



Chevron

October 10, 1997

Mr. Hugh Murphy
City of Hayward Fire Department
25151 Clawiter Road
Hayward, CA 94545

RECEIVED BY
FIRE PREVENTION OFFICE

OCT 15 1997

HAYWARD FIRE DEPARTMENT

Chevron Products Company

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

Marketing - Sales West

Phone 510 842-9500

Re: **Chevron Service Station #9-0260**
21995 Foothill Blvd., Hayward, CA

Dear Mr. Murphy:

Enclosed is a copy of a Drilling Report that was conducted by our consultant Terra Vac for the above noted site. Chevron has contracted with Terra Vac to conduct remediation activities to address the presence of petroleum hydrocarbons in the soil and groundwater beneath the site.

To facilitate the interim remedial activities, Terra Vac installed sixteen dual vacuum extraction (DVE) wells and one down gradient groundwater monitoring well. The Interim Remediation Work Plan was approved by your office prior to the start of this work.

Two of the DVE wells that were completed into the saturated zone, were to provide more complete coverage throughout the site. The other fourteen DVE wells were completed in varying depths to just above the sand layer. These wells are to directly influence hydrocarbons trapped in the unsaturated silt and clay zones.

The down gradient monitoring well was installed to further characterize the dissolved hydrocarbon plume and provide more detailed information concerning the hydraulic gradient down gradient of the site.

Initial start up of the remedial system is now under way and the startup report will be submitted when received from Terra Vac. Once the system is fully operational, continual reports will be submitted of the remedial systems operation.

If you have any questions or comments, call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY


Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

October 10, 1997
Mr. Hugh Murphy
Chevron Service Station #9-0260
Page 2

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

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

Mr. Jim Perkins
Division Manager
Terra Vac Corporation
1651 Alvarado Street
San Leandro, CA 94577 (Less Report)

Ms. Castillo
1180 Rex Road
Hayward, CA 94541

Ms. Bette Owen, Chevron

**DRILLING REPORT
FORMER CHEVRON STATION 9-0260
21995 FOOTHILL BOULEVARD
HAYWARD, CALIFORNIA**

PROJECT 30-0236



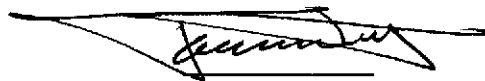
**DRILLING REPORT
FORMER CHEVRON STATION 9-0260
21995 FOOTHILL BOULEVARD
HAYWARD, CALIFORNIA**

Prepared For:

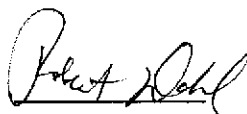
Chevron Products Company
6001 Bollinger Canyon Road, P.O. Box 5004
San Ramon, California 94583-0804

Prepared By:

Terra Vac Corporation
1651 Alvarado Street
San Leandro, California 94577



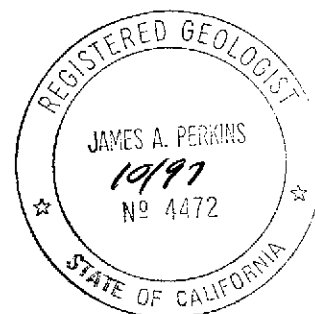
Jason L. Nutt
Project Engineer



Robert Dahl
Project Manager



James A. Perkins, R.G.
Division Manager



September 29, 1997



**DRILLING REPORT
FORMER CHEVRON STATION 9-0260
21995 FOOTHILL BOULEVARD
HAYWARD, CALIFORNIA**

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**DRILLING REPORT
FORMER CHEVRON STATION 9-0260
21995 FOOTHILL BOULEVARD
HAYWARD, CALIFORNIA**

1.0 INTRODUCTION

The site, located at 21995 Foothill Boulevard (Figures 1 and 2), was a former Chevron retail gasoline service station until October 1996, when the underground fuel tanks and service station facilities were removed. The site is currently a vacant dirt lot. Environmental investigations have confirmed the presence of petroleum hydrocarbons in the soil and groundwater beneath the site. Remediation activities have been conducted onsite by others.

Chevron has contracted Terra Vac Corporation (Terra Vac) to install sixteen dual vacuum extraction (DVE) wells to facilitate interim remedial action, and one downgradient groundwater monitoring well. The Interim Remediation Work Plan was approved prior to the start of work reported herein. Previous site investigations and remediation activities were described in the Work Plan.

2.0 FIELD ACTIVITIES

2.1 Drilling

Between July 16, and July 19, 1997, Bay Area Exploration, Inc., under the direction of Terra Vac, drilled and completed sixteen DVE wells (DVE-1 through DVE-16) and one groundwater monitoring well (MW-18). The well locations are shown on Figures 2 & 3.

A CME-75 truck mounted drill rig was used to advance hollow-stem augers to the total depth of each boring. All the borings were drilled with 8 inch augers.

2.2 Sampling

Soil samples were collected from the ground surface to the total depth at five-foot intervals, using a modified split-spoon sampler. The sampler was driven eighteen inches ahead of the augers using a standard 140 pound hammer repetitively dropped 30 inches. The sampler contained one six-inch and three four-inch by two-inch diameter brass liners. If possible, one of the four inch liners was retained for chemical analyses while the soil in the remaining liners were used for lithologic classification and field screening for volatile organic compounds (VOCs).

Soil from each sampling interval was placed in a sealable container for VOC screening. A hand-held ProREA-75 photoionization detector (PID) was used to screen each of soil samples collected. The Unified Soils Classification System was used in the field to describe the soil characteristics and moisture content of each sample. The lithology of each



boring was recorded and boring logs prepared. PID concentration, observed lithologic changes and groundwater depth were used to determine the well screen interval and placement in each well. The boring logs are presented in Appendix A.

Prior to each use, the soil sampler was cleaned using an Alconox wash and rinsed with potable water. Upon the completion of each well, auger flights, the auger bit, and other pieces of intrusive equipment were steam cleaned to prevent cross contamination between borings. Rinsate generated during the decontamination of drilling equipment was stored in DOT approved 55 gallon drums. The decon water was removed by Gettler Ryan on August 4 during a routine quarterly groundwater monitoring event. Soil generated during the drilling was stockpiled on site. Drill cuttings were placed on visqueen and covered pending proper disposal. Integrated Waste Management, Inc. removed all stockpiled drill cuttings on July 25, 1997. Gettler Ryan and Integrated Waste Management operate under direct contract with Chevron.

2.3 Well Construction

Sixteen dual vacuum extraction wells and one groundwater monitoring well were installed, and constructed of Schedule 40 PVC well screen and riser. Well screen slot size is 0.020 inches. Well construction details are presented in Appendix A. Traffic rated well boxes were concreted in place over each well located in Rex Road.

The DVE wells were drilled to depths of between fifteen and twenty feet. Two DVE wells were completed with screen extending into the sand zone at approximately feet. Wells DVE-1 and DVE-9 were completed with five foot screened intervals extending to depths of fifteen and nineteen feet, respectively. These wells were completed into the saturated zone to provide more complete coverage throughout the site. The other DVE wells, DVE-2 through -8, and DVE-10 through -16 were completed with five foot screened intervals extending to varying depths, located just above the sand layer. These fourteen wells are to directly influence hydrocarbons trapped in the unsaturated silt and clay zones.

Well MW-18 was drilled to a depth of twenty-six and one-half feet. The well was completed to a depth of twenty-five feet with the screened interval between fifteen and twenty-five feet. This well was installed to further characterize the dissolved hydrocarbon plume and provide more detailed information concerning the hydraulic gradient downgradient of the site.

3.0 FINDINGS

3.1 Analytical Results

Select soil samples collected during drilling were submitted for analytical testing in accordance with protocol described in the Interim Remediation Work Plan. Due to the tight configuration of wells at the site, redundancy of soil analytical data, and cost effectiveness,



Terra Vac did not submit samples collected from wells DVE-2, -9, -11, -12, and -13. Terra Vac determined that the soils in these areas had already been sufficiently characterized due to the presence of existing monitoring wells, and held the samples to control the costs of analysis. Upon return of the split-spoon, the selected brass sleeves were capped, labeled and stored on ice. A chain of custody form was initiated by the sampling personnel and completed during subsequent handling of samples. Analytical testing was conducted by Sequoia Analytical (Sequoia) Laboratories, a State of California certified laboratory, of Concord, California. Soil samples were analyzed using EPA method 8015 for Total Petroleum Hydrocarbons as gasoline (TPH-g) and EPA method 8020 for benzene, toluene, ethylbenzene and xylenes (BTEX). Laboratory analytical reports are included in Appendix B. A summary of the results is presented in Table 1. Sequoia is directly contracted with Chevron.

The bulk of the hydrocarbons recorded on-site were located at depths of between 14 and 15 feet. Off-site hydrocarbons were recorded at depths of between 10 and 15 feet. This indicates that the smear zone or capillary fringe area is the most heavily impacted. Analytical results demonstrated hydrocarbon concentrations with TPH-g and benzene as high as 4,700 ppm (DVE6-15.3) and 52 ppm (DVE6-15.3), respectively.

3.2 Geology & Hydrogeology

Local lithology has been observed to be characterized by relatively stratified deposits. The upper ten to fifteen feet is primarily comprised of silts and clays. The underlying adjacent sand unit is approximately 5 feet thick and extends from between ten and twenty feet. This layer contains varying percentages of intermixed silts and clays. Below the sand layer exists a very dense clay to silty clay. Local groundwater exists beneath the site at an approximate depth of between ten and fifteen feet, and was encountered during drilling at a depth of approximately 15 feet. Boring logs are presented in Appendix A.

On August 4, 1997, as included with the third quarter groundwater monitoring event, Gettler Ryan, Inc. developed and sampled newly installed monitoring well MW-18. Static groundwater was measured to have a depth of 16.60 feet.. The well has not yet been surveyed to provide an appropriate groundwater elevation. Gettler Ryan measured groundwater flow to the southwest at an approximate gradient of 0.02. Analytical results demonstrate TPH-g and benzene concentrations of 66,000 and 8,600 ppb, respectively.



Table 1
Soil Analytical Results:
TPH-g & BTEX

Former Chevron Station 9-0260
21995 Foothill Boulevard
Hayward, California

Sample	Date	TPH-g	B	T	E	X	Other
DVE 1-5.3	7/17/97	<1.0	<0.005	<0.005	<0.005	<0.005	
DVE 1-10.3	7/17/97	13	0.022	0.030	0.028	<0.005	
DVE 1-15.5	7/17/97	170	0.51	0.80	0.45	0.20	
DVE 2-5.3	7/17/97	--	--	--	--	--	
DVE 2-10.3	7/17/97	--	--	--	--	--	
DVE 2-15.3	7/17/97	--	--	--	--	--	
DVE 3-10.3	7/18/97	190	2.0	5.6	3.1	16	
DVE 3-15.3	7/18/97	1,800	5.6	8.4	23	140	
DVE 4-4.8	7/18/97	43	0.22	0.18	0.79	3.2	
DVE 4-9.8	7/18/97	660	6.0	2.6	8.1	30	
DVE 4-14.3	7/18/97	1,800	23	50	24	120	
DVE 5-10.3	7/16/97	930	8.6	19	15	76	
DVE 5-15.3	7/16/97	2,600	20	25	31	220	
DVE 6-5.8	7/16/97	100	0.11	0.19	0.99	0.73	
DVE 6-10.3	7/16/97	190	0.68	1.4	3.2	11	
DVE 6-15.3	7/16/97	4,700	52	250	82	390	
DVE 7-5.3	7/18/97	3.1	0.014	0.017	0.0082	0.021	
DVE 7-10.3	7/18/97	41	0.33	0.95	0.56	3.4	
DVE 7-15.3	7/18/97	3,200	41	180	42	210	
DVE 8-5.0	7/18/97	<1.0	<0.005	<0.005	<0.005	<0.005	
DVE 8-10.3	7/18/97	2,700	11	65	39	210	
DVE 8-14.3	7/18/97	470	6.3	16	7.5	41	
DVE 9-5.3	7/17/97	--	--	--	--	--	
DVE 9-10.3	7/17/97	--	--	--	--	--	
DVE 9-19.3	7/17/97	--	--	--	--	--	
DVE 10-10.3	7/17/97	<1.0	<0.005	<0.005	<0.005	<0.005	
DVE 10-15.3	7/17/97	44	0.64	0.21	0.57	2.5	
DVE 11-5.3	7/17/97	--	--	--	--	--	
DVE 11-15.3	7/17/97	--	--	--	--	--	
DVE 12-5.3	7/17/97	--	--	--	--	--	
DVE 12-15.3	7/17/97	--	--	--	--	--	
DVE 13-10.3	7/17/97	--	--	--	--	--	
DVE 13-15.3	7/17/97	--	--	--	--	--	
DVE 14-10.3	7/16/97	3,400	44	180	60	330	
DVE 14-14.8	7/16/97	2,400	18	120	40	210	



