



76 Broadway  
Sacramento, California 95818

February 17, 2006

Mr. Barney Chan  
Alameda County Health Agency  
1131 Harbor Bay Parkway  
Alameda, California 94502

Re: **Report Transmittal  
Well Abandonment Report  
76 Service Station #6419  
6401 Dublin Boulevard,  
Dublin, CA**

Dear Mr. Chan:

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

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor)  
ConocoPhillips  
Risk Management & Remediation  
76 Broadway  
Sacramento, CA 95818  
Phone: 916-558-7609  
Fax: 916-558-7639

Sincerely,

Thomas Kosel  
Risk Management & Remediation

Attachment

**RECEIVED**

2:27 pm, Oct 17, 2008

Alameda County  
Environmental Health



February 17, 2006

TRC Project No. 42017005

Mr. Barney Chan  
Hazardous Materials Specialist  
Alameda County Health Care Services  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

**RE: WELL ABANDONMENT REPORT**  
76 SERVICE STATION NO. 6419 (5748)  
6401 DUBLIN BOULEVARD  
DUBLIN, CALIFORNIA

Dear Mr. Chan,

On behalf of ConocoPhillips Company (ConocoPhillips), TRC submits this Well Abandonment Report for the destruction of four (4) monitoring wells at the 76 Service Station No. 6419 (5748) located at 6401 Dublin Boulevard (Site) in Dublin, California (Figure 1).

Monitoring wells MW-2, MW-4, MW-6, and MW-7 were abandoned on January 12, 2006. These wells were abandoned at the request of the City of Dublin in anticipation of street widening on both Dougherty Road and Dublin Boulevard. Figure 2 shows the locations of the former wells. Prior to the abandonment of these wells, well destruction permits were obtained from the Zone 7 Water Resources Management. Copies of the permits are included in Appendix A. Initial boring logs and well completion details are included in Appendix B.

The four wells were abandoned by backfilling the well casing with neat cement grout and applying 25 pounds of pressure for 5 minutes, in accordance with California Well Standards 74-81 and 74-90. The well boxes were backfilled with neat cement grout to within 0.5 feet below grade, and capped with concrete or dirt, depending on the surrounding surface. Well destruction details are summarized in Table 1.

Waste materials are currently stored onsite and will be transported to an approved waste disposal facility.

Should you have any questions regarding this report, please contact either of the undersigned at (925) 688-1200.

Sincerely,  
**TRC**



Rachelle Dum  
Staff Geologist



Keith Woodburne, P.G.  
Senior Project Geologist

Attachments:

Table 1 - Well Destruction Details

Figure 1 - Vicinity Map  
Figure 2 - Site Plan

Appendix A - Well Destruction Permits  
Appendix B - Boring Logs and Well Completion Details



cc: Shelby Lathrop, ConocoPhillips (electronic upload only)

