



PACIFIC
ENVIRONMENTAL
GROUP, INC.

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11:38 am, Sep 15, 2010

Alameda County
Environmental Health

December 22, 1997

Thrifty Oil Company
13539 East Foster Road
Santa Fe Springs, California 90670

Subject: Baselining Subsurface Investigation Report
 Thrifty Service Station No. 063
 6125 Telegraph Road
 Oakland, California
 PACIFIC Project No. 331-008.1A

Dear Thrifty:

PACIFIC Environmental Group, Inc. (PACIFIC) was contracted by to conduct a baselining subsurface investigation at the subject site. The purpose of the investigation was to baseline environmentally related subsurface conditions at 6125 Telegraph Road, Oakland, CA. Results of the subsurface investigation are summarized in the paragraphs below and in the enclosed attachments.

Scope of Work

On June 9, 1997, PACIFIC visited the site to mark the proposed soil boring locations. Underground Service Alert (USA) was notified of the drilling. In addition to USA, a geophysical company (Norcal Geophysical Consultants, Inc.), visited the site to clear each proposed soil boring location on June 9, 1997. On June 9, 1997 PACIFIC visited the site to collect soil samples beneath each dispenser. No soil samples were collected since underdispenser containment was present. On June 11 and 12, 1997, PACIFIC conducted site investigation activities in the areas of the underground storage tanks and the dispenser islands, which included drilling nine 10-20 foot soil borings. See the attached figure for soil boring locations and drilling depths. All soil samples were submitted to Del Mar Analytical, a California Department of Health Services Certified Laboratory, located in Irvine, California. A total of 19 soil samples were relinquished to the laboratory. A total of 19 samples were analyzed for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes, and methyl *tert*-butyl ether. Results of soil sample analyses are summarized in Table 1. Copies of the certified analytical reports are attached. Standard operating procedures for soil sampling techniques are attached. No evidence of an existing waste-oil tank was found.

Baselining Subsurface Investigation Report

Thrifty Service Station No. 063

Oakland, California

PACIFIC Project No. 331-008.1A

Page 2

Site Geology

Thrifty Station No. 063 is located in the City of Oakland at an elevation of approximately 145 feet above mean sea level. Local topography slopes to the southwest at approximately 0.025 foot per foot (USGS, 1959). The site is situated in the flatland region between the San Francisco Bay and the Oakland Hills. This flatland region is comprised of Quaternary alluvium and estuarine bay and marsh deposits. The site is underlain by Holocene alluvium and marsh deposits comprised of silts and clay (DMG, 1979). Soil types encountered during site investigation activities consisted predominantly of clay and silty sand from the ground surface to the total depth of the investigation. Groundwater was encountered at approximately 16 feet bgs. Copies of soil boring logs are attached.

Closing Comments

The information contained in this report represents our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

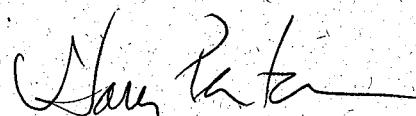
If you should have any questions, please call either of the undersigned at (626) 351-4814.

Sincerely,

PACIFIC ENVIRONMENTAL GROUP, INC.

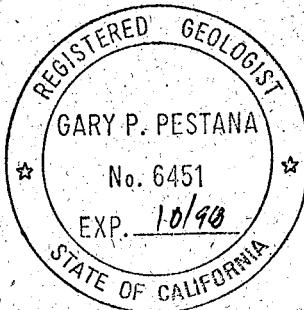


Chris Rohlfing
Sr. Staff Geologist



Gary Pestana, R.G.
Project Manager

cc: Kateri Luka



Attachments: Site Plan Showing Soil Boring Locations
Geophysical Site Maps
Table 1: Analytical Summary - Soil Samples
Soil Boring Logs
Laboratory Report and Chain-of-Custody Documentation
Equipment Decontamination Technique
Standard Operating Procedures for Soil Sampling Techniques

Baselining Subsurface Investigation Report

Thrifty Service Station No. 063

Oakland, California

PACIFIC Project No. 331-008.1A

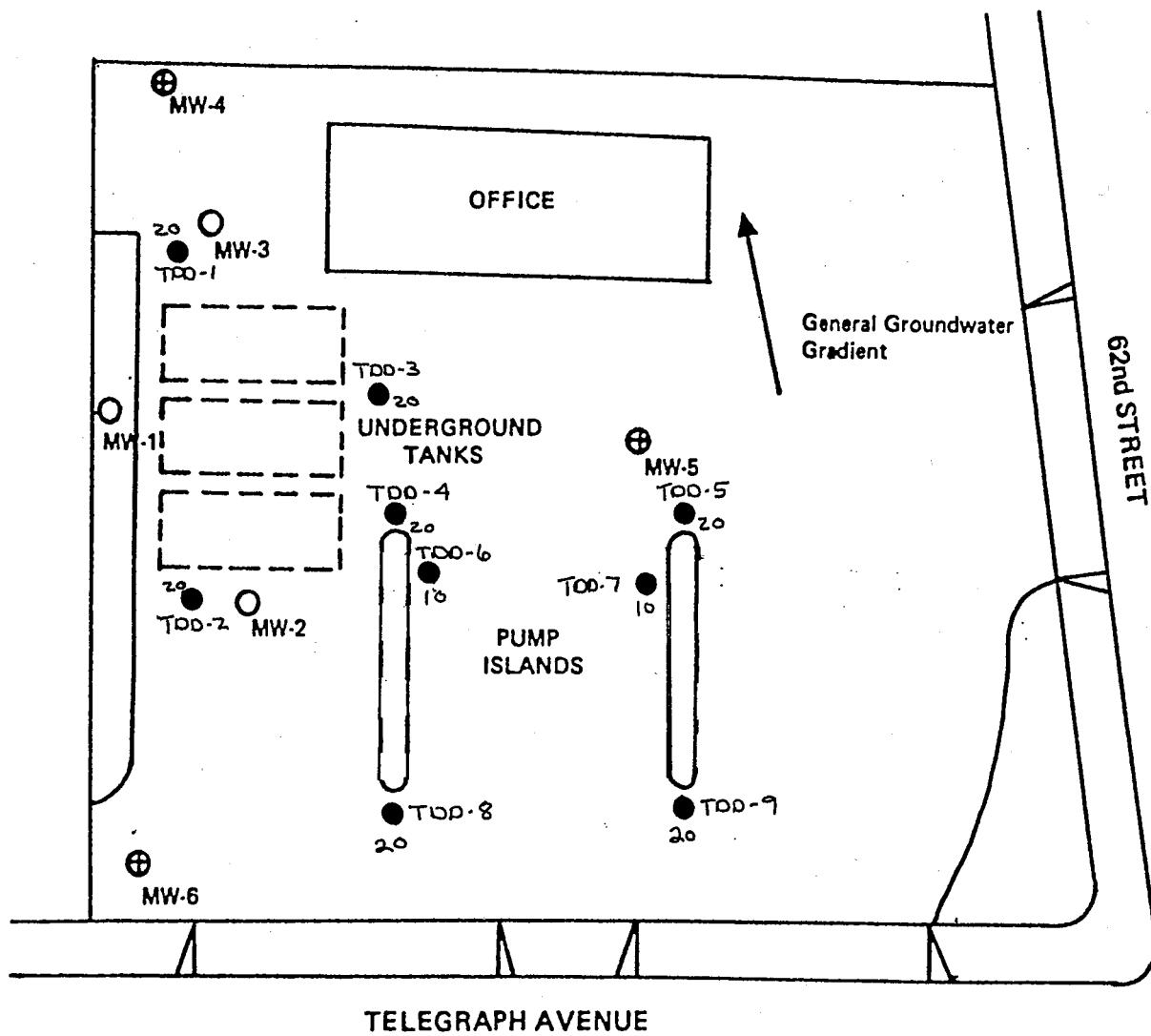
Page 3

References

Divisions of Mines and Geology (DMG), 1979, Geology of Northern California, Bulletin 190.

United States Geological Survey (USGS), 1969, Oakland West Quadrangle, 7.5 minute topographic, photorevised 1980.

9542/063



LEGEND

- MW-1 GT Monitoring Wells
- MW-4 WCC Monitoring Wells

0 25
Feet.

● Boring and Depth

Thifty No. 063

6125 Telegraph Road
Oakland, CA

PERSONNEL: TAH/IRLB

JOB: 97-1453.01

DATE: 6-9-97

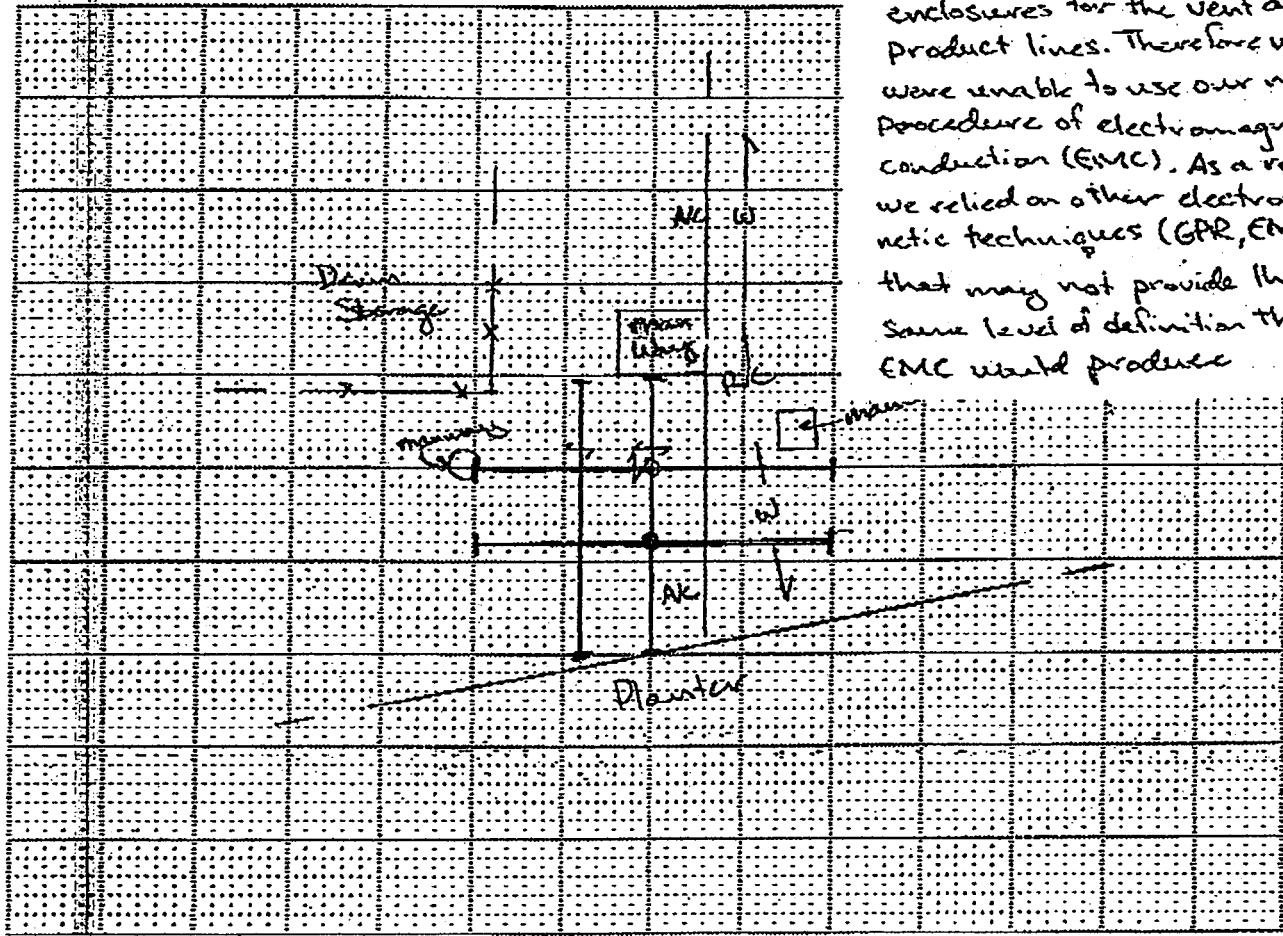
NORCAL

GEOPHYSICAL
CONSULTANTS
INC.

