

C A M B R I A

May 23, 2005

Mr. Barney Chan
Alameda County Environmental Health Department (ACEHD)
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: Site Conceptual Model and Corrective Action Plan
Chevron Site # 20-6145
Former Signal Oil Service Station
800 Center Street, Oakland, California
Cambria Project No. 31H-2002, Fuel Leak Case No. RO000454

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Site Conceptual Model and Corrective Action Plan* on behalf of Chevron Environmental Management Company (Chevron). This report summarizes site background/history, previous investigations, current conditions, describes potential remedial options and make recommendations regarding those options.

Please review the document and contact Robert Foss at (510) 420-3348 if you have any questions or comments. We would like to set up a meeting with you, Mr. Sadler and Mr. Rene Boisvert, the future developer to discuss the contents of the document and the recommendations therein and a path forward to facilitate redevelopment of the site. Thank you for your attention to this matter.

Sincerely,
Cambria Environmental Technology, Inc.



Robert Foss, P.G.
Associate Geologist

cc:

Mr. J. Mark Inglis, Chevron, P.O. Box 6012, San Ramon, CA 94583
Mr. Terrell Sadler, 618 Brooklyn Avenue, Oakland, CA 94606
Mr. Hollis Rogers, c/o Mr. Victor Brown, 580 Grand Avenue, Oakland, CA 94610
Mr. Rene Boisvert, Boulevard Equity Group, 484 Lake Park Avenue #246, Oakland, CA 94610

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Alameda County
AUG 18 2005
Environmental Health

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C A M B R I A

**Site Conceptual Model
and
Corrective Action Plan**

For:

**Former Chevron (Signal Oil) Station 206145 (S-800)
800 Center Street
Oakland, California**



Submitted to:

**Mr. Barney Chan
Alameda County Environmental Health Department
Alameda, California**

May 23, 2005

C A M B R I A

**Site Conceptual Model
and
Corrective Action Plan**

For:

**Former Chevron (Signal Oil) Station 206145 (S-800)
800 Center Street
Oakland, California**

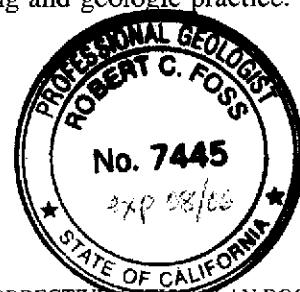
Prepared by:

Cambria Environmental Technology, Inc.

5900 Hollis Street, Suite A
Emeryville, California 94608

All work performed by Cambria Environmental Technology, Inc. for this project was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications or professional opinions presented herein were prepared in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied.

Robert Foss for N Scott MacLeod
N. Scott MacLeod, PG 5747
Principal Geologist



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1 OBJECTIVES

Cambria Environmental Technology, Inc. (Cambria) prepared this Site Conceptual Model (SCM) and Corrective Action Plan (CAP) on behalf of Chevron for the site referenced above. Our objective is to review and present available site data, identify potential data gaps, recommend work to address the data gaps, and make remedial recommendations that will shorten the time to case closure. A summary of previous work and our conclusions and recommendations are presented below.

2 SITE BACKGROUND

The site is a former Signal Oil gasoline service station located on the northeastern corner of the intersection of 8th Street and Center Street in Oakland, California. Local topography is relatively flat and the site is approximately 15 feet above mean sea level (Figure 1). The site is currently undeveloped and both commercial and residential properties are located in the vicinity. Records indicate that it was first developed as a service station in 1932. Four 1,000-gallon fuel underground storage tanks (USTs) and one used oil UST were installed when the site was built. It is unknown as to how many subsequent generations of USTs were installed and operated before the final USTs were removed in 1973 when the station was closed. The nearest surface water body is Oakland Inner Harbor, located approximately 1 mile south of the site. Figures from previous investigations are presented in Appendix A.

2.1 Previous Environmental Investigations and Remediation

A total of 47 soil borings have been advanced both onsite and offsite, 5 soil vapor probes were advanced onsite, 8 monitoring wells were installed both onsite and offsite (1 onsite monitoring well was destroyed and replaced). Following remedial excavation, 34 confirmation soil samples were collected. Figure 2 shows the locations of the wells, former well, excavations, and the most recent soil borings. A summary of environmental work performed at the site is presented below.

1989 Subsurface Investigation: In August 1989, Subsurface Consultants Inc. advanced soil borings B1 through B5 to depths ranging from 4.5 and 26 fbg in the vicinity of the former USTs, dispenser island, and sumps along the eastern property boundary. Temporary wells were installed in borings B1 and B3. The highest hydrocarbon concentrations detected were 14,000 mg/kg total petroleum hydrocarbons as diesel (TPHd), 31,000 mg/kg TPH as gasoline (TPHg), and 500 mg/kg benzene. A soil sample collected from 3.5 fbg in boring B-5, near the former hydraulic hoist, contained 16,000 mg/kg oil and grease. Soil analytical data are presented in Appendix B.

1995 Subsurface Investigation: Groundwater Technology Inc. advanced borings SB-1 through SB-3 to 12 fbg and installed groundwater monitoring wells MW-1 through MW-4 to 15 fbg in October 1995. The highest concentrations detected were 14,000 mg/kg TPHg and 120 mg/kg benzene.

1996 Subsurface Investigation: Pacific Environmental Group (PEG) advanced soil borings P-1 through P-9 in March 1996. The highest hydrocarbon concentrations detected in soil were 13,000 mg/kg TPHg and 41 mg/kg benzene in boring P-3. The highest hydrocarbon concentrations detected in groundwater were 800,000 µg/l TPHg and 13,000 µg/l benzene in boring P-2, located in Center Street. In December 1996, PEG installed off-site wells MW-5, MW-6 and MW-7. No TPHg or benzene were detected in soil. Groundwater analytical results are presented in Appendix C.

1997 Soil Vapor Sampling: PEG advanced soil vapor points SV-1 through SV-5 to depths up to 12 fbg. The highest concentrations of TPHg and benzene in soil were 10,600 and 86 ppm, respectively. The highest concentrations of TPHg and benzene in soil vapors were 50,000 and 65 ppbv, respectively. Hydrocarbon vapor concentrations in soil were highest in the interval between 6 and 10 fbg. Soil vapor data are presented in Appendix D. Risk?

1999/2001 Site Demolition: Gettler-Ryan removed the dispenser island, sumps, the hydraulic hoist, building foundations, garbage enclosure, yard lights and asphalt. A 1,000-gallon UST, a 550-gallon used-oil UST, and a buried 55-gallon drum (apparently a makeshift used-oil UST) were encountered. This work was initiated in September 1999, but was postponed until April 2001, while Chevron and the property owner determined UST ownership. The 1,000-gallon UST, 550-gallon used-oil UST, 55-gallon drum, and the hydraulic hoist were removed and compliance samples were collected and analyzed. The highest hydrocarbon concentrations detected were in soil from the former gasoline UST cavity at 630 mg/kg TPHg and 10 mg/kg benzene.

2002 Monitoring Well Installation: Gettler-Ryan installed groundwater monitoring well MW-8 offsite. No TPHd, TPHg, benzene or MTBE were detected in soil.

2002 Subsurface Investigation: Gettler-Ryan advanced soil borings GP-1 through GP-23 to depths of approximately 12 fbg. Soil samples were collected at 5 and 10 fbg in each boring. The results were used to profile soil from an upcoming excavation event for disposal. Boring GP-9 at 10 fbg contained the highest detected TPHg and benzene in soil at 19,000 and 83 mg/kg, respectively. The highest reported concentration of MTBE in soil was 170 ppm collected from

real?

boring GP-14 at 10 fbg. However, according to the analytic result tables from this report, MTBE was analyzed by EPA Method 8021. This method can result in false positive results being reported. Since the station was shut down in 1973, long before use of MTBE as an oxygenate was widespread, it is likely that the reported results represent false positives.

2002 Excavation: Gettler-Ryan excavated soil in the areas of the former USTs, dispenser island, hydraulic lift and sumps to a maximum depth of approximately 12 fbg in November 2002. Approximately 1,584 tons of hydrocarbon-impacted soil were removed from the site and transported to Allied Waste Landfill in Manteca, California. Thirty-four confirmation soil samples were collected during the excavation. No samples were collected along the west sidewall (along Center Street) because of shoring. No TPH as motor oil or hydraulic oil were detected from the hydraulic lift and no total oil and grease (TOG) were detected beneath the sump area. Well MW-1 was abandoned prior to excavation. Prior to backfilling, approximately 900 pounds of oxygen releasing compound was placed in the bottom of the excavation and Class II aggregate base-rock was used for backfill.

2003 Soil Borings and Well Installation: Gettler-Ryan advanced soil borings GP-24 through GP-30 to approximately 16 fbg with soil samples collected at 5, 10, and 15 fbg. Monitoring well MW-1A was installed near former monitoring well MW-1 as a replacement well. The highest detected concentration of TPHd was 1,600 mg/kg collected from both boring GP-27 at 15 fbg and GP-30 at 10 fbg. The 10 fbg sample from boring GP-30 contained the highest detected concentrations of TPHg, benzene and MTBE at 16,000, 92 and 150 mg/kg, respectively. Gettler-Ryan also conducted a well survey and utility survey. Two industrial and one irrigation well were identified within ½ mile of the site, with the closest well being 1,600 ft south of the site. No utilities were identified with construction deep enough to encounter groundwater.

2004 Boring Investigation: During two phases of investigation in 2004, Cambria drilled CPT borings CPT-1 through CPT-5 and auger borings C-1 through C-9 to assess current conditions on and off the site. The highest hydrocarbon concentrations detected in soil were 9,000 mg/kg TPHg, 1,200 mg/kg TPHd, and 20 mg/kg benzene. No MTBE was detected in soil.

3 SITE CONDITIONS

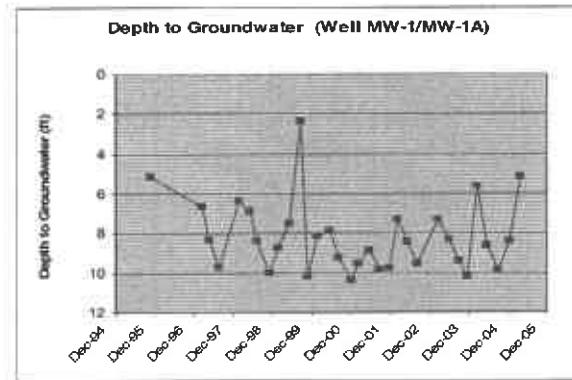
3.1 Site Geology

The site is underlain by Holocene and Pleistocene Merritt sands. Unconsolidated sediments beneath the site and site vicinity consist primarily of silty sands with intermittent silts, sands and clayey silts to approximately 75 fbg. The silty sands and sands are found primarily from the

surface, or beneath the fill, to depths of approximately 55 fbg and the silts are commonly found beneath the sands. Boring logs are presented in Appendix E and cross-sections prepared based on data from Cambria's 2004 investigation data are presented in Appendix F.

3.2 Site Hydrogeology

As indicated in the adjacent figure, groundwater typically ranges from about 6 to 10 fbg, with several feet of fluctuation annually. Groundwater flow direction varies from south to west with a gradient range of 0.003 to 0.01 ft/ft. Based on the topography and natural drainage patterns in the area, the regional groundwater flow direction appears to be towards Oakland Inner Harbor (Figure 1).



Based on subsurface lithology and groundwater potentiometric surface data, we estimate a groundwater flow velocity (v) of 0.00125 to 0.125 ft/day assuming a hydraulic conductivity (K) of 0.1 to 10 ft/day, a hydraulic gradient (i) of 0.006 and a porosity (n) of 0.4 ($v = Ki/n$).

3.3 Monitoring Well Construction

Nine groundwater monitoring wells have been installed at the site. Well MW-1 was destroyed during the remedial excavation and replaced with well MW-1A. The wells are screened from 5 to 15 fbg. Boring and well logs are presented in Appendix E.

3.4 Hydrocarbon Distribution in Soil

Based on soil sampling from investigations conducted before and after the remedial excavation, it appears that the highest hydrocarbon concentrations are detected in the center and western portions of the site near the former 1,000 gallon UST and former dispenser island. TPHg and benzene distribution with depth is shown on Figures 3 through 12. Most of the shallow hydrocarbon concentration data collected was at 5 and 10 fbg. Therefore, we selected 0 – 7 fbg as the first depth interval to contour (the approximate midpoint between the 5 and 10 fbg samples). The next depth interval selected was 7 – 11 fbg. The 11 fbg depth was selected because it is immediately above the approximately 12 fbg remedial excavation floor samples. The 12–17 fbg, 17–22 fbg, and 22–27 fbg depth intervals are the three 5-ft intervals underlying the excavation floor.

As indicated on Figures 3 through 12, and in the cross-sections in Appendix F, the highest TPHg and benzene concentrations are detected in a 5 to 8 ft thick zone at about 10 fbg. TPHd concentrations are similarly distributed. Because groundwater depth ranges from 6 to 10 fbg, a significant portion of the hydrocarbon mass detected in soil resides below the water table.

No MTBE was detected in soil in the most recent investigation. As mentioned above, the service station was closed in 1973 before the widespread use of MTBE as a fuel oxygenate so MTBE is not a concern.

3.5 Hydrocarbon Mass in Soil

Based on the hydrocarbon distribution presented in Figures 3 through 12, the estimated hydrocarbon mass remaining in soil is 1,920 gallons of TPHg and 6.1 gallons of benzene (Tables 1A and 1B).

3.6 Hydrocarbon Distribution in Groundwater

The highest hydrocarbon concentrations in groundwater are detected in wells MW-1 (which was replaced by well MW-1A) and well MW-3. The horizontal extent of hydrocarbons in groundwater is limited and defined in all four directions by clean wells MW-4 through MW-8. The extent of hydrocarbons in groundwater is limited to less than 100 ft from the source area. Analytical results for groundwater are presented in Appendix C and plume definition figures are presented in Appendix G.

Notations on the laboratory reports from onsite well analyses indicate that the TPHd chromatographs show "non-typical diesel #2 fuel oil" patterns. According to personal communications with laboratory personnel, chromatograph patterns for TPHd in soil and groundwater exhibit a pattern indicative of the heavier end of gasoline range hydrocarbons. It was also stated that it is doubtful that the unidentified peaks on the TPHd chromatograph pattern originate from a waste oil source.

Based on groundwater samples collected at various depths during Cambria's 2004 boring investigation, the highest hydrocarbon concentrations are detected in shallow groundwater (Appendix E). As indicated on the groundwater analytical tables for these borings, hydrocarbons were detected in groundwater throughout the water column. In some borings, concentrations decreased with depth, while other borings had concentrations increasing with depth. We could not determine what parameters were controlling the vertical hydrocarbon profile.

3.7 NAPL Source and Distribution

No NAPL has been observed at the site.

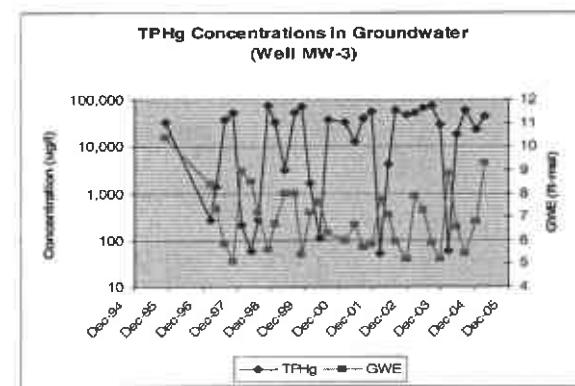
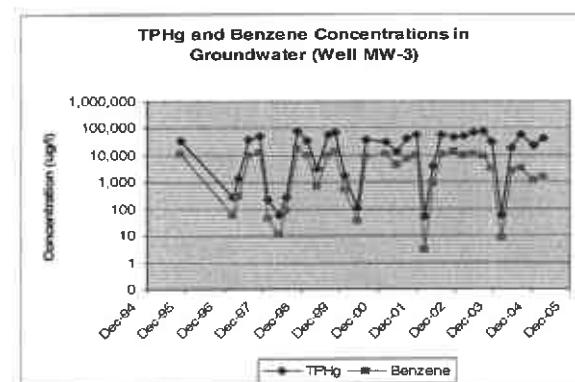
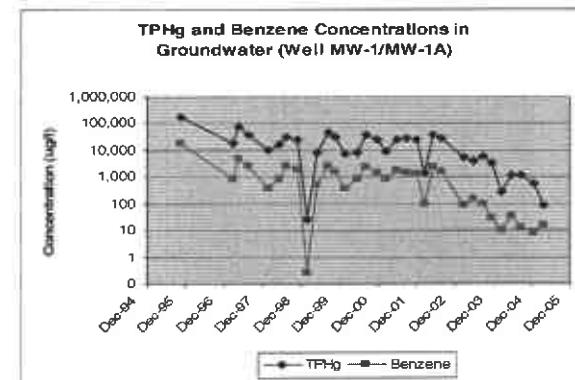
3.8 Hydrocarbon Concentration Trends in Groundwater

As indicated in the adjacent figures, TPHg and benzene concentrations in well MW-1 (and replacement well MW-1A, both located within the remedial excavation) have recently decreased. Therefore, it appears that the remedial excavation improved water quality in the hydrocarbon source area. Hydrocarbon concentrations in well MW-3 (outside the remedial excavation area) are not decreasing. There is insufficient time-series data for TPHd to draw any conclusions.

As indicated in the bottom figure, TPHg concentrations in well MW-3 fluctuate annually and are lowest when the water table is the highest. There are higher permeability soils at the high water depth range that appear to contain less hydrocarbon mass, resulting in cleaner samples during high water periods.

4 PREFERENTIAL PATHWAY ANALYSIS

Gettler-Ryan's utility survey indicated that no utilities were deeper than 3 to 5 fbg. Therefore, these utilities do not intersect groundwater or act as preferential flow pathways. A figure illustrating utilities in the vicinity of the subject site is presented in Appendix H.



5 SENSITIVE RECEPTORS

Three wells were identified within ½ mile of the site, with the closest well being 1,600 ft south of the site. Area well survey results are presented in Appendix H. Because the hydrocarbon plume is limited to within 100 ft of the hydrocarbon source area, and because the plume is stable, none of the wells are at risk due to hydrocarbons originating from the site. No surface water features were identified near the site. It is stated in the California Regional Water Quality Control Board San Francisco Bay Region Groundwater Committee's June 1999 *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, California* that Oakland has no plans to develop local groundwater resources for use as drinking water due to existing or potential salt water intrusion, contamination, or poor/limited quantity. Therefore, groundwater is not considered a sensitive receptor.

6 RISK ASSESSMENT

To be conservative, we compared hydrocarbon concentrations in soil, soil gas and groundwater to the Environmental Screening Levels (ESLs) in the California Regional Water Quality Control Board's *Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater, Volume 1, Summary Tier 1 Lookup Tables*, Interim Final February 2005. The scenario is for shallow soil (less than approximately 10 fbg) where residential land use is permitted and where groundwater is not a source of drinking water.

The relevant soil, soil gas and groundwater ESLs for the site are presented in Table A. ESL Summary Tables B and E are presented in Appendix I.

Table A
Residential Soil and Groundwater ESLs

Matrix	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Xylenes
Shallow Soil (≤3m bgs)	100 mg/kg	100 mg/kg	0.18 mg/kg	9.3 mg/kg	3.2 mg/kg	11 mg/kg
Soil Gas	26,000 µg/m ³	26,000 µg/m ³	85 µg/m ³	63,000 µg/m ³	420,000 µg/m ³	150,000 µg/m ³
Groundwater	500 ug/L	640 ug/L	46 ug/L	130 ug/L	290 ug/L	100 ug/L

ESLs from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Interim Final February 2005.

Deep Soil

73m

400

500

0.18

7

9.3

4.7

1.5

7 REMEDIAL ACTIONS TAKEN

As discussed above, a large portion of the site was excavated to a depth of 12 fbg to remove hydrocarbon-bearing soils and the excavation was backfilled with 900 pounds of an oxygen releasing compound. This remedial excavation and oxygenation resulted in significant water quality improvements in well MW-1/MW-1A that were installed in the excavation area. No improvement in water quality was observed in well MW-3, south of the excavation.

8 SITE CONCEPTUAL MODEL SUMMARY AND DATA GAP ANALYSIS

Based on the available information, it appears that there was a non-oxygenated gasoline release prior to 1973 from the former UST and/or dispenser island area. The majority of hydrocarbons in soil are limited to a 5 to 10 ft thick zone in the capillary fringe. Hydrocarbons were detected in groundwater at depths down to 72 fbg, with concentrations increasing with depth with some constituents at some locations and some constituent concentrations decreasing with depth at other locations. This variable vertical concentration trend is not consistent with the limited vertical hydrocarbon extent observed in soil.

Given the limited hydrocarbon distribution in soil and groundwater and the age and composition of the aqueous-phase hydrocarbon plume, it is unlikely that any sensitive receptors will be impacted. As indicated above, groundwater is not planned for drinking water use. Therefore, the primary potential receptor would be future site occupants.

The site is currently undeveloped, but the property owner, Mr. Terrell Sadler, is currently in negotiations to sell the property for residential redevelopment. The current proposed construction is slab on grade foundation and manufactured housing units. The City of Oakland owns two narrow adjacent parcels and the developer wishes to work with the city to incorporate these two parcels into his development plans.

8.1 Data Gaps

The extent of hydrocarbons in soil and groundwater are well defined and no additional assessment is needed to make remedial decisions at the site.

8.2 Groundwater Monitoring Program

Although concentration fluctuations occur annually in site wells, the fluctuations fall within predictable concentration ranges and trends. Therefore, there is no benefit to conducting groundwater sampling quarterly. We recommend sampling wells semi-annually through 2006 during the first and third quarters followed by annual sampling in the third quarter, thereafter.

9 REMEDIATION OPTIONS

The primary risk of concern at the site is vapor migration to future site buildings, specifically residences. Based on the ESL exceedances either hydrocarbons need to be remediated to below ESLs from soil, soil gas and groundwater for multiple constituents, or the vapor migration pathway needs to be eliminated. Of the possible remedial options, only excavation and multi-phase extraction (MPE) appear likely to meet ESLs. These two remedial options are reviewed below.

9.1 Excavation

Previous excavation efforts resulted in some improvement in water quality as indicated by decreasing hydrocarbon concentration trends in well MW-1/MW-1A (installed in the excavation). However, the fact that hydrocarbons were detected in backfilled soil during investigations subsequent to the excavation indicates that the excavation was not sufficiently deep to remove all residual hydrocarbon mass. In addition, the excavation was not broad enough to remove all soils with hydrocarbon concentrations exceeding ESLs. Therefore, if excavation were selected as the preferred remedial alternative, not only must it be larger, but it must be several feet deeper than the 12 fbg excavation depth previously attained. Because of the likelihood of groundwater infiltration into the excavation, extensive dewatering would be required.

Based on the current hydrocarbon distribution, about 1,500 cubic yards of impacted soil would need to be removed. About 1,000 cubic yards of clean overburden would need to be excavated to access the hydrocarbon bearing soil. If we presume about \$100/cy to manage the project, excavated, transport and dispose of impacted soil, and replace the soil with engineered backfill, the cost to remove the impacted soil is about \$150,000. The cost to remove and replace the clean overburden is about \$25/cy for an additional cost of \$25,000. Shoring costs along Center Street are likely about \$25,000 and dewatering costs are likely about \$100,000. Therefore, the total remedial cost for excavation would be about \$250,000.

9.2 MPE

MPE is a viable remedial alternative for the volatile hydrocarbon components in soil and groundwater beneath the site. Although MPE will not remove all TPHd detected in soil beneath the site, it might remove sufficient volatile TPHd components to mitigate potential TPHd vapor migration to future residential structures.

The primary concern with MPE is the ability to properly dewater hydrocarbon-bearing soils to allow vapor-phase extraction of volatile hydrocarbons. Because of the silt content, it is possible that the site could be dewatered sufficiently at manageable groundwater flow rates. However, it is also possible that sand stringers could result in water production rates that would make MPE less likely to successfully dewater the hydrocarbon-bearing soils. The efficacy of MPE would need to be tested prior to installation.

Costs for MPE implementation (presuming the test indicated MPE was feasible) would be \$40,000 for a pilot test, \$150,000 for properly constructed MPE wells and system installation, and \$10,000 per month for operation with a likely operational duration of 18 months (\$180,000). Therefore, total MPE costs would likely be about \$370,000.

9.3 Vapor Mitigation

Both of the remedial options presented above could significantly reduce hydrocarbon mass in the subsurface. However, neither of these options could eliminate the potential risk of vapor migration. Were the extent of hydrocarbons in soil confined to the area on site, excavation would be a viable remedial option. However, as indicated in Figures 4 and 9, hydrocarbons extend partially off-site part way beneath Center Street. It is unlikely that we would excavate beneath Center Street, which would leave residual volatile hydrocarbons in place. These residual hydrocarbons would pose a potential vapor risk that would require future site buildings to include vapor mitigation barriers.

While MPE can result in significant improvements in water quality, it is unlikely that sufficient hydrocarbon mass could be removed to preclude the need for vapor barriers to manage potential risk to future site occupants.

For these reasons, it appears that a vapor barrier will be needed regardless of whether the site is remediated.

A properly designed vapor barrier should have two components. First, it must prevent vapors from entering future site structures. Secondly, it must incorporate a ventilation system that prevents vapor accumulation beneath the structures.

One technology that meets both of these design criteria is a Liquid Boot®. The Liquid Boot consists of a flexible membrane installed beneath the foundation slab to prevent vapor penetration into the building. A vented permeable zone is constructed beneath the membrane to prevent accumulation of volatile compounds. This combination approach prevents vapor migration into the overlying structure.

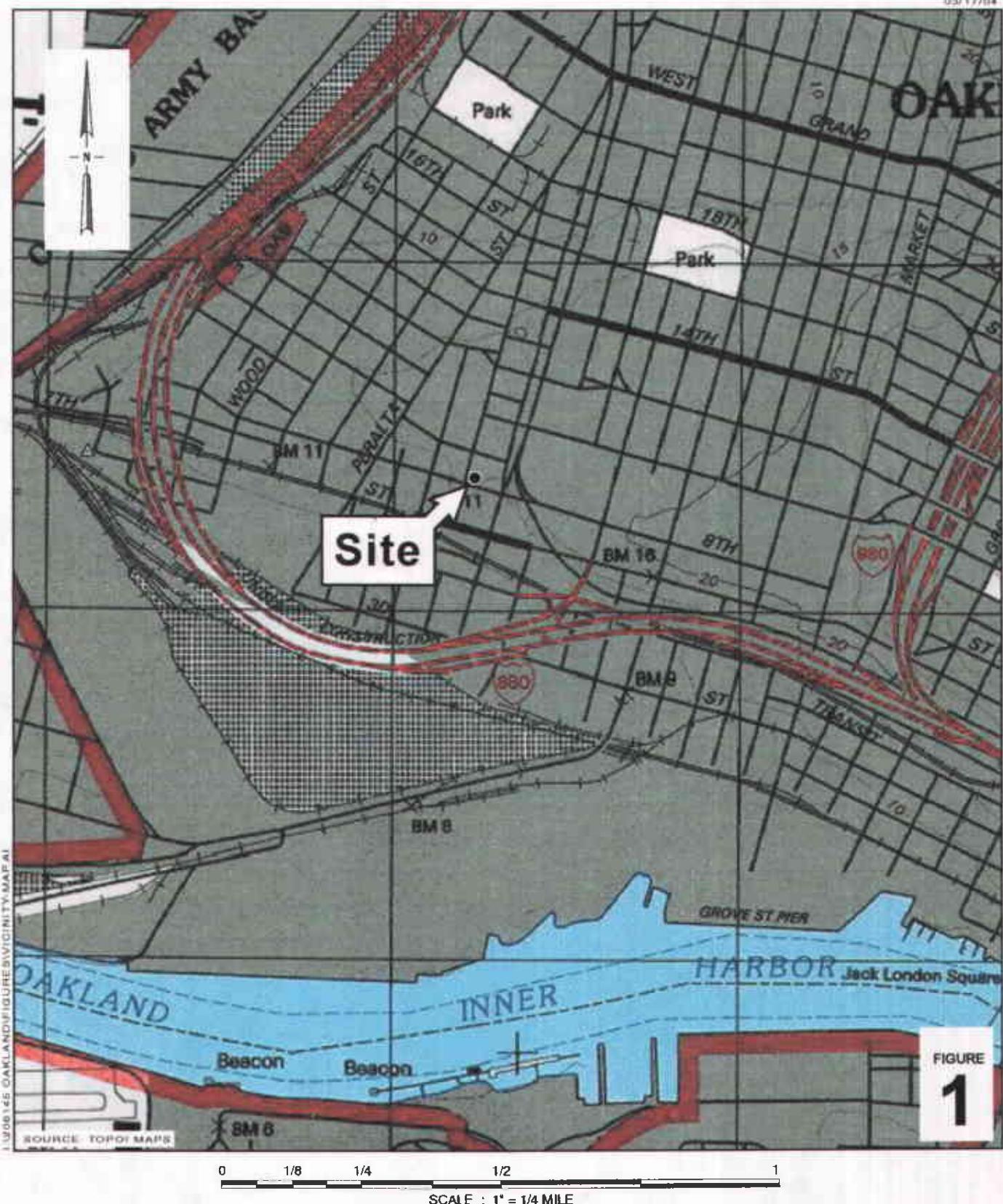
10 RECOMMENDED APPROACH

Because both of the active remedial measures evaluated above will require installation of a vapor barrier beneath future site structures, we recommend foregoing active remediation and instead installing an engineered vapor pathway mitigation measure such as the Liquid Boot. The vapor mitigation measures will eliminate the only identified exposure route, which is vapor migration to future site structures. If the structure is constructed with vapor mitigation measures, no additional remediation is necessary. No hydrocarbon concentrations were detected in soil to depths of 7 fbg that exceed ESLs, therefore, there is no risk due to dermal contact and shallow soils do not warrant remediation.

Because of the possibility that the site may be redeveloped multiple times in the future, we recommend a deed restriction that stipulates that any future site developments also include vapor mitigation measures. The combination of vapor mitigation measures beneath the residential development planned in the near term, and the deed restriction to ensure protection in perpetuity mitigates future risk posed by residual hydrocarbons.

Because vapor mitigation measures will be required even if the site is excavated or remediated through MPE, and because the vapor mitigation measures are sufficient to protect future occupants, there is no justification for excavation or MPE.

We recommend meeting with the Alameda County Environmental Health Department to present details of the Liquid Boot and discuss design criteria and methodologies for confirming a proper installation. Based on the outcome of this meeting, we can submit a detailed design protective of the planned site development.



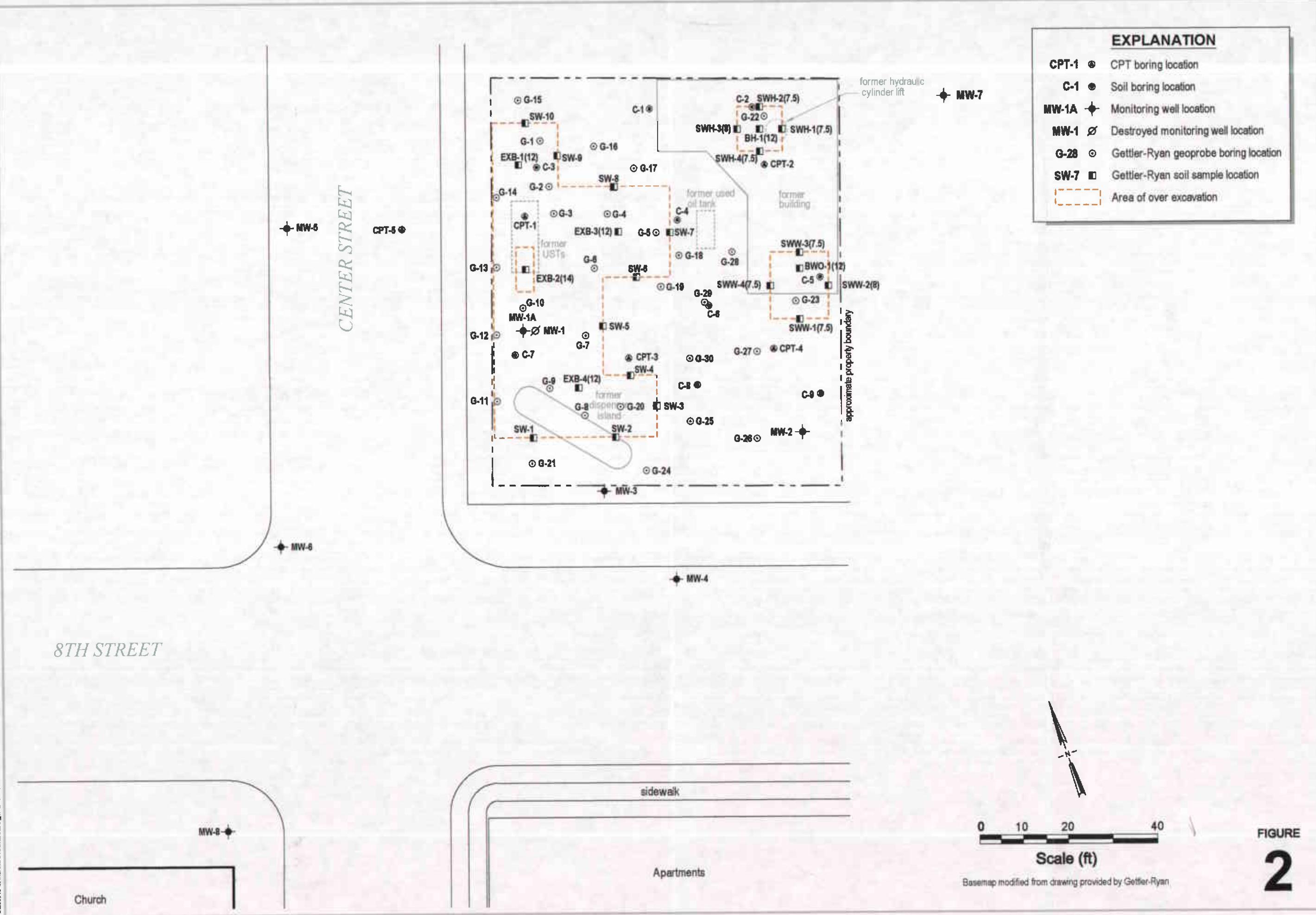
Chevron Service Station # 206145

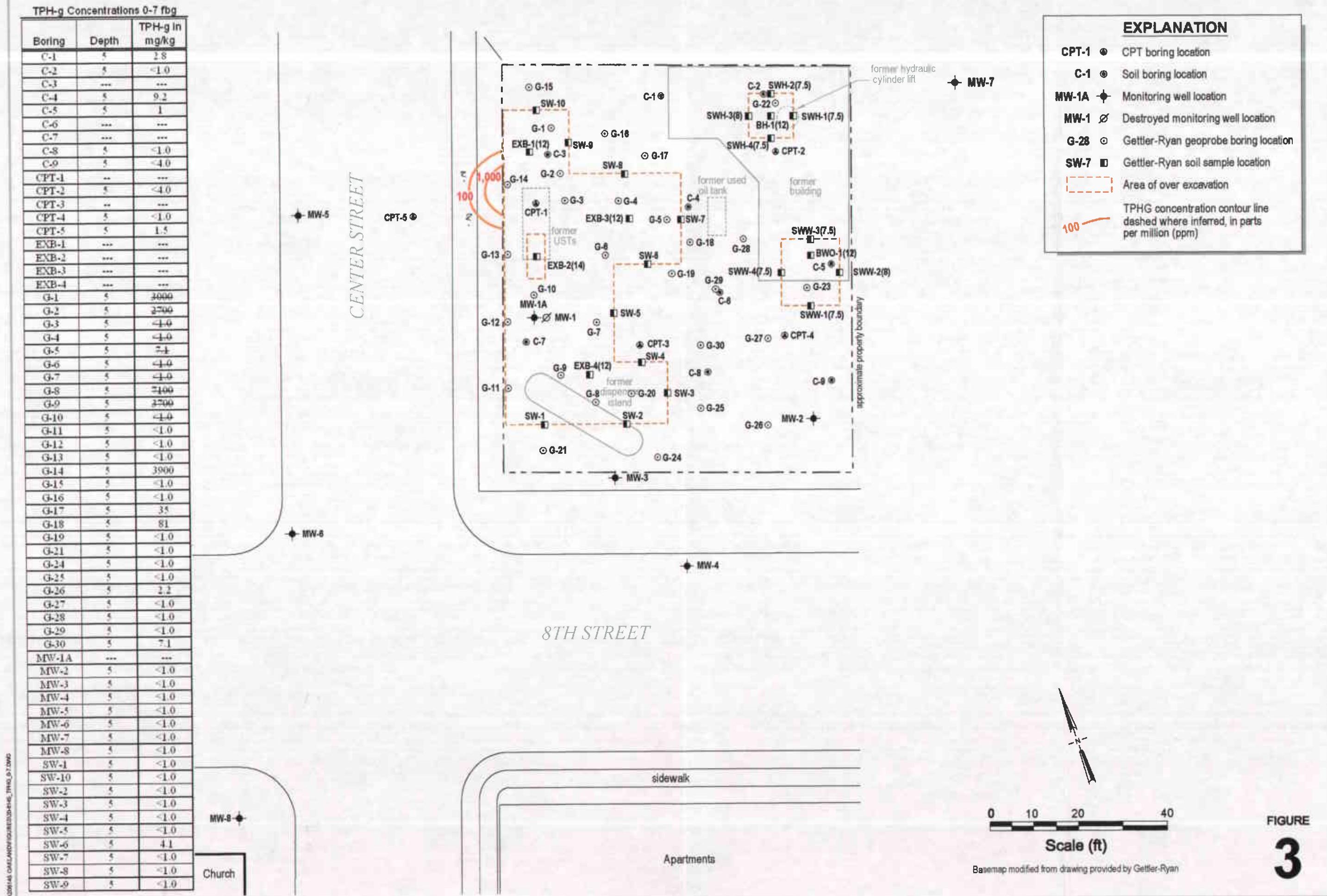


Vicinity Map

800 Center Street
Oakland, California

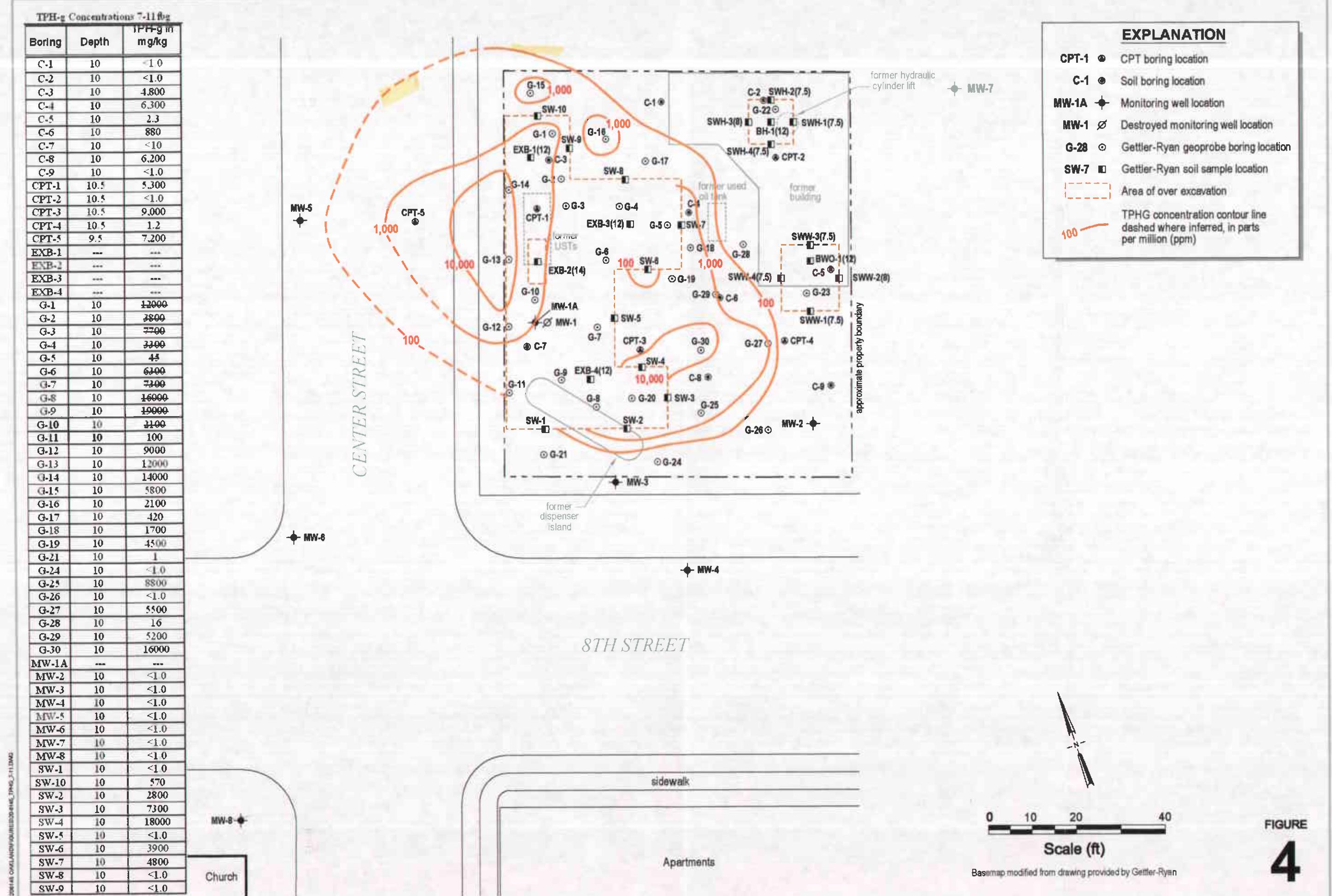
CAMBRIA





Chevron Service Station 206145

Oakland, California



Chevron Service Station 206145

800 Center Street
Oakland, CaliforniaFIGURE
5

TPH-g Concentrations 11-17 ftbg		
Boring	Depth	TPH-g in mg/kg
C-1	15	<1.0
C-2	15	<1.0
C-3	15	9.7
C-4	15	3.1
C-5	15	<1.0
C-6	15	27
C-7	15	1,100
C-8	15	19
C-9	15	<1.0
CPT-1	14.5	2
CPT-2	14.5	<1.0
CPT-3	15.5	18
CPT-4	14.5	<1.0
CPT-5	15.5	140
EXB-1	12	4000
EXB-2	14	1900
EXB-3	12	3400
EXB-4	12	6900
G-1	---	---
G-2	---	---
G-3	---	---
G-4	---	---
G-5	---	---
G-6	---	---
G-7	---	---
G-8	---	---
G-9	---	---
G-10	---	---
G-11	---	---
G-12	---	---
G-13	---	---
G-14	---	---
G-15	---	---
G-16	---	---
G-17	---	---
G-18	---	---
G-19	---	---
G-20	15	10000
G-21	15	620
G-22	15	4800
G-23	15	3500
MW-1A	16	<1.0
MW-2	---	---
MW-3	---	---
MW-4	---	---
MW-5	15	<1.0
MW-6	15	<1.0
MW-7	15	<1.0
MW-8	15	<1.0
SW-1	---	---
SW-10	---	---
SW-2	---	---
SW-3	---	---
SW-4	---	---
SW-5	---	---
SW-6	---	---
SW-7	---	---
SW-8	---	---
SW-9	---	---

F:\\SRI\\16\\C:\\LAND\\16\\TPHG\\TPHG_11-17.DWG

CENTER STREET

8TH STREET

sidewalk

Apartments

MW-5

CPT-5

MW-6

MW-4

former hydraulic cylinder lift

MW-7

0 10 20 40
Scale (ft)

Basemap modified from drawing provided by Gettier-Ryan

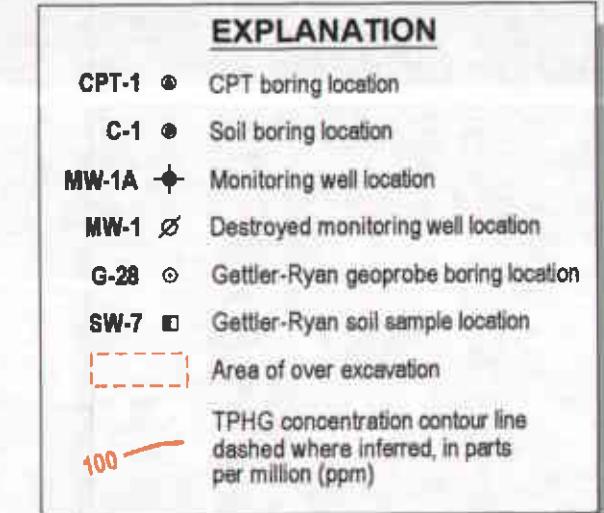


FIGURE
6

0 10 20 40
Scale (ft)

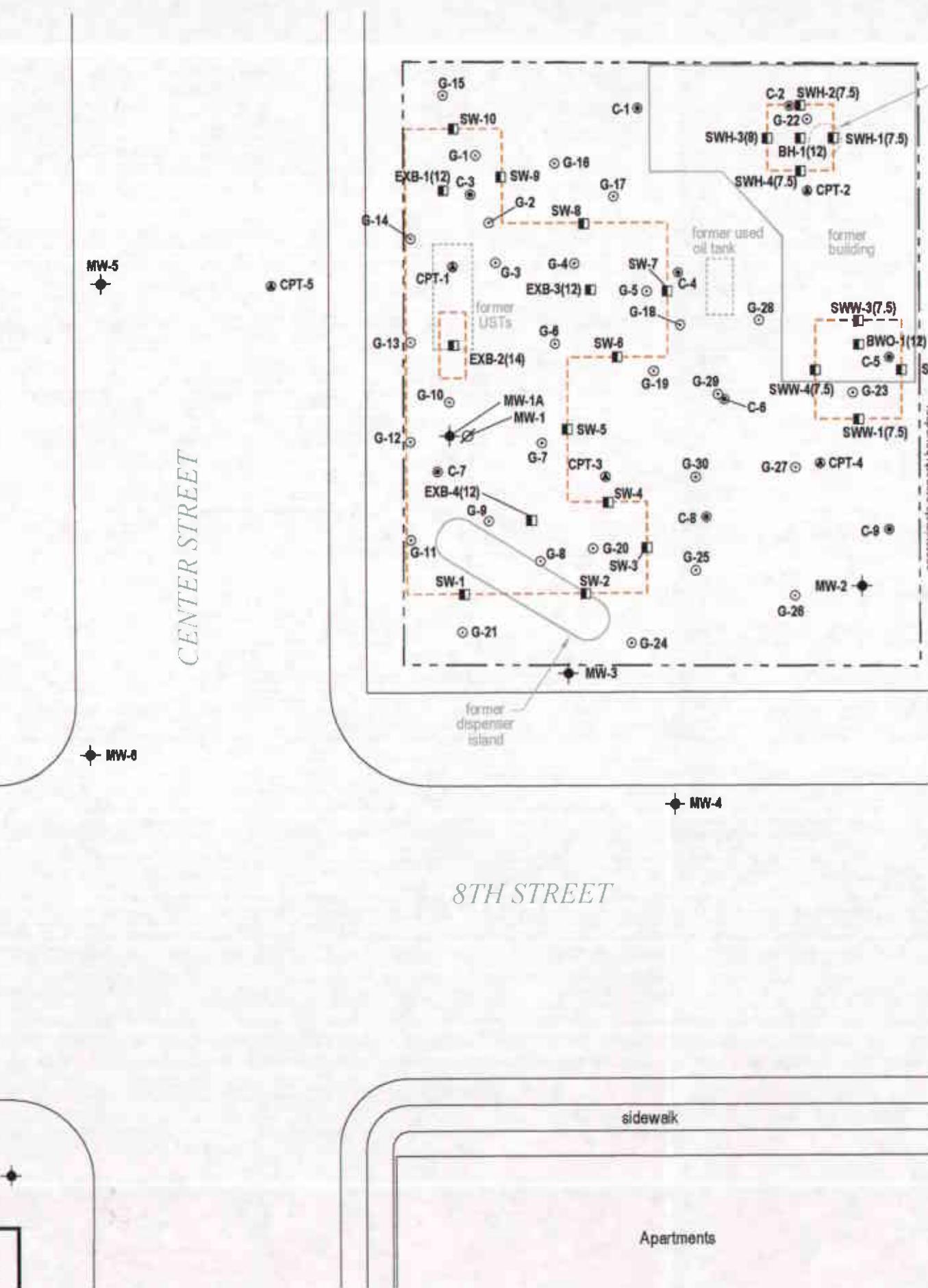
Basemap modified from drawing provided by Gettler-Ryan

EXPLANATION

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A ● Monitoring well location
- MW-1 ○ Destroyed monitoring well location
- G-28 ○ Gettler-Ryan geoprobe boring location
- SW-7 ■ Gettler-Ryan soil sample location
- [Dashed orange box] Area of over excavation

TPH-g Concentrations 17-22 fbg		
Boring	Depth	TPH-g in mg/kg
C-1	20	<1.0
C-2	20	<1.0
C-3	20	<1.0
C-4	20	<1.0
C-5	20	<1.0
C-6	20	4.3
C-7	20	<1.0
C-8	20	2.7
C-9	20	<1.0
CPT-1	---	---
CPT-2	20.5	<1.0
CPT-3	20.5	14
CPT-4	20.5	<1.0
CPT-5	---	---
EXB-1	---	---
EXB-2	---	---
EXB-3	---	---
EXB-4	---	---
G-1	---	---
G-2	---	---
G-3	---	---
G-4	---	---
G-5	---	---
G-6	---	---
G-7	---	---
G-8	---	---
G-9	---	---
G-10	---	---
G-11	---	---
G-12	---	---
G-13	---	---
G-14	---	---
G-15	---	---
G-16	---	---
G-17	---	---
G-18	---	---
G-19	---	---
G-27	---	---
G-28	---	---
G-29	---	---
G-30	---	---
MW-1A	---	---
MW-2	---	---
MW-3	---	---
MW-4	---	---
MW-5	---	---
MW-6	---	---
MW-7	---	---
MW-8	---	---
SW-1	---	---
SW-10	---	---
SW-2	---	---
SW-3	---	---
SW-4	---	---
SW-5	---	---
SW-6	---	---
SW-7	---	---
SW-8	---	---
SW-9	---	---

130616_OAKLAND_CHEVRON206145_TPHg_F22.DWG



CENTER STREET

8TH STREET

sidewalk

Apartments

Church

TPHg Concentrations in Soil



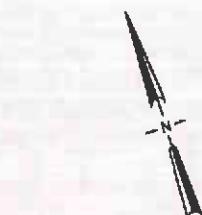
C A M B R I A

Chevron Service Station 206145

800 Center Street
Oakland, CaliforniaFIGURE
7

Scale (ft)

Basemap modified from drawing provided by Gettler-Ryan



0 10 20 40

TPH-g Concentrations 22-27 ftbg

Boring	Depth	TPH-g in mg/kg
C-1	24.5	<1.0
C-2	24.5	<1.0
C-3	24.5	<1.0
C-4	24.5	<1.0
C-5	24.5	<1.0
C-6	24.5	<1.0
C-7	24.5	<1.0
C-8	24.5	<1.0
C-9	24.5	<1.0
CPT-1	25.5	<1.0
CPT-2	25.5	<1.0
CPT-3	25.5	1.3
CPT-4	25.5	<1.0
CPT-5	25.5	7.6
EXB-1	---	---
EXB-2	---	---
EXB-3	---	---
EXB-4	---	---
G-1	---	---
G-2	---	---
G-3	---	---
G-4	---	---
G-5	---	---
G-6	---	---
G-7	---	---
G-8	---	---
G-9	---	---
G-10	---	---
G-11	---	---
G-12	---	---
G-13	---	---
G-14	---	---
G-15	---	---
G-16	---	---
G-17	---	---
G-18	---	---
G-19	---	---
G-20	---	---
G-21	---	---
G-22	---	---
G-23	---	---
G-24	---	---
G-25	---	---
G-26	---	---
G-27	---	---
G-28	---	---
G-29	---	---
G-30	---	---
MW-1A	---	---
MW-2	---	---
MW-3	---	---
MW-4	---	---
MW-5	---	---
MW-6	---	---
MW-7	---	---
MW-8	---	---
SW-1	---	---
SW-2	---	---
SW-3	---	---
SW-4	---	---
SW-5	---	---
SW-6	---	---
SW-7	---	---
SW-8	---	---
SW-9	---	---

CENTER STREET

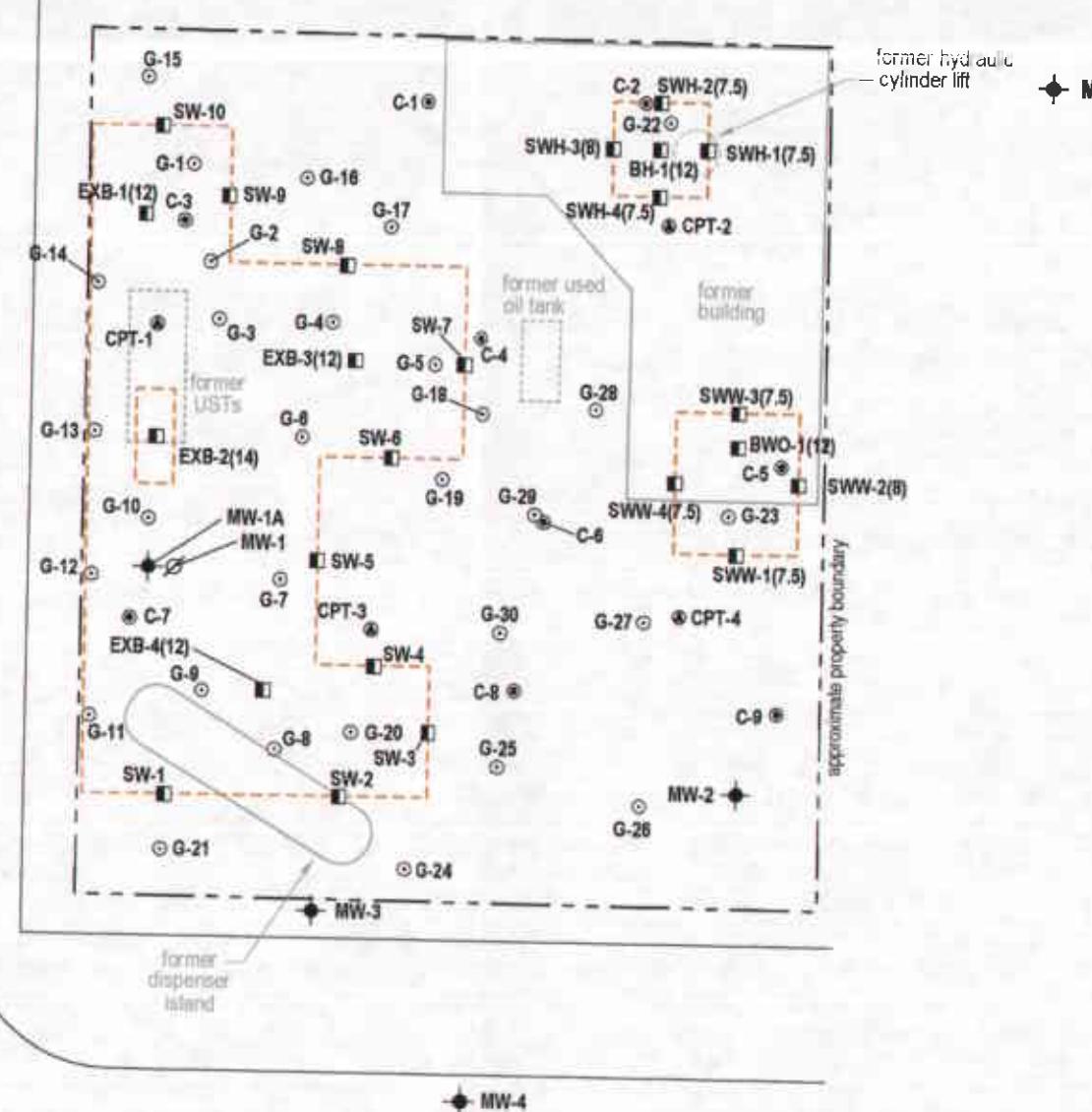
MW-5

MW-6

8TH STREET

sidewalk

Apartments



EXPLANATION

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A ● Monitoring well location
- MW-1 ✘ Destroyed monitoring well location
- G-28 ○ Gettler-Ryan geoprobe boring location
- SW-7 ■ Gettler-Ryan soil sample location
- [Dashed orange rectangle] Area of over excavation

Benzene Concentrations in Soil

C A M B R I A

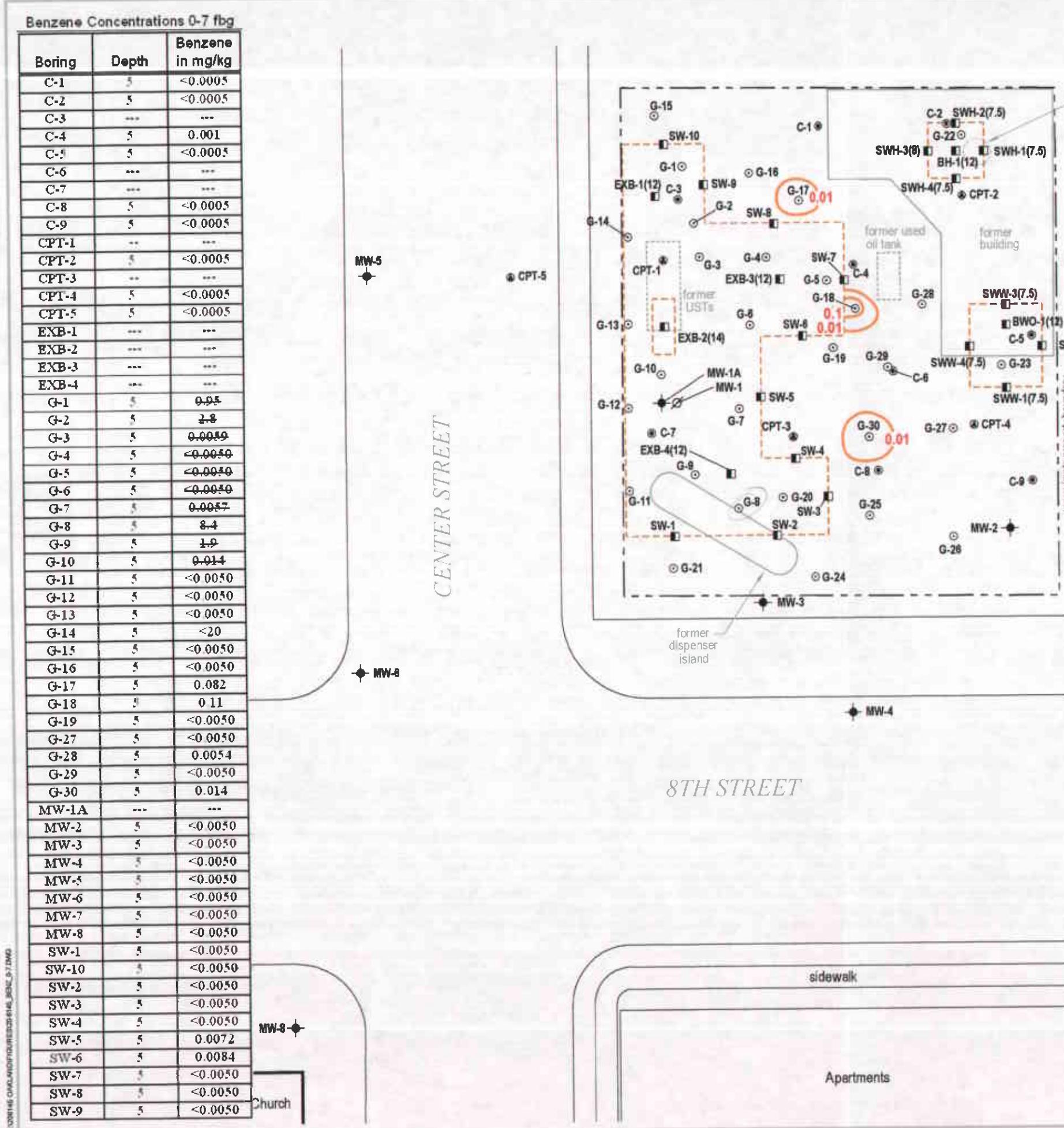
Chevron Service Station 206145800 Center Street
Oakland, California**FIGURE 8**

0 10 20 40
Scale (ft)

Basemap modified from drawing provided by Gettler-Ryan

EXPLANATION

- CPT-1** ● CPT boring location
- C-1** ● Soil boring location
- MW-1A** ◆ Monitoring well location
- MW-1** Ø Destroyed monitoring well location
- G-28** ○ Gettler-Ryan geoprobe boring location
- SW-7** □ Gettler-Ryan soil sample location
- Dashed box** Area of over excavation
- Benzene concentration contour line** dashed where inferred, in parts per million (ppm)



Benzene Concentrations in Soil

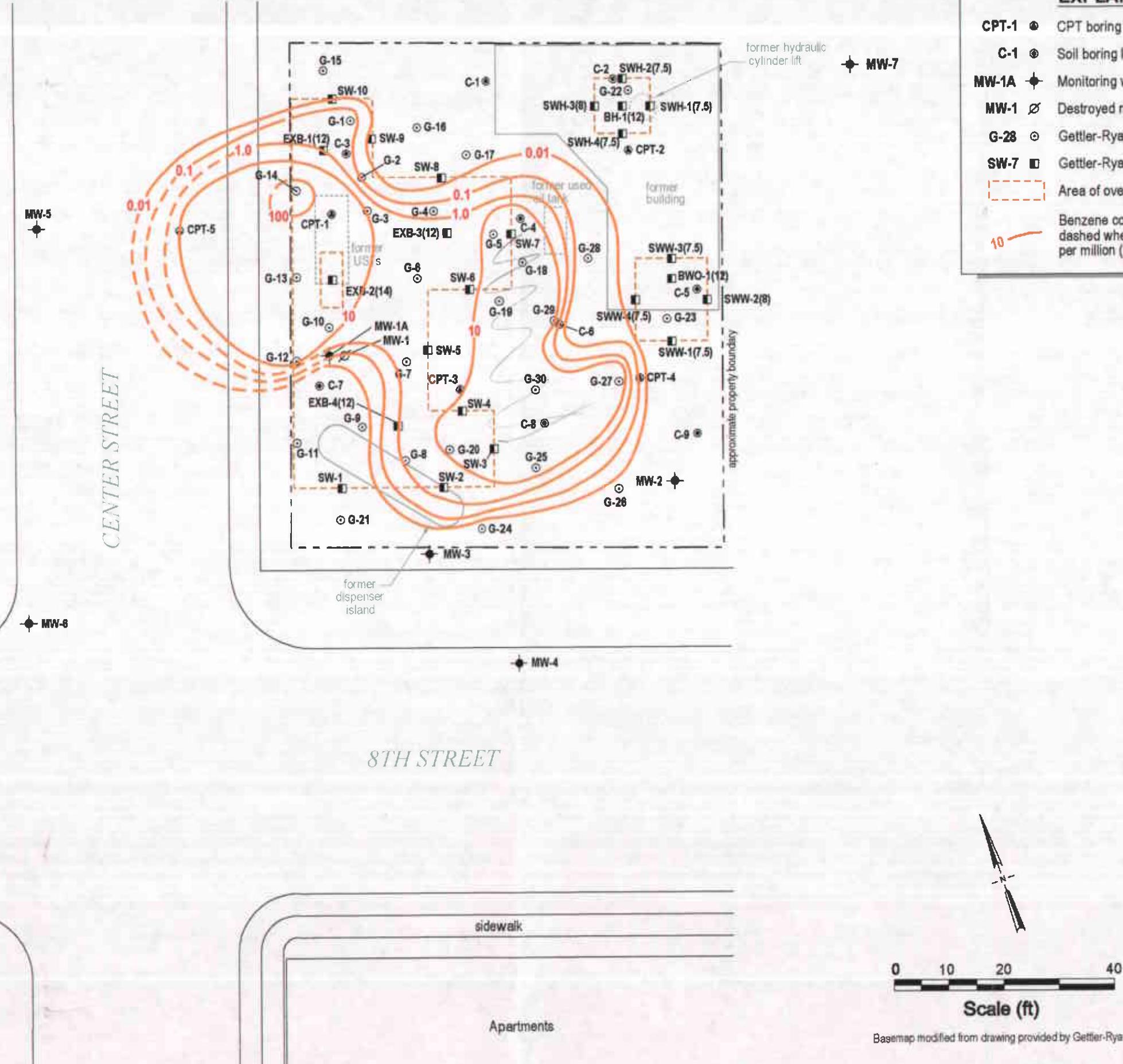
7 to 11 East Balau Grande

CONTINUATION

Chancery Court Case No. 2006114

800 Certified Sleek

Benzene Concentrations 7-11 fm		
Boring	Depth	Benzene in mg/kg
C-1	10	<0.0005
C-2	10	<0.0005
C-3	10	0.75
C-4	10	11
C-5	10	<0.0005
C-6	10	<0.063
C-7	10	<0.0005
C-8	10	20
C-9	10	<0.0005
CPT-1	10.5	10
CPT-2	10.5	<0.0005
CPT-3	10.5	1.9
CPT-4	10.5	<0.0005
CPT-5	9.5	13
EXB-1	---	---
EXB-2	---	---
EXB-3	---	---
EXB-4	---	---
G-1	10	34
G-2	10	7.5
G-3	10	19
G-4	10	3.5
G-5	10	0.062
G-6	10	19
G-7	10	18
G-8	10	69
G-9	10	83
G-10	10	14
G-11	10	<0.080
G-12	10	50
G-13	10	56
G-14	10	65
G-15	10	12
G-16	10	3.1
G-17	10	0.62
G-18	10	4.9
G-19	10	20
G-21	10	0.0091
G-24	10	0.0074
G-25	10	27
G-26	10	<0.0050
G-27	10	13
G-28	10	0.027
G-29	10	39
G-30	10	92
MW-1A	---	---
MW-2	10	<0.0050
MW-3	10	0.24
MW-4	10	<0.0050
MW-5	10	<0.0050
MW-6	10	<0.0050
MW-7	10	<0.0050
MW-8	10	<0.0050
SW-1	10	<0.0050
SW-10	10	<0.10
SW-2	10	2.5
SW-3	10	19
SW-4	10	91
SW-5	10	<0.0050
SW-6	10	7.3
SW-7	10	11
SW-8	10	<0.0050
SW-9	10	<0.0050