**TABLE**

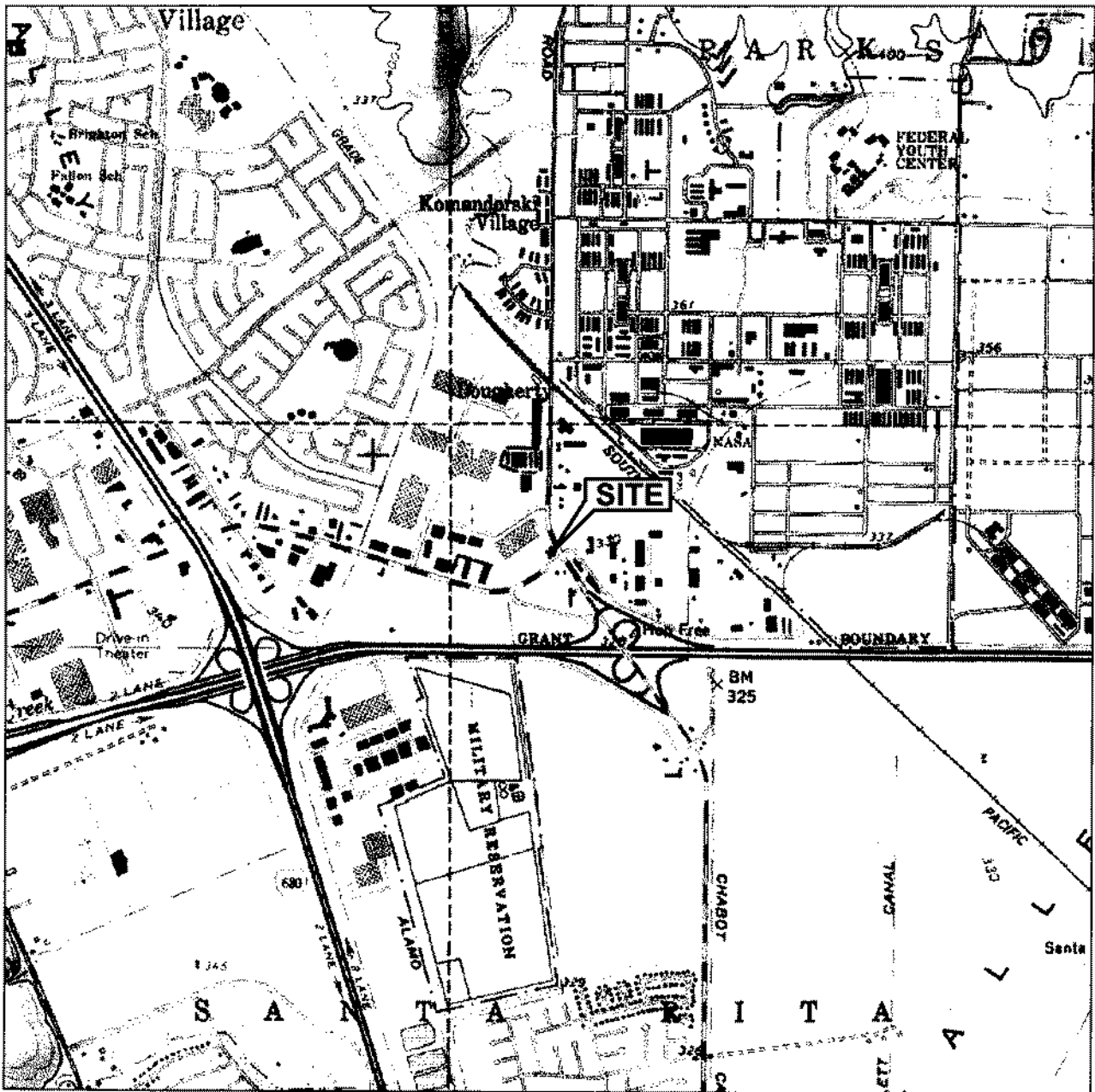
**Table 1**

**Well Destruction Details**

76 Service Station No. 6419 (5748)  
6401 Dublin Boulevard  
Dublin, California

Well ID	Type of Well	Construction Details			Destruction Details	
		Casing Diameter (inches)	Depth (feet)	Boring Diameter (inches)	Depth (feet)	Backfill Method
MW-2	Monitoring	2	20	8	20	Neat cement grout to 0.5 feet below grade; concrete cap
MW-4	Monitoring	2	19	8	19	Neat cement grout to 0.5 feet below grade; dirt cap
MW-6	Monitoring	2	19	8	19	Neat cement grout to 0.5 feet below grade; dirt cap
MW-7	Monitoring	2	19	8	19	Neat cement grout to 0.5 feet below grade; dirt cap

