HAGEMAN-AGUIAR, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

REPORT OF

SUBSURFACE INVESTIGATION

GOLDEN GATE PETROLEUM

421 - 23rd Avenue
Oakland, California

November 23, 1999

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I. INTRODUCTION

The subject site is the Golden Gate Petroleum Oakland Cardlock located at 421-23rd Avenue in Oakland, California. The location of the site is shown in Figure 1. The current layout of the site is shown in Figure 2.

Background Information

The site has been a service station since 1976. In August 1998, five single walled underground storage tanks, associated piping and dispenser islands were removed from the property. The underground storage tanks were used for the storage of premium unleaded gasoline, regular unleaded gasoline and diesel fuel. The underground storage tanks were replaced with two 20,000 gallon double walled fiberglass underground storage tanks.

During the tank removal activities, approximately 1,300 cubic yards of hydrocarbon impacted soil was excavated and removed from the site. In addition, approximately 28,000 gallons of groundwater and separate phase hydrocarbons were removed.

Laboratory analysis of soil and groundwater samples collected from the tank cavity revealed elevated levels of hydrocarbons in the soil and groundwater. As a result, a collector trench and the two extraction casings (casing-1 and casing-2 in Figure 2), were placed within the new tank backfill.

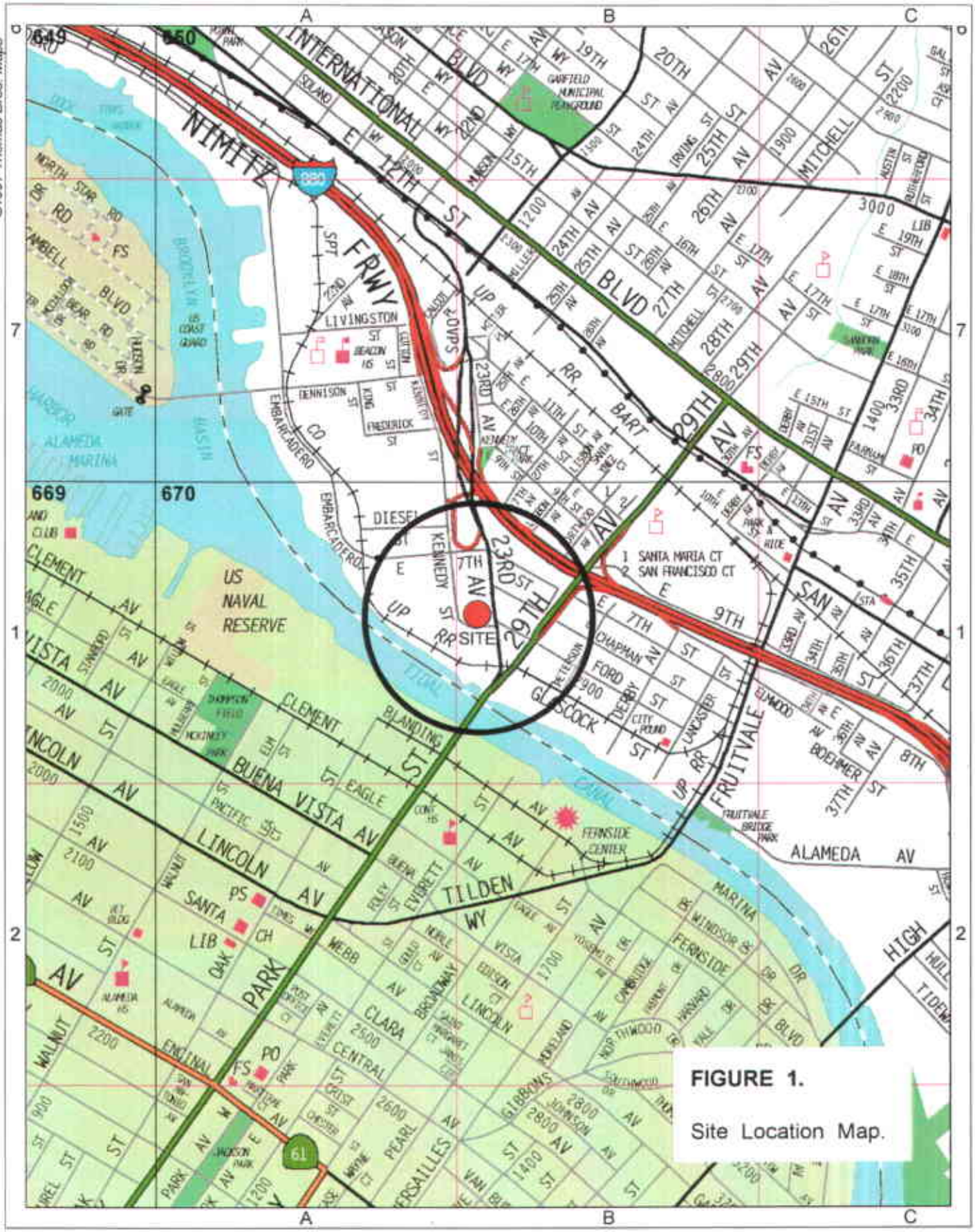


FIGURE 1.

Site Location Map.

● *SITE: 421-23rd Ave, Oakland, CA, Page & Grid 670 B1*

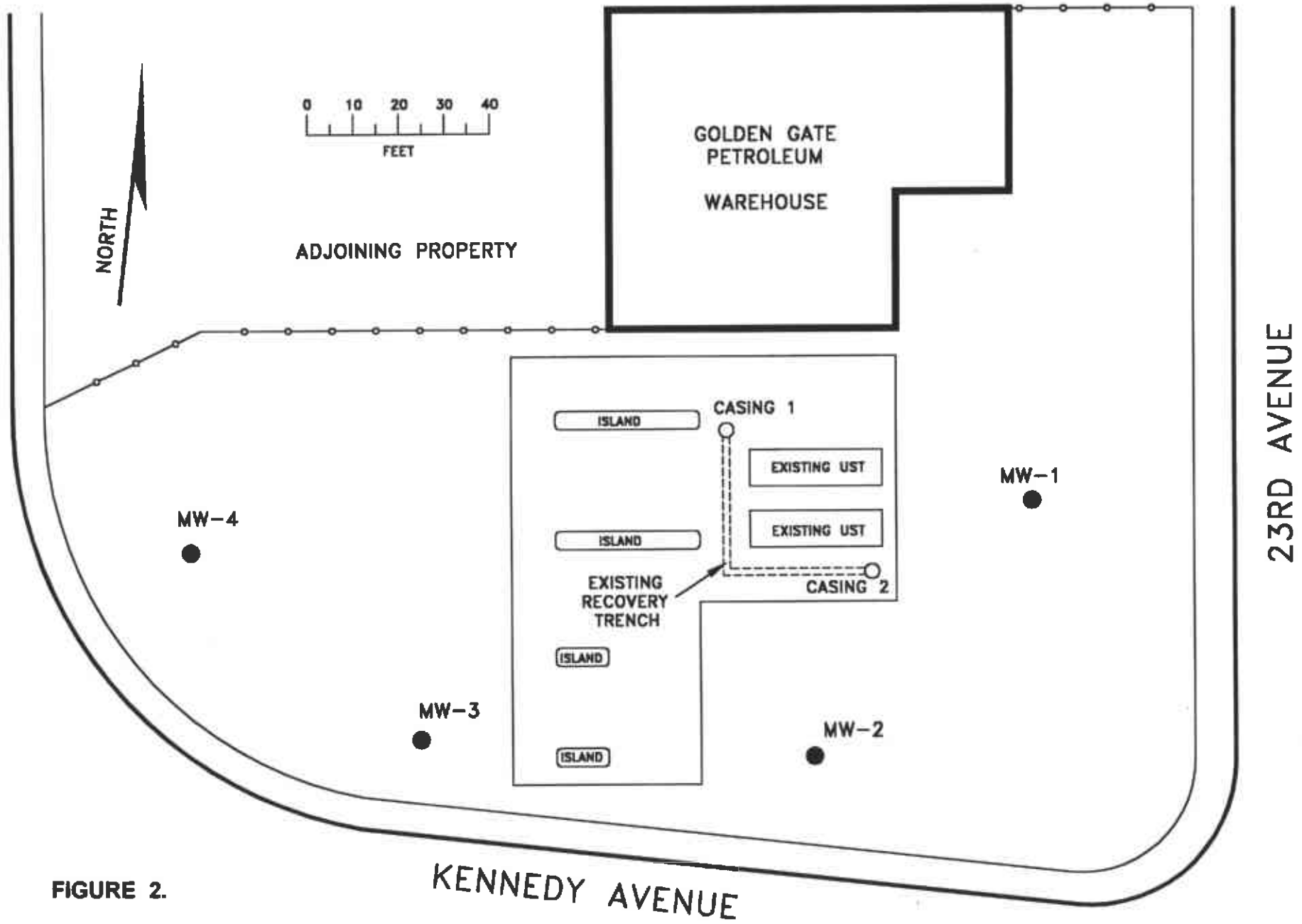


FIGURE 2.

Site Map.

The removal of the underground storage tanks, along with contaminated soil and groundwater, was conducted by Bonkowski & Associates, in accordance with the "*Supplemental IRM Workplan*" by Bonkowski & Associates, dated August 18, 1998.

Purpose of Investigation

The purpose of this subsurface investigation was to assess the environmental conditions of the soil and groundwater beneath the site prior to the possible implementation of future corrective action. The scope of work included 1) the collection of soil and "grab" groundwater samples from eight "Geoprobe" borings and 2) the installation and sampling of four on-site shallow groundwater monitoring wells.

All of the work described in this report was performed in accordance with the "*Site Assessment and Corrective Action Workplan - Golden Gate Petroleum*" by Bonkowski & Associates, dated November 16, 1998. This workplan was approved by Barney Chan of the Alameda County Environmental Health Services in a letter dated November 25, 1998. Copies of various correspondence pertaining to the site is provided in Attachment A.

II. SITE DESCRIPTION

Regional Hydrogeology

The location of the site with respect to surface topography and various hydrologic features is shown in Figure 3. As shown on this map, the site is located on a low-lying portion of the Bay Plain at a surface elevation of approximately 10 feet MSL. The site is located within approximately 500 feet of the Oakland Inner Harbor and approximately 3 miles west of the Oakland Hills.

On this portion of the low-lying Bay Plain in close proximity to San Francisco Bay, the soils beneath the subject property consist primarily of fine grain soils (silts and clays). The near surface soils are described as younger alluvium, mainly stream and channel deposits interbedded with beach and dune sand, and marine terrace deposits (Geologic Map of California, San Francisco Sheet, State of California Division of Mines and Geology, 1980). The majority of shallow groundwater movement occurs in the thin sand and gravel layers and/or "stringers". Bedrock is likely to occur at a depth of greater than 50 feet beneath the subject property.

Based upon the surface topography, as well as the various hydrologic features shown in Figure 3, the general regional shallow groundwater can be expected to flow from the Oakland Hills to hills to the northeast of the site (area of groundwater recharge) and move southwesterly toward the Oakland Inner Harbor (area of discharge).

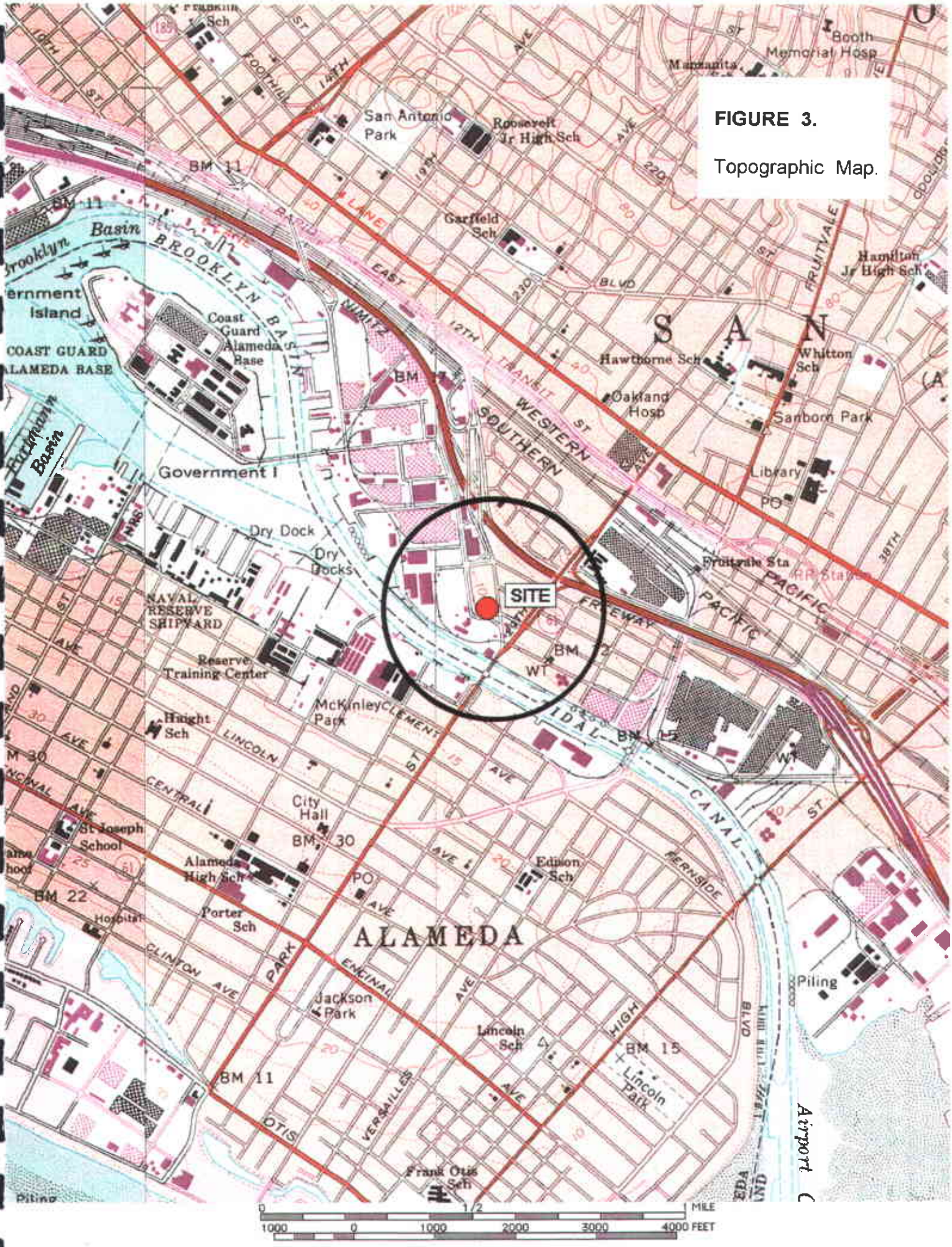


FIGURE 3.

Topographic Map.

On-Site Hydrogeology

Based upon the data obtained from the various soil borings and monitoring well installations that have been conducted, the subject property is underlain by fine-grained alluvial deposits, the major portion of which appear to consist of clay and clay-silt mixtures, with the shallow groundwater found to occur in narrow layers of clayey sand & gravel. Saturated soils were typically first encountered at depths ranging between 11 and 15 feet below ground surface, followed by a significant rise in the borehole water level. The location of saturated soil with respect to the stabilized water level may be indicative of somewhat confined groundwater conditions.

As described in Section V of this report, static shallow groundwater table elevations were found to range between 8.25 and 9.65 below ground surface. The shallow groundwater flow was determined to be in a southwesterly direction, toward the Oakland Inner Harbor. This flow direction is consistent with the predicted regional groundwater movement.

III. FIELD WORK: GEOPROBE BORINGS

Boring Locations

The locations of the eight "Geoprobe" borings are shown in Figure 4. The boring locations are consistent with the approved workplan that was previously prepared by Bonkowski & Associates.

Permitting

Prior to the commencement of the field work, a drilling permit was obtained from the Alameda County Public Works Agency (Permit No. 99WR628), dated October 26, 1999. A copy of the permit is provided in Attachment A.

Barney Chan of the Alameda County Environmental Health Department made a field visit on October 8,1999, in order to inspect the soil boring field work that was being conducted.

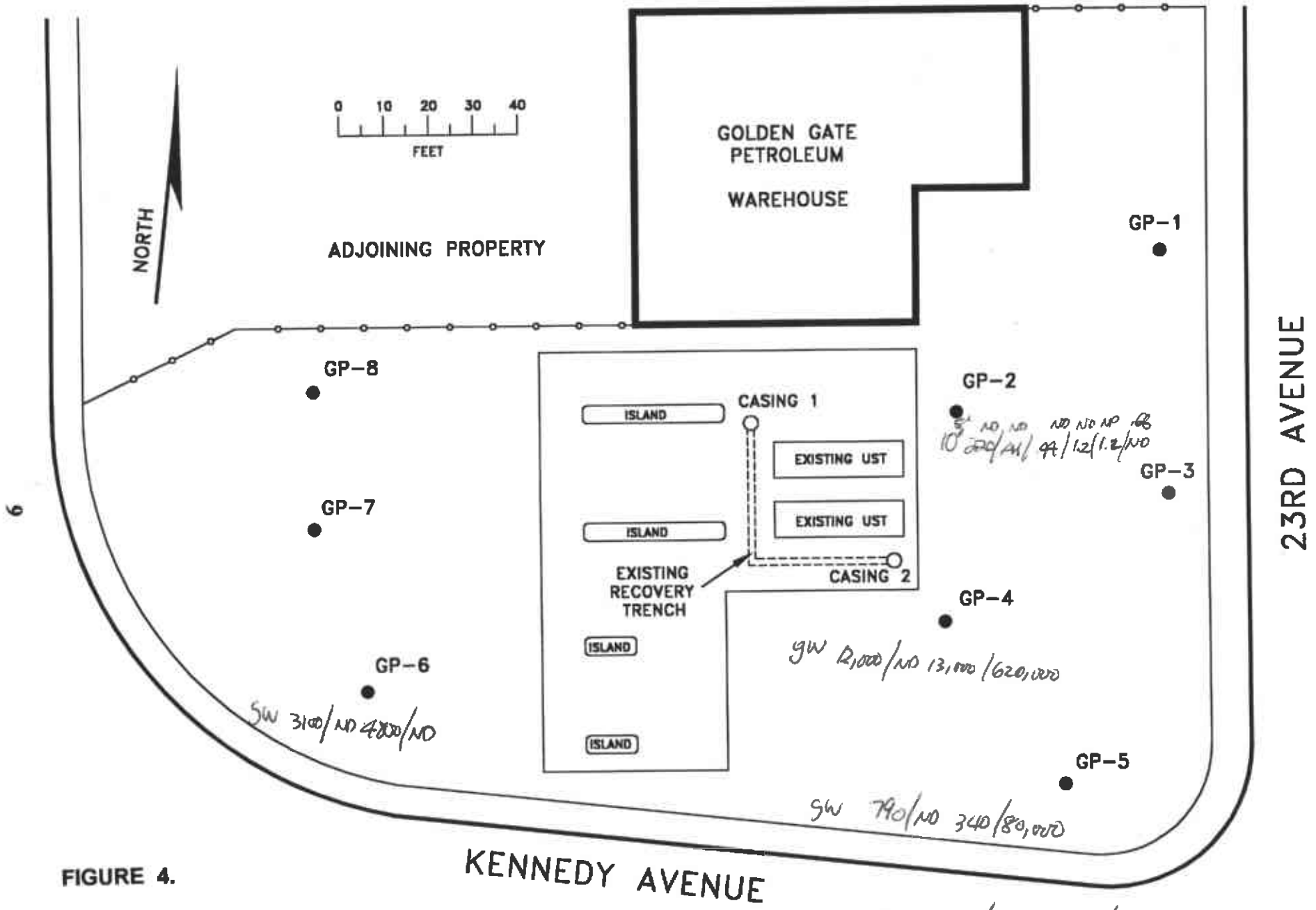


FIGURE 4.

"Geoprobe" Boring Locations.

GW TPHg/BTEX MTBE/TPHd ppb
Soil TPHg/BTEX MTBE ppm

Soil Sampling

On October 8, 1999, the eight "Geoprobe" borings GP-1 through GP-8 were drilled and sampled. The field work was conducted by Gregg Drilling of Martinez, California. At each location, a "Geoprobe" macrocore barrel was hydraulically driven into the ground. For each drive, the entire 4 feet of barrel length was fitted with a clear acrylic plastic insert. At the desired sampling depth, the plastic "Geoprobe" insert was cut to produce a six-inch cylinder of soil packed in clear plastic. The ends of the plastic cylinder were then sealed with aluminum foil, over which was placed plastic end-caps and sealed with duct tape. The samples were immediately placed on ice, then delivered under chain-of-custody to the laboratory at the conclusion of the field work.

Soil samples for chemical analyses were collected at 5-foot intervals until the shallow groundwater table was encountered at a depth that ranged between 11 and 15 feet below ground surface. In addition to the physical sample collection, soil samples were screened in the field at several depth intervals for Petroleum Hydrocarbon contamination using a Flame Ionization Detector (FID).