Basemao modified from drawing provided by Gettier-Ryan

FIGURE
9

Benzene Concentrations in Soil

CAMBRIA

Chevron Service Station 206145

Oakland, California

FIGURE
10

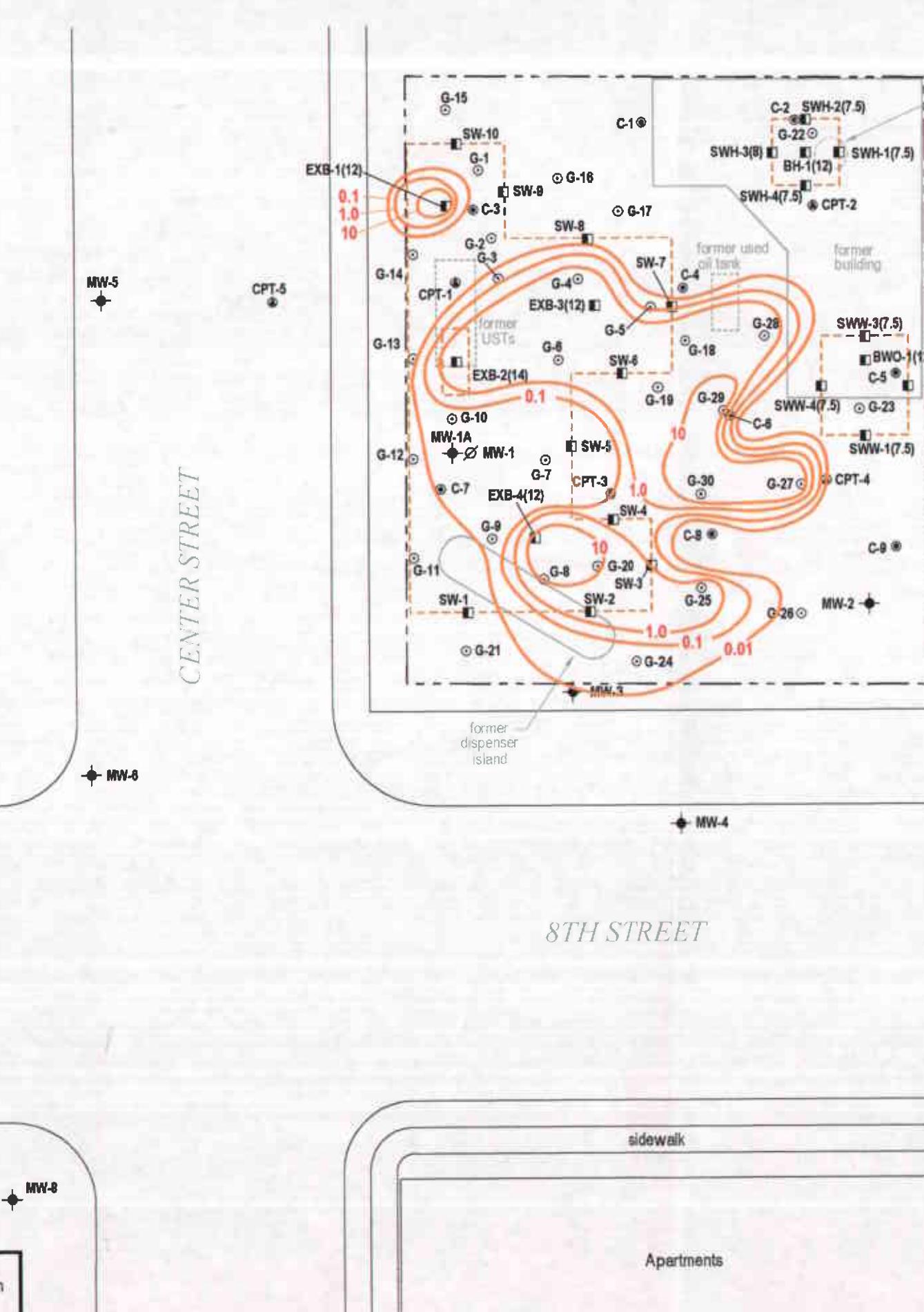
 0 10 20 40
Scale (ft)

Basemap modified from drawing provided by Gettier-Ryan

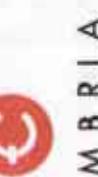
Benzene Concentrations 11-17 fbg

Boring	Depth	Benzene in mg/kg
C-1	15	<0.0005
C-2	15	<0.0005
C-3	15	<0.001
C-4	15	<0.0005
C-5	15	<0.0005
C-6	15	<0.002
C-7	15	<0.063
C-8	15	0.001
C-9	15	<0.0005
CPT-1	14.5	0.0005
CPT-2	14.5	<0.0005
CPT-3	15.5	0.094
CPT-4	14.5	<0.0005
CPT-5	15.5	<0.063
EXB-1	12	2.5
EXB-2	14	7.3
EXB-3	12	9.5
EXB-4	12	22
G-1	---	---
G-2	---	---
G-3	---	---
G-4	---	---
G-5	---	---
G-6	---	---
G-7	---	---
G-8	---	---
G-9	---	---
G-10	---	---
G-11	---	---
G-12	---	---
G-13	---	---
G-14	---	---
G-15	---	---
G-16	---	---
G-17	---	---
G-18	---	---
G-19	---	---
G-20	15	58
G-21	15	2.3
G-22	15	14
G-23	15	27
MW-1A	16	0.013
MW-2	---	---
MW-3	---	---
MW-4	---	---
MW-5	15	<0.0050
MW-6	15	<0.0050
MW-7	15	<0.0050
MW-8	15	<0.0050
SW-1	---	---
SW-10	---	---
SW-2	---	---
SW-3	---	---
SW-4	---	---
SW-5	---	---
SW-6	---	---
SW-7	---	---
SW-8	---	---
SW-9	---	---

H:\\K1\\CD\\ANDY\\GEOTRUST\\HEALTH\\BENZ_11-17.DWG



EXPLANATION	
CPT-1	● CPT boring location
C-1	● Soil boring location
MW-1A	● Monitoring well location
MW-1	○ Destroyed monitoring well location
G-28	○ Gettier-Ryan geoprobe boring location
SW-7	□ Gettier-Ryan soil sample location
Area of over excavation	
Benzene concentration contour line dashed where inferred, in parts per million (ppm)	

Benzene Concentrations in Soil

CAMBRIA

Chevron Service Station 206145

800 Center Street
Oakland, California**FIGURE
11**

0 10 20 40
Scale (ft)

Basemap modified from drawing provided by Gettier-Ryan

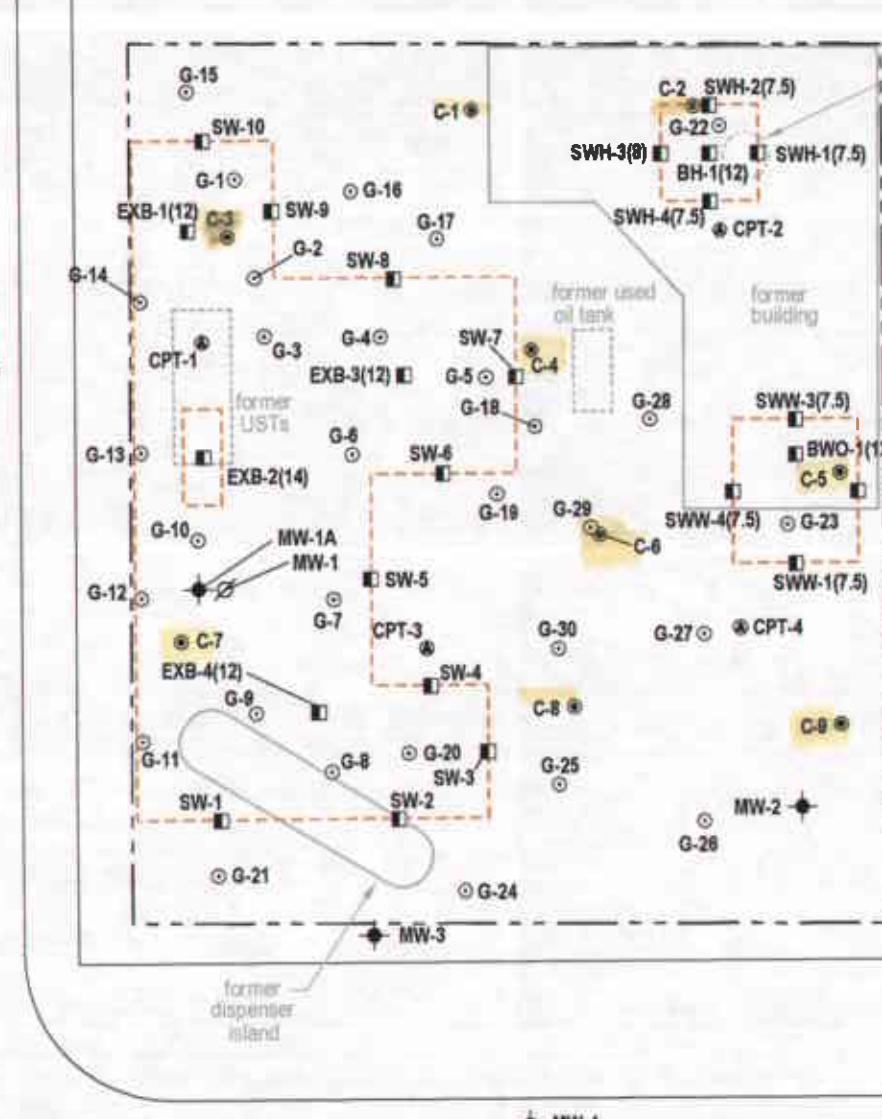
Benzene Concentrations 17-22 fbg		
Boring	Depth	Benzene in mg/kg
C-1	20	<0.0005
C-2	20	<0.0005
C-3	20	<0.0005
C-4	20	<0.0005
C-5	20	<0.0005
C-6	20	<0.0005
C-7	20	<0.0005
C-8	20	<0.0005
C-9	20	<0.0005
CPT-1	---	---
CPT-2	20.5	<0.0005
CPT-3	20.5	0.002
CPT-4	20.5	<0.0005
CPT-5	---	---
EXB-1	---	---
EXB-2	---	---
EXB-3	---	---
EXB-4	---	---
G-1	---	---
G-2	---	---
G-3	---	---
G-4	---	---
G-5	---	---
G-6	---	---
G-7	---	---
G-8	---	---
G-9	---	---
G-10	---	---
G-11	---	---
G-12	---	---
G-13	---	---
G-14	---	---
G-15	---	---
G-16	---	---
G-17	---	---
G-18	---	---
G-19	---	---
G-20	---	---
G-21	---	---
G-22	---	---
G-23	---	---
G-24	---	---
G-25	---	---
G-26	---	---
G-27	---	---
G-28	---	---
G-29	---	---
G-30	---	---
MW-1A	---	---
MW-2	---	---
MW-3	---	---
MW-4	---	---
MW-5	---	---
MW-6	---	---
MW-7	---	---
MW-8	---	---
SW-1	---	---
SW-2	---	---
SW-3	---	---
SW-4	---	---
SW-5	---	---
SW-6	---	---
SW-7	---	---
SW-8	---	---
SW-9	---	---

CENTER STREET

8TH STREET

sidewalk

Apartments

**EXPLANATION**

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A ● Monitoring well location
- MW-1 ○ Destroyed monitoring well location
- G-28 ○ Gettier-Ryan geoprobe boring location
- SW-7 ■ Gettier-Ryan soil sample location
- Area of over excavation

Benzene Concentrations in Soil

22 to 27 Feet Below Grade



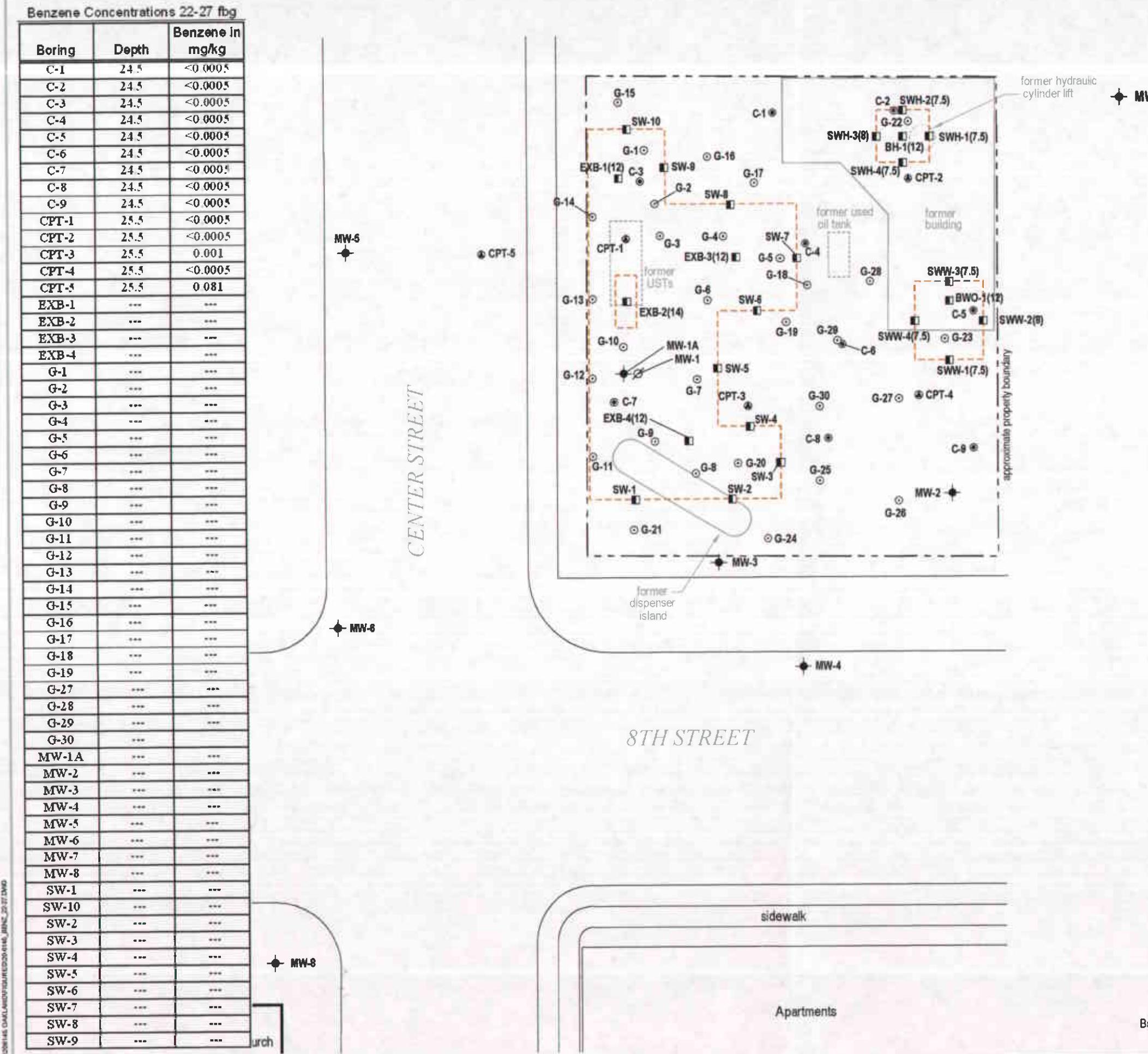
C A M B R I A

Chevron Service Station 206145
800 Center Street
Oakland, California

FIGURE
12

Scale (ft)

Basemap modified from drawing provided by Gettler-Ryan



EXPLANATION

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A ● Monitoring well location
- MW-1 ○ Destroyed monitoring well location
- EXB-1 ○ Gettler-Ryan geoprobe boring location
- SW-7 ■ Gettler-Ryan soil sample location
- Area of over excavation

Table 1a. Estimated TPHg Mass Remaining in Soil - Former Chevron Station 206145, 800 Center Street, Oakland, California

Depth Range		0 - 7 ft	0 - 7 ft	7 - 11 ft	11 - 17 ft	11 - 17 ft			
A = Area of impacted soil	square feet	30	68	330	136	957	820	4,022	2,108
T = Thickness of impacted soil	feet	7	7	4	4	4	4	6	6
V _{soil} = Volume of impacted soil	cubic yard	8	18	49	20	142	121	596	468
BD = Bulk density of soil (estimated)	kg/cubic yard	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163
SM = Total mass of impacted soil	kg	9,049	20,511	56,878	23,441	164,948	141,334	693,228	544,999
CON = Concentration in soil (average)	mg/kg soil	1,950	500	7,500	8,500	5,000	5,000	500	500
M = Mass in Soil	mg	1.76E+07	1.03B+07	4.27E+08	1.99E+08	8.25E+08	7.07E+08	3.47E+08	2.72E+09
	kg	17.65	10.26	426.59	199.25	824.74	706.67	346.61	2725.00
	pounds	38.82	22.56	938.49	438.34	1814.42	1554.68	762.55	5994.99
V = Total volume in soil	liters	23.84	13.86	576.47	269.25	1114.51	954.96	468.40	3682.43
	gallons	6.30	3.66	152.29	71.13	294.42	252.28	123.74	972.80
									50.02

Equations Used

$$V_{\text{soil}} = A * T / 27$$

$$SM = BD * V_{\text{soil}}$$

$$CON = 1/2 \text{ highest concentration contour or } 1/2 \text{ max. conc.}$$

$$M = CON * SM$$

$$V = Density * M$$

Notes:

1. Based on an estimated dry soil density of 95 lb/cf.
2. Based on an estimated average concentration per contour interval.

Hydrocarbon Density (kg/liter): 0.74

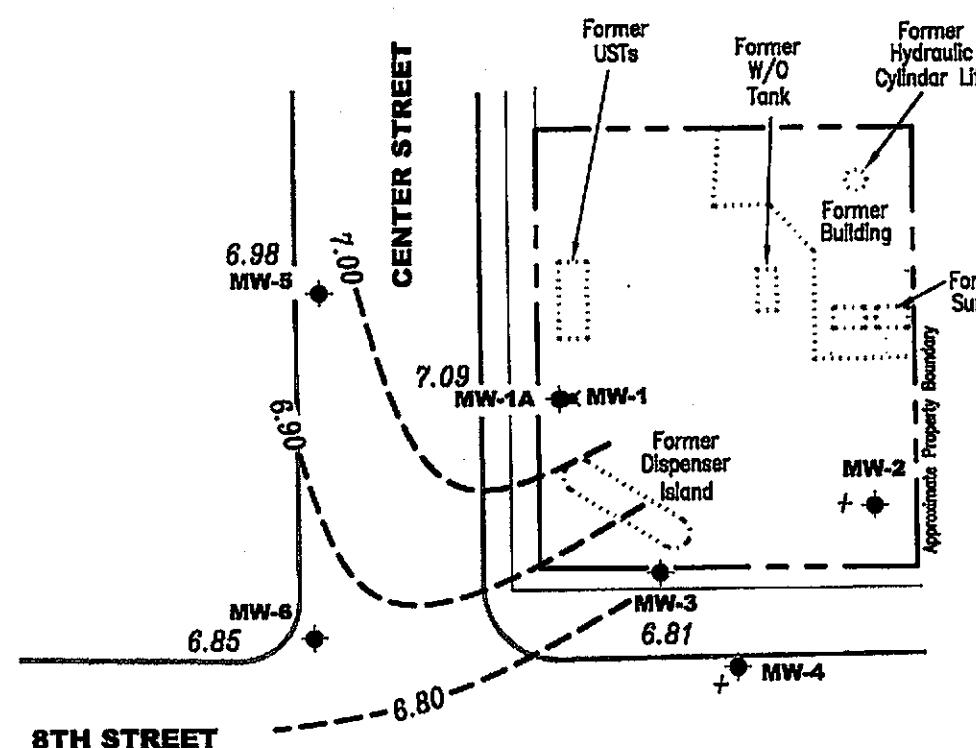
TOTAL POUNDS	11,873
TOTAL GALLONS	1,927

Table 1b. Estimated Benzene Mass Remaining in Soil - Former Chevron Station 206145, 800 Center Street, Oakland, California

Depth Range		0 - 7 ft	0 - 7 ft	7 - 11 ft	11 - 17 ft	11 - 17 ft	11 - 17 ft	11 - 17 ft				
A = Area of impacted soil	square feet	10	129	42	1,860	1,210	726	887	301	1,123	905	1,111
T = Thickness of impacted soil	feet	7	7	4	4	4	4	4	6	6	6	6
V _{soil} = Volume of impacted soil	cubic yard	3	33	6	276	179	108	131	67	250	201	247
BD = Bulk density of soil (estimated)	kg/cubic yard	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163	1,163
SM = Total mass of impacted soil	kg	3,016	38,910	7,239	320,588	208,554	125,133	152,882	77,820	290,339	233,977	287,236
CON = Concentration in soil (average)	mg/kg soil	0.055	0.050	85	46	5	0.5	0.05	29	5	0.5	0.05
	mg	1.66E+02	1.95E+03	6.15E+05	1.47E+07	1.04E+06	6.26E+04	7.64E+03	2.26E+06	1.45E+06	1.17E+05	1.44E+04
M = Mass in Soil	kg	0.00	0.00	0.62	14.75	1.04	0.06	0.01	2.26	1.45	0.12	0.01
	pounds	0.00	0.00	1.35	32.44	2.29	0.14	0.02	4.96	3.19	0.26	0.03
V = Total volume in soil	liters	0.00	0.00	0.70	16.76	1.18	0.07	0.01	2.56	1.65	0.13	0.02
	gallons	0.00	0.00	0.18	4.43	0.31	0.02	0.00	0.68	0.44	0.04	0.00
Equations Used		Notes:										
V _{soil} = A * T/27		1. Based on an estimated dry soil density of 95 lb/cf.										
SM = BD * V _{soil}		2. Based on an estimated average concentration per contour interval.										
CON = 1/2 highest concentration contour or 1/2 max. conc.												
M = CON * SM												
V = Density * M		Hydrocarbon Density (kg/liter): 0.88										
											TOTAL POUNDS	44.7
											TOTAL GALLONS	6.1

APPENDIX A

Figures From Previous Investigations

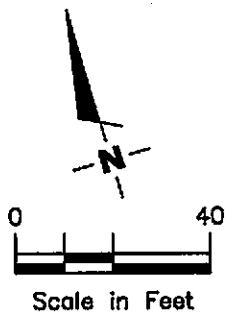
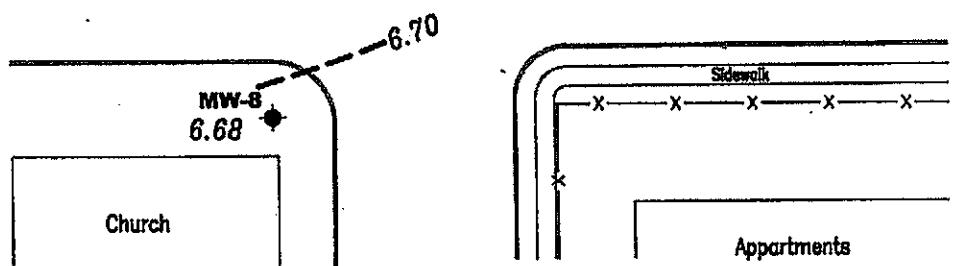


EXPLANATION

- Groundwater monitoring well
- ✗ Destroyed well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 Groundwater elevation contour, dashed where inferred
- + TOC not available



Approximate groundwater flow direction at a gradient of 0.003 to 0.006 Ft./Ft.



Source: Figure modified from drawing provided by RRM engineering contracting firm.



GETTLER - RYAN INC.

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Dublin, CA 94568

(925) 551-7555

PROJECT NUMBER
386492

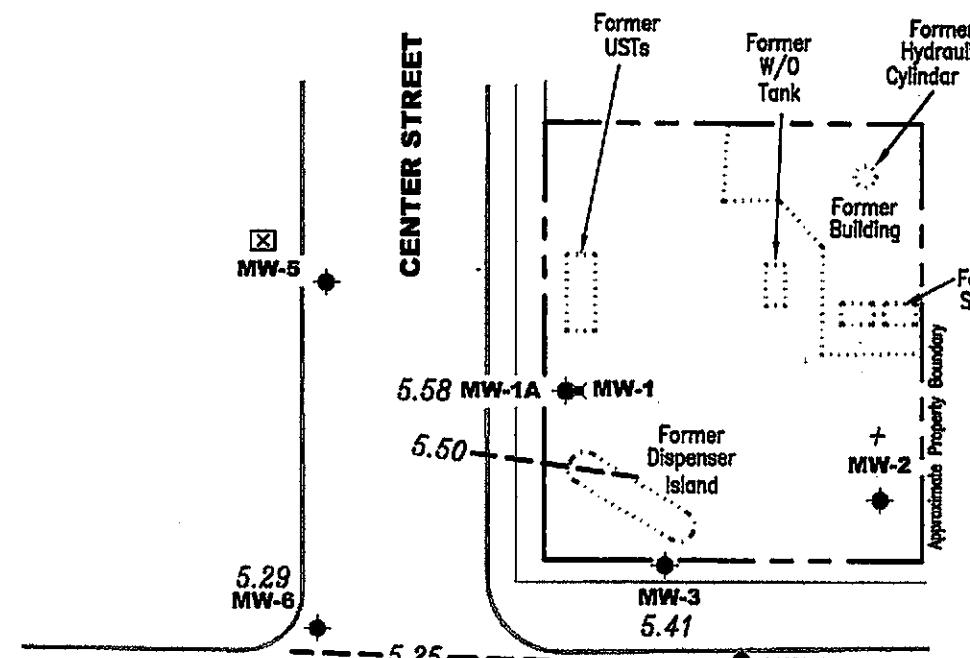
REVIEWED BY

POTENTIOMETRIC MAP

Former Chevron (Signal Oil) Service Station #206145(S-800)
800 Center Street
Oakland, California

DATE
December 17, 2004

REVISED DATE



EXPLANATION

- Groundwater monitoring well
- ✗ Destroyed well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- - - 99.99 Groundwater elevation contour, dashed where inferred
- + TOC not available
- ☒ Inaccessible



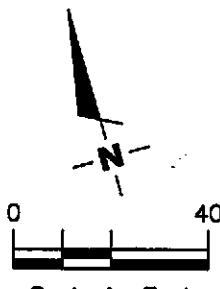
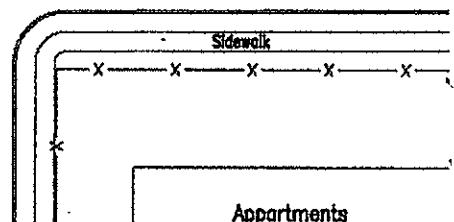
Approximate groundwater flow direction at a gradient of 0.006 to 0.008 Ft./Ft.

8TH STREET

----- 5.00

MW-8
4.79

Church



Scale in Feet

Source: Figure modified from drawing provided by RRM engineering contracting firm.



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PROJECT NUMBER
386492

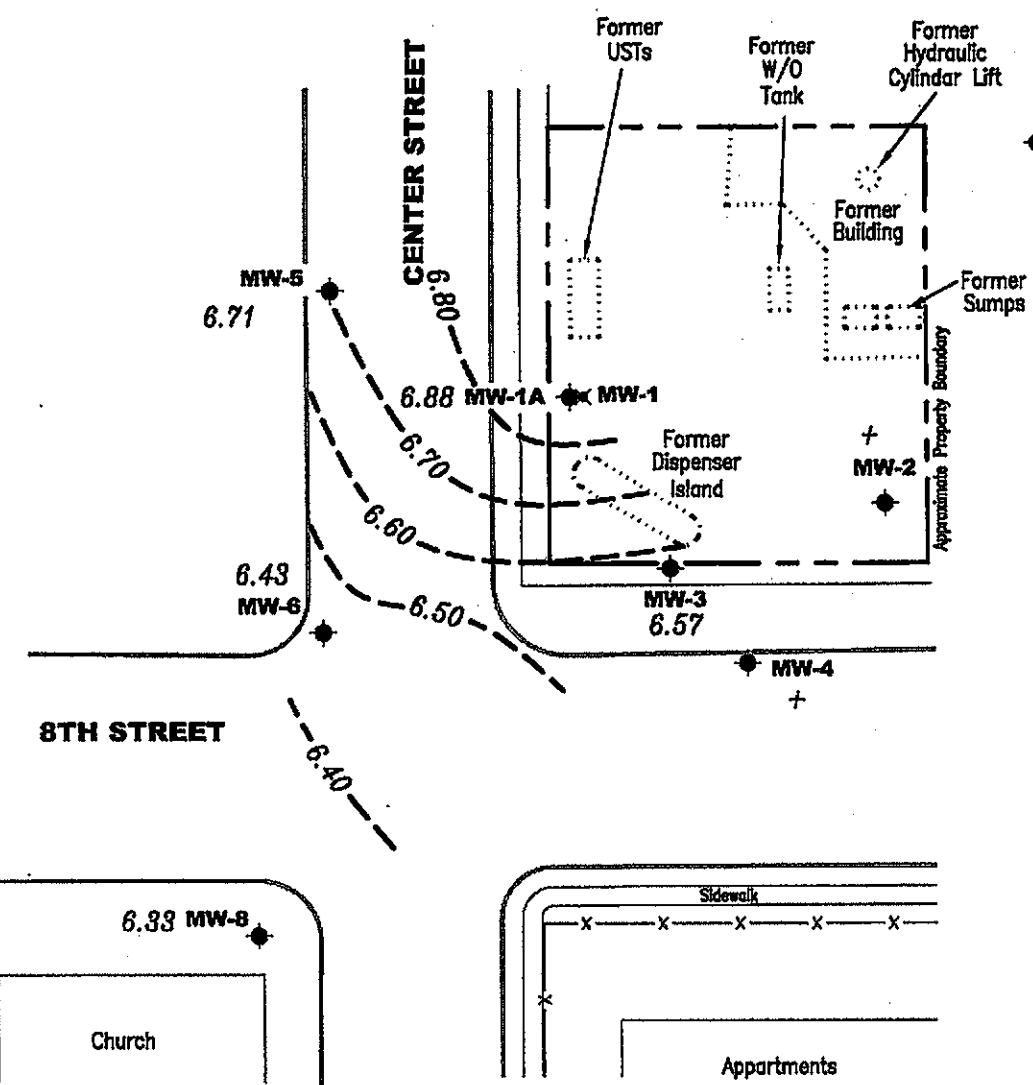
REVIEWED BY

POTENIOMETRIC MAP

Former Chevron (Signal Oil) Service Station #206145(S-800)
800 Center Street
Oakland, California

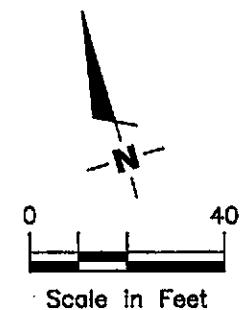
DATE
August 31, 2004

REVISED DATE



EXPLANATION

- Groundwater monitoring well
 - ✗ Destroyed well
 - 99.99 Groundwater elevation in feet referenced to Mean Sea Level
 - Groundwater elevation contour, dashed where inferred
 - + TOC not available
- Approximate groundwater flow direction at a gradient of 0.002 to 0.007 Ft./Ft.



Source: Figure modified from drawing provided by RRM engineering contracting firm.



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(925) 551-7555

POTENIOMETRIC MAP

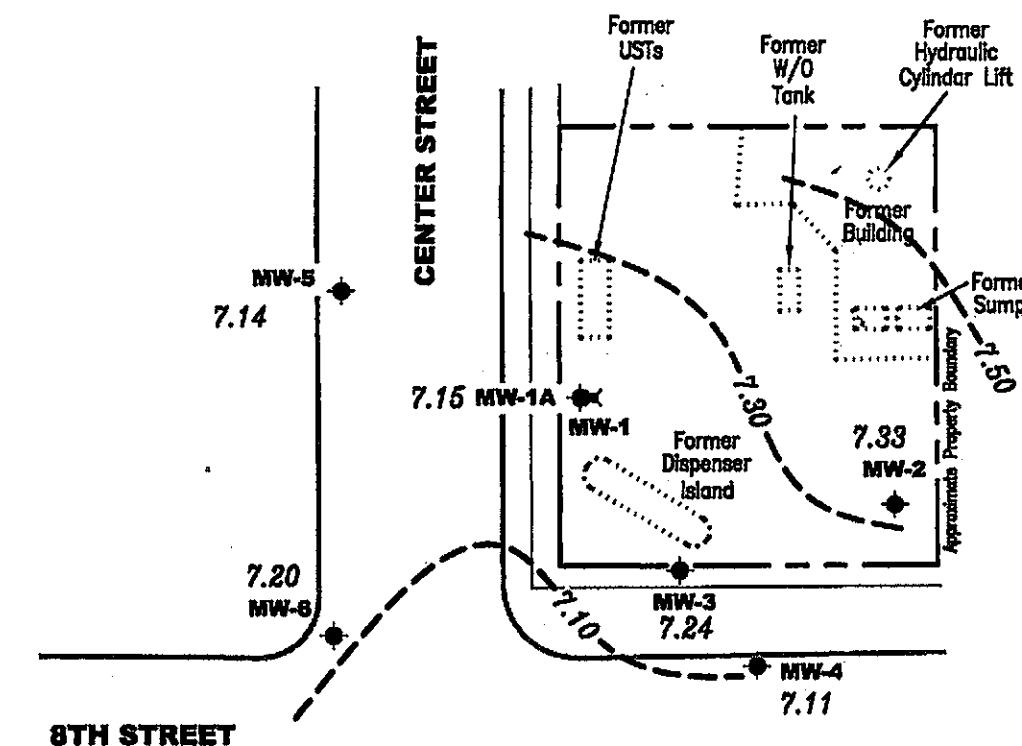
Former Chevron (Signal Oil) Service Station #206145(S-800)
800 Center Street
Oakland, California

PROJECT NUMBER
386492

REVIEWED BY

DATE
May 28, 2004

REVISED DATE

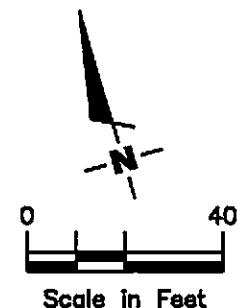
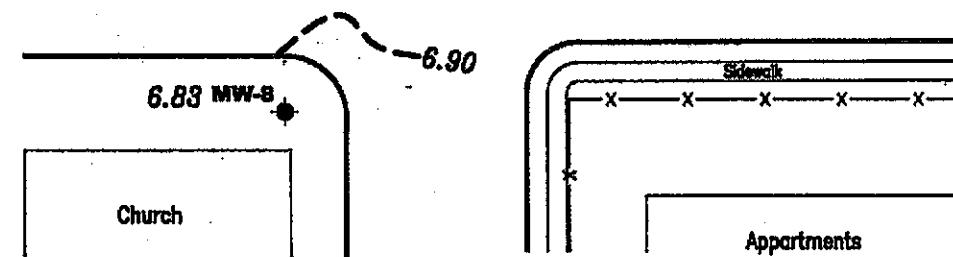


EXPLANATION

- Groundwater monitoring well
- ✗ Destroyed well
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level
- 99.99 Groundwater elevation contour, dashed where inferred



Approximate groundwater flow direction at a gradient of 0.003 to 0.007 Ft./Ft.



Source: Figure modified from drawing provided by RRM engineering contracting firm.



GETTLER - RYAN INC.
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PROJECT NUMBER
386492

REVIEWED BY

DATE
June 2, 2003

REVISED DATE

POTENTIOMETRIC MAP
Former Chevron (Signal Oil) Service Station #206145(S-800)
800 Center Street
Oakland, California

LQ

CONCENTRATION MAP
Former Chevron (Signal Oil) Service Station #20-6145
800 Center Street

REvised Date _____

DATE

REVIEWED BY

PROJECT NUMBER

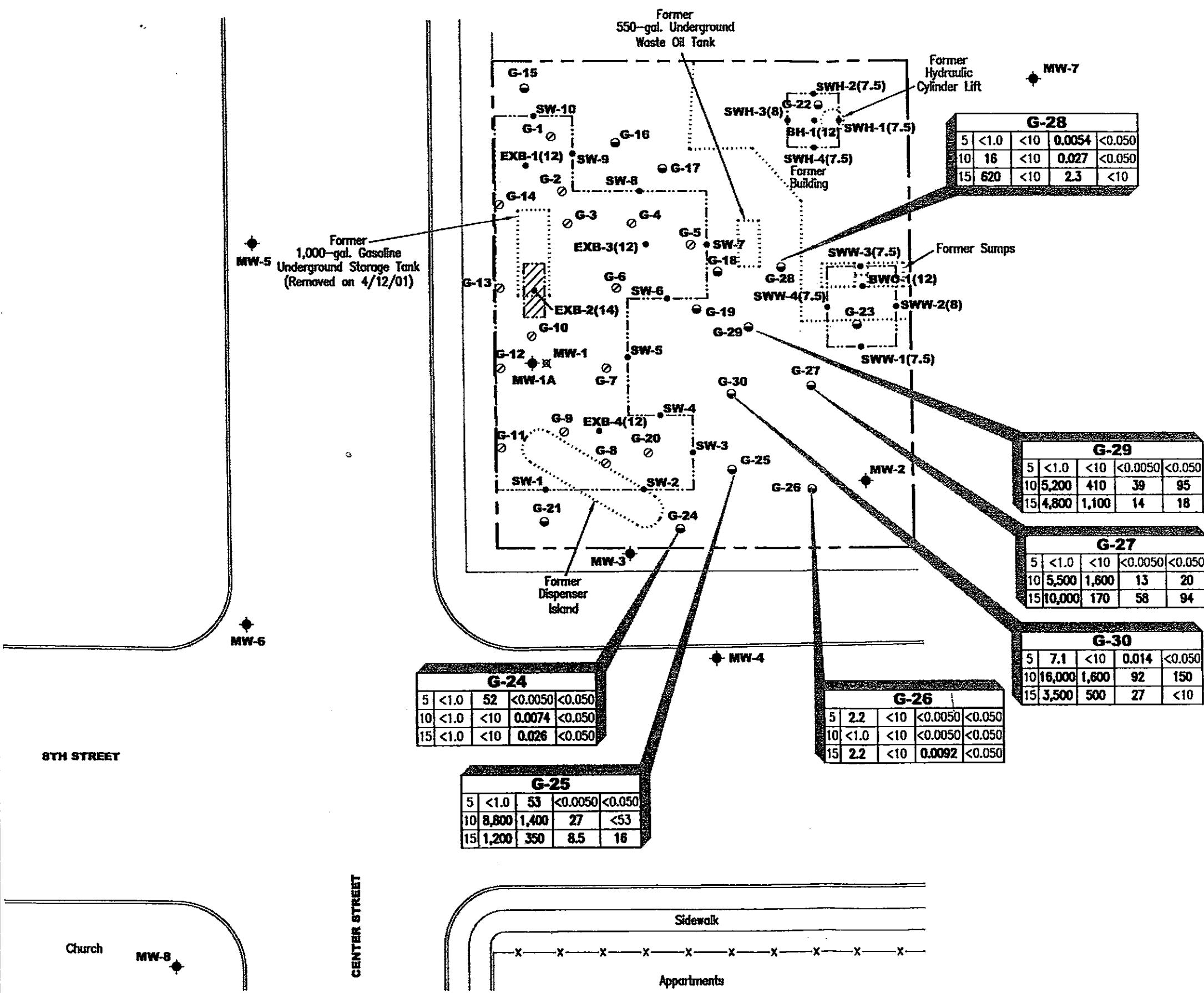
EXPLANATION

- Groundwater monitoring well
 - ☒ Destroyed groundwater monitoring well
 - Geoprobe boring
 - Geoprobe boring removed by overexcavation on 11/14-18/02
 - Soil sample location
 - Limit of excavation to 12 feet bgs
 - ▨ Limit of excavation to 14 feet bgs

SAMPLE I.D.

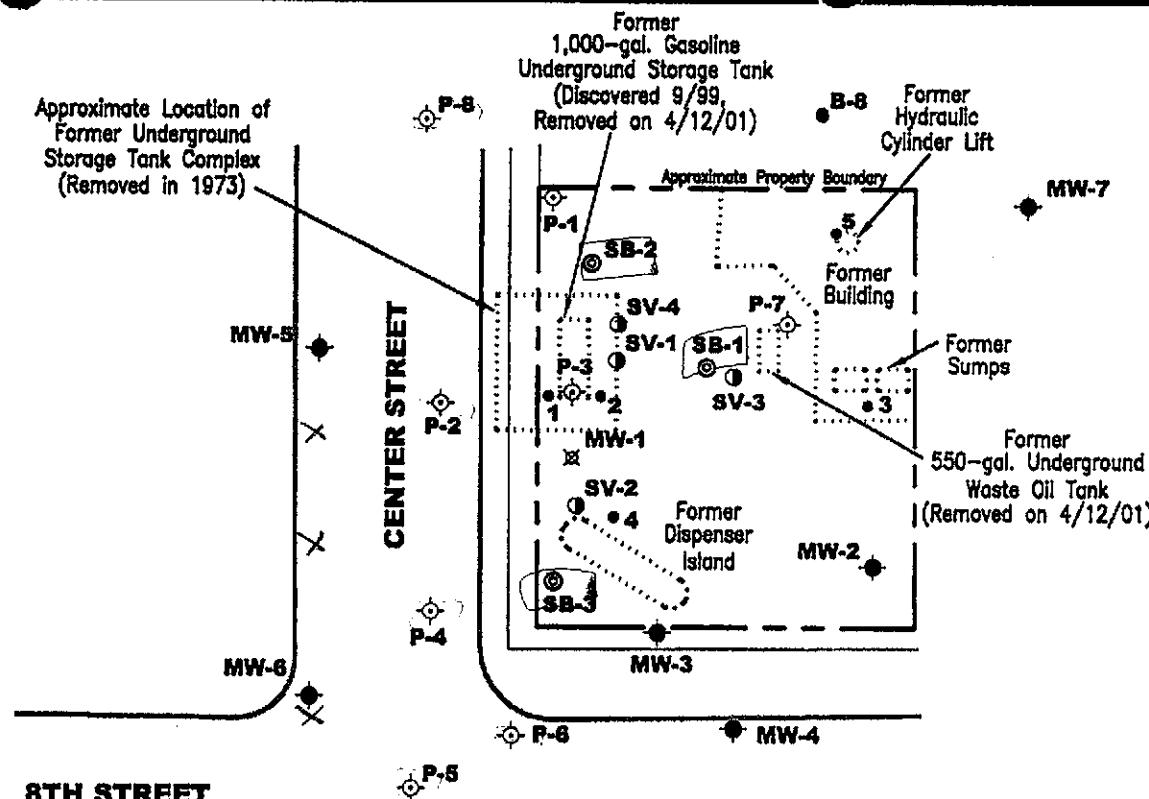
Depth	TPH(G)	TPH(D)	B	MTBE
-------	--------	--------	---	------

Depth (Sample depth in feet)/
 TPH(G) (Total Petroleum
 Hydrocarbons as Gasoline/
 TPH(D) (Total Petroleum
 Hydrocarbons as Diesel/
 B (Benzene)/MTBE (Methyl
 tert-butyl ether) concentrations
 in ppm

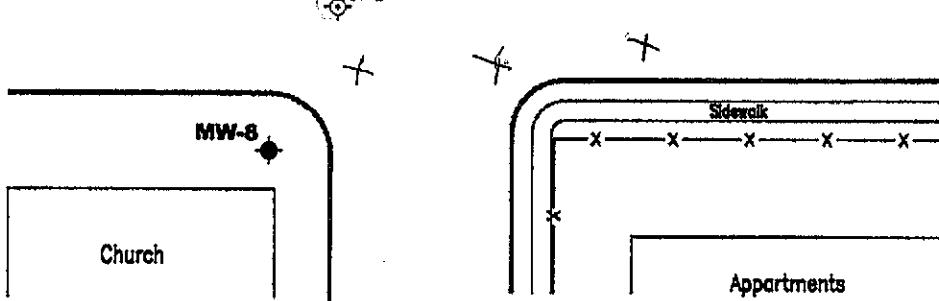


Source: Figure modified from drawing provided by RRM engineering contracting firm and Gettier-Ryan Field observations.

Approximate Location of
Former Underground
Storage Tank Complex
(Removed in 1973)



8TH STREET



Source: Figure modified from drawing provided by RRM engineering contracting firm.



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Dublin, CA 94568

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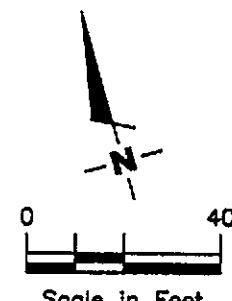
PROJECT NUMBER
DG261451.5C01

REVIEWED BY

DATE
1/03

EXPLANATION

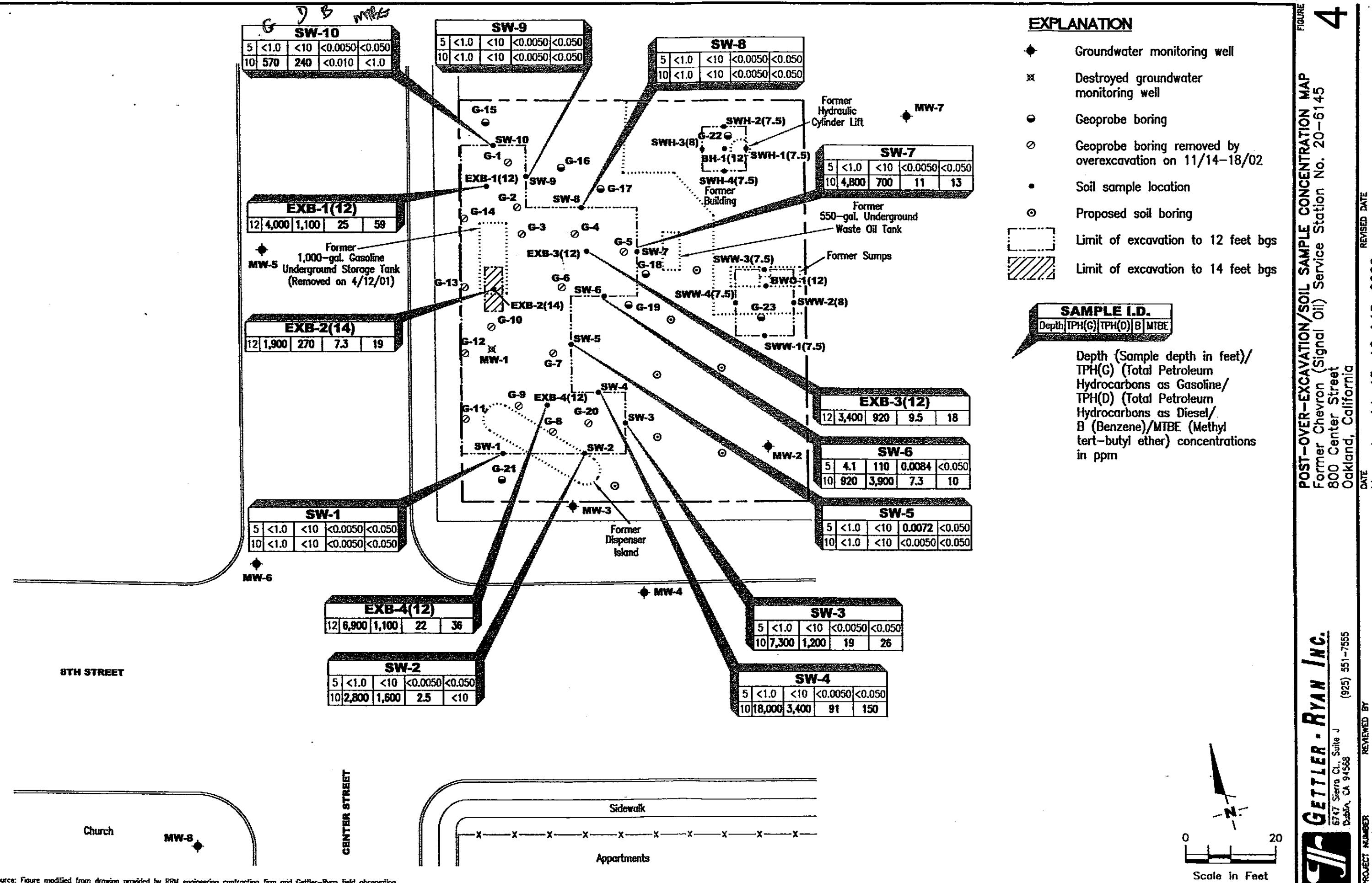
- Groundwater monitoring well
- ✗ Destroyed groundwater monitoring well
- Soil boring – Subsurface Consultants, 1989
- SB-1 Soil boring – Groundwater Technology, 1995
- SV-1 Soil vapor probe – Pacific Environmental Group, 1997
- P-1 Geoprobe soil boring – Pacific Environmental Group, 1997
- B-8 Soil boring – Pacific Environmental Group, 1997



Scale in Feet

SITE PLAN
Former Chevron Service Station No 20-6145
800 Center Street
Oakland, California

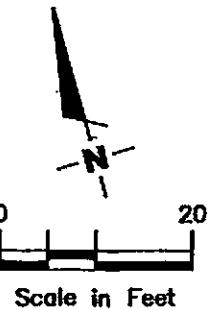
FIGURE
2



POST-OVER-EXCAVATION/SOIL SAMPLE CONCENTRATION MAP
Former Chevron (Signal Oil) Service Station No. 20-6145
800 Center Street
Oakland, California

CONCENTRATION MAP
 Former Chevron (Signal Oil) Service Station No. 20-6145
 800 Center Street
 Oakland, California

DATE June 21, 2002

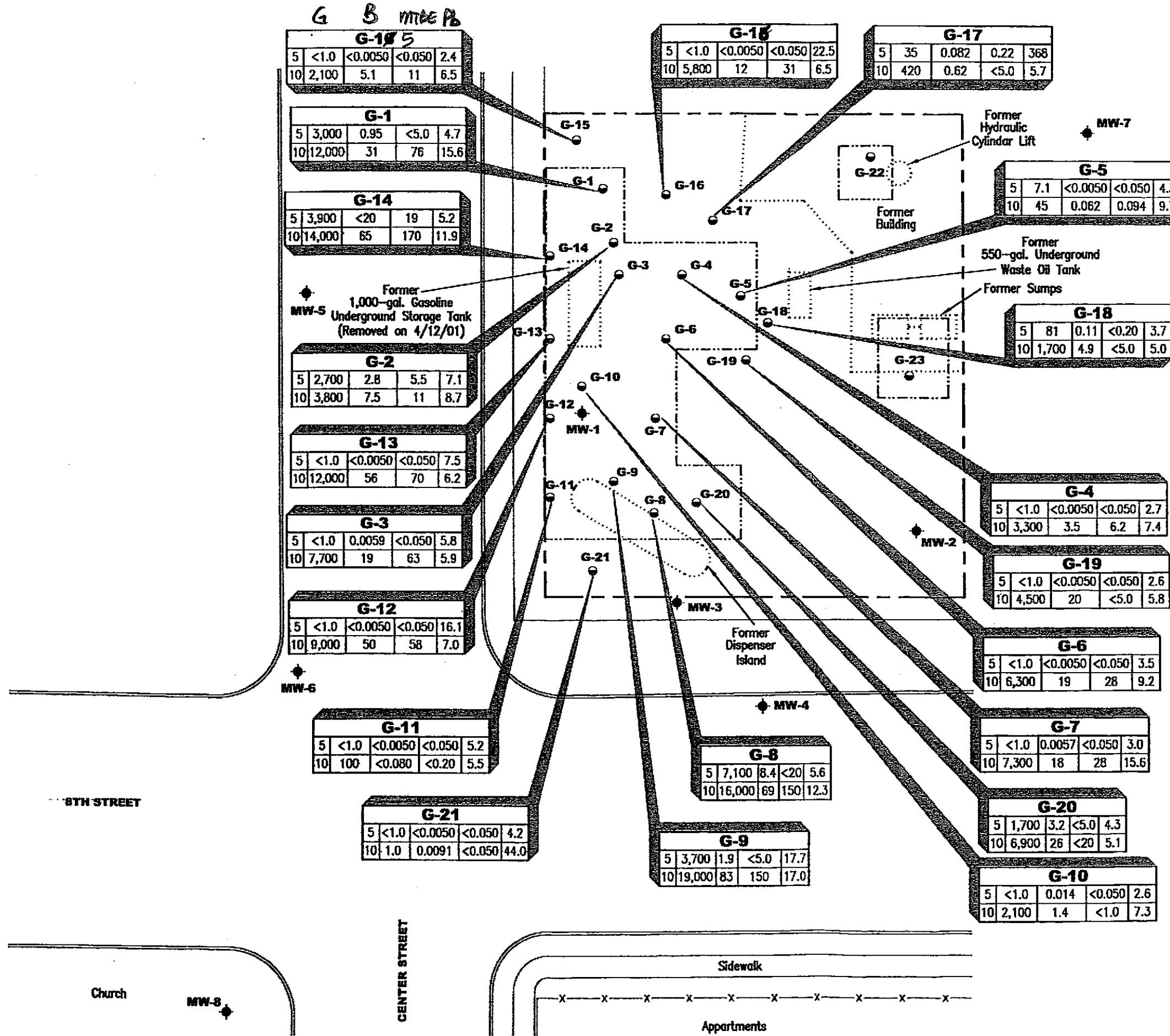
**EXPLANATION**

- ◆ Groundwater monitoring well
- Geoprobe boring
- Proposed limit of excavation

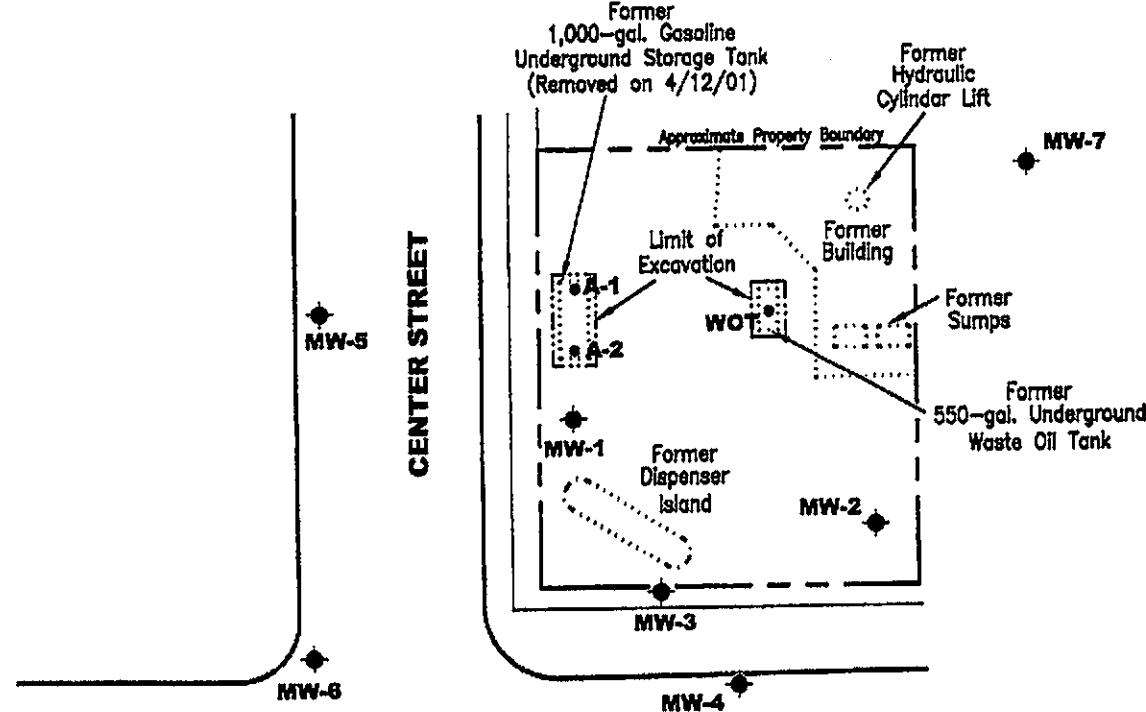
BORING I.D.

Depth TPH(G) B MTBE TPb

Depth (Sample depth in feet)/
 TPH(G) (Total Petroleum
 Hydrocarbons as Gasoline/
 B (Benzene)/MTBE (Methyl
 tert-butyl ether)/ TPb (Total
 Lead) concentrations in ppm



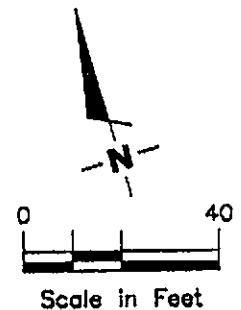
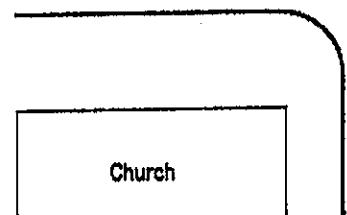
Source: Figure modified from drawing provided by RRW engineering contracting firm and Gettier-Ryan field observation.



EXPLANATION

- ◆ Groundwater monitoring well
- Soil sample location

8TH STREET



Source: Figure modified from drawing provided by RRM engineering contracting firm.



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SITE PLAN/SAMPLE LOCATION MAP

Former Chevron (Signal Oil) Service Station No 20-6145
800 Center Street
Oakland, California

2

PROJECT NUMBER
DG26145C.4C01

REVIEWED BY

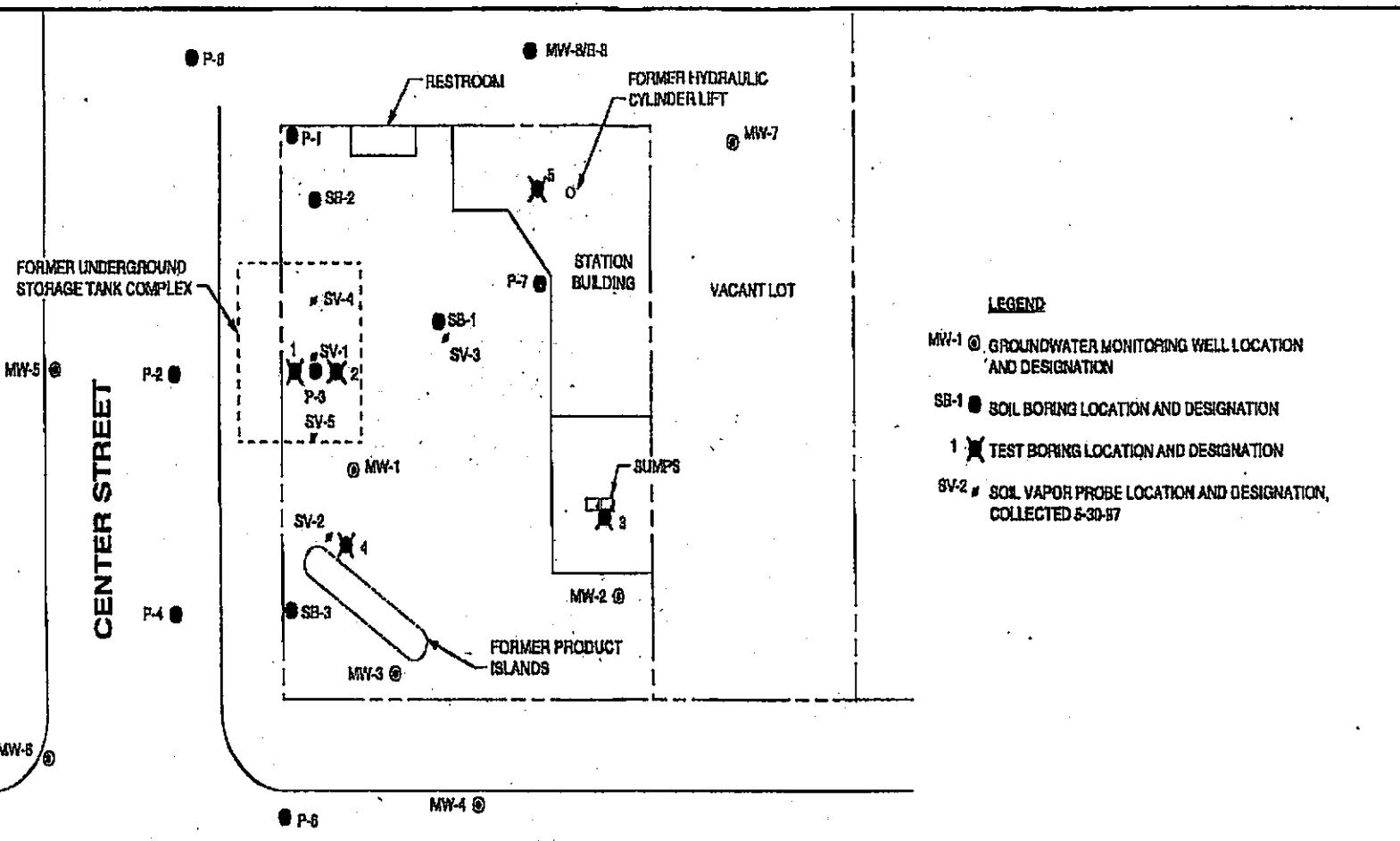
DATE
5/01

REVISED DATE

FILE NAME: C:\WINDOWS\Desktop\AO1-20-6145.DWG | Layout Tab: Tank Rpt 5-01

FIGURE

N



SOURCE: MAP BY GROUNDWATER TECHNOLOGY; DATED: 8-7-85



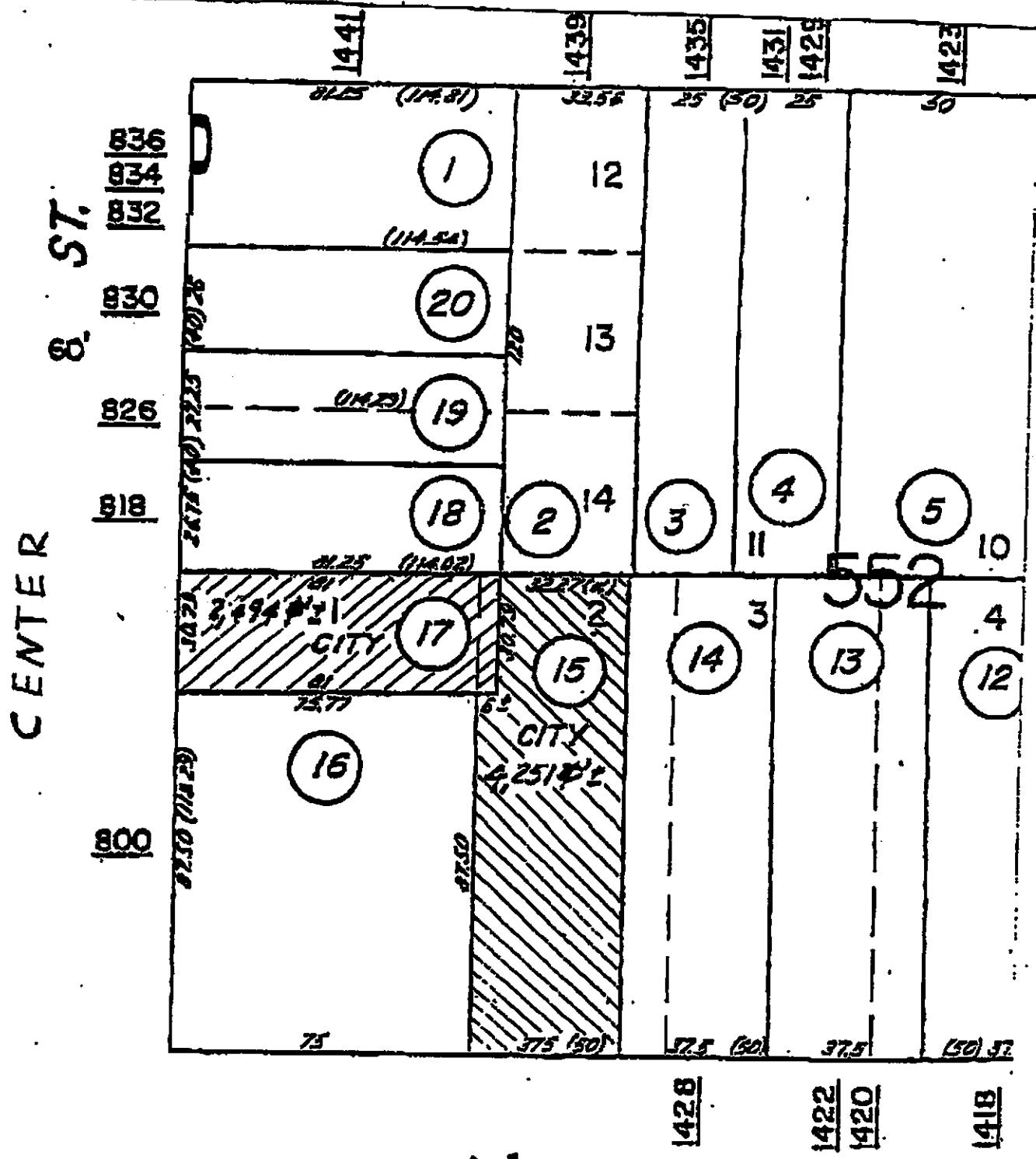
PACIFIC
ENVIRONMENTAL
GROUP, INC.

