

P&D ENVIRONMENTAL
A Division of Paul H. King, Inc.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

September 12, 2005
Report 0298.R4

Mr. Harold Turner
Snow Cleaners, Inc.
2678 Coolidge Avenue
Oakland, CA 94601

SUBJECT: SENSITIVE RECEPTOR SURVEY
Fuel Leak Site RO0000357
Snow Cleaners, Inc.
2678 Coolidge Avenue
Oakland, CA

Dear Mr. Turner:

This report presents the results of a sensitive receptor survey performed by P&D Environmental, a division of Paul H. King, Inc. (P&D) for the subject site. The survey was performed in accordance with a request from Mr. Jerry Wickham of the Alameda County Department of Environmental Health (ACDEH) set forth in a letter dated July 11, 2005. In a telephone conversation with P&D on July 21, 2005, Mr. Wickham identified the sensitive receptors of interest as being hospitals, day care centers and schools within 200 feet, surface water bodies nearby, and production wells within 2000 feet.

The sensitive receptor search was conducted by review of local maps and business listings, and interviews with site personnel. The well search was performed by submitting requests to the California Department of Water Resources (DWR) and the Alameda County Public Works Agency (ACPWA) for identification of wells located within a 2000-foot radius of the subject site. A summary of well information obtained from the survey is provided in Table 1 and Table 2 attached with this report.

The subject site is located on Davis Street between Coolidge Avenue and 34th Avenue in Oakland, California. A Site Location Map showing the location of wells identified within a 2000-foot radius of the subject site is attached as Figure 1. Copies of the information provided by the DWR and the ACPWA is also attached with this report.

The results of the sensitive receptor survey show that no surface sensitive receptors are located within the vicinity of the subject site with the exception of Peralta Creek approximately 400 feet to the southeast of the site, and that no wells were identified that are considered to be at risk from the subject site.

SURFACE RECEPTOR SEARCH

A sensitive receptor search was performed for the vicinity of the subject site. The property owner Mr. Harold Turner was interviewed and local business listings were reviewed to identify hospitals, day care centers and schools in the site vicinity. None of the aforementioned facilities were identified within 200 feet of the subject site property boundary. United States Geological Survey (USGS) and county assessor's parcel maps were consulted to identify surface water resources in the nearby vicinity. The only surface water resource identified near the subject site property boundary was Peralta Creek, which is located approximately 380 feet southeast from the property boundary at its closest point. The location of Peralta Creek relative to the subject site is shown in Figure 1.

WELL SEARCH

P&D requested that Mr. James Yoo of the ACPWA perform a 2000-foot radius well search for the subject site. On July 21, 2005 Mr. Yoo provided a table via e-mail to P&D that transmitted the findings of his database search. A total of 28 wells (including the two groundwater monitoring wells at the subject site) and addresses for two sites where soil borings were drilled were identified in the ACPWA database. The well identified at 2361 E 29th Street is outside of the 2,000-foot radius search area. In addition the well identified as being located at 2681 Fruitvale Avenue is believed to be located at 2682 Fruitvale Avenue based upon comparison of the installation date and section number with the DWR database. This alternate address is assumed to be a data entry error in the ACPWA database. The list of addresses and associated information provided by Mr. Yoo are attached with this report as Table 1.

P&D also requested that the DWR provide documentation of wells located within a 2000-foot radius of the subject site. On August 2, 2005 the DWR provided 51 pages of well information. For one address, a Water Well Driller's Report or Well Completion Report was not included but a DWR file number (01-143A-D) had been assigned to a site map and boring logs for four soil borings. For a different address (DWR file number 140322) the well was located outside the 2,000-foot radius search area. For a different address, one copy of a Water Well Drillers Report (342668) was used for four wells. Copies of the report contained the added designations of A through D to distinguish information for each of the different wells. All four of the wells were associated with the same offsite investigation, and the area of investigation extended up to two blocks from 2168 Fruitvale Avenue. Locations 14 and 15 on Figure 2 (see also Table 2) show the locations of these wells. A total of 17 wells and four soil borings were identified in the DWR database. The results of the DWR information are summarized in Table 2. The well information provided by the DWR is attached as Appendix A.

The addresses for wells identified in the information provided by both the ACPWA and the DWR are summarized in Table 3. All of the wells in Table 3 are groundwater monitoring wells with the exception of two irrigation wells.

DISCUSSION

A sensitive receptor survey was performed for features located above and below the ground in the vicinity of the subject site. A surface receptor search was performed for the sensitive facilities in the site vicinity. No hospitals, day care centers or schools were identified within 200 feet of the property boundary of the subject site. The only surface water resource identified near the subject site property boundary was Peralta Creek, which is located approximately 380 feet southeast of the subject property boundary at its closest point. The location of Peralta Creek is shown in Figure 1.

Review of Figure 1 shows that the site is located near the top of a northeasterly-trending interfluvial (ridge-like) structure. The topography in the area surrounding the site slopes to the east and south. Peralta Creek is located approximately 400 feet to the east and southeast of the subject site. Although the site vicinity topography slopes to the east and south, the ground surface between Coolidge Avenue (bordering the property on the west) and 34th Avenue (the first street encountered to the east of the site) is remarkably flat. Almost all of the change in elevation between the site and Peralta Creek occurs to the east of 34th Avenue. Although the groundwater flow direction at the site is unknown, based on these observations, the anticipated groundwater flow direction at the site is toward the southeast.

The distribution of Stoddard Solvent in groundwater in the vicinity of the subject site was documented in P&D's Subsurface Investigation Report (document 0298.R2), dated February 28, 2005. The Stoddard Solvent appears to originate from a former underground storage tank pit located adjacent to Davis Street, and extends beneath Davis Street towards the southeast. (see Figure 3). No wells are identified to the southeast of the subject site in the 2000-foot search radius.

A total of 30 wells were identified in the information provided by the DWR and ACPWA. Two of the wells are located outside of the 2,000-foot radius search area. Two of the wells are located at the subject site. Of the remaining 26 wells, all but one are either located at either a higher surface elevation, or are located on the north side of the ridge-like structure and are separated from the site by the ridge. As a result, these wells are not considered to be at risk from Stoddard Solvent originating at the subject site. One well (number 29 on Figure 2) is located at a lower elevation, but it is located approximately 2000 feet to the southwest of the site at a transgradient location. Based on the southeasterly groundwater flow direction for the subject site, no wells located within 2000 feet of the subject site were identified that could be affected as a sensitive receptor.

DISTRIBUTION

A copy of this report should be sent to Mr. Jerry Wickham at the ACDEH. The report should be accompanied by a transmittal letter signed by an authorized representative of Snow Cleaners, Inc.

LIMITATIONS

This report was prepared solely for the use of Snow Cleaners, Inc. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

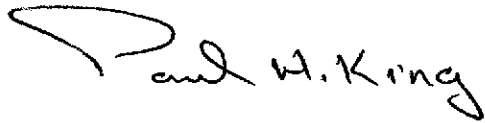
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

September 12, 2005
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Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental



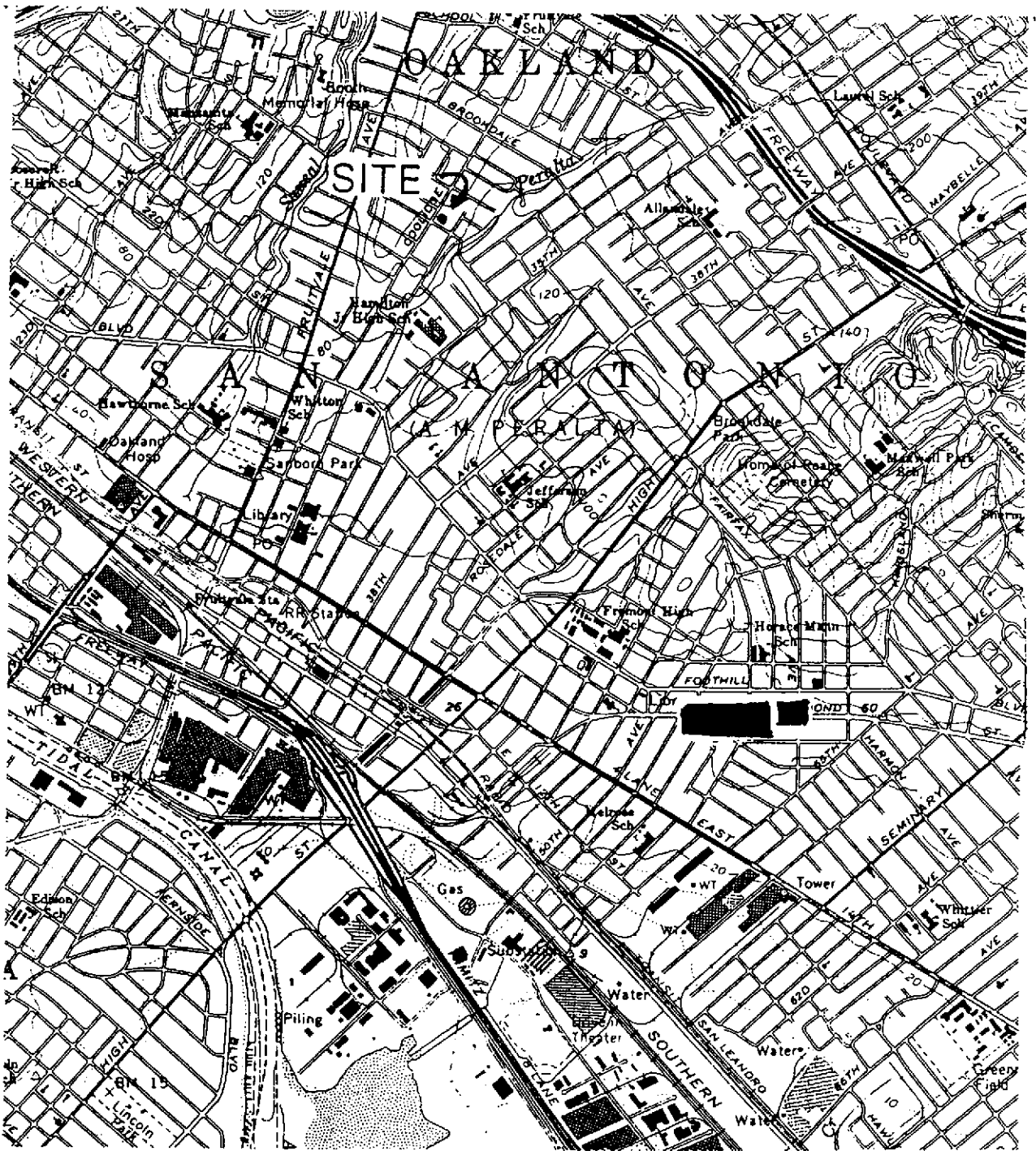
Paul H. King
President
Professional Geologist #5901
Expires: 12/31/05

Attachments: Figure 1 - Site Location Map
Figure 2 - Well Locations within 2000 Feet of the Subject Site
Figure 3 - Site Vicinity Map
Table 1 - ACPWA Well Information
Table 2 - DWR Well Information
Table 3 - Well Locations Within 2000 Feet of the Subject Site
Appendix A - California Dept. of Water Resources Well Records

PHK/efo
0298.R4

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55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
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Base Map From
U.S. Geological Survey
Oakland East, Calif.
7.5 Minute Quadrangle
Photorevised 1980

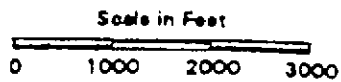
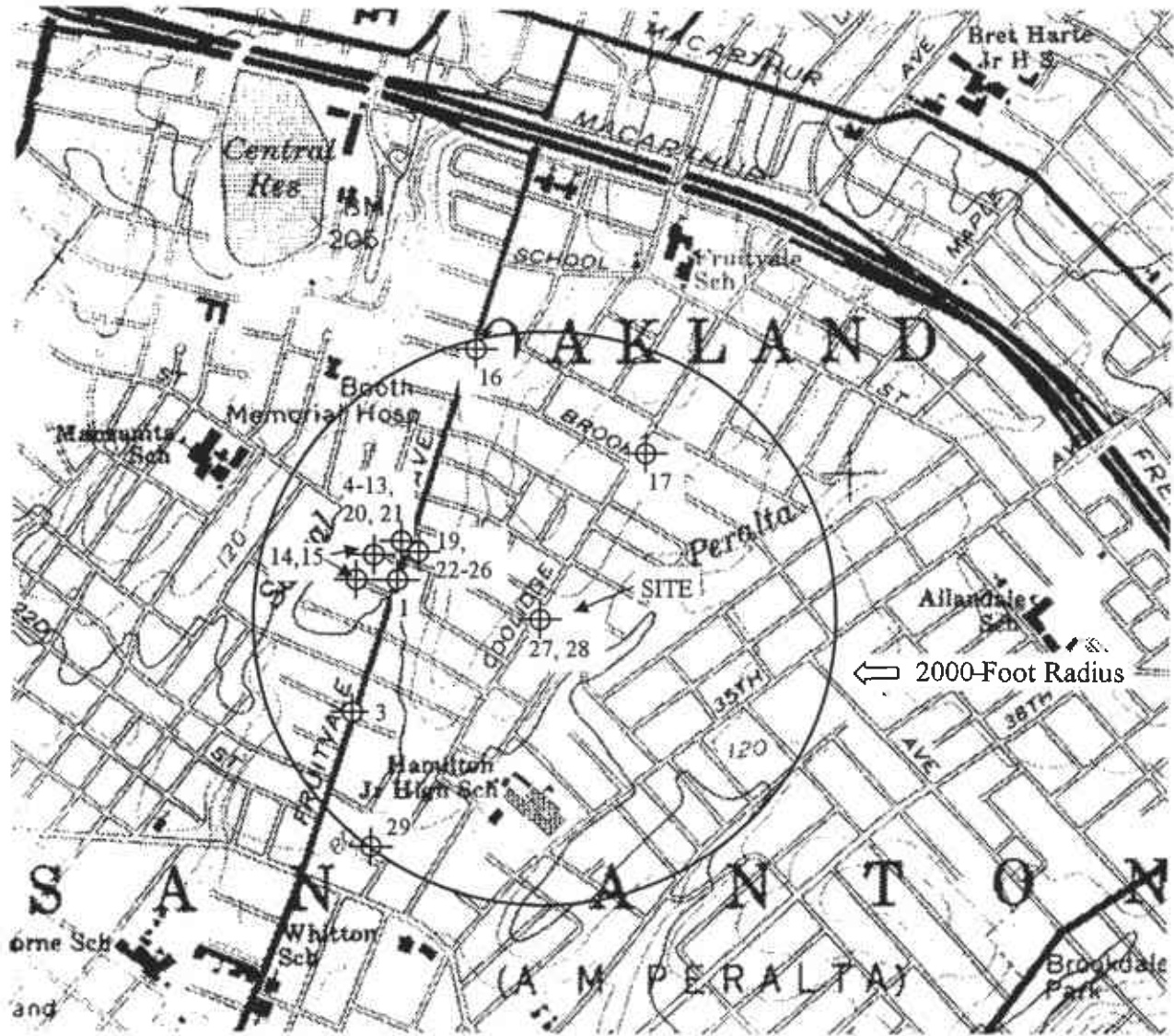