## FIGURES



1 MILE    3/4    1/2    1/4    0    1 MILE

SCALE 1 : 24,000



QUADRANGLE LOCATION

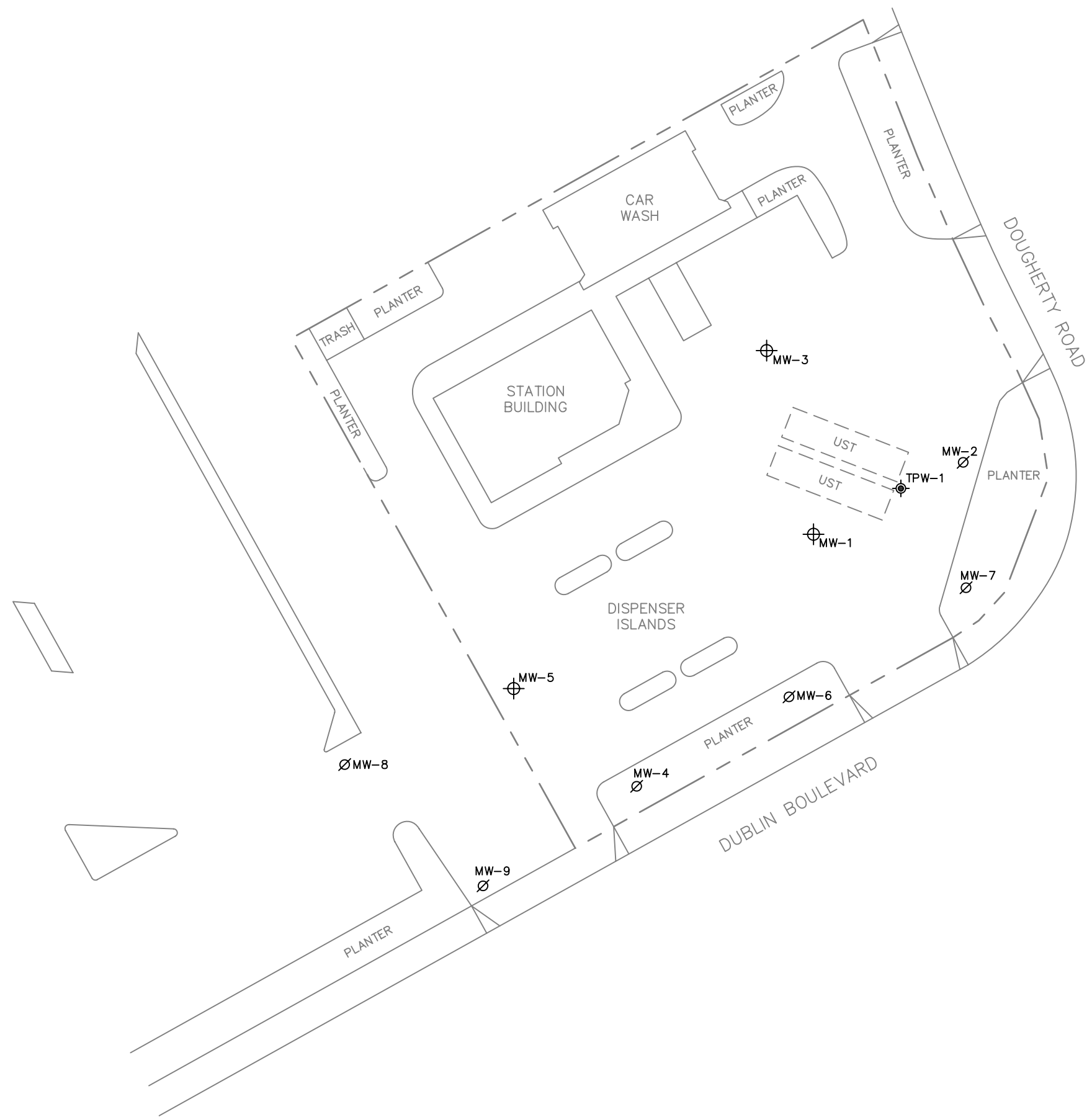
SOURCE:  
 United States Geological Survey  
 7.5 Minute Topographic Maps:  
 Dublin Quadrangle  
 California

**VICINITY MAP**

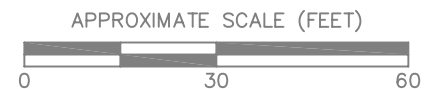
76 Service Station #6419 (5748)  
 6401 Dublin Boulevard  
 Dublin, California

**TRC**

**FIGURE 1**



LEGEND	
---	Approximate property line
MW-7 ⊕	Groundwater monitoring well
TPW-1 ⊕	UST pit backfill well
MW-9 ∅	Abandoned well



**SITE PLAN**  
 76 Service Station #6419 (5748)  
 6401 Dublin Boulevard  
 Dublin, California

SOURCE: Site plan by Gettler-Ryan, March 2002.





