



June 12, 1989

Mr. Dan Denine  
Lakeshore Financial  
2100 Lakeshore Ave., Ste. B  
Oakland, Ca. 94606

Re: Workplan-Proposal for Soil and Groundwater Investigation Services at  
3940 Castro Valley Blvd., Castro Valley

Dear Mr. Denine,

The following is Aqua Science Engineer's workplan-proposal for an initial site assessment to be conducted at the site referenced above. The scope of work was developed from the Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks of June 2, 1988. The format for the proposal is from the Workplan for Initial Subsurface Investigation, Proposal Format attachment that accompanied recent correspondence from the Alameda County Dept. of Environmental Health, Hazardous Materials Program.

#### INTRODUCTION

A soil and groundwater investigation is to be conducted at 3940 Castro Valley Blvd. in Castro Valley, Ca., as a result of earlier investigative activities at the site. The site assessment has been mandated by May, 1989 correspondence from the Alameda County Dept. of Environmental Health, Hazardous Materials Program. The May 1 letter requires that the vertical and horizontal extent of gasoline contamination in the soil and groundwater be determined.

The site is located at the northeast corner of Castro Valley Blvd and Marshall St. in Castro Valley (Figure 1). A Texaco gas station operated here until June, 1985, when two 6,000 and two 4,000 gallon gasoline tanks were removed (Figure 2). The details of the tank removal and initial soil sampling operations are unknown to this company. Though September, 1984 PetroTite (R) tests indicated that the tanks were tight, soil samples from the tankpit indicated significant gasoline contamination of soils. July, 1985 soil samples showed 6,500 ppm TPH as gasoline and, after further excavation, additional soil samples of October, 1985 revealed 15 to 7,900 ppm TPH as gasoline. A monitoring well was installed approximately down gradient from the gas dispenser islands. Soil samples collected during drilling showed 6 to 38 ppm TPH as gasoline at 20 to 25 feet below grade (Groundwater Technology Contamination Assessment Report, February, 1988).

In November and December of 1987, Groundwater Technology drilled three soil borings and installed groundwater monitoring wells in three additional borings. Soil sample analyses indicated 14 ppm TPH as gas in MW 2E at 24-24.5 feet depth. SB 1F (29-29.5 feet) showed 0.95 ppm toluene, 1.9 ppm methylene chloride, and 0.025 ppm chloroform. Soil sample MW 1E (24-24.5 feet) contained 0.24 ppm ethylbenzene and 2.0 ppm xylene. Other soil analyses showed concentrations below method detection limits for TPH gas, BTXE, total oil and grease, methylene chloride, and chloroform (Groundwater Technology Contamination Assessment Report, February, 1988, (Table 1)).

TABLE 1

ANALYTICAL LABORATORY RESULTS - SOIL SAMPLE:  
[ppm]

SAMPLE	DEPTH (FT.)	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENE	BTEX	TOG	METHYLENE CHLORIDE	CHLOROFORM	MISC. HYDRO- CARBONS (C4-12)	TPH as GASOLINE
SB 1 C	(14-14.5)	ND	ND	ND	ND	ND	-	-	-	ND	ND
SB 1 F	(29-29.5)	ND	0.95	ND	ND	-	ND	1.9	0.025	ND	ND
SB 2 B	( 9- 9.5)	ND	ND	ND	ND	ND	-	-	-	ND	ND
SB 2 F	(29-29.5)	ND	ND	ND	ND	ND	-	-	-	ND	ND
SB 3 C	(14-14.5)	ND	ND	ND	ND	ND	-	-	-	ND	ND
SB 3 F	(29-29.5)	ND	ND	ND	ND	ND	-	-	ND	-	-
MW 1 E	(24-24.5)	ND	ND	0.24	2.0	-	-	ND	ND	14.0	14.0
MW 2 E	(24-24.5)	ND	ND	ND	ND	ND	-	-	-	ND	ND
MW 3 E	(24-24.5)	ND	ND	ND	ND	ND	-	-	-	-	-

ANALYTICAL LABORATORY RESULTS - WATER SAMPLES  
[ppb]

SAMPLE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENE	BTEX	MISC. HYDRO- CARBONS (C4-12)	TPH AS GASOLINE
SB 3	70	9	4	1,600	1,700	27,000	29,000
MW-1	15	12	3	190	220	1,900	2,100
MW-2	220	16	3	150	390	2,000	2,400
MW-3	ND	ND	ND	ND	ND	ND	ND

ND - Less than Practical Quantitation Levels as per EPA Federal Register  
 TOG - Total Oil and Grease  
 TPH - Total Petroleum Hydrocarbons  
 BTEX - Total Benzene, Toluene, Ethylbenzene, Xylene

T4080A

Initial groundwater samples from the three monitoring wells and one of the borings ranged from nondetectable for all constituents in MW-3, to as high as 29 ppm TPH as gas with 1,700 ppb total BTXE in SB 3 (Table 2). Biannual monitoring of the three wells installed by Groundwater Technology showed a decline in contaminant levels in samples of June, 1988, then an increase in samples from December, 1988 (Table 2). The groundwater gradient at the site was determined to be in a northerly direction in June, 1988, shifting slightly westward in December, 1988.

### **SITE DESCRIPTION**

The site rests upon Quaternary alluvial deposits in a small valley. Surrounding the valley are Cretaceous marine deposits of the Panoche and Knoxville Formations. Where bedded, these shales, sandstones, and conglomerates dip steeply to the northeast and southwest. The area is marked by northwest trending folds and faults, including the East Chabot Fault which lies less than one mile to the southwest of the site.

Though the gas station has been removed, Figure 2 gives the approximate layout of those facilities, as well as the location of borings and monitoring wells. The initial subsurface investigation revealed that the soils beneath the site are mainly clays and sandy clays from grade to as much as 45 feet depth (Appendix A). First groundwater was encountered between 23 and 32 feet depth, stabilizing at between about 21 to 24 feet depth, implying an Artesian system.

Two of the original four monitoring wells have been destroyed, preliminary to new construction of an automotive oil and lube shop (Appendix B). The soil in the area of the southern pump island has been removed to a depth of about 10 feet as part of the ongoing construction. The original tankpit was backfilled at an unknown date. The construction of the new facility will be concurrent with investigation activities.

### **PROPOSED SITE ASSESSMENT PROCEDURES**

The plan for determining the extent of soil and groundwater contamination includes further drilling, sampling, and analysis of soils and groundwater at the site. The gradient information gathered to date allows for the proper placement of borings and wells to minimize cost and inconvenience to the client.

To determine the extent of soil and groundwater contamination present at the site, four borings are proposed, two of which will be converted to monitoring wells. The United Soil Classification System will be used by a geologist to make a continuous log of each boring. A Mobile B-61 or B-57 drilling rig with 8 and 10 inch augers will be used to drill two soil borings as shown on Figure 3. Soil boring #1 (B-1) will be drilled to first groundwater, within 10 feet to the south of the tankpit, in order to verify contaminant migration in the direction of groundwater flow. B-2 will be drilled to 20 feet depth in the approximate vicinity of the destroyed monitoring well TX, to address contaminant migration from the pump islands. The borings will be pressure grouted from total depth to grade with cement.

**TABLE 2**  
**DISSOLVED TOTAL PETROLEUM HYDROCARBONS**  
**December 1987 - December 1988**  
**parts per billion (ppb)**

DATE SAMPLED	MW-1	MW-2	MW-3
12/30/87	2,100	2,400	<PQL
06/07/88	290	1,200	<PQL
12/13/88	370	4,000	<PQL

MW = Monitoring Well  
 <PQL = Less Than Practical Quantitation Levels

DATE	ELEV. (ft.)	MW-1	MW-2	MW-3
		99.10	99.60	96.80
12/30/87	DTW	21.82	22.30	22.60
	DTP	-	-	-
	PT	0	0	0
06/07/88	DTW	23.35	23.83	21.09
	DTP	-	-	-
	PT	0	0	0
12/13/88	DTW	23.17	23.69	20.92
	DTP	-	-	-
	PT	0	0	0

MW = Monitoring Well  
 ELEV. = Relative Elevation of Wellhead  
 DTW = Depth to Water (ft)  
 DTP = Depth to Product (ft)  
 PT = Product thickness (ft)

A monitoring well will be drilled and installed to between 40 to 50 feet in a directly down gradient direction from the tankpit, in the area of the previously existing building. This well will be constructed of 4 inch Schedule 40 PVC casing, with up to 20 feet of .010" or .020" slotted schedule 40 PVC. A second groundwater monitoring well will be established to 40 to 50 feet, as close as possible to Groundwater Technology's MW-2 (destroyed), in a down gradient direction. This will be a 2 inch schedule 40 PVC well which provides the geometry between wells which is necessary for future gradient determinations as well as monitoring of the southern pump island.

Undisturbed soil samples will be taken at 5 foot intervals with a hammer driven California Split Spoon sampler as drilling progresses. The samples will be collected in precleaned 2" X 6" brass tubes and sealed with plastic caps and tape. Because of the aromatic nature of gasoline, soil samples will be screened by sensory perception for analysis. A grab sample of groundwater from B-1 will be taken in a plastic bailer which has been precleaned, and collected into amber glass bottles and septum vials for analysis. All sampling equipment will be cleaned with a TSP solution and rinsed twice between samplings. The drilling rig and augers will be high pressure hot washed before arriving on site and between borings. Decon rinseate will be drummed, as will drill cuttings, and left onsite pending sample results.

The groundwater monitoring wells will be constructed as shown in Figure 4. The wells will be developed by bailing at least 50 gallons of water from each well into drums with a 2" bailer. After stabilizing, the wells will be sampled with the bailer into precleaned amber glass bottles and vials. All soil and groundwater samples to be submitted for analysis will be immediately placed into a cooler with ice and submitted to a State Certified Analytical Laboratory following chain of custody procedures for TPH as gasoline with BTXE distinction using EPA methods 8015/8020/602.

#### **SITE SAFETY**

Drilling will not be conducted during lightning storms. If, during drilling, product odors emanating from the hole are deemed to be substantial, drilling personnel will wear Tyvek suits and rubber gloves. Respirators equipped with organic vapor cartridges may be worn as well under these drilling conditions. The closest hospital is Laurel Hospital which is reached by traveling west on Castro Valley Blvd., turning north onto Lake Chabot Rd. and continuing about two blocks to the hospital on the left.

#### **REPORTING**

A complete report of methods, findings, and conclusions will be submitted to all appropriate agencies within 30 days of the completion of the investigation.

The preceding proposal has been read and understood and is hereby agreed to. The elements of the above proposal and the price constitute expressed parts of the contract, evidenced by my signature below.

