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Letter of Transmittal

To:	Alameda County Health Care Services Agency	Date: 11/21/2005
	Environmental Health Service - Environmental Protection	
	1131 Harbor Bay Parkway, Suite 250	Job No: SJ37-90H-1.2005
	Alameda, California 94502-6577	
Attn:	Jerry Wickham	

We are sending the following items:

Date	Copies	Description
21-Nov-05	1	**Well Installation Report**
		Shell-branded Service Station
		3790 Hopyard Road
		Pleasanton, CA

These are transmitted:

☐ For your Information ☐ For action specified below ☐ For review and comment ☒ For your use ☐ As requested

Remarks

Copies to: Denis Brown, Shell Oil Products US
Betty Graham, RWQCB
Danielle Stefani, Livermore-Pleasanton Fire Dept
Matthew Katen, Zone 7 Water Agency
T.C. Sun, Property Owner representative - 3730 Hopyard Rd, Pleasanton

By: Lena Martinez
Title: Project Manager Assistant/LFR

RO 363

Shell Oil Products US

November 21, 2005

Re: **Well Installation Report**
Shell-branded Service Station
3790 Hopyard Road
Pleasanton, California

Dear Mr. Jerry Wickham:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,
Shell Oil Products US

Denis L. Brown
Project Manager

20945 S. Wilmington Avenue, Carson, CA 90810 P: (559) 645-9306; F: (559) 645-5643

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November 21, 2005
Project SJ3790-1.2005

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Well Installation Report
Shell-branded Service Station
3790 Hopyard Road
Pleasanton, California

Dear Mr. Wickham,

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared this report describing the drilling of a deep cone penetration testing (CPT) boring and the installation of new on- and off-site groundwater monitoring wells at the site referenced above (Figure 1). The report also presents the analytical results of groundwater samples from the new wells, a discussion of horizontal and vertical groundwater flow, extent of fuel oxygenates dissolved in groundwater, and recommendations for further site activity. The report was requested in a letter from the Alameda County Health Care Services Agency (ACHCSA) to Shell dated July 28, 2005.

BACKGROUND

On February 15 through 18, 2005, Delta performed groundwater sampling at nine locations (CPT-3 through CPT-11, Figure 2) using CPT equipment. The goal of the CPT investigation was to define the lateral and vertical extent of methyl tert-butyl ether (MTBE) and tert butanol (TBA) previously detected in shallow groundwater beneath the site and downgradient areas.

The CPT boreholes encountered clay to a depth of approximately 50 feet below grade (bg). Interlayered silt, sandy silt, sand, and gravelly sand predominate from approximately 50 feet bg to the total depth explored of 80 feet bg. Delta prepared a series of geologic cross sections based on CPT data and boring logs from previous soil borings and borings for groundwater monitoring wells. The cross sections were presented in Delta's *CPT Soil and Groundwater Investigation Report* dated March 24, 2005. Updated

cross sections are provided as Figures 3 through 7. Logs for all CPT borings (previous and current) are provided in Attachment A.

Groundwater analytical data from the CPT investigation confirmed that petroleum hydrocarbons, MTBE, and TBA are primarily confined to the groundwater contained in clay deposits in the 15- to 20-foot depth interval (see Table 1). The clay, extending from near the ground surface to a depth of approximately 50 feet bg, appears to act to retard the downward migration of contaminants. MTBE and TBA were detected in only three of sixteen groundwater samples collected from sand deposits below a depth of 50 feet. The three samples were collected from borings CPT-4 and CPT-5 in the area of highest TBA concentrations in shallow groundwater (Figure 2). MTBE was detected in the 55- to 60-foot groundwater sample from boring CPT-4 at 0.54 micrograms per liter (ug/l). MTBE was not detected in the 70- to 74-foot depth sample from boring CPT-4. MTBE and TBA were both detected in the 59- to 62-foot and 76- to 80-foot groundwater samples from boring CPT-5. MTBE and TBA concentrations increased with depth. MTBE and TBA concentrations in the 76- to 80-foot sample were 19 ug/l and 39 ug/l, respectively.

Delta, in its March 24, 2005 report, recommended the following:

- Drilling of an additional CPT boring (CPT-5A, Figure 2) near previous boring CPT-5. The purpose of the boring is to define the vertical extent of MTBE and TBA detected in boring CPT-5 at a depth of 76 to 80 feet bg. The CPT boring will be extended to a depth of approximately 120 feet bg or refusal. Depth discrete groundwater samples will be collected from sand layers from 80 to 120 feet bg. The water samples will be analyzed for MTBE and TBA by EPA Method 8260B.
- Install a well cluster in the area of boring CPT-5. Existing Well S-5 will be used to monitor shallow groundwater. A series of wells will be installed at depths ranging from 75 to 120 feet bg based on the results of the CPT boring described above. Wells will be constructed with a maximum sand pack length of 5 feet in accordance with ACHCSA requirements.
- Install a well cluster in the southeast corner of the 3760 Hopyard Road (7-Eleven) property. A series of wells will be installed at depths ranging from 35 to 120 feet bg based on the results of the CPT boring described above. Wells will be constructed with maximum sand pack lengths of 5 feet.
- Install three wells adjacent to Arroyo Mocha Canal. Wells are proposed to be approximately 25 feet deep and monitor first encountered groundwater.

The ACHCSA, in its letter to Shell dated April 26, 2005, concurred with Delta's recommendations. The ACHCSA requested a work plan detailing the recommended work and responses to a series of technical comments. Shell submitted a work plan prepared by Delta dated June 24, 2005. The work plan was approved by ACHCSA in a letter to Shell dated July 28, 2005.

GROUNDWATER INVESTIGATION

The following sections describe tasks performed during completion of an additional groundwater investigation at the site. Investigation results are also provided and discussed.

PREFIELD ACTIVITIES

Prior to drilling, Delta marked the locations of all CPT boring and well locations and contacted Underground Services Alert 48 hours prior to drilling. In addition, a private utility locator was retained to perform a geophysical survey of the proposed boring locations. Each location was then air-knifed or hand augered to a depth of approximately seven feet to minimize the possibility of encountering underground utilities during drilling activities. Delta obtained all required drilling permits and an encroachment permit for work adjacent to the Arroyo Mocho Canal from the Zone 7 Flood Control and Water Conservation District (Zone 7) and the City of Pleasanton. Drilling and encroachment permits are provided as Attachment B. Mr. Jerry Wickham of ACHCSA was notified 72 hours prior to any drilling activities.

CPT SOIL PROFILING

The CPT investigation consisted of two separate boreholes at the location of CPT-5A on Figure 2– one for stratigraphic profiling and a second for collecting discrete soil and groundwater samples. Soil classifications were based on the cone penetration resistance, sleeve friction, and friction ratio. A soil classification graph was generated during the advancement of the CPT-5A borehole. A soil profile graph is provided in Attachment A. Grout was then pumped into the initial borehole behind the cone by using a grout collar (retraction grouting).

On February 15, 2005, Boring CPT-5 was drilled to a depth of 80 feet bg in the area of highest MTBE concentrations in first groundwater (20 feet bg). Groundwater samples were collected from sand deposits at depths of approximately 62 and 80 feet bg. On September 9, 2005, an adjacent boring, CPT-5A was drilled to a depth of 100 feet bg at which boring refusal was encountered. As in all other site CPT borings, boring CPT-5A encountered clay from the ground surface to a depth of approximately 50 feet bg. (see geologic cross section A-A, Figure 3). Sand deposits were encountered at depths of 56 to 66 feet bg and 76 to 78 feet bg separated by silt (see log in Attachment A). Silt was found to underlie the deepest of the sand layers to a depth of at least 100 feet bg.

CPT GROUNDWATER SAMPLING AND ANALYSIS

A second CPT borehole was drilled for collection of depth discrete groundwater samples. To collect discrete groundwater samples, a sealed PVC hydropunch screen was pushed to the desired sampling depth. The push rod was then retracted exposing the hydropunch screen. Groundwater hydrostatically entered the sampler from the saturated soil. A small diameter stainless steel bailer was lowered through the hollow push rods, into the screen section for sample collection. A Delta geologist determined the appropriate depths from which to collect discrete groundwater samples by reviewing the CPT-5A soil profile graph. Water samples were collected at the depth of the two sand layers identified on the profile – 61 to 64 feet bg and 74 to 78 feet bg. An attempt was made to collect a water sample from near the bottom of the boring – 97 to 100 feet bg. No water entered the sampler during a ½-hour waiting period.

The groundwater samples were transferred to 40-milliliter glass VOA bottles. The bottles were placed on ice for transportation to the laboratory. Groundwater samples were analyzed for total

petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and xylene (BTEX compounds), and fuel oxygenates MTBE and TBA by EPA Method 8260B.

The water sample from the upper sand layer contained benzene (0.84 ug/l), ethylbenzene (1.4 ug/l), and xylene (2.8 ug/l). MTBE was detected at 1.4 ug/l. TBA was not detected in the sample. TPH-G, BTEX compounds, MTBE, and TBA were all below the laboratory reporting limit for the sample collected from the lower sand (Table 1). Laboratory reports and chain of custody documentation are provided in Attachment C.

INSTALLATION OF GROUNDWATER MONITORING WELL CLUSTERS

Delta installed groundwater monitoring well clusters at the location of existing Wells S-5 and S-9. In accordance with ACHCSA guidelines, sand pack intervals did not exceed 5 feet in length. Each well was completed in a separate borehole.

The wells were installed using hollow-stem auger drilling equipment provided by Gregg Drilling (License C57- 485165). Soil samples were collected every 5 feet from the ground surface to the near the top of the anticipated well screen depth interval. Continuous soil sampling was performed in the bottom portion of each boring (see boring logs, Attachment A). The borings at the S-5 location encountered clay from the ground surface to a depth of approximately 53.5 feet bg. Clayey sand, sand, and gravel were encountered from 53.5 feet to 77.5 feet bg, the maximum depth of the borings. The borings at the S-9 location encountered clay from the ground surface to a depth of approximately 55.5 feet bg. Clay, clayey sand, sand, and clayey gravel were encountered from 55.5 feet to 79 feet bg, the maximum depth of the borings (see geologic sections A-A and E-E, Figures 3 and 7).

A PID was used to measure soil hydrocarbon concentrations at 5-foot intervals. The PID soil samples were placed in a sealed plastic bag. After approximately 5-minutes, the PID probe was inserted into the plastic bag and soil gas allowed to pass through the PID until readings stabilized. The resulting concentration readings were recorded on the boring logs. The highest PID readings were measured in borings S-5B and S-5C at the top of the saturated zone at a depth of 19 to 20 feet bg.

The S-5 well cluster consists of three wells – S-5, S-5B, and S-5C. Well construction data is summarized below and on Table 2.

Well	Date Installed	Total Depth (feet)	Well Diameter (inches)	Screened and Sand Packed Interval (feet)	Soil Type Adjacent to Screened Interval
S-5	1/26/88	36	3	5 to 36	Clay
S-5B	10/28/05	62	4	57 to 62	Sand and gravel
S-5C	10/31/05	77	4	72 to 77	Clayey sand and sand

The S-9 well cluster consists of three wells – S-9, S-9B, and S-9C. Well construction data is summarized below and on Table 2.

Well	Date Installed	Total Depth (feet)	Well Diameter (inches)	Screened and Sand Packed Interval (feet)	Soil Type Adjacent to Screened Interval
S-9	2/24/89	34.5	3	9.5 to 34.5	Clay
S-9B	10/26/05	61	4	56 to 61	Clayey sand and sand
S-9C	10/31/05	79	4	74 to 79	Clayey sand and sand

All new wells were constructed of 4-inch diameter PVC casing and well screens. The location and elevations of all new wells were established by Mid Coast Engineering (MCE), a California licensed surveyor, on November 16, 2005. The MCE report is provided as Attachment D. On November 8, 2005, Blaine Tech Services (Blaine) developed wells by cycles of surging followed by pumping until clear water was obtained. Wells in the S-5 and S-9 well clusters were sampled by Blaine on November 11, 2005. Groundwater samples were sent to Severn Trent Laboratories, Inc. (STL) of Pleasanton, California and analyzed for TPH-G, BTEX compounds, MTBE, and TBA by EPA Method 8260B. Well development and sampling field pages, laboratory analysis and chain of custody documentation are presented in Attachment C.

VERTICAL GROUNDWATER GRADIENT IN WELL CLUSTERS

The S-5 and S-9 well clusters provide the opportunity to determine the vertical component of groundwater gradient beneath the site area. The table below summarizes data regarding vertical gradients.

Well	Date	Depth to Water (feet)	Groundwater Elevation (MSL)	Head Difference (feet)	Length Between Mid-Point of Saturated Screened Interval (feet)	Vertical Component Gradient (- = downward and + = upward)
S-5	11/11/05	22.17	307.19	-	-	-
S-5B	11/11/05	43.79	288.46	-18.73	31.5	-0.56
S-5C	11/11/05	43.65	288.68	0.22	15.0	0.02
S-9	11/11/05	20.41	307.44	-	-	-
S-9B	11/11/05	45.25	285.22	-22.22	31.5	-0.71
S-9C	11/11/05	42.87	287.90	2.68	18.0	0.15

Negative gradients show movement in the downward direction and positive gradients show movement in the upward direction. It appears that the vertical gradient between groundwater in the upper clay zone and the upper portion of the sandy zone is in the downward direction, whereas the vertical gradient between the upper portion of the sandy zone and the lowest monitored zone is upwards. This upward gradient in the lowest zone should help to retard contaminants from reaching lower zones.

WELL CLUSTER GROUNDWATER ANALYTICAL DATA

The S-5 and S-9 well clusters were sampled on November 11, 2005. Groundwater analytical data is summarized on Table 1. Based on initial sampling of these well clusters, it appears that MTBE is present in all zones sampled. MTBE concentrations appear to decline with depth with concentrations ranging from 8.3 ug/l to 220 ug/l in the upper wells screened in the clay zone at a range from 5 feet to 36 feet; 2.5 ug/l to 23 ug/l in the middle wells screened at a range of 57 to 62 feet bg; and 0.87 ug/l to 10 ug/l in the lowest wells screened at a range from 73 to 79 feet bg. TBA was detected at 15 ug/l and 25 ug/l in wells S-5B and S-9, respectively. TBA was not detected above the laboratory detection limit of 5.0 ug/l in any other wells in the S-5 and S-9 well clusters during the initial sampling.

DOWNGRADIENT GROUNDWATER INVESTIGATION

The ACHCSA, in its letter dated April 26, 2005, requested further delineation of the lateral extent of groundwater contamination in the shallow clay zone (15- to 20-foot depth interval). Delta proposed to install three additional monitoring wells, S-13 through S-15, at the locations adjacent to Arroyo Mocha Canal shown on Figure 2. A Delta geologist met in the field with Mr. Larry Akinsiku and Mr. Joe Seto of Zone 7 to review drilling locations adjacent to Arroyo Mocha Canal. The Zone 7 representatives observed what they referred to as unstable soil conditions in the area of proposed Well S-13 and indicate that they did not want a drill rig along that portion of the Canal. In addition, a major sanitary sewer and overhead power lines limited the ability to drill in the same area. Delta and Zone 7 agreed that proposed Well S-13 would not be installed. The locations of proposed Wells S-14 and S-15 were approved by Zone 7.

On October 28, 2005, Delta installed Wells S-14 and S-15 using hollow-stem auger drilling equipment provided by Gregg Drilling (License C57- 485165). Borings encountered clay to their total depth of 25 feet bg. Groundwater was encountered during drilling of Well S-14 at 23 feet bg. The boring for Well S-15 was dry. Boring logs are provided in Attachment A. Soil samples were collected every 5 feet from the ground surface to the total depth of the boring for the well installations. A PID was used to measure soil hydrocarbon concentrations at 5-foot intervals. Wells were constructed of 4-inch diameter PVC casing and well screens. Wells S-14 and S-15 were constructed with sand pack and well screens from 15 to 25 feet bg as approved by ACHCSA. The longer well screens were approved in order collect sufficient water for sampling from clay deposits.

Wells were developed by Blaine on November 8, 2005. Well S-15 was found to be dry. Well S-14 was developed by cycles of surging followed by pumping until clear water was obtained. Well S-14 was sampled by Blaine on November 11, 2005. The Well S-14 groundwater sample was analyzed by STL for TPH-G, BTEX compounds, MTBE and TBA by EPA Method 8260B.

Well development and sampling field pages, laboratory analysis and chain of custody documentation is presented in Attachment C.

The location and top of casing elevation of the well was established by MCE, a California licensed surveyor, on November 16, 2005. The MCE report is provided as Attachment D.

WELL S-14 GROUNDWATER ANALYTICAL DATA

The initial sampling of Well S-14 located across the Arroyo Mocho Canal and down gradient of the S-9 well cluster indicated no impacts in groundwater. All analytes tested for were below the laboratory reporting limits. Groundwater analytical data is summarized on Table 1.

CONCLUSIONS

Delta provides the following conclusions based on a comprehensive review of site soil and groundwater data;

- The site and surrounding area is underlain to a depth of approximately 50 feet by clay;
- groundwater is contained in the clay deposits below a depth of approximately 20 feet bg;
- the shallow groundwater moves to the south-southeast through thin silt and fine-grained sand seams and possibly fractures within the clay;
- soils between approximately 50 and 100 feet bg consist of saturated interlayered clay, silt, sand, and gravel;
- the groundwater flow in sand and gravel in the 50- to 100-foot depth interval is assumed to be the southeast based on regional data (Zone 7, Fall Groundwater Contour Map 2001 Water Year, February 5, 2002)
- groundwater contained in the upper clay layer has an apparent downward vertical gradient whereas the groundwater in the lowest monitored sandy layer at approximately 78 feet has an apparent upward vertical gradient;
- lateral extent of the MTBE and TBA plume in upper clay zone appears to have been defined. lateral extent of MTBE in the shallow clay zone (upper 50 feet) appears to extend east across Hopyard Road and south to the northern bank of the Arroyo Mocho Canal. TBA in the shallow clay zone extends east to the middle of Hopyard Road and to the south of the station property to the north bank of the Arroyo Mocho Canal.
- recent groundwater samples from well clusters S-5 and S-9 indicate that MTBE is contained in all zones monitored with declining concentrations at depth. TBA was detected on-site only in Well S-5B (15 ug/l). TBA was detected off-site only in groundwater samples collected from the upper clay layer in well S-9 (25 ug/l). Off-site samples collected from the lower two zones indicate no TBA impacts.

- MTBE and TBA are primarily confined to the groundwater contained in clay deposits in the upper interval

RECOMMENDATIONS

Delta recommends the following;

- Add Wells S-5B, S-5C, S-9B, and S-9C to the quarterly monitoring program. Well clusters data will be reviewed after two additional quarters of monitoring to assess concentrations in lower zones. Further recommendations will be considered after additional data is collected.
- Sample Well S-14 and S-15 (if water available) on a semi-annual basis.
- Continue groundwater extraction and treatment (GWE&T) for shallow zone in compliance with ACHESA letter dated July 28, 2005;
- Monitor natural attenuation of fuel oxygenates in deep sand and gravel zones

If you have any questions, please call me at (408) 826-1880.

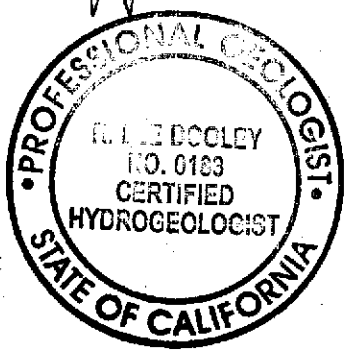
Sincerely,
Delta Environmental Management, Inc.

Rebecca Wolff

Rebecca Wolff
Senior Staff Geologist

R Lee Dooley

R. Lee Dooley
Senior Hydrogeologist
CHG 183



Attachments: Table 1 – Summary of Groundwater Analytical Data
Table 2 – Well Construction Detail

Figure 1 – Site Location and Well Survey Map
Figure 2 – Boring and Well Location Map
Figure 3 – Geologic Cross Section A-A
Figure 4 – Geologic Cross Section B-B
Figure 5 – Geologic Cross Section C-C
Figure 6 – Geologic Cross Section D-D
Figure 7 – Geologic Cross Section E-E

Attachment A – CPT and Well Boring Logs
Attachment B – Drilling and Encroachment Permits
Attachment C – Laboratory Analytical Reports and Chain of Custody Documentation
Attachment D – Well Location and Elevation Report

cc. Denis Brown, Shell Oil Products US
Betty Graham, RWQCB – San Francisco Bay Region
Danielle Stefani, Livermore-Pleasanton Fire Department
Matthew Katen, Zone 7 Water Agency
T.C. Sun, Property owner representative – 3730 Hopyard Rd, Pleasanton

Table 1
Summary of Groundwater Analytical Data
Shell-branded Service Station
3790 Hopyard Road
Pleasanton, California

Sample Designation	Date Sampled	Depth (feet bg)	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylene (ug/l)	MTBE (ug/l)	TBA (ug/l)
CPT-3	2/15/2005	33-38	DRY						
CPT-3	2/15/2005	43-48	DRY						
CPT-4	2/16/2005	33-38	DRY						
CPT-4	2/16/2005	55-60	<50	**1.2**	<0.50	**3.0**	**3.0**	**0.54**	<5.0
CPT-4	2/16/2005	70-74	<50	<0.50	<0.50	**1.1**	**1.3**	<0.50	<5.0
CPT-5	2/18/2005	33-38	DRY						
CPT-5	2/18/2005	59-62	**150**	**0.64**	<0.50	**1.7**	**1.3**	**1.2**	**6.8**
CPT-5	2/18/2005	76-80	**620**	**16**	**0.66**	**32**	**14**	**19**	**39**
CPT-6	2/18/2005	33-38	DRY						
CPT-6	2/18/2005	59-63	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-6	2/18/2005	75-78	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-7	2/16/2005	20-35	<50	<0.50	<0.50	<0.50	<1.0	**160**	<5.0
CPT-7	2/16/2005	60-63	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-7	2/16/2005	75-80	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
	2/16/2005	33-38	DRY						
CPT-8	2/16/2005	60-63	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-8	2/16/2005	75-80	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-9	2/18/2005	33-38	DRY						
CPT-9	2/18/2005	58-62	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-9	2/18/2005	74-77	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-10	2/17/2005	20-38	<100	<1.0	<1.0	<1.0	<2.0	**200**	**11**
CPT-10	2/17/2005	62-64	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-10	2/17/2005	76-80	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-11	2/17/2005	33-38	DRY						
CPT-11	2/17/2005	63	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-11	2/17/2005	70-74	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<5.0
CPT-5A@65'	9/9/2005	61-64	<50	**0.84**	<0.5	**1.4**	**2.8**	**1.4**	<5.0
CPT-5A@78'	9/9/2005	74-78	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0
CPT-5A@100'	9/9/2005	97-100	DRY						
S-5	11/11/2005	36	**2,300**	**54**	**0.69**	**15**	**19**	**8.3**	<5.0
S-5B	11/11/2005	62	<50	<0.5	<0.5	<0.5	<1.0	**2.5**	**15**
S-5C	11/11/2005	77	**55**	<0.5	**0.67**	<0.5	<1.0	**0.87**	<5.0
S-9	11/11/2005	34.5	<100	<1.0	<1.0	<1.0	<2.0	**220**	**25**
S-9B	11/11/2005	61	<50	<0.5	**2.0**	<0.5	<1.0	**23**	<5.0
S-9C	11/11/2005	79	<50	<0.5	<1.0	<0.5	<1.0	**10**	<5.0
S-14	11/11/2005	25	<50	<0.5	<1.0	<0.5	<1.0	<0.5	<5.0
S-15	11/11/2005	25	DRY						