**APPENDIX A**  
**WELL DESTRUCTION PERMITS**



# ZONE 7 WATER AGENCY

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

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 6401 Dublin Blvd  
Dublin, CA 94568

PERMIT NUMBER 26004  
WELL NUMBER 3S/1E-6E3, 6E5, 6E7 & 6E8  
APN 941-0205-010-03

California Coordinates Source \_\_\_\_\_ Accuracy \_\_\_\_\_ ft.  
CCN \_\_\_\_\_ ft. CCE \_\_\_\_\_ ft.  
APN 941-205-103

### PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT Name ConocoPhillips  
Address 76 Broadway Phone \_\_\_\_\_  
City Sacramento, CA Zip 94818

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

APPLICANT Name TRC Fax (925) 688-0388  
Address 1590 Solano Way, Ste A Phone (925) 682-1200  
City Concord, CA Zip 94520

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

TYPE OF PROJECT:  
Well Construction  Geotechnical Investigation   
Well Destruction  Contamination Investigation   
Cathodic Protection  Other \_\_\_\_\_

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
  1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
  2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
  3. Grout placed by tremie.

PROPOSED WELL USE:  
Domestic  Irrigation   
Municipal  Remediation   
Industrial  Groundwater Monitoring   
Dewatering  Other \_\_\_\_\_

- D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
- E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

DRILLING METHOD:  
Mud Rotary  Air Rotary  Hollow Stem Auger   
Cable Tool  Direct Push  Other \_\_\_\_\_

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

DRILLING COMPANY Woodward Drilling  
DRILLER'S LICENSE NO. 710079

WELL SPECIFICATIONS:  
Drill Hole Diameter 8 in. Maximum Depth 20 ft.  
Casing Diameter 2 in. Number 4  
Surface Seal Depth 25 ft.

SOIL BORINGS:  
Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

ESTIMATED STARTING DATE January 11, 2006  
ESTIMATED COMPLETION DATE January 12, 2006

