



February 21, 2011

Mr. Christopher C. Carey  
Post-Remediation Unit/Remedial Section  
Bureau of Environmental Remediation  
Kansas Department of Health and Environment  
1000 SW Jackson Street, Suite 410  
Topeka, KS 66612-1367

RE: December 2010 Field Activities Implementation Report  
Former Unocal Chemical Distribution Facility  
2100 East 37<sup>th</sup> Street North  
Wichita, Kansas 67219

Dear Mr. Carey:

This letter is intended to describe the field activities that were conducted in December 2010 at the former Union Oil Company of California (Unocal) Chemical Distribution Facility in Wichita, Kansas. URS Corporation (URS) has prepared this letter on behalf of the Chevron Environmental Management Company (EMC). This letter also serves as the repository for analytical data, boring logs, and other information collected during the event.

The field activities were conducted in response to the Kansas Department of Health and Environment (KDHE) comments in two letters regarding the *Documentation of Injection Interim Measure Activities* (dated March 4, 2010) and the *Phytoremediation Interim Measure Workplan* (dated March 24, 2010). Additional details of the work were described in the *Phytoremediation Interim Measure Workplan* (URS, March 2010) and the letter to KDHE regarding the *Proposed Field Activities – Monitoring Systems for Injection and Phytoremediation Interim Measures and Sample Confirmation* (dated October 27, 2010). KDHE issued a comment letter for those two submittals on November 15, 2010, asking for slight modifications to the location of a proposed well and the addition of piezometers in Plot B. A revised figure showing the final locations was provided to KDHE on November 29, 2010.

The field activities included groundwater confirmation sampling via direct-push technology (DPT), monitoring well and piezometer installation, well repair, well abandonment, and investigation-derived waste (IDW) management. Drilling, well repair, and well abandonment services were subcontracted to Roberts Environmental Drilling, Inc. (REDI); surveying services were provided by Benchmark Land Survey, P.A. (Benchmark).

### **Groundwater Confirmation Sampling**

On December 7, 2010, URS and REDI arrived on the former Unocal site. The groundwater confirmation sampling was conducted at three borehole locations, DP-170, DP-171, and DP-172, using DPT. These locations were adjacent to historical locations DP-65, DP-63, and DP-48,

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respectively. Boreholes at locations DP-170, DP-171, and DP-172 were advanced to the shale bedrock at 24 feet below ground surface ((ft bgs), 25 ft bgs, and 32 ft bgs, respectively, using an AMS 9700 Power Probe DPT rig. In the October 27, 2010 letter, it was proposed that groundwater samples would be collected from two depth intervals (shallow and deep) at each location. Two groundwater grab samples were collected at DP-170, designated by an “A” for shallow and “B” for deep. However, based on the lithology and groundwater encountered, only one groundwater bearing zone was observed by the field geologist at borehole locations DP-171 and DP-172; therefore, only one groundwater grab sample was collected. Boring logs for DP-170 through DP-172 are included in **Attachment A**. The samples were submitted to Lancaster Laboratories, Lancaster, Pennsylvania for volatile organic compound (VOC) analysis by U.S. Environmental Protection Agency (EPA) Method 8260B. The laboratory report is presented in **Attachment B**. The analytical results for those analytes that were detected at least once are included in **Table 1**. No result exceeded the KDHE Tier 2 Risk Based Standard for Kansas (RSK) residential levels.

**Table 1. Groundwater Confirmation Sampling – Detected Analytical Results**

Analyte <sup>1</sup>	KDHE Tier 2 RSK Residential Level <sup>2</sup>	Borehole ID				MDL
		DP-170A	DP-170B	DP-171	DP-172	
	Screen Depth (ft bgs)	13 to 18	19 to 24	14 to 19	15 to 20	
Acetone	11,500	<b>5.9</b>	ND	<b>4 J</b>	<b>3.6 J</b>	3.0
n-Butylbenzene	33.8	ND	ND	ND	0.5 J	0.1
1,2-Dichloroethane	5	ND	<b>0.1 J</b>	<b>0.2 J</b>	ND	0.1
cis-1,2-Dichloroethene	70	ND	ND	<b>0.4 J</b>	ND	0.1
Ethylbenzene	700	ND	ND	<b>0.1 J</b>	ND	0.1
Methyl Tertiary Butyl Ether (MTBE)	133	<b>7.9</b>	<b>8.1</b>	<b>1.3</b>	<b>7.2</b>	0.1
Methyl Ethyl Ketone (MEK)	4,920	<b>3.8 J</b>	ND	<b>2.1 J</b>	ND	1.0
Toluene	1,000	ND	ND	ND	<b>0.1 J</b>	0.1
Trichloroethene	5	ND	ND	<b>0.3 J</b>	ND	0.1

<sup>1</sup> Analyzed by Lancaster Laboratories, Lancaster, Pennsylvania for volatile organic compounds (VOCs) (8260B).

<sup>2</sup> Kansas Department of Health and Environment (KDHE) Tier 2 Risk Based Standard for Kansas (RSK) residential levels for groundwater (KDHE, October 2010).

J - The analyte was positively identified, the quantification is an estimation.

All units are presented in µg/L.

**Bold** values were detected.

bgs - Below ground surface.

ft - Feet.

ID - Identification.

MDL - Method detection limit.

ND - The analyte was not detected above the MDL.

### Piezometer and Monitoring Well Installation

From December 8 to 18, 2010, 23wells/piezometers were installed by REDI on the former Unocal site (12 monitoring wells and 11 piezometers). Eight of the monitoring wells, P-13S through P-16S and P-13D through P-16D, were installed to complete the Plumelet A Injection Interim Measure (IM) Groundwater Monitoring System. Four monitoring wells, P-17S, P-17D,

P-18, and P-19, were installed to complete the groundwater monitoring system for the Phytoremediation IM. Eleven piezometers, BPZ-1 through BPZ 5 and CPZ-2 through CPZ-7, were installed to monitor the hydraulic effects of Phytoremedial Plots B and C. The installation of a piezometer at borehole location CPZ-1 was initially proposed, but due to a lack of groundwater at the location, a piezometer was not installed.

Nineteen of the 24 borehole locations (including CPZ-1) were logged by the geologist for lithology by collecting continuous core samples with the AMS 9700 Power Probe DPT rig. The remaining five locations were not logged for lithology due to their close proximity to a borehole location that was previously logged. In some instances, the DPT encountered refusal and the lithology data available to the geologist was insufficient to set a well. In these situations, REDI replaced the DPT tooling with hollow stem augers (HSA), and the lithology was then logged based on the auger cuttings. The borehole termination depth was determined by the geologist and was reached when the groundwater zone to be screened would meet the different monitoring objectives, which are described in the letter to KDHE, *Proposed Field Activities – Monitoring Systems for Injection and Phytoremediation Interim Measures and Sample Confirmation* (dated October 27, 2010).

At 18 of the 23 well/piezometer locations, with the exception of 5 deep wells, 1.5-inch diameter well casing and Geoprobe® pre-packed filters and screens were installed within the DPT or hollow stem auger. The well casing and screen were constructed with Schedule (Sch) 40 polyvinyl chloride (PVC). The pre-packed filters were factory packed with 20/40 mesh sand, and the screens were 0.010-inch machine slotted. The five deep wells (P-13D, P-14D, P-15D, P-16D, and P-17D) were installed within the hollow stem auger using 2-inch diameter well casing and screen. The well casing and screen were constructed with Sch 40 PVC. The filter pack consisted of 12/20 silica sand, and the screen was 0.010-inch machine slotted. All the wells included a 3-inch end cap and were completed with a bentonite grout seal, a 2-foot by 2-foot concrete well pad, and an above ground surface completion.

The 23 wells and piezometer are scheduled to be developed in February 2011. Monitoring wells will be developed prior to being sampled in their respective monitoring programs. The development will follow ASTM D 5521-05 *Standard Guide for Development of Ground-Water Monitoring Wells in Granular Aquifers*.

**Figure 1** shows the locations of the monitoring wells. **Table 2** summarizes the well construction details. Boring logs with well construction diagrams are included in **Attachment A**.

**Table 2. Well Construction Detail Summary**

Well ID	Well Diameter (inches)	Total Depth (ft bgs)	Screen Length (ft)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
CPZ-1	See Note				
CPZ-2	1.5	25.0	20	4.75	24.75
CPZ-3	1.5	27.0	15	11.75	26.75
CPZ-4	1.5	28.0	20	7.75	27.75
CPZ-5	1.5	19.5	15	4.25	19.25
CPZ-6	1.5	15.25	10	5.0	15.0
CPZ-7	1.5	29.0	20	8.0	28.0
BPZ-1	1.5	19.5	10	9.25	19.25
BPZ-2	1.5	22	10	11.75	21.75
BPZ-3	1.5	19	10	8.75	18.75
BPZ-4	1.5	20	10	9.75	19.75
BPZ-5	1.5	22	10	11.75	21.75
P-13S	1.5	22	15	6.75	21.75
P-13D	2	33	10	22.75	32.75
P-14S	1.5	21	15	5.75	20.75
P-14D	2	32	10	21.75	31.75
P-15S	1.5	22	15	6.75	21.75
P-15D	2	33	10	22.75	32.75
P-16S	1.5	23	15	7.75	22.75
P-16D	2	40	15	24.75	39.75
P-17S	1.5	17	10	6.75	16.75
P-17D	2	28	10	17.75	27.75
P-18	1.5	20	10	9.75	19.75
P-19	1.5	19.5	10	9.25	19.25

Note: On December 8, 2010, URS Corporation (URS) and subcontractor Roberts Environmental Drilling, Inc. (REDI) drilled to bedrock at borehole location CPZ-1 without encountering groundwater. After a discussion between URS and the Kansas Department of Health and Environment (KDHE) on December 8, 2010, it was decided to not install a well at CPZ-1.

bgs – Below ground surface.

ft – Feet.

ID – Identification.

### Well Repair

During previous site visits, it was observed that the well casing at existing well MW-17 was exposed to the surface due to a damaged well vault. Moreover, a well pad did not exist. On December 8, 2010, REDI replaced the well vault and constructed a new well pad for MW-17.

### Well Abandonment

On December 16, 2010, REDI plugged and abandoned four unknown wells located on the south side of the former Unocal site, approximately five feet east of existing well MW-2. It is believed that these wells were part of a historical dual phase extraction monitoring system, but their exact purpose is unknown. The wells were coupled, with a 1-inch and a 2-inch diameter well in each well cluster. The total depths on the east well cluster were 20.4 ft bgs (1-inch well) and 19.25 ft bgs (2-inch well). The total depths on the west well cluster were 20.2 ft bgs (1-inch well) and

19.2 ft bgs (2-inch well). The boreholes were then backfilled with bentonite grout. The state well reports are included in **Attachment C**.

### Surveying

On December 20, 2010, Benchmark surveyed the 3 groundwater confirmation sampling locations (DP-170 through DP-172), the 23 well/piezometer locations, and the dry borehole at CPZ-1. Benchmark also re-surveyed the top of casing and ground surface elevations on the repaired existing well MW-17 and existing well MW-4. The survey data are provided in **Table 3**.

**Table 3. Survey Data**

Well ID	Northing	Easting	Ground Surface Elevation (ft MSL)	Top of Casing Elevation (ft MSL)
BPZ-1	1709942.56	1656449.52	1349.13	1352.06
BPZ-2	1709910.98	1656486.64	1349.73	1352.62
BPZ-3	1709880.46	1656413.39	1348.95	1351.75
BPZ-4	1709864.42	1656462.70	1348.92	1352.04
BPZ-5	1709877.27	1656497.13	1349.24	1352.36
CPZ-1	1710072.27	1656351.87	1349.01	N/A
CPZ-2	1710060.18	1656429.46	1349.50	1352.5
CPZ-3	1710012.48	1656399.18	1349.25	1352.2
CPZ-4	1709995.76	1656366.67	1349.15	1351.95
CPZ-5	1709964.46	1656398.25	1349.00	1351.85
CPZ-6	1709938.41	1656337.77	1349.22	1352.12
CPZ-7	1709956.71	1656329.09	1349.22	1352.09
DP-170	1710070.73	1656585.37	1348.29	N/A
DP-171	1710028.23	1656559.25	1348.54	N/A
DP-172	1709973.63	1656559.33	1348.58	N/A
MW-4	1709848.69	1656358.60	1348.69	1351.26
MW-17	1709889.81	1656439.89	1349.33	1349.11
P-13D	1709851.52	1656635.54	1348.88	1348.88
P-13S	1709857.84	1656635.21	1348.86	1348.86
P-14D	1709848.93	1656557.43	1348.88	1348.88
P-14S	1709858.98	1656556.78	1348.34	1348.34
P-15D	1709927.89	1656589.91	1348.65	1348.65
P-15S	1709933.77	1656590.30	1348.71	1348.71
P-16D	1709946.22	1656590.72	1348.62	1348.62
P-16S	1709952.43	1656590.05	1348.59	1348.59
P-17D	1709851.11	1656488.18	1348.94	1348.94
P-17S	1709851.07	1656496.41	1348.84	1348.84
P-18	1709848.60	1656428.93	1348.74	1348.74
P-19	1709896.43	1656366.82	1348.82	1348.82

Coordinate System: State Plane Kansas, South Zone (1502), North American Datum (NAD) 83, North American Vertical Datum (NAVD) 88.  
 ft - Feet.

ID - Identification.

MSL - Mean sea level.

N/A - Not available.

**IDW Management**

Twenty-nine (29) drums of IDW were generated during the field activities. Currently, the waste from the field effort is being managed in accordance with *URS Standard Operating Procedure for Investigation-Derived Wastes at the Former Unocal Chemical Distribution Facility*.

If you have any questions or comments, please feel free to contact me at 512-419-6180.

Respectfully Submitted,  
**URS Corporation**



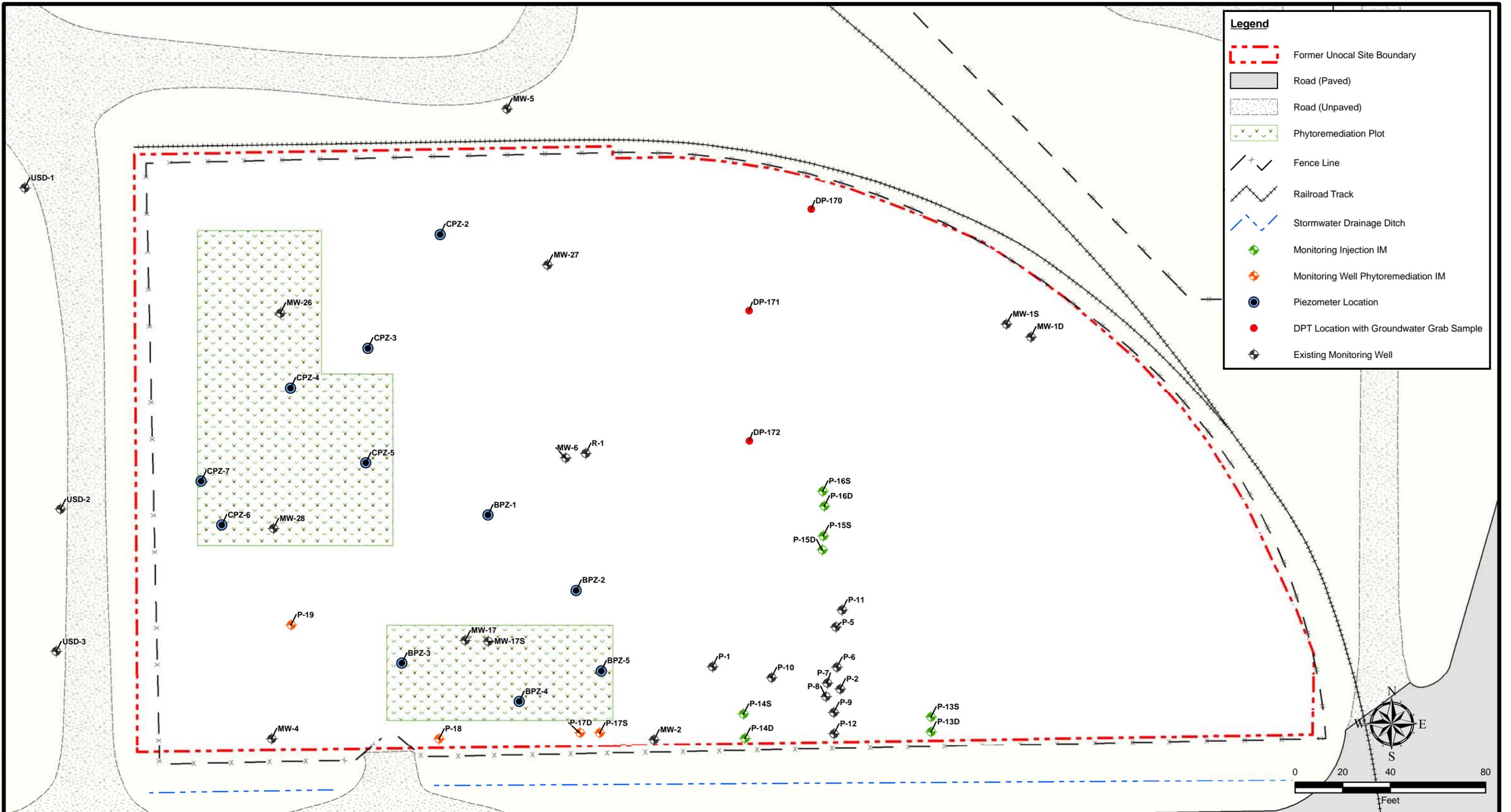
Derek R. Peacock, P.E.  
Project Manager

cc: Mr. Michael P. Mailloux, Chevron EMC  
File

Attachments

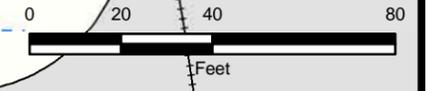
**FIGURE**

Q:\Unocal-Wichita\Drawings\Phyto\_O&M\_Plan\Fig 1 Samp Locs 1210.mxd 2/7/2011 @ 11:11:28 AM



**Legend**

- Former Unocal Site Boundary
- Road (Paved)
- Road (Unpaved)
- Phytoremediation Plot
- Fence Line
- Railroad Track
- Stormwater Drainage Ditch
- + Monitoring Injection IM
- + Monitoring Well Phytoremediation IM
- Piezometer Location
- DPT Location with Groundwater Grab Sample
- ⊕ Existing Monitoring Well



<p>9400 Amberglenn Blvd. Austin, TX 78729 Phone: (512) 454-4797 Fax: (512) 419-5474</p>	Client: Former Unocal Chemical Distribution Facility Wichita, Kansas		
	Title: <b>Figure 1</b> <b>Monitoring Well, Piezometer,</b> <b>and DPT Locations</b> <b>(December 2010)</b>		
Drawn by: gwc/aus	Date: 2/7/2011	GIS File: Fig 1 Samp Locs 1210.mxd	Figure: 1

**Attachment A**

**Boring Logs**

Well ID: BPZ-1

Total Depth: 28 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** Kim Nguyen

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1349.13

**Top of Casing Elevation (ft, MSL):** 1352.06

**Coordinates:** N 1709942.56 E 1656449.52

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

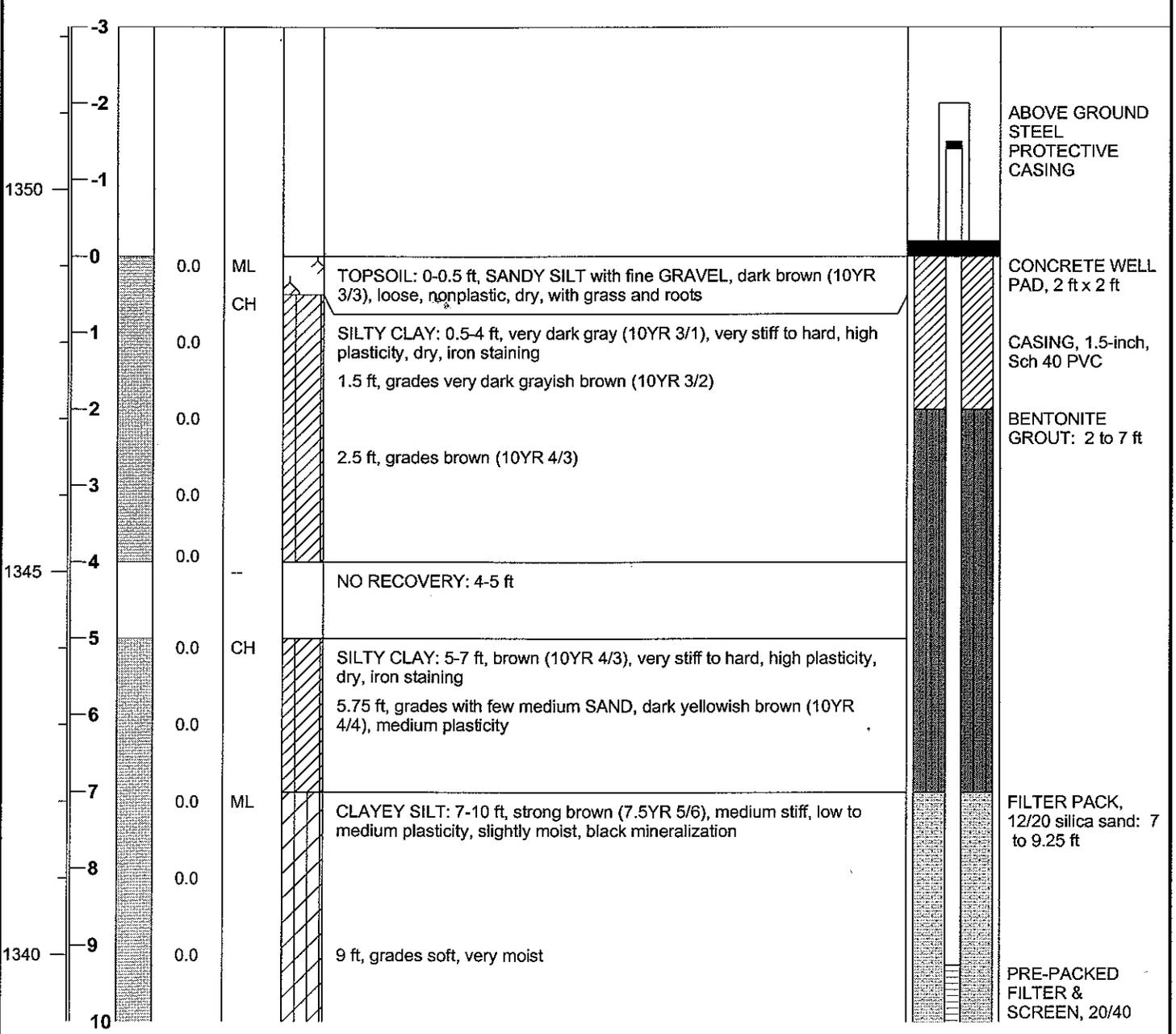
**Drilling Method:** DPT

**Sampling Method:** 5 ft Continuous

**Borehole Diameter (inches):** 3.25

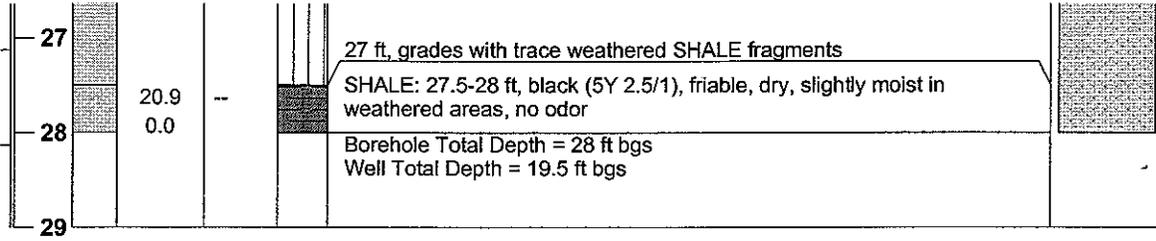
**Dates Drilled:** 12/10/10

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	ML		SILT: 10-14 ft, with some CLAY, light yellowish brown (10YR 6/4), soft, low plasticity, wet		mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 9.25 to 19.25 ft
	11		0.0					
	12		0.0					
	13		0.0			12.7 ft, grades light olive gray (5Y 6/2) and black (5Y 2.5/1)		
1335	14		83.6	CH/SC		SANDY CLAY: 14-15.5 ft, with pockets of moist CLAYEY SAND, olive gray (5Y 5/2), black (5Y 2.5/1) mottling, very stiff, high plasticity, dry		
	15		13.4			15 ft, grades with no CLAYEY SAND		
	16		134.8	ML		SILT: 15.5-16.5 ft, greenish gray (10GY 5/1), medium stiff, friable, nonplastic, dry		
	17		86.7	CH		SILTY CLAY: 16.5-17.2 ft, greenish gray (10GY 5/1), soft, high plasticity, very moist		
	18		128.6	ML		SILT: 17.2-19 ft, greenish gray (10GY 5/1), stiff to very stiff, friable, nonplastic, dry		
	19		7.5			17.7 ft, grades dark brown (7.5YR 3/4), hard		
1330	19					18.8 ft, grades with pale olive (5Y 6/4) and greenish gray (10G 6/1) mottling		
	20					NO RECOVERY: 19-20 ft		
	20		13.6	ML		SILT: 20-27.5 ft, with CLAY, light olive gray (5Y 6/2), medium stiff, friable, nonplastic, dry		
	21		11.4			21 ft, grades slightly moist		
	22		20.2			22 ft, grades with dark brown (7.5YR 3/4) mottling, dry		
	23		3.4			22.5 ft, grades with no CLAY, iron staining		
1325	24		441.5					
	25		2280					
	25		177.8			25 ft, grades with CLAY, olive gray (5Y 5/2) and olive yellow (5Y 6/6), very stiff, low to medium plasticity, dry, iron staining		
	26		54.8					
								END CAP, 1.5-inch, Sch 40 PVC: 19.25 to 19.5 ft