"Grab" Groundwater Sampling

At each "Geoprobe" location, new 3/4-inch PVC slotted screen and blank casing was inserted to the bottom of the borehole. Groundwater samples were then collected using a stainless steel bailer. During the course of the field work, "grab" groundwater samples were also collected from existing backfill casings CASING-1 and CASING-2. The water samples were placed inside appropriate 40 mL VOA vials bottles free of any headspace and 1-liter amber bottles. The groundwater samples were immediately placed on crushed

ice, then transported under chain-of-custody to the laboratory upon completion of the field work.

Boring Logs

Each of the eight "Geoprobe" borings were logged in the field by Gary Aguiar, Registered Civil Engineer #34262. The boring logs are provided in Attachment B. As shown by these boring logs, the site is largely underlain by Clay (CL-CH), with the shallow groundwater found to occur in Clayey Sand (SC) and Clayey Sand & Gravel (GC) located beneath. Saturated soils were typically first encountered at depths ranging between 11 and 15 feet below ground surface. The location of saturated soil with respect to the stabilized water level may be indicative of somewhat confined groundwater conditions. After allowing water levels to stabilize in the open boreholes, static water levels were measured at approximately 9 feet below ground surface. The location of saturated soil with respect to the stabilized water level may be indicative of somewhat confined groundwater conditions.

Borehole Sealing

Following the completion of the soil sampling operation, the temporary PVC screen and blank casing was removed, and each borehole was filled with neat cement grout up to the ground surface.

Equipment Decontamination

Prior to the conduct of field work, all equipment, including "Geoprobe" barrels, had been cleaned by Gregg Drilling personnel before arriving at the site. Field decontamination of sampling equipment was conducted by washing in a water/TSP solution, followed by a double water rinse.

IV. FIELD WORK: WELL INSTALLATIONS

Well Locations

The locations of shallow groundwater monitoring wells MW-1, MW-2, MW-3 and MW-4 are shown in Figure 5. Although the locations of the wells are generally consistent with the approved workplan that was previously prepared by Bonkowski & Associates, the locations of wells MW-1 and MW-4 were modified to reflect the plume configurations for dissolved Gasoline and MTBE that were apparent from the results of the "Geoprobe" groundwater sampling. The modification of the well locations was approved by Barney Chan at the Alameda County Environmental Health Department.

Permitting

Prior to the commencement of the monitoring well installations, a drilling permit was obtained from the Alameda County Public Works Agency (Permit No. 99WR589), dated October 5, 1999. A copy of the permit is provided in Attachment A.

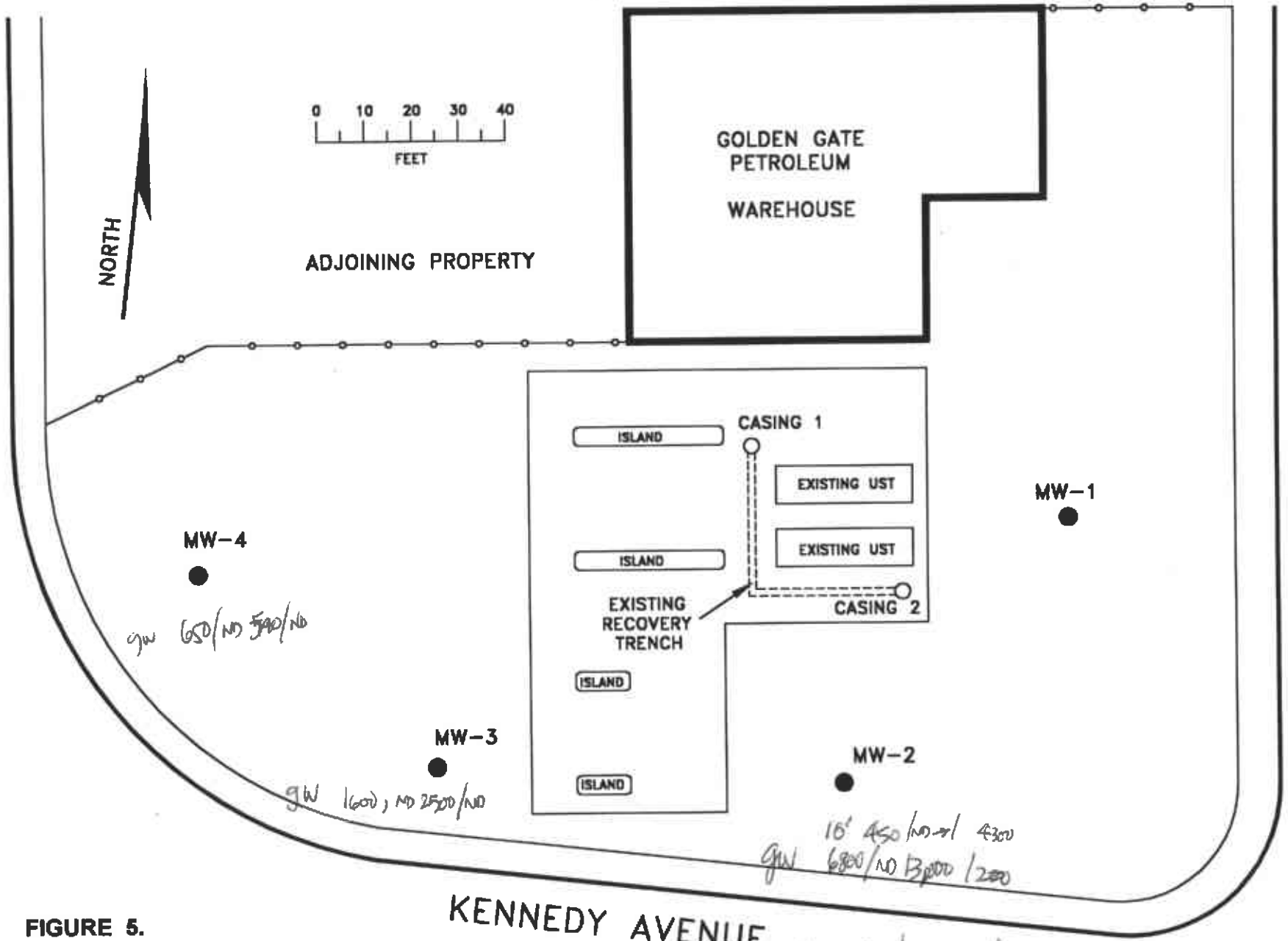


FIGURE 5.

Monitoring Well Locations.

Well Installations

On November 1, 1999, the four shallow groundwater monitoring wells MW-1, MW-2, MW-3 and MW-4, were installed. The field work was conducted by Gregg Drilling of Martinez, California, using a truck mounted drill rig equipped with both 8-inch and 10-inch hollow-stem augers.

During the drilling operation at each location, soil samples for chemical analyses were collected at 5-foot intervals until the shallow groundwater table was encountered at a depth of approximately 10 feet below ground surface. Each soil sample was collected by driving directly into the native soil below the augers with a 2-inch split-barrel sampler fitted with clean brass liners. The ends of one 6-inch long brass liner from each 18-inch drive were sealed with Teflon film, over which was placed a plastic end-cap. All samples were immediately placed on crushed ice, then transported under chain-of-custody to the laboratory upon completion of the field work.

Well borings MW-1, MW-2, MW-3 and MW-4 were each extended to a depth of 20 feet below ground surface. Wells MW-1 and MW-4 were set into 8-inch diameter boreholes and were each cased to approximately five feet above the water table with 2-inch PVC slotted screen pipe (0.02" slots). Wells MW-2 and MW-3 were set into 10-inch diameter boreholes and were each cased to approximately five feet above the water table with 4-inch PVC slotted screen pipe (0.02" slots). The annular space of the wells were packed with No. 3 Monterey sand to approximately one to two feet above the top of the screened section. Approximately one foot of wetted bentonite pellets were placed upon the sand pack, followed by a neat Portland cement grout seal up to two feet below ground surface and then filled to finish grade with concrete. The top of the PVC casings were fitted with a water tight locking cap and a water-tight steel locking traffic lid. Well construction diagrams are provided on the boring logs in Attachment B.

Boring Logs

Each of the well borings were logged in the field by Fred Hayden, R.G., Staff Geologist, under the supervision of Gary Aguiar, P.E. The boring logs are provided in Attachment B.

Equipment Decontamination

Prior to the drilling of the monitoring well boring, all drilling equipment, including augers, drill stem, and split barrel samplers, was steam-cleaned. All steam-cleaning was conducted by Gregg Drilling at their permitted steam-cleaning facility located in Martinez, California. All split-barrel samplers, brass tubes, and other sampling equipment were decontaminated by washing in a water and TSP solution, followed by a double water rinse.

Well Development and Sampling

On November 9, 1999, the newly installed monitoring wells MW-1, MW-2, MW-3 and MW-4 were developed. During the development of the wells, groundwater and silt were removed from each well casing using a PVC bailer. An insignificant amount of silt and clay were removed from the newly installed casings. Monitoring wells MW-3 and MW-4 went dry during the development process. Well development logs are available in Attachment C.

On November 11, 1999, monitoring wells MW-1, MW-2, MW-3 and MW-4 were sampled. In addition, existing backfill casings CASING-1 and CASING-2 were also sampled. Prior to groundwater sampling, all wells were purged by bailing several casing volumes of water. Monitoring wells MW-3 and MW-4 went dry during the purging process. Field conductivity, temperature, and pH meters were present on-site during the well sampling. As the purging process proceeded, the pH, conductivity and temperature were monitored. Groundwater samples were subsequently collected from each well using clean disposable Teflon bailers. The water samples were placed inside appropriate 40 mL VOA vials free of any headspace and 1-liter amber bottles. The samples were immediately placed on crushed ice, then transported under chain-of-custody, via courier, to the laboratory at the end of the work day.

At the time each monitoring well was sampled, the following information was recorded in the field: 1) depth-to-water prior to purging, using an electrical well sounding tape, 2) identification of any floating product, sheen, or odor prior to purging, using a clear Teflon bailer, 3) sample temperature, 4) specific conductance, and 5) pH of the sample. Well sampling logs are provided in Attachment C.

Waste Generation

All drill cuttings were drummed and stored on-site. All water removed from the wells during development and purging was drummed and stored on-site. The ultimate disposition of the drill cuttings and the wastewater is the responsibility of Golden Gate Petroleum and is beyond the scope of work described in this report.

V. RESULTS OF WATER LEVEL MEASUREMENTS

Top-of-Casing Survey

The top-of-casing elevation for each on-site well was surveyed on November 19, 1999, by Hageman-Aguiar, Inc. Well survey data are provided in Attachment D.

Shallow Groundwater Flow Direction

The shallow water table elevations were measured by Hageman-Aguiar, Inc., on November 11, 1999. These measurements are shown in Table 1. Figure 6 presents a contour map for the shallow groundwater table beneath the site. As shown in this figure, the shallow groundwater beneath the site appears to flow in a southwesterly direction.

Shallow Groundwater Table Hydraulic Gradient

As shown in Figure 6, the shallow groundwater table beneath the site has a calculated hydraulic gradient of dH/dL = 0.30'/130' = 0.0023 ft/ft.

TABLE 1.
Shallow Water Table Elevations

November 11, 1999

Well	Top of Casing Elevation (feet)	Depth to Water (feet)	Water Table Elevation (feet)
MW-1	9.81	8.61	1.20
MW-2	9.22	8.25	0.97
MW-3	9.39	8.48	0.91
MW-4	9.72	8.86	0.86
Casing-1	10.77	9.65	1.12
Casing-2	9.98	8.87	1.11

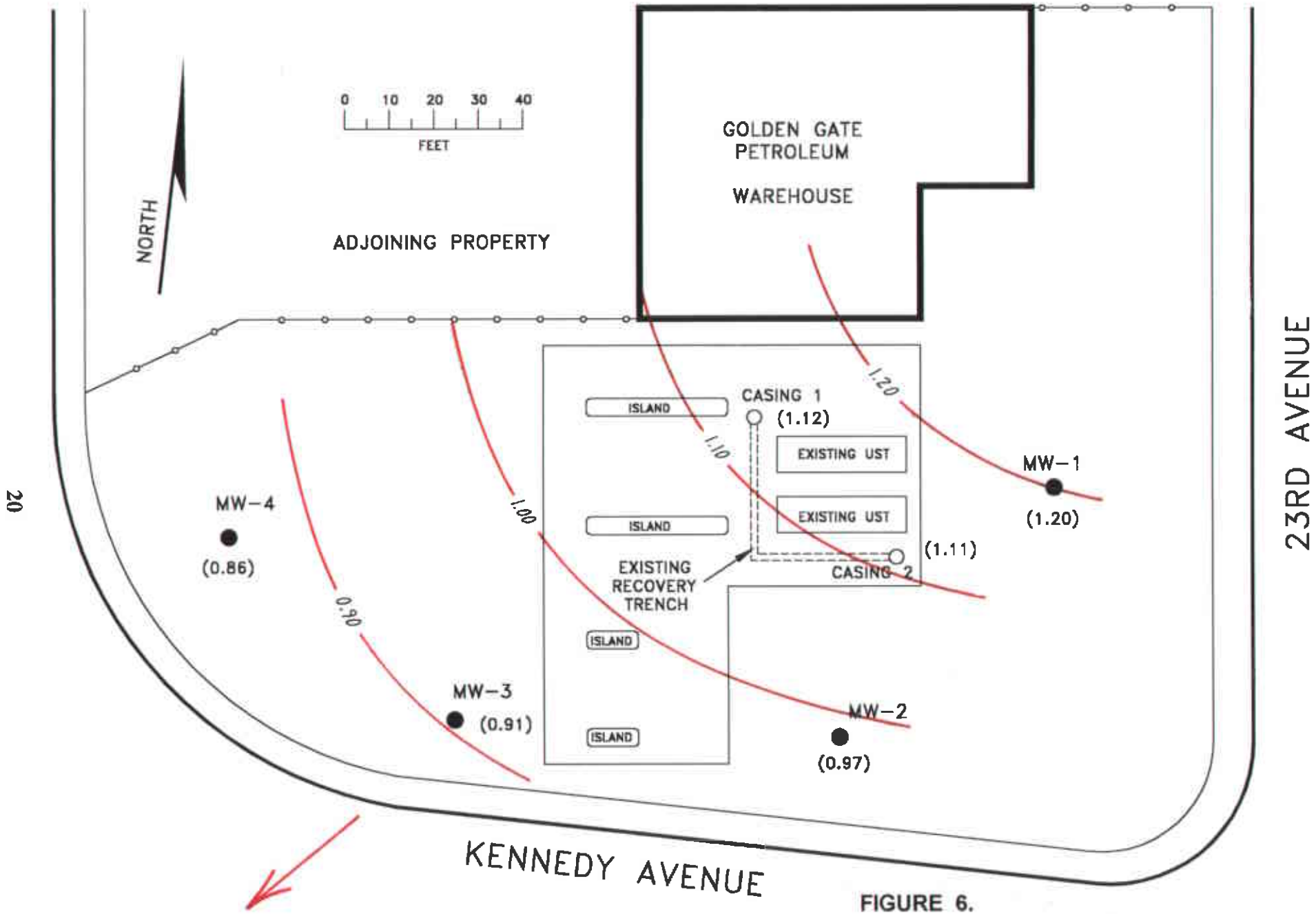


FIGURE 6.

Shallow Groundwater Contour Map.
Measured on November 11, 1999.

VI. ANALYTICAL RESULTS

Laboratory Analysis

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures. The laboratory analyses were performed by Entech Analytical Labs, Inc., located in Sunnyvale, California.

Selected soil samples were analyzed for:

1) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015M).
2) Total Petroleum Hydrocarbons as Diesel (EPA method 8015M).
3) Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE (EPA method 8020).

All groundwater samples were analyzed for:

1) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015M).
2) Total Petroleum Hydrocarbons as Diesel (EPA method 8015M).
3) Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE (EPA method 8020).

The groundwater samples collected from monitoring wells MW-2, MW-3 and MW-4 and extraction Casing-2 were analyzed for:

1) MTBE confirmation (EPA method 8260).

Analytical Results: Soil

Table 2 presents the results of the laboratory analysis of selected soil samples collected from the eight "Geoprobe" locations and the borings for the newly installed monitoring wells. Copies of the laboratory reports for the soil sample analyses are provided in Attachment E.

As shown in Table 2, petroleum hydrocarbons were detected in the area to the east and southeast of the existing underground tanks and pump islands. Gasoline was detected at concentrations of up to 450 mg/kg (ppm). Diesel was detected at concentrations of up to 4,300 mg/kg (ppm).

TABLE 2.
Soil Sampling Results.

Boring	Date	Depth (feet)	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TPH as Diesel (mg/kg)
GP-1	10-08-99	10	ND	ND	ND	ND	ND	ND	**4.2**
GP-2	10-08-99	5 10	ND **220**	ND **0.41**	ND **0.44**	ND **1.2**	ND **1.2**	**0.66** ND	ND **7.9**
GP-3	10-08-99	10	ND	ND	ND	ND	ND	ND	ND
GP-4	10-08-99	5 10	**70** **36**	ND ND	ND ND	ND ND	ND ND	ND ND	**610** **56**
GP-5	10-08-99	10	ND	ND	ND	ND	ND	ND	ND
Detection Limit			1.0	0.005	0.005	0.005	0.005	0.05	1.0

ND = not detected

TABLE 2. (continued)
Soil Sampling Results.

Boring	Date	Depth (feet)	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	TPH as Diesel (mg/kg)
GP-6	10-08-99	10	ND	ND	ND	ND	ND	ND	ND
GP-7	10-08-99	10	ND	ND	ND	ND	ND	ND	ND
MW-2	11-01-99	5 10	ND **450**	ND ND	**0.037** ND	ND ND	ND ND	ND ND	**9.7** **4,300**
Detection Limit			1.0	0.005	0.005	0.005	0.005	0.05	1.0

ND = not detected

Analytical Results: Groundwater

Table 3 presents the results of the laboratory analysis of the "grab" groundwater samples collected from "Geoprobe" borings GP-1 through GP-8. As shown by these data, Gasoline and Diesel were detected at concentrations of up to 12,000 µg/L (ppb) and 620,000 µg/L (ppb), respectively in the sample collected from "Geoprobe" location GP-4. In addition, elevated concentrations of MTBE were detected in several of the samples, with the highest concentration of 13,000 µg/L (ppb) found in GP-4.

Table 4 presents the results of the laboratory analysis of the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3 and MW-4. As shown in Table 4, Gasoline was detected in the shallow groundwater samples collected from wells MW-2, MW-3 and MW-4 at concentrations of 6,800 µg/L (ppb), 1,600 µg/L (ppb) and 650 µg/L (ppb), respectively. MTBE was detected in the shallow groundwater samples collected from wells MW-2, MW-3 and MW-4 at concentrations of 13,000 µg/L (ppb), 3,100 µg/L (ppb) and 750 µg/L (ppb), respectively.

Copies of the laboratory reports for the groundwater sample analyses are provided in Attachment E.

TABLE 3.

"Geoprobe" Groundwater Sampling Results.

Boring	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	TPH as Diesel (ug/L)
GP-1	10-08-99	ND	1.4	ND	ND	ND	ND	190
GP-2	10-08-99	1,200	6.1	2.9	65	55	76	350
GP-3	10-08-99	ND	ND	ND	ND	ND	ND	ND
GP-4	10-08-99	12,000	ND	ND	ND	ND	13,000	620,000
GP-5	10-08-99	790	ND	ND	ND	ND	340	80,000
GP-6	10-08-99	3,100	ND	ND	ND	ND	4,800	ND
GP-7	10-08-99	180	ND	ND	ND	ND	350	ND
GP-8	10-08-99	150	ND	ND	ND	ND	240	ND
Detection Limit		50	0.50	0.50	0.50	0.50	5.0	50

ND = not detected

TABLE 4.

Groundwater Sampling Results.

Well	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	TPH as Diesel (ug/L)	MTBE CONFIRMATION BY EPA 8260 (ug/L)
MW-1	11-11-99	ND	ND	ND	ND	ND	ND	ND	---
MW-2	11-11-99	**6,800**	ND	ND	ND	ND	**13,000**	**220**	**13,000**
MW-3	11-11-99	**1,600**	ND	ND	ND	ND	**3,100**	ND	**2,500**
MW-4	11-11-99	**650**	ND	ND	ND	ND	**750**	ND	**540**
CASING-1 (*)	10-08-99 11-11-99	ND ND	ND ND	ND ND	ND ND	ND ND	**9.2** **350**	ND ND	--- ---
CASING-2 (*)	10-08-99 11-11-99	**680** **150**	ND ND	ND ND	ND ND	ND ND	**1,200** **300**	**83** ND	--- **320**
Detection Limit		50	0.50	0.50	0.50	0.50	5.0	50	0.5

ND = not detected

(*) recovery casing located in previous tank excavation

VII. DATA ANALYSIS

Analysis of soil sampling data clearly indicates that residual Diesel and Gasoline concentrations are still present in the area to the east and southeast of the existing underground tanks and pump islands. During the previous tank removal and soil over-excavation activities, this contaminated soil was not removed due to the practical limits that were set at the time of the field work.

