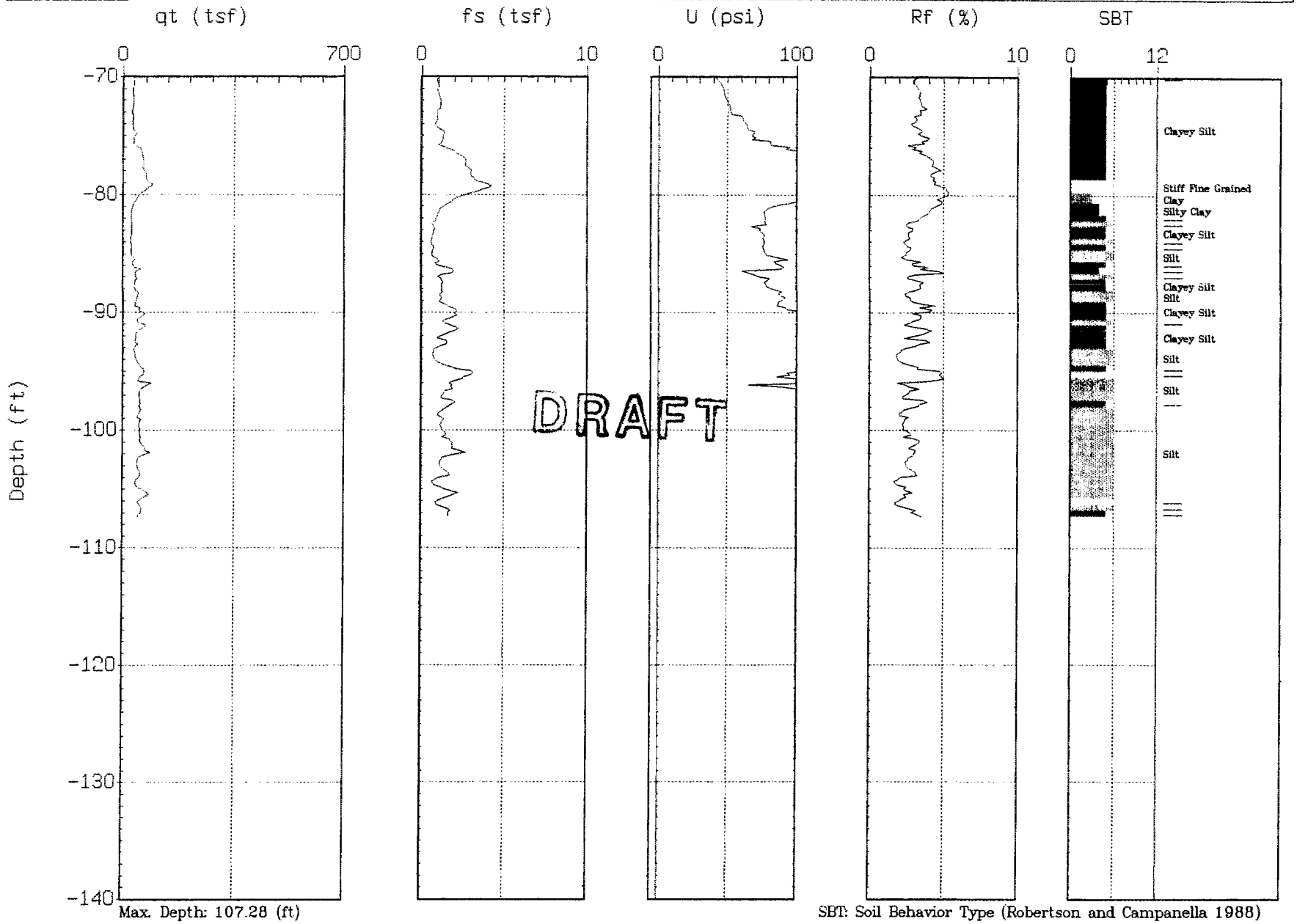
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : ~~CPT-71~~ PP070

Geologist : B. CLARKE
Date : 10:30:01 13:31



Max. Depth: 107.28 (ft)

Depth Inc.: 0.164 (ft)

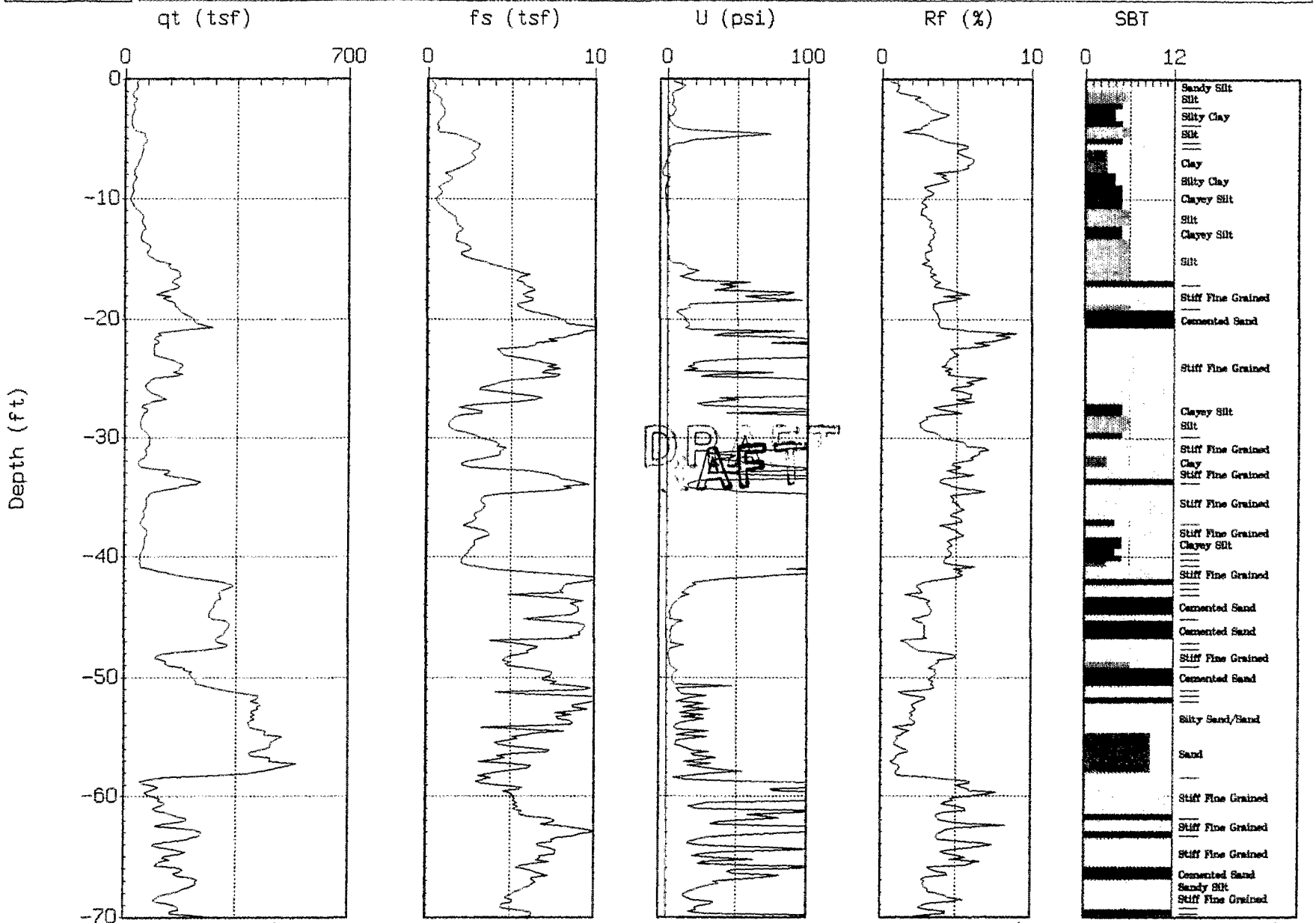
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-74

Geologist : B. CLARKE
Date : 10:31:01 09:02



DRAFT

Max. Depth: 86.94 (ft)

Depth Inc.: 0.164 (ft)

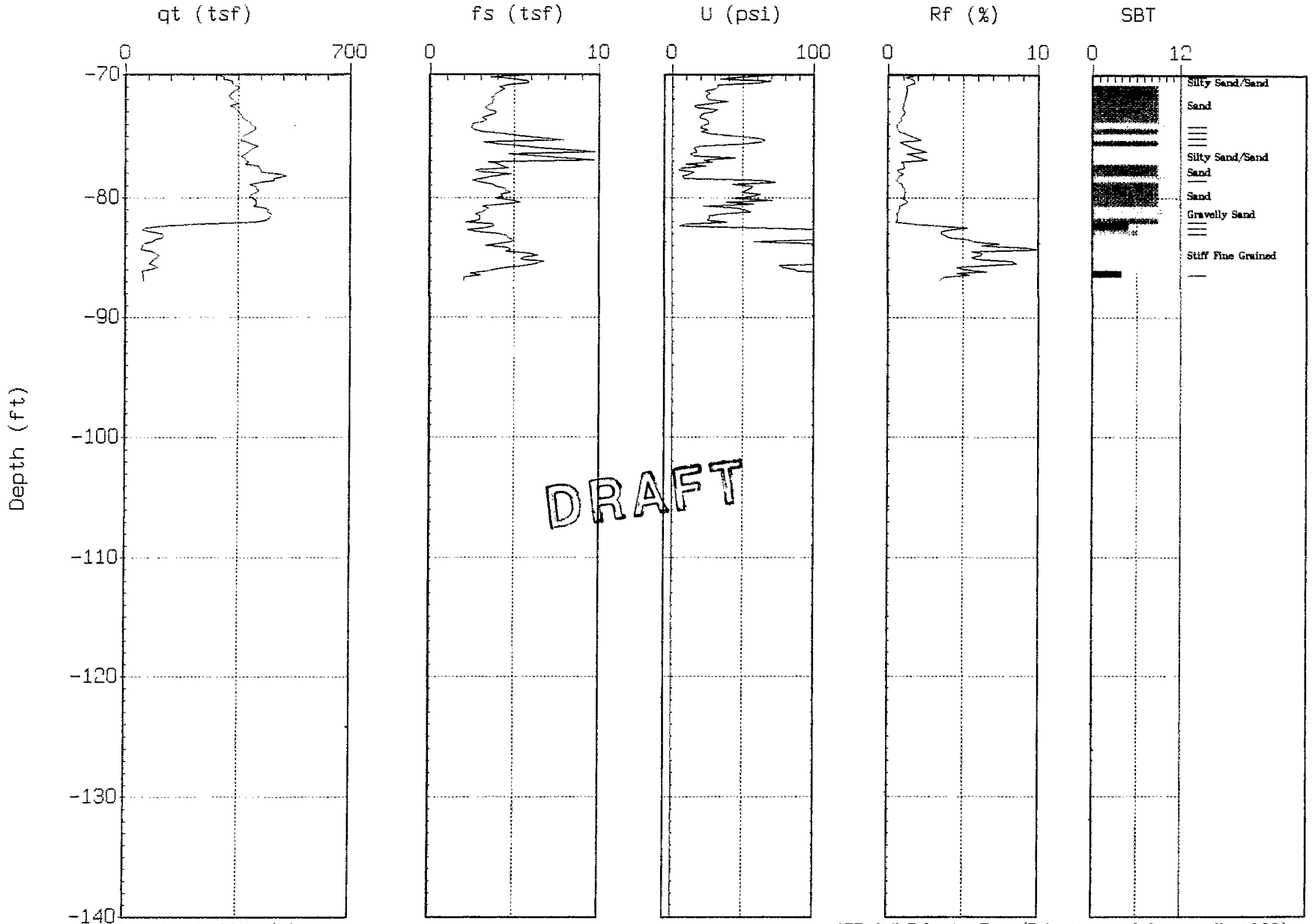
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-74

Geologist : B. CLARKE
Date : 10:31:01 09:02



Max. Depth: 86.94 (ft)

Depth Inc.: 0.164 (ft)

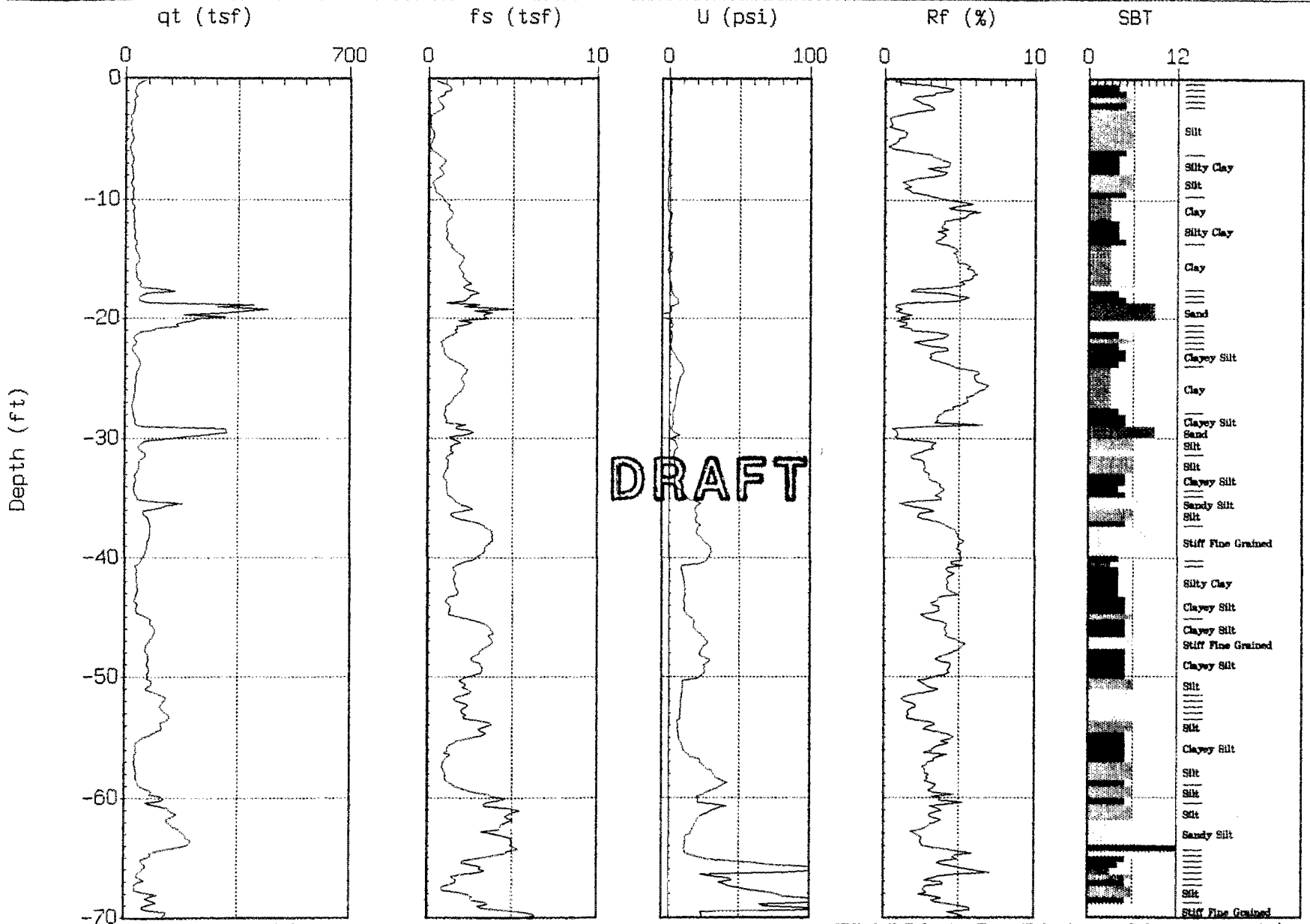
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-~~83~~ PP081

Geologist : B. CLARKE
Date : 11:01:01 12:56



Max. Depth: 81.86 (ft)

Depth Inc.: 0.164 (ft)

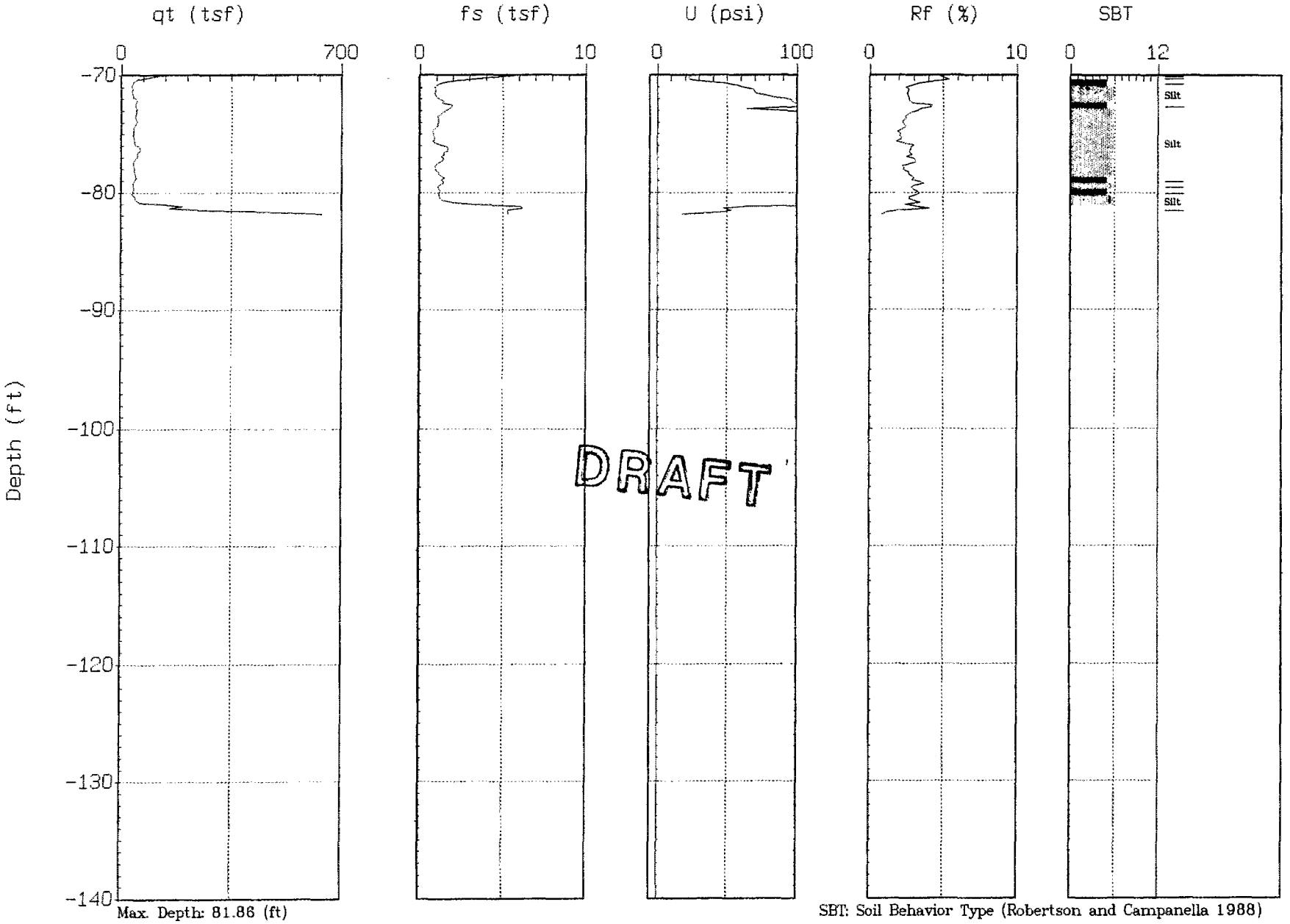
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

R.F. WESTON

Site : OMEGA CHEM.
Location : CPT-83 PP081

Geologist : B. CLARKE
Date : 11:01:01 12:56



Max. Depth: 81.86 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson and Campanella 1988)

WESTON

SHEET ____ of ____

CLIENT/SUBJECT Omega W.O. NO. ____

TASK DESCRIPTION CPT / PP Sample Boring Correlation TASK NO. 032 / a

PREPARED BY BR DEPT ____ DATE 12-8-01

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

CPT	is really	PP
9		013
71		070
83		081

Remainder appear to correlate directly

RFW 10-05-003/A-5/85
512 5649

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET 1 of 1

CLIENT/SUBJECT Omega W.O. NO.

TASK DESCRIPTION Tel. con. re const. of MW08B/C TASK NO.

PREPARED BY BC DEPT DATE 12-26-01

MATH CHECK BY DEPT DATE

METHOD REV. BY DEPT DATE

APPROVED BY

DEPT DATE

90 MW08 B/C

1½' 85-90 ~~silty~~ SM w/ cl

83-85 clayey silt.

82-84 F-M snd

NR

76-80 clayey silt

73-75 SM

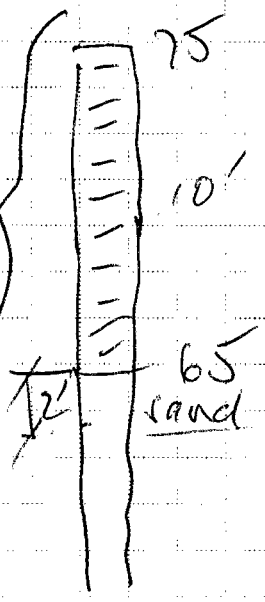
68.5-70 F-M snd

63-65 F-M snd

59.5-60 Clayey silt.

08B/C log inverted

Inverted



08B

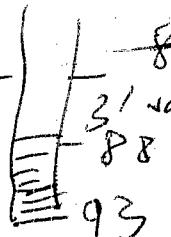
~~87-93 snd~~ 84-85 f. sndy clayey silt.

~~85~~ 87-93 SP

93-96½ M/EC

96½-100 F. sndy silt.

from 08D"



08C

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET 1 of ___

CLIENT/SUBJECT Omega W.O. NO. ___

TASK DESCRIPTION Aquifer dist. in study area TASK NO. 0210

PREPARED BY summary DEPT ___ DATE 12-27-01

MATH CHECK BY ___ DEPT ___ DATE ___

METHOD REV. BY ___ DEPT ___ DATE ___

APPROVED BY ___ DEPT ___ DATE ___

— Bellflower aquiclude ~40' thick in SW 1/3 to 1/2 of study area; ~20' thick in central S part of study area. Base @ ~120' MSL @ Omega.

— Gaspur aquifer embayment in WNW 1/3 to 1/2 of study area thickens to 80' @ Norwalk Blvd. Base ~60 to 80 ft. MSL.

— Gage aquifer absent (partly eroded by Gaspur?) in tongue extending WSW from just N. of Omega site. ~20+ ft. thick; to 40' thick in far SW corner of study area.

Gage merged w/ overlying aquifer in far NW corner of study area. Base of Gage ~>100 ft. MSL. to >150' MSL, or higher.

— Hollydale aquifer present in W 1/2 of study area, & in SE ~1/4 of study area. ~<40 ft. thick

Latter area Hollydale merged w/ overlying aquifer. Base >50' MSL, ~~even~~ S. of study area.

— Jefferson aquifer present in WSW 3/8 of study area. ≲ 20 ft. thick

Merged w/ overlying aquifer(s) in NW <1/4 of study area. Base el. ~ 0' MSL in center of study area.

AA

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET 1 of ____

CLIENT/SUBJECT Omega W.O. NO. ____

TASK DESCRIPTION Tel. conv. re construction of MW01 "B" TASK NO. ~~0210~~ 0321

PREPARED BY ____ DEPT ____ DATE 12-27-0

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

- Began log @ 60'
- Consistent S, w/ localized gravel, to 85' bgs!
- 2" CL/ML layer @ ~ 78.5'
- 85-95'+ hard clay

⇒ - Build one 4" well, screen 76-86'
- 2' sand above top of screen.

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ___ of ___

CLIENT/SUBJECT Omega W.O. NO. ___

TASK DESCRIPTION Aquifer dist. in study area TASK NO. 0210

PREPARED BY ___ DEPT ___ DATE 12-27-01

MATH CHECK BY ___ DEPT ___ DATE ___

METHOD REV. BY ___ DEPT ___ DATE ___

APPROVED BY ___ DEPT ___ DATE ___

— Lynwood aquifer beneath WSW ~9/10 of study area. ~50-100 ft. thick.

Merged w/ overlying aquifer(s) in far WNW edge of study area. Base @ ~ -50' @ Omega, -100' MSL under most of study area; & ~ -50' MSL in extreme SW cor.

— Silverado aquifer beneath WSW ~9/10 of study area. ~100 to 150 ft. thick.

Base ~ -200' MSL @ Omega; ~ -300' MSL elsewhere.

Additional summary info, Whittier Area, from Bulletin 104, p. 161-165

Qal - thin finger of S, G, Cl
Gaspur & Bellflower
~80' thick to W., thin to E.

Bellflower Qal - clay & sndy clay, 10-40' thick above Gaspur aquifer in W part of area
Bellflower is Qlw in much of Whittier area.

Bellflower is clay & sndy clay av. 20' thick, extending to ~70' bgs

locally percolates/transmits water where thin &/or discontinuous.

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

Gaspur Qal – mainly S+G w/ litt. interbedded clay, ~30-60' thick, as deep as 145' ft. bgs/+60' MSL

Qlw – continental deposits, max ~70' thick

Gage – major water bearing Qlw unit in Whittier Delineated only in S. por. of Whittier area Typ. ~30' thick snd, w/ some interbedded clay. Max depth ~150' bgs/+50' MSL

Qsp – S+G w/ intbdd clay, prob. marine

Hollydale – 10 to 25' thick S+G w/ litt. interbedded clay. Max depth ~100' bgs/+50' MSL

Jefferson – 20-40' thick S+G w/ litt. interbedded clay. Merged w/ Hollydale in W. part of "Whittier" area Max depth ~350' bgs/-100' MSL

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET 1 of ___

CLIENT/SUBJECT Omega W.O. NO. ___

TASK DESCRIPTION CPT Log Summary, NE to SW TASK NO. 0610

PREPARED BY BC DEPT ___ DATE 1-1-02

MATH CHECK BY ___ DEPT ___ DATE ___

METHOD REV. BY ___ DEPT ___ DATE ___

APPROVED BY ___ DEPT ___ DATE ___

CPT 70 — Intbdd clayey slt, slty clay, clay, sndy slt, slt to ~43' bgs
- Two thin slty snds intbdd w/ sndy slt/slt @ 43-48' bgs
- Clayey slt / clay intbdd. 48-82' bgs
- Clayey slt / slt intbdd (thicker) 82-107' bgs

CPT 1 — Intbdd clayey slt, slty clay, clay, slt to ~62 or 70' bgs, w/ sndy slt @ 34' & 43' bgs
- ~~Int~~ Clayey slt / slt intbdd (thicker) @ 70-87' bgs.

CPT 2 — Intbdd slty clay, clay, clayey slt, and slt @ 0-44 bgs; w/ sndy slt @ 16' bgs, and slty snd/snd @ 31 ft bgs.
- Sand betw sndy slt @ 44-51' bgs
- Clayey slt w/ slt intbdd (thicker) @ 51-85' bgs

CPT 42 — Clay, clayey slt, and slt @ 0-29' bgs
- slty snd/snd @ 31 ft bgs
- slt / clayey slt @ 31-59' bgs.
- Snd @ 59-60' bgs.

CPT 81 — Clay, slt, clayey slt, 0-~50'
- snd & slty snd @ 19-21' & 29-31'
- stiff f. gnd @ 37-40' & 46-48'
- slt, clayey slt, (thicker) & stiff f. gnd @ ~50' to 82' bgs., w/ slty snd @ 52'

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

CPT-6
- Clay, silty clay, clayey silt (silt in ↓) 0-48' bgs
- Clayey silt, stiff f. gnd, silt, sndy silt w/ thin cmtd snds 48-78' bgs.
- cmtd snds @ 58', 60', 67' bgs, among stiff f. gnd

CPT-13
- clayey silt & silt 0-17' bgs
- stiff f. gnd, tr. clay @ 17'-38'
- silt, sndy silt, silty snd, snd, cmtd snd 38-58'
- silty snd/snd @ 40-45', snd @ 45-47', cmtd snds @ 47-50', 56', & 58'

CPT-15
- clayey silt, silty clay, silt @ 0-53'; stiff f. gnd @ ~31-36'
- clayey silt & silt @ 53-88' (thicker); stiff f. gnd @ 84' & 88' bgs

CPT-41
- silt, sndy silt, clayey silt @ 0-41'
- sndy silt, silt, ~~and~~ silty snd, and snd 41-60'; snd @ 45' & 47' to 49'.
- gravelly snd (& snd) 60-73'

CPT-11
- clay, silty clay, clayey silt, & stiff f. gnd 0-51'; stiff f. gnd @ 32-34', 43-51'
- silty snd, cmtd snd, sndy silt 51-55'
- Gravelly snd, snd 55-59'
- silt, sndy silt, clayey silt, cmtd snd & stiff f. gnd 59-71'
- silty snd & snd 71-74'

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

CPT-17
- slt, sndy slt, clayey slt 0-39 ft.
- snd & slty snd 39-43'
- gravelly snd / snd 43-63'

CPT-23
- slt, sndy slt w/ few slty snd & snd 0-49'
- snd @ 17-19'; 20-21'; & 25-26'
- snd @ 49-52'
- grvly snd @ 52-59'
- sndy slt, slty snd, & slt @ 59-62'
- snd & gravelly snd @ 62-65'

CPT-10
- slt, slty clay, clayey slt & slty snd 0-42'
- snd & gravelly snd @ 42-47'

CPT-22
- sndy slt & slty snd @ 0-10'
- slty clay, clayey slt, clay & slt 10-39'
- snd & slty snd @ 39-49'
- gravelly snd & snd @ 49-68'

CPT-20
- slty clay, clayey slt, clay, sndy slt, & stiff f. gnd @ 0-39'
- snd, slty snd, & sndy slt 39-47'
- gravelly snd @ 47-52'
- slt, clayey slt, sndy slt, & stiff f. gnd 52-76'

CPT-46
- sndy slt & slty snd @ 0-12'
- clayey slt, clay, slty clay, & slt @ 12-29'
- snd @ 29-35'
- grvly snd & snd @ 35-48'
- sndy slt & slty snd @ 48-52'

RFW 10-05-003/A-5/85

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

CPT-29
- sndy slt & slty snd @ 0-7'
- clayey slt, slty clay, slt, & sndy slt @ 7-34'
- slty snd/snd @ 34-42'
- snd & grvly snd @ 42-44' +

CPT-33
- clayey slt, slty clay, clay & slt 0-28'
- slty snd @ 28-29'
- snd & gravelly snd @ 29-40' +

CPT-34
- clayey slt & slt @ 0-32'
- snd @ 32-33'
- slty snd/snd @ 33-35'
- grvly snd @ 35-36' +

CPT-63
- clay, slty clay, & slt @ 0-14'
- snd, grvly snd & slty snd @ 14-26'
- slt, sndy slt, & clayey slt @ 26-38'
- snd, grvly snd, slty snd, sndy slt @ 38-89'
- stiff f. gnd, clayey slt, slty snd, & slt @ 89-104' +

CPT-39
- clayey slt, slty clay, slt, clay & sndy slt @ 0-31'
- snd & grvly snd @ 31-35' +

CPT-38
- clayey slt, clay, slty clay, slt & sndy slt @ 0-13'
- sand w/ 1' slty snd intervals @ 13-31'
- clayey slt, slt, & stiff f. gnd @ 31-73' +

CPT-40
- clayey slt, slt, sndy slt, stiff f. gnd, slty clay & clay @ 0-21'
- snd @ 21-24'
- slt & clayey slt @ 24-63'
- snd @ 63-64' +

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CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

CPT-52
- Clay, silty clay, clayey silt @ 0-16'
- silty sand @ 16-19'
- sand & gravly sand @ 19-33'
- silt & sandy silt @ 33-42'
- silty sand, cmtd sand, sand @ 42-47'
- gravly sand & sand ~~@ 47~~ & cmtd sand @ 47-57'
- silt & sandy silt @ 57-68'
- silty sand @ 68-74'+

CPT-69
- stiff f. gnd, clayey silt, & cmtd sand @ 0-42'
- sand, gravly sand, silty sand, sandy silt & stiff f. gnd @ 42-69'
- clayey silt, stiff f. gnd, silt @ 69-91'+

CPT-57
- clayey silt, stiff f. gnd, clay, silty clay, silt @ 0-42'
- silty sand @ 42-44'
- gravly sand & sand @ 44-57'
- sandy silt & silt @ 57-59'
- sand & gravly sand, intbdd @ 59-70'+

CPT-59
- stiff f. gnd, clayey silt, silt & silty clay 0-39'
- sand, silty sand, sandy silt, silt & cmtd sand 39-60'
- gravly sand & sand 60-73'
- stiff f. gnd, sand, silty sand, silt, sandy silt & clayey silt intbdd 73-94'+

CPT-74
- silt, clayey silt, clay, silty clay, & stiff f. gnd @ 0-19
- stiff f. gnd, cmtd sand, clayey silt, sandy silt, & silty clay, intbdd @ 19-52'
- silty sand 52-54'
- sand 54-58'
- stiff f. gnd, silt, sandy silt, cmtd sand 58-70'
- sand, silty sand, gravly sand 70-83'
- stiff f. gnd 83-87'+

RFW 10-05-003/A-5/85

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SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

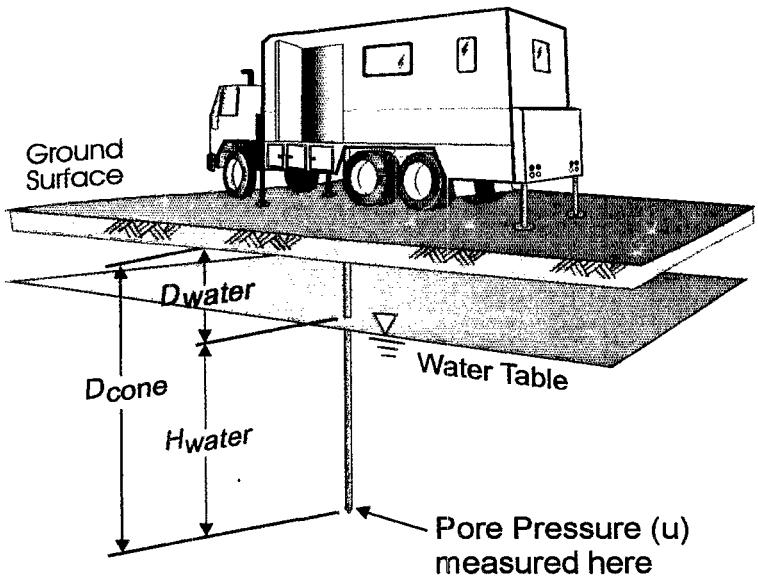
APPROVED BY ____

DEPT ____ DATE ____

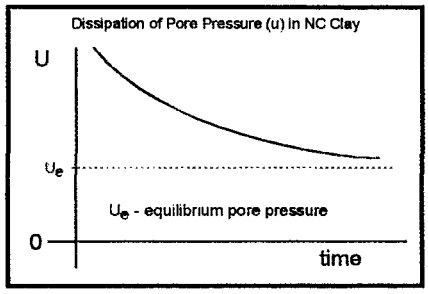
CPT-65
- stiff f. gnd, clayey slt, slt, sndy slt, slty clay & cmtd snd, int bld @ 0-39'
- snd, slty snd, sndy slt @ 39-55'
- stiff f. gnd, cmtd snd, sndy slt & clayey slt @ 55-61'
- snd, slty snd, & grvly snd @ 61-64'+

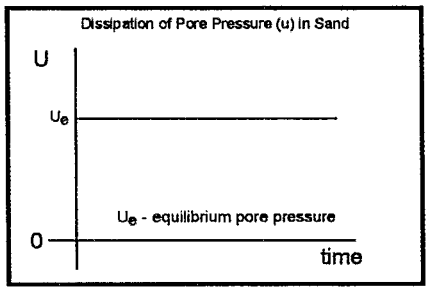
CPT-66
- stiff. f. gnd, slt, cmtd snd, & clayey slt @ 0-32'
- slty snd & sndy slt @ 32-44'
- snd @ 44-45'
- slt & sndy slt @ 45-53'
- cmtd snd, stiff f. gnd, & slty snd @ 53-62'

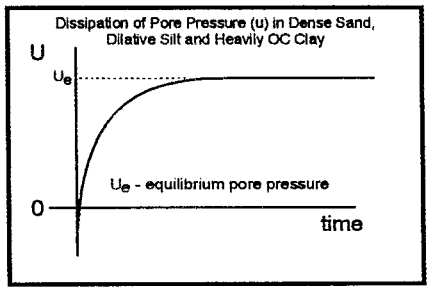
Estimation of Ground Water Table from CPT Dissipation Tests



D_{cone} - Depth of Cone
D_{water} - Depth to Water Table
H_{water} - Head of Water







Water Table Calculation

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

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

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

GREGG
Gregg In Situ, Inc.

PRESENTATION OF CONE PENETRATION TEST DATA

OMEGA OU-02

WHITTIER, CALIFORNIA

Prepared for:

WESTON
Thousand Oaks, California

Prepared by:

GREGG IN SITU, INC.
Signal Hill, California
02-186sh

Prepared on:

August 22, 2002

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PRESENTATION OF CONE PENETRATION TEST DATA

1.0 INTRODUCTION

This report presents the results of a Cone Penetration Testing (CPT) and in situ groundwater sampling program carried out at the Omega OU-02 site located in Whittier, CA. The work was performed on August 4th, 14th & 16th, 2002. The scope of work was performed as directed by Weston personnel.

2.0 FIELD EQUIPMENT & PROCEDURES

The Cone Penetration Tests (CPT) were carried out by GREGG IN SITU, INC. of Signal Hill, CA using an integrated electronic cone system. The CPT soundings were performed in accordance with ASTM standards (D 5778-95). A 20 ton capacity cone was used for all of the soundings (figure 1). This cone has a tip area of 15 cm^2 and 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 cones used during the program recorded the following parameters at 5 cm depth intervals:

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

The above parameters were printed simultaneously on a printer and stored on a computer diskette for future analysis and reference.

The pore water pressure element was located directly behind the cone tip. The pore water pressure element was 5.0 mm thick and consisted of porous plastic. Each of the elements were saturated in silicon oil under vacuum pressure prior to penetration. Pore pressure dissipations were recorded at 5 second intervals when appropriate during pauses in the penetration.

A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

The cones were pushed using GREGG IN SITU's CPT rig, having a down pressure capacity of approximately 25 tons. 6 CPT soundings were performed. The penetration tests were carried to depths of approximately 66 to 80 feet below ground surface. Test locations and depths were determined in the field by Weston personnel.

In situ groundwater samples were taken at 16 Locations. Groundwater samples were collected using a Hydropunch® type groundwater sampling system (figure 2). The groundwater sampler operates by pushing 1.75 or 1.5 inch diameter hollow rods with a retrievable tip. A stainless steel filter screen is attached to the tip. At the desired sampling depth, the rods are retracted exposing the filter screen and allowing for groundwater infiltration. A small diameter bailer is then used to collect groundwater samples through the hollow rod.

The CPT/groundwater sample holes were grouted using our support rig. The grouting procedure consists of pushing a hollow CPT rod with a "knock out" plug back down the hole to the test hole termination depth. Grout is then pumped under pressure as the tremie pipe is pulled from the hole.

3.0 CONE PENETRATION TEST DATA & INTERPRETATION

The cone penetration test data is presented in graphical form. Penetration depths are referenced to existing ground surface. This data includes CPT logs of measured soil parameters and a computer tabulation of interpreted soil types along with additional geotechnical parameters and pore pressure dissipation data.

The stratigraphic interpretation is based on relationships between cone bearing (qc), sleeve friction (fs), and penetration pore pressure (U). The friction ratio (Rf), which is sleeve friction divided by cone bearing, is a calculated parameter which is used to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone bearing and generate large excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little in the way of excess pore water pressures.

Pore Pressure Dissipation Tests (PPDT's) were taken at various intervals in order to measure hydrostatic water pressures and approximate depth to groundwater table. In addition, the PPDT data can be used to estimate the horizontal permeability (k_h) of the soil. The correlation to permeability is based on the time required for 50 percent of the measured dynamic pore pressure to dissipate (t_{50}). The PPDT correlation figure (figure 3) is provided in the Appendix.

The interpretation of soils encountered on this project was carried out using recent correlations developed by Robertson et al, 1988. It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and U. In these situations, experience and judgement and an assessment of the pore pressure dissipation data

should be used to infer the soil behavior type. The soil classification chart (figure 4) used to interpret soil types based on qc and Rf is provided in the Appendix.

We hope the information presented is sufficient for your purposes. We recommend that all data be carefully reviewed by qualified personnel to verify the data and make appropriate recommendations. If you have any questions, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,
GREGG IN SITU, INC.

Brian Savela
Operations Manager

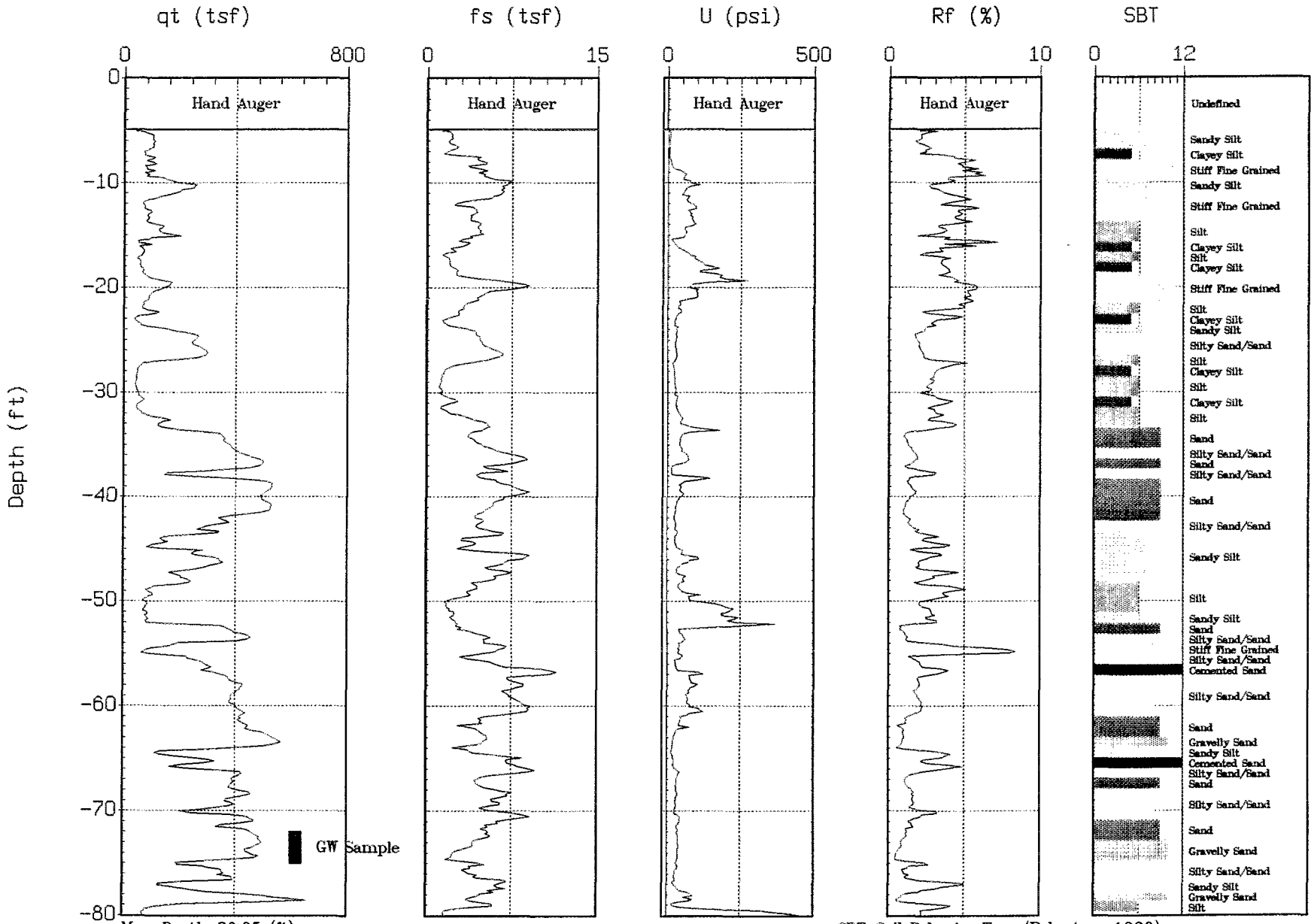
3.1 CPT PLOTS

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-91

Geologist : G. ZUNIGA
Date : 08:14:02 13:41



Max. Depth: 80.05 (ft)

Depth Inc.: 0.164 (ft)

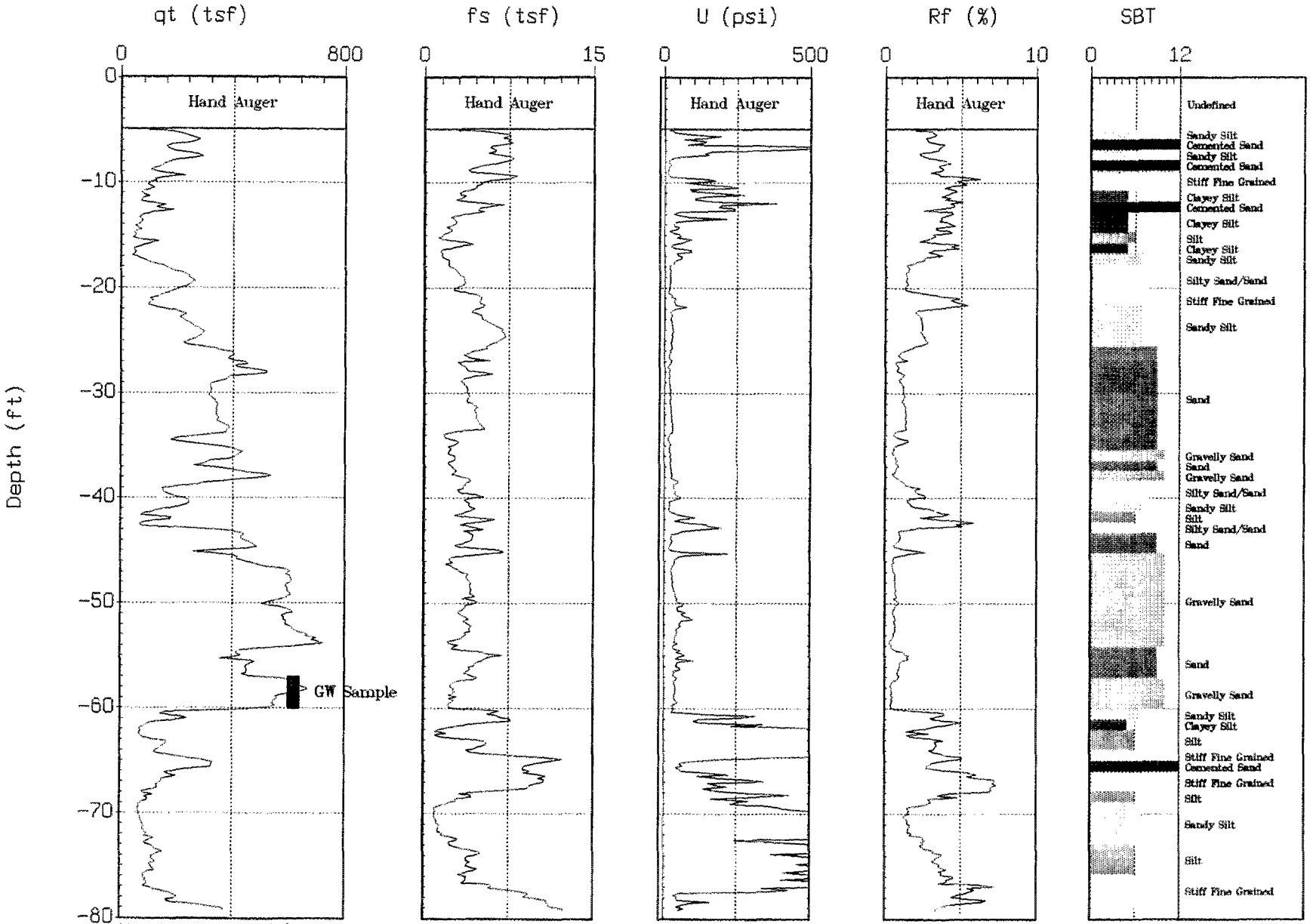
SBT: Soil Behavior Type (Robertson 1990)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-92

Geologist : G. ZUNIGA
Date : 08:14:02 10:30



Max. Depth: 79.23 (ft)

Depth Inc.: 0.164 (ft)

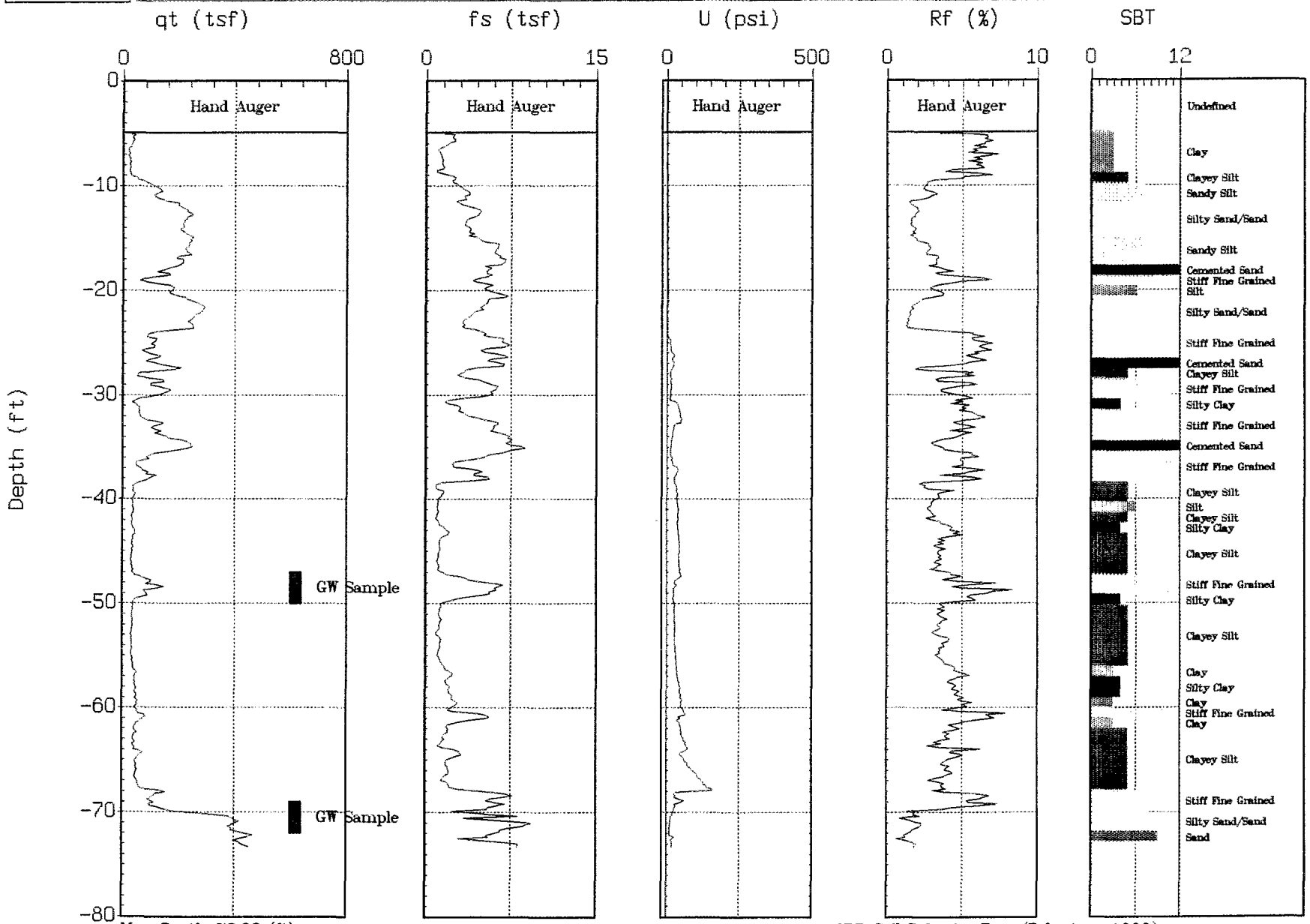
SBT: Soil Behavior Type (Robertson 1990)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-94

Geologist : G. ZUNIGA
Date : 08:09:02 09:36



Max. Depth: 73.33 (ft)

Depth Inc.: 0.164 (ft)

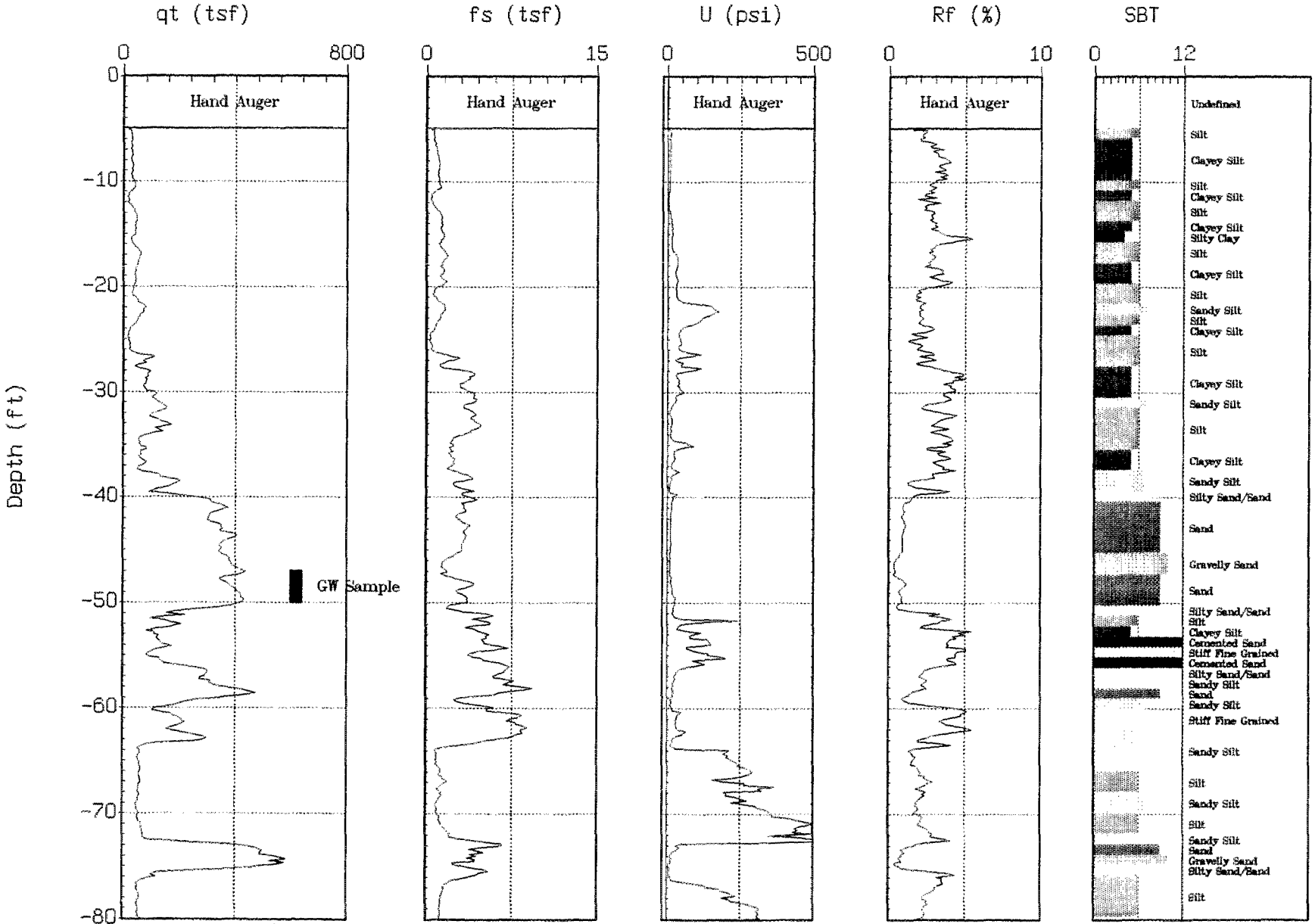
SBT: Soil Behavior Type (Robertson 1990)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-95

Geologist : G. ZUNIGA
Date : 08:14:02 08:13



Max. Depth: 80.05 (ft)

Depth Inc.: 0.164 (ft)

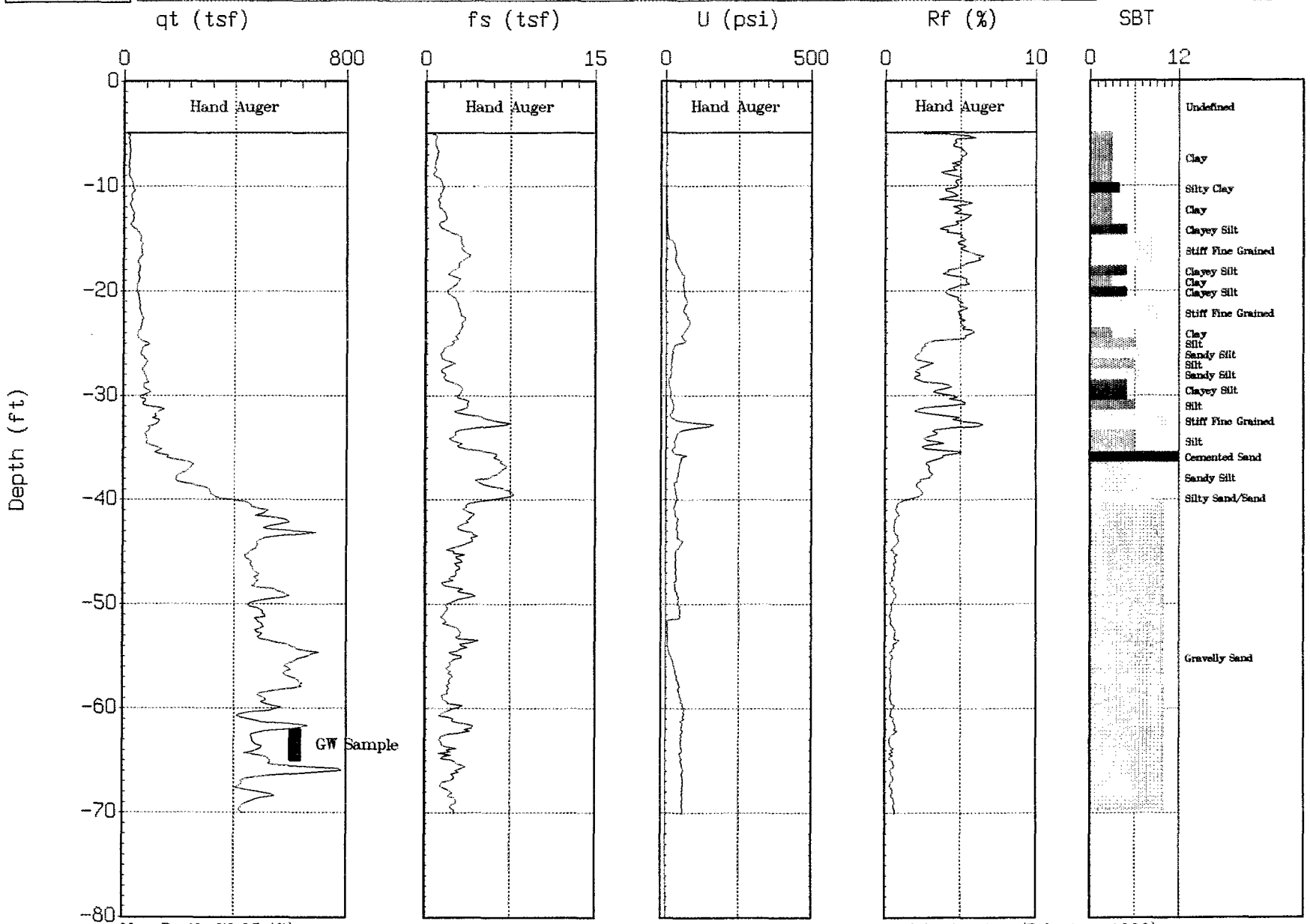
SBT: Soil Behavior Type (Robertson 1990)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-112

Geologist : G. ZUNIGA
Date : 08:16:02 12:51



Max. Depth: 70.05 (ft)

Depth Inc.: 0.164 (ft)

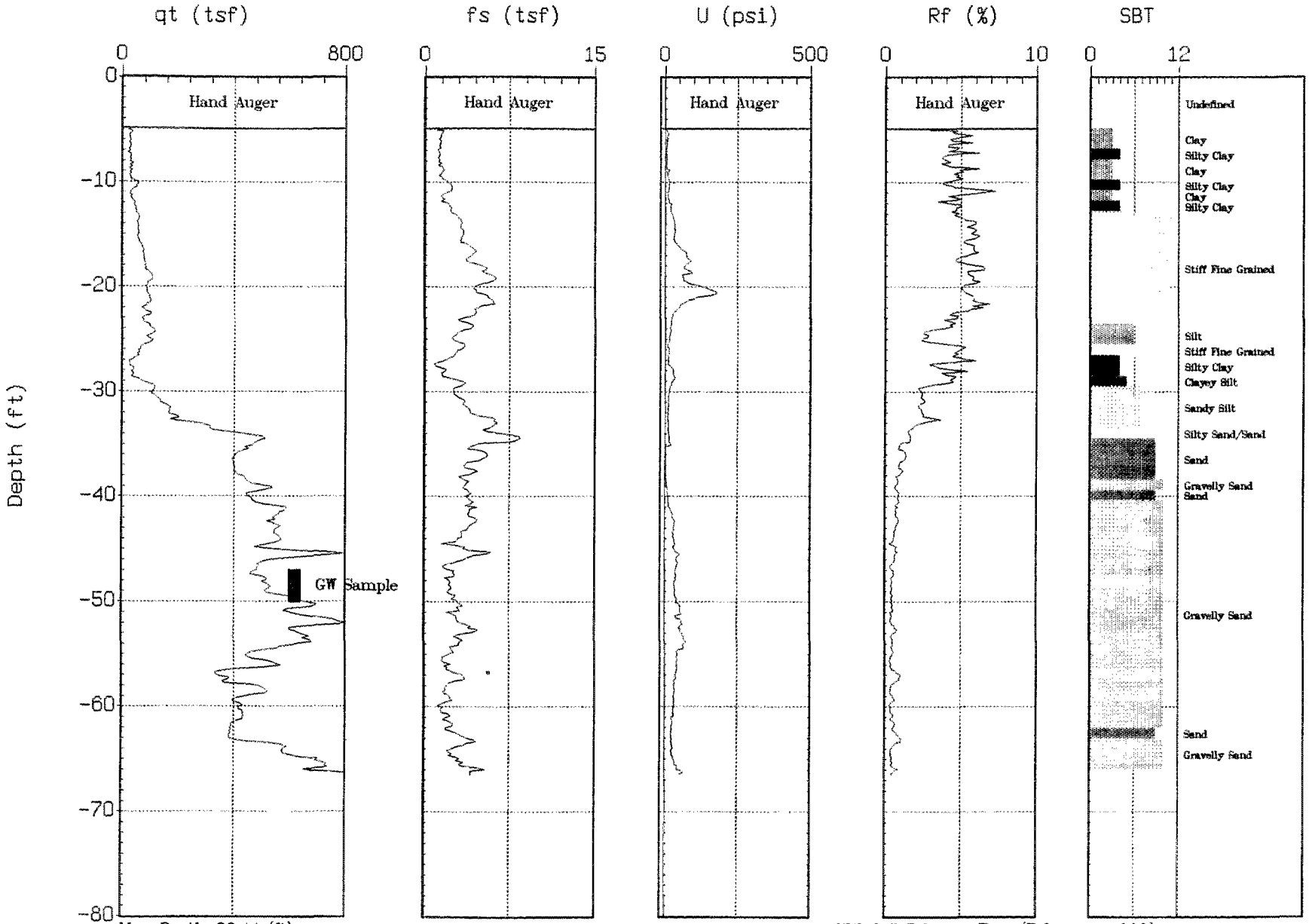
SBT: Soil Behavior Type (Robertson 1990)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-115

Geologist : G. ZUNIGA
Date : 08:16:02 09:09



Max. Depth: 66.44 (ft)

Depth Inc.: 0.164 (ft)

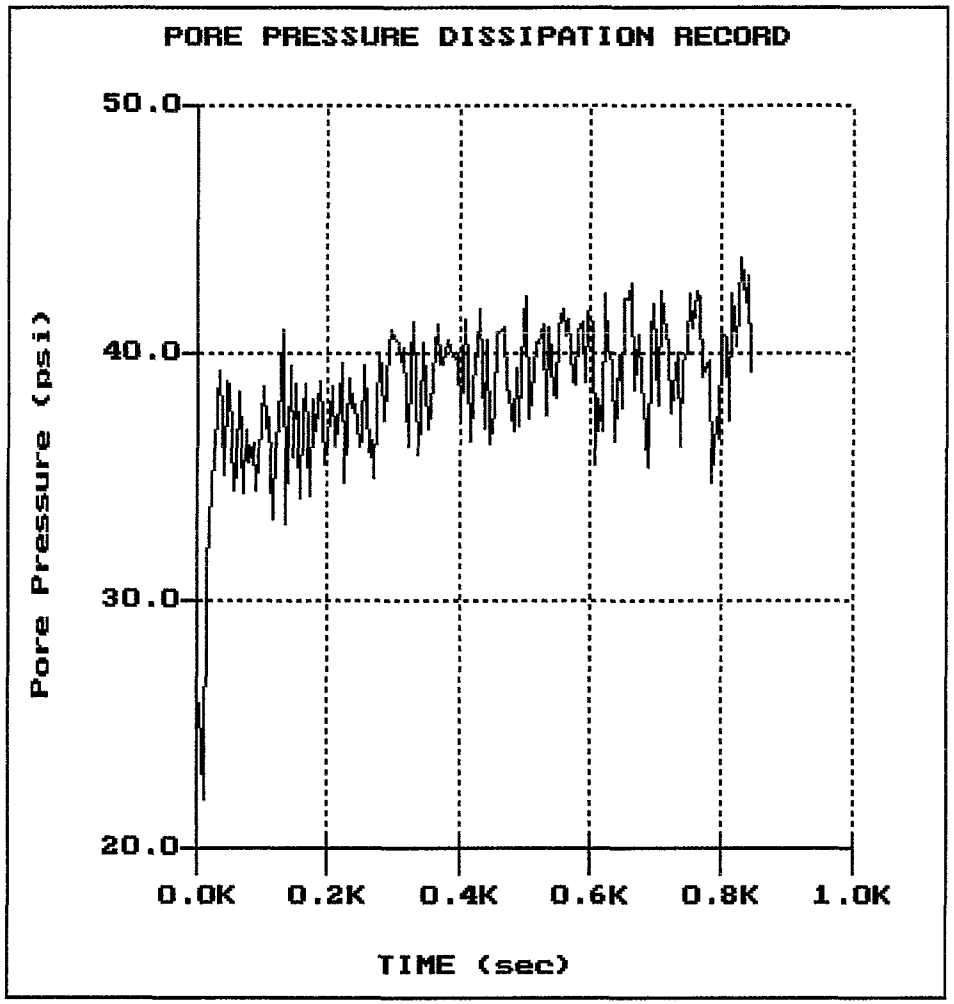
SBT: Soil Behavior Type (Robertson 1990)

