

November 10, 2000

Jeannette St. Onge  
1863 Sweetwood Drive  
Daly City, California 94105

RE: Well Survey Report  
2411 Webb Avenue, Alameda, California  
ACC Project No. 00-6632-001.01

ENVIRONMENTAL  
PROTECTION  
00 NOV 13 PM 5:15

Dear Ms. St. Onge:

Enclosed please find two copies of the Well Survey Report for 2411 Webb Avenue, Alameda, California. This survey has been requested by the Alameda County Health Care Services Agency as a condition of regulatory site closure. On your behalf, ACC will forward a copy of the Summary to Mr. Larry Seto at the Alameda County Health Care Services Agency for review.

## **BACKGROUND**

The subject site is located at 2411 Webb Avenue, Alameda, California (Figure 1). The site is approximately 27 feet above sea level and is located 2,200 feet southwest of the Alameda/Oakland Estuary separating Alameda from Oakland. San Francisco Bay is an additional 5,070 feet to the southwest. The site is underlain by native poorly-sorted sands and silts interspersed with shallow fill materials. Land use in the vicinity of the site is characterized by a combination of residential and commercial buildings.

### **Site Characterization Activities**

Blymyer Engineers, Inc. conducted a subsurface investigation at the site in October 1997 to characterize impact to soil and groundwater due to the suspect release from one 500-gallon fuel oil underground storage tank (UST) and one 500-gallon gasoline UST. The work performed included advancing two exploratory soil borings to 12 and 14 feet below ground surface (bgs) and collecting one soil sample and one grab groundwater sample from each boring.

Laboratory analytical results reported up to 4,300 parts per million (ppm) total extractable petroleum hydrocarbons (TEPH) as diesel fuel and up to 320 ppm total petroleum hydrocarbons as gasoline (TPHg) in soil, with only minor concentrations of BTEX constituents. Up to 9,400 parts per billion (ppb) TEPH as diesel fuel and up to 1,400 TPHg was reported in grab groundwater samples, with no detectable concentrations of BTEX constituents. MTBE was not detected in soil or grab groundwater samples

During the investigation, native soils consisted of brown silty sand (SM) with minor clay to approximately 6.5 to 9.5 feet bgs, underlain by green silt (ML) to a depth of approximately 11.5 to 13.5 feet bgs. This unit was underlain by brown silty sand (SM) to the total depth of investigation (12 to 14 feet bgs). Groundwater was encountered in the borings at depths ranging

from 11.8 to 13.5 feet bgs and stabilized at approximately 10 feet bgs, suggesting slightly confined groundwater conditions.

### **UST Removal**

According to the December 21, 1999 tank removal report prepared by TEC/Accutite (Accutite), one 500-gallon gasoline UST and one 500-gallon fuel oil UST were removed from the site on December 9, 1999. The date of UST installation is unknown. According to the report, the USTs were located beneath the sidewalk in front of the subject site, and the bottoms of the tanks were located approximately 6 feet below ground surface (bgs).

Following removal, the former USTs were examined by Mr. Scott Seery of the ACHCSA and each was found to have several holes. The total depth of the excavation was 6 feet bgs, and no water was encountered in the pit. Staining and petroleum hydrocarbon odor was observed in soil in direct contact with the tank bottom.

Under direction of Mr. Seery, Accutite collected one confirmation soil sample from beneath each tank at approximately 8 feet bgs, and one 4-point composite soil sample from stockpiled soil generated during excavation. Analytical results reported 8,300 parts per million (ppm) total petroleum hydrocarbons as diesel (TPHd), 450 ppm total petroleum hydrocarbons as gasoline (TPHg), 4.6 ppm xylenes, and trace concentrations of toluene and ethylbenzene from the soil sample collected beneath the heating oil UST. Analytical results for the soil sample collected beneath the gasoline UST reported 5,300 ppm TPHd, 300 ppm TPHg, 2.2 ppm xylenes, and trace amounts of toluene and ethylbenzene. Based on documentation presented in Accutite's report, additional excavation following UST removal was not required by the ACHCSA.