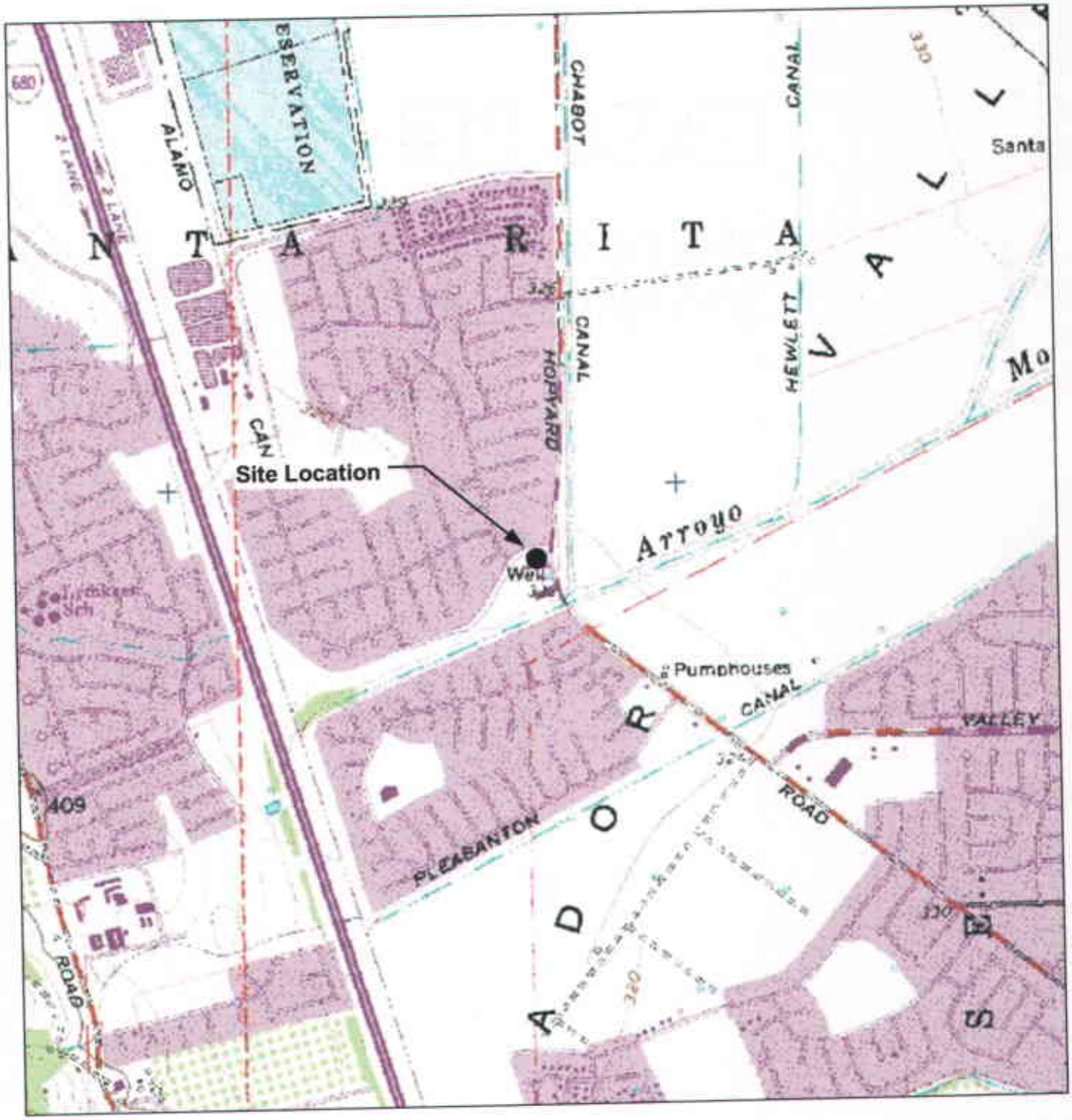
Notes:
DRY = insufficient water in borehole for sample.
ug/l = micrograms per liter
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
TBA = tert-Butyl alchohol

Table 2
Well Construction Details
Shell-branded Service Station
3790 Hopyard Road
Pleasanton, California

Well Designation	Date Installed	Total Depth (feet)	Screened Interval (feet)	TOC Elevation (feet - MSL)
S-1 (destroyed)	10/28/87			
S-2	10/28/87	35	5 to 35	328.77
S-3	01/26/88	36	5 to 36	327.40
S-4	01/26/88	36	5 to 36	328.11
S-5	01/26/88	36	5 to 36	329.36
S-5B	10/28/05	62	58 to 62	332.25
S-5C	10/31/05	77	73 to 77	332.33
S-6	10/04/88	35	10 to 35	327.26
S-7	10/04/88	35	10 to 35	328.41
S-8	02/24/89	34.5	9.5 to 34.5	326.14
S-9	02/24/89	34.5	9.5 to 34.5	327.85
S-9B	10/26/05	61	57 to 61	330.47
S-9C	10/25/05	79	75 to 79	330.77
S-10	8/9/1989	35.5	unknown	325.87
S-11	08/26/02	25	10 to 25	327.48
S-12	09/19/02	25	10 to 25	322.76
S-14	10/28/05	25	15 to 25	324.90
S-15	10/28/05	25	15 to 25	332.05
SR-1	08/09/89	35	10 to 35	328.33
SR-2	09/20/89	35	10 to 35	327.31
SR-3	09/19/89	35	10 to 35	327.50

Notes
TOC = top of casing
MSL = mean sea level

	A	B	C	D	E	F	G	H	I	J	K
1	**SHELL-BRANDED SERVICE STATION**										
2	**3790 Hopyard Road**										
3	**Pleasanton, California**										
4											
5	**DELTA Project No. SJ37-908-1**										
6											
7	Project : 05224										
8	User name MCE Date & Time 9:48:27 AM 11/17/2005										
9	Coordinate System US State Plane 1983 Zone California Zone 3 0403										
10	Project Datum NAD 1983 (Conus)										
11	Vertical Datum NAVD88										
12	Coordinate Units US survey feet										
13	Distance Units US survey feet										
14	Elevation Units US survey feet										
15											
16		S-5B	11/16/2005	332.25	CGPS	88	0.5		Mid Coast Engineers		top of casing
17		S-5C	11/16/2005	332.33	CGPS	88	0.5		Mid Coast Engineers		top of casing
18		S-9B	11/16/2005	330.47	CGPS	88	0.5		Mid Coast Engineers		top of casing
19		S-9C	11/16/2005	330.77	CGPS	88	0.5		Mid Coast Engineers		top of casing
20		S-14	11/16/2005	324.90	CGPS	88	0.5		Mid Coast Engineers		top of casing
21		S-15	11/16/2005	332.05	CGPS	88	0.5		Mid Coast Engineers		top of casing



GENERAL NOTES:
Base Map from: DeLorme Yarmouth, ME 04096
Source Data: USGS

North

0 1,300 2,600
Scale, Feet

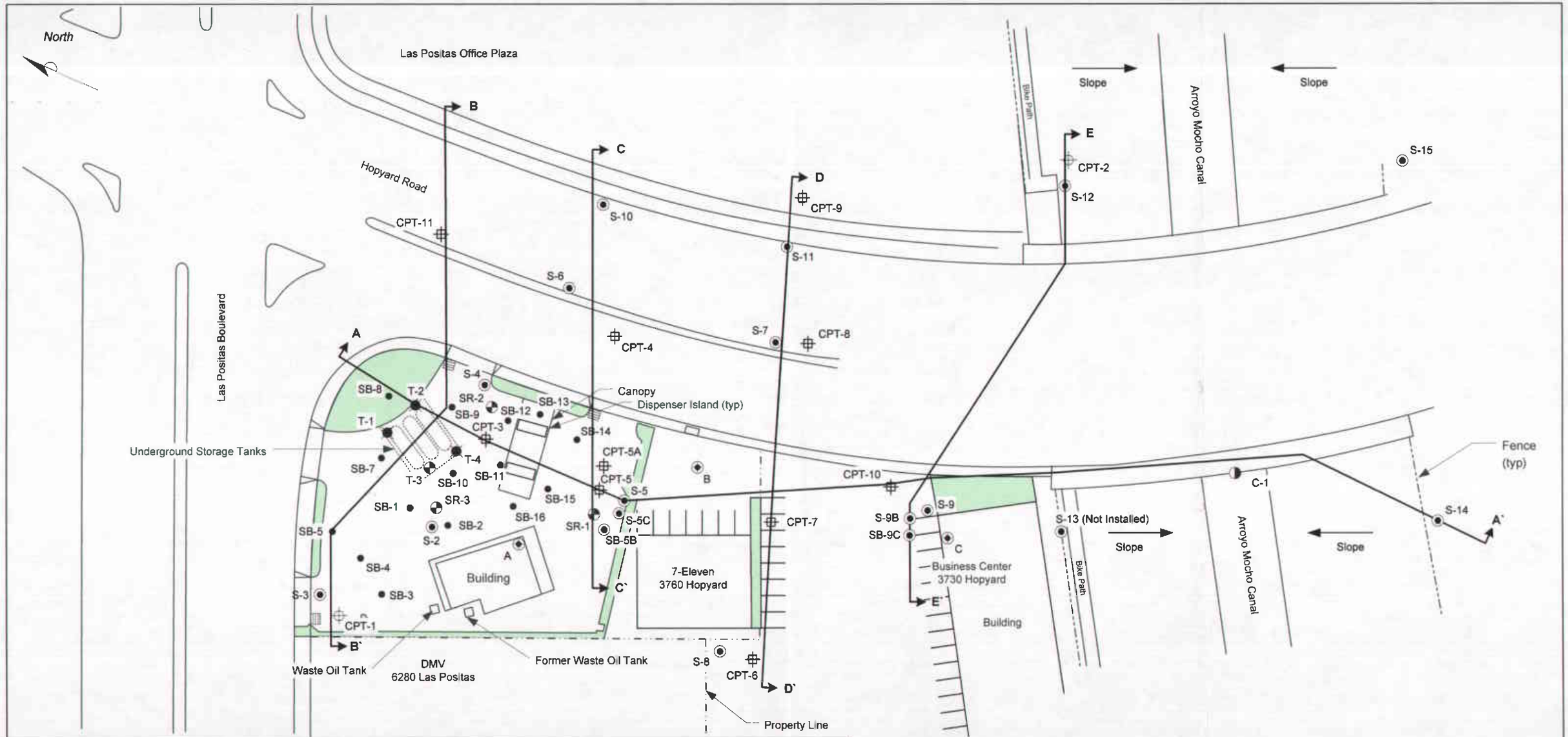
QUADRANGLE LOCATION

FIGURE 1
SITE LOCATION AND WELL SURVEY MAP

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY VF 12/04/03
FILE NO. SJ37-90H-1.2005	PREPARED BY VF
REVISION NO.	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

SB-3	•	SOIL BORING LOCATION (OCTOBER 2004)
S-5	◉	GROUNDWATER MONITORING WELL
SR-1	◒	GROUNDWATER RECOVERY WELL
T-1	✖	TANK BACKFILL WELL
C-1	◑	CREEK GAUGING LOCATION
CPT-1	⊕	CPT SAMPLING LOCATION (CPT-1 7/26/02; CPT-2 11/25/02)
CPT-5	⊕	CPT SAMPLING LOCATION
C C`		CROSS SECTION LINE AND DESIGNATION
	◉	APPROXIMATE LOCATION OF ABANDONED IRIGATION WELL 3S/1E-7Q1

A • LOCATION FROM ZONE 7 WATER AGENCY WELL LOCATION MAP, DATED 5/1/02

B • LOCATION BASED ON USGS DUBLIN 7 ½ MINUTE TOPOGRAPHIC QUADRANGLE

C • LOCATION BASED ON DESCRIPTION FROM CALIFORNIA DEPARTMENT OF WATER RESOURCES, WELL DATA FORM, DATED 10/22/59

0 60 FT

APPROX. SCALE

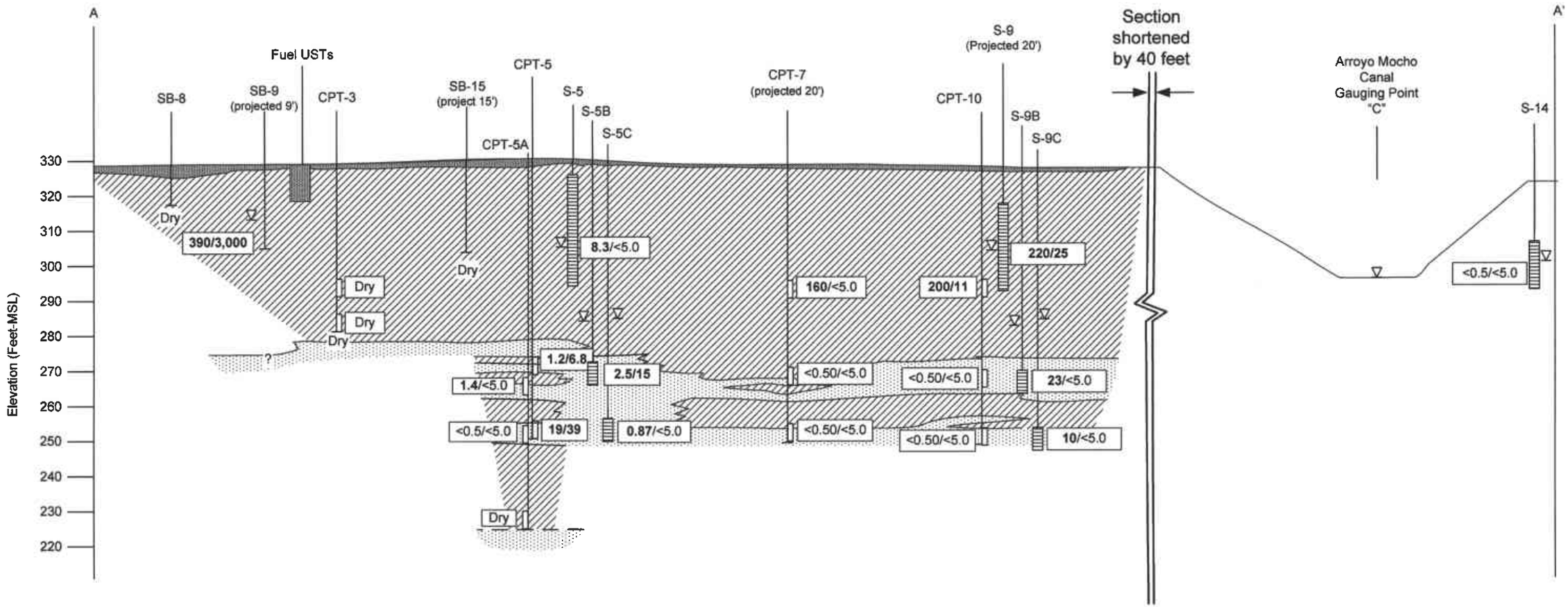
FIGURE 2

BORING AND WELL LOCATION MAP

SHELL-BRANDED SERIVCE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1 2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1 2005	PREPARED BY JL
REVISION NO. 2	REVIEWED BY

Delta Environmental Consultants, Inc



LEGEND

- CLAY AND/OR SILT
- SAND
- SURFACE MATERIALS (FILL, ASPHALT, ETC.)
- GROUNDWATER LEVEL
- NA — NOT ANALYZED
- Dry — BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION
- WELL
- SCREENED INTERVAL
- BORING
- GROUNDWATER SAMPLE
- <10/<100 — MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L) (**SEE EXPLANATION FOR SAMPLING DATES)

**SB Borings Drilled and Sampled October 2004
CPT Borings CPT-3 through CPT 11 Drilled and Sampled February 2005
CPT Boring CPT-5A Drilled and Sampled September 2005
Wells S-5, S-5B, S-5C, S-9, S-9B, S-9C, S-14 Sampled November 11, 2005

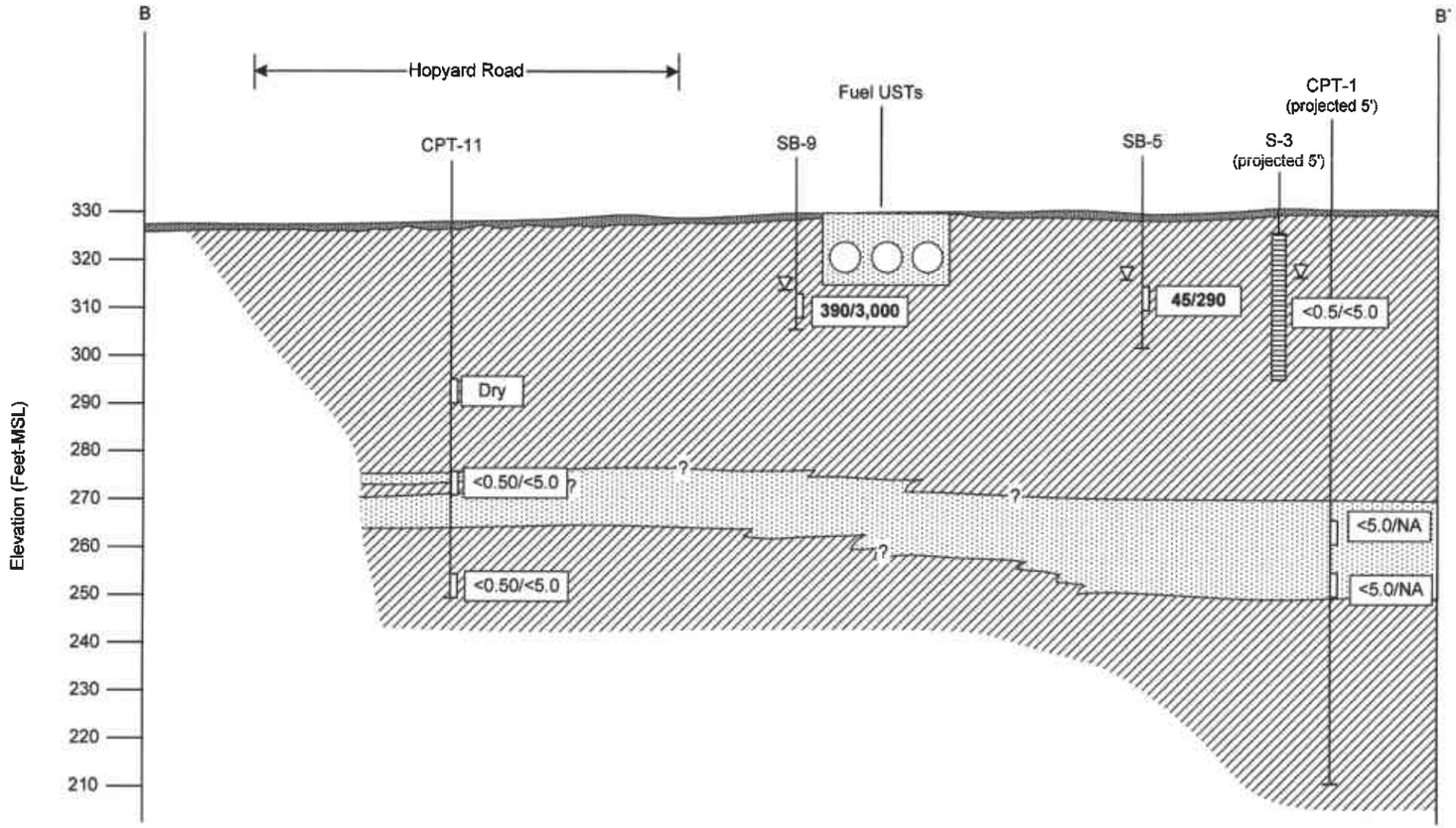
0 40 FT
APPROX. SCALE

FIGURE 3
CROSS SECTION A TO A`

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1.2005	PREPARED BY L.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

- CLAY AND/OR SILT
- SAND
- SURFACE MATERIALS (FILL, ASPHALT, ETC.)
- ▽ GROUNDWATER LEVEL
- NA NOT ANALYZED
- Dry BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION
- BORING
- GROUNDWATER SAMPLE
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L): SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005
- WELL
- SCREENED INTERVAL
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), WELL SAMPLED 07/29/05

0 40 FT
APPROX. SCALE

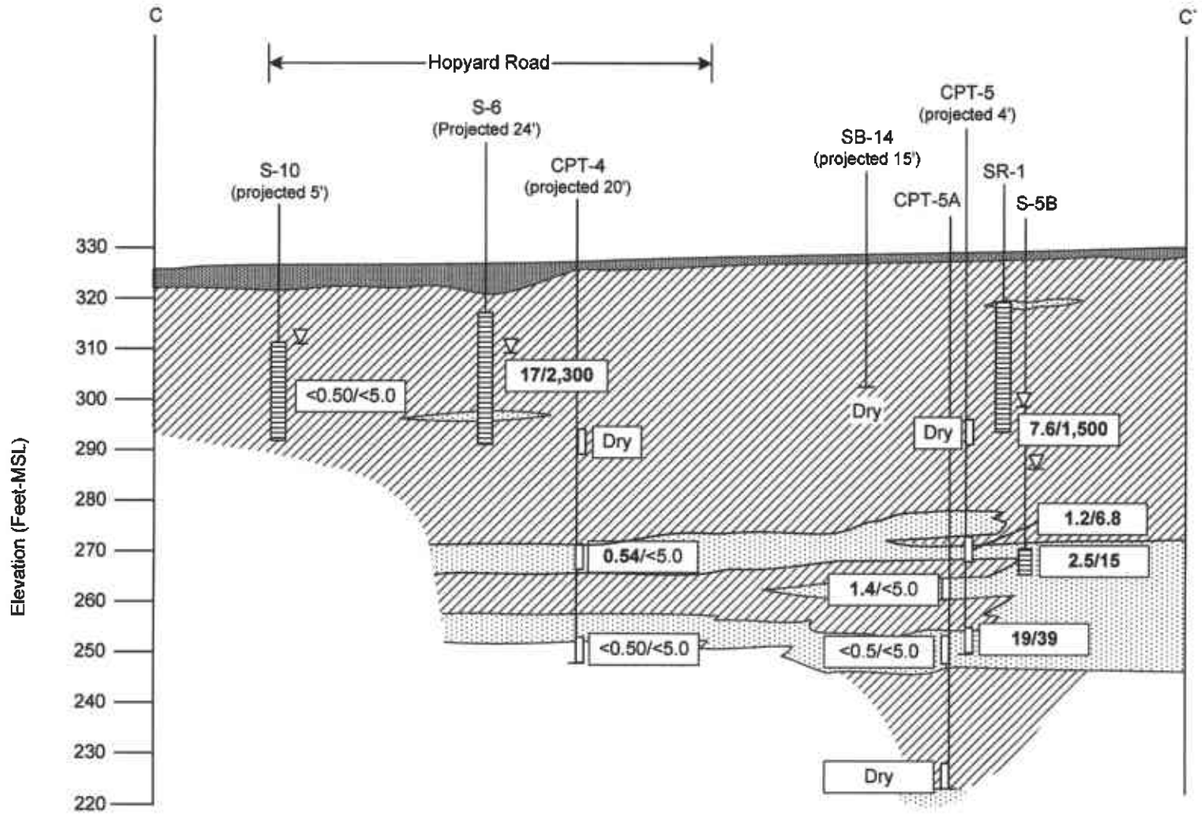
FIGURE 4

CROSS SECTION B TO B'