CLIENT: Pacific Environmental

LOCATION: 6125 Telegraph Ave / Oakland
Thrifty Gas

BORING: TDD1



Scale = 10'

EXPLANATION

- Original Boring Location
- Final Boring Location
- GPR Traverse
- Localized GPR Anomaly
- Utility Alignment

Utilities

- T (Telephone, Comm.)
- SS (Sanitary Sewer)
- E (Electric)
- SD (Storm Drain)
- NG (Natural Gas)
- W (Water)
- CA (Compressed Air)
- FS (Fire Suppression)
- STM (Steam)
- UU (Undifferentiated Utility)

Surface

- ✓ RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- C (Concrete)
- Soil
- Gravel
- other

NOTES

- | Equipment: | Procedure: | Surface Conditions: |
|---------------|--------------------|---------------------|
| ✓ GPR (Radar) | ✓ EMC (Conduction) | — Wet |
| ✓ RD 400 | ✓ EMI (Induction) | ✓ Dry |
| ✓ M Scope | ✓ Ambient | — other |
| — other | ✓ GPR | |

REMARKS

N
Did not detect Stormdrain alignment

Access to vent pipes was not provided

PERSONNEL TAH/RLB

JOB: 97-453.01

DATE: 6-9-97

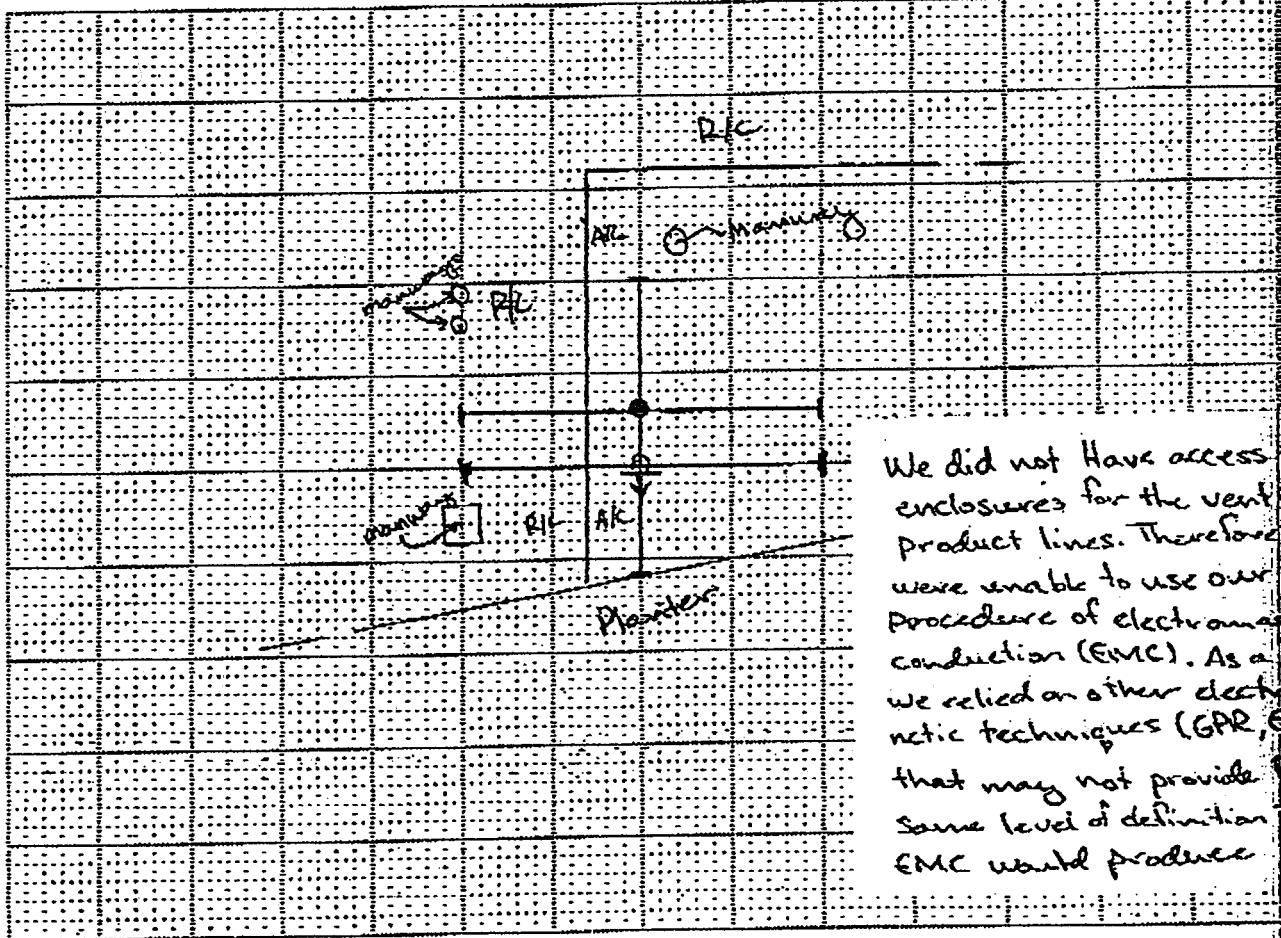
NORCAL

GEOPHYSICAL
CONSULTANTS
INC.

CLIENT: Pacific Environmental

LOCATION: 6125 Telegraph Ave / Oakland
Thirsty Gas

BORING: TDD2



Scale: 1" = 10'

EXPLANATION

- Original Boring Location
- Final Boring Location
- GPR Traverse
- ↔ Localized GPR Anomaly
- Utility Alignment

Utilities

- | | |
|------------------------|---------------------------------|
| - T (Telephone, Comm.) | - SS (Sanitary Sewer) |
| - E (Electric) | - SD (Storm Drain) |
| - NG (Natural Gas) | - W (Water) |
| - CA (Compressed Air) | - FS (Fire Suppression) |
| - STM (Steam) | - UU (Undifferentiated Utility) |

Surface

- | | |
|----------------------------|----------|
| ✓ RC (Reinforced Concrete) | - Soil |
| ✓ AC (Asphalt) | - Gravel |
| - C (Concrete) | - other |

NOTES

Equipment:	Procedure:	Surface Conditions:
✓ GPR (Radar)	✓ EMC (Conduction)	✓ Wet
✓ RD 400	✓ EMI (Induction)	✓ Dry
✓ M Scope	✓ Ambient	- other
- other	✓ GPR	

REMARKS

N → Disturbed Soils
 did not detect storm drain alignment
 Access to vent pipes was not provided

DETERMINATION OF GROUNDWATER

DATE: 4-27

NORCAL

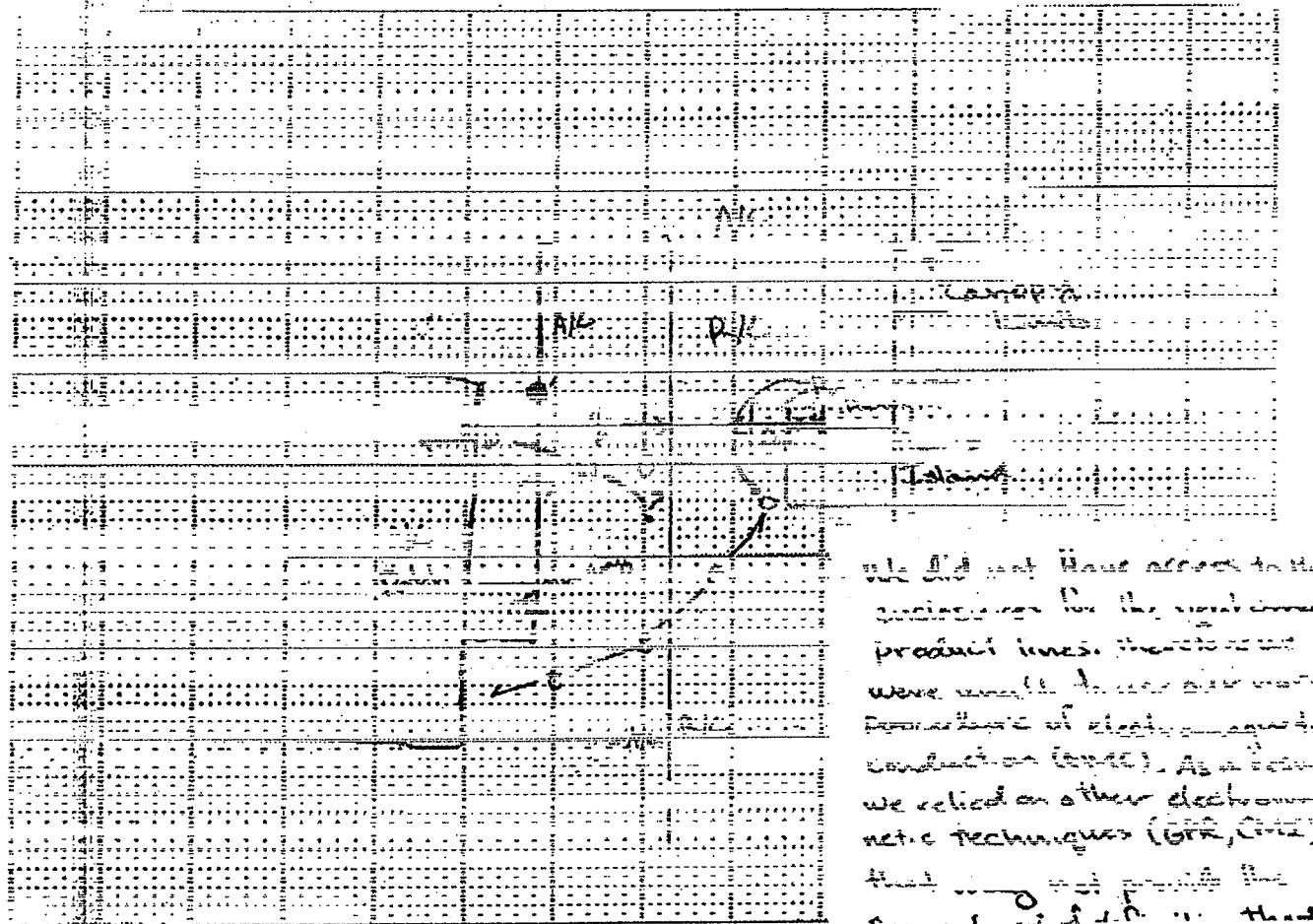
GEOPHYSICAL
CONSULTANTS
INC.

