ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 12, 1997

STID 1929

Robert Boust
Unocal Corporation
P.O. Box 5155
San Ramon, CA 94583

Steven Thomas
Thomas Properties
1401 N. Broadway
Walnut Creek, CA 94596

RE: (FORMER) UNOCAL STATION #0543, 992 MAIN STREET, PLEASANTON

Dear Messrs. Boust and Thomas:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]) of the California Health and Safety Code. The State Water Resources Control Board (SWRCB) has required since March 1, 1997 that this agency use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at this site.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Up to 4000 micrograms per liter (ug/l) Total Petroleum Hydrocarbons as gasoline and 53 ug/l Benzene, among other constituents, remain in ground water beneath the site.

If you have any questions, please contact the undersigned at (510) 567-6783.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist

Enclosures: 1. Case Closure Letter
2. Case Closure Summary

cc: Gordon Coleman, Chief, Environmental Protection Division

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REMEDIAL ACTION COMPLETION CERTIFICATION

Robert Boust
Unocal Corporation
P.O. Box 5155
San Ramon, CA 94583

Steven Thomas
Thomas Properties
1401 N. Broadway
Walnut Creek, CA 94596

RE: (FORMER) UNOCAL STATION #0543, 992 MAIN STREET, PLEASANTON

Dear Messrs. Boust and Thomas:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director, Environmental Health Services

c: Gordon Coleman, Chief, Env. Protection Division
Kevin Graves, RWQCB
Dave Deaner, SWRCB (w/attachment)
Chris Boykin, Livermore-Pleasanton Fire Department (w/attach.)
Craig Mayfield, Zone 7

SIGNED COPY

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 08/14/97

Agency name: **Alameda County-EPD** Address: **1131 Harbor Bay Pkwy #250**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Scott Seery** Title: **Haz. Materials Spec.**

II. CASE INFORMATION

Site facility name: **(former) Unocal Station #0543**
Site facility address: **992 Main Street, Pleasanton 94566**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **1929**
URF filing date: **04/13/94** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
Unocal Corporation Attn: Robert Boust	2000 Crow Canyon Pl. P.O. Box 5155 San Ramon, CA 94583	(510) 277-2334
Thomas Properties Attn: Steven Thomas	1401 N. Broadway Walnut Creek, CA 94596	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000 gal	gasoline	removed	05/05/92
2	10,000 "	"	"	"
3	500 "	waste oil	"	"

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: UNK

Site characterization complete? YES

Date approved by oversight agency:

Monitoring Wells installed? YES Number: 5

Proper screened interval? YES

Highest GW depth below ground surface: 35.51' Lowest depth: 47.26'

Flow direction: variable

Most sensitive current use: commercial

Are drinking water wells affected? NO Aquifer name: Amador Subbasin

Leaking Underground Fuel Storage Tank Program

Is surface water affected? NO Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations): NONE

Report(s) on file? **YES** Where is report filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	(2 x 10K; 1 x 500 gal)	Disposal - H&H Ship Svc S.F., CA	05/08/92
Piping	UNK (presumed as above)		
Free Product	NA		
Soil	550 yds^3	Disposal - BFI L.F. Livermore, CA	06/22 - 06/23/92
	30 yds^3	Disposal - Laidlaw Bakersfield, CA	05/19/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant		Soil (ppm) Before[1]	Soil (ppm) After[2]	Water (ppb)[3] Before	Water (ppb)[3] After
TPH (Gas)		300	600	1600	4000
TPH (Diesel)		1.5	1.6	ND	NA
TPH (Hyd. Fluid)		NA	38	NA	"
Benzene		0.067	0.66	28	53
Toluene		0.15	0.16	ND	30
Xylene		26	19	5.1	16
Ethylbenzene		5.9	2.5	5.6	28
Oil & Grease		ND	ND	NA	NA
Heavy metals		(See Note 1)		"	"
Other:	**HVOC**	ND	0.0067 (PCE) 0.016 (1,1,1-TCA) 0.0062 (TCE)	"	"
	MtBE	NA	NA	ND	ND

Note: 1) "Before" soil results for TPH-G and BTEX from initial samples collected from base of fuel UST pit following 1992 closures, and from below dispensers / product piping. TOG, HVOC and metals results from waste oil UST closure samples. Metals: Cd 1.4, Cr 52, Pb 6.6, Ni 97, and Zn 77 ppm.

2) "After" soil results from borings / wells installed at the site post UST closures. TPH-HF and HVOC results from borings EB1 and EB2 emplaced through the station service bay; all others from well boring MW2.

3) All water results from well MW2 beginning 12/92, and ending 2/97.

Comments (Depth of Remediation, etc.):

Two 10,000 gallon fuel and one 500 gallon waste oil steel USTs were removed from this site during May 1992. Tanks were reportedly void of any obvious holes or cracks.

Soil samples were collected from below each tank and analyzed for the appropriate suite of target compounds. Up to 300 ppm TPH-G, 26 ppm total xylenes, 0.10 ppm toluene, and 5.9 ppm ethylbenzene were identified in sample **A1** collected at a depth of 14' BG below one of the fuel tanks. Benzene was not detected in this sample. Benzene was detected at a concentration of 0.067 ppm in sample **D2** collected below one of the dispensers at a depth of 2' BG.

The areas of samples **A1** and **D1/D2** were subsequently reexcavated to 16' and 4' BG, respectively, and resampled [**A1(16)**, **D1(4)**, and **D2(4)**, also respectively]. Concentrations of fuel compounds were either markedly reduced or below laboratory detection limits in these confirmation samples.

Unremarkable results were attained in sample **WO1** collected below the waste oil UST at a depth of 12' BG. All HVOC compounds and TOG were below laboratory detection limits. Metals were detected in this sample, but appear, however, to be present at geogenic concentrations.

Stockpiled material (550 yds^3 from fuel UST pit; 30 yds^3 from waste oil UST pit) was eventually transported to BFI and Laidlaw landfills. The UST pits were subsequently restored using imported fill from a local quarry.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommisioned: NO (pending case closure)

Number Decommisioned: NONE (pending closure) Number Retained: 5 (pending closure)

List enforcement actions taken: NONE

List enforcement actions rescinded: NONE

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Scott Seery — Title: Haz Mat Specialist
Signature: — Date: 8/14/97

Reviewed by
Name: Tom Peacock — Title: Supervising Haz Mat Specialist
Signature: — Date: 8-20-97

Name: Brian Oliva — Title: Sr. Haz Mat Specialist
Signature: — Date: 8/14/97

VI. RWQCB NOTIFICATION

Date Submitted to RB: 8/29/97 — RB Response: Approved
RWQCB Staff Name: Kevin Graves — Title: San. Engr. Assoc. — Date: 8/27/97

VII. ADDITIONAL COMMENTS, DATA, ETC.

During November and December 1992, three wells (MW1, 2, 3) and nine exploratory borings (EB1 - EB9) were initially completed at the site. Each well was constructed to depths between 50 and 50½' BG. Borings EB1 and EB2 were advanced to 10' BG, while EB3 - EB9 were drilled to depths ranging from 39 to 50' BG.

Ground water was initially encountered at depths between 38½ and 49' BG. Some apparent localized confining conditions were noted in several of the boreholes as water rose between ½ and 9½' while each were still open. Such may be explained by the apparent areally-limited, heterogeneous, gradational, and interfingering sedimentary beds encountered during boring advancement.

Up to 600 ppm TPH-G and 0.66 ppm benzene were encountered in soil sampled from MW2 at the 35' depth, within the apparent capillary zone. Up to 6.7 ppb PCE, 16 ppb 1,1,1-TCA, 6.2 ppb TCE, 38 ppm TPH-hydraulic fluid, and 1.6 ppm diesel-range TPH were identified in samples collected at depths between 4½ and 9½' BG in borings EB1 and EB2, emplaced within the service bay of the former station building.

Initial ground water samples revealed up to 1600 ug/l TPH-G and 28 ug/l benzene, as well as detectable ethylbenzene and total xylenes, in well MW2. Samples collected from the remaining wells and grab samples collected from exploratory borings failed to identify fuel compounds at concentrations above laboratory detection limits.

During September 1993, two additional wells (MW4 and MW5) and one exploratory boring (EB10) were completed at the site. EB10 was advanced through the fuel UST pit to 40½' BG. Wells were constructed to the 50' depth. Ground water was encountered between 38 and 39' BG.

Detectable soil concentrations of TPH-G and TEX were noted at the 17 and 20' depths in EB10 during boring advancement. All remaining soil samples to total depth explored were below laboratory detection limits in EB10. Detectable concentrations of TPH-G and TEX were also noted in soil samples collected from within the capillary zone (35 - 37.5' BG) in MW-5, only, during advancement.

Up to 210 ug/l TPH-G and 1.2 ug/l benzene, as well as detectable TEX, were noted in water sampled from MW-5. All analytes were "ND" in water sampled from MW-4.

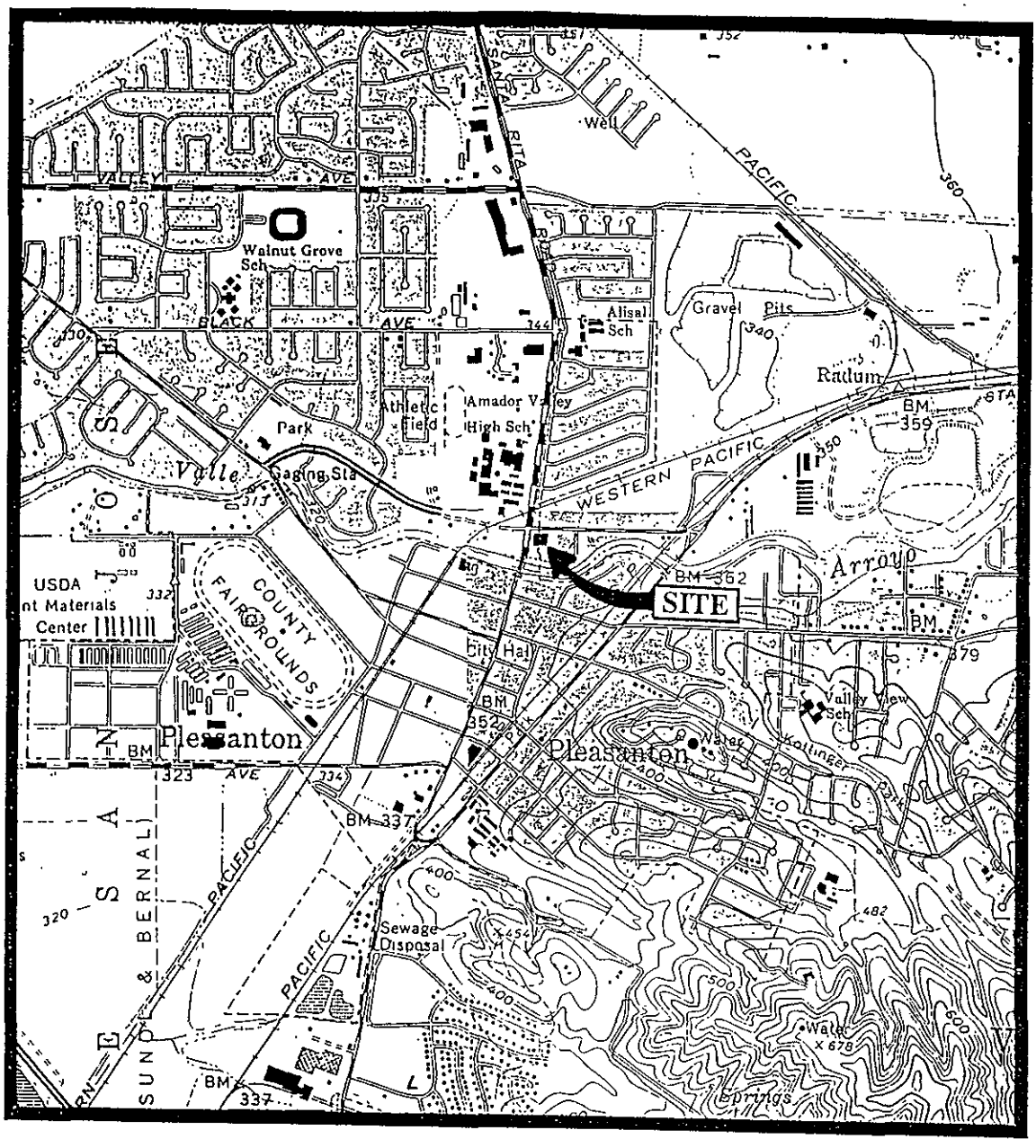
A "pilot" vapor extraction test was performed during February 1994 using MW2 as the vapor extraction test well. Wells MW1, 3, 4, and 5 were used as observation wells. Limited air sparging was also employed to gauge the effectiveness of this technology in removing dissolved phase HCs from the area surrounding MW2. Results of this test led the consultant to conclude that SVE was not a cost-effective remediation measure for this site.

