

ENVIRONMENTAL  
PROTECTION



**Chevron**

99 FEB 22 PM 5:21

February 18, 1999

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**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. Barney Chan  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**Re: Chevron Service Station #9-1851  
451 Hegenberger Road  
Oakland, California**

Dear Mr. Chan:

Enclosed is the Fourth Quarter Groundwater Monitoring Report for 1998 that was prepared by our consultant Blaine Tech Services Inc., for the above noted site. The groundwater samples collected were analyzed for the TPH-g, BTEX and MtBE constituents. Your letter of April 10, 1998 approved the discontinuance for the sampling of VOC's in monitoring well M-2.

The benzene constituent decreased in all four monitoring wells from the previous sampling event. It appears that the benzene increase in all of the wells reported in the third quarter, may have been an anomaly, which I stated in my cover letter. An additional sampling event will be needed to confirm this. The highest concentration of MtBE and benzene was detected in well MW-4, in this sampling event, which is a change from the last sampling event in which MW-1 had the highest concentration. Therefore, those concentrations appear to have been an anomaly.

The depth to ground water varied from 3.53 feet to 5.06 feet below grade with a direction of flow southwesterly.

In the next sampling event the highest MtBE concentration detected by EPA Method 8020 will be confirmed by Method 8260.

February 18, 1999  
Mr. Barney Chan  
Chevron Service Station #9-1851  
Page 2

Chevron will continue to monitor the site quarterly. If you have any questions call me at (925) 842-9136.

Sincerely,  
**CHEVRON PRODUCTS COMPANY**



Philip R. Briggs  
Site Assessment and Remediation Project Manager

Enclosure

Cc. Bill Scudder, Chevron

Mr. Ben Shimek  
451 Hegenberger Road  
Oakland, CA 94621



1680 ROGERS AVENUE  
SAN JOSE, CA 95112-1105  
(408) 573-7771 FAX  
(408) 573-0555 PHONE

February 10, 1999

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

#### 4th Quarter 1998 Monitoring at 9-1851

Fourth Quarter 1998 Groundwater Monitoring at  
Chevron Service Station Number 9-1851  
451 Hegenberger Rd.  
Oakland, CA

Monitoring Performed on December 29, 1998

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#### Groundwater Sampling Report 981229-S-4

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

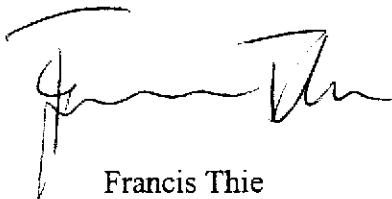
also contains new groundwater elevation calculations taken from the computer plotted gradient map which is located in the **Professional Engineering Appendix**.