Figures 7, 8, 9 and 10 show lines of equal concentration for Diesel, Gasoline, Benzene and MTBE, respectively, in the shallow groundwater. In addition to the data from the shallow monitoring wells, the "grab" groundwater sampling data collected from the geoprobe borings were also considered in the delineation of the concentration plumes.

As shown in Figure 7, the dissolved Diesel concentrations in the shallow groundwater appear to be generally centered around the area to the east and southeast of the existing underground tanks and pump islands. These concentrations in the shallow groundwater appear to coincide with the elevated concentrations that were detected in the soil samples. It can therefore be concluded that elevated concentrations of Diesel in the shallow groundwater are directly attributable to the presence of contamination that is still remaining in the soil. Figure 7 clearly indicates that the Diesel concentration plume is relatively confined on the subject property, and that there is no significant off-site migration of dissolved Diesel in the shallow groundwater.

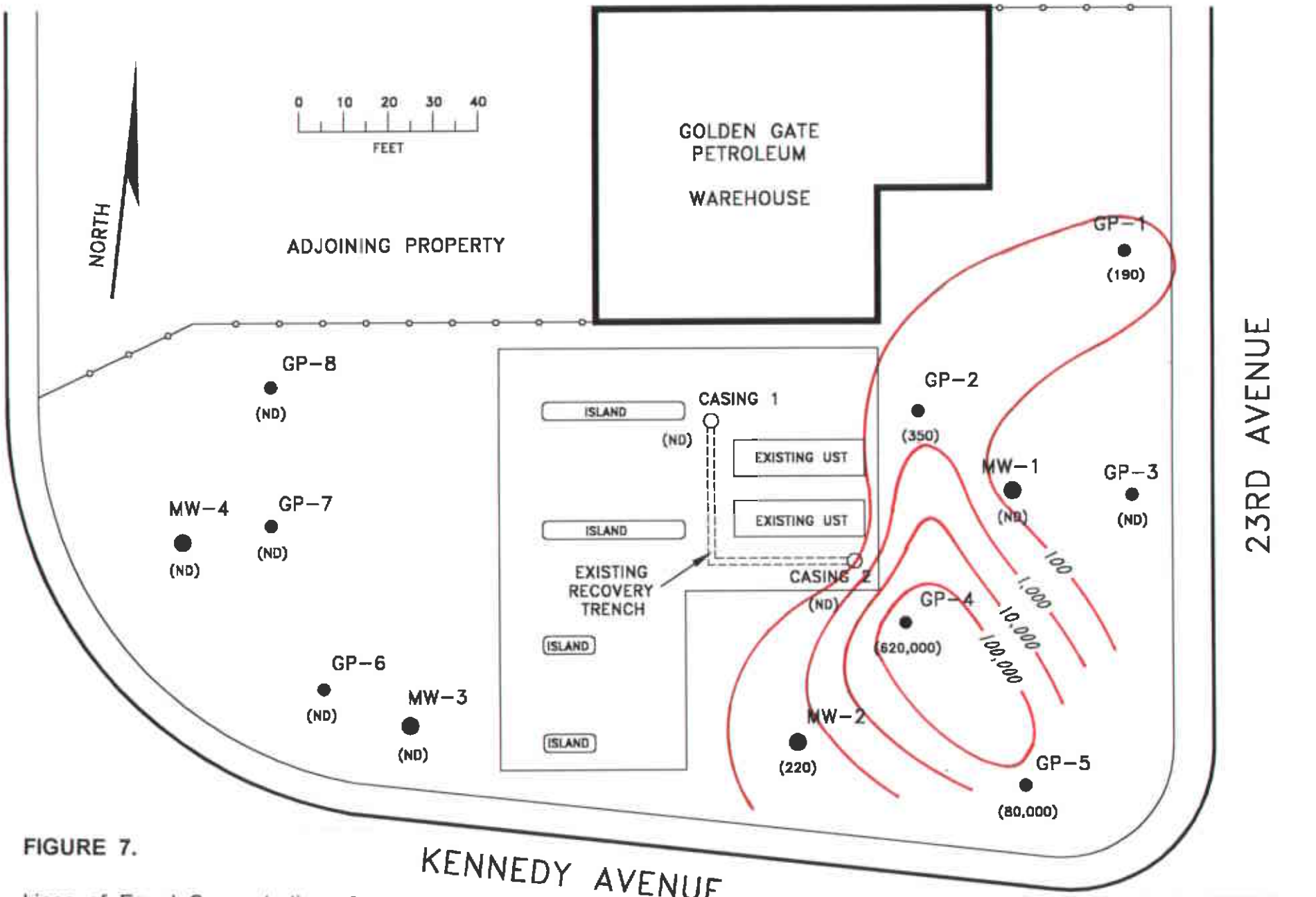


FIGURE 7.

Lines of Equal Concentration of Diesel in ug/L (ppb) in the Shallow Groundwater.

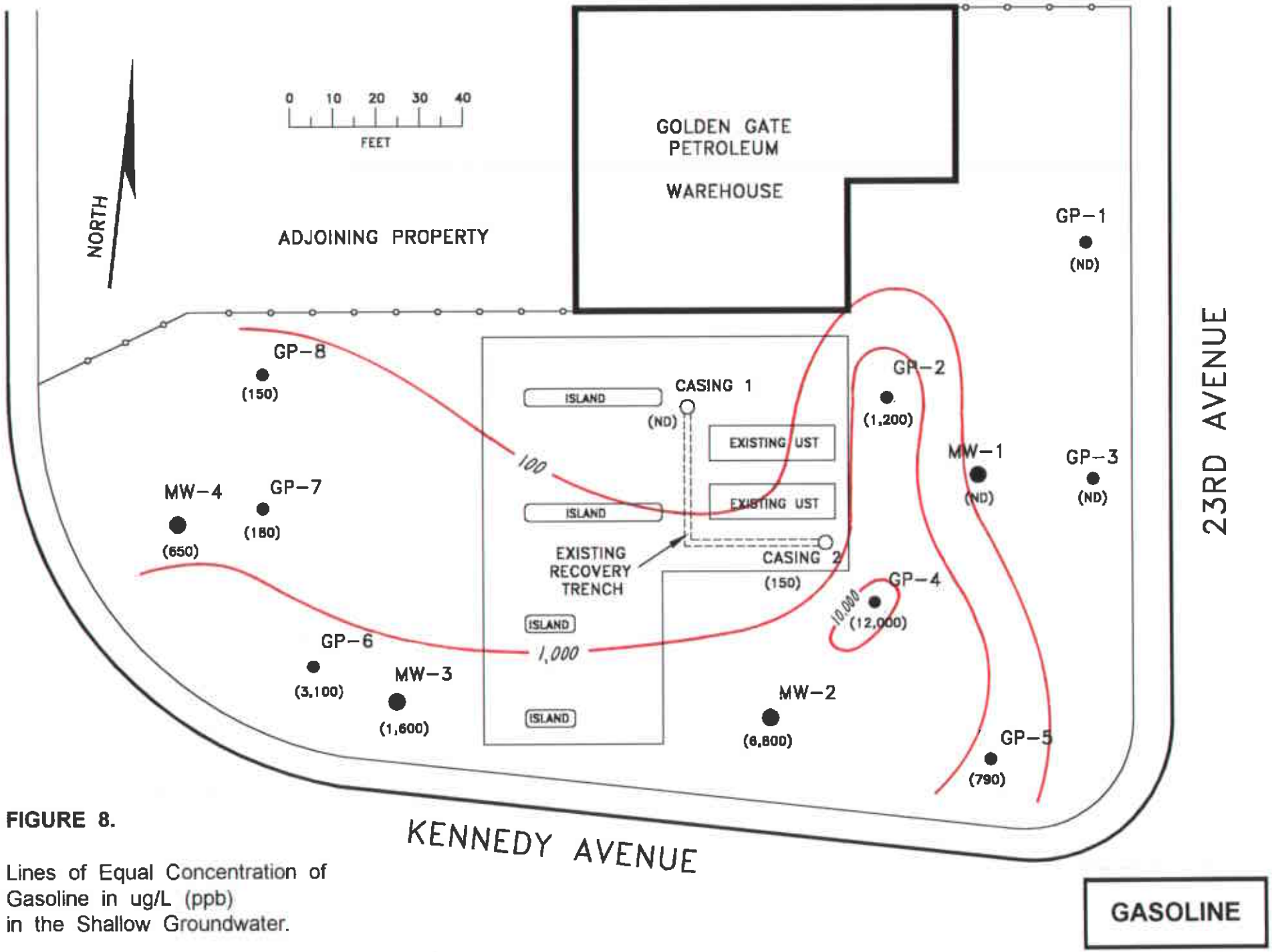


FIGURE 8.

Lines of Equal Concentration of Gasoline in ug/L (ppb) in the Shallow Groundwater.

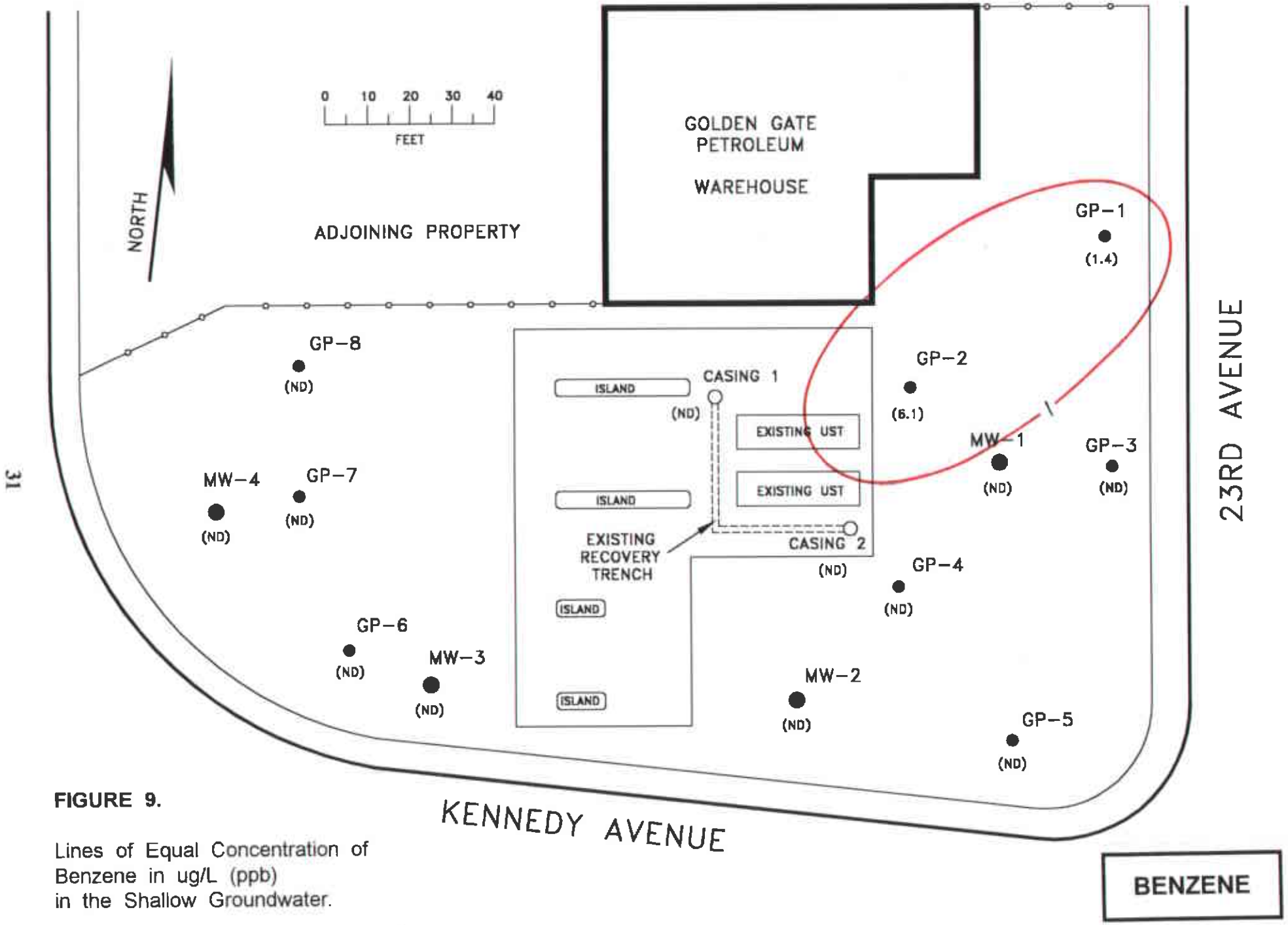


FIGURE 9.

Lines of Equal Concentration of Benzene in ug/L (ppb) in the Shallow Groundwater.

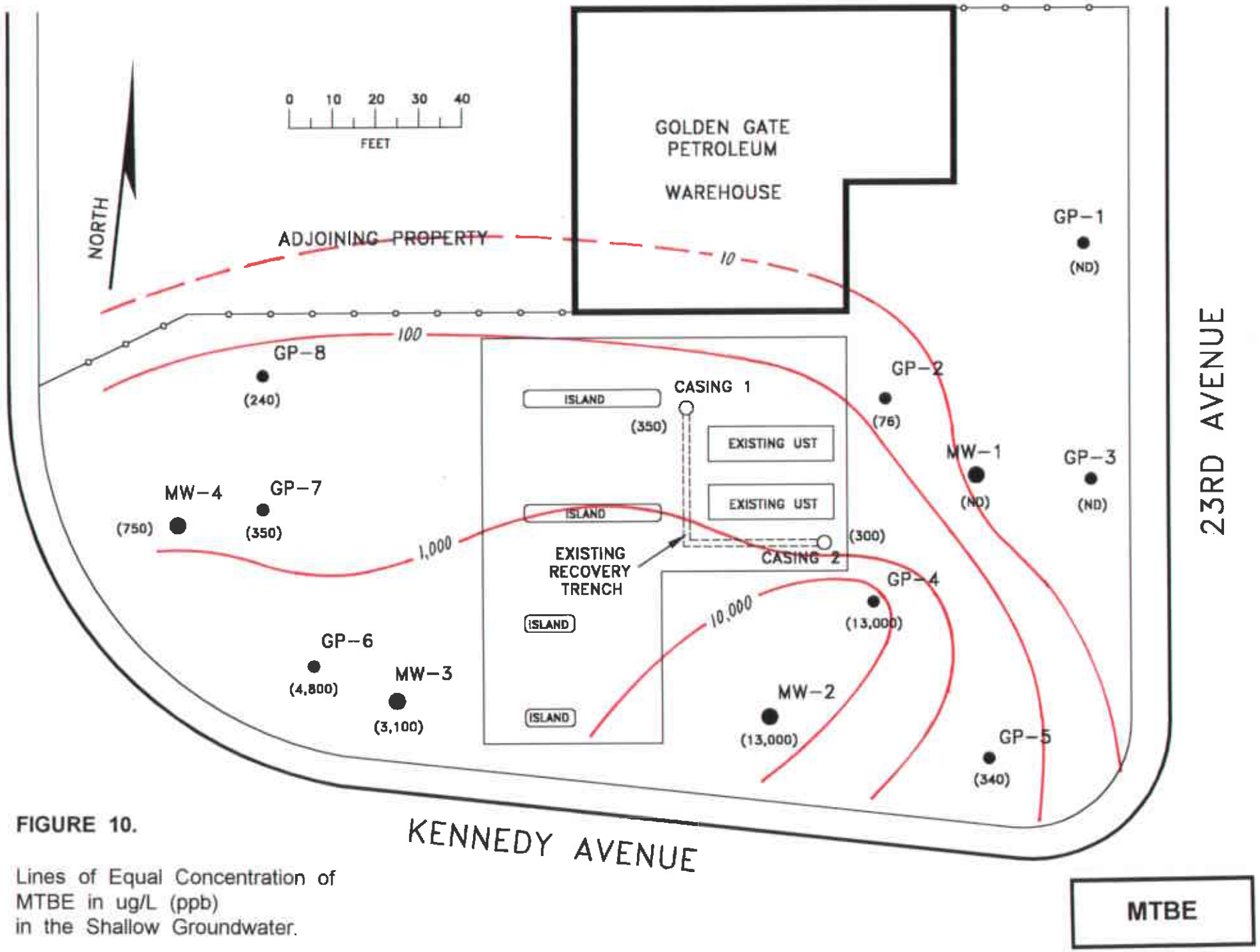


FIGURE 10.

Lines of Equal Concentration of MTBE in ug/L (ppb) in the Shallow Groundwater.

As shown in Figure 8, the dissolved Gasoline concentrations in the shallow groundwater appear to be generally centered around the area to the east and southeast of the existing underground tanks and pump islands. These concentrations in the shallow groundwater appear to coincide with residual concentrations of Gasoline that still remains in the soil within this area. The lack of elevated Gasoline concentrations within the previous underground tank location is clearly indicative of relatively effective source removal. The Gasoline concentration plume appears to spread out toward the southwest, thus exhibiting a plume configuration that is consistent with the measured shallow groundwater flow direction beneath the site. Figure 8 clearly indicates off-site migration of dissolved Gasoline in the shallow groundwater.

Figures 9 and 10 show lines of equal concentration for Benzene and MTBE, respectively, in the shallow groundwater. As indicated by Figure 9, Benzene appears to be present in only "trace" concentrations, with the concentration plume relatively isolated within a small area on the northeasterly portion of the property. Benzene is clearly not a constituent-of-concern for this site. As indicated by Figure 10, MTBE is present in the shallow groundwater at elevated concentrations, with the plume configuration corresponding closely with the dissolved Gasoline plume. Off-site migration of dissolved MTBE in the shallow groundwater is clearly indicated.

Based upon an analysis of the concentration plumes shown in Figures 7, 8 , 9 and 10, it can be concluded that relatively effective contaminant source removal was achieved at the time of the previous underground tank removals and over-excavation activities. An obvious lack of dissolved petroleum hydrocarbons in the shallow groundwater within this area is apparent. Consequently, future groundwater extraction from within the previous excavation backfill (Casing-1 and Casing-2), as has been previously proposed, will have only very limited benefit in the remediation of the existing shallow groundwater contamination.

VIII. SUMMARY

1) The site is largely underlain by Clay (CL-CH), with the shallow groundwater found to occur in Clayey Sand (SC) and Clayey Sand & Gravel (GC) located beneath. During the soil boring activities, saturated soils were typically first encountered at depths ranging between 11 and 15 feet below ground surface. After allowing water levels to stabilize in the open boreholes, static water levels were measured at approximately 9 feet below ground surface. The location of saturated soil with respect to the stabilized water level may be indicative of somewhat confined groundwater conditions.

2) The static shallow groundwater table elevation beneath the site currently ranges between 8.25 and 9.65 feet below ground surface. The shallow groundwater appears to flow in a southwesterly direction.

3) Petroleum hydrocarbons were detected in the soil beneath the area located to the east and southeast of the existing underground tanks and pump islands. Gasoline was detected in the soil at concentrations of up to 450 mg/kg (ppm). Diesel was detected in the soil at concentrations of up to 4,300 mg/kg (ppm).

4) For "grab" groundwater samples collected from the "Geoprobe" borings, Gasoline and Diesel were detected at concentrations of up to 12,000 µg/L (ppb) and 620,000 µg/L (ppb), respectively. In addition, elevated concentrations of MTBE were detected in several of the "grab" groundwater samples, with the highest concentration reported as 13,000 µg/L (ppb).

5) For the newly installed monitoring wells, Gasoline was detected in the shallow groundwater samples collected from wells MW-2, MW-3 and MW-4 at concentrations of 6,800 μg/L (ppb), 1,600 μg/L (ppb) and 650 μg/L (ppb), respectively. MTBE was detected in the shallow groundwater samples collected from wells MW-2, MW-3 and MW-4 at concentrations of 13,000 μg/L (ppb), 3,100 μg/L (ppb) and 750 μg/L (ppb), respectively.

6) Analysis of soil sampling data clearly indicates that residual Diesel and Gasoline concentrations are still present in the area to the east and southeast of the existing underground tanks and pump islands. During the previous tank removal and soil over-excavation activities, this contaminated soil was not removed due to the practical limits that were set at the time of the field work.

7) Based upon groundwater concentration plume analysis, it can be concluded that 1) elevated concentrations of Diesel in the shallow groundwater are directly attributable to the presence of contamination that is still remaining in the soil, 2) the Diesel contamination is relatively confined on the subject property and 3) that there is no significant off-site migration of dissolved Diesel in the shallow groundwater.

8) Based upon groundwater concentration plume analysis, it can be concluded that 1) the Gasoline concentrations in the shallow groundwater coincide with residual concentrations of Gasoline that still remain in the soil, 2) the Gasoline plume configuration is consistent with the measured shallow groundwater flow direction beneath the site and 3) off-site migration of dissolved Gasoline in the shallow groundwater is clearly indicated.

9) Based upon an analysis of the data, Benzene is not a constituent-of-concern.

10) Based upon groundwater concentration plume analysis, it can be concluded that 1) MTBE is present in the shallow groundwater at elevated concentrations, with the plume configuration corresponding closely with the dissolved Gasoline plume and 2) off-site migration of dissolved MTBE in the shallow groundwater is clearly indicated.