3.2 PORE PRESSURE DISSIPATION PLOTS

WESTON

Site:OMEGA OU-02
Location:CPT-95

Geologist:G. ZUNIGA
Date:08:14:02 08:13

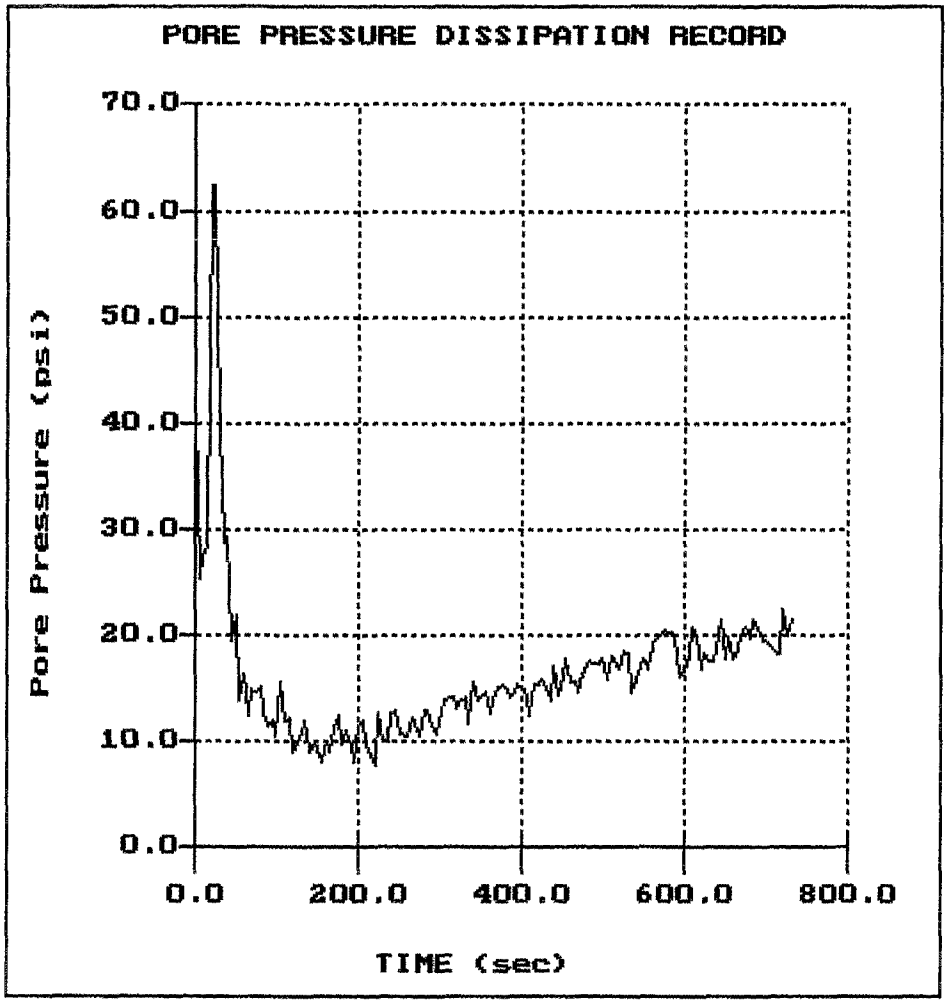


File: 186C95.PPC
Depth (m): 22.40
(ft): 73.49
Duration : 845.0s
U-min: 22.01 10.0s
U-max: 43.90 830.0s

WESTON

Site:OMEGA OU-02
Location:CPT-92

Geologist:G. ZUNIGA
Date:08:14:02 10:30

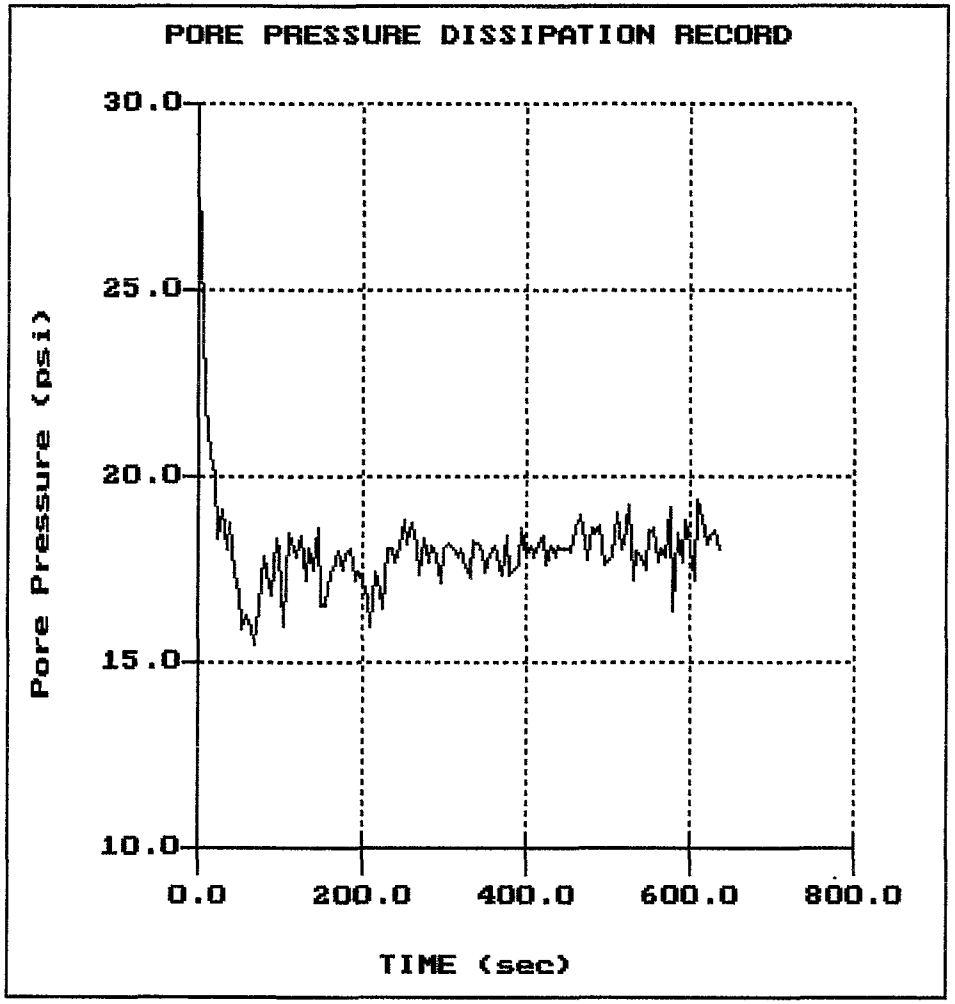


File: 186C92.PPC
Depth (m): 24.15
(ft): 79.23
Duration : 730.0s
U-min: 7.81 220.0s
U-max: 62.30 25.0s

WESTON

Site:OMEGA OU-02
Location:CPT-91

Geologist:G. ZUNIGA
Date:08:14:02 13:41

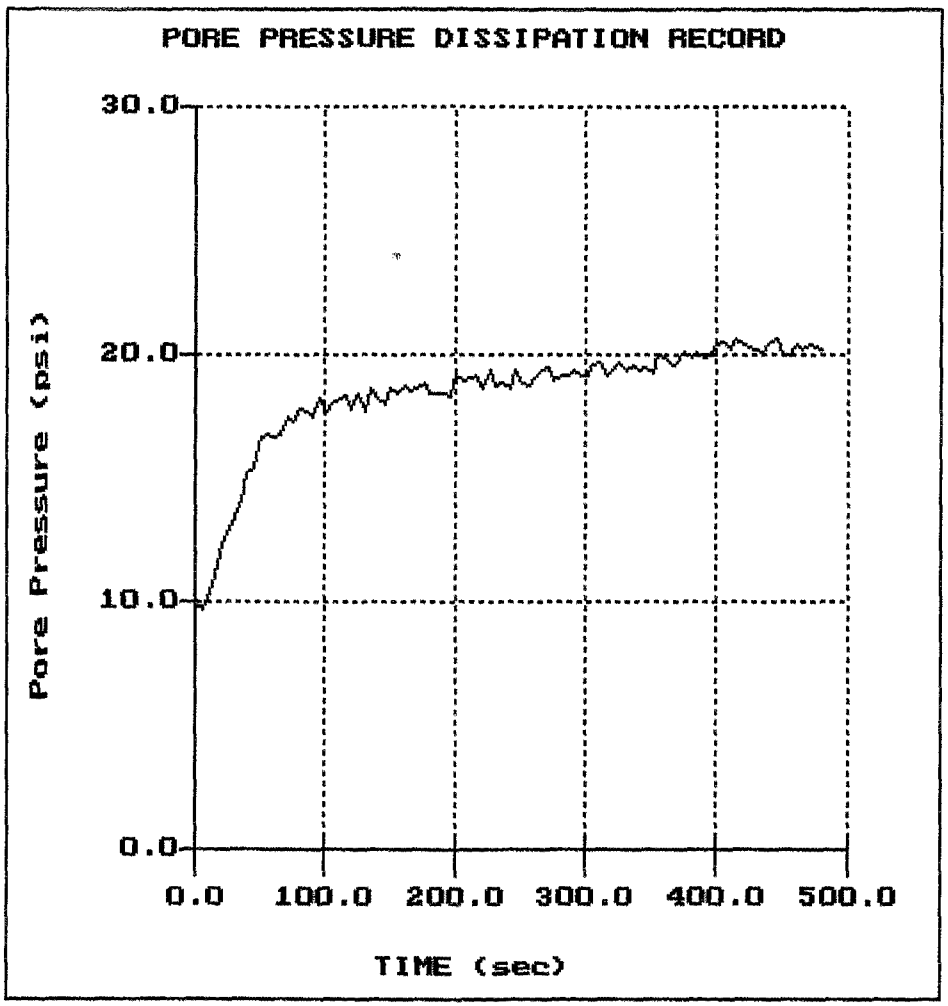


File: 186C91.PPC
Depth (m): 22.85
(ft): 74.97
Duration : 635.0s
U-min: 15.50 70.0s
U-max: 28.03 0.0s

WESTON

Site:OMEGA OU-02
Location:CPT-94

Geologist:G. ZUNIGA
Date:08:09:02 09:36

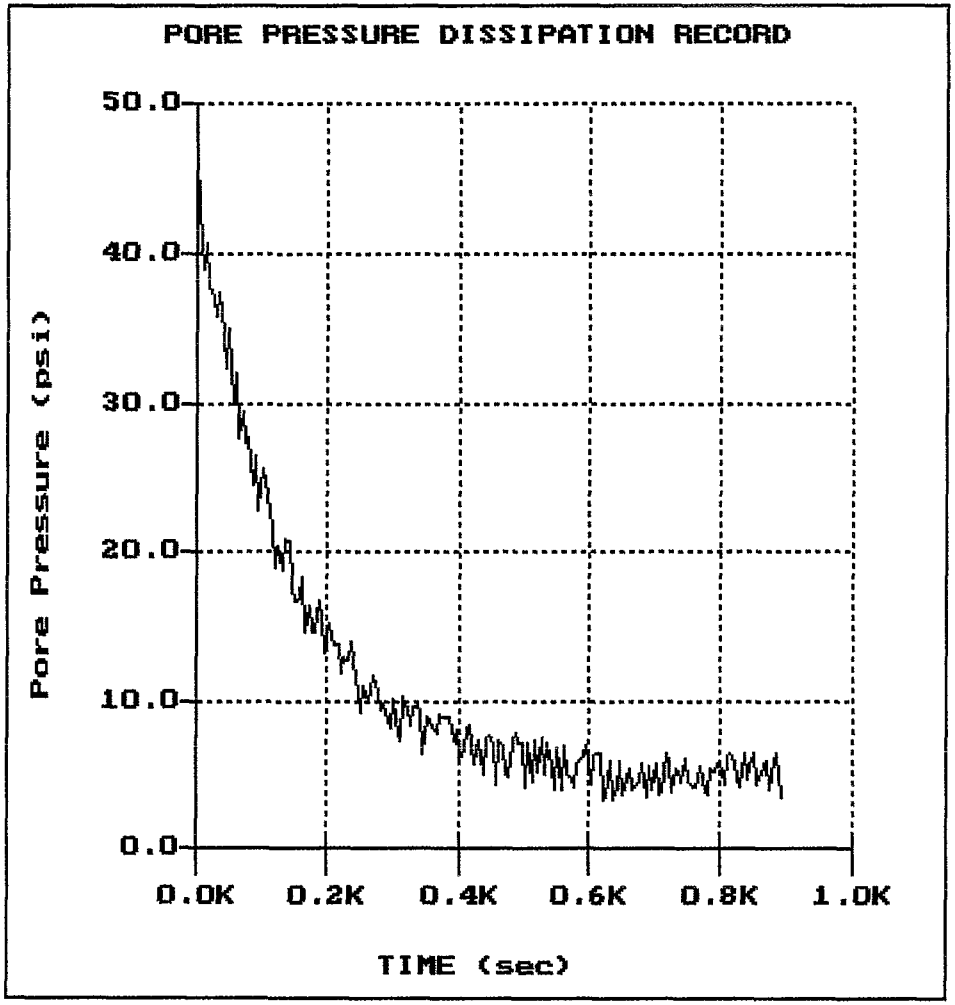


File: 186C94.PPC
Depth (m): 22.00
(ft): 72.18
Duration : 480.0s
U-min: 9.64 5.0s
U-max: 20.63 415.0s

WESTON

Site:OMEGA OU-02
Location:CPT-112

Geologist:G. ZUNIGA
Date:08:16:02 12:51

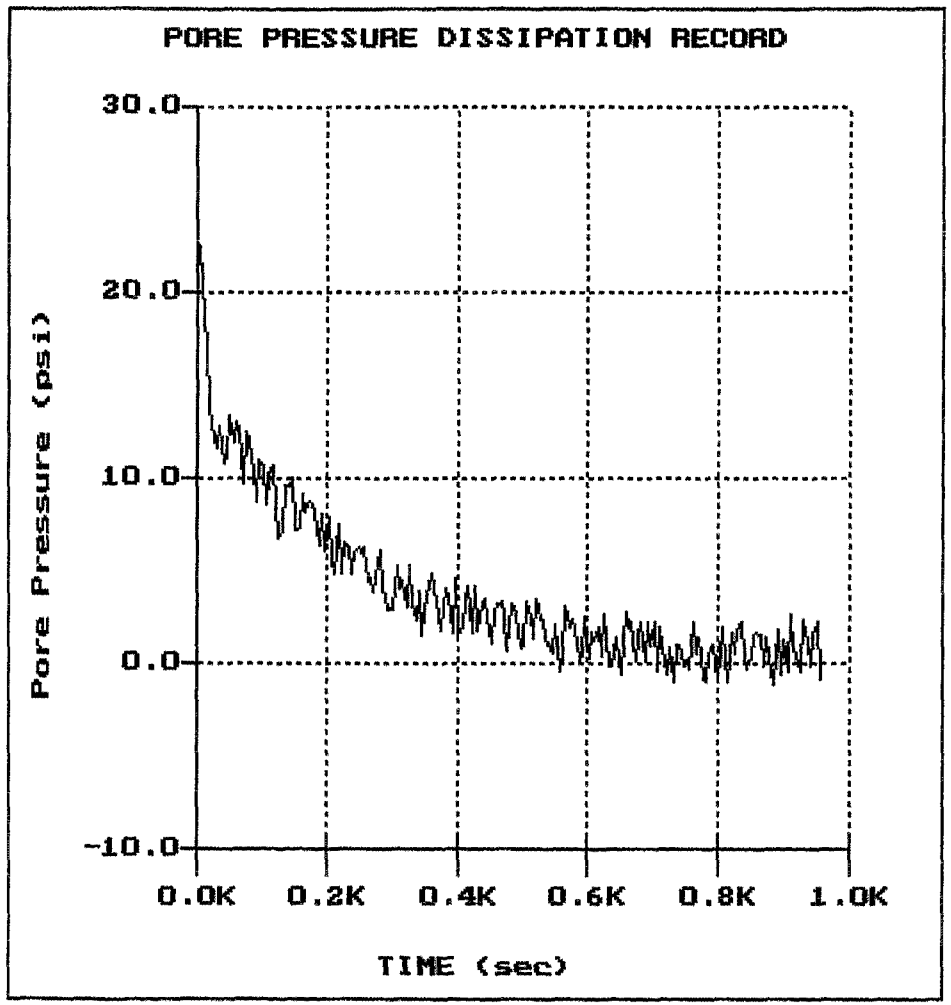


File: 186C112.PPC
Depth (m): 15.65
(ft): 51.35
Duration : 890.0s
U-min: 3.26 620.0s
U-max: 46.63 0.0s

WESTON

Site:OMEGA OU-02
Location:CPT-115

Geologist:G. ZUNIGA
Date:08:16:02 09:09



File: 186C115.PPC
Depth (m): 10.70
(ft): 35.10
Duration : 955.0s
U-min: -1.06 885.0s
U-max: 22.46 5.0s

APPENDIX

ELECTRICAL PIEZOCONE

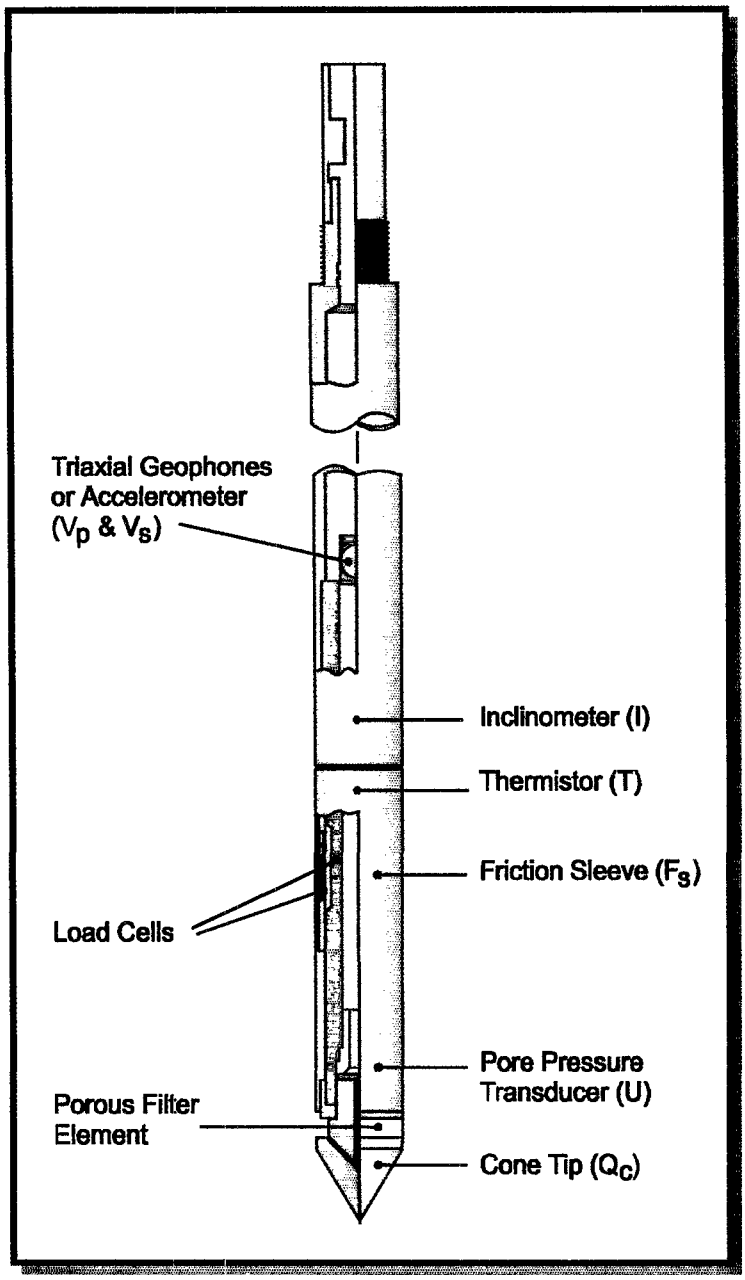


Figure 1

GROUNDWATER SAMPLER (HYDROPUNCH)

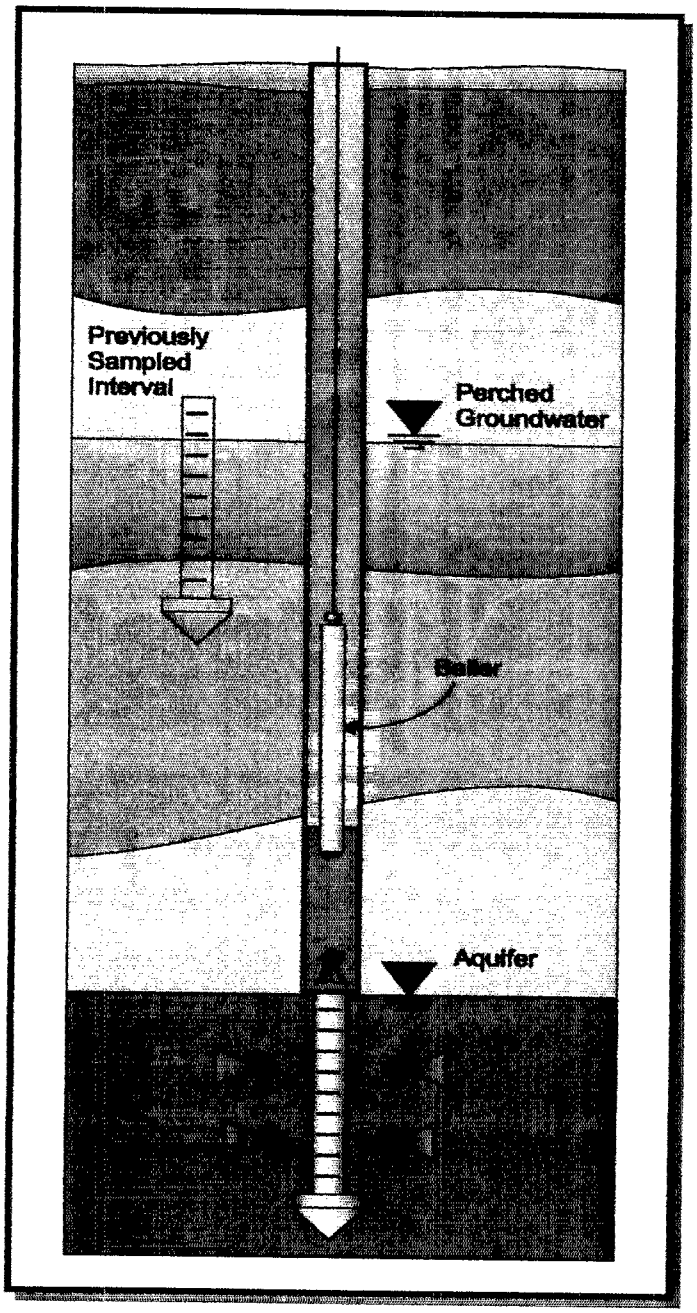
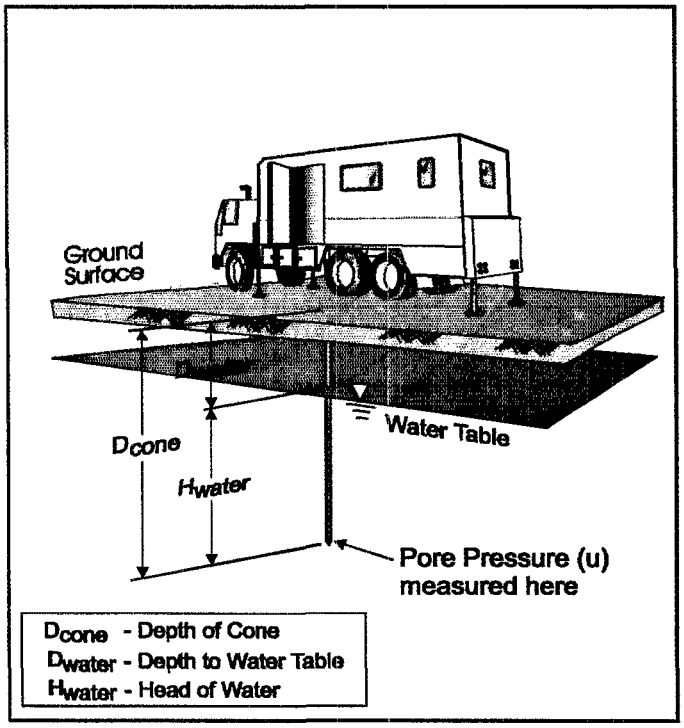
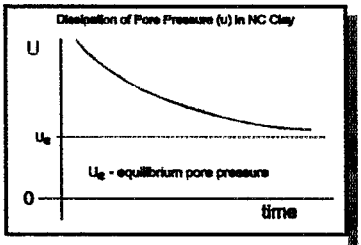
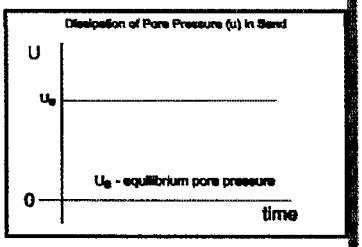


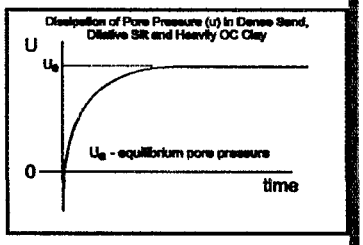
Figure 2

PPDT CORRELATION









Water Table Calculation

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

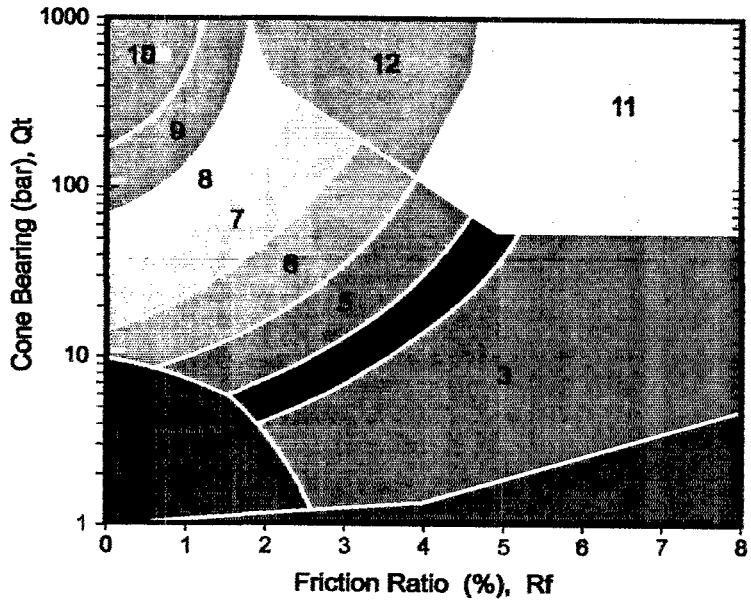
where $H_{water} = U_e$ (depth units)

Useful Conversion Factors:

1psi = 0.704m = 2.31 feet (water)
1tsf = 0.958 bar = 13.9 psi
1m = 3.28 feet

Figure 3

SOIL CLASSIFICATION CHART



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	silty sand to sandy silt
8	4	sand to silty sand
9	5	sand
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

* overconsolidated or cemented

After Robertson and Campenella

Figure 4

REFERENCES

Robertson, P.K. and Campanella, R.G. and Wightman, A., 1983 "SPT-CPT Correlations", Journal of the Geotechnical Division, ASCE, Vol. 109, No. GT11, Nov., pp. 1449-1460.

Robertson, P.K. and Wride C.E., 1998 "Evaluating Cyclic Liquefaction Potential Using The Cone Penetration Test", Journal of Geotechnical Division, Mar. 1998, pp. 442-459.

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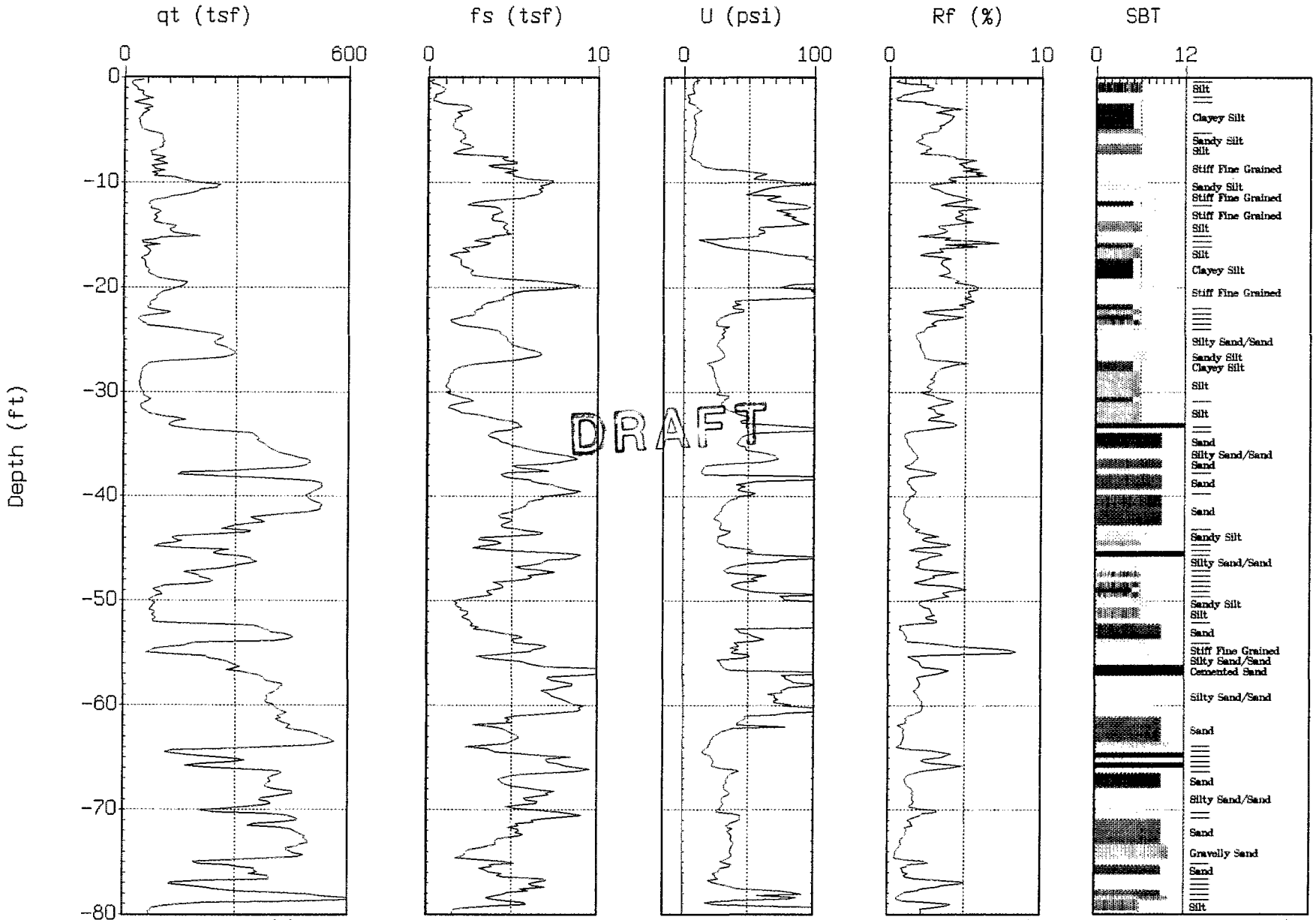
GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-91

Geologist : G. ZUNIGA
Date : 08:14:02 13:41



Max. Depth: 80.05 (ft)

Depth Inc.: 0.164 (ft)

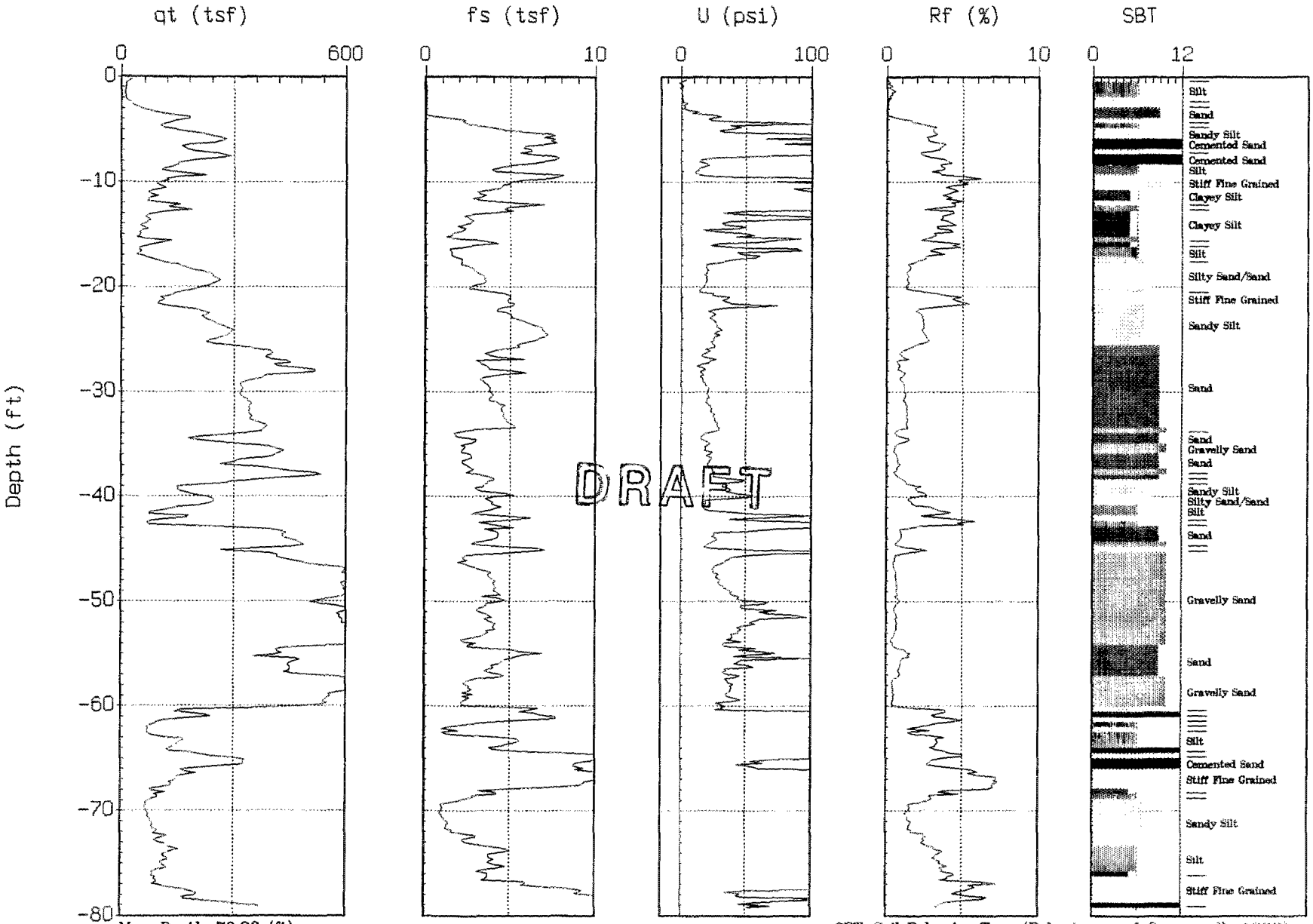
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-92

Geologist : G. ZUNIGA
Date : 08:14:02 10:30



DRAFT

Max. Depth: 79.23 (ft)

Depth Inc.: 0.164 (ft)

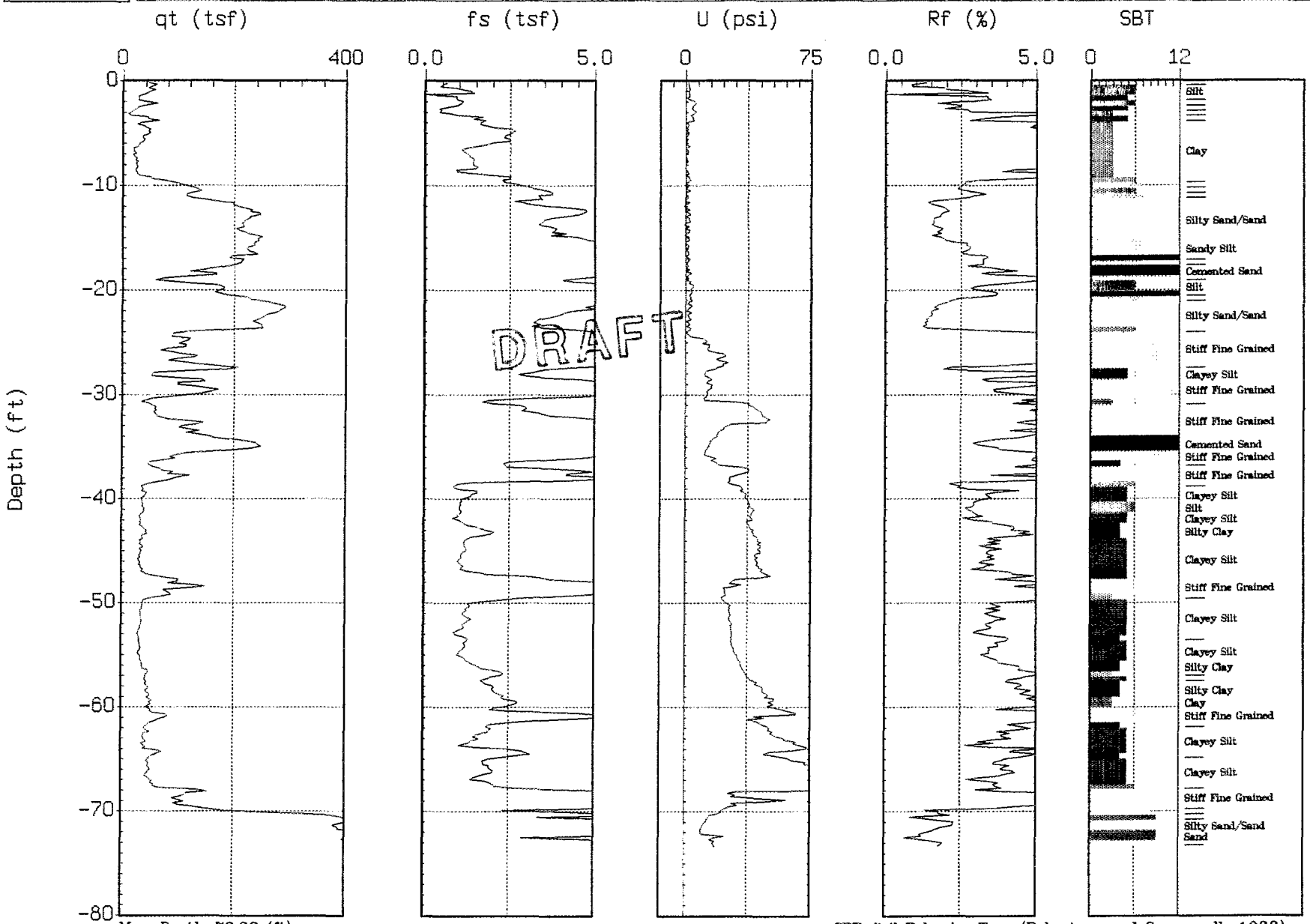
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON

Site : CPT-94
Location : WHITTIER

Geologist : BILL CLARK
Date : 08:09:02 09:36



Max. Depth: 73.33 (ft)

Depth Inc.: 0.164 (ft)

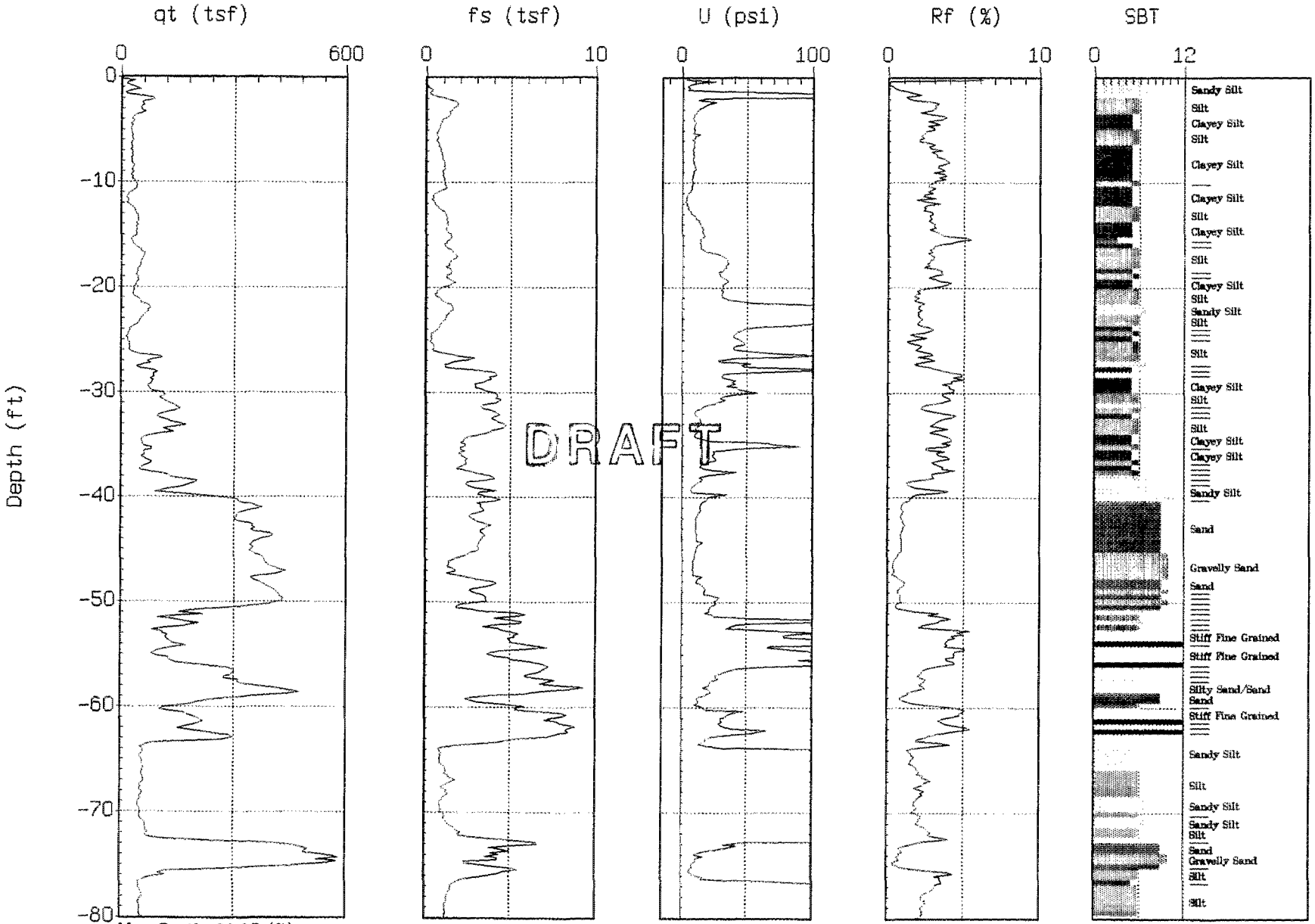
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-95

Geologist : G. ZUNIGA
Date : 08:14:02 08:13



Max. Depth: 80.05 (ft)

Depth Inc.: 0.164 (ft)

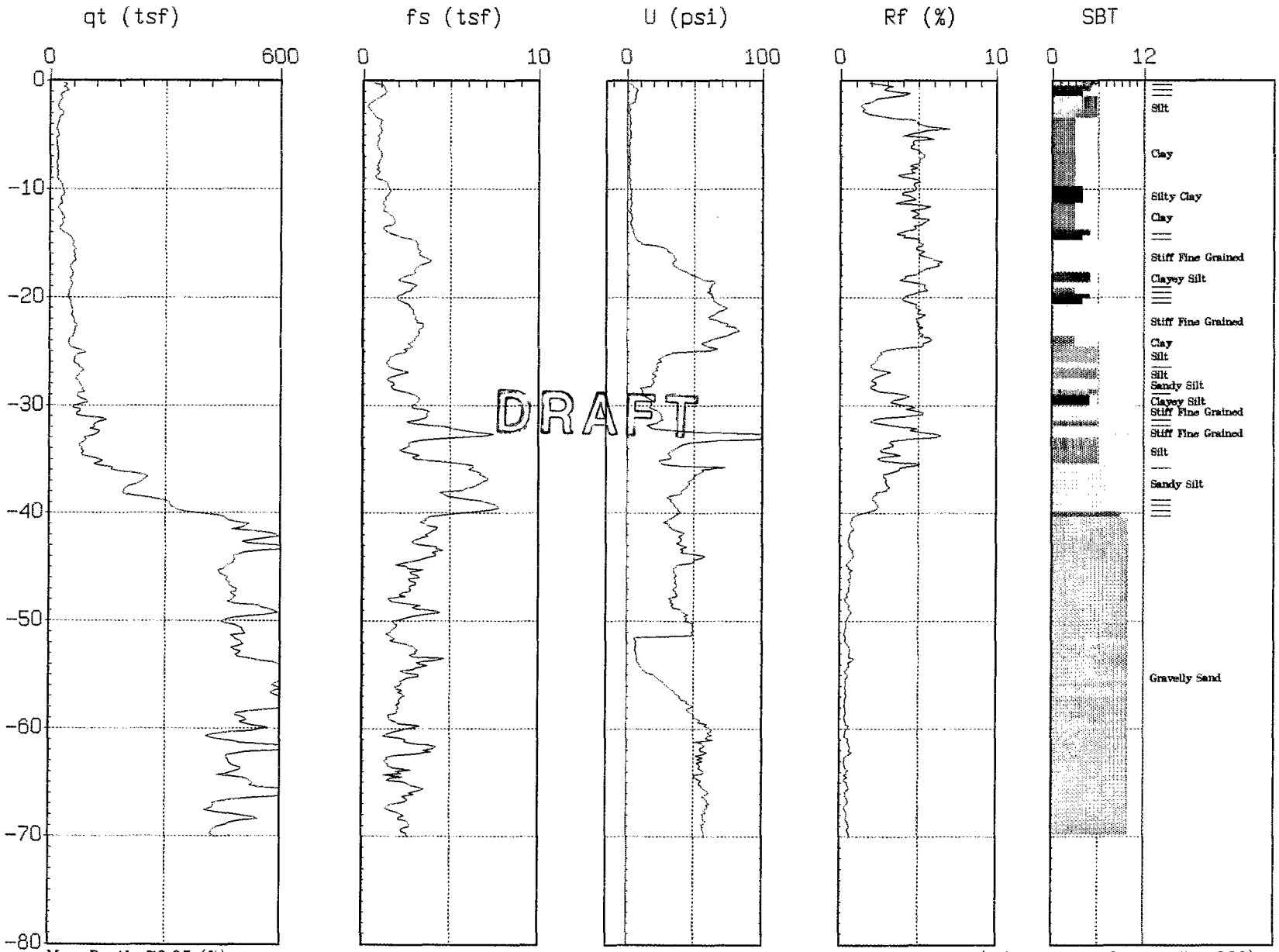
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-112

Geologist : G. ZUNIGA
Date : 08:16:02 12:51



Max. Depth: 70.05 (ft)

Depth Inc.: 0.164 (ft)

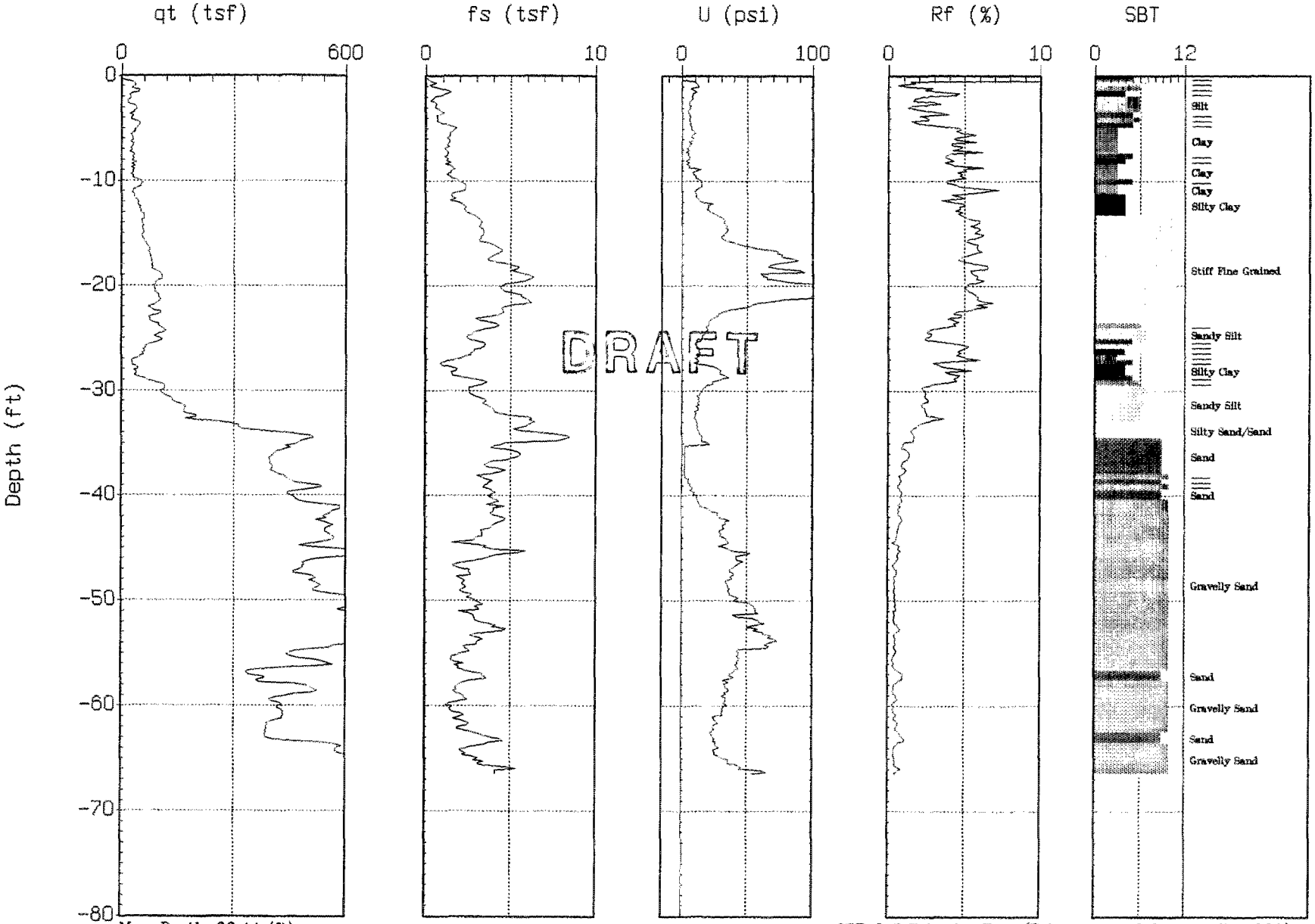
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

WESTON

Site : OMEGA OU-02
Location : CPT-115

Geologist : G. ZUNIGA
Date : 08:16:02 09:09



Max. Depth: 66.44 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson and Campanella 1988)

APPENDIX B

PHASE 2 HOLLOW STEM AUGER BORING LOGS

BORING NUMBER B086

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/13/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/13/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval or Continuous	GRAVEL PACK TYPE	----
GROUND ELEVATION	153 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	52 feet
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 30 Feet bgs. Spurious PID readings.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
NM		60	AUGER					Asphalt	0.4
						SP		Light yellowish brown (2.5Y 6/3) FINE to MEDIUM SAND with subangular gravel (1/8 to 1-inch diameter) - FILL.	2.5
						SM		Dark yellowish brown (10YR 4/4) SILTY FINE SAND with little clay, micaceous, dry.	4.5
>300	7 12 6	18	CORE		5	ML		Yellowish brown (10YR 5/4) FINE SANDY SILT with trace to little clay, slightly plastic, micaceous, moist, medium stiff.	6.0
						SM		Yellowish brown (10YR 5/6) SILTY FINE SAND with trace clay, well sorted, slightly micaceous, cohesive, medium dense, moist, grading downward to	10.0
>300	6 9 9	18	CORE		10	SM-SP		Dark yellowish brown (10YR 4/6) SILTY FINE SAND and FINE SAND with little silt, well sorted, slightly micaceous, dense, moist.	15.0
>300	11 16 22	18	CORE		15	SP		Yellowish brown (10 YR 5/4) to pale olive (5Y 6/3) FINE to MEDIUM SAND, well, sorted, trace to little silt. Silt present in red-brown <1/2-inch oxide pockets, non-cohesive, medium dense to dense, slightly moist, no odor.	20.0
2.4	13 20 26	18	CORE		20	ML		Olive brown (2.5Y 4/4) to (2.5Y 5/4) SILT, trace to little clay, trace fine sand, slightly micaceous, some oxide mottling, slight to medium plasticity, medium stiff, moist.	22.5
2.6	9 20 33	18	CORE		25	SM		Olive brown (2.5Y 4/3) SILTY FINE SAND with trace silt, slightly micaceous.	25.5
						SP		Pale olive (5Y 6/3) to olive gray (5Y 5/2) FINE SAND with trace silt, very well sorted, slightly cohesive and mottled with yellowish oxides, dense, slightly moist.	25.8
18.2	30 36 48	18	CORE		30	SW		Olive gray (5Y 5/2) FINE SAND and FINE to COARSE SAND, medium sorted, dense, moist.	30.5
	31 41	0 14.4	NR CORE			SP		Olive gray (5Y 4/2) FINE SAND, well sorted.	31.0
	63/-8" 38	0	NR			SW-SP		Olive gray (5Y 5/2) FINE to COARSE SAND to dark olive gray (5Y 3/2) FINE to MEDIUM SAND, medium sorted, little to some subrounded gravel (1/4 to 3/4-inch diameter), igneous.	32.0
	49 70/-9"	15	CORE			SP		Olive gray (5Y 5/2) FINE to MEDIUM SAND, well sorted, very dense, moist.	34.0 35.0

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/13/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/13/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	38 53	18	CORE			SW		Light olive gray (5Y 6/2) FINE to MEDIUM to COARSE SAND with some localized subrounded gravel (1-inch diameter), medium sorted, very dense, moist	
64	75/3" 44	18	CORE						37.0
	60					SP		Light olive gray (5Y 6/2) FINE SAND with trace to little silt, slightly cohesive.	37.
	80 50 63	0 12	NR CORE			SP		Olive gray (5Y 5/2) GRAVELLY FINE to MEDIUM SAND, gravel subrounded to subangular (3/4 to 1.5-inch diameter), slightly moist.	38.
0.6	90/0" 33 65	0 15	NR CORE		40	SP		Light olive gray (5Y 6/2) to olive (5Y 5/3) FINE to MEDIUM SAND with trace silt, trace gravel (1/8 to 1-inch diameter), gravel and cobble stringers at 39.5, 42, and 43 feet bgs, subrounded to 3/4 to 3 inches, slightly moist.	39.5
	79/3" 39 50	18	CORE						42.0
	57 31 61	0 15	NR CORE						43.
	63/3" 20 37	18	CORE		45	SP SW		Light olive gray (5Y 6/2) to olive 5Y 5/3) FINE to MEDIUM to FINE to COARSE SAND with localized trace silt, well sorted, little gravel (3/8 to 3/4-inch diameter), moist.	44.
20	36 40 52	18	CORE			SP			45.5 46.
	70 30 41	0 16.5	NR CORE			SW SM		Olive gray (5Y 4/2) SILTY FINE SAND to very FINE SANDY SILT, micaceous, medium dense, moist.	47. 47.5
	47/5" 30 47	18	CORE			SP		Olive gray (5Y 5/2) FINE to MEDIUM SAND with trace silt, well sorted, dense, moist, no odor.	
1.8	63 39 52	18	CORE		50				50.5
	48	0	NR			SW		Olive gray (5Y 5/2) FINE to COARSE SAND, medium sorted, moist to very moist, no odor.	52.
0.1	20 29 37	18	CORE			SP		Olive gray (5Y 4/2) to dark olive gray (5Y 3/2) FINE to MEDIUM SAND, well sorted, medium dense to dense, saturated.	55.
					55			Bottom of borehole at 55.0 feet.	

BORING NUMBER B087

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/14/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/14/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	157 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	63.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						SM-SP		Dark yellowish brown (10YR 4/4) FINE SAND with little to some silt and localized coarse sand, medium sorted, medium dense, dry.	
	12 16 43	18	CORE		5				
						SP-SM		Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND with some silt, well sorted, medium dense to dense, slightly moist.	8.0
	20 27 29	18	CORE		10				11.0
						SP-SM		Dark yellowish brown (10YR 4/4) FINE SAND with some silt, well sorted, medium dense to dense, slightly moist.	13.0
						SW		Light olive brown (2.5Y 5/4) FINE to MEDIUM to COARSE SAND with little silt, medium sorted, oxidized pockets, medium dense, subrounded grains.	
	27 33 40	18	CORE		15				16.0
						SP		Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND with little silt, well sorted, no oxygenated pockets, medium dense to dense, slightly micaceous, subrounded grains, slightly moist.	18.0
						ML		Light olive brown (2.5Y 5/3) CLAYEY SILT with little to trace fine sand, micaceous, medium soft and plastic, slightly moist.	
	16 22 25	18	CORE		20				23.0
						SP		Light olive brown (2.5Y 5/3) FINE SAND with little silt, well sorted, medium dense, subrounded grains, slightly moist.	
	22 40 47	18	CORE		25				26.0
						SP-SM		Light olive brown (2.5Y 5/3) FINE SAND with some gravel and silt, little medium to coarse sand, medium sorted, medium dense to dense, subrounded gravel (1/8 to 1/2-inch diameter), subrounded sand grains, slightly moist.	28.0
						SP-SM		Olive brown (2.5Y 4/3) FINE to MEDIUM SAND with some silt, well sorted, slightly micaceous, dense, slightly moist.	
	41 46 60	18	CORE		30				33.0
						SM-SC		Light olive brown (2.5Y 5/3) SILTY FINE SAND with little clay, medium sorted, medium dense, stiff, slightly moist.	

BORINGSWELL CONSTRUCTION LOG PHASE 2 BORING LOGS GPJ RFW SHERMAN OAKS GDT 3/18/03

BORING NUMBER B087

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/14/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/14/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
	19 40 69	18	CORE			SW		Pale olive (5Y 6/4) FINE to COARSE SAND with trace gravel and silt, medium sorted, dense, subrounded grains, slightly moist.	35.5 36.0
						SP-SM		Pale olive (5Y 6/4) to light olive brown (2.5Y 5/3)FINE to MEDIUM SAND with little silt, well sorted, dense, subrounded grains, slightly moist.	
	40 57 70	18	CORE		40				41.5
						SW		Pale olive (5Y 6/3) FINE to COARSE SAND with little silt and subrounded to subangular gravel (1/8 to 1-inch diameter), medium sorted, dense to very dense, subrounded grains, slightly moist.	
	46 60 75	18	CORE		45				48.0
						SP		Light yellowish brown (2.5Y 6/4) FINE SAND with little medium to coarse sand and subrounded to subangular gravel (1/8 to 3/4-inch diameter), medium sorted, dense, slightly moist.	
	50 60 75	18	CORE		50				51.0
						SP		Olive brown (2.5Y 4/3) GRAVELLY FINE SAND (1/8 to 3/4-inch diameter), subrounded to subangular, well sorted, very dense, slightly moist.	53.0
						SP-SM		Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND, some silt, trace clay, some subrounded gravel (1/8 to 1/4-inch diameter), well sorted, medium dense to dense, moist.	
	33 47 66	18	CORE		55				56.0
						SP-SM		Olive brown (2.5Y 5/4) FINE SAND, some silt, moist, dense.	57
						SP		Olive (5Y 5/3) to olive (5Y 4/3) FINE to MEDIUM SAND with little silt, well sorted, medium dense to dense, slightly micaceous, very moist.	
	29 37 46	18	CORE		60				62.5
						SW-SP		Olive (5Y 4/3) FINE to MEDIUM to COARSE SAND with little silt, medium sorted, medium dense, slightly micaceous, wet.	
	19 26 33	18	CORE		65				66

Bottom of borehole at 66.5 feet.

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B088

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/14/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/14/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	153 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	67 feet
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						ML		Dark yellowish brown (10YR 4/4) SILT with some clay, slightly micaceous, medium soft to medium stiff, medium plastic.	5.0
	16 25 29	18	CORE		5	ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, slightly micaceous, medium stiff, medium plastic, dry.	7.5
	11 14 15	18	CORE		10	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, micaceous, slightly plastic, slightly moist.	13.0
						ML		Light brownish gray (2.5Y 6/2) SILT with little very fine sand and little clay, medium soft and slightly plastic, slightly moist.	15.5
	17 22 28	18	CORE		15	SP		Light olive brown (2.5Y 5/4) FINE SAND with some silt, well sorted, medium dense, slightly micaceous, slightly cohesive, slightly moist.	21.5
	30 39 46	18	CORE		20	ML		Brown (10YR 4/3) SILT with some clay, slightly micaceous, medium stiff, slightly plastic, slightly moist.	23.0
						SP		Light olive brown (2.5Y 5/3) FINE to MEDIUM SAND, well sorted, slightly micaceous, medium dense, low cohesion, slightly moist.	26.0
	27 36 44	18	CORE		25	SP		Light olive brown (2.5Y 5/3) FINE SAND, well sorted, medium dense, low cohesion, slightly moist.	28.0
						SW		Pale olive (5Y 6/3) GRAVELLY FINE to COARSE SAND, clasts 1/8 to 1-inch diameter, subangular to subrounded, poorly sorted, dense, slightly moist.	31.0
	31 50 59/0"	0 12	NR CORE		30	SW		Pale olive (5Y 6/3) to light olive brown (2.5 Y 5/6) FINE to COARSE SAND with some silt pockets and little subrounded gravel, medium sorted, low cohesion, dense to very dense, slightly micaceous, slightly moist.	

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ REW SHERMAN OAKS.GDT 2/13/03

BORING NUMBER B088

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/14/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/14/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DE
	37 63 73	18	CORE			SW		Pale olive (5Y 6/3) to light olive brown (2.5 Y 5/6) FINE to COARSE SAND with some silt pockets and little subrounded gravel, medium sorted, low cohesion, dense to very dense, slightly micaceous, slightly moist. *(continued)*	
						SP		Light olive brown (2.5Y 5/6) to brownish yellow (10YR 6/8) FINE to MEDIUM SAND with little silt, well sorted, medium dense, slightly micaceous, subrounded, slightly moist, no odor, highly oxidized and less silt at 40.5 feet bgs.	38.
	23 33 48	18	CORE		40				41.
						SW		Pale olive brown (2.5Y 6/3) FINE to COARSE SAND with little subrounded to subangular gravel (1/8 to 1-inch diameter), medium sorted, dense to very dense, subrounded grains, slightly moist.	
	33 50 70/3"	0 15	NR CORE		45	SW-GP		Light olive brown (2.5Y 5/3) to very dark brown (2.5Y 3/3) GRAVELLY FINE to COARSE SAND to SANDY GRAVEL, clasts 1/8 to 1 1/4-inch, subangular to subrounded, poorly sorted, dense, slightly moist, no odor, dark oxidation at 46 feet bgs.	45.0
						ML		Brown (10YR 4/3) SILT with some clay, plastic, medium soft, micaceous, very moist.	48.0
	40 57 83	18	CORE		50	SW-GP		Light olive brown (2.5YR 5/3) FINE to COARSE SAND to FINE to COARSE SANDY GRAVEL, with little silt, clasts subrounded to subangular, moderately sorted, black discoloration, dense, slightly moist.	50
						SP		Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND to fine to very fine sand, well sorted, dense, subrounded to subangular, slightly micaceous, slightly moist.	53.5
	38 60 80	18	CORE		55	SP		Light olive brown (2.5Y 5/4) VERY FINE to FINE SAND, very well sorted, slightly micaceous, dense.	56.0
						SP		Light olive brown (2.5Y 5/3) FINE to MEDIUM SAND with little silt and little coarse sand, well sorted, dense, grading into a fine to coarse sand with little silt and little subrounded to subangular gravel (1/4 to 1/2-inch diameter), slightly moist.	58
	26 37 48	18	CORE		60	SP			
						SP-SW		Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND with little silt and little coarse sand, moderately to well sorted, medium dense to dense, at 66 feet grades into a FINE to COARSE SAND with little silt, trace fine gravel, dense, moderately to well sorted, moist.	62.5
	23 37 48	18	CORE		65				
						SW		Dark grayish brown (2.5Y 4/2) FINE to COARSE sand with some subrounded gravel (1/8 to 1/2-inch diameter), moderately sorted, medium dense, wet.	68.0
	14 23 36	18	CORE		70				
						SP		Dark grayish brown (2.5Y 4/2) FINE to MEDIUM SAND, well sorted, medium dense to dense, wet.	71.0 71

Bottom of borehole at 71.5 feet.

BORING NUMBER B089

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/15/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/15/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	145 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	68.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS	PID reading spurious.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						ML		Brown (10YR 4/3) to dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, medium soft, very slight plasticity, micaceous, dry to very slightly moist.	
>300	14 20 27	18	CORE		5				
								Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND with little clay, well sorted, medium loose, micaceous, slightly moist.	8.0
>300	12 13 15	18	CORE		10	SM			
>300	37 60 100/3"	0 15	NR CORE		15	ML		Light yellowish brown (2.5Y 6/3) SILT with some clay, little very fine sand, slightly oxidized, medium soft to medium stiff, slightly plastic, very slightly moist.	15.5
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, slightly plastic, very dense, micaceous, very slightly moist.	16.5
								Light olive brown (2.5Y 5/4) FINE to MEDIUM SAND with some silt, well sorted, subrounded, slightly micaceous, dense, moist.	18.0
>300	39 50 57/3"	0 15	NR CORE		20	SP-SM			
								Light yellowish brown (2.5Y 6/3) FINE to MEDIUM to COARSE SAND with little silt, medium sorted, some oxidized patches, trace subrounded gravel (1/4-inch diamter), dense to very dense, slightly moist.	23.0
>300	29 40 63	18	CORE		25	SW			
						SW		Pale olive (5Y 6/3) FINE to COARSE SAND with some subangular gravel (1/8 to 1/4-inch diamater) and trace silt, moderately sorted, micaceous, dense, slightly moist.	28.0
>300	39 53 64	18	CORE		30				30.5
						SP		Pale olive (5Y 6/3) FINE to MEDIUM SAND with little silt, well sorted, very slightly micaceous, dense to very dense, subrounded grains.	33.0
						SW			35.0

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B089

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
>300	53 100 100/3"	0 15	NR CORE			SW		Light olive brown (2.5Y 5/4) to (2.5Y 5/3) GRAVELLY FINE to COARSE SAND with little to some silt, subangular gravel (1/8 to 1-inch diameter) subrounded sand, igneous clasts, moderately sorted, medium soft, plastic, very dense, slightly micaceous, slightly moist.	
>300	59 100 100/3"	0 15	NR CORE		40				
						SP		Light yellowish brown (2.5Y 6/3) FINE to MEDIUM to COARSE SAND with little to some subangular gravel (1/8 to 1/4-inch diameter) and light olive brown (2.5Y 5/4) clayey silt lenses, medium soft, plastic, slightly micaceous, slightly moist.	42.5
>300	40 63 21	18	CORE		45				
						SW		Light olive brown (2.5Y 5/3) GRAVELLY FINE to COARSE SAND with little silt and subangular to subrounded gravel (1/8 to 1-inch diameter), moderately sorted, very dense, slightly moist.	47.5
>300	90 140 140/0"	0 12	NR CORE		50	SP-SM		Light brownish gray (2.5Y 6/2) VERY FINE to FINE SAND, some silt, well sorted, slightly micaceous, very dense, slightly moist.	51.0
						SW		Light olive brown (2.5Y 5/3) GRAVELLY FINE to COARSE SAND with little silt, subangular gravel (1/8 to 1/4-inch diameter), moderately sorted, dense, slightly moist to moist.	53.0
	41 60 67	18	CORE		55				
						ML		Light olive brown (2.5Y 5/4) SILT with little very fine sand, some clay, medium soft, plastic, micaceous, moist.	56.0
						SM		Light olive brown (2.5 5/4) SILTY FINE SAND with little clay, well sorted, medium soft.	58
	49 76 63	18	CORE		60				
						SW SP		Light brownish gray (2.5Y 6/2) FINE to COARSE SAND with some subrounded gravel (1/8 to 1/2-inch diameter), grading into fine to medium sand, moderately sorted, slightly moist.	60 62.0 63
								Light olive brown (2.5Y 5/3) FINE to COARSE SAND with silt and trace subrounded gravel, moderately sorted, oxidized layers throughout, dense to very dense, moist.	
	52 70 98	18	CORE		65	SW			
						SW		Grayish brown (2.5Y 5/2) GRAVELLY FINE to MEDIUM to COARSE SAND, (subangular gravel, 1/8 to 1-inch diameter), subrounded sand, moderately sorted, dense, wet.	67.5
	33 40 47	18	CORE		70				
						SP		Light olive brown (2.5Y 5/3) FINE SAND, subrounded, well sorted, slightly micaceous, dense, wet.	71 71

Bottom of borehole at 71.5 feet.