NORCAL

DETERMINATION OF GROUNDWATER

LOCATION: 6250 E. 100 S. 100' N. 100' E.

BORING: TDD5



EXPLANATION



Original Boring Location



First Radar Location



GPR Traverse



Localized GPR Anomaly



Utility Alignment

- T (Telephone, Comm.)

- SS (Sanitary Sewer)

- E (Electric)

- SD (Storm Drain)

- AC (Asphalt)

- W (Water)

- RC (Reinforced Concrete)

- FG (Fence Separation)

- C (Concrete)

- Unidentified Utility

- Soil

- Gravel

- other

EQUIPMENT

✓ GPR (Radar)

✓ RD 400

✓ M. Scope

- other

PROCEDURE

✓ EMC (Conduction)

✓ EMI (Induction)

✓ Ambient

✓ GPR

SURFACE CONDITIONS

✓ Wet

✓ Dry

other

NOTES

REMARKS

N → Disturbed
Soil

- Moved TDD5 10' N. & 10' E. to avoid GPR anomalies
- Did not detect standard alignment
- Access to vent pipes was not provided

PERFORMANCE TEST REPORT

SUBMISSION DATE

DATE 9-17

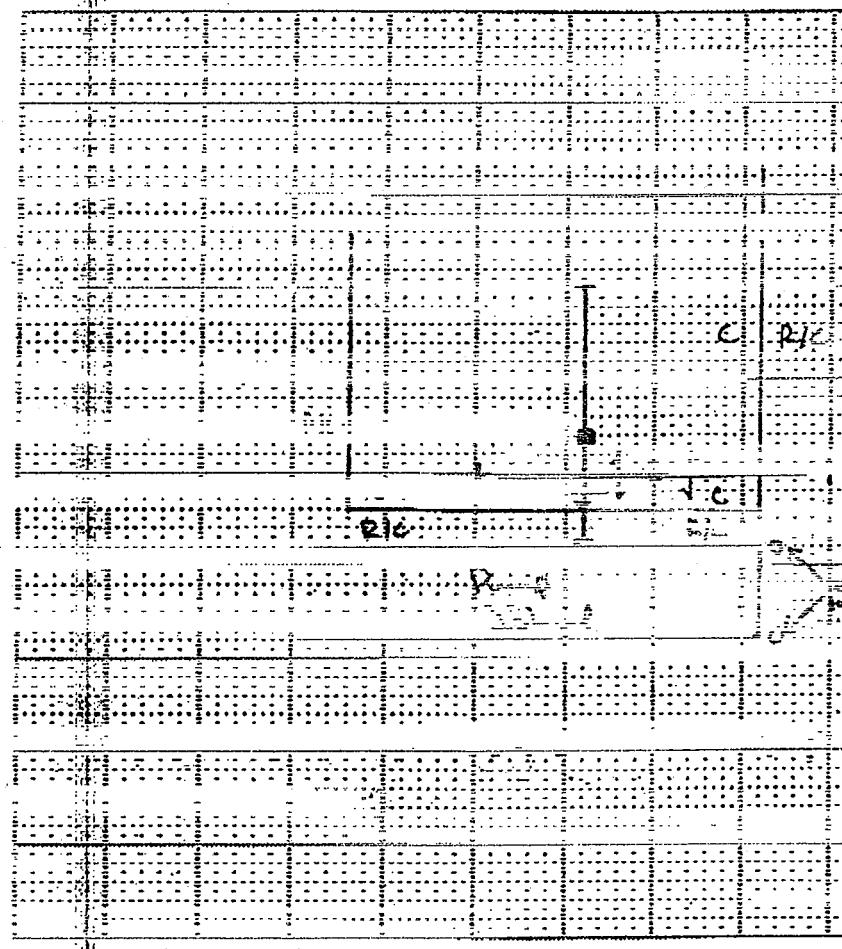
NORCAL GEOPHYSICAL CONSULTANTS INC.

CLIENT: Pacific Gas & Electric

LOCATION: 600 1/2 E. 10th Street, San Francisco

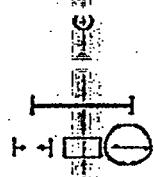
TODD

BORING: TODD



Scale 1:10

EXPLANATION



Original Boring Location

Boring Location

GPR Traverse

Localized GPR Anomaly

Utility Alignment

LEGENDS

T (Telephone, Comm.)	SS (Sanitary Sewer)
P (Power)	SD (Storm Drain)
NG (Natural Gas)	W (Water)
CA (Compressed Air)	FS (Fire Suppression)
STEAM (Steam)	UU (Undifferentiated Utility)

SURFACE

RC (Reinforced Concrete)	Soil
AC (Asphalt)	Gravel
C (Concrete)	other

We did not have access to the underground for the investigation of product lines. Therefore we were unable to use our standard procedure of electrical resistivity investigation (EMI). As a result, we relied on other direct subsurface magnetic techniques (GPR, EMI) that may not provide the same level of detail as the standard investigation.

NOTES

EQUIPMENT	PROCEDURE	Surface Conditions
✓ GPR (Radar)	EMC (Conductivity)	Dry
✓ RD 400	EMI (Induction)	other
✓ M Scope	Ambient	
- other	GPR	

REMARKS

- N - TODD is located beneath canopy
- Did not detect any disturbance soils
- Access to vent pipes was limited

DATE: 6-9-97

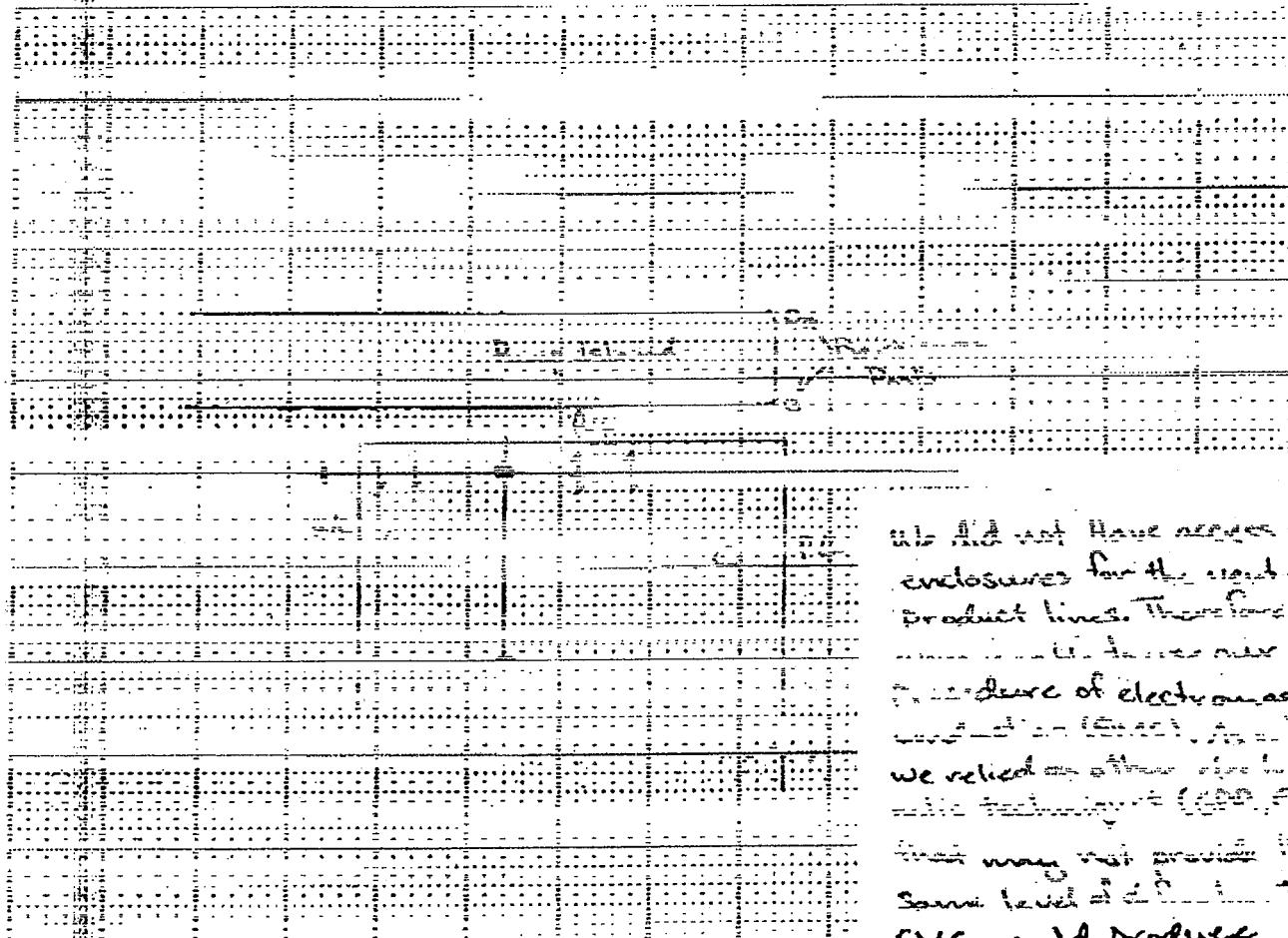
CLIENT: Pacific Environmental

LOCATION: 1000 - 1000 - 1000 - 1000

Thrifty Gas

TO: NORCAL
 FROM: NORCAL
 SUBJECT: GPR SURVEY

NORCAL



Scale = 10'

EXPLANATION

Boring Location

First Boring Location

GPR Traverse

Localized GPR Anomaly

Utility Anomaly

UTILITIES

- T (Telephone, Comm.)
- SS (Sanitary Sewer)
- E (Electric)
- SD (Storm Drain)
- NG (Natural Gas)
- W (Water)
- FG (Fire Suppression)
- CG (Groundwater)

- RC (Reinforced Concrete)
- Soil
- AC (Asphalt)
- Gravel
- C (Concrete)
- other

NOTES

- | Procedure | Surface Condition |
|---------------|-------------------|
| ✓ GPR (Radar) | EMC (Conduct.) |
| ✓ RD 400 | EMI (Induction) |
| ✓ M Scope | Ambient |
| - other | GPR |

REMARKS

- N - GPR is located beneath canopy.
- 1 - No - to - want signs were not present.
- 1 - Undisturbed alignment