### **LOCAL AND REGIONAL HYDROGEOLOGY**

The subject site is located approximately 2,200 feet southwest of the Alameda/Oakland Estuary and approximately 5,070 feet northeast of San Francisco Bay. Regional topography suggests a northeasterly groundwater gradient towards the estuary, and the low elevation of the subject site (approximately 25 feet above sea level) indicates a relatively shallow local groundwater gradient. Groundwater flow direction and gradient has been reported to be 0.007 foot/foot to the east at the BP Oil facility at 1541 Park Street, located approximately 220 feet west of the subject site. Groundwater flow direction and gradient have been reported to be 0.018 foot/foot to the north at the Good Chevrolet facility at 1630 Park Street, approximately 430 feet north of the subject site. This data suggests a northeasterly flow direction in the vicinity of the site, with a gradient on the order of 0.01 foot per foot.

During the subsurface investigation, Blymyer encountered silt and silty sand to depths of 12 to 14 feet below ground surface. fine-grained soils possessing low hydraulic conductivity. These semipermeable soil types combined with shallow local groundwater gradient offer minimal migration potential for petroleum hydrocarbons in shallow groundwater. Groundwater was encountered at approximately 10 feet below ground surface. Due to proximity to the estuary and

resulting poor groundwater quality, it is highly unlikely that private or municipal wells are located downgradient of the subject site.

## **WELL SURVEY**

At the request of Mr. Larry Seto of the ACHCSA, ACC requested well survey data from the Alameda County Public Works Agency (ACPWA) listing all wells within a 0.5-mile radius from the subject site. According to this data, 16 active wells are located within 0.5 mile of the subject site. Of these wells, nine are groundwater monitoring wells, six are extraction/recovery wells, and one is an irrigation well.

Only one of the wells listed in the ACPWA database is located downgradient of the subject site. Groundwater monitoring well 2S/3W 7N 42 is located approximately 1,500 feet to the north-northeast of the site. The closest well to the subject site, a monitoring well with designation 2S/3W 7N 13, is located approximately 375 feet to the northwest, in the crossgradient direction. The only well which is a potential sensitive receptor is an irrigation well located at 2235 Lincoln Boulevard, approximately 1,000 feet in the crossgradient direction. A copy of the well survey data is attached.

## **DISCUSSION**

Analytical results from grab groundwater samples collected at the subject site in October 1997 reported no detectable concentrations of BTEX or MTBE in groundwater, typically the most mobile constituents of dissolved-phase petroleum hydrocarbons. Reported concentrations of TPHg and TEPH as diesel fuel have likely degraded due to natural attenuation processes since the collection date, and can be expected to degrade further over time.

Based on the subsurface investigation report published by Blymyer Engineers following the October 1998 soil borings, subsurface materials at the site consist of interbedded sandy silt and clay, soil types which generally possess low hydraulic conductivity. Fine-grained soils, combined with a very shallow regional groundwater gradient (estimated on the order of 0.01 foot per foot), indicates a limited potential for the migration of petroleum hydrocarbons in shallow groundwater.

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## CONCLUSIONS


Based on the absence of mobile petroleum hydrocarbon constituents, shallow regional groundwater gradient, the presence of fine-grained soils beneath the subject site, and the distance to the surrounding wells, ACC estimates the potential of residual petroleum hydrocarbons at the subject site to impact downgradient wells to be minimal to nonexistent.

If you have any questions regarding this letter or the findings of the work, please contact me at (510) 638-8400.

