



**Chevron**

ENVIRONMENTAL  
EXAMINATION  
91 AUG 19 PM 2:49

August 15, 1997

Ms. Susan Hugo  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Chevron Products Company**  
6001 Bollinger Canyon Road  
Building L  
San Ramon, CA 94583  
P.O. Box 6004  
San Ramon, CA 94583-0904

**Marketing – Sales West**  
Phone 510 842-9500

**Re:     Chevron Service Station #9-0329**  
**340 Highland Avenue**  
**Piedmont, California**

Dear Ms. Hugo:

Enclosed is the Third Quarter Groundwater Monitoring report for 1997, prepared by our consultant Blaine Tech Services Inc. for the above noted facility. Ground water samples were analyzed for TPH-g, BTEX, and MtBE.

The concentrations detected in monitoring wells C-3, C-5 and C-6 were below method detection levels for all constituents, while well C-4 was below method detection limits for the benzene, ethyl-benzene and xylene constituents. Well C-2 continues to detect concentrations of all constituents, with MtBE concentration increasing from the previous sampling event.

The depth to the groundwater varied from 1.47 feet to 4.21 feet below grade with a direction of flow south southeast.

As stated in previous correspondence, Chevron has no explanation for the continuing and increasing high concentration of the MtBE constituent in monitoring well C-2. Chevron has not owned or operated this station since 1990 and has had no control over its operation or maintenance since that time. In fact, Chevron ceased providing gasoline to this station on October 31, 1996.

From reviewing the sampling results, it appears that a spill or leak may have occurred in the first quarter of 1995, as the benzene concentration increased three fold (880 ppb to 2500 ppb), from the 1/6/95 sampling event to the 4/13/95 sampling event.

There is a pending request from your office to submit a work plan to address these questions by first testing the integrity of the tank and piping systems. As stated in our previous correspondence, Chevron continues to believe that the responsibility to provide a work plan for testing the tank and piping systems rests with the current owner, Mr. Frank Hoffman and the operators Mir Ghafari and Fred Manoucheri, since Chevron has not owned or operated the station since 1990.

Chevron will continue to monitor the site quarterly. If you have any questions or comments call me at (510) 842-9136.

August 15, 1997  
Ms. Susan Hugo  
Chevron Service Station # 9-0329  
Page 2

Sincerely,  
**CHEVRON PRODUCTS COMPANY**



Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

cc. Mr. Kevin Graves  
RWQCB-San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

Mr. Frank Hoffman  
Hoffman Investment Company  
1760 Willow Road  
Hillsborough, CA 94010

Mir Ghafari & Fred Manoucheri  
Service Station  
340 Highland Avenue  
Piedmont, CA 94611

Ms. Bette Owen, Chevron

Ms. Patsy Tarabini, Chevron (Less report)

**BLAINE**  
TECH SERVICES INC.



1680 ROGERS AVENUE  
SAN JOSE, CALIFORNIA 95112  
(408) 573-7771 FAX  
(408) 573-0555 PHONE

ENVIRONMENTAL  
PROTECTION

97 AUG 19 PM 2:49

August 6, 1997

Phil Briggs  
Chevron U.S.A. Products Company  
P.O. Box 6004  
San Ramon, CA 94583-0904

### 3rd Quarter 1997 Monitoring at 9-0329

Third Quarter 1997 Groundwater Monitoring at  
Chevron Service Station Number 9-0329  
340 Highland Avenue  
Piedmont, CA

Monitoring Performed on July 9, 1997

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### Groundwater Sampling Report 970709-K-2

This report covers the routine monitoring of groundwater wells at this Chevron facility. Blaine Tech Services, Inc.'s work at the site includes inspection, gauging, evacuation, purgewater containment, sample collection and sample handling in accordance with standard procedures that conform to Regional Water Quality Control Board requirements.

Routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated volume of a three-case volume purge, elapsed evacuation time, total volume of water removed, and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purge water is, likewise, collected and transported to McKittrick Waste Treatment Site for disposal.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The table

also contains new groundwater elevation calculations taken from the computer plotted gradient map which is located in the **Professional Engineering Appendix**.

At a minimum, Blaine Tech Services, Inc. field personnel are certified upon completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

A handwritten signature consisting of two stylized letters, possibly 'F' and 'T', followed by a surname.