PERSONNEL: TAH/RLB

JOB: 97-953.01

DATE: 6-9-97

NORCAL

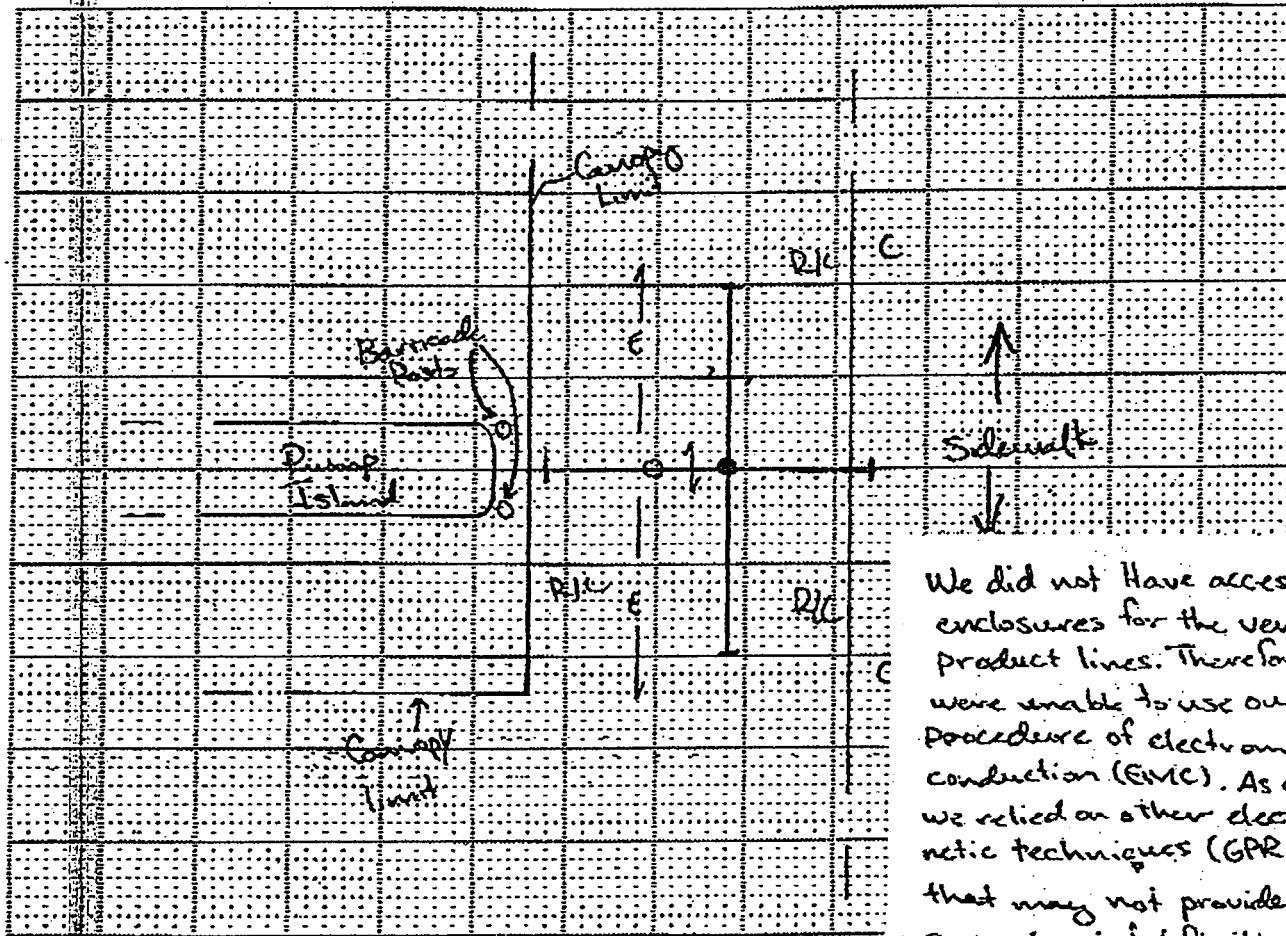
GEOPHYSICAL
CONSULTANTS
INC.

CLIENT: Pacific Environmental

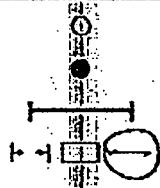
LOCATION: 6125 Telegraph AVE / Oakland

Thrifty Gas

BORING: TDD8



Scale = 10'

EXPLANATION

Original Boring Location

Final Boring Location

GPR Traverse

Localized GPR Anomaly

Utility Alignment

Utilities

- | | |
|------------------------|---------------------------------|
| ✓ T (Telephone, Comm.) | - SS (Sanitary Sewer) |
| ✓ E (Electric) | - SD (Storm Drain) |
| - NG (Natural Gas) | - W (Water) |
| - CA (Compressed Air) | - FS (Fire Suppression) |
| - STM (Steam) | - UU (Undifferentiated Utility) |

Surface

- | | |
|----------------------------|----------|
| ✓ RC (Reinforced Concrete) | - Soil |
| - AC (Asphalt) | - Gravel |
| - C (Concrete) | - other |

Equipment:	Procedure:	Surface Conditions:
✓ GPR (Radar)	✓ EMC (Conduction)	- Wet
✓ RD 400	✓ EMI (Induction)	✓ Dry
✓ M Scope	✓ Ambient	- other
- other	✓ GPR	

IN USE**REMARKS**

- N - Did not detect stormdrain alignment
 ✓ - R/C limits effectiveness of M-Scope
 - Access to vent pipes was not provided

PERSONNEL: TAW/RLB

JOB: 97453.01

DATE: 6-9-97

NORCAL

GEOPHYSICAL
CONSULTANTS
INC.

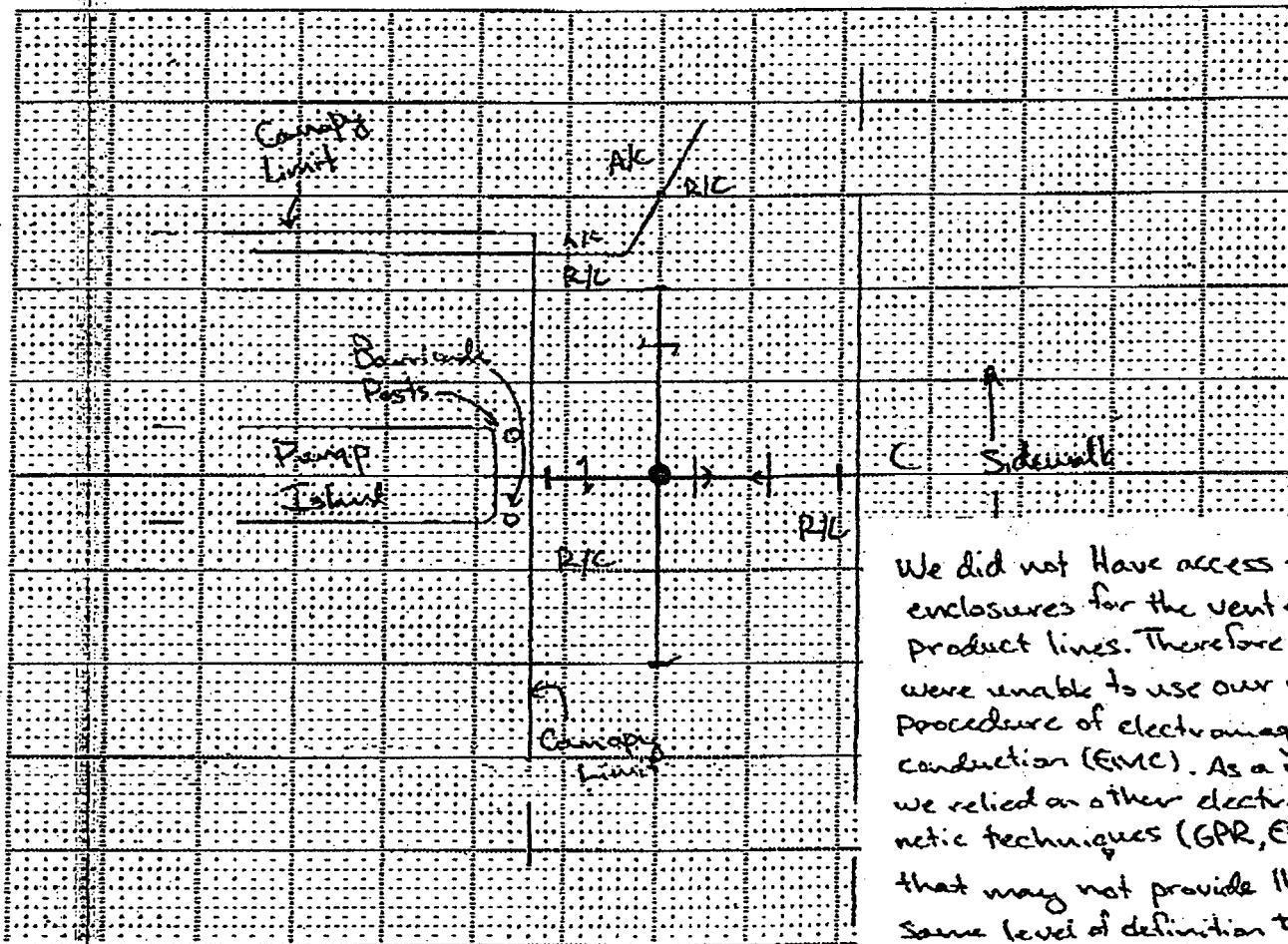
NORCAL

CLIENT: Pacific Environmental

LOCATION: 6125 Telegraph Ave/Oakland

Thrifty Gas

BORING: TDD9



Original Boring Location



Final Boring Location



GPR Traverse



Localized GPR Anomaly



Utility Alignment

Utilities

- T (Telephone, Comm.) - SS (Sanitary Sewer)
- E (Electric) - SD (Storm Drain)
- NG (Natural Gas)
- CA (Compressed Air)
- STM (Steam) - W (Water)
- - FS (Fire Suppression)
- - UU (Undifferentiated Utility)

Surface

- ✓ RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- ✓ C (Concrete)
- Soil
- Gravel
- other

CLIENT: Pacific Environmental

LOCATION: 6125 Telegraph Ave/Oakland

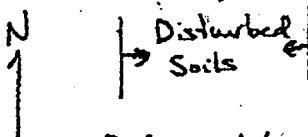
Thrifty Gas

BORING: TDD9

We did not have access to the enclosures for the vent and product lines. Therefore we were unable to use our normal procedure of electromagnetic conduction (EMC). As a result, we relied on other electromagnetic techniques (GPR, EMI) that may not provide the same level of definition that EMC would produce.

EXPLANATION**NOTES**

Equipment:	Procedure:	Surface Conditions:
✓ GPR (Radar)	✓ EMC (Conduction)	Wet
✓ RD 400	✓ EMI (Induction)	Dry
✓ M Scope	✓ Ambient	other
- other	✓ GPR	

REMARKS

Did not detect Storm drain alignment

R/C limits effectiveness of M-Scope
Access to vent pipes was not provided



2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
 16525 Sherman Way, Suite C-II, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
 2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

TABLE 1
 ANALYTICAL SUMMARY - SOIL SAMPLES
 Thrifty 063
 6125 TELEGRAPH RD
 OAKLAND, CALIFORNIA

Sample I.D.	Sampled	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		Concentration (mg/Kg)					
TDD1-15'	6/11/97	480	2.3	<0.75	7.0	42	1.7
TDD1-20'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD2-15'	6/11/97	37	0.19	0.13	0.61	1.9	<1.0
TDD2-20'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD3-15'	6/11/97	7.5	0.043	<0.015	0.044	<0.045	12
TDD3-20'	6/11/97	<1.0	0.11	<0.0050	0.0070	<0.015	3.2
TDD4-15'	6/11/97	36	0.41	<0.038	0.39	1.2	14
TDD4-20'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	1.4
TDD5-10'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD5-20'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD6-5'	6/11/97	550	2.5	5.5	9.7	50	6.0
TDD6-10'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD7-5'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	1.0
TDD7-10'	6/11/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD8-10'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD8-20'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD9-5'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD9-10'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0
TDD9-20'	6/12/97	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0