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1.2005	PREPARED BY L.D.
REVISION NO. 2	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

- CLAY AND/OR SILT
- SAND
- SURFACE MATERIALS (FILL, ASPHALT, ETC.)
- GROUNDWATER LEVEL
- NA — NOT ANALYZED
- Dry — BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION

BORING

GROUNDWATER SAMPLE

<10/<100 — MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L); SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005 (WITH THE EXCEPTION OF CPT-5A (9/05))

WELL

SCREENED INTERVAL

<10/<100 — MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), WELLS S-6 AND S-10 SAMPLED 7/29/05; WELL S-5B SAMPLED 11/11/05

0 40 FT

APPROX. SCALE

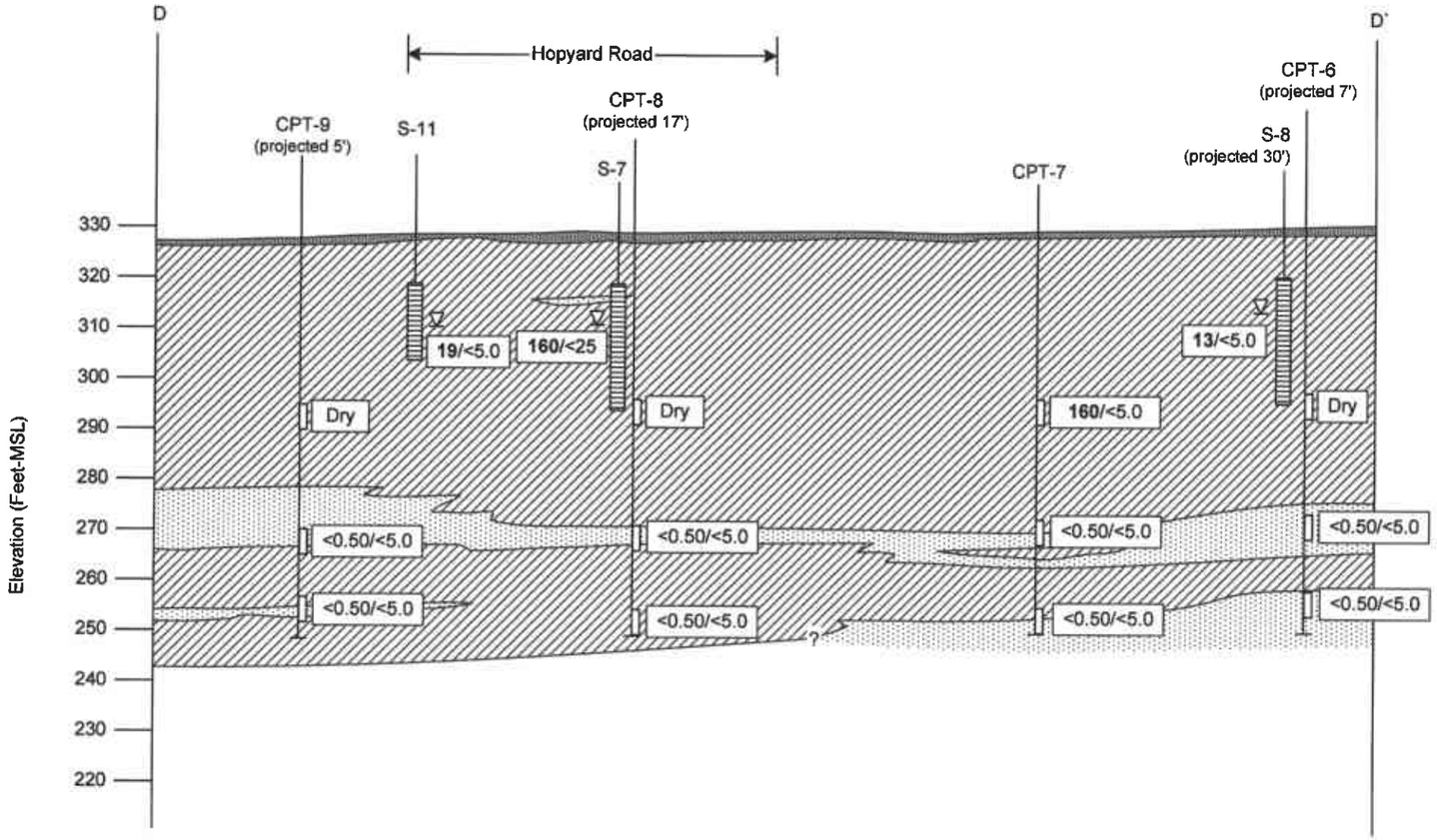
FIGURE 5

CROSS SECTION C TO C'

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1.2005	PREPARED BY L.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

- CLAY AND/OR SILT
- SAND
- SURFACE MATERIALS (FILL, ASPHALT, ETC.)
- ▽ GROUNDWATER LEVEL
- NA NOT ANALYZED
- Dry BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION
- BORING
- GROUNDWATER SAMPLE
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L); SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005
- WELL
- SCREENED INTERVAL
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), 07/29/05

0 40 FT
APPROX. SCALE

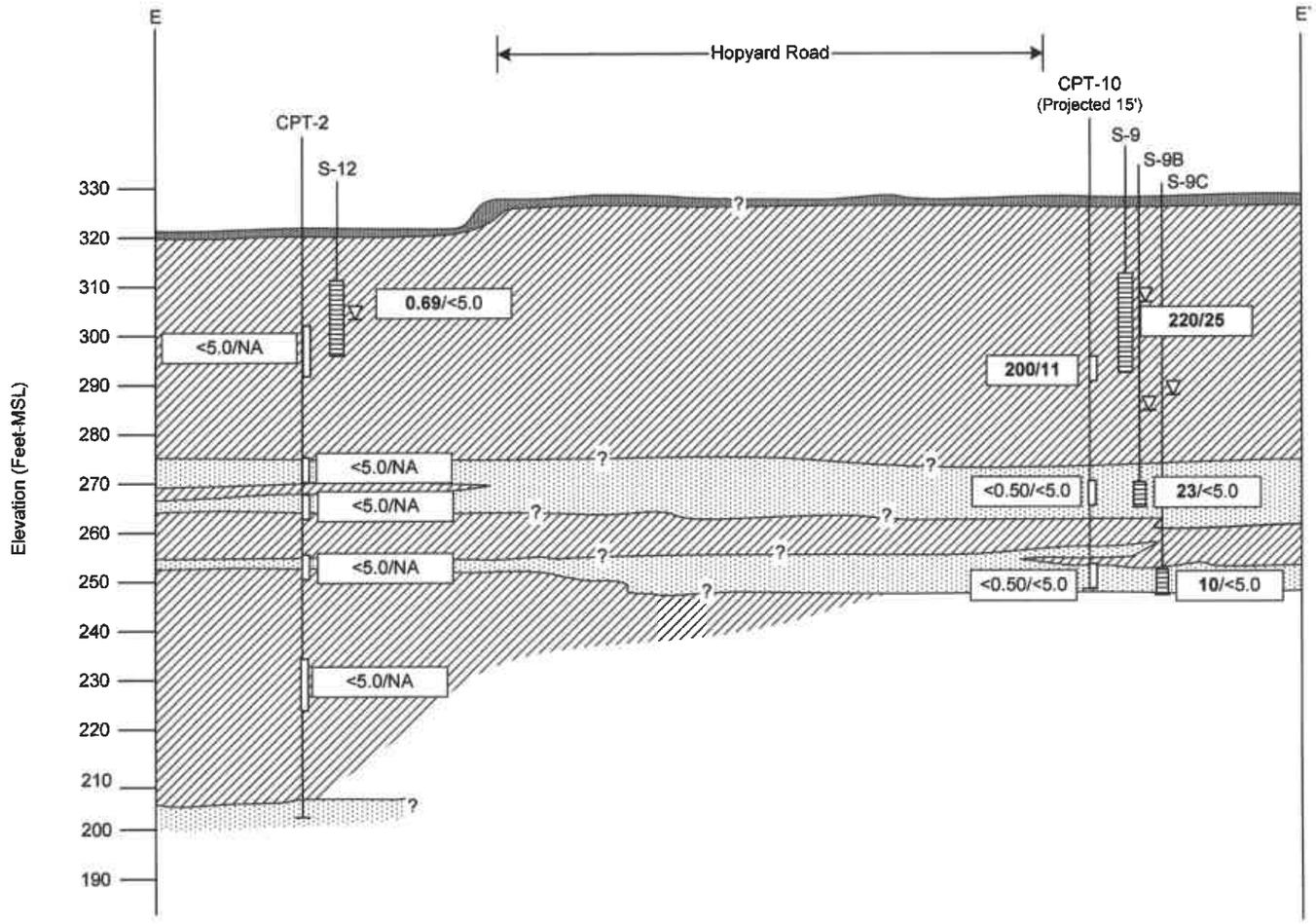
FIGURE 6

CROSS SECTION D TO D`

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1.2005	PREPARED BY L.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

- CLAY AND/OR SILT
- SAND
- SURFACE MATERIALS (FILL, ASPHALT, ETC.)
- ▽ GROUNDWATER LEVEL
- NA NOT ANALYZED
- Dry BOREHOLE WAS DRY OR CONTAINED INSUFFICIENT WATER FOR SAMPLE COLLECTION
- BORING
- GROUNDWATER SAMPLE
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L); SB BORINGS DRILL OCTOBER 2004, CPT BORINGS DRILLED FEBRUARY 2005
- WELL
- SCREENED INTERVAL
- <10/<100 MTBE/TBA CONCENTRATIONS IN GROUNDWATER (ug/L), S12 - 07/29/05; S-9, S-9B AND S-9C - 11/11/05

0 40 FT

APPROX. SCALE

FIGURE 7

CROSS SECTION E TO E`

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 11/11/05
FILE NO. SJ37-90H-1.2005	PREPARED BY L.D.
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

Attachment A

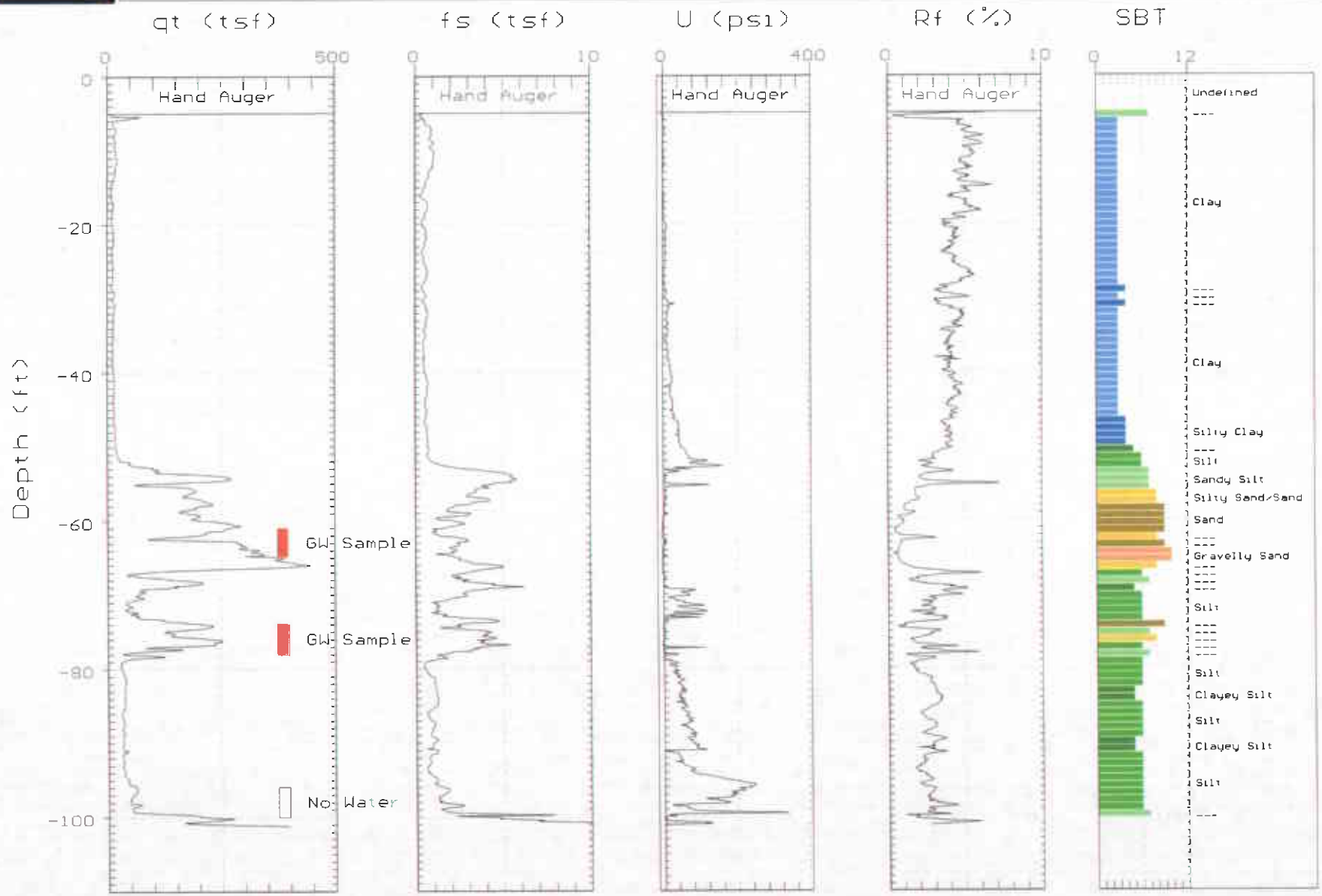
CPT AND WELL BORING LOGS

GREGG

DELTA ENV.

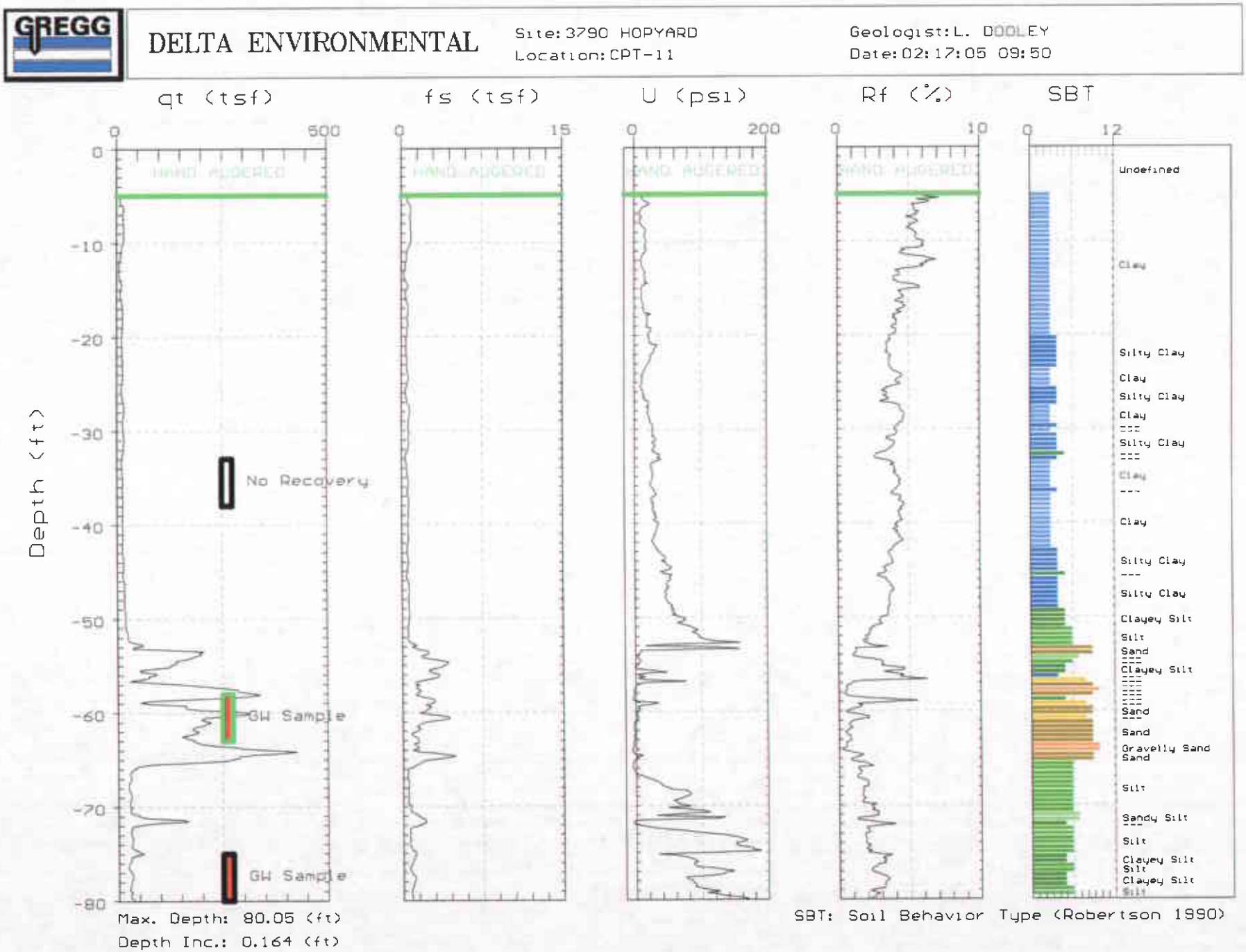
Site: 3790 HOPYARD RD.
Location: CPT-05a

Engineer: H.BUCKINGHAM
Date: 09:09:05 10:15



Max. Depth: 101.25 (ft)
Depth Inc.: 0.066 (ft)

SBT: Soil Behavior Type (Robertson 1990)

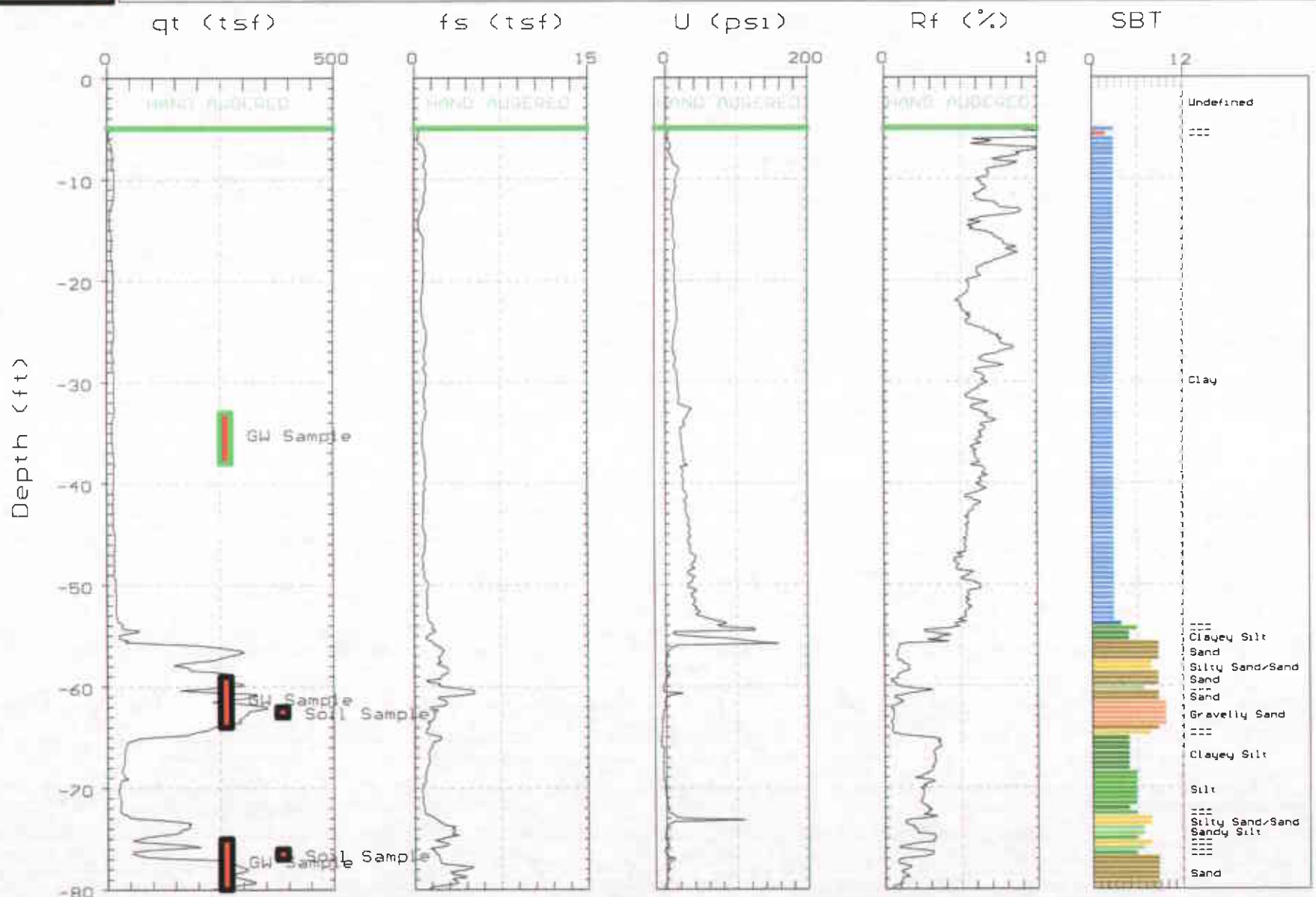

GREGG
DELTA ENVIRONMENTAL
Site: 3790 HOPYARD
Location: CPT-11
Geologist: L. DOOLEY
Date: 02:17:05 09:50
qt (tsf)
fs (tsf)
U (psi)
Rf (%)
SBT
0
500
15
200
10
12
HAND AUGERED
No Recovery
GW Sample
GW Sample
Depth (ft)
0
-10
-20
-30
-40
-50
-60
-70
-80
Undefined
Clay
Silty Clay
Clay
Silty Clay
Clay
Silty Clay
Clay
Clay
Silty Clay
Silty Clay
Clayey Silt
Silt
Sand
Clayey Silt
Sand
Sand
Gravelly Sand
Sand
Silt
Sandy Silt
Silt
Clayey Silt
Silt
Clayey Silt
Silt
Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-10