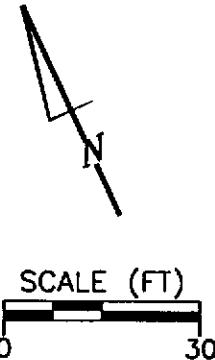
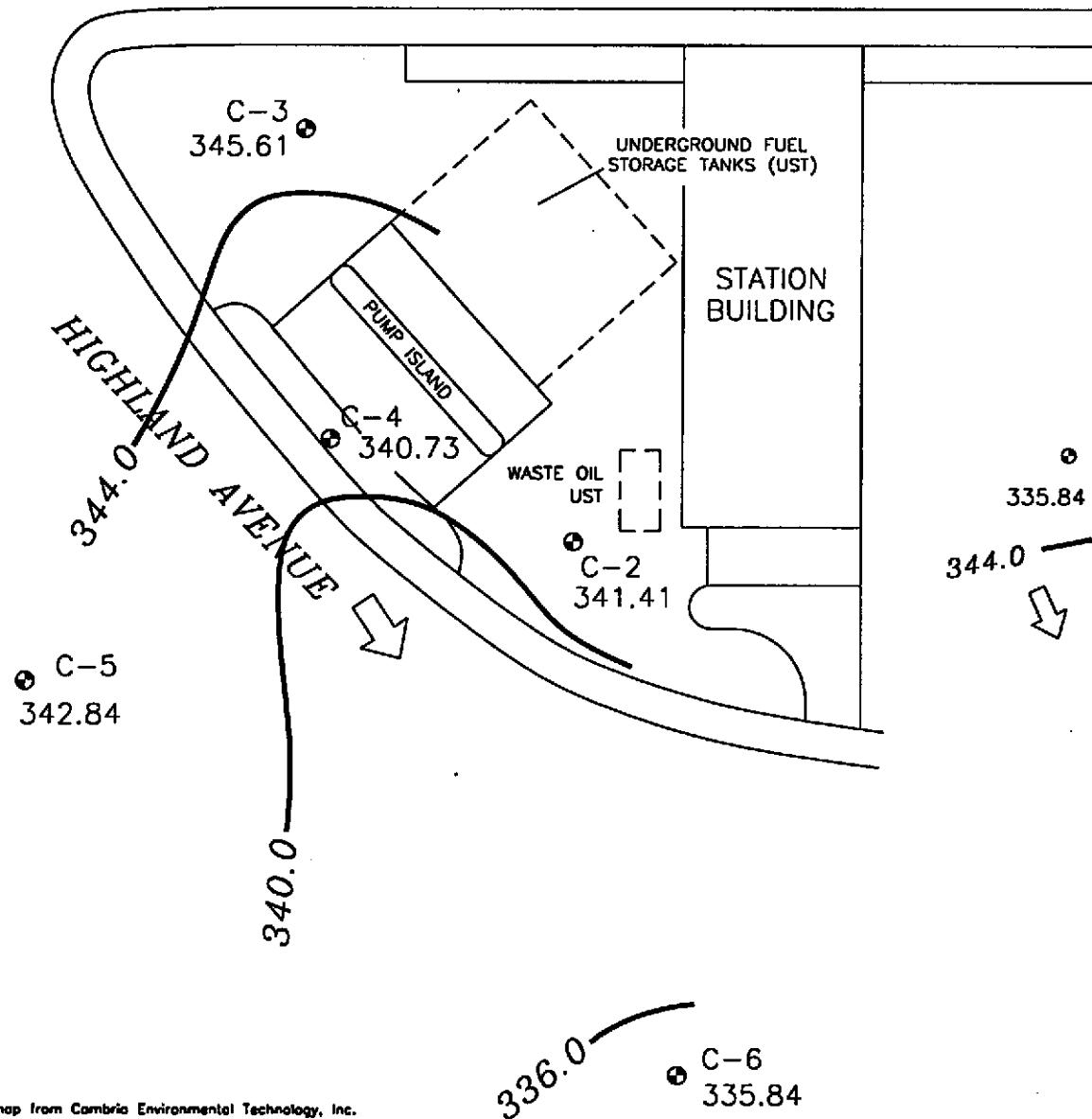
Francis Thie  
Vice President

FPT/aa

attachments: Professional Engineering Appendix  
Cumulative Table of Well Data and Analytical Results  
Analytical Appendix  
Field Data Sheets

# **Professional Engineering Appendix**

# HIGHLAND WAY



## EXPLANATION

- MONITORING WELL
- 335.84 GROUNDWATER ELEVATION (FT, MSL)
- 344.0 GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- 344.0 → APPROXIMATE GROUNDWATER FLOW DIRECTION;  
APPROXIMATE GRADIENT = 0.06



Basemap from Cambria Environmental Technology, Inc.