Revised: 8/7/97

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
 Project Manager

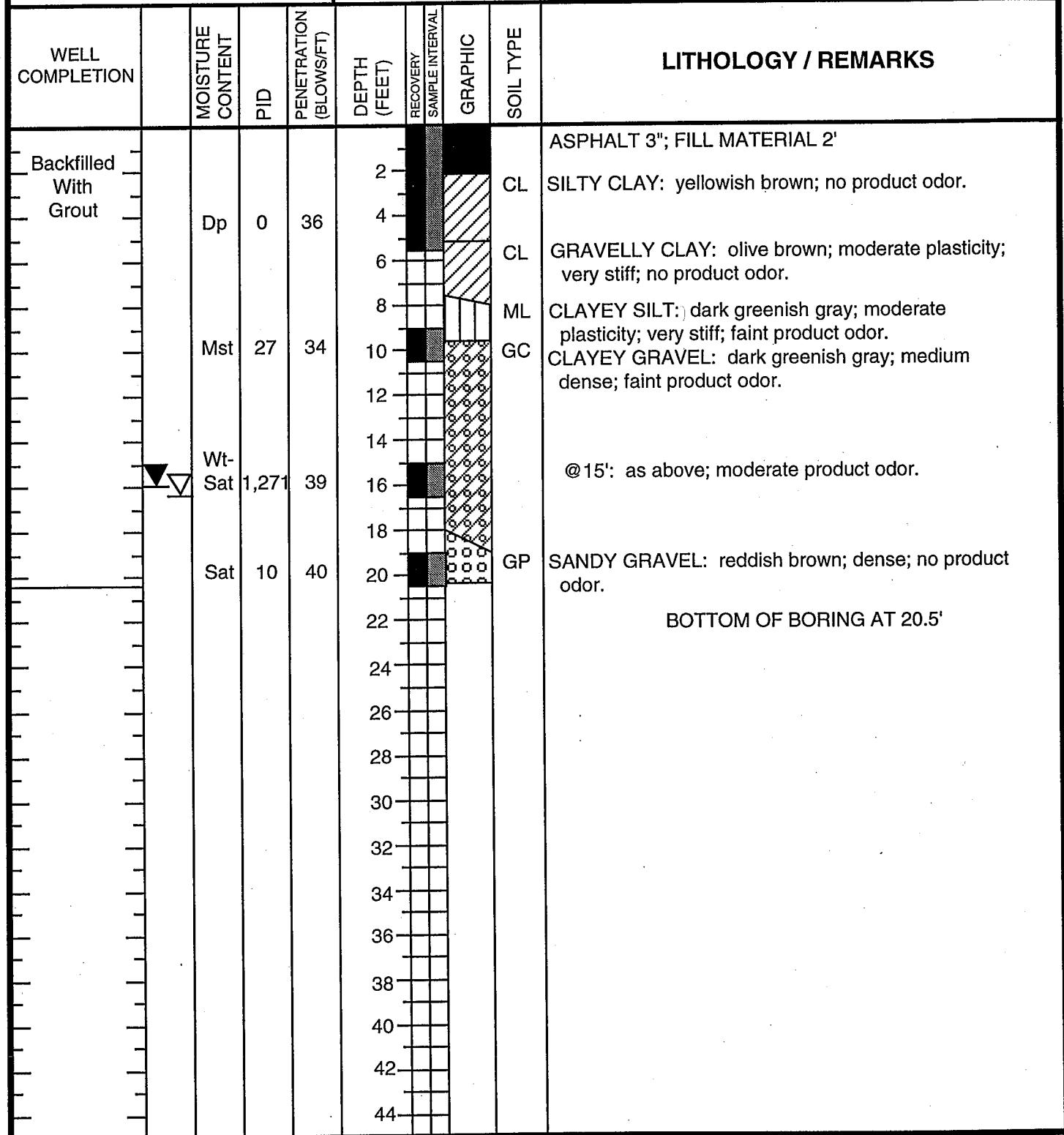
The data contained on the certified reports are reviewed for accuracy and completeness and should take precedence over this summary table. This report shall not be reproduced, except in full, without written permission.

GF03585.PEG



PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20.5'



LOCATION MAP

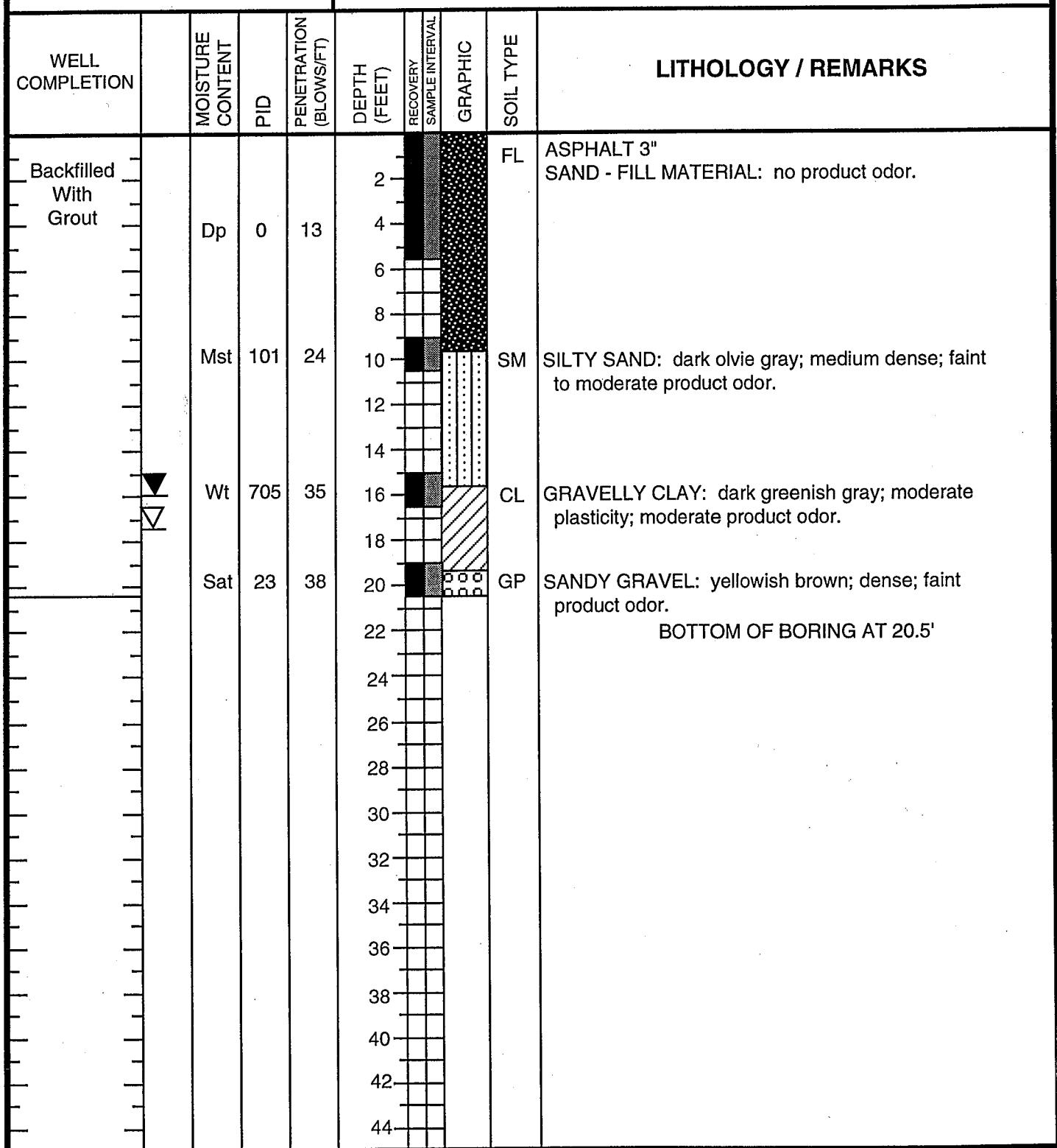
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TDD-2

PAGE 1 OF 1

PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20.5'