Sincerely,



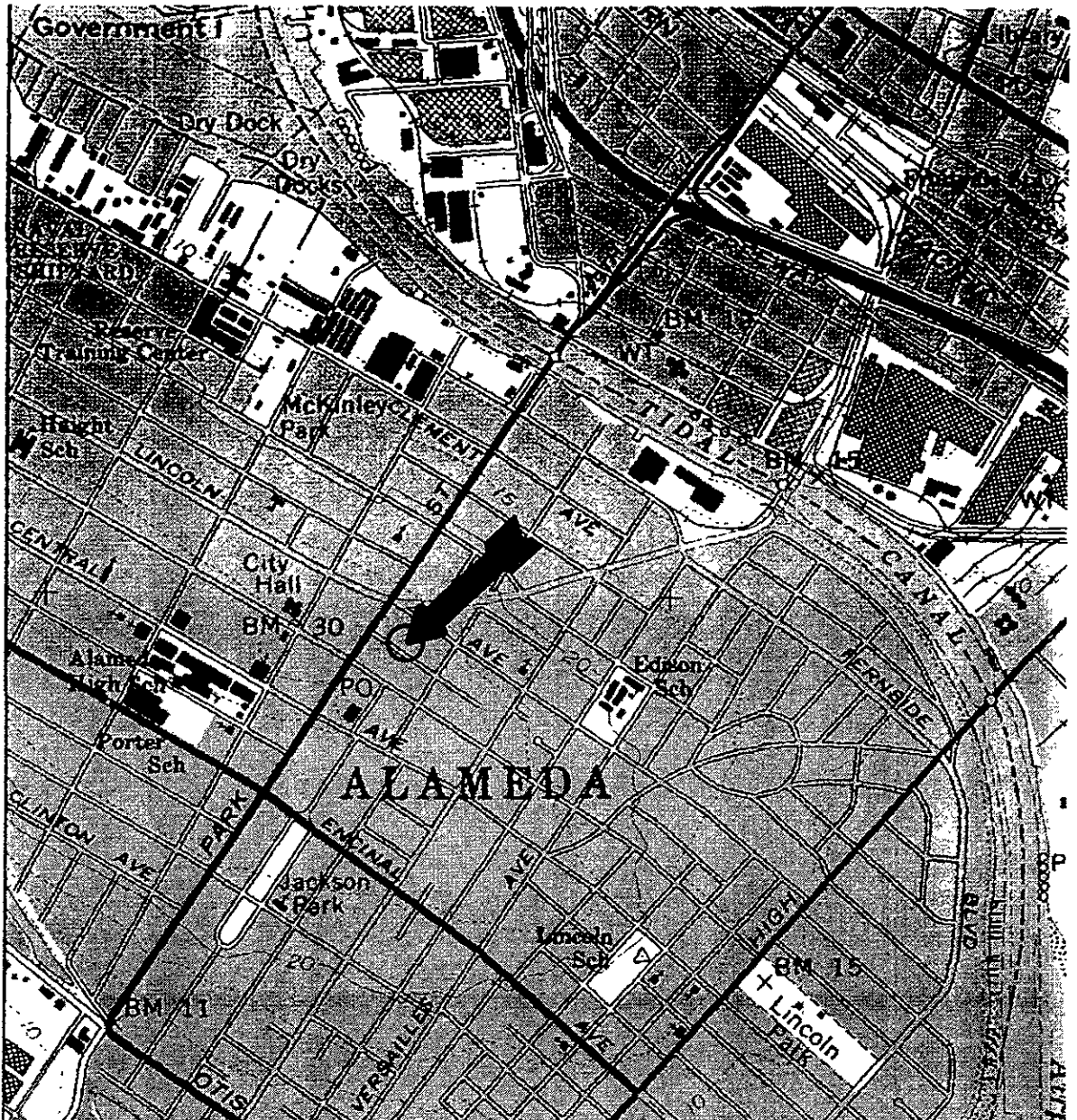
Neil Doran  
Staff Geologist



David R. DeMent, RG  
Environmental Division Manager

Attachments

/nhd



SOURCE: DeLorme TopoQuads 1999

Title: **Location Map**  
**2411 Webb Avenue**  
**Alameda, California**

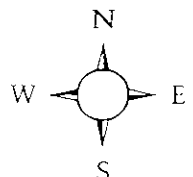
Figure Number 1 Scale 1" = 1/4 Mile

Project Number 6632-01.00 Drawn By NHD

**A·C·C**  
 ENVIRONMENTAL  