PREPARED BY

**RRM**  
engineering contracting firm

Chevron Station 9-0329  
340 Highland Avenue  
Piedmont, California

GROUNDWATER ELEVATION  
CONTOUR MAP, JULY 9, 1997

FIGURE:  
1  
PROJECT:  
DAC04

# **Table of Well Data and Analytical Results**

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-2</b>										
08/07/89	94.19	91.33	2.88	--	34,000	580	60	170	270	--
11/15/89	94.19	91.39	2.80	--	8100	500	36	420	180	--
02/01/91	94.19	90.41	3.75	--	6800	490	21	310	86	--
04/16/91	94.19	91.64	2.55	--	9600	810	43	550	270	--
10/16/91	94.19	90.67	3.52	--	7100	320	23	200	60	--
01/08/92	94.19	90.04	4.15	--	2400	190	9.0	83	22	--
04/10/92	94.19	91.23	2.96	--	6600	550	33	340	170	--
07/14/92	94.19	91.36	2.83	--	9000	680	330	580	690	--
10/05/92	94.19	89.81	4.38	--	5500	250	17	130	82	--
01/06/93	94.19	90.25	3.94	--	5500	190	32	41	54	--
03/29/93	94.19	92.10	2.09	--	19,000	670	40	180	370	--
07/02/93	94.19	92.10	2.09	--	8000	1100	41	420	500	--
10/11/93	94.19	91.43	2.76	--	42,000	940	34	140	87	--
01/10/94	94.19	89.37	4.82	--	12,000	770	20	220	74	--
04/06/94	94.19	91.70	2.49	--	40,000	820	33	190	110	--
07/06/94	94.19	91.72	2.47	--	8800	870	28	140	95	--
11/11/94	94.19	91.32	2.87	--	8600	460	81	180	120	--
01/06/95	94.19	91.64	2.55	--	15,000	880	48	270	140	--
04/13/95	94.19	92.13	2.06	--	56,000	2500	130	730	360	--
07/25/95	94.19	92.05	2.14	--	11,000	1000	34	540	160	--
10/05/95	94.19	91.68	2.51	--	13,000	1000	<20	160	170	--
01/02/96	94.19	91.97	2.22	--	9500	1300	<50	380	87	64,000
04/11/96	94.19	92.27	1.92	--	<10,000	1300	<100	<100	<100	74,000
07/08/96	94.19	92.14	2.05	--	<20,000	1200	<200	<200	<200	110,000
10/03/96	94.19	91.90	2.29	--	<25,000	1200	<250	<250	<250	140,000
01/23/97	343.39	341.49	1.90	--	20,000	1100	<200	460	<200	110,000
02/14/97	343.39	341.42	1.97	Confirmation run	--	--	--	--	--	150,000
04/08/97	343.39	341.12	2.27	--	<50,000	1100	<500	<500	<500	160,000
07/09/97	343.39	341.41	1.98	--	<50,000	1300	<500	<500	<500	210,000