Table 1(cont.)
Soil Analytical Results:
TPH-g & BTEX

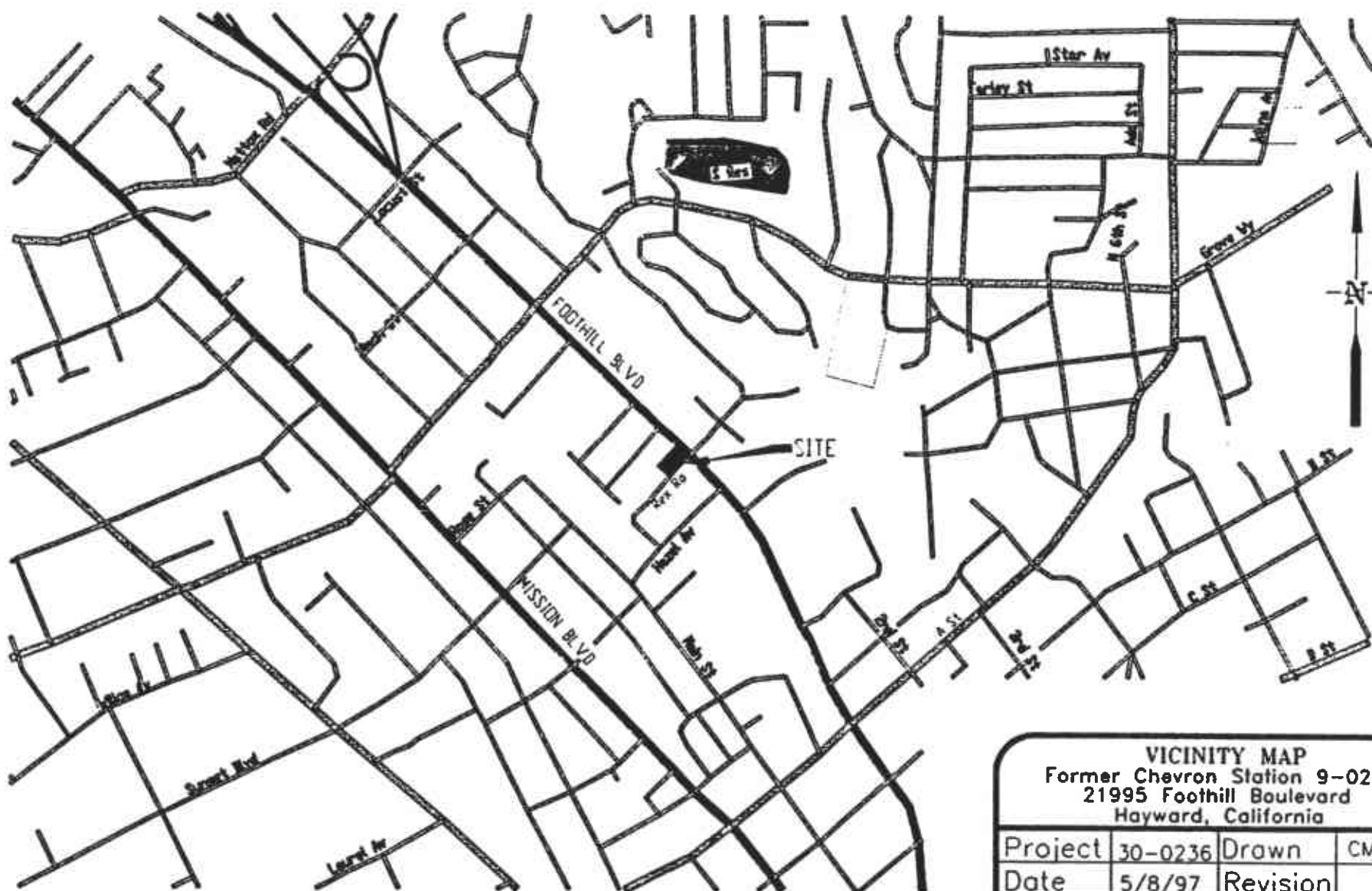
Former Chevron Station 9-0260
 21995 Foothill Boulevard
 Hayward, California

Sample	Date	TPH-g	B	T	E	X	Other
DVE 15-5.8	7/16/97	<1.0	<0.005	<0.005	<0.005	<0.005	
DVE 15-10.8	7/16/97	2,800	37	87	36	240	
DVE 15-14.5	7/16/97	56	2.0	5.0	1.1	6.4	
DVE 16-5.7	7/16/97	<1.0	<0.005	<0.005	<0.005	<0.005	
DVE 16-10.8	7/16/97	620	6.0	7.7	7.3	58	
DVE 16-15.8	7/16/97	130	1.3	1.8	1.7	8.1	
MW 18-5.3	7/16/97	<1.0	<0.005	<0.005	<0.005	<0.005	
MW 18-10.8	7/16/97	98	0.084	0.16	0.33	3.2	
MW 18-15.8	7/16/97	210	0.98	0.90	2.2	12	
MW 18-20.8	7/16/97	8.3	0.36	0.16	<0.005	0.18	
Composite 1(A-D)	7/18/97	360	0.93	1.5	3.7	16	12 ^a

Note: Concentrations are in mg/kg or ppm.

^a Analyzed for Total Lead





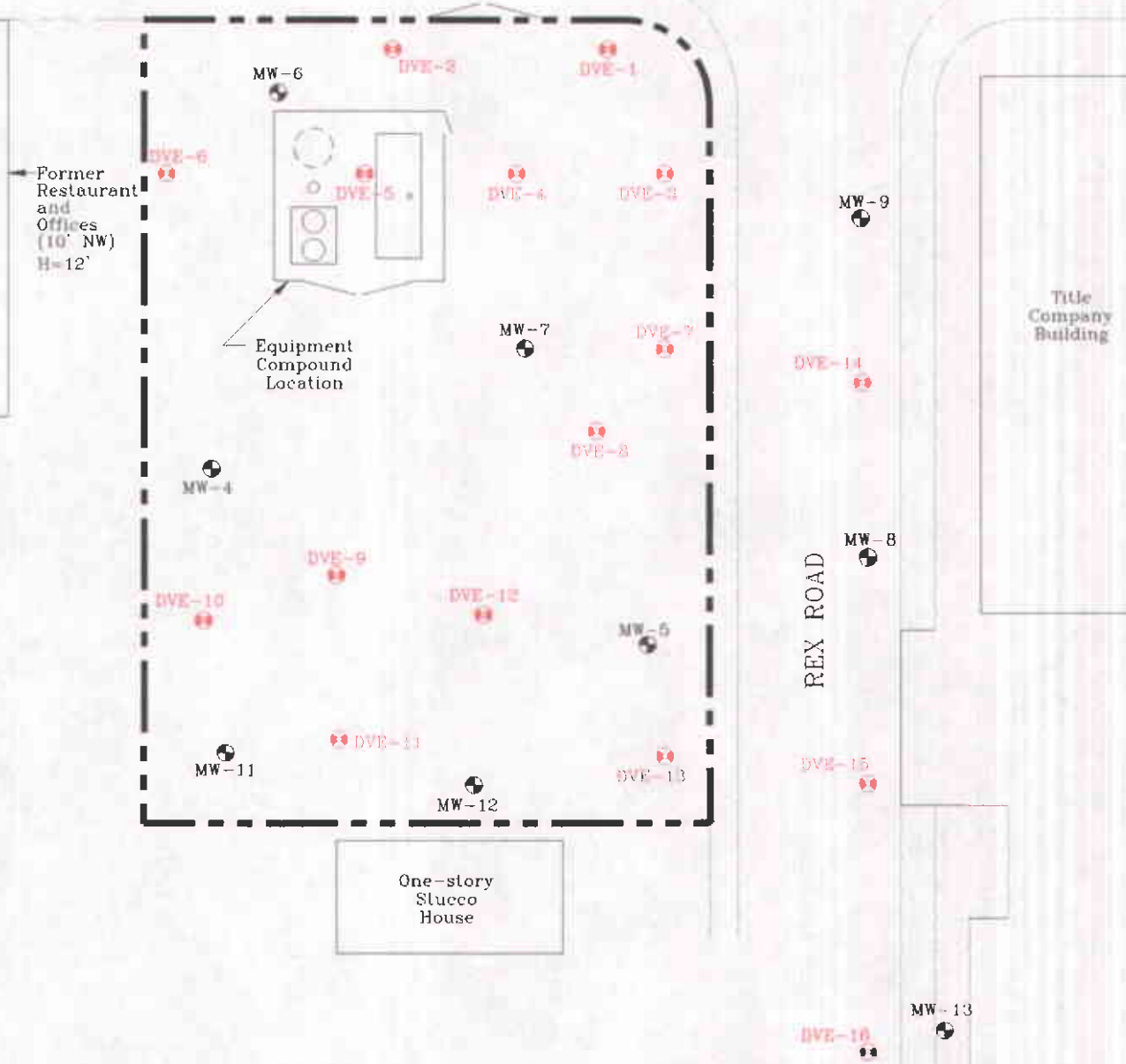
VICINITY MAP
Former Chevron Station 9-0260
21995 Foothill Boulevard
Hayward, California

Project	30-0236	Drawn	CMG
Date	5/8/97	Revision	
Scale	N.T.S.	Checked	

TERRA
VAC 1651 Alvarado Street
San Leandro, CA 94577
(510) 351-8900 Fax: -0221

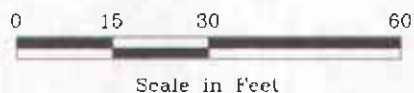
Figure
1

FOOTHILL BOULEVARD



MW-13 = Groundwater Monitoring Well

DVE-16 = Dual Vacuum Extraction Well

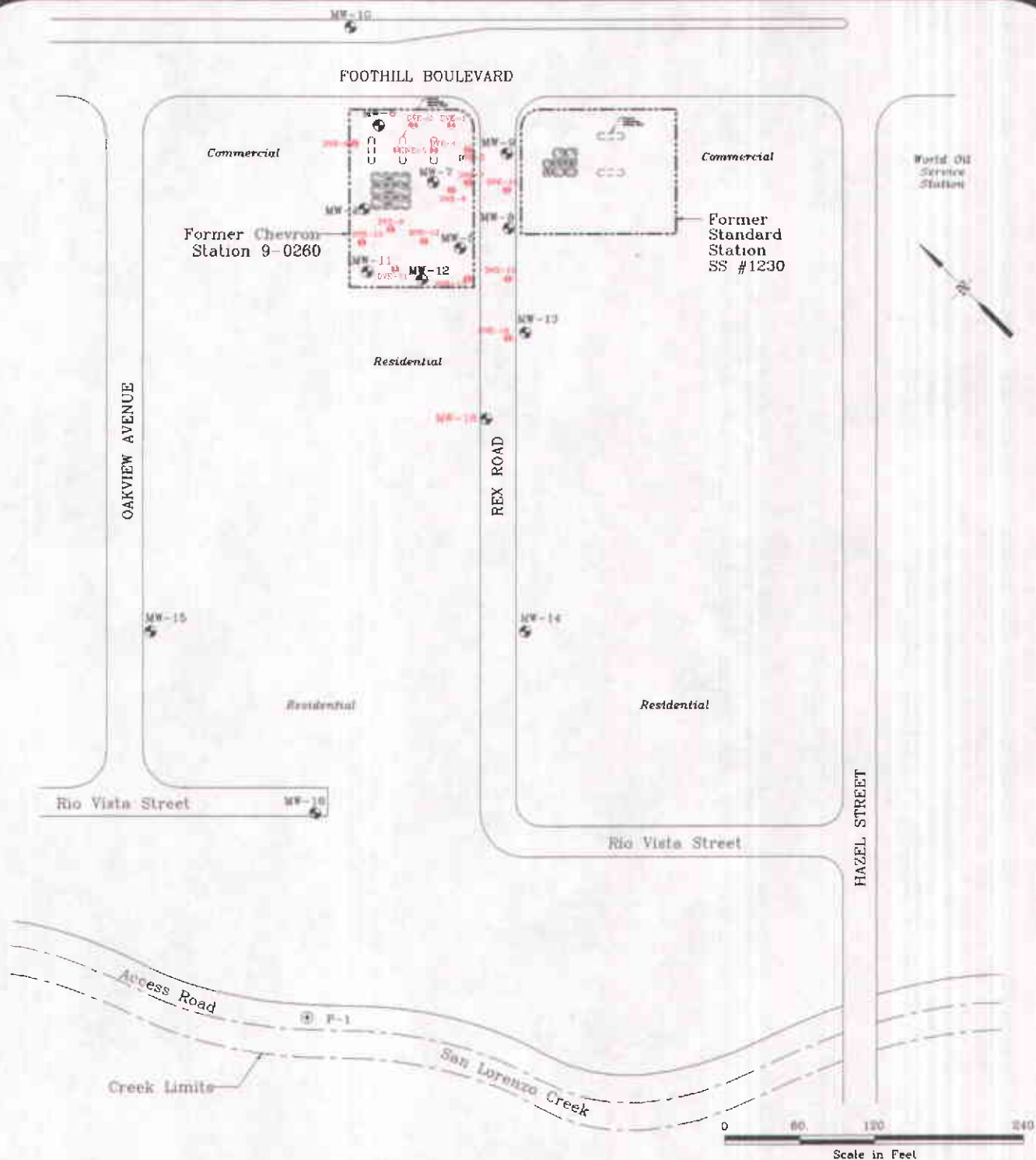


Site Map
Former Chevron Station 9-0260
21995 Foothill Boulevard
Hayward, California

Project	30-0236	Drawn	JLN
Date	5/13/97	Revision	
Scale	1"=30'	Checked	

TERRA VAC
1651 Alvarado Street
San Leandro, CA 94577
(510) 351-8900 Fax: -0221

Figure
2



Note: Base map adopted from Weiss Associates, Figure 3, titled "TPH-G Concentrations in Groundwater - December 3, 1992", dated January 21, 1993.

Extended Site Plan
Former Chevron Station 9-0260
21995 Foothill Boulevard
Hayward, California

Project	30-0236	Drawn	JLN
Date	5/13/97	Revision	
Scale	1"=120'	Checked	

TERRA VAC
1651 Alvarado Street
San Leandro, CA 94577
(510) 351-8900 Fax: -0221

Figure
3

APPENDIX A
Boring Logs/Well Construction Details

Bottom of boring at 15 feet.

DRILLING COMPANY BAEi
DATE DRILLED 7/17/97
SURFACE ELEVATION Not surveyed
TOTAL DEPTH OF HOLE 15 Feet
FIRST OBSERVED GW 15 Feet

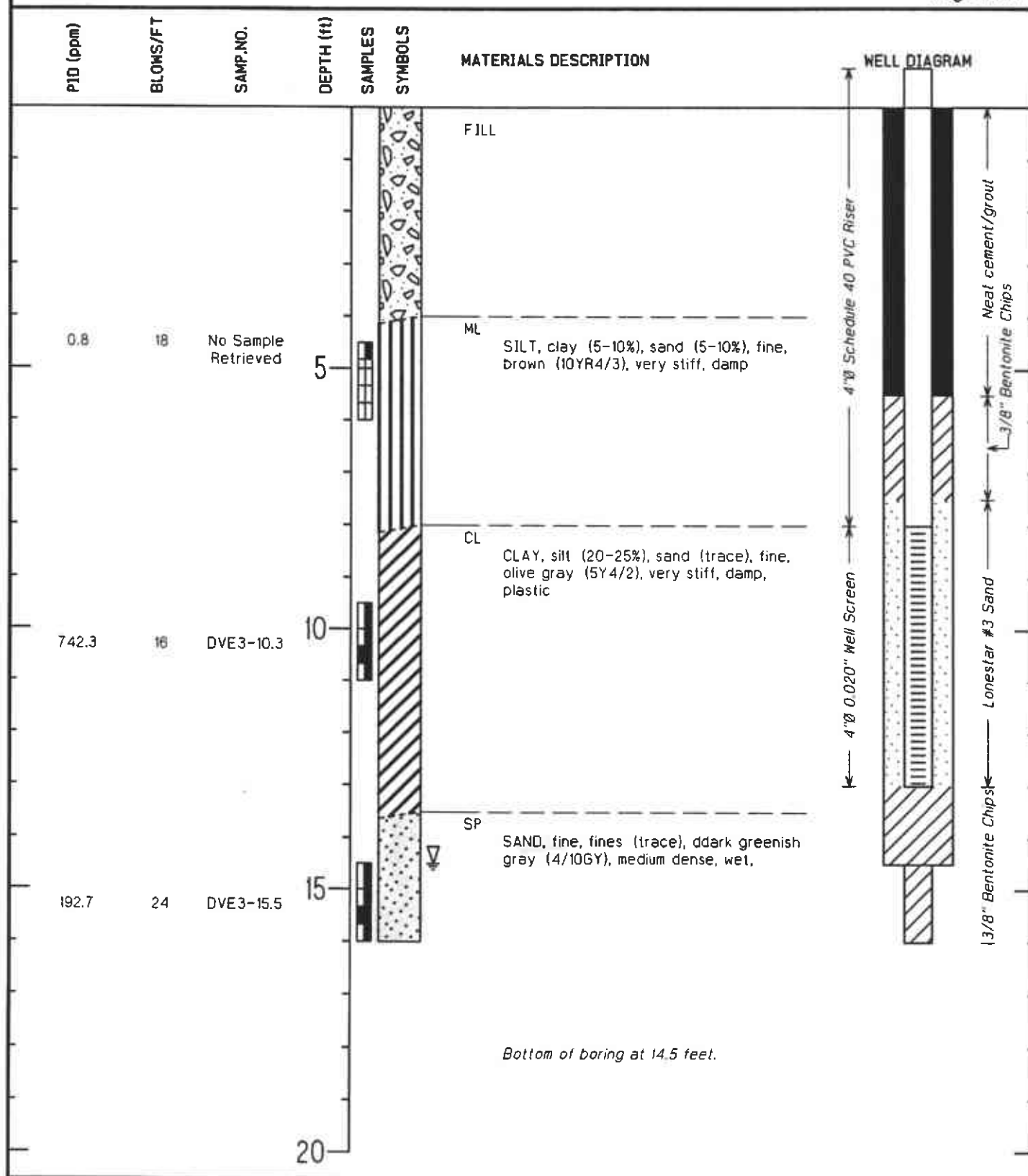
DRILLING COMPANY BAEI

DATE DRILLED 7/17/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10"Ø Hollow Stem Auger

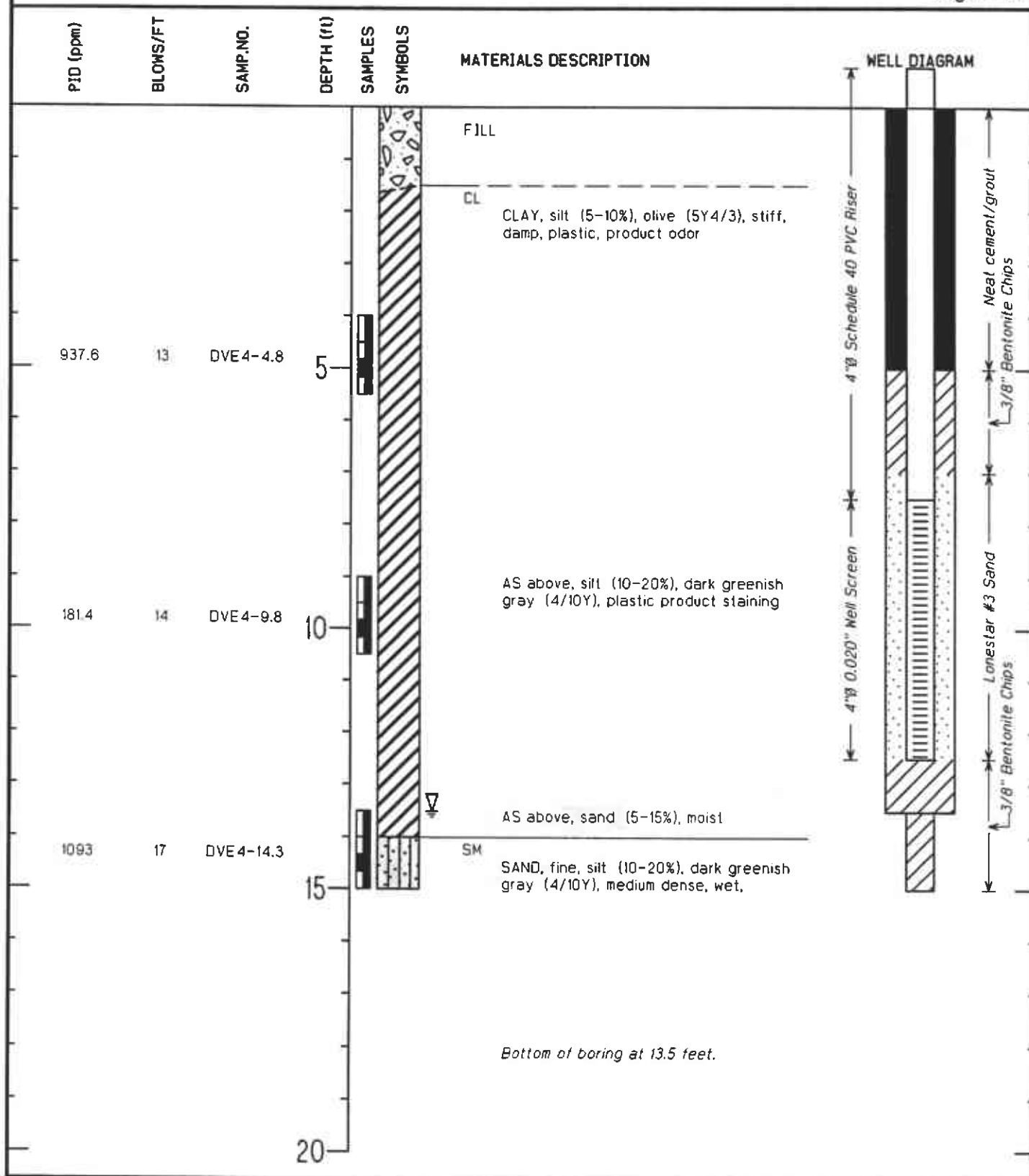
DRILLING COMPANY BAE1

DATE DRILLED 7/18/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10" Hollow Stem Auger