Figure 1
SITE LOCATION MAP
2678 Coolidge Ave
Oakland, CA

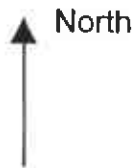
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LEGEND

⊕ Well Location
See Table 3 For Well-Specific Information



Base Map From:
U.S. Geological Survey
Oakland East, Calif.
7.5 Minute Series
Photorevised 1980

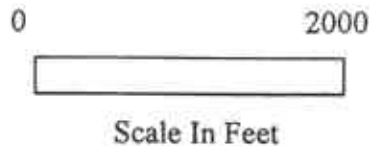
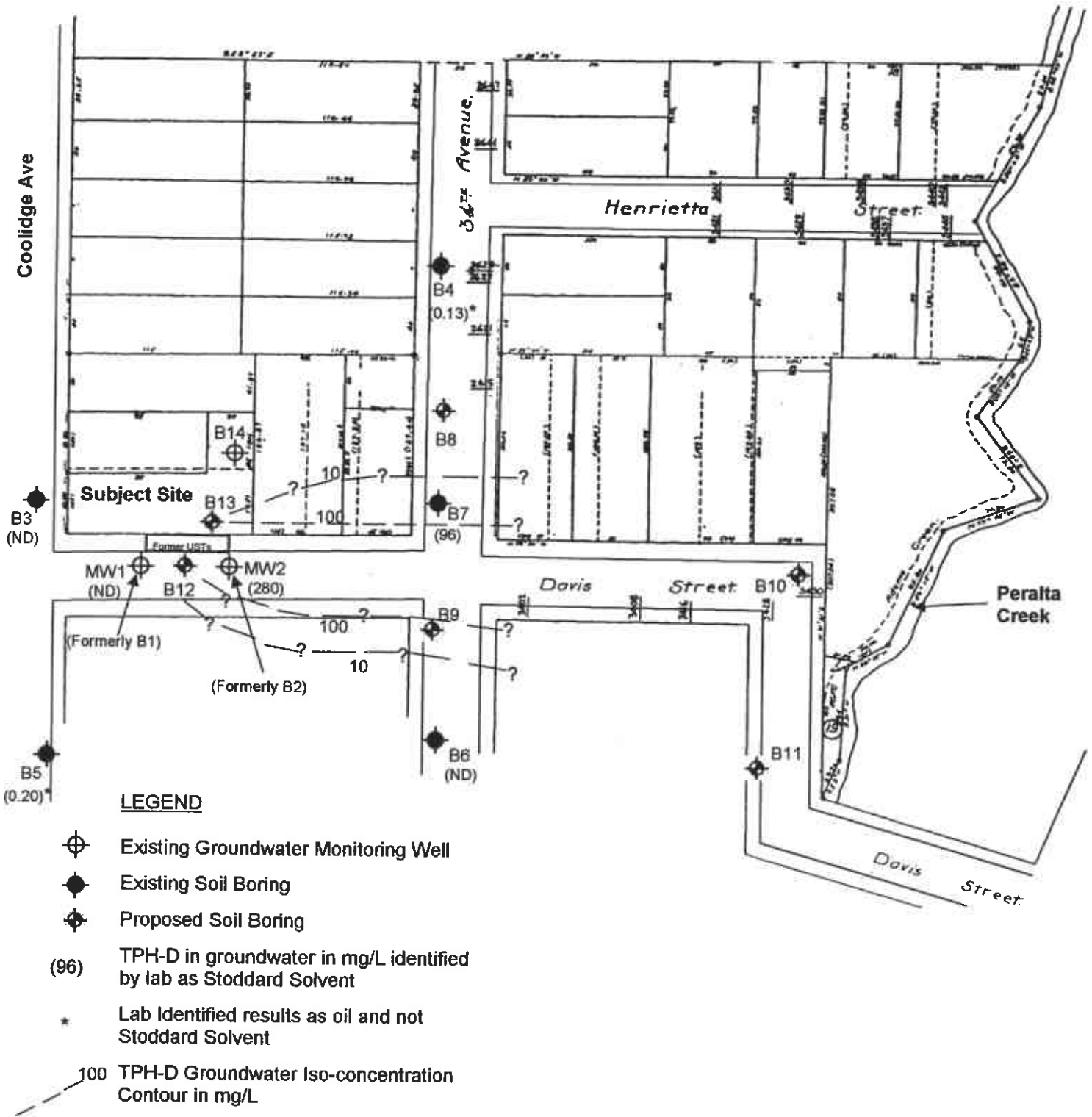


Figure 2
WELL LOCATIONS
WITHIN 2000 FEET OF
THE SUBJECT SITE
2678 Coolidge Ave.
Oakland, CA

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 55 Santa Clara Avenue, Suite 240
 Oakland, CA 94610
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Base Map From
 Parcel Quest
 Assessor's Parcel Maps
 Alameda County Map Disc
 July 2001

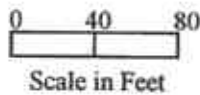


Figure 3
 SITE VICINITY MAP
 2678 Coolidge Ave
 Oakland, CA

Table 1:
ACPWA Well Information

Permit	Tr	Section	Address	Longcity	Owner	Update	Xcoord	Ycoord	Matchlevel	Tsrgg	Rec_code	Phone	City	Drilldate	Elevation	Totaldepth	Waterdepth	Diameter	Use
	2S/3W	5B 1	3112 COOLIDGE	Oakland	TERRY	7/30/1984	122212532	37791547	9	2S/3W 5B	2892	0	OAK		0	0	14	8	IRR
	2S/3W	5C	FRUITVALE AVE/DAVIS ST	Oakland	PERALTA HACIENDA	7/22/1986	122228700	37769050	2	2S/3W 5C	2893	0	OAK	Oct-85	0	20	10	0	BOR
	2S/3W	5C 1	2381 E 29TH ST	Oakland	SALEM LUTHERAN HOME	1/15/1985	122224545	37795107	0	2S/3W 5C	2894	0	OAK		0	180	0	6	IRR
	2S/3W	5C 2	2681 2681 FRUITVALE AVE.	Oakland	CHEVRON U.S.A. INC.	9/1/1989	122216977	37791555	9	2S/3W 5C	2895	0	OAK	Feb-89	0	22	13	4	MON
	2S/3W	5C 3	2681 FRUITVALE AVE.	Oakland	CHEVRON U.S.A. INC.	9/1/1989	122219180	37790133	0	2S/3W 5C	2896	0	OAK	Feb-89	0	19	12	4	MON
	2S/3W	5C 4	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2897	0	OAK	May-89	0	26	18	4	MON
	2S/3W	5C 5	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2898	0	OAK	May-89	0	22	15	4	MON
	2S/3W	5C 6	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2899	0	OAK	May-89	0	22	15	4	MON
	2S/3W	5C 7	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2900	0	OAK	May-89	0	25	18	4	MON
	2S/3W	5C 8	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2901	0	OAK	May-89	0	22	15	4	MON
	2S/3W	5C 9	2681 FRUITVALE AVE	Oakland	CHEVRON USA	1/22/1990	122219180	37790133	0	2S/3W 5C	2902	0	OAK	May-89	0	22	15	4	MON
	2S/3W	5C10	2682 Fruitvale Road	Oakland	Chevron USA	8/31/1990	122216977	37791555	9	2S/3W 5C	837	0	OAK	Jul-90	0	25	15	2	MON
	2S/3W	5C11	2681 Fruitvale Road	Oakland	Chevron USA	8/31/1990	122219180	37790133	3	2S/3W 5C	838	0	OAK	Jul-90	0	27	13	2	MON
	2S/3W	5C12	2681 Fruitvale Ave	Oakland	Former Chevron MW11	10/1/1992	122219180	37790133	1	2S/3W 5C	8226	0	OAK	Oct-91	102	22	16	2	MON
	2S/3W	5C13	2681 Fruitvale Ave	Oakland	Former Chevron MW12	10/1/1992	122219180	37790133	1	2S/3W 5C	8227	0	OAK	Oct-91	102	23	15	2	MON
	2S/3W	5C14	2681 Fruitvale Ave	Oakland	Former Chevron MW13	10/1/1992	122219180	37790133	1	2S/3W 5C	8228	0	OAK	Oct-91	101	25	17	2	MON
	2S/3W	5C15	2681 Fruitvale Ave	Oakland	Former Chevron MW14	10/1/1992	122219180	37790133	1	2S/3W 5C	8229	0	OAK	Oct-91	98	27	19	2	MON
	2S/3W	5C16	2662 Fruitvale Av	Oakland	City of Oakland	8/13/1997	122219057	37789897	1	2S/3W 5C	0	0	OAK	9/94	101	17	0	2	MON
	2S/3W	5C17	2681 Fruitvale Av	Oakland	Chevron	8/21/1997	122219197	37790133	1	2S/3W 5C	0	0	OAK	7/93	0	25	14	2	MON
	2S/3W	5C18	2681 Fruitvale Av	Oakland	Chevron	8/21/1997	122219197	37790133	1	2S/3W 5C	0	0	OAK	6/93	0	24	14	2	MON
	2S/3W	5C19	2662 Fruitvale Av	Oakland	City of Oakland-Environme	9/11/1997	122219023	37789897	1	2S/3W 5C	0	0	OAK	4/95	0	25	5	2	MON
	2S/3W	5C20	2662 Fruitvale Av	Oakland	City of Oakland-Environme	9/11/1997	122219023	37789897	1	2S/3W 5C	0	0	OAK	6/95	0	21	6	2	MON
93439	2S/3W	5C21	2662 Fruitvale Av	Oakland	City of Oakland	11/3/1997	122219013	37789893	1	2S/3W 5C	0	0	OAK	8/93	103	26	16	2	MON
93439	2S/3W	5C22	2662 Fruitvale Av	Oakland	City of Oakland	11/3/1997	122219013	37789867	1	2S/3W 5C	0	0	OAK	8/93	105	26	14	2	MON
93439	2S/3W	5C23	2662 Fruitvale Av	Oakland	City of Oakland	11/3/1997	122219013	37789867	1	2S/3W 5C	0	0	OAK	8/93	102	20	12	2	MON
	2S/3W	5E 1	2400 FRUITVALE AVE	Oakland	QUIK-STOP MARKET	11/25/1985	122220300	37786730	0	2S/3W 5E	2903	0	OAK	Sep-85	0	26	17	2	MON
	2S/3W	5F 1	2678 Coolidge Av	Oakland	Snow Cleaners	9/11/1997	122215697	37788801	1	2S/3W 5F	0	0	OAK	1/94	0	45	42	2	MON
	2S/3W	5F 2	2678 Coolidge Av	Oakland	Snow Cleaners	9/11/1997	122215697	37788801	1	2S/3W 5F	0	0	OAK	1/94	0	26	19	4	MON
	2S/3W	5M 1	3320 E 22ND ST	Oakland	ROY OVERALL	8/31/1984	122220156	37784104	0	2S/3W 5M	2907	0	OAK	7/85	0	100	12	12	IRR
	2S/3W	5M 2	325 PACIFIC AVE	Oakland	CONVERSE DAVIS DIXON ASS.	7/30/1984	122221529	37784561	9	2S/3W 5M	2908	0	OAK	6/77	0	0	0	0	GEO*

Notes:

- OAK = Oakland
- IRR = Irrigation Well
- BOR = Soil Boring
- MON = Monitoring Well

Table 2:
DWR Well Information

<u>Fig. 2</u> <u>Index #</u>	<u>Township/</u> <u>Range</u>	<u>Section/</u> <u>Tract</u>	<u>Street Address</u>	<u>City</u>	<u>Owner</u>	<u>Total</u> <u>Borehole</u> <u>Depth</u> <u>(Feet)</u>	<u>Use/</u> <u>Designation</u>	<u>DWR/ WCR</u> <u>#</u>	<u>Date</u> <u>Completed</u>	<u>Notes</u>
1	2S/3W	5C	Fruitvale Ave/Davis St.	Oakland	Peralta Hacienda	20	Boring	01-143A-D	10/19/1985	Approx. 1100 ft N13°W of site
2	2S/3W	5N1	E18th St/34th ave	Oakland	Pacific Gas & Electric Co.	120	Catholic Protection	140322	4/29/1979	not within 2000 ft of site
3	2S/3W	5E1	2400 Fruitvale Ave	Oakland	Quik-Stop Market	26	MW (P1)	179171	9/13/1985	Approx. 1500 ft S27°W of site
4	2S/3W	5C4	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26	MW (MW3)	293484	5/23/1989	Approx. 1100 ft N30°W of site
5	2S/3W	5C5	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW (MW4)	293485	5/23/1989	Approx. 1100 ft N30°W of site
6	2S/3W	5C6	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW (MW5)	293486	5/23/1989	Approx. 1100 ft N30°W of site
7	2S/3W	5C7	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	25	MW (MW6)	293487	5/24/1989	Approx. 1100 ft N30°W of site
8	2S/3W	5C8	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW (MW7)	293488	5/24/1989	Approx. 1100 ft N30°W of site
9	2S/3W	5C9	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW (MW8)	293489	5/24/1989	Approx. 1100 ft N30°W of site
10	2S/3W	5C2	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW (MW1-R)	303736	2/16/1989	Approx. 1100 ft N30°W of site
11	2S/3W	5C3	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	19	MW (MW2-R)	303737	2/16/1989	Approx. 1100 ft N30°W of site
12	2S/3W	5C10	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26.5	MW (MW9)	340327	7/26/1990	Approx. 1100 ft N30°W of site
13	2S/3W	5C11	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26.5	MW (MW10)	340328	7/26/1990	Approx. 1100 ft N30°W of site
14	2S/3W	5C12,13	Davis St/Fruitvale Ave, Blossom St.	Oakland	Chevron USA	21.5, 22.5	MW (MW11, MW12)	342668A,B	10/9/1991	Approx. 1400 ft N20°W of site
15	2S/3W	5C14,15	Davis St/Fruitvale Ave, Blossom St.	Oakland	Chevron USA	25, 26.5	MW (MW13, MW14)	342668C,D	10/9/1991	Approx. 1400 ft N13°W and N20°W of site
16	1S/3W	32P2	2964 Fruitvale Ave	Oakland	Mrs. Frances Beddig	22	MW (MW2)	407400	1/26/1993	Approx. 1900 ft N77°W of site

Notes:

MW = Monitoring Well

DWR = Department of Water Resources

WCR = Well Completion Report

Table 3:
Wells Located within 2000 feet of the Subject Site

Source	Figure 2 Index #	Township/Range	Section/Tract	Street Address	City	Owner	Total Borehole Depth (Feet)	Use	Date Completed	Notes
DWR	3	2S/3W	5E1	2400 Fruitvale Ave	Oakland	Quik-Stop Market	26	MW	9/13/1985	Approx. 1500 ft S27°W of site
DWR	4	2S/3W	5C4	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26	MW	5/23/1989	Approx. 1100 ft N30°W of site
DWR	5	2S/3W	5C5	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW	5/23/1989	Approx. 1100 ft N30°W of site
DWR	6	2S/3W	5C6	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW	5/23/1989	Approx. 1100 ft N30°W of site
DWR	7	2S/3W	5C7	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	25	MW	5/24/1989	Approx. 1100 ft N30°W of site
DWR	8	2S/3W	5C8	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW	5/24/1989	Approx. 1100 ft N30°W of site
DWR	9	2S/3W	5C9	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW	5/24/1989	Approx. 1100 ft N30°W of site
DWR	10	2S/3W	5C2	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	21.5	MW	2/16/1989	Approx. 1100 ft N30°W of site
DWR	11	2S/3W	5C3	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	19	MW	2/16/1989	Approx. 1100 ft N30°W of site
DWR	12	2S/3W	5C10	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26.5	MW	7/26/1990	Approx. 1100 ft N30°W of site
DWR	13	2S/3W	5C11	2681 Fruitvale Ave	Oakland	Chevron, U.S.A., Inc.	26.5	MW	7/26/1990	Approx. 1100 ft N30°W of site
DWR	14	2S/3W	5C12,13	Davis St/Fruitvale Ave, Blossom St.	Oakland	Chevron USA	21.5, 22.5	MW	10/9/1991	Approx. 1400 ft N20°W of site
DWR	15	2S/3W	5C14,15	Davis St/Fruitvale Ave, Blossom St.	Oakland	Chevron USA	25, 26.5	MW	10/9/1991	Approx. 1400 ft N13°W and N20°W of site
ACPWA	16	1S/3W	32P2	2964 Fruitvale Ave	Oakland	Mrs. Frances Beddig	22	MW	1/26/1993	Approx. 1900 ft N77°W of site
ACPWA	17	2S/3W	5B 1	3112 COOLIDGE	Oakland	Terry	0	Irrigation		Approx. 1600 ft N59°E of site
ACPWA	19	2S/3W	5C16	2662 Fruitvale Av	Oakland	City of Oakland	17	MW	9/94	Approx. 1000 ft N28°W of site
ACPWA	20	2S/3W	5C17	2681 Fruitvale Av	Oakland	Chevron	25	MW	7/93	Approx. 1100 ft N30°W of site
ACPWA	21	2S/3W	5C18	2681 Fruitvale Av	Oakland	Chevron	24	MW	6/93	Approx. 1100 ft N30°W of site
ACPWA	22	2S/3W	5C19	2662 Fruitvale Av	Oakland	City of Oakland	25	MW	4/95	Approx. 1000 ft N28°W of site
ACPWA	23	2S/3W	5C20	2662 Fruitvale Av	Oakland	City of Oakland	21	MW	6/95	Approx. 1000 ft N28°W of site
ACPWA	24	2S/3W	5C21	2662 Fruitvale Av	Oakland	City of Oakland	26	MW	8/93	Approx. 1000 ft N28°W of site
ACPWA	25	2S/3W	5C22	2662 Fruitvale Av	Oakland	City of Oakland	26	MW	8/93	Approx. 1000 ft N28°W of site
ACPWA	26	2S/3W	5C23	2662 Fruitvale Av	Oakland	City of Oakland	20	MW	8/93	Approx. 1000 ft N28°W of site
ACPWA	27	2S/3W	5F 1	2678 Coolidge Av	Oakland	Snow Cleaners	45	MW	1/94	on site
ACPWA	28	2S/3W	5F 2	2678 Coolidge Av	Oakland	Snow Cleaners	26	MW	1/94	on site
ACPWA	29	2S/3W	5M 1	3320 E 22ND ST	Oakland	Roy Overall	100	Irrigation	/46	Approx. 2000 ft S53°W of site

Notes:
MW = Monitoring Well

APPENDIX A
California Department of Water Resources
Well Records

BORING 1
 DATE DRILLED 10/19/85
 SURFACE ELEVATION 103±

DEPTH IN FEET	LABORATORY TEST DATA					SAMPLING		SYMBOLS	DESCRIPTION
	TYPE OF STRENGTH TEST	STRENGTH TEST DATA		MOISTURE CONTENT, %	DRY DENSITY, PCF	TYPE OF SAMPLER	SAMPLING RESISTANCE		
		NORMAL OR CONFINING PRESSURE, PSF	SHEAR STRENGTH, PSF						
0									2 inches asphaltic concrete over 4 inches aggregate base
	P	-	4000	19	105	U	20	CL	Dark brown silty clay (stiff)
5									
	P	-	2300	19	107	U	19	CL	Brown sandy silty clay (stiff)
10									
	P	-	4500	15	117	U	27	CL	Greenish brown gravelly clay with gasoline odor (stiff)
15									
	P	-	3550	20	109	U	26	CL	Mottled orange and grayish brown sandy silty clay (stiff)
20									
				22	101	U	16	SC	Brown clayey sand with traces of gravel (loose)

∇ (Encountered water, 10/19/85)

NOTE: SAMPLING RESISTANCE FOR U SAMPLER ARE MEASURED IN NUMBER OF BLOWS REQUIRED TO DRIVE SAMPLER 12 INCHES. BLOW COUNTS ARE FOR THE LAST 12 INCHES (OR PORTION THEREOF) OF A TOTAL OF THE LAST 18 INCHES PENETRATION OF THE SAMPLER.

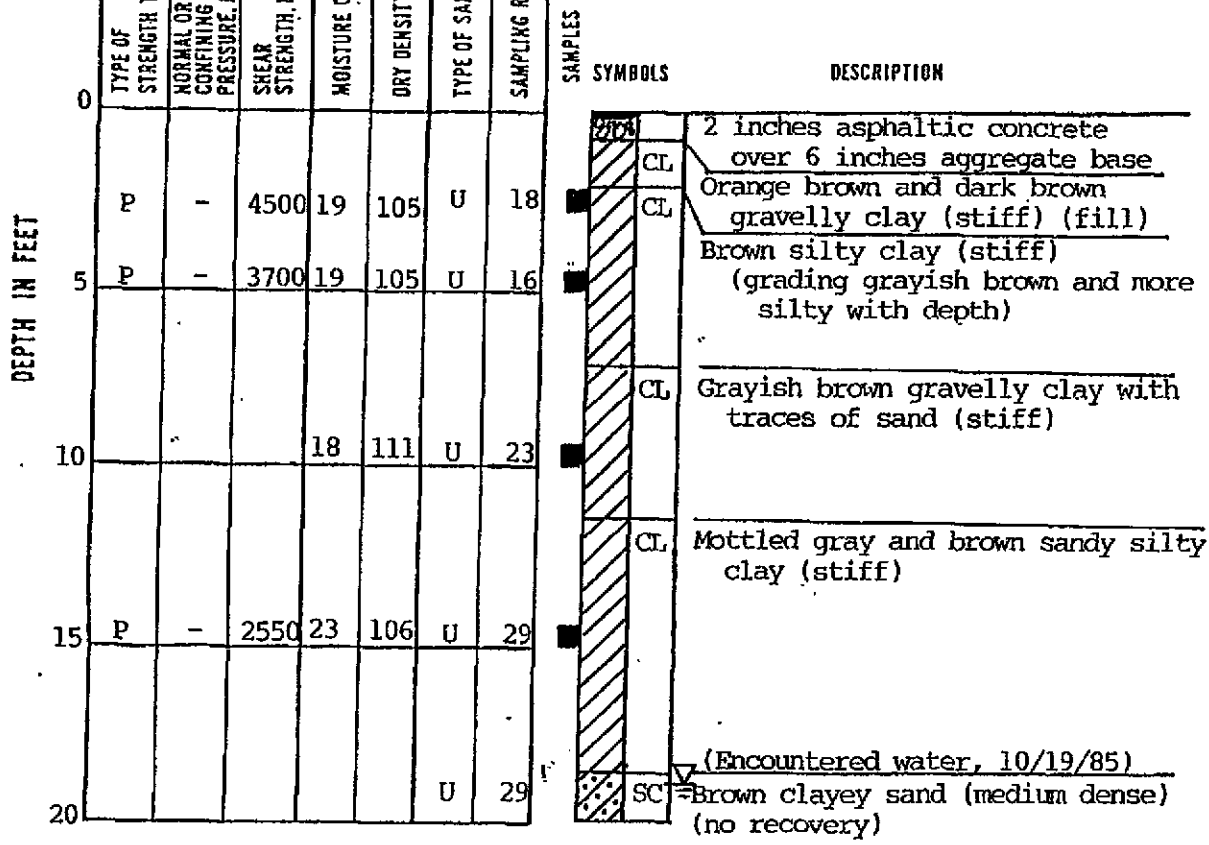
1081-01-01 City of Oakland

LOG OF BORING

TransPacific Geotechnical Engineers, Inc.

DEPTH IN FEET	LABORATORY TEST DATA					SAMPLING	
	TYPE OF STRENGTH TEST	STRENGTH TEST DATA		MOISTURE CONTENT, %	DRY DENSITY, PCF	TYPE OF SAMPLER	SAMPLING RESISTANCE
		NORMAL OR CONFINING PRESSURE, PSF	SHEAR STRENGTH, PSF				
0							
	P	-	4500	19	105	U	18
5	P	-	3700	19	105	U	16
10				18	111	U	23
15	P	-	2550	23	106	U	29
20						U	29

BORING 2
 DATE DRILLED 10/19/85
 SURFACE ELEVATION 104±



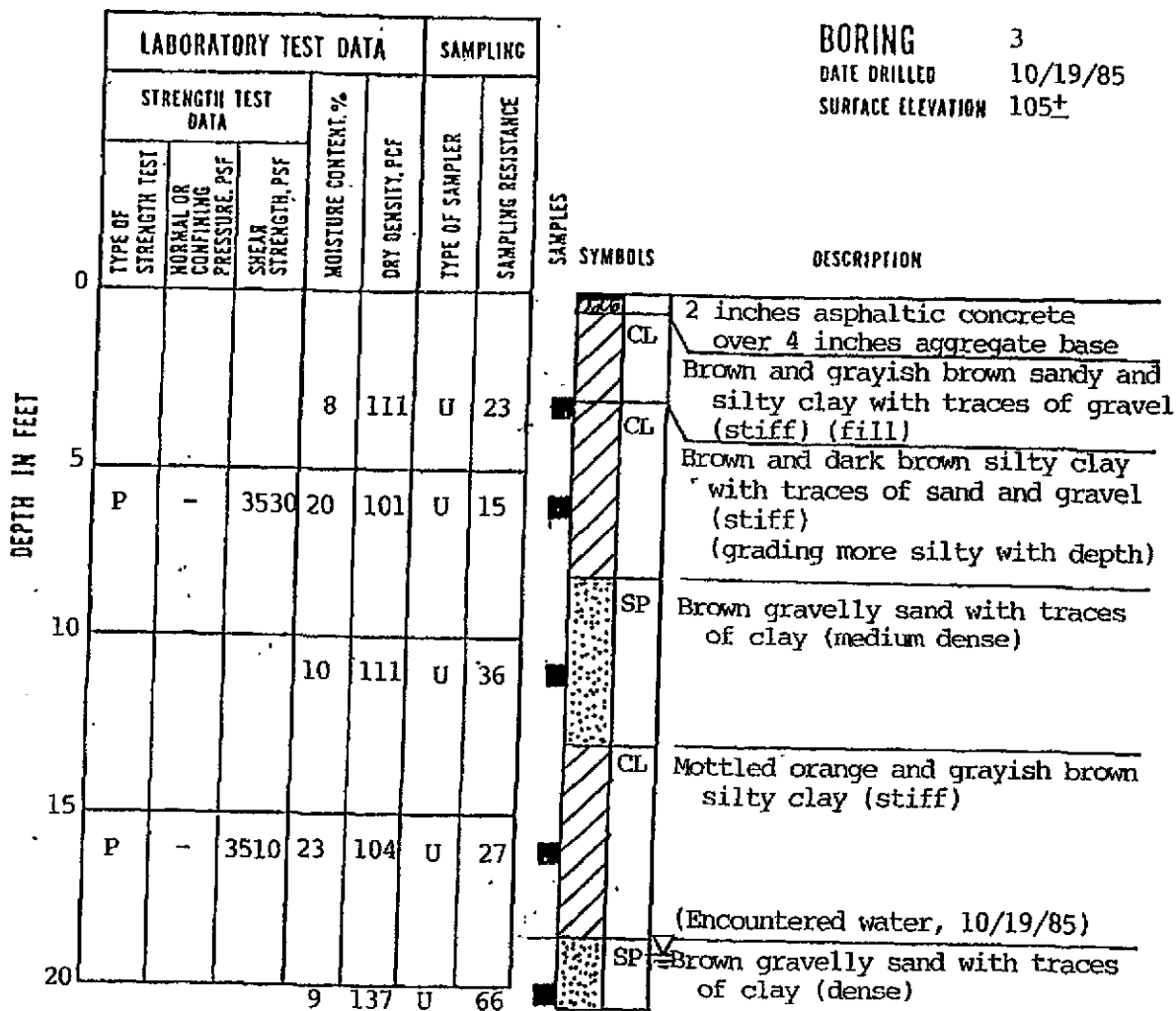
NOTE: See Plate 2-A

1081-01-01 City of Oakland

LOG OF BORING

TransPacific Geotechnical Engineers, Inc.

BORING 3
 DATE DRILLED 10/19/85
 SURFACE ELEVATION 105±



NOTE: See Plate 2-A

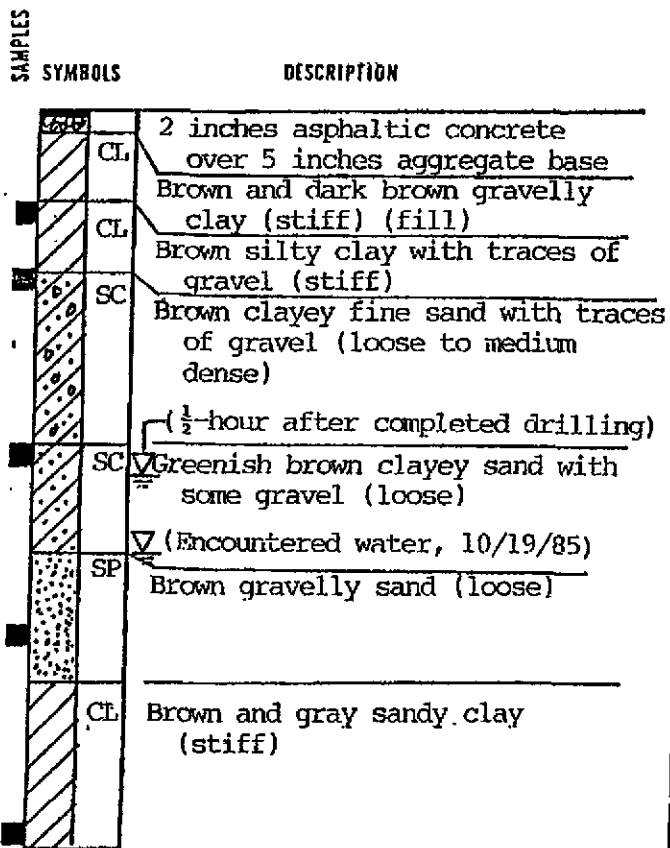
1081-01-01 City of Oakland

LOG OF BORING

TransPacific Geotechnical Engineers, Inc.

BORING 4
 DATE DRILLED 10/19/85
 SURFACE ELEVATION 104±

DEPTH IN FEET	LABORATORY TEST DATA				SAMPLING		
	STRENGTH TEST DATA			MOISTURE CONTENT, %	DRY DENSITY, PCF	TYPE OF SAMPLER	SAMPLING RESISTANCE
	TYPE OF STRENGTH TEST	NORMAL OR CONFINING PRESSURE, PSF	SHEAR STRENGTH, PSF				
0							
	DSCU	500	720	17	100	U	15
	DSCU	1000	1370	18	104	U	20
5				19	100	U	20
10				9	114	U	10
15				19	98	U	14
20						U	10



NOTE: See Plate 2-A

(Strong gasoline odor between 4 to 15 feet)

1081-01-01 City of Oakland

LOG OF BORING

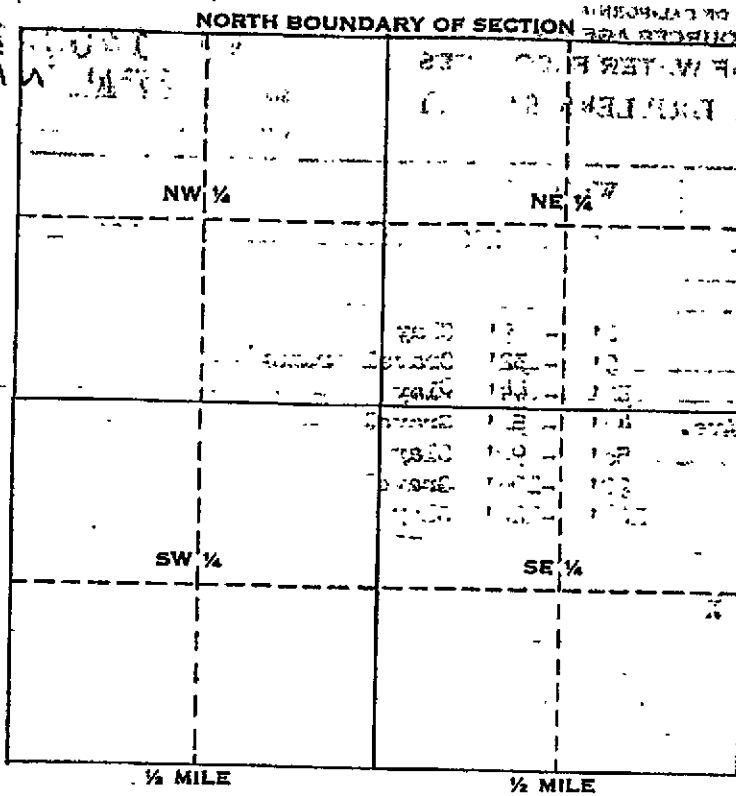
TransPacific Geotechnical Engineers, Inc.

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL LOCATION SKETCH



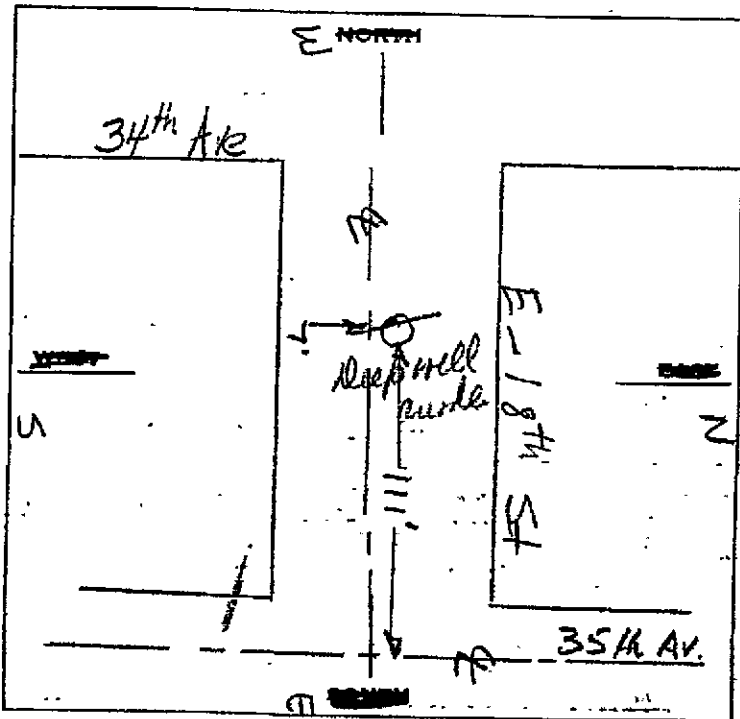
140322

Township 2 N S

Range 3 E W

Section No. 5 N 80

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



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

1976 SEP 2 PM 1 28

DEPT. OF WATER
PRACTICES

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(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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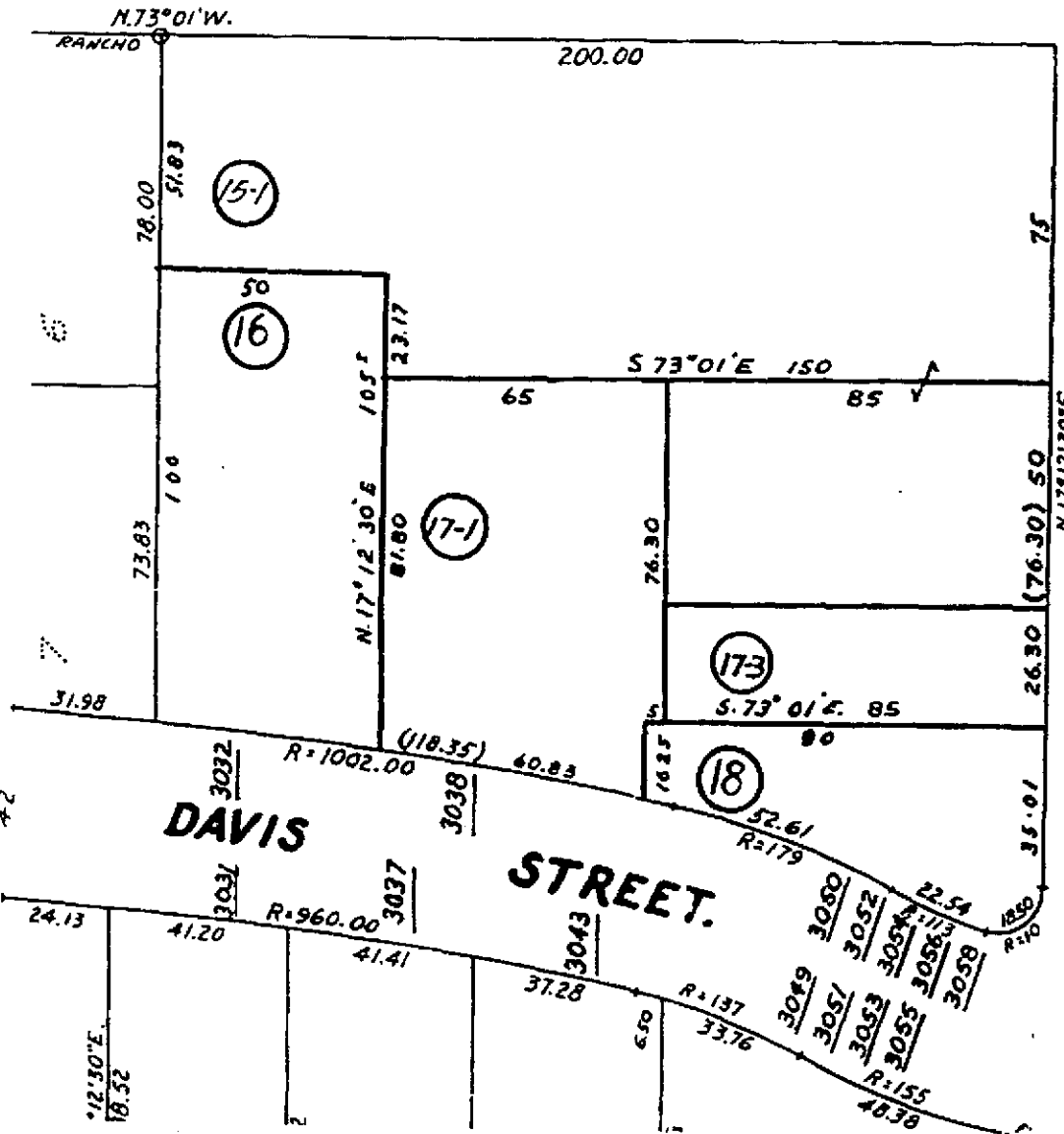
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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820

EAST 27TH STREET.

60



66

2691

AVENUE.

2655

770
SEE PRECEDING PAGE. 1

25/30/5C 2-3
Inv'd
Add'l 30373p

Block 27

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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2S/3W-5C10

LOG OF EXPLORATORY BORING 340327

PROJECT NUMBER 1207	BORING NO. MW-9
PROJECT NAME Former Chevron Service Station No. 9-4340	PAGE 1 OF 2
BY K. Flory	DATE 7/26/90
	SURFACE ELEV. ~100 ft.

PID (ppm)	RECOVERY (in/in)	BLOW CNT. (blws/ft)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
				5	1		FILL, very dark grayish brown (10YR,3/2); 60-70% low plasticity fines; 30-40% fine to medium gravel; very dry; no product odor.	
0	18/18	13 17 20		5	1		@5': dark brown (7.5YR,3/2); 40-50% low plasticity fines; 20% fine to coarse sand; 30-40% fine to coarse gravel; hard; very dry; no product odor.	
0	18/18	6 11 5		10	1		CLAY (CH), dark brown (7.5YR,3/2); 85-90% high plasticity fines; 5-10% fine sand; trace fine gravel; firm; damp; slight product odor.	
			7/26/90					
1453	18/18	5 3 2	▽ ▽	15	1		SANDY GRAVEL (GW), dark gray (7.5YR,4/2); trace high plasticity fines; 30-40% fine to coarse sand; 55-65% fine to coarse gravel; loose; wet; strong product odor.	
			7/26/90				CLAYEY SILT (ML), dark brown (7.5YR,3/2); 80-90% low plasticity fines; 10-20% fine to coarse sand; stiff, moist; no product odor.	
				20				

REMARKS
 Boring was drilled using 8-inch outside-diameter hollow-stem augers. Soil samples were collected using a 2-inch diameter modified-California split-spoon sampler. A monitor well was installed using 2-inch diameter PVC casing.

25/30-05C10

LOG OF EXPLORATORY BORING 340827

PROJECT NUMBER 1207

BORING NO. MW-9

PROJECT NAME Former Chevron Service Station No. 9-4340

PAGE 2 OF 2

BY K. Flory

DATE 7/26/90

SURFACE ELEV. ~100 ft.

PID (ppm)	RECOVERY (in/in)	BLOW CNT. (blws/ft)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
0	18/18	2 3 4					<p>CLAYEY SILT (ML), continued. SANDY SILT (SM), very dark gray (7.5YR,2/0); 90-95% low plasticity fines; 5-10% fine sand; firm; very moist; no product odor.</p> <p>GRAVEL (GW).</p>	
0	12/18	5 8 10		25			<p>SILTY SAND (SM), dark gray (7.5YR,4/0); 5-15% low plasticity fines; 85-95% fine sand; medium dense; wet; no product odor.</p> <p>SILT (ML), gray (7.5YR,5/0); 95-100% low plasticity fines; trace fine sand; soft; dry; no product odor.</p> <p>@26.2': olive brown (2.5YR,4/4).</p> <p>BORING TERMINATED AT 26.5 FEET.</p>	
				30				
				35				
				40				

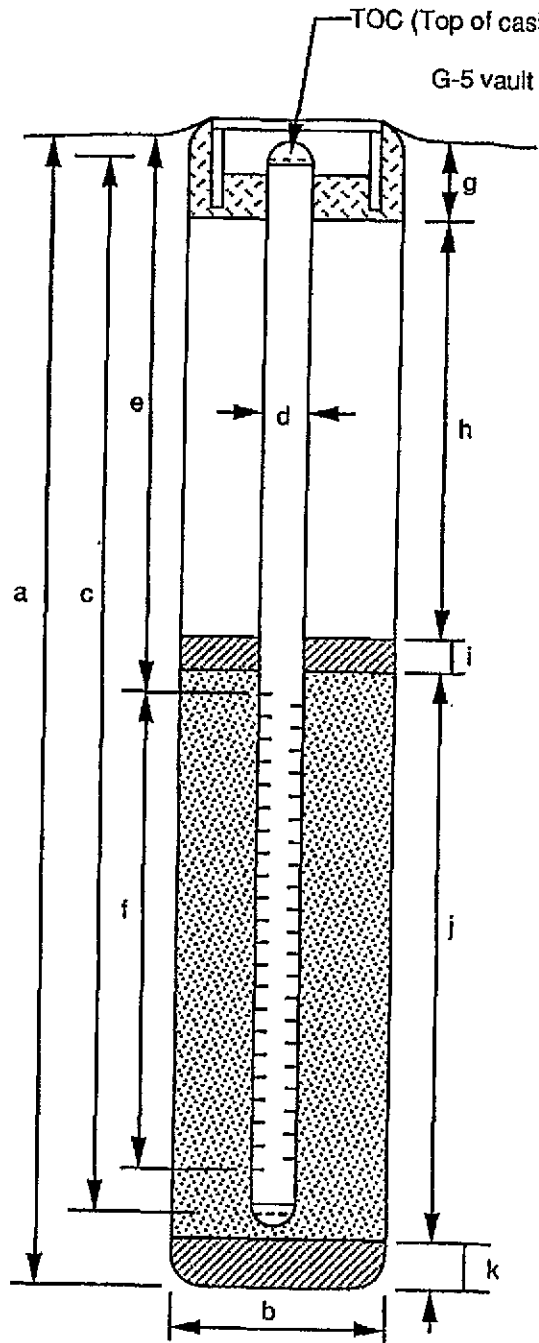
REMARKS

Boring was drilled using 8-inch outside-diameter hollow-stem augers. Soil samples were collected using a 2-inch diameter modified-California split-spoon sampler. A monitor well was installed using 2-inch diameter PVC casing.

25/30-5010

WELL DETAILS 340327

PROJECT NUMBER 1207 BORING / WELL NO. MW-9
 PROJECT NAME Former Chevron SS No. 9-4340 TOP OF CASING ELEV. _____
 LOCATION 2681 Fruitvale Ave., Oakland, CA GROUND SURFACE ELEV. ~100'
 WELL PERMIT NO. 90406 DATUM MSL
 INSTALLATION DATE 7/26/90



EXPLORATORY BORING

a. Total depth 26.5 ft.
 b. Diameter 8 in.
 Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Total casing length 24.5 ft.
 Material Schedule 40 PVC
 d. Diameter 2 in.
 e. Depth to top perforations 10 ft.
 f. Perforated length 15 ft.
 Perforated interval from 10 to 25 ft.
 Perforation type Machine Slotted
 Perforation size 0.020 inch
 g. Surface seal 1 ft.
 Material Concrete
 h. Backfill 5 ft.
 Material Bentonite-Cement Grout
 i. Seal 2 ft.
 Material Bentonite
 j. Gravel pack 17 ft.
 Gravel pack interval from 7.5 to 24.5 ft.
 Material #3 Sand
 k. Bottom seal/fill 1.5 ft.
 Material slough

Form prepared by KBB

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WELL COMPLETION REPORT
(WELL LOGS)

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25/3W-5011

LOG OF EXPLORATORY BORING 340328

PROJECT NUMBER 1207

BORING NO. MW-10

PROJECT NAME Former Chevron Service Station No. 9-4340

PAGE 1 OF 2

BY K. Flory

DATE 7/26/90

SURFACE ELEV. ~100 ft.

PID	RECOVERY	BLOW CNT.	GROUND WATER LEVELS	DEPTH IN FT.	LITHO-GRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
(ppm)	(in/in)	(blows/ft)					
				5		FILL, dark brown (10YR,3/3); 80-90% low plasticity fines; 10-20% fine to coarse gravel; stiff; dry; no product odor.	
0	13/18	5 9 11		5		SANDY CLAY (SC), dark brown (7.5YR,3/2); 60-70% high plasticity fines; 15-25% fine to coarse sand; 15-20% fine to coarse gravel; very stiff; dry; no product odor.	
0	12/18	5 5 8		10		GRAVELLY SAND (SW), strong brown (7.5YR,4/6); 60-70% fine to coarse sand; 30-40% fine to coarse gravel; medium dense; dry; no product odor.	
			▽			CLAYEY SAND (SC), dark yellowish brown (10YR,3/4); 30-40% high plasticity fines; 55-65% fine to medium sand; trace fine gravel; medium dense; moist; no product odor.	
0	18/18	3 3 5		15		CLAY (CH), mottled gray (10YR,5/1) and brown (10YR,5/3); 95-100% high plasticity fines; trace fine sand; stiff; damp, vertical gray seams with minor water; no product odor.	
			▽				
				20		SAND (SW).	

REMARKS

Boring was drilled using 8-inch outside-diameter hollow-stem augers. Soil samples were collected using a 2-inch diameter modified-California split-spoon sampler. A monitor well was installed using 2-inch diameter PVC casing.

2S/3W-SC11

LOG OF EXPLORATORY BORING

340328

PROJECT NUMBER 1207

BORING NO. MW-10

PROJECT NAME Former Chevron Service Station No. 9-4340

PAGE 2 OF 2

BY K. Flory

DATE 7/26/90

SURFACE ELEV. ~100 ft.

PID (ppm)	RECOVERY (in/in)	BLOW CNT. (blws/ft)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION	WELL DETAIL
0	4/18	4 5 11					<p>SAND (SW), mottled gray (10YR,5/2) and yellowish brown (10YR,5/4); trace high plasticity fines; 75-85% fine to coarse sand; 10-15% fine gravel; trace coal; medium dense; wet; no product odor.</p>	
0	12/18	9 11 12		25			<p>GRAVEL (GW), dark brown (10YR,3/3); 10-20% fine to coarse sand; 80-90% fine to coarse gravel; wet; no product odor.</p> <p>@25': dark grayish brown (10YR,4/2); trace high plasticity fines; 15-25% fine to coarse sand; 70-80% fine to coarse gravel; medium dense; wet; no product odor.</p>	
							<p>SANDY CLAY (SC), dark grayish brown (10YR,4/2); 60-70% low plasticity fines; 30-40% fine to coarse sand; very stiff; wet; no product odor.</p>	
				30			<p>GRAVEL (GW), dark grayish brown (10YR,4/2); trace low plasticity fines; 10-20% fine to coarse sand; 75-85% fine to coarse gravel; medium dense; wet; no product odor.</p>	
				35			<p>BORING TERMINATED AT 26.5 FEET.</p>	
				40				

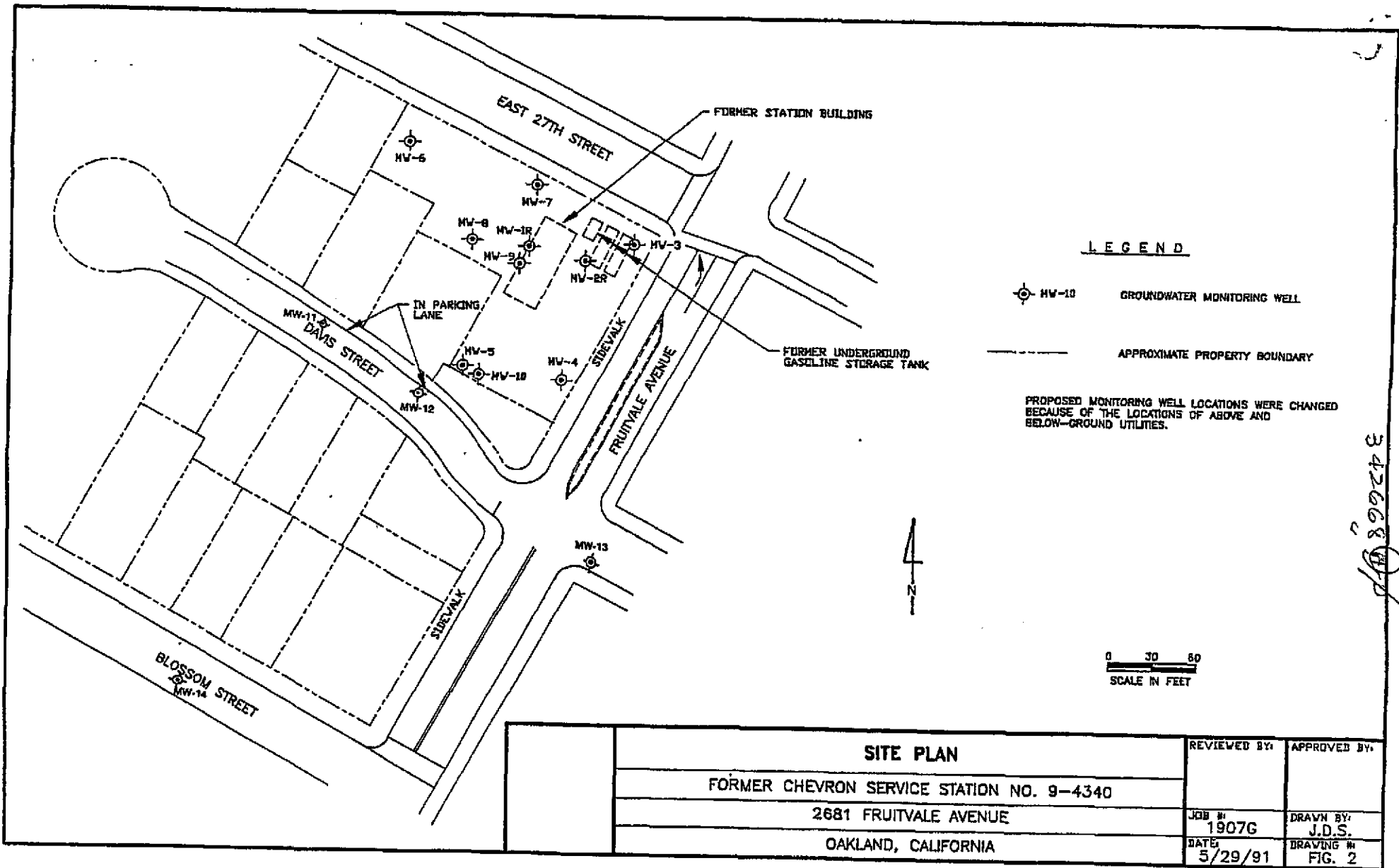
REMARKS

Boring was drilled using 8-inch outside-diameter hollow-stem augers. Soil samples were collected using a 2-inch diameter modified-California split-spoon sampler. A monitor well was installed using 2-inch diameter PVC casing.

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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SITE PLAN		REVIEWED BY:	APPROVED BY:
FORMER CHEVRON SERVICE STATION NO. 9-4340			
2681 FRUITVALE AVENUE		JOB # 1907G	DRAWN BY: J.D.S.
OAKLAND, CALIFORNIA		DATE: 5/29/91	DRAWING # FIG. 2

342668A

02503W 05012

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-11

Date Drilled: 10/8/91

Project Number: 1907-3G

Logged By: BVT

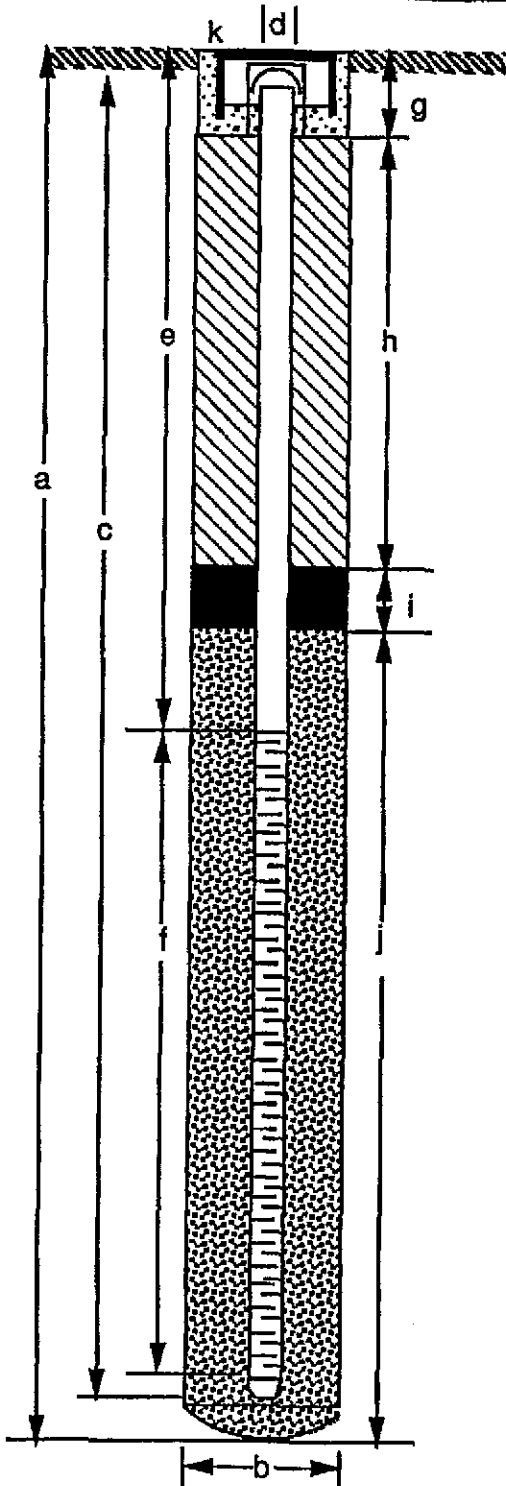
Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
1				Asphalt: 3" Baseroack: 2"			
2			ML	SILT, dark reddish brown (5YR 2.5/2), 80-90% silt, 5-15% clay, 5-10% very fine- to fine-grained sand, <5% medium- to coarse-grained sand, low plasticity, stiff, moist			
3							
4				At approximately 4 feet, color change to dark brown (7.5YR 3/4), increase in coarse-grained sand to fine gravel content (5-10%)			
5							
6		23				0	
7				At approximately 7 feet, driller indicated presence of gravels. Thickness apparently <1 foot			
8							
9							
10							
11		10	SM	SILTY SAND, brown to dark brown (7.5YR 4/4) 60-70% fine- to medium-grained sand, 20-30% silt, 5-15% coarse-grained sand to fine gravel, minor clay binder, poorly sorted, loose to medium dense, very moist to wet		0	
12							
13							
14					11/7/91 08:45		
15							
16		12			10/8/91 09:47	0	
17			SW-SM	GRAVELLY SAND, dark grayish brown (10YR 4/2), 70-80% fine- to coarse-grained sand, 10-20% fine-medium gravel, 10-20% silt, poorly sorted, medium dense, saturated			
18							
19							
20			ML	SILT, brown (10YR 5/3), low plasticity, very stiff, damp			
21		38					

Bottom of boring = 21.5 feet

REVIEWED BY R.G./C.E.G.

MONITORING WELL DETAIL

Project Number	<u>1907-3G</u>	Boring/Well No.	<u>MW-11</u>
Project Name	<u>Former Chevron Station 9-4340</u>	Top of Casing Elev.	<u>101.98</u>
County	<u>Alameda</u>	Ground Surface Elev.	<u>102.62</u>
Well Permit No.	<u>91545</u>	Datum	<u>Mean Sea Level</u>



EXPLORATORY BORING

a. Total depth	<u>21.5</u> ft.
b. Diameter	<u>8</u> in.
Drilling method	<u>Hollow Stem Auger</u>

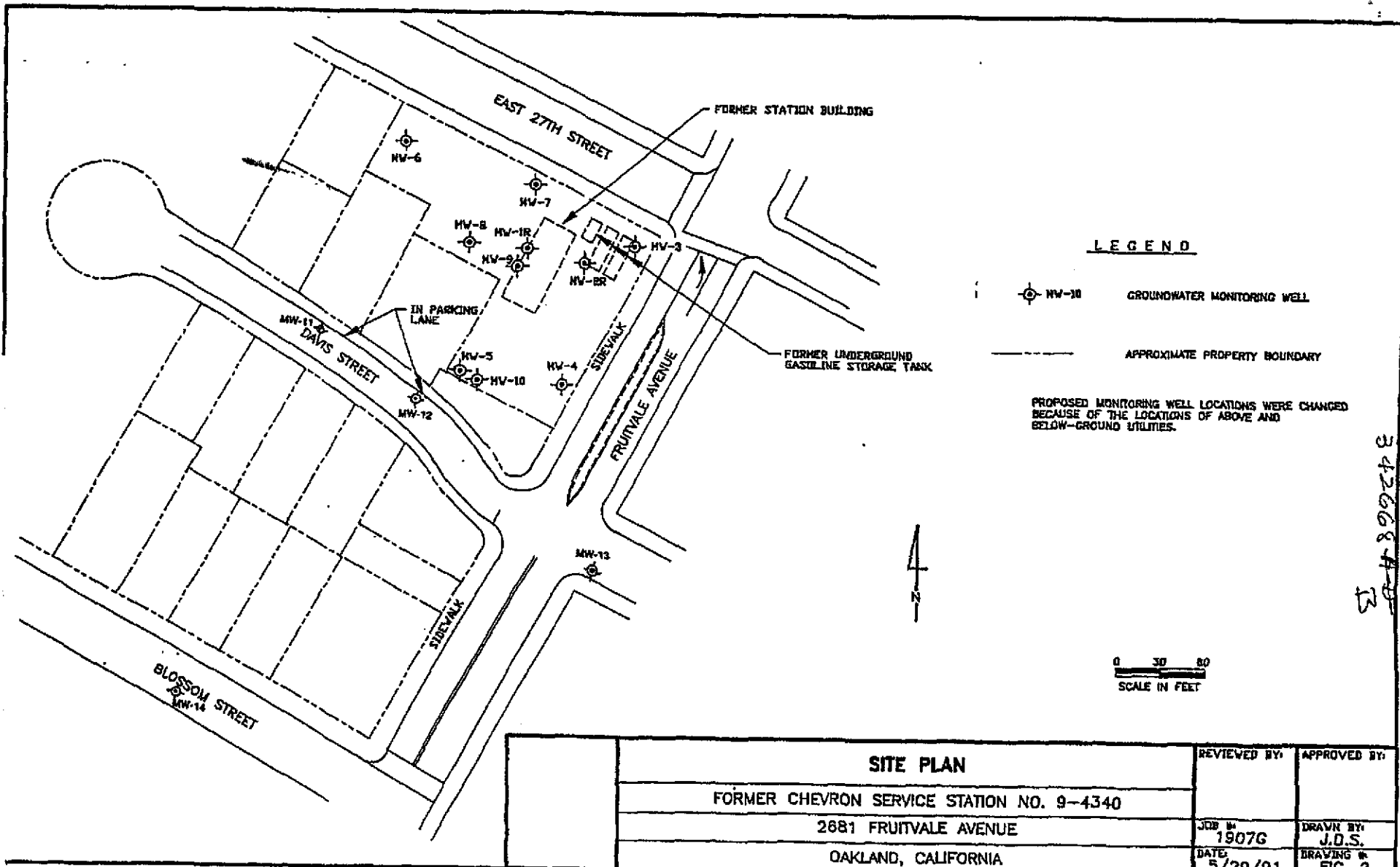
WELL CONSTRUCTION

c. Casing length	<u>21</u> ft.
Material	<u>Schedule 40 PVC</u>
d. Diameter	<u>2</u> in.
e. Depth to top perforations	<u>11</u> ft.
f. Perforated length	<u>10</u> ft.
Perforated interval from	<u>11</u> to <u>21</u> ft.
Perforation type	<u>Machine Slot</u>
Perforation size	<u>0.020</u> in.
g. Surface seal	<u>1</u> ft.
Seal material	<u>Concrete (10"), Asphalt (2")</u>
h. Backfill	<u>8.5</u> ft.
Backfill material	<u>Cement Grout</u>
i. Seal	<u>1</u> ft.
Seal material	<u>Bentonite</u>
j. Gravel pack	<u>11.5</u> ft.
Pack material	<u>2/12 Monterey Type Sand</u>
k.	<u>Traffic-rated watertight vault box with locking PVC expansion cap</u>

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WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



SITE PLAN		REVIEWED BY:	APPROVED BY:
FORMER CHEVRON SERVICE STATION NO. 9-4340			
2881 FRUITVALE AVENUE		JOB # 1907G	DRAWN BY: J.D.S.
OAKLAND, CALIFORNIA		DATE: 5/29/91	DRAWING #: FIG. 2

34268-13

342668 B

02503W05013

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-12

Date Drilled: 10/8/91

Project Number: 1907-3G

Logged By: BVT

Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
1				Asphalt: 3" Baseroack: 2"			
2			ML	SILT, dark reddish brown (5YR 2.5/2), 80-90% silt, 5-15% clay, 5-10% very fine- to fine-grained sand, <5% medium- to coarse-grained sand, low plasticity, stiff, moist			
3							
4				At approximately 4 feet, color change to dark brown (7.5YR 3/4), increase in coarse-grained sand to fine gravel content (5-15%)			
5							
6		39				0	
7							
8							
9							
10			ML	SANDY SILT, brown to dark brown (7.5YR 4/4), 60-70% silt, 35-45% fine- to medium-grained sand, trace coarse-grained sand, low plasticity, stiff, very moist			
11		15				0	
12			SM	SILTY SAND, dark yellowish brown (10YR 4/4), 85-95% fine- to medium-grained sand, 15-25% silt, well sorted, loose, very moist to saturated	▼		
13							
14							
15					11/7/91 09:15		
16		7			10/8/91 12:33		
17							
18							
19			ML	SILT, brown (10YR 5/3), low plasticity, very stiff, damp to moist			
20		42	GW-GM	SANDY GRAVEL, dark yellowish brown (10YR 3/4), 65-75% fine to coarse gravel, 35-45% fine- to coarse-grained sand, 5-15% fines, poorly sorted, dense, saturated			
21							

REVIEWED BY R.G./C.E.G.

Page 1 of 2

342668B

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-12

Date Drilled: 10/8/91

Project Number: 1907-3G

Logged By: BVT

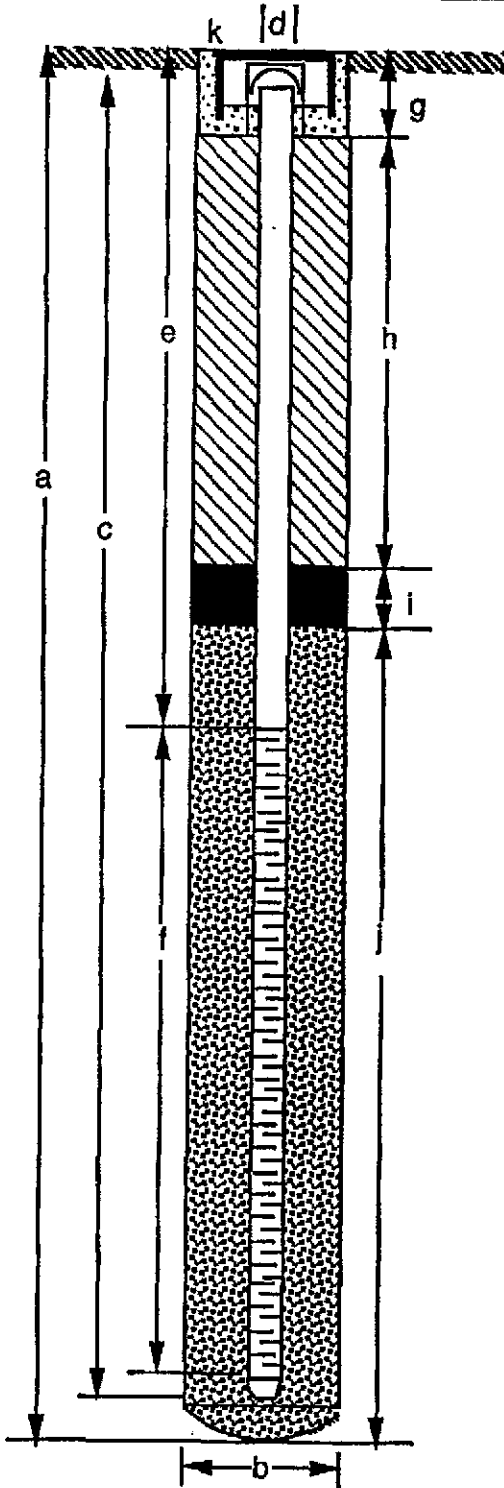
Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
22		8		At 22 feet, color change to dark bluish gray (SB 4/1)			
23				Bottom of boring = 22.5 feet			
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							

REVIEWED BY R.G./C.E.G.

MONITORING WELL DETAIL

02503205013

Project Number	<u>1907-3G</u>	Boring/Well No.	<u>MW-12</u>
Project Name	<u>Former Chevron Station 9-4340</u>	Top of Casing Elev.	<u>102.16</u>
County	<u>Alameda</u>	Ground Surface Elev.	<u>102.69</u>
Well Permit No.	<u>91545</u>	Datum	<u>Mean Sea Level</u>



EXPLORATORY BORING

a. Total depth	<u>22.5</u> ft.
b. Diameter	<u>8</u> in.
Drilling method	<u>Hollow Stem Auger</u>

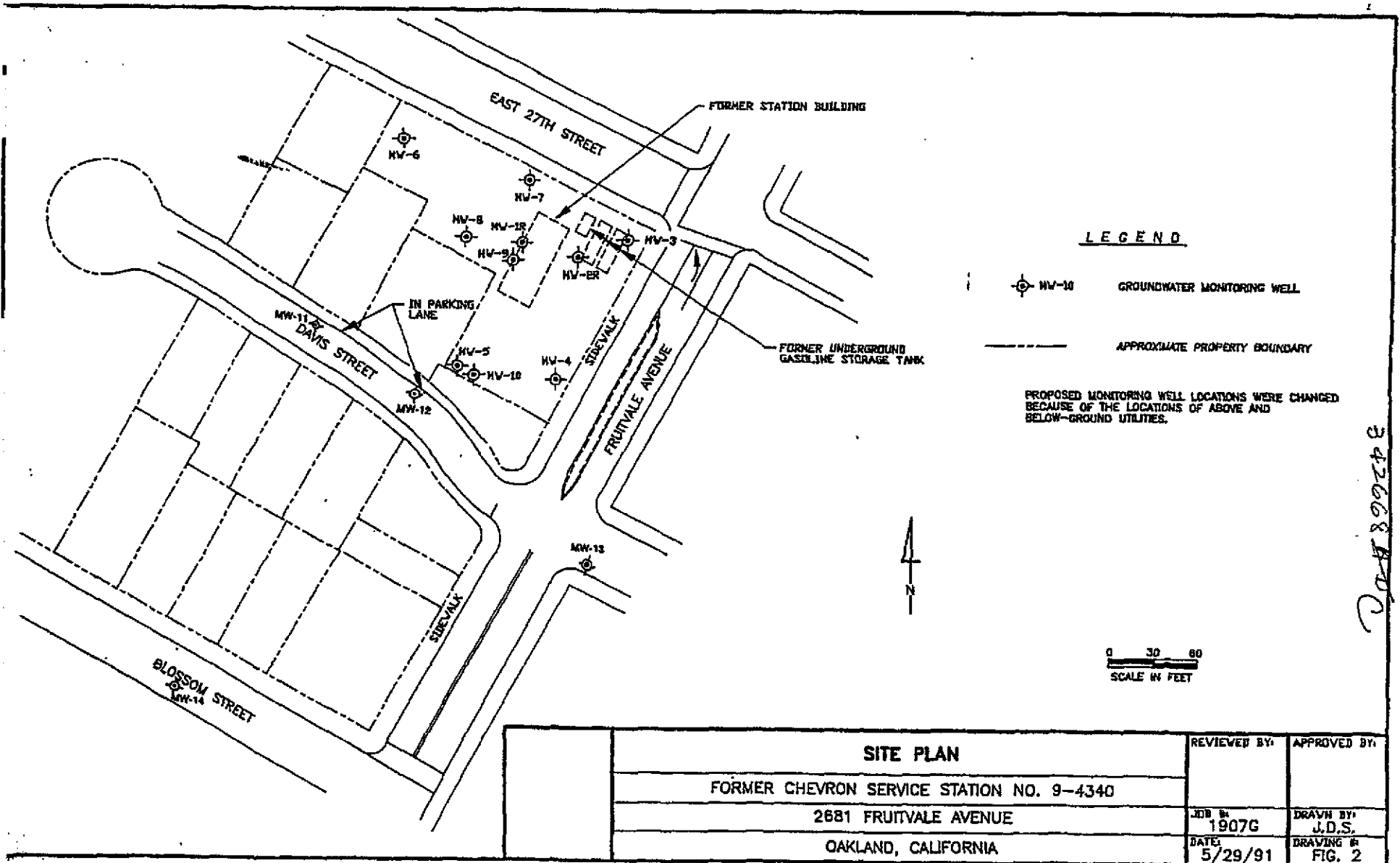
WELL CONSTRUCTION

c. Casing length	<u>22.5</u> ft.
Material	<u>Schedule 40 PVC</u>
d. Diameter	<u>2</u> in.
e. Depth to top perforations	<u>12.5</u> ft.
f. Perforated length	<u>10</u> ft.
Perforated interval from	<u>12.5</u> to <u>22.5</u> ft.
Perforation type	<u>Machine Slot</u>
Perforation size	<u>0.020</u> in.
g. Surface seal	<u>1</u> ft.
Seal material	<u>Concrete (10"), Asphalt (2")</u>
h. Backfill	<u>9.5</u> ft.
Backfill material	<u>Cement Grout</u>
i. Seal	<u>1</u> ft.
Seal material	<u>Bentonite</u>
j. Gravel pack	<u>11</u> ft.
Pack material	<u>2/12 Monterey Type Sand</u>
k.	<u>Traffic-rated watertight vault box with locking PVC expansion cap</u>

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



SITE PLAN		REVIEWED BY:	APPROVED BY:
FORMER CHEVRON SERVICE STATION NO. 9-4340			
2881 FRUITVALE AVENUE		JOB NO. 1907G	DRAWN BY: J.D.S.
OAKLAND, CALIFORNIA		DATE: 5/29/91	DRAWING NO. FIG. 2

342668C

02503W05CL24

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-13

Date Drilled: 10/9/91

Project Number: 1907-3G

Logged By: BVT

Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
1				Asphalt: 4" Baseroack: 3"			
2							
3							
4							
5							
6	13-1	24	ML	SILT, dark brown (7.5YR 3/4), 80-90% silt, 5-15% fine-grained sand, clay binder, trace coarse-grained sand, 1-2% rootholes, low to medium plasticity, very stiff, moist		100	
7							
8							
9							
10							
11	13-2	19		SILT, mottled dark yellowish brown (10YR 4/4) with greenish gray (5BG 5/1), 80-90% silt, clay binder, 1-3% fine- to medium-grained sand, low-medium plasticity, very stiff, moist	11/7/91 09:21	607	
12							
13							
14				SILTY CLAY, mottled dark yellowish brown (10YR 4/4) with greenish gray (5BG 5/1), 65-75% clay, 35-45% silt, 3-5% fine- to medium-grained sand, 3-5% rootholes, medium plasticity, very moist (wet in rootholes)			
15			CL				
16	13-3	11				0	
17					10/9/91 09:25		
18							
19			SP-SM	SAND, dark greenish gray (5BG 4/1), 90-95% sand, 5-10% silt, 1-3% roots, well sorted, loose, saturated			
20							
21		6					

REVIEWED BY R.G./C.E.G.

342668C

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-13

Date Drilled: 10/9/91

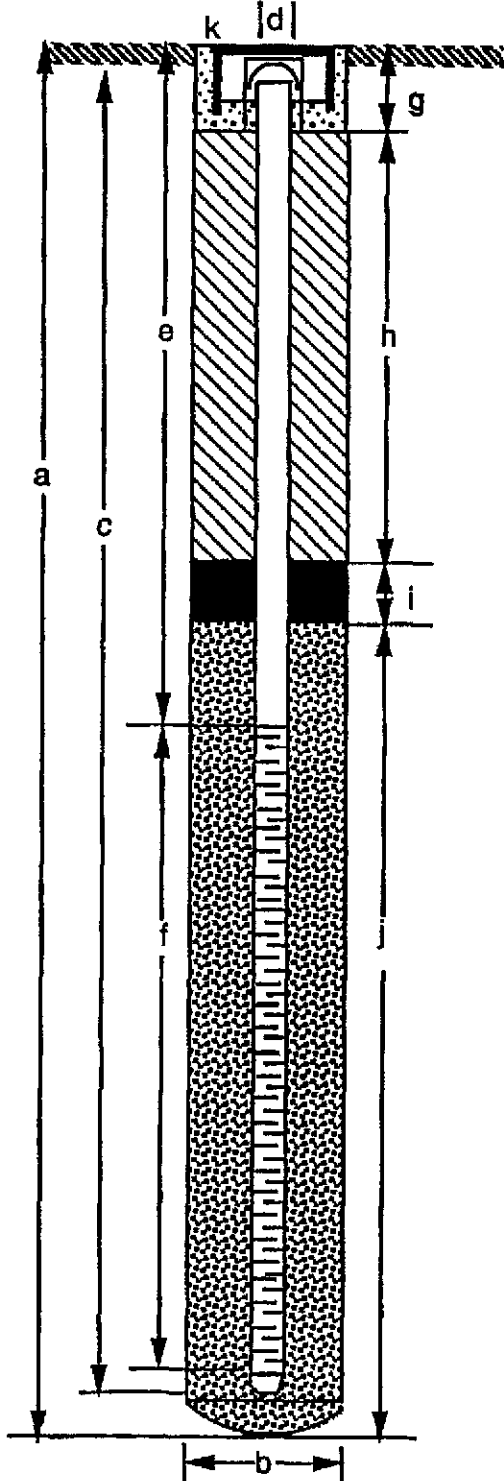
Project Number: 1907-3G

Logged By: BVT

Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
22			SP-SM	SAND as above			
23			GW-GM	SANDY GRAVEL, dark yellowish brown (10YR 3/4), 65-75% fine to coarse gravel, 35-45% fine- to coarse-grained sand, 5-15% fines, poorly sorted, dense, saturated			
24							
25		33	ML	SILT, light yellowish brown (2.5YR 5/3), 95-100% silt, 5-10% fine-grained sand, low plasticity, stiff, moist			
26				Bottom of boring = 25 feet			
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41	5						
42							

MONITORING WELL DETAIL

Project Number	1907-3G	Boring/Well No.	MW-13
Project Name	Former Chevron Station 9-4340	Top of Casing Elev.	101.20
County	Alameda	Ground Surface Elev.	101.43
Well Permit No.	91545	Datum	Mean Sea Level



EXPLORATORY BORING

- a. Total depth 25 ft.
- b. Diameter 8 in.
- Drilling method Hollow Stem Auger

WELL CONSTRUCTION

- c. Casing length 24.5 ft.
Material Schedule 40 PVC
- d. Diameter 2 in.
- e. Depth to top perforations 14.5 ft.
- f. Perforated length 10 ft.
Perforated interval from 14.5 to 24.5 ft.
Perforation type Machine Slot
Perforation size 0.020 in.
- g. Surface seal 1 ft.
Seal material Concrete (10"), Asphalt (2")
- h. Backfill 11.5 ft.
Backfill material Sand/Cement Slurry
- i. Seal 1 ft.
Seal material Bentonite
- j. Gravel pack 11.5 ft.
Pack material 2/12 Monterey Type Sand
- k. Traffic-rated watertight vault box with locking PVC expansion cap

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

342668D

025 03W05CL5

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No. MW-14

Date Drilled: 10/9/91

Project Number: 1907-3G

Logged By: BVT

Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
1				Asphalt: 3" Baseroack: 6"			
2							
3							
4							
5		25	ML	GRAVELLY SILT, very dark grayish brown (10YR 3/2), 60-70% silt, 20-30% fine to medium gravel, 10-20% fine- to coarse-grained sand, clay binder, low plasticity, very stiff, moist		0	
6							
7							
8							
9		13	ML	SANDY SILT, dark yellowish brown (10YR 4/4), 70-80% silt, 20-30% fine-grained sand, clay binder, low to medium plasticity, moist to very moist			
10							
11			SM	SILTY SAND, yellowish brown (10YR 4/4), 60-70% fine- to coarse-grained sand, 25-35% silt, 15-25% fine to coarse gravel, poorly sorted, medium dense, very moist to wet		0	
12							
13					11/7/91 08:25		
14							
15		9	ML	SANDY SILT, mottled yellowish brown (10YR 5/4) with strong brown (7.5YR 5/6), 55-65% silt, 40-50% fine- to medium-grained sand, 3-5% coarse-grained sand to fine gravel, 3-5% rootholes, low plasticity, very moist to saturated (wet in rootholes)			
16							
17							
18							
19					10/9/91 15:40		
20				At approximately 19.5 to 20.5 feet, gradational color change to dark greenish gray (5GY 4/1)			
21		8	SM	SILTY SAND			

REVIEWED BY R.G./C.E.G.

Page 1 of 2

342668D

RESNA EXPLORATORY BORING LOG

Project Name: Former Chevron Station 9-4340
Oakland, California

Boring No.: MW-14

Date Drilled: 10/9/91

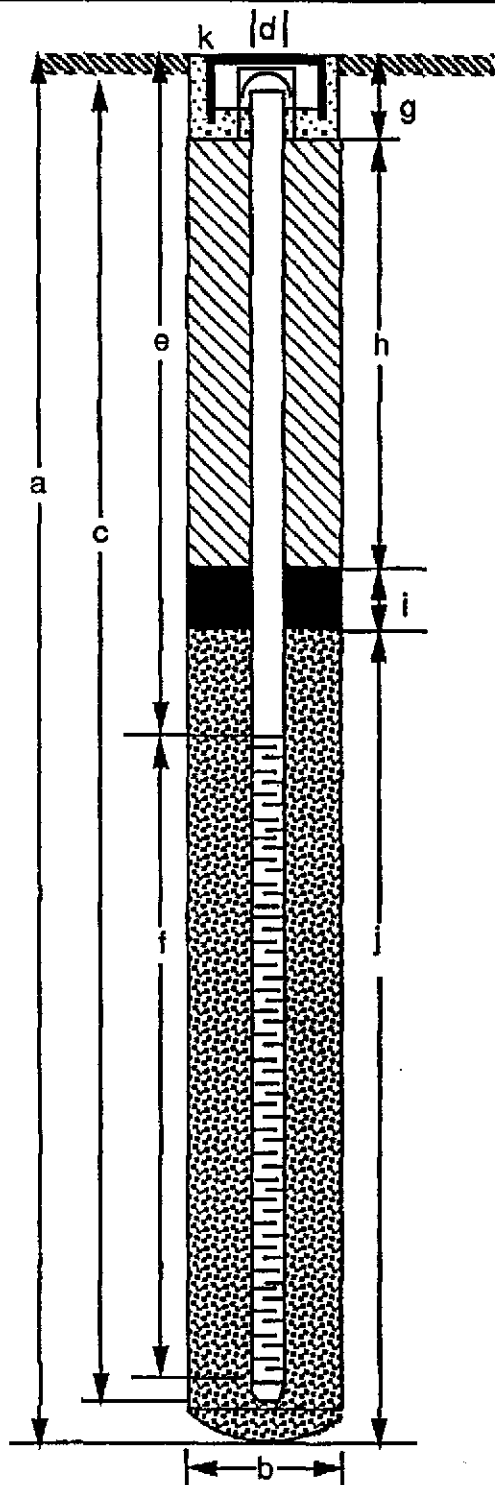
Project Number: 1907-3G

Logged By: BVT

Depth (ft.)	Sample No.	Blows/Foot	Unified Soil Classification	SOIL DESCRIPTION	Water Level	PID Reading (ppm)	Well Construction
22			SM	SILTY SAND, mottled dark bluish gray (5B 4/1) with olive brown (2.5Y 4/3), 75-85% fine- to medium-grained sand, 25-35% silt, well sorted, loose, saturated			
23			SW-SM	GRAVELLY SAND, dark greenish gray (5GY 4/1), 70-80% fine- to coarse-grained sand, 20-30% fine-coarse gravel, 5-15% fines, poorly sorted, medium dense, saturated			
24			ML	SILT, light yellowish brown (2.5Y 5/3), low plasticity, very stiff, moist			
25		27		Bottom of boring = 26.5 feet			
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							

MONITORING WELL DETAIL

Project Number	<u>1907-3G</u>	Boring/Well No.	<u>MW-14</u>
Project Name	<u>Former Chevron Station 9-4340</u>	Top of Casing Elev.	<u>98.26</u>
County	<u>Alameda</u>	Ground Surface Elev.	<u>98.56</u>
Well Permit No.	<u>91545</u>	Datum	<u>Mean Sea Level</u>

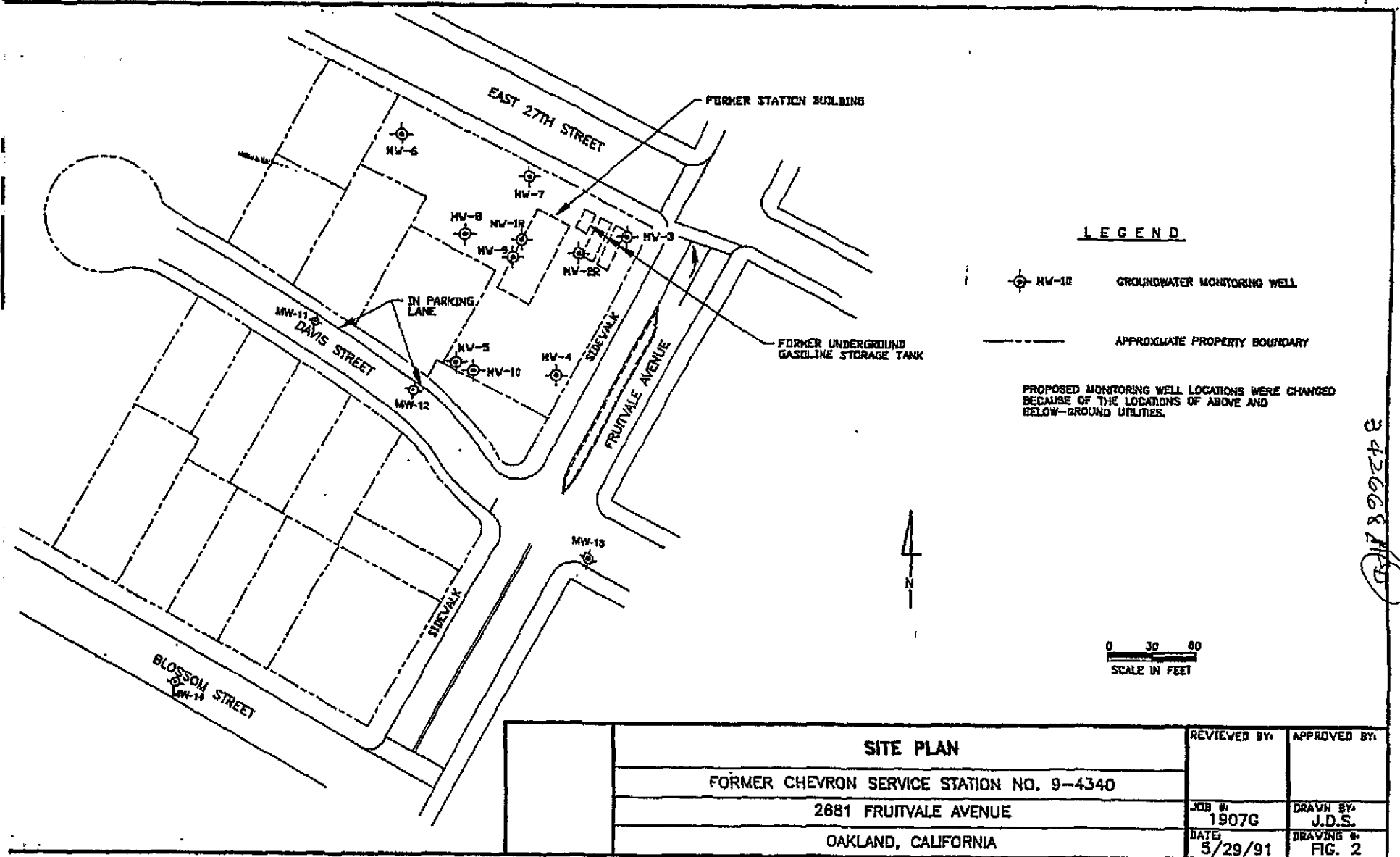


EXPLORATORY BORING

- a. Total depth 26.5 ft.
- b. Diameter 8 in.
- Drilling method Hollow Stem Auger

WELL CONSTRUCTION

- c. Casing length 26 ft.
Material Schedule 40 PVC
- d. Diameter 2 in.
- e. Depth to top perforations 16 ft.
- f. Perforated length 10 ft.
Perforated interval from 16 to 26 ft.
Perforation type Machine Slot
Perforation size 0.020 in.
- g. Surface seal 1 ft.
Seal material Concrete (10"), Asphalt (2")
- h. Backfill 13 ft.
Backfill material Sand/Cement Slurry
- i. Seal 1 ft.
Seal material Bentonite
- j. Gravel pack 11.5 ft.
Pack material 2/12 Monterey Type Sand
- k. Traffic-rated watertight vault box with locking PVC expansion cap



SITE PLAN		REVIEWED BY:	APPROVED BY:
FORMER CHEVRON SERVICE STATION NO. 9-4340			
2681 FRUITVALE AVENUE		JOB #: 1907G	DRAWN BY: J.D.S.
OAKLAND, CALIFORNIA		DATE: 5/29/91	DRAWING #: FIG. 2

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

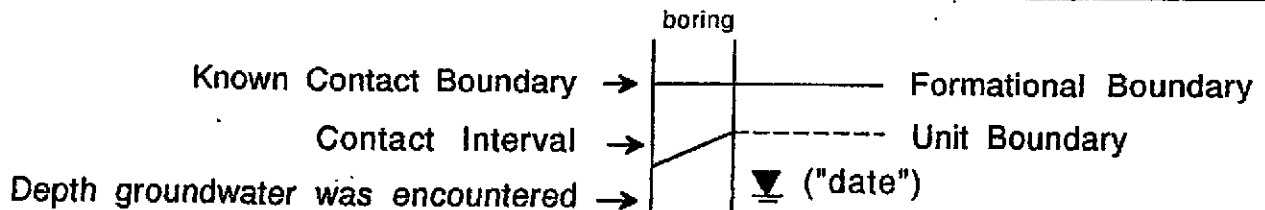
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UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		TYPICAL NAMES		
COARSE GRAINED SOILS more than half > #200 sieve	GRAVELS more than half coarse fraction is larger than No. 4 sieve	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	well graded gravels, gravel-sand mixtures
		GRAVELS WITH OVER 12% FINES	GP	poorly graded gravels, gravel-sand mixtures
		GRAVELS WITH OVER 12% FINES	GM	silty gravels, poorly graded gravel-sand silt mixtures
		GRAVELS WITH OVER 12% FINES	GC	clayey gravels, poorly graded gravel-sand clay mixtures
	SANDS more than half coarse fraction is smaller than No. 4 sieve	CLEAN SANDS WITH LITTLE OR NO FINES	SW	well graded sands, gravelly sands
		CLEAN SANDS WITH LITTLE OR NO FINES	SP	poorly graded sands, gravelly sands
		SANDS WITH OVER 12% FINES	SM	silty sands, poorly graded sand-silt mixtures
		SANDS WITH OVER 12% FINES	SC	clayey sands, poorly graded sand-clay mixtures
FINE GRAINED SOILS more than half < #200 sieve	SILTS AND CLAYS liquid limit less than 50	ML	inorg. silts and v.fine sands, rock flour silty or clayey sands, or clayey silts w/sl. plasticity	
		CL	inorg. clays of low-med plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL	organic clays and organic silty clays of low plasticity	
	SILTY AND CLAYS liquid limit greater than 50	MH	inorganic silty, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		CH	inorganic clays of high plasticity, fat clays	
		OH	organic clays of medium to high plasticity organic silts	
HIGHLY ORGANIC SOILS		Pt	peat and other highly organic soils	

LEGEND FOR BORING LOGS



ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVENUE, SUITE 110
ALAMEDA, CA 94501

Soil Classification System

Project No. 6064-2

Date: 1/9/93






DRN: MCK

2964 Fruitvale Ave.

15/3W 32P2

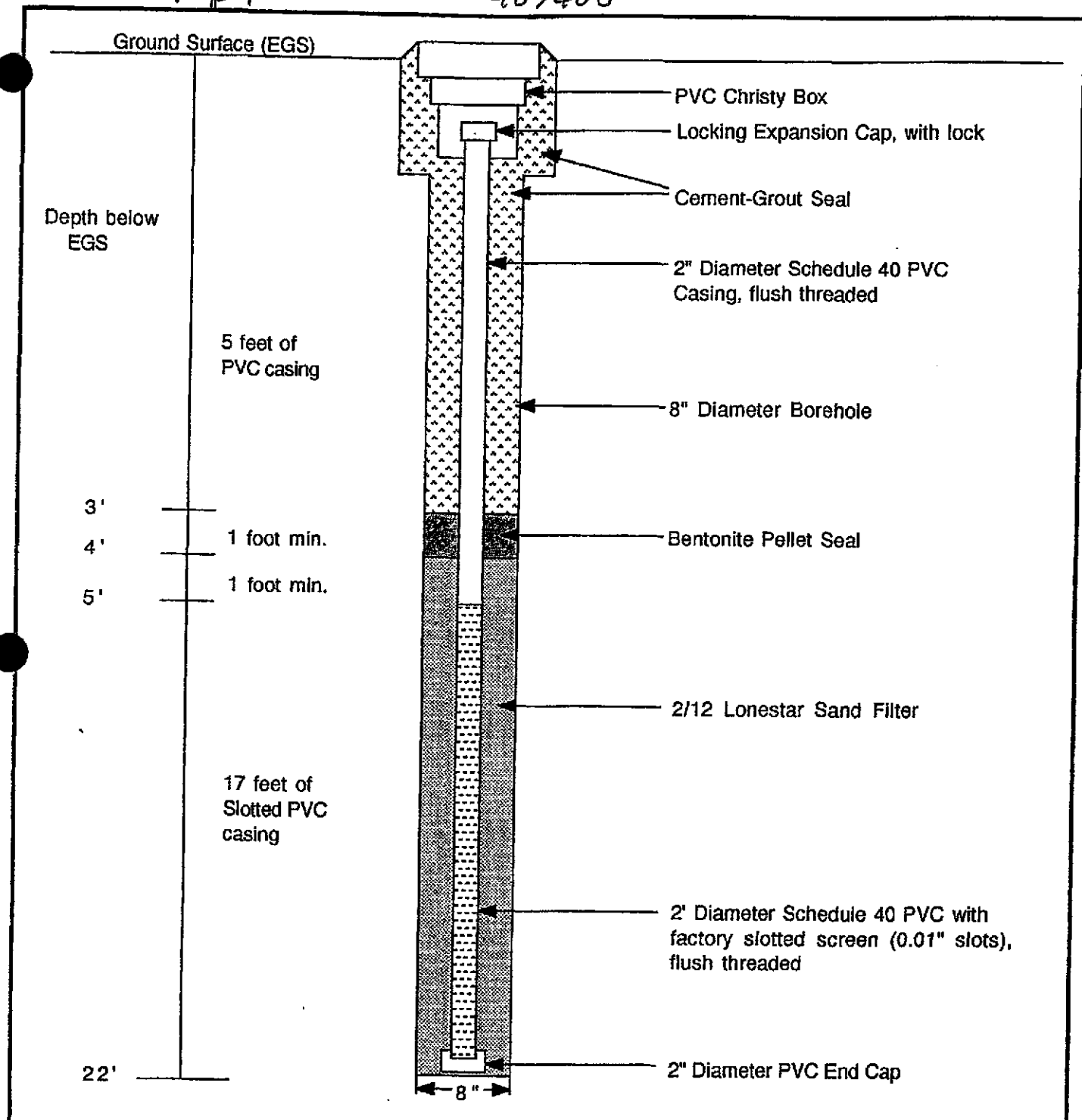
327

407400

Bayland Drilling B-53 Drill Rig.	MicroTip (ppm)	Blows/6 in.	SAMPLE #	Sample Int.	Depth (feet)	Equipment: Hollow Stem Auger Logged By: M. Kaltreider PROJECT: 2964 Fruitvale Avenue Start Date: 01/15/93
Soil color described using Munsell soil color charts <u>Color code</u>					0	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained, dense (baserock)
(10YR-3/2)	0	3	MW2-5		4 6	Very dark greyish brown/red mottled silty clay (CL), plastic, medium stiff, moist.
(10YR-3/2) (Gley - 4)	50	4	MW2-10		8 10 12	Hydrocarbon odor in cuttings. ▼ (groundwater 01/15/93) Very dark greyish brown to dark grey mottled clay (CH), plastic, saturated, medium stiff, strong hydrocarbon odor
(5Y-3/2)	10	7	MW2-15		14 16 18	Dark olive gray sandy clay (CL), plastic, medium stiff, saturated.
(10YR-4/3)	0	10	MW2-20		20	Brown clayey gravel (GC) with sand, medium dense, saturated.
(10YR-4/3)	0	30			22 24	Brown gravelly sand (SW), medium dense, saturated.
					24 26 28	BOTTOM OF BORING @ 22 FEET
ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501					JOB NO: 6068-2	BORING MW-2
					DATE: 02/13/93	2964 Fruitvale Avenue

4 of 7

407400



Not to Scale

ACC Environmental Consultants 1000 Atlantic Avenue, Suite 110 Alameda, CA 94501	Job No.: 6068-2	Schematic of Monitoring Well No.: MW-2
	Date: 02/13/93	2964 Fruitvale Avenue



5 077

407400

15/3W 32P2

Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California

Phone: (408) 955-9988 / FAX: (408) 955-9538

ANALYTICAL REPORT

Page: 1 of 1

Client: ACC Environmental
1000 Atlantic Ave.
Alameda, CA 94501
Attn: Misty Kaltreider

Date Sampled: 01/15/93
Date Received: 01/18/93
Date Analyzed: 01/19/93
Batch:SD-071 Matrix: Soil
Conc. Unit mg/kg(ppm)

Project: Fruitvale (Proj.#6068-2)

"ND" means "not detected" at indicated detection limit.
B:benzene, T:toluene, E:ethylbenzene & X:total xylenes.
Samples received chilled with a chain of custody record.

SAMPLE I.D.	Total Lead

DETECTION LIMIT	1 ppm

→ MW-2-10'	ND
MW-3-10'	ND

Reviewed and approved by

George Tsai, Jan. 20, 1992
George Tsai, Laboratory Director



627

407400

1513W 32 P2

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ANALYTICAL REPORT

Page: 1 of 1

Client: ACC Environmental
1000 Atlantic Ave.
Alameda, CA 94501

Date Sampled: 01/15/93
Date Received: 01/18/93
Date Analyzed: 01/19/93
Batch: SD-071 Matrix: Soil

Attn: Misty Kaltreider

Conc. Unit ug/kg(ppb)

Project: Fruitvale (Proj.#6068-2)

"ND" means "not detected" at indicated detection limit.

B:benzene, T:toluene, E:ethylbenzene & X:total xylenes.

Samples received chilled with a chain of custody record.

SAMPLE I.D.	8015M/TPH Gasoline	B	/	T	/	E	/	X
		8020						
		50ppb						
		0.5 ppb						
MW-2-5'	ND	ND	/	ND	/	ND	/	ND
MW-2-10'	11350	1254.6	/	1112.1	/	1267.5	/	1679.8
MW-3-5'	ND	ND	/	ND	/	ND	/	ND
MW-3-10'	7610	1540.0	/	1774.7	/	1249.0	/	1613.5

Reviewed and approved by

George Tsai, Jan. 20, 1993
George Tsai, Laboratory Director