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-3</b>										
08/07/89	97.65	93.36	4.29	--	<50	<0.5	<1.0	<1.0	<3.0	--
11/15/89	97.65	92.48	5.17	--	<500	<0.5	2.8	<0.5	1.1	--
02/01/91	97.65	91.27	6.38	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/16/91	97.65	93.93	3.72	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/16/91	97.65	89.45	8.20	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/08/92	97.65	90.97	6.68	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/10/92	97.65	93.15	4.50	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/14/92	97.65	91.44	6.21	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/92	97.65	88.34	9.31	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/93	97.65	94.24	3.41	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/29/93	97.65	97.15	0.50	--	<50	<0.5	<0.5	<0.5	0.8	--
07/02/93	97.65	95.06	2.59	--	<50	4.0	3.0	<0.5	3.0	--
10/11/93	97.65	92.75	4.90	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/10/94	97.65	93.26	4.39	--	<50	<0.5	1.0	<0.5	0.8	--
04/06/94	97.65	94.97	2.68	--	<50	<0.5	1.0	0.7	4.5	--
07/06/94	97.65	95.55	2.10	--	<50	2.2	4.1	<0.5	2.8	--
11/11/94	97.65	96.42	1.23	--	<50	<0.5	0.8	<0.5	<0.5	--
01/06/95	97.65	97.05	0.60	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/13/95	97.65	97.05	0.60	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/25/95	97.65	96.00	1.65	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/95	97.65	94.02	3.63	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/02/96	97.65	94.53	3.12	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/11/96	97.65	96.83	0.82	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/08/96	97.65	96.15	1.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/03/96	97.65	95.17	2.48	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	347.08	346.87	0.21	--	<50	<0.5	<0.5	<0.5	<0.5	3.2
04/08/97	347.08	346.33	0.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	347.08	345.61	1.47	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-4</b>										
08/07/89	95.60	--	--	Dry	--	--	--	--	--	Dry
11/15/89	95.60	90.65	4.95	--	1300	2.9	310	0.5	2.9	--
02/01/91	95.60	90.82	4.78	--	72	<0.5	9.0	<0.5	<0.5	--
04/16/91	95.60	95.60	4.83	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/16/91	95.60	91.37	4.23	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/08/92	95.60	90.79	4.81	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/10/92	95.60	91.34	4.26	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/14/92	95.60	91.32	4.28	--	<50	<0.5	3.8	<0.5	<0.5	--
10/05/92	95.60	91.31	4.29	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/93	95.60	91.31	4.29	--	<50	0.7	<0.5	<0.5	<0.5	--
03/29/93	95.60	91.30	4.30	--	<50	0.5	1.0	<0.5	2.0	--
07/02/93	95.60	91.38	4.22	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/11/93	95.60	91.30	4.30	--	<50	0.6	<0.5	<0.5	<0.5	--
01/10/94	95.60	91.16	4.44	--	<50	0.7	3.0	<0.5	1.0	--
04/06/94	95.60	91.36	4.24	--	130	2.2	5.4	3.3	24	--
07/06/94	95.60	91.36	4.24	--	99	5.9	7.5	2.0	12	--
11/11/94	95.60	91.39	4.21	--	<50	<0.5	9.5	<0.5	<0.5	--
01/06/95	95.60	91.18	4.42	--	<50	0.7	1.0	<0.5	1.1	--
04/13/95	95.60	91.36	4.24	--	67	0.54	7.2	<0.5	1.1	--
07/25/95	95.60	91.36	4.24	--	390	<2.0	150	<2.0	<2.0	--
10/05/95	95.60	91.22	4.38	--	130	<0.5	66	<0.5	<0.5	--
01/02/96	95.60	91.34	4.26	--	<50	<0.5	<0.5	<0.5	<0.5	34
04/11/96	95.60	91.21	4.39	--	<50	<0.5	0.93	<0.5	<0.5	56
07/08/96	95.60	91.32	4.28	--	<50	<0.5	<0.5	<0.5	<0.5	21
10/03/96	95.60	91.38	4.22	--	80	<0.5	31	<0.5	<0.5	9.9
01/23/97	344.94	340.55	4.39	--	<50	<0.5	<0.5	<0.5	<0.5	23
04/08/97	344.94	340.69	4.25	--	87	<0.5	3.6	<0.5	1.7	7.0
07/09/97	344.94	340.73	4.21	--	93	<0.5	32	<0.5	<0.5	26
<b>C-5</b>										
11/25/96	--	--	3.30	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	345.14	343.69	1.45	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	345.14	342.82	2.32	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	345.14	342.84	2.30	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-6</b>										
11/25/96	--	--	2.13	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
01/23/97	338.61	--	0.00	Well flooded	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	338.61	--	0.00	Well flooded	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	338.61	335.84	2.77	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
<b>Backfill Well: A</b>										
08/07/89	--	--	2.10	--	1000	50	6.0	5.0	22	--
11/15/89	--	--	2.04	--	3700	98	2.1	4.3	55	--
02/01/91	--	--	3.05	--	36,000	1100	750	130	6100	--
04/16/91	--	--	2.01	--	8000	370	6.0	86	750	--
10/16/91	--	--	4.15	--	--	--	--	--	--	--
<b>Backfill Well: B</b>										
08/07/89	--	--	4.12	--	--	--	--	--	--	--
11/15/89	--	--	--	--	--	--	--	--	--	--
02/01/91	--	--	5.03	--	--	--	--	--	--	--
04/16/91	--	--	4.00	--	--	--	--	--	--	--
10/16/91	--	--	6.24	--	--	--	--	--	--	--

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>TRIP BLANK</b>										
01/06/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/29/93	--	--	--	--	<50	<0.5	<0.5	<0.5	1.0	--
07/02/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/11/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/10/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/06/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/06/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
11/11/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/06/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/13/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/25/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
10/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/02/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/11/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/08/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/03/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/23/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/08/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
07/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on April 13, 1995.