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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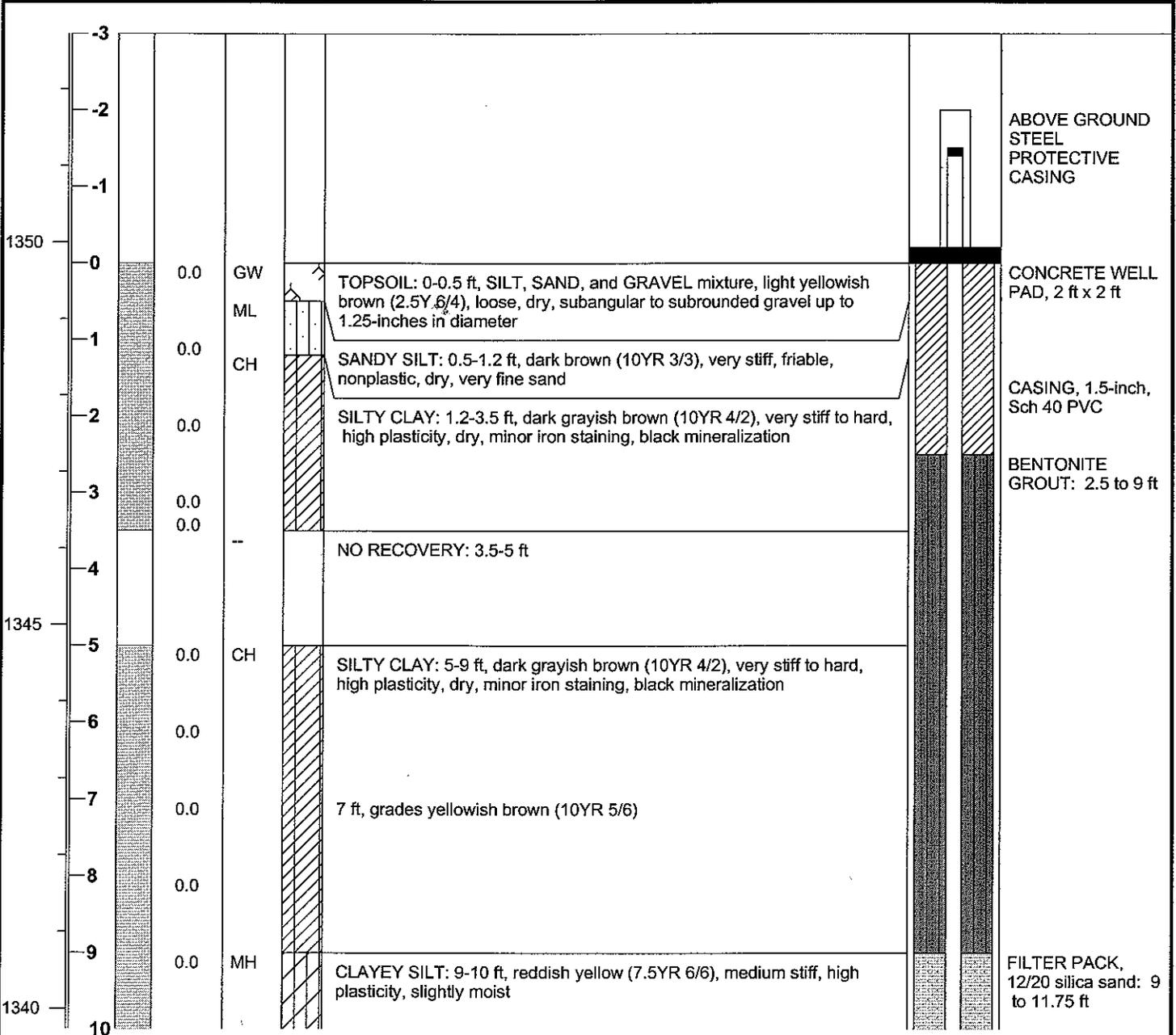


Well ID: BPZ-2

Total Depth: 28.5 ft bgs

PROJECT INFORMATION				DRILLING INFORMATION			
Project Name: Former Unocal Chemical Distribution Facility				Drilling Company: Roberts Environmental Drilling, Inc.			
Location: Wichita, Kansas				Driller: Brian Schilling			
Logged By: Kim Nguyen				Drilling Equipment: AMS 9700 Power Probe			
Project Manager: Derek Peacock				Drilling Method: DPT			
Ground Surface Elevation (ft, MSL): 1349.73				Sampling Method: 5 ft Continuous			
Top of Casing Elevation (ft, MSL): 1352.62				Borehole Diameter (inches): 3.25			
Coordinates: N 1709910.98 E 1656486.64				Dates Drilled: 12/9/10			

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	MH		SILT: 10-15 ft, with CLAY, reddish yellow (7.5YR 6/6), medium stiff, high plasticity, moist		
	11		0.0					
	12		0.0			12 ft, grades very moist		
	13		0.0			13 ft, grades wet		
	14		0.0					
1335	15		0.0	ML		CLAYEY SILT: 15-18.5 ft, with very fine SAND, dark gray (7.5YR 4/1) and greenish gray (10GY 6/1), soft, low plasticity, wet to saturated		
	16		88.3					
	17		32.0					
	18		6.6					
	19		0.0	ML		SANDY SILT: 18.5-22.3 ft, greenish gray (10Y 5/1), medium stiff, medium plasticity, very moist, very fine to coarse sand		
1330	20		0.0			19 ft, grades with CLAY		
	21		0.6					
	22		0.7	SP		21.7-22.2 ft, SAND lens, loose, moist, medium to coarse sand, poorly graded		
	23		1.9	ML		SILT: 22.3-27.5 ft, greenish gray (10GY 6/1), very stiff, nonplastic, dry, heavy iron staining		
	24		7.1			24 ft, grades olive (5Y 5/3)		
1325	25		0.2			25 ft, grades olive (5Y 5/4), iron staining		
	26		3.4					

PRE-PACKED FILTER & SCREEN, 20/40 mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 11.75 to 21.75 ft

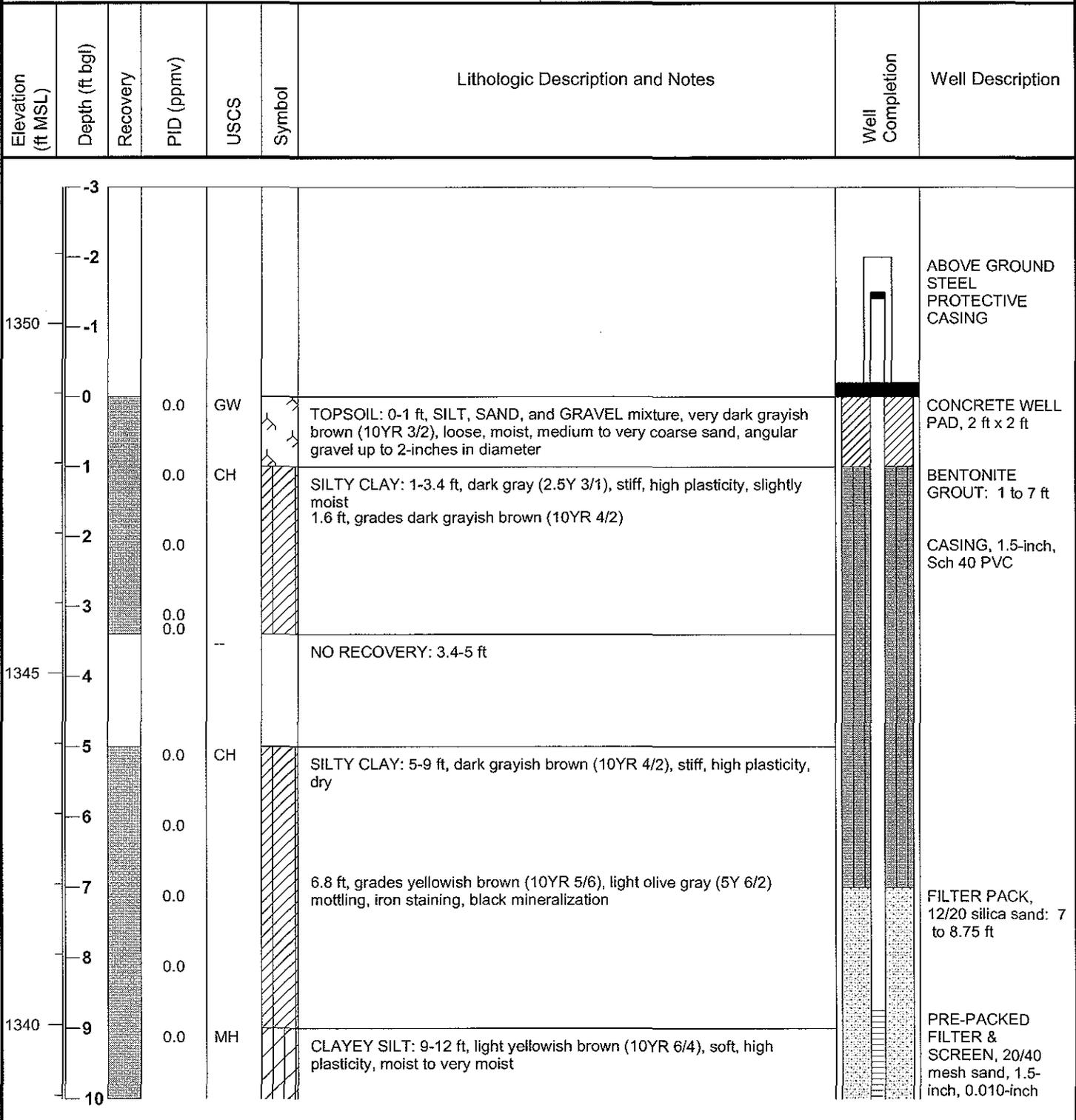
END CAP, 1.5-inch, Sch 40 PVC: 21.75 to 22 ft

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
			1.2					
			0.7			SHALE: 27.5-28.5 ft, dark gray (5Y 4/1), hard, friable in some areas, dry		
			0.0			Borehole Total Depth = 28.5 ft bgs Well Total Depth = 22 ft bgs		

Well ID: BPZ-3

Total Depth: 24 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.95		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.75		Borehole Diameter (inches): 3.25	
Coordinates: N 1709880.46 E 1656413.39		Dates Drilled: 12/9/10	

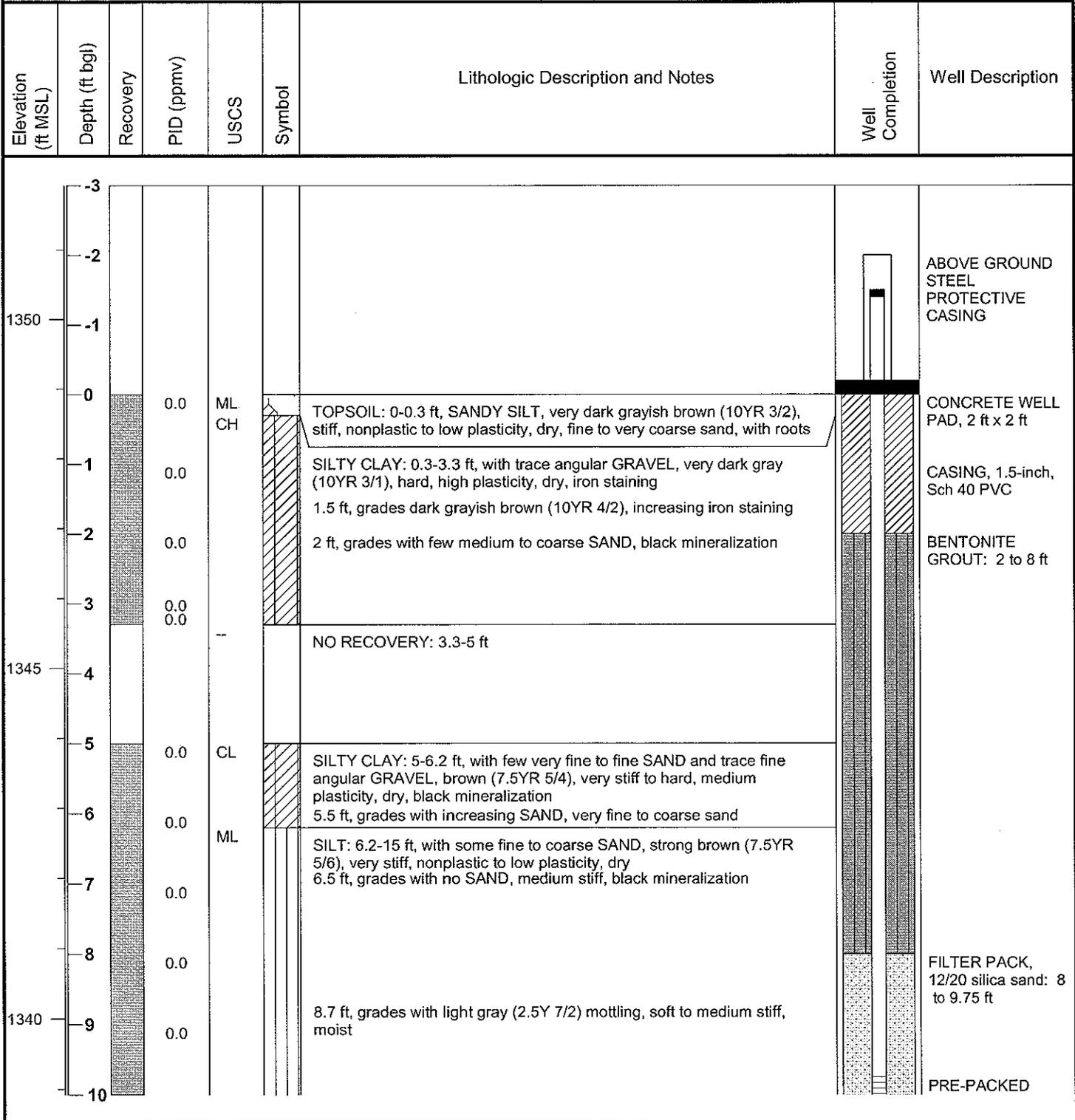


Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0			10 ft, grades with trace coarse to very coarse SAND, grayish brown (10YR 5/2), medium to high plasticity, wet		slot, Sch 40 PVC: 8.75 to 18.75 ft
	11		1.7					
	12		0.0	ML		SANDY SILT: 12-13.7 ft, with pockets of loose, medium to coarse SAND, gray (5Y 5/1), soft, friable, nonplastic, very moist, medium to coarse sand		
	13		1.1			12.2-12.3 ft, SAND lens, medium dense, medium to coarse sand 12.7-12.8 ft, SAND lens, medium dense, medium to coarse sand 13 ft, grades grayish brown (2.5Y 5/2)		
1335	14		387.2	SP ML		SAND: 13.7-14 ft, black (N 2.5/), medium dense, wet, medium to coarse sand, poorly graded		
	15		593.8			SILT: 14-22.5 ft, greenish gray (5GY 6/1), stiff, friable, low plasticity, dry, iron staining 15.1 ft, grades with heavy iron staining		
	16		32.4			16.2 ft, grades with decreasing iron staining		
	17							
	18		133.3			17.5 ft, grades pale olive (5Y 6/3), yellow (2.5Y 7/6) mottling		
1330	19		41.9					END CAP, 1.5-inch, Sch 40 PVC: 18.75 to 19 ft
	20		22.4			19.2 ft, grades olive yellow (2.5Y 6/6)		
	21		3.6			20 ft, grades with some CLAY, light yellowish brown (2.5Y 6/4), soft to medium stiff, medium plasticity, dry to slightly moist, minor iron staining		
	22		2.9					
	23		9.8					
	24		1.4			SHALE: 22.5-24 ft, black (2.5Y 2.5/1), friable, dry to slightly moist, weathered		
1325	24		0.0			Borehole Total Depth = 24 ft bgs Well Total Depth = 19 ft bgs		
	25		0.0					

Well ID: BPZ-4

Total Depth: 29.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.92		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): 1352.04		Borehole Diameter (inches): 3.25	
Coordinates: N 1709864.42 E 1656462.70		Dates Drilled: 12/9/10	



Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	MH		10 ft, grades light yellowish brown (10YR 6/4), soft, medium to high plasticity, very moist to wet, minor iron staining		FILTER & SCREEN, 20/40 mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 9.75 to 19.75 ft
	11		0.0					
	12		0.0					
	13		0.0					
1335	14		0.0			13.5 ft, grades with light greenish gray (5GY 7/1) mottling		
	15		0.0	ML		CLAYEY SILT: 15-18.5 ft, with very fine SAND, greenish gray (10Y 5/1) and dark gray (2.5Y 4/1), soft, nonplastic, wet		
	16		31.2					
	17		39.3					
	18		4.0					
1330	19		1.8	MH		SANDY SILT: 18.5-20 ft, with CLAY, greenish gray (10Y 5/1), stiff to very stiff, medium to high plasticity, moist, very fine to medium sand		
	20		1.4	SP		19.9-20 ft, SAND lens, greenish gray (10Y 5/1), loose, moist, coarse sand, poorly graded		END CAP, 1.5-inch, Sch 40 PVC: 19.75 to 20 ft
	21		0.0	CH		SILTY CLAY: 20-21 ft, with some medium SAND, greenish gray (10GY 6/1), brown (7.5YR 5/4) mottling, stiff, high plasticity, dry		
	22		0.0	ML		SILT: 21-27.5 ft, greenish gray (5GY 6/1) and olive (5Y 5/4), stiff to very stiff, friable, nonplastic, dry		
	23		0.7			23 ft, grades soft, moist 23.3 ft, grades dry		
1325	24		1.1			24 ft, grades olive yellow (2.5Y 6/6) and light yellowish brown (2.5Y 6/4), hard		
	25		0.2					
	26		0.6					

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1320	27	0.5						
	28	0.3						
	29	0.0						
	30	0.0						
						SHALE: 27.5-29.5 ft, dark grayish brown (2.5Y 4/2), friable, dry, weathered		
						Borehole Total Depth = 29.5 ft bgs Well Total Depth = 20 ft bgs		

Well ID: BPZ-5

Total Depth: 28 ft bgs

### PROJECT INFORMATION

Project Name: Former Unocal Chemical Distribution Facility

Location: Wichita, Kansas

Logged By: Kim Nguyen

Project Manager: Derek Peacock

Ground Surface Elevation (ft, MSL): 1349.24

Top of Casing Elevation (ft, MSL): 1352.36

Coordinates: N 1709877.27 E 1656497.13

### DRILLING INFORMATION

Drilling Company: Roberts Environmental Drilling, Inc.

Driller: Brian Schilling

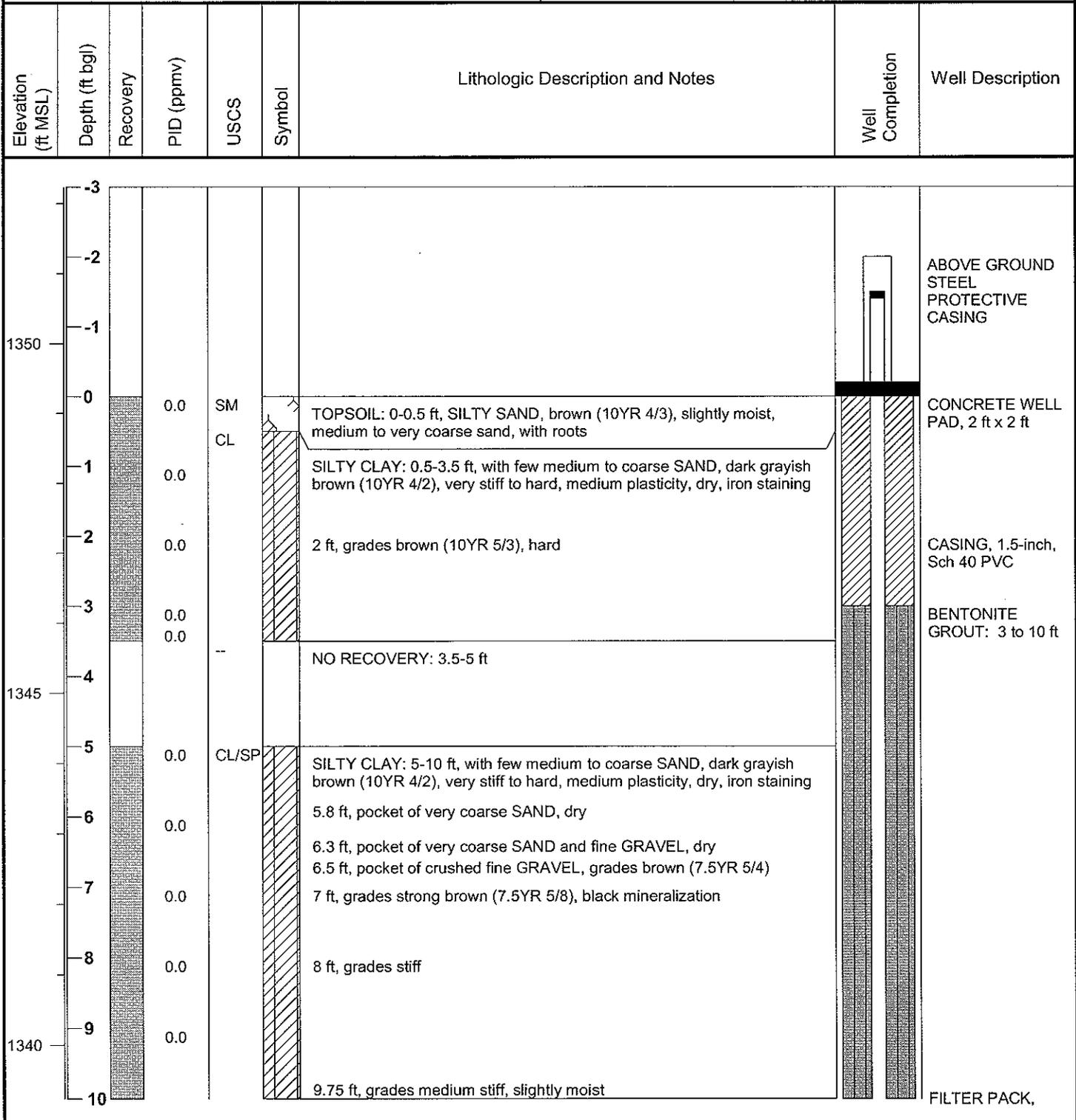
Drilling Equipment: AMS 9700 Power Probe

Drilling Method: DPT

Sampling Method: 5 ft Continuous

Borehole Diameter (inches): 3.25

Dates Drilled: 12/8/10



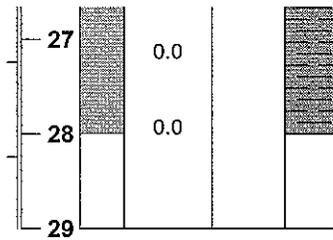
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	ML		SILT: 10-21.6 ft, with CLAY, reddish yellow (7.5YR 6/6), light olive gray (5Y 6/2) mottling, soft to medium stiff, medium plasticity, slightly moist to moist		FILTER PACK, 12/20 silica sand: 10 to 11.75 ft
	11		0.0					
	12		0.0					PRE-PACKED FILTER & SCREEN, 20/40 mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 11.75 to 21.75 ft
	13		0.0					
1335	14		0.0			13.5 ft, grades wet		
	15		0.0			15 ft, grades light olive brown (2.5Y 5/3), soft, black mineralization		
	16		0.0					
	17		0.0					
	18		94.7			18 ft, grades saturated		
1330	19		2.0			19.25 ft, grades light brownish gray (2.5Y 6/2)		
	20		0.1			20 ft, grades wet to saturated		
	21		0.1	SP		21.5-21.6 ft, SAND lens, greenish gray (10Y 6/1), loose, wet, medium to coarse sand, poorly graded		
	22		0.1	ML		SANDY SILT: 21.6-22.6 ft, greenish gray (10Y 6/1) with green, medium stiff to stiff, low plasticity, moist, very fine sand		END CAP, 1.5-inch, Sch 40 PVC: 21.75 to 22 ft
	23		0.0	ML		SILT: 22.6-26 ft, with some CLAY, light yellowish brown (2.5Y 6/4), light gray (5Y 7/2) mottling, stiff, dry to slightly moist, iron staining		
1325	24		0.0			24 ft, grades with no CLAY, friable, dry		
	25		0.0					
	26		0.0			SHALE: 26-28 ft, dark olive gray (5Y 3/2) and very dark gray (5Y 3/1), slightly moist		



# MONITOR WELL LOG

Well ID: BPZ-5

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Borehole Total Depth = 28 ft bgs  
Well Total Depth = 22 ft bgs

Well ID: CPZ-1

Total Depth: 30 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, KS

**Logged By:** Kim Nguyen

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1349.01

**Top of Casing Elevation (ft, MSL):** N/A

**Coordinates:** N 1710072.27 E 1656351.87

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

**Drilling Method:** DPT & Hollow Stem Auger

**Sampling Method:** 5 ft Continuous & Auger Cuttings

**Borehole Diameter (inches):** 3.25 & 8

**Dates Drilled:** 12/8/10

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
0	0.0			CH		TOPSOIL: 0-0.5 ft, CLAY with few medium to coarse SAND, very dark grayish brown (10YR 3/2), stiff, high plasticity, dry to slightly moist, with roots		
1	0.0			CL		FILL: 0.5-3 ft, SANDY CLAY with SILT and fine GRAVEL, with pockets of loose fine to very coarse SAND, brown (10YR 4/3), very stiff, high plasticity, dry, fine to medium sand		
2	0.0							
3	0.0					NO RECOVERY: 3-5 ft		
1345	4							
5	0.0			CH		SILTY CLAY: 5-7 ft, with some medium to very coarse SAND, olive (5Y 5/3), hard, high plasticity, dry, iron staining, black mineralization		
6	0.0					6.8 ft, grades with trace GRAVEL up to 1-inch in diameter 6.9 ft, grades with no GRAVEL		
7	0.0			ML		SILT: 7-27 ft, with some CLAY, olive yellow (2.5Y 6/6) and light yellowish brown (2.5Y 6/4), stiff, friable, low plasticity, dry, iron staining		
8	0.0							
1340	9					9 ft, grades dark gray (5Y 4/1)		
10	0.0					10 ft, grades slightly moist		
11	0.0					10.5 ft, grades dry		
12	0.0							
13								