11) An obvious lack of dissolved petroleum hydrocarbons in the shallow groundwater within the previous underground tank location is apparent. It can therefore be concluded that relatively effective contaminant source removal was achieved at the time of the previous underground tank removals and over-excavation activities.

12) Based upon detailed data analysis, future groundwater extraction from within the previous excavation backfill (Casing-1 and Casing-2), as has been previously proposed, will have only very limited benefit in the remediation of the existing shallow groundwater contamination.

REPORT OF SUBSURFACE INVESTIGATION

GOLDEN GATE PETROLEUM

421 23rd Avenue, Oakland, California

November 23, 1999

EXP. 9-30-03

Gary Aguiar **RCE 34262**

ATTACHMENT A

Correspondence and Permits

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

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

November 1, 1999
StID # 191

Mr. Harvey Brook
Golden Gate Petroleum
1001 Galaxy Way, Suite 308
Concord, CA 94520

Re: Work Plan for 421 23rd Ave., Oakland CA 94606

Dear Mr. Brook:

This letter confirms the receipt of tentative results from the initial Geoprobe investigation performed by Hageman-Aguiar, Inc. (HA) at the above referenced site. As you are aware, HA has initiated the work plan previously proposed by Bonkowski & Associates and approved by our office. HA has interpreted the initial soil and groundwater data from the geoprobe investigation and slightly changed the locations of the monitoring wells. Our office has reviewed the iso-concentration maps and the revised well location map and concur with their locations. I understand that the wells are scheduled for installation today.

HA has stated that the final version of this investigation will be completed by November 22, 1999. Please let me know if there are any changes in this completion date.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. G. Aguiar, Hageman-Aguiar, Inc., 11100 San Pablo Ave., Suite 200-A, El Cerrito, CA 94530
Mr. M. Owens, SWRCB Cleanup Fund, 2014 T. St., Suite 130, Sacramento, CA 94244-2120

modwp421 23rd

HAGEMAN-AGUIAR, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

October 27, 1999

Barney Chan
Alameda County Environmental Health
1131 Harbor Bay Parkway
2nd Floor
Alameda, CA 94502

Re: Golden Gate Petroleum
421-23rd Ave, Oakland, CA

Dear Mr. Chan:

Please be advised that the installation of the shallow groundwater monitoring wells at the above-referenced site will begin on Monday, November 1, 1999. Although the work will be conducted in accordance with the "*Site Assessment and Corrective Action Workplan*" by Bonkowski & Associates, dated November 16, 1998, we will be modifying the locations of the wells as shown in the attached figure. This figure also provides a much more accurate site plan than was originally provided by Bonkowski & Associates.

The proposed well locations reflect the recent geoprobe investigation data analysis, which indicates dissolved Gasoline and MTBE plumes in the shallow groundwater which appear

11100 SAN PABLO AVE., SUITE 200-A, EL CERRITO, CALIFORNIA 94530 • TEL 510-620-0891 • FAX 510-620-0894

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

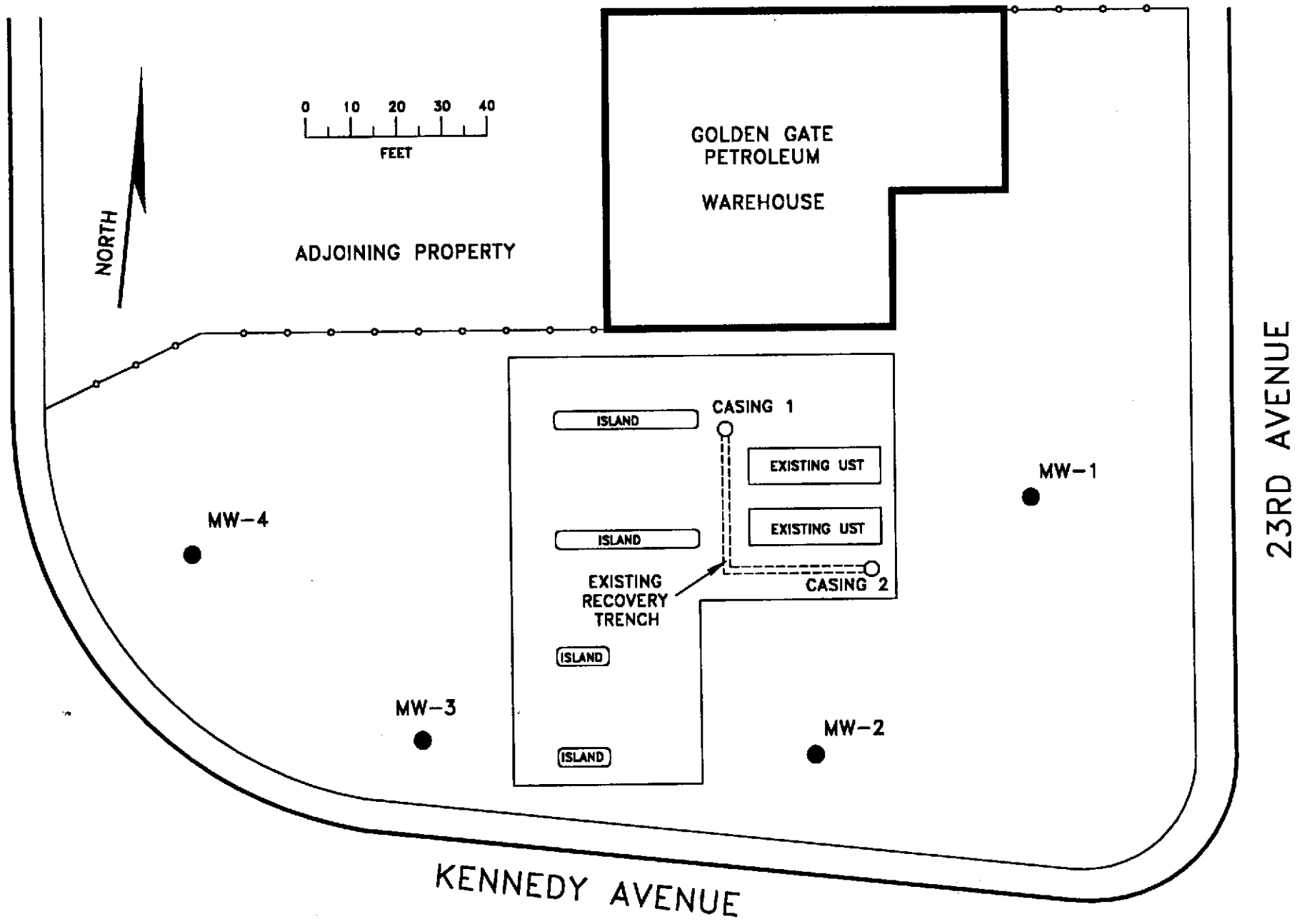
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

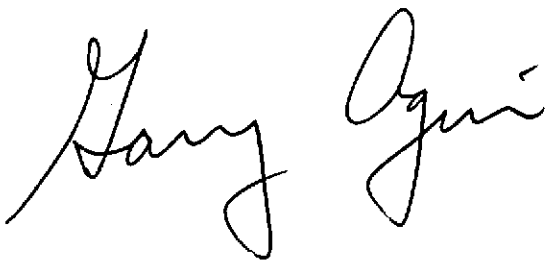
REMOVED



Proposed Monitoring Well Locations.

to be centered around the previous UST locations and are "drawn-out" in a southwesterly direction toward Kennedy Avenue. The analytical data from both the geoprobe investigation and the monitoring well installations, along with complete data analysis, will be presented in the Final Investigation Report that is expected to be completed by November 22, 1999.

If you have any questions, please contact me at (510)620-0891.



Gary Aguiar
Principal Engineer

cc: M. Owens, SWRCB Cleanup Fund,
2014 T St., Suite 130, Sacramento, CA 94244-2120

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5246 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 421 23rd Ave., Oakland, CA

California Coordinates Source _____ ft. Accuracy ± ___ ft
CCN _____ ft. CCE _____ ft
APN _____

CLIENT
Name Golden Gate Petroleum
Address 1001 Galaxy Wy. Phone 925-603-8670
City Concord Zip 94520
Suite 305

APPLICANT
Name Hageman-Aguilar, Inc.
Gary Aguilar Fax 510-620-0894
Address 1100 San Pablo Ave. Phone 510-620-0891
City El Cerrito Zip 94530
Ste. 200-A

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☒	"Geoprobe"	

DRILLER'S LICENSE NO. C57-485165

WELL PROJECTS
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

GEOTECHNICAL PROJECTS
Number of Borings 6 Maximum
Hole Diameter 2 in. Depth 20 ft.

ESTIMATED STARTING DATE October 8, 1999
ESTIMATED COMPLETION DATE October 8, 1999

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

APPLICANT'S SIGNATURE Gary Aguilar DATE 10/4/99

FOR OFFICE USE

PERMIT NUMBER 99WR589
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

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

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

F. WELL DESTRUCTION
See attached.

(G) SPECIAL CONDITIONS SEE ATTACHED INFORMATION.

APPROVED Frank L. Codd DATE 10/5

FAXED OCT 99

HAGEMAN-AGUIAR, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

October 4, 1999

Barney Chan
Alameda County Environmental Health
1131 Harbor Bay Parkway
2nd Floor
Alameda, CA 94502

Re: Golden Gate Petroleum
421-23rd Ave, Oakland, CA

Dear Mr. Chan:

This letter is provided in response to your letter dated September 24, 1999, to Mr. Harvey Brook at Golden Gate Petroleum. In that letter, you have requested information regarding the status of the implementation of the workplan for subsurface investigation that was prepared by Bonkowski & Associates.

Please be advised that Hageman-Aguiar, Inc., has been authorized to take over the project and to begin the field work as soon as possible. The following is the currently planned schedule for implementation of the workplan:

11100 SAN PABLO AVE., SUITE 200-A, EL CERRITO, CALIFORNIA 94530 • TEL 510-620-0891 • FAX 510-620-0894

TIME SCHEDULE

TASK	COMPLETION DATE
1) Geoprobe Sampling Field Work	October 8, 1999
2) Laboratory Results	October 15, 1999
3) Data Analysis, Final Placement of Wells	October 22, 1999
4) Monitoring Well Installation	November 1, 1999
5) Well Development	November 4, 1999
6) Well Sampling	November 8, 1999
7) Laboratory Results	November 15, 1999
8) Data Analysis, Final Report	November 22, 1999

As you can see from this time schedule, we are currently prepared to begin the field work on Friday October 8, 1999. In the event that you wish to be present on-site, please consider this formal notice that the geoprobe field work will be conducted this Friday.

If you have any questions, please contact me at (510)620-0891.

Gary Aguiar
Principal Engineer

cc: M. Owens, SWRCB Cleanup Fund,
2014 T St., Suite 130, Sacramento, CA 94244-2120

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

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

February 24, 1999
StID #191

Mr. Harvey Brook
Golden Gate Petroleum
1001 Galaxy Way, Suite 308
Concord, CA 94520

Re: Site Assessment and Corrective Action Workplan for 421 23rd Ave., Oakland 94606

Dear Mr. Brook:

Our office approved the November 16, 1998 Corrective Action Workplan for the above referenced site in my November 25, 1998 letter. Since this time, we are aware that the Underground Storage Tank Cleanup Fund (Cleanup Fund) has reviewed your application claim for reimbursement and you have been designated a Priority Class "C". Please be reminded that current and future reimbursement is contingent on your timely and efficient performance of the approved remedial actions.

Therefore, to avoid jeopardizing your status with the Cleanup Fund, our office requests that you perform the previously approved work plan (borings and monitoring well) **within 45 days or by April 7, 1999.**

You are reminded to contact me 72 working hours prior to this work. I may be reached at (510) 567-6765.

Sincerely,

Barney M Chan

Barney M.Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. C. Dittmar, Bonkowski & Associates, 3650 Mount Diablo Blvd., Suite 200, Lafayette, CA 94549
Ms. C. Gordon, SWRCB Cleanup Fund, 2014 T Street, Suite 130, Sacramento CA 95814
CAPlmp421

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

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

September 24, 1999
StID # 191

Mr. Harvey Brook
1001 Galaxy Way, #308
Concord, CA 94520

Re: Golden Gate Petroleum, 421 23rd Ave., Oakland CA 94606

Dear Mr. Brook:

This letter requests that you provide our office an acceptable time schedule for the implementation of the previously approved November 16, 1998 work plan for the above site. As you will recall, our office required additional investigation of this site based on the results of samples taken from the August 1998 tank removals. Our office, working along with the City of Oakland Fire Services, allowed the installation and operation of the new fuel tanks on the condition that you proceed with your site investigation. The November 16, 1998 work plan from Bonkowski & Associates called for the advancement of eight geoprobe borings to characterize the site and the installation of four monitoring wells. In addition, if necessary, groundwater extraction would be considered from the extraction trench installed within the tank pit.

On your behalf, Bonkowski & Associates requested and was granted an extension for the initiation of this work until 45 days after receipt of the Letter of Commitment from the Cleanup Fund, or not later than July 1, 1999. On April 2, 1999, I confirmed Corrective Action Compliance for this site with the Cleanup Fund. On August 9, 1999 our office received a copy of a Pre-Approval of Corrective Action Costs from the Cleanup Fund. Therefore, our office anticipated the initiation of the work plan by September 24, 1999. To date, we have not been informed of the status of the implementation of the aforementioned work plan. Therefore, we will, through copying the Cleanup Fund, notify them of this situation. I am recommending that they issue a 90 day compliance letter which could result in the removal of their commitment to reimburse your remediation expenses.

Please contact our office and provide an acceptable schedule for your work **plan within 10 days or by October 4, 1999**. You may contact me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. M. Bonkowski, Bonkowski & Associates, 6400 Hollis St., Suite 4, Emeryville, CA 94608
Mr. M. Owens, SWRCB Cleanup Fund, 2014 T St., Suite 130, Sacramento CA 94244-2120
Mr. C. Campanella, 5401 San Leandro St., Oakland CA 94601
Sch-wp421-23

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

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

February 24, 1999
StID #191

Mr. Harvey Brook
Golden Gate Petroleum
1001 Galaxy Way, Suite 308
Concord, CA 94520

Re: Site Assessment and Corrective Action Workplan for 421 23rd Ave., Oakland 94606

Dear Mr. Brook:

Our office approved the November 16, 1998 Corrective Action Workplan for the above referenced site in my November 25, 1998 letter. Since this time, we are aware that the Underground Storage Tank Cleanup Fund (Cleanup Fund) has reviewed your application claim for reimbursement and you have been designated a Priority Class "C". Please be reminded that current and future reimbursement is contingent on your timely and efficient performance of the approved remedial actions.

Therefore, to avoid jeopardizing your status with the Cleanup Fund, our office requests that you perform the previously approved work plan (borings and monitoring well) within 45 days or by April 7, 1999.

You are reminded to contact me 72 working hours prior to this work. I may be reached at (510) 567-6765.

Sincerely,

Barney M Chan

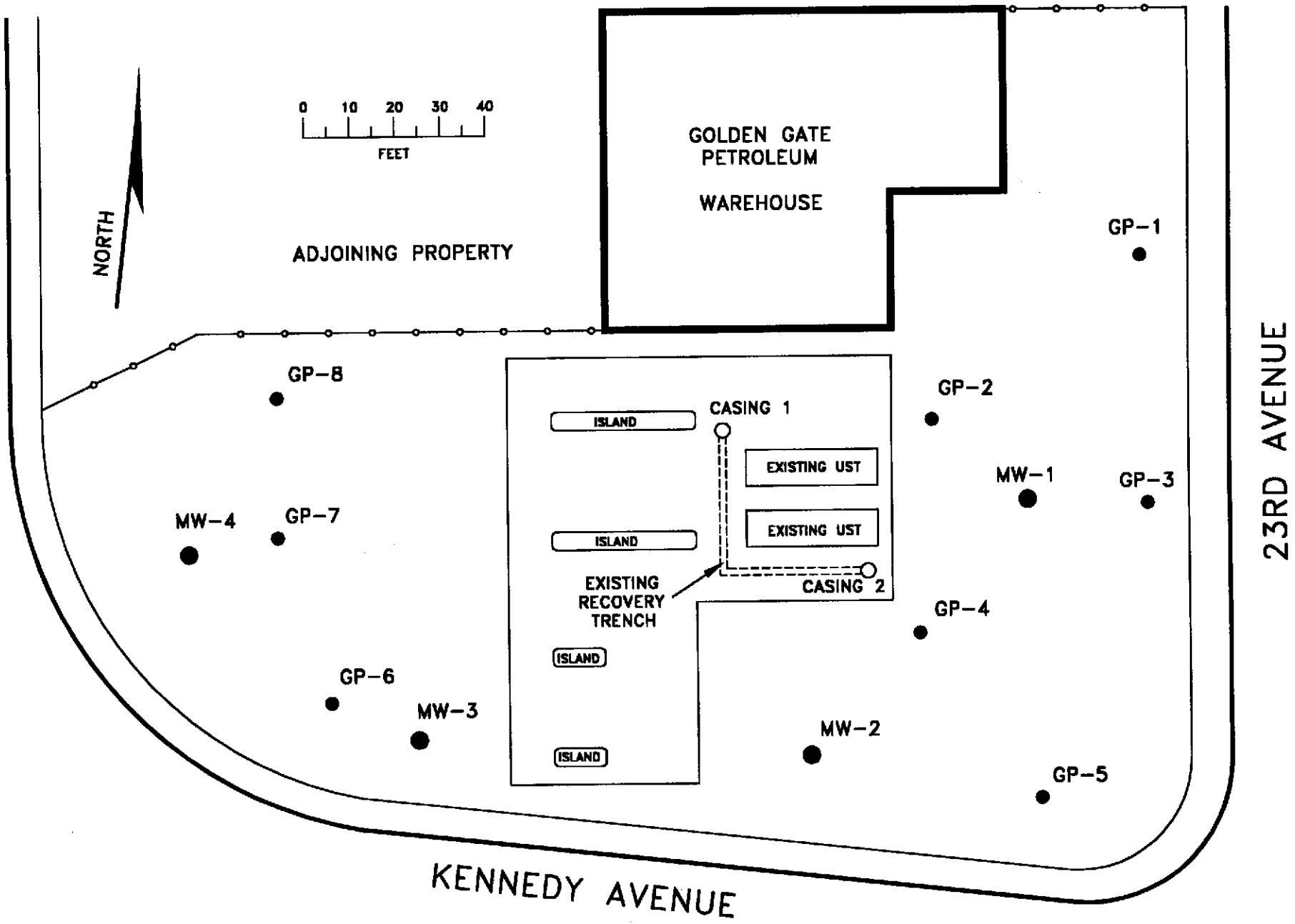
Barney M.Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. C. Dittmar, Bonkowski & Associates, 3650 Mount Diablo Blvd., Suite 200, Lafayette, CA 94549
Ms. C. Gordon, SWRCB Cleanup Fund, 2014 T Street, Suite 130, Sacramento CA 95814

CAPlan431

ATTACHMENT B

Boring Logs


0 10 20 30 40
FEET
NORTH
GOLDEN GATE PETROLEUM
WAREHOUSE
ADJOINING PROPERTY
GP-1
GP-2
GP-3
GP-4
GP-5
GP-6
GP-7
GP-8
MW-1
MW-2
MW-3
MW-4
CASING 1
CASING 2
ISLAND
ISLAND
ISLAND
EXISTING UST
EXISTING UST
EXISTING RECOVERY TRENCH
23RD AVENUE
KENNEDY AVENUE

HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

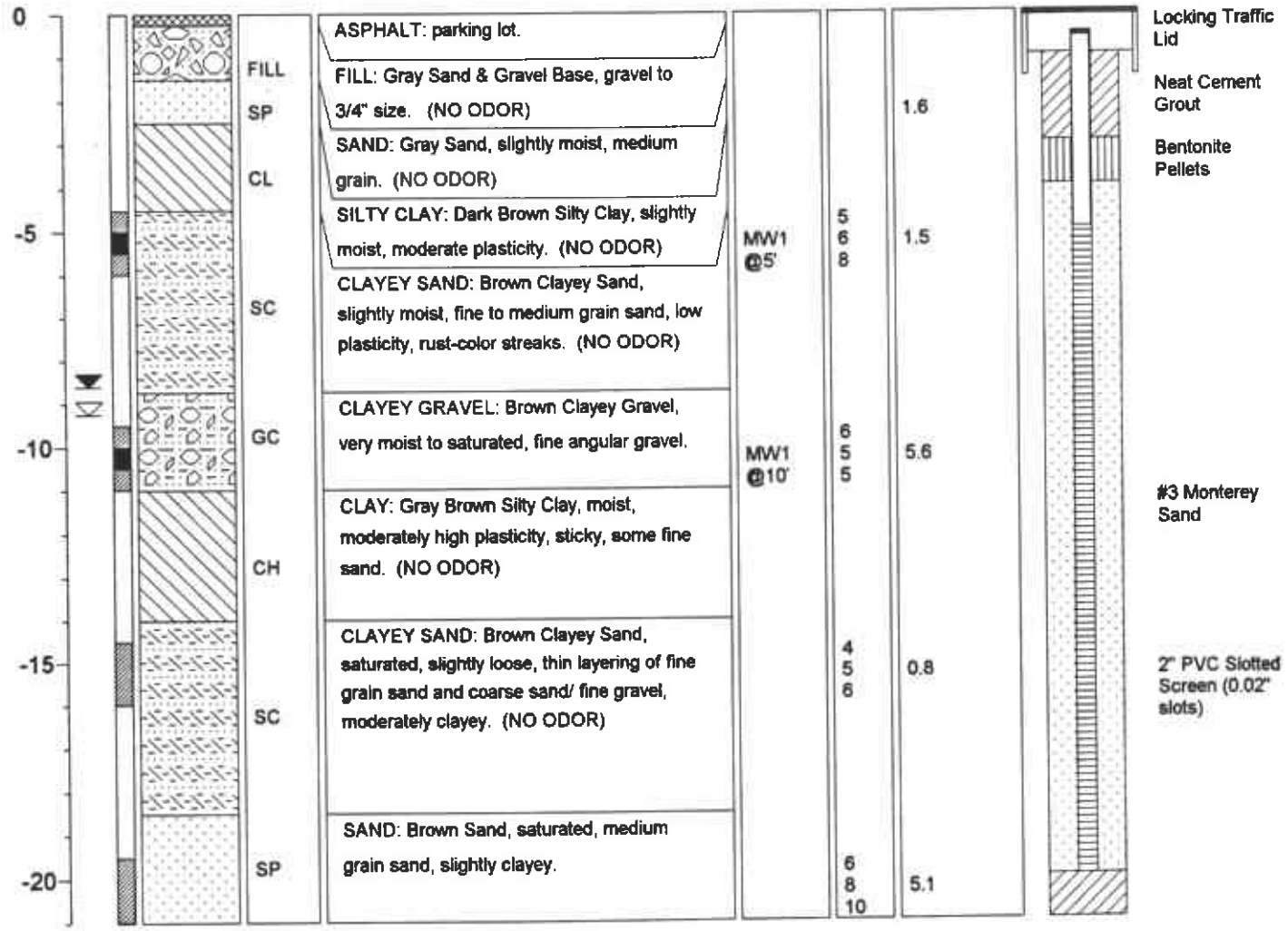
BOREHOLE NO.: **MW-1**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Mobile B-61**
	Oakland, CA	METHOD OF DRILLING:	**8" Hollow Stem Augers**
LOGGED BY:	**Fred Hayden**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**11-01-99**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:

▽ Water level during drilling
▼ Water level in completed well



HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

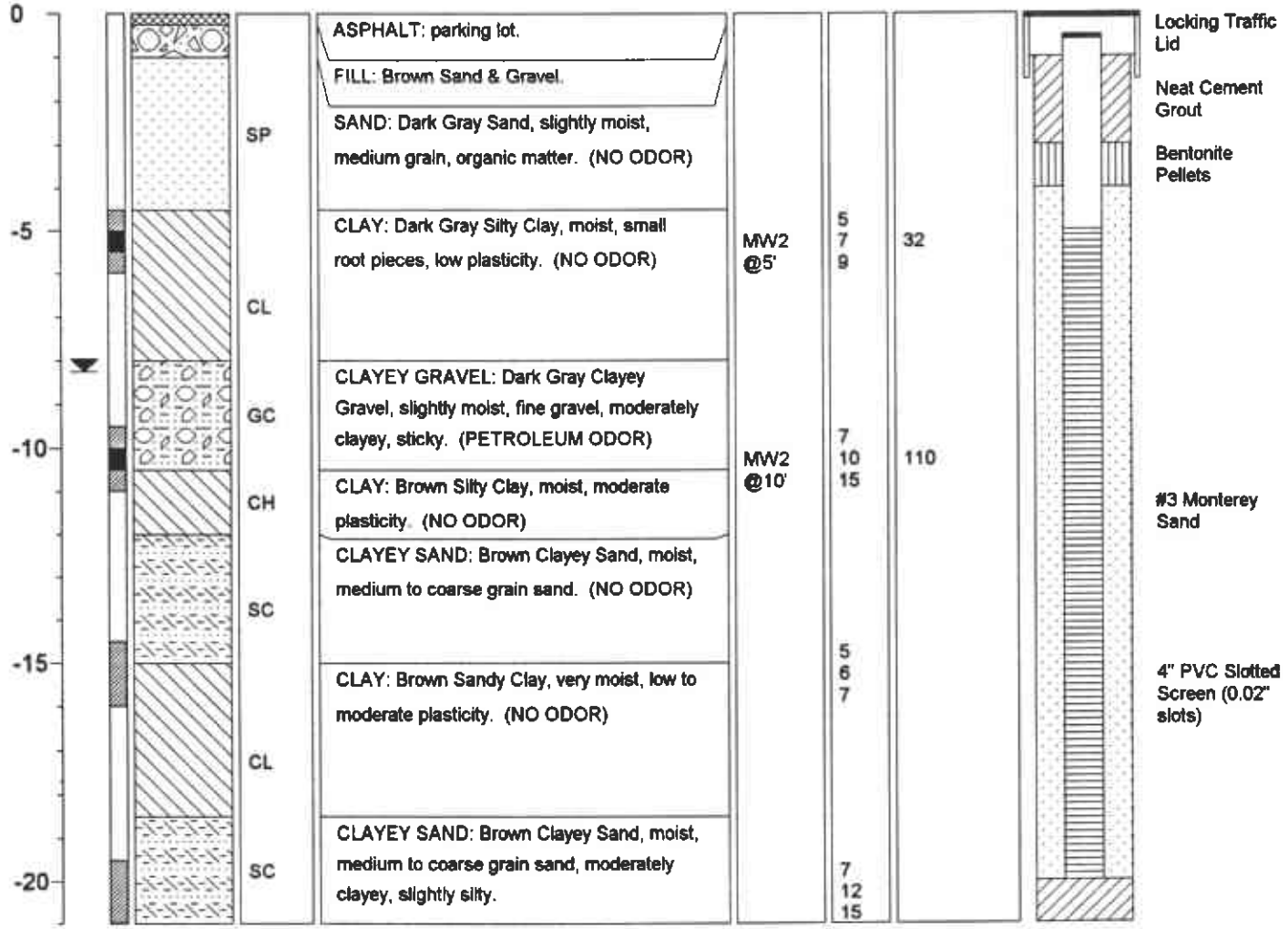
BOREHOLE NO.: **MW-2**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Mobile B-61**
	Oakland, CA	METHOD OF DRILLING:	**10" Hollow Stem Augers**
LOGGED BY:	**Fred Hayden**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**11-01-99**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:

▽ Water level during drilling
▼ Water level in completed well



HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-3**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Mobile B-61**
	Oakland, CA	METHOD OF DRILLING:	**10" Hollow Stem Auger**
LOGGED BY:	**Fred Hayden**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**11-01-99**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:

▽ Water level during drilling

▼ Water level in completed well

Page 1 of 1

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION
0			SP	ASPHALT: parking lot.				Locking Traffic Lid
				FILL: Brown Sand & Gravel.				Neat Cement Grout
				SAND: Gray Brown Sand, slightly moist, well sorted, medium grain. (NO ODOR)				Bentonite Pellets
-5			CL	CLAY: Brown Silty Clay, moist, low plasticity. (NO ODOR)	MW3 @5'	5 7 9	32	
	▼			CLAY: Brown Sandy Clay, very moist, low to moderate plasticity, sticky. (NO ODOR)	MW3 @10'	7 10 15	110	#3 Monterey Sand
-10								
-15			CL			5 6 7		4" PVC Slotted Screen (0.02" slots)
-20			SC	CLAYEY SAND: Brown Clayey Sand, moist, medium to coarse grain sand, moderate plasticity.		7 12 15		

HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

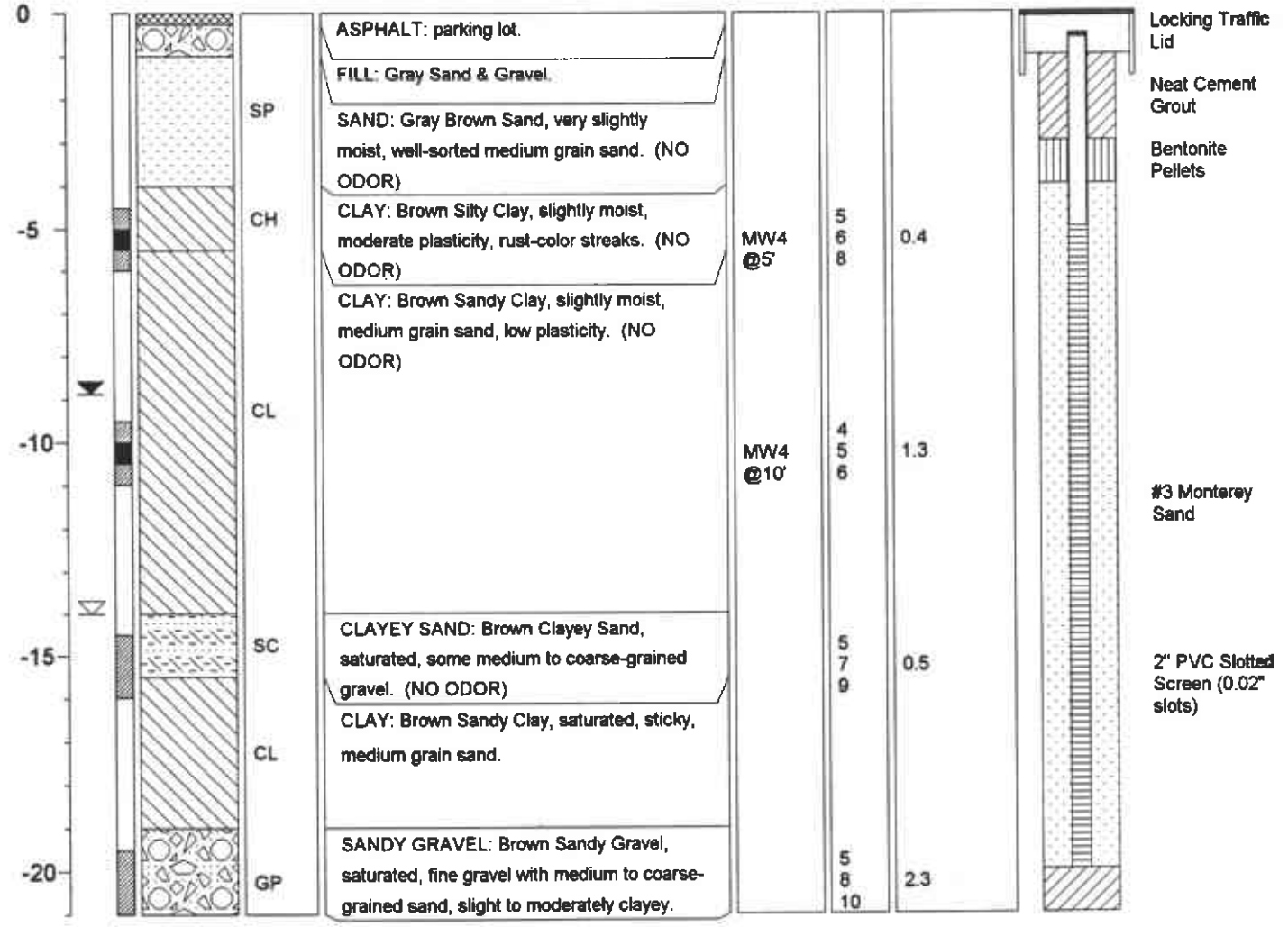
BOREHOLE NO.: **MW-4**

TOTAL DEPTH: **20'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Mobile B-61**
	Oakland, CA	METHOD OF DRILLING:	**8" Hollow Stem Augers**
LOGGED BY:	**Fred Hayden**	SAMPLING METHODS:	**2" split barrel sampler**
DATE DRILLED:	**11-01-99**	HAMMER WT./DROP:	**140 lb., 30 in.**

NOTES:

▽ Water level during drilling
▼ Water level in completed well



HAGEMAN-AGUIAR, INC.
11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

BOREHOLE NO.: **GP-1**

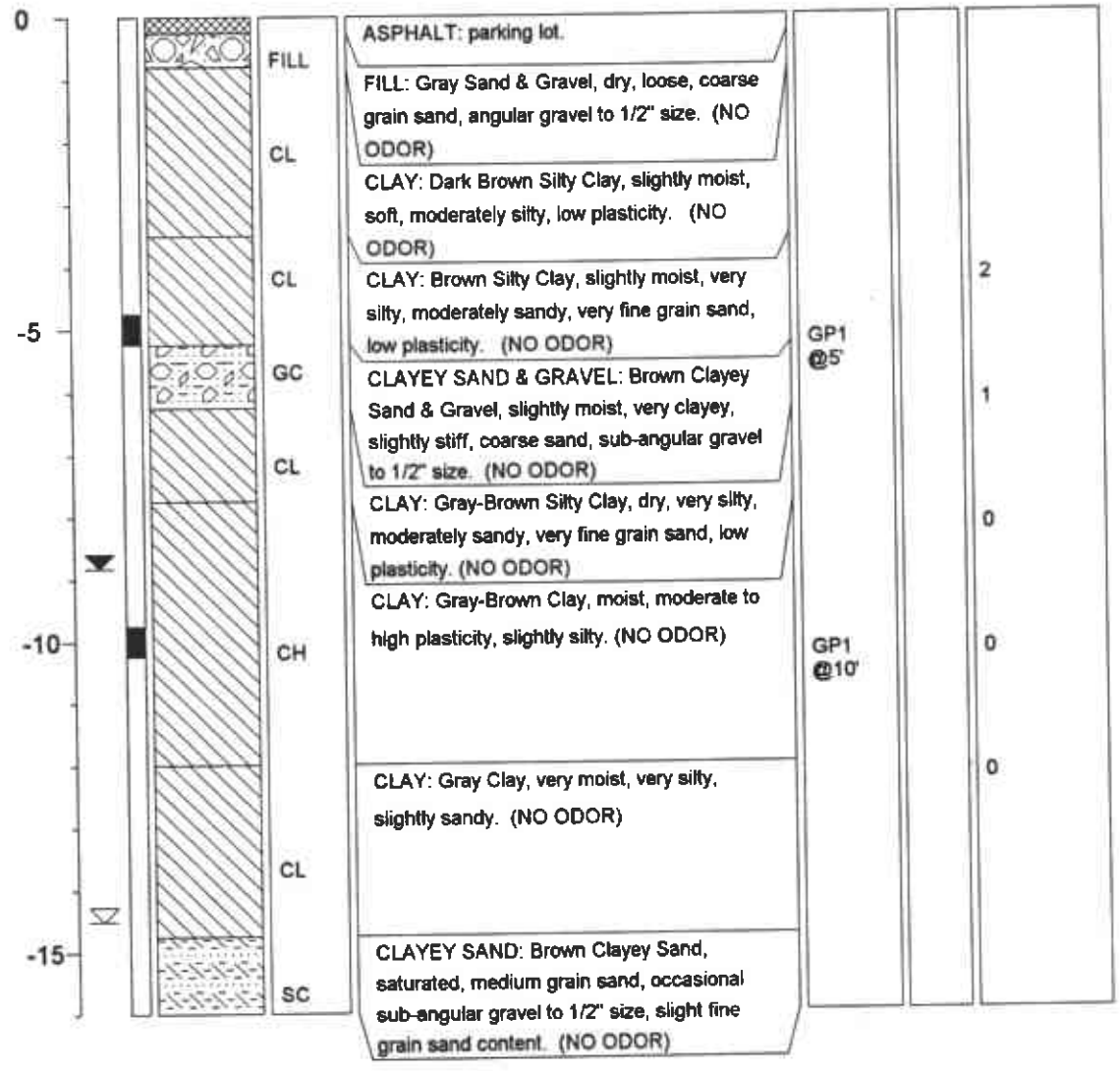
TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well

Page 1 of 1



DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION

HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

BOREHOLE NO.: **GP-2**

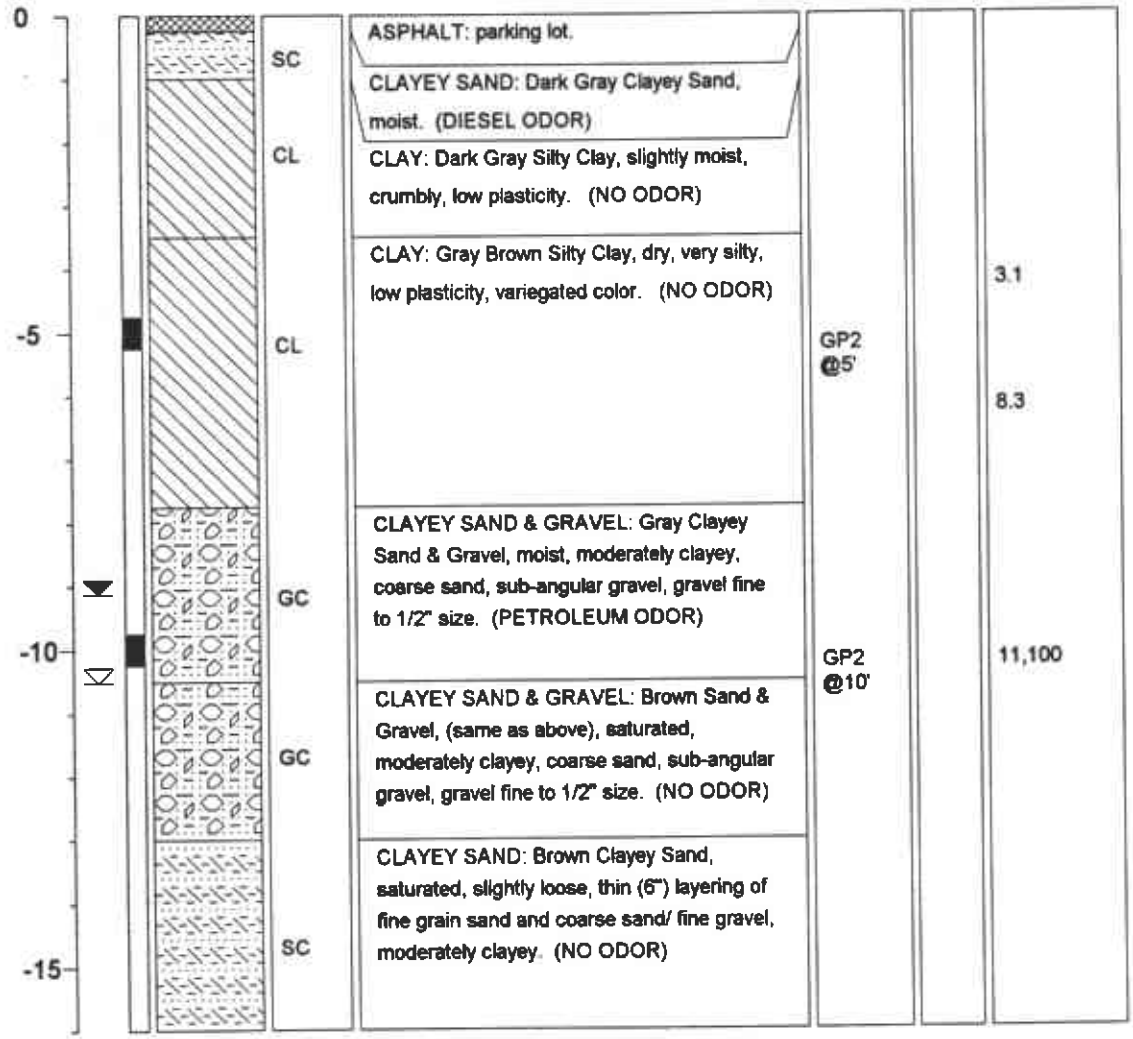
TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well

Page 1 of 1



DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION

HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (fax)

FIELD BOREHOLE LOG

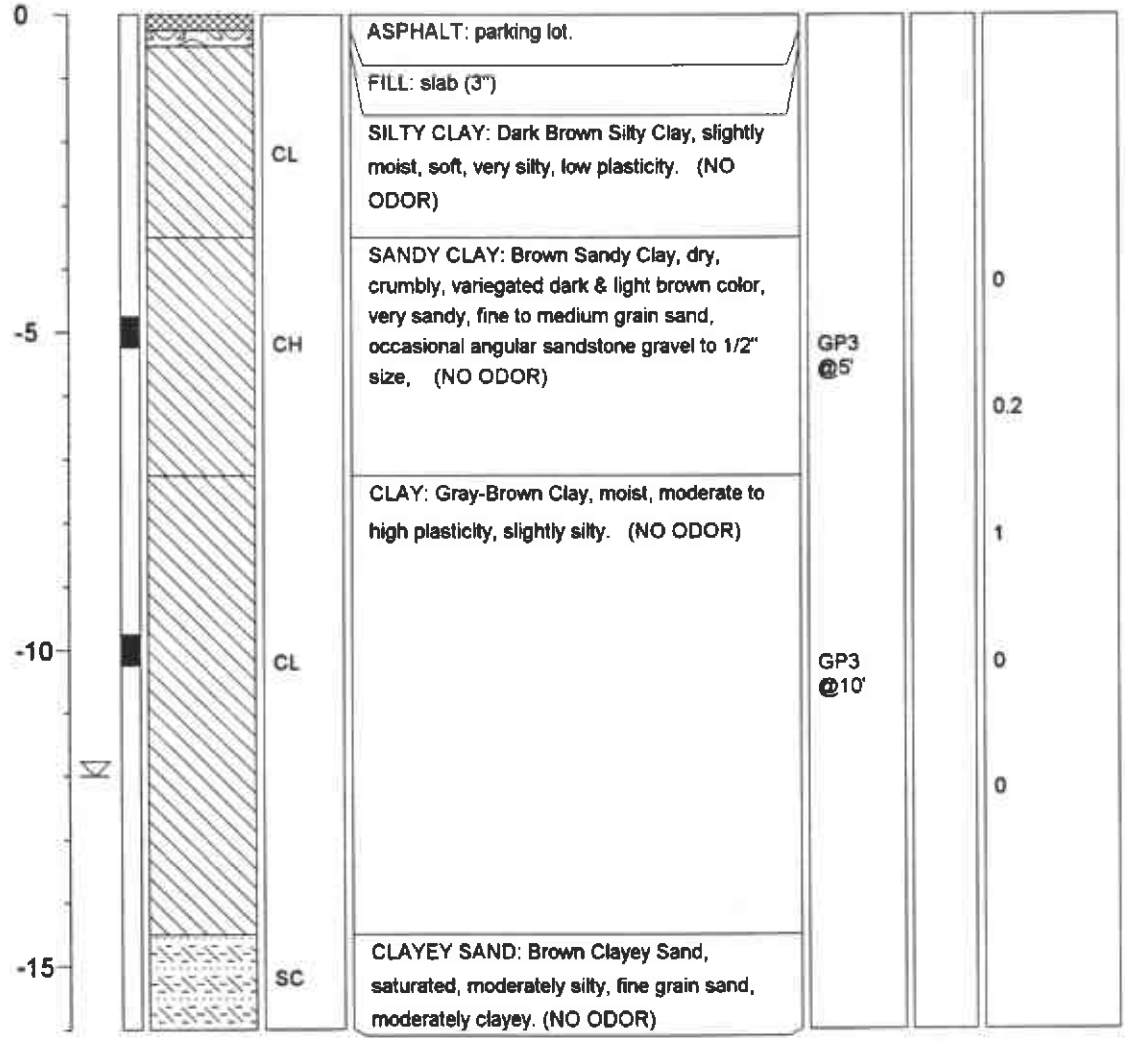
BOREHOLE NO.: **GP-3**

TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:
low rate of groundwater recharge into borehole

▽ Water level during drilling
▼ Water level in completed well



DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION
0				ASPHALT: parking lot.				
				FILL: slab (3")				
			CL	SILTY CLAY: Dark Brown Silty Clay, slightly moist, soft, very silty, low plasticity. (NO ODOR)				
-5			CH	SANDY CLAY: Brown Sandy Clay, dry, crumbly, variegated dark & light brown color, very sandy, fine to medium grain sand, occasional angular sandstone gravel to 1/2" size, (NO ODOR)	GP3 @5'		0 0.2	
				CLAY: Gray-Brown Clay, moist, moderate to high plasticity, slightly silty. (NO ODOR)			1	
-10			CL		GP3 @10'		0	
							0	
-15			SC	CLAYEY SAND: Brown Clayey Sand, saturated, moderately silty, fine grain sand, moderately clayey. (NO ODOR)				

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FIELD BOREHOLE LOG

BOREHOLE NO.: **GP-4**

TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well

Page 1 of 1

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION
0			FILL	ASPHALT: parking lot.				
				FILL: Gray Sand & Gravel, dry, loose, coarse grain sand, angular gravel to 1/2" size. (NO ODOR)				
			CL	CLAY: Dark Gray Silty Clay, dry, very silty, low plasticity. (NO ODOR)				
				CLAY: Gray Silty Clay, slightly moist, very silty, moderately sandy, very fine grain sand. (DIESEL ODOR)			221	
-5	■		CL		GP4 @5'		452	
							1390	
-10	■		GC	CLAYEY GRAVEL: Gray Clayey Gravel, moist, moderately clayey, coarse sand, fine gravel, (DIESEL ODOR)	GP4 @10'		560	
	▽						480	
			CH	CLAY: Gray Brown Clay, saturated, soft, moderate to high plasticity, slightly silty. (NO ODOR)				
-15								

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FIELD BOREHOLE LOG

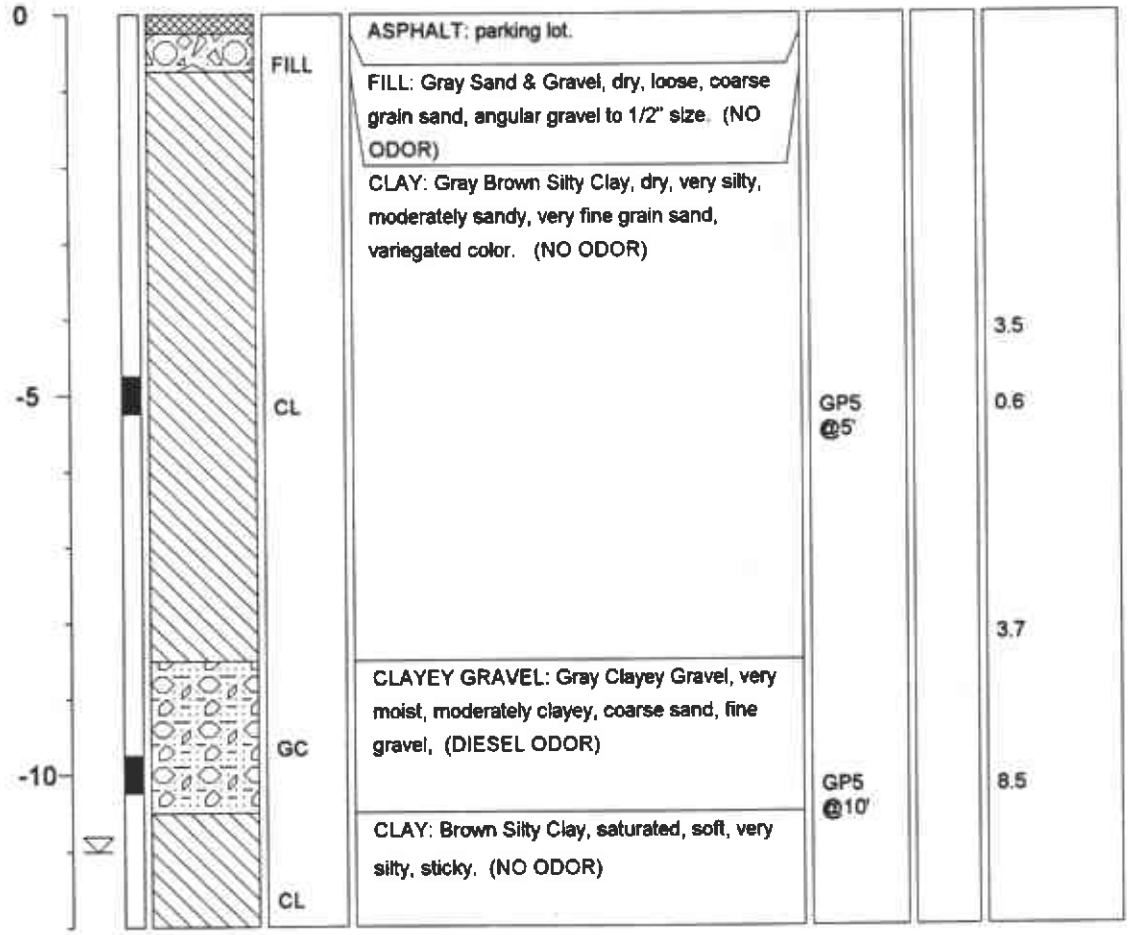
BOREHOLE NO.: **GP-5**

TOTAL DEPTH: **12'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well



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FIELD BOREHOLE LOG

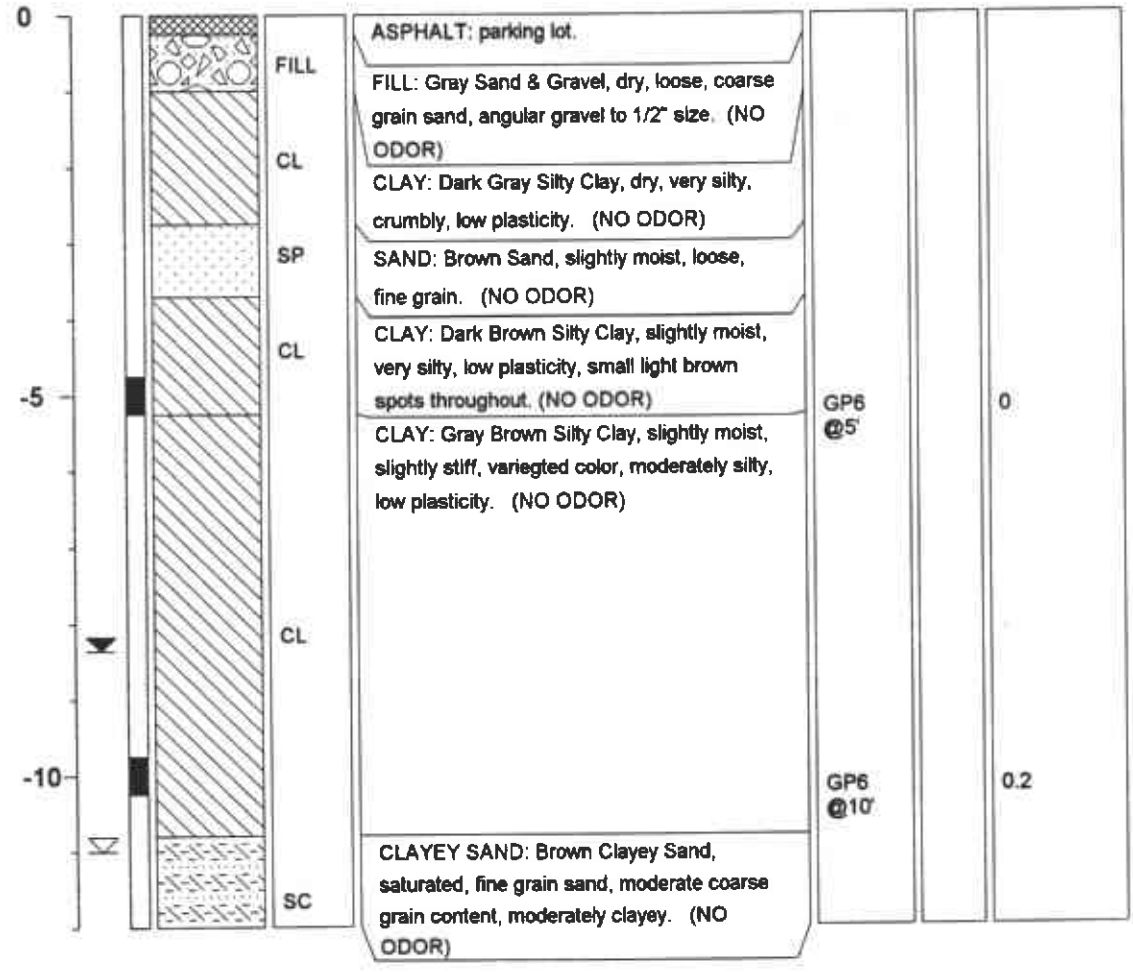
BOREHOLE NO.: **GP-6**

TOTAL DEPTH: **12'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well



DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION

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FIELD BOREHOLE LOG

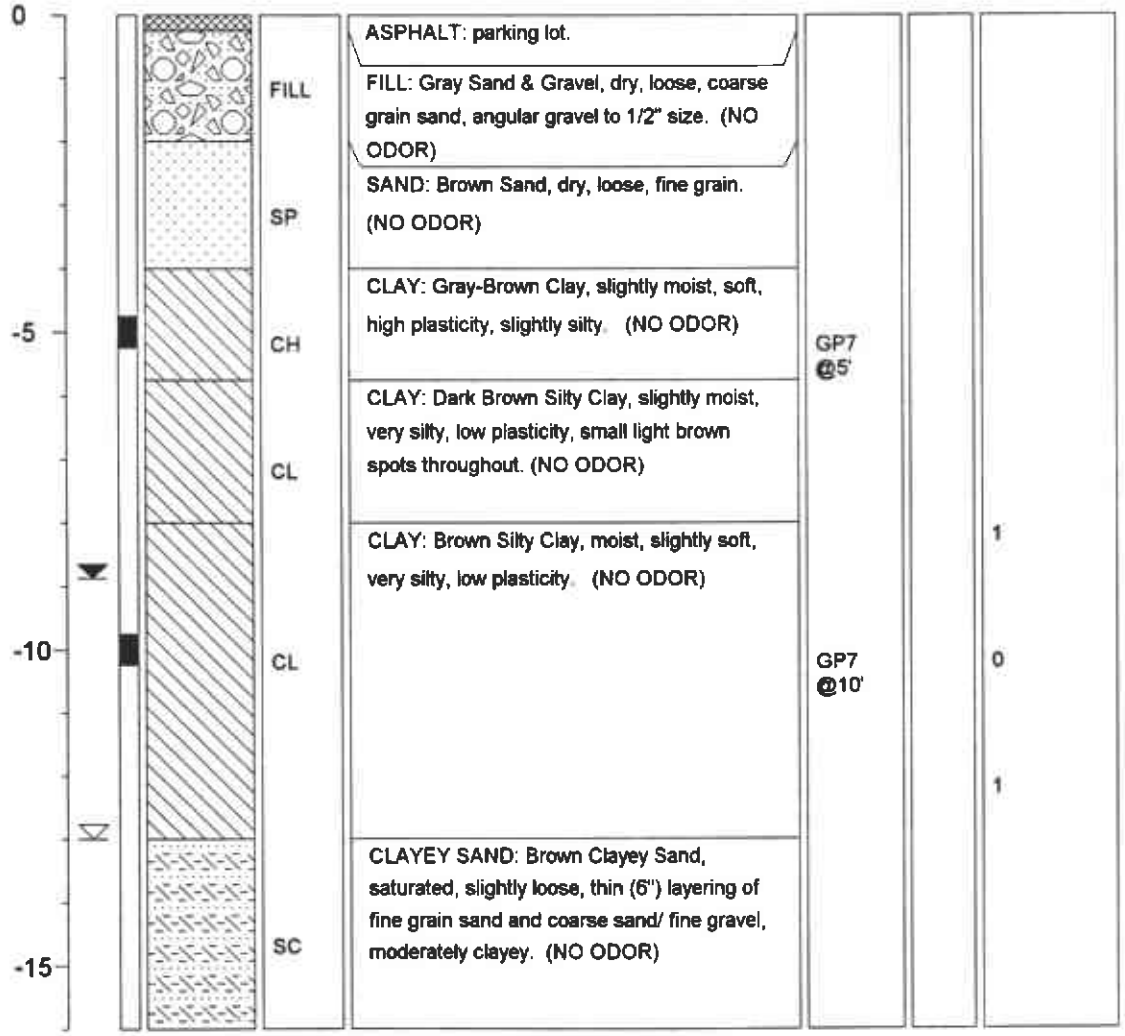
BOREHOLE NO.: **GP-7**

TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well



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FIELD BOREHOLE LOG

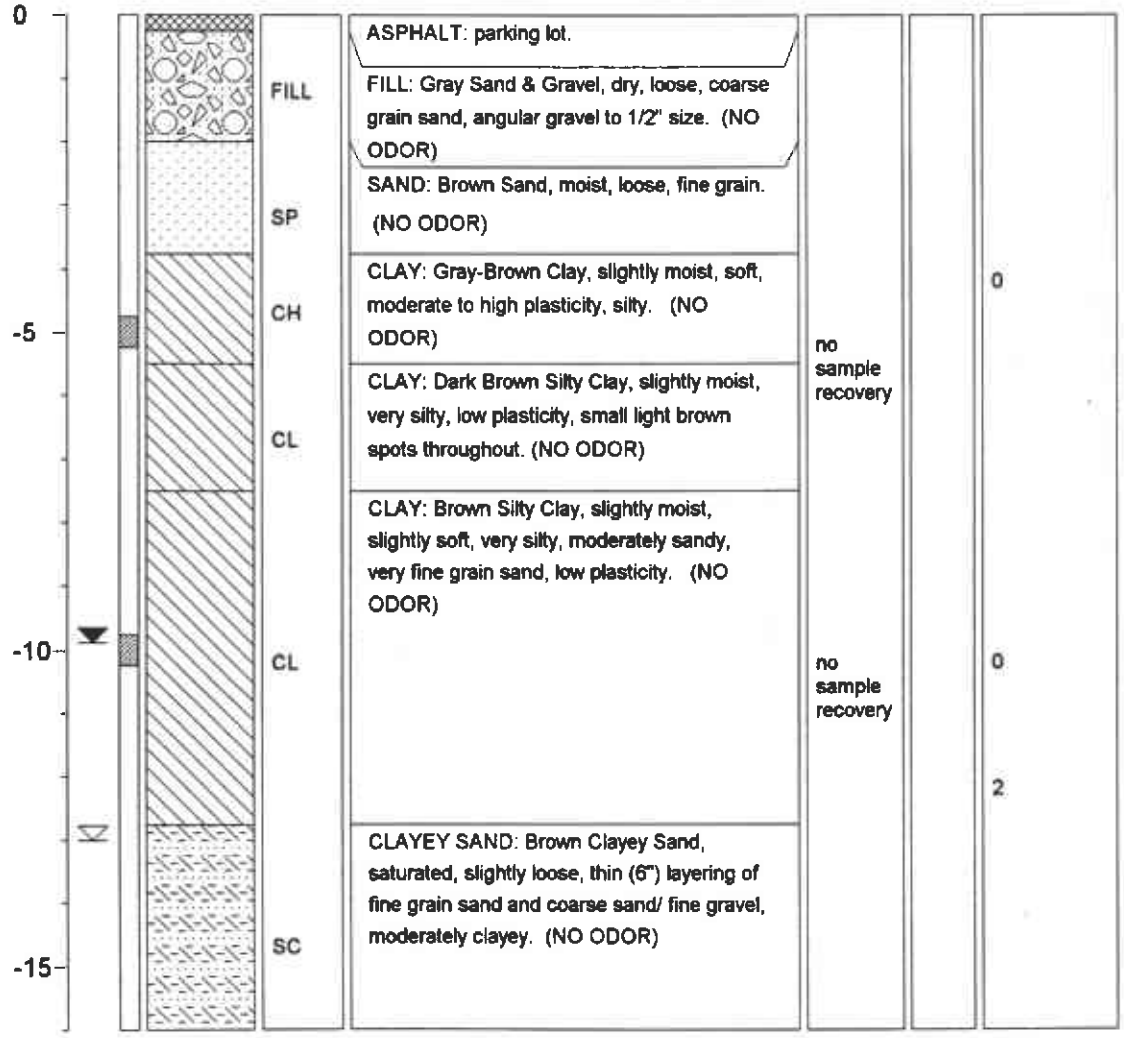
BOREHOLE NO.: **GP-8**

TOTAL DEPTH: **16'**

PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	**Golden Gate Petroleum**	DRILLING CO.:	**Gregg Drilling**
JOB NO.:	**0277**		**Martinez, CA**
SITE LOCATION:	**421-23rd Avenue**	RIG TYPE:	**Geoprobe**
	Oakland, CA	METHOD OF DRILLING:	**Direct Push**
LOGGED BY:	**Gary Aguiar**	SAMPLING METHODS:	**Macrocore Barrel**
DATE DRILLED:	**10-08-99**	HAMMER WT./DROP:	

NOTES:

▽ Water level during drilling
▼ Water level in completed well



DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	FID (ppm)	WELL COMPLETION
			FILL	ASPHALT: parking lot.				
				FILL: Gray Sand & Gravel, dry, loose, coarse grain sand, angular gravel to 1/2" size. (NO ODOR)				
			SP	SAND: Brown Sand, moist, loose, fine grain. (NO ODOR)				
			CH	CLAY: Gray-Brown Clay, slightly moist, soft, moderate to high plasticity, silty. (NO ODOR)			0	
-5			CL	CLAY: Dark Brown Silty Clay, slightly moist, very silty, low plasticity, small light brown spots throughout. (NO ODOR)	no sample recovery			
			CL	CLAY: Brown Silty Clay, slightly moist, slightly soft, very silty, moderately sandy, very fine grain sand, low plasticity. (NO ODOR)				
-10			CL		no sample recovery		0	
							2	
			SC	CLAYEY SAND: Brown Clayey Sand, saturated, slightly loose, thin (6") layering of fine grain sand and coarse sand/ fine gravel, moderately clayey. (NO ODOR)				
-15								