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

APPLICANT'S SIGNATURE Rachelle Dunn Date 12/28/05  
Rachelle Dunn

Approved Wyman Hong Date 1/10/06  
Wyman Hong

ATTACH SITE PLAN OR SKETCH

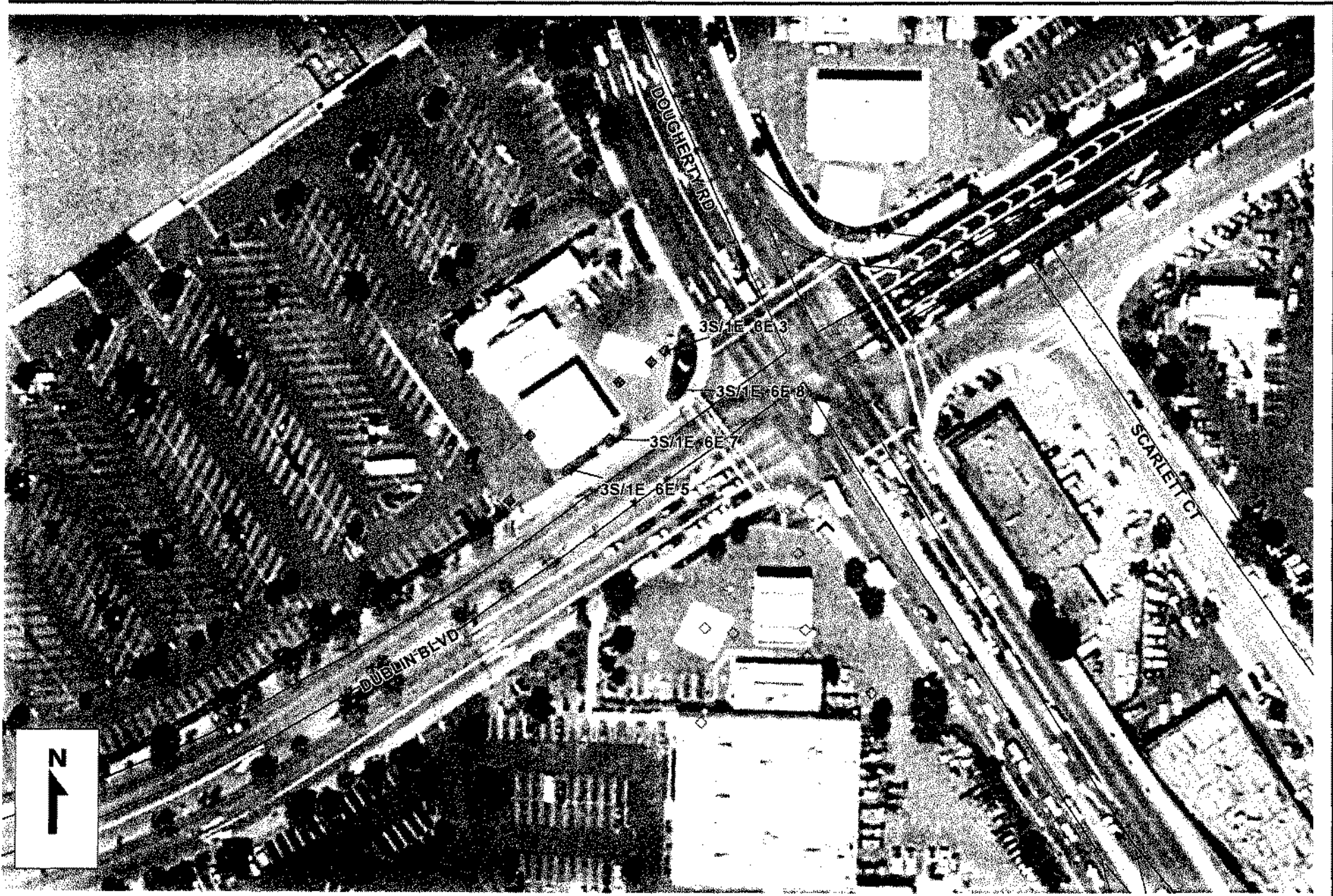
January 10, 2006

**Zone 7  
Water Resources Engineering  
Groundwater Protection Ordinance**

**ConocoPhillips  
6401 Dublin Boulevard  
Dublin  
Wells 3S/1E-6E3(MW-2), 3S/1E-6E5(MW-4), 3S/1E-6E7(MW-6) and  
3S/1E-6E8(MW-7)  
Permi 26004**

Destruction Requirements:

1. Clean out all bridged or poorly compacted materials to the bottom of the well.
2. Sound the well as deeply as practicable and record for your report.
3. Pressure grout the casing to two feet below the finished grade or original ground, whichever is the lower elevation.
4. Remove the casing, seal, and gravel pack to two feet below the finished grade or original ground, whichever is the lower elevation (optional).
5. After the seal has set, backfill the remaining hole with compacted material(optional).



**ZONE 7 WATER AGENCY**  
**100 NORTH CANYONS PARKWAY**  
**LIVERMORE, CA 94551**

**WELL LOCATION MAP**

**SCALE: 1"= 100 ft**

**DATE: 1/10/06**

**6401 Dublin Blvd**  
**H:\FLOOD\REFERALLS\REFERALLS.WOR**

**APPENDIX B**  
**BORING LOGS AND WELL COMPLETION DETAILS**

## BORING LOG

Project No. KEI-P93-0401	Boring Diameter	8.5"	Logged By D.L. <i>JCB</i> <i>LEO 1633</i>
	Casing Diameter	2"	
Project Name Unocal S/S #6419 6401 Dublin Blvd., Dublin	Well Cover Elevation	N/A	Date Drilled 2/25/94
Boring No. MW2	Drilling Method	Hollow-stem Auger	Drilling Company Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati- graphy USCS	Description
		0		A.C. Pavement over sand and gravel base.
			CL	Silty clay, stiff, moist, black grading to olive brown (fill).
			GC	Clayey gravel with sand, gravel to 2 3/4 inches in diameter, dense, moist, dark olive gray, disturbed, pocketed (fill).
			CH	Silty clay, stiff, moist, black.
3/5/7		5	SM	Poorly graded sand, predominantly medium grained, loose, moist,
			ML	dark olive gray.
			CH	Silt, trace clay grading to 10-15% clay, stiff, moist, dark olive gray.
			CH	Silty clay, stiff, moist, black, high plasticity.
			CL	Silty clay, estimated at 35-45% silt, stiff, moist, olive brown and very dark grayish brown, mottled, with root holes, locally grades to very clayey silt.
3/5/10		10	MH	Clayey silt, stiff, moist, olive brown and brown, mottled.
			ML	Silt, estimated at 20-30% clay, and 5-10% sand, stiff, moist, olive brown and brown, mottled.
			CL	Silty clay, estimated at 30-40% silt, stiff, moist, olive and olive brown, mottled, with caliche nodules to 3/4 inch in diameter.
		15	CL	Silty clay, as above, except olive brown.
4/6/9	▽		MH	Clayey silt, estimated at 35-45% clay, stiff, moist, olive to olive brown, trace organic matter.
			ML	Silt, estimated at 15-30% clay, stiff, very moist, olive, with trace caliche.
3/4/6		20	CL	Silty clay, stiff, moist, olive and olive brown, mottled.
TOTAL DEPTH: 20'				