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B090

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/15/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/15/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	150 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	70.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						ML		Brown (10YR 4/3) VERY FINE SANDY SILT with some clay, medium soft to medium stiff, slightly plastic, micaceous, some calcareous stringers, dry.	
0.0	12 22 29	18	CORE		5				
									8.0
0.0	11 16 29	18	CORE		10	SM		Dark yellowish brown (10YR 4/4) SILTY VERY FINE SAND with little clay, well sorted, micaceous, medium dense, medium stiff, plastic, cohesive, slightly moist.	10.0
								Light brownish gray (2.5Y 6/2) FINE SAND with some silt and trace gravel (3/4-inch diameter), well sorted, medium dense, very micaceous, oxidation patches throughout, slightly moist.	13.0
0.0	15 20 23	18	CORE		15	SP-SM			
						SM		Grayish brown (2.5Y 5/2) SILTY FINE SAND with little clay, well sorted, micaceous, medium dense, slightly moist.	18.0
0.0	24 37 48	18	CORE		20	SP		Grayish brown (2.5Y 5/2) FINE to MEDIUM SAND with little silt, well sorted, some oxidized patches, very micaceous, slightly cohesive, slightly moist.	20.5
0.2	28 38 56	18 0	CORE		25	SP		Light olive brown (2.5Y 5/3) FINE to MEDIUM SAND with little silt, well sorted, subrounded, micaceous, dense, slightly cohesive, slightly moist.	25.5
						SP		Light olive brown (2.5Y 5/3) to grayish brown (2.5Y 5/2) FINE to MEDIUM SAND with little silt and trace coarse sand, well sorted, subrounded, micaceous, dense to very dense, slightly cohesive, slightly moist.	28.0
0.0	49 100 100/3"	0 15 0	NR CORE NR		30	SP-SM		Light olive brown (2.5Y 5/3) FINE SAND.	31.0
									35.0

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B090

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0	18 26 31	18	CORE			SP-SM		Light olive brown (2.5Y 5/3) FINE SAND with little silt and trace clay, well sorted, very micaceous, subrounded, dense to medium dense, cohesive, oxidized pockets observed throughout, moist.	38.
0.0	57 75 75/0"	0 12	NR CORE		40	SW		Light olive brown (2.5Y 5/3) FINE to COARSE SAND with little silt and some gravel (1/8 to 1-inch diamter), moderately sorted, subrounded to subangular sand, slightly micaceous, slightly cohesive, slightly moist.	
0.0	46 70 90	18	CORE		45	SW		Light olive brown (2.5Y 5/3) GRAVELLY FINE to COARSE SAND with little silt, moderately to poorly sorted, gravel (1/8 to 3/4-inch diameter), subrounded sand, slightly micaceous, slightly cohesive, slightly oxidized, igneous clasts, moist.	45.5
						SM		Light olive brown (2.5Y 5/4) SILTY FINE SAND with little coarse sand, moderately sorted, micaceous, subrounded, moist.	48.0
0.0	23 38 36	18	CORE		50	ML		Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with some clay, medium soft, oxidized pockets, micaceous, slightly plastic, moist.	50.5
						SP		Grayish brown (2.5Y 5/2) FINE to MEDIUM SAND with little silt, well sorted, slightly micaceous, subrounded, slightly dense, slightly moist.	53.0
0.0	30 56 68	18	CORE		55	CL-ML		Olive brown (2.5Y 4/4) CLAYEY SILT, medium stiff, micaceous, plastic, slightly oxidized, slightly moist.	56.5
						ML		Light olive brown (2.5Y 5/4) VERY FINE SANDY SILT with little clay, slightly plastic, micaceous, medium soft, moist.	58.
0.0	26 40 44	18	CORE		60	SP-SM		Olive gray (5Y 4/2) VERY FINE SAND with little silt and trace clay, well sorted, micaceous, slightly oxidized stringers, very cohesive, dense, moist.	61.
0.0	21 47 62	18	CORE		65	SP		Olive (5Y 5/3) FINE to MEDIUM SAND with little silt, well sorted, micaceous, cohesive, subrounded, dense, moist to wet.	66.
0.0	28 37 49/3"	0 15	NR CORE		70	SP-SW		Olive (5Y 4/2) FINE to MEDIUM to COARSE SAND with little silt, well sorted, subrounded, micaceous, cohesive, wet.	73.0

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B090

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0	38 40 44/0"	0 12	NR CORE			SP-SW		Olive (5Y 4/2) FINE to MEDIUM to COARSE SAND with little silt, well sorted, subrounded, micaceous, cohesive, wet. *(continued)*	76.5
								Bottom of borehole at 76.5 feet.	

BORING NUMBER B096

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/6/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/6/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	228 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	88.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS	Continuous Sampling Below 83.5 Feet bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Concrete Paving	0.4
						CL-ML		Dark yellowish brown (10YR 4/4) to dark brown (10YR 3/3) CLAYEY SILT to CLAY with little silt, plastic, micaceous, medium soft.	
0.0		18	CORE		5	CL-ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT, soft, non-plastic, slightly micaceous, dry.	5.0
								Brown (10YR 4/3) SILTY CLAY, slightly plastic, medium soft, slightly micaceous, some calcareous stringers, medium stiff to stiff, color change to dark yellowish brown (10YR 3/4) at 11 feet bgs.	7.5
0.0		18	CORE		10	CL			
0.0		18	CORE		15	CL-ML		Brown (10YR 4/3) CLAYEY SILT, slightly plastic, stiff, dry.	15.0
						CL		Dark yellowish brown (10YR 3/4) SILTY CLAY, medium stiff, slightly plastic, slightly micaceous, dry.	16.0
						ML		Light olive brown (2.5Y 5/3) CLAYEY SILT with little very fine sand, slightly micaceous, little or no plasticity, medium soft.	18.0
0.0		18	CORE		20				
						SM		Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND, well sorted, medium, loose, micaceous, dry, little clay at 21 feet bgs.	20.5
						ML		Brown (10YR 4/3) VERY FINE SANDY SILT with little clay, calcareous stringers, medium plastic, medium soft, dry.	23.0
0.0		18	CORE		25				
						SP		Dark yellowish brown (10YR 4/6) GRAVELLY SAND, poorly sorted, loose, subangular to subrounded gravel (1/8 to 1 1/2-inch diameter clasts), dry.	25.5
						CL-ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT, medium plastic, medium soft, some calcium stringers, slightly micaceous, dry.	26.0
0.0		18	CORE		30	CL-ML		Brown (10YR 4/3) CLAYEY SILT, similar to above but less plastic and more micaceous, medium stiff, dry. Color change to dark yellowish brown (10YR 4/4) at 34.5 feet below ground surface (bgs).	28.0
									29.5

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/6/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/6/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0		18	CORE			CL-ML		Brown (10YR 4/3) CLAYEY SILT, similar to above but less plastic and more micaceous, medium stiff, dry. Color change to dark yellowish brown (10YR 4/4) at 34.5 feet below ground surface (bgs). *(continued)*	
0.0		18	CORE		40				40.
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, slightly plastic, medium soft, micaceous, slightly moist.	43.
0.0		18	CORE		45	CL-ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with very little fine sand, slightly oxidized, non-plastic, some calcium stringers, medium soft, slightly moist. Increase in silt towards lower portion of the sample.	48.0
0.0		0 12	NR CORE		50	SW		Dark yellowish brown (10YR 4/4) GRAVELLY SAND with little silt, poorly sorted, loose to medium loose, slightly oxidized in some areas, subrounded to subangular clasts (1/8 to 1 1/2-inch diameter).	51.0
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with some fine sand, medium stiff, micaceous, non-plastic, slightly moist.	53.0
0.0		0 12	NR CORE		55	ML		Dark yellowish brown (10YR 4/4) GRAVELLY SILT, some fine sand and little clay, slightly plastic, medium stiff, angular to subrounded gravel (1/8 to 3/4-inch diameter).	56.0
0.0		18	CORE		60	CL-ML		Dark yellowish brown (10YR 3/4) to (10YR 4/4) CLAYEY SILT, slight to no plasticity, stiff, slightly micaceous, slightly moist. Relative density changes from stiff to medium soft at approximately 59.5 feet bgs. Calcareous stringers more abundant at approximately 65 feet bgs.	
		18	CORE		65				
		18	CORE		70				70.5
						ML		Light olive brown (2.5Y 5/4) VERY FINE SANDY SILT with little clay, little or no plasticity, stiff, slightly micaceous, slightly moist.	73.0
						CL-ML		Olive brown (2.5Y 4/4) to dark yellowish brown (10YR 4/4) CLAYEY SILT, stiff, slightly plastic, slightly micaceous, slightly moist, abundant calcareous stringers below 80 feet bgs.	

BORING NUMBER B096

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/6/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/6/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		18	CORE			CL-ML		Olive brown (2.5Y 4/4) to dark yellowish brown (10YR 4/4) CLAYEY SILT, stiff, slightly plastic, slightly micaceous, slightly moist, abundant calcareous stringers below 80 feet bgs. *(continued)*	
		18	CORE		80				
									83.0
		0	NR			ML		Light olive brown (2.5Y 5/4) CLAYEY SILT with little coarse sand, slightly plastic, medium soft, slightly micaceous, wet.	
		12	CORE						84.5
		0	NR		85	ML		Yellowish brown (10YR 5/6) CLAYEY SILT with gravel and fine sand, poorly sorted, subangular gravel (1/8 to 1-inch diameter), very moist to wet.	
		10.8	CORE						86.0
		0	NR			SW		Dark yellowish brown (10YR 4/4) GRAVELLY FINE to COARSE SAND with little silt and clay, poorly sorted, subangular to subrounded loose gravel (1/8 to 1-inch diameter), slightly micaceous, moist to wet. ▼	
		6	CORE						
		0	NR						89.0
		6	CORE		90	ML		Brown (10YR 4/3) GRAVELLY CLAYEY SILT with little fine to medium sand, subrounded and angular loose gravel (1/16 to 1 1/2-inch diameter), medium soft, wet. Some dark greenish lenses with no odor.	
					95				95.0

Bottom of borehole at 95.0 feet.

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B097

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/5/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/5/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch and 24-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	236 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	98.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 79.5 Feet bgs.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER			CL-ML		Concrete Paving Dark yellowish brown (10YR 3/4) CLAYEY SILT with few 1-inch gravel, slightly plastic, soft, dry.	0.4
		18	CORE		5	CL		Dark yellowish brown (10YR 4/4) SILTY CLAY, slightly plastic, medium stiff, slightly micaceous, dry. Few subangular gravel (1/2 to 1-inch diamter) at 6.5 feet bgs.	4.5
		18	CORE		10	CL		Dark brown (10YR 3/3) CLAY, plastic, medium hard, some calcareous stringers, dry.	8.0
		18	CORE		15	CL		Dark brown (10YR 3/3) GRAVELLY CLAY, slightly micaceous, medium stiff, angular to subangular gravel (1/8 to 1-inch diameter), some calcareous stringers, dry.	13.0
		18	CORE		20	SW		Dark yellowish brown (10YR 4/4) GRAVELLY FINE to COARSE SAND, poorly sorted, low cohesiveness, subrounded to subangular clasts (1/4 to 1-inch diameter) dry.	18.0
9.6		18	CORE		25	CL		Brown (10YR 4/3) to olive brown (2.5Y 4/4) SILTY CLAY, stiff, slightly plastic, slightly micaceous, dry.	23.0
		24	CORE		30	ML		Brown (10YR 4/3) CLAYEY SILT, medium soft, slightly plastic, dry.	34.0

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/5/02
PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/5/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
6.8						ML		Brown (10YR 4/3) CLAYEY SILT, medium soft, slightly plastic, dry. *(continued)*	36.0
								Brown (10YR 4/3) SILTY FINE SAND with trace clay and few subangular gravel (1/2 to 1-inch diameter).	
		24	CORE			SM			
					40				
5.8									41.0
								Dark yellowish brown (10YR 4/4) GRAVELLY VERY FINE to MEDIUM SAND, moderately sorted, low cohesiveness, loose, dry. Grades into an olive brown (2.5Y 4/4) SILTY VERY FINE SAND, well sorted and micaceous, at 44.5 feet bgs.	
		24	CORE			SP			
									44.5
					45	SM			45.0
4.2								Dark yellowish brown (10YR 4/4) CLAY with little silt, plastic, hard, slightly mottled, micaceous, dry.	
		24	CORE			CL			
					50				
1.8									51.0
								Dark yellowish brown (10YR 4/4) SILTY CLAY with little very fine sand, stiff, micaceous, plastic. Lower 6 inches of sample softer.	
		24	CORE			CL			
					55				
0.4									56.0
								Dark grayish brown (10YR 4/2) CLAY with trace silt, medium stiff, slightly plastic to plastic, slightly mottled and micaceous, slightly moist.	
		24	CORE			CL			
					60				
0.0									61.0
								Dark yellowish brown (10YR 4/4) SILTY CLAY, slightly plastic, stiff, slightly micaceous and moist.	
		24	CORE			CL			
									64.
					65	CL		Dark yellowish brown (10YR 4/4) CLAY with trace silt, plastic, medium soft, mottled, slightly micaceous, slightly moist.	
0.0									66.
								Dark yellowish brown (10YR 4/4) CLAY, plastic, medium stiff, slightly micaceous, slightly moist.	
		24	CORE			CL			
					70				
1.4									71.
								Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND, well sorted, medium dense, slightly moist.	
						SM			
		24	CORE						73.5
						CL		Dark yellowish brown (10YR 4/4) CLAY, locally little silt, medium plastic, medium stiff, moist.	

BORING NUMBER B097

WESTON

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/5/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/5/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
12.2						CL		Dark yellowish brown (10YR 4/4) CLAY, locally little silt, medium plastic, medium stiff, moist. *(continued)*	77.0
0.3		18	CORE		80	CL		Brown (10YR 4/3) CLAY with some silt, little fine sand below 81.5 feet bgs, medium soft to medium stiff, slightly micaceous, slightly mottled, moist	79.5
		18	CORE						
		18	CORE						
		18	CORE			CL		Yellowish brown (10YR 5/6) SILTY CLAY, hard-cemented, slightly micaceous, slightly plastic, slight mottled.	84.0
0.3		18	CORE		85	CL		Light olive brown (2.5Y 7/3) CLAY. 2-inch layer of cemented clay with angular gravel (1/8 to 1/2-inch diameter).	85.5
		18	CORE					Dark yellowish brown (10YR 4/4) to light olive brown (2.5Y 5/4)SILTY CLAY, with trace gravel and little fine sand below 90.5 feet bgs, medium soft, non-plastic, moist to slightly wet.	86.0
		18	CORE			CL			
0.0		0	NR		90				
		12	CORE						
		18	CORE			ML		Dark yellowish brown (10YR 4/4) GRAVELLY SILT with trace clay, subangular clasts (1/8 to 1 1/2-inch diameter), medium soft, moist.	92.0
		0	NR						93.5
		12	CORE			SM		Dark yellowish brown (10YR 4/4) GRAVELLY SILTY FINE SAND, moderately sorted, low cohesiveness, loose, subangular to subrounded gravel (1/8 to 1-inch diameter), moist.	
		0	NR		95				
		6	CORE						96.0
		0	NR					Yellowish brown (10YR 5/6) SILTY FINE SAND with little subangular to subrounded gravel (1/8 to 1/2-inch), well sorted, low cohesiveness, moist to very moist.	
		12	CORE			SM			
		18	CORE						98.5
						SW		Dark yellowish brown (10YR 4/4) GRAVELLY FINE to COARSE SAND, moderately sorted, subangular to rounded gravel (1/8 to 3/4-inch diameter), wet.	99.5
0.0		0	NR						
		15	CORE		100	CL		Dark yellowish brown (10YR 3/4) CLAY, plastic, stiff, wet.	101.0
		18	CORE			CL		Dark yellowish brown (10YR 4/4) GRAVELLY CLAY, slightly plastic to plastic, medium soft, subrounded (1/8-inch diameter), wet.	101.5
						ML		Brown (10YR 4/3) VERY FINE SANDY SILT with little clay, slightly micaceous, wet.	102.0

Bottom of borehole at 102.0 feet.

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B098

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/6/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/6/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	216 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	86.0
LOGGED BY	B. Clarke, A. Cohan	GROUND WATER ELEVATION	
REMARKS	Continuous Sampling Below 69.5 Feet bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER				Concrete Paving	0.4
							Dark yellowish brown (10YR 4/6) CLAYEY SILT with trace subrounded gravel (1/4 to 1-inch diameter), medium soft, slightly micaceous, non-plastic, dry.	
0.0		18	CORE		5	ML		
		0	NR		10			10.0
0.0		12	CORE			SW	Light olive brown (2.5Y 5/4) FINE to COARSE GRAVELLY SAND, poorly sorted, subangular gravel (1/8 to 1 1/2-inch diameter), dry.	10.5
						ML	Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with trace gravel, medium soft, non-plastic, dry.	13.0
						ML	Dark olive brown (2.5Y 3/3) CLAYEY SILT with little fine sand and trace gravel, medium stiff, non-plastic to slightly plastic, slightly micaceous.	
		0	NR		15			15.5
0.1		12	CORE			SW	Light brownish gray (2.5Y 6/2) GRAVELLY FINE to COARSE SAND with little silt, subrounded to subangular gravel (1/8 to 1 1/2-inch diameter).	16.0
						ML	Dark yellowish brown (10YR 3/4) VERY FINE SANDY SILT with little clay, soft, slightly oxidized, slightly micaceous, dry	18.0
							Dark yellowish brown (10YR 3/4) CLAYEY SILT with little subangular gravel (1/8 to 1-inch diameter), medium stiff, non-plastic, dry.	
0.0		18	CORE		20	ML		
0.0		18	CORE		25			25.5
						ML	Dark yellowish brown (10YR 3/4) GRAVELLY SILT with some clay and fine sand, soft, slightly micaceous, subrounded to angular gravel (1/8 to 1-inch diameter), dry.	28.0
						SW	Dark yellowish brown (10YR 4/4) GRAVELLY FINE to COARSE SAND with little silt, poorly sorted, subangular to subrounded gravel (1/8 to 1-inch diameter).	
0.1		18	CORE		30			30.5
						ML	Dark yellowish brown (10YR 3/4) CLAYEY SILT with trace sand, medium soft, slightly plastic, micaceous.	33.0
						ML	Dark yellowish brown (10YR 3/4) GRAVELLY CLAYEY SILT with little coarse sand, stiff, slightly plastic, micaceous, subrounded to subangular gravel (1/8 to 1 1/2-inch diameter). Color change in lower 3-inches of sample to light gray (10YR 7/2).	

BORING NUMBER B098

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/6/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/6/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.5		0 12	NR CORE			ML		Dark yellowish brown (10YR 3/4) GRAVELLY CLAYEY SILT with little coarse sand, stiff, slightly plastic, micaceous, subrounded to subangular gravel (1/8 to 1 1/2-inch diameter). Color change in lower 3-inches of sample to light gray (10YR 7/2). *(continued)*	
						CL		Dark yellowish brown (10YR 3/4) SILTY CLAY, plastic, medium soft.	38
0.2		0 4.8	NR CORE		40	ML		Dark yellowish brown (10YR 3/4) CLAYEY SILT, plastic, medium soft, micaceous, dry.	41
						ML		Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with little clay, medium soft, plastic, micaceous, slightly moist.	43
0.2		0 15	NR CORE		45	CL		Dark brown (10YR 3/3) SILTY CLAY, plastic, stiff, slightly micaceous, slightly moist.	45.5
0.8		18	CORE		50			Dark brown (10YR 3/3) to dark yellowish brown (10 YR 3/4) CLAYEY SILT with little to some fine sand, slightly plastic, some calcareous stringers, locally micaceous, slightly moist to moist. Very stiff at 51 feet bgs.	48.0
0.3		0 15	NR CORE		55	ML			
0.3		18	CORE		60				63.
0.6		18	CORE		65				
0.9		18	CORE		70			Olive brown (2.5Y 4/4) CLAYEY SILT with little very fine sand, plastic, medium soft to medium stiff, micaceous, calcareous stringers, moist to very moist.	69.5
		0 14.4	NR CORE			ML			
		18	CORE					CLAYEY SILT, trace very fine sand, moist to very moist.	73.0
1.0		6	CORE			ML			

BORING NUMBER B098

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/6/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/6/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR			ML		CLAYEY SILT, trace very fine sand, moist to very moist. *(continued)*	
		12	CORE						76.0
		18	CORE			SM		Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND with little clay, well sorted, medium dense, slightly micaceous, few calcareous stringers, very moist.	77.0
		18	CORE			ML		Olive brown (2.5Y 4/4) CLAYEY SILT with little very fine sand, stiff to medium hard, slightly plastic, some calcareous stringers, moist.	
		0	NR		80				80.0
0.7		12	CORE			ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, medium stiff, little to slightly plastic, calcium stringers, moist.	
		18	CORE						81.5
		18	CORE			ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with trace fine sand, slightly micaceous, plastic, medium stiff, moist to very moist.	
		18	CORE		85				
									▼ 86.0
0.6		18	CORE			ML		Yellowish brown (10YR 5/6) VERY FINE SANDY SILT with little clay, medium soft, slightly micaceous, stiff, very moist to wet.	87.5

Bottom of borehole at 87.5 feet.

BORING NUMBER B099

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/7/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/7/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	205 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	70.5
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS	Continuous Sampling Below 60 Feet bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Concrete Paving	0.4
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT, slightly plastic, soft to medium soft, dry.	4.0
0.0		18	CORE		5	CL		Very dark grayish brown (2.5 3/2) SILTY CLAY, slightly plastic, stiff to medium stiff, dry.	4.5
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with some very fine sand, plastic, calcareous stringers, medium soft, dry.	8.0
0.0		18	CORE		10	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay and trace subrounded to subangular gravel (1/8 to 1/2-inch), slightly plastic, slightly micaceous, dry.	13.0
0.2		0 14.4	NR CORE		15	ML		Dark yellowish brown (10YR 3/4) CLAYEY SILT with some very fine sand, medium stiff, some calcareous stringers, dry to very slightly moist. Grades into a very fine sandy silt with some clay at 15.5 feet bgs.	16.0
						MLS			18.0
0.0		0 14.4	NR CORE		20			Dark yellowish brown (10YR 3/4) to (10YR 4/4) CLAYEY SILT with some very fine sand, medium soft to medium stiff, plastic, micaceous, slightly moist.	
0.0		18	CORE		25	ML			
0.0		18	CORE		30				

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B099

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/7/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/7/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.1		18	CORE			ML		Dark yellowish brown (10YR 3/4) to (10YR 4/4) CLAYEY SILT with some very fine sand, medium soft to medium stiff, plastic, micaceous, slightly moist. *(continued)*	38
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, slightly micaceous, medium soft to medium stiff, slightly moist.	
0.3		0 14.4	NR CORE		40	SW		Dark yellowish brown (4/4) FINE to COARSE SAND, moderately sorted, subrounded, slightly moist.	40 41
								Dark yellowish brown (10YR 4/4) CLAYEY SILT, plastic, soft to medium soft to medium stiff, localized calcareous stringers, micaceous, moist. Some very fine sand at approximately 50.5 feet bgs.	
0.0		0 14.4	NR CORE		45	ML			
		18	CORE		50				
								Olive brown (2.5Y 4/4) VERY FINE SANDY SILT wtih little clay, non-plastic, medium soft to medium stiff, abundant calcareous stringers, slightly moist.	53.0
0.3		0 12	NR CORE		55	ML			
								Dark yellowish brown (10YR 4/4) CLAYEY SILT with trace to little gravel, slightly plastic, medium stiff, micaceous, calcareous stringers, slightly moist.	58
1.1		0 15	NR CORE		60	ML			
		0 15	NR CORE			GM		Light gray (10YR 7/2) GRAVEL with CLAYEY SILT, gravel subangular to subrounded (to 1-inch diameter), oxidized, stiff. Some white patches.	61.5 62.5
		18	CORE					Yellowish brown (10YR 5/4) to dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, slightly plastic, medium soft to medium stiff, calcareous stringers, slightly moist.	
0.7		18	CORE		65				
		18	CORE			ML			
		0 14.4	NR CORE						
2.9		18	CORE		70	SW		Olive brown (2.5Y 4/3) FINE to COARSE SAND with little silt, trace clay, and trace to little subrounded to subangular gravel, moderately sorted, low cohesiveness, wet.	70.0 70.5
		18	CORE					Dark yellowish brown (10YR 4/4) to (10YR 3/4) CLAYEY SILT with trace gravel (1/4 to 1/2-inch diameter), plastic, medium stiff to stiff, very moist, cementation at 75 feet bgs.	
		18	CORE			ML			

BORING NUMBER B099

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/7/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/7/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
1.0		18	CORE			ML		Dark yellowish brown (10YR 4/4) to (10YR 3/4) CLAYEY SILT with trace gravel (1/4 to 1/2-inch diameter), plastic, medium stiff to stiff, very moist, cementation at 75 feet bgs. *(continued)*	
		18	CORE						
		18	CORE						
									79.5
								Bottom of borehole at 79.5 feet.	

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS GPJ RFW SHERMAN OAKS GDT 2/13/03

BORING NUMBER B100

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/6/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/6/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	205 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	70.5
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 61 Feet bgs. Spurious PID readings.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Concrete Paving	0.4
						ML		Dark yellowish brown (10YR 4/6) SILT with trace fine sand and little clay, plastic, dry.	4.5
71.6		18	CORE		5	CL		Brown (10YR 4/3) CLAY, plastic, slightly micaceous, stiff, dry.	5.0
						ML		Dark yellowish brown (10YR 4/4) SILT with trace fine sand and little clay, slightly mottled, slightly plastic, medium stiff, dry.	
96.5		18	CORE		10				
282		18	CORE		15	CL		Dark yellowish brown (10YR 3/4) SILTY CLAY with little gravel and coarse sand (2 1/2-inch lens), slightly plastic, trace mica, medium hard, dry.	13.0
						ML		Brown (10YR 4/3) FINE SANDY SILT with little clay and gravel, slightly micaceous, slightly plastic, dry.	18.0
106		18	CORE		20	SM		Dark yellowish brown (10YR 4/4) SILTY FINE SAND with little clay, well sorted, medium dense, dry.	20.0
43		18	CORE		25	CL		Brown (10YR 4/3) CLAY with little silt, medium stiff, plastic, micaceous, slightly moist. More silt present towards lower portion of the sample.	22.5
29.3		18	CORE		30	SM		Yellowish brown (10YR 5/4) SILTY VERY FINE SAND with little clay, well sorted, low cohesiveness, medium loose, micaceous, slightly moist.	30.0
						CL		Dark yellowish brown (10YR 3/4) SILTY CLAY with trace to little coarse sand, hard, trace mica, slightly moist.	33.0

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS GPJ RFW SHERMAN OAKS GDT 3/18/03

BORING NUMBER B100

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/6/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/6/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
31.9		18	CORE			CL		Dark yellowish brown (10YR 3/4) SILTY CLAY with trace to little coarse sand, hard, trace mica, slightly moist. *(continued)*	
31.4		18	CORE		40			Dark yellowish brown (10YR 4/4) CLAYEY SILT with some very fine sand, micaceous, stiff, moist.	40.0
34.3		18	CORE		45	ML			
29.2		18	CORE		50				
						SM		Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND, well sorted, medium dense, low plasticity, very low cohesiveness, micaceous, moist.	53.0
45.4		18	CORE		55				56.0
						CL		Light olive brown (2.5Y 5/4) VERY FINE SANDY CLAY with silt, micaceous, stiff, moist.	58
45.2		18	CORE		60	SM		Brown (10YR 4/3) SILTY VERY FINE SAND with little clay, well sorted, medium dense, micaceous, low cohesiveness, moist.	
		18	CORE						
58.2		0	NR						63
46.5		12	CORE			SP		Light yellowish brown (2.5Y 6/3) to dark yellowish brown (10YR 3/4) FINE SAND, well sorted, medium loose, rounded grains, moist.	
		0	NR		65				
36.5		12	CORE			SM		Dark yellowish brown (10YR 4/4) SILTY VERY FINE SAND with trace clay, well sorted, some mica.	65.5
		0	NR			SW			66
42.4		14.4	CORE					Pale yellow (2.5Y 7/3) to dark yellowish brown (10YR 4/4) MEDIUM to COARSE SAND, moderately sorted, subrounded, medium dense, very moist.	66
		0	NR						
57.3		14.4	CORE			SP		Light olive brown (2.5Y 5/3) to dark yellowish brown (10YR 4/4) FINE SAND, well sorted, medium dense, very moist to wet.	
		0	NR		70				
42.0		14.4	CORE						
		0	NR						71
26.9		12	CORE			SP		Dark yellowish brown (10YR 3/4) FINE to MEDIUM SAND with little clay in pockets, well sorted, rounded grains, micaceous, medium loose, wet.	72.5

Bottom of borehole at 72.5 feet.

BORING NUMBER B101

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/15/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/15/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger: Rhino Rig, 6-inch Diamter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	199 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	72.0
LOGGED BY	B. Clarke	GROUND WATER ELEVATION	
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						ML		Brown (10YR 4/3) CLAYEY SILT with little fine sand, non-plastic, medium soft, moist.	
0.6		18	CORE		5				5.5
						CL		Brown (10YR 4/3) SILTY CLAY with pockets of fine to coarse sand at 6.2 feet bgs, medium plastic, stiff, moist.	8.0
0.3		18	CORE		10	ML		Brown (10YR 4/3) CLAYEY SILT with little to some fine sand and trace localized gravel, some fine to coarse sandy pockets at 10 feet bgs, very slightly elastic, slightly micaceous, medium soft to medium stiff, moist.	
0.6		18	CORE		15				16.0
						SM		Brown (10YR 4/3) FINE SANDY SILT with little clay and trace subangular gravel (to 3/8-inch diameter), slightly micaceous, non-plastic, medium soft, moist.	19.5
0.6		18	CORE		20	CL		Brown (10YR 4/3) SILTY CLAY with trace very fine sand, medium plastic, stiff, moist.	22.5
0.3		18	CORE		25	ML		Yellowish brown (10YR 5/4) CLAYEY SILT with trace very fine sand, very slightly micaceous, slightly plastic, medium stiff, moist.	
0.6		18	CORE		30				31.0
						CL		Yellowish brown (10YR 5/6) SILTY CLAY with trace very fine sand and trace subangular gravel (to 1/4-inch diameter), medium plastic, very stiff, moist.	33.0
						CL		Brown (10YR 4/3) SILTY CLAY with little very fine sand, slightly mottled, slightly plastic, medium stiff, moist.	

BORING NUMBER B101

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
1.3		18	CORE			CL		Brown (10YR 4/3) SILTY CLAY with little very fine sand, slightly mottled, slightly plastic, medium stiff, moist. *(continued)*	
						ML		Brown (10YR 4/3) CLAYEY SILT with little to some sand, slightly plastic.	37.
1.0		18	CORE		40				40.
						ML		Brown (10YR 4/3) FINE SANDY SILT with trace to some clay, very slightly plastic, medium soft to medium stiff, moist.	
						ML		Yellowish brown (10YR 5/4) CLAYEY SILT with little to some sand, slightly plastic, medium stiff, moist.	43.
2.0		18	CORE		45				45.5
						CL		Yellowish brown (10YR 5/4) SILTY CLAY, little to some sand, slightly plastic and micaceous, stiff, slightly moist.	
						SP		Olive (5Y 5/3) to yellowish brown (10YR 5/4) FINE to MEDIUM SAND with trace silt and little subrounded gravel (3/4-inch diameter), well sorted, medium dense, moist.	48.0
0.0		18	CORE		50				51.0
						SM		Yellowish brown (10YR 5/6) SILTY SAND, medium dense, moist.	53.0
						SW		Olive (5Y 5/3) FINE to COARSE SAND with trace subangular gravel, medium sorted, moist.	
0.3		18	CORE		55				55.
						SP		FINE to MEDIUM SAND with trace subangular gravel (1/4 to 1/2-inch diameter), medium sorted, dense, moist.	58
						SP		Olive gray (5Y 5/2) FINE to MEDIUM SAND, well sorted, non-cohesive, subrounded fine gravel at 61 feet bgs, dense, moist.	
0.3		18	CORE		60				
1.0		18	CORE		65				68.0
						CL		Brown (10YR 5/3) SILTY CLAY, slightly mottled, medium plastic, medium stiff, some calcareous stringers, very moist to wet.	
3.8		18	CORE		70				

BORING NUMBER B101

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

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PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
1.3		18	CORE			CL			76.0
								Bottom of borehole at 76.0 feet.	

BORING NUMBER B102

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/15/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/15/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger: Rhino Rig, 6-inch Diamter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	206 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	76.5 feet
LOGGED BY	B. Clarke	GROUND WATER ELEVATION	
REMARKS	Continous Sampling Below 63.5 Feet bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						GP		Light gray (10YR 7/2) SANDY GRAVEL (angular) base.	0.5
						CL		Dark yellowish brown (10YR 4/4) SILTY CLAY with trace fine sand and trace subangular gravel (1/8 to 1-inch diameter), slightly porous, medium soft to medium stiff, medium plastic, moist.	
0.3		18	CORE		5				5.5
						ML		Yellowish brown (10YR 5/6) SILT with little clay and trace very fine sand, very slightly plastic, calcareous stringers, medium soft, moist.	
									8.5
0.3		18	CORE		10	ML		Yellowish brown (10YR 5/6) CLAYEY SILT with little fine sand and trace (one) subrounded gravel (2-inch diameter), slightly plastic, moist.	
			CORE						
									12.5
						ML		Yellowish brown (10YR 5/6) FINE SANDY SILT with trace to little clay, medium stiff, non-plastic, moist.	
0.6		18	CORE		15				15.0
						SM-SW		Yellowish brown (10YR 5/6) GRAVELLY, SILTY FINE to COARSE SAND with little clay, medium dense, cohesive, subangular to subrounded gravel (1 1/2-inch diameter), moist.	15.5
						CL		Yellowish brown (10YR 5/6) to brown (10YR 5/3) SILTY CLAY with trace to little fine sand, and trace gravel (1/4-inch diameter), slightly blocky, slight to medium plasticity, medium stiff, moist to very moist.	
0.6		18	CORE		20				
									23.0
						ML		Yellowish brown (10YR 5/4) CLAYEY SILT with trace to little very fine sand, slightly elastic, sticky, medium soft to medium stiff, moist to very moist.	
2.0		18	CORE		25				
0.3		18	CORE		30				
									33.0
						CL		Yellowish brown (10YR 5/4) SILTY CLAY with trace to little fine sand and trace fine subangular gravel (1/4-inch diameter), blocky, medium plastic, stiff to very stiff, slightly mottled, moist.	

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 2/13/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02
PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
2.7		18	CORE			CL		Yellowish brown (10YR 5/4) SILTY CLAY with trace to little fine sand and trace fine subangular gravel (1/4-inch diameter), blocky, medium plastic, stiff to very stiff, slightly mottled, moist. *(continued)*	37
						ML		Light yellowish brown (10YR 6/4) CLAYEY SILT with trace very fine sand, slightly elastic, medium soft, calcareous stringers, very moist.	39.5
1.0		18	CORE		40	CL		Yellowish brown (10YR 4/4) SILTY CLAY, little fine sand, slightly plastic, medium soft to medium stiff, some calcareous stringers at 49.5 feet bgs, moist.	
1.0		18	CORE		45				
2.0		18	CORE		50				51.0
						SM		Pale brown (10YR 6/3) SILTY FINE SAND, very well sorted, cohesive, dense, moist.	53.0
5.0		18	CORE		55	SM		Light olive brown (2.5Y 5/4) SILTY FINE SAND with trace to little clay, slightly mottled, calcareous stringers, oxidized, medium dense, slightly moist.	55
						SM		Light yellowish brown (10YR 6/4) SILTY FINE SAND, to trace clay, very well sorted, moderately cohesive, medium dense, moist.	58
0.3		18	CORE		60	SP		Light olive gray (5Y 6/2) FINE SAND, to trace silt, very well sorted, slightly micaceous, dense, slightly moist.	61
		18	CORE			CL		Brown (10YR 5/3) to dark yellowish brown (10YR 4/4) SILTY CLAY with trace to little fine sand, localized light gray calcareous stringers, slight plasticity, medium soft to stiff, mottled, slightly micaceous, slightly moist to very moist.	
2.0		18	CORE		65				
		18	CORE						
		18	CORE						
		0	NR		70				70.0
1.7		8.4	CORE			ML		Yellowish brown (10YR 4/4) FINE SANDY SILT with trace to some localized clay, non-elastic to slightly elastic, medium stiff, moist.	71.0
		18	CORE			ML		Yellowish brown (10YR 4/4) to brown (10YR 5/3) CLAYEY SILT with trace to little fine sand, medium stiff.	71
		18	CORE			CL		Yellowish brown (10YR 4/4) to brown (10YR 5/3) SILTY CLAY with trace very fine sand, slightly micaceous, slightly mottled, slight to medium plasticity, medium stiff to very stiff, very moist.	
		18	CORE						

BORING NUMBER B102

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/15/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/15/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		18	CORE			CL		Yellowish brown (10YR 4/4) to brown (10YR 5/3) SILTY CLAY with trace very fine sand, slightly micaceous, slightly mottled, slight to medium plasticity, medium stiff to very stiff, very moist. *(continued)* ▼	77.0
0.3		18	CORE			ML		Brown (10YR 4/3) CLAYEY SILT with little fine sand, soft, wet, saturated.	77.5
						CL		Yellowish brown (10YR 5/4) SILTY CLAY, stiff, very moist.	78.0
						ML		Yellowish brown (5/4) CLAYEY SILT with trace to little fine sand, medium stiff, wet.	78.5

Bottom of borehole at 78.5 feet.

BORING NUMBER B103

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/13/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/13/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	192 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	66.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 60 Feet bgs. Spurious PID readings.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			SM		Asphalt Light olive brown (2.5Y 5/4) SILTY VERY FINE SAND, well sorted, dense, white flecks, dry, possible fill.	0.4
282	7 12 13	18	CORE		5	SM		Dark yellowish brown (10YR 3/4) SILTY VERY FINE SAND with trace clay, well sorted, dense, few calcareous stringers, white flecks, dry, possible fill.	5.0
320	9 18 22	18	CORE		10	SM			
>400	13 25 29/0"	0 12	NR CORE		15	ML		Brown (10YR 4/3) CLAYEY SILT with trace gravel, medium stiff, few root casts, non-plastic to slightly plastic, dry.	15.5
								Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little to some clay, medium stiff to stiff, slightly plastic, dry.	18.0
>300	18 25 37/3"	0 15	NR CORE		20	SM			
>300	13 20 27/3"	0 15	NR CORE		25	SM			
								Yellowish brown (10YR 5/6) SILTY VERY FINE SAND with little clay, well sorted, medium dense to dense, dry.	28.0
>300	20 23 25	18	CORE		30	SM			
						ML		Brown (10YR 4/3) CLAYEY SILT with little to some very fine sand, medium stiff to stiff, slightly micaceous, slightly plastic.	33.0

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B103

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/13/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/13/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
>300	13 30 43	18	CORE					Brown (10YR 4/3) CLAYEY SILT with little to some very fine sand, medium stiff to stiff, slightly micaceous, slightly plastic. *(continued)*	
>300	12 29 36	18	CORE		40	ML			
>300	16 20 23	18	CORE		45	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay, medium soft, plastic, slightly moist to moist.	45.
>300	19 25 33	18	CORE		50	SM		Olive brown (2.5Y 4/4) SILTY VERY FINE SAND with little clay, well sorted, very micaceous, few calcareous stringers, slightly oxidized, slight greenish tint, dense, moist to very moist, no odor.	51.
80.2	14 19 22	18	CORE		55	SC		Light olive brown (2.5Y 5/3) CLAYEY VERY FINE SAND with little silt, well sorted, very micaceous, medium dense, very moist.	58.
>300	12 20 22	18	CORE		60	ML		Light olive brown (2.5Y 5/3) CLAYEY SILT, medium stiff, plastic, oxidized, very moist.	61.0
	9 12 13	18	CORE						
	11 13 16	18	CORE			SM		Light olive brown (2.5Y 5/3) SILTY VERY FINE SAND, little clay, well sorted, very micaceous, oxidized, medium dense, moist.	63. 64.5
>300	18 25 37	18	CORE		65	ML		Light olive brown (2.5Y 5/3) CLAYEY SILT.	65.
	23 30 39	18	CORE			SW		Light olive brown (2.5Y 5/3) GRAVELLY FINE to COARSE SAND with little silt, moderately sorted, micaceous, dense, subangular to subrounded gravel (1/4 to 1 1/4-inch diameter), wet.	66.5
						SP		Light olive brown (2.5Y 5/3) FINE to MEDIUM SAND with little silt, well sorted, micaceous, subrounded, dense, wet.	67.5

Bottom of borehole at 67.5 feet.

BORING NUMBER B104

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/12/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/12/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	188 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	65.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 55 Feet bgs.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML		Asphalt Dark yellowish brown (10YR 3/4) CLAYEY SILT with little sand and little fine gravel, medium stiff, slightly plastic, dry, probable fill.	0.4
0.0		18	CORE		5	ML ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, slightly plastic, soft, dry. Brown (10YR 4/3) CLAYEY SILT with little very fine sand, abundant calcareous stringers, medium stiff, plastic, dry.	4.5 5.0
0.1		18	CORE		10	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, medium soft to medium stiff, slightly plastic and micaceous, dry.	8.0
0.5		18	CORE		15				
0.0		18	CORE		20			Dark yellowish brown (10YR 4/4) to yellowish brown (10YR 5/6) VERY FINE SANDY SILT with little to some clay, medium stiff, micaceous, some calcareous stringers, plastic, dry, cemented white gravel (1/4 to 1-inch diameter) layer at 26 feet bgs.	18.0
0.0		0 12	NR CORE		25	ML			
50.1		18	CORE		30				

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B104

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/12/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/12/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
15.2		18	CORE					Dark yellowish brown (10YR 4/4) to yellowish brown (10YR 5/6) VERY FINE SANDY SILT with little to some clay, medium stiff, micaceous, some calcareous stringers, plastic, dry, cemented white gravel (1/4 to 1-inch diameter) layer at 26 feet bgs. *(continued)*	
						ML			
1.7		18	CORE		40				
									43.
								Yellowish brown (10YR 5/6) SILTY VERY FINE SAND with little clay, well sorted, slightly micaceous, few calcareous stringers, dense, very slightly moist.	
21.8		18	CORE		45				
						SM			
5.8		18	CORE		50				
									53.0
								Light olive brown (2.5Y 5/4) CLAYEY SILT with little very fine sand, micaceous, plastic, medium soft to medium stiff, slight greenish tint, slightly moist to very moist, no odor.	
26.8		18	CORE		55	ML			
		18	CORE						57.
		18	CORE			SM		Olive brown (2.5Y 4/3) SILTY VERY FINE SAND with little clay, well sorted, very micaceous, dense, slight greenish tint, slight odor, very moist.	
									59.5
6.8		18	CORE		60	ML		Olive brown (2.5Y 4/4) CLAYEY SILT with little very fine sand, plastic, oxidized, medium soft, moist.	60.
		18	CORE			SM-SP		Olive brown (2.5Y 4/3) FINE SAND with some silt, well sorted, micaceous, medium dense, very moist.	61.0
						ML			62.0
		18	CORE			SM		Olive brown (2.5Y 4/3) VERY FINE SANDY SILT with some clay, micaceous, medium soft, oxidized, slightly plastic, very moist.	62.
						ML		Olive brown (2.5Y 4/3) SILTY VERY FINE SAND with little clay, well sorted, dense, very moist.	
		0	NR						
6.8		12	CORE		65			Light olive brown (2.5Y 5/3) CLAYEY SILT with trace to little very fine sand, oxidized, plastic, slightly micaceous, very moist.	65.0
		18	CORE			SW-SM		Grayish brown (2.5Y 5/2) FINE to COARSE SAND with some silt, medium sorted, subrounded grains, dense, wet.	
		18	CORE						67.5
						SW		Dark grayish brown (2.5Y 4/2) GRAVELLY FINE to COARSE SAND with little silt, subrounded to subangular gravel (1/8 to 3/4-inch diameter), poorly sorted, dense, wet.	68.
		18	CORE			SW		Dark grayish brown (2.5Y 4/2) FINE to COARSE SAND with some gravel and little silt, poorly sorted, dense, wet.	
					70				70.0
15.4								Bottom of borehole at 70.0 feet.	

BORING NUMBER B105

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/12/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/12/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	183 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	64.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 55 Feet bgs.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			SW		Asphalt	0.4
								Light gray (2.5Y 6/1) GRAVELLY SILTY FINE to COARSE SAND.	0.5
								Black ASPHALT FILL with trace brick.	1.5
						ML		Brown (10YR 5/3) VERY FINE SANDY SILT with little clay, slightly to medium elasticity, medium soft, moist.	
					5				5.5
0.0		0 12	NR CORE			ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with some very fine sand and trace gravel, medium stiff, calcareous stringers, roots, slightly micaceous, dry.	
0.4		18	CORE		10	ML		Grading to VERY FINE SANDY SILT, little to some clay, medium soft.	10.5
0.9		18	CORE		15	ML		Very dark grayish brown (10YR 3/2) CLAYEY SILT, to little fine sand, medium plastic, slightly micaceous, medium stiff, dry.	15.5
1.7		0 15	NR CORE		20	ML			23.0
0.2		18	CORE		25	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay, medium soft, very plastic, micaceous, slightly moist.	28.0
0.0		18	CORE		30	ML		Dark yellowish brown (10YR 3/4) CLAYEY SILT with trace very fine sand, non to slightly plastic, medium stiff, micaceous, slightly moist.	33.0
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay, medium stiff, slightly micaceous, plastic, slightly moist.	

BORING NUMBER B105

WESTON

PROJECT NUMBER 20074.515.009.0321 DATE STARTED 8/12/02

PROJECT NAME Omega OU-02 DATE COMPLETED 8/12/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0		18	CORE					Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay, medium stiff, slightly micaceous, plastic, slightly moist. *(continued)*	
						ML			
0.1		18	CORE		40				
									43.0
						SM-SP		Olive brown (2.5Y 4/4) FINE SAND with some silt and trace clay, trace gravel, well sorted, micaceous, subangular gravel (1/2 to 1-inch diameter), slightly moist.	
0.2		18	CORE		45				46.0
						ML		Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with little clay, micaceous, soft, non-plastic, slight greenish tint, slightly moist.	
0.0		18	CORE		50				51.0
						SM		Dark yellowish brown (10YR 4/4) SILTY FINE SAND with little clay, well sorted, loose, very micaceous, slightl greenish tint, no odor, moist.	
									53.5
						ML		Olive brown (2.5Y 4/3) CLAYEY SILT with little very fine sand, slightly oxidized, medium stiff, slightly micaceous, few calcareous stringers, slight to no plasticity, moist.	
0.0		18	CORE		55				56.0
		18	CORE			SP-SM		Olive brown (2.5Y 4/4) FINE SAND with some silt, well sorted, very micaceous, moist to very moist.	57.0
						SM		Dark brown (10YR 3/3) SILTY FINE SAND with little clay, very micaceous, moist.	57.5
		18	CORE			SP-SM		Olive brown (2.5Y 4/4) FINE SAND with some silt, well sorted, very micaceous, moist to very moist.	58.5
						SM		Olive brown (2.5Y 4/3) SILTY FINE SAND with little clay, well sorted, little oxidation, very micaceous, medium dense, slight greenish tint, moist to very moist, no odor.	
0.0		18	CORE		60				60.0
						ML		Olive brown (2.5Y 4/3) CLAYEY SILT with little to some very fine sand, oxidized, micaceous, medium soft, plastic, moist to very moist.	
		18	CORE						61.5
						SM		Olive brown (2.5Y 4/3) SILTY FINE SAND with little clay, well sorted, medium dense, very micaceous, very moist.	62.0
		18	CORE			SP-SM		Olive brown (2.5Y 4/3) FINE to MEDIUM SAND with little silt and clay, well sorted, medium loose	62.5
						ML			64.0
		0	NR			SP		Dark olive brown (2.5Y 3/3) CLAYEY SILT with some very fine sand, medium stiff, micaceous, very moist to wet.	64.5
0.9		12	CORE		65			MEDIUM to COARSE SAND, little silt, wet.	
		18	CORE			SM		Olive brown (2.5Y 4/4) SILTY FINE SAND with little clay, well sorted, oxidized, medium dense, very micaceous, wet.	
		18	CORE						67.5
		0	NR			SP-SM		Olive brown (2.5Y 4/3) FINE SAND with trace to little clay and silt, oxidized, medium dense, very micaceous, saturated.	
2.1		6	CORE		70				
		18	CORE						70.5
						SW		Dark grayish brown (2.5Y 4/2) GRAVELLY SAND with little silt and small clay pockets, subangular to subrounded gravel (1/8 to 1-inch diameter), poorly sorted, wet.	71.5
		0	NR						
		12	CORE			SP		Dark grayish brown (2.5Y 4/2) FINE to MEDIUM SAND with trace gravel, moderately sorted, wet.	73.0

Bottom of borehole at 73.0 feet.

BORING NUMBER B107

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/7/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/7/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	187 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	64 feet
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 54.5 Feet bgs.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Concrete Paving	0.4
						CL		Very dark grayish brown (2.5Y 3/2) SILTY CLAY, littlle plasticity, medium stiff to stiff, dry.	4.5
0.0		18	CORE		5	ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with trace sand, stiff, slight plasticity, dry.	5.0
								Light olive brown (2.5Y 5/4) VERY FINE SANDY SILT with little clay, localized trace gravel, very slight plasticity, calcareous stringers, medium soft, dry.	
0.0		18	CORE		10	ML			
0.0		18	CORE		15				
								Dark yellowish brown (10YR 3/4) CLAYEY SILT with little very fine sand and trace gravel, medium stiff, non-plastic, slightly micaceous, dry.	18.0
3.9		0 15	NR CORE		20				
12.5		18	CORE		25	ML			
0.0		18	CORE		30				

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 2/13/03

BORING NUMBER B107

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/7/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/7/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.0		18	CORE			ML		Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with little clay, medium stiff, slightly micaceous, localized trace rootlets, slightly plastic, dry.	35.[illegible]
0.3		0 12	NR CORE		40				43.[illegible]
0.0		18	CORE		45	SM		Olive brown (2.5Y 4/4) SILTY VERY FINE SAND with little clay, well sorted, medium dense, slightly micaceous, calcareous stringers, moderate cohesiveness, very slightly moist.	49.[illegible]
0.0		18	CORE		50	SM		Light olive brown (2.5Y 5/4) SILTY FINE SAND with trace clay, well sorted, micaceous, low cohesivess, very slightly moist.	53.0
4.6		18	CORE		55	ML		Light yellowish brown (2.5Y 6/4) CLAYEY SILT, plastic, medium stiff, some oxidation, moist to very moist.	57.0
		18	CORE			SM		Olive brown (2.5Y 4/3) SILTY FINE SAND with trace clay, medium dense, very micaceous, very moist.	57.[illegible]
		18	CORE			ML		Pale olive (5Y 6/3) CLAYEY SILT with little very fine sand, very micaceous, medium stiff, some oxidation, slightly moist.	59.0
14.0		18	CORE		60	ML		Grades into a VERY FINE SANDY SILT with little clay, very moist.	60.[illegible]
		18	CORE			SM		Olive (5Y 5/3) SILTY VERY FINE SAND with little clay, well sorted, very micaceous, very moist.	60.[illegible]
		18	CORE			ML		Olive (5Y 5/3) CLAYEY SILT with little very fine sand, very micaceous, medium stiff, some oxidation, slightly moist.	62.5
		18	CORE			ML		Light olive brown (2.5Y 5/4) VERY FINE SANDY SILT with little clay, medium soft, micaceous, slightly plastic, very moist.	64.[illegible]
60.1		0 12	NR CORE		65	SM		Light olive brown (2.5Y 5/4) to dark yellowish brown (10YR 3/6) SILTY FINE SAND. well sorted, loose to medium loose, micaceous, very moist.	66
		18	CORE			SM		Olive brown (2.5Y 4/4) SILTY VERY FINE SAND, well sorted, medium dense, micaceous, wet.	69
		18	CORE						

Bottom of borehole at 69.0 feet.

BORING NUMBER B108

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/16/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/16/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger: Rhino Rig, 6-inch Diamter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	200 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	65.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.6
						ML		Gley (4/10Y) CLAYEY SILT with little very fine sand, plastic, medium stiff, micaceous, strong odor.	2.0
						ML		Olive brown (2.5Y 4/3) CLAYEY SILT with little very fine sand, plastic, medium stiff, micaceous, oxidized.	5.0
9.8		18	CORE		5	SP-SM		Dark olive brown (2.5Y 3/3) FINE SAND with some silt, trace subrounded gravel, well sorted, dense, dry.	6.0
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT, localized fine sand, plastic, micaceous, medium soft to medium stiff, dry to slightly moist.	
8.9		18	CORE		10				11.0
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little clay, slightly plastic, medium soft to medium stiff, dry.	13.5
3.4		18	CORE		15	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT wtih some clay and trace igneous subangular gravel (1-inch diameter), medium stiff, plastic to medium plastic, dry to very slightly moist.	18.0
						SM		Dark yellowish brown (10YR 3/6) SILTY VERY FINE SAND with little clay, well sorted, dense, subrounded, cohesive, slightly moist.	20.5
4.2		18	CORE		20	SP-SM		Yellowish brown (10YR 5/4) FINE SAND with some silt and little subrounded gravel (1/8 to 1/4-inch diameter), well sorted, dense, cohesive.	21.5
5.3		18	CORE		25	ML		Dark brown (10YR 3/3) CLAYEY SILT, to little very fine sand, plastic, medium stiff, slightly moist.	28.0
						SP-SM		Dark yellowish brown (10YR 4/6) FINE SAND with some silt and trace coarse sand, well sorted, dense, cohesive, subrounded, slightly micaceous, slightly moist.	31.0
3.2		18	CORE		30	ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay, medium stiff, slightly plastic, slightly micaceous, slightly moist.	

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B108

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/16/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/16/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
5.5		18	CORE			ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with some very fine sand, slightly plastic, medium stiff to stiff, slightly moist.	35.
						SM		Dark yellowish brown (10YR 4/6) SILTY VERY FINE SAND with little clay, well sorted, dense, cohesive, slightly micaceous, slightly moist.	38.
8.9		18	CORE		40				
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, medium soft, plastic, moist.	41.
						ML		Dark brown (10YR 3/3) to very pale brown (10YR 8/2) SILT with little to some clay and fine sand, medium stiff to stiff, plastic, abundant calcareous stringers, some cemented areas, slightly moist.	43.
36.6		18	CORE		45				
						SP-SM		Dark yellowish brown (10YR 4/4) FINE SAND with little clay and silt, well sorted, dense to very dense, subrounded, slightly moist.	46.
						SP-SM		Light olive brown (2.5Y 5/4) FINE to MEDIUM to COARSE SAND with some silt and little subrounded to subangular gravel (1/4 to 1-inch diameter), well sorted, slightly cohesive, dense, moist.	48.5
4.3		18	CORE		50				
						SW		Light olive brown (2.5Y 5/4) FINE to COARSE SAND with little silt and subrounded gravel (1/8 to 1/4-inch diameter), medium sorted, slightly micaceous, subrounded sand, dense, moist.	53.0
0.0		18	CORE		55				
4.5		18	CORE		60				
5.9		18	CORE		65				65.
						SP-SM		Olive brown (2.5Y 4/3) FINE to MEDIUM SAND with some silt, well sorted, dense, slightly micaceous, subrounded sand, cohesive, wet.	
						SW		Olive brown (2.5Y 4/3) FINE to COARSE SAND with some subrounded gravel (1/8 to 1/4-inch), medium sorted, dense, cohesive, wet.	68.0
6.9		18	CORE		70				
								Bottom of borehole at 71.5 feet.	71.

BORING NUMBER B109

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/8/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/8/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	199 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	71.0
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	

REMARKS: Continuous Sampling Below 64.5 Feet bgs.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Asphalt	0.4
						CL		Very pale brown (10YR 8/3) SILTY CLAY, medium stiff, plastic, dry.	
14.5		0 12	NR CORE		5			Dark yellowish brown (10YR 4/4) CLAYEY SILT with little to some very fine sand, localized trace gravel, medium soft, slightly plastic, slightly micaceous, some calcareous stringers, dry.	5.0
3.9		18	CORE		10	ML			
7.3		18	CORE		15				
						SP		Dark yellowish brown (10YR 3/4) GRAVELLY FINE to MEDIUM SAND with little to some silt and subrounded to angular gravel (1/8 to 3/4-inch diameter), moderately sorted, medium dense, slightly micaceous.	18.0
7.9		0 12	NR CORE		20				20.5
						CL		Dark yellowish brown (10YR 3/4) SILTY CLAY, medium stiff to stiff, plastic, micaceous, moist.	23.0
7.2		18	CORE		25	ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with little fine sand and trace gravel, medium stiff to stiff, plastic to very plastic, micaceous, slightly moist.	
14.7		18	CORE		30				30.5
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little to some clay, medium soft to medium stiff, plastic, slightly micaceous, moist.	

BORINGWELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

BORING NUMBER B109

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/8/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/8/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DE
23.4		18	CORE			ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with little to some clay, medium soft to medium stiff, plastic, slightly micaceous, moist. *(continued)*	
20.8		18	CORE		40				
								Dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, slightly plastic, stiff, micaceous, moist.	43.0
31.4		18	CORE		45	ML			
								Olive brown (2.5Y 4/3)FINE to MEDIUM SAND with little coarse sand and little subrounded to subangular gravel (up to 1/4-inch diameter), little silt, well sorted, dense, moist.	48.0
		0	NR		50				
1.1		6	CORE			SP			
		0	NR		55				
1.1		12	CORE						55
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT with little very fine sand, medium soft, plastic, micaceous, moist.	
48.0		18	CORE		60	SM		Light olive brown (2.5Y 5/4) SILTY FINE SAND with some clay, very well sorted, dense, micaceous, very moist.	59.5 60
						ML		Olive brown (2.5Y 4/4) CLAYEY SILT with little very fine sand, plastic, moist.	
								Olive brown (2.5Y 4/4) SILTY CLAY, medium stiff to stiff, plastic, slightly micaceous, calcareous stringers, moist. Trace subrounded gravel (1/8-inch diameter) at 68 feet bgs.	63
16		18	CORE		65				
		18	CORE			CL			
		18	CORE						
65.3		18	CORE		70	ML		Olive brown (2.5Y 4/4) VERY FINE SANDY SILT with little to some clay and little subrounded to subangular gravel (1/8 to 1/4-inch diameter), medium stiff to stiff, slightly plastic, moist.	69 71.0
		0	NR						
		15	CORE			ML		Olive brown (2.5Y 4/4) CLAYEY SILT with little very fine sand, plastic, calcareous stringers, medium stiff to stiff. Outside of sample wet, moist inside.	72

Bottom of borehole at 72.5 feet.

BORING NUMBER B110

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	8/8/02
PROJECT NAME	Omega OU-02	DATE COMPLETED	8/8/02
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	----
DRILLING METHOD	Hollow Stem Auger, 6-inch Diameter	SCREEN TYPE/SLOT	----
SAMPLING METHOD	18-inch Split Spoon, 5-foot Interval	GRAVEL PACK TYPE	----
GROUND ELEVATION	198 feet (estimated)	GROUT TYPE/QUANTITY	----
TOP OF CASING	----	DEPTH TO WATER	69.5
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS	Continuous Sampling Below 59.5 Feet bgs.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		54	AUGER					Asphalt	0.4
						CL		Dark brown (10YR 3/3) SILTY CLAY, medium stiff, plastic, dry.	
11.2		0 12	NR CORE		5	ML		Light olive brown (2.5Y 5/4) CLAYEY SILT with little very fine sand, calcareous stringers, plastic, medium soft to medium stiff, slightly micaceous, dry.	5.0
11.6		18	CORE		10	ML		Light olive brown (2.5Y 5/4) VERY FINE SANDY SILT with some clay and trace gravel, slightly micaceous, medium stiff, calcareous stringers, non-plastic, dry.	8.0
16.9		18	CORE		15	ML		Dark yellowish brown (10YR 3/4) CLAYEY SILT with little to some very fine sand and trace gravel, medium stiff to stiff, localized calcareous stringers, micaceous, plastic.	13.0
15.5		18	CORE		20				
12.2		18	CORE		25			Brown (10YR 4/3) CLAYEY SILT with trace gravel and trace coarse sand, stiff, plastic, micaceous, dry.	24.5
19.2		18	CORE		30	ML			

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS GPJ RFW SHERMAN OAKS GDT 3/18/03

BORING NUMBER B110

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 8/8/02

PROJECT NAME Omega OU-02 **DATE COMPLETED** 8/8/02

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
41.9		18	CORE					Brown (10YR 4/3) CLAYEY SILT with trace gravel and trace coarse sand, stiff, plastic, micaceous, dry. *(continued)*	
70.0		18	CORE		40	ML			
75.2		18	CORE		45				45.5
						ML		Dark yellowish brown (10YR 4/4) VERY FINE SANDY SILT with some clay and trace gravel, medium stiff to stiff, plastic, micaceous, very slightly moist.	48.0
						SM		Olive brown (2.5Y 4/4) SILTY FINE SAND with little clay, well sorted, medium soft, micaceous, moist.	
60.2		0 12	NR CORE		50				51.0
						ML		Dark yellowish brown (10YR 4/4) CLAYEY SILT, soft to medium soft, plastic, micaceous, moist.	53.0
164		18	CORE		55	ML		Dark yellowish brown (10YR 3/4) VERY FINE SANDY SILT with some clay, oxidized, calcareous stringers, slightly micaceous, slightly plastic, moist.	
90		18	CORE		60				61.0
		18 18	CORE CORE			ML		Olive brown (2.5Y 4/4) to light olive brown (2.5Y 5/4) CLAYEY SILT with little fine sand and trace gravel, abundant calcareous stringers, localized oxides, medium stiff, plastic, slightly moist.	64.0
96.9		18	CORE		65				
		18	CORE						67.0
		18	CORE			SM-ML		Dark yellowish brown (10YR 3/4) CLAYEY VERY FINE SANDY SILT, micaceous, plastic, moist.	68.0
						ML		Dark yellowish brown (10YR 3/4) VERY FINE SANDY SILT with little clay, medium stiff, micaceous, moist. ▼	69.5
54.5		0 18	NR CORE		70	SM		Dark yellowish brown (10YR 4/6) SILTY FINE SAND with little gravel and little clay, well sorted, dense. Wet on outside of sample and moist on inside.	71.0
		18	CORE			SM		Dark yellowish brown (10YR 4/6) SILTY FINE SAND with subrounded to subangular gravel (1/8 to 1-inch diameter), well sorted, dense, wet.	72.5

Bottom of borehole at 72.5 feet.

BORING/WELL CONSTRUCTION LOG PHASE 2 BORING LOGS.GPJ RFW SHERMAN OAKS.GDT 3/18/03

APPENDIX C

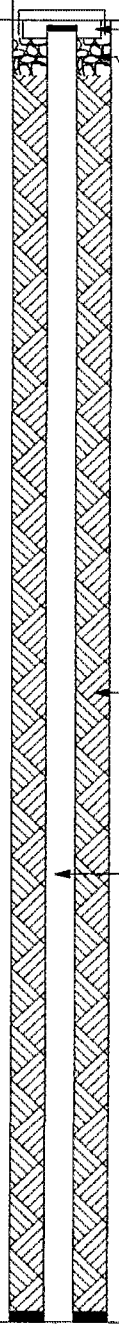
MONITORING WELL LOGS AND CONSTRUCTIONS

WELL NUMBER MW01A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/11/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/11/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diameter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	158.35	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	158.21	DEPTH TO WATER	30.6
LOGGED BY	B. Clarke	GROUND WATER ELEVATION	127.8
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
NM		60	AUGER			SP-SM		Asphalt	0.4
								FILL--Gravelly, silty sand, dense	1.0
								Yellowish brown to brown (10YR 5/4 to 10YR 5/3) SILT to fine sandy SILT, slightly moist, medium soft.	
		0	NR		5	ML			
		36	CORE						
									8.5
0.0		60	CORE		10	CL-ML		Dark brown (10YR 3/3) silty CLAY, slight to medium plasticity, slightly moist, stiff.	
						CL-ML		Dark brown silty CLAY, as above, more silt, slightly blocky.	12.0
								Dark yellowish brown (10YR 3/4) clayey SILT, slight to medium elasticity, slightly moist, slightly blocky and crumbly.	13.5
0.0		0	NR		15	ML			
		48	CORE						16.5
								Dark yellowish brown clayey SILT, as above, with trace fine sand.	
0.2		60	CORE		20	ML			
									24.0
0.0		60	CORE		25	ML		Dark yellowish brown (10YR 4/4) SILT, trace fine sand, trace to little clay, very slight plasticity.	
						ML		Dark yellowish brown fine sandy SILT.	26.3
						ML		Dark yellowish brown clayey SILT, blocky partings.	26.8
									29.3
0.0		60	CORE		30	CL		Dark yellowish brown (10YR 4/4) silty CLAY, trace fine sand.	30.5
						ML		Dark yellowish brown to dark brown (10YR 3/4 to 10YR 4/3) SILT, trace to little clay, trace very fine sand, slightly micaceous, moist to very moist at 31.5 feet, wet at 34 feet.	
									35.0

WELL DIAGRAM



BORINGWELL CONSTRUCTION LOG OMEGA WELL LOGS GPJ RFW SHERMAN OAKS GDT 1/22/03

WELL NUMBER MW01A

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/11/01

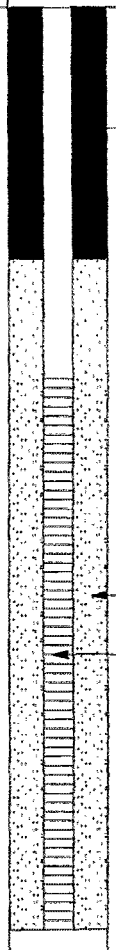
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/11/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
0.2		60	CORE			ML		Dark grayish brown (10YR 4/2) fine SILT, non-plastic, mottled with oxides, micaceous, wet, soft. ∇	38.0
		0	NR		40	SM		Dark grayish brown (2.5Y 4/2) silty very fine SAND, very well sorted, micaceous, locally grading to fine sandy silt.	41.5
0.2		42	CORE			ML		Dark grayish brown (2.5Y 4/2) fine sandy SILT.	43.0
						SP		Dark grayish brown (2.5Y 4/2) fine to medium SAND, medium to well sorted, saturated, dense.	44.0
NM		0	NR		45	SW		Dark grayish brown fine to coarse SAND, trace to little subrounded gravel to 1 to 2-inch, medium sorting, saturated, dense.	
		36	CORE						49.5
		0	NR		50	SP		Olive gray (5Y 4/2) fine SAND to fine to medium SAND, very well to well sorted, trace silt, trace clay, with 2-inch fine sandy silt layer at base	
1.7		42	CORE						53.5
						SW		Dark grayish brown (2.5Y 4/2) gravelly fine to coarse SAND, medium sorted, gravel to 1.5-inch.	55.0
0.7		0	NR		55	SP-SM		Light olive brown (2.5Y 5/4) silty fine to medium SAND, medium sorted, trace fine gravel to 3/4-inch, trace clay, slightly moist, slightly cemented.	56.0
		24	CORE			SP		Light olive brown medium to coarse SAND, trace gravel to 3/4-inch, saturated, very dense.	59.5
2.1					60	SM		Pale olive (5Y 6/3) silty fine to medium SAND, trace clay, wet/saturated, very slightly cemented.	60.0

Bottom of borehole at 60.0 feet.

