ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 1105 - 5800 College Ave, Oakland, CA
(2-10K, 1-5K, and 1-1K gallons tanks removed in 1988)

December 8, 1998

Mr. Phil Briggs
Chevron
P.O.Box 5004
San Ramon, CA 94583-0804

Mr. Jon Vicars
2980 College Ave
Berkeley, Ca 94605

Dear Messrs. Briggs and Vicars:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection
Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Leroy Griffin, OFD
files-ec (chevron2-3)

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO1090

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

StID 1105

December 8, 1998

Mr. Phil Briggs
Chevron
P.O.Box 5004
San Ramon, CA 94583-0804

Mr. Jon Vicars
2980 College Ave
Berkeley, Ca 94605

Re: Fuel Leak Site Case Closure for Chevron Service Station #2258, at 5800 College Ave, Oakland, CA

Dear Messrs. Briggs and Vicars:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- up to 580ppb TPHg and 8.7ppb benzene exists in groundwater beneath the site; and,
- a site safety plan must be prepared for construction workers in the event of excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enlosures: 1. Case Closure Letter 2. Case Closure Summary

c: Frank Kliewer, City of Oakland, Planning Dept, 1330 Broadway, 2nd Floor, Oakland, CA 94612
files (chevron2-4)

RO #01-0380

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date: May 7, 1998**

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Eva Chu** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Chevron Service Station #2258**
Site facility address: **5800 College Ave, Oakland, CA**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **1105**
URF filing date: **11/22/88** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
1. **Phil Briggs** **Chevron USA** **P.O. Box 5004** **San Ramon, C 94583-0804**	2. **Jon Vicars** **2980 College Ave** **Berkeley, CA 94605**	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000	Gasoline	Removed	Oct 1988
2	10,000	"	"	"
3	5,000	"	"	"
4	1,000	Waste Oil	"	"

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **3/18/98**
Monitoring Wells installed? **Yes** Number: **8 monitoring wells, 2 extraction wells**
Proper screened interval? **Yes, ~10' to 15' bgs in EW-2**
Highest GW depth below ground surface: **6.42'** Lowest depth: **14.84' in EW-2**
Flow direction: **SW**
Most sensitive current use: **Commercial**
Are drinking water wells affected? **No** Aquifer name: **Unknown**
Is surface water affected? **No** Nearest affected SW name: **NA**
Off-site beneficial use impacts (addresses/locations): **None**
Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	**4 USTs**	**Unknown**	**Oct 1988**
Free Product	**38 pounds soil vapor was extracted from Dec 1991 to Dec 1993**		
Soil	**Unknown qty excavated**	**Unknown**	
Groundwater	**83,000 gal. removed from the extraction system, its disposal is unknown**		

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After [2]	Before[3]	After [4]
TPH (Gas)	**2,800**		**66,000**	**580**
TPH (Diesel)	**46[5]**			
Benzene	**31**		**19,000**	**8.7**
Toluene	**210**		**27,000**	**1.3**
Ethylbenzene	**60**		**2,100**	**2.0**
Xylenes	**310**		**12,000**	**2.7**
MtBE	**NA**		**NA**	**6.2**
Oil & Grease	**9,200[5]**			
Heavy metals				
Other **SVOC**	**see notes 5 & 6**		**NA**	**NA**
HVOC	**ND**			

NOTE: 1 soil sample from gasoline pit, 10/88
2 overexcavation was performed at the site for the construction of a five story commercial building with subsurface parking, but no confirmatory soil samples were collected
3 groundwater from well MW-5, 12/88
4 groundwater from well EW-2, 12/97
5 soil sample from waste oil pit, 10/88
6 3.2 ppm 2-Methylnaphthalene, 2.0 ppm naphthalene

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____
Does corrective action protect public health for current land use? **YES**
Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**
Should corrective action be reviewed if land use changes? **YES**
Monitoring wells Decommissioned: **Yes**
Number Decommissioned: **5** Number Retained: **5**
List enforcement actions taken: **None**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva** CHW — Title: **Haz Mat Specialist**

Signature: [signature] — Date: 5/7/98

Reviewed by

Name: **Madhulla Logan** — Title: **Haz Mat Specialist**

Signature: [signature] — Date: 7/20/98

Name: **Thomas Peacock** — Title: **Supervisor**

Signature: [signature] — Date:

VI. RWQCB NOTIFICATION

Date Submitted to RB: 5/8/98 — RB Response:

RWQCB Staff Name: **Chuck Headlee** — Title: **REG**

Signature: [signature] — Date: 5/18/98

VII. ADDITIONAL COMMENTS, DATA, ETC.

Three fuel USTs (2-10K, 1-5K) in a common pit and a waste oil UST (1K) in a separate pit were removed in October 1988. Soil samples collected from the fuel tank pit contained up to 2,800 ppm TPHg, and 31, 210, 60, and 310 ppm BTEX, respectively. The soil sample from the waste oil pit contained up to 9,200 ppm TOG and various low levels of SVOCs. Soil samples collected from the product lines did not contain petroleum hydrocarbons.

In December 1988 five groundwater monitoring wells (MW-1 through MW-5) were installed. Soil samples were collected from the vadose zone of each boring. Analytical results were unremarkable for TPHg and BTEX, the only analytes sought. However, the groundwater samples contained up to 66,000 ppb TPHg and 19,000 ppb benzene. Seven additional soil borings were drilled to 20' bgs in April 1989 to assess the extent of hydrocarbon contamination in soil. Only the boring on the south side of the former USTs detected up to 15 ppm TPHg. BTEX were detected at very low concentrations in the borings (the report documenting the seven additional borings is not available to this office).

Wells MW-1 through MW-5 were destroyed in June 1989, prior to the construction of a 5-unit commercial building with subsurface parking. During construction, soil was excavated, removing additional contaminated soil in the vicinity of the former USTs and dispenser islands. Confirmatory soil samples were not collected. A soil vapor extraction system was installed below the new parking structure's concrete floor to prevent hydrocarbon vapors from potentially accumulating beneath the concrete pad. In addition, two groundwater extraction wells, EW1 and EW2, were installed. Groundwater extraction operated from April 1991 through November 1991 when water levels dropped below the well pumps. At this time vapor extraction began. The combined soil vapor/groundwater extraction operated cyclically until December 1993. A total of ~83,000 gallons of water and ~38 pounds of hydrocarbon vapors were extracted.

Off-site and downgradient monitoring wells, MW-6 and MW-7, were installed in August 1990, and well MW-8 was installed in July 1996. Groundwater has been collected from the onsite extraction wells and off-site monitoring wells since 1990. The offsite wells have not detected TPHg, BTEX, or MtBE. The hydrocarbon levels in EW1 and EW2 have decreased over the years to levels, which would not pose a risk to human health. Continued monitoring is not warranted.

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.

chevron2.1

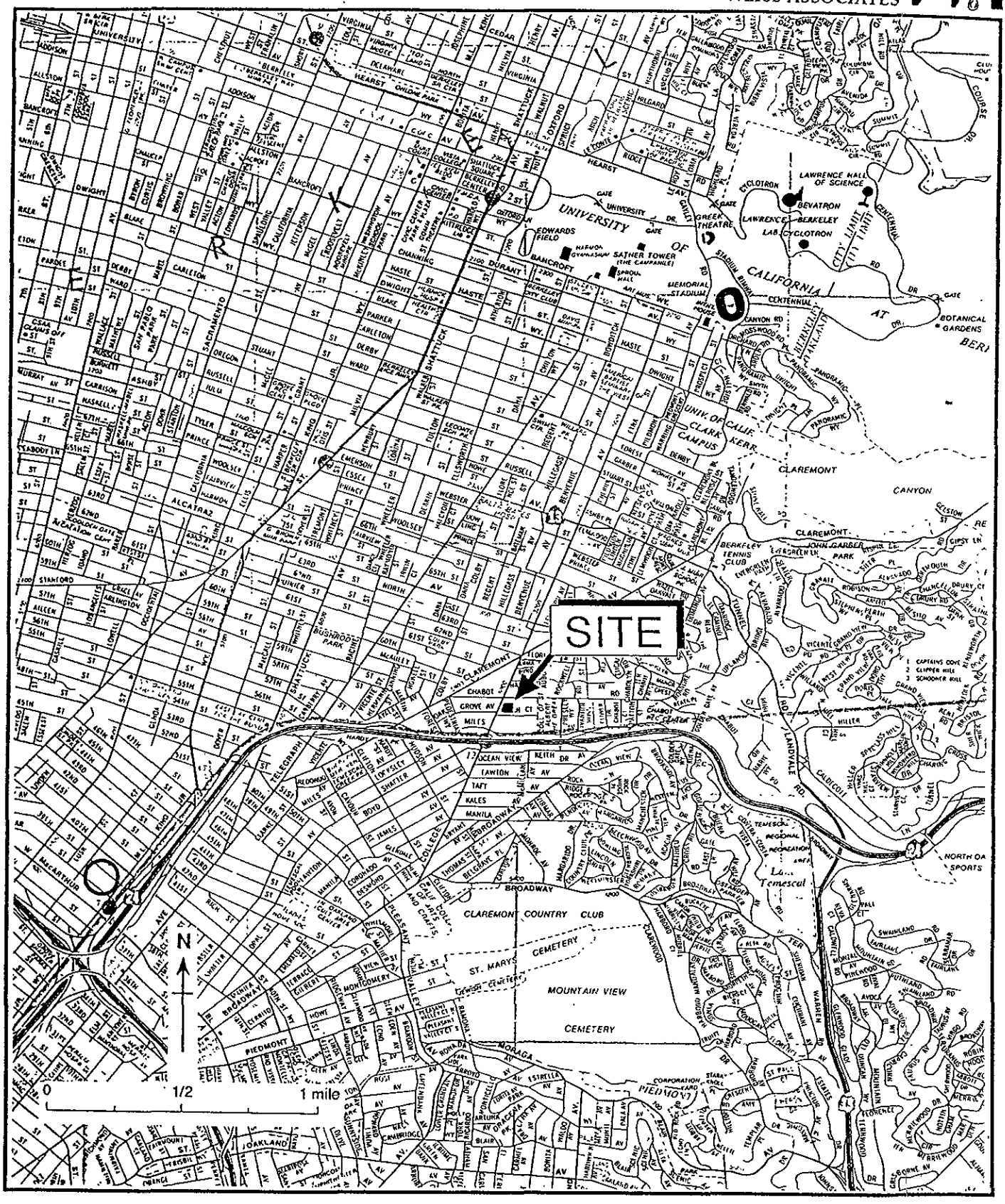


Figure 1. Site Location Map, Former Chevron Service Station #9-2258, 5800 College Avenue, Oakland, California