All wells were sampled quarterly through January 1995; sampling frequencies were thereafter reduced. Only wells MW2 and MW5 revealed noteworthy contaminant concentrations in water sampled during this 5 year period. These data suggest a very localized plume in the vicinity of the former fuel UST cavity which is periodically fed through sorption/desorption phenomena within the capillary zone as ground water levels wax and wane seasonally.

There may be historical contribution of pollutants from the nearby former Mobil station located <100 feet north of well MW5. The Mobil site has been under active remediation (SVE/P&T) since 1995 resulting in the removal of >3000 gallons of product to date from the unsaturated zone. The bulk of the Mobil plume appears to be captured by the cone of depression induced by pumping at that site. Gradients at the Unocal site do not clearly appear to be affected by such pumping.

Directly south of the Unocal site on property owned by the City of Pleasanton ("City"), flanked directly to the south by Arroyo del Valle, are monitoring wells used by Zone 7 to gauge water levels. One such well (3S/1E 21C2) is a former Pleasanton Township production well. At least two other former Pleasanton Township wells (and perhaps as many as 3) were also located on this adjoining site, but their current locations or abandonment methods cannot be firmly established. The City, with coordination from Zone 7, will be monitoring well 3S/1E 21C2 yearly over the course of 5 years for the presence of BTEX and MtBE to ensure residuals from the adjoining Unocal site have not impacted that location.

All residual fuel components at the Unocal site are at concentrations <u>below</u> established California-modified RBSL screening levels in accordance with the ASTM E1739-95 *Risk-Based Corrective Action (RBCA)* guidance.

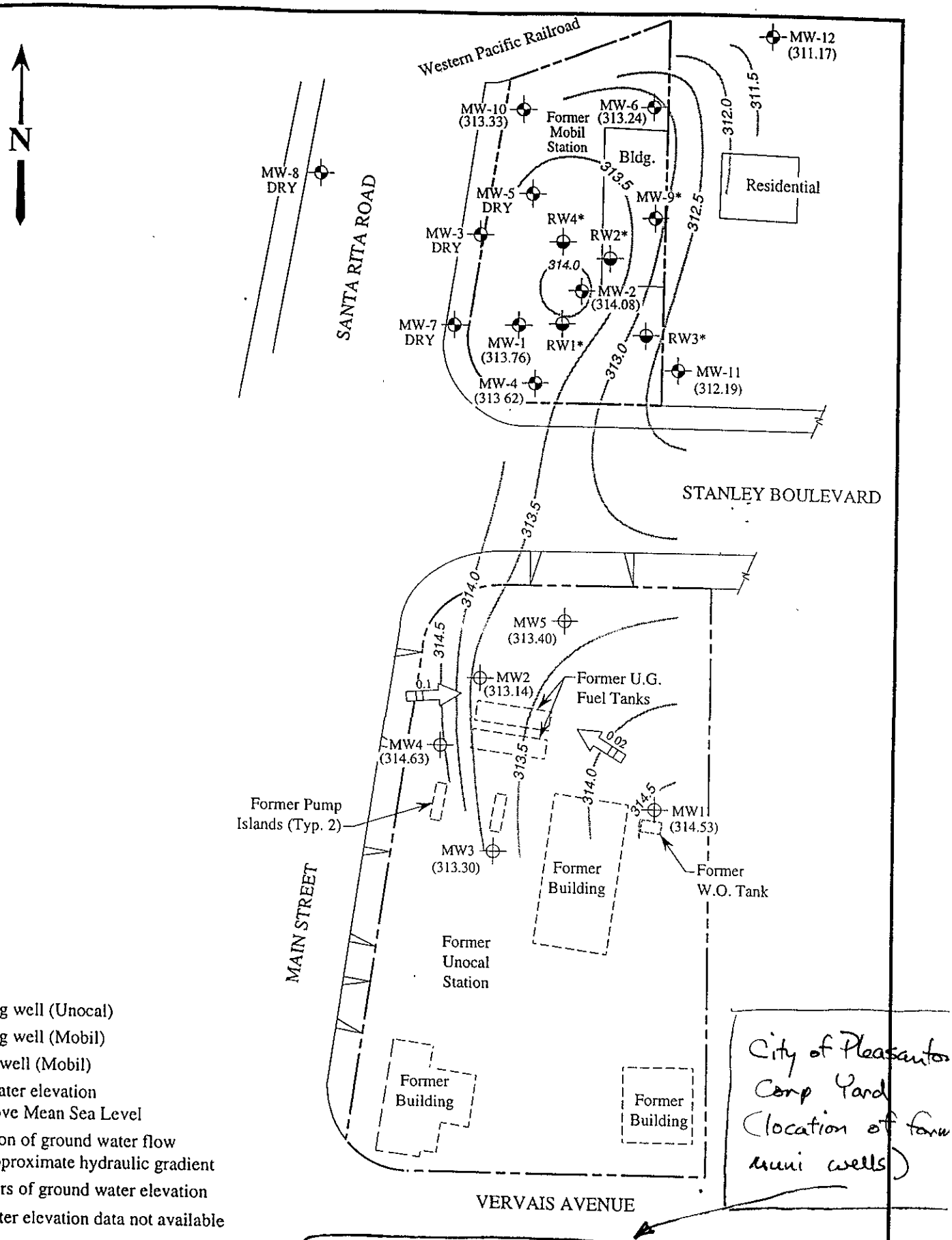


Base modified from 7.5 minute U.S.G.S. Livermore and Dublin Quadrangles
(both photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	FORMER UNOCAL S/S #0543 992 MAIN STREET PLEASANTON, CALIFORNIA	LOCATION MAP



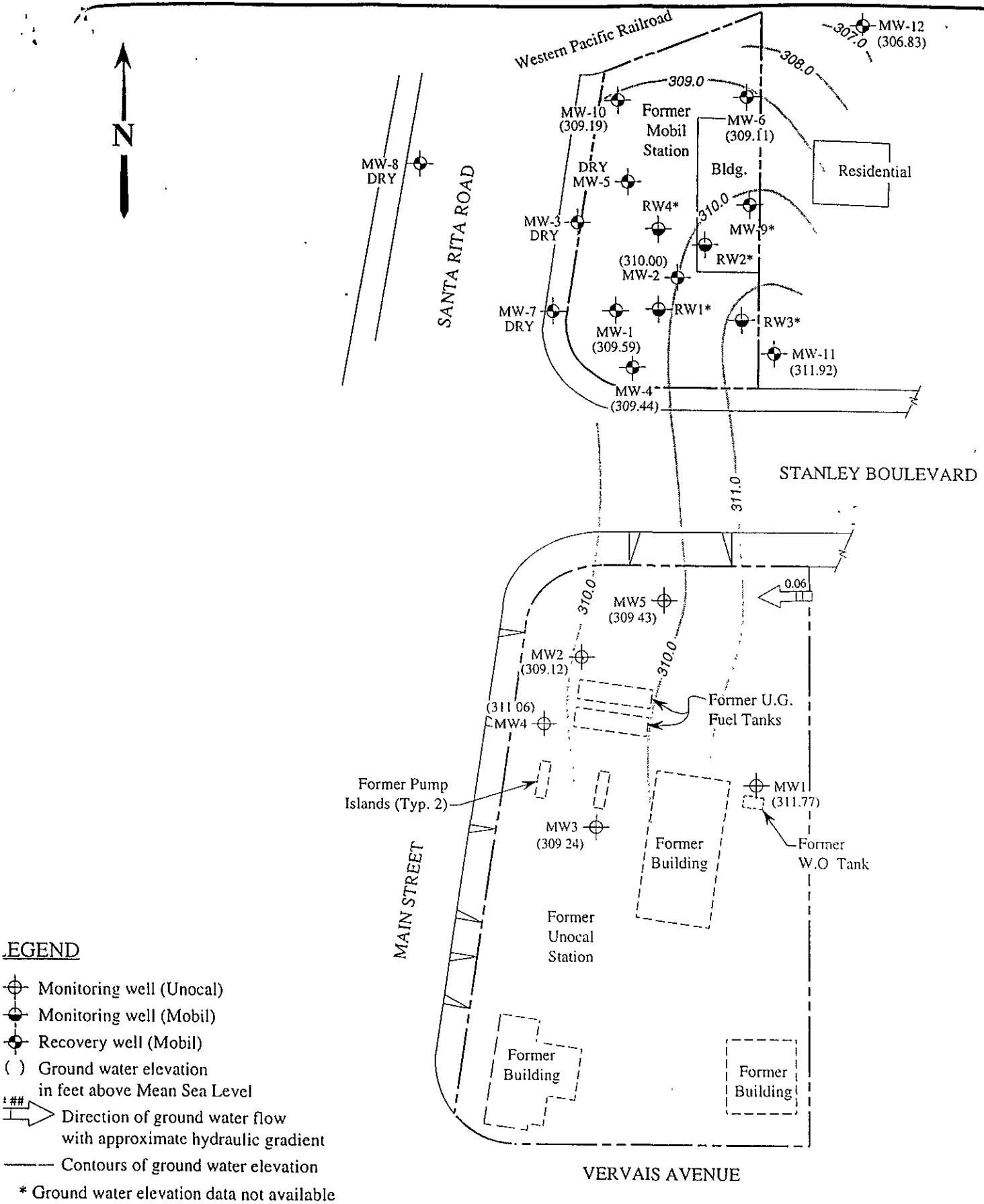
POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 12, 1997 JOINT MONITORING EVENT

MPDS SERVICES, INC.

FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

0 50 100
Approx. scale feet

FIGURE
1



LEGEND

- Monitoring well (Unocal)
- Monitoring well (Mobil)
- Recovery well (Mobil)
- ( ) Ground water elevation in feet above Mean Sea Level
- ##.# Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- * Ground water elevation data not available

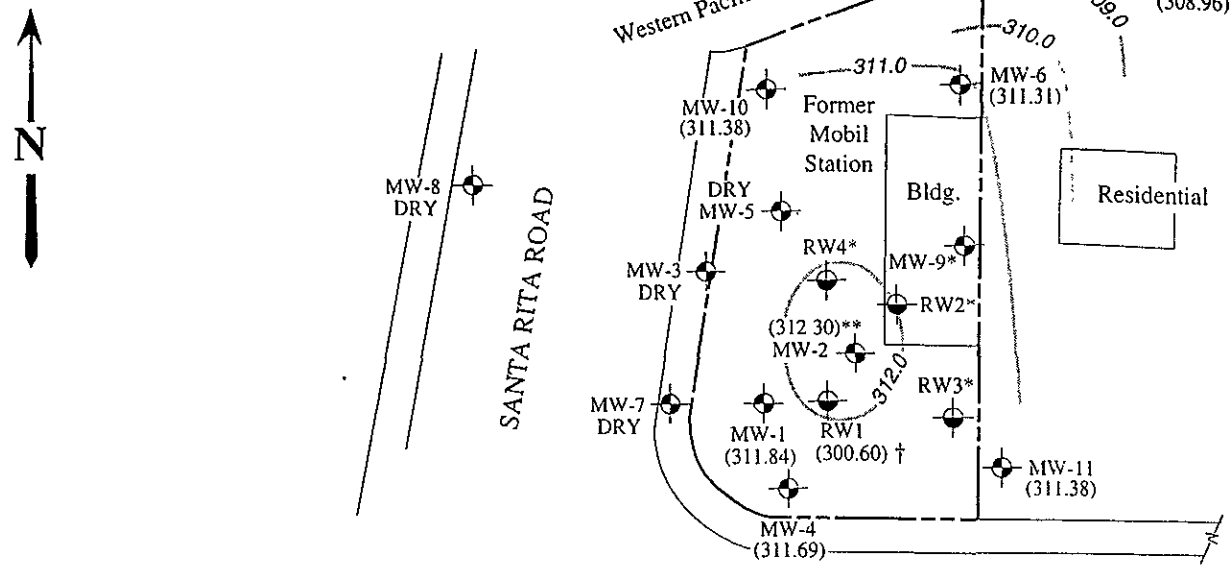
POTENTIOMETRIC SURFACE MAP FOR THE AUGUST 12, 1996 JOINT MONITORING EVENT

MPDS SERVICES, INC.