Geologist: L. DOOLEY
Date: 02:17:05 08:25



Max. Depth: 80.22 (ft)
Depth Inc.: 0.164 (ft)

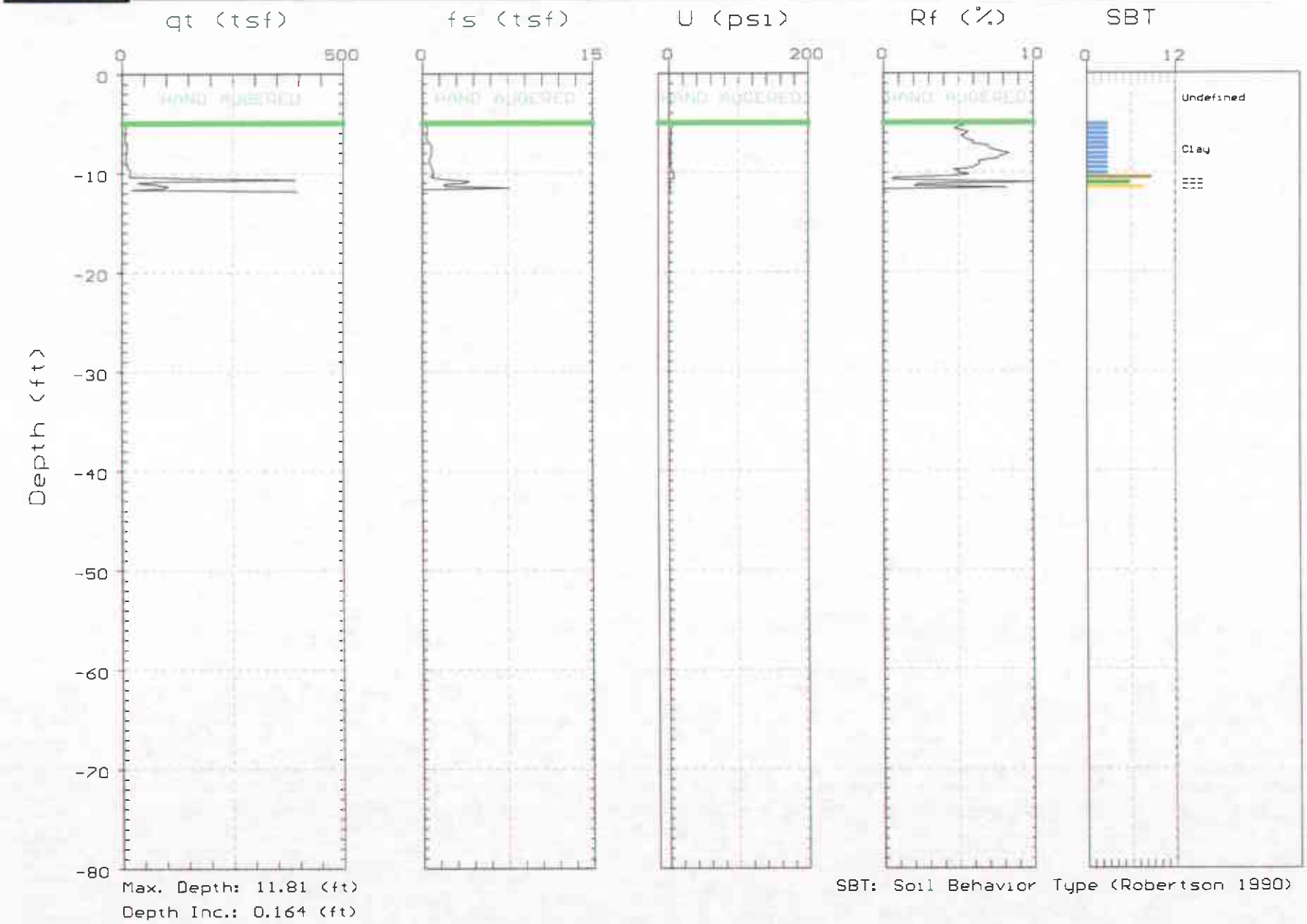
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-09

Geologist: L. DOOLEY
Date: 02:17:05 15:27



Max. Depth: 11.81 (ft)
Depth Inc.: 0.164 (ft)

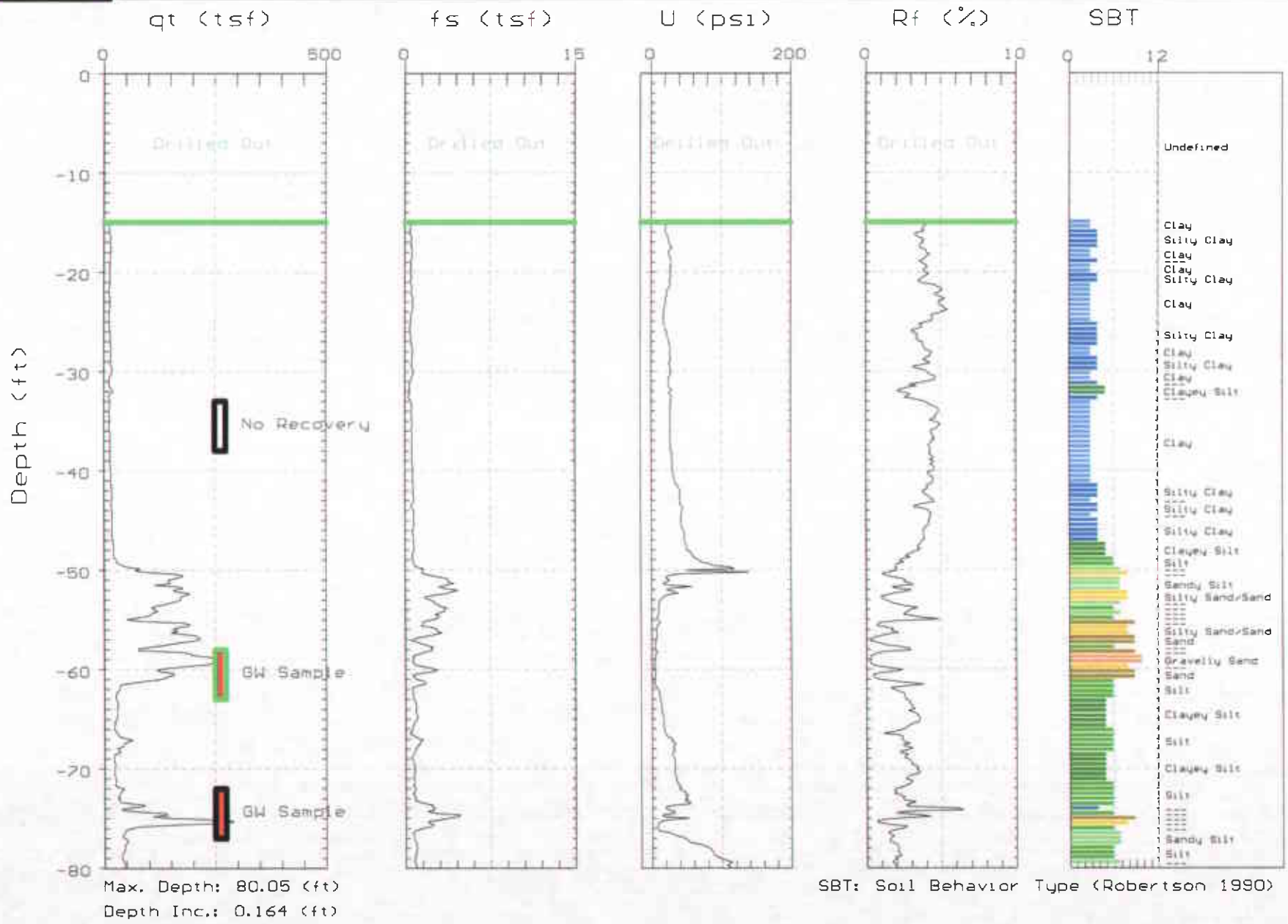
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-09A

Geologist: L. DOOLEY
Date: 02:17:05 16:04



Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

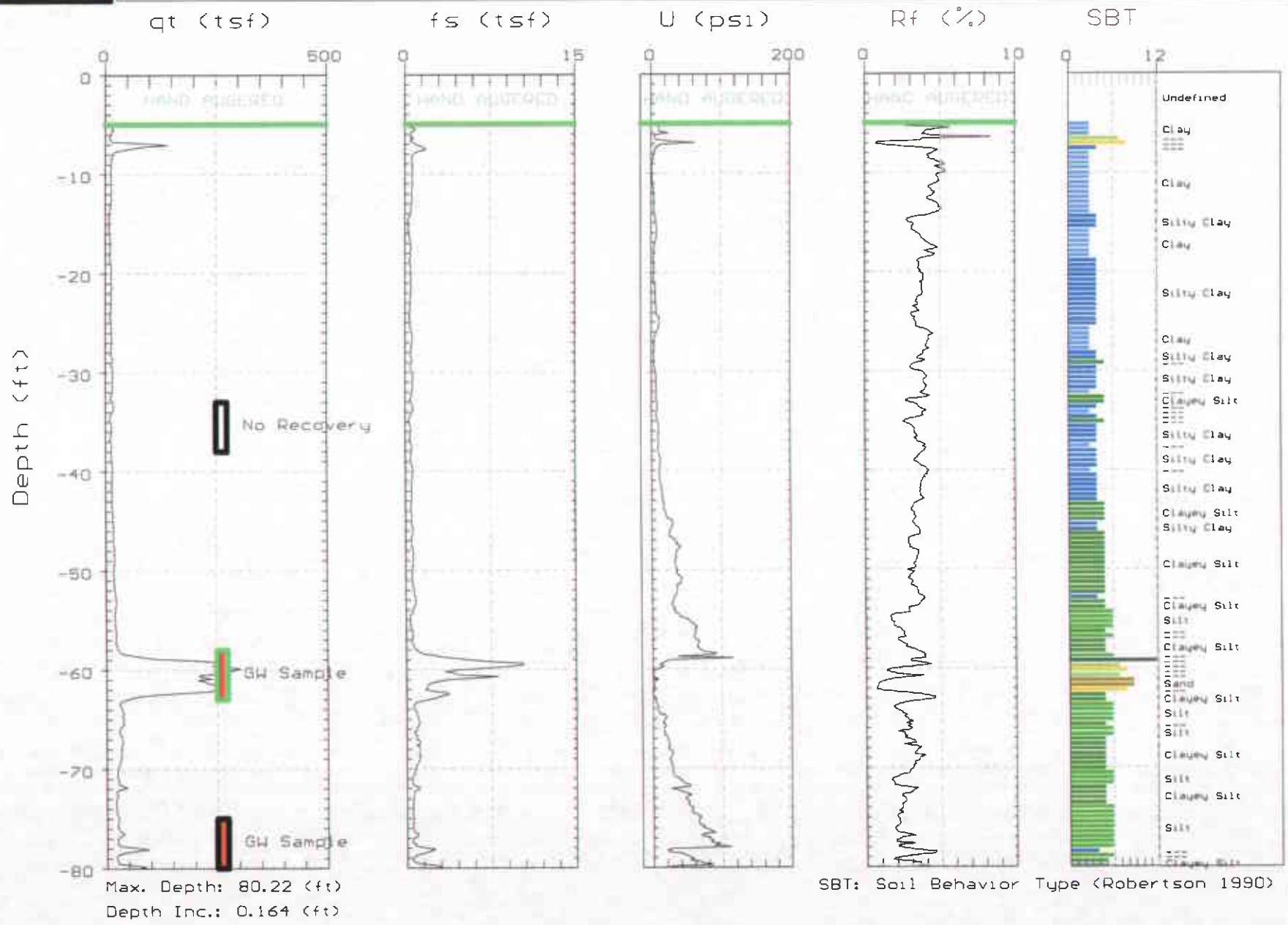
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-08

Geologist: L. DOOLEY
Date: 02:16:05 11:51



Max. Depth: 80.22 (ft)
Depth Inc.: 0.164 (ft)

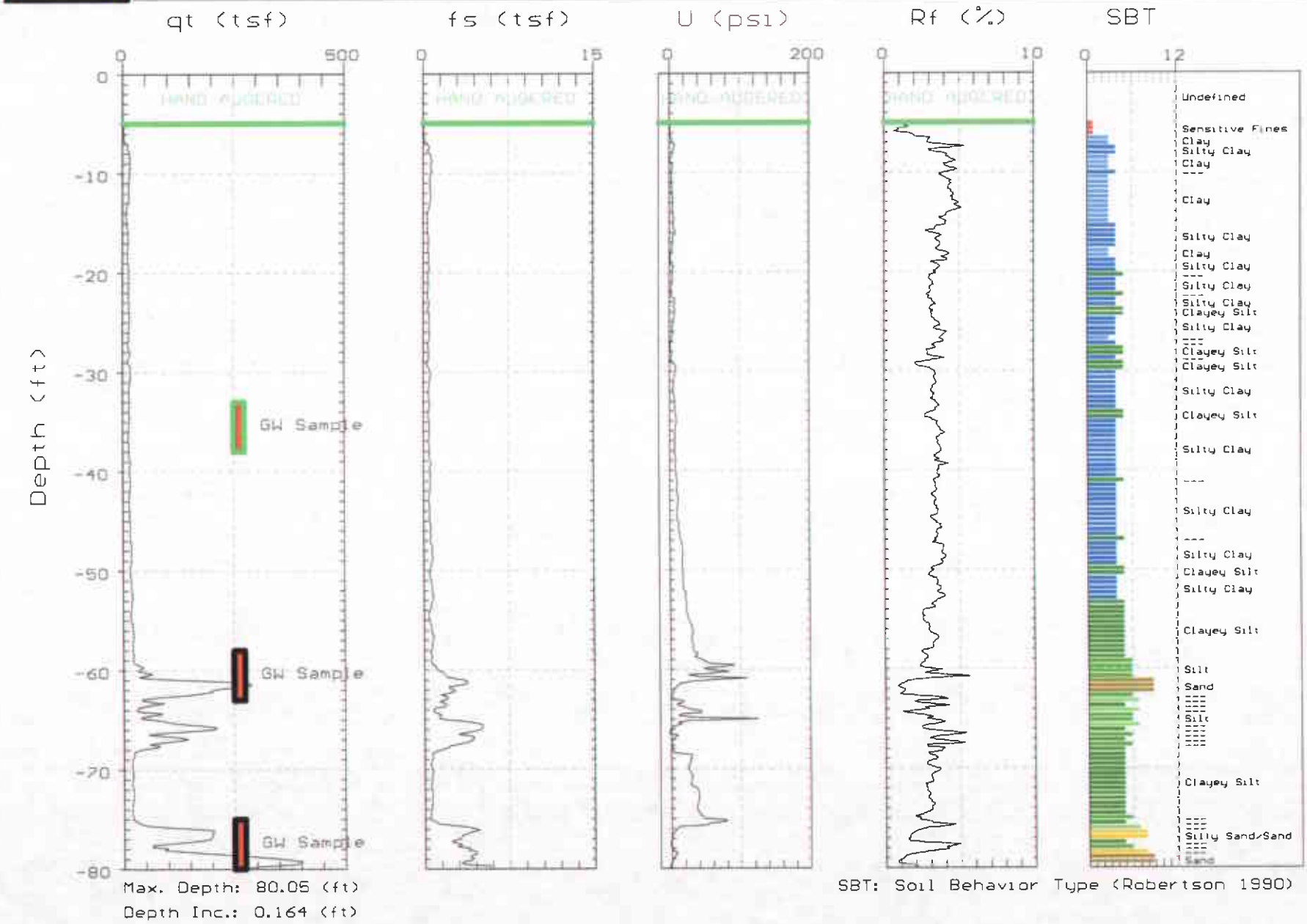
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-07

Geologist: L. DOOLEY
Date: 02:16:05 08:20



Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

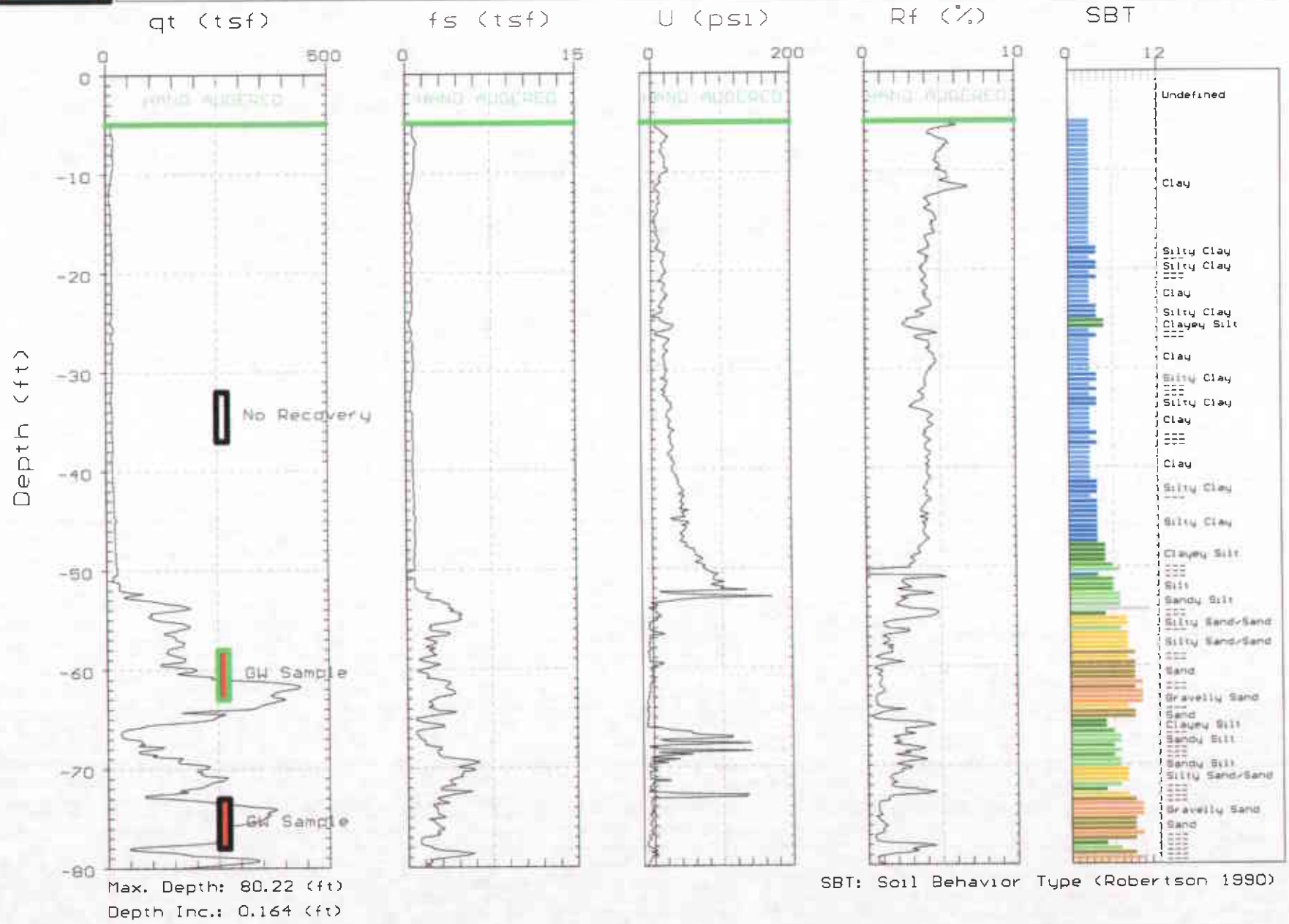
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-06

Geologist: L. DOOLEY
Date: 02:18:05 10:01



Max. Depth: 80.22 (ft)
Depth Inc.: 0.164 (ft)

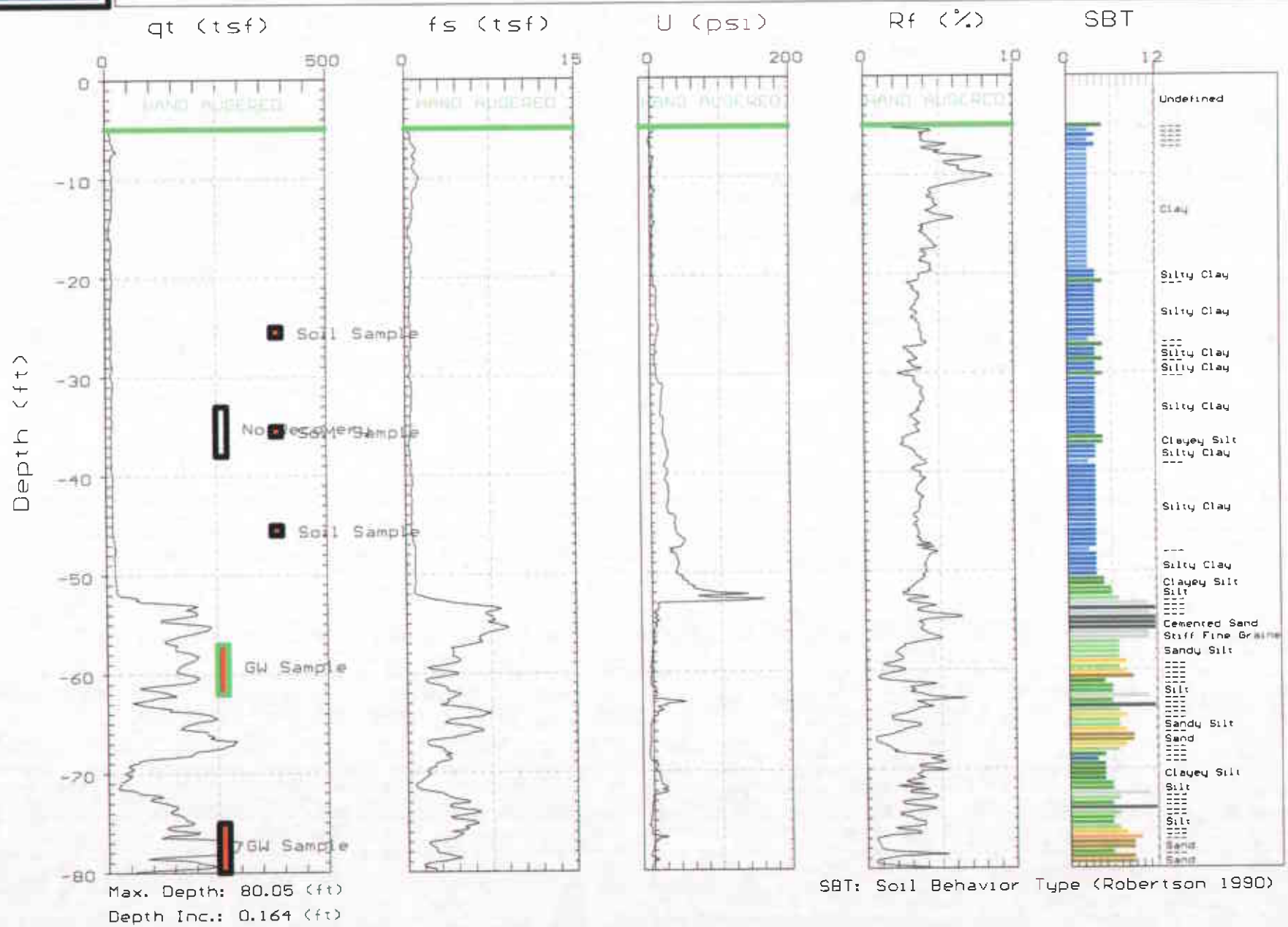
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-05