For Lakeshore Financial:

Signature: [Handwritten Signature]  
Title: Partner  
Date: 6-20-89

For Aqua Science Engineers:

Signature: [Handwritten Signature]  
Title: VICE PRESIDENT  
Date: 6-12-89

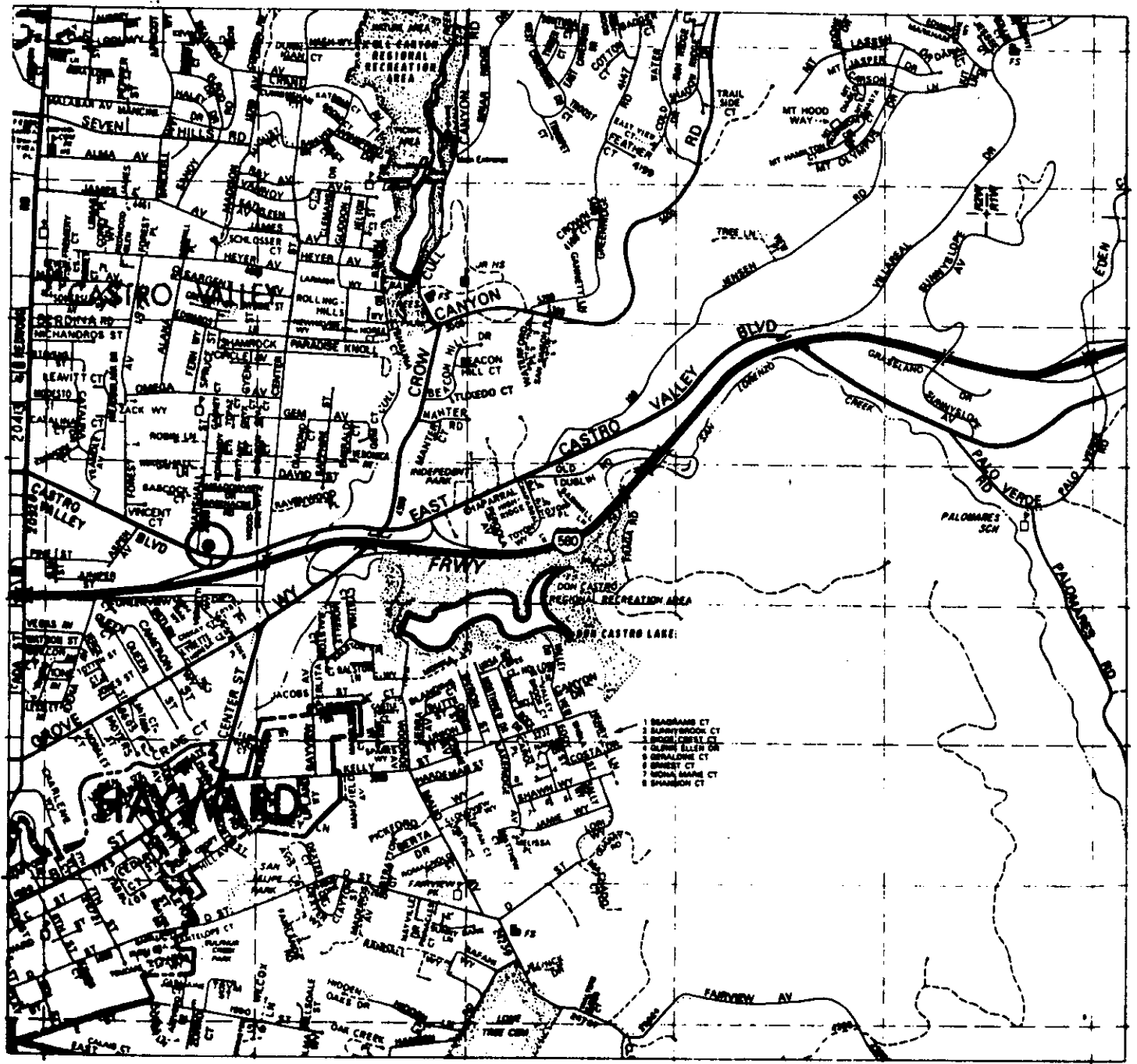
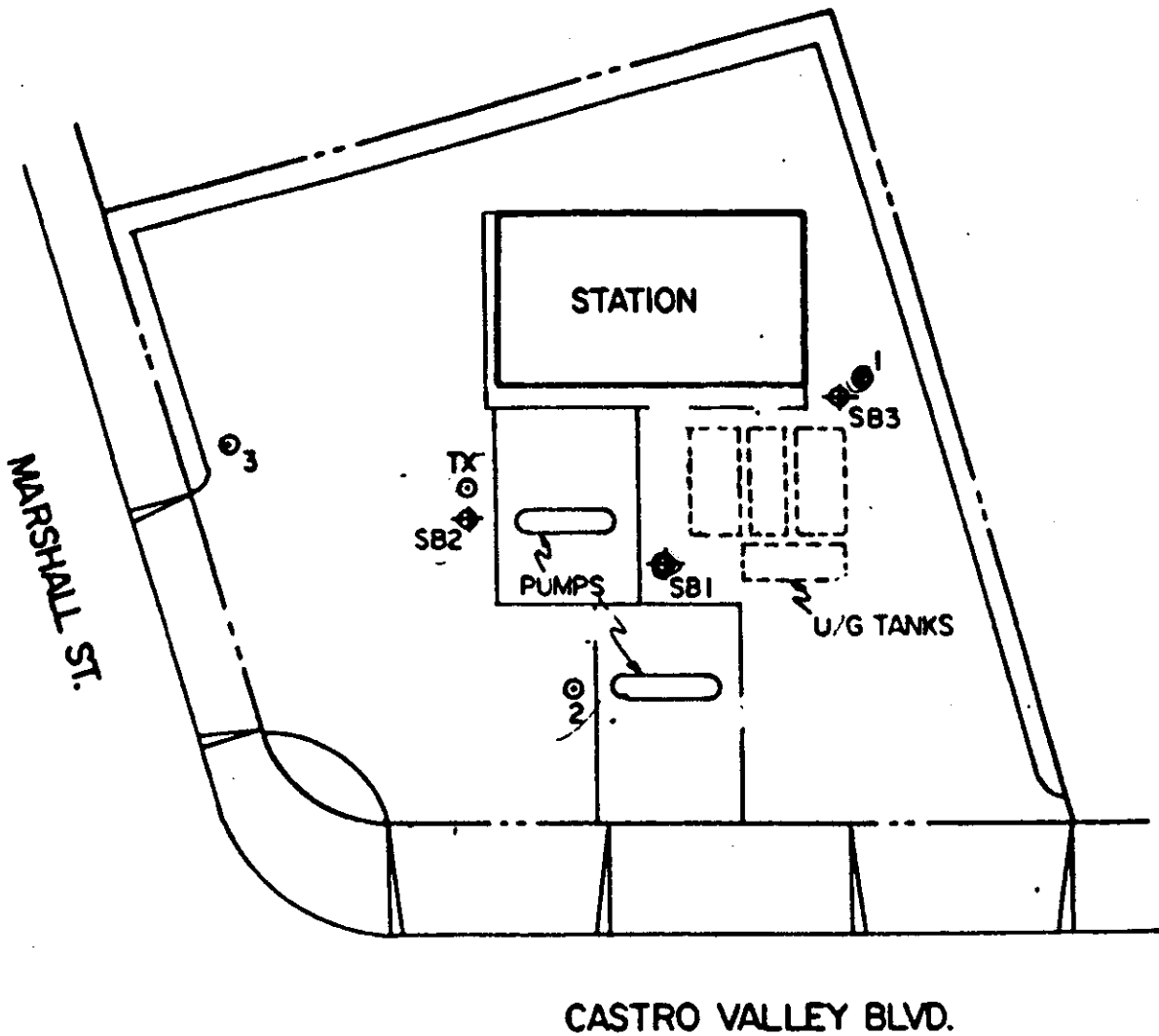


FIGURE I  
SITE LOCATION MAP

○ SITE LOCATION





LEGEND

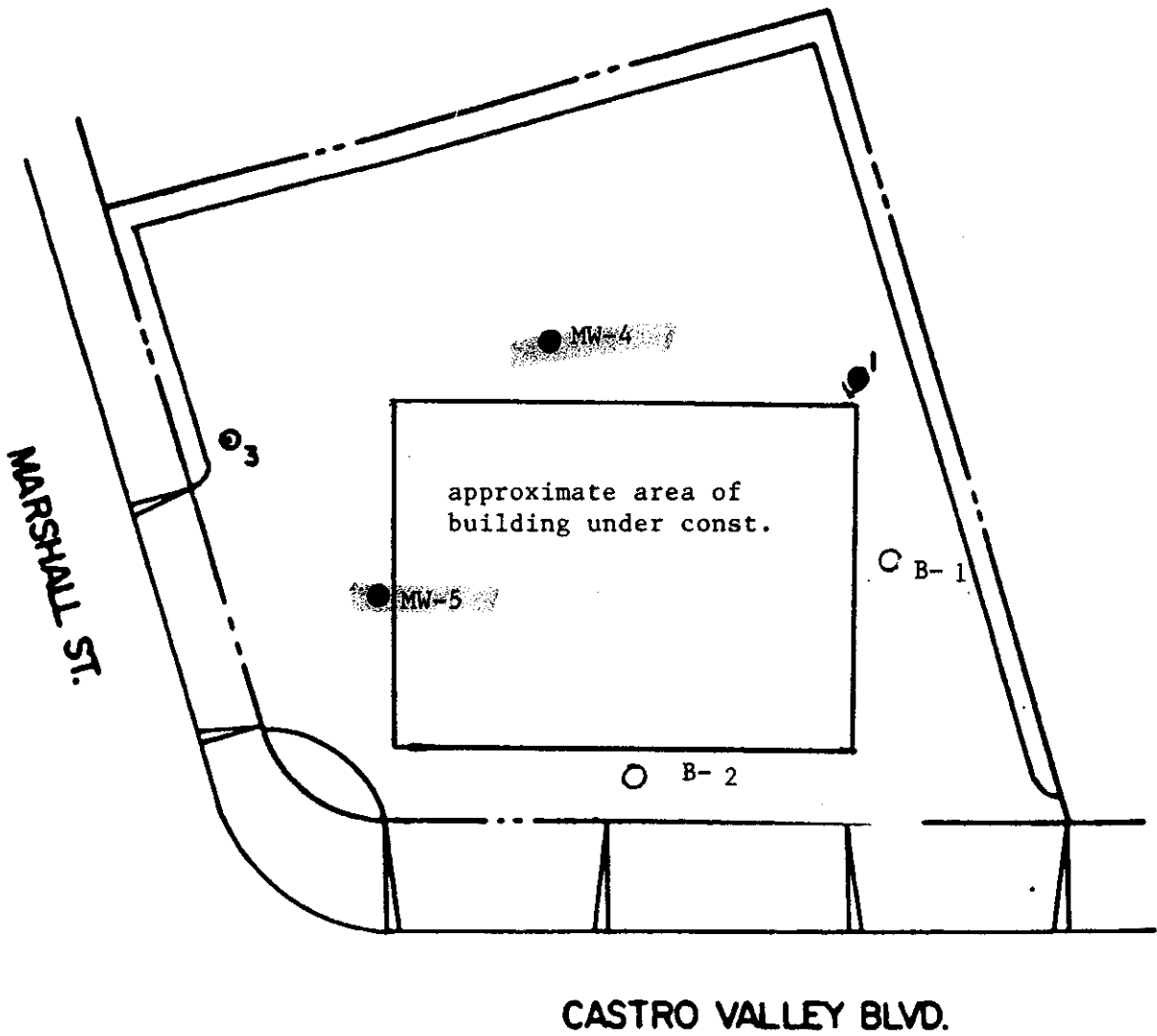
- ⊙ MONITORING WELL (existing)
- ◆ SOIL BORING (existing)

FIGURE 2  
SITE PLAN

previously removed facilities







**LEGEND**

⊙ MONITORING WELL (existing)

● MONITORING WELL (proposed)

○ SOIL BORING (proposed)

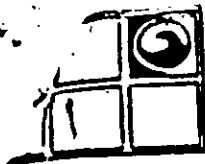
FIGURE 3



0 FEET 30

**APPENDIX A**

**BORING LOGS**



Soil Boring 1

Project Texaco Castro Valley Owner Texaco Refin. & Market  
 Location Castro Valley Project Number 203 150 4080  
 Date Drilled 11/20/87 Total Depth of Hole 35 ft. Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 31 ft. 24-hrs.  
 Screen: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Slot Size \_\_\_\_\_  
 Casing: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Type \_\_\_\_\_  
 Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger  
 Driller Todd Byard Log by Jan Prasil

Sketch Map

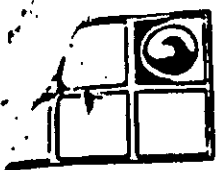
See Site Plan

Notes

Depth (feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification
0					2 inches asphalt over 5 inches base course
2					Gray sandy clay (medium stiff, dry, no product odor)
4		0	A 4 5 8	CL	Yellow, sandy clay (medium stiff, dry, no product odor)
6					
8		0	B 1 2 3	CL	(grades yellow-brown, soft)
10					
12					
14		0	C 4 6 8	CL	(grades medium stiff) (grades sandy)
16					
18			D 5 8 13	SC	Brown, clayey, medium sand (medium stiff, dry, no product odor)
20		0			(grades moist)
22					
24		0	E 11 17 27		



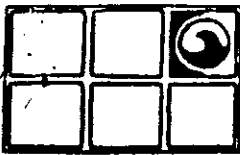
Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26					Brown, clayey, medium sand (cont'd)
28			F	SC	(grades very moist)
30		0	8 10 12		▼ Encountered water 11/20/87 (1055 hours) (grades more clayey)
32					Brown, sandy clay (medium stiff, wet, no product odor)
34				CL	
36					End of boring, backfilled with concrete
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					