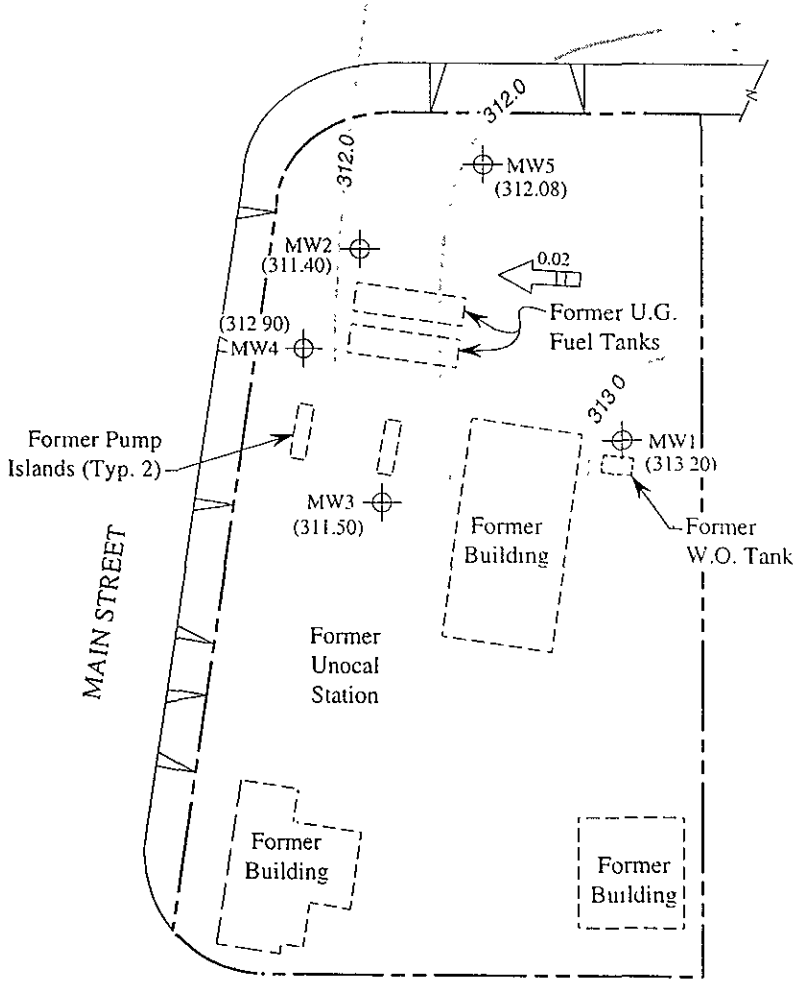
FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

0 50 100
Approx. scale feet

FIGURE
1



STANLEY BOULEVARD



0 50 100

Approx. scale feet

LEGEND

- Monitoring well (Unocal)
- Monitoring well (Mobil)
- Recovery well (Mobil)
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

* Ground water elevation data not available

** Ground water elevation corrected due to the presence of free product.

† Elevation was not used to calculate contours.

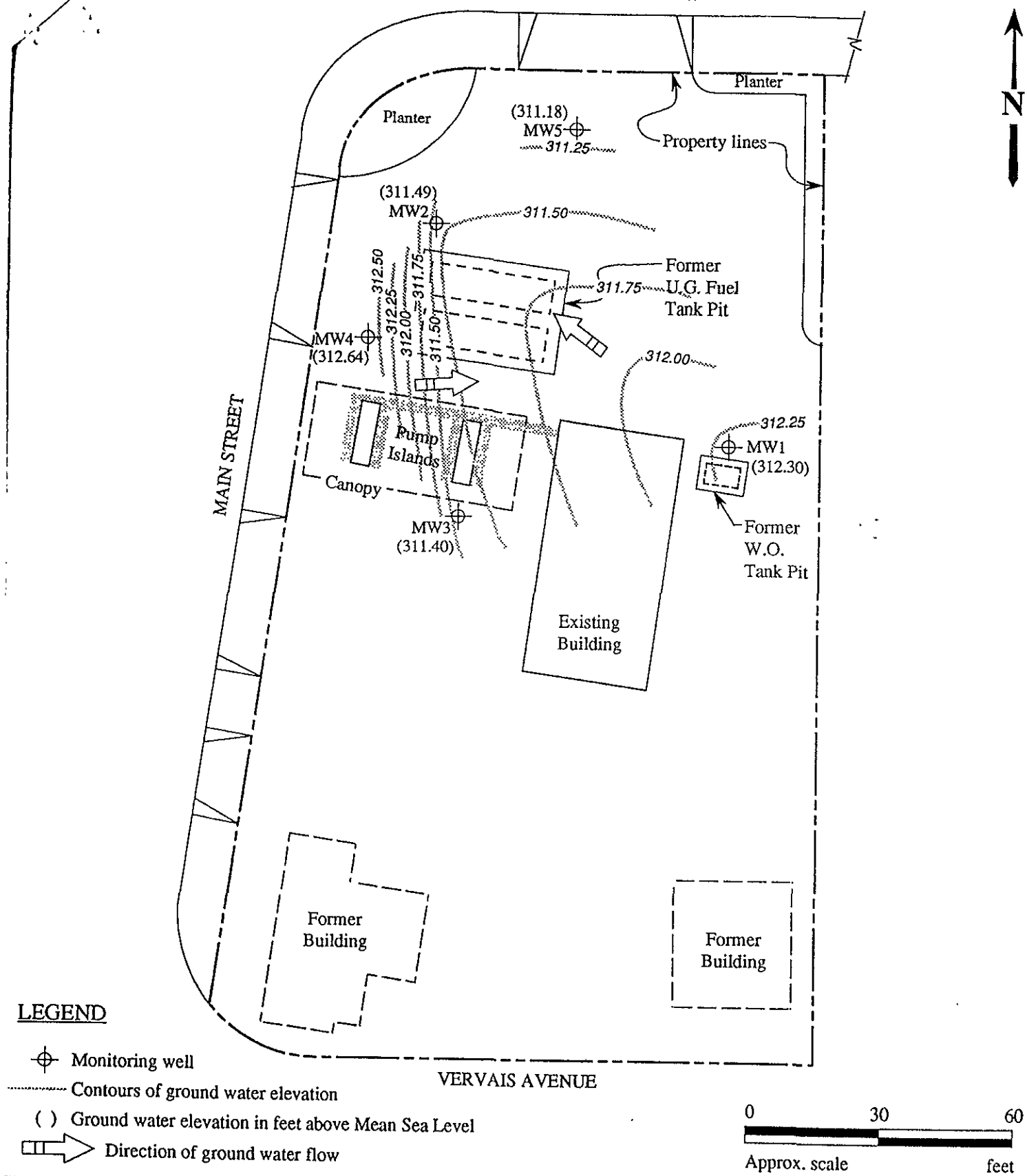
VERVAIS AVENUE

POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 12, 1996 JOINT MONITORING EVENT