Geologist: L. DOOLEY
Date: 02:15:05 14:12



Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

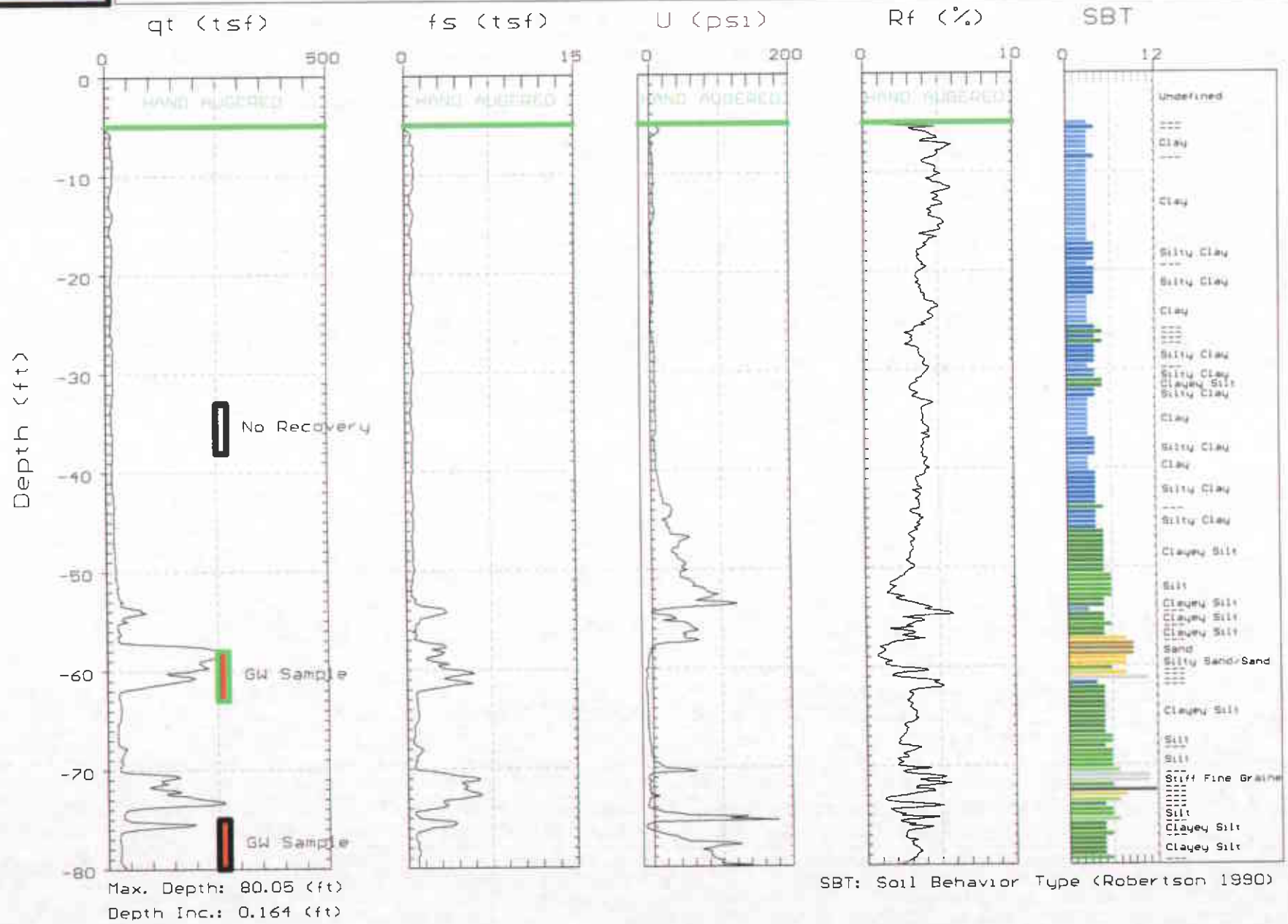
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-04

Geologist: L. DOOLEY
Date: 02: 15: 05 12: 43



Max. Depth: 80.05 (ft)
Depth Inc.: 0.164 (ft)

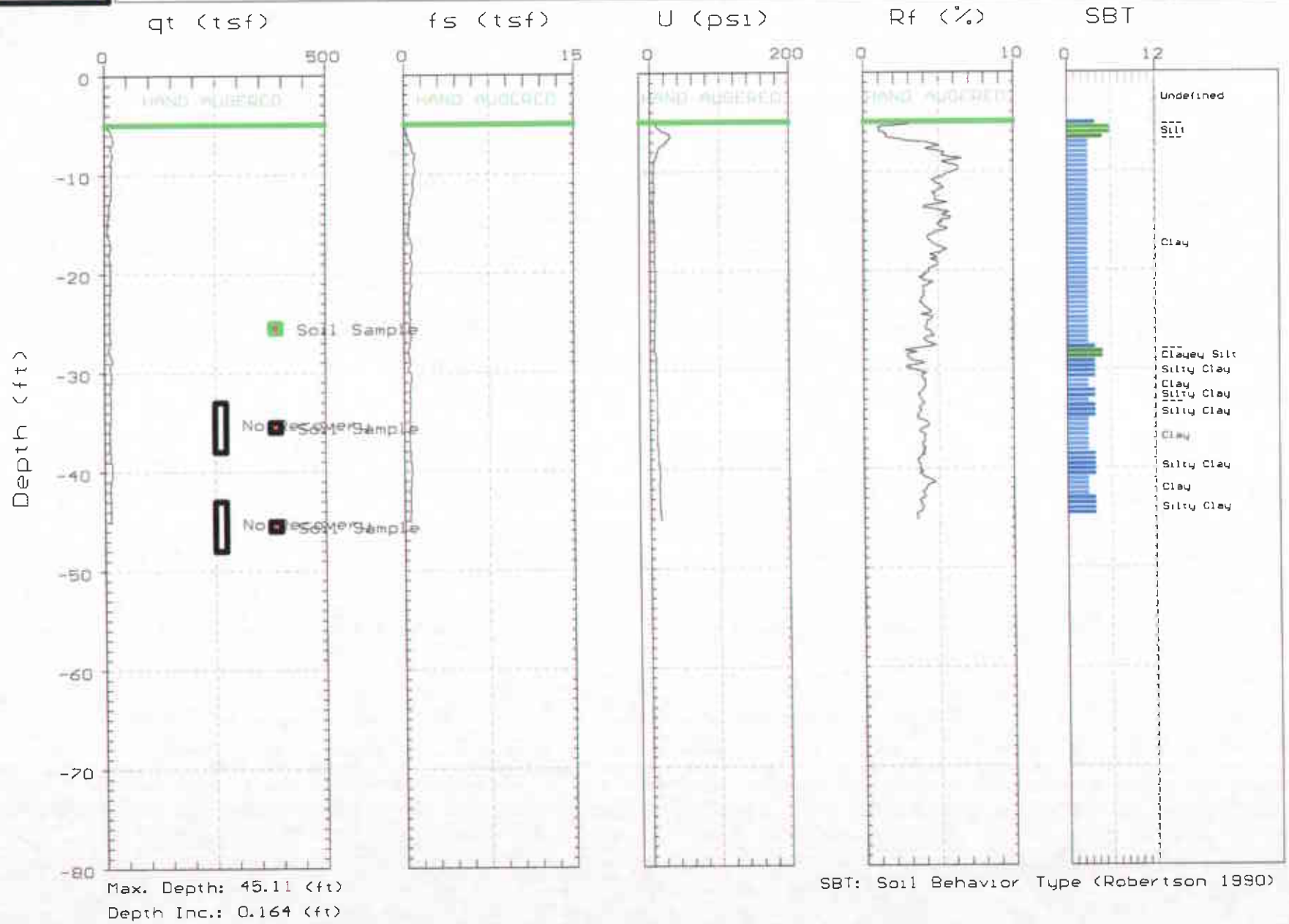
SBT: Soil Behavior Type (Robertson 1990)

GREGG

DELTA ENVIRONMENTAL

Site: 3790 HOPYARD
Location: CPT-03

Geologist: L. DOOLEY
Date: 02:15:05 09:05



Max. Depth: 45.11 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5b
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 1 of 3
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	62.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	62 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing / Grout)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
								AF	3 to 4 inch asphalt with approx. 2 inches of base rock
				air knifed & hand augered	1				
					2			CL	**Sandy Lean CLAY**: dark brown, 5-15% gravels up to ~3mm b-axis diameter, 30-40% medium grained sand, low to moderate plasticity, some small roots
					3				
					4				
					5				**Sandy Lean CLAY**: same as above, darker brown to black, 30-40%medium grained sand
					6				Encountered 2-3" asphalt layer
					7				
					8				
				6					
		damp	68.6	13	9			CL	**Lean CLAY**: medium grey, ~10% fine grained sand, low plasticity, very stiff
				15	10				
					11				
					12				
					13				
				4					
		damp	60.4	8	14				(same as above, trace fine grained sand, moderate plastictiy, stiff)
				11	15				
					16				
					17				
					18				
				7					
		damp	1,305	6	19			CL	**Sandy Lean CLAY**: light grey with medium grey mottling, 30-35% fine grained sand, moderate plasticity, stiff
				11	20				
					21				
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5b
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 2 of 3
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	62.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	62 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout					23				
		damp	10.3	8 8 9	24 25			CL	**Lean CLAY**: dark grey with some black mottling, ~10% fine grained sands, moderate plasticity, stiff
					26 27 28				
		wet	0.3 0.3	8 13 13	29 30				(same as above, no dark grey mottling, very stiff)
					31 32 33				
		damp moist	0.1	6 8 9	34 35			CL	**Sandy Lean CLAY**: greyish brown, 30-35% fine to medium grained sand, moderate to high plasticity, stiff
					36 37 38				
		moist	0.1	7 8 10	39 40			CL	**Lean CLAY**: medium brown, medium to high plasticity, stiff
					41 42 43				
		moist		5 5	44				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5b
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 3 of 3
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	62.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	62 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Casing	▼	moist	0.1	5 6	45			CL	**Lean CLAY**: same as above
					46				
					47				
					48				
				7	49				
Grout		moist	0.1	11 13	50			CL	**Lean CLAY with Sand**: light brown mottled with light grey, 15-25% fine grained sand, moderate plasticity, stiff
					51				
					52				
					53				
				40 50 for 5"	54			SC	**Fine Grained SAND with Clay**: medium brown, 15-25% clay, very dense
		damp			55				
Bentonite			0.3	27 54	56			SP	**Poorly Graded Medium Grained SAND**: dark tan, medium dense
				16 16	57				
		wet		40				SW	**Well Graded SAND**: tan and medium brown, ~10% fines, medium dense
Sand				11 50 for 5"	58				
					59				No recovery (sluff)
					60				No recovery (sluff)
					61				
		wet			62			GW	**Well Graded GRAVEL with sand**: grey, 1/4 to 1.5" gravel, 10-20% well graded sand, dense
									Boring terminated at 62.5 feet below grade
					63				
					64				
					65				
					66				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5c
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 1 of 4
Driller:	Gregg	Date Drilled:	10/31/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	77.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	77 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				air knifed & hand augered	1			AF	3 to 4 inch asphalt with approx. 2 inches of base rock
					2			CL	**Sandy Lean CLAY**: dark brown, 5-15% gravels up to ~3mm b-axis diameter, 30-40% medium grained sand, low to moderate plasticity, some small roots
					3				
					4				
					5				**Sandy Lean CLAY**: same as above, darker brown to black, 30-40%medium grained sand
					6				Encountered 2-3" asphalt layer
					7				
					8				
				6	9				
		damp	68.6	13				CL	**Lean CLAY**: medium grey, ~10% fine grained sand, low plasticity, very stiff
				15	10				
					11				
					12				
					13				
				4	14				
		damp	60.4	8					(same as above, trace fine grained sand, moderate plastictiy, stiff)
				11	15				
					16				
					17				
					18				
				7	19				
		damp	1,305	6				CL	**Sandy Lean CLAY**: light grey with medium grey mottling, 30-35% fine grained sand, moderate plasticity, stiff
				11	20				
					21				
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5c
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 2 of 4
Driller:	Gregg	Date Drilled:	10/31/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	77.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	77 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill / Casing					23				
				8					
		damp	10.3	8	24			CL	**Lean CLAY**: dark grey with some black mottling, ~10%
				9					fine grained sands, moderate plasticity, stiff
					25				
					26				
					27				
					28				
				8					
		wet	0.3	13	29				(same as above, no dark grey mottling, very stiff)
			0.3	13	30				
					31				
					32				
					33				
				6					
		damp	0.1	8	34			CL	**Sandy Lean CLAY**: greyish brown, 30-35% fine to medium
		moist		9	35				grained sand, moderate to high plasticity, stiff
					36				
					37				
					38				
				7					
		moist	0.1	8	39			CL	**Lean CLAY**: medium brown, medium to high plasticity, stiff
				10	40				
					41				
					42				
					43				
				5					
		moist		5	44				

Grout

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Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5c
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 3 of 4
Driller:	Gregg	Date Drilled:	10/31/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	77.5 feet	
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	77 feet	
Gravel Pack:	#3	Casing Stickup:	n/a	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout	▼	moist	0.1	5 6	45			CL	**Lean CLAY**: same as above
					46				
					47				
					48				
				7	49				
		moist	0.1	11 13	50			CL	**Lean CLAY with Sand**: light brown mottled with light grey, 15-25% fine grained sand, moderate plasticity, stiff
					51				
					52				
					53				
				40 50 for 5"	54			SC	**Fine Grained SAND with Clay**: medium brown, 15-25% clay, very dense
		damp	0.3	27 54	55				
				16 16	56			SP	**Poorly Graded Medium Grained SAND**: dark tan, medium dense
		wet		40 11 50 for 5"	57			SW	**Well Graded SAND**: tan and medium brown, ~10% fines, medium dense
					58				
					59				No recovery (sluff)
					60				No recovery (sluff)
					61				
		wet			62			GW	**Well Graded GRAVEL with sand**: grey, 1/4 to 1.5" gravel, 10-20% well graded sand, dense
				8 13 36	63				
					64				
			0.3		65				
					66				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-5c	
Logged By:	Heather Buckingham	Location:	3790 Hopyard Road	Page 4 of 4	
Driller:	Gregg	Date Drilled:	10/31/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	10 inch	Please see site map	
Sampling Method:	CA Mod. Split-Shoe	Hole Depth:	77.5 feet		
Casing Type:	Sched. 40 PVC	Well Diameter:	4 inch		
Slot Size:	0.02	Well Depth:	77 feet		
Gravel Pack:	#3	Casing Stickup:	n/a		
Elevation		Northing		Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout					67				
					68				
		wet		16	69			SP	**Poorly Graded Coarse Grained SAND**: ~10% 1/4"
			0.1	50 for 4"	70				gravel, 10-20% clay, medium dense
Bentonite				16					
				50 for 4"	71				
				50 for 6"	72				
		wet			73			SC	**Clayey SAND**: medium brown, 40-45% clay, 55-60% fine grained sand, low plasticity, dense
				15					
				16	74				
Sand				28					
					75			SW	**Coarse Grained SAND**: same as above
			0.1						
		wet			76			SC	**Clayey SAND**: same as above, grey
					77				
				50 for 5"					
					78				Boring terminated at 77.5 feet below ground surface
					79				
					80				
					81				
					82				
					83				
					84				
					85				
					86				
					87				
					88				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9b
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 1 of 3
Driller:	Gregg	Date Drilled:	10/26/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	61 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	61 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
								AF	3 to 4 inch asphalt with approx. 2 inches of base rock
					1				
					2			CL	**Lean CLAY**: dark greyish brown, trace coarse grained sand, gravels up to ~5mm b-axis diameter, medium plasticity
					3			SC	**Clayey SAND**: dark brown, fine to medium grained sand, 20-30% clay
					4			CL	**Lean CLAY**: dark brown, 5-15% gravels up to ~5mm b-axis diameter, medium plasticity
			0.1	air knifed & hand augered	5				
					6			SC	**Clayey SAND**: brown to yellowish brown, fine to medium grained sand, 15-25% clay
					7				
					8				
				5	9				
		slight	0.1	8				CL	**Lean CLAY with Sand**: dark grey, sand pockets ~0.5cm with fine to medium grained sand (10-15%), low to moderate plasticity, 2-3" clayey sand layer within fine grained sand, stiff
Grout		damp		12	10				
					11				
					12				
					13				
				6	14				
		damp	0.1	8				CL	**Lean CLAY**: dark green with brown mottling, trace fine grained sand, medium to high plasticity, stiff
				9	15				
					16				
					17				
					18				
				6	19				(same as above, orange mottling, ~10% fine grained sand, medium to high plasticity)
			0.1	7					
				7	20				
					21				
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9b
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 2 of 3
Driller:	Gregg	Date Drilled:	10/26/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	61 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	61 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout					23				**Lean CLAY** (continued)
		damp	0.9	6 8 9	24 25			CL	**Lean CLAY with Sand**: dark brown with red brown mottling (end at 15') dark grey with light grey sand pockets, 10-20% fine grained sand, moderate plasticity, very stiff
					26 27				
		damp	0.5	9 11 12	28 29 30			CL	**Sandy Lean CLAY**: medium grey, 30-35% fine grained sand, moderate plasticity, very stiff
					31 32 33				
		damp	0.3	7 9 13	34 35				
	▼				36 37 38				
		damp	0.2	8 15 16	39 40				
					41 42 43				
		damp		11 9	44				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9b
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 3 of 3
Driller:	Gregg	Date Drilled:	10/26/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	61 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	61 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout / Bentonite / Sand		damp	0.1	9 7	45			CL	**Sandy Lean CLAY** (continued)
					46				
					47				
					48				
					49				
		wet	0.2	7	50				
				10	51			CL	**Lean CLAY with Sand**: grey, 15-20% fine grained sand, moderate plasticity, very stiff
		damp		11 7	52				
				9					
				8	53				(same as above, grey mottling)
				9					
				12	54				
		damp		18					
				7	55				
			0.1	11					
		damp		18	56			SC	**Poorly Graded Fine Grained SAND with Clay**: grey, 80-85% fine grained sand, 15-20% fines, medium dense
				5					
		wet		17	57				
				11					
				15	58			SP	**Poorly Graded Medium to Coarse Grained SAND with Gravel**: grey, 10-15% gravel, trace fine grained sand, dense
		wet		25					
				33	59				
				7					**Poorly Graded Fined Grained Sand with Clay**: same
			0.8	17	60			SC	as above, dense
				18					**Poorly Graded Medium to Coarse Grained SAND with**
		wet		27	61			SP	**Gravel**: same as above, very dense
					62				
					63				
					64				
					65				
					66				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9c
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 1 of 4
Driller:	Gregg	Date Drilled:	10/25/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	79 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	79 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
								AF	3 to 4 inch asphalt with approx. 2 inches of base rock
				air knifed & hand augered	1				
					2			CL	**Lean CLAY**: dark greyish brown, trace coarse grained sand, gravels up to ~5mm b-axis diameter, medium plasticity
					3			SC	**Clayey SAND**: dark brown, fine to medium grained sand, 20-30% clay
					4			CL	**Lean CLAY**: dark brown, 5-15% gravels up to ~5mm b-axis diameter, medium plasticity
			0.1		5				
					6			SC	**Clayey SAND**: brown to yellowish brown, fine to medium grained sand, 15-25% clay
					7				
					8				
				5	9				
		slight	0.1	8				CL	**Lean CLAY with Sand**: dark grey, sand pockets ~0.5cm with fine to medium grained sand (10-15%), low to moderate plasticity, 2-3" clayey sand layer within fine grained sand, stiff
Grout		damp		12	10				
					11				
					12				
					13				
				6	14				
		damp	0.1	8				CL	**Lean CLAY**: dark green with brown mottling, trace fine grained sand, medium to high plasticity, stiff
				9	15				
					16				
					17				
					18				
				6	19				(same as above, orange mottling, ~10% fine grained sand, medium to high plasticity)
			0.1	7					
				7	20				
					21				
					22				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9c
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 2 of 4
Driller:	Gregg	Date Drilled:	10/25/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	79 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	79 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout					23				**Lean CLAY** (continued)
		damp	0.9	6 8 9	24 25			CL	**Lean CLAY with Sand**: dark brown with red brown mottling (end at 15') dark grey with light grey sand pockets, 10-20% fine grained sand, moderate plasticity, very stiff
					26 27				
		damp	0.5	9 11 12	28 29 30			CL	**Sandy Lean CLAY**: medium grey, 30-35% fine grained sand, moderate plasticity, very stiff
					31 32 33				
		damp	0.3	7 9 13	34 35				
	▼				36 37 38				
		damp	0.2	8 15 16	39 40				
					41 42 43				
		damp		11 9	44				

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9c
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 3 of 4
Driller:	Gregg	Date Drilled:	10/25/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	79 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	79 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout		damp	0.1	9 7	45			CL	**Sandy Lean CLAY** (continued)
					46				
					47				
					48				
					49				
		wet	0.2	7	50				
				10 11	51			CL	**Lean CLAY with Sand**: grey, 15-20% fine grained sand, moderate plasticity, very stiff
		damp		7 9	52				
				8 9	53				(same as above, grey mottling)
		damp		12 18	54				
				7	55				
		damp	0.1	11 18	56			SC	**Poorly Graded Fine Grained SAND with Clay**: grey, 80-85% fine grained sand, 15-20% fines, medium dense
		wet		5 17	57				
				11 15	58			SP	**Poorly Graded Medium to Coarse Grained SAND with Gravel**: grey, 10-15% gravel, trace fine grained sand, dense
		wet		25 33	59				
			0.8	7 17	60			SC	**Poorly Graded Fined Grained Sand with Clay**: same as above, dense
		wet		18 27	61			SP	**Poorly Graded Medium to Coarse Grained SAND with Gravel**: same as above, very dense
				50 for 5"					
		wet		17 33	62				
				40	63			SC	**Poorly Graded Fine Grained SAND with Clay**: same as above, very dense
				17 19	64			SW	**Well Graded Coarse Grained SAND with Gravel**: grey, 35-40% 1/4" gravel, trace large gravels up to 1", 60-65% sand, dense
		wet		30 12	65				
			0.1	19					**Graded SAND, CLAY and GRAVEL with Fine Grained Sand**: grey, ~15-20% fine grained sands, ~25-30% fines, 50-55% gravel up to 1", dense
		wet		20 12	66			GC CL	

Delta
Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-9c
Logged By:	Heather Buckingham	Location:	3730 Hopyard Road	Page 4 of 4
Driller:	Gregg	Date Drilled:	10/25/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	CA Mod. Split Shoe	Hole Depth:	79 feet	
Casing Type:	Sch. 40 PVC	Well Diameter:	4 inch	
Slot Size:	0.02	Well Depth:	79 feet	
Gravel Pack:	#3	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

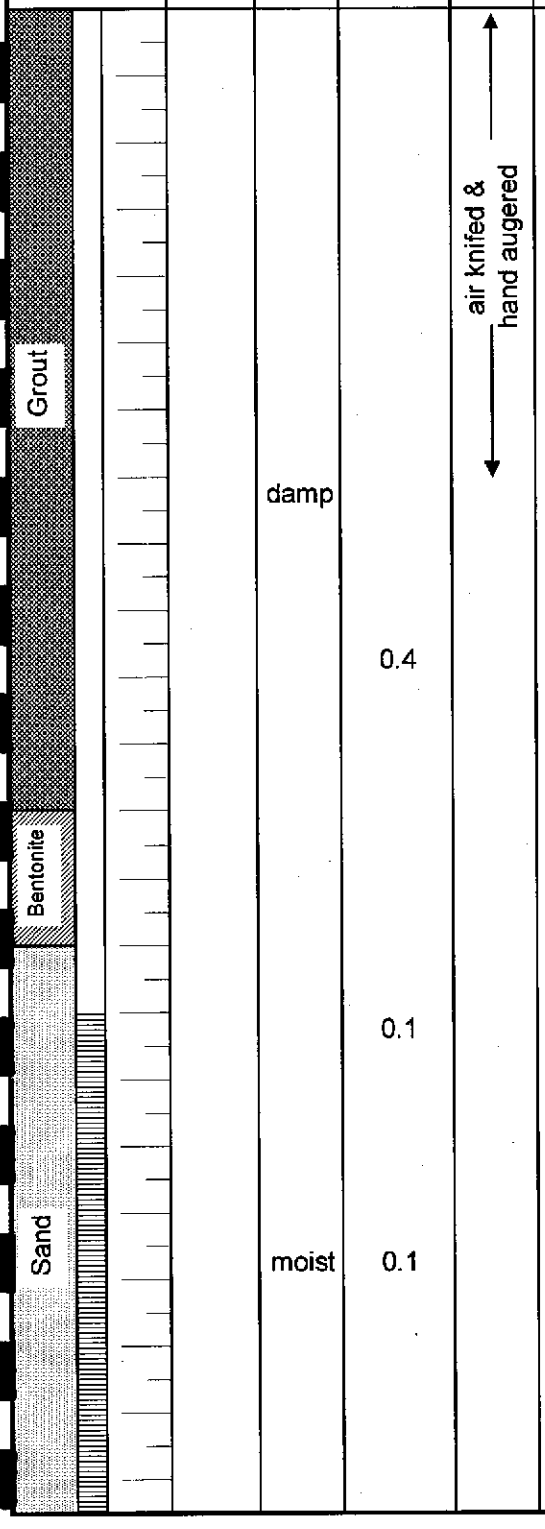
Please see site map

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout		dry		12	67			CL	**Lean CLAY with Sand**: same as above, grey with brown mottling, medium dense
		slight		12					
		damp		14					
				19	68				
				11					
				7	69				
				7					
				7	70				
		dry	0.1	6					
		slight		8	71				(same as above, brown with tan mottling, very stiff)
		damp		11					
				13	72				
Bentonite				8					
		damp		11	73				
				4					
				12	74				
				18					
Sand		moist	0.1	14	75			SC	**Poorly Graded Fine Grained SAND**: medium brown, 10-15% fines, dense
				14					
				28	76				
				28					
				28	77				
				50 for 5"				SC	**Poorly Graded SAND with Clay**: medium brown, 15-20% fines, 80-85% fine grained sand, slight plasticity, dense
				18	78				
				33				SW	**Well Graded SAND**: tannish brown, trace gravel (~5%)
				25	79				Boring terminated at 79 feet below ground surface
					80				
					81				
					82				
					83				
					84				
					85				
					86				
					87				
					88				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-14	
Logged By:	Heather Buckingham	Location:	Trailgate # 7 & 8	Page 1 of 2	
Driller:	Gregg	Date Drilled:	10/28/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	10 inch	Please see site map	
Sampling Method:	Geoprobe	Hole Depth:	25 feet		
Casing Type:	PVC	Well Diameter:	4 inch		
Slot Size:	0.01	Well Depth:	25 feet		
Gravel Pack:	#2/12	Casing Stickup:	NA		
Elevation		Northing		Easting	



Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
			air knifed & hand augered	1				
				2			CL	**Lean CLAY with Gravel**: dark brown, 15-25% gravel (up to 10mm b-axis), trace medium grained sands, medium plasticity
				3				
				4				
				5				**Lean CLAY**: dark brown, 10-20% medium grained sand, medium plasticity
				6				
	damp			7			CL	**Lean CLAY**: brown with orangish brown mottling, ~10% fine grained sand, medium to high plasticity
				8				
				9				
		0.4		10				(same as above, 10-20% organics)
				11				(same as above, root holes)
				12				
				13				
				14				
		0.1		15				
				16				
				17				
				18				
	moist	0.1		19			CL	**Lean CLAY with Sand**: dark grey mottled with tan, 15-25% medium to fine grained sand, moderate to high plasticity
				20				
				21				
				22				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-14
Logged By:	Heather Buckingham	Location:	Trailgate # 7 & 8	Page 2 of 2
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	Geoprobe	Hole Depth:	25 feet	
Casing Type:	PVC	Well Diameter:	4 inch	
Slot Size:	0.01	Well Depth:	25 feet	
Gravel Pack:	#2/12	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Sand	▼	moist	0.4		23			CL	**Sandy Lean CLAY**: light grey, 25-35% fine grained sand, medium to high plasticity
					24				
					25				Boring terminated at 25 feet below ground surface
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-15
Logged By:	Heather Buckingham	Location:	trailgate #7 and #8	Page 1 of 2
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	Geoprobe	Hole Depth:	25 feet	
Casing Type:	PVC	Well Diameter:	4 inch	
Slot Size:	0.01	Well Depth:	25 feet	
Gravel Pack:	#2/12	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill, Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				air knifed & hand augered	1				
					2			SC	**Clayey SAND**: light brown, loosley packed. 70-80% medium to fine grained sand, 5-10% gravels up to 15mm b-axis, 10-25% fines, no plasticity
					3				
					4				
					5				slightly less gravel
					6				
					7				
					8				
					9				
Bentonite		dry	0.3		10			CL	**Lean CLAY**: dark brown mottled with orangish brown, moderate to high plasticity
					11				
					12				
					13				
					14				
		damp	0.1		15				
					16				
					17				
					18			CL	**Lean CLAY**: same as above, dark brown mottled with medium grey
Sand		moist	0.1		19				
					20				
					21				
					22			CL	**Lean CLAY with Sand**: dark brown mottled with light brown, 10-25% fine grained sand, moderate plasticity

Delta

Environmental Consultants, Inc.

Project No:	SJ37-90H-1	Client:	Shell Oil Products US	Well No: S-15
Logged By:	Heather Buckingham	Location:	trailgate #7 and #8	Page 2 of 2
Driller:	Gregg	Date Drilled:	10/28/2005	
Drilling Method:	HSA	Hole Diameter:	10 inch	
Sampling Method:	Geoprobe	Hole Depth:	25 feet	
Casing Type:	PVC	Well Diameter:	4 inch	
Slot Size:	0.01	Well Depth:	25 feet	
Gravel Pack:	#2/12	Casing Stickup:	NA	
Elevation		Northing		Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Sand			0.1		23–25				Boring terminated at 25 feet below ground surface
					26–44				

Attachment B

DRILLING AND ENCROACHEMENT PERMITS

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Arroyo Mocho Canal near Hopyard Rd., Pleasanton, CA

California Coordinates Source _____ ft. Accuracy± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Shell Oil Products U.S.
Address 20945 S. Wilmington Ave. Phone 707-865-0251
City Carson, CA Zip 90810

APPLICANT
Name Beta Environmental Consultants, Inc.
Fax _____
Address 175 Bernal Rd, St. 200 Phone 408-224-4724
City San Jose, CA Zip 95119

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☒	Well Destruction	☐

PROPOSED WELL USE

New Domestic	☐	Irrigation	☐
Municipal	☐	Remediation	☐
Industrial	☐	Groundwater Monitoring	☐
Dewatering	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Hollow Stem Auger	☒
Cable Tool	☐	Direct Push	☐	Other _____	☐

DRILLING COMPANY BC Environmental
DRILLER'S LICENSE NO. 686255

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 30 ft.
Surface Seal Depth ~25 ft. Number S-13, S-14, and S-15 (3 total)

SOIL BORINGS
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 10/17/05
ESTIMATED COMPLETION DATE 10/21/05

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.
APPLICANT'S SIGNATURE Heather Buckingham Date 9/13/05

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 25160
WELL NUMBER 3S/1E-18B2, 18B3 & 18B4
APN _____

PERMIT CONDITIONS

(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
4. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved Wyman Hong Date 10/3/05
Wyman Hong

Revised: April 27, 2005

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3730 Hopyard Rd. Pleasanton, CA

California Coordinates Source _____ ft Accuracy± _____ ft.
CCN _____ ft. CCE _____ ft.
APN 941-1309-69

CLIENT
Name Shell Oil Products U.S.
Address 20945 S. Willmington Ave. Phone (707) 865-0251
City Carson, CA Zip 90810

APPLICANT
Name Delta Environmental Consultants, Inc. Fax (408) 225-8506
Address 175 Cremona Rd., St. 200 Phone (408) 826-1866
City San Jose Zip 95179

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	X	Well Destruction	☐

PROPOSED WELL USE

New Domestic	☐	Irrigation	☐
Municipal	☐	Remediation	☐
Industrial	☐	Groundwater Monitoring	X
Dewatering	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Hollow Stem Auger	X
Cable Tool	☐	Direct Push	☐	Other _____	☐

DRILLING COMPANY BC2 Environmental
DRILLER'S LICENSE NO. 688255

WELL PROJECTS S-9B & S-9C

Drill Hole Diameter	10 in.	Maximum Depth	S-9B = 62 ft S-9C = 77 ft.
Casing Diameter	4 in.	Number	S-9B & S-9C (2 wells)
Surface Seal Depth	S-9B, 57 ft. S-9C = 75 ft		

SOIL BORINGS
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 10/17/05
ESTIMATED COMPLETION DATE 10/21/05

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Heather Buchingham Date 10/6/05

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 25169
WELL NUMBER 3S/1E-7Q28 (S-9B), 3S/1E-7Q29 (S-9C
APN 941-1309-069-00

PERMIT CONDITIONS

(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
4. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved Wyman Hong Date 10/17/05
Wyman Hong

Revised: April 27, 2005

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 454-5728

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 3790 Hopyard Rd. Pleasanton, CA

California Coordinates Source _____ ft Accuracy± _____ ft.
CCN _____ ft. CCE _____ ft.
APN 941-1309-35

CLIENT
Name Shell Oil Products U.S.
Address 20945 S. Wilmington Ave Phone (310) 816-0251
City Carson, CA Zip 90810

APPLICANT
Name Delta Environmental Consultants, Inc.
Fax (408) 225-8506
Address 175 Bernal Rd, St. 200 Phone (408) 826-1866
City San Jose, CA Zip 95119

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☒	Well Destruction	☐

PROPOSED WELL USE

New Domestic	☐	Irrigation	☐
Municipal	☐	Remediation	☐
Industrial	☐	Groundwater Monitoring	☒
Dewatering	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Hollow Stem Auger	☑
Cable Tool	☐	Direct Push	☐	Other _____	☐

DRILLING COMPANY BC Environmental
DRILLER'S LICENSE NO. 688255

WELL PROJECTS
S-5B & S-5C
Drill Hole Diameter 10 in. Maximum S-5B= 62 ft
Casing Diameter 4 in. Depth S-5C= 77 ft.
Surface Seal Depth S-5B=57 ft. Number S-5B, S-5C (2 wells)
S-5C= 75 ft.

SOIL BORINGS
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 10/17/05
ESTIMATED COMPLETION DATE 10/21/05

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Heather Buckingl Date 10/4/05

ATTACH SITE PLAN OR SKETCH

FOR OFFICE USE

PERMIT NUMBER 25170
WELL NUMBER 3S/1E-7Q32 (S-5B), 3S/1E-7Q33 (S-5C)
APN 941-1309-035-00

PERMIT CONDITIONS

(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
4. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after the completion of permitted work the well installation report including all soil and water laboratory analysis results.

Approved Wyman Hong Date 10/17/05
Wyman Hong

Revised: April 27, 2005

Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Phone: 925-454-5000
Fax: 925-454-5726
www.zone7water.com

ENCROACHMENT PERMIT

Permit Information

☑ Flood Control ☐ Water Supply PERMIT NO.: 70044

Permittee: ATTN: HEATHER BUCKINHAM DELTA ENVIRONMENTAL CONSULTANTS, INC.

Address: 175 BERNAL ROAD, SUITE 200

City/State/Zip: SAN JOSE, CA. 95119

Telephone No.: (408) 224-4724 Fax No.: (408) 225- 8506

Cell Phone No.: (408) 623-1521 Email:

Contact Person: HEATHER BUCKINHAM

WORK PERFORMED UNDER THIS PERMIT SHALL NOT COMMENCE BEFORE 10/17/05,

AND SHALL BE COMPLETED BY 10/28/05.

PLEASE READ ALL SECTIONS OF THIS PERMIT CAREFULLY AND KEEP IT AT THE WORKSITE.

In compliance with your request, and subject to all the terms, conditions and restrictions written below or given as general or special provisions on any part of this form, PERMISSION IS HEREBY GRANTED AS FOLLOWS:

Location: ARROYO MOCHO (LINE G) AT HOPYARD ROAD

Permitted Use: ACCESS TO THE FACILITY TO INSTALL 3 WELLS ON ACCESS ROAD FOR GROUND WATER MONITORING WATER MONITORING ASSOCIATED WITH ENVIRONMENTAL ASSESMENT FOR THE SHELL STATION AT 3790 HOPYARD ROAD AS DIRECTED BY THE ALAMEDA COUNTY ENVIRONMENTAL HEALTH

Failure to complete work by said date shall void this permit unless a written extension is granted by Zone 7 Water Agency.

Items attached or referred to herein and made part hereof:

1. **General Provisions, attached.**
2. **Special Provisions, below.**

Special Provisions

PERMITTEE SHALL KEEP ACCESS ROAD CLEAR AT ALL TIME FOR EMERGENCY AND INSPECTION VEHICLES

PERMITTEE SHALL KEEP ACCESS GATES LOCKED AT THE END OF THE DAY

PERMIT NO.: 70043

Special Provisions (Continued)

SEE ATTACHMENT

(Attach more pages if needed)

FOR PERMITTEE:

By signing below, I agree to all terms and conditions as set forth in the General Provision and Special Provisions of this Encroachment Permit. For those areas involved herein to which Zone 7 Water Agency does not hold fee title, I have also obtained permission from the underlying property owners.

Sign: Heather Buckingham Date: 10/17/05

Print: Heather Buckingham Title: Senior Staff Geologist PE/HG

FOR ZONE 7: Permission is Granted

By: LARRY AKINSIKU Date: 10/3/05

Title: ASSISTANT ENGINEER

For Zone 7 Use Only

☐ Work Completed

☐ Expired

Inspector: RICHARD DANIEL

Inspection Date:

Zone 7 Engineer: LARRY AKINSIKU

Approved Completion Date: 10/15//05

Permit Fee: $WAIVED Receipt Number:

Review Deposit: $ Receipt Number:

Inspection Deposit: $ Receipt Number:

Bond Required? ☐ Yes ☐ No Bond Type: ☐ Cash ☐ Surety

Bond Amount: $ Receipt Number:

Insurance Required? ☐ Yes ☐ No If required, attach proof of insurance to permit.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551 PHONE (925) 454-5000

SPECIAL PROVISIONS
PERMIT NO. 70044

1. Permittee or any person/agency undertaking a construction activity that disturbs greater or equal than 1 (one) acre shall provide a copy of the Notice of Intent (NOI) that was sent to the State Water Resources Control Board for coverage under the Construction Activity Stormwater NPDES General Permit.

2. Permittee shall provide for erosion control measures which prevent site runoff from running over bank directly into a live stream or channel.

3. Permittee shall be responsible to repair all damages resulting from the permittee's use of flood control facilities. All damage shall be repaired to the satisfaction of Zone 7.

4. Permittee shall make such repairs within a reasonable time, as determined by Zone 7, after receipt of a written notice. In the event of permittee's failure to make such repairs within 14 calendar days, or otherwise specified, after receipt of written notice from Zone 7, it will be interpreted as the permittee authorizes Zone 7 to proceed to have said repairs made at permittee's expense and permittee shall pay the costs and charges, therefore, upon demand.

5. Permittee shall observe a maximum vehicular speed limit of 15 mph on all access roads within Zone 7 facilities. Dust control shall be provided. Working hours shall conform to City of Pleasanton ordinances. Zone 7 access entrance area must remain clear at all times for emergency vehicles' use. Permittee shall keep the access area in a neat, orderly and sanitary condition at all times. No disposal of any material in Zone 7 property is permitted.

6. In consideration of the granting of this permit, the permittee agrees that it shall hold harmless, defend and indemnify the County of Alameda, the Alameda County Flood Control and Water Conservation District, including Zone 7, its Board of Supervisors, the Directors of Zone 7, their officers, employees and agents (collectively "Indemnitees") from and against any and all claims, losses, damages, liabilities or expenses, including reasonable attorney fees, incurred in the defense thereof, for the death or injury to any person or persons (including employees of Permittee or COUNTY and/or District) or damage of any property (including property of Permittee or County and/or District) which arises out of or is any way connected with the work permitted herein (collectively "Liabilities") except where such Liabilities are proximately caused solely by the negligence or willful misconduct of any Indemnitee.

7. In consideration of the granting of this permit, the permittee agrees to name, at permittee's expense, the Alameda County Flood Control and Water Conservation District, including Zone 7, the members of its Board of Supervisors and the directors of Zone 7, and all their officials, officers, employees and agents ("Flood Control"), as additional insureds on one or more policies of insurance providing general liability and automobile liability coverage, issued by an insurer licensed to do business in the State of California, with minimum levels of coverage of $500,000 individual/$1,000,000 total, for liability for injury to persons, and $100,000 for damage to property. Written proof of coverage must be provided before commencement of the permitted work. The proof must provide for 30 days written notice of cancellation to "Flood Control" before coverage is terminated.

8. Please notify Richard Daniel, Zone 7 inspector, at least 48 hours prior to all scheduled work at (925) 454-5084.

9. Return key to Zone 7.

E:\larry\specialprovisions70044

THE CITY OF PLEASANTON

PUBLIC WORKS PERMIT

-Inspections must be requested 24 Hours prior to Starting Work-

Project Address	**APN#**	**Permit #:** ENCR 201417 **Applicant** DELTA ENVIRONMENTAL CON

Project: ARROYO MOCHO CANEL - ENCR TO DRILL WELL ON ZONE 7 PROP.

Owner	**Contractor** DELTA ENVIRONMENTAL CONSULTANT SAN JOSE, CA 95119 WELL DRILLING 485165

Scope of Work ENCR-WELL ENCR FOR INSTALLING MONITORING WELL

This encroachment permit is for installation of monitoring well on zone 7 property near Hopyard and Arroyo Mocho Canel trail gate 7 and 8. Contractor is responsible for restoring any damage to public improvements including but not limited to curb, gutter, sidewalk, street, underground utility, etc. Contractor shall submit traffic control plan for city staff approval if any of his/her activity will affect vehicular or pedestrian traffic.

Comments

Quantity	Description	Amount
1	MISC ENCROACHMENT PERMIT	50.00
	MISC. INSPECTION	110.00

Entered: KB

CALL PUBLIC WORKS INSPECTION 24 HRS PRIOR TO START OF WORK (925) 931-5680

All work to be performed to City of Pleasanton Standard Details and Specifications. This permit is issued pursuant to all provisions of the City of Pleasanton Municipal Code, Chapter 13.04, Encroachment.

Total Fees: $160.00 **Payment:** $160.00

Issued By: Kaushik Rabadi **Date of Issue:** 17-OCT-2005

Applicant or Agent: Heather Buckingham for DE/TS **Date:**

Engineering Division: (925) 931-5650 Public Works Inspections: (925) 931-5680

THE CITY OF

PLEASANTON.

CONDITIONS FOR ENCROACHMENT PERMIT

1. ✓ Work area shall be clean at the end of each working day. No construction materials may be stored in street or sidewalk overnight. City of Pleasanton streets shall not be used for staging areas. If excessive debris accumulates to the dissatisfaction of the homeowners, business owners or the City due to construction activities, then the contractor shall be required to clean roadway and sidewalk areas during working hours. All cleaning methods used for construction shall conform to the Urban Runoff Program.

2. ✓ Work area shall be safe for vehicular, bicycle and pedestrian traffic. All driveways and other entrances to homes or businesses are to remain accessible at all times or other provisions for access must be made.

3. ✓ Landscaping damaged during the project shall be repaired to the owner's satisfaction. In the case of City owned and maintain landscaping, contact Parks Department at (925) 931-5565.

4. ✓ Traffic control shall conform to Cal-Trans standards.

5. ____ Contractor to submit site specific traffic control plan for pothole work and bore work. **(Traffic control plan must be received 48 hours prior to lane closure).**

6. ✓ Concrete to be removed shall be removed to closest score mark outside work area. All replacement concrete must be doweled to existing concrete.

7. ____ Removal of 6" of pavement required where gutter is to be removed. 6" slot shall be re-paved with AC deep lift after new gutter is in place.

8. ____ Pipe or conduit that is installed in a trench over 5' in depth must be shored in accordance with applicable Cal-OSHA regulations.

9. ____ When permission is granted for directional boring, existing utilities must be "potholed" to establish bore profile.

10. ____ When permission is granted for directional boring in a landscaped area, the minimum bore depth shall be 42 inches, measured from the top of curb and not from the top of the landscape mound.

11. ____ Structural trench backfill shall consist of:
    - A) Standard trenches: 3" min. AC on 10" of CTB (2 Sack mix) for minor streets.
    - B) Standard trenches: 3" min. AC on 15" of CTB (2-sack mix) for major streets.
    - C) Rock wheel trenching: 2" of AC on flowable concrete trench backfill. (City approved mix)
    - D) Backfill in sidewalk and landscape areas shall conform to City Specifications.

12. ✓ Permits may be required from other agencies having jurisdiction in area.

13. ____ Haul route per attached sheet.

14. ✓ Permittee to call utility locating service (USA) at 1-800-642-2444 48 hours prior to beginning of work.

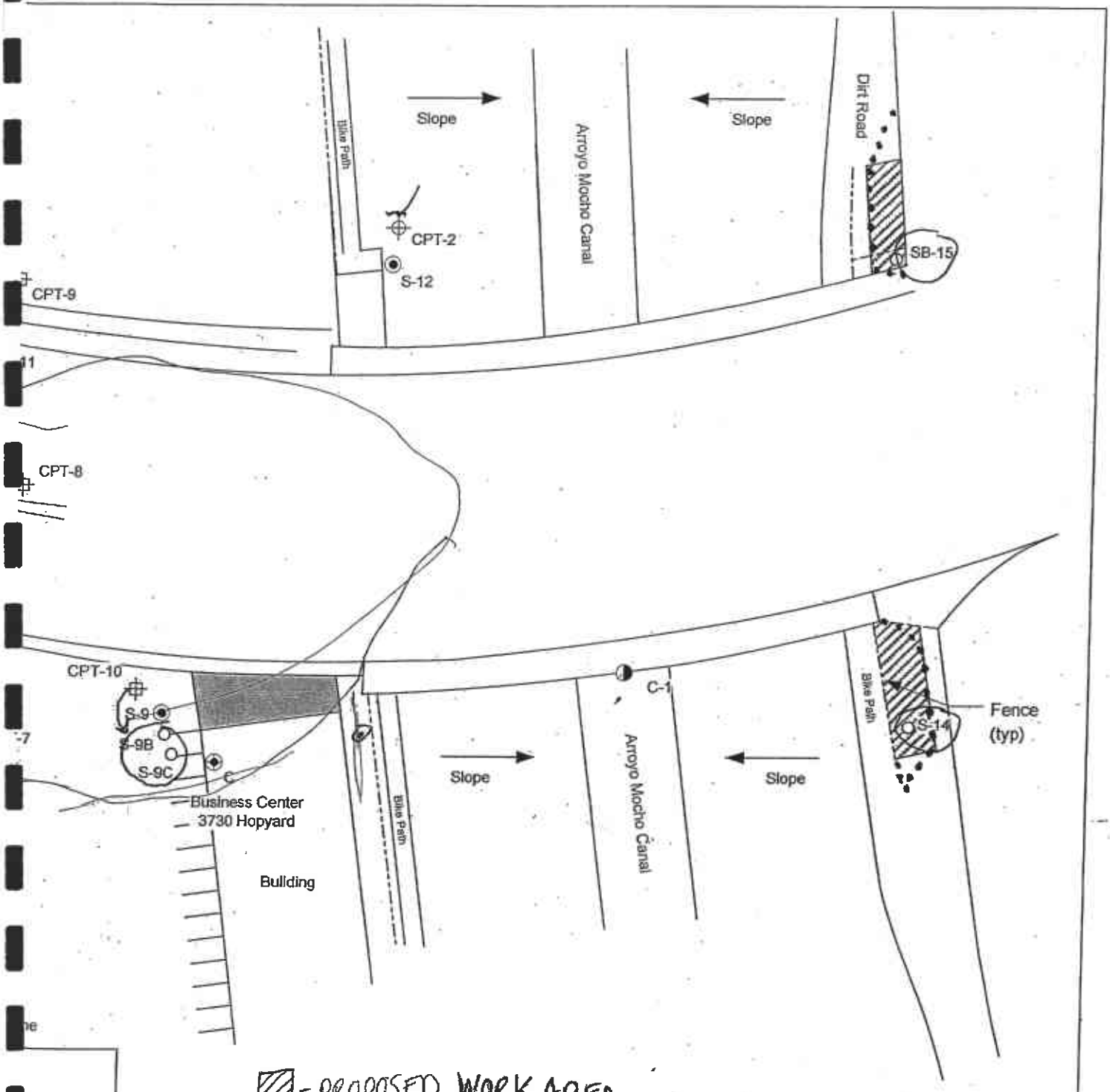
15. ✓ Work hours are from 8:00 a.m. to 5:00 p.m. Monday through Friday. Weekends, holidays and after-hours only upon written permission 48 hours in advance. (All overtime is subject to reimbursement).

16. ✓ The City Engineer or his authorized representative will be the sole judge of the quality of work, the interpretation of these conditions, and the interpretations of City specifications and/or City Details applicable to the project.

17. ✓ Contractor is responsible for removal of all USA marking.

PUBLIC WORKS P. O. Box 520, Pleasanton, CA 94566-0802

Administration	Engineering	Traffic	Inspection	Operation Service Center
200 Old Bernal Rd	200 Old Bernal Rd	200 Old Bernal Rd.	205-F Main St.	3333 Busch Road
(925) 931-5650	(925) 931-5650	(925) 931-5650	(925) 931-5680	(925) 931-5500
(925) 931-5479	(925) 931-5479	(925) 931-5479	(925) 931-5484	(925) 931-5595



▨ - PROPOSED WORK AREA

... - TRAFFIC CONES

FIGURE 2

SITE MAP

SHELL-BRANDED SERIVCE STATION
3790 Hopyard Road
Pleasanton, California

0 60 FT

APPROX. SCALE

PROJECT NO. SJ37-90H-1.2005	DRAWN BY JL 10/17/05
FILE NO. SJ37-90H-1.2005	PREPARED BY HB
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

Attachment C

BLAINE FIELD DATA SHEETS
AND
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

SEVERN TRENT STL

Submission#: 2005-11-0174

Blaine Tech Services, Inc.

November 17, 2005

1680 Rogers Avenue
San Jose, CA 95112-1105

Attn.: Michael Ninokata

Project#: BTS#051111-WC-1
Project: 98995842
Site: 3790 Hopyard Rd., Pleasanton, CA

Attached is our report for your samples received on 11/11/2005 18:10
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/26/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-11-0174

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Michael Ninokata

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
S-5	11/11/2005 10:50	Water	1
S-5B	11/11/2005 09:47	Water	2
S-5C	11/11/2005 10:25	Water	3
S-9	11/11/2005 07:45	Water	4
S-9B	11/11/2005 11:35	Water	5
S-9C	11/11/2005 11:20	Water	6
S-14	11/11/2005 09:10	Water	7

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-5**
Sampled: 11/11/2005 10:50
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 1
Extracted: 11/14/2005 13:02
QC Batch#: 2005/11/14-1B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	2300	50	ug/L	1.00	11/14/2005 13:02	
Benzene	54	0.50	ug/L	1.00	11/14/2005 13:02	
Toluene	0.69	0.50	ug/L	1.00	11/14/2005 13:02	
Ethylbenzene	15	0.50	ug/L	1.00	11/14/2005 13:02	
Total xylenes	19	1.0	ug/L	1.00	11/14/2005 13:02	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/14/2005 13:02	
Methyl tert-butyl ether (MTBE)	8.3	0.50	ug/L	1.00	11/14/2005 13:02	
Surrogate(s)						
1,2-Dichloroethane-d4	95.9	73-130	%	1.00	11/14/2005 13:02	
Toluene-d8	92.0	81-114	%	1.00	11/14/2005 13:02	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-5B**
Sampled: 11/11/2005 09:47
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 2
Extracted: 11/12/2005 11:35
QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 11:35	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 11:35	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 11:35	
tert-Butyl alcohol (TBA)	15	5.0	ug/L	1.00	11/12/2005 11:35	
Methyl tert-butyl ether (MTBE)	2.5	0.50	ug/L	1.00	11/12/2005 11:35	
Surrogate(s)						
1,2-Dichloroethane-d4	85.7	73-130	%	1.00	11/12/2005 11:35	
Toluene-d8	91.2	81-114	%	1.00	11/12/2005 11:35	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-5C**
Sampled: 11/11/2005 10:25
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 3
Extracted: 11/12/2005 16:44
QC Batch#: 2005/11/12-1A.71

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	55	50	ug/L	1.00	11/12/2005 16:44	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 16:44	
Toluene	0.67	0.50	ug/L	1.00	11/12/2005 16:44	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 16:44	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 16:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 16:44	
Methyl tert-butyl ether (MTBE)	0.87	0.50	ug/L	1.00	11/12/2005 16:44	
Surrogate(s)						
1,2-Dichloroethane-d4	99.5	73-130	%	1.00	11/12/2005 16:44	
Toluene-d8	98.6	81-114	%	1.00	11/12/2005 16:44	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Test(s): 8260B

Sample ID: **S-9**
Lab ID: 2005-11-0174 - 4

Sampled: 11/11/2005 07:45
Extracted: 11/15/2005 23:20

Matrix: Water
QC Batch#: 2005/11/15-2A.64

Analysis Flag: L2, pH: <2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	100	ug/L	2.00	11/15/2005 23:20	
Benzene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Toluene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Ethylbenzene	ND	1.0	ug/L	2.00	11/15/2005 23:20	
Total xylenes	ND	2.0	ug/L	2.00	11/15/2005 23:20	
tert-Butyl alcohol (TBA)	25	10	ug/L	2.00	11/15/2005 23:20	
Methyl tert-butyl ether (MTBE)	220	1.0	ug/L	2.00	11/15/2005 23:20	
Surrogate(s)						
1,2-Dichloroethane-d4	103.4	73-130	%	2.00	11/15/2005 23:20	
Toluene-d8	105.2	81-114	%	2.00	11/15/2005 23:20	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Attn.: Michael Ninokata

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-9B**
Sampled: 11/11/2005 11:35
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 5
Extracted: 11/12/2005 12:52
QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 12:52	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 12:52	
Toluene	2.0	0.50	ug/L	1.00	11/12/2005 12:52	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 12:52	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 12:52	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 12:52	
Methyl tert-butyl ether (MTBE)	23	0.50	ug/L	1.00	11/12/2005 12:52	
Surrogate(s)						
1,2-Dichloroethane-d4	95.6	73-130	%	1.00	11/12/2005 12:52	
Toluene-d8	93.4	81-114	%	1.00	11/12/2005 12:52	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-9C**
Sampled: 11/11/2005 11:20
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 6
Extracted: 11/12/2005 13:17
QC Batch#: 2005/11/12-1A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/12/2005 13:17	
Benzene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Toluene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Ethylbenzene	ND	0.50	ug/L	1.00	11/12/2005 13:17	
Total xylenes	ND	1.0	ug/L	1.00	11/12/2005 13:17	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/12/2005 13:17	
Methyl tert-butyl ether (MTBE)	10	0.50	ug/L	1.00	11/12/2005 13:17	
Surrogate(s)						
1,2-Dichloroethane-d4	91.5	73-130	%	1.00	11/12/2005 13:17	
Toluene-d8	93.1	81-114	%	1.00	11/12/2005 13:17	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Prep(s): 5030B
Sample ID: **S-14**
Sampled: 11/11/2005 09:10
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-11-0174 - 7
Extracted: 11/14/2005 13:45
QC Batch#: 2005/11/14-1B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	11/14/2005 13:45	Q6
Benzene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Toluene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Ethylbenzene	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Total xylenes	ND	1.0	ug/L	1.00	11/14/2005 13:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	11/14/2005 13:45	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	11/14/2005 13:45	
Surrogate(s)						
1,2-Dichloroethane-d4	101.4	73-130	%	1.00	11/14/2005 13:45	
Toluene-d8	95.3	81-114	%	1.00	11/14/2005 13:45	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/11/12-1A.65**

MB: 2005/11/12-1A.65-052 — Date Extracted: 11/12/2005 07:52

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 07:52	
Gasoline [Shell]	ND	50	ug/L	11/12/2005 07:52	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 07:52	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 07:52	
Benzene	ND	0.5	ug/L	11/12/2005 07:52	
Toluene	ND	0.5	ug/L	11/12/2005 07:52	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 07:52	
Total xylenes	ND	1.0	ug/L	11/12/2005 07:52	
Surrogates(s)					
1,2-Dichloroethane-d4	86.0	73-130	%	11/12/2005 07:52	
Toluene-d8	92.8	81-114	%	11/12/2005 07:52	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Michael Ninokata

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/11/12-1A.71-045

Water

Test(s): 8260B
QC Batch # 2005/11/12-1A.71
Date Extracted: 11/12/2005 08:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/12/2005 08:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/12/2005 08:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/12/2005 08:45	
Benzene	ND	0.5	ug/L	11/12/2005 08:45	
Toluene	ND	0.5	ug/L	11/12/2005 08:45	
Ethylbenzene	ND	0.5	ug/L	11/12/2005 08:45	
Total xylenes	ND	1.0	ug/L	11/12/2005 08:45	
Surrogates(s)					
1,2-Dichloroethane-d4	104.6	73-130	%	11/12/2005 08:45	
Toluene-d8	107.0	81-114	%	11/12/2005 08:45	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2005/11/14-1B.69**

MB: 2005/11/14-1B.69-044 — Date Extracted: 11/14/2005 07:44

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/14/2005 07:44	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/14/2005 07:44	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/14/2005 07:44	
Benzene	ND	0.5	ug/L	11/14/2005 07:44	
Toluene	ND	0.5	ug/L	11/14/2005 07:44	
Ethylbenzene	ND	0.5	ug/L	11/14/2005 07:44	
Total xylenes	ND	1.0	ug/L	11/14/2005 07:44	
Surrogates(s)					
1,2-Dichloroethane-d4	100.8	73-130	%	11/14/2005 07:44	
Toluene-d8	97.0	81-114	%	11/14/2005 07:44	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/11/15-2A.64

MB: 2005/11/15-2A.64-036

Date Extracted: 11/15/2005 19:36

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	11/15/2005 19:36	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	11/15/2005 19:36	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	11/15/2005 19:36	
Benzene	ND	0.5	ug/L	11/15/2005 19:36	
Toluene	ND	0.5	ug/L	11/15/2005 19:36	
Ethylbenzene	ND	0.5	ug/L	11/15/2005 19:36	
Total xylenes	ND	1.0	ug/L	11/15/2005 19:36	
Surrogates(s)					
1,2-Dichloroethane-d4	93.8	73-130	%	11/15/2005 19:36	
Toluene-d8	102.0	81-114	%	11/15/2005 19:36	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/11/12-1A.65**

LCS 2005/11/12-1A.65-099 Extracted: 11/12/2005 Analyzed: 11/12/2005 07:26
LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	20.7		25	82.8			65-165	20		
Benzene	21.8		25	87.2			69-129	20		
Toluene	23.8		25	95.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	393		500	78.6			73-130			
Toluene-d8	465		500	93.0			81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/11/12-1A.71**

LCS 2005/11/12-1A.71-018 Extracted: 11/12/2005 Analyzed: 11/12/2005 08:18

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	30.3		25	121.2			65-165	20		
Benzene	24.3		25	97.2			69-129	20		
Toluene	22.8		25	91.2			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	468		500	93.6			73-130			
Toluene-d8	502		500	100.4			81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/11/14-1B.69**

LCS 2005/11/14-1B.69-002 Extracted: 11/14/2005 Analyzed: 11/14/2005 07:02
LCSD 2005/11/14-1B.69-023 Extracted: 11/14/2005 Analyzed: 11/14/2005 07:23

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.1	26.5	25	104.4	106.0	1.5	65-165	20		
Benzene	23.5	23.9	25	94.0	95.6	1.7	69-129	20		
Toluene	24.8	24.5	25	99.2	98.0	1.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	447	473	500	89.4	94.6		73-130			
Toluene-d8	485	497	500	97.0	99.4		81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.
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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/11/15-2A.64**

LCS 2005/11/15-2A.64-054 Extracted: 11/15/2005 Analyzed: 11/15/2005 18:54
LCSD 2005/11/15-2A.64-015 Extracted: 11/15/2005 Analyzed: 11/15/2005 19:15

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	22.0	20.9	25	88.0	83.6	5.1	65-165	20		
Benzene	21.3	21.0	25	85.2	84.0	1.4	69-129	20		
Toluene	22.6	21.9	25	90.4	87.6	3.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	508	507	500	101.6	101.4		73-130			
Toluene-d8	535	540	500	107.0	108.0		81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/11/12-1A.65**

S-5B >> MS

Lab ID: 2005-11-0174 - 002

MS: 2005/11/12-1A.65-020 Extracted: 11/12/2005 Analyzed: 11/12/2005 09:00
Dilution: 1.00

MSD: 2005/11/12-1A.65-026 Extracted: 11/12/2005 Analyzed: 11/12/2005 09:26
Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	23.1	22.3	2.49	25	82.4	79.2	4.0	65-165	20		
Benzene	22.3	22.0	ND	25	89.2	88.0	1.4	69-129	20		
Toluene	23.8	23.8	ND	25	95.2	95.2	0.0	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	391	386		500	78.2	77.2		73-130			
Toluene-d8	453	460		500	90.6	92.0		81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

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Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/11/12-1A.71**

MS/MSD Lab ID: 2005-11-0145 - 011

MS: 2005/11/12-1A.71-002 Extracted: 11/12/2005 Analyzed: 11/12/2005 10:02
Dilution: 50.00

MSD: 2005/11/12-1A.71-029 Extracted: 11/12/2005 Analyzed: 11/12/2005 10:29
Dilution: 50.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	5040	5020	4100	1250	75.2	73.6	2.2	65-165	20		
Benzene	1220	1140	ND	1250	97.6	91.2	6.8	69-129	20		
Toluene	1160	1080	ND	1250	92.8	86.4	7.1	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	460	459		500	92.0	91.8		73-130			
Toluene-d8	517	508		500	103.4	101.6		81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.
Attn.: Michael Ninokata

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/11/15-2A.64**

S-9 >> MS

Lab ID: 2005-11-0174 - 004

MS: 2005/11/15-2A.64-038 Extracted: 11/15/2005 Analyzed: 11/15/2005 22:38
Dilution: 2.00

MSD: 2005/11/15-2A.64-059 Extracted: 11/15/2005 Analyzed: 11/15/2005 22:59
Dilution: 2.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	229	211	216	50	26.0	-10.0	450.	65-165	20	M5	M5,R1
Benzene	40.6	36.3	ND	50	81.2	72.6	11.2	69-129	20		
Toluene	43.3	37.6	0.54	50	85.5	74.1	14.3	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	484	478		500	96.8	95.6		73-130			
Toluene-d8	514	513		500	102.8	102.6		81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Blaine Tech Services, Inc.

Attn.: Michael Ninokata

1680 Rogers Avenue
San Jose, CA 95112-1105
Phone: (408) 573-0555 Fax: (408) 573-7771

Project: BTS#051111-WC-1
98995842

Received: 11/11/2005 18:10

Site: 3790 Hopyard Rd., Pleasanton, CA

Legend and Notes

Sample Comment

Lab ID: 2005-11-0174-7

Siloxane peaks were found in the sample which are not believed to be gasoline related. If they were to be quantified as gasoline, the concentration would be 92ug/L.

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

M5

MS/MSD spike recoveries were below acceptance limits. See blank spike (LCS).

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

R1

Analyte RPD was out of QC limits.

LAB: STL

Lab Identification (if necessary):

Address:

City, State, Zip

SHELL Chain Of Custody Record

114504

Shell Project Manager to be invoiced:

☑ ENVIRONMENTAL SERVICES
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

Denis Brown

2005-11-0174

INCIDENT NUMBER (ES ONLY): 9 8 9 9 5 8 4 2

SAP or CRMT NUMBER (TS/CRMT):

DATE: 11/11/05

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS
SITE ADDRESS (Street, City and State): 3790 Hopyard Rd., Pleasanton, CA	GLOBAL ID NO.: T0600101257
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112	
EDF DELIVERABLE TO (Responsible Party or Designee): Justin Link	PHONE NO.: (408)224-4724
E-MAIL: jlink@deltaenv.com	CONSULTANT PROJECT NO.: 051111-WC-1 BTS #
PROJECT CONTACT (Hardcopy or PDF Report to): Michael Ninokata	
TELEPHONE: 408-573-0555	FAX: 408-573-7771
E-MAIL: mninokata@blainetech.com	
SAMPLER NAME(S) (Print): Will Crow	LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☐ 10 DAYS ☐ 5 DAYS ☒ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ______

GC/MS MTBE CONFIRMATION: HIGHEST ______ HIGHEST per BORING ______ ALL ______

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

RUSH!

