



ENVIRONMENTAL  
PROTECTION

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March 5, 1998

Mr. Scott Seery  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502

Re: **Potential Receptor Survey Report**

Shell Service Station  
6039 College Avenue  
Oakland, California  
WIC #204-5508-3301  
Cambria Project #240-0503-1

Dear Mr. Seery:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria), is submitting the results of the potential receptor survey conducted for the site referenced above. The survey objectives were to identify sensitive ground water receptors within a one-half mile radius of the site. A site background, survey results, and conclusions are presented below.

### SITE BACKGROUND

**Site Description:** The site is an active Shell service station located at the southern corner of the intersection of Claremont and College Avenues in Oakland, California (Figure 1). It has been an active service station since the 1940s, and the underground storage tanks (USTs) have been replaced several times. There are currently three 10,000-gallon fiberglass gasoline USTs on the site.

**Investigation Summary:** Several investigations have been conducted since 1990 to define the extent of hydrocarbons in soil and ground water. To date, six wells have been installed, and ground water has been monitored quarterly since February 1991. The ground water flow direction has consistently been to the southwest. The extent of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX) in soil and ground water has been adequately defined to a limited distance into the southwest neighboring property and slightly west beneath Claremont Avenue. Methyl tert-butyl ether (MTBE) was detected in ground water during fourth quarter 1997 at a maximum concentration of 78,000  $\mu\text{g/L}$  (this result is approximate as analysis of this sample was run after the holding time expired).

CAMBRIA  
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## **SURVEY RESULTS**

### **Surface Water Bodies**

Based on a review of the Oakland East and Oakland West, California topographic quadrangles produced by the United States Geological Survey and "Guide to East Bay Creeks," there are three surface bodies of water within the study area. The first is an intermittent and partially underground section of Claremont Creek which is northeast (upgradient) to east (crossgradient) of the subject site. The second is a very small section of the primarily underground Temescal Creek which is southeast (crossgradient) of the subject site. The third is a section of the Broadway Branch of Glen Echo Creek which is at the southeast (crossgradient) edge of the study area (Figure 1).

### **Ground Water Wells**

Mr. Andreas Godfrey of the Alameda County Department of Public Works (ACDPW) provided Cambria with a database printout, listing ground water wells within the study area (Attachment A). Information provided includes use, total depth of wells, and owner. This is summarized in Table 1. Thirty-seven active wells were identified; one is a domestic water producing well and the other thirty-six are ground water monitoring wells, piezometers, cathodic protection wells, or test wells. Those records provided by the ACDPW which included an identifiable well location are plotted on Figure 1.

The closest downgradient wells to the subject site are three monitoring wells located southeast along College Avenue and one cathodic protection well located directly south along Chabot Road. The only potential receptor well in the study area is one-quarter of a mile east (crossgradient) of the subject site on Ivanhoe Road.

## **CONCLUSIONS**

Three surface water bodies and one potential receptor well were located within the study area. However, due to their distance and location upgradient and crossgradient of the subject site, none would be impacted by hydrocarbons detected at the subject site. Therefore, based on the results of this survey, there are no potential ground water receptors that could be impacted by this site.

Mr. Scott Seery  
March 5, 1998

CAMBRIA

**CLOSING**

We appreciate the opportunity to work with you on this project. If you have any questions or comments, please contact us at (510) 420-0700.

Sincerely,  
Cambria Environmental Technology, Inc.

*Christina Empedocles*

Christina Empedocles  
Staff Geologist

*Khaled B. Rahman*

Khaled B. Rahman, R.G., C.H.G.  
Senior Geologist



Attachment A - Alameda County Department of Public Works Well Location Database Search