ATTACHMENT C

Well Development and Sampling Logs

WELL DEVELOPMENT LOG

Project/No. 0277 Page 1 of 4

Site Location Golden Gate - 23rd Ave

Date 11/09/97

Well No. MW-4

Time Began 11:06

Weather Sunny, 60°-70° Completed 11:32

EVACUATION DATA

Description of Measuring Point (MP) WB@G

WB@G - T.O.C. = 0.35'

Total Sounded Depth of Well Below MP 19.26'+0.27'

Diameter of Casing 2"

- Depth to Water Below MP 8.85'

= Water Column in Well 10.68'

Gallons in Casing 1.80 + Annular Space _____ = Total Gallons _____
(30% porosity)

Gallons Pumped During Development 16

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor None

Appearance Silty

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surged well for 5 minutes					
11:16	4	22.8	284	6.60	Tan very high
Surged well for 2 minutes					
11:23	8	23.1	431	6.64	Tan very high
11:28	12	22.6	519	6.73	Tan high
11:32	16	22.8	562	6.77	Tan high

Field Personnel R Wilson

WELL DEVELOPMENT LOG

Project/No. 0277 Page 2 of 4

Site Location Golden Gate - 23rd Ave

Date 11/09/99

Well No. MW-1

Time Began 12:03

Weather Sunny, 60°-70° Completed 12:30

EVACUATION DATA

Description of Measuring Point (MP) WB@G

WB@G - T.O.C. = 0.36'

Total Sounded Depth of Well Below MP 19.24'+0.27'

Diameter of Casing 2"

- Depth to Water Below MP 8.64'

= Water Column in Well 10.87'

Gallons in Casing 1.84 + Annular Space (30% porosity) _____ = Total Gallons _____

Gallons Pumped During Development 16

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor None

Appearance Silty

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surged well for 5 minutes					
12:14	4	23.4	928	6.82	Tan very high
Surged well for 2 minutes					
12:21	8	23.0	837	6.82	Tan very high
12:26	12	22.7	798	6.82	Tan very high
12:30	16	22.5	726	6.84	Tan very high

Field Personnel R Wilson

WELL DEVELOPMENT LOG

Project/No. 0277 Page 3 of 4

Site Location Golden Gate - 23rd Ave

Date 11/09/99

Well No. MW-3

Time Began 13:57

Weather Cloudy, 60°-70° Completed 14:52

EVACUATION DATA

Description of Measuring Point (MP) WB@G

WB@G - T.O.C. = 0.40'

Total Sounded Depth of Well Below MP 20.33±0.27'

Diameter

- Depth to Water Below MP 8.54' of Casing 4"

= Water Column in Well 12.06

Gallons in Casing 7.88 + Annular Space _____ = Total Gallons _____

(30% porosity)

Gallons Pumped During Development 26

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor None

Appearance Silty

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surged well for 5 minutes					
14:07	9	22.6	929	7.24	Tan med
Surged well for 5 minutes					
14:17	16	21.5	1097	7.24	dewatered Tan high
Allowed well to recharge for 15 minutes					
14:38	23	21.7	1077	7.23	dewatered Tan high
Allowed well to recharge for 10 minutes					
14:52	26	21.7	934	7.22	dewatered Tan high

Field Personnel R Wilson

WELL DEVELOPMENT LOG

Project/No. 0277 Page 4 of 4

Site Location Golden Gate - 23rd Ave.

Date 11/09/99

Well No. MW-2

Time Began 15:26

Weather cloudy, 55°-65° Completed 15:53

EVACUATION DATA

Description of Measuring Point (MP) WB@G

WB@G - T.O.C. = 0.52'

Total Sounded Depth of Well Below MP 20.21' + 0.27'

Diameter

- Depth to Water Below MP 8.28' of Casing 4"

= Water Column in Well 12.20'

Gallons in Casing 7.97 + Annular Space _____ = Total Gallons _____
(30% porosity)

Gallons Pumped During Development 36

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor Hydrocarbon

Appearance Silty

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
Surged well for 5 minutes					
15:36	9	23.2	1010	7.18	odor Tan high
Surged well for 2 minutes					
15:44	18	22.7	906	7.17	odor Tan high
15:48	27	23.1	887	7.17	odor Tan high
15:53	36	22.6	889	7.17	dewatered Tan high odor

Field Personnel R Wilson

Hageman-Aguiar, Inc.

11100 San Pablo Ave. Suite 200A
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(510) 620-0891 Fax (510) 620-0894

Project: Golden Gate - 23rd Ave. **Date:** 11/11/99

WELL #	DEPTH TO WATER	PRODUCT	WELL DEPTH	PRODUCT REMOVED	WATER REMOVED	COMMENTS
MW-1	8.61'	none	19.40'		8gal	
MW-2	8.25'	sheen	20.38'		26gal	
MW-3	8.48'	none	20.50'		17gal	
MW-4	8.86'	none	19.44'		8gal	
Casing-1	9.65'	none	13.50'		9gal	
Casing-2	8.87'	none	14.52'		15gal	

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave
Page: 1 of 6
Well Number: MW-1
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 09:42
Sampling Personnel: R Wilson
Completed: 09:55

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP	19.13' +0.27'		Sample Collected
- Depth to Water Below MP	8.61'	Volatile Organics (VOA's)	3
= Water Column in Well	10.79'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.169 (2")	Polyethylene (plastic)	
= Gallons in Casing	1.82	Other	
Gallons Pumped Prior to Sampling	8	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	
Acrillyc Bailer		Disposable Bailer	X
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) None, clear

Time	09:46	09:49	09:52	09:55	
Gals Removed	2	4	6	8	
Temperature	23.9	23.5	23.4	23.1	
Conductivity	620	692	704	703	
pH	7.34	7.34	7.36	7.39	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	high	high	high	high	
Other					

Comments:

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave
Page: 2 of 6
Well Number: MW-4
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 10:23
Sampling Personnel: R Wilson
Completed: 10:33

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP: 19.17' + 0.27'
- Depth to Water Below MP: 8.86'
= Water Column in Well: 10.58'
x Casing Diameter Multiplier: 0.169 (2")
= Gallons in Casing: 1.79
Gallons Pumped Prior to Sampling: 8

Sample Collected
Volatile Organics (VOA's): 5
1 Liter Amber Glass: 2
Polyethylene (plastic):
Other:
Samples Filtered: no

Evacuation Method:
PVC Bailer: X
Acrillyc Bailer:
Pump:
Other:

Sample Method:
Evacuation Bailer:
Disposable Bailer: X
Pump:
Direct:

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) None, clear

Time	10:24	10:27	10:30	10:33	
Gals Removed	2	4	6	8	
Temperature	23.3	23.2	23.2	23.1	
Conductivity	717	724	709	710	
pH	7.17	7.17	7.15	7.16	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	high	high	high	high	
Other					

Comments:

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave
Page: 3 of 6
Well Number: MW-3
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 10:54
Sampling Personnel: R Wilson
Completed: 11:25

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP: 20.23'+0.27'
- Depth to Water Below MP: 8.48'
= Water Column in Well: 12.02'
x Casing Diameter Multiplier: 0.653 4"
= Gallons in Casing: 7.85
Gallons Pumped Prior to Sampling: 17

Sample Collected
Volatile Organics (VOA's): 5
1 Liter Amber Glass: 2
Polyethylene (plastic):
Other:
Samples Filtered: no

Evacuation Method:
PVC Bailer: X
Acrillyc Bailer:
Pump:
Other:

Sample Method:
Evacuation Bailer:
Disposable Bailer: X
Pump:
Direct:

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

				sample	
Time	10:58	11:02	11:05	11:25	
Gals Removed	7	14	17	17	
Temperature	22.7	21.8	21.2	21.8	
Conductivity	809	818	813	793	
pH	7.17	7.18	7.20	7.18	
Color / Odor	Tan	Tan	Tan	Tan	
Turbidity	high	high	high	low	
Other			dewatered		

Comments:

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave
Page: 4 of 6
Well Number: MW-2
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 13:03
Sampling Personnel: A Wilson
Completed: 13:29

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP: 20.11'+0.27'
- Depth to Water Below MP: 8.25'
= Water Column in Well: 12.13'
x Casing Diameter Multiplier: 0.653 (4")
= Gallons in Casing: 7.92
Gallons Pumped Prior to Sampling: 26

Sample Collected
Volatile Organics (VOA's): 5
1 Liter Amber Glass: 2
Polyethylene (plastic):
Other:
Samples Filtered: no

Evacuation Method:
PVC Bailer: X
Acrilyc Bailer:
Pump:
Other:

Sample Method:
Evacuation Bailer:
Disposable Bailer: X
Pump:
Direct:

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) Slight Sheen, clear

Time	13:07	13:11	13:15	13:19	sample 13:29
Gals Removed	7	14	21	26	26
Temperature	23.4	23.1	22.7	22.0	22.2
Conductivity	771	798	811	861	871
pH	7.12	7.13	7.15	7.15	7.15
Color / Odor	Tan	Tan	Tan	Tan	Tan
Turbidity	med	high	high	high	low
Other	sheen	sheen		dewatered	

Comments:

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave.
Page: 5 of 6
Well Number: Casing - 1
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 13:55
Sampling Personnel: R Wilson
Completed: 14:16

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP	13.23' + 0.27'	Sample Collected	
- Depth to Water Below MP	9.65'	Volatile Organics (VOA's)	3
= Water Column in Well	3.85'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.653 (4")	Polyethylene (plastic)	
= Gallons in Casing	2.51	Other	
Gallons Pumped Prior to Sampling	9	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: (thickness to 0.01 foot, if any) None, clear

Time	14:02	14:09	14:16		
Gals Removed	3	6	9		
Temperature	22.1	22.0	21.9		
Conductivity	677	664	650		
pH	7.11	7.13	7.14		
Color / Odor	clear	clear	clear		
Turbidity	low	low	low		
Other					

Comments: DTW after removal of 6 gallons was 9.66' - no drawdown

WELL SAMPLING LOG

Site Location: Golden Gate - 23rd Ave
Page: 6 of 6
Well Number: Casing - 2
Date: 11/11/99
Weather: Sunny, 60°-70°
Time Began: 15:04
Sampling Personnel: A Wilson
Completed: 15:40

EVACUATION DATA

Description of Measuring Point (MP): WB@G

Total Sounded Depth of Well Below MP	14.25' ± 0.27'	Sample Collected	
- Depth to Water Below MP	8.87'	Volatile Organics (VOA's)	5
= Water Column in Well	5.65'	1 Liter Amber Glass	2
x Casing Diameter Multiplier	0.653 (4")	Polyethylene (plastic)	
= Gallons in Casing	3.69	Other	
Gallons Pumped Prior to Sampling	15	Samples Filtered	no

Evacuation Method:		Sample Method:	
PVC Bailer	X	Evacuation Bailer	X
Acrillyc Bailer		Disposable Bailer	
Pump		Pump	
Other		Direct	

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear
(thickness to 0.01 foot, if any)

Time	15:16	15:28	15:40		
Gals Removed	5	10	15		
Temperature	21.0	20.7	20.5		
Conductivity	669	669	677		
pH	7.14	7.14	7.14		
Color / Odor	clear	clear	clear		
Turbidity	low	low	low		
Other					

Comments: DTW after removal of 10 gallons was 8.86' - no drawdown

ATTACHMENT D

Well Survey Data

NOVEMBER 19, 1999
GARY AGUIAR
RANDAL WILSON

SOKKIA $C3_2$ AUTO LEVEL
TOPO ROD
OVERCAST, RAINING

GOLDEN GATE PETROLEUM
421 - 23RD AVENUE
OAKLAND, CA

MONITORING WELL ELEVATIONS

STA	BS	HI	FS	ELEV	
BM				7.91	BENCHMARK (*)
	6.52	14.43			
MW-2			5.21	9.22	METAL RIM @ GRADE, WELL MW-2
BM			6.52	7.91	B.M.
MW-2				9.22	METAL RIM @ GRADE, ON-SITE B.M.
	5.56				
MW-3			5.39	9.39	METAL RIM @ GRADE, WELL MW-3
MW-4			5.06	9.72	METAL RIM @ GRADE, WELL MW-4
CASING-1			4.01	10.77	METAL RIM @ GRADE, CASING #1
CASING-2			4.80	9.98	METAL RIM @ GRADE, CASING #2
MW-1			4.97	9.81	METAL RIM @ GRADE, WELL MW-1
MW-2			5.56	9.22	ON-SITE B.M.

(*) BENCHMARK AT CHEVRON/RMC LONESTAR FACILITY, 333-23RD AVE.
ON NORTHEASTERLY SIDE OF 23RD AVE., THE NORTHEASTERLY TOP OF RAIL @ CURB (OF RAILROAD TRACKS RUNNING THROUGH SITE).
ELEV. SET AT 7.91 FEET MSL

REGISTERED PROFESSIONAL ENGINEER
GARY H. AGUIAR
No. C-34262
CIVIL
STATE OF CALIFORNIA

EXP. 9-30-03

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 10/15/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave.
PO #:
Sampled By: Client

Certified Analytical Report

Solid Sample Analysis: (All results in mg/kg)

Sample ID	GP-1@10'			GP-2@5'			GP-3@10'				
Sample Date	10/8/99			10/8/99			10/8/99				
Sample Time	8:00			12:05			8:45				
Lab #	16834-001			16834-002			16834-004				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Analysis Date	10/14/99			10/12/99			10/12/99				
TPH-Diesel	**4.2** [x]	1.0	1.0	**ND**	1.0	1.0	**ND**	1.0	1.0	1.0	8015M
Analysis Date	10/12/99			10/13/99			10/12/99				
TPH-Gas	**ND**	1.0	1.0	**ND**	5.0	5.0	**ND**	1.0	1.0	1.0	8015M
MTBE	**ND**	1.0	0.05	**0.66**	5.0	0.25	**ND**	1.0	0.05	0.05	8020
Benzene	**ND**	1.0	0.005	**ND**	5.0	0.025	**ND**	1.0	0.005	0.005	8020
Toluene	**ND**	1.0	0.005	**ND**	5.0	0.025	**ND**	1.0	0.005	0.005	8020
Ethyl Benzene	**ND**	1.0	0.005	**ND**	5.0	0.025	**ND**	1.0	0.005	0.005	8020
Xylenes (total)	**ND**	1.0	0.005	**ND**	5.0	0.025	**ND**	1.0	0.005	0.005	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

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Attn: Randal Wilson

Date: 10/15/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave.
PO #:
Sampled By: Client

Certified Analytical Report

Solid Sample Analysis: (All results in mg/kg)

Sample ID	GP-2@10'			GP-4@5'			GP-4@10'				
Sample Date	10/8/99			10/8/99			10/8/99				
Sample Time	12:10			12:35			12:40				
Lab #	16834-003			16834-005			16834-006				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Analysis Date	10/12/99			10/13/99			10/13/99				
TPH-Diesel	**7.9** x	1.0	1.0	**610** x	10	10	**56**	1.0	1.0	1.0	8015M
Analysis Date	10/12/99			10/12/99			10/12/99				
TPH-Gas	**220**	200	10	**70** x	200	10	**36** x	100	5.0	0.050	8015M
MTBE	**ND**	200	1	**ND**	200	1	**ND**	100	0.5	0.005	8020
Benzene	**0.41**	200	0.1	**ND**	200	0.1	**ND**	100	0.05	0.0005	8020
Toluene	**0.44**	200	0.1	**ND**	200	0.1	**ND**	100	0.05	0.0005	8020
Ethyl Benzene	**1.2**	200	0.1	**ND**	200	0.1	**ND**	100	0.05	0.0005	8020
Xylenes (total)	**1.2**	200	0.1	**ND**	200	0.1	**ND**	100	0.05	0.0005	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

· Samples for TPH-G/BTEX required methanol extractions due to high concentrations of target hydrocarbons

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11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 10/15/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave.
PO #:
Sampled By: Client

Certified Analytical Report

Solid Sample Analysis: (All results in mg/kg)

Sample ID	GP-5@10'			GP-6@10'			GP-7@10'				
Sample Date	10/8/99			10/8/99			10/8/99				
Sample Time	13:35			10:55			9:35				
Lab #	16834-007			16834-008			16834-009				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Analysis Date	10/13/99			10/13/99			10/13/99				
TPH-Diesel	**ND**	1.0	1.0	**ND**	1.0	1.0	**ND**	1.0	1.0	1.0	8015M
Analysis Date	10/12/99			10/12/99			10/12/99				
TPH-Gas	**ND**	1.0	1.0	**ND**	1.0	1.0	**ND**	1.0	1.0	1.0	8015M
MTBE	**ND**	1.0	0.05	**ND**	1.0	0.05	**ND**	1.0	0.05	0.05	8020
Benzene	**ND**	1.0	0.005	**ND**	1.0	0.005	**ND**	1.0	0.005	0.005	8020
Toluene	**ND**	1.0	0.005	**ND**	1.0	0.005	**ND**	1.0	0.005	0.005	8020
Ethyl Benzene	**ND**	1.0	0.005	**ND**	1.0	0.005	**ND**	1.0	0.005	0.005	8020
Xylenes (total)	**ND**	1.0	0.005	**ND**	1.0	0.005	**ND**	1.0	0.005	0.005	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

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STANDARD LAB QUALIFIERS
July, 1998

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier	Description
U	Compound was analyzed for but not detected
J	Estimated valued for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG4991012
Matrix: Solid
Units: µg/kg

Date Analyzed: 10/12/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP µg/kg	**SP % R**	SPD µg/kg	**SPD %R**	% RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<5.0	5.6	ND	5.0	**89**	5.0	**89**	0.0	25	75-125
Toluene	8020	<5.0	31	ND	29	**92**	28	**89**	2.8	25	75-125
Ethyl Benzene	8020	<5.0	6.1	ND	5.0	**82**	5.0	**82**	0.0	25	75-125
Xylenes	8020	<5.0	35	ND	31	**89**	32	**92**	3.2	25	75-125
Gasoline	8015	<1000	500	ND	494	**99**	458	**92**	7.6	25	75-125
aaa-TFT(S.S.)-PID	8020			115%	106%		102%				65-135
aaa-TFT(S.S.)-FID	8015			105%	98%		97%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes

QC Batch #: DS990912
Matrix: Soil
Units: mg/Kg

Date analyzed: 09/20/99
Date extracted: 09/17/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	**SP %R**	SPD mg/Kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	19	77	20	**81**	4.6	25	43-118
Hexocosane				75%	73%		80%				65-135

Definition of Terms:

- MB: Method Blank
- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:

Golden Gate - 23rd ave

Oakland

SAMPLER: (Signature) Randal Wilson

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-Gas, BTEX, MTBE	TPH-Diesel				REMARKS
GP-1@5'	10/08/99	07:55	X		Geoprobe #1 @ 5' bgs	X	X		16834	-010	Hold
GP-1@10'	10/08/99	08:00	X		" #1 @ 10' bgs	X	X			-001	
GP-2@5'	10/08/99	12:05	X		" #2 @ 5' bgs	X	X			-002	
GP-2@10'	10/08/99	12:10	X		" #2 @ 10' bgs	X	X			-003	
GP-3@5'	10/08/99	08:40	X		" #3 @ 5' bgs	X	X			-011	Hold
GP-3@10'	10/08/99	09:45	X		" #3 @ 10' bgs	X	X			-004	
GP-4@5'	10/08/99	12:35	X		" #4 @ 5' bgs	X	X			-005	
GP-4@10'	10/08/99	12:40	X		" #4 @ 10' bgs	X	X			-006	
GP-5@5'	10/08/99	13:30	X		" #5 @ 5' bgs	X	X			-012	Hold
GP-5@10'	10/08/99	13:35	X		" #5 @ 10' bgs	X	X			-007	
GP-6@5'	10/08/99	10:45	X		" #6 @ 5' bgs	X	X			-013	Hold
GP-6@10'	10/08/99	10:55	X		" #6 @ 10' bgs	X	X			-008	
GP-7@5'	10/08/99	09:25	X		" #7 @ 5' bgs	X	X			-014	Hold
GP-7@10'	10/08/99	09:35	X		" #7 @ 10' bgs	X	X			-009	
										-015 (GG)	10/11/99

RELINQUISHED BY: (Signature) Randal Wilson	DATE 10/08/99 TIME 16:47	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature) Paulina Chan	DATE 10/8/99 TIME 16:55

Entech Analytical Labs, Inc.