mpds SERVICES, INCORPORATED

FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE
1

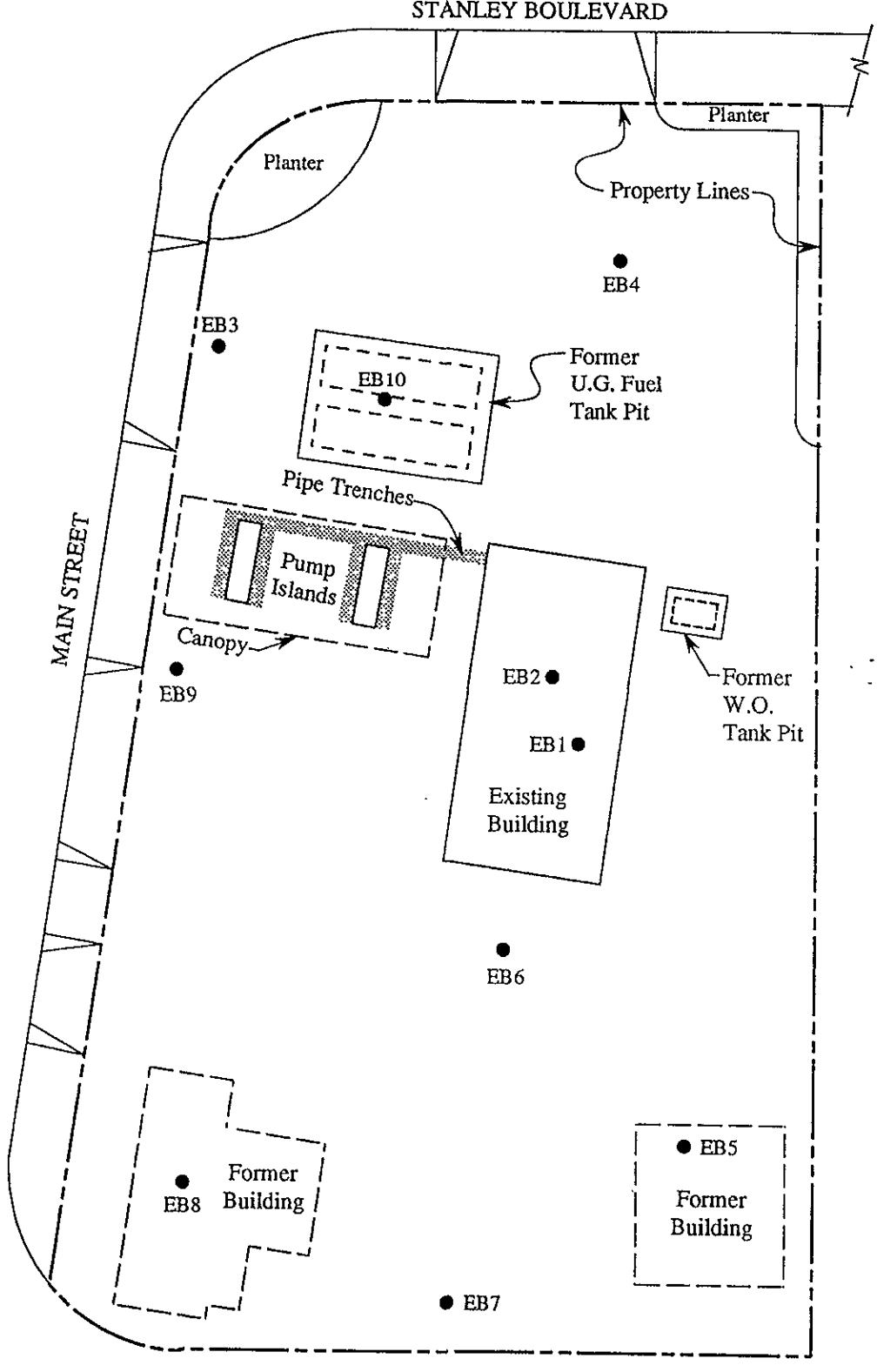


POTENTIOMETRIC SURFACE MAP FOR THE OCTOBER 2, MONITORING EVENT 1993

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE
1



LEGEND

● Exploratory boring

0 30 60

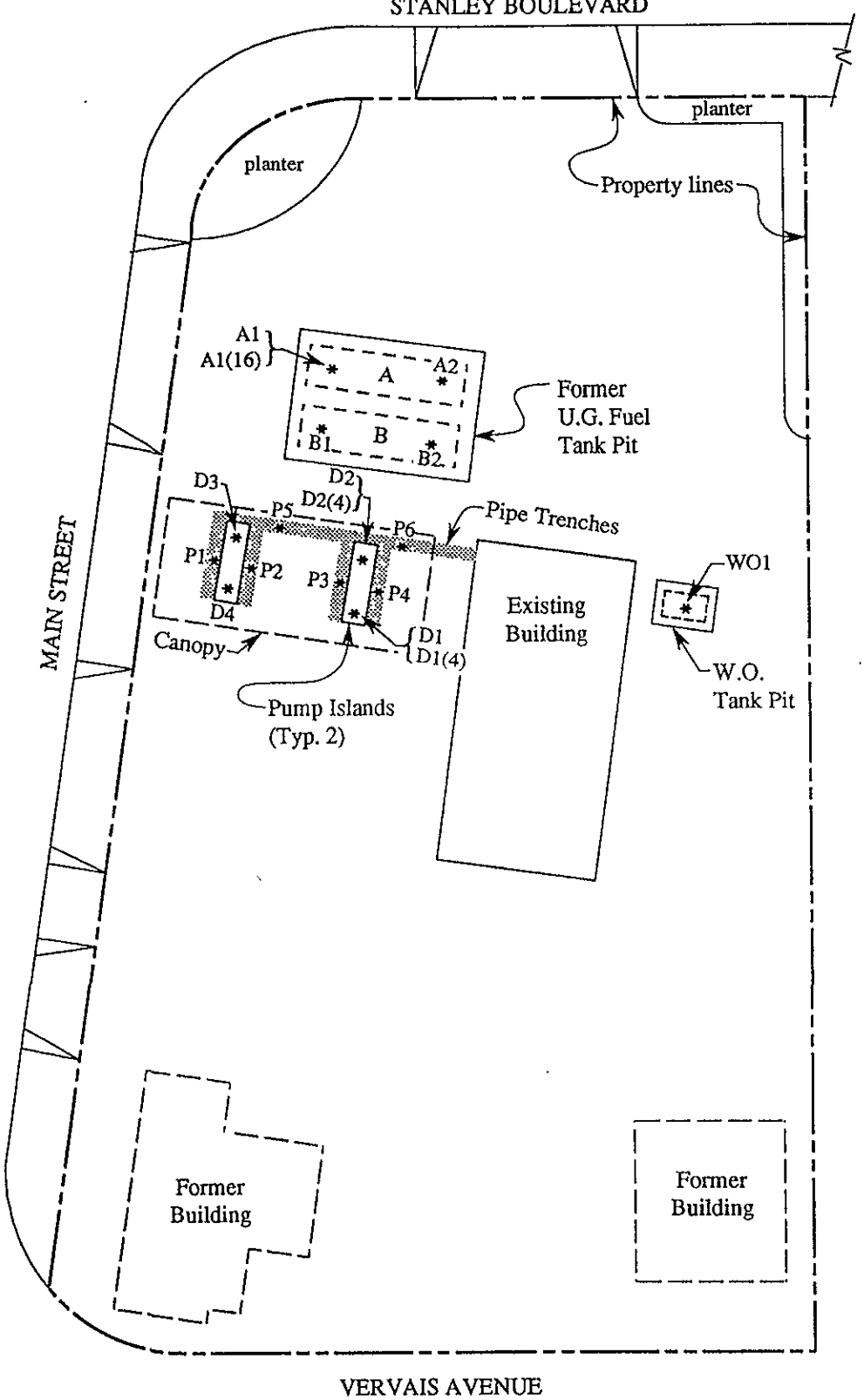
Approx. scale feet

EXPLORATORY BORING LOCATION MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE
5



LEGEND

* Sample point location

0 30 60

Approx. scale feet

SOIL SAMPLE POINT LOCATION MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #0543
992 MAIN STREET
PLEASANTON, CALIFORNIA

FIGURE
6

RECENT SAMPLING DATA

Table 1

Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on February 12, 1997)						
MW1*	314.53	36.25	50.60	0	No	0
MW2	313.14	36.37	50.28	0	No	7.5
MW3*	313.30	37.74	50.15	0	No	0
MW4	314.63	35.51	49.92	0	No	7.5
MW5	313.40	35.93	50.09	0	No	7.5
(Monitored and Sampled on August 12, 1996)						
MW1*	311.77	39.01	50.61	0	No	0
MW2	309.12	40.39	50.29	0	No	8
MW3*	309.24	41.80	50.16	0	No	0
MW4	311.06	39.08	49.92	0	No	6
MW5	309.43	39.90	50.10	0	No	6.5
(Monitored and Sampled on February 12, 1996)						
MW1*	313.20	37.58	50.60	0	--	0
MW2	311.40	38.11	50.27	0	No	8.5
MW3*	311.50	39.54	50.16	0	--	0
MW4	312.90	37.24	49.80	0	No	9
MW5	312.08	37.25	50.11	0	No	9
(Monitored and Sampled on November 10, 1995)						
MW1*	309.81	40.97	★	0	--	0
MW2	308.06	41.45	50.35	0	No	6.5
MW3*	308.36	42.68	★	0	--	0
MW4*	309.53	40.61	★	0	--	0
MW5	306.74	42.59	50.15	0	No	5.5

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW1	12/16/92*	ND	ND	ND	ND	ND	--
	4/14/93*	ND	ND	ND	ND	ND	--
	7/6/93*	ND	ND	ND	ND	ND	--
	10/2/93*	ND	ND	ND	ND	ND	--
	1/27/94	ND	ND	ND	ND	ND	--
	4/25/94	ND	ND	3.5	ND	3.4	--
	7/8/94	ND	ND	ND	ND	ND	--
	10/5/94	ND	ND	ND	ND	ND	--
	1/4/95	ND	ND	ND	ND	ND	--
	5/3/95	NOT SAMPLED					
	8/4/95	NOT SAMPLED					
	11/10/95	NOT SAMPLED					
	2/12/96	NOT SAMPLED					
	8/12/96	NOT SAMPLED					
	2/12/97	NOT SAMPLED					
MW2	12/16/92	1,600	28	ND	5.6	5.1	--
	4/14/93	4,300	7.2	5.8	10	13	--
	7/6/93	4,700	17	15	30	28	--
	10/2/93	720	12	1.8	2.7	1.7	--
	1/27/94	1,500	28	9.0	ND	20	--
	4/25/94	1,100	19	1.7	2.5	6.6	--
	7/8/94	1,100	17	ND	ND	6.4	--
	10/5/94	240	4.7	2.5	0.52	2.6	--
	1/4/95	2,000	23	ND	ND	ND	--
	5/3/95	SAMPLED SEMI-ANNUALLY					
	8/4/95	2,000	40	ND	17	43	--
	11/10/95	1,400	13	2.8	2.7	4.0	10
	2/12/96	3,200	66	9.2	27	35	ND
	8/12/96	390	2.0	4.1	2.1	4.2	ND
	2/12/97	4,000	53	30	28	16	ND

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW3	12/16/92	ND	ND	ND	ND	ND	--
	4/14/93	ND	ND	ND	ND	ND	--
	7/6/93	ND	ND	ND	ND	ND	--
	10/2/93	ND	ND	ND	ND	ND	--
	1/27/94	ND	ND	ND	ND	ND	--
	4/25/94	ND	ND	1.4	ND	1.8	--
	7/8/94	ND	ND	ND	ND	ND	--
	10/5/94	ND	ND	ND	ND	ND	--
	1/4/95	ND	ND	ND	ND	ND	--
	5/3/95	NOT SAMPLED					
	8/4/95	NOT SAMPLED					
	11/10/95	NOT SAMPLED					
	2/12/96	NOT SAMPLED					
	8/12/96	NOT SAMPLED					
	2/12/97	NOT SAMPLED					
MW4	10/2/93	ND	ND	ND	ND	ND	--
	1/27/94	ND	ND	ND	ND	ND	--
	4/25/94	ND	ND	1.2	ND	1.5	--
	7/8/94	ND	ND	ND	ND	ND	--
	10/5/94	ND	ND	ND	ND	ND	--
	1/4/95	ND	ND	ND	ND	ND	--
	5/3/95	SAMPLED SEMI-ANNUALLY					
	8/4/95	63	0.77	1.1	1.9	15	--
	11/10/95	NOT SAMPLED					
	2/12/96	ND	ND	0.96	ND	0.67	--
	8/12/96	ND	ND	0.70	ND	1.7	ND
	2/12/97	ND	ND	ND	ND	ND	ND
MW5	10/2/93	210	1.2	2.0	2.2	1.1	--
	1/27/94	320	1.8	1.3	2.6	4.5	--
	4/25/94	160	ND	1.9	1.4	1.9	--
	7/8/94	120	ND	ND	1.1	1.8	--
	10/5/94	83	0.73	0.90	ND	3.0	--
	1/4/95	210	ND	0.74	ND	0.90	--
	5/3/95	580	6.9	1.5	1.6	1.7	--
	8/4/95	550	5.4	0.76	1.2	11	--
	11/10/95	300	0.99	1.2	0.98	0.58	ND
	2/12/96	420	8.2	2.1	1.7	1.2	--
	8/12/96	ND	ND	0.60	ND	0.99	ND
	2/12/97	830	9.8	3.2	4.8	6.3	ND

Table 2

Summary of Laboratory Analyses
Water

---

* Total Oil & Grease, TPH as diesel, and all EPA method 8010 constituents were non-detectable.

-- Indicates analysis was not performed.

ND = Non-detectable.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.

Laboratory analyses data prior to January 27, 1994, were provided by Kaprealian Engineering, Inc.

WATER SAMPLES FROM BORINGS

KEI-P92-0204.R5
October 29, 1993

TABLE 4

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Number	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
11/30/92	EB3	ND	ND	ND	ND	ND
to	EB4	ND	ND	ND	ND	ND
12/02/92	EB5	ND	ND	ND	ND	ND
	EB6	ND	ND	ND	ND	ND
	EB7	ND	ND	ND	ND	ND
	EB8	ND	ND	ND	ND	ND
	EB9	ND	ND	ND	ND	ND

ND = Non-detectable.

Results in parts per billion (ppb), unless otherwise indicated.

NOTE: Water samples were collected during drilling. The results of the analyses may not be representative of formation water, and should be used for comparative informational purposes only.