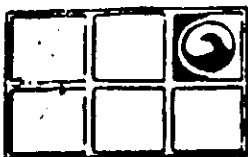
Project Texaco Castro Valley Owner Texaco Refin. & Market.  
 Location Castro Valley Project Number 203 150 4080  
 Date Drilled 11/20/87 Total Depth of Hole 35 ft. Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 31 ft. 24-hrs \_\_\_\_\_  
 Screen: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Slot Size \_\_\_\_\_  
 Casing: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Type \_\_\_\_\_  
 Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger  
 Driller Todd Byard Log by Jan Prasil

Sketch Map  
  
See Site Plan  
  
Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification
0					2 inches Asphalt over 5 inches base course
0 - 1				CL	Gray, sandy clay (medium stiff, dry, no product odor)
1 - 2				CL	Brown, silty clay (stiff, dry, no product odor)
2 - 4			A 304	CL	(grades sandy)
4 - 5					
5 - 8			B 5 8 10	SC	Light brown clayey sand (medium dense, dry, no product odor)
8 - 10					(grades more clayey)
10 - 12					Light brown, silty clay (stiff, dry, no product odor)
12 - 14			C 6 12 15	CL	(grades sandy, medium stiff)
14 - 16					
16 - 18					Brown, sandy clay (medium stiff, dry, no product odor)
18 - 20			D 4 6 8	CL	
20 - 22					
22 - 24			E 6 8	CL	(grades stiff)



Depth (feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26					Brown, sandy clay (cont'd)
28			F	CL	(grades more sandy)
30			15 22		▼ Encountered water 11/20/87 (1230 hours)
32					Brown, coarse sand (loose, wet, no product odor)
34			G	SP	
36			4		End of boring, backfilled with concrete
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					



# Soil Boring 3

# Drilling Log

Project Texaco Castro Valley Owner Texaco Refin. & Market.  
 Location Castro Valley Project Number 203 150 4080  
 Date Drilled 11/20/87 Total Depth of Hole 35 ft. Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Screen: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Slot Size \_\_\_\_\_  
 Casing: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Type \_\_\_\_\_  
 Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger  
 Driller Todd Byard Log by Jan Prasil

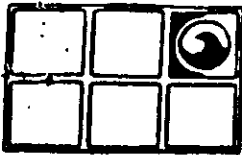
Sketch Map

See Site Map

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Notes

Depth (feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification
0					2 inches asphalt over 5 inches base course
0 - 2				CL	Gray, sandy clay (medium stiff, dry, no product odor)
2 - 4			A 10 18 28	CL	Light brown, silty clay (very stiff, dry, no product odor)  (grades sandy, less silty)
4 - 8			B 5 5 8	CL	Light brown, sandy clay (medium stiff, dry, no product odor)  (grades gray-green, silty)
8 - 14			C 8 15 21	CL	(grades very stiff)
14 - 18			D 5 6 7	SC	Light brown, clayey, medium sand (medium dense, dry, no product odor)  (grades brown)
18 - 24			E 8 10 12	SC	(grades more clayey)



Depth (feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
-26					Light brown, clayey medium sand (cont'd)
-28					(grades moist)
-30			F 10 15 21	SC	
-32					▼ Encountered water 11/20/87 (1520 hours)
-34				CL	Brown sandy clay (medium stiff, wet, no product odor)
-36					End of boring, backfilled with concrete
-38					:
-40					
-42					
-44					
-46					
-48					
-50					
-52					
-54					
-56					
-58					





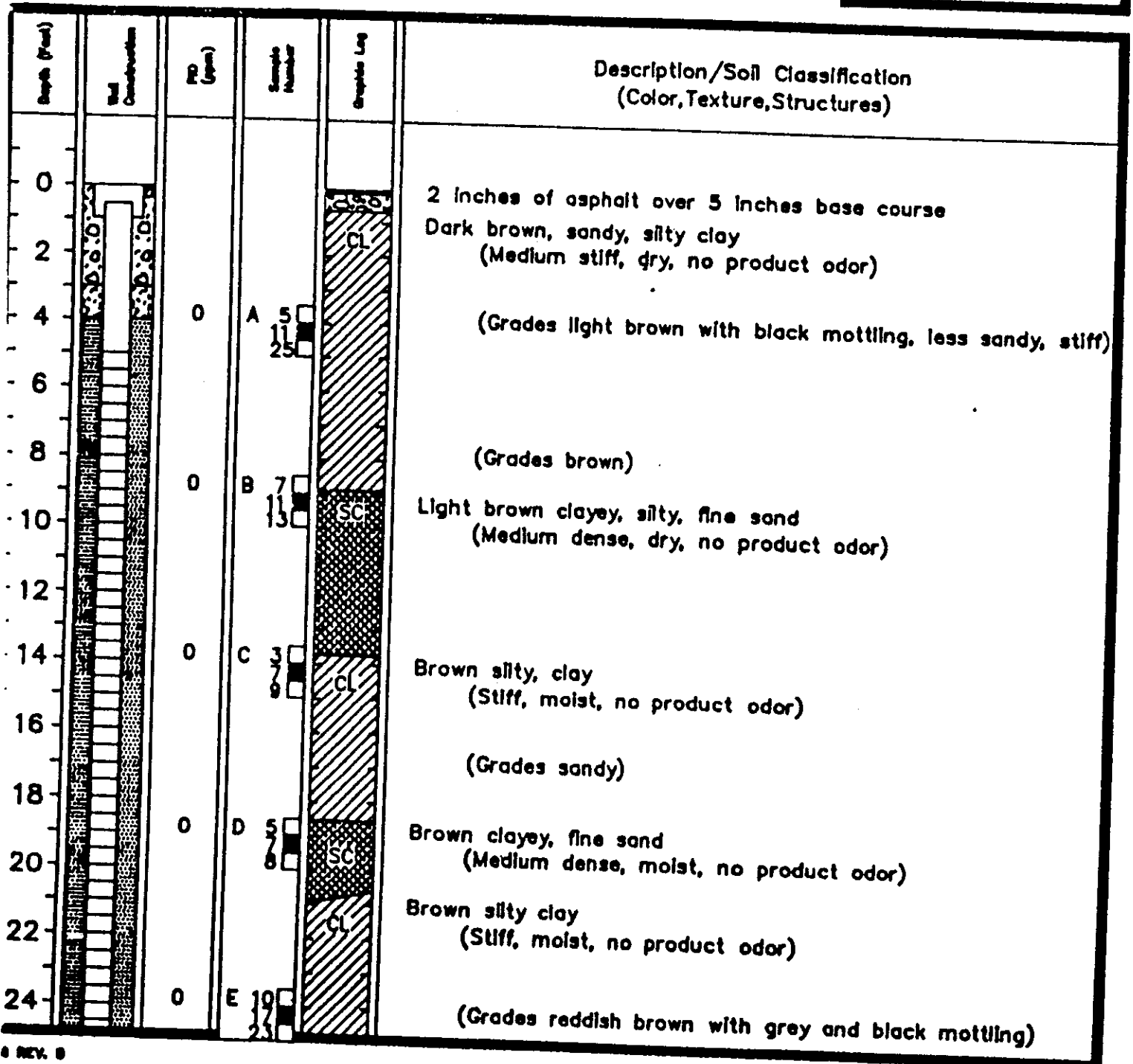
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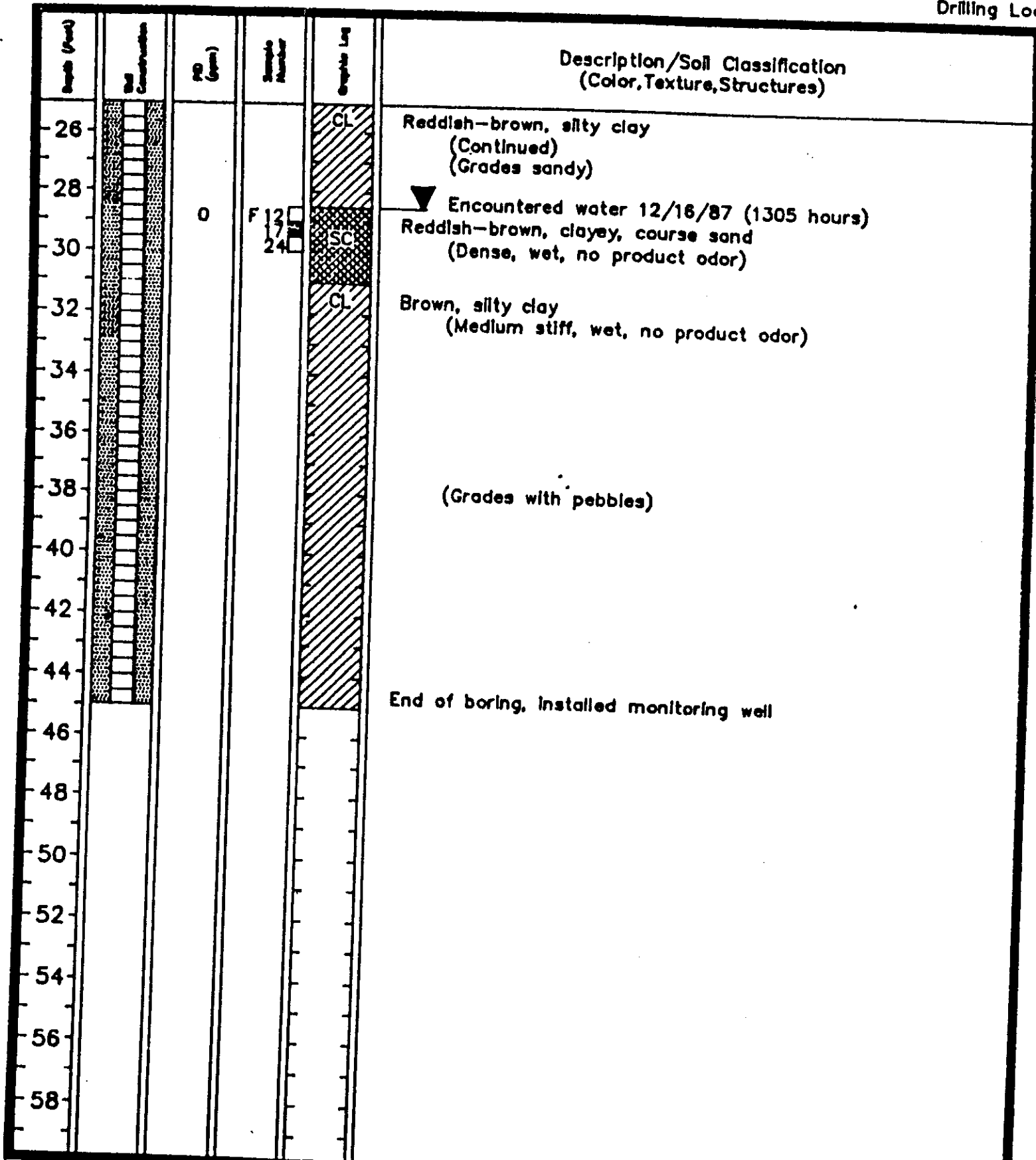
Monitoring Well 1

Drilling Log

Project TEXACO CASTRO VALLEY Owner TEXACO REF. AND MARK. INC.  
 Location CASTRO VALLEY, CA Project Number 203-150-4080  
 Date Drilled 12/16/87 Total Depth of Hole 45 FT Diameter 10.5 IN.  
 Surface Elevation \_\_\_\_\_ Water Level Initial 28 FT 24-hour \_\_\_\_\_  
 Screen: Dia. 4 IN. Length 40 FT Slot Size .020 IN.  
 Casing: Dia. 4 IN. Length 5 FT Type PVC  
 Drilling Company SIERRA PACIFIC Drilling Method HOLLOW STEM AUGER  
 Driller TODD BYARD Log by JAN PRASIL  
 Geologist / Engineer \_\_\_\_\_ License No. \_\_\_\_\_