SCALE
0 20 40 FEET

FORMER SIGNAL SERVICE STATION 800
800 Center Street at 8th Street
Oakland, California

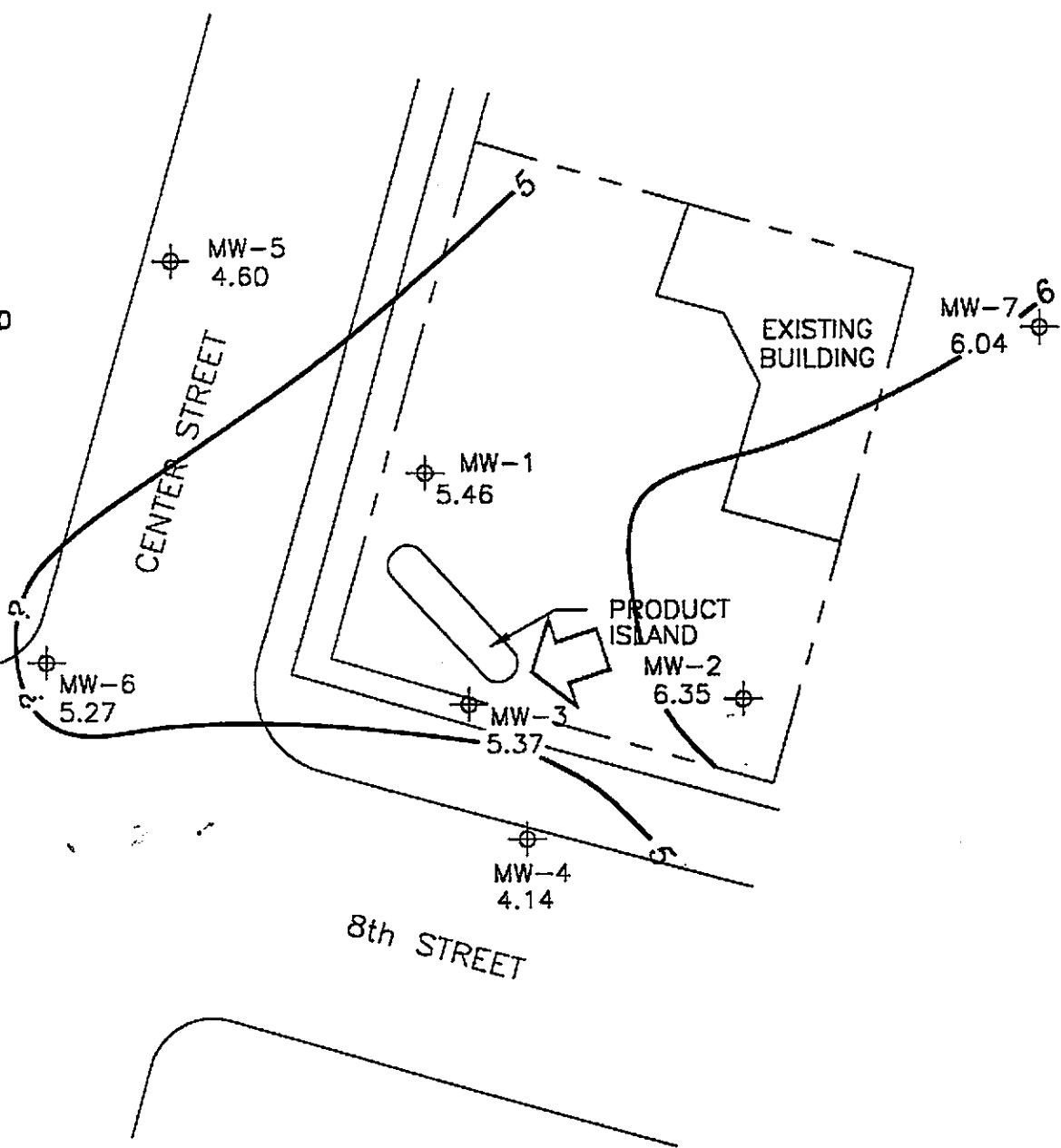
SITE MAP

FIGURE:
2
PROJECT:
320-182.1C



SITE MAP - 14
1418 1420 1422 1428

SCALE (ft)



EXPLANATION

- ⊕ MONITORING WELL
- 5.27 GROUNDWATER ELEVATION (FT, MSL)
- 6 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- ↗ APPROXIMATE GROUNDWATER FLOW DIRECTION;
APPROXIMATE GRADIENT = 0.03



Ref. 205145.dwg
Baseline from Ron Archer Engineer Inc.

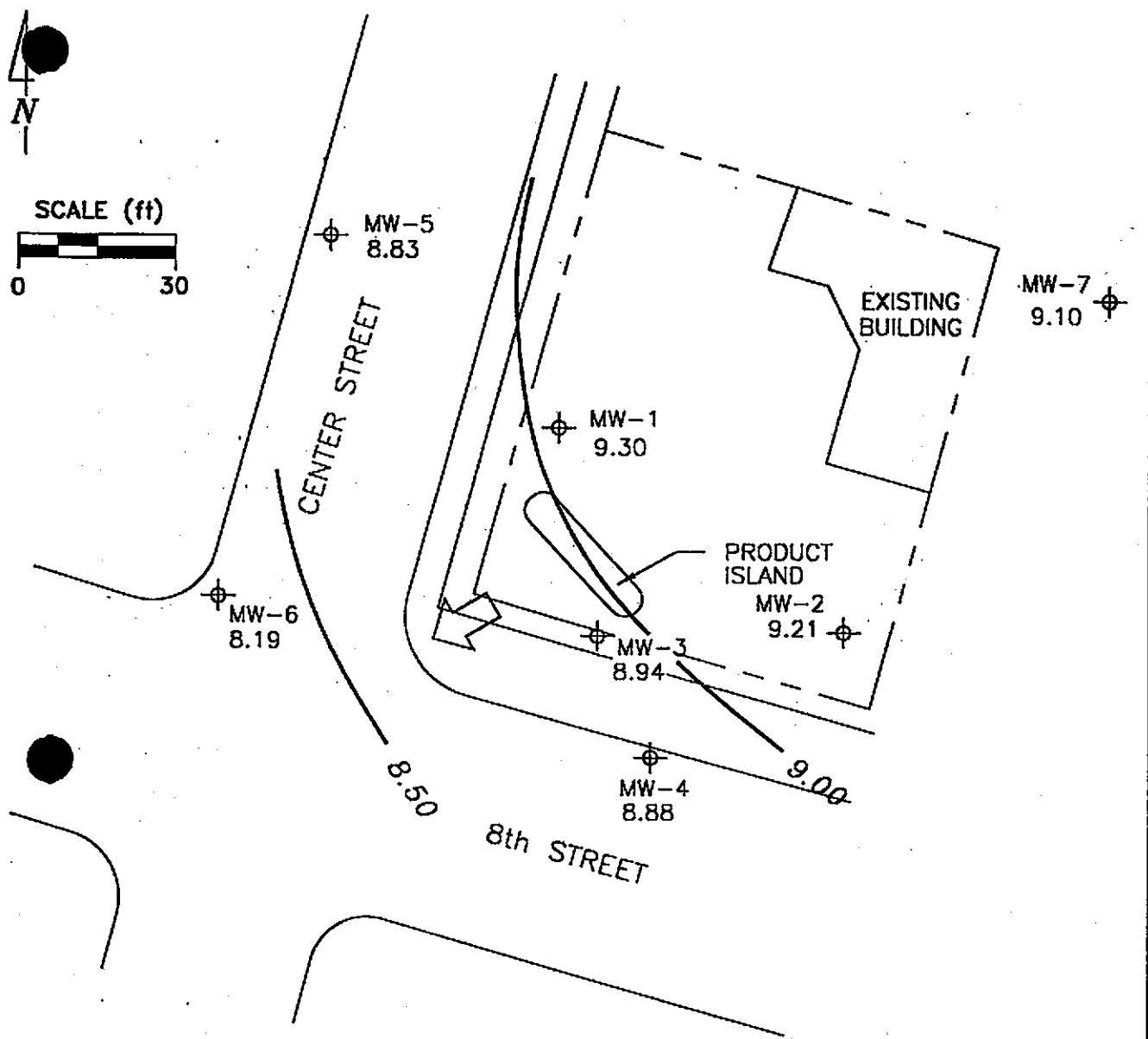
PREPARED BY

RRM
engineering contracting firm

Former Signal Service Station S-800
800 Center Street
Oakland, California

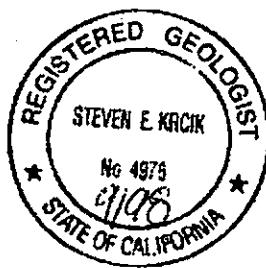
GROUNDWATER ELEVATION CONTOUR MAP,
OCTOBER 28, 1999

FIGURE:
1
PROJECT:
DAC04



EXPLANATION

- ⊕ MONITORING WELL
- 8.88 GROUNDWATER ELEVATION (FT, MSL)
- 8.50 — GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- ↗ APPROXIMATE GROUNDWATER FLOW DIRECTION;
APPROXIMATE GRADIENT = 0.01



Map from Ron Archer Engineer Inc.

PARED BY

RRM
engineering contracting firm

Former Signal Service Station S-800

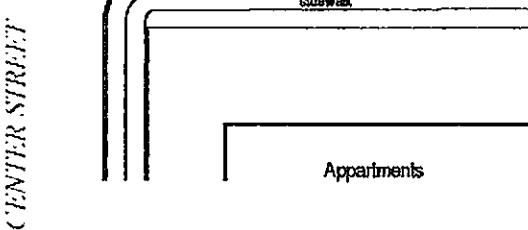
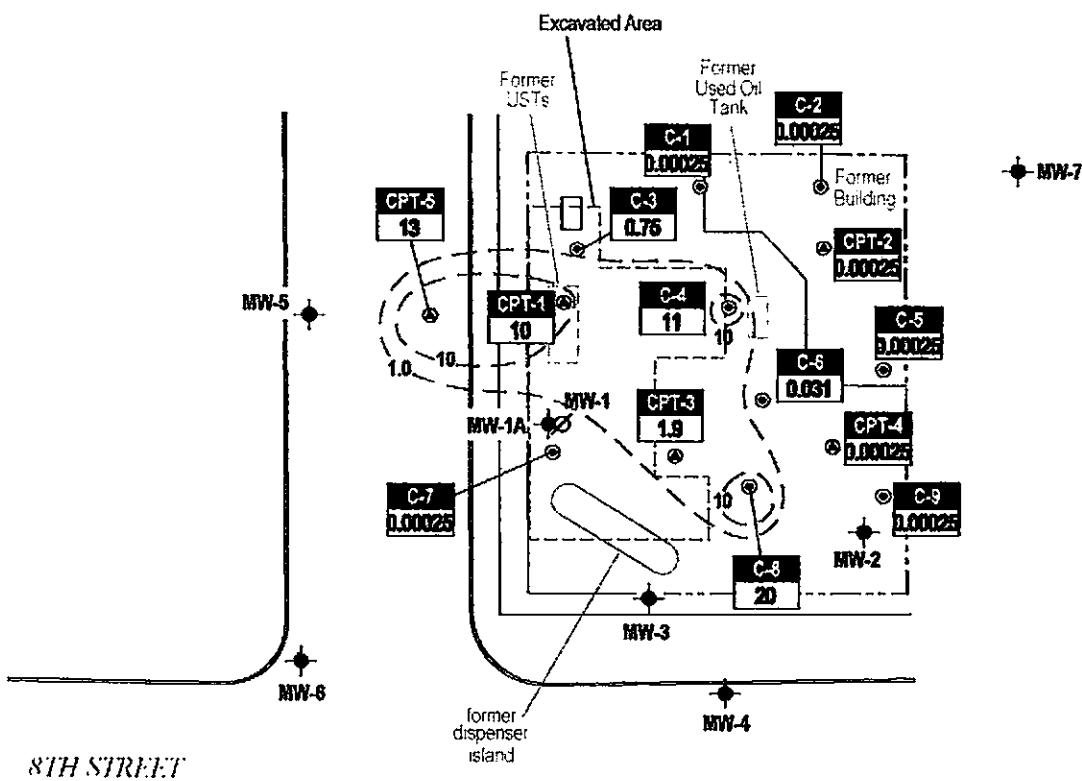
800 Center Street
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP,
JANUARY 28, 1998

FIGURE:

1

PROJECT:
DAC04



EXPLANATION

- CPT-1 • CPT boring location
- C-1 • Soil boring location
- MW-1A ♦ Monitoring well location
- MW-1 ⚡ Destroyed monitoring well location

Well / Boring designation

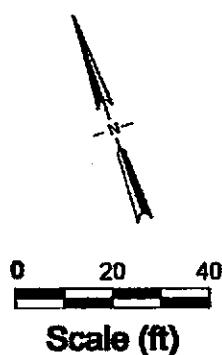
Well ID

BENZ

Benzene concentrations in soil from 5.0 to 10.5 fbg. in parts per million (ppm)

10 —

Benzene concentration contour line dashed where inferred



CHEVRON SERVICE STATION # 206145

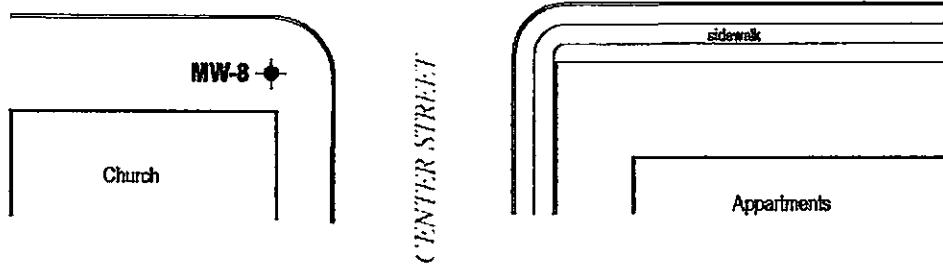
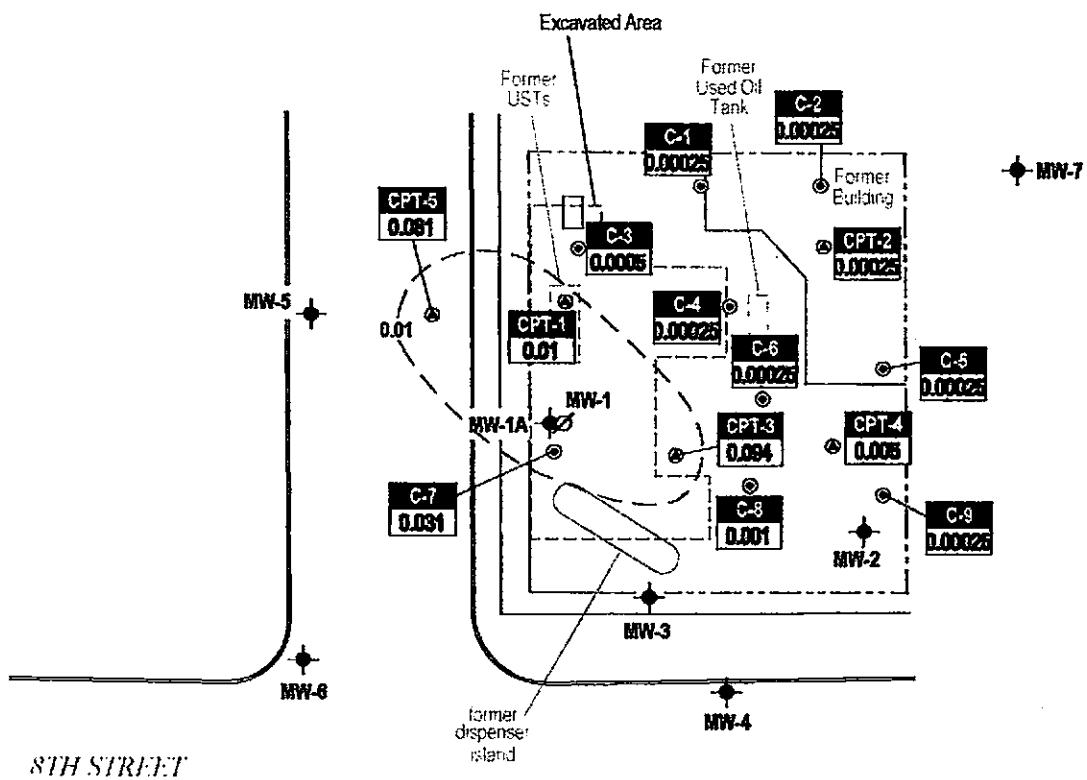
0 Center Street

Oakland, California



C A M B R I A

Isoconcentrations of Benzene
In Soil from 5.0 to 10.5 fbg.



EXPLANATION

- CPT-1** ◊ CPT boring location

C-1 ◊ Soil boring location

MW-1A ♦ Monitoring well location

MW-1 ⚡ Destroyed monitoring well location

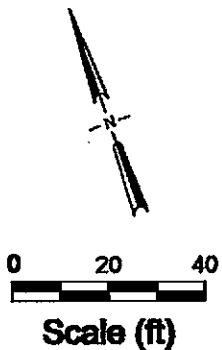
Well ID Well / Boring designation
BENZ Benzene concentrations in soil from >10.5 fbg. in parts per million (ppm)

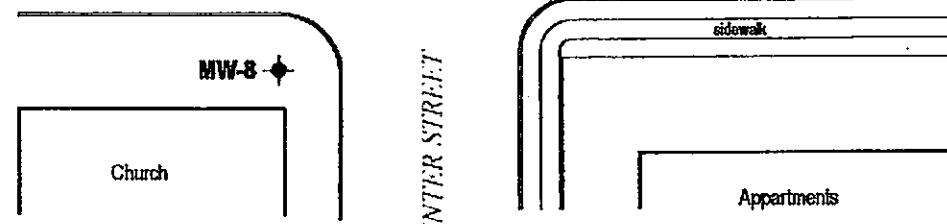
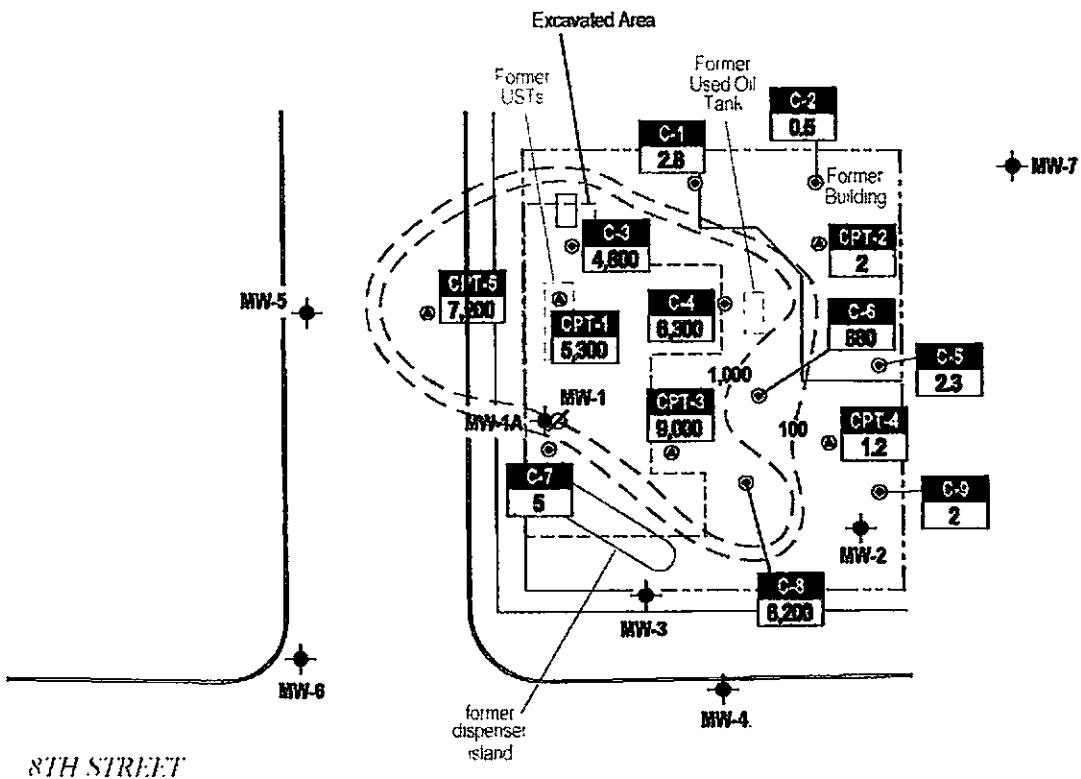
10 — — Benzene concentration contour line dashed where inferred



CAMBRIA

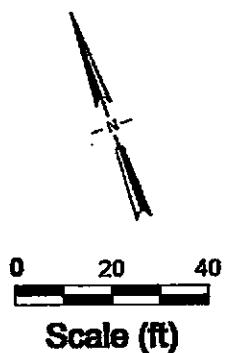
Isoconcentrations of Benzene in Soil from >10.5 fbg.





EXPLANATION

- CPT-1 • CPT boring location
- C-1 • Soil boring location
- MW-1A • Monitoring well location
- MW-1 Ø Destroyed monitoring well location
- Well ID Well / Boring designation
- TPHg TPHg concentrations in soil from 5.0 to 10.5 fbg. in parts per million (ppm)
- 10 — TPHg concentration contour line dashed where inferred

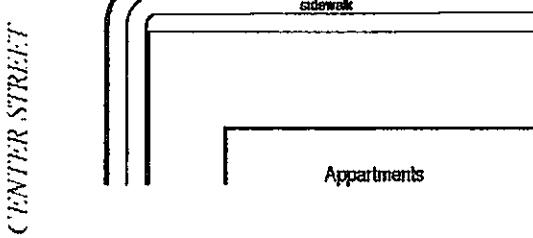
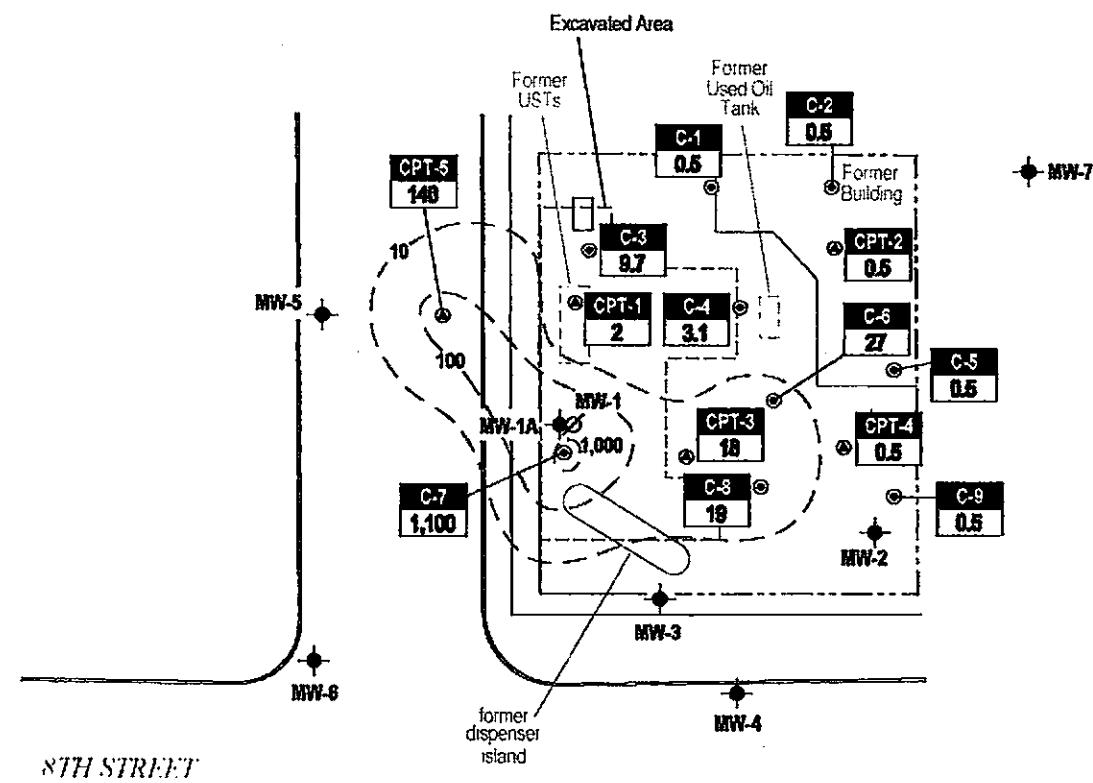


Chevron Service Station # 206145
800 Center Street
Oakland, California



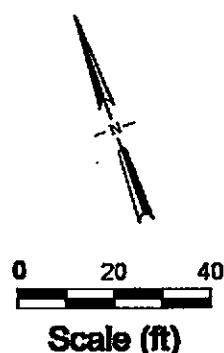
C A M B R I A

**Isoconcentrations of TPHg
in Soil from 5.0 to 10.5 fbg.**



EXPLANATION

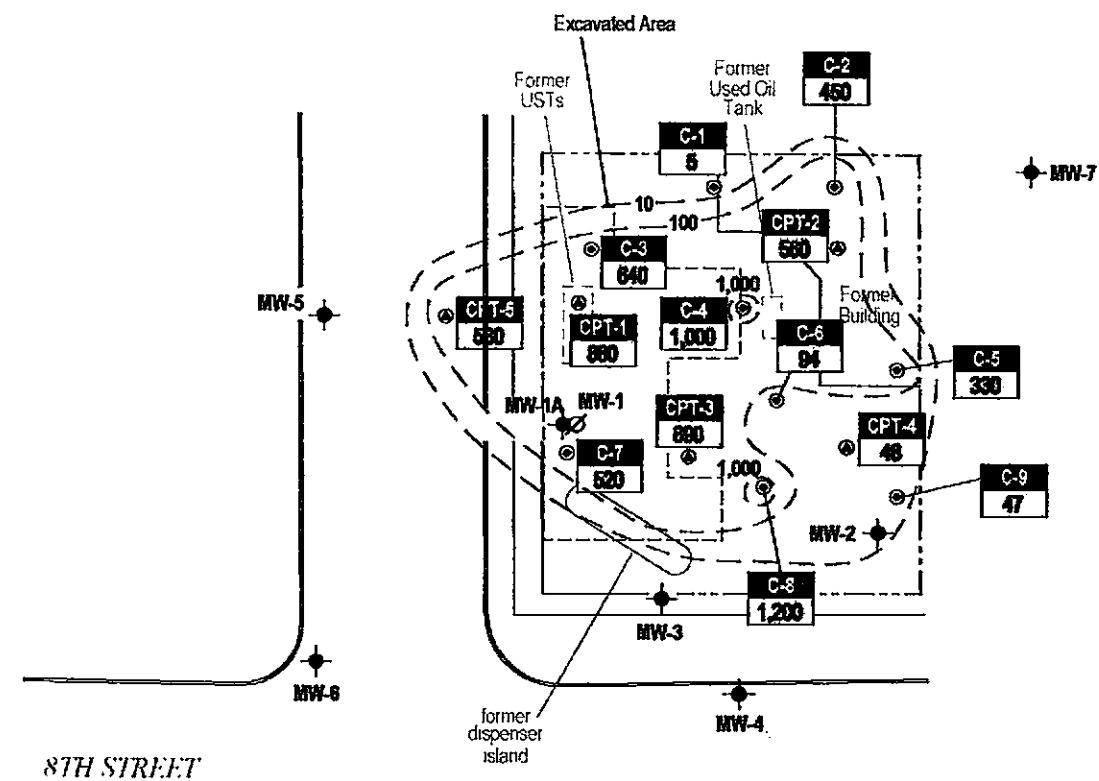
- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A • Monitoring well location
- MW-1 ⚡ Destroyed monitoring well location
- Well / Boring designation
- TPHg TPHg concentrations in soil from >10.5 fbg. in parts per million (ppm)
- 10 — TPHg concentration contour line dashed where inferred



C A M B R I A

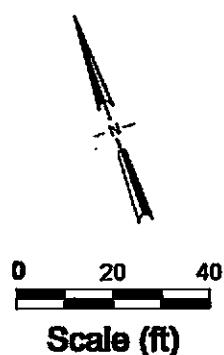
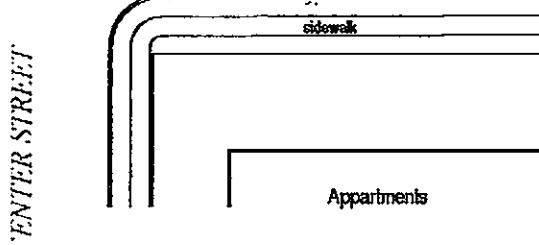
Chevron Service Station # 206145
800 Center Street
Oakland, California

Isoconcentrations of TPHg
in Soil from >10.5 fbg.



EXPLANATION

- CPT-1 • CPT boring location
- C-1 • Soil boring location
- MW-1A • Monitoring well location
- MW-1 ⚡ Destroyed monitoring well location
- Well ID — Well / Boring designation
- TPHd — TPHd concentrations in soil from 5.0 - 10.5 fbg in parts per million (ppm)
- 100 — TPHd concentration contour line dashed where inferred

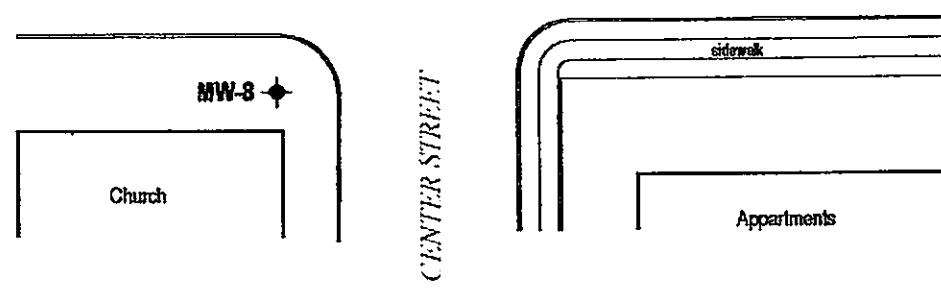
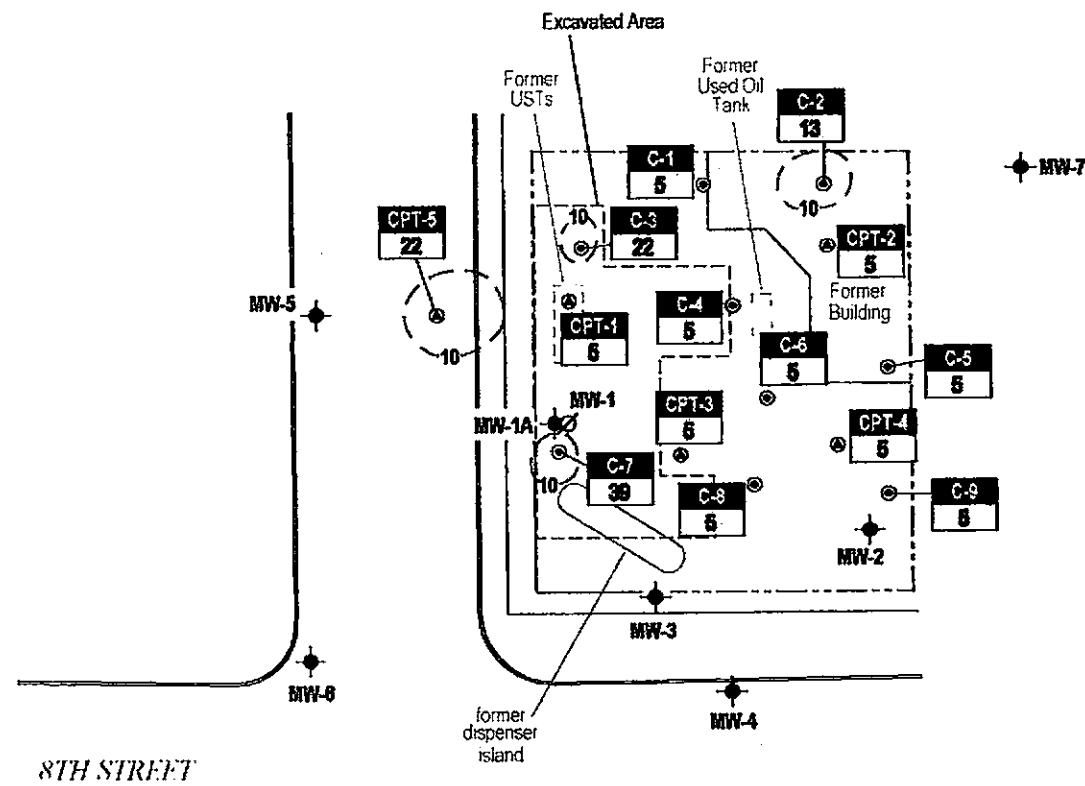


● Chevron Service Station # 206145
800 Center Street
Oakland, California



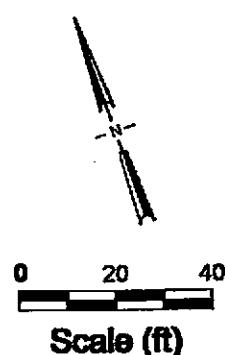
C A M B R I A

Isoconcentrations of TPHd
in Soil from 5 - 10.5 fbg.



EXPLANATION

- CPT-1** ● CPT boring location
- C-1** ● Soil boring location
- MW-1A** • Monitoring well location
- MW-1** ⚡ Destroyed monitoring well location
- Well ID** Well / Boring designation
- TPHd** TPHd concentrations in soil from 5.0 to 10.5 fbg. in parts per million (ppm)
- 10 — — TPHd concentration contour line dashed where inferred



APPENDIX B

Soil Analytical Data

Table 1. Analytic Results for Soil - Former Chevron Station 20-6145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Sample Depth (ftbg)	TPHd	TPHg	B	T	E	X	MTBE	1,2 DCA	EDB
Concentrations reported in milligrams per kilogram - mg/kg											
CPT-1	10/6/04	10.5	860	5,300	10	230	92	460	<0.62	<1.2	<1.2
CPT-1	10/6/04	14.5	<10.0	2	0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-1	10/6/04	25.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-1	10/6/04	29.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-1	10/6/04	35	<10.0	<1.0	0.0005	0.005	0.004	0.023	<0.0005	<0.001	<0.001
CPT-1	10/6/04	40	<10.0	<1.0	0.01	0.098	0.04	0.2	<0.0005	<0.001	<0.001
CPT-2	10/6/04	5	560	<4.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	10.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	14.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	20.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	25.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	29.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	35.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-2	10/7/04	40.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-3	10/12/04	10.5	890	9,000	1.9	200	130	660	<0.25	<0.50	<0.50
CPT-3	10/12/04	15.5	<10.0	18	0.094	0.028	0.34	0.31	<0.003	<0.005	<0.005
CPT-3	10/12/04	20.5	<10.0	14	0.002	0.003	0.01	0.025	<0.0005	<0.001	<0.001
CPT-3	10/12/04	25.5	<10.0	1.3	0.001	0.009	0.001	0.005	<0.0005	<0.001	<0.001
CPT-3	10/12/04	29.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-3	10/12/04	35.5	<10.0	3.3	0.013	0.031	<0.001	0.11	<0.0005	<0.001	<0.001
CPT-3	10/12/04	40.5	<10.0	4.5	0.008	0.032	0.002	0.13	<0.0005	<0.001	<0.001
CPT-4	10/6/04	5	46	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-4	10/8/04	10.5	<10.0	1.2	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-4	10/8/04	14.5	<10.0	<1.0	<0.0005	0.005	0.001	0.005	<0.0005	<0.001	<0.001
CPT-4	10/8/04	20.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-4	10/8/04	25.5	<10.0	<1.0	<0.0005	0.002	<0.001	0.002	<0.0005	<0.001	<0.001
CPT-4	10/8/04	29.5	<10.0	<1.0	<0.0005	0.004	0.001	0.005	<0.0005	<0.001	<0.001
CPT-4	10/8/04	35.5	<10.0	<1.0	<0.0005	0.001	<0.001	0.001	<0.0005	<0.001	<0.001
CPT-4	10/8/04	40.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001

Table 1. Analytic Results for Soil - Former Chevron Station 20-6145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Sample Depth (fbg)	TPHd	TPHg	B	T	E	X	MTBE	1,2 DCA	EDB
Concentrations reported in milligrams per kilogram - mg/kg											
CPT-5	10/11/04	5	<10.0	1.5	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CPT-5	10/11/04	9.5	530	7,200	13	260	100	550	<0.25	<0.50	1.5
CPT-5	10/11/04	15.5	<10.0	140	<0.063	<0.13	<0.13	0.13	<0.063	<0.13	<0.13
CPT-5	10/11/04	25.5	22	7.6	0.081	0.75	0.12	0.74	<0.0005	<0.001	<0.001
CPT-5	10/11/04	29.5	<10.0	13	0.0005	0.005	0.002	0.01	<0.0005	<0.001	<0.001
CPT-5	10/11/04	35.5	<10.0	<1.0	<0.0005	0.006	0.003	0.015	<0.0005	<0.001	<0.001
CPT-5	10/11/04	50.5	<10.0	4.8	<0.0005	0.003	0.002	0.01	<0.0005	<0.001	<0.001
CPT-5	10/11/04	69.5	<10.0	<1.0	<0.0005	0.001	<0.001	0.001	<0.0005	<0.001	<0.001
C-1	11/1/04	5	<10.0	2.8	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-1	11/1/04	10	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-1	11/1/04	15	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-1	11/1/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-1	11/1/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-2	11/1/04	5	450	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-2	11/1/04	10	67	<1.0	<0.0005	0.002	<0.001	<0.001	<0.0005	<0.001	<0.001
C-2	11/1/04	15	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-2	11/1/04	20	13	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-2	11/1/04	24.5	<10.0	<1.0	<0.0005	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-3	11/1/04	10	640	4,800	0.75	94	66	310	<0.63	<1.3	<1.3
C-3	11/1/04	15	22	9.7	<0.001	<0.002	0.003	0.005	<0.001	<0.002	<0.002
C-3	11/1/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-3	11/1/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-4	11/1/04	5	160	9.2	0.001	0.008	<0.001	0.003	<0.0005	<0.001	<0.001
C-4	11/2/04	10	1,000	6,300	11	410	200	780	<0.63	<1.3	<1.3
C-4	11/2/04	15	<10.0	3.1	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-4	11/2/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-4	11/2/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-5	11/1/04	5	160	1	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-5	11/2/04	10	330	2.3	<0.0005	0.002	<0.001	0.002	<0.0005	<0.001	<0.001
C-5	11/2/04	15	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-5	11/2/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-5	11/2/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001

Table 1. Analytic Results for Soil - Former Chevron Station 20-6145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Sample Depth (fbg)	TPHd	TPHg	B	T	E	X	MTBE	1,2 DCA	EDB
Concentrations reported in milligrams per kilogram - mg/kg											
C-6	11/2/04	10	94	880	<0.063	3.8	6.9	36	<0.063	<0.13	<0.13
C-6	11/2/04	15	<10.0	27	<0.002	<0.005	0.11	0.052	<0.002	<0.005	<0.005
C-6	11/2/04	20	<10.0	4.3	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-6	11/2/04	24.5	<10.0	<1.0	<0.0005	0.003	<0.001	0.001	<0.0005	<0.001	<0.001
C-7	11/1/04	10	520	<10	<0.0005	0.003	<0.001	0.002	<0.0005	<0.001	<0.001
C-7	11/1/04	15	39	1,100	<0.063	1.9	5.7	33	<0.063	<0.13	<0.13
C-7	11/1/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-7	11/1/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-8	11/1/04	5	38	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-8	11/2/04	10	1,200	6,200	20	590	240	990	<0.62	<1.2	2.5
C-8	11/2/04	15	<10.0	19	0.001	<0.002	0.003	0.002	<0.001	<0.002	<0.002
C-8	11/2/04	20	<10.0	2.7	<0.0005	<0.001	<0.001	0.001	<0.0005	<0.001	<0.001
C-8	11/2/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-9	11/1/04	5	47	<4.0	<0.0005	0.003	<0.001	<0.001	<0.0005	<0.001	<0.001
C-9	11/2/04	10	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-9	11/2/04	15	<10.0	<1.0	<0.0005	0.002	<0.001	0.002	<0.0005	<0.001	<0.001
C-9	11/2/04	20	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
C-9	11/2/04	24.5	<10.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M

Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B

1,2-Dichloroethane (1,2 DCA) by EPA Method 8260B

1,2-Dibromoethane (EDB) by EPA Method 8260B

<x = Not detected above method detection limit

fbg = Feet below grade

TABLE I - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	MTBE (ppm)	Total Lead (ppm)
G-1(5)	6/21/2002	5.00	3,000	0.95	46	52	240	<5.0	4.7
G-1(10)	6/21/2002	10	12,000	31	660	290	1,100	76	15.6
G-2(5)	6/21/2002	5	2,700	2.8	84	77	310	5.5	7.1
G-2(10)	6/21/2002	10	3,800	7.5	200	120	500	11	8.7
G-3(5)	6/21/2002	5	<1.0	0.0059	0.049	0.016	0.057	<0.050	5.8
G-3(10)	6/21/2002	10	7,700	19	520	290	1,100	63	5.9
G-4(5)	6/21/2002	5	<1.0	<0.0050	0.021	0.0056	0.027	<0.050	2.7
G-4(10)	6/21/2002	10	3,300	3.5	140	120	480	6.2	7.4
G-5(5)	6/21/2002	5	7.1	<0.0050	0.041	0.022	0.064	<0.050	4.3
G-5(10)	6/21/2002	10	45	0.062	0.58	0.62	2.4	0.094	9.7
G-6(5)	6/21/2002	5	<1.0	<0.0050	0.0069	0.0054	0.022	<0.050	3.5
G-6(10)	6/21/2002	10	6,300	19	360	190	900	28	9.2
G-7(5)	6/21/2002	5	<1.0	0.0057	0.045	0.012	0.046	<0.050	3.0
G-7(10)	6/21/2002	10	7,300	18	420	250	1,100	28	15.6
G-8(5)	6/21/2002	5	7,100	8.4	280	210	960	<20	5.6
G-8(10)	6/21/2002	10	16,000	69	1,100	470	1,900	150	12.3
G-9(5)	6/21/2002	5	3,700	1.9	54	57	350	<5.0	17.7
G-9(10)	6/21/2002	10	19,000	83	1,200	520	2,200	150	17.0
G-10(5)	6/21/2002	5	<1.0	0.014	0.073	0.012	0.052	<0.050	2.6
G-10(10)	6/21/2002	10	2,100	1.4	32	52	270	<1.0	7.3
G-11(5)	6/21/2002	5	<1.0	<0.0050	0.035	0.019	0.084	<0.050	5.2
G-11(10)	6/21/2002	10	100	<0.080	0.43	0.53	3.1	<0.050	16.1
G-12(5)	6/21/2002	5	<1.0	<0.0050	0.034	0.010	0.057	<0.050	7.0
G-12(10)	6/21/2002	10	9,000	50	540	240	1,200	58	7.5
G-13(5)	6/21/2002	5	<1.0	<0.0050	0.0062	<0.0050	0.019	<0.050	6.2
G-13(10)	6/21/2002	10	12,000	56	600	290	1,400	70	5.2
G-14(5)	6/21/2002	5	3,900	<20	190	120	510	19	11.9
G-14(10)	6/21/2002	10	14,000	65	940	400	1,700	170	

TABLE 1 - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	MTBE (ppm)	Total Lead (ppm)
G-15(5)	6/21/2002	5	<1.0	<0.0050	0.020	<0.0050	0.017	<0.050	22.5
G-15(10)	6/21/2002	10	5,800	12	320	110	450	31	6.5
G-16(5)	6/21/2002	5	<1.0	<0.0050	0.015	<0.0050	<0.015	<0.050	2.4
G-16(10)	6/21/2002	10	2,100	5.1	110	52	230	11	6.5
G-17(5)	6/21/2002	5	35	0.082	0.78	0.54	1.2	0.22	368
G-17(10)	6/21/2002	10	420	0.62	9.2	9.9	41	<5.0	5.7
G-18(5)	6/21/2002	5	81	0.11	1.1	0.76	2.6	<0.20	3.7
G-18(10)	6/21/2002	10	1,700	4.9	68	51	220	<5.0	5.0
G-19(5)	6/21/2002	5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050	2.6
G-19(10)	6/21/2002	10	4,500	20	230	110	450	<5.0	5.8
G-20(5)	6/21/2002	5	1,700	3.2	31	30	140	<5.0	4.3
G-20(10)	6/21/2002	10	6,900	26	360	200	860	<20	5.1
G-21(5)	6/21/2002	5	<1.0	<0.0050	0.016	<0.0050	0.016	<0.050	4.2
G-21(10)	6/21/2002	10	1.0	0.0091	0.18	0.055	0.23	<0.050	44.0

ANALYTICAL METHOD:

TPHg = Total Petroleum Hydrocarbons as gasoline by EPA Method 8015 modified

Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA method 8021

MTBE = Methyl tert-butyl ether by EPA Method 8021

Total Lead By EPA Method 6010B

EXPLANATION:

ppm = parts per million

NR = Not Requested

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

TABLE 2 - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (in feet)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	TPHd (ppm)	TPHho (ppm)	TOG (ppm)	MTBE (ppm)
G-22(2.5,5,7.5,10) ¹	6/21/2002	2.5,5,7.5,10	0.063	0.47	0.28	2.0	---	---	8,200	---	<0.50
G-23(2.5,5,7.5,10) ¹	6/21/2002	2.5,5,7.5,10	<0.0050	0.012	<0.0050	0.017	<1.0	<10	---	310	<0.050

EXPLANATION:

ppm = parts per million

--- = not analyzed

¹ = Composite Sample

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

ANALYTICAL METHOD:

Benzene, Toluene, Ethylbenzene, and Total Xylenes according to EPA Method 8021

TPHg = Total Petroleum Hydrocarbons as gasoline according to EPA Method 8015M

TPHd = Total Petroleum Hydrocarbons as diesel according to EPA Method 8015M

TPHho = Total Petroleum Hydrocarbons as hydraulic oil according to EPA Method 8015M

TOG = Total Oil and Grease by EPA Method 8260

MTBE = Methyl tert-butyl ether By EPA Method 8021

TABLE 3 - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depths (in feet)	SVOC (ppm)	HVOC (ppm)	Soluble Lead ² (ppm)	Total Cadmium (ppm)	Total Chromium (ppm)	Total Lead (ppm)	Total Nickel (ppm)	Total Zinc (ppm)
G-22(2.5,5,7.5,10) ¹	6/21/2002	2.5,5,7.5,10	---	---	4.51	<0.091	37.8	87.1	27.8	52.4
G-23(2.5,5,7.5,10) ¹	6/21/2002	2.5,5,7.5,10	<0.033 - <0.17	<0.0010 - <0.0020	---	<0.088	41.0	6.7	36.1	23.2

EXPLANATION:

ppm = parts per million

--- = not analyzed

¹ = Composite Sample² = STLC (soluble threshold limit concentration)ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

ANALYTICAL METHOD:

SVOC = Semi Volatile Organic Compounds By EPA Method 8270

HVOC = Halogenated Volatile Organic Compounds By EPA Method 8260

Cadmium, Chromium, Lead, Nickel, Zinc By EPA Method 6010B

TABLE I - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street

Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHd (ppm)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	MtBE (ppm)
Geoprobe Soil Samples									
G-24(5)	1/29/2003	5	52	<1.0	<0.0050	0.012	<0.0050	<0.015	<0.050
G-24(10)	1/29/2003	10	<10	<1.0	0.0074	0.014	<0.0050	<0.015	<0.050
G-24(15)	1/29/2003	15	<10	<1.0	0.026	0.012	0.0096	<0.015	<0.050
G-25(5)	1/29/2003	5	53	<1.0	<0.0050	0.0095	<0.0050	<0.015	<0.050
G-25(10)	1/29/2003	10	1,400	8,800	27	560	290	1,200	<53 ¹
G-25(15)	1/29/2003	15	350	1,200	8.5	90	35	140	16
G-26(5)	1/29/2003	5	<10	2.2	<0.0050	0.020	0.0076	0.036	<0.050
G-26(10)	1/29/2003	10	<10	<1.0	<0.0050	0.0092	<0.0050	<0.015	<0.050
G-26(15)	1/29/2003	15	<10	2.2	0.0092	<0.020	0.019	0.031	<0.050
G-27(5)	1/29/2003	5	<10	<1.0	<0.0050	0.020	<0.0050	0.018	<0.050
G-27(10)	1/29/2003	10	1,600	5,500	13	250	180	700	20
G-27(15)	1/29/2003	15	170	10,000	58	790	350	1,300	94
G-28(5)	1/29/2003	5	<10	<1.0	0.0054	0.030	0.0063	0.026	<0.050
G-28(10)	1/29/2003	10	<10	16	0.027	0.096	0.056	0.28	<0.050
G-28(15)	1/29/2003	15	<10	620	2.3	34	17	71	<10
G-29(5)	1/29/2003	5	<10	<1.0	<0.0050	0.021	0.0057	0.021	<0.050
G-29(10)	1/29/2003	10	410	5,200	39	380	160	640	95
G-29(15)	1/29/2003	15	1,100	4,800	14	290	170	670	18

ANALYTICAL METHOD:

TPHg and TPHd = Total Petroleum Hydrocarbons as gasoline and diesel by California Luft /EPA Method 8015B modified
 Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA method 8021B

MtBE = Methyl tert-butyl ether by EPA Method 8021B

¹ = Due to the presence of an interferent near its retention time, the normal reporting limit was not attained.**EXPLANATION:**

ppm = parts per million

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

TABLE 1 - SOIL SAMPLE CHEMICAL ANALYTICAL DATA

Former Chevron Service Station No. 20-6145

800 Center Street

Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHd (ppm)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	MtBE (ppm)
<u>Geoprobe Soil Samples</u>									
G-30(5)	1/29/2003	5	<10	7.1	0.014	0.25	0.14	0.70	<0.050
G-30(10)	1/29/2003	10	1,600	16,000	92	1,000	480	1,900	150
G-30(15)	1/29/2003	15	500	3,500	27	210	85	370	<10
<u>Monitoring Well Soil Sample</u>									
MW-1A(16)	1/29/2003	16	<10	<1.0	0.013	0.033	0.0087	0.027	<0.050

ANALYTICAL METHOD:

TPHg and TPHd = Total Petroleum Hydrocarbons as gasoline and diesel by California Luft /EPA Method 8015B modified

Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA method 8021B

MtBE = Methyl tert-butyl ether by EPA Method 8021B

^ = Due to the presence of an interferent near its retention time, the normal reporting limit was not attained.

EXPLANATION:

ppm = parts per million

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

TABLE 2 - SOIL PHYSICAL PARAMETERS

Former Chevron Service Station
800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (in feet)	Moisture Content %	Porosity	Soil pH	Grain Size	
						Sand %	Fir %
G-24(8)	1/29/2003	8	15.75	34.10	7.82	64.77	34
G-27(14)	1/29/2003	14	18.74	32.97	7.07	69.06	30

EXPLANATION:

lbs/cu ft = Pounds Per Cubic Foot

gm/cc = Grams per cubic centimeter

TOC =Total Organic Carbon

cm/sec = Centimeter per second

ppm = parts per million

ANALYTICAL METHOD:

Moisture Content American Society of Testing And Materials (ASTM) Method D 2216

Porosity by ASTM D 3152/ D 2325

Bulk Density by ASTM Method D 2937

Soil pH by Environmental Protection Agency (EPA) Method 9045

Grain Size by ASTM D 2419/ D 422

TOC =Total Organic Carbon by Walkley Black

Permeability by ASTM Method D 5084

TABLE 4 - POST-OVER-EXCAVATION SOIL- SAMPLE CHEMICAL ANALYTICAL DATA - DISPENSER ISLAND AND GASOLINE UST AREA

Former Chevron Service Station No. 20-6145

800 Center Street

Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHg (ppm)	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	MTBE (ppm)
SAMPLES FROM SIDEWALLS OF OVEREXCAVATION									
SW-1(5)	11/15/2002	5	<1.0	<10	<0.0050	0.0073	<0.0050	0.017	<0.050
SW-1(10)	11/15/2002	10	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-2(5)	11/18/2002	5	<1.0	<10	<0.0050	0.0088	<0.0050	<0.015	<0.050
SW-2(10)	11/18/2002	10	2,800	1,600	2.5	75	52	250	<10
SW-3(5)	11/18/2002	5	<1.0	<10	<0.0050	0.0089	<0.0050	0.021	<0.050
SW-3(10)	11/18/2002	10	7,300	1,200	19	330	170	650	26
SW-4(5)	11/18/2002	5	<1.0	<10	<0.0050	0.0081	<0.0050	<0.015	<0.050
SW-4(10)	11/18/2002	10	18,000	3,400	91	1,200	440	1,900	150
SW-5(5)	11/16/2002	5	<1.0	<10	0.0072	0.039	0.0057	0.022	<0.050
SW-5(10)	11/16/2002	10	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-6(5)	11/16/2002	5	4.1	110	0.0084	0.15	0.079	0.41	<0.050
SW-6(10)	11/16/2002	10	3,900	920	7.3	140	110	450	10
SW-7(5)	11/15/2002	5	<1.0	<10	<0.0050	0.011	<0.0050	<0.015	<0.050
SW-7(10)	11/15/2002	10	4,800	700	11	250	130	540	13
SW-8(5)	11/15/2002	5	<1.0	<10	<0.0050	0.016	<0.0050	<0.015	<0.050
SW-8(10)	11/15/2002	10	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-9(5)	11/15/2002	5	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-9(10)	11/15/2002	10	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-10(5)	11/15/2002	5	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050
SW-10(10)	11/15/2002	10	570	240	<0.10	0.66	3.7	21	<1.0

TABLE 4 - POST-OVER-EXCAVATION SOIL- SAMPLE CHEMICAL ANALYTICAL DATA - DISPENSER ISLAND AND GASOLINE UST AREA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (Feet)	TPHg (ppm)	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	MTBE (ppm)
SAMPLES FROM BASE OF OVEREXCAVATION									
EXB-1(12)	11/14/2002	12	4,000	1,100	25	230	87	380	59
EXB-2(14)	11/15/2002	14	1,900	270	7.3	71	42	200	19
EXB-3(12)	11/16/2002	12	3,400	920	9.5	170	86	370	18
EXB-4(12)	11/16/2002	12	6,900	1,100	22	310	150	640	36

ANALYTICAL METHOD:

TPHg = Total Petroleum Hydrocarbons as gasoline by Luft Method

TPHd = Total Petroleum Hydrocarbons as diesel by Luft Method

Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA method 8021B

MTBE = Methyl tert-butyl ether by EPA Method 8021B

EXPLANATION:

ppm = parts per million

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

TABLE 5 - POST-OVER-EXCAVATION - SOIL SAMPLE CHEMICAL ANALYTICAL DATA - HYDRAULIC CYLINDER LIFT AREA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depth (feet)	TPHmo (ppm)	TPHho (ppm)
SWH-1(7.5)	11/16/2002	7.5	<10	<10
SWH-2(7.5)	11/16/2002	7.5	<10	<10
SWH-3(8)	11/16/2002	8	<10	<10
SWH-4(7.5)	11/16/2002	7.5	<10	<10
<u>SAMPLE FROM BASE OF OVEREXCAVATION</u>				
BH-1(12)	11/16/2002	12	<10	<10

EXPLANATION:

ppm = parts per million

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

ANALYTICAL METHOD:

TPHmo = Total Petroleum Hydrocarbons as Motor Oil EPA Method 8015B modified

TPHho = Total Petroleum Hydrocarbons as hydraulic oil according to EPA Method 8015B modified

TABLE 6 - POST-OVER-EXCAVATION - SOIL SAMPLE CHEMICAL ANALYTICAL DATA - SUMP AREA

Former Chevron Service Station No. 20-6145

800 Center Street
Oakland, California

Sample No.	Sample Date	Sample Depths (feet)	TPHg (ppm)	TPHd (ppm)	TOG (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Nickel (ppm)	Zinc (ppm)
SWW-1(7.5)	11/18/2002	7.5	--	--	<230	--	--	--	--	--
SWW-2(8)	11/18/2002	8	--	--	<230	--	--	--	--	--
SWW-3(7.5)	11/18/2002	7.5	--	--	<230	--	--	--	--	--
SWW-4(7.5)	11/18/2002	7.5	--	--	<230	--	--	--	--	--
<u>SAMPLE FROM BASE OF OVEREXCAVATION</u>										
BWO-1(12)*	11/18/2002	12	<1.0	<10	<230	0.37	46.4	3.9	32.8	50

EXPLANATION:

ppm = parts per million

-- = Not Analyzed

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

ANALYTICAL METHOD:

TPHg = Total Petroleum Hydrocarbons as gasoline by Luft Method

TPHd = Total Petroleum Hydrocarbons as diesel by Luft Method

TOG = Total Oil and Grease by EPA Method 5520 D&E

Cadmium, Chromium, Lead, Nickel and Zinc by EPA Method 6010B

* = EPA Method 8260 and 8270 analysis showed no detectable concentration for all analytes except for bis (2-ethylhexyl) phthalate (0.10 mg/kg) and methylene Chloride (0.0044 mg/kg).

TABLE 1- SOIL CHEMICAL ANALYTICAL DATA

Former Chevron Service Station Number 20-6145

800 Center Street

Oakland, California

Sample No.	Sample Date	Sample Depth (in feet)	TPHg (ppm)	TPHd (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	MtBE (ppm)	Total lead (ppm)
MW-8(11)	1/9/02	11	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050	---
MW-8(15)	1/9/02	15	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050	---
MW-8(20)	1/9/02	20	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050	---
SP1-Comp	1/9/02	N/A	<1.0	<10	<0.0050	<0.0050	<0.0050	<0.015	<0.050	2.7

EXPLANATION:

ppm = parts per million

--- = analysis not requested

N/A = not applicable

ANALYTICAL LABORATORY:

Lancaster Laboratories (ELAP #2116)

ANALYTICAL METHOD:

TPHg = Total Petroleum Hydrocarbons as gasoline by California LUFT Method

TPHd = Total Petroleum Hydrocarbons as diesel by California LUFT Method

Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA method 8020A

MtBE = Methyl tert-butyl ether by EPA Method 8020A

Total Lead by EPA Method 6010B

Table 1. Soil Chemical Analytical Data
 Former Chevron (Signal Oil) Service Station # 20-6145
 800 Center Street
 Oakland, California

Sample ID	Sample Date	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	MTBE (ppm)	Lead (ppm)	TPHd (ppm)	O&G (ppm)	VOCs (ppm)	SVOs (ppm)
Gasoline UST Pit													
A-1	4/12/01	8.5	630 ¹	10	4.4	15	48	<5.0	NR	NR	NR	NR	NR
A-2	4/12/01	8.5	32 ¹	0.11	0.04	0.37	0.98	0.38	NR	NR	NR	NR	NR
Waste Oil UST Pit													
WOT	4/12/01	8	10 ¹	0.0092	0.040	0.058	0.24	0.058	<1.0 ³	3.2 ²	110	ND	ND

Explanation:

TPHg = Total Petroleum Hydrocarbons as gasoline

TPHd = Total Petroleum Hydrocarbons as diesel

BTEX = Benzene, toluene, ethylbenzene, and xylenes

MTBE = Methyl tert-butyl ether

O&G = Oil and Grease

VOCs = Volatile organic compounds

SVOs = Semi-volatile organics

ND = None of the constituent compounds were detected

NR = Analysis not requested

ppm = Parts per million

Analytical Methods

TPHg/Benzene/MTBE = EPA Methods 5030/8015 Mod.

TPHd = EPA Methods 3550/8015 Mod.

O&G = Standard Method 5520E&F

VOCs = EPA Method 8010B

SVOs = EPA Method 8270C

metals = EPA 6000/7000 Series Methods

Analytical Laboratory

Sequoia Analytical (ELAP #1271)

Notes

¹ Laboratory report indicates gasoline C6-C12.

² Laboratory report indicates unidentified hydrocarbons C9-C40.

³ Also analyzed for cadmium (<0.50 ppm), chromium (60 ppm), nickel (52 ppm), and zinc (38 ppm).

Table 2
Physical Soil Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Sample ID	Sample Date	Sample Depth feet	Total Porosity %	Air Content %	Water Content %	Saturation %	pH	Foc %	Soil Density g/cc
SV-1	5/30/97	2.5	44.75	36	33.8	19.67	6.31	NT	0.068
		6	39.52	28.3	26.21	89.1	NT	NT	0.275
		8.5	NT	NT	NT	NT	NT	0.12	NT
		9.5	33.6	0.15	33.6	99.57	6.8	NT	0.26
SV-2	5/30/97	3	NT	NT	NT	NT	7.53	NT	NT
		3.5	NT	NT	NT	NT	NT	0.083	NT
		9	NT	NT	NT	NT	NT	0.067	NT
		10	34.02	0.95	33.1	97.21	7.03	NT	0.257
SV-3	5/30/97	3.5	46	30	TH	68.1	7.07	NT	0.128
Overall Averages =			39.65	14.3	25.34	68.11	7.07	0.09	0.197
Vadose Zone Average (to 3.5 feet) =			45.57*	33*	12.4*	27.34	6.99*	NT	0.097*
Vadose Zone Average (to 6 feet) =			43.4	23.4	20	47.9	6.99	NT	0.158
NT = Not tested									
Soil Density = Dry density x moisture %									
g/cc = grams per cubic centimeter									
* = These values were used to calculate the soil vapor model risk and the construction worker RBSL									
Foc = Fraction of organic carbon									

Table 3
Analytical Soil Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Soil Sample ID	Sample Date	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
SV-1	5/30/97	3	<1.0	<0.005	<0.005	<0.005	<0.005
		6	2,100	<2.5	46	57	300
		8.5	7,600	52	180	140	720
SV-2	5/30/97	3.5	<1.0	<0.005	<0.005	<0.005	<0.005
		6	11	<0.005	0.009	0.01	0.057
		9	8,000	12	420	150	710
SV-3	5/30/97	3	1.4	<0.005	0.029	0.014	0.1
		6	84	3	0.28	1.4	1.9
		9	300	5.1	130	83	340
SV-4	5/30/97	3	<1.0	<0.005	0.0058	<0.005	0.01
		6	10,000	<0.005	<0.005	<0.005	<0.005
		9	10,000	86	470	210	960
SV-5	5/30/97	3	<1.0	<0.005	<0.005	<0.005	<0.005
		6	<1.0	<0.005	<0.005	<0.005	<0.005
		9	7,800	20	410	130	690

mg/kg = Milligrams per kilograms

TPHg = Total petroleum hydrocarbons calculated as gasoline

Table 1
 Soil Analytical Data
 Total Petroleum Hydrocarbons
 (TPPH as Gasoline and BTEX Compounds)

Former Signal Service Station S0800
 800 Center Street at 8th Street
 Oakland, California

Well/ Boring Number	Date Sampled	Sample Depth (feet)	TPPH as				Ethyl- benzene (ppm)	Xylenes (ppm)
			Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)			
MW-5	12/18/96	5	<1.0	<0.0050	0.016	0.0083	0.046	
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-6	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-7	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-8/B-8	12/18/96	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
		15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

TPPH = Total purgeable petroleum hydrocarbons

ppm = Parts per million

January 24, 1997

Table 1
Soil Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MTBE)

Former Signal Service Station S0800
 800 Center Street at 8th Street
 Oakland, California

Well Number	Sample Depth (feet)	Date Sampled	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethy-benzene (ppm)	Xylenes (ppm)	MTBE (ppm)
P-1	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		510	ND	18	9.7	46	ND
	17		ND	ND	ND	0.008	0.009	ND
P-2	6	03/22/96	4,000	ND	120	71	330	ND
P-3	10	03/22/96	13,000	38	780	280	1,400	ND
	16		5,400	41	310	110	1,400	ND
	20		260	3.7	21	6.2	27	ND
P-7	6	03/22/96	ND	ND	ND	ND	ND	ND
	10		1	ND	ND	ND	ND	ND
	15		13	ND	0.31	0.15	0.71	ND
P-8	6	03/22/96	ND	ND	ND	ND	ND	ND
	12		ND	ND	ND	0.0066	ND	ND

TPPH = Total purgeable petroleum hydrocarbons
 MTBE = Methyl t-butyl ether
 ppm = Parts per million
 ND = Not detected
 See certified analytical reports for detection limits.

TABLE 1
Analytical Results of Soil Samples
(Results expressed as milligrams per kilogram)

Former Signal Service Station No. S0800
800 Center Street
Oakland, California

Date	Sample ID	Sample Depth (ft) ^a	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g ^b
10-17-95	MW-1-5	5	0.091	0.49	0.14	1.9	11
10-17-95	MW-1-10	10	120	800	270	1,300	14,000
10-17-95	MW-2-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-2-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-3-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	MW-3-10	10	0.24	0.010	0.016	0.019	<1.0
10-18-95	MW-4-5	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-18-95	MW-4-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-17-95	SB-1-5	5	0.34	1.2	1.2	1.3	87
10-17-95	SB-1-10	10	72	640	240	1,100	8,100
10-17-95	SB-2-5	5	0.19	4.8	5.1	26	240
10-17-95	SB-2-10	10	28	440	150	630	4,700
10-18-95	SB-3-5	5	<0.0050	0.019	0.0087	0.049	<1.0
10-18-95	SB-3-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
10-18-95	COMP	N/A	0.036	1.5	0.75	3.2	13

^a feet below surface grade

^b total petroleum hydrocarbons as gasoline

The results of the analytical tests on the soil, sump sludge and groundwater samples are presented below.

Table 1. SOIL ANALYSES

Boring No.	Sample Depth (feet)	Total Petroleum Hydrocarbons				Ethyl-Benzene (ppm)	Total Xylenes (ppm)
		TVH (ppm) ¹	TEH ² (ppm)	Benzene (ppm)	Toluene (ppm)		
1	10	2100	6800	50	220	46	240
1	15	2400	NT	32	200	60	290
2	7	4100	14000	50	450	130	540
2	11.5	31000	NT ³	500	2800	760	3700
3	10.5	100	ND	ND ⁴	2	2	7
3	12.5	950	220	ND	44	32	130
4	7.5	5400	5100	57	250	140	610
4	10.5	5800	NT	92	360	1100	670
<hr/>		<hr/>					
Boring No.	Depth feet	TOG (ppm)	Cadmium (ppm)	Chromium (ppm)	Lead (ppm)	Zinc (ppm)	
3	3.5	ND	0.7	18	18	19	
5 ⁵	3.5	16,000	NT	NT	NT	NT	

¹ Parts per million

² As gasoline

³ NT = not tested

⁴ ND = Not detected, see analytical test reports for detection limits

⁵ Boring 5 identified as HA on Laboratory Test Reports

Table 2. GROUNDWATER ANALYSES

Boring No.	TVH (ppm)	TEH (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	Other EPA 624 Chemicals (ppm)	
1	2600	ND	13	41	22	140	NT	
3	43	ND	0.34	4.2	1.1	2.5	ND	



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
JOB NUMBER: 272.012
JOB LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/11/89
DATE REPORTED: 09/13/89
PAGE 3 OF 14

Total Volatile Hydrocarbons (TVH) by EPA 8015
Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 602/8020
Extraction by EPA 5030 Purge and Trap

LAB ID	CLIENT ID	TVH AS BENZENE GASOLINE		TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLEMES (mg/Kg)
		(mg/Kg)	(mg/Kg)			
18154-4	BORING 1 @ 10	2,100	50	220	46	240
18154-5	BORING 1 @ 15	2,400	32	200	60	290
18154-6	BORING 2 @ 7	4,100	50	450	130	540
18154-7	BORING 2 @ 11.5	31,000	500	2,800	760	3,700
18154-8	BORING 3 @ 10.5	100	ND(1)	2	2	7
18154-9	BORING 3 @ 12.5	950	ND(5)	44	32	130
18154-11	BORING 4 @ 7.5	5,400	57	250	140	610
18154-12	BORING 4 @ 10.5	5,800	92	360	1,100	670

ND = None Detected; Limit of detection is indicated in parentheses.