DIAGRAM

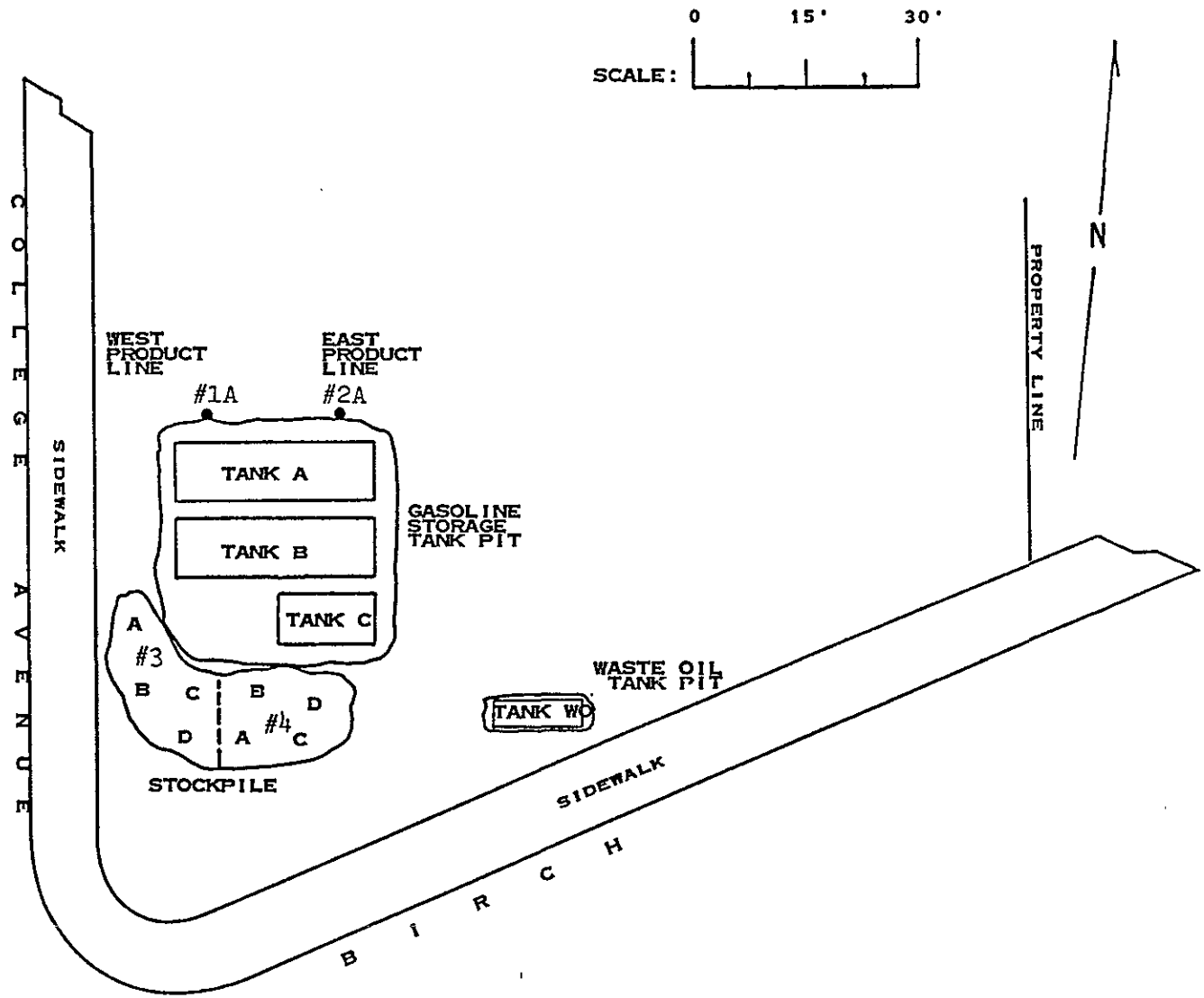
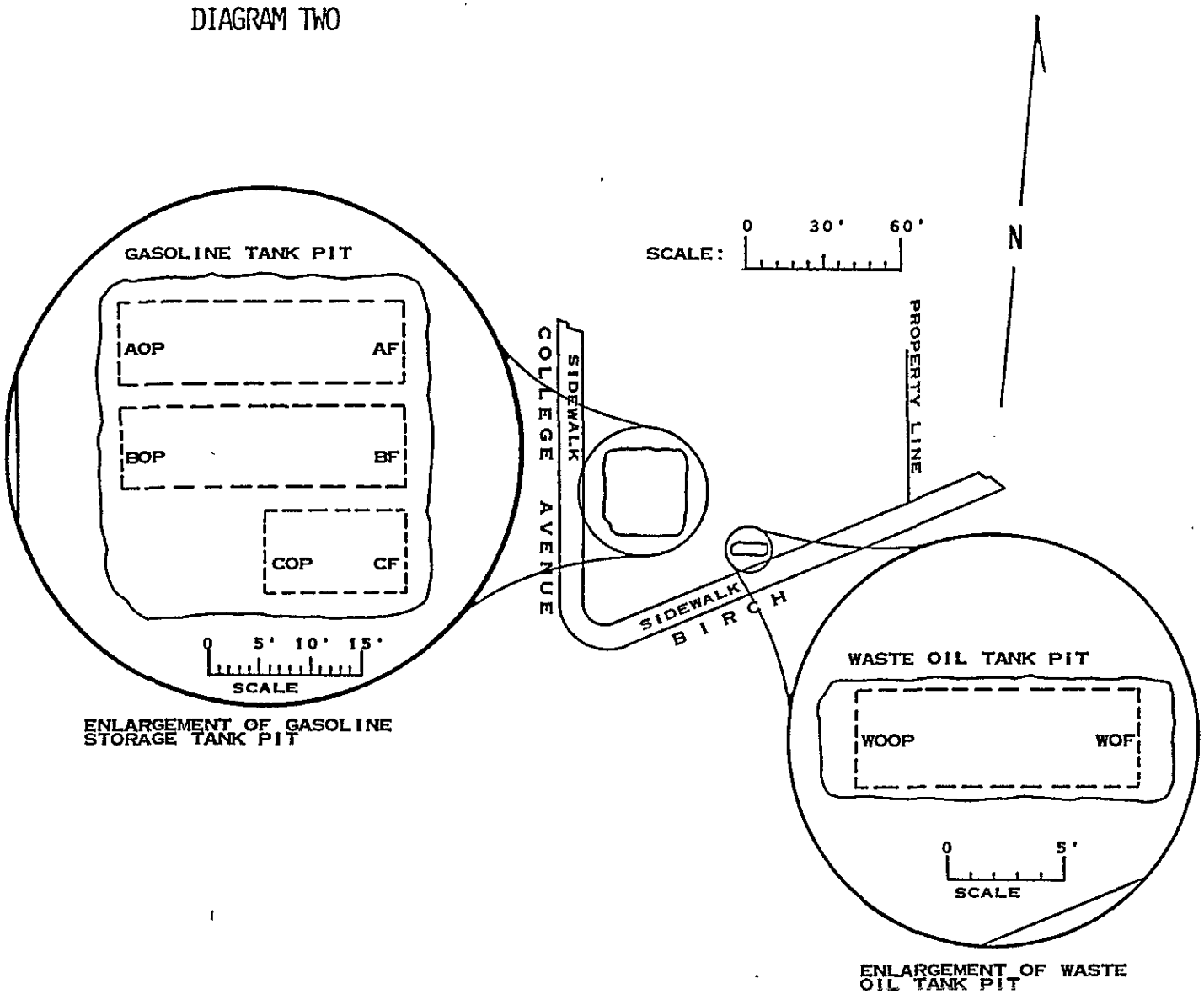

0
15'
30'
SCALE:
N
PROPERTY LINE
COLLEGE AVENUE
SIDEWALK
WEST PRODUCT LINE
EAST PRODUCT LINE
#1A
#2A
TANK A
TANK B
TANK C
GASOLINE STORAGE TANK PIT
A
#3
B
C
B
D
D
A
#4
C
STOCKPILE
WASTE OIL TANK PIT
TANK WO
SIDEWALK
BIRCH

DIAGRAM TWO



MAP REF: THOMAS BROS. ALAMEDA COUNTY P.4 D-4

SAMPLING PERFORMED BY MARGO MACKEY

DIAGRAMS PREPARED BY BRENT ADAMS

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS ENTL LABORATORY	LABORATORY SAMPLE I.D.	ANALYTICAL RESULTS IN PARTS PER MILLION -- PPM TPH AS GAS	BEN-ZENE	TOL-UENE	ETHYL BEN-ZENE	XY-LENES
AP	14.5	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#2	SEQUOIA	8101643	2600	0.34	35	49	310
Aop	13.0	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#3	SEQUOIA	8101644	4.0	ND	ND	ND	ND
BP	12.5	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#1	SEQUOIA	8101642	2.4	ND	ND	ND	ND
Bop	13.0	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#4	SEQUOIA	8101645	5.7	ND	ND	ND	ND
CP	13.0	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#5	SEQUOIA	8101646	9.7	ND	ND	ND	ND
Cop	12.5	STANDARD	INTRFACE	SOIL	10/20/88	88294-M-1	#6	SEQUOIA	8101647	2800	31	210	60	300
STOCK	12"	SURVEY	BAAQMD MODIFD	SOIL	10/19/88	88293-M-1	#3A-D	SEQUOIA	8101640	2.5	ND	ND	ND	0.11
STOCK	12"	SURVEY	BAAQMD MODIFD	SOIL	10/19/88	88293-M-1	#4A-D	SEQUOIA	8101641	35	0.094	0.61	0.23	2.0
PRODUCT LINE SAMPLES														
PLS	4'	STANDARD	HANDDRIVE	SOIL	10/19/88	88293-M-1	#1A	SEQUOIA	8101638	ND	ND	ND	ND	ND
PLS	4'	STANDARD	HANDDRIVE	SOIL	10/19/88	88293-M-1	#2A	SEQOUIA	8101639	ND	ND	ND	ND	ND

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

ANALYTICAL RESULTS IN PARTS PER MILLION -- PPM

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	TPH AS GAS	BEN-ZENE	TOL-UENE	ETHYL BEN-ZENE	XY-LENES
WoF	8.0	STANDARD	INTERFACE	SOIL	10/20/88	88294-M-1	#7	SEQUOIA	8101648	24	ND	ND	0.20	1.2
	10.5	ELECTIVE	EXPLOR	SOIL	10/20/88	88294-M-1	#8	SEQUOIA	8101949	7.9	ND	ND	ND	ND

ANALYTICAL RESULTS IN PARTS PER MILLION -- PPM

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	TPH-HBP DIESEL	Cd	Cr	Pb	Zn
WoF	8.0	STANDARD	INTERFACE	SOIL	10/20/88	88294-M-1	#7	SEQUOIA	8101648	46	1.0	48	7.0	230
	10.5	ELECTIVE	EXPLOR	SOIL	10/20/88	88294-M-1	#8	SEQUOIA	8101949	6.0	0.27	42	8.7	55

ANALYTICAL RESULTS IN PARTS PER BILLION -- PPB

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TOTAL OIL & GREASE	PPB EPA 8010 COMPOUNDS	PPB EPA 8240 COMPOUNDS	PPB EPA 8270 COMPOUNDS
WoF	8.0	STANDARD	INTERFACE	SOIL	10/20/88	88294-M-1	#7	SEQUOIA	8101648	9200	ND	--	SEE LAB REPORT
	10.5	ELECTIVE	EXPLOR	SOIL	10/20/88	88294-M-1	#8	SEQUOIA	8101949	4100	--	SEE LAB REPORT	SEE LAB REPORT

SEQUOIA ANALYTICAL

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583-0804
Attn: Mike Vomund

Date Sampled: 10/20/88
Date Received: 10/20/88
Date Extracted: 10/20/88
Date Analyzed: 10/20/88
Date Reported: 10/24/88

Project: BTS #88294M1, Chevron #2258, 5800 College Ave., Oakland

Sample Number	Sample Description
810648 W.F 8'	Soil #7

SEMI-VOLATILE ORGANICS by MASS SPECTROMETRY
Non-Calibrated Compounds

Analyte	Concentration µg/kg
Benzene,1,2,3-Trimethyl-	8700
Decane	9200
Benzene,1-Ethyl-3-Methyl-	4100
Nonane,2,6-Dimethyl-	4100
Nonane,4,5-Dimethyl-	5000
Naphthalene,1-Methyl-	2800
Heptadecane,2,6,10,15-Tetramethyl-	51000
Pentacosane	11000
Pentatriacontane	51000
Dodecane 2-cyclohexyl-,2-cyclohexyl-	11000
Hexatriacontane	21000
High Molecular Weight Hydrocarbon Matrix	71000000

Method of Analysis: EPA 8270 & "Open Scan"

NOTE: All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SEQUOIA ANALYTICAL
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Chevon U.S.A. Inc.

Sample Number: 8101648

Sample Description: Soil, #7

SEMI-VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Di-N-octyl phthalate	1000	N.D.
Fluoranthene	1000	N.D.
Fluorene	1000	N.D.
Hexachlorobenzene	1000	N.D.
Hexachlorobutadiene	1000	N.D.
Hexachlorocyclopentadiene	1000	N.D.
Hexachloroethane	1000	N.D.
Indeno(1,2,3-cd)pyrene	1000	N.D.
Isophorone	1000	N.D.
2-Methylnaphthalene	1000	3200
2-Methylphenol	1000	N.D.
4-Methylphenol	1000	N.D.
Naphthalene	1000	2000
2-Nitroaniline	1000	N.D.
3-Nitroaniline	1000	N.D.
4-Nitroaniline	1000	N.D.
Nitrobenzene	1000	N.D.
2-Nitrophenol	1000	N.D.
4-Nitrophenol	5000	N.D.
N-Nitrosodiphenylamine	1000	N.D.
N-Nitroso-di-N-propylamine	1000	N.D.
Pentachlorophenol	5000	N.D.
Phenanthrene	1000	N.D.
Phenol	1000	N.D.
Pyrene	1000	N.D.
1,2,4-Trichlorobenzene	1000	N.D.
2,4,5-Trichlorophenol	1000	N.D.
2,4,6-Trichlorophenol	1000	N.D.

Method of Extraction: EPA 3550 Method of Analysis: EPA 8270

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

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

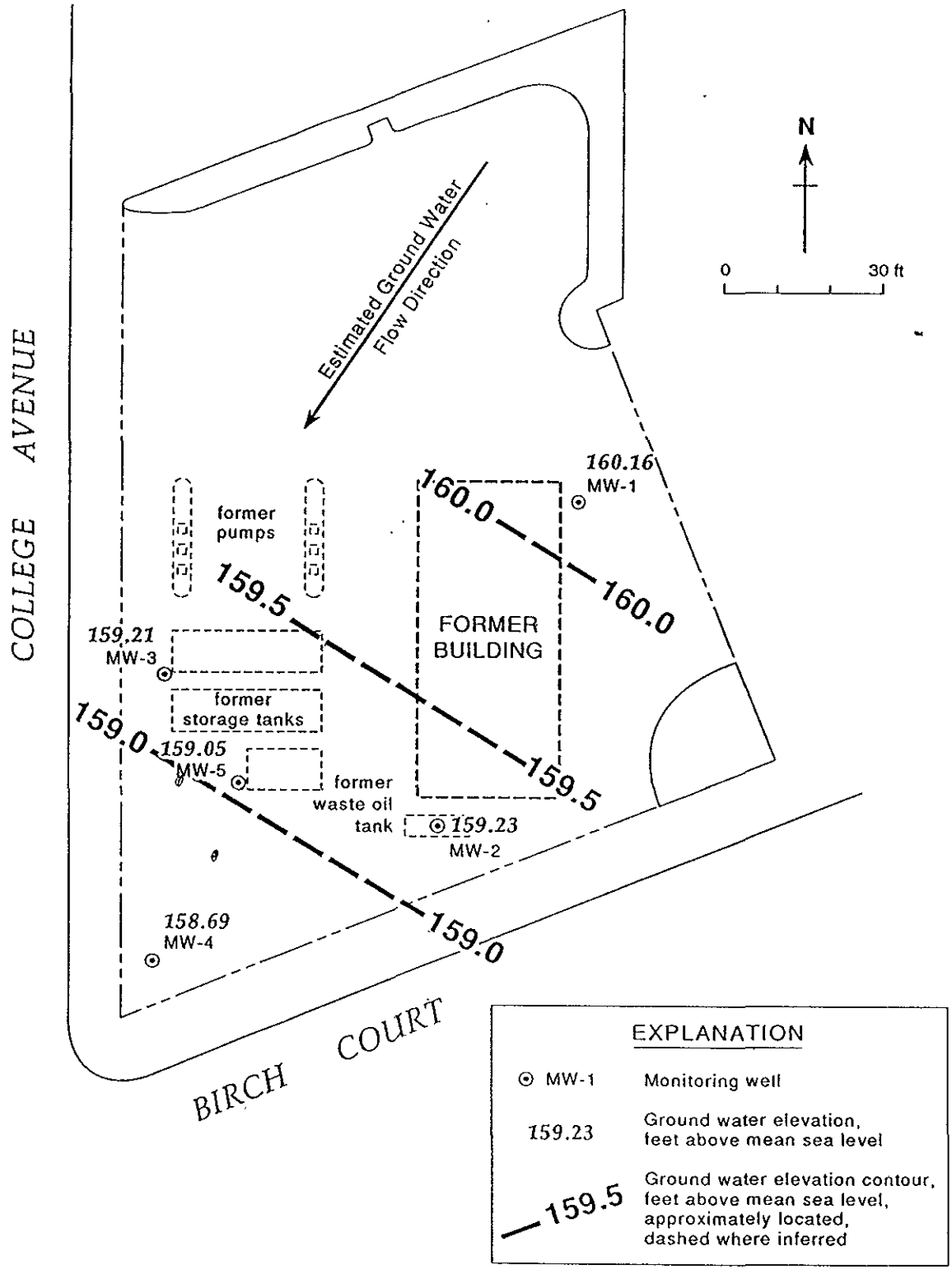


Figure 3. Ground Water Elevation Contours for 15 December 1988 - Chevron Service Station #92258, Oakland, California

TABLE 1. Analytic Results for Soil - Chevron Service Station #92258, Oakland, California

Soil Boring (Well ID)	Sample Depth	Date Sampled (ft)	Analytic Lab	Analytic Method	Sat/ Unsat	TFHC	B	E	T	X
						<---------- parts per million (mg/kg) ----------				>
BH-A	20.8	12-06-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
(MW-1)	26.2	12-06-88	Clayton	8015/8020	Sat	<10	<0.04	<0.03	<0.02	<0.04
BH-B	15.8	12-06-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
(MW-2)	20.8	12-06-88	Clayton	8015/8020	Unsat	<10	0.16	<0.03	<0.02	<0.04
	28.8	12-06-88	Clayton	8015/8020	Sat	20	0.43	0.35	0.86	1.4
BH-C	9.8	12-07-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
(MW-3)	13.8	12-07-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
	17.8	12-07-88	Clayton	8015/8020	Unsat	<10	0.06	0.06	0.02	0.37
	21.8	12-07-88	Clayton	8015/8020	Unsat	80	0.06	0.19	<0.02	0.76
	26.3	12-07-88	Clayton	8015/8020	Sat	<10	<0.04	<0.03	<0.02	<0.04
BH-D	20.7	12-08-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
(MW-4)	25.7	12-08-88	Clayton	8015/8020	Sat	<10	<0.04	<0.03	<0.02	<0.04
BH-E	10.7	12-08-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
(MW-5)	15.7	12-08-88	Clayton	8015/8020	Unsat	<10	<0.04	<0.03	<0.02	<0.04
	20.7	12-08-88	Clayton	8015/8020	Unsat	<10	0.31	<0.03	0.04	0.11
	25.3	12-08-88	Clayton	8015/8020	Sat	50	1.2	0.67	2.7	4.0

Abbreviations:

TFHC = Total Fuel Hydrocarbons as Gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
<n = Not detected at detection limit of n ppm
Sat = Saturated soil sample
Unsat = Unsaturated soil sample

Analytic Laboratory:

Clayton = Clayton Environmental Consultants, Pleasanton, California

Analytic Methods:

8015 = EPA Method 8015, Non-Halogenated Volatile Organics
8020 = EPA Method 8020, Aromatic Volatile Organics

WEISS ASSOCIATES

TABLE 2. Analytic Results for Ground Water - Chevron Service Station #92258, Oakland, California

Sample ID	Date Sampled	Analytic Lab	Analytic Method	VPHC	B	E	T	X
				<---------- parts per billion (µg/L) ---------->				
MW-1	13 Dec 88	Clayton	8015/602	<50	<0.4	<0.3	<0.3	<0.4
MW-2	13 Dec 88	Clayton	8015/602	22,000	2,700	870	6,400	4,000
MW-3	13 Dec 88	Clayton	8015/602	7,800	570	450	920	2,000
MW-4	14 Dec 88	Clayton	8015/602	31,000	5,900	1,900	5,600	6,700
MW-5	14 Dec 88	Clayton	8015/602	66,000	19,000	2,100	27,000	12,000
DHS Action Levels	NA	NA	NA	NA	0.7	680	100	620

Abbreviations:

VPHC = Volatile Petroleum Hydrocarbons as Gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
<n = Not detected at detection of limit of n ppb
DHS Levels = Department of Health Services Recommended Drinking Water Action Levels
NA = Not Applicable

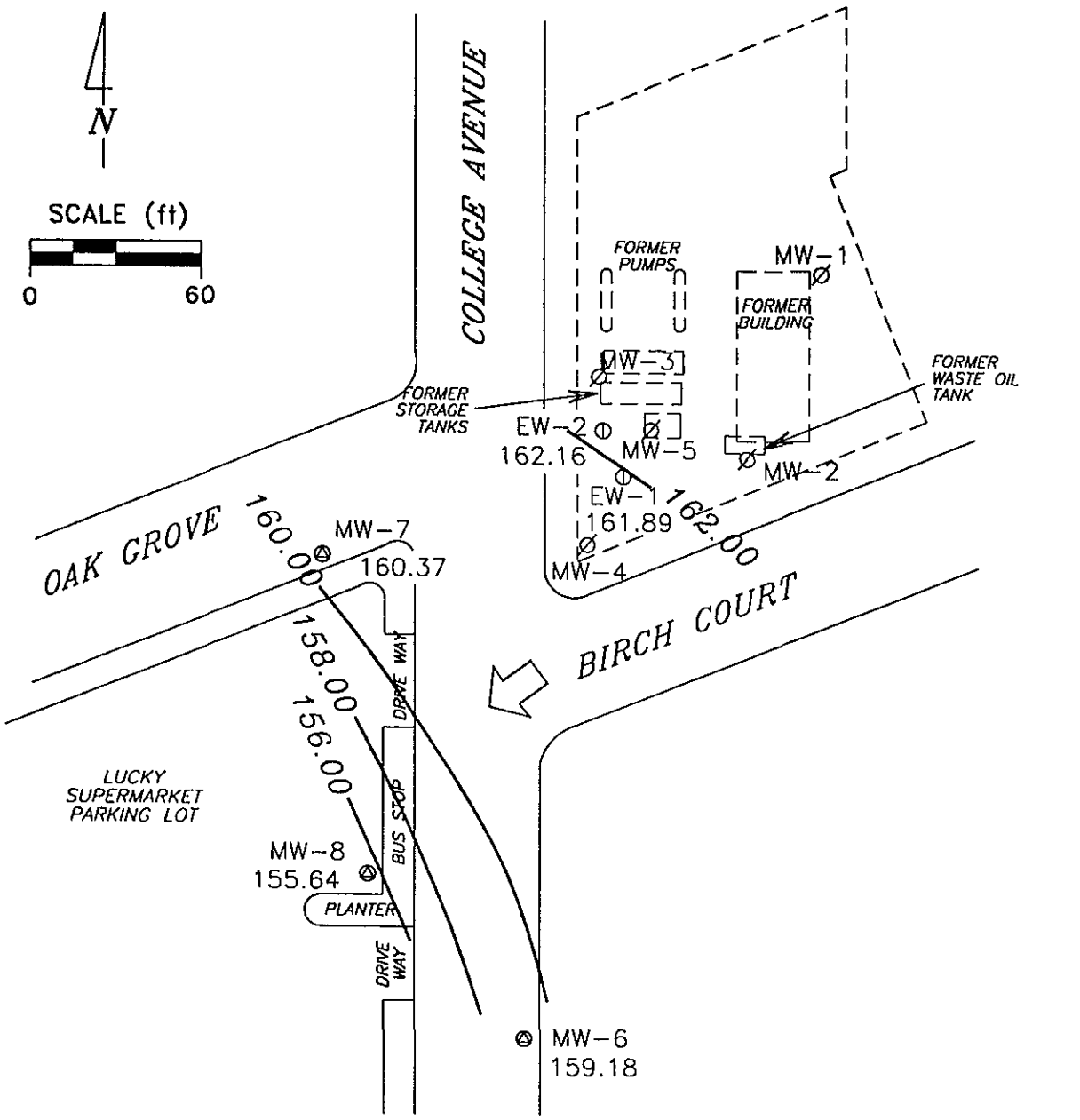
Analytic Laboratory:

Clayton = Clayton Environmental Consultants Pleasanton, California

Analytic Methods:

8015 = Total Fuel Hydrocarbons by Modified EPA Method 8015
602 = Aromatic Volatile Hydrocarbons by EPA Method 602

Method 602, respectively. The analytic results indicate that VPHC were detected in concentrations above 1,000 ppb in ground water wells MW-2 through MW-5. Except for ethylbenzene in well MW-3, BETX concentrations were above California Department of Health Services (DHS) Recommended Drinking Water Action Levels in ground water wells MW-2 through MW-5. No VPHC or BETX were detected in ground water samples from well MW-1.



EXPLANATION

- ⊘ MONITORING WELL
- ⊕ EXTRACTION WELL
- Ø DESTROYED WELL
- 159.18 GROUNDWATER ELEVATION (FT,MSL)
- 158.00 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.04

REGISTERED GEOLOGIST
STEVEN E. KRCIK
No 4976
9/98
STATE OF CALIFORNIA

Basemap from Geoconsultants, Inc.

PREPARED BY
RRM
engineering contracting firm

Former Chevron Station 9-2258
5800 College Avenue
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP, DECEMBER 12, 1997

FIGURE:
1
PROJECT:
DAC04

TABLE 1. Results of Soil Analyses - Former Chevron Service Station #9-2258, 5800 College Avenue, Oakland, California

Soil Boring (Well ID)	Sample Depth	Date Sampled	Analytic Lab	Analytic Method	Sat/ Unsat	TPH-G	B	E	T	X
						<----------parts per million (mg/kg)---------->				
BH-F	16.0	08/02/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015
(MW-6)	19.5	08/02/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015
	22.5	08/02/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015
BH-G	16.0	08/03/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015
(MW-7)	21.0	08/03/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015
	26.0	08/03/90	GTEL	8015/8020	Unsat	<10	<0.005	<0.005	<0.005	<0.015

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
Sat = Saturated soil sample
Unsat = Unsaturated soil sample
<n = Not detected at detection limit of n ppm

Analytical Laboratory:

GTEL = GTEL Environmental Laboratories, Concord, California

Analytic Methods:

8015 = Modified EPA Method 8015, TPH-G
8020 = EPA Method 8020, BETX

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	Other VOCs EPA 601	MTBE
MW-6											
08/16/90	178.76	156.68	22.08	--	<50	<0.3	<0.3	<0.3	<0.3	--	--
04/12/91	178.76	160.06	18.70	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/12/91	178.76	156.66	22.10	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/11/91	178.76	155.65	23.11	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/06/92	178.76	156.90	21.86	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/16/92	178.76	160.12	18.64	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/14/92	178.76	156.61	22.15	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/15/92	178.76	155.81	22.95	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/07/93	178.76	159.65	19.11	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/06/93	178.76	160.24	18.52	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
07/13/93	178.76	157.76	21.00	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
12/13/93	178.76	157.47	21.29	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/31/94	178.76	158.56	20.20	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	178.76	156.75	22.01	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/21/94	178.76	--	--	Inaccessible	--	--	--	--	--	--	--
03/23/95	178.76	163.67	15.09	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/14/95	178.76	158.15	20.61	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/14/95	178.67	157.13	21.54	TOC adjusted	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/20/95	178.67	158.36	20.31	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/25/96	178.67	161.14	17.53	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/21/96	178.67	--	--	Inaccessible	--	--	--	--	--	--	--
09/30/96	178.67	156.41	22.26	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/17/96	178.67	159.10	19.57	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
03/31/97	178.67	158.39	20.28	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/23/97	178.67	157.06	21.61	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/26/97	178.67	156.51	22.16	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/12/97	178.67	159.18	19.49	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	Other VOCs EPA 601	MTBE
MW-7											
08/16/90	180.19	157.77	22.42	--	<50	<0.3	<0.3	<0.3	<0.3	--	--
04/12/91	180.19	160.64	19.55	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/11/91	180.19	157.89	22.30	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/11/91	180.19	156.90	23.29	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/06/92	180.19	158.56	21.63	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/16/92	180.19	160.76	19.43	--	110	4.7	1.6	<0.5	5.0	--	--
07/14/92	180.19	158.00	22.19	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/15/92	180.19	157.21	22.98	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/07/93	180.19	160.97	19.22	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/06/93	180.19	160.77	19.42	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
07/13/93	180.19	159.21	20.98	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
12/13/93	180.19	159.00	21.19	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/31/94	180.19	159.83	20.36	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	180.19	158.18	22.11	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/21/94	180.19	161.11	19.08	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/23/95	180.19	163.21	16.98	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/14/95	180.19	159.56	20.63	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/14/95	180.19	158.59	21.60	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/20/95	180.19	159.93	20.26	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/25/96	180.19	161.28	18.91	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/21/96	180.19	159.64	20.55	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/30/96	180.19	157.72	22.47	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/17/96	180.19	160.34	19.85	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
03/31/97	180.19	159.91	20.28	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/23/97	180.19	158.58	21.61	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/26/97	180.19	157.85	22.34	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/12/97	180.19	160.37	19.82	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	Other VOCs EPA 601	MTBE
MW-8											
07/18/96	176.27	153.77	22.50	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/30/96	176.27	153.00	23.27	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/17/96	176.27	155.57	20.70	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
03/31/97	176.27	154.92	21.35	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/23/97	176.27	153.66	22.61	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/26/97	176.27	153.08	23.19	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/12/97	176.27	155.64	20.63	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

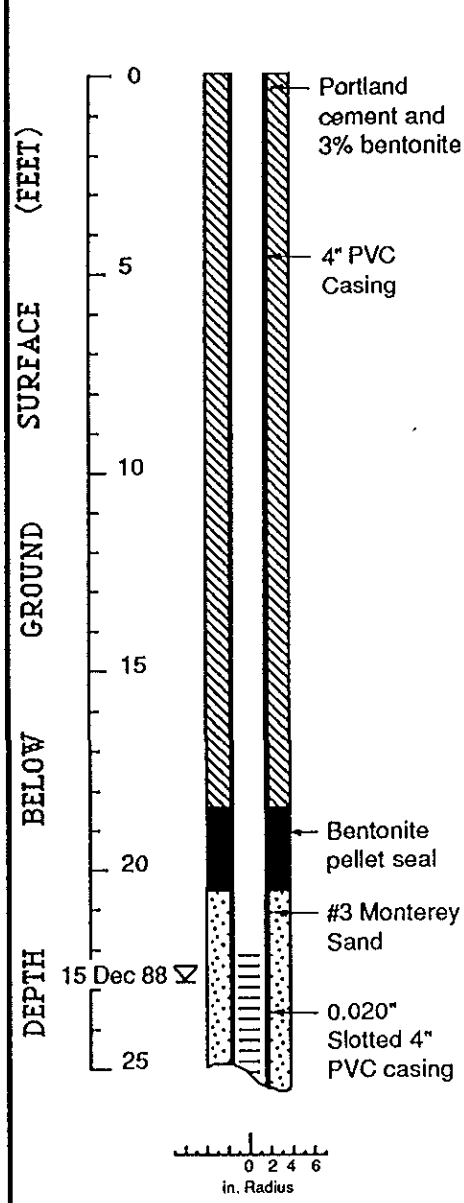
DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	Other VOCs EPA 601	MTBE
EW-1											
01/18/90	172.02	161.61	10.41	--	32,000	4800	1500	3600	6200	--	--
08/16/90	172.02	158.38	13.64	--	18,000	5100	950	110	1600	--	--
04/12/91	172.02	161.04	10.98	--	14,000	1300	320	240	1300	--	--
07/11/91	172.02	155.93	16.09	--	4800	570	38	95	390	--	--
10/11/91	172.02	157.82	14.20	--	110	5.6	1.9	<0.5	2.3	--	--
01/06/92	172.02	157.80	14.22	--	28,000	2000	820	550	2900	--	--
04/16/92	172.02	160.61	11.41	--	9400	920	140	68	420	--	--
07/14/92	172.02	154.14	17.88	--	210	27	0.5	2.5	33	--	--
10/15/92	173.35	157.97	15.38	TOC adjusted	3600	550	140	4.2	28	--	--
01/07/93	173.35	162.40	10.95	--	--	--	--	--	--	--	--
03/01/93	173.35	164.22	9.13	--	2800	280	110	20	160	--	--
04/06/93	173.35	158.28	15.07	--	3500	250	130	31	220	--	--
07/13/93	173.35	157.21	16.14	--	3100	220	150	45	430	--	--
12/13/93	173.35	156.75	16.60	--	280	13	3.6	2.1	28	--	--
03/31/93	173.35	162.49	10.86	--	5700	640	510	49	610	--	--
10/24/94	173.35	159.09	14.26	--	280	18	17	1.3	24	--	--
12/21/94	173.35	163.74	9.61	--	120	7.2	5.5	<0.5	7.9	--	--
03/23/95	173.35	166.82	6.53	--	110	3.9	4.4	<0.5	5.8	--	--
06/14/95	173.35	160.67	12.68	--	1300	45	64	8.6	60	--	--
09/14/95	173.35	159.60	13.75	--	1500	35	76	<5.0	95	--	--
12/20/95	173.35	160.71	12.64	--	930	29	53	<2.0	73	--	--
03/25/96	173.35	163.85	9.50	--	80	1.6	1.7	1.3	1.8	--	<2.5
06/21/96	173.35	160.60	12.75	--	300	15	0.67	16	1.4	--	5.5
09/30/96	173.35	158.60	14.75	--	200	<0.5	0.58	<0.5	0.90	--	<2.5
12/17/96	173.35	161.78	11.57	--	830	25	2.0	0.65	43	--	<2.5
03/31/97	173.35	160.91	12.44	--	170	12	<0.5	<0.5	4.2	--	3.2
06/23/97	173.35	159.58	13.77	--	130	<0.5	<0.5	0.78	<0.5	--	<2.5
09/26/97	173.35	158.90	14.45	--	160	2.9	<0.5	1.93	0.80	--	8.4
12/12/97	173.35	161.89	11.46	--	200	5.5	0.61	<0.5	2.7	--	2.6

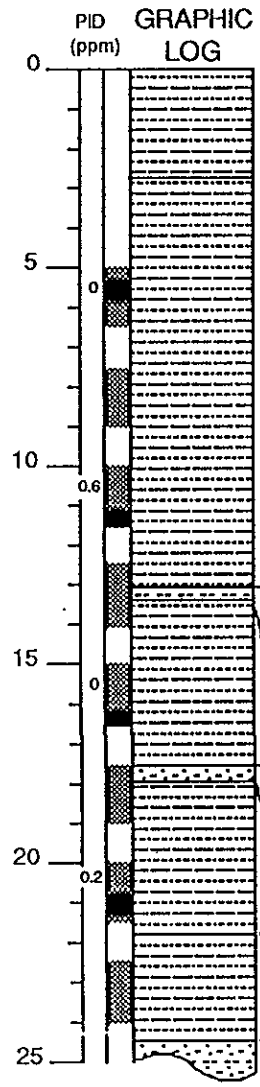
Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	Other VOCs EPA 601	MTBE
EW-2											
01/18/90	172.12	161.83	10.29	--	42,000	2900	2000	2600	9000	--	--
08/16/90	172.12	158.56	13.56	--	37,000	4600	2100	780	7000	--	--
04/12/91	172.12	159.03	13.09	--	51,000	1600	4500	590	6000	--	--
07/11/91	172.12	157.72	14.40	--	410	23	7	15	49	--	--
10/11/91	172.12	158.08	14.04	--	64	0.5	<0.5	<0.5	2.6	--	--
01/06/92	172.12	158.24	13.88	--	40,000	2600	1500	940	6000	--	--
04/16/92	172.12	161.24	10.88	--	16,000	630	450	90	1300	--	--
07/14/92	172.12	154.94	17.18	--	1800	130	58	43	280	--	--
10/15/92	173.20	158.36	14.84	TOC adjusted	510	22	18	1.3	30	--	--
01/07/93	173.20	162.89	10.31	--	--	--	--	--	--	--	--
03/01/93	173.20	164.09	9.11	--	8200	300	260	25	330	--	--
04/06/93	173.20	157.45	15.75	--	6800	320	280	26	400	--	--
07/13/93	173.20	159.00	14.20	--	12,000	690	900	200	2800	--	--
12/13/93	173.20	158.67	14.53	--	17,000	920	660	260	2400	--	--
03/31/94	173.20	162.44	10.76	--	18,000	400	680	38	1300	--	--
10/24/94	173.20	159.10	14.10	--	8700	410	450	49	980	--	--
12/21/94	173.20	163.70	9.50	--	3600	170	170	19	210	--	--
03/23/95	173.20	166.78	6.42	--	250	11	8.4	1.6	8.3	--	--
06/14/95	173.20	160.94	12.26	--	4000	200	410	24	310	--	--
09/14/95	173.20	159.84	13.36	--	9100	230	<5.0	12	340	--	--
12/20/95	173.20	160.89	12.31	--	7600	220	530	15	550	--	--
03/25/96	173.20	163.90	9.30	--	630	15	3.0	14	5.6	--	<2.5
06/21/96	173.20	160.86	12.34	--	1100	20	<2.5	23	5.7	--	<12
09/30/96	173.20	158.96	14.24	--	700	<2.5	<2.5	6.1	3.7	--	800
12/17/96	173.20	161.94	11.26	--	1400	43	3.0	62	38	--	13
03/31/97	173.20	161.10	12.10	--	480	3.0	1.3	1.0	<0.5	--	<2.5
06/23/97	173.20	159.79	13.41	--	2300	20	6.4	39	30	--	18
09/26/97	173.20	159.03	14.17	--	1100	6.0	<2.0	4.9	3.4	--	<10
12/12/97	173.20	162.16	11.04	--	580	8.7	1.3	2.0	0.97	--	6.2

WELL MW-1 (BH-A)





DESCRIPTION

Silty CLAY (CL); dark gray; stiff; damp; 10% fine sand; low est K

Clayey SILT (ML); dark brown; stiff; 10-15% fine sand; low est K

Medium yellow-brown; medium stiff; damp; 15-20% fine sand below 7.0'

Increasing moisture at 11.0'

Silty SAND (SM); medium brown; dense; moist; 20-25% gravels to 1.0"; mod est K

Clayey SILT (ML); green-brown; soft to very soft; moist to wet; low est K

Sandy SILT (ML); red-brown; medium stiff; wet; 15-20% medium to coarse sand; low est K

Clayey SILT (ML); green- brown; soft to medium stiff; wet; low est K

Clayey SILT/ Silty CLAY (ML/CL); brown mottled orange; soft; wet; low est K

Sandy SILT (ML); medium brown; medium stiff; wet; 20-25% medium to fine sand; low est K

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample

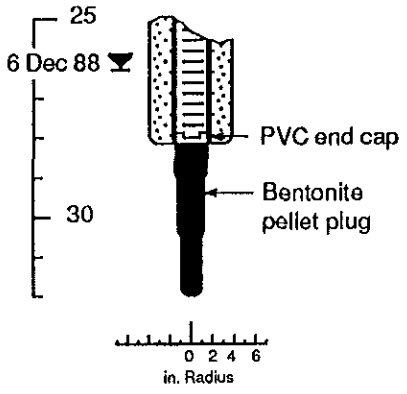
K = Estimated permeability (hydraulic conductivity)

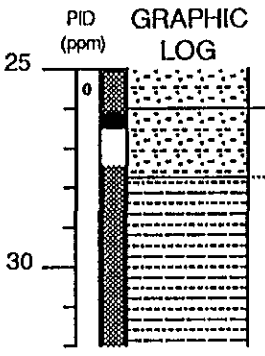
Logged by: Jim Carmody
Supervisor: Richard Weiss; EG 1112
Drilling Company: Datum Exploration, Pittsburg, CA
Driller: Jim Condrey
Drilling Method: CME-75
Dates Drilled: 6 December 1988
Well Head Completion: Locking Stovepipe
Type of sampler: Split barrel (1.4, 2.0, 2.5" ID)

Well Construction and Boring Log - Well MW-1 (BH-A)

Chevron Service Station #92258
Oakland, California

WELL MW-1 (BH-A) (cont.)





DESCRIPTION

Silty SAND (SM); medium brown; loose; <10% clay; mod est K

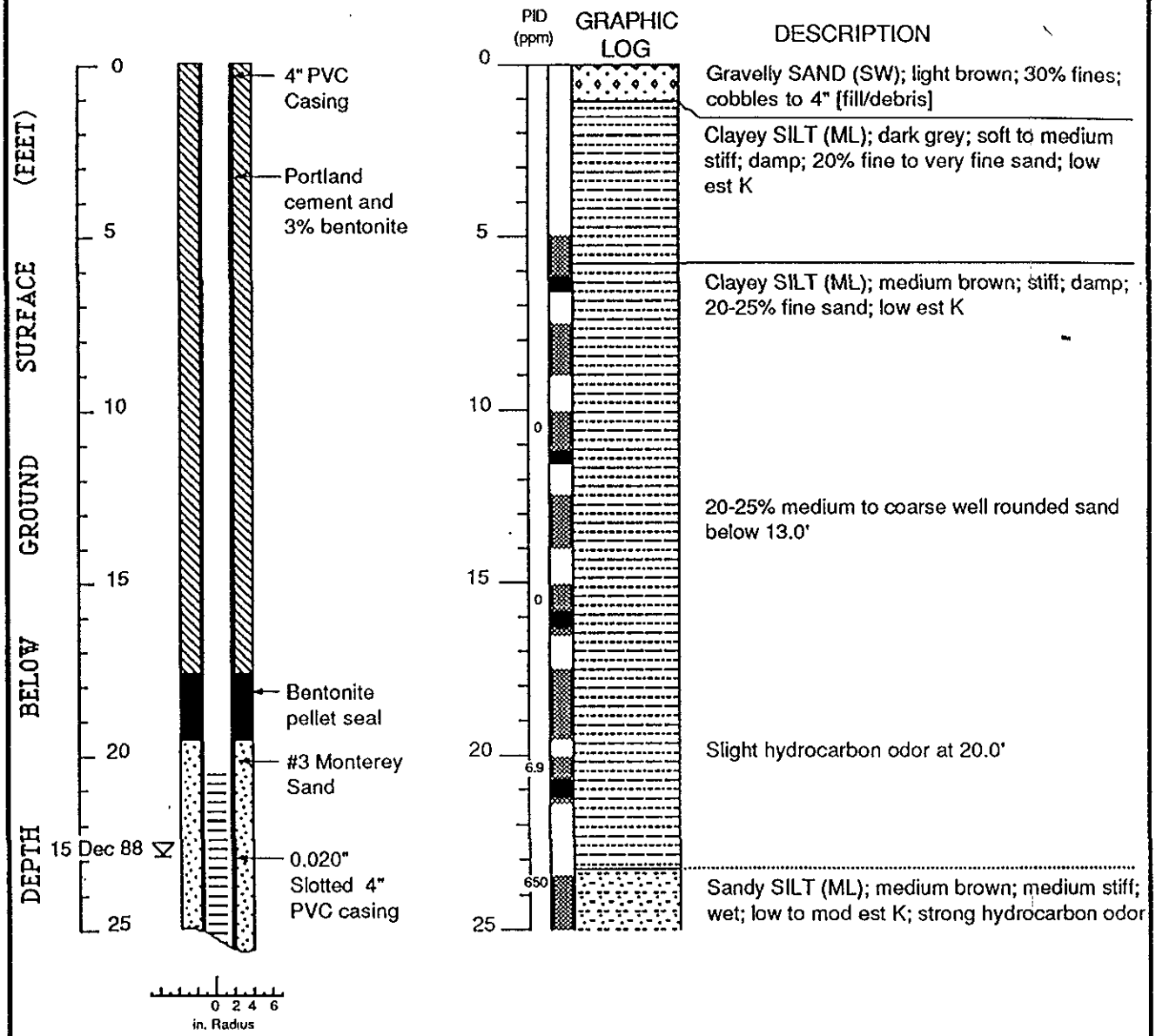
Clayey SILT (ML); light to medium brown; stiff; wet; some iron oxide; low est K

DEPTH BELOW GROUND SURFACE (FEET)

Well Construction and Boring Log - Well MW-1(BH-A)

Chevron Service Station #92258
Oakland, California

WELL MW-2 (BH-B)



EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample

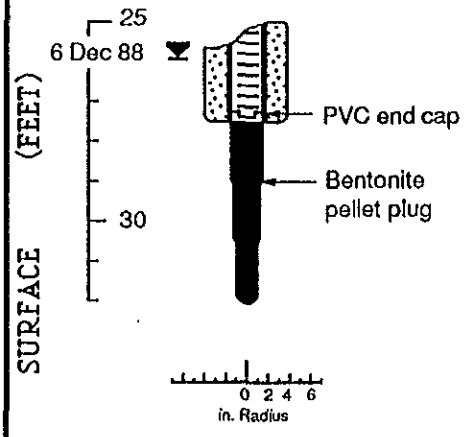
K = Estimated permeability (hydraulic conductivity)

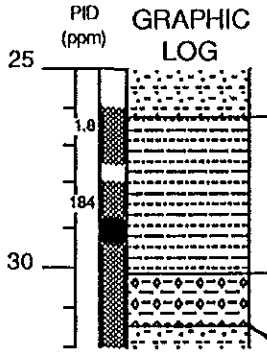
Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Datum Exploration, Pittsburg, CA
Driller:	Jim Condrey
Drilling Method:	CME-75
Dates Drilled:	6 December 1988
Well Head Completion:	Locking Stovepipe
Type of sampler:	Split barrel (1.4, 2.0, 2.5" ID)

Well Construction and Boring Log - Well MW-2 (BH-B)

Chevron Service Station #92258
Oakland, California

WELL MW-2 (BH-B) (cont.)





DESCRIPTION

Clayey SILT (ML); medium brown;very stiff; moist to wet;10-20% fine to very fine sand; low est K; moderate hydrocarbon odor

Gravelly CLAY (CH); medium brown; hard; rock fragments; low est K

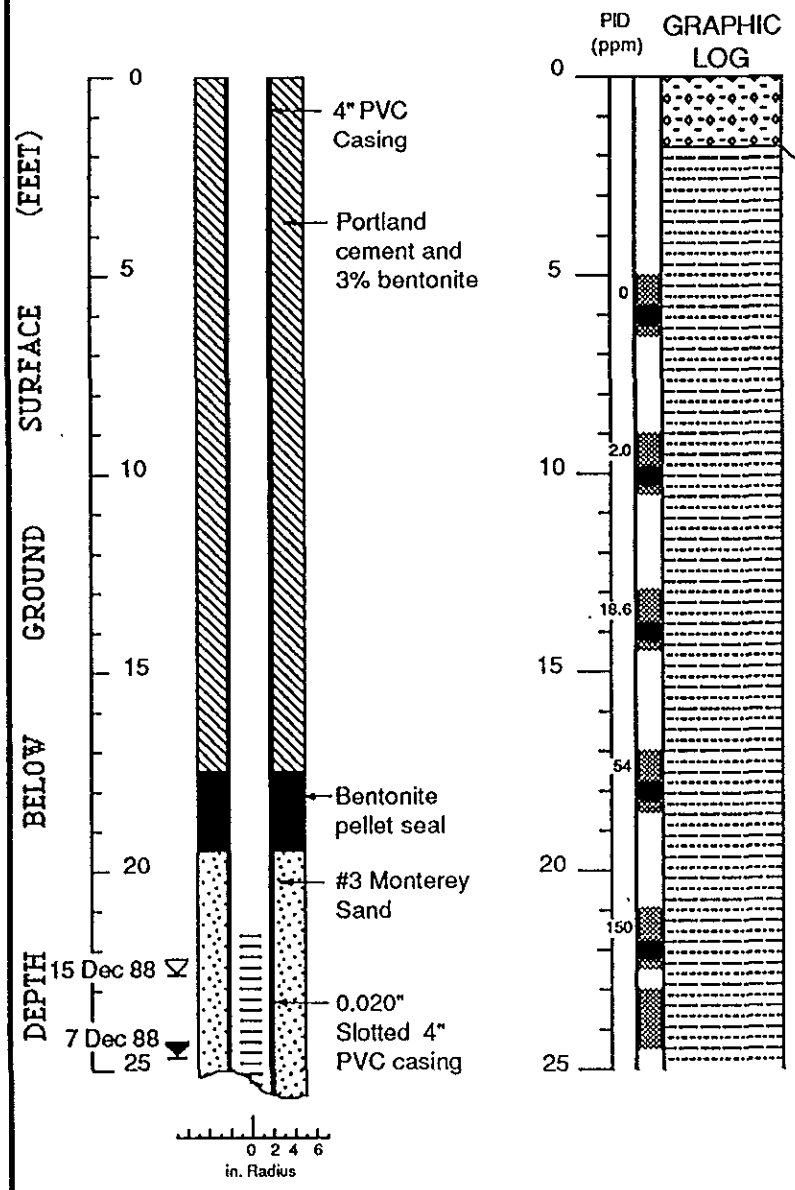
Silty SAND (SM); medium to dark brown; dense; mod est K

DEPTH BELOW GROUND SURFACE (FEET)

Well Construction and Boring Log - Well MW-2 (BH-B)

Chevron Service Station #92258
Oakland, California

WELL MW-3 (BH-C)



EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample

K = Estimated permeability (hydraulic conductivity)

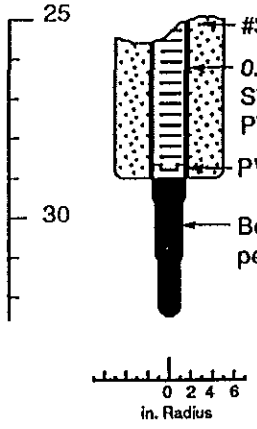
Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Datum Exploration, Pittsburg, CA
Driller:	Jim Condrey
Drilling Method:	CME-75
Dates Drilled:	7 December 88
Well Head Completion:	Locking Stovepipe
Type of sampler:	Split barrel (1.4, 2.0, 2.5" ID)

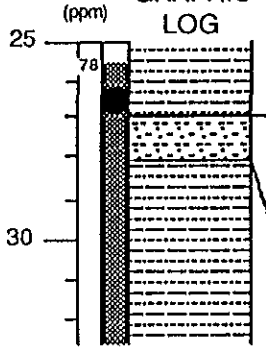
Well Construction and Boring Log - Well MW-3 (BH-C)

Chevron Service Station #92258
Oakland, California

WELL MW-3 (BH-C) (cont.)

DEPTH BELOW GROUND SURFACE (FEET)





DESCRIPTION

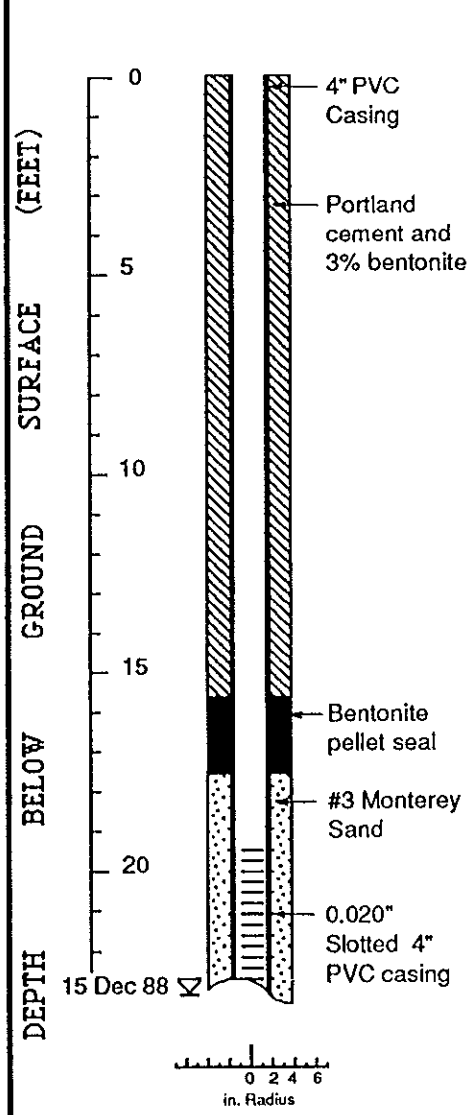
Silty SAND (SM); green-brown; very dense; wet; 25% fines; fine to very coarse subrounded to subangular sand; low to mod est K

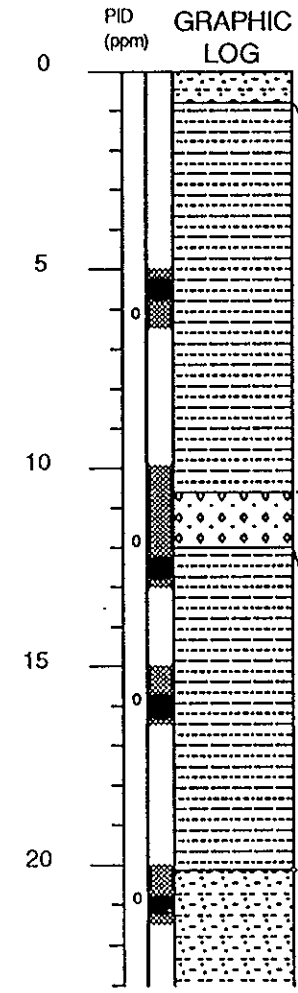
Clayey SILT/ Silty CLAY (ML/CL); green-brown; stiff; wet; low est K

Well Construction and Boring Log - Well MW-3 (BH-C)

Chevron Service Station #92258
Oakland, CA

WELL MW-4 (BH-D)





DESCRIPTION

Silty SAND (SP); light brown; loose; medium sand; 20% fines; dry [fill]

Clayey SILT (ML); dark green-grey; medium stiff; damp; 15% fine sand; low est K

Gravelly SAND (SP); brown-green; dense; moist; 20% fines; 30% subrounded to rounded gravels to 0.5" ; mod est K

Clayey SILT (ML); dark brown; stiff; damp; 15% fine sand; low est K

Moisture increasing to wet; consistancy to soft at 15.0'

Sandy SILT (ML); dark green; soft to stiff; wet; 30% fine to very fine sand; occasional well rounded gravels to 1.0"; low to mod est K

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample

K = Estimated permeability (hydraulic conductivity)

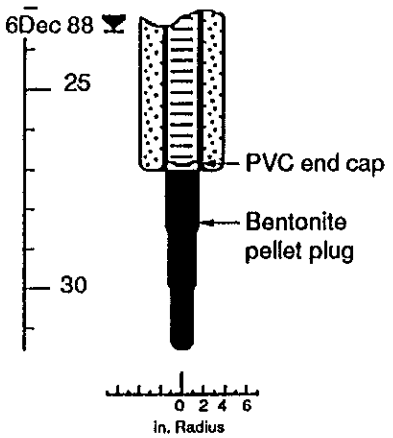
Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Datum Exploration, Pittsburg, CA
Driller:	Jim Condrey
Drilling Method:	CME-75
Dates Drilled:	8 December 1988
Well Head Completion:	Locking Stovepipe
Type of sampler:	Split barrel (1.4, 2.0, 2.5" ID)

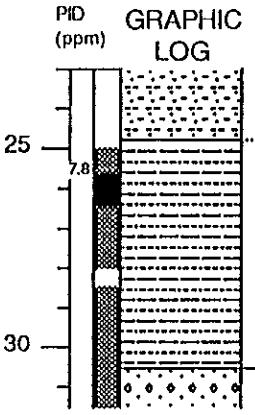
Well Construction and Boring Log - Well MW-4 (BH-D)

Chevron Service Station #92258
Oakland, California

WELL MW-4/BH-D (cont.)

DEPTH BELOW GROUND SURFACE (FEET)





DESCRIPTION

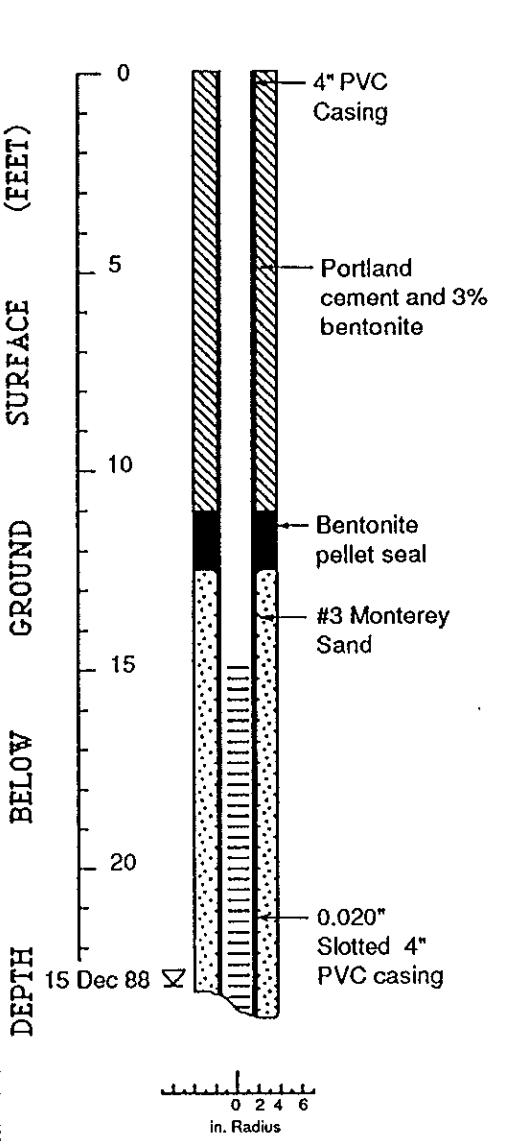
Clayey SILT (ML); mottled green-brown; 20% fine sand; very stiff; damp; low est K

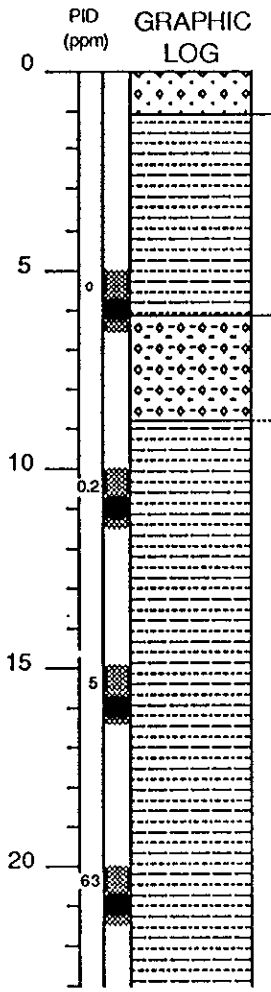
Gravelly SAND (SP); medium brown; 15-20% fines; dense to very dense; wet; mod est K

Well Construction and Boring Log - Well MW-4 (BH-D)

Chevron Service Station #92258
Oakland, California

WELL MW-5 (BH-E)





DESCRIPTION

Gravelly SAND (SP); light brown; loose [fill]

Clayey SILT (ML); dark grey; stiff; damp; 15-20% fine sand; low est K

Gravelly SILT (ML); medium brown; stiff to very stiff; damp; 15% fine to medium sand; low est K

Clayey SILT (ML); medium brown; stiff to very stiff; damp; low est K

Dark green; stiff; damp; faint hydrocarbon odor at 15.0'

Moderate hydrocarbon odor at 20.0'

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated permeability (hydraulic conductivity)

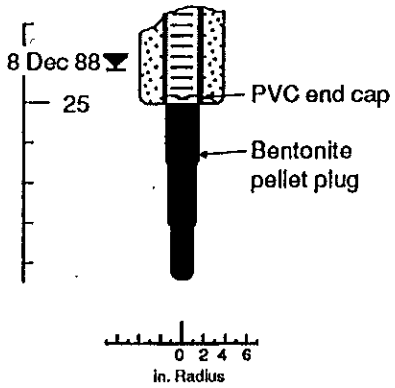
Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Datum Exploration, Pittsburg, CA
Driller:	Jim Condrey
Drilling Method:	CME-75
Dates Drilled:	8 December 1988
Well Head Completion:	Locking Stovepipe
Type of sampler:	Split barrel (1.4, 2.0, 2.5" ID)

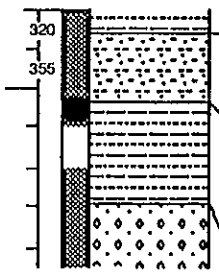
Well Construction and Boring Log - Well MW-5 (BH-E)

Chevron Service Station #92258
Oakland, California

WELL MW-5 (BH-E) (cont.)

DEPTH BELOW GROUND SURFACE (FEET)





DESCRIPTION

Sandy SILT (ML); medium brown; wet; stiff; strong hydrocarbon odor; low to mod est K

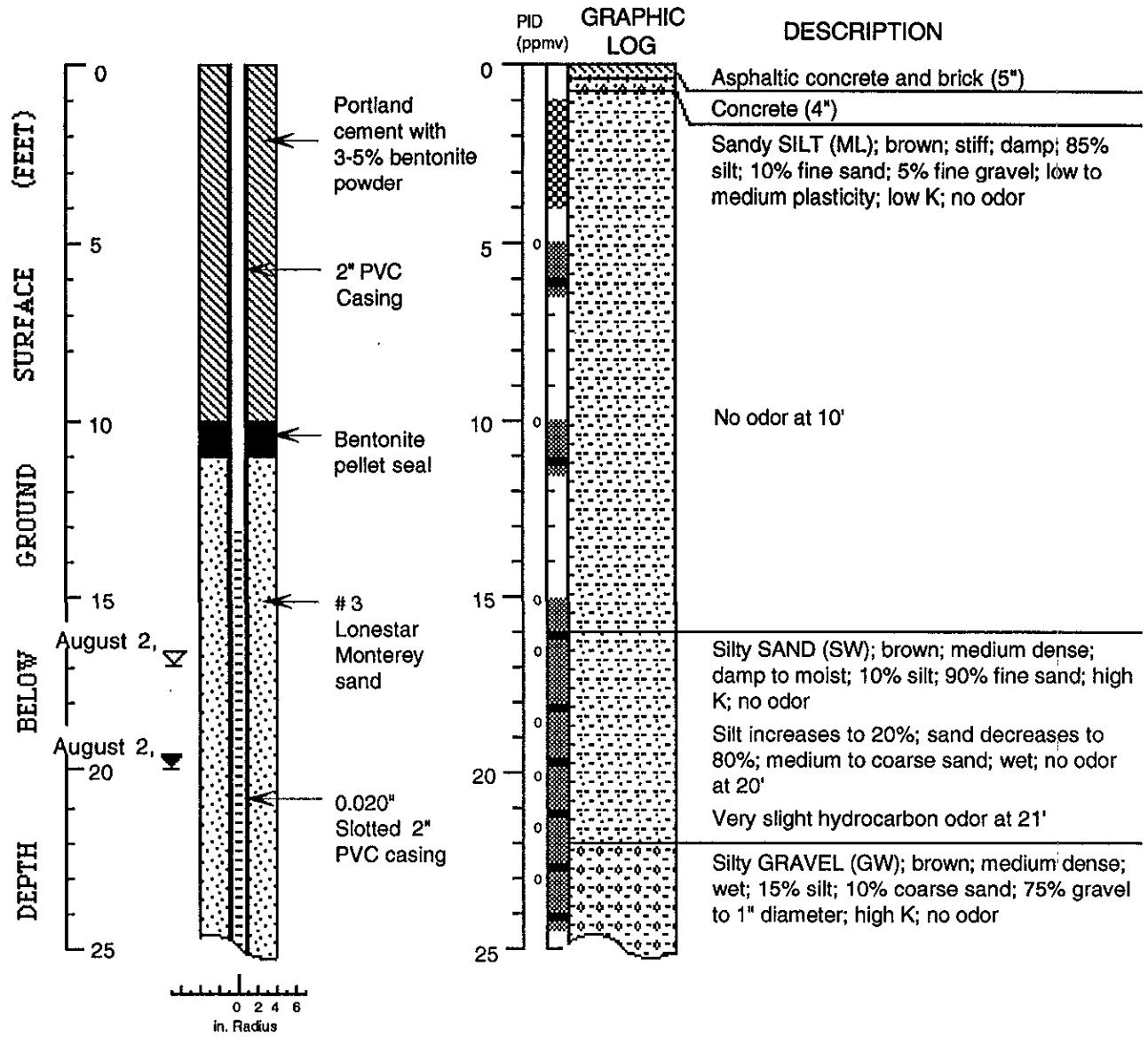
Clayey SILT (ML); brown-green; wet; medium stiff; 15-20% very fine to medium sand; moderate hydrocarbon odor; low est K

Gravelly SAND (SP); medium brown; 20% fines; dense; mod est K

Well Construction and Boring Log - Well MW-5 (BH-E)

Chevron Service Station #92258
Oakland , California

WELL MW-6 (BH-F)



EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by:	Robert Kitay
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow-stem auger
Date Drilled:	August 2, 1990
Well Head Completion:	4" Locking well-plug, traffic-rated vault
Type of sampler:	Split barrel (1.5", 2.0", 2.5" ID)
Ground Surface Elevation:	179.04 feet above mean sea level

Well Construction and Boring Log - Well MW-6 (BH-F)

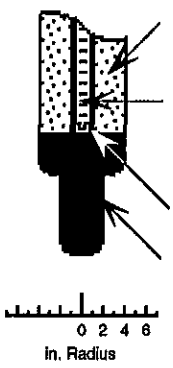
Chevron Service Station #92258
Oakland, California

WELL MW-6 (BH-F) (cont.)

DEPTH BELOW GROUND SURFACE (FEET)

25

30



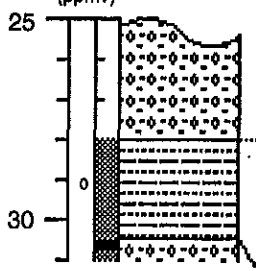
#3 Lonestar Monterey sand

0.020" Slotted 2" PVC casing

PVC endcap

Bentonite pellet plug

PID (ppmv)



GRAPHIC LOG

DESCRIPTION

(Contact-driller)

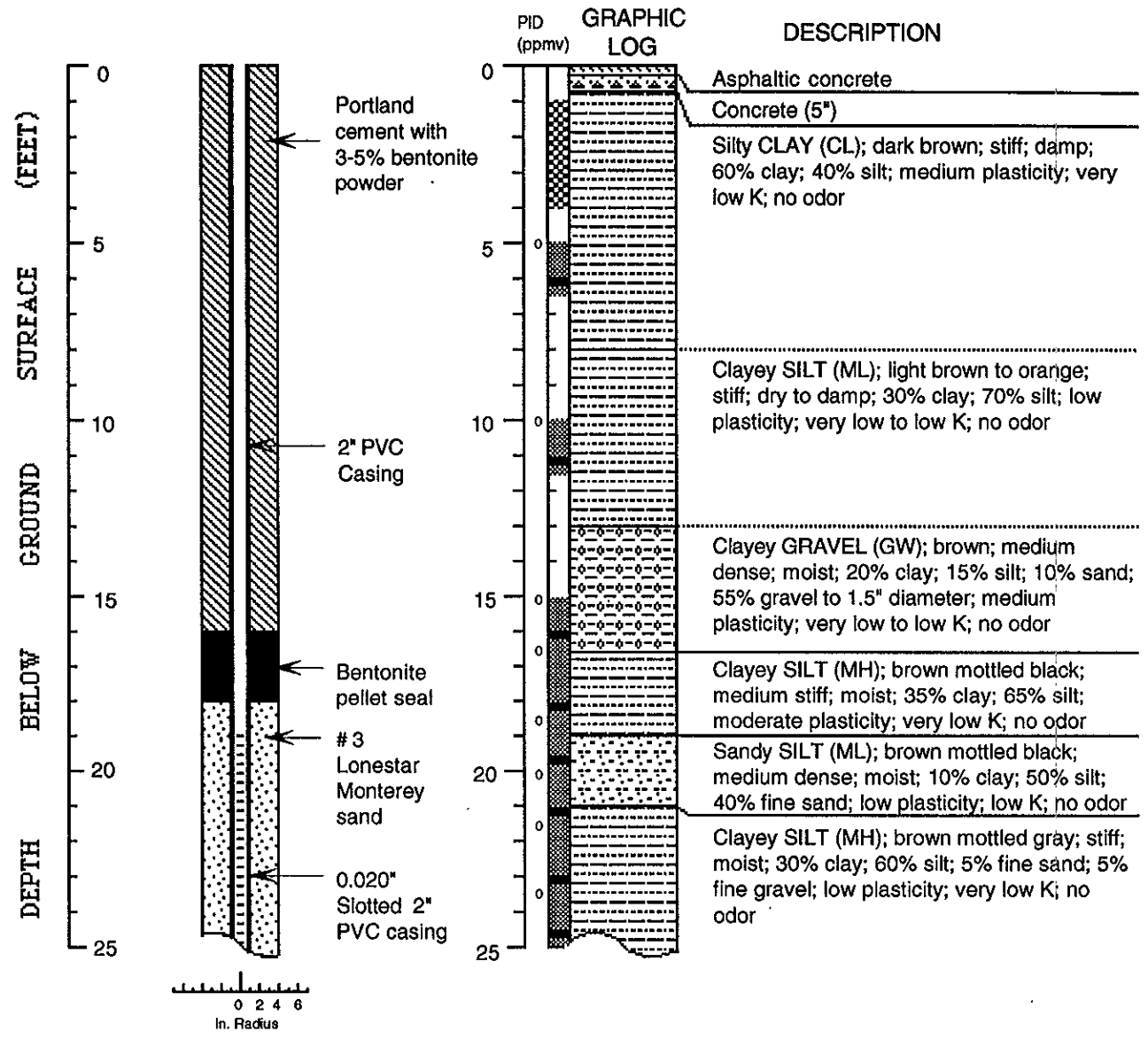
Clayey SILT (ML); brown; stiff; wet; 25% clay; 60% silt; 10% fine sand; 5% fine gravel; low to medium plasticity; very low K; no odor

Silty GRAVEL (GW); brown; medium dense; wet; 15% silt; 10% coarse sand; 75% gravel to 1" diameter; high K; no odor

Well Construction and Boring Log - Well MW-6 (BH-F)

Chevron Service Station #92258
Oakland, California

WELL MW-7 (BH-G)



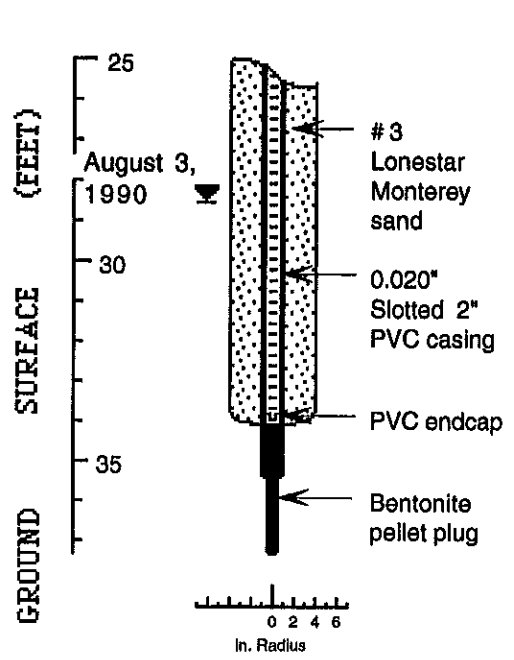
EXPLANATION

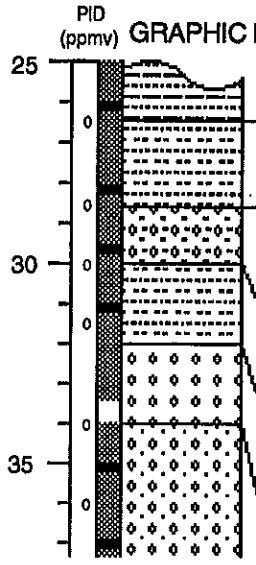
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by:	Robert Kitay
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow-stem auger
Date Drilled:	August 3, 1990
Well Head Completion:	4" Locking well-plug, traffic-rated vault
Type of sampler:	Split barrel (1.5", 2.0", 2.5" ID)
Ground Surface Elevation:	180.53 feet above mean sea level

Well Construction and Boring Log - Well MW-7 (BH-G) Chevron Service Station #92258 Oakland, California

WELL MW-7 (BH-G) (cont.)





DESCRIPTION

SILT (ML); brown; very stiff; moist; 95% silt; 5% fine sand; low plasticity; moderate K; no odor

Silty GRAVEL (GW); brown-black-yellow; 20% silt; 10% sand; 70% gravel to 2" diameter; moderate K; no odor

SILT (ML); brown; hard; wet; 95% silt; 5% fine sand; low plasticity; moderate K; no odor

COBBLES; gray to black; wet; 100% angular cobbles 3+" diameter; high to very high K; no odor

Sandy GRAVEL (GW); brown; dense; wet; 15% silt; 35% sand; 50% fine gravel; high K; no odor

Well Construction and Boring Log - Well MW-7 (BH-G)

Chevron Service Station #92258
Oakland, California

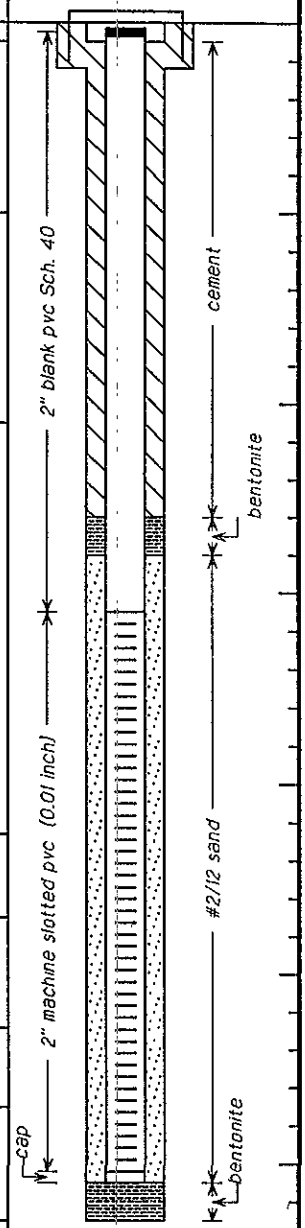
Gettler-Ryan, Inc.

Log of Boring MW-8

PROJECT: *Former Chevron SS# 9-2258*	LOCATION: *5800 College Avenue, Oakland, CA*
G-R PROJECT NO. : *5226.01*	SURFACE ELEVATION: *feet MSL*
DATE STARTED: *07/12/96*	WL (ft. bgs): *21.5* DATE: *07/12/96* TIME: *7:20*
DATE FINISHED: *07/12/96*	WL (ft. bgs): *21.8* DATE: *07/12/96* TIME: *9:40*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *31.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

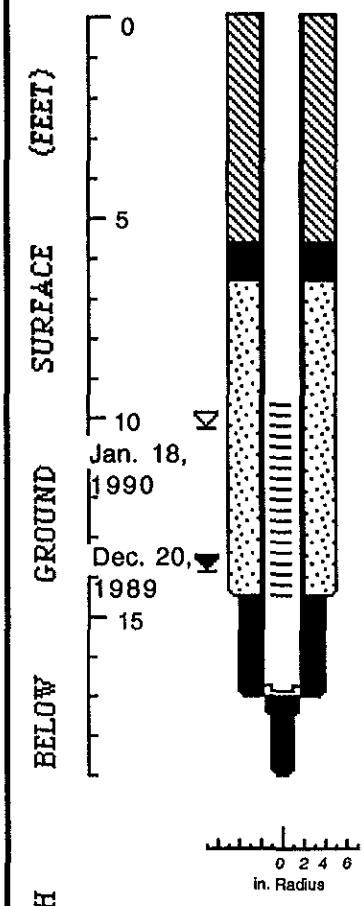
DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
				CL	PAVEMENT – asphalt over baserock.
					CLAY (CL) – black (10YR 2/1), moist, stiff, low plasticity; 90% clay, 10% fine sand.
5	0	7	MW8-6	ML	GRAVELLY SILT (ML) – dark brown (10YR 4/3), damp, stiff, low plasticity; 50% silt, 35% fine gravel, 15% clay.
10	0	7	MW8-11	ML	SANDY SILT (ML) – dark yellowish brown 910YR 4/6), moist, stiff, low plasticity; 60% silt, 30% fine sand, 10% clay.
15	0	6	MW8-16		Clay increases to 30%, silt decreases to 40%, becomes medium stiff.
20	0	5	MW8-20.5		
	0	5	MW8-21	SC	CLAYEY SAND (SC) – dark yellowish brown (10YR 4/6), saturated; 50% fine sand, 30% clay, 20% silt.
				ML	GRAVELLY SILT (ML) – dark yellowish brown (10YR 4/6), saturated, stiff , low plasticity; 40% silt, 30% fine gravel, 20% fine to coarse sand, 10% clay.
25	0	10	MW8-26		
				CL	CLAY (CL) – dark yellowish brown (10YR 4/6), saturated, stiff, low plasticity; 45% clay, 40% silt, 10% fine sand, 5% fine gravel.
30	0	13	MW8-31	ML	SANDY SILT (ML) – yellowish brown (10YR 5/6), *mottled light brownish gray (2.5Y 6/2)*, saturated, stiff, low plasticity; 60-65% silt, 30% fine sand, 5-10% clay.
					Bottom of boring at 31.5 feet, 07/12/96.
35					

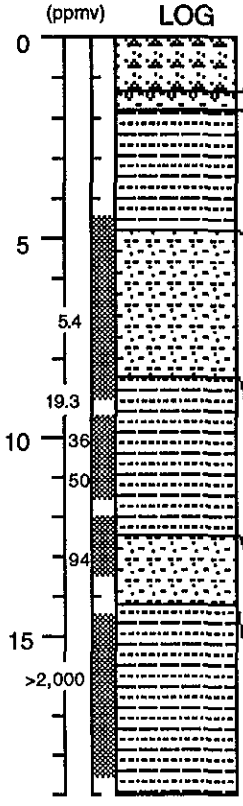
WELL DIAGRAM



JOB NUMBER: *5226.01*

WELL EW-1





DESCRIPTION

Concrete

Gravelly SILT (ML); low to mod K [fill]

Clayey SILT (ML); red-brown; firm; damp; ~10% very fine to coarse sand; minor gravel to 1/2" diameter; low plasticity; low K ~20% sand, very low plasticity at 4.5'

Sandy SILT (ML); medium green-gray; firm; damp; ~25% very fine to coarse sand; ~10% gravel to 3/4" diameter; very low plasticity; low to mod K
Minor gravel, mod K, root molds from 6'
Moderate hydrocarbon odor at 7'
Interbedded with Silty SAND (SM), mod K from 7.5'

Clayey SILT (ML); dark green-gray mottled olive-brown; firm; moist; low plasticity; low K ~15% gravel to 1.5" diameter; strong hydrocarbon odor from 10.5'

Sandy SILT (ML); medium yellow-brown mottled blue-gray; stiff; moist; ~30% very fine to fine sand; minor gravel to 1/2" diameter; very low plasticity; low to mod K; strong hydrocarbon odor

Clayey SILT (ML); medium yellow-brown mottled blue-gray; stiff; ~20% very fine to fine sand; ~5% gravel to 1/2" diameter; very low to low plasticity; low K; strong hydrocarbon odor

EXPLANATION

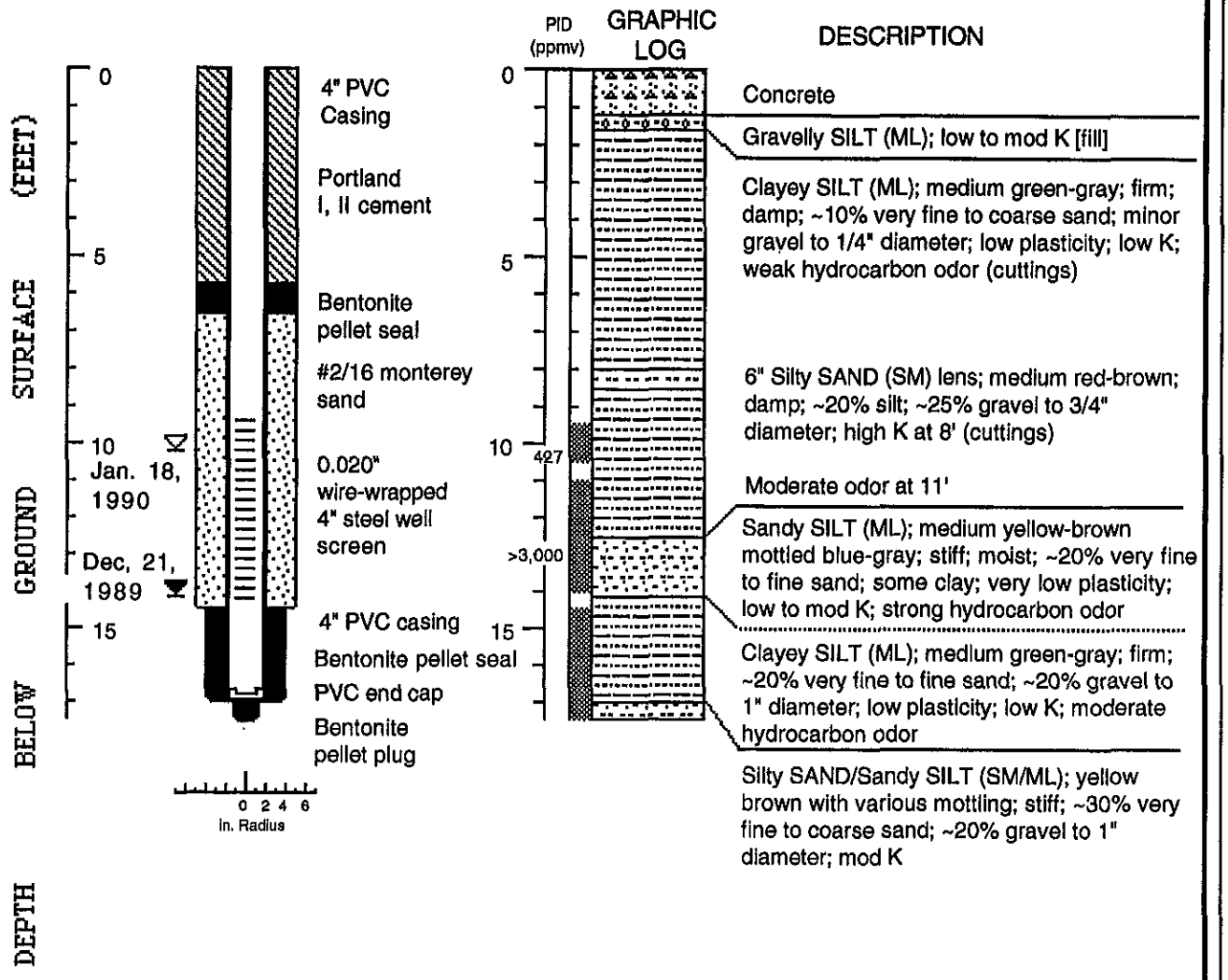
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by: John Duey
Supervisor: Richard Weiss; EG 1112
Drilling Company: Allen Drilling
Driller: Guy Lyons
Drilling Method: Hollow stem auger
Dates Drilled: Dec. 20, 21, 1989
Well Head Completion: Concrete vault
Type of sampler: Split Barrel (1.5", 2", 2.5" ID)

Well Construction and Boring Log - Well EW-1

Chevron Service Station #92258, Oakland, CA

WELL EW-2



EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged by:	John Duey
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Allen Drilling
Driller:	Guy Lyons
Drilling Method:	Hollow stem auger
Dates Drilled:	Dec. 20, 21, 1989
Well Head Completion:	Concrete vault
Type of sampler:	Split Barrel (1.5", 2.0", 2.5" ID)

Well Construction and Boring Log - Well EW-2

Chevron Service Station #92258, Oakland, CA