

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

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

September 12, 2000
StID # 1068

REMEDIAL ACTION COMPLETION CERTIFICATION

Exxon-Mobil Co.
Mr. Darin Rouse
P.O. Box 4032
Concord, CA 94524-4032

Resources for Community Development
Ms. Lisa Motoyama
2131 University Ave., Ste. 224
Berkeley, CA 94704

RE: 6600 E. 14th St., Oakland 94621

Dear Mr. Rouse and Ms. Motoyama:

This letter confirms the completion of site investigation and remedial action for the one (1) 550 waste oil and the three (3) 10,000 gallon gasoline tanks formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground tank is greatly appreciated.

Based on information in the above-referenced file and with provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of this Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) as the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,


Mee Ling Tung
Director, Environmental Health

Mr. D. Rouse & Ms. L. Motoyama
StID # 1068
6600 E. 14th St., Oakland CA 94621
September 12, 2000
Page 2

c: ✓ B. Chan, Hazardous Materials Division-files
Mr. Chuck Headlee, RWQCB
Mr. Allan Patton, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 1605 Martin Luther
King Dr., Oakland CA 94612
RACC6600E14thSt

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

September 14, 2000
StID# 1068

ENVIRONMENTAL HEALTH SERVICES

ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Mr. Darin Rouse
Exxon-Mobil Co.
P.O. Box 4032
Concord CA 94524-4032

Ms. Lisa Motoyama
Resources for Community Development
2131 University Ave., Ste. 224
Berkeley, CA 94704

**RE: Fuel Leak Site Case Closure, 6600 E. 14th St., Oakland CA
94621**

Dear Mr. Rouse and Ms. Motoyama:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with the Health and Safety Code, Chapter 6.75 (Article 4, Section 25299.37 h). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Health Services, Local Oversight Program (LOP) is required to use this case closure letter. We are also enclosing the case closure summary. This document confirms the completion of the investigation and cleanup of the reported release at the subject site.

Site Investigation and Cleanup Summary:

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

- * 13 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 25 ppm TPH as diesel, and 0.037 and 0.075 ppm toluene and xylenes, respectively remain in the soil at the site.
- 160 parts per billion (ppb) TPH as gasoline, 180 ppb TPH as diesel, 12 ppb benzene and 420 ppb MTBE remain in the groundwater at the site.

This site should be included in the City's permit tracking system. You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: Mr. L. Griffin, City of Oakland OES, 1605 MLK Jr. Way,
Oakland CA 94612

✓ B. Chan, files (letter only)

Tr1t6600E14thSt

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: June 16, 2000

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Parkway**
Rm 250, Alameda CA 94502
City/State/Zip: **Alameda** Phone: **(510) 567-6700**
Responsible staff person: **Barney Chan** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: Former Exxon Station
Site facility address: 6600 E. 14th St., Oakland CA 94621
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: 1068
ULR filing date: 4/3/91 SWEEPS No: **N/A**

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
1. Exxon-Mobil Co. c/o Mr. Darin Rouse	P.O. Box 4032 Concord, CA 94524-4032	925-246-8768
2. Resources for Community Development c/o Ms. Lisa Motoyama	2131 University Ave. Suite224 Berkeley, CA 94704	510-841-2210 x19

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	550	waste oil	removed	12/20/96
2	10,000	gasoline	removed	"
3	10,000	gasoline	removed	"
4	10,000	gasoline	removed	"

III RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: possibly from releases from the dispenser

Site characterization complete? Yes

Date approved by oversight agency:

Monitoring Wells installed? Yes Number: 14: 11 monitoring, 3 VEWS

Leaking Underground Fuel Storage Program

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	1Before	2After	3Before	After 4
TPH (Gas)	350	13		160
TPH (Diesel)	56	25		180
Benzene	1.4	ND		12
Toluene	0.22	0.037		ND
Ethylbenzene	2.7	ND		ND
Xylenes	18	0.075		ND
TRPH (418.1)	590			
HVOC's	ND			
Semi-volatiles	ND			
MTBE	1.2			420
Heavy metals (Cd,Cr,Pb,Ni,Zn)	ND,69,13,120,70			

Comments (Depth of Remediation, etc.):

1 Samples from tank removals on 12/20/96

2 Samples from over-excavation of the dispenser area, no over-excavation of the hydraulic lift area was performed

3 no groundwater was encountered during the tank removals

4 1/27/00 monitoring results for MW2

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Undetermined

Does corrective action protect public health for current land use? YES

Site management requirements: site should be included in the City of Oakland Permit Tracking System. A site health and safety plan will be required for any subsurface work.

Should corrective action be reviewed if land use changes? Yes

Monitoring wells Decommissioned?: No

Number Decommissioned: 8 Number Retained: 6

List enforcement actions taken: None

List enforcement actions rescinded: NA

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Barney M. Chan Title: Hazardous Materials Specialist

Signature: *Barney M. Chan* Date: 6-26-00

Reviewed by

Name: Tom Peacock Title: Manager

Signature: *Tom Peacock* Date: 6-26-00

Name: Eva Chu Title: Hazardous Materials Specialist

Signature: *Eva Chu* Date: 6/20/00

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:

RWQCB Staff Name: C. Headlee Title: AEG Date:

VII. ADDITIONAL COMMENTS, DATA, ETC.

See attached site summary.

Site Summary for 6600 E. 14th St., Oakland CA 94621
StID # 1068

This site is located on the north side of E. 14th St. (International Blvd.), between 66th Ave. and Havenscourt Blvd. This block consists of two parcels, 6600 E. 14th St., the western parcel that was a former Exxon service station and 6630 E. 14th St., the eastern parcel, that was a former Texaco station. **See Figures 1 and 2.** The two parcels are tied because Exxon assumed responsibility for all environmental issues for both parcels.

In addition, because of the presence of former USTs on both parcels, there's a possibility of commingling of releases from the sites. It is believed that the USTs on 6630 E. 14th St. were removed in 1966, when the Texaco station was torn down, however, there are no reports documenting this. There are also no records on the number or locations of USTs on this parcel. A summary of the documented environmental investigations conducted at the two parcels is detailed below.

June 14, 1988- Texaco installed monitoring wells MW-7A through MW-7C, see Plate 6. No monitoring information was obtained from these wells and it appears that these wells were closed by Texaco in September 1988, although no formal closure report was provided. Exxon later assumed site liability and initiated their own investigation.

March 1991- Exxon installed three monitoring wells, MW1 through MW3, to investigate potential releases from the USTs on 6600 E. 14th St.. MW1 was located just on the 6630 E. 14th St. parcel, MW2 was located down-gradient of the USTs and dispensers and MW3 was located cross-gradient of the USTs on 6600 E. 14th St. **See Figure 2, Table 1 and accompanying well logs.** Soil samples from the borings contained up to 98 ppm TPHg and 0.074, 0.12, 0.24, 0.19 ppm BTEX, respectively. Groundwater exhibited up to 3100 ppb TPHg, 160 ppb TPHd and 190, 2.6, 100, 84 ppb, BTEX, respectively. Since this time to the present, the highest groundwater contamination has been found in MW-2.

May 1992- Exxon installed four additional groundwater monitoring wells, MW4- MW7 both on and off-site, to further delineate the plume. Little to no petroleum contamination was observed in the borings from these wells. Subsurface soils were similar to that encountered in wells MW1 through MW3. Beneath the asphalt cap, one encountered silty clay to about 14' bgs where groundwater was encountered in sandy clay. Groundwater rises to about 8-10' bgs. Groundwater monitoring has consistently detected TPHd, TPHg and BTEX only in MW-2 and MW-3. **See Figure 3 for the monitoring well locations, Figure 4 for a cross-section diagram from MW-4 to MW-7, Table 2 for analytical and accompanying well logs.** MW-5 was located approximately 160' down-gradient of MW-2, the most impacted well.

November 1993- Exxon installed three soil vapor extraction wells, VE1 through VE3 and two borings, B-1 and B-2. One of the vapor wells (VE-2) and one of the borings (B-2) were advanced below groundwater (about 12' bgs), where a grab water sample was taken. Soil samples were taken from all five borings. Low levels of TPH were detected in the soil samples. The highest groundwater sample was from S-B-2, cross-gradient to the dispensers. **See Plate 1 & Table 3.**

December 1993- Exxon performed a SVE feasibility test and a groundwater extraction feasibility test. The SVE consisted of the three vapor extraction wells and wells MW-1 and MW-2. A step-drawdown test was performed on MW-2 at three rates. SVE and groundwater extraction were determined not to be feasible alternatives.

February 1996- Exxon submitted a CAP recommending passive bio-remediation based upon fate and transport estimation for site contaminants. Excavation was not recommended since this was an on-going operating station, but would be considered upon the closure of the station or removal of the tanks. It is noted, however, that Exxon's evaluation was using a model for the migration and attenuation of benzene, not MTBE. To enhance natural attenuation, in September 1996, Exxon installed ORC socks in wells MW1, MW2, MW3 and MW6.

December 1996- The existing service station was destroyed, the three 10,000 gallon gasoline fuel tanks and one 550 gallon used oil tank were removed along with the product lines and two hydraulic hoists. Soil samples were taken from a depth of 9-9.5' bgs along the sidewalls of UST pit. One soil sample from beneath the waste oil tank pit was taken, as were samples from beneath the two hydraulic hoists and from beneath each of the dispensers. **See Plate 2 and Tables 4 & 5 for the results of these samples.** Generally, very low levels of TPHg, BTEX and MTBE were found in the samples from the tank pit. The highest TPHg contamination was exhibited in soil samples from beneath the southernmost dispensers, D2 and D3. Up to 350 ppm TPHg and 1.4, 0.13, 2.7 and 18 ppm, BTEX, respectively was found. Based upon these results, over-excavation was later performed.

January 1997- Exxon destroyed two off-site wells (MW1 and MW7) and three on-site SVE wells (VE1 through VE3) and installed one replacement monitoring well, MW8 on 6600 E. 14th St., near the northernmost dispenser. The monitoring wells were destroyed to allow Exxon to divest their interest in 6630 E. 14th St. **See Plate 3, Table 6 and accompanying well log.**

February 1997- Exxon performed a geophysical survey on 6630 E. 14th St., parcel 1, searching for additional USTs. Three areas were discovered with magnetic anomalies. The contractor stated that the anomalies were not large enough to be a group of underground fuel tanks, however, it was possible that one of the anomalies could be a small UST such as a waste oil tank, as was recently confirmed. **See drawing 3 indicating the three areas.**

May 1997- The two of the three magnetic anomaly areas were excavated and no additional USTs were discovered. The third area was located adjacent to the boundary of the two parcels and was not probed due to its proximity to the sidewalk. Apparently, the probing missed the recently detected UST near the boundary of 6600 and 6630 E. 14th St..

December 1997- Exxon excavated approximately 197 tons of soil from the former dispenser areas, D2 and D6, and adjacent to MW8. Soil was excavated to a depth of 10' bgs and confirmation soil samples were taken at the limits of the excavation. **See Plate 4 & Table 7.**

January 1998- Exxon drilled two soil borings SB1 and SB2 and collected soil samples. The purpose of these borings was to determine the lateral extent of the contamination found in boring S-9-D6 in the easterly direction. The soil samples collected at a depth of 6' exhibited ND for TPHg, BTEX and TPHd.

April 1998- Exxon excavated approximately 151 tons of soil in the area between the former northernmost dispenser and SB1 and SB2. **See Plate 4 and Table 7 for the results of both excavations.** Both excavation soil piles, approximately 348 cubic yards, were disposed at BFI Landfill in Livermore.

April 1999- Exxon performed a sensitive receptor and underground utility survey to primarily determine the potential migration and impact of the MTBE release. No municipal or private wells were located within a 2,000 feet radius of the site. No domestic water wells were located within 1000 feet of the site. No surface water bodies were identified within a 2500 feet radius of the site and no basements were observed in buildings within a 1000 feet radius of the site.

The utility survey identified electric, gas, sewer, telephone, storm drain, cable TV and water lines lying either on the sidewalk or within E. 14th St., however, since the first encountered groundwater lies approximately 16' bgs, only a sewer interceptor lying 22' bgs, might act as a pathway for groundwater.

October 1999- Exxon performed an off-site investigation to determine the extent of the MTBE in soil and groundwater. Borings SB1 through SB3 were drilled immediately down-gradient of MW2: within the property boundary, within the median and within the southern curb on E. 14th St., respectively. These borings were hand augered to approximately two feet below first-encountered groundwater and sampled using a disposable bailer. At the same time a water sample from MW2 was also collected for chemical analysis. The groundwater sample from SB1, approximately 15' down-gradient of MW2, exhibited 18,000 ppb TPHg, 46, ND, 1200, 64, 1900 ppb BTEX and MTBE, respectively. The groundwater samples from SB2 and SB3 did not detect any analytes. MW2 exhibited 1800 ppb TPHg, 8.6, ND, ND, ND, 1300 ppb BTEX and MTBE, respectively. The results from SB1 indicate the petroleum release has migrated down-gradient, however, the results from SB2 and SB3 indicate that the plume has not migrated significantly off-site. **See Plate 5 and Table 8. A couple of cross-sections on and off-site are also provided.**

The MTBE release appears confined to an area near MW-2. An iso-concentration map of MTBE is provided, **See Plate 7**, as well as a similar map for benzene seen on **Plate 8**. A rose diagram provided indicates a fairly consistent south-southwest gradient. **See Plate 9. Table 10 provides the cumulative groundwater monitoring data.**

December 1999- Exxon submitted a RBCA and requested site closure. The RBCA used the maximum value for BTEX in soil and groundwater to determine risk. The exposure pathways considered viable were:

- Surface soil direct ingestion and dermal contact (residential receptor)
- Surface soil volatilization to indoor air (inhalation: residential receptor)
- Surface soil volatilization to outdoor air (inhalation: residential receptor)
- Subsurface soil volatilization to outdoor air (inhalation: residential receptor)
- Subsurface soil volatilization to indoor air (inhalation: residential receptor)
- Groundwater volatilization to indoor air (inhalation: residential receptor)
- Groundwater volatilization to outdoor air (inhalation: residential receptor)

All surface soil samples were taken from the February 21, 2000 Clayton Phase II Site Assessment. See **Figure 5 and Table 9**. The surface soil samples were shallow composite samples from borings B-3, B-11, B-12, B-13 and B-14. Only sample B-12 detected any TEX, while all samples were ND for benzene. The highest subsurface soil, S-9-D6, with a benzene concentration of 0.62 ppm, was used to evaluate subsurface soil risk. The maximum benzene concentration within the past year, 0.1 ppm from MW-2, was used to evaluate risk from groundwater. Neither of these maximum concentration values exceeded their respective SSTL. **Please refer to the GSI input table, work sheets and summary of data points.**

February 18, 2000- Spoke with Ms. L. Motoyama of RCD (Resources for Community Development) the new property owner of both 6600 and 6630 E. 14th St., and was notified that their consultant, Clayton Environmental, had discovered an apparent waste oil tank on 6630 E. 14th St. property. Clayton also performed a Phase II investigation for RCD who plan a multi-unit housing complex on the combined parcels. This investigation consisted of two elements. One was performing an extensive geophysical survey using vertical magnetic gradient (VMG), terrain conductivity (TC), metal detection (MD) and ground penetrating radar (GPR), all in an attempt to identify the existence of UST, piping or back-filled excavations. See **Table 11 and Plates 8 and 9**. Table 11 lists the six magnetic anomalies identified by VMG and the results of physical probing in these areas. **These six locations are shown on Plate 9. Plate 8 shows the results of the TC survey.** It is interesting that two areas labeled A & B are noted as possible zones of backfill. Area a is the area of the former USTs and the over-excavation, while area B is most likely the area of the former Texaco USTs.

The second element consisted of advancing 14 temporary borings and sampling soil and groundwater from these borings. Six select soil samples (based upon PID readings) were analyzed for TPH as motor oil, as diesel and as gasoline, BTEX, MTBE, volatile organics and the five heavy metals analyzed for waste oil tanks. The two-point composite soil samples were taken from 2 and 4 feet bgs. Very little contaminants were found in the shallow soil samples. The only significant contaminants was the presence of TPH_{mo,d} and g in the grab groundwater samples from borings B-2 through B-5. Up to 1600, 1300 and 1700 ppb TPH_{mo,d,g}, respectively was found in these samples. No benzene or toluene was found. Up to 8.7 ppb ethylbenzene, 1.5 ppb xylenes and 18 ppb MTBE were also reported in groundwater. See **Tables 9,12 and Figure 5**.

The source of the release may be from former USTs on Parcel 1, (6630 E. 14th St.) or from both Parcel 1 and Parcel 2 ,(6600 E. 14th St.). The concentrations in these grab groundwater samples are similar to that found in MW-2 on Parcel 2, the well down-gradient of the former USTs and dispensers. Extensive monitoring of MW-2 indicates that the fuel release is limited in extent and no risk to human health or environment is expected. The petroleum release on Parcel 1 is either from the former USTs on Parcel 1, assumed to have been removed in 1966, or from the former USTs on Parcel 2, removed in 1996. Therefore, it is safe to say that the release to groundwater on Parcel 1 is no more a threat as that from Parcel 2, which we know is not a threat. In addition, the City of Oakland has recently issued a no further action for the waste oil tank removal.

In summary, site closure is recommended for 6600 E. 14th St. and no further action for 6630 E. 14th St. based upon:

- Adequate source removal has occurred. The underground tanks have been removed from both sites and extensive over-excavation of soil has occurred on 6600 and to lesser degree at 6630 E. 14th St.
- Both parcels have been adequately characterized. Although less sampling has occurred on 6630 E. 14th St., the site has had a thorough geophysical examination. No underground tanks appear to remain and a large area of possible backfill was identified from where the former underground tanks likely were removed. Low levels of dissolved petroleum hydrocarbons were identified down-gradient to this area. Although subsurface sampling was not done in this area, based upon the concentration of petroleum hydrocarbons detected in groundwater on Parcel 1, it is not likely that high concentrations of hydrocarbon remain in soil.
- The groundwater plume is not migrating. The down-gradient well, MW-7, has not been impacted over many years of monitoring. The MTBE found on-site has not been found off-site.
- No sensitive receptors are likely to be impacted.
- The site poses no significant risk to human health or the environment. The proposed residential development will be built on a concrete slab foundation, therefore the lack of subsurface soil data on Parcel 1 is not as critical.