DRILLING COMPANY BAEi

DATE DRILLED 7/18/97

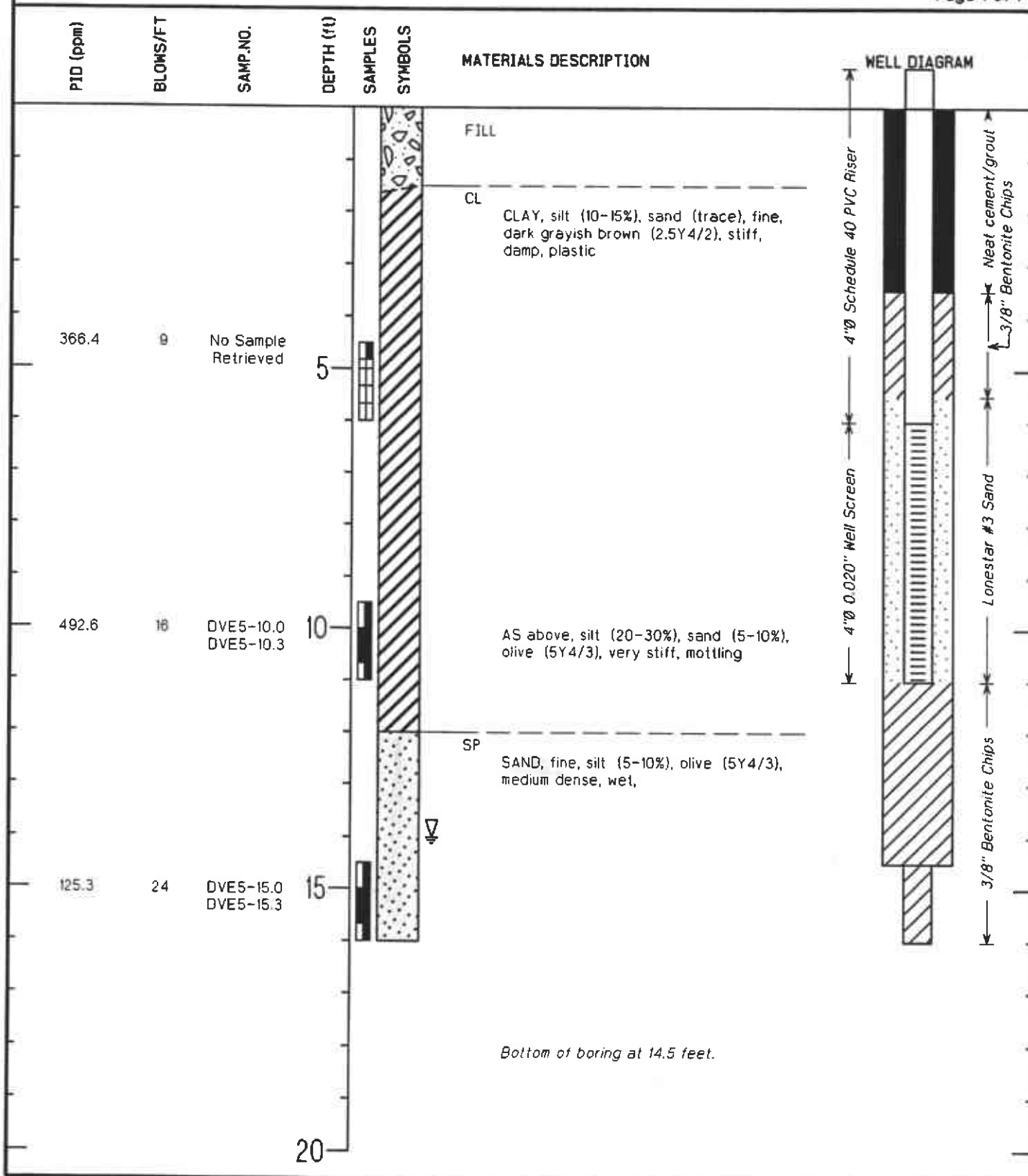
SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 13.5 Feet

FIRST OBSERVED GW 13.5 Feet

LOG OF DUAL VAPOR EXTRACTION WELL DVE-5

Page 1 of 1



PROJECT	Chevron Station 9-0260	DRILLING COMPANY	BAEi
LOCATION	21995 Foothill Boulevard, Hayward	DATE DRILLED	7/16/97
JOB NUMBER	30-0236	SURFACE ELEVATION	Not surveyed
GEOLOGIST	Cliff M. Garrett	TOTAL DEPTH OF HOLE	14 Feet
DRILL RIG	10"Ø Hollow Stem Auger	FIRST OBSERVED GW	14 Feet

PROJECT	Chevron Station 9-0260	DRILLING COMPANY	BAEi
LOCATION	21995 Foothill Boulevard, Hayward	DATE DRILLED	7/16/97
JOB NUMBER	30-0236	SURFACE ELEVATION	Not surveyed
GEOLOGIST	Cliff M. Garratt	TOTAL DEPTH OF HOLE	14.5 Feet
DRILL RIG	10"Ø Hollow Stem Auger	FIRST OBSERVED GW	14.5 Feet

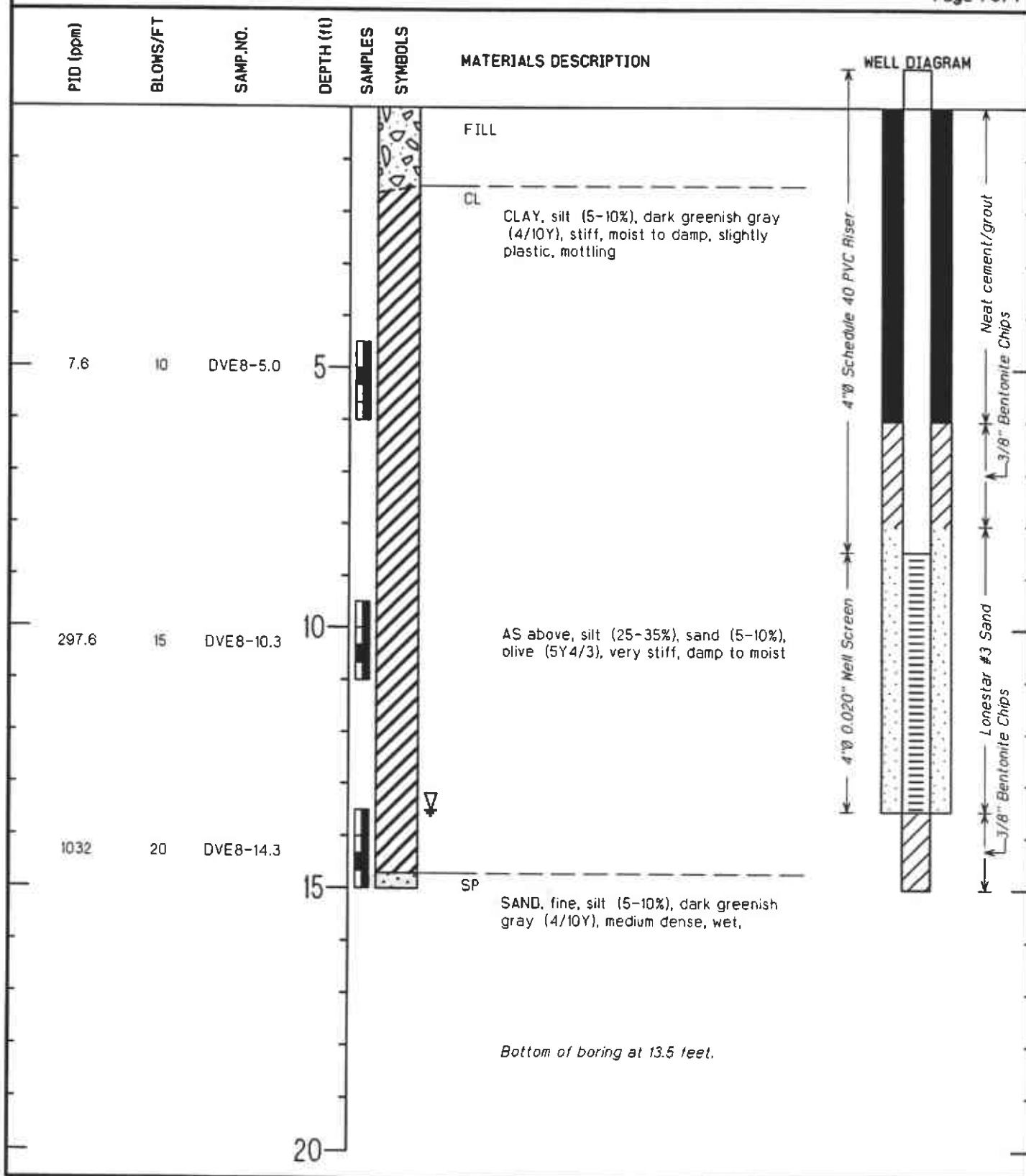
DRILLING COMPANY BAEI

DATE DRILLED 7/18/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10" Hollow Stem Auger

DRILLING COMPANY BAEi

DATE DRILLED 7/18/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 13.5 Feet

FIRST OBSERVED GW 13.5 Feet

Bottom of boring at 20 feet.

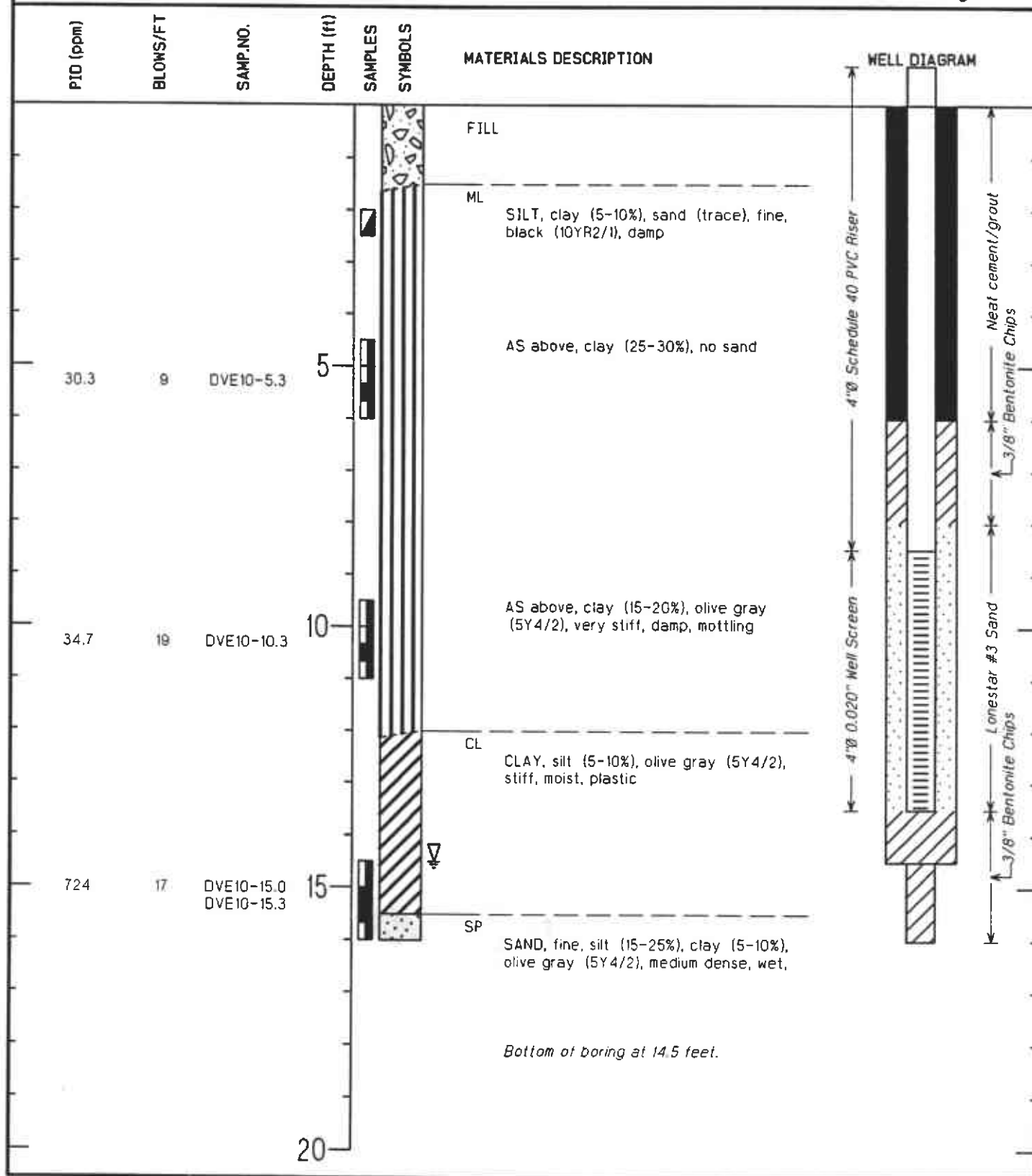
DRILLING COMPANY BAEi

DATE DRILLED 7/17/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 20 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10" Ø Hollow Stem Auger