Earlier field data and analytical results provided by Sierra Environmental.

Survey performed on March 20, 1997 by Ron Archer, Civil Engineer Inc.

### ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl t-butyl ether

# **Analytical Appendix**



**Sequoia  
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233  
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: C-2  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-01

Sampled: 07/09/97  
Received: 07/10/97  
Analyzed: 07/16/97  
Reported: 08/08/97

QC Batch Number: GC071697BTEX02A  
Instrument ID: GCHP02

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	N.D.
Methyl t-Butyl Ether	2500	210000
Benzene	500	1300
Toluene	500	N.D.
Ethyl Benzene	500	N.D.
Xylenes (Total)	500	N.D.
Chromatogram Pattern:		
Surrogates		
Trifluorotoluene	Control Limits % 70                    130	% Recovery 99

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Repner  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

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FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: C-3  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-02

Sampled: 07/09/97  
Received: 07/10/97  
Analyzed: 07/15/97  
Reported: 08/08/97

QC Batch Number: GC071597BTEX03A  
Instrument ID: GCHP03

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	99

Analyses reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Penner  
Project Manager



Sequoia  
Analytical

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233  
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: C-4  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-03

Sampled: 07/09/97  
Received: 07/10/97  
Analyzed: 07/16/97  
Reported: 08/08/97

QC Batch Number: GC071697BTEX02A  
Instrument ID: GCHP02

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	.....	93
Methyl t-Butyl Ether	2.5	26
Benzene	0.50	N.D.
Toluene	0.50	32
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:	.....	Gas
<b>Surrogates</b>		
Trifluorotoluene	Control Limits % 70      130	% Recovery 114

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233  
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
  
Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: C-5  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-04

Sampled: 07/09/97  
Received: 07/10/97  
  
Analyzed: 07/15/97  
Reported: 08/08/97

QC Batch Number: GC071597BTEX03A  
Instrument ID: GCHP03

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	89

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Penner  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive      Redwood City, CA 94063      (650) 364-9600      FAX (650) 364-9233  
404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600      FAX (510) 988-9673  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600      FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: C-6  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-05

Sampled: 07/09/97  
Received: 07/10/97  
Analyzed: 07/16/97  
Reported: 08/08/97

QC Batch Number: GC071697BTEX02A  
Instrument ID: GCHP02

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	106

Analytics reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Penner  
Project Manager



Sequoia  
Analytical

680 Chesapeake Drive Redwood City, CA 94063 (650) 364-9600 FAX (650) 364-9233  
404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
  
Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Sample Descript: TB  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9707568-06

Sampled: 07/09/97  
Received: 07/10/97  
  
Analyzed: 07/15/97  
Reported: 08/08/97

QC Batch Number: GC071597BTEX03A  
Instrument ID: GCHP03

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	94

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Repner  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834	(415) 364-9600 (510) 988-9600 (916) 921-9600	FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
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Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Fran Thie

Client Project ID: Chevron 9-0329 / 970709-K2  
Matrix: Liquid

Work Order #: 9707568 -01, 03, 05

Reported: Jul 25, 1997

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071697BTEX02A	GC071697BTEX02A	GC071697BTEX02A	GC071697BTEX02A	GC071697BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Mirafab				
MS/MSD #:	970753402	970753402	970753402	970753402	970753402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Analyzed Date:	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Instrument I.D. #:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.7	9.4	9.6	29	65
MS % Recovery:	97	94	96	97	108
Dup. Result:	9.9	9.5	9.7	29	65
MSD % Recov.:	99	95	97	97	108
RPD:	2.0	1.1	1.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK071697	BLK071697	BLK071697	BLK071697	BLK071697
Prepared Date:	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Analyzed Date:	7/16/97	7/16/97	7/16/97	7/16/97	7/16/97
Instrument I.D. #:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.9	9.6	9.7	29	65
LCS % Recov.:	99	96	97	97	108