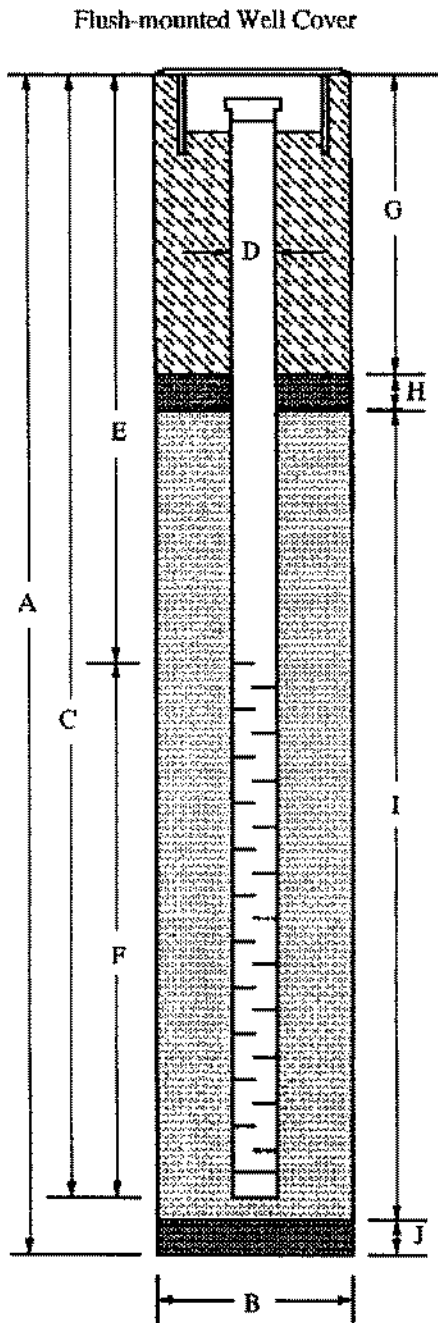
## WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #6419, 6401 Dublin Blvd., Dublin

WELL NO.: MW2

PROJECT NUMBER: KEI-P93-0401

WELL PERMIT NO.: ACFC & WCD #94071



- A. Total Depth : 20'
- B. Boring Diameter: 8.5"  
 Drilling Method: Hollow Stem Auger
- C. Casing Length: 20'  
 Material: Schedule 40 PVC
- D. Casing Diameter: OD = 2.375"  
ID = 2.067"
- E. Depth to Perforations: 4'
- F. Perforated Length: 16'  
 Perforation Type: Machined Slot  
 Perforation Size: 0.010"
- G. Surface Seal: 1.5'  
 Seal Material: Neat Cement
- H. Seal: 1.5'  
 Seal Material: Bentonite
- I. Filter Pack: 17'  
 Pack Material: RMC Lonestar Sand  
 Size: #2/12
- J. Bottom Seal: None  
 Seal Material: N/A

Gettler-Ryan Inc.