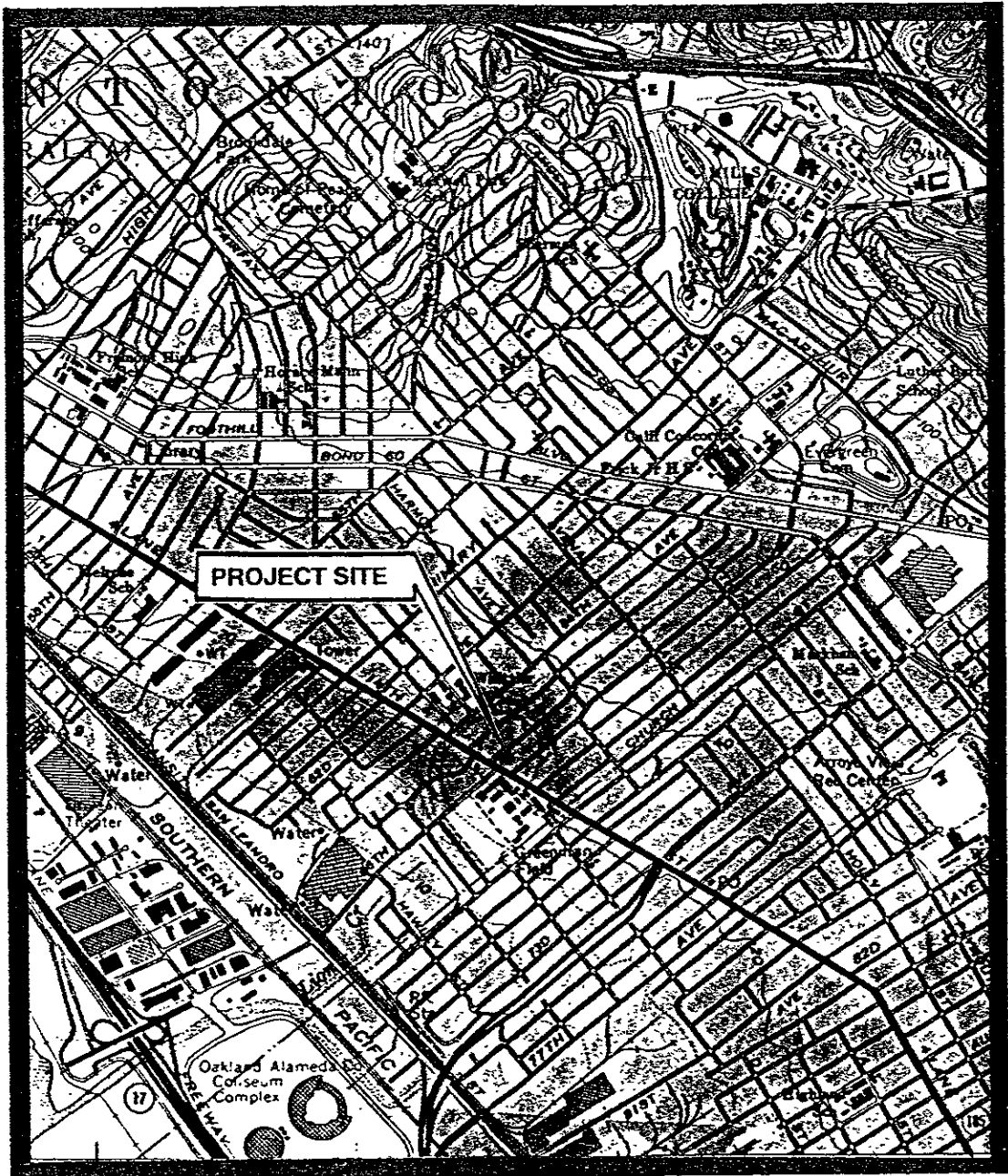



FIGURE 1: SITE VICINITY MAP

**EXXON COMPANY, U.S.A.
 SERVICE STATION NO. 7 - 0236
 6630 EAST 14TH STREET
 OAKLAND, CALIFORNIA**

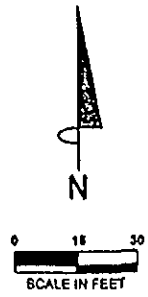
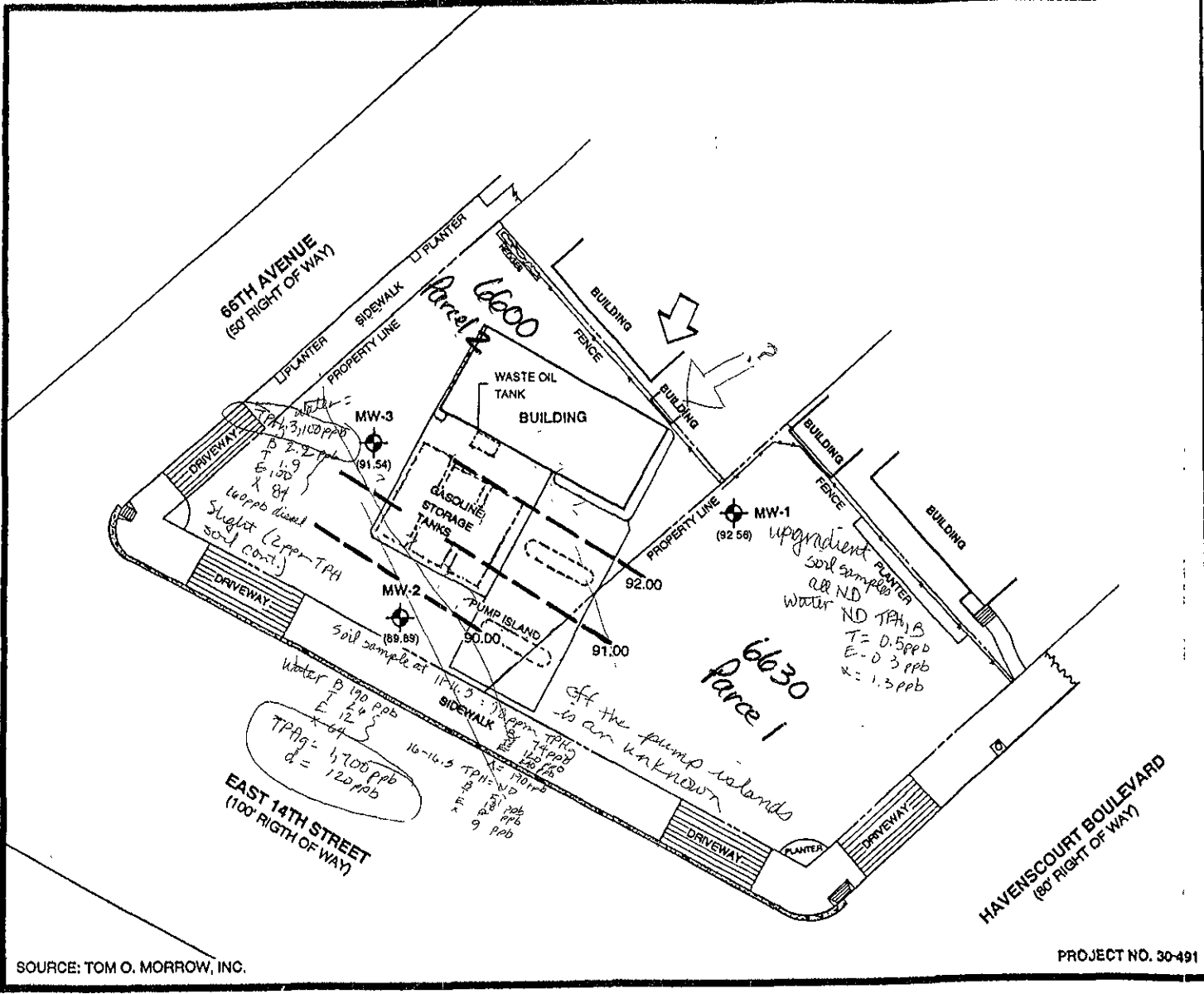
PROJECT NO. 30 - 491



**SOURCE: U.S.G.S. MAP OAKLAND EAST QUADRANGLE
 CALIFORNIA. 7.5 MINUTE SERIES (TOPOGRAPHIC)
 PHOTOED 1959. PHOTOREVISED 1980**



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



- LEGEND:**
- GROUND WATER MONITORING WELL
 - (91.54) GROUND WATER ELEVATION
 - 91.00- GROUND WATER ELEVATION CONTOUR
 - GENERAL DIRECTION OF GROUND WATER FLOW
- Notes:**

1. Contour lines are interpretive based on water level reading recorded on 3/20/91.
2. Contour Interval 1.0 ft.
3. Average Hydraulic Gradient = 0.03 ft./ft.

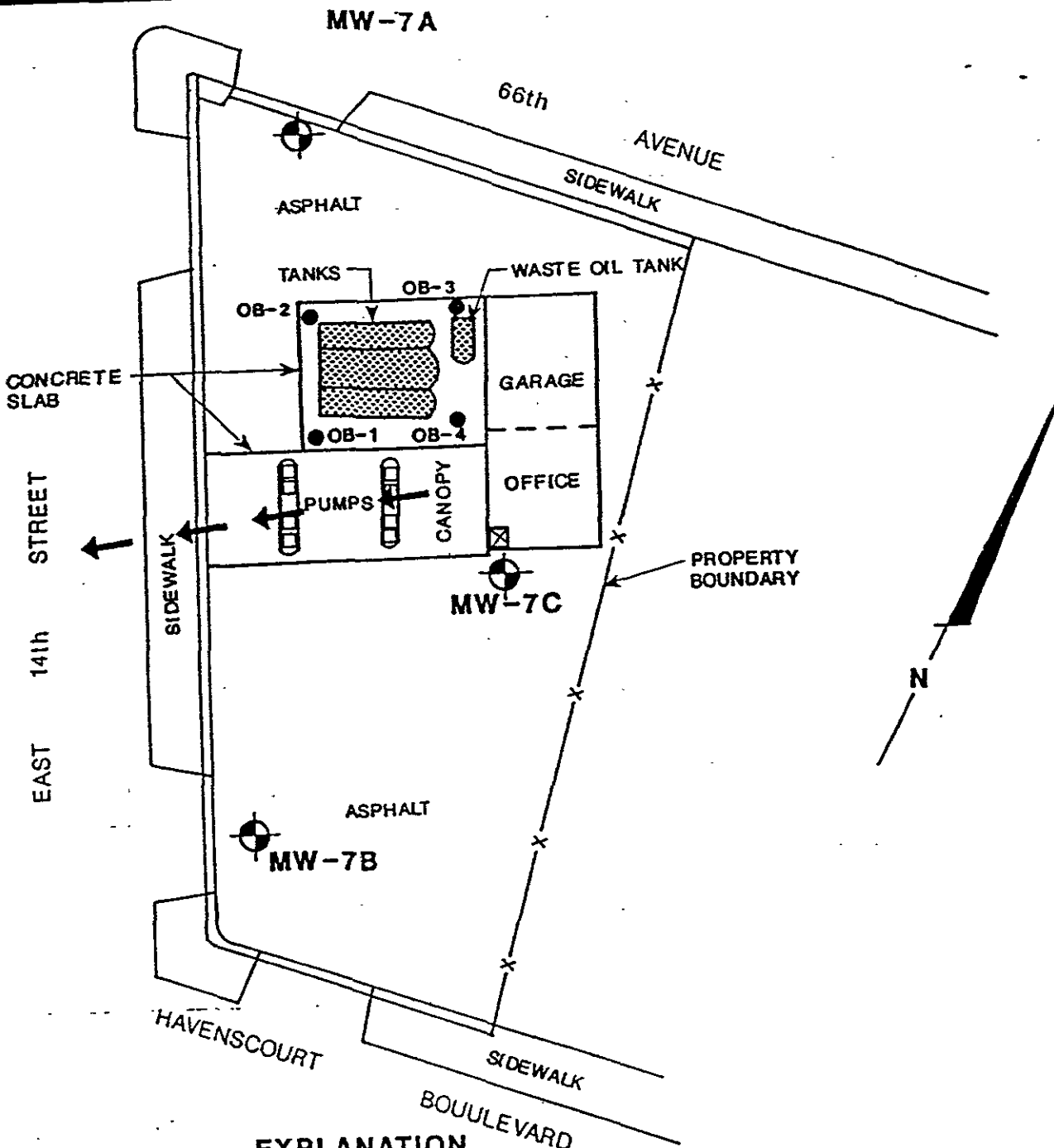
FIGURE 2: GROUND WATER ELEVATION CONTOUR MAP

EXXON COMPANY, U.S.A.
 SERVICE STATION NO. 7 - 0236
 6630 EAST 14th STREET
 OAKLAND, CALIFORNIA

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

SOURCE: TOM O. MORROW, INC.

PROJECT NO. 30-491



EXPLANATION





- MW-7A  Monitoring Well Location and Number
- OB-1  Observation Well Location and Number
-  Ground-water Flow Direction
-  Bench Mark (HLA Datum El. = 100 feet)



PLATE 6



Harding Lawson Associates
Engineers and Geoscientists

Site Plan
Texaco Station-62488000220
6630 E. 14th Street
Oakland, California

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
AG	2251,053.04	JO	5/88		

TABLE 1 - SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES

Exxon Company, U.S.A.
 Exxon Service Station No. 7-0236
 6630 East 14th Street
 Oakland, California

Alton Geoscience, Inc. Project No. 30-491

Well No.	Depth (in feet)	TPH-G	B	T	E	X
Concentrations in Parts Per Million						
Date of Sampling - March 13, 1991						
MW-1	6-6.5	ND<1	ND<0.003	ND<0.003	ND<0.003	ND<0.003
MW-1	11-11.5	ND<1	ND<0.003	ND<0.003	ND<0.003	ND<0.003
MW-1	16-16.5	ND<1	ND<0.003	ND<0.003	ND<0.003	ND<0.003
MW-2	6-6.5	2	0.008	0.018	ND<0.003	0.025
MW-2	11-11.5	98	0.074	0.12	0.24	0.19
MW-2	16-16.5	ND<1	0.051	ND<0.003	0.018	0.009
MW-3	6-6.5	ND<1	0.009	ND<0.003	ND<0.003	0.01
MW-3	11-11.5	ND<1	ND<0.003	ND<0.003	ND<0.003	0.018
MW-3	16-16.5	ND<1	ND<0.003	ND<0.003	ND<0.003	0.004

Note:

- TPH-G = Total petroleum hydrocarbons
- B = Benzene
- T = Toluene
- E = Ethylbenzene
- X = Xylenes
- ND = Not detected above the reported method detection limits
- NA = Not analyzed

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY
BORING



PROJECT NO. 30-491 DATE DRILLED 03/13/91
 CLIENT Exxon Company, U.S.A.
 LOCATION 14th St. & 66th Ave., Oakland
 LOGGED BY W. Shipp APPROVED BY _____

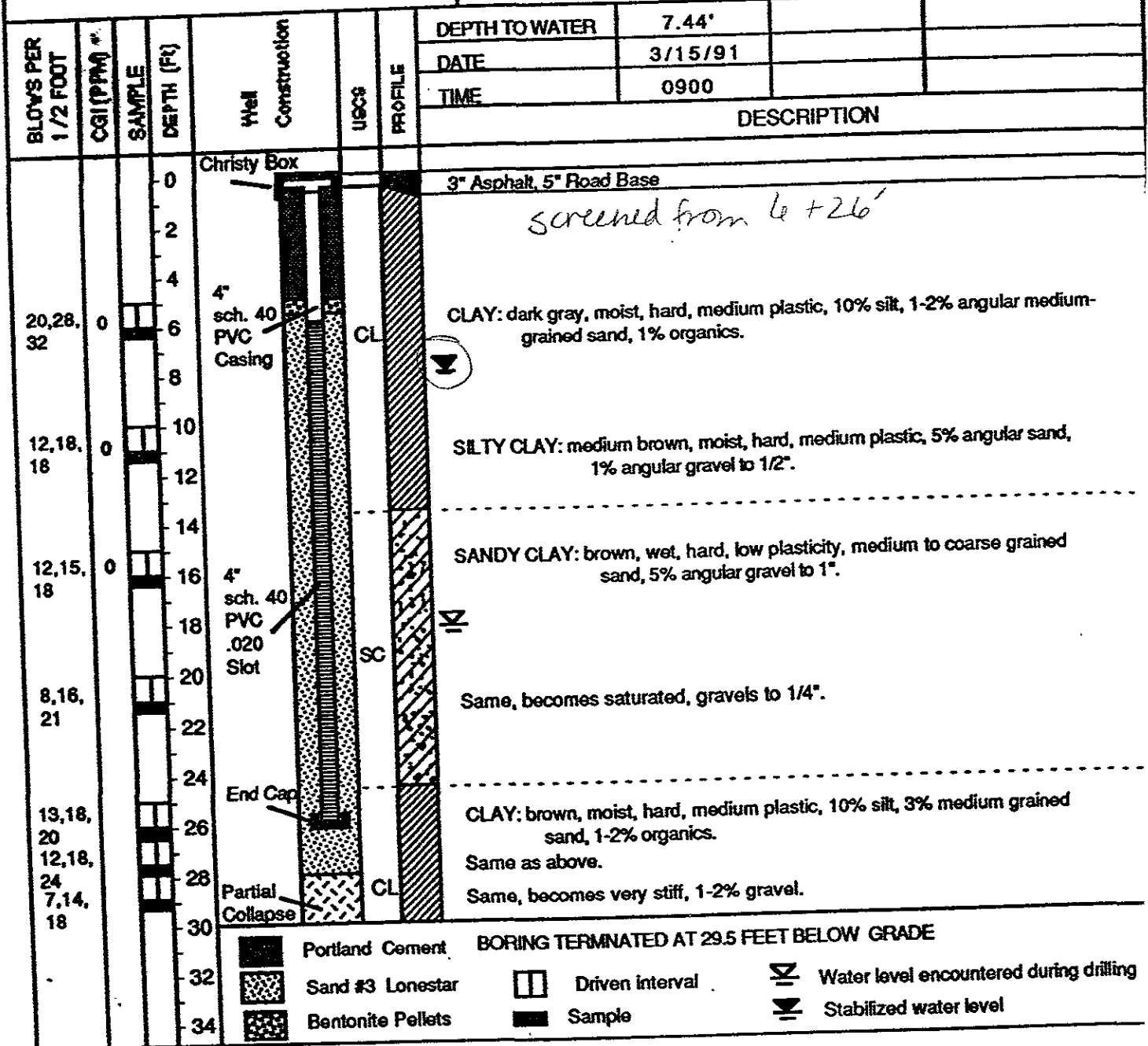
BORING NO.

 WELL NO.
 MW-1

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 100.00'

DRILLING METHOD CME 75 HOLE DIAM. 10"
 SAMPLER TYPE Modified split spoon
 CASING DATA 4" PVC, 0.020" slots
 DRILLER West Hazmat Drilling Corp.



ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY
BORING



PROJECT NO. 30-491 DATE DRILLED 03/13/91
 CLIENT Exxon Company, U.S.A.
 LOCATION 14th St. & 66th Ave., Oakland
 LOGGED BY W. Shipp APPROVED BY _____

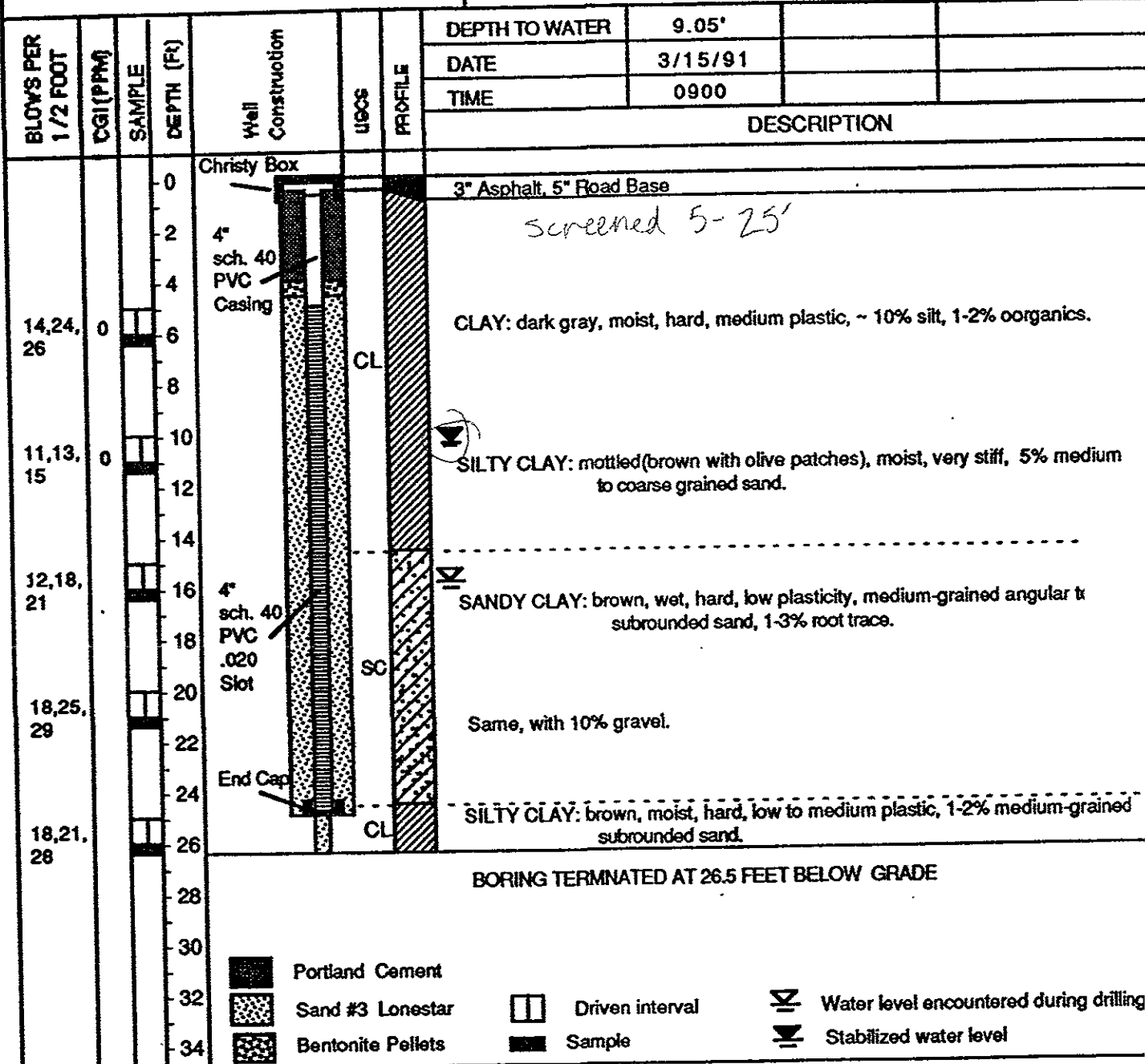
BORING NO.

 WELL NO.
 MW-2

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 98.94'

DRILLING METHOD CME 75 HOLE DIAM. 10"
 SAMPLER TYPE Modified split spoon
 CASING DATA 4" PVC, 0.020" slots
 DRILLER West Hazmat Drilling Corp.



ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY
BORING



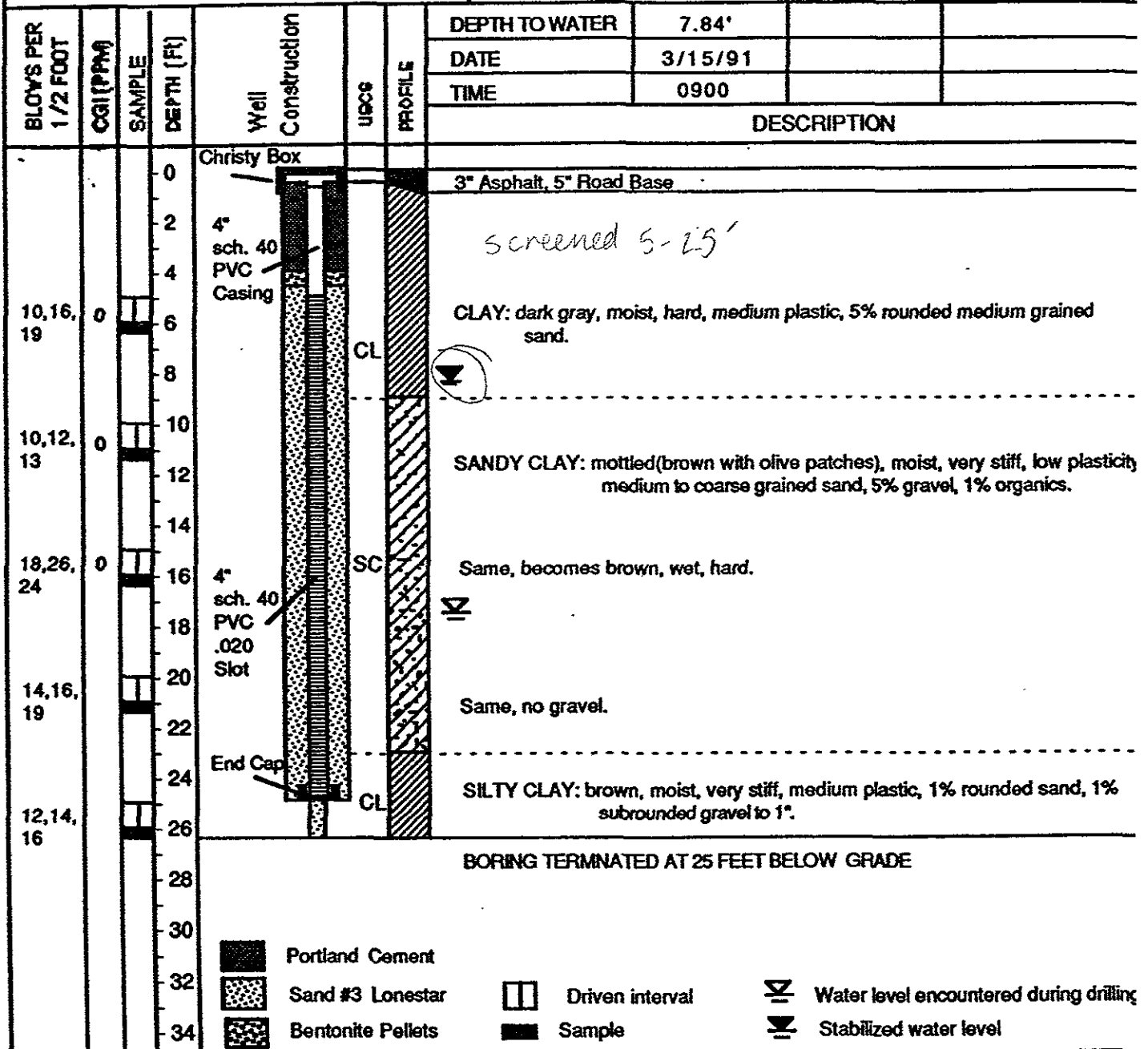
PROJECT NO. 30-491 DATE DRILLED 03/13/91
 CLIENT Exxon Company, U.S.A.
 LOCATION 14th St. & 66th Ave., Oakland
 LOGGED BY W. Shipp APPROVED BY _____