 CONSULTANTS

Date 6/8/00

1477 Capwell Drive, Suite 100  
 Berkeley, California 94607  
 (415) 840-1100 (510) 672-2404

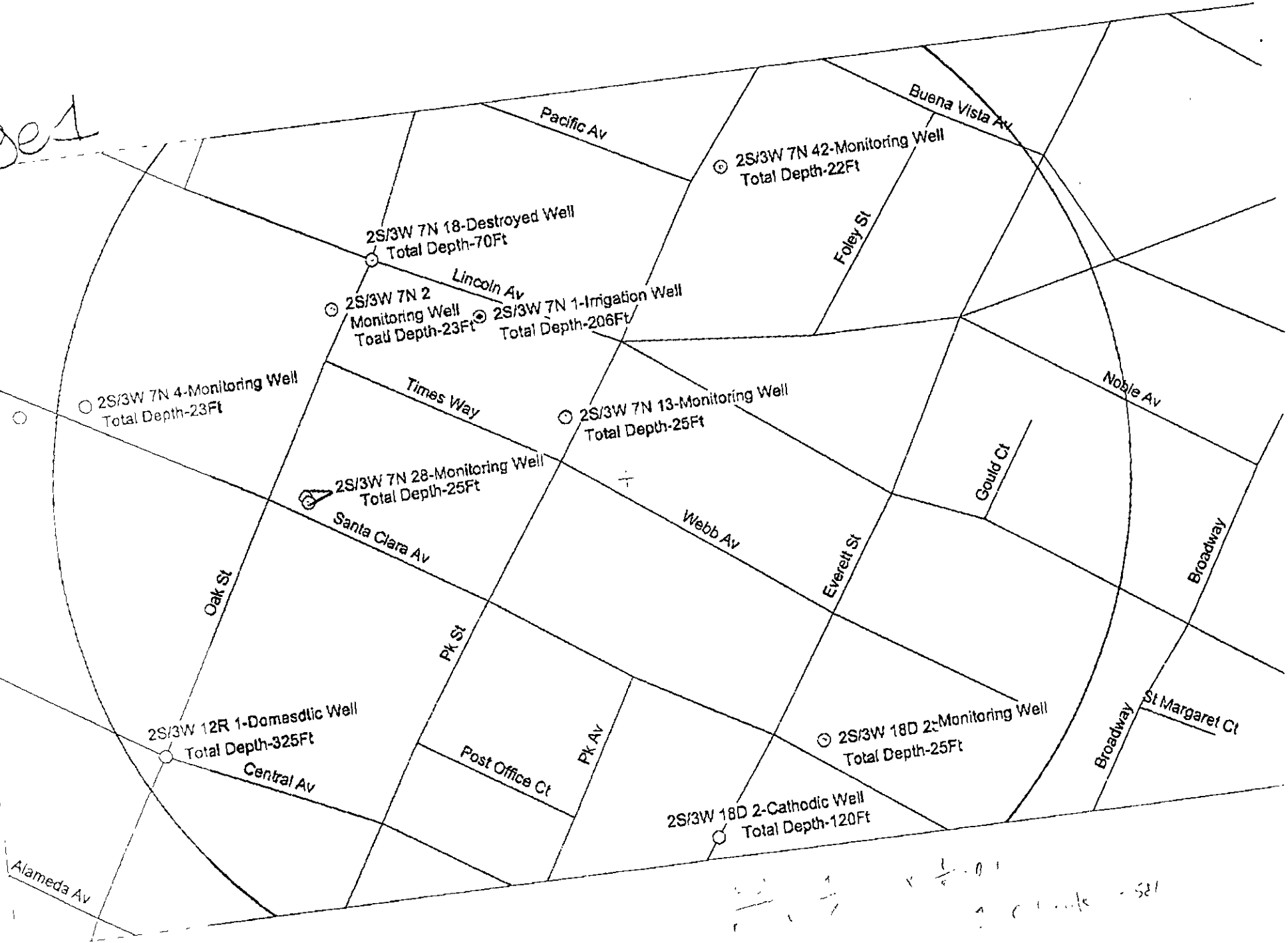


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FAX NO. 5107821939

ALAMEDA COUNTY PWA RM239

0CT-25-00 WED 11:44 AM



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1" = 100'    1" = 50'    1" = 25'    1" = 12.5'    1" = 6.25'    1" = 3.125'

