

ENVIRONMENTAL  
PROTECTION

MAR 19 PM 3:10



5510 1699  
LS  
**Chevron**

March 17, 1999

**Chevron Products Company**  
6001 Bollinger Canyon Road  
Building L, Room 1110  
PO Box 6004  
San Ramon, CA 94583-0904

**Philip R. Briggs**  
Project Manager  
Site Assessment & Remediation  
Phone 925 842-9136  
Fax 925 842-8370

Mr. Thomas Peacock  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: Chevron Service Station #9-6607**  
**2340 Otis Drive, Alameda, California**

Dear Mr. Peacock:

Enclosed is the First Quarter Groundwater Monitoring Report for 1998 that was prepared by our consultant Blaine Tech Services Inc. for the above noted site. Ground water samples were collected and analyzed for TPH-g, BTEX and MtBE constituents. Monitoring wells MW-1 and M-2 are sampled quarterly and analyzed for all of the constituents, while wells MW-3 and MW-4 are sampled annually (first quarter), but measured for groundwater depth quarterly.

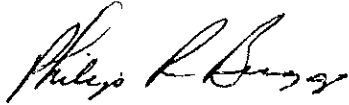
In monitoring well MW-4 the concentrations were below method detection limits for all of the constituents, while in wells MW-1, MW-2 and MW-3 the concentrations were below method detection limits for the TPH-g and BTEX constituents. MtBE continues to be detected in wells MW-1, MW-2 and MW-3. The sample for well MW-1 was diluted to achieve an accurate chromatogram reading for MtBE.

Depth to groundwater varied from 4.21 feet to 5.18 feet below grade, with a direction of flow varying northerly and southerly from well MW-4 to wells MW-1 and MW-3 respectively.

March 17, 1999  
Mr. Thomas Peacock  
Chevron Service Station #9-6607  
Page 2

If you have any questions or comments, call me at (925) 842-9136.

Sincerely,  
**CHEVRON PRODUCTS COMPANY**



Philip R. Briggs  
Site Assessment and Remediation Project Manger

Enclosure

Cc. Mr. Wayne Weber  
Chevron Station # 9-6607  
2340 Otis Drive  
Alameda, CA 94501

Harsh Investment Corp.  
523 West Plaza  
South Shore Center  
Alameda, CA 94501

Mr. Bill Scudder, Chevron

**BLAINE**  
TECH SERVICES, INC.



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

ENVIRONMENTAL  
PROTECTION

MAR 19 PM 3:10

March 8, 1999

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

### 1st Quarter 1999 Monitoring at 9-6607

First Quarter 1999 Groundwater Monitoring at  
Chevron Service Station Number 9-6607  
2340 Otis Drive  
Alameda, CA

Monitoring Performed on January 20, 1999

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### Groundwater Sampling Report 990120-Y-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. Purgewater 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 in black ink that reads "Christine Lillie". The signature is written in a cursive, flowing style.