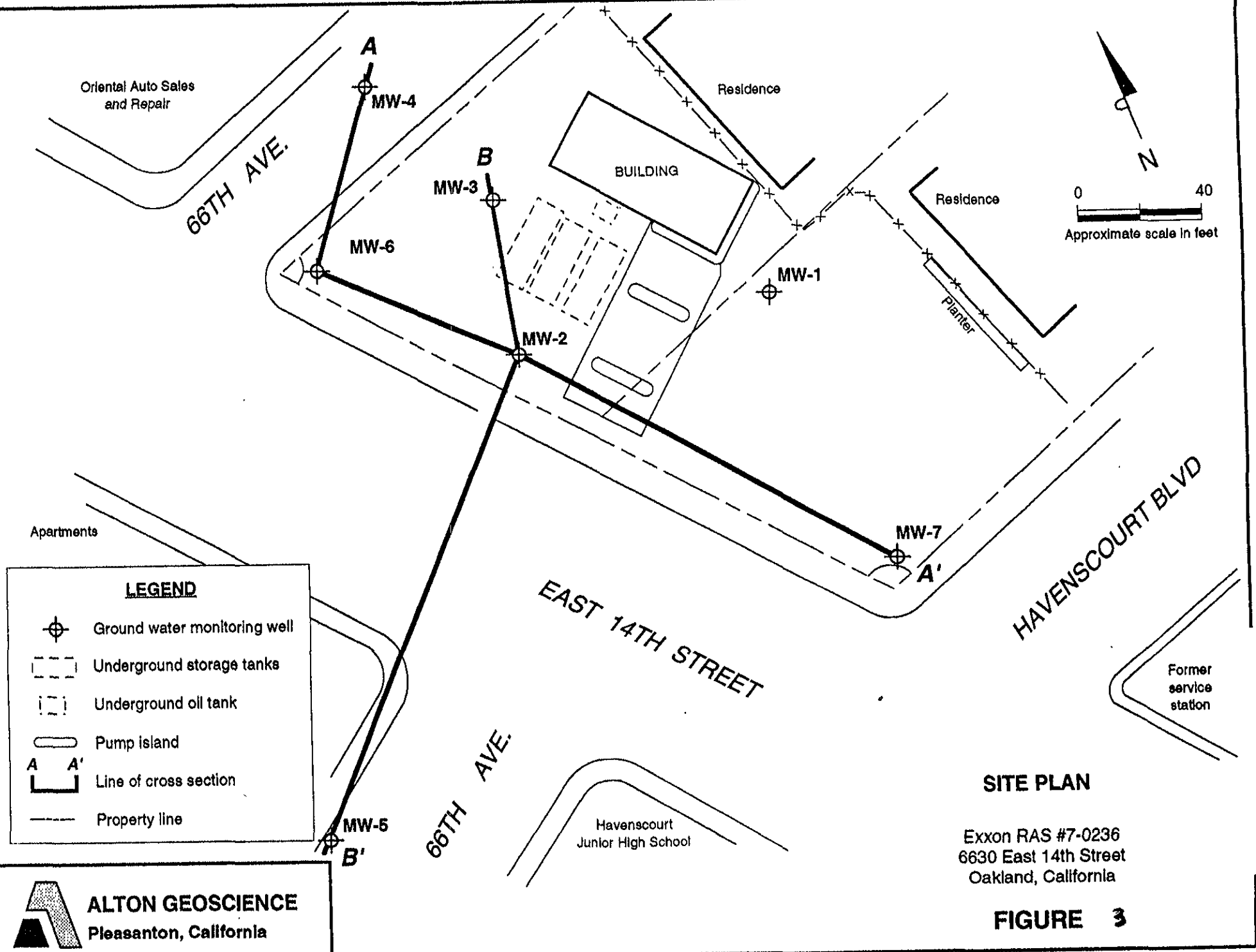
BORING NO. _____
 WELL NO. MW-3

FIELD SKETCH OF BORING LOCATION







TOP OF CASING ELEVATION 99.38'

DRILLING METHOD CME 75 HOLE DIAM. 10"
 SAMPLER TYPE Modified split spoon
 CASING DATA 4" PVC, 0.020" slots
 DRILLER West Hazmat Drilling Corp.





LEGEND

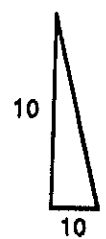
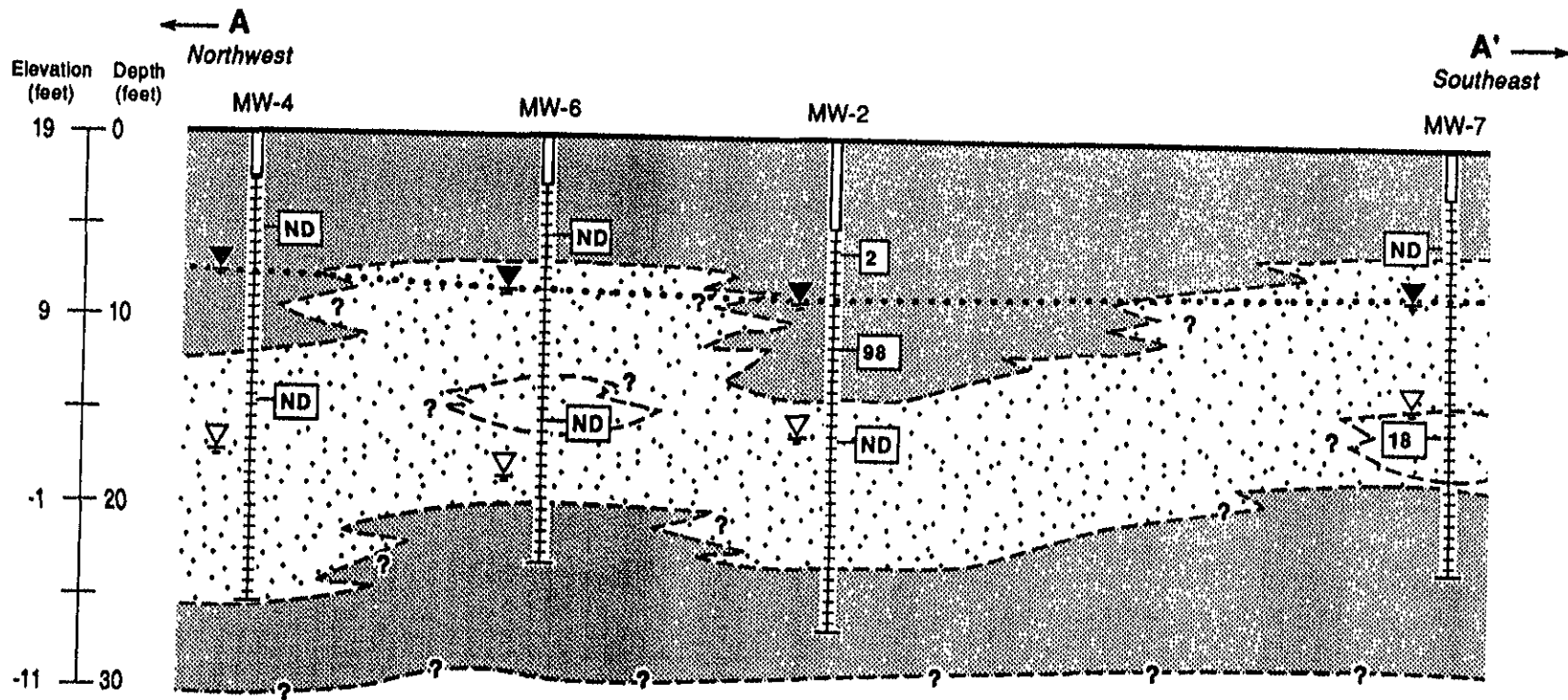
-  Ground water monitoring well
-  Underground storage tanks
-  Underground oil tank
-  Pump island
-  Line of cross section
-  Property line

SITE PLAN

Exxon RAS #7-0236
 6630 East 14th Street
 Oakland, California

FIGURE 3

 **ALTON GEOSCIENCE**
 Pleasanton, California



Scale in feet
Vertical exaggeration = 4:1

LEGEND

	Clay or Silty Clay		Blank
	Intermittent Sandy Clay, Silty Clay, Silty Sand with Clayey Sand lenses		Screened Interval
	Stabilized water level as of 3/26/92		Gradational contact (inferred)
	Water level at time of drilling		Total petroleum hydrocarbons as gasoline concentrations in parts per million (ppm) ND = not detected

HYDROGEOLOGIC CROSS SECTION A-A'

Exxon RAS #7-0236
6630 East 14th Street
Oakland, California

FIGURE 4

ALTON GEOSCIENCE
Pleasanton, California

TABLE 2

**Summary of Results of Soil Sampling
Exxon RAS #7-0236
6630 East 14th Street, Oakland, California**

CONCENTRATIONS IN PARTS PER MILLION (PPM)

ID	DATE OF SAMPLING	DEPTH OF SOIL SAMPLE (FEET)	TPH-G	TPH-D	B	T	E	X	LAB
MW-4	03/26/92	5 to 5.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-4	03/26/92	14.5 to 15	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-5	03/26/92	5 to 5.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-5	03/26/92	15 to 15.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-6	03/26/92	5 to 5.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-6	03/26/92	15 to 15.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-7	03/26/92	5 to 5.5	ND<1	ND<5	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE
MW-7	03/26/92	15 to 15.5	18	23	ND<0.005	ND<0.005	ND<0.005	ND<0.005	PACE

EXPLANATION OF ABBREVIATIONS:

TPH-G	:total petroleum hydrocarbons as gasoline	-- (EPA method 8015 modified)
TPH-D	:total petroleum hydrocarbons as diesel	-- (EPA method 8015 modified)
B	:benzene	-- (EPA method 8020)
T	:toluene	-- (EPA method 8020)
E	:ethylbenzene	-- (EPA method 8020)
X	:xylenes	-- (EPA method 8020)
PACE	:Pace Laboratory, Inc	
ND	:not detected	

**ALTON GEOSCIENCE
LOG OF EXPLORATORY
BORING**



PROJECT NO. 30-0491-01 DATE DRILLED 3/26/92

CLIENT Exxon RAS #7-0236

LOCATION 6630 E. 14th Street, Oakland, California

LOGGED BY J. DeGeorge

APPROVED BY _____

WELL NO.
MW-4

Page 1 of 1

FIELD SKETCH OF BORING LOCATION

SEE FIGURE 2

TOP OF CASING ELEVATION 19.46'

DRILLING METHOD Hollow Stem Auger HOLE DIAM. 8"

SAMPLER TYPE Split spoon

CASING DATA 2" Sch. 40 PVC: 2.5' Blank, 22.5' Screen

DRILLER West Hazmat Drilling Corporation

PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (ftg)	Well Construction	USCS	PROFILE	DEPTH TO WATER	
							17'	7.76'
							DATE	TIME
							3/26/92	10:20 AM
							4/6/92	12:00 PM
							DESCRIPTION	
			0				ASPHALT 3"/Coarse gravel subgrade	
			2	2" diam. Sch. 40 PVC Casing			SILTY CLAY: black, slightly moist, very stiff; trace fine- to medium-grained sand, low plasticity.	
0			4				SILTY CLAY: olive-green, slightly moist, very stiff; trace fine- to medium-grained sand, low plasticity.	
			6					
			8					
0			10		CL		SILTY CLAY: brown, moist, very stiff; very fine-grained sand, low plasticity.	
			12					
			14	2" diam. Sch. 40 PVC 0.020" slotting			SANDY CLAY: brown, moist, very stiff; fine- to medium-grained sand, some coarse-grained sand and trace fine gravel, low plasticity.	
0			16					
			18				SANDY CLAY: brown, wet, firm; fine- to medium-grained sand, increasing coarse-grained sand and increasing fine gravel, low plasticity.	
			20					
0			22					
			24	End Cap				
			26				Borehole terminated at approximately 25-1/2 feet below grade	

**ALTON GEOSCIENCE
LOG OF EXPLORATORY
BORING**



PROJECT NO. 30-0491-01 DATE DRILLED 3/26/92
 CLIENT Exxon RAS #7-0236
 LOCATION 6630 E. 14th Street, Oakland, California
 LOGGED BY J. DeGeorge APPROVED BY _____

WELL NO.
MW-5

Page 1 of 1

FIELD SKETCH OF BORING LOCATION

SEE FIGURE 2

TOP OF CASING ELEVATION 16.95'

DRILLING METHOD Hollow Stem Auger HOLE DIAM. 8"
 SAMPLER TYPE Split spoon
 CASING DATA 2" Sch. 40 PVC: 2.5' Blank, 22.5' Screen
 DRILLER West Hazmat Drilling Corporation

PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (ftg)	Well Construction	USCS	PROFILE	DEPTH TO WATER		
							18'	10.66'	
							DATE	3/26/92	4/6/92
							TIME	11:50 AM	12:00 PM
							DESCRIPTION		
			0				ASPHALT 3"/fine gravel subgrade		
			2	2" diam. Sch. 40 PVC Casing			SILTY CLAY: black, slightly moist, stiff; trace fine- to medium-grained sand, low plasticity.		
0			4						
			6				SILTY CLAY: brown, moist, stiff; fine- to coarse-grained sand, low plasticity.		
0			8		CL				
			10				SANDY CLAY: brown, moist, very stiff; fine- to coarse-grained sand, low plasticity.		
0			12						
			14	2" diam. Sch. 40 PVC 0.020" slotting			CLAYEY SAND: brown, wet, medium dense; medium-grained sand, trace fine-grained and coarse-grained sand and trace fine gravel.		
0			16				Intermittent SANDY CLAY: brown, wet, medium dense; medium-grained sand.		
			18		SC				
0			20						
			22						
			24	End Cap					
			26						
							Borehole terminated at approximately 25-1/2 feet below grade		

ALTON GEOSCIENCE
LOG OF EXPLORATORY
BORING



PROJECT NO. 30-0491-01 DATE DRILLED 3/26/92
 CLIENT Exxon RAS #7-0236
 LOCATION 6630 E. 14th Street, Oakland, California
 LOGGED BY J. DeGeorge APPROVED BY _____

WELL NO.
MW-6

Page 1 of 1

FIELD SKETCH OF BORING LOCATION

SEE FIGURE 2

TOP OF CASING ELEVATION 18.79'

DRILLING METHOD Hollow Stem Auger HOLE DIAM. 10"
 SAMPLER TYPE Split spoon/Continuous Core
 CASING DATA 4" Sch. 40 PVC: 2.5' Blank, 20' Screen
 DRILLER West Hazmat Drilling Corporation

PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (fbg)	Well Construction	USCS	PROFILE	DEPTH TO WATER	18.5'	8.29'
							DATE	3/26/92	4/6/92
							TIME	2:00 PM	12:00 PM
DESCRIPTION									
			0	4" diam. Sch. 40 PVC Casing					
			2						
			4						
0			6		CL				
			8						
0			10						
			12						
0			14	4" diam. Sch. 40 PVC 0.020" slotting	SC				
			16						
0			18		CL				
			20						
0			22	End Cap					
			24						
			26						

ASPHALT 3"/fine gravel subgrade

SILTY CLAY: black, slightly moist, very stiff; trace coarse-grained sand, trace fine gravel, intermittent color changes to olive-green, low plasticity.

SANDY CLAY: brown, slightly moist, very stiff; medium- to coarse-grained sand, trace fine gravel, low plasticity.

SILTY CLAY: brown, slightly moist, very stiff; trace medium- to coarse-grained sand, moderate plasticity.

SANDY CLAY: brown, slightly moist, very stiff; fine- to coarse-grained sand, trace fine gravel, low plasticity.

CLAYEY SAND: brown, moist, medium dense; medium- to coarse-grained sand, trace fine gravel, some olive-green mottling.

CLAY(6" layer): brown, slightly moist, very stiff; low plasticity.

SANDY CLAY: brown, moist, stiff; fine- to coarse-grained sand, fine gravel, low plasticity.

CLAY: brown, slightly moist, very stiff; moderate to high plasticity, black wavy vertical streaks.

Borehole terminated at approximately 23 feet below grade

**ALTON GEOSCIENCE
LOG OF EXPLORATORY
BORING**



PROJECT NO. 30-0491-01 DATE DRILLED 3/26/92

CLIENT Exxon RAS #7-0236

LOCATION 6630 E. 14th Street, Oakland, California

LOGGED BY J. DeGeorge APPROVED BY _____

WELL NO.
MW-7

Page 1 of 1

FIELD SKETCH OF BORING LOCATION

SEE FIGURE 2

TOP OF CASING ELEVATION 19.23'

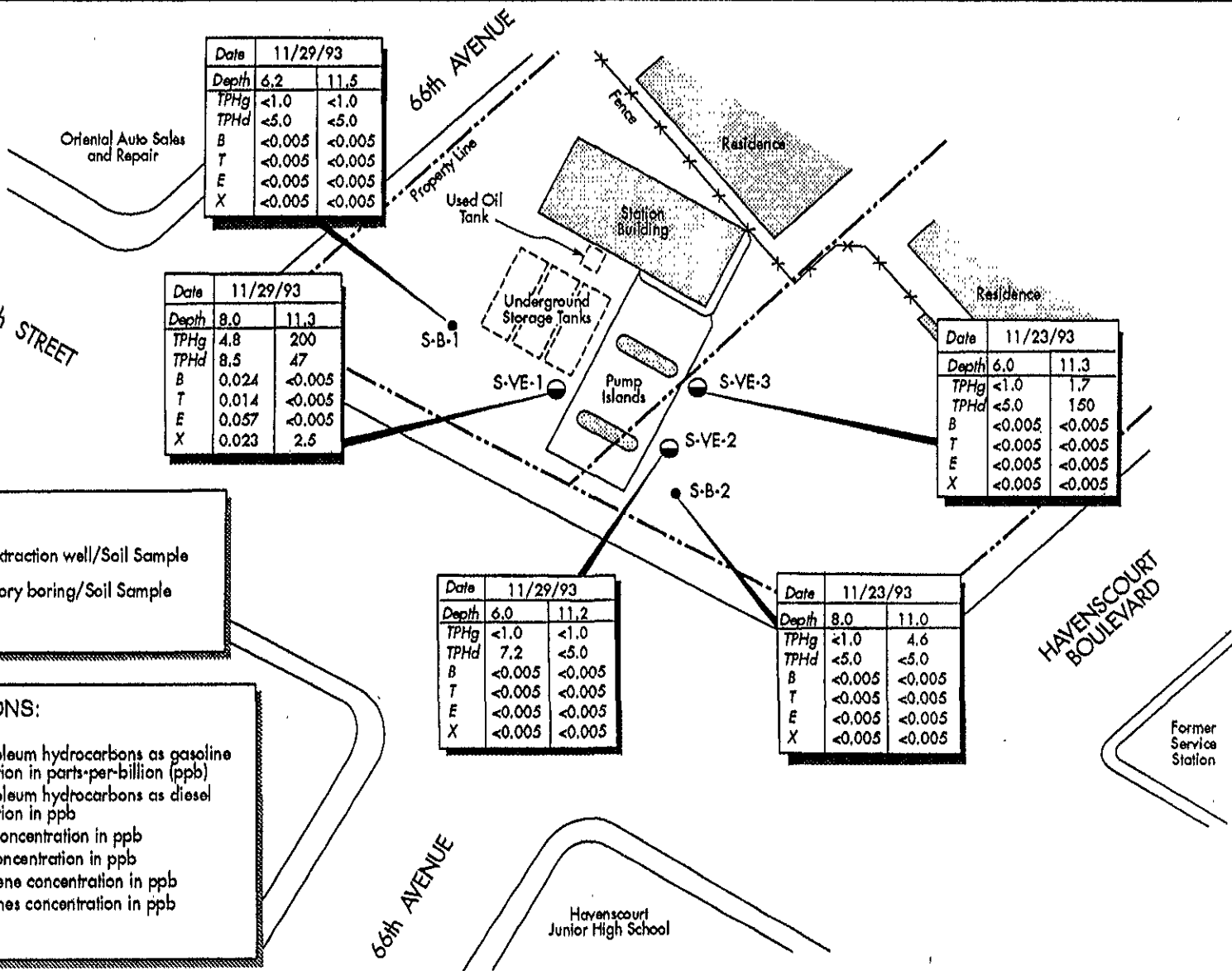
DRILLING METHOD Hollow Stem Auger HOLE DIAM. 8"

SAMPLER TYPE Split spoon

CASING DATA 2" Sch. 40 PVC: 2.5' Blank, 20' Screen

DRILLER West Hazmat Drilling Corporation

PID (ppm)	TPH-G (ppm)	SAMPLE	DEPTH (ft)	Well Construction	USCS PROFILE	DEPTH TO WATER		DESCRIPTION
						14'	8.34'	
						DATE	3/26/92	4/6/92
						TIME	4:00 PM	12:00 PM
			0					ASPHALT 6"/fine gravel subgrade
			2	2" diam. Sch. 40 PVC Casing	CL			SILTY CLAY: black, slightly moist, very stiff; trace fine- to medium-grained sand, moderate plasticity.
			4					
0			6					SILTY SAND: olive-green, slightly moist, dense; fine- to coarse-grained sand, fine gravel.
			8		SM			
0			10					SANDY CLAY: olive-green, moist, very stiff; medium- to coarse-grained sand, low plasticity.
			12		CL			
0			14	2" diam. Sch. 40 PVC 0.020" slotting				CLAYEY SAND: olive-green, wet, dense; medium- to coarse-grained sand.
			16		SC			
			18					
0			20		CL			CLAY: brown, slightly moist, very stiff; moderate to high plasticity, black wavy vertical streaks.
			22	End Cap				
			24					
			26					
Borehole terminated at approximately 23 feet below grade								



Date	11/29/93	
Depth	6.2	11.5
TPHg	<1.0	<1.0
TPHd	<5.0	<5.0
B	<0.005	<0.005
T	<0.005	<0.005
E	<0.005	<0.005
X	<0.005	<0.005

Date	11/29/93	
Depth	8.0	11.3
TPHg	4.8	200
TPHd	8.5	47
B	0.024	<0.005
T	0.014	<0.005
E	0.057	<0.005
X	0.023	2.5

Date	11/23/93	
Depth	6.0	11.3
TPHg	<1.0	1.7
TPHd	<5.0	150
B	<0.005	<0.005
T	<0.005	<0.005
E	<0.005	<0.005
X	<0.005	<0.005

Date	11/29/93	
Depth	6.0	11.2
TPHg	<1.0	<1.0
TPHd	7.2	<5.0
B	<0.005	<0.005
T	<0.005	<0.005
E	<0.005	<0.005
X	<0.005	<0.005