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

**SEQUOIA ANALYTICAL**  
Peggy Penner  
Project Manager

**Please Note:**  
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9707568.BLA <1>



**Sequoia  
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834	(415) 364-9600 (510) 988-9600 (916) 921-9600	FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100
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Blaine Tech Services, Inc.  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Fran Thie

Client Project ID: Chevron 9-0329 / 970709-K2  
Matrix: Liquid

Work Order #: 9707568-02, 04, 06

Reported: Jul 25, 1997

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071597BTEX03A	GC071597BTEX03A	GC071597BTEX03A	GC071597BTEX03A	GC071597BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030				

Analyst:	D. Jirsa				
MS/MSD #:	970748401	970748401	970748401	970748401	970748401
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Analyzed Date:	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Instrument I.D. #:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.0	8.8	8.9	24	43
MS % Recovery:	90	88	89	80	72
Dup. Result:	8.9	8.7	8.7	24	42
MSD % Recov.:	89	87	87	80	70
RPD:	1.1	1.1	2.3	0.0	2.4
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK071597	BLK071597	BLK071597	BLK071597	BLK071597
Prepared Date:	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Analyzed Date:	7/15/97	7/15/97	7/15/97	7/15/97	7/15/97
Instrument I.D. #:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.1	8.9	8.9	25	43
LCS % Recov.:	91	89	89	83	72

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

**SEQUOIA ANALYTICAL**

Peggy Penner  
Project Manager

Please Note:  
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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**Sequoia  
Analytical**

680 Chesapeake Drive      Redwood City, CA 94063      (415) 364-9600      FAX (415) 364-9233  
404 N. Wiget Lane      Walnut Creek, CA 94598      (510) 988-9600      FAX (510) 988-9673  
819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600      FAX (916) 921-0100

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Fran Thie

Client Proj. ID: Chevron 9-0329/970709-K2  
Lab Proj. ID: 9707568

Received: 07/10/97  
Reported: 07/21/97

## **LABORATORY NARRATIVE**

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPPH Note: Sample 9707568-01 was diluted 1000-fold.

**SEQUOIA ANALYTICAL**

Peggy Penher  
Project Manager

Yes No

## Chain-of-Custody-Reco

Fax copy of Lab Report and COC to Chevron Contact:  Yes

**Chevron U.S.A. Inc.**  
**P.O. BOX 5004**  
**San Ramon, CA 94583**  
**FAX (415)842-9591**

**Chevron Facility Number** 9-0329  
**Facility Address** 340 Highland Ave., Piedmont, CA  
**Consultant Project Number** 970709-162  
**Consultant Name** Blaine Tech Services, Inc.  
**Address** 1680 Rogers Ave., San Jose, CA 95112  
**Project Contact (Name)** Fran Thie  
**(Phone)** (408)573-0555 **(Fax Number)** (408)573-7771

**Chevron Contact (Name)** Phil Briggs  
**(Phone)** (510)842-9136

**Laboratory Name** Sequoia

**Laboratory Release Number** 9034836

**Samples Collected by (Name)** Keith Brown

**Collection Date** 7/6/05

**Signature** *Keith Brown*

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water	A = Charcoal	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed							DO NOT BILL FOR TB-LB.	Remarks	
								STEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICP or AA)	MORE	
C-2	1	3	W	O	1345	HCl	Y	X									5 10 12 18
C-3	2	1	1	1	1330			X	X								
C-4	3				1310			X	X								
C-5	4				1230			X	X								
C-6	5	1			1250			X	X								
DB	6	2	1	1	~		~									X	

Released By (Signature)

Organization PBS

Date/Time

Received By (Signature)

Organization Sequoia

Date/Time 7/10/11:05

Turn Around Time (Circle Choice)

24 Hrs.

48 Hrs.

5 Days

10 Days

As Contracted

Inquished By (Signature)

Organization SEQUOIA

Date/Time 7/10

Received By (Signature)

Organization

Date/Time

Bashed By (Signature)

Organization

Date/Time

Received For Laboratory By (Signature)

Date/Time

Blaine

7/10/05 12:17

# **Field Data Sheets**



# CHEVRON WELL MONITORING DATA SHEET

Project #:	920709-KL	Station #:	9-0829
Sampler:	KCB	Date:	7/9
Well I.D.:	C-2	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	1485	Depth to Water:	198
Depth to Free Product:	—	Thickness of Free Product (feet):	
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer  
 C NR  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

$$\frac{20}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{60}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1336	76.9	6.8	840	2.0	Hydrocarbon strong
1339	70.0	6.8	900	4.0	- gas odor -
1341	69.8	6.8	910	6.0	- gray floaty -
					FP globs also in water