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,

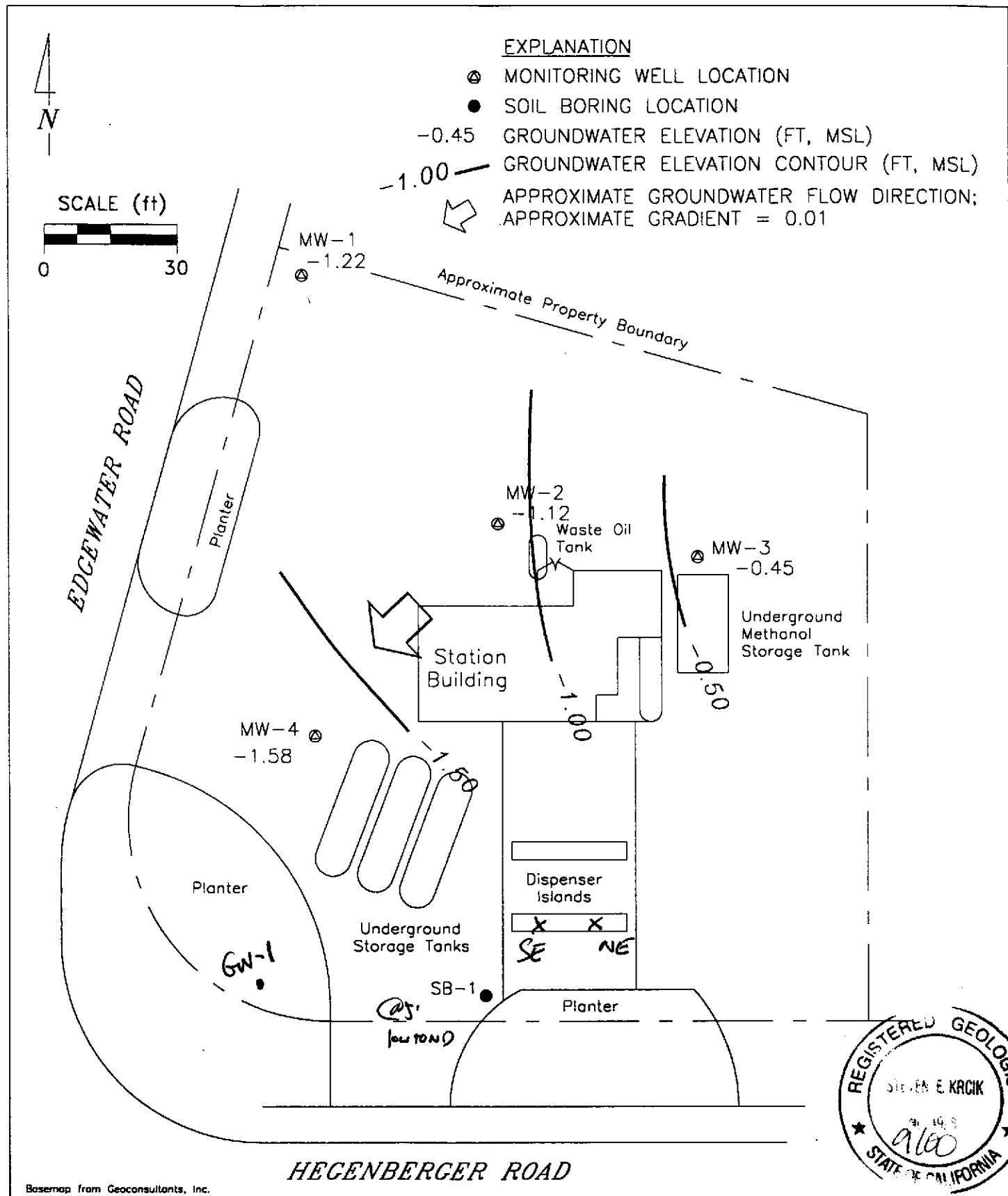
A handwritten signature in black ink, appearing to read "Francis Thie".

Francis Thie  
Vice President

FPT/sb

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

# **Professional Engineering Appendix**



PREPARED BY

**RRM**  
engineering contracting firm

Chevron Station 9-1851  
451 Hegenberger Road  
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,  
DECEMBER 29, 1998

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 (EPA 8240)	Benzene by (EPA 8240)	Xylene by (EPA 8240)	C-1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
<b>MW-1</b>																	
10/17/95	2.61	-1.51	4.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	
03/29/96	2.61	-0.72	3.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	9.5	
06/26/96	2.61	-1.23	3.84	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	46	
09/25/96	2.61	-1.41	4.02	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	--	--	--	--	940	
12/17/96	2.61	-0.96	3.57	--	<50	0.86	<0.5	<0.5	<0.5	--	--	--	--	--	--	260	
03/20/97	2.61	-1.54	4.15	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	76	
06/20/97	2.61	-1.72	4.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	64	
09/09/97	2.61	-1.74	4.35	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	110	
12/12/97	2.61	-0.39	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	27	
02/19/98	2.61	0.78	1.83	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	14	
06/23/98	2.61	-0.73	3.34	***	210	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	3400	
08/31/98	2.61	-0.88	3.49	***	1400	630	<5.0	<5.0	<5.0	--	--	--	--	--	--	16,000	
12/29/98	2.61	-1.22	3.83	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	1090	
<b>MW-2</b>																	
10/17/95	3.51	-1.82	5.33	*	170	3.5	<0.5	1.0	6.1 <5000	1600**	--	--	11	--	--	--	
03/29/96	3.51	-0.44	3.95	--	89	4.7	<0.5	0.64	0.74	--	3000**	11	2.5	17	--	5.4	21
06/26/96	3.51	-1.09	4.60	--	80	8.7	<0.5	1.2	1.3	--	2000**	11	<2.0	15	--	12	31
09/25/96	3.51	--	--	Inaccessible	--	--	--	--	--	--	--	--	--	--	--	--	
12/17/96	3.51	-0.41	3.92	--	110	<0.5	<0.5	0.75	2.1	--	2400**	10	<2.0	2.3	--	5.5	27
03/20/97	3.51	-1.32	4.83	--	140	8.2	<2.0	<2.0	<2.0	--	3400**	--	--	<2.0	--	3.2	58
06/20/97	3.51	-1.53	5.04	--	62	7.7	<0.5	<0.5	<0.5	--	1600**	7.2	<2.0	4.6	2.2	5.2	38
09/09/97	3.51	-1.47	4.98	--	190	9.4	<0.5	<0.5	0.86	--	82**	11	<2.0	<2.0	<2.0	<2.0	48
12/12/97	3.51	-0.40	3.91	--	180	1.8	<0.5	<0.5	3.2	--	8500**	<2.0	<2.0	<2.0	<2.0	<2.0	34
02/19/98	3.51	0.55	2.96	--	<100	1.8	<1.0	<1.0	<1.0	--	3800**	<3.3	<3.3	<3.3	<3.3	<3.3	230
06/23/98	3.51	-0.54	4.05	***	60	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	55
08/31/98	3.51	-0.80	4.31	--	61	2.2	<0.5	<0.5	1.1	--	--	--	--	--	--	--	53
12/29/98	3.51	-1.12	4.63	--	54	1.32	<0.5	<0.5	0.752	--	--	--	--	--	--	--	38.1