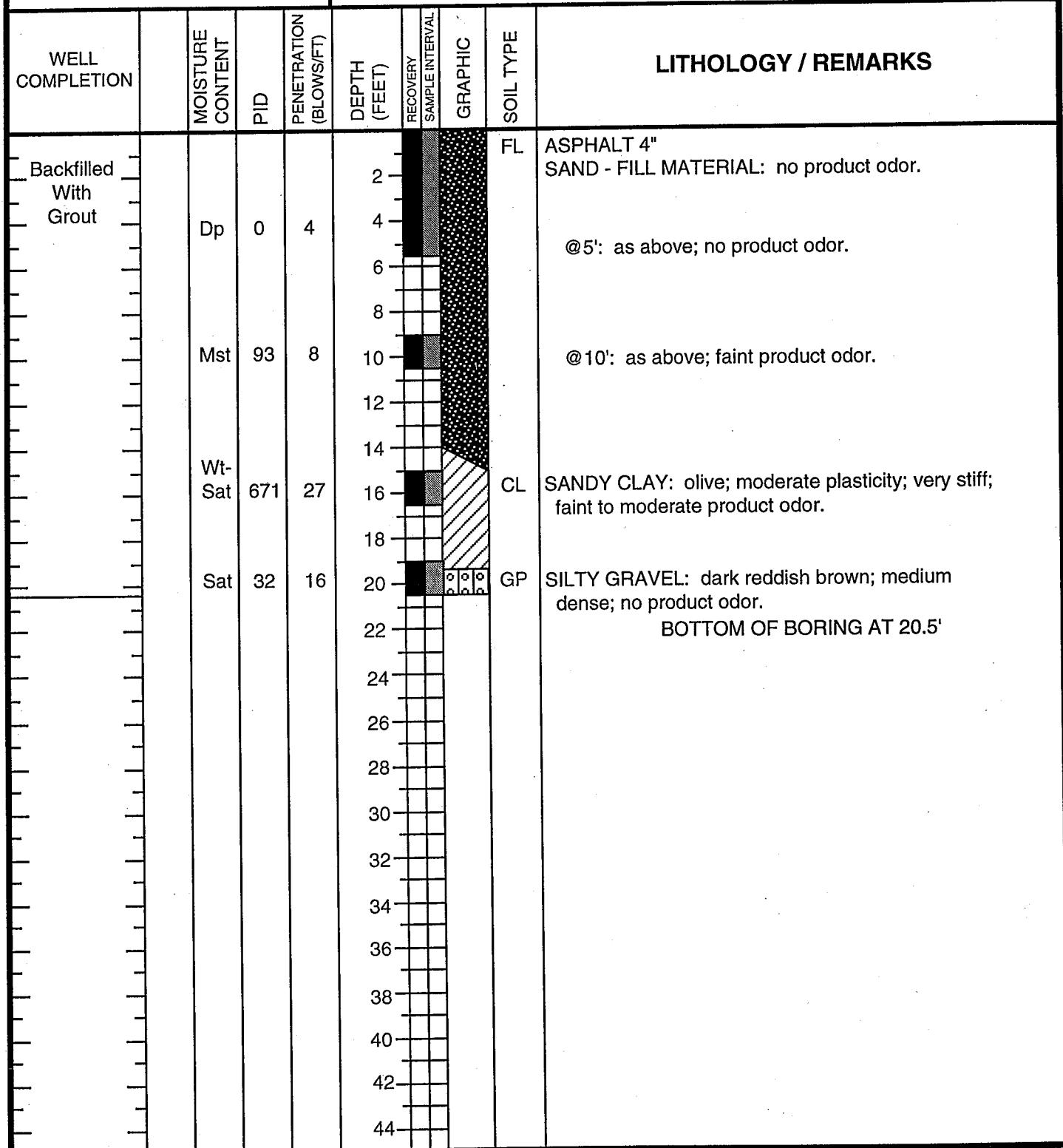
LOCATION MAP

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TDD-3
PAGE 1 OF 1

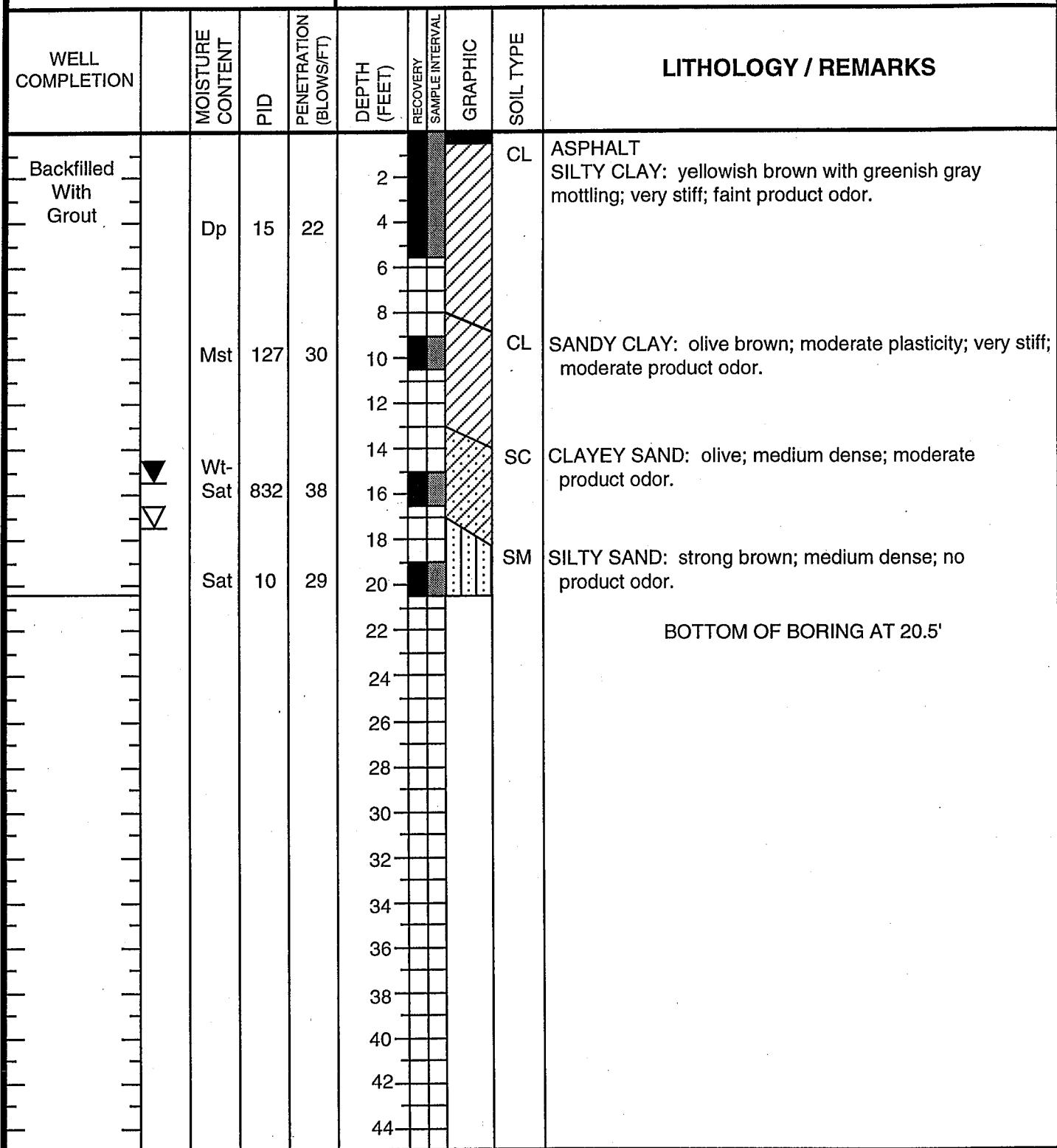
PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20.5'



PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20.5'



LOCATION MAP

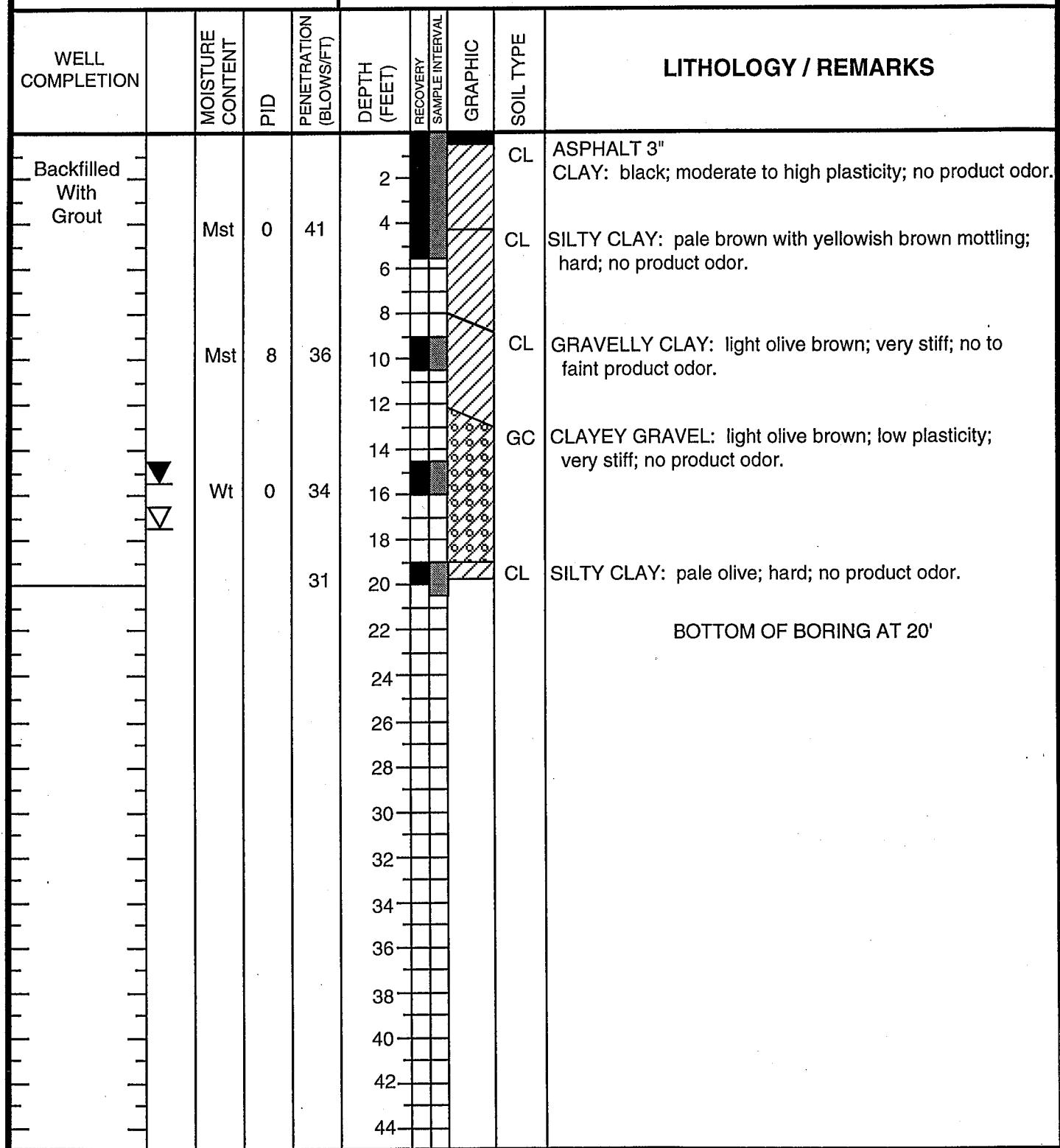
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TDD-5

PAGE 1 OF 1

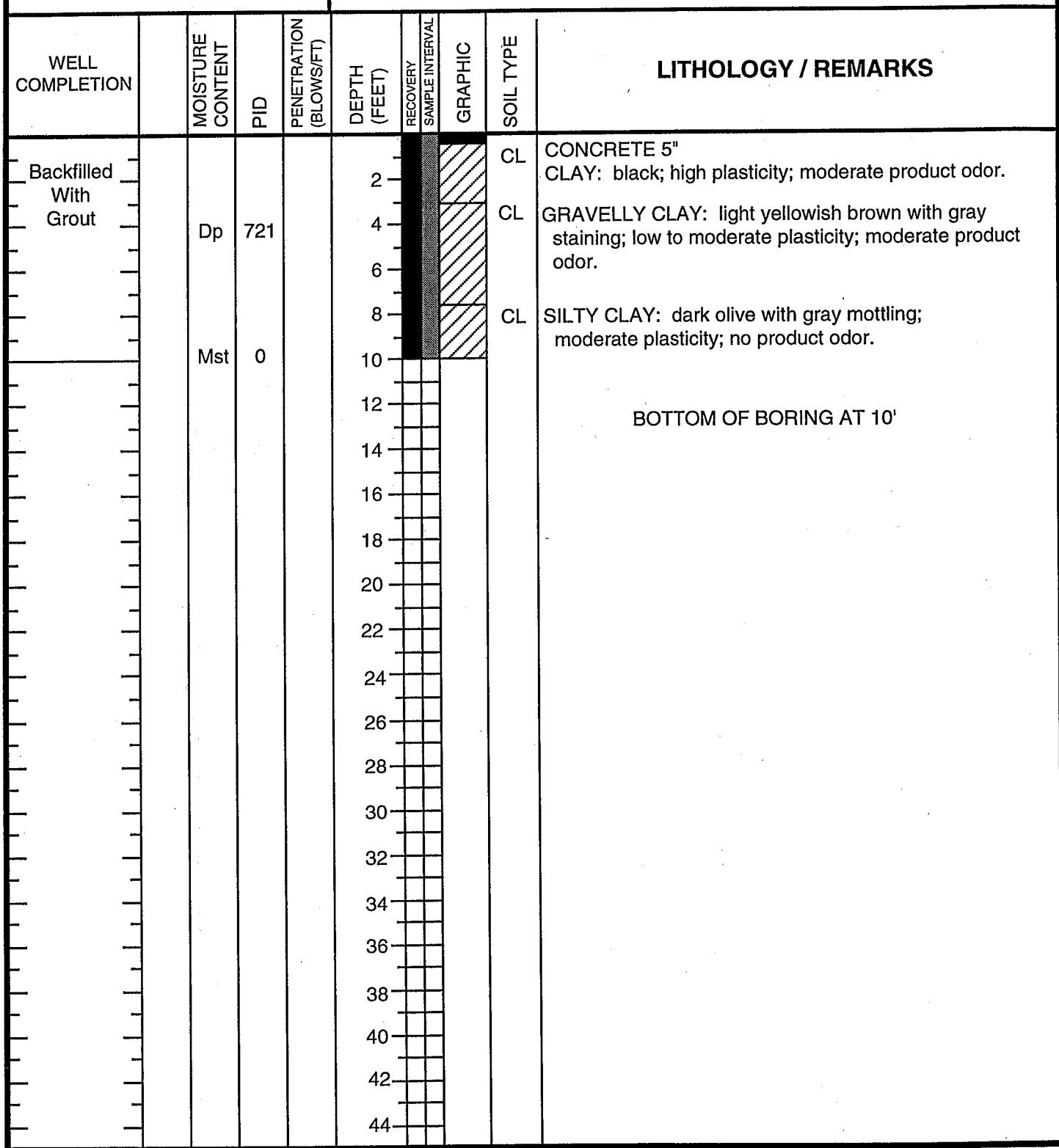
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 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20'



PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 10'



LOCATION MAP

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TDD-7
PAGE 1 OF 1

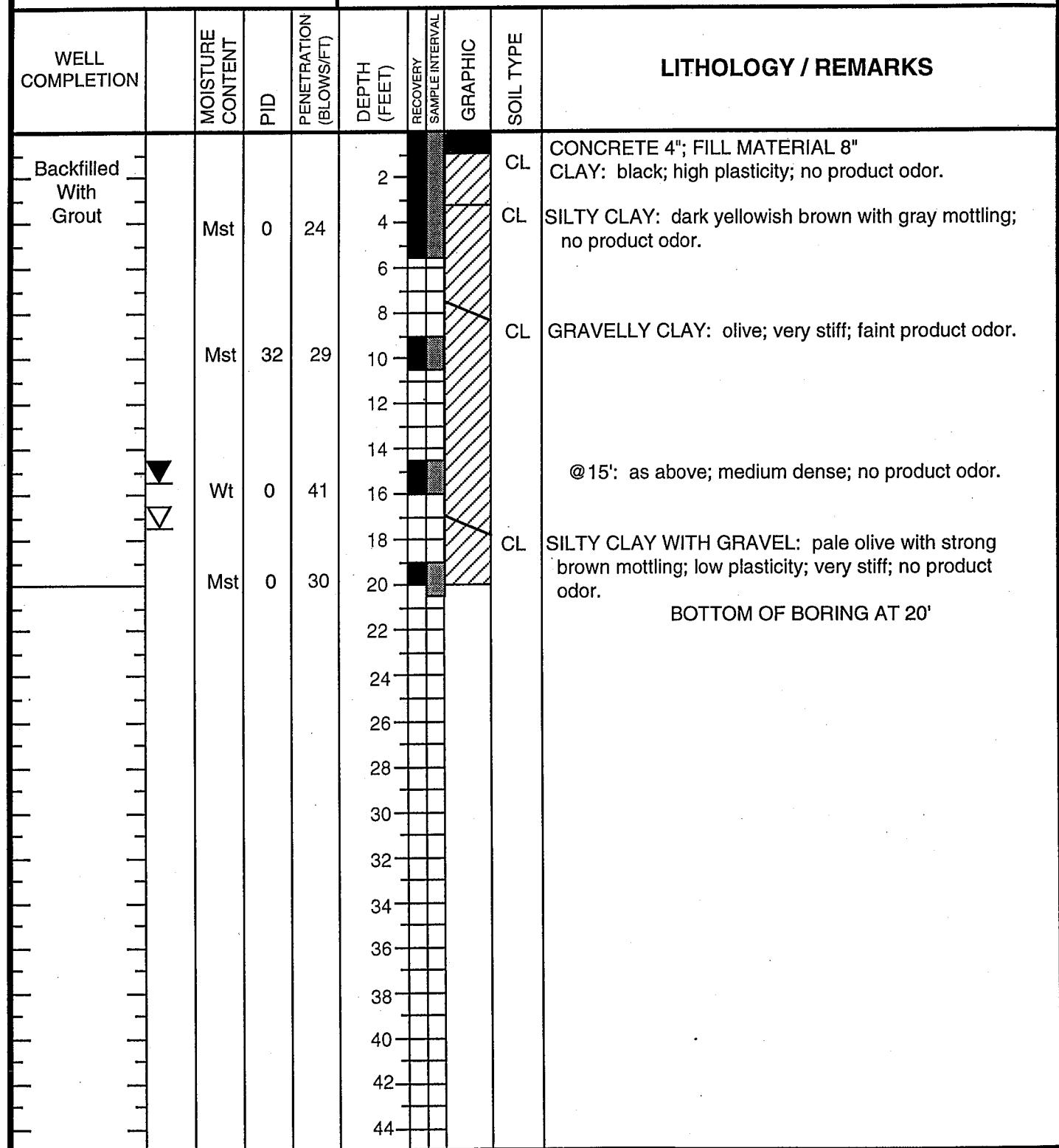
PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 3400 San Pablo Ave.
 HOLE DIAMETER: 8"
 HOLE DEPTH: 10'

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout	Mst	27						CL	CONCRETE 5"; FILL MATERIAL 1' CLAY: black; high plasticity; faint product odor.
	Mst	0						CL	SILTY CLAY: light olive brown with gray staining along rootholes; no product odor. @10': as above; no product odor. BOTTOM OF BORING AT 10'

PROJECT NO. 331-008.1A
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 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-11-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20'



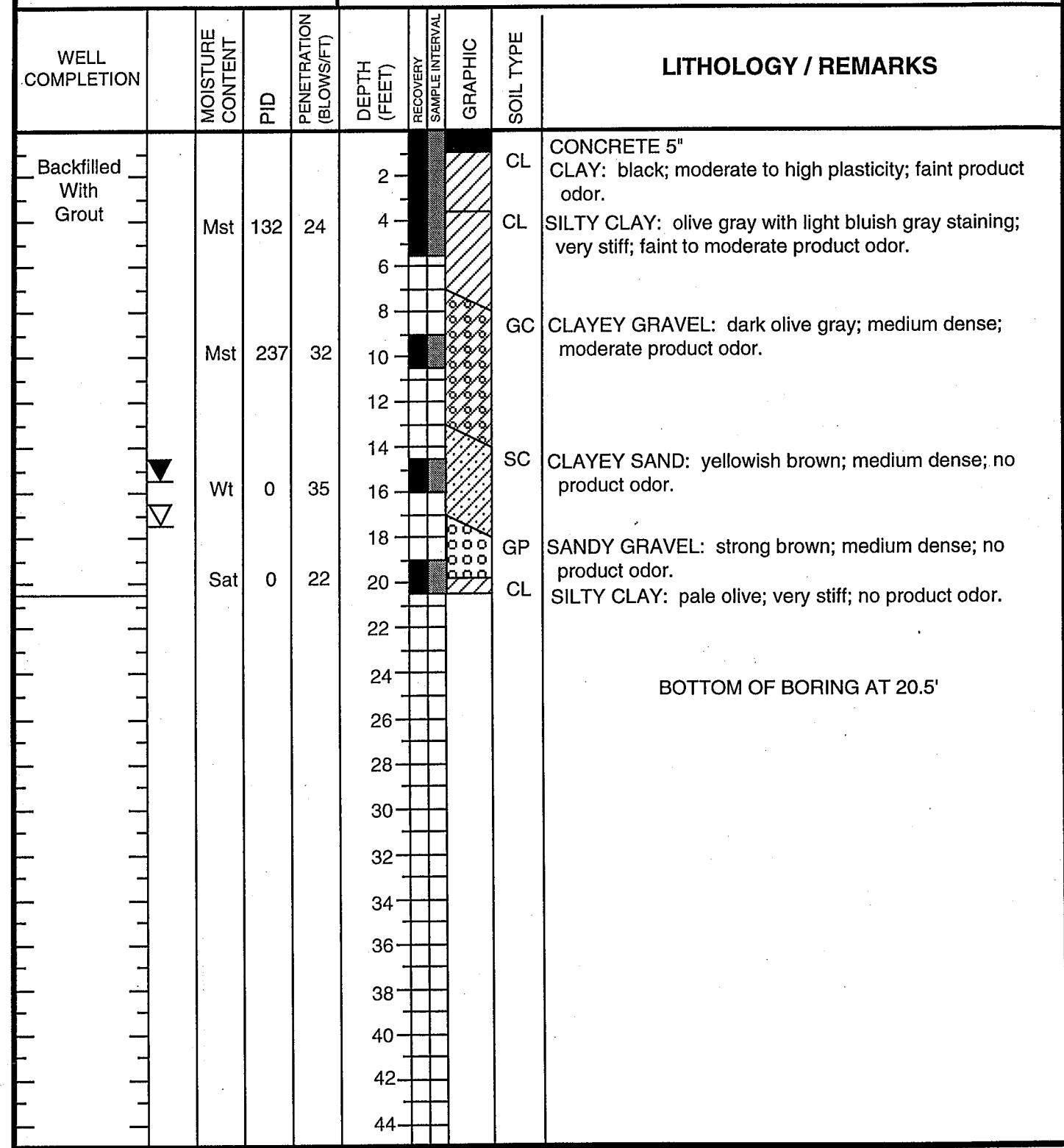
LOCATION MAP

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TDD-9
PAGE 1 OF 1

PROJECT NO. 331-008.1A
 LOGGED BY: D.A.
 DRILLER: MDE
 DRILLING METHOD: HSA
 SAMPLING METHOD: CALMOD

CLIENT: Thrifty Station No. 063
 DATE DRILLED: 6-12-97
 LOCATION: 6125 Telegraph Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 20.5'





2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: GF03585

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 24, 1997
Analyzed: Jun 24, 1997
Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF03585	TDD6-5'	550	2.5	5.5	9.7	50

Reporting Limit:	60	0.30	0.30	0.30	0.90
------------------	----	------	------	------	------

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 60.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager





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Pacific Environmental Group
 650 Sierra Madre Villa, Ste. 204
 Pasadena, CA 91107
 Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
 063, Oakland
 Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
 First Sample #: GF03586

Sampled: Jun 11, 1997
 Received: Jun 19, 1997
 Extracted: Jun 24, 1997
 Analyzed: Jun 24, 1997
 Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF03586	TDD6-10'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03587	TDD7-5'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03588	TDD7-10'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03595	TDD1-20'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03596	TDD2-15'	37	0.19	0.13	0.61	1.9
GF03597	TDD2-20'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03599	TDD3-20'	N.D.	0.11	N.D.	0.0070	N.D.
GF03601	TDD4-20'	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015
------------------	-----	--------	--------	--------	-------

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
 Nancy Johnson
 Project Manager



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GF03585.PEG <2 of 11>



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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: GF03594

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 24, 1997
Analyzed: Jun 24, 1997
Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF03594	TDD1-15'	480	2.3	N.D.	7.0	42

Reporting Limit:	150	0.75	0.75	0.75	2.3
------------------	-----	------	------	------	-----

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 150.

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Nancy Johnson
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GF03585.PEG <3 of 11>



Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: GF03598

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-II, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 25, 1997
Analyzed: Jun 25, 1997
Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF03598	TDD3-15'	7.5	0.043	N.D.	0.044	N.D.

Reporting Limit:	3.0	0.015	0.015	0.015	0.045
------------------	-----	-------	-------	-------	-------

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 3.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager





Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: GF03600

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 25, 1997
Analyzed: Jun 25, 1997
Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Total Xylenes
	Soil	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
GF03600	TDD4-15'	36	0.41	N.D.	0.39	1.2

Reporting Limit:	7.5	0.038	0.038	0.038	0.11
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Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit. Due to matrix effects and/or other factors, the sample required dilution. Reporting limits for this sample have been raised by a factor of 7.5.