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1335	13		0.0			13.2 ft, grades dark grayish brown (10YR 4/2) and yellowish brown (10YR 5/4)		
	14		0.0					
	15		0.0			15 ft, grades with no CLAY, olive gray (5Y 5/2)		
	16		0.0			16 ft, grades with SHALE fragments		
	17		0.0			17 ft, grades with CLAY, medium to high plasticity, slightly moist *DPT encountered refusal at 17 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings.		
	18		0.0			18 ft, grades with decreasing CLAY, dry		
1330	19		0.0			19 ft, grades brown (7.5YR 5/4), low plasticity		
	20		0.1			20 ft, grades with no CLAY, reddish brown (5YR 4/3)		
	21		0.0					
	22		0.0			22 ft, grades olive gray (5Y 5/2)		
	23		0.0			23 ft, grades with CLAY, brown (10YR 5/3), dry to slightly moist		
1325	24		0.0			24 ft, grades olive gray (5Y 5/2) and light olive brown (2.5Y 5/3), medium plasticity		
	25		0.0			25 ft, grades light olive brown (2.5Y 5/3)		
	26		0.4					
	27		0.0			SHALE: 27-30 ft, very dark gray (5Y 3/1), dry to slightly moist		
	28		0.9					
1320	29		0.8					



# MONITOR WELL LOG

Well ID: CPZ-1

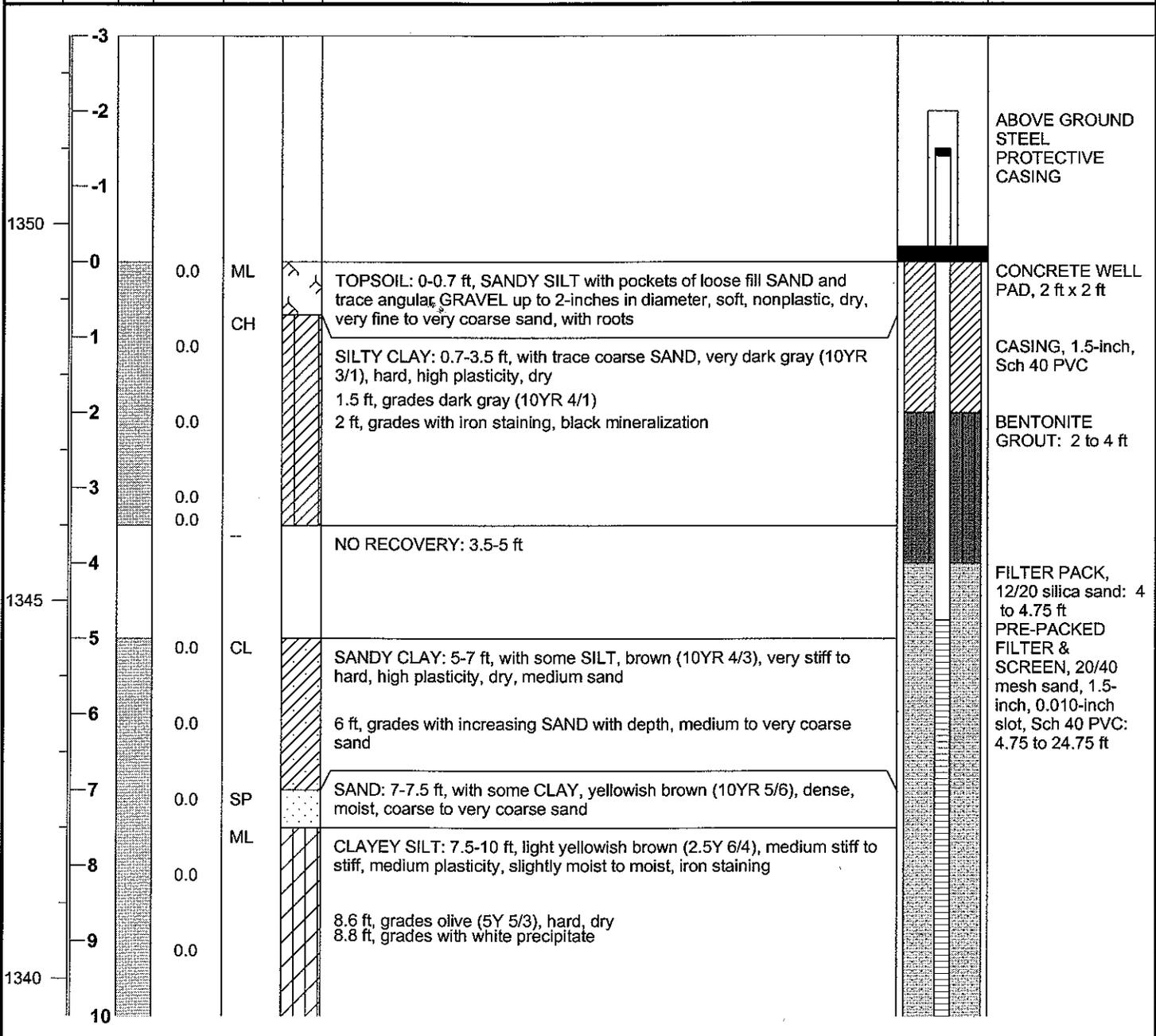
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	30		1.9			Borehole Total Depth = 30 ft bgs *A piezometer was not installed at CPZ-1 because the borehole was dry.		
	31							

Well ID: CPZ-2

Total Depth: 25 ft bgs

PROJECT INFORMATION				DRILLING INFORMATION			
Project Name: Former Unocal Chemical Distribution Facility				Drilling Company: Roberts Environmental Drilling, Inc.			
Location: Wichita, Kansas				Driller: Brian Schilling			
Logged By: Kim Nguyen				Drilling Equipment: AMS 9700 Power Probe			
Project Manager: Derek Peacock				Drilling Method: DPT & Hollow Stem Auger			
Ground Surface Elevation (ft, MSL): 1349.50				Sampling Method: 5 ft Continuous & Auger Cuttings			
Top of Casing Elevation (ft, MSL): 1352.50				Borehole Diameter (inches): 3.25 & 8			
Coordinates: N 1710060.18 E 1656429.46				Dates Drilled: 12/14/10			

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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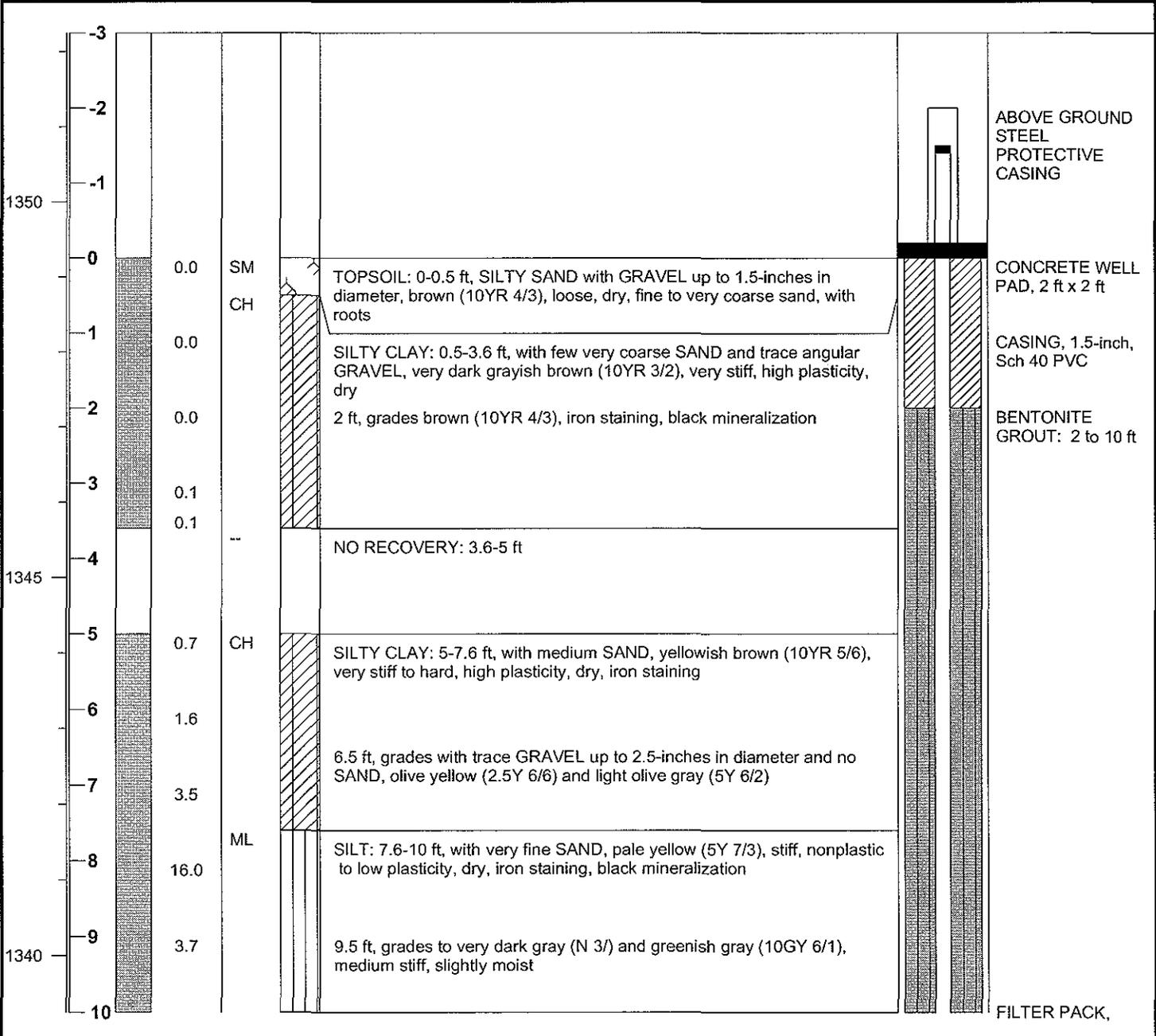
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	ML		SILT: 10-12.5 ft, light olive brown (2.5Y 5/6), greenish gray (5GY 6/1) mottling, hard, friable, nonplastic, dry, iron staining		
	11		238.0			10.5 ft, grades yellowish brown (10YR 5/4), dark gray (5Y 4/1) mottling		
	12		89.0			11.5 ft, grades with minor white precipitate		
	13		0.8	CH		SILTY CLAY: 12.5-13.5 ft, with GRAVEL up to 2-inches in diameter, greenish gray (5GY 6/1), soft, high plasticity, very moist, minor iron staining		
	14		0.8	ML		13.1-13.5 ft, grades with increasing SILT and with some very fine to fine SAND, wet		
	15		0.4	SM		SILT: 13.5-18 ft, with very fine SAND, greenish gray (5GY 5/1), very stiff, low plasticity, friable, dry		
1335	15		0.4	ML		13.9-14.2 ft, SILTY SAND lens, loose		
	16		1.7			14.2 ft, grades reddish brown (5YR 4/3)		
	17		4.5			15 ft, grades with some CLAY and no SAND, light olive gray (5Y 6/2), hard, low to medium plasticity, minor iron staining		
	18		11.1			16 ft, grades light yellowish brown (2.5Y 6/3)		
	19		2.1			17.5 ft, grades with some weathered SHALE		
	20		18.8	ML		*DPT encountered refusal at 18 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings.		
	21		18.8			SILT: 18-22 ft, with some CLAY, yellowish brown (10YR 5/4), low to medium plasticity, dry to slightly moist		
1330	22		0.8			20 ft, grades light olive brown (2.5Y 5/4), dry		
	23		9.1			21 ft, grades with SHALE fragments		
	24		2.8			SHALE: 22-25 ft, dark olive gray (5Y 3/2), dry, weathered		
	25		2.2					
	26		3.8					
1325	25					Borehole Total Depth = 25 ft bgs Well Total Depth = 25 ft bgs		END CAP, 1.5-inch, Sch 40 PVC: 24.75 to 25 ft

Well ID: CPZ-3

Total Depth: 27.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT & Hollow Stem Auger	
Ground Surface Elevation (ft, MSL): 1349.25		Sampling Method: 5 ft Continuous & Auger Cuttings	
Top of Casing Elevation (ft, MSL): 1352.20		Borehole Diameter (inches): 3.25 & 8	
Coordinates: N 1710012.48 E 1656399.18		Dates Drilled: 12/8/10	

Elevation (ft, MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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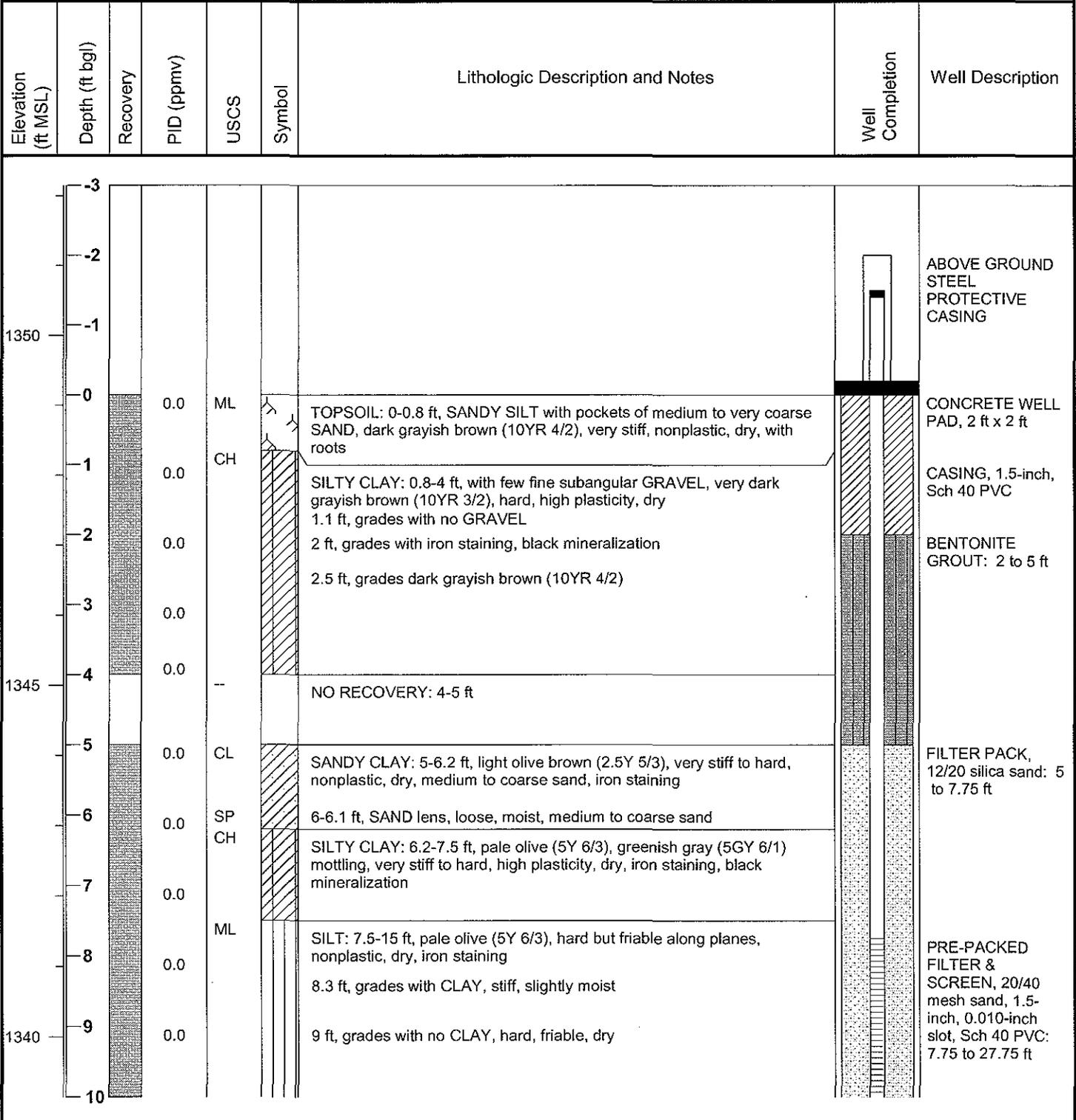
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		427.0	ML		CLAYEY SILT: 10-12.5 ft, pale olive (5Y 6/3), stiff to very stiff, low plasticity, dry		FILTER PACK, 12/20 silica sand: 10 to 11.75 ft
	11		27.1			10.5-10.8 ft, grades with fine to medium SAND and GRAVEL up to 1-inch diameter, dry		
	12		24.0			11.5 ft, grades light yellowish brown (10YR 6/4), very stiff to hard, dry		PRE-PACKED FILTER & SCREEN, 20/40 mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 11.75 to 26.75 ft
	13		23.1	ML		SILT: 12.5-14.5 ft, olive (5Y 5/3), gray (5Y 5/1) mottling, medium stiff, friable, nonplastic, slightly moist		
1335	14		15.1					
	15		2.9	CL		SILTY CLAY: 14.5-18 ft, with trace coarse SAND and fine angular GRAVEL, pale olive (5Y 6/4), medium stiff, low to medium plasticity, dry *DPT encountered refusal at 15 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings.		
	16		1.2	CH		15 ft, grades olive (5Y 5/3), high plasticity, slightly moist		
	17		390.1			16 ft, grades light olive brown (2.5Y 5/3), dry to slightly moist		
	18		154.3					
	19		101.3	ML		CLAYEY SILT: 18-20 ft, dark brown (7.5YR 3/3), friable, low plasticity, dry		
1330	20		115.6					
	21		155.5	CH		SILTY CLAY: 20-27 ft, grayish brown (2.5Y 5/2), high plasticity, dry		
	22		200.5			21 ft, grades brown (10YR 5/3)		
	23		121.6			22 ft, grades dry to slightly moist		
	24		94.7					
	25		76.7			25 ft, grades with trace medium SAND, iron staining		
1325	26		77.7					
	26		53.1			26 ft, grades olive (5Y 4/3)		

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	27		22.4			SHALE: 27-27.5 ft, very dark gray (5Y 3/1), friable, dry		END CAP, 1.5-inch, Sch 40 PVC: 26.75 to 27 ft
	28					Borehole Total Depth = 27.5 ft bgs Well Total Depth = 27 ft bgs		

Well ID: CPZ-4

Total Depth: 29.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT & Hollow Stem Auger	
Ground Surface Elevation (ft, MSL): 1349.15		Sampling Method: 5 ft Continuous & Auger Cuttings	
Top of Casing Elevation (ft, MSL): 1351.95		Borehole Diameter (inches): 3.25 & 8	
Coordinates: N 1709995.76 E 1656366.67		Dates Drilled: 12/13/10	





# MONITOR WELL LOG

Well ID: CPZ-4

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0			10 ft, grades light yellowish brown (2.5Y 6/4), medium stiff		
	11		3.3			11.1-11.2 ft, grades with heavy iron staining		
	12		3.4			11.5 ft, grades with some CLAY, light olive gray (5Y 6/2), very stiff, nonfriable		
	13		0.8			12 ft, grades with very fine SAND, dark yellowish brown (10YR 4/6) and light olive gray (5Y 6/2)		
	14		1.8			12.5 ft, grades with no SAND, olive gray (5Y 5/2), dark gray (5Y 4/1) mottling, hard, friable		
1335	15		0.3			14 ft, grades brown (10YR 5/3), olive gray (5Y 5/2) mottling		
	16		0.0	ML		*DPT encountered refusal at 15 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings.		
	17		0.0			SILT: 15-28 ft, light olive brown (2.5Y 5/3), low plasticity, slightly moist		
	18		0.9			16 ft, grades dry to slightly moist		
	19		2.8			17 ft, grades with CLAY, moist		
1330	20		2.0					
	21		0.9			20 ft, grades with no CLAY, brown (7.5YR 4/4), friable, dry		
	22		0.9			21 ft, grades with light yellowish brown (2.5Y 6/3) mottling		
	23		0.4			22 ft, grades light olive brown (2.5Y 5/3), nonfriable, iron staining		
	24		1.3			23 ft, grades with CLAY, slightly moist, no iron staining		
1325	25		0.2			24 ft, grades with iron staining		
	26		0.6			25 ft, grades with fine SHALE fragments, dry		
			0.6					

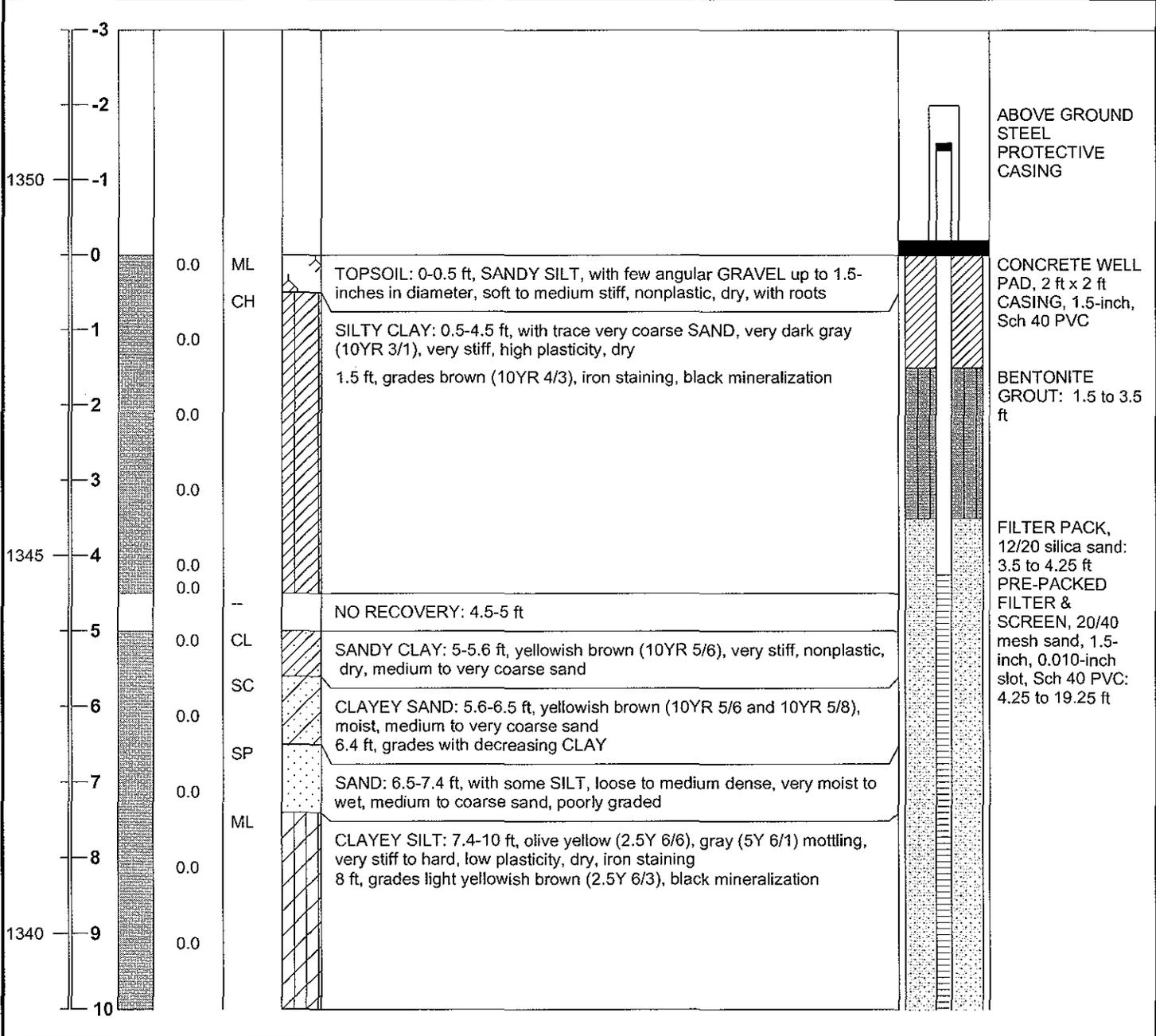
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1320	27		0.4					
	28		0.9	--		SHALE: 28-29.5 ft, black (2.5Y 2.5/1), very stiff, dry		END CAP, 1.5-inch, Sch 40 PVC: 27.75 to 28 ft
	29		1.7					
	30					Borehole Total Depth = 29.5 ft bgs Well Total Depth = 28 ft bgs		

Well ID: CPZ-5

Total Depth: 19.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1349.00		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.85		Borehole Diameter (inches): 3.25	
Coordinates: N 1709964.46 E 1656398.25		Dates Drilled: 12/13/10	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		2.8	ML		<p>SILT: 10-19.5 ft, greenish gray (5GY 5/1), soft to medium stiff, friable, nonplastic, slightly moist, black staining</p> <p>10.7 ft, SAND lamination, light greenish gray (5GY 7/1), dry, very fine sand</p> <p>12.5 ft, grades with brown (10YR 5/3) mottling, no black staining</p> <p>12.7 ft, grades brown (10YR 5/3)</p> <p>15 ft, grades greenish gray (5GY 5/1), low plasticity, moist</p> <p>16.7 ft, grades with some very fine SAND, hard</p> <p>17.5 ft, grades reddish brown (5YR 4/3), nonplastic, dry</p> <p>18.6 ft, grades nonfriable</p> <p>19 ft, grades with olive gray (5Y 6/2) mottling</p> <p>DPT encountered refusal at 19.5 ft bgs.</p> <p>Borehole Total Depth = 19.5 ft bgs</p> <p>Well Total Depth = 19.5 ft bgs</p>		<p>END CAP, 1.5-inch, Sch 40 PVC; 19.25 to 19.5 ft</p>
	11		28.0					
	12		2.3					
	13		0.8					
1335	14		6.3					
	15		10.2					
	16		4.3					
	17		9.4					
	18		8.4					
	19		23.6					
1330	19		0.4					
	19		0.2					
	19		0.0					
	20							

Well ID: CPZ-6

Total Depth: 18.5 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** Kim Nguyen