Date	11/23/93	
Depth	8.0	11.0
TPHg	<1.0	4.6
TPHd	<5.0	<5.0
B	<0.005	<0.005
T	<0.005	<0.005
E	<0.005	<0.005
X	<0.005	<0.005

EXPLANATION

- VE-2 Vapor extraction well/Soil Sample
- B-2 Exploratory boring/Soil Sample

CONCENTRATIONS:

TPHg = Total petroleum hydrocarbons as gasoline concentration in parts-per-billion (ppb)

TPHd = Total petroleum hydrocarbons as diesel concentration in ppb

B = Benzene concentration in ppb

T = Toluene concentration in ppb

E = Ethylbenzene concentration in ppb

X = Total Xylenes concentration in ppb

Map Source: Site Plan by Alton Geoscience, 1992



TABLE 4
SOIL SAMPLE ANALYSIS RESULTS
 Former Exxon Service Station 7-0236
 6630 East 14th Street
 Oakland, California
 (Page 1 of 2)

Sample Number	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylene	TEPHd	TRPH	MTBE	Lead
Soil - Hoists									
(A) S-10-H1	<1.0	<0.0050	<0.0050	<0.0050	0.0067	NA	320	NA	<10
	Additional Analyses: HVOC's = ND; SVOC's = ND; Cadmium = <1.0; Chromium = 68; Nickel = 110; Zinc = 73								
(B) S-10-H2	16	<0.0050	0.037	<0.0050	0.18	NA	590	NA	<10
	Additional Analyses: HVOC's = ND; SVOC's = ND; Cadmium = <1.0; Chromium = 78; Nickel = 110; Zinc = 63								
Soil - Gasoline UST's									
S-9.5-T1N	1.1	<0.0050	<0.0050	<0.0050	<0.0050	1.1	NA	1.2	NA
S-9-T1S	3.1	<0.0050	0.0056	0.027	0.025	2.9	NA	0.44	NA
S-9.5-T2N	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	NA	<0.025	NA
S-9-T2S	2.8	0.0072	0.010	0.0088	0.015	2.0	NA	0.46	NA
S-9-T3N	<1.0	0.0054	<0.0050	<0.0050	<0.0050	1.8	NA	0.28	NA
S-9-T3S	16	0.036	0.030	0.049	0.086	7.8	NA	0.22	NA
Soil-Used-Oil UST									
S-8-T4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	52	220	<0.025	<10
	Additional Analyses: HVOC's = ND; SVOC's = ND; Cadmium = <1.0; Chromium = 69; Nickel = 120; Zinc = 70								
Soil-Dispensers									
S-3-D1	9.4	0.043	0.086	0.031	0.075	1.8	NA	NA	NA
S-2.5-D2	150	(1.4)	0.13	2.5	10	21	NA	NA	NA
S-3-D3	350	0.24	<0.25	2.7	18	41	NA	NA	NA
S-3.5-D4	99	0.58	0.22	0.90	0.31	6.1	NA	NA	13
S-3.5-D5	29	0.45	0.082	0.33	0.41	5.7	NA	0.96	NA
S-3-D6	95	<0.12	<0.12	0.45	6.4	56	NA	0.62	NA

TABLE 5
SAMPLE ANALYSIS RESULTS
STOCKPILED SOIL
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Sample Number	TPHg	Benzene	Toluene	Ethyl benzene	Xylene	TEPHd	TTLc Lead
Gasoline UST - Soilpile							
SP-1(1-4)	1.7	<0.0050	0.012	0.0064	0.046	11	NA
SP-2(1-4)	31	0.15	0.034	0.18	0.23	38	58 (2.3)
SP-3(1-4)	3.4	0.0087	<0.0050	0.0090	0.066	34	NA
SP-4(1-4)	15	0.094	0.044	0.063	0.44	31	NA
SP-5(1-4)	13	0.085	0.027	0.032	0.42	160	12
SP-6(1-4)	8.8	0.059	0.030	0.025	0.29	17	<10
Additional Analyses: HVOC's = ND; SVOC's = ND; TRPH = 300; Antimony = <10; Arsenic = <10; Barium = 79; Beryllium = <1.0; Cadmium = <1.0; Chromium = 32; Cobalt = 5.5; Copper = 25; Mercury = 0.031; Molybdenum = <5.0; Nickel = 54; Selenium = <10; Silver = <1.0; Thallium = 24; Vanadium = 31; Zinc = 44; Thallium (<0.2); Vanadium = (0.23)							
SP-7(1-4)	14	0.14	0.052	<0.025	0.18	25	NA
SP-8(1-4)	7.9	0.038	0.040	0.027	0.28	12	NA
Hoist - Stockpile							
SP-1(1-4)	1,100	<0.5	2.6	7.4	48	NA	<10
Additional Analyses: HVOC's = ND; SVOC's = ND; TRPH = 2,600; Cadmium = <1.0; Chromium = 68; Nickel = 110; Zinc = 62; Chromium = (0.17); Nickel = (2.2)							

Notes:

Results in milligrams per kilograms (ml/kg) unless otherwise noted.

<	=	Less than detection limit established by laboratory.
TPHg	=	Total petroleum hydrocarbons as gasoline
BTEX	=	Benzene, toluene, ethylbenzene, total xylene isomers
MTBE	=	Methyl tert-butyl ether
TEPHd	=	Total petroleum hydrocarbons as diesel
TRPH	=	Total recoverable petroleum hydrocarbons
HVOC's	=	Halogenated volatile organic compounds
SVOC's	=	Semi-volatile organic compounds
NA	=	Not Analyzed
()	=	STLC reported in milligrams per liter (mg/L)
NA	=	Not Analyzed

Table 3
RESULTS OF ANALYSES OF SOIL AND GROUNDWATER SAMPLES
Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Sample Designation	Date	TPHg	TPHd	Benzene	Ethyl-Toluene	Total benzene	Xylenes	Lead
Soil Samples(1)								
S6.2B-1	11/29/93	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S11.5B-1	11/29/93	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S8.0B2	11/23/93	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S11.0B2	11/23/93	4.6	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S8.0VE-1	11/29/93	4.8	8.5	0.024	0.014	0.057	0.023	NA
S11.3VE-1	11/29/93	200	47	<0.005	<0.005	<0.005	2.5	NA
S6.0VE2	11/23/93	<1.0	7.2	<0.005	<0.005	<0.005	<0.005	NA
S11.2VE2	11/23/93	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S6.0VE3	11/23/93	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005	NA
S11.3VE3	11/23/93	1.7	150	<0.005	<0.005	<0.005	<0.005	NA
Cuttings C-ABCD*	11/29/93	11.0	42	<0.005	<0.005	0.18	0.035	<1.0
Cuttings D-ABCD*	11/29/93	1.4	<5.0	<0.005	<0.005	11	12	<1.0
Water Samples(2)								
B-2	11/23/93	6800	1300	35	16	340	36	NA
VE-2	11/23/93	1300	330	0.5	17	1.9	23	NA

Notes:

(1) Soil sample results in parts per million

(2) Water sample results in parts per billion

TPHg: Total petroleum hydrocarbons as gasoline

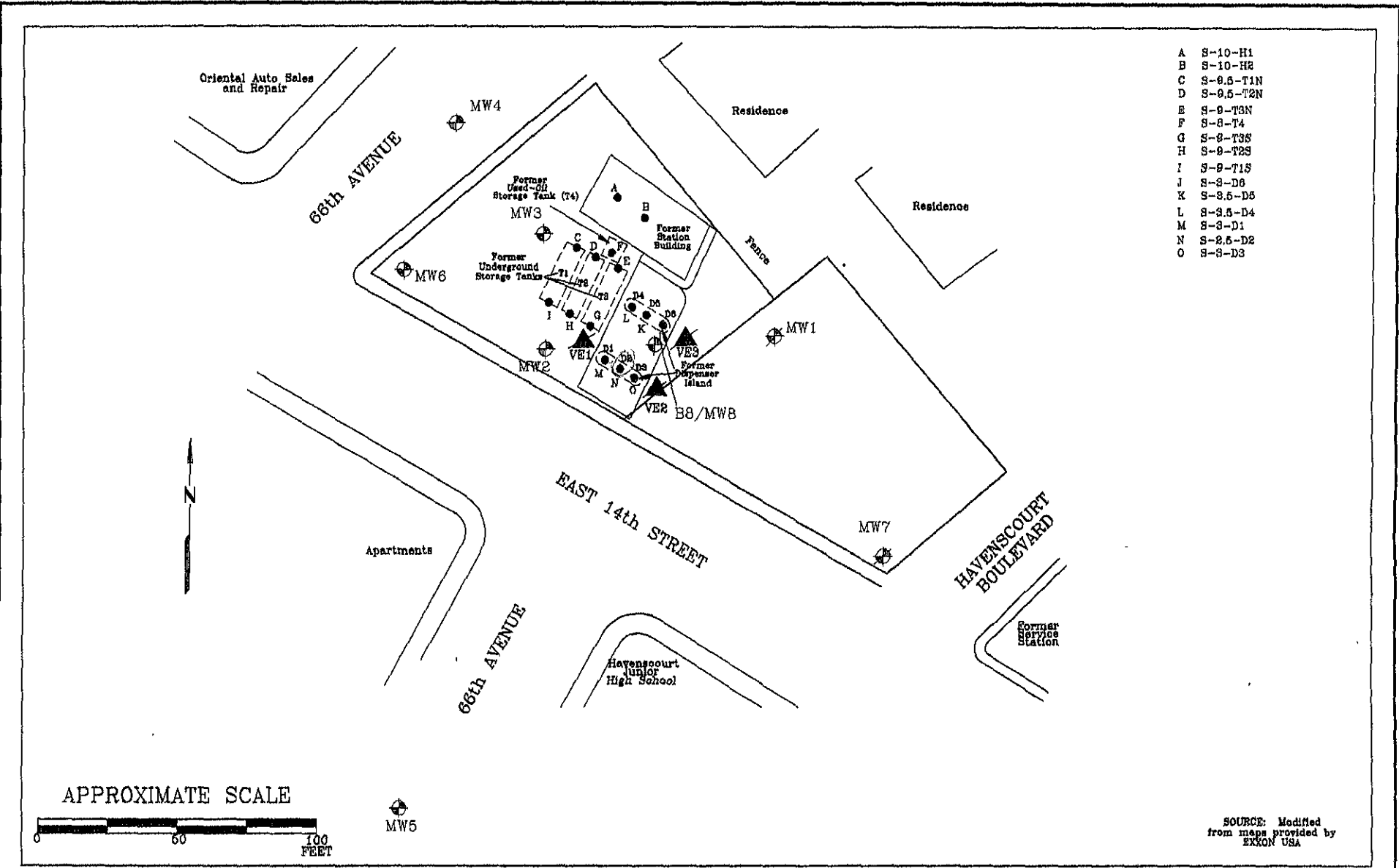
TPHd: Total petroleum hydrocarbons as diesel

NA: Not applicable

Sample designation:

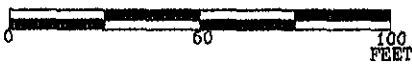
S30.3VE-1: S=Soil, 30.3=Sample depth (feet), VE-1=Sample location

* = Drill Cuttings composite samples



- A S-10-H1
- B S-10-H2
- C S-9.5-T1N
- D S-9.5-T2N
- E S-9-T3N
- F S-9-T4
- G S-9-T3S
- H S-9-T2S
- I S-9-T1S
- J S-9-D6
- K S-9.5-D5
- L S-9.5-D4
- M S-9-D1
- N S-9.5-D2
- O S-9-D3

APPROXIMATE SCALE



SOURCE: Modified from maps provided by EXXON USA

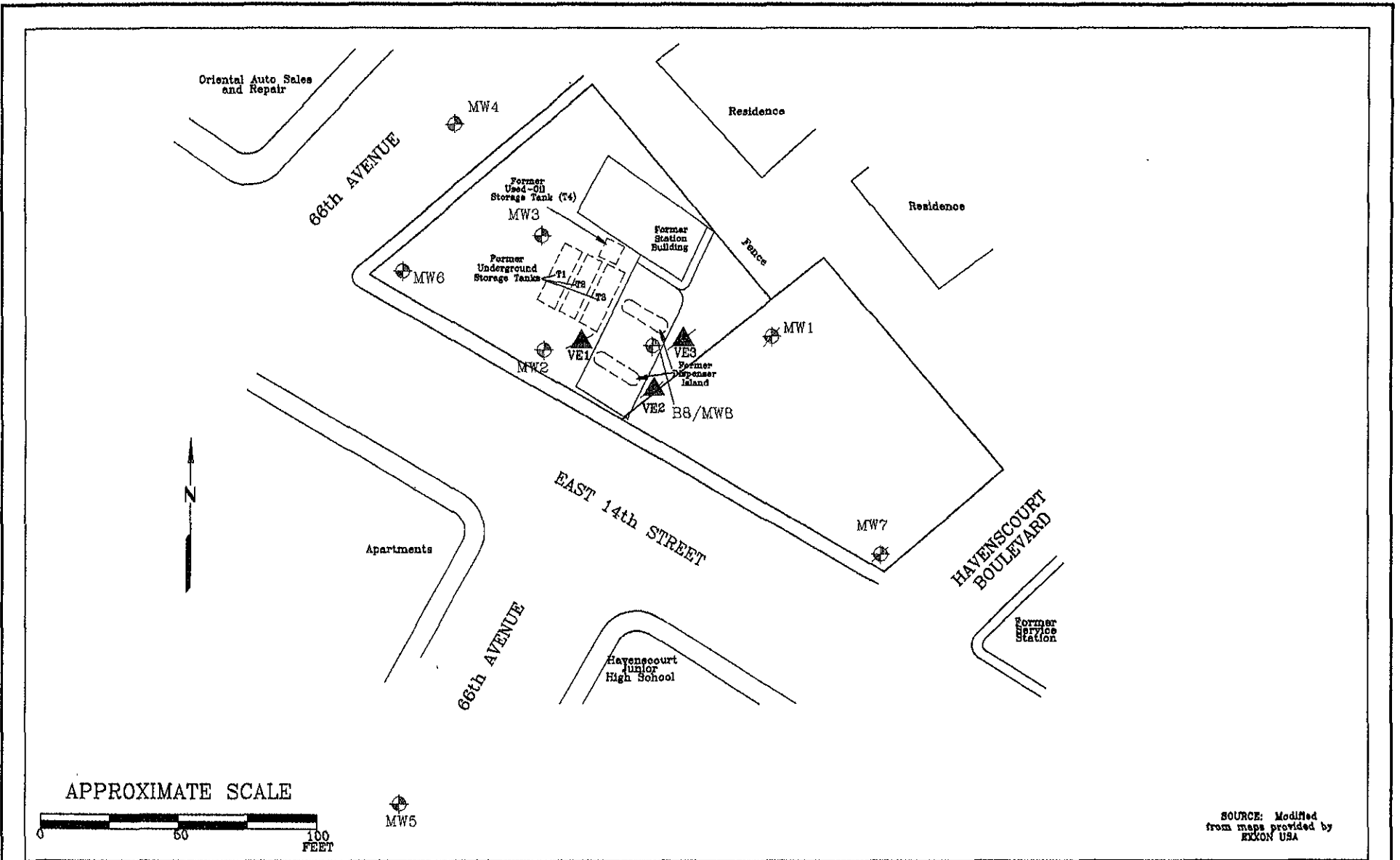
FN 20060002



GENERALIZED SITE PLAN
 FORMER
 EXXON SERVICE STATION 7-0236
 6830 East 14th Street

EXPLANATION	
	Groundwater Monitoring Well
	Groundwater Monitoring Well (Destroyed)
	Vapor Extraction Well (Destroyed)
	Soil Boring/Groundwater Monitoring Well

PROJECT NO.	2009
PLATE	1



FN 20090002



GENERALIZED SITE PLAN

FORMER
 EXXON SERVICE STATION 7-0236
 6630 East 14th Street
 Oakland California

EXPLANATION

- MW8 Groundwater Monitoring Well
- Groundwater Monitoring Well (Destroyed)
- VE3 Vapor Extraction Well (Destroyed)
- BB/MWB Soil Boring/Groundwater Monitoring Well

PROJECT NO.

2009

PLATE

3

TABLE 6
SOIL AND STOCKPILE SAMPLE ANALYSIS RESULTS
 Former Exxon Service Station 7-0236
 6630 East 14th Street
 Oakland, California

Sample Number	TPHg	B	T	E	X	TEPHd	MTBE	TTLc Lead
S-10-MW8	22	0.26	0.013	0.067	0.19	14	<0.025	NA
SP-1-(1-4)	13	0.28	0.026	0.069	0.11	14	NA	13

Notes:

Soil results in parts per million

- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA method 8015 (modified).
- BTEX = Toluene, benzene, ethylbenzene and total xylenes using EPA method 8020.
- TEPHd = Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 8015 (modified).
- MTBE = Methyl tert-butyl ether analyzed using EPA method 8020.
- TTLc Lead = Total threshold limit concentrations (TTLc) analyzed using EPA method 6010.
- NA = Not Analyzed

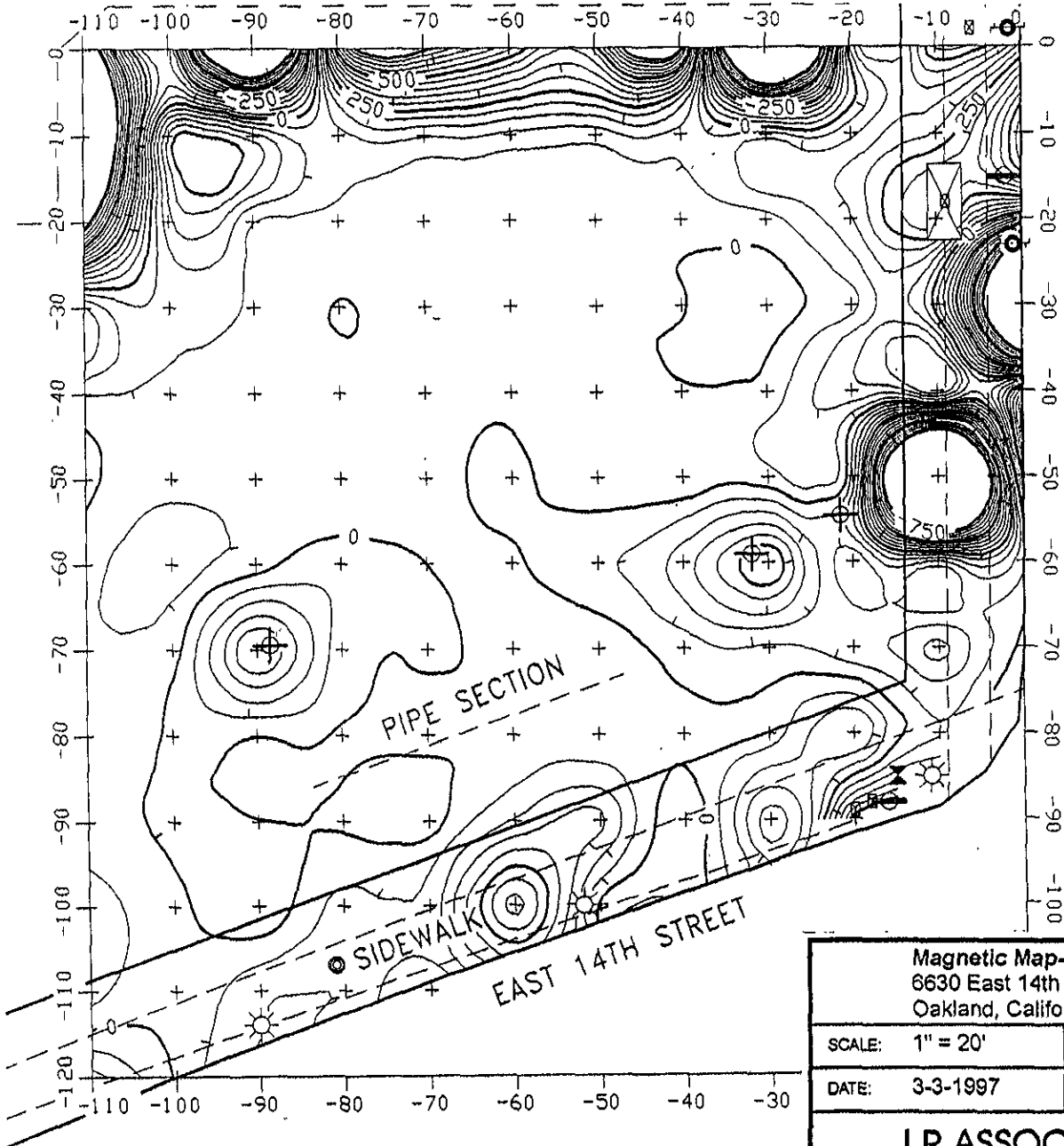


Project No.: 2009 Boring: ~~B5/118~~ Plate: 1 OF 1
 Site: Former Exxon Service Station 7-0236 Date: 01/10/97
 Drill Contractor: Woodward

Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
 Drill Rig: B57 Bore Hole Diameter: 8" Signature: _____
 Location: Between South ends of former dispenser islands. Registration: R.G. 4333
 Logged by: Scott Graham

DEPTH (ft.)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					CH	Fill, sandy gravel Clay, black, damp, trace of very fine-grained sand	
-5	30	6.0			CL	Silty clay, olive-gray, moist, some very fine-grained sand, trace of gravel to 1/4" diameter	
-10	47	383				transitioning to sandy clay, olive-gray, moist, orange and black mottling, fine-grained, some gravels	
-15	40					light brown, wet, increasing gravels	
-20	13	2.0				transitioning to silty clay, brown, wet	
-25	16	6.0				trace of silt, lens of gravels to 3/8" diameter at 25 feet	
						Total depth = 25 feet Groundwater encountered at 14.5 feet	
-30							
-35							
-40							

