PERJURY STATEMENT

Subject: Fuel Lake Case No. RO0002981 and Geotracker Global ID T1000000416, Red Hanger Cleaners, 6335-6339 College Ave., Oakland, CA 94618

"I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Ted Cleveland
Vice President, Operations
EFI Global, Inc.

Environmental Resources Management

1277 Treat Boulevard
Suite 500
Walnut Creek, CA 94597
(925) 946-0455
(925) 946-9968 (fax)

7 June 2010

Barbara Jakub, P.G.
Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: RO#0002981
Well Survey Report
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Dear Ms. Jakub:

On behalf of EFI Global, Inc. and Mr. Ronald Elvidge, site owner, ERM-West, Inc. (ERM) presents to Alameda County Environmental Health Services (ACEH) this Well Survey Report for the Red Hanger Kleaners site (Site), located at 6239 College Avenue in Oakland, California (Figure 1). In the preparation of this report, the following agencies were contacted to obtain information on wells situated within ¼ mile of the subject property:

- The Alameda County Public Works Agency, Water Resources Section (ACPWA); and
- The California Department of Water Resources, Division of Planning and Local Assistance (DWR).

The results of the ACPWA and DWR well surveys, which included listings greater than ¼-mile from the subject property, are included in Attachment A. In addition to the ACPWA and ACEH well surveys, ERM consulted the online websites for Alameda County Environmental Health Department (http://ehgis.acgov.org/dehpublic/dehpublic.jsp) and the Regional Water Quality Control Board (http://geotracker.waterboards.ca.gov/).

Based on the information derived from the above sources, ERM has identified the presence of 26 wells within ¼-mile of the subject property

(see attached Figure 1). As seen in the attached Table 1, all of the wells are associated with environmental investigations being conducted at nearby sites. Given the locations of these 26 wells relative to the subject property and the southwesterly groundwater flow direction in the vicinity, it is unlikely that the 26 wells would be 1) potential receptors of groundwater flowing beneath the subject property; or 2) conduits to influence groundwater migration from the subject property.

If you have any questions regarding this report, please feel free to contact either of the undersigned at (925) 946-0455.

Sincerely,

John O. Cavanaugh, P.G.
Principal-in-Charge

Jill A. Quillin, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
JILL A. QUILLIN
No. 8024
EXP. 8/2011
STATE OF CALIFORNIA

JAQ/ASC/JOC/kl/0099877
cc: Mr. Gary Bates, EFI Global, Inc. (electronic copy)
file
enclosures

Project No. 0099877.00
Date: 06/04/10
Drawn By: J. Estrada
CAD File: g:\0099877\0099877700-07.dwg

SITE LOCATION
5239 COLLEGE AVE.

1/4 MILE RADIUS FROM SITE

1 6039 COLLEGE AVE.
2 5940 COLLEGE AVE.
3 5930 COLLEGE AVE.
4 5929 COLLEGE AVE.
5 6230 CLAREMONT AVE.
6 6201 CLAREMONT AVE.
7 6066 CLAREMONT AVE.

COLLEGE AVE.
CLAREMONT AVE.
Regent St
Benvenue Ave
Lewiston Ave
Elon Ave
Brookside Dr
Brookside Ave
Elon Ct
Hillcrest Ct
Roslyn Ct
Chabolyn Terrace
Manor
Chabot Crest
Mystic St
Manora St
Ashum Ave
Rockwell St
Rose Ct
Ross St
Patton St
Chabot Ct
Clover Dr
Dana St
Catraz Ave
Florio St
Armanino Ct
Harwood Ave
Ivanhoe Rd
Hillegass Ave
61st St
60th St
Colby St
Claremont Ave
Chabot Rd
Birch Ct
Presley Way
Miles Ave
Grove Shafter Fwy
HWY 24

N
0 300
Approx. Scale (feet)

Figure 1
Well Locations within 1/4 Mile of Site
Red Hanger Kleaners
6239 College Avenue
Oakland, California

ERM 06/10

Aerial Photo Source: © 2007 Google Earth Pro Ver 5.0.11337.1968

Table 1
Summary of Water Wells
Located Within 0.25 Miles Radius of
Red Hanger Kleaners
6239 College Avenue
Oakland, CA

Well ID	Section	Location	Well Use	Date Drilled/ Installed	Well Diameter (inches)	Total Well Depth (feet bgs)	Screened interval (feet bgs)	Distance from Site (miles)
1	13B	6039 College Avenue, Oakland	Monitoring (7)	February-90 (4)	4	25	14.5 - 24.5	0.07
				August-91 (1)	2	30	13.5 - 28.5	
				September-93 (1)	2	25	10 - 24.5	
				May-06 (1)	4	36	25 - 35	
2		5940 College Avenue, Oakland	Monitoring (2)	December-00	2	21	5 to 20	0.15
					2	21	5 to 20	
3		5930 College Avenue, Oakland	Monitoring (3)	June-98	2	15	4.75 to 14	0.17
						20	4.75 to 19	
				October-99	2	20	4.5 to 19	
			Piezometer (1)	October-99	2	20	2.5 to 18	
4	13C	5929 College Avenue, Oakland	Monitoring (6)	July-91 (3)	4	27	7 - 27	0.16
					4	28	8 - 28	
					2	30	10 - 30	
				November-93 (3)	2	27.5	7 to 27	
					2	30	9 to 29	
					4	30	9.5 to 29	
5	13B	6230 Claremont Avenue, Oakland	Piezometer (3)	8/1/1997 (temporary, since abandoned)	1	24	–	0.06
6		6201 Claremont Avenue, Oakland	Monitoring (3)	July-00	2	30	10 to 30.5	0.02
					2	30	10 to 30	
					2	30	10 to 30	
7	13C	6066 Claremont Avenue, Oakland	Monitoring (1)	August-91	4	28.5	13.5 - 28.5	0.07

bgs = below ground surface

Attachment A
ACPWA and DWR Well Surveys

Confidential

Jill Quillin

From: Hamlin, Vicky [vickyh@acpwa.org]
Sent: Wednesday, May 26, 2010 10:23 AM
To: Jill Quillin; Jakub, Barbara, Env. Health
Cc: Yoo, James
Subject: well search 6239 College Ave Oakland 1S 4W 13 .25 mile radius
Attachments: Legend for Well Search.rtf; well search 6239 College Ave Oakland 1S 4W 13 .25 mile radius.xls

You requested a .25 mile radius search.

I searched in Sections 1S/4W 12 PQR, 1S/4W 13 ABCFG and found results in all but the underlined sections.

In accordance with Section 13752, information obtained from these reports shall be kept confidential and shall not be disseminated, published, or made available for inspection by the public without written authorization from the owner(s) of the well(s). The information shall be used only for the purpose of conducting the study. Copies obtained shall be stamped **CONFIDENTIAL** and shall be kept in a restricted file accessible only to agency staff or the authorized agent.

The information provided is deemed reliable but not guaranteed.

Please let me know if you have further questions.

Victoria Hamlin
ESA
Alameda County Public Works Agency
Water Resources Section
399 Elmhurst Street
Hayward, CA 94544
Ph: 510-670-5443
Fax: 510-782-1939
vickyh@acpwa.org
www.acgov.org/pwa/wells

Permit	Tr	Section	Address	Longcity	Owner	Update	Xcoord	Ycoord	Matchlevel	Tsrqq	Rec_code	Phone	City	Drilldate	Elevation	Totaldepth	Waterdept	Diameter	Use
	1S/4W	13B 5	6230 Claremont Av	Oakland	Blood Bank of the ACCMA	8/13/1997	1.22E+08	37850065	1	1S/4W 13B	0	0	OAK	4/93	0	24	23	1	PIE
	1S/4W	13B 6	6230 Claremont Av	Oakland	Blood Bank of the ACCMA	8/13/1997	1.22E+08	37850065	1	1S/4W 13B	0	0	OAK	4/93	0	24	23	1	PIE
	1S/4W	13B 7	6230 Claremont Av	Oakland	Blood Bank of the ACCMA	8/13/1997	1.22E+08	37850065	1	1S/4W 13B	0	0	OAK	4/93	0	24	0	1	PIE
	1S/4W	13B	6039 College Ave	Oakland	Shell Oil Company	3/29/1991	1.22E+08	37848491	0	1S/4W 13B	1566	0	OAK	9/90	0	0	0	8	DES
	1S/4W	13B 1	6039 College Ave	Oakland	Shell Oil Company	3/29/1991	1.22E+08	37848491	0	1S/4W 13B	1567	0	OAK	7/90	0	0	8	0	BOR*
	1S/4W	13B 2	6039 College Ave	Oakland	Shell Oil Company	3/29/1991	1.22E+08	37848491	0	1S/4W 13B	1568	0	OAK	1/90	0	0	0	10	BOR*
	1S/4W	13B 3	6039 College Ave	Oakland	Shell Oil Company	3/29/1991	1.22E+08	37848491	0	1S/4W 13B	1569	0	OAK	1/90	196	25	0	4	MON
	1S/4W	13B 4	6039 College Ave	Oakland	Shell Oil Company	3/29/1991	1.22E+08	37848491	0	1S/4W 13B	1570	0	OAK	1/90	194	25	0	4	MON
93507	1S/4W	13C 7	5929 College Av	Oakland	Dreyer's Grand Ice Cream	11/3/1997	1.22E+08	37847691	1	1S/4W 13C	0	0	OAK	Sep-93	185	28	13	2	MON
93507	1S/4W	13C 8	5929 College Av	Oakland	Dreyer's Grand Ice Cream	11/3/1997	1.22E+08	37847691	1	1S/4W 13C	0	0	OAK	Sep-93	185	30	0	2	MON
93507	1S/4W	13C 9	5929 College Av	Oakland	Dreyer's Grand Ice Cream	11/3/1997	1.22E+08	37847691	1	1S/4W 13C	0	0	OAK	9/93	188	30	0	2	MON
	1S/4W	13C 4	5929 College Ave	Oakland	Dryer's Ice Cream MW@	8/13/1992	1.22E+08	37846972	1	1S/4W 13C	7605	0	OAK	7/91	0	28	15	4	MON
	1S/4W	13C 3	5929 College Ave	Oakland	Dryer's Ice Cream MW1	8/13/1992	1.22E+08	37846972	1	1S/4W 13C	7604	0	OAK	7/91	0	30	18	2	MON
	1S/4W	13C 5	5929 College Ave	Oakland	Dryer's Ice Cream MW3	8/13/1992	1.22E+08	37846972	1	1S/4W 13C	7606	0	OAK	7/91	0	27	14	4	MON
	1S/4W	13C 1	62 & HILLEGASS	Oakland	PG&E	7/31/1984	1.22E+08	37849421	8	1S/4W 13C	2304	0	OAK	7/75	0	81	0	0	DES
	1S/4W	13C 2	6066 Claremont Ave	Oakland	Shell Oil Co	8/3/1992	1.22E+08	37848489	1	1S/4W 13C	7546	0	OAK	8/91	0	32	17	4	MON
92481	1S/4W	13C10	6039 College Av	Oakland	Shell Oil Company	3/12/1998	1.22E+08	37848488	1	1S/4W 13C	0	0	OAK	9/93	0	25	14	2	MON
	1S/4W	13C 6	6039 College Ave	Oakland	Shell Service Station	8/19/1997	1.22E+08	37848491	1	1S/4W 13C	0	0	OAK	9/93	193	25	15	2	MON
	1S/4W	13G10	5800 College Av	Oakland	Chevron Products Co	9/11/1997	1.22E+08	37846330	1	1S/4W 13G	0	0	OAK	7/96	0	30	22	2	MON
	1S/4W	13G 8	5800 College Avenue	Oakland	Chevron USA	1/11/1991	1.22E+08	37846330	0	1S/4W 13G	914	0	OAK	7/90	0	48	0	2	MON
	1S/4W	13G 1	5800 COLLEGE AVE	Berkeley	CHEVRON USA	6/28/1989	1.22E+08	37846330	8	1S/4W 13G	2313	0	BER	Jul-89	0	0	0	0	DES
	1S/4W	13G 2	5800 COLLEGE AVE	Berkeley	CHEVRON USA	6/28/1989	1.22E+08	37846330	8	1S/4W 13G	2314	0	BER	Jul-89	0	0	0	0	DES
	1S/4W	13G 3	5800 COLLEGE AVE	Berkeley	CHEVRON USA	6/28/1989	1.22E+08	37846330	8	1S/4W 13G	2315	0	BER	Jul-89	0	0	0	0	DES
	1S/4W	13G 4	5800 COLLEGE AVE	Berkeley	CHEVRON USA	6/28/1989	1.22E+08	37846330	8	1S/4W 13G	2316	0	BER	Jul-89	0	0	0	0	DES
	1S/4W	13G 5	5800 COLLEGE AVE	Berkeley	CHEVRON USA	6/28/1989	1.22E+08	37846330	8	1S/4W 13G	2317	0	BER	Jul-89	0	0	0	0	DES
	1S/4W	13G 9	5800 College Avenue	Oakland	Chevron, USA	1/11/1991	1.22E+08	37846330	0	1S/4W 13G	915	0	OAK	8/90	179	28	16	2	MON
	1S/4W	13G 6	5800 College Avenue	Oakland	Chevron, USA, Inc.	5/30/1990	1.22E+08	37846330	0	1S/4W 13G	60	0	OAK	Dec-89	0	17	10	4	MON
	1S/4W	13G 7	5800 College Avenue	Oakland	Chevron, USA, Inc.	5/30/1990	1.22E+08	37846330	0	1S/4W 13G	61	0	OAK	Dec-89	0	17	10	4	MON
	1S/4W	13G 6	5776 MILES AVE	Oakland	CITY OF OAKLAND	1/22/1990	1.22E+08	37845872	0	1S/4W 13G	6536	0	OAK	Apr-89	100	28	18	0	PIE
	1S/4W	13G 7	5776 MILES AVE	Oakland	CITY OF OAKLAND	1/22/1990	1.22E+08	37845872	0	1S/4W 13G	6537	0	OAK	Apr-89	101	28	23	0	PIE
	1S/4W	13G 8	5776 MILES AVE	Oakland	CITY OF OAKLAND	1/22/1990	1.22E+08	37845872	0	1S/4W 13G	6538	0	OAK	Apr-89	99	33	18	2	MON
	1S/4W	13G 1					0	0	9	1S/4W 13G	6813	0		Dec-88	0	32	15	4	MON
	1S/4W	13G 2					0	0	9	1S/4W 13G	6814	0		Dec-88	0	32	15	4	MON
	1S/4W	13G 3					0	0	9	1S/4W 13G	6815	0		Dec-88	0	33	15	4	MON
	1S/4W	13G 4					0	0	9	1S/4W 13G	6816	0		Dec-88	0	32	23	4	MON
	1S/4W	13G 5					0	0	9	1S/4W 13G	6817	0		Dec-88	0	29	23	4	MON

Well Legend

DOM=Domestic well

IRR=Irrigation well

MUN= Municipal well

IND=Industrial well

CAT=Cathodic well

DES=well destroyed (through permit)

ABN=Abandoned and not being used (but has not been destroyed through permit process)

TES=Test well

BOR= Geotechnical investigation

MON= Monitoring well

EXT=Extraction/ Vapor wells

PIE=Piezometers

REC=Recovery well (extraction/ vapor)

? = Unknown or no information found or given

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WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

15/4W 12H2

340582

welenco

ELECTRIC LOG

FILING NO

COMPANY LUHDORFF & SCALMANINI

WELL CLAIRMONT RESORT & TENNIS CLUB

FIELD

STATE CALIFORNIA COUNTY ALAMEDA

LOCATION:

REAR PARKING LOT

SEC TWP RGE

OTHER SERVICES

—

Permanent Datum: GL, Elev.

Log Measured From GL, Ft. Above Perm. Datum

Drilling Measured From GL

Elev.: K.B.

D.F.

G.L.

Date	12-18-90			
Run No.	ONE			
Depth—Driller	200'			
Depth—Logger	200'			
Btm. Log Inter.	199'			
Top Log Inter.	5'			
Casing—Driller	N/A @	@	@	@
Casing—Logger	N/A			
Bit Size	6¼"			
Type Fluid in Hole	BENTONITE			
Dens. | Visc.	8.9 | 52	|	|	|
pH | Fluid Loss	- | - ml	| ml	| ml	| ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	10 @ 77 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	10 @ 75 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	N/A @ °F	@ °F	@ °F	@ °F
Source: R_{mf} R_{mc}	M |	|	|	|
R_m @ BHT	N/A @ °F	@ °F	@ °F	@ °F
Time Since Circ.	0 HR			
Max. Rec. Temp.	N/A °F	°F	°F	°F
Equip. | Location	L11 | SAC	|	|	|
Recorded By	D. LOCKERBIE			
Witnessed By	M. GORDON	R BATISTA		

Fold Here

This Heading and Log Conform To API RP 31

REMARKS

Changes in Mud Type or Additional Samples

Date | Sample No.				
Depth—Driller				
Type Fluid in Hole				
Dens. | Visc.	|	|	|	|
ph | Fluid Loss	| ml	| ml	| ml	| ml
Source of Sample				
R_m @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	— |	|	|	|
R_m @ BHT	@ °F	@ °F	@ °F	@ °F
R_{mf} @ BHT	@ °F	@ °F	@ °F	@ °F
R_{mc} @ BHT	@ °F	@ °F	@ °F	@ °F

Scale Changes

Type Log	Depth	Scale Up Hole	Scale Down Hole

Equipment Data

Run No.	Tool Type	Pad Type	Tool Position	Other
ONE	NORMALS		FREE	

RESISTIVITY ohms. m^2/m | RESISTANCE Detail Curve

RESISTIVITY ohms. m^2/m | SHORT NORMAL 16 Inch | LONG NORMAL 64 Inch

0 100 | 0 100

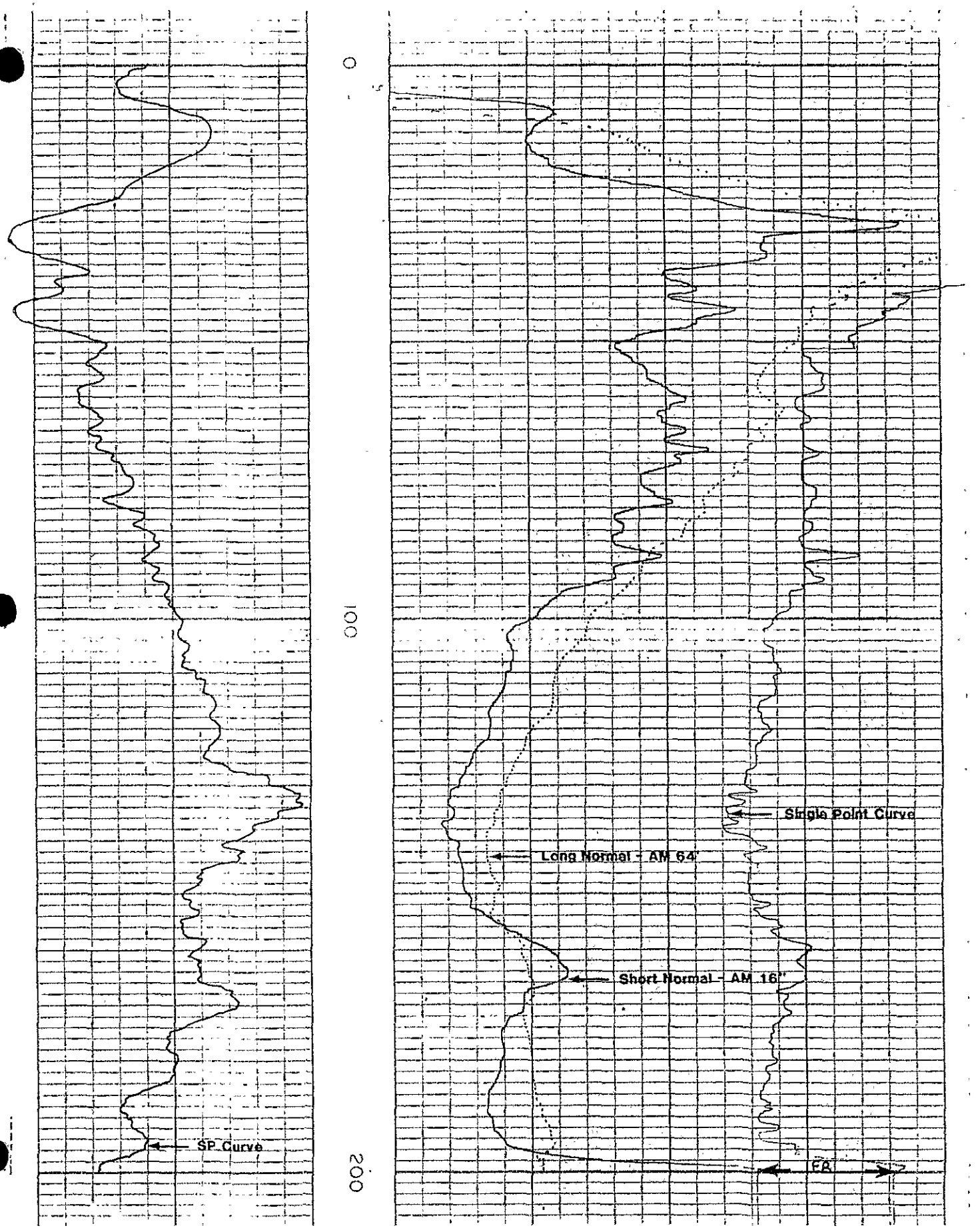
Depths

SPONTANEOUS POTENTIAL millivolts

+ 5 -

15/4W 12H2

340582



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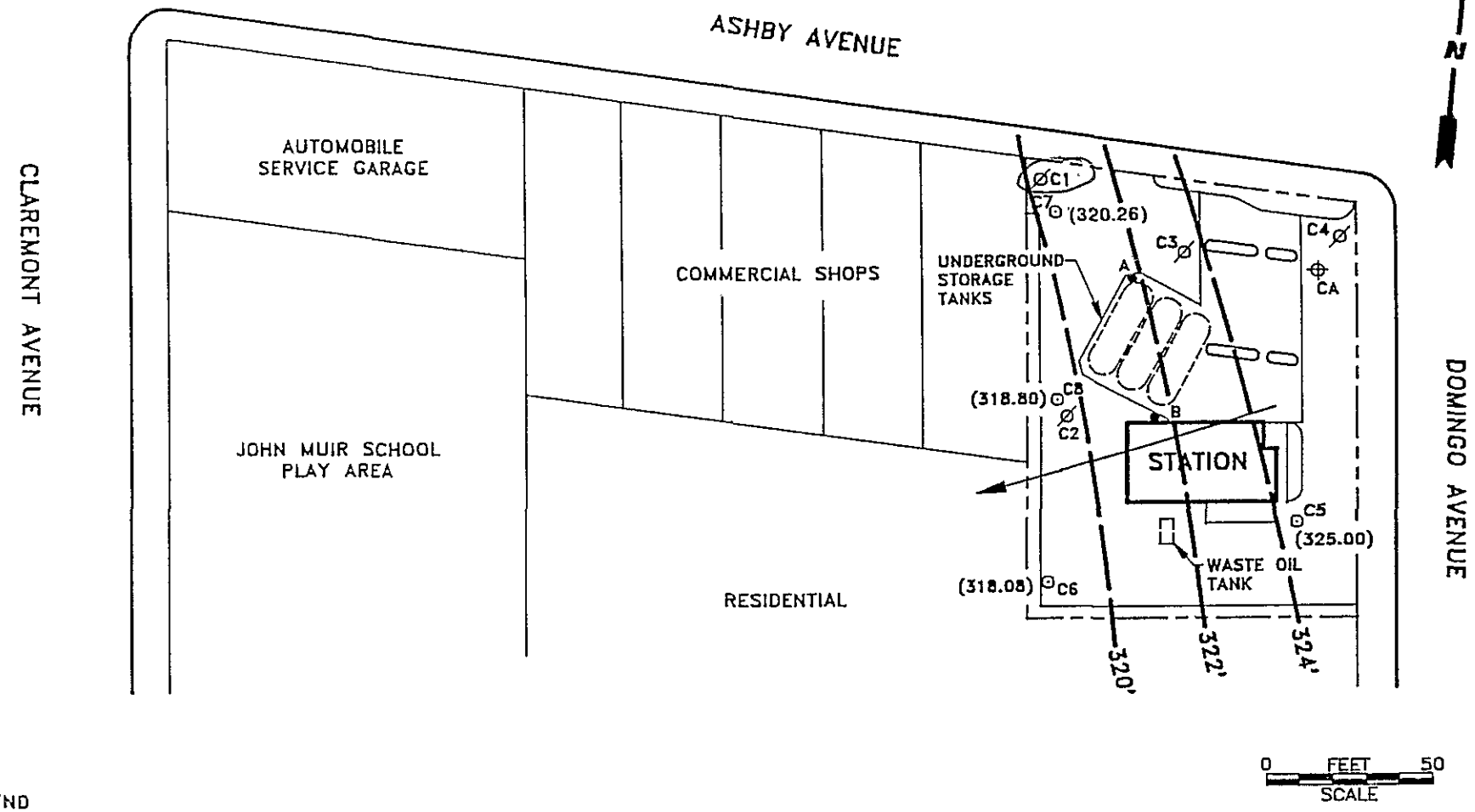

LEGEND

- ○ MONITORING WELL
- • TANK PIT MONITORING WELL
- ⊘ ABANDONED MONITORING WELL
- ⊕ SOIL BORING
- ( ) POTENTIOMETRIC SURFACE ELEVTION
- —— POTENTIOMETRIC SURFACE CONTOUR
- ——► GROUNDWATER FLOW DIRECTION

GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387

POTENTIOMETRIC SURFACE MAP (12/4/92)

CLIENT:	LOCATION:	REV. NO.:	DATE:
CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0289	3048 ASHBY AVENUE BERKELEY, CALIFORNIA	0	1/14/93

PM	PE/RG	DESIGNED	DETAILED	ACAD FILE:	PROJECT NO.:	FIGURE:
IAW	DRK	TW	ML	PSMD492/SP193	020203082	3

P.212

40313

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(WELL LOGS)

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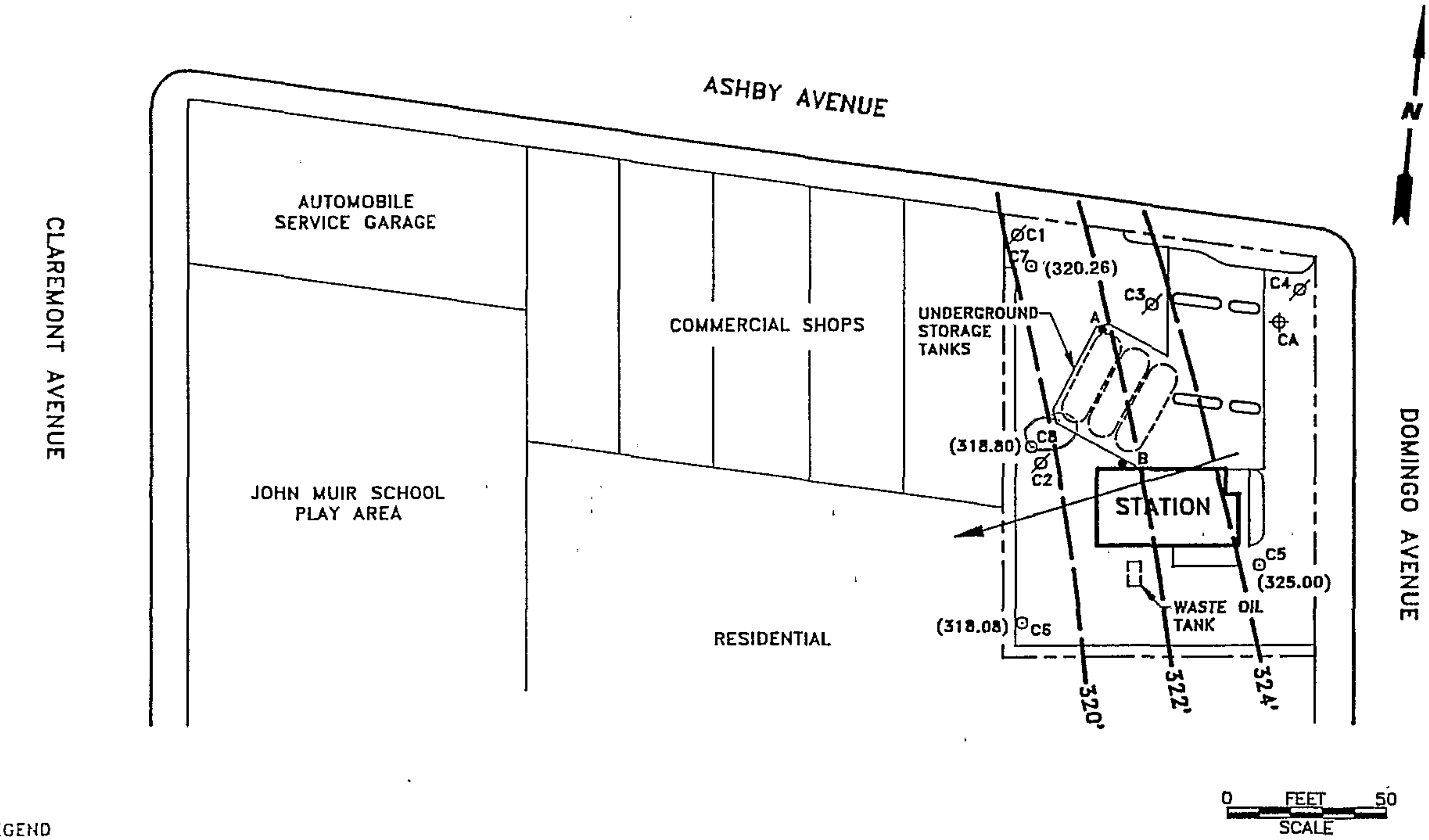


LEGEND

- ○ MONITORING WELL
- • TANK PIT MONITORING WELL
- ⌀ ABANDONED MONITORING WELL
- ⊕ SOIL BORING
- ( ) POTENTIOMETRIC SURFACE ELEVTION
- – – – POTENTIOMETRIC SURFACE CONTOUR
- ——► GROUNDWATER FLOW DIRECTION

GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

POTENTIOMETRIC SURFACE MAP (12/4/92)

CLIENT:	LOCATION:	REV. NO.:	DATE:
CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0289	3048 ASHBY AVENUE BERKELEY, CALIFORNIA	0	1/14/93

PM	PE/RG	DESIGNED	DETAILED	ACAD FILE:	PROJECT NO.:	FIGURE:
LAW	DRK	TW	ML	PSMD492/SP193	020203082	3

p. 2 of 4

40311.2

1S/4W 12H4

Drilling Log

GROUNDWATER TECHNOLOGY

Monitoring Well **C8**

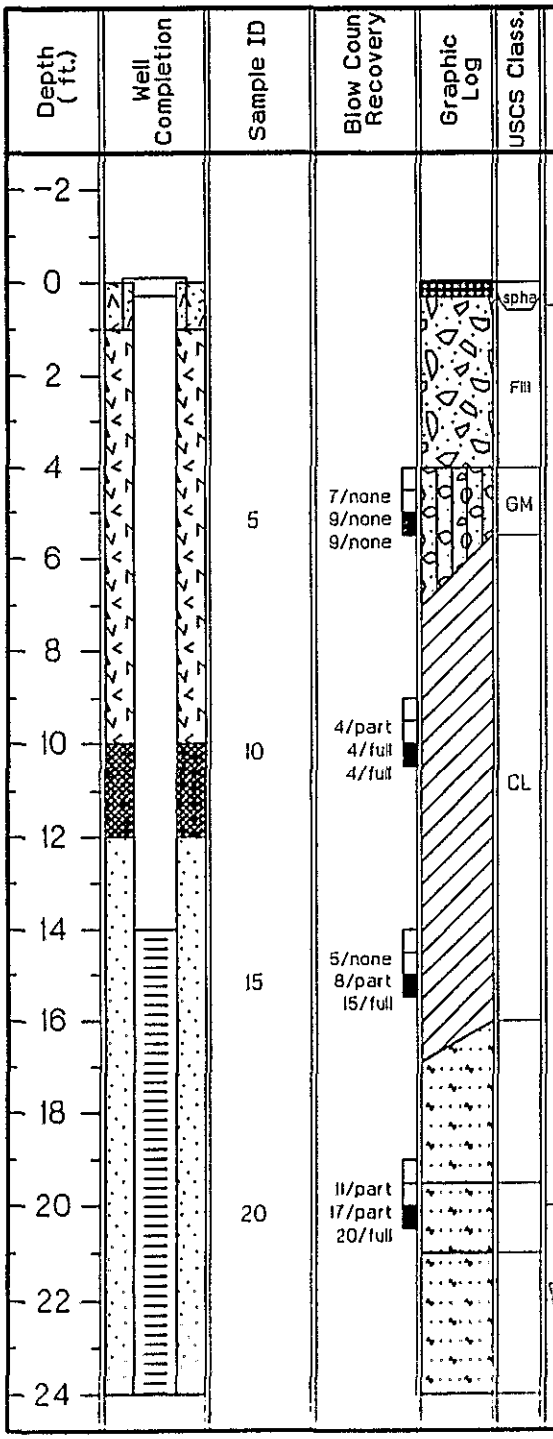
Project CHV/3048 Ashby Ave. Owner Chevron U.S.A. Products Co.
Location Berkeley, CA Project No. 020203082 Date drilled 11/12/92
Surface Elev. 338.99 ft. Total Hole Depth 34.5 ft. Diameter 8.5 inches
Top of Casing 338.55 ft. Water Level Initial 22 ft. Static 12/04/92 19.75 ft.
Screen: Dia 4 in. Length 20 ft. Type/Size 0.020 in.
Casing: Dia 4 in. Length 14 ft. Type SCH 40 PVC
Filter Pack Material #3 sand Rig/Core Type Mobile B-53/Split Spoon
Drilling Company Kvilhaug Well Drilling Method Hollow Stem Auger Permit # 92S-039
Driller Mike Crocker Log By Chip Hurley
Checked By David Kleesattel License No. RG# 5136 (1) David K. Kleesattel

See Site Map For Boring Location

COMMENTS:

On 11-12-92 drill rig refusal was encountered at 22-feet. Drilling was continued on 11-16-92.