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1349.22

**Top of Casing Elevation (ft, MSL):** 1352.12

**Coordinates:** N1709938.41 E1656337.77

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

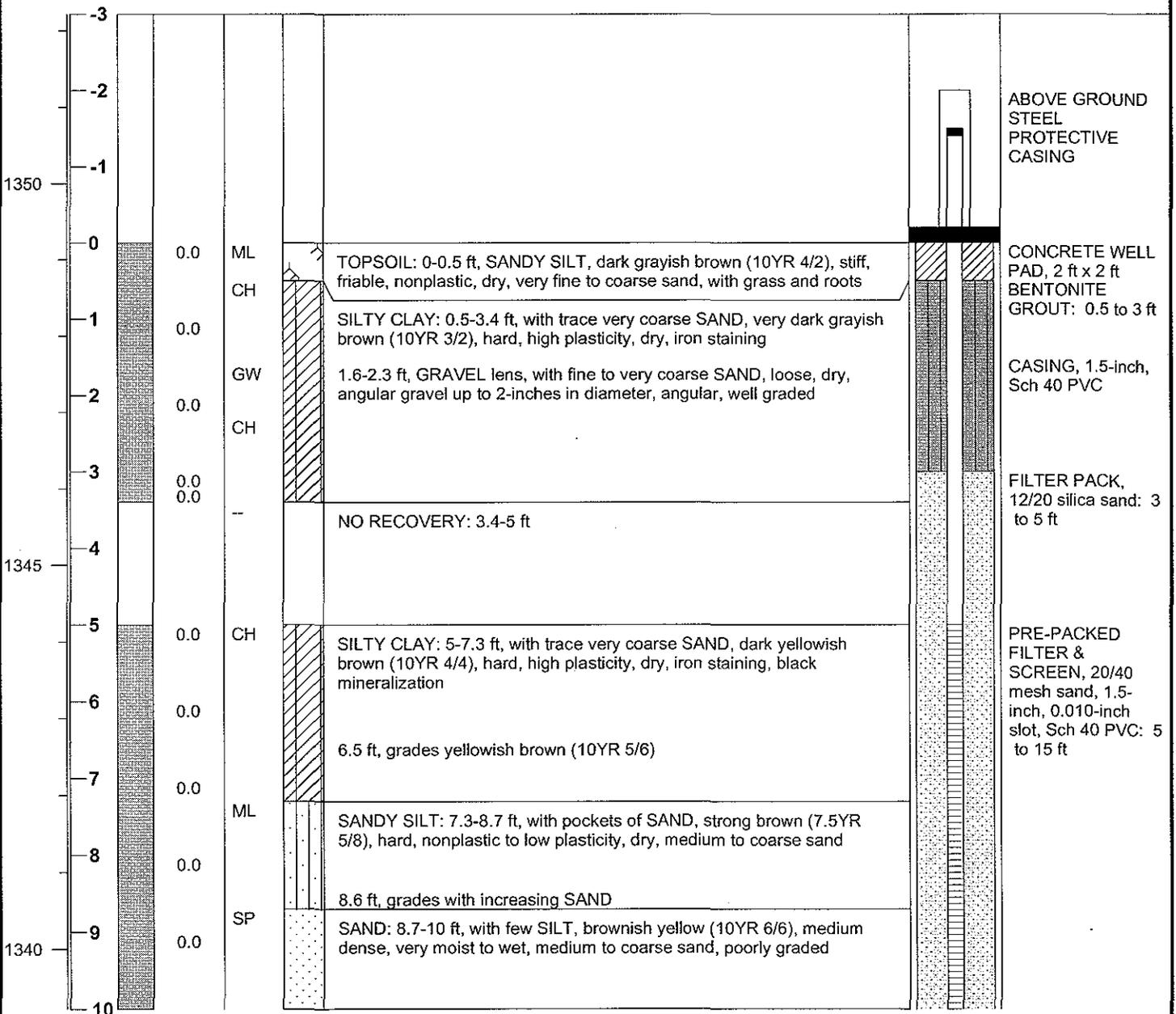
**Drilling Method:** DPT

**Sampling Method:** 5 ft Continuous

**Borehole Diameter (inches):** 3.25

**Dates Drilled:** 12/12/10

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	ML		CLAYEY SILT: 10-11 ft, light gray (5Y 7/2) and olive yellow (2.5Y 6/6), medium stiff, low to medium plasticity, slightly moist, iron staining, black mineralization		END CAP, 1.5-inch, Sch 40 PVC: 15 to 15.25 ft
	11		0.0	CH		SILTY CLAY: 11-14 ft, with trace GRAVEL, light olive gray (5Y 6/2), hard, high plasticity, dry, iron staining		
	12		0.0					
	13		0.0					
1335	14		0.	ML		SILT: 14-15.3 ft, with few CLAY, pale olive (5Y 6/3), medium stiff, friable, nonplastic, dry to slightly moist, minor iron staining		
	15		0.0	CH		SILTY CLAY: 15.3-16 ft, with trace GRAVEL, light olive gray (5Y 6/2), very stiff, high plasticity, dry, minor iron staining		
	16		0.0	ML		SILT: 16-18.5 ft, with CLAY, olive (5Y 5/3), strong brown (7.5YR 5/6) mottling, very stiff to hard, friable, nonplastic, dry		
	17		0.0			17 ft, grades yellowish red (5YR 4/6), grayish brown (2.5Y 5/2) mottling, very stiff		
	18		0.0			18 ft, grades with no CLAY		
	18		0.0			*DPT encountered refusal at 18.5 ft bgs. Based on lithology at MW-28, shale was encountered at 19 ft bgs.		
1330	19					Borehole Total Depth = 18.5 ft bgs Well Total Depth = 15.25 ft bgs		

Well ID: CPZ-7

Total Depth: 29 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** John O'Neal

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1349.22

**Top of Casing Elevation (ft, MSL):** 1352.09

**Coordinates:** N 1709956.71 E 1656329.09

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

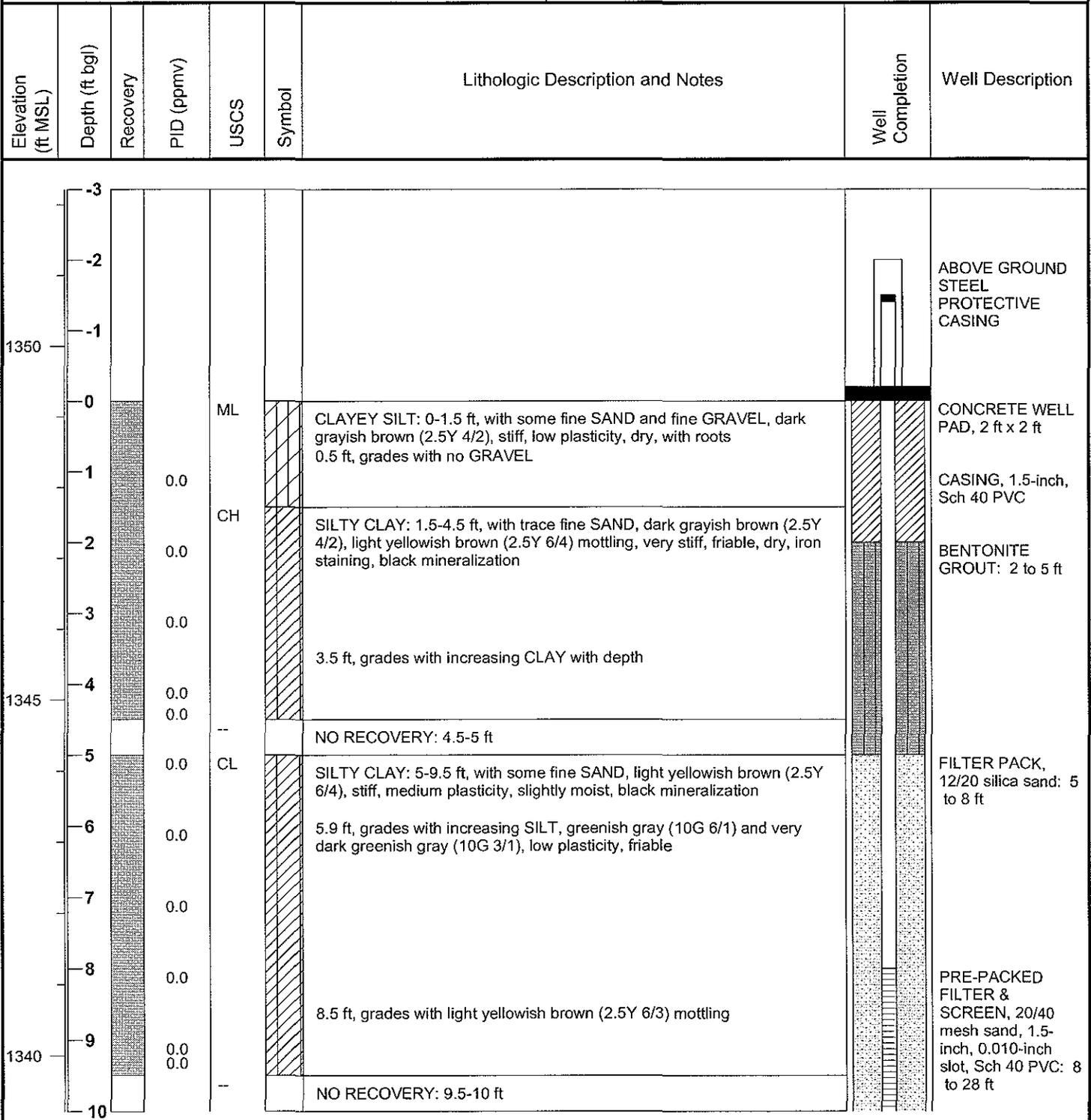
**Drilling Equipment:** AMS 9700 Power Probe

**Drilling Method:** DPT & Hollow Stem Auger

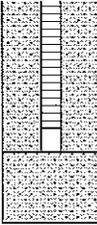
**Sampling Method:** 5 ft Continuous & Auger Cuttings

**Borehole Diameter (inches):** 3.25 & 8

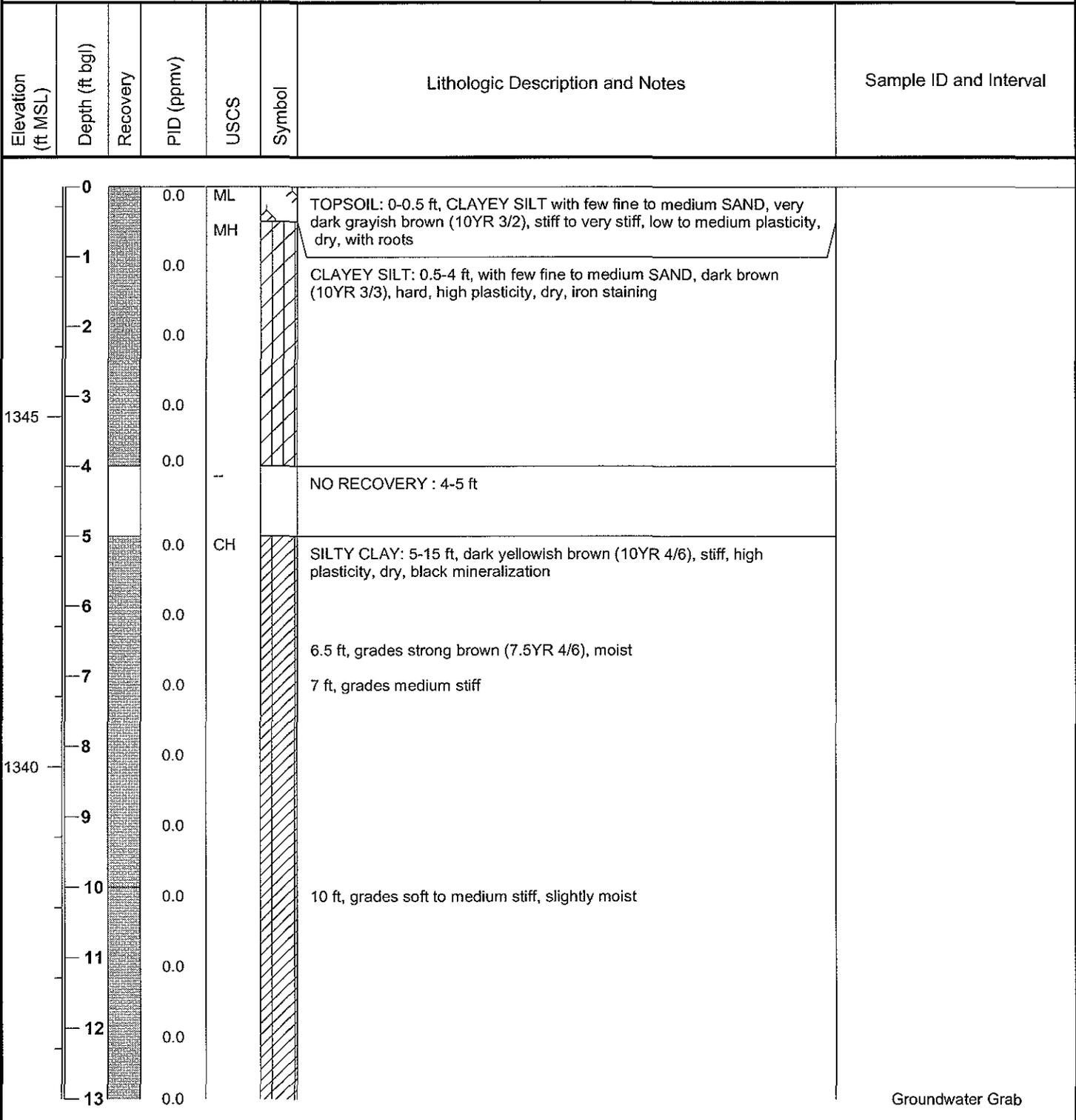
**Dates Drilled:** 12/18/10



Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	CL		<p>SILTY CLAY: 10-12 ft, with trace fine SAND, greenish gray (10G 6/1), yellowish brown (2.5Y 6/3) mottling, stiff, friable, slightly moist</p> <p>10.5-11 ft, grades with white precipitate</p> <p>11 ft, grades with very fine SAND</p> <p>*DPT encountered refusal at 12 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings.</p>		
	11		0.0					
	12		0.1	CL		<p>SILTY CLAY: 12-18 ft, with trace fine SAND, light olive brown (2.5Y 5/3), stiff, medium plasticity, slightly moist, no odor</p>		
	13		0.0					
1335	14		0.0					
	15		0.0					
	16		0.0					
	17		0.0					
	18		0.0	CL		<p>CLAY: 18-22 ft, with some SILT and trace fine SAND, reddish brown (5YR 4/3), hard, friable, low plasticity, dry</p>		
	19		0.0					
1330	20		0.0					
	21		0.0					
	22		0.1	CL		<p>SILTY CLAY: 22-28 ft, with trace very fine SAND, grayish brown (2.5Y 5/2), stiff, low plasticity, slightly moist</p> <p>25 ft, grades with increasing CLAY, very stiff</p>		
	23		0.4					
1325	24		0.2					
	25		0.2					
	26		0.2					

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
			1.4			27 ft, grades hard		
			2.8			SHALE: 28-29 ft, dark gray (2.5Y 4/1), hard, dry		END CAP, 1.5-inch, Sch 40 PVC: 28 to 28.25 ft
1320						Borehole Total Depth = 29 ft bgs Well Total Depth = 28.25 ft bgs		
30								

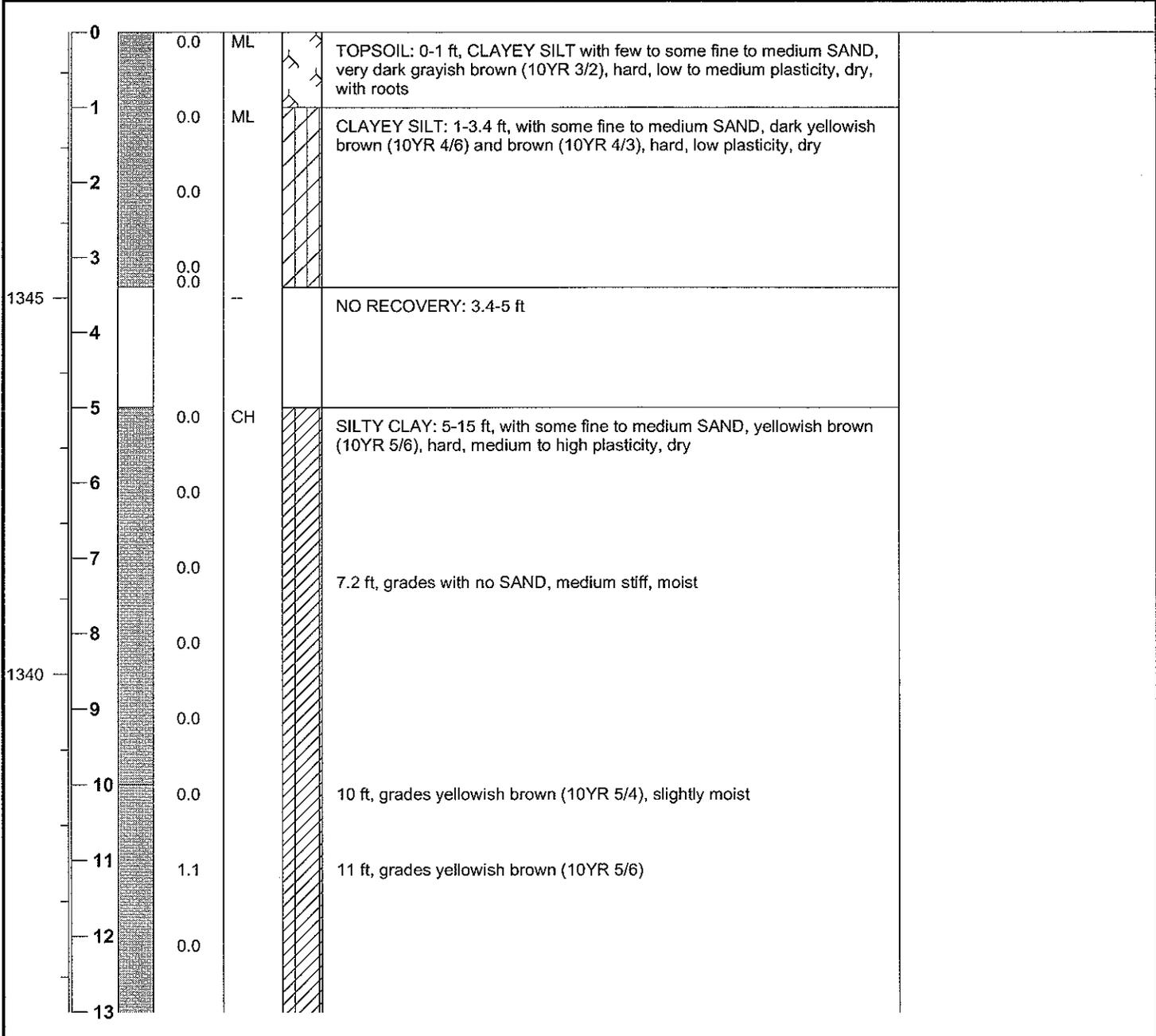
PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, KS		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.29		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): N/A		Borehole Diameter (inches): 3.25	
Coordinates: N 1710070.73 E 1656585.37		Dates Drilled: 12/7/10	



Elevation (ft. MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Sample ID and Interval
1335	13	0.0				13.5 ft, grades moist	Groundwater Grab DP170-A Screened: 13 to 18 ft bgs
	14	0.0				14.7 ft, grades brown (10YR 5/3)	
	15	0.1		MH		SANDY SILT: 15-20 ft, light greenish gray (10Y 7/1), soft, high plasticity, saturated, very fine to medium sand, with reduced zones	
	16	0.1					
	17	0.0					
1330	18	0.0				17.5 ft, grades with pockets of medium to coarse, poorly graded SAND, light brownish gray (2.5Y 6/2), hard, medium to high plasticity, slightly moist, iron staining	
	19	0.0					Groundwater Grab DP170-B Screened: 19 to 24 ft bgs
	20	0.0		SW		GRAVELLY SAND: 20-20.5 ft, loose, wet, coarse to very coarse sand, gravel up to 0.75-inches in diameter, well graded	
	21	0.0		ML		CLAYEY SILT: 20.5-23 ft, light yellowish brown (2.5Y 6/3), stiff to very stiff, low plasticity, slightly moist, iron staining	
	22	0.0					
1325	23	0.0		--		SHALE: 23-24 ft, dark gray (5Y 4/1), competent but friable, dry to slightly moist, no odor	
	24	0.0				Borehole Total Depth = 24 ft bgs	
	25						

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, KS		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.54		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): N/A		Borehole Diameter (inches): 3.25	
Coordinates: N 1710028.23 E 1656559.25		Dates Drilled: 12/7/10	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Sample ID and Interval
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Sample ID and Interval
1335	13	0.0				13 ft, grades moist	Groundwater Grab DP171 Screened: 14 to 19 ft bgs
	14	0.0					
	15	0.0		MH		SILT: 15-19 ft, grayish brown (10YR 5/2), light greenish gray (5GY 7/1) mottling, soft, high plasticity, wet	
	16	0.9					
	17	0.0					
	18	0.1				17.8 ft, grades with some medium SAND, dry	
1330	19	0.0		CH		CLAY: 19-19.8 ft, pale olive (5Y 6/3) and light yellowish brown (2.5Y 6/4), hard, high plasticity, dry	
	20	0.0		ML		SILT: 19.8-20 ft, reddish brown (5YR 4/3) and grayish brown (2.5Y 5/2), dry, laminated	
	21					NO RECOVERY: 20-24.6 ft	
	22						
1325	23						
	24					SILT: 24.6-25 ft, with dark gray (5Y 4/1) SHALE fragments, olive (5Y 5/3), hard, dry	
	25			ML		*DPT encountered refusal at 25 ft bgs.	
	26					Borehole Total Depth = 25 ft bgs *Based on borehole DP-172, shale was encountered at ~28 ft bgs. There was no groundwater encountered at DP-172 at 20 to 28 ft bgs.	

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, KS

**Logged By:** Kim Nguyen

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1348.58

**Top of Casing Elevation (ft, MSL):** N/A

**Coordinates:** N 1709973.63 E 1656559.33

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

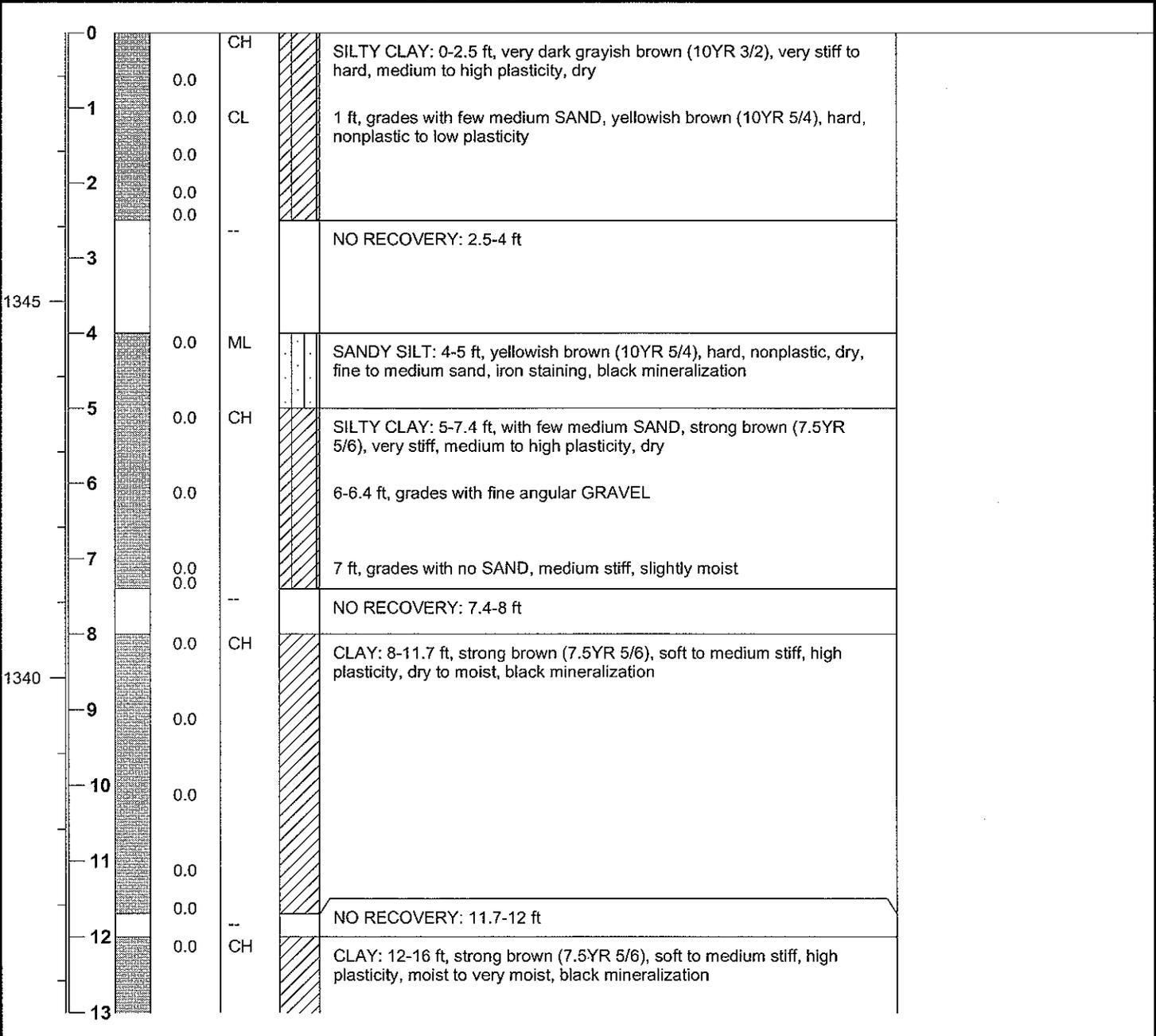
**Drilling Method:** DPT

**Sampling Method:** 4 ft Continuous

**Borehole Diameter (inches):** 2.5

**Dates Drilled:** 12/7/10

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Sample ID and Interval
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Sample ID and Interval
1335	13	0.0					
	14	0.0					
	15	0.0				15 ft, grades with SILT, light greenish gray (5GY 7/1) and light olive brown (2.5Y 5/3), very moist	Groundwater Grab DP172 Screened: 15 to 20 ft bgs
	16	5.3		MH		SILT: 16-19.6 ft, light greenish gray (5GY 7/1), soft, high plasticity, wet	
	17	0.0					
	18	0.0					
1330	19	0.0		SP		18.9 ft, grades saturated 19.5-19.6 ft, SAND lens, light greenish gray (5GY 7/1), loose, wet, medium to coarse sand, poorly graded	
	20	0.0		MH		CLAYEY SILT: 19.6-20 ft, light olive gray (5Y 6/2), medium stiff to stiff, high plasticity, dry to slightly moist	
	21	0.0		ML		SANDY SILT: 20-21.8 ft, light gray (2.5Y 7/2), medium stiff, medium plasticity, dry to slightly moist, medium to very coarse sand, iron staining	
	22	0.0		CH		CLAY: 21.8-23.5 ft, light olive gray (5Y 6/2), very stiff to hard, high plasticity, dry	
	23	0.0		GM		22.3-22.5 ft, SILTY GRAVEL lens, dry, angular gravel up to 1-inch in diameter	
	23	0.0		CH		22.5 ft, grades hard, iron staining	
1325	24	0.0		--		NO RECOVERY: 23.5-24 ft	
	24	0.0		CH		CLAY: 24-28 ft, olive (5Y 5/3), hard, high plasticity, dry, iron staining	
	25	0.0					
	26	0.0					
	27	0.0					
	28	0.0				27.6 ft, grades black (5Y 2.5/1), angular, weathered SHALE fragments	
1320	28	0.0		--		SHALE: 28-32 ft, black (5Y 2.5/1), hard, dry, competent *Sample was stuck in the sampler and was not able to be retrieved. The description is based on the sampler shoe cuttings.	
	29						