Log of Boring MW-4

PROJECT: *Tosco (Unocal) Station No. 6419*

LOCATION: *6401 Dublin Blvd., Dublin, CA*

PROJECT NO. : *140101.02*

CASING ELEVATION: *330.36 ft. MSL*

DATE STARTED: *05/10/99*

WL (ft. bgs): *12*      DATE: *05/10/99*      TIME: *9:05 AM*

DATE FINISHED: *05/10/99*

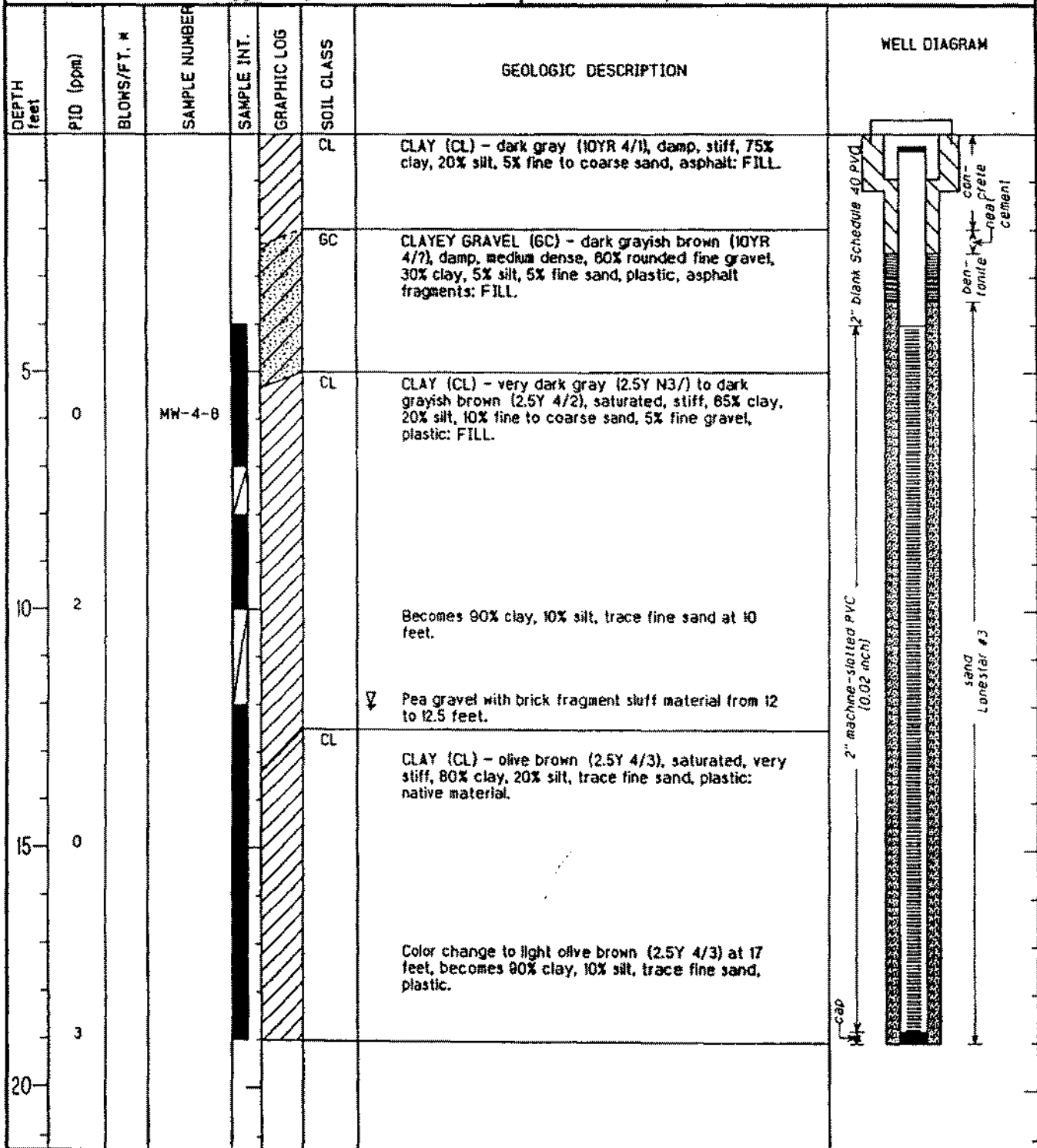
WL (ft. bgs):      DATE:      TIME:

DRILLING METHOD: *8" Geoprobe Macrocore*

TOTAL DEPTH: *19 Feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*





Gettler-Ryan Inc.

Log of Boring MW-6

PROJECT: *Tosco (Unocal) Station No. 6419*

LOCATION: *6401 Dublin Blvd, Dublin, CA*

PROJECT NO.: *140101.02*

CASING ELEVATION: *330.49 ft. MSL*

DATE STARTED: *05/10/99*

WL (ft. bgs):      DATE:      TIME:

DATE FINISHED: *05/10/99*

WL (ft. bgs):      DATE:      TIME:

DRILLING METHOD: *8" Geoprobe Macrocore*

TOTAL DEPTH: *19 Feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Clyde Galantine*