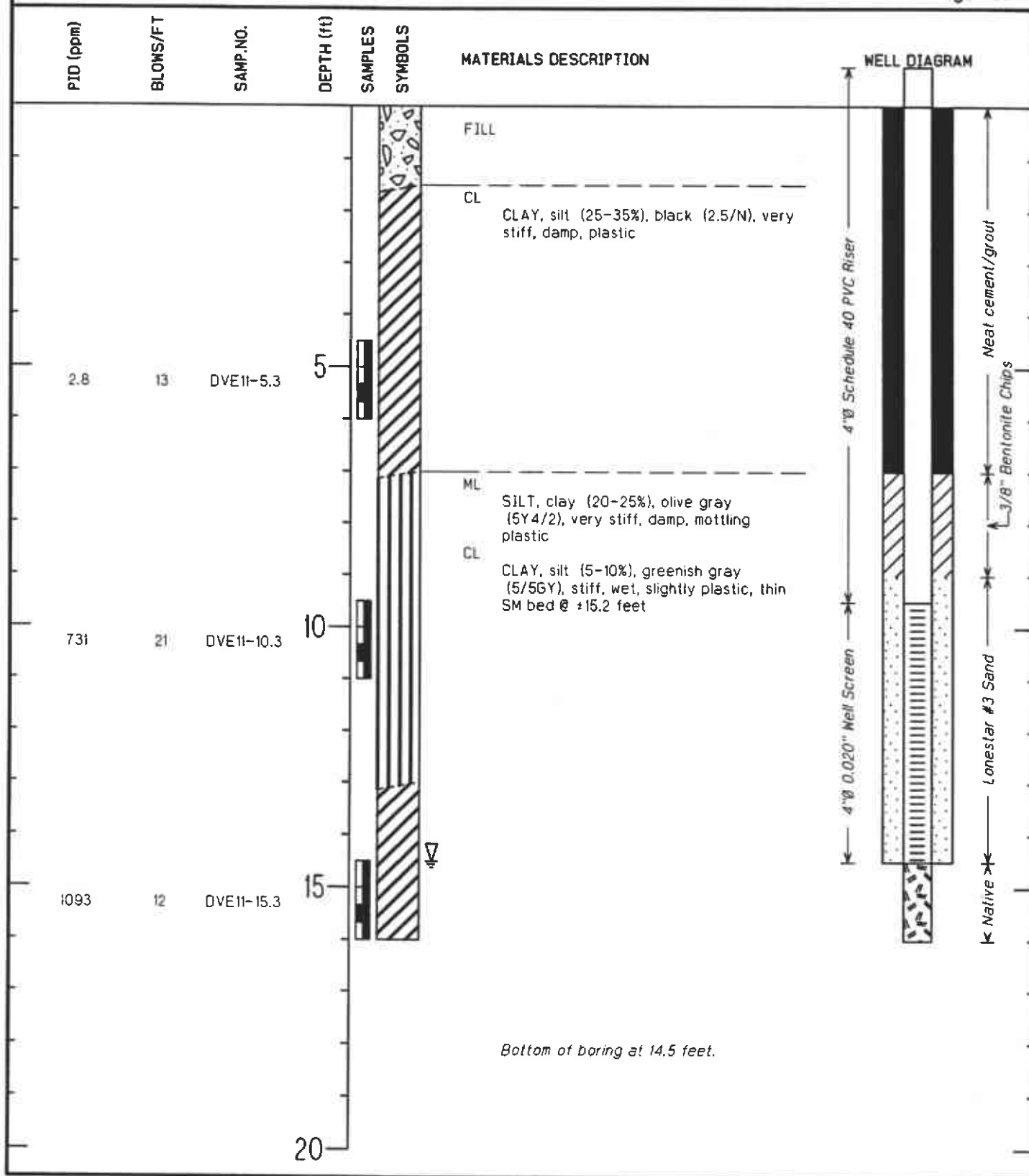
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DATE DRILLED 7/17/97

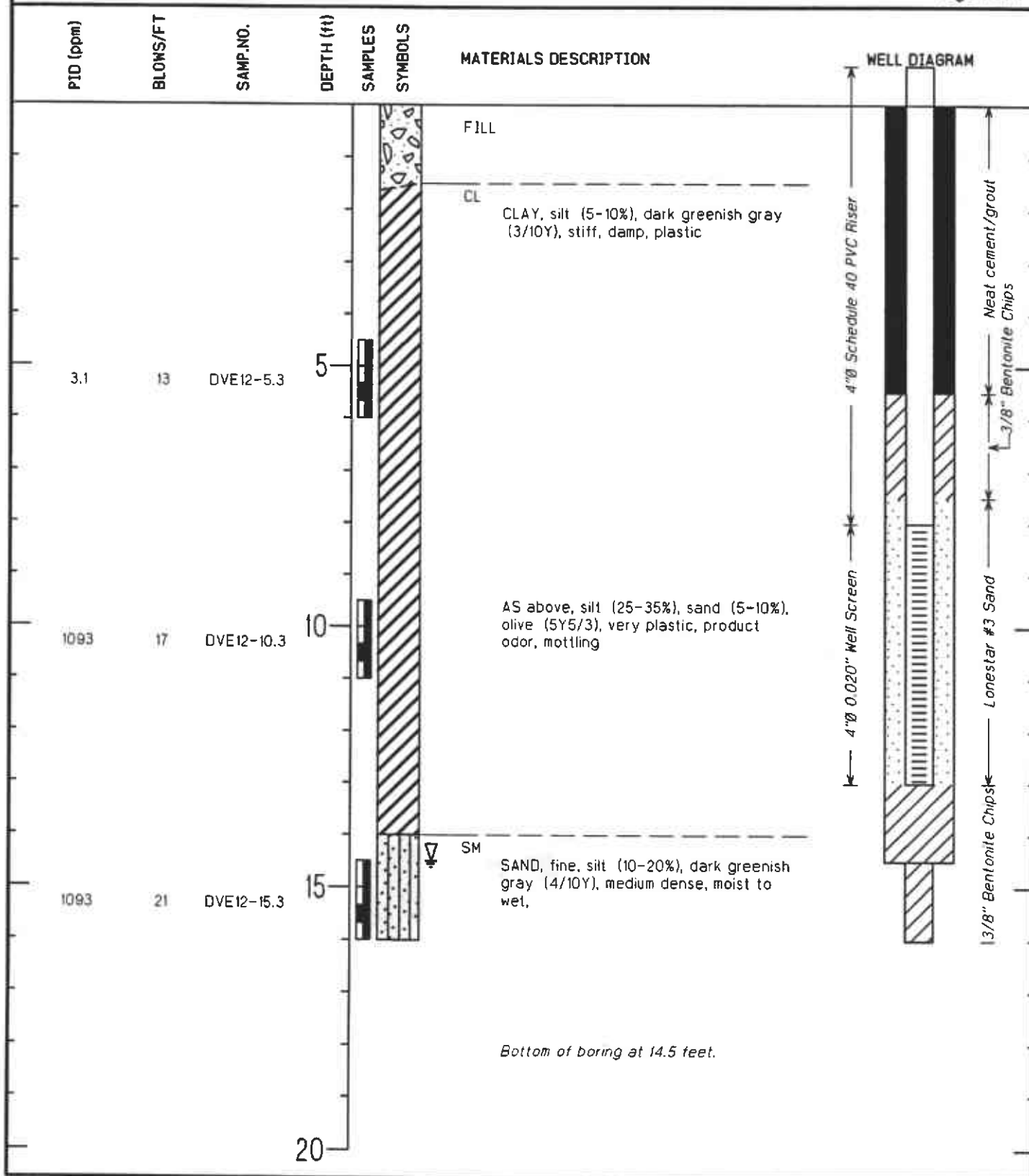
SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT	Chevron Station 9-0260	DRILLING COMPANY	BAEi
LOCATION	21995 Foothill Boulevard, Hayward	DATE DRILLED	7/17/97
JOB NUMBER	30-0236	SURFACE ELEVATION	Not surveyed
GEOLOGIST	Cliff M. Garratt	TOTAL DEPTH OF HOLE	14.5 Feet
DRILL RIG	10"Ø Hollow Stem Auger	FIRST OBSERVED GW	14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10' Ø Hollow Stem Auger

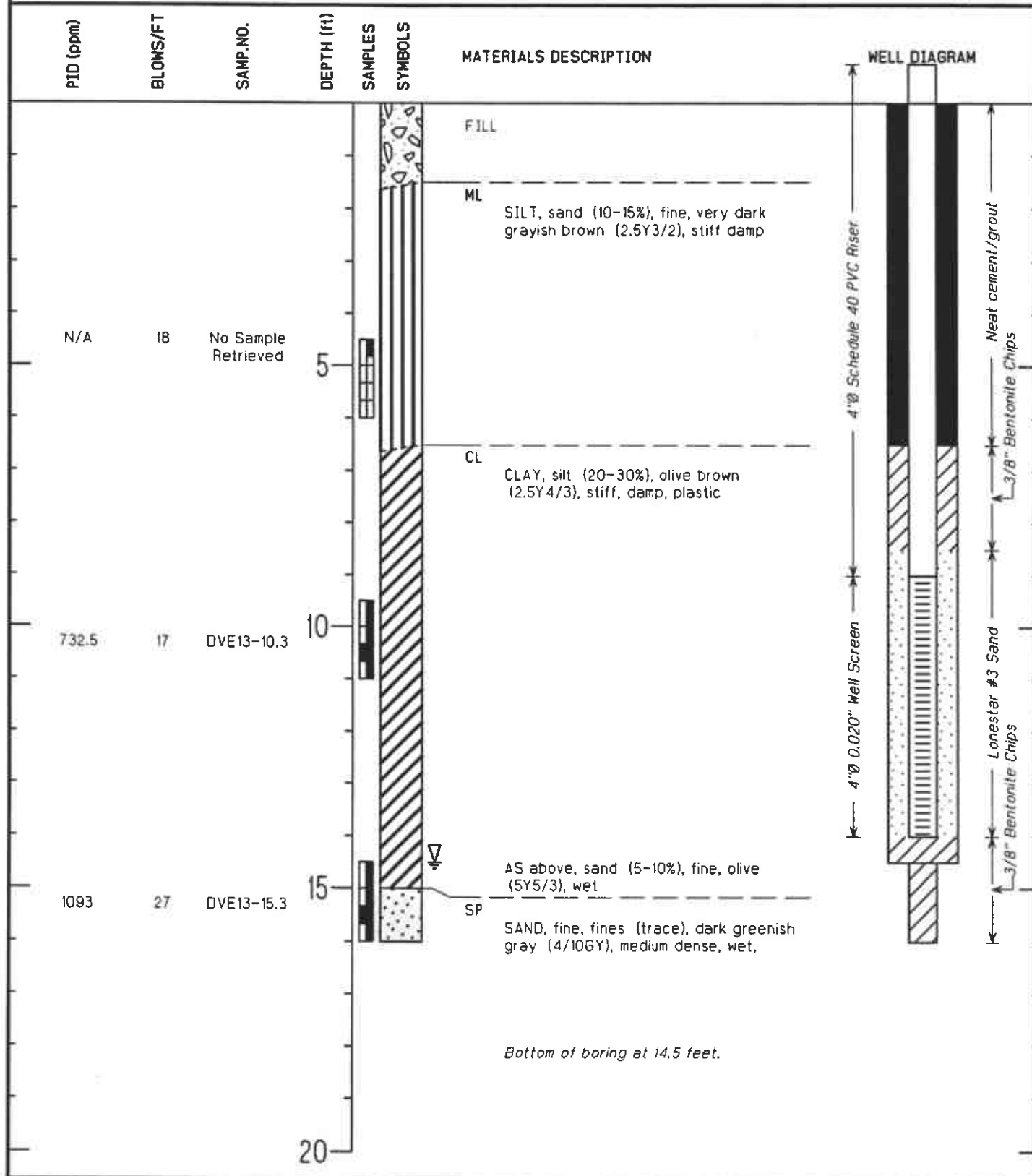
DRILLING COMPANY BAEI

DATE DRILLED 7/17/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10"Ø Hollow Stem Auger