\* Results of EPA 8010 test indicates that the detection of 1,1-Dichloroethane is 1.7 ppb.

\*\* Chromatogram pattern indicates an unidentified hydrocarbon.

\*\*\* See Table of Additional Analyses

## 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 (EPA 8240)	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2- DCE	Carbon Disulfide	Vinyl Chloride	MTBE
<b>MW-3</b>																	
10/17/95	3.08	-1.34	4.42	***	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	
03/29/96	3.08	0.08	3.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	26	
06/26/96	3.08	-0.52	3.60	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	47	
09/25/96	3.08	-1.06	4.14	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	--	570	
12/17/96	3.08	-0.12	3.20	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	680	
03/20/97	3.08	-0.22	3.30	--	<50	<5.7	<5.7	<5.7	<5.7	--	--	--	--	--	--	430	
06/20/97	3.08	-0.78	3.86	--	<500	<5.0	<5.0	<5.0	<5.0	--	--	--	--	--	--	1400	
09/09/97	3.08	-1.11	4.19	--	76**	22	<0.5	<0.5	<0.5	--	--	--	--	--	--	920	
12/12/97	3.08	0.12	2.96	--	52	15	<0.5	<0.5	<0.5	--	--	--	--	--	--	710	
02/19/98	3.08	0.86	2.22	--	<50	6.6	<0.5	<0.5	<0.5	--	--	--	--	--	--	380	
06/23/98	3.08	-0.17	3.25	*	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	390	
08/31/98	3.08	-0.78	3.86	--	<50	19	<0.5	<0.5	<0.5	--	--	--	--	--	--	830	
12/29/98	3.08	-0.45	3.53	--	<250	<2.5	<2.5	<2.5	<2.5	--	--	--	--	--	--	416	
<b>MW-4</b>																	
10/17/95	3.48	-1.60	5.08	--	<125	<1.2	<1.2	<1.2	<1.2	--	--	--	--	--	--	--	
03/29/96	3.48	-1.13	4.61	--	<1000	<10	<10	<10	<10	--	--	--	--	--	--	6700	
06/26/96	3.48	-0.82	4.30	--	<2000	<20	<20	<20	<20	--	--	--	--	--	--	7200	
09/25/96	3.48	-1.85	5.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	<2.5	
12/17/96	3.48	0.67	2.81	--	<2000	120	<20	<20	<20	--	--	--	--	--	--	11,000	
03/20/97	3.48	-1.02	4.50	--	250**	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	10,000	
03/20/97	3.48	-1.02	4.50	Conf. run	--	--	--	--	--	--	--	--	--	--	--	8600	
06/20/97	3.48	-2.20	5.68	--	<2500	<25	<25	<25	<25	--	--	--	--	--	--	9300	
09/09/97	3.48	-2.02	5.50	--	460**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	6600	
12/12/97	3.48	-1.55	5.03	--	430**	120	<2.5	<2.5	<2.5	--	--	--	--	--	--	7800	
02/19/98	3.48	0.13	3.35	--	510**	130	<0.5	<0.5	<0.5	--	--	--	--	--	--	6600	
06/23/98	3.48	-1.50	4.98	*	550**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	6800	
08/31/98	3.48	-1.94	5.42	--	<500	450	<5.0	<5.0	<5.0	--	--	--	--	--	--	14,000	
12/29/98	3.48	-1.58	5.06	--	<5000	<50	<50	<50	<50	--	--	--	--	--	--	16,100	

\* See Table of Additional Analyses

\*\* Chromatogram pattern indicates an unidentified hydrocarbon.