1" = 100'    1" = 50'    1" = 25'    1" = 12.5'    1" = 6.25'    1" = 3.125'

P. 03/04  
 FAX NO. 510/871939  
 ALAMEDA COUNTY PWA RM239  
 001-25-00 WED 11:44 AM

Permit	Tr	Section	Address	Longcity	Owner	Update	Xcoord	Tcoord			
	2S/3W	7N 3	2263 SANTA CLARA A'	Alameda	CITY OF ALAMEDA (C.	07/22/1986	122,243,349	37,766,324	0	2S/3W 7N	2,995
	2S/3W	7N 4	2263 SANTA CLARA A'	Alameda	CITY OF ALAMEDA (C.	07/22/1986	122,243,349	37,766,324	0	2S/3W 7N	2,996
	2S/4W	12R 1	CENTRAL AV & OAK ST	Alameda	ALA. HIGH SCHOOL	07/30/1984	122,243,100	37,764,400	0	2S/4W 12F	4,103
	2S/3W	7L15	1725 Park Street	Alameda	Exxon USA EW-	03/09/1992	122,238,251	37,768,121	1	2S/3W 7L	7,337
	2S/3W	7L16	1725 Park Street	Alameda	Exxon USA EW-	03/09/1992	122,238,251	37,768,121	1	2S/3W 7L	7,338
	2S/3W	7L17	1725 Park Street	Alameda	Exxon USA EW-	03/09/1992	122,238,251	37,768,121	1	2S/3W 7L	7,339
	2S/3W	7L18	1725 Park Street	Alameda	Exxon USA EW-	03/09/1992	122,238,251	37,768,121	1	2S/3W 7L	7,340
	2S/3W	7L19	1725 Park Street	Alameda	Exxon USA EW-	03/09/1992	122,238,251	37,768,121	1	2S/3W 7L	7,341
	2S/3W	7N24	1700 Park St	Alameda	Cavanaugh Motors	08/14/1992	122,238,220	37,767,855	1	2S/3W 7N	7,701
	2S/3W	7N25	1700 Park St	Alameda	Cavanaugh Motors	08/14/1992	122,238,220	37,767,855	1	2S/3W 7N	7,702
	2S/3W	7N29	2301 Santa Clara Ave.	Alameda	Chun's Service Center	04/30/1993	122,241,946	37,765,684	1	2S/3W 7N	0
	2S/3W	7N28	2301 Santa Clara Ave.	Alameda	Chun's Service Center	04/30/1993	122,241,946	37,765,684	1	2S/3W 7N	0
	2S/3W	7N27	2301 Santa Clara Ave.	Alameda	Chun's Service Center	04/30/1993	122,241,946	37,765,684	1	2S/3W 7N	0
	2S/3W	7N30	1541 PARK STREET	Alameda	BP Oil Company	06/22/1993	122,240,132	37,765,936	1	2S/3W 7N	0
	2S/3W	18D18	2501 Santa Clara Ave.	Alameda	Goodman Property MW	07/12/1993	122,238,664	37,764,037	1	2S/3W 18C	0
	2S/3W	18D23	2501 Santa Clara Ave.	Alameda	Goodman Property MW	07/23/1993	122,238,664	37,764,038	1	2S/3W 18C	0
	2S/3W	18D24	2501 Santa Clara Ave.	Alameda	Goodman Property MW	07/23/1993	122,238,664	37,764,038	1	2S/3W 18C	0
	2S/3W	18D25	2501 Santa Clara Ave.	Alameda	Goodman Property MW	07/23/1993	122,238,664	37,764,038	1	2S/3W 18C	0
	2S/3W	7N 5	1541 PARK ST	Alameda	MOBIL SERVICE STATIC	06/03/1988	122,240,136	37,765,932	0	2S/3W 7N	2,997
	2S/3W	7L14	1725 Park Street	Alameda	Exxon Corporation	03/01/1991	122,238,251	37,768,121	0	2S/3W 7L	596