DEPTH feet	PTD (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5	2		MW-6-8.5			CL	GRAVELLY CLAY (CL) - very dark grayish brown (10YR 3/2), damp, stiff, 85% clay, 30% fine gravel, 5% fine to coarse sand: FILL.	
						GC	CLAY WITH GRAVEL (GC) - grayish brown (2.5Y 5/2), damp, dense, 70% fine gravel, 25% clay, 5% fine to coarse sand: FILL.	
						CL	CLAY (CL) - very dark gray (5Y 3/1), damp, stiff, 80% clay, 35% silt, 5% fine sand: FILL.	
						SC	CLAYEY SAND (SC) - very dark gray (2.5Y N3/), damp, medium dense, 80% fine to medium sand, 40% clay: FILL.	
						ML	SILT (ML) - black (2.5 N2/), damp, stiff, 85% silt, 20% clay, 15% fine to medium sand, non plastic, organic appearance.	
10	0		MW-6-12			CL	CLAY (CL) - black (2.5 N2/), damp, stiff, 85% clay, 15% silt, trace sand, organic appearance.  Gravel layer from 9 to 9.2 feet.	
							Color change to dark grayish brown (2.5Y 4/2) at 12 feet, becomes damp, stiff, 75% clay, 25% silt, trace gravel, rootlets, plastic.  Fine sand layer from 13.8 to 13.9 feet.	
15	2						Color change to grayish brown (2.5Y 5/2) at 16 feet, becomes 85% clay, 15% silt, white concretions, slight MnO staining, plastic.  Fine gravel layer from 17.5 to 17.8 feet.	
20								

<b>Gettler-Ryan Inc.</b>		<b>Log of Boring MW-7</b>	
PROJECT: <i>Tosco (Unocal) Station No. 6419</i>		LOCATION: <i>6401 Dublin Blvd., Dublin, CA</i>	
PROJECT NO.: <i>140101.02</i>		CASING ELEVATION: <i>330.43 ft. MSL</i>	
DATE STARTED: <i>05/10/99</i>		WL (ft. bgs): <i>5.75</i>	DATE: <i>05/10/99</i> TIME: <i>5:00 PM</i>
DATE FINISHED: <i>05/10/99</i>		WL (ft. bgs):	DATE: TIME:
DRILLING METHOD: <i>8" Geoprobe Macrocore</i>		TOTAL DEPTH: <i>19 Feet</i>	
DRILLING COMPANY: <i>Gregg Drilling</i>		GEOLOGIST: <i>Clyde Galantine</i>	

DEPTH feet	PID (ppm)	BLOWS/FT. #	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5	6		MW-7-8		[Hatched pattern]	CL	GRAVELLY CLAY (CL) - grayish brown (2.5Y 5/2), damp, stiff, 80% clay, 15% fine gravel, 5% fine to coarse sand; FILL.	
					[Dotted pattern]	GC	CLAYEY GRAVEL (GC) - grayish brown (2.5Y 5/2), damp, dense, 85% fine gravel, 30% clay, 5% fine to coarse sand; FILL.	
					[Horizontal line pattern]	SC	CLAYEY SAND (SC) - very dark gray (2.5Y N3/), saturated, medium stiff, 85% fine to medium sand, 30% clay, 5% silt; FILL.	
					[Diagonal line pattern]	CL	CLAY (CL) - very dark gray (10YR 3/1), damp, stiff, 90% clay, 10% silt, trace fine sand, very plastic.  Fine to medium sand layers from 9.25 to 9.5 feet and from 9.75 to 9.9 feet.  Color change to very dark grayish brown (2.5Y 3/2) at 10.5 feet, becomes wet, 80% clay, 20% silt, trace gravel, plastic.	
10	0				[Dotted pattern]	SH SM	SAND WITH SILT (SW-SM) - dark grayish green (2.5Y 4/2), saturated, loose, 90% fine sand, 10% silt.	
					[Diagonal line pattern]	CL	CLAY (CL) - olive brown (2.5Y 4/3), damp, stiff, 80% clay, 30% silt, 10% fine sand.  Becomes 80% clay, 20% silt, trace gravel or concretions, plastic at 14.5 feet.	
15	0				[Dotted pattern]	SH SM	SAND WITH SILT (SW-SM) - dark grayish green (2.5Y 4/2), saturated, loose, 90% fine sand, 10% silt.	
					[Diagonal line pattern]	CL	CLAY (CL) - light olive brown (2.5Y 5/3), damp, stiff, 70% clay, 25% silt, 5% fine sand, caliche, plastic.	
20	0							