\*\*\* Results of EPA 8015 test indicates that levels of Methanol and Methyl ethyl ketone are respectively <1000 and <200 ppb.

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	TPH-Diesel	Benzene (EPA 8240)	Xylene (EPA 8240)	1, 2-DCE	Carbon Disulfide	Vinyl Chloride	MTBE
	Head Elev.	Water Elev.	To Water														
<b>TRIP BLANK</b>																	
10/17/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/29/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/26/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
09/25/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/17/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
03/20/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/20/97	--	--	--	--	<50	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	--	--	--
09/09/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/12/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
02/19/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
06/23/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
08/31/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.5
12/29/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	<2.0

## Cumulative Table of Well Data and Analytical Results

### ADDITIONAL ANALYSES

Vertical Measurements are in feet.

Analytical values are in parts per billion (ppb)

DATE	Notes	Ethanol	t-Butanol	MTBE	DIPE	ETBE	TAME
<b>MW-1</b>							
06/23/98	--	<50000	<10000	4500	<200	<200	<200
08/31/98	--	--	--	17,000	--	--	--
<b>MW-2</b>							
06/23/98	--	<500	<100	56	<2.0	<2.0	<2.0
<b>MW-3</b>							
06/23/98	--	<5000	<1000	420	<20	<20	26
<b>MW-4</b>							
06/23/98	--	<50000	<10000	11000	<200	<200	860

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on March 29, 1996.

Earlier field data and analytical results are drawn from the December 29, 1995 Gettler-Ryan, Inc. report.

### ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons

ND = Not detected at or above the minimum quantitation limit. See laboratory reports for minimum quantitation limits.

TOG = Total Oil Grease

MTBE = Methyl t-butyl Ether

DIPE = Di-Isopropyl Ether

ETBE = Ethyl t-Butyl Ether

TAME = t-Amyl Methyl Ether

C-1,2 DCE = Cis-1,2-Dichloroethylene

Conf. run = Confirmation run

# **Analytical Appendix**



Sequoia  
Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8  
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834  
Petaluma, CA 94954

(650) 364-9600  
(925) 988-9600  
(916) 921-9600  
(707) 792-1865

FAX (650) 364-9233  
FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

January 14, 1999

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

RE: Chevron/P901014

Dear Christine Lillie

Enclosed are the results of analyses for sample(s) received by the laboratory on December 31, 1998. 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

680 Chesapeake Drive  
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Blaine Tech/Chevron  
1680 Rogers Ave.  
San Jose, CA 95112

Project: Chevron  
Project Number: 9-1851/981229-S4  
Project Manager: Christine Lillie

Sampled: 12/29/98  
Received: 12/31/98  
Reported: 1/14/99

### ANALYTICAL REPORT FOR P901014

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	P901014-01	Water	12/29/98
MW-2	P901014-02	Water	12/29/98
MW-3	P901014-03	Water	12/29/98
MW-4	P901014-04	Water	12/29/98
TB	P901014-05	Water	12/29/98





**Sequoia  
Analytical**

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FAX (925) 988-9673  
FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-1851/981229-S4 Project Manager: Christine Lillie	Sampled: 12/29/98 Received: 12/31/98 Reported: 1/14/99
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**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>MW-1</b>								
Gasoline	9010074	1/6/99	1/6/99		500	ND	ug/l	
Benzene	"	"	"		5.00	ND	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	ND	"	
<b>Methyl tert-butyl ether</b>	"	"	"		20.0	<b>1090</b>	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		108	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		99.0	"	
<b>MW-2</b>								
Gasoline	9010074	1/6/99	1/6/99		50.0	<b>54.0</b>	ug/l	
Benzene	"	"	"		0.500	<b>1.32</b>	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	<b>0.752</b>	"	
<b>Methyl tert-butyl ether</b>	"	"	"		2.00	<b>38.1</b>	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		115	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		94.7	"	
<b>MW-3</b>								
Gasoline	9010074	1/6/99	1/7/99		250	ND	ug/l	
Benzene	"	"	"		2.50	ND	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		2.50	ND	"	
<b>Methyl tert-butyl ether</b>	"	"	"		10.0	<b>416</b>	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		116	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		97.7	"	
<b>MW-4</b>								
Gasoline	9010074	1/6/99	1/7/99		5000	ND	ug/l	
Benzene	"	"	"		50.0	ND	"	
Toluene	"	"	"		50.0	ND	"	
Ethylbenzene	"	"	"		50.0	ND	"	
Xylenes (total)	"	"	"		50.0	ND	"	
<b>Methyl tert-butyl ether</b>	"	"	"		200	<b>16100</b>	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		114	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		96.7	"	
<b>TB</b>								
Gasoline	9010074	1/6/99	1/7/99		50.0	ND	ug/l	



**Sequoia  
Analytical**

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819 Striker Avenue, Suite B  
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Blaine Tech/Chevron  
1680 Rogers Ave.  
San Jose, CA 95112

Project: Chevron  
Project Number: 9-1851/981229-S4  
Project Manager: Christine Lillie

Sampled: 12/29/98  
Received: 12/31/98  
Reported: 1/14/99

**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>								
Benzene	9010074	1/6/99	1/7/99		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-Trifluorotoluene</i>	"	"	"	65.0-135		115	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		103	"	





**Sequoia  
Analytical**

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 1455 McDowell Blvd. North, Ste. D	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954	(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865	FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342
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Blaine Tech/Chevron 1680 Rogers Ave. San Jose, CA 95112	Project: Chevron Project Number: 9-1851/981229-S4 Project Manager: Christine Lillie	Sampled: 12/29/98 Received: 12/31/98 Reported: 1/14/99
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**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	Reporting Limit Units	Recov. Recov. Limits	RPD %	RPD % Notes*
<b>Batch: 9010074</b>								
<b>Blank</b>								
Gasoline	1/6/99			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		347	"	65.0-135	116	
Surrogate: 4-Bromofluorobenzene	"	300		303	"	65.0-135	101	
<b>LCS</b>								
<b>9010074-BS1</b>								
Benzene	1/6/99	100		115	ug/l	65.0-135	115	
Toluene	"	100		112	"	65.0-135	112	
Ethylbenzene	"	100		107	"	65.0-135	107	
Xylenes (total)	"	300		333	"	65.0-135	111	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		357	"	65.0-135	119	
<b>Matrix Spike</b>								
<b>9010074-MS1 P901010-02</b>								
Benzene	1/6/99	100	ND	109	ug/l	65.0-135	109	
Toluene	"	100	ND	110	"	65.0-135	110	
Ethylbenzene	"	100	ND	104	"	65.0-135	104	
Xylenes (total)	"	300	ND	324	"	65.0-135	108	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		313	"	65.0-135	104	
<b>Matrix Spike Dup</b>								
<b>9010074-MSD1 P901010-02</b>								
Benzene	1/6/99	100	ND	107	ug/l	65.0-135	107	20.0 1.85
Toluene	"	100	ND	107	"	65.0-135	107	20.0 2.76
Ethylbenzene	"	100	ND	102	"	65.0-135	102	20.0 1.94
Xylenes (total)	"	300	ND	318	"	65.0-135	106	20.0 1.87
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		316	"	65.0-135	105	



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

Project: Chevron  
Project Number: 9-1851/981229-S4  
Project Manager: Christine Lillie

Sampled: 12/29/98  
Received: 12/31/98  
Reported: 1/14/99

#### Notes and Definitions

#	Note
DET	Analytic 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



Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

# Chain-of-Custody-Record

Chevron Products Co. P.O. BOX 6004 San Ramon, CA 94583 FAX (925)842-B370	Chevron Facility Number	9-1851	Chevron Contact (Name)	PHIL BRIGGS
	Facility Address	451 Hegenberger Rd., Oakland	(Phone)	(925) 842-9136
	Consultant Project Number	981229-S4	Laboratory Name	SEQUOIA
	Consultant Name	BLAINE TECH SERVICE, INC.	Laboratory Service Order	9144488
	Address	1680 ROGERS AVE., SAN JOSE	Laboratory Service Code	ZZ02800
	Project Contact (Name)	CHRISTINE LILLIE	Samples Collected by (Name)	DOUG SANDERS
(Phone)	408-573-0555 (Fax Number)	(Phone)	408-573-7771	