Sketch Map  
  
SEE SITE PLAN  
  
Notes







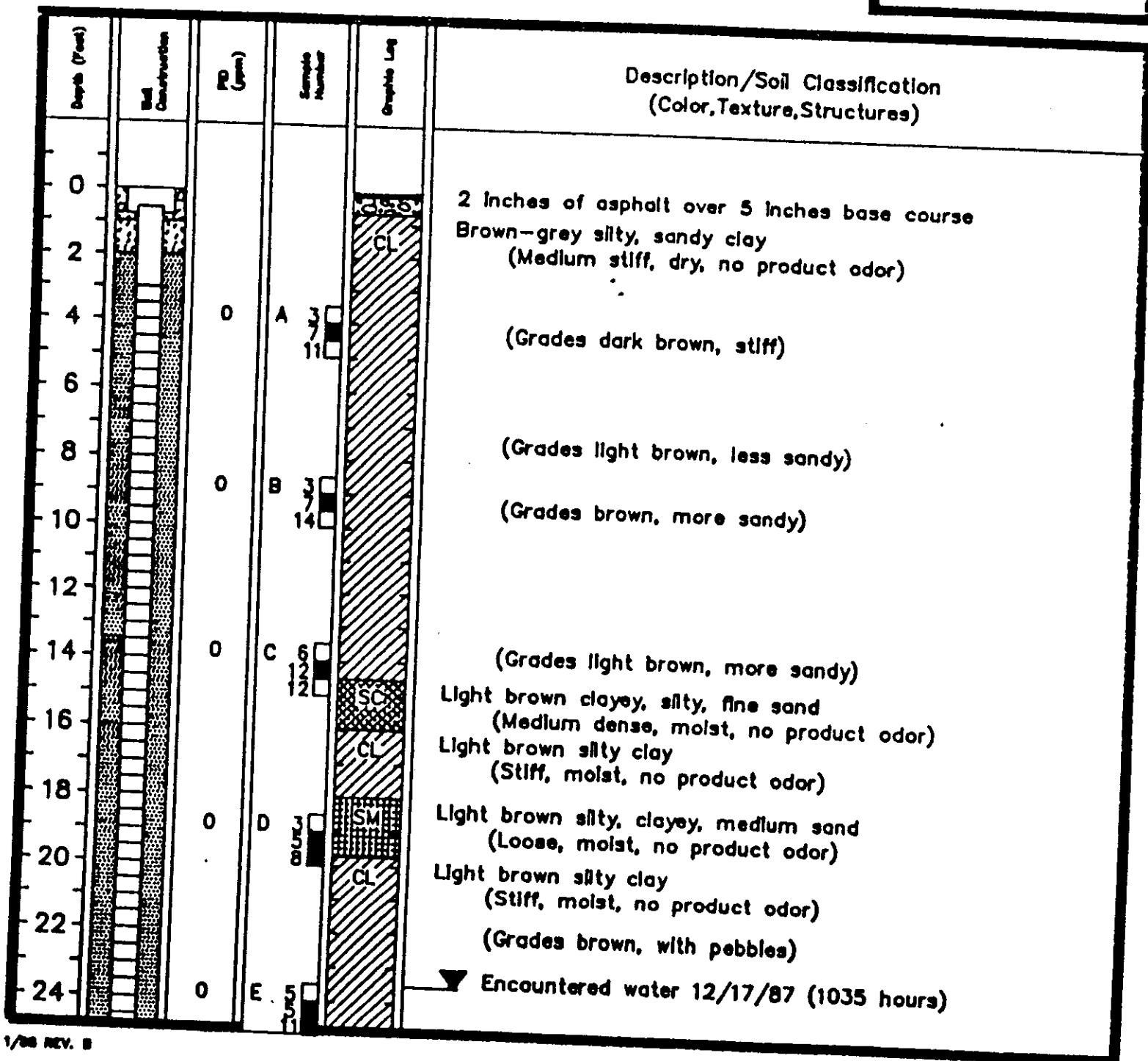
# GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 2

Drilling Log

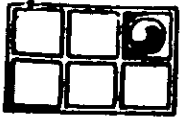
Project TEXACO CASTRO VALLEY Owner TEXACO REF. AND MARK. INC.  
 Location CASTRO VALLEY, CA Project Number 203-150-4080  
 Date Drilled 12/17/87 Total Depth of Hole 38 FT Diameter 10.5 IN.  
 Surface Elevation \_\_\_\_\_ Water Level Initial 23.5 FT 24-hour \_\_\_\_\_  
 Screen: Dia. 4 IN. Length \_\_\_\_\_ 35 FT Slot Size .020 IN.  
 Casing: Dia. 4 IN. Length \_\_\_\_\_ 3 FT Type PVC  
 Drilling Company SIERRA PACIFIC Drilling Method HOLLOW STEM AUGER  
 Driller TODD BYARD Log by JAN PRASIL  
 Geologist / Engineer \_\_\_\_\_ License No. \_\_\_\_\_

Sketch Map  
  
SEE SITE PLAN  
  
Notes





Depth (ft)	Soil Sample	Moisture (%)	Soil Classification	Description/Soil Classification (Color, Texture, Structures)
26		0	CL	Brown silty clay with pebbles (Continued)  (Grades light brown)
28				
30				
32				
34		0	CL	Brown fine sandy clay (Stiff, wet, no product odor)
36				
38				End of drilling, installed monitoring well
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				



# GROUNDWATER TECHNOLOGY, INC.

## Monitoring Well 3

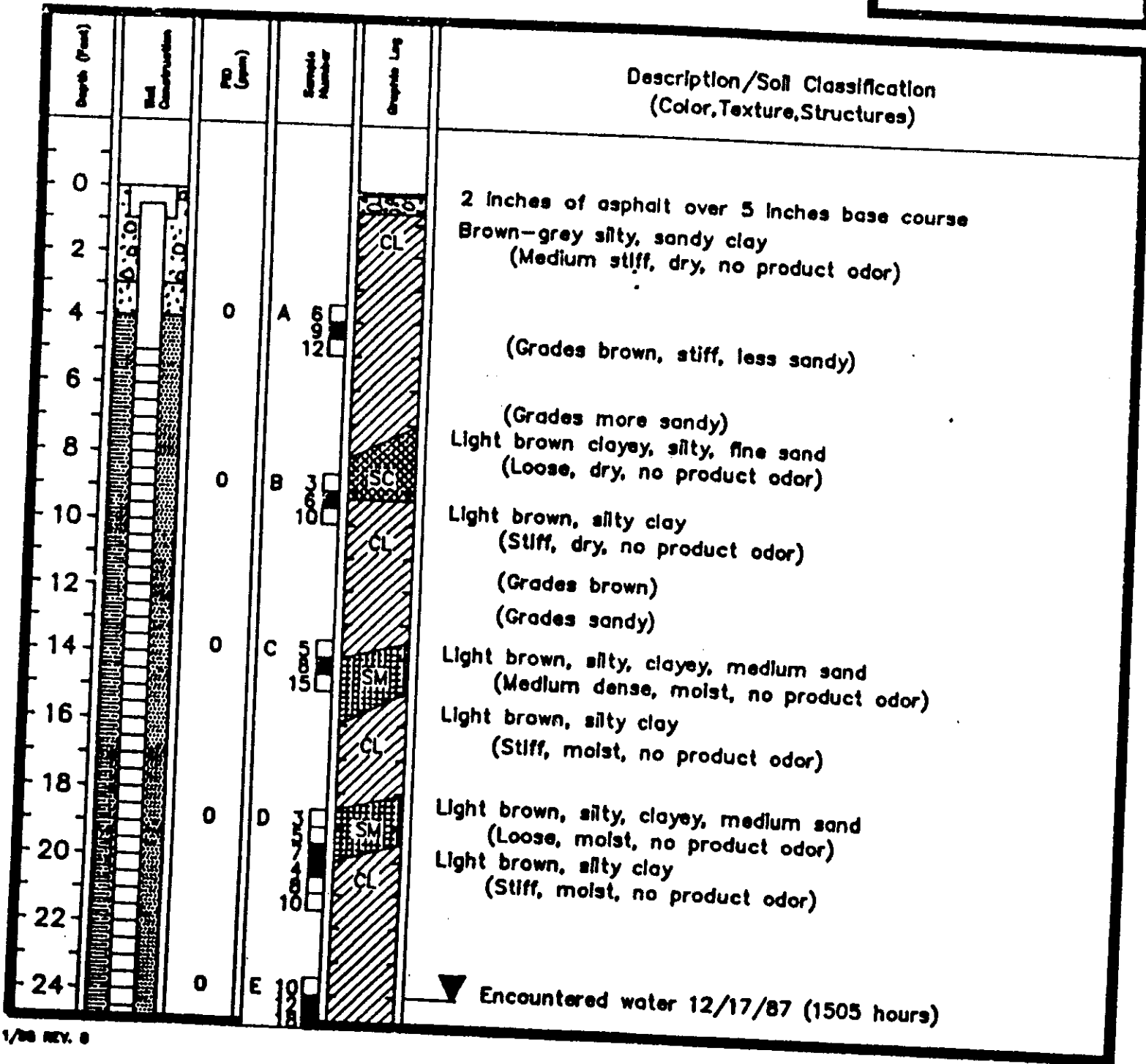
## Drilling Log

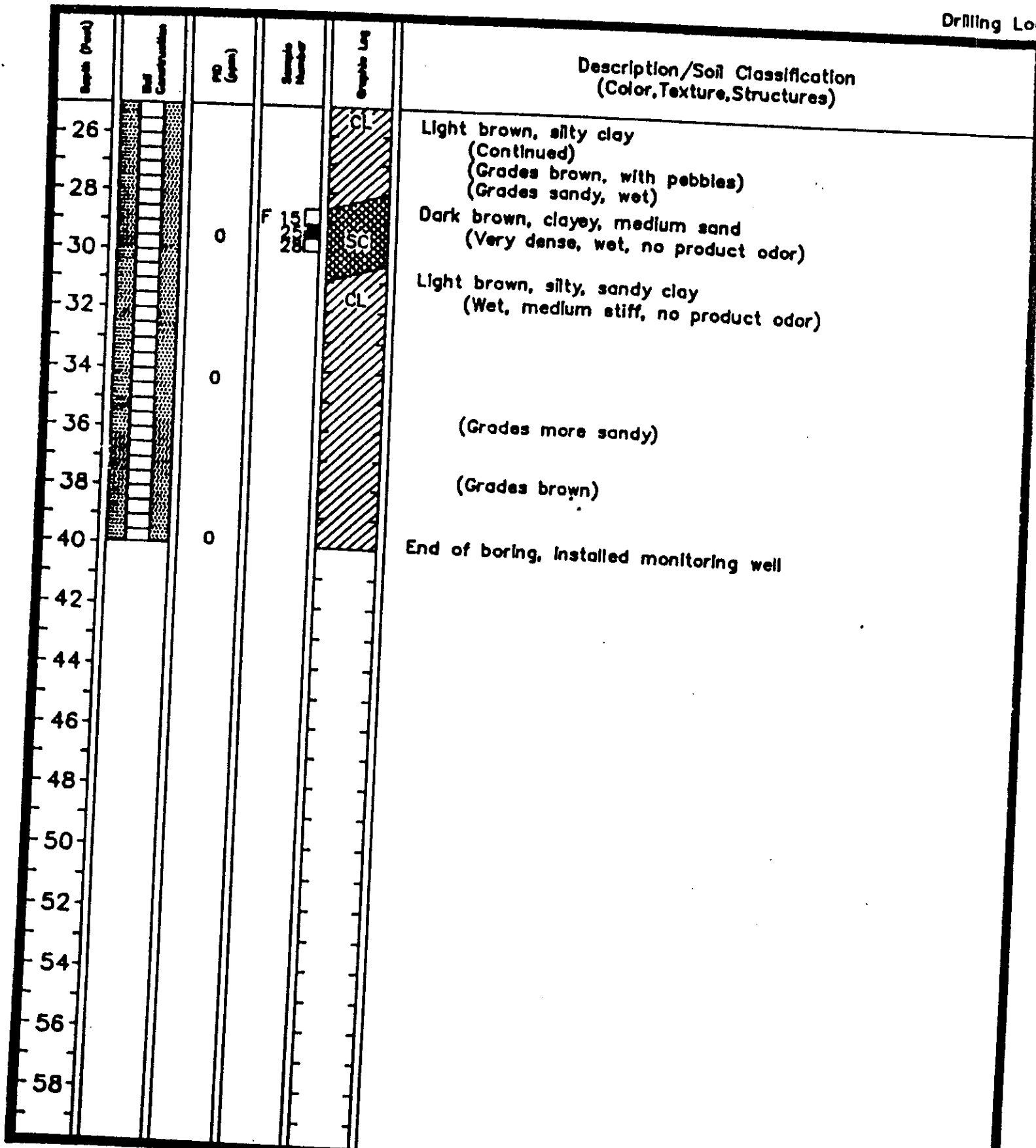
Project TEXACO CASTRO VALLEY Owner TEXACO REF. AND MARK. INC.  
 Location CASTRO VALLEY, CA Project Number 203-150-4080  
 Date Drilled 12/17/87 Total Depth of Hole 40 FT Diameter 10.5 IN.  
 Surface Elevation \_\_\_\_\_ Water Level Initial 24 FT 24-hour \_\_\_\_\_  
 Screen: Dia. 4 IN. Length 35 FT Slot Size .020 IN.  
 Casing: Dia. 4 IN. Length 5 FT Type PVC  
 Drilling Company SERRA PACIFIC Drilling Method HOLLOW STEM AUGER  
 Driller TODD BYARD Log by JAN PRASIL  
 Geologist / Engineer \_\_\_\_\_ License No. \_\_\_\_\_

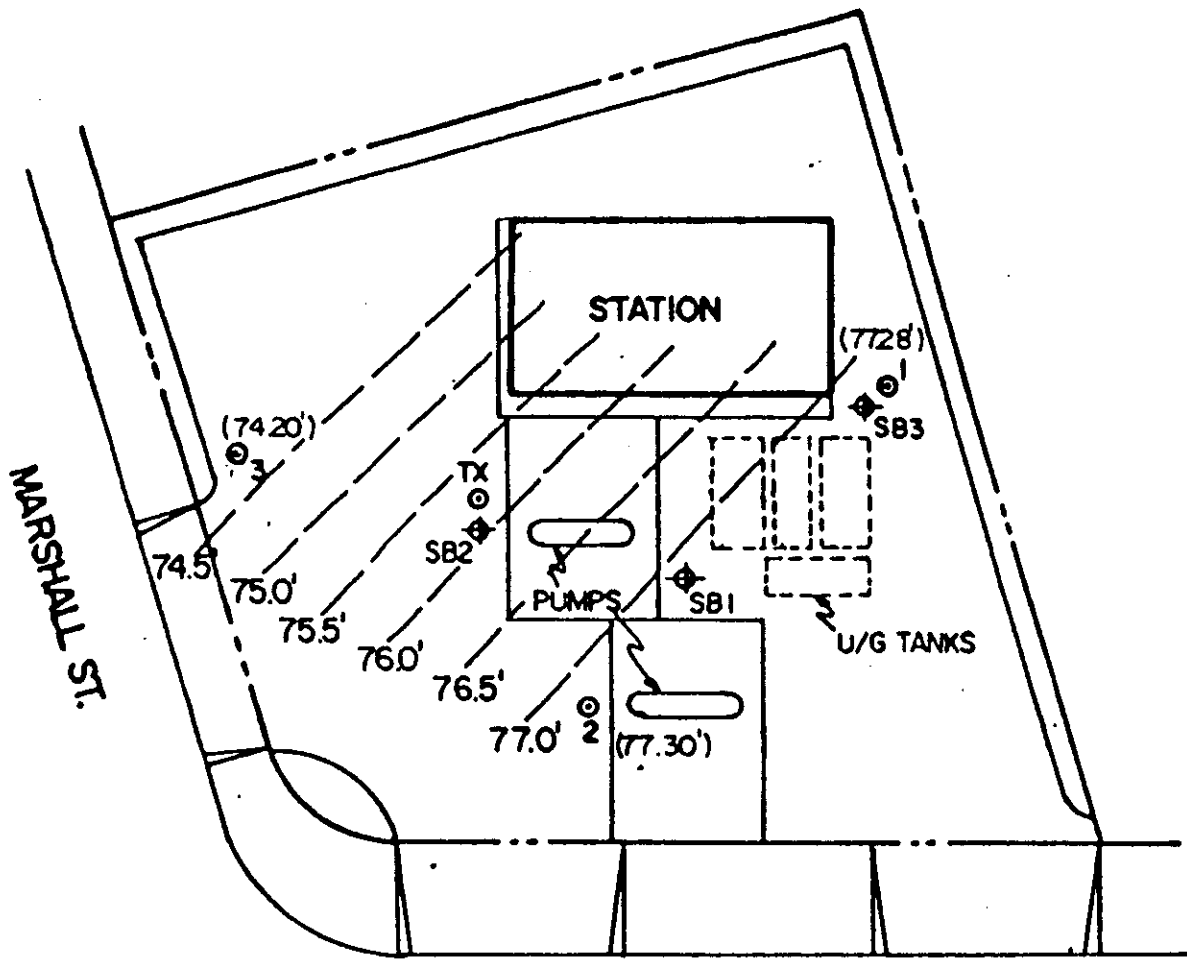
Sketch Map

SEE SITE PLAN

Notes







CASTRO VALLEY BLVD.

**LEGEND**

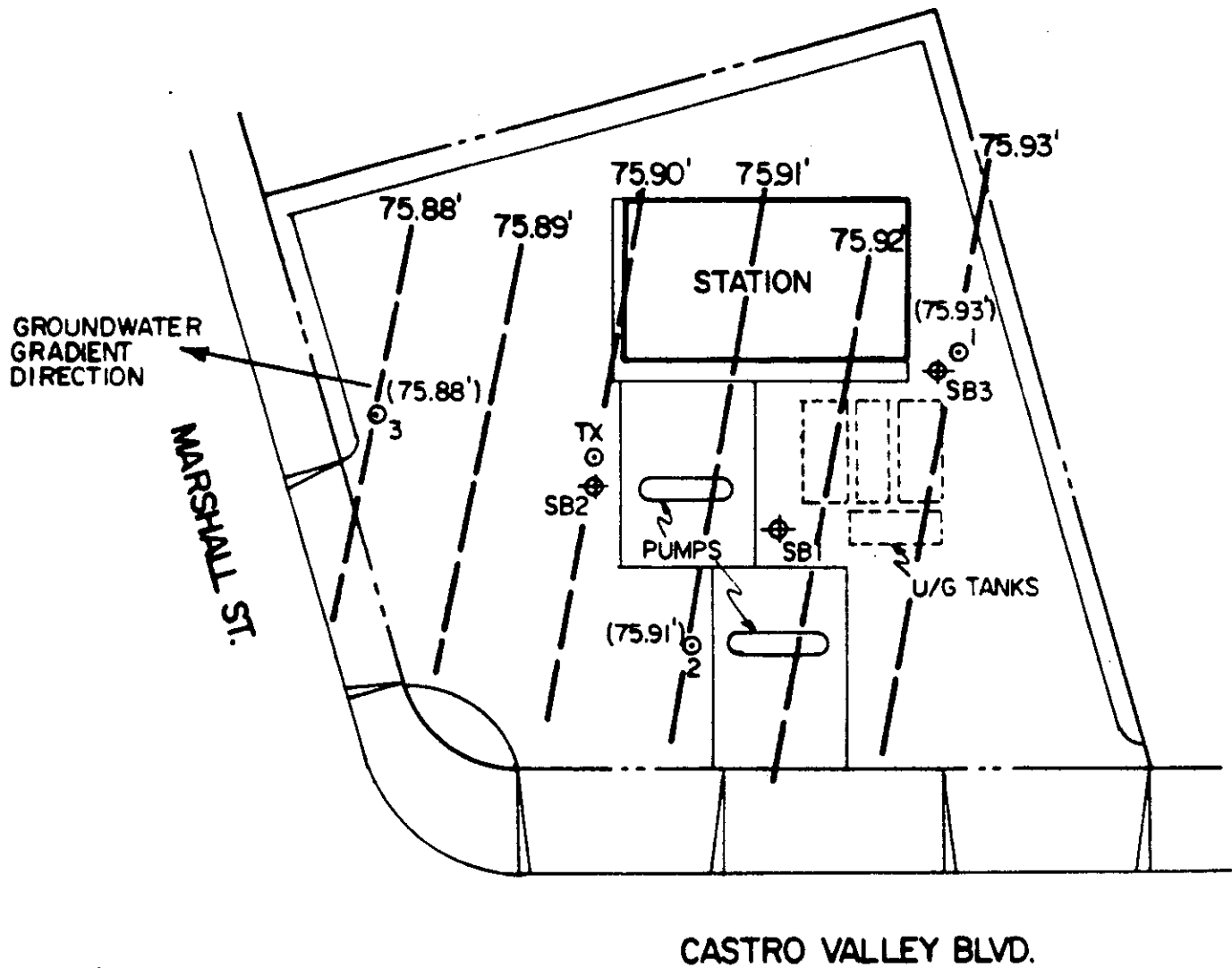
- ⊙ MONITORING WELL
- ◆ SOIL BORING
- ( ) RELATIVE GROUNDWATER ELEVATION
- - - GROUNDWATER CONTOUR

FIGURE 3  
GROUNDWATER GRADIENT MAP  
 12/30/87

TEXACO REFINING  
 & MARKETING INC.  
 CASTRO VALLEY, CALIFORNIA

0 FEET 30

GROUNDWATER TECHNOLOGY



**LEGEND**

- ⊙ MONITORING WELL
- ◆ SOIL BORING
- ( ) GROUNDWATER ELEVATION
- - - GROUNDWATER CONTOUR

Figure 1. Groundwater Gradient Map-12/13/88



0 FEET 30



**GROUNDWATER TECHNOLOGY**

**TEXACO REFINING & MARKETING INC.  
CASTRO VALLEY, CALIFORNIA**



**APPENDIX B**  
**CHAIN OF CUSTODY DOCUMENTATION**  
**AND**  
**SAMPLE ANALYSES REPORTS**

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 885-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

02-03-88 MH

Page 1 of 2

**PROJECT MGR:** Jan Prasil  
 Groundwater Technology, Inc.  
 4080 Pike Lane  
 Concord, CA 94520

**PROJECT #:** 203-199-4080-1  
**LOCATION:** Castro Valley, CA  
**SAMPLED:** 11-21-87 BY: J. Prasil  
**RECEIVED:** 11-23-87 BY: K. Biava  
**ANALYZED:** 11-30-87 BY: J. Floro  
**MATRIX:** Soil E. Foley

**TEST RESULTS (ppm)**

COMPOUNDS	LAB #	9962	9963A	9964	9965	9966
	I. D. #	1C	1F	2B	2F	3C
Benzene		ND	ND	ND	ND	ND
Ethylbenzene		ND	ND	ND	ND	ND
Toluene		ND	ND	ND	ND	ND
Xylenes		ND	ND	ND	ND	ND
Total BTEX		ND	ND	ND	ND	ND
Misc Hydrocarbons (C4-12)		ND	ND	ND	ND	ND
Total Petroleum Hydrocarbons as Gasoline		ND	ND	ND	ND	ND

ND = Less than Practical Quantitation levels as per EPA Federal Register,  
 November 13, 1985, p. 46906. Results rounded to two significant figures.

METHODS: EPA 5030/8015/8020.

This report replaces one of the same dated 12/02/87.

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

Page 2 of 2

PROJECT MGR: Jan Prasil  
 PROJECT #: 203-199-4080-1  
 LOCATION: 3940 Castro Valley Blvd  
 Castro Valley, CA

**TEST RESULTS** (ppm)

COMPOUNDS	LAB #	9967					
	I. D. #	3F					
Benzene		ND					
Ethylbenzene		ND					
Toluene		ND					
Xylenes		ND					
Total BTEX		ND					
Misc. Hydrocarbons (C4-C12)		ND					
Total Petroleum Hydrocarbons as Gasoline		ND					

ND = Less than Practical Quantitation levels as per EPA Federal Register  
 November 13, 1985, p. 46906. Results rounded to two significant figures.

METHODS: Modified EPA 5030/8015/8020.

This report replaces one of the same number dated 12/02/87.