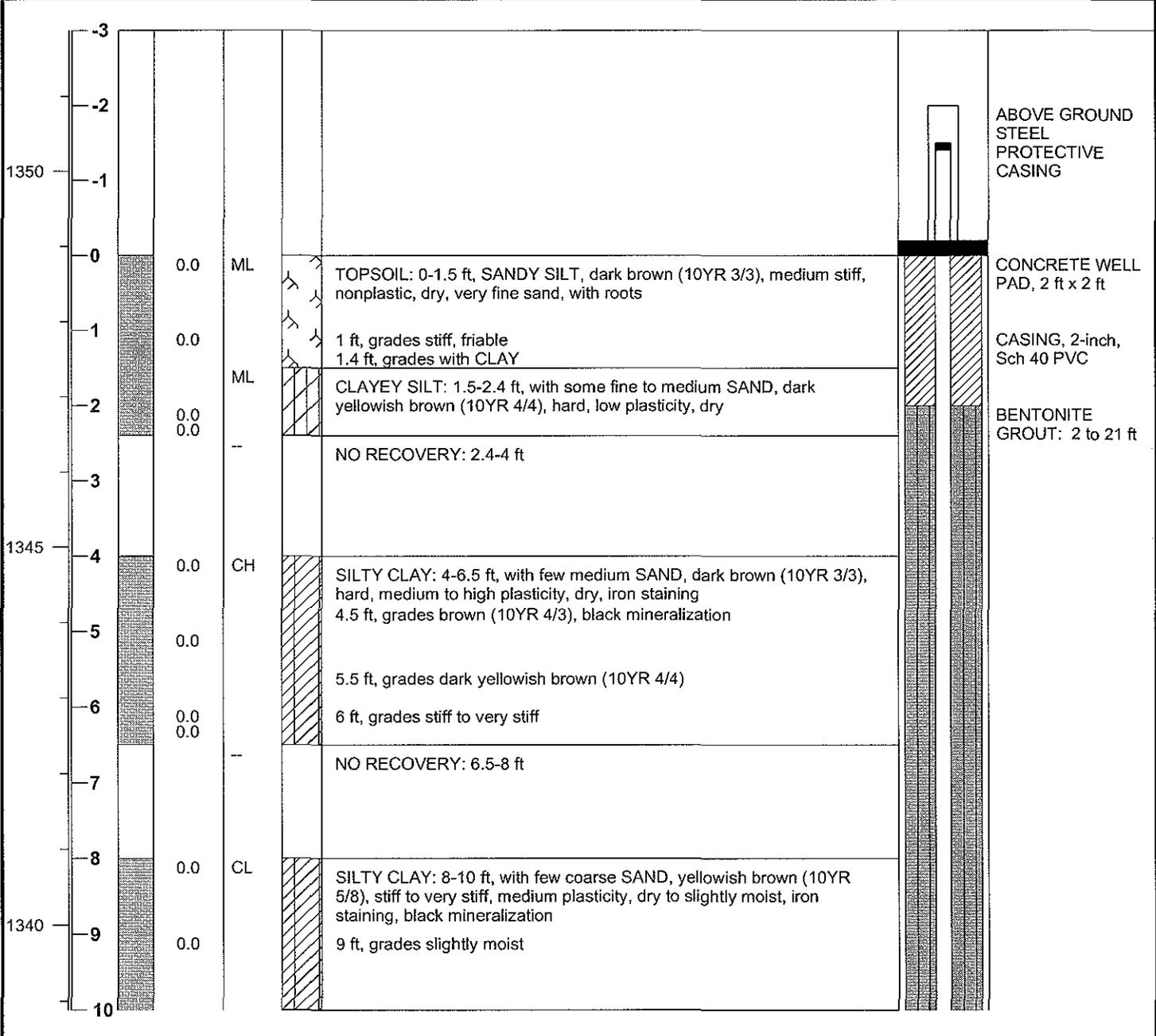


Well ID: P-13D

Total Depth: 33 ft bgs

PROJECT INFORMATION				DRILLING INFORMATION			
Project Name: Former Unocal Chemical Distribution Facility				Drilling Company: Roberts Environmental Drilling, Inc.			
Location: Wichita, Kansas				Driller: Brian Schilling			
Logged By: Kim Nguyen				Drilling Equipment: AMS 9700 Power Probe			
Project Manager: Derek Peacock				Drilling Method: DPT & Hollow Stem Auger			
Ground Surface Elevation (ft, MSL): 1348.88				Sampling Method: 4 ft Continuous			
Top of Casing Elevation (ft, MSL): 1351.77				Borehole Diameter (inches): 2.5 & 8			
Coordinates: N1709851.52 E1656635.54				Dates Drilled: 12/11/10 - 12/17/10			

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0	MH		CLAYEY SILT: 10-12.75 ft, strong brown (7.5YR 5/6), medium stiff, medium to high plasticity, slightly moist, black mineralization		
	11		0.0			11 ft, grades brown (10YR 5/3), medium stiff, moist		
	12		0.0					
	13		0.0	MH		SILT: 12.75-14.8 ft, brown (10YR 5/3), soft, high plasticity, very moist, black staining		
1335	14		0.0			14.2 ft, SAND pocket, medium dense, very moist, coarse to very coarse sand		
	15		0.0	--		NO RECOVERY: 14.8-16 ft		
	16		0.0	MH		SILT: 16-20 ft, with CLAY, light olive brown (2.5Y 5/3), soft, high plasticity, very moist to wet, black staining		
	17		0.0					
	18		0.0					
1330	19		0.0			18.7 ft, grades medium stiff to stiff, slightly moist		
	20		0.0	CH		SILTY CLAY: 20-24 ft, with few medium SAND, grayish brown (10YR 5/2), very stiff to hard, high plasticity, dry		
	21		0.0			21.5 ft, grades with greenish gray (10GY 6/1) mottling		
	22		0.0			22 ft, grades with increasing SILT		
	23		0.0					
1325	24		0.0	ML SM ML		SANDY SILT: 24-24.2 ft, greenish gray (10GY 6/1), very stiff, dry, iron staining		
	25		0.0	CH		SILTY SAND: 24.2-24.5 ft, with trace angular GRAVEL, greenish gray (5GY 6/1), medium dense, very moist to wet, medium to coarse sand, iron staining		
	26		0.0			SANDY SILT: 24.5-25 ft, greenish gray (10GY 6/1), very stiff, dry, iron staining		
						SILTY CLAY: 25-30 ft, with trace subangular GRAVEL, greenish gray (10GY 5/1) and grayish brown (2.5Y 5/2), very stiff, high plasticity, dry, iron staining		
							FILTER PACK, 12/20 silica sand: 21 to 33 ft	
							SCREEN, 2-inch, 0.010-inch slot, Sch 40 PVC: 22.75 to 32.75 ft	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1320	27		0.0	GW	[Diagonal Hatching]	26.7-26.9 ft, SILTY GRAVEL lens, with very coarse SAND, very moist, fine gravel, well graded	[Vertical Line]	
	28		0.0	CH	[Diagonal Hatching]	27 ft, grades with increasing SILT, olive yellow (2.5Y 6/6) and light greenish gray (10GY 7/1), medium stiff, slightly moist		
	29		0.0		[Diagonal Hatching]	28 ft, grades stiff, heavy iron staining		
	30		0.0		[Diagonal Hatching]	28.75 ft, grades brown (10YR 5/3), hard, dry		
	31		0.0	ML	[Diagonal Hatching]	CLAYEY SILT: 30-32.8 ft, pale olive (5Y 6/3), soft, medium plasticity, slightly moist		
	32		0.0		[Diagonal Hatching]	32 ft, grades with olive gray (5Y 5/2) SHALE fragments, hard, dry		
1315	33		0.0	--	[Horizontal Dotted]	SHALE: 32.8-33 ft, dark gray (5Y 4/1), hard, nonfriable, dry		END CAP, 2-inch, Sch 40 PVC: 32.75 to 33 ft
	34					Borehole Total Depth = 33 ft bgs Well Total Depth = 33 ft bgs		

Well ID: P-13S

Total Depth: 22 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** John O'Neal

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1348.86

**Top of Casing Elevation (ft, MSL):** 1351.76

**Coordinates:** N 1709857.84 E 1656635.21

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

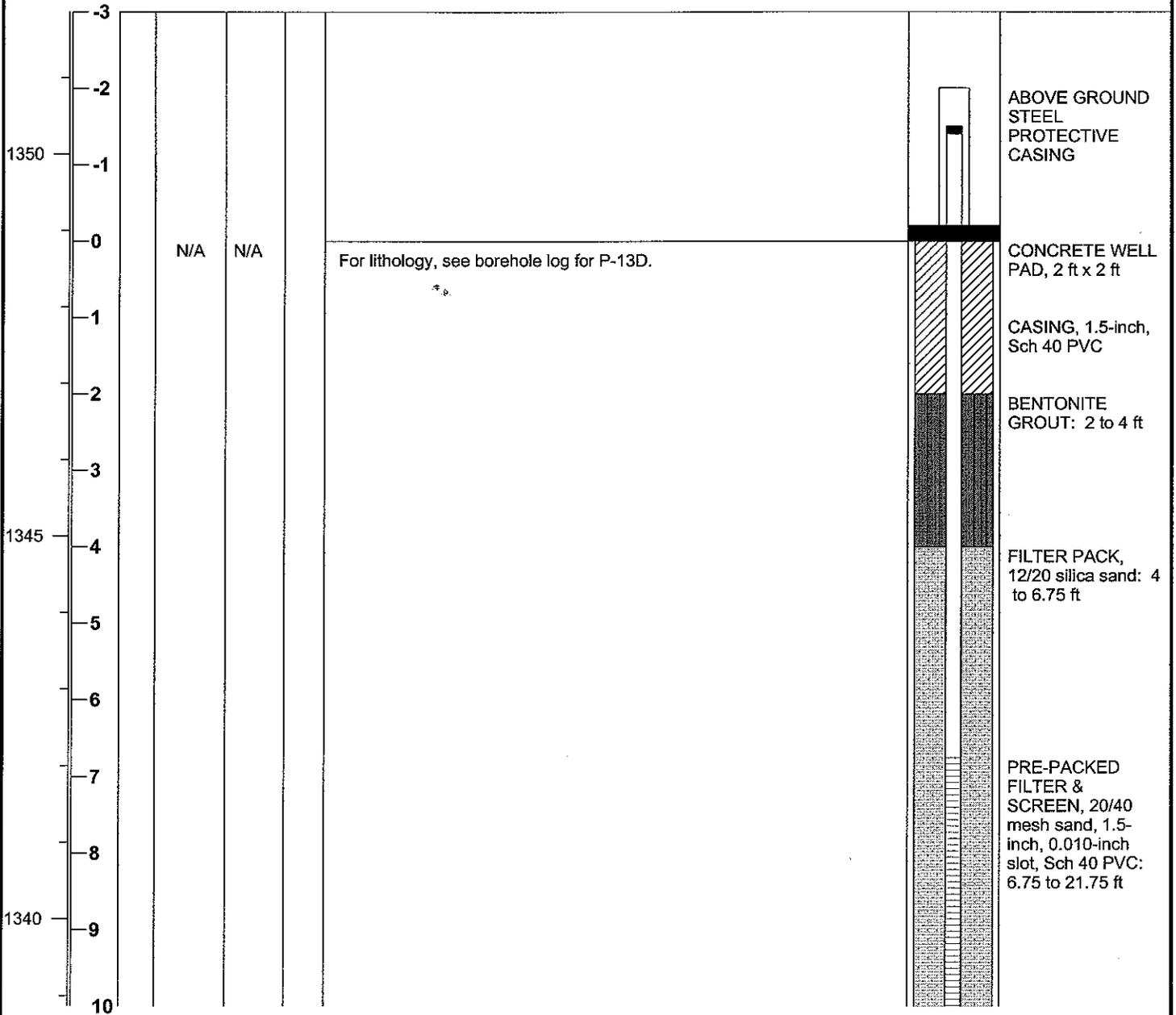
**Drilling Method:** DPT

**Sampling Method:** N/A

**Borehole Diameter (inches):** 3.25

**Dates Drilled:** 12/17/10

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10							
	11							
	12							
	13							
1335	14							
	15							
	16							
	17							
	18							
1330	19							
	20							
	21							
	22					Well Total Depth = 22 ft bgs		END CAP, 1.5-inch, Sch 40 PVC: 21.75 to 22 ft
	23							

Well ID: P-14D

Total Depth: 33 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** Kim Nguyen

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1348.88

**Top of Casing Elevation (ft, MSL):** 1351.58

**Coordinates:** N 1709848.93 E 1656557.43

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

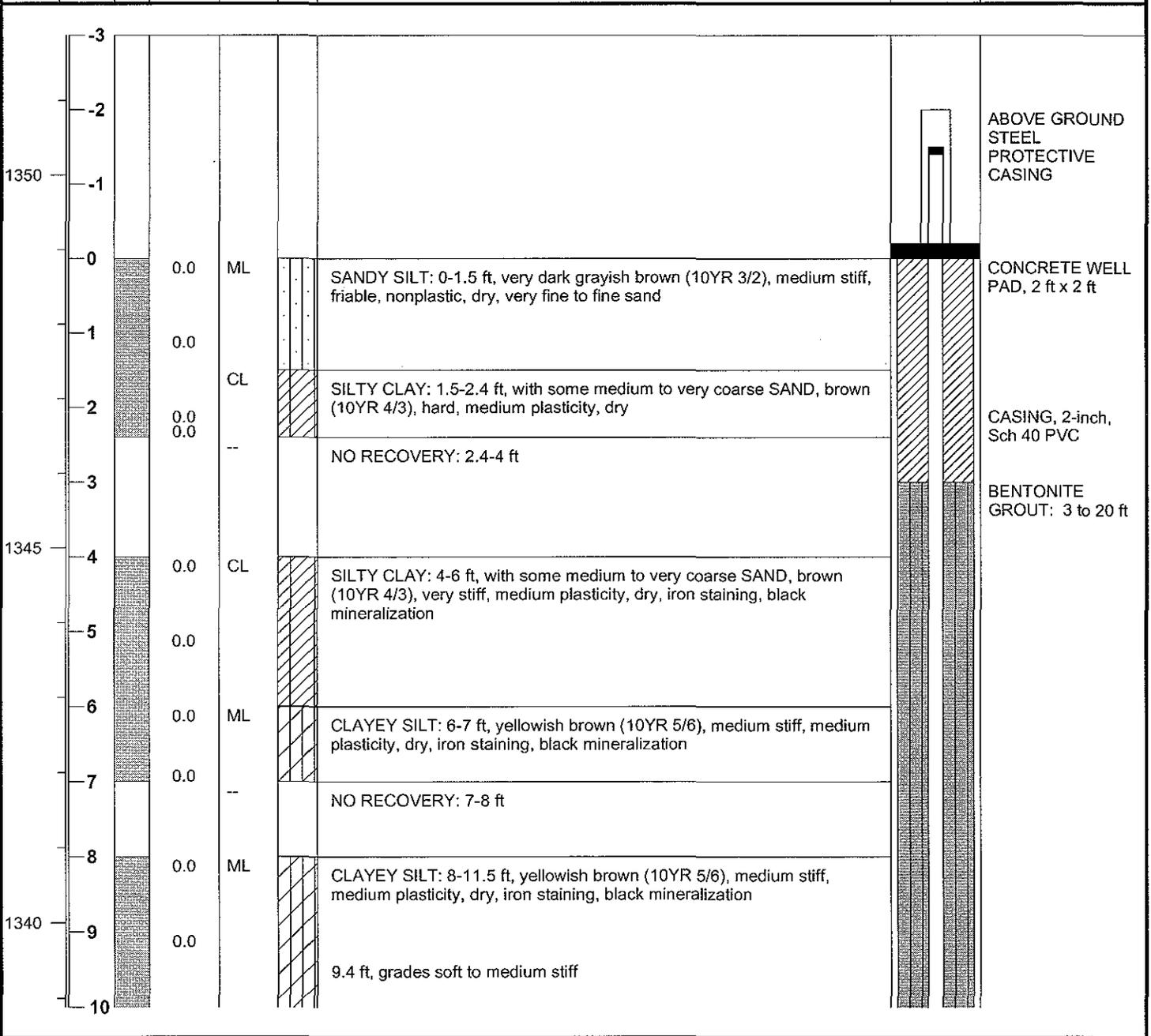
**Drilling Method:** DPT & Hollow Stem Auger

**Sampling Method:** 4 ft Continuous

**Borehole Diameter (inches):** 2.5 & 8

**Dates Drilled:** 12/11/10 - 12/12/10

Elevation (ft, MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0			10 ft, grades slightly moist to moist		
	11		0.0 0.0					
	12		0.0	ML		NO RECOVERY: 11.5-12 ft		
	13		0.0	CH		CLAYEY SILT: 12-13.5 ft, yellowish brown (10YR 5/6), soft, medium plasticity, very moist, iron staining, black mineralization		
1335	14		0.0			SILTY CLAY: 13.5-14.8 ft, yellowish brown (10YR 5/4), hard, high plasticity, dry		
	15		0.0			NO RECOVERY: 14.8-16 ft		
	16		0.0	ML		SANDY SILT: 16-16.9 ft, pale olive (5Y 6/3), hard, nonplastic, dry, fine to coarse sand		
	17		0.0	SP		SAND: 16.9-18.7 ft, brown (10YR 5/3), medium dense, wet to saturated, medium to coarse sand, poorly graded		
	18		0.0			17.7 ft, grades with black staining 18.3 ft, grades with little SILT		
1330	19		0.0	ML		SANDY SILT: 18.7-22.5 ft, light olive brown (2.5Y 5/3), greenish gray (10GY 6/1) mottling, medium stiff, nonplastic to low plasticity, slightly moist to moist, iron staining		
	20		0.0			20 ft, grades with few fine angular GRAVEL		
	21		0.0			21.6 ft, SILTY SAND pocket, medium dense, very moist, medium to coarse sand, poorly graded 21.8 ft, SAND pocket, medium dense, very moist, medium to coarse sand, poorly graded		
	22		0.0					
	23		0.0	ML		SILT: 22.5-23.2 ft, with few fine to medium SAND, light olive brown (2.5Y 5/3), greenish gray (10GY 6/1) mottling, very stiff to hard, low to medium plasticity, dry		
	24		0.0	ML		SANDY SILT: 23.2-26.6 ft, light olive brown (2.5Y 5/3), greenish gray (10GY 6/1) mottling, medium stiff, nonplastic to low plasticity, slightly moist to moist, iron staining 23.7 ft, SILTY SAND pocket, medium dense, moist, medium to coarse sand, poorly graded 24 ft, grades with trace angular GRAVEL, dry 25.1 ft, SAND lamination, loose, very moist to wet, coarse sand		
1325	25		0.0					
	26		0.0	ML		SILT: 26.6-27.5 ft, with few CLAY and trace angular GRAVEL, greenish		
								FILTER PACK, 12/20 silica sand: 20 to 32 ft
								SCREEN, 2-inch, 0.010-inch slot, Sch 40 PVC: 21.75 to 31.75 ft

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	27		0.0			gray (10GY 6/1) and light yellowish brown (2.5Y 6/3), very stiff to hard, low plasticity, dry		
	28		0.0	ML		NO RECOVERY: 27.5-28 ft		
1320	29		0.0			SILT: 28-32.5 ft, with dark gray (5Y 4/1) SHALE fragments, olive (5Y 5/3), hard, friable, low plasticity, dry, iron staining		
	30		0.0					
	31		0.0					
	32		0.0			31.5 ft, grades olive yellow (2.5Y 6/6), black mineralization		
	33		0.0			SHALE: 32.5-33 ft, very dark gray (5Y 3/1), hard, friable, dry		
1315	34					Borehole Total Depth = 33 ft bgs Well Total Depth = 32 ft bgs		END CAP, 2-inch, Sch 40 PVC: 31.75 to 32 ft

Well ID: P-14S

Total Depth: 21 ft bgs

### PROJECT INFORMATION

Project Name: Former Unocal Chemical Distribution Facility

Location: Wichita, Kansas

Logged By: John O'Neal

Project Manager: Derek Peacock

Ground Surface Elevation (ft, MSL): 1348.34

Top of Casing Elevation (ft, MSL): 1351.21

Coordinates: N 1709858.98 E 1656556.78

### DRILLING INFORMATION

Drilling Company: Roberts Environmental Drilling, Inc.

Driller: Brian Schilling

Drilling Equipment: AMS 9700 Power Probe

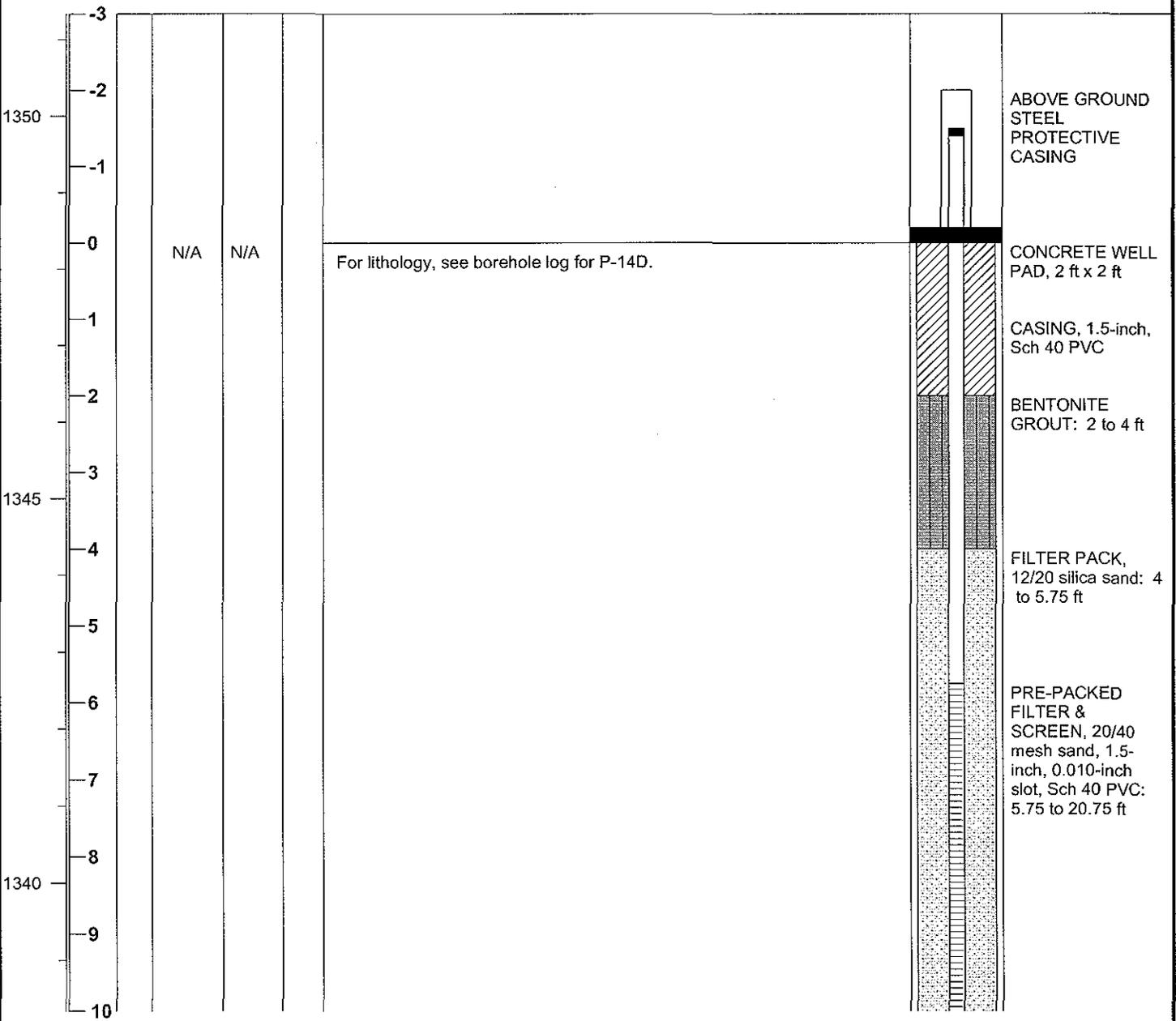
Drilling Method: DPT

Sampling Method: N/A

Borehole Diameter (inches): 3.25

Dates Drilled: 12/17/10

Elevation (ft, MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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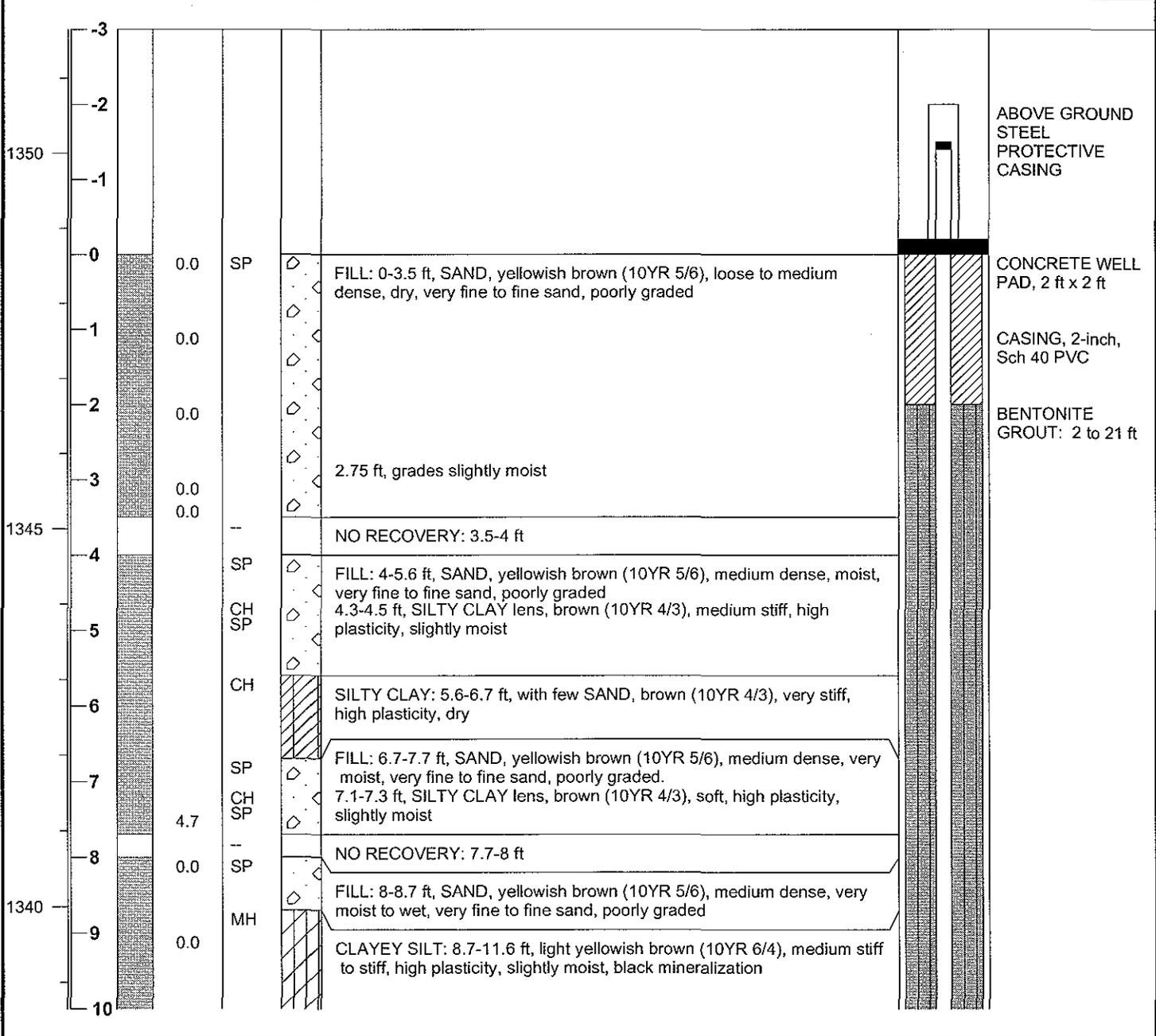
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10							
	11							
	12							
1335	13							
	14							
	15							
	16							
	17							
1330	18							
	19							
	20							
	21					Well Total Depth = 21 ft bgs		END CAP, 1.5-inch, Sch 40 PVC: 20.75 to 21 ft
	22							