Christine Lillie  
Project Coordinator

FPT/sb

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

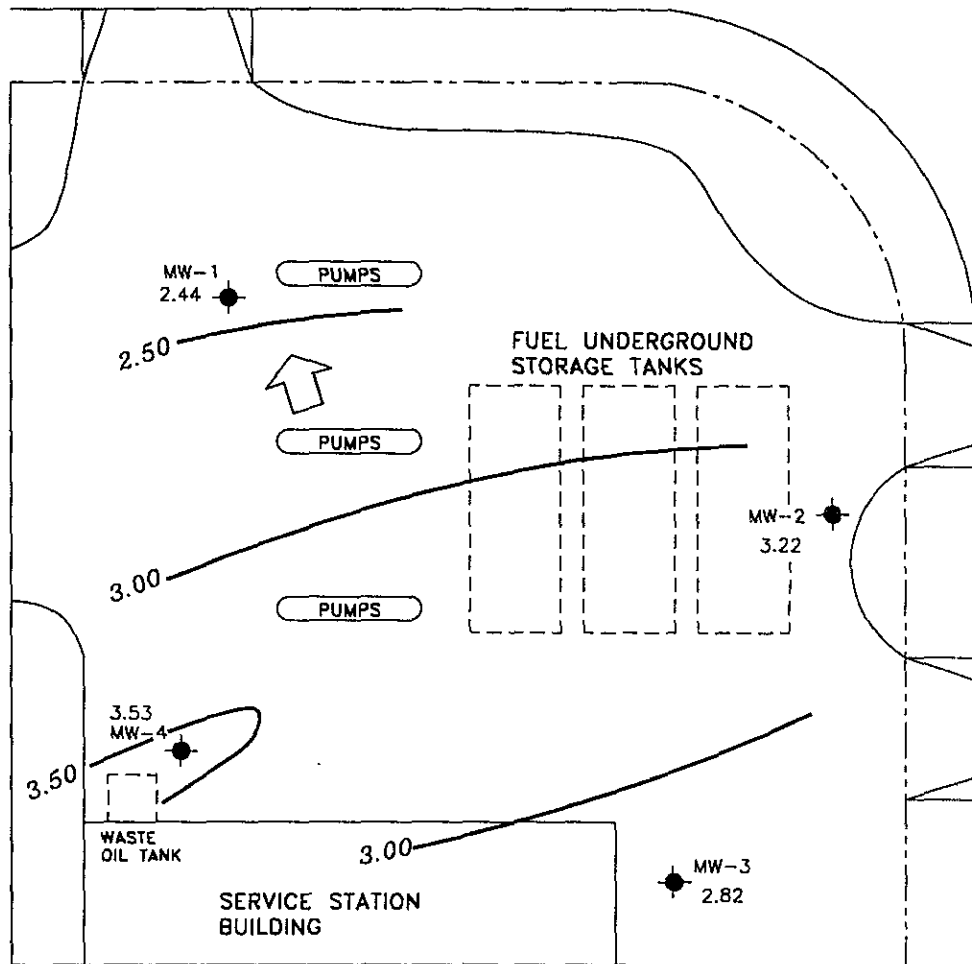
# **Professional Engineering Appendix**

OTIS DRIVE

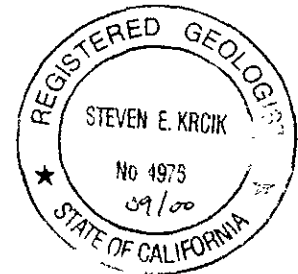
PARK STREET



SCALE (ft)



- EXPLANATION**
- ◆ MONITORING WELL
  - 3.53 GROUNDWATER ELEVATION (FT. MSL)
  - 3.00 — GROUNDWATER ELEVATION CONTOUR (FT. MSL)
  - ↑ APPROXIMATE GROUNDWATER FLOW DIRECTION;  
APPROXIMATE GRADIENT = 0.02



Base map from Cambria Environmental Technology, Inc.