cc: A.E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

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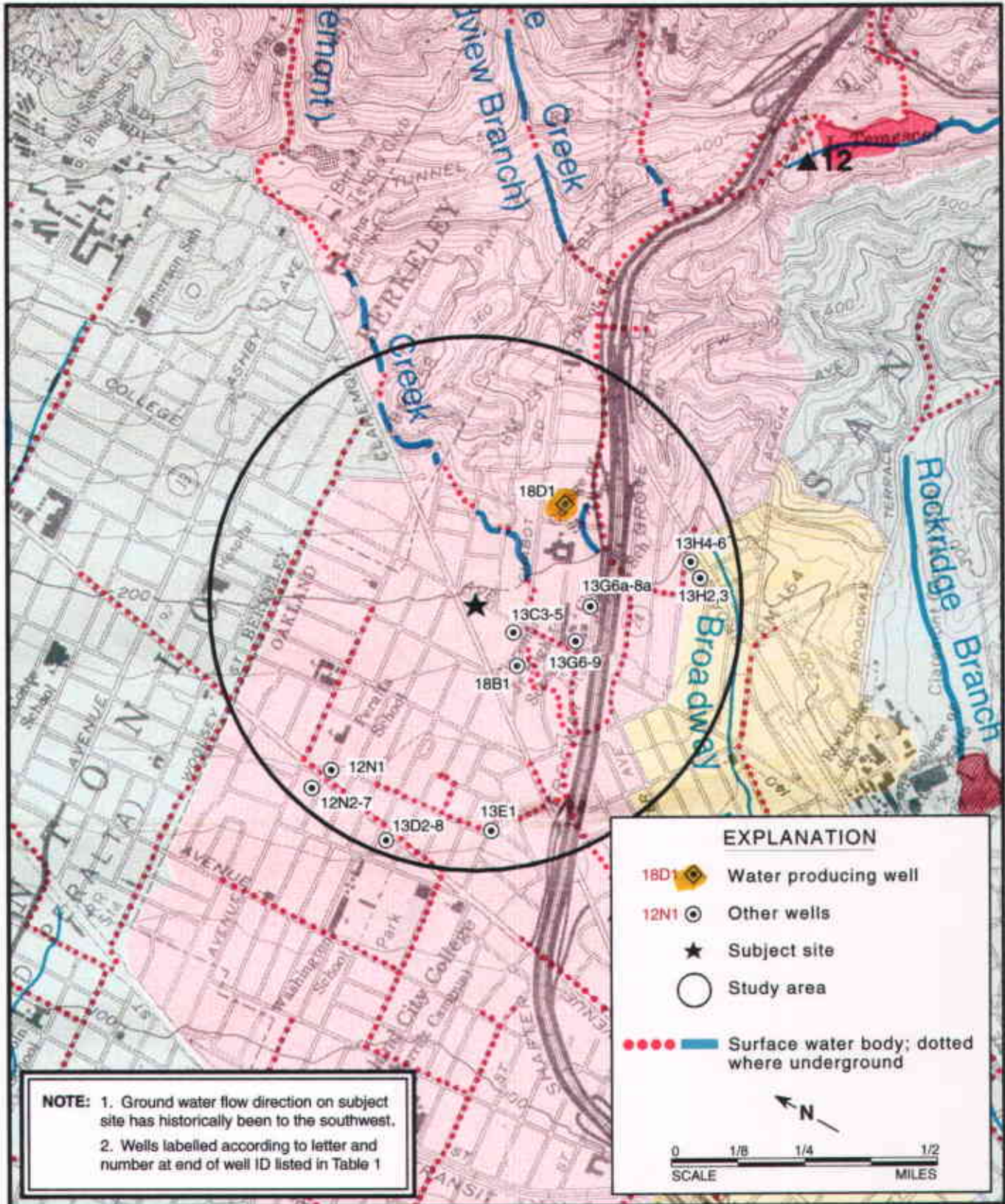


Figure 1. Well Locations - Shell Service Station, 6039 College Avenue, Oakland, California