Well Diameter: 2", Slot Size: 0.010", Sand Size: 2/12", Grout: Neat cement

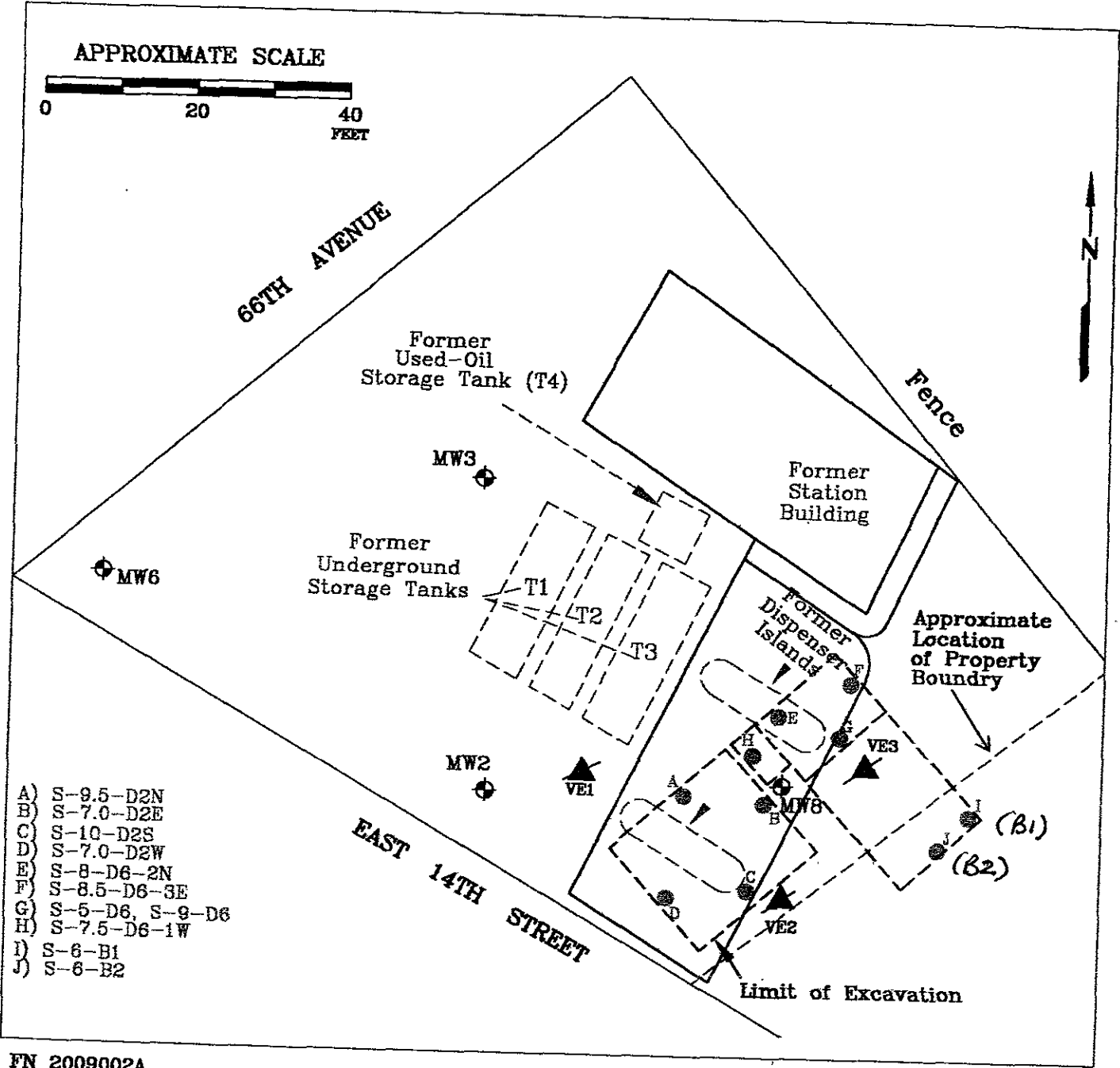
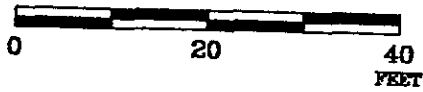


EXPLANATION:

- MANHOLE COVER OR DRAIN
- CHRISTY BOX
- ☀ LIGHT
- ⊕ POST OR SIGN
- ⚡ POWER POLE
- ⊗ VALVE
- ⊕ STAKED ANOMALY
- BURIED PIPE
- - - FENCE
- ⊕ MAGNETIC DATA POINT
- MAGNETIC CONTOUR

Magnetic Map- Former Exxon Station 7-0236 6630 East 14th Street Oakland, California		
SCALE: 1" = 20'	JOB NUMBER:	DRAWN BY: J.J.R.
DATE: 3-3-1997	103127-97	REVISED:
J R ASSOCIATES Civil and Environmental Geophysics 1886 Emory Street, San Jose, CA (408) 293-7390		
		DRAWING NUMBER: 3

APPROXIMATE SCALE



- A) S-9.5-D2N
- B) S-7.0-D2E
- C) S-10-D2S
- D) S-7.0-D2W
- E) S-8-D6-2N
- F) S-8.5-D6-3E
- G) S-5-D6, S-9-D6
- H) S-7.5-D6-1W
- I) S-6-B1
- J) S-6-B2

FN 2009002A

EXPLANATION

- MW8 Groundwater Monitoring Well
- Limits of Over Excavation
- VE3 Destroyed Vapor Well
- J Soil Sample

SOURCE:
Modified from a map
provided by
Exxon USA



GENERALIZED SITE PLAN

FORMER EXXON SERVICE STATION 7-0236
6600 East 14th Street
Oakland, California

PROJECT NO.

2009

PLATE

4

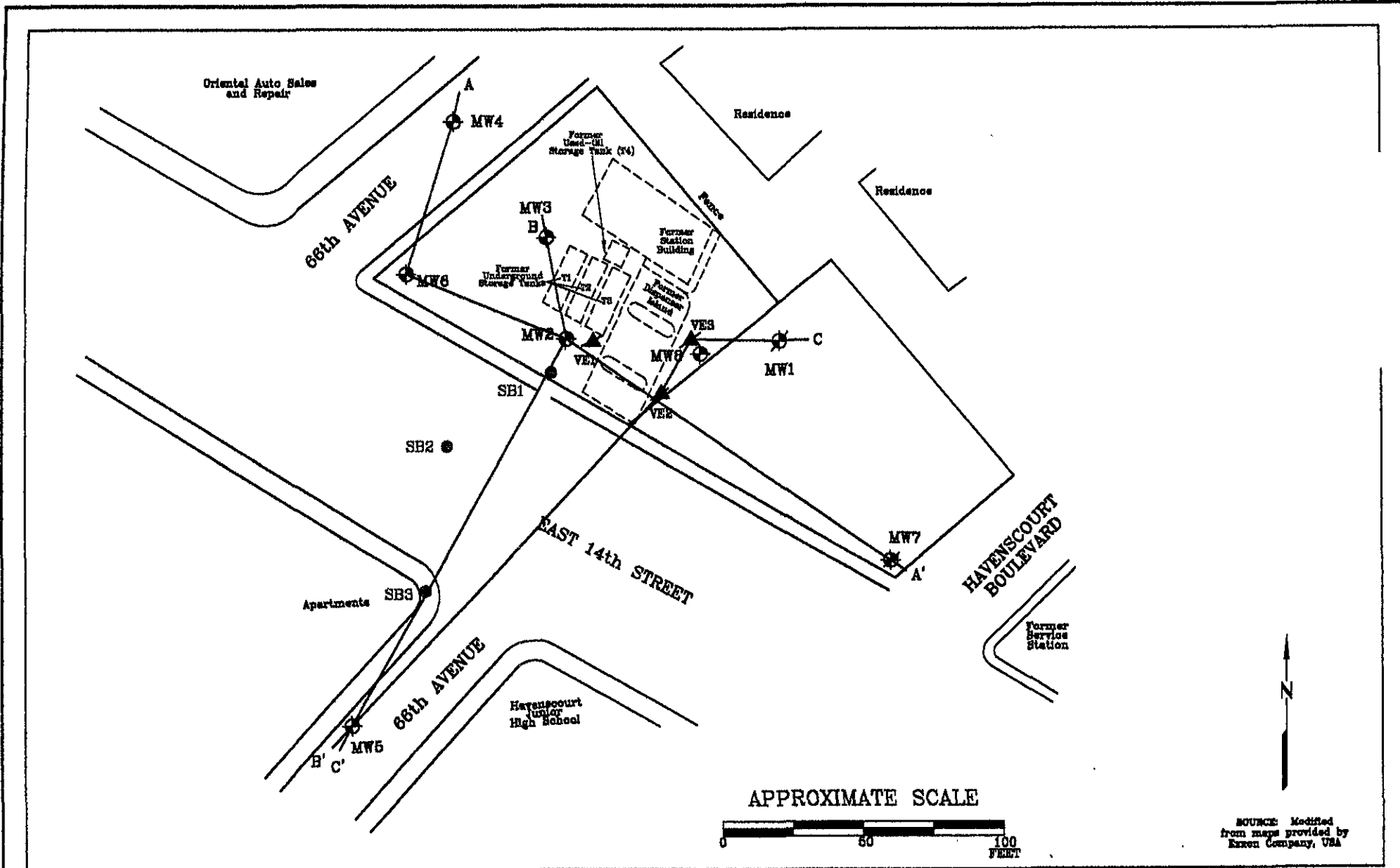
August 19, 2008

TABLE 7
SAMPLE ANALYSES RESULTS
OVER EXCAVATION OF SOIL
DECEMBER 1997
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 1 of 2)

Sample Number	TPPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TEPHd
12/97						
S-5-D6	<1.0					
G S-9-D6	800	<0.0050	<0.0050	<0.0050	<0.0050	-
F S-8.5-D6-3E	1.9	0.62	<0.50	<0.50	<0.50	<1.0
E S-8-D6-2N	<1.0	<0.0050	<0.0050	<0.0050	<0.50	620
H S-7.5-D6-1W	1.1	<0.0050	<0.0050	<0.0050	0.021	<1.0
		<0.0050	<0.0050	<0.0050	<0.0050	1.0
A S-9.5-D2N	3.5	<0.0050	<0.0050	<0.0050	<0.0050	1.5
C S-10-D2S	13	<0.0050	<0.0050	<0.0050		
D S-7.0-D2W	<1.0	<0.0050	0.037	<0.0050	0.012	5.6
B S-7.0-D2E	<1.0	<0.0050	<0.0050	<0.0050	0.075	7.5
		<0.0050	<0.0050	<0.0050	<0.0050	5.1
Hand Auger					<0.0050	25
I S-6-B1 1/98	<1.0		<0.0050	<0.0050	<0.0050	
J S-6-B2 1/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
		<0.0050	<0.0050	<0.0050	<0.0050	1.0

Notes:

- Soil results in milligrams per kilograms (mg/Kg)
- < = Less than detection limit established by laboratory.
- TPPHg = Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 8015 (modified)
- BTEX = Benzene, toluene, ethylbenzene, total xylene isomers analyzed using EPA method 8020
- MTBE = Methyl tertiary -butyl ether analyzed using EPA method 8020
- TEPHd = Total extractable petroleum hydrocarbons as diesel using EPA method 8015 (modified)



FN 8008003A



GENERALIZED SITE PLAN

FORMER
EXXON SERVICE STATION 7-0236
 6600 East 14th Street

EXPLANATION

- ◆ Groundwater Monitoring Well
- ✱ Groundwater Monitoring Well (Destroyed)
- Soil Boring
- ✱ Former Underwater Well (Destroyed)

PROJECT NO.

2009

PLATE

5

SOURCE: Modified from maps provided by Exxon Company, USA

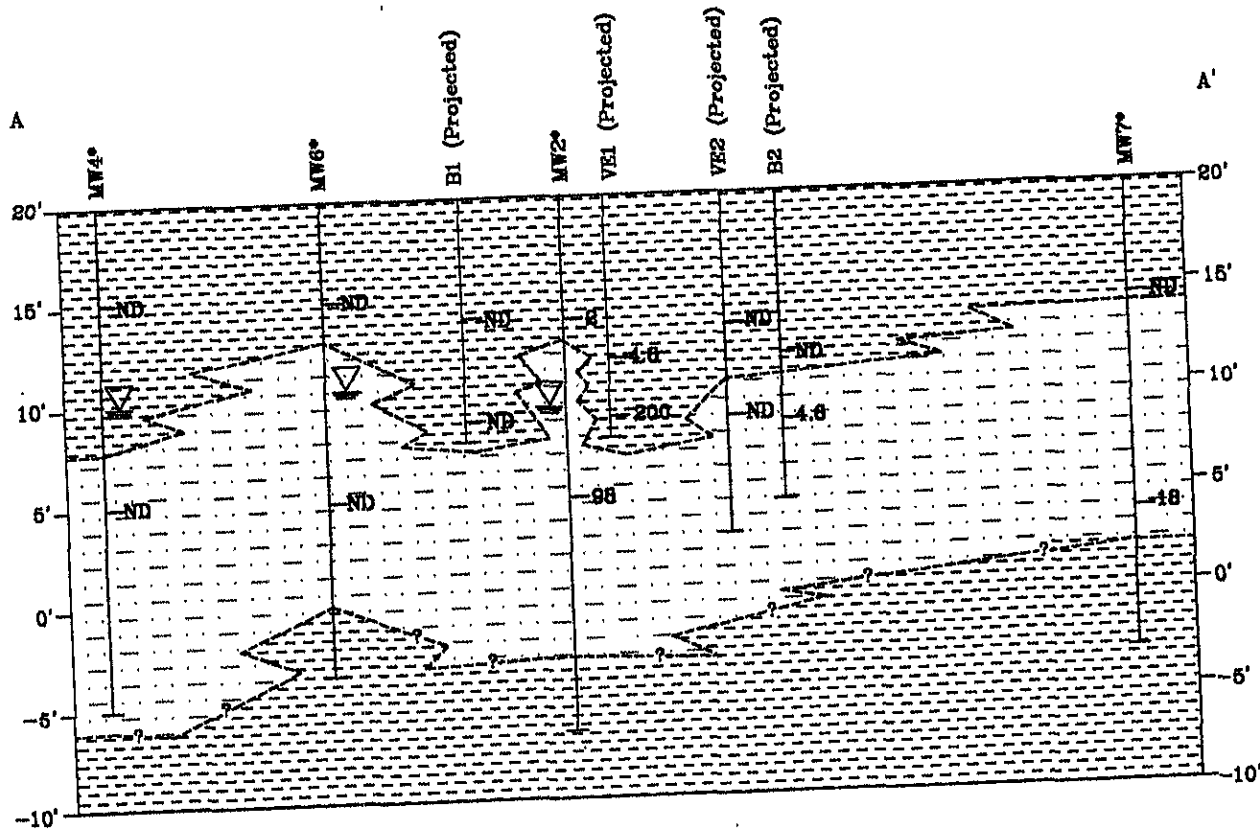
TABLE 8
GROUNDWATER SAMPLE RESULTS
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 1 of 1)




Sample	Sampling Date	DTW	TEPHd	TPPHg	MTBE	B	T	E	X	DO
			<.....ug/L.....>							
W-11-SB1	10/13/99	11	---	18,000	1,900	46	<25	1,200	32	---
W-13-SB2	10/13/99	13	---	<50	<5	<1	<1	<1	<1	---
W-16-SB3	10/13/99	16	---	<50	<5	<1	<1	<1	<1	---
W-21-MW2	10/13/99	21	590	1,800	1,300	8.6	<5	<5	<5	8.71

Notes:

- W-11-SB1 = Water sample collected from soil boring one at 11 feet below grade surface.
- DTW = Depth to water.
- TEPHd = Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 8015 (modified).
- TPPHg = Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015 (modified).
- MTBE = Methyl tertiary butyl ether analyzed using EPA method 8260.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA method 8021.
- DO = Dissolved oxygen reading collected after well purging using a YSI model 55 meter.
-
- < = Not measured/not analyzed.
- ug/L = Less than the indicated detection limit shown by the laboratory.
- mg/L = Micrograms per liter.
- = Milligrams per liter

APPROXIMATE SCALE



-  Clay or Silty Clay
-  Intermittent Sandy Clay, Silty Clay, Silty Sand with Clayey Sand Lenses or Gravelly Silt
-  Static Groundwater Surface (10/11/99)

APPROXIMATE SCALE



SOURCE: Cross Section modified from Alton Geoscience (1998)

FN 8009XSA



CROSS SECTION A - A'

FORMER
 EXXON SERVICE STATION 7-0236
 6600 East 14th Street
 Oakland, California

EXPLANATION

- * Boring logs not available; data acquired from Alton Geoscience cross section (8/92)
- 200 Concentration of total purgeable petroleum hydrocarbons as gasoline in parts per million (ppm).
- ND Not Detected
- MW4 Monitoring Well
- B2 Soil Boring
- VE1 Vapor Extraction Well

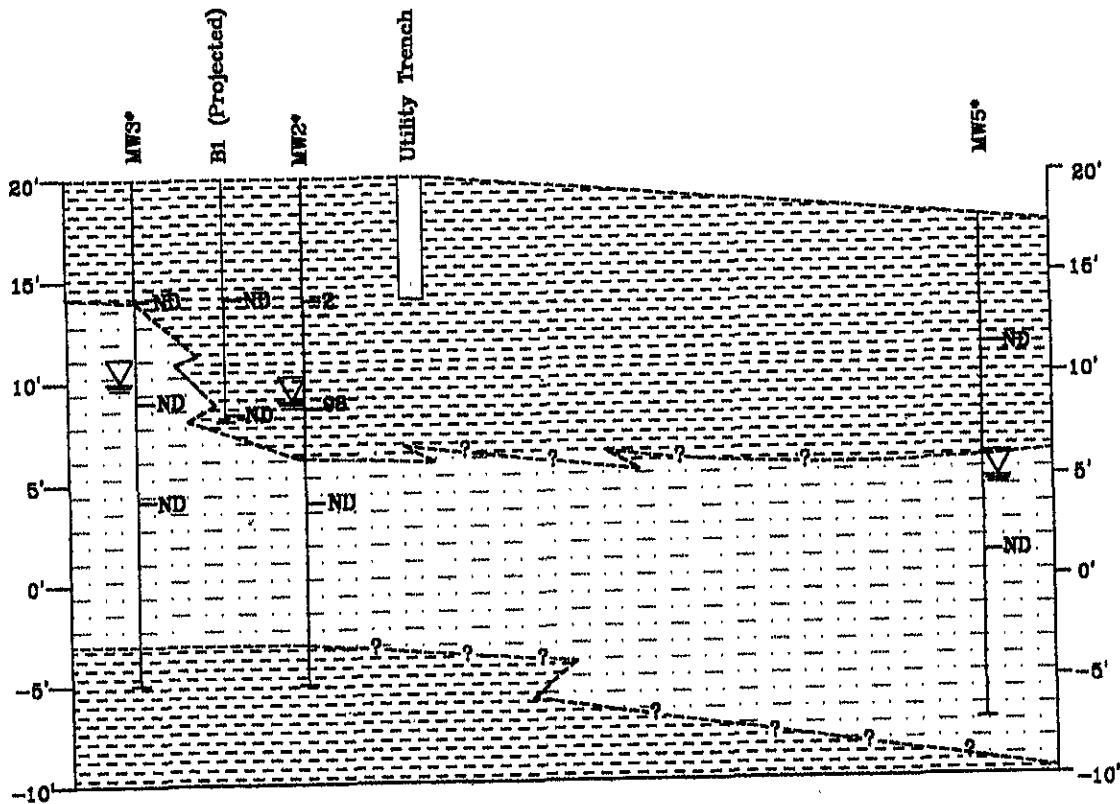
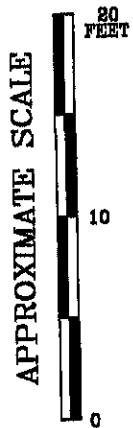
PROJECT NO.

2009

PLATE

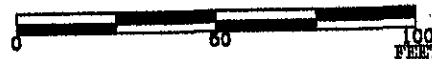
I

DATE: 12/15/05



- Clay or Silty Clay
- Sandy Clay or Clayey Sand
- Static Groundwater Surface (10/11/99).

APPROXIMATE SCALE



SOURCE: Cross Section modified from Alton Geoscience (1998)

FN 2009XSBB



CROSS-SECTION B - B'

FORMER
 EXXON SERVICE STATION 7-0236
 6600 East 14th Street
 Oakland, California

EXPLANATION

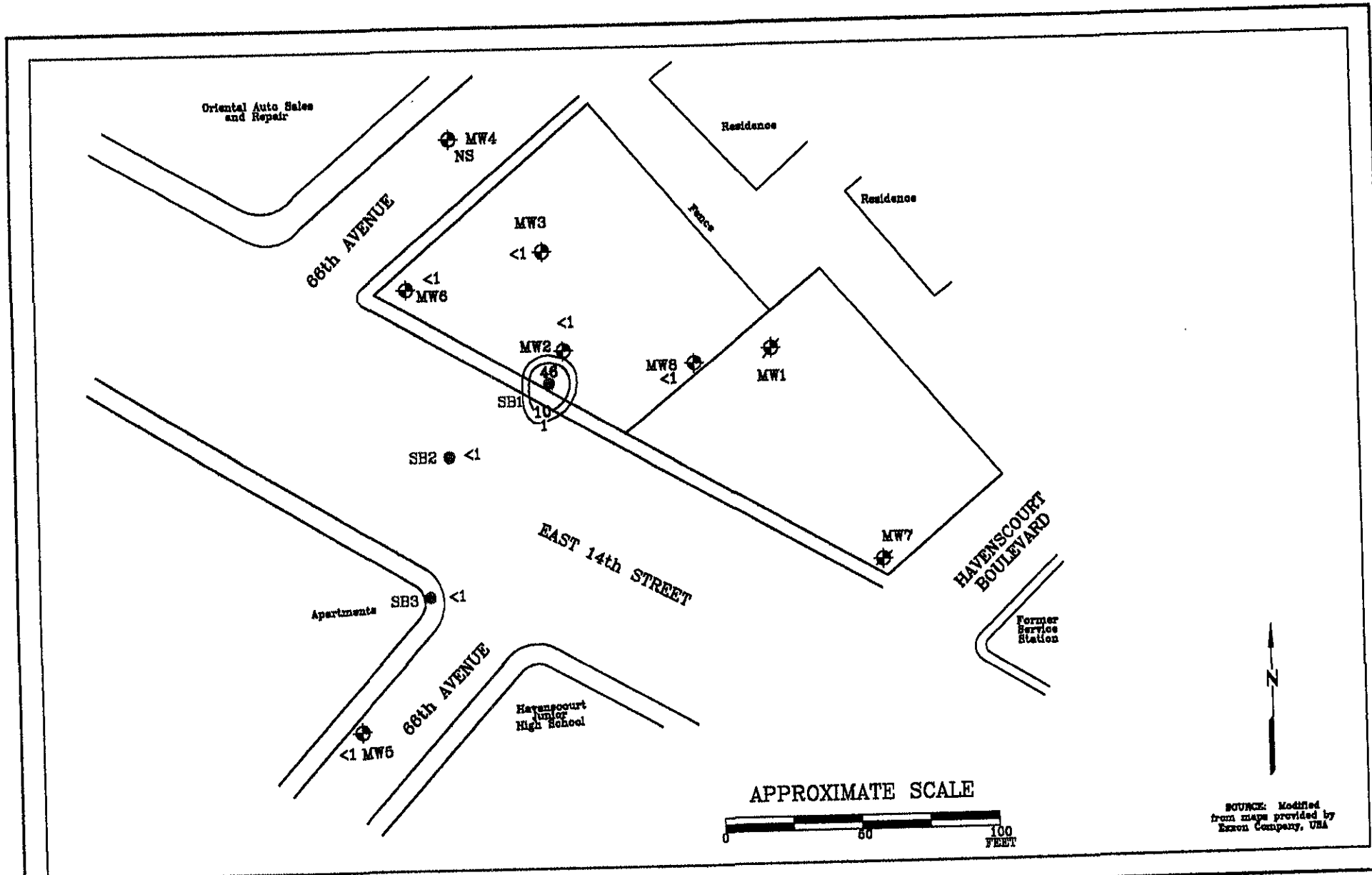
- * Boring logs not available; data acquired from Alton Geoscience cross section (1998)
- 98 Concentration of total purgeable petroleum hydrocarbons as gasoline in parts per million (ppm).
- ND Not Detected
- MW5 Monitoring Well

PROJECT NO.