SAFY KHALIFA, Ph.D., Director

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 *from inside California*  
 (800) 423-7143 *from outside California*

**PROJECT MGR:** Jan Prasil  
 Groundwater Technology, Inc.  
 4080-D Pike Lane  
 Concord, CA 94520

**PROJECT #:** 203-199-4080-2A  
**LOCATION:** 3940 Castro Valley Blvd  
 Castro Valley, CA

**SAMPLED:** 11-21-87 BY: J. Prasil  
**RECEIVED:** 11-23-87 BY: K. Biava  
**ANALYZED:** 11-24-87 BY: V. Craven  
**MATRIX:** Soil R. Craven

V. O. A.  
 A TEST RESULTS (ppm)

COMPOUNDS	LAB #	9936B			
	I. D. #	1F			
Chloromethane		ND			
Bromomethane		ND			
Vinyl Chloride		ND			
Chloroethane		ND			
Methylene Chloride		1.9			
Acetone		ND			
Carbon Disulfide		ND			
1,1-Dichloroethene		ND			
1,1-Dichloroethane		ND			
Trans-1,2-Dichloroethene		ND			
Chloroform		0.025			
1,2-Dichloroethane		ND			
2-Butanone		ND			
1,1,1-Trichloroethane		ND			
Carbon Tetrachloride		ND			
Vinyl Acetate		ND			
Bromodichloromethane		ND			
1,2-Dichloropropane		ND			
cis-1,3-Dichloropropene		ND			
Trichloroethene		ND			
Dibromochloromethane		ND			
1,1,2-Trichloroethane		ND			
Benzene		ND			
Trans-1,3-Dichloropropene		ND			
2-Chloroethylvinylether		ND			
Bromoform		ND			
4-Methyl-2-Pentanone		ND			
2-Hexanone		ND			
Tetrachloroethene		ND			
1,1,2,2-Tetrachloroethane		ND			
Toluene		0.95			
Chlorobenzene		ND			
Ethylbenzene		ND			



A division of Groundwater Technology, Inc.

**Western Region**

4080-C Pike Lane, Concord, CA 94520

(415) 685-7852

(800) 544-3422 *from inside California*

(800) 423-7143 *from outside California*

Page One Continued

PROJECT MGR: Jan Prasil

PROJECT #: 203-199-4080-2A

LOCATION: 3940 Castro Valley Blvd  
Castro Valley, CA

B

(ppm)

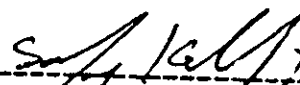
COMPOUNDS	LAB #	I.D. #	9936B	1F			
-----------	-------	--------	-------	----	--	--	--

Styrene			ND				
1,2-Dichlorobenzene			ND				
1,3-Dichlorobenzene			ND				
1,4-Dichlorobenzene			ND				
Total Xylenes			ND				
Trichlorofluoromethane			ND				

ND = Less than Practical Quantitation levels as per EPA Federal Register, November 13, 1985, p. 46906.

METHODS: Extracted by EPA 3550. Analyzed by EPA 8240.

This report replaces one of the same number dated 11-24-87.

  
SAFY KHALIFA, Ph.D., Director

Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

PROJECT MGR: Jan Prasil  
 Groundwater Technology, Inc.  
 4080-D Pike Lane  
 Concord, CA 94520

PROJECT #: 203-199-4080-3A  
 LOCATION: 3940 Castro Valley Blvd  
 Castro Valley, CA

SAMPLED: 11-21-87 BY: J. Prasil  
 RECEIVED: 11-23-87 BY: K. Biava  
 ANALYZED: 12-12-87 BY: R. Heines  
 MATRIX: Soil


TEST RESULTS (ppm)

PARAMETER	LAB #	I.D. #	9963C	1F

Total Oil & Grease

ND

ND = Not Detected.  
 METHOD: EPA 413.1.

  
 SAFY KHALIFA, Ph.D., Director

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

**PROJECT MGR:** Jan Prasil  
 Groundwater Technology, Inc.  
 4080-D Pike Lane  
 Concord, CA 94520

**PROJECT #:** 203-199-4080-5  
**LOCATION:** 3940 Castro Valley Rd., Castro Valley, CA  
**SAMPLED:** 12/15/87 BY: G. Mason  
**RECEIVED:** 12/17/87 BY: K. Biava  
**ANALYZED:** 12/19/87 BY: V. Craven  
**MATRIX:** Soil R. Craven

V. O. A.  
 A TEST RESULTS (ppm)

COMPOUNDS	LAB #	10959			
	I. D. #	MW-1E			
Chloromethane		ND			
Bromomethane		ND			
Vinyl Chloride		ND			
Chloroethane		ND			
Methylene Chloride		ND			
Acetone		ND			
Carbon Disulfide		ND			
1,1-Dichloroethene		ND			
1,1-Dichloroethane		ND			
Trans-1,2-Dichloroethene		ND			
Chloroform		ND			
1,2-Dichloroethane		ND			
2-Butanone		ND			
1,1,1-Trichloroethane		ND			
Carbon Tetrachloride		ND			
Vinyl Acetate		ND			
Bromodichloromethane		ND			
1,2-Dichloropropane		ND			
cis-1,3-Dichloropropane		ND			
Trichloroethene		ND			
Dibromochloromethane		ND			
1,1,2-Trichloroethane		ND			
Benzene		ND			
Trans-1,3-Dichloropropane		ND			
2-Chloroethylvinylether		ND			
Bromoform		ND			
4-Methyl-2-Pentanone		ND			
2-Hexanone		ND			
Tetrachloroethene		ND			
1,1,2,2-Tetrachloroethane		ND			
Toluene		ND			
Chlorobenzene		ND			
Ethylbenzene		0.24			

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

PROJECT MGR: Jan Prasil  
Groundwater Technology, Inc.  
4080-D Pike Lane  
Concord, CA 94520

PROJECT #: 203-199-4080-5  
LOCATION: 3940 Castro Valley Rd., Castro Valley, CA  
SAMPLED: 12/15/87 BY: G. Mason  
RECEIVED: 12/17/87 BY: K. Biava  
ANALYZED: 12/19/87 BY: V. Craven  
MATRIX: Soil R. Craven

V. O. A.  
A TEST RESULTS (ppm)

COMPOUNDS	LAB #	10959			
	I. D. #	MW-1E			
Chloromethane		ND			
Bromomethane		ND			
Vinyl Chloride		ND			
Chloroethane		ND			
Methylene Chloride		ND			
Acetone		ND			
Carbon Disulfide		ND			
1,1-Dichloroethene		ND			
1,1-Dichloroethane		ND			
Trans-1,2-Dichloroethene		ND			
Chloroform		ND			
1,2-Dichloroethane		ND			
2-Butanone		ND			
1,1,1-Trichloroethane		ND			
Carbon Tetrachloride		ND			
Vinyl Acetate		ND			
Bromodichloromethane		ND			
1,2-Dichloropropane		ND			
cis-1,3-Dichloropropene		ND			
Trichloroethene		ND			
Dibromochloromethane		ND			
1,1,2-Trichloroethane		ND			
Benzene		ND			
Trans-1,3-Dichloropropene		ND			
2-Chloroethylvinylether		ND			
Bromoform		ND			
4-Methyl-2-Pentanone		ND			
2-Hexanone		ND			
Tetrachloroethene		ND			
1,1,2,2-Tetrachloroethane		ND			
Toluene		ND			
Chlorobenzene		ND			
Ethylbenzene		ND			
		0.24			



Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

Page One Continued

PROJECT MGR: Jan Prasil  
 PROJECT #: 203-199-4080-5  
 LOCATION: 3940 Castro Valley Rd.  
 Castro Valley, CA

B (ppm)

COMPOUNDS	LAB #	10959			
	I.D.#	MW-1E			
Styrene					ND
1,2-Dichlorobenzene					ND
1,3-Dichlorobenzene					ND
1,4-Dichlorobenzene					ND
Total Xylenes					2
Trichlorofluoromethane					ND

ND = Less than Practical Quantitation levels as per EPA Federal Register,  
 November 13, 1985, p. 46906.  
 METHODS: Extraction by EPA 3550.  
 Analysis by EPA 8240.  
 This report replaces one of the same dated 12-19-87.

*Safy Khalifa*  
 SAFY KHALIFA, Ph.D., Director

Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

PROJECT MGR: Jan Prasil  
 Groundwater Technology, Inc  
 4080-D Pike Lane  
 Concord, CA 94520

PROJECT #: 203-199-4080-6A  
 LOCATION: 3940 Castro Valley Blvd  
 Castro Valley, CA

SAMPLED: 12-17-87 BY: J. Prasil  
 RECEIVED: 12-18-87 BY: K. Biava  
 ANALYZED: 12-28-87 BY: J. Floro  
 MATRIX: Soil

TEST RESULTS (ppm)

COMPOUNDS	LAB #	11039	11040			
	I.D. #	MW-2E	MW-3E			
Benzene		ND	ND			
Ethylbenzene		ND	ND			
Toluene		ND	ND			
Xylenes		ND	ND			
Total BTEX		ND	ND			
Misc Hydrocarbons (C4-12)		14	ND			
Total Petroleum Hydrocarbons as Gasoline		14	ND			

METHODS: Modified EPA Method 5030/8020/8015.  
 ND = Less than Practical Quantitation levels as per EPA Federal Register,  
 November 13, 1985, p. 46906.  
 Results rounded to two significant figures.

*Safy Khalifa*  
 SAFY KHALIFA, Ph.D., Director

Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

PROJECT MGR: Jan Prasil  
 Groundwater Technology, Inc.  
 4080-D Pike Lane  
 Concord, CA 94520

PROJECT #: 203-199-4080-4A  
 LOCATION: 3940 Castro Valley Blvd  
 Castro Valley, CA

SAMPLED: 11-21-87 BY: J. Prasil  
 RECEIVED: 12-02-87 BY: K. Biava  
 ANALYZED: 12-02-87 BY: J. Floro  
 MATRIX: Water

TEST RESULTS (ppb)

COMPOUNDS	LAB #	I. D. #	10297	SB-3				
Benzene			70					
Ethylbenzene			4					
Toluene			9					
Xylenes			1600					
Total BTEX			1700					
Misc. Hydrocarbons (C4-12)			27000					
Total Petroleum Hydrocarbons as Gasoline			29000					

METHODS: EPA Modified 602/5030/8015/8020.  
 Results rounded to two significant figures.  
 ND = Less than Practical Quantitation levels as per EPA Federal Register  
 November 13, 1985, p. 46906.

*Safy Khalifa / EM7*  
 SAFY KHALIFA, Ph.D., Director

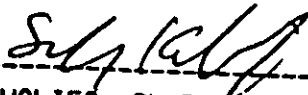
**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

1/16/88 rw  
 PROJECT MGR: Jan Prasil  
 Groundwater Technology, Inc  
 4080-D Pike Lane  
 Concord, CA 94520  
 PROJECT #: 203-199-4080-7A  
 LOCATION: 3940 Castro Valley Blvd. Castro Valley, CA  
 SAMPLED: 12/30/87 BY: J. Galloway  
 RECEIVED: 12/30/87 BY: K. Biava  
 ANALYZED: 1/08/88 BY: P. Sra  
 MATRIX: Water

TEST RESULTS (ppb = ug/L)

COMPOUNDS	LAB #	13282	13283	13284		
	I.D.#	MW-1	MW-2	MW-3		
Benzene		15	220	ND		
Ethylbenzene		3	3	ND		
Toluene		12	16	ND		
Xylenes		190	150	ND		
Total BTEX		220	390	ND		
Misc. Hydrocarbons (C4-12)		1900	2000	ND		
Total Petroleum Hydrocarbons as Gasoline		2100	2400	ND		

METHODS: Modified EPA Methods 5030/8015/8020.  
 ND = Less than Practical Quantitation Levels as per EPA Federal Register,  
 November 13, 1985, p. 46906.  
 Results rounded to two significant figures.

  
 SAFY KHALIFA, Ph.D., Director

PROJECT NO. 203 199 4080-1

SPECIFY ANALYSIS REQUESTED

PROJECT NAME GTI - Concord

SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP	DATE	TIME	ACIDIFIED	ICED	EPA METHOD (Specify #s)	SPECIFY ANALYSIS REQUESTED			REMARKS
											GASOLINE HYDROCARBONS BY <input type="checkbox"/> BTX <input type="checkbox"/> THX	OTHER	SPECIAL DETECTION LIMIT	
1C	1	✓				11/21		✓	✓		<input checked="" type="checkbox"/>	8240 (VOCs)		9962
1F	1	✓						✓	✓		<input checked="" type="checkbox"/>	TPH as waste		9963 A
2B	1	✓						✓	✓		<input checked="" type="checkbox"/>			9964
2F	1	✓						✓	✓		<input checked="" type="checkbox"/>			9965
3C	1	✓						✓	✓		<input checked="" type="checkbox"/>			9966
3F	1	✓				11/21		✓	✓		<input checked="" type="checkbox"/>			9967

8020/8015 (BTX+THX)

40

Relinquished by: *[Signature]*

Date: 11/23/87 Time: [ ]

Received by: [ ]

SPECIAL REPORTING REQUIREMENTS  PQL (see attached)

Relinquished by: [ ]

Date: [ ] Time: [ ]

Received by: [ ]

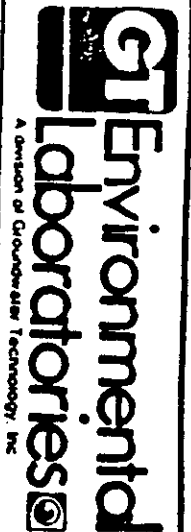
JOB SITE LOCATION: 3940 Castro Valley Blvd. Castro Valley, CA  
SAMPLER: SIGNATURE *[Signature]*

Relinquished by: [ ]

Date: 11-23-87 Time: 10:15

Received by laboratory: K. Biava

PROJECT MANAGER: JAN PRASIL  
ADDRESS: GTI - Concord PHONE NO. 415-6712387



Western Region  
4080-C Pike Ln., Concord, CA 94520  
(415) 685-7852  
In CA: (800) 544-3422  
Outside CA: (800) 423-7143

11/21  
[Signature]

PROJECT NO. 203 199 4080-2

PROJECT NAME GT1 - Concord

SPECIFY ANALYSIS REQUESTED

SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP.	DATE	TIME	ACIDIFIED	ICED	EPA METHOD (specify #s)	SPECIFY ANALYSIS REQUESTED				REMARKS	
											GASOLINE HYDROCARBONS BY <input type="checkbox"/> BTX <input type="checkbox"/> TMT	OTHER	SPECIAL DETECTION LIMIT			
1C	1		✓			11/21		✓								
1F	1		✓					✓								
2B	1		✓					✓								
2F	1		✓					✓								
3C	1		✓					✓								
3F	1		✓			11/21		✓								

8240 (VOCs) TPH as waste  
 8020/8015 (BTX, THC)  
 9963B

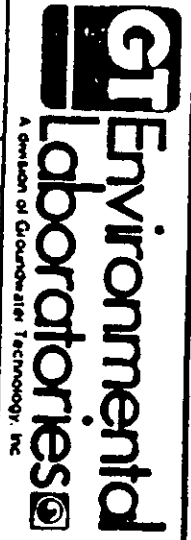
Relinquished by: <i>[Signature]</i>	Date: 11/23/87	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date: 11-23-87	Time: 10:15	Received by laboratory: K. Biava

SPECIAL REPORTING REQUIREMENTS  PQL  
 (see attached)

JOB SITE LOCATION: 3940 Castro Valley Blvd. Castro Valley, CA

SAMPLER: SIGNATURE *[Signature]*

PROJECT MANAGER: JAN PRASIL  
 ADDRESS: GT1 - Concord PHONE NO. 415-671-0000



Western Region  
 4080-C Pke Ln., Concord, CA 94520  
 (415) 685-7852  
 In CA: (800) 544-3422  
 Outside CA: (800) 423-7143

*[Signature]*

PROJECT NO. 203 199 4080-3

PROJECT NAME GT1 - Concord

SPECIFY ANALYSIS REQUESTED

SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP.	DATE	TIME	ACIDIFIED	ICED	EPA METHOD (specify #s)	SPECIFY ANALYSIS REQUESTED				REMARKS	
											GASOLINE HYDROCARBONS BY <input type="checkbox"/> BTX <input type="checkbox"/> TN	2020/2015 (Stex, The)	OTHER	8240 (MCA)		TRIT (MCA)
1C	1		✓			11/21		✓	✓							
1F	1		✓					✓	✓							
2B	1		✓					✓	✓							
2F	1		✓					✓	✓							
3C	1		✓					✓	✓							
3F	1		✓			11/21		✓	✓							

SPECIAL REPORTING REQUIREMENTS  PQL

JOB SITE LOCATION: 3940 Castro Valley Blvd. Castro Valley, CA

SAMPLER: SIGNATURE *[Signature]*

PROJECT MANAGER: IAN PRASIL v 815  
ADDRESS: GT1 - Concord PHONE NO. 415-6712387

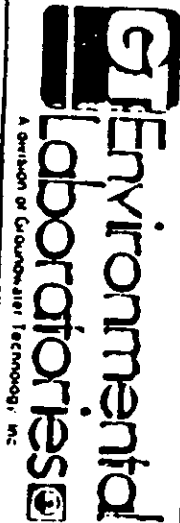
Relinquished by: *[Signature]* Date: 11/23/87 Time: Received by:

Relinquished by: Date: Time: Received by:

Relinquished by: Date: 11-23-87 Time: 10:15 Received by laboratory: K. Bianchi

9963C  
iD Prod: 2012/2015  
or  
5.11/2012/2015  
Analys: FID

12/14/87



Western Region  
4080-C Pk. Ln., Concord, CA 9452C  
(415) 685-7852  
In CA: (800) 544-3422  
Outside CA: (800) 423-7143

PROJECT NO. 203199-4080

SPECIFY ANALYSIS REQUESTED

PROJECT NAME GTI - Concord

SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP.	DATE	TIME	ACIDIFIED	ICED	EPA METHOD (specify #)

GASOLINE HYDROCARBONS BY  BTEX  TWA METALS

OTHER

VOG (8240)

SPECIAL DETECTION LIMIT

L<sup>10</sup> Soil VCEP

REMARKS

MW 1E

1

V

12/5

V

- 10959

V

Volatile organic compounds (8240)

Relinquished by:

*[Signature]*

Date

12/16

Time

8:00

Received by:

SPECIAL REPORTING REQUIREMENTS  FQL (see attached)

Relinquished by:

Date

Time

Received by:

JOB SITE LOCATION: 3940 Castro Valley Road Castro Valley, CA

SAMPLER: SIGNATURE

*[Signature]*

Relinquished by:

Date

12-7-87 10:10

Time

Received by laboratory:

K. Brava

PROJECT MANAGER: JPN PRASIL

ADDRESS:

GTI Concord

PHONE NO.

415-6712387



Western Region  
4080-C Pike Ln., Concord, CA 94520  
(415) 685-7852  
In CA: (900) 544-3422  
Outside CA: (800) 423-7143

*[Signature]*





# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO. <b>203 199 4080</b>											SPECIFY ANALYSIS REQUESTED					
PROJECT NAME <b>GTI - Concord</b>											EPA METHOD (specify #)	GASOLINE HYDROCARBONS BY BTEX METALS	OTHER	SPECIAL DETECTION LIMIT	REMARKS	
SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP	DATE	TIME	ACIDIFIED	ICED							
<b>SB 3</b>	<b>1</b>	<input checked="" type="checkbox"/>				<b>11/21</b>		<input checked="" type="checkbox"/>		<b>602</b>	<input checked="" type="checkbox"/>				<b>BTEX, TPH</b>	
															<b>24 hrd turnaround</b>	

Relinquished by: <i>[Signature]</i>	Date <b>12/2/87</b>	Time	Received by:	SPECIAL REPORTING REQUIREMENTS <input checked="" type="checkbox"/> (see attached) <b>PGL</b>
Relinquished by:	Date	Time	Received by:	JOB SITE LOCATION: <b>3940 Castro Valley Blvd. Castro Valley, CA</b>
Relinquished by:	Date	Time	Received by laboratory:	SAMPLER: SIGNATURE <i>[Signature]</i>
	Date	Time		PROJECT MANAGER: <b>JAN PRASIL</b>
				ADDRESS: <b>GTI - Concord</b> PHONE NO. <b>415 6712387</b>



A Division of Golder Associates Technology, Inc.

Western Region

4080-C Pre Ln., Concord, CA 94520  
 (415) 685-7852  
 In CA: (800) 544-3422  
 Outside CA: (800) 423-7143

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO. 203-199-4080-7										SPECIFY ANALYSIS REQUESTED			REMARKS
PROJECT NAME GTI CONCORD										GASOLINE HYDROCARBONS BY BTEX METALS	OTHER	SPECIAL DETECTION LIMIT	
SAMPLE I.D. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP.	DATE	TIME	ACIDIFIED	ICED				EPA METHOD (specify #)
MW 1	2	X				12/30	1:30	X	X		X	13282	BTEX-THC
MW 2	2	X				↓	1:45	X	X		Y	13283	↓ ↓
MW 3	2	X				↓	2:00	X	X		X	13284	↓ ↓ Mod. 602
Relinquished by: <i>J. Halloway</i>		Date: <i>12/30</i>		Time: <i>4:05</i>		Received by:				SPECIAL REPORTING REQUIREMENTS <input checked="" type="checkbox"/> (see attached)			
Relinquished by:		Date:		Time:		Received by:				JOB SITE LOCATION: <i>CASTRO VALLEY (3440 Castro Valley Blvd) Castro Valley, CA.</i>			
Relinquished by:		Date:		Time:		Received by laboratory:				SAMPLER: SIGNATURE <i>Jerry Halloway</i>			
Relinquished by:		Date:		Time:		Received by laboratory:				PROJECT MANAGER: <i>Yan PRASIL</i>			
Relinquished by:		Date: <i>2-30-87</i>		Time: <i>4:10</i>		Received by laboratory: <i>K-Biava</i>				ADDRESS: <i>4080 PIKE LN CONCORD</i>		PHONE NO: <i>671-2387</i>	

Mod. 602  
 BTEX METALS

40



Western Region  
 4080-C Pike Ln., Concord, CA 94520  
 In CA: (800) 544-3422  
 Outside CA: (800) 423-7143

-on  
 file

Western Region  
4080-C Pike Lane  
Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

CLIENT: Jan Prasil  
Groundwater Technology, Inc.  
4080 Pike Lane  
Concord, CA 94520  
PROJECT#: 203-199-4080-8  
LOCATION: 3940 Castro Valley Road  
Castro Valley, CA  
SAMPLED: 06/07/88 BY: J. Prasil  
RECEIVED: 06/08/88 BY: J. Floro  
ANALYZED: 06/15/88 BY: E. Popek  
MATRIX: Water  
UNITS: ppb

TEST RESULTS

COMPOUNDS	LAB # I. D. #	24768 MW-1	24769 MW-2	24770 MW-2 B	24771 MW-3
Benzene		37	220	<PQL	<PQL
Toluene		<PQL	<PQL	<PQL	<PQL
Ethylbenzene		<PQL	32	<PQL	<PQL
Xylenes		17	46	<PQL	<PQL
Total BTEX		54	300	<PQL	<PQL
Total Petroleum Hydrocarbons as Gasoline		290	1200	<PQL	<PQL

PQL = Less than Practical Quantitation Levels as per EPA Federal Register,  
November 13, 1985, p. 46906.

Results rounded to two significant figures.

METHOD:

Modified EPA 5030/8020/8015.

