

56 JUN 20 1996 2:37



**Chevron**

January 29, 1996

**Chevron U.S.A. Products Company**  
6001 Bollinger Canyon Rd , Bldg. L  
P.O. Box 5004  
San Ramon, CA 94583-0804

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

**Mark A. Miller**  
SAR Engineer  
Phone No. 510 842-8134  
Fax No. 510 842-8252

**Re: Former Chevron Service Station #9-4587  
609 Oak Street, Oakland, CA**

Dear Ms. Eberle:

Enclosed is the Fourth Quarter 1995 Ground Water Monitoring Report dated January 18, 1996, prepared by our consultant Blaine Tech Services, Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. The levels of dissolved hydrocarbon constituents in the ground water samples analyzed were lower than previous observations at the site. Depth to ground water was measured at approximately 6.8 to 9.6 feet below grade and the direction of flow is to the southeast.

The dual vacuum extraction (DVE) system has been operational since September of 1995. The air sparging system is currently operational as well. The decrease in ground water concentrations observed during the past quarter is likely a result of the operation of these systems.

Planned future activities include continued operation of the air sparge system and demobilization of the DVE system. Chevron will continue to monitor and sample this site on a quarterly basis. If you have any questions or comments, please feel free to contact me at (510) 842-8134.

Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller  
Site Assessment and Remediation Engineer

Enclosure

cc: Ms. B.C. Owen

Ms. Jennifer Eberle  
January 29, 1996  
Page 2

Mr. Mark Frye, Terra Vac - San Leandro

Mr. Dewey Bargiacchi  
The Paris Company  
8520 Pardee  
Oakland, CA 94621

Mr. James Kimberlin  
1100 Howe Avenue #415  
Sacramento, CA 94825

Mr. William Kimberlin  
51 Eureka Street  
Kensington, CA 94707

January 18, 1996

Mark Miller  
Chevron U.S.A. Products Company  
P.O. Box 5004  
San Ramon, CA 94583-0804

## 4th Quarter 1995 Monitoring at 9-4587

Fourth Quarter 1995 Groundwater Monitoring at  
Chevron Service Station Number 9-4587  
609 Oak Street  
Oakland, CA

Monitoring Performed on December 19, 1995

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### Groundwater Sampling Report 951219-A-1

This report covers the routine quarterly 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 Chevron's Richmond Refinery for disposal.

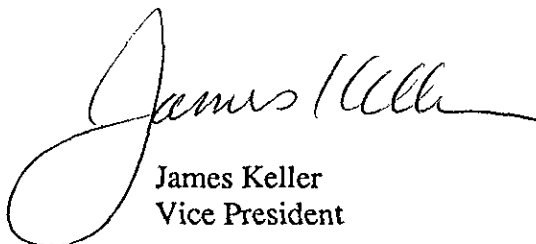
Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL DATA AND ANALYTICAL RESULTS**. The full analytical report for the most recent samples is located in the **Analytical Appendix**. The table also contains new groundwater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

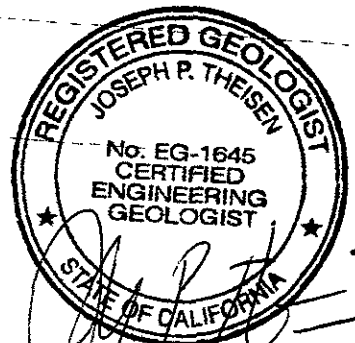
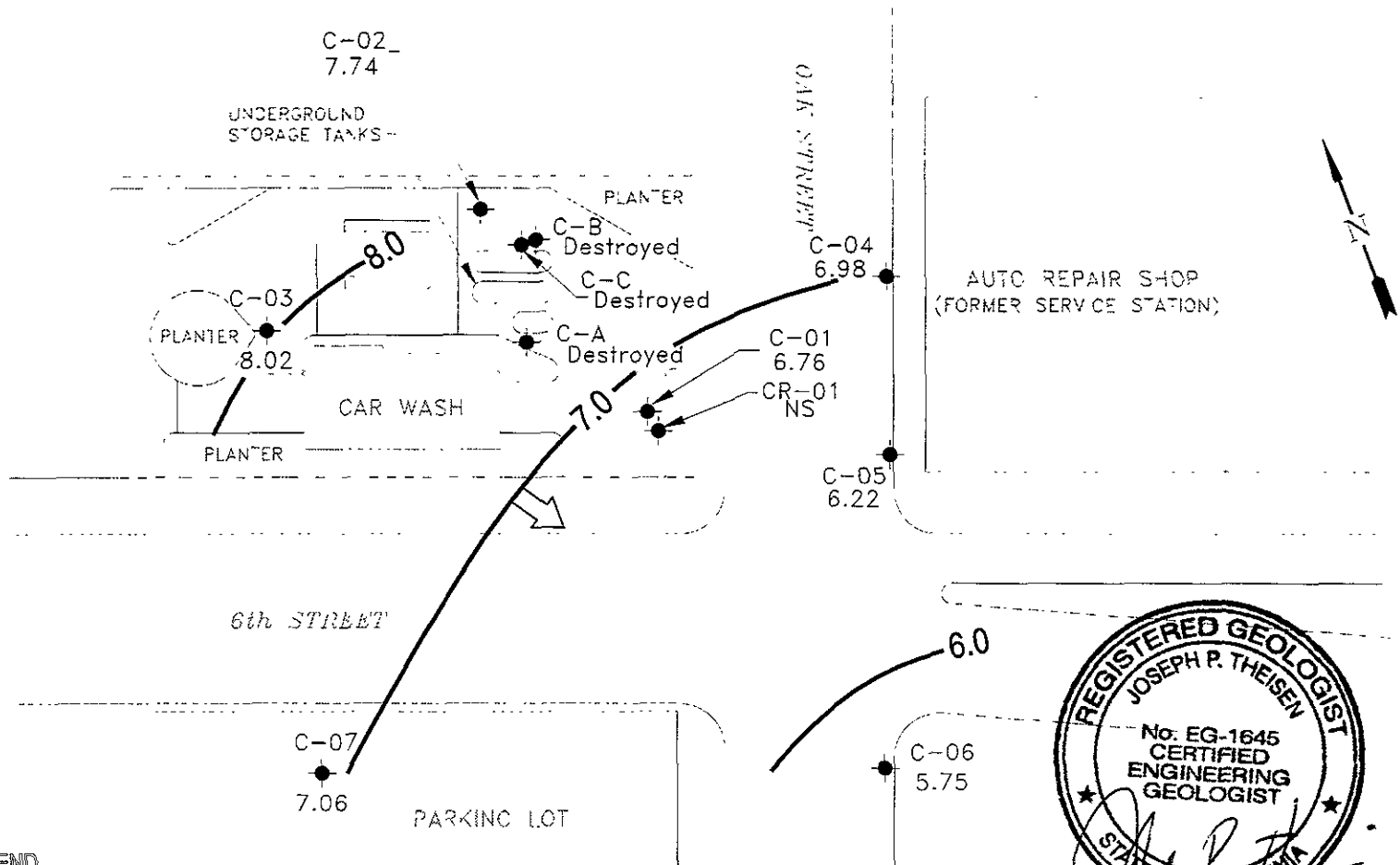


James Keller  
Vice President

JPK/dk

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

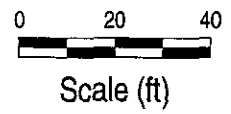
# **Professional Engineering Appendix**



**LEGEND**

- PROPERTY LINE
- MONITORING WELL
- NS NOT SURVEYED
- X.XX POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION

NOTE:  
 1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.



Base map from Groundwater Technology, Inc.

**CAMBRIA**  
 Environmental Technology, Inc.

Chevron Service Station 9-4587  
 609 Oak Street  
 Oakland, California  
 VCHEVRON19-4587\4587-QM

Ground Water Elevation  
 December 19, 1995

FIGURE  
**1**

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

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Volumetric Measurements are in gallons.			Notes	Analytical results are in parts per billion (ppb)					MTBE	
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	Total SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene		
<b>C-A</b>														
12/06/89	--	--	--	--	--	--	--		44,000	20,000	66	1600	2220	--
10/30/90	--	--	11.20	--	--	--	Sheen		31,000	23,000	110	1100	160	--
10/30/90	--	--	11.20	--	--	--	Sheen		30,000	23,000	150	1000	180	--
01/14/91	--	--	11.25	--	--	--	--		12,000	30,000	540	1400	560	--
04/03/91	--	--	9.82	--	--	--	--		59,000	33,000	2400	2200	3100	--
07/17/91	--	--	10.93	--	--	--	--		52,000	38,000	380	1300	500	--
10/07/91	--	--	--	--	--	--	--		--	--	--	--	--	--
06/25/92	--	--	--	--	--	--	--		--	--	--	--	--	--
09/17/92	--	--	--	--	--	--	--		--	--	--	--	--	--
12/16/92	--	--	--	--	--	--	--		--	--	--	--	--	--
03/18/93	--	--	--	--	--	--	--		--	--	--	--	--	--
06/11/93	--	--	--	--	--	--	--		--	--	--	--	--	--
09/08/93	--	--	--	--	--	--	--		--	--	--	--	--	--
09/17/93	--	--	10.02	--	--	--	--		--	--	--	--	--	--
12/23/93	--	--	--	--	--	--	--		--	--	--	--	--	--
03/07/94	--	--	--	--	--	--	--		--	--	--	--	--	--
06/17/94	--	--	10.05	--	--	--	--		77,000	32,000	3600	3200	14,000	--
09/12/94	--	--	11.75	--	--	--	--		270	170	1.0	13	24	--
06/29/95	--	--	--	--	--	--	Destroyed		--	--	--	--	--	--



## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.			Volumetric Measurements are in gallons.				Analytical results are in parts per billion (ppb)						
DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	SPH Thickness	SPH Removed	Total SPH Removed	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-B</b>													
12/06/89	--	--	--	0.01	--	--	--	--	--	--	--	--	--
10/30/90	--	--	11.19	0.01	--	--	--	--	--	--	--	--	--
01/14/91	--	--	11.40	0.01	--	--	--	--	--	--	--	--	--
04/03/91	--	--	9.55	1.00	--	--	--	--	--	--	--	--	--
04/04/91	--	--	10.54	1.06	--	--	--	--	--	--	--	--	--
07/17/91	--	--	10.84	0.03	--	--	--	--	--	--	--	--	--
10/07/91	--	--	11.10	0.04	--	--	--	--	--	--	--	--	--
02/04/92	--	--	10.78	0.01	--	--	--	--	--	--	--	--	--
03/06/92	--	--	--	--	--	--	--	--	--	--	--	--	--
04/01/92	--	--	10.33	1.02	--	--	--	--	--	--	--	--	--
06/25/92	--	--	11.20	0.68	--	--	--	--	--	--	--	--	--
09/17/92	--	--	11.07	0.13	--	--	--	--	--	--	--	--	--
12/16/92	--	--	10.41	0.38	--	--	--	--	--	--	--	--	--
03/18/93	--	--	9.19	0.05	--	--	--	--	--	--	--	--	--
06/11/93	--	--	9.54	0.70	--	--	--	--	--	--	--	--	--
09/08/93	--	--	--	--	--	--	--	--	--	--	--	--	--
09/17/93	--	--	9.85	0.52	--	--	--	--	--	--	--	--	--
12/23/93	--	--	9.37	0.20	--	--	--	--	--	--	--	--	--
03/07/94	--	--	9.24	0.85	--	--	--	--	--	--	--	--	--
06/17/94	--	--	9.38	0.02	--	--	--	--	--	--	--	--	--
09/12/94	--	--	11.13	0.49	--	--	--	--	--	--	--	--	--
06/29/95	--	--	--	--	--	--	Destroyed	--	--	--	--	--	--

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylene	MTBE
	Head Elev.	Water Elev.	To Water	SPH	SPH Removed	SPH Removed							
<b>C-C</b>													
12/06/89	--	--	--	0.15	--	--	--	--	--	--	--	--	--
10/30/90	--	--	10.84	0.03	--	--	--	--	--	--	--	--	--
01/14/91	--	--	11.01	0.11	--	--	--	--	--	--	--	--	--
04/03/91	--	--	9.19	0.02	--	--	--	--	--	--	--	--	--
07/17/91	--	--	10.53	0.03	--	--	--	--	--	--	--	--	--
10/07/91	--	--	10.98	0.08	--	--	--	--	--	--	--	--	--
02/04/92	--	--	10.45	0.09	--	--	--	--	--	--	--	--	--
03/06/92	--	--	8.83	0.09	--	--	--	--	--	--	--	--	--
04/01/92	--	--	9.23	0.16	--	--	--	--	--	--	--	--	--
06/25/92	--	--	10.40	0.12	--	--	--	--	--	--	--	--	--
09/17/92	--	--	10.84	0.12	--	--	--	--	--	--	--	--	--
12/16/92	--	--	10.02	0.12	--	--	--	--	--	--	--	--	--
03/18/93	--	--	8.70	0.15	--	--	--	--	--	--	--	--	--
06/11/93	--	--	9.25	0.13	--	--	--	--	--	--	--	--	--
09/08/93	--	--	--	--	--	--	--	--	--	--	--	--	--
09/17/93	--	--	9.83	--	--	--	Sheen	--	--	--	--	--	--
12/23/93	--	--	9.66	0.07	--	--	--	--	--	--	--	--	--
03/07/94	--	--	8.93	0.28	--	--	--	--	--	--	--	--	--
06/17/94	--	--	10.13	0.03	--	--	--	--	--	--	--	--	--
09/12/94	--	--	11.20	0.13	--	--	--	--	--	--	--	--	--
06/29/95	--	--	--	--	--	--	Destroyed	--	--	--	--	--	--

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	Analytical results are in parts per billion (ppb)					
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-1</b>													
12/06/89	16.07	--	--	0.20	--	--	--	--	--	--	--	--	--
10/30/90	16.07	5.30	10.79	0.02	--	--	--	--	--	--	--	--	--
01/14/91	16.07	4.70	11.39	0.02	--	--	--	--	--	--	--	--	--
04/03/91	16.07	6.66	9.43	0.02	--	--	--	--	--	--	--	--	--
07/17/91	16.07	5.64	10.46	0.04	--	--	--	--	--	--	--	--	--
10/07/91	16.07	5.36	10.74	0.04	--	--	--	--	--	--	--	--	--
02/04/92	16.07	5.71	10.37	0.01	--	--	--	--	--	--	--	--	--
03/06/92	16.07	6.87	9.20	--	--	--	--	--	--	--	--	--	--
04/01/92	16.07	6.79	9.28	--	--	--	--	--	--	--	--	--	--
06/25/92	16.07	6.10	9.98	0.01	--	--	--	--	--	--	--	--	--
09/17/92	16.07	5.56	10.51	--	--	--	Sheen	100,000	8800	7000	2800	19,000	--
12/16/92	16.07	6.26	9.81	--	--	--	Sheen	--	--	--	--	--	--
03/18/93	16.07	7.19	8.88	--	--	--	Sheen	--	--	--	--	--	--
06/11/93	16.07	6.78	9.31	0.02	--	--	--	--	--	--	--	--	--
09/08/93	16.07	--	--	--	--	--	--	--	--	--	--	--	--
09/17/93	16.07	6.37	9.72	0.02	--	--	--	--	--	--	--	--	--
12/23/93	16.07	6.58	9.49	--	--	--	--	41,000	5400	590	710	5600	--
03/07/94	16.07	7.32	8.96	0.26	--	--	--	--	--	--	--	--	--
06/17/94	16.07	6.39	9.70	0.02	--	--	--	--	--	--	--	--	--
09/12/94	16.07	3.66	12.42	0.01	--	--	--	--	--	--	--	--	--
06/29/95	16.07	7.29	8.78	--	--	--	--	220,000	11,000	3600	3500	19,000	--
09/13/95	16.07	6.54	9.56	0.04	0.21	0.21	--	--	--	--	--	--	--
12/19/95	16.07	6.76	9.31	0.00	0.00	0.21	--	14,000	180	81	240	2200	440

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.			Volumetric Measurements are in gallons.				Analytical results are in parts per billion (ppb)						
DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	SPH Thickness	SPH Removed	Total SPH Removed	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-2</b>													
12/06/89	16.84	--	--	--	--	--	--	16,000	250	1200	550	1400	--
10/30/90	16.84	5.68	11.16	--	--	--	--	28,000	3700	1900	1200	4300	--
01/14/91	16.84	5.73	11.11	--	--	--	--	24,000	3300	1200	1100	4100	--
01/14/91	16.84	5.73	11.11	--	--	--	--	30,000	3900	1500	1500	5000	--
04/03/91	16.84	7.31	9.53	--	--	--	--	12,000	1100	840	650	1800	--
04/03/91	16.84	7.31	9.53	--	--	--	--	14,000	1100	990	680	1800	--
07/17/91	16.84	6.16	10.68	--	--	--	--	13,000	1700	560	650	1700	--
07/17/91	16.84	6.16	10.68	--	--	--	--	14,000	1700	640	720	1900	--
10/07/91	16.84	5.82	11.02	--	--	--	--	25,000	3700	1300	1400	3800	--
02/04/92	16.84	6.24	10.60	--	--	--	--	16,000	2600	300	880	1900	--
04/01/92	16.84	7.54	9.30	--	--	--	--	15,000	1900	300	700	1500	--
06/25/92	16.84	6.39	10.45	--	--	--	--	23,000	3400	740	1300	3400	--
09/17/92	16.84	6.06	10.78	--	--	--	--	18,000	3500	550	1400	3900	--
12/16/92	16.84	6.90	9.94	--	--	--	--	12,000	1200	120	460	1100	--
03/18/93	16.84	8.04	8.80	--	--	--	--	5200	990	130	290	430	--
06/11/93	16.84	7.41	9.43	--	--	--	--	34,000	8200	910	2400	6600	--
09/08/93	16.84	--	--	--	--	--	--	3400	690	26	190	330	--
09/17/93	16.84	6.93	9.91	--	--	--	--	--	--	--	--	--	--
12/23/93	16.84	7.15	9.69	--	--	--	--	2500	830	26	130	260	--
03/07/94	16.84	7.87	8.97	--	--	--	--	1100	420	6.5	110	69	--
06/17/94	16.84	6.98	9.86	--	--	--	--	1400	290	8.6	60	63	--
09/12/94	16.84	5.74	11.10	--	--	--	--	370	96	1.3	9.4	16	--
06/29/95	16.84	7.84	9.00	--	--	--	--	4100	400	96	250	500	--
09/13/95	16.84	7.10	9.74	--	--	--	--	3500	200	50	57	290	--
12/19/95	16.84	7.74	9.10	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Volumetric Measurements			Notes	Analytical results					
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	Total SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>C-3</b>													
12/06/89	16.48	--	--	--	--	--	--	<500	<0.5	<0.5	<0.5	0.74	--
10/30/90	16.48	6.04	10.44	--	--	--	--	410	4.0	4.0	2.0	9.0	--
01/14/91	16.48	6.14	10.34	--	--	--	--	80	<0.5	<0.5	<0.5	1.0	--
04/03/91	16.48	7.47	9.01	--	--	--	--	53	<0.5	<0.5	<0.5	2.0	--
07/17/91	16.48	6.48	10.00	--	--	--	--	<50	5.9	<0.5	<0.5	<0.5	--
10/07/91	16.48	6.10	10.38	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/04/92	16.48	6.48	10.00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/01/92	16.48	7.65	8.83	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/25/92	16.48	6.63	9.85	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/17/92	16.48	6.28	10.20	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	16.48	7.08	9.40	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/18/93	16.48	8.36	8.12	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/11/93	16.48	7.89	8.59	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/08/93	16.48	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/17/93	16.48	7.48	9.00	--	--	--	--	--	--	--	--	--	--
12/23/93	16.48	7.65	8.83	--	--	--	--	<50	<0.5	0.8	<0.5	2.9	--
03/07/94	16.48	8.29	8.19	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/17/94	16.48	7.43	9.05	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/94	16.48	--	--	--	--	--	Inaccessible	--	--	--	--	--	--
06/29/95	16.48	8.18	8.30	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/13/95	16.48	7.64	8.84	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	16.48	8.02	8.46	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylene	MTBE
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed							
<b>C-4</b>													
12/06/89	16.53	--	--	--	--	--	--	--	--	--	--	--	--
10/30/90	16.53	4.97	11.56	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
01/14/91	16.53	5.09	11.44	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
04/03/91	16.53	6.53	10.00	--	--	--	--	150	3.0	<0.5	12	9.0	--
07/17/91	16.53	5.37	11.16	--	--	--	--	290	2.3	0.4	52	0.4	--
10/07/91	16.53	5.14	11.39	--	--	--	--	<50	<0.5	<0.5	4.6	<0.5	--
02/04/92	16.53	5.51	11.02	--	--	--	--	<50	<0.5	<0.5	2.8	<0.5	--
02/04/92	16.53	5.51	11.02	--	--	--	--	<50	<0.5	<0.5	2.5	0.5	--
04/01/92	16.53	6.70	9.83	--	--	--	--	480	4.9	<0.5	64	4.3	--
06/25/92	16.53	5.65	10.88	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/17/92	16.53	5.29	11.24	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	16.53	6.13	10.40	--	--	--	--	56	<0.5	<0.5	1.0	<0.5	--
03/18/93	16.53	7.05	9.48	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/11/93	16.53	6.92	9.61	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/08/93	16.53	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/17/93	16.53	6.46	10.07	--	--	--	--	--	--	--	--	--	--
12/23/93	16.53	6.70	9.83	--	--	--	--	<50	1.2	1.5	<0.5	3.2	--
03/07/94	16.53	7.33	9.20	--	--	--	--	60	0.7	1.1	6.7	1.8	--
06/17/94	16.53	6.56	9.97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/94	16.53	5.32	11.21	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/29/95	16.53	7.18	9.35	--	--	--	--	<50	<0.5	<0.5	1.4	<0.5	--
09/13/95	16.53	6.60	9.93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	16.53	6.98	9.55	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	Analytical results are in parts per billion (ppb)						
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	
<b>C-5</b>														
12/06/89	14.70	4.73	9.97	--	--	--	--	--	--	--	--	--	--	--
10/30/90	14.70	--	--	--	--	--	--	<50	0.8	<0.5	<0.5	<0.5	0.5	--
01/14/91	14.70	4.83	9.87	--	--	--	--	54	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/03/91	14.70	5.98	8.72	--	--	--	--	1800	330	200	52	170	--	--
07/17/91	14.70	5.07	9.63	--	--	--	--	170	120	5.3	12	20	--	--
10/07/91	14.70	4.87	9.83	--	--	--	--	<50	1.1	<0.5	<0.5	<0.5	--	--
02/04/92	14.70	5.17	9.53	--	--	--	--	91	16	<0.5	2.4	2.0	--	--
04/01/92	14.70	6.13	8.57	--	--	--	--	960	200	5.4	21	33	--	--
06/25/92	14.70	5.26	9.44	--	--	--	--	800	2.5	<0.5	1.3	7.3	--	--
09/17/92	14.70	4.98	9.72	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/16/92	14.70	5.63	9.07	--	--	--	--	81	5.4	1.2	1.5	4.3	--	--
03/18/93	14.70	6.26	8.44	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/11/93	14.70	6.17	8.53	--	--	--	--	<50	1.6	<0.5	<0.5	<1.5	--	--
09/08/93	14.70	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/17/93	14.70	5.81	8.89	--	--	--	--	--	--	--	--	--	--	--
12/23/93	14.70	6.02	8.68	--	--	--	--	<50	5.5	1.3	0.7	4.0	--	--
03/07/94	14.70	6.52	8.18	--	--	--	--	460	180	21	27	70	--	--
06/17/94	14.70	5.89	8.81	--	--	--	--	<50	10	0.5	1.4	3.3	--	--
09/12/94	14.70	4.83	9.87	--	--	--	--	<50	6.4	<0.5	<0.5	<0.5	--	--
06/29/95	14.70	6.33	8.37	--	--	--	--	65	10	<0.5	2.3	9.1	--	--
09/13/95	14.70	5.90	8.80	--	--	--	--	370	41	0.76	17	50	--	--
12/19/95	14.70	6.22	8.48	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	Analytical results are in parts per billion (ppb)						
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	
<b>C-6</b>														
12/06/89	13.87	--	--	--	--	--	--	--	--	--	--	--	--	--
10/30/90	13.87	4.44	9.43	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
01/14/91	13.87	4.46	9.41	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/03/91	13.87	5.21	8.66	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/17/91	13.87	4.62	9.25	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/07/91	13.87	4.53	9.34	--	--	--	--	67	<0.5	0.6	<0.5	0.6	--	--
02/04/92	13.87	4.71	9.16	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/01/92	13.87	5.28	8.59	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/25/92	13.87	4.76	9.11	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/92	13.87	4.59	9.28	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/16/92	13.87	4.99	8.88	--	--	--	--	120	9.3	1.9	2.7	7.4	--	--
03/18/93	13.87	5.52	8.35	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
06/11/93	13.87	5.66	8.21	--	--	--	--	<50	<0.5	0.7	<0.5	<1.5	--	--
09/08/93	13.87	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/17/93	13.87	5.50	8.37	--	--	--	--	--	--	--	--	--	--	--
12/23/93	13.87	5.58	8.29	--	--	--	--	<50	1.4	1.0	<0.5	3.5	--	--
03/07/94	13.87	5.87	8.00	--	--	--	--	<50	0.8	<0.5	<0.5	<0.5	--	--
06/17/94	13.87	5.46	8.41	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/12/94	13.87	4.99	8.88	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/29/95	13.87	5.79	8.08	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/13/95	13.87	5.56	8.31	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/19/95	13.87	5.75	8.12	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--



## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	Analytical results are in parts per billion (ppb)						
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	
<b>C-7</b>														
02/07/91	15.78	5.90	9.88	--	--	--	--	<50	<0.5	0.8	<0.5	<0.5	<0.5	--
04/03/91	15.78	6.74	9.04	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/17/91	15.78	5.92	9.86	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/07/91	15.78	5.68	10.10	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/04/92	15.78	6.04	9.74	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/01/92	15.78	6.82	8.96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/25/92	15.78	6.16	9.62	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/92	15.78	6.03	9.75	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/16/92	15.78	6.37	9.41	--	--	--	--	--	--	--	--	--	--	--
03/18/93	15.78	7.33	8.45	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<1.5	--
06/11/93	15.78	7.07	8.71	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<1.5	--
09/08/93	15.78	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<1.5	--
09/17/93	15.78	6.73	9.05	--	--	--	--	--	--	--	--	--	--	--
12/23/93	15.78	6.93	8.85	--	--	--	--	<50	1.9	1.4	<0.5	3.6	3.6	--
03/07/94	15.78	7.35	8.43	--	--	--	--	<50	2.4	1.3	<0.5	0.6	0.6	--
06/17/94	15.78	6.71	9.07	--	--	--	--	<50	<0.5	<0.5	<0.5	1.2	1.2	--
09/12/94	15.78	5.98	9.80	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/29/95	15.78	7.14	8.64	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/95	15.78	6.86	8.92	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/19/95	15.78	7.06	8.72	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Total			Notes	Analytical results are in parts per billion (ppb)					
				SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE
<b>CR-1</b>													
10/30/90	--	--	10.51	--	--	--	--	9600	7100	65	610	190	--
01/14/91	--	--	10.29	--	--	--	--	1500	3200	52	190	77	--
07/17/91	--	--	10.19	--	--	--	--	15,000	9300	220	680	530	--
10/07/91	--	--	10.46	--	--	--	--	17,000	7600	50	440	68	--
10/07/91	--	--	10.46	--	--	--	--	14,000	9400	52	430	110	--
02/04/92	--	--	10.12	--	--	--	--	19,000	6100	32	350	100	--
04/01/92	--	--	9.24	--	--	--	--	29,000	5300	820	380	1200	--
06/25/92	--	--	10.03	--	--	--	--	12,000	3300	280	210	460	--
09/17/92	--	--	10.30	--	--	--	--	--	--	--	--	--	--
12/16/92	--	--	9.59	--	--	--	Sheen	--	--	--	--	--	--
03/18/93	--	--	8.82	0.05	--	--	--	--	--	--	--	--	--
06/11/93	--	--	9.58	0.87	--	--	--	--	--	--	--	--	--
09/08/93	--	--	--	--	--	--	--	--	--	--	--	--	--
09/17/93	--	--	--	--	--	--	--	--	--	--	--	--	--
12/23/93	--	--	9.02	0.02	--	--	--	--	--	--	--	--	--
03/07/94	--	--	8.41	0.04	--	--	--	--	--	--	--	--	--
06/17/94	--	--	--	--	--	--	--	--	--	--	--	--	--
09/12/94	--	--	15.32	0.02	--	--	--	--	--	--	--	--	--
06/29/95	--	--	8.67	--	--	--	--	49,000	9400	310	2400	7200	--
09/13/95	--	--	9.93	0.03	0.13	0.13	--	--	--	--	--	--	--
12/19/95	--	--	8.75	0.00	0.00	0.13	--	19,000	880	48	1600	3100	4000

## Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Volumetric Measurements are in gallons.

Analytical results are in parts per billion (ppb)

DATE	Well	Ground	Depth	Total			Notes	Analytical results are in parts per billion (ppb)						
	Head Elev.	Water Elev.	To Water	SPH Thickness	SPH Removed	SPH Removed		TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	MTBE	
<b>TRIP BLANK</b>														
10/30/90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
01/14/91	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/07/91	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/03/91	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/17/91	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/07/91	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/04/92	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/01/92	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/25/92	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/17/92	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/16/92	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/18/93	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/11/93	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<1.5	--
09/08/93	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<1.5	--
09/17/93	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/23/93	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/07/94	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/17/94	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/12/94	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/29/95	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/13/95	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/19/95	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Note: Blaine Tech Services, Inc. began routine monitoring of the groundwater wells at this site on June 29, 1995.  
 Earlier field data and analytical results are drawn from the October 14, 1994 Groundwater Technology, Inc. report.

**ABBREVIATIONS:**

TPH = Total Petroleum Hydrocarbons  
 SPH = Separate Phase Hydrocarbons  
 MTBE = Methyl t-Butyl Ether

# Analytical Appendix



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Chevron 9-4587/951219-A1 Sample Descript: C-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9512E79-01	Sampled: 12/19/95 Received: 12/20/95 Analyzed: 12/22/95 Reported: 12/27/95
--	--	---

QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

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

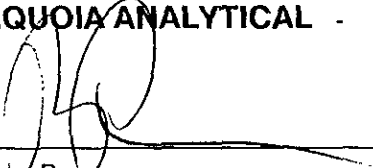
Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	14000
Methyl t-Butyl Ether	50	440
Benzene	10	180
Toluene	10	81
Ethyl Benzene	10	240
Xylenes (Total)	10	2200
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

**SEQUOIA ANALYTICAL** - ELAP #1210




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Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Attention: Jim Keller

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-2  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-02

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	97

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-3  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-03

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

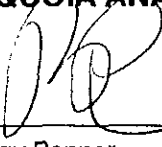
QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	85

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-4  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-04

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	86

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Peggy Penner  
Project Manager







Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-5  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-05

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

QC Batch Number: GC122295BTEX22A

Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	83

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-6  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-06

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller


QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	78

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: C-7  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-07

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	81

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: CR-1  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-08

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

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

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2500	19000
Methyl t-Butyl Ether	125	4000
Benzene	25	880
Toluene	25	48
Ethyl Benzene	25	1600
Xylenes (Total)	25	3100
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	83

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133

Client Proj. ID: Chevron 9-4587/951219-A1  
Sample Descript: TB  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9512E79-09

Sampled: 12/19/95  
Received: 12/20/95  
Analyzed: 12/22/95  
Reported: 12/27/95

Attention: Jim Keller

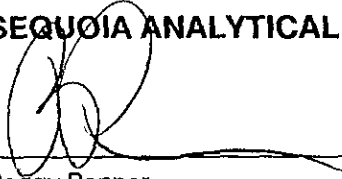
QC Batch Number: GC122295BTEX22A  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	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:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	99

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Peggy Penner  
Project Manager





**Sequoia  
Analytical**

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404 N. Wiget Lane  
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Sacramento, CA 95834

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(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Blaine Technical Services  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Proj. ID: Chevron 9-4587/951219-A1

Received: 12/20/95


Lab Proj. ID: 9512E79

Reported: 12/27/95

## LABORATORY NARRATIVE

TPPH Note: Sample 9512E79-01 was diluted 20-fold.  
Sample 9512E79-08 was diluted 50-fold.

**SEQUOIA ANALYTICAL**

  
Peggy Penner  
Project Manager





Blaine Tech Services, Inc.  
985 Timothy Drive  
San Jose, CA 95133  
Attention: Jim Keller

Client Project ID: **Chevron 9-4587/951219-A1**  
Matrix: **Liquid**

Work Order #: **9512E79 -01-09**

Reported: **Jan 3, 1996**

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122295BTEX22A	GC122295BTEX22A	GC122295BTEX22A	GC122295BTEX22A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9512D0404	9512D0404	9512D0404	9512D0404
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/22/95	12/22/95	12/22/95	12/22/95
Analyzed Date:	12/22/95	12/22/95	12/22/95	12/22/95
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	10	11	31
MS % Recovery:	100	100	110	103
Dup. Result:	9.9	10	10	30
MSD % Recov.:	99	100	100	100
RPD:	1.0	0.0	9.5	3.3
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK122295	BLK122295	BLK122295	BLK122295
Prepared Date:	12/22/95	12/22/95	12/22/95	12/22/95
Analyzed Date:	12/22/95	12/22/95	12/22/95	12/22/95
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.7	10	11	34
LCS % Recov.:	97	100	110	113

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120
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**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

9512E79.BLA <1>









931  
1780

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4507</u>
Sampler: <u>RV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-1</u>	Well Diameter: (circle one) 2 <u>3</u> 4 6
Total Well Depth: Before <u>17.80</u> After	Depth to Water: Before <u>9.31</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u> Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>3.1</u>	$\times$	<u>3</u>	$=$	<u>9.3</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1130	69.0	6.6	300	—	3.5	STRONG ODOR
1133	69.4	6.8	310	—	7.0	LT. SHEEN
1136	69.2	6.8	310	—	9.5	

Did Well Dewater?  If yes, gals. Gallons Actually Evacuated: 9.5

Sampling Time: 1145 Sampling Date: 12-19-95

Sample I.D.: C-1 Laboratory: SEQ

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4587</u>
Sampler: <u>PV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-2</u>	Well Diameter: (circle one) 2 <u>(3)</u> 4 6
Total Well Depth: Before <u>19.20</u> After	Depth to Water: Before <u>9.10</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>(PVC)</u> Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<del>#3.7</del>	x	<u>3</u>	=	<del>#8</del> <u>11.1</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	PH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1107	67.4	6.8	110	—	<del>20</del> 4.0	Muddy
1108	68.0	7.0	220	—	<del>7.0</del> 8.0	
1113	68.2	7.0	220	—	<del>5.0</del> 12.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: ~~5.0~~ 12.0

Sampling Time: 1120 Sampling Date: 12-19-95

Sample I.D.: C-2 Laboratory: SEQ

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4587</u>
Sampler: <u>RV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-3</u>	Well Diameter: (circle one) 2 <u>(3)</u> 4 6
Total Well Depth: Before <u>19.85</u> After	Depth to Water: Before <u>8:46</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u>	Grade Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>4.2</u>	<u>x</u>	<u>3</u>	<u>=</u>	<u>12.6</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
<u>1040</u>	<u>65.4</u>	<u>6.8</u>	<u>220</u>	<u>—</u>	<u>4.5</u>	<u>ROOTS!!</u>
<u>1045</u>	<u>65.6</u>	<u>6.9</u>	<u>220</u>	<u>—</u>	<u>9.0</u>	
<u>1050</u>	<u>65.4</u>	<u>6.7</u>	<u>220</u>	<u>—</u>	<u>13.0</u>	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 13.0

Sampling Time: 1057 Sampling Date: 12-19-95

Sample I.D.: C-3 Laboratory: SEQ

Analyzed for: TPH-G BTEX TPH-D OTHER: MTBE  
 (Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER:  
 (Circle)

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>959-4587</u>
Sampler: <u>RV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-4</u>	Well Diameter: (circle one) <u>3</u> 4 6
Total Well Depth: Before <u>29.13</u> After	Depth to Water: Before <u>9.55</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u> Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>3.1</u>	x	<u>3</u>	=	<u>9.1</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1006	70.4	6.8	280	—	3.5	
1010	70.2	7.0	280	—	7.0	
1013	70.2	7.0	288	—	9.5	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 9.5

Sampling Time: 1020 Sampling Date: 12-19-95

Sample I.D.: C-4 Laboratory: SEQ

Analyzed for: TPH-G BTEX TPH-D OTHER: MTBE  
(Circle)

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER:  
(Circle)

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4587</u>
Sampler: <u>RV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-5</u>	Well Diameter: (circle one) <u>(2)</u> 3 4 6
Total Well Depth: Before <u>28.88</u> After	Depth to Water: Before <u>8.48</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u> Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>3.2</u>	<u>x</u>	<u>3</u>	<u>=</u>	<u>9.6</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
<u>946</u>	<u>70.2</u>	<u>6.8</u>	<u>380</u>	<u>—</u>	<u>3.5</u>	
<u>949</u>	<u>69.8</u>	<u>7.0</u>	<u>360</u>	<u>—</u>	<u>7.0</u>	
<u>952</u>	<u>70.0</u>	<u>7.0</u>	<u>360</u>	<u>—</u>	<u>10.0</u>	

Did Well Dewater? <u>N</u> If yes, gals.	Gallons Actually Evacuated: <u>10.0</u>
Sampling Time: <u>958</u>	Sampling Date: <u>12-19-95</u>
Sample I.D.: <u>C-5</u>	Laboratory: <u>SEQ</u>
Analyzed for: (Circle) <u>TPH-G</u> <u>BTEX</u> TPH-D OTHER:	<u>MIBE</u>
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:	

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4587</u>
Sampler: <u>RV</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>C-6</u>	Well Diameter: (circle one) <u>3</u> 4 6
Total Well Depth: Before <u>28.76</u> After	Depth to Water: Before <u>8.12</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u>	Grade Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>3.3</u>	x	<u>3</u>	=	<u>9.9</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer <input checked="" type="checkbox"/> Middleburg Electric Submersible Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
--	---

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
920	67.2	7.0	420	—	3.5	
923	68.0	7.2	430	—	7.0	
926	67.6	7.2	430	—	10.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 10.0

Sampling Time: 935 Sampling Date: 12-19-95

Sample I.D.: C-6 Laboratory: SEQ

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:

# CHEVRON WELL MONITORING DATA SHEET

Project #: <u>951219-A1</u>	Station #: <u>9-4587</u>
Sampler: <u>W</u>	Start Date: <u>12-19-95</u>
Well I.D.: <u>CR-1</u>	Well Diameter: (circle one) 2 3 4 <u>6</u>
Total Well Depth: Before <u>23.71</u> After	Depth to Water: Before <u>8.75</u> After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: <u>PVC</u>	Grade Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

<u>21.9</u>	<u>x</u>	<u>3</u>	<u>=</u>	<u>65.7</u>
1 Case Volume		Specified Volumes		gallons

Purging: Bailer Disposable Bailer Middleburg Electric Submersible <input checked="" type="checkbox"/> Extraction Pump Other _____	Sampling: Bailer Disposable Bailer <input checked="" type="checkbox"/> Extraction Port Other _____
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TIME	TEMP. (F)	PH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
<u>1150</u>	<u>68.0</u>	<u>6.6</u>	<u>560</u>	<u>—</u>	<u>22.0</u>	<u>BLACK</u>
<u>1153</u>	<u>67.8</u>	<u>6.9</u>	<u>510</u>	<u>—</u>	<u>44.0</u>	<u>ODOR</u>
<u>1156</u>	<u>67.4</u>	<u>7.0</u>	<u>450</u>	<u>—</u>	<u>66.0</u>	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 66.0

Sampling Time: 1200 Sampling Date: 12-19-95

Sample I.D.: CR-1 Laboratory: SEQ

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: MTBE

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER: