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

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

September 19, 1997

StID# 775

Mr. Philip Briggs,
Chevron USA Inc.,
P.O. Box 5004
San Ramon, CA 94583-0804

Walter Bauman Trust
60 Hillsdale Mall,
San Mateo, CA 94403

Re: Fuel Leak Site Case Closure at the former Chevron Station located at 997 Grant Ave., San Lorenzo 94580

Dear Mr. Briggs and the Bauman Trust:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- ND, 13, 33, and 1.7 parts per billion(ppb) of BTEX, remains in the ground water in the area of the former underground tank, along with 250 ppb of total petroleum hydrocarbons (TPH).

- If a change in the land use is proposed, then an evaluation of risk from exposure to contaminated soil/groundwater must be made.

If you have any questions, please contact this office at (510) 567-6737.

Sincerely,

Brian P. Oliva, REHS, REA,
Hazardous Materials Specialist

enclosure:
1. Case Closure Letter
2. Case Closure Summary

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
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(510) 567-6700
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September 19, 1997

STID #775

REMEDIAL ACTION COMPLETION CERTIFICATION

Philip Briggs,
Chevron USA Inc.,
P.O. Box 5004
San Ramon, CA 94583-0804

Walter Bauman Trust
60 Hillsdale Mall,
San Mateo, CA, 94403

Subject: Former Chevron Service Station #9-5630, 997 Grant Avenue, San Lorenzo, CA 94580 Removal of one (1) six thousand gallon gasoline, two (2) ten thousand gallon gasoline, and one (1) one thousand gallon waste oil underground storage tanks

Dear Mr. Briggs and the Bauman Trust:

This letter confirms the completion of a site investigation and remedial action for the underground storage tank formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based upon the available information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

Please contact Brian P. Oliva, at (510) 567-6737 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director of Environmental Health Services

enclosure

c: Chief, Hazardous Materials Division - files
Brian P. Oliva, ACDEH
Kevin Graves, RWQCB
Lori Casias, SWRCB
Cheryl Gordon, State Cleanup Fund
Jim Ferdinand, Alameda County Fire Depatment

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: June 10, 1997

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6763
Responsible staff person: Juliet Shin Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Former Chevron Service Station #9-5630
Site facility address: 997 Grant Ave., San Lorenzo, CA 94580
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: STID 775
URF filing date: 4/8/91 SWEEPS No: N/A

Responsible Parties:	Addresses:	Phone Numbers:
Chevron USA Inc Contact: Philip Briggs	P.O. Box 5004 San Ramon, CA 94583-0804	(510)842-9136
Walter Baumann Trust	60 Hillsdale Mall San Mateo, CA 94403	Unknown

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	6,000	Super Unleaded gas	removed	12/18/90
2	10,000	Regular leaded	removed	12/18/90
3	10,000	Regular unleaded	removed	12/18/90
4	1,000	Waste Oil	removed	12/18/90

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: All the product tanks failed a petrotite test due to leaks found in the vent lines in 1986. These lines were subsequently replaced and retested. It is reported that each system passed upon retest. Additionally, it was noted during the December 1990 UST closures that one of the 10,000-gallon underground storage tanks, previously containing regular unleaded gasoline, as well as the 6,000-gallon underground storage tank, contained holes or cracks.

Site characterization complete? YES

Date approved by oversight agency: June 10, 1997

Monitoring Wells installed? YES Number: Seven (Wells C-1 through C-7. Well C-4 destroyed during overexcavation of tank pit).

Proper screened interval? Wells C-5 (screened from 5- to 20-feet bgs), and C-6 and C-7 (screened from 3- to 18-feet bgs) appear to be screening across the presumed unconfined aquifer beneath the site. However, Wells C-1 through C-4 are screened significantly below the water table, from ~15- to ~28-feet bgs, because it was assumed at the time of their installation that the aquifer was semi-confined.

Highest GW depth below ground surface: 5.41-feet bgs Lowest depth: 16.02-feet bgs (Data from Well C-6)

Flow direction: Consistently to the southwest to northwest

Most sensitive current use: Commercial

Are drinking water wells affected? NO Aquifer name: Unknown

Is surface water affected? NO Nearest affected SW name:

Off-site beneficial use impacts (addresses/locations): There are 35 monitoring wells, 29 irrigation wells, and three domestic wells within 0.5 miles of the site. However, per the results of Well C-5, no ground water contamination appears to have migrated off site.

Report(s) on file? YES Where is report(s) filed? Alameda County
1131 Harbor Bay Pkwy.
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	4 tanks	Erickson, Inc. 255 Parr Blvd. Richmond, CA 94801	12/18/90
Piping	(It appears that the piping was also hauled to Erickson)		
Free Product	33 gallons	Erickson, Inc.	12/18/90
Soil	220 cubic yard of soil was hauled to Browning Ferris Industries, 4001 Vasco Rd., Livermore, California 94550		
	5,000 cubic yards	Aerated and re-used on site	
Groundwater	Recycled at Chevron facility in Richmond		

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup
(From pit-excluding stockpiled soil)

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[3]	Before[6]	After[7]
TPH (Gas)	6,000	270	8,000	250
TPH (Diesel)	ND	ND	ND	ND
Benzene	2.8[8]	0.056[4]	7,800	13
Toluene	50[2]	1.9[5]	19,000	1.7
Xylene	400	9	17,000	33
Ethylbenzene	56	3	2,700	3.8
MTBE	NA			
Oil & Grease	ND	ND		
Heavy metals	Metal concentrations were all below TTLC and 10xSTLC values given in Title 22 CCR, and existing human-health protective threshold values			
4-Methyl-2Pentanone	0.077			

1-Sample CT-12 collected from below product piping on 1/15/91
2-Sample CX-1B collected from bottom of tank pit on 12/18/90
3-Confirmatory soil sample, CX-23s, collected from the sidewall of the tank pit overexcavation on 2/15/91.
4-Confirmatory soil sample, CX-17s, collected from the sidewall of the tank pit overexcavation on 2/15/91.
5-Sample C-6-10, collected during the installation of Well C-6 on 7/22/94.
6-"grab" groundwater sample CH-1 collected from the gas tank pit on 12/18/90.
7-Groundwater samples collected from Well C-2.
8-Sample from C-4 @ 10.5-feet (11/12/98)

Comments (Depth of Remediation, etc.): Refer to Section VII. Additional Comments, Data, etc.

IV. CLOSURE

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

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES

Monitoring wells Decommisioned: NO

Number Decommisioned: One well, C-4, destroyed during excavation of the tank pit.

Number Retained: Six

List enforcement actions taken: None

List enforcement actions rescinded: None

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Juliet Shin — Title: Senior HMS
Signature: — Date: 7/22/97

Reviewed by
Name: Eva Chu — Title: Hazardous Materials Spec.
Signature: — Date: 7/18/97

Name: Tom Peacock — Title: Supervising HMS
Signature: — Date: 7-24-97

VI. RWQCB NOTIFICATION

Date Submitted to RB: — RB Response: Approved
RWQCB Staff Name: Kevin Graves — Title: San. Engineering Asso. — Date: 8/12/97

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site was previously occupied by a Chevron Service Station and is now vacant. The site is located at the corner of Washington Avenue and Grant Avenue (refer to attached figure 1).

On November 12 and 13, 1990, four monitoring wells (C-1 through C-4) were installed at the site (refer to attached figure 2 for well locations). Soil samples were collected from Well C-1 from 5-, 10.5-, and 15.5-feet bgs; in Well C-2 from 4-, 9-, 14-, and 19.5-feet bgs; in Well C-3 from 5.5-, 10.5-,15.5-,and 20.5-feet bgs; and in Well C-4 from 10.5-, 15.5-, and 20.5-feet bgs (refer to attached boring logs). Soil samples were analyzed for TPHg, TPHd, O&G, and BTEX. Soil samples from Well C-1 were also analyzed for chlorinated hydrocarbons using Method 8240. Analysis of these samples identified up to 890ppm TPHg, 2.8ppm benzene, 26ppm toluene, 22ppm ethylbenzene, and 110ppm total xylenes. No chlorinated hydrocarbons were identified (refer to attached table 1 for analytical results).

Wells C-1 and C-2 were screened from 15- to 28-feet bgs, and Wells C-3 and C-4 were screened from 17- to 27-feet bgs, based on the initially

encountered groundwater depth during drilling, which was noted to be at ~18- to 19-feet bgs. Subsequent to the well installations, the water level rose to approximately 11.5-feet bgs, indicating semi-confined to confined conditions. However, based on the fact that water was identified in the tank pit excavation at 11.5-feet bgs and the fact that the water level rose to 11.5-feet bgs in these wells, this may be indicative of slow recharge rather than semi-confined conditions.

On December 18, 1990, two 10,000-gallon fiberglass underground storage tanks (USTs) containing regular leaded and unleaded gasoline, as well as one 6,000-gallon fiberglass UST containing unleaded gasoline and one 1,000-gallon UST containing waste oil, were removed from the site.

Six soil samples (CX-1B, CX-4B, CX-5B, CX-7B, CX-9B, and CX-10B) were collected from below the former gas USTs, from ~11.5-feet below ground surface (bgs)(refer to attached figures 3 & 4 for sample locations). Eight soil samples (CX-2S, CX-3S, CX-6S, CX-8S, CX-11S, CX-12S, CX-13S, and CX-14S) were collected from the sidewall of the gas UST excavation from 8- to 9.5-feet bgs. Additionally, one "grab" groundwater sample, CH-1, was collected from the pit from near sample CX-1B. These samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Analysis of the samples collected from the bottom of the excavation identified up to 1,700 parts per million (ppm) TPHg, 1.2ppm benzene, 50ppm toluene, 29ppm ethylbenzene, and 160ppm total xylenes. Analysis of the sidewall soil samples identified up to 4,500ppm TPHg, 0.7ppm benzene, 16ppm toluene, 39ppm ethylbenzene, and 210ppm total xylenes. The "grab" groundwater sample identified 8,000 parts per billion(ppb) TPHg, 7,800ppb benzene, 19,000ppb toluene, 2,700ppb ethylbenzene, and 17ppb total xylenes.

For the waste oil tank pit, one soil sample, CW-1B, was collected from below the UST at 11-feet bgs, and four sidewall soil samples (CW-2, CW-3, CW-4, and CW-5) were collected from ~7-feet bgs. These samples were analyzed for TPHg, TPH as diesel(TPHd), Oil & Grease (O&G), BTEX, volatile organics (using Method 8240), and cadmium, chromium, lead, nickel, and zinc. Analysis of these samples identified up to 0.01ppm total xylenes and 0.077ppm 4-methyl-2-pentanone. Analysis for TPHg, TPHd, O&G, and BTEX were Non Detect. All metal concentrations were below ten times the Soluble Threshold Limit Concentrations (STLCs) given in Title 22 of the California Code of Regulations (refer to attached table 2 for all soil sample results).

In addition to the above tank pit samples, 11 soil samples (CT-1 through CT-11) were collected from beneath the product piping and dispensers from ~3.5-feet bgs. These samples were analyzed for TPHg and BTEX. Analysis of these samples identified up to 3,400ppm TPHg, 0.45ppm benzene, 1.7ppm toluene, 12ppm ethylbenzene, and 80ppm total xylenes. One additional soil sample, CT-12, was collected from 5.5-feet bgs below sample CT-2, where the highest concentrations were identified, in an attempt to delineate the

vertical extent of this contamination. Analysis of CT-12 identified even higher concentrations than CT-2, at 6,000ppm TPHg, 0.5ppm benzene, 17ppm toluene, 56ppm ethylbenzene, and 400ppm total xylenes.

In February 1991, extensive overexcavation was conducted of the gas UST tank pit and associated piping trenches and dispensers (refer to attached figure 4 for extent of overexcavation). It was not stated whether any vertical overexcavation was conducted, however, lateral overexcavation was conducted until an Organic Vapor Meter photoionization detector identified less than 100ppm out in the field. Subsequently, confirmatory soil samples, CX-15S through CX-24S, were collected from the sidewalls of the overexcavation at ~9.5-feet bgs. No confirmatory excavation bottom samples were collected. The confirmatory soil samples were analyzed for TPHg and BTEX. Analysis of these samples identified up to 270ppm TPHg, 0.056ppm benzene, 0.093ppm toluene, 3ppm ethylbenzene, and 9ppm total xylenes.

Based on the fact that no confirmatory soil samples were collected from the bottom of the overexcavation, it appears that the elevated contaminant concentrations initially identified in the bottom tank pit samples collected from 11.5-feet bgs were left in place. According to information provided to us in Geraghty & Miller's March 21, 1994 Background Data Clarification Report, it is suggested that the excavation was conducted down to 14.5 feet below ground surface, however, there is no further information supporting this statement.

Per Geraghty & Miller's March 11, 1994 Background Data Clarification Report, approximately 504 cubic yards of soil was excavated and stockpiled onsite in December 1990. An additional 4,700 cubic yards of soil was overexcavated in February 1991. A total of 5,204 cubic yards of soil was excavated. Following excavation, four soil samples were collected for every 50 cubic yards of excavated soil, composited in the laboratory, and analyzed as one sample (CS-1 through CS-88, CZ-1, and CSX-16 through CSX-18). Soil samples were collected below the top 6 to 12 inches of stockpiled soil. All stockpiled soil with a total of TPHg greater than 9 ppm (estimated 2,200 cubic yards) was aerated on site. All remaining excavated soil (estimated 3,004 cubic yards) was retained on site for use as backfill.

Upon completion of aerating the 2,200 cubic yards of soil, soil samples were collected from each 20 cubic yards of this soil. All the sections of the stockpiled soil containing less than 10 ppm were used as backfill material. The remaining soil was aerated further and resampled. Approximately 200 cubic yards of soil (CS16 through CS18, and CS26) were transported to Browning Ferris Industries North Vasco Road Disposal Site in Livermore.

The excavation was backfilled with one foot of 1.5-inch drain rock. Filter fabric was placed on top of the drain rock. EGE inaccurately reported the installation of a compacted clay liner.

Well C-4 was destroyed during the February 1991 overexcavation activities, so it was only sampled once. Groundwater gradient information calculated for the site up until December 1991 were inaccurate due to the damage Well C-2 incurred during the excavation activities. These gradients were recalculated after Well C-2 was repaired and all the wells were re-surveyed in April 1992.

On February 2, 1993, one additional off-site, downgradient monitoring well was installed in Washington Avenue (refer to attached figure 5 for well location). Two soil samples were collected from Well C-5 from 5- and 10-feet bgs, and analyzed for TPHg and BTEX. No contaminants were identified above detection limits (refer to attached table 3). Groundwater was first encountered in this well at 8.5-feet bgs and was screened from 5- to 20-feet bgs (refer to attached boring log). Groundwater from this well did not appear to be semi-confined, as compared to the on-site wells that first encountered groundwater at ~18-feet bgs and stabilized at ~11.5-feet bgs.

There was some uncertainty as to whether the aquifer beneath the site was really semi-confined, based on the differences in the depth-to-water between off-site Well C-5 and the existing on-site wells; and the fact that the water levels in all the wells stabilized at ~11.5-feet bgs, which was the depth of the water originally found in the tank excavation pit. If the groundwater was, in fact, not confined, then the on-site wells were screening too far below the water table. Due to this concern, and the fact that soil contamination was apparently left in place at ~11.5-feet bgs, two additional monitoring wells (Well C-6 and C-7), screening across 11.5-feet bgs, were installed on July 22, 1994 (refer to attached boring logs; and figure 5 for well locations; and table 4 for soil sample results).

Two soil samples were collected from Wells C-6 and C-7 at 5- and 10-feet bgs and analyzed for TPHg and BTEX. These soil samples were collected in order to estimate the extent and severity of the soil contamination initially observed at the bottom of the tank excavation. Analysis of these samples identified up to 180ppm TPHg, 0.05ppm benzene, 1.9ppm toluene, 0.84ppm ethylbenzene, and 0.95ppm total xylenes. First encountered groundwater in these two wells was at ~12-feet bgs, and the wells were screened from 3- to 18-feet bgs.

In March 1995, it was discovered that incorrect sample analytical data had been submitted to this office for the sampling events conducted between June 1992 and February 1995 for Wells C-1, C-2, C-3, and C-5. This data was replaced by the correct analytical results in all reports prepared and submitted to this office after March 1995.

In December 1995, Chevron submitted a human-health risk assessment to the County. This risk assessment addressed the following exposure scenarios: 1) residential dermal and inhalation exposure to site soils and the enclosed-space exposure to vapors emanating from the groundwater plume; and 2) Construction worker dermal and inhalation exposure to site soils. An addendum to this risk assessment, dated July 10, 1996, additionally addressed the ingestion scenario for construction workers, children scenarios, and the application of a "crack factor" used in the assessment of indoor vapor inhalation. The risk assessment showed that all these scenarios were below a 1×10^{-6} excess cancer risk.

For the last three years, contaminant concentrations identified in groundwater samples collected from the on- and off-site monitoring wells have been below the human-health protective threshold concentrations for a commercial site listed in the Tier 1 table of the American Society for Testing and Materials' Risk-Based Corrective Action Guidelines (E1739-95) for an excess cancer risk of 1 x 10-6. Additionally, the groundwater contaminant plume appears to have stabilized and be limited in extent, based on the NonDetect levels in the downgradient wells(refer to attached table 5 for all groundwater analytical results).

This office is recommending case closure for this site based on the following rationale:

- Currently, there appears to be no threat to human health or the environment based on the 1996 human health risk assessment conducted for the site, as well as the American Society for Testing and Materials' Risk-Based Corrective Action Guidelines (E1739-95).

- The plume appears to be stable and limited in extent based on the NonDetect levels in downgradient well C-5.

FIGURES

GROUNDWATER TECHNOLOGY

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

N

SCALE: 0 FEET 2000

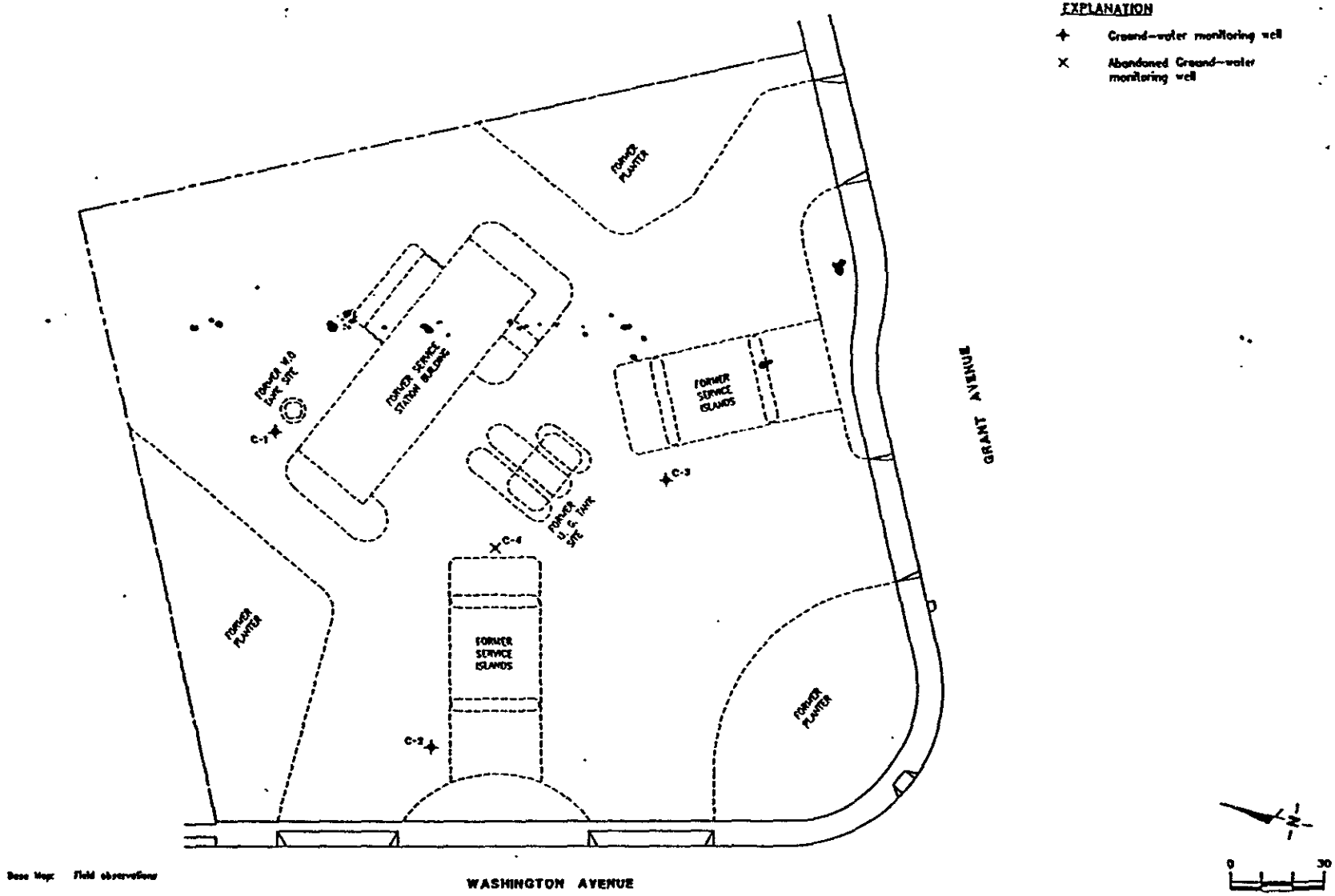
SITE LOCATION MAP

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-5630

DATE: 3/9/93

LOCATION: 997 GRANT AVENUE
SAN LORENZO, CALIFORNIA

FIGURE: 1

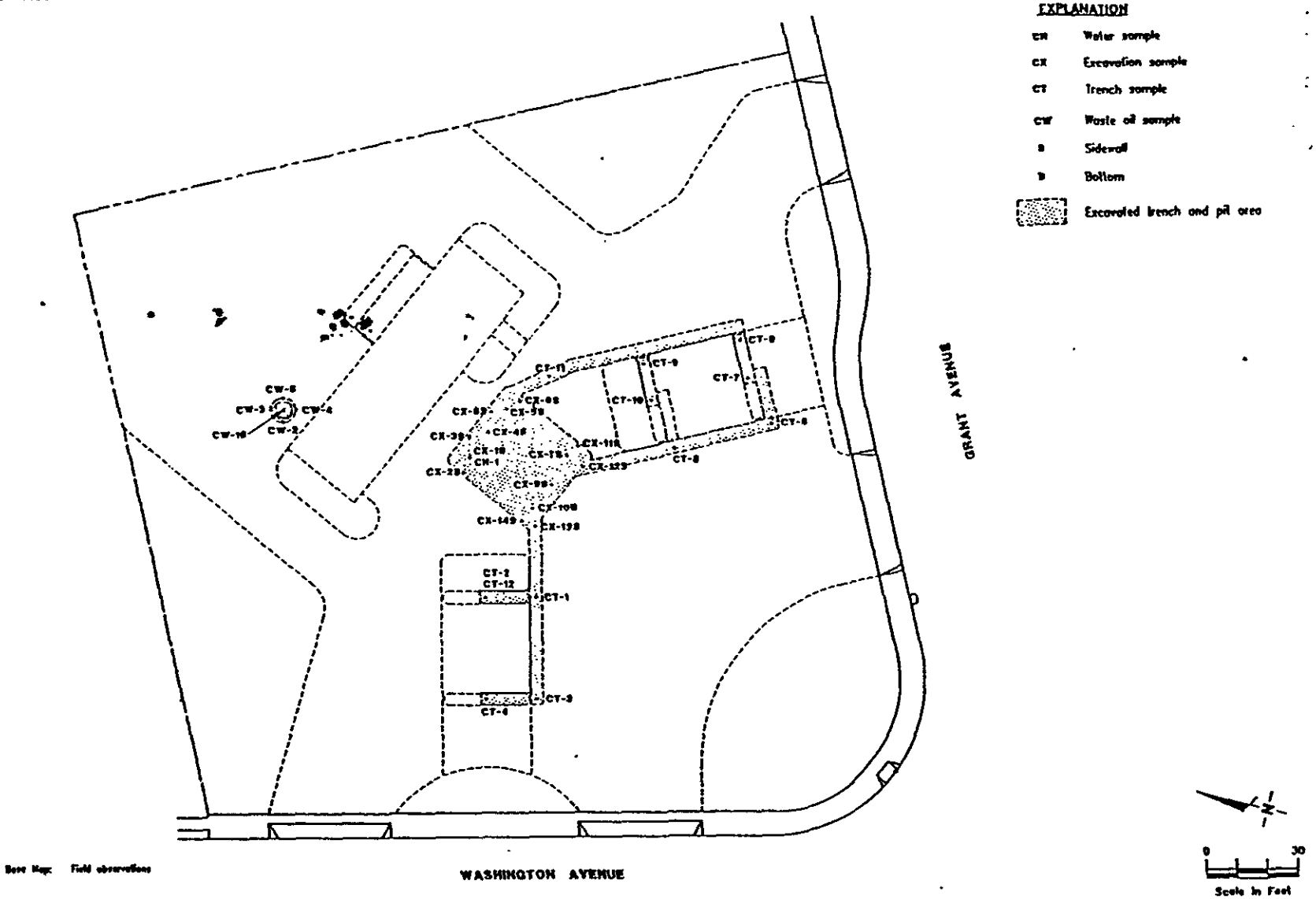


Reference: GSI (1991b)

ENVIRONMENTAL GEOSCIENCES ENGINEERING		
a division of Water Resources Associates, Inc. Phoenix, Arizona		
Project No.: 70601	Drawn by: V. N. C.	
Date: 5/6/92		

CHEVRON USA
FORMER STATION #9-5630
SAN LORENZO, CA
SITE FEATURES

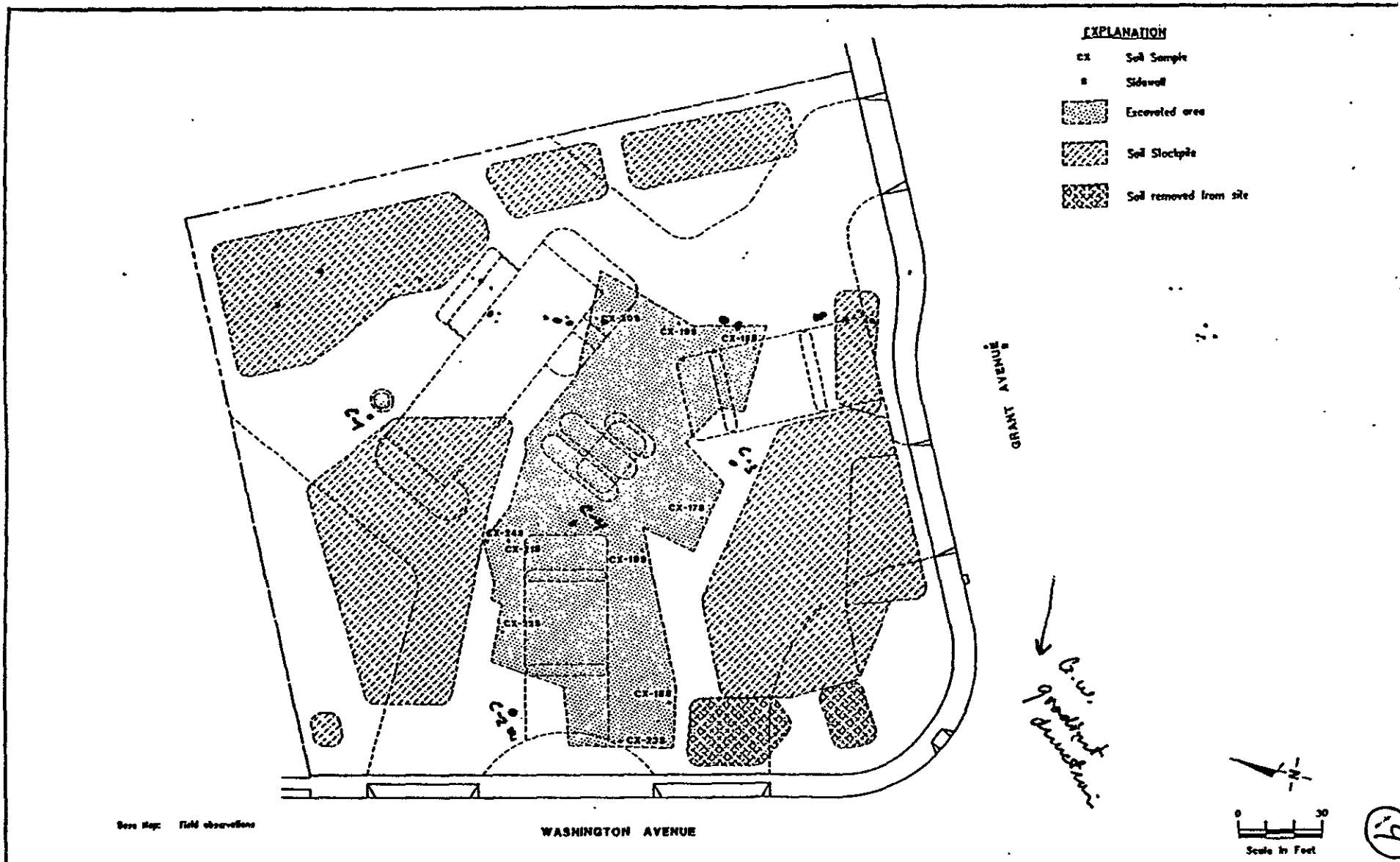
Figure 2



Reference: GSI (1991b)

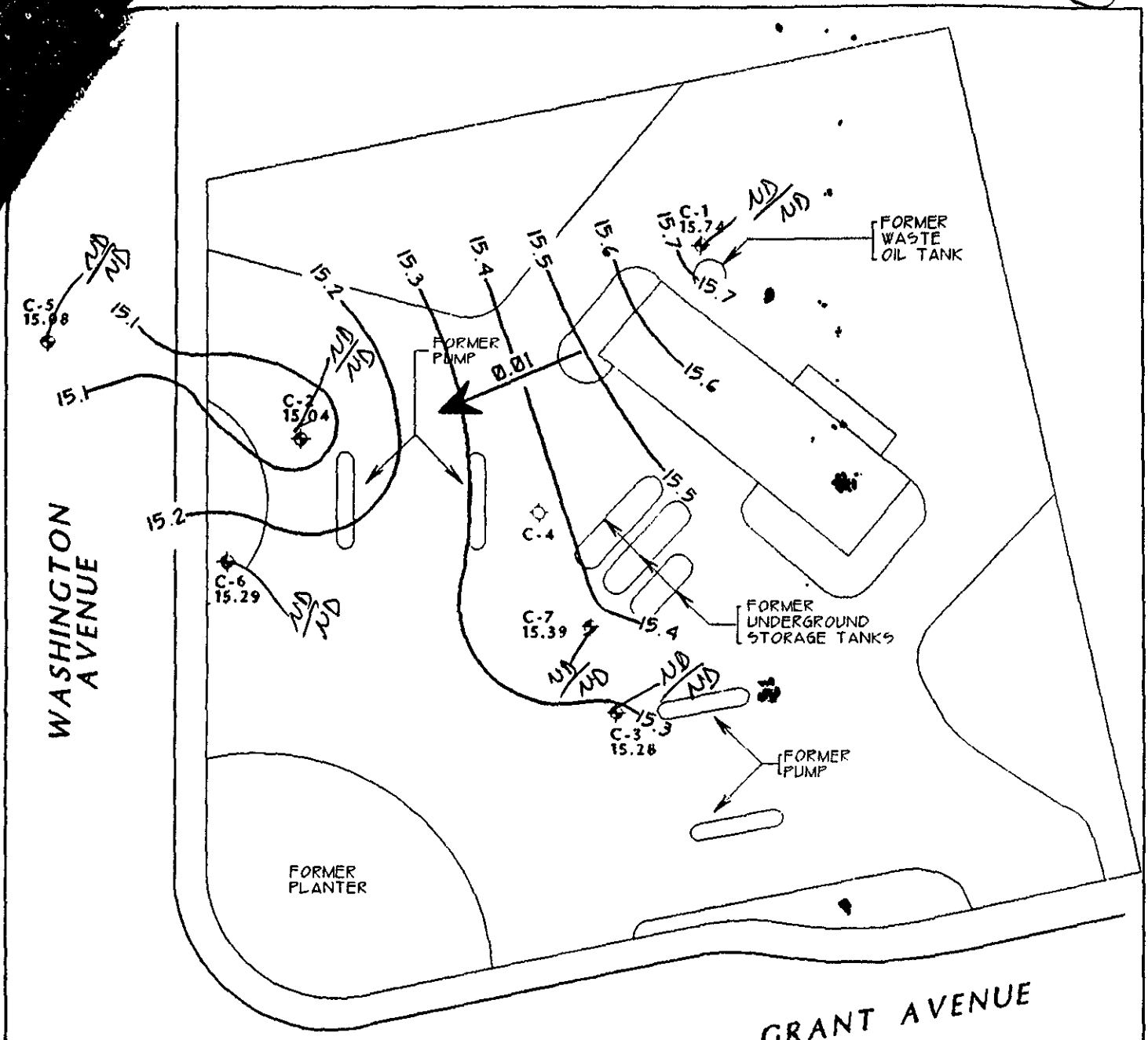
ENVIRONMENTAL GEOSCIENCES ENGINEERING		CHEVRON USA
a division of Water Resources Associates, Inc. Phoenix, Arizona		FORMER STATION #9-5630
Project No.: 70601	Drawn by: V. M. C.	SAN LORENZO, CA
Date: 5/6/92	Checked by: C. M. P.	INITIAL EXCAVATION SAMPLE MAP

Figure 3



Reference: GSI (1991b)

ENVIRONMENTAL GEOSCIENCES ENGINEERING		CHEVRON USA FORMER STATION #9-5630 SAN LORENZO, CA FINAL EXCAVATION SAMPLE MAP	Figure 4
a division of Water Resources Associates, Inc. Phoenix, Arizona			
Project No.: 70601	Drawn by: V. N. C.		
Date: 5/6/92	Checked by: C. H. F.		



EXPLANATION

C-3	GROUND-WATER MONITORING WELL INSTALLED BY GERAGHTY & MILLER
C-4	DESTROYED WELL
15.28	GROUND-WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
15.4	GROUND-WATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL
0.01	APPROXIMATE DIRECTION OF GROUND-WATER FLOW. GRADIENT INDICATED IN FEET / FEET

REGISTERED GEOLOGIST
JEREMY C. WIRE
NO. 93
Certified Hydrogeologist
STATE OF CALIFORNIA

TITLE : GROUND-WATER ELEVATION CONTOUR MAP - MARCH 12, 1997

LOCATION: FORMER CHEVRON SERVICE STATION #9-5630
997 GRANT AVENUE, SAN LORENZO, CALIFORNIA

SOURCE : SIERRA

GEOCONSULTANTS, INC
SAN JOSE, CALIFORNIA
Project No. G758-09
DRWG NO: W031297 REV:

TABLES

TABLE 2

SOIL ANALYSES DATA

SAMPLE I.D.	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TOG (PPM)
C-1-5.0	12-Nov-90	20-Nov-90	<1	<0.010	<0.015	<0.015	<0.015	<50
C-1-10.5	12-Nov-90	20-Nov-90	<1	<0.010	<0.015	<0.015	<0.015	<50
C-1-15.5	12-Nov-90	20-Nov-90	<1	<0.010	<0.015	<0.015	<0.015	<50
C-2-4.0	12-Nov-90	20-Nov-90	3	0.046	0.008	<0.005	0.036	N/A
C-2-9.0	12-Nov-90	20-Nov-90	[redacted]	0.18	0.22	0.96	1.5	N/A
C-2-14.0	12-Nov-90	20-Nov-90	<1	0.006	<0.005	<0.005	0.010	N/A
C-2-19.5	12-Nov-90	20-Nov-90	<1	<0.005	<0.005	<0.005	<0.005	N/A
C-3-5.5	12-Nov-90	20-Nov-90	2	1.7	0.019	0.036	0.037	N/A
C-3-10.5	12-Nov-90	20-Nov-90	[redacted]	0.20	0.041	1.4	0.93	N/A
C-3-15.5	12-Nov-90	20-Nov-90	<1	<0.005	0.008	<0.005	0.013	N/A
C-3-20.5	12-Nov-90	20-Nov-90	<1	<0.005	0.006	<0.005	0.011	N/A

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
TOG = Total Oil and Grease
PPM = Parts Per Million
N/A = Not Analyzed

Notes: 1. All data shown as <x are reported as ND (none detected).
2. BTEX results for samples C-1-5.0, C-1-10.5 and C-1-15.5 were reported in micrograms per kilogram (parts per billion).

TABLE 2

SOIL ANALYSES DATA

SAMPLE I.D.	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TOG (PPM)
C-4-10.5	12-Nov-90	21-Nov-90	890	28	26	22	110	N/A
C-4-15.5	12-Nov-90	20-Nov-90	<1	<0.005	<0.005	<0.005	0.008	N/A
C-4-20.5	13-Nov-90	20-Nov-90	1	0.007	0.014	0.008	0.043	N/A

TABLE 1

SOIL ANALYSES DATA

SAMPLE NO	DEPTH (FT)	SAMPLE DATE	ANALYSIS DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	OIL & GREASE (PPM)
CH-1	9.5	18-Dec-90	02-Jan-91	8	7.8	19	2.7	17	----
CW-1B	11	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	<.005	<50
CW-2	7	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	0.010	<50
CW-3	7	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	0.007	<50
CW-4	7	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	0.010	<50
CW-5	7	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	<.005	<50
CT-1	3.5	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	0.009	----
CT-2	3.5	18-Dec-90	28-Dec-90	3400	<0.5	1.7	12	80	----
CT-3	3.5	18-Dec-90	02-Jan-91	8	0.12	0.10	0.35	0.30	----
CT-4	3.5	18-Dec-90	28-Dec-90	8	0.11	0.069	0.26	0.15	----
CT-5	3.5	18-Dec-90	02-Jan-91	<1	0.010	<.005	<.005	0.017	----
CT-6	3.5	18-Dec-90	28-Dec-90	5	0.031	0.010	<.005	0.15	----

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million
CX = Excavation and Overexcavation Sample
CW = Waste Oil Sample
B = Bottom
CH = Ground-water Sample
CT = Trench Sample
S = Sidewall

727802-3

(2)

TABLE 1

SOIL ANALYSES DATA

SAMPLE NO	DEPTH (FT)	SAMPLE DATE	ANALYSIS DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	OIL & GREASE (PPM)
CT-7	3.5	18-Dec-90	28-Dec-90	2	<.005	0.006	0.007	0.030	----
CT-8	3.5	18-Dec-90	28-Dec-90	<1	<.005	<.005	<.005	0.005	----
CT-9	3.5	18-Dec-90	28-Dec-90	3	<.005	0.012	<.005	0.030	----
CT-10	3.5	18-Dec-90	28-Dec-90	13	0.029	0.010	0.29	0.61	----
CT-11	3.5	18-Dec-90	28-Dec-90	4	0.45	<.005	0.11	0.062	----
CT-12	5.5	15-Jan-91	24-Jan-91	6000	0.500	17	56	400	----
CX-1B	11.5	18-Dec-90	28-Dec-90	1500	1.2	50	29	160	----
CX-2S	9.5	18-Dec-90	28-Dec-90	12	0.014	0.100	0.096	0.38	----
CX-3S	8.5	18-Dec-90	28-Dec-90	6	0.009	0.014	0.100	0.075	----
CX-4B	11.5	18-Dec-90	28-Dec-90	1700	0.40	31	25	150	----
CX-5B	11.5	18-Dec-90	28-Dec-90	1600	0.39	32	24	140	----
CX-6S	8.5	18-Dec-90	28-Dec-90	6	0.005	0.013	0.040	0.12	----
CX-7B	11.5	18-Dec-90	28-Dec-90	730	0.89	19	11	62	----
CX-8S	8.0	18-Dec-90	28-Dec-90	4500	0.70	10	39	210	----

Piping Trench samples

CT-12 collected beneath sample CT2. Chunks going up

Collected from bottom of gas tank pit

left in place

Sidewall Sample

" "

Sidewall Sample

Sidewall Sample

727802-3

TABLE 1

SOIL ANALYSES DATA

SAMPLE NO	DEPTH (FT)	SAMPLE DATE	ANALYSIS DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	OIL & GREASE (PPM)
CX-9B	11.5	18-Dec-90	28-Dec-90	1100	<0.3	9.9	15	80	----
CX-10B	11.5	18-Dec-90	28-Dec-90	54	0.026	0.23	0.38	1.6	----
CX-11S	8.0	18-Dec-90	28-Dec-90	780	0.35	11	11	65	----
CX-12S	8.5	18-Dec-90	28-Dec-90	220	0.17	0.070	7	0.30	----
CX-13S	8.5	18-Dec-90	28-Dec-90	1900	0.45	16	28	160	----
CX-14S	9.0	18-Dec-90	29-Dec-90	680	<0.3	6	9.6	57	----
CX-15S	9.5	15-Feb-91	25-Feb-91	3	<.005	<.005	0.014	0.008	----
CX-16S	9.5	15-Feb-91	25-Feb-91	2	<.005	<.005	0.011	0.013	----
CX-17S	9.5	15-Feb-91	25-Feb-91	<1	0.056	<.005	<.005	0.011	----
CX-18S	9.5	15-Feb-91	25-Feb-91	2	0.008	<.005	0.019	0.006	----
CX-19S	9.5	15-Feb-91	25-Feb-91	46	<.030	0.046	0.18	0.41	----
CX-20S	9.5	15-Feb-91	25-Feb-91	<1	<.005	<.005	<.005	<.005	----
CX-21S	9.5	15-Feb-91	25-Feb-91	170	0.037	0.075	2	4	----
CX-22S	9.5	15-Feb-91	25-Feb-91	54	0.024	0.038	0.25	0.83	----

left in place

Sidewall samples from gas pit

Overexcavation samples from sidewalls.

727802-3

TABLE 1

SOIL ANALYSES DATA

SAMPLE NO	DEPTH (FT)	SAMPLE DATE	ANALYSIS DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	OIL & GREASE (PPM)
CX-23S	9.5	15-Feb-91	25-Feb-91	270	0.011	0.093	3	9	----
CX-24S	8.5	26-Aug-91	30-Aug-91	5	<.005	0.049	0.012	0.015	----

Overexc. samples from sidewalls

TABLE 1
ANALYTICAL RESULTS OF SOIL SAMPLES
COLLECTED ON FEBRUARY 2, 1993
(Concentrations in parts per million)

DATE	SAMPLE ID	SAMPLE DEPTH (feet)	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH-AS-GASOLINE
02/02/93	C-5	5	<0.005	<0.005	<0.005	<0.005	<1
		10	<0.005	<0.005	<0.005	<0.005	<1

TPH = Total petroleum hydrocarbons

R3451A1.TW

TABLE 1
Analytical Results of Soil Samples

Former Chevron Service Station No. 9-5630
997 Grant Avenue
San Lorenzo, California

			(milligrams per kilograms)				
Date	Sample ID	Sample Depth ft[a]	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g[b]
7/22/94	C-6-5	5	0.012	<0.005	<0.005	0.015	<1
7/22/94	C-6-10	10	0.05	1.9	0.84	0.95	180
7/22/94	C-7-5	5	<0.005	<0.05	<0.005	<0.005	<1
7/22/94	C-7-10	10	<0.005	<0.05	<0.005	0.014	<1
7/22/94	COMP[c]	N/A[d]	<0.005	<0.005	<0.005	<0.005	<1

Source: Superior Precision Analytical, Inc.

a = feet
b = total petroleum hydrocarbons as gasoline
c = composite soil sample, for disposal characterization
d = not applicable

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet.

Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	MTBE
C-1											
12/05/90	24.08	11.64	12.44	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--
09/06/91	23.88	10.68	13.20	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/04/91	23.88	12.17	11.71	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/02/92	23.88	14.45	9.43	--	<50	<0.5	<0.5	<0.5	<0.5	<5000	--
06/03/92	23.88	13.74	10.14	--	<50	1.4	1.5	0.6	3.0	--	--
09/02/92	23.88	12.09	11.79	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/01/92	23.88	12.10	11.78	--	<50	0.6	3.5	0.7	3.4	--	--
03/23/93	23.88	15.94	7.94	--	200	13	8.7	<0.5	10	--	--
06/15/93	23.88	14.49	9.39	--	74	1.4	5.2	1.6	11	--	--
09/07/93	23.88	13.16	10.72	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
11/30/94	23.88	14.80	9.08	--	--	--	--	--	--	--	--
02/01/95	23.88	16.57	7.31	--	--	--	--	--	--	--	--
09/13/95	23.88	13.86	10.02	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/29/95	23.88	14.88	9.00	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
03/08/96	23.88	16.81	7.07	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/12/96	23.88	15.13	8.75	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
09/12/96	23.88	13.39	10.49	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/16/96	23.88	14.21	9.67	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
03/12/97	23.88	15.74	8.14	--							

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	MTBE
C-2											
12/05/90	22.69	11.39	11.30	--	<50	0.7	<0.5	<0.5	0.5	--	--
09/06/91	21.54	10.54	11.00	--	<50	1.3	0.6	0.7	1.5	--	--
12/04/91	21.54	12.16	9.38	--	--	--	--	--	--	--	--
04/02/92	21.54	14.21	7.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/03/92	21.54	12.55	8.99	--	180	12	13	7.9	21	--	--
09/02/92	21.54	11.95	9.59	--	630	14	30	18	54	--	--
12/01/92	21.54	11.96	9.58	--	1000	47	83	51	150	--	--
03/23/93	21.54	15.24	6.30	--	80	5.0	7.9	6.0	18	--	--
06/15/93	21.54	14.27	7.27	--	220	9.0	16	12	37	--	--
09/07/93	21.54	12.99	8.55	--	200	13	21	15	43	--	--
09/13/95	21.54	7.86	13.68	--	<50	<0.5	0.60	0.84	2.3	--	--
12/29/95	21.54	14.52	7.02	--	<50	2.7	<0.5	<0.5	<0.5	--	<2.5
03/08/96	21.54	16.08	5.46	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/12/96	21.54	15.00	6.54	--	<50	<0.5	<0.5	0.99	2.5	--	<2.5
09/12/96	21.54	13.18	8.36	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/16/96	21.54	13.48	8.06	--	250	13	1.7	3.8	33	--	<2.5
03/12/97	21.54	15.04	6.50	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	MTBE
C-3											
12/05/90	23.45	11.70	11.75	--	<50	1.0	0.7	<0.5	<0.5	--	--
09/06/91	22.40	10.78	11.62	--	1100	150	0.6	51	1.9	--	--
12/04/91	22.40	12.26	10.14	--	89	<0.5	<0.5	0.7	0.6	--	--
04/02/92	22.40	14.33	8.07	--	60	2.1	1.3	1.1	3.2	--	--
06/03/92	22.40	13.77	8.63	--	7600	94	86	26	89	--	--
09/02/92	22.40	12.10	10.30	--	<50	<0.5	<0.5	<0.5	0.9	--	--
12/01/92	22.40	12.16	10.24	--	54	0.8	5.7	1.1	5.9	--	--
03/23/93	22.40	15.57	6.83	--	<50	1.1	1.4	<0.5	1.7	--	--
06/15/93	22.40	14.45	7.95	--	67	1.3	3.9	1.1	7.8	--	--
09/07/93	22.40	--	--	Inaccessible	--	--	--	--	--	--	--
09/13/95	22.40	--	--	Inaccessible	--	--	--	--	--	--	--
12/29/95	22.40	--	--	Inaccessible	--	--	--	--	--	--	--
03/08/96	22.40	--	--	Inaccessible	--	--	--	--	--	--	--
06/12/96	22.40	--	--	Inaccessible	--	--	--	--	--	--	--
09/12/96	22.40	13.34	9.06	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/16/96	22.40	13.56	8.84	--	220	9.7	<0.5	<0.5	22	--	<2.5
03/12/97	22.40	15.28	7.12	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
C-4											
12/05/90	23.32	11.47	11.85	--	<50	4.0	2.0	0.7	3.0	--	--
09/06/91	--	--	--	Well destroyed	--	--	--	--	--	--	--
C-5											
02/16/93	22.01	15.37	6.64	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/23/93	22.01	15.41	6.60	--	<50	<1.5	0.9	<0.5	<1.5	--	--
06/15/93	22.01	13.91	8.10	--	70	0.7	1.7	<0.5	2.8	--	--
09/07/93	22.01	12.61	9.40	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
11/30/94	22.01	14.25	7.76	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/01/95	22.01	15.94	6.07	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/13/95	22.01	13.29	8.72	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/29/95	22.01	14.31	7.70	--	<50	<0.5	<0.5	<0.5	<0.5	--	7.3
03/08/96	22.01	16.14	5.87	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/12/96	22.01	15.33	6.68	--	<50	<0.5	<0.5	<0.5	<0.5	--	5.7
09/12/96	22.01	12.73	9.28	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/16/96	22.01	13.90	8.11	--	<50	<0.5	<0.5	<0.5	<0.5	--	3.8
03/12/97	22.01	15.08	6.93	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical results are in parts per billion (ppb)

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylene	TOG	MTBE
C-6											
08/17/94	21.42	5.40	16.02	--	430	0.7	2.7	<0.5	28	--	--
11/30/94	21.42	14.16	7.26	--	610	2.1	0.57	30	14	--	--
02/01/95	21.42	14.77	6.65	--	210	<0.5	<0.5	<0.5	0.94	--	--
09/13/95	21.42	13.64	7.78	--	860	4.6	<0.5	40	0.52	--	--
12/29/95	21.42	14.63	6.79	--	1900	7.4	<2.5	86	<2.5	--	2.0
03/08/96	21.42	16.01	5.41	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/12/96	21.42	14.93	6.49	--	270	0.84	<0.5	10	<0.5	--	13
09/12/96	21.42	13.12	8.30	--	400	5.4	<0.5	27	<0.5	--	11
12/16/96	21.42	14.10	7.32	--	69	0.66	<0.5	2.3	<0.5	--	12
03/12/97	21.42	15.29	6.13	--	<50	<0.5	<0.5	0.50	<0.5	--	4.2
C-7											
08/17/94	23.21	13.14	10.07	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/30/94	23.21	14.73	8.48	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/01/95	23.21	15.99	7.22	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
09/13/95	23.21	13.71	9.50	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/29/95	23.21	14.77	8.44	--	<50	<0.5	<0.5	<0.5	<0.5	--	4.4
03/08/96	23.21	16.15	7.06	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
06/12/96	23.21	14.88	8.33	--	<50	<0.5	<0.5	<0.5	<0.5	--	4.4
09/12/96	23.21	13.19	10.02	--	<50	<0.5	<0.5	<0.5	<0.5	--	<2.5
12/16/96	23.21	14.03	9.18	--	<50	<0.5	<0.5	<0.5	<0.5	--	2.5
03/12/97	23.21	15.39	7.82	--	<50	<0.5	<0.5	<0.5	<0.5	--	5.0

BORING LOGS

Field location of boring: (See Plate 2)	Project No.: 727801	Date: 11/12/90	Boring No.: C-1
	Client: Chevron Service Station No. 5630		
	Location: 997 Grant Avenue		
	City: San Lorenzo, California		Sheet 1 of 2
	Logged by: KDM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data:		
Hole diameter: 8-Inches	Top of Box Elevation: 24.08		Datum: MSL

Water Level	17.5'		12.44'
Time	15:45		17:32
Date	11/13/90		12/5/90

PID (ppm)	Blows/ft.* or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION - 1.3 ft.
				2				SILTY CLAY (CL) - black (10YR 2/1), very stiff, damp, medium plasticity; 50% clay; 35% silt; 15% fine sand; trace fine gravel in cuttings.
				3				
				4				
	300		C-1-					SILTY SAND (SM) - dark grayish brown (10YR 4/2), medium dense, damp; 70% fine sand; 30% silt; trace worm burrows.
6.8	400	S&H	5.0	5				
	refusal			6				
				7				
				8				
				9				SILTY CLAY (CL/ML) - black (10YR 2/1), very stiff, damp, low plasticity; 60% clay; 45% silt; 5% fine sand; roots and rootholes; small white caliche concretions.
			C-1-	10				
1.5	18	S&H	10.5	11				
				12				
				13		▼		CLAY (CL) - light olive brown (2.5YR 5/4), stiff, moist, medium to high plasticity; 80% clay; 15% silt; 5% fine sand.
				14				
			C-1-	15				ocasional small (<1 mm) black and red-brown rock fragments.
1.5	10	S&H	15.5	16				
				17				
				18		▽		easier drilling at 17 feet. Water on sample rods at 17.5 feet.
				19				

Remarks: * Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. C-1

JOB NUMBER	REVIEWED BY PG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CE6 1351	11/90		

Field location of boring: (See Plate 2)	Project No.: 727801	Date: 11/12/90	Boring No.: C-1
	Client: Chevron Service Station No. 5630		
	Location: 997 Grant Avenue		
	City: San Lorenzo, California		Sheet 2 of 2
	Logged by: KDM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data:		
Hole diameter: 8-Inches	Top of Box Elevation:		Datum:

	Water Level			
	Time			
	Date			

PID (ppm)	Blowsft.* or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				20				SANDY SILT (ML) - pale yellow (2.5Y 7/4), loose, moist, low plasticity; 70% silt; 20% fine sand; 10% nodules of saturated fine sand and white caliche.
			C-1-					
1.5	4	S&H	20.5	21				
				22				grades to:
				23				50% silt; 40% fine sand; 10% scattered small caliche nodules; rare harder fragments (1/4 inch diameter).
				24				
			C-1-	25				
1.5	8	S&H	25.5	26				
				27				
				28				Stiffer at 28 feet.
				29				CLAY (CL) - pale yellow brown (2.5Y 7/4), very stiff, damp, medium plasticity; 70% clay; 25% silt; 5% fine sand.
			C-1-					
1.5	15	S&H	30.0	30				
				31				
				32				CLAYEY SILT (ML/CL) - pale yellow brown (2.5Y 7/4), medium stiff, slightly damp, medium plasticity; 50% silt; 40% clay; 10% fine sand.
			C-1-	33				
N/A	8	SPT	33.5	34				Bottom of sample at 33.5 feet.
				35				Bottom of boring at 33.5 feet.
				36				11/12/90
				37				
				38				
				39				

Remarks: N/A = Not Available

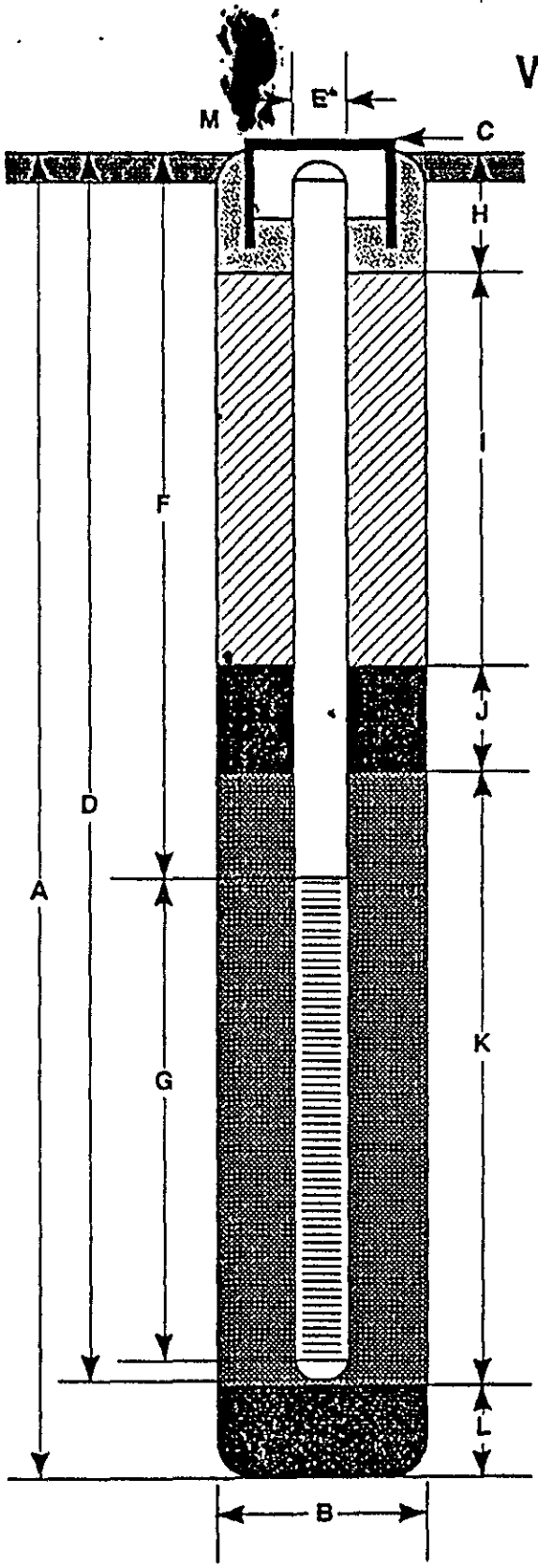
GeoStrategies Inc.

Log of Boring

BORING NO. C-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CE6 1351	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 33.5 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation 24.08 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 28 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 15 ft.

G Perforated Length 13 ft.
Perforated Interval from 15 to 28 ft.
Perforation Type Factory Slot
Perforation Size 0.020 in.

H Surface Seal from 0.0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 10.5 ft.
Backfill Material Concrete

J Seal from 10.5 to 13 ft.
Seal Material Bentonite

K Gravel Pack from 13 to 28 ft.
Pack Material Lonestar #2/12 sand

L Bottom Seal 5.5 ft.
Seal Material Bentonite

M Vault box with locking cap and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/12/90	Boring No: C-2	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 1 of 2	
Logged by: KDM	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: 22.69 Datum: MSL

Water Level	18.7'	11.0'		11.30'
Time	16:00	15:50		17:00
Date	11/12/90	11/13/90		12/5/90

PID (ppm)	Blows/ft.* or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 1.3 ft. thick
				2				
				3				SANDY CLAY (CL) - black (2.5YR/), medium stiff, damp, medium plasticity; 50 % clay; 40% fine sand; 10% silt; trace worm burrows.
	150			4				
62	150	S&H	C-2-4.0					
	150			5				
				6				
				7				
				8				CLAYEY SAND (SC) - olive yellow (2.5YR 6/6), medium dense, damp; 50% medium sand; 30% clay; 10% coarse sand; 10% silt.
	250							
1274	250	S&H	C-2-9.0	9				
	250			10				
				11		▼		
				12				
				13				
7.9	9	S&H	C-2-14.0	14				CLAY (CL) - gray (2.5 YR/4), stiff, damp, medium plasticity; 70% clay; 25% silt; 5% diseminated caliche (white to gray color), small rootholes; dark staining along vertical soil pores or burrows.
				15				
				16				
				17				CLAYEY SILT (ML/CL) - olive yellow (2.5Y 6/6), medium stiff, moist; 60% silt; 10% fine sand; 25% clay; 5% rock fragments; very small rootholes.
				18				
				19		▽		
N/A	7	S&H	C-2-19.5	20				

Remarks: *Converted to equivalent Standard Penetration blow/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/12/90	Boring No: C-2	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 2 of 2	
Logged by: KDM	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: Datum:

Water Level				
Time				
Date				

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				21				SANDY SILT (ML) - olive yellow (2.5Y 6/6), loose, saturated, small rootlets, trace caliche; 40% - 60% silt; 30% - 50% fine sand; 10% - 30% clay. Alternate sandy and silty beds, 1 to 2 inches thick.
				22				
				23				
50.3	7	S&H	C-2-24.0	24				
				25				
				26				
				27				
				28				harder drilling at 27.5 ft.
1.5	9	S&H	C-2-29.0	29				CLAY (CL) - olive yellow (2.5Y 6/6), stiff, moist, trace disemenated caliche; 60% clay; 30% silt; 10% fine sand.
				30				Bottom of Boring at 29.5 ft.
				31				Bottom of Sample at 29.5 ft.
				32				11/12/90
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Remarks:

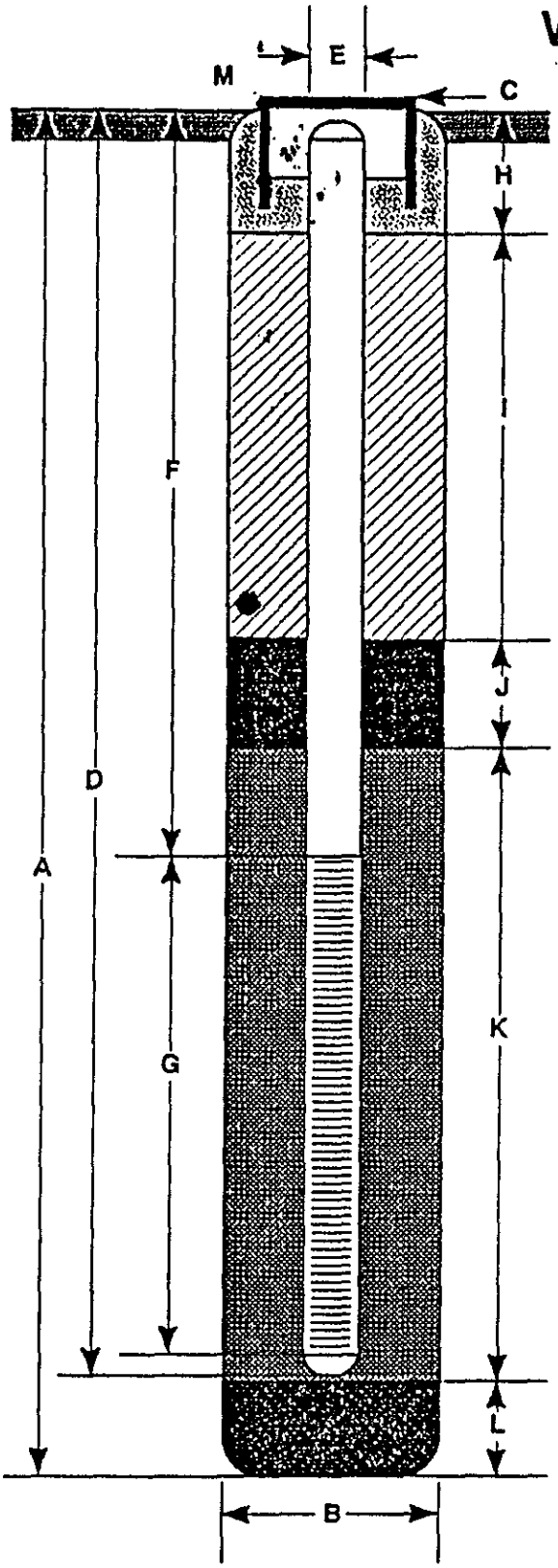
GeoStrategies Inc.

Log of Boring

BORING NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 29.5 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation 22.69 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 28 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 15 ft.

G Perforated Length 13 ft.
Perforated Interval from 15 to 28 ft.
Perforation Type Factory Slot
Perforation Size 0.020 in.

H Surface Seal from 0.0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 11 ft.
Backfill Material Concrete

J Seal from 11 to 13 ft.
Seal Material Bentonite

K Gravel Pack from 13 to 28 ft.
Pack Material Lonestar #2/12 sand

L Bottom Seal 1.5 ft.
Seal Material Native Material

M Vault box with locking cap and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CE6 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/12/90	Boring No: C-3	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 1 of 2	
Logged by: KDM	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: 23.45 Datum: MSL

Water Level	18.0'	11.5'		11.75'
Time	15:40	16:00		15.55
Date	11/12/90	11/13/90		12/5/90

PID (ppm)	Blows/ft* or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION 1.0 ft.
				2				SANDY CLAY (CL) - black (10YR 2/1), medium stiff, damp, low to medium plasticity.
				3				
				4				
	150			5				
	200							
78	200	S&H	C-3-5.5					SANDY SILT (ML) - black (10YR 2/1), medium stiff, damp, low to medium plasticity; 70% silt; 20% sand; 10% clay; discoloration from product.
				6				
				7				
				8				
				9				COLOR CHANGE to very dark grayish brown (2.5YR 3/2), damp, low plasticity; 70% silt; 25% sand; 5% clay.
				10				
750	13	S&H	C-3-10.5					
				11				
				12		▼		
				13				easy drilling at 12.5 ft.
				14				
				15				CLAY (CL) - dark grayish brown (10YR 4/2), stiff, saturated, medium to high plasticity; rootholes; 75% clay; 15% silt; 10% sand;
29	10	S&H	C-3-15.5	16				
				17				
				18		▽		Water on rods at 18.0 ft.
				19				

Remarks: * Converted to equivalent Standard Penetration blow/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/12/90	Boring No: C-3	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 2 of 2	
Logged by: KDM	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: Datum:

Water Level				
Time				
Date				

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								COLOR CHANGE to dark brown (10YR 3/13) at 19.0 ft., medium stiff; 80% clay; 10% silt; 10% fine sand; open burrows; rootholes.
6	6	S&H	C-3-20.5	20				
				21				
				22				
				23				Harder drilling at 23.5 ft.
				24				
			C-3-25.5					COLOR CHANGE to light olive brown (2.5YR 5/4) at 24.0 ft.; damp.
3.5	9	S&H		25				
				26				
				27				
				28				Bottom of Boring at 27.0 ft.
								Bottom of Sample at 27.0 ft.
				29				11/12/90
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				

Remarks:

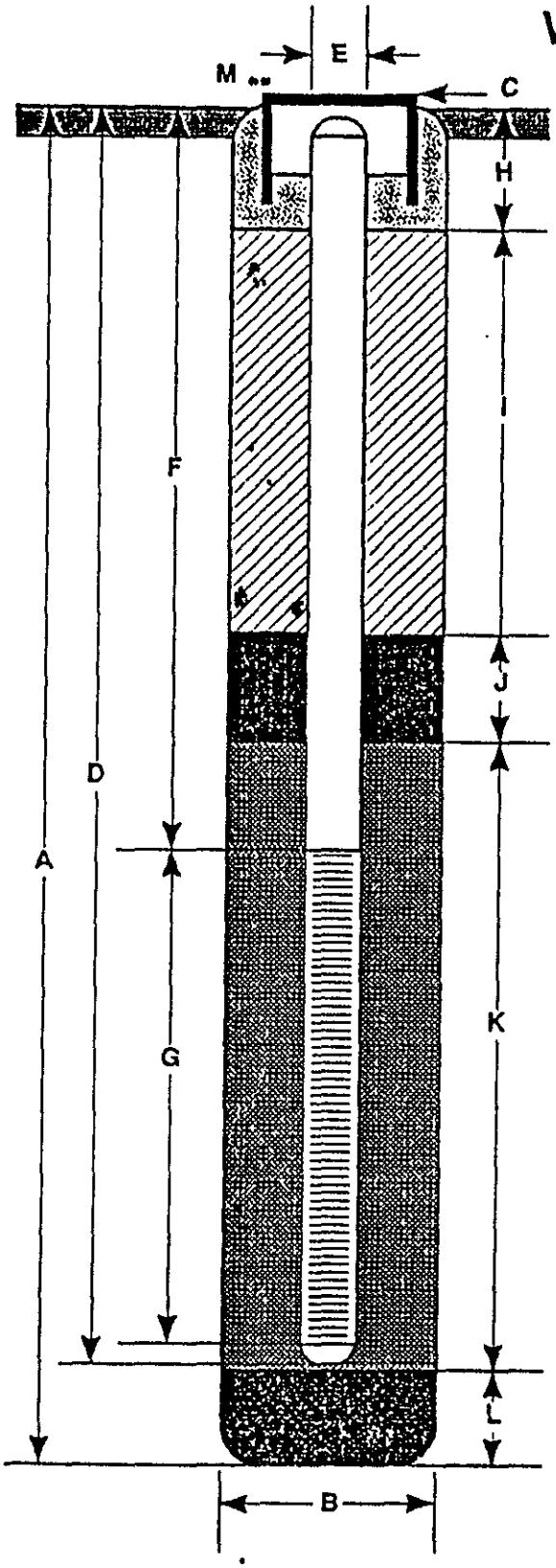
GeoStrategies Inc.

Log of Boring

BORING NO. C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCL: CE61351	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 27 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation 23.45 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 28 ft.
Material Shedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 17 ft.

G Perforated Length 10 ft.
Perforated Interval from 17 to 27 ft.
Perforation Type Factory Slot
Perforation Size 0.020 in.

H Surface Seal from 0.0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 13 ft.
Backfill Material Concrete

J Seal from 13 to 15 ft.
Seal Material Bentonite

K Gravel Pack from 15 to 27 ft.
Pack Material Lonestar #2/12 sand

L Bottom Seal 0.0 ft.
Seal Material Native Material

M Vault Box with locking cap and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/13/90	Boring No: C-4	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 1 of 2	
Logged by: KDM	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: 23.32 Datum: MSL

Water Level	19.0'	14.0'	12.0'	11.85'
Time	14:30	15:00	16:05	16:36
Date	11/13/90	11/13/90	11/13/90	12/5/90

PID (ppm)	Blows/ft.* or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION 1.0 ft.
				2				FILL - GRAVELLY SAND, dense, slightly damp
				3				
				4				
	200			5				SANDY CLAY (CL) - black (10YR 2/1), medium stiff,
	200							damp, low to medium plasticity; 60% clay; 20% silt; 20%
0	200	S&H	C-4-5.5					sand.
				6				
				7				
				8				
				9				
				10				
1994	14	S&H	C-4-10.5					COLOR CHANGE to olive brown (2.5Y 4/4) at 9.0 ft., stiff,
				11				damp; 50% clay; 25% silt; 25% sand; trace shell
				12		▼		fragments.
				13				
				14		▼		
				15				CLAY (CL) - grayish brown (2.5Y 4/2), medium stiff,
0	8	S&H	C-4-15.5					damp, medium to high plasticity; 70% clay; 25% silt; 5%
				16				sand; gray oxidation staining along small rootholes and
				17				soil pores.
				18				
				19		▽		

Remarks: * Converted to equivalent Standard Penetration blows/ft.

Log of Boring

BORING NO. C-4

GeoStrategies Inc.

JOB NUMBER	REVIEWED BY PG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC : CEG 1351	11/90		

Field location of boring:

(See Plate 2)

Project No.: 727801	Date: 11/13/90	Boring No. C-4	
Client: Chevron Service Station No. 5630			
Location: 997 Grant Avenue			
City: San Lorenzo, California		Sheet 2 of 2	
Logged by: KDM	Driller: Baylanc		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: Datum:

Water Level				
Time				
Date				

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				20				CLAYEY SILT (ML) - light olive brown (2.5YR 5/4), medium stiff, damp, medium plasticity; 60% silt; 35% clay; 5% fine sand.
15.5	6	S&H	C-4-20.5	21				
				22				
				23				
				24				
				25				
7.9	7	S&H	C-4-25.5	26				
				27				
				28				
				29				
				30				
N/A	6	S&H	C-4-30.5	31				Bottom of Boring at 30.5 ft.
				32				Bottom of Sample at 30.5 ft.
				33				11/13/90
				34				
				35				
				36				
				37				
				38				
				39				

Remarks:

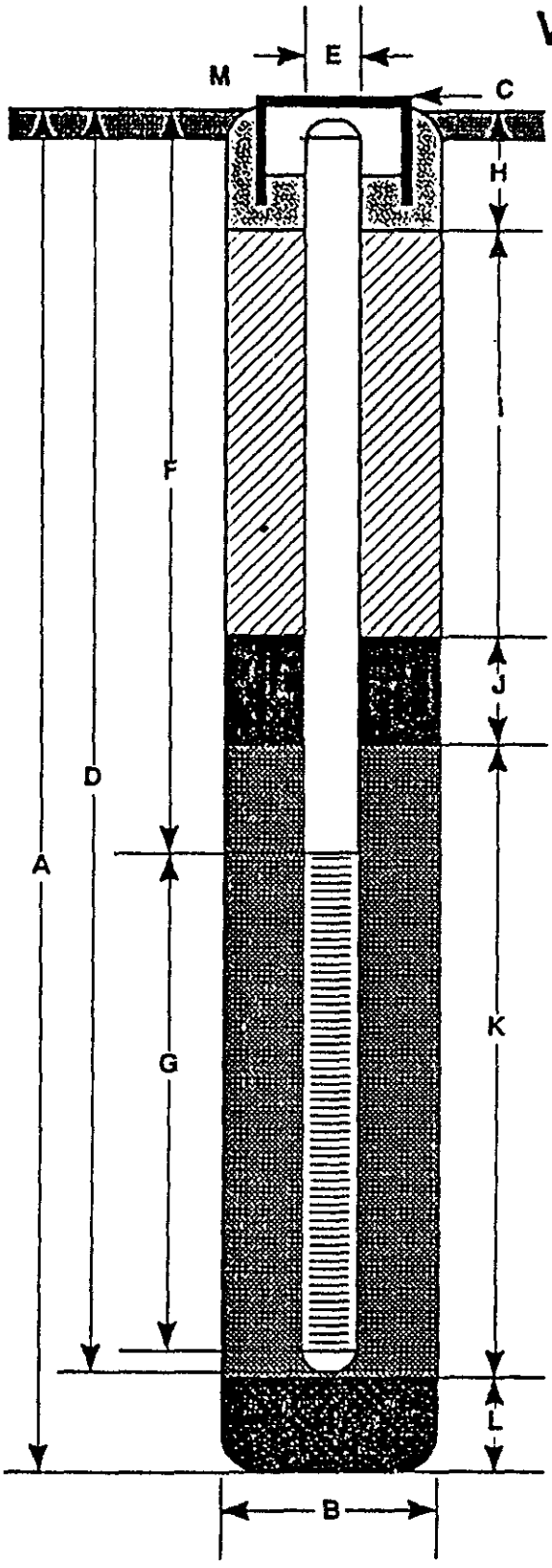
GeoStrategies Inc.

Log of Boring

BORING NO. C-4

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC : CEG 1351	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 30.5 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation 23.32 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 29 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 17 ft.

G Perforated Length 22 ft.
Perforated Interval from 17 to 29 ft.
Perforation Type Factory Slot
Perforation Size 0.020 in.

H Surface Seal from 0.0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 13 ft.
Backfill Material Concrete

J Seal from 13 to 15 ft.
Seal Material Bentonite

K Gravel Pack from 17 to 29 ft.
Pack Material Lonestar #2/12 sand

L Bottom Seal 1.5 ft.
Seal Material Native Material

M Vault box with locking cap and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-4

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
727801	MCC: CEG 1351	11/90		

Drilling Log

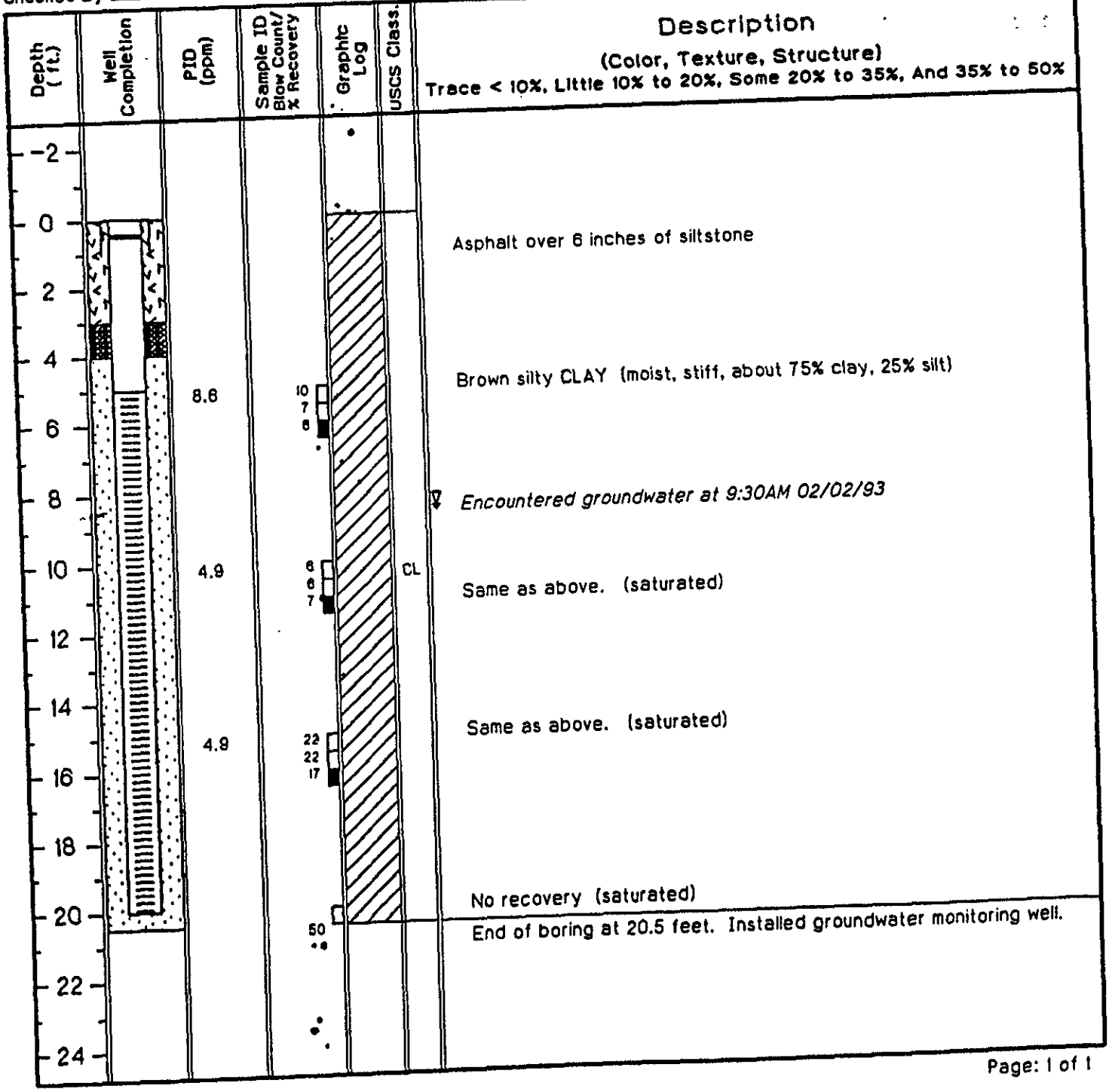
GROUNDWATER TECHNOLOGY

Monitoring Well C-5

Project Chev/997 Grant Avenue — Owner Chevron U.S.A. Products Co.
Location San Lorenzo, California — Project No. 02020 3451 — Date drilled 02/02/93
Surface Elev. 22.27 ft. — Total Hole Depth 20.5 ft. — Diameter 8 in.
Top of Casing 22.01 ft. — Water Level Initial 8.5 ft. — Static 02/16/93 15.37 ft.
Screen: Dia 2 in. — Length 15.0 ft. — Type/Size 0.020 in.
Casing: Dia 2 in. — Length 5.0 ft. — Type SCH 40 PVC
Filter Pack Material Lapis Lustre #3 — Rig/Core Type Mobile B-61/Split Spoon
Drilling Company Kvilhaug Well Drilling — Method Hollow Stem Auger — Permit # 92638
Driller Rod Furlow — Log By Chip Hurley
Checked By David Kleesattel — License No. RG# 5136

See Site Map For Boring Location

COMMENTS:



03/16/1993 ktNog-Jan93

Drilling Log

GROUNDWATER TECHNOLOGY

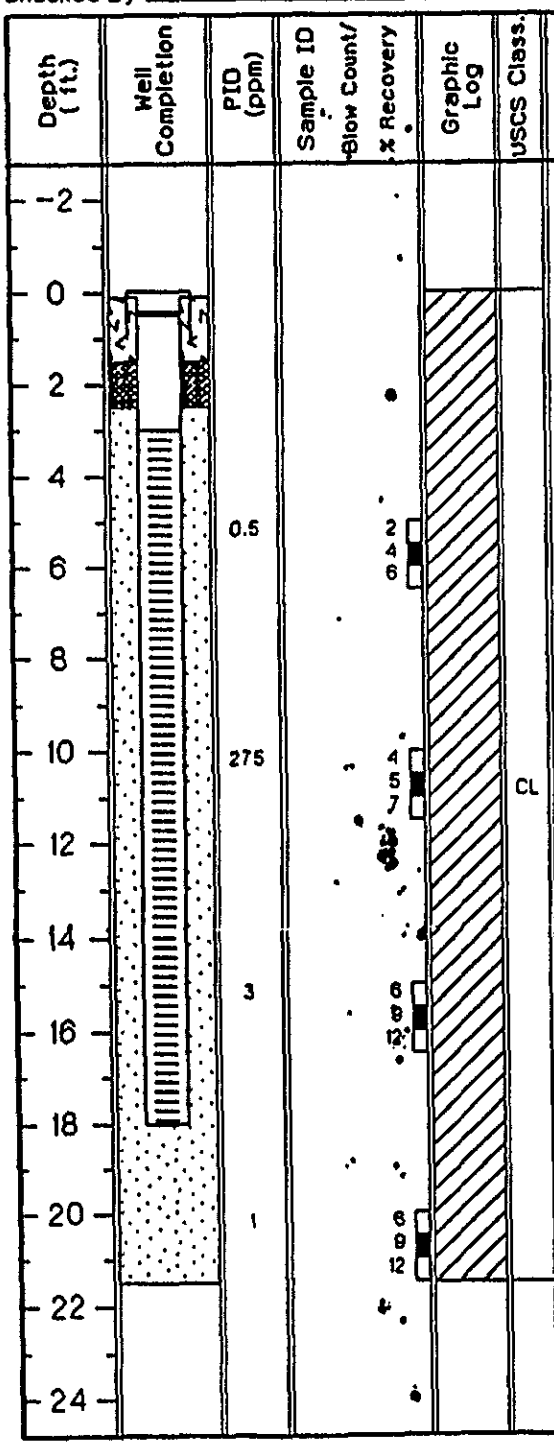
Monitoring Well C-6

Project CHV/997 Grant Avenue Owner Chevron U.S.A. Products Co.
Location San Lorenzo, California Proj. No. 02020 0019
Surface Elev. 21.30 ft. Total Hole Depth 21.5 ft. Diameter 8 in.
Top of Casing 21.42 ft. Water Level Initial 11 ft. Static 8.44 ft.
Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
Casing: Dia 2 in. Length 3 ft. Type SCH 40 PVC
Fill Material Lapis Lustre #3 Rig/Core CME-55/Split Spoon
Drill Co. SES, Inc. Method Hollow Stem Auger
Driller David Ryan Log By Bob Davis Date 07/22/94 Permit # 94390
Checked By E. K. Simonis License No. RG# 4422

See Site Map For Boring Location

COMMENTS:

Percentages are approximate. Well is screened from 3 to 18 feet below grade. (SES) Soil Exploration Services drillers



Description

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

NOTE: Hand augered to 5 feet, cuttings gray black CLAY

Gray black CLAY, about 95% clay, 5% silt, medium stiff, moist, medium plasticity, no hydrocarbon odor.

Gray black CLAY, about 95% clay, 5% silt, stiff, moist, medium plasticity, slight hydrocarbon odor.

Water encountered during drilling, 7/22/94

Moderate yellowish brown CLAY, about 90% clay, 10% silt, stiff, saturated, medium plasticity, no hydrocarbon odor.

Moderate yellowish brown CLAY, about 90% clay, 10% silt, stiff, saturated, medium plasticity, no hydrocarbon odor.

End of boring at 21.5 feet. Installed groundwater monitoring well.

Drilling Log

GROUNDWATER TECHNOLOGY

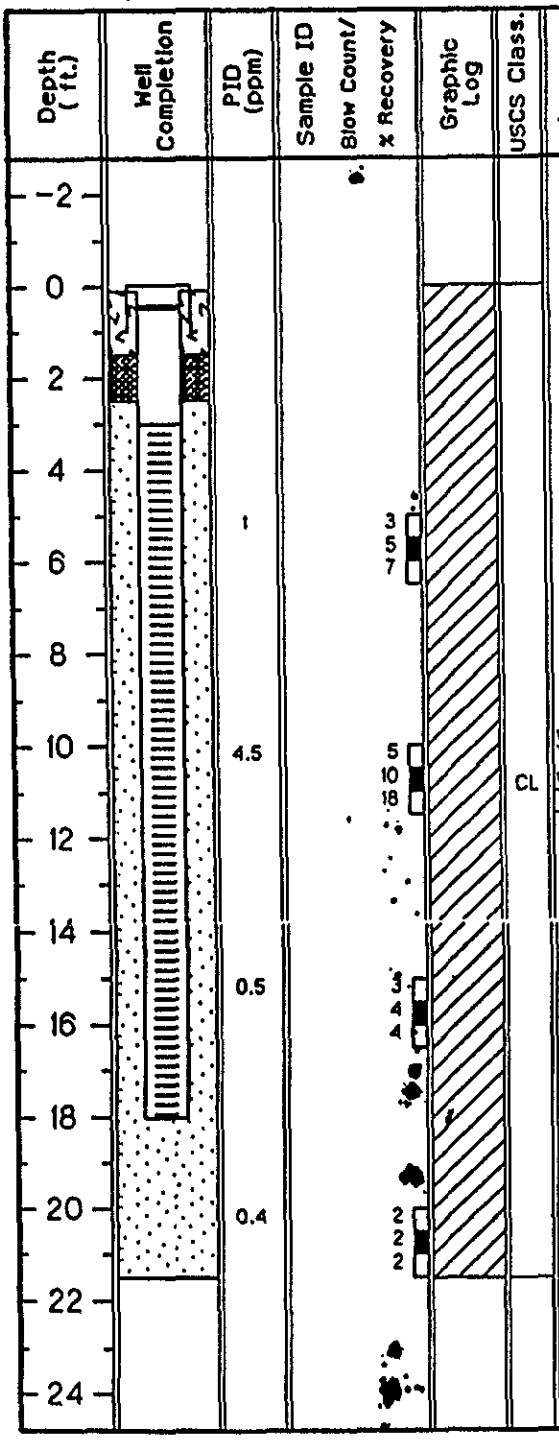
Monitoring Well C-7

Project CHV/997 Grant Avenue — Owner Chevron U.S.A. Products Co.
Location San Lorenzo, California — Proj. No. 02020 0019
Surface Elev. 23.40 ft. — Total Hole Depth 21.5 ft. — Diameter 8 in.
Top of Casing 23.21 ft. — Water Level Initial 11 ft. — Static 10.08 ft.
Screen: Dia 2 in. — Length 15 ft. — Type/Size 0.020 in.
Casing: Dia 2 in. — Length 3 ft. — Type SCH 40 PVC
Fill Material Lapis Lustre #3 — Rig/Core CME-55/Split Spoon
Drill Co. SES, Inc. — Method Hollow Stem Auger
Driller David Ryan — Log By Bob Davis — Date 07/22/94 — Permit # 94390
Checked By E. K. Simonis — License No. RG# 4422

See Site Map For Boring Location

COMMENTS:

Percentages are approximate. Well is screened from 3 to 18 feet below grade (SES) Soil Exploration Services drillers.



Description

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

NOTE: Hand augered to 5 feet, cuttings gray black CLAY

Gray black CLAY, about 95% clay, 5% silt, medium stiff, moist, medium plasticity, no hydrocarbon odor.

Gray black CLAY, about 95% clay, 5% silt, very stiff, moist, medium plasticity, faint hydrocarbon odor.

Water encountered during drilling, 7/22/94

NOTE: 11.5 feet to 12.0 feet, well graded, fine gravel, saturated (noted from cuttings).

Moderate yellowish brown CLAY, about 95% clay, 5% silt, medium stiff, saturated, medium plasticity, trace fine gravel, no hydrocarbon odor.

Moderate yellowish brown CLAY, about 95% clay, 5% silt, soft, saturated, medium plasticity, no hydrocarbon odor.

End of boring at 21.5 feet. Installed groundwater monitoring well.