CA ELAP# I-2346

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Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randall Wilson

Date: 10/21/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	GP-1			GP-2			GP-3				
Sample Date	10/8/99			10/8/99			10/8/99				
Sample Time	8:15			12:20			8:59				
Lab #	16820-001			16820-002			16820-003				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	10/12/99			10/12/99			10/12/99				
TPH-Diesel	**190**	1.0	50	**350** [x]	1.0	50	**ND**	1.0	50	50	8015M
Analysis Date	10/11/99			10/11/99			10/11/99				
TPH-Gas	**ND**	1.0	50	**1,200**	1.0	50	**ND**	1.0	50	50	8015M
MTBE	**ND**	1.0	5.0	**76**	1.0	5.0	**ND**	1.0	5.0	5.0	8020
Benzene	**1.4**	1.0	0.50	**6.1**	1.0	0.50	**ND**	1.0	0.50	0.50	8020
Toluene	**ND**	1.0	0.50	**2.9**	1.0	0.50	**ND**	1.0	0.50	0.50	8020
Ethyl Benzene	**ND**	1.0	0.50	**65**	1.0	0.50	**ND**	1.0	0.50	0.50	8020
Xylenes (total)	**ND**	1.0	0.50	**55**	1.0	0.50	**ND**	1.0	0.50	0.50	8020

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El Cerrito, CA 94530
Attn: Randall Wilson

Date: 10/21/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	GP-7			GP-8							
Sample Date	10/8/99			10/8/99							
Sample Time	9:45			10:50							
Lab #	16820-007			16820-008							
	Result	DF	DLR	Result	DF	DLR				PQL	Method
Results in µg/Liter:											
Analysis Date	10/12/99			10/12/99							
TPH-Diesel	**ND**	1.0	50	**ND**	1.0	50				50	8015M
Analysis Date	10/21/99			10/21/99							
TPH-Gas	**180** [x]	1.0	50	**150** [x]	1.0	50				50	8015M
MTBE	**350**	1.0	5.0	**240**	1.0	5.0				5.0	8020
Benzene	**ND**	1.0	0.50	**ND**	1.0	0.50				0.50	8020
Toluene	**ND**	1.0	0.50	**ND**	1.0	0.50				0.50	8020
Ethyl Benzene	**ND**	1.0	0.50	**ND**	1.0	0.50				0.50	8020
Xylenes (total)	**ND**	1.0	0.50	**ND**	1.0	0.50				0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

Report amended 10/21/99

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N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

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Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randall Wilson

Date: 10/15/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	**Casing 1**			**Casing 2**							
Sample Date	10/8/99			10/8/99							
Sample Time	11:30			11:35							
Lab #	**16820-009**			**16820-010**							
	Result	DF	DLR	Result	DF	DLR				PQL	Method
Results in µg/Liter:											
Analysis Date	10/12/99			10/12/99							
TPH-Diesel	**ND**	1.0	50	**83** [x]	1.0	50				50	8015M
Analysis Date	10/11/99			10/12/99							
TPH-Gas	**ND**	1.0	50	**680**	5.0	250				50	8015M
MTBE	**9.2**	1.0	5.0	**1,200**	5.0	25				5.0	8020
Benzene	**ND**	1.0	0.50	**6.3**	5.0	2.5				0.50	8020
Toluene	**ND**	1.0	0.50	**ND**	5.0	2.5				0.50	8020
Ethyl Benzene	**ND**	1.0	0.50	**5.4**	5.0	2.5				0.50	8020
Xylenes (total)	**ND**	1.0	0.50	**72**	5.0	2.5				0.50	8020

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Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW991004
Matrix: Liquid
Units: µg/L

Date analyzed: 10/12/99
Date extracted: 10/11/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	**SP %R**	SPD µg/L	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	917	**92**	715	**72**	24.7	25	64-119
Hexocosane(S.S.)				82%	89%		68%				65-135

Definition of Terms:

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- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG1991011
Matrix: Liquid
Units: µg/Liter

Date Analyzed: 10/11/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	**SP % R**	SPD µg/Liter	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Benzene	8020	<0.50	5.6	ND	5.4	**96**	6.0	**107**	10.6	25	77-129
Toluene	8020	<0.50	29.0	ND	26	**89**	28	**97**	8.1	25	82-122
Ethyl Benzene	8020	<0.50	5.7	ND	5.0	**87**	5.3	**93**	6.6	25	77-114
Xylenes	8020	<0.50	30.6	ND	28	**91**	30	**98**	7.4	25	85-125
Gasoline	8015	<50.0	500	ND	416	**83**	437	**87**	5.0	25	75-125
aaa-TFT(S.S.)-PID	8020			78%	82%		79%				65-135
aaa-TFT(S.S.)-FID	8015			98%	93%		100%				65-135

Definition of Terms:

na: Not Analyzed in QC batch
MB: Method Blank
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike % Recovery
nc: Not Calculated

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:

Golden Gate - 23rd ave

Oakland

SAMPLER: (Signature) Randal Wilson

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

ANALYSIS REQUESTED: TPH-Gas, BTEX, MTBE; TPH-Diesel

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-Gas, BTEX, MTBE	TPH-Diesel						REMARKS
GP-1'	10/08/99	08:15		X	Water from geoprobe boring #1	X	X		16820-	001			
GP-2'	10/08/99	12:20		X	" " " " #2	X	X			-002			
GP-3'	10/08/99	08:59		X	" " " " #3	X	X			-003			only 1 amber
GP-4'	10/08/99	12:50		X	" " " " #4	X	X			-004			
GP-5'	10/08/99	13:45		X	" " " " #5	X	X			-005			
GP-6'	10/08/99	11:05		X	" " " " #6	X	X			-006			
GP-7'	10/08/99	09:45		X	" " " " #7	X	X			-007			
GP-8'	10/08/99	10:50		X	" " " " #8	X	X			-008			
Casing 1	10/08/99	11:30		X	" " Trench Casing #1	X	X			-009			
Casing 2	10/08/99	11:35		X	" " " " #2	X	X			-010			

RELINQUISHED BY: (Signature) Randal Wilson	DATE 10/08/99 TIME 16:50	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE 10/8/99 TIME 16:50

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes

QC Batch #: DS991005
Matrix: Solid
Units: mg/Kg

Date analyzed: 10/11/99
Date extracted: 10/11/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	21	**83**	21	**85**	1.3	25	43-118
Hexocosane				86%	83%		79%				65-135

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randall Wilson

Date: 10/21/99
Date Received: 10/8/99
Project: Golden Gate - 23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	GP-4			GP-5			GP-6				
Sample Date	10/8/99			10/8/99			10/8/99				
Sample Time	12:50			13:45			11:05				
Lab #	16820-004			16820-005			16820-006				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	10/12/99			10/12/99			10/12/99				
TPH-Diesel	**620,000**	100	5000	**80,000**	10	500	**ND**	1.0	50	50	8015M
Analysis Date	10/11/99			10/13/99			10/12/99				
TPH-Gas	**12,000** [x]	200	10000	**790** [x]	5.0	250	**3,100** [x]	50	2500	50	8015M
MTBE	**13,000**	200	1000	**340**	5.0	25	**4,800**	50	250	5.0	8020
Benzene	**ND**	200	100	**ND**	5.0	2.5	**ND**	50	25	0.50	8020
Toluene	**ND**	200	100	**ND**	5.0	2.5	**ND**	50	25	0.50	8020
Ethyl Benzene	**ND**	200	100	**ND**	5.0	2.5	**ND**	50	25	0.50	8020
Xylenes (total)	**ND**	200	100	**ND**	5.0	2.5	**ND**	50	25	0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

November 10, 1999

Randal Wilson
Hagenan-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530

Order: 17316
Project Name: Golden Gate Petroleum
Project Number:
Project Notes:

Date Collected: 11/3/99
Date Received: 11/3/99
P.O. Number:

On November 03, 1999, 8 samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	BTEX/Gas/Diesel	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	MTBE	EPA 8020

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#I-2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/10/99
Date Received: 11/3/99
Project: Golden Gate Petroleum
PO #:
Sampled By: Client

Certified Analytical Report

Solid Sample Analysis: (All results in mg/kg)

Sample ID	MW-2@5'										
Sample Date	11/1/99										
Sample Time	13:02										
Lab #	17316-001										
	Result	DF	DLR							PQL	Method
Analysis Date	11/5/99										
TPH-Diesel	9.7	1.0	1.0							1.0	8015M
Analysis Date	11/4/99										
TPH-Gas	**ND**	1.0	1.0							1.0	8015M
MTBE	**ND**	1.0	0.05							0.05	8020
Benzene	**ND**	1.0	0.005							0.005	8020
Toluene	0.037	1.0	0.005							0.005	8020
Ethyl Benzene	**ND**	1.0	0.005							0.005	8020
Xylenes (total)	**ND**	1.0	0.005							0.005	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 1-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hagenian-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/10/99
Date Received: 11/3/99
Project: Golden Gate Petroleum
PO #:
Sampled By: Client

Certified Analytical Report

Solid Sample Analysis: (All results in mg/kg)

Sample ID	MW-2@10'										
Sample Date	11/1/99										
Sample Time	13:08										
Lab #	17316-002										
	Result	DF	DLR							PQL	Method
Analysis Date	11/5/99										
TPH-Diesel	**4,300**	50	50							1.0	8015M
Analysis Date	11/4/99										
TPH-Gas	**450** [1]	500	25							0.050	8015M
MTBE	**ND**	500	2.5							0.005	8020
Benzene	**ND**	500	0.25							0.0005	8020
Toluene	**ND**	500	0.25							0.0005	8020
Ethyl Benzene	**ND**	500	0.25							0.0005	8020
Xylenes (total)	**ND**	500	0.25							0.0005	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

[1] Sample for TPH-GBTEX required methanol extraction due to high concentrations of target hydrocarbons

- Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #1-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 1-2346

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STANDARD LAB QUALIFIERS
July, 1998

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier	Description
U	Compound was analyzed for but not detected
J	Estimated valued for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range, chromatographic pattern not typical of fuel

ATTACHMENT E

Analytical Results

18.0°C

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:
Golden Gate Petroleum
23rd Avenue
Oakland, CA

SAMPLER: (Signature) for RANDAL WILSON

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

ANALYSIS REQUESTED: TPH-g, BTEX, MTBE; TPH-d

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-g	TPH-d	BTEX, MTBE				REMARKS
MW1@5'	11-1-99	11:17	X		Monitoring Well -1 @ 5'	X	X		17316		-003	
MW-1@10'	11-1-99	11:20	X		Monitoring Well 1 @ 10'	X	X				-004	Normal
MW-2@5'	11-1-99	13:02	X		Monitoring Well 2 @ 5'	X	X				-001	Turn
MW-2@10'	11-1-99	13:08	X		Monitoring Well 2 @ 10'	X	X				-002	Around Time
MW-3@5'	11-1-99	9:35	X		Monitoring Well 3 @ 5'	X	X				-005	Please.
MW-3@10'	11-1-99	9:40	X		Monitoring Well 3 @ 10'	X	X				-006	
MW-4@5'	11-1-99	7:55	X		Monitoring Well 4 @ 5'	X	X				-007	
MW-4@10'	11-1-99	8:00	X		Monitoring Well 4 @ 10'	X	X				-008	

RELINQUISHED BY: (Signature)	DATE 11-3-99 TIME 15:14	RECEIVED BY: (Signature)	DATE 11/3/99 TIME 1514
RELINQUISHED BY: (Signature)	DATE 11/3/99 TIME 17:40	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE 11/3/99 TIME 1745

Nov-10-1999 11:14AM

HAGEMAN-AGUIAR, INC.
Environmental & Water Resources Engineering
Groundwater Consultants

FAX COVER SHEET

DATE:	11-3-99	TIME:	
TO:	ENTECH	PHONE:	(408) 735-1550
		FAX:	(408) 735-1554
FROM:	Renee Athey	PHONE:	(510) 620-0891
	Hageman-Aguiar, Inc.	FAX:	(510) 620-0894
RE:	Revised Chain-of-Custody for Golden Gate Petroleum.		
CC:			

Number of pages including cover sheet: 2

Message

Please attach the revised chain-of-custody to the samples pick up today. Please only RUN soil samples from MW-2 @ 5' and MW-2 @ 10'. Sorry, for the confusion.

Renee

11100 SAN PABLO AVE., SUITE 200-A • EL CERRITO, CALIFORNIA 94530 • (510) 620-0891 • FAX (510) 620-0894

— REVISED —

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:
Golden Gate Petroleum
23rd Avenue
Oakland, CA

SAMPLER (Signature): for RANDALL WILSON

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

ANALYSIS REQUESTED: TPH-g, BTEX, MTBE; TPH-d

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-g	TPH-d	BTEX, MTBE				REMARKS
MW-1 @ 5'	11-1-99	11:17	X		Monitoring Well -1 @ 5'	X	X		HOLD	FK	-003	
MW-1 @ 10'	11-1-99	11:20	X		Monitoring Well 1 @ 10'	X	X		HOLD		-004	Normal
MW-2 @ 5'	11-1-99	13:02	X		Monitoring Well 2 @ 5'	X	X	15-316	-001			Turn
MW-2 @ 10'	11-1-99	13:08	X		Monitoring Well 2 @ 10'	X	X			FK	-002	Around Time
MW-3 @ 5'	11-1-99	9:35	X		Monitoring Well 3 @ 5'	X	X		HOLD	FK	-005	Please.
MW-3 @ 10'	11-1-99	9:40	X		Monitoring Well 3 @ 10'	X	X		HOLD	FK	-006	
MW-4 @ 5'	11-1-99	7:55	X		Monitoring Well 4 @ 5'	X	X		HOLD	FK	-007	
MW-4 @ 10'	11-1-99	8:00	X		Monitoring Well 4 @ 10'	X	X		HOLD	FK	-008	

RELINQUISHED BY: (Signature) for RANDALL WILSON	DATE 11-3-99 TIME 15:14	RECEIVED BY: (Signature)	DATE 11/3/99 TIME 15:14
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE 11/3/99 TIME 17:45

Entech Analytical Labs, Inc.

CA ELAP#:I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

November 19, 1999

Randal Wilson
Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530

Order: 17547
Project Name: Golden Gate-23rd Ave
Project Number:
Project Notes:

Date Collected: 11/12/99
Date Received: 11/12/99
P.O. Number:

On November 12, 1999, 6 samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	Gas/BTEX/MTBE	EPA 8015 MOD.
		EPA 8020
	TPH as Diesel	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#I-2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP#:1-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/19/99
Date Received: 11/12/99
Project: Golden Gate-23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	MW-1			MW-2			MW-3				
Sample Date	11/11/99			11/11/99			11/11/99				
Sample Time	9:55			13:29			11:25				
Lab #	17547-001			17547-002			17547-003				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	11/18/99			11/19/99			11/18/99				
TPH-Diesel	**ND**	1.0	50	**220**	1.0	50	**ND**	1.0	50	50	8015M
Analysis Date	11/15/99			11/16/99			11/16/99				
TPH-Gas	**ND**	1.0	50	**6,800**	100	5000	**1,600** [1]	25	1250	50	8015M
MTBE	**ND**	1.0	5.0	**13,000**	100	500	**3,100**	25	125	5.0	8020
Benzene	**ND**	1.0	0.50	**ND**	100	50	**ND**	25	12.5	0.50	8020
Toluene	**ND**	1.0	0.50	**ND**	100	50	**ND**	25	12.5	0.50	8020
Ethyl Benzene	**ND**	1.0	0.50	**ND**	100	50	**ND**	25	12.5	0.50	8020
Xylenes (total)	**ND**	1.0	0.50	**ND**	100	50	**ND**	25	12.5	0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

[1] Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #1-2345)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/19/99
Date Received: 11/12/99
Project: Golden Gate-23rd Ave
PO #:
Sampled By: Client

Certified Analytical Report

Liquid Sample Analysis:

Sample ID	MW-4			Casing-1			Casing-2				
Sample Date	11/11/99			11/11/99			11/11/99				
Sample Time	10:33			14:16			15:40				
Lab #	17547-004			17547-005			17547-006				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Results in µg/Liter:											
Analysis Date	11/18/99			11/18/99			11/17/99				
TPH-Diesel	**ND**	1.0	50	**ND**	1.0	50	**ND**	1.0	50	50	8015M
Analysis Date	11/16/99			11/16/99			11/16/99				
TPH-Gas	**650**	10	500	**ND**	5.0	250	**150**	2.0	100	50	8015M
MTBE	**750**	10	50	**350**	5.0	25	**300**	2.0	10	5.0	8020
Benzene	**ND**	10	5	**ND**	5.0	2.5	**ND**	2.0	1	0.50	8020
Toluene	**ND**	10	5	**ND**	5.0	2.5	**ND**	2.0	1	0.50	8020
Ethyl Benzene	**ND**	10	5	**ND**	5.0	2.5	**ND**	2.0	1	0.50	8020
Xylenes (total)	**ND**	10	5	**ND**	5.0	2.5	**ND**	2.0	1	0.50	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP#1-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

STANDARD LAB QUALIFIERS
July, 1998

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier	Description
U	Compound was analyzed for but not detected
J	Estimated valued for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis. discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS: Golden Gate - 23rd Ave

SAMPLER: (Signature) Randal Wilson

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	ANALYSIS REQUESTED: TPH-Gas, BTEX, MTBE	TPH-Diesel	MTBE by 8260	REMARKS
MW-1	11/11/99	09:55		X	Monitor Well #MW-1	X	X		17542 - 001
MW-2	11/11/99	13:29		X	" " #MW-2	X	X	X	-002
MW-3	11/11/99	11:25		X	" " #MW-3	X	X	X	-003
MW-4	11/11/99	10:33		X	" " #MW-4	X	X	X	-004
Casing-1	11/11/99	14:16		X	Recovery Trench Casing #1	X	X		-005
Casing-2	11/11/99	15:40		X	" " " #2	X	X	X	-006

RELINQUISHED BY: (Signature) Randal Wilson	DATE 11/12/99 TIME 11:21	RECEIVED BY: (Signature) Rod W. BD #713	DATE 11-12-99 TIME 1129
RELINQUISHED BY: (Signature) Rod W. BD	DATE 11/10/99 TIME 1910	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED BY: (Signature)	DATE TIME
RELINQUISHED BY: (Signature)	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature)	DATE 11/12/99 TIME 1425

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

November 22, 1999

Randal Wilson
Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530

Order: 17547
Project Name: Golden Gate-23rd Ave
Project Number:
Project Notes:

Date Collected: 11/12/99
Date Received: 11/12/99
P.O. Number:

On November 12, 1999, 6 samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	MTBE by EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#1-2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 1-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/22/99
Date Received: 11/12/99
Project Name: Golden Gate-23rd Ave
Project Number:
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 17547 **Lab Sample ID:** 17547-002 **Client Sample ID:** MW-2

Sample Time: 1:29 PM **Sample Date:** 11/12/99 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	13000		200	5	1000	µg/L	11/21/99	WMS991121	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99	65 - 135
Dibromofluoromethane	87	65 - 135
Toluene-d8	106	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #1-2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/22/99
Date Received: 11/12/99
Project Name: Golden Gate-23rd Ave
Project Number:
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 17547 **Lab Sample ID:** 17547-003 **Client Sample ID:** MW-3

Sample Time: 11:25 AM **Sample Date:** 11/12/99 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	2500		50	5	250	µg/L	11/21/99	WMS991121	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98	65 - 135
Dibromofluoromethane	88	65 - 135
Toluene-d8	105	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/22/99
Date Received: 11/12/99
Project Name: Golden Gate-23rd Ave
Project Number:
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 17547 **Lab Sample ID:** 17547-004 **Client Sample ID:** MW-4

Sample Time: 10:33 AM **Sample Date:** 11/12/99 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	540		10	5	50	µg/L	11/21/99	WMS991121	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97	65 - 135
Dibromofluoromethane	67	65 - 135
Toluene d8	106	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.
11100 San Pablo Avenue
El Cerrito, CA 94530
Attn: Randal Wilson

Date: 11/22/99
Date Received: 11/12/99
Project Name: Golden Gate-23rd Ave
Project Number:
P.O. Number:
Sampled By: Client

Certified Analytical Report

Order ID: 17547 **Lab Sample ID:** 17547-006 **Client Sample ID:** Casing-2

Sample Time: 3:40 PM **Sample Date:** 11/12/99 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	320		5	5	25	µg/L		WMS991121	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96	65 - 135
Dibromofluoromethane	102	65 - 135
Toluene-d8	102	65 - 135

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #1-2346)

Michelle L. Anderson, Laboratory Director

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:
Golden Gate - 23rd Ave

SAMPLER: (Signature)
Randal Wilson

HAGEMAN - AGUIAR, INC.
11100 San Pablo Ave., Suite 200-A
El Cerrito, CA 94530
(510)620-0891 (510)620-0894 (FAX)

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	TPH-Gas, BTEX, MTBE	TPH-Diesel	MTBE by 8260	REMARKS
MW-1	11/11/99	09:55		X	Monitor Well #MW-1	X	X		17547 - 001
MW-2	11/11/99	13:29		X	" " #MW-2	X	X	X	-002
MW-3	11/11/99	11:25		X	" " #MW-3	X	X	X	-003
MW-4	11/11/99	10:33		X	" " #MW-4	X	X	X	-004
Casing-1	11/11/99	14:16		X	Recovery Trench Casing #1	X	X		-005
Casing-2	11/11/99	15:40		X	" " " #2	X	X	X	-006

ANALYSIS REQUESTED

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
Randal Wilson	11/12/99 11:24	Roger D. Bell #713	11-12-99 1129
Roger D. Bell	11/12/99 1910		

RECEIVED FOR LABORATORY BY: (Signature)
DATE 11/12/99
TIME 1428