2009

PLATE

DATE: 12/15/95



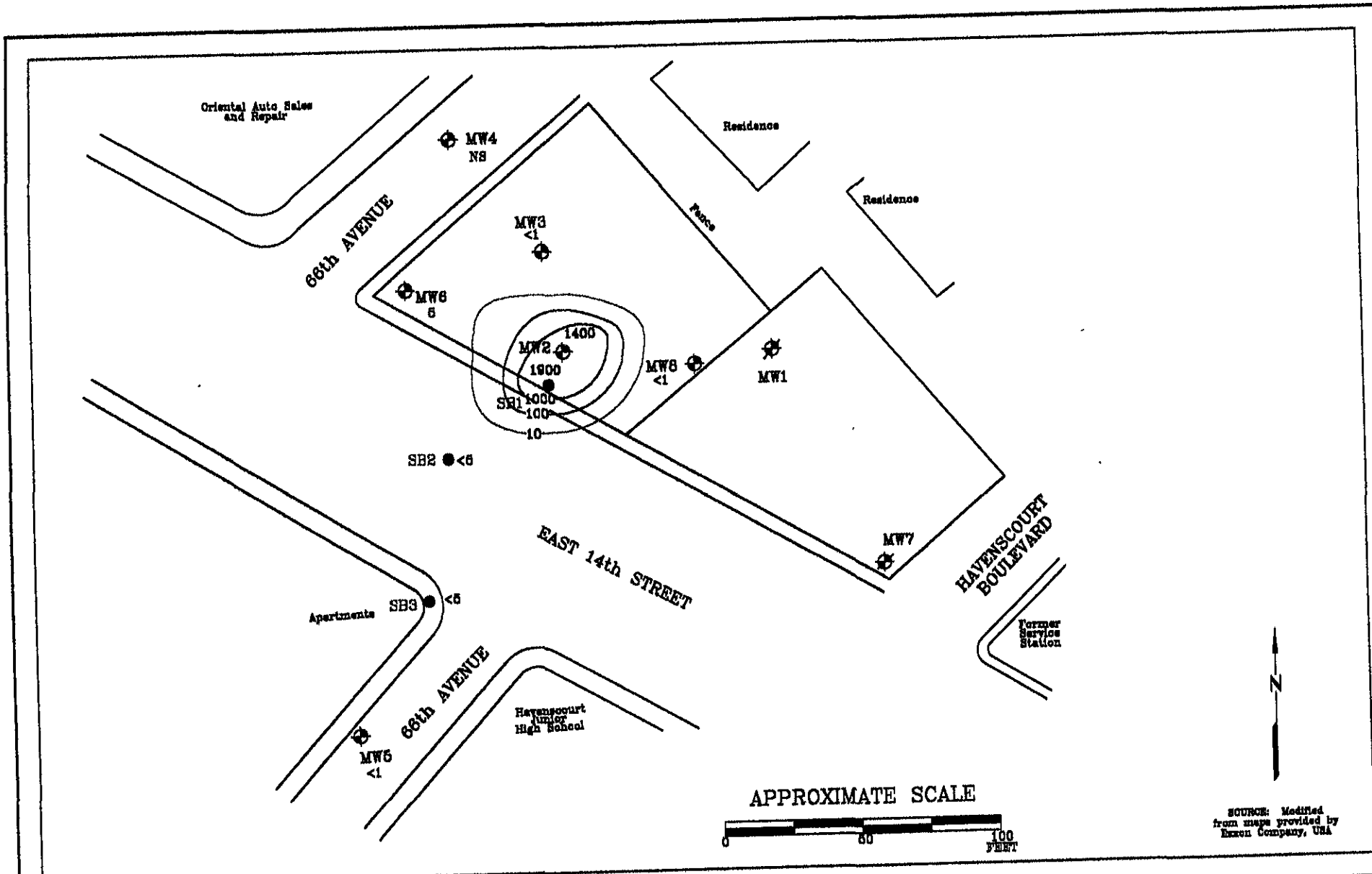
FN 2009008A



**BENZENE
ISOCONCENTRATION MAP
OCTOBER 11, 1999**
FORMER
EXXON SERVICE STATION 7-0236
6600 East 14th Street

EXPLANATION	
◆	Groundwater Monitoring Well
✱	Groundwater Monitoring Well (Destroyed)
●	Soil Boring
	Benzene Concentration in us/l

PROJECT NO.	2009
PLATE	8



APPROXIMATE SCALE



SOURCE: Modified from maps provided by Exxon Company, USA

FN 2009003A

MTBE
ISOCONCENTRATION MAP
OCTOBER 11, 1999
 FORMER
EXXON SERVICE STATION 7-0236

MWS EXPLANATION

- ◆ Groundwater Monitoring Well
- ✱ Groundwater Monitoring Well (Destroyed)
- Soil Boring

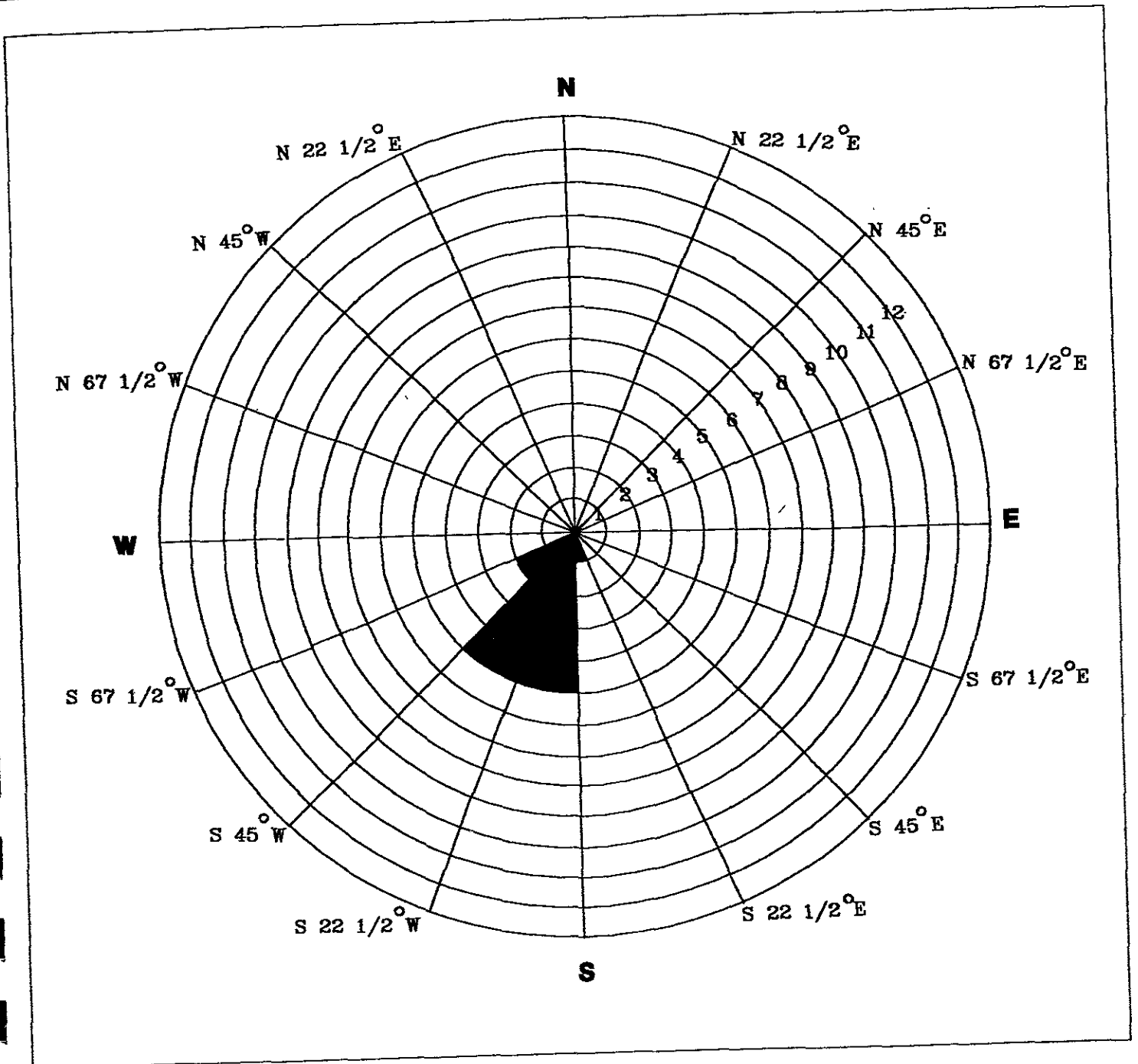
PROJECT NO.

2009

PLATE

7





FN 20090005

EXPLANATION

N Compass Direction
Thirteen Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of quarterly monitoring events that the gradient plotted in that 22 1/2 degree sector. For example, five quarterly groundwater gradient directions plotted between due south and south 22 1/2 degrees west. Therefore, the dominant groundwater gradient direction as depicted by the rose diagram is between due south and south 45 degrees west.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

FORMER EXXON SERVICE STATION 7-0236
6600 East 14th Street
Oakland, California

PROJECT NO.

2009

PLATE 9

June 21, 1999



TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 1 of 8)

Well ID # (TOC)	Sampling Date	SUBI	DTW feet	Elev. >	TEPHd <	TPPHg >	MTBE >	B ug/L	T >	E >	X >	DO <	Ferrous Iron mg/L	Alkalinity mg/L	Nitrate mg/L	Sulfate mg/L
MW1 (20.20)	3/15/91	NR	7.44	12.76	---	<50	---	<0.3	0.5	0.3	1.3	---	---	---	---	---
	1/15/92 (H,T)	NR	10.60	9.60	< 300	<50	---	<0.5	0.7	<0.5	0.9	---	---	---	---	---
	3/23/92 (H,T)	NR	6.38	13.82	<50	<50	---	<0.5	<0.5	<0.5	< 0.5	---	---	---	---	---
	4/6/92	NR	7.55	12.65	---	---	---	---	---	---	---	---	---	---	---	---
	7/8/92 (H,T)	NR	9.85	10.35	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	10/13/92 (H,T)	NR	12.95	7.25	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	3/9/93	NLPH	7.38	12.82	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	6/4/93	NLPH	8.55	11.65	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	9/2/93	NLPH	10.85	9.35	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	11/16/93	NLPH	12.43	7.77	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	2/4/94	NLPH	9.10	11.10	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	4/29/94	NLPH	8.45	11.75	<50	<50	---	<0.5	< 0.5	<0.5	<0.5	---	---	---	---	---
	9/20/94	NLPH	10.73	9.47	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	12/14/94	NLPH	7.35	12.85	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	3/27/95	NLPH	7.06	13.14	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	5/18/95	NLPH	7.32	12.88	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	8/8/95	NLPH	9.24	10.96	<50	<50	< 2.5	<0.5	<0.5	<0.5	< 0.5	---	---	---	---	---
	11/7/95	NLPH	10.74	9.46	<50	<50	< 2.5	<0.5	<0.5	<0.5	< 0.5	---	---	---	---	---
	2/29/96	NLPH	6.80	13.40	53	<50	< 2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	5/10/96	NLPH	8.13	12.07	150	<50	< 2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	8/20/96	NLPH	9.58	10.62	<50	<50	< 2.5	<0.5	<0.5	<0.5	< 0.5	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	9.50	---	---	---	---
	11/27/96	---	---	---	---	---	---	---	---	---	---	11.54	---	---	---	---
	12/6/96	NLPH	8.10	12.10	---	---	---	---	---	---	---	10.05	---	---	---	---
	1/19/97	Abandoned	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW2 (19.15)	3/15/91 (H,T)	NR	9.05	10.10	120	1,700	---	190	2.6	12	64	---	---	---	---	---
	1/15/92 (H,T)	NR	11.60	7.55	1,000	6,800	---	81	<10	320	170	---	---	---	---	---
	3/23/92 (H,T)	NR	9.42	9.73	3,000	7,100	---	740	30	810	490	---	---	---	---	---
	4/6/92	NR	9.09	10.06	---	---	---	---	---	---	---	---	---	---	---	---
	7/8/92	NR	10.08	9.07	2,100	7,000	---	250	14	300	160	---	---	---	---	---
	10/13/92	NR	12.06	7.09	1,900	3,200	---	97	2.6	97	53	---	---	---	---	---
	3/9/93	sheen	9.71	9.44	---	---	---	---	---	---	---	---	---	---	---	---
	6/4/93	sheen	9.40	9.75	---	---	---	---	---	---	---	---	---	---	---	---
	9/2/93	sheen	10.46	8.69	3,700	11,000	2,500	210	18	260	59	---	---	---	---	---
	11/16/93 (M*)	NLPH	11.44	7.71	3,300	8,500	---	75	27	51	32	---	---	---	---	---
	2/4/94	NLPH	10.41	8.74	2,700	4,400	---	120	16	22	7.7	---	---	---	---	---
	4/29/94	NLPH	9.51	9.64	2,000	380	---	5.9	0.6	1.6	<0.5	---	---	---	---	---
	9/20/94	NLPH	10.57	8.58	1,800**	19,000	---	190	29***	110	27***	---	---	---	---	---
	12/14/94	sheen	8.90	10.25	---	---	---	---	---	---	---	---	---	---	---	---
	3/27/95	NLPH	7.72	11.43	1,700	6,300	---	210	15	250	43	---	---	---	---	---
	5/18/95	sheen	8.65	10.30	2,000#	6,000	---	180	9.9	220	55	---	---	---	---	---
	8/8/95	NLPH	9.67	9.48	2,700	5,300	36,000	110	<20	120	<20	---	---	---	---	---
	11/7/95	NLPH	10.49	8.66	1,800	6,400	24,000	120	11	95	38	---	---	---	---	---
	2/29/96	NLPH	8.45	10.70	2,500	<5,000	25,000	120	<50	120	<50	---	---	---	---	---

Additional Analyses for general minerals and properties < *

TABLE 10
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 2 of 8)

Well ID # (TOC)	Sampling Date	SUBJ < ... >	DTW feet	Elev. > ... <	TEPHd < ... >	TPPHg < ... >	MTBE < ... >	B ug/L	T < ... >	E < ... >	X < ... >	DO < ... >	Ferrous Iron mg/L	Alkalinity mg/L	Nitrate < ... >	Sulfate < ... >	
MW2 (cont.) (19.15)	5/10/96	NLPH	9.02	10.13	2,300	11,000	26,000	210	120	210	140	---	---	---	---	---	
	8/20/96	NLPH	10.08	9.07	---	---	---	---	---	---	---	7.75	---	---	---	---	
	10/17/96	---	---	---	---	---	---	---	---	---	---	6.28	---	---	---	---	
	11/27/96	---	---	---	---	---	---	---	---	---	---	5.21	---	---	---	---	
	12/16/96	NLPH	10.21	8.94	1,700	5,800	< 125	170	<25	38	<25	5.21	---	---	---	---	
	1/17/97	NLPH	---	---	---	---	---	---	---	---	---	3.67	---	---	---	---	
	(22.19)	2/25/97	NLPH	8.15	14.04	1,500	5,900	4,400	110	14	310	52	2.71	---	---	---	---
		3/13/97	---	---	---	---	---	---	---	---	---	---	2.46	---	---	---	---
		4/16/97	---	---	---	---	---	---	---	---	---	---	1.00	---	---	---	---
		5/21/97	NLPH	10.50	11.69	1,600	5,700	1,800	71	11	240	59	0.85	---	---	---	---
		6/5/97	---	---	---	---	---	---	---	---	---	---	2.18	---	---	---	---
		7/11/97	---	---	---	---	---	---	---	---	---	---	1.87	---	---	---	---
		8/6/97	NLPH	10.80	11.39	1,600	4,100	(1,900)	40	5.2	49	17	1.51	---	---	---	---
		9/23/97	---	---	---	---	---	---	---	---	---	---	2.36	---	---	---	---
		10/7/97	NLPH	11.08	11.11	1,200	280	230	1.2	2.4	< 0.5	1.1	1.56	---	---	---	---
		12/24/97	---	---	---	---	---	---	---	---	---	---	1.23	---	---	---	---
	1/16/98	NLPH	7.29	14.90	1,200	3,500	3,000	190	14	110	31	1.18	---	---	---	---	
	2/20/98	---	---	---	---	---	---	---	---	---	---	1.30	---	---	---	---	
	3/26/98	---	---	---	---	---	---	---	---	---	---	1.20	---	---	---	---	
	4/17/98	NLPH	8.61	13.58	970	3,200	2,600	150	6.9	37	5.7	1.38	---	---	---	---	
5/13/98	---	---	---	---	---	---	---	---	---	---	0.45	---	---	---	---		
6/22/98	---	---	---	---	---	---	---	---	---	---	1.09	---	---	---	---		
7/17/98	NLPH	9.38	12.81	1,300	1,700	1,500	63	< 5.0	<5.0	<5.0	0.86	---	---	---	---		
10/16/98	NLPH	10.41	11.78	1,500	2,000	1,400	22	< 2.0	< 2.0	2.4	---	---	---	---	---		
1/15/99	NLPH	10.01	12.18	900	2,300	2,200	< 5.0	6.0	<5.0	6.5	---	---	---	---	---		
4/23/99	NLPH	7.61	14.58	967	2,140	937	42.3	<1.0	22.3	<1.0	---	---	---	---	---		
7/30/99	NLPH	9.82	12.37	1,620	2,480	1,470/1,360*	100	<10.0	<10.0	<10.0	---	---	---	---	---		
8/12/99	NLPH	10.00	12.19	---	---	---	---	---	---	---	---	0.710	750	6.0	7.2		
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	1.02	---	---	---	---		
10/11/99	NLPH	10.46	11.73	1,700	2,900	1,300/1,400*	<1.0	2.5	<1.0	<1.0	---	0.200	927	14.8	27.6		
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	19.71	---	---	---	---		
1/26-27/2000	NLPH	8.95	13.24	150/180**	160	420	12	<0.5	<0.5	<0.5	4.10	0.0200	842	6.97	28.2		
MW3 (19.59)	3/15/91 (H,T)	NR	7.84	11.75	160	3,100	---	2.2	1.9	100	84	---	---	---	---	---	
	1/15/92 (H,T)	NR	10.30	9.29	< 300	250	---	0.7	6.8	1.5	1.5	---	---	---	---	---	
	3/23/92 (H,T)	NR	6.84	12.75	440	640	---	<0.5	12	25	6.5	---	---	---	---	---	
	4/6/92	NR	7.84	11.75	---	---	---	---	---	---	---	---	---	---	---	---	
	7/8/92 (H,T)	NR	8.63	10.96	960	2,900	---	<0.5	2.6	12	63.7	---	---	---	---	---	
	10/13/92 (H)	NR	12.10	7.49	400	1,100	---	5.5	<0.5	4.6	1.1	---	---	---	---	---	
	3/9/93	sheen	9.05	10.54	---	---	---	---	---	---	---	---	---	---	---	---	
	6/4/93	sheen	8.43	11.16	---	---	---	---	---	---	---	---	---	---	---	---	
	9/2/93	NLPH	10.22	9.37	690	840	---	2.7	3.6	5.4	2.9	---	---	---	---	---	
	11/16/93	NLPH	11.44	8.15	310	650	---	<0.5	11	7.7	2.4	---	---	---	---	---	
	2/4/94	NLPH	9.27	10.32	340	870	---	0.6	14	1.2	0.8	---	---	---	---	---	
	4/29/94	NLPH	8.10	11.49	290	790	---	<0.5	<0.5	0.8	1	---	---	---	---	---	
	9/20/94	NLPH	10.10	9.49	91**	1,900	---	<0.5	<0.5	11	4.4	---	---	---	---	---	
12/14/94	NLPH	8.00	11.59	190	1,700	---	17	22	<0.5	<0.5	---	---	---	---	---		
3/27/95	NLPH	7.23	12.36	1,100	1,500	---	5.0	3.1	6.3	3.6	---	---	---	---	---		

TABLE 10
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
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Well ID #	Sampling Date	SUBJ	DTW feet	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	DO	Ferrous Iron	Alkalinity	Nitrate	Sulfate		
(TOC)								ug/L					mg/L					
MW3 (cont.) (19.59)	5/18/95	NLPH	7.73	11.86	470#	1,000	---	<0.5	<0.5	4.1	0.94	---	---	---	---	---		
	8/8/95	NLPH	8.81	10.78	580	1,600	12	12	<0.5	2.4	0.63	---	---	---	---	---		
	11/7/95	NLPH	9.96	9.63	540	1,500	26	<2.5	2.9	<2.5	<2.5	---	---	---	---	---		
	2/29/96	NLPH	8.47	11.12	680	1,000	<25	<5.0	<5.0	<5.0	<5.0	---	---	---	---	---		
	5/10/96	NLPH	7.93	11.66	560	480	6.8	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---		
	8/20/96	NLPH	10.13	9.46	---	---	---	---	---	---	---	---	---	---	---	---	---	
	10/17/96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/27/96	---	---	---	---	---	---	---	---	---	---	---	7.65	---	---	---	---	
	12/6/96	NLPH	9.21	10.38	450	970	19	<1.0	<1.0	<1.0	1.8	---	---	---	---	---	---	
	1/17/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	(22.62)	2/25/97	NLPH	8.34	14.28	410	990	47	10	0.85	0.86	1.5	10.69	---	---	---	---	
		3/13/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		4/16/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		5/21/97	NLPH	9.99	12.63	270	<50	<2.5	<0.5	<0.5	<0.5	<0.5	6.76	---	---	---	---	
		6/5/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		7/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		8/6/97	NLPH	10.29	12.33	310	650	<5.0	4.0	<1.0	<1.0	<1.0	10.59	---	---	---	---	
		9/23/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		10/7/97	NLPH	10.86	11.76	500	1,600	12	24	10	<2.0	3.5	11.81	---	---	---	---	
		12/24/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1/16/98		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
2/20/98		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
3/26/98		---	---	---	---	---	---	---	---	---	---	---	11.22	---	---	---	---	
4/17/98		NLPH	7.56	15.06	220	710	21	<0.5	0.76	<0.5	<0.5	9.40	---	---	---	---		
5/13/98		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
6/22/98		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
7/17/98		NLPH	8.23	14.39	180	450	8.9	9.5	<1.0	<1.0	<1.0	0.96	---	---	---	---		
10/16/98		NLPH	9.75	12.87	320	520	5.1	<0.5	11	<0.5	0.93	---	---	---	---	---		
1/15/99		NLPH	8.83	13.79	600	190	12	<0.5	0.91	<0.5	0.7	---	---	---	---	---	---	
4/23/99		NLPH	7.11	15.51	194	406	2.71	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---	
7/30/99	NLPH	8.98	13.64	72.5	193	<2.50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	---		
8/12/99	NLPH	9.40	13.22	---	---	---	---	---	---	---	---	---	---	---	---	---		
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	---	---	0.0440	330	48.1	47.4		
10/11/99	NLPH	9.91	12.71	100	130	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---	---		
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	---	---	0.0490	317	50.1	48.2		
1/26-27/2000	NLPH	8.56	14.06	150/<50**	210	<2	1.6	<0.5	<0.5	<0.5	<0.5	1.41	---	---	---	---		
MW4 (19.46)	4/6/92	NR	7.76	11.70	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	7/8/92	NR	9.56	9.90	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	10/13/92	NR	12.09	7.37	<80	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	3/9/93	NLPH	7.53	11.93	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	6/4/93	NLPH	8.50	10.96	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	9/2/93	NLPH	10.30	9.16	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	11/16/93*	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/4/94	NLPH	8.82	10.64	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	4/29/94 (D)	NLPH	8.55	10.91	100	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
	9/20/94	NLPH	10.21	9.25	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
12/14/94	NLPH	7.04	12.42	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---			

TABLE 10
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
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Well ID #	Sampling Date	SUBJ	DTW feet	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	DO	Ferrous Iron	Alkalinity	Nitrate	Sulfate	
(TOC)					ug/L												
					mg/L												
MW4 (cont.) (19.46)	3/27/93	NLPH	6.38	13.08	140	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/18/93	NLPH	7.56	11.90	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	8/8/93	NLPH	8.92	10.54	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/7/93	NLPH	10.30	9.16	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/29/96	NLPH	6.44	13.02	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/10/96	NLPH	8.15	11.31	<50	<50	<2.5	<0.5	0.84	<0.5	<0.5	2.3	---	---	---	---	
	8/20/96	NLPH	9.27	10.19	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	
	10/17/96	---	---	---	---	---	---	---	---	---	---	---	1.63	---	---	---	---
	11/27/96	---	---	---	---	---	---	---	---	---	---	---	1.54	---	---	---	---
	12/6/96	NLPH	7.76	11.70	---	---	---	---	---	---	---	---	2.33	---	---	---	---
	1/17/97	---	---	---	---	---	---	---	---	---	---	---	0.91	---	---	---	---
	(22.58)	2/25/97	NLPH	7.98	14.60	<50	<50	<2.5	<0.5	0.89	<0.5	1.8	---	---	---	---	---
		3/13/97	---	---	---	---	---	---	---	---	---	---	---	1.06	---	---	---
4/16/97		---	---	---	---	---	---	---	---	---	---	---	4.03	---	---	---	
5/21/97		NLPH	9.03	13.55	---	---	---	---	---	---	---	---	0.90	---	---	---	
6/5/97		---	---	---	---	---	---	---	---	---	---	---	1.46	---	---	---	
7/11/97		---	---	---	---	---	---	---	---	---	---	---	1.31	---	---	---	
8/6/97		NLPH	9.74	12.84	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
9/23/97		---	---	---	---	---	---	---	---	---	---	---	1.50	---	---	---	
10/7/97		NLPH	10.06	12.52	---	---	---	---	---	---	---	---	1.65	---	---	---	---
12/24/97		---	---	---	---	---	---	---	---	---	---	---	1.96	---	---	---	---
1/16/98		NLPH	5.01	17.57	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
2/20/98		---	---	---	---	---	---	---	---	---	---	---	3.33	---	---	---	---
3/26/98		---	---	---	---	---	---	---	---	---	---	---	1.65	---	---	---	---
4/17/98		NLPH	7.21	15.37	---	---	---	---	---	---	---	---	3.10	---	---	---	---
5/13/98		---	---	---	---	---	---	---	---	---	---	---	0.40	---	---	---	---
6/22/98		---	---	---	---	---	---	---	---	---	---	---	1.20	---	---	---	---
7/17/98		NLPH	8.46	14.12	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
10/16/98	NLPH	9.84	12.74	---	---	---	---	---	---	---	---	---	---	---	---	---	
1/15/99	NLPH	11.33	11.25	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
4/23/99	NLPH	7.63	14.95	---	---	---	---	---	---	---	---	---	---	---	---	---	
7/30/99	NLPH	9.17	13.41	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	---	---	2.94	---	---	---	
10/11/99	NLPH	9.98	12.60	---	---	---	---	---	---	---	---	---	---	---	---	---	
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	---	---	1.36	---	---	---	
1/26-27/2000	NLPH	7.60	14.98	110/ <50**	<50	<2	<0.5	<0.5	<0.5	<0.5	<0.5	3.00	---	---	---	---	
MW5 (16.95)	4/6/92	NR	10.66	6.29	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	7/8/92 *	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	10/13/92	NR	15.02	1.93	<50	69	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	3/9/93	NLPH	10.27	6.68	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	6/4/93	NLPH	11.35	5.60	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	9/2/93	NLPH	13.15	3.80	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/16/93	NLPH	14.35	2.60	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/4/94	NLPH	11.83	5.12	60	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	4/29/94	NLPH	11.15	5.80	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	9/20/94	NLPH	12.79	4.16	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	12/14/94	NLPH	9.95	7.00	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	

TABLE 10
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
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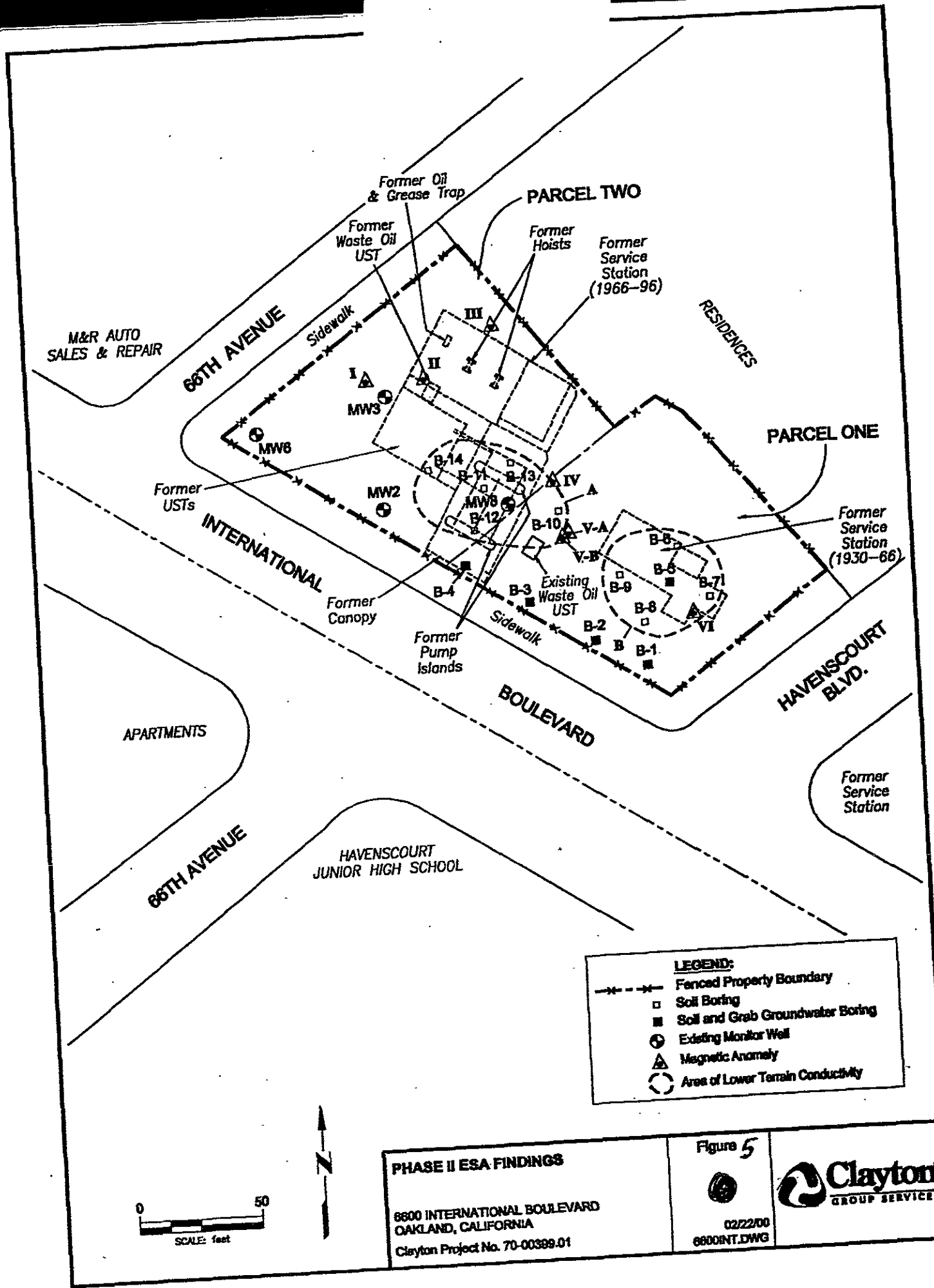
Well ID #	Sampling Date	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	DO	Ferrous Iron	Alkalinity	Nitrate	Sulfate	
(TOC)			feet					ug/L					mg/L				
MW5 (cont.) (16.95)	3/27/95	NLPH	9.09	7.86	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/18/95	NLPH	10.29	6.66	<50	<50	---	<0.5	4.6	0.65	2.8	---	---	---	---	---	
	8/8/95	NLPH	11.13	5.82	51	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/7/95	NLPH	12.12	4.83	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
Additional Analyses for general minerals and properties < **																	
(19.98)	2/29/96	NLPH	9.24	7.71	60	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/10/96	NLPH	10.71	6.24	<50	<50	<2.5	<0.5	<0.5	<0.5	1.6	---	---	---	---	---	
	8/20/96	NLPH	11.45	5.50	---	---	---	---	---	---	---	---	---	---	---	---	
	10/17/96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/27/96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	12/6/96	NLPH	10.70	6.25	90	62	<2.5	1.2	6.5	1.7	11	---	---	---	---	---	
	1/17/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	2/25/97	NLPH	10.49	6.46	90	<50	<2.5	1.4	2.4	0.95	7.4	---	---	---	---	---	
	3/13/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	4/16/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	5/21/97	NLPH	11.31	8.67	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	6/5/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	7/11/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/6/97	NLPH	11.78	8.20	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	9/23/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	10/7/97	NLPH	12.26	7.72	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	12/24/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	1/16/98	NLPH	8.87	11.11	<50	<50	<2.5	<0.5	<0.5	<0.5	0.64	---	---	---	---	---	
	2/20/98	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	3/26/98	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	4/17/98	NLPH	9.97	10.01	<50	<50	<2.5	0.9	2.2	0.81	3.6	---	---	---	---	---	
	5/13/98	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/22/98	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	7/17/98	NLPH	11.00	8.98	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	
	10/16/98	NLPH	11.92	8.06	51	<50	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	
	1/15/99	NLPH	9.01	10.97	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	
4/23/99	NLPH	6.31	13.67	<50	<50	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---		
7/30/99	NLPH	11.16	8.82	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---		
8/12/99	NLPH	11.48	8.50	---	---	---	---	---	---	---	---	---	0.110	510	<1.0	17.7	
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	---	2.11	---	---	---	---	
10/11/99	NLPH	12.01	7.97	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	4.00	457	5.39	27.2	
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	---	1.58	---	---	---	---	
1/26-27/2000	NLPH	10.12	9.86	130 < 50**	<50	<2	<0.5	<0.5	<0.5	<0.5	<0.5	2.20	0.0340	503	<1.00	1.95	
MW6 (18.79)	4/6/92 (H)	NR	8.29	10.50	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	7/8/92 (H,T)	NR	9.22	9.57	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	10/13/92	NR	11.51	7.28	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	3/9/93	NLPH	8.26	10.53	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	6/4/93	NLPH	8.90	9.89	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	9/2/93	NLPH	9.92	8.87	60	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/16/93	NLPH	10.65	8.14	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/4/94	NLPH	9.26	9.53	80	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
4/29/94	NLPH	8.33	10.46	110	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		

TABLE 1C
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 6 of 8)

Well ID #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	DO	Ferrous Iron	Alkalinity	Nitrate	Sulfate	
(TOC)	Date	<.....>	feet.....>	>	<.....>	<50	ug/L	<0.5	<0.5	<0.5	<0.5	<.....>	<.....>	mg/L.....>	>	>	
MW6 (cont.) (18.79)	9/20/94	NLPH	9.23	9.56	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	12/14/94	sheen	7.87	10.92	---	---	---	---	---	---	---	---	---	---	---	---	
	3/27/95	NLPH	7.63	11.16	54	56	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/18/95	NLPH	8.00	10.79	71	56	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	8/8/95	NLPH	8.92	9.87	60	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/7/95	NLPH	9.77	9.02	<50	<50	4.7	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/29/96	NLPH	7.67	11.12	64	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/10/96	NLPH	8.33	10.46	110	<50	5.4	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	8/20/96	NLPH	9.16	9.63	---	---	---	---	---	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	10.58	---	---	---	---	
	11/27/96	---	---	---	---	---	---	---	---	---	---	14.17	---	---	---	---	
	12/6/96	NLPH	8.55	10.24	68	<50	3.9	<0.5	<0.5	<0.5	<0.5	10.33	---	---	---	---	
	1/17/97	---	---	---	---	---	---	---	---	---	---	11.71	---	---	---	---	
	2/25/97	NLPH	8.42	13.42	67	<50	6.8	<0.5	<0.5	<0.5	<0.5	10.94	---	---	---	---	
	3/13/97	---	---	---	---	---	---	---	---	---	---	8.88	---	---	---	---	
	4/16/97	---	---	---	---	---	---	---	---	---	---	15.20	---	---	---	---	
	(21.84)	5/21/97	NLPH	9.16	12.68	82	<50	3.4	<0.5	<0.5	<0.5	<0.5	12.38	---	---	---	---
6/5/97		---	---	---	---	---	---	---	---	---	---	10.99	---	---	---	---	
7/11/97		---	---	---	---	---	---	---	---	---	---	10.13	---	---	---	---	
8/6/97		NLPH	9.82	12.02	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	9.05	---	---	---	---	
9/23/97		---	---	---	---	---	---	---	---	---	---	6.22	---	---	---	---	
10/7/97		NLPH	9.85	11.99	89	<50	4.1	<0.5	<0.5	<0.5	<0.5	9.68	---	---	---	---	
12/24/97		---	---	---	---	---	---	---	---	---	---	2.78	---	---	---	---	
1/16/98		NLPH	5.50	16.34	93	<50	<2.5	<0.5	<0.5	<0.5	<0.5	2.73	---	---	---	---	
2/20/98		---	---	---	---	---	---	---	---	---	---	3.55	---	---	---	---	
3/26/98		---	---	---	---	---	---	---	---	---	---	3.90	---	---	---	---	
4/17/98		NLPH	8.12	13.72	59	<50	<2.5	<0.5	<0.5	<0.5	<0.5	5.08	---	---	---	---	
5/13/98		---	---	---	---	---	---	---	---	---	---	6.90	---	---	---	---	
6/22/98		---	---	---	---	---	---	---	---	---	---	8.96	---	---	---	---	
7/17/98		NLPH	8.81	13.03	63	<50	3.3	<0.5	<0.5	<0.5	<0.5	10.69	---	---	---	---	
10/16/98		NLPH	9.84	12.00	60	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
1/15/99		NLPH	9.55	12.29	<50	<50	3.7	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
4/23/99		NLPH	8.72	13.12	106	<50	14.4	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
7/30/99	NLPH	9.32	12.52	<50	<50	<2.50/2.50*	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	6.20	---	---	---	---		
10/11/99	NLPH	9.54	12.30	<50	<50	3.4/5*	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---		
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	9.09	---	---	---	---		
1/26-27/2000	NLPH	9.09	12.75	120/ <50**	<50	2.7	<0.5	<0.5	<0.5	<0.5	2.30	---	---	---	---		
MW7 (19.23)	4/6/92	NR	8.34	10.89	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	7/8/92 *	NR	10.30	8.93	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	10/13/92	NR	12.91	6.32	94	670	---	0.8	<0.5	<0.5	2.5	---	---	---	---	---	
	3/9/93	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	6/4/93	NLPH	8.68	10.55	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	9/2/93	NLPH	10.80	8.43	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/16/93	NLPH	12.38	6.85	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/4/94	NLPH	9.28	9.95	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
4/29/94	NLPH	9.19	10.04	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---		

TABLE 10
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-0236
 6600 East 14th Street
 Oakland, California
 (Page 7 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >.....<	TBPHd <.....>	TPPHg <.....>	MTBE <.....>	B ug/L	T <.....>	E <.....>	X <.....>	DO <.....>	Ferrous Iron mg/L	Alkalinity mg/L	Nitrate mg/L	Sulfate mg/L	
MW7 (cont.) (19.23)	9/20/94	NLPH	10.85	8.38	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	12/14/94	NLPH	8.44	10.79	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	3/27/95	NLPH	7.54	11.69	280	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/18/95	NLPH	8.11	11.12	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	8/8/95	NLPH	9.48	9.75	\$2	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	11/7/95	NLPH	10.83	8.40	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	2/29/96	NLPH	7.70	11.53	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	5/10/96	NLPH	8.76	10.47	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	8/20/96	NLPH	9.91	9.32	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
	10/17/96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/27/96	---	---	---	---	---	---	---	---	---	---	1.48	---	---	---	---	
	12/6/96	NLPH	8.90	10.33	---	---	---	---	---	---	---	2.71	---	---	---	---	
	1/19/97	Abandoned	---	---	---	---	---	---	---	---	---	8.90	---	---	---	---	
	MW8 (22.60)	1/17/97	---	---	---	---	---	---	---	---	---	---	1.39	---	---	---	---
		2/25/97	NLPH	7.93	14.67	<50	69	30	<0.5	<0.5	<0.5	<0.5	1.82	---	---	---	---
		3/13/97	---	---	---	---	---	---	---	---	---	---	1.58	---	---	---	---
4/16/97		---	---	---	---	---	---	---	---	---	---	0.81	---	---	---	---	
5/21/97		NLPH	9.04	13.36	<50	<50	3.5	<0.5	<0.5	<0.5	<0.5	0.74	---	---	---	---	
6/5/97		---	---	---	---	---	---	---	---	---	---	0.55	---	---	---	---	
7/11/97		---	---	---	---	---	---	---	---	---	---	0.85	---	---	---	---	
8/6/97		NLPH	9.90	12.70	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	0.77	---	---	---	---	
9/23/97		---	---	---	---	---	---	---	---	---	---	0.75	---	---	---	---	
10/7/97		NLPH	10.23	12.37	<50	100	4.9	1.1	<0.5	<0.5	<0.5	0.82	---	---	---	---	
12/24/97		---	---	---	---	---	---	---	---	---	---	0.86	---	---	---	---	
1/16/98		NLPH	4.39	18.21	81	180	9.6	2.8	<0.5	<0.5	0.92	0.94	---	---	---	---	
2/20/98		---	---	---	---	---	---	---	---	---	---	0.61	---	---	---	---	
3/26/98		---	---	---	---	---	---	---	---	---	---	0.53	---	---	---	---	
4/17/98		NLPH	---	---	74	370	27	<0.5	0.94	<0.5	0.79	2.65	---	---	---	---	
5/13/98		---	---	---	---	---	---	---	---	---	---	0.25	---	---	---	---	
6/22/98		---	---	---	---	---	---	---	---	---	---	1.38	---	---	---	---	
7/17/98		NLPH	8.02	14.58	<50	<50	3.3	<0.5	<0.5	<0.5	<0.5	2.09	---	---	---	---	
10/16/98		NLPH	9.78	12.82	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
1/15/99		NLPH	8.40	14.20	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---	
4/23/99	NLPH	7.35	15.25	70.1	111	3.45	<0.5	0.97	<0.5	<0.5	---	---	---	---	---		
7/30/99	NLPH	8.86	13.74	<50	89.4	<2.5	<0.5	2.7	<0.5	<0.5	---	---	---	---	---		
9/3/99	NLPH	---	---	---	---	---	---	---	---	---	2.45	---	---	---	---		
10/11/99	NLPH	10.04	12.56	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	---	---	---		
10/14/99	NLPH	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
1/26-27/2000	NLPH	5.52	17.08	90/60**	<50	<2	<0.5	<0.5	<0.5	<0.5	2.10	---	---	---	---		



M&R AUTO SALES & REPAIR

66TH AVENUE

Former Oil & Grease Trap

PARCEL TWO

Former Waste Oil UST

Former Hoists

Former Service Station (1966-96)

RESIDENCES

Sidewalk

Former USTs

PARCEL ONE

INTERNATIONAL BOULEVARD

Former Service Station (1930-66)

APARTMENTS

Former Canopy

Former Pump Islands

BOULEVARD

HAVENSCOURT BLVD.

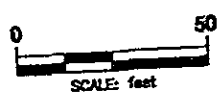
Former Service Station

66TH AVENUE

HAVENSCOURT JUNIOR HIGH SCHOOL

LEGEND:

- Fenced Property Boundary
- Soil Boring
- Soil and Grab Groundwater Boring
- ⊕ Existing Monitor Well
- △ Magnetic Anomaly
- Area of Lower Terrain Conductivity



PHASE II ESA FINDINGS
 6600 INTERNATIONAL BOULEVARD
 OAKLAND, CALIFORNIA
 Clayton Project No. 70-00389.01

Figure 5



02/22/00
 6600INT.DWG

TABLE 9

**Summary of Petroleum Products and VOCs in Soil
6600 International Boulevard, Oakland, California**

Sample ID	Depths (feet)	TPH-mo	TPH-d	TPH-g	Petroleum Products					VOCs All Analytes
					Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
B-3 (comp)	1 and 3	ND	6.2	ND	ND	ND	ND	ND	ND	ND
B-7 (comp)	2 and 4	ND	1.7	ND	ND	ND	ND	ND	ND	ND
B-11 (comp)	2 and 4	ND	3.1	ND	ND	ND	ND	ND	ND	ND
B-12 (comp)	2 and 4	ND	2.9	ND	ND	0.012	0.034	0.11	ND	ND
B-13 (comp)	2 and 4	ND	2.8	ND	ND	ND	ND	ND	ND	ND
B-14 (comp)	2 and 4	ND	1.5	ND	ND	ND	ND	ND	ND	ND

Notes:

All results reported in milligrams per kilogram (mg/kg) or parts per million (ppm)

ND = Analyte not present at or above the method detection limit

(comp) = 2-point composite soil sample

TPH-mo = Total petroleum hydrocarbons as motor oil

TPH-d = Total petroleum hydrocarbons as diesel

TPH-g = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

VOCs = Volatile Organic Compounds

NOTE: values which differ from Tier 1 default values are shown in bold italics and underlined.

Exposure Parameter	Definition (Units)	Residential		Commercial/Industrial		
		Adult	(1-6yrs)	(1-16 yrs)	Chronic	Constrctn
ATc	Averaging time for carcinogens (yr)	70				
ATn	Averaging time for non-carcinogens (yr)	30				
BW	Body Weight (kg)	70	6	16	25	
ED	Exposure Duration (yr)	30	15	35	70	1
t	Averaging time for vapor flux (yr)	30	6	16	25	1
EF	Exposure Frequency (days/yr)	350			25	1
EF.Derm	Exposure Frequency for dermal exposure	350			250	180
IRgw	Ingestion Rate of Water (L/day)	2			250	
IRs	Ingestion Rate of Soil (mg/day)	100	200		1	
IRadj	Adjusted soil Ing. rate (mg-yr/kg-d)	1.1E+02			50	100
IRa.in	Inhalation rate indoor (m ³ /day)	15			9.4E+01	
IRa.out	Inhalation rate outdoor (m ³ /day)	20			20	
SA	Skin surface area (dermal) (cm ²)	20			20	
SAadj	Adjusted dermal area (cm ² -yr/kg)	5.8E+03		2.0E+03	5.8E+03	10
M	Soil to Skin adherence factor	2.1E+03			1.7E+03	5.8E+03
AAFb	Age adjustment on soil ingestion	1				
AAFd	Age adjustment on skin surface area	FALSE			FALSE	
tox	Use EPA tox data for air (or PEL based)?	FALSE			FALSE	
gwMCL?	Use MCL as exposure limit in groundwater?	TRUE			FALSE	

Surface Parameters	Definition (Units)	Residential	Constrctn
A	Contaminated soil area (cm ²)	<u>8.0E+02</u>	<u>8.0E+03</u>
W	Length of affect. soil parallel to wind (cm)	<u>1.3E+03</u>	<u>1.3E+03</u>
W.gw	Length of affect. soil parallel to groundwater (cm)	<u>6.4E+02</u>	
Uair	Ambient air velocity in mixing zone (cm/s)	2.3E+02	
della	Air mixing zone height (cm)	2.0E+02	
Lss	Thickness of affected surface soils (cm)	<u>8.1E+01</u>	
Pe	Particulate areal emission rate (g/cm ² /s)	6.8E-14	

Groundwater Definition (Units)	Value
della.gw	Groundwater mixing zone depth (cm)
I	Groundwater infiltration rate (cm/yr)
Ugw	Groundwater Darcy velocity (cm/yr)
Ugw.lr	Groundwater seepage velocity (cm/yr)
Ks	Saturated hydraulic conductivity (cm/s)
grad	Groundwater gradient (cm/cm)
Sw	Width of groundwater source zone (cm)
Sd	Depth of groundwater source zone (cm)
phi.eff	Effective porosity in water-bearing unit
foc.sat	Fraction organic carbon in water-bearing unit
BIO?	Is biotenuation considered?
BC	Biodegradation Capacity (mg/L)

Soil	Definition (Units)	Value
hc	Capillary zone thickness (cm)	5.0E+00
hv	Vadose zone thickness (cm)	<u>2.8E+02</u> - 9.2'
rho	Soil density (g/cm ³)	1.7
foc (o1)	Fraction of organic carbon in vadose zone	0.001 - more conservative
phi	Soil porosity in vadose zone	0.38
Lgw	Depth to groundwater (cm)	<u>2.8E+02</u> - 9.5'
Ls	Depth to top of affected subsurface soil (cm)	<u>8.1E+01</u> - 3'
Lsubs	Thickness of affected subsurface soils (cm)	<u>4.0E+02</u>
pH	Soil/groundwater pH	6.5
phi.w	Volumetric water content	capillary 0.342 vadose 0.12 foundation 0.12
phi.a	Volumetric air content	0.038 0.26 0.26

Building	Definition (Units)	Residential	Commercial
Lb	Building volume/area ratio (cm)	2.0E+02	3.0E+02
ER	Building air exchange rate (s ⁻¹)	1.4E-04	2.3E-04
Lcrk	Foundation crack thickness (cm)	1.5E+01	
eta (o1)	Foundation crack fraction	0.00001	

Transport Parameters	Definition (Units)	Residential	Commercial
ax	Longitudinal dispersivity (cm)		
ay	Transverse dispersivity (cm)		
az	Vertical dispersivity (cm)		
Vapor			
dcy	Transverse dispersion coefficient (cm)		
dcz	Vertical dispersion coefficient (cm)		

Matrix of Exposed Persons to Complete Exposure Pathways	Residential		Commercial/Industrial	
	Chronic	Constrctn	Chronic	Constrctn
Outdoor Air Pathways:				
SS.v	Volatiles and Particulates from Surface Soils	FALSE	FALSE	TRUE
S.v	Volatilization from Subsurface Soils	TRUE	FALSE	TRUE
GW.v	Volatilization from Groundwater	TRUE	FALSE	
Indoor Air Pathways:				
S.b	Vapors from Subsurface Soils	TRUE	FALSE	
GW.b	Vapors from Groundwater	TRUE	FALSE	
Soil Pathways:				
SS.d	Direct Ingestion and Dermal Contact	FALSE	FALSE	
Groundwater Pathways:				
GW.i	Groundwater Ingestion	FALSE	TRUE	TRUE
S.l	Leaching to Groundwater from all Soils	FALSE	FALSE	

Matrix of Receptor Distance and Location On- or Off-Site	Residential		Commercial/Industrial	
	Distance	On-Site	Distance	On-Site
GW	Groundwater receptor (cm)	FALSE	FALSE	FALSE
S	Inhalation receptor (cm)	TRUE	FALSE	FALSE

Matrix of Target Risks	Individual	Cumulative
TRab	Target Risk (class A&B carcinogens)	1.0E-08
TRc	Target Risk (class C carcinogens)	1.0E-05
THQ	Target Hazard Quotient	1.0E+00
Opt	Calculation Option (1, 2, or 3)	2
Tier	RBCA Tier	2

Site Name: Former Exxon Station 7-0236

Completed By: Steve M. Zigan

Site Location: 6600 East 14th Street

Date Completed: 11/10/1999

GROUNDWATER SSTL VALUES

Target Risk (Class A & B) 1.0E-6

MCL exposure limit?

Calculation Option: 2

Target Risk (Class C) 1.0E-5

PEL exposure limit?

Target Hazard Quotient 1.0E+0

SSTL Results For Complete Exposure Pathways ("X" If Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	Groundwater Ingestion			X	Groundwater Volatilization to Indoor Air		X	Groundwater Volatilization to Outdoor Air		Applicable SSTL	SSTL Exceeded?	Required CRF
CAS No.	Name	(mg/L)	Residential: (on-site)	Commercial: (on-site)	Regulatory(MCL): (on-site)	Residential: (on-site)	Commercial: (on-site)	Residential: (on-site)	Commercial: (on-site)	Residential: (on-site)	Commercial: (on-site)	(mg/L)	"X" If yes	Only if 'yes' left
71-43-2	Benzene	1.0E-1	NA	NA	NA	3.0E+1	NA	3.7E+0	NA	3.7E+0	NA	3.7E+0	<input type="checkbox"/>	<1
100-41-4	Ethylbenzene	2.2E-2	NA	NA	NA	>Sol	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1
108-88-3	Toluene	1.0E-2	NA	NA	NA	>Sol	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1
1330-20-7	Xylene (mixed isomers)	1.0E-2	NA	NA	NA	>Sol	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1

>Sol Indicates risk-based target concentration greater than constituent solubility

Site Name: Former Exxon Station 7-0236

Completed By: Steve M. Zigan

Site Location: 6600 East 14th Street

Date Completed: 11/10/1999

**SUBSURFACE SOIL SSTL VALUES
(> 3 FT BGS)**

Target Risk (Class A & B) 1.0E-6
Target Risk (Class C) 1.0E-5
Target Hazard Quotient 1.0E+0

MCL exposure limit?
 PEL exposure limit?

Calculation Option: 2

SSTL Results For Complete Exposure Pathways ("X" If Complete)

CONSTITUENTS OF CONCERN		Representative Concentration (mg/kg)	Soil Leaching to Groundwater			Soil Volatilization to Indoor Air		Soil Volatilization to Outdoor Air		Applicable SSTL (mg/kg)	SSTL Exceeded?	Required CRF
			Residential: (on-site)	Commercial: (on-site)	Regulatory(MCL): (on-site)	Residential: (on-site)	Commercial: (on-site)	Residential: (on-site)	Commercial: (on-site)			
71-43-2	Benzene	6.2E-1	NA	NA	NA	4.2E+0	NA	4.2E+0	NA	4.2E+0	<input type="checkbox"/>	<1
100-41-4	Ethylbenzene	1.3E-1	NA	NA	NA	>Res	NA	>Res	NA	>Res	<input type="checkbox"/>	<1
108-88-3	Toluene	8.7E-2	NA	NA	NA	>Res	NA	>Res	NA	>Res	<input type="checkbox"/>	<1
1330-20-7	Xylene (mixed isomers)	1.3E+0	NA	NA	NA	>Res	NA	>Res	NA	>Res	<input type="checkbox"/>	<1

>Res indicates risk-based target concentration greater than constituent residual saturation value

**SCREEN 7.2
SURFACE SOILS
CONCENTRATION
CALCULATOR**

UCL Percentile

Analytical Data (Up to 50 Data Points)

1 2 3 4 5 6 7 8

Calculated Default
Distribution Detection
of Data Limit

(mg/kg)

#DIV/0!	0.005
#DIV/0!	0.005
#DIV/0!	0.005
#DIV/0!	0.005

(mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg)

Sample Name

Date Sampled

[REDACTED]

[REDACTED]

B
E
T
X

**SCREEN 7.1
GROUNDWATER
CONCENTRATION
CALCULATOR**

Choose UCL Percentile

Analytical Data (Up to 50 Data Points)

1 2 3 4 5 6 7 8

Calculated Distribution of Data
Default Detection Limit (mg/L)

Lognormal	0.002
Lognormal	0.002
Lognormal	0.002
Lognormal	0.005

	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Well Name	MW2	MW2	MW2	MW2	MW2	MW2	MW2
Date Sampled	10/1/99	7/20/99	4/26/99	1/5/99	11/7/99	7/20/99	4/23/99

B
E
T
X

0.001	0.001	0.042	0.005	0.001	0.0105	0.005	0.001
0.001	0.001	0.021	0.005	0.001	0.005	0.001	0.001
0.0025	0.001	0.001	0.006	0.001	0.003	0.001	0.001
0.001	0.001	0.001	0.0065	0.001	0.005	0.001	0.001

TABLE 12

Summary of Petroleum Products and VOCs in Grab Groundwater
6600 International Boulevard, Oakland, California

Sample ID	TPH-mo	TPH-d	TPH-g	Petroleum Products					VOCs			
				Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Acetone	MEK	Naphthalene	IPB
B-1	ND	98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-2	ND	200	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND
B-3	ND	1,000	1,700	ND	ND	ND	ND	ND	70	ND	ND	ND
B-4	ND	180	890	ND	ND	8.7	1.5	18	290	54	2.6	24
B-5	1,600	1,300	ND	ND	ND	3.7	1.2	8.2	ND	54	2.6	18
						ND	ND	ND	ND	ND	ND	ND

Notes:

All results reported in micrograms per liter (ug/L) or parts per billion (ppb)

ND = Analyte not present at or above the method detection limit

TPH-mo = Total petroleum hydrocarbons as motor oil

TPH-d = Total petroleum hydrocarbons as diesel

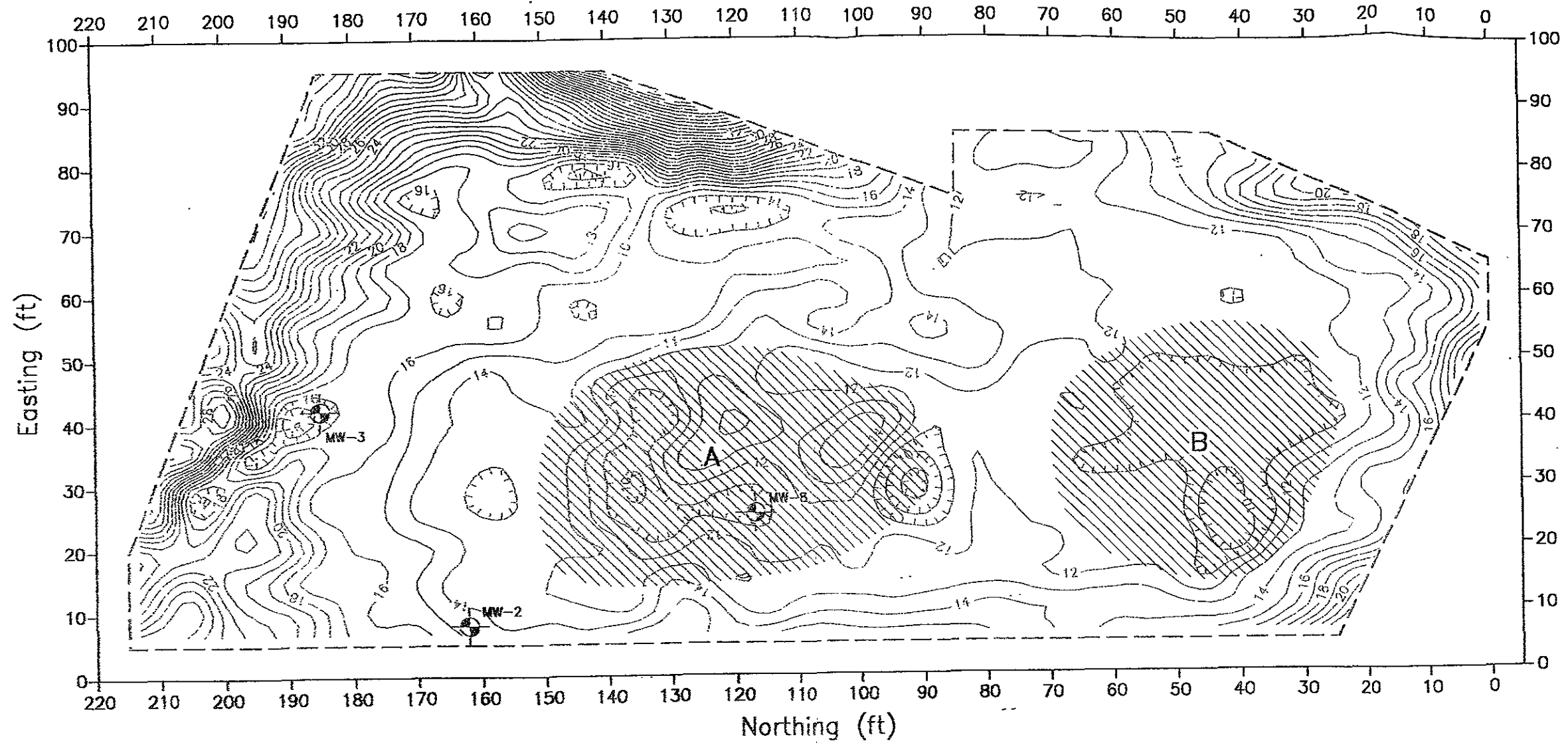
TPH-g = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

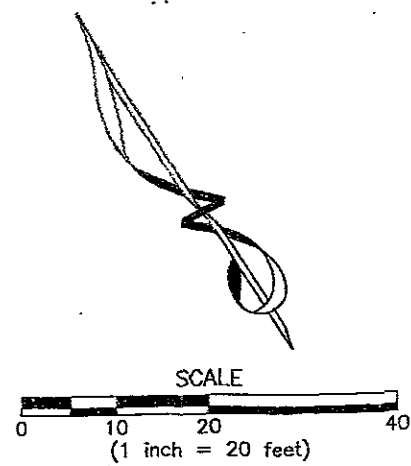
VOCs = Volatile Organic Compounds

MEK = Methyl Ethyl Ketone

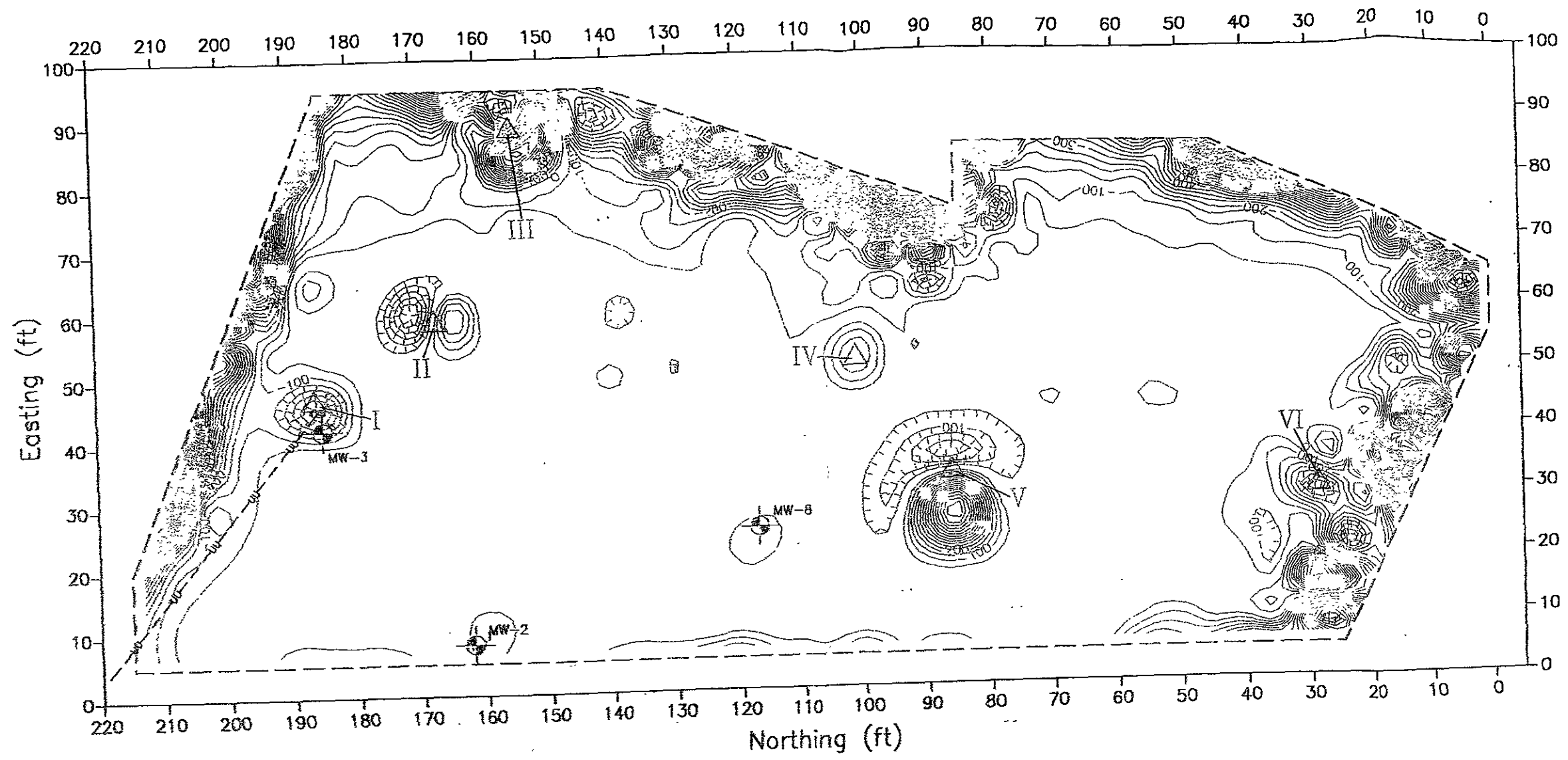
IPB = Isopropylbenzene



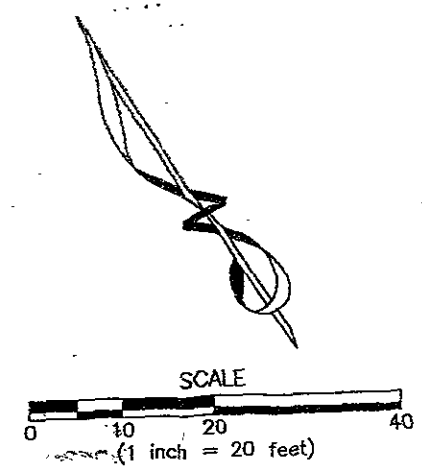
LEGEND	
	LIMITS OF TERRAIN CONDUCTIVITY INVESTIGATION
	TERRAIN CONDUCTIVITY CONTOUR (CONTOUR INTERVAL = 1 mS/m)
	ZONES OF POSSIBLE BACKFILL
	MONITORING WELLS



	TERRAIN CONDUCTIVITY CONTOUR MAP		PLATE
	6600 INTERNATIONAL BOULEVARD		
	LOCATION: OAKLAND, CALIFORNIA		
	CLIENT: CLAYTON ENVIRONMENTAL CONSULTANTS		
JOB #: 99-304.05	NORCAL GEOPHYSICAL CONSULTANTS INC.		
DATE: NOV. 1999	DRAWN BY: G.RANDALL	APPROVED BY: DJB	



LEGEND	
	LIMITS OF VERTICAL MAGNETIC GRADIENT INVESTIGATION
	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 50 nT/m)
	SUSPECTED BURIED FERROUS OBJECT
	UNDIFFERENTIATED UTILITY
	MONITORING WELL



	VERTICAL MAGNETIC GRADIENT CONTOUR MAP 6600 INTERNATIONAL BOULEVARD		PLATE
	LOCATION: OAKLAND, CALIFORNIA CLIENT: CLAYTON ENVIRONMENTAL CONSULTANTS		
JOB #: 99-304.05 DATE: NOV. 1999	NORCAL GEOPHYSICAL CONSULTANTS INC. DRAWN BY: G.RANDALL		APPROVED BY: DJB