The total depth of the well was set at approximately 34-feet below grade.



Description

(Color, Texture, Structure)
Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%

Asphalt

Unconsolidated back fill material with rock fragments.

Green serpentinite fragments with silty clay matrix. Matrix is 55% clay and 45% silt. No hydrocarbon odor.

Black/dark brown CLAY. About 60% clay, about 25% rock fragments about 15% silt. Moist with a hydrocarbon odor at the sampler tip.

Same as above. Hydrocarbon odor throughout the sample.

Sandstone encountered at 17 to 19.5 feet.

▼ Static groundwater level on 12/04/92

Poorly indurated sandstone 50% fine sand, about 30% silt, about 10% rock fragments, about 10% clay. Slighty moist with slight hydrocarbon odor.

Drill rig refusal at 22 feet.

Encountered groundwater at 22 feet, 11/16/92 10:30AM

P-494

403112

1S/4W 12H4

GROUNDWATER TECHNOLOGY

Drilling Log

Monitoring Well **C8**

Project *CHV/3048 Ashby Ave.* Owner *Chevron U.S.A. Products Co.*

Location *Berkeley, CA* Project No. *020203082* Date drilled *11/12/92*

Depth (ft.)	Well Completion	Sample ID	Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
24			/none			
			50/none			SANDSTONE. No hydrocarbon odor.
26		25	50/none			
			/none			
28		27	50/none			Drill rig refusal at 27 feet.
			50/part			
30						SANDSTONE. About 50% clay, 30% silt, 10% sand, 10% rock fragments, moist, no hydrocarbon odor.
32						SANDSTONE. No hydrocarbon odor. Drill rig refusal at 34 feet. Set the well at 34 feet below grade.
34		34	/none			
			50/none			
			50/none			End of boring at 34.5 feet. Installed groundwater monitoring well.
36						
38						
40						
42						
44						
46						
48						
50						
52						
54						
56						

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

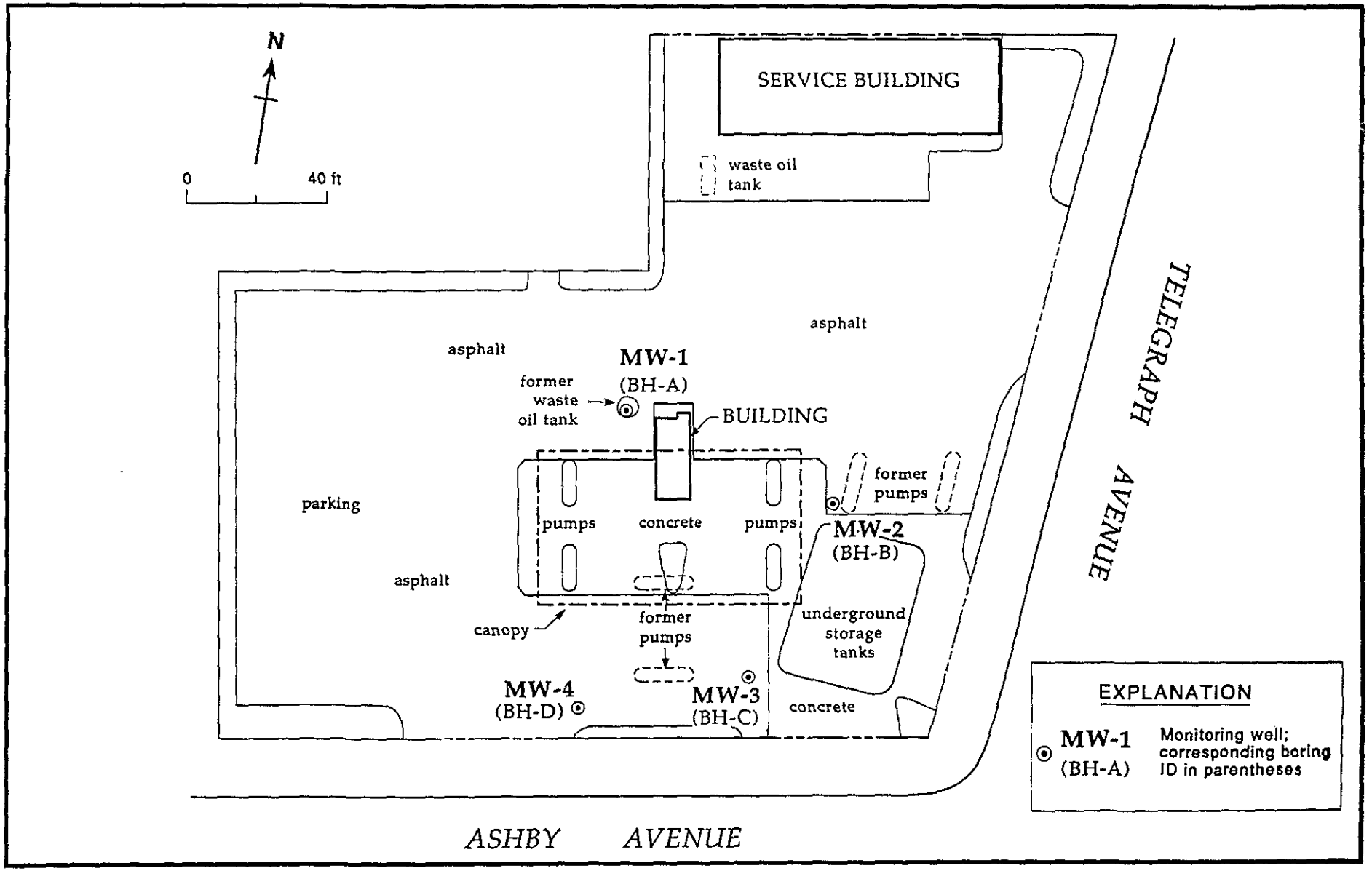


Figure 4. Monitoring Well Locations - Chevron Service Station #90972, Berkeley, California

15/4W-12M1-4
17906 A-D

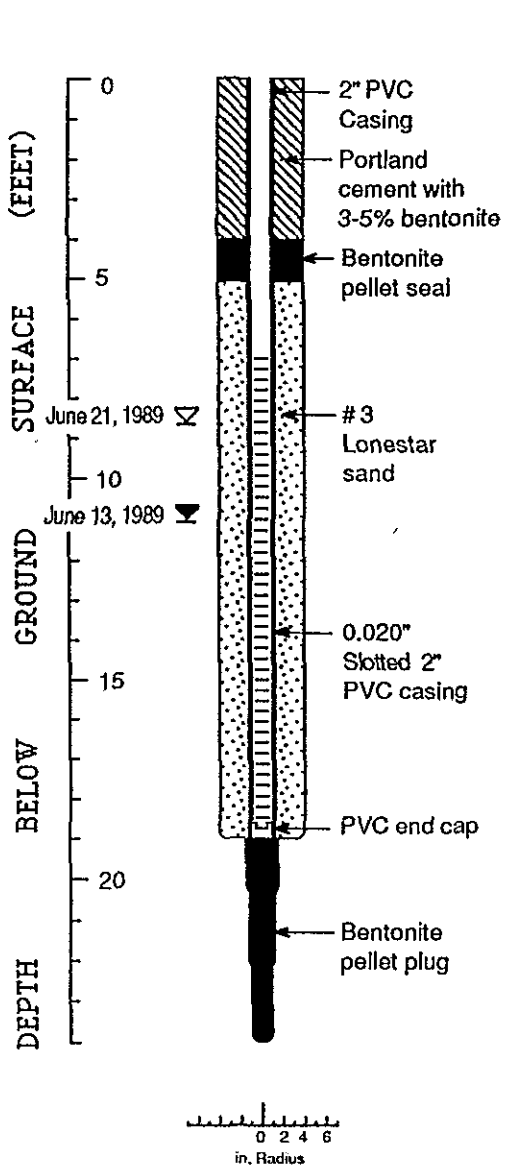
Add'l Invv

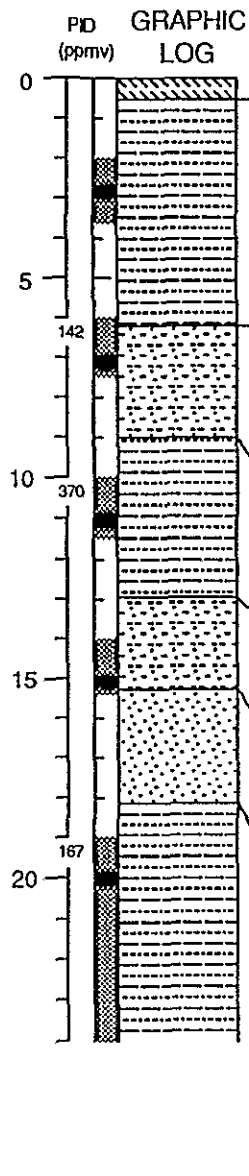
179096A

WEISS ASSOCIATES

WELL MW-1 (BH-A)

1S/4W 12M1





DESCRIPTION

Asphaltic concrete

Clayey SILT (OL); dark gray; soft; damp to moist; 65% silt; 20-25% clay; 10-15% medium sand; occasional gravel to 1"; low est K; high organic content

Sandy SILT (SM); green-brown; medium dense; damp; 10-15% clay; 40-50% silt; 20-25% fine to medium sand; 15% subangular gravel to 1 1/2"; low to mod est K; moderate hydrocarbon odor [tank backfill?]

Silty CLAY (CL); yellow-brown; stiff to very stiff; wet; 60-65% clay; 25-30% silt; trace of fine sand; medium plasticity; low est K; moderate hydrocarbon odor

Silty SAND (SM); medium brown; dense; wet; 25-30% silt; 30% fine to medium sand; 30% coarse sand; 10-15% gravel to 1 1/2"; mod to high est K

SAND (SP); medium brown; dense; wet; trace fines; 60-65% very fine sand; 30% fine sand; trace medium sand; high est K

Silty CLAY (CL); brown; very stiff; damp; trace fine sand; low est K; slight hydrocarbon odor

10-15% medium sand below 22'

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:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration
Driller:	Rick Carr
Drilling Method:	Hollow stem auger
Date Drilled:	June 13, 1989
Well Head Completion:	Locking stovepipe inside concrete vault
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 #90972 Berkeley, California

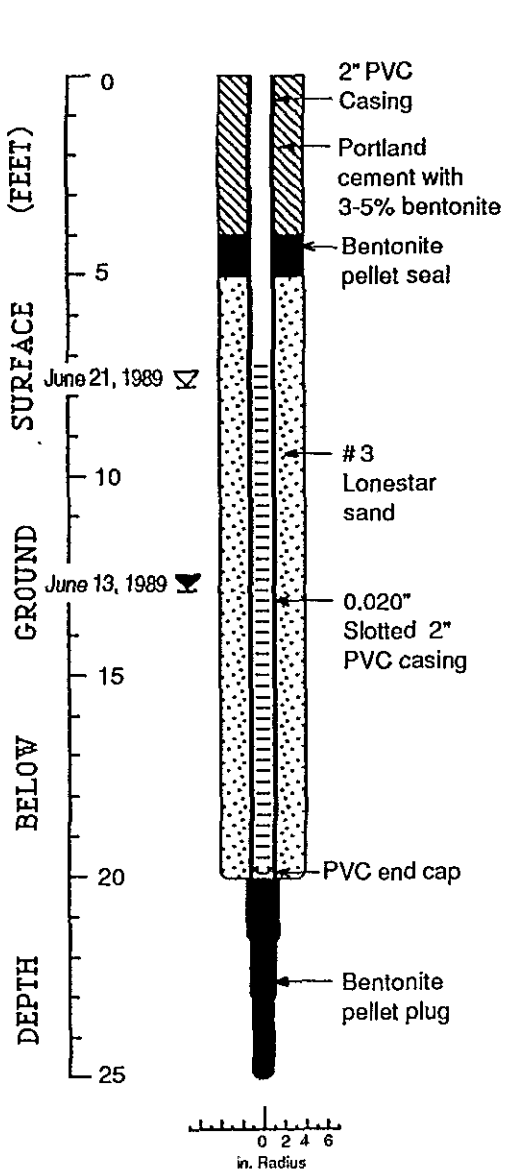
Add'l Info

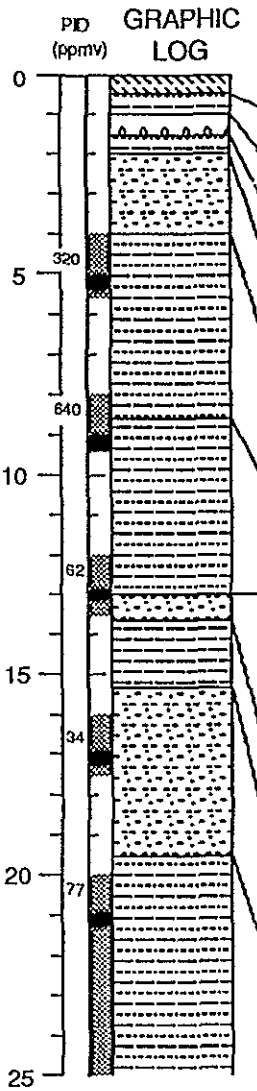
1790968

WEISS ASSOCIATES

WELL MW-2 (BH-B)

1S/4W 12M2





DESCRIPTION

- Asphaltic concrete
- Silty CLAY (CL); dark brown; stiff; moist
- Pea gravel to 1/4" [fill]
- Silty CLAY (OL); dark gray; medium stiff; moist; low est K; high organic content
- Silty SAND (SM); green-brown mottled blue; soft; moist; 30-35% silt; 65-70% fine to coarse sand; mod est K
- Clayey SILT (ML); green mottled brown; very stiff; damp; 30% clay; 65% silt; trace fine to coarse sand; low est K; moderate hydrocarbon odor
- Clayey SILT (ML); brown; hard; damp; 40% clay; 60% silt; low est K
  Grading to Silty CLAY below 7'
- Silty SAND (SM); brown; very dense; wet; 10-15% clay; 25-30% silt; 35-40% fine to very fine sand; 20-25% medium to coarse sand; mod est K; moderate to strong hydrocarbon odor
- CLAY (CL); brown; hard; damp; 90-95% clay; 5% silt; low est K
- Silty SAND (SM); medium brown; very stiff; moist to wet; 25-30% clay; 30-35% silt; 40-45% fine to medium sand; low to mod est K; slight hydrocarbon odor
- Silty CLAY (CL); brown; medium stiff; damp; 60% clay; 20% silt; 20% fine sand to 3/8"; low est K; slight 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:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration
Driller:	Rick Carr
Drilling Method:	Hollow stem auger
Date Drilled:	June 13, 1989
Well Head Completion:	Locking stovepipe inside concrete vault
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 #90972
Berkeley, California

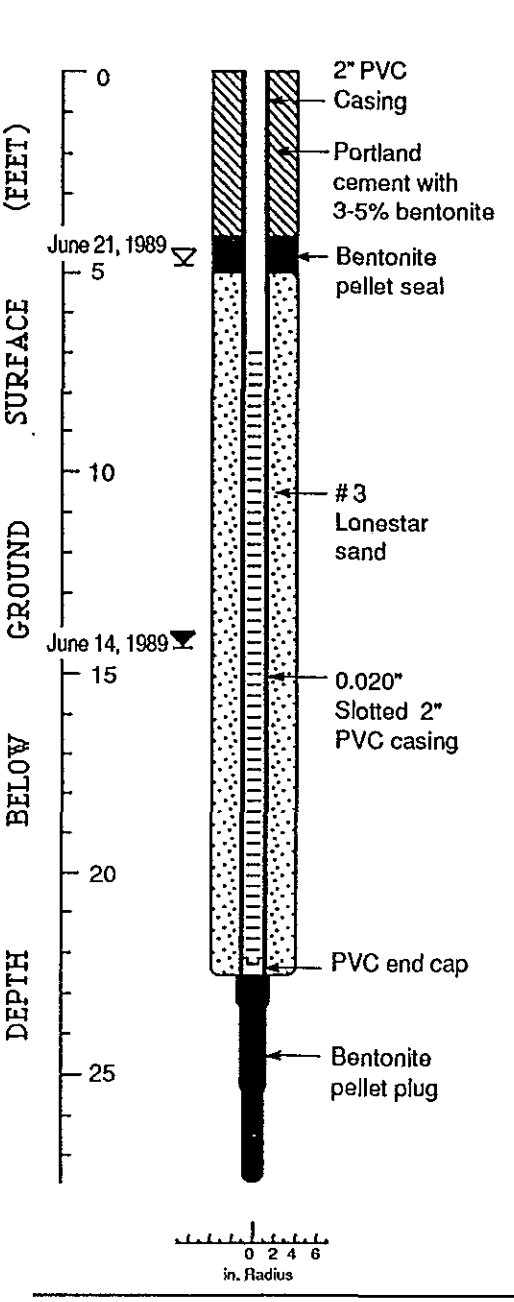
Add ✓
Inv ✓

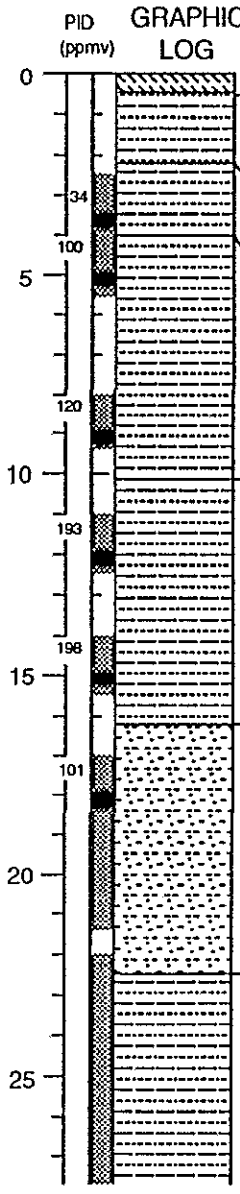
1790960

WEISS ASSOCIATES

WELL MW-3 (BH-C)

1S/4W 12M 3





DESCRIPTION

Asphaltic concrete

Silty CLAY (OL); dark gray; medium stiff; moist; high organic content; low est K

Silty CLAY (CL); green-brown; stiff to very stiff; damp; 60-70% clay; 30-35% silt; trace of fine sand to fine gravel; low est K

Clayey SILT (ML); brown mottled gray; stiff to very stiff; damp to moist; 25-30% clay; 50-60% silt; 15-20% very fine to medium sand; low est K

30% very fine to coarse sand below 8'

Silty CLAY (CL); dark brown; very stiff; mosit; 50-60% clay; 25-30% silt; 20-25% very fine to coarse sand; root material present; stained blue; low est K

Medium brown; trace fine sand below 14'

Silty SAND (SM); medium brown; very dense; moist to wet; 25-30% fines; 15-20% very fine to fine sand; 10-15% medium sand; 50% coarse sand; occasional gravel to 1 1/2"; low to mod est K; no hydrocarbon odor

15-20% gravels to 1 1/2" below 20'

Silty CLAY (CL); brown; hard; damp; 50-60% clay; 30-35% silt; <10% very 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 hydraulic conductivity

Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration
Driller:	Rick Carr
Drilling Method:	Hollow stem auger
Date Drilled:	June 14, 1989
Well Head Completion:	Locking stovepipe inside concrete vault
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 #90972
Berkeley, California

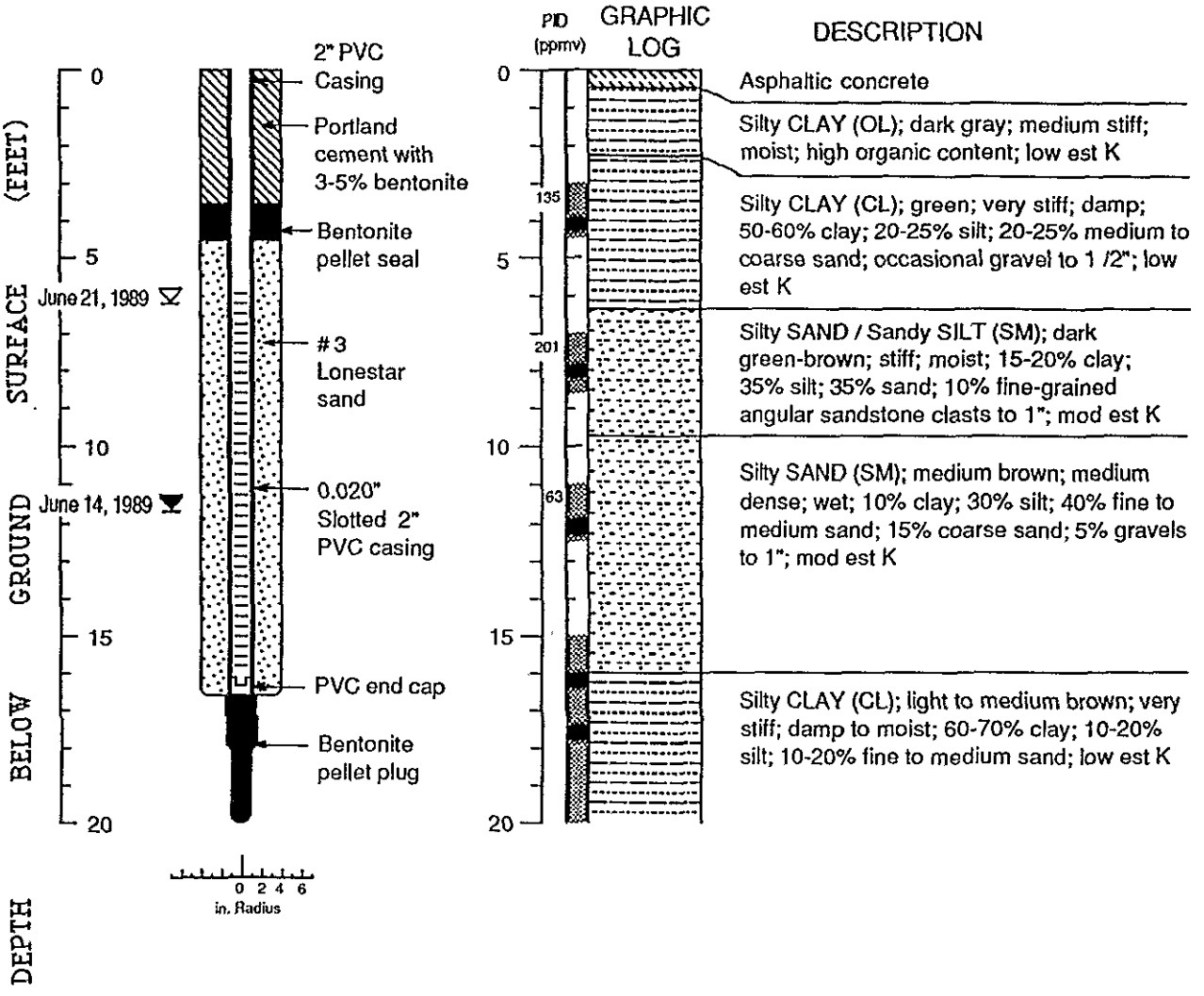
Add ✓
Inv ✓

1790960

WEISS ASSOCIATES

WELL MW-4 (BH-D)

1S/4W/12M4



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:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Bay Area Exploration
Driller:	Rick Carr
Drilling Method:	Hollow stem auger
Date Drilled:	June 14, 1989
Well Head Completion:	Locking stovepipe inside concrete vault
Type of sampler:	Split barrel (1.4", 2.0", 2.5" ID)

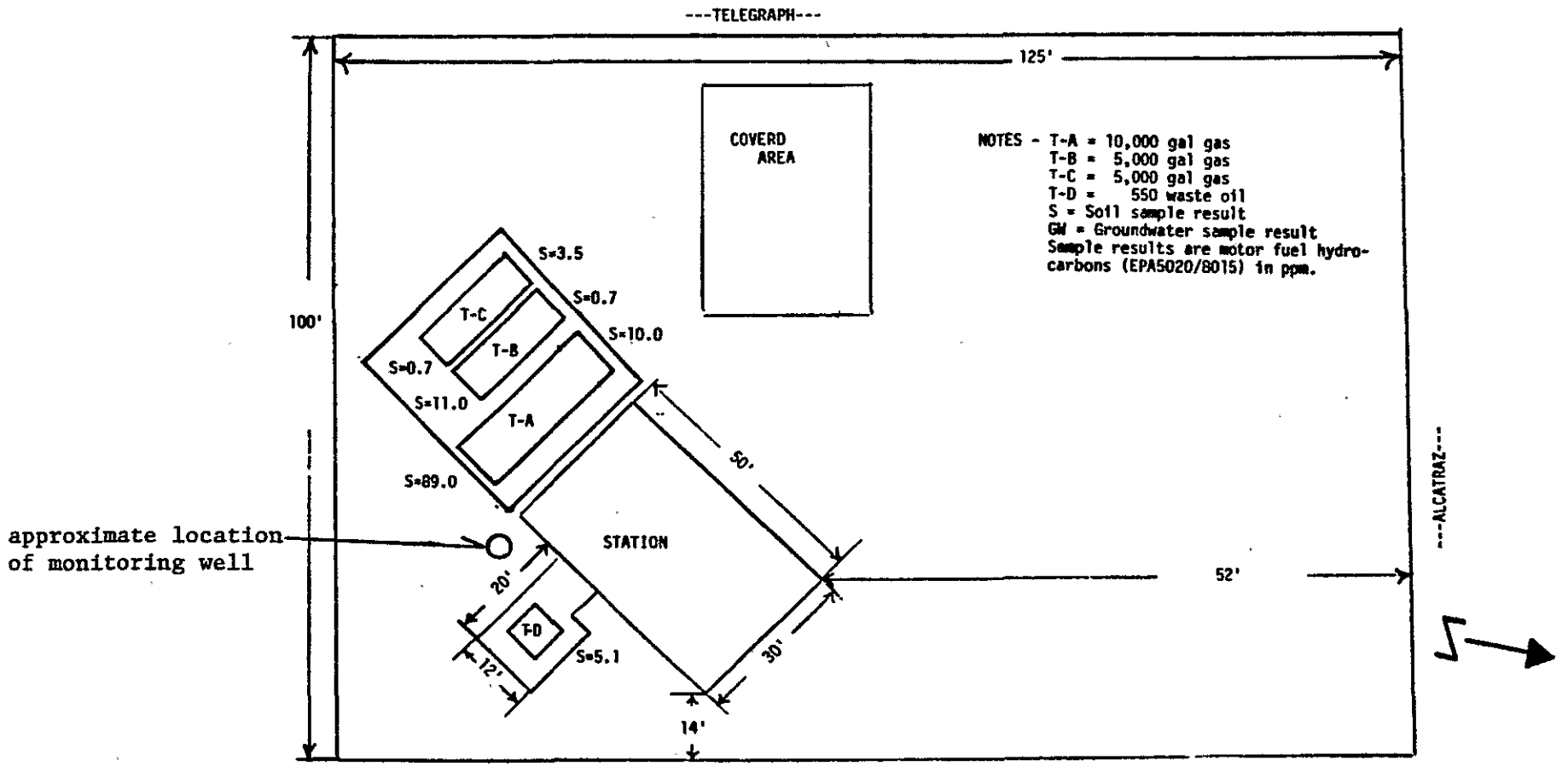
Well Construction and Boring Log - Well MW-4 (BH-D)

Chevron Service Station #90972
Berkeley, California

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



6392 Telegraph Ave., Oakland, Californi

SCALE:	APPROVED BY	DRAWN BY
DATE:		REVISED

AQUA SCIENCE ENG.

Figure 1, not to scale

01-4221

01-4222
0150 400 NW1

WATER WELL DRILLERS REPORT

Owner: Givens and Zweben
6407 Fairmont Ave.
El Cerrito, CA 94530

Constructed: 7-26-88

County: Alameda Permit No: ACFC 88346

Equipment: Rotary (Geospace 1200) Gravel Pack: Yes/#3 Aquarium Sand
From: 8 ft. to 24 ft.

Casing: 2" PVC Perforations: 0.010"
From: to 29 ft. From: 9 ft. 24 ft.

Well Seal: Yes/neat Portland cement surface to 7 ft., bentonite 7 ft. to 8 ft. bentonite from 24 ft. to 29 ft.

Water Levels
Depth of First Water: .
Depth After Well Completion:

Sampling: Soils by Calif. Split Spoon, 5 ft. and 10 ft.

Chemical Analysis: Yes, GC/FID of two soil samples and one water sample (results negative)

Well Use: monitoring Pump Tests: No

01-422E

PROJECT: GIVENS AND ZWEBEN, OAKLAND

LOG OF BOREHOLE 1S/4W 12N1

depth ft.	SOILS DESCRIPTION	BOREHOLE DETAILS	Hammer Blow Count	REMARKS
0		Steel Cover		
1	Black Silty Clay, Slightly Moist, Medium Plasticity (CL)			
2				
3				
4	Brown to Light Brown Silty Clay, Minor Quantity of Fine Gravel (CL)	Cement		
5		Solid PVC Casing	10 12 15	Soil Sample
6				
7		Bentonite		
8	Brown to Light Brown Silty Clay, Minor Quantity of Fine to Medium Gravel Increasing Moisture Content (CL)			
9				
10			10 29 29	Soil Sample
11			Water Table	
12				
13	Fine to Medium Gravel Mixed With Sand, Some Silty Clay (GC)			
14		No. 3 Monterey Sand		
15				
16	AQUA SCIENCE ENGINEERS			
17				

Date: 7-26-88 | Logged By: Bruce Berman

01-422I

PROJECT: GIVENS AND ZWEBEN (Cont.) | **LOG OF BOREHOLE**

depth ft.	SOILS DESCRIPTION	BOREHOLE DETAILS	Hammer Blow Count	REMARKS
18	Fine to Medium Gravel Mixed With Sand, Some Silty Clay (GC)	No. 3 Monterey Sand		
19				
20			20	
21	Coarse Gravel (GP)			
22				
23				
24				
25			25	
26	Light Brown to Yellow Silty Clay Moist, Stiff, Some Coars Sand and Gravel (CH)			
27				
28		Bentonite		
29	B.O.H.			
30			30	
31				
32				
33				
34				
35				

AQUA SCIENCE ENGINEERS

Date: 7-26-88 | Logged By: Bruce Berman

01-4221

USA LOCATION REQUEST FORM

CA: 800-642-2444
NV: 800-227-2600

REQUEST # 110343
DATE CALLED IN: 7-21-98

ADDRESS OR DESCRIPTION WHERE YOU WILL BE DIGGING:

6392 Telegraph Ave., Oakland
abandonded gas station

CITY: Oakland

NEAREST CROSS STREET: Alcatraz

NATURE OF WORK: exploratory drilling & soil sampling

WHO IS THE WORK BEING DONE FOR? Shell Givens

STARTING DATE: 7-25-98 TIME: 8:00 am

YOUR NAME: Bruce Berman

YOUR COMPANY'S NAME: Argus Science Engineers

AREA CODE AND TELEPHONE NUMBER WHERE YOU CAN BE REACHED?

(415) 820-9391

COUNTY WHERE WORK IS BEING DONE: Alameda

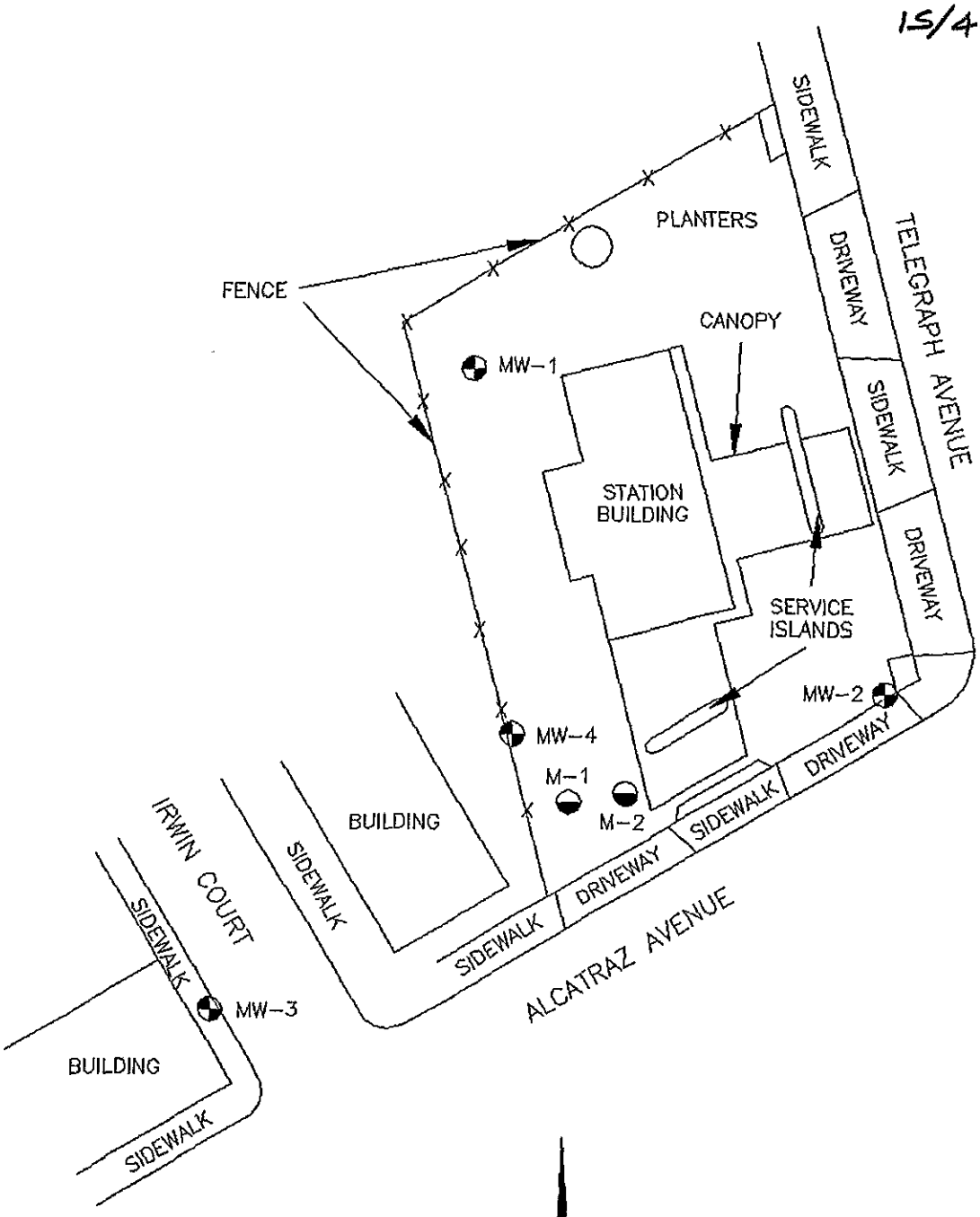
WORK PERMIT, CITY OR COUNTY? None Required NUMBER:

FOREMAN OF THE JOB Bruce Berman

TWO WORKING DAYS NOTICE IS REQUIRED ON ALL LOCATION REQUESTS. EACH LOCATION IS ACTIVE FOR 14 CALENDAR DAYS FROM THE DATE IT IS CALLED IN.