WELL DIAGRAM



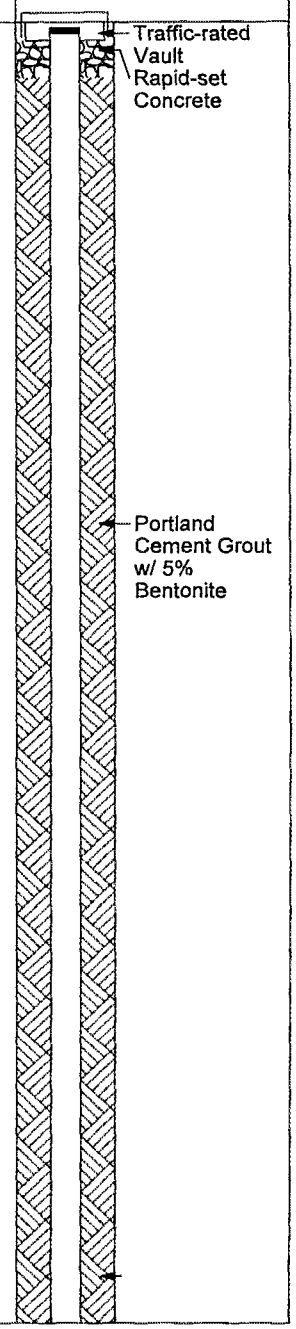
BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

WELL NUMBER MW01B

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/27/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/27/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	158.26	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 230 gal.
TOP OF CASING	158.09	DEPTH TO WATER	30.4
LOGGED BY	B. Clarke A. Cohan	GROUND WATER ELEVATION	127.8
REMARKS	Lithology to 60 feet from MW01A		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
NM		60	AUGER			SP-SM		Asphalt	0.4
								Fill--Gravelly, silty sand, dense	1.0
								Yellowish brown to brown (10YR 5/4 to 10YR 5/3) SILT to fine sandy SILT, slightly moist, medium soft.	
		0	NR		5	ML			
		36	CORE						
									8.5
								Dark brown (10YR 3/3) silty CLAY, slight to medium plasticity, slightly moist, stiff.	
0.0		60	CORE		10	CL-ML			
									12.0
						CL-ML		Dark brown silty CLAY, as above, more silt, slightly blocky.	
									13.5
								Dark yellowish brown (10YR 3/4) clayey SILT, slight to medium elasticity, slightly moist, slightly blocky and crumbly.	
		0	NR		15	ML			
		48	CORE						16.5
								Dark yellowish brown clayey SILT, as above, with trace fine sand.	
0.2		60	CORE		20	ML			
									24.0
								Dark yellowish brown (10YR 4/4) SILT, trace fine sand, trace to little clay, very slight plasticity.	
0.0		60	CORE		25	ML			
									26.3
						ML		Dark yellowish brown fine sandy SILT.	26.8
						ML		Dark yellowish brown clayey SILT, blocky partings.	
									29.3
						CL		Dark yellowish brown (10YR 4/4) silty CLAY, trace fine sand. ▼	30.5
0.0		60	CORE		30			Dark yellowish brown to dark brown (10YR 3/4 to 10YR 4/3) SILT, trace to little clay, trace very fine sand, slightly micaceous, moist to very moist at 31.5 feet, wet at 34 feet.	
						ML			
									35.0

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS GPJ RFW SHERMAN OAKS GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/27/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/27/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
0.2		60	CORE			ML		Dark grayish brown (10YR 4/2) fine sandy SILT, non-plastic, mottled with oxides, micaceous, wet, soft.	38.0	Sch. 40 PVC Blank Casing
		0	NR		40	SM		Dark grayish brown (2.5Y 4/2) silty very fine SAND, very well sorted, micaceous, locally grading to fine sandy silt.	41.5	
0.2		42	CORE			ML		Dark grayish brown (2.5Y 4/2) fine sandy SILT.	43.0	
						SP		Dark grayish brown (2.5Y 4/2) fine to medium SAND, medium to well sorted, saturated, dense.	44.0	
NM		0	NR		45	SW		Dark grayish brown fine to coarse SAND, trace to little subrounded gravel to 1 to 2-inch, medium sorting, saturated, dense.		Portland Cement Grout w/ 5% Bentonite
		36	CORE						49.5	
1.7		0	NR		50	SP		Olive gray (5Y 4/2) fine SAND TO fine to medium SAND, very well to well sorted, trace silt, trace clay, with 2-inch fine sandy silt layer at base.		
		42	CORE						53.5	
						SP		Dark grayish brown (2.5Y 4/2) gravelly fine to coarse SAND, medium sorted, gravel to 1.5-inch.	55.0	
0.7		0	NR		55	SP-SM		Light olive brown (2.5Y 5/4) silty fine to fine SAND, medium sorted, trace fine gravel to 3/4-inch, trace clay, slightly moist, slightly cemented.	56.0	
		24	CORE			SP		Light olive brown medium to coarse SAND, trace gravel to 3/4-inch, saturated, very dense.	59.5	
		0	NR		60	SM		Pale olive (5Y 6/3) silty fine to medium SAND, trace clay, wet/saturated, very slightly cemented.	62.0	
2.1		36	CORE					Olive brown (2.5Y 4/3) fine to medium SAND, trace silt, trace subrounded gravel to 1/2-inch toward base, medium sorted, wet.		
		0	NR		65	SP			69.0	
		12	CORE			SM		Olive brown (2.5Y 4/4) silty fine SAND, micaceous, well sorted, wet.	69.5	Bentonite Pell Seal
		0	NR		70	SW		Olive brown gravelly fine to coarse SAND, trace silt, gravel subrounded to subangular and 1/2 to 1-1/2 inch, medium sorted, wet, partly cemeted at 70 feet bgs.	72.0	
0.7		36	CORE			SW		Olive brown fine to coarse SAND, little subrounded gravel 1/8 to 2-inch, poorly sorted, wet.	74.0	
						SP				

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/27/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/27/01

Continued from Previous Page

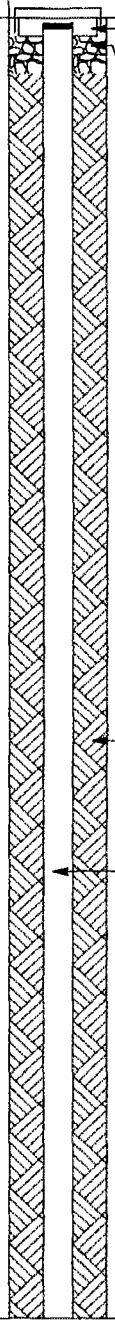
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR			SP		Olive brown fine to medium SAND, trace silt, trace gravel, micaceous, cemented at 75 feet bgs. *(continued)*		
		36	CORE			GP		Olive brown medium to coarse sandy GRAVEL, clasts subrounded 1/8 to 1-inch.	77.0	
						ML		Olive brown clayey SILT, trace fine sand, micaceous.	78.3	
		0	NR		80	SP		Olive brown fine SAND, little silt, micaceous, well sorted, wet.	78.5	#3 Monterey Sand; Sch. 40 PVC 0.02-inch Slotted Well Screen (75 to 85.4 feet bgs)
0.5		30	CORE			SP		Dark grayish brown (2.5Y 4/2) fine to medium SAND, few coarse grains, 1-inch silt lens, wet.	82.5	
0.3		60	CORE		85	CL		Olive brown (2.5Y 4/4) silty CLAY, slightly plastic, stiff.	85.0	
0.2		60	CORE		90	CL		Olive brown silty CLAY, trace subrounded gravel 1/8 to 1/4 inch, stiff.	90.0	Bentonite Pellet Backfill
NM					95			Bottom of borehole at 95.0 feet.	95.0	

WELL NUMBER MW02A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/12/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/12/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	154.94	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 155 gal.
TOP OF CASING	158.09	DEPTH TO WATER	27.1
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	127.8
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
NM		60	AUGER			SC		Asphalt Dark brown (10YR 3/3) clayey SAND, some stringers, some calcareous clasts, slight luster.	0.4
NM		60	CORE		5	CL		Very dark brown (10YR 2/2) CLAY	6.0
0.0		60	CORE		10	ML		Dark brown (10YR3/3) clayey SILT, trace fine sand, slight to medium plasticity, slightly moist, stiff.	9.5
0.0		60	CORE		15	CL-ML		Dark brown (10YR 3/3) silty CLAY, trace angular gravel (possible concretions).	17.0
0.0		0	NR		20				
		48	CORE			CL		Dark yellowish brown (10YR 3/4) fine sandy CLAY.	21.0
						ML		Dark yellowish brown (10YR 3/4) fine sandy SILT, very moist, more plastic and micaceous at 25 feet bgs.	22.5
		0	NR		25				
0.0		48	CORE			SM		Dark brown silty fine SAND	26.5
						SP		Fine SAND, well sorted	29.0
0.2		0	NR		30				
		30	CORE			SP		Dark yellowish brown (10YR 3/6) SAND, fine to medium grained, trace silt, well sorted, wet, trace mica.	32.5

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/12/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/12/01

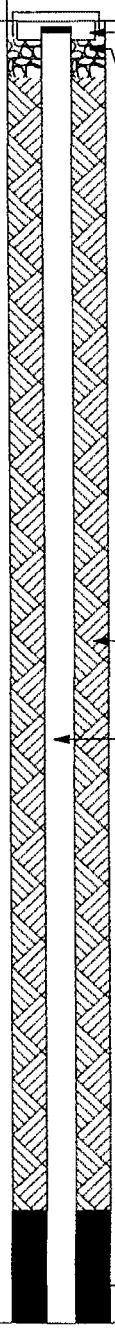
Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
35		0	NR			SP		Dark yellowish brown (10YR 3/6) SAND, fine to medium grained, trace silt, well sorted, wet, trace mica. *(continued)*		Bentonite Pellets
		0	NR		40					
		30	CORE			SW		Olive brown (2.5Y 4/3) gravelly SAND, poorly sorted, wet.	42.5	
						ML		Dark yellowish brown (10YR4/4) fine sandy SILT.	43.0	
								Olive brown (2.5Y 4/3) fine to coarse SAND	43.5	
51		0	NR		45	SW				
		24	CORE					Medium to coarse SAND, moderate to poorly sorted, moist, 1.5-inch subrounded grains, trace of cementation with trace clay found in lower inch of sample.	48.0	
23		0	NR		50	SP				#3 Monterey Sand
		30	CORE			SM		Dark grayish brown (10YR4/2) SILTY FINE SAND, wet, soft	52.4	Sch. 40 PVC 0.02-inch Slotted Well Screen (45 to 60 feet bgs)
						SW		Olive brown (2.5Y 4/3) fine to coarse SAND, moderately sorted, 1 inch subrounded to rounded gravel, moist, trace of cementation in lower portion of sample.	52.5	
39		0	NR		55			Olive brown fine to medium SAND, cemented toward base	55.0	
		30	CORE			SP				
31					60			Bottom of borehole at 60.0 feet.	60.0	

WELL NUMBER MW03A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/12/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/12/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	30-inch Split Spoon	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	152.28	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	151.99	DEPTH TO WATER	25.9
LOGGED BY	T. Mehall	GROUND WATER ELEVATION	126.4
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
NM		0 24	NR CORE		5			Dark yellowish brown (10YR 3/4), CLAY with little sand, low plasticity, slightly moist, firm, no odor. Similar extending to 15 feet below ground surface (bgs).	
0		30	CORE		10	CL			
0.1		30	CORE		15				
						SC-SM		Yellowish brown (10YR 5/6), Clayey SAND with silt, 30% fines and 70% fine sand, moist, firm, no odor.	16.5 17.0
						CL		Dark yellowish brown (10YR 3/4), CLAY with some fine sand, low plasticity, moist, firm, no odor.	
0.2		30	CORE		20				
						SC		Dark yellowish brown (10YR 4/4), clayey SAND, 40% clays, 60% fine sand, moist, firm, no odor.	21.5
0.4		30	CORE		25				
						SC-SM		Dark yellowish brown (10YR 4/4), SAND with clay and silt, 30% fines, 70% fine to medium sand, subrounded, moist to wet, soft.	25.5
									29.0
NM		30	CORE		30	ML		Brownish yellow (10YR 6/6), SILT with sand and clay, 20% fine sand and 80% fines, low plasticity, moist to wet, firm, no odor, trace cementation.	



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/12/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/12/01

Continued from Previous Page

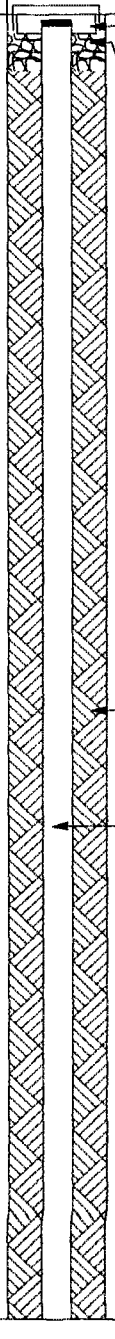
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
NM		0 27	NR CORE			SM		Brownish yellow (10YR 6/6), silty SAND, 40% fines, 60% fine sand, no plasticity, wet, soft, no odor, 2-inch diameter cemented nodule in shoe.	35.5	
NM		0 27	NR CORE		40	SP-SM		Dark yellowish brown (10YR 4/6), SAND with silt, 20% silt and 80% fine to medium sand (predominantly medium), poorly graded, wet, soft, no odor.	40.5	#3 Monterey Sand Sch. 40 PVC 0.02-inch Slotted Well Screen (37.8 to 48 feet bgs)
NM		30	CORE		45	SP		Dark yellowish brown (10YR 4/6), SAND, poorly graded, predominantly medium grained, wet, soft, no odor.	44.0	
NM		15	CORE		50	ML		Yellowish brown (10YR 5/4), SILT, 25% fine sand and 75% silt, moist, firm to hard, no odor, trace cementation, wet at 50 feet bgs.	47.0	Bentonite Pellets Backfi
								Bottom of borehole at 51.3 feet.	51.3	

WELL NUMBER MW04A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/10/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/10/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 30-inch Split Spoon	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	147.39	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	147.20	DEPTH TO WATER	23.0
LOGGED BY	T. Mehall	GROUND WATER ELEVATION	124.4
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						ML		Dark yellowish brown (10YR 4/4), SILT with gravel, 90% silt and 10% medium subrounded gravel clasts, moist, soft, no odor.	5.0
2.7		30	CORE		5	ML		Dark yellowish brown (10YR 4/4), SILT, 95% silt and trace fine sand, moist to wet, soft, no odor.	8.5
		0	NR						
		15	CORE			CL		Very dark grayish brown (10YR 3/2), CLAY, medium plasticity, moist, firm, no odor, trace of cemented nodules at 9.5 to 10 feet below ground surface (bgs).	11.5
1.7		30	CORE		10	CL		Similar to above, consistency increases to hard, color change to dark grayish brown (10YR 4/2). Moisture decreases to slightly moist, increased silt content, lower plasticity.	12.5
		30	CORE			CL-ML			16.5
1.2		30	CORE		15	SW-SC		Dark yellowish brown (10YR 3/4), SAND with clay, 75% fine to coarse sand, 25% clay, well graded, subrounded, moist, no odor, trace of fine gravel.	17.0
		30	CORE			CL		Dark grayish brown (10YR 4/2), CLAY, low plasticity, firm, slightly moist to moist, no odor. Slight increase in plasticity at 20 feet bgs. Trace cementation at 21.5 and 25 feet bgs.	
0.7		30	CORE		20				
		30	CORE						
0.7		30	CORE		25				
		30	CORE			CL		No significant change from above, 75% fines and 25% fine sand, decrease plasticity to low, slightly moist, no odor.	27.0
		0	NR		30	ML		Dark yellowish brown (10YR 4/6), sandy SILT, slightly moist, hard, no odor.	28.5
2.7		15	CORE						32.0
		30	CORE			SP		Dark yellowish brown (10YR 4/6), SAND, fine to medium grained (predominantly medium), poorly graded, subangular, wet, no odor.	

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/10/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/10/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
17.5		30	CORE			SP		Dark yellowish brown (10YR 4/6), SAND, fine to medium grained (predominantly medium), poorly graded, subangular, wet, no odor. *(continued)*	37.0	Bentonite Chips
		30	CORE			SW		Dark brown well graded SAND with gravel (25% fine sand, 50% medium sand, 25% coarse sand), 90% sand with 10% gravel, subrounded to rounded sand, wet, no odor.	38.5	
						SP		Dark yellowish (10YR 4/6) poorly graded sand, fine to medium (predominantly medium), subangular, wet, no odor.	40.0	
0		30	CORE		40	SW-SC		Dark grayish brown (10YR 4/2) well graded SAND with clay and gravel, (20% clay, 10% medium gravel subrounded, 70% SAND). SAND comprised of 20% fines, 40% medium, 40% coarse, subangular, wet, no odor.	43.0	
		30	CORE			SW		Gray (10YR 5/1), SAND, 15% gravel and 85% well graded sand (20% fine, 40% medium, and 40% coarse), subangular, wet, no odor.	45.5	
0		30	CORE		45	SM		Silty SAND in sluff	47.5	#3 Monterey Sand
0		0	NR			SM-SW		Gray (10YR 5/1), silty SAND, similar to above, bottom 1/2 foot well graded SAND (SW) with coarse gravel, 25% gravel, 75% SAND (20% Fines, 50% medium, and 30% coarse), subangular to subrounded, wet.	50.0	Sch. 40 PVC 0.02-inch Slotted Well Screen (42.7 t 53 feet bgs)
		12	CORE							
NM		0	NR		50	SP		Sluff contains poorly graded sand and silty sand, wet, no odor.	53.0	
		15	CORE							

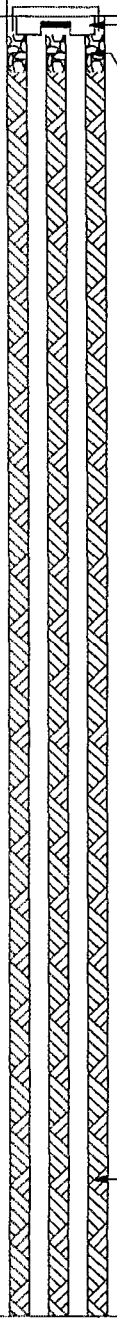
Bottom of borehole at 53.0 feet.

WELL NUMBER MW04B/MW04C

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/17/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/18/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 2-inch
DRILLING METHOD	Mud Rotary, 10-inch Diameter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	147.40-MW04B; 147.39-MW04C	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 150 gal.
TOP OF CASING	147.23-MW04B; 147.10-MW04C	DEPTH TO WATER	22.9
LOGGED BY	B. Clarke	GROUND WATER ELEVATION	
REMARKS	Lithology to 53 feet below ground surface from MW04A		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
			AUGER					Asphalt	0.4
						ML		Dark yellowish brown (10YR 4/4), SILT with gravel, 90% silt and 10% medium subrounded gravel clasts, moist, soft, no odor.	5.0
					5	ML		Dark yellowish brown (10YR 4/4), SILT, 95% silt and trace fine sand, moist to wet, soft, no odor.	8.5
					10	CL		Very dark grayish brown (10YR 3/2), CLAY, medium plasticity, moist, firm, no odor, trace of cemented nodules at 9.5 to 10 feet below ground surface (bgs).	11.5
						CL		Similar to above, consistency increases to hard, color change to dark grayish brown (10YR 4/2).	12.5
					15	CL-ML		Moisture decreases to slightly moist, increased silt content, lower plasticity.	16.5
						SW-SC		Dark yellowish brown (10YR 3/4), SAND with clay, 75% fine to coarse sand, 25% clay, well graded, subrounded, moist, no odor, trace of fine gravel.	17.0
					20	CL		Dark grayish brown (10YR 4/2), CLAY, low plasticity, firm, slightly moist to moist, no odor. Slight increase in plasticity at 20 feet bgs. Trace cementation at 21.5 and 25 feet bgs.	
					25				
						CL		No significant change from above, 75% fines and 25% fine sand, decrease plasticity to low, slightly moist, no odor.	27.0
					30	ML		Dark yellowish brown (10YR 4/6), sandy SILT, slightly moist, hard, no odor.	28.5
						SP		Dark yellowish brown (10YR 4/6), SAND, fine to medium grained (predominantly medium), poorly graded, subangular, wet, no odor.	32.0

WELL DIAGRAM



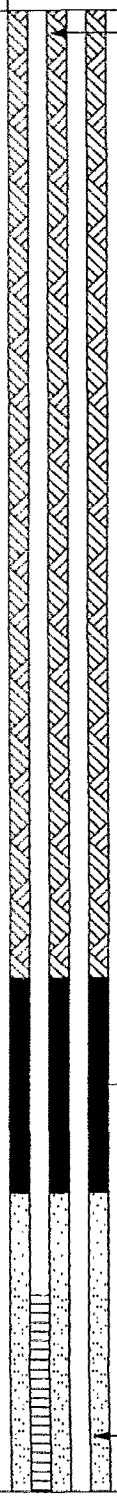
BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS GPJ RFW SHERMAN OAKS GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/17/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/18/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
						SP		Dark yellowish brown (10YR 4/6), SAND, fine to medium grained (predominantly medium), poorly graded, subangular, wet, no odor. *(continued)*	37.0
						SW		Dark brown well graded SAND with gravel (25% fine sand, 50% medium sand, 25% coarse sand), 90% sand with 10% gravel, subrounded to rounded sand, wet, no odor.	38.5
						SP		Dark yellowish (10YR 4/6) poorly graded sand, fine to medium (predominantly medium), subangular, wet, no odor.	40.0
					40	SW-SC		Dark grayish brown (10YR 4/2) well graded SAND with clay and gravel, (20% clay, 10% medium gravel subrounded, 70% SAND). SAND comprised of 20% fines, 40% medium, 40% coarse, subangular, wet, no odor.	43.0
						SW		Gray (10YR 5/1), SAND, 15% gravel and 85% well graded sand (20% fine, 40% medium, and 40% coarse), subangular, wet, no odor.	45.5
					45	SM		Silty SAND in sluff	47.5
						SM-SW		Gray (10YR 5/1), silty SAND, similar to above, bottom 1/2 foot well graded SAND (SW) with coarse gravel, 25% gravel, 75% SAND (20% Fines, 50% medium, and 30% coarse), subangular to subrounded, wet.	50.0
					50	SP		Sluff contains poorly graded sand and silty sand, wet, no odor.	53.0
		0	NR		55	SM		Dark yellowish brown (10YR 3/4), silty SAND (25% silt, 75% fine sand), wet, no odor.	57.5
NM		60	CORE		60	ML		Olive brown (2.5Y 5/3), very fine sandy SILT, micaceous, low plasticity, moist, medium stiff.	61.5
						ML		Dark olive 2.5Y 4/3 and 2.5Y 5/1 slightly mottled clayey SILT, grading to (CL) silty CLAY, slight to medium plasticity, moist, medium stiff.	63.0
						ML		Fine sandy SILT, slightly micaceous.	63.5
						ML		Clayey SILT, medium plasticity, medium stiff.	64.0
		0	NR		65	SM		Light olive brown (2.5Y 5/4), silty fine SAND, 5% clay, 55% fine sand and 40% silt, well sorted, grading into a fine to medium SAND, 45% fine sand, 10% medium sand and 40% silt, micaceous.	67.5
		48	CORE						
NM		0	NR		70	SP		Dark gray (5Y 4/1) well sorted SAND (75% fine sand, 10-25% medium sand), 0-10% SILT, wet, medium dense.	

WELL DIAGRAM



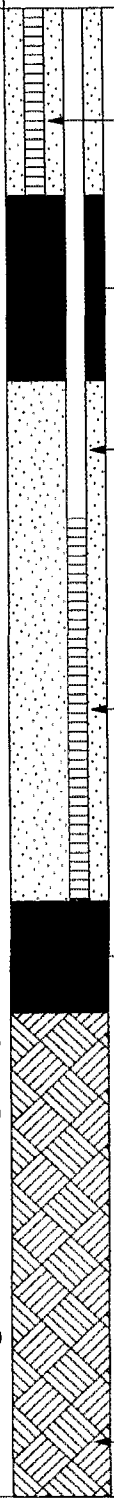
WESTON

PROJECT NUMBER 20074.515.009.0321 DATE STARTED 12/17/01
PROJECT NAME Omega OU-02 DATE COMPLETED 12/18/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR			SP		Dark gray (5Y 4/1) well sorted SAND (75% fine sand, 10-25% medium sand), 0-10% SILT, wet, medium dense. *(continued)*	
NM		12	CORE		80	SP		Grading to dark grayish brown (2.5Y 4/2), SAND, 60% medium sand and 40% fine sand.	79.0 79.5
		0	NR			CL		Gray (2.5Y 5/1) silty CLAY, medium plasticity, moist, medium stiff, some nodules.	81.5
NM		42	CORE			CL-ML		Olive to gray (5Y 5/1 and 5Y 5/4), clayey SILT to silty CLAY, 10% very fine sand, very slightly plastic, hard/cemented.	82.5
		0	NR		85	ML		Olive (5Y 5/4), Clayey SILT to very fine sandy SILT, moist, non-plastic, medium stiff. Grades into a fine sandy SILT, 30 % fine sand, 60% silt and 10% clay, moist, non-plastic.	
NM		18	CORE		90	SM		Dark grayish brown to dark yellowish brown (2.5Y4/2 to 10YR 4/4), silty fine SAND, 60% fine sand, <10% medium sand, 30% silt and 5% clay, cohesive, very well sorted, slightly micaceous.	88.5
		0	NR						
NM		18	CORE		95	SP		Olive brown (2.5Y 4/3), fine to medium SAND, 30% fine sand, 70% medium sand, trace rounded 1/2-inch gravel, wet, dense.	93.5 94.5
		0	NR			SP-SM		Dark grayish brown (2.5Y 4/2), fine to medium sand, 70% fine sand, 20% medium sand, 10% silt, wet, dense.	
NM		24	CORE			ML		Olive brown (2.5Y 4/3), clayey SILT with trace very fine sand, medium plasticity, moist, stiff, slightly micaceous.	98.0 99.5
		0	NR		100				
NM		54	CORE			ML		Dark grayish brown (2.5Y 4/2), fine sandy SILT, 70% silt, 25% fine sand and 5% clay, very slightly plastic, moist to very moist, medium stiff, slightly micaceous, grading into silty very fine sand, slightly micaceous.	
						ML		Clayey SILT, medium plasticity, very stiff.	102.5 103.0
						ML		Dark grayish brown to olive brown (2.5Y 4/2 to 2.5Y 4/4), fine sandy SILT, 25% fine sand, 60% silt and 15% clay, trace fine subangular 1/4-inch gravel, slightly mottled.	
NM		60	CORE		105			Grading into an olive brown (2.5Y 4/3), very fine to fine sandy CLAY, 50% clay, 30% silt and 20% fine sand, trace subangular to rounded 3/4-inch gravel, very slightly plastic, moist, very stiff to hard. At approximately 107.5 feet, increase in silt and sand, color change to gray and brown (10YR 5/1 and 10YR 5/3).	105.0
		0	NR		110				
NM		48	CORE			CL			111.0

WELL DIAGRAM



PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/17/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/18/01

Continued from Previous Page

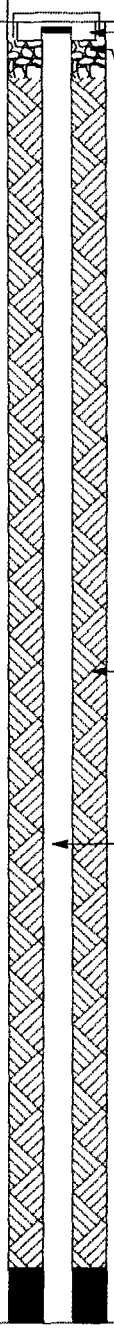
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
NM		60	CORE					Olive brown to gray (2.5Y 4/3 to 10YR 5/1), very fine to fine sandy CLAY, medium plasticity, stiff to very stiff, trace subangular 1/4-inch gravel. Color change at 114 feet bgs to very dark grayish brown (10YR 3/2) with sand, medium to high plasticity. At 120 feet bgs, continuing very fine sandy CLAY, 70% clay, 15% silt and 15% very fine sand, medium plasticity, very stiff to hard. *(continued)*		
NM		60	CORE		120	CL				Medium Bentonite Chip
NM					125			Bottom of borehole at 125.0 feet.	125.0	

WELL NUMBER MW05A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/10/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/10/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	151.78	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	151.57	DEPTH TO WATER	24.4
LOGGED BY	B. Clarke	GROUND WATER ELEVATION	127.4
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						SM		Light olive brown (2.5Y 5/4), silty fine SAND, slightly moist to moist, medium dense. Color changes to olive brown (2.5Y 4/3) at 6.5 feet below ground surface (bgs) and changes back to light olive brown at 7.5 feet bgs.	
		0	NR		5				
NM		42	CORE						8.0
						SP		Light olive brown (2.5Y 5/3), fine SAND with trace silt, moist to wet at 10 feet bgs.	
0.4		60	CORE		10				10.5
						ML		Light yellowish brown to light brownish gray (2.5Y 6/4 to 2.5Y 6/2), clayey SILT, medium elasticity, very moist, medium soft, mottled oxides, pore holes.	12.5
						CL		Very dark grayish brown (2.5Y 3/2), silty CLAY, slight to medium plasticity, moist, medium stiff to stiff, mottled with white stringers, a few oxide root casts, blocky. Color changes to dark brown (10YR 3/3) at 17 feet bgs and then to dark yellowish brown (10YR 4/4) at 19.5 feet bgs.	
		0	NR		15				
0.1		48	CORE						
0.0		60	CORE		20				20.5
						ML		Yellowish brown (10YR 5/4), fine sandy SILT, very slight elasticity, moist, medium stiff, slightly mottled, blocky, clayier downward.	22.5
						CL		Dark yellowish brown (10YR 4/4 to 10 YR 3/4), silty CLAY, medium plasticity, blocky, white stringers, phacoidal. Trace fine sand at 25 feet bgs. ▼	
		0	NR		25				
0.0		54	CORE						27.0
						CL		Dark grayish brown (2.5Y 4/2), CLAY, abundant light gray and white stringers. Grades into an olive brown (2.5Y 4/3), silty CLAY, very moist, medium stiff.	
								▽	30.0
		0	NR		30				
0.0		54	CORE			ML		Grayish brown to dark grayish brown (2.5Y to 2.5Y 4/2), clayey to fine sandy silt, very slight elasticity, very moist to wet, medium soft, mottled oxides, stringers, calcite nodules, micaceous. More fine sand at 33 feet bgs, non-plastic.	

WELL DIAGRAM



WELL NUMBER MW05A

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/10/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/10/01

Continued from Previous Page

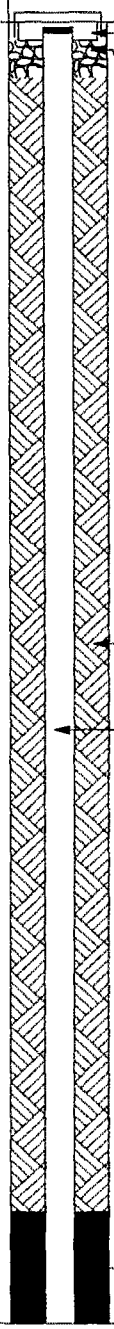
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR			ML		Grayish brown to dark grayish brown (2.5Y to 2.5Y 4/2), clayey to fine sandy silt, very slight elasticity, very moist to wet, medium soft, mottled oxides, stringers, calcite nodules, micaceous. More fine sand at 33 feet bgs, non-plastic. *(continued)*		Bentonite Chips
NM		60	CORE		40	ML		Dark gray to grayish brown (2.5Y 4/1 to 2.5Y 5/2), fine sandy SILT, very slight elasticity, wet, medium soft, mottled yellowish oxides. Grades into SILT, with zero to trace fine sand at 42 feet bgs, medium elasticity, slightly micaceous.	40.0	
						ML		Clayey SILT to SILT, medium elasticity, very moist to wet.	43.0	
						SP		Dark grayish brown (2.5Y 4/2), fine to medium SAND, trace silt, well sorted, saturated.	44.0	
		0	NR		45	ML		(5Y 5/2 to 5Y 5/3) very fine sandy SILT, non-plastic, cohesive	44.5	
		30	CORE			SP		Dark grayish (2.5Y 4/2) fine to medium SAND, saturated, well sorted, medium dense	46.5	#3 Monterey Sand
13		0	NR		50	SW		Grayish brown to olive brown (2.5Y 5/2 to 2.5Y 4/3), medium to coarse sand, subangular sand grains, little to some subrounded to subangular 1/2-3-inch gravel, dense, saturated.	48.5	Sch. 40 PVC 0.02-inch Slotted Well Screen (43.3 to 53.3 feet bgs)
NM								Bottom of borehole at 53.0 feet.	53.0	

WELL NUMBER MW06A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/13/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/13/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 30-inch Split Spoon	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	150.77	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	150.63	DEPTH TO WATER	24.1
LOGGED BY	T. Mehall	GROUND WATER ELEVATION	126.6
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML-SM		Landscaped lawn Very dark gray (10YR 3/1), silty SAND, 40% silt and 60% fine sand, soft, moist, no odor.	0.2
0.2		30	CORE		5	SM		Yellowish brown (10YR 5/6), silty SAND, 20% silt and 80% fine sand, moist, soft, no odor.	5.0
		30	CORE						
		0	NR		10	ML		Yellowish brown (10YR 5/6), SILT with sand, 15% fine sand and 85% silt, moist to wet, soft, no odor.	9.5
0.2		24	CORE			CL		Very dark grayish brown (10YR 3/2), CLAY, low to medium plasticity, moist, no odor, some rootlets present. Increase in plasticity to medium at 13.5 feet below ground surface (bgs), still a trace of rootlets.	10.5
		30	CORE						
0.4		30	CORE		15	SM		Dark yellowish brown (10YR 3/6), silty SAND, 30% silt and 70% fine sand, moist, soft, no odor. Increase clay content at 18.5 feet bgs.	15.5
		30	CORE						
0.2		30	CORE		20	SC		Dark grayish brown (10YR 4/2), clayey SAND, 25% clay and 75% fine sand, low plasticity, moist, no odor, trace roots. Color change from 20 to 22 feet bgs to a dark yellowish brown mixed with dark gray (10 YR 4/1) and dark yellowish brown (10YR 4/4).	19.0
		30	CORE			SC		Dark yellowish brown (10YR 4/4) clayey SAND, 25% clay, 75% fine to medium sand with trace coarse sand, firm, moist, no odor	23.0 23.5
0.2		0 23	NR CORE		25	SC-CL		Dark yellowish brown (10YR 4/6), sandy CLAY to clayey SAND, 40% clay and 60% fine to medium sand, medium plasticity, slightly moist, hard, no odor.	27.0
		0	NR			SC		Reddish brown (5YR 4/3), clayey SAND, 80% fine to medium sand and 20% clay, low plasticity, moist, soft, no odor.	28.5
		15	CORE			SP		Dark yellowish brown (10YR 4/4) poorly graded SAND, fine to coarse grained (predominantly medium), subrounded, wet, no odor.	
0.2		30	CORE		30			Trace medium to coarse subrounded gravel at 31, 39, and 43 feet bgs. No significant change observed in the lithology from 32 to 46 feet bgs.	31.0
		0 27	NR CORE			SP			

WELL DIAGRAM



PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/13/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/13/01

Continued from Previous Page

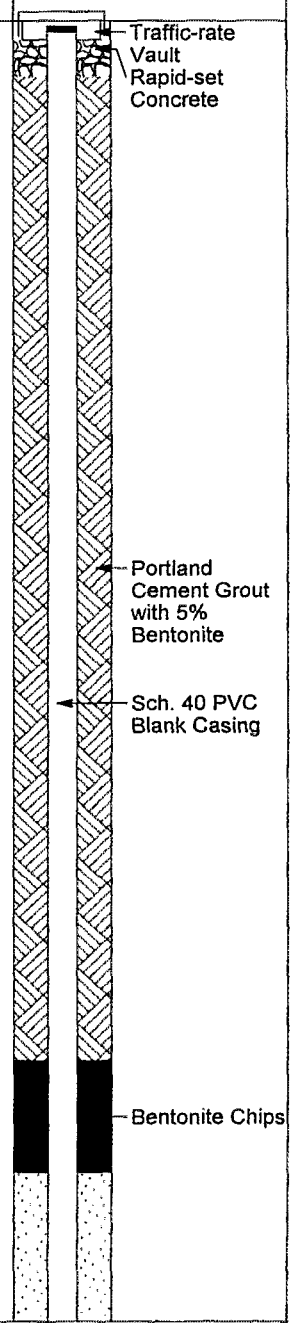
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
3.7		30	CORE					Trace medium to coarse subrounded gravel at 31, 39, and 43 feet bgs. No significant change observed in the lithology from 32 to 46 feet bgs. *(continued)*		
		30	CORE							
1.7		30	CORE		40	SP				#3 Monterey Sand
		30	CORE							Sch. 40 PVC 0.020-inch Slotted Well Screen (37.1 to 47.5 feet bgs)
1.4		30	CORE		45	SP-SW		Color change to yellowish brown (10 YR 5/4) poorly sorted SAND, increase in coarse sand and subrounded gravel, wet, no odor	45.0	
1.2								Bottom of borehole at 47.5 feet.	47.5	

WELL NUMBER MW07A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/11/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/12/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 30-inch Split Spoon	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	143.94	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	143.65	DEPTH TO WATER	20.8
LOGGED BY	T. Mehall	GROUND WATER ELEVATION	123.2
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML		Asphalt Dark yellowish brown (10YR 4/6), sandy SILT, 15% fine sand and 85% silt, moist, soft, no odor.	0.4
		30	CORE		5	CL		Very dark gray (10YR 3/1), CLAY, low to medium plasticity, moist, soft, no odor.	5.0
		30	CORE			CL		Dark yellowish brown (10YR3/4), sandy CLAY, 25% fine sand and 75% clay, low to medium plasticity, moist, firm, no odor.	7.5
0.2		0 24	NR CORE		10	CL		Very dark gray (10YR 3/1), CLAY, medium plasticity, slightly moist, firm, no odor. Color change at 13 feet bgs to dark yellowish brown (10YR 3/4). Trace cementation at 19.8 feet below ground surface (bgs).	11.5
		30	CORE						
0.2		30	CORE		15				
		30	CORE						
0.4		30	CORE		20				21.0
		30	CORE			SC		Dark yellowish brown (10YR 4/4), clayey SAND, 70% fine to medium sand and 30% clay, low plasticity, moist, soft, no odor. Trace fine gravel at 21 feet bgs.	23.0
						SC		Yellowish brown (10YR 5/4), SAND with clay, 85% fine to medium sand and 15% clay, wet, soft, no odor.	24.5
		0	NR		25	ML		Silty sand in slough. Yellowish brown (10YR 5/4), SILT, trace of fine sand, moist to wet, soft, no odor.	26.0
0.0		15 30	CORE CORE			SM		Yellowish brown (10YR 5/4), silty SAND, 85% fine to medium sand and 15% silt, moist, soft, no odor. Increase grain size from medium to coarse at 28 feet bgs.	28.0
		0 23	NR CORE		30	ML		Very dark grayish brown (10YR 3/2), SILT with sand, 15% fine sand and 85% silt, soft, no odor. Increase sand at 30.5 feet bgs.	30.5
0.0		30	CORE			SW		Light brownish gray (10YR 6/2), SAND, 25% fine, 40% medium and 35% coarse grained sand, well graded, wet, no odor. 2-inch layer of SILT at 31.5 feet bgs; increased coarse sand below silt, color change at 32.3 feet bgs to yellowish brown (10YR 5/6)	33.0
						SP		Yellowish-brown medium SAND, poorly graded, wet, no odor.	

WELL DIAGRAM



PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/11/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/12/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
0.0		0 23	NR CORE			SP		Yellowish-brown medium SAND, poorly graded, wet, no odor. *(continued)*	36.5	
		0 23	NR CORE					Yellowish brown (10YR 5/6), SAND, predominantly subrounded and medium grained, wet, poorly sorted, no odor. Large gravel in sluff at 41 feet bgs.		#3 Monterey Sand
		0 28	NR CORE		40	SP				Sch. 40 PVC 0.020-inch Slotted Well Screen (35.8 to 46 feet bgs)
0.0		0 23	NR CORE						45.0	
0.0 NM		12	CORE		45	SW		Light brownish gray (10YR 6/2), SAND with gravel, 25% fine sand, 40% medium sand and 35% coarse sand, subangular fine to coarse gravel, well graded, wet, no odor.	46.0	

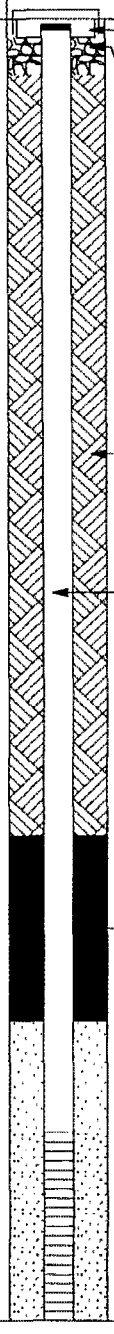
Bottom of borehole at 46.0 feet.

WELL NUMBER MW08A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/17/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/17/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	150.47	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 100 gal.
TOP OF CASING	150.25	DEPTH TO WATER	26.3
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	124.2
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML		Landscaped lawn Very dark grayish brown (10YR 3/2), SILT with some clay and trace sand, micaceous.	0.2
0.0		60	CORE		5	ML		Black (7.5YR 2.5/1), SILT with clay and fine sand, micaceous. Color change at 7 feet below ground surface (bgs) to brown (10YR 4/3).	5.5
0.0		60	CORE		10	ML		Dark brown (7.5YR 3/3), SILT with some clay and trace fine sand, 5% sand and 90% fines, root casts, no odor.	10.0
0.0		60	CORE		15	CL		Very dark grayish brown (10YR 3/2), CLAY wih silt, moist, no odor, rootlets. Trace sand and some oxidation at 18.5 feet bgs.	14.0
0.0		60	CORE		20				
0.0		60	CORE		25	ML		Dark yellowish brown (10YR 3/4), SILT with fine sand and clay, 15% sand and 85% fines, moist, some oxidation. Color change at 23.5 feet bgs to dark brown (7.5YR 3/4) and increase in fine sand content, micaceous, wet at 27 feet bgs.	22.0
		0	NR		30	SP-SW		Dark yellowish brown (10YR 3/6), fine to medium and fine to coarse SAND with trace to little silt, poorly to moderately sorted, wet.	29.0
0.0		36	CORE						34.5

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/17/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/17/01

Continued from Previous Page

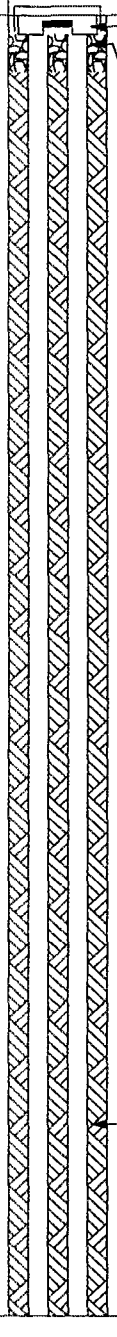
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR			SM		Brown (10YR 4/3), silty fine to medium SAND, wet, no odor, slightly cemented. *(continued)*	37.0	#3 Monterey Sand
0.0		36	CORE			SW		Dark yellowish brown (10YR 3/4), fine to coarse SAND, trace silt, trace subrounded to subangular 1/2-inch gravel, wet.	38.5	Sch. 40 PVC 0.020-inch Slotted Well Screen (30 to 45 feet bgs)
		0	NR		40	SM		Dark yellowish brown (10YR 4/4), silty fine SAND, trace subangular gravel, 1/4-inch gravel clasts, wet, slightly cemented.	42.5	
0.0		30	CORE			SW-SP		Olive brown (2.5Y 4/4), fine to coarse SAND, trace to little silt, poorly sorted, trace 1/2 to 1-inch subrounded gravel. Color change at 44 feet bgs to dark yellowish brown (10YR 3/6); finer sands toward bottom.	45.0	
0.0					45			Bottom of borehole at 45.0 feet.		

WELL NUMBER MW08B/MW08C

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/26/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/26/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 2-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	150.35-MW08B and MW08C	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 210 gal.
TOP OF CASING	150.11 - MW08B; 150.14 - MW08C	DEPTH TO WATER	26.8
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	
REMARKS	Lithology to 45 feet below ground surface from MW08A		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML		Landscaped lawn Very dark grayish brown (10YR 3/2), SILT with some clay and trace sand, micaceous.	0.2
0.0		60	CORE		5	ML		Black (7.5YR 2.5/1), SILT with clay and fine sand, micaceous. Color change at 7 feet below ground surface (bgs) to brown (10YR 4/3).	5.5
0.0		60	CORE		10	ML		Dark brown (7.5YR 3/3), SILT with some clay and trace fine sand, 5% sand and 90% fines, root casts, no odor.	10.0
0.0		60	CORE		15	CL		Very dark grayish brown (10YR 3/2), CLAY wih silt, moist, no odor, rootlets. Trace sand and some oxidation at 18.5 feet bgs.	14.0
0.0		60	CORE		20				
0.0		60	CORE		25	ML		Dark yellowish brown (10YR 3/4), SILT with fine sand and clay, 15% sand and 85% fines, moist, some oxidation. Color change at 23.5 feet bgs to dark brown (7.5YR 3/4) and increase in fine sand content, micaceous, wet at 27 feet bgs.	22.0
		0	NR		30				29.0
0.0		36	CORE			SP-SW		Dark yellowish brown (10YR 3/6), fine to medium and fine to coarse SAND with trace to little silt, poorly to moderately sorted, wet.	34.5

WELL DIAGRAM



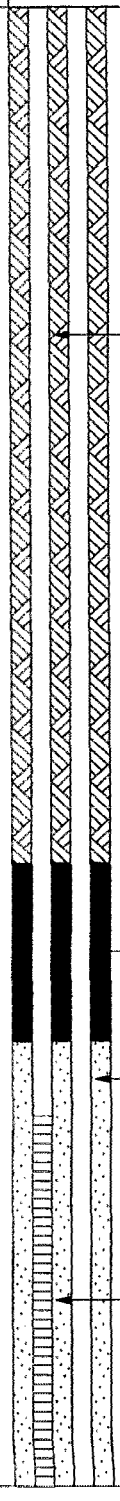
BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/26/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/26/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR			SM		Brown (10YR 4/3), silty fine to medium SAND, wet, no odor, slightly cemented. *(continued)*	37.0
0.0		36	CORE			SW		Dark yellowish brown (10YR 3/4), fine to coarse SAND, trace silt, trace subrounded to subangular 1/2-inch gravel, wet.	38.5
		0	NR		40	SM		Dark yellowish brown (10YR 4/4), silty fine SAND, trace subangular gravel, 1/4-inch gravel clasts, wet, slightly cemented.	42.5
0.0		30	CORE			SW-SP		Olive brown (2.5Y 4/4), fine to coarse SAND, trace to little silt, poorly sorted, trace 1/2 to 1-inch subrounded gravel. Color change at 44 feet bgs to dark yellowish brown (10YR 3/6); finer sands toward bottom.	
0.0		0	NR		45				
		0	NR		50	SW		Olive brown (2.5Y 4/3), SAND, fine to coarse grained, moist, moderately sorted, soft, grades into more gravel and coarser sand towards lower portion of sample.	50.0
		0	NR		55				
		24	CORE						59.5
		0	NR		60	ML		Olive brown (2.5 Y 4/4), clayey SILT with some sand, trace subrounded 1/2-1.5-inch gravel, medium plasticity, wet, medium stiff, slightly micaceous.	63.0
NM		24	CORE			SP-SM		Olive brown (2.5Y 4/3), fine to medium SAND with trace of silt, moderate to well sorted, wet, soft. Silty sand at 65 feet bgs.	65.0
		0	NR		65	SM			68.5
0.9		18	CORE					Olive brown (2.5Y 4/3), SAND, fine to medium grained, wet, moderate to well sorted, soft, slightly micaceous. Increase in silt content at 73 feet bgs; well sorted.	
		0	NR		70	SP			73.0
0.8		24	CORE			SM			

WELL DIAGRAM



WELL NUMBER MW08B/MW08C

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/26/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/26/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR			SM			76.0	
0.9		48	CORE			ML		Olive gray (5Y 4/2), clayey SILT, little subrounded 1/4-1/2-inch gravel, wet, medium stiff, micaceous. Color change at 79 feet bgs to dark yellowish brown (10YR 4/4), with increase in fine sand.		Bentonite Pellets
		0	NR		80					
									82.5	
0.8		30	CORE			SP		Olive brown (2.5Y 4/4), SAND with some silt, fine to medium grained sand, moderate to well sorting, wet, soft, micaceous.	83.5	
		0	NR		85	ML		Dark yellowish brown (10YR 4/4), clayey SILT, wet, medium stiff, micaceous. Grades into a very fine sandy SILT at 84 feet bgs with trace clay, medium soft.		#3 Monterey Sand
0.7		12	CORE						89.0	Sch. 40 PVC 0.02-in Slotted Well Screen (86.7 to 91.7 feet bgs)
		0	NR		90	SM		Dark olive brown (2.5Y 3/3), silty fine SAND with some clay, wet, soft to medium soft, micaceous.		
									93.0	#3 Monterey Sand

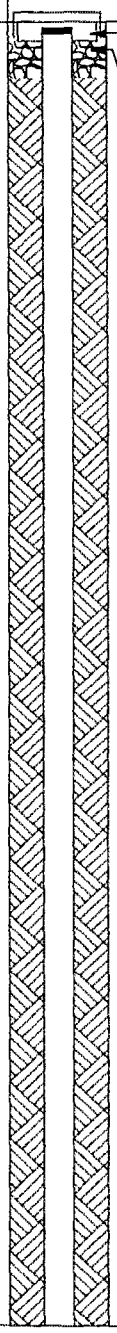
Bottom of borehole at 93.0 feet.

WELL NUMBER MW08D

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/19/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/19/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Mud Rotary, 8-inch Diameter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	150.17	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 165 gal.
TOP OF CASING	150.02	DEPTH TO WATER	30.1
LOGGED BY	B. Clarke A. Cohan	GROUND WATER ELEVATION	120.1
REMARKS	Lithology to 45 feet below ground surface from MW08A		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		540	AUGER					Landscaped lawn	0.2
						ML		Very dark grayish brown (10YR 3/2), SILT with some clay and trace sand, micaceous.	
					5				5.5
						ML		Black (7.5YR 2.5/1), SILT with clay and fine sand, micaceous. Color change at 7 feet below ground surface (bgs) to brown (10YR 4/3).	
					10				10.0
						ML		Dark brown (7.5YR 3/3), SILT with some clay and trace fine sand, 5% sand and 90% fines, root casts, no odor.	
									14.0
					15	CL		Very dark grayish brown (10YR 3/2), CLAY wih silt, moist, no odor, rootlets. Trace sand and some oxidation at 18.5 feet bgs.	
					20				22.0
					25	ML		Dark yellowish brown (10YR 3/4), SILT with fine sand and clay, 15% sand and 85% fines, moist, some oxidation. Color change at 23.5 feet bgs to dark brown (7.5YR 3/4) and increase in fine sand content, micaceous, wet at 27 feet bgs.	
									29.0
					30	SP-SW		Dark yellowish brown (10YR 3/6), fine to medium and fine to coarse SAND with trace to little silt, poorly to moderately sorted, wet. ▼	
									34.5

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS GPJ RFW SHERMAN OAKS GDT 1/27/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/19/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/19/01

Continued from Previous Page

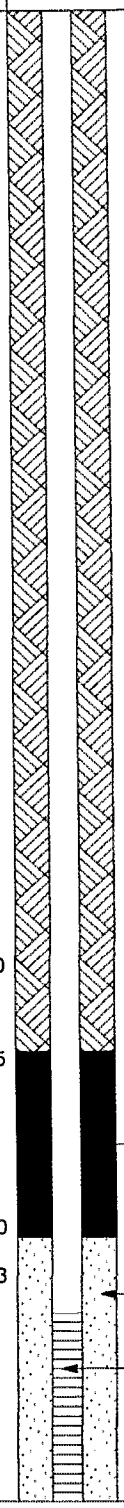
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
						SM		Brown (10YR 4/3), silty fine to medium SAND, wet, no odor, slightly cemented. *(continued)*		
									37.0	
						SW		Dark yellowish brown (10YR 3/4), fine to coarse SAND, trace silt, trace subrounded to subangular 1/2-inch gravel, wet.	38.5	
					40	SM		Dark yellowish brown (10YR 4/4), silty fine SAND, trace subangular gravel, 1/4-inch gravel clasts, wet, slightly cemented.		
									42.5	
0.0		0	NR		45	SW-SP		Olive brown (2.5Y 4/4), fine to coarse SAND, trace to little silt, poorly sorted, trace 1/2 to 1-inch subrounded gravel. Color change at 44 feet bgs to dark yellowish brown (10YR 3/6); finer sands toward bottom.		
									49.0	
NM		6	CORE		50	GP		Medium to coarse sandy subangular 2-inch GRAVEL.	50.0	
		0	NR			SP-SW		Olive brown (2.5Y 4/4), SAND with trace silt and some subangular 1/2-1-inch gravel, medium to coarse grained sand, wet. Color change at 54.5 feet bgs to strong brown (7.5YR 4/6).		Portland Cement Grout with 5% Bentonite
NM		12	CORE		55					Sch. 40 PVC Blank Casing
		0	NR							
									58.5	
		18	CORE			ML		Dark yellowish brown (10YR 4/4), clayey SILT with a trace of fine sand and some subrounded 1/2-1-inch gravel, slightly plastic, wet, medium stiff.	59.5	
		0	NR		60	GP		Sandy GRAVEL, subrounded, 1/4-1/2-inch.	60.0	
NM		42	CORE			ML		Brown (7.5YR 4/4), clayey SILT, wet, stiff, micaceous. Increase in sand content towards lower portion of sample.		
									63.0	
						SM		Olive gray to olive (5Y 4/2 to 5Y 5/3), silty fine SAND, wet, stiff, micaceous.	64.5	
		0	NR		65	SP		Olive gray (5Y 5/2), SAND, fine to medium grained, some silt, wet. Some subrounded 1/2-1-inch gravel and a color change to olive brown (2.5Y 4/4) at 68 feet.		
									68.0	
		12	CORE						69.0	
		0	NR		70	ML		Dark yellowish gray (10YR 4/4), fine sandy SILT, wet, stiff, micaceous.		
NM		54	CORE							
								Increase in clay content, carbonate patches and partially cemeted.	72.0	

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/19/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/19/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR					Increase in clay content, carbonate patches and partially cemeted. *(continued)*	
		12	CORE		80	ML		Color change by 79 feet bgs to light brown (2.5Y 4/3). Color changes back to dark yellowish brown (10YR 4/4) at 79.5 feet bgs.	79.0
		0	NR						
NM		12	CORE		85	ML		Fine sandy SILT as above. Color change to dark olive brown (2.5Y 3/3), medium soft.	84.0
		0	NR						
		36	CORE			SP		Very dark grayish brown (2.5Y 3/2), SAND, fine to medium, little silt, trace gravel, wet, soft.	87.0
NM		60	CORE		90				
NM		60	CORE		95	CL-ML		Dark yellowish brown (10YR 3/4), silty CLAY, wet, stiff, moderately cemented, micaceous. Color changes to dark brown (7.5YR 3/3) at 95.5 feet bgs and is partially cemented.	93.0
						ML		Dark brown (7.5YR 3/3), fine sandy SILT, wet, medium stiff, partially cemented, micaceous.	96.5
NM		60	CORE		100				
						SM		Silty fine SAND, medium soft, wet, micaceous	101.0
NM		60	CORE		105	SP		Brown (10YR 4/3), SAND, fine to medium, trace silt, wet, medium soft, micaceous. Grading into fine to very fine sand at 106 feet bgs.	103.5
						CL-ML		Brown (10YR 4/3), silty CLAY, medium stiff, partially cemented, micaceous.	108.0
NM		60	CORE		110	SP		Dark yellowish brown (10YR 3/6) to dark olive gray (5Y 3/2), SAND, fine grained, trace silt, wet, micaceous, odor.	109.3

WELL DIAGRAM



PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/19/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/19/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR						115.5	
		54	CORE					Dark olive gray (5Y 3/2), SAND, fine grained, trace silt, wet, soft, micaceous, odor. At 122 feet bgs some medium grained sands and some subrounded 1/4-1/2-inch gravel.		
						SP				Sch. 40 PVC 0.020-inch Slotted Well Screen (110 to 120 feet bgs)
NM		60	CORE		120					#3 Monterey Sand
									122.0	
						CL		Small lens of CLAY, wet, medium soft.	122.5	
								Dark olive gray (5Y 3/2), SAND as seen above. Dark yellowish brown (10YR 4/6) oxidized layer at 125 feet bgs. Trace of subrounded 1/4-1/2-inch gravel at 126.5 feet bgs.	122.7	
NM		60	CORE		125					
NM		60	CORE		130					
						SP				
NM		60	CORE		135					Bentonite Chips Backfill
		0	NR		140					
		54	CORE					Fine to coarse SAND, some gravel	141.0	
						SW				
									143.5	
						ML		Clayey SILT, cemented, with subrounded 1/8-1/4-inch gravel layer.	145.0	
NM		60	CORE		145			SAND, fine to medium grained, some gravel, wet, soft. Some coarse sand at approximately 147 bgs.		
						SP				
									149.0	
						ML		Fine sandy SILT, wet, medium soft.	150.0	
					150			Bottom of borehole at 150.0 feet.		

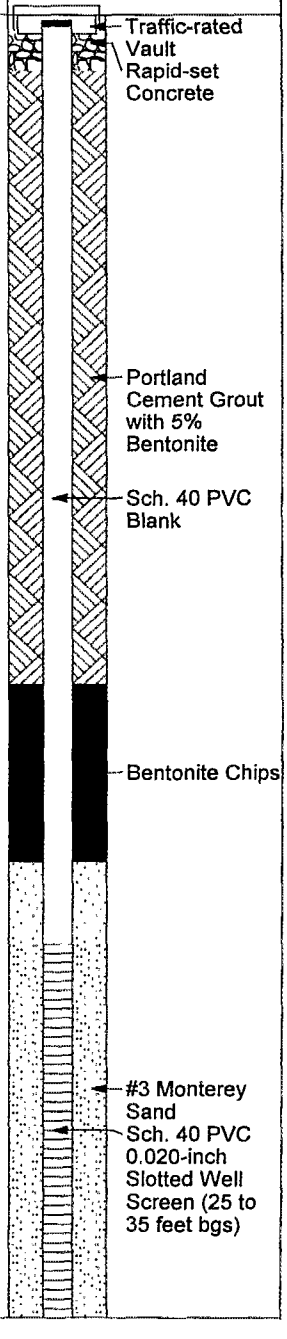
WELL NUMBER MW09A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/28/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/28/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	149.51	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 50 gal.
TOP OF CASING	149.37	DEPTH TO WATER	24.9
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	124.6

REMARKS: Lithology and sampling detail to 65 feet below ground surface from MW09B

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
			AUGER					Landscaped lawn	0.2
						ML		Dark yellowish brown (10YR 4/4), SILT, soft, moist, no odor.	
					5				
						CL		Brown (10YR 4/3), fine sandy CLAY, 20% fine sand and 80% clay, medium plasticity, moist, soft, no odor, roots present. Color change at 12 feet below ground surface (bgs) to dark reddish brown (5YR 4/3), and trace cementation at 13 feet bgs.	8.3
					10				
					15	ML		Dark reddish brown (5YR 4/3), fine sandy SILT, 15% fine sand and 85% silt, slightly moist, soft, no odor. At 16 feet bgs, color changes to grayish brown (10YR 5/2), increase consistency to firm, and decrease in moisture. At 18 feet bgs, increase in moisture, decrease consistency to soft, and slight black discoloration from 19.5 to 20 feet bgs.	14.5
					20				
						SM		Dark yellowish brown (10YR 4/4), silty SAND, 25% silt and 75% fine sand, slightly moist, soft, no odor.	21.0
						ML		Dark reddish brown (10YR 4/3) sandy SILT, 15% fine sand, 85% silt, soft, slightly moist, no odor.	22.5
					25	SP		Yellowish brown (10YR 5/6), SAND, fine to medium grained, subrounded, poorly sorted, slightly moist, no odor. At 25.5 feet bgs, color change to grayish brown (10YR 5/2) and increase in moisture.	23.5
					30	ML		Brown (10YR 4/3), fine sandy SILT, 15% fine sand and 85% silt, wet, soft, no odor.	29.0
						SM		Dark grayish brown (10YR 4/2), silty SAND, 20% silt and 80% fine sand, wet, soft, no odor.	32.5
						ML-SM		Dark grayish brown (10YR 4/2), sandy SILT to silty SAND, 50% silt and 50% fine sand, moist to wet, firm, no odor.	33.5

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/28/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/28/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
						ML-SM		Dark grayish brown (10YR 4/2), sandy SILT to silty SAND, 50% silt and 50% fine sand, moist to wet, firm, no odor. *(continued)*	38.0	
					40	ML		At 38 feet bgs, cementation and decrease in moisture content	41.0	
					45	ML		At 41 feet bgs, trace cementation, increase consistency to hard, increase clay content and color change to light brownish gray (10YR 6/2).	46.0	
						SC		Dark yellowish brown (10YR 4/6), clayey SAND, 40% clay and silt and 60% fine sand, low plasticity, moist, no odor.	48.0	
					50	CL		Yellowish brown (10YR 5/4), sandy CLAY, 40% clay, 60% fine sand, medium plasticity, moist, hard, no odor, trace cementation. 1/4-inch fine sand lense at 48.5 feet bgs.	53.0	
					55	SP		Grayish brown (10YR 5/2), SAND, poorly graded, predominantly medium grained, wet, soft, no odor. At 55.5 feet bgs, decrease in grain size to predominantly fine.	61.0	
					60	CL		Dark grayish brown (10YR 4/2), sandy CLAY, 20% sand and 80% clay, medium plastic, moist to wet, no odor.		Bentonite Pellets Backfill
		0	NR		65					
		24	CORE			SP-SM		Olive brown (2.5Y 4/3), silty SAND, fine to medium, some clay, 75% sand and 25% fines, wet, poorly sorted, soft, micaceous.	68.0	
		0	NR		70				71.0	
1.2		48	CORE			CL-ML		Dark yellowish brown (10YR 4/4), silty CLAY, low to medium plasticity, wet, medium stiff, micaceous.	74.5	

BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/28/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/28/01

Continued from Previous Page

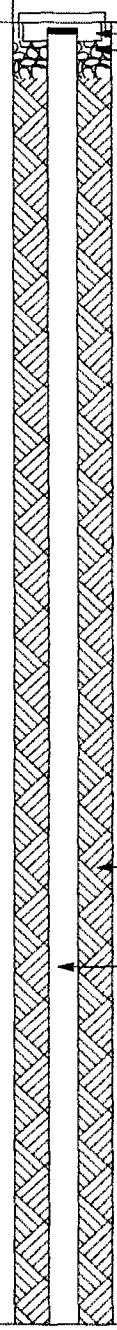
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
		0	NR			CL		Light olive brown (2.5Y 5/4), CLAY. Similar to above, but less silt and some oxidation. Non-recovery indicates possible sand. *(continued)*		
					80					
		0	NR							
NM		42	CORE			CL-ML		Olive brown (2.5Y 4/4), silty CLAY, similar to 71 to 74.5 feet bgs.	81.5	
						ML		Olive brown (2.5Y 4/4), fine sandy SILT, wet, soft, very micaceous.	83.5 / 83.6	
		0	NR		85	SP		Olive brown (2.5Y 4/3), SAND, fine to medium, wet, moderately sorted, soft.		
					90			Bottom of borehole at 90.0 feet.	90.0	

WELL NUMBER MW09B

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/14/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/14/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	149.56	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 150 gal.
TOP OF CASING	149.34	DEPTH TO WATER	27.7
LOGGED BY	T. Mehall	GROUND WATER ELEVATION	121.9
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML	Landscaped lawn Dark yellowish brown (10YR 4/4), SILT, soft, moist, no odor.	0.2
0.0		60	CORE		5			
0.0		60	CORE		10	CL	Brown (10YR 4/3), fine sandy CLAY, 20% fine sand and 80% clay, medium plasticity, moist, soft, no odor, roots present. Color change at 12 feet below ground surface (bgs) to dark reddish brown (5YR 4/3), and trace cementation at 13 feet bgs.	8.3
0.0		60	CORE		15	ML	Dark reddish brown (5YR 4/3), fine sandy SILT, 15% fine sand and 85% silt, slightly moist, soft, no odor. At 16 feet bgs, color changes to grayish brown (10YR 5/2), increase consistency to firm, and decrease in moisture. At 18 feet bgs, increase in moisture, decrease consistency to soft, and slight black discoloration from 19.5 to 20 feet bgs.	14.5
		0	NR		20			21.0
0.0		48	CORE			SM	Dark yellowish brown (10YR 4/4), silty SAND, 25% silt and 75% fine sand, slightly moist, soft, no odor.	22.5
						ML	Dark reddish brown (10YR 4/3) sandy SILT, 15% fine sand, 85% silt, soft, slightly moist, no odor.	23.5
		0	NR		25	SP	Yellowish brown (10YR 5/6), SAND, fine to medium grained, subrounded, poorly sorted, slightly moist, no odor. At 25.5 feet bgs, color change to grayish brown (10YR 5/2) and increase in moisture.	
0.0		30	CORE					29.0
		0	NR		30	ML	Brown (10YR 4/3), fine sandy SILT, 15% fine sand and 85% silt, wet, soft, no odor.	32.5
0.0		30	CORE			SM	Dark grayish brown (10YR 4/2), silty SAND, 20% silt and 80% fine sand, wet, soft, no odor.	33.5
						ML-SM	Dark grayish brown (10YR 4/2), sandy SILT to silty SAND, 50% silt and 50% fine sand, moist to wet, firm, no odor.	