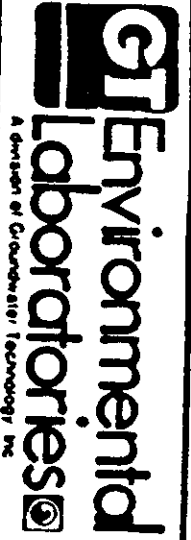
*Safy Khalifa / emf*  
SAFY KHALIFA, Ph.D., Director

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO. 203 1994080-8  
 PROJECT NAME GTI - Concord

SPECIFY ANALYSIS REQUESTED

SAMPLE ID. NUMBER	# OF CONTAINERS	WATER	SOIL	SED.	COMP.	DATE	TIME	ACIDIFIED	ICED	EPA METHOD (specify #)	SPECIFY ANALYSIS REQUESTED			SPECIAL DETECTION LIMIT	REMARKS
											GASOLINE HYDROCARBONS BY EPI/TH	METALS	OTHER		
MW1	2	X				7 Jun 85	4:45	X	X		X				24768
MW1-Blank	1	X				7 Jun 85	4:45	X	X		Hold				hold (blank)
MW2	2	X				7 Jun 85	4:55	X	X		X				24769
MW2-Blank	1	X				7 Jun 85	4:55	X	X		X				24770
MW3	2	X				7 Jun 85	4:35	X	X		X				24771
MW3-Blank	1	X				7 Jun 85	4:35	X	X		Hold				hold (blank)
TRIP BLANK	1	X						X	X		Hold				hold (blank)



Western Region  
 4080-C Pk. Ln., Concord, CA 94520  
 (415) 685-7852  
 In CA: (800) 544-3422  
 Outside CA: (800) 423-7143

Relinquished by: <u>Jan Pratil</u>	Date <u>June 7 1988</u>	Time <u>8:15 AM</u>	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date <u>6/8/88</u>	Time <u>8:40</u>	Received by laboratory: <u>[Signature]</u>

SPECIAL REPORTING REQUIREMENTS  (see attached)

JOB SITE LOCATION: 3940 Castro Valley Rd. Castro Valley, CA

SAMPLER: SIGNATURE L. White

PROJECT MANAGER: Jan Pratil

ADDRESS: GTI Concord PHONE NO. 671-2357



12/27/88MT

Page 1 of 1

WORK ORD#: 8812178  
CLIENT: Jan Prasil  
Groundwater Technology, Inc.  
4080 Pike Lane  
Concord, CA 94520

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

PROJECT#: 203-199-4080-10  
LOCATION: 3940 Castro Valley Blvd.  
Castro Valley, CA  
SAMPLED: 12/13/88 BY: S. Kranyak  
RECEIVED: 12/14/88 BY: K. Biava  
ANALYZED: 12/20/88 BY: R. Condit  
MATRIX: Water  
UNITS: ug/L (ppb)

TEST RESULTS

PARAMETER	ISAMPLE #	01A	02A	03A	04A
	I.I.D.	MW-1	MW-2	MW-3	MW-3B
Benzene		30	640	<PQL	<PQL
Toluene		<PQL	23	<PQL	<PQL
Ethylbenzene		<PQL	120	<PQL	<PQL
Xylenes		<PQL	110	<PQL	<PQL
Total BTEX		30	890	<PQL	<PQL
Total Petroleum Hydrocarbons as Gasoline		370	4000	<PQL	<PQL

PQL = Less than Practical Quantitation Levels per EPA Federal Register, November 13, 1985, page 46906.  
Results rounded to two significant figures.

METHOD:  
Modified EPA Method 5030/8020/8015

EMMA P. POPEK, Director



4060-C Pike Lane  
Concord, CA 94520  
415-685-7852

800-544-3422 (In CA)  
800-423-7143 (Outside CA)

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jan P. Phone #:

Address: FAX #:

Project Number: 203 199 4080 Project Name: GTI Concord

Project Location: Castro Valley Blvd Sampler Signature: Steve Krampf

Sample ID	Lab # (Lab use only)	# CONTAINERS Volume/Amount	Matrix					Method Preserved					Sampling		STEX (602/6020)	BTEX/TPH as Gasoline (602/6020/6015) - J	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/6010	EPA 602/6020	EPA 608/6080	EPA 608/6080-PCBs Only	EPA 624/6240	EPA 625/6270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(74307/421/239.2)	ORGANIC LEAD	OTHER	SPECIAL HANDLING		
			WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO3	ICE	NONE	OTHER	DATE	TIME																						
MW1		2	X							X	X																									
MW2		2																																		
MW3		2																																		
MW1B		1																																		
MW2B		1																																		
MW3B		1																																		

Relinquished by: <u>[Signature]</u>	Date Time: <u>12/14</u>	Received by:
Relinquished by:	Date Time:	Received by:
Relinquished by: <u>[Signature]</u>	Date Time: <u>12/14/88:45</u>	Received by Laboratory: <u>Kathy Biana</u>

Remarks: \* Hold Blanks unless told by Jan.P. except 3B AC 12/19/88

ON HOLD - 11 (SEE REMARKS)

PRIORITY ONE SERVICE (24 hr)  
EXPEDITED SERVICE (2-4 days)  
VERBAL/FAX  
SPECIAL DETECTION LIMITS (SPECIFY)

AquaScience Engineers, Inc.  
2500 Old Crow Canyon Rd.  
Suite 121  
San Ramon, CA 94583

April 13, 1989  
PACE Project Number: 490412500

Attn: Mr. Greg Gouvea

D. Dineen

Date Sample(s) Collected: 04/12/89  
Date Sample(s) Received: 04/12/89

PACE Sample Number:  
Parameter

Units	MDL	721530 SS-1	721540 SS-2	721550 SS-3
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ORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Purgeable Fuels, as Gasoline (EPA 8015)	mg/kg wet	1.0	ND	36	ND
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PURGEABLE AROMATIC COMPOUNDS, EPA 8020

Benzene	mg/kg	0.005	ND	0.13	ND
Ethylbenzene	mg/kg	0.005	ND	0.33	ND
Toluene	mg/kg	0.005	0.006	0.33	0.007
Xylenes, Total	mg/kg	0.005	ND	2.4	0.005

MDL Method Detection Limit  
ND Not detected at or above the MDL.

Approval:

*Lisa J. Petersen*  
\_\_\_\_\_  
Lisa J. Petersen  
Project Manager for  
PACE Laboratories

*Douglas E. Oram*  
\_\_\_\_\_  
Douglas E. Oram, Ph.D.  
Technical Reviewer for  
PACE Laboratories

RECEIVED

APR 15 1989

NOVATO, CALIF.



490412.500  
~~000306~~

P.O. Box 535, San Ramon, CA 94583-0535



(415) 820-9391

Project Name: D. Dineen Site: Castro Valley Blvd. Date: April 12, '89 Laboratory: PACE

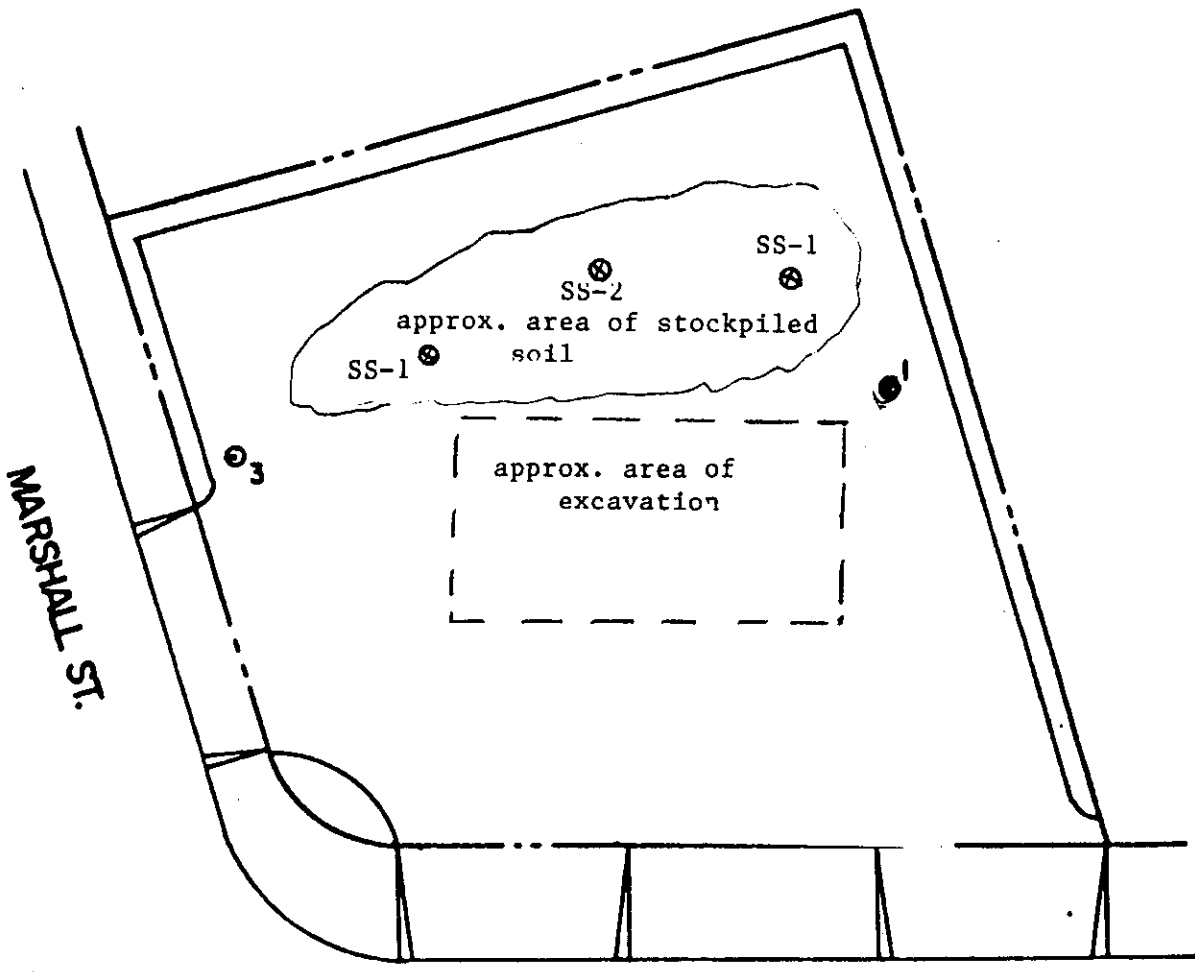
Sample ID	Sample/Container Type	Analyze/ Hold	Analyze For:	Method - Detection Limit	Notes/Remarks
<u>SS1</u>	<u>X S/BT</u>	<u>A</u>	<u>gas/PTXG</u>		<u>24 hr. rush</u>
<u>SS2</u>	<u>S/BT</u>	<u>A</u>	<u>" "</u>		
<u>SS3</u>	<u>S/BT</u>	<u>A</u>	<u>" "</u>		

S = Soil W = Water O = Other  
 G = Glass BT = Brass Tube P = Plastic V = Vial Q = Other

Chain of Custody

1. Sampled by: [Signature]  
 2. Courier: Danale Dukeraki  
4/12/89 1330  
Pace Labs  
 3. Received by Lab: C. Sontag  
 Date: 4/12/89 Time: 5pm  
 4. Received in Office: Date: \_\_\_\_\_

- Collate all samples for single analysis.
- Collate and analyze two top samples and if clean, do not analyze other sample.
- Call ASE for instructions.
- See attached protocol.



LEGEND

- ⊙ MONITORING WELL
- ◆ SOIL BORING

⊗ soil sample location

0 FEET 30

GREGORY P. BURG  
Senior Engineer

B. S. Civil Engineering, South Dakota School of Mines and Technology, 1980  
M. S. Structural Engineering, South Dakota Sch. of Mines and Technology, 1981  
California State Professional Civil Engineer #36208

Eight Years Experience in environmental, civil and structural engineering and construction projects world-wide. Major emphasis is in environmental investigation and cleanup, underground storage tank removal and replacement, excavation and shoring, and structural analysis and design.

Fields of Experience include construction supervision of direct hire and subcontract labor for a variety of tank removal and installation, contaminated soil investigation, excavation, drilling and concrete installation and finishing projects. Engineering experience includes structural analysis and design of refinery and mining structures, seismic analysis of structures, logistics coordination and tank installation design. Related activities include preparation of engineering drawings, as-built drawings, data sheets, material requisitions, specifications, reports, cost estimates, material take-offs and construction bid packages. Also familiar with computer hardware and software plus surveying techniques.

Present Assignment: Senior Engineer with responsibility for all phases of a four site tank removal and installation project for Bay Area Rapid Transit District.

Aqua Science Engineers Work History: Major responsibilities have included engineering design, project management, scheduling and construction supervision for installation of underground storage tanks and monitoring facilities. Planned and executed a number of major contaminated soil excavation and offhaul programs. Participated in several contaminated site investigations, including soil and groundwater sampling and geotechnical drilling. Supervised construction and operation of several on-site soil treatment facilities. Responsible engineer for maintenance of computer facilities for ASE. October 1987 to present.

Previous Work History: Lead Engineer for EQE in San Francisco. Major responsibilities included the seismic analysis of structures, both in the construction phase and existing buildings, to establish maximum probable losses associated with major earthquakes. Duties included site visits, seismic analysis, structural design and preparation of reports. September 1986 to September 1987.

Previous Work History: Civil Engineer in a design / construction support capacity for Bechtel in San Francisco. Major project experience includes analysis and design of modular (transportable) refinery processing buildings constructed in California and transported by barge to Arctic regions for installation. Duties included detailed design of main superstructure and pipe supports, preparation of material requisitions, supervision of logistics drawings and field construction support in the fabrication yard. In addition, served as Logistics Engineer in charge of the logistics plan for transport and final placement of the modules at the oil field gathering centers. Additional experience in mining applications includes computer modeling and analysis of the ore conveyor tower for a copper concentrator facility in Utah, the largest A-frame tower ever designed by Bechtel. July 1981 to August 1986.

May, 1989