SOIL SAMPLES FROM WELL BOREHOLES

KEI-P92-0204.R5
October 29, 1993

TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
12/03/92	MW1(5)*	ND	ND	ND	ND	ND	ND
	MW1(10)*	ND	ND	ND	ND	ND	ND
	MW1(15)*	ND	ND	ND	ND	ND	ND
	MW1(20)*	1.6**	ND	ND	ND	ND	ND
	MW1(25)*	ND	ND	ND	ND	ND	ND
	MW1(30)*	ND	ND	ND	ND	ND	ND
	MW1(35)*	ND	ND	ND	ND	ND	ND
	MW1(38.5)*	ND	ND	ND	ND	ND	ND
12/02/92	MW2(15)	--	ND	ND	ND	ND	ND
	MW2(20)	--	ND	ND	ND	ND	ND
	MW2(25)	--	ND	ND	ND	ND	ND
	MW2(30)	--	ND	ND	ND	ND	ND
	MW2(35)	--	600	0.66	ND	2.5	19
	MW2(38)	--	44	ND	0.16	0.39	0.81
	MW3(5)	--	ND	ND	ND	ND	ND
	MW3(10)	--	ND	ND	ND	ND	ND
	MW3(14.5)	--	ND	ND	ND	ND	ND
	MW3(17.0)	--	ND	ND	ND	ND	ND
	MW3(20)	--	ND	ND	ND	ND	ND
	MW3(25)	--	ND	ND	ND	ND	ND
	MW3(30)	--	ND	ND	ND	ND	ND
	MW3(35)	--	ND	ND	ND	ND	ND
	MW3(40)	--	ND	ND	ND	ND	ND
9/08/93 & 9/09/93	MW4(5)	--	ND	ND	ND	ND	ND
	MW4(10)	--	ND	ND	ND	ND	ND
	MW4(15)	--	ND	ND	ND	ND	ND
	MW4(20)	--	ND	ND	ND	ND	ND
	MW4(25)	--	ND	ND	ND	ND	ND
	MW4(30)	--	ND	ND	ND	ND	ND
	MW4(35)	--	ND	ND	ND	ND	ND
	MW4(38.5)	--	ND	ND	ND	ND	ND
	MW5(5)	--	ND	ND	ND	ND	ND
	MW5(10)	--	ND	ND	ND	ND	ND
	MW5(15)	--	ND	ND	ND	ND	ND
	MW5(20)	--	ND	ND	ND	ND	ND
	MW5(25)	--	ND	ND	ND	ND	ND
	MW5(30)	--	ND	ND	ND	ND	ND
	MW5(35)	--	140	ND	0.20	0.28	2.9
	MW5(37.5)	--	83	ND	0.14	0.32	1.5

SOIL SAMPLES FROM BORINGS

KEI-P92-0204.R5
October 29, 1993

TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
11/30/92 through 12/02/92	EB1(4.5)	ND	ND	ND	ND	ND
	EB1(9.5)	ND	ND	ND	ND	ND
	EB2(4.5)	ND	ND	ND	ND	ND
	EB2(9.5)	ND	ND	ND	ND	ND
	EB3(5)	ND	ND	ND	ND	ND
	EB3(10)	ND	ND	ND	ND	ND
	EB3(15)	ND	ND	ND	ND	ND
	EB3(20)	ND	ND	ND	ND	ND
	EB3(25)	ND	ND	ND	ND	ND
	EB3(30)	ND	ND	ND	ND	ND
	EB3(35)	ND	ND	ND	ND	ND
	EB3(39)	ND	ND	ND	ND	ND
	EB4(5)	ND	ND	ND	ND	ND
	EB4(10)	ND	ND	ND	ND	ND
	EB4(15)	ND	ND	ND	ND	ND
	EB4(20)	ND	ND	ND	ND	ND
	EB4(25)	ND	ND	ND	ND	ND
	EB4(30)	ND	ND	ND	ND	ND
	EB4(35)	ND	ND	ND	ND	ND
	EB4(40)	ND	ND	ND	ND	ND
	EB4(45)	ND	ND	ND	ND	ND
	EB4(48)	ND	ND	ND	ND	ND
	EB5(5)	ND	ND	ND	ND	ND
	EB5(10)	ND	ND	ND	ND	ND
	EB5(15)	ND	ND	ND	ND	ND
	EB5(20)	ND	ND	ND	ND	ND
	EB5(25)	ND	ND	ND	ND	ND
	EB5(30)	ND	ND	ND	ND	ND
	EB5(35)	ND	ND	ND	ND	ND
	EB5(40)	ND	ND	ND	ND	ND
	EB6(5)	ND	ND	ND	ND	ND
	EB6(10)	ND	ND	ND	ND	ND
	EB6(15)	ND	ND	ND	ND	ND
	EB6(20)	ND	ND	ND	ND	ND
	EB6(25)	ND	ND	ND	ND	ND
	EB6(30)	ND	ND	ND	ND	ND
	EB6(35)	ND	ND	ND	ND	ND
	EB6(40)	ND	ND	ND	ND	ND

TABLE 5 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
11/30/92 through 12/02/92 (Con't)	EB7(5)	ND	ND	ND	ND	ND
	EB7(10)	ND	ND	ND	ND	ND
	EB7(15)	ND	ND	ND	ND	ND
	EB7(20)	ND	ND	ND	ND	ND
	EB7(25)	ND	ND	ND	ND	ND
	EB7(30)	ND	ND	ND	ND	ND
	EB7(35)	ND	ND	ND	ND	ND
	EB7(39.5)	ND	ND	ND	ND	ND
	EB8(5)	ND	ND	ND	ND	ND
	EB8(9.5)	ND	ND	ND	ND	ND
	EB8(15)	ND	ND	ND	ND	ND
	EB8(20)	ND	ND	ND	ND	ND
	EB8(25)	ND	ND	ND	ND	ND
	EB8(30)	ND	ND	ND	ND	ND
	EB8(35)	ND	ND	ND	ND	ND
	EB8(40)	ND	ND	ND	ND	ND
	EB8(45)	ND	ND	ND	ND	ND
	EB8(49)	ND	ND	ND	ND	ND
	EB9(5)	ND	ND	ND	ND	ND
	EB9(10)	ND	ND	ND	ND	ND
	EB9(15)	ND	ND	ND	ND	ND
	EB9(20)	ND	ND	ND	ND	ND
	EB9(25)	ND	ND	ND	ND	ND
	EB9(30)	ND	ND	ND	ND	ND
	EB9(35)	ND	ND	ND	ND	ND
	EB9(38)	ND	ND	ND	ND	ND
9/08/93	EB10(17)	ND	ND	0.0065	0.012	0.013
	EB10(20)	1.2	ND	0.0082	0.0060	0.020
	EB10(25)	ND	ND	ND	ND	ND
	EB10(30)	ND	ND	ND	ND	ND
	EB10(35)	ND	ND	ND	ND	ND
	EB10(38.5)	ND	ND	ND	ND	ND

NOTE: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

ND = Non-detectable.

Results are in parts per million (ppm), unless otherwise indicated.

KEI-P92-0204.R5
October 29, 1993

TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	TPH as Diesel	TPH as Hydraulic Fluid	TOG	Tetra-chloroethene (ppb)**	1,1,1-Tri chloroethane (ppb)**	Trichlo-roethene (ppb)**
12/01/92	EB1(4.5)	1.6*	ND	ND	6.7	10	6.2
	EB1(9.5)	ND	ND	ND	ND	6.3	ND
	EB2(4.5)	ND	38	ND	ND	11	ND
	EB2(9.5)	ND	27	ND	ND	16	ND

* Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

** All EPA method 8010 constituents were non-detectable, except for tetrachloroethene, 1,1,1-trichloroethane, and trichloroethene, as indicated.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

NOTE: The soil samples were collected at the depths (below grade) indicated in the ( ) of the respective sample number.

UST CLOSURE / TRENCH SAMPLES

KEI-P92-0204.R5
October 29, 1993

TABLE 7

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
5/05/92	A1	14	--	300	ND	0.10	5.9	26
	A1(16)	16	--	2.5	ND	0.011	0.038	0.056
	A2	14	--	2.7	ND	0.010	0.0072	0.037
	B1	14	--	ND	ND	ND	ND	0.0077
	B2	14	--	ND	ND	ND	ND	0.0081
	P1	3	--	ND	ND	ND	ND	ND
	P2	3	--	ND	ND	ND	ND	ND
	P3	3	--	ND	ND	ND	ND	ND
	P4	3	--	ND	ND	ND	ND	ND
	P5	3	--	ND	0.028	0.010	0.014	0.075
	P6	3	--	ND	ND	ND	ND	ND
	WO1*	12	1.5	ND	ND	ND	ND	ND
5/07/92	D1	2	--	29	0.056	0.14	0.21	0.91
	D2	2	--	75	0.067	0.15	0.14	2.5
	D3	2	--	3.3	0.0062	0.012	0.0076	0.046
	D4	2	--	ND	ND	ND	ND	ND
5/15/92	D1(4)	4	--	ND	ND	ND	ND	ND
	D2(4)	4	--	ND	ND	ND	ND	ND

-- Indicates analysis was not performed.

ND = Non-detectable.

* TOG and all EPA method 8010 constituents were non-detectable. Metal concentrations were detected as follows: cadmium was 1.4 ppm, chromium was 52 ppm, lead was 6.6 ppm, nickel was 97 ppm, and zinc was 77 ppm.

Results in parts per million (ppm), unless otherwise indicated.

APPENDIX A

BORING LOG
AND
WELL COMPLETION
DIAGRAM

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** JGG / W.W. CEG 1633
Project Name Unocal S/S #0543, 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/3/92
Boring No. MW1	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Asphalt pavement over sand and gravel base.
6/6/5		5	ML	Silt, estimated at 5-10% clay, 5% fine-grained sand, and trace gravel to 1 inch in diameter, stiff, moist to very moist, brown (10YR 4/3), trace pores.
5/5/7		10		Silt, estimated at 5-10% clay, 5% fine-grained sand and trace gravel to 3/8 inch in diameter, stiff, moist, brown (10YR 4/3), trace pores with gray (10YR 5/1) staining.
7/8/10		15		Silt, estimated at 10% fine-grained sand and 5% clay, very stiff, moist, brown (10YR 5/3), trace pores.
6/8/11		20		Silt, estimated at 10-15% fine-grained sand and 5% clay, very stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/3/92
Boring No. MW1	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/7/10		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist to very moist, slightly elastic, brown (10YR 5/3), trace pores with gray staining.
5/6/8		30		Silt, estimated at 10% fine-grained sand and 5-10% clay, stiff, moist, slightly elastic, brown (10YR 5/3) pores with gray staining common.
4/6/7		35	ML-SM	Sandy silt, estimated at 15-20% fine-grained sand and 10% clay, stiff, moist to very moist, grayish brown (10YR 5/2), trace pores.
5/8/11	▼			Sandy silt, estimated at 15-20% fine-grained sand and 5% clay, very stiff, very moist to saturated, grayish brown (10YR 5/2).
4/9/16		40	SM	Silty sand, estimated at 25-30% silt and 5% gravel to 3/8 inch in diameter, medium dense, saturated, grayish brown (10YR 5/2), sand is predominantly fine-grained.
			ML	Clayey silt, estimated at 25-30% clay and trace coarse-grained sand, very stiff, very moist, slightly elastic, grayish brown (10YR 5/2), trace pores with gray staining.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/3/92
Boring No. MW1	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/6/11		45	ML	Clayey silt, estimated at 25-30% clay and trace coarse-grained sand, very stiff, very moist, slightly elastic, grayish brown (10YR 5/2), trace pores with gray staining.
5/9/16				Clayey silt, estimated at 20-25% clay and 5-10% fine-grained sand, very stiff, very moist to saturated, slightly elastic, grayish brown (10YR 5/2).
5/7/15		50		Silt, estimated at 5% clay and trace sand, very stiff, very moist to saturated, slightly elastic, light brownish gray (2.5Y 6/2) and pale brown (10YR 6/3) mottled.
				TOTAL DEPTH: 50.5'
		55		
		60		
		65		