QA/QC SUMMARY

%RPD
%RECOVERY

<1
96

LABORATORY NUMBER: 18154
 CLIENT: SUBSURFACE CONSULTANTS
 JOB #: 272.012
 LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
 DATE ANALYZED: 09/07/89
 DATE REPORTED: 09/13/89
 PAGE 6 OF 14

Extractable Petroleum Hydrocarbons in Soils & Wastes
 EPA 8015 (Modified)
 Extraction Method: EPA 3550

LAB ID	CLIENT ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)	OTHER (mg/Kg)
18154-4	BORING 1 @ 10	6,800	ND(100)	ND(100)	ND(100)
18154-6	BORING 2 @ 7	14,000	ND(100)	ND(100)	ND(100)
18154-8	BORING 3 @ 10.5	ND(10)	ND(10)	ND(10)	ND(10)
18154-9	BORING 3 @ 12.5	220	ND(10)	ND(10)	ND(10)
18154-10	BORING 3 @ 3.5	ND(10)	ND(10)	ND(10)	ND(10)
18154-11	BORING 4 @ 7.5	5,100	ND(100)	ND(100)	ND(100)

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference	11
Spike: % Recovery	95

LAB NUMBER: 18154
CLIENT: SUBSURFACE CONSULTANTS
PROJECT #: 272.012
LOCATION: CENTER STREET

DATE RECEIVED: 08/30/89
DATE ANALYZED: 09/13/89
DATE REPORTED: 09/14/89
PAGE 7 OF 14

ANALYSIS: OIL AND GREASE
METHOD: SMWW 503E

LAB ID	SAMPLE ID	RESULT	UNITS	DETECTION LIMIT
18154-10	BORING 3 @ 3.5	ND	mg/Kg	50
18154-13	BORING HA @ 3.7	16,000	mg/Kg	50

ND = NONE DETECTED.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	82

Table 2
Physical Soil Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Sample ID	Sample Date	Sample Depth feet	Total Porosity %	Air Content %	Water Content %	Saturation %	pH	Foc %	Soil Density g/cc
SV-1	5/30/97	2.5	44.75	36	39.8	19.67	6.31	NT	0.068
		6	39.52	43	35.21	89.1	NT	NT	0.275
		8.5	NT	NT	NT	NT	NT	0.12	NT
		9.5	33.6	0.15	33.6	99.57	6.8	NT	0.26
SV-2	5/30/97	3	NT	NT	NT	NT	7.53	NT	NT
		3.5	NT	NT	NT	NT	NT	0.083	NT
		9	NT	NT	NT	NT	NT	0.067	NT
		10	34.02	0.95	33.1	97.21	7.03	NT	0.257
SV-3	5/30/97	3.5	46	30	16	68.11	7.07	NT	0.126
Overall Averages =			39.65	14.3	25.34	68.11	7.07	0.09	0.197
Vadose Zone Average (to 3.5 feet) =			45.57*	33*	12.4*	27.34	6.99*	NT	0.097*
Vadose Zone Average (to 6 feet) =			43.4	23.4	20	47.9	6.99	NT	0.156
NT = Not tested Soil Density = Dry density x moisture % g/cc = grams per cubic centimeter * = These values were used to calculate the soil vapor model risk and the construction worker RBSL Foc = Fraction of organic carbon									

APPENDIX C

Groundwater Analytical Data

Table 2. Analytic Results for Groundwater - Former Chevron Station 20-6145, 800 Center Street, Oakland, California

Sample ID	Sample Date	Sample Depth (fbg)	TPHd	TPHg	B	T	E	X	MTBE	1,2 DCA	EDB
Concentrations reported in micrograms per liter (µg/L)											
CPT-1	10/6/04	12	NA	97,000	5,200	21,000	3,700	16,000	<13	64	60
CPT-1	10/6/04	30	440	130	0.6	4	1	7	<0.5	<0.5	<0.5
CPT-1	10/6/04	43	370	54	1	14	6	26	<0.5	<0.5	<0.5
CPT-1	10/6/04	58	3,100	370	3	20	6	24	<0.5	<0.5	<0.5
CPT-2	10/7/04	16	1,200	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-2	10/7/04	32	450	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-2	10/7/04	43	500	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-2	10/7/04	60	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CPT-3	10/12/04	32	770	270	4	28	13	40	<0.5	<0.5	<0.5
CPT-3	10/12/04	43	370	130	1	11	4	13	<0.5	<0.5	<0.5
CPT-3	10/12/04	57	3,800	12,000	160	1,300	780	3,200	<1	<1	6
CPT-4	10/8/04	30	620	310	19	91	130	440	<0.5	<0.5	<0.5
CPT-4	10/8/04	43	380	92	<0.5	6	2	8	<0.5	<0.5	<0.5
CPT-4	10/8/04	60	1,900	<50	<0.5	2	1	5	<0.5	<0.5	<0.5
CPT-4	10/8/04	72	2,400	<50	<0.5	2	0.9	4	<0.5	<0.5	<0.5
CPT-5	10/11/04	31	1,300	2,600	120	590	120	440	<0.5	11	3
CPT-5	10/11/04	45	2,400	6,600	120	1,400	440	2,000	<1	7	8
CPT-5	10/11/04	58	NA	19,000	220	2,100	540	2,500	<3	18	18
C-2	11/1/04	GRAB	750	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C-5	11/2/04	GRAB	74	<50	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M

Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B

Methyl tertiary butyl ether (MTBE) by EPA Method 8260B

1,2-Dichloroethane (1,2 DCA) by EPA Method 8260B

1,2-Dibromoethane (EDB) by EPA Method 8260B

<x = Not detected above method detection limit

Groundwater Monitoring Data and Analytical Results
 Former Chevron (Signal Oil) Service Station #206145 (S-800)
 800 Center Street
 Oakland, California

WELL ID/ DATE	TOC* (ft)	GWE (msl)	DTW (ft)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-1											
10/27/95	15.69	10.54	5.15	--	170,000	19,000	34,000	4,800	26,000	--	--
02/20/97	15.64	8.96	6.68	--	18,000	870	3,500	470	2,100	<250	--
04/24/97	15.64	7.30	8.34	--	76,000	4,600	16,000	1,600	8,300	1,000	--
07/23/97	15.64	5.90	9.74	--	37,000	2,700	8,000	870	6,100	<250	--
10/29/97	15.64	INACCESSIBLE		--	--	--	--	--	--	--	--
01/28/98	15.64	9.30	6.34	--	10,000	380	2,000	300	1,500	<25	--
05/11/98	15.64	8.72	6.92	--	17,000	880	3,100	380	2,300	<250	--
07/16/98	15.64	7.23	8.41	--	29,000	2,700	6,800	890	3,900	<1,000	--
08/04/98 ^a	15.64	6.90	8.74	--	--	--	--	--	--	--	<1.0 x 10 ¹
09/03/98 ^a	15.64	6.43	9.21	--	--	--	--	--	--	--	4.1 x 10 ³
10/21/98 ^b	15.64	5.59	10.05	--	--	--	--	--	--	--	4.7 x 10 ²
11/04/98	15.64	5.64	10.00	--	25,000	1,900	5,900	810	4,300	<125	--
01/26/99	15.64	6.86	8.78	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/06/99	15.64	8.17	7.47	--	8,050	515	1,840	256	1,190	300/<20 ^c	--
08/21/99	15.64	13.27	2.37	--	46,500	2,530	8,700	1,010	5,300	<1,250/<40 ^c	--
10/28/99	15.64	5.46	10.18	--	31,600	1,580	6,100	794	4,400	1,270	--
01/31/00	15.64	7.49	8.15	--	7,270	366	1,280	171	935	<12.5	--
05/19/00	15.64	7.78	7.86	--	8,000 ^e	870	1,200	430	1,200	<250	--
08/07/00	15.64	6.42	9.22	--	37,000 ^e	2,400	8,500	1,100	5,500	1,500/<4.0 ^f	--
12/01/00	15.64	5.25	10.39	--	25,500 ^g	1,390	4,920	801	4,330	<500/<10 ^f	--
02/09/01	15.64	6.10	9.54	--	8,900 ^e	850	1,300	470	1,700	820/<2.0 ^f	--
05/29/01	15.64	6.79	8.85	--	24,000 ^e	1,800	5,600	740	3,700	<250/<2.0 ^f	--
08/27/01 ^h	15.64	5.83	9.81	--	27,000	1,400	4,400	710	3,400	--<20 ^f	--
11/28/01	15.64	5.84	9.80	--	26,000	1,300	3,900	620	3,400	<100/<2 ^f	--
02/14/02	15.63	8.34	7.29	--	1,400	100	360	45	240	9.3/<2 ^f	--
05/15/02	15.63	7.18	8.45	--	37,000	2,400	7,300	1,000	4,800	<100/<3.0 ^f	--
08/05/02	15.63	6.09	9.54	--	27,000	1,500	4,600	700	3,400	<100/<3.0 ^f	--
DESTROYED											

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	TOC ^a (n.)	GWE (mst)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-1A											
02/24/03 ^b	15.49	8.17	7.32	4,600	5,100	92	340	66	480	<10	--
06/02/03	15.49	7.15	8.34	5,500	3,800	150	490	72	450	<13	--
09/02/03	15.49	6.10	9.39	10,000	6,200	100	580	110	760	47	--
11/21/03	15.49	5.29	10.20	3,800	3,200	29	150	49	240	<10	--
02/27/04	15.49	9.87	5.62	2,800	280	9.7	19	3.0	30	<2.5	--
05/28/04	15.49	6.88	8.61	5,500	1,100	35	81	27	140	17	--
08/31/04	15.49	5.58	9.91	4,500	1,100	13	68	27	110	<2.5	--
12/17/04	15.49	7.09	8.40	2,300 ^c	560	8.0	17	9.6	36	<2.5	--
MW-2											
10/27/95	15.77	10.60	5.17	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/20/97	15.72	8.51	7.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/24/97	15.72	7.82	7.90	--	83 ^d	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/23/97	15.72	5.92	9.80	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/97	15.72	5.13	10.59	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	15.72	9.21	6.51	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/11/98	15.72	8.82	6.90	--	SAMPLED ANNUALLY		--	--	--	--	--
07/16/98	15.72	7.37	8.35	--	--	--	--	--	--	--	--
08/04/98 ^e	15.72	7.03	8.69	--	--	--	--	--	--	--	1.9 x 10 ¹
09/03/98 ^e	15.72	6.44	9.28	--	--	--	--	--	--	--	3.0 x 10 ²
10/21/98 ^b	15.72	5.51	10.21	--	--	--	--	--	--	--	8.8 x 10 ²
11/04/98	15.72	5.60	10.12	--	--	--	--	--	--	--	--
01/26/99	15.72	6.87	8.85	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/06/99	15.72	8.20	7.52	--	--	--	--	--	--	--	--
08/21/99	15.72	13.21	2.51	--	--	--	--	--	--	--	--
10/28/99	15.72	6.35	9.37	--	--	--	--	--	--	--	--
01/31/00	15.72	7.25	8.47	--	<50	<0.5	0.541	<0.5	<0.5	<2.5	--
05/19/00	15.72	7.65	8.07	--	--	--	--	--	--	--	--
08/07/00	15.72	6.35	9.37	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0 ^f	--
12/01/00	15.72	5.60	10.12	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
02/09/01	15.72	6.05	9.67	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
05/29/01	15.72	6.73	8.99	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--

TABLE 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	TOC* (<i>n</i>)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-2 (cont)											
08/27/01 ^b	15.72	5.68	10.04	--	<50	<0.50	<0.50	<0.50	<0.50	--/5.0 ^f	--
11/28/01	15.72	5.86	9.86	--	NOT SAMPLED DUE TO INSUFFICIENT WATER						--
02/14/02	15.69	7.86	7.83	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/15/02	15.69	7.09	8.60	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/05/02	15.69	6.02	9.67	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/30/02	15.69	DRY	--	--	--	--	--	--	--	--	--
02/24-25/03 ¹	15.69	8.04	7.65	140	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
06/02/03	15.69	7.33	8.36	150 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/02/03	15.69	5.97	9.72	150 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/21/03	-- ⁿ	-- ⁿ	10.39	180	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/27/04	-- ⁿ	-- ⁿ	6.90	310	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/28/04	-- ⁿ	-- ⁿ	9.13	160	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	-- ⁿ	-- ⁿ	10.30	180 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	-- ⁿ	-- ⁿ	8.91	77 ⁿ	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
MW-3											
10/27/95	15.46	10.37	5.09	--	33,000	11,000	1,700	2,300	4,200	--	--
02/20/97	15.42	8.37	7.05	--	260	56	<1.0	7.6	5.9	<5.0	--
04/24/97	15.42	7.29	8.13	--	1,400	310	28	76	75	74	--
07/23/97	15.42	5.84	9.58	--	37,000	10,000	1,500	2,700	4,200	2,500	--
10/29/97	15.42	5.09	10.33	--	53,000	12,000	1,200	3,000	3,100	2,500	--
01/28/98	15.42	8.94	6.48	--	210	43	1.5	1.7	3.9	10	--
05/11/98	15.42	8.49	6.93	--	59	11	<0.5	2.1	<0.5	<2.5	--
07/16/98	15.42	7.14	8.28	--	260	90	4.8	18	5.7	<10	--
08/04/98 ^a	15.42	6.88	8.54	--	--	--	--	--	--	--	8.5×10^2
09/03/98 ^a	15.42	6.34	9.08	--	--	--	--	--	--	--	2.4×10^3
10/21/98 ^b	15.42	5.62	9.80	--	--	--	--	--	--	--	6.0×10^1
11/04/98	15.42	5.60	9.82	--	73,000	17,000	3,800	4,900	8,100	<250	--
01/26/99	15.42	6.70	8.72	--	32,400	10,200	1,850	2,650	3,140	715/<500 ^c	--
05/06/99	15.42	7.97	7.45	--	3,160	668	89.6	180	123	<200/<10 ^c	--
08/21/99	15.42	7.95	7.47	--	53,800	9,700	2,040	2,880	5,000	<1,250/<40 ^c	--
10/28/99	15.42	5.37	10.05	--	71,300	14,000	3,420	4,320	8,360	<1,000	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)

800 Center Street
 Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-3 (cont)											
01/31/00	15.42	7.16	8.26	--	1,650	496	49.1	134	82.6	<12.5	--
05/19/00	15.42	7.60	7.82	--	110 ^e	36	2.5	9.1	4.0	6.3	--
08/07/00	15.42	6.29	9.13	--	36,000 ^e	9,000	3,000	2,700	2,800	2,500/<10 ^f	--
12/01/00	15.42	2.45	12.97	--	NOT SAMPLED DUE TO INSUFFICIENT WATER						--
02/09/01	15.42	5.98	9.44	--	32,000 ^e	11,000	3,900	3,200	4,800	3,200/<2.0 ^f	--
05/29/01	15.42	6.65	8.77	--	13,000	4,200	2,000	1,800	1,500	74/<2.0 ^f	--
08/27/01 ^h	15.42	5.70	9.72	--	40,000	7,600	2,800	2,500	2,700	--/<25 ^f	--
11/28/01	15.42	5.77	9.65	--	57,000	10,000	2,900	2,900	2,800	<250/<5.0 ^f	--
02/14/02	15.40	7.73	7.67	--	51	2.9	<0.50	1.9	1.8	<2.5/<2 ^f	--
05/15/02	15.40	7.05	8.35	--	4,100	910	250	210	240	<20/<2 ^f	--
08/05/02	15.40	5.96	9.44	--	58,000	11,000	4,300	3,400	4,000	<250/<10 ^f	--
11/30/02	15.40	5.14	10.26	--	46,000	13,000	2,900	3,700	2,600	<100/<10 ^f	--
02/24-25/03 ⁱ	15.40	7.89	7.51	4,500	52,000	9,600	4,800	2,900	4,100	<130	--
06/02/03	15.40	7.24	8.16	6,500	67,000	11,000	9,600	3,400	5,700	<250	--
09/02/03	15.40	5.89	9.51	10,000	73,000	8,900	10,000	3,600	7,000	300	--
11/21/03	15.40	5.17	10.23	8,000	29,000	3,300	3,200	1,200	1,500	<200	--
02/27/04	15.40	8.84	6.56	200	59	8.2	6.3	1.7	6.8	<2.5	--
05/28/04	15.40	6.57	8.83	5,400	18,000	2,600	970	1,600	950	<100	--
08/31/04	15.40	5.41	9.99	9,100	58,000	3,200	9,600	2,800	7,500	<50	--
12/17/04	15.40	6.81	8.59	2,200 ^e	23,000	1,100	2,100	1,200	2,600	<25	--
MW-4											
10/27/95	14.45	9.37	5.08	--	66	6.8	<0.5	<0.5	<0.5	<0.5	--
02/20/97	14.40	8.12	6.28	--	54	<0.5	<0.5	<0.5	7.4	39	--
04/24/97	14.40	7.29	7.11	--	54	1.4	<0.5	0.65	3.0	100	--
07/23/97	14.40	5.80	8.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/97	14.40	5.74	8.66	--	--	--	--	--	--	--	--
11/13/97	14.40	4.97	9.43	--	<50	<0.5	0.79	<0.5	<0.5	<2.5	--
01/28/98	14.40	8.88	5.52	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/11/98	14.40	8.40	6.00	--	SAMPLED BIANNUALLY						--
07/16/98	14.40	7.08	7.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
08/04/98 ^a	14.40	6.28	8.12	--	--	--	--	--	--	--	1.8 x 10 ⁴

TABLE 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-4 (cont)											
09/03/98 ^a	14.40	6.32	8.08	--	--	--	--	--	--	--	1.4×10^4
10/21/98 ^b	14.40	5.64	8.76	--	--	--	--	--	--	--	8.6×10^4
11/04/98	14.40	5.61	8.79	--	--	--	--	--	--	--	--
01/26/99	14.40	6.71	7.69	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/06/99	14.40	8.15	6.25	--	--	--	--	--	--	--	--
08/21/99	14.40	8.13	6.27	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/99	14.40	4.14	10.26	--	--	--	--	--	--	--	--
01/31/00	14.40	7.07	7.33	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/19/00	14.40	7.52	6.88	--	--	--	--	--	--	--	--
08/07/00	14.40	6.23	8.17	--	<50	4.3	0.60	<0.50	<0.50	<2.5/<2.0 ^f	--
12/01/00	14.40	INACCESSIBLE		--	--	--	--	--	--	--	--
02/09/01	14.40	INACCESSIBLE		--	--	--	--	--	--	--	--
05/29/01	14.40	6.58	7.82	--	NOT SAMPLED DUE TO INSUFFICIENT WATER						--
08/27/01	14.40	6.52	7.88	--	NOT SAMPLED DUE TO INSUFFICIENT WATER						--
11/28/01	14.40	DRY	--	--	--	--	--	--	--	--	--
02/14/02	14.37	7.66	6.71	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
05/15/02	14.37	6.96	7.41	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
08/05/02	14.37	DRY	--	--	--	--	--	--	--	--	--
11/30/02	14.37	DRY	--	--	--	--	--	--	--	--	--
02/24-25/03 ⁱ	14.37	7.77	6.60	200	<50	8.0	<0.50	<0.50	<1.5	<2.5	--
06/02/03	14.37	7.11	7.26	300	<50	4.3	<0.5	<0.5	<1.5	<2.5	--
09/02/03	14.37	5.80	8.57	410	51	4.3	<0.5	<0.5	<1.5	<2.5	--
11/21/03	-- ^a	-- ^a	10.24	560	110	25	0.6	1.5	<1.5	<2.5	--
02/27/04	-- ^a	-- ^a	5.71	340	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/28/04	-- ^a	-- ^a	7.88	430	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	-- ^a	-- ^a	9.03	460	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	-- ^a	-- ^a	7.67	390 ^a	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
MW-5											
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/20/97	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
04/24/97	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--

Groundwater Monitoring Data and Analytical Results
 Former Chevron (Signal Oil) Service Station #206145 (S-800)
 800 Center Street
 Oakland, California

WELL ID/ DATE	TOC*	CWE (msl)	DTW (ft)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-5 (cont)											
04/30/97	15.03	7.06	7.97	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/23/97	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
10/29/97	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
01/28/98	15.03	8.83	6.20	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/11/98	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
07/16/98	15.03	7.28	7.75	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
08/04/98	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
11/04/98	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
01/26/99	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
05/06/99	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
08/21/99	15.03	6.74	8.29	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/99	15.03	4.60	10.43	--	--	--	--	--	--	--	--
01/31/00	15.03	7.39	7.64	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/19/00	15.03	7.85	7.18	--	--	--	--	--	--	--	--
08/07/00	15.03	INACCESSIBLE		--	--	--	--	--	--	--	--
12/01/00	15.03	5.68	9.35	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50/<2.0 ^f	--
02/09/01	15.03	6.22	8.81	--	<50	<0.50	<0.50	<0.50	<0.50	<2.50/<2.0 ^f	--
05/29/01	15.03	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--	--	--
08/27/01	15.03	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--	--	--
11/28/01	15.03	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--	--	--
02/14/02	15.01	7.96	7.05	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
05/15/02	15.01	7.23	7.78	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
08/05/02	15.01	6.13	8.88	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
11/30/02	15.01	5.27	9.74	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ^f	--
02/24-25/03 ⁱ	15.01	7.99	7.02	<50	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
06/02/03	15.01	7.14	7.87	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/02/03	15.01	6.02	8.99	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/21/03	15.01	5.26	9.75	68	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/27/04	15.01	8.42	6.59	140	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/28/04	15.01	6.71	8.30	76	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	15.01	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--	--	--
12/17/04	15.01	6.98	8.03	52 ^j	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	TOC* (<i>g</i>)	GWE (<i>mst</i>)	DTW (<i>L</i>)	TPH-D (<i>ppb</i>)	TPH-G (<i>ppb</i>)	B (<i>ppb</i>)	T (<i>ppb</i>)	E (<i>ppb</i>)	X (<i>ppb</i>)	MTBE (<i>ppb</i>)	CUB (<i>cfu/ml</i>)
MW-6											
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/20/97	14.73	8.11	6.62	--	800	310	23	11	28	<12	--
04/24/97	14.73	7.13	7.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/23/97	14.73	5.73	9.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/97	14.73	4.98	9.75	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	14.73	8.19	6.54	--	160	38	<0.5	<0.5	<0.5	<2.5	--
05/11/98	14.73	8.08	6.65	--	1,700	490	72	39	52	<25	--
07/16/98	14.73	7.04	7.69	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
08/04/98 ^a	14.73	6.89	7.84	--	--	--	--	--	--	--	8.6×10^3
09/03/98 ^a	14.73	6.24	8.49	--	--	--	--	--	--	--	2.9×10^3
10/21/98 ^b	14.73	5.46	9.27	--	--	--	--	--	--	--	1.8×10^3
11/04/98	14.73	5.52	9.21	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/26/99	14.73	6.49	8.24	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/06/99	14.73	7.91	6.82	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
08/21/99	14.73	7.93	6.80	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/28/99	14.73	5.27	9.46	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
01/31/00	14.73	7.16	7.57	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/19/00	14.73	7.60	7.13	--	<50	11	<0.5	<0.5	<0.5	<2.5	--
08/07/00	14.73	6.22	8.51	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0 ^f	--
12/01/00	14.73	DRY	--	--	--	--	--	--	--	--	--
02/09/01	14.73	DRY	--	--	--	--	--	--	--	--	--
05/29/01	14.73	6.63	8.10	--	NOT SAMPLED DUE TO INSUFFICIENT WATER						--
08/27/01 ^h	14.73	9.83	4.90	--	150	<0.50	5.7	<0.50	<0.50	--/<5.0 ^f	--
11/28/01	14.73	DRY	--	--	--	--	--	--	--	--	--
02/14/02	14.68	7.90	6.78	--	<50	<0.50	<0.50	<0.50	<0.50	<1.5	<2.5
05/15/02	14.68	7.32	7.36	--	<50	<0.50	<0.50	<0.50	<0.50	<1.5	<2.5
08/05/02	14.68	DRY	--	--	--	--	--	--	--	--	--
11/30/02	14.68	DRY	--	--	--	--	--	--	--	--	--
02/24-25/03 ⁱ	14.68	7.89	6.79	<50	<50	<0.50	<0.50	<0.50	<0.50	<1.5	<2.5
06/02/03	14.68	7.20	7.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.5	<2.5
09/02/03	14.68	5.77	8.91	190	<50	<0.5	<0.5	<0.5	<0.5	<1.5	<2.5
11/21/03	14.68	4.86	9.82	98	<50	<0.5	<0.5	<0.5	<0.5	<1.5	<2.5
02/27/04	14.68	8.12	6.56	240	<50	<0.5	<0.5	<0.5	<0.5	<1.5	<2.5

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-6 (cont)											
05/28/04	14.68	6.43	8.25	150	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	14.68	5.29	9.39	360 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	14.68	6.85	7.83	91 ⁿ	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
MW-7											
01/03/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/20/97	16.36	8.86	7.50	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/24/97	16.36	7.59	8.77	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/23/97	16.36	6.09	10.27	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/97	16.36	5.28	11.08	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	16.36	9.10	7.26	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/11/98	16.36	9.11	7.25	--	SAMPLED ANNUALLY		--	--	--	--	--
07/16/98	16.36	8.00	8.36	--	--	--	--	--	--	--	--
08/04/98 ^a	16.36	7.32	9.04	--	--	--	--	--	--	--	1.5×10^3
09/03/98 ^a	16.36	6.65	9.71	--	--	--	--	--	--	--	6.5×10^2
10/21/98 ^b	16.36	5.96	10.40	--	--	--	--	--	--	--	4.8×10^3
11/04/98	16.36	5.89	10.47	--	--	--	--	--	--	--	--
01/26/99	16.36	8.25	8.11	--	<50	<0.5	<0.5	<0.5	0.5	<2.0	--
05/06/99	16.36	8.47	7.89	--	--	--	--	--	--	--	--
08/21/99	16.36	8.51	7.85	--	--	--	--	--	--	--	--
10/28/99	16.36	6.04	10.32	--	--	--	--	--	--	--	--
01/31/00	16.36	7.57	8.79	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/19/00	16.36	UNABLE TO LOCATE		--	--	--	--	--	--	--	--
08/07/00	16.36	6.67	9.69	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0 ^f	--
12/01/00	16.36	5.84	10.52	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
02/09/01	16.36	6.30	10.06	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
05/29/01	16.36	UNABLE TO LOCATE		--	--	--	--	--	--	--	--
08/27/01 ^b	16.36	6.02	10.34	--	<50	<0.50	<0.50	<0.50	<0.50	</<5.0 ^f	--
11/28/01	16.36	6.09	10.27	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/14/02	16.31	8.21	8.10	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/15/02	16.31	7.41	8.90	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/05/02	16.31	6.26	10.05	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--

Groundwater Monitoring Data and Analytical Results
 Former Chevron (Signal Oil) Service Station #206145 (S-800)
 800 Center Street
 Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
MW-7 (cont)											
11/30/02	16.31	5.39	10.92	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/24-25/03 ¹	16.31	8.30	8.01	<50	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
06/02/03	16.31	7.67	8.64	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/02/03	16.31	6.17	10.14	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/21/03	16.31	UNABLE TO LOCATE - BURIED			--	--	--	--	--	--	--
02/27/04	16.31	UNABLE TO LOCATE - BURIED			--	--	--	--	--	--	--
05/28/04	-- ^a	-- ^a	9.40	91	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	-- ^a	-- ^a	10.61	150 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	-- ^a	-- ^a	9.16	170 ⁿ	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
MW-8											
02/14/02 ^j	15.29	7.30	7.99	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/ ^f 2 ^f	--
05/15/02 ^k	15.29	6.66	8.63	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/05/02 ^k	15.29	5.48	9.81	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/30/02 ^k	15.29	4.85	10.44	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/24-25/03 ^l	15.29	7.46	7.83	<50	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
06/02/03	15.29	6.83	8.46	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/02/03	15.29	5.57	9.72	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/21/03	15.29	4.89	10.40	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/27/04	15.29	8.38	6.91	280	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/28/04	15.29	6.33	8.96	72	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	15.29	4.79	10.50	92 ^m	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	15.29	6.68	8.61	53 ⁿ	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
TRIP BLANK											
02/20/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/24/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/23/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/29/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/11/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

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800 Center Street
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)	CUB (cfu/ml)
TRIP BLANK (cont)											
07/16/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/04/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
01/26/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/06/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
01/31/00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/19/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
08/07/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
12/01/00	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
02/09/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
05/29/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
08/27/01 ^h	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	--/5.0 ^f	--
QA											
11/28/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/14/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/15/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/05/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/30/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/24-25/03	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
06/02/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/02/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
11/21/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
02/27/04	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
05/28/04	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
08/31/04	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
12/17/04	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--

TABLE 1
Groundwater Monitoring Data and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 19, 2000 were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing

(ft.) = Feet

GWE = Groundwater Elevation

(msl) = Mean sea level

DTW = Depth to Water

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

CUB = Contaminate utilizing bacteria

(cfu/ml) = Colony forming unit per milliliter

(ppb) = Parts per billion

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

- * On February 18, 2003 MW-1A was surveyed using the previous benchmark.

TOC elevations were surveyed on December March 4, 2002, by Virgil Chavez Land Surveying. The benchmark for the survey was a City of Oakland benchmark, #25-H monument disk in well casting in sidewalk at the northwest corner of 7th and Center. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83), (Benchmark Elevation = 10.784 feet NGVD 29).

- a Contaminate hydrocarbon utilizing bacteria plate count was run with diesel and jet fuel degraders.
- b Contaminate hydrocarbon utilizing bacteria plate count was run with gasoline degraders.
- c Confirmation run.
- d Chromatogram pattern indicates an unidentified hydrocarbon.
- e Laboratory report indicates gasoline C6-C12.
- f MTBE by EPA Method 8260.
- g Laboratory reports indicates weathered gasoline C6-C12.
- h TPH-G and BTEX by EPA Method 8260.
- i Well development performed.
- j TPH-D was detected at 130 ppb.
- k TPH-D was <50 ppb.
- l Well re-development performed.
- m Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
- n TOC damaged; unable to calculate an accurate GWE.
- o TPH-D with silica gel clean-up.

Table 2
Field Measurements and Analytical Results
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID/ DATE	Pre-purge DO (mg/L)	Post-purge DO (mg/L)	Pre-purge ORP (mV)	Post-purge ORP (mV)	Total Alkalinity (ppb)	Ferrous Iron (ppb)	Nitrate as Nitrate (ppb)	Sulfate (ppb)
MW-1 09/03/98	2.3	1.6	-90	-103	230,000	9,800	<1,000	6,100
MW-2 09/03/98	2.8	2.5	-206	-163	390,000	7,400	<1,000	21,000
MW-3 09/03/98	3.1	0.7	-124	-99	830,000	45,000	<1,000	10,000
MW-4 09/03/98	2.6	1.1	-190	-206	--	--	--	--
MW-6 09/03/98	2.6	3.2	-148	-167	94,000	62	28,000	47,000
MW-7 09/03/98	2.7	3.2	-207	-229	170,000	120	7,800	57,000

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results were compiled from reports prepared by Blaine Tech Services, Inc.

DO = Dissolved Oxygen

(mg/L) = Milligram per liter

ORP = Oxidation Reduction Potential

(mV) = Millivolts

(ppb) = Parts per billion

-- = Not Analyzed

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID	DATE	METHANOL (ppm)	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-1	08/07/00	--	<1,000	410	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	12/01/00	--	<2,500	<250	<10	<10	<10	<10	<10	<10
	02/09/01	--	<500	340	<2.0	<2.0	<2.0	53	<2.0	<2.0
	05/29/01	--	<500	<20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	08/27/01	<2,000	<200	230	<20	<20	<20	<20	<20	<20
	11/28/01	--	<500	130	<2	<2	<2	<2	<2	<2
	02/14/02	--	<500	<100	<2	<2	<2	<2	<2	<2
	05/15/02	--	<500	120	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
	08/05/02	--	<500	100	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
DESTROYED										
MW-2	08/07/00	--	<500	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	08/27/01	--	--	--	<5.0	--	--	--	--	--
MW-3	08/07/00	--	<500	2,600	<10	<10	<10	<10	490	17
	02/09/01	--	<500	2,000	<2.0	<2.0	<2.0	35	<2.0	<2.0
	05/29/01	--	<500	1,700 ¹	<2.0	<2.0	<2.0	38	980 ¹	7.4
	08/27/01	<5,000	<250	1,300	<25	<25	<25	<25	380	<25
	11/28/01	--	<500	1,500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	02/14/02	--	<500	<100	<2	<2	<2	<2	<2	<2
	05/15/02	--	<500	110	<2	<2	<2	<2	120	<2
	08/05/02	--	<1,000	1,400	<10	<10	<10	<10	670	<10
	11/30/02	--	<1,000	1,200	<10	<10	<10	<10	380	<10
MW-4	08/07/00	--	<500	<100	<2.0	<2.0	<2.0	<2.0	18	<2.0
	08/27/01	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	--	--
	11/28/01	DRY	--	--	--	--	--	--	--	--
	02/14/02	--	<500	<100	<2	<2	<2	<2	9	<2
	05/15/02	--	<500	<100	<2	<2	<2	<2	4	<2
	08/05/02	DRY	--	--	--	--	--	--	--	--
	11/30/02	DRY	--	--	--	--	--	--	--	--

Table 3
Groundwater Analytical Results - Oxygenate Compounds
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

WELL ID	DATE	METHANOL (ppm)	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIME (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-5	12/01/00	--	<500	<50	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	02/09/01	--	<500	<50	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	08/27/01	INACCESSIBLE - CAR PARKED OVER WELL								
	11/28/01	INACCESSIBLE - CAR PARKED OVER WELL								
	02/14/02	--	<500	<100	<2	<2	<2	<2	<2	<2
	05/15/02	--	<500	<100	<2	<2	<2	<2	<2	<2
	08/05/02	--	<500	<100	<2	<2	<2	<2	<2	<2
MW-6	11/30/02	--	<500	<100	<2	<2	<2	<2	<2	<2
	08/07/00	--	<500	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	08/27/01	--	--	--	<5.0	--	--	--	--	--
	11/30/02	DRY	--	--	--	--	--	--	--	--
MW-7	08/07/00	--	<500	<100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	08/27/01	--	--	--	<5.0	--	--	--	--	--
MW-8	02/14/02	--	<500	<100	<2	<2	<2	<2	<2	<2

Groundwater Analytical Results - Oxygenate Compounds
Former Chevron (Signal Oil) Service Station #206145 (S-800)
800 Center Street
Oakland, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

(ppm) = Parts per million

(ppb) = Parts per billion

-- = Not Analyzed

¹ Laboratory report indicates this sample was originally analyzed within holding time. Re-analysis for confirmation or dilution was performed past the recommended holding time.

ANALYTICAL METHODS:

EPA Method 8260 (modified) for Methanol

EPA Method 8260 for Oxygenate Compounds

APPENDIX D
Soil Vapor Data

Figure 3: SV-1 Soil Vapor Data

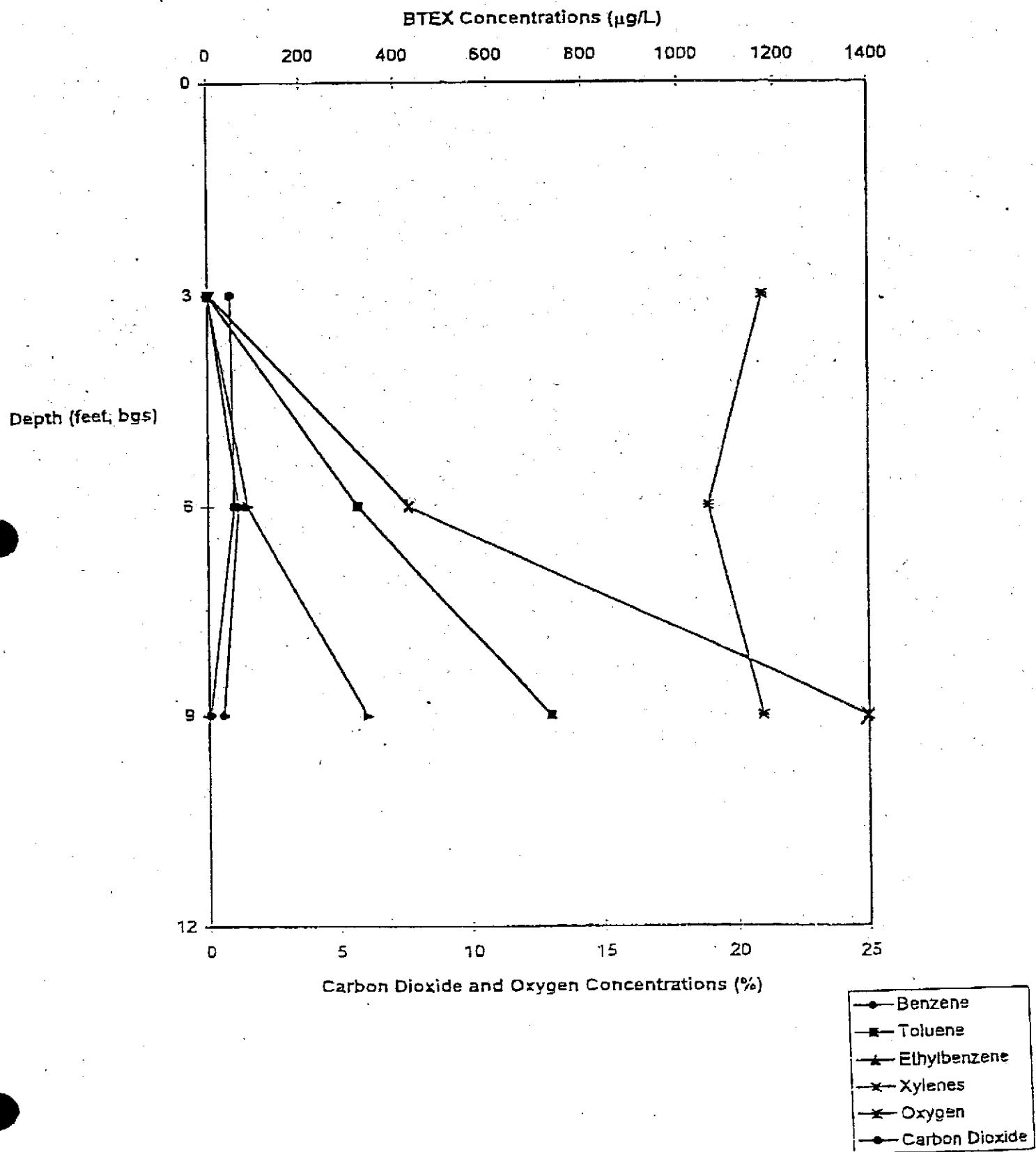


Figure 4: SV-2 Soil Vapor Data

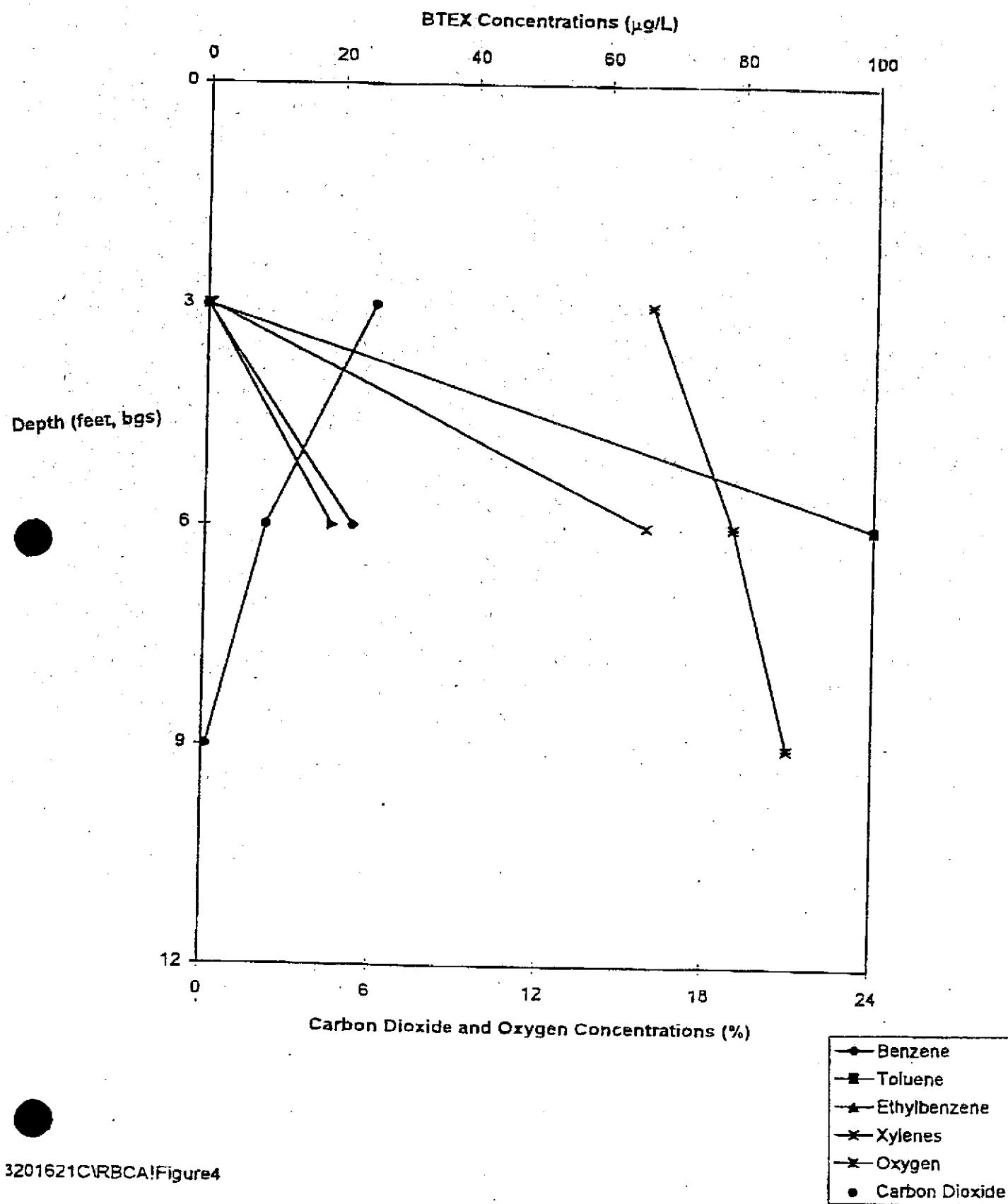


Figure 5: SV-3 Soil Vapor Data

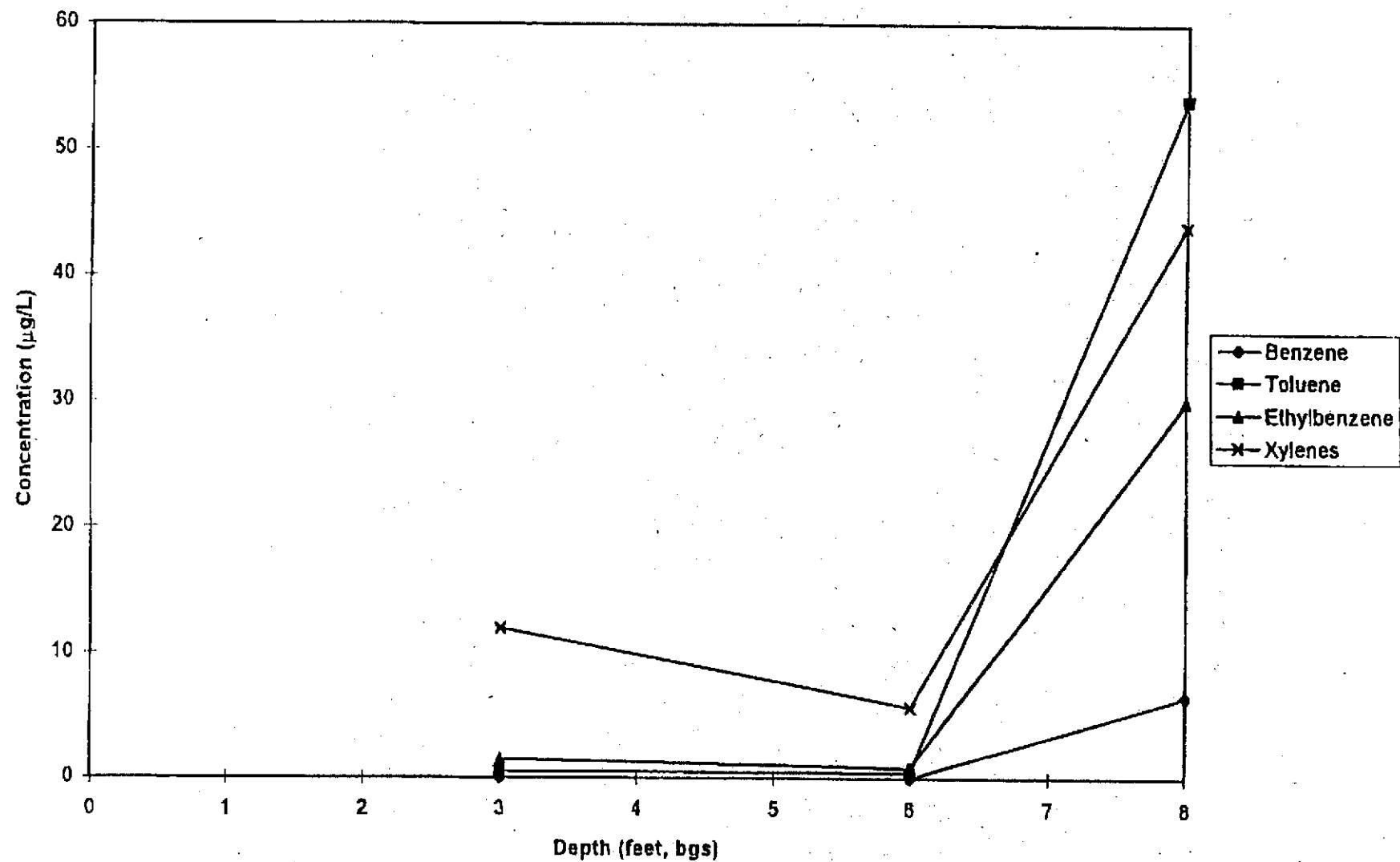


Figure 6: SV-4 Soil Vapor Data

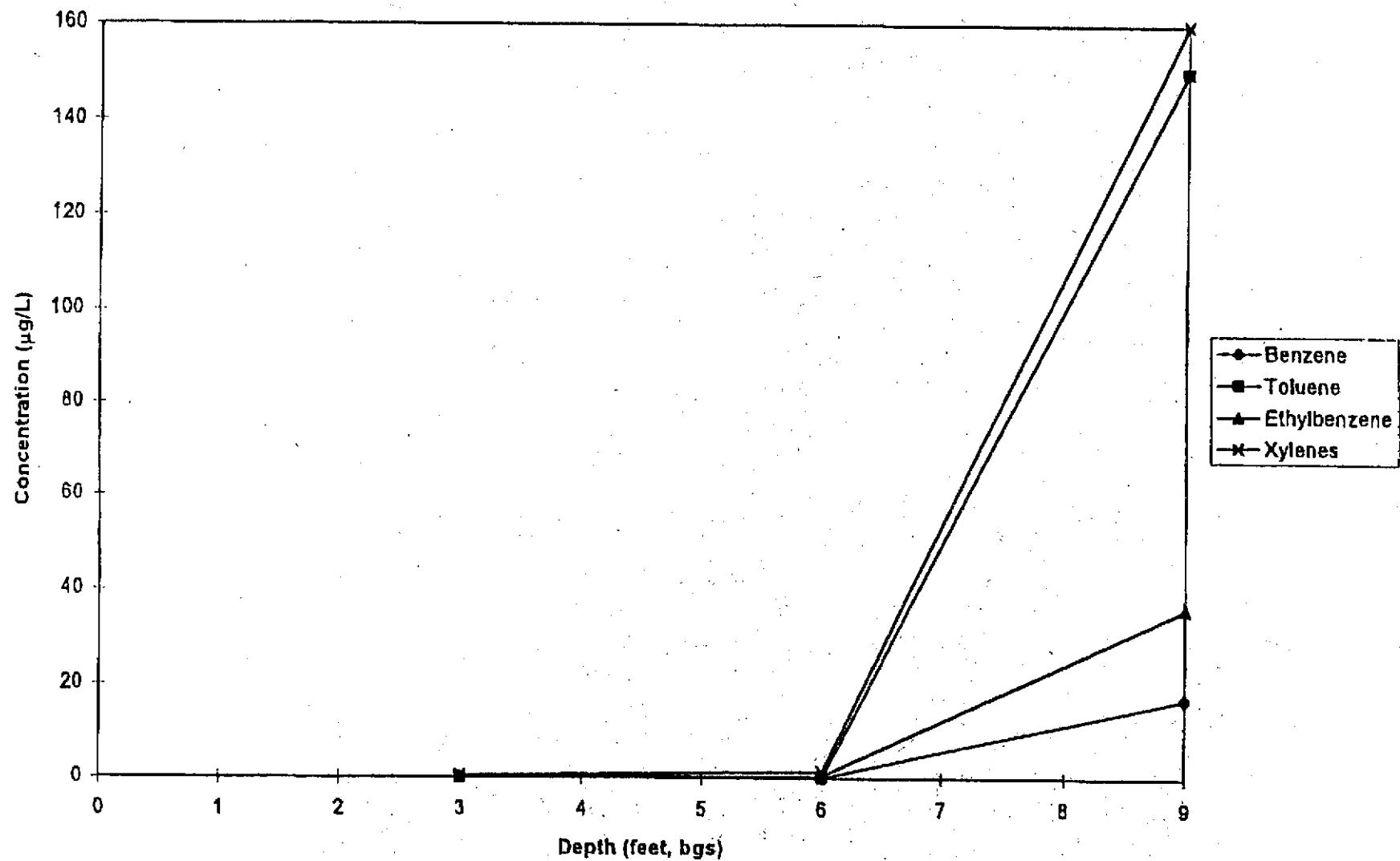


Figure 7: SV-5 Soil Vapor Data

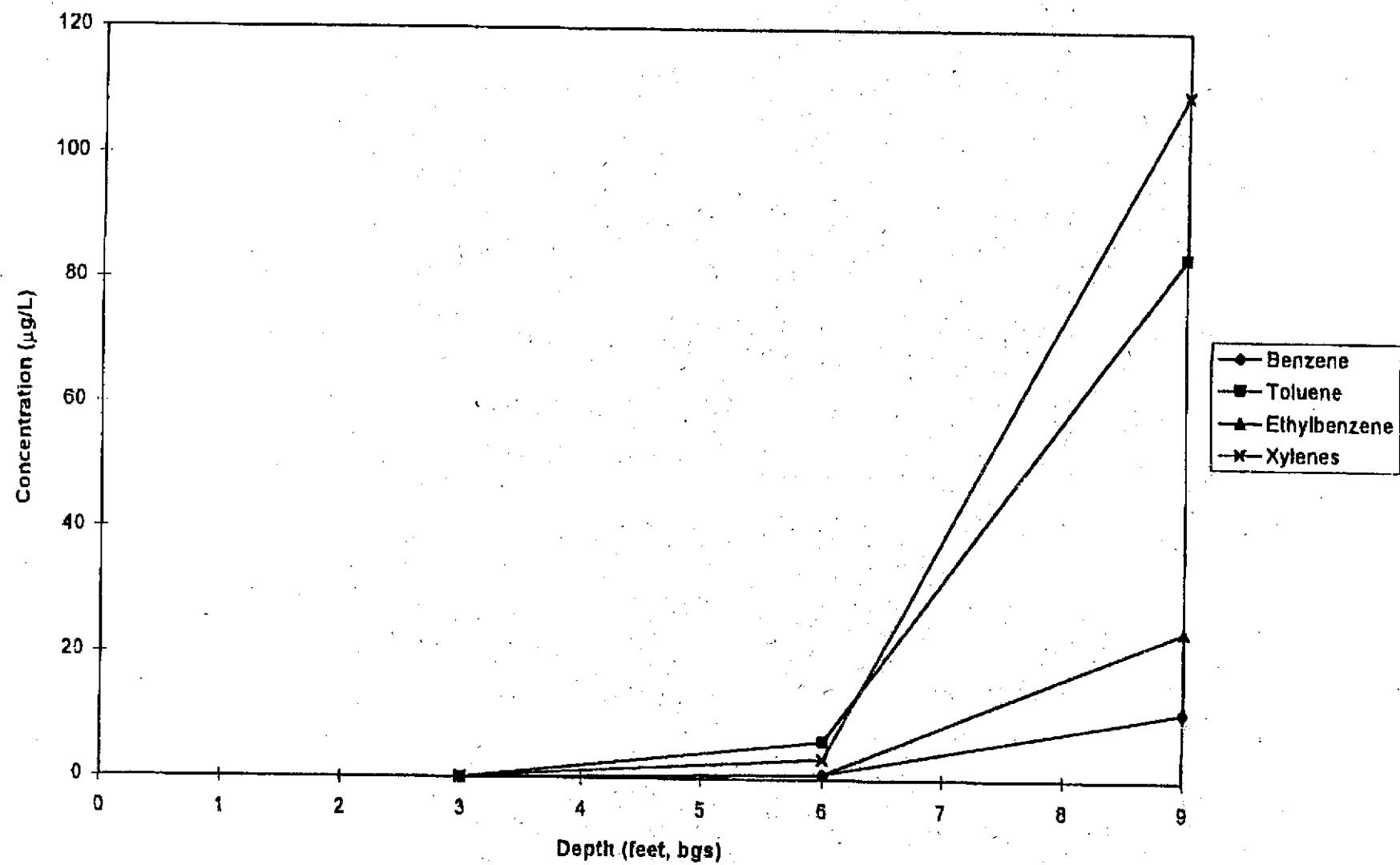


Table 1
Soil Vapor Data

Former Signal Service Station 0800
800 Center Street at Eighth Street
Oakland, California

Sample ID	Sample Date	Sample Depth	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	TPH-g (µg/L)	O ₂ %	CO ₂ %
SV-1	5/30/97	3	3.7	1.6	0.75	5.3	360	20.97	0.87
		6	65	120	84	430	50,000	18.97	1.00
		9	32	130	340	1,400	24,000	20.97	0.07
SV-2	5/30/97	3	ND	0.11	0.11	0.53	11	15.97	6.00
		6	22	106	193	66	27,000	18.97	2.20
		9	NT	NT	NT	NT	NT	20.97	0.16
SV-3	5/30/97	3	ND	0.54	0.1	12	180	NT	NT
		6	ND	0.42	0.07	5.7	63	NT	NT
		8	6.5	54	35	14	300	NT	NT
SV-4	5/30/97	3	ND	0.034	0.17	0.48	71	NT	NT
		6	ND	0.08	0.40	1.4	270	NT	NT
		9	17	150	36	160	5,400	NT	NT
SV-5	5/30/97	3	ND	0.015	0.009	0.071	6	NT	NT
		6	0.84	6.1	0.79	3.3	100	NT	NT
		9	11	84	24	110	400	NT	NT

µg/L = Micrograms per liter

TPH-g = Total petroleum hydrocarbons calculated as gasoline

O₂ = Oxygen

CO₂ = Carbon dioxide

APPENDIX E

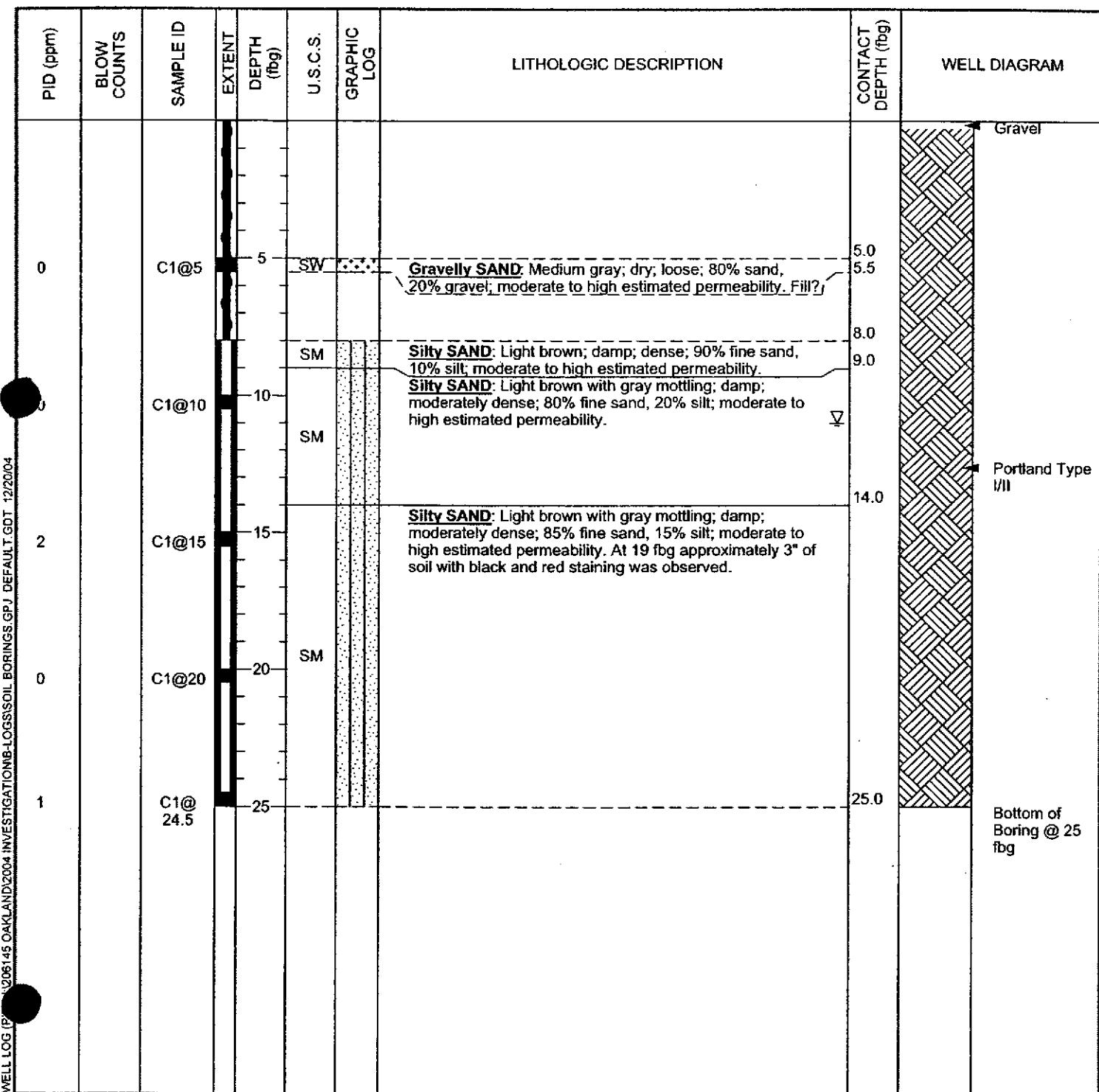
Boring Logs



Cambria Environmental Technology, Inc.
5900 Hollis Street, Ste. A
Emeryville, CA 94608
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Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-1
JOB/SITE NAME	20-6145	DRILLING STARTED	01-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	01-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	11.0 fbg (01-Nov-04) ▽
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA ▽
REMARKS	Cleared to 8 fbg with air knife.		