PREPARED BY

**RRM**  
engineering contracting firm

**Chevron Station 9-6607**  
2340 Otis Drive  
Alameda, California

**GROUNDWATER ELEVATION CONTOUR MAP,**  
JANUARY 20, 1999

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	TOG	TPH-Diesel	MTBE	Other VOCs	PNAAs
<b>MW-1</b>														
08/21/91	7.12	1.02	6.10	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/09/92	7.12	3.16	3.96	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--	--	--	--
04/20/92	7.12	3.22	3.90	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/25/92	7.12	2.94	4.18	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
11/24/92	7.12	2.40	4.72	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/21/93	7.12	3.94	3.18	--	<50	<0.5	0.7	<0.5	1.0	--	--	--	--	--
04/13/93	7.12	3.42	3.70	--	<50	<0.5	<0.5	<0.5	1.0	--	--	--	--	--
07/14/93	7.12	2.91	4.21	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/26/93	7.12	2.84	4.28	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/11/94	7.12	2.96	4.16	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
03/31/94	7.12	3.24	3.88	--	<50	<0.5	0.6	<0.5	0.7	--	--	--	--	--
07/14/94	7.12	4.12	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/12/94	7.12	2.87	4.25	--	80	<0.5	<0.5	<0.5	<0.5	--	--	121	<5.0-<50	--
01/11/95	7.12	4.00	3.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	130	--	--
04/05/95	7.12	3.66	3.46	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	170	--	<5.0
07/13/95	7.12	3.13	3.99	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	400	--	--
10/05/95	7.12	2.74	4.38	--	<50	<0.5	2.3	0.66	4.0	--	--	300	--	--
10/03/96	7.12	2.68	4.44	--	<50	0.63	<0.5	<0.5	<0.5	--	--	560	--	--
01/22/97	7.12	3.73	3.39	--	<200	<2.0	<2.0	<2.0	<2.0	--	--	530	--	--
01/22/97	7.12	3.73	3.39	Confirmation run	--	--	--	--	--	--	--	880	--	--
04/09/97	6.92*	3.22	3.70	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	610	--	--
07/09/97	6.92	3.05	3.87	--	240	47	<2.0	<2.0	<2.0	--	--	990	--	--
10/16/97	6.92	2.95	3.97	--	250	<2.0	<2.0	<2.0	<2.0	--	--	1000	--	--
01/08/98	6.92	3.47	3.45	--	<200	<2.0	<2.0	<2.0	<2.0	--	--	**	--	--
04/24/98	6.92	3.31	3.61	--	170	20	<0.5	<0.5	<0.5	--	--	1700	--	--
07/15/98	6.92	3.07	3.85	--	160	58	1.1	<0.5	0.59	--	--	1500	--	--
07/15/98	6.92	3.07	3.85	Confirmation run	--	--	--	--	--	--	--	1600	--	--
10/27/98	6.92	2.80	4.12	--	140	<0.5	<0.5	<0.5	<0.5	--	--	1200	--	--
01/20/99	6.92	2.44	4.48	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	1330	--	--

\* Wellhead elevation altered due to maintenance.

\*\* No value for MTBE could be determined; see lab report.



## 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	TOG	TPH-Diesel	MTBE	Other VOCs	PNAs
<b>MW-2</b>														
08/21/91	7.43	1.03	6.40	--	430	170	0.9	1.0	3.6	--	--	--	--	--
01/09/92	7.43	3.20	4.23	--	58	16	<0.5	<0.5	<0.5	<5000	--	--	--	--
04/20/92	7.43	3.26	4.17	--	180	9.6	<0.5	0.8	<0.5	--	--	--	--	--
07/25/92	7.43	2.96	4.47	--	220	8.0	0.7	4.0	8.6	--	--	--	--	--
11/24/92	7.43	1.61	5.82	--	72	3.2	<0.5	0.5	0.6	--	--	--	--	--
01/21/93	7.43	4.08	3.35	--	<50	0.8	<0.5	<0.5	<0.5	--	--	--	--	--
04/13/93	7.43	3.41	4.02	--	78	<0.5	<0.5	<0.5	0.6	--	--	--	--	--
07/14/93	7.43	2.94	4.49	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/26/93	7.43	2.87	4.56	--	<50	<0.5	0.9	<0.5	0.6	--	--	--	--	--
01/11/94	7.43	3.04	4.39	--	<50	<0.5	1.0	<0.5	<0.5	--	--	--	--	--
03/31/94	7.43	3.25	4.18	--	<50	0.5	<0.5	<0.5	0.8	--	--	--	--	--
07/14/94	7.43	2.53	4.90	--	<50	<0.5	<0.5	<0.5	0.6	--	--	--	--	--
10/12/94	7.43	2.89	4.54	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	2900	<50-<500	--
01/11/95	7.43	4.17	3.26	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	2500	--	--
04/05/95	7.43	3.78	3.65	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.0	--	<5.0
07/13/95	7.43	3.12	4.31	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	1100	--	--
10/05/95	7.43	2.75	4.68	--	<50	<0.5	1.9	0.54	3.4	--	--	280	--	--
10/03/96	7.43	2.63	4.80	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	1000	--	--
01/22/97	7.43	4.07	3.36	--	540*	<5.0	<5.0	<5.0	<5.0	--	--	1300	--	--
01/22/97	7.43	4.07	3.36	Confirmation run	--	--	--	--	--	--	--	1600	--	--
04/09/97	7.43	3.18	4.25	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	970	--	--
07/09/97	7.43	2.95	4.48	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	710	--	--
10/16/97	7.43	2.99	4.44	--	<100	<1.0	<1.0	<1.0	<1.0	--	--	1000	--	--
01/08/98	7.43	3.64	3.79	--	68	<0.5	<0.5	<0.5	<0.5	--	--	**	--	--
04/24/98	7.43	3.48	3.95	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	490	--	--
07/15/98	7.43	3.13	4.30	--	51	1.2	1.2	<0.5	<0.5	--	--	480	--	--
10/27/98	7.43	2.98	4.45	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	180	--	--
01/20/99	7.43	3.22	4.21	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	388	--	--

\* Chromatogram pattern indicates an unidentified hydrocarbon.

\*\* No value for MTBE could be determined, see lab report.

## 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	TOG	TPH-Diesel	MTBE	Other VOCs	PNAAs
<b>MW-3</b>														
08/21/91	8.07	0.97	7.10	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/09/92	8.07	3.04	5.03	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--	--	--	--
04/20/92	8.07	3.16	4.91	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/25/92	8.07	2.73	5.34	--	<50	1.0	1.0	1.0	3.4	--	--	--	--	--
11/24/92	8.07	3.07	5.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/21/93	8.07	3.73	4.34	--	<50	<0.5	0.5	<0.5	1.0	--	--	--	--	--
04/13/93	8.07	3.23	4.84	--	<50	<0.5	<0.5	<0.5	0.6	--	--	--	--	--
07/14/93	8.07	2.78	5.29	--	<50	<0.5	<0.5	<0.5	2.0	--	--	--	--	--
10/26/93	8.07	2.71	5.36	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/11/94	8.07	2.85	5.22	--	<50	<0.5	1.0	<0.5	<0.5	--	--	--	--	--
03/31/94	8.07	3.08	4.99	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/14/94	8.07	2.71	5.36	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/12/94	8.07	3.05	5.02	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/11/95	8.07	3.72	4.35	--	<50	<0.5	<0.5	<0.5	0.7	--	--	<5.0	--	--
04/05/95	8.07	5.43	2.64	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5.0	--	<5.0
07/13/95	8.07	2.94	5.13	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/05/95	8.07	2.61	5.46	--	<50	<0.5	1.2	<0.5	<0.5	--	--	--	--	--
10/03/96	8.07	2.54	5.53	--	<50	0.98	1.2	0.53	2.5	--	--	<2.5	--	--
01/22/97	8.07	3.45	4.62	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
04/09/97	8.00*	2.95	5.05	Sampled annually	--	--	--	--	--	--	--	--	--	--
07/09/97	8.00	2.86	5.14	--	--	--	--	--	--	--	--	--	--	--
10/16/97	8.00	2.80	5.20	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
01/08/98	8.00	3.25	4.75	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	9.3	--	--
04/24/98	8.00	3.27	4.73	--	--	--	--	--	--	--	--	--	--	--
07/15/98	8.00	2.93	5.07	--	--	--	--	--	--	--	--	--	--	--
10/27/98	8.00	2.76	5.24	--	--	--	--	--	--	--	--	--	--	--
01/20/99	8.00	2.82	5.18	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	42.2	--	--

\* Wellhead elevation altered due to maintenance.

## 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	TOG	TPH-Diesel	MTBE	Other VOCs	PNAs
<b>MW-4</b>														
08/21/91	7.85	1.00	6.85	--	<50	0.6	<0.5	<0.5	<0.5	<5000	--	--	--	--
01/09/92	7.85	3.15	4.70	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--	--	--	--
04/20/92	7.85	3.21	4.64	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--	--	--	--
07/25/92	7.85	2.90	4.95	--	<50	0.5	1.1	<0.5	0.8	--	78	--	--	--
11/24/92	7.85	2.43	5.42	--	<50	<0.5	<0.5	<0.5	1.0	<5000	--	--	--	--
01/21/93	7.85	3.78	4.07	--	<50	<0.5	0.5	<0.5	0.7	--	<10	--	--	--
04/13/93	7.85	3.40	4.45	--	<50	<0.5	<0.5	<0.5	1.0	--	<10	--	--	--
07/14/93	7.85	2.95	4.90	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/26/93	7.85	2.90	4.95	--	<50	2.0	3.0	2.0	3.0	--	--	--	--	--
01/11/94	7.85	3.08	4.77	--	<50	<0.5	0.5	<0.5	<0.5	--	--	--	--	--
03/31/94	7.85	3.20	4.65	--	<50	<0.5	<0.5	<0.5	1.0	--	--	--	--	--
07/14/94	7.85	2.80	5.05	--	<50	0.9	1.2	<0.5	2.0	--	--	--	--	--
10/12/94	7.85	2.97	4.88	--	<50	<0.5	0.9	<0.5	0.7	--	--	--	--	--
01/11/95	7.85	3.85	4.00	--	<50	<0.5	0.8	0.7	1.5	--	--	<5.0	--	--
04/05/95	7.85	3.63	4.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--	<2.0	<5.0	--
07/13/95	7.85	3.14	4.71	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/05/95	7.85	2.83	5.02	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/03/96	7.85	2.77	5.08	--	100	5.5	5.6	2.5	12	--	--	<2.5	--	--
01/22/97	7.85	3.57	4.28	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
04/09/97	7.85	3.25	4.60	Sampled annually	--	--	--	--	--	--	--	--	--	--
07/09/97	7.85	3.06	4.79	--	--	--	--	--	--	--	--	--	--	--
10/16/97	7.85	3.04	4.81	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	2.7	--	--
01/08/98	7.85	3.48	4.37	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
04/24/98	7.85	3.51	4.34	--	--	--	--	--	--	--	--	--	--	--
07/15/98	7.85	3.39	4.46	--	--	--	--	--	--	--	--	--	--	--
10/27/98	7.85	3.33	4.52	--	--	--	--	--	--	--	--	--	--	--
01/20/99	7.85	3.53	4.32	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.0	--	--

## 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	TOG	TPH-Diesel	MTBE	Other VOCs	PNAs
<b>TRIP BLANK</b>														
01/21/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
04/13/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/14/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/26/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/11/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
03/31/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/14/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/12/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/11/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
04/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
07/13/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/05/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
10/03/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
01/22/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
04/09/97	--	--	--	--	<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	--	--
10/16/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
01/08/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
04/24/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
07/15/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
10/27/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.5	--	--
01/20/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	<2.0	--	--

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on April 5, 1995.  
Earlier field data and analytical results provided by Sierra Environmental.

### ABBREVIATIONS.

TPH = Total Petroleum Hydrocarbons  
TOG = Total Oil and Grease  
MTBE = Methyltertiary butylether  
VOC = Volatile Organic Compound

# Analytical Appendix



Sequoia  
Analytical

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February 2, 1999

Christine Lillie  
Blaine Tech/Chevron  
1680 Rogers Ave.  
San Jose, CA 95112

RE: Chevron/P901459

Dear Christine Lillie

Enclosed are the results of analyses for sample(s) received by the laboratory on January 26, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai  
Project Manager

CA ELAP Certificate Number 2245





**Sequoia  
Analytical**

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Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

**ANALYTICAL REPORT FOR P901459**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW 1	P901459-01	Water	1/20/99
MW 2	P901459-02	Water	1/20/99
MW 3	P901459-03	Water	1/20/99
MW 4	P901459-04	Water	1/20/99
TB	P901459-05	Water	1/20/99





Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M  
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<b><u>P901459-01</u></b>				
<b>MW 1</b>							<b>Water</b>	
Gasoline	9020027	2/1/99	2/2/99		250	ND	ug/l	
Benzene	"	"	"		2.50	ND	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		2.50	ND	"	
Methyl tert-butyl ether	"	"	"		10.0	1330	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		106	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		96.0	"	
				<b><u>P901459-02</u></b>				
<b>MW 2</b>							<b>Water</b>	
Gasoline	9020027	2/1/99	2/2/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	388	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		104	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		95.3	"	
				<b><u>P901459-03</u></b>				
<b>MW 3</b>							<b>Water</b>	
Gasoline	9010575	2/1/99	2/1/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	42.2	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		114	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		92.7	"	
				<b><u>P901459-04</u></b>				
<b>MW 4</b>							<b>Water</b>	
Gasoline	9010575	2/1/99	2/1/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		112	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		94.7	"	
				<b><u>P901459-05</u></b>				
<b>TB</b>							<b>Water</b>	
Gasoline	9010575	2/1/99	2/2/99		50.0	ND	ug/l	







Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M  
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>TB (continued)</b>				<b><u>P901459-05</u></b>				
Benzene	9010575	2/1/99	2/2/99		0.500	ND	ug/l	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		111	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		96.0	"	





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Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 9010575</b>		<b>Date Prepared: 1/31/99</b>			<b>Extraction Method: EPA 5030 waters</b>					
<b>Blank</b>		<b>9010575-BLK1</b>								
Gasoline	1/31/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	300		293	"	65.0-135	97.7			
Surrogate: 4-Bromofluorobenzene	"	300		290	"	65.0-135	96.7			
<b>Blank</b>		<b>9010575-BLK2</b>								
Gasoline	2/1/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	300		341	"	65.0-135	114			
Surrogate: 4-Bromofluorobenzene	"	300		282	"	65.0-135	94.0			
<b>LCS</b>		<b>9010575-BS1</b>								
Benzene	1/31/99	100		97.8	ug/l	65.0-135	97.8			
Toluene	"	100		97.2	"	65.0-135	97.2			
Ethylbenzene	"	100		93.2	"	65.0-135	93.2			
Xylenes (total)	"	300		295	"	65.0-135	98.3			
Surrogate: a,a,a-Trifluorotoluene	"	300		293	"	65.0-135	97.7			
<b>LCS</b>		<b>9010575-BS2</b>								
Gasoline	2/1/99	1000		960	ug/l	65.0-135	96.0			
Surrogate: 4-Bromofluorobenzene	"	300		287	"	65.0-135	95.7			
<b>Matrix Spike</b>		<b>9010575-MS1</b>		<b>P901367-01</b>						
Benzene	1/31/99	100	ND	99.2	ug/l	65.0-135	99.2			
Toluene	"	100	0.735	98.4	"	65.0-135	97.7			
Ethylbenzene	"	100	ND	92.7	"	65.0-135	92.7			
Xylenes (total)	"	300	ND	293	"	65.0-135	97.7			
Surrogate: a,a,a-Trifluorotoluene	"	300		303	"	65.0-135	101			
<b>Matrix Spike Dup</b>		<b>9010575-MSD1</b>		<b>P901367-01</b>						
Benzene	1/31/99	100	ND	104	ug/l	65.0-135	104	20.0	4.72	
Toluene	"	100	0.735	103	"	65.0-135	102	20.0	4.31	

Sequoia Analytical - Petaluma

\*Refer to end of report for text of notes and definitions.





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Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Matrix Spike Dup (continued)</b>										
	<u>9010575-MSD1</u>		<u>P901367-01</u>							
Ethylbenzene	1/31/99	100	ND	98.3	ug/l	65.0-135	98.3	20.0	5.86	
Xylenes (total)	"	300	ND	308	"	65.0-135	103	20.0	5.28	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		309	"	65.0-135	103			
<b>Batch: 9020027</b>										
<b>Blank</b>										
<b>Date Prepared: 2/1/99</b>										
<b>Extraction Method: EPA 5030 waters</b>										
<b>9020027-BLK1</b>										
Gasoline	2/1/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		301	"	65.0-135	100			
Surrogate: 4-Bromofluorobenzene	"	300		263	"	65.0-135	87.7			
<b>LCS</b>										
<b>9020027-BS1</b>										
Gasoline	2/1/99	1000		1070	ug/l	65.0-135	107			
Surrogate: 4-Bromofluorobenzene	"	300		300	"	65.0-135	100			
<b>Matrix Spike</b>										
<b>9020027-MS1</b>										
<b>P902002-02</b>										
Gasoline	2/1/99	1000	ND	1010	ug/l	65.0-135	101			
Surrogate: 4-Bromofluorobenzene	"	300		284	"	65.0-135	94.7			
<b>Matrix Spike Dup</b>										
<b>9020027-MSD1</b>										
<b>P902002-02</b>										
Gasoline	2/1/99	1000	ND	1090	ug/l	65.0-135	109	20.0	7.62	
Surrogate: 4-Bromofluorobenzene	"	300		294	"	65.0-135	98.0			





Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-6607/990120-Y2 Project Manager: Christine Lillie	Sampled: 1/20/99 Received: 1/26/99 Reported: 2/2/99
---	---	---

**Notes and Definitions**

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference





# **Field Data Sheets**



## CHEVRON WELL MONITORING DATA SHEET

Project #: 990120 Y2	Station #: 9-6607
Sampler: B. TAYLOR	Date: 1/20/99
Well I.D.: MW1	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 22.87	Depth to Water: 4.48
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      Sampling Method:  Bailer  
 Disposable Bailer       Disposable Bailer  
 Middleburg       Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump

<u>12</u>	x	<u>3</u>	=	<u>36</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1416	60.5	7.8	1478	13	
1418	61.7	7.4	2031	24	
1419	61.8	7.3	2076	36	

Did well dewater? Yes  No  Gallons actually evacuated: 36

Sampling Time: 1422      Sampling Date: 1/20/99

Sample I.D.: MW1      Laboratory: Sequoia CORE 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 #: <u>990120 Y2</u>	Station #: <u>9-6607</u>
Sampler: <u>B. TAYLOR</u>	Date: <u>1/20/99</u>
Well I.D.: <u>MW2</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>23.26</u>	Depth to Water: <u>4.21</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product (feet): <u>    </u>
Referenced to: <u>PVC</u> 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:     

<u>13</u>	X	<u>3</u>	=	<u>39</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1317</u>	<u>60.2</u>	<u>7.9</u>	<u>727</u>	<u>13</u>	
<u>1318</u>	<u>61.1</u>	<u>7.7</u>	<u>742</u>	<u>26</u>	
<u>1321</u>	<u>62.7</u>	<u>7.2</u>	<u>751</u>	<u>39</u>	

Did well dewater? Yes  No Gallons actually evacuated: 39

Sampling Time: 1325 Sampling Date: 1/20/99

Sample I.D.: MW2 Laboratory: Sequoia CORE 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 #: <u>990120 Y2</u>	Station #: <u>9-6607</u>
Sampler: <u>B. TAYLOR</u>	Date: <u>1/20/99</u>
Well I.D.: <u>MW 3</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>23.39</u>	Depth to Water: <u>5.19</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> 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: <u>Bailer</u> <u>Disposable Bailer</u> <u>Middleburg</u> <u>Electric Submersible</u> <u>Extraction Pump</u> Other: _____	Sampling Method: <u>Bailer</u> <u>Disposable Bailer</u> <u>Extraction Port</u> Other: _____
---	--

<u>12</u>	X	<u>3</u>	=	<u>36</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1339</u>	<u>61.7</u>	<u>7.8</u>	<u>2585</u>	<u>12</u>	
<u>1341</u>	<u>62.4</u>	<u>7.2</u>	<u>2826</u>	<u>24</u>	
<u>1343</u>	<u>63.1</u>	<u>7.6</u>	<u>3004</u>	<u>36</u>	

Did well dewater?    Yes <u>No</u>	Gallons actually evacuated: <u>36</u>
Sampling Time: <u>1345</u>	Sampling Date: <u>1/20/99</u>
Sample I.D.: <u>MW3</u>	Laboratory: <u>Sequoia</u> CORE N. Creek Assoc. Labs
Analyzed for: <u>TPH-G BTEX MTBE</u> TPH-D Other:	
Duplicate I.D.:	Analyzed for: TPH-G BTEX MTBE TPH-D Other:
D.O. (if req'd):	Pre-purge: <span style="float: right;">mg/L</span> Post-purge: <span style="float: right;">mg/L</span>
O.R.P. (if req'd):	Pre-purge: <span style="float: right;">mV</span> Post-purge: <span style="float: right;">mV</span>

## CHEVRON WELL MONITORING DATA SHEET

Project #: <u>990120 72</u>	Station #: <u>9-6607</u>
Sampler: <u>B. TAYLOR</u>	Date: <u>1/20/99</u>
Well I.D.: <u>MW 4</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>20.23</u>	Depth to Water: <u>4.32</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> 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: \_\_\_\_\_

<u>11</u>	x	<u>3</u>	=	<u>33</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
<u>1358</u>	<u>60.1</u>	<u>7.9</u>	<u>2025</u>	<u>11</u>	
<u>1359</u>	<u>61.2</u>	<u>7.7</u>	<u>2148</u>	<u>22</u>	
<u>1401</u>	<u>63.4</u>	<u>7.7</u>	<u>2200</u>	<u>33</u>	

Did well dewater? Yes  No  Gallons actually evacuated: 33

Sampling Time: 1405 Sampling Date: 1/20/99

Sample I.D.: MW 4 Laboratory: Sequoia CORE 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