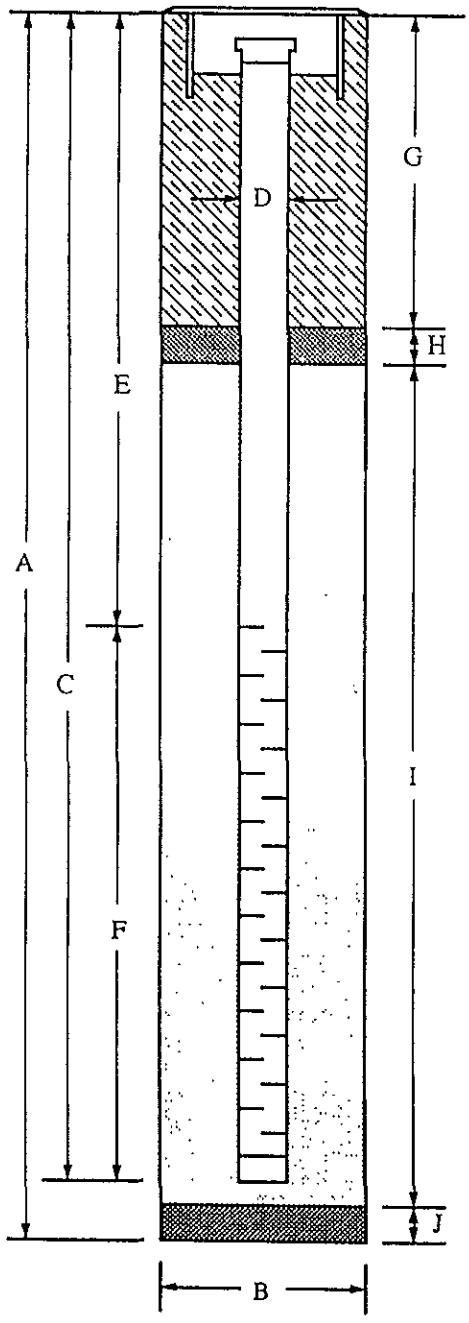
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #0543, 992 Main Street, Pleasanton WELL NO. MW1

PROJECT NUMBER: KEI-P92-0204

WELL PERMIT NO.: 92507

Flush-mounted Well Cover



A. Total Depth : 50.5'

B. Boring Diameter: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 50'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 30'

F. Perforated Length: 20'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 26'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 22.5'

Pack Material: RMC Lonestar Sand

Size: 2/12

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** W.W. JGG CEG 1633
Project Name Unocal S/S #0543, 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2-3/92
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	GW	Sand and gravel road base (fill).
		5	GW	Sand and gravel road base (fill).
		10	GW	Sand and gravel road base, subangular gravel to 1 inch in diameter, moist, light brownish gray (10YR 6/2) (fill).
			GW	per driller
5/8/10		15	ML	Silt, estimated at 10% fine-grained sand, and 5% clay, very stiff, moist, grayish brown (10YR 5/2), trace rootlets, color change at 15.5 feet to olive gray (5Y 5/2).
4/4/5		20	ML	Silt, estimated at 10% fine-grained sand and 5% clay, stiff, moist, dark gray (5Y 4/1), silt is slightly elastic, trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** W.W. JGG CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2-3/92
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
4/7/9		25	ML	Silt, estimated at 10% fine-grained sand and 5-10% clay, stiff to very stiff, moist, slightly elastic, gray (5Y 5/1) and pale brown (10YR 6/3), mottled, trace pores with gray (5Y 5/1) staining.
4/7/8		30		Silt, estimated at 5-10% clay and trace sand, stiff, moist, olive gray (5Y 5/2), trace pores.
3/5/6		35		Sandy silt, estimated at 15-20% fine-grained sand, 5% clay, and trace gravel to 3/8 inch in diameter, stiff, very moist, dark greenish gray (5GY 4/1).
4/12/21	▼			Sandy silt as above, except very moist to saturated, very stiff.
		40	SM	Silty sand, estimated at 10-15% silt and trace gravel to 3/8 inch in diameter, dense, saturated, dark greenish gray (5GY 4/1), sand is fine-grained and estimated at 10% coarse-grained.
4/7/9			ML	Clayey silt, estimated at 15% clay, stiff to very stiff, very moist, slightly elastic, light olive brown (2.5Y 5/3) with greenish gray (5GY 5/1) staining in root pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" / **Casing Diameter** 2"	**Logged By** W.W.
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2-3/92
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
5/8/10		45	ML	Clayey silt, estimated at 15-20% clay, very stiff, very moist, slightly elastic, light olive brown (2.5Y 5/3) and light brownish gray (2.5Y 6/2) mottled, trace caliche nodules, pores.
7/11/23		50	GP	Sandy gravel, estimated at 40% sand and 5% silt, dense, saturated, grayish brown (2.5Y 5/2), subrounded gravel to 3/4 inch in diameter.
				TOTAL DEPTH: 50'
		55		
		60		
		65		

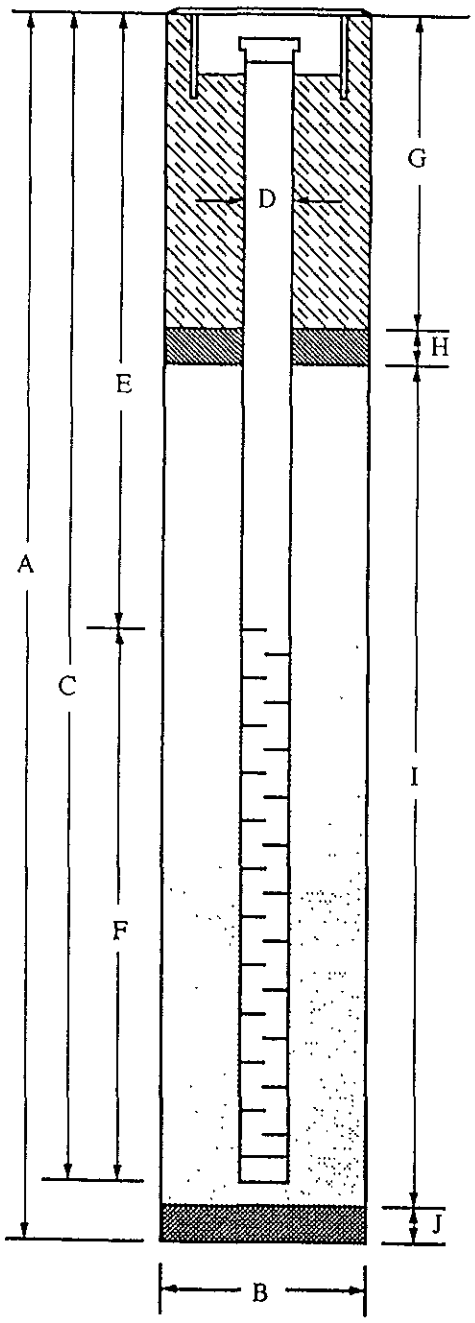
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #0543, 992 Main Street, Pleasanton WELL NO. MW2

PROJECT NUMBER: KEI-P92-0204

WELL PERMIT NO.: 92507

Flush-mounted Well Cover



A. Total Depth : 50'

B. Boring Diameter: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 50'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 30'

F. Perforated Length: 20'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 26'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 22'

Pack Material: RMC Lonestar Sand

Size: 2/12

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. MW3	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand, remnants of brick and glass (fill).
				Four inch concrete slab.
4/4/6		5	ML	Sandy silt, estimated at 15% sand, 5% gravel to 1/2 inch in diameter, and trace clay, stiff, moist, brown (10YR 5/3), trace pores.
3/6/6		10		Silt, estimated at 10% fine-grained sand and trace clay, stiff, moist, slightly elastic, brown (10YR 5/3), trace organic matter and pores.
10/12/18		15	GW	Sandy gravel, estimated at 35-40% sand, subrounded gravel to 1-1/2 inches in diameter, medium dense to dense, moist, light brownish gray (10YR 6/2).
6/11/12			ML	
5/7/8		20		Silt, estimated at 5-10% fine-grained sand, 5% clay, and trace subrounded gravel to 3/8 inch in diameter, stiff to very stiff, moist, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. MW3	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/7/8		25	ML	Silt, estimated at 10% sand and 5-10% clay, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.
3/5/8		30		Clayey silt, estimated at 15% clay and trace fine-grained sand, stiff, moist, pale brown (10YR 6/3), trace pores.
5/6/7		35		Silt, estimated at 10-15% fine-grained sand, 5% clay and trace gravel to 3/8 inch in diameter, stiff, very moist, slightly elastic, brown (10YR 5/3).
4/7/12				Silt, estimated at 10-15% fine-grained sand, 5% clay and trace rounded gravel to 3/8 inch in diameter, very stiff, very moist, brown (10YR 5/3).
4/6/10	▼	40		Silt, estimated at 5% fine-grained sand, 5% clay and trace gravel to 3/8 inch in diameter, stiff to very stiff, very moist to saturated, slightly elastic, brown (10YR 5/3), trace pores and organic matter.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. MW3	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/6/9		45	ML	Clayey silt, estimated at 15-20% clay, stiff, very moist, grayish brown (10YR 5/2), silt is slightly elastic.
				Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, very moist to saturated, brown (10YR 5/3).
7/13/15			ML-SM	Sandy silt, estimated at 25-35% fine-grained sand and trace gravel to 3/4 inch in diameter, very stiff, saturated, brown (10YR 5/3).
6/9			SM	
		50		Silty sand, estimated at 10-15% silt and trace gravel to 1/2 inch in diameter, medium dense, saturated, grayish brown (10YR 5/2), sand is predominantly fine-grained.
				TOTAL DEPTH: 50'
		55		
		60		
		65		

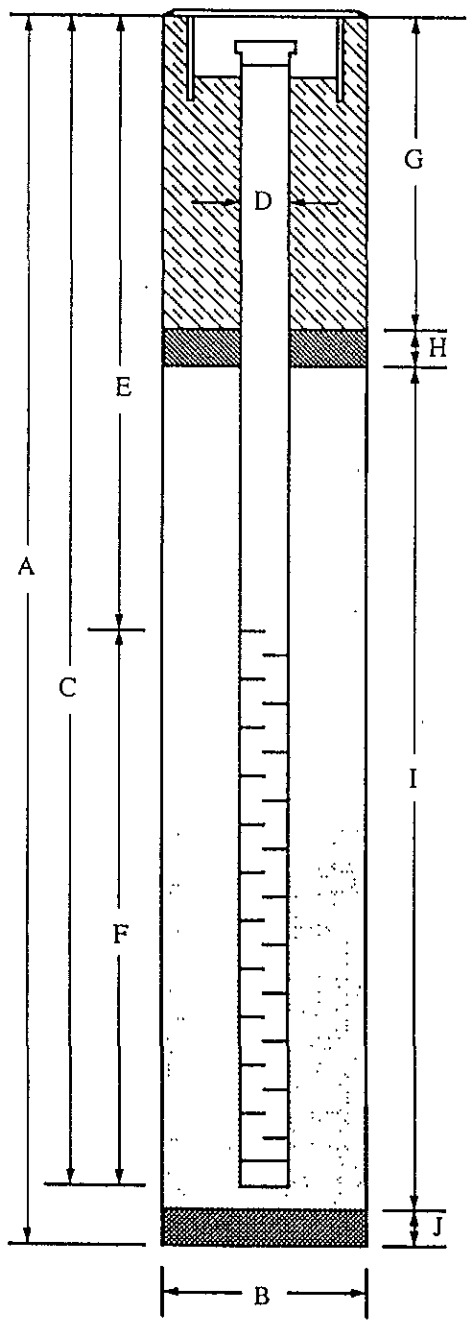
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal S/S #0543, 992 Main Street, Pleasanton WELL NO. MW3

PROJECT NUMBER: KEI-P92-0204

WELL PERMIT NO.: 92507

Flush-mounted Well Cover



A. Total Depth : 50'

B. Boring Diameter: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 50'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 30'

F. Perforated Length: 20'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 26'

Seal Material: Neat Cement

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 22'

Pack Material: RMC Lonestar Sand

Size: 2/12

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG **D.L.** CEG 1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8, 1993
Boring No. MW4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel base.
2/3/3		5	ML	Silty fine to very fine-grained sand, estimated at 20-30% silt, firm, moist, brown.
3/4/4		10		Sandy silt, estimated at 30-40% very fine to fine-grained sand, firm to stiff, moist, dark brown.
3/4/6		15		Sandy silt as above except brown, locally grades to silty very fine to fine-grained sand.
3/4/7		20		Sandy silt, estimated at 35-45% very fine to fine-grained sand, firm to stiff, very moist, brown.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG D.L. CEG 1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8, 1993
Boring No. MW4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
3/4/5		25	ML	Silty sand, estimated at 35-45% very fine to fine-grained sand, firm to stiff, very moist, brown.
			SM	Sandy silt, estimated at 25-35% silt and trace clay, sand is very fine to medium-grained, loose, very moist, brown, cohesive.
3/4/6		30	ML	Silt with sand, trace clay, sand is very fine to fine-grained, firm, very moist, brown.
				Silt, estimated at 10-15% sand and 5-10% clay, firm to stiff, moist, brown.
4/5/7		35	SM	Silty sand, estimated at 20-25% silt and 5-10% gravel to 1-1/4 inches in diameter, loose to medium dense, very moist, dark brown.
3/5/5			ML	Silty fine-grained sand, estimated at 20-30% silt, firm to stiff, very moist, dark brown.
7/7/8	▽		SW	Well graded sand with gravel, estimated at 5-10% silt, medium dense, very moist to saturated, dark brown.
		40		Sandy silt, sand is very fine-grained, stiff, wet, olive brown.
4/7/8				Silt, estimated at 10-15% very fine-grained sand and 5-10% clay, stiff, moist, dark olive brown.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" / **Casing Diameter** 2"	**Logged By** JGG / D.L. CEG 1C33
Project Name Unocal S/S #0543, 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8, 1993
Boring No. MW4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/7/8		45	ML	Silt with clay, trace very fine-grained sand, stiff, moist, olive brown.
				Sandy silt, sand is fine-grained, stiff, wet, olive brown.
4/4/5		50	SP	Poorly graded sand, medium-grained, estimated at 5-10% silt, loose, saturated, dark brown, grades to fine-grained sand towards 50 feet.
		55		TOTAL DEPTH: 50'
		60		
		65		

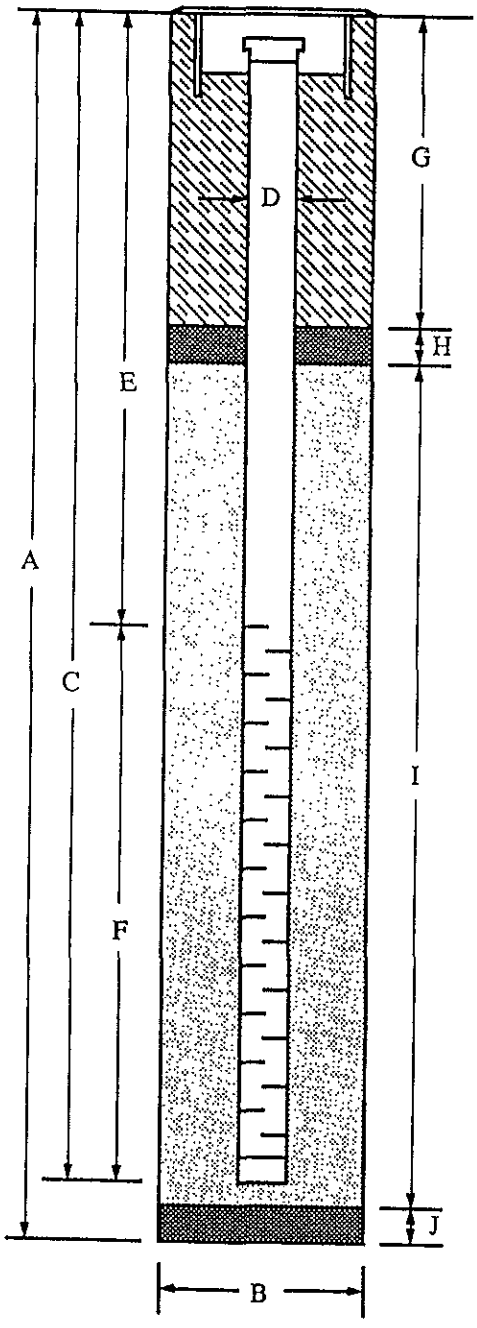
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #0543, 992 Main St., Pleasanton **WELL NO.:** MW4

PROJECT NUMBER: KEI-P92-0204

WELL PERMIT NO.: ACFC&WCD #93394

Flush-mounted Well Cover



A. Total Depth : 50'

B. Boring Diameter: 8.5"

Drilling Method: Hollow Stem Auger

C. Casing Length: 50'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 33'

F. Perforated Length: 17'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 29'

Seal Material: 11-Sack Cement/Sand Slurry

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 19'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JG6 D.L. CEG/1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8-9, 1993
Boring No. MW5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel base.
2/2/2		5	SM	Silty sand, estimated at 15-20% silt, trace gravel to 1/2 inch in diameter, loose, moist, dark brown.
				Sandy silt, estimated at 35-45% sand, firm, moist, dark brown.
2/3/5		10		Silt with sand, trace clay, sand is very fine-grained, firm to stiff, moist, dark brown.
5/7/8		15	ML	Sandy silt, estimated at 35-45% very fine to fine-grained sand, stiff, moist, dark brown, locally grades to silty very fine to fine-grained sand as above.
4/4/5		20		

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** D.L. JTG CEG/1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8-9, 1993
Boring No. MW5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
2/4/5		25	ML	Sandy silt, estimated at 30-40% very fine to fine-grained sand, firm to stiff, moist, dark brown, mottled with dark olive gray below 25 feet, estimated at 5-10% clay below 25 feet.
3/4/4		30		Sandy silt as above, except estimated at 30% sand.
				Silty fine-grained sand, loose, very moist, olive gray to dark olive gray.
2/3/5		35	SM	Silty sand, estimated at 20-25% silt, sand is fine to medium-grained, trace gravel to 3/8 inch in diameter, loose, very moist to wet, dark olive gray.
2/2/5	▽			Silty very fine to fine-grained sand, loose, wet to saturated, olive gray.
				Silt, estimated at trace to 15% variable sand content, trace clay, sand is very fine-grained, stiff, very moist, olive brown.
4/5/6		40	ML	Sandy silt, estimated at 30% very fine-grained sand, stiff, wet, olive brown.
4/5/5				Silt with clay, stiff, moist, dark olive gray, with occasional root holes.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG D.L. CEG 1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8-9, 1993
Boring No. MW5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/5/5		45	ML	Silt with clay, trace fine-grained sand, stiff, moist, olive brown, locally grades to clayey silt with occasional root holes.
3/5/5		50		Sandy silt, estimated at 30-40% very fine to fine-grained sand, stiff, wet, olive brown and grayish brown, mottled.
				TOTAL DEPTH: 50'
		55		
		60		
		65		

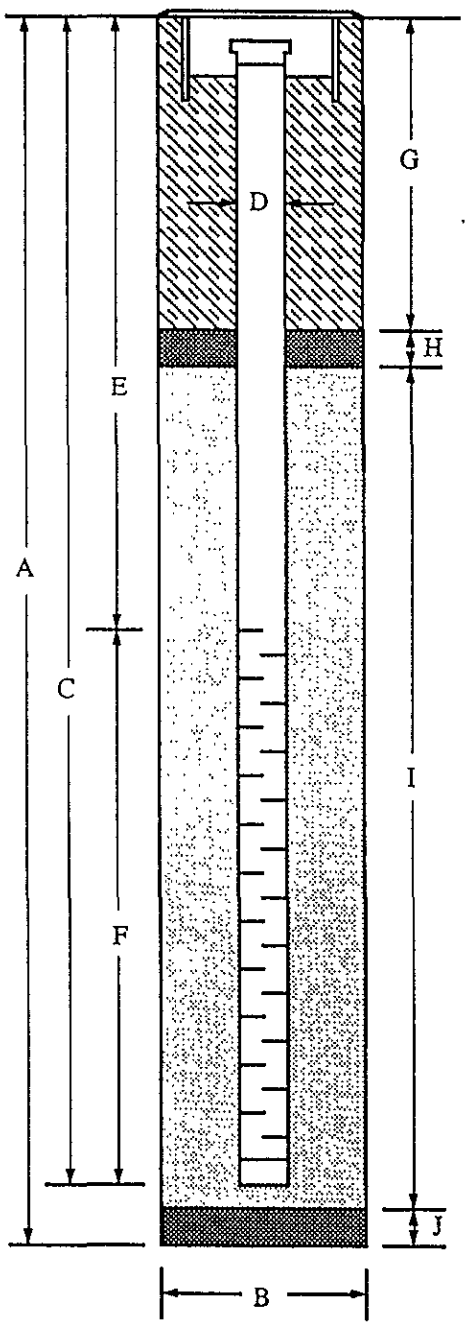
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #0543, 992 Main St., Pleasanton **WELL NO.:** MW5

PROJECT NUMBER: KEI-P92-0204

WELL PERMIT NO.: ACFC&WCD #93394

Flush-mounted Well Cover



A. Total Depth : 50'

B. Boring Diameter: 8.5"

Drilling Method: Hollow Stem Auger

C. Casing Length: 50'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 32'

F. Perforated Length: 18'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 28'

Seal Material: 11-Sack Cement/Sand Slurry

H. Seal: 2'

Seal Material: Bentonite

I. Filter Pack: 20'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB1	**Drilling Method** Hand Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Five inches of concrete over sand and gravel base (fill).
		5	ML	Silt, estimated at 5% fine-grained sand, firm, moist, brown (10YR 5/3), micaceous.
		10		Silt, trace sand and clay, firm, moist, brown (10YR 5/3).
		15		Silt, estimated at 10% sand, trace clay and gravel to 1/2 inch in diameter, firm to stiff, moist, slightly plastic, dark grayish brown (10YR 4/2) .
		20		TOTAL DEPTH 10'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB2	**Drilling Method** Hand Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS		Description
		0			Five inches of concrete over silt and gravel (fill).
					Silt, trace fine-grained sand, firm, moist, brown (10YR 5/3).
		5	ML		Silt, firm, moist, brown (10YR 5/3).
					Silt, estimated at 5% clay, and trace fine-grained sand, firm to stiff, mosit, brown (10YR 4/3).
		10			TOTAL DEPTH 10'
		15			
		20			

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB3	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel base. (fill).
3/4/4		5	ML	Silt, estimated at 5% fine-grained sand, firm to stiff, moist, brown (10YR 5/3), trace rootlets.
5/6/7		10		Silt, trace very fine-grained sand, stiff, moist, brown (10YR 4/3), trace root pores.
5/9/15		15		Silt, estimated at 10% fine-grained sand and trace gravel to 3/8 inch in diameter, very stiff, moist, brown (10YR 5/3).
4/7/11		20		Silt, estimated at 5% fine-grained sand, very stiff, moist to very moist, brown (10YR 5/3), trace root pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** W.W.
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB3	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
6/9/12		25		Silt, estimated at 5-10% fine-grained sand, very stiff, moist to very moist, slightly elastic, brown (10YR 5/3), trace pores.
4/5/7		30	ML	Silt, estimated at 5% clay and trace fine-grained sand, stiff, moist to very moist, slightly elastic, light yellowish brown (10YR 6/4).
3/4/6		35		Silt, estimated at 10% fine-grained sand, trace clay and gravel to 1/2 inch in diameter, stiff, very moist, grayish brown (2.5Y 5/2), trace pores.
5/7/8	▽	40		Sandy silt, estimated at 25-30% sand and 5% gravel ot 3/8 inch in diameter, stiff, saturated, light yellowish brown (2.5Y 6/3). Silt, stiff, very moist, slightly elastic, light yellowish brown (10YR 6/4), trace pores. TOTAL DEPTH: 40.5'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CE61633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Three inches of asphalt over road base.
			GM	Silty gravel, estimated at 35% silt, 5-10% sand, gravel is subrounded to 1 inch in diameter, moist, brown (10YR 5/3).
2/3/3		5		Silt, trace clay, firm, moist, dark grayish brown (10YR 4/2), trace pores.
3/6/7		10	ML	Silt, trace sand and clay, stiff, moist, brown (10YR 5/3), trace pores.
6/9/11		15		Silt, estimated at 5% fine-grained sand and trace clay, very stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.
5/7/10		20		Silt, estimated at 5-10% fine-grained sand and trace clay, very stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/6/9		25	ML	Silt, estimated at 10% fine-grained sand and 5% clay, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.
3/5/8		30		Silt, estimated at 10% clay and trace to 10% sand, stiff, moist, olive gray (5Y 5/2), localized areas of moderate consolidation to 1-1/2 inches in diameter, trace pores.
3/6/7		35	ML-SM	Sandy silt, estimated at 35% fine-grained sand and 5% gravel to 3/4 inch in diameter, stiff, moist, brown (10YR 5/3), trace pores.
3/4/6	▽	40		Sandy silt as above, except very moist.
			ML	Silt, estimated at 10% clay and trace sand, stiff, very moist, slightly elastic to elastic, brown (10YR 5/3), trace pores.
4/7/8				Clayey silt, estimated at 15-20% clay, stiff, moist, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	W.W. CE6/633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB4	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
6/8/11		45	ML	Clayey silt, estimated at 30% clay, very stiff, moist, elastic, light olive brown (2.5Y 5/3), caliche common, trace pores.
2/3/5				Clayey silt as above.
			SM	Silty sand, estimated at 30-35% silt, firm to stiff, saturated, brown (10YR 5/3), trace pores, sand is fine-grained.
		50		TOTAL DEPTH: 48.5'
		55		
		60		
		65		