**Table 1. Well Survey - Shell Service Station - WIC# 204-5508-3301, 6039 College Avenue, Oakland, California**

Well ID	Installation Date	Owner	Map	Use	Depth (feet)
1S-4W-13H2	September 1989	Shell Oil Products Company	M	MON	10
1S-4W-13H3	September 1989	Shell Oil Products Company	M	MON	10
1S-4W-13G6	December 1989	Chevron, USA, Inc.	M	MON	17
1S-4W-13G7	December 1989	Chevron, USA, Inc.	M	MON	17
1S-4W-13D8	October 1989	Thrifty Oil Company	M	MON	30
1S-4W-13G8	July 1990	Chevron, USA, Inc.	M	MON	48
1S-4W-13G9	August 1990	Chevron, USA, Inc.	M	MON	28
1S-4W-13B3	January 1990	Shell Oil Products Company	SS	MON	25
1S-4W-13B4	January 1990	Shell Oil Products Company	SS	MON	25
1S-4W-18B1	July 1981	EBMUD	M	CAT	27
1S-4W-18D1	UNK	H.L. Sorensen	M	DOM	80
1S-4W-12N1	July 1988	Givens Investment Company	M	MON	29
1S-4W-12N2	July 1989	Arco Products Company	M	MON	29
1S-4W-12N3	July 1989	Arco Products Company	M	MON	29
1S-4W-12N4	July 1989	Arco Products Company	M	MON	29
1S-4W-12N5	July 1989	Arco Products Company	M	MON	28
1S-4W-13D2	June 1986	Arco Products Company	M	TES	30
1S-4W-13D3	June 1986	Arco Products Company	M	TES	30
1S-4W-13D4	June 1986	Arco Products Company	M	TES	30
1S-4W-13D5	November 1986	Thrifty Oil Company	M	MON	30
1S-4W-13D6	November 1986	Thrifty Oil Company	M	MON	27
1S-4W-13D7	November 1986	Thrifty Oil Company	M	MON	27
1S-4W-13E1	July 1974	PG&E	M	CAT	78
1S-4W-13L2	May 1975	EBMUD	NM	CAT	50
1S-4W-13N2	May 1975	EBMUD	NM	CAT	50
1S-4W-13G6a	April 1989	City of Oakland	M	PIE	28

**Table 1. Well Survey - Shell Service Station - WIC# 204-5508-3301, 6039 College Avenue, Oakland, California**

Well ID	Installation Date	Owner	Map	Use	Depth (feet)
1S-4W-13G7a	April 1989	City of Oakland	M	PIE	28
1S-4W-13G8a	April 1989	City of Oakland	M	MON	33
1S-4W-13C2	August 1991	Shell Oil Products Company	SS	MON	32
1S-4W-13C3	July 1991	Dryer's Ice Cream	M	MON	30
1S-4W-13C4	July 1991	Dryer's Ice Cream	M	MON	28
1S-4W-13C5	July 1991	Dryer's Ice Cream	M	MON	27
1S-4W-12N6	April 1992	Arco Products Company	M	MON	26
1S-4W-12N7	April 1992	Arco Products Company	M	MON	17
1S-4W-13H4	August 1992	Chevron, USA, Inc	M	MON	43
1S-4W-13H5	August 1992	Chevron, USA, Inc	M	MON	43
1S-4W-13H6	August 1992	Chevron, USA, Inc	M	MON	38