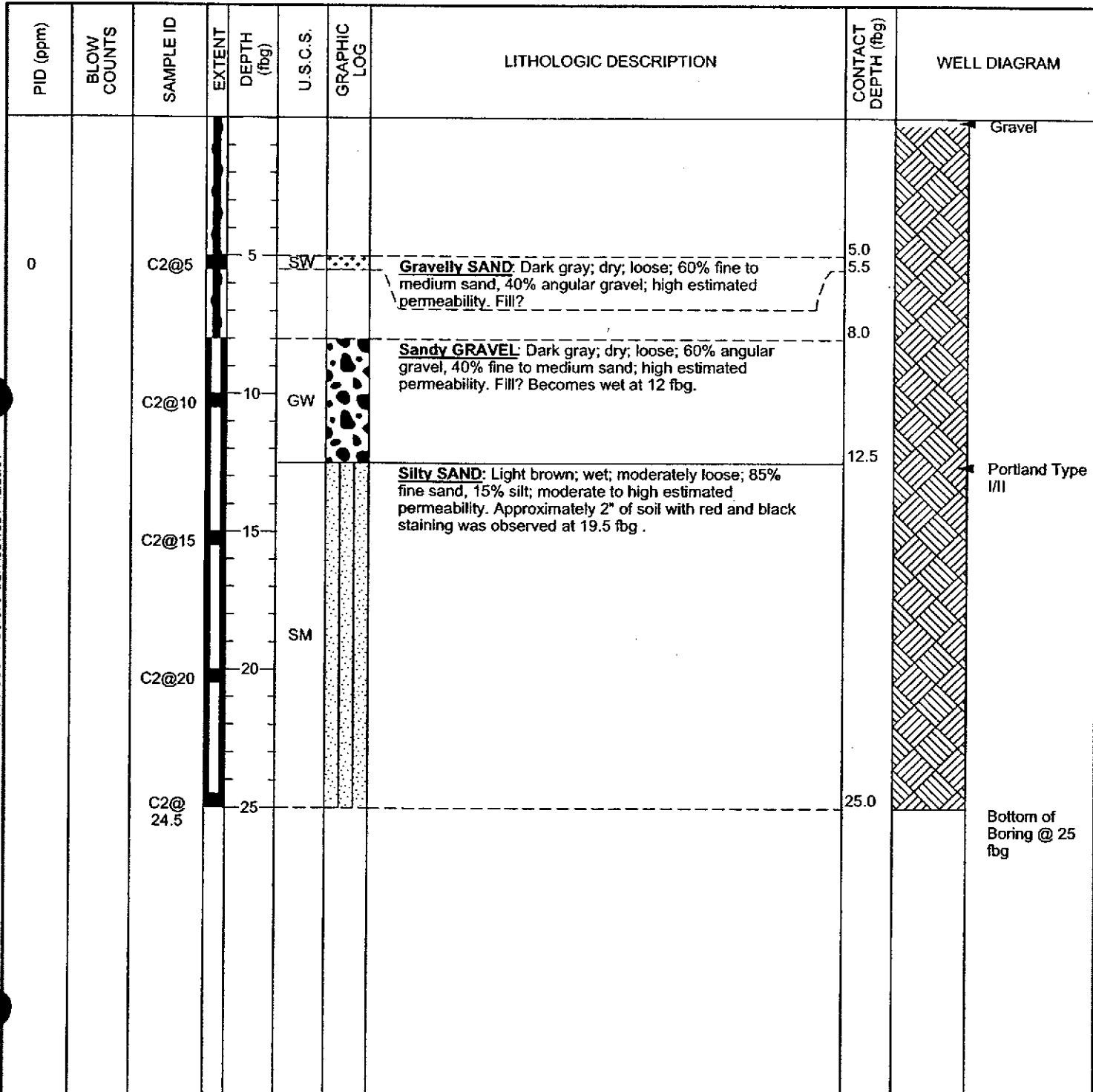




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-2
JOB/SITE NAME	20-6145	DRILLING STARTED	01-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	01-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

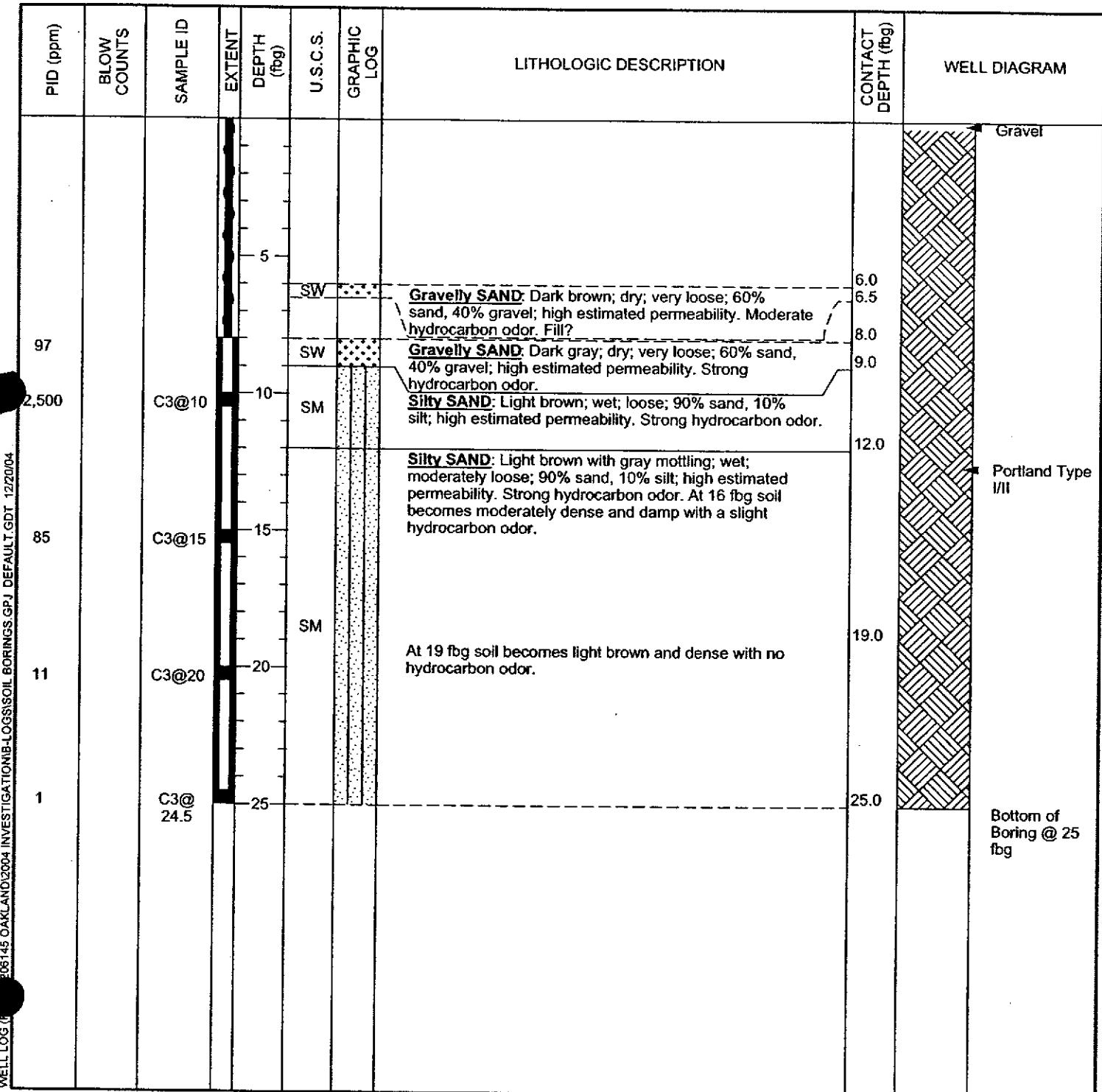




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-3
JOB/SITE NAME	20-6145	DRILLING STARTED	01-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	01-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

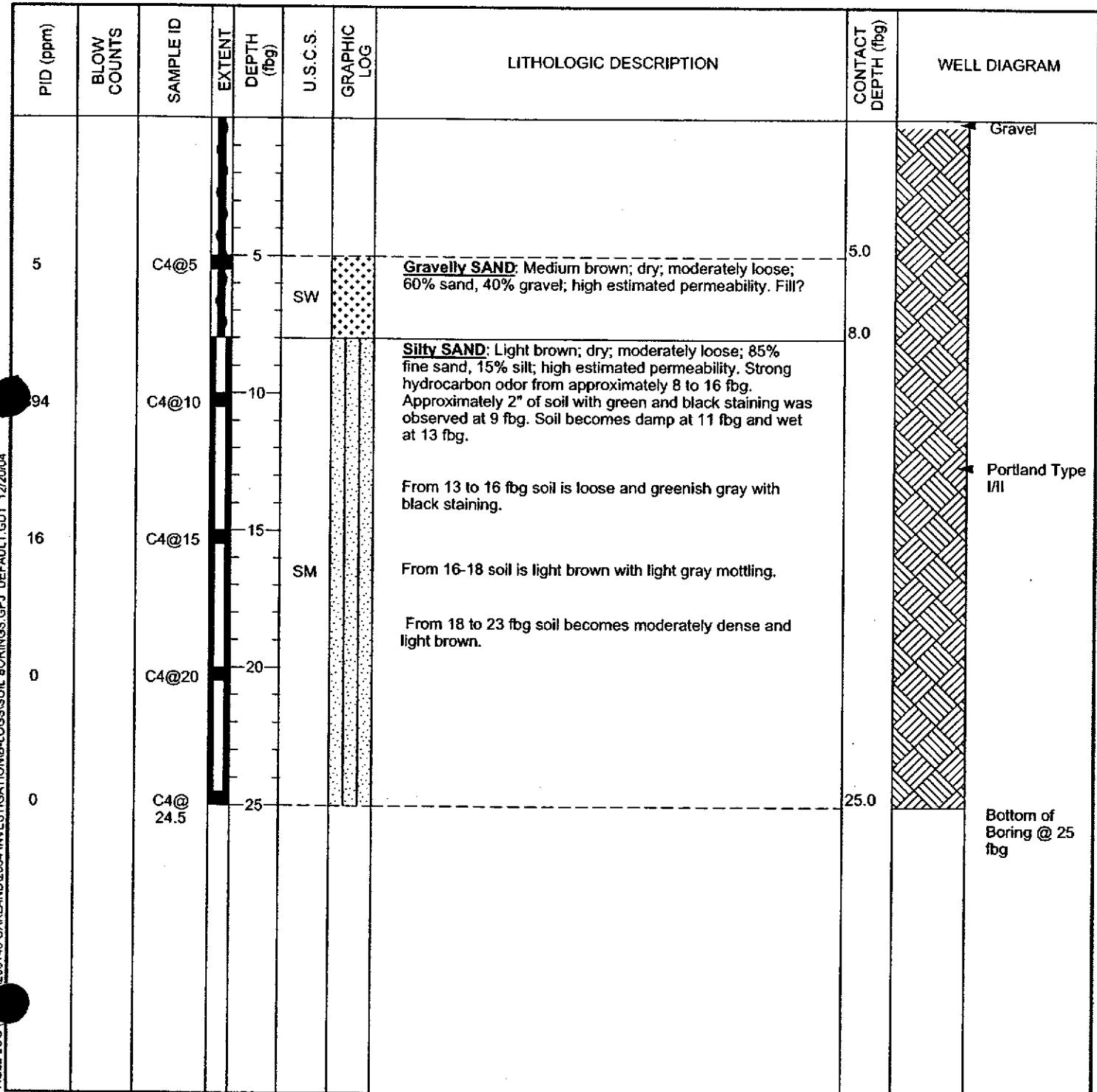




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-4
JOB/SITE NAME	20-6145	DRILLING STARTED	02-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	02-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

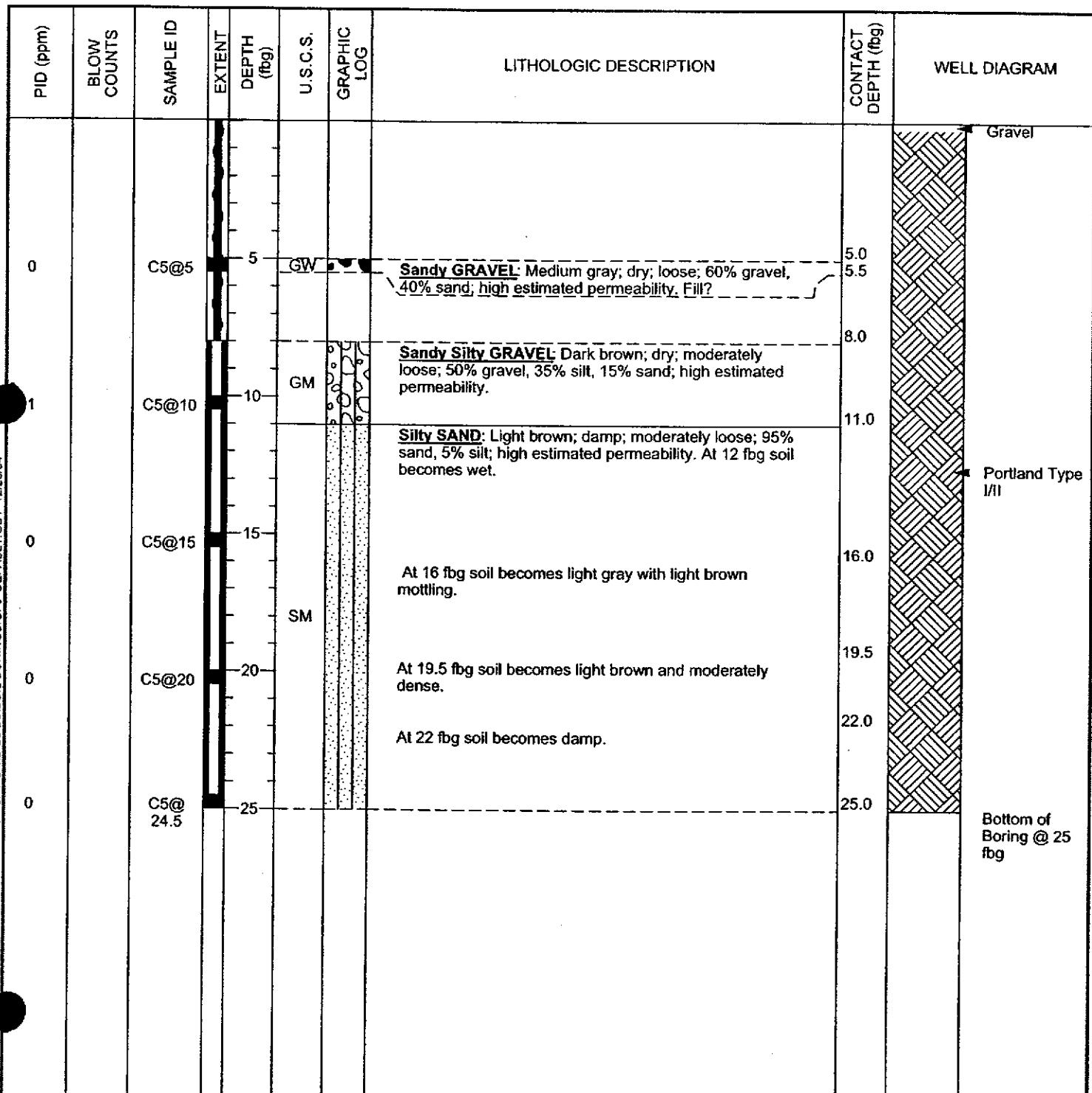




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-5
JOB/SITE NAME	20-6145	DRILLING STARTED	02-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	02-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

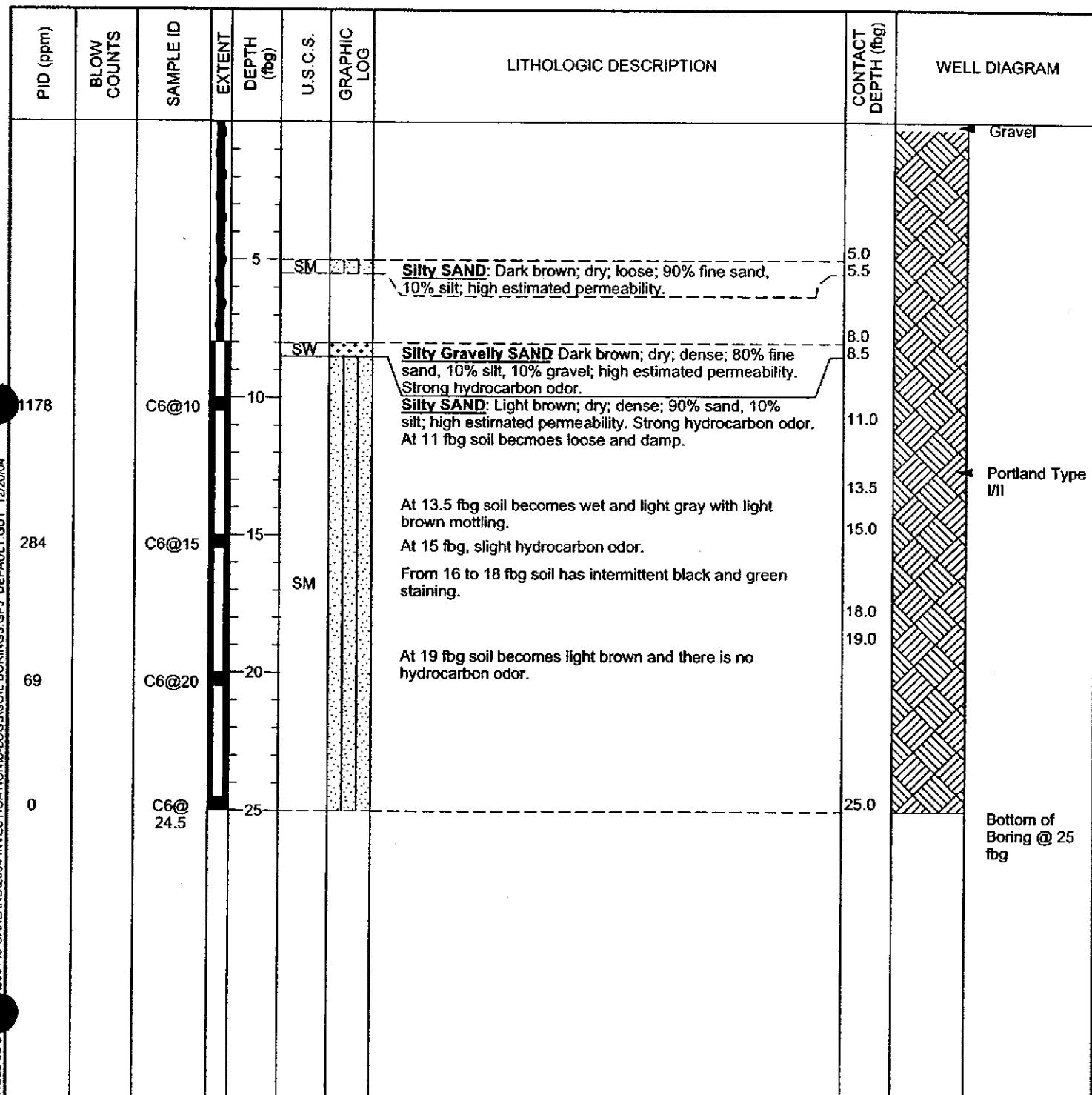




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-6
JOB/SITE NAME	20-6145	DRILLING STARTED	02-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	02-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

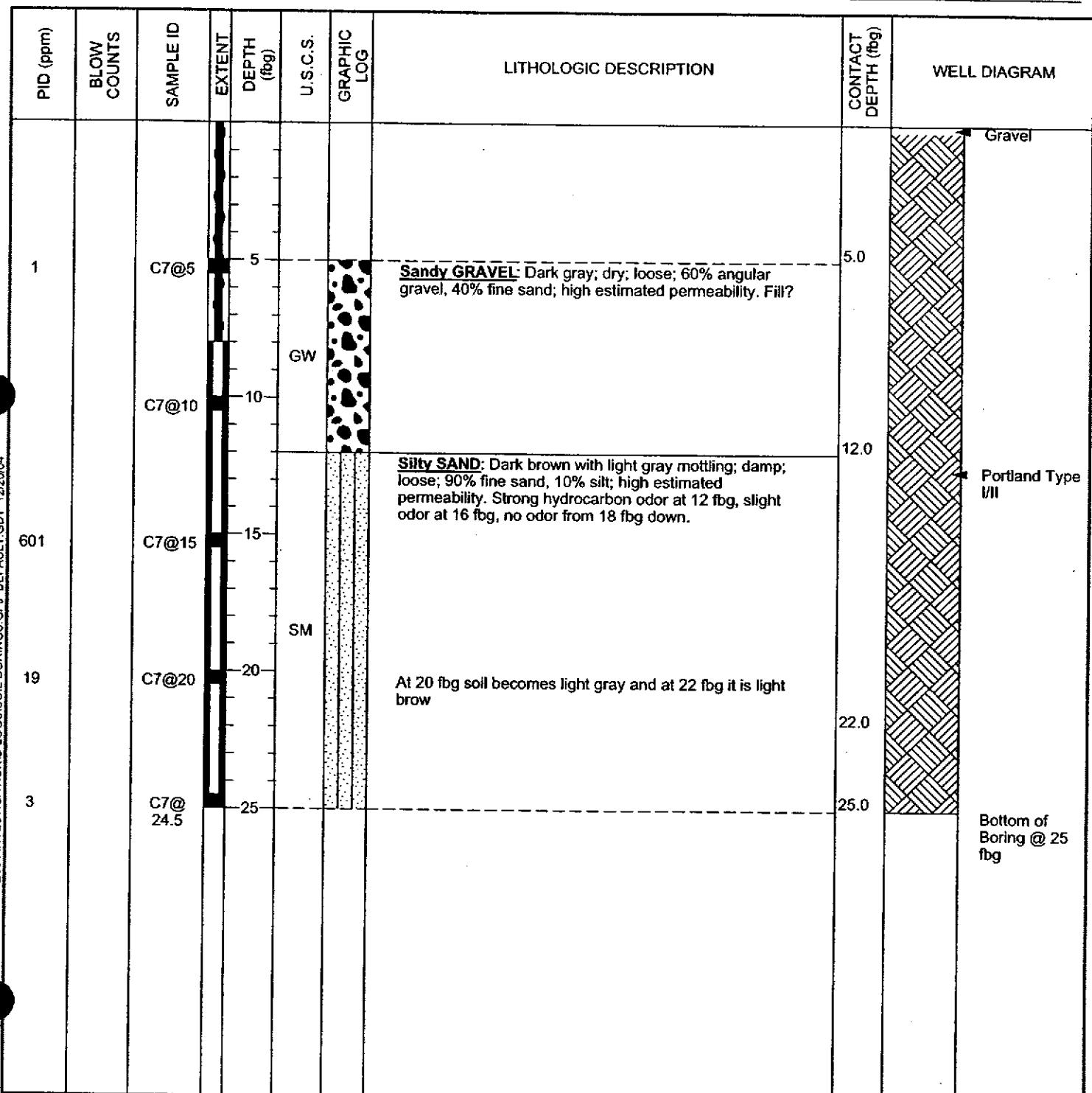




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-7
JOB/SITE NAME	20-6145	DRILLING STARTED	01-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	01-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

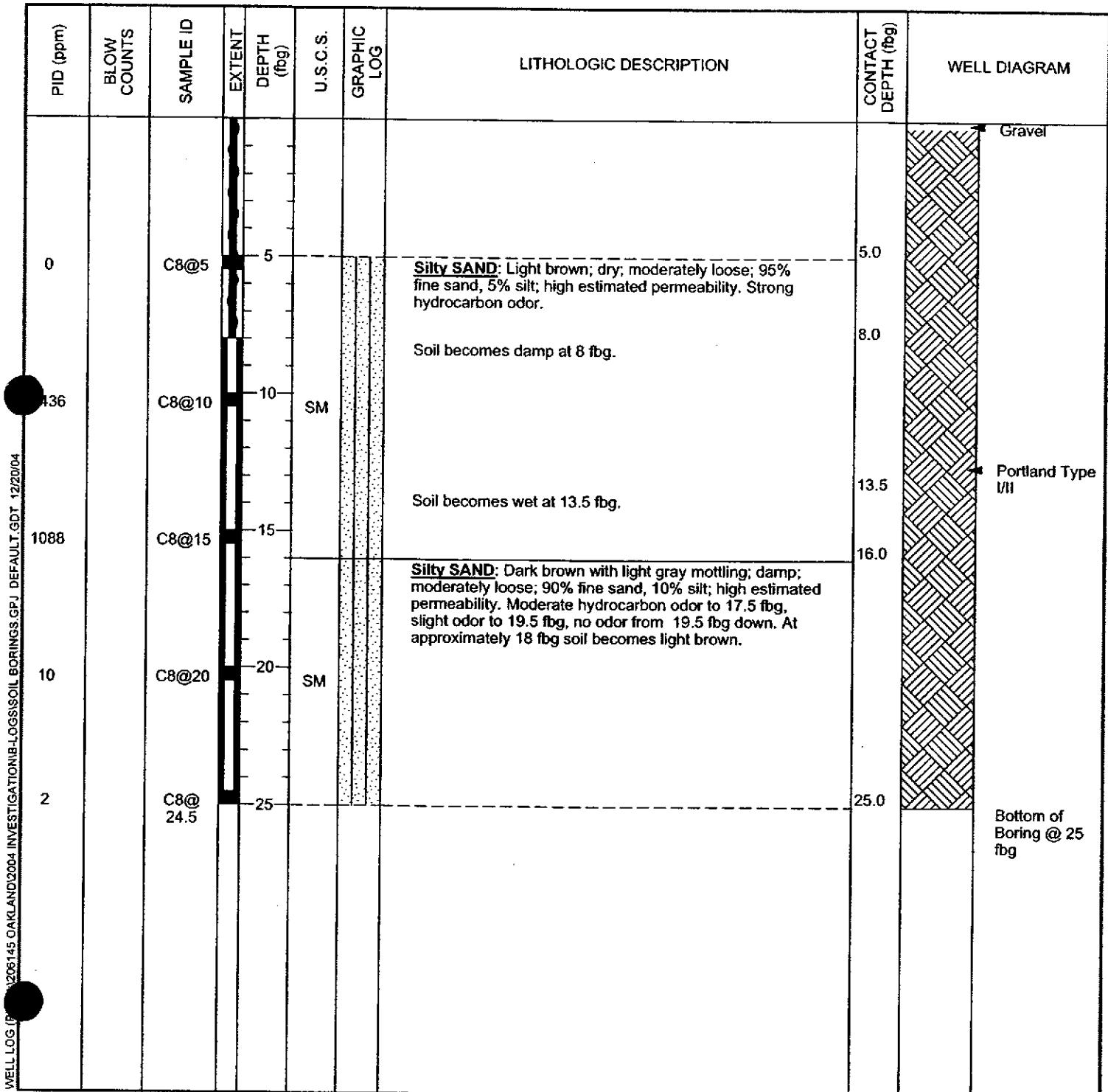




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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-8
JOB/SITE NAME	20-6145	DRILLING STARTED	02-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	02-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		

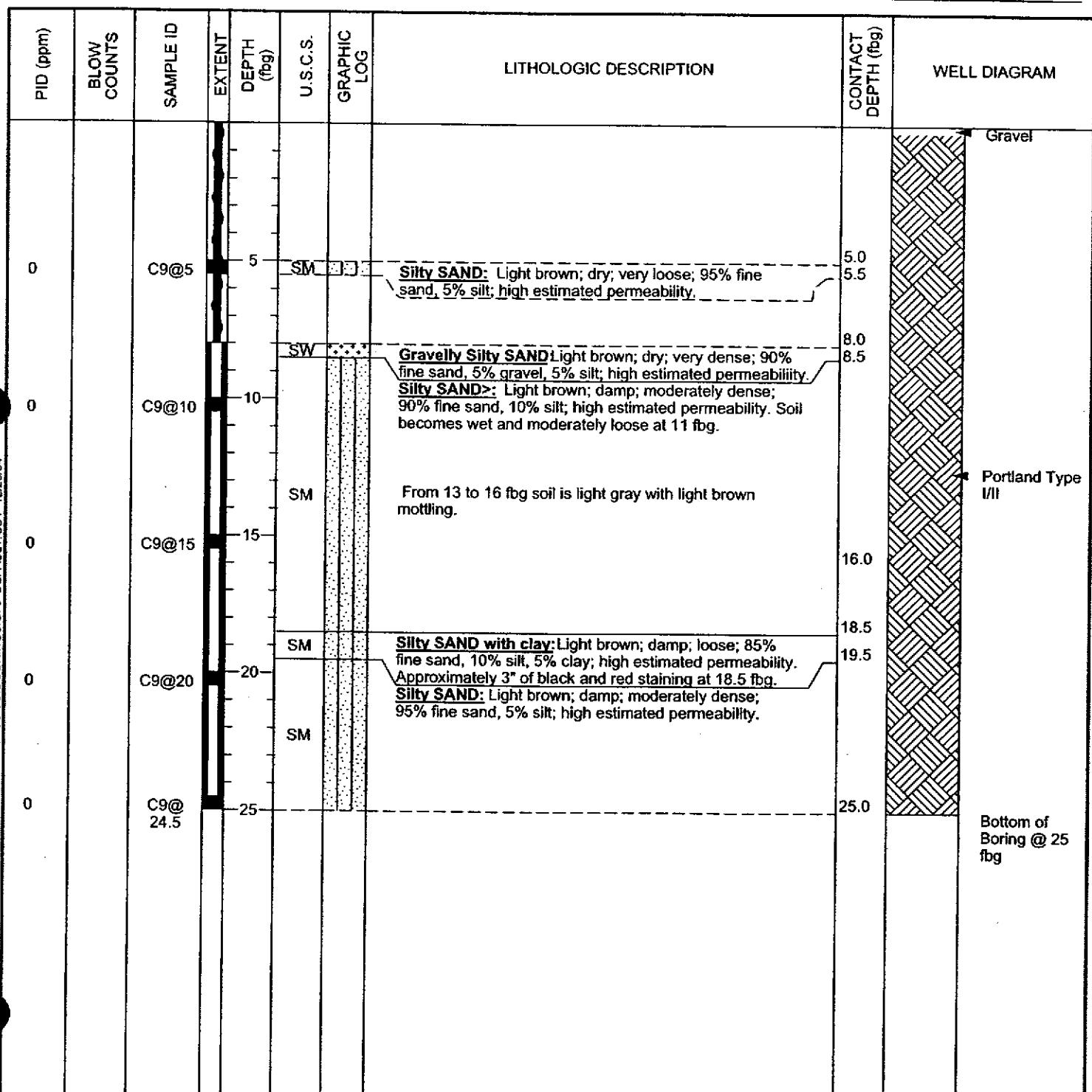


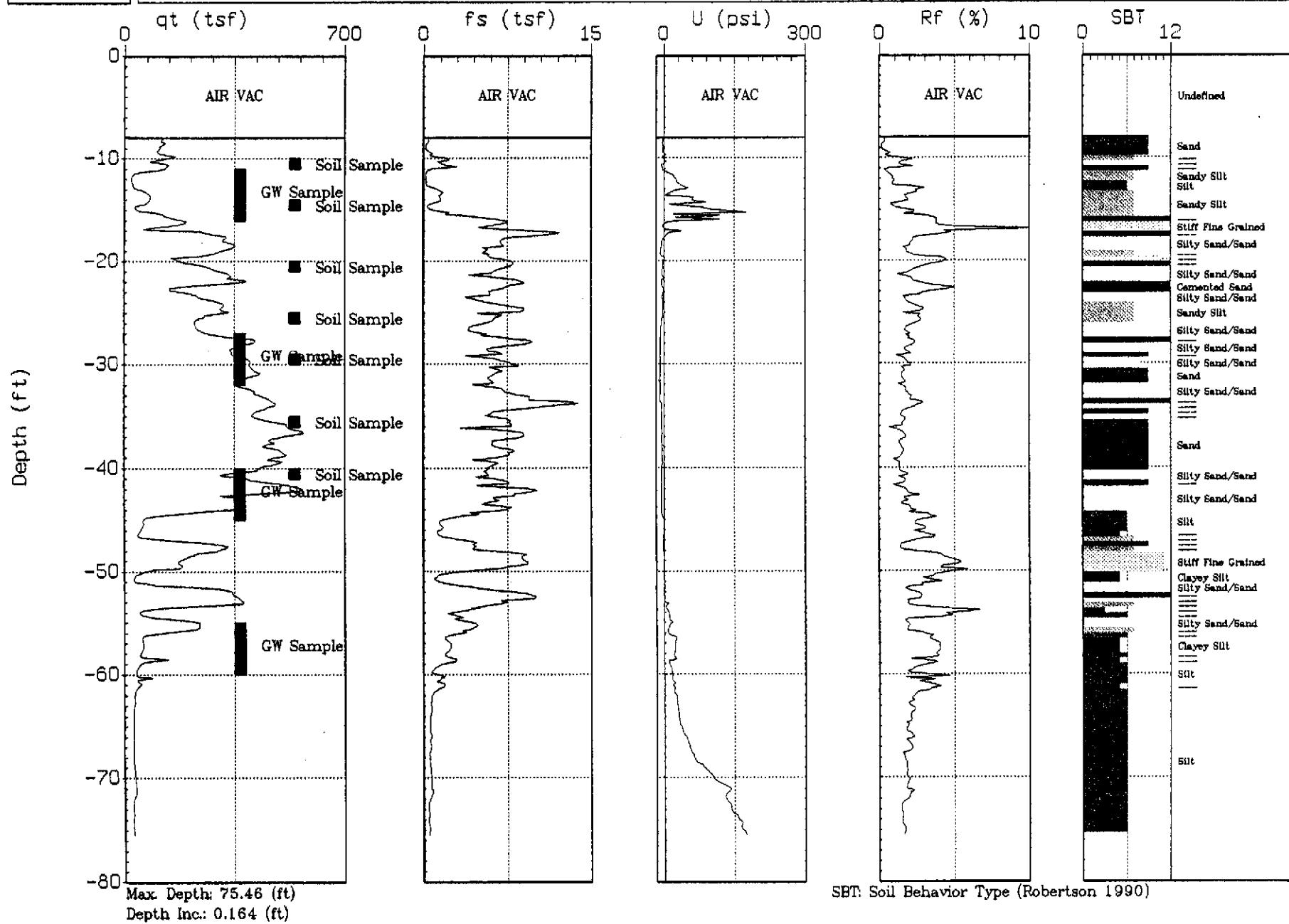


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BORING/WELL LOG

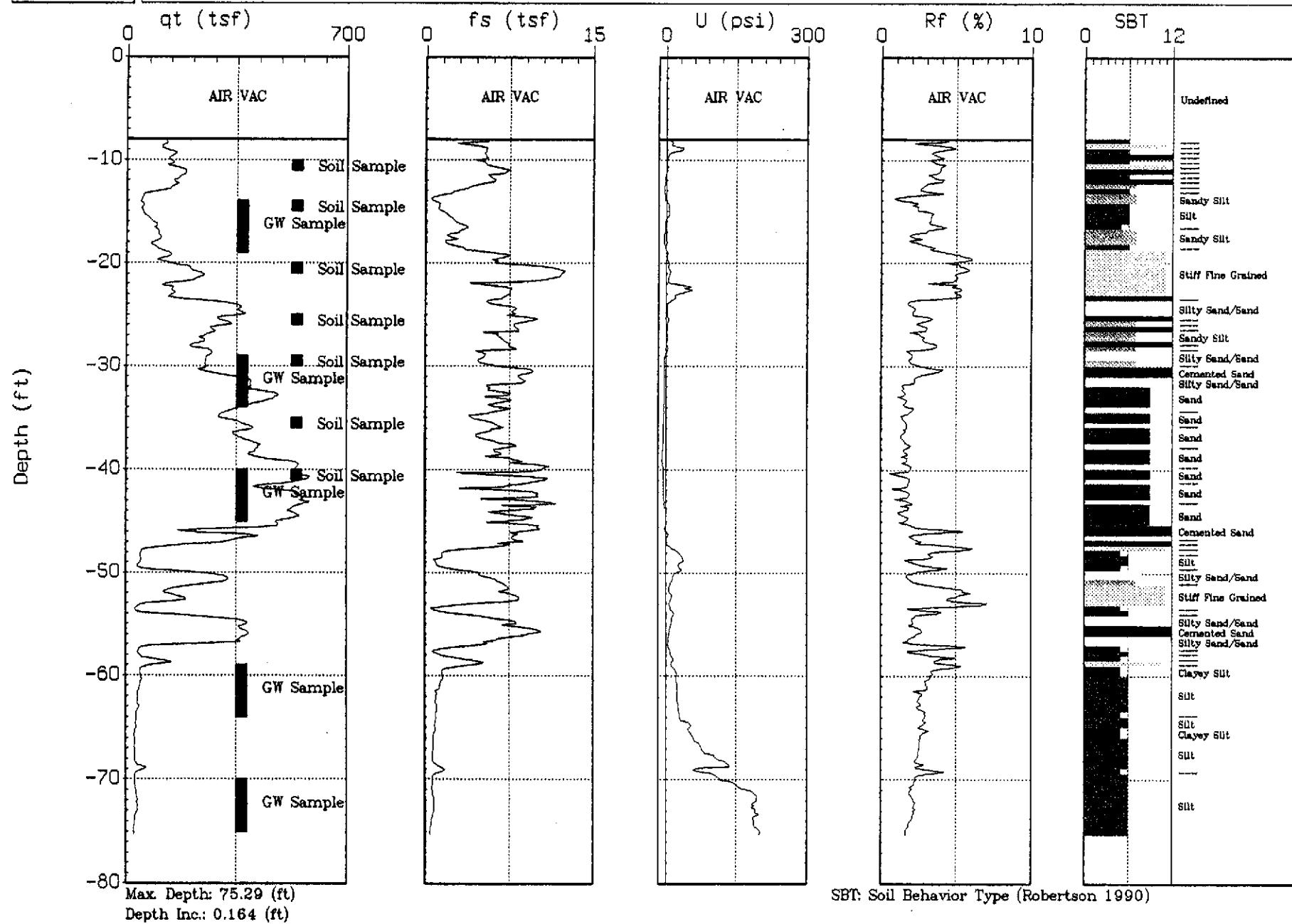
CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	C-9
JOB/SITE NAME	20-6145	DRILLING STARTED	02-Nov-04
LOCATION	800 Center Street, Oakland CA	DRILLING COMPLETED	02-Nov-04
PROJECT NUMBER	31H-2002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Company, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	Sarah Owen	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss, RG# 7445	DEPTH TO WATER (Static)	NA
REMARKS	Cleared to 8 fbg with air knife.		



GREGG**CAMBRIA**Site: CHEVRON 206145
Location: CPT-01Geologist: S. OWEN
Date: 10:06:04 10:44

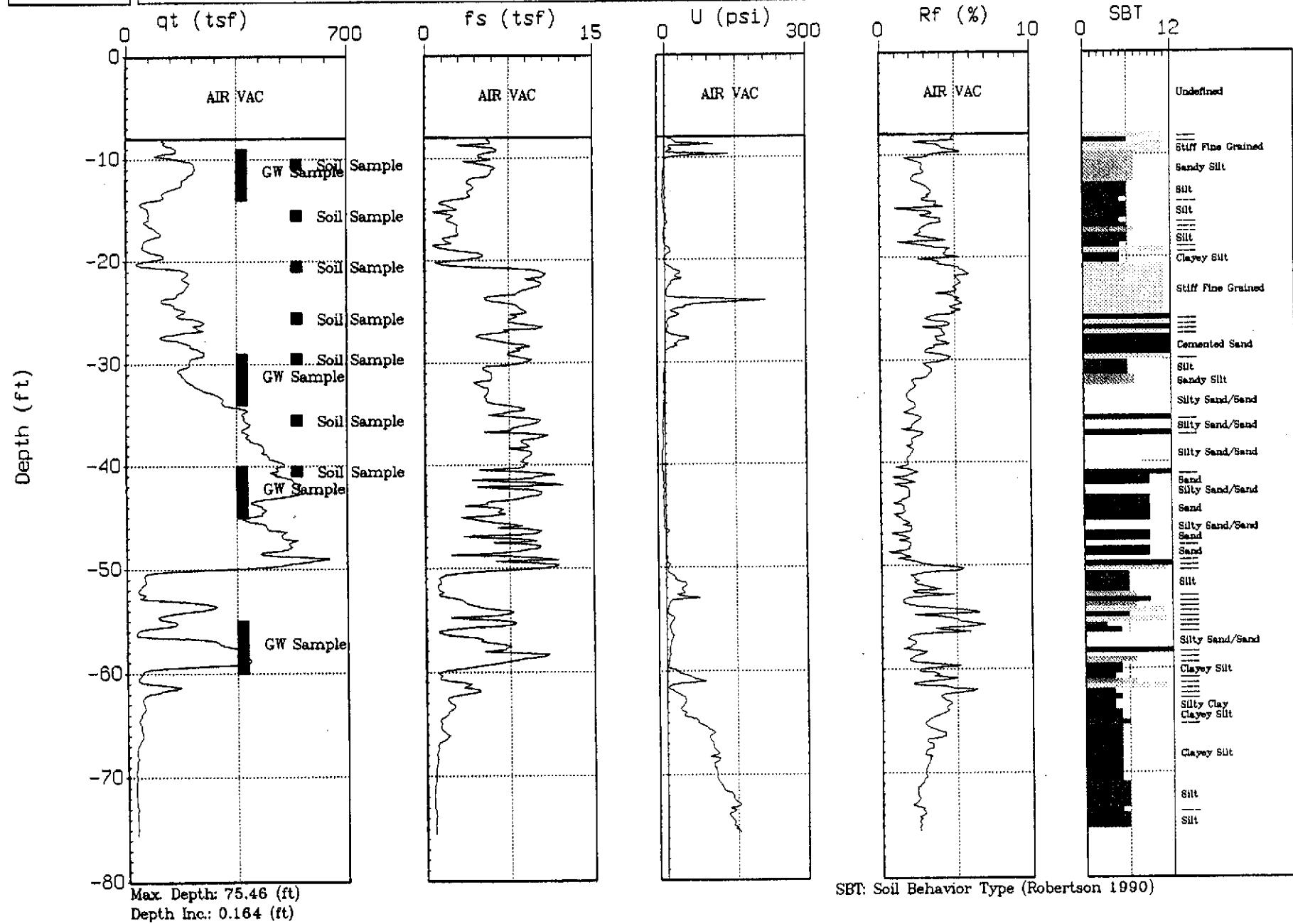


CAMBRIA

Site: CHEVRON 206145
Location: CPT-02Geologist: S. OWEN
Date: 10/07/04 08:24

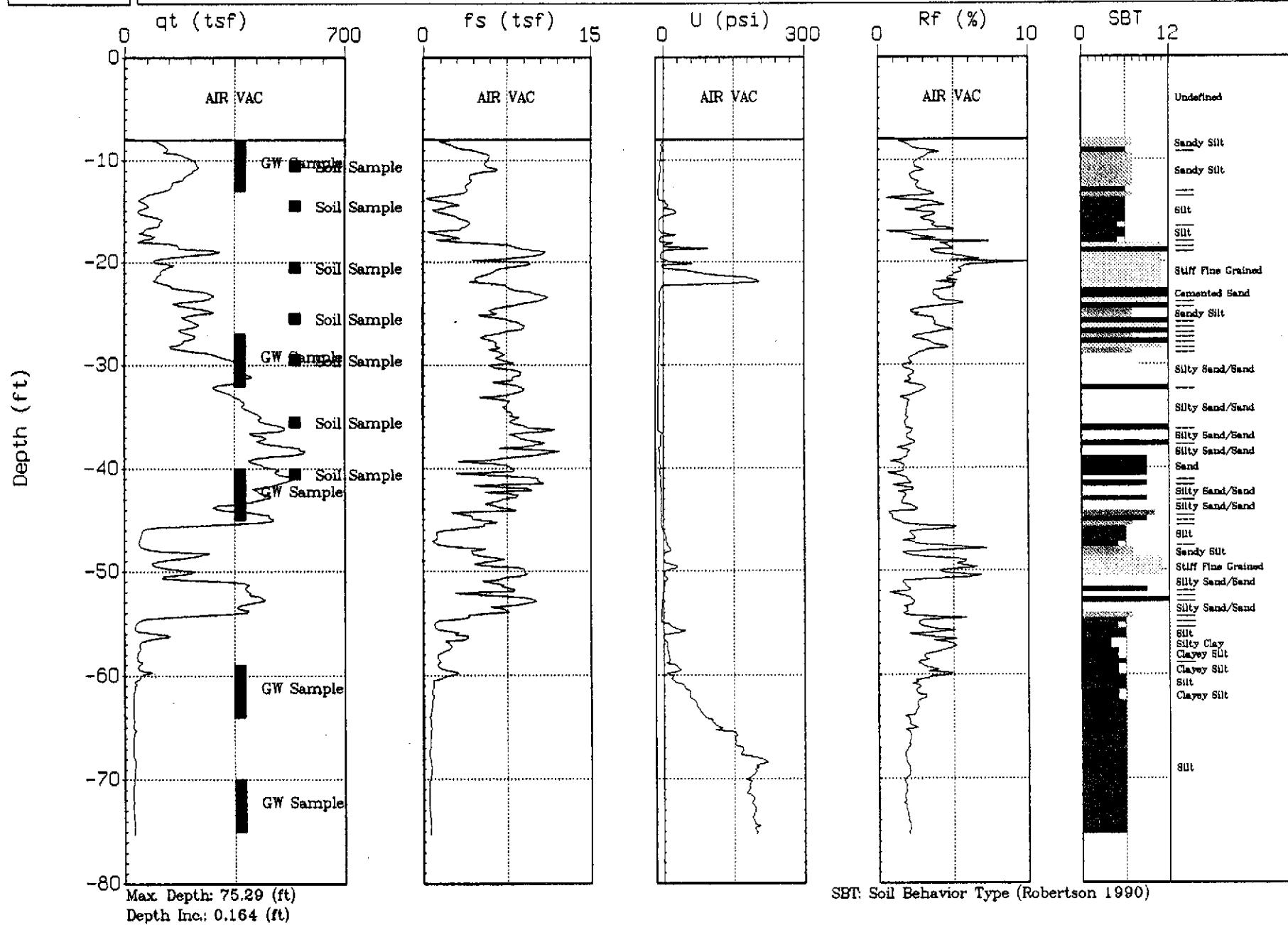


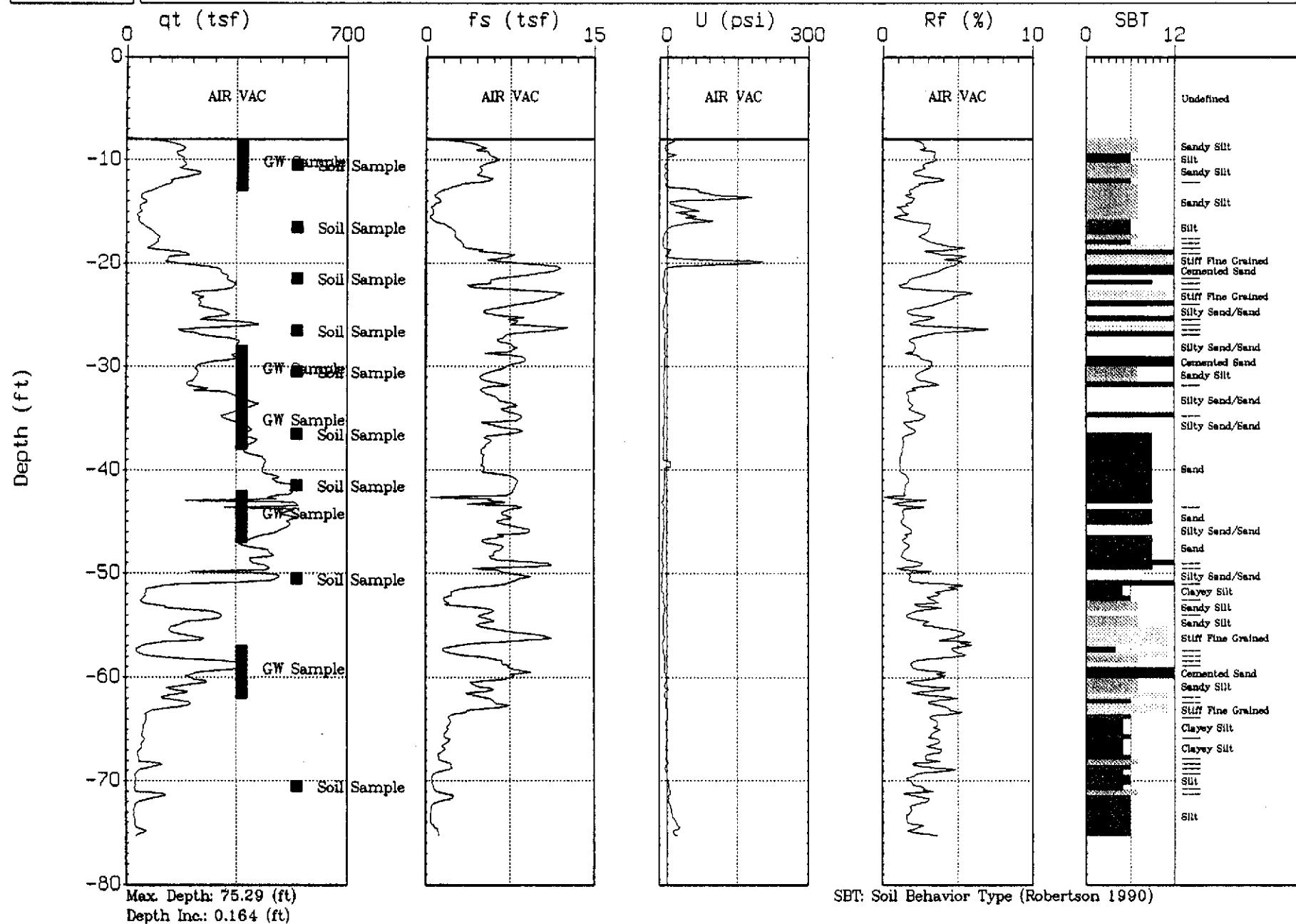
CAMBRIA

Site: CHEURON 206145
Location: CPT-03Geologist: S. OWEN
Date: 10:08:04 15:26



CAMBRIA

Site: CHEVRON 206145
Location: CPT-04Geologist: S. OWEN
Date: 10:07:04 15:34

GREGG**CAMBRIA**Site: CHEVRON 206145
Location: CPT-05Geologist: S. OWEN
Date: 10:11:04 10:43

Gettler-Ryan, Inc.

Log of Boring G-1

PROJECT: Former Chevron Service Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California
GR PROJECT NO.: DG26145G.4CT1	SURFACE ELEVATION:
DATE STARTED: 06/21/02	WL (ft. bgs): DATE: TIME:
DATE FINISHED: 06/21/02	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: 2 in. Geoprobe	TOTAL DEPTH: 12 feet
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION		REMARKS
						TEST	TEST	
2					SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.5YR 5/6), dry, loose; 90% fine sand, 10% silt.		Boring backfilled with neat cement to ground surface.
4								
6					SM	SILTY SAND (SM) - dark grayish brown (10YR 4/2), moist, dense; 75% fine sand, 25% silt.		
8								
10								
12								Hand augered to 5 feet bgs.
14								

Gettler-Ryan, Inc.

Log of Boring G-2

PROJECT: <i>Former Chevron Service Station No. 20-6145</i>	LOCATION: <i>800 Center Street, Oakland, California</i>
GR PROJECT NO.: <i>DG26145G.4CT1</i>	SURFACE ELEVATION:
DATE STARTED: <i>06/21/02</i>	WL (ft. bgs): DATE: TIME:
DATE FINISHED: <i>03/21/02</i>	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: <i>2 in. Geoprobe</i>	TOTAL DEPTH: <i>12 feet</i>
DRILLING COMPANY: <i>Gregg Drilling</i>	GEOLOGIST: <i>Andrew Smith</i>

DEPTH (feet)	PID (pm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2					SP	Asphalt - 2 inches thick. POORLY GRADED SAND (SP) - strong brown (7.5YR 5/6), moist, medium dense; 95% fine sand, 5% silt.	Boring backfilled with neat cement to ground surface.
4							
5	39	G-2 (5)				Color changes to grayish brown (10YR 5/2).	Hand augered to 5 feet bgs.
6							
8						Color changes to strong brown (7.5YR 5/6).	
10							
12	175	G-2 (10)				Bottom of boring at 12 feet bgs.	
14							

Gettier-Ryan, Inc.
Log of Boring G-3

 PROJECT: *Former Chevron Service Station No. 20-6145* LOCATION: *800 Center Street, Oakland, California*

 GR PROJECT NO.: *DG26145G.4CT1*

SURFACE ELEVATION:

 DATE STARTED: *06/21/02*

WL (ft. bgs): DATE: TIME:

 DATE FINISHED: *06/21/02*

WL (ft. bgs): DATE: TIME:

 DRILLING METHOD: *2 in. Geoprobe*

 TOTAL DEPTH: *12 feet*

 DRILLING COMPANY: *Gregg Drilling*

 GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2					SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.SYR 5/6), dry, loose; 90% fine sand, 10% silt.	Boring backfilled with neat cement to ground surface.
4							
6						Color changes to dark greenish gray (Gley t, 4/5GY).	
8					SM	SILTY SAND (SM) - reddish brown (5YR 4/4), moist, medium dense; 75% fine sand, 25% silt.	
10							
12						Bottom of boring at 12 feet bgs.	
14							

Gettler-Ryan, Inc.

Log of Boring G-4

PROJECT: Former Chevron Service Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California
GR PROJECT NO.: DG26145G.4CT1	SURFACE ELEVATION:
DATE STARTED: 06/21/02	WL (ft. bgs): DATE: TIME:
DATE FINISHED: 06/21/02	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: 2 in. Geoprobe	TOTAL DEPTH: 12 feet
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith

DEPTH (feet)	PTO (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.5YR 5/6), dry, loose; 90% fine sand, 10% silt.	Boring backfilled with neat cement to ground surface.
2							
4							
10		G-4 (5)				Color changes to dark greenish gray (Gley 1, 4/5GY).	Hand augered to 5 feet bgs.
10					SM	SILTY SAND (SM) - reddish brown (5YR 4/4), moist, medium dense; 75% fine sand, 25% silt.	
12		G-4 (10)				Bottom of boring at 12 feet bgs.	
14							

Gettler-Ryan, Inc.

Log of Boring G-5

PROJECT: <i>Former Chevron Service Station No. 20-6145</i>	LOCATION: <i>800 Center Street, Oakland, California</i>
GR PROJECT NO.: <i>DG261456.4CT1</i>	SURFACE ELEVATION:
DATE STARTED: <i>06/21/02</i>	WL (ft. bgs): DATE: TIME:
DATE FINISHED: <i>06/21/02</i>	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: <i>2 in. Geoprobe</i>	TOTAL DEPTH: <i>12 feet</i>
DRILLING COMPANY: <i>Gregg Drilling</i>	GEOLOGIST: <i>Andrew Smith</i>

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2					SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.5YR 5/6), dry, loose; 90% fine sand, 10% silt.	Boring backfilled with neat cement to ground surface.
4							
6							
12		G-5 (5)					Hand augered to 5 feet bgs.
20		G-5 (10)					
12						Bottom of boring at 12 feet bgs.	
14							

Gettler-Ryan, Inc.

Log of Boring G-6

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CT1

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/21/02

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith

DEPTH (feet)	P10 (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION		REMARKS
2					SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.5YR 5/6), dry, loose; 90% fine sand, 10% silt.		Boring backfilled with neat cement to ground surface.
4								
6								
8								
10								
>1000	G-6 (5)							Hand augered to 5 feet bgs.
12								
14								

JOB NUMBER: DG26145G.4CT1

Page 1 of 1

Gettler-Ryan, Inc.

Log of Boring G-7

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CTI

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/21/02

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith

DEPTH (feet)	P.D. (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION			REMARKS
24	6-7 (5)				SP-SM	Asphalt - 2 inches thick. POORLY GRADED SAND WITH SILT (SP-SM) - strong brown (7.5YR 5/6), dry, loose; 90% fine sand, 10% silt.			Boring backfilled with neat cement to ground surface.
357	G-7 (10)				SM	SILTY SAND (SM) - dark brown (7.5YR 3/3), moist, medium dense; 60% fine sand, 30% silt.			Hand augered to 5 feet bgs.
12						Bottom of boring at 12 feet bgs.			
14									

Gettler-Ryan, Inc.

Log of Boring G-8

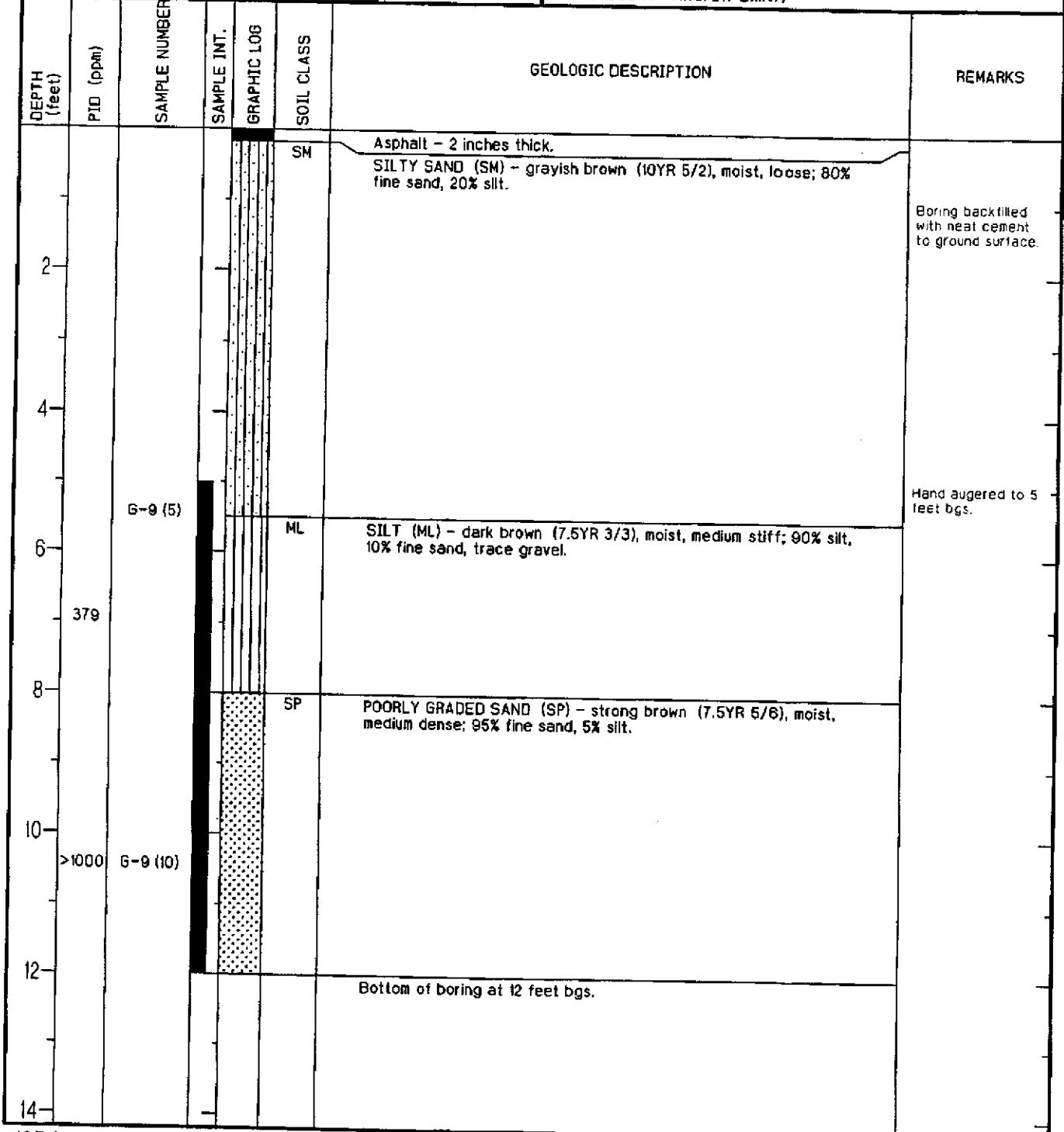
PROJECT: Former Chevron Service Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California		
GR PROJECT NO.: DG26145G.4CT1	SURFACE ELEVATION:		
DATE STARTED: 06/21/02	WL (ft. bgs):	DATE:	TIME:
DATE FINISHED: 06/21/02	WL (ft. bgs):	DATE:	TIME:
DRILLING METHOD: 2 in. Geoprobe	TOTAL DEPTH: 12 feet		
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith		

DEPTH (feet)	PbD (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2					SM	Asphalt - 2 inches thick. SILTY SAND (SM) - brown (7.5YR 5/3), moist, loose; 75% fine sand, 25% silt.	Boring backfilled with neat cement to ground surface.
4							
6							
8							
10							
12							
14							
36.1							
>1000		G-8 (10)			SP-SM	POORLY GRADED SAND WITH SILT (SP-SM) - dark brown (7.5YR 3/3), moist, medium dense; 90% fine sand, 10% silt, trace gravel.	Hand augered to 5 feet bgs.
						Bottom of boring at 12 feet bgs.	

Gettier-Ryan, Inc.

Log of Boring G-9

PROJECT: Former Chevron Service Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California
GR PROJECT NO.: DG26145G.4CT1	SURFACE ELEVATION:
DATE STARTED: 06/21/02	WL (ft. bgs): DATE: TIME:
DATE FINISHED: 06/21/02	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: 2 in. Geoprobe	TOTAL DEPTH: 12 feet
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith

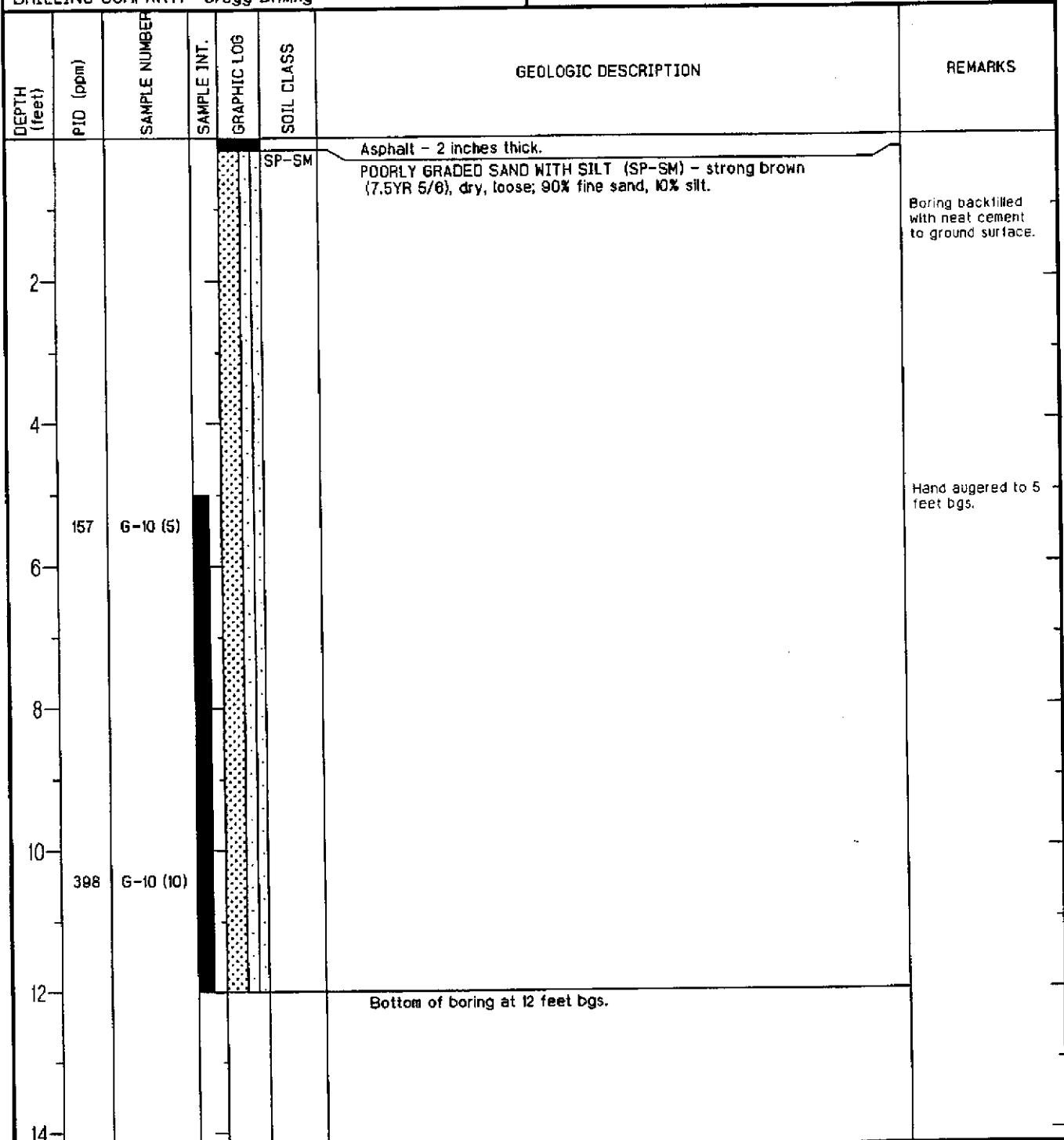


JOB NUMBER: DG26145G.4CT1

Gettler-Ryan, Inc.

Log of Boring G-10

PROJECT: <i>Former Chevron Service Station No. 20-6145</i>	LOCATION: <i>800 Center Street, Oakland, California</i>
GR PROJECT NO.: <i>DG26145G.4CT1</i>	SURFACE ELEVATION:
DATE STARTED: <i>06/21/02</i>	WL (ft. bgs): DATE: TIME:
DATE FINISHED: <i>06/21/02</i>	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: <i>2 in. Geoprobe</i>	TOTAL DEPTH: <i>12 feet</i>
DRILLING COMPANY: <i>Gregg Drilling</i>	GEOLOGIST: <i>Andrew Smith</i>



Gettier-Ryan, Inc.

Log of Boring G-11

PROJECT: Former Chevron Service Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California
GR PROJECT NO.: DG261456.4CTI	SURFACE ELEVATION:
DATE STARTED: 06/21/02	WL (ft. bgs); DATE: TIME:
DATE FINISHED: 06/21/02	WL (ft. bgs); DATE: TIME:
DRILLING METHOD: 2 in. Geoprobe	TOTAL DEPTH: 12 feet
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2					SP	Asphalt - 2 inches thick. POORLY GRADED SAND (SP) - dark brown (7.5YR 3/3), moist, medium dense; 95% fine sand, 5% silt.	Boring backfilled with neat cement to ground surface.
4							
6		G-11 (5)				Color changes to strong brown (7.5YR 5/6).	Hand augered to 5 feet bgs.
8					SW	WELL-GRADED SAND (SW) - dark brown (7.5YR 3/3), moist, medium dense; 95% sand, 5% silt.	
10							
12		G-11 (10)				Bottom of boring at 12 feet bgs.	
14							

JOB NUMBER: DG261456.4CTI

Gettler-Ryan, Inc.

Log of Boring G-12

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CT1

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/21/02

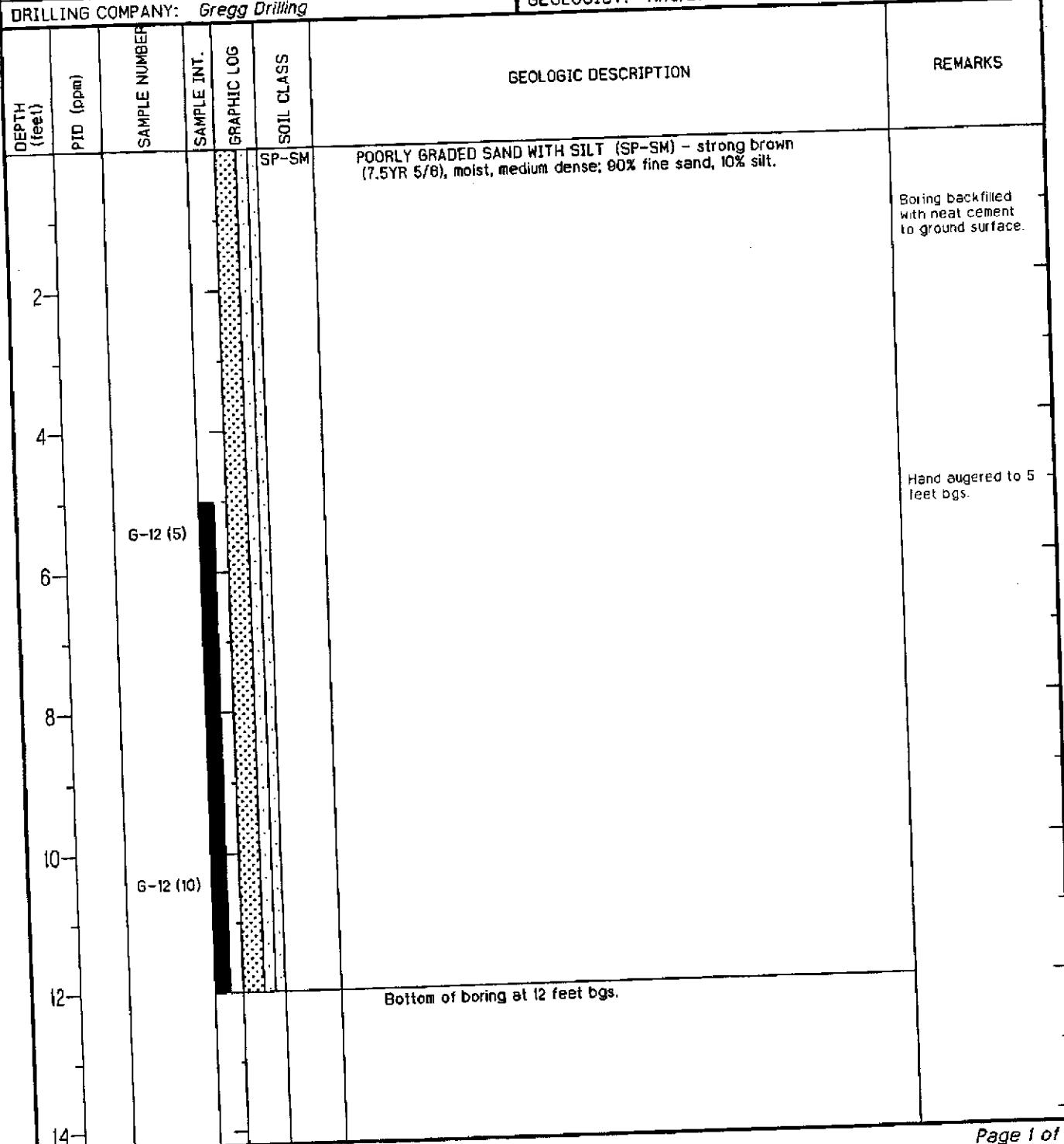
WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith



JOB NUMBER: DG26145G.4CT1

Gettler-Ryan, Inc.

Log of Boring G-13

PROJECT: *Former Chevron Service Station No. 20-8145*

LOCATION: *800 Center Street, Oakland, California*

GR PROJECT NO.: *DG26145G.4CT1*

SURFACE ELEVATION:

DATE STARTED: *06/21/02*

WL (ft. bgs): DATE: TIME:

DATE FINISHED: *06/21/02*

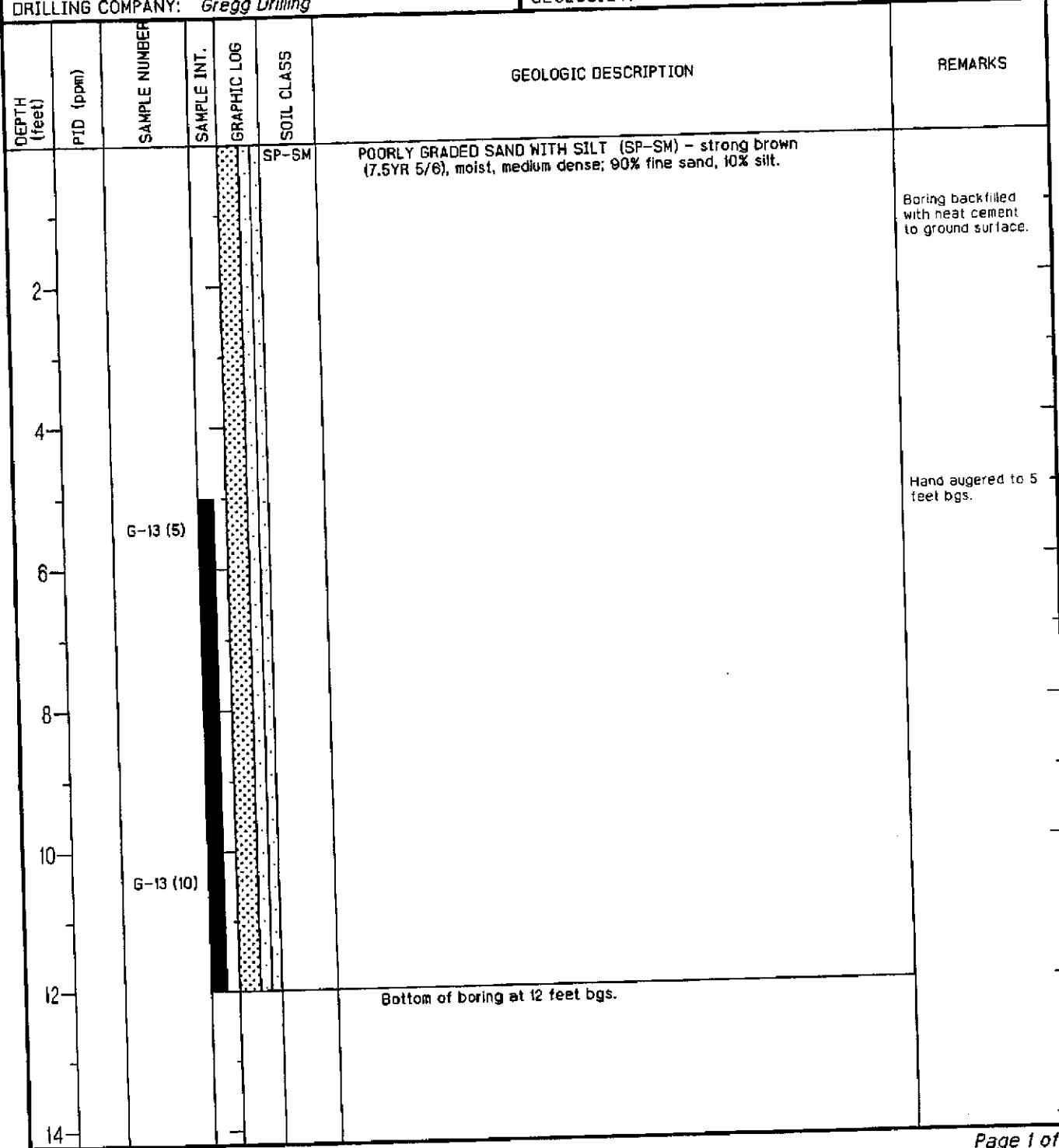
WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *2 in. Geoprobe*

TOTAL DEPTH: *12 feet*

DRILLING COMPANY: *Gregg Drilling*

GEOLOGIST: *Andrew Smith*



JOB NUMBER: *DG26145G.4CT1*

Gettier-Ryan, Inc.