	2S/3W	7N14	1700 Park Street	Alameda	Mr.Dave Cavanaugh	07/27/1990	122,238,220	37,767,855	0	2S/3W 7N	706
	2S/3W	7N15	1700 Park Street	Alameda	Mr.Dave Cavanaugh	07/27/1990	122,238,220	37,767,855	0	2S/3W 7N	707
	2S/3W	7N16	1700 Park Street	Alameda	Mr.Dave Cavanaugh	07/27/1990	122,238,220	37,767,855	0	2S/3W 7N	708
	2S/3W	7N17	1700 Park Street	Alameda	Mr.Dave Cavanaugh	07/27/1990	122,238,220	37,767,855	0	2S/3W 7N	709
	2S/3W	7N	Oak at Lincoln Street	Alameda	Alameda Free Library	07/30/1990	122,241,300	37,766,900	3	2S/3W 7N	746
	2S/3W	7N18	Oak St. and Lincoln St.	Alameda	Alameda Free Library	02/27/1991	122,241,300	37,766,900	3	2S/3W 7N	1,016
	2S/3W	7L 8	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	12/16/1988	122,238,251	37,768,121	0	2S/3W 7L	2,982
	2S/3W	7L 9	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	12/16/1988	122,238,251	37,768,121	0	2S/3W 7L	2,983
	2S/3W	7L10	1725 PARK ST	ALAMEDA	EXXON RS 7-0104	12/16/1988	122,238,251	37,768,121	0	2S/3W 7L	2,984
	2S/3W	7L11	1725 PARK ST.	Alameda	EXXON	06/15/1989	122,238,251	37,768,121	0	2S/3W 7L	2,985
	2S/3W	7L12	1725 PARK ST.	Alameda	EXXON	06/15/1989	122,238,251	37,768,121	0	2S/3W 7L	2,986
	2S/3W	7L13	1725 PARK ST.	Alameda	EXXON	06/15/1989	122,238,251	37,768,121	0	2S/3W 7L	2,987
	2S/3W	7N 1	2235 LINCOLN AVE	Oakland	ALAMEDA STEAM LAUI	07/30/1984	122,240,624	37,766,529	9	2S/3W 7N	2,993
	2S/3W	7N 2	1555 OAK STREET	Alameda	CITY OF ALAMEDA (PO	07/22/1986	122,241,614	37,766,667	0	2S/3W 7N	2,994
	2S/3W	7N 6	1541 PARK ST	Alameda	MOBIL SERVICE STATIC	06/03/1988	122,240,136	37,765,932	0	2S/3W 7N	2,998
	2S/3W	7N 7	1541 PARK ST	Alameda	MOBIL SERVICE STATIC	06/03/1988	122,240,136	37,765,932	0	2S/3W 7N	2,999
	2S/3W	7N 8	1541 PARK STREET	Alameda	MOBIL OIL CORPORATK	10/01/1989	122,240,136	37,765,932	0	2S/3W 7N	3,000
	2S/3W	7N 9	1541 PARK STREET	Alameda	SHELL OIL CORPORATK	10/01/1989	122,240,136	37,765,932	0	2S/3W 7N	3,001
	2S/3W	7N10	1541 PARK STREET	Alameda	SHELL OIL CORPORATK	10/01/1989	122,240,136	37,765,932	0	2S/3W 7N	3,002
	2S/3W	7N11	1541 PARK ST	Alameda	MOBIL OIL CORP.	11/06/1989	122,240,136	37,765,932	0	2S/3W 7N	3,003
	2S/3W	7N12	1541 PARK ST	Alameda	MOBIL OIL CORP.	11/06/1989	122,240,136	37,765,932	0	2S/3W 7N	3,004
	2S/3W	7N13	1541 PARK ST	Alameda	MOBIL OIL CORP.	11/06/1989	122,240,136	37,765,932	0	2S/3W 7N	3,005