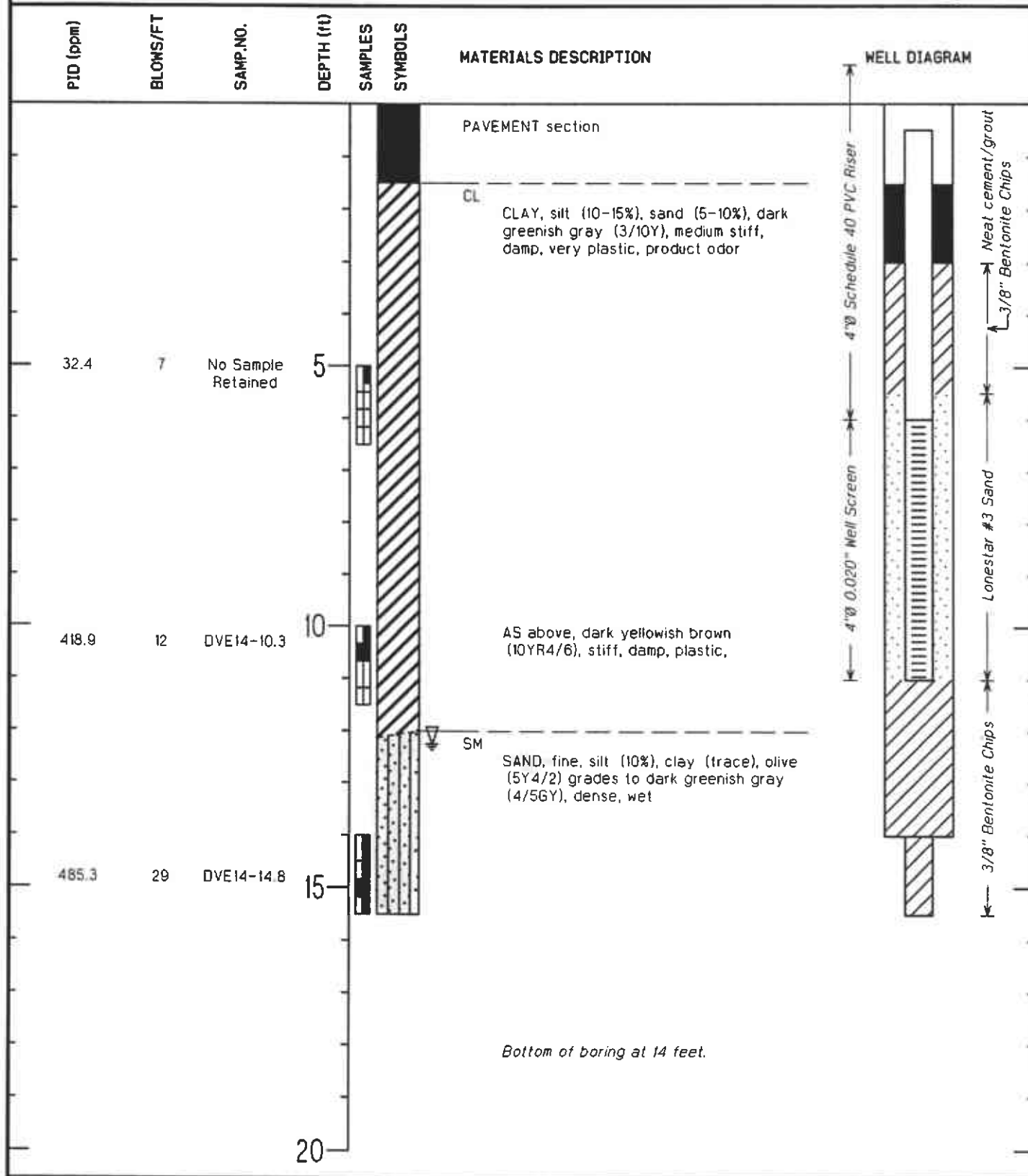
DRILLING COMPANY BAEI

DATE DRILLED 7/17/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14.5 Feet

FIRST OBSERVED GW 14.5 Feet



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10"Ø Hollow Stem Auger

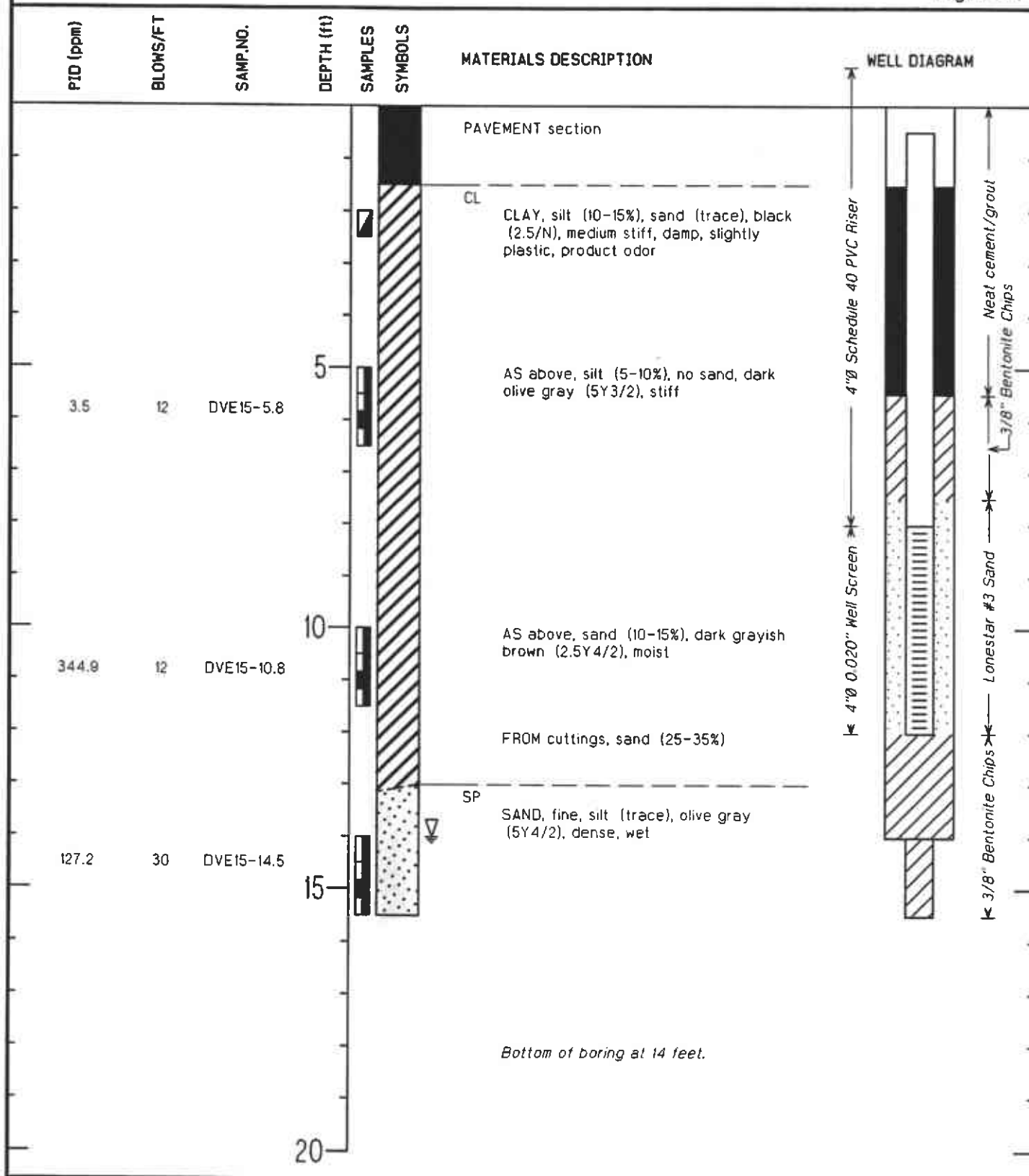
DRILLING COMPANY BAEi

DATE DRILLED 7/16/97

SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14 Feet

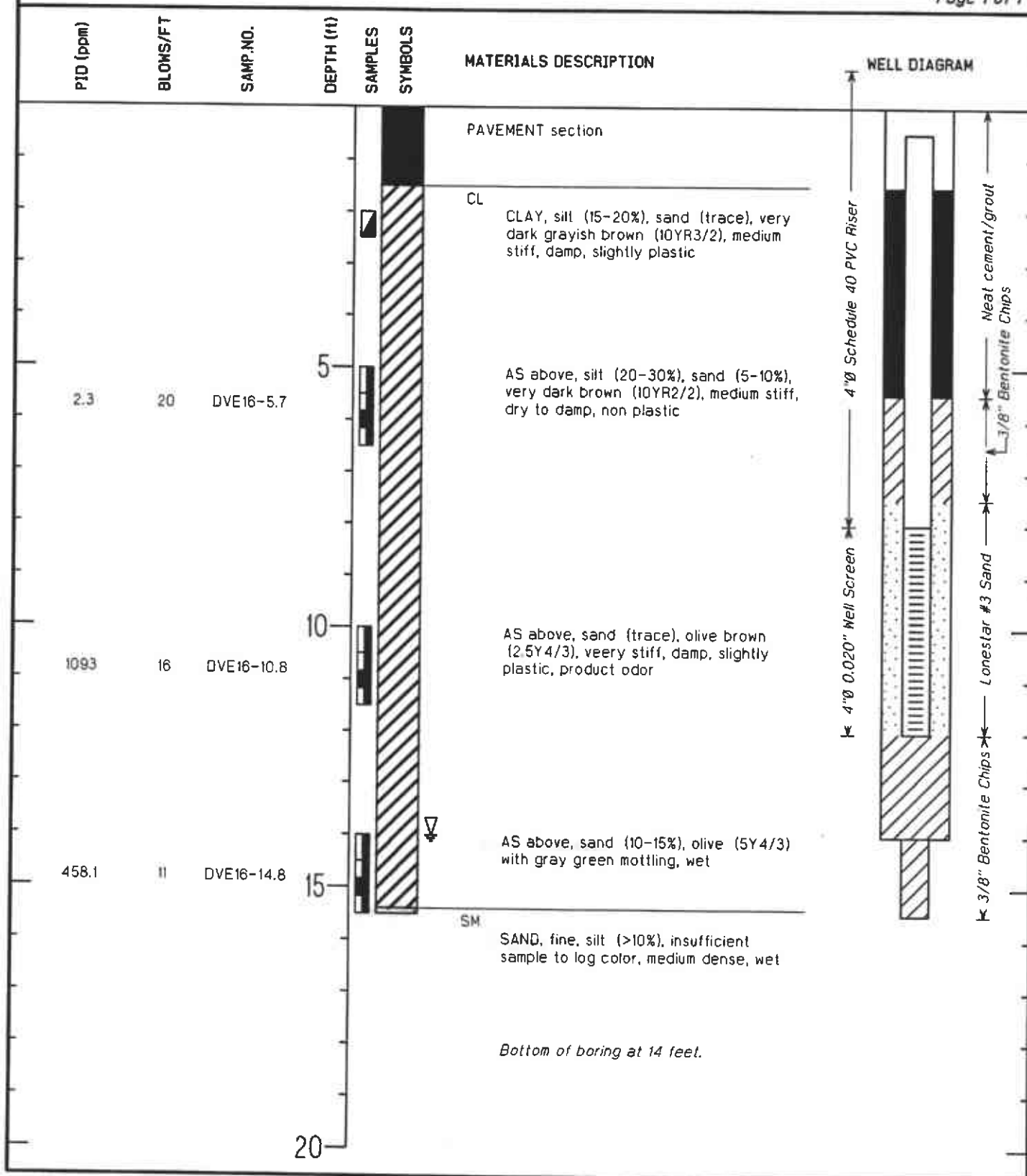
FIRST OBSERVED GW 12.25 Feet



PROJECT	Chevron Station 9-0260	DRILLING COMPANY	BAEi
LOCATION	21995 Foothill Boulevard, Hayward	DATE DRILLED	7/16/97
JOB NUMBER	30-0236	SURFACE ELEVATION	Not surveyed
GEOLOGIST	Cliff M. Garratt	TOTAL DEPTH OF HOLE	14 Feet
DRILL RIG	10"Ø Hollow Stem Auger	FIRST OBSERVED GW	14 Feet

LOG OF DUAL VAPOR EXTRACTION WELL DVE-16

Page 1 of 1



PROJECT Chevron Station 9-0260

LOCATION 21995 Foothill Boulevard, Hayward

JOB NUMBER 30-0236

GEOLOGIST Cliff M. Garratt

DRILL RIG 10" Hollow Stem Auger

DRILLING COMPANY BAEi

DATE DRILLED 7/16/97

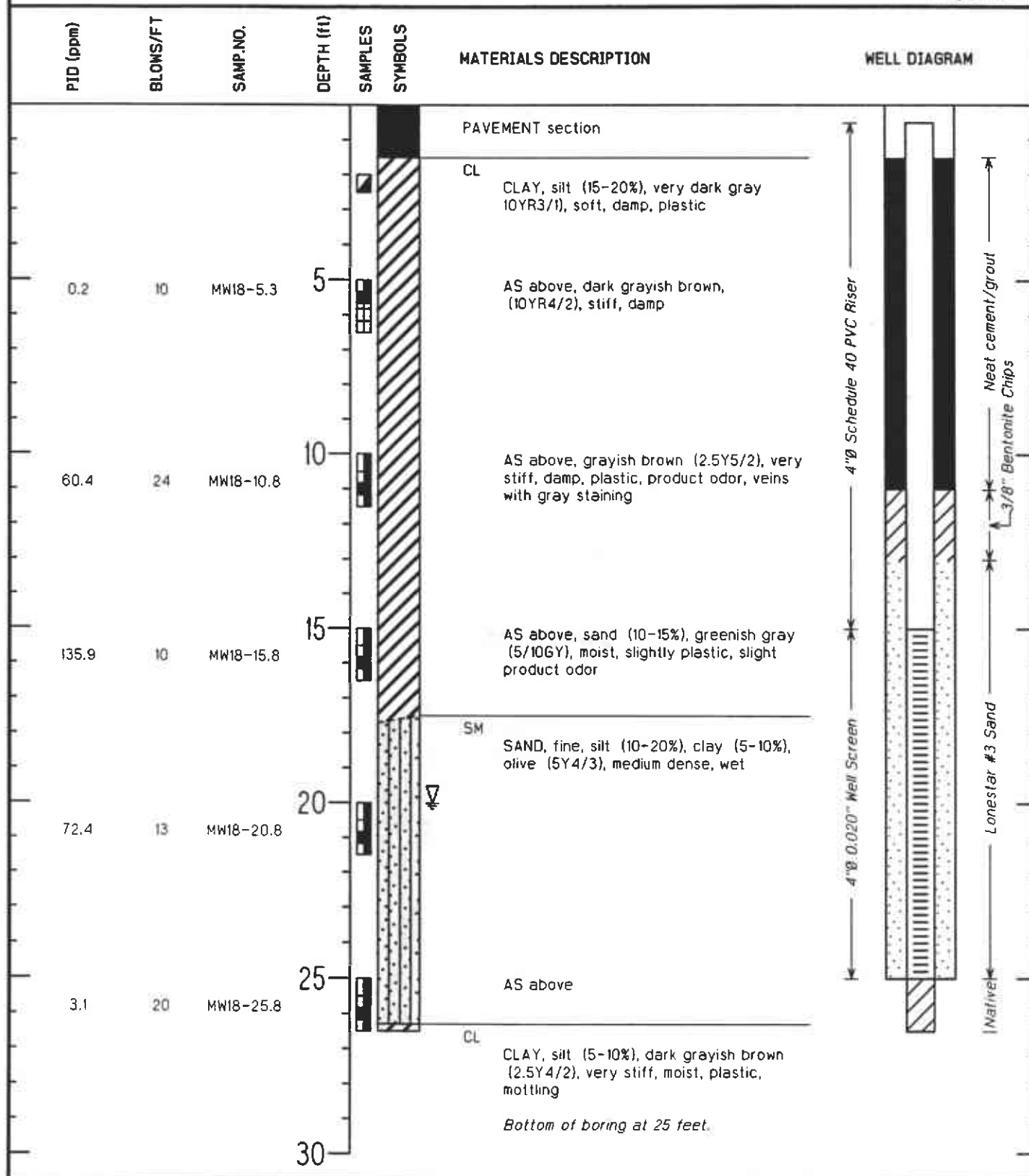
SURFACE ELEVATION Not surveyed

TOTAL DEPTH OF HOLE 14 Feet

FIRST OBSERVED GW 14 Feet

LOG OF GROUNDWATER MONITORING WELL MW-18

Page 1 of 1



PROJECT	Chevron Station 9-0260	DRILLING COMPANY	BAEi
LOCATION	21995 Foothill Boulevard, Hayward	DATE DRILLED	7/16/97
JOB NUMBER	30-0236	SURFACE ELEVATION	Not surveyed
GEOLOGIST	Cliff M. Garratt	TOTAL DEPTH OF HOLE	25 Feet
DRILL RIG	8"Ø Hollow Stem Auger	FIRST OBSERVED GW	20 Feet

APPENDIX B
Laboratory Analytical Reports
by
Sequoia Analytical



Sequoia
Analytical

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 1-5.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-01

Sampled: 07/17/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072197BTEXEXB
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	97
4-Bromofluorobenzene	60 140	94

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 1-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-02

Sampled: 07/17/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072197BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	13
Benzene	0.0050	0.022
Toluene	0.0050	0.030
Ethyl Benzene	0.0050	0.028
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern: Gas & Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	78
4-Bromofluorobenzene	60 140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 1-15.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-03

Sampled: 07/17/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

C Batch Number: GC072297BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	170
Benzene	0.050	0.51
Toluene	0.050	0.80
Ethyl Benzene	0.050	0.45
Xylenes (Total)	0.050	0.20
Chromatogram Pattern: Gas & Unidentified HC		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82
4-Bromofluorobenzene	60	140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 10-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-04

Sampled: 07/17/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

GC Batch Number: GC072197BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	80
4-Bromofluorobenzene	60 140	87

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

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Terra Vac
651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 10-15.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-05

Sampled: 07/17/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

GC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	44
Benzene	0.050	0.64
Toluene	0.050	0.21
Ethyl Benzene	0.050	0.57
Xylenes (Total)	0.050	2.5
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82
Bromofluorobenzene	60	140	10 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 3-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-06

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	20	190
Benzene	0.10	2.0
Toluene	0.10	5.6
Ethyl Benzene	0.10	3.1
Xylenes (Total)	0.10	16
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97
4-Bromofluorobenzene	60	140	11 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 3-15.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-07

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

GC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	1800
Benzene	1.2	5.6
Toluene	1.2	8.4
Ethyl Benzene	1.2	23
Xylenes (Total)	1.2	140
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	123
4-Bromofluorobenzene	60	140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 4-4.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-08

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	43
Benzene	0.025	0.22
Toluene	0.025	0.18
Ethyl Benzene	0.025	0.79
Xylenes (Total)	0.025	3.2
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	168 Q
4-Bromofluorobenzene	60 140	27 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 4-9.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-09

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072197BTEXEXA

Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	660
Benzene	0.50	6.0
Toluene	0.50	2.6
Ethyl Benzene	0.50	8.1
Xylenes (Total)	0.50	30
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	139 Q
4-Bromofluorobenzene	60 140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 4-14.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-10

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	1800
Benzene	1.2	23
Toluene	1.2	50
Ethyl Benzene	1.2	24
Xylenes (Total)	1.2	120
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	136 Q
4-Bromofluorobenzene	60 140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 7-5.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-11

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

QC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	3.1
Benzene	0.0050	0.014
Toluene	0.0050	0.017
Ethyl Benzene	0.0050	0.0082
Xylenes (Total)	0.0050	0.021
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	112
4-Bromofluorobenzene	60 140	137

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 7-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-12

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

GC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	41
Benzene	0.025	0.33
Toluene	0.025	0.95
Ethyl Benzene	0.025	0.56
Xylenes (Total)	0.025	3.4
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	122
4-Bromofluorobenzene	60	140	30 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 7-15.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-13

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

GC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	3200
Benzene	1.2	41
Toluene	1.2	180
Ethyl Benzene	1.2	42
Xylenes (Total)	1.2	210
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	89
4-Bromofluorobenzene	60 140	Q

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

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 8-5.0
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-14

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/29/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	71
4-Bromofluorobenzene	60 140	91

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 8-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-15

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

Attention: Tony Dahl

GC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	2700
Benzene	1.2	11
Toluene	1.2	65
Ethyl Benzene	1.2	39
Xylenes (Total)	1.2	210
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	184 Q
4-Bromofluorobenzene	60 140	Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 8-14.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-16

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	470
Benzene	1.2	6.3
Toluene	1.2	16
Ethyl Benzene	1.2	7.5
Xylenes (Total)	1.2	41
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106
4-Bromofluorobenzene	60	140	Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Tod Granicher
Project Manager



Sequoia
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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: MW 18-5.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-17

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/29/97
Reported: 07/31/97

GC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78
4-Bromofluorobenzene	60	140	78

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: MW 18-10.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-18

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

GC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	98
Benzene	0.025	0.084
Toluene	0.025	0.16
Ethyl Benzene	0.025	0.33
Xylenes (Total)	0.025	3.2
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	198 Q
4-Bromofluorobenzene	60 140	42 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: MW 18-15.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-19

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

QC Batch Number: GC072297BTEXEXA

Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	25	210
Benzene	0.12	0.98
Toluene	0.12	0.90
Ethyl Benzene	0.12	2.2
Xylenes (Total)	0.12	12
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	151 Q
4-Bromofluorobenzene	60	140	12 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: MW 18-20.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-20

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	8.3
Benzene	0.0050	0.36
Toluene	0.0050	0.16
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.18
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	110
4-Bromofluorobenzene	60 140	103

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 16-5.7
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-21

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/21/97
Analyzed: 07/23/97
Reported: 07/31/97

QC Batch Number: GC072197BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	80
4-Bromofluorobenzene	60 140	92

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 16-10.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-22

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/29/97
Reported: 07/31/97

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	620
Benzene	0.50	6.0
Toluene	0.50	7.7
Ethyl Benzene	0.50	7.3
Xylenes (Total)	0.50	58
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	101
4-Bromofluorobenzene	60 140	6 Q

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

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 15-5.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-23

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/22/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072297BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	89
4-Bromofluorobenzene	60 140	86

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Terra Vac
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 15-10.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-24

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/25/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	500	2800
Benzene	2.5	37
Toluene	2.5	87
Ethyl Benzene	2.5	36
Xylenes (Total)	2.5	240
Chromatogram Pattern: Gas & Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	104
4-Bromofluorobenzene	60 140	Q

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 15-14.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-25

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

GC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	20	56
Benzene	0.10	2.0
Toluene	0.10	5.0
Ethyl Benzene	0.10	1.1
Xylenes (Total)	0.10	6.4
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	121
4-Bromofluorobenzene	60	140	4 Q

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 14-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-26

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	3400
Benzene	1.2	44
Toluene	1.2	180
Ethyl Benzene	1.2	60
Xylenes (Total)	1.2	330
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	139 Q
4-Bromofluorobenzene	60 140	4 Q

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

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 14-14.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-27

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	2400
Benzene	1.2	18
Toluene	1.2	120
Ethyl Benzene	1.2	40
Xylenes (Total)	1.2	210
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96
4-Bromofluorobenzene	60	140	7 Q

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

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 5-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-28

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

GC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	930
Benzene	0.50	8.6
Toluene	0.50	19
Ethyl Benzene	0.50	15
Xylenes (Total)	0.50	76
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	108
4-Bromofluorobenzene	60	140	8 Q

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 5-15.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-29

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	2600
Benzene	1.2	20
Toluene	1.2	25
Ethyl Benzene	1.2	31
Xylenes (Total)	1.2	220
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	101
4-Bromofluorobenzene	60 140	9 Q

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

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Terra Vac
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 6-5.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-30

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/25/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	100
Benzene	0.050	0.11
Toluene	0.050	0.19
Ethyl Benzene	0.050	0.99
Xylenes (Total)	0.050	0.73
Chromatogram Pattern: Gas & Unidentified HC		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	94
4-Bromofluorobenzene	60 140	Q

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 6-10.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-31

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

QC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	25	190
Benzene	0.12	0.68
Toluene	0.12	1.4
Ethyl Benzene	0.12	3.2
Xylenes (Total)	0.12	11
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	96
4-Bromofluorobenzene	60 140	11 Q

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Terra Vac
1651 Alvarado St.
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Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 6-15.3
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-32

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

Attention: Tony Dahl

GC Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	4700
Benzene	1.2	52
Toluene	1.2	250
Ethyl Benzene	1.2	82
Xylenes (Total)	1.2	390
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	121
4-Bromofluorobenzene	60	140	21 Q

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

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Terra Vac
1651 Alvarado St.
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Attention: Tony Dahl

Client Proj. ID: Chevron 9-0260, 30-0236
Sample Descript: DVE 16-15.8
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707A17-33

Sampled: 07/16/97
Received: 07/18/97
Extracted: 07/23/97
Analyzed: 07/24/97
Reported: 07/31/97

C Batch Number: GC072397BTEXEXA
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	130
Benzene	0.25	1.3
Toluene	0.25	1.8
Ethyl Benzene	0.25	1.7
Xylenes (Total)	0.25	8.1
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91
4-Bromofluorobenzene	60	140	4 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Page:

33



**Sequoia
Analytical**

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FAX (415) 364-9233
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FAX (916) 921-0100

Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Project ID: Chevron 9-0260, 30-0236
Matrix: Solid

Work Order #: 9707A17 01-33

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

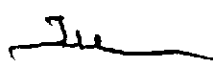
Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072397BTEXEXA	GC072397BTEXEXA	GC072397BTEXEXA	GC072397BTEXEXA	GC072397BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970787404	970787404	970787404	970787404	970787404
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/23/97	7/23/97	7/23/97	7/23/97	7/23/97
Analyzed Date:	7/23/97	7/23/97	7/23/97	7/23/97	7/23/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.19	0.19	0.19	0.57	1.3
MS % Recovery:	95	95	95	95	108
Dup. Result:	0.18	0.18	0.18	0.59	1.2
MSD % Recov.:	90	90	90	92	100
RPD:	5.4	5.4	5.4	3.6	8.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072397	BLK072397	BLK072397	BLK072397	BLK072397
Prepared Date:	7/23/97	7/23/97	7/23/97	7/23/97	7/23/97
Analyzed Date:	7/23/97	7/23/97	7/23/97	7/23/97	7/23/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.19	0.19	0.19	0.57	1.3
LCS % Recov.:	95	95	95	95	108

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

SEQUOIA ANALYTICAL


Tod Granicher
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

9707A17.TTT <1>



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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Project ID: Chevron 9-0260, 30-0236
Matrix: Solid

Work Order #: 9707A17 01-33

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072297BTEXEXA	GC072297BTEXEXA	GC072297BTEXEXA	GC072297BTEXEXA	GC072397BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970787410	970787410	970787410	970787410	970787410
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.17	0.17	0.18	0.53	1.2
MS % Recovery:	85	85	90	88	100
Dup. Result:	0.16	0.16	0.17	0.50	1.1
MSD % Recov.:	80	80	85	83	92
RPD:	6.1	6.1	5.7	5.8	8.7
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072297	BLK072297	BLK072297	BLK072297	BLK072297
Prepared Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.19	0.19	0.19	0.59	1.3
LCS % Recov.:	95	95	95	98	108

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

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.

SEQUOIA ANALYTICAL

TJG
Tod Granicher
Project Manager

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

9707A17.TTT <2>





Sequoia Analytical

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Project ID: Chevron 9-0260, 30-0236
Matrix: Solid

Work Order #: 9707A17 01-33

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072197BTEXEXB	GC072197BTEXEXB	GC072197BTEXEXB	GC072197BTEXEXB	GC072397BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	970787411	970787411	970787411	970787411	970787411
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.18	0.18	0.18	0.56	1.2
MS % Recovery:	90	90	90	93	100
Dup. Result:	0.17	0.17	0.17	0.52	1.2
MSD % Recov.:	85	85	85	87	100
RPD:	5.7	5.7	5.7	7.4	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072197	BLK072197	BLK072197	BLK072197	BLK072197
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.19	0.19	0.19	0.57	1.3
LCS % Recov.:	95	95	95	95	108

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

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.

SEQUOIA ANALYTICAL

TJ
Tod Granicher
Project Manager

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

9707A17.TTT <3>





Sequoia
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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Proj. ID: Chevron 9-0260, 30-0236

Received: 07/18/97

Lab Proj. ID: 9707A17

Reported: 07/31/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 42 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPHGBS: High surrogate recoveries were confirmed. Low extraction surrogate recoveries due to dilutions.

SEQUOIA ANALYTICAL


Ted Granicher
Project Manager

Chevron Contact (Name) Phil Briggs
(Phone) 510.842.1913
Laboratory Name Scahoia
Laboratory Release Number 9044646
Samples Collected by (Name) Cliff Garrett
Collection Date 7.17.97
Signature Cliff Garrett

[illegible]

Chevron Facility Number T-0000
Facility Address 21995 Foothill
Consultant Project Number 30-0230
Consultant Name Terra Vac
Address 11651 Alvarado St.
Project Contact (Name) Tony Dahl
(Phone) 510-351-5900 (Fax Number) - 0221

Chevron Contact (Name) Phil B. 1995
(Phone) 510. 842. 9136
Laboratory Name Srahoia
Laboratory Release Number 9044646
Samples Collected by (Name) Cliff Garratt
Collection Date 7.17.97
Signature Cliff Garratt

5 10 3 65

24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Chevron Facility Number 9-0260
Facility Address 2199S Farhill
Consultant Project Number 30-0236
Consultant Name Terra Vac
Address 1651 Alvarado St.
Project Contact (Name) Tony Dahl
(Phone) 510-391-9900 (Fax Number) -0221

Chevron Contact (Name) Phil Briggs
(Phone) 510-842-9136
Laboratory Name Sesquora
Laboratory Release Number 9044646
Samples Collected by (Name) Cliff Garrett
Collection Date 7.18.97
Signature [Signature]

[illegible]

Relinquished By (Signature)

Organization

Date/Time

Received By (Signature) _____

Organisation

Dpt./Time

Turn Around Time (Circle Choice)

Reinquited by (Signature)

Organization

Date/Time

Received By (Signature)

Organisation

Date/Time

Retinguled By (Signature)

Organization

Date/Time

Received For Laboratory By (Signature)

Date/Time

24 Hrs.

48 Hq.

5. Derive

10 Dove

As Contracted

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

Chevron Facility Number 9-0260
Facility Address 21995 East hill Blvd, Hayward
Consultant Project Number 30-0236
Consultant Name Terra Vac Corp
Address 1651 Alvarado St., San Leandro
Project Contact (Name) Tony Dahl
(Phone) 510-351-8900 (Fax Number) -0221

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-9136
Laboratory Name Sequoia
Laboratory Release Number 9044646
Samples Collected by (Name) Cliff Garrett
Collection Date 7-16-97
Signature Cliff Garrett

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Leak (Yes or No)	Analytes To Be Performed <u>9207A17</u>												Remarks
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Greases (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8140)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)					
MW18-5.3	12	1	S	D			Yes	✓												
-10.8	18							✓												
-15.8	19							✓												
-20.8	20							✓												
-25.8																			Hold	
DVE16-5.7	21							✓												
-10.8	22							✓												
-14.8								✓												
DVE15-5.8	23							✓												
-10.8	24							✓												
-14.8	25							✓												
DVE H-10.3	26							✓												
-14.8	27							✓												
DVE S 10.3	28							✓												

Relinquished By (Signature) <u>Cliff Garrett</u>	Organization <u>TV</u>	Date/Time <u>7/18/97/305r</u>	Received By (Signature) <u>Tony Dahl</u>	Organization <u>SEQ</u>	Date/Time <u>7/18/97/305r</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>Tony Dahl</u>	Organization <u>SEQ</u>	Date/Time <u>7/18/97/WDP</u>	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>~</u>		Date/Time <u>7-11-97 1958</u>	

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

Chevron Facility Number 9.0220
Facility Address 21995 Football Blvd
Consultant Project Number 30.0236
Consultant Name Terra Vac
Address 1651 Alvarado St
Project Contact (Name) Tony Dahl
(Phone) 510.351.8900 (Fax Number) -0221

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-1913b
Laboratory Name Sequoia
Laboratory Release Number 9044646
Samples Collected by (Name) C. P. Garrett
Collection Date 7/16/97
Signature [Signature]

[illegible]



Sequoia
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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260/30.0236

Lab Proj. ID: 9707942

Sampled: 07/18/97

Received: 07/18/97

Analyzed: see below

Attention: Tony Dahl

Reported: 07/22/97

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
---------	-------	---------------	-----------------	----------------

Lab No: 9707942-01
Sample Desc: SOLID,0236 1(A-D) Comp

Lead	mg/Kg	07/22/97	5.0	12
------	-------	----------	-----	----

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

SEQUOIA ANALYTICAL - ELAP #1210

Rod Granicher
Project Manager



Sequoia
Analytical

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577

Client Proj. ID: Chevron 9-0260/30.0236
Sample Descript: 0236 1(A-D) Comp
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9707942-01

Sampled: 07/18/97
Received: 07/18/97
Extracted: 07/19/97
Analyzed: 07/22/97
Reported: 07/22/97

QC Batch Number: GC071997BTEXEXA
Instrument ID: GCHP1

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	360
Benzene	0.50	0.93
Toluene	0.50	1.5
Ethyl Benzene	0.50	3.7
Xylenes (Total)	0.50	16
Chromatogram Pattern:		Gas
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	127
4-Bromofluorobenzene	60 140	4.7 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Page:

2



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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Project ID: Chevron 9-0260/30.0236
Matrix: Solid

Work Order #: 9707942 01

Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC071997BTEXEXA	GC071997BTEXEXA	GC071997BTEXEXA	GC071997BTEXEXA	GC071997BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	970791103	970791103	970791103	970791103	970791103
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/19/97	7/19/97	7/19/97	7/19/97	7/19/97
Analyzed Date:	7/19/97	7/19/97	7/19/97	7/19/97	7/19/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.16	0.15	0.16	0.47	1.1
MS % Recovery:	8	75	80	78	92
Dup. Result:	0.18	0.16	0.16	0.50	1.1
MSD % Recov.:	80	80	80	83	92
RPD:	12	6.5	0.0	6.2	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK071997	BLK071997	BLK071997	BLK071997	BLK071997
Prepared Date:	7/19/97	7/19/97	7/19/97	7/19/97	7/19/97
Analyzed Date:	7/19/97	7/19/97	7/19/97	7/19/97	7/19/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.18	0.18	0.18	0.55	1.2
LCS % Recov.:	90	90	90	92	100

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

SEQUOIA ANALYTICAL


Tod Granicher
Project Manager

Please Note:

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

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

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Terra Vac
1651 Alvarado St.
San Leandro, CA 94577
Attention: Tony Dahl

Client Project ID: Chevron 9-0260/30.0236
Matrix: Solid

Work Order #: 9707942 01

Reported: Jul 28, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0721976010MDF	ME0721976010MDF	ME0721976010MDF	ME0721976010MDF
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	970789701	970789701	970789701	970789701
Sample Conc.:	N.D.	N.D.	23	25
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	46	48	66	67
MS % Recovery:	92	96	86	84
Dup. Result:	46	48	65	66
MSD % Recov.:	92	96	84	82
RPD:	0.0	0.0	1.5	1.5
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK072197	BLK072197	BLK072197	BLK072197
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	50	51	50	51
LCS % Recov.:	100	102	100	102

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

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Tod Granicher
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

9707942.TTT <2>



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Attention: Tony Dahl

Client Proj. ID: Chevron 9-0260/30.0236

Received: 07/18/97

Lab Proj. ID: 9707942

Reported: 07/22/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 6 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

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David Granicher
Project Manager

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