Sample Number	Number of Containers	Matrix S = Soil W = Water	Air C = Charcoal	Sample Preservation	Date/Time	State Method:										Remarks				
						STEX/MTBE+TPH GAS (8020)	STEX/MTBE+TPH GAS (8015)	TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oxygenates (8260)	Purgeable Hydrocarbons (8010)	Purgeable Organics (8260)	Structurable Organics (8270)	Oil and Grease (5520)	Metals (ICAP or Cd,Cr,Pb,Zn,Ni)	STEX (8020)	STEX/MTBE/Naph. (8020)	TPH - HCID	TPH-D Extended	
MW-1	3	w		H21	12/29/98 1535	X														Lab Sample No. P981014-01
MW-2	3	w			1510	X														-02
MW-3	3	w			1455	X														-03
MW-4	3	w			1521	X														-04
TB	2	w			12/29/98	X														-05
																				11 30 44 36

COOLER CUSTODY SEALS IN FACT  
NOT INTACT *NA*

COOLER TEMPERATURE *10 °C*

Handled By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N	Turn Around Time (Circle Choice)
<i>BB</i>	BB	12/30/98 10:10	<i>Christine Lillie</i>		10/18		24 hrs. 48 hrs. 5 Days 10 Days
<i>Christine Lillie</i>	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Iced Y/N	
		12/30/98					As Contracted

# **Field Data Sheets**

## **WELL GAUGING DATA**

Project # 981229-54 Date 12-29-98 Client Chev. 9-1851

Site 451 Hegenberger Rd, Oakland, CA.

# CHEVRON WELL MONITORING DATA SHEET

Project #: 981229-54	Station #: 9-1851
Sampler: Doug	Date: 12-29-98
Well I.D.: MW - 1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 14.66	Depth to Water: 3.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	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: \_\_\_\_\_

$$\begin{array}{r}
 1.7 \\
 \times \quad 3 \\
 \hline
 \end{array} = 5.1 \text{ Gals.}$$

1 Case Volume (Gals.)      Specified Volumes      Calculated Volume

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1527	65.7	7.3	3340	1.5	light Sheen
1529	64.3	7.3	3300	3.0	
1531	64.4	7.4	3310	5.5	

Did well dewater? Yes    No    Gallons actually evacuated: 5.5

Sampling Time: 1535 Sampling Date: 12-29-98

Sample I.D.: MW - 1 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 #: 981229-54	Station #: 9-1B51
Sampler: DOUG	Date: 12-29-98
Well I.D.: MW-2	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 14.98	Depth to Water: 4.63
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multipplier	Well Diameter	Multipplier
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: \_\_\_\_\_

1.7	X	3	=	5.10	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1501	65.3	7.3	5810	2.0	
1503	64.8	7.2	5870	4.0	
1506	64.1	7.0	5900	5.0	
					* Reacts w/ HCl

Did well dewater? Yes  No Gallons actually evacuated: 5.0

Sampling Time: 1510 Sampling Date: 12-29-98

Sample I.D.: MW-2 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 #: 981229-54	Station #: 9-1851
Sampler: DOUG	Date: 12-29-98
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8
Total Well Depth: 14.75	Depth to Water: 3.53
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC	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

Other: \_\_\_\_\_

<u>1.8</u>	<u>x</u>	<u>3</u>	<u>=</u>	<u>5.4</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1446	64.3	6.8	4300	2.0	
1448	64.0	6.9	4290	4.0	
1450	64.7	6.8	4310	5.5	

Did well dewater? Yes  No Gallons actually evacuated: 5.5

Sampling Time: 1455 Sampling Date: 12-29-98

Sample I.D.: MW-3 Laboratory:  Sequoia CORE N. Creek Assoc. LabsAnalyzed 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 #: 9B1229-S4	Station #: 9-1B51		
Sampler: Doug	Date: 12-29-98		
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 _____		
Total Well Depth: 15.12	Depth to Water: 5.06		
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: \_\_\_\_\_

$$\frac{1.6}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{4.8}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Gals. Removed	Observations
1515	65.3	7.2	3210	1.5	slight odor
1517	65.0	7.2	3230	3.0	
1519	64.9	7.1	3190	5.0	

Did well dewater? Yes  Gallons actually evacuated: 5.0

Sampling Time: 1521 Sampling Date: 12-29-98

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