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OCT-25-00 WED 11:45 AM ALAMEDA COUNTY PWA RM239 FAX NO. 510/821939 P. 04/04

Phone	City	Drilldate	Elevation	Totaldepth	Waterdepth	Diameter	Use	Log	W	W	Yield	Dtwcalc	Old dbase
224,100	ALA	06/86	0	23	7	2	MON	G	0	0	0	0	L
224,100	ALA	6/86	0	23	7	2	MON	G	0	0	0	0	L
0	ALA	7	30	325	0	16	DOM	D	+	+	0	0	L
0	ALA	12/91	0	40	7	4	EXT	D	0	0	0	0	D
0	ALA	12/91	0	40	7	4	EXT	D	0	0	0	0	D
0	ALA	12/91	0	41	7	4	EXT	D	0	0	0	0	D
0	ALA	12/91	0	41	7	4	EXT	D	0	0	0	0	D
0	ALA	12/91	0	40	7	4	EXT	D	0	0	0	0	D
0	ALA	6/91	0	21	8	2	MON	D	0	0	0	0	D
0	ALA	6/91	0	21	8	2	MON	D	0	0	0	0	D
0	ALA	1/93	31	25	16	2	MON	G	0	0	0	15	D
0	ALA	1/93	31	25	15	2	MON	G	0	0	0	16	D
0	ALA	1/93	31	25	16	2	MON	G	0	0	0	15	D
0	ALA	4/92	0	30	10	6	REC	D	0	0	0	0	D
0	ALA	4/93	0	25	5	2	MON	G	0	0	0	0	D
0	ALA	10/92	0	25	8	2	MON	G	0	0	0	0	D
0	ALA	10/92	0	25	9	2	MON	G	0	0	0	0	D
0	ALA	10/92	0	25	10	2	MON	G	0	0	0	0	D
0	ALA	02/88	0	25	10	2	MON	G	1	0	0	0	L
0	ALA	1/90	0	20	8	4	MON	D	0	0	0	0	D
0	ALA	05/90	0	15	0	4	MON	G	0	0	0	0	D
0	ALA	05/90	0	15	0	4	MON	G	0	0	0	0	D
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0	ALA	05/90	0	15	0	4	MON	G	0	0	0	0	D
0	ALA	04/90	0	0	0	0	BOR	G	0	0	0	0	D
0	ALA	7/90	0	70	0	8	DES	D	0	0	0	0	D
0	ALA	06/88	0	16	7	4	MON	D	0	0	0	0	L
0	ALA	06/88	0	15	7	4	MON	D	0	0	0	0	L
0	ALA	06/88	0	22	7	4	MON	D	0	0	0	0	L
0	ALA	02/89	0	20	0	4	MON	G	0	0	0	0	L
0	ALA	02/89	0	20	0	4	MON	G	0	0	0	0	L
0	ALA	02/89	0	20	0	4	MON	G	0	0	0	0	L
0	OKA	1/16	0	206	0	0	IRR	?	0	3	0	0	L
224,100	ALA	6/86	0	23	7	2	MON	G	0	0	0	0	L
0	ALA	02/88	0	25	11	2	MON	G	1	0	0	0	L
0	ALA	02/88	0	25	13	2	MON	G	1	0	0	0	L
0	ALA	03/89	0	25	11	2	MON	D	0	0	0	0	L
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0	ALA	03/89	0	25	12	2	MON	G	0	0	0	0	L
0	ALA	03/89	0	25	11	2	MON	G	0	0	0	0	L
0	ALA	03/89	0	25	12	2	MON	G	0	0	0	0	L

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