RECEIPT VERIFICATION REQUESTED ☑

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	BTEX (8260B)	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	TBA (8260B)	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	S-5	11/11/05	1050	H_2O	3HCl	X	X		X					X	
	S-5B	↓	0947	↓	↓	X	X		X					X	
	S-5C	↓	1025	↓	↓	X	X		X					X	
	S-9	↓	0745	↓	↓	X	X		X					X	
	S-9B	↓	1135	↓	↓	X	X		X					X	
	S-9C	↓	1120	↓	↓	X	X		X					X	
	S-14	↓	0910	↓	↓	X	X		X					X	

TEMPERATURE ON RECEIPT C°: 2

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Will Crow	[signature] (Sample Custodian)	11/11/05	1330
[signature] 11/11/05	[signature]	11/11/05	1810
[signature]	[signature]	11/11/05	2015

SEVERN TRENT STL

Submission#: 2005-09-0325

Delta Env. Consultants San Jose

September 27, 2005

175 Bernal Rd., Suite 200
San Jose, CA 95119

Attn.: Lee Dooley
Project: 98995842
Site: 3790 Hopyard Road, Pleasanton

Attached is our report for your samples received on 09/13/2005 12:06
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 10/28/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-09-0325

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose
Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
CPT-5A@65`	09/09/2005 16:20	Water	1
CPT-5A@78`	09/09/2005 17:30	Water	2

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: **CPT-5A@65'**

Lab ID: 2005-09-0325 - 1

Sampled: 09/09/2005 16:20

Extracted: 9/20/2005 15:02

Matrix: Water

QC Batch#: 2005/09/20-1A.66

pH: <2

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	09/20/2005 15:02	
Benzene	0.84	0.50	ug/L	1.00	09/20/2005 15:02	
Toluene	ND	0.50	ug/L	1.00	09/20/2005 15:02	
Ethylbenzene	1.4	0.50	ug/L	1.00	09/20/2005 15:02	
Total xylenes	2.8	1.0	ug/L	1.00	09/20/2005 15:02	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	09/20/2005 15:02	
Methyl tert-butyl ether (MTBE)	1.4	0.50	ug/L	1.00	09/20/2005 15:02	
Surrogate(s)						
1,2-Dichloroethane-d4	94.9	73-130	%	1.00	09/20/2005 15:02	
Toluene-d8	98.5	81-114	%	1.00	09/20/2005 15:02	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Prep(s): 5030B

Test(s): 8260B

Sample ID: **CPT-5A@78'**

Lab ID: 2005-09-0325 - 2

Sampled: 09/09/2005 17:30

Extracted: 9/20/2005 14:34

Matrix: Water

QC Batch#: 2005/09/20-1A.66

pH: <2

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	1.00	09/20/2005 14:34	
Benzene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Toluene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Ethylbenzene	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Total xylenes	ND	1.0	ug/L	1.00	09/20/2005 14:34	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	1.00	09/20/2005 14:34	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	09/20/2005 14:34	
Surrogate(s)						
1,2-Dichloroethane-d4	95.6	73-130	%	1.00	09/20/2005 14:34	
Toluene-d8	97.7	81-114	%	1.00	09/20/2005 14:34	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/09/20-1A.66

MB: 2005/09/20-1A.66-045

Date Extracted: 09/20/2005 10:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	ug/L	09/20/2005 10:45	
tert-Butyl alcohol (TBA)	ND	5.0	ug/L	09/20/2005 10:45	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/20/2005 10:45	
Benzene	ND	0.5	ug/L	09/20/2005 10:45	
Toluene	ND	0.5	ug/L	09/20/2005 10:45	
Ethylbenzene	ND	0.5	ug/L	09/20/2005 10:45	
Total xylenes	ND	1.0	ug/L	09/20/2005 10:45	
Surrogates(s)					
1,2-Dichloroethane-d4	100.0	73-130	%	09/20/2005 10:45	
Toluene-d8	98.2	81-114	%	09/20/2005 10:45	

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose
Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/09/20-1A.66**

LCS 2005/09/20-1A.66-018 Extracted: 09/20/2005 Analyzed: 09/20/2005 10:18

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	25.0		25	100.0			65-165	20		
Benzene	26.0		25	104.0			69-129	20		
Toluene	28.6		25	114.4			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	454		500	90.8			73-130			
Toluene-d8	515		500	103.0			81-114			

Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Lee Dooley

175 Bernal Rd., Suite 200
San Jose, CA 95119
Phone: (408) 224-4724 Fax: (408) 224-4518

Project: 98995842

Received: 09/13/2005 12:06

Site: 3790 Hopyard Road, Pleasanton

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/09/20-1A.66**

MS/MSD

Lab ID: 2005-09-0211 - 012

MS: 2005/09/20-1A.66-039 Extracted: 09/20/2005 Analyzed: 09/20/2005 13:39

Dilution: 4.00

MSD: 2005/09/20-1A.66-007 Extracted: 09/20/2005 Analyzed: 09/20/2005 14:07

Dilution: 4.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	377	390	274	100	103.0	116.0	11.9	65-165	20		
Benzene	93.7	102	ND	100	93.7	102.0	8.5	69-129	20		
Toluene	111	116	ND	100	111.0	116.0	4.4	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	445	461		500	89.0	92.2		73-130			
Toluene-d8	537	526		500	107.4	105.2		81-114			

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA

(925)484-1919 (925)484-1096 fax

EQUIVA Services LLC Chain Of Custody Record

97426

Equiva Project Manager to be invoiced:

- ☑ SCIENCE & ENGINEERING
- ☐ TECHNICAL SERVICES
- ☐ CRMT HOUSTON

Denis Brown

2005-09-0325

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 8 4 2

SAP or CRMT NUMBER (TS/CRMT):

DATE: 9/12/05

PAGE: 1 of 1

SAMPLING COMPANY: Delta Environmental Consultants	LOG CODE:
ADDRESS: 175 Bernal Rd #200, San Jose, CA 95119	
PROJECT CONTACT (Hardcopy or PDF Report to): Lee Dooley	
TELEPHONE: (408) 224-4724	FAX: (408) 225-8506
E-MAIL: ldooley@deltaenv.com	
SITE ADDRESS (Street and City): 3790 Hopyard Road, Pleasanton	GLOBAL ID NO.: T0600101257
EDF DELIVERABLE TO (Responsible Party or Designee): Heather Buckingham	PHONE NO.: 408-224-4724
E-MAIL: vfisher@deltaenv.com	CONSULTANT PROJECT NO.:
SAMPLER NAME(S) (Print): Heather Buckingham	LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☑ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ______

GC/MS MTBE CONFIRMATION: HIGHEST ______ HIGHEST per BORING ______ ALL ______

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	TBA	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-___)	Total Lead 6010B per Shell's Disp. list	TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	CPT-5A@65'	9/9/2005	4:20	g.w.	5	X	X		X			X														
	CPT-5A@78'	9/9/2005	5:30	g.w.	5	X	X		X			X														

TEMPERATURE ON RECEIPT C°: 2 °C

Relinquished by: (Signature) Heather Buckingham	Received by: (Signature) [signature]	Date: 9/13/05	Time: 1206
Relinquished by: (Signature) [signature] 9/13/05	Received by: (Signature) [signature]	Date: 9/13/05	Time: 1700
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

WELL GAUGING DATA

Project # 051111-WC-1 Date 11/11/05 Client Shell

Site 3790 Hopyard Rd., Pleasanton

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
S-5	3					22.17	35.65		
S-5B	4					43.79	61.53		
S-5C	4					43.65	~~54.45~~ 76.76		
S-9	3					20.41	34.45		
S-9B	4					45.25	59.37		
S-9C	4					42.87	78.05		
S-14	4					17.63	24.63	✓	

SHELL WELL MONITORING DATA SHEET

BTS #: 05111-WC-1	Site: 3790 Hopyard Rd, Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: S-5	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 35.65	Depth to Water (DTW): 22.17
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 24.87	

Purge Method: (Bailer) / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ___

Sampling Method: (Bailer) / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ___

1 Case Volume	Specified Volumes	Calculated Volume
*~~5.0~~ (Gals.) X	3	= 15.0 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or ~~µS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1043	65.9	7.0	1755	146	5	odor
1044	66.9	6.8	1631	105	10	
1045	66.7	6.9	1631	9	15	↓

Did well dewater? Yes (No) Gallons actually evacuated: 15

Sampling Date: 11/11/05 Sampling Time: 1050 Depth to Water: 28.63 @ departure

Sample I.D.: S-5 Laboratory: ~~STL~~ Other ___

Analyzed for: ~~TPH-G~~ ~~BTEX~~ ~~MTBE~~ TPH-D Other: TBA

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 051111-WC-1	Site: 3710 Hyyard Rd, Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: S-5B	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 61.53	Depth to Water (DTW): 43.79
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 47.34	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric (Submersible), Waterra, Peristaltic, Extraction Pump, Other_____

Sampling Method: (Bailer), Disposable Bailer, Extraction Port, Dedicated Tubing, Other:_____

1 Case Volume	Specified Volumes	Calculated Volume
11.5 (Gals.) X	3	= 34.5 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
0939	65.5	7.8	3299	105	12	
0941	65.9	7.7	3810	98	23	
0943	66.0	7.7	3849	46	35	

Did well dewater? Yes (No) Gallons actually evacuated: 35

Sampling Date: 11/11/05 Sampling Time: 0947 Depth to Water: 44.28

Sample I.D.: S-5B Laboratory: (STL) Other_____

Analyzed for: ~~TPH-G~~ ~~BTEX~~ ~~MTBE~~ TPH-D Other: TBA

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 05111-WC1	Site: 3790 Hopyard Rd, Pleasanton
Sampler: MT	Date: 11/11/05
Well I.D.: S-5C	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 76.76	Depth to Water (DTW): 43.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 50.27	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other ___

Sampling Method: (Bailer), Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___

21.5 (Gals.) X	3	= 64.5 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1010	64.5	7.8	4564	231	22	
1018.5	64.9	7.7	4605	85	44	
1020	~~65.2~~	7.7	4585	74	65	
	65.2					

Did well dewater? Yes (No) Gallons actually evacuated: 65

Sampling Date: 11/11/05 Sampling Time: 1025 Depth to Water: 43.86

Sample I.D.: S-5C Laboratory: ~~STL~~ Other ___

Analyzed for: (TPH-G) ~~BTEX~~ ~~MTBE~~ TPH-D Other: TBA

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 05111-WC-1	Site: 3790 Hopyard Rd, Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: ~~MW~~ 3-9	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 24.45	Depth to Water (DTW): 20.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 23.22	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____

Sampling Method: (Bailer), Disposable Bailer, Extraction Port, Dedicated Tubing, Other:____

5.2 (Gals.) X 3 = 15.6 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0736	66.0	6.8	2613	168	6	clear
0737	66.2	6.8	2698	63	11	"
0738	66.5	6.9	2736	111	16	"

Did well dewater? Yes (No) Gallons actually evacuated: 16

Sampling Date: 11/11/05 Sampling Time: 0745 Depth to Water: 23.00

Sample I.D.: ~~MW~~ 3-9 Laboratory: (STL) Other____

Analyzed for: (TPH-G) BTEX MTBE TPH-D Other: TBA

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: G5111 -WC.1	Site: 3790 Hopyard Rd, Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: ~~MW-9C~~ S-9B	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 59.37	Depth to Water (DTW): 45.25
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 46.07	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric (Submersible) / Waterra / Peristaltic / Extraction Pump / Other ___

Sampling Method: (Bailer) / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ___

1 Case Volume	Specified Volumes	Calculated Volume
9.2 (Gals.) X	3	= 27.6 Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0759	65.5	8.0	1893	54	10	clear
0800	well	dewatered	@ ~12 gallons			
~~0805~~						
1133	65.3	8.3	2099	84	—	

Did well dewater? (Yes) No — Gallons actually evacuated: 12

Sampling Date: 11/11/05 — Sampling Time: 1135 — Depth to Water: 54.30 @ departure

Sample I.D.: ~~MW-9C~~ S-9B — Laboratory: (STL) Other ___

Analyzed for: (TPH-G) BTEX MTBE TPH-D Other: TBA

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 051111-WC-1	Site: 3790 Hopyard Rd., Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: ~~MW-9B~~ S-9C	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 78.05	Depth to Water (DTW): 42.87
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 49.91	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____

Sampling Method: ~~Bailer~~, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____

22.9 (Gals.) X 3 = 68.7 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or ~~uS~~)	Turbidity (NTUs)	Gals. Removed	Observations
0814	65.0	7.7	4221	55	23	Clear
0815	well	dewatered	@ ~25	gallons		
1118	64.6	7.6	4214	95	—	

Did well dewater? (Yes) No Gallons actually evacuated: 25

Sampling Date: 11/11/05 Sampling Time: 1120 Depth to Water: 51.45 @ depletion

Sample I.D.: ~~MW-9B~~ S-9C Laboratory: (STL) Other____

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other: TBA

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 051116-WC-1	Site: 3790 Hopyard Rd, Pleasanton
Sampler: WC	Date: 11/11/05
Well I.D.: S-14	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 24.63	Depth to Water (DTW): 17.63
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 19.03	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other_____

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other:_____

4.6 (Gals.) X	3	= 13.8 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0858	63.4	7.6	4270	189	5	clear
0859	63.4	7.3	4510	26	10	↓
0900	63.3	7.2	4467	34	14	↓

Did well dewater? Yes (No)		Gallons actually evacuated: 14	
Sampling Date: 11/11/05	Sampling Time: 0910	Depth to Water: 19.06	
Sample I.D.: S-14		Laboratory: (STL) Other_____	
Analyzed for: (TPH-G BTEX MTBE TPH-D)		Other: TBA	
EB I.D. (if applicable):	@ Time	Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D		Other:	
D.O. (if req'd): Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

WELL GAUGING DATA

Project # 051108-PC1 Date 11/8/05 Client Shell

Site 3790 Hopyard Rd., Pleasanton

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
S-5B	4					43.71	61.26		
S-5C	4					43.69	76.38		
S-9B	4					43.12	58.71		
S-9C	4					40.80	74.60		
S-14	4					17.45	24.59		

WELL DEVELOPMENT DATA SHEET

Project #: 051108-PC1	Client: Shell
Developer: PC	Date Developed: 11/8/05
Well I.D. S-5B	Well Diameter: (circle one) 2 3 (4) 6 __
Total Well Depth: Before 61.26 After 61.55	Depth to Water: Before 43.71 After 44.02
Reason not developed:	If Free Product, thickness:
Additional Notations: Surged well for 10 min. Hard Bottom	

Volume Conversion Factor (VCF):
{12 x (d^2/4) x π) /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

11.4	X	10	=	114
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☒ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft) DTW. NOTATIONS:
1100	Begin Purge w/ PAD pump					
1123	63.9	7.6	3412	>1000	11.5	44.05 thick grey
1144	64.2	7.6	3744	>1000	23	44.15 " "
1158	64.6	7.5	3822	912	34.2	44.20 clearing
Decon	Switch to 3" Electric Submersible Pump					
1220	Begin Purge w/ Electric Submersible Pump					
1230	64.9	7.5	3880	200	~~35.7~~ 45.6 PC	44.68 cloudy
1238	66.2	7.5	3914	111	57	45.00 clearing
1244	66.0	7.4	3902	82	68.4	45.04 ↓
1250	65.7	7.5	3893	106	79.8	45.21 ↓ agitated bottom w/ pump
1256	66.4	7.4	3896	>1000	91.2	thick grey
1302	66.2	7.5	3926	126	102.6	45.40 clearing
1308	66.3	7.5	3928	131	114	45.45 ↓
Did Well Dewater? NO		If yes, note above.		Gallons Actually Evacuated: 114		

1309 Purge Ended

3

WELL DEVELOPMENT DATA SHEET

Project #: 051108-PC1	Client: Shell
Developer: PC	Date Developed: 11/8/05
Well I.D. S-5C	Well Diameter: (circle one) 2 3 (4) 6 __
Total Well Depth: Before ~~76.38~~ 76.95 After	Depth to Water: Before 43.69 After 44.19
Reason not developed:	If Free Product, thickness:
Additional Notations: Surged well for 10 min	

Volume Conversion Factor (VCF):	Well dia.		VCF
$(12 \times (d^2/4) \times \pi) / 231$	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

21.2	X	10	=	212
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☑ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft) DTW: NOTATIONS:
1300	Begin Purge w/ PAD Pump.				~~21.2~~ R	
1324	64.8	7.6	4612	>1000	21.2	44.05 brown, Muddy
1325	Pull Pump to unclog					
1448	Restart Purge w/ PAD pump					
1506	63.8	7.6	4752	325	42.4	44.05 brown
1524	63.5	7.5	4678	>1000	63.6	44.09 Muddy brown
1528	switched to Electric Submersible					
1538	65.0	7.5	4669	272	84.8	44.74 brown, silty
1550	65.4	7.5	4683	>1000	~~84.8~~ R 106	45.48 " "
1557	65.3	7.5	4684	626	127.2	45.49 clearing
1605	65.3	7.5	4686	96	148.4	45.50 "
1610	65.1	7.5	4678	60	169.6	45.50 "
1615	653	7.5	4679	>1000	~~190.8~~ 190 *	45.51 brown, Muddy
Did Well Dewater? NO		If yes, note above.		Gallons Actually Evacuated: 212		
1620	65.3	7.5	4681	>1000	212	45.48
End Purge						

WELL DEVELOPMENT DATA SHEET

Project #: 051100-PC	Client: Shell
Developer: PC/	Date Developed: 11/8/05
Well I.D. ~~S-9C~~ S-9B	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth:	Depth to Water:
Before 58.71 After 59.25	Before 43.12 After 58.19
Reason not developed:	If Free Product, thickness:
Additional Notations: Swabbed well for 10min.	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

10.1	X	10	=	101
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☒ Bailer (Teflon)
- ☐ Suction Pump
- ☐ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	(Ft) DTW:	NOTATIONS:
0822	Begin Purge w/ PAD						
0839	63.4	7.8	530	>1000	10.1	56.21	Grey silty
	well dewatered @ 11 gal Swabbed well for 10 min.						
	moved onto S-9B	–					
930	returned to Hand bail-Purge. DTW: 57.98'						
938	well dewatered @ 13 gal						grey silty, thick
	surged well for 10 min.			DTW: 58.09'			
1445	Return for Gauge			DTW: 55.79			
	Surged for ~10 Min prior to Purging w/ Bailer						
1601.	65.0	8.5	1429	>1000	~3 (16 total)		DTW = 58.30
	well dewatered						
	End. Development @ 16.1 gal						
Did Well Dewater? Yes	If yes, note above.			Gallons Actually Evacuated:		16	

Richard Daniel
484 2600

WELL DEVELOPMENT DATA SHEET

Project #: 05110B-PC1	Client: Shell
Developer: JC	Date Developed: 11/8/05
Well I.D. ~~S-4B~~ S-9C	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 74.60 After 78.59	Depth to Water: Before 40.80 After
Reason not developed:	If Free Product, thickness:
Additional Notations: Surged well for ~~10~~ 10 min.	

Volume Conversion Factor (VCF):	Well dia.		VCF
$\{12 \times (d^2/4) \times \pi\} / 231$	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

22	X	10	=	220
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" surge block

TIME	TEMP (F)	pH	Cond. (mS or ~~uS~~)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft) DTW: NOTATIONS:
0855	Begin Purge on S9E					thick grey, silty
926	63.7	7.3	2105	>1000	~~22~~	67.84
939	Pump pulled to unclog					
958	Restart Purge					65.92
1020	well dewatered. Surged well for 10 min					
		4.28 gal	Moved onto S-5B			
1452	return to Gauge			DTW: 48.31		DTW (EW) 1511 = 47.20
	Surged well for 10 min before restarting purge					
Bottom of well is soft but thick, clogs pump, Pump placed @ ~73'						
1605	65.6	7.6	3968	>1000	44	Cloudy
		well dewatered @				DTW = 70.71
	End Development @ 45 gal					
Did Well Dewater? yes	If yes, note above.			Gallons Actually Evacuated:		

WELL DEVELOPMENT DATA SHEET

Project #: 051108-PC1	Client: Shell
Developer: PC	Date Developed: 11/8/05
Well I.D. S-14	Well Diameter: (circle one) 2 3 (4) 6
Total Well Depth: Before 24.59 After 24.65	Depth to Water: Before 17.45 After
Reason not developed:	If Free Product, thickness:
Additional Notations: Surged well for 10 min. Hard Bottom	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

1 Case Volume	X	Specified Volumes	=	gallons
4.6	X	10	=	46

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump _____
Other equipment used 4" surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	(ft) DTW:	NOTATIONS:
1355	Begin Purge w/ PAD pump						
1402	63.1	7.8	5350	>1000	4.6	19.30	brown.
1409	63.0	7.9	5151	192	9.2	20.95	clearing
1415	62.8	8.1	5028	449	13.8	22.55	
	well dewatered @ 14 gal			DTW 24.09			
1430	Swabbed well for 10 min. DTW: 23.10'. Return to later						
1628	return to well for gauge			21.90			
1630	62.3	6.9	4753	>1000	18.4		brown
	well dewatered @ 19.5						
	End Purge						

Did Well Dewater? Yes If yes, note above. Gallons Actually Evacuated: 18.5

Attachment D

WELL LOCATION AND ELEVATION REPORT

MCE

Mid Coast Engineers
Civil Engineers and Land Surveyors
70 Penny Lane, Suite A - Watsonville, CA 95076
phone: (831) 724-2580
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Richard A. Wadsworth
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Land Surveyor
Jeff S. Nielsen
Land Surveyor

November 17, 2005

Heather Buckingham
Delta Environmental Consultants, Inc.
175 Bernal Road, Suite 200
San Jose, CA 95119

Re: **Shell-branded Service Station, 3790 Hopyard Road, Pleasanton, California;** DELTA Project No. SJ37-908-1, MCE Job No. 05224

Dear Ms. Buckingham,

As you requested, on November 16 we surveyed six monitoring wells located at the referenced site. Our findings are listed on the attached sheets, expressed in State Plane Coordinates and Latitude/Longitude.

A notch was cut in the north rim of the PVC casing (TOC) and a cross chiseled in the north rim of the box (TOB).

Measurements were obtained from conventional survey techniques in combination with GPS techniques (Code CGPS), using control points HS5408 (HPGN CA 04 07)and DE8479 (C226), as published by NGS/NOAA and listed on their web site. Latitude and Longitude as shown were determined from the California Coordinate System, Zone 3, NAD 83 Datum. The accuracy range of the reported information is +/- 1cm. GPS equipment is the Trimble 5700/5800 system (Code T57).

The benchmark used for this survey is HS3991 (C 972 RESET 1967), a bench mark disk in a steel and concrete bridge over Mocho Canal, on the east side of Hopyard Road approximately 650 feet south of the intersection with Las Positas Boulevard. Elevation = 333.23 feet, NAVD 88 datum.

Please let me know if you have questions or need additional information.

Yours truly,

Lee D. Vaage

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

DELTA Project No. SJ37-908-1

Project : 05224
User name MCE Date & Time 9:48:27 AM 11/17/2005
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NAVD88
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Northing	Easting	Elevation	Description
3	2073529.27	6155274.66	332.25	S-5Btoc
4	2073529.64	6155274.61	332.61	S-5Btob
5	2073523.40	6155280.84	332.33	S-5Ctoc
6	2073523.75	6155280.84	332.51	S-5Ctob
8	2073396.07	6155333.87	330.47	S-9Btoc
9	2073396.50	6155333.68	330.92	S-9Btob
10	2073398.42	6155341.81	330.77	S-9Ctoc
11	2073398.89	6155341.70	331.37	S-9Ctob
13	2073101.03	6155405.79	324.90	S-14toc
14	2073101.29	6155405.74	325.36	S-14tob
15	2073163.03	6155631.84	332.05	S-15toc
16	2073163.30	6155631.74	332.43	S-15tob
17	2073155.67	6155535.85	333.23	BM3991

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

DELTA Project No. SJ37-908-1

Project : 05224
User name MCE Date & Time 9:48:27 AM 11/17/2005
Coordinate System US State Plane 1983 Zone California Zone 3 0403
Project Datum NAD 1983 (Conus)
Vertical Datum NAVD88
Coordinate Units US survey feet
Distance Units US survey feet
Elevation Units US survey feet

Point Number	Latitude	Longitude	Elevation	Description
3	37.681137763°N	121.904374743°W	332.25	S-5Btoc
4	37.681138793°N	121.904374947°W	332.61	S-5Btob
5	37.681121903°N	121.904353091°W	332.33	S-5Ctoc
6	37.681122854°N	121.904353132°W	332.51	S-5Ctob
8	37.680774425°N	121.904163269°W	330.47	S-9Btoc
9	37.680775593°N	121.904163942°W	330.92	S-9Btob
10	37.680781210°N	121.904135944°W	330.77	S-9Ctoc
11	37.680782482°N	121.904136353°W	331.37	S-9Ctob
13	37.679967198°N	121.903899471°W	324.90	S-14toc
14	37.679967899°N	121.903899661°W	325.36	S-14tob
15	37.680146764°N	121.903121649°W	332.05	S-15toc
16	37.680147482°N	121.903122022°W	332.43	S-15tob
17	37.680122601°N	121.903452926°W	333.23	BM3991

	A	B	C	D	E	F	G	H	I	J	K	L
1	**SHELL-BRANDED SERVICE STATION**											
2	**3790 Hopyard Road**											
3	**Pleasanton, California**											
4												
5	**DELTA Project No. SJ37-908-1**											
6												
7	Project : 05224											
8	User name MCE Date & Time 9:48:27 AM 11/17/2005											
9	Coordinate System US State Plane 1983 Zone California Zone 3 0403											
10	Project Datum NAD 1983 (Conus)											
11	Vertical Datum NAVD88											
12	Coordinate Units US survey feet											
13	Distance Units US survey feet											
14	Elevation Units US survey feet											
15												
16		S-5B	MW	11/16/2005	37.6811378	-121.9043747	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
17		S-5C	MW	11/16/2005	37.6811219	-121.9043531	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
18		S-9B	MW	11/16/2005	37.6807744	-121.9041633	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
19		S-9C	MW	11/16/2005	37.6807812	-121.9041359	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
20		S-14	MW	11/16/2005	37.6799672	-121.9038995	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing
21		S-15	MW	11/16/2005	37.6801468	-121.9031216	CGPS	NAD83	1	Mid Coast Engineers	T57	top of casing