Did well dewater? Yes  No Gallons actually evacuated: 6.0

Sampling Time: 1345 Sampling Date: 7/9

Sample I.D.: C-2 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

# CHEVRON WELL MONITORING DATA SHEET

Project #:	920709-K1	Station #:	9-038
Sampler:	CCB	Date:	7/9
Well I.D.:	C-3	Well Diameter:	(2) 3 4 6 8
Total Well Depth:	1420	Depth to Water:	147
Depth to Free Product:	—	Thickness of Free Product (feet):	—
Referenced to:	PVC	Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

$$\frac{20}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{60}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1320	80.6	6.8	280	2.0	
1322	76.0	6.8	300	4.0	- silty/tau -
1325	71.6	7.0	300	6.0	

Did well dewater? Yes No Gallons actually evacuated: 6.0

Sampling Time: 1330 Sampling Date: 7/9

Sample I.D.: C-3 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Duplicate I.D.:	Analyzed for:	TPH-G	BTEX	MTBE	TPH-D	Other:
D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:		mg/L
O.R.P. (if req'd):	Pre-purge:	mV		Post-purge:		mV

# CHEVRON WELL MONITORING DATA SHEET

Project #:	970709-62		Station #:	9-0329	
Sampler:	KCB		Date:	7/9	
Well I.D.:	C4		Well Diameter:	2	3 4 6 8
Total Well Depth:	42 ft 10008		Depth to Water:	42	
Depth to Free Product:	—		Thickness of Free Product (feet):		
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

$$\frac{0.9}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{2.7}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1304	69.0	7.0	560	1.0	grayish/silky -
1306	68.8	6.8	520	2.0	dark gray very silky
1307	68.4	6.8	510	3.0	

Did well dewater? Yes  No Gallons actually evacuated: 30

Sampling Time: 1310 Sampling Date: 7/9

Sample I.D.: C4 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

# CHEVRON WELL MONITORING DATA SHEET

Project #:	970709-K2		Station #:	9-0329	
Sampler:	KCB		Date:	7/9	
Well I.D.:	C5		Well Diameter:	2	3 4 6 8
Total Well Depth:	1750		Depth to Water:	230	
Depth to Free Product:	←		Thickness of Free Product (feet):		
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI	HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method:  
 Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method:  
 Bailer  
 Disposable Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

$$\begin{array}{c}
 \frac{2.4}{1 \text{ Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{7.2}{\text{Calculated Volume}}
 \end{array} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1221	74.6	6.9	200	2.5	sl/fy/tan
1224	71.2	7.1	740	5.0	
1227	69.4	7.2	740	7.5	

Did well dewater? Yes  No Gallons actually evacuated: 7.5

Sampling Time: 1230 Sampling Date: 7/9

Sample I.D.: C5 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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# CHEVRON WELL MONITORING DATA SHEET

Project #:	970709-K2		Station #:	9-0829				
Sampler:	KCB		Date:	7/9				
Well I.D.:	C6		Well Diameter:	(2)	3	4	6	8
Total Well Depth:	1740		Depth to Water:	222				
Depth to Free Product:	—		Thickness of Free Product (feet):	—				
Referenced to:	PVC	Grade	D.O. Meter (if req'd):	YSI		HACH		

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius <sup>2</sup> * 0.163

Purge Method: Bailer  
 Disposable Bailex  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailex  
 Extraction Port  
 Other: \_\_\_\_\_

$$\begin{array}{ccc}
 2.3 & \times & 3 \\
 \hline
 \text{1 Case Volume (Gals.)} & \text{Specified Volumes} & \text{Calculated Volume} \\
 & & 6.9 \text{ Gals.}
 \end{array}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1240	72.9	7.2	650	2.5	
1243	70.0	7.2	64.0	5.0	- salty / tan -
1248	69.4	7.3	64.0	7.0	

Did well dewater? Yes  No Gallons actually evacuated: 7.0

Sampling Time: 1250 Sampling Date: 7/9

Sample I.D.: C6 Laboratory: Sequoia GTEL N. Creek Assoc. Labs

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV