Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

90 OCT 12 AM 10: 59

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

October 8, 1990

Mr. Rafat Shahid
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Chevron Service Station #9-5607
5269 Crow Canyon Road
Castro Valley, CA

Dear Mr. Shahid:

Enclosed we are forwarding the Quarterly Groundwater Sampling Report dated September 18, 1990, conducted by our consultant Alton Geoscience, Inc. at the above referenced site. As indicated in the report, levels of hydrocarbon concentrations remain consistent with previous samplings.

Chevron will continue to monitor this site and report findings on a quarterly basis.

If you have any questions or comments, please do not hesitate to contact me at (415) 842-9581.

Very truly yours,
C.G. Trimbach

By _____
Nancy Vukelich

NLV/jmr
Enclosure

cc: Mr. Lester Feldman
RWQCB - Bay Area
1800 Harrison St., Ste. 700
Oakland, CA 94612

ALTON GEOSCIENCE, INC.

[redacted]

Ms. Nancy Vukelich
Chevron U.S.A., Inc.
Post Office Box 5004
San Ramon, California 94583-0804

30-189

Subject: Quarterly Ground Water Monitoring Report
Chevron Station No. 9-5607
5269 Crow Canyon Road
Castro Valley, California

Dear Ms. Vukelich:

In accordance with our agreement, Alton Geoscience, Inc. transmits this Quarterly Ground Water Monitoring and Sampling Report for Chevron Station No. 9-5607, located at 5269 Crow Canyon Road, Castro Valley, California. Figure 1 shows the site location.

Monitoring and sampling of the ground water monitoring wells were performed on June 12, 1990, in accordance with the requirements and procedures of the governing Regional Water Quality Control Board (RWQCB) and local regulatory agencies.

FIELD PROCEDURES

Prior to purging and sampling the wells, the depth to ground water in each well was measured from the top of casing to the nearest 0.01 foot using an electronic sounder. Ground water samples were collected and observed for the presence of free product or sheen.

Water samples were collected after more than 3 casing volumes of ground water were purged from each well. Each sample was collected using a clean bailer (dedicated for each well), and then transferred into the appropriate clean sample containers for delivery to a state-certified laboratory following proper preservation and chain of custody procedures.

SAMPLING AND ANALYTICAL RESULTS

The results of the monitoring and laboratory analyses of the ground water samples for this quarter, as well as the results of previous quarterly monitoring and sampling events are summarized in Table 1.

Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and flow direction were determined as shown in Figure 2.

Slight sheen was noted in ground water samples from MW-1, MW-3, MW-6, and MW-9. No free product was observed. The water sampling survey forms presenting the results of the field activities and observations as well as the official laboratory reports and chain of custody records are included in Appendix A.

SCHEDULE

The next quarterly sampling event is scheduled for September 1990. A report presenting the results of the field and analytical data is scheduled to be submitted in November 1990.

Copies of this report should be submitted to the following agencies for their review:

Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, California 94621
Attn: Mr. Rafat Shahid

Regional Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street, Suite 700
Oakland, California 94612

Please call if you have any questions concerning this report.

Sincerely,

ALTON GEOSCIENCE, INC.

Stephan Rosen
Project Manager

Al Sevilla, R.C.E. 26392
Division General Manager

Enclosure

Table 1 - Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607, 5269 Crow Canyon Road
Castro Valley, California
Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (FT)	DEPTH TO WATER (TOC-FT)	GROUND WATER ELEVATION (ft above msl)	TPH-G (8015)	B (8020/ 602)	T (8020/ 602)	E (8020/ 602)	X (8020/ 602)	ANALYTICAL LAB
MW-1	03/26/85	283.46	22.83	260.63	---	---	---	---	---	NA
MW-1	07/03/86	283.46	23.58	259.88	---	---	---	---	---	NA
MW-1	03/26/87	283.46	20.50	262.96	---	---	---	---	---	NA
MW-1	03/28/88	283.46	26.00	257.46	---	---	---	---	---	NA
MW-1	03/10/89	283.46	15.86	267.60	---	---	---	---	---	NA
MW-1	04/03/89	283.46	16.85	266.61	---	---	---	---	---	NA
MW-1	05/08/89	283.46	22.68	260.78	---	---	---	---	---	NA
MW-1	06/05/89	283.46	24.66	258.80	---	---	---	---	---	NA
MW-1	07/12/89	283.46	25.56	257.90	---	---	---	---	---	NA
MW-1	08/10/89	283.46	25.89	257.57	---	---	---	---	---	NA
MW-1	09/13/89	283.46	26.55	256.91	22,000	3,600	1,100	1,000	3,500	NA
MW-1	10/04/89	283.46	25.24	258.22	---	---	---	---	---	NA
MW-1	11/03/89	283.46	25.03	258.43	---	---	---	---	---	NA
MW-1	12/04/89	283.46	26.37	213.28	13,000	2,000	550	610	1,600	NA
MW-1	03/07/90	283.46	22.48	260.98	---	---	---	---	---	NA
MW-1	03/09/90	---	---	---	---	---	---	---	---	SAL
MW-1	06/12/90	283.46	24.35	259.11	21,000	3,500	1,400	840	4,000	SAL
MW-2	03/26/85	284.37	---	---	---	---	---	---	---	NA
MW-2	07/03/86	284.37	19.69	264.68	---	---	---	---	---	NA
MW-2	03/26/87	284.37	15.45	268.92	---	---	---	---	---	NA
MW-2	03/28/88	284.37	20.92	263.45	---	---	---	---	---	NA
MW-2	03/10/89	284.37	12.80	271.57	---	---	---	---	---	NA
MW-2	04/03/89	284.37	14.26	270.11	---	---	---	---	---	NA
MW-2	05/08/89	284.37	18.42	265.95	---	---	---	---	---	NA
MW-2	06/05/89	284.37	20.09	264.28	---	---	---	---	---	NA
MW-2	07/12/89	284.37	20.79	263.58	---	---	---	---	---	NA
MW-2	08/10/89	284.37	21.40	262.97	---	---	---	---	---	NA
MW-2	09/13/89	284.37	21.86	262.51	320	62	4	10	14	NA
MW-2	10/04/89	284.37	19.89	264.48	---	---	---	---	---	NA
MW-2	11/03/89	284.37	20.76	263.61	---	---	---	---	---	NA
MW-2	12/04/89	284.37	20.82	263.55	1,000	240	37	66	130	NA
MW-2	03/07/90	284.37	17.83	266.54	---	---	---	---	---	NA
MW-2	03/09/90	284.37	17.83	266.54	390	280	35	27	50	SAL
MW-2	06/12/90	284.37	19.89	264.48	700	260	34	28	55	SAL
MW-3	03/26/85	285.98	---	---	---	---	---	---	---	NA
MW-3	07/03/86	285.98	26.04	259.94	---	---	---	---	---	NA
MW-3	03/26/87	285.98	25.64	260.34	---	---	---	---	---	NA
MW-3	03/28/88	285.98	28.82	257.16	---	---	---	---	---	NA
MW-3	03/10/89	285.98	22.78	263.20	---	---	---	---	---	NA
MW-3	04/03/89	285.98	22.71	263.27	---	---	---	---	---	NA
MW-3	05/08/89	285.98	25.95	260.03	---	---	---	---	---	NA

Table 1 (cont'd.)
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607, 5269 Crow Canyon Road
Castro Valley, California
Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (FT)	DEPTH TO WATER (TOC-FT)	GROUND WATER ELEVATION (ft above msl)	TPH-G (8015)	B (8020/ 602)	T (8020/ 602)	E (8020/ 602)	X (8020/ 602)	ANALYTICAL LAB
MW-8	03/28/88	288.40	10.66	277.74	---	---	---	---	---	NA
MW-8	03/10/89	288.40	06.61	281.79	---	---	---	---	---	NA
MW-8	04/03/89	288.40	06.46	281.94	---	---	---	---	---	NA
MW-8	05/08/89	288.40	08.97	279.43	---	---	---	---	---	NA
MW-8	06/05/89	288.40	10.88	277.52	---	---	---	---	---	NA
MW-8	07/12/89	288.40	12.15	276.25	---	---	---	---	---	NA
MW-8	08/10/89	288.40	12.46	275.94	---	---	---	---	---	NA
MW-8	09/13/89	288.40	12.78	275.62	ND	ND	ND	ND	ND	NA
MW-8	10/04/89	288.40	12.51	275.89	---	---	---	---	---	NA
MW-8	11/03/89	288.40	14.63	273.77	---	---	---	---	---	NA
MW-8	12/04/89	288.40	09.59	278.81	64	0.6	0.6	ND	1	NA
MW-8	03/07/90	288.40	08.80	279.60	---	---	---	---	---	NA
MW-8	03/09/90	288.40	08.80	279.60	89	ND	ND	ND	ND	NA
MW-8	06/12/90	288.40	08.94	279.46	120	2.5	1.2	1.0	1.4	SAL
MW-9	07/03/86	268.46	13.89	254.57	---	---	---	---	---	NA
MW-9	03/26/87	268.46	13.74	254.72	---	---	---	---	---	NA
MW-9	03/28/88	268.46	14.99	253.47	---	---	---	---	---	NA
MW-9	03/10/89	268.46	13.39	255.07	---	---	---	---	---	NA
MW-9	04/03/89	268.46	12.84	255.62	---	---	---	---	---	NA
MW-9	05/08/89	268.46	14.38	254.08	---	---	---	---	---	NA
MW-9	06/05/89	268.46	15.36	253.10	---	---	---	---	---	NA
MW-9	07/12/89	268.46	15.65	252.81	---	---	---	---	---	NA
MW-9	08/10/89	268.46	15.80	252.66	---	---	---	---	---	NA
MW-9	09/13/89	268.46	16.53	251.93	42,000	14,000	1,100	2,800	4,200	NA
MW-9	10/04/89	268.46	16.52	251.94	---	---	---	---	---	NA
MW-9	11/03/89	268.46	16.51	251.95	---	---	---	---	---	NA
MW-9	12/04/89	268.46	16.79	251.67	36,000	11,000	670	2,500	3,800	NA
MW-9	03/07/90	268.46	16.22	252.24	---	---	---	---	---	NA
MW-9	03/09/90	268.46	16.22	252.24	28,000	12,000	500	3,000	4,700	NA
MW-9	06/12/90	268.40	14.88	253.52	39,000	11,000	1,600	2,300	4,800	SAL
MW-10A	03/07/90	264.84	20.21	244.63	---	---	---	---	---	NA
MW-10A	03/09/90	---	---	---	ND	1.6	0.7	0.8	3.5	SAL
MW-10A	06/12/90	264.84	19.70	245.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
MW-10B	03/07/90	264.85	21.44	243.41	---	---	---	---	---	NA
MW-10B	06/12/90	264.85	19.94	244.91	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
MW-11	03/07/90	265.30	22.74	242.56	---	---	---	---	---	NA
MW-11	03/09/90	---	---	---	ND	1.2	0.7	ND	1.4	SAL
MW-11	06/12/90	265.30	21.98	243.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL

Table 1 (cont'd.)
Summary of Results of Ground Water Sampling
Chevron Service Station # 9-5607, 5269 Crow Canyon Road
Castro Valley, California
Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (FT)	DEPTH TO WATER (TOC-FT)	GROUND WATER ELEVATION (ft above msl)	TPH-G (8015)	B (8020/ 602)	T (8020/ 602)	E (8020/ 602)	X (8020/ 602)	ANALYTICAL LAB
MW-12	03/07/90	269.66	14.92	254.74	---	---	---	---	---	NA
MW-12	03/09/90	---	---	---	1,400	230	140	33	180	SAL
MW-12	06/12/90	269.66	14.79	254.87	720	190	71	18	73	SAL
MW-13	03/07/90	284.32	11.18	273.14	---	---	---	---	---	NA
MW-13	03/09/90	---	---	---	ND	15	3.7	1.0	6.2	SAL
MW-13	06/12/90	284.32	10.70	273.62	ND<50	2.6	ND<0.5	ND<0.5	ND<0.5	SAL
MW-14	03/07/90	270.74	15.18	255.56	---	---	---	---	---	NA
MW-14	03/09/90	270.74	---	---	ND	ND	ND	ND	ND	SAL
MW-14	06/12/90	270.74	13.42	257.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
MW-15	03/07/90	246.15	11.10	235.05	---	---	---	---	---	NA
MW-15	03/09/90	246.15	---	---	410	ND	1.4	0.5	0.6	SAL
MW-15	06/12/90	246.15	10.78	235.37	420	11	ND<0.5	ND<0.5	ND<0.5	SAL
MW-16	03/07/90	246.69	18.50	256.02	---	---	---	---	---	NA
MW-16	03/09/90	---	---	---	ND	ND	ND	ND	ND	SAL
MW-16	06/12/90	246.69	11.42	235.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	SAL
RW	12/04/89	---	---	---	62,000	29,000	1,700	1,800	8,800	NA
RW	03/07/90	274.52	18.50	256.02	---	---	---	---	---	NA
RW	06/12/90	274.52	18.49	256.03	31,000	15,000	2,000	560	3,100	SAL

upgradient

EXPLANATION OF ABBREVIATIONS:

TPH-G : Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)
TPH-D : Total Petroleum Hydrocarbons as Diesel (EPA method 8015 modified)
B : Benzene (EPA method 8020)
T : Toluene (EPA method 8020)
E : Ethylbenzene (EPA method 8020)
X : Xylenes (EPA method 8020)

TOG : Total Oil and Grease (EPA method 5030 & 503E)
--- : Not Analyzed/Not Measured
NA : Not applicable/Not available
ND : Not Detected
TB : Trip Blank
D : Duplicate
ft above msl : Feet Above Mean Sea Level

SAL : Superior Analytical Laboratory
GTEL : GTEL Labs
PACE : PACE Labs
MT : Med-Tox Associates
ITC : International Technology Corporation
BCL : Brown and Caldwell Laboratories

NOTES:

1. Depth to Water level measured from top of well casing (in feet).

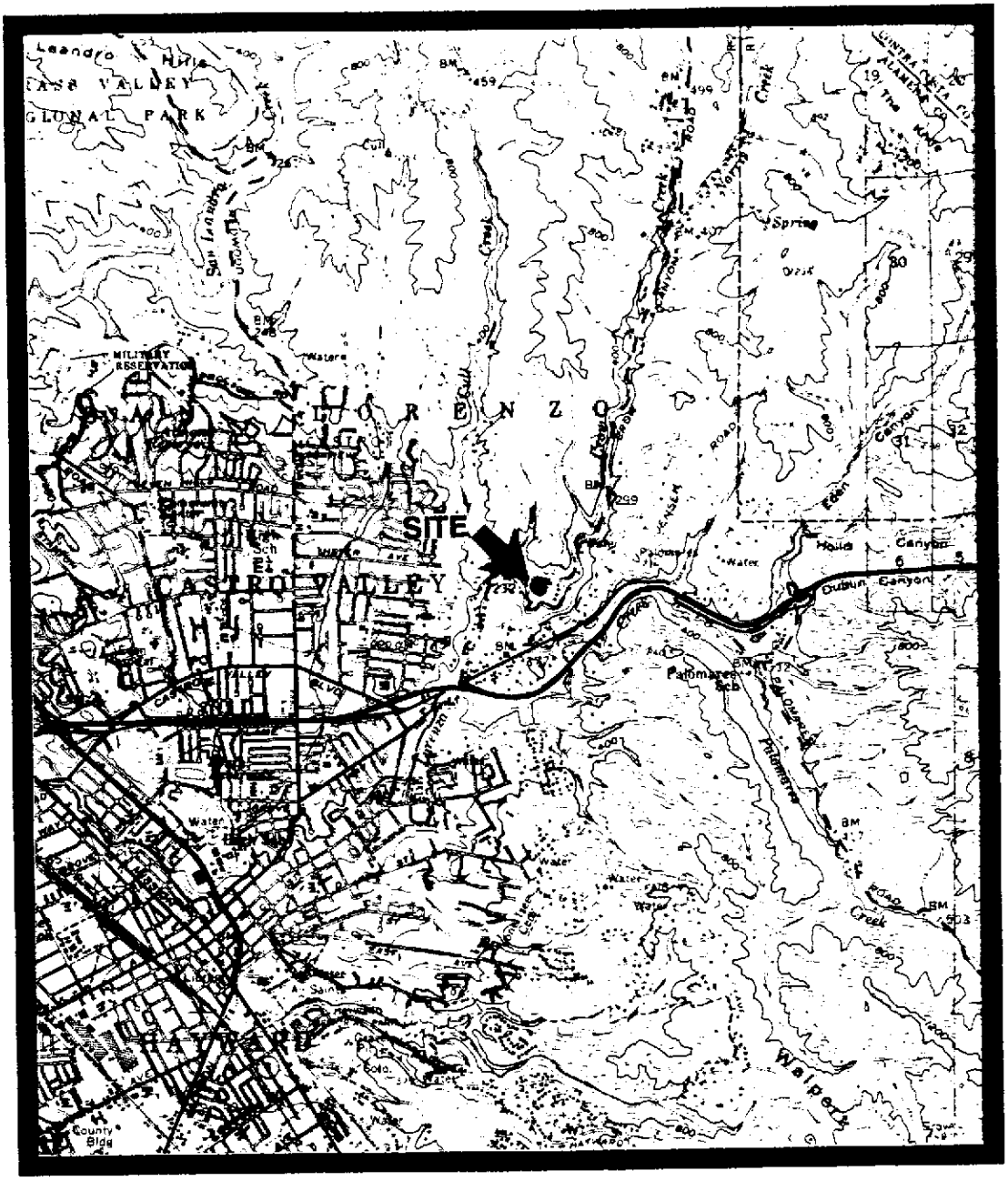


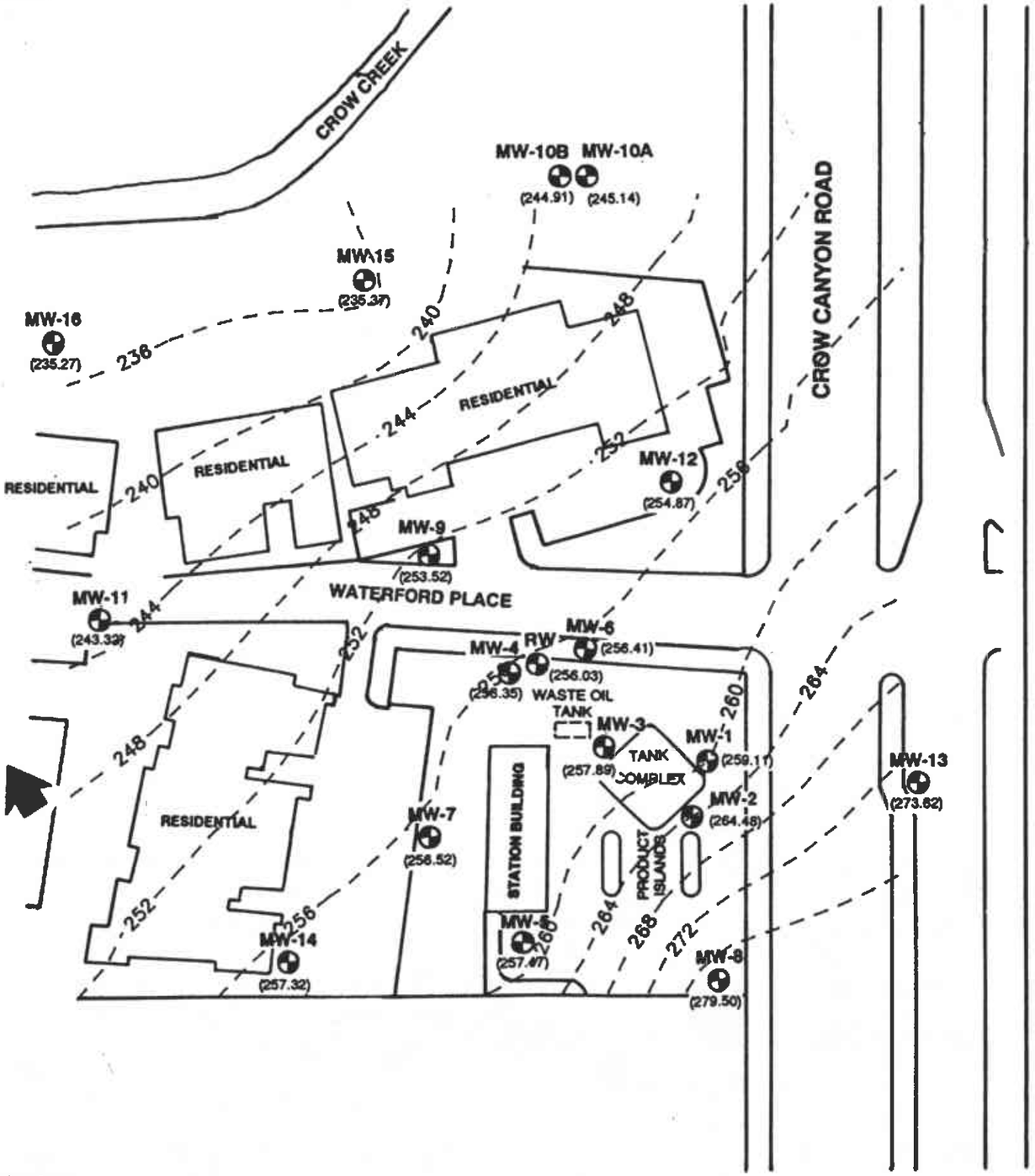
FIGURE 1. VICINITY MAP

CHEVRON SERVICE STATION NO. 9-5607
5269 CROW CANYON ROAD
CASTRO VALLEY, CALIFORNIA

PROJECT NO. 30-189

SOURCE: HAYWARD QUADRANGLE,
USGS 15 MINUTE (TOPOGRAPHIC)

ALTON GEOSCIENCE
1000 Burnett Ave., Ste. 140
Concord, CA 94520



Source: Groundwater Technology

PROJECT NO. 30 - 189

N

0 50

SCALE (IN FEET)

LEGEND:

- GROUND WATER MONITORING WELL
- (256.35) GROUND WATER ELEVATION
- GROUND WATER ELEVATION CONTOUR
- GENERAL DIRECTION OF GROUND WATER FLOW

Notes:
Contour lines are interpretive based on fluid levels in monitoring wells measured on 6 - 12 - 90. Elevations in feet above sea level (NGVD - 1929.)

FIGURE 2. GROUND WATER ELEVATION CONTOUR MAP

Chevron Service Station No. 9-5607
5289 Crow Canyon Road
Castro Valley, California

ALTON GEOSCIENCE
1000 Burnett Ave., Ste. 140
Concord, CA 94520

APPENDIX A

FIELD SAMPLE FORMS,

OFFICIAL LABORATORY RESULTS, AND

CHAIN OF CUSTODY FORMS

ALTON GEOSCIENCE, INC
1170 Burnett Ave., Ste. S
Concord, CA 94520

JOB NUMBER 95607 TECHNICIAN Bennett

JOB LOCATION Castro Valley DATE 06-12-90

PUMPOUT ☐ YES ☐ NO	DATE OF LAST PUMPOUT:			WEATHER: TIME:		COMMENTS (Notes, conditions, etc.)
	HOLD	CUT	LEVEL			
WELL #	DEPTH TO WATER	DEPTH TO PRODUCT	PROD. THICKNESS (FT)	TOTAL DEPTH	DEPTH TO PUMP	
C-1	24.35			44		
C-2	19.89			45.0		
C-3	28.09			50.0		
C-4	16.06			32.0		
C-5	30.48			40.0		
C-6	18.97			31.0		
C-7	14.18			35.0		
C-8	8.94			25.3		
C-9	14.88			29.0		
C-10A C-10B	19.70 19.94			25.0 32.0		
C-11	21.98			35.0		
C-12	14.79			34.5		
C-13	10.70			35.0		
C-14	13.42			30.5		
C-15	10.78			21.0		
C-16	11.42			30.8		
IRW-1	18.49			35.5		

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061290

Well: MW-1 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 33.5 feet Time: _____ Water level Before Pumping: 19.49

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
_____	feet x	0.16	0.65	_____	_____	_____

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: _____

Time	Volume	pH	Conductivity	T	Notes
____	_____	_____	_____	_____	_____
____	_____	_____	_____	_____	_____
____	_____	_____	_____	_____	_____
____	_____	_____	_____	_____	_____
____	_____	_____	_____	_____	_____

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH	_____	_____	_____	_____
Conductivity	_____	_____	_____	_____
Temperature (F)	_____	_____	_____	_____

Presample Collection Gallons Purged: 0

Time Sample Collection Begins: 17:30

Time Sample Collection Ends: 17:30

Total Gallons Purged: 6

Comments: Twelve Inch Bore - constant purge

Sampled @ 6/5/91

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061290

Well: C-1 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 43.3 feet Time: _____ Water level Before Pumping: 24.33

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
19.13	feet x	0.16	(0.65)	12.5	3	37.3

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: Sheen - odor - clear

Time	Volume	pH	Conductivity	T	Notes
____	7	____	1.35	68.6	Same
____	14	____	1.33	66.8	Same
____	21	____	1.36	65.3	Same
____	31	____	1.36	64.1	Same
____	38	____	1.36	63.7	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH	_____	_____	_____	_____
Conductivity	_____	_____	_____	_____
Temperature (F)	_____	_____	_____	_____

Presample Collection Gallons Purged: 39

Time Sample Collection Begins: 12:00

Time Sample Collection Ends: 12:00

Total Gallons Purged: 39

Comments: Sample 061390

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 06-12-90

Well: C-2 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 45 feet Time: _____ Water level Before Pumping: 19.89

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
25.11 feet x	0.16	(0.65)	16.3	3	49.0

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: Light Gray - odor

Time	Volume	pH	Conductivity	T	Notes
____	5	____	1.94	66.4	Solid Gray - odor
____	15	____	1.93	64.2	Same
____	25	____	1.86	63.4	Same
____	35	____	0.83	63.3	Same
____	50	____	0.83	63.3	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 50.0

Time Sample Collection Begins: 20.15

Time Sample Collection Ends: 20:15

Total Gallons Purged: 50.0

Comments: Sampled 061490

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061290

Well: C-3 Sampling Team: Brian Adkins

Well Development Method: _____

Sampling Method: Bailer

Describe Equipment Decontamination Before Sampling: Triple Rinse w/ TSP

Well Development/ Well Sampling Data

Total Well Depth: 50 feet Time: 1435 Water level Before Pumping: 2809

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
21.91	feet x	0.16	(0.65)	14.2	3	42.7

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: SI Sheen small Brown globules

Time	Volume	pH	Conductivity	T	Notes
1425	10	6.96	2.0	67.5	grey, Silty, Sheen
1430	20	6.99	1.095	63.3	Same
1445	30	6.99	1.093	63.2	Same
1456	40	6.99	1.097	61.5	Same
1510	43	6.98	1.098	61.3	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 43

Time Sample Collection Begins: 17:00

Time Sample Collection Ends: 17:00

Total Gallons Purged: 43

Comments: Sampled 061390

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 45607 Date: 061290

Well: C-4 Sampling Team: [illegible]

Well Development Method:

Sampling Method:

Describe Equipment Decontamination Before Sampling: Triple rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 30.0 feet Time: _____ Water level Before Pumping: 16.66

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
13.34	feet x	0.16	(0.65)	9.97	3	29.9

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
____	6	____	2.01	64.1	[illegible]
____	12	____	1.99	63.9	[illegible]
____	18	____	2.0	63.2	[illegible]
____	24	____	2.0	63.3	[illegible]
____	30	____	2.0	63.4	[illegible]

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: _____

Time Sample Collection Begins: 1500

Time Sample Collection Ends: 1500

Total Gallons Purged: _____

Comments: Sampled 061590

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-169 Site: 75607 Date: 061390

Well: C-5 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse w TSP

Well Development/ Well Sampling Data

Total Well Depth: 40 feet Time: _____ Water level Before Pumping: 30.48

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
9.52 feet x	0.16	(0.65)	6.19	3	18.6

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
	4		1.85	72.5	clear
	8		1.81	67.5	Brown
	12		1.76	66.1	Brown
	16		1.81	67.0	Brown
	24		1.77	66.6	Brown

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: >4.0

Time Sample Collection Begins: 11:30

Time Sample Collection Ends: 11:50

Total Gallons Purged: >4.0

Comments: Sampled 061490

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061290

Well: C-6 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 30.8 feet Time: _____ Water level Before Pumping: 18.87

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
11.93 feet x	0.16	(0.65)	7.75	3	23.3

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: slight sheen - strong odor

Time	Volume	pH	Conductivity	T	Notes
	4		1.097	61.3	Grey - odor
	8		1.099	62.7	Same
	12		1.097	63.0	Same
	16		1.097	63.1	Same
	24		1.097	63.0	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 24

Time Sample Collection Begins: 1845

Time Sample Collection Ends: 1845

Total Gallons Purged: 24

Comments: Sampled 061590

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061290

Well: C-7 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: _____
Triple [illegible] with TSP

Well Development/ Well Sampling Data

Total Well Depth: 35.0 feet Time: _____ Water level Before Pumping: 14.18

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
20.82 feet x	0.16	0.65	3.33	3	10.0

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
____	2	____	1.56	65.1	clear
____	4	____	1.56	64.3	tan slight odor
____	6	____	1.61	64.0	same
____	8	____	1.55	63.4	same
____	10	____	1.54	63.1	same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: _____

Time Sample Collection Begins: 0845

Time Sample Collection Ends: 0845

Total Gallons Purged: _____

Comments: Sampled 061590

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 061390

Well: C-4 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: ≥5.3 feet Time: 12:32 Water level Before Pumping: 8.94

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
16.36 feet x	0.16	0.65	5.89	3	17.7

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
____	15	____	1.35	67.4	Cloudy Brown
____	18	____	1.34	65.7	clear
____	21	____	1.33	67.9	cloudy brown
____	24	____	1.34	67.8	same
____	27	____	1.33	67.9	same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 27

Time Sample Collection Begins: 12:30

Time Sample Collection Ends: 12:30

Total Gallons Purged: 27

Comments: Sampled 061490

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 06 12 90

Well: C-9 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: _____
Triple Rinse ... SP

Well Development/ Well Sampling Data

Total Well Depth: 29.0 feet Time: _____ Water level Before Pumping: 14.88

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
14.12	feet x	0.16	0.65	9.18	3	27.5

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: Grey - Sheen

Time	Volume	pH	Conductivity	T	Notes
1255	5	6.69	1.77	64.9	Same
1300	10	6.99	1.73	63.3	Same
1304	15	6.99	1.94	63.4	Same
1310	20	6.99	1.89	63.4	Same
1313	25	6.99	1.83	63.4	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 29.0

Time Sample Collection Begins: 1330

Time Sample Collection Ends: 1330

Total Gallons Purged: 29.0

Comments: Sampled 06/12/90

well cap broken

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 06/29/90

Well: C-10A Sampling Team: Bennett

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: Triple Rinse

Well Development/ Well Sampling Data

Total Well Depth: ≥30 feet Time: _____ Water level Before Pumping: 19.70

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
3.3	feet x	0.16 .36	0.65	1.19	3	3.6

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
555	1	6.98	1.96	61.2	cloudy-Brown
557	2	6.99	1.92	61.7	same
559	2.3	6.93	1.92	61.8	same
601	3	6.98	1.93	61.3	same
603	4.0	6.97	1.94	61.7	same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 4

Time Sample Collection Begins: 18:03

Time Sample Collection Ends: 18:05

Total Gallons Purged: 4

Comments: Sampled 061990

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 3x139 Site: 93607 Date: 061290

Well: C-10B Sampling Team: Benicht

Well Development Method: ____

Sampling Method: ____

Describe Equipment Decontamination Before Sampling: ____
[illegible]

Well Development/ Well Sampling Data

Total Well Depth: 32.0 feet   Time: ____   Water level Before Pumping: 19.94

Water Column		Casing Diameter 2-inch	Casing Diameter 4-inch	Volume	Factor	Volume to Purge
12.06	feet x	0.16	0.65	4.34	3	13.0

Depth Purging From: ____ feet.   Time Purging Begins: ____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
	3	6.99	1.65	[illegible]	clear
	6	6.9[illegible]	1.60	67.1	[illegible] brown
	8	6.9[illegible]	1.39	62.1	[illegible] brown
	10	[illegible]	1.36	61.5	[illegible]
	13	6.[illegible]	1.34	61.3	[illegible]

Time Field Parameter Measurement Begins: ____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 13.

Time Sample Collection Begins: [illegible]

Time Sample Collection Ends: 1630

Total Gallons Purged: 13

Comments: Sample @1340

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 06/2/90

Well: C-11 Sampling Team: Bennett

Well Development Method:

Sampling Method:

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 350 feet Time: 12:02 Water level Before Pumping: 21.98

Water Column	Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
13.02 feet x	0.16	0.65		3	14.1

Depth Purging From: ____ feet. Time Purging Begins: ____

Notes on Initial Discharge: Light Brown

Time	Volume	pH	Conductivity	T	Notes
1323	2		1.59	63.5	Light Brown
1329	4		1.60	63.7	Brown
1241	8		1.60	63.9	Brown
1330	9		1.59	63.9	Brown
1333	13		1.59	63.5	Brown

Time Field Parameter Measurement Begins:

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 15

Time Sample Collection Begins: 13:25

Time Sample Collection Ends: 13:25

Total Gallons Purged: 15

Comments: Sampled 06/4/90

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 95607 Date: 06-7290

Well: C-12 Sampling Team: Bennett

Well Development Method: _____

Sampling Method: Bailor

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 34.5 feet Time: 13:42 Water level Before Pumping: 14.79

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
19.71	feet x	0.16	0.65	5.9	3	17.7

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
1000	4		1059	64.6	Brown
1010	8		1054	6206	Brown
1020	12		1053	6200	Brown - odor
1030	16		1059	6807	Brown - odor
1040	18		1060	6408	Brown - odor

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 18

Time Sample Collection Begins: 10:45

Time Sample Collection Ends: 10:45

Total Gallons Purged: 19

Comments: Sampled 061590

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 93607 Date: 061490

Well: C-13 Sampling Team: [illegible]

Well Development Method: _____

Sampling Method: _____

Describe Equipment Decontamination Before Sampling: _____

Well Development/ Well Sampling Data

Total Well Depth: 33.0 feet Time: _____ Water level Before Pumping: 10.70

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
24.3	feet x	0.16	(.3) 0.65	8.80	3	26.2

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
1745	3		1.60	69.3	grey no odor
1750	6		1.54	65.9	Same
1755	12		1.56	66.7	Same
1803	20		1.57	66.8	Same
1820	27		1.37	66.0	Same

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 22.0

Time Sample Collection Begins: 19:30

Time Sample Collection Ends: 19:30

Total Gallons Purged: 22.0

Comments: Sampled 061490

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30189 Site: 93607 Date: 061290

Well: C-14 Sampling Team: Bennett

Well Development Method: __________

Sampling Method: __________

Describe Equipment Decontamination Before Sampling: Triple Rinse with TSP

Well Development/ Well Sampling Data

Total Well Depth: 30.5 feet Time: _____ Water level Before Pumping: 13.42

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
17.08	feet x	0.16	0.65	6.15	3	18.5

Depth Purging From: ____ feet. Time Purging Begins: _____

Notes on Initial Discharge: clear

Time	Volume	pH	Conductivity	T	Notes
1542	3		1.05	71.8	clear
1550	6		1.01	67.9	light Brown
1553	9		1.08	69.0	Dark Brown
1607	12		1.19	70.1	Darker
1617	19		1.18	69.2	Dark Brown

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 18.0

Time Sample Collection Begins: 15:00

Time Sample Collection Ends: 15:00

Total Gallons Purged: 18.0

Comments: Sampled 06 13 90

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 81055
CLIENT: Alton Geoscience
CLIENT JOB NO.: 30-189

DATE RECEIVED: 06/21/90
DATE REPORTED: 06/28/90

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
81055-11	C-10B MW-10B	06/12/90	06/27/90
81055-12	C-11 MW-11	06/12/90	06/27/90
81055-13	C-12 MW-12	06/12/90	06/27/90
81055-14	C-13 MW-13	06/12/90	06/27/90
81055-15	C-14 MW-14	06/12/90	06/27/90
81055-16	C-15 MW-15	06/12/90	06/27/90
81055-17	C-16 MW-16	06/12/90	06/27/90
81055-18	RW-1 RW	06/12/90	06/27/90
81055-19	C-17 ~~MW-17~~ > UNKNOWN	06/12/90	06/27/90
81055-20	C-18 ~~MW-18~~ DUPLICATE SAMPLES	06/12/90	06/27/90

Laboratory Number:	81055 11	81055 12	81055 13	81055 14	81055 15
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	720	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	190	2.6	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	71	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	18	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	73	ND<0.5	ND<0.5

Laboratory Number:	81055 16	81055 17	81055 18	81055 19	81055 20
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	420	ND<50	31000	16000	80
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	11	ND<0.5	15000	2600	2.3
TOLUENE:	ND<0.5	ND<0.5	2000	1700	1.6
ETHYL BENZENE:	ND<0.5	ND<0.5	560	680	0.9
XYLENES:	ND<0.5	ND<0.5	3100	2200	4.3

Chain-of-Custody Record

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

Chevron Facility Number: 95607 Castro Valley
Consultant Release Number: 3446310
Consultant Project Number: 30-189
Consultant Name: ALTON GeoScience
Address: 1000 Burnett Ave, Concord, CA
Fax Number: 415-682-8921
Project Contact (Name): Stephen Rosen
(Phone): 682-1582

Chevron Contact (Name): John Randall
(Phone): 842-9625
Laboratory Name: Superior
Lab Ref. Number: 2542150
Samples Collected by (Name): Matt Bennett
Collection Date: 6-13-90 to 6-15-90
Signature:

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite	Time / Date	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803				Remarks
C-1		3	W	G	6/15 12:00	HCL	Yes	X			X							40 ml
C-2					6/14 12:15													
C-3					6/13 17:00													
C-4					6/15 13:00													
C-5					6/14 11:50													
C-6					6/15 18:43													
C-7					6/15 9:43													
C-8					6/14 13:30													
C-9					6/15 13:50													
C-10A					6/15 18:05													
C-10B					6/15 18:30													
C-11					6/14 13:25													
C-12					6/15 10:43													

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)
Brian Adkins	ALTON GeoScience	6/21 14:30	Ken Brown	Superior	6/21 1426	24 Hrs
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	48 Hrs
						(5 Days)
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	10 Days

MS 5136 (6 89)

Chain-of-Custody Record

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

Chevron Facility Number 95607 Castro Valley
Consultant Release Number 3496310
Consultant Project Number 30-189
Consultant Name ALTON Geoscience
Address 1000 Burnett Ave, Concord, CA
Fax Number 415-682-8921
Project Contact (Name) Stephen Rosen
(Phone) 682-1582

Chevron Contact (Name) John Randall
(Phone) 842-9625
Laboratory Name Superior
Lab Ref. Number 2542150
Samples Collected by (Name) Matt Bennett
Collection Date 6-12-90 → 6-15-90
Signature

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803				Remarks
C-13		3	W	G	6/14 19:30	HCL	Yes	X			X							40-1
C-14					6/13 15:00													
C-15					6/12 5:35													
C-16					6/15 16:20													
RW-1					6/15 17:30													
C-17	DUPLICATES				6/15 20:00													
C-18					6/15 17:13													
TB					6/19 5:00													

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	ALTON GEO	6/21 14:30			6/21 1426
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)
24 Hrs
48 Hrs
(5 Days)
10 Days

MS 5136 (8-89)