Log of Boring G-14

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CT1

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/21/02

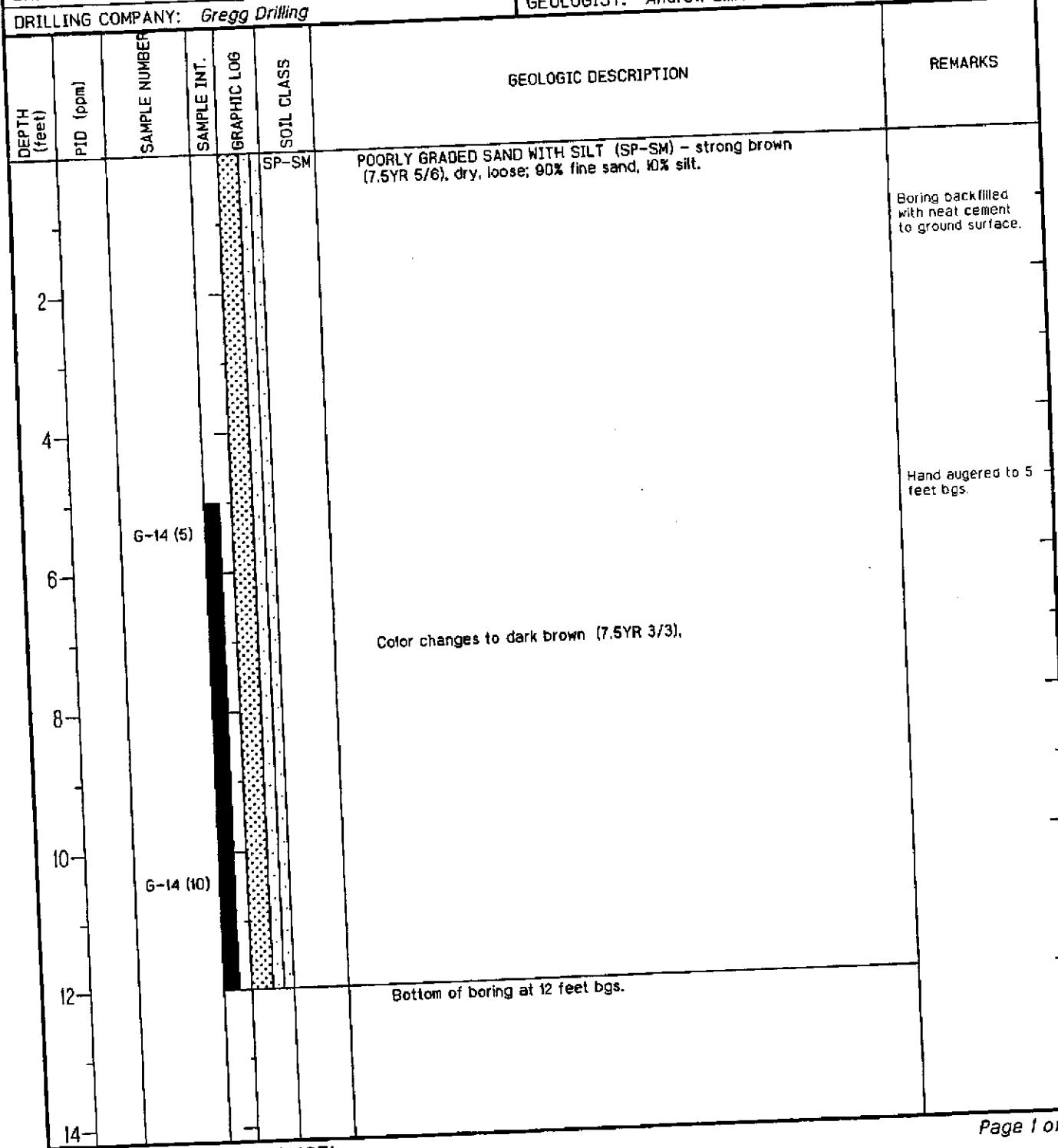
WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith



Gettler-Ryan, Inc.

Log of Boring G-15

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG261456.4CT1

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 06/21/02

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith

DEPTH (feet)	Pb (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
2						Grass, top soil, debris and trace brick.	
4							
6							
8							
10		G-15 (5)			SP-SM	POORLY GRADED SAND WITH SILT (SP-SM) - dark brown (7.5YR 3/3), moist, medium dense; 90% fine sand, 10% silt.	Boring backfilled with neat cement to ground surface.
12		G-15 (10)			SM	Color changes to light olive brown (2.5Y 4/3). SILTY SAND (SM) - dark brown (7.5YR 3/3), moist, medium dense; 75% fine sand, 25% silt.	Hand augered to 5 feet bgs.
14						Bottom of boring at 12 feet bgs.	

Gettler-Ryan, Inc.

PROJECT: Former Chevron Service Station No. 20-6145
 GR PROJECT NO.: DG28145G.4CTI
 DATE STARTED: 06/21/02
 DATE FINISHED: 06/21/02
 DRILLING METHOD: 2 in. Geoprobe
 DRILLING COMPANY: Gregg Drilling

Log of Boring G-16

LOCATION: 800 Center Street, Oakland, California

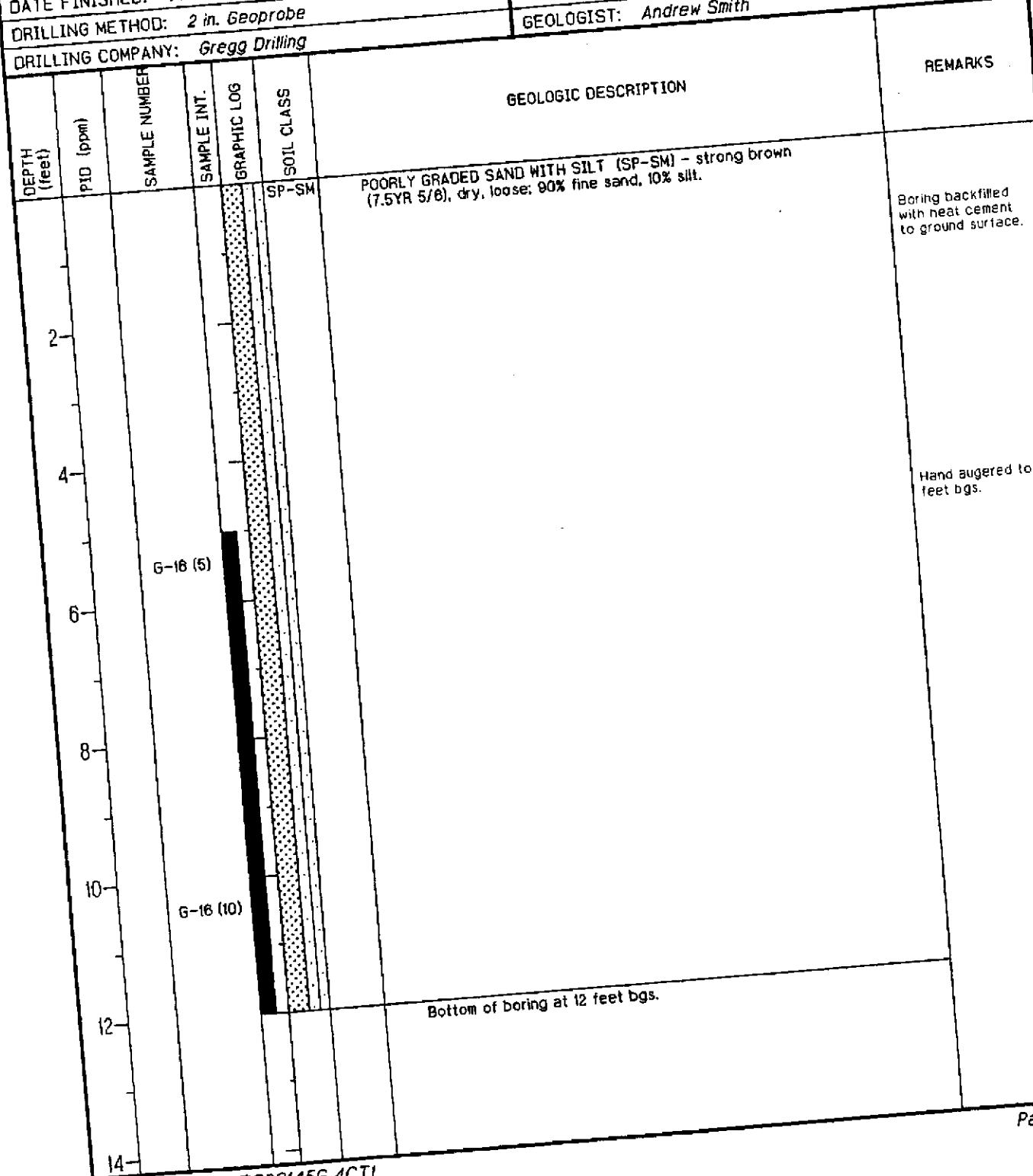
SURFACE ELEVATION:

WL (ft. bgs): DATE: TIME:

WL (ft. bgs): DATE: TIME:

TOTAL DEPTH: 12 feet

GEOLOGIST: Andrew Smith



Gettier-Ryan, Inc.

Log of Boring G-17

PROJECT: Former Chevron Service Station No. 20-6145

GR PROJECT NO.: DG26145G.4CT1

DATE STARTED: 06/21/02

DATE FINISHED: 06/21/02

DRILLING METHOD: 2 in. Geoprobe

DRILLING COMPANY: Gregg Drilling

LOCATION: 800 Center Street, Oakland, California

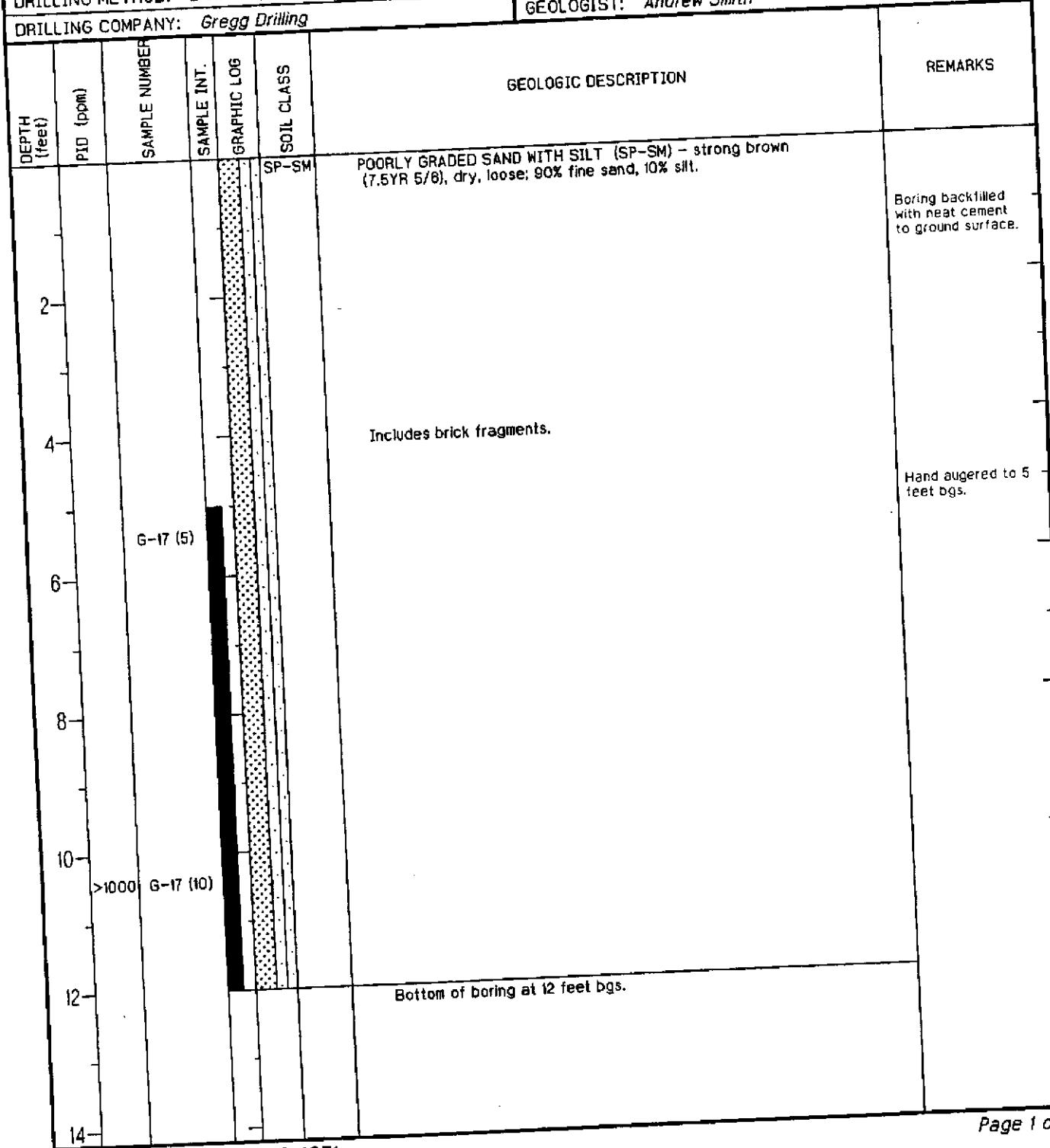
SURFACE ELEVATION:

WL (ft. bgs): DATE: TIME:

WL (ft. bgs): DATE: TIME:

TOTAL DEPTH: 12 feet

GEOLOGIST: Andrew Smith



JOB NUMBER: DG26145G.4CT1

Gettier-Ryan, Inc.

Log of Boring G-18

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CT1

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs):

DATE:

TIME:

DATE FINISHED: 06/21/02

WL (ft. bgs):

DATE:

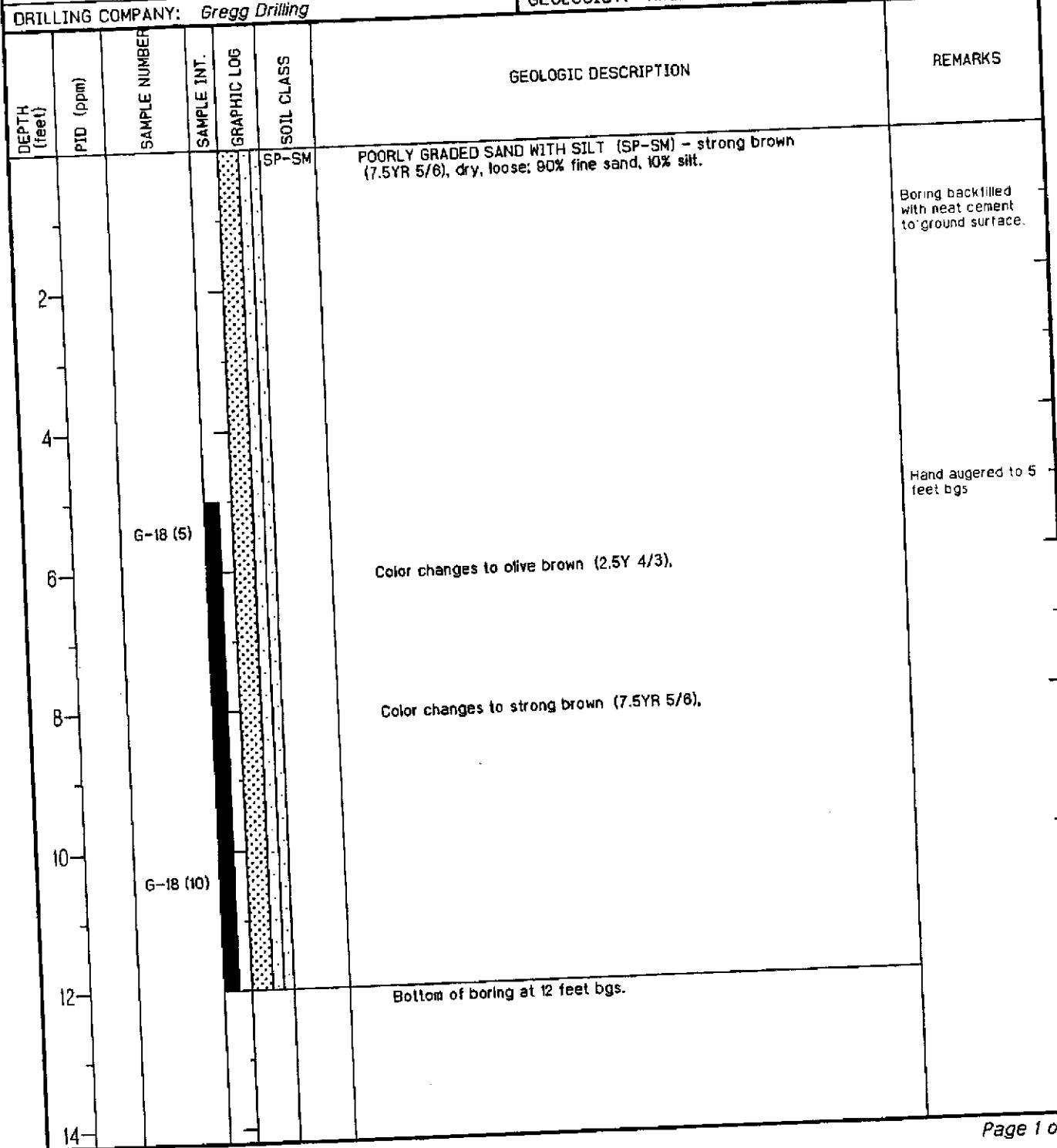
TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith



Gettler-Ryan, Inc.

Log of Boring G-19

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CTI

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs):

DATE:

TIME:

DATE FINISHED: 06/21/02

WL (ft. bgs):

DATE:

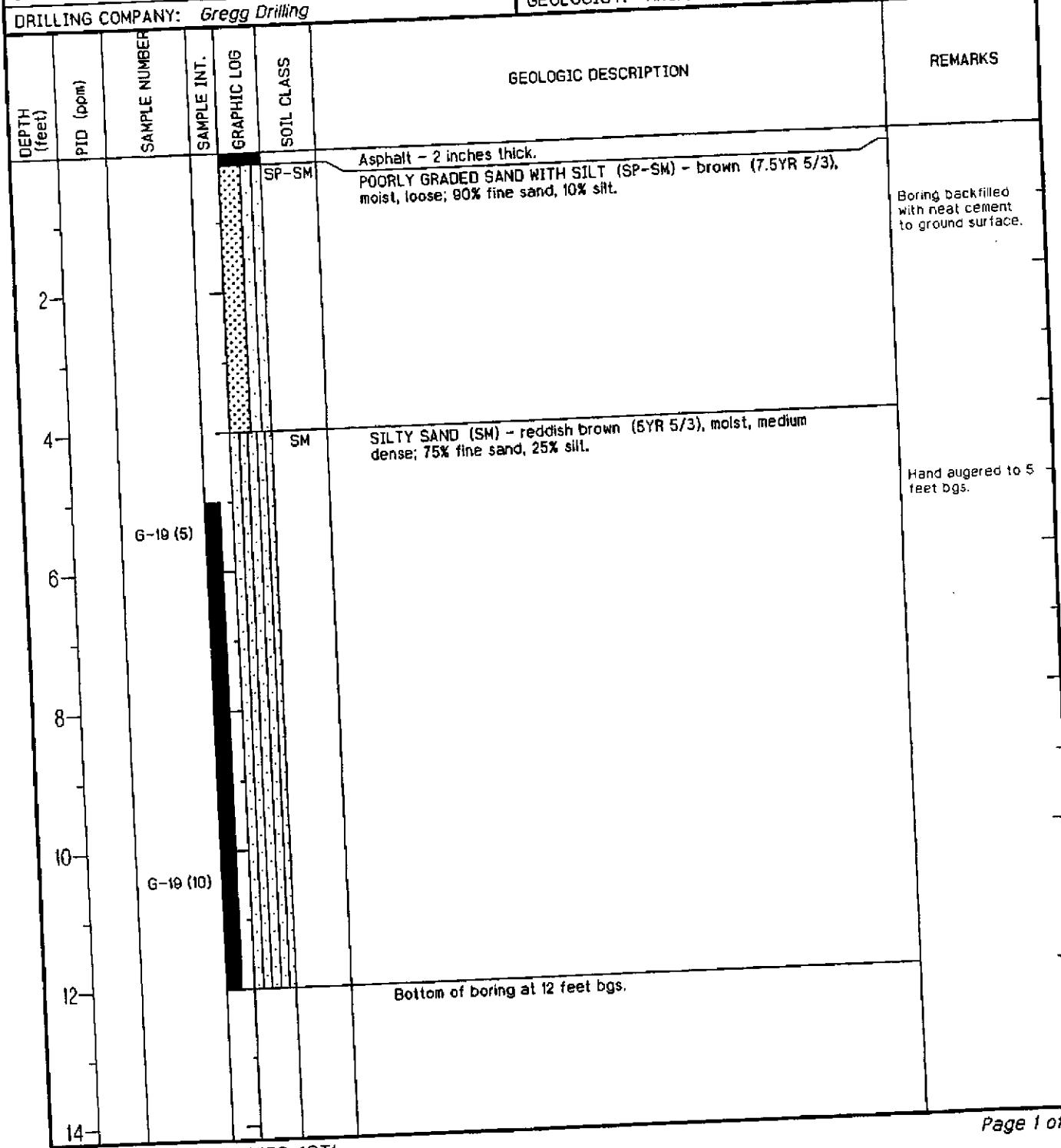
TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith



Gettier-Ryan, Inc.

PROJECT: Former Chevron Service Station No. 20-6145
 GR PROJECT NO.: DG261456.4CT1
 DATE STARTED: 06/21/02
 DATE FINISHED: 03/21/02
 DRILLING METHOD: 2 in. Geoprobe
 DRILLING COMPANY: Gregg Drilling

Log of Boring G-20

LOCATION: 800 Center Street, Oakland, California

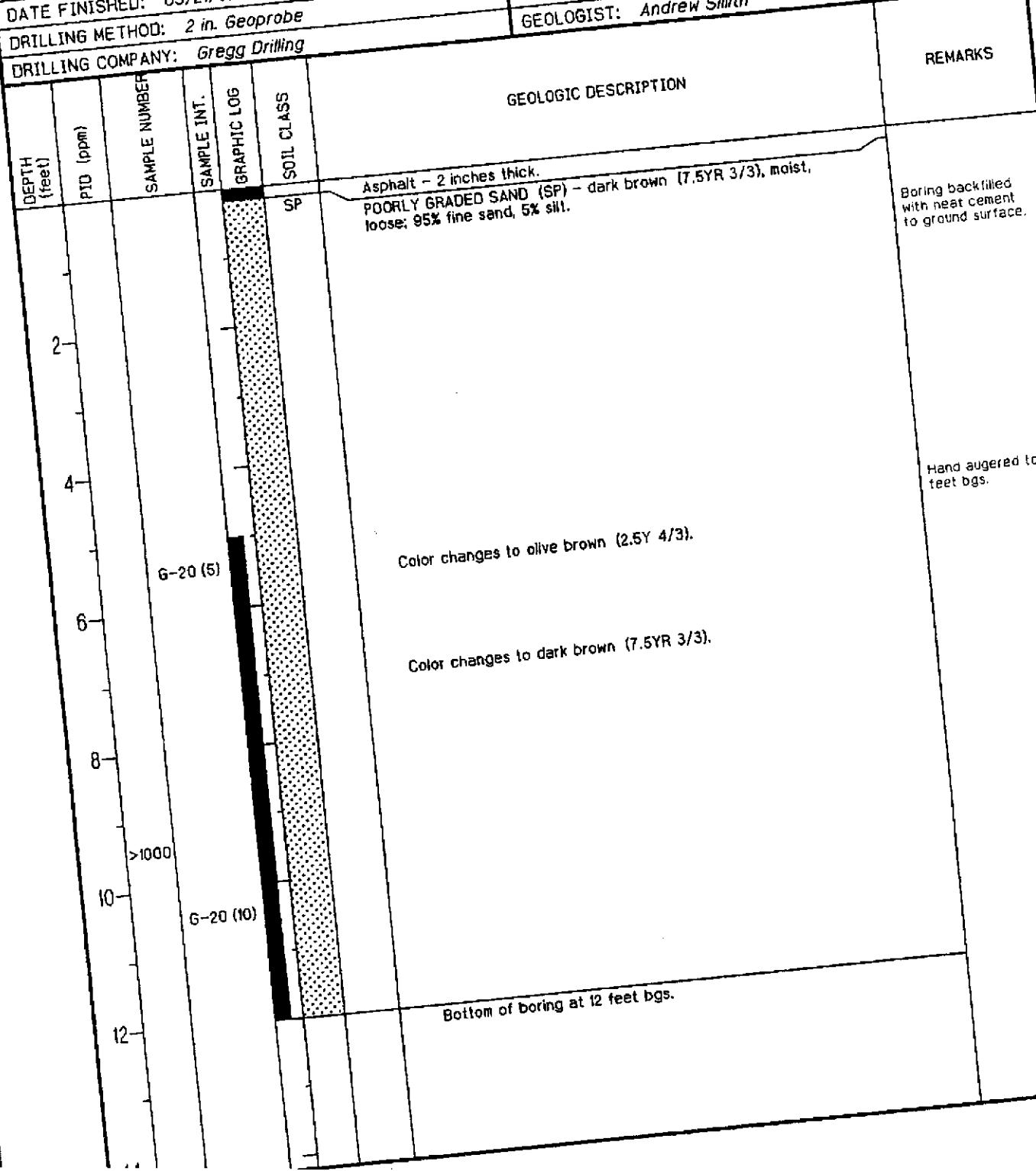
SURFACE ELEVATION:

WL (ft. bgs): DATE: TIME:

WL (ft. bgs): DATE: TIME:

TOTAL DEPTH: 12 feet

GEOLOGIST: Andrew Smith



Gettier-Ryan, Inc.

Log of Boring G-21

PROJECT: Former Chevron Service Station No. 20-6145

LOCATION: 800 Center Street, Oakland, California

GR PROJECT NO.: DG26145G.4CTI

SURFACE ELEVATION:

DATE STARTED: 06/21/02

WL (ft. bgs): DATE: TIME:

DATE FINISHED: 03/21/02

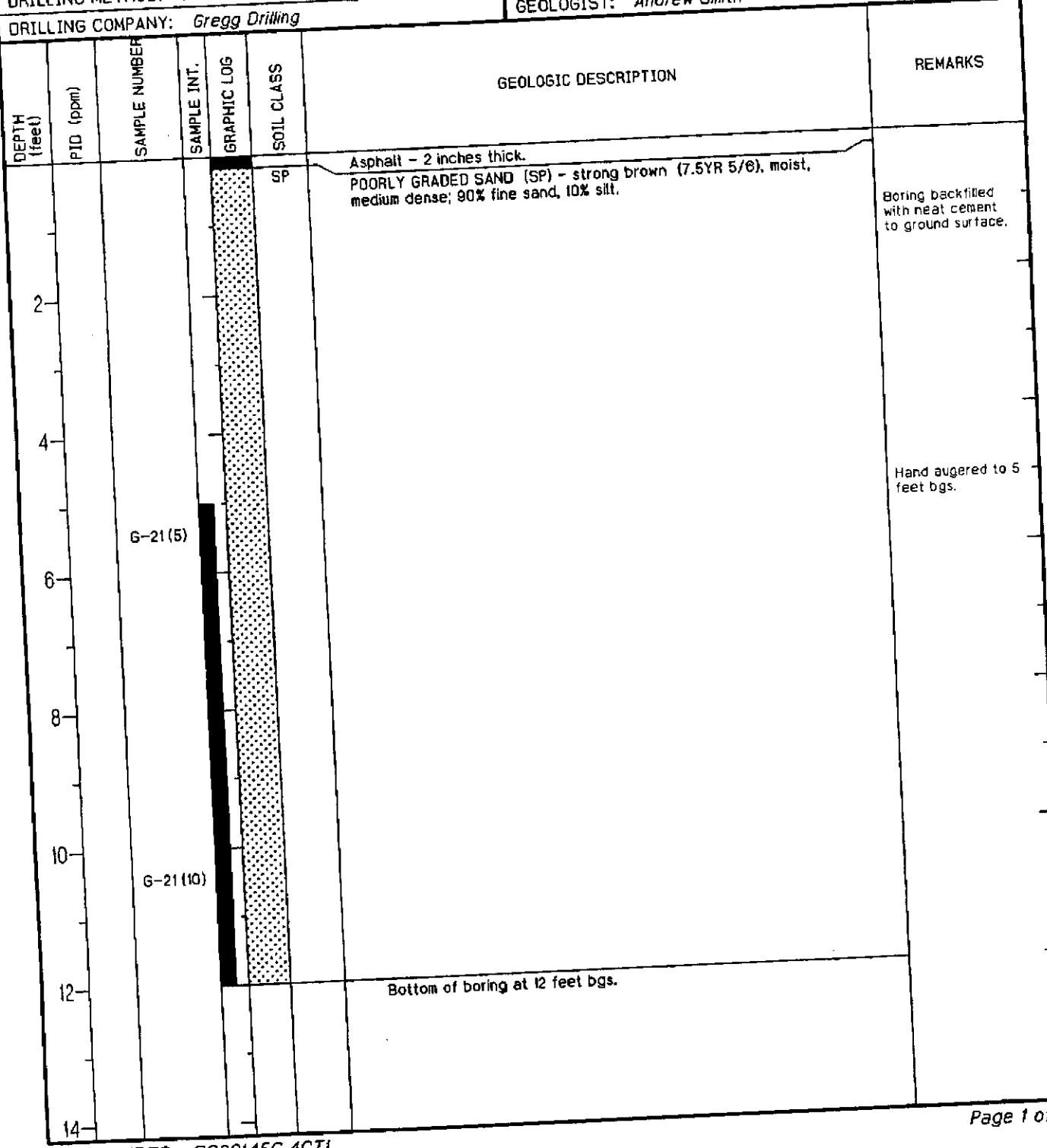
WL (ft. bgs): DATE: TIME:

DRILLING METHOD: 2 in. Geoprobe

TOTAL DEPTH: 12 feet

DRILLING COMPANY: Gregg Drilling

GEOLOGIST: Andrew Smith



JOB NUMBER: DG26145G.4CTI

Gettler-Ryan, Inc.

PROJECT: Former Chevron Service Station No. 20-6145
 GR PROJECT NO.: DG261456.4CTI
 DATE STARTED: 06/21/02
 DATE FINISHED: 06/21/02
 DRILLING METHOD: 2 in. Geoprobe
 DRILLING COMPANY: Gregg Drilling

Log of Boring G-22

LOCATION: 800 Center Street, Oakland, California

SURFACE ELEVATION:

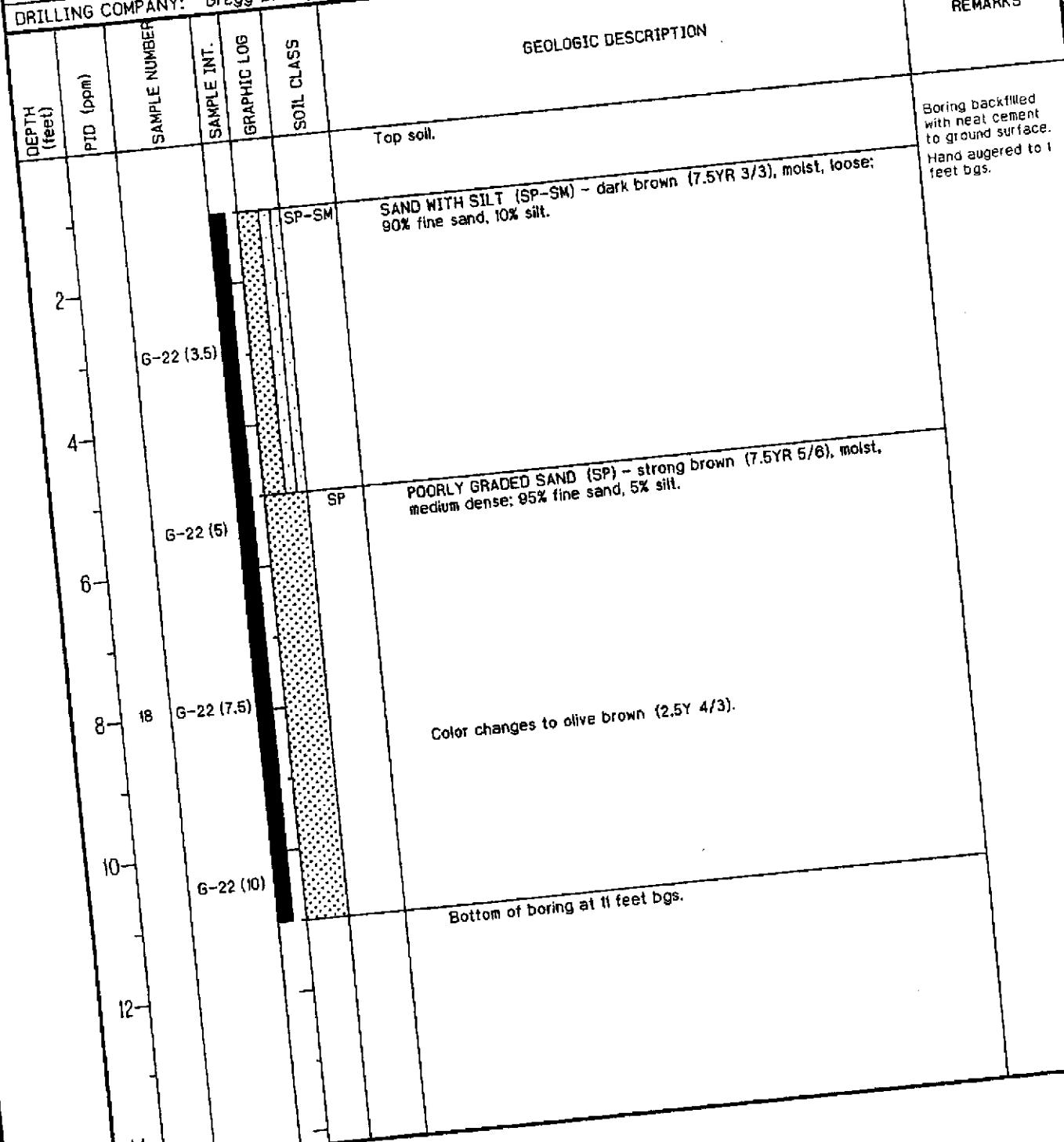
WL (ft. bgs): DATE: TIME:

WL (ft. bgs): DATE: TIME:

TOTAL DEPTH: 11 feet

GEOLOGIST: Andrew Smith

REMARKS



Gettier-Ryan, Inc.

PROJECT: Former Chevron Service Station No. 20-6145
 GR PROJECT NO.: DG26145G.4CT1
 DATE STARTED: 06/21/02
 DATE FINISHED: 06/21/02
 DRILLING METHOD: 2 in. Geoprobe
 DRILLING COMPANY: Gregg Drilling

Log of Boring G-23

LOCATION: 800 Center Street, Oakland, California

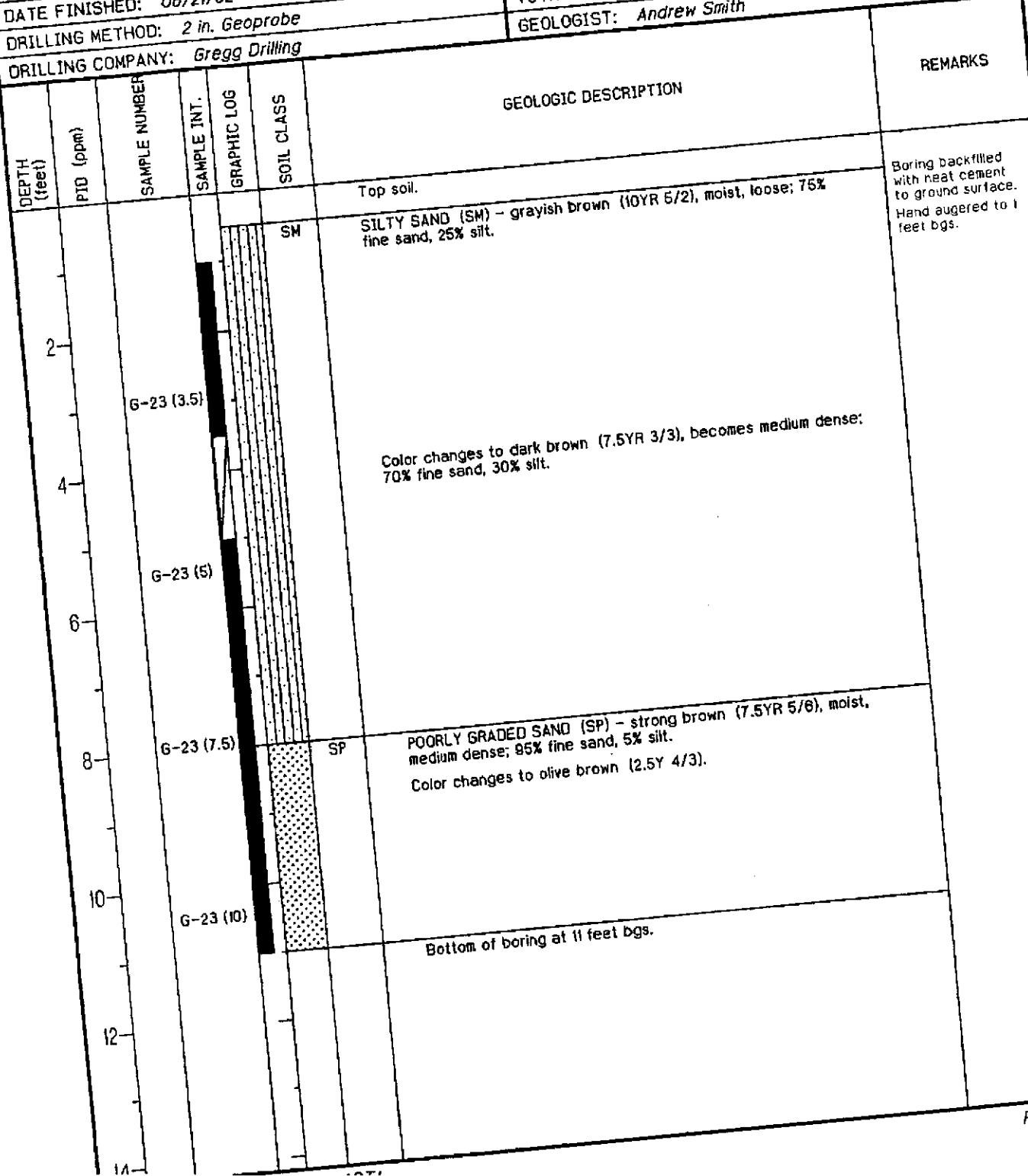
SURFACE ELEVATION:

WL (ft. bgs): DATE: TIME:

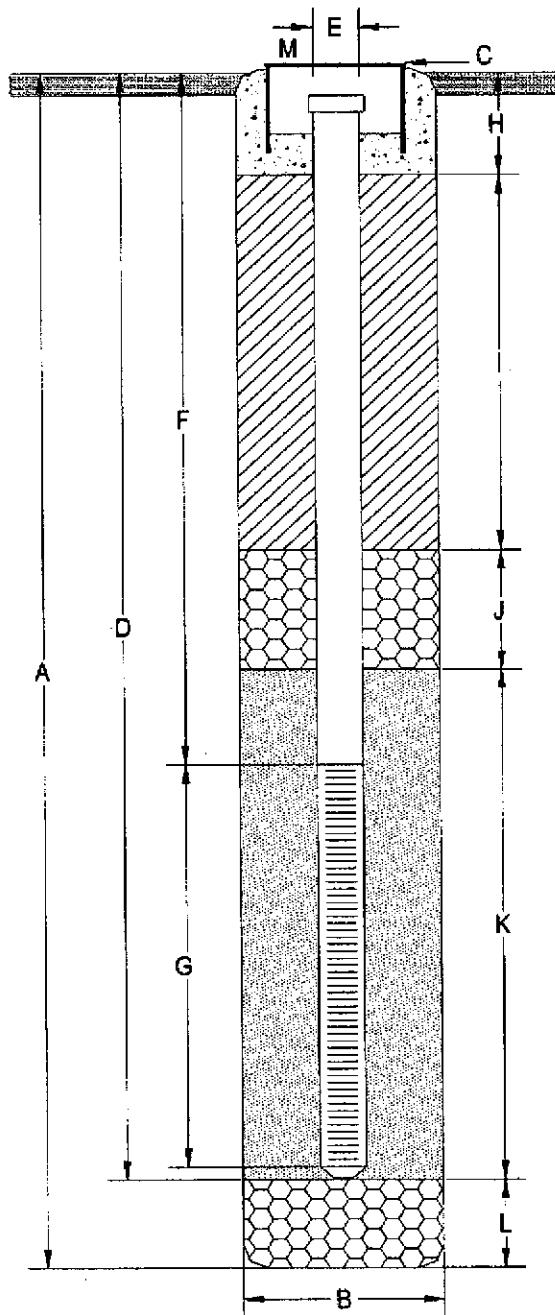
WL (ft. bgs): DATE: TIME:

TOTAL DEPTH: 11 feet

GEOLOGIST: Andrew Smith



WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 16 ft.
 B Diameter of Boring 8 in.
 Drilling Method Hollow Stem Auger
 C Top of Box Elevation _____ ft.
 Referenced to Mean Sea Level
 Referenced to Project-Datum
 D Casing Length 16 ft.
 Material PVC
 E Casing Diameter 2 in.
 F Depth to Top Perforations 6 ft.
 G Perforated Length 10 ft.
 Perforated interval from 6 to 16 ft.
 Perforation Size 0.01 in.
 H Surface Seal from 0 to 1 ft.
 Seal Material Concrete
 I Backfill from 1 to 4 ft.
 Seal Material Grout
 J Seal from 4 to 5 ft.
 Seal Material Bentonite
 K Gravel Pack from 5 to 16 ft.
 Pack Material Lonestar #2/12
 L Bottom Seal None ft.
 Seal Material None
 M _____

Note: Depths measured from initial ground surface.



Gettier - Ryan, Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

PROPOSED WELL CONSTRUCTION DETAIL - MW-1A

FIGURE

5

JOB NUMBER

DG26145I.5C01

REVIEWED BY

DATE

REVISED DATE

REVISED DATE

1/23/03



**GROUNDWATER
TECHNOLOGY**

Drilling Log

Monitoring Well MW-1

Project Signal S0800

Location 800 Center St.

Owner CHV/USA

Project No. 020200105

Date drilled 10/17/95

Surface Elev. 16.2 ft.

Total Hole Depth 16.5 ft.

Diameter 8.25 in.

Top of Casing 15.69 ft.

Water Level Initial 10 ft.

Static 10.54 ft.

Screen Dia 2 in.

Length 10 ft.

Type/Size PVC/0.020 in.

Casing: Dia 2 in.

Length 5 ft.

Type PVC

Filter Pack Material #3 Monterey Sand

Rig/Core Type CME 75/Splitspoon

Drilling Company Bay Area Explor.

Method Hollow Stem Auger

Permit # 65654

Driller Scott Fitche

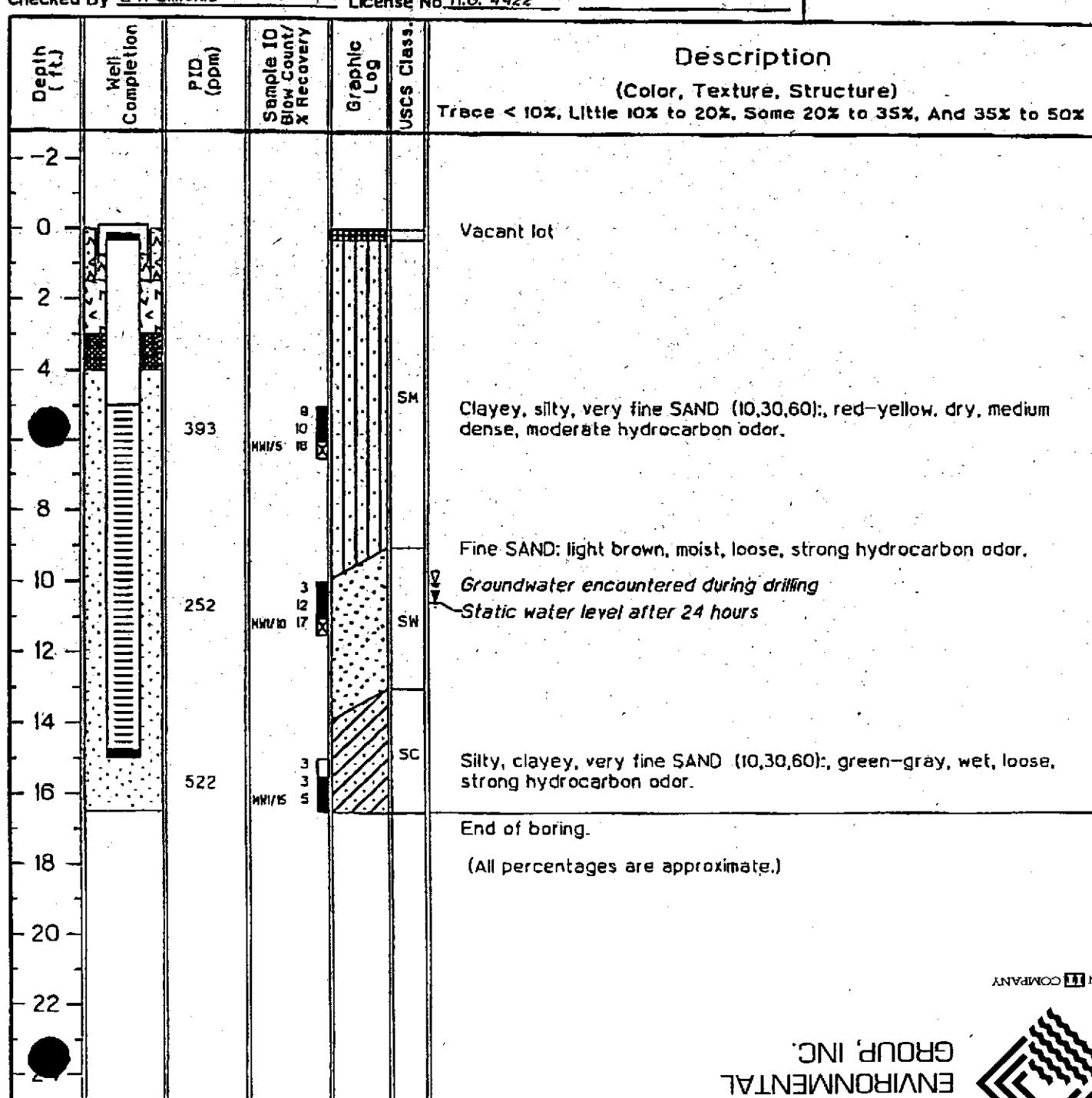
Log By Terry James

Checked By E K Simonis

License No. A.G. 4422

See Site Map
For Boring Location

COMMENTS:



COMPANY

ENVIRONMENTAL GROUP, INC.



PACIFIC

GROUNDWATER
TECHNOLOGY

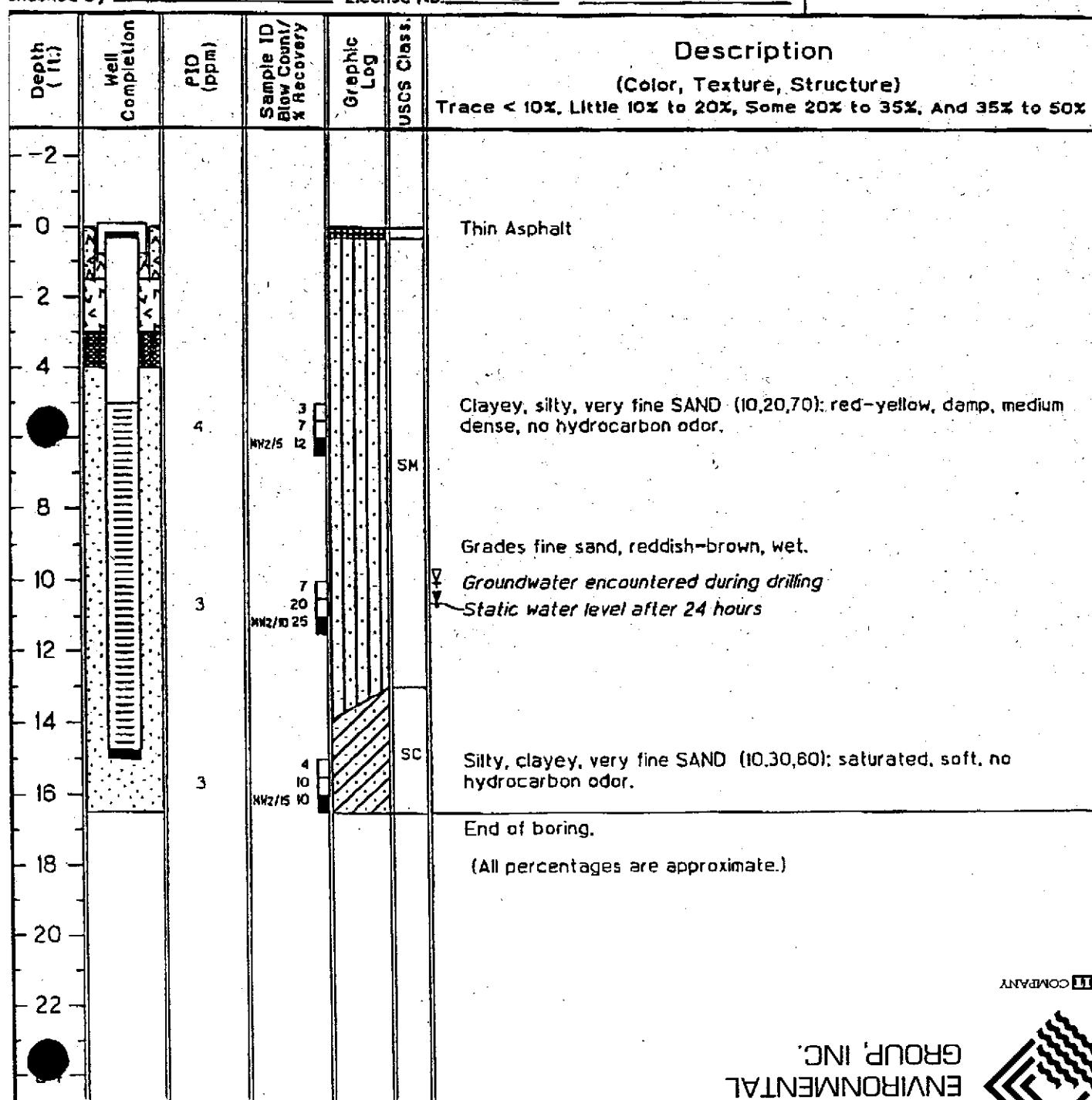
Drilling Log

Monitoring Well MW-2

Project Signal S0800 Owner CHV/USA
 Location 800 Center St. Project No. 020200105 Date drilled 10/17/95
 Surface Elev. 16.3 ft. Total Hole Depth 16.5 ft. Diameter 8.25 in.
 Top of Casing 15.77 ft. Water Level Initial 10 ft. Static 10.60 ft.
 Screen Dia 2 in. Length 10 ft. Type/Size PVC/0.020 in.
 Casing Dia 2 in. Length 5 ft. Type PVC
 Filter Pack Material #3 Monterey Sand Rig/Core Type CME 75/Split spoon
 Drilling Company Bay Area Explor. Method Hollow Stem Auger Permit # B5664
 Driller Scott Fitche Log By Terry James
 Checked By E.K. Simonis License No. R.G. 4422

See Site Map
For Boring Location

COMMENTS:



COMPANY

ENVIRONMENTAL GROUP, INC.

PACIFIC



GROUNDWATER
TECHNOLOGY

Drilling Log

Monitoring Well MW-3

Project Signal S0800

Location 800 Center St.

Owner CHV/USA

Project No. 020200105

Date drilled 10/17/95

Surface Elev. 16.1 ft. Total Hole Depth 16.5 ft. Diameter 8.25 in.

Top of Casing 15.46 ft. Water Level Initial 10 ft. Static 10.37 ft.

Screen Dia 2 in. Length 10 ft. Type/Size PVC/0.020 in.

Casing Dia 2 in. Length 5 ft. Type PVC

Filter Pack Material #3 Monterey Sand Rig/Core Type CME 75/Splitspoon

Drilling Company Bay Area Explor. Method Hollow Stem Auger Permit # 55884

Driller Scott Fitche

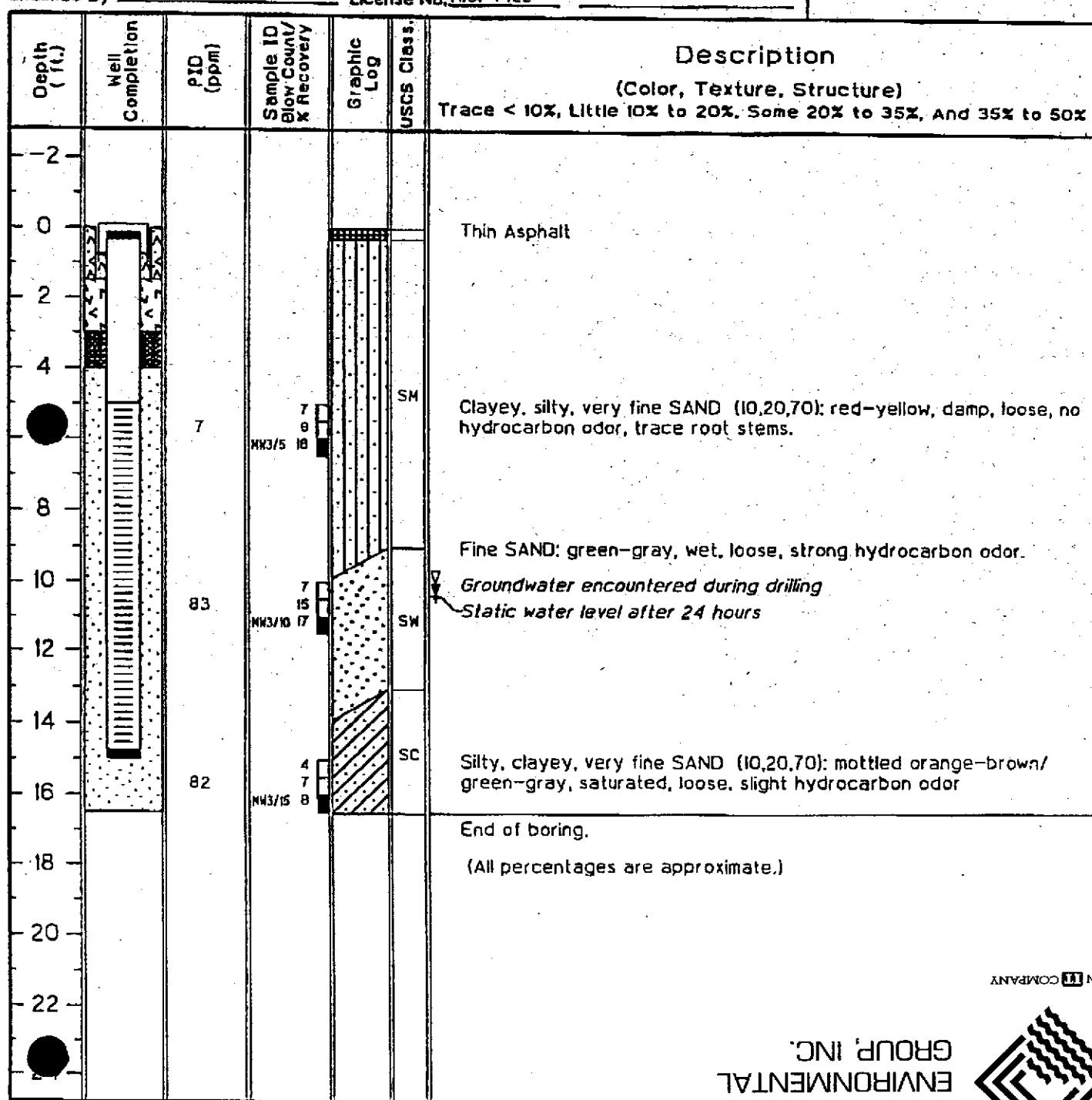
Log By Terry James

Checked By EK Simanis

License No. R.G. 4422

See Site Map
For Boring Location

COMMENTS:



IN COMPANY

ENVIRONMENTAL
PACIFIC GROUP, INC.

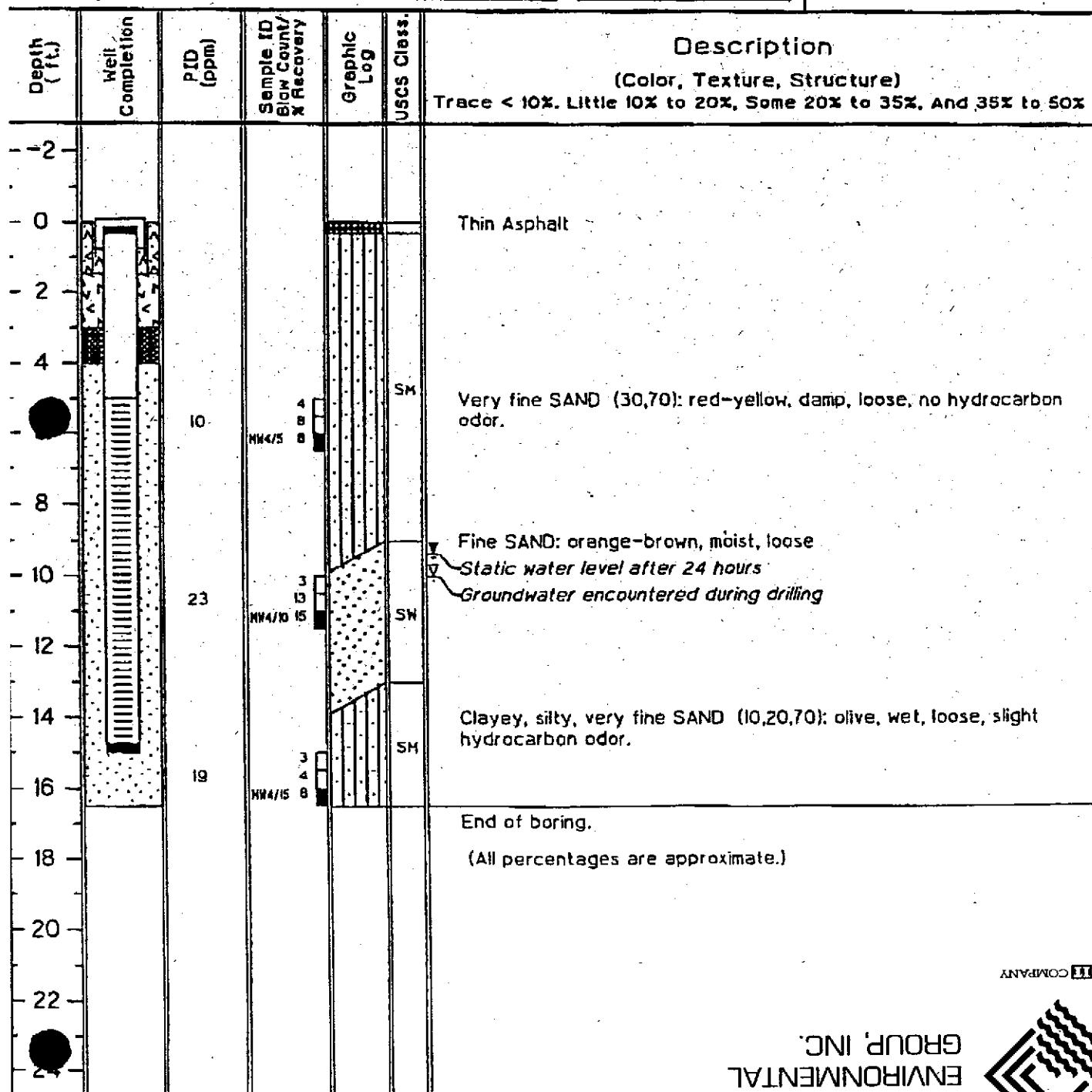

**GROUNDWATER
TECHNOLOGY**

Drilling Log

Monitoring Well MW-4

Project Signal S0800
 Location 800 Center St. Owner CHV/USA
 Surface Elev. 14.84 ft. Total Hole Depth 18.5 ft. Diameter 8.25 in.
 Top of Casing 14.45 ft. Water Level Initial 10 ft. Static 9.37 ft.
 Screen Dia 2 in. Length 10 ft. Type/Size PVC/0.020 in.
 Casing Dia 2 in. Length 5 ft. Type PVC
 Filter Pack Material #3 Monterey Sand Rig/Core Type CME 55/Splitsooter
 Drilling Company Bay Area Explor. Method Hollow Stem Auger Permit # ES084
 Driller Scott Fitche Log By Terry James
 Checked By E K Simonis License No. R.G. 4422

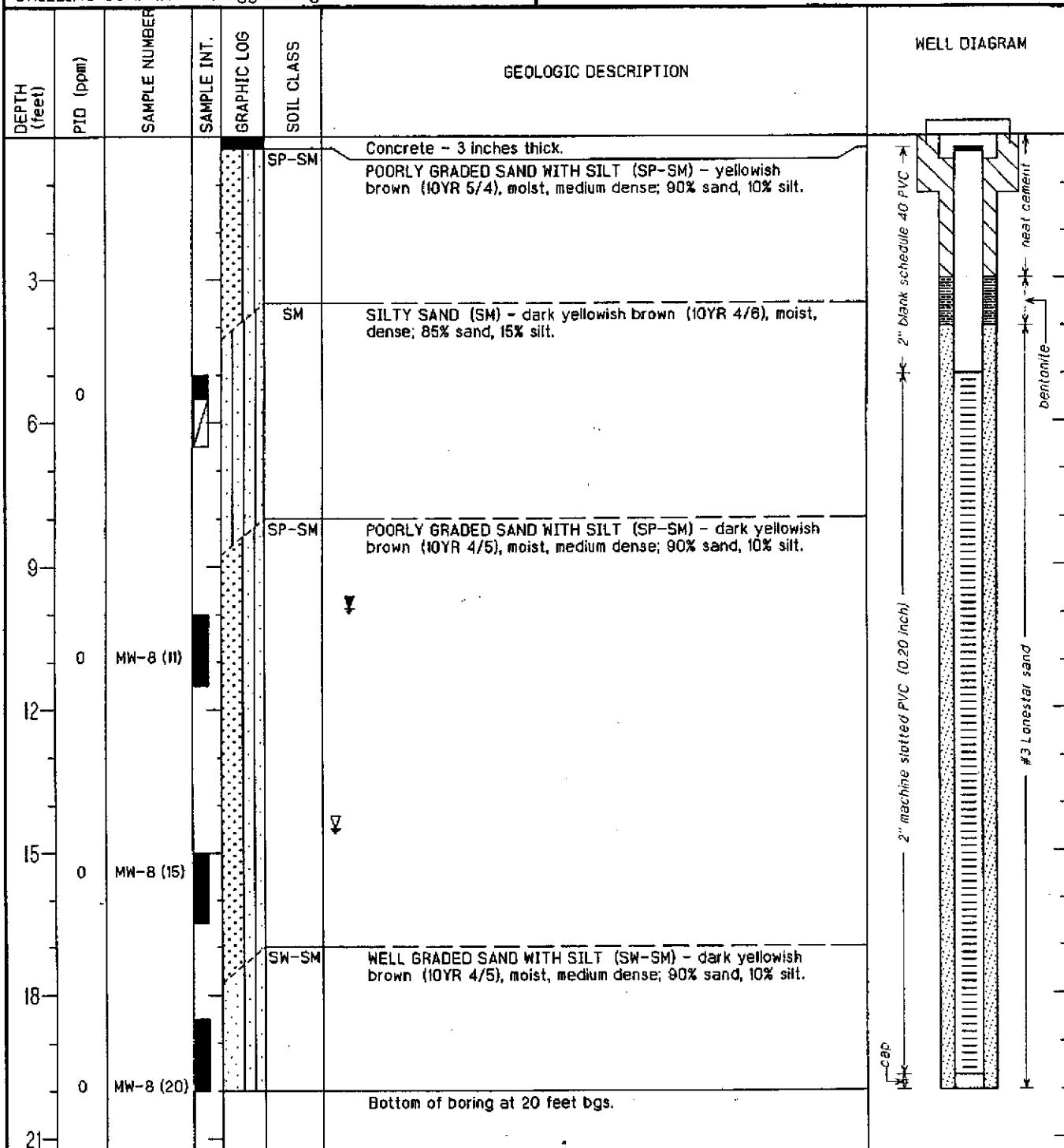
 See Site Map
For Boring Location

COMMENTS:


Gettler-Ryan, Inc.

Log of Boring MW-8

PROJECT: Chevron Station No. 20-6145	LOCATION: 800 Center Street, Oakland, California
GR PROJECT NO.: 346492.02	CASING ELEVATION:
DATE STARTED: 01/09/02	WL (ft. bgs): 14.5 DATE: 01/09/02 TIME: 9:05
DATE FINISHED: 01/09/02	WL (ft. bgs): 9.89 DATE: 01/09/02 TIME: 11:30
DRILLING METHOD: 8" hollow-stem auger	TOTAL DEPTH: 20 feet
DRILLING COMPANY: Gregg Drilling	GEOLOGIST: Andrew Smith



Drilling Log

Soil Boring SB-2

GROUNDWATER
TECHNOLOGYProject Signal SO800Loc. 800 Center St.Owner CHV/USAProject No. 020200105Date drilled 10/17/95Surface Elev. Total Hole Depth 11.5 ft. Diameter 6.25 in.Top of Casing Water Level Initial 10.0 ft. Static -- ft.Screen Dia -- in. Length -- ft. Type/Size -- in.Casing Dia -- in. Length -- ft. Type --Filter Pack Material Neat cement Rig/Core Type CME 55/SplitsoonDrilling Company Bay Area Explor. Method Hollow Stem Auger Permit # B5664Driller Tim Dunn Log By Terry JamesChecked By E K Simonis License No. R.G. 4422See Site Map
For Boring Location

COMMENTS:

Depth (ft.)	PID (ppm)	Sample ID #	Bowl Count/ % Recovery	Graphic Log	USCS Class	Description (Color, Texture, Structure)	
						Trace < 10%. Little 10% to 20%. Some 20% to 35%. And 35% to 50%	
-2							
-0						Thin Asphalt	
-2							
-4							
841	8 15 SBZ/S 16				SM	Clayey, silty, very fine SAND (10,30,60): mottled yellow-brown/ green-gray, dry, medium dense, strong hydrocarbon odor, trace root stems.	
-8							
-10							
800	8 15 SBZ/D 21				SW	Groundwater encountered during drilling. Fine SAND: brown, wet, loose, strong hydrocarbon odor.	
-12						End of boring.	
-14						(All percentages are approximate.)	
-16							
-18							
-20							
-22							
-24							

AN M COMPANY

ENVIRONMENTAL GROUP, INC.



PACIFIC

Page



**GROUNDWATER
TECHNOLOGY**

Drilling Log

Soil Boring SB-1

Project Signal S0800

Location 800 Center St.

Owner CHV/USA

Project No. 020200105

Date drilled 10/17/85

Surface Elev. -- ft.

Total Hole Depth 115 ft.

Diameter 6.25 in.

Top of Casing -- ft.

Water Level Initial 10.0 ft.

Static -- ft.

Screen Dia -- in.

Length -- ft.

Type/Size -- in.

Casing Dia -- in.

Length -- ft.

Type --

Filter Pack Material Neat cement

Rig/Core Type CME 55/Split spoon

Drilling Company Bay Area Explor.

Method Hollow Stem Auger

Permit # 65654

Driller Tim Dunn

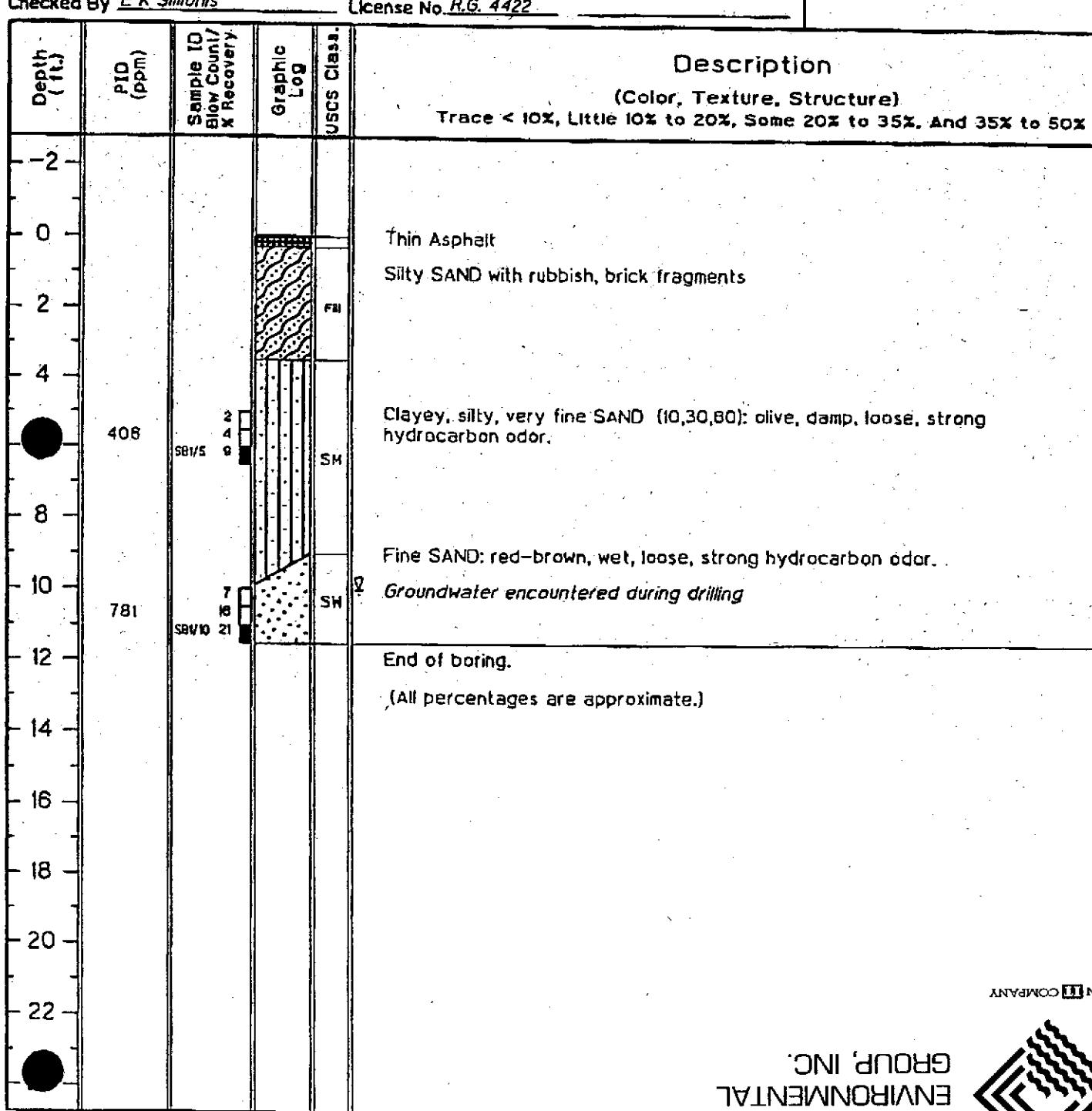
Log By Terry James

Checked By EK Simonis

License No. R.G. 4422

**See Site Map
For Boring Location**

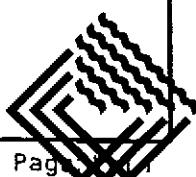
COMMENTS:



ENVIRONMENTAL COMPANY

ENVIRONMENTAL GROUP, INC.

PACIFIC



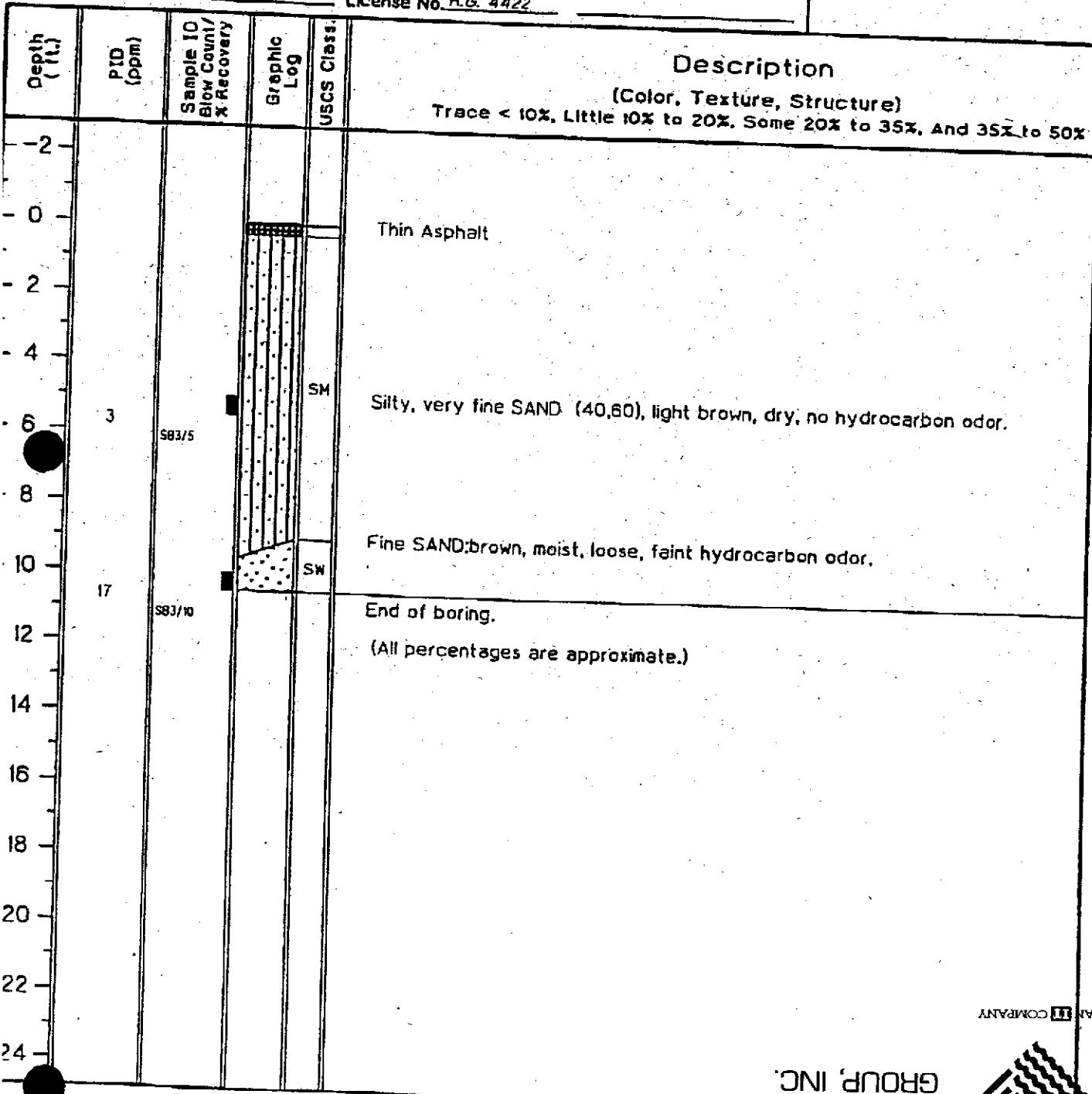
GROUNDWATER
TECHNOLOGY

Drilling Log

Soil Boring SB-3

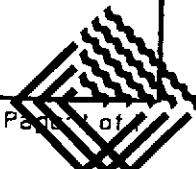
Project Signal S0800Location 800 Center St.Owner CHV/USAProject No. 020200105Date drilled 10/18/95Site Elev. Total Hole Depth 10.5 ft.Diameter 4.25 in.Top of Casing Water Level Initial ft.Static ft.Screen Dia in.Length ft.Type/Size in.Casing Dia in.Length ft.Type Filter Pack Material Neat cementRig/Core Type Hand Auger/ Impact SamplerDrilling Company GTIMethod Hand AugerPermit # 85664Driller Terry JamesLog By Terry JamesChecked By E K SimonisLicense No. R.G. 4422See Site Map
For Boring Location

COMMENTS:

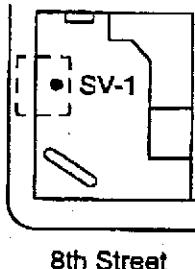


AN IT COMPANY

PACIFIC ENVIRONMENTAL GROUP, INC.



LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. SV-1

PAGE 1 OF 1

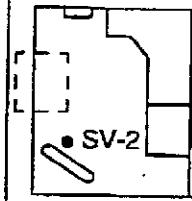
PROJECT NO. 320-162.1C
 LOGGED BY: T.F.B.
 DRILLER: VIRONEX
 DRILLING METHOD: GEOPROBE
 SAMPLING METHOD: GEOPROBE
 CASING TYPE: NA
 SLOT SIZE: NA
 SAND PACK: NA

CLIENT: CHEVRON
 DATE DRILLED: 5-30-97
 LOCATION: 800 Center Street
 HOLE DIAMETER: 2"
 HOLE DEPTH: 12'
 WELL DIAMETER: NA
 WELL DEPTH: NA
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	FID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS	
								LITHOLOGY	REMARKS
Backfilled With Grout	Dry	20		1			SM	ASPHALT; TANK BACKFILL	
				2				SILTY SAND: dark brown; 35% fines; 65% fine sand; faint product odor.	
				3					
				4					
				5					
				6					
				7					
				8			CL	SANDY CLAY: dark brown; 70% fines; 30% fine sand; strong product odor.	
				9			SM	SILTY SAND: dark brown; 30% fines; 70% fine sand; strong product odor.	
				10					
				11					
				12				@ 12': dark brown.	
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					

BOTTOM OF BORING AT 12'

LOCATION MAP



8th Street

N

PACIFIC ENVIRONMENTAL GROUP, INC.

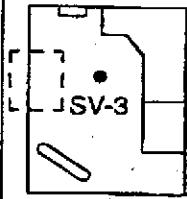
BORING NO. SV-2
PAGE 1 OF 1

PROJECT NO. 320-1621C
 LOGGED BY: T.F.B.
 DRILLER: VIRONEX
 DRILLING METHOD: GEOPROBE
 SAMPLING METHOD: GEOPROBE
 CASING TYPE: NA
 SLOT SIZE: NA
 SAND PACK: NA

CLIENT: CHEVRON
 DATE DRILLED: 5-30-97
 LOCATION: 800 Center Street
 HOLE DIAMETER: 2"
 HOLE DEPTH: 10.5'
 WELL DIAMETER: NA
 WELL DEPTH: NA
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	FID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS	
Backfilled	Dry			1			ML	ASPHALT	
With Grout	Mst	50		2				SANDY SILT: dark brown; 65% fines; 35% fine sand; faint product odor.	
	Wt			3					
				4					
				5					
				6					
				7					
				8					
				9					
				10					
				11					
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					
								BOTTOM OF BORING AT 10.5'	

LOCATION MAP



8th Street

N

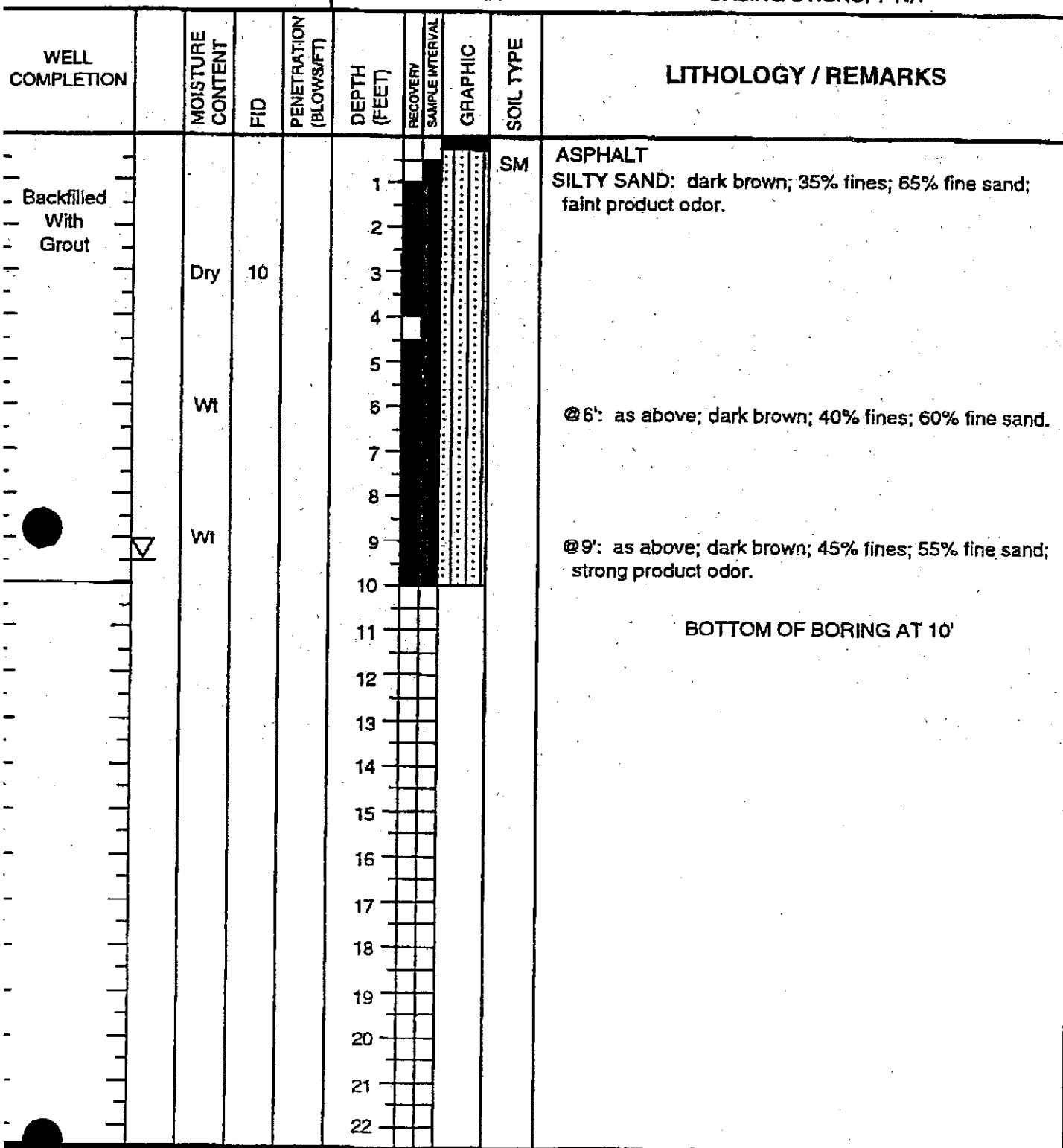
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. SV-3

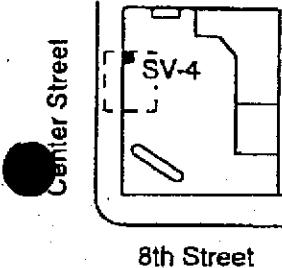
PAGE 1 OF 1

PROJECT NO. 320-162.1C
 LOGGED BY: T.F.B.
 DRILLER: VIRONEX
 DRILLING METHOD: GEOPROBE
 SAMPLING METHOD: GEOPROBE
 CASING TYPE: NA
 SLOT SIZE: NA
 SAND PACK: NA

CLIENT: CHEVRON
 DATE DRILLED: 5-30-97
 LOCATION: 800 Center Street
 HOLE DIAMETER: 2"
 HOLE DEPTH: 10'
 WELL DIAMETER: NA
 WELL DEPTH: NA
 CASING STICKUP: NA



LOCATION MAP



N

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. SV-4

PAGE 1 OF 1

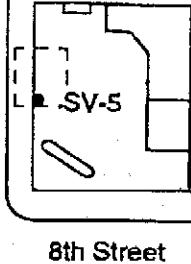
PROJECT NO. 320-162.1C
 LOGGED BY: T.F.B.
 DRILLER: VIRONEX
 DRILLING METHOD: GEOPROBE
 SAMPLING METHOD: GEOPROBE
 CASING TYPE: NA
 SLOT SIZE: NA
 SAND PACK: NA

CLIENT: CHEVRON
 DATE DRILLED: 5-30-97
 LOCATION: 800 Center Street
 HOLE DIAMETER: 2"
 HOLE DEPTH: 9.5'
 WELL DIAMETER: NA
 WELL DEPTH: NA
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	FID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL		GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS	
Backfilled With Grout	Dry	30		1				SM	ASPHALT; TANK BACKFILL	
	Mst	High		2					SILTY SAND: dark brown; 30% fines; 70% fine sand; faint product odor.	
	Wt	High		3					@ 6': as above; dark brown; 30% fines; 70% fine sand; moderate product odor.	
				4						
				5						
				6						
				7						
				8						
				9					@ 9': as above; 35% fines; 65% fine sand; strong product odor.	
				10						
				11						
				12						
				13						
				14						
				15						
				16						
				17						
				18						
				19						
				20						
				21						
				22						

BOTTOM OF BORING AT 9.5'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. SV-5
PAGE 1 OF 1

PROJECT NO. 320-162.1C
 LOGGED BY: T.F.B.
 DRILLER: VIRONEX
 DRILLING METHOD: GEOPROBE
 SAMPLING METHOD: GEOPROBE
 CASING TYPE: NA
 SLOT SIZE: NA
 SAND PACK: NA

CLIENT: CHEVRON
 DATE DRILLED: 5-30-97
 LOCATION: 800 Center Street
 HOLE DIAMETER: 2'
 HOLE DEPTH: 9.5'
 WELL DIAMETER: NA
 WELL DEPTH: NA
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	FID	PENETRATION (BLOWSF/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS													
								1	2	3	4	5	6	7	8	9	10	11	12	13	14
Backfilled With Grout		Dp	40				ML	ASPHALT													
		Wt	High					SANDY SILT: dark brown; 65% fines; 35% fine sand; slight product odor.													
		Wt	High					@ 6': as above; 70% fines; 30% fine sand; strong product odor.													
								@ 9': as above; strong product odor.													
								BOTTOM OF BORING AT 9.5'													

APPENDIX F
Cross-Sections

Fence Diagram A-A' of TPHd Concentrations in Soil

C
C A M B R I A

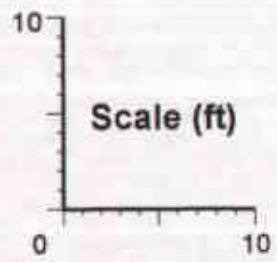
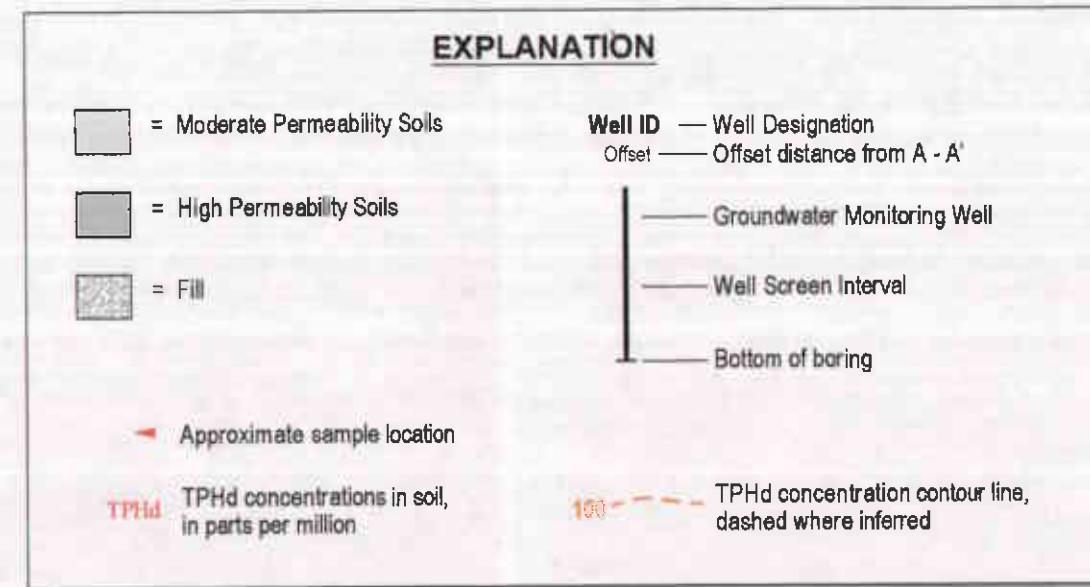
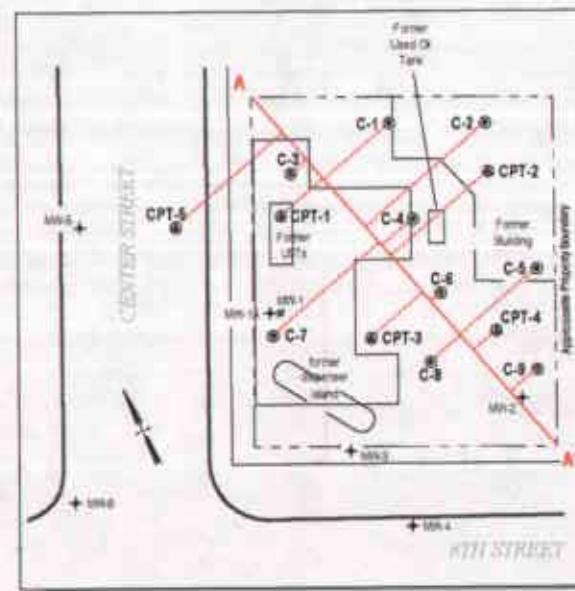
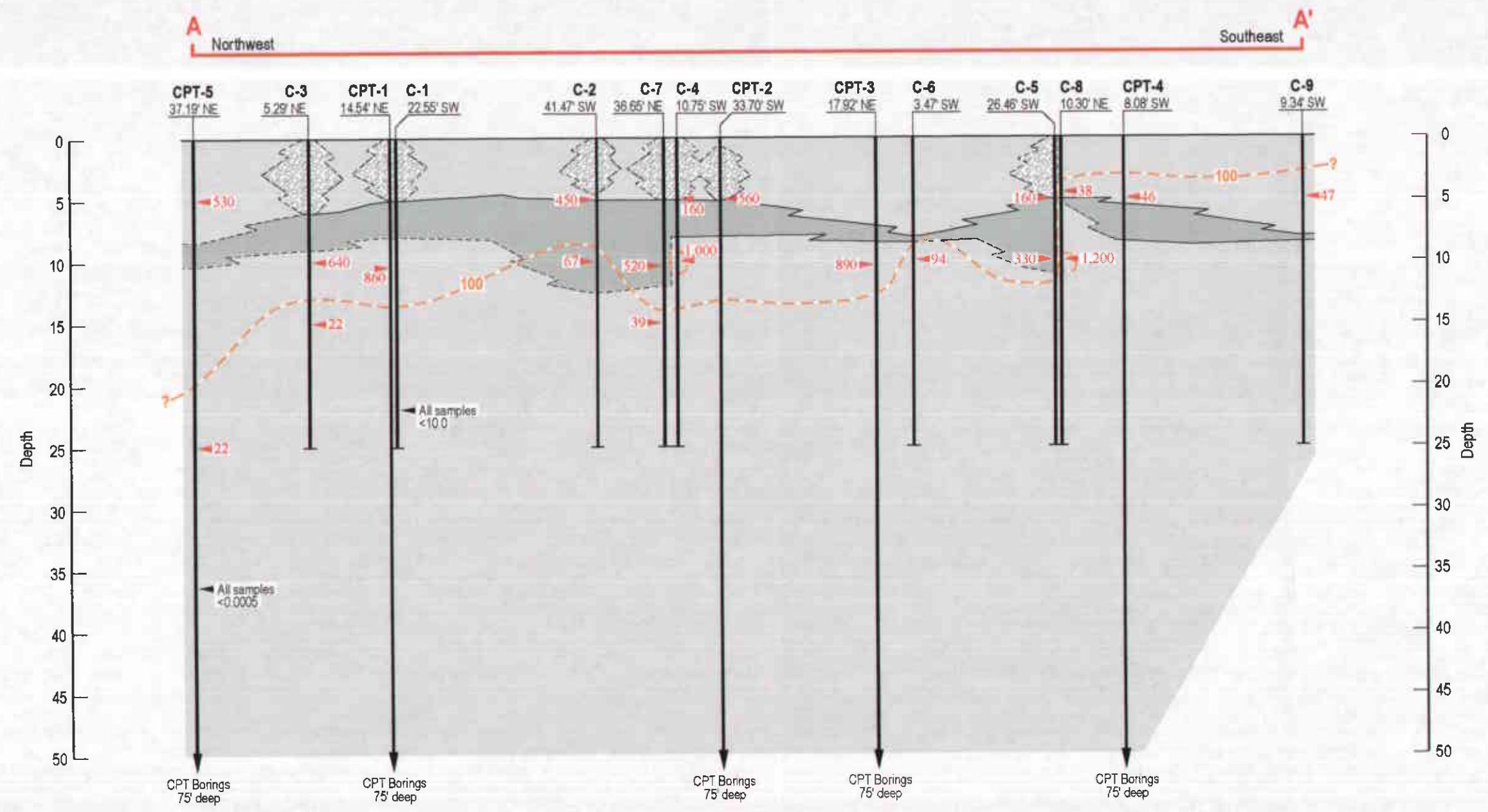


FIGURE
1A

Chevron Service Station #206145
800 Center Street
Oakland, California

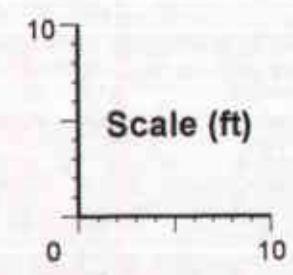
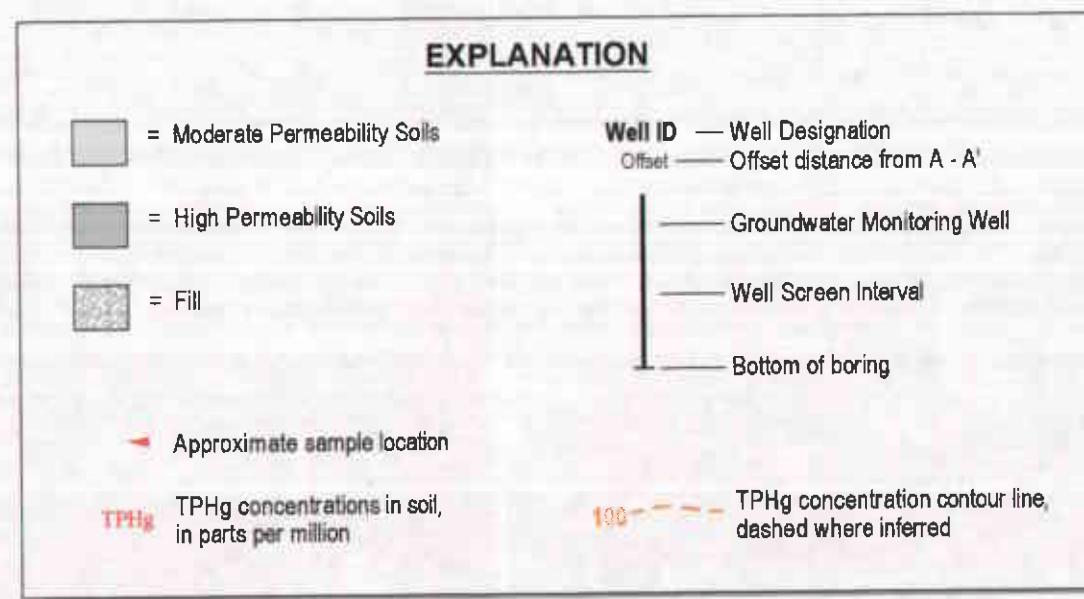
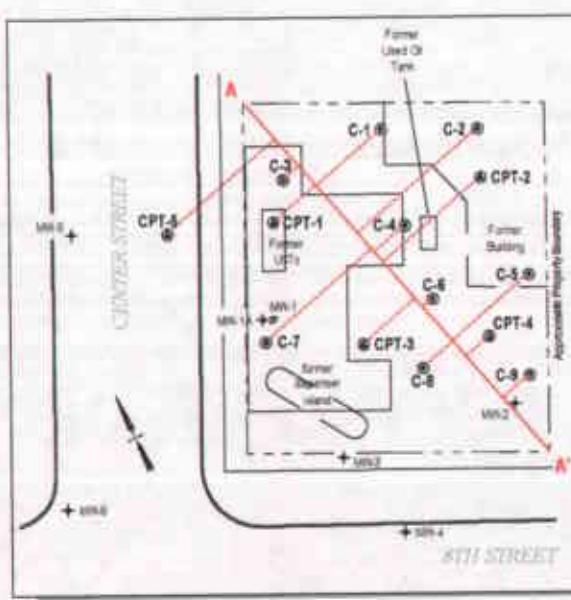
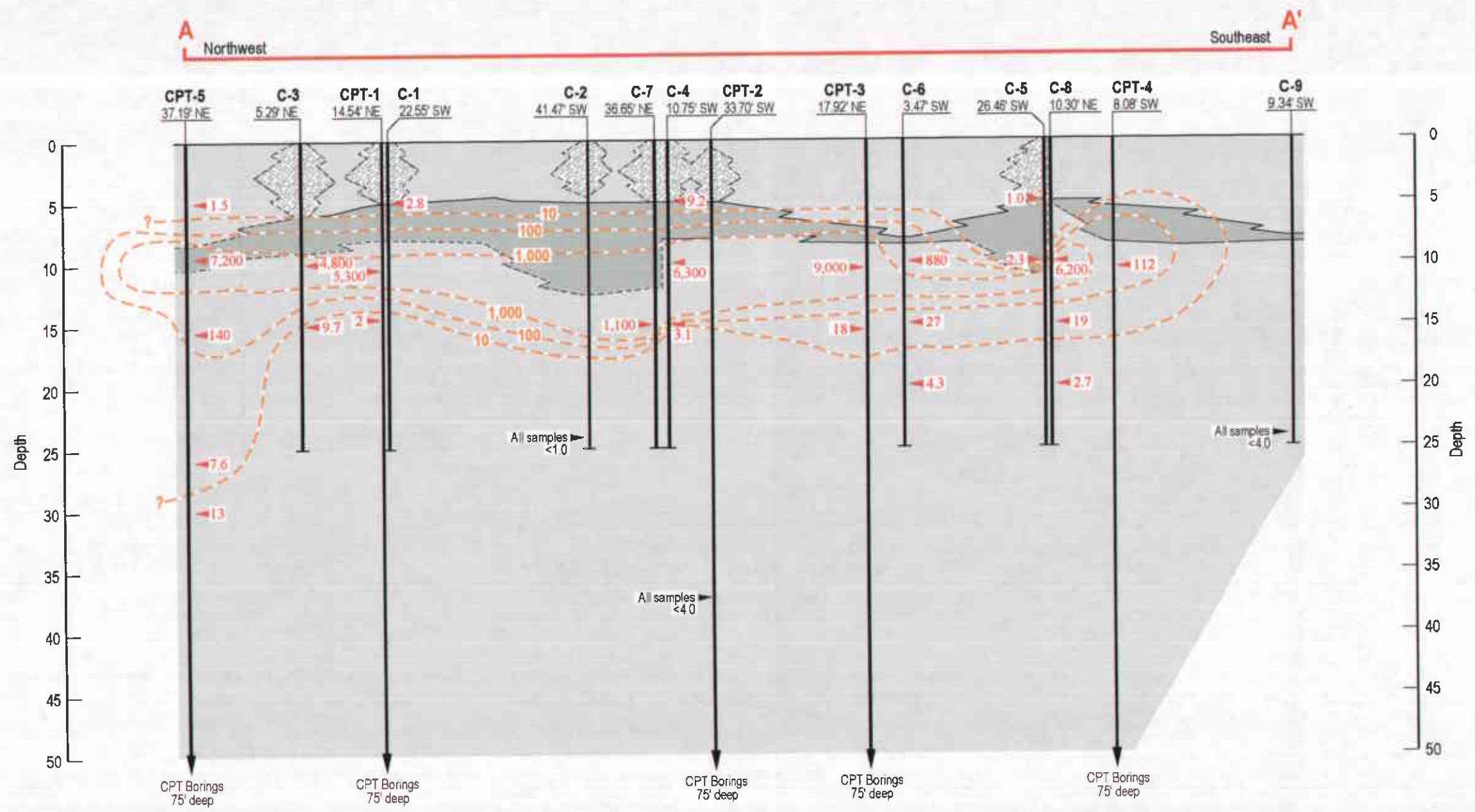
Fence Diagram A-A' of TPHg Concentrations in Soil

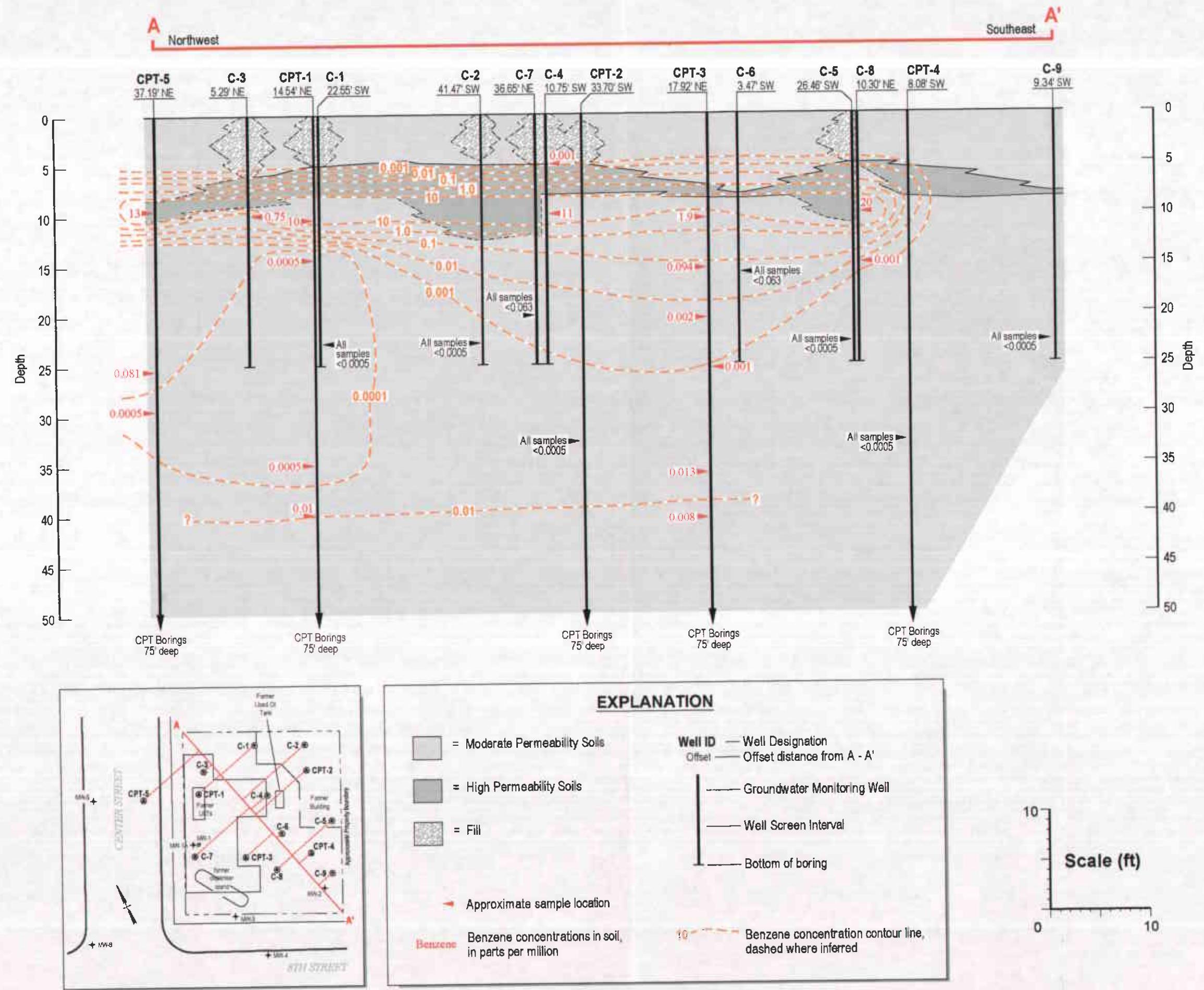
C A M B R I A

Chevron Service Station #206145

800 Center Street
Oakland, California

FIGURE
2A



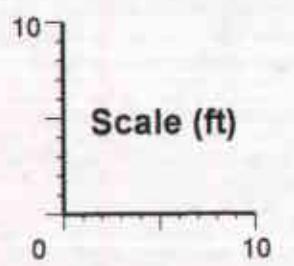
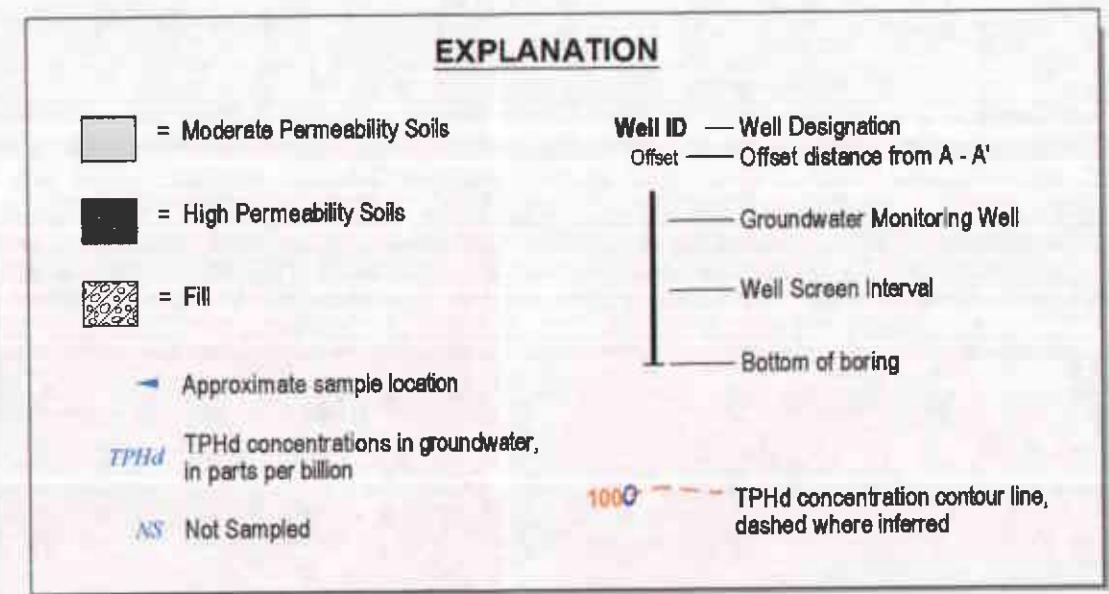
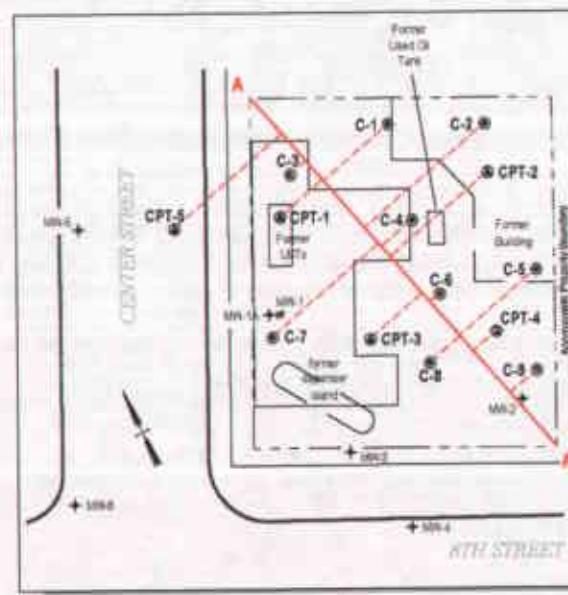
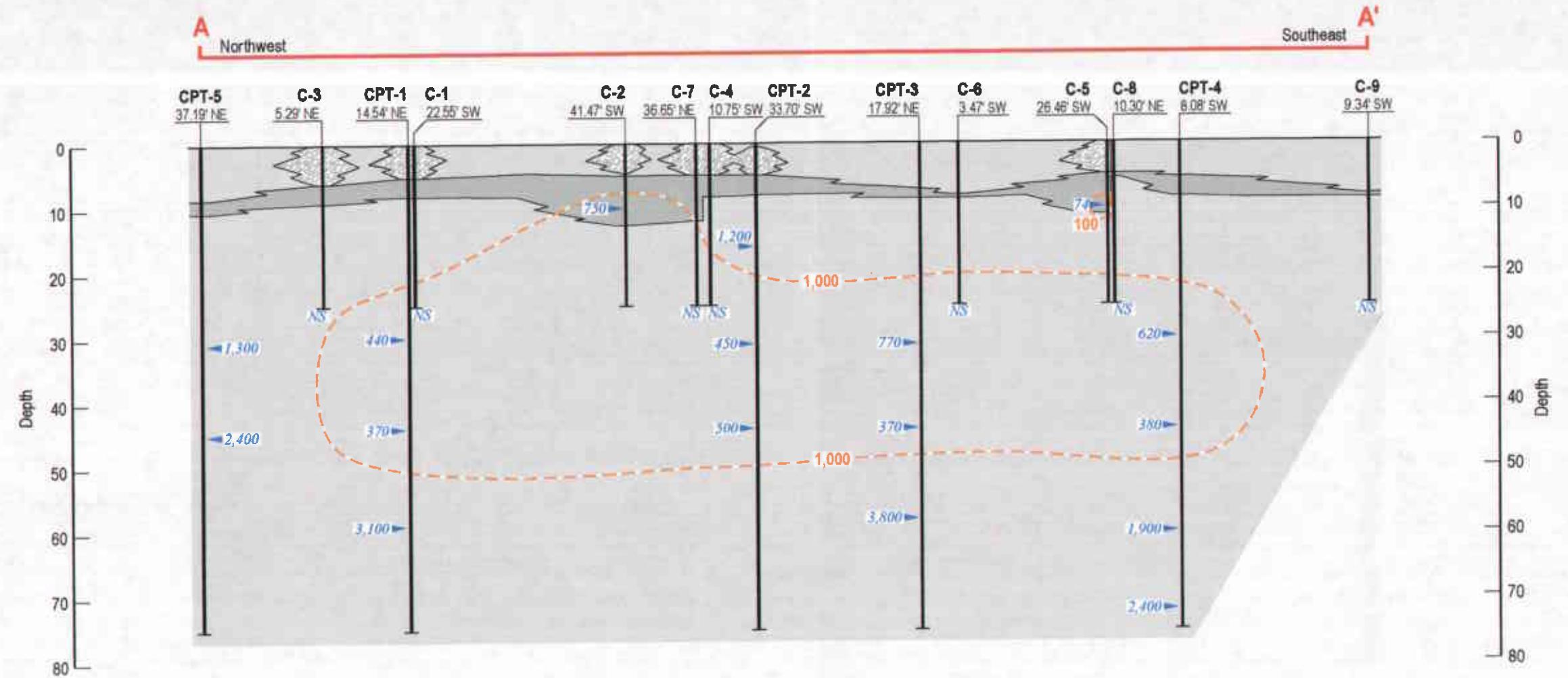
Fence Diagram A-A'
of Benzene Concentrations in Soil

Fence Diagram A-A' of TPHd Concentrations in Groundwater

C A M B R I A

Chevron Service Station #206145
800 Center Street
Oakland, California

FIGURE
4A



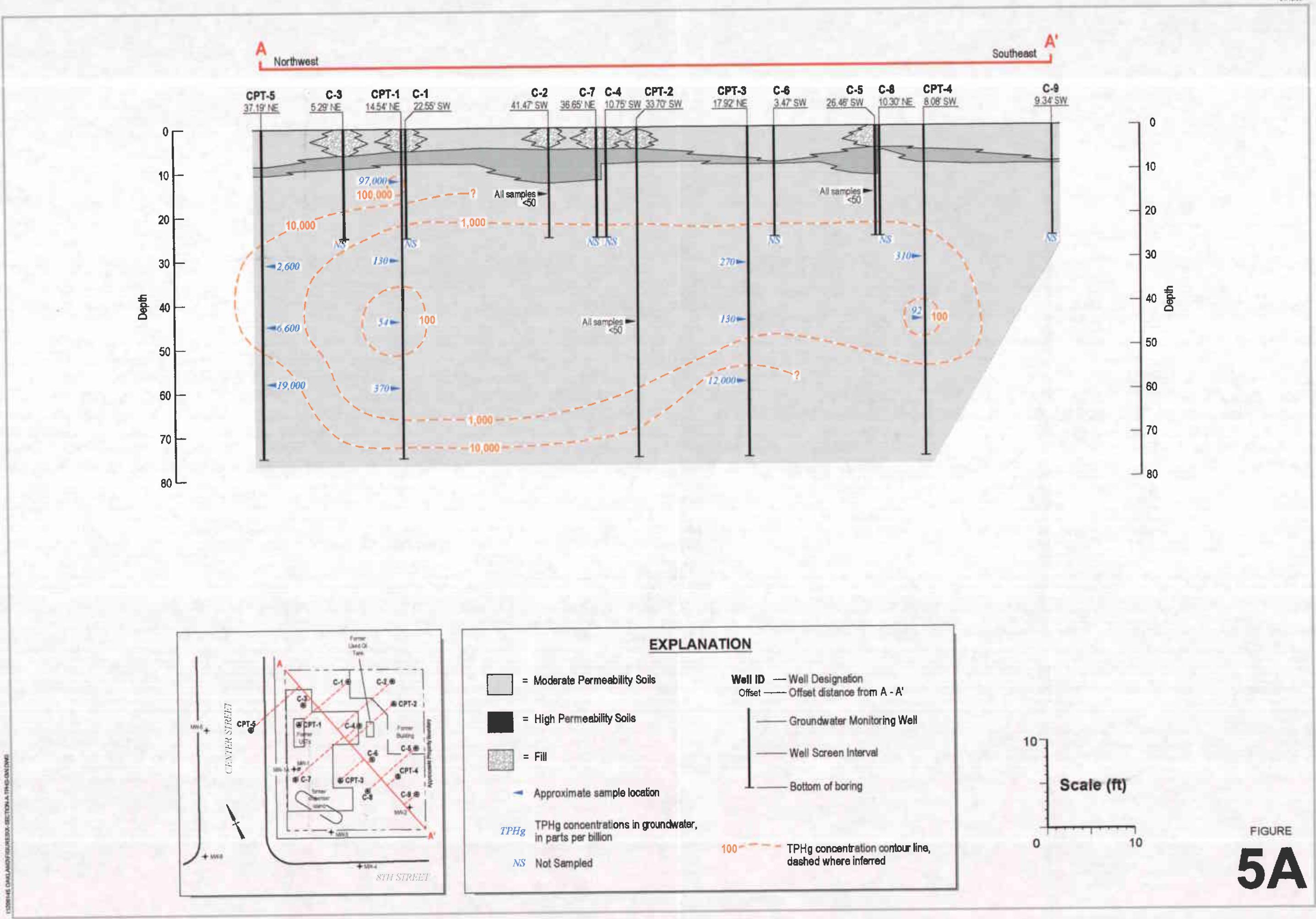
Fence Diagram A-A' of TPHg Concentrations in Groundwater

C A M B R I A

Chevron Service Station #206145

Oakland, California

**FIGURE
5A**

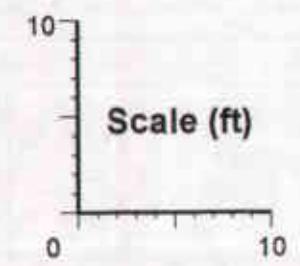
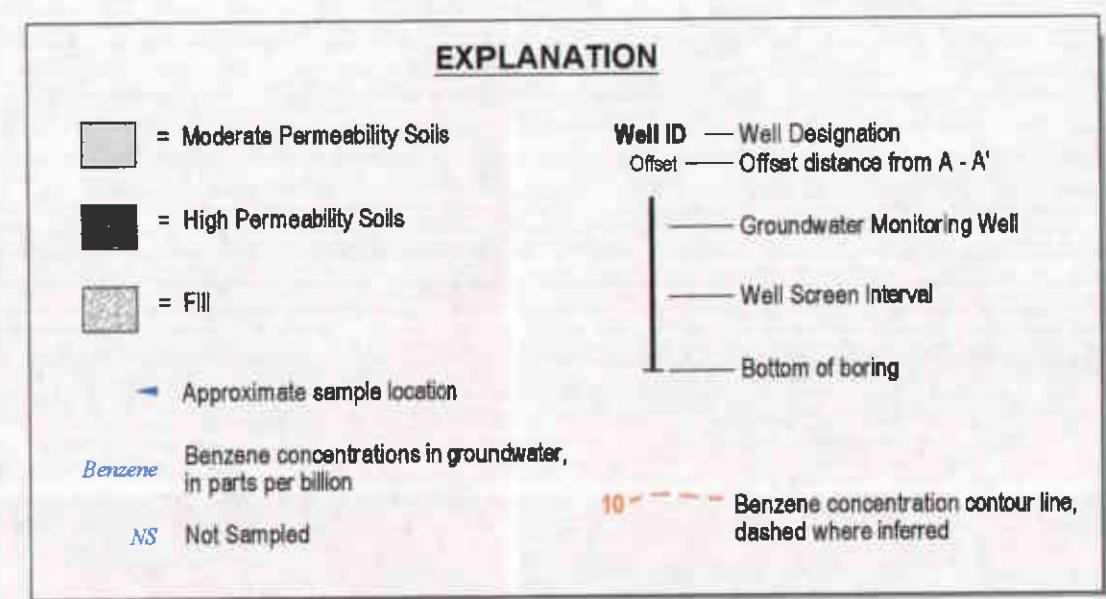
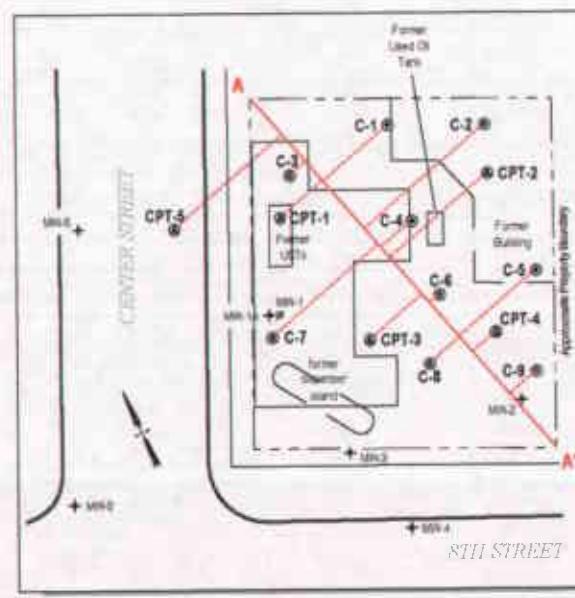
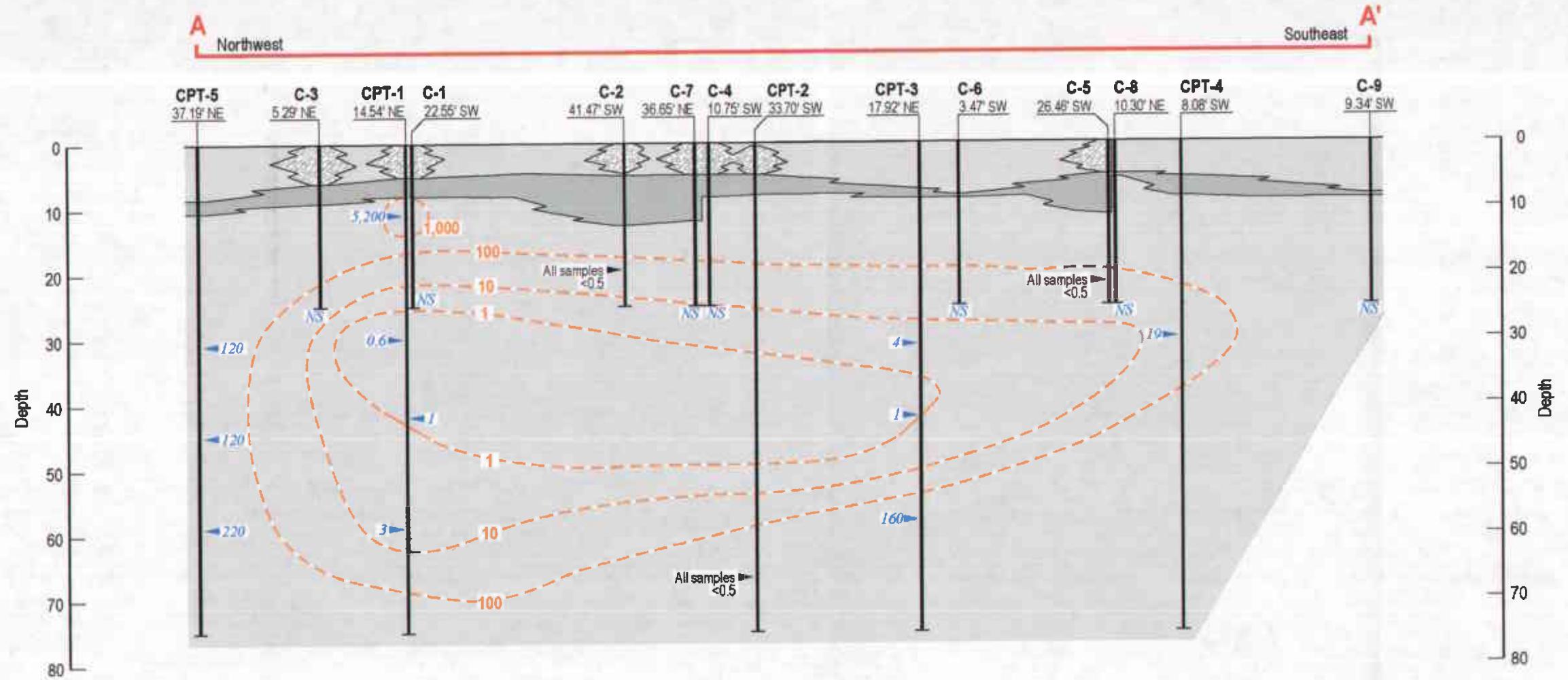


Fence Diagram A-A' of Benzene Concentrations in Groundwater

C A M B R I A

Chevron Service Station #206145
800 Center Street
Oakland, California

**FIGURE
6A**



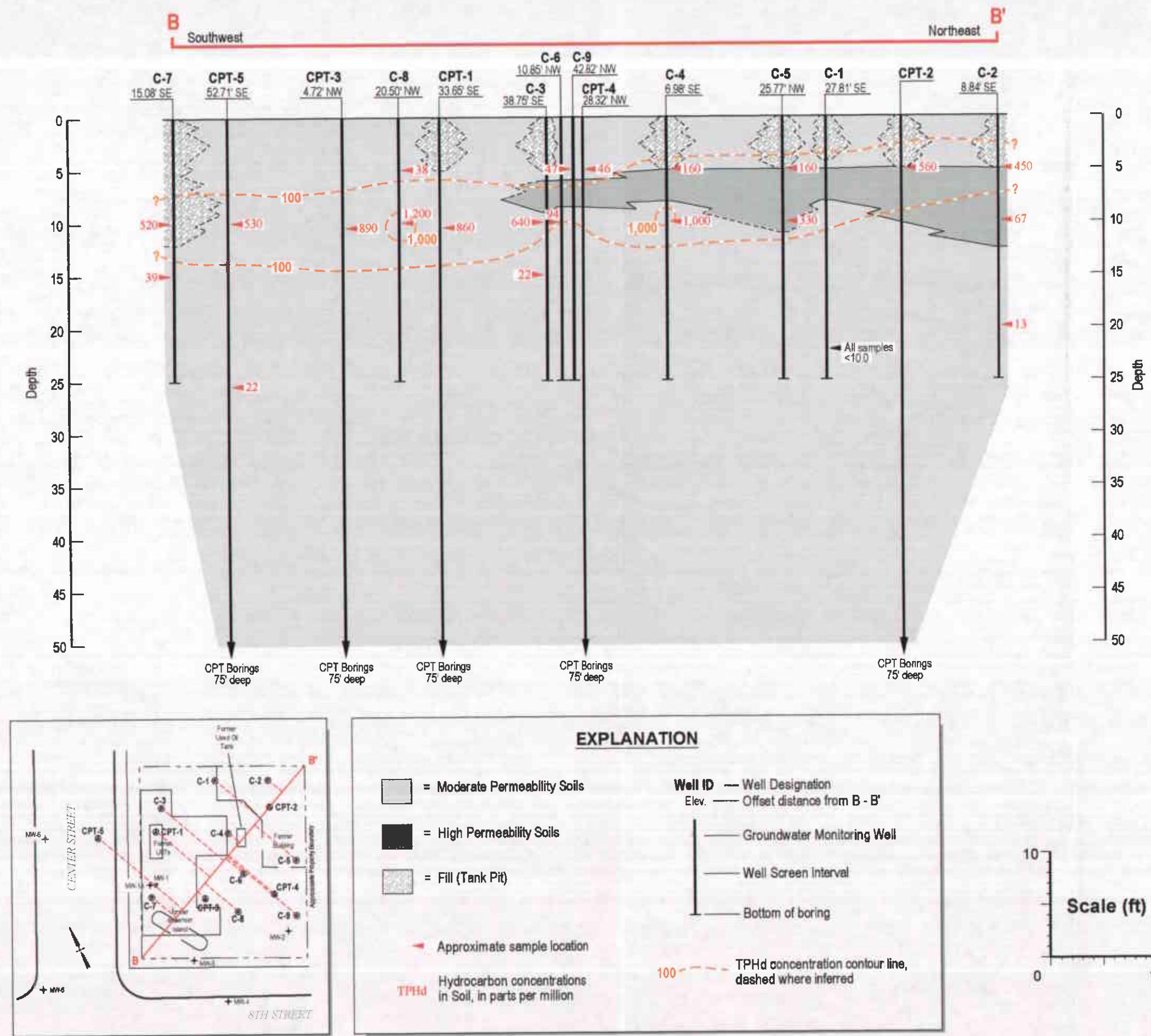
CAMBRIA

Chevron Service Station #206145

800 Center Street

Oakland, California

Fence Diagram B-B'
TPHd Concentrations in Soil

FIGURE
1B

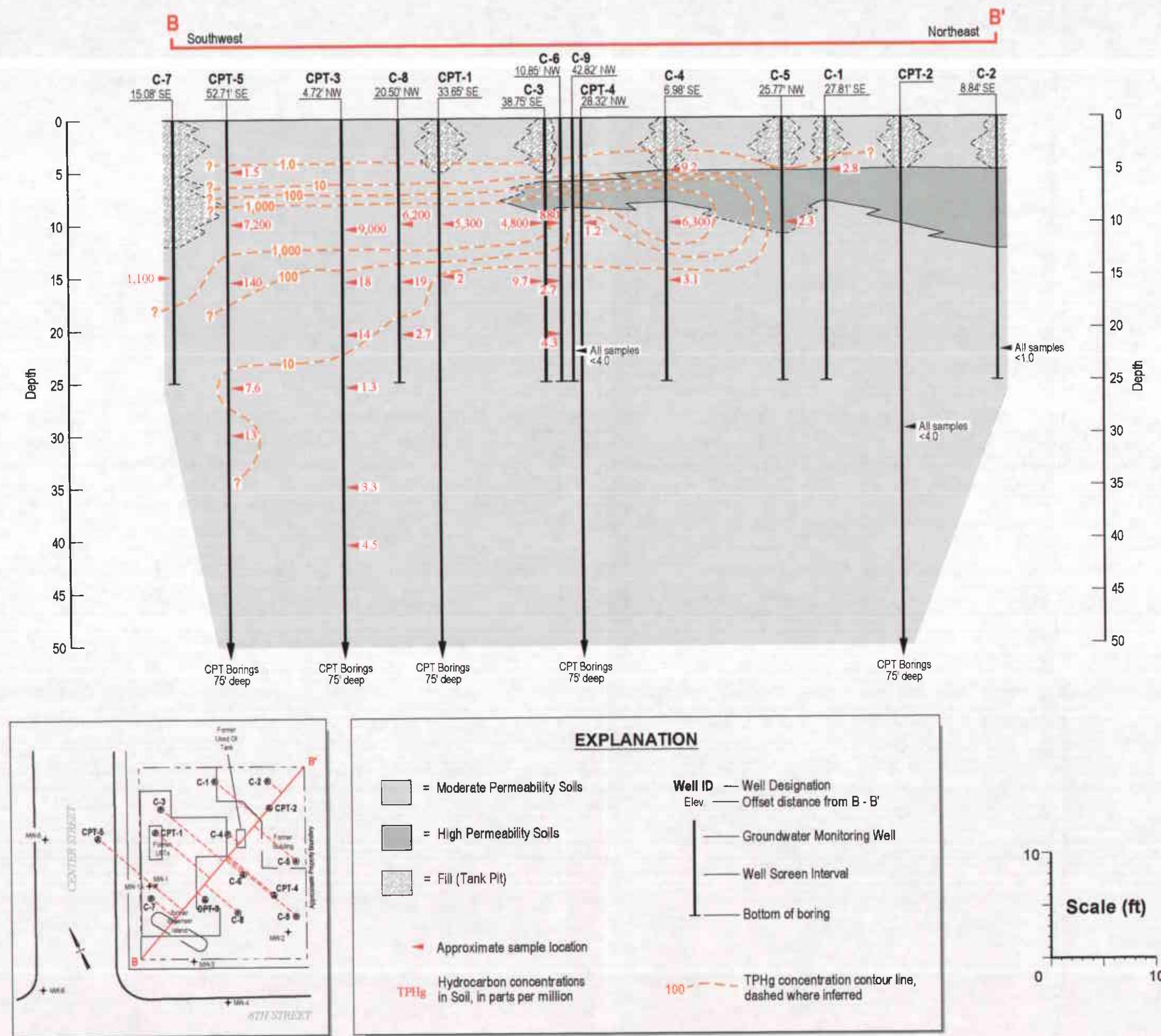
Fence Diagram B-B'
TPHg Concentrations in Soil

C A M B R I A

Chevron Service Station #206145

800 Center Street
Oakland, California

FIGURE
2B



Chevron Service Station #206145
800 Center Street
Oakland, California

C
C A M B R I A

Fence Diagram B-B'
Benzene Concentrations in Soil

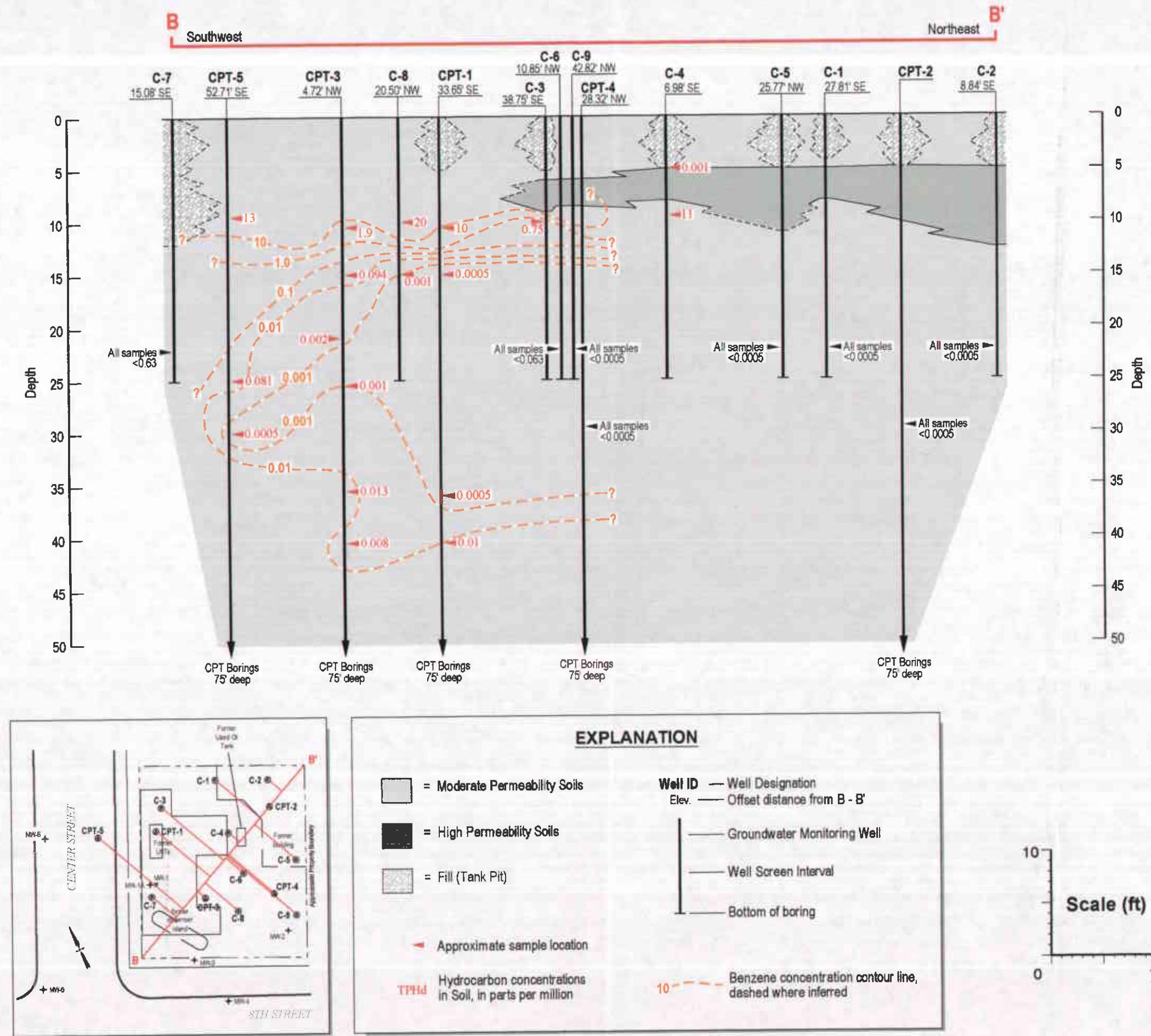


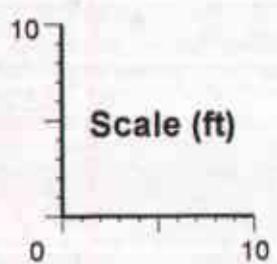
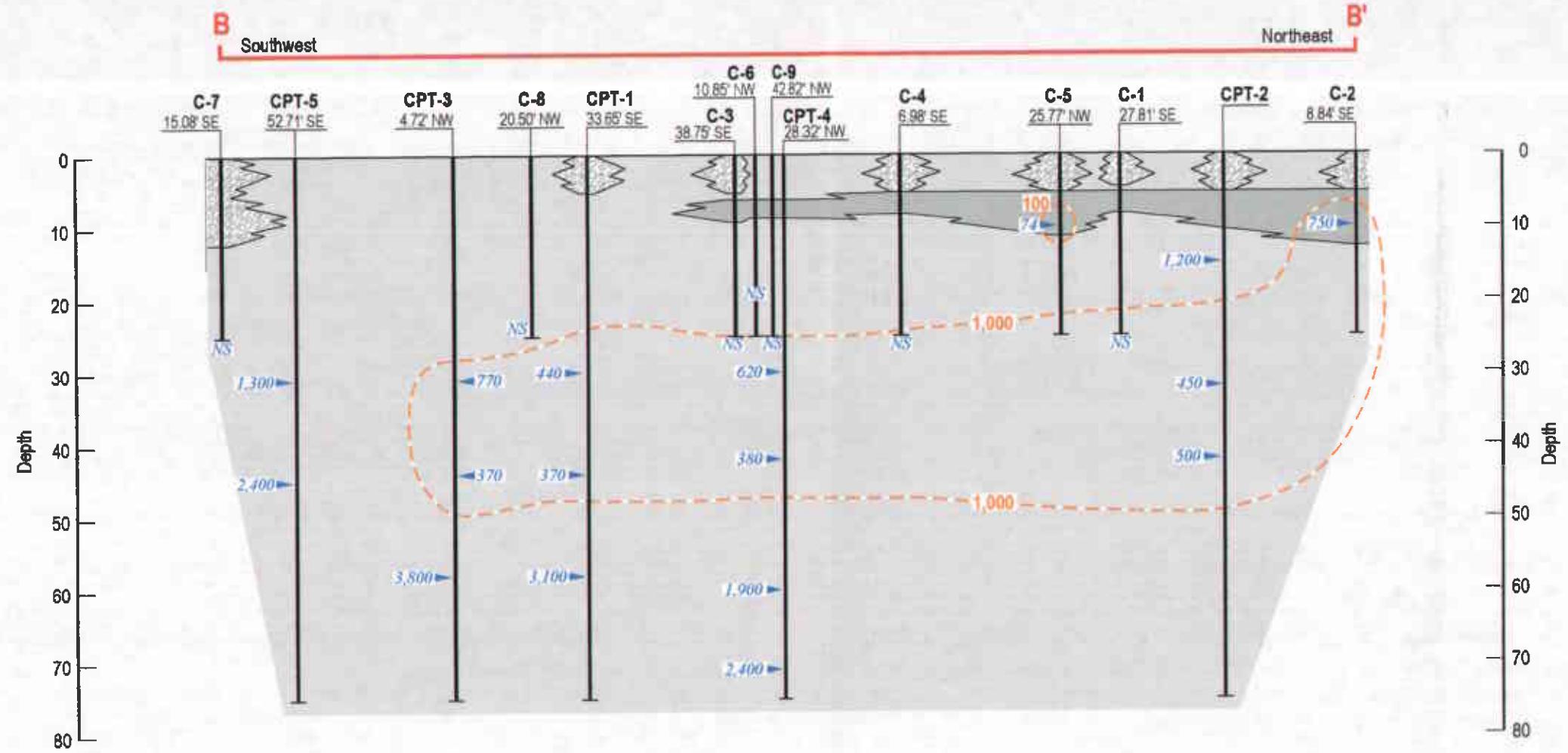
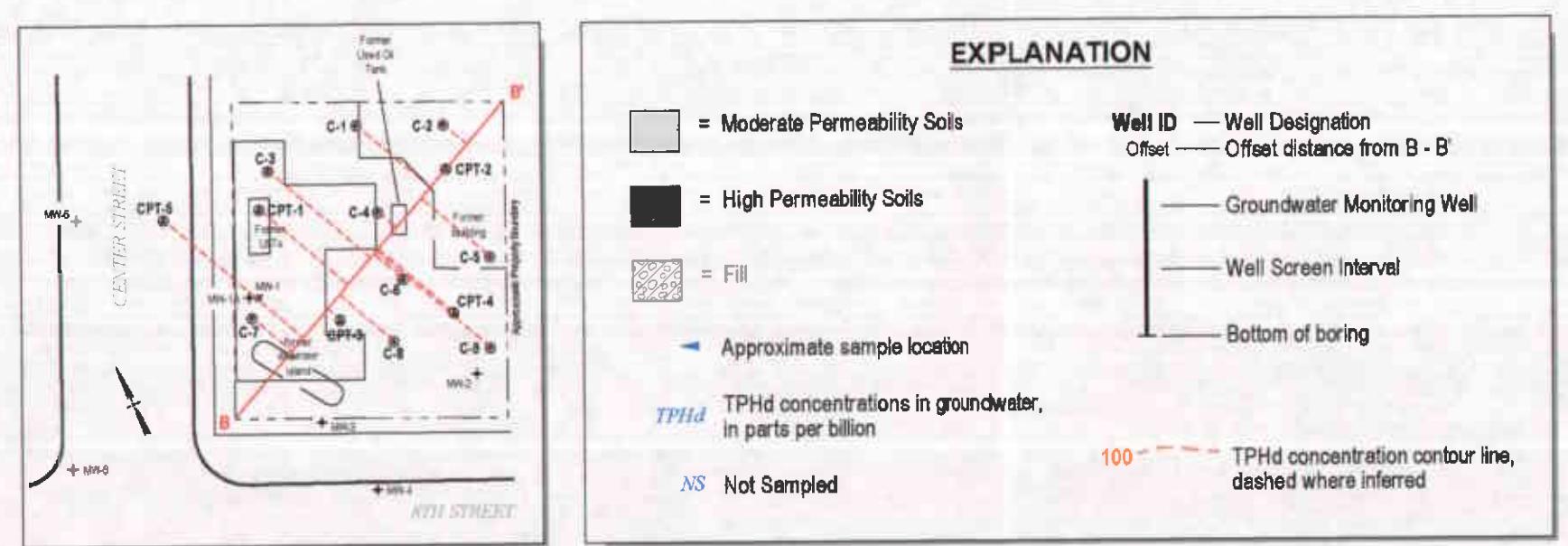
FIGURE
3B

Chevron Service Station #206145
800 Center Street
Oakland, California

(C)

Fence Diagram B-B'
TPHd Concentrations in Groundwater

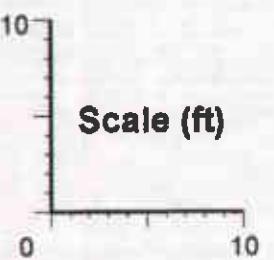
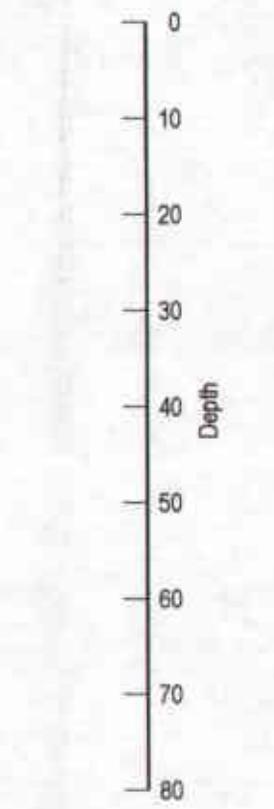
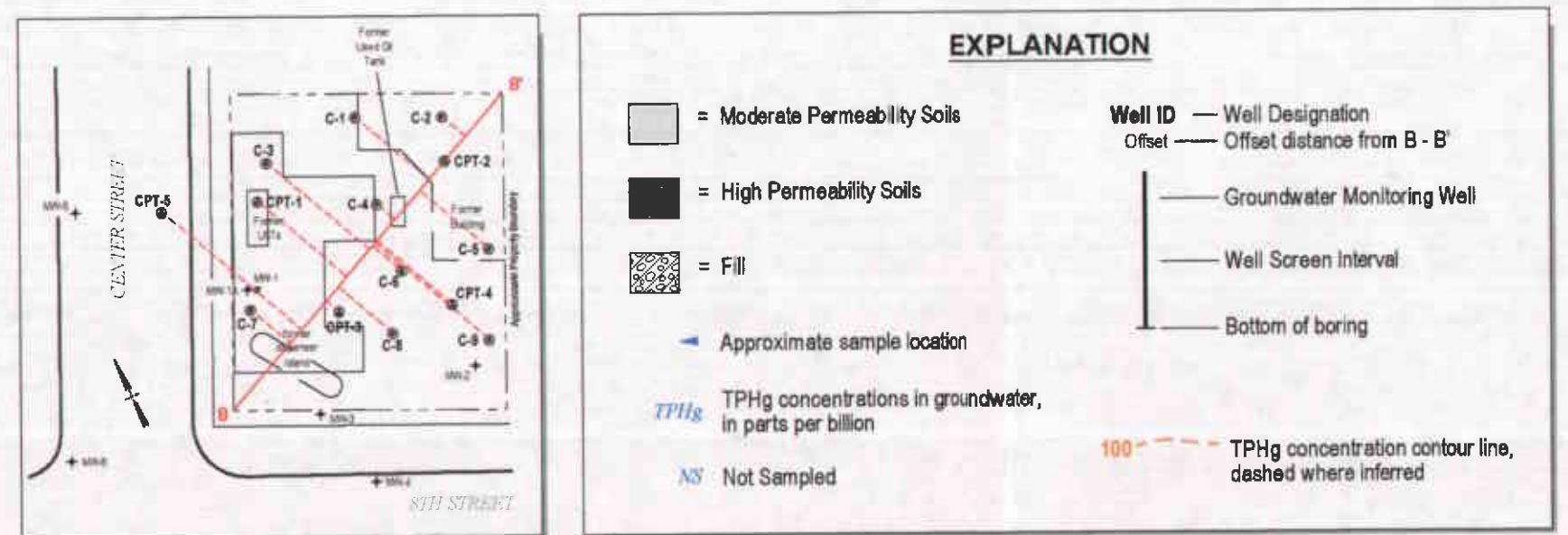
4B



Fence Diagram B-B' TPHg Concentrations in Groundwater

10

800 Center Street

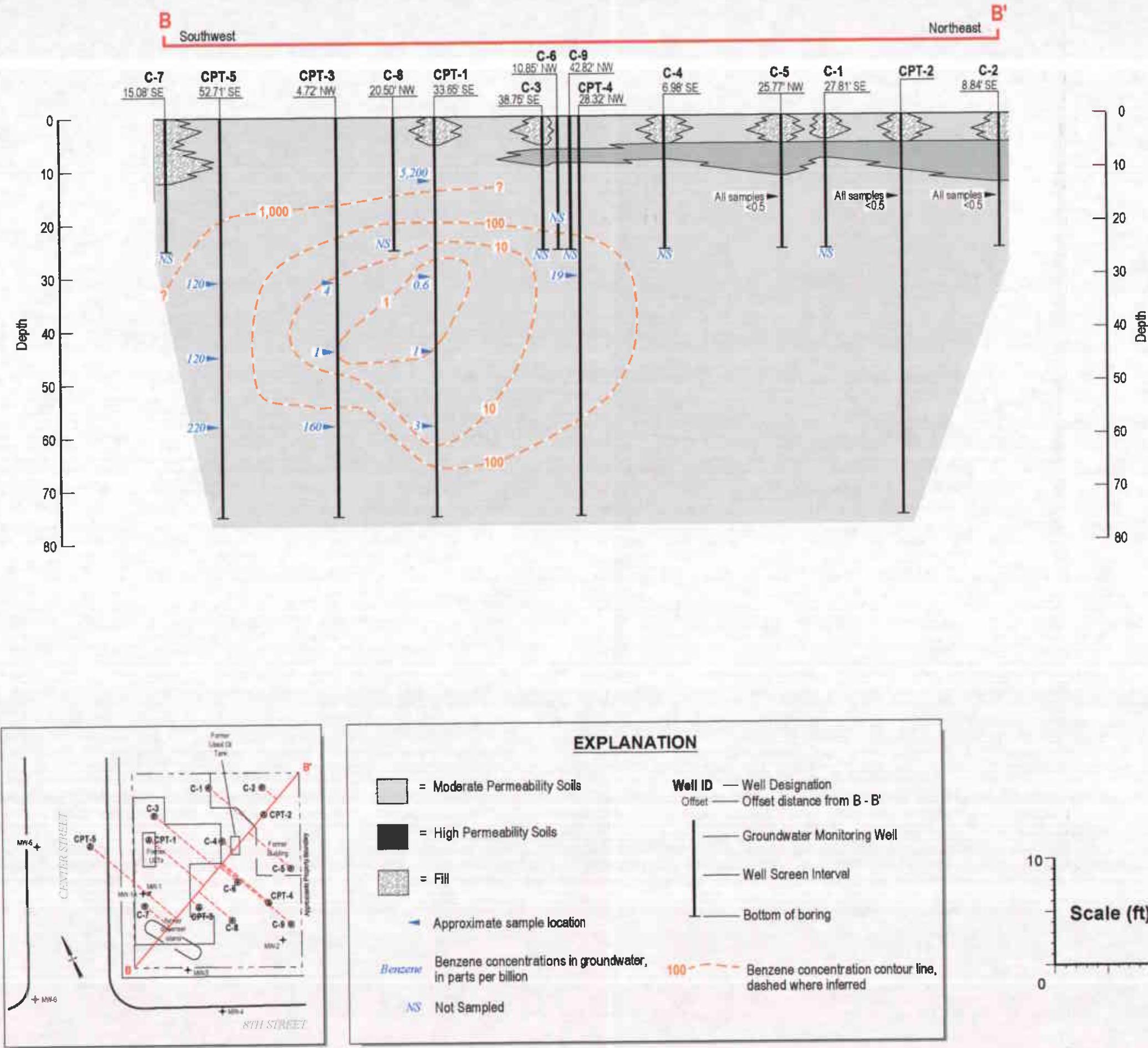


**FIGURE
5B**

Fence Diagram B-B'
Benzene Concentrations in Groundwater

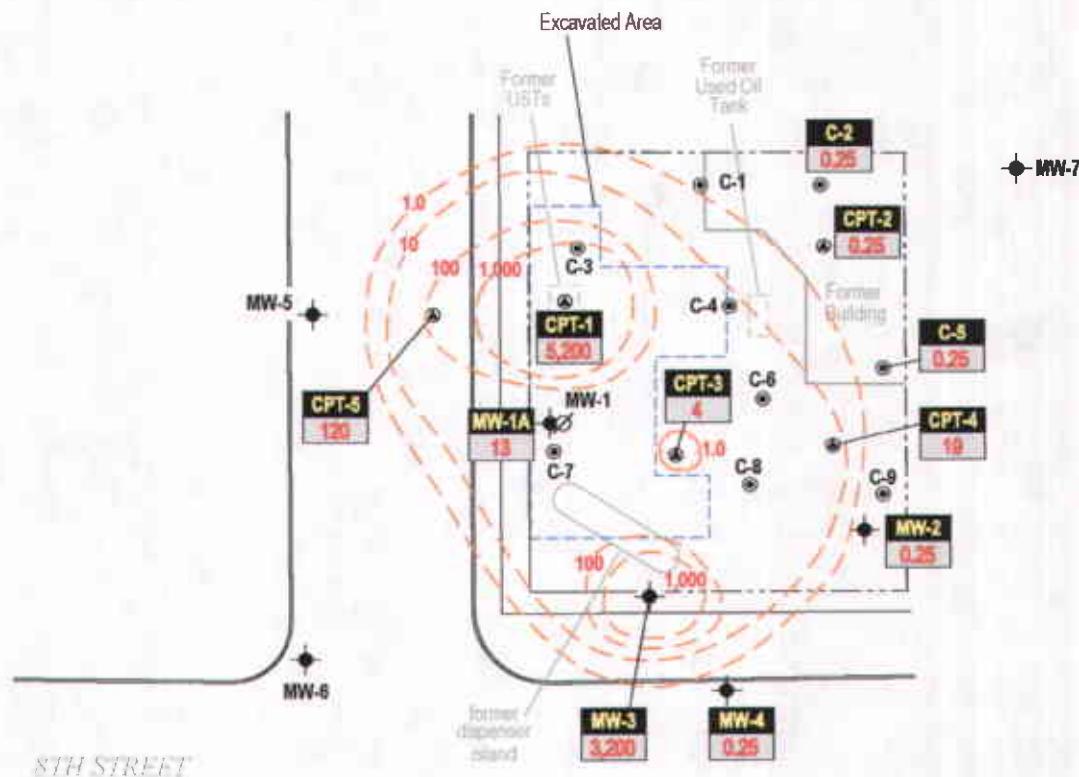
CAMBRIA

FIGURE
Chevron Service Station #206145
800 Center Street
Oakland, California



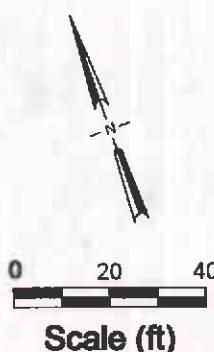
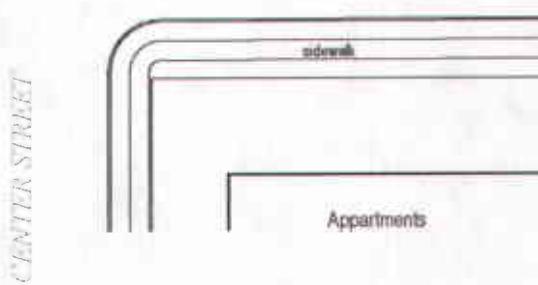
APPENDIX G

Extent of Hydrocarbons in Groundwater



EXPLANATION

- CPT-1** ● CPT boring location
- C-1** ● Soil boring location
- MW-1A** ● Monitoring well location
- MW-1** ○ Destroyed monitoring well location
- Well / Boring designation**
- Well ID** Benz Benzene concentrations in groundwater from 12 - 32 fbg in parts per billion (ppb)
- 100** — Benzene concentration contour line dashed where inferred

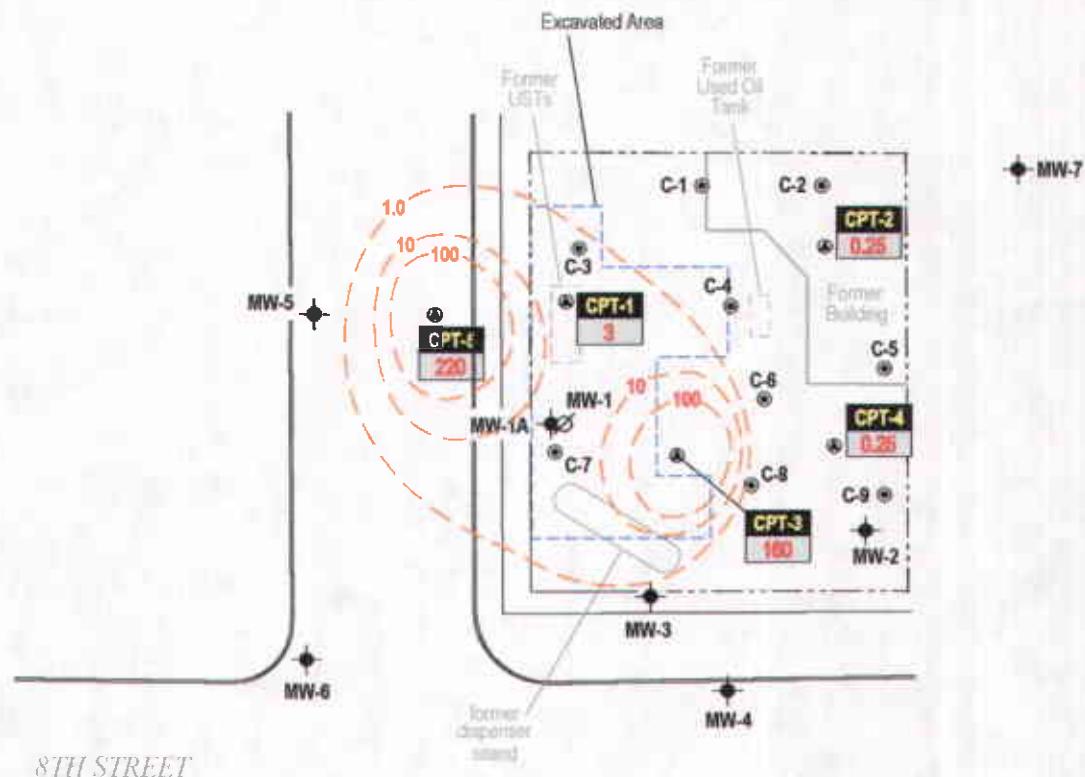


Chevron Service Station # 206145
800 Center Street
Oakland, California



C A M B R I A

Isoconcentrations of Benzene
in Groundwater from 12 - 32 fbg.



Church

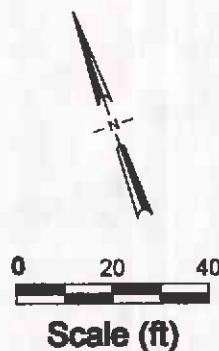
CENTER STREET

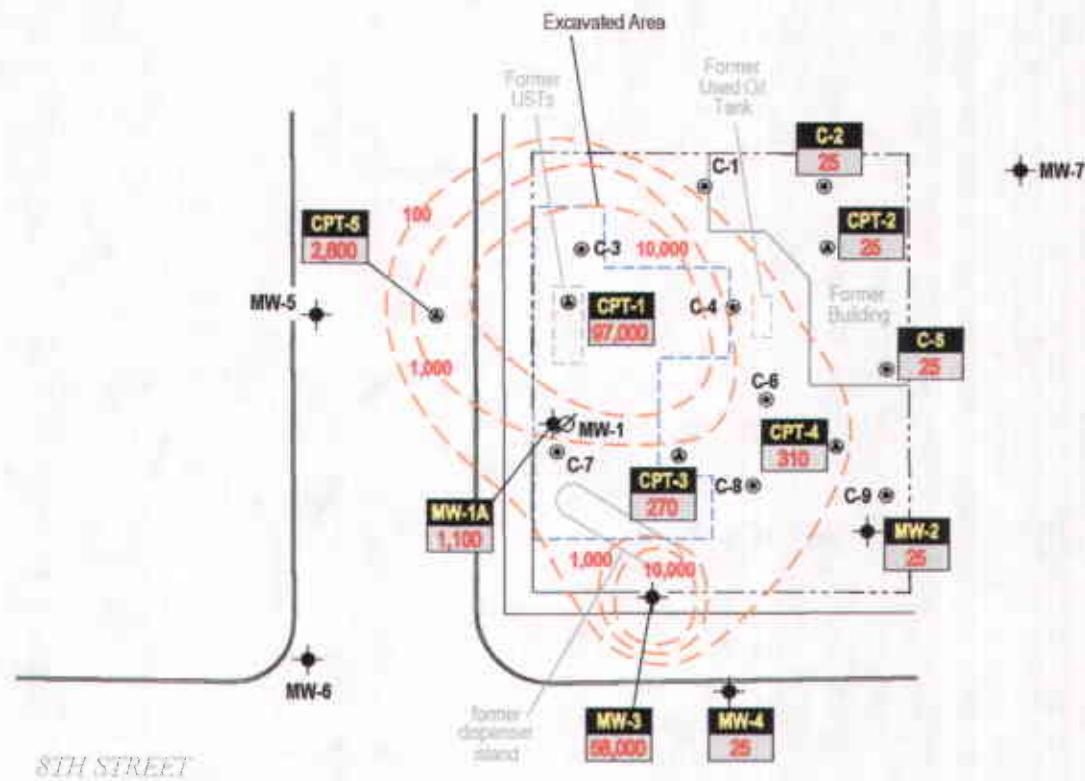
sidewalk

Apartments

EXPLANATION

- CPT-1** ● CPT boring location
- C-1** ● Soil boring location
- MW-1A** ♦ Monitoring well location
- MW-1** ⚡ Destroyed monitoring well location
- Well / Boring designation**
- Well ID** Benzene concentrations in groundwater from 33 - 72 fbg in parts per billion (ppb)
- 100** Benzene concentration contour line dashed where inferred





8TH STREET

CENTER STREET

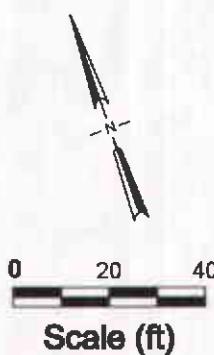
Church

sidewalk

Apartments

EXPLANATION

- CPT-1** ● CPT boring location
- C-1** ● Soil boring location
- MW-1A** • Monitoring well location
- MW-1** Ø Destroyed monitoring well location
- Well / Boring designation**
- TPHg** TPHg concentrations in groundwater from 12 - 32 fbg in parts per billion (ppb)
- 100** TPHg concentration contour line dashed where inferred

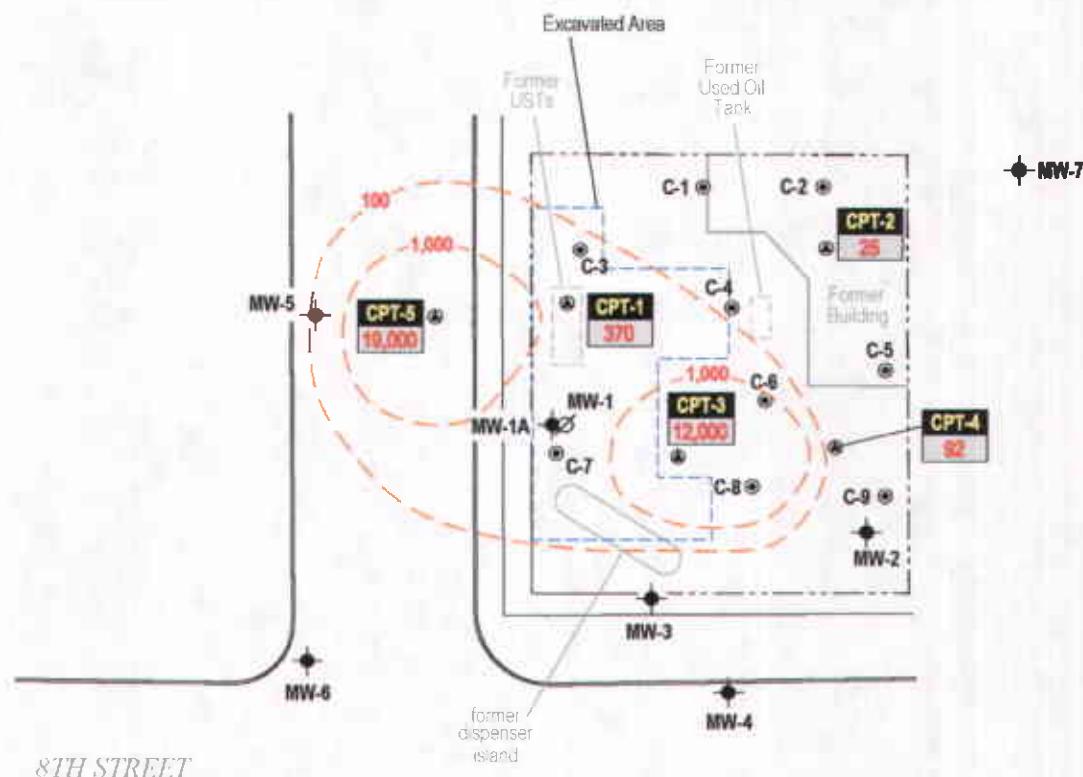


Isoconcentrations of TPHg
in Groundwater from 12 - 32 fbg.

Chevron Service Station # 206145
800 Center Street
Oakland, California



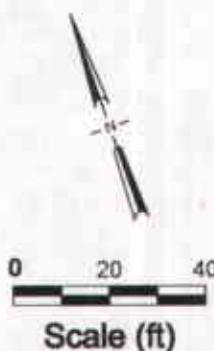
C A M B R I A



EXPLANATION

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A ● Monitoring well location
- MW-1 Ø Destroyed monitoring well location
- Well / Boring designation
- TPHg concentrations in groundwater from 33 - 72 fbg in parts per billion (ppb)
- TPHg concentration contour line dashed where inferred

100-148 OAKLAND/PLATINUM/2004/TMH-72.DWG

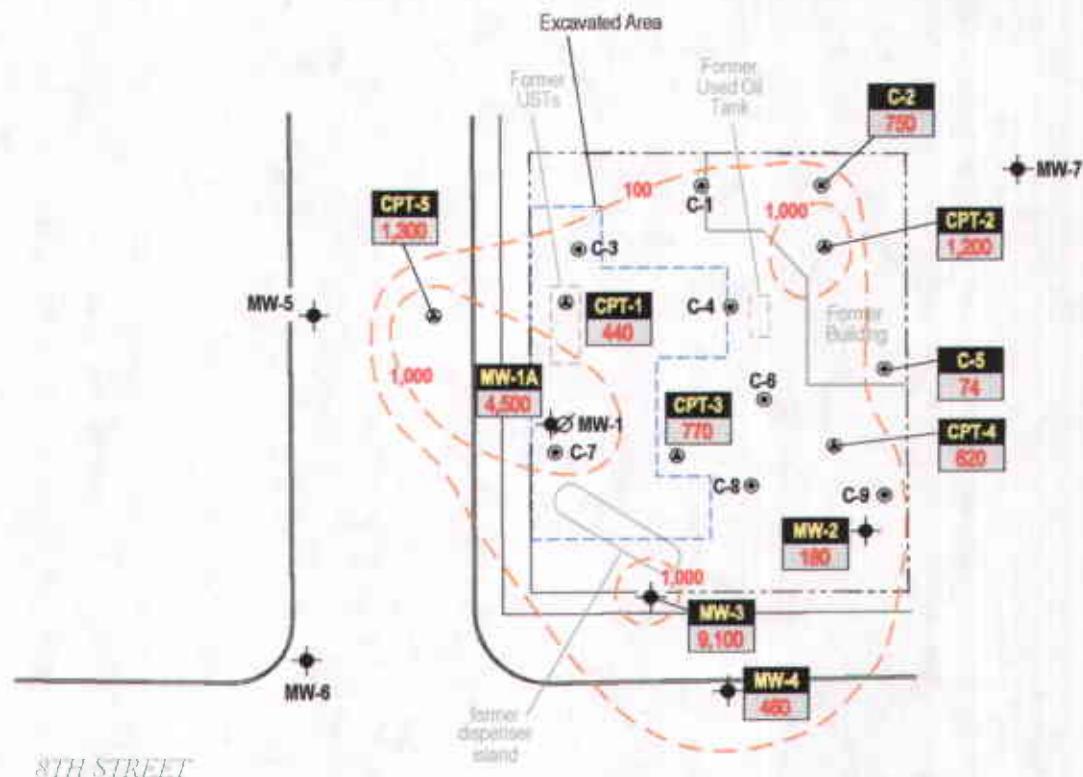


Chevron Service Station # 206145
800 Center Street
Oakland, California



C A M B R I A

**Isoconcentrations of TPHg
in Groundwater from 33 - 72 fbg.**



Church

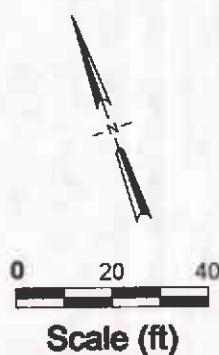
CENTER STREET

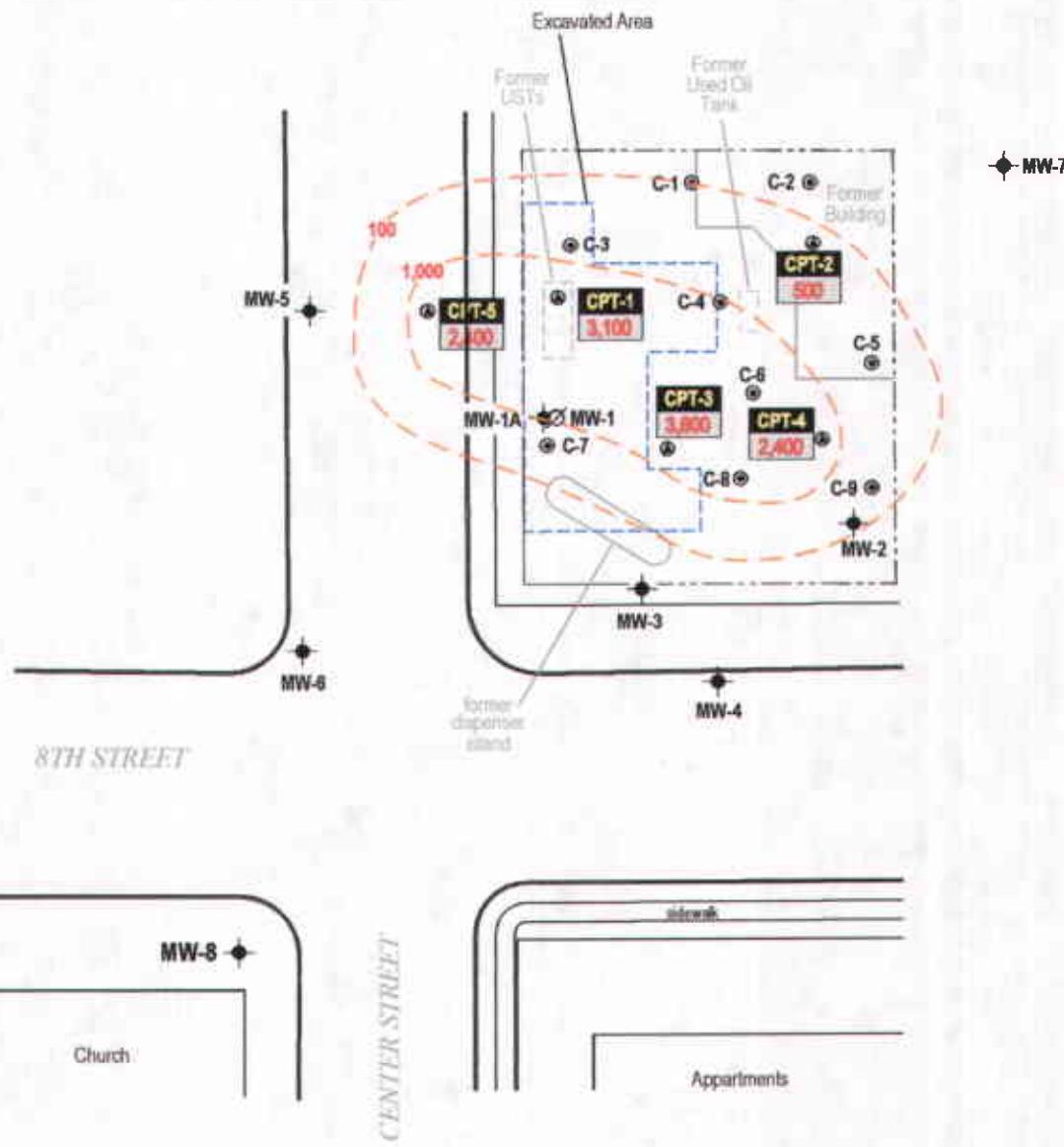
Apartment

sidewalk

EXPLANATION

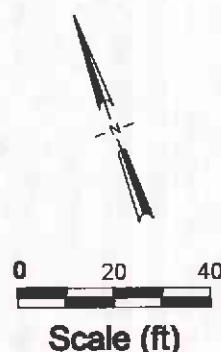
- CPT-1** ● CPT boring location
- C-1** ○ Soil boring location
- MW-1A** ● Monitoring well location
- MW-1** ○ Destroyed monitoring well location
- Well / Boring designation**
- TPHd** TPHd concentrations in groundwater from 12 - 32 fbg in parts per billion (ppb)
- 100** — Isoconcentration contour line dashed where inferred





EXPLANATION

- CPT-1 ● CPT boring location
- C-1 ● Soil boring location
- MW-1A • Monitoring well location
- MW-1 Ø Destroyed monitoring well location
- Well ID TPHd Well / Boring designation
- TPHd concentrations in groundwater from 33 - 72 fbg in parts per billion (ppb)
- TPHd concentration contour line dashed where inferred



Chevron Service Station # 206145
800 Center Street
Oakland, California


C A M B R I A

**Isoconcentrations of TPHd
in Groundwater from 33 - 72 fbg.**

APPENDIX H

Area Well Survey & Utility Survey Data

TABLE 4 - WELL SEARCH DATA
 Former Chevron Service Station No. 20-6145
 800 Center Street, Oakland California
 Half Mile Radius Around Site

Map ID	Well Owner	Well Location	Well Use	Well Status	State Well #	Year Installed	Well Depth (feet)	Screen Interval From (feet)	Screen Interval To (feet)	Well Diameter (inches)	Avg DTW (feet)
1	General Electric Company	1614 Campbell Street	IND	NA	NA	1918	200	NA	NA	NA	4
2	Carnation Dairy Facility	1310 4th Street	ABD	NA	NA	1990	20	NA	NA	2	NA
3	Shredded Wheat	Union and 14th Street	IRR	NA	NA	1915	55	NA	NA	NA	8
4	Red Star Yeast Company	1384 5th Street	IND	NA	NA	1946	350	NA	NA	12	43

Explanation

Well location data supplied by the County of Alameda Public Works Agency

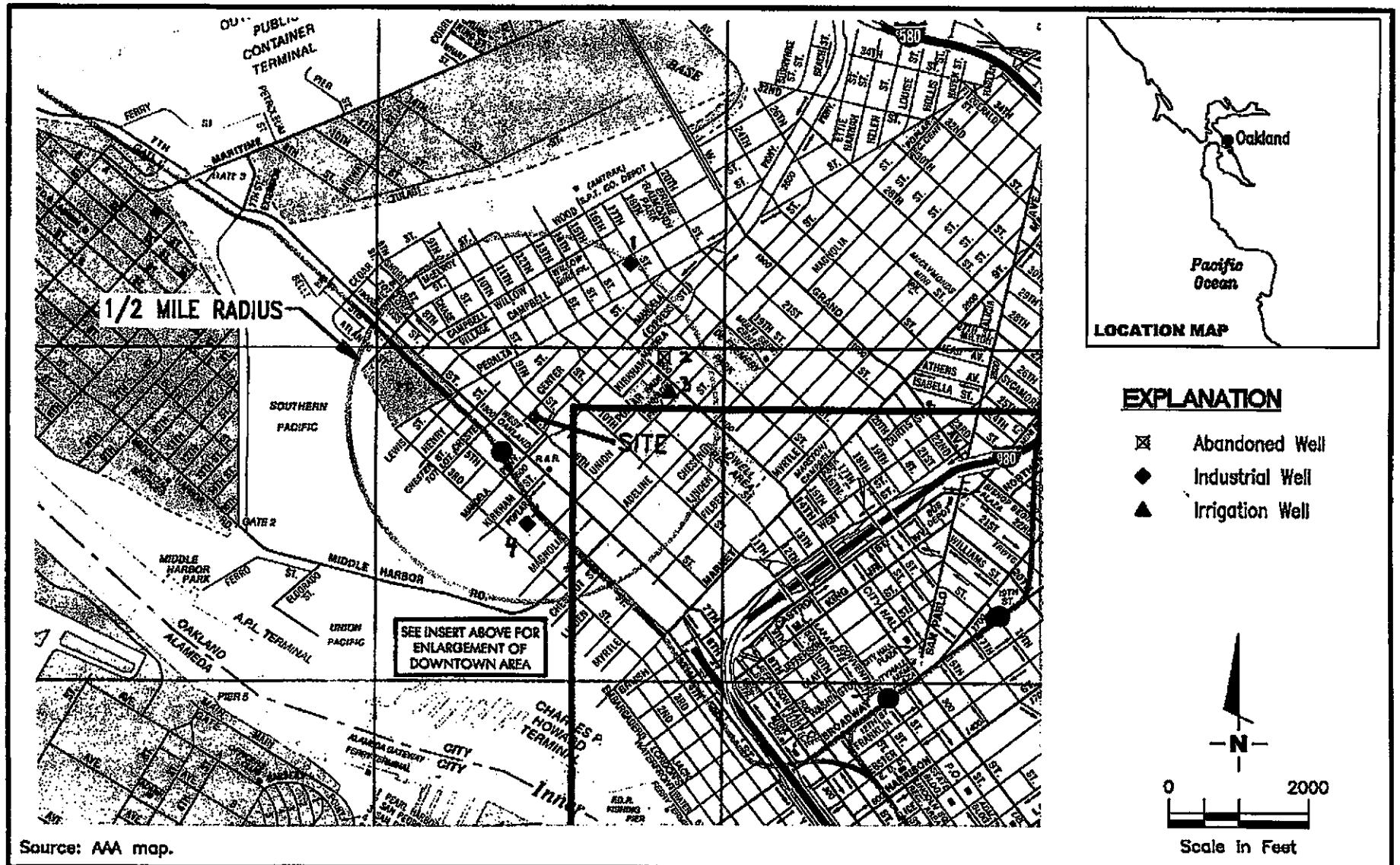
IND = Industrial Well

ABD = Abandoned Well

IRR = Irrigation Well

NA = Information Not Available

DWT = Depth To Water



GETTLER - RYAN INC.
8747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 651-7658

JOB NUMBER
347492

REVIEWED BY

WELL SURVEY MAP
Former Signal Oil Service Station No 20-6145
800 Center Street
Oakland, California

REVISED DATE

FILE NAME: P:\ENVIRO\CHEVRON\20-6145\VIC-20-6145.Dwg | Layout Tab: Well Survey 3-01



GERTLER - RYAN Inc.

UTILITY MAP
Former Chevron Service Station No. 20-6145

4

800 Center Street

Oakland, California

Product Number

DG2614SC-4C01

Revised by

ER

Sheet No.

100-20-6145

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APPENDIX I
ESL Summary Tables

TABLE B. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Shallow Soils (<3m bgs)
Groundwater IS NOT a Current or Potential Source of Drinking Water

CHEMICAL PARAMETER	¹Shallow Soil		³Groundwater (µg/L)
	²Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
ACENAPHTHENE	1.9E+01	1.9E+01	2.3E+01
ACENAPHTHYLENE	1.3E+01	1.3E+01	3.0E+01
ACETONE	5.0E-01	5.0E-01	1.5E+03
ALDRIN	3.2E-02	1.3E-01	1.3E-01
ANTHRACENE	2.8E+00	2.8E+00	7.3E-01
ANTIMONY	6.1E+00	4.0E+01	3.0E+01
ARSENIC	5.5E+00	5.5E+00	3.6E+01
BARIUM	7.5E+02	1.5E+03	1.0E+03
BENZENE	1.8E-01	3.8E-01	4.6E+01
BENZO(a)ANTHRACENE	3.8E-01	1.3E+00	2.7E-02
BENZO(b)FLUORANTHENE	3.8E-01	1.3E+00	2.9E-02
BENZO(k)FLUORANTHENE	3.8E-01	1.3E+00	4.0E-01
BENZO(g,h,i)PERYLENE	2.7E+01	2.7E+01	1.0E-01
BENZO(a)PYRENE	3.8E-02	1.3E-01	1.4E-02
BERYLLIUM	4.0E+00	8.0E+00	2.7E+00
BIPHENYL, 1,1-	6.5E+00	6.5E+00	5.0E+00
BIS(2-CHLOROETHYL)ETHER	3.7E-03	1.2E-02	6.1E+01
BIS(2-CHLOROISOPROPYL)ETHER	6.6E-01	6.6E-01	6.1E+01
BIS(2-ETHYLHEXYL)PHTHALATE	1.6E+02	5.3E+02	3.2E+01
BORON	1.6E+00	2.0E+00	1.6E+00
BROMODICHLOROMETHANE	1.4E-02	3.9E-02	1.7E+02
BROMOFORM	6.1E+01	6.9E+01	3.2E+03
BROMOMETHANE	2.2E-01	5.1E-01	1.6E+02
CADMIUM	1.7E+00	7.4E+00	1.1E+00
CARBON TETRACHLORIDE	1.2E-02	3.4E-02	9.3E+00
CHLORDANE	4.4E-01	1.7E+00	4.0E-03
CHLOROANILINE, p-	5.3E-02	5.3E-02	5.0E+00
CHLOROBENZENE	1.5E+00	1.5E+00	2.5E+01
CHLOROETHANE	6.3E-01	8.5E-01	1.2E+01
CHLOROFORM	8.8E-01	1.9E+00	3.3E+02
CHLOROMETHANE	7.0E-02	2.0E-01	4.1E+01
CHLOROPHENOL, 2-	1.2E-01	1.2E-01	1.8E+00
CHROMIUM (Total)	5.8E+01	5.8E+01	1.8E+02
CHROMIUM III	7.5E+02	7.5E+02	1.8E+02
CHROMIUM VI	1.8E+00	1.8E+00	1.1E+01
CHRYSENE	3.8E+00	1.3E+01	3.5E-01
COBALT	1.0E+01	1.0E+01	3.0E+00
COPPER	2.3E+02	2.3E+02	3.1E+00
CYANIDE (Free)	3.6E-03	3.6E-03	1.0E+00
DIBENZO(a,h)ANTHTRACENE	1.1E-01	3.8E-01	2.5E-01
DIBROMOCHLOROMETHANE	1.9E-02	5.4E-02	1.7E+02
1,2-DIBROMO-3-CHLOROPROPANE	4.5E-03	4.5E-03	2.0E-01
DIBROMOETHANE, 1,2-	7.3E-03	2.0E-02	1.5E+02
DICHLOROBENZENE, 1,2-	1.6E+00	1.6E+00	1.4E+01

TABLE B. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Shallow Soils (<3m bgs)
Groundwater IS NOT a Current or Potential Source of Drinking Water

CHEMICAL PARAMETER	¹Shallow Soil		³Groundwater (µg/L)
	²Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
DICHLOROBENZENE, 1,3-	7.4E+00	7.4E+00	6.5E+01
DICHLOROBENZENE, 1,4-	4.6E-02	1.3E-01	1.5E+01
DICHLOROBENZIDINE, 3,3-	4.0E-01	1.4E+00	2.5E+02
DICHLORODIPHENYLDICHLOROETHANE (DDD)	2.3E+00	9.0E+00	1.0E-03
DICHLORODIPHENYLDICHLOROETHYLENE (DDE)	1.6E+00	4.0E+00	1.0E-03
DICHLORODIPHENYLTRICHLOROETHANE (DDT)	1.6E+00	4.0E+00	1.0E-03
DICHLOROETHANE, 1,1-	3.2E-01	8.9E-01	4.7E+01
DICHLOROETHANE, 1,2-	2.5E-02	7.0E-02	2.0E+02
DICHLOROETHYLENE, 1,1-	4.3E+00	4.3E+00	2.5E+01
DICHLOROETHYLENE, Cis 1,2-	1.6E+00	3.6E+00	5.9E+02
DICHLOROETHYLENE, Trans 1,2-	3.1E+00	7.3E+00	5.9E+02
DICHLOROPHENOL, 2,4-	3.0E+00	3.0E+00	3.0E+00
DICHLOROPROPANE, 1,2-	5.1E-02	1.4E-01	1.0E+02
DICHLOROPROPENE, 1,3-	3.3E-02	9.3E-02	5.3E+01
DIELDRIN	2.3E-03	2.3E-03	1.9E-03
DIETHYLPHthalATE	3.5E-02	3.5E-02	1.5E+00
DIMETHYLPHthalATE	3.5E-02	3.5E-02	1.5E+00
DIMETHYLPHENOL, 2,4-	7.4E-01	7.4E-01	1.1E+02
DINITROPHENOL, 2,4-	2.1E-01	2.1E-01	7.5E+01
DINITROTOLUENE, 2,4-	8.6E-01	8.6E-01	1.2E+02
1,4 DIOXANE	1.8E+01	3.0E+01	5.0E+04
DIOXIN (2,3,7,8-TCDD)	4.6E-06	1.9E-05	5.0E-06
ENDOSULFAN	4.6E-03	4.6E-03	8.7E-03
ENDRIN	6.5E-04	6.5E-04	2.3E-03
ETHANOL	4.5E+01	4.5E+01	5.0E+04
ETHYLBENZENE	3.2E+01	3.2E+01	2.9E+02
FLUORANTHENE	4.0E+01	4.0E+01	8.0E+00
FLORENE	8.9E+00	8.9E+00	3.9E+00
HEPTACHLOR	1.4E-02	1.4E-02	3.8E-03
HEPTACHLOR EPOXIDE	1.5E-02	1.5E-02	3.8E-03
HEXAChlorobenzene	2.7E-01	9.6E-01	3.7E+00
HEXAChlorobutadiene	3.7E+00	2.2E+01	4.7E+00
HEXAChlorocyclohexane (gamma) LINDANE	4.9E-02	4.9E-02	8.0E-02
HEXAChloroethane	1.2E+01	4.1E+01	1.2E+01
INDENO(1,2,3-cd)PYRENE	3.8E-01	1.3E+00	2.9E-02
LEAD	1.5E+02	7.5E+02	2.5E+00
MERCURY	3.7E+00	1.0E+01	1.2E-02
METHOXYCHLOR	1.9E+01	1.9E+01	1.9E-02
METHYLENE CHLORIDE	5.2E-01	1.5E+00	2.2E+03
METHYL ETHYL KETONE	1.3E+01	1.3E+01	1.4E+04
METHYL ISOBUTYL KETONE	3.9E+00	3.9E+00	1.7E+02
METHYL MERCURY	1.2E+00	1.0E+01	3.0E-03
METHYLNAPHTHALENE (total 1- & 2-)	2.5E-01	2.5E-01	2.1E+00
METHYL TERT BUTYL ETHER	2.0E+00	5.6E+00	1.8E+03

TABLE B. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Shallow Soils (<3m bgs)
Groundwater IS NOT a Current or Potential Source of Drinking Water

CHEMICAL PARAMETER	¹Shallow Soil		³Groundwater (µg/L)
	²Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
MOLYBDENUM	4.0E+01	4.0E+01	2.4E+02
NAPHTHALENE	4.6E-01	1.5E+00	2.4E+01
NICKEL	1.5E+02	1.5E+02	8.2E+00
PENTACHLOROPHENOL	4.4E+00	5.0E+00	7.9E+00
PERCHLORATE	1.2E+00	1.2E+00	6.0E+02
PHENANTHRENE	1.1E+01	1.1E+01	4.6E+00
PHENOL	1.9E+01	1.9E+01	1.3E+03
POLYCHLORINATED BIPHENYLS (PCBs)	2.2E-01	7.4E-01	1.4E-02
PYRENE	8.5E+01	8.5E+01	2.0E+00
SELENIUM	1.0E+01	1.0E+01	5.0E+00
SILVER	2.0E+01	4.0E+01	1.9E-01
STYRENE	1.5E+01	1.5E+01	1.0E+02
tert-BUTYL ALCOHOL	5.7E+01	1.1E+02	1.8E+04
TETRACHLOROETHANE, 1,1,1,2-	3.0E+00	6.9E+00	9.3E+02
TETRACHLOROETHANE, 1,1,2,2-	9.1E-03	2.5E-02	1.9E+02
TETRACHLOROETHYLENE	8.7E-02	2.4E-01	1.2E+02
THALLIUM	1.0E+00	1.3E+01	2.0E+01
TOLUENE	9.3E+00	9.3E+00	1.3E+02
TOXAPHENE	4.2E-04	4.2E-04	2.0E-04
TPH (gasolines)	1.0E+02	4.0E+02	5.0E+02
TPH (middle distillates)	1.0E+02	5.0E+02	6.4E+02
TPH (residual fuels)	5.0E+02	1.0E+03	6.4E+02
TRICHLOROBENZENE, 1,2,4-	3.8E-01	1.0E+00	2.5E+01
TRICHLOROETHANE, 1,1,1-	7.8E+00	7.8E+00	6.2E+01
TRICHLOROETHANE, 1,1,2-	3.2E-02	8.9E-02	3.5E+02
TRICHLOROETHYLENE	2.6E-01	7.3E-01	3.6E+02
TRICHLOROPHENOL, 2,4,5-	1.8E-01	1.8E-01	1.1E+01
TRICHLOROPHENOL, 2,4,6-	6.9E+00	1.0E+01	4.9E+02
VANADIUM	1.1E+02	2.0E+02	1.9E+01

TABLE B. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Shallow Soils (<3m bgs)
Groundwater IS NOT a Current or Potential Source of Drinking Water

CHEMICAL PARAMETER	¹Shallow Soil		³Groundwater (µg/L)
	²Residential Land Use (mg/kg)	Commercial/ Industrial Land Use Only (mg/kg)	
VINYL CHLORIDE	6.7E-03	1.9E-02	3.8E+00
XYLEMES	1.1E+01	1.1E+01	1.0E+02
ZINC	6.0E+02	6.0E+02	8.1E+01
Electrical Conductivity (mS/cm, USEPA Method 120.1 MOD)	2.0	4.0	not applicable
Sodium Adsorption Ratio	5.0	12	not applicable

Red: Updated with respect to ESLs presented in July 2003 document.

Notes:

1. Shallow soils defined as soils less than or equal to 3 meters (approximately 10 feet) below ground surface.
2. Category "Residential Land Use" generally considered adequate for other sensitive uses (e.g., day-care centers, hospitals, etc.)
3. Assumes potential discharge of groundwater into marine or estuary surface water system.

Source of soil ESLs: Refer to Appendix 1, Tables A-1 and A-2.

Source of groundwater ESLs: Refer to Appendix 1, Table F-1b.

Soil data should be reported on dry-weight basis (see Appendix 1, Section 6.2).

Soil ESLs intended to address direct-exposure, groundwater protection, ecologic (urban areas) and nuisance concerns under noted land-use scenarios. Soil gas data should be collected for additional evaluation of potential indoor-air impacts at sites with significant areas of VOC-impacted soil. See Section 2.6 and Table E.

Groundwater ESLs intended to address surface water, indoor-air and nuisance concerns. Use in conjunction with soil gas screening levels to more closely evaluate potential impacts to indoor-air if groundwater screening levels for this concern approached or exceeded (refer to Section 2.6 and Appendix 1, Table F-1a).

Aquatic habitat goals for bioaccumulation concerns not considered in selection of groundwater goals (refer to Section 2.7).

Refer to appendices for summary of ESL components.

Soil and water ESLs for ethanol based on gross contamination concerns (see Appendix 1, Chapter 5 and related tables).

TPH -Total Petroleum Hydrocarbons. TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g., BTEX, PAHs, oxidizers, etc.). See Volume 1, Section 2.2 and Appendix 1, Chapter 5.

TABLE E. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Indoor Air and Soil Gas
(Vapor Intrusion Concerns)

CHEMICAL PARAMETER	INDOOR AIR SCREENING LEVELS		² SHALLOW SOIL GAS SCREENING LEVELS	
	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)
ACENAPHTHENE	4.4E+01	6.1E+01	4.4E+04	1.2E+05
ACENAPHTHYLENE	2.9E+01	4.1E+01	2.9E+04	8.2E+04
ACETONE	6.6E+02	9.2E+02	6.6E+05	1.8E+06
ALDRIN				
ANTHRACENE	2.2E+02	3.1E+02	2.2E+05	6.1E+05
ANTIMONY				
ARSENIC				
BARIUM				
BENZENE	8.5E-02	1.4E-01	8.5E+01	2.9E+02
BENZO(a)ANTHRACENE				
BENZO(b)FLUORANTHENE				
BENZO(k)FLUORANTHENE				
BENZO(g,h,i)PERYLENE				
BENZO(a)PYRENE				
BERYLLIUM				
BIPHENYL, 1,1-	3.7E+01	5.1E+01	3.7E+04	1.0E+05
BIS(2-CHLOROETHYL)ETHER	3.4E-03	5.7E-03	3.4E+00	1.1E+01
BIS(2-CHLOROISOPROPYL)ETHER	2.4E-01	4.1E-01	2.4E+02	8.2E+02
BIS(2-ETHYLHEXYL)PHTHALATE				
BORON				
BROMODICHLOROMETHANE	6.6E-02	1.1E-01	6.6E+01	2.2E+02
BROMOFORM				
BROMOMETHANE	1.0E+00	1.4E+00	1.0E+03	2.9E+03
CADMIUM				
CARBON TETRACHLORIDE	5.7E-02	9.5E-02	5.7E+01	1.9E+02
CHLORDANE				
CHLOROANILINE, p-				
CHLOROBENZENE	1.2E+01	1.7E+01	1.2E+04	3.5E+04
CHLOROETHANE	2.9E+00	4.9E+00	2.9E+03	9.9E+03
CHLOROFORM	4.5E-01	7.5E-01	4.5E+02	1.5E+03
CHLOROMETHANE	3.3E-01	5.5E-01	3.3E+02	1.1E+03
CHLOROPHENOL, 2-	3.7E+00	5.1E+00	3.7E+03	1.0E+04
CHROMIUM (Total)				
CHROMIUM III				
CHROMIUM VI				
CHRYSENE				
COBALT				
COPPER				
CYANIDE (Free)				
DIBENZO(a,h)ANTHTRACENE				
DIBROMOCHLOROMETHANE	9.1E-02	1.5E-01	9.1E+01	3.0E+02
1,2-DIBROMO-3-CHLOROPROPANE	1.2E-03	2.0E-03	1.2E+00	4.1E+00
DIBROMOETHANE, 1,2-	3.4E-02	5.7E-02	3.4E+01	1.1E+02
DICHLOROBENZENE, 1,2-	4.2E+01	5.8E+01	4.2E+04	1.2E+05

TABLE E. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Indoor Air and Soil Gas
(Vapor Intrusion Concerns)

CHEMICAL PARAMETER	INDOOR AIR SCREENING LEVELS		SHALLOW SOIL GAS SCREENING LEVELS	
	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)
DICHLOROBENZENE, 1,3-	2.2E+01	3.1E+01	2.2E+04	6.1E+04
DICHLOROBENZENE, 1,4-	2.1E-01	3.6E-01	2.1E+02	7.2E+02
DICHLOROBENZIDINE, 3,3-				
DICHLORODIPHENYLDICHLOROETHANE (DDD)				
DICHLORODIPHENYLDICHLOROETHYLENE (DDE)				
DICHLORODIPHENYLTRICHLOROETHANE (DDT)				
DICHLOROETHANE, 1,1-	1.5E+00	2.5E+00	1.5E+03	5.0E+03
DICHLOROETHANE, 1,2-	1.2E-01	2.0E-01	1.2E+02	3.9E+02
DICHLOROETHYLENE, 1,1-	4.2E+01	5.8E+01	4.2E+04	1.2E+05
DICHLOROETHYLENE, Cis 1,2-	7.3E+00	1.0E+01	7.3E+03	2.0E+04
DICHLOROETHYLENE, Trans 1,2-	1.5E+01	2.0E+01	1.5E+04	4.1E+04
DICHLOROPHENOL, 2,4-				
DICHLOROPROPANE, 1,2-	2.4E-01	4.0E-01	2.4E+02	7.9E+02
DICHLOROPROPENE, 1,3-	1.5E-01	2.6E-01	1.5E+02	5.2E+02
DIELDRIN				
DIETHYLPHthalate				
DIMETHYLPHthalate				
DIMETHYLPHENOL, 2,4-	1.5E+01	2.0E+01	1.5E+04	4.1E+04
DINITROPHENOL, 2,4-				
DINITROTOLUENE, 2,4-				
1,4 DIOXANE				
DIOXIN (2,3,7,8-TCDD)				
ENDOSULFAN				
ENDRIN				
ETHANOL			1.9E+07	3.8E+07
ETHYLBENZENE	4.2E+02	5.8E+02	4.2E+05	1.2E+06
FLUORANTHENE				
FLUORENE	2.9E+01	4.1E+01	2.9E+04	8.2E+04
HEPTACHLOR				
HEPTACHLOR EPOXIDE				
HEXACHLOROBENZENE				
HEXACHLOROBUTADIENE				
HEXACHLOROCYCLOHEXANE (gamma) LINDANE				
HEXACHLOROETHANE				
INDENO(1,2,3-cd)PYRENE				
LEAD				
MERCURY	1.9E-02	2.7E-02	1.9E+01	5.3E+01
METHOXYCHLOR				
METHYLENE CHLORIDE	2.4E+00	4.1E+00	2.4E+03	8.2E+03
METHYL ETHYL KETONE	2.1E+02	3.0E+02	2.1E+05	5.9E+05
METHYL ISOBUTYL KETONE	1.7E+01	2.4E+01	1.7E+04	4.7E+04
METHYL MERCURY				
METHYLNAPHTHALENE (total 1- & 2-)	2.9E+01	4.1E+01	2.9E+04	8.2E+04
METHYL TERT BUTYL ETHER	9.4E+00	1.6E+01	9.4E+03	3.1E+04

TABLE E. ENVIRONMENTAL SCREENING LEVELS (ESLs)
Indoor Air and Soil Gas
(Vapor Intrusion Concerns)

CHEMICAL PARAMETER	INDOOR AIR SCREENING LEVELS		SHALLOW SOIL GAS SCREENING LEVELS	
	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)	¹ Residential Land Use (ug/m ³)	Commercial/ Industrial Land Use Only (ug/m ³)
MOLYBDENUM				
NAPHTHALENE	7.1E-02	1.2E-01	7.1E+01	2.4E+02
NICKEL				
PENTACHLOROPHENOL				
PERCHLORATE				
PHENANTHRENE	2.9E+01	4.1E+01	2.9E+04	8.2E+04
PHENOL				
POLYCHLORINATED BIPHENYLS (PCBs)				
PYRENE	2.2E+01	3.1E+01	2.2E+04	6.1E+04
SELENIUM				
SILVER				
STYRENE	2.1E+02	3.0E+02	2.1E+05	5.9E+05
tert-BUTYL ALCOHOL	2.6E+00	4.3E+00	2.6E+03	8.7E+03
TETRACHLOROETHANE, 1,1,1,2-	3.3E-01	5.5E-01	3.3E+02	1.1E+03
TETRACHLOROETHANE, 1,1,2,2-	4.3E-02	7.2E-02	4.3E+01	1.4E+02
TETRACHLOROETHYLENE	4.1E-01	6.8E-01	4.1E+02	1.4E+03
THALLIUM				
TOLUENE	6.3E+01	8.8E+01	6.3E+04	1.8E+05
TOXAPHENE				
TPH (gasolines)	2.6E+01	3.6E+01	2.6E+04	7.2E+04
TPH (middle distillates)	2.6E+01	3.6E+01	2.6E+04	7.2E+04
TPH (residual fuels)				
TRICHLOROBENZENE, 1,2,4-	7.3E-01	1.0E+00	7.3E+02	2.0E+03
TRICHLOROETHANE, 1,1,1-	4.6E+02	6.4E+02	4.6E+05	1.3E+06
TRICHLOROETHANE, 1,1,2-	1.5E-01	2.5E-01	1.5E+02	5.0E+02
TRICHLOROETHYLENE	1.2E+00	2.0E+00	1.2E+03	4.1E+03
TRICHLOROPHENOL, 2,4,5-	7.3E+01	1.0E+02	7.3E+04	2.0E+05
TRICHLOROPHENOL, 2,4,6-				
VANADIUM				
VINYL CHLORIDE	3.2E-02	5.3E-02	3.2E+01	1.1E+02
XYLENES	1.5E+02	2.0E+02	1.5E+05	4.1E+05
ZINC				