**Abbreviations:**

M = Well location shown on map

NM = Not mapped, unable to determine location

SS = Well located on subject site

MON = Monitoring well

DOM = Domestic well

PIE = Piezometer

CAT = Cathodic protection well

TES = Test well

UNK = Unknown

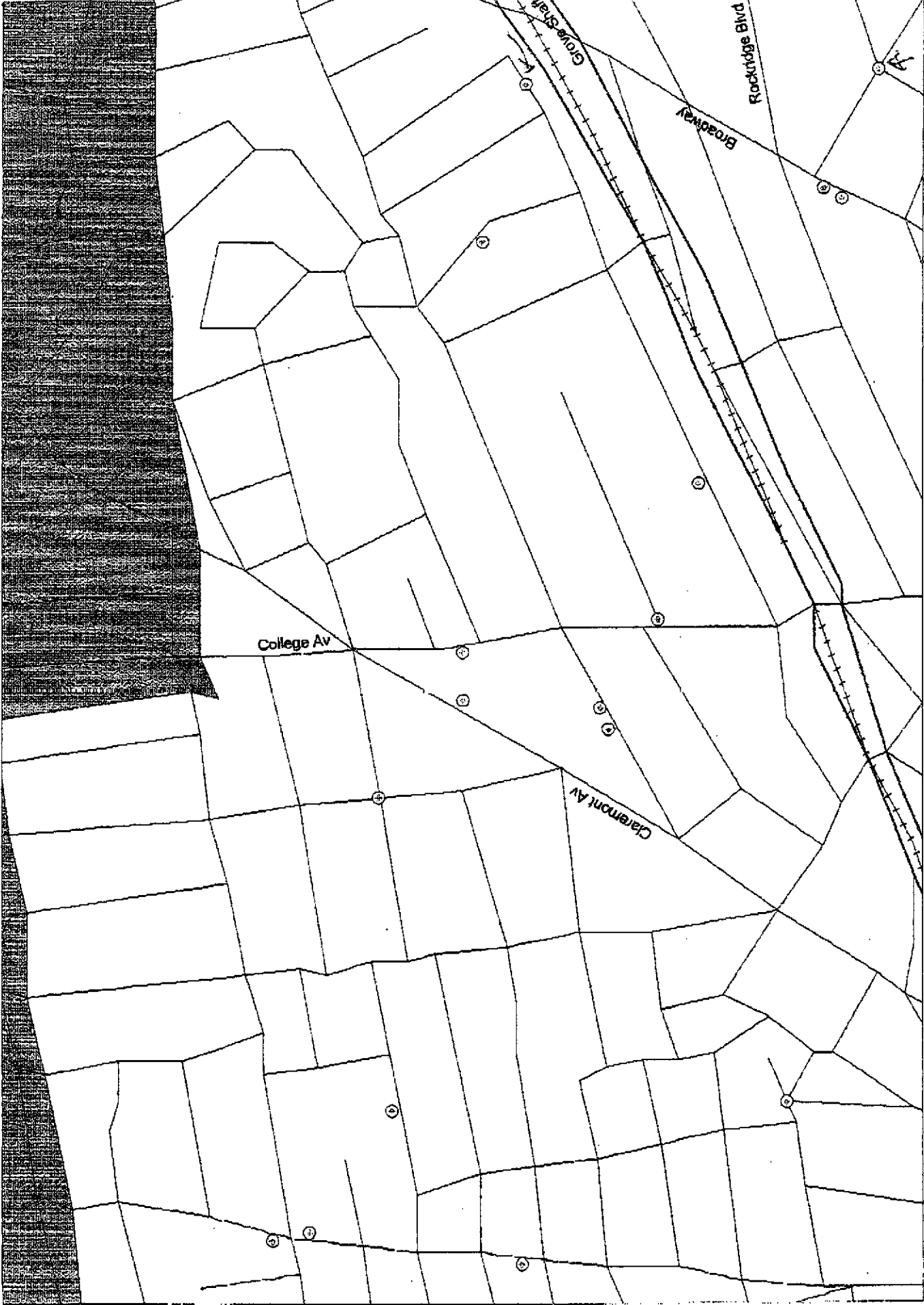
Note: Well labelled on Figure 1 by letter and numbers at end of Well ID