Well ID: P-15D

Total Depth: 33.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT & Hollow Stem Auger	
Ground Surface Elevation (ft, MSL): 1348.65		Sampling Method: 4 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.69		Borehole Diameter (inches): 2.5 & 8	
Coordinates: N 1709927.89 E 1656589.91		Dates Drilled: 12/14/10 - 12/16/10	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		11.9			10 ft, grades with decreasing CLAY		
	11		53.7					
			15.3					
	12		0.0	CH		NO RECOVERY: 11.6-12 ft		
	13		0.1			SILTY CLAY: 12-18.8 ft, with few medium to coarse SAND, yellowish brown (10YR 5/4), very stiff to hard, medium to high plasticity, dry		
1335	14		56.3			14 ft, grades with greenish gray (10GY 6/1) mottling		
	15		12.4					
	16		6.6			16 ft, grades with some SAND, stiff		
	17		1.0					
	18		1.2	SM		18.7-18.8 ft, SILTY SAND lens, brown (10YR 5/3), medium dense, very moist to wet, medium to coarse sand		
1330	19		25.3	ML		SANDY SILT: 18.8-21.9 ft, greenish gray (10GY 6/1) and brown (10YR 5/3), slightly moist to moist, coarse to very coarse sand, iron staining 19.5 ft, SILTY SAND lamination, wet		
	20		46.8			20 ft, grades soft to medium stiff, moist		
	21		14.7			21.2 ft, grades with wet pockets of SILTY SAND		
	22		6.4	CL		SANDY CLAY: 21.9-22.9 ft, yellowish brown (10YR 5/4), light greenish gray (5GY 7/1) mottling, low plasticity, dry, medium to coarse sand, iron staining 22.8 ft, grades with white GRAVEL		
	23		4.2	SM		SILTY SAND: 22.9-24 ft, greenish gray (5GY 6/1) and light yellowish brown (10YR 7/4), medium dense, very moist, medium to very coarse sand, iron staining 23.9 ft, grades with GRAVEL		
1325	24		88.5	ML		SANDY SILT: 24-26 ft, greenish gray (10GY 6/1) and brown (10YR 5/3), medium stiff, slightly moist, coarse to very coarse sand, iron staining 24.7 ft, SAND lamination, loose, wet, coarse to very coarse sand, poorly graded 25.2 ft, SILTY SAND lamination, very moist, coarse to very coarse sand		
	25		28.8	GP		25.7-25.8 ft, SANDY GRAVEL lens, black (2.5Y 2.5/1), loose, wet, very coarse sand, fine gravel, poorly graded		
	26		4.3	ML		SILT: 26-28 ft, pale olive (5Y 6/3), very stiff, friable, nonplastic, dry, iron staining		
							FILTER PACK, 12/20 silica sand: 21 to 33 ft	
							SCREEN, 2-inch, 0.010-inch slot, Sch 40 PVC: 22.75 to 32.75 ft	



# MONITOR WELL LOG

Well ID: P-15D

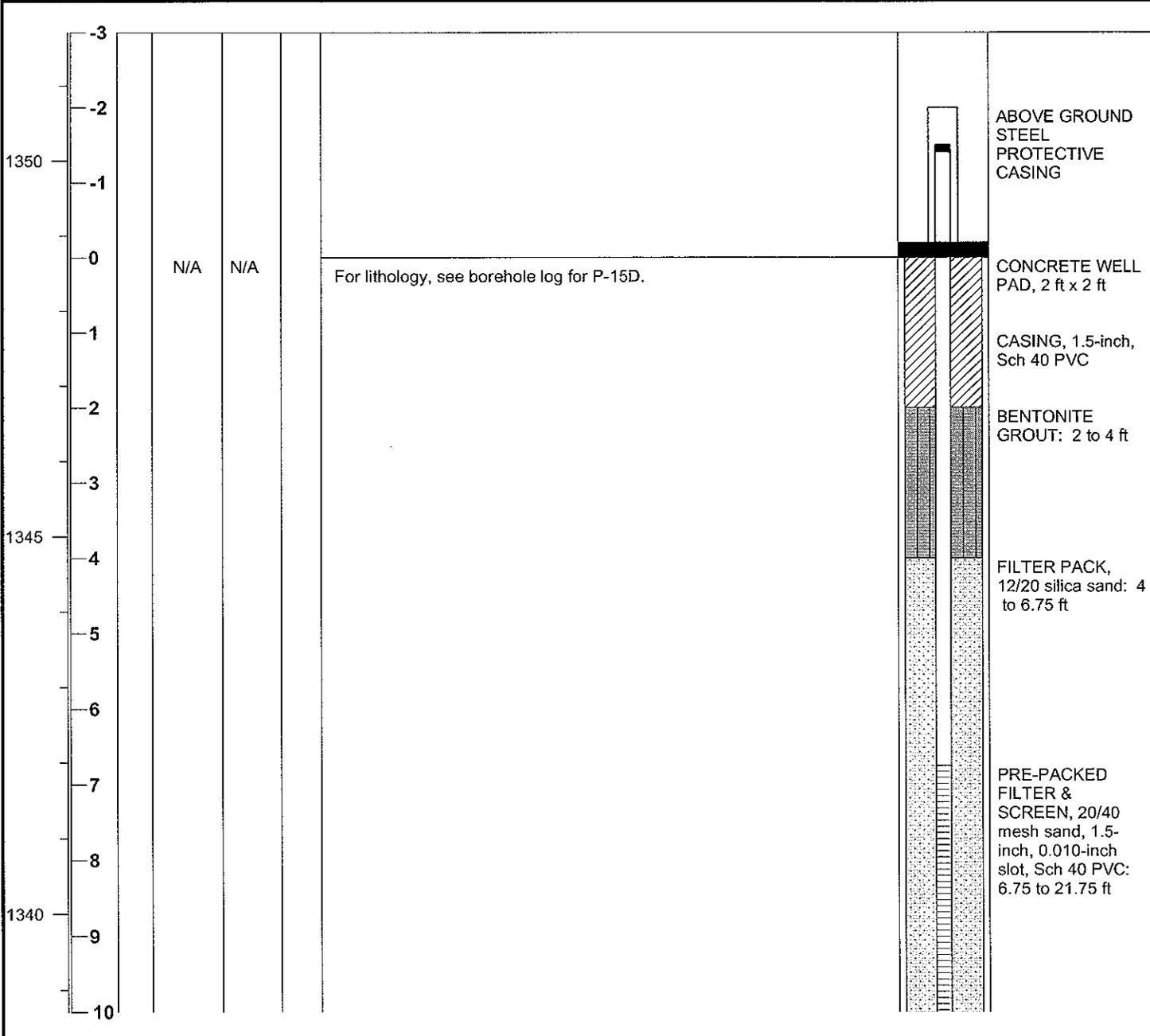
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1320	27		97.6			26.5 ft, SILTY SAND lamination, wet, very coarse sand		
	28		5.3	ML		CLAYEY SILT: 28-32 ft, yellowish brown (10YR 5/4), hard, low plasticity, dry		
	29		0.0					
	30		0.0			30 ft, grades pale olive (5Y 6/3), very stiff, friable		
	31		0.0			30.5 ft, SAND lamination, loose, dry, very fine to fine sand		
	31		0.0			31 ft, grades hard		
	32		0.0			31.5 ft, grades with SHALE fragments		
	32		0.0	--		SHALE: 32-33.5 ft, dark gray (5Y 4/1), very stiff to hard, dry		
	33		0.0					
1315	34					Borehole Total Depth = 33.5 ft bgs Well Total Depth = 33 ft bgs		END CAP, 2-inch, Sch 40 PVC: 32.75 to 33 ft

Well ID: P-15S

Total Depth: 22 ft bgs

PROJECT INFORMATION				DRILLING INFORMATION			
Project Name: Former Unocal Chemical Distribution Facility				Drilling Company: Roberts Environmental Drilling, Inc.			
Location: Wichita, Kansas				Driller: Brian Schilling			
Logged By: John O'Neal				Drilling Equipment: AMS 9700 Power Probe			
Project Manager: Derek Peacock				Drilling Method: DPT			
Ground Surface Elevation (ft, MSL): 1348.71				Sampling Method: N/A			
Top of Casing Elevation (ft, MSL): 1351.77				Borehole Diameter (inches): 3.25			
Coordinates: N 1709933.77 E 1656590.30				Dates Drilled: 12/16/10			

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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# MONITOR WELL LOG

Well ID: P-15S

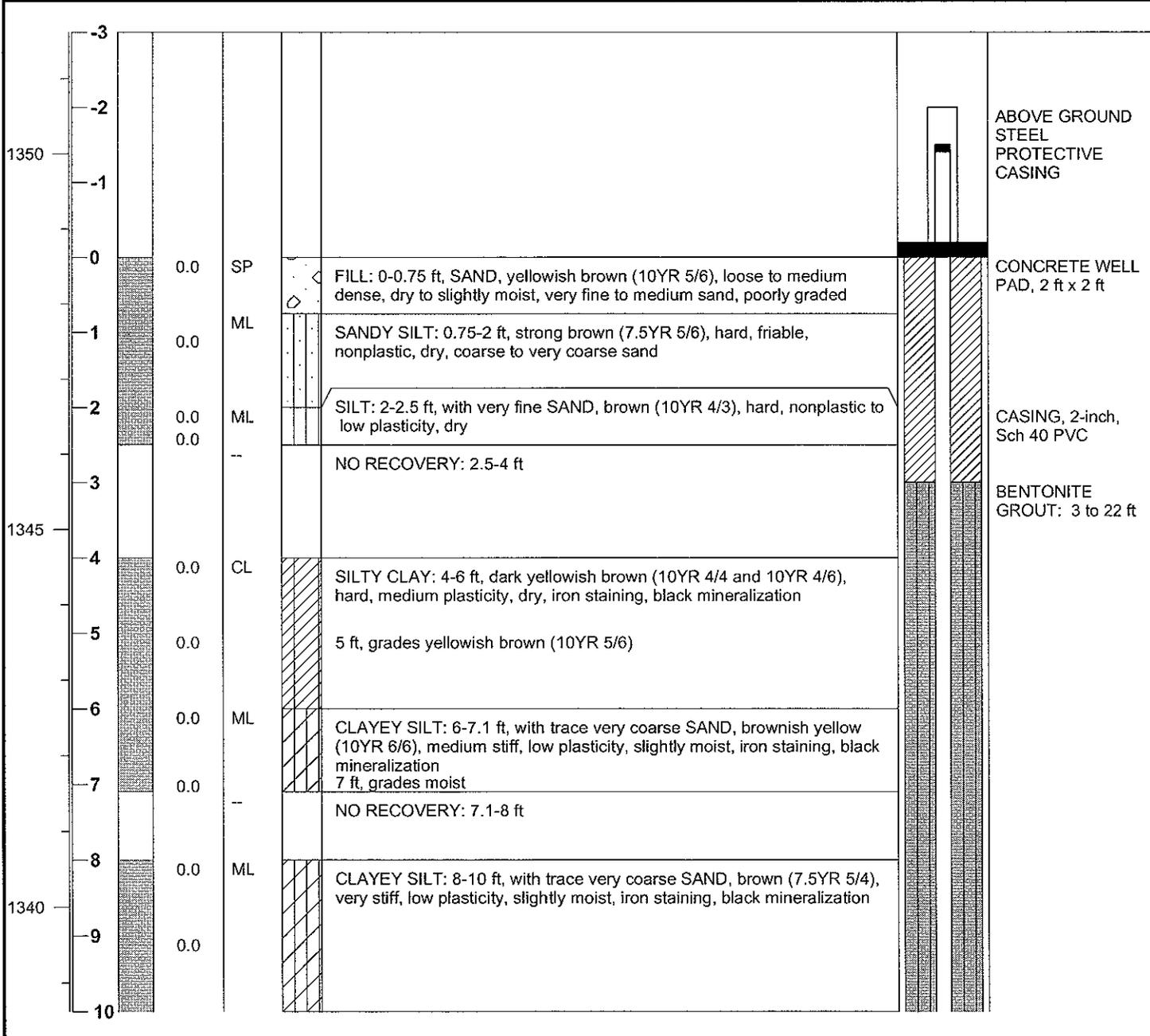
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10							
	11							
	12							
	13							
1335	14							
	15							
	16							
	17							
	18							
1330	19							
	20							
	21							
	22					Well Total Depth = 22 ft bgs		END CAP, 1.5-inch, Sch 40 PVC: 21.75 to 22 ft
	23							

Well ID: P-16D

Total Depth: 42 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen, John O'Neal		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT & Hollow Stem Auger	
Ground Surface Elevation (ft, MSL): 1348.62		Sampling Method: 4 ft Continuous & Auger Cuttings	
Top of Casing Elevation (ft, MSL): 1351.66		Borehole Diameter (inches): 2.5 & 8	
Coordinates: N 1709946.22 E 1656590.72		Dates Drilled: 12/14/10 - 12/15/10	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1335	10		2.7	CH	[Diagonal Hatching]	SILTY CLAY: 10-16 ft, brown (7.5YR 5/4), very stiff to hard, high plasticity, dry, strong pungent odor		
	11		1.3					
	12		5.9			12 ft, grades yellowish brown (10YR 5/4), gray (5Y 6/1) mottling		
	13		1.6					
	14		12.5			14 ft, grades medium stiff		
	15		1.8					
	16		0.9	CH	[Diagonal Hatching]	15.6 ft, grades with few very coarse SAND, greenish gray (5GY 6/1) mottling, slightly moist, iron staining		
	17		20.1			17.3 ft, grades with SILT, soft, moist		
	18		161.4	SM	[Dotted]	SILTY SAND: 17.4-18.6 ft, with pockets of loose to medium dense, wet SAND, light olive brown (2.5Y 5/3)		
				SP	[Dotted]	18.5-18.6 ft, SAND lens, black, wet, medium to coarse sand		
1330	19		1.0	CL	[Diagonal Hatching]	SILTY CLAY: 18.6-18.8 ft, with few medium SAND, light olive brown (2.5Y 5/3), greenish gray (2.5Y 5/3) mottling, medium stiff, low plasticity, slightly moist		
	20		0.0			NO RECOVERY: 18.8-20 ft		
	21		0.0	CL	[Diagonal Hatching]	SILTY CLAY: 20-23 ft, with white GRAVEL up to 1-inch in diameter, greenish gray (5GY 6/1) and brown (10YR 5/3), medium stiff, medium plasticity, dry		
	22		0.0					
	23		0.0	GW	[Circles]	*DPT encountered refusal at 23 ft bgs. Move location ~1 ft to the north and encountered refusal at 19 ft bgs. Switch to hollow stem augering. The following lithology is based on auger cuttings. GRAVEL: 23-24 ft		FILTER PACK, 12/20 silica sand: 22 to 40 ft
1325	24		0.5	ML	[Vertical Lines]	SANDY SILT: 24-25 ft, greenish gray (5GY 6/1), medium stiff, wet, medium to coarse sand		
	25		0.2			Auger cuttings consists of thick gray fine SAND and SILT wet slurry. Geologist is unable to log borehole due to indistinguishable lithology contacts.		SCREEN, 2-inch, 0.010-inch slot, Sch 40 PVC: 24.75 to 39.75 ft
	26		0.3					

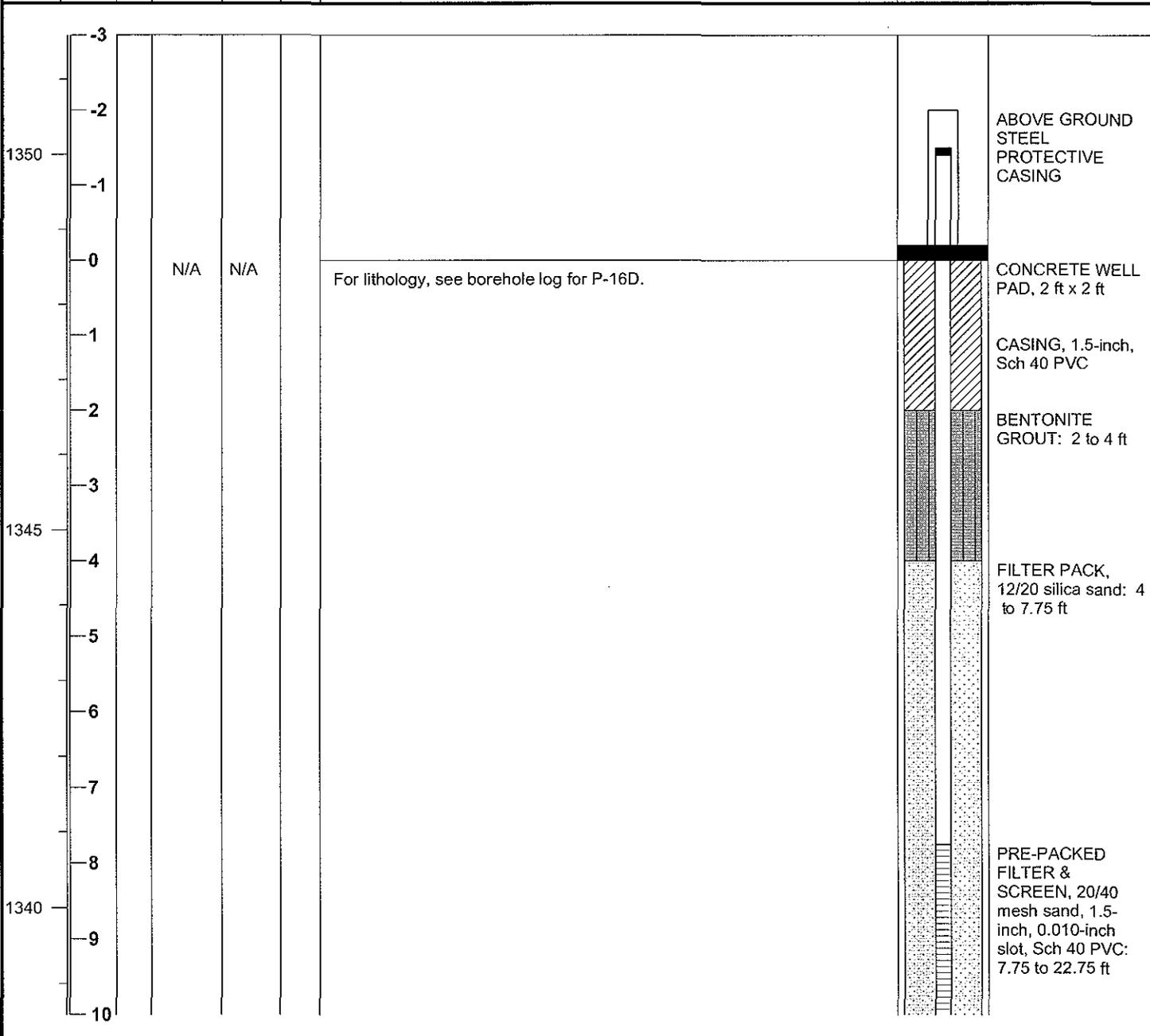
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1320	27		0.1					
	28		0.1					
	29		0.4					
	30		0.2					
	31		0.0					
	32		0.1					
1315	33							
	34							
	35							
	36							
	37							
	38		0.1					
1310	39		0.1					
	40		0.1			Drill rig encountered a hard lithologic contact.		
	41				SHALE			END CAP, 2-inch, Sch 40 PVC: 39.75 to 40 ft
	42					Borehole Total Depth = 42 ft bgs Well Total Depth = 40 ft bgs		
	43							

Well ID: P-16S

Total Depth: 23 ft bgs

PROJECT INFORMATION					DRILLING INFORMATION		
Project Name: Former Unocal Chemical Distribution Facility					Drilling Company: Roberts Environmental Drilling, Inc.		
Location: Wichita, Kansas					Driller: Brian Schilling		
Logged By: John O'Neal					Drilling Equipment: AMS 9700 Power Probe		
Project Manager: Derek Peacock					Drilling Method: DPT		
Ground Surface Elevation (ft, MSL): 1348.59					Sampling Method: N/A		
Top of Casing Elevation (ft, MSL): 1351.42					Borehole Diameter (inches): 3.25		
Coordinates: N 1709952.43 E 1656590.05					Dates Drilled: 12/16/10		

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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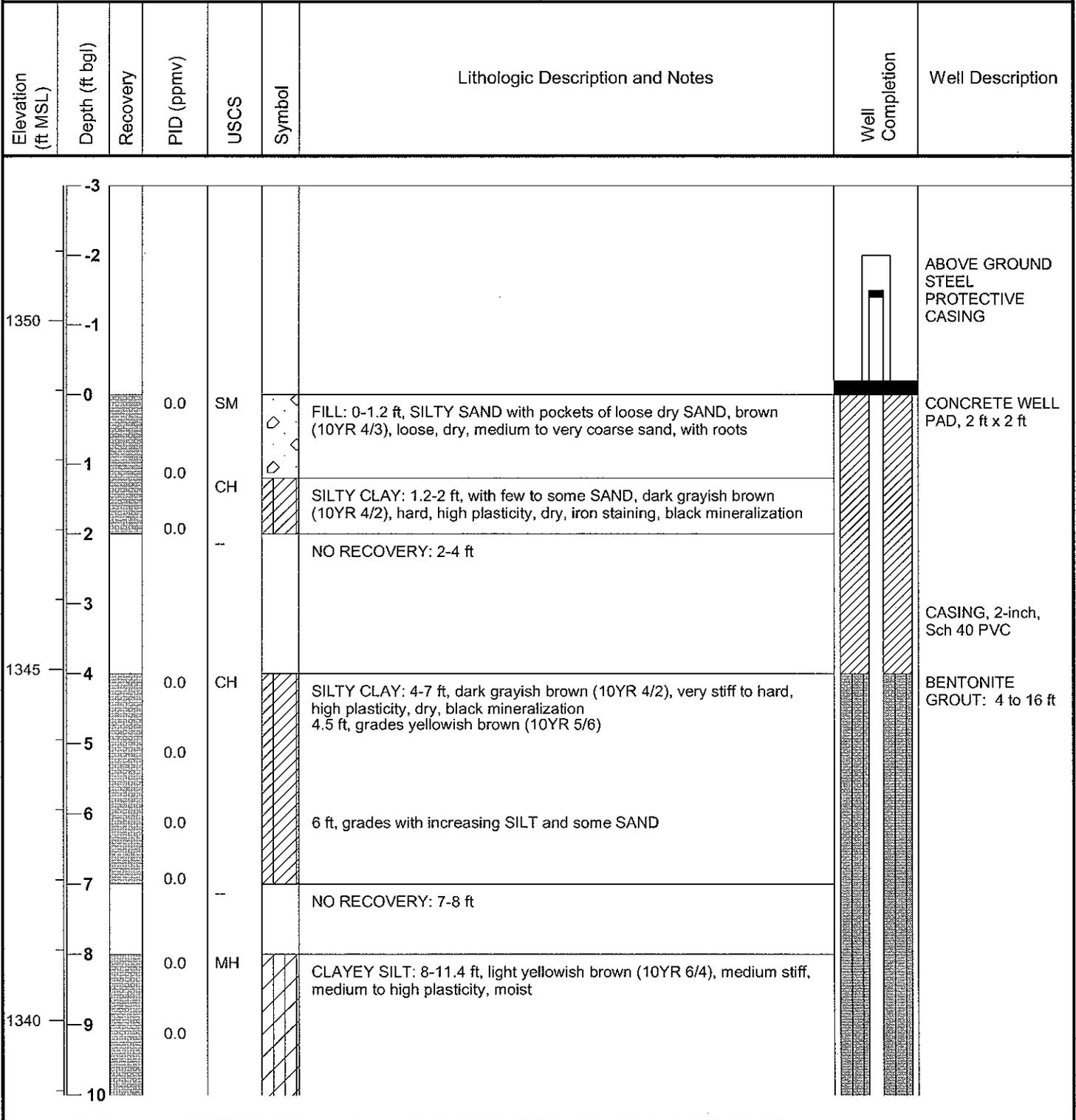