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Nancy Johnson
Project Manager

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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/CA DHS Mod. 8015/8020
First Sample #: GF03589

Sampled: Jun 12, 1997
Received: Jun 19, 1997
Extracted: Jun 25-27, 1997
Analyzed: Jun 25-27, 1997
Reported: Jun 30, 1997

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
GF03589	TDD8-10'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03590	TDD8-20'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03591	TDD9-5'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03592	TDD9-10'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03593	TDD9-20'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03602	TDD5-10'	N.D.	N.D.	N.D.	N.D.	N.D.
GF03603	TDD5-20'	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015
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Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Nancy Johnson
Project Manager

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Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/8020
First Sample #: GF03585

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 24-25, 1997
Analyzed: Jun 24-25, 1997
Reported: Jun 30, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description Soil	Sample Result mg/Kg (ppm)
GF03585	TDD6-5'	6.0
GF03586	TDD6-10'	N.D.
GF03587	TDD7-5'	1.0
GF03588	TDD7-10'	N.D.
GF03594	TDD1-15'	1.7
GF03595	TDD1-20'	N.D.
GF03596	TDD2-15'	N.D.
GF03597	TDD2-20'	N.D.
GF03598	TDD3-15'	12
GF03599	TDD3-20'	3.2

Reporting Limit:	1.0
------------------	-----

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Nancy Johnson
Project Manager



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GF03585.PEG <7 of 11>



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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/8020
First Sample #: GF03600

Sampled: Jun 11, 1997
Received: Jun 19, 1997
Extracted: Jun 24-25, 1997
Analyzed: Jun 24-25, 1997
Reported: Jun 30, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description	Sample Result mg/Kg (ppm)
GF03600	TDD4-15'	14
GF03601	TDD4-20'	1.4

Reporting Limit: 1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Nancy Johnson
Project Manager



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GF03585.PEG <8 of 11>



Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

Client Project ID: Thrifty Work Auth. #9542-97-01
063, Oakland
Analysis Method: EPA 5030/8020
First Sample #: GF03589

2852 Alton Ave., Irvine, CA 92606 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Sampled: Jun 12, 1997
Received: Jun 19, 1997
Extracted: Jun 25-27, 1997
Analyzed: Jun 25-27, 1997
Reported: Jun 30, 1997

MTBE (EPA 8020 MODIFIED)

Laboratory Number	Sample Description	Sample Result mg/Kg (ppm)
GF03589	TDD8-10'	N.D.
GF03590	TDD8-20'	N.D.
GF03591	TDD9-5'	N.D.
GF03592	TDD9-10'	N.D.
GF03593	TDD9-20'	N.D.
GF03602	TDD5-10'	N.D.
GF03603	TDD5-20'	N.D.

Reporting Limit:	1.0
------------------	-----

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager

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GF03585.PEG <9 of 11>





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Pasadena, CA 91107
Attention: Gary Pestana

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16525 Sherman Way, Suite C-II, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Method Blank

Extracted: Jun 24-27, 1997
Analyzed: Jun 24-27, 1997
Reported: Jun 30, 1997
Matrix: Soil

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Description	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
Method Blank	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limit:	1.0	0.0050	0.0050	0.0050	0.015
------------------	-----	--------	--------	--------	-------

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C12.

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson
Project Manager



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GF03585.PEG <10 of 11>



Pacific Environmental Group
650 Sierra Madre Villa, Ste. 204
Pasadena, CA 91107
Attention: Gary Pestana

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1014 E. Cooley Dr, Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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2465 W. 12th St., Suite I, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

Method Blank

Extracted: Jun 24-27, 1997
Analyzed: Jun 24-27, 1997
Reported: Jun 30, 1997
Matrix: Soil

MTBE (EPA 8020 MODIFIED)

Laboratory Description	Sample Result mg/Kg (ppm)
Method Blank	N.D.

Reporting Limit: 1.0

MTBE = Methyl tert-Butyl Ether

Analytes reported as N.D. were not present at or above the reporting limit.

DEL MAR ANALYTICAL (ELAP #1197)

Nancy Johnson

Nancy Johnson
Project Manager

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GF03585.PEG <11 of 11>





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2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1338

MS/MSD DATA REPORT

EPA Method 8015/8020

Matrix: Soil

Date: 06/24/97
Sample #: GF03599
Batch #: GF24191S

<u>Analyte</u>	<u>R1</u>	<u>Sp</u>	<u>MS</u>	<u>MSD</u>	<u>PR1</u>	<u>PR2</u>	<u>RPD</u>	<u>Mean PR</u>	<u>Acceptance Limits</u>	
	ppm	ppm	ppm	ppm	%	%	%	%	<u>RPD</u>	<u>Mean PR</u>
TPH	0.37	1.1	1.2	1.2	79	75	4.0	77	*	≤30 80 - 122
Benzene	0.11	0.10	0.22	0.19	103	76	14	*	90	≤10 85 - 116
Toluene	0.00065	0.10	0.086	0.089	86	88	2.9	87		≤10 84 - 115
Ethylbenzene	0.0070	0.10	0.091	0.095	85	88	3.5	86		≤10 85 - 116
Xylenes	0.0090	0.30	0.26	0.28	85	89	4.6	87		≤12 85 - 116

* Refer to LCS for batch validation.

Definition of Terms

- R1..... Result of Sample Analysis
Sp..... Spike Concentration added to sample
MS..... Matrix Spike Result
MSD..... Matrix Spike Duplicate Result
PR1..... Percent Recovery of MS; $((MS-R1)/SP) \times 100$
PR2..... Percent Recovery of MSD; $((MSD-R1)/SP) \times 100$
RPD..... Relative Percent Difference; $((MS-MSD)/(MS+MSD)/2) \times 100$
Mean PR..... Mean Percent Recovery
Acceptance Limits Determined by in-house Control Charts





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16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
2465 W. 12th St., Suite 1, Tempe, AZ 85281 (602) 968-8272 FAX (602) 968-1358

LCS DATA REPORT

EPA Method 8015/8020

Matrix: Soil

Date: 06/24/97
Sample #: BLANK
Batch #: GF24191S

<u>Analyte</u>	<u>Spike Conc.</u>	<u>Result</u>	<u>% Recovery</u>	<u>ACP</u>
TPH	1.1	1.1	97	85 - 115 %
Benzene	0.10	0.10	100	85 - 115 %
Toluene	0.10	0.099	99	85 - 115 %
Ethylbenzene	0.10	0.10	101	85 - 115 %
Xylenes	0.30	0.31	102	85 - 115 %

Definition of Terms

- LCS Laboratory Control Sample
Spike Conc Result of Sample Analysis
Result Result of Laboratory Control Sample Analysis
%Recovery Percent Recovery of LCS; ((Result - Spike Conc.) / Spike Conc.) X 100
ACP Acceptance Limits for Percent Recovery
TPH Total Petroleum Hydrocarbons

Del Mar Analytical



THRIFTY Oil Company 10,000 Lakewood Blvd, Downey CA
Chain of Custody

PROJECT No. 331-008.1A

Pacific Environmental Group, Inc.

2025 Gateway Place #440, San Jose CA 95110.

Phone 408 441 7790 Fax 408 441 7539

Facility No. Thrifty Stn # 63

Facility Address: 6125 Telegraph Road, Oakland

Billing Reference Number:

CLIENT engineer:

PACIFIC Point of Contact: Mary Pestana Sampler: Doug Andrews

Laboratory Name: All Man Analytical

Comments:

Sample I.D.	Cont. No.	Container	Sample Preserv.	Matrix	W=water	G=grab	S=soll.	D=disc.	A=air	C=comp.	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Dislvd. Metals	Total	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)
TDD1-15'	1	2"X6" Brass	NP	S	D	6-11-97														
TDD1-20'																				
TDD2-15'																				
TDD2-20'																				
TDD3-15'																				
TDD3-20'																				
TDD4-15'																				
TDD4-20'																				
TDD5-10'																				
TDD5-20'	✓	✓	✓	✓	✓	6-12-97														

Condition of Sample:

Temperature Received:

Mail original Analytical Report to:

Pacific Environmental Group

Turnaround Time:

Priority Rush (1 day)

Rush (2 days)

Expedited (5 days)

Standard (10 days)

As Contracted

Relinquished by: *Doug Andrew* Date: 6-18-97 Time: 10:00am

Received by: *Krissey Hesomas*

Date: 6/18/97 Time: 11:00

2025 Gateway Place #440
San Jose, CA 95110

Relinquished by: *Krissey Hesomas* Date: 6/18/97 Time: 16:20

Received by: *From Krissey Hesomas FedEx*

Date: 6-19-97 Time: 11:30

620 Contra Costa Blvd, #209
Pleasant Hill, CA 94523

Relinquished by: *Marcia Remus* Date: 6-19-97 Time: 12:50

Received by: *Marcia Remus*

Date: 6/19/97 Time: 12:50

25725 Jeronimo Rd. #576C
Mission Viejo, CA 92622

Relinquished by: *Marcia Remus* Date: *6/19/97* Time: *12:50pm*

Received by: laboratory *(Signature)*

Date: 6/19/97 Time: 12:50pm

4020 148th Ave NE #B
Redmond, WA 98052

(IN TACT/UNIC)

PROJECT No. 331-008-1A

Chain of Custody

Pacific Environmental Group, Inc.

2025 Gateway Place #440, San Jose CA 95110.

Phone 408 441 7790 Fax 408 441 7539

Condition of Sample:

Temperature Received

Mail original Analytical Report to:
Pacific Environmental Group

Turnaround Time:

Relinquished by

Date	Time
6-18-87	10:00am

Received by
Krisel Kosnik

Date _____ Time _____

2025 Gateway Place #440
San Jose, CA 95110

Priority Rush (1 day)

Relinquished by

Date 10/18/97 Time 11:21

~~Received by~~ *John F. Murphy* ~~From~~

Date Time

620 Contra Costa Blvd. #20
Pleasant Hill, CA 94523

Rush (2 days)

Relinquished by

Date 6-19-97 Time 11:15

~~Received by~~

Date _____ Time _____

25725 Jeronimo Rd. #576
Mission Viejo, CA 92622

Standard (10 days)

~~RElinquished by~~

~~01/01/12~~ Date: Time

Received by laboratory

Date 11/10/20 Time 12:50

4020 148th Ave NE #B
Redmond, WA 98052

As Contracted

Equipment Decontamination Technique

1.0 Scope and Application

The following section describes field techniques that were performed by Pacific Environmental Group, Inc. PACIFIC personnel in the performance of the tasks involved with this project.

2.0 Equipment and Supplies

<u>Quantity</u>	<u>Description</u>
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3	Wash tubs or buckets (5-gallon minimum capacity).
1 gallon	Citranox® detergent.
As needed	Tap water.
As needed	Distilled water.
1 pair	Neoprene gloves.
3	Scrub brushes.

3.0 Procedures

- 3.1 Rinse each bucket (or wash tub) with tap water and then distilled water, prior to use.
- 3.2 Place one brush in each bucket and fill accordingly:
 - a) Bucket #1: Tap water/Citranox® detergent (mix as specified by the manufacturer).
 - b) Bucket #2: Tap water.
 - c) Bucket #3: Distilled water.
- 3.3 Place the piece of