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand base, angular gravel to 1-1/4 inches in diameter.
				Silt, stiff, moist, brown (10YR 5/3), trace rootlets.
9/12/18		5	ML	Silt, trace sand, very stiff, slightly moist, pale brown (10YR 6/3).
10/16/25		10		Sandy silt, estimated at 15% sand and trace gravel to 1/2 inch in diameter, hard, slightly moist, pale brown (10YR 6/3).
				Silt, estimated at 10% sand and trace clay, very stiff, very moist, brown (10YR 5/3).
10/18/24		15	GW-GM	Sandy gravel with silt, estimated at 30-35% predominantly fine-grained sand, 15% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, dense, slightly moist, pale brown (10YR 6/3)
			ML	Silt, estimated at 10% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3).
8/11/14		20	GW	Sandy gravel, estimated at 35% sand, 10% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, medium dense, slightly moist, pale brown (10YR 6/3).

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB5	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
			GW	Sandy gravel, estimated at 35% sand, 10% silt, and subangular to subrounded gravel to 1-1/4 inches in diameter, medium dense, slightly moist, pale brown (10YR 6/3).
7/10/15		25		Silt, estimated at 10% fine-grained sand and 5-10% clay, very stiff, moist, brown (10YR 5/3), trace light brownish gray (2.5Y 6/2) mottling.
			ML	
4/4/7		30		Silt, estimated at 10% fine-grained sand and 5% clay, stiff, slightly elastic, pale brown (10YR 6/3).
3/4/8		35		Sandy silt, estimated at 15-20% sand and trace gravel to 3/8 inch in diameter, stiff, very moist, brown (10YR 6/3).
			ML-SM	
6/8/9	▽	40		Sandy silt, estimated at 40% fine-grained sand and trace gravel to 3/8 inch in diameter, very stiff, very moist to saturated, brown (10YR 5/3).
			ML	Silt, very stiff, very moist to saturated, slightly elastic, yellowish brown (10YR 5/4) with slightly light brownish gray (2.5Y 6/2) mottling.
				TOTAL DEPTH 41'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" / **Casing Diameter** N/A	**Logged By** W.W. JGG CEG 1633
Project Name Unocal S/S #0543, 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel, gravel to 3 inches in diameter (fill).
3/5/6		5	ML	Silt, estimated at 5-15% sand and trace gravel to 1 inch in diameter, stiff, moist, brown (10YR 5/3).
5/6/6		10		Silt, estimated at 10% sand and 5-10% gravel to 1 inch in diameter, stiff, moist, brown (10YR 4/3), trace rootlets.
				Silt, estimated at 10% sand and 5% gravel, very stiff, moist, brown (10YR 4/3).
7/10/12		15	SW	Gravelly sand, estimated at 15% gravel to 1 inch in diameter and trace silt, medium dense, moist, pale brown (10YR 6/3), sand is gap-graded.
6/8/11		20	ML	Silt, estimated at 5-10% fine-grained sand, very stiff, moist, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** W.W. JGG CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB6	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/7/10		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), trace pores.
5/7/8		30		Silt, estimated at 12% clay and trace sand, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores and caliche.
4/5/6		35		Silt, estimated at 10% sand, 5% clay and trace gravel to 3/8 inch in diameter, stiff, moist to very moist, brown (10YR 5/3), silt is slightly elastic, trace pores.
3/7/10				Silt, estimated at 10-15% sand, very stiff, very moist, brown (10YR 5/3).
4/7/15	▼	40	SM-ML	Silty sand/sandy silt and trace gravel to 3/8 inch in diameter, medium dense to very stiff, saturated, brown (10YR 5/3), sand is predominantly fine-grained.
				TOTAL DEPTH 41'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. EB7	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Sandy gravel with silt (fill).
			ML	Silt, trace fine-grained sand, stiff, moist, brown (10YR 5/3), trace rootlets.
7/9/11		5	GP	Sandy gravel, estimated at 40-45% well graded sand, gravel is subrounded to 1/2 inch in diameter, medium dense, moist, light brownish gray (10YR 6/2).
7/22/35		10		Sandy gravel, estimated at 40% sand and 5% silt,very dense, moist, light brownish gray (10YR 6/2), sand is well graded, gap graded gravel to 2-1/2 inches in diameter, gravel is predominantly under 1 inch in diameter.
6/13/26		15	GP-GM	Sandy gravel with silt, estimated at 35-40% sand and 10-20% silt, dense, moist, light brownish gray (10YR 6/2), subrounded gravel to 3/4 inch in diameter.
7/10/14		20	ML	Silt, estimated at 10% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), silt is slightly elastic.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/2/92
Boring No. EB7	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/9/15		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3), trace root pores.
5/6/9		30		Silt, estimated at 5-10% clay and 5% fine-grained sand, stiff, moist to very moist, slightly elastic, brown (10YR 5/3), trace root pores, trace organic matter.
4/7/11		35		Silt, estimated at 5-10% clay, 5% fine-grained sand, and trace gravel to 1/2 inch in diameter, very stiff, very moist, brown (10YR 5/3), traces of light brownish gray (10YR 6/2) mottling, silt is more elastic than above.
7/13/14	▽ ▼	40	ML-SM	Sandy silt/silty sand, very stiff to medium dense, very moist to saturated, brown (10YR 5/3), sand is fine to medium-grained.
				TOTAL DEPTH 40.5'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	**W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand base.
32/50		5		Sandy gravel with silt, estimated at 30% sand and 10-15% silt, very dense, moist, light brownish gray (10YR 6/2), subrounded gravel to 1 inch in diameter.
50-6"		10	GW-GM	Sandy gravel as above.
8/21/35		15		Sandy gravel with silt as above except subrounded gravel to 1-3/4 inches in diameter.
6/9/13		20	ML	Silt, estimated at 10% very fine-grained sand and 5% clay, very stiff, moist to very moist, brown (10YR 5/3), trace pores with grayish brown (2.5Y 5/2) staining.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9"	**Logged By** JGG
	Casing Diameter N/A	W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
5/7/14		25	ML	Silt, estimated at 10-15% fine-grained sand and trace clay, very stiff, moist, brown (10YR 5/3) with slight grayish brown (2.5Y 5/2) staining in pores.
5/8/10		30	SM	Silt, estimated at 10-15% fine-grained sand, 5% clay, and trace gravel to 3/8 inch in diameter, very stiff, moist, brown (10YR 5/3), with slight grayish brown (2.5Y 5/2). Three inch lense of silty sand encountered at 30.5 feet, estimated at 40% silt, sand is fine-grained with an estimated 5% coarse-grained sand and 5% gravel to 3/8 inch in diameter.
5/6/8		35	ML	Silt, estimated at 10-15% very fine to fine-grained sand and trace gravel to 3/8 inch in diameter, stiff, very moist, brown (10YR 5/3), trace pores.
6/9/11	12:30	40		Silt, trace clay, very stiff, very moist, slightly elastic, brown (10YR 5/3) with slight light brownish gray (2.5Y 6/2) mottling.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG **W.W.** CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 11/30/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/8/9	11:43	45	ML	Clayey silt, estimated at 15% clay, very stiff, moist to very moist, elastic, pale brown (10YR 6/3) with light brownish gray (2.5Y 6/2) mottling.
5/7/12	11:20	50	SM	Sandy silt, estimted at 30% fine-grained sand and trace clay, very stiff, saturated, pale brown (10YR 6/3) with brownish gray (2.5Y 6/2) mottling.
		55		TOTAL DEPTH 50'
		60		
		65		

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel base.
3/4/5		5	ML	Silt, estimated at 5-10% sand, stiff, moist, brown (10YR 5/3), trace rootlets.
3/7/9		10		Silt, estimated at 5-10% sand and 5% gravel to 1/2 inch in diameter, stiff, moist, brown (10YR 5/3), trace root pores.
			GW	Sandy gravel, estimated at 30-40% well graded sand, medium dense, slightly moist, light brownish gray (10YR 6/2), subrounded gravel to 1-1/4 inches in diameter.
6/13/22		15	GW-SW	Sandy gravel/gravely sand, dense, moist, light brownish gray, (10YR 6/2), sand is well graded, subrounded gravel to 1/2 inch in diameter.
3/4/6		20	ML	Silt, estimated at 10% fine-grained sand and 5% clay, stiff, moist, slightly elastic, brown (10YR 5/3), trace pores.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 9" **Casing Diameter** N/A	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #0543 992 Main Street, Pleasanton	**Well Cover Elevation**	**Date Drilled** 12/1/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/6/9		25	ML	Silt, estimated at 5-10% fine-grained sand and trace gravel to 3/8 inch in diameter, stiff, very moist, pale brown (10YR 6/3), trace root pores.
5/7/8		30		Silt, estimated at 5-10% clay and 5% sand, stiff, moist to very moist, brown (10YR 5/3), trace root pores.
4/5/7	▽	35		Silt, estimated at 10% sand, trace clay, and trace gravel to 3/8 inch in diameter, stiff, very moist, slightly elastic, brown (10YR 5/3), trace organic matter (decayed wood, black).
3/3/6	▼		ML-SM	Sandy silt, estimated at 20-25% fine-grained sand, trace clay, and trace gravel ot 3/8 inch in diameter, stiff, very moist to saturated, pale brown (10YR 6/3), silt is slightly elastic.
		40		TOTAL DEPTH: 39'

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG D.L. CEG 1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8, 1993
Boring No. EB10	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Gravel and sand (tank pit backfill).
		5		
		10		
		15	ML	
4/4/6				Sandy silt, estimated at 35-45% very fine to fine-grained sand, stiff, moist, dark brown.
3/3/4		20		Sandy silt as above.

BORING LOG

Project No. KEI-P92-0204	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG D.L. CEG 1633
Project Name Unocal S/S #0543 992 Main St., Pleasanton	**Well Cover Elevation** N/A	**Date Drilled** September 8, 1993
Boring No. EB10	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/5/7		25		Sandy silt, estimated at 35-45% very fine to fine-grained sand, trace clay, stiff, moist.
			ML	Clayey silt, estimated at 5-10% sand, firm, moist, olive brown and dark grayish brown, mottled.
3/2/5		30		Silty fine-grained sand, stiff, very moist, olive gray.
4/4/6		35		Sandy silt, estimated at 35-45% very fine to fine-grained sand, stiff, moist, dark grayish brown, locally grades to silty fine-grained sand.
4/6/9				Silty fine-grained sand, stiff, moist to wet, dark brown.
	▽		SM	Silty sand, estimated at 15-20% silt and 5-10% gravel, medium dense, moist to saturated, dark brown.
3/5/6		40	SW	Well graded sand, loose, saturated, dark brown.
			ML	Silt, stiff, moist, olive brown, rapid dilatancy.
				TOTAL DEPTH: 40.5'