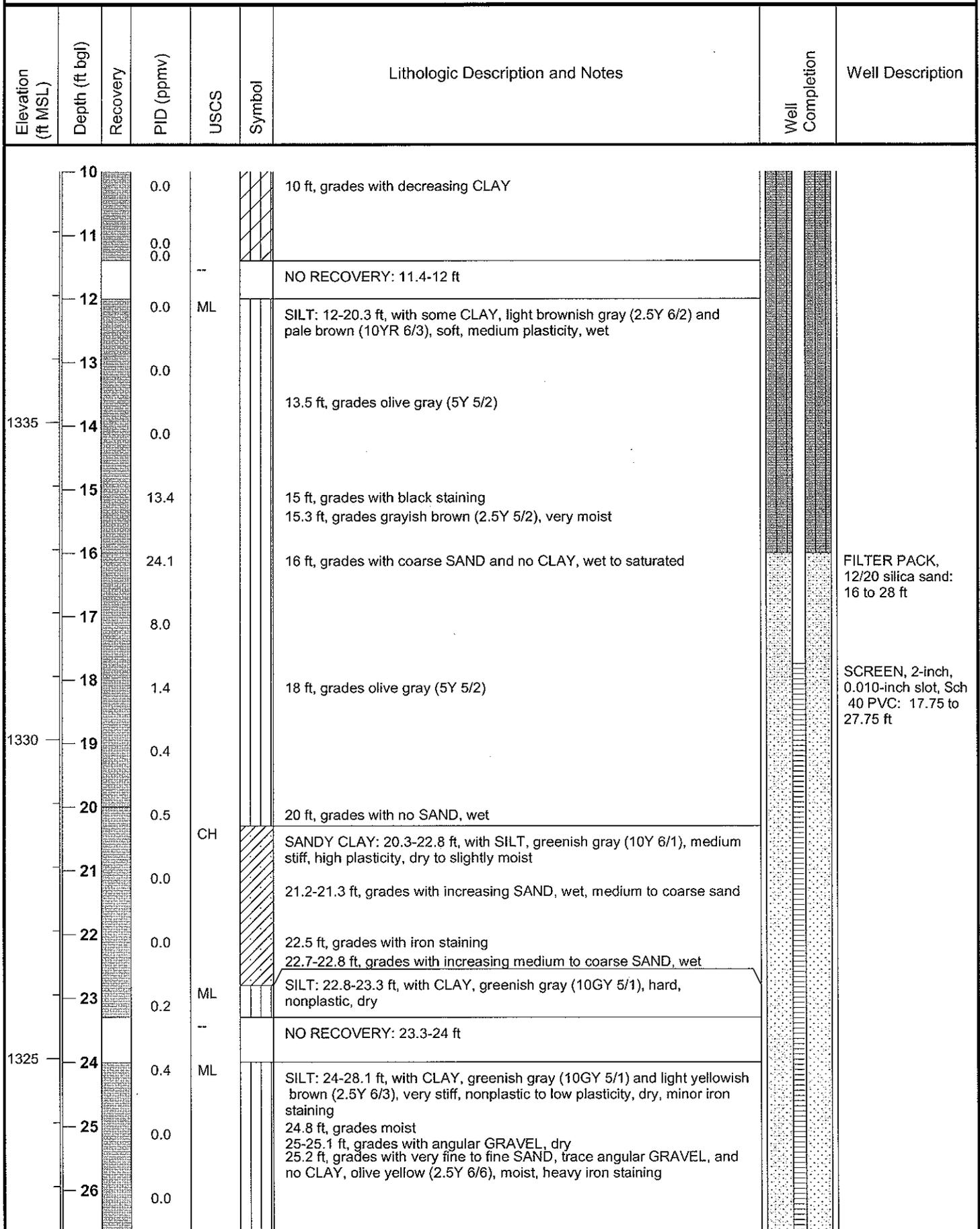


Well ID: P-17D

Total Depth: 32 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT & Hollow Stem Auger	
Ground Surface Elevation (ft, MSL): 1348.94		Sampling Method: 4 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.81		Borehole Diameter (inches): 2.5 & 8	
Coordinates: N 1709851.11 E 1656488.18		Dates Drilled: 12/10/10 - 12/11/10	





Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	27		0.1			27 ft, grades soft, very moist to wet		
	28		0.0			27.7 ft, grades pale olive (5Y 6/3), hard, dry		END CAP, 2-inch, Sch 40 PVC: 27.75 to 28 ft
1320	29		0.0			SHALE: 28.1-32 ft, dark grayish brown (2.5Y 4/2), hard, friable, dry		
	30		0.0					
	31		0.0			31 ft, grades dark gray (5Y 4/1)		
	32		0.0			Borehole Total Depth = 32 ft bgs Well Total Depth = 28 ft bgs		
	33							

Well ID: P-17S

Total Depth: 17 ft bgs

### PROJECT INFORMATION

**Project Name:** Former Unocal Chemical Distribution Facility

**Location:** Wichita, Kansas

**Logged By:** John O'Neal

**Project Manager:** Derek Peacock

**Ground Surface Elevation (ft, MSL):** 1348.84

**Top of Casing Elevation (ft, MSL):** 1351.87

**Coordinates:** N 1709851.07 E 1656496.41

### DRILLING INFORMATION

**Drilling Company:** Roberts Environmental Drilling, Inc.

**Driller:** Brian Schilling

**Drilling Equipment:** AMS 9700 Power Probe

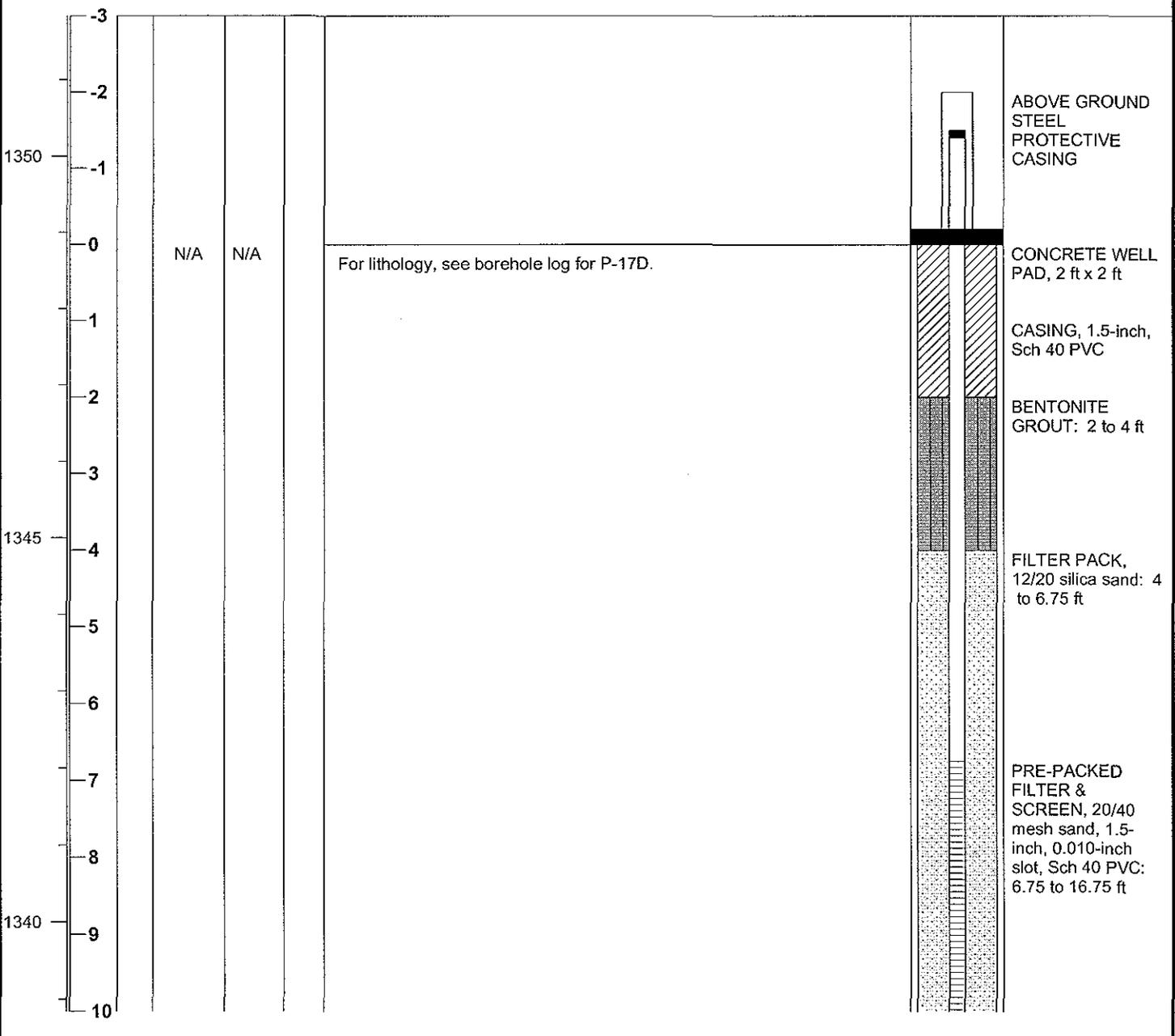
**Drilling Method:** DPT

**Sampling Method:** N/A

**Borehole Diameter (inches):** 3.25

**Dates Drilled:** 12/16/10

Elevation (ft, MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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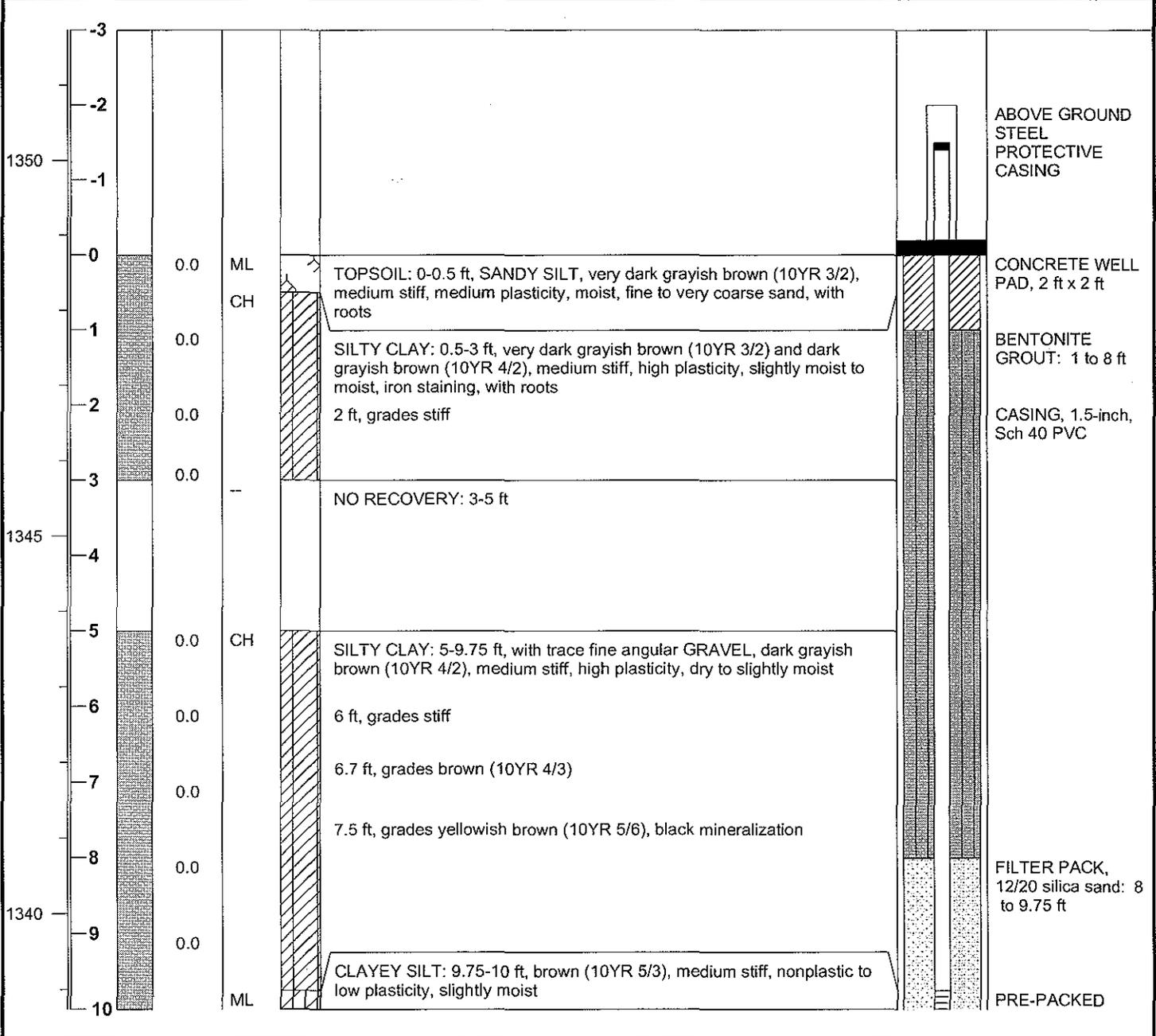
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1335	10 11 12 13 14 15 16 17 18					Well Total Depth = 17 ft bgs		END CAP, 1.5-inch, Sch 40 PVC: 16.75 to 17 ft

Well ID: P-18

Total Depth: 25.5 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.74		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.77		Borehole Diameter (inches): 3.25	
Coordinates: N 1709848.60 E 1656428.93		Dates Drilled: 12/9/10	

Elevation (ft, MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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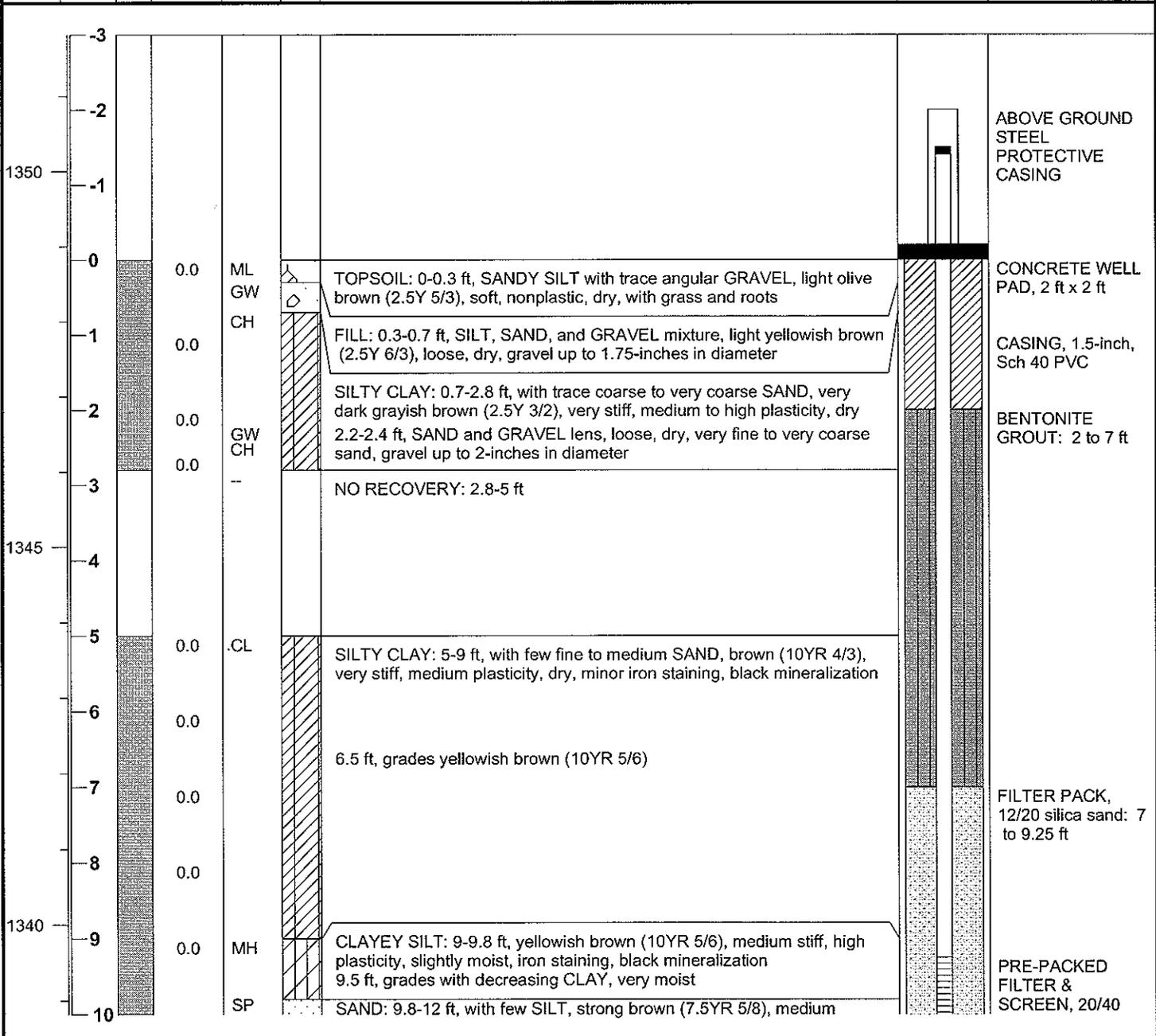
Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
1335	10		0.0	MH		SILT: 10-15 ft, with some CLAY, brown (10YR 5/3), soft to medium stiff, high plasticity, very moist		FILTER & SCREEN, 20/40 mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 9.75 to 19.75 ft
	11		0.0			11.4 ft, grades greenish gray (5GY 5/1)		
	12		0.0			11.8 ft, grades grayish brown (2.5Y 5/2) and dark gray (2.5Y 4/1) 12 ft, grades soft, wet		
	13		0.2					
	14		0.5			14 ft, grades with increasing CLAY		
	15		10.3	CL		SANDY CLAY: 15-16 ft, with pockets of loose, dry, medium to coarse SAND, dark gray (2.5Y 4/1), medium stiff, medium plasticity, dry, medium to coarse sand, strong hydrocarbon odor		
	16		413.6	ML		SILT: 16-22.5 ft, with fine to coarse SAND, gray (5Y 5/1), medium stiff to stiff, low to medium plasticity, dry, iron staining		
	17		52.6			16.7 ft, grades greenish gray (5GY 5/1) 17 ft, grades with CLAY and no SAND, greenish gray (10GY 6/1)		
	18		64.8					
1330	19		12.9			19 ft, grades with no CLAY, olive yellow (2.5Y 6/6), greenish gray (5GY 6/1) mottling, friable, nonplastic		
	20		25.4			20 ft, grades slightly moist		END CAP, 1.5-inch, Sch 40 PVC: 19.75 to 20 ft
	21		2.9			20.7 ft, grades greenish gray (5GY 6/1), olive yellow (2.5Y 6/6) mottling, stiff to very stiff, dry		
	22		5.6			22 ft, grades olive (5Y 5/3)		
	23		0.3	CL		SILTY CLAY: 22.5-24.5 ft, olive yellow (2.5Y 6/6), stiff, low to medium plasticity, dry, iron staining		
1325	24		4.7					
	25		3.8			SHALE: 24.5-25.5 ft, very dark gray (5Y 3/1), very stiff to hard, dry		
	26		0.0			Borehole Total Depth = 25.5 ft bgs Well Total Depth = 20 ft bgs		

Well ID: P-19

Total Depth: 24 ft bgs

PROJECT INFORMATION		DRILLING INFORMATION	
Project Name: Former Unocal Chemical Distribution Facility		Drilling Company: Roberts Environmental Drilling, Inc.	
Location: Wichita, Kansas		Driller: Brian Schilling	
Logged By: Kim Nguyen		Drilling Equipment: AMS 9700 Power Probe	
Project Manager: Derek Peacock		Drilling Method: DPT	
Ground Surface Elevation (ft, MSL): 1348.82		Sampling Method: 5 ft Continuous	
Top of Casing Elevation (ft, MSL): 1351.78		Borehole Diameter (inches): 3.25	
Coordinates: N 1709896.43 E 1656366.82		Dates Drilled: 12/10/10	

Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
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Elevation (ft MSL)	Depth (ft bgl)	Recovery	PID (ppmv)	USCS	Symbol	Lithologic Description and Notes	Well Completion	Well Description
	10		0.0			dense, very moist, coarse to very coarse sand, poorly graded 10 ft, grades with few CLAY and no SILT, yellowish brown (10YR 5/8), loose to medium dense, wet, medium to very coarse sand		mesh sand, 1.5-inch, 0.010-inch slot, Sch 40 PVC: 9.25 to 19.25 ft
	11		0.0	CH SP		10.6-10.8 ft, SILTY CLAY lens, dark grayish brown (2.5Y 4/2) and light greenish gray (10Y 7/1), soft, high plasticity, moist, iron staining		
	12		0.0	CH		11 ft, grades with increasing CLAY, medium dense, wet 11.4 ft, grades with no CLAY, loose		
	13		0.7	SC ML		CLAY: 12-12.7 ft, pale olive (5Y 6/4), soft to medium stiff, high plasticity, very moist CLAYEY SAND: 12.7-13 ft, with few angular GRAVEL up to 1-inch in diameter, olive (5Y 5/6), dense, very moist, very coarse sand, iron staining		
1335	14		2.2			SILT: 13-23 ft, olive (5Y 5/3), brown (7.5YR 4/4) mottling, hard, nonplastic, dry 13.8 ft, grades brown (7.5YR 4/4)		
	15		0.0			15 ft, grades with CLAY, light yellowish brown (2.5Y 6/3), very stiff to hard, minor iron staining		
	16		1.3					
	17		0.6					
	18		0.2			17.5 ft, grades light olive brown (2.5Y 6/3), hard, friable		
1330	19		1.6					
	20		0.5			19.2 ft, grades with olive gray (5Y 5/2) mottling		END CAP, 1.5-inch, Sch 40 PVC: 19.25 to 19.5 ft
	21		0.0					
	22		24.8			21 ft, no odor		
	23		2.1					
	24		0.0			SHALE: 23-24 ft, black (5Y 2.5/1), hard, slightly weathered		
1325	24		0.0			Borehole Total Depth = 24 ft bgs Well Total Depth = 19.5 ft bgs		
	25							

**Attachment B**

**Laboratory Reports**

## ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17605-2425

Prepared for:

Chevron Environmental Mgmt Co  
6001 Bollinger Canyon Rd K2052  
San Ramon CA 94583

December 09, 2010

Project: Wichita, KS

Submittal Date: 12/08/2010  
Group Number: 1224312  
SDG: WKS64  
PO Number: 0015063046  
Release Number: MAILLOUX  
State of Sample Origin: KSClient Sample DescriptionDP170-A Grab Water Sample  
DP170-B Grab Water Sample  
DP171 Grab Water Sample  
DP172 Grab Water Sample  
DP-TB01 Water SampleLancaster Labs (LLD) #6158156  
6158157  
6158158  
6158159  
6158160

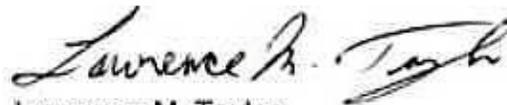
The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC      URS Corporation  
COPY TO  
1 COPY TO      Data Package Group

Attn: Jean Youngerman

Questions? Contact your Client Services Representative  
Katherine A Klinefelter at (717) 656-2300 Ext. 1566

Respectfully Submitted,



Lawrence M. Taylor  
Senior Specialist

**Sample Description: DP170-A Grab Water Sample**  
**Site # NA Former Unocal Chem Distrib Facility**  
**2100 E. 37th Street, Wichita, KS**

**LLI Sample # WW 6158156**  
**LLI Group # 1224312**  
**Account # 11956**

**Project Name: Wichita, KS**

Collected: 12/07/2010 16:55 by KN

Chevron Environmental Mgmt Co  
 6001 Bollinger Canyon Rd K2052  
 San Ramon CA 94583

Submitted: 12/08/2010 09:30

Reported: 12/09/2010 16:03

P170A SDG#: WKS64-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	5.9	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	3.8 J	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	7.9	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Acetate	108-05-4	N.D.	0.2	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs 25 ml purge 8260	SW-846 8260B 25mL purge	1	G103431AA	12/09/2010 10:15	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G103431AA	12/09/2010 10:15	Jason M Long	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

**Sample Description:** DP170-B Grab Water Sample  
 Site # NA Former Unocal Chem Distrib Facility  
 2100 E. 37th Street, Wichita, KS

LLI Sample # WW 6158157  
 LLI Group # 1224312  
 Account # 11956

**Project Name:** Wichita, KS

Collected: 12/07/2010 16:30 by KN

Chevron Environmental Mgmt Co  
 6001 Bollinger Canyon Rd K2052  
 San Ramon CA 94583

Submitted: 12/08/2010 09:30

Reported: 12/09/2010 16:03

P170B SDG#: WKS64-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.1 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	8.1	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Acetate	108-05-4	N.D.	0.2	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs 25 ml purge 8260	SW-846 8260B 25mL purge	1	G103422AA	12/08/2010 15:55	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G103422AA	12/08/2010 15:55	Jason M Long	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

**Sample Description: DP171 Grab Water Sample**  
**Site # NA Former Unocal Chem Distrib Facility**  
**2100 E. 37th Street, Wichita, KS**

**LLI Sample # WW 6158158**  
**LLI Group # 1224312**  
**Account # 11956**

**Project Name: Wichita, KS**

Collected: 12/07/2010 16:15 by KN

Chevron Environmental Mgmt Co  
 6001 Bollinger Canyon Rd K2052  
 San Ramon CA 94583

Submitted: 12/08/2010 09:30

Reported: 12/09/2010 16:03

DP171 SDG#: WKS64-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	4.0 J	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	2.1 J	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	0.2 J	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	0.4 J	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.1 J	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	1.3	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	0.3 J	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Acetate	108-05-4	N.D.	0.2	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs 25 ml purge 8260	SW-846 8260B 25mL purge	1	G103431AA	12/09/2010 09:53	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G103431AA	12/09/2010 09:53	Jason M Long	1

\*=This limit was used in the evaluation of the final result

**Sample Description: DP172 Grab Water Sample**  
**Site # NA Former Unocal Chem Distrib Facility**  
**2100 E. 37th Street, Wichita, KS**

**LLI Sample # WW 6158159**  
**LLI Group # 1224312**  
**Account # 11956**

**Project Name: Wichita, KS**

Collected: 12/07/2010 15:15 by KN

Chevron Environmental Mgmt Co  
 6001 Bollinger Canyon Rd K2052  
 San Ramon CA 94583

Submitted: 12/08/2010 09:30

Reported: 12/09/2010 16:03

DP172 SDG#: WKS64-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/1</b>	<b>ug/1</b>	<b>ug/1</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	3.6 J	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	0.5 J	0.1	0.5	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	7.2	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Acetate	108-05-4	N.D.	0.2	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs 25 ml purge 8260	SW-846 8260B 25mL purge	1	G103431AA	12/09/2010 09:31	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G103431AA	12/09/2010 09:31	Jason M Long	1

\*=This limit was used in the evaluation of the final result



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

**Sample Description: DP-TB01 Water Sample**  
**Site # NA Former Unocal Chem Distrib Facility**  
**2100 E. 37th Street, Wichita, KS**

**LLI Sample # WW 6158160**  
**LLI Group # 1224312**  
**Account # 11956**

**Project Name: Wichita, KS**

Collected: 12/07/2010 07:00

Chevron Environmental Mgmt Co  
 6001 Bollinger Canyon Rd K2052  
 San Ramon CA 94583

Submitted: 12/08/2010 09:30

Reported: 12/09/2010 16:03

DPTB1 SDG#: WKS64-05TB\*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
<b>GC/MS</b>	<b>Volatiles</b>	<b>SW-846 8260B 25mL</b>	<b>ug/l</b>	<b>ug/l</b>	<b>ug/l</b>	
	<b>purge</b>					
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromoform	75-25-2	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	n-Butylbenzene	104-51-8	N.D.	0.1	0.5	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	0.5	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroethane	75-00-3	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichlorobenzene	95-50-1	N.D.	0.1	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	0.5	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Isopropylbenzene	98-82-8	N.D.	0.1	0.5	1
02898	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.1	0.5	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	5.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Styrene	100-42-5	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Trichloroethene	79-01-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1
02898	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.1	0.5	1
02898	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.1	0.5	1
02898	Vinyl Acetate	108-05-4	N.D.	0.2	0.5	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

### General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	VOCs 25 ml purge 8260	SW-846 8260B 25mL purge	1	G103422AA	12/08/2010 18:25	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G103422AA	12/08/2010 18:25	Jason M Long	1

\*=This limit was used in the evaluation of the final result

## Quality Control Summary

 Client Name: Chevron Environmental Mgmt Co  
 Reported: 12/09/10 at 04:03 PM

Group Number: 1224312

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

## Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: G103422AA	Sample number (s): 6158157, 6158160								
Acetone	N.D.	3.0	5.0	ug/l	92	98	74-137	7	30
Benzene	N.D.	0.1	0.5	ug/l	101	100	80-120	2	30
Bromoform	N.D.	0.1	0.5	ug/l	102	95	70-128	7	30
2-Butanone	N.D.	1.0	5.0	ug/l	90	95	71-149	5	30
n-Butylbenzene	N.D.	0.1	0.5	ug/l	100	100	80-120	0	30
Carbon Disulfide	N.D.	0.4	0.5	ug/l	110	105	73-133	5	30
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	100	98	80-129	2	30
Chlorobenzene	N.D.	0.1	0.5	ug/l	100	98	80-120	2	30
Chloroethane	N.D.	0.1	0.5	ug/l	124	122	67-124	2	30
Chloroform	N.D.	0.1	0.5	ug/l	102	100	80-120	2	30
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	100	98	80-120	2	30
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	101	98	80-120	3	30
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	104	98	80-127	6	30
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	103	100	80-123	3	30
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103	101	80-120	2	30
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	103	100	80-120	3	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	101	99	80-120	2	30
Isopropylbenzene	N.D.	0.1	0.5	ug/l	102	99	80-120	3	30
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	102	99	73-120	4	30
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	108	102	70-123	5	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	102	99	80-120	3	30
Naphthalene	N.D.	0.1	0.5	ug/l	102	99	77-120	3	30
Styrene	N.D.	0.1	0.5	ug/l	102	100	80-120	2	30
Tetrachloroethene	N.D.	0.1	0.5	ug/l	101	99	80-120	2	30
Toluene	N.D.	0.1	0.5	ug/l	102	98	80-120	3	30
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	102	100	80-121	2	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	102	99	80-120	3	30
Trichloroethene	N.D.	0.1	0.5	ug/l	101	100	80-120	1	30
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	122	120	71-126	2	30
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	100	100	80-120	1	30
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	101	101	80-120	0	30
Vinyl Acetate	N.D.	0.2	0.5	ug/l	135	139	57-157	3	30
Vinyl Chloride	N.D.	0.1	0.5	ug/l	122	122	55-126	1	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	101	100	80-120	2	30
Batch number: G103431AA	Sample number (s): 6158156, 6158158-6158159								
Acetone	N.D.	3.0	5.0	ug/l	91	94	74-137	3	30
Benzene	N.D.	0.1	0.5	ug/l	99	98	80-120	1	30
Bromoform	N.D.	0.1	0.5	ug/l	98	95	70-128	3	30
2-Butanone	N.D.	1.0	5.0	ug/l	86	91	71-149	5	30
n-Butylbenzene	N.D.	0.1	0.5	ug/l	96	98	80-120	2	30
Carbon Disulfide	N.D.	0.4	0.5	ug/l	105	104	73-133	1	30
Carbon Tetrachloride	N.D.	0.1	0.5	ug/l	98	97	80-129	0	30
Chlorobenzene	N.D.	0.1	0.5	ug/l	97	98	80-120	1	30
Chloroethane	N.D.	0.1	0.5	ug/l	119	121	67-124	2	30
Chloroform	N.D.	0.1	0.5	ug/l	99	99	80-120	0	30

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

 Client Name: Chevron Environmental Mgmt Co  
 Reported: 12/09/10 at 04:03 PM

Group Number: 1224312

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL**</u>	<u>Blank LOQ</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
1,2-Dichlorobenzene	N.D.	0.1	0.5	ug/l	95	97	80-120	2	30
1,1-Dichloroethane	N.D.	0.1	0.5	ug/l	100	99	80-120	1	30
1,2-Dichloroethane	N.D.	0.1	0.5	ug/l	99	96	80-127	3	30
1,1-Dichloroethene	N.D.	0.1	0.5	ug/l	100	100	80-123	0	30
cis-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	100	99	80-120	0	30
trans-1,2-Dichloroethene	N.D.	0.1	0.5	ug/l	99	99	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	97	99	80-120	1	30
Isopropylbenzene	N.D.	0.1	0.5	ug/l	98	99	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.1	0.5	ug/l	99	96	73-120	3	30
4-Methyl-2-Pentanone	N.D.	1.0	5.0	ug/l	101	97	70-123	4	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	99	98	80-120	2	30
Naphthalene	N.D.	0.1	0.5	ug/l	96	95	77-120	1	30
Styrene	N.D.	0.1	0.5	ug/l	99	100	80-120	1	30
Tetrachloroethene	N.D.	0.1	0.5	ug/l	97	98	80-120	1	30
Toluene	N.D.	0.1	0.5	ug/l	97	98	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.1	0.5	ug/l	98	99	80-121	1	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	97	96	80-120	0	30
Trichloroethene	N.D.	0.1	0.5	ug/l	99	99	80-120	0	30
Trichlorofluoromethane	N.D.	0.1	0.5	ug/l	115	117	71-126	1	30
1,2,4-Trimethylbenzene	N.D.	0.1	0.5	ug/l	96	99	80-120	3	30
1,3,5-Trimethylbenzene	N.D.	0.1	0.5	ug/l	97	100	80-120	3	30
Vinyl Acetate	N.D.	0.2	0.5	ug/l	137	135	57-157	2	30
Vinyl Chloride	N.D.	0.1	0.5	ug/l	113	117	55-126	3	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	97	99	80-120	2	30

## Sample Matrix Quality Control

 Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: G103422AA	Sample number(s): 6158157,6158160 UNSPK: P155620								
Acetone	111		57-163						
Benzene	105		87-126						
Bromoform	86		65-126						
2-Butanone	109		58-168						
n-Butylbenzene	105		83-131						
Carbon Disulfide	128		82-147						
Carbon Tetrachloride	107		86-152						
Chlorobenzene	103		87-120						
Chloroethane	133		70-139						
Chloroform	104		86-136						
1,2-Dichlorobenzene	100		83-117						
1,1-Dichloroethane	105		89-128						
1,2-Dichloroethane	100		83-143						
1,1-Dichloroethene	106		88-137						
cis-1,2-Dichloroethene	102		82-129						
trans-1,2-Dichloroethene	105		88-127						
Ethylbenzene	103		80-140						
Isopropylbenzene	104		81-133						
Methyl Tertiary Butyl Ether	98		73-125						
4-Methyl-2-Pentanone	98		69-133						
Methylene Chloride	102		84-122						

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

 Client Name: Chevron Environmental Mgmt Co  
 Reported: 12/09/10 at 04:03 PM

Group Number: 1224312

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Naphthalene	96		55-132						
Styrene	41		39-162						
Tetrachloroethene	107		86-129						
Toluene	103		83-127						
1,1,1-Trichloroethane	108		81-152						
1,1,2-Trichloroethane	100		85-129						
Trichloroethene	108		85-131						
Trichlorofluoromethane	130		81-149						
1,2,4-Trimethylbenzene	98		65-131						
1,3,5-Trimethylbenzene	95		70-130						
Vinyl Chloride	129		57-150						
Xylene (Total)	101		84-125						

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: G103431AA			Sample number(s): 6158156,6158158-6158159 UNSPK: P156133						
Acetone	88		57-163						
Benzene	105		87-126						
Bromoform	90		65-126						
2-Butanone	87		58-168						
n-Butylbenzene	103		83-131						
Carbon Disulfide	117		82-147						
Carbon Tetrachloride	107		86-152						
Chlorobenzene	102		87-120						
Chloroethane	131		70-139						
Chloroform	104		86-136						
1,2-Dichlorobenzene	98		83-117						
1,1-Dichloroethane	103		89-128						
1,2-Dichloroethane	100		83-143						
1,1-Dichloroethene	112		88-137						
cis-1,2-Dichloroethene	106		82-129						
trans-1,2-Dichloroethene	110		88-127						
Ethylbenzene	102		80-140						
Isopropylbenzene	105		81-133						
Methyl Tertiary Butyl Ether	98		73-125						
4-Methyl-2-Pentanone	96		69-133						
Methylene Chloride	101		84-122						
Naphthalene	93		55-132						
Styrene	81		39-162						
Tetrachloroethene	109		86-129						
Toluene	103		83-127						
1,1,1-Trichloroethane	107		81-152						
1,1,2-Trichloroethane	97		85-129						
Trichloroethene	106		85-131						
Trichlorofluoromethane	130		81-149						
1,2,4-Trimethylbenzene	92		65-131						
1,3,5-Trimethylbenzene	86		70-130						
Vinyl Chloride	130		57-150						
Xylene (Total)	98		84-125						

### Surrogate Quality Control

\*- Outside of specification

\*\*-This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: Chevron Environmental Mgmt Co  
Reported: 12/09/10 at 04:03 PM

Group Number: 1224312

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs 25 ml purge 8260

Batch number: G103422AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6158157	98	100	98	101
6158160	97	99	99	98
Blank	99	100	98	98
LCS	100	102	100	98
LCSD	99	100	99	98
MS	99	99	98	97
Limits:	77-114	74-113	77-110	78-110

Analysis Name: VOCs 25 ml purge 8260

Batch number: G103431AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6158156	98	102	99	102
6158158	98	98	99	101
6158159	96	98	101	101
Blank	97	97	99	98
LCS	99	100	99	98
LCSD	99	98	100	97
MS	98	98	97	97
Limits:	77-114	74-113	77-110	78-110

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

# Analysis Request/ Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct # 11956 Group# 1224312 Sample # 6158156-60

Total = 1 cooler  
**COC # 257162**

**24 TAT**  
HR

Please print. Instructions on reverse side correspond with circled numbers.

<p>1 Client: <u>URS Corporation</u> <sup>Archerron EMC</sup> Acct. #: <u>11956</u></p> <p>Project Name/ #: <u>Former Unocal 41009891.01</u> PWSID #: _____</p> <p>Project Manager: <u>Derek Peacock</u> P.O. #: _____</p> <p>Sampler: <u>Kim Nguyen</u> Quote #: _____</p> <p>Name of state where samples were collected: <u>KS</u></p>				<p>4 Matrix:</p> <p>Soil <input type="checkbox"/> Potable <input type="checkbox"/> Check if Applicable</p> <p>Water <input type="checkbox"/> NPDES</p> <p>Other _____</p>		<p>5 Analyses Requested</p> <p>Preservation Codes</p> <table border="1" style="width: 100%; height: 100px;"> <tr><td style="width: 20px;">#</td><td style="width: 20px;"> </td><td style="width: 20px;"> </td></tr> <tr><td style="text-align: center;">VOCs (2260B)</td><td style="text-align: center;">3</td><td style="text-align: center;">3</td><td style="text-align: center;">2</td><td style="text-align: center;">2</td><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td style="text-align: center;"> </td></tr> </table>				#								VOCs (2260B)	3	3	2	2				<p>6 For Lab Use Only</p> <p>FSC: _____</p> <p>SCR#: <u>98719</u></p> <p>Preservation Codes</p> <p>H=HCl T=Thiosulfate</p> <p>N=HNO<sub>3</sub> B=NaOH</p> <p>S=H<sub>2</sub>SO<sub>4</sub> O=Other</p> <p>Remarks: <u>Cooler temp = 0.8°C</u></p> <p style="text-align: right;">Temperature of samples upon receipt (if requested)</p>																																							
#																																																																	
VOCs (2260B)	3	3	2	2																																																													
<p>2 Sample Identification</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample ID</th> <th>Date Collected</th> <th>Time Collected</th> <th>Grab</th> <th>Composite</th> <th>Soil</th> <th>Water</th> <th>Other</th> <th>Total # of Containers</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>DP170A</td> <td>12/7/10</td> <td>1655</td> <td style="text-align: center;">X</td> <td> </td> <td> </td> <td style="text-align: center;">X</td> <td> </td> <td style="text-align: center;">3 3</td> <td rowspan="5" style="vertical-align: top;">Some bubbles due to reaction w/ HCl acid</td> </tr> <tr> <td>DP170B</td> <td style="text-align: center;">↓</td> <td>1630</td> <td style="text-align: center;">↓</td> <td> </td> <td> </td> <td style="text-align: center;">↓</td> <td> </td> <td style="text-align: center;">↓ ↓</td> </tr> <tr> <td>DP171</td> <td style="text-align: center;">↓</td> <td>1615</td> <td style="text-align: center;">↓</td> <td> </td> <td> </td> <td style="text-align: center;">↓</td> <td> </td> <td style="text-align: center;">↓ ↓</td> </tr> <tr> <td>DP172</td> <td style="text-align: center;">↓</td> <td>1515</td> <td style="text-align: center;">↓</td> <td> </td> <td> </td> <td style="text-align: center;">↓</td> <td> </td> <td style="text-align: center;">↓ ↓</td> </tr> <tr> <td>DP-TB01</td> <td style="text-align: center;">↓</td> <td>0700</td> <td style="text-align: center;">↓</td> <td> </td> <td> </td> <td style="text-align: center;">↓</td> <td> </td> <td style="text-align: center;">2 2</td> </tr> </tbody> </table>		Sample ID	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	Remarks	DP170A	12/7/10	1655	X			X		3 3	Some bubbles due to reaction w/ HCl acid	DP170B	↓	1630	↓			↓		↓ ↓	DP171	↓	1615	↓			↓		↓ ↓	DP172	↓	1515	↓			↓		↓ ↓	DP-TB01	↓	0700	↓			↓		2 2	<p>7 Turnaround Time Requested (TAT) (please circle): Normal <u>Rush</u></p> <p>(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)</p> <p>Date results are needed: <u>in 24 TAT</u></p> <p>Rush results requested by (please circle): Phone Fax <u>E-mail</u></p> <p>Phone #: <u>512-454-4797</u> Fax #: <u>512-454-8807</u></p> <p>E-mail address: <u>jean-youngerman@urscorp.com</u></p>							
Sample ID	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	Remarks																																																								
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DP-TB01	↓	0700	↓			↓		2 2																																																									
<p>8 Data Package Options (please circle if required)</p> <p>Type I (validation/NJ Reg) TX TRRP-13 Yes No</p> <p>Type II (Tier II) MA MCP CT RCP</p> <p>Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No</p> <p>Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.)</p> <p>Type VI (Raw Data Only) Internal COC Required? Yes / No</p> <p><u>Contact Jean Youngerman for details</u></p>				<p>9 Relinquished by: _____ Date: <u>12/11/10</u> Time: <u>1435</u> Received by: _____ Date: <u>12/5/10</u> Time: <u>2100</u></p> <p>Relinquished by: _____ Date: <u>12/7/10</u> Time: <u>1730</u> Received by: _____ Date: _____ Time: _____</p> <p>Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____</p> <p>Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____</p> <p>Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: <u>12/8/10</u> Time: <u>0930</u></p>																																																													

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>ug</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>ml</b>	milliliter(s)	<b>l</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>ul</b>	microliter(s)
<b>&lt;</b>	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
<b>&gt;</b>	greater than		
<b>J</b>	estimated value – The result is $\geq$ the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
<b>A</b> TIC is a possible aldol-condensation product	<b>B</b> Value is $<$ CRDL, but $\geq$ IDL
<b>B</b> Analyte was also detected in the blank	<b>E</b> Estimated due to interference
<b>C</b> Pesticide result confirmed by GC/MS	<b>M</b> Duplicate injection precision not met
<b>D</b> Compound quantitated on a diluted sample	<b>N</b> Spike sample not within control limits
<b>E</b> Concentration exceeds the calibration range of the instrument	<b>S</b> Method of standard additions (MSA) used for calculation
<b>N</b> Presumptive evidence of a compound (TICs only)	<b>U</b> Compound was not detected
<b>P</b> Concentration difference between primary and confirmation columns $>$ 25%	<b>W</b> Post digestion spike out of control limits
<b>U</b> Compound was not detected	<b>*</b> Duplicate analysis not within control limits
<b>X,Y,Z</b> Defined in case narrative	<b>+</b> Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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**Attachment C**

**State Well Abandonment Reports**



**WATER WELL PLUGGING RECORD Form WWC-5P**

KSA 82a-1212

ID NO.

[ ]

<b>1 LOCATION OF WATER WELL:</b> County: <u>SEDGWICK</u>	Fraction <u>SE 1/4 SE 1/4 SW 1/4</u>	Section Number <u>27</u>	Township Number <u>26 S</u>	Range Number <u>1 DW</u>
---	---	-----------------------------	--------------------------------	-----------------------------

Distance and direction from nearest town or city street address of well if located within city?

2100 E. 37TH ST. NORTH, WICHITA, KS 67219

<b>2 WATER WELL OWNER:</b> <u>CHEVRON EMC</u> RR#, St. Address, Box #: <u>6111 BOLLINGER CANYON RD. BR 11, ROOM 3424</u> City, State ZIP Code: <u>SAN RAMON, CA 94583</u>	Global Positioning Systems (decimal degrees, min. of 4 digits) Latitude: <u>37.752335°</u> Longitude: <u>-97.309492°</u> Elevation: _____ Datum: <u>NGS 84</u> Data Collection Method: <u>DIGITAL MAP (GOOGLE EARTH)</u>
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**3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:**

**4 DEPTH OF WELL:** 19.25 ft.

WELL'S STATIC WATER LEVEL \_\_\_\_\_ ft

WELL WAS USED AS:

1 Domestic	5 Public Water Supply	9 Dewatering
2 Irrigation	6 Oil Field Water Supply	<u>10 Monitoring</u>
3 Feedlot	7 Domestic (Lawn & Garden)	11 Injection Well
4 Industrial	8 Air Conditioning	12 Other _____

Was a chemical/bacteriological sample submitted to Department? Yes \_\_\_ No

**5 TYPE OF BLANK CASING USED:**

1 Steel	3 RMP (SR)	5 Wrought	7 Fiberglass	9 Other (Specify below)
<u>2 PVC</u>	4 ABS	6 Asbestos-Cement	8 Concrete Tile	

Blank casing diameter 2 in. Was casing pulled? Yes  No \_\_\_ If yes, how much ALL

Casing height above or below land surface \_\_\_\_\_ in.

**6 GROUT PLUG MATERIAL:** 1 Neat cement 2 Cement grout 3 Bentonite 4 Other \_\_\_\_\_

Grout Plug Intervals: From 19.25 ft. to 0 ft., From \_\_\_\_\_ ft. to \_\_\_\_\_ ft., From \_\_\_\_\_ to \_\_\_\_\_ ft.

What is the nearest source of possible contamination:

1 Septic tank	6 Seepage pit	11 Fuel Storage	16 Other (specify below)
2 Sewer lines	7 Pit privy	12 Fertilizer storage	<u>SECONDARY ON-SITE SOURCE</u>
3 Watertight sewer lines	8 Sewage lagoon	13 Insecticide storage	
4 Lateral lines	9 Feedyard	14 Abandoned water well	Direction from well? <u>ON-SITE</u>
5 Cess pool	10 Livestock pens	15 Oil well/Gas well	How many feet? <u>ON-SITE</u>

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS

(CREDI JOB # 105028)

**7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:** This water well was plugged under my jurisdiction and was completed on (mo/day/year) 12/18/10 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 788. This Water Well Record was completed on (mo/day/year) 12/21/11 under the business name of ROBERTS ENV. DRILLING, INC. by (signature) [Signature]

**INSTRUCTIONS:** Use typewriter or ballpoint pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5522. Send one to Water Well Owner and retain one for your records. Visit us at <http://www.kdheks.gov/geo/waterwells>.

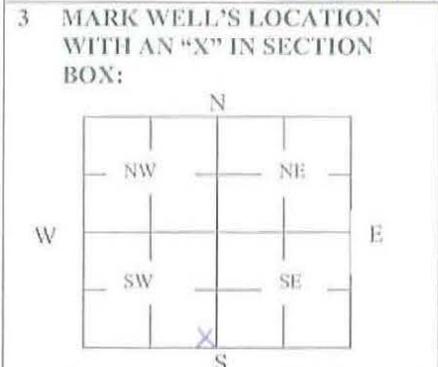


**WATER WELL PLUGGING RECORD Form WWC-5P** KSA 82a-1212 ID NO.  

<b>1 LOCATION OF WATER WELL:</b> County: <u>SEDG. WICK</u>	Fraction <u>SE 1/4 SE 1/4 SW 1/4</u>	Section Number <u>27</u>	Township Number <u>26 S</u>	Range Number <u>1 EW</u>
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Distance and direction from nearest town or city street address of well if located within city?  
2100 E. 37TH ST. NORTH, WICHITA, KS 67219

<b>2 WATER WELL OWNER:</b> <u>CHEVRON EMC</u> RR#, St. Address, Box #: <u>6111 BOWLINGER CANYON RD. BR. 14, ROOM 3424</u> City, State ZIP Code: <u>SAN RAMON, CA 94583</u>	Global Positioning Systems (decimal degrees, min. of 4 digits) Latitude: <u>37.752335°</u> Longitude: <u>-97.309492°</u> Elevation: _____ Datum: <u>NAD 84</u> Data Collection Method: <u>DIGITAL MAP (GOOGLE EARTH)</u>
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**4 DEPTH OF WELL** 19.2 ft.

WELL'S STATIC WATER LEVEL \_\_\_\_\_ ft

WELL WAS USED AS:

1 Domestic	5 Public Water Supply	9 Dewatering
2 Irrigation	6 Oil Field Water Supply	<u>10 Monitoring</u>
3 Feedlot	7 Domestic (Lawn & Garden)	11 Injection Well
4 Industrial	8 Air Conditioning	12 Other _____

Was a chemical/bacteriological sample submitted to Department? Yes \_\_\_\_\_ No

**5 TYPE OF BLANK CASING USED:**

1 Steel	3 RMP (SR)	5 Wrought	7 Fiberglass	9 Other (Specify below) _____
<u>2 PVC</u>	4 ABS	6 Asbestos-Cement	8 Concrete Tile	_____

Blank casing diameter 2 in. Was casing pulled? Yes  No \_\_\_\_\_ If yes, how much ALL

Casing height above or below land surface \_\_\_\_\_ in.

**6 GROUT PLUG MATERIAL:** 1 Neat cement 2 Cement grout 3 Bentonite 4 Other \_\_\_\_\_

Grout Plug Intervals: From 19.2 ft. to 0 ft., From \_\_\_\_\_ ft. to \_\_\_\_\_ ft., From \_\_\_\_\_ to \_\_\_\_\_ ft.

What is the nearest source of possible contamination:

1 Septic tank	6 Seepage pit	11 Fuel Storage	16 Other (specify below)
2 Sewer lines	7 Pit privy	12 Fertilizer storage	<u>SECONDARY ON-SITE SOURCE</u>
3 Watertight sewer lines	8 Sewage lagoon	13 Insecticide storage	
4 Lateral lines	9 Feedyard	14 Abandoned water well	Direction from well? <u>ON-SITE</u>
5 Cess pool	10 Livestock pens	15 Oil well/Gas well	How many feet? <u>ON-SITE</u>

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS

(CREDI JOB # 102038)

**7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:** This water well was plugged under my jurisdiction and was completed on (mo/day/year) 12/18/10 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 788. This Water Well Record was completed on (mo/day/year) 1/31/11 under the business name of ROBERTS ENV. DRILLING, INC. by (signature) [Signature]

**INSTRUCTIONS:** Use typewriter or ballpoint pen. Please press firmly and print clearly. Please fill in blanks, underline or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Ste. 420, Topeka, Kansas 66612-1367. Telephone: 785/296-5522. Send one to Water Well Owner and retain one for your records. Visit us at <http://www.kdheks.gov/geo/waterwells>.