CAMBRIA

**ATTACHMENT A**

Alameda County Department of Public Works  
Well Location Database Search





6039 College ①



Tr	Section	Address	Owner	City	Drilldate	Totaldepth	Waterdepth	Diameter	Use	Yield
1S/4W	13H 2	6756 Broadway	Shell Oil Company	OAK	9/89	10	4	4	MON	0
1S/4W	13H 3	6756 Broadway	Shell Oil Company	OAK	9/89	10	4	4	MON	0
1S/4W	13G 6	5800 College Avenue	Chevron, USA, Inc.	OAK	12/89	17	10	4	MON	0
1S/4W	13G 7	5800 College Avenue	Chevron, USA, Inc.	OAK	12/89	17	10	4	MON	0
1S/4W	13D 8	6125 Telegraph Avenue	Thrifty Oil Company	OAK	10/89	30	15	6	MON	0
1S/4W	13G 8	5800 College Avenue	Chevron USA	OAK	7/90	48	0	2	MON	0
1S/4W	13G 9	5800 College Avenue	Chevron, USA	OAK	8/90	28	16	2	MON	0
1S/4W	13B	6039 College Ave	Shell Oil Company	OAK	9/90	0	0	8	DES	0
1S/4W	13B 1	6039 College Ave	Shell Oil Company	OAK	7/90	0	8	0	BOR*	0
1S/4W	13B 2	6039 College Ave	Shell Oil Company	OAK	1/90	0	0	10	BOR*	0
1S/4W	13B 3	6039 College Ave	Shell Oil Company	OAK	1/90	25	0	4	MON	0
1S/4W	13B 4	6039 College Ave	Shell Oil Company	OAK	1/90	25	0	4	MON	0
1S/3W	18B 1	5909 CHABOT RD	EBMUD	OAK	7/81	27	0	0	CAT	0
1S/3W	18D 1	5809 IVANHOE RD	H.L. SORENSON	OAK	?	80	20	15	DOM	0
1S/4W	12N 1	6392 TELEGRAPH AVE.	GIVENS INVESTMENT CO.	OAK	7/88	29	11	2	MON	0
1S/4W	12N 2	6407 TELEGRAPH	ARCO PRODUCTS CO.	OAK	07/89	29	8	4	MON	0
1S/4W	12N 3	6407 TELEGRAPH	ARCO PRODUCTS CO.	OAK	07/89	29	8	4	MON	0
1S/4W	12N 4	6407 TELEGRAPH	ARCO PRODUCTS CO.	OAK	07/89	29	8	4	MON	0
1S/4W	12N 5	6407 TELEGRAPH	ARCO PRODUCTS CO.	OAK	07/89	28	8	4	MON	0
1S/4W	13C 1	62 & HILLEGASS	PG&E	OAK	7/75	81	0	0	DES	0
1S/4W	13D 1	460 63RD ST	PERALTA ELEMENTARY S	OAK	8/74	0	0	0	GEO'	0
1S/4W	13D 2	6125 TELEGRAPH AVE	ARCO PETROLEUM	OAK	6/86	30	16	2	TES	0
1S/4W	13D 3	6125 TELEGRAPH AVE	ARCO PETROLEUM	OAK	6/86	30	16	2	TES	0
1S/4W	13D 4	6125 TELEGRAPH AVE	ARCO PETROLEUM	OAK	6/88	30	16	2	TES	0
1S/4W	13D 5	6125 TELEGRAPH AVE	THRIFTY OIL	OAK	11/86	30	16	4	MON	0
1S/4W	13D 6	6125 TELEGRAPH AVE	THRIFTY OIL	OAK	11/86	27	16	4	MON	0
1S/4W	13D 7	6125 TELEGRAPH AVE	THRIFTY OIL	OAK	11/86	27	13	4	MON	0
1S/4W	13E 1	MARTIN & HERMANN ST	PG&E	OAK	7/74	78	17	0	CAT	0
1S/4W	13G 1	5800 COLLEGE AVE	CHEVRON USA	BER	07/89	0	0	0	DES	0
1S/4W	13G 2	5800 COLLEGE AVE	CHEVRON USA	BER	07/89	0	0	0	DES	0
1S/4W	13G 3	5800 COLLEGE AVE	CHEVRON USA	BER	07/89	0	0	0	DES	0
1S/4W	13G 4	5800 COLLEGE AVE	CHEVRON USA	BER	07/89	0	0	0	DES	0
1S/4W	13G 5	5800 COLLEGE AVE	CHEVRON USA	BER	07/89	0	0	0	DES	0
1S/4W	13I 2	MILES AV	EBMUD	OAK	5/75	50	0	0	CAT	0
1S/4W	13N 2	MILES AV	EBMUD	OAK	5/75	50	0	0	CAT	0
1S/4W	13G 6	5776 MILES AVE	CITY OF OAKLAND	OAK	04/89	28	18	0	PIE	0
1S/4W	13G 7	5776 MILES AVE	CITY OF OAKLAND	OAK	04/89	28	23	0	PIE	0
1S/4W	13G 8	5776 MILES AVE	CITY OF OAKLAND	OAK	04/89	33	18	2	MON	0
1S/4W	13C 2	6066 Claremont Ave	Shell Oil Co	OAK	8/91	32	17	4	MON	0
1S/4W	13C 3	5929 College Ave	Dryer's Ice Cream MW1	OAK	7/91	30	18	2	MON	0
1S/4W	13C 4	5929 College Ave	Dryer's Ice Cream MW6	OAK	7/91	28	15	4	MON	0
1S/4W	13C 5	5929 College Ave	Dryer's Ice Cream MW3	OAK	7/91	27	14	4	MON	0

6039

College

(2)

Tr	Section	Address	Owner	City	Drilldate	Totaldepth	Waterdepth	Diameter	Use	Yield
1S/4W	12N 6	6407 Telegraph Ave	ARCO Products MW-E	OAK	4/92	26	8	4	MON	0
1S/4W	12N 7	6407 Telegraph Ave	ARCO Products MW-E	OAK	4/92	17	6	4	MON	0
1S/4W	13H 4	5775 Broadway	Chevron USA - MW - 3	OAK	8/92	43	0	2	MON	0
1S/4W	13H 5	5775 Broadway	Chevron USA - MW - 1	OAK	8/92	43	41	2	MON	0
1S/4W	13H 6	5775 Broadway	Chevron USA - MW - 2	OAK	8/92	38	27	2	MON	0

6039 Colby ③