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/14/01
PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/14/01

Continued from Previous Page

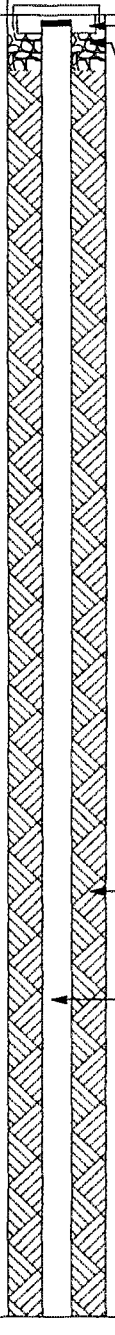
PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	WELL DIAGRAM
0.0		60	CORE			ML-SM		Dark grayish brown (10YR 4/2), sandy SILT to silty SAND, 50% silt and 50% fine sand, moist to wet, firm, no odor. *(continued)*	38.0	
NM		60	CORE		40	ML		At 38 feet bgs, cementation and decrease in moisture content At 41 feet bgs, trace cementation, increase consistency to hard, increase clay content and color change to light brownish gray (10YR 6/2).	41.0	
NM		60	CORE		45	ML			46.0	Bentonite Pellets
						SC		Dark yellowish brown (10YR 4/6), clayey SAND, 40% clay and silt and 60% fine sand, low plasticity, moist, no odor.	48.0	
		0	NR		50	CL		Yellowish brown (10YR 5/4), sandy CLAY, 40% clay, 60% fine sand, medium plasticity, moist, hard, no odor, trace cementation. 1/4-inch fine sand lense at 48.5 feet bgs.		
NM		36	CORE						53.0	
		0	NR		55	SP		Grayish brown (10YR 5/2), SAND, poorly graded, predominantly medium grained, wet, soft, no odor. At 55.5 feet bgs, decrease in grain size to predominantly fine.		#3 Monterey Sand Sch. 40 PVC 0.020-inch Slotted Well Screen (49.8 to 60 feet bgs)
		18	CORE							
NM		60	CORE		60				61.0	
						CL		Dark grayish brown (10YR 4/2), sandy CLAY, 20% sand and 80% clay, medium plastic, moist to wet, no odor.		
0.0					65			Bottom of borehole at 65.0 feet.	65.0	

WELL NUMBER MW10A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/18/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/18/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	147.82	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 150 gal.
TOP OF CASING	147.71	DEPTH TO WATER	31.3
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	116.5
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER					Asphalt	0.4
						CL-ML		Very dark brown (10YR 2/2), silty CLAY, roots, micaceous.	
		0	NR		5				
0.0		48	CORE						
						ML		Dark yellowish brown (10YR 3/4), fine sandy SILT, 20% sand and 80% fines, slightly cemented, roots.	8.0
0.0		60	CORE		10	SM		Dark yellowish brown (10YR 4/4), silty fine SAND, 80% sand and 20% fines, moist, very micaceous.	10.0
						ML		Dark yellowish brown (10YR 3/4), fine sandy SILT, similar to previous, darker, slight cementation.	11.0
		0	NR		15	ML		Dark yellowish brown (10YR 4/4), SILT with fine to medium sand and some clay, 15% sand and 85% fines, micaceous.	14.0
0.0		24	CORE						18.4
		0	NR		20	SP		Dark yellowish brown (10YR 3/4), SAND, 1% gravel, 90% sand and 9% fines, fine to medium grained, poorly sorted, trace 1.5 inch subrounded gravel, moist, no odor. At 23 feet bgs, increase in gravel content; subrounded 1/2 to 1-inch, trace silt. At 28 feet bgs, increase in sand grain size from medium to coarse.	
0.0		30	CORE						
		0	NR		25				
0.0		24	CORE						28.0
		0	NR		30	SP			
0.0		18	CORE			SW			33.5

WELL DIAGRAM



BORINGWELL CONSTRUCTION LOG OMEGA WELL LOGS GPJ RFW SHERMAN OAKS GDT 1/27/03

WELL NUMBER MW10A

PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/18/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/18/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR			SW		Dark brown (10YR 3/3), gravelly SAND, subrounded 1/2 to 2-inch clasts, fine to coarse grained sand, trace silt, wet, no odor. *(continued)*	37.5
0.0		30	CORE			SP		Very dark grayish brown to dark olive brown (2.5Y 3/2 to 2.5Y 3/3), SAND with trace to some silt, trace subangular 1/2 to 1 inch gravel,1% gravel, 4% fines and 95% sand, fine to medium grained sand, moderately sorted, wet, no odor, micaceous.	
		0	NR		40				
0.0		24	CORE						43.0
		0	NR		45	SP-SM			
0.0		24	CORE						48.5
		0	NR		50	SW		Dark brown (10YR 3/3), gravely SAND, 1/8 to 1 inch subrounded gravel, 10% gravel, 85% sand and 5% fines, poorly sorted, wet, no odor, micaceous. Few small lenses of strong brown (7.5YR 4/6), SILT.	
0.0		36	CORE			CL-ML		Dark yellowish brown (10YR 4/4), silty CLAY with trace gravel, 3% gravel, 2% sand, and 95% fines, wet, slightly cemented, micaceous.	52.0
		0	NR		55	SW		Olive brown (2.5Y 4/3), SAND, fine to coarse grains, trace silt, 5% fines and 95% sand, poorly sorted, wet, no odor, micaceous. At 57.5 feet bgs, some subrounded 1/4 to 1/2 inch-gravel.	54.0
0.0		54	CORE						
		0	NR		60	SM		Dark yellowish brown (10YR 4/4), silty SAND, trace clay.	59.0
0.0		36	CORE			CL-ML		Dark yellowish brown (10YR 3/6), silty CLAY, some oxidation, micaceous.	62.0
0.0					65			Bottom of borehole at 65.0 feet.	65.0

WELL DIAGRAM

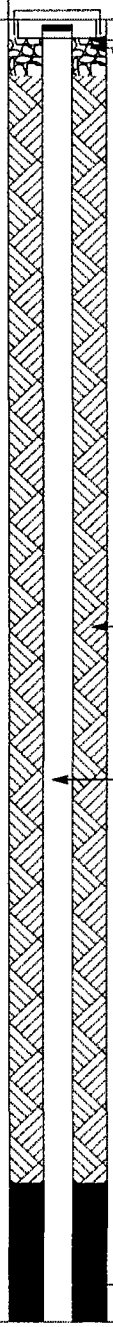
BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/27/03

WELL NUMBER MW11A

PROJECT NUMBER	20074.515.009.0321	DATE STARTED	12/13/01
PROJECT NAME	Omega OU-02	DATE COMPLETED	12/13/01
LOCATION	Whittier, CA	CASING TYPE/DIAMETER	Sch. 40 PVC / 4-inch
DRILLING METHOD	Hollow Stem Auger, 10-inch Diamter	SCREEN TYPE/SLOT	Sch. 40 PVC / 0.020-inch
SAMPLING METHOD	Continuous 5-foot Core	GRAVEL PACK TYPE	#3 Monterey Sand/8 cu. ft.
GROUND ELEVATION	151.51	GROUT TYPE/QUANTITY	Portland/5% Bentonite / 140 gal.
TOP OF CASING	151.20	DEPTH TO WATER	34.4
LOGGED BY	A. Cohan	GROUND WATER ELEVATION	117.2
REMARKS			

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		60	AUGER			ML		Landscaped lawn Brown (10YR4/3), SILT with a trace of clay, micaceous. At 7.0 feet bgs, trace subangular 1/2-inch gravel.	0.2
		0	NR		5				
NM		48	CORE						7.4
						ML		Light olive brown (2.5Y 5/3), sandy SILT, slightly moist.	9.0
						ML		Dark yellowish brown (10YR 4/4) to light olive brown (2.5Y 5/3) SILT, to trace clay, slightly moist, micaceous.	10.0
0.0		60	CORE		10	ML		Olive brown (2.5Y 4/3) clayey SILT, moist, micaceous, mottled with oxides. 6-inch olive brown sand lens at 13 feet bgs, fine grained, some silt, well sorted, slightly micaceous. Cementation and root casts at 16.5 feet bgs.	
0.0		60	CORE		15				18.0
						SM		Light olive brown (2.5Y 5/3), silty very fine SAND.	19.7
0.0		60	CORE		20	ML		Olive brown (2.5Y 4/4), SILT with trace to little fine sand and trace clay, mottled, some cemented areas. At 24 feet bgs, color change to dark gray (5Y 4/1), slight fuel-like odor. At 25.5 feet bgs, increase in sand content, grading back to silt at 27.5 feet bgs. Some oxidation.	
2.3		60	CORE		25				28.0
		0	NR		30	SP		Dark yellowish brown (10YR 3/4), fine SAND, trace silt and trace clay, 90% sand and 10% fines, very well sorted, moist. At 32.5 feet bgs, fine to medium sand, with trace fines. Color change at 34 feet bgs to olive brown (2.5Y 4/3). At 38.6 feet bgs, pale olive (5Y 6/3), and wet.	
0.0		36	CORE						

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

WELL NUMBER MW11A

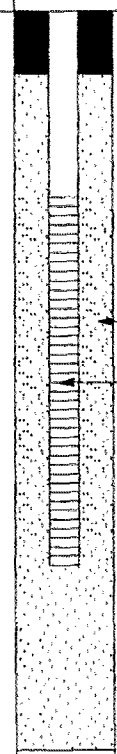
PROJECT NUMBER 20074.515.009.0321 **DATE STARTED** 12/13/01

PROJECT NAME Omega OU-02 **DATE COMPLETED** 12/13/01

Continued from Previous Page

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH
		0	NR			SP		Dark yellowish brown (10YR 3/4), fine SAND, trace silt and trace clay, 90% sand and 10% fines, very well sorted, moist. At 32.5 feet bgs, fine to medium sand, with trace fines. Color change at 34 feet bgs to olive brown (2.5Y 4/3). At 38.6 feet bgs, pale olive (5Y 6/3), and wet. *(continued)*	
		18	CORE						39.0
		0	NR		40	SP-SW		Dark gray (5Y 4/1), gravelly SAND, medium to coarse grained sand, 80% sand and 20% subrounded 1.5-inch gravel, wet.	41.0
0.0		36	CORE			SP-SW		Dark olive gray (5Y 3/2), SAND with some gravel, 90% medium to coarse sand, 10% gravel, trace silt moderately sorted. At 44.8 feet bgs, silty sand lens. At 48 feet bgs, olive gray (5Y 4/2) fine to coarse sand.	
		0	NR		45				
		30	CORE						49.5
		0	NR		50	GP		Sandy GRAVEL with some silt and trace clay, 70% gravel, 20% sand and 10% fines, gravel is subrounded and predominantly 1/2-inch in diameter, partially cemented.	51.5
0.0		42	CORE			ML		Olive (5Y 4/4), clayey SILT, 1% sand and 99% fines, very small lenses of sandy gravel, micaceous.	53.5
						GM		Silty GRAVEL, some sand and trace clay, 80% gravel, 5% sand and 15% fines, gravel is predominantly subrounded and 1/2 to 1-inch in diameter.	55.0
0.0					55			Bottom of borehole at 55.0 feet.	

WELL DIAGRAM



BORING/WELL CONSTRUCTION LOG OMEGA WELL LOGS.GPJ RFW SHERMAN OAKS.GDT 1/22/03

APPENDIX D

MONITORING WELL DEVELOPMENT RECORDS

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA
SAMPLE NO.: MW-01A
DATE: 1-21-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE LOCKED: (YES) NO KEY NO: _____

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 59.85 (FT-M) (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 31.00 (FT-M) TIME MEASURED 1118

(C) WATER COLUMN HEIGHT (A - B): 28.85 (FT-M)

(D) WELL DIAMETER FACTOR: 0.66 (GPF-LPM)

Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; (4") = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 19.04 (GAL-L)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <190.41 (GAL)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER - SUBMERSIBLE PUMP) CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED) AND: (STORED) - DISPOSED ONSITE - OFFSITE

Pump On: 1208, Pump Off: 1350 COLLECTED IN: (TANKS) DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	~~TURBID~~ Volume ~~ITY~~ (gal)	FIELD MEASUREMENTS pH	Cond (umhos/cm)	Turb (ntu)	Temp (°C)		COMMENTS
1214	31.15	2.6	65	6.63	1,220	999	21.2		muddy, cloudy
1224	31.06	2.01	85.01	6.68	1,230	500	21.8		muddy, partially cloudy
1234	31.04	2.06	105.46	6.68	1,210	82	21.8		slightly muddy/cloudy
1244	31.04	2.01	125.01	6.69	1,210	42	22.0		slightly cloudy - slightly clear
1259	31.01	2.01	145.01	6.74	1,220	143	21.9		" "
1309	31.01	2.01	164.61	6.71	1,220	34	22.0		" "
1319	31.01	2.01	184.41	6.71	1,220	31	22.0		" "
1330	31.01	2.01	206.6	6.73	1,220	19	21.9		clear - slightly clear →

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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Time	Depth to Water	Purge Rate	Volume	pH	Cond	Turb	Temp	Comments
1339	31.01	2.01	225.02	6.7	1230	24	22.0	clear - slightly cloudy
1348	31.12	6.55	262.76	6.7	1230	9	21.7	"

GEOLIS Well Purging Form

MW01B

COMPANY: Gregg Drilling
CLIENT: Ortega - USACE
PROJECT: 2007H-515-009-0321
SITE: Whittier, CA

SAMPLE NO.: ~~MW08B~~
DATE: 1-21-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 82.12 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 30.88 FT-M TIME MEASURED 0745

(C) WATER COLUMN HEIGHT (A - B): 51.24 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 33.8 GAL-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <338 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 0854 Pump Off: 1039 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	~~TURBIDITY~~ Volume (49 gal bailed)	FIELD MEASUREMENTS pH	Cond (µmhos/cm)	Turb (ntu)	Temp (°C)		COMMENTS
0856	37	2.0	62	5.71	1160	440	18.3		muddy
0911	37.02	2.1	92.3	6.58	1,140	17	20.0		clear
0926	37	2.1	123	6.75	1,090	22	20.2		clear
0940	37.06	2.1	152.2	6.88	975	17	20.5		clear
0954	37.08	2.1	182.4	6.87	982	13	20.6		clear
1009	37.09	2.1	213.0	6.84	971	15	20.7		clear
1023	37.09	2.06	243.2	6.86	965	14	21.0		clear
1037	37.09	2.11	272.5	6.83	960	12	21.0		clear

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA

SAMPLE NO.: MW02
DATE: 01-29-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) NO KEY NO: _____

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 59.95 (FT)M (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 27.54 (FT)M TIME MEASURED 0746

(C) WATER COLUMN HEIGHT (A - B): 32.41 (FT)M

(D) WELL DIAMETER FACTOR: 0.66 (GPF)-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(E) ONE WELL VOLUME (C x D): 21.39 (GAL)-L (2" = 0.16; (4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(F) VOLUMES TO BE PURGED: <10 (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 213.91 (GAL)-L

PURGING INFORMATION

WELL PURGING METHOD: (BAILER) - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 52.5 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: (STORED) - DISPOSED ONSITE - OFFSITE

Pump On: 0910 Pump Off: 1101 COLLECTED IN: (TANKS) DRUMS NUMBER OF CONTAINERS: 1 (smaller tank)

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ (~~FT~~ gal)	FIELD MEASUREMENTS pH	Cond (µmohs/cm)	Turb (ntu)	Temp (°C)		COMMENTS
0914	27.71	2.01	62.7	5.81	1,410	999	17.2		muddy/cloudy
0924	27.69	2.11	82.8	6.32	1,480	108	19.2		muddy/partially cloudy
0933	27.68	2.11	102.6	6.51	1,470	59	19.5		partially muddy/partially cloudy
0943	27.69	2.06	123.2	6.52	1,480	85	20.0		" "
0952	27.68	2.06	143.0	6.56	1,480	51	20.5		" "
1002	27.66	2.06	162.6	6.62	1,480	44	20.3		partially clear
1011	27.66	2.06	182.6	6.60	1,470	49	20.2		" "
1021	27.66	2.06	202.7	6.67	1,470	35	20.2		" " →

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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Time	Depth to Water	Purge Rate	Volume	pH	Cond	Turb	Temp	Comments
1031	27.64	2.06	222.8	6.56	1,460	29	20.9	slightly clear
1041	27.63	2.06	242.7	6.67	1,460	32	21.0	slightly clear
1051	27.62	2.11	263.0	6.61	1,470	23	21.1	" "
1100	27.62	2.11	282.7	6.56	1,430	~~18~~ 13	21.4	slightly cloudy-clear

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA

SAMPLE NO.: MW03
DATE: 1-23-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 46.53 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 26.13 FT-M TIME MEASURED 1337

(C) WATER COLUMN HEIGHT (A - B): 20.40 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 13.46 GAL-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <134.64 GAL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 66.5 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 1440 Pump Off: 1522 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~ITY (gal)	FIELD MEASUREMENTS pH	Cond. umhos/cm	Turb. ntu	Temp. °C		COMMENTS
1442	30.52	1.90	70	6.64	1,600	999	20.9		cloudy/muddy
1449	N/M	2.06	83.51	6.59	1,590	815	21.4		cloudy/muddy
1455	30.25	2.06	96.50	6.56	1,610	229	21.6		" "
1501	31.14	2.06	110.0	6.62	1,630	60	21.7		slightly cloudy
1508	31.26	2.11	123.0	6.61	1,620	21	21.6		slightly clear
1515	31.33	2.06	136.51	6.62	1,610	8	21.5		slightly clear - clear
1520	31.39	2.06	149.50	6.60	1,630	3	21.6		clear

(see log book) *

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MDT - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA

SAMPLE NO.: MW04A
DATE: 01/22/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" (4") - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 51.38 (FT-M) (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 33.24 (FT-M) TIME MEASURED 0715

(C) WATER COLUMN HEIGHT (A - B): 18.14 (FT-M)

(D) WELL DIAMETER FACTOR: 0.66 (GPF-LPM) Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; (4" = 0.65); 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 11.97 (GAL-L)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 119.72 (GAL-L)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER) - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED) AND: (STORED) - DISPOSED ONSITE - OFFSITE

Pump ON: 0824 Pump Off: 0907 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ITY (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
0826	23.63 AKC	2.11	51.81	6.14	1,570	999	18.9		muddy, cloudy
0832	23.68	2.06	64.64	6.44	1,570	415	20.5		less muddy/cloudy
0836	23.68	2.06	74.01	6.54	1,560	134	20.5		slightly muddy/cloudy
0841	23.69	2.11	84.06	6.59	1,540	62	20.6		" "
0846	23.68	2.11	94.06	6.57	1,570	50	20.9		" "
0851	23.68	2.11	104.12	6.64	1,560	46	20.9		" "
0856	23.68	2.11	114.12	6.62	1,560	37	21.0		slightly clear
0900	23.69	2.11	124.12	6.65	1,550	35 AKC	21.0		" "

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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G071291T

Time	Depth to H_2O	Purge Rate	Volume	pH	Cond	Turb.	Temp	Comments
0905	23.69	2.06	134.65	6.68	1,530	40	21.0°	slightly clear

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA

SAMPLE NO.: MW-04B
DATE: 01-22-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) - NO KEY NO: _____

WELL DIAMETER: (2") - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 80.06 (FT) M (MEASURED) RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 24.67 (FT) M TIME MEASURED 1010

(C) WATER COLUMN HEIGHT (A - B): 55.39 (FT) M

(D) WELL DIAMETER FACTOR: 0.16 (GPF) LPM

Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 8.86 (GAL) L

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <88.62 (GAL)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 28 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED) AND (STORED) - DISPOSED ONSITE - OFFSITE

PumpOn: 1108, PumpOff: 1223 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1

(see log book) * * *

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~TP~~ (gal)	FIELD MEASUREMENTS pH	Cond (umhos/cm)	Turb (ntu)	Temp (°C)		COMMENTS
1113	24.63	1.11	36.1	6.97	1,250	320	19.9°		partially cloudy
1121	24.62	1.11	45.01	6.88	1,280	250	19.5°		partially cloudy
1132	24.53	.72	54.30	6.82	1,260	83	19.9°		partially clear
1143	24.41	.68	63.2	6.77	1,290	147	20.2°		" "
1153	24.18	.21	72.7	6.78	1,310	401	20.1		partially cloudy
1203	23.81	.56	81.1	6.79	1,290	999	20.1		cloudy/muddy
1213	23.74	.63	89.89	6.83	1,320	41	19.8		clear - partially clear
1221	23.75	1.0	98.01	6.77	1,270	1	19.6		clear (crystal)

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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Time	Depth to H_2O	Purge Rate	Volume	pH	Cond	Turb	Temp	Comments

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omaha)
PROJECT: 20074-515-669-0321
SITE: Whittier, CA

SAMPLE NO.: MW-04C
DATE: 01-22-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) - NO KEY NO: _____

WELL DIAMETER: (2") - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 99.13 (FT)-M (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 27.90 (FT)-M TIME MEASURED ~~0~~ 1400 AKC

(C) WATER COLUMN HEIGHT (A - B): 71.23 (FT)-M

(D) WELL DIAMETER FACTOR: 0.16 (GPF)-LPM

(E) ONE WELL VOLUME (C x D): 11.40 (GAL)-L

(F) VOLUMES TO BE PURGED: <10

Well Factor = 0.041 (Well Diameter in Inches)²
(2" = ~~0.16~~; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 114.0 (GAL)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER) - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 25 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED) AND: (STORED) DISPOSED ONSITE - OFFSITE

Pump On: 1415 Pump Off: 1534 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID-ITY~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
1417	27.60	1.53	27.5	6.87	1,330	350	19.3		cloudy/muddy
1425	27.65 AKC	1.59	39.8	6.91	1,270	230	18.9		slightly cloudy
1432	25.63	1.59	51.01	6.83	1,260	93	19.0		slightly cloudy
* 1439	27.41	1.59	62.01	6.77	1,230	25	19.0		slightly clear
* 1449	26.63	1.00	72.79	6.75	1,290	690	18.6		slightly clear - slightly cloudy
* 1501	26.27	1.00	83.95	6.73	1,260	533	18.6		"
* 1513	25.65	.88 AKC	94.65	6.72	1,290	999	18.4		"
1525	25.95	1.59	105.01	6.78	1,290	8	19.3		clear →

(see log book)

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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Time	Depth to Water	Purge Rate	Volume	pH	Cond	Turb.	Temp	Comments
1533	25.98	1.64	116.5	6.74	1,300	0	18.9	clear (crystal)

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Whittier, CA
SAMPLE NO.: MW-05
DATE: 01-29-02/01-30-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/A

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 52.62 (FT-M) (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 24.91 (FT-M) TIME MEASURED 1236

(C) WATER COLUMN HEIGHT (A - B): 27.71 (FT-M)

(D) WELL DIAMETER FACTOR: 0.66 (GPF-LPM) Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; (4" = 0.65) 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 18.29 (GAL-L)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <182.89 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: (BAILER) - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 59.5 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: (STORED) - DISPOSED ONSITE - OFFSITE

Pump On: 1349 Pump Off: 1533 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1 (smaller tank)

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~-ITY~~ (gal)	FIELD MEASUREMENTS pH	Cond (umhos/cm)	Turb. (ntu)	Temp (°C)		COMMENTS
1353	26.05	2.06	71.7	6.73	1,500	999	19.5		muddy, cloudy
1402	26.01	2.01	89.6	6.74	1,500	582	20.3		muddy, cloudy
1411	25.99	2.01	107.8	6.71	1,500	303	20.3		" "
1419	25.96	2.06	125.6	6.61	1,460	210	20.6		" "
1429	25.94	2.01	143.8	6.72	1,500	182	20.5		" "
1438	25.93	2.01	162.0	6.70	1,490	155	20.4		" "
1446	25.91	2.01	179.6	6.66	1,470	126	21.1		slightly muddy/cloudy
1455	25.96	2.01	197.7	6.64	1,480	110	21.3		" "

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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Time	Depth to Water	Purge Rate	Volume	pH	Cond.	Turb.	Temp.	Comments
1504	25.96	2.01	216.0	6.70	1,480	129	21.2	slightly muddy/clear
1513	25.95	2.01	233.70	6.72	1,480	87	21.4	" "
1522	25.94	2.01	251.70	6.60	1,470	70	21.3	" "
1531	25.94	2.01	269.70	6.71	1,470	98	21.4	" "

Pump Off 1533

1-30-02 Bailed 17.5 more gallons. Total bailed gallons = 77 gal.

Pump On ~~0803~~ Akc. ~~0817~~ Akc. 0817

0819	25.70	2.01	304.0	5.30	1,530	999	16.2	muddy/cloudy
0828	25.69	2.01	322.2	6.17	1,500	203	19.4	slightly muddy/cl
0837	25.69	1.95	340.1	6.38	1,490	101	20.1	" "
0847	25.68	1.95	358.5	6.42	1,490	90	20.6	" "
0856	25.69	1.95	376.3	6.57	1,500	42	20.4	" "
0905	25.69	1.95	394.5	6.61	1,490	35	20.6	slightly clear
0914	25.69	1.95	412.1	6.69	1,490	25	20.3	" "
0923	25.69	1.95	430.3	6.70	1,490	21	20.5	" "
0932	25.69	1.95	448.2	6.71	1,480	25	21.0	slightly clear - clear

Pump Off 0933

GEOLIS Well Purging Form

COMPANY: Greg's Drilling
CLIENT: USACE (Omaha)
PROJECT: 20074-515-009-0321
SITE: Santa Fe Springs, CA
SAMPLE NO.: MW-06
DATE: 01-25-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 46.81 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 24.77 FT-M TIME MEASURED 0738

(C) WATER COLUMN HEIGHT (A - B): 22.04 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(E) ONE WELL VOLUME (C x D): 14.55 GAL-L (2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(F) VOLUMES TO BE PURGED: <10 (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(G) TOTAL VOLUME TO BE PURGED (E x F): → <145.46 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 44 gallons bailed, < > = negative

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 0923 Pump Off: 1020 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

	TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~NTU~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
	0925	24.77 AKC	1.59	48.1	5.76	1,940	730	18.8		muddy, cloudy
	0933	24.72	2.01	63.2	6.61	1,840	73	20.7		slightly muddy, cloudy
	0940	24.72	2.01	78.2	6.62	1,840	35	21.2		" "
	0948	24.72	2.01	93.5	6.68	1,840	5	21.4		slightly cloudy - slightly clear
*	0955	24.71	2.01	108.2	6.70	1,860	181	21.8		slightly muddy/cloudy
*	1003	24.71	1.98	123.01	6.75	1,860	29	21.6		" "
	1011	24.68	1.90	138.10	6.73	1,840	<10>	21.6		slightly clear - clear
	1019	24.68	1.98	153.20	6.71	1,840	<10>	21.8		clear

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: ~~MW-11~~ MW-07
DATE: 01-23-02
SAMPLER: Amanda K. Cohan
SIGNATURE: Amanda K Cohan

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) - NO KEY NO: _____

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 45.45 (FT)-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 21.12 (FT)-M TIME MEASURED 1015

(C) WATER COLUMN HEIGHT (A - B): 24.33 (FT)-M

(D) WELL DIAMETER FACTOR: 0.66 (GPF)-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 16.06 (GAL)-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <160.58 (GAL)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER - SUBMERSIBLE PUMP) CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: (STORED) DISPOSED ONSITE - OFFSITE

Pump On: 1113, Pump Off: 1253 COLLECTED IN: (TANKS) DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT)-M	PURGE RATE (GPM)-LPM	Volume ~~TURBID~~ ~~-TY~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
1115	21.39	2.06	55.10	6.46	2,550	380	19.5		muddy, cloudy
1122	21.36	2.06	70.30	6.53	2,520	999	20.9		less muddy, cloudy
1129	21.34	2.06	85.01	6.57	2,520	305	21.1		slightly cloudy
1137	21.32	2.06	100.10	6.58	2500	213	21.1		" "
1144	21.31	2.06	116.0	6.59	2,510	156	21.3		" "
1152	21.31	2.06	131.1	6.57	2,540	104	21.4		slightly cloudy - slightly clear
1159	21.31	2.06	146.01	6.59	2,500	108	21.1		" "
1206	21.29	2.06	161.3	6.59	2,520	109	21.3		" "

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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(See log book)

Time	Depth to Water	Purge Rate	Volume	pH	Cond.	Turb.	Temp.	Comments
1214	21.25	2.06	177.0	6.58	2,500 AKC	81	21.4	slightly clear
1221	21.27 AKC	2.06	192.05	6.61	2,500	70	21.3	" "
1229	21.25	2.06	208.0	6.68	2,600	289	~~17.1~~ 21.0 AKC	slightly cloudy
1236	21.24	2.06	~~189.0~~ 223.0 AKC	6.66	2,500	240	21.3	slightly cloudy
1244	21.21 AKC	1.95	238.2	6.59	2,580	90	21.3	slightly clear
1252	21.20	2.0	253.2	6.59	2,590	22	21.4	clear - slightly cl.

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW-08A
DATE: 01-30-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) NO KEY NO: _____

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 44.78 (FT)-M (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 26.69 (FT)-M TIME MEASURED 1046

(C) WATER COLUMN HEIGHT (A - B): 18.09 (FT)-M

(D) WELL DIAMETER FACTOR: 0.66 (GPF)-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; (4" = 0.65); 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 11.94 (GAL)-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <119.40 (GAL)-L

PURGING INFORMATION

WELL PURGING METHOD: (BAILER - SUBMERSIBLE PUMP) CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 315 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED AND: (STORED) DISPOSED ONSITE - OFFSITE

Pump On: 1140 Pump Off: 1220 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~(ITY)~~ (gal)	FIELD MEASUREMENTS pH	Cond (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
1142	26.93	2.06	36.6	6.80	1,940	580	18.7		muddy / cloudy
1148	26.89	2.01	48.6	6.77	1,970	900	20.5		" "
1155	26.87	2.01	60.6	6.71	1,970	999	20.8		" "
1201	26.87	1.95	72.7	6.70	1,920	145	20.8		slightly muddy / cloudy
1207	26.88	1.95	84.6	6.67	1,960	36	21.3		" "
1213	26.88	1.95	96.7	6.73	1,940	14	21.4		slightly clear - clear
1219	26.88	1.95	108.5	6.74	1,930	~~7~~ ARC	21.4		clear

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW-08B
DATE: 01-24-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE LOCKED: (YES) - NO KEY NO: _____

WELL DIAMETER: (2") - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 75.06 (FT)-M (MEASURED) - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 26.74 (FT)-M TIME MEASURED 1030

(C) WATER COLUMN HEIGHT (A - B): 48.32 (FT)-M

(D) WELL DIAMETER FACTOR: 0.16 (GPF)-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 7.73 (GAL)-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <77.31 (GAL)

PURGING INFORMATION

WELL PURGING METHOD: (BAILER) - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 32 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE (COLLECTED) AND: (STORED) - DISPOSED ONSITE - OFFSITE

Pump On: 1410, Pump Off: 1521 COLLECTED IN: (TANKS) - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	~~TURBID~~ Volume (gal)	FIELD MEASUREMENTS pH	Cond. (µmhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
1412	27.47	1.0	32.31	6.85	1,590	703	21.9		muddy, cloudy
1421	27.44	0.89	41.10	6.91	1,590	27	21.3		slightly clear
1434	27.36	0.79	49.60	6.89	1,620	19	21.4		slightly clear
1444	27.41	1.0	58.5	6.89	1,610	52	21.5		slightly muddy - slightly clear
1451	27.41	1.0	66.1	6.93	1,620	24	21.3		slightly clear
1500	27.32	.89	74.5	6.99	1,610	40	21.3		slightly clear
1511	27.18	.95	82.09	6.89	1,590	18	21.3		slightly clear - clear
1519	27.18	1.00	90.75	6.95	1,620	0	21.3		clear

(see log book) *

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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G071291T

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-032
SITE: Santa Fe Springs, CA
SAMPLE NO.: MW-08C
DATE: 01-24-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 90.90 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 27.36 FT-M TIME MEASURED 1030

(C) WATER COLUMN HEIGHT (A - B): 63.54 FT-M

(D) WELL DIAMETER FACTOR: 0.16 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(E) ONE WELL VOLUME (C x D): 10.17 GAL-L (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <101.66 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 44 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pumpon: 1156 Pumpoff: 1306 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
1158	29.05	1.56	45.5	6.84	1,590	18	20.7		slightly clear
1209	29.14	.89	55.5	6.88	1,630	0	20.9		clear
1220	29.15	.86	63.0	6.84	1,600	1	21.0		clear
1239	29.08	.89	73.29	6.83	1,620	1	22.2		clear.
1251	29.08	.89	83.42	6.85	1,600	0	21.3		clear
1303	29.11	.89	92.88	6.84	1,590	0	21.3		clear

(see log book) *

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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G071291T

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-809-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW08D
DATE: 01-28-02, 01-30-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES NO KEY NO: _____

WELL DIAMETER: 2" 4" 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/A

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 121.0 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 35.97' FT-M TIME MEASURED 0737

(C) WATER COLUMN HEIGHT (A - B): 85.03 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 56.12 GAL-L

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 561.20 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 79 gallons bailed + 25 gallons bailed (104 total) * see back of page

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED DISPOSED ONSITE - OFFSITE

Pump On: 0933 Pump Off: 1736 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBIDITY~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
0937	47.44	2.11	89.10	6.78	1,210	320	19.5		muddy / cloudy
1004	34.04	2.06	144.50	7.00	1,240	653	19.2		muddy / cloudy
1042	34.11	2.06	223.20	6.96	1,250	382	20.1		muddy / cloudy
1110	33.91	2.06	278.5	~~7.06~~ AHC	1,260	273	20.1		" "
1139	33.84	1.95	333.4	6.99	1,240	195	20.8		slightly muddy / cloudy
1207	33.78	1.95	388.1	7.01	1,240	162	21.0		" "
1236	33.75	1.90	443.2	7.00	1,230	121	20.9		" "
1305	33.51	1.90	498.4	7.11	1,230	114	20.1		" " →

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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752.[illegible]

	Time	Depth to Water	Purge Rate	Volume	pH	Cond.	Turb.	Temp	Comments
Pump Off 1335	1334	32.30	1.90	552.0	7.01	1,240	118	20.2	slightly muddy/cloudy
	1603	30.91	1.95	586.58	7.13	1,200	999	18.3	muddy/cloudy
Pump On 1600	1630	33.15	1.95	641.68	7.00	1,250	120	18.8	slightly muddy/cloudy
	1657	33.12	1.95	694.68	7.07	1,260	87	18.1	" "
	1725	33.48	1.90	750.48	7.00	1,260	53	19.9	slightly clear

01-30-02 Bailed 7 gallons, 111 gallons TOTAL

Pump On 1448	1451	32.64	2.01	765.10	7.48	1,150	999	20.7	muddy/cloudy
	1519	32.61	2.01	820.2	7.19	1,240	20	21.1	slightly clear-clear
	1546	32.96	2.01	875.1	7.18	1,230	16	20.7	clear-slightly clear
Pump Off 1616	1614	32.66	1.95	930.9	7.16	1,240	17	20.7	clear

GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-004-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW-09A
DATE: 1-25-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 34.96 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 25.40 FT-M TIME MEASURED 1224

(C) WATER COLUMN HEIGHT (A - B): ~~0.66~~ 9.56 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²

(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)

(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 6.31 GAL-L

(F) VOLUMES TO BE PURGED: < 10

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 63.10 GAL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 29 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 1440 Pump Off: 1535 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~ITY~~ (gal)	FIELD MEASUREMENTS pH	Cond. (µmhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
~~1441~~	32.61	.11	30.0	7.02	1,860	860	20.7		muddy, cloudy
1507	32.52	.5	41.0	7.11	1,870	999	20.6		muddy, cloudy
1516	32.99	.5	43.0	6.77	1,850	<10>	20.8		clear-slightly clear
1527	33.18	.5	45.0	6.88	1,850	<10>	21.0°		clear
1534	33.42	.5	47.0	6.96	1,850	<10>	21.0°		clear

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-609-0321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW-09B
DATE: 01-25-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" 4" 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 58.60 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 28.07 FT-M TIME MEASURED 1118

(C) WATER COLUMN HEIGHT (A - B): 30.53 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 20.15 GAL-L

(F) VOLUMES TO BE PURGED: <10

(G) TOTAL VOLUME TO BE PURGED (E x F): → <201.50 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 59.5 gallons bailed, < > = negative

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 1215 Pump Off: 1325 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~TPC~~ (gal)	FIELD MEASUREMENTS pH	Cond (µmhos/cm)	Turb (ntu)	Temp (°C)		COMMENTS
1222	29.11	1.95	70	6.92	1,760	49	20.4		cloudy/muddy
1231	29.18	2.01	89.7	6.84	1,720	<10>	20.7		slightly cloudy
1241	29.25	2.01	109.6	6.84	1,740	<10>	20.8		" "
1252	29.28	2.01	129.7	6.83	1,730	0	21.2		slightly clear - clear
1303	29.28	2.01	149.6	6.84	1,740	7	21.5		clear - slightly clear
1313	29.29	1.89	169.9	6.83	1,750	<10>	21.1		clear
1324	29.31	1.80	189.7	6.84	1,720	<10>	21.3		clear

(see log book) * *

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USACE (Omega)
PROJECT: 20074-515-009-C321
SITE: Santa Fe Springs, CA

SAMPLE NO.: MW-10
DATE: 01-24-02
SAMPLER: Amanda K. Chan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" - 4" - 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 62.10 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 31.56 FT-M TIME MEASURED 0729

(C) WATER COLUMN HEIGHT (A - B): 30.54 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 20.16 GAL-L

(F) VOLUMES TO BE PURGED: < 10

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 201.56 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 0832, Pump Off: 0942 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	~~TURBID~~ Volume ~~ITY~~ (gal)	FIELD MEASUREMENTS pH	Cond (umhos/cm)	Turb (ntu)	Temp (°C)		COMMENTS
0834	32.66	1.95	54.10	6.46	1,850	800	19.7°		muddy/cloudy
0844	32.51	2.11	74.10	6.56	1,930	19	21.0°		slightly muddy/cloudy
0853	32.52	2.11	94.10	6.63	1,930	24	21.3°		" "
0902	32.52	2.11	114.20	6.64	1,940	32	21.6°		slightly muddy - slightly clear
0912	33.11	2.11	134.2	6.60	1,880	45	21.4°		" "
0923	32.49	2.11	157.0	6.57	1,930	23	22.0°		slightly clear.
0931	32.48	2.06	174.1	6.61	1,870	2	21.5		clear
0941	32.48	2.11	194.1	6.60	1,860	10	21.8		clear

(see log book) *

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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GEOLIS Well Purging Form

COMPANY: Gregg Drilling
CLIENT: USAFCEE (Omega)
PROJECT: 20074-515-009-0321
SITE: Santa Fe Springs, CA
SAMPLE NO.: MW-11
DATE: 01-23-02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

WELL OBSERVATIONS

PROTECTIVE CASING: INTACT - DAMAGED - NONE LOCKED: YES - NO KEY NO: _____

WELL DIAMETER: 2" 4" 6" - 8" - OTHER: _____ STICKUP HEIGHT: N/A FT-M

MEASURING POINT: TIC - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: PID - FID DEVICE: N/M

BACKGROUND: _____ INSIDE WELL CASING: _____

NAPL LAYER OBSERVED: FLT - SNK - NON SAMPLED: YES - NO THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 49.75 FT-M MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 34.39 FT-M TIME MEASURED 0736

(C) WATER COLUMN HEIGHT (A - B): 15.36 FT-M

(D) WELL DIAMETER FACTOR: 0.66 GPF-LPM

(E) ONE WELL VOLUME (C x D): 10.14 GAL-L

(F) VOLUMES TO BE PURGED: < 10

Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(G) TOTAL VOLUME TO BE PURGED (E x F): → < 101.40 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: Volume includes 49 gallons bailed.

PURGE WATER DISPOSITION: DISCHARGED ONSITE COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

Pump On: 0838 Pump Off: 0920 COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: 1

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	Volume ~~TURBID~~ ~~FTY~~ (gal)	FIELD MEASUREMENTS pH	Cond. (umhos/cm)	Turb. (ntu)	Temp. (°C)		COMMENTS
0840	35.89 AKC	1.95	57.10	5.85	1,950	999	20.0		muddy, cloudy
0845	34.75 AKC	2.11	68.01	6.16	2,050 AKC	360	20.7°		slightly cloudy
0850	34.75	2.11	77.5	6.25	2,070	71	21.2°		slightly cloudy
0855	34.75	2.11	87.4	6.29	2,020	40	20.9°		slightly cloudy
0859	34.74	2.11	97.5	6.36	2,020	24	21.2°		slightly clear
0905	34.75	2.11	108.0	6.42	2,010	12	21.1°		slightly clear - clear
0909	34.75	2.11	117.5	6.44	2,030	4	21.2°		clear.
0918	35.22	6.60	158	6.52	2,070	8	21.1°		clear.

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MD1 - DTW in Well _____
MSC - Specific Conductance	MPH - pH	MO1 - Other: _____	MD2 - DTW in Well _____
MPD - Photoionizer (e.g., HNu)	MEH - Eh	MO2 - Other: _____	MD3 - DTW in Well _____
MFD - Flame Ionizer (e.g., OVA)	MAL - Alkalinity	MO3 - Other: _____	MD4 - DTW in Well _____

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WESTON
MANAGERS DESIGNERS/CONSULTANTS

SHEET ____ of ____

CLIENT/SUBJECT ____ W.O. NO. ____

TASK DESCRIPTION ____ TASK NO. ____

PREPARED BY ____ DEPT ____ DATE ____

MATH CHECK BY ____ DEPT ____ DATE ____

METHOD REV. BY ____ DEPT ____ DATE ____

APPROVED BY ____ DEPT ____ DATE ____

TOTAL VOLUMES

MW01A	262.76 gal	
MW01B	272.50 gal	
MW02	285.08 gal →	285.08 gallons in small ta
MW03	152.42 gal	
MW04A	134.65 gal	
MW04B	99.62 gal	
MW04C	119.08 gal	
MW05	450.41 gal. →	274.35 gallons in small tank 176.06 gallons in large tank
MW06	155.77 gal	
MW07	256.14 gal	
MW08A	110.58 gal	
MW08B	91.19 gal	
MW08C	93.25 gal	
MW08D	935.04 gal	
MW09A	47.0 gal	
MW09B	191.17 gal	
MW10	196.35 gal	
MW11	169.54 gal	
~~MW~~		

Small tank	Large tank	Total
559.43 gal	3463.15 gal	4022.38 gal

* Volumes do not include what Gregg pumped off truck tank Be (Decon Rinsate, etc) — Minimal Volume —

RFW 10-05-003/A-5/85

APPENDIX E

GROUNDWATER SAMPLING FIELD LOGS

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA
PROJECT: Omega Chemical
SITE:

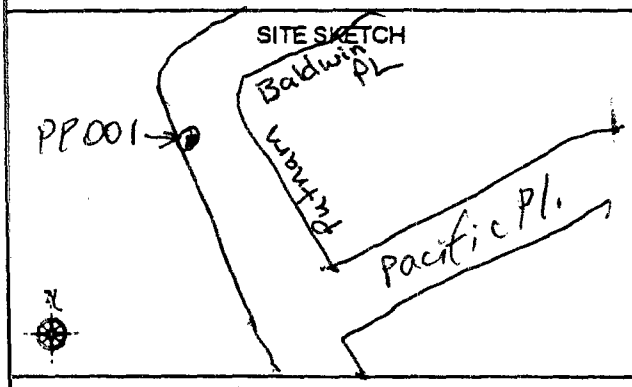
SAMPLE NO.: GW 301-PP001-00824
DATE: 8/16/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: 14:55
TIME COLLECTED:
SAMPLE DEPTH: 84ft. FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BGT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer through 5' Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln, DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Cl VOCs, HAP-Site + GC/MS	3 Voas
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - ~~SPL~~ - RNS - TRP - LCS

COMMENTS: CPT Auto-lith & PDP Curve TD refusal (84ft)
Sample Boring PP001 TD = 86ft bgs (refusal)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

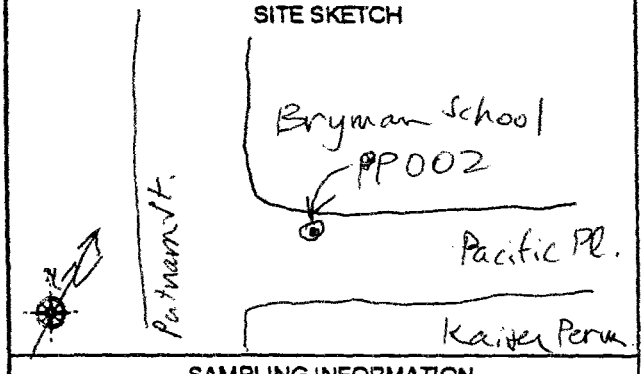
SAMPLE NO.: GW301-PP002-0084
DATE: 8-15-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP002-0084
TIME COLLECTED: 1255
SAMPLE DEPTH: 83.5' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
(GROUNDWATER) WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK ?
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	71' bgs	PPD Test
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer in 5' length of screen
SAMPLER DECONTAMINATION: DED - LAB - (FLD) - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln ; DI rinse
QA SAMPLES: N/A
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) RAD - OTH	FASP-on site	Chlor VOCs, Hap-site & GC/MS	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT auto lith. 1st, TD = 85.5' bgs (refusal)
Run 1 pressure curve @ TD! ⇒ DTW = 71' bgs.
Second boring for sample TD = 86 ; sample @ 83.5' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

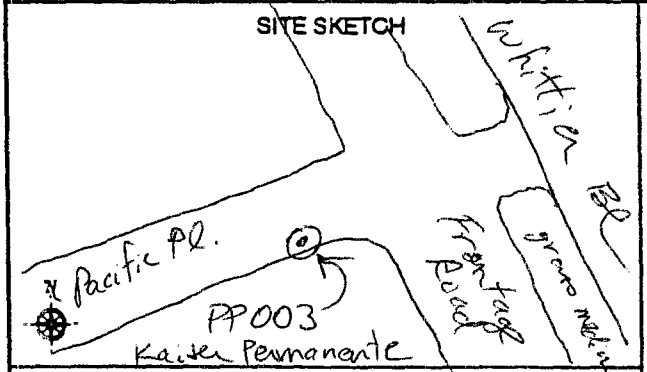
SAMPLE NO.: GW301-PP003-0094
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP003-0094
TIME COLLECTED: 0825
SAMPLE DEPTH: 94' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		~92' bgs sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer in open hole.
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox sdn; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hap-site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Adv to 86' bgs; no water. Adv. to 96' bgs; v. little water; screen prob. mudded up. Pull rod & sample open hole.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

No Sample - BC

COMPANY: RFW
CLIENT: WACE/EPA
PROJECT: Omega
SITE:

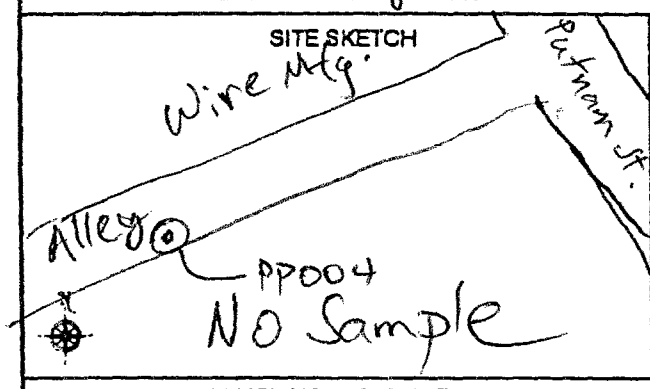
SAMPLE NO.: ~~GW301-PP004-0073~~
DATE: 8-15-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION TD = 75'

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: ~~GW301-PP004-0073~~ No Sample BC
TIME COLLECTED: ~~1355~~
SAMPLE DEPTH: 72.5' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID	0.0	
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

rounding

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE: SS Bailer w/ 5' pvc screen
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	~~FASP~~	~~Chlor. VOCs, 3 VOAs - Hop Site + GC/MS~~	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Auto Lift
Slow fill before sample - wait ~15' to accumulate; pull up another foot & wait again. 1425 still no water ⇒ OMITTED

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form Re-established

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

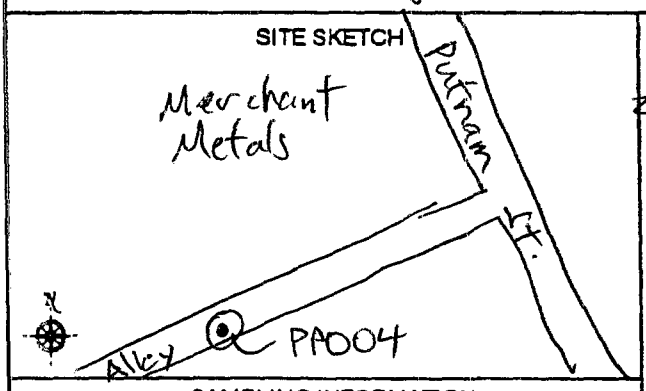
SAMPLE NO.: QW301-PP004-0086
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: QW301-PP004-0086
TIME COLLECTED: 0835
SAMPLE DEPTH: 84-88 'bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		86' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln, DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-Site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance sample boring to 88' bgs TD. No CPT litho. Waited ~15 min for sufficient water.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

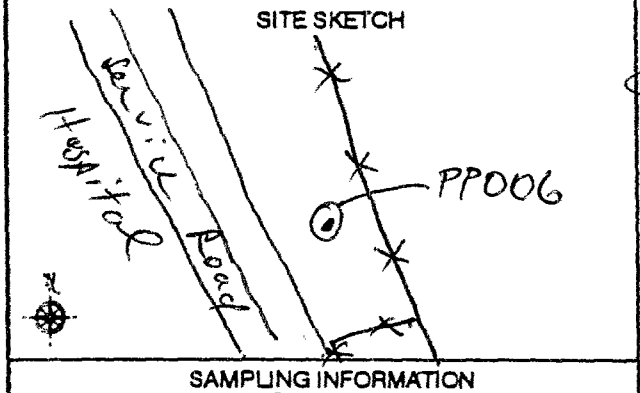
SAMPLE NO.: GW301-PP006-0070
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP006-0070
TIME COLLECTED: 1120
SAMPLE DEPTH: 72' bgs FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	~62' bgs PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID	0.0	
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox rinse; DI rinse
QA SAMPLES: sequential; 2nd
* CO-LOCATED SAMPLE ID: GW301-PP006-4070 → 1125 sample time
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID: 1070
LAB CONTROL SAMPLE ID:

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	chlor VOCs; Hop-site & GCMS	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho and PPD curve first. TD refusal @ 78.5' bgs. Sample boring slow water => wait for water; then sample — keep sample times as-is.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE: TD = 83.3'

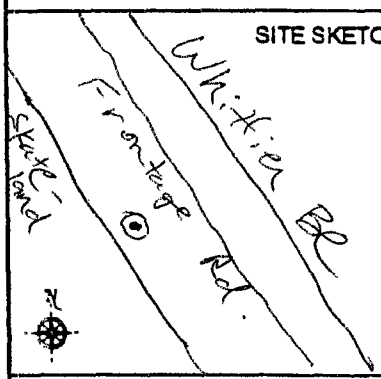
SAMPLE NO.: GW301-PP007-0081
DATE: 8-15-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP007-0081
TIME COLLECTED: 1025
SAMPLE DEPTH: 80.8' bgs (FT) M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
(GROUNDWATER) WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - R/V - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK ?
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		68.5' bgs
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE: bailer in 5' length of screen
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB (FLD) OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) - RAD - OTH	EACP	Chlorinated VOCs	Hap-site + GC/MS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT auto-lith

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: WACF/EPA
PROJECT: Omega
SITE:

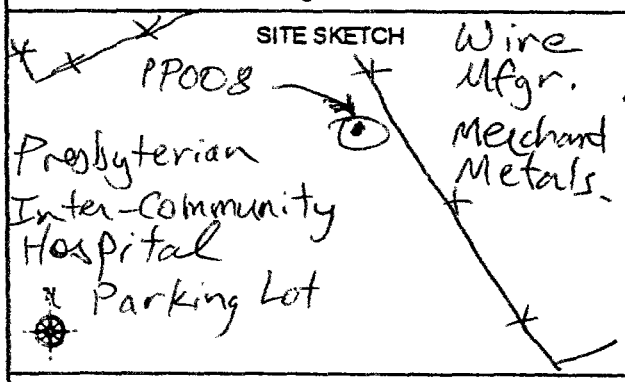
SAMPLE NO.: GW301-PP008-0070
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION TD = 72'

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP008-0070
TIME COLLECTED: 0930
SAMPLE DEPTH: 70' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		60' bgs — sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer and 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs, Hap-site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

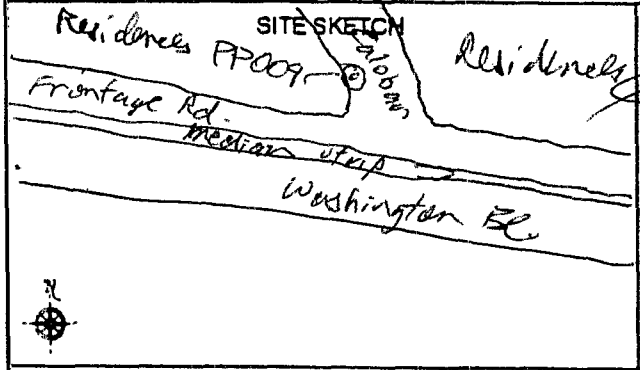
SAMPLE NO.: GW301-PP009-0047
DATE: 8-18-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP009-0047
TIME COLLECTED: 45-49' bgs 1100
SAMPLE DEPTH: ~~43-49' bgs~~ FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		35.8' bgs - sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 6S bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hap-Site+GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Refusal @ 49' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

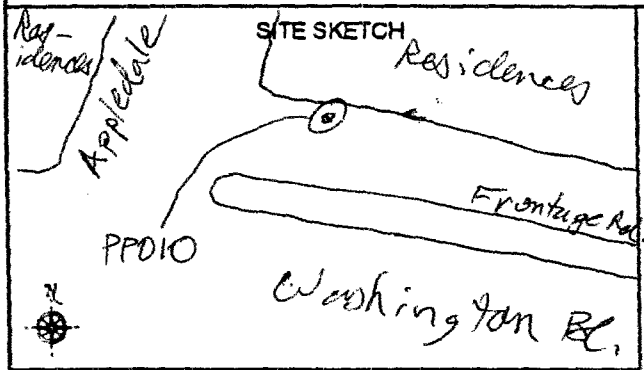
SAMPLE NO.: GW301-PP010-0045
DATE: 8-18-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP010-0045
TIME COLLECTED: 1335
SAMPLE DEPTH: 43-47' bgs. FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	28.3' bgs ⇐ PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor-VOCs; Hap-Site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho. PPD curve @ 44' bgs. ⇒ DTW ≈ 28.3' (sand beg. 43' bgs)
CPT boring refusal @ 47' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G0912911T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

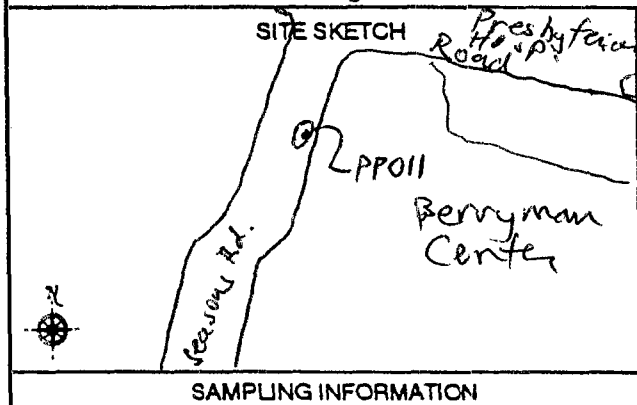
SAMPLE NO.: GW301-PP011-0059
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION TD=

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP011-0059
TIME COLLECTED: 1425
SAMPLE DEPTH: 1 bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

~~SOURCE:~~ GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	52' bgs from PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB PLD OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hup-lite & GC/MS	3 VOAs.
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho & PPD; sandy @ 55-60, & ~72'
TD CPT 74' (Refusal)
Sample boring will do two depths; near 60' & near TD
TAW

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

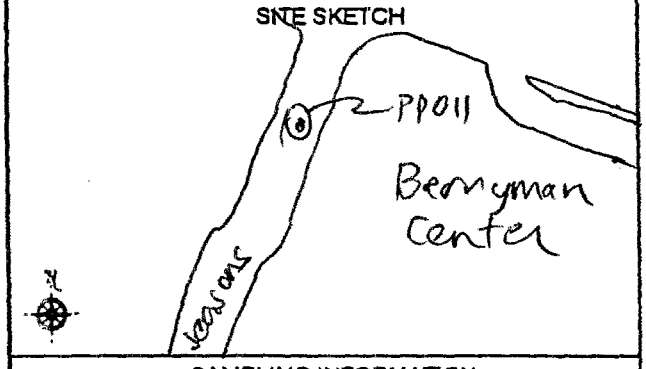
SAMPLE NO.: GW301-PP011-0072
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP011-0072
TIME COLLECTED: 1447
SAMPLE DEPTH: 74.5-2 = 72.5 FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	52' bgs, per PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unfiltered

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs - Hap Site and GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: See GW301-PP011-0059; This is deeper sample at 74.47-2' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

SAMPLE NO.: GW301-PP012-0063
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

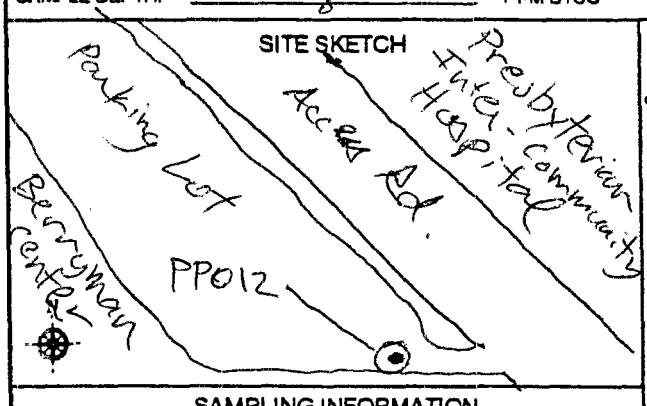
SAMPLE IDENTIFICATION

TD=65' bgs

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP012-63
TIME COLLECTED: 0850
SAMPLE DEPTH: 63' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		45.0' bgs sound.
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer and 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs, Hap-Site+GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. sand (c)(est.) @ ~63' bgs. TD=65' bgs tight but no refusal.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

BC

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

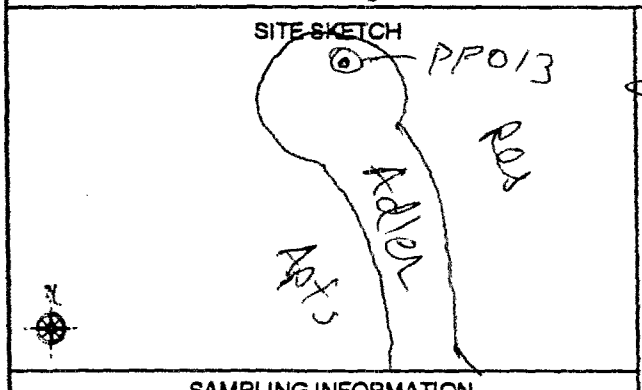
SAMPLE NO.: ~~PP~~ GW301-PP013-0056
DATE: 8-16-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP013-0056
TIME COLLECTED: 1620
SAMPLE DEPTH: 56' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	45' bgs ⇐ PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID	0.0	
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	chlor VOCs; hap-site plus gc/ms	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - ~~SPL~~ RNS - TRP - LCS

COMMENTS: CPT lithology refusal @ 58' bgs. Sandy @ ~41-50; 58'
PPD curve ⇒ DTW = 45' bgs.
Sample boring to refusal @ 58' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

RC

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

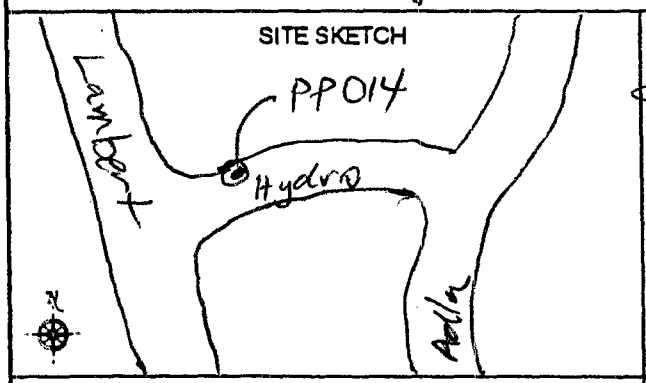
SAMPLE NO.: ~~PPO~~ GW301-PP014-0052
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP014-0052
TIME COLLECTED: 0825
SAMPLE DEPTH: 50-54' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOB - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		43.5 bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 5' bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI water
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hop-Site + GC/MS)	3 VOAs.
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Litho. Adv. sample boring to refusal @ 54' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G0912911T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

SAMPLE NO.: GW301-PP015-0084
DATE: 8-15-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

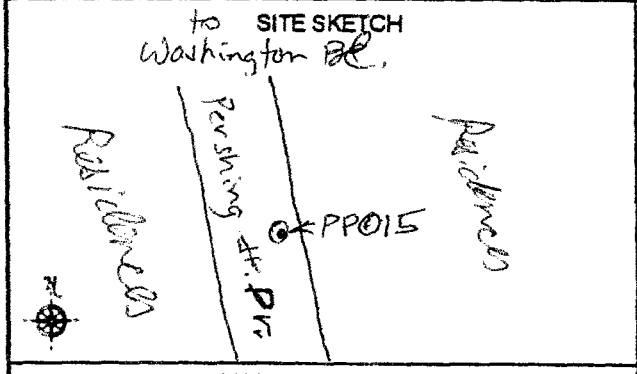
SAMPLE IDENTIFICATION

TD sample boring = 86' bgs.

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP015-0084
TIME COLLECTED: 1610
SAMPLE DEPTH: 83.5' FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	61' bgs ← PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID	0.0	
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alcmox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chla ~~solvents~~ VOCs, HAP-Site + GC/MS, 3 VOAs	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL SPL - RNS - TRP - LCS

COMMENTS: CPT Auto-lith & PDP curve. TD (Refusal @ 88').
Just tagged sand ~ @ TD.
Sample boring PP015 TD = 86' (Refusal) bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

0080

COMPANY: RFW
CLIENT: USACE / US EPA
PROJECT: Omega Chemical
SITE:

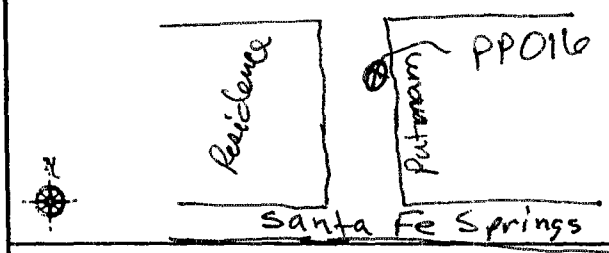
SAMPLE NO.: GW 301 - PP016 - 0080
DATE: 8/16/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW 301 - PP016 - 0080
TIME COLLECTED:
SAMPLE DEPTH: 80' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		81' bgs - sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer and 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB FLD - OTH
DESCRIBE OTHER: B
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln, DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Cl VOCs, Hap-site + GC/MS	8 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho
Refusal @ 82.5 ft bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

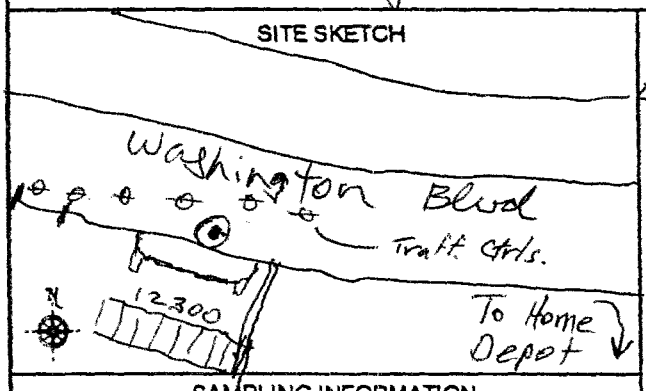
SAMPLE NO.: GW301-PP017-0056
DATE: 8-18-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP017-0056
TIME COLLECTED: 1005
SAMPLE DEPTH: 54-58 'bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	NPPD curve	40.5' bgs
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

rounde

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: ss bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW301-PP017-1056@1010 → sequential dup; second.
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hep-Site + GC/MS	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho to refusal @ TD = 63' bgs. No PPD curve. Adv. sample boring to 58' bgs; basically refusal.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

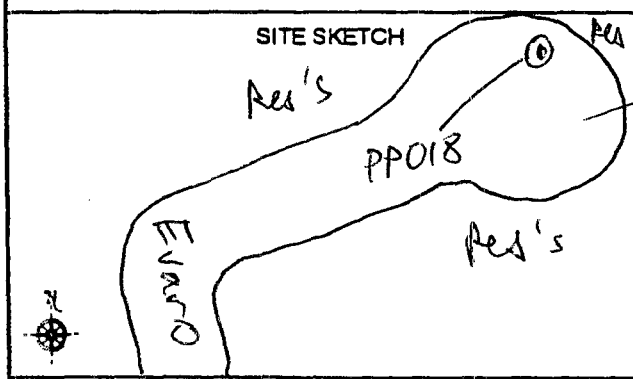
SAMPLE NO.: GW301-PP018-0058
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP018-0058
TIME COLLECTED: 0950
SAMPLE DEPTH: 46-60' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		40' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0-0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS Bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FAIP	Chlor. VOCs - Hap - Site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CAT litho. Adv. sample boring to 60' bgs TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

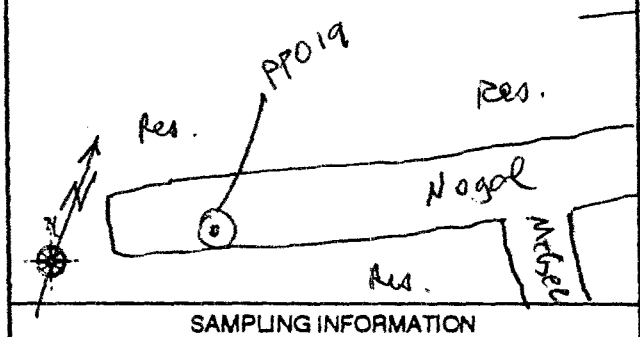
SAMPLE NO.: GW301-PP019-0058
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP019-0058
TIME COLLECTED: 1045
SAMPLE DEPTH: 56-60' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		48' bgs (sounder)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (Map-site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Adv. sample boring to 60' bgs. Sounded DTW = 48' bgs. immediately after sample.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

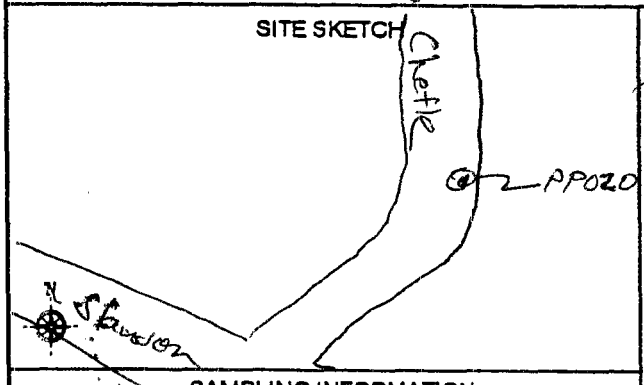
SAMPLE NO.: QW301-PP020-0050
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: QW301-PP020-0050
TIME COLLECTED: 1420
SAMPLE DEPTH: 48-52' ~~50~~ bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	bgs	⇐ PDP curve
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

PPD BC

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer & 5' PVC screen.
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs;	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho & PDP test. CPT boring adv. to refusal @ 75' bgs TD. First sample @ 50', second, deeper sample ~~is~~ listed on separate form.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED?: YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

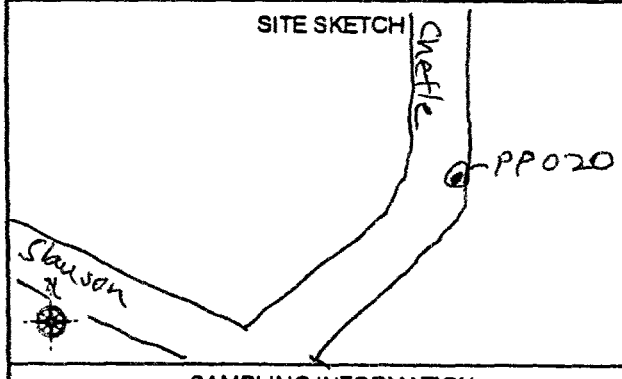
SAMPLE NO.: GW301-PP020-0073
DATE: 9-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP020-0073
TIME COLLECTED: 1445
SAMPLE DEPTH: 71-75 'bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	~25' bgs ≤ PPD test	~50' bgs
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

volume

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer & 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	CNor VOCs; Hap Site + QC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Second, deeper sample @ same location; based on ~~TD = 82'~~ refusal @ 75' bgs TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

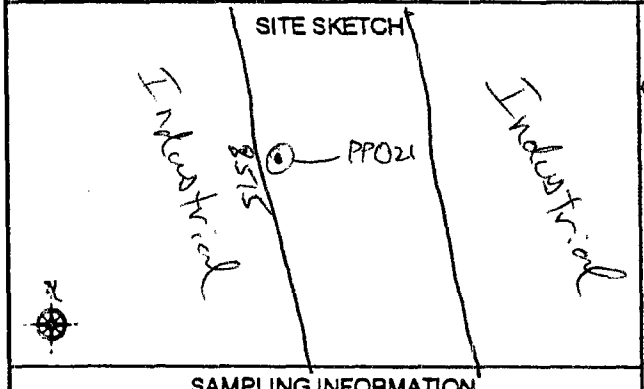
SAMPLE NO.: GW301-PP021-0058
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP021-0058
TIME COLLECTED: 1050
SAMPLE DEPTH: 56-60 'bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		33 'bgs sounded
TEMPERATURE		≈ rising
SP. COND.		
pH		
Eh		
DO		
PID		0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer & -5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB FLD OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID: 4001
RINSE BLANK ID: GW301-PP021-~~4008~~ → 1045
TRIP BLANK ID: N/A
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	chlor. VOCs, Hap-site + GC/MS	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Sample boring refusal @ 60' bgs T.D.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED: YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

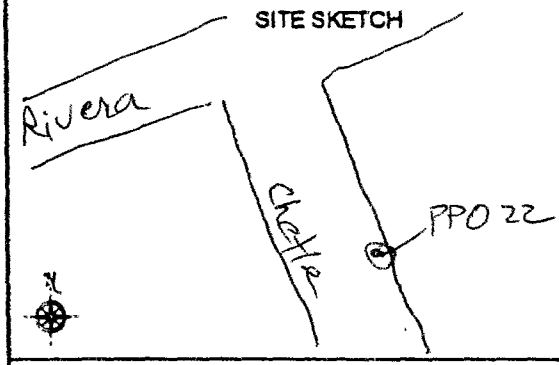
SAMPLE NO.: GW301-PP022-0058
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP022-0058
TIME COLLECTED: 1255
SAMPLE DEPTH: 56-60 'bgs. FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30 'bgs ← PP curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer & 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hap-site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho and PPD curve. CPT boring refusal @ 68' bgs TD. Sandy & Snd/grav 39 to 68'. Advance sample boring to 60' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

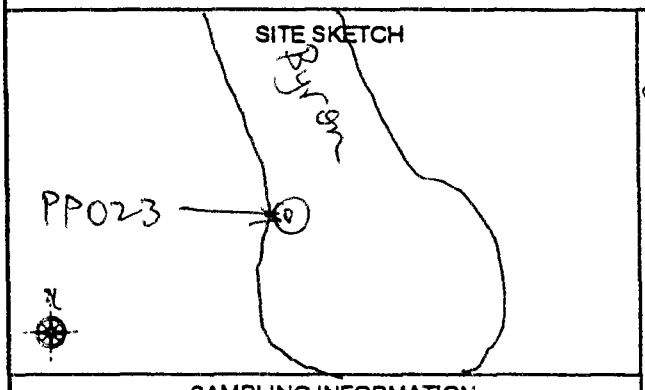
SAMPLE NO.: GW301-PP023-0063
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP023-0063
TIME COLLECTED: 0950
SAMPLE DEPTH: 63' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30' ⇐ PPP Curve	→ 29.5' bgs sound
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.5-0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs hap-site + GC/MS	3VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho, grvly snds @ 50-59'; 63-64.5' (TD-refusal); PPD test ⇒ DTW = 30' bgs. Sample boring refusal @ 65' TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

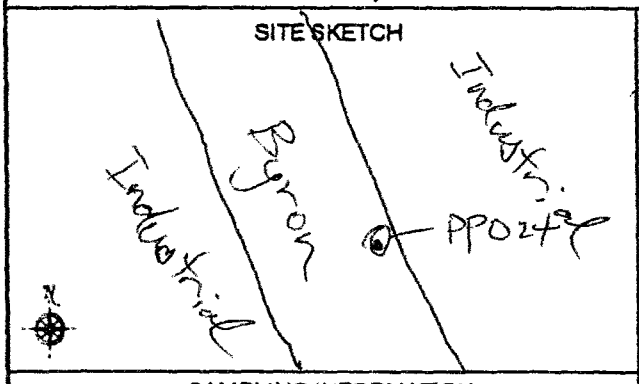
SAMPLE NO.: GW301-PP024-0058
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP024-0058
TIME COLLECTED: 1020
SAMPLE DEPTH: 58' bgs FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		28' bgs
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

sample

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; Hap-site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Litho. Sample boring TD @ 60' (Refusal) — sample @ ~58' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: USACE / US EPA
PROJECT: Omega Chemical
SITE:

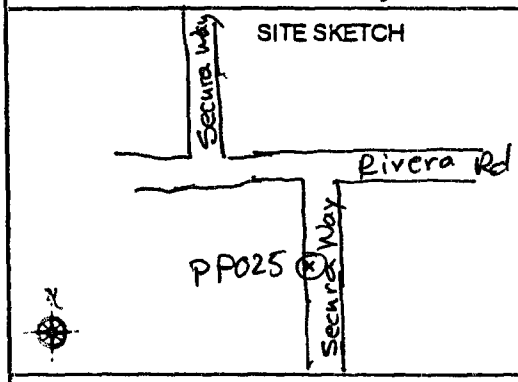
SAMPLE NO.: GW301-PP025-0050
DATE: 8/17/01
SAMPLER: B. Clarke
SIGNATURE:

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP025-0050
TIME COLLECTED: 15:20
SAMPLE DEPTH: 50' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		25' sounded bgs.
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer through PVC screen 5'
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	chlor VOCs; Hapsite + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD ~ 52' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

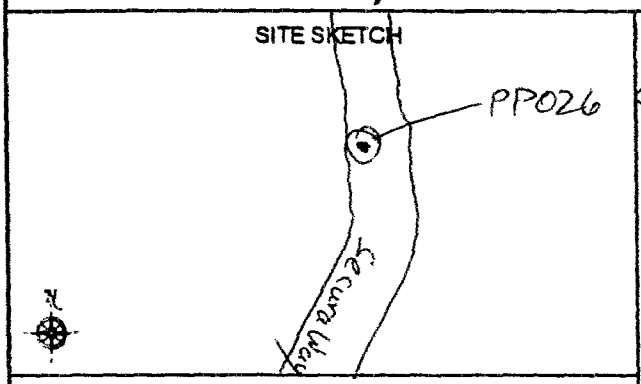
SAMPLE NO.: GW301-PP026-0041
DATE: 8-17-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP026-0041
TIME COLLECTED: 1550
SAMPLE DEPTH: 39-43' bgs screen FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		24' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer & 5' PVC screen.
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	ChlorVOCs, Hap-Site + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Sample boring refusal @ TD = 43' bgs. Feels cemented, driller says.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

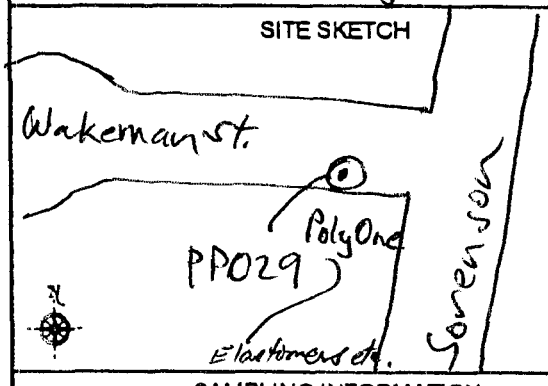
SAMPLE NO.: GW301-PP029-0045
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP029-0045
TIME COLLECTED: 1415
SAMPLE DEPTH: 43-47' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	26' bgs (PPD curve)	24.8' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID: GW301-PP029-0046

(1415) MS/MSD

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (Hap-Site + GC/MS)	3 + 5 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Adv. CPT litho to refusal @ 44' bgs. silty sand begins @ 34' bgs; grvly sand near TD. Sample boring advanced to refusal @ 47' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

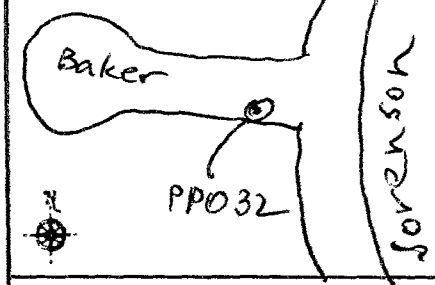
SAMPLE NO.: GW301-PP032-0062
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP032-0062
TIME COLLECTED: 1240
SAMPLE DEPTH: 60 - 64' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		39.5' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2-0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

(1235) sample time

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unfiltered

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen.
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: GW301-PP032-4002
LAB CONTROL SAMPLE ID: N/A

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-Site + GC/MS)	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Adv. sample boring to refusal @ 64' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

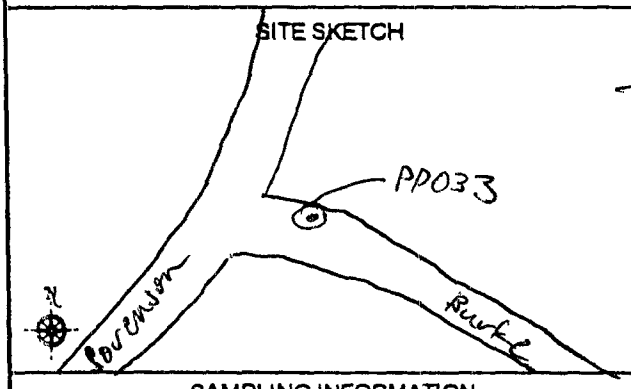
SAMPLE NO.: GW301-PP033-0038
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP033-0038
TIME COLLECTED: 1415
SAMPLE DEPTH: 36 - 40 ' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		34' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.5 to 0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-Vite + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - DPL - RNS - TRP - LCS

COMMENTS: CPT like refusal @ 40' bgs. Adv. sample boring to refusal also @ 40' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

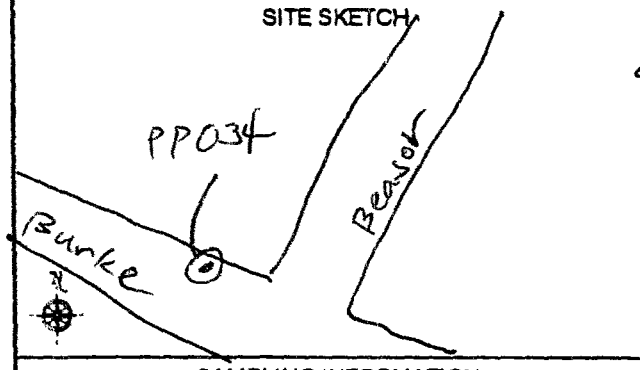
SAMPLE NO.: GW301-PP034-0033
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP034-0033
TIME COLLECTED: 1305
SAMPLE DEPTH: 31—35' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		28' bgs (sampled)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.5-0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSS - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' Ave screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor-VOC, (Hap-site + GC/MS)	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho. refusal @ 36' bgs TD, in gravelly sand. Adv. sample bor

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

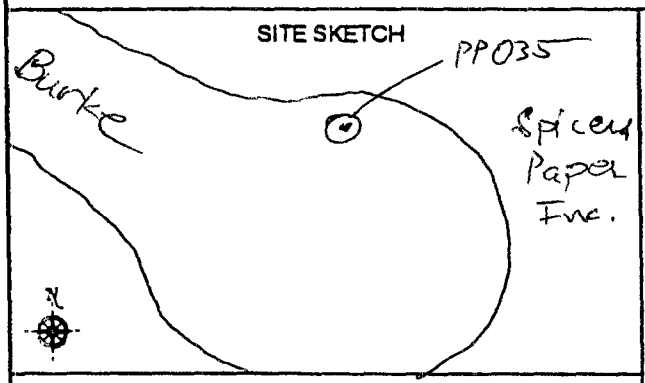
SAMPLE NO.: GW301-PP035-0036
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP035-0036
TIME COLLECTED: 0755
SAMPLE DEPTH: 34-38' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WCB - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		28' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (Hap-Site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CAT litho. Sample boring adv. to refusal @ 38' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

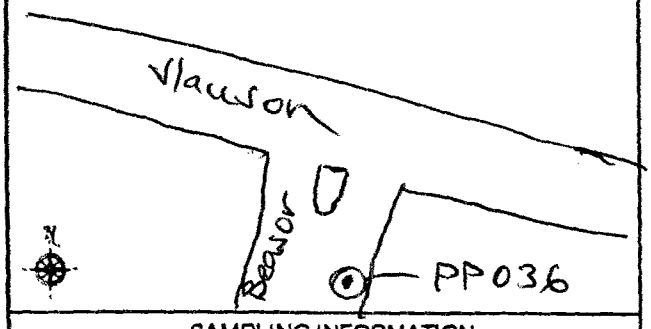
SAMPLE NO.: GW301-PP036-0054 52
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID:
TIME COLLECTED: 1125
SAMPLE DEPTH: ~~52-56' bgs~~ FT-M BTOC
50-54' bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		28' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		4.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse 2 BC
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW301-PP036-1054 (1130)
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID: 2 BC
MS/MSD Volume
LAB CONTROL SAMPLE ID: GW301-PP036-0054 (1125, 1130)

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-site + QC/MS)	6 + 3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Litho. Adv. sample boring to 54' bgs TD. Found DTW = 28' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE: 41-45' bgs.

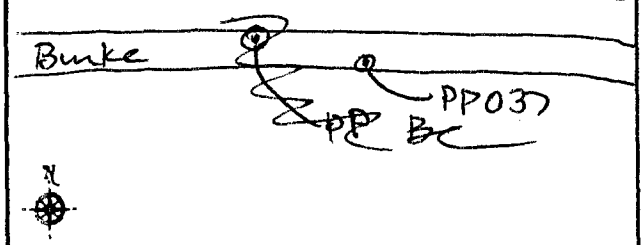
SAMPLE NO.: GW301-PP037-0043
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP037-0043
TIME COLLECTED: 1445
SAMPLE DEPTH: 41-45' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WGS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		25.5' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 5' bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Clorox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NO CPT (i.h.o. sample boring refusal in grav (?) @ 45' bgs TD. Sound DTW after @ 25.5' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

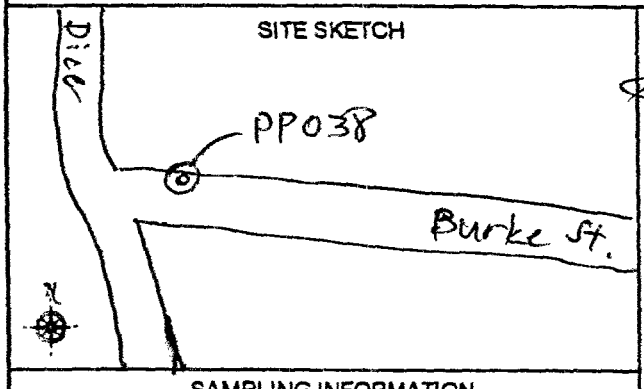
SAMPLE NO.: GW301-PP038-0073
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP038-0073
TIME COLLECTED: 0955
SAMPLE DEPTH: 71-75' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	34.6' bgs (PPD curve)	~64' bgs secured
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unfiltered

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	CHlorVOCs (Hap-Site + GC/MS)	3 VOAs.
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Adv. CPT litho to refusal @ 73' bgs. Shallow sands (Grasper Aquifer?). Deeper sands below ≈73' bgs (Gage Aquifer?). Adv. sample boring to refusal @ 75' bgs TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

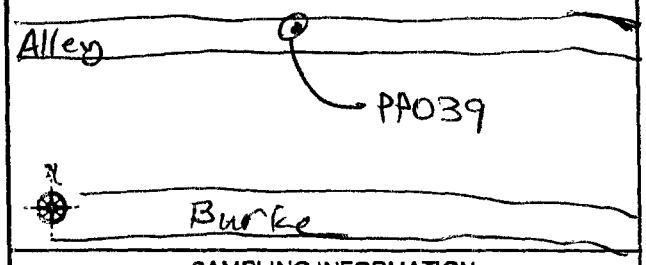
SAMPLE NO.: GW301-PP039-0033
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP039-0033
TIME COLLECTED: 1610
SAMPLE DEPTH: 31 – 35' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	25' bgs (PPD curve)	22' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	CNor VOCs (Hop-Site + GCMS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - BPL - RNS - TRP - LCS

COMMENTS: CPT litho to refusal @ 35' bgs. Sand @ ~30.5' bgs. Sample boring adv. to refusal @ 35' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

Be GW301-PP040-0062

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

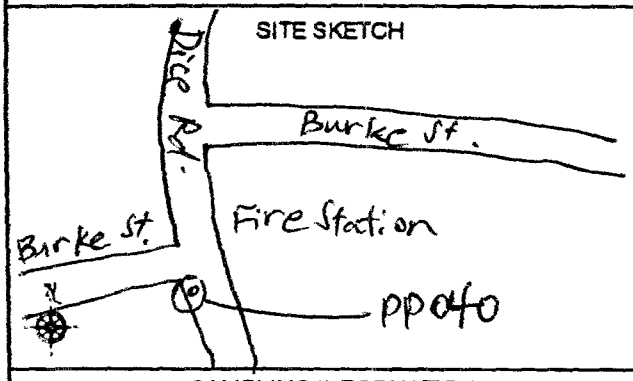
SAMPLE NO.: ~~PP301-0~~
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP040-0062
TIME COLLECTED: 1115
SAMPLE DEPTH: 60-64' bgs FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	40.5' bgs (PPDcurve)	46' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2-0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' Arc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs; (Hap site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL SPL - RNS - TRP - LCS

COMMENTS: CPT litho to refusal @ 64' bgs. (Sand begins @ ~63'). Adv. sample boring to refusal @ 64' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G0912917

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

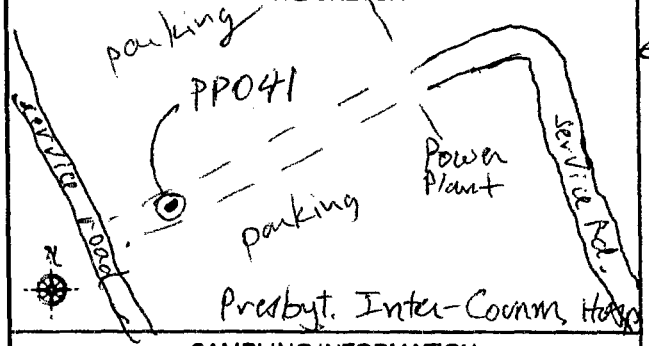
SAMPLE NO.: GW301-PP041-0065
DATE: 8-18-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clark

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP041-0065
TIME COLLECTED: ~~14~~ BC ~~1520~~ BC 1505
SAMPLE DEPTH: — ' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER - WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	53.8' bgs ⇐	PPD curve
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 - 0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs - Hap-Site/GCMS	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: BC COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho boring to ~~refusal @~~ 62' bgs. PPD curve ⇒ DTW = 53.8' bgs. ~~Sample boring~~ BC Continue CPT to refusal @ 72' bgs. Sample boring ~~refusal at~~ BC 67' bgs TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

No Sample

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

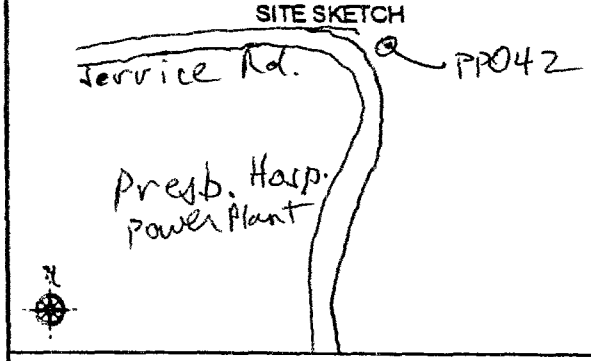
SAMPLE NO.: ~~GW301 PP042-00~~
DATE: 8-20-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: ~~GW301 PP042-00~~
TIME COLLECTED: ~~08~~
SAMPLE DEPTH: - ' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:

	BEFORE	AFTER
WATER LEVEL	53' bgs ⇐ PPD curve	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen; + casing (temp. piezometer)
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EASP	Chlor VOCs - HapSite + GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho boring, refusal @ dense sand @ 60' bgs. PPD test ⇒ DTW = 53' bgs. Water v.v. slow ⇒ set temp piezometer to accumulate water. BC 8-22-01 No water at TD = 63' btoc. (~1' stickup) ⇒ No sample; abandoned. BC

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

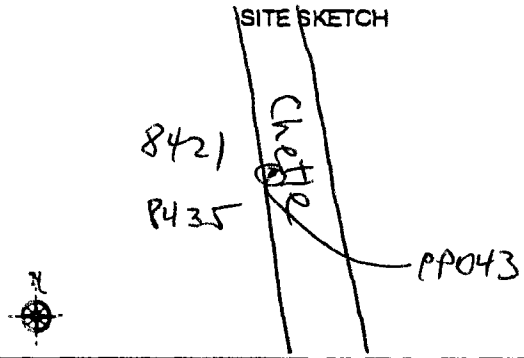
SAMPLE NO.: GW301-PP043-0051
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP043-0051
TIME COLLECTED: 0935
SAMPLE DEPTH: 49-53' bgs. FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	36 'bgs (sounded)	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (Hop-Site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NO CPT litho. Adv. sample boring to 53' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: UUKE/EPA
PROJECT: Omega
SITE:

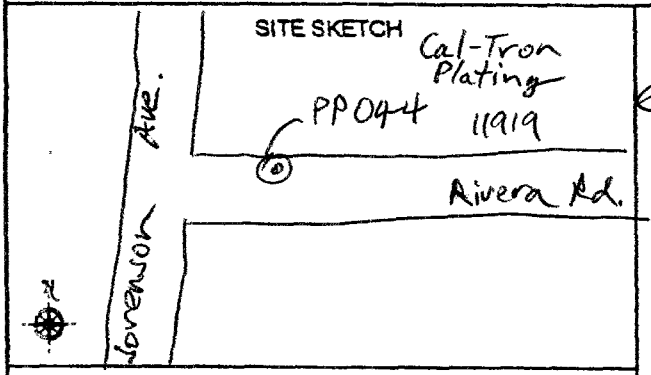
SAMPLE NO.: GW301-PP044-0051
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP044-0051
TIME COLLECTED: 1000
SAMPLE DEPTH: – ' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		24' bgs (Sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2-0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FALP	Chlor. VOCs (Hap-Lite + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Adv sample boring to refusal @ 53' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

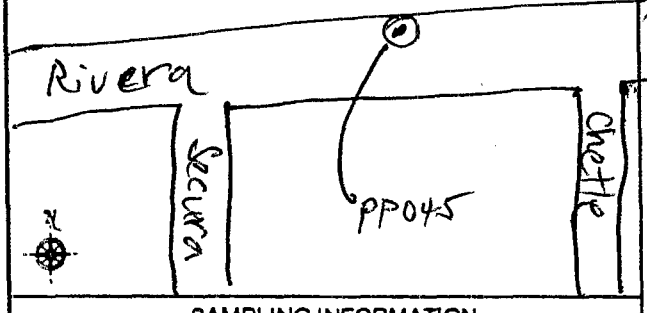
SAMPLE NO.: GW301-PP045-0052
DATE: 8-21-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP045-0052
TIME COLLECTED: 1550
SAMPLE DEPTH: 50 — 54' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH Public storage



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER: WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		27' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW301-PP045-1052 (1555)
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-Site + GC/MS)	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NO CPT litho. Adv. sample boring to 54' bgs TD (refusal).

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ?: YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

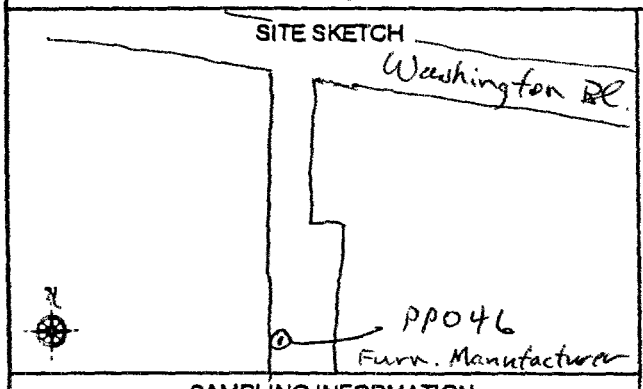
SAMPLE NO.: GW301-PP046-0047
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP046-0047
TIME COLLECTED: 1110
SAMPLE DEPTH: 45--49' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	25.5' bgs (PPD curve)	26' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.8-1.1
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer, 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln, DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (Hap-Site plus QC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance CPT litho to refusal @ 52' bgs; Advance sample boring to 49' (base of gravly sand unit).

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

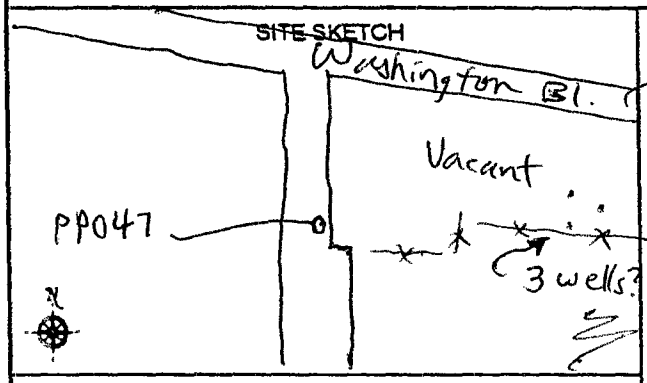
SAMPLE NO.: GW301-PP047-0048
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP047-0048
TIME COLLECTED: 1135
SAMPLE DEPTH: 46-50' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WGS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		28' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2-0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: ss bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (Hap-Site + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance sample boring to 50' bgs. No CPT litho.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

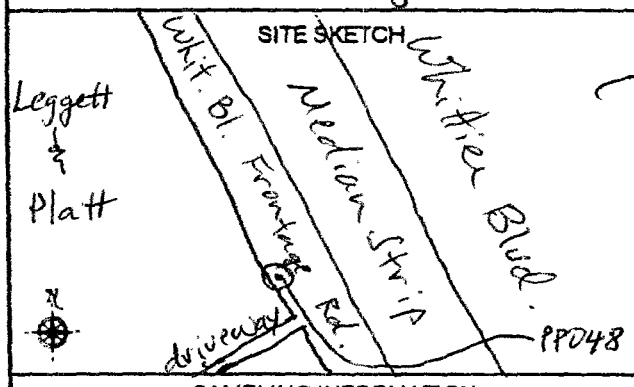
SAMPLE NO.: ~~GW-PT~~ GW301-PP048-0099
DATE: 8-22-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP048-0099
TIME COLLECTED: 1245
SAMPLE DEPTH: 97-101' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		98' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2-0.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC, GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Adv. sample boring to 101' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

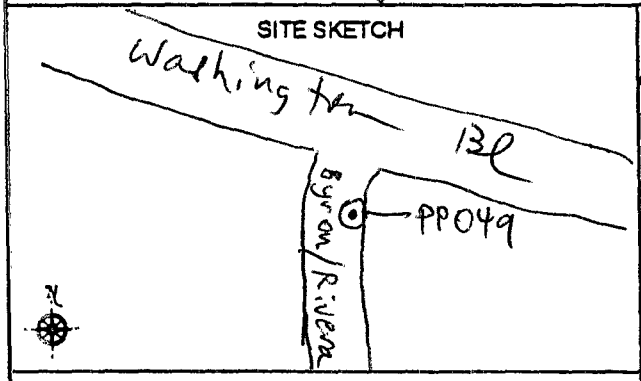
SAMPLE NO.: GW301-PP049-0063
DATE: 8-23-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP049-0063
TIME COLLECTED: 0800
SAMPLE DEPTH: 61 — 65' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		45' bgs Sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 1.5 bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln, DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance sample boring to refusal @ 65' bgs. Sandy sample.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

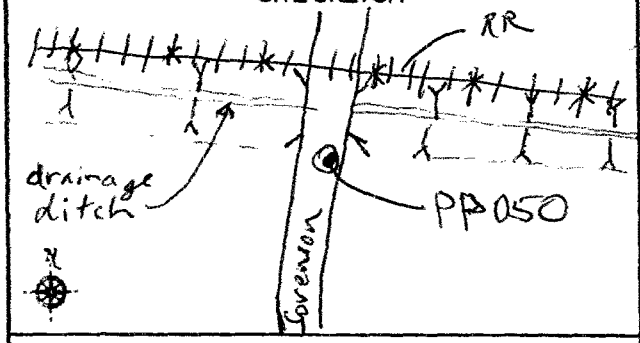
SAMPLE NO.: QW301-PP050-0072
DATE: 8-23-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: QW301-PP050-0072
TIME COLLECTED: 0845
SAMPLE DEPTH: 71-75' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		36' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		NM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 5' bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC+GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Sand apparent bel. 50' (to driller). Adv. to refusal @ 75' bgs. Achieved greater depth than other locations in this area.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

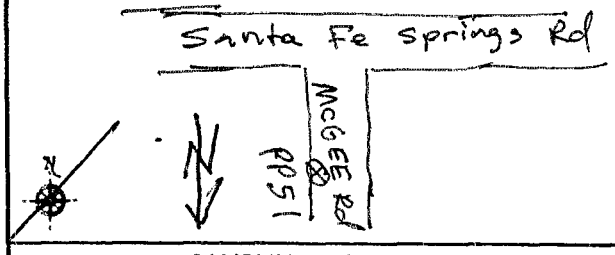
SAMPLE NO.: GW301-PP051-0055
DATE: 8-23-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP051-0055
TIME COLLECTED: 0915
SAMPLE DEPTH: 53-57' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		43' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unfiltered.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC+GC/ms)	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance to 57' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US ACE / US EPA
PROJECT: Omega Superfund Site
SITE:

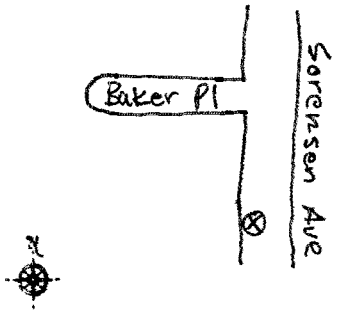
SAMPLE NO.: GW301-PP052-0055
DATE: 8/23/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP052
TIME COLLECTED: 11:07 AM
SAMPLE DEPTH: 57' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30' bgs (PPD curve)	27' (Sounder)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (GC+GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho. Silty sand apparent @ 70' bgs. Sand apparent @ 73' bgs. TD to refusal ~74' bgs. Sample Depth 57' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US ACE / US EPA
PROJECT: Omega Superfund Site
SITE:
SAMPLE NO.: GW301-PP052-1055
DATE: 8/23/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

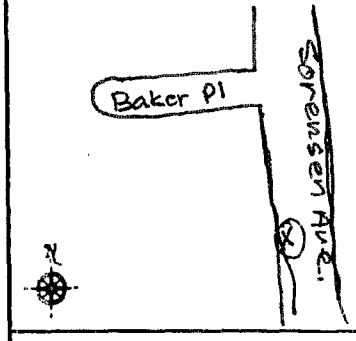
SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP052
TIME COLLECTED: 11:15 AM
SAMPLE DEPTH: 57' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30' bgs (PPD Curve)	27' (Sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (GC + GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho. Silty sand apparent @ 70' bgs. Sand apparent @ 73' bgs. TD to refusal ~ 74' bgs. Sample Dept @ 57' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

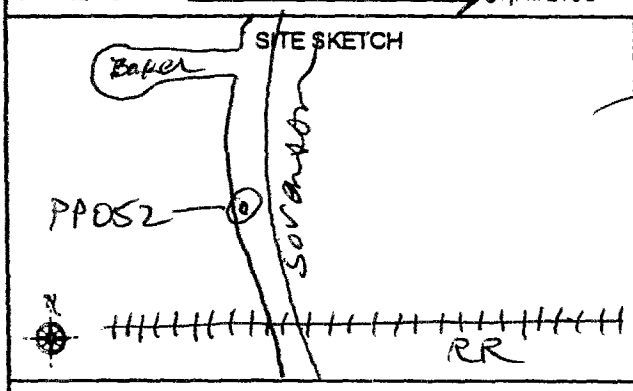
SAMPLE NO.: GW301-PP052-0055
DATE: 8-23-01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP052-0055
TIME COLLECTED: 1107
SAMPLE DEPTH: 53-57 ft. bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30' bgs by PPD auto	27' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5 ft. PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: ~~PP~~GW301-PP052-1055 (1115)
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC + GC/MS)	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advanced CPT litho to refusal at 74' bgs TD. Sample boring advanced to base of primary sand unit at 57' bgs TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US ACE / US EPA
PROJECT: Omega Superfund Site
SITE:

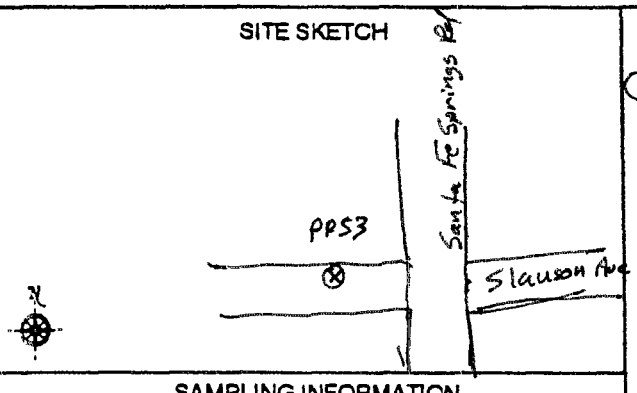
SAMPLE NO.: GW301-PP053-0049
DATE: 8/23/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP053-0049
TIME COLLECTED: 13:09
SAMPLE DEPTH: 49' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		25' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		ND
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer through 5" screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A BC
SPLIT SAMPLE ID: ↓ BC 03
BC RINSE BLANK ID: GW301-PP053-4049 ~~(1309)~~ (1300) BC
TRIP BLANK ID: N/A BC
LAB CONTROL SAMPLE ID: ✓

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	(GC + GC/MS) chlor. VOCs	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME: ↓
PARAMETERS: SAME OTHER: ↓
REPRESENTATIVES NAME: ↓
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth ~ 51' bgs. Prepared rinsate blank prior to sampling. BC

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

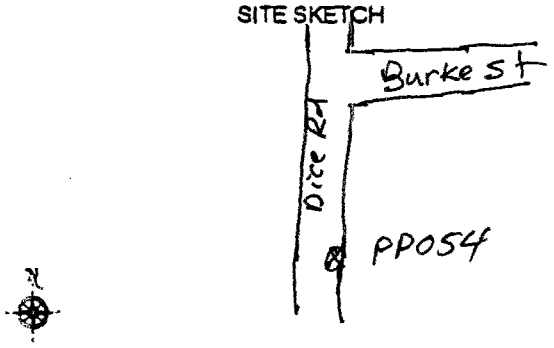
COMPANY: Roy F. Weston
CLIENT: US ACE / US EPA
PROJECT: Omega Superfund site
SITE:
SAMPLE NO.: GW301-PP054-0062
DATE: 8/23/01
SAMPLER: G. Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP054-0062
TIME COLLECTED: 14:12
SAMPLE DEPTH: 62' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		46.5' (Sounded) bgs (46.5' bgs)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		ND
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC+GC/ms)	3 Voas
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth to refusal ~ 64' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

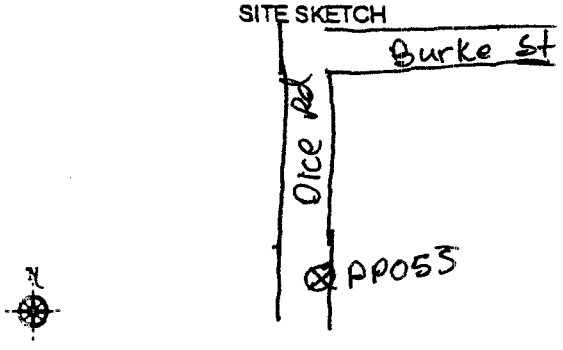
COMPANY: Roy F. Weston
CLIENT: US ACE / US EPA
PROJECT: Omega Superfund Site
SITE:
SAMPLE NO.: GW301 - PP055-0065
DATE: 8/23/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP055-0065
TIME COLLECTED: 14:42
SAMPLE DEPTH: 65 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		45' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		ND
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln; DI H2O
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor VOCs (GC+GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth to refusal: 67' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Superfund Site
SITE:

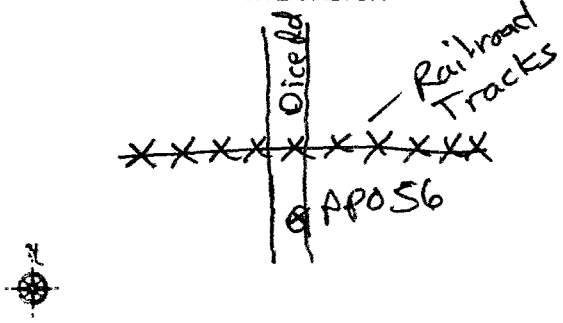
SAMPLE NO.: GW301-PP056-0058
DATE: 8/23/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW 301-PP056-0058
TIME COLLECTED: ~~55~~ 1515
SAMPLE DEPTH: 58' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved Tick

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: bailer through 5' screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox; DI H_2O Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (GC+GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth to refusal: 60' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F Weston
CLIENT: US ACE/US EPA
PROJECT: Omega Superfund Site
SITE:

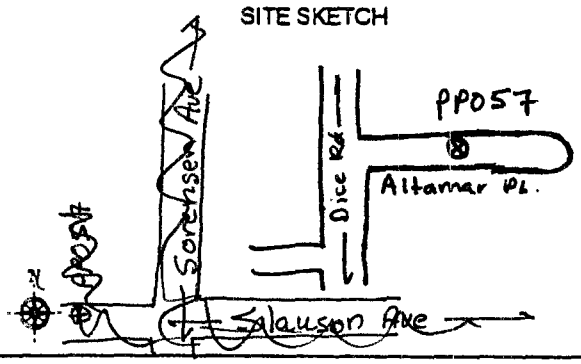
SAMPLE NO.: GW301 - PP057 - 0062
DATE: 9/~~8~~4/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP057-0062
TIME COLLECTED: 09:22
SAMPLE DEPTH: 62' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	47' bgs (PPO Curve)	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		ND 0.8
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: preserved HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox Soln; DI H_2O Rinse
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP	Chlor. VOCs (GC+GC/ms)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT TD to refusal : 70' bgs
Sample boring to ~~refusal~~ TD : 64' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston, Inc.
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

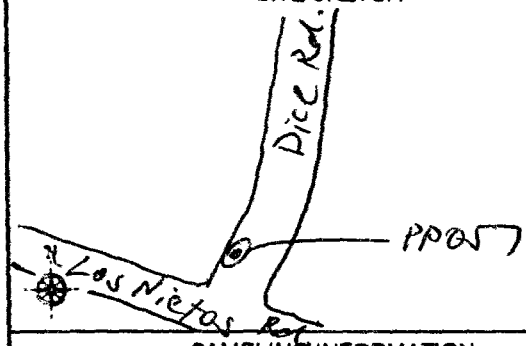
SAMPLE NO.: GW301-PP058-0064
DATE: 9-4-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP058-0064
TIME COLLECTED: 1005
SAMPLE DEPTH: 60-64' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		55' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		ND-0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FANP/Region IX Lab	Chlor VOCs (GC/MS)	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho.
TD to refusal: 66' bgs
GW samples collected @ 10:05

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

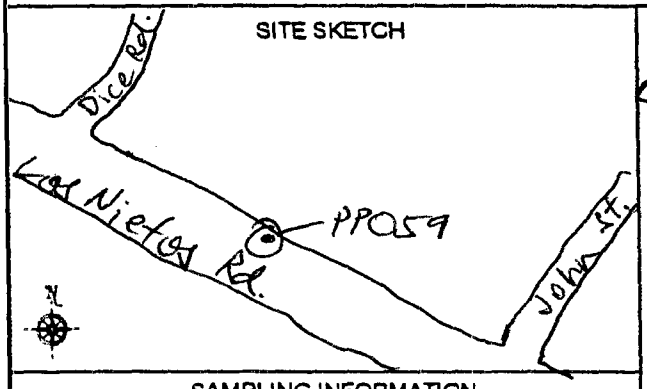
SAMPLE NO.: GW301-PP059-0063
DATE: 9-4-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP059-0063
TIME COLLECTED: 12:10
SAMPLE DEPTH: 61-65' 63' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	61' bgs (PPD curve)	58.5' bgs sounded
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox Soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP/Region IX Lab	VOCs - GC/MS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Adv. CPT to refusal @ 94' bgs
Sample boring advanced to 65' bgs to intermediate S+G

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

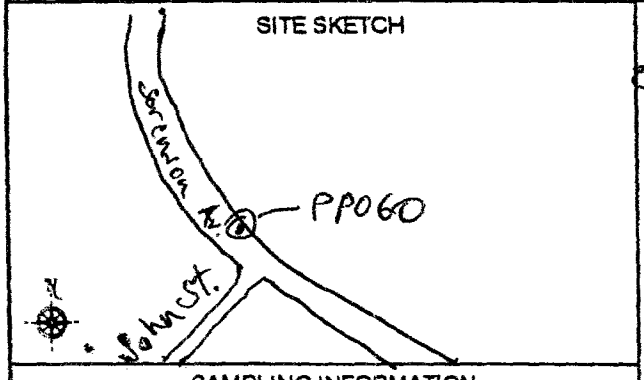
SAMPLE NO.: GW301-PP060-0065
DATE: 9-7-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP060-00
TIME COLLECTED: 1320
SAMPLE DEPTH: 63-67' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		32' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		2.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

(1325) sample time

(1315) sample time

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: SS bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW301-PP060-1065
SPLIT SAMPLE ID: N/A
RINSE BLANK ID: GW301-PP060-4005
TRIP BLANK ID: NA
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP/Region IX Lab	VOCs - GC/MS	3+3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Adv. sample boring to 67' bgs. Slower yield, but enough water for samples.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: RFW BC
CLIENT: USACE/~~OM~~ EPA
PROJECT: Omega
SITE:

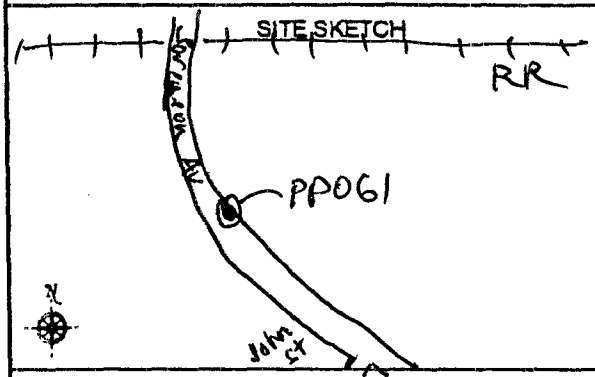
SAMPLE NO.: GW301-PP061-0065
DATE: 9-4-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP061-0065
TIME COLLECTED: 1404
SAMPLE DEPTH: 63-67' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		59' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: unpreserved

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: ss bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID: GW301-PP061-0065 (1404)

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP/Region 9 Lab	VOCs (GC/MS)	3+3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance sample boring to 67' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

SAMPLE NO.: GW301-PP062-0038
DATE: 9-4-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

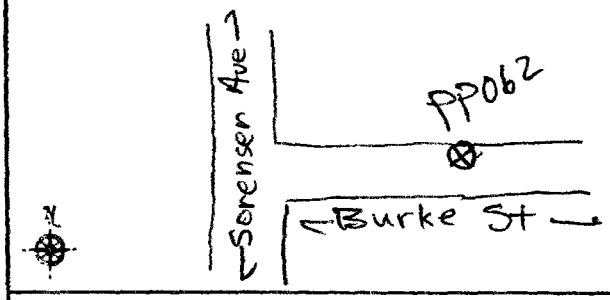
SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP062-0038
TIME COLLECTED: 15:05
SAMPLE DEPTH: 35 — 40 'bgs. FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER ~~WOS~~ - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		24' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 5" bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln.; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: GW301-PP062-2001
LAB CONTROL SAMPLE ID: N/A

(1525)
SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: Unpreserved

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP/Region IX Lab	VOCs - GCMS	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance sample boring to 40' bgs (refusal)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

4 401 BC

COMPANY: RFW
CLIENT: USACE/EPA
PROJECT: Omega
SITE:

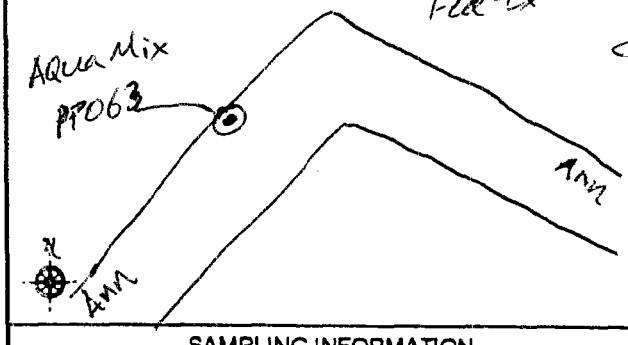
SAMPLE NO.: GW301-PP063-0059
DATE: 10-29-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 401 4 BC 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW301-PP063-0059
TIME COLLECTED: 1035
SAMPLE DEPTH: 57-61 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	22.7 PPD @ 42'	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 PPM
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 6.5" acrylic bailer; 5' of PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho to ~~refusal @ 52' bgs~~ 103' bgs. Sndy grav @ 52' bgs. & deeper softer silt near TD.
Advance Sample boring to 60' bgs. Collected gw samples @ 1035. 0.0 ppm OVM reading

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

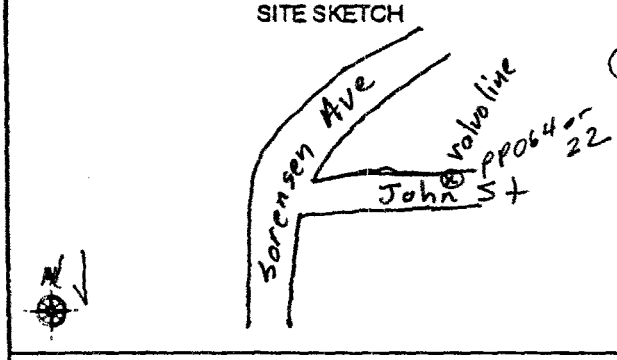
SAMPLE NO.: GW401-PP064-006
DATE: 10/29/01
SAMPLER: G. Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP064-006
TIME COLLECTED: 1101
SAMPLE DEPTH: 59-63 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		52.70' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: 6" Teflon bailer; 5' of PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAx-Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW boring to refusal @ 63' bgs @ 1059. Collect GW samples @ 1101. 0.0 ppm reading on OVM

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

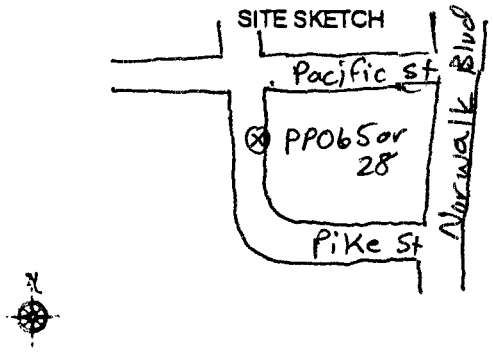
SAMPLE NO.: GW401-PP065-00~~52~~ 69 G.Z
DATE: 10/29/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP065-00~~62~~ 69 G.Z
TIME COLLECTED: G.Z ~~67~~ ~~G.Z~~ 1335
SAMPLE DEPTH: ~~50~~ ~~54~~ 71 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS: G.Z

	BEFORE	AFTER
WATER LEVEL	~~54' PPD~~	61.2' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		218 ppm; 4 ppm 2nd reading
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: G.Z acrylic ~~SS~~ bailer; 5' of PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI rinse

QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho to refusal @ 64' bgs
Sand layer @ approximately 52'. Silty sand/sand: 61'–62'.
TD @ 71' in CPT boring. GW samples collected @ 1335

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

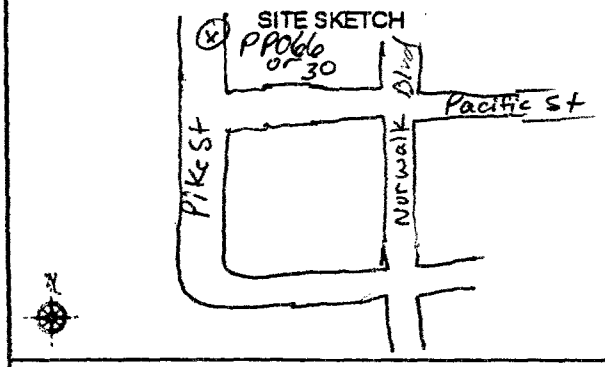
SAMPLE NO.: GW401-PP066-0065
DATE: 10/29/01
SAMPLER: G. Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP066-0065
TIME COLLECTED: 1458
SAMPLE DEPTH: 63-67 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	50' (PPD Curve)	
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		BC
PID		0.4
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		
	@1520	

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer ; 5' of PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Alconox soln; DI Rinse
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: GW401-PP066-~~0~~2002
LAB CONTROL SAMPLE ID: — N/A —

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho to refusal @ 62' bgs @ 1420
Cemented sand @ 31' bgs: Water level from PPD curve @ 50' bgs.
Advance GW boring penetration to 67' bgs. GW samples
collected @ 1458

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston, Inc.
CLIENT: USEPA / USACE
PROJECT: Omega
SITE:

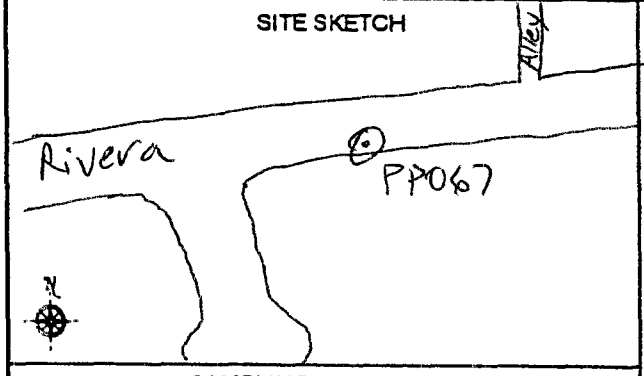
SAMPLE NO.: GW401-PP067-0046
DATE: 10-30-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP067-0046
TIME COLLECTED: 0810
SAMPLE DEPTH: 44-48' FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		24.8' bgs sounded.
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED OTHER
DESCRIBE: HCl.

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Acrylic bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - PLU - OTH
DESCRIBE OTHER: Disposable mat'ls
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL SPL - RNS - TRP - LCS

COMMENTS: Advance sample boring to refusal @ 48' bgs. No CPT litho.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston, Inc.
CLIENT: USEPA / USACE
PROJECT: Omega
SITE:

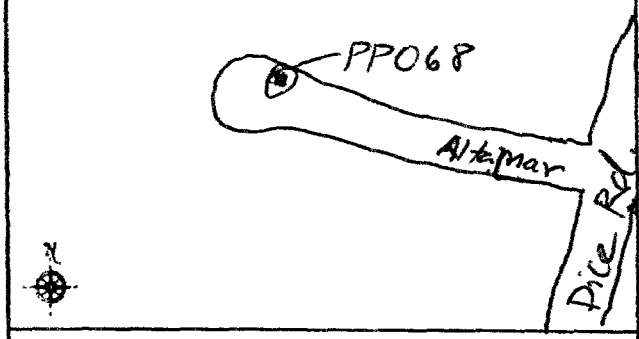
SAMPLE NO.: GW401-PP068-0058
DATE: 10-30-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP068-0058
TIME COLLECTED: 0845
SAMPLE DEPTH: 56-60' FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		~47.3' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic disp. bailer; 5' pvc screen
SAMPLER DECONTAMINATION: IDED - LAB FLD OTH
DESCRIBE OTHER: Disposable mat'ls.
PROCEDURE: DET - STM - ACE - HEX - MET NON OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT lithp. Adv. sample boring to refusal @ 60' bgs. Plenty of water.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston, Inc.
CLIENT: USEPA / USACE
PROJECT: Omega
SITE:

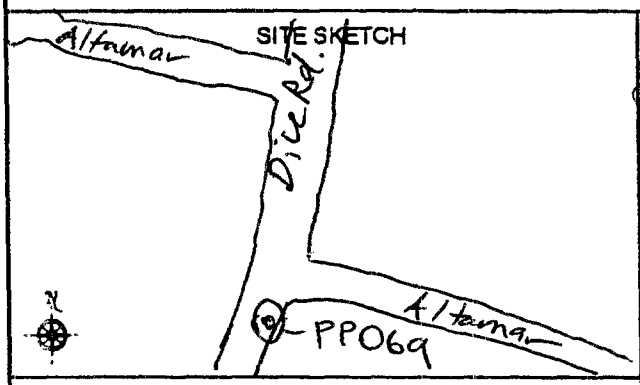
SAMPLE NO.: GW401-PP069-0060
DATE: 10-30-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP069-0060
TIME COLLECTED: 1045
SAMPLE DEPTH: 58 - 62 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:

	BEFORE	AFTER
WATER LEVEL	50.3' bgs PPD @ 88'	52.3' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Disposable nalls
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW401-PP069-~~1060~~ -1060BC @ 1050
MUP - sequential
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX	8260B	3+3 VOA's
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance CPT litho to ~ refusal in dense sand @ ~~88'~~ 90' bgs. F-grad above. Advance sample boring to 62' bgs, to sample near base of S+G.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

No sample! 070 reach to boring on Whittier Blvd. Drilling Road

GEOLIS Water Sampling Form

~~70~~ 6.2

COMPANY:	Roy F. Weston, Inc.	SAMPLE NO.:	GW401-PP0~~70~~-00
CLIENT:	US EPA / US ACE	DATE:	10/30/01
PROJECT:	Omega Chemical	SAMPLER:	G. Zuñiga
SITE:		SIGNATURE:	Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3 BC

UNIT SYSTEM: ENGLISH 6.2 METRIC

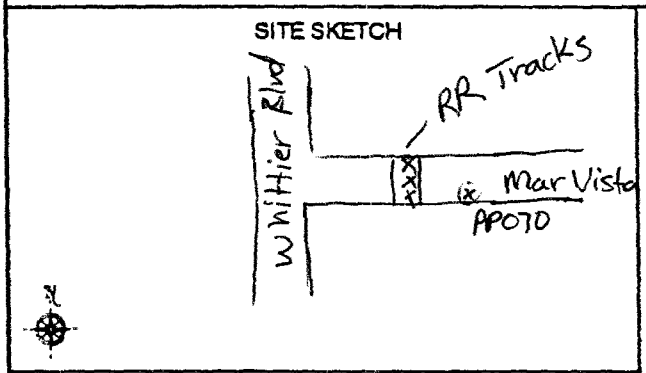
SAMPLE ID: GW401-PP0~~70~~-00~~78~~

TIME COLLECTED: BC

SAMPLE DEPTH: ~~76-80' bgs~~ FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH

SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH

DESCRIBE OTHER:

NAPL LAYER PRESENT: NO FLT SNK

LAYER SAMPLED: NO YES MIX

THICKNESS IN-CM

DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		Dry
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER

DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER

DESCRIBE:

SAMPLING METHOD:

GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH

SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH

OTHER: acrylic bailer; 5' PVC screen

SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH

DESCRIBE OTHER:

PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH

DESCRIBE OTHER: Disposable Materials

QA SAMPLES:

CO-LOCATED SAMPLE ID: N/A

SPLIT SAMPLE ID:

RINSE BLANK ID:

TRIP BLANK ID:

LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260 B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A

SPLIT SAMPLE ID NO.: N/A

ORGANIZATION NAME:

PARAMETERS: SAME OTHER:

REPRESENTATIVES NAME:

QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance PP070 GW Boring to refusal @ 80' bgs. No H_2O found! No sample collected. Bedrock ??

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

No Sample 070 reassigned

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

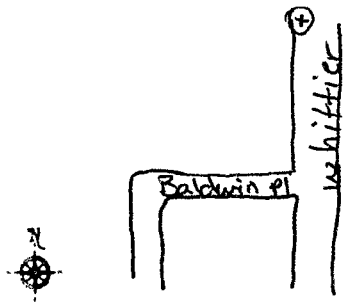
SAMPLE NO.: GW401-PP070
DATE: 10/30/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP070
TIME COLLECTED: * ~~No Sample Collected~~ *
SAMPLE DEPTH: FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		DRY
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW Boring to refusal @ 87' bgs
No H_2O found: No Sample collected.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

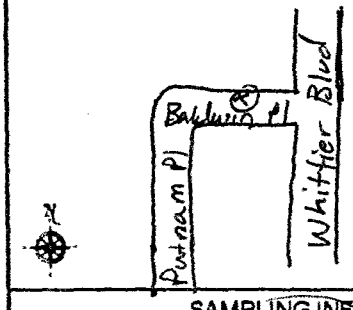
SAMPLE NO.: GW401 - PP070 - 0098 (93 6.7)
DATE: 10/30/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP070-0098 (93 6.7)
TIME COLLECTED: 1447
SAMPLE DEPTH: 86-100' FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	83 (sounded)	84.1' bgs (sounded)
TEMPERATURE	CPT boring	
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PEN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Acrylic bailer; 14' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance CPT litho to 107' bgs @ 1350. Groundwater level from CPT boring @ 1414 = 83' bgs. Advance GW boring to 100' bgs @ 1431. 14' of exposed screen placed down boring. GW samples collected @ 1447

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: USACE/USEPA
PROJECT: Omega
SITE:

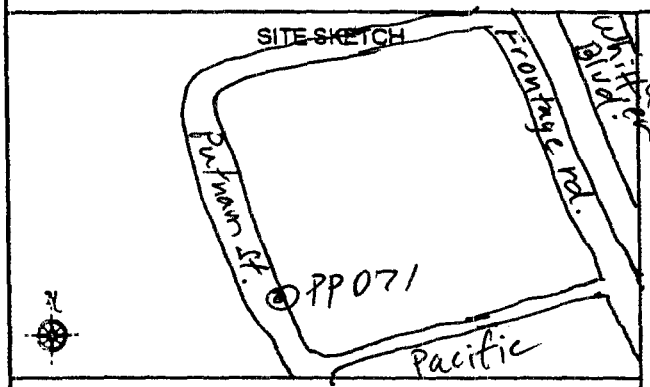
SAMPLE NO.: GW401-PP071-0084
DATE: 10-30-01
SAMPLER: Bill Clarke, Gerard Zuniga
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP071-0084
TIME COLLECTED: 1535
SAMPLE DEPTH: 82-86 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		69' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' pvc screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: disposable materials
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260 B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - BNS - TRP - LCS

COMMENTS: No CPT litho. Advance sample boring to 86' bgs (refusal). GW samples collected @ 1535. (GW401-PP071-0084)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

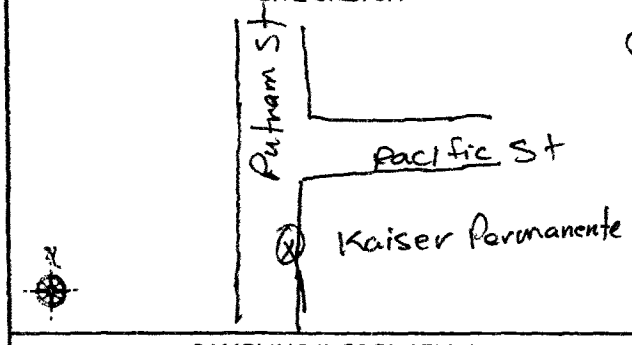
SAMPLE NO.: GW401-PP072-0088
DATE: 10/30/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP072-0088
TIME COLLECTED: 1618
SAMPLE DEPTH: 86-90 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		73' bgs (sound)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Acrylic bailer; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: GW401-PP072-2003 @ 1620
LAB CONTROL SAMPLE ID: N/A

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260	SVOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance GW boring to 90' bgs (1615). Collect GW samples (GW401-PP072-0088) @ 1618.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston, Inc.
CLIENT: USEPA / USACE
PROJECT: Omega
SITE: OU-02
SAMPLE NO.: GW401-PP073-0087
DATE: 10-31-01
SAMPLER: Bill Clarke
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP073-0087
TIME COLLECTED: 0740
SAMPLE DEPTH: 82 - ~~84~~ 92' bgs BC FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		54.6' bgs (sound)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 10' PVC screen
SAMPLER DECONTAMINATION: DED LAB FLD OTH
DESCRIBE OTHER: disposable matl
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM RAD - OTH	EMAX-Torrance	8260 B	6 of 2 ~~3~~ VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: ~~Ad~~ BC No CPT litho. Advance sample boring to 84' bgs. Dry. Pull out, and advance again deeper. Adv. to 92' bgs w/ 10' screen.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

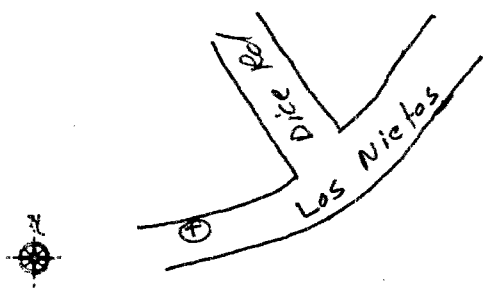
SAMPLE NO.: GW401-PP074-~~0085~~ 0072 6.2
DATE: 10/31/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP074-0072
TIME COLLECTED: 1035
SAMPLE DEPTH: ~~83~~ ~~87'~~ 70-74 6.2 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:

	BEFORE	AFTER
WATER LEVEL	41' (PPD Curve)	59.7' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance CPT litho to 87' bgs. (0942)
GW boring advanced to 74' bgs. (1029)
GW samples (GW401-PP074-0072) @ 1035

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

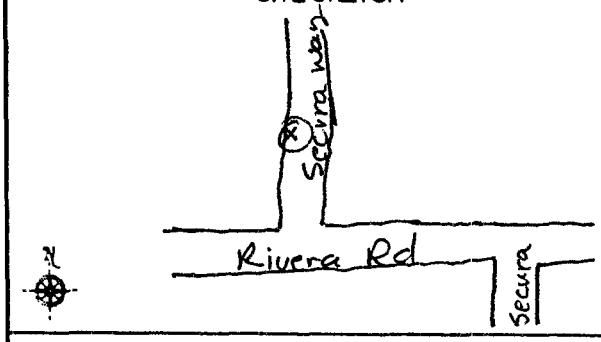
SAMPLE NO.: GW401-PP075-0048
DATE: 10/31/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP075-0048
TIME COLLECTED: 1126
SAMPLE DEPTH: 46-50 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		36.9 (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID: 2005 @ 1230
TRIP BLANK ID: GW401-PP075-0048 BC
LAB CONTROL SAMPLE ID: N/A

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: HCl

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW boring to refusal @ 50' bgs (1124)
Collect GW samples @ 1126 (GW401-PP075-0048

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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NO SAMPLE
076 assigned to next loc

GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA/US ACE
PROJECT: Omega Chemical
SITE:

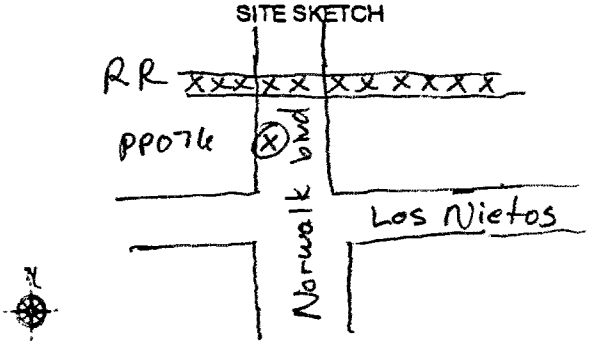
SAMPLE NO.: GW401-PP076-~~0036~~ 6.2
DATE: 10/31/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC 6.2
SAMPLE ID: GW401-PP076 ~~0036~~
TIME COLLECTED: ~~1300~~ 6.2
SAMPLE DEPTH: ~~34-38~~ 6.2 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		Dry
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET NON - OTH
DESCRIBE OTHER: Disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Hydro-punch (advance GW boring to Refusal @38' bgs. No CPT litho. No N_2O found. No gw sample collected.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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076 assigned to next locn.
No Sample.

GEOLIS Water Sampling Form

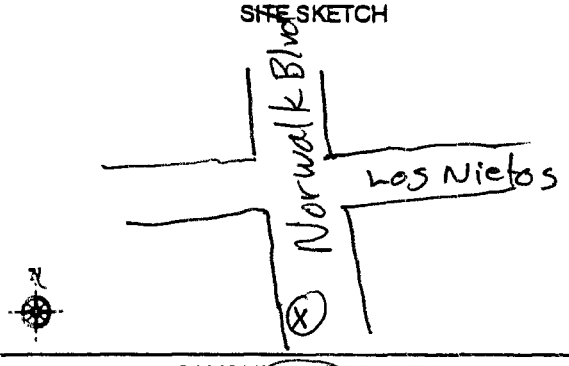
COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega chemical
SITE:
SAMPLE NO.: GW401-PP076b
DATE: 10/31/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP076b
TIME COLLECTED:
SAMPLE DEPTH: FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW boring to refusal @ 40' (1418) No H2O found. No sample collected (1420)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

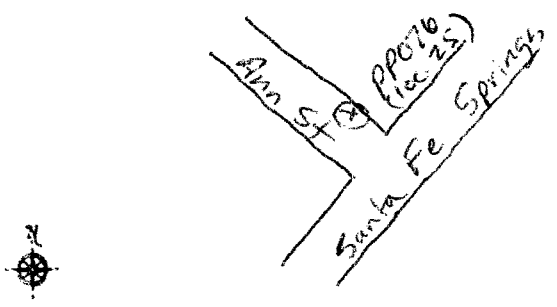
COMPANY: Roy F Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:
SAMPLE NO.: GW401-PP076-0056
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP076-0056
TIME COLLECTED: 0810
SAMPLE DEPTH: 53-59 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		32' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance GW boring to 59' bgs (refusal) — 0805
GW samples (GW401-PP076-0056) collected @ 0810
Groundwater sounded @ 32' bgs @ 0815.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: USEPA / US ACE
PROJECT: Omega Chemical
SITE:

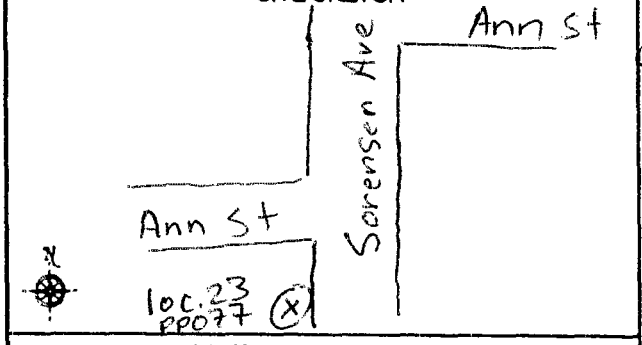
SAMPLE NO.: GW401-PP077-0060
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP077-0060
TIME COLLECTED: 0850
SAMPLE DEPTH: 56 ft - 65 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		32' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Acrylic bailer; 10' PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Air CPT Trflo. Advance GW boring to 65' bgs (0846). GW samples collected @ 0850 (GW401-PP077-0060) Groundwater sounded @ 32' bgs (0858)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

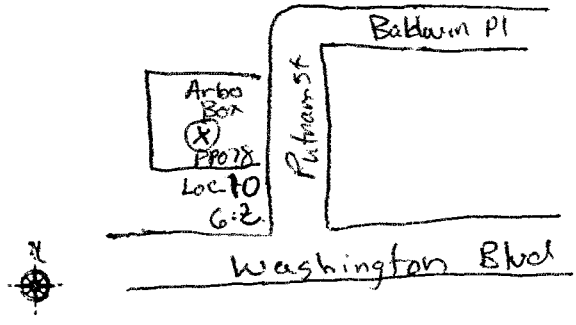
COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:
SAMPLE NO.: GW401-PP078-0081
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP078-0081
TIME COLLECTED: 0930
SAMPLE DEPTH: 79-83' FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		75' (Sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer, 5 PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT with. Advance gw boring to 83' bgs (0928) (return) collect GW samples (GW401-PP078-0081) @ 0930. GW level @ 75' @ 0933

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

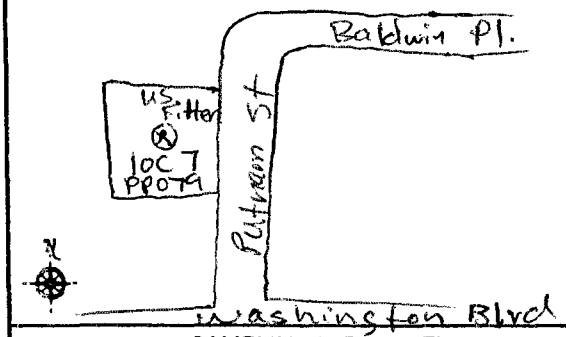
COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:
SAMPLE NO.: GW401-PP079-0088
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP079-C88
TIME COLLECTED: 1105
SAMPLE DEPTH: 86-90' FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		83.7' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: Acrylic bailer ; 5' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES: (1110) GW401-PP079-1088
CO-LOCATED SAMPLE ID: Sequential ~~N/A~~ 6.2
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Orrance	8260B	3 VOAs
CHM - RAD - OTH	Sample Duplicate →		3 VOAs
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Litho. Advance GW boring to 90' bgs (1101). GW samples collected @ 1105 (GW401-PP079-0088). Sample duplicated collected (GW401-PP079-1088) (1110). Groundwater sounded @ 83.7' @ 1118

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

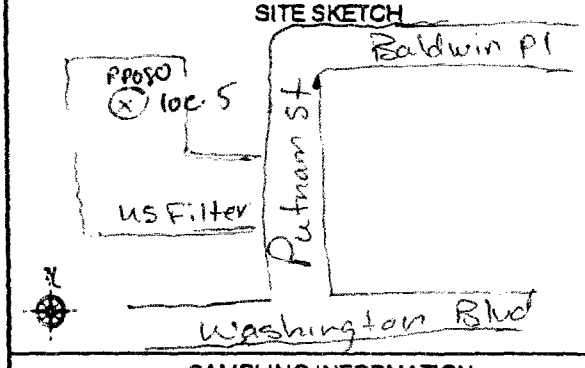
SAMPLE NO.: GW401-PP080-~~0088~~ 0071 6.2
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP080-~~0088~~ 0071 6.2
TIME COLLECTED: 1540 ~~1215~~ 6.2
SAMPLE DEPTH: 61-81 ~~86-90'~~ 6.2 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 20 PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho, Advance GW boring to 90' bgs (12ft) 6.2 (15 ft bgs)
GW samples collected @ 1540 ~~1215~~ 6.2 (GW401-PP080-~~0088~~ 6.2)
Groundwater sounded @ 6.2

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

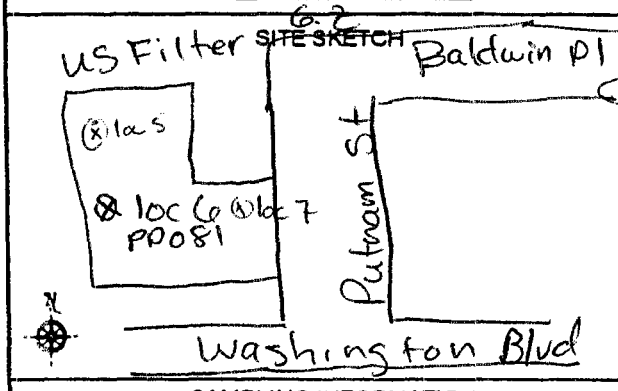
COMPANY: Roy F. Weston
CLIENT: US EPA | US ACE
PROJECT: Omega Chemical
SITE:
SAMPLE NO.: GW401-PP081-0071
DATE: 11/01/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP081-0071
TIME COLLECTED: 1457
SAMPLE DEPTH: 62 ~~77~~-81 (6.2) FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS: (1323) BEFORE (PPD Curve) AFTER

	BEFORE	AFTER
WATER LEVEL	~~75.5'~~ 6.2	68' bgs (sounded)
TEMPERATURE	68.9' bgs	
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer ; PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID: GW401-PP081-4006 → @1330
TRIP BLANK ID: N/A
LAB CONTROL SAMPLE ID:

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT litho. Advance CPT to 82' bgs (1320). Advance GW Boring down CPT boring to 81' bgs (1431). Groundwater samples collected @ 1457. Groundwater sounded @ 68' bgs.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

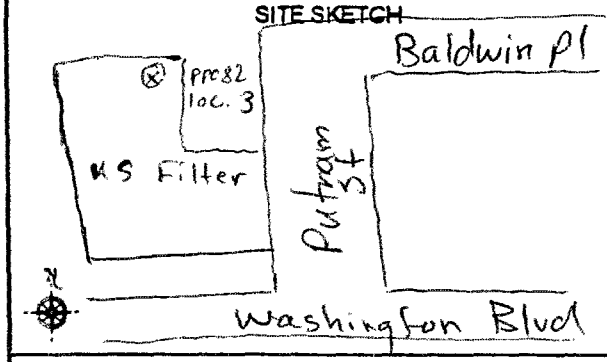
SAMPLE NO.: GW401-PP082-0080
DATE: 11/01/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP082-0080
TIME COLLECTED: 1620
SAMPLE DEPTH: 71-90 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		89.8' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 20' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET NON OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID (1611) GW401-PP082-2006 (@ 1611)
LAB CONTROL SAMPLE ID: N/A

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX-Torrance	8260 B	3 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT litho. Advance GW boring to 90' bgs
GW samples (GW401-PP082-0080) collected @ 1620
Groundwater sounded @

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

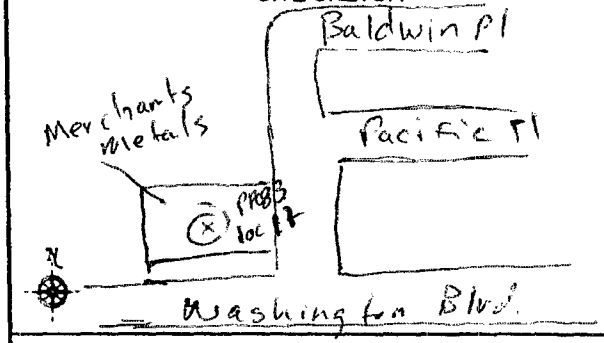
SAMPLE NO.: GW401-PP083-0082
DATE: 11/02/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401 - PP083 - 0082
TIME COLLECTED: 0805
SAMPLE DEPTH: 75-90' FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		67.3' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 15' PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Disposable materials
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID: GW401-PP083-0082 (MS/MSD)

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH	MS/MSD		3 VOAS
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW boring to 90' bgs (0801) No CPT litho. GW samples (GW401-PP083-0082) collected @ 0805 Groundwater sounded @ 67.3' @ 0811

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:

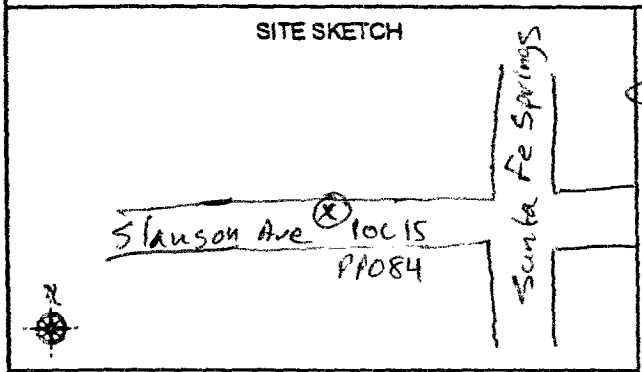
SAMPLE NO.: GW401-PP084-0047
DATE: 11/2/01
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP084-0047
TIME COLLECTED: 1005
SAMPLE DEPTH: 40-55 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		25.6' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer ; 15 PVC screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance GW boring to 55' bgs @ 0958
Collect GW samples (GW401-PP084-0047) @ 1005
water level sounded @ 25.6' bgs @ 1006

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

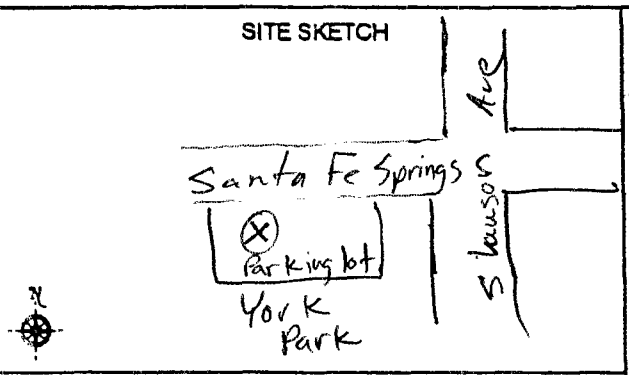
COMPANY: Roy F. Weston
CLIENT: US EPA / US ACE
PROJECT: Omega Chemical
SITE:
SAMPLE NO.: GW401-PP085-0038
DATE: 11/2/01
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW401-PP085-0038
TIME COLLECTED: 1150
SAMPLE DEPTH: 30-44 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		21' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: acrylic bailer; 1.5 PVC Screen
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Disposable Materials
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: (1200) GW401-PP085-2007
LAB CONTROL SAMPLE ID: N/A

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EMAX - Torrance	8260B	3 VOAS
CHM - RAD - OTH	Trip Blank	8260B	3 VOAS
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Advance (GW) boring to refusal @ 44' bgs @ 1145. Collect gw samples @ 1150. groundwater sounded @ 21' bgs @ 1151, 0.0 ppm OVM reading. Trip blank collected @ 1200 (GW401-PP085-2007)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OU-02
SITE: B086 Norwalk just S of Perkins

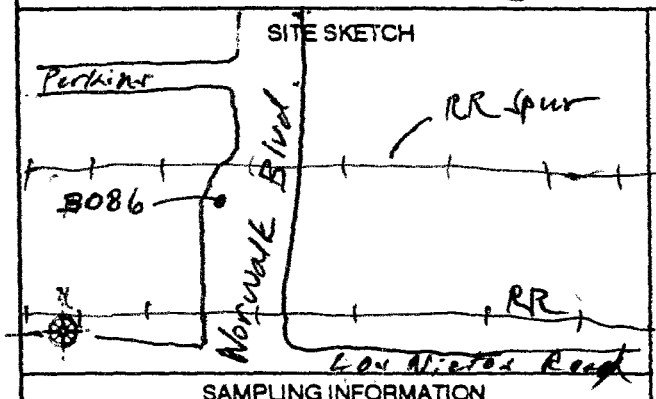
SAMPLE NO.: LW302-B086-0053
DATE: 8/13/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: LW302-B086-00~~53~~-53
TIME COLLECTED: 1520
SAMPLE DEPTH: 51-55 FT-M BTOC BGS

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		52.99
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		2.4
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE: 5' temp screen w/ casing to surface.
SAMPLING METHOD: disposable bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: New nafla
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: water enc. in F-M and @ ~ 52' screened from 51-55'. (Water table sample).

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OU-#2
SITE: B087, Los Nietos & Norwalk

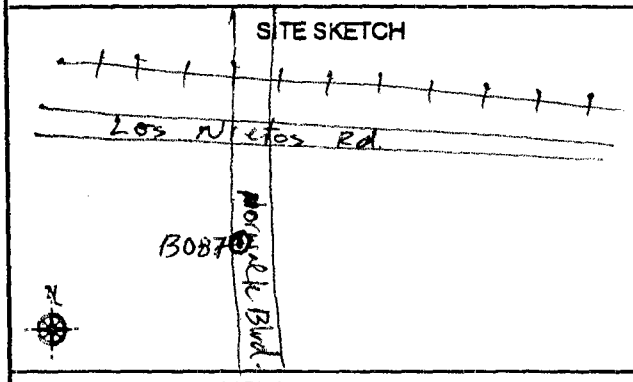
SAMPLE NO.: GW302-B087-0064
DATE: 8/14/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B087-0064
TIME COLLECTED: 1010
SAMPLE DEPTH: 62-66 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WCS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		61.3
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD = 66.5', hit water @ ~ 63', pulled augers ~ 10', set tiny screen @ TD of hole.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-02
SITE: B088 / Norwalk Blvd.

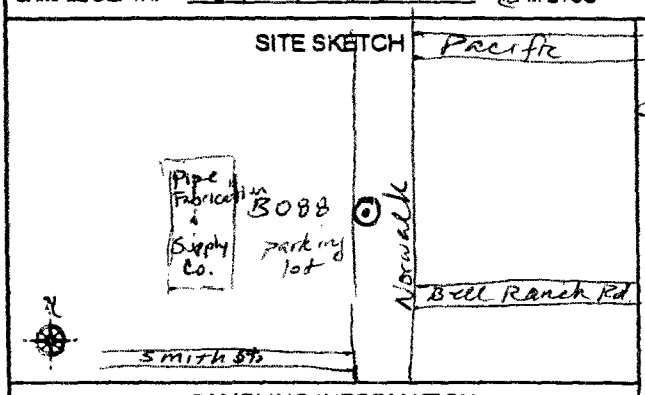
SAMPLE NO.: GW302-B088-0069
DATE: 8/14/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B088-0069
TIME COLLECTED: 1555
SAMPLE DEPTH: 67-71 IN-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		66.45
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	TASP mobile lab	B260B, Freon, Methane	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD = 71.5' bgs, hit water @ ~ 67' bgs, Pulled augers 10', install temp screen to total depth

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-02
SITE: B089, Smith Rd. infront of TMS

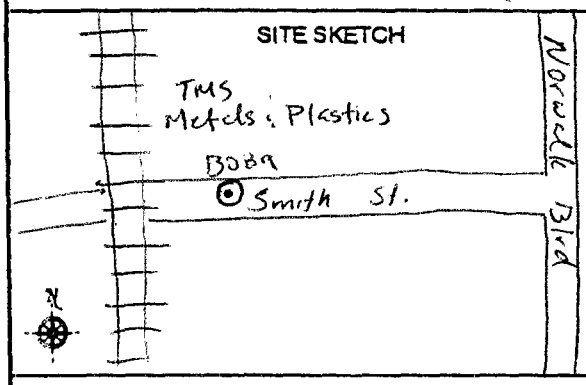
SAMPLE NO.: GW302-B089-0068
DATE: 8/15/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B089-0068
TIME COLLECTED: 1010
SAMPLE DEPTH: 65-71 ~~FTM~~ BGS BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		67.45
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.9
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: Time: 0958
Equipment ~~TRIP~~ BLANK ID: GW302-B089-4002
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone,	2 von vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth ~ 71.5' bgs, hit water @ approx. ~68' bgs, piled augers ~ 10 feet, installed trap screen @ TD

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OU-02
SITE: B090, McCann, east of Norwalk

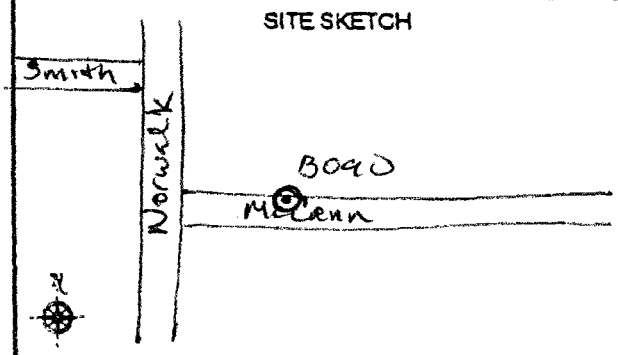
SAMPLE NO.: GW302-B090-0070
DATE: 8/15/02
SAMPLER: Amanda K. Bohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B090-0070
TIME COLLECTED: 1540
SAMPLE DEPTH: 65-75 FT-M ~~BTOC~~ BGS

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		69.45
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.9
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	B260B, Frem, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

71

COMPANY: Weston Solutions
CLIENT: USEPA/US ACE
PROJECT: Omega, OU-2
SITE: PP091, Los Nietos @ SFS

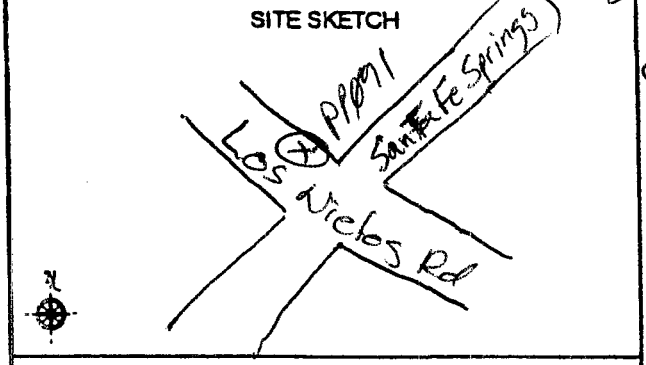
SAMPLE NO.: GW302-PP091-00~~3~~ 6.2
DATE: 08/09/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP091-00~~3~~ 6.2 71
TIME COLLECTED: 6.2 ~~[illegible]~~ 1440
SAMPLE DEPTH: 6.2 ~~5[illegible]~~ 66-75 FT - M BTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	31.4' (CPT)	61' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved with HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 18' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID: GW302-PP091-0071

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP EPA Reg 9	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH	FASP EPA Reg. 9	Extended VOCs (8260B) (MS/MSD)	4 VOAs
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT Lithology @ 1335 and advanced to 89' bgs (1405)
~~Temporary well installed~~ 6.2
Dissipation Test @ 1355 (75' bgs): 31.4' @ 1359

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, OU-2
SITE: PP092, Greenleaf @ Los Nietos

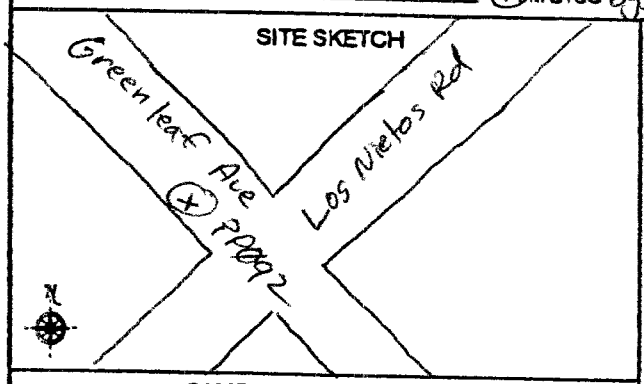
SAMPLE NO.: GW302-PP092-0056
DATE: 8/14/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP092-0056
TIME COLLECTED: 1144
SAMPLE DEPTH: 51-60' FT/M BTOC bgs

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	37' (CPT)	48.10 ~~59.2'~~ (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.3 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP EPA Reg 9	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.: N/A
PARAMETERS: SAME OTHER:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT Lithology started @ 1020 and advanced to refusal @ 79' bgs (1053). Run Dissipation Test @ 1053 @ 79' bgs
H_2O level determined @ 37' bgs (CPT)

DATA ENTRY BY:
DATE ENTERED:
QC REPORTS PRINTED? YES - NO

QC REVIEW BY:
REVIEW DATE:
APPROVED WITH - WITHOUT REVISIONS

QA REVIEW BY:
REVIEW DATE:
APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega OU-2
SITE: PP093, Ann St near RR

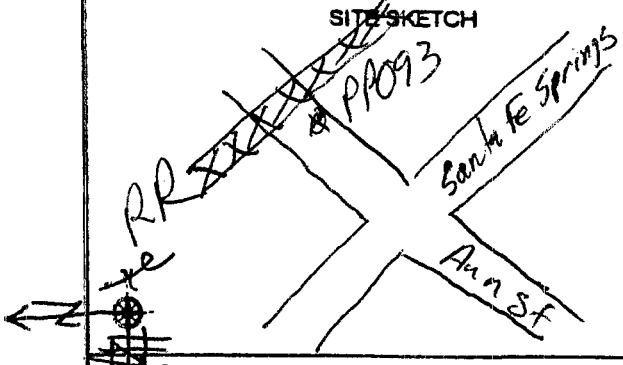
SAMPLE NO.: GW302-PP093-0070
DATE: 08/09/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP093-0070
TIME COLLECTED: 1300
SAMPLE DEPTH: 68-72' FT-M BTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		55.00' (sounded)
TEMPERATURE		(1303)
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm (1304)
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: 5 Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - METO - NON - OTH
DESCRIBE OTHER: Dedicated screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP EPA Reg 9	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, OU-2
SITE: PP094, Ann St @ Greenleaf

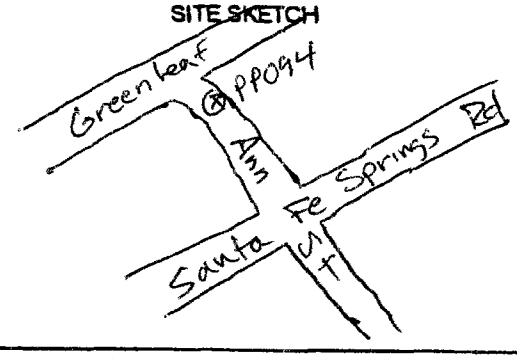
SAMPLE NO.: GW3Ø2-PP094-0020
DATE: 8/9/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW3Ø2-PP094-0020
TIME COLLECTED: ~~1635~~ 6.2 1119
SAMPLE DEPTH: 68-72' FT M BTOC bgs

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	26' bgs (CPT)	59' bgs (sounded 1125)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.0 ppm (1124)
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg. 9 Mobile	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Sample boring - no water @ 46-50' ⇒ Adv. to 72' to capture silty sand & sand.
CPT lithology started @ 0934 Refusal @ 73' bgs
Dissipation Test @ 0955 H_2O level determined @ 26' bgs.
(72' bgs)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, OU-2
SITE: PP095, Busch Pl near Greenleaf

SAMPLE NO.: GW302-PP095-0046
DATE: 8/14/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

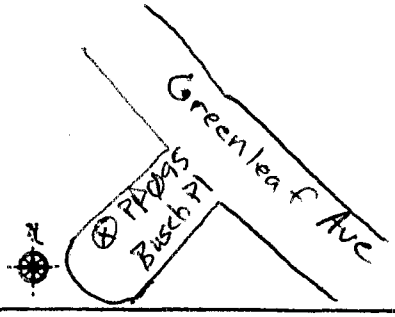
SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP095-0046
TIME COLLECTED: 0915
SAMPLE DEPTH: 41'-50' FT/M BTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	30' (CPT)	50' (Sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW302-PP095-1046 (0920)
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP EPA Reg 9	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH	FASP EPA Reg. 9	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:
CPT Lithology Started @ 0810 and advanced to 80' (0840)
Dissipation Test @ 0824 -> 73.49' bgs.
H_2O level determined @ 30' bgs (0830)

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OU-02
SITE: B096, on Whittier Frontage Rd

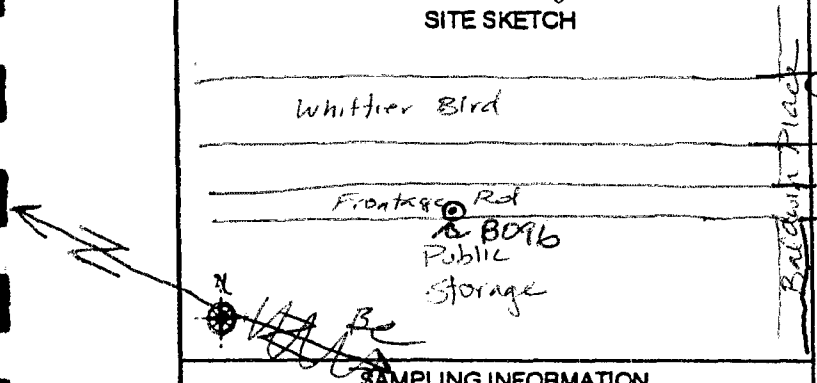
SAMPLE NO.: GW302-B096-0093
DATE: 08/6/02
SAMPLER: AKC/BC
SIGNATURE:

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B096-0093
TIME COLLECTED: ~~1310~~ or 1350
SAMPLE DEPTH: 91'-95' bgs FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		89.2
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' temp screen; casing to surface ss bailer
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox soln; DI; DI steam screen
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	Region 9 FASP	VOCs, Freon 113 & Acetone	2 VOA vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Water in semi-perched/confined layer @ ~87 to 91'

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY:	Weston Solutions	SAMPLE NO.:	GW302-B097-~~0101~~ 0101 stet BC
CLIENT:	USACE / EPA Reg. 9	DATE:	8-5-02
PROJECT:	Omega OU-02	SAMPLER:	AC/BC
SITE:	B097 - Mar Vista St, Whittier	SIGNATURE:	

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3

UNIT SYSTEM: ENGLISH - METRIC BC

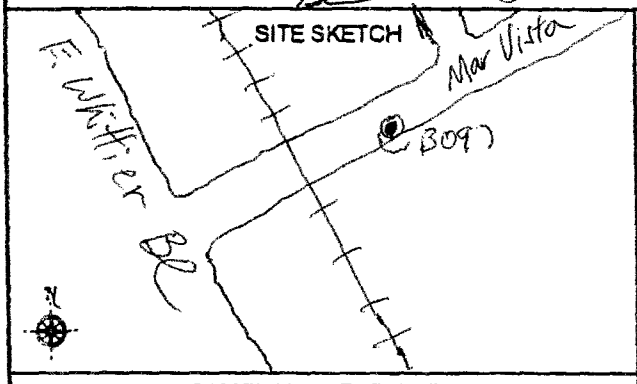
SAMPLE ID: GW302-B097-~~0101~~ 0101 stet

TIME COLLECTED: ~~1130~~ BC ~~1230~~

SAMPLE DEPTH: ~~102-103~~ BC ~~98-104~~ BGS FT/M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH

SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH

DESCRIBE OTHER:

NAPL LAYER PRESENT: NO FLT SNK

LAYER SAMPLED: NO YES MIX

THICKNESS IN-CM

DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		100.7 bgs
TEMPERATURE		sounded
SP. COND.		
pH		
Eh BC		
DO		
PID		0.0 ppm
FID		in top of casing
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER

DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: BC DISCRETE - COMPOSITE - OTHER

DESCRIBE: Temp screen, bailer

SAMPLING METHOD: Hollow Stem Rig.

GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH

SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH

OTHER: through augers (semi-open hole)

SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH

DESCRIBE OTHER:

PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH

DESCRIBE OTHER: Alconox + DI; 2 DI rinses

QA SAMPLES:

CO-LOCATED SAMPLE ID: None

SPLIT SAMPLE ID:

RINSE BLANK ID:

TRIP BLANK ID:

LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	Region 9 FASP	VOCs incl. Fr 113 & Acetone	2 VOA vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A

SPLIT SAMPLE ID NO.: N/A

ORGANIZATION NAME:

PARAMETERS: SAME OTHER:

REPRESENTATIVES NAME:

QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: 1130 wait for water; ~1145 pull rod -- screen didn't disconnect (150 blows for 1 foot advance) -- sample w/ bailer through augers -- 1220 water too muddy; set 10' temp screen and casing to surface. 1235 Pull casing; steam screen.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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Pull augers ~ <10 ft. after re-setting screen & casing. Break; return; sample

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/EPA Region 9
PROJECT: Omega OU1-02
SITE: B098, Putnam & Baldwin Pl
SAMPLE NO.: GW302-B098-0083
DATE: 8-6-02
SAMPLER: Bill Clarke, Amanda Chan
SIGNATURE:

SAMPLE IDENTIFICATION

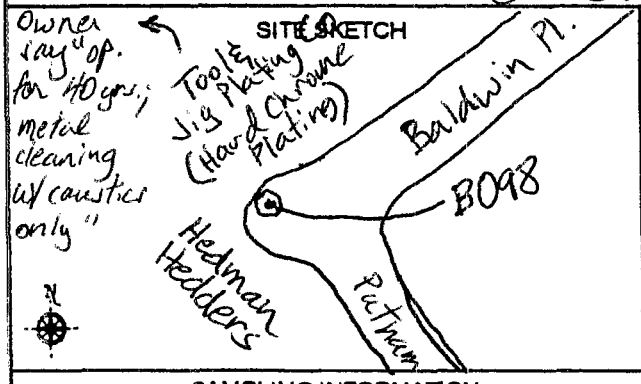
QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B098-0083
TIME COLLECTED: 1700
SAMPLE DEPTH: 78.5 – 87.5 FT BTOC BGS

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH

Owner say "op. for 40 yrs; metal cleaning w/ caustics only"



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		82.2' BGS
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		6.9
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' temp screen; casing to surface
SAMPLING METHOD: SS bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB FLD OTH
DESCRIBE OTHER: Alconox + DI; DI; DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: steam clean screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Region 9 Mobile	Extended 8260B	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: water in: cat'd clayey silt to silt.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega Chemical OU02
SITE: B099 Putnam in front of AB & MM

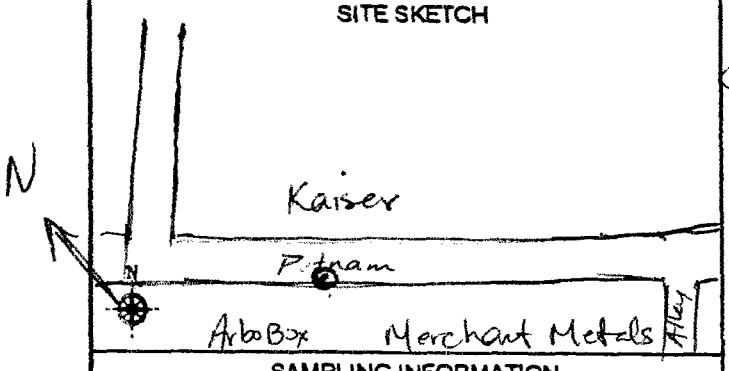
SAMPLE NO.: GW302-B099-0071
DATE: 8/7/02
SAMPLER: Amanda Cohan, Bill Clark
SIGNATURE:

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B099-0071
TIME COLLECTED: 0945
SAMPLE DEPTH: 71 FT/M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		73.55
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		60.6
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES: Time: 0950
Duplicate — CO-LOCATED SAMPLE ID: GW302-B099-1071
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Sample interval 70-72', drilled to 84.5', pulled augers to sample interval, inserted temp screen and sampled water that collected in screen. The screen was placed at the total depth of 84.5'

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US ACE/US EPA
PROJECT: Omega OU-02
SITE: B100, Putnam St near alley

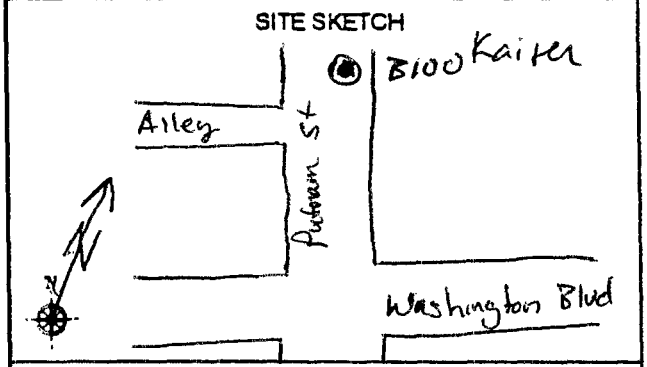
SAMPLE NO.: GW302-B100-0072
DATE: 08/06/02
SAMPLER: AC/BC
SIGNATURE:

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B100-0072
TIME COLLECTED: 0855
SAMPLE DEPTH: 71.5-72.5 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		71.3' BGS
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		57.3
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' temp screen; casing to surface; stainless steel bailer.
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox DI, 2 DI Rinses
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: steam screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	Region 9 FASP	VOCs, Freon 113 & Acetone	2 VOA Vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Stopped short of planned 80' TD due to abdn. water.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

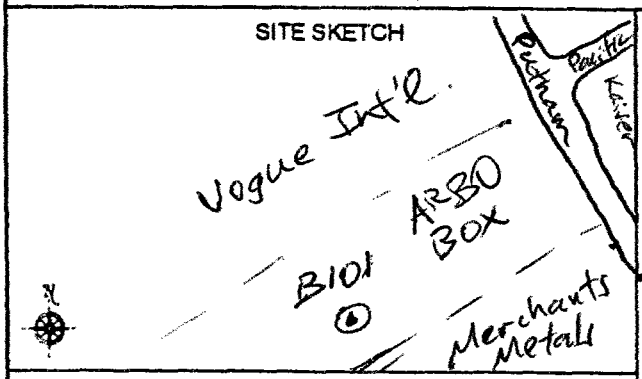
COMPANY: Weston Solutions, Inc. SAMPLE NO.: GW302-B101-0072
CLIENT: USACE/ EPA Region 9 DATE: 8-15-02
PROJECT: Omega OU-02 SAMPLER: BC / GZ
SITE: Arbo Box, Whittier SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B101-0072
TIME COLLECTED: ~~GW~~ 1600
SAMPLE DEPTH: 68-76' BGS FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		72.1' bgs.
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		99 in temp casing
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE: Temp Casing - blank casing to surface; disp. Poly bailer
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Disposable mates.
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EPA Region 9 FASP	8260B extended list	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME: PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME: QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USEPA Region 9
PROJECT: Omega OU-02
SITE: ARBO Box, Whittier

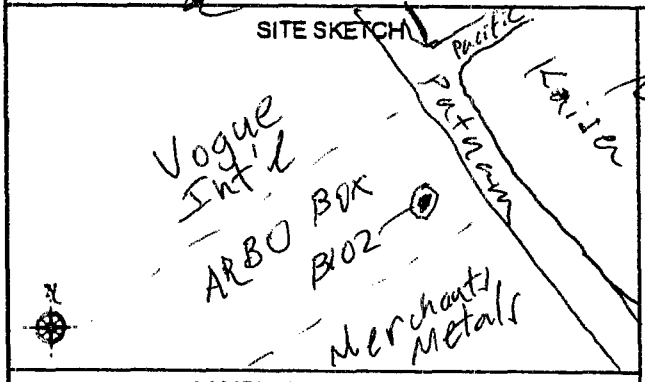
SAMPLE NO.: GW302-B102-00746 BC
DATE: 8-15-02
SAMPLER: BC / GZ
SIGNATURE: Bill Clarke

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC BC
SAMPLE ID: GW302-B102-~~0074~~ 0076
TIME COLLECTED: BC 1305
SAMPLE DEPTH: ~~70~~ 73.75 - 78' BC FT-M BTOC BGS

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		76.29' BGS
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		6.8 in casing
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE COMPOSITE - OTHER
DESCRIBE: 10' temp PVC screen, casing to surface; disp. poly bailer
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: New
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	Region 9 FASP	8260B incl acetone, FRs	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-02
SITE: B103, hospital lot behind MM

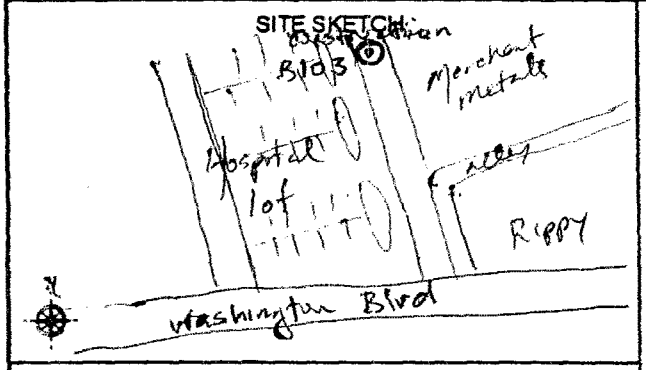
SAMPLE NO.: GW302-B103-0066
DATE: 8/13/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION by hospital construction

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B103-0066
TIME COLLECTED: 0940
SAMPLE DEPTH: 65'-67' FBM BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH:



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	2 vial vocs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD = 67.5', hit water @ 65.8' bgs. Pulled augers 10 feet, 10' screen.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-02
SITE: B104, hospital lot, roadway behind Merchant

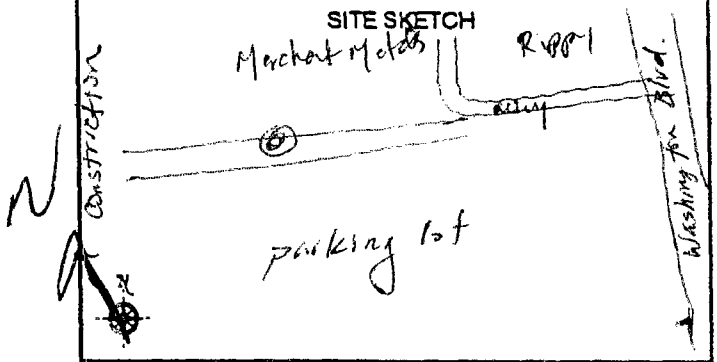
SAMPLE NO.: GW302-B104-0065
DATE: 8/12/02
SAMPLER: Amanda K. Cohen
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B104-0065
TIME COLLECTED: 1610
SAMPLE DEPTH: 60-70' FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		63.15
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.4
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	IASP mobile lab	8260B Freon, Acetone	2 vox vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD = 70' bgs, STW = 65' bgs, pulled augers 10', placed temp screen (10') to TD.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OU-02
SITE: B105 Hospital lot in front of alley

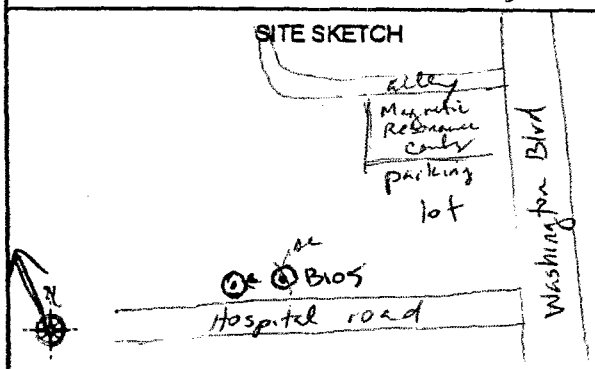
SAMPLE NO.: GW302-B105-0068
DATE: 8/12/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B105-0068
TIME COLLECTED: 1020
SAMPLE DEPTH: 63-73' FT/M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		62.0'
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSS - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Pulled augers 10 feet, installed temp screen. TD = 73' Sample interval 63'-73', 10 foot screen.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USEPA/US ACE
PROJECT: Omega, OU-2
SITE: PP106, Alley behind Rippy

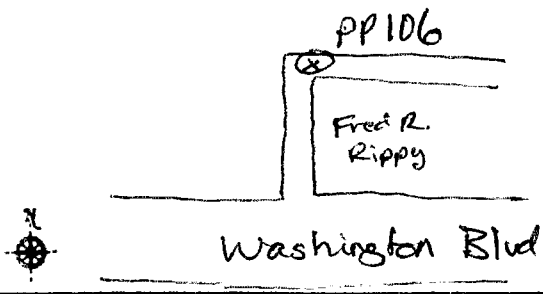
SAMPLE NO.: GW302-PP106-0065
DATE: 8/9/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW306-PP106-0065
TIME COLLECTED: 0820
SAMPLE DEPTH: 61-70' (FT) M BTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		62.35 @ ~~0818~~ 0821 6.2
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm @ ~~0819~~ 0822 6.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg. 9 Mobile	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-02
SITE: B107 alley next to Rippy

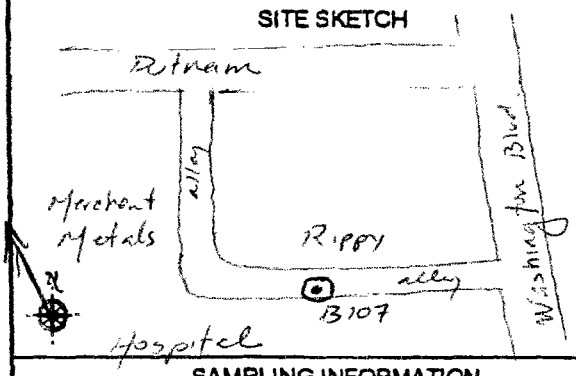
SAMPLE NO.: GW302-B107-0069
DATE: 8/7/02
SAMPLER: Amanda K. Cohen
SIGNATURE: AC

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B107-~~WEC~~ AC 0069
TIME COLLECTED: 1505
SAMPLE DEPTH: 69 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		65.45
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.2
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
AC ~~MS/MSD~~ CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID: 0069
MS/MSD LAB CONTROL SAMPLE ID: GW302-B107-~~0006~~ AC

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B From Acetate	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Collected sample @ ~69', TD = 69', some perched water @ 55' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/USEPA
PROJECT: Omega OV-02
SITE: B108, Marchant Metals property

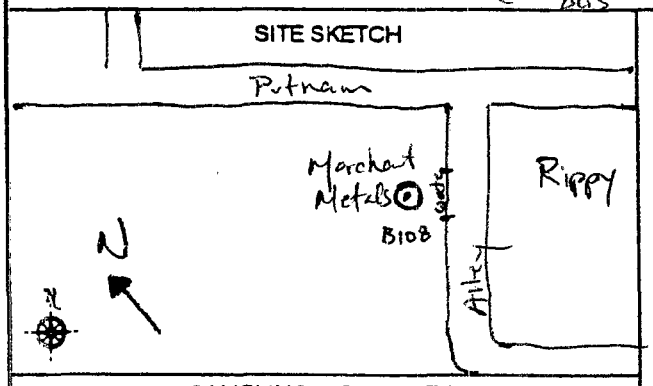
SAMPLE NO.: GW302-B108-0066
DATE: 8/16/02
SAMPLER: Amanda K. Cohen
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B108-0066
TIME COLLECTED: 1015
SAMPLE DEPTH: 61-71' BTM BTOC PVC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		67.4
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		191!!
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EASP mobile lab	8260B, Fmn, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: TD = 71.5', hit water ~ 65' bgs, set temp screen (10') at TD, pulled augers 10 feet.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE/ USEPA
PROJECT: Omega OU/02
SITE: B109 Parking lot behind Rippy

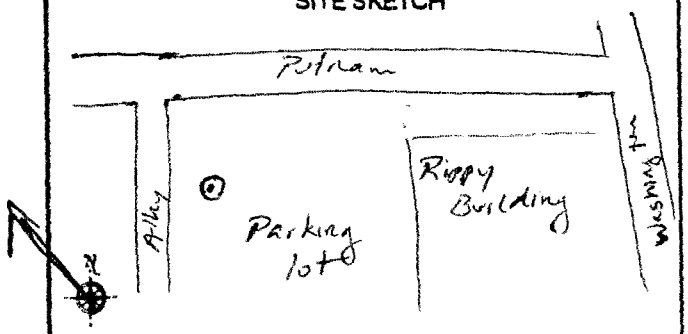
SAMPLE NO.: GW302-B109-0070
DATE: 8/9/02
SAMPLER: Amanda K. Cohan
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B109-0070
TIME COLLECTED: 0940
SAMPLE DEPTH: 68.5 - 72.5 FT-M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		64.56
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EASP mobile lab	8260B, Freon, Acetone	2 voa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total Depth was 72.5', pulled augers 4 feet, put screen at total depth, sampled

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USACE / USEPA
PROJECT: Omega OU-Ø2
SITE: B110, parking lot of Rippy

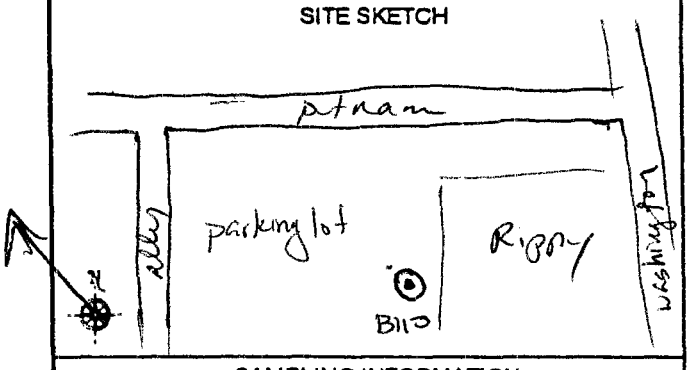
SAMPLE NO.: GW302-B110-0071
DATE: 8/8/02
SAMPLER: Amanda Cohen
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-B110-0071
TIME COLLECTED: 1245
SAMPLE DEPTH: ~~71~~ m 69.5-72.5 FT/M BTOC

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		67.0
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.5
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER:
QA SAMPLES: Time: 1250
Duplicate CO-LOCATED SAMPLE ID: GW302-B110-1071
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP mobile lab	8260B, Freon, Acetone	2 roa vials
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: Total depth = 72.5' bgs, pulled augers 4 feet, placed temp well to bottom of hole, sampled.

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US ACE / US EPA
PROJECT: Omega, OU-02
SITE: PPIII, Marie Callenders

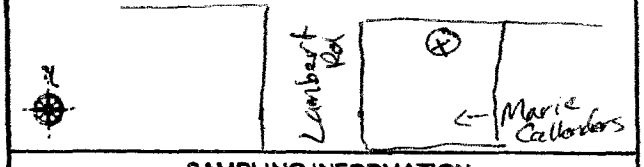
SAMPLE NO.: GW302-PPIII-0063
DATE: 08/09/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PPIII-0063
TIME COLLECTED: 0735
SAMPLE DEPTH: 61-65 FT-MBTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		53.20 @ 0742
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.0 ppm @ 0743
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - SCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, ~~DI~~, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg. 9 Mobile	Extended 8260B	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: USEPA | USACE
PROJECT: Omega, OU-2
SITE: PP112 Near Carls Dr

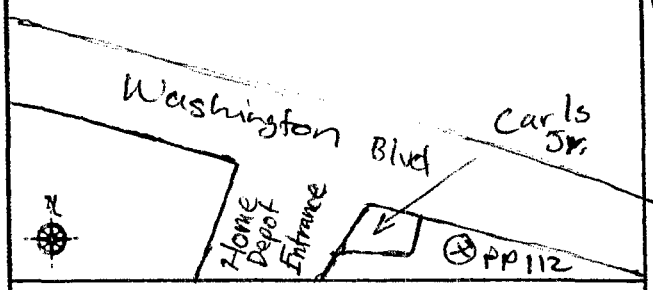
SAMPLE NO.: GW302-PP112-0063
DATE: 8/16/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP112-0063
TIME COLLECTED: 1355
SAMPLE DEPTH: 61-65' bgs (FT-M BTOC)

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	36.2' bgs (CPT)	29.2' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.3
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP EPA Reg. 9 Mobile	8260B Extended VOCs	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT Lithology advancement @ 1246
H_2O Dissipation Test performed @ 1300
H_2O level @ 36.2' bgs
Total Depth @ 70' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, CU-2
SITE: PP113, near Togos

SAMPLE NO.: GW3Ø2-PP113-0063
DATE: 8/16/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

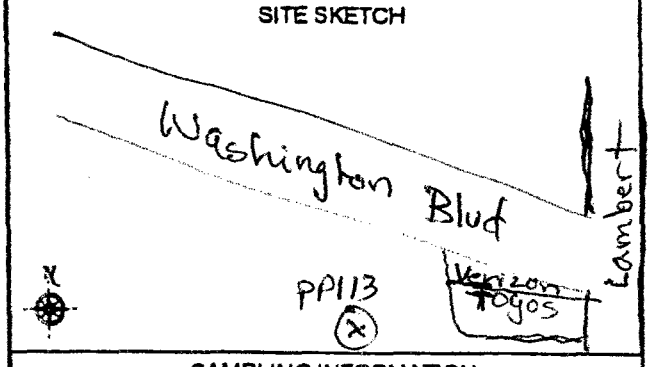
SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW3Ø2-PP113-0063
TIME COLLECTED: 1220
SAMPLE DEPTH: 61-65 (F)-M BTOC bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		40' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.3ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: Stainless steel bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - SCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: GW3Ø2-PP113-1063 (1225)
SPLIT SAMPLE ID: N/A
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg 9 Mobile	8260B Extended VOCs	4 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NO CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, OU-2
SITE: PP114, Behind Del Taco

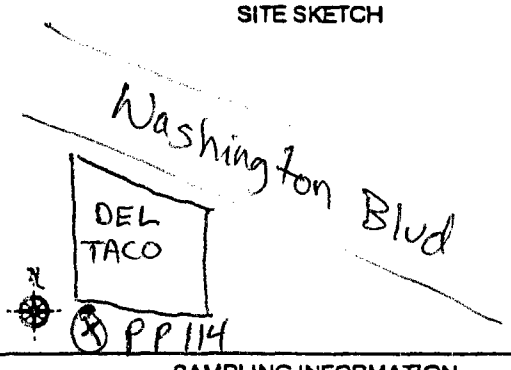
SAMPLE NO.: GW302-PP114-0063
DATE: 8/16/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP114-0063
TIME COLLECTED: 1125
SAMPLE DEPTH: 61-65 Ft bgs (FT-M BTOC)

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER: WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER: STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		57.30 (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.3 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD:
GROUNDWATER: BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER: BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	EASP Reg 9. Mobile	Extended VOCs (8260B)	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA/US ACE
PROJECT: Omega, OU-2
SITE: PP115, Home Depot

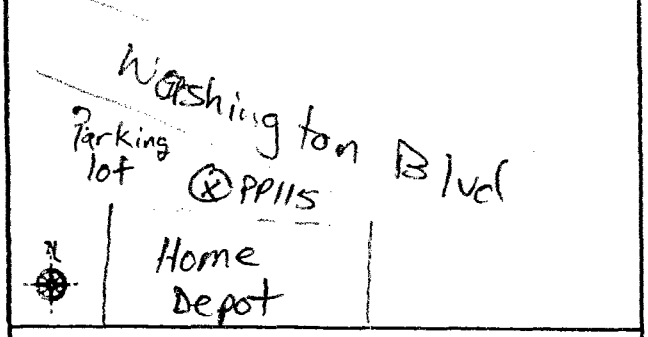
SAMPLE NO.: GW302-PP115-0048
DATE: 8/16/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP115-00
TIME COLLECTED: 1000
SAMPLE DEPTH: 46-50 (FT-M BTOC) bgs

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER - WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	35' bgs (CPT)	31.2' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.3 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' temp screen
SAMPLING METHOD: Stainless steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg. 9 Mobile	Extended VOCs	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: CPT Lithology started @ 0904 to refusal @ 66.5
Dissipation test performed @ 0911 H_2O level determined @ 35' bgs

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US EPA / US ACE
PROJECT: Omega, OU-2
SITE: PP116, Home Depot NW Corner

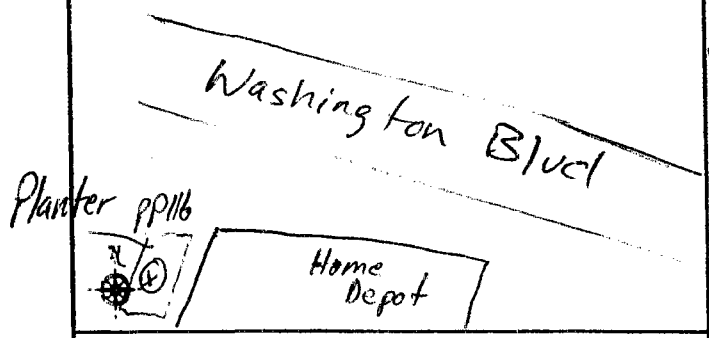
SAMPLE NO.: GW3Ø2-PP116-ØØ61
DATE: 08/16/02
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW3Ø2-PP116-ØØ61
TIME COLLECTED: 0815
SAMPLE DEPTH: 56-65' bgs (FT) M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		33.1' bgs (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED - OTHER
DESCRIBE: VOA Vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 10' Temp. Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg. 9 Mobile	Extended VOCs	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NOCPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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G091291T

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US ACE / US EPA Reg 9
PROJECT: Omega, OU-02
SITE: PP117, Fairchild on Byron Rd

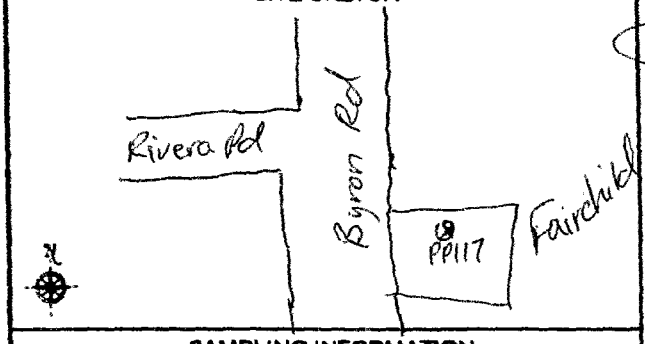
SAMPLE NO.: GW302-PP117-0053
DATE: 8/8/02
SAMPLER: Gerardo Zuñiga
SIGNATURE: Gerardo Zuñiga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP117-0053
TIME COLLECTED: 0935
SAMPLE DEPTH: 51-55' FT-M BTOC BGS

SURFACE	ESTIMATED	SURVEYED
ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		~~78.00~~ 31.50'
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		0.6 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE: VOA vials preserved w/HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp Screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID: GW302-PP117-GE4001 (0915)
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg 9 Mobile	Extended 8260B	2 VOAS
CHM - RAD - OTH	FASP Reg 9 Mobile	Extended 8260B	2 VOAS
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED ? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US ACE/US EPA Reg 9.
PROJECT: Omega OU-02
SITE: PP118, Fairchild on Byron Rd

SAMPLE NO.: GW 302-PP118-0055
DATE: August 8, 2002
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

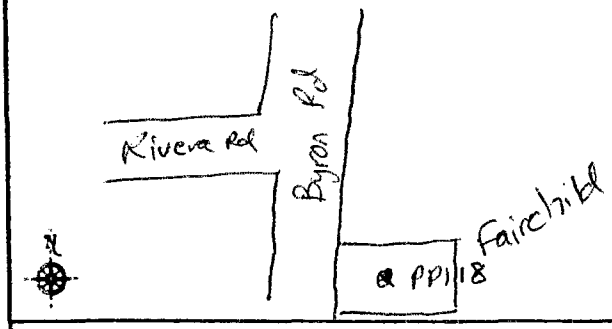
SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW 302-PP118-0055
TIME COLLECTED: 0842
SAMPLE DEPTH: 53-57 FT-M BTOC BGS

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.:

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE: GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		45.55' (sounded)
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.3 ppm
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED OTHER
DESCRIBE: VOA vials preserved w/ HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated Screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Reg 9. Mobile	Extended 8260B	2 VOAS
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: NO CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

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GEOLIS Water Sampling Form

COMPANY: Weston Solutions
CLIENT: US ACE/US EPA Reg. 9
PROJECT: Omega OU-02
SITE: PP119, Fairchild on Byron Rd.

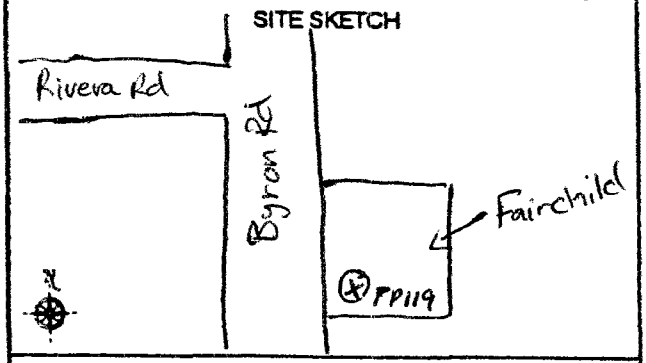
SAMPLE NO.: GW302-PP119-0058
DATE: August 8, 2002
SAMPLER: Gerardo Zuniga
SIGNATURE: Gerardo Zuniga

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: ENGLISH - METRIC
SAMPLE ID: GW302-PP119-0058
TIME COLLECTED: 0813
SAMPLE DEPTH: 56 - 60 FTM BTOC BGS

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		
WELL PERMIT No.:		

SITE SKETCH



SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL		38.45' @ 0819
TEMPERATURE		
SP. COND.		
pH		
Eh		
DO		
PID		1.0 ppm @ 0820
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED PRESERVED OTHER
DESCRIBE: 40A vials preserved w/HCl

SAMPLING INFORMATION

SAMPLE TYPE: DISCRETE - COMPOSITE - OTHER
DESCRIBE: 5' Temp screen
SAMPLING METHOD: Stainless Steel Bailer
GROUNDWATER BLO - BLC - PSB - PPR - PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED - LAB - FLD - OTH
DESCRIBE OTHER: Alconox + DI, DI, DI - for SS only
PROCEDURE: DET - STM - ACE - HEX - MET - NON - OTH
DESCRIBE OTHER: Dedicated screen
QA SAMPLES:
CO-LOCATED SAMPLE ID: N/A
SPLIT SAMPLE ID:
RINSE BLANK ID:
TRIP BLANK ID:
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
CHM - RAD - OTH	FASP Region 9 Mobile	Extended 8260B	2 VOAs
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH: N/A
SPLIT SAMPLE ID NO.: N/A
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS: No CPT Lithology

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES - NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

APPENDIX F

GROUNDWATER ANALYTICAL DATA SUMMARY

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B086	B087	B088	B B089	B090	B096
	Sample ID:	GW302-B086-0053	GW302-B087-0064	GW302-B088-0069	GW302-B089-0068	GW302-B090-0070	GW302-B096-0093
	Sample Date:	08/13/2002	08/14/2002	08/14/2002	08/15/2002	08/15/2002	08/06/2002
	Depth (feet):	53 to N/A	64 to N/A	69 to N/A	68 to N/A	70 to N/A	93 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	2 U	18	4	1 U
1,1,2,2-Tetrachloroethane		1 U	1 U	2 U	1 U	1 U	1 U
1,1,2-Trichloroethane		1 U	1 U	2 U	1 U	1 U	1 U
1,1-Dichloroethane		1 U	1 U	1 J	1 U	12	1 U
1,1-Dichloroethene		2	2	2 J	8	120	1 U
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	2 U	1 U	1 U	1 U
1,2-Dichloroethane		1 U	1 U	0.9 J	1 U	0.9 J	1 U
1,2-Dichloropropane						24	
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	2 U	1 U	1 U	1 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	2 U	1 U	1 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		6 U	6 U	20 U	10 U	10 U	9 J
Benzene		1 U	1 U	2 U	1 U	1 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B086	B087	B088	B089	B090	B096
	Sample ID:	GW302-B086-0053	GW302-B087-0064	GW302-B088-0069	GW302-B089-0068	GW302-B090-0070	GW302-B096-0093
	Sample Date:	08/13/2002	08/14/2002	08/14/2002	08/15/2002	08/15/2002	08/06/2002
	Depth (feet):	53 to N/A	64 to N/A	69 to N/A	68 to N/A	70 to N/A	93 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	2 U	1 U	1 U	1 U
Chlorobenzene		1 U	1 U	2 U	1 U	1 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane		1 U	1 U	2 U	1 U	1 U	1 U
Chloroethane		1 U	1 U	2 U	1 U	1 U	1 U
Chloroform		1 U	1 U	2 J	1 U	3	1 U
Chloromethane		1 U	1 U	2 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	2 U	1	4	1 U
Dibromomethane							
Dichlorodifluoromethane		1 U	1 U	2 U	1 U	1 U	1 U
Ethylbenzene		1 U	1 U	2 U	1 U	1 U	1 U
M,P-Xylene		1 U	1 U	2 U	1 U	1 U	1 U
Methylene Chloride		1 U	1 U	2 U	1 U	1 U	1 U
n-Butylbenzene							
o-Xylene		1 U	1 U	2 U	1 U	1 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		34 J	38	4	11	27	1 U
Toluene		1 U	1 U	2 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B086	B087	B088	B089	B090	B096
	Sample ID:	GW302-B086-0053	GW302-B087-0064	GW302-B088-0069	GW302-B089-0068	GW302-B090-0070	GW302-B096-0093
	Sample Date:	08/13/2002	08/14/2002	08/14/2002	08/15/2002	08/15/2002	08/06/2002
	Depth (feet):	53 to N/A	64 to N/A	69 to N/A	68 to N/A	70 to N/A	93 to N/A
trans-1,2-Dichloroethene		1 U	1 U	2 U	1 U	1 U	1 U
Trichloroethene		11	6	6	15	32	1 U
Trichlorofluoromethane		1 U	1 U	2 U	1 U	1 U	1 U
Trichlorotrifluoroethane		1 U	1 U	2 U	1 U	0.6 J	1 U
Vinyl Chloride		1 U	1 U	2 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B097	B098	B099	B099	B100	B101
	Sample ID:	GW302-B097-0101	GW302-B098-0083	GW302-B099-0071	GW302-B099-1071	GW302-B100-0072	GW302-B101-0072
	Sample Date:	08/05/2002	08/06/2002	08/07/2002	08/07/2002	08/06/2002	08/15/2002
	Depth (feet):	101 to N/A	83 to N/A	71 to N/A	71 to N/A	72 to N/A	72 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	50 U	20 U	20 U	20 U	10 U
1,1,2,2-Tetrachloroethane		1 U	50 U	20 U	20 U	20 U	10 U
1,1,2-Trichloroethane		1 U	50 U	20 U	20 U	20 U	10 U
1,1-Dichloroethane		1 U	50 U	20 U	20 U	20 U	10 U
1,1-Dichloroethene		5	50	70	60	640	180
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	50 U	20 U	20 U	20 U	10 U
1,2-Dichloroethane		1 U	50 U	20 U	20 U	20 U	10 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	50 U	20 U	20 U	20 U	10 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	50 U	20 U	20 U	20 U	10 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		10 U	500 U	200 U	200 U	200 U	60 J
Benzene		1 U	50 U	20 U	20 U	20 U	10 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B097	B098	B099	B099	B100	B101
	Sample ID:	GW302-B097-0101	GW302-B098-0083	GW302-B099-0071	GW302-B099-1071	GW302-B100-0072	GW302-B101-0072
	Sample Date:	08/05/2002	08/06/2002	08/07/2002	08/07/2002	08/06/2002	08/15/2002
	Depth (feet):	101 to N/A	83 to N/A	71 to N/A	71 to N/A	72 to N/A	72 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	50 U	20 U	20 U	20 U	10 U
Chlorobenzene		1 U	50 U	20 U	20 U	20 U	10 U
Chlorodibromomethane							
Chlorodifluoromethane		1 U	50 U	20 U	20 U	20 U	10 U
Chloroethane		1 U	50 U	20 U	20 U	20 U	10 U
Chloroform		1 U	50 U	20 U	20 U	20 U	10 U
Chloromethane		1 U	50 U	20 U	20 U	20 U	10 U
cis-1,2-Dichloroethene		1 U	50 U	20 U	20 U	20 U	10 U
Dibromomethane							
Dichlorodifluoromethane		1 U	50 U	20 U	20 U	20 U	10 U
Ethylbenzene		1 U	50 U	20 U	20 U	20 U	10 U
M,P-Xylene		1 U	50 U	20 U	20 U	20 U	10 U
Methylene Chloride		1 U	50 U	20 U	20 U	20 U	10 U
n-Butylbenzene							
o-Xylene		1 U	50 U	20 U	20 U	20 U	10 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		1 U	70	290	270	630	1300
Toluene		1 U	50 U	20 U	20 U	20 U	10 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B097	B098	B099	B099	B100	B101
	Sample ID:	GW302-B097-0101	GW302-B098-0083	GW302-B099-0071	GW302-B099-1071	GW302-B100-0072	GW302-B101-0072
	Sample Date:	08/05/2002	08/06/2002	08/07/2002	08/07/2002	08/06/2002	08/15/2002
	Depth (feet):	101 to N/A	83 to N/A	71 to N/A	71 to N/A	72 to N/A	72 to N/A
trans-1,2-Dichloroethene		1 U	50 U	20 U	20 U	20 U	10 U
Trichloroethene		1 U	660	200	200	190	210
Trichlorofluoromethane		1 U	50 U	170	140	410	330
Trichlorotrifluoroethane		1 U	50 U	460	400	690	1400
Vinyl Chloride		1 U	50 U	20 U	20 U	20 U	10 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B102	B103	B104	B105	B107	B108
	Sample ID:	GW302-B102-0076	GW302-B103-0066	GW302-B104-0065	GW302-B105-0068	GW302-B107-0069	GW302-B108-0066
	Sample Date:	08/15/2002	08/13/2002	08/12/2002	08/12/2002	08/07/2002	08/16/2002
	Depth (feet):	76 to N/A	66 to N/A	65 to N/A	68 to N/A	69 to N/A	66 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		5 U	100 U	50 U	9 J	20 U	500 U
1,1,2,2-Tetrachloroethane		5 U	100 U	50 U	10 U	20 U	500 U
1,1,2-Trichloroethane		5 U	100 U	50 U	10 U	20 U	500 U
1,1-Dichloroethane		5 U	100 U	50 U	10	10 J	500 U
1,1-Dichloroethene		120	100	870	800	600	1900
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		5 U	100 U	50 U	10 U	20 U	500 U
1,2-Dichloroethane		5 U	100 U	50 U	40	10 J	500 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		5 U	100 U	50 U	10 U	20 U	500 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		5 U	100 U	50 U	10 U	20 U	500 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		50 U	1000 U	500 U	100 U	200 U	5000 U
Benzene		5 U	100 U	50 U	10 U	20 U	500 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B102	B103	B104	B105	B107	B108
	Sample ID:	GW302-B102-0076	GW302-B103-0066	GW302-B104-0065	GW302-B105-0068	GW302-B107-0069	GW302-B108-0066
	Sample Date:	08/15/2002	08/13/2002	08/12/2002	08/12/2002	08/07/2002	08/16/2002
	Depth (feet):	76 to N/A	66 to N/A	65 to N/A	68 to N/A	69 to N/A	66 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		5 U	100 U	50 U	10 U	20 U	500 U
Chlorobenzene		5 U	100 U	50 U	10 U	20 U	500 U
Chlorodibromomethane							
Chlorodifluoromethane		5 U	100 U	50 U	10 U	20 U	500 U
Chloroethane		5 U	100 U	50 U	10 U	20 U	500 U
Chloroform		5 U	100 U	50 U	500	220	500 U
Chloromethane		5 U	100 U	50 U	10 U	20 U	500 U
cis-1,2-Dichloroethene		5 U	1500	50 U	10	20 U	500 U
Dibromomethane							
Dichlorodifluoromethane		5 U	100 U	50 U	10 U	20 U	500 U
Ethylbenzene		5 U	100 U	50 U	10 U	20 U	500 U
M,P-Xylene		5 U	100 U	50 U	7 J	20 U	500 U
Methylene Chloride		5 U	100 U	50 U	10 U	20 U	500 U
n-Butylbenzene							
o-Xylene		5 U	100 U	50 U	10 U	20 U	500 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		460	600	1600	2800	1300	5100
Toluene		5 U	100 U	50 U	10 U	20 U	500 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	B102	B103	B104	B105	B107	B108
	Sample ID:	GW302-B102-0076	GW302-B103-0066	GW302-B104-0065	GW302-B105-0068	GW302-B107-0069	GW302-B108-0066
	Sample Date:	08/15/2002	08/13/2002	08/12/2002	08/12/2002	08/07/2002	08/16/2002
Constituent	Depth (feet):	76 to N/A	66 to N/A	65 to N/A	68 to N/A	69 to N/A	66 to N/A
trans-1,2-Dichloroethene		5 U	100 U	50 U	10 U	20 U	500 U
Trichloroethene		120	7000	320	400	440	500
Trichlorofluoromethane		200	200	480	170	60	600
Trichlorotrifluoroethane		820	300	1300	300	40	1800
Vinyl Chloride		5 U	100 U	50 U	10 U	20 U	500 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B109	B110	B110	PP001	PP002	PP003
	Sample ID:	GW302-B109-0070	GW302-B110-0071	GW302-B110-1071	GW301-PP001-0084	GW301-PP002-0084	GW301-PP003-0094
	Sample Date:	08/08/2002	08/08/2002	08/08/2002	08/16/2001	08/15/2001	08/17/2001
	Depth (feet):	70 to N/A	71 to N/A	71 to N/A	84 to N/A	84 to N/A	94 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		400	100 U	100 U	50 U	5 U	10 U
1,1,2,2-Tetrachloroethane		100 U	100 U	100 U	50 U	5 U	10 U
1,1,2-Trichloroethane		100 U	100 U	100 U	50 U	5 U	10 U
1,1-Dichloroethane		80 J	100 U	100 U	50 U	3 J	10 U
1,1-Dichloroethene		3100	2000	2000	50	5 U	10 U
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		100 U	100 U	100 U	50 U	5 U	10 U
1,2-Dichloroethane		900	100 U	100 U	50 U	5 U	10 U
1,2-Dichloropropane					50 U	5 U	
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		100 U	100 U	100 U	50 U	5 U	10 U
1,3-Dichloropropane					50 U	5 U	
1,4-Dichlorobenzene		100 U	100 U	100 U	50 U	5 U	10 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		1000 U	600 J	700 J			
Benzene		100 U	100 U	100 U	50 U	5 U	10 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	B109	B110	B110	PP001	PP002	PP003
	Sample ID:	GW302-B109-0070	GW302-B110-0071	GW302-B110-1071	GW301-PP001-0084	GW301-PP002-0084	GW301-PP003-0094
	Sample Date:	08/08/2002	08/08/2002	08/08/2002	08/16/2001	08/15/2001	08/17/2001
	Depth (feet):	70 to N/A	71 to N/A	71 to N/A	84 to N/A	84 to N/A	94 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		100 U	100 U	100 U	50 U	5 U	10 U
Chlorobenzene		100 U	100 U	100 U	50 U	5 U	10 U
Chlorodibromomethane							
Chlorodifluoromethane		100 U	100 U	100 U			
Chloroethane		100 U	100 U	100 U	50 U	5 U	10 U
Chloroform		2400	800	800	50 U	5 U	10 U
Chloromethane		100 U	100 U	100 U	50 U	5 U	10 U
cis-1,2-Dichloroethene		100 U	100 U	100 U	50 U	5 U	10 U
Dibromomethane							
Dichlorodifluoromethane		100 U	100 U	100 U			
Ethylbenzene		100 U	100 U	100 U	50 U	5 U	10 U
M,P-Xylene		100 U	100 U	100 U	50 U	5 U	10 U
Methylene Chloride		3800	100 U	100 U	50 U	5 U	10 U
n-Butylbenzene							
o-Xylene		100 U	100 U	100 U	50 U	5 U	10 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		53000	8000	8000	60	420	10 U
Toluene		100 U	100 U	100 U	50 U	5 U	10 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	B109	B110	B110	PP001	PP002	PP003
	Sample ID:	GW302-B109-0070	GW302-B110-0071	GW302-B110-1071	GW301-PP001-0084	GW301-PP002-0084	GW301-PP003-0094
	Sample Date:	08/08/2002	08/08/2002	08/08/2002	08/16/2001	08/15/2001	08/17/2001
Constituent	Depth (feet):	70 to N/A	71 to N/A	71 to N/A	84 to N/A	84 to N/A	94 to N/A
trans-1,2-Dichloroethene		80 J	100 U	100 U	50 U	1 U	10 U
Trichloroethene		2100	1100	1100	600	1 J	6 J
Trichlorofluoromethane		800	300	300	50 U	32	10
Trichlorotrifluoroethane		1700	500	500	50 U	120	70
Vinyl Chloride		100 U	100 U	100 U	50 U	5 U	10 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP004	PP006	PP006	PP007	PP008	PP009
	Sample ID:	GW301-PP004-0086	GW301-PP006-0070	GW301-PP006-1070	GW301-PP007-0081	GW301-PP008-0070	GW301-PP009-0047
	Sample Date:	08/22/2001	08/16/2001	08/16/2001	08/15/2001	08/16/2001	08/18/2001
	Depth (feet):	86 to N/A	70 to N/A	70 to N/A	81 to N/A	70 to N/A	47 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		25 U	100 U	100 U	1 U	10 U	1 U
1,1,2,2-Tetrachloroethane		25 U	100 U	100 U	1 U	10 U	1 U
1,1,2-Trichloroethane		25 U	100 U	100 U	1 U	10 U	1 U
1,1-Dichloroethane		25 U	100 U	100 U	1 U	10 U	1 U
1,1-Dichloroethene		100	100 U	100 U	1 U	500	1 U
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		25 U	100 U	100 U	1 U	10 U	1 U
1,2-Dichloroethane		25 U	100 U	100 U	1 U	10 U	1 U
1,2-Dichloropropane			100 U	100 U	1 U	10 U	
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		25 U	100 U	100 U	1 U	10 U	1 U
1,3-Dichloropropane			100 U	100 U	1 U	10 U	
1,4-Dichlorobenzene		25 U	100 U	100 U	1 U	10 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		25 U	100 U	100 U	1 U	10 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP004	PP006	PP006	PP007	PP008	PP009
	Sample ID:	GW301-PP004-0086	GW301-PP006-0070	GW301-PP006-1070	GW301-PP007-0081	GW301-PP008-0070	GW301-PP009-0047
	Sample Date:	08/22/2001	08/16/2001	08/16/2001	08/15/2001	08/16/2001	08/18/2001
	Depth (feet):	86 to N/A	70 to N/A	70 to N/A	81 to N/A	70 to N/A	47 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		25 U	100 U	100 U	1 U	10 U	1 U
Chlorobenzene		25 U	100 U	100 U	1 U	10 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		25 U	100 U	100 U	1 U	10 U	1 U
Chloroform		25 U	100 U	100 U	1 U	10 U	1 U
Chloromethane		25 U	100 U	100 U	1 U	10 U	1 U
cis-1,2-Dichloroethene		25 U	100 U	100 U	1 U	17	1 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		25 U	100 U	100 U	1 U	10 U	1 U
M,P-Xylene		25 U	100 U	100 U	1 U	10 U	1 U
Methylene Chloride		25 U	100 U	100 U	1 U	10 U	1 U
n-Butylbenzene							
o-Xylene		25 U	100 U	100 U	1 U	10 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		150 U	1100	800	10	400	11
Toluene		25 U	100 U	100 U	1 U	10 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP004	PP006	PP006	PP007	PP008	PP009
	Sample ID:	GW301-PP004-0086	GW301-PP006-0070	GW301-PP006-1070	GW301-PP007-0081	GW301-PP008-0070	GW301-PP009-0047
	Sample Date:	08/22/2001	08/16/2001	08/16/2001	08/15/2001	08/16/2001	08/18/2001
Constituent	Depth (feet):	86 to N/A	70 to N/A	70 to N/A	81 to N/A	70 to N/A	47 to N/A
trans-1,2-Dichloroethene		25 U	100 U	100 U	11 U	10 U	1 U
Trichloroethene		70	70 J	60 J	1 U	600	12
Trichlorofluoromethane		70	100 U	100 U	25	400	0.5 J
Trichlorotrifluoroethane		210	100 U	100 U	22	1500	1 U
Vinyl Chloride		25 U	100 U	100 U	1 U	10 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP010	PP011	PP011	PP012	PP013	PP014
	Sample ID:	GW301-PP010-0045	GW301-PP011-0059	GW301-PP011-0072	GW301-PP012-0063	GW301-PP013-0056	GW301-PP014-0052
	Sample Date:	08/18/2001	08/16/2001	08/16/2001	08/16/2001	08/16/2001	08/21/2001
	Depth (feet):	45 to N/A	59 to N/A	72 to N/A	63 to N/A	56 to N/A	52 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	25 U	10 U	10 U	2 U
1,1,2,2-Tetrachloroethane		1 U	1 U	25 U	10 U	10 U	2 U
1,1,2-Trichloroethane		1 U	1 U	25 U	10 U	10 U	2 U
1,1-Dichloroethane		1 U	1 U	25 U	10 U	10 U	2 U
1,1-Dichloroethene		1 U	2	40	70	20	7
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	25 U	10 U	10 U	2 U
1,2-Dichloroethane		1 U	1 U	25 U	10 U	10 U	2 U
1,2-Dichloropropane			1 U	25 U	10 U	10 U	
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	25 U	10 U	10 U	2 U
1,3-Dichloropropane			1 U	25 U	10 U	10 U	
1,4-Dichlorobenzene		1 U	1 U	25 U	10 U	10 U	2 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1 U	25 U	10 U	10 U	2 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP010	PP011	PP011	PP012	PP013	PP014
	Sample ID:	GW301-PP010-0045	GW301-PP011-0059	GW301-PP011-0072	GW301-PP012-0063	GW301-PP013-0056	GW301-PP014-0052
	Sample Date:	08/18/2001	08/16/2001	08/16/2001	08/16/2001	08/16/2001	08/21/2001
	Depth (feet):	45 to N/A	59 to N/A	72 to N/A	63 to N/A	56 to N/A	52 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	25 U	10 U	10 U	2 U
Chlorobenzene		1 U	1 U	25 U	10 U	10 U	2 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	25 U	10 U	10 U	2 U
Chloroform		1 U	1 U	25 U	10 U	10 U	2 U
Chloromethane		1 U	1 U	25 U	10 U	10 U	2 U
cis-1,2-Dichloroethene		1 U	1 U	25 U	230	10 U	2 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	25 U	10 U	10 U	2 U
M,P-Xylene		1 U	1 U	25 U	10 U	10 U	2 U
Methylene Chloride		1 U	1 U	25 U	10 U	10 U	2 U
n-Butylbenzene							
o-Xylene		1 U	1 U	25 U	10 U	10 U	2 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		1 U	8	40	140	6 UJ	6
Toluene		1 U	1 U	25 U	10 U	10 U	2 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP010	PP011	PP011	PP012	PP013	PP014
	Sample ID:	GW301-PP010-0045	GW301-PP011-0059	GW301-PP011-0072	GW301-PP012-0063	GW301-PP013-0056	GW301-PP014-0052
	Sample Date:	08/18/2001	08/16/2001	08/16/2001	08/16/2001	08/16/2001	08/21/2001
Constituent	Depth (feet):	45 to N/A	59 to N/A	72 to N/A	63 to N/A	56 to N/A	52 to N/A
trans-1,2-Dichloroethene		1 U	1 U	25 U	10 U	10 U	2 U
Trichloroethene		1	23	370	1300	10 U	2 U
Trichlorofluoromethane		1 U	1 U	25 U	70	180	11
Trichlorotrifluoroethane		1 U	1 U	25 U	220	160	28
Vinyl Chloride		1 U	1 U	25 U	10 U	10 U	2 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP015	PP016	PP017	PP017	PP018	PP019
	Sample ID:	GW301-PP015-0084	GW301-PP016-0080	GW301-PP017-0056	GW301-PP017-1056	GW301-PP018-0058	GW301-PP019-0058
	Sample Date:	08/15/2001	08/16/2001	08/18/2001	08/18/2001	08/20/2001	08/20/2001
	Depth (feet):	84 to N/A	80 to N/A	56 to N/A	56 to N/A	58 to N/A	58 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	100 U	100 U	1 U	0.9 J
1,1,2,2-Tetrachloroethane		1 U	1 U	100 U	100 U	1 U	1 U
1,1,2-Trichloroethane		1 U	1 U	100 U	100 U	1 U	1 U
1,1-Dichloroethane		1 U	1 U	100 U	100 U	1 U	1 U
1,1-Dichloroethene		0.9 J	1 U	400	300	0.8 J	60
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	100 U	100 U	1 U	1 U
1,2-Dichloroethane		1 U	1 U	100 U	100 U	0.4 J	0.4 J
1,2-Dichloropropane		1 U	1 U				
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	100 U	100 U	1 U	1 U
1,3-Dichloropropane		1 U	1 U				
1,4-Dichlorobenzene		1 U	1 U	100 U	100 U	1 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1 U	100 U	100 U	1 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP015	PP016	PP017	PP017	PP018	PP019
	Sample ID:	GW301-PP015-0084	GW301-PP016-0080	GW301-PP017-0056	GW301-PP017-1056	GW301-PP018-0058	GW301-PP019-0058
	Sample Date:	08/15/2001	08/16/2001	08/18/2001	08/18/2001	08/20/2001	08/20/2001
	Depth (feet):	84 to N/A	80 to N/A	56 to N/A	56 to N/A	58 to N/A	58 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	100 U	100 U	1 U	1 U
Chlorobenzene		1 U	1 U	100 U	100 U	1 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	100 U	100 U	1 U	1 U
Chloroform		1 U	1 U	100 U	100 U	1 U	2
Chloromethane		1 U	1 U	100 U	100 U	1 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	200	200	1 U	1 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	100 U	100 U	1 U	1 U
M,P-Xylene		1 U	1 U	100 U	100 U	1 U	1 U
Methylene Chloride		1 U	1 U	100 U	100 U	1 U	1 U
n-Butylbenzene							
o-Xylene		1 U	1 U	100 U	100 U	1 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		2	1 U	700	700	23	60
Toluene		1 U	1 U	100 U	100 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP015	PP016	PP017	PP017	PP018	PP019
	Sample ID:	GW301-PP015-0084	GW301-PP016-0080	GW301-PP017-0056	GW301-PP017-1056	GW301-PP018-0058	GW301-PP019-0058
	Sample Date:	08/15/2001	08/16/2001	08/18/2001	08/18/2001	08/20/2001	08/20/2001
Constituent	**Depth (feet):**	84 to N/A	80 to N/A	56 to N/A	56 to N/A	58 to N/A	58 to N/A
trans-1,2-Dichloroethene		1 U	1 U	100 U	100 U	1 U	1 U
Trichloroethene		1 U	1 U	1300	1200	1 U	14
Trichlorofluoromethane		140	4	300	200	1	40
Trichlorotrifluoroethane		160	5	1000	1000	3	110
Vinyl Chloride		1 U	1 U	100 U	100 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP020	PP020	PP021	PP022	PP023	PP024
	Sample ID:	GW301-PP020-0050	GW301-PP020-0073	GW301-PP021-0058	GW301-PP022-0058	GW301-PP023-0063	GW301-PP024-0058
	Sample Date:	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001
	Depth (feet):	50 to N/A	73 to N/A	58 to N/A	58 to N/A	63 to N/A	58 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		50 U	25 U	50 U	10 U	100 U	250 U
1,1,2,2-Tetrachloroethane		50 U	25 U	50 U	10 U	100 U	250 U
1,1,2-Trichloroethane		50 U	25 U	50 U	10 U	100 U	250 U
1,1-Dichloroethane		50 U	25 U	50 U	10 U	100 U	250 U
1,1-Dichloroethene		150	60	90	10	900	2300
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		50 U	25 U	50 U	10 U	100 U	250 U
1,2-Dichloroethane		50 U	25 U	50 U	10 U	100 U	100 J
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		50 U	25 U	50 U	10 U	100 U	250 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		50 U	25 U	50 U	10 U	100 U	250 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		50 U	25 U	50 U	10 U	100 U	250 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP020	PP020	PP021	PP022	PP023	PP024
	Sample ID:	GW301-PP020-0050	GW301-PP020-0073	GW301-PP021-0058	GW301-PP022-0058	GW301-PP023-0063	GW301-PP024-0058
	Sample Date:	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001
	Depth (feet):	50 to N/A	73 to N/A	58 to N/A	58 to N/A	63 to N/A	58 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		50 U	25 U	50 U	10 U	100 U	250 U
Chlorobenzene		50 U	25 U	50 U	10 U	100 U	250 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		50 U	25 U	50 U	10 U	100 U	250 U
Chloroform		50 U	25 U	50 U	10 U	100	1100
Chloromethane		50 U	25 U	50 U	10 U	100 U	250 U
cis-1,2-Dichloroethene		50 U	25 U	10 J	10 U	100 U	250 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		50 U	25 U	50 U	10 U	100 U	250 U
M,P-Xylene		50 U	25 U	50 U	10 U	100 U	250 U
Methylene Chloride		50 U	25 U	50 U	10 U	100 U	250 U
n-Butylbenzene							
o-Xylene		50 U	25 U	50 U	10 U	100 U	250 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		260	160	170	40	1000	4500
Toluene		50 U	25 U	50 U	10 U	100 U	250 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP020	PP020	PP021	PP022	PP023	PP024
	Sample ID:	GW301-PP020-0050	GW301-PP020-0073	GW301-PP021-0058	GW301-PP022-0058	GW301-PP023-0063	GW301-PP024-0058
	Sample Date:	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001	08/17/2001
Constituent	Depth (feet):	50 to N/A	73 to N/A	58 to N/A	58 to N/A	63 to N/A	58 to N/A
trans-1,2-Dichloroethene		50 U	25 U	50 U	10 U	100 U	250 U
Trichloroethene		720	410	800	210	200	1100
Trichlorofluoromethane		120	100	80	7 J	500	800
Trichlorotrifluoroethane		360	250	250	40	1200	2300
Vinyl Chloride		50 U	25 U	50 U	10 U	100 U	250 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP025	PP026	PP029	PP032	PP033	PP034
	Sample ID:	GW301-PP025-0050	GW301-PP026-0041	GW301-PP029-0045	GW301-PP032-0062	GW301-PP033-0038	GW301-PP034-0033
	Sample Date:	08/17/2001	08/17/2001	08/21/2001	08/21/2001	08/20/2001	08/20/2001
	Depth (feet):	50 to N/A	41 to N/A	45 to N/A	62 to N/A	38 to N/A	33 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		5 U	50 U	1 U	10 U	1 U	5 U
1,1,2,2-Tetrachloroethane		5 U	50 U	1 U	10 U	1 U	5 U
1,1,2-Trichloroethane		5 U	50 U	1 U	10 U	1 U	5 U
1,1-Dichloroethane		5 U	50 U	1 U	10 U	0.5 J	5 U
1,1-Dichloroethene		5 J	300	1 U	6 J	12	13
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		5 U	50 U	1 U	10 U	1 U	5 U
1,2-Dichloroethane		5 U	50 U	1 U	10 U	0.9 J	5 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		5 U	50 U	1 U	10 U	1 U	5 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		5 U	50 U	1 U	10 U	1 U	5 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		5 U	50 U	1 U	10 U	1 U	5 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP025	PP026	PP029	PP032	PP033	PP034
	Sample ID:	GW301-PP025-0050	GW301-PP026-0041	GW301-PP029-0045	GW301-PP032-0062	GW301-PP033-0038	GW301-PP034-0033
	Sample Date:	08/17/2001	08/17/2001	08/21/2001	08/21/2001	08/20/2001	08/20/2001
	Depth (feet):	50 to N/A	41 to N/A	45 to N/A	62 to N/A	38 to N/A	33 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		5 U	50 U	1 U	10 U	1 U	5 U
Chlorobenzene		5 U	50 U	1 U	10 U	1 U	5 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		5 U	50 U	1 U	10 U	1 U	5 U
Chloroform		5 U	80	1 U	10 U	0.8 J	5
Chloromethane		5 U	50 U	1 U	10 U	1 U	5 U
cis-1,2-Dichloroethene		5 U	40 J	1 U	6 J	13	5 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		5 U	50 U	1 U	10 U	1 U	5 U
M,P-Xylene		5 U	50 U	1 U	10 U	1 U	5 U
Methylene Chloride		5 U	50 U	1 U	10 U	1 U	5 U
n-Butylbenzene							
o-Xylene		5 U	50 U	1 U	10 U	1 U	5 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		17	500	1	140	400	42
Toluene		5 U	50 U	1 U	10 U	1 U	5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP025	PP026	PP029	PP032	PP033	PP034
	Sample ID:	GW301-PP025-0050	GW301-PP026-0041	GW301-PP029-0045	GW301-PP032-0062	GW301-PP033-0038	GW301-PP034-0033
	Sample Date:	08/17/2001	08/17/2001	08/21/2001	08/21/2001	08/20/2001	08/20/2001
Constituent	Depth (feet):	50 to N/A	41 to N/A	45 to N/A	62 to N/A	38 to N/A	33 to N/A
trans-1,2-Dichloroethene		5 U	50 U	1 U	10 U	1 U	5 U
Trichloroethene		98	950	1 U	60	70	80
Trichlorofluoromethane		5 U	160	1 U	10 U	1 U	24
Trichlorotrifluoroethane		5	560	1 U	7 J	1 U	76
Vinyl Chloride		5 U	50 U	1 U	10 U	1 U	5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP035	PP036	PP036	PP037	PP038	PP039
	Sample ID:	GW301-PP035-0036	GW301-PP036-0052	GW301-PP036-1052	GW301-PP037-0043	GW301-PP038-0073	GW301-PP039-0033
	Sample Date:	08/21/2001	08/20/2001	08/20/2001	08/20/2001	08/21/2001	08/20/2001
	Depth (feet):	36 to N/A	52 to N/A	52 to N/A	43 to N/A	73 to N/A	33 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		25 U	25 U	25 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		25 U	25 U	25 U	1 U	1 U	1 U
1,1,2-Trichloroethane		25 U	25 U	25 U	1 U	1 U	1 U
1,1-Dichloroethane		25 U	25 U	25 U	1 U	1 U	1 U
1,1-Dichloroethene		30	90	100	1 U	0.6 J	2
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		25 U	25 U	25 U	1 U	1 U	1 U
1,2-Dichloroethane		25 U	25 U	25 U	1 U	1 U	1 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		25 U	25 U	25 U	1 U	1 U	1 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		25 U	25 U	25 U	1 U	1 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		25 U	25 U	25 U	1 U	1 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Station ID:	PP035	PP036	PP036	PP037	PP038	PP039
Sample ID:	GW301-PP035-0036	GW301-PP036-0052	GW301-PP036-1052	GW301-PP037-0043	GW301-PP038-0073	GW301-PP039-0033
Sample Date:	08/21/2001	08/20/2001	08/20/2001	08/20/2001	08/21/2001	08/20/2001
Constituent / Depth (feet):	36 to N/A	52 to N/A	52 to N/A	43 to N/A	73 to N/A	33 to N/A
Bromochloromethane						
Bromodichloromethane						
Bromoform						
Bromomethane						
Carbon Disulfide						
Carbon Tetrachloride	25 U	25 U	25 U	1 U	1 U	1 U
Chlorobenzene	25 U	25 U	25 U	1 U	1 U	1 U
Chlorodibromomethane						
Chlorodifluoromethane						
Chloroethane	25 U	25 U	25 U	1 U	1 U	1 U
Chloroform	25 U	20 J	20 J	1 U	1 U	1 U
Chloromethane	25 U	25 U	25 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	25 U	20 J	20 J	1 U	1 U	1 U
Dibromomethane						
Dichlorodifluoromethane						
Ethylbenzene	25 U	25 U	25 U	1 U	1 U	1 U
M,P-Xylene	25 U	25 U	25 U	1 U	1 U	1 U
Methylene Chloride	25 U	25 U	25 U	1 U	1 U	1 U
n-Butylbenzene						
o-Xylene	25 U	25 U	25 U	1 U	1 U	1 U
sec-butylbenzene						
tert-Butyl Methyl Ether						
tert-Butylbenzene						
Tetrachloroethene	50	160	190	4	1	16
Toluene	25 U	25 U	25 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Station ID:	PP035	PP036	PP036	PP037	PP038	PP039
Sample ID:	GW301-PP035-0036	GW301-PP036-0052	GW301-PP036-1052	GW301-PP037-0043	GW301-PP038-0073	GW301-PP039-0033
Sample Date:	08/21/2001	08/20/2001	08/20/2001	08/20/2001	08/21/2001	08/20/2001
Constituent / Depth (feet):	36 to N/A	52 to N/A	52 to N/A	43 to N/A	73 to N/A	33 to N/A
trans-1,2-Dichloroethene	25 U	25 U	25 U	1 U	1 U	1 U
Trichloroethene	180	460	500	0.6 J	1	1
Trichlorofluoromethane	20 J	60	70	1 U	1 U	1 U
Trichlorotrifluoroethane	50	240	280	1 U	0.5 J	1 U
Vinyl Chloride	25 U	25 U	25 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP040	PP041	PP043	PP044	PP045	PP045
	Sample ID:	GW301-PP040-0062	GW301-PP041-0065	GW301-PP043-0051	GW301-PP044-0051	GW301-PP045-0052	GW301-PP045-1052
	Sample Date:	08/21/2001	08/18/2001	08/22/2001	08/22/2001	08/21/2001	08/21/2001
	Depth (feet):	62 to N/A	65 to N/A	51 to N/A	51 to N/A	52 to N/A	52 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	100 U	5 U	1 U	1 U
1,1,2,2-Tetrachloroethane		1 U	1 U	100 U	5 U	1 U	1 U
1,1,2-Trichloroethane		1 U	1 U	100 U	5 U	1 U	1 U
1,1-Dichloroethane		1 U	1 U	100 U	5 U	1 U	1 U
1,1-Dichloroethene		1 U	1 U	1300	5 U	1 U	1 U
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	100 U	5 U	1 U	1 U
1,2-Dichloroethane		1 U	1 U	100 U	5 U	1 U	1 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	100 U	5 U	1 U	1 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	100 U	5 U	1 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1 U	100 U	5 U	1 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP040	PP041	PP043	PP044	PP045	PP045
	Sample ID:	GW301-PP040-0062	GW301-PP041-0065	GW301-PP043-0051	GW301-PP044-0051	GW301-PP045-0052	GW301-PP045-1052
	Sample Date:	08/21/2001	08/18/2001	08/22/2001	08/22/2001	08/21/2001	08/21/2001
	Depth (feet):	62 to N/A	65 to N/A	51 to N/A	51 to N/A	52 to N/A	52 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	100 U	5 U	1 U	1 U
Chlorobenzene		1 U	1 U	100 U	5 U	1 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	100 U	5 U	1 U	1 U
Chloroform		1 U	1 U	300	5 U	0.9 J	0.9 J
Chloromethane		1 U	1 U	100 U	5 U	1 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	100 U	44	1 U	1 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	100 U	5 U	1 U	1 U
M,P-Xylene		1 U	1 U	100 U	5 U	1 U	1 U
Methylene Chloride		1 U	1 U	100 U	5 U	1 U	1 U
n-Butylbenzene							
o-Xylene		1 U	1 U	100 U	5 U	1 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		1 U	1	1500	66	4	4
Toluene		1 U	1 U	100 U	5 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Station ID:	PP040	PP041	PP043	PP044	PP045	PP045
Sample ID:	GW301-PP040-0062	GW301-PP041-0065	GW301-PP043-0051	GW301-PP044-0051	GW301-PP045-0052	GW301-PP045-1052
Sample Date:	08/21/2001	08/18/2001	08/22/2001	08/22/2001	08/21/2001	08/21/2001
Constituent Depth (feet):	62 to N/A	65 to N/A	51 to N/A	51 to N/A	52 to N/A	52 to N/A
trans-1,2-Dichloroethene	1 U	1 U	100 U	5 U	1 U	1 U
Trichloroethene	2	3	800	14	10	10
Trichlorofluoromethane	1 U	1 U	400	5 U	1 U	1 U
Trichlorotrifluoroethane	1 U	1 U	1100	5 U	1 U	1 U
Vinyl Chloride	1 U	1 U	100 U	5 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP046	PP047	PP048	PP049	PP050	PP051
	Sample ID:	GW301-PP046-0047	GW301-PP047-0048	GW301-PP048-0099	GW301-PP049-0063	GW301-PP050-0072	GW301-PP051-0055
	Sample Date:	08/22/2001	08/22/2001	08/22/2001	08/23/2001	08/23/2001	08/23/2001
	Depth (feet):	47 to N/A	48 to N/A	99 to N/A	63 to N/A	72 to N/A	55 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	100 U	50 U	50 U	1 U
1,1,2,2-Tetrachloroethane		1 U	1 U	100 U	50 U	50 U	1 U
1,1,2-Trichloroethane		1 U	1 U	100 U	50 U	50 U	1 U
1,1-Dichloroethane		1 U	1 U	100 U	50 U	50 U	1 U
1,1-Dichloroethene		1 U	1 U	100 U	50 U	50 U	1 U
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	100 U	50 U	50 U	1 U
1,2-Dichloroethane		1 U	1 U	100 U	50 U	50 U	1 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	100 U	50 U	50 U	1 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	100 U	50 U	50 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1 U	100 U	50 U	50 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP046	PP047	PP048	PP049	PP050	PP051
	Sample ID:	GW301-PP046-0047	GW301-PP047-0048	GW301-PP048-0099	GW301-PP049-0063	GW301-PP050-0072	GW301-PP051-0055
	Sample Date:	08/22/2001	08/22/2001	08/22/2001	08/23/2001	08/23/2001	08/23/2001
	Depth (feet):	47 to N/A	48 to N/A	99 to N/A	63 to N/A	72 to N/A	55 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	100 U	50 U	50 U	1 U
Chlorobenzene		1 U	1 U	100 U	50 U	50 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	100 U	50 U	50 U	1 U
Chloroform		1 U	1 U	100 U	50 U	50 U	1 U
Chloromethane		1 U	1 U	100 U	50 U	50 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	100 U	50 U	50 U	1 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	100 U	50 U	50 U	1 U
M,P-Xylene		1 U	1 U	100 U	50 U	50 U	1 U
Methylene Chloride		1 U	1 U	100 U	50 U	50 U	1 U
n-Butylbenzene							
o-Xylene		1 U	1 U	100 U	50 U	50 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		2	1	100 U	30 J	290	1
Toluene		1 U	1 U	100 U	50 U	50 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP046	PP047	PP048	PP049	PP050	PP051
	Sample ID:	GW301-PP046-0047	GW301-PP047-0048	GW301-PP048-0099	GW301-PP049-0063	GW301-PP050-0072	GW301-PP051-0055
	Sample Date:	08/22/2001	08/22/2001	08/22/2001	08/23/2001	08/23/2001	08/23/2001
Constituent	Depth (feet):	47 to N/A	48 to N/A	99 to N/A	63 to N/A	72 to N/A	55 to N/A
trans-1,2-Dichloroethene		1 U	1 U	100 U	50 U	50 U	1 U
Trichloroethene		2	1	960	190	90	1 U
Trichlorofluoromethane		1 U	1 U	100 U	50 U	50 U	1 U
Trichlorotrifluoroethane		2	0.7 J	100 U	50 U	50 U	1 U
Vinyl Chloride		1 U	1 U	100 U	50 U	50 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP052	PP052	PP053	PP054	PP055	PP056
	Sample ID:	GW301-PP052-0055	GW301-PP052-1055	GW301-PP053-0049	GW301-PP054-0062	GW301-PP055-0065	GW301-PP056-0058
	Sample Date:	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001
	Depth (feet):	55 to N/A	55 to N/A	49 to N/A	62 to N/A	65 to N/A	58 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	1 U	1 U	5 U	5 U
1,1,2,2-Tetrachloroethane		1 U	1 U	1 U	1 U	5 U	5 U
1,1,2-Trichloroethane		1 U	1 U	1 U	1 U	5 U	5 U
1,1-Dichloroethane		1 U	1 U	1 U	1 U	5 U	5 U
1,1-Dichloroethene		0.5 J	1 U	1 U	1 U	5 U	8
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	1 U	1 U	5 U	5 U
1,2-Dichloroethane		1 U	1 U	0.5	1 U	5 U	5 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	1 U	1 U	5 U	5 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	1 U	1 U	5 U	5 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1 U	1 U	1 U	5 U	5 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP052	PP052	PP053	PP054	PP055	PP056
	Sample ID:	GW301-PP052-0055	GW301-PP052-1055	GW301-PP053-0049	GW301-PP054-0062	GW301-PP055-0065	GW301-PP056-0058
	Sample Date:	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001
	Depth (feet):	55 to N/A	55 to N/A	49 to N/A	62 to N/A	65 to N/A	58 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	1 U	1 U	5 U	5 U
Chlorobenzene		1 U	1 U	1 U	1 U	5 U	5 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	1 U	1 U	5 U	5 U
Chloroform		1 U	1 U	1 U	1 U	5 U	5 U
Chloromethane		1 U	1 U	1 U	1 U	5 U	5 U
cis-1,2-Dichloroethene		1 U	1 U	1 U	1 U	5 U	5 U
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	1 U	1 U	5 U	5 U
M,P-Xylene		1 U	1 U	1 U	1 U	5 U	5 U
Methylene Chloride		1 U	1 U	1 U	1 U	5 U	5 U
n-Butylbenzene							
o-Xylene		1 U	1 U	1 U	1 U	5 U	5 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		5	5	22	2	120	58
Toluene		1 U	1 U	1 U	1 U	5 U	5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP052	PP052	PP053	PP054	PP055	PP056
	Sample ID:	GW301-PP052-0055	GW301-PP052-1055	GW301-PP053-0049	GW301-PP054-0062	GW301-PP055-0065	GW301-PP056-0058
	Sample Date:	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001	08/23/2001
	Depth (feet):	55 to N/A	55 to N/A	49 to N/A	62 to N/A	65 to N/A	58 to N/A
trans-1,2-Dichloroethene		1 U	1 U	1 U	1 U	5 U	5 U
Trichloroethene		7	7	0.5 J	24	62	72
Trichlorofluoromethane		1 U	1 U	2	1 U	5 U	6
Trichlorotrifluoroethane		0.8 J	0.7 J	6	1 U	3 J	7
Vinyl Chloride		1 U	1 U	1 U	1 U	5 U	5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP057	PP058	PP059	PP060	PP060	PP061
	Sample ID:	GW301-PP057-0062	GW301-PP058-0064	GW301-PP059-0063	GW301-PP060-0065	GW301-PP060-1065	GW301-PP061-0065
	Sample Date:	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001
	Depth (feet):	62 to N/A	64 to N/A	63 to N/A	65 to N/A	65 to N/A	65 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1	250	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane		1 U	4	1 U	1 U	1 U	1 U
1,1-Dichloroethane		0.7 J	240	2	1 U	1 U	1 U
1,1-Dichloroethene		8	2900	10	42	40	4
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane		0.5	110	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone							
Benzene		1 U	1	1 U	1 U	1 U	1 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP057	PP058	PP059	PP060	PP060	PP061
	Sample ID:	GW301-PP057-0062	GW301-PP058-0064	GW301-PP059-0063	GW301-PP060-0065	GW301-PP060-1065	GW301-PP061-0065
	Sample Date:	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001
	Depth (feet):	62 to N/A	64 to N/A	63 to N/A	65 to N/A	65 to N/A	65 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		1 U	0.7 J	1 U	1 U	1 U	1 U
Chlorodibromomethane							
Chlorodifluoromethane							
Chloroethane		1 U	1 U	1 U	1 U	1 U	1 U
Chloroform		1 U	9	3	1	1	2
Chloromethane		1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		10	1400	18	6	6	3
Dibromomethane							
Dichlorodifluoromethane							
Ethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
M,P-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride		1 U	0.8 J	1 U	1 U	1 U	1 U
n-Butylbenzene							
o-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
sec-butylbenzene							
tert-Butyl Methyl Ether							
tert-Butylbenzene							
Tetrachloroethene		110	3300	80	150	180	46
Toluene		1 U	1 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP057	PP058	PP059	PP060	PP060	PP061
	Sample ID:	GW301-PP057-0062	GW301-PP058-0064	GW301-PP059-0063	GW301-PP060-0065	GW301-PP060-1065	GW301-PP061-0065
	Sample Date:	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001	09/04/2001
Constituent	Depth (feet):	62 to N/A	64 to N/A	63 to N/A	65 to N/A	65 to N/A	65 to N/A
trans-1,2-Dichloroethene		1 U	15	0.6 J	1 U	1 U	1 U
Trichloroethene		40	780	48	190	200	18
Trichlorofluoromethane		0.7 J	61	13	110	90	2
Trichlorotrifluoroethane		2	61	16	210	180	4
Vinyl Chloride		0.5 U	11	0.5 U	0.5 U	0.5 U	0.5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP062	PP063	PP064	PP065	PP066	PP067
	Sample ID:	GW301-PP062-0038	GW401-PP063-0059	GW401-PP064-0061	GW401-PP065-0069	GW401-PP066-0065	GW401-PP067-0046
	Sample Date:	09/04/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001	10/30/2001
	Depth (feet):	38 to N/A	59 to N/A	61 to N/A	69 to N/A	65 to N/A	46 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U					
1,1,2,2-Tetrachloroethane		1 U					
1,1,2-Trichloroethane		1 U					
1,1-Dichloroethane		1 U	1 U	1 U	29	180	5 U
1,1-Dichloroethene		13	1 U	4.6	630	1300	12
1,1-Dichloropropene			1 U	1 U	10 U	10 U	5 U
1,2,3-Trichloropropane			1 U	1 U	10 U	10 U	5 U
1,2,4-Trimethylbenzene			1 U	1 U	17	10 U	5 U
1,2-Dibromo-3-chloropropane			2 U	2 U	20 U	20 U	10 U
1,2-Dibromoethane [EDB]			1 U	1 U	10 U	10 U	5 U
1,2-Dichlorobenzene		1 U	1 U	1 U	10 U	10 U	5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.24 J	5 U	110	2.5 U
1,2-Dichloropropane		1 U	1 U	1 U	21	10 U	5 U
1,3,5-Trimethylbenzene			1 U	1 U	3.4 J	10 U	5 U
1,3-Dichlorobenzene		1 U	1 U	1 U	10 U	10 U	5 U
1,3-Dichloropropane			1 U	1 U	10 U	10 U	5 U
1,4-Dichlorobenzene		1 U	1 U	1 U	10 U	10 U	5 U
2,2-Dichloropropane			1 U	1 U	10 U	10 U	5 U
2-Butanone			10 U	10 U	100 U	100 U	50 U
2-Chlorotoluene			1 U	1 U	10 U	10 U	5 U
4-Chlorotoluene			1 U	1 U	10 U	10 U	5 U
Acetone			10 U	10 U	100 U	100 U	50 U
Benzene		1 U	1 U	1 U	10 U	10 U	5 U
Bromobenzene			1 U	1 U	10 U	10 U	5 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP062	PP063	PP064	PP065	PP066	PP067
	Sample ID:	GW301-PP062-0038	GW401-PP063-0059	GW401-PP064-0061	GW401-PP065-0069	GW401-PP066-0065	GW401-PP067-0046
	Sample Date:	09/04/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001	10/30/2001
	Depth (feet):	38 to N/A	59 to N/A	61 to N/A	69 to N/A	65 to N/A	46 to N/A
Bromochloromethane			1 U	1 U	10 U	10 U	5 U
Bromodichloromethane			1 U	1 U	10 U	10 U	5 U
Bromoform			1 U	1 U	10 U	10 U	5 U
Bromomethane			1 U	1 U	10 U	10 U	5 U
Carbon Disulfide			1 U	1 U	10 U	10 U	5 U
Carbon Tetrachloride		0.5 U	0.99	0.5 U	5 U	5 U	2.5 U
Chlorobenzene		1 U	1 U	1 U	10 U	10 U	5 U
Chlorodibromomethane			1 U	1 U	10 U	10 U	5 U
Chlorodifluoromethane							
Chloroethane		1 U	1 U	1 U	10 U	10 U	5 U
Chloroform		2	0.29 J	0.52 J	5.4 J	7.5 J	1.2 J
Chloromethane		1 U	1 U	1 U	10 U	10 U	5 U
cis-1,2-Dichloroethene		1	1 U	3	44	550	5 U
Dibromomethane			1 U	1 U	10 U	10 U	5 U
Dichlorodifluoromethane			1 U	1 U	10 U	10 U	5 U
Ethylbenzene		1 U					
M,P-Xylene		1 U	1 U	1 U	10 U	10 U	5 U
Methylene Chloride		1 U					
n-Butylbenzene			1 U	1 U	5.2 J	10 U	5 U
o-Xylene		1 U	1 U	1 U	10 U	10 U	5 U
sec-butylbenzene			1 U	1 U	4.2 J	10 U	5 U
tert-Butyl Methyl Ether							
tert-Butylbenzene			1 U	1 U	10 U	10 U	5 U
Tetrachloroethene		250	5.9	45	86	850	540
Toluene		1 U	0.28 J	0.42 J	4.2 J	3.6 J	1.9 J

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP062	PP063	PP064	PP065	PP066	PP067
	Sample ID:	GW301-PP062-0038	GW401-PP063-0059	GW401-PP064-0061	GW401-PP065-0069	GW401-PP066-0065	GW401-PP067-0046
	Sample Date:	09/04/2001	10/29/2001	10/29/2001	10/29/2001	10/29/2001	10/30/2001
	Depth (feet):	38 to N/A	59 to N/A	61 to N/A	69 to N/A	65 to N/A	46 to N/A
trans-1,2-Dichloroethene		1 U	1 U	0.93 J	10 U	4.3 J	5 U
Trichloroethene		25	1.7	32	70	540	8.8
Trichlorofluoromethane		0.5 J	1 U	7.9	10 U	19	5 U
Trichlorotrifluoroethane		2	0.97 J	13	10 U	17	5 U
Vinyl Chloride		0.5 U	2 U	2 U	20 U	20 U	10 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP068	PP069	PP069	PP070	PP071	PP072
	Sample ID:	GW401-PP068-0058	GW401-PP069-0060	GW401-PP069-1060	GW401-PP070-0093	GW401-PP071-0084	GW401-PP072-0088
	Sample Date:	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001
	Depth (feet):	58 to N/A	60 to N/A	60 to N/A	93 to N/A	84 to N/A	88 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1-Dichloroethane		2.5 J	110	100	1 U	1 U	1 U
1,1-Dichloroethene		13	380	390	1.8	5.4	7.2
1,1-Dichloropropene		5 U	5 U	5 U	1 U	1 U	1 U
1,2,3-Trichloropropane		5 U	5 U	5 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane		10 U	10 U	10 U	2 U	2 U	2 U
1,2-Dibromoethane [EDB]		5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dichlorobenzene		5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dichloroethane		2.5 U	13	12	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		5 U	5 U	5 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		5 U	5 U	5 U	1 U	1 U	1 U
1,3-Dichlorobenzene		5 U	5 U	5 U	1 U	1 U	1 U
1,3-Dichloropropane		5 U	5 U	5 U	1 U	1 U	1 U
1,4-Dichlorobenzene		5 U	5 U	5 U	1 U	1 U	1 U
2,2-Dichloropropane		5 U	5 U	5 U	1 U	1 U	1 U
2-Butanone		50 U	50 U	50 U	10 U	10 U	10 U
2-Chlorotoluene		5 U	5 U	5 U	1 U	1 U	1 U
4-Chlorotoluene		5 U	5 U	5 U	1 U	1 U	1 U
Acetone		50 U	50 U	50 U	10 U	10 U	26
Benzene		5 U	5 U	5 U	1 U	1 U	1 U
Bromobenzene		5 U	5 U	5 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP068	PP069	PP069	PP070	PP071	PP072
	Sample ID:	GW401-PP068-0058	GW401-PP069-0060	GW401-PP069-1060	GW401-PP070-0093	GW401-PP071-0084	GW401-PP072-0088
	Sample Date:	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001
	Depth (feet):	58 to N/A	60 to N/A	60 to N/A	93 to N/A	84 to N/A	88 to N/A
Bromochloromethane		5 U	5 U	5 U	1 U	1 U	1 U
Bromodichloromethane		5 U	5 U	5 U	1 U	1 U	1 U
Bromoform		5 U	5 U	5 U	1 U	1 U	1 U
Bromomethane		5 U	5 U	5 U	1 U	1 U	1 U
Carbon Disulfide		5 U	5 U	5 U	1 U	1 U	1 U
Carbon Tetrachloride		2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		5 U	5 U	5 U	1 U	1 U	1 U
Chlorodibromomethane		5 U	5 U	5 U	1 U	1 U	1 U
Chlorodifluoromethane							
Chloroethane		5 U	5 U	5 U	1 U	1 U	1 U
Chloroform		1 J	1.1 J	1.1 J	1 U	0.63 J	0.26 J
Chloromethane		5 U	5 U	5 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		5 U	340	350	1 U	1 U	0.54 J
Dibromomethane		5 U	5 U	5 U	1 U	1 U	1 U
Dichlorodifluoromethane		5 U	5 U	5 U	1 U	1 U	1 U
Ethylbenzene							
M,P-Xylene		5 U	5 U	5 U	1 U	1 U	1 U
Methylene Chloride							
n-Butylbenzene		5 U	5 U	5 U	1 U	1 U	1 U
o-Xylene		5 U	5 U	5 U	1 U	1 U	1 U
sec-butylbenzene		5 U	5 U	5 U	1 U	1 U	1 U
tert-Butyl Methyl Ether							
tert-Butylbenzene		5 U	5 U	5 U	1 U	1 U	1 U
Tetrachloroethene		45	200	180	0.28 J	6.1	400
Toluene		1.6 J	2 J	1.4 J	1 U	0.31 J	0.34 J

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP068	PP069	PP069	PP070	PP071	PP072
	Sample ID:	GW401-PP068-0058	GW401-PP069-0060	GW401-PP069-1060	GW401-PP070-0093	GW401-PP071-0084	GW401-PP072-0088
	Sample Date:	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001	10/30/2001
	Depth (feet):	58 to N/A	60 to N/A	60 to N/A	93 to N/A	84 to N/A	88 to N/A
trans-1,2-Dichloroethene		5 U	1.9 J	1.7 J	1 U	1 U	1 U
Trichloroethene		46	110	110	29	35	78
Trichlorofluoromethane		3.1 J	11	10	1 U	6.7	65
Trichlorotrifluoroethane		5.9	21	21	1 U	52	240
Vinyl Chloride		10 U	5.2 J	5.1 J	2 U	2 U	2 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP073	PP074	PP075	PP076	PP077	PP078
	Sample ID:	GW401-PP073-0087	GW401-PP074-0072	GW401-PP075-0048	GW401-PP076-0056	GW401-PP077-0060	GW401-PP078-0081
	Sample Date:	10/31/2001	10/31/2001	10/31/2001	11/01/2001	11/01/2001	11/01/2001
	Depth (feet):	87 to N/A	72 to N/A	48 to N/A	56 to N/A	60 to N/A	81 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1-Dichloroethane		50 U	8.6	1 U	1 U	1 U	1 U
1,1-Dichloroethene		740	37	0.4 J	1 U	0.21 J	120
1,1-Dichloropropene		50 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichloropropane		50 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		50 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane		100 U	2 U	2 U	2 U	2 U	2 U
1,2-Dibromoethane [EDB]		50 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene		50 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane		25 U	0.22 J	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		50 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		50 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene		50 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane		50 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene		50 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane		50 U	1 U	1 U	1 U	1 U	1 U
2-Butanone		500 U	10 U	10 U	10 U	10 U	10 U
2-Chlorotoluene		50 U	1 U	1 U	1 U	1 U	1 U
4-Chlorotoluene		50 U	1 U	1 U	1 U	1 U	1 U
Acetone		500 U	10 U	10 U	10 U	10 U	130
Benzene		50 U	1 U	1 U	1 U	1 U	0.75 J
Bromobenzene		50 U	1 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP073	PP074	PP075	PP076	PP077	PP078
	Sample ID:	GW401-PP073-0087	GW401-PP074-0072	GW401-PP075-0048	GW401-PP076-0056	GW401-PP077-0060	GW401-PP078-0081
	Sample Date:	10/31/2001	10/31/2001	10/31/2001	11/01/2001	11/01/2001	11/01/2001
	Depth (feet):	87 to N/A	72 to N/A	48 to N/A	56 to N/A	60 to N/A	81 to N/A
Bromochloromethane		50 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane		50 U	1 U	1 U	1 U	1 U	1 U
Bromoform		50 U	1 U	1 U	1 U	1 U	1 U
Bromomethane		50 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide		50 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride		25 U	0.5 U	0.5 U	0.5 U	0.26 J	0.5 U
Chlorobenzene		50 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane		50 U	1 U	1 U	1 U	1 U	1 U
Chlorodifluoromethane							
Chloroethane		50 U	1 U	1 U	1 U	1 U	1 U
Chloroform		26 J	0.63 J	1.2	0.4 J	0.54 J	1.5
Chloromethane		50 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		50 U	19	1 U	0.84 J	0.88 J	1.6
Dibromomethane		50 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane		50 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene							
M,P-Xylene		50 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride							
n-Butylbenzene		50 U	1 U	1 U	1 U	1 U	1 U
o-Xylene		50 U	1 U	1 U	1 U	1 U	1 U
sec-butylbenzene		50 U	1 U	1 U	1 U	1 U	1 U
tert-Butyl Methyl Ether							
tert-Butylbenzene		50 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene		420	35	5.5	32	34	2300
Toluene		50 U	1 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP073	PP074	PP075	PP076	PP077	PP078
	Sample ID:	GW401-PP073-0087	GW401-PP074-0072	GW401-PP075-0048	GW401-PP076-0056	GW401-PP077-0060	GW401-PP078-0081
	Sample Date:	10/31/2001	10/31/2001	10/31/2001	11/01/2001	11/01/2001	11/01/2001
Constituent	Depth (feet):	87 to N/A	72 to N/A	48 to N/A	56 to N/A	60 to N/A	81 to N/A
trans-1,2-Dichloroethene		50 U	0.3 J	1 U	1 U	1 U	1 U
Trichloroethene		250	46	2	11	16	240
Trichlorofluoromethane		600	4.9	1 U	1 U	0.48 J	310
Trichlorotrifluoroethane		2200	11	1 U	1.2	2.6	1000
Vinyl Chloride		100 U	2 U	2 U	2 U	2 U	2 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP079	PP079	PP080	PP081	PP082	PP083
	Sample ID:	GW401-PP079-0088	GW401-PP079-1088	GW401-PP080-0071	GW401-PP081-0071	GW401-PP082-0080	GW401-PP083-0082
	Sample Date:	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/02/2001
	Depth (feet):	88 to N/A	88 to N/A	71 to N/A	71 to N/A	80 to N/A	82 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1-Dichloroethane		1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene		4.3	12	1 U	1 U	1 U	800
1,1-Dichloropropene		1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichloropropane		1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane		2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dibromoethane [EDB]		1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane		1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane		1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane		1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone		10 U	10 U	10 U	10 U	3 J	10 U
2-Chlorotoluene		1 U	1 U	1 U	1 U	1 U	1 U
4-Chlorotoluene		1 U	1 U	1 U	1 U	1 U	1 U
Acetone		7.5 J	3 J	10 U	10 U	6.9 J	150 J
Benzene		0.24 J	1 U	1 U	1 U	0.44 J	1 U
Bromobenzene		1 U	1 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP079	PP079	PP080	PP081	PP082	PP083
	Sample ID:	GW401-PP079-0088	GW401-PP079-1088	GW401-PP080-0071	GW401-PP081-0071	GW401-PP082-0080	GW401-PP083-0082
	Sample Date:	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/02/2001
	Depth (feet):	88 to N/A	88 to N/A	71 to N/A	71 to N/A	80 to N/A	82 to N/A
Bromochloromethane		1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane		1 U	1 U	1 U	1 U	1 U	1 U
Bromoform		1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane		1 U	1 U	1 U	1 U	1 U	1 U
Carbon Disulfide		1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane		1 U	1 U	1 U	1 U	1 U	1 U
Chlorodifluoromethane							
Chloroethane		1 U	1 U	1 U	1 U	1 U	1 U
Chloroform		0.61 J	0.97 J	1 U	1 U	1 U	1.1
Chloromethane		1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	1 U	1 U	1 U	0.28 J
Dibromomethane		1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane		1 U	1 U	1 U	1 U	1 U	2.3
Ethylbenzene							
M,P-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride							
n-Butylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
sec-butylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
tert-Butyl Methyl Ether							
tert-Butylbenzene		1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene		8.8	6.1	5.1	22	2.8	460
Toluene		1 U	1 U	1 U	1 U	0.44 J	0.42 J

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP079	PP079	PP080	PP081	PP082	PP083
	Sample ID:	GW401-PP079-0088	GW401-PP079-1088	GW401-PP080-0071	GW401-PP081-0071	GW401-PP082-0080	GW401-PP083-0082
	Sample Date:	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/01/2001	11/02/2001
	Depth (feet):	88 to N/A	88 to N/A	71 to N/A	71 to N/A	80 to N/A	82 to N/A
trans-1,2-Dichloroethene		1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene		240	580	1 U	1 U	1 U	310
Trichlorofluoromethane		0.66 J	0.25 J	1 U	1 U	1 U	390
Trichlorotrifluoroethane		2.9	1.8	1 U	1 U	1 U	1300
Vinyl Chloride		2 U	2 U	2 U	2 U	2 U	2 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP084	PP085	PP091	PP092	PP093	PP094
	Sample ID:	GW401-PP084-0047	GW401-PP085-0038	GW302-PP091-0071	GW302-PP092-0056	GW302-PP093-0070	GW302-PP094-0070
	Sample Date:	11/02/2001	11/02/2001	08/14/2002	08/14/2002	08/09/2002	08/09/2002
	Depth (feet):	47 to N/A	38 to N/A	71 to N/A	56 to N/A	70 to N/A	70 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane				1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane				1 U	1 U	1 U	1 U
1,1,2-Trichloroethane				1 U	1 U	1 U	1 U
1,1-Dichloroethane		1.2	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene		280	1 U	1 U	1 U	1 U	1 U
1,1-Dichloropropene		1 U	1 U				
1,2,3-Trichloropropane		1 U	1 U				
1,2,4-Trimethylbenzene		1 U	1 U				
1,2-Dibromo-3-chloropropane		2 U	2 U				
1,2-Dibromoethane [EDB]		1 U	1 U				
1,2-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane		1.2	0.5 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane		1 U	1 U				
1,3,5-Trimethylbenzene		1 U	1 U				
1,3-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropane		1 U	1 U				
1,4-Dichlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
2,2-Dichloropropane		1 U	1 U				
2-Butanone		10 U	10 U				
2-Chlorotoluene		1 U	1 U				
4-Chlorotoluene		1 U	1 U				
Acetone		53 J	10 U	10 U	10 U	10 U	6 U
Benzene		0.6 J	1 U	1 U	1 U	1 U	1 U
Bromobenzene		1 U	1 U				

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP084	PP085	PP091	PP092	PP093	PP094
	Sample ID:	GW401-PP084-0047	GW401-PP085-0038	GW302-PP091-0071	GW302-PP092-0056	GW302-PP093-0070	GW302-PP094-0070
	Sample Date:	11/02/2001	11/02/2001	08/14/2002	08/14/2002	08/09/2002	08/09/2002
	Depth (feet):	47 to N/A	38 to N/A	71 to N/A	56 to N/A	70 to N/A	70 to N/A
Bromochloromethane		1 U	1 U				
Bromodichloromethane		1 U	1 U				
Bromoform		1 U	1 U				
Bromomethane		1 U	1 U				
Carbon Disulfide		1 U	1 U				
Carbon Tetrachloride		0.24 J	0.5 U	1 U	1 U	1 U	1 U
Chlorobenzene		1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane		1 U	1 U				
Chlorodifluoromethane				1 U	1 U	1 U	1 U
Chloroethane		1 U	1 U	1 U	1 U	1 U	1 U
Chloroform		4.6	0.36 J	1 U	1 U	1 U	1 U
Chloromethane		1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		5.7	1.2	0.5 J	1 U	1 U	1 U
Dibromomethane		1 U	1 U				
Dichlorodifluoromethane		1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene				1 U	1 U	1 U	1 U
M,P-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride				1 U	1 U	1 U	1 U
n-Butylbenzene		1 U	1 U				
o-Xylene		1 U	1 U	1 U	1 U	1 U	1 U
sec-butylbenzene		1 U	1 U				
tert-Butyl Methyl Ether							
tert-Butylbenzene		1 U	1 U				
Tetrachloroethene		320	53	5	1 U	1 U	1 U
Toluene		1 U	1 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP084	PP085	PP091	PP092	PP093	PP094
	Sample ID:	GW401-PP084-0047	GW401-PP085-0038	GW302-PP091-0071	GW302-PP092-0056	GW302-PP093-0070	GW302-PP094-0070
	Sample Date:	11/02/2001	11/02/2001	08/14/2002	08/14/2002	08/09/2002	08/09/2002
Constituent	Depth (feet):	47 to N/A	38 to N/A	71 to N/A	56 to N/A	70 to N/A	70 to N/A
trans-1,2-Dichloroethene		0.49 J	1 U	1 U	1 U	1 U	1 U
Trichloroethene		250	17	2	1 U	1 U	1 U
Trichlorofluoromethane		240	1 U	1 U	1 U	1 U	1 U
Trichlorotrifluoroethane		550	6.1	1 U	1 U	1 U	1 U
Vinyl Chloride		2 U	2 U	1 U	1 U	1 U	1 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP095	PP095	PP106	PP111	PP112	PP113
	Sample ID:	GW302-PP095-0046	GW302-PP095-1046	GW302-PP106-0065	GW302-PP111-0063	GW302-PP112-0063	GW302-PP113-0063
	Sample Date:	08/14/2002	08/14/2002	08/09/2002	08/09/2002	08/16/2002	08/16/2002
	Depth (feet):	46 to N/A	46 to N/A	65 to N/A	63 to N/A	63 to N/A	63 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		1 U	1 U	40 J	50 U	50 U	20 U
1,1,2,2-Tetrachloroethane		1 U	1 U	50 U	50 U	50 U	20 U
1,1,2-Trichloroethane		1 U	1 U	50 U	50 U	50 U	20 U
1,1-Dichloroethane		1 U	1 U	60	50 U	50 U	20 U
1,1-Dichloroethene		1 U	1 U	2400	600	1100	360
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		1 U	1 U	50 U	50 U	50 U	20 U
1,2-Dichloroethane		1 U	1 U	330	50 U	50 U	20 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		1 U	1 U	50 U	50 U	50 U	20 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		1 U	1 U	50 U	50 U	50 U	20 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		10 U	10 U	50 U	50 U	500 U	200 U
Benzene		1 U	1 U	50 U	50 U	50 U	20 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP095	PP095	PP106	PP111	PP112	PP113
	Sample ID:	GW302-PP095-0046	GW302-PP095-1046	GW302-PP106-0065	GW302-PP111-0063	GW302-PP112-0063	GW302-PP113-0063
	Sample Date:	08/14/2002	08/14/2002	08/09/2002	08/09/2002	08/16/2002	08/16/2002
	Depth (feet):	46 to N/A	46 to N/A	65 to N/A	63 to N/A	63 to N/A	63 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		1 U	1 U	50 U	50 U	50 U	20 U
Chlorobenzene		1 U	1 U	50 U	50 U	50 U	20 U
Chlorodibromomethane							
Chlorodifluoromethane		1 U	1 U	50 U	50 U	50 U	20 U
Chloroethane		1 U	1 U	50 U	50 U	50 U	20 U
Chloroform		0.5 J	0.6 J	3000	30 J	80	20 U
Chloromethane		1 U	1 U	50 U	50 U	50 U	20 U
cis-1,2-Dichloroethene		1 U	1 U	50 U	50 U	50 U	20 U
Dibromomethane							
Dichlorodifluoromethane		1 U	1 U	50 U	50 U	50 U	20 U
Ethylbenzene		1 U	1 U	50 U	50 U	50 U	20 U
M,P-Xylene		1 U	1 U	50 U	50 U	50 U	20 U
Methylene Chloride		1 U	1 U	50 U	50 U	50 U	20 U
n-Butylbenzene							
o-Xylene		1 U	1 U	50 U	50 U	50 U	20 U
sec-butylbenzene							
tert-Butyl Methyl Ether							90
tert-Butylbenzene							
Tetrachloroethene		1 U	1 U	15000	370	740	270
Toluene		1 U	1 U	50 U	50 U	50 U	20 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Station ID:	PP095	PP095	PP106	PP111	PP112	PP113
Sample ID:	GW302-PP095-0046	GW302-PP095-1046	GW302-PP106-0065	GW302-PP111-0063	GW302-PP112-0063	GW302-PP113-0063
Sample Date:	08/14/2002	08/14/2002	08/09/2002	08/09/2002	08/16/2002	08/16/2002
Constituent Depth (feet):	46 to N/A	46 to N/A	65 to N/A	63 to N/A	63 to N/A	63 to N/A
trans-1,2-Dichloroethene	1 U	1 U	30 J	50 U	50 U	20 U
Trichloroethene	1 U	1 U	1800	50	130	50
Trichlorofluoromethane	1 U	1 U	600	360	420	210
Trichlorotrifluoroethane	1 U	1 U	1100	870	1100	470
Vinyl Chloride	1 U	1 U	50 U	50 U	50 U	20 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP113	PP114	PP115	PP116	PP117	PP118
	Sample ID:	GW302-PP113-1063	GW302-PP114-0063	GW302-PP115-0048	GW302-PP116-0061	GW302-PP117-0053	GW302-PP118-0055
	Sample Date:	08/16/2002	08/16/2002	08/16/2002	08/16/2002	08/08/2002	08/08/2002
	Depth (feet):	63 to N/A	63 to N/A	48 to N/A	61 to N/A	53 to N/A	55 to N/A
Volatile Organic Compounds (ug/l)							
1,1,1-Trichloroethane		20 U	20 U	20 U	50 U	100 U	100 U
1,1,2,2-Tetrachloroethane		20 U	20 U	20 U	50 U	100 U	100 U
1,1,2-Trichloroethane		20 U	20 U	20 U	50 U	100 U	100 U
1,1-Dichloroethane		20 U	20 U	20 U	50 U	100 U	100 U
1,1-Dichloroethene		260	330	160	390	2400	1300
1,1-Dichloropropene							
1,2,3-Trichloropropane							
1,2,4-Trimethylbenzene							
1,2-Dibromo-3-chloropropane							
1,2-Dibromoethane [EDB]							
1,2-Dichlorobenzene		20 U	20 U	20 U	50 U	100 U	100 U
1,2-Dichloroethane		20 U	20 U	20 U	50 U	90 J	100 U
1,2-Dichloropropane							
1,3,5-Trimethylbenzene							
1,3-Dichlorobenzene		20 U	20 U	20 U	50 U	100 U	100 U
1,3-Dichloropropane							
1,4-Dichlorobenzene		20 U	20 U	20 U	50 U	100 U	100 U
2,2-Dichloropropane							
2-Butanone							
2-Chlorotoluene							
4-Chlorotoluene							
Acetone		200 U	200 U	200 U	500 U	1000 U	1000 U
Benzene		20 U	20 U	20 U	50 U	100 U	100 U
Bromobenzene							

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP113	PP114	PP115	PP116	PP117	PP118
	Sample ID:	GW302-PP113-1063	GW302-PP114-0063	GW302-PP115-0048	GW302-PP116-0061	GW302-PP117-0053	GW302-PP118-0055
	Sample Date:	08/16/2002	08/16/2002	08/16/2002	08/16/2002	08/08/2002	08/08/2002
	Depth (feet):	63 to N/A	63 to N/A	48 to N/A	61 to N/A	53 to N/A	55 to N/A
Bromochloromethane							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride		20 U	20 U	20 U	50 U	100 U	100 U
Chlorobenzene		20 U	20 U	20 U	50 U	100 U	100 U
Chlorodibromomethane							
Chlorodifluoromethane		20 U	20 U	20 U	50 U	100 U	100 U
Chloroethane		20 U	20 U	20 U	50 U	100 U	100 U
Chloroform		20 U	10 J	20 U	30 J	900	200
Chloromethane		20 U	20 U	20 U	50 U	100 U	100 U
cis-1,2-Dichloroethene		20 U	20 U	20 U	50 U	100 U	100 U
Dibromomethane							
Dichlorodifluoromethane		20 U	20 U	20 U	50 U	100 U	100 U
Ethylbenzene		20 U	20 U	20 U	50 U	100 U	100 U
M,P-Xylene		20 U	20 U	20 U	50 U	100 U	100 U
Methylene Chloride		20 U	20 U	20 U	50 U	100 U	100 U
n-Butylbenzene							
o-Xylene		20 U	20 U	20 U	50 U	100 U	100 U
sec-butylbenzene							
tert-Butyl Methyl Ether		90	20	60			
tert-Butylbenzene							
Tetrachloroethene		220	180	100	330	5100	1200
Toluene		20 U	20 U	20 U	50 U	100 U	100 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP113	PP114	PP115	PP116	PP117	PP118
	Sample ID:	GW302-PP113-1063	GW302-PP114-0063	GW302-PP115-0048	GW302-PP116-0061	GW302-PP117-0053	GW302-PP118-0055
	Sample Date:	08/16/2002	08/16/2002	08/16/2002	08/16/2002	08/08/2002	08/08/2002
Constituent	Depth (feet):	63 to N/A	63 to N/A	48 to N/A	61 to N/A	53 to N/A	55 to N/A
trans-1,2-Dichloroethene		20 U	20 U	20 U	50 U	100 U	100 U
Trichloroethene		40	40	20	70	900	200
Trichlorofluoromethane		160	200	220	280	900	600
Trichlorotrifluoroethane		420	480	430	610	2000	1300
Vinyl Chloride		20 U	20 U	20 U	50 U	100 U	100 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

Constituent	Station ID:	PP119
	Sample ID:	GW302-PP119-0058
	Sample Date:	08/08/2002
	Depth (feet):	58 to N/A
Volatile Organic Compounds (ug/l)		
1,1,1-Trichloroethane		100 U
1,1,2,2-Tetrachloroethane		100 U
1,1,2-Trichloroethane		100 U
1,1-Dichloroethane		100 U
1,1-Dichloroethene		900
1,1-Dichloropropene		
1,2,3-Trichloropropane		
1,2,4-Trimethylbenzene		
1,2-Dibromo-3-chloropropane		
1,2-Dibromoethane [EDB]		
1,2-Dichlorobenzene		100 U
1,2-Dichloroethane		100 U
1,2-Dichloropropane		
1,3,5-Trimethylbenzene		
1,3-Dichlorobenzene		100 U
1,3-Dichloropropane		
1,4-Dichlorobenzene		100 U
2,2-Dichloropropane		
2-Butanone		
2-Chlorotoluene		
4-Chlorotoluene		
Acetone		1000 U
Benzene		100 U
Bromobenzene		

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP119
	Sample ID:	GW302-PP119-0058
	Sample Date:	08/08/2002
Constituent	Depth (feet):	58 to N/A
Bromochloromethane		
Bromodichloromethane		
Bromoform		
Bromomethane		
Carbon Disulfide		
Carbon Tetrachloride		100 U
Chlorobenzene		100 U
Chlorodibromomethane		
Chlorodifluoromethane		100 U
Chloroethane		100 U
Chloroform		100 U
Chloromethane		100 U
cis-1,2-Dichloroethene		100 U
Dibromomethane		
Dichlorodifluoromethane		100 U
Ethylbenzene		100 U
M,P-Xylene		100 U
Methylene Chloride		100 U
n-Butylbenzene		
o-Xylene		100 U
sec-butylbenzene		
tert-Butyl Methyl Ether		
tert-Butylbenzene		
Tetrachloroethene		600
Toluene		100 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

Omega - Phase 1 and 2 Push Probe Ground Water Data Listing

	Station ID:	PP119
	Sample ID:	GW302-PP119-0058
	Sample Date:	08/08/2002
Constituent	**Depth (feet):**	58 to N/A
trans-1,2-Dichloroethene		100 U
Trichloroethene		200
Trichlorofluoromethane		600
Trichlorotrifluoroethane		1300
Vinyl Chloride		100 U

A blank cell indicates analysis was not performed or the result was rejected during analysis.

OVERSIZE ITEM(S)

Due to the size of this item, it has been scanned separately.

See Document # 163870 for scanned image(s).