01-2175-V

15/4W-12N2-5



MW-4 ◓ = Monitoring well installed by Applied GeoSystems (July 1989)

M-2 ◒ = Tank pit monitoring well installed by Applied GeoSystems (1988)

Source: Surveyed by Ron Archer Civil Engineer, Inc.

N

Approximate Scale

40 20 0 40 80

feet

Applied GeoSystems

PROJECT NO. 18039-3

GENERALIZED SITE PLAN
ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE

P - 2

01-2175 Inv Add/ 1S/4W 12N2

Total depth of boring: 28-1/2 feet Diameter of boring: 11 inches Date drilled: 7-6-89

Casing diameter: 4 inches Length: 27 feet Slot size: 0.020-inch

Screen diameter: 4 inches Length: 20 feet Material type: Sch 40 PVC

Drilling Company: Kvilhaug Drilling Company, Inc. Driller: Rod and Leroy

Method Used: Hollow-Stem Auger Field Geologist: Becky and Keith

Signature of Registered Professional: _____

Registration No.: _____ State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt.	
2		4		CL	Silty clay, dark brown, slightly damp, medium plasticity, very stiff, rootlets, minor iron staining. staining.	
4	S-3.5	12 18				
6						
8		3				
	S-8.5	5 12			Sandy clay, grading to clay with gravel, some mottling, slight plasticity, stiff.	
10						
12						
		15				
14	S-13.5	18 20			Slightly green, hard.	
16						
18		8				
	S-18.5	10 12			Silty clay, some sand and gravel, light brown, moist, medium plasticity, very stiff.	
20					(Section continues downward)	

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-1/MW-1

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE P - 4

01-217S 1S/4W-12N2

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				CL	Silty clay, some sand and gravel, light brown, moist, medium plasticity, stiff.	
	S-23	3 5 7			Trace gravel.	
24						
26						
28	S-28	3 5 7				
					Total Depth = 28-1/2 feet.	
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-1/MW-1

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE
P - 5

01-217T Inv/Add/ 1S/4W 12N3

Total depth of boring: 28-1/2 feet Diameter of boring: 11 inches Date drilled: 7-6-89

Casing diameter: 4 inches Length: 27 feet Slot size: 0.020-inch

Screen diameter: 4 inches Length: 20 feet Material type: Sch 40 PVC

Drilling Company: Kvilhaug Drilling Company, Inc. Driller: Rod and Leroy

Method Used: Hollow-Stem Auger Field Geologist: Becky and Keith

Signature of Registered Professional: _____

Registration No.: _____ State: CA

Depth	Sample No.	Blows/6"	P.I.D.	USCS Code	Description	Well Const.
0						
2				CL	Sandy clay, dark brown, damp, slight plasticity, very stiff.	
4	S-3.5	6 10 12				
6						
8	S-8.5	7 20 25			Silty clay, with some gravel, light brown, damp, hard.	
10						
12						
14	S-13.5	5 7 15			Very stiff.	
16						
18	S-18.5	7 20 25			Silty clay with gravel, brown, moist, hard.	
20					(Section continues downward)	

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-2/MW-2

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE P - 6

01-217T 1S/4W-12N3

Depth	Sample No.	Blows/6"	P.I.D.	USCS Code	Description	Well Const.
				CL	Silty clay with gravel, brown, moist, hard.	
22		3				
	S-23	5 12			Silty clay, some fine gravel, dark brown, stiff.	
24						
26						
		10				
28	S-28	20 25			Silty clay with sand, medium brown, slightly damp, slight plasticity, hard.	
					Total Depth = 28-1/2 feet.	
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-2/MW-2

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE P - 7

01-2170 Inv Add'l S/4W 12N 4

Total depth of boring: 28-1/2 feet Diameter of boring: 11 inches Date drilled: 7-7-89

Casing diameter: 4 inches Length: 27 feet Slot size: 0.020-inch

Screen diameter: 4 inches Length: 20 feet Material type: Sch 40 PVC

Drilling Company: Kvilhaug Drilling Company, Inc. Driller: Rod and Leroy

Method Used: Hollow-Stem Auger Field Geologist: Becky and Keith

Signature of Registered Professional: _____

Registration No.: _____ State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Concrete (4 inches) over baserock (6 inches).	
2				CL	Silty clay, with sand and some gravel, medium brown, damp, slight plasticity, stiff, rootlets.	
4	S-3.5	3 10 10				
6						
8	S-8.5	2 4 8			Damp.	
10						
12						
14	S-13.5	4 6 10			Some mottling, moist.	
16						
18	S-18.5	6 5 12			Silty clay, minor gravel, light to medium brown, damp, medium plasticity, stiff.	
20					(Section continues downward)	

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-3/MW-3

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE P - 8

01-2170 1S/4W-12N4

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				CL	Silty clay, minor gravel, light to medium brown, damp, medium plasticity, stiff.	
		6				
		8				
24	S-23.5	12			Very stiff.	
26						
		.5				
		10				
28	S-28.5	12			Silty clay with sand, slight plasticity, very stiff.	
					Total Depth = 28-1/2 feet.	
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-3/MW-3

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE

P - 9

01-2171 Inv Add 1S/4W 12N5

Total depth of boring: 27-1/2 feet Diameter of boring: 11 inches Date drilled: 7-7-89

Casing diameter: 4 inches Length: 27 feet Slot size: 0.020-inch

Screen diameter: 4 inches Length: 20 feet Material type: Sch 40 PVC

Drilling Company: Kvilhaug Drilling Company, Inc. Driller: Rod and Leroy

Method Used: Hollow-Stem Auger Field Geologist: Becky and Keith

Signature of Registered Professional: _____

Registration No.: _____ State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
2		2		CL	Silty clay, some sand and fine-grained gravel, very dark brown, slightly damp, slight plasticity, stiff.	
		3				
4	3.5	8				
6						
8		3				
		4				
	8.5	10				
10						
12						
		4		GM	Sandy gravel, some silt, medium brown, very moist, medium dense.	
		10				
14	S-13.5	25				
16						
		15				
18		15				
	S-18.5	20			Wet, dense.	
20						

(Section continues downward)

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-4/MW-4

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE P - 10

81-217V 1S/4W-12N5

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
				GM	Sandy gravel, some silt, medium brown, very moist, medium dense.	
22						
		.6		CL	Silty clay, some sand and gravel, very stiff.	
		12				
24	S-23.5	15				
26		.7				
		20				
	S-27	20			Grades more gravelly.	
28					Total Depth = 27-1/2 feet.	
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

Applied GeoSystems

PROJECT NO. 18039-3

LOG OF BORING B-4/MW-4

ARCO Station No. 374
6407 Telegraph Avenue
Oakland, California

PLATE

P - 11

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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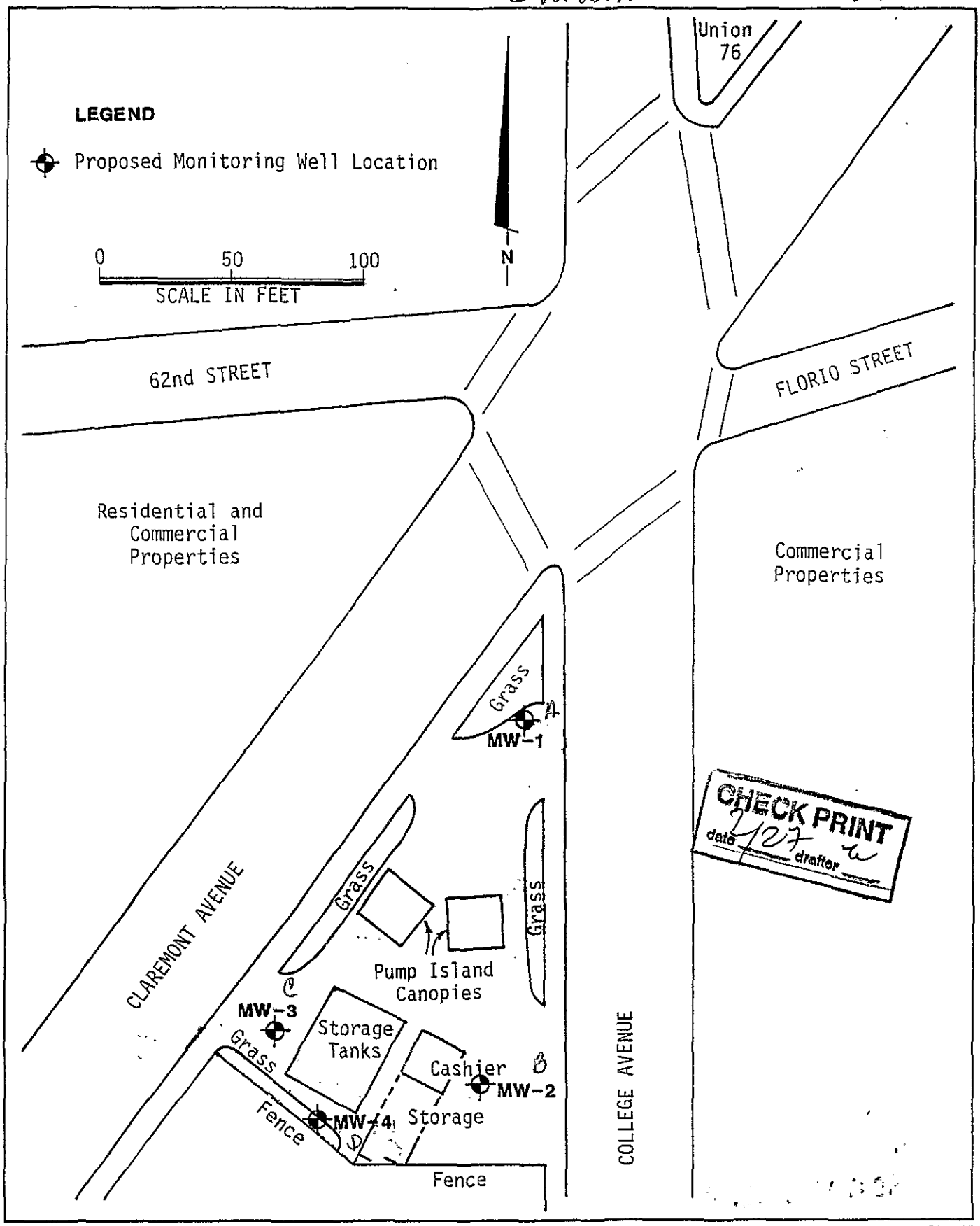
342401A-D 1S/4W 13B1-4



Harding Lawson Associates
Engineering and Environmental Services

Monitoring Well Locations
Shell Service Station
6039 College Avenue
Oakland, California

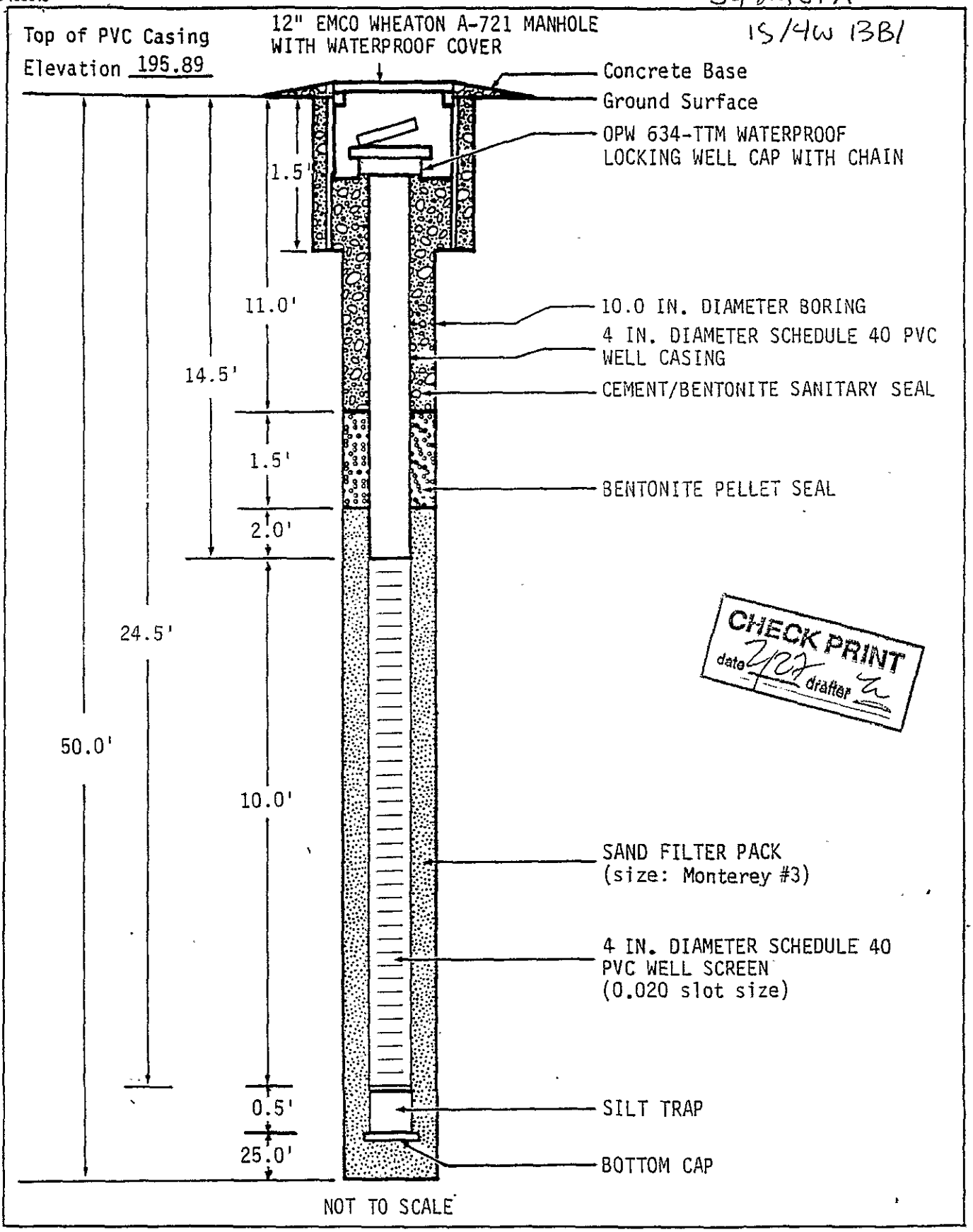
PLATE **4**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
KH	4022,233.03		11/89	

106848

342401A

1S/4W 13B1



CHECK PRINT
date 4/27 drafter

Harding Lawson Associates
Engineers and Geoscientists

Well Completion Diagram MW-1
Shell Service Station
6039 College Avenue
Oakland, California

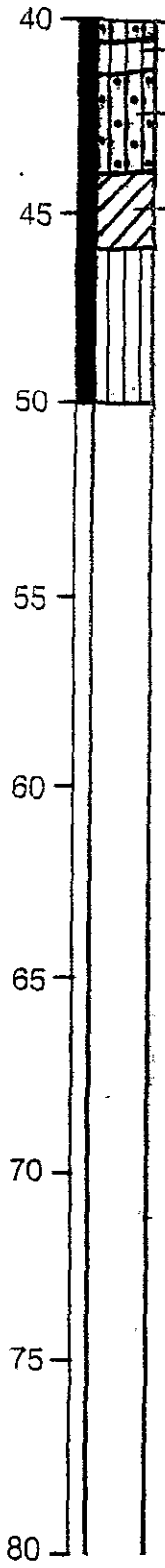
PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

1S/4W 13B1 342401A

(Continuation of Log)

Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Gasoline Odor
29	0		None
32	0		None
42	0		None
48	0		
15	0		
31	0		



MOTTLED BROWN-GRAY SILT (ML), medium dense, moist

BROWN SILTY SAND WITH GRAVEL (SM), dense, saturated, gravel ≤.5 inch, some clay

BROWN LEAN CLAY WITH GRAVEL (CL), hard, moist, gravel ≤.5 inch

MOTTLED BROWN-ORANGE SILT (ML), medium dense, moist, some gravel decreasing towards bottom

Same, mottled gray-brown, partial cementation

CHECK PRINT
date 3/14 drafter q

Harding Lawson Associates
Engineers, Geologists & Geophysicists

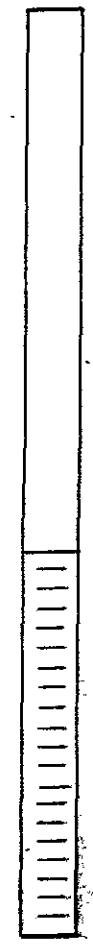
Log of Boring B-1, MW-1
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

Equipment Hollow Stem Auger

Elevation _____ Date 01/04/90 (0-25)
02/08/90 (25-50)

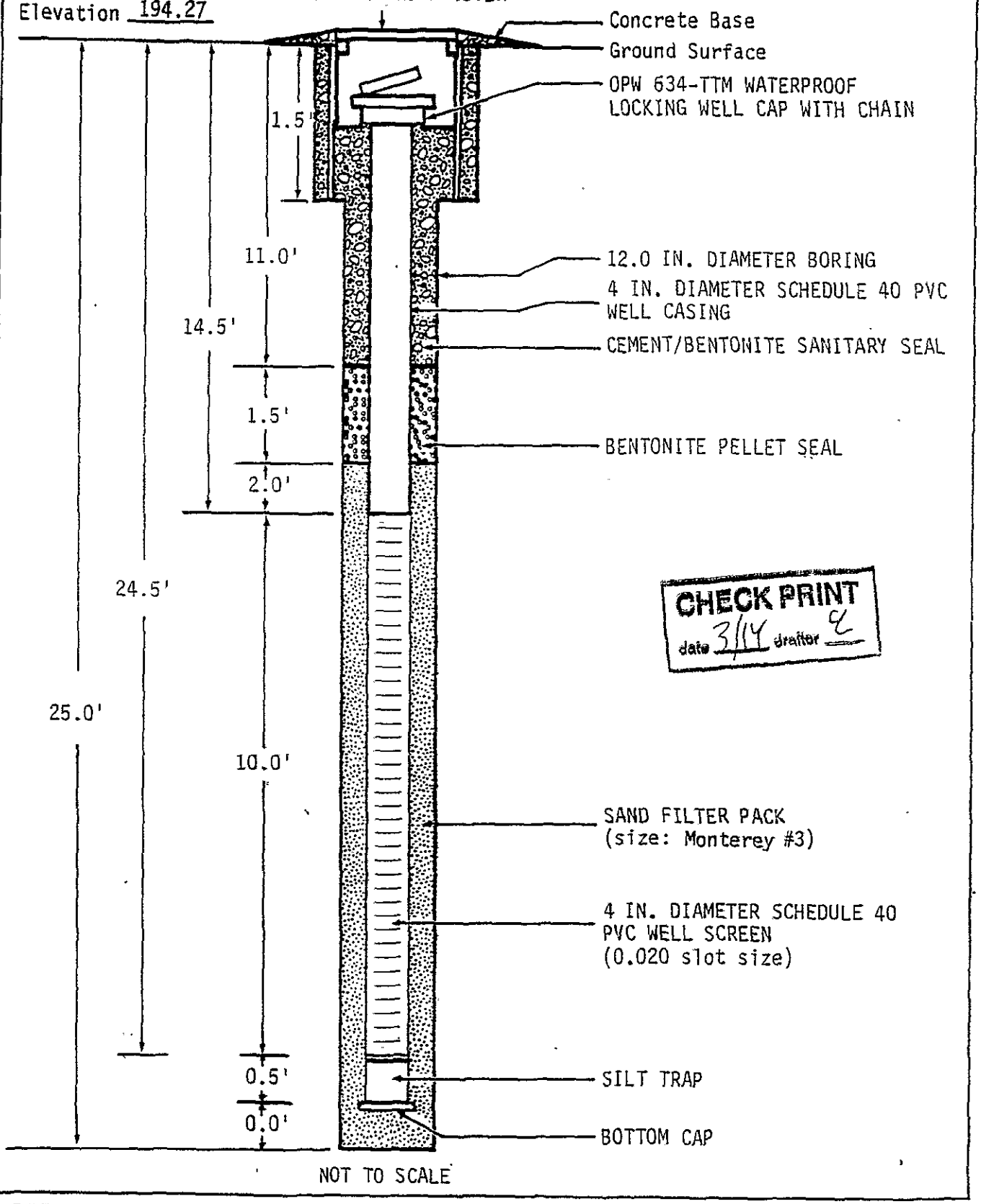


Blows/foot	Photo Ionization Detector (ppm)	Gasoline Odor	Depth (ft)	Sample	
			0		
8	0	None	5		DARK BROWN SILTY SAND (SM), medium dense, dry, very fine to fine sand
33	0	None	10		BROWN SANDY LEAN CLAY (CL), very stiff, dry, very fine sand, no plasticity
12	0	None	15		BROWN LEAN CLAY WITH SAND (CL), stiff, moist, slight plasticity
15	1	None			Same, moderate plasticity
30	0	None			Same, mottled with wet gray soft clay
33	0	None	20		
58	0	None			BROWN LEAN CLAY WITH GRAVEL (CL), very stiff, dry, slight plasticity
					Bottom of boring at 25 feet
22	0	None	25		MOTTLED ORANGE-BROWN SILT (ML), medium dense, moist, with increasing sand content towards bottom of sample
14	0	None			
24	0	None	30		BROWN SILTY SAND WITH GRAVEL (SP), medium dense, saturated, gravel ≤.25 inch, medium to coarse sand
29	0	None			
16	0	None			Same, increasing sand (fine to medium)
25	0	None			BROWN SILT WITH GRAVEL (ML), medium dense, moist, gravel <.5 inch, some sand
29	0	None	35		
21	0	None			DARK BROWN LEAN CLAY (CL), very stiff, moist, with sand
26	0	None			MOTTLED BROWN-GRAY CLAY (CL), increased sand, some gravel <.15 inch
			40		BROWN SILTY SAND WITH GRAVEL (SM), medium dense, moist, gravel <.25 inch, with clay

342401B

1S/4W 13B2

Top of PVC Casing Elevation 194.27



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date 3/14 drafter C

NOT TO SCALE

Harding Lawson Associates
Engineers and Geoscientists

Well Completion Diagram MW-2
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

3424010 1S/4W 13B2

Equipment Hollow Stem Auger

Elevation _____ Date 02/08/90

Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
				0		
13	0		None	5		DARK BROWN SANDY LEAN CLAY (CL), stiff, moist, no plasticity
33	0		None	10		Same, brown, hard
13	0		None	15		MOTTLED BROWN-GRAY CLAY (CL), dry, slight plasticity
43	0		None	20		Same, orange-brown, hard, moist, with increased silt content
12	0		None	25		BROWN SILT (ML), medium dense, moist
						Bottom of boring at 25.0 feet
				30		
				35		
				40		

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Log of Boring MW-2
Shell Service Station
6039 College Avenue
Oakland, California

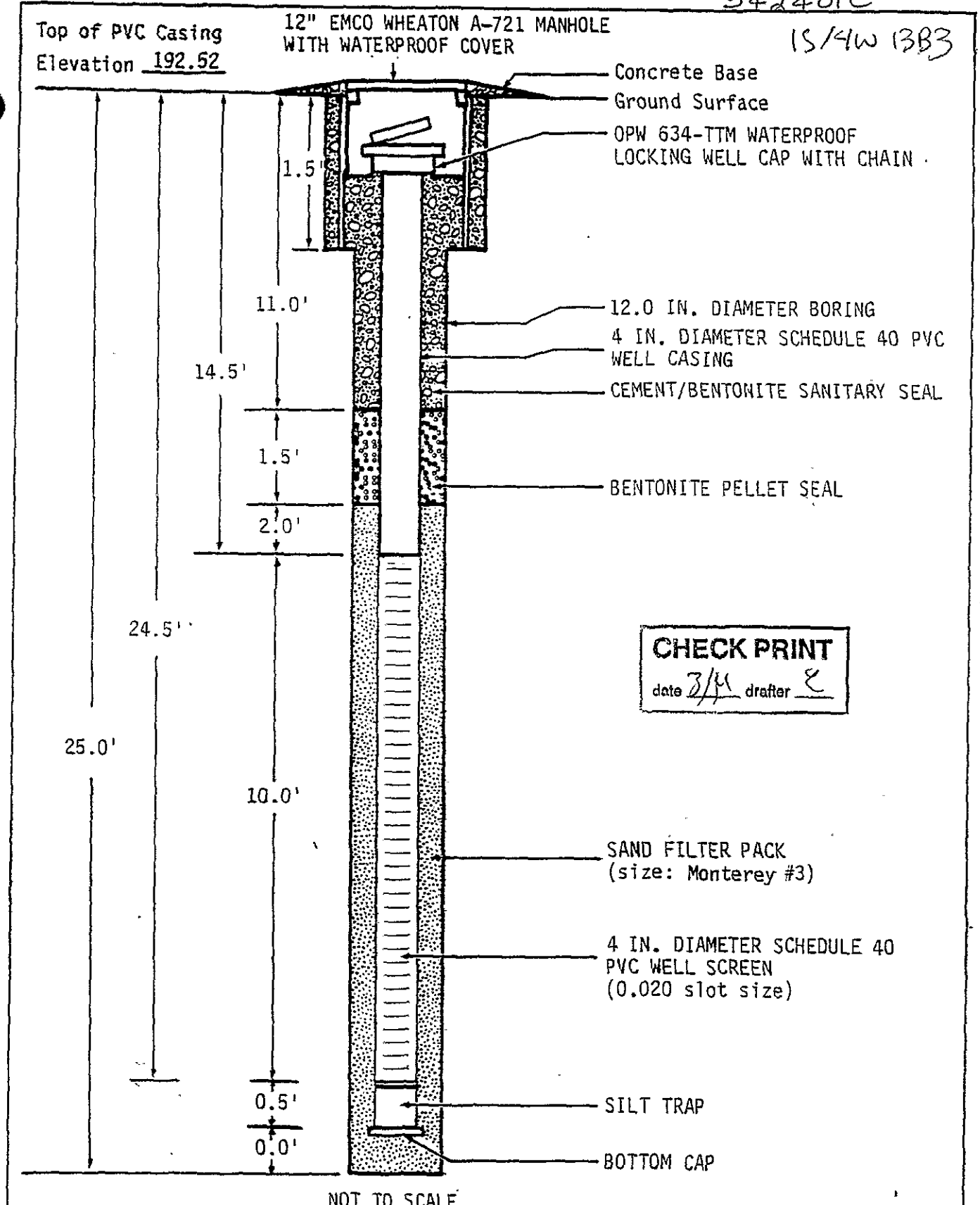
PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

135648.

342401C

15/4W 13B3



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date 3/4 drafter E

Harding Lawson Associates
Engineers and Geoscientists

Well Completion Diagram MW-3
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

342401C 1S/4W 13B3

Equipment Hollow Stem Auger

Elevation _____ Date 02/07/90

Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
				0		
11	20		Slight	5		BROWN SILT (ML), very hard, moist, some clay
34	100		Strong	10		MOTTLED GRAY-BROWN SILTY CLAY (CL-ML), hard, moist
17	110		Strong Gas sheen	15		MOTTLED GRAY-BROWN SILT (ML), hard, moist
10	30		Strong	20		Same, very stiff
28	100		Strong	25		BROWN SANDY LEAN CLAY WITH GRAVEL (CL), hard, moist Bottom of boring at 26.5 feet
				30		
				35		
				40		

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Harding Lawson Associates
Engineers and Geoscientists

Log of Boring MW-3
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

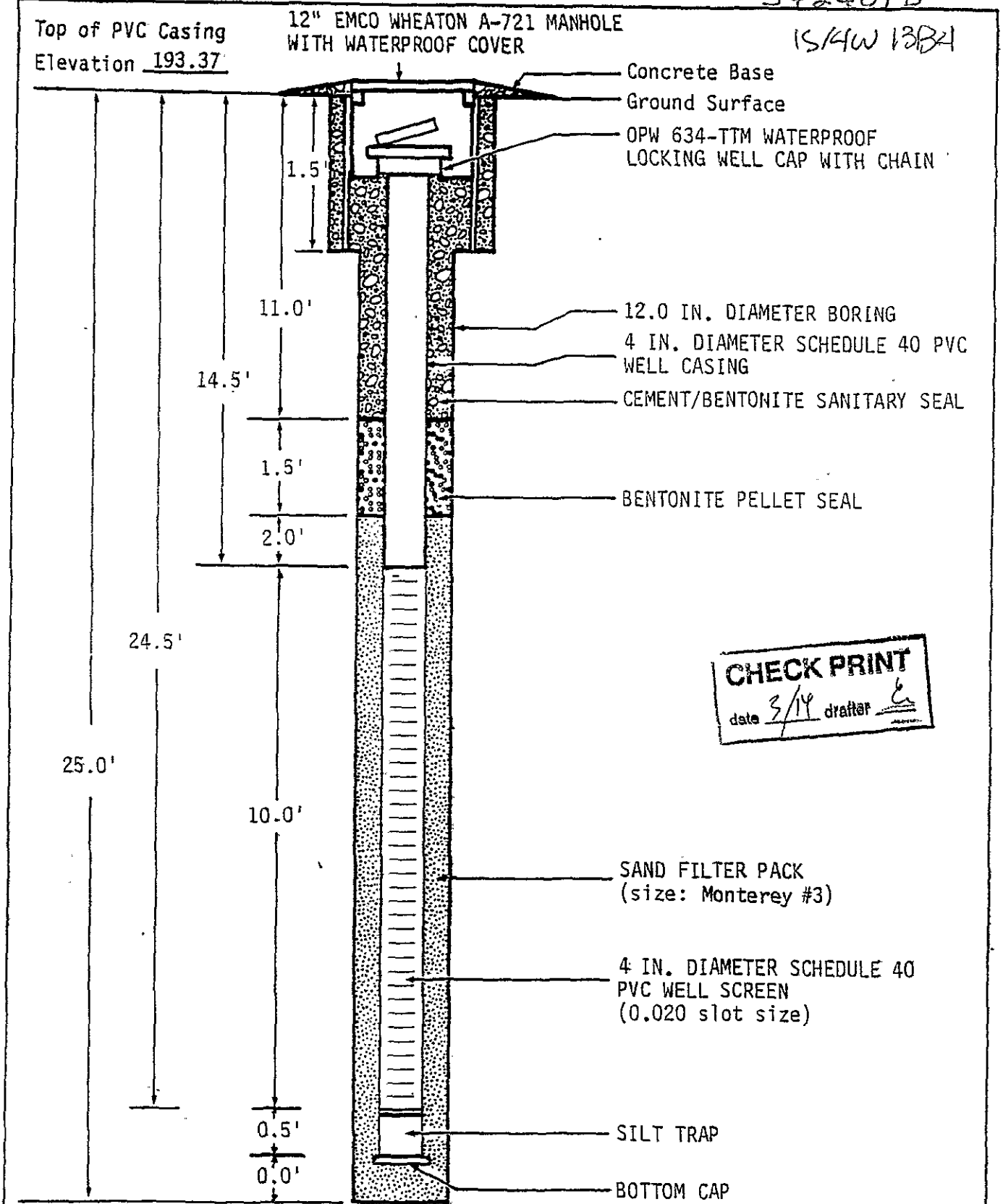
DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

105648

342401D

15/4W 13B1

Top of PVC Casing Elevation 193.37



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date 3/14 drafter

NOT TO SCALE

Harding Lawson Associates
Engineers and Geoscientists

Well Completion Diagram MW-4
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

342401D 1S/4W 13B4

Equipment Hollow Stem Auger

Elevation _____ Date 02/07/90

Depth (ft)	Sample	Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	
0					
5		33	0	None	BROWN SILT WITH GRAVEL (ML), hard, dry, gravel to 1.5-inch diameter
10		44	0	None	BROWN LEAN CLAY (CL), hard, moist, some black mottling, some silt
15		14	150	Strong	GREENISH-BROWN SILT (ML), hard, moist, slight plasticity
20		69	200	Free Product	GRAY SILT (ML), stiff, saturated BROWN LEAN CLAY (CL), hard, moist
25		23	10	Slight	Same, some gravel to 1.5-inch Bottom of boring at 26.5 feet
30					
35					
40					

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date 3/14 drafter

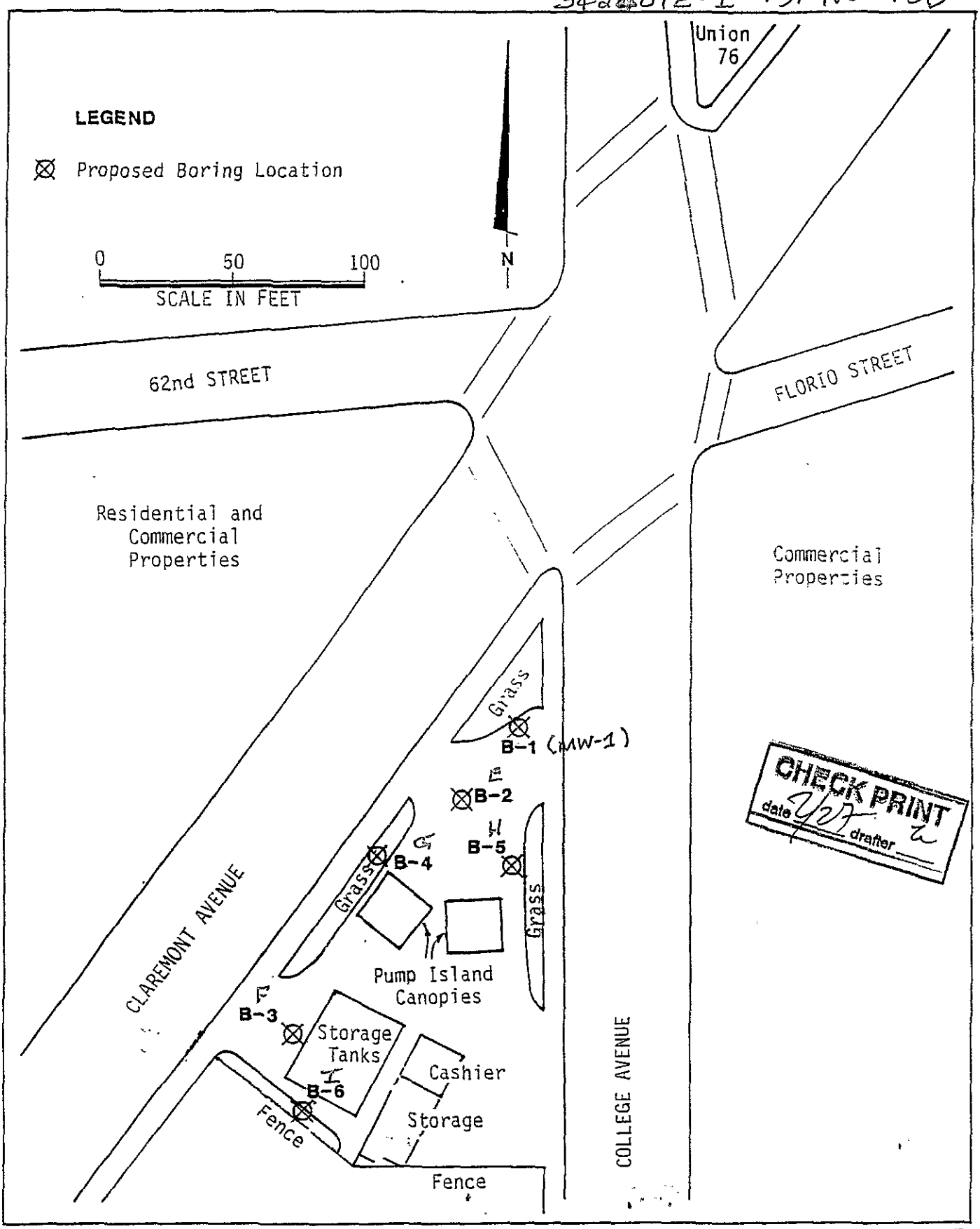
PLATE

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring MW-4
Shell Service Station
6039 College Avenue
Oakland, California

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

3422 01E-I 1S/4W 13B



Harding Lawson Associates
Engineering and Environmental Services

Soil Boring Locations
Shell Service Station
6039 College Avenue
Oakland, California

PLATE **3**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
KH	4022,233.03		11/89	

3427E01E 1S/4W 13B

Equipment Hollow Stem Auger

Elevation _____ Date 01/05/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
				0		
	21	0	None	5		No recovery, brown loose sandy material and asphalt in bottom of split barrel
	35	3.4	Slight	10		BROWN-GRAY MOTTLED SANDY LEAN CLAY (CL), medium dense, moist, fine to coarse sand
	16	6.3	Slight	15		GRAY SANDY SILT (ML), medium dense, moist, very fine sand
	9	720	Strong			GREEN-GRAY MOTTLED SANDY SILT (ML), dense, wet, very fine sand
Perm MA	28	134	Strong			BROWN-GRAY MOTTLED SILT WITH SAND (ML), dense, dry, very fine sand
	48	4.0	Slight	20		BROWN-GRAY SAND AND GRAVEL WITH SILT (GM), dense, moist, fine to medium gravel ~25%
		140	Strong			
Perm MA	20	0.5	None			BROWN SILTY SAND WITH GRAVEL (SP), medium dense, saturated at 22.5 to 23 feet, gravel absent at 23.5 feet
				25		Bottom of boring at 24 feet
				30		
				35		
				40		

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date 2/14 drafter

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring B-2
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

3422401F 1S/4W13B

Equipment Hollow Stem Auger

Elevation _____ Date 01/05/90

Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
			0		
			5		DARK BROWN SANDY SILT (ML), medium dense, moist, very fine sand
10	0	None			
			10		BROWN-GRAY MOTTLED SANDY CLAY (CL), hard, moist, very fine sand, occasional gravel
43	56	Strong			
			15		GREEN-GRAY SANDY SILT WITH CLAY (ML), very stiff, moist, very fine sand, slight plasticity
14	95	Strong			
					GRAY SANDY SILT (ML), medium dense, dry, very fine sand, non-plastic
12	240	Strong			
			20		GRAY SANDY SILT (ML), medium dense, wet, very fine sand
8	220	Strong			
					BROWN SANDY SILT (ML), dense, saturated, very fine sand, some clay
28	170	Strong			
					Bottom of boring at 22.5 feet
29	18	Slight	25		
			30		
			35		
			40		

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date 3/14 drafter E

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Engineers and Geoscientists

Log of Boring B-3
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

342401G 1S/4W 13B

Equipment Hollow Stem Auger

Elevation _____ Date 01/04/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
	24	0	None	0		BROWN SILTY SAND (SM), medium dense, dry, some gravel
	26	0	None	5		DARK BROWN SANDY SILT (ML), dense, dry, some gravel
	27	1.1	None			BROWN SANDY SILT WITH CLAY (ML), stiff, dry, no plasticity
	25	1	None	10		GRAY-BROWN MOTTLED CLAY (CL), stiff, dry, some sand, slight plasticity
	34	0	None			BROWN SANDY SILT (ML), stiff, dry, no plasticity
	25	1	None			BROWN-GRAY MOTTLED SANDY LEAN CLAY (CL), stiff, dry, slight plasticity, very fine sand
	15	8	Slight	15		BROWN-GRAY SAND WITH CLAY (SC), dense, dry, some fine gravel, fine sand stringers
	25	25	Strong			GRAY SILT (ML), stiff, moist, some fine sand, slight plasticity, claystone fragments
	16	230	Strong			
	24	270	Strong	20		GRAY SILTY SAND WITH GRAVEL (SP), medium dense, moist, multi-color gravel, green sand, claystone fragments
	51	23	Strong			
	51	3	Slight			GREEN-GRAY LEAN CLAY (CL), medium stiff, moist, some fine sand, medium plasticity
	48	0	None			
Perm MA	29	0	None	25		BROWN SANDY LEAN CLAY (CL), hard, dry, fine sand and occasional fine gravel
						Bottom of boring at 25 feet
				30		
				35		
				40		

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date 3/4 drafter

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Engineers and Geoscientists

Log of Boring B-4
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

342401H 1S/4W 13B

Equipment Hollow Stem Auger

Elevation _____ Date 01/04/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
				0		
	20	0	None	5		DARK BROWN SILTY SAND (SM), medium dense, dry, occasional fine gravel, orange mottling
	27	0	None	10		BROWN SANDY SILT WITH CLAY (ML), very stiff, dry, very fine sand, no plasticity
Perm MA	12	3	None	15		BROWN-GRAY SILT WITH SAND (ML), very stiff, dry, very fine sand, no plasticity
	28	9	Slight	20		BROWN-GRAY MOTTLED SANDY LEAN CLAY (CL), very stiff, dry, very fine sand, no plasticity
	19	1	None			BROWN SANDY LEAN CLAY (CL), stiff, saturated from 21.5 to 21.7 feet, moist at 22 feet
				25		Bottom of boring at 23 feet
				30		
				35		
				40		

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Harding Lawson Associates
Engineers and Geoscientists

Log of Boring B-5
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

342401I 1S/4W 13B

Equipment Hollow Stem Auger

Elevation _____ Date 01/05/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Petroleum Hydrocarbon Odor	Depth (ft)	Sample	
				0		
	13	0	None	5		DARK BROWN SANDY SILT (SM-ML), medium dense, moist, sand >50% 5 to 5.5 feet, root material, fine to medium sand
	35	0	None	10		BROWN-GRAY MOTTLED SANDY CLAY (CL), very stiff, dry, occasional gravel, fine to medium sand
	16	130	Strong	15		GREEN-GRAY SANDY SILT WITH CLAY (ML), stiff, moist, very fine sand, slight plasticity
Perm	12	119	Strong			GRAY SILT (ML), medium dense, moist, some very fine sand <12%
MA	9	140	Strong			GREEN-GRAY SILT WITH CLAY (ML), stiff, saturated, slight plasticity
	12		No recovery	20		BROWN LEAN CLAY WITH SAND (CL), hard, dry, with gray mottling, very fine sand
Perm MA	33	6	Slight			Bottom of boring at 22.5 feet
				25		
				30		
				35		
				40		

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date 3/14 drafter

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring B-6
Shell Service Station
6039 College Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	4022,233.03		2/90		

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

01-5055
1S/4W-13C 3

AQUA TERRA TECHNOLOGIES INC.

Log of Exploratory Boring

Project: Dryers Ice Cream Job No.: 9126

Location: 5929 College Avenue, Oakland, CA Date: 07/16/91

Boring No.: MW1 Driller: Gregg Drilling Page 1 of 2

Logged by: Bruce Berman Proj. Mgr. Terry Carter Reviewed by: _____

Penetration 0.5 Feet	Depth (feet)	U.S.C.S. Soil Class.	Field Description	
	0	Fill	0'-1' Redwood chip-bark and soil backfill (planter)	
	1			
	2	CL	1'-8' Silty clay; black (10YR 2/1); stiff; slightly damp. Gradational color change to very dark grayish brown (10YR 3/2), minor component of very fine sand beginning at 5'.	
	3			
	4			
	5			
	6			
	7			
	8		8'-18' Sandy clay; dark yellowish brown (10YR 4/4); 10% to 20% very fine sand; stiff to very stiff; slightly damp. Gradational increase in fine sand content and moisture content; minor iron staining and micro pores beginning at ≈ 15'.	
	9			
	10			10' Sample
7,9,14	11			
	12			
	13	CL		
	14			
	15			15' Sample
5,17,12	16			
	17			

01-505S
18/4W-13C 3

AQUA TERRA TECHNOLOGIES INC.

Field Drilling and Sampling Log

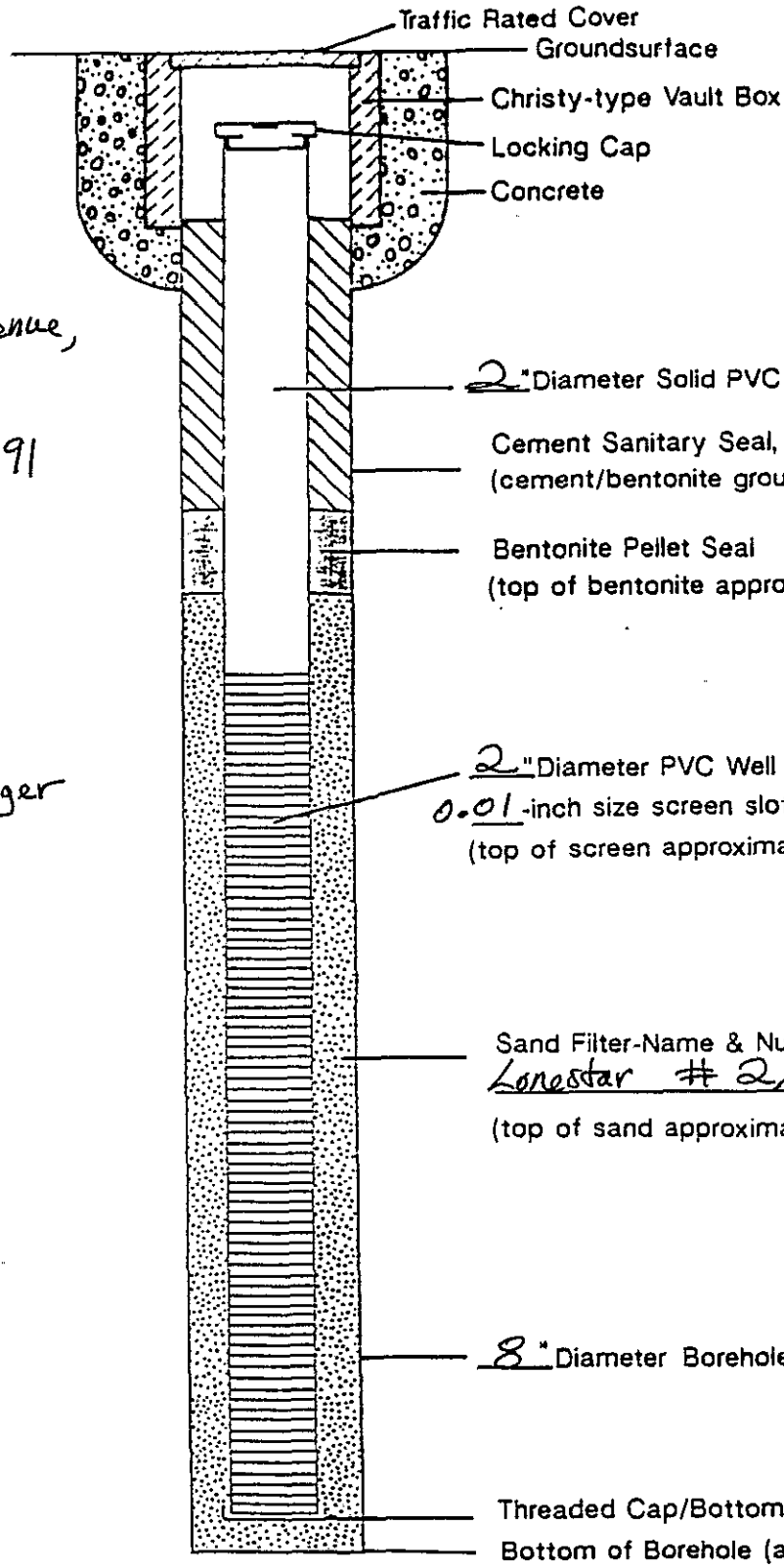
Job No: 9126

Penetration (0.5 Ft)	Depth (feet)	U.S.C.S. Soil Class.	MW1 Field Description	
	18	CL	18'-30' Sandy-gravelly clay to clayey sand; 20% very find sand, 10% medium to coarse sand, 20% fine to medium gravel (semi-round sandstone to 1/2-inch diameter); thin lenses of clean gravel (< 6-inches) diminish with depth.	18' First water
	19			
	20			20' Sample saturated, not retained.
6,16,22	21			
	22	GC-CL		
	23			
	24			
	25			
	26			
	27			
	28			
	29			
	30		B.O.H. @ 30'.	
	31			
	32			
	33			
	34			
	35			
	36			
	37			
	38			
	39			

9126/#1/DRYRSMW1.LOG

01-505S
1S/4W-13C3

MW-1
Well Designation:



Site Location:
5929 College Avenue,
Oakland, CA.

Date Installed: 7-16-91

Drilling Company:
Gregg Drilling

Driller: Chris

Drilling Method:
Hollow-stem auger

Logged By: BB

Notes:

Not to Scale

Groundwater Monitoring Well Construction Details

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

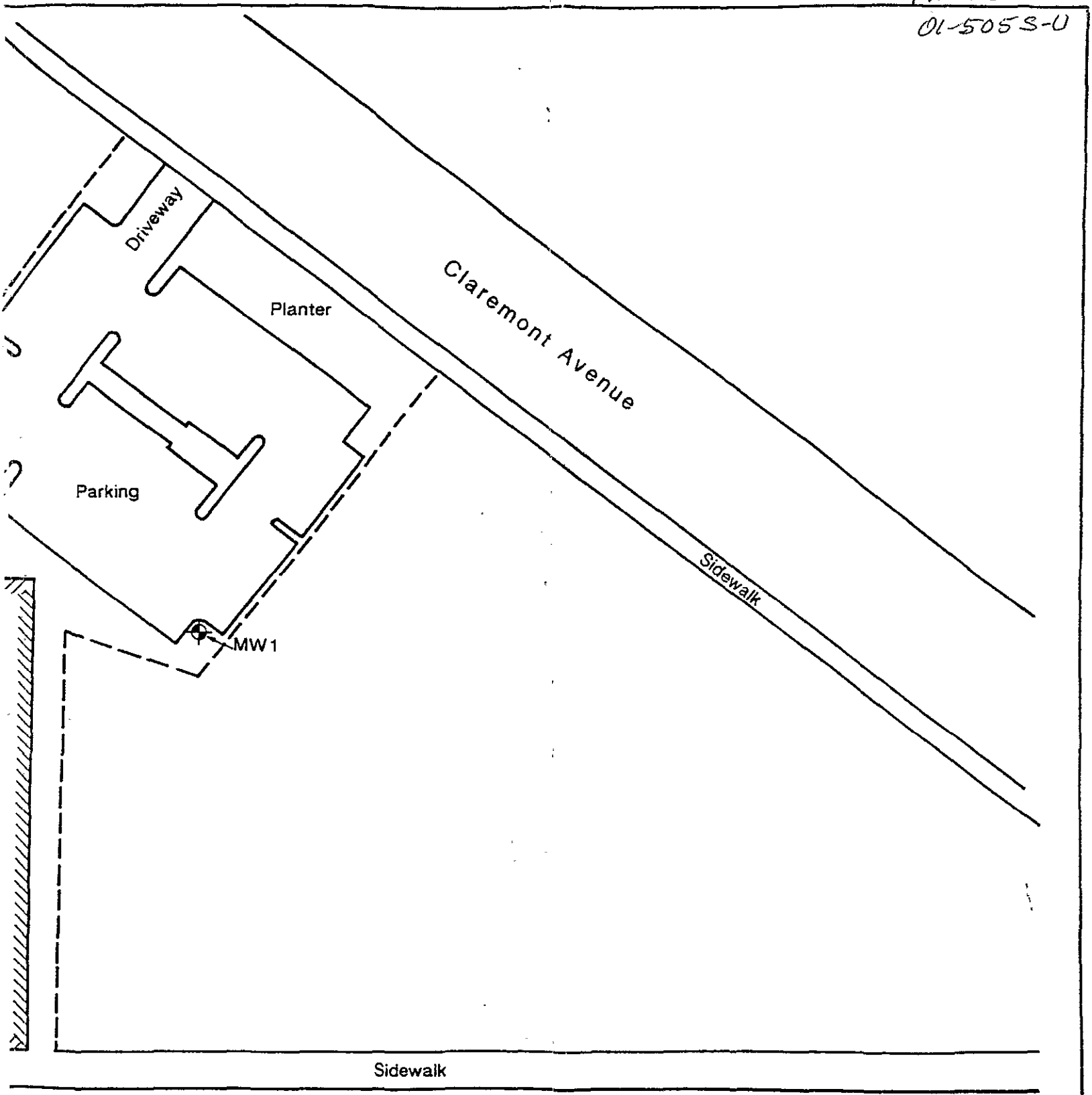
Dryers Ice Cream

JOB NUMBER 9126

DATE

~~PLATE~~ MW1

15/4W-13C3-5
01-505S-U

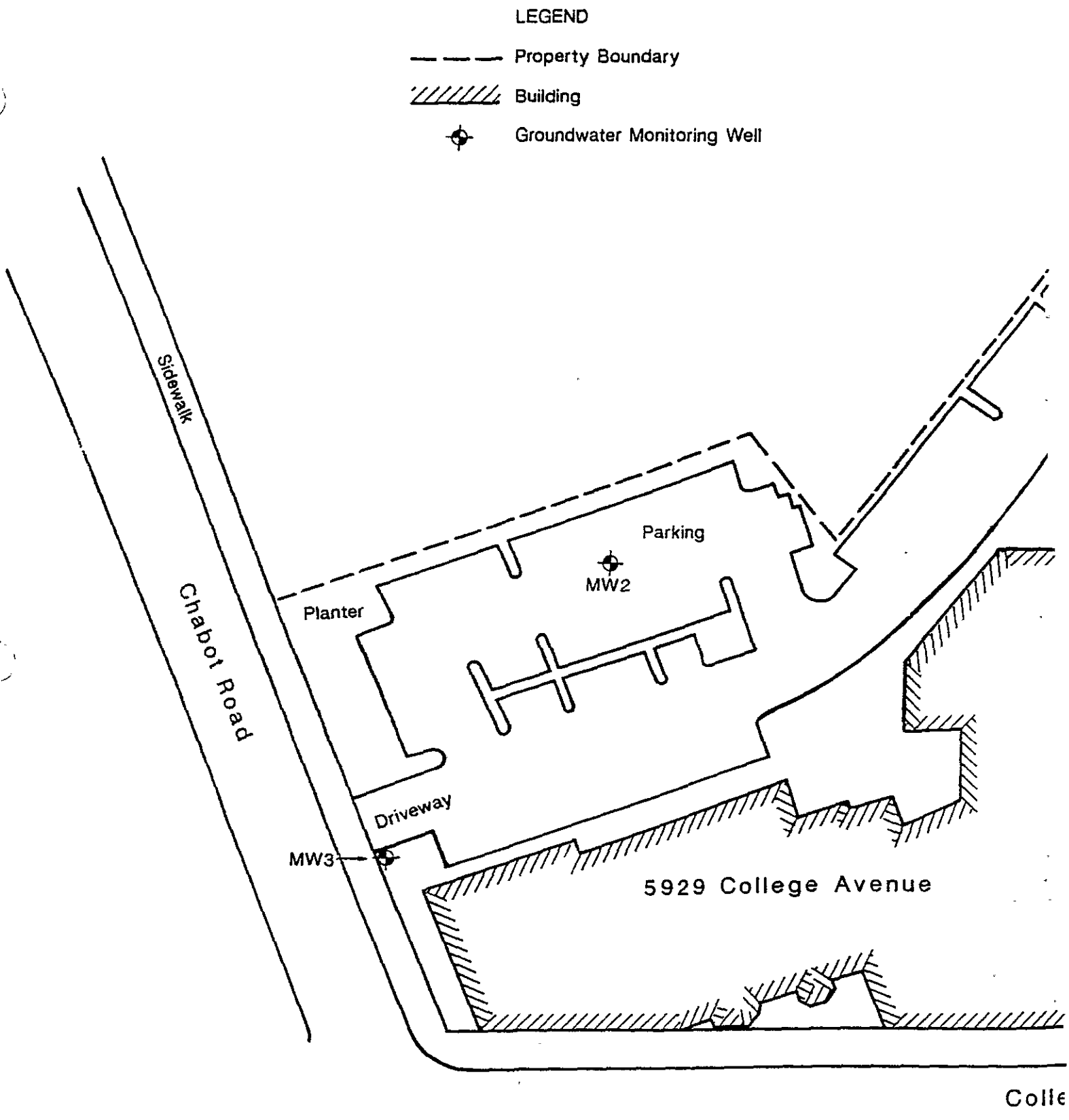


ge Avenue

Site Map

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

Dreyer's Grand Ice Cream, Inc.		PLATE
JOB NUMBER	DATE	2
9126	9/91	



Licit C57-485165- phone 510-934-4884

01-505T
15/4W-13C 4

AQUA TERRA TECHNOLOGIES INC.

Log of Exploratory Boring

Project: Dryers Ice Cream Job No.: 9126

Location: 5929 College Avenue, Oakland, CA Date: 07/17/91

Boring No.: MW2 Driller: Gregg Drilling Page 1 of 2

Logged by: Bruce Berman Proj. Mgr. Terry Carter Reviewed by: _____

Penetration 0.5 Feet	Depth (feet)	U.S.C.S. Soil Class.	Field Description	
	0	Asphalt, baserock	0'-1.5' Asphalt and gravel base-rock	
	1		1.5-10' Silty clay; very dark grayish brown (10YR 3/2); stiff; medium plasticity; slightly damp to damp. Gradational color change to dark brown (10YR 4/3).	
	2			
	3			
	4			
	5	CL		
	6			
	7			
	8			
	9			
	10		10'-28' Sandy clay; dark brown (10YR 4/3); 10% to 20% very fine to fine sand; stiff; damp to moist; minor rust staining; minor blue-green aged hydrocarbon discoloring. Gradational increase in fine sand content and moisture content.	10' Sample, hydrocarbon odor
6,10,12	11			
	12			
	13	CL		
	14			
	15			15' First water, 15' sample slipped
4,9,12	16			
	17			

9126/#1/DRYRSMW2.LOG

01-505T
15/4W-13C4

AQUA TERRA TECHNOLOGIES INC.

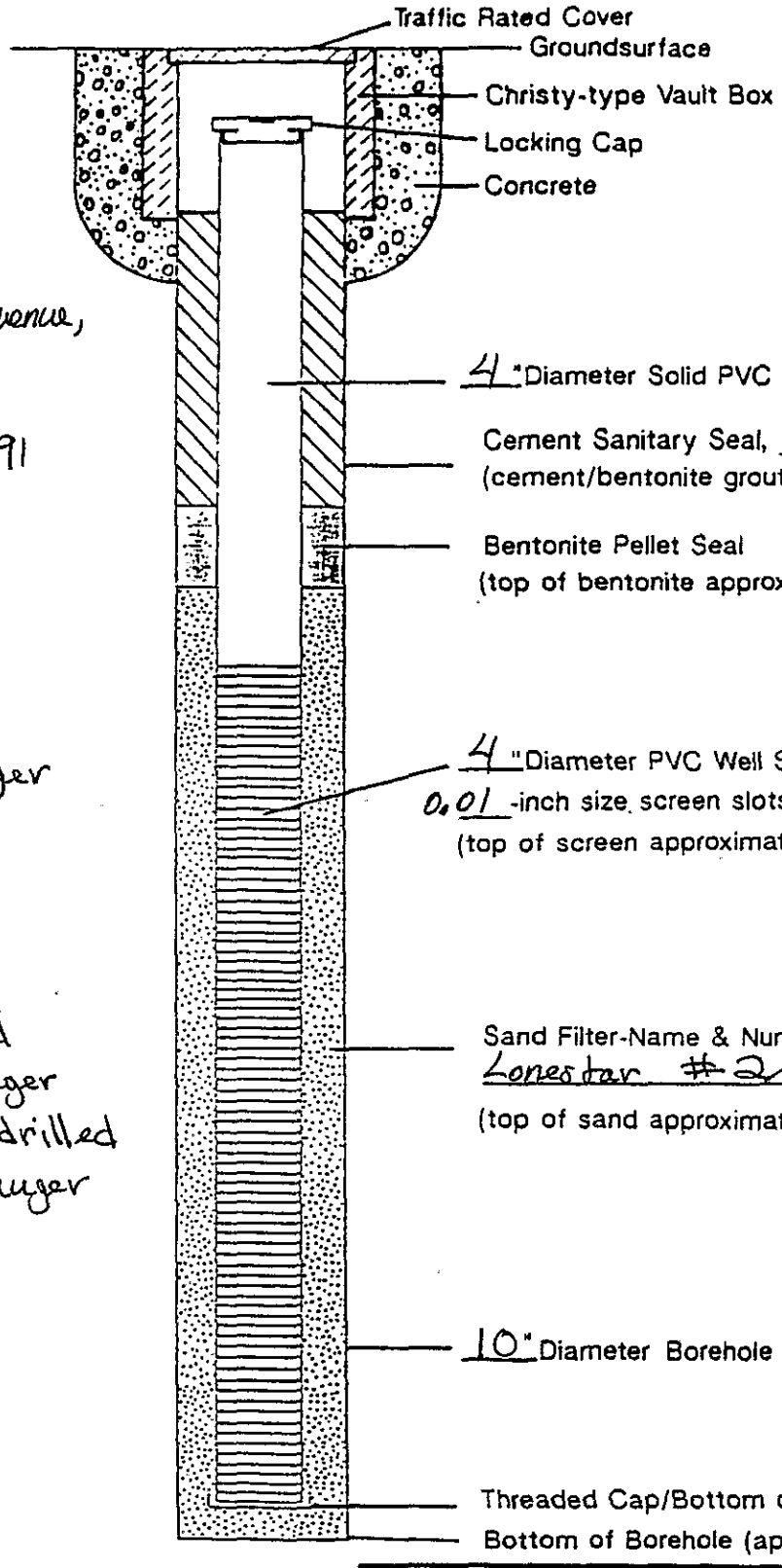
Field Drilling and Sampling Log

Job No: 9126

Penetration 0.5 Feet	Depth (feet)	U.S.C.S. Soil Class.	MW2 Field Description	
	18	CL		out of sampler, saturated, not recovered. Hydrocarbon odor in water dripping from sampler. Hydrocarbon odor in drill cuttings below 15'.
	19			
	20			
	21			
	22			
	23			
	24			
	25			
	26			
	27			
	28		B.O.H. @ 28'.	
	29			
	30			
	31			
	32			
	33			
	34			
	35			
	36			
	37			
	38			
	39			

MW2
Well Designation:

1S/4W-13C4
01-505T



Site Location:
5929 College Avenue,
Oakland, CA.

Date Installed: 7-17-91

Drilling Company:
Gregg Drilling

Driller: Chris

Drilling Method:
Hollow-stem auger

Logged By: BB

Notes:
Pilot hole drilled with 6-inch auger to 15 feet, overdrilled with 10-inch auger

Not to Scale

Groundwater Monitoring Well Construction Details

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

Dryers Ice Cream

JOB NUMBER 9126

DATE

~~PLATE~~ MW2

01-505U
1S/4W 13C5

AQUA TERRA TECHNOLOGIES INC.

Log of Exploratory Boring

Project: Dryers Ice Cream Job No.: 9126

Location: 5929 College Avenue, Oakland, CA Date: 07/18/91

Boring No.: MW3 Driller: Gregg Drilling Page 1 of 2

Logged by: Bruce Berman Proj. Mgr. Terry Carter Reviewed by: _____

Penetration 0.5 Feet	Depth (feet)	U.S.C.S. Soil Class.	Field Description	
	0	Fill	0'-1.5- Soil fill materials (planter area)	
	1		1.5'-27' Sandy clay; black (10YR 2/1); 10% to 20% very fine sand; moist.	
	2			
	3			3' Hydrocarbon odor in drill cuttings
	4			
	5		5'; lens of fine sand; dark yellowish brown (10YR 4/4); 3-inches thick; damp.	
2,2,4	6		Soil just above and below sand lens has minor blue-green aged hydrocarbon discoloring. Gradational increase in moisture and fine sand content with increased depth.	5' sampler driven for lithologic description only (without tubes), sample not retained, hydrocarbon odor
	7	CL-Fill?		
	8			
	9		Major blue-green aged hydrocarbon discoloring below 10'.	
	10			
4,4,5	11			10' Sample, strong hydrocarbon odor
	12			
	13			
	14			14' First water, strong hydrocarbon odor in water drip-
	15		15'; wood chips in good condition, not decomposed (brought up in sampler).	
3,5,10	16			

01-505U
15/4W-13C5

AQUA TERRA TECHNOLOGIES INC.

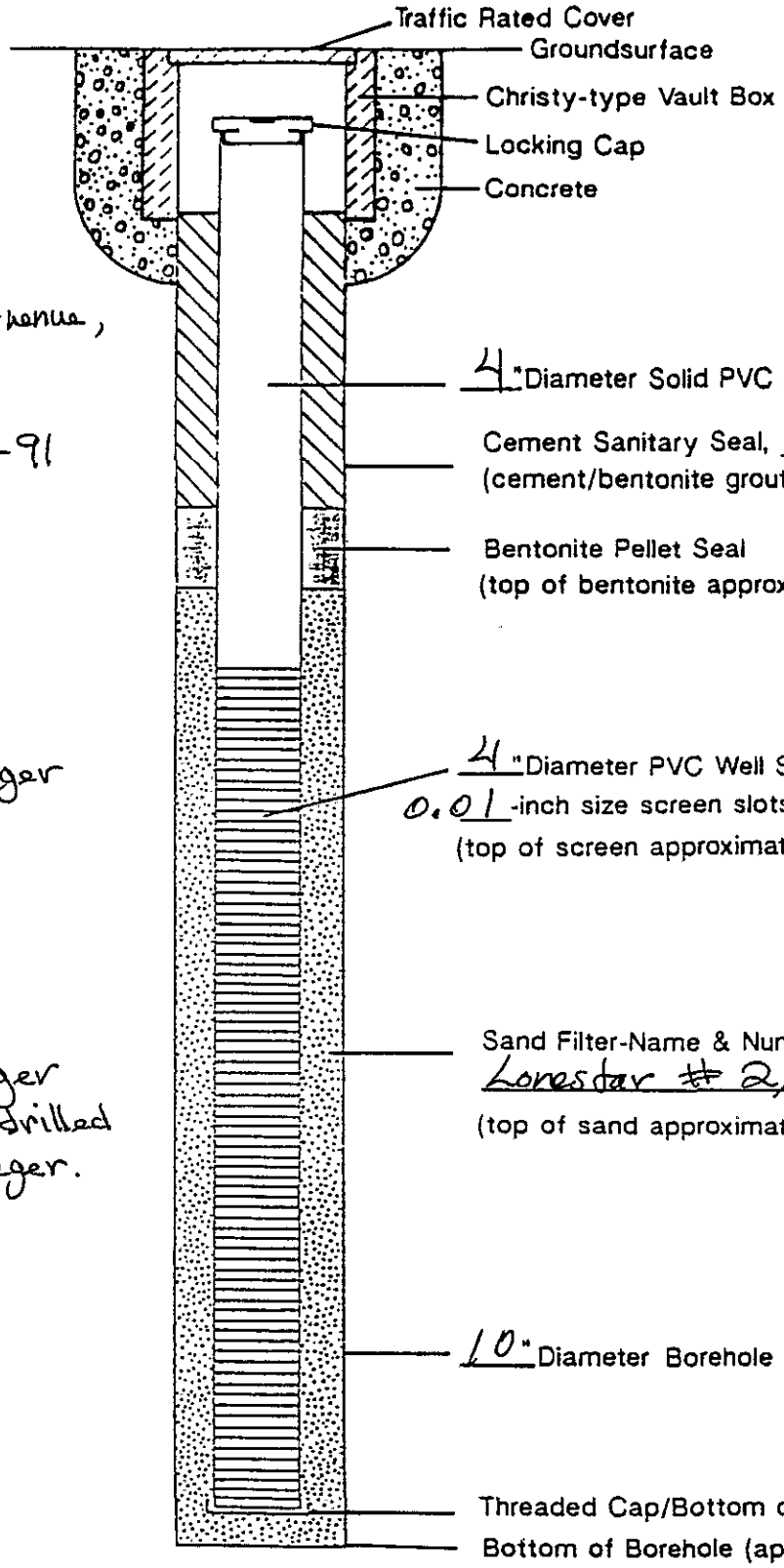
Field Drilling and Sampling Log

Job No: 9126

Penetration 0.5 Feet	Depth (feet)	U.S.C.S. Soil Class.	MW3 Field Description	
	17		17'; Drillers observation; augers encountered stiffer material similar to drilling conditions in native material in the other two boreholes. (possibly in tank excavation backfilled with excavated soil to 17', native material below 17'?).	ping from end of drill rod, sheen 15' Incomplete sample recovery, saturated soil, sample not restained Strong hydrocarbon odor, sheen on drill cuttings and auger below 15'
	18			
	19			
	20			
	21			
	22	CL		
	23			
	24			
	25			
	26			
	27		B.O.H. @ 27'	
	28			
	29			
	30			
	31			
	32			
	33			
	34			
	35			
	36			
	37			
	38			

MW3
Well Designation:

1S/4W-13C5
OL-5050



Site Location:
5929 College Avenue,
Oakland, CA.

Date Installed: 7-18-91

Drilling Company:
Gregg Drilling

Driller: Chris

Drilling Method:
Hollow-stem auger

Logged By: BB

Notes:
Pilot hole drilled with 6-inch auger to 15-feet, over drilled with 10-inch auger.

Not to Scale

Groundwater Monitoring Well Construction Details

ATT Aqua Terra Technologies
Consulting Engineers
& Scientists

Dryers Ice Cream

JOB NUMBER 9126

DATE

~~PLATE~~
MW3

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
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WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

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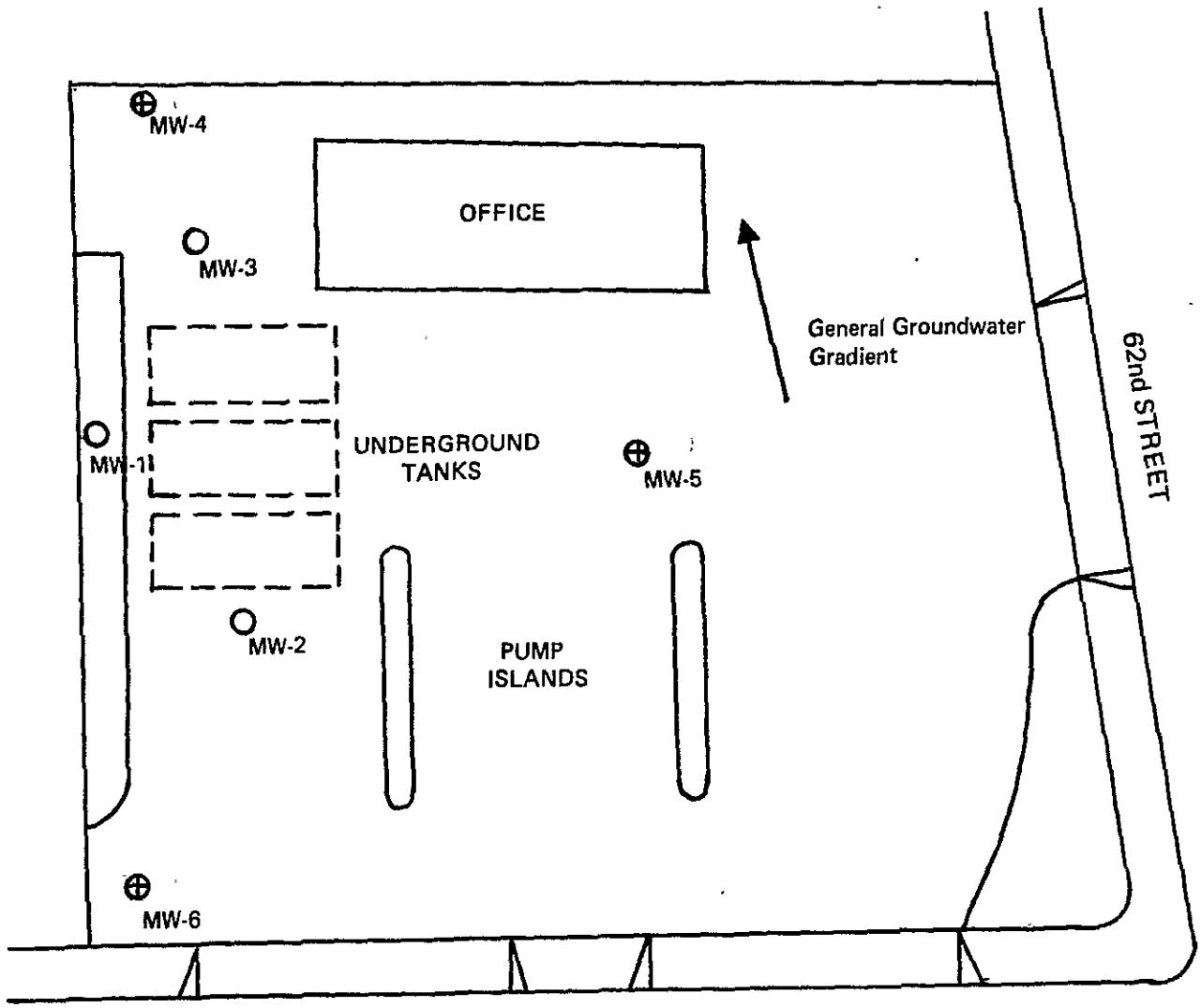
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

INV ✓
AO ✓ 179203 ~~01-217~~ A, B, C plot/copy
Permit No. 86305

15/4W13D5-7



THRIFTY OIL
6125 TELEGRAPH AVE.
OAKLAND, CA.

Figure 1. MONITORING WELL LOCATIONS

DRILLER: KVILHAUG WELL DRILLING, CONCORD

#P6305

INV ✓
AD ✓

179203A ~~01 217A~~
1S/4W13D5

Project No.: 90390A
Date: 11-13-86

Elevation.

DEPTH IN FEET	SAMPLE NUMBER	LOG & SAMPLE	PENE. RESIS. / FT.	DESCRIPTION	WELL DESIGN: #3 SAND 4"ID-0.02 SLOT
				Existing Ground Surface	
0				Black Topsoil	
1				Brown Silty Clay - Crumbly - Dry - No Odor	1
2					
3					
4					
5				Headspace = No Sample Recovery	5
6	4-1		12		
7				Same but stiffer	
8					
9					
10				Olive/Grn Silty Clay-Moist-No Odor	10
11	4-2			Olive/Grn Silty Sand-Sat.-Poss. Odor	
12				Black Gravelly Sandy Silty Clay - Saturated - Very Slight HC Odor	
13					
14				Headspace = 80 ppm	
15				Brown and Olive Green Silty Clay - Very Moist to Saturated - Moderate HC Odor	15
16	4-3		20		16.0
17				Headspace = > 1000 ppm	
18					
19					
20				Brown Gravelly Sandy Silty Clay - Very Moist - No Odor	
21					
22					
23					
24					
25					25
26				Lighter Brown Sandy Silty Clay - Saturated - No Odor	
27					

Figure 3A - Test Boring Log No. 1
- Monitoring Well No. MW-4

Woodward-Clyde Consultants

#86305

179203A
15/4W13D5

Project No.: 90390A
Date: 11-13-86

Elevation.

DEPTH IN FEET	SAMPLE NUMBER	LOG & SAMPLE	PENE. RESIS. / FT.	DESCRIPTION	WELL DESIGN: #3 SAND 4"ID-0.02 SLOT
				28 Feet Below Existing Ground Surface	
28					
29				Light Brown Sandy Sandy Silty Clay - Saturated - No Odor	
30				Bottom of Boring at 30 ft.	
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					

Figure 3B - Test Boring Log No. 1
- Monitoring Well No. MW-4

Woodward-Clyde Consultants

#86305 INV ✓ AD ✓ 179203B ~~GL-2178~~ 15/4W13D6

Project No.: 90390A

Date: 11-13-86

Elevation.

DEPTH IN FEET	SAMPLE NUMBER	LOG & SAMPLE	PENE. RESIS. / FT.	DESCRIPTION	WELL DESIGN: #3 SAND 4"ID-0.02 SLOT
				Existing Ground Surface	
0				AC Pavement	
1				Black Loamy Clay - Dry - No Odor 1	
2				Black to Dark Brown Silty Clay - Moist - No Odor	
3					
4					
5				Headspace = 0 5	
6	5-1		12	Brown Silty Clay w/ some Olive Mottling Moist - No Odor	
7					
8					
9				Olive Silty Clay w/ some Brown Mottling - Moist - No Odor	
10					
11	5-2		28	Headspace = 0	
12					
13					
14				Brown and Grey/Grn Sandy Silty Clay w/ some Dk. Grey Streaks - Very Moist -	
15			16	No Odor 15	
16	5-3			16 Headspace = 0	
17				Brown Silty Sandy Clay - Moist - No Odor	
18					
19					
20				20	
21					
22					
23				Light Brown Silty Sandy Clay - Very Moist - No Odor	
24					
25				25	
26					
27				Bottom of Hole at 27 ft.	

Figure 4 - Test Boring Log No. 2
- Monitoring Well No. MW-5

Woodward-Clyde Consultants

#86305 INV ✓ AD ✓ 179203C 15/4W13D7

Project No.: 90390A

Date: 11-13-86

Elevation.

DEPTH IN FEET	SAMPLE NUMBER	LOG & SAMPLE	PENE. RESIS. / FT.	DESCRIPTION	WELL DESIGN: #3 SAND 4"ID-0.02 SLOT
0				Existing Ground Surface	
0				AC Pavement and Base	
1				Brown Silty Clay, Stiff - Moist - No Odor	
5	6-1		36	Brown Silty Clay, Crumbly - Slightly Moist - No Odor Headspace = No Sample Recovery	
7				Olive Green to Blue Green Silty Clay - Moist - No Odor	
10	6-2		4	Headspace = 0 Brown Silty Clay - Moist - No Odor	
13					▼ 13.8
15	6-3		28	Headspace = 0 Brown Silty Sandy Clay - Saturated - No Odor	
20				Brown Silty Clay w/ Little Sand - Very Moist - No Odor	
25				Brown Silty Sandy Clay w/ some Gravel - Very Moist - No Odor	
27				Bottom of Boring at 27 ft.	

Figure 5 - Test Boring Log No. 3
- Monitoring Well No. MW-6

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WELL COMPLETION REPORT
(WELL LOGS)

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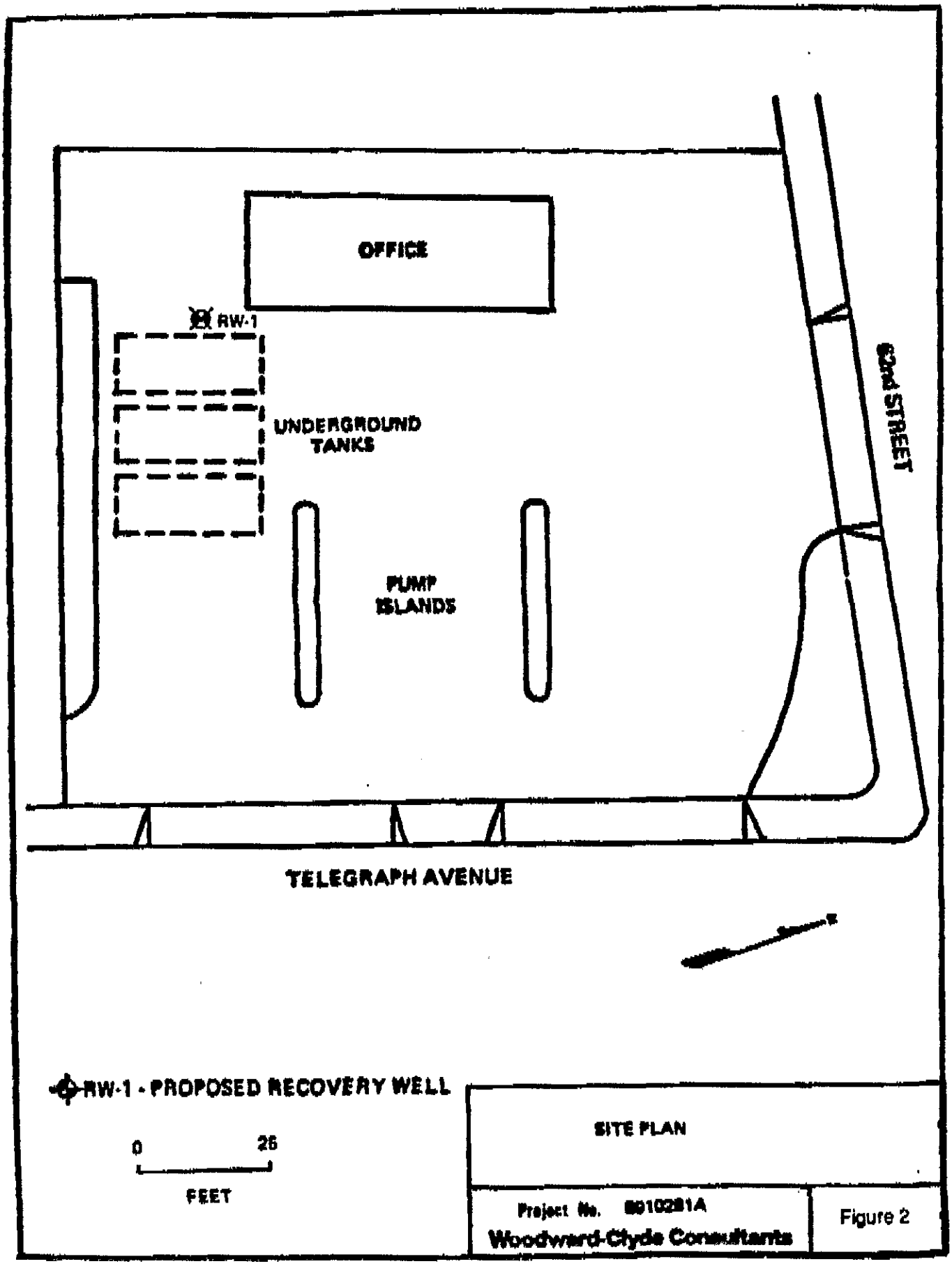
201222

1S/4W 13D8



SITE PLAN

Project No. 80102B1A

Woodward-Clyde Consultants

Figure 2

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

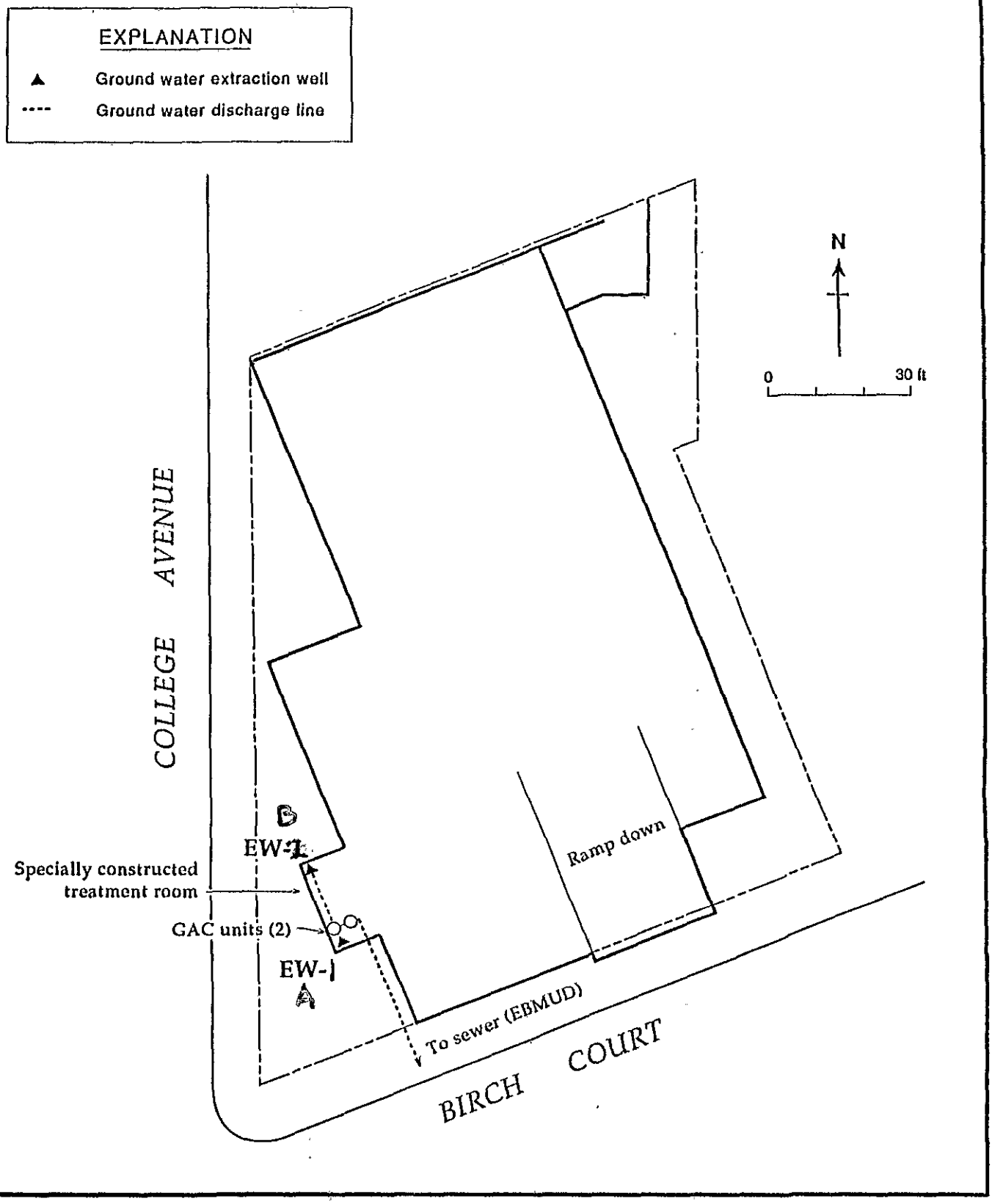
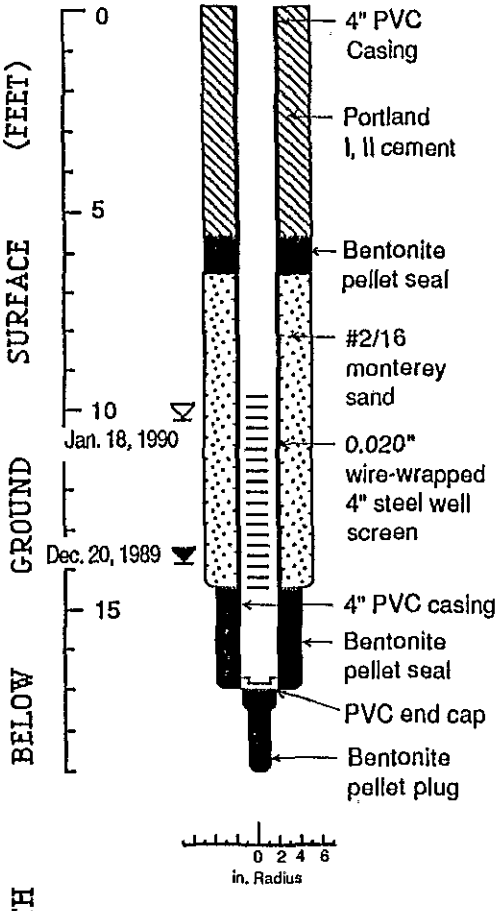


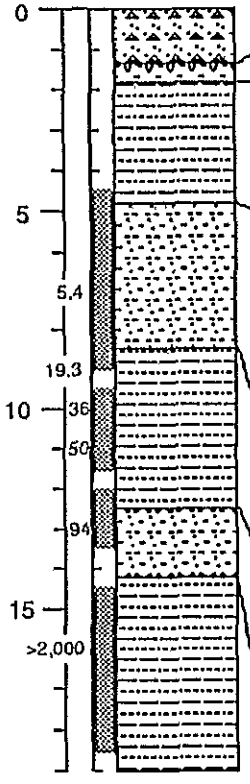
Figure 5. Proposed Ground Water Remediation System - Former Chevron Service Station #92258, 5800 College Avenue, Oakland, California

1S/4W 13G6
325102A

WEISS ASSOCIATES

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
Weak hydrocarbon odor at 18'

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

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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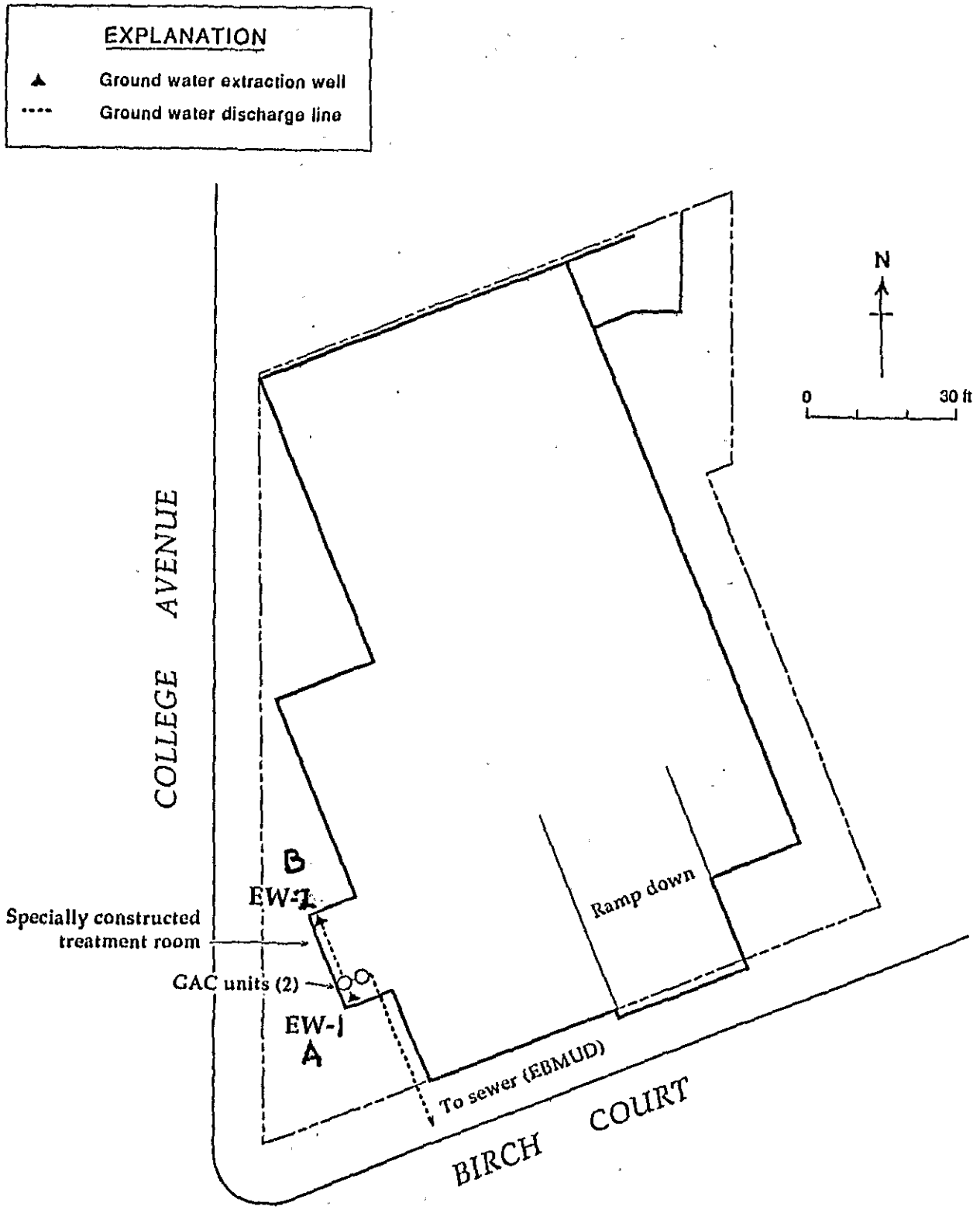
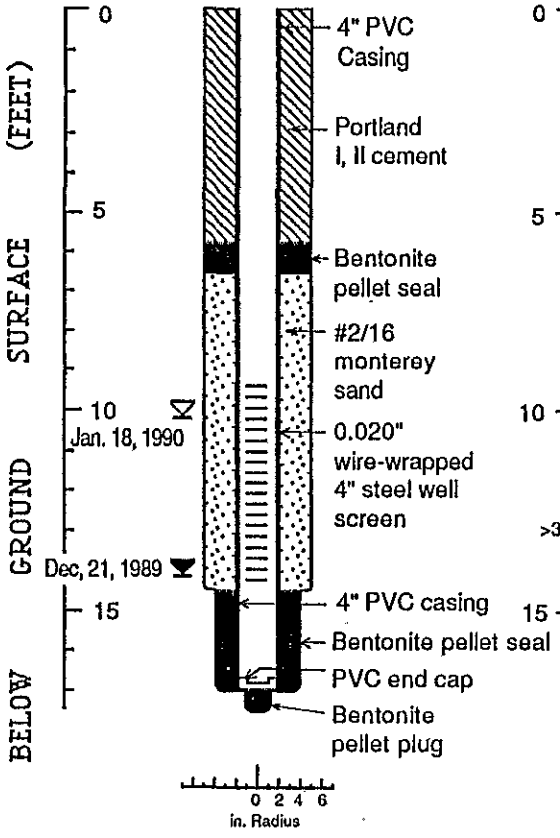


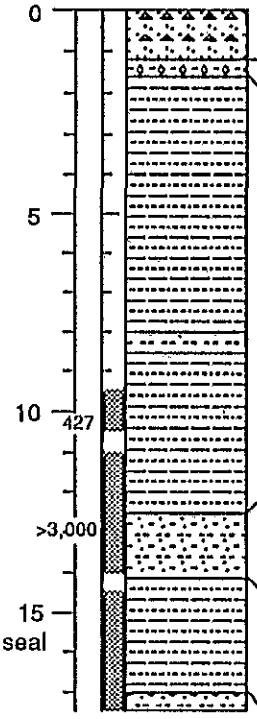
Figure 5. Proposed Ground Water Remediation System - Former Chevron Service Station #92258, 5800 College Avenue, Oakland, California

1S/4W 13G7
325028

WEISS ASSOCIATES

WELL EW-2





DESCRIPTION

Concrete

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

Clayey SILT (ML); medium green-gray; firm; damp; ~10% very fine to coarse sand; minor gravel to 1/4" diameter; low plasticity; low K; weak hydrocarbon odor (cuttings)

6" Silty SAND (SM) lens; medium red-brown; damp; ~20% silt; ~25% gravel to 3/4" diameter; high K at 8' (cuttings)

Moderate odor at 11'

Sandy SILT (ML); medium yellow-brown mottled blue-gray; stiff; moist; ~20% very fine to fine sand; some clay; very low plasticity; low to mod K; strong hydrocarbon odor

Clayey SILT (ML); medium green-gray; firm; ~20% very fine to fine sand; ~20% gravel to 1" diameter; low plasticity; low K; moderate hydrocarbon odor

Silty SAND/Sandy SILT (SM/ML); yellow brown with various mottling; stiff; ~30% very fine to coarse sand; ~20% gravel to 1" diameter; mod 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 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

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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179042

WEISS ASSOCIATES

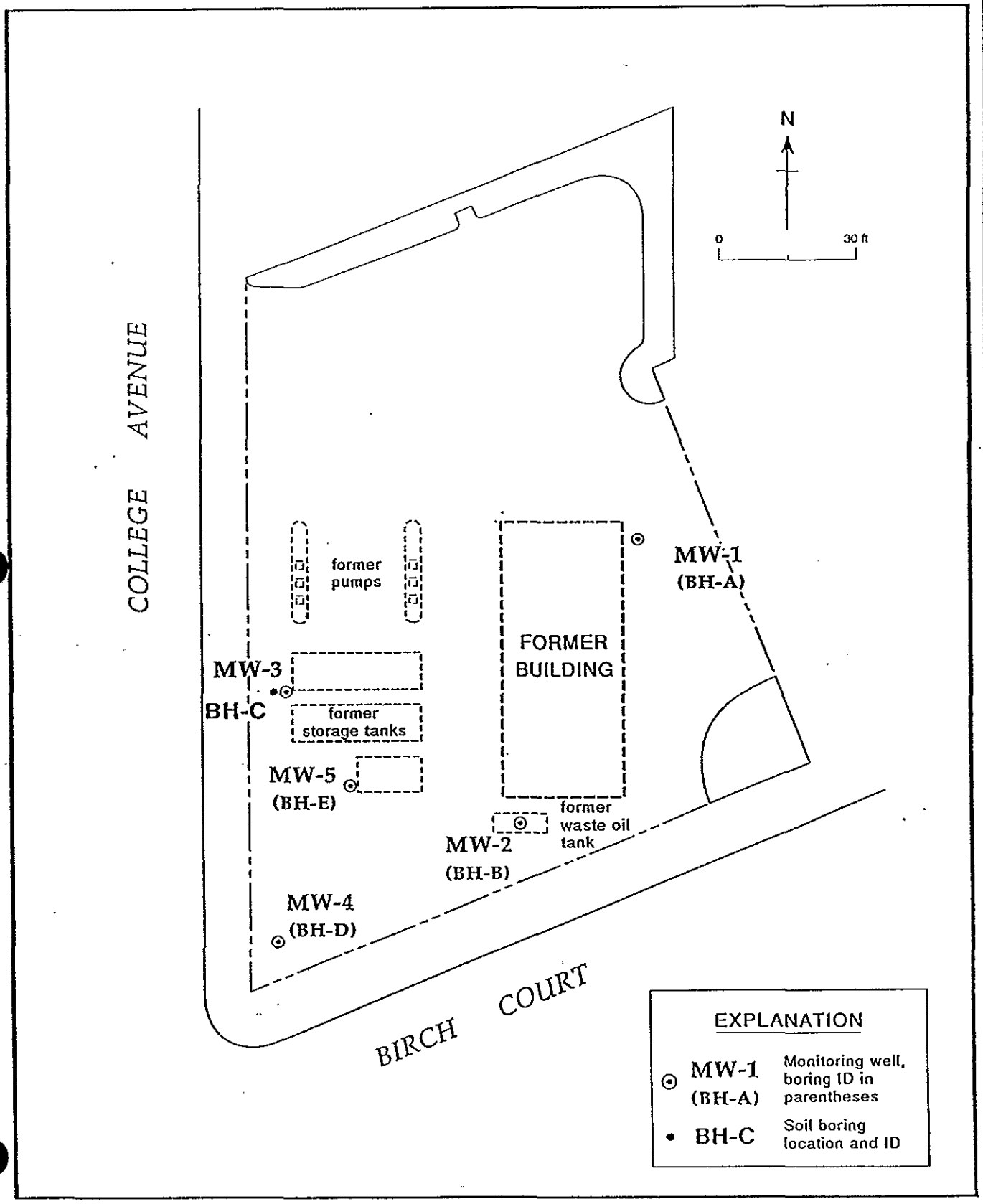

Figure 2. Monitoring Well and Soil Boring Locations - Chevron Service Station #92258, Oakland, California

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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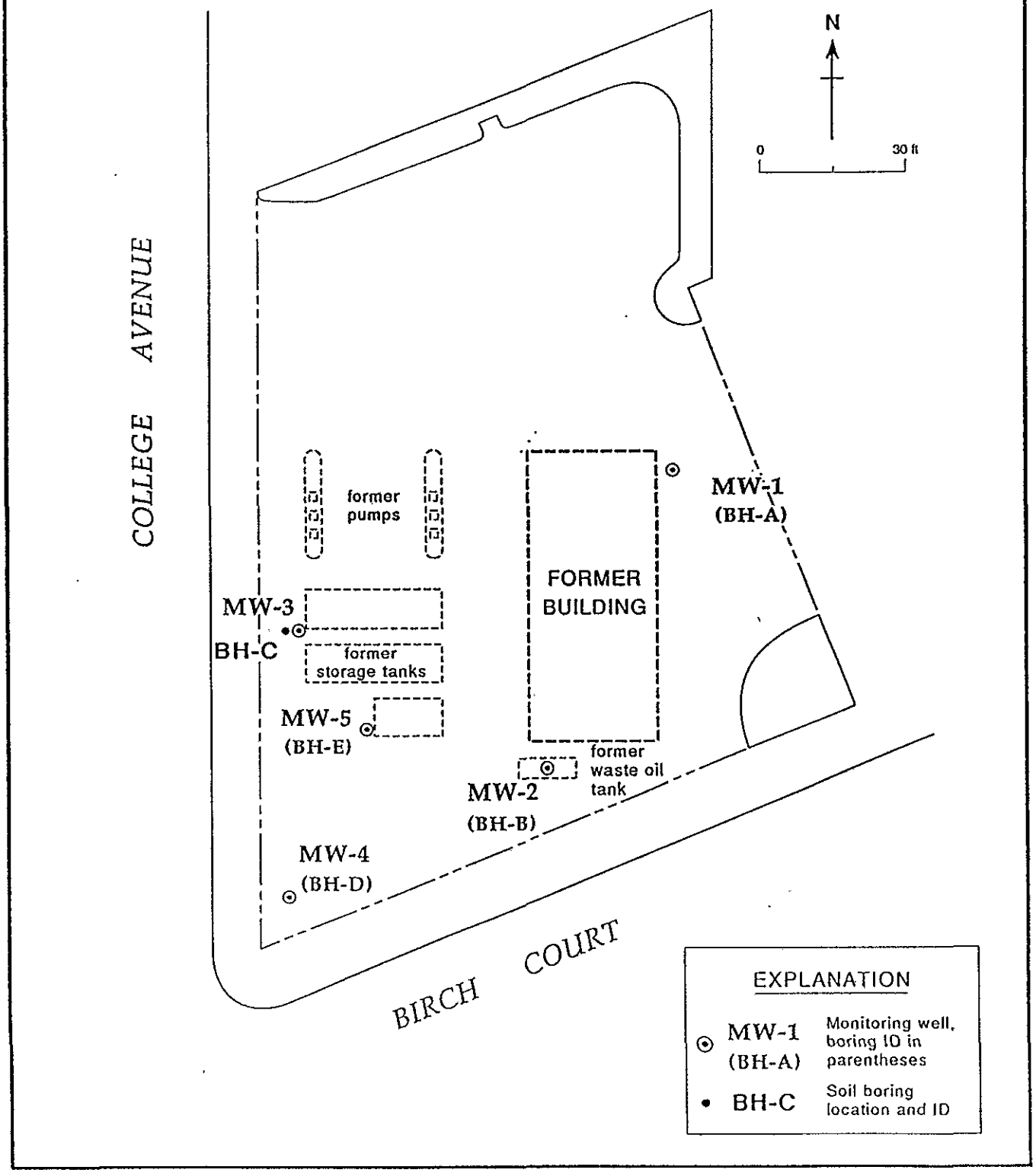


Figure 2. Monitoring Well and Soil Boring Locations - Chevron Service Station #92258, Oakland, California

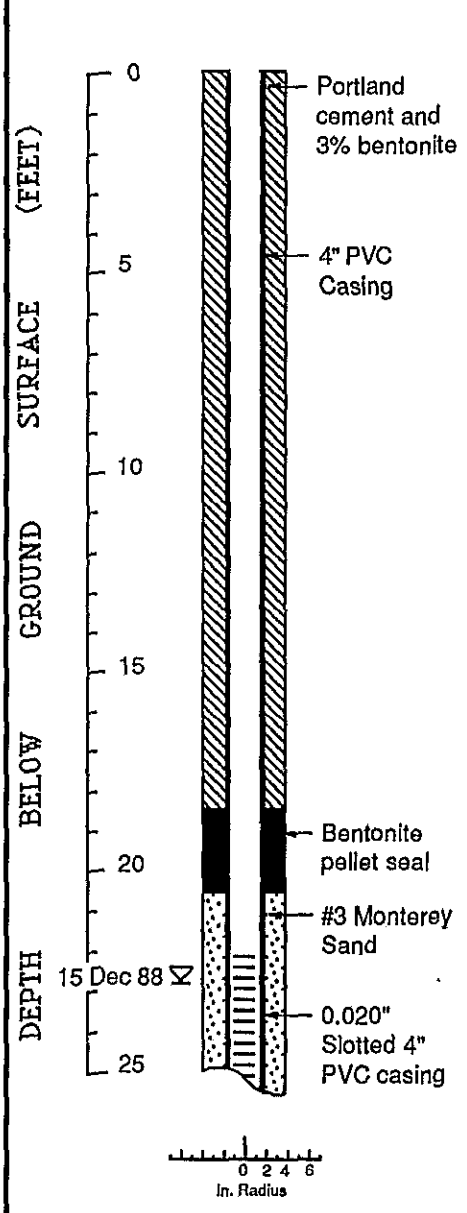
179045A

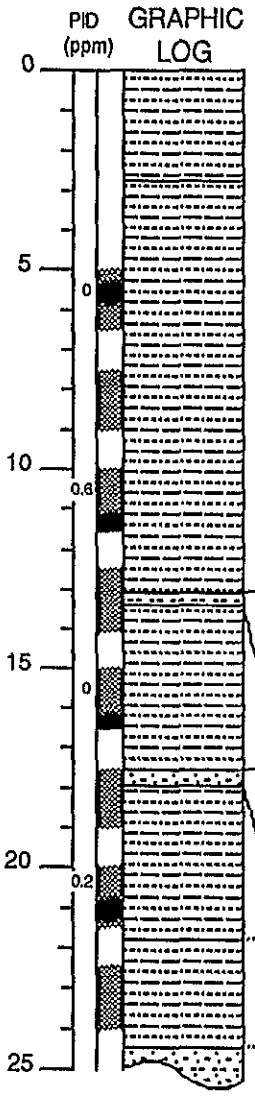
Add'l Info

136-1 1S/4W 13G1

WEISS ASSOCIATES

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)

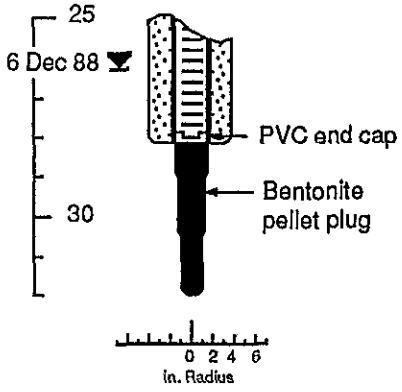
Well Construction and Boring Log - Well MW-1 (BH-A)

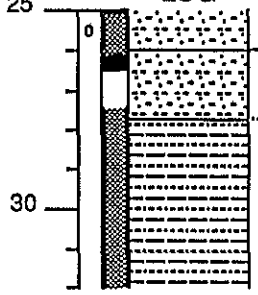
Chevron Service Station #92258
Oakland, California

179045A

WEISS ASSOCIATES

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)

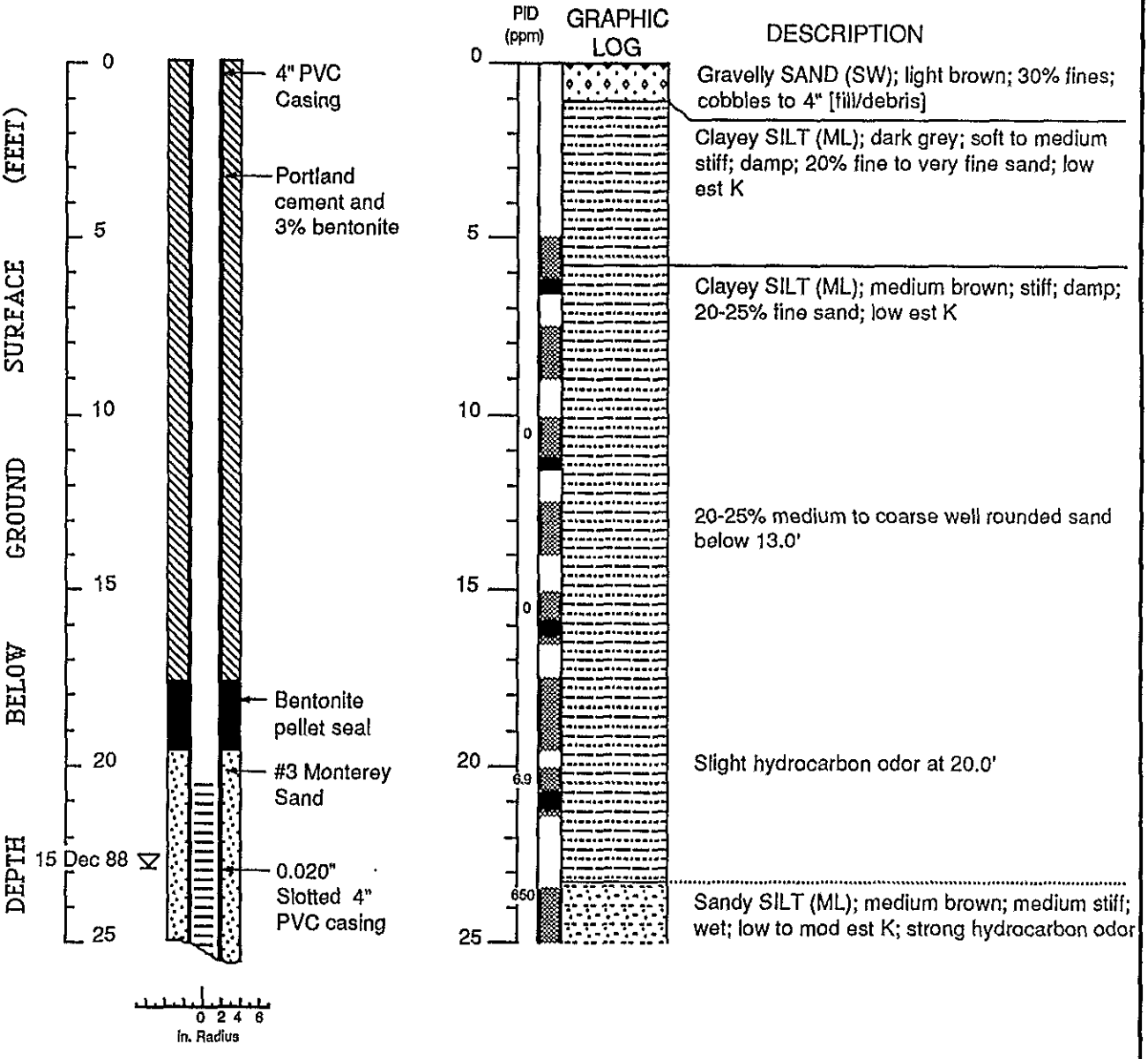
Chevron Service Station #92258
Oakland, California

1790458

Added Inv 136 2 1S/4W 13G2

WEISS ASSOCIATES

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)

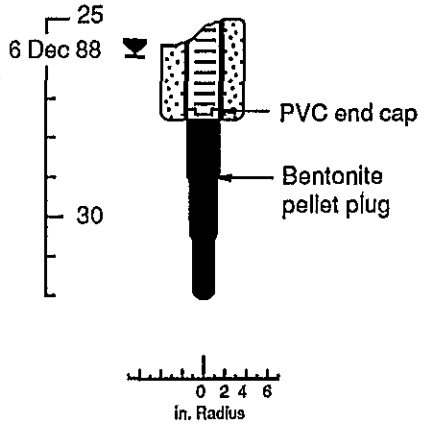
Well Construction and Boring Log - Well MW-2 (BH-B)

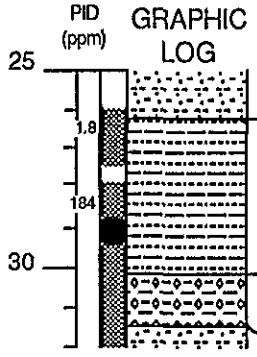
Chevron Service Station #92258
Oakland, California

1790458

WEISS ASSOCIATES

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)

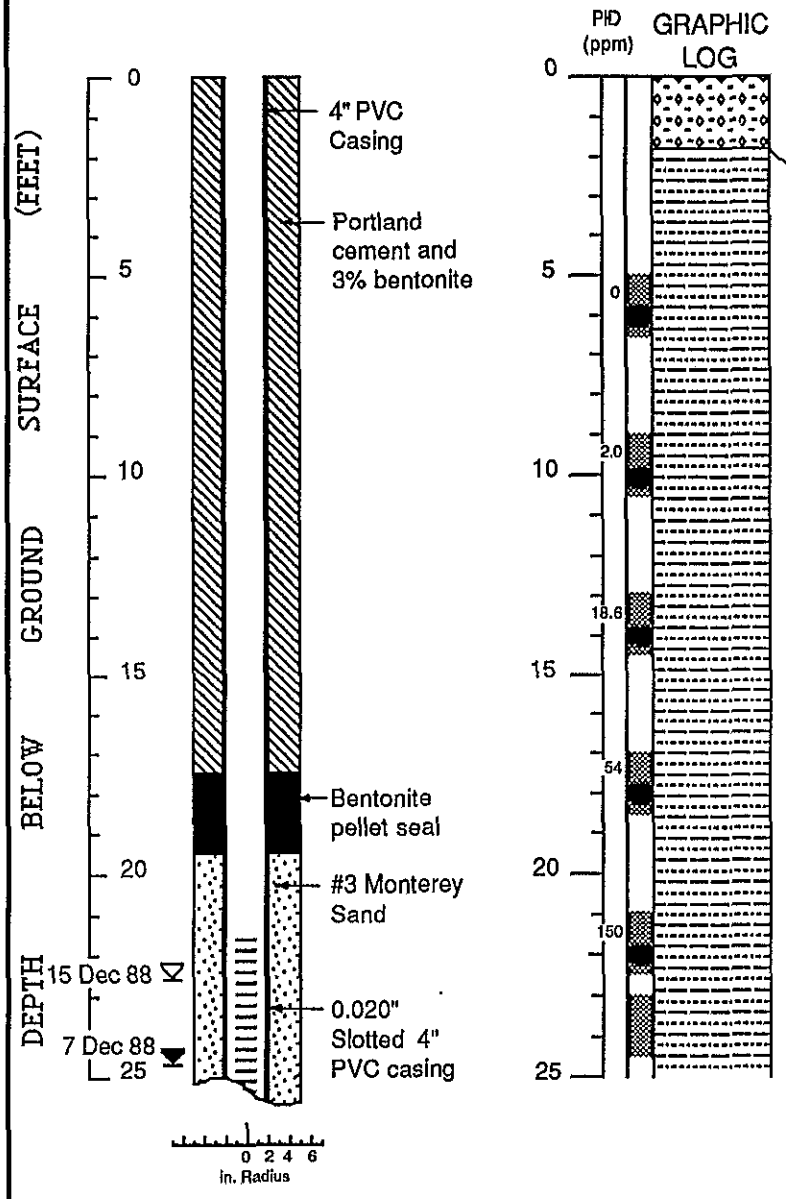
Chevron Service Station #92258
Oakland, California

179045C

Add'l Info 1363 1S/4W 13G3

WEISS ASSOCIATES

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)

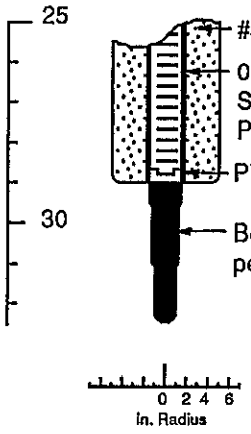
Logged by:	Jim Carmody
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Datum Exploration, Pittsburg, CA
Driller:	Jim Condrey
Drilling Method:	CME-75
Dates Drilled:	7 December 88
Well Head Completion:	Locking Stovepipe
Type of sampler:	Split barrel (1.4, 2.0, 2.5" ID)

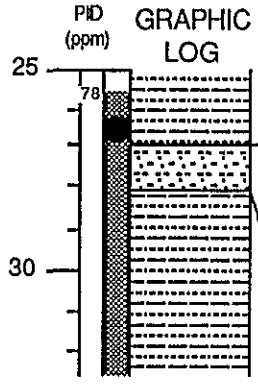
Well Construction and Boring Log - Well MW-3 (BH-C)

Chevron Service Station #92258
Oakland, California

179045 C

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





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

DEPTH BELOW GROUND SURFACE (FEET)

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

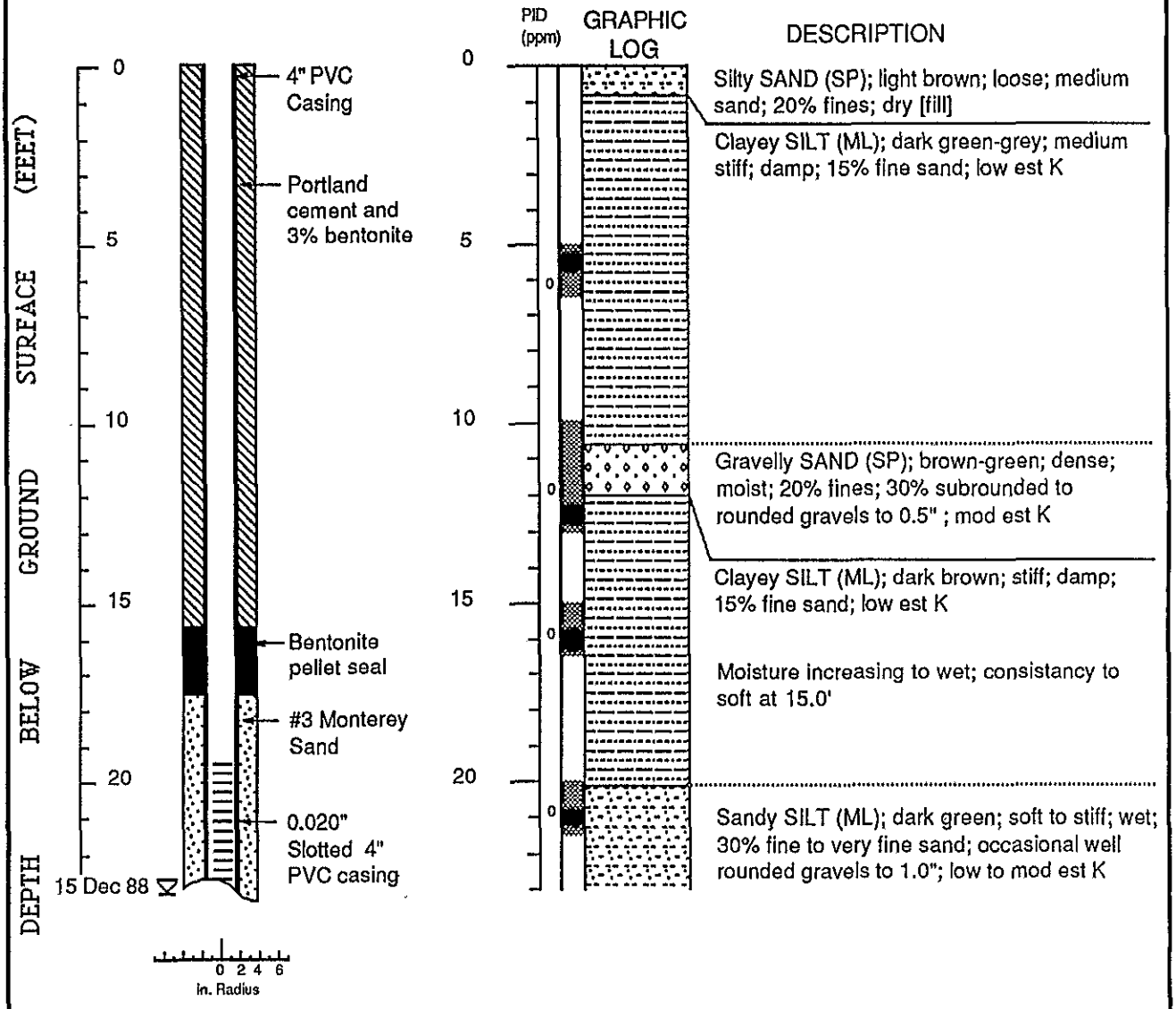
Chevron Service Station #92258
Oakland, CA

179045D

Add ✓ Inv ✓ 13 G-4 15/4W 13G-4

WEISS ASSOCIATES

WELL MW-4 (BH-D)



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)

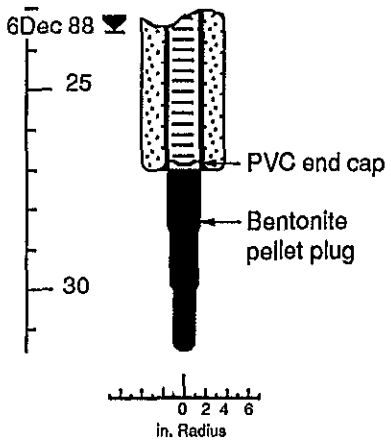
Well Construction and Boring Log - Well MW-4 (BH-D)

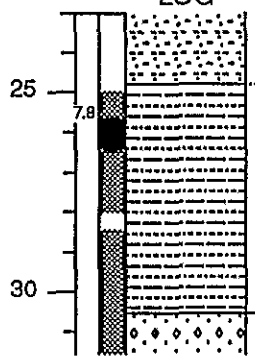
Chevron Service Station #92258
Oakland, California

179045D

WEISS ASSOCIATES

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





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

DEPTH BELOW GROUND SURFACE (FEET)

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

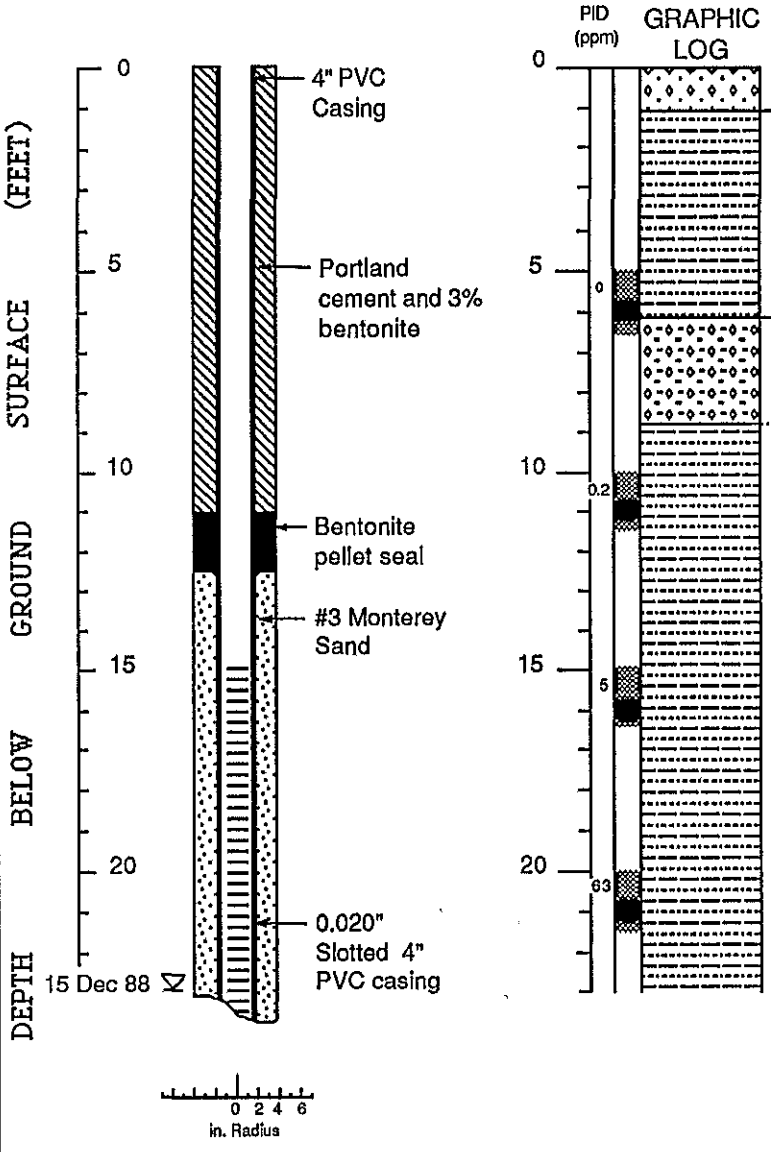
Chevron Service Station #92258
Oakland, California

179045E

Add'l Info 13G5 1S/4W13G5

WEISS ASSOCIATES

WELL MW-5 (BH-E)



DESCRIPTION

- 0 to 5': Gravelly SAND (SP); light brown; loose [fill]
- 5 to 10': Clayey SILT (ML); dark grey; stiff; damp; 15-20% fine sand; low est K
- 10 to 15': Gravelly SILT (ML); medium brown; stiff to very stiff; damp; 15% fine to medium sand; low est K
- 15 to 20': Clayey SILT (ML); medium brown; stiff to very stiff; damp; low est K
- 15.0': Dark green; stiff; damp; faint hydrocarbon odor at 15.0'
- 20.0': 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)

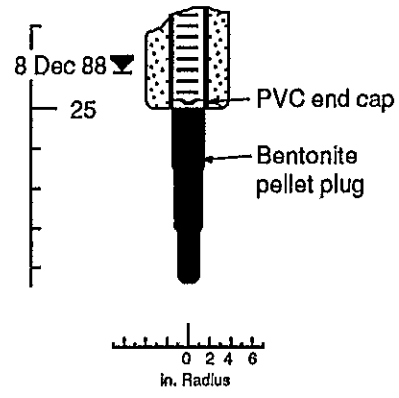
Well Construction and Boring Log - Well MW-5 (BH-E)

Chevron Service Station #92258
Oakland, California

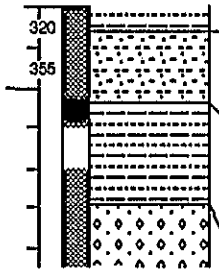
179045E

WEISS ASSOCIATES

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

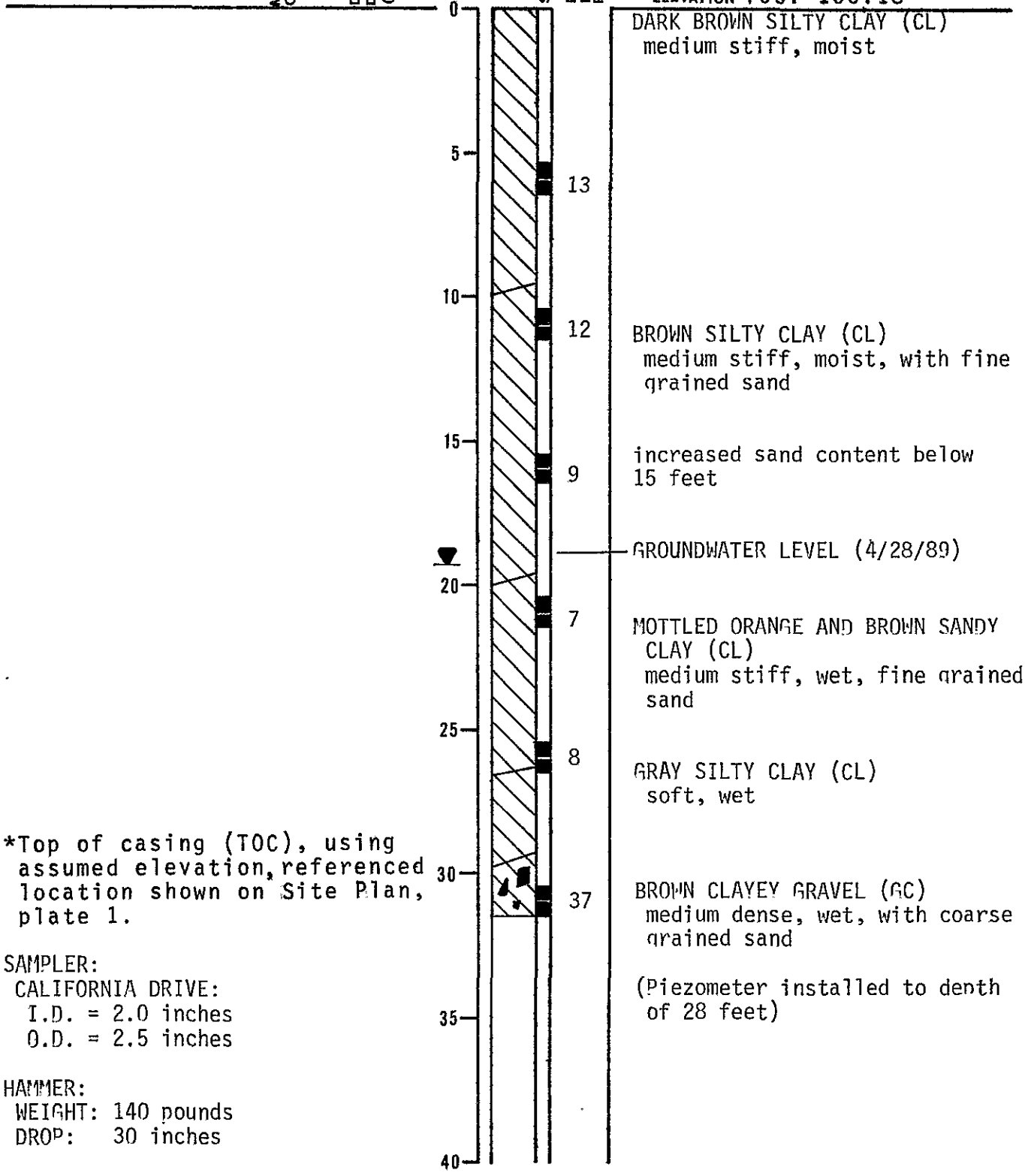
Well Construction and Boring Log - Well MW-5 (BH-E)

Chevron Service Station #92258
Oakland , California

01-434M Inv/Addv 1S/4W 13G6

LOG OF TEST BORING 1

EQUIPMENT 7" Hollow Stem Auger
DATE DRILLED 4/21/89
ELEVATION TOC: 100.18'*



*Top of casing (TOC), using assumed elevation, referenced location shown on Site Plan, plate 1.

SAMPLER:
CALIFORNIA DRIVE:
I.D. = 2.0 inches
O.D. = 2.5 inches

HAMMER:
WEIGHT: 140 pounds
DROP: 30 inches

Subsurface Consultants

FIRE STATION 19 - OAKLAND, CA

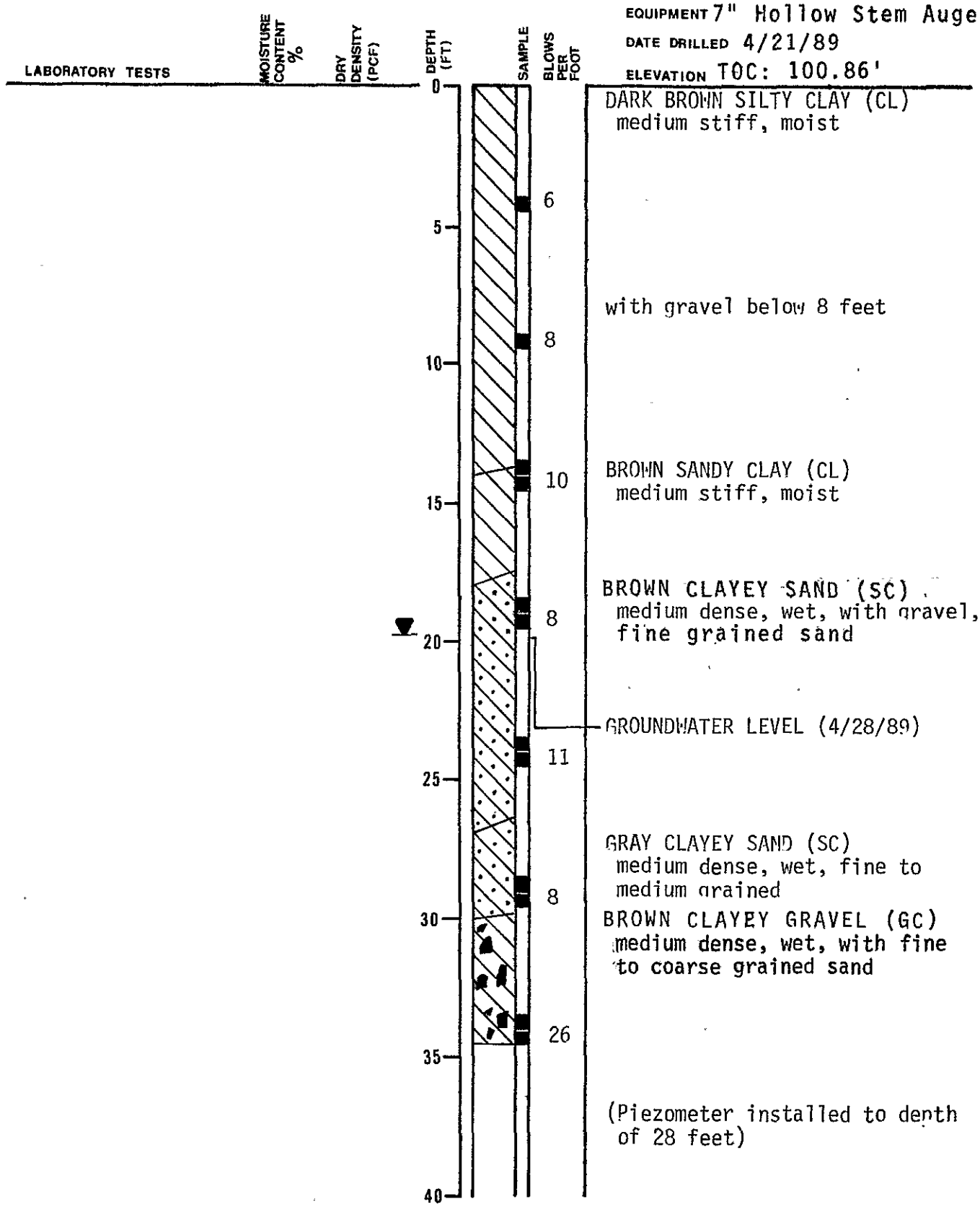
JOB NUMBER 272.010 | DATE 5/4/89 | APPROVED

PLATE 2

01-434N Inv/Add/ 1S/4W 13G 7

LOG OF TEST BORING 2

EQUIPMENT 7" Hollow Stem Auger
DATE DRILLED 4/21/89
ELEVATION TOC: 100.86'

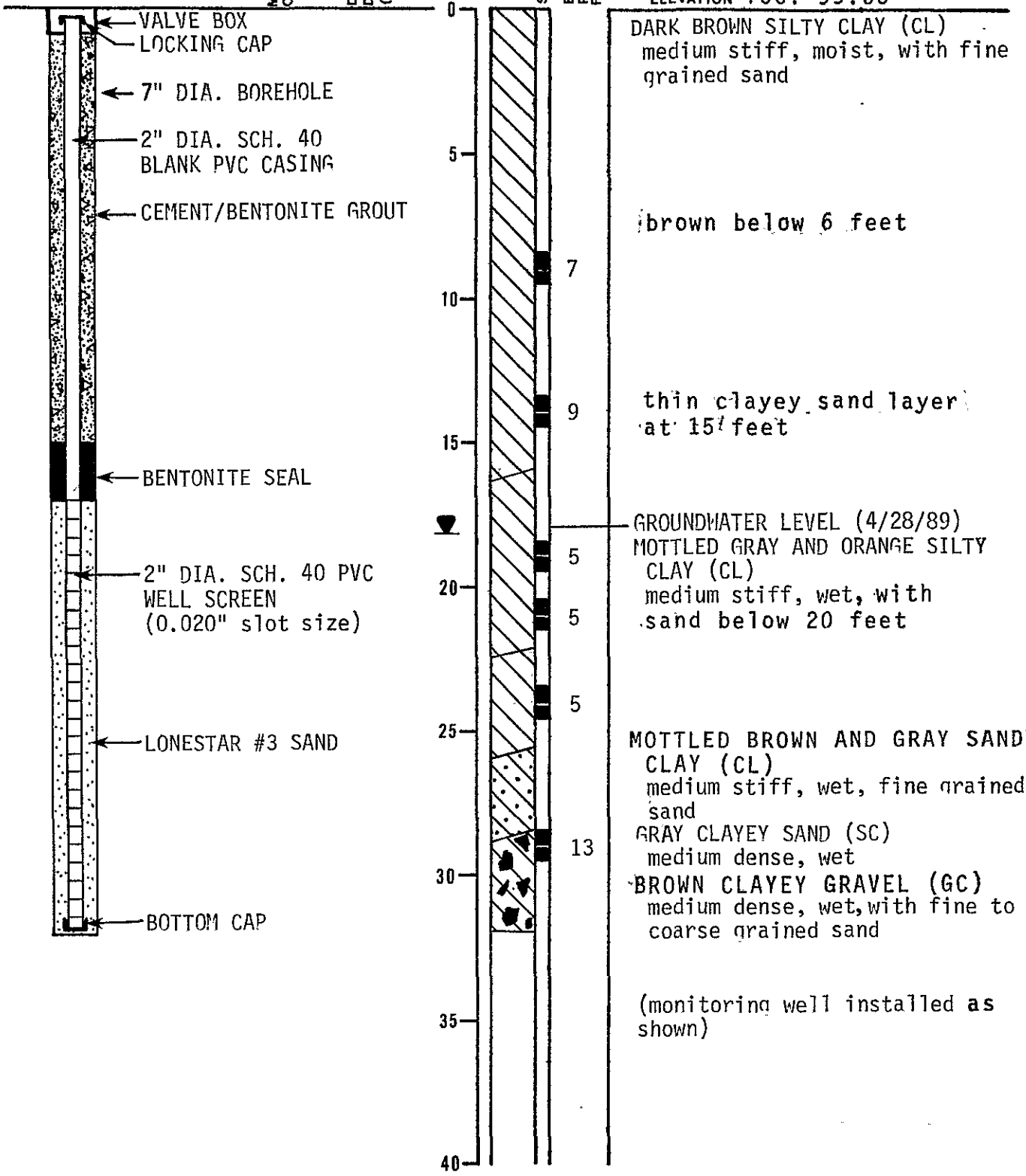


Subsurface Consultants	FIRE STATION 19 - OAKLAND, CA			PLATE
	JOB NUMBER 272.010	DATE 5/4/89	APPROVED	3

01-4349 Inv/Add/ 1S/4W 13G8

LOG OF TEST BORING 3

EQUIPMENT 7" Hollow Stem Auger
DATE DRILLED 4/21/89
ELEVATION TOC: 99.03'

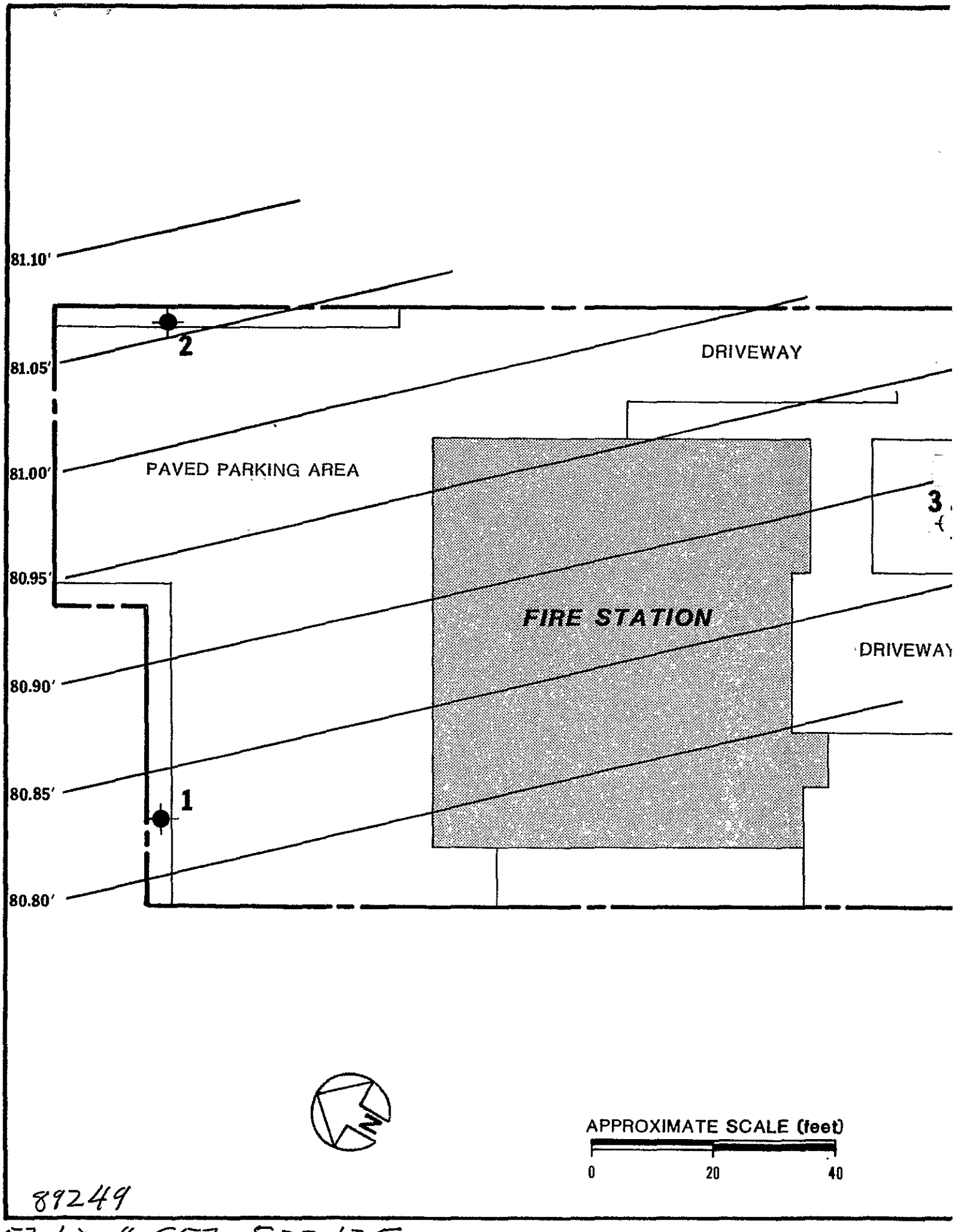


Subsurface Consultants

FIRESTATION 19 - OAKLAND, CA

JOB NUMBER 272.010 | DATE 5/4/89 | APPROVED

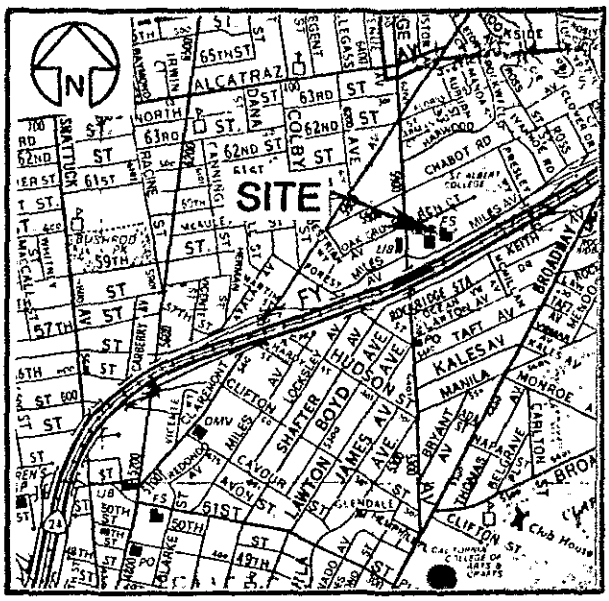
PLATE 4



89249

C57 Lic.# C57-522125

01-434M-6 1S/4W 13G 6-8 Inv/ADV



VICINITY MAP

ELEVATION REFERENCE
TOP OF CURB
ASSUMED AT 100.00 FEET

MILES AVENUE

- PIEZOMETER
- MONITORING WELL
- PROPERTY LINE
- GROUNDWATER ELEVATION CONTOURS (FEET) (4/28/89)
- APPROXIMATE PREVIOUS UNDERGROUND TANK LOCATION

SITE SKETCH

Subsurface Consultants

FIRE STATION 19 - OAKLAND, CA

JOB NUMBER	DATE	APPROVED
272.010	4/15/89	

PLATE 1

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

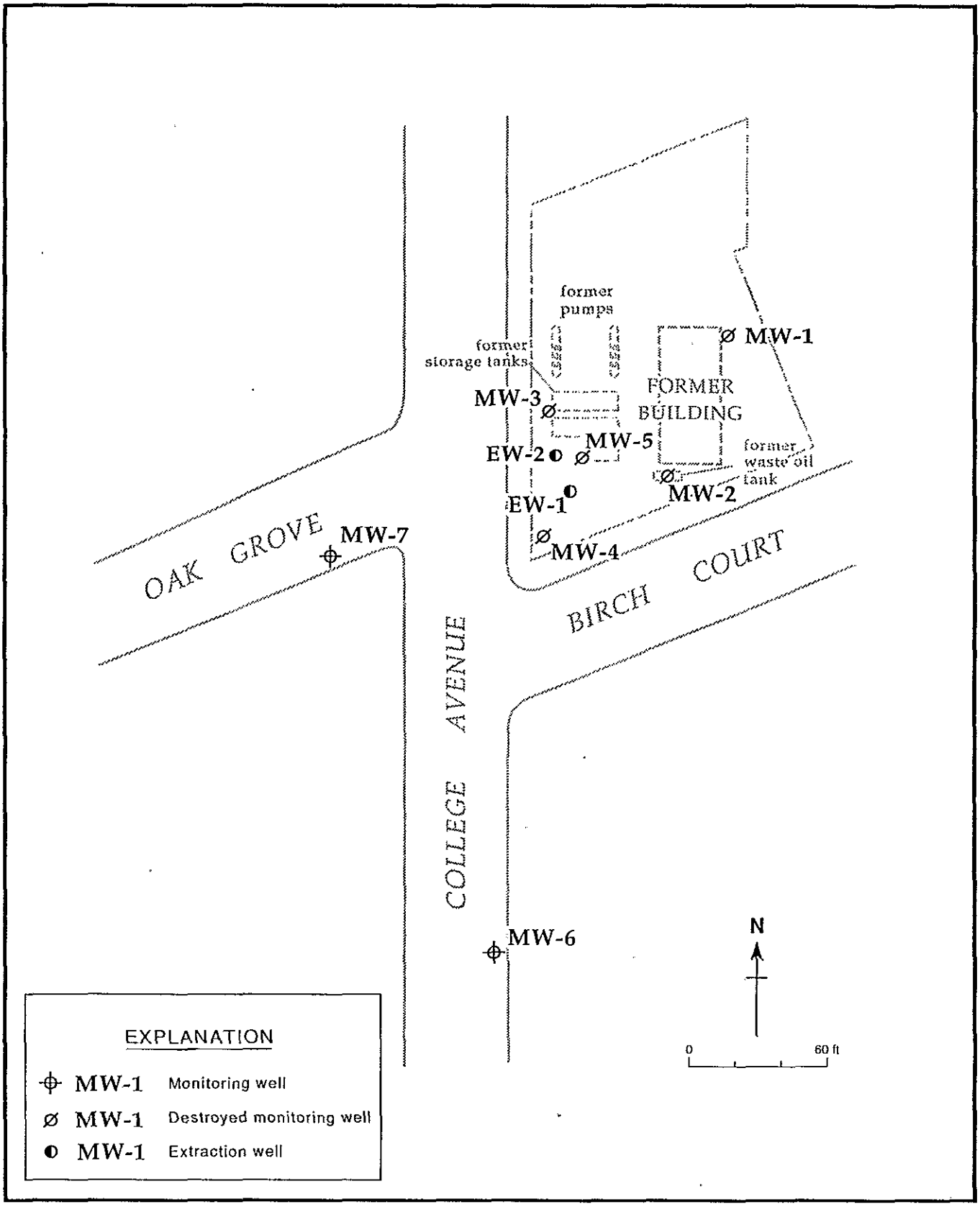
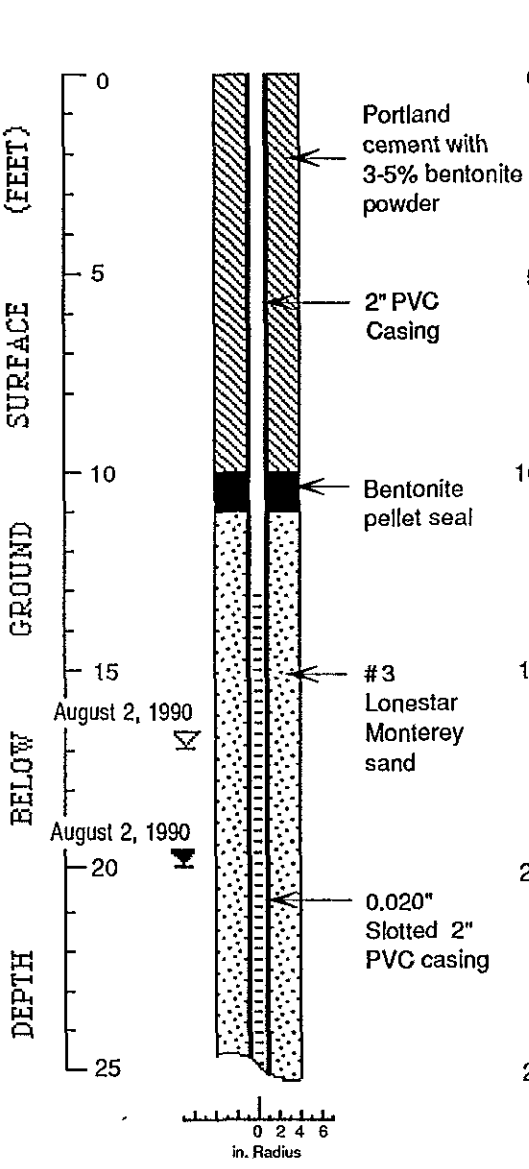
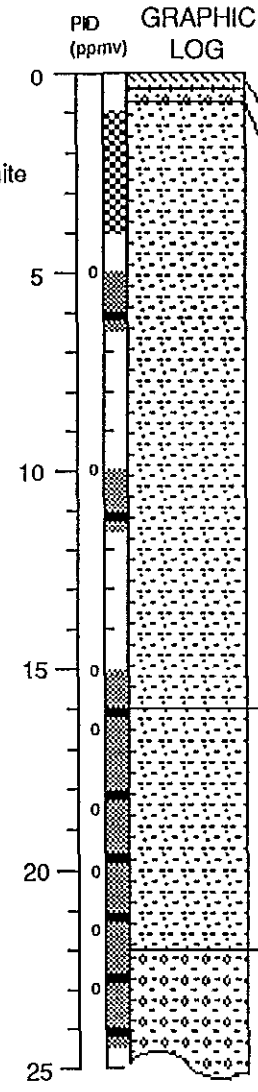


Figure 2. Monitoring and Extraction Well Locations - Chevron Service Station #92258, 5800 College Avenue, Oakland, California

WELL MW-6 (BH-F)





DESCRIPTION

Asphaltic concrete and brick (5")

Concrete (4")

Sandy SILT (ML); brown; stiff; damp; 85% silt; 10% fine sand; 5% fine gravel; low to medium plasticity; low K; no odor

No odor at 10'

Silty SAND (SW); brown; medium dense; damp to moist; 10% silt; 90% fine sand; high K; no odor

Silt increases to 20%; sand decreases to 80%; medium to coarse sand; wet; no odor at 20'

Very slight hydrocarbon odor at 21'

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

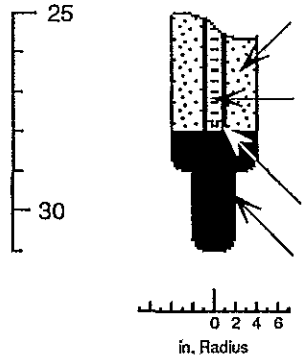
Logged by:	Robert Kitay
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow-stem auger
Date Drilled:	August 2, 1990
Well Head Completion:	4" Locking well-plug, traffic-rated vault
Type of sampler:	Split barrel (1.5",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

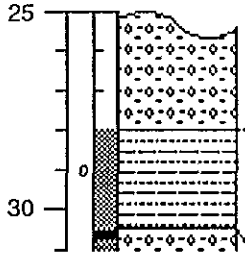
Well Construction and Boring Log - Well MW-6 (BH-F)

Chevron Service Station #92258
Oakland, California

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

DEPTH BELOW GROUND SURFACE (FEET)





GRAPHIC LOG

DESCRIPTION

(Contact-driller)

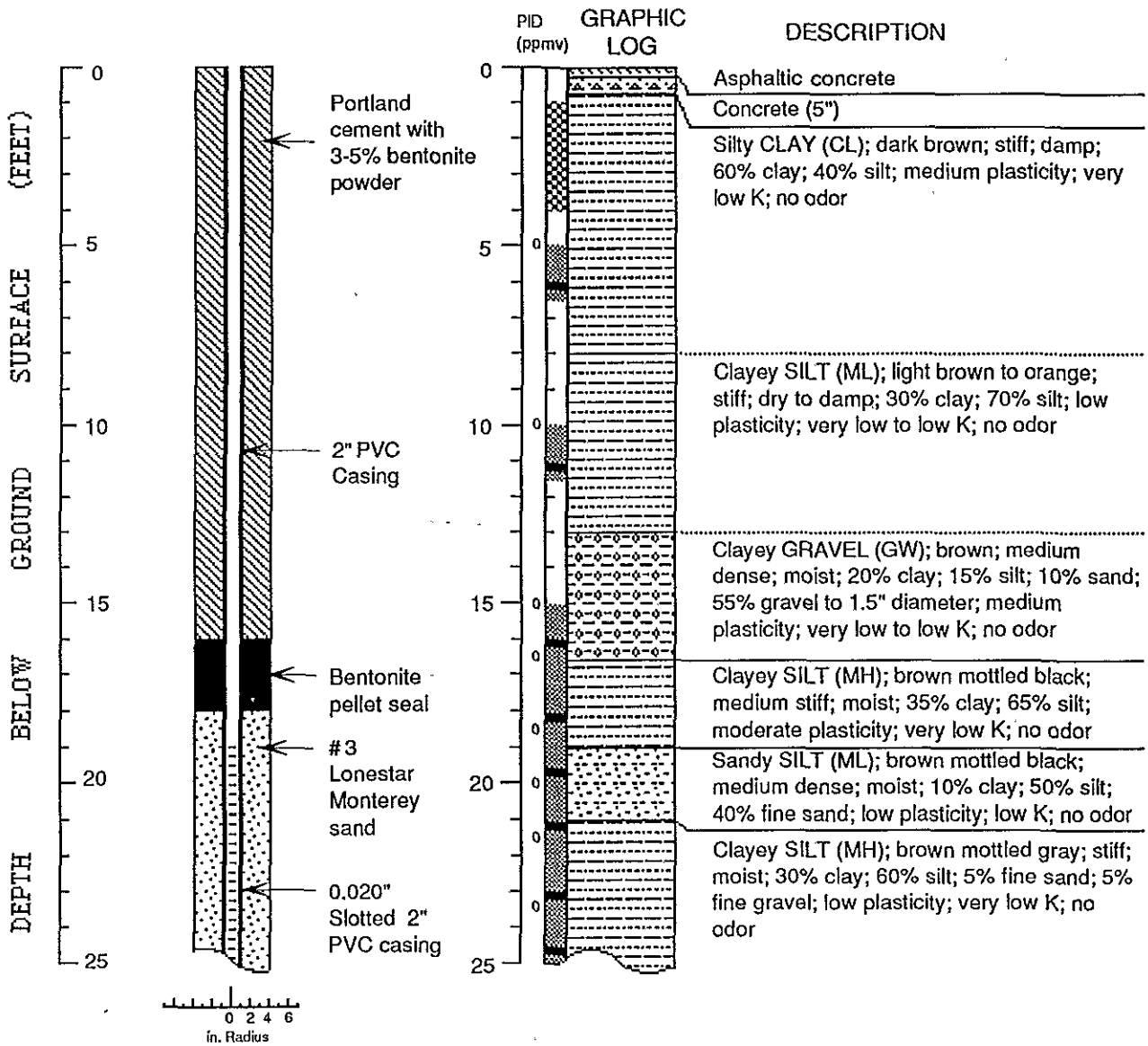
Clayey SILT (ML); brown; stiff; wet; 25% clay; 60% silt; 10% fine sand; 5% fine gravel; low to medium plasticity; very low K; no odor

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

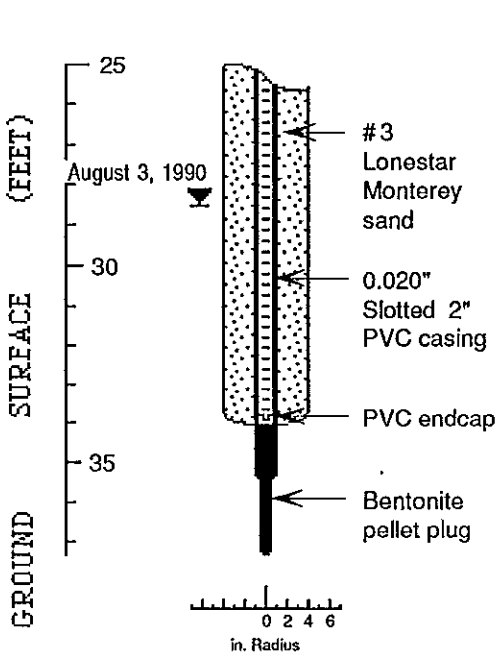
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Uncertain contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

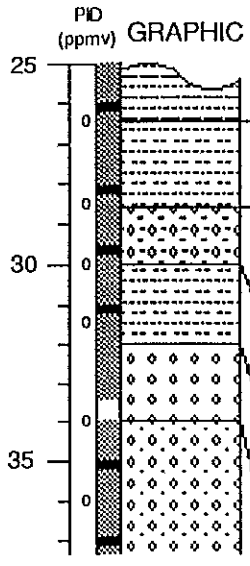
Logged by:	Robert Kitay
Supervisor:	Richard Weiss; EG 1112
Drilling Company:	Soils Exploration Services, Vacaville, CA
Driller:	Russ Ellis
Drilling Method:	Hollow-stem auger
Date Drilled:	August 3, 1990
Well Head Completion:	4" Locking well-plug, traffic-rated vault
Type of sampler:	Split barrel (1.5",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

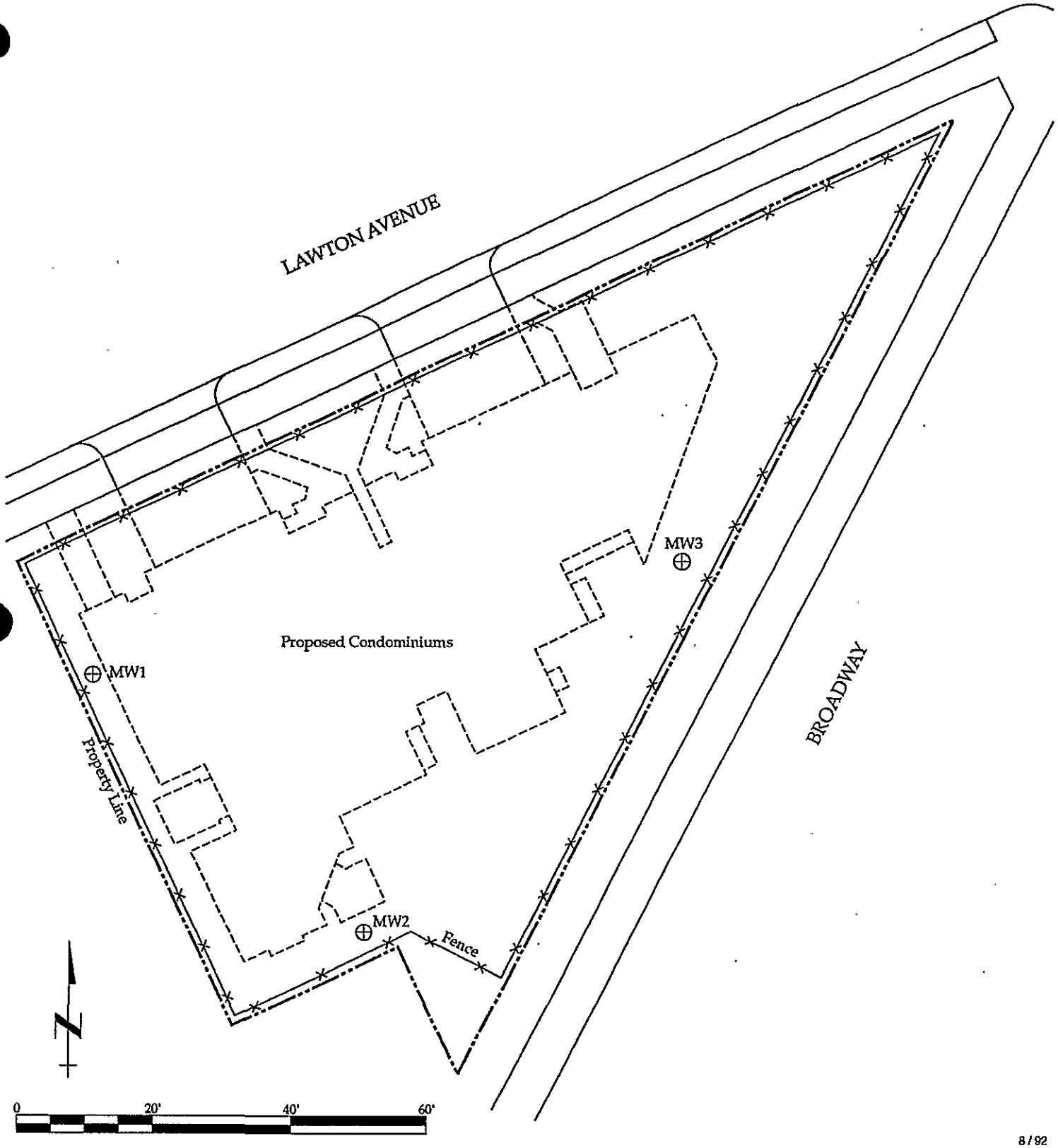
Chevron Service Station #92258
Oakland, California

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

367291 [redacted] 1S/4W 13H #5



8/92

EXPLANATION

⊕ MW-3 Proposed Monitor Well location

Site Location Map
Former Chevron Service Station #9-3575
5775 Broadway
Oakland, California

FIGURE
2

RUNA

17046.01

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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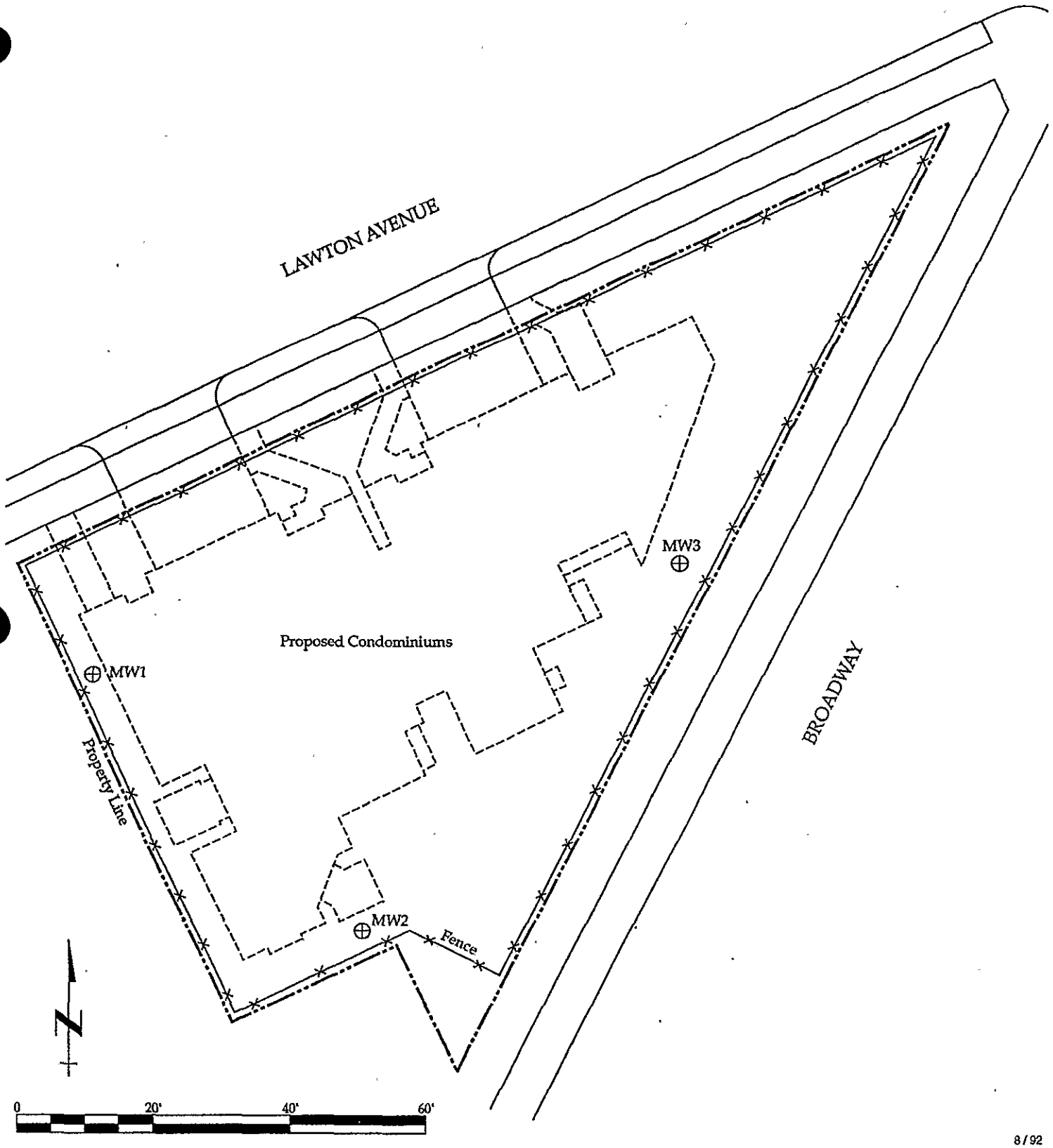
367292 ~~367271-367273~~ 15/4W 13H

6



8/92

EXPLANATION

⊕ MW-3 Proposed Monitor Well location

Site Location Map
Former Chevron Service Station #9-3575
5775 Broadway
Oakland, California

FIGURE

2

17046.01

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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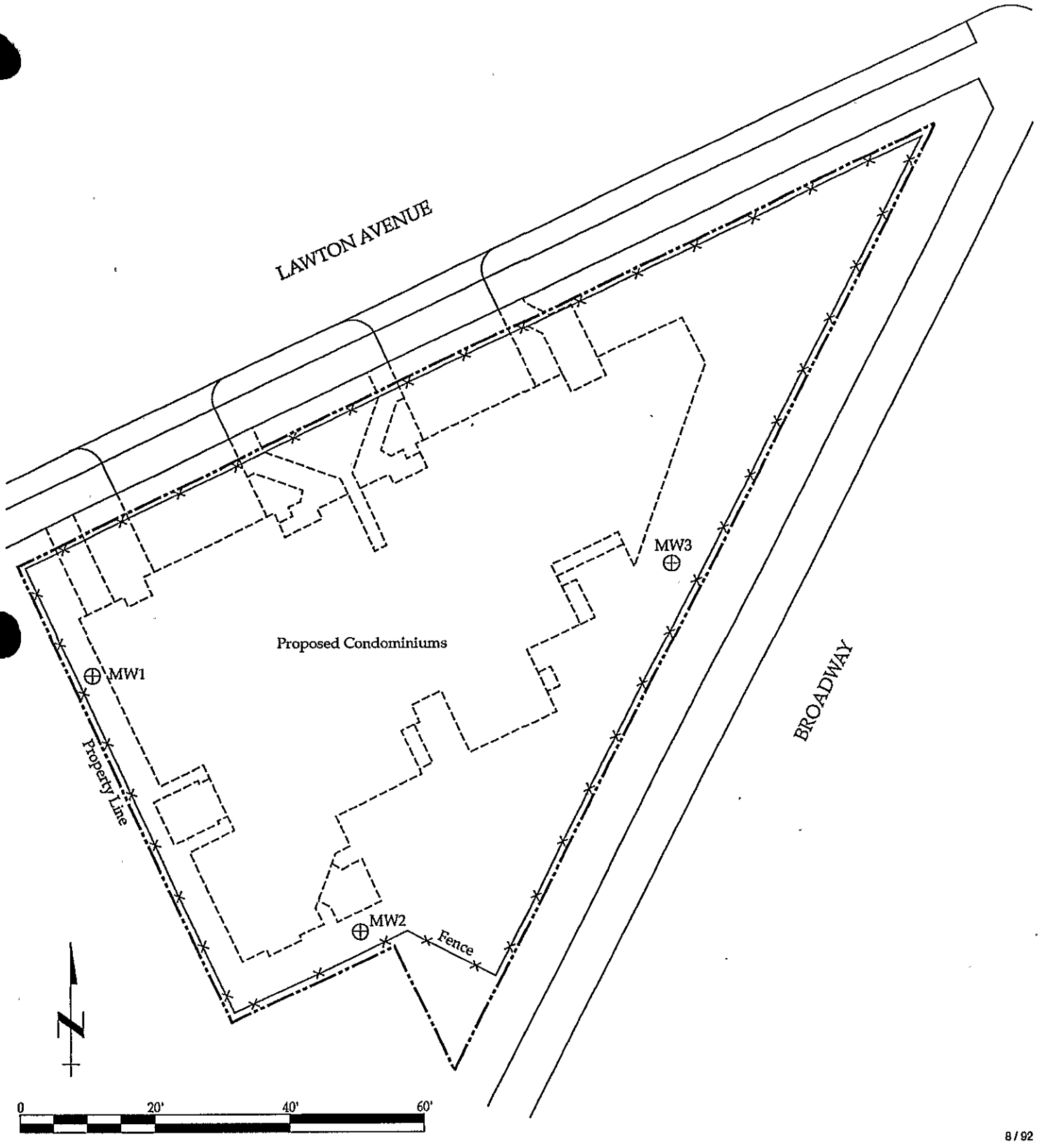
367293 15/4W 13H 4



8/92

EXPLANATION

⊕ MW-3 Proposed Monitor Well location

Site Location Map

Former Chevron Service Station #9-3575
5775 Broadway
Oakland, California

FIGURE

2

17046.01

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

REGION

COUNTY

NEAR

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

BASIN

DWR No. 1S/4E-13S M. D. & M.

OTHER Nos. Job No. 1667

WELL LOG

01-715

LOCATION 5976 Telegraph Avenue, Oakland

OWNER R. A. Shuey Creamery ADDRESS 5976 Telegraph Avenue, Oakland

DRILLED BY J. K. Oaks ADDRESS

DRILLING METHOD GRAVEL PACKED Yes DATE COMPLETED July 1935

SIZE OF CASING DEPTH 21' of 8" STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING 9' AFTER

TEST DATA: DISCHARGE G. P. M. 10 DRAWDOWN FT. 10½ HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION Driller's Log

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 10		Yellow clay			
- 10		Sandy clay and gravel			
- 20½		Sand and gravel			
- 22		Sand rock			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263

REGION

COUNTY

NEAR

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

BASIN

DWR No. 1S/4W-13F B & M

OTHER Nos.

01-716

#1

WELL LOG

LOCATION Foot of Oak Grove Avenue, Oakland

OWNER ADDRESS

DRILLED BY Ough ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 2		Loam			
18		Yellow cement			
23		Yellow clay			
36		Yellow sand			
45		Yellow cem gravel			
46		Yellow cem clay			
55		Yellow cem gravel			
58		Yellow cem clay			
80		Yellow cem gravel			
98		Sand and Gravel			
110		Cem gravel			
120		Clay			
122		Hard cement, basement rock/.			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263

REGION

COUNTY

NEAR

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

BASIN

DWR No. [illegible] B & M

OTHER Nos.

01-717

WELL LOG

LOCATION Foot of Oak Grove Avenue, Oakland

OWNER Unch ADDRESS

DRILLED BY ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 2		Loam			
15		Cement clay			
26		Yellow clay			
28		sand			
33		yellow clay			
42		gravel and sand			
46		gravel			
49		sand			
62		gravel and sand			
63		yellow clay			

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LOG OBTAINED BY DATE SHEET 1 OF

FORM 263

REGION

COUNTY

NEAR

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

BASIN

DWR No. 1S/2W- , B & M

OTHER Nos.

WELL LOG

Well No. 3

01-718

LOCATION Foot of Oak Grove Avenue, Oakland, Drilled by J. Ough.

OWNER ADDRESS

DRILLED BY ADDRESS

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %	
0 - 2		Loam			
17		Cement (Clay or hardpan)			
23		Clay			
29		Cl cement			
37		Clay			
39		sandy clay			
47		fine gravel			
84		coarse gravel			
86		sandy clay			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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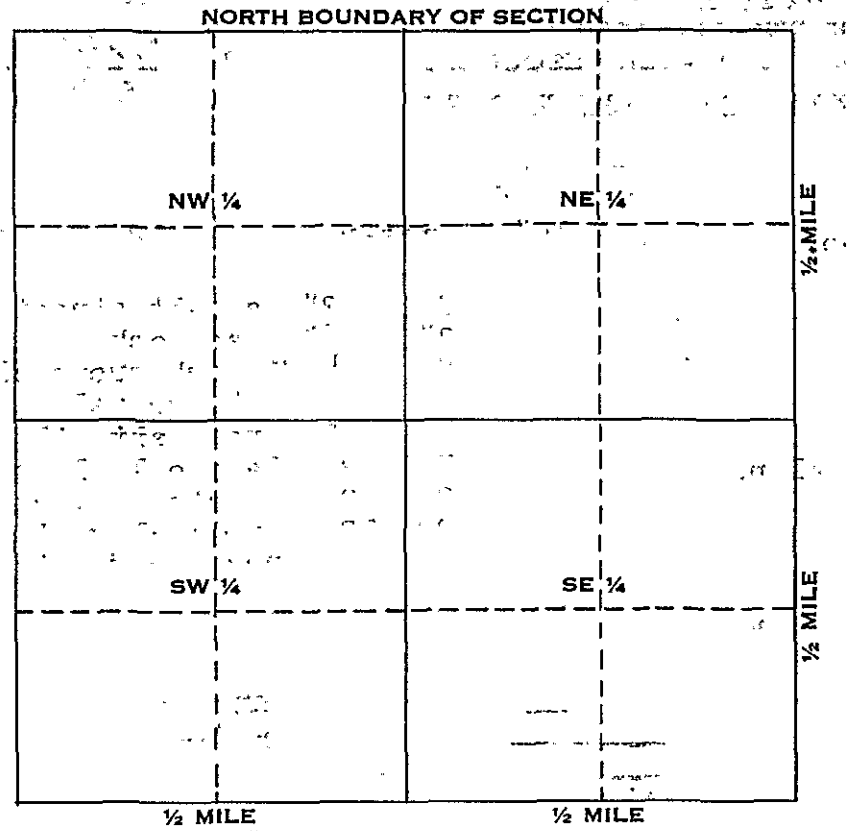
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

WELL LOCATION SKETCH

12019

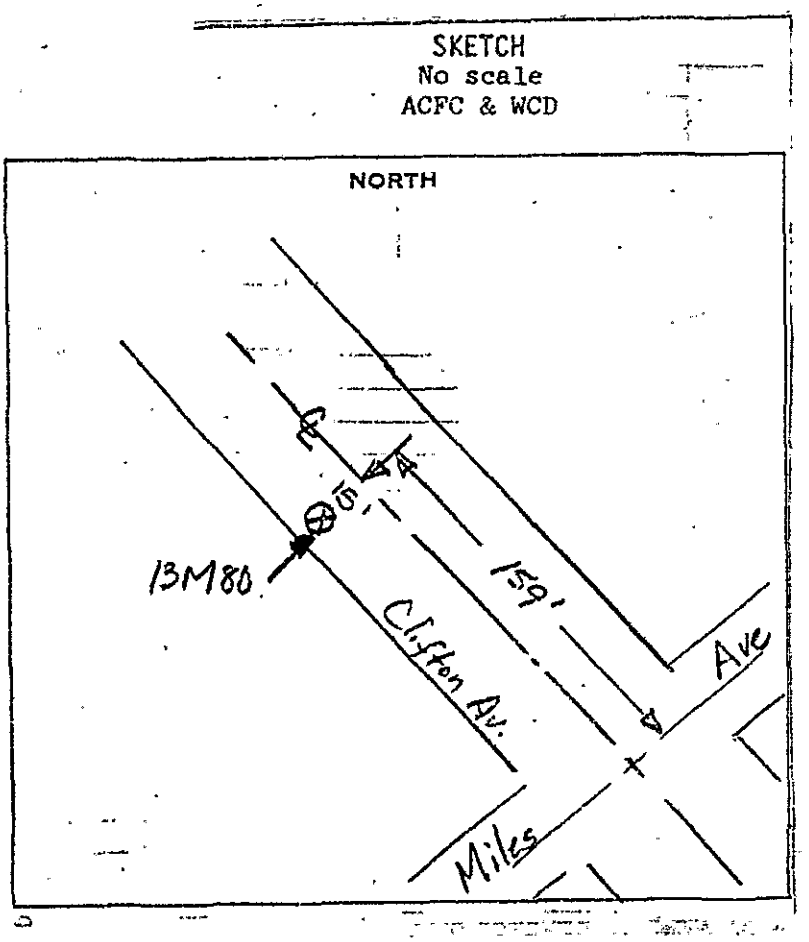


Township 1 N/S

Range 4 E/W

Section No. 13 M 80

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.

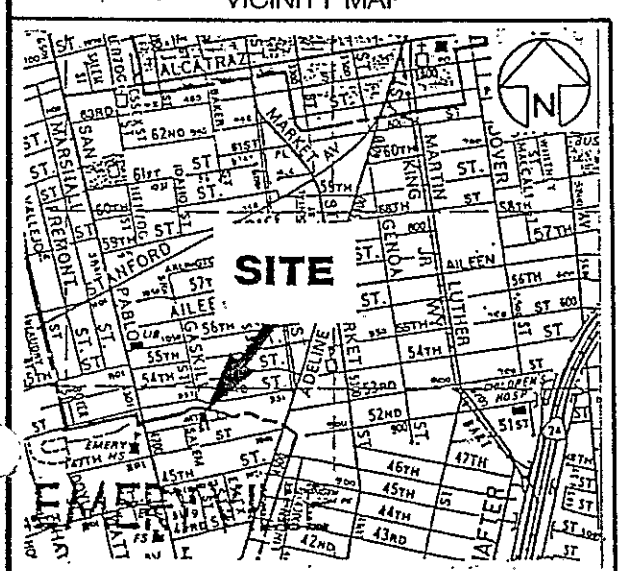


MW-1

MW-2

MW-3

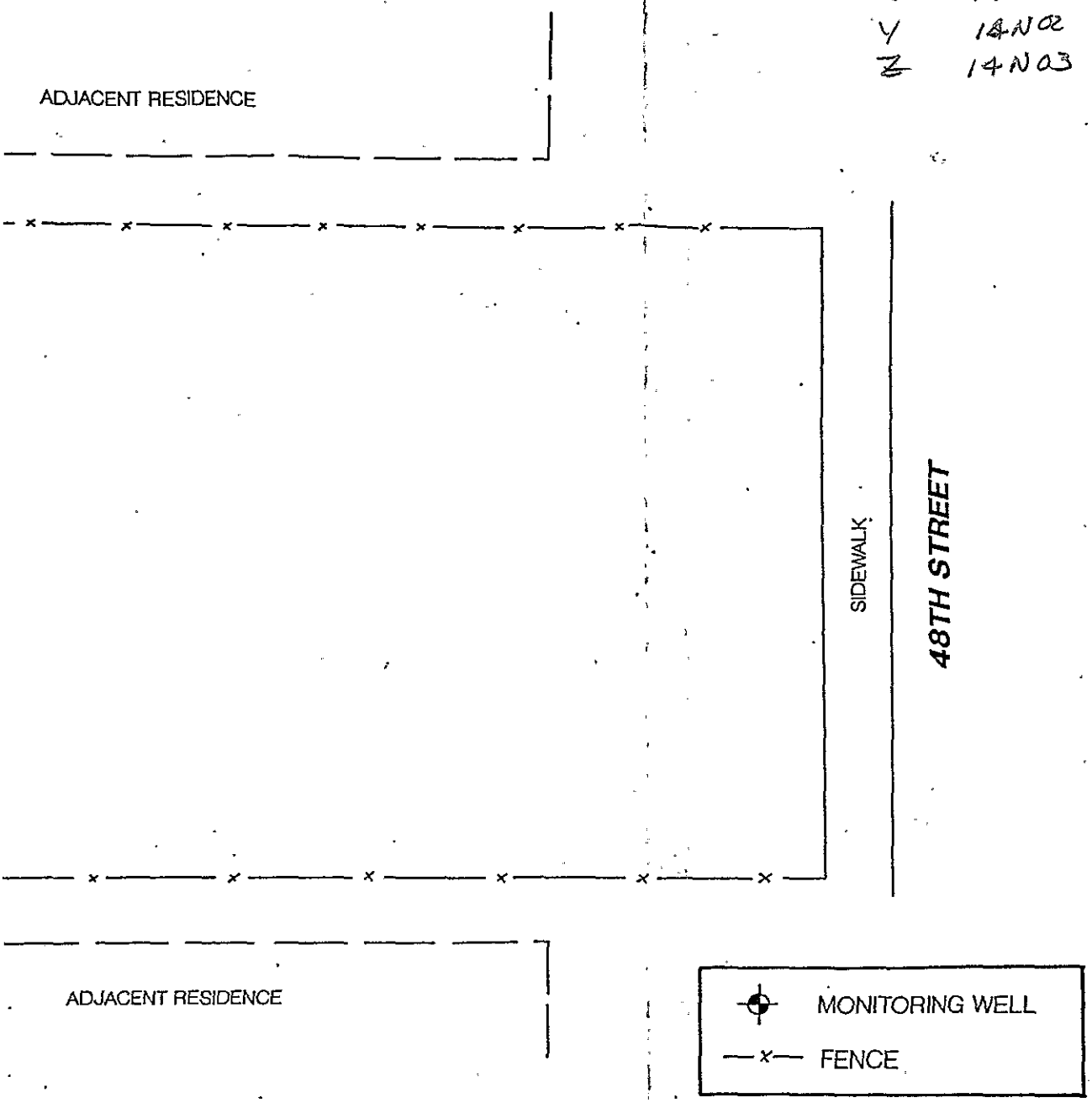
VICINITY MAP



01-539K-Z

01S04W-14N01-03

X 14N01
Y 14N02
Z 14N03



SITE PLAN

Subsurface Consultants

1056 48TH STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
537.006	10/28/92	MW

PLATE 1

01-539X-B

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 1056 45th Street
Emeryville, CA

CLIENT
Name City of Emeryville
Address 2200 Powell St, 12th Floor Phone 596-4350
City Emeryville Zip 94608

APPLICANT
Name Marianne Watada
Subsurface Consultants, Inc.
Address 171-12th St #201 Phone 268-0461
City Oakland Zip 94607

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	___	Well Destruction	X

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other monitoring
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. ___

WELL PROJECTS

Drill Hole Diameter	8	in.	Maximum Depth	23	ft.
Casing Diameter	2	in.	Number	3	
Surface Seal Depth	14	ft.			

GEOTECHNICAL PROJECTS

Number of Borings	___		Maximum Depth	___	ft.
Hole Diameter	___	in.			

ESTIMATED STARTING DATE 10/27/92
ESTIMATED COMPLETION DATE 10/27/92

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Marianne Watada Date 10/22/92

FOR OFFICE USE

PERMIT NUMBER 92529
LOCATION NUMBER 1S/4W 15R80 to 15R82

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial well or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(E.) WELL DESTRUCTION. See attached.
Each well will be drilled out. The casing, seal and gravel pack will be removed. The resulting holes will be backfill with neat cement using tremie methods.

Approved Wyman Hong Date 23 Oct
Wyman Hong

3185

CONFIDENTIAL

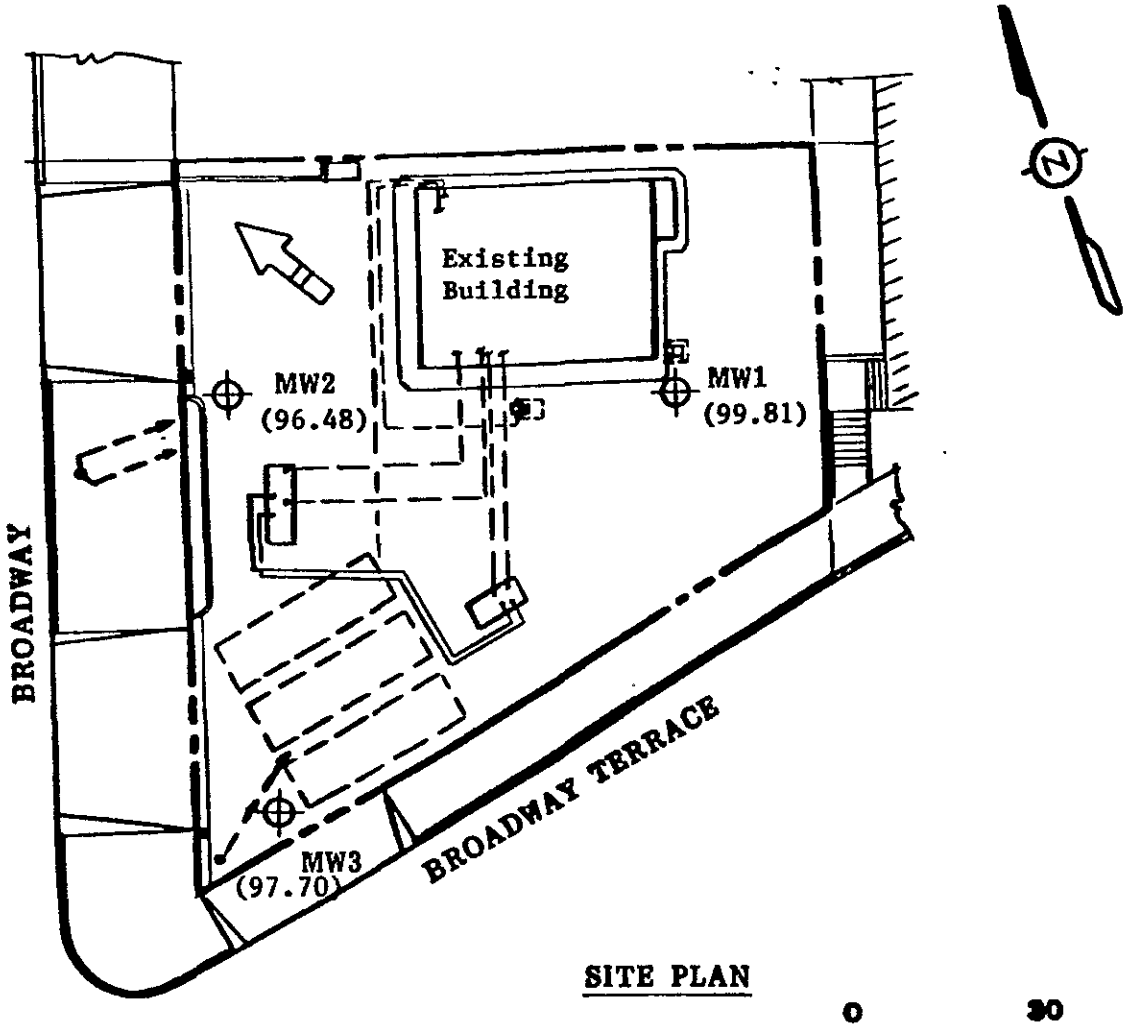
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

1S/4W 13Q1-3

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

3803 48A-C



SITE PLAN

0 30 60
Approx. Scale feet

LEGEND

⊕ Monitoring Well

( ) Ground Water Elevation in feet on 4/23/90. Top of MW3 Well Cover assumed 100.00 feet as datum.

⇨ Ground Water Flow Direction

Unocal Service Station #1028
5300 Broadway
Oakland, California

15/4 01391

BORING LOG

3803481

Project No. KEI-P89-1111	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal Oakland-5300 Broadway	Well Head Elevation N/A	Date Drilled 4/6/90
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		A. C. Pavement
			N/A	BEDROCK - FRANCISCAN COMPLEX Shale, locally silty, hard, weathered, fractured, dry, olive gray and olive brown, dark reddish brown in some fractures.
50-5 1/2		5		
41/46/50 5 1/2"	▼			Shale Bedrock, hard, moist to dry, weathered, locally decomposed and clayey, olive brown and strong brown.
26/50-5"		10		Shale, as above, moist to wet, locally sheared.
50-2"		15		Shale, as above, olive gray, fractured less weathered than above, hardness increasing with depth.
		20		TOTAL DEPTH: 15'

16/4W/39

380348A

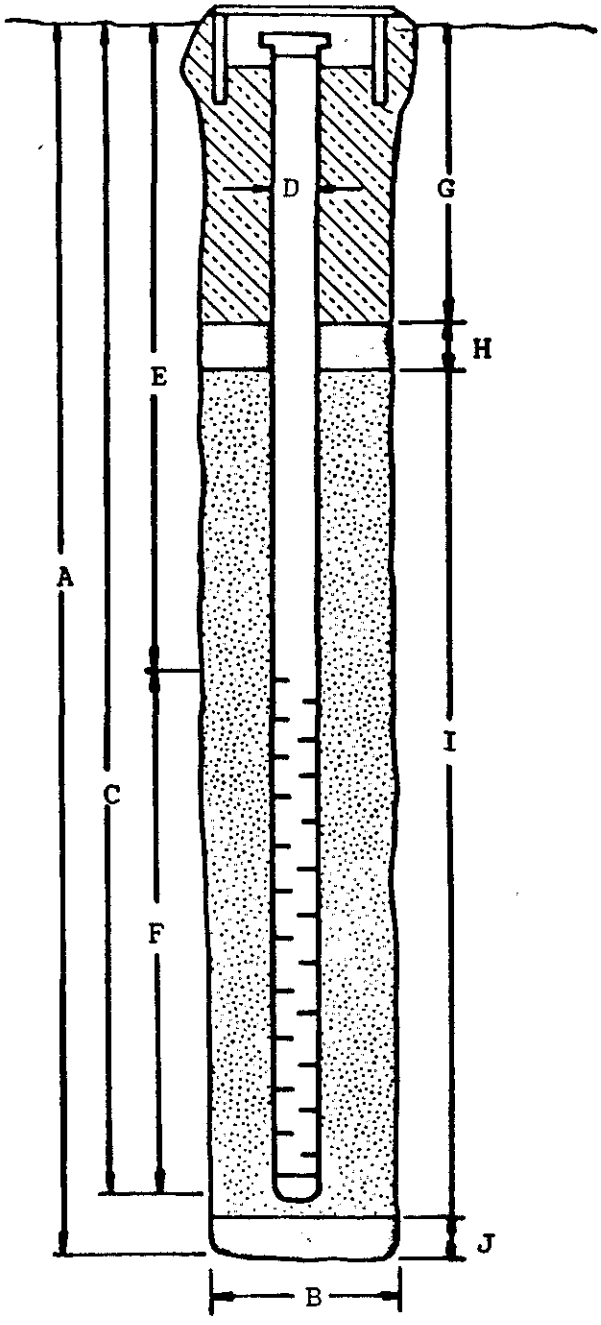
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland - 5300 Broadway BORING/WELL NO. MW1

PROJECT NUMBER: KEI-P89-1111

WELL PERMIT NO.: 90154

Flush-mounted Well Cover



A. Total Depth: 19'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 19'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 3'

F. Perforated Length: 16'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 1'

Seal Material: Concrete

H. Seal: 1'

Seal Material: Bentonite

I. Gravel Pack: 17'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

15/4W13Q2

BORING LOG

380348B

Project No. KEI-P89-1111	**Boring & Casing Diameter** 9" 2"	**Logged By** D.L.
Project Name Unocal Oakland-5300 Broadway	**Well Head Elevation** N/A	**Date Drilled** 4/6/90
Boring No. MW2	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		A. C. Pavement Sand and gravel base.
			CL/CH	Sandy clay, 10-15% gravel, very stiff, moist, yellowish brown and red, gravel is composed of weathered shale fragments.
26/50-5"		5	N/A	BEDROCK - FRANCISCAN COMPLEX Shale, hard, weathered, slightly moist to dry, fractured, locally decomposed and clayey, olive and olive brown, dark reddish brown in fractured planes.
50-6"				
50-5"	▼	10		Shale Bedrock, as above, hard, dry, fractured, olive gray, olive brown and strong brown in fractures, weathered, wet below 9.5 feet.
50-5 3/4		15		Shale, as above, wet, less weathered than above.
		20		TOTAL DEPTH: 19'

15/4W1392

3803488

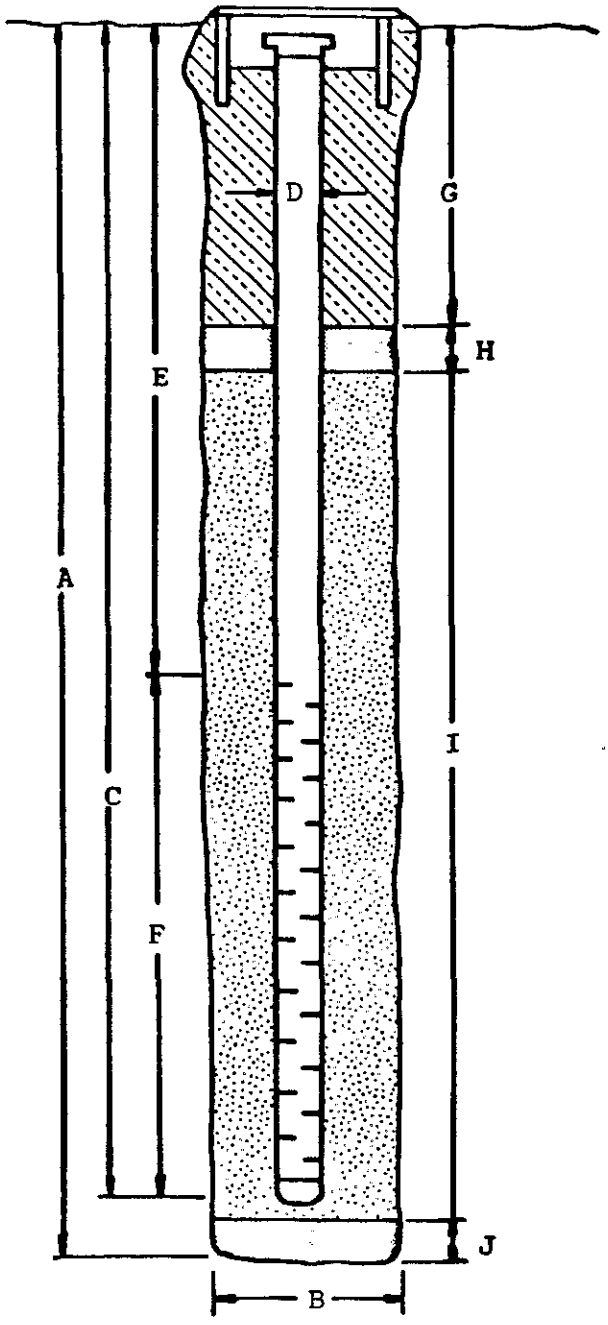
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland - 5300 Broadway BORING/WELL NO. MW2

PROJECT NUMBER: KEI-P89-1111

WELL PERMIT NO.: 90154

Flush-mounted Well Cover



A. Total Depth: 19'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 19'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 4'

F. Perforated Length: 15'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 1.5'

Seal Material: Concrete

H. Seal: 1.5'

Seal Material: Bentonite

I. Gravel Pack: 16'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

15 4 U 1393

BORING LOG

380348C

Project No. KEI-P89-1111	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal Oakland-5300 Broadway	Well Head Elevation N/A	Date Drilled 4/6/90 & 4/9/90
Boring No. MW3	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (ft) Samples	Stratigraphy USCS	Description
		0		Concrete Pavement
			CL/CH	Sandy clay, 10-20% gravel, very stiff, moist, yellowish brown, gravel is shale, bedrock weathered to soil.
				BEDROCK - FRANCISCAN COMPLEX
20/24/50 -5"		5	N/A	Shale, moderately hard to hard, slightly most to dry, weathered, locally decomposed and clayey, fractured, olive brown and strong brown, black in some fracture planes.
50-3"				
51	▼			Shale to silty shale, as above, moderately decomposed and clayey between 9 and 10 feet.
		10		
		15		Shale to silty shale, as above, less weathered than above, hardness increasing with depth.
		20		TOTAL DEPTH: 20'

Q3.

380348C

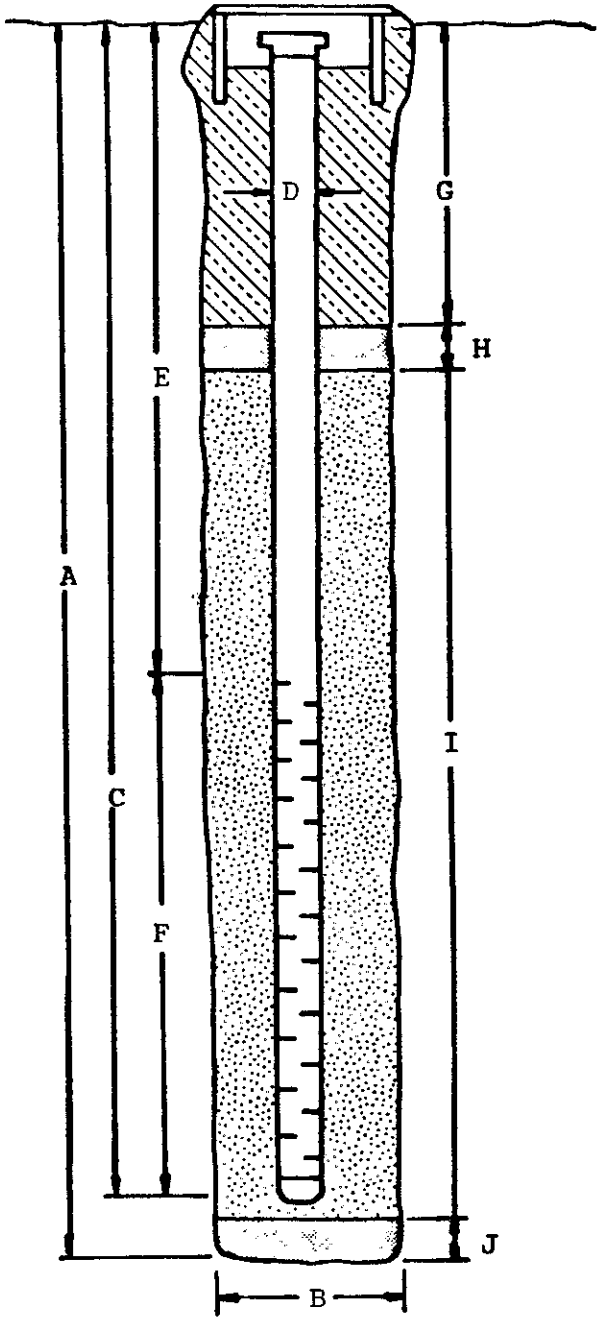
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal - Oakland - 5300 Broadway BORING/WELL NO. MW3

PROJECT NUMBER: KEI-P89-1111

WELL PERMIT NO.: 90154

Flush-mounted Well Cover



A. Total Depth: 20'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 20'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 4'

F. Perforated Length: 16'

Perforation Type: Machined Slot

Perforation Size: 0.020"

G. Surface Seal: 1.5'

Seal Material: Concrete

H. Seal: 1.5'

Seal Material: Bentonite

I. Gravel Pack: 17'

Pack Material: RMC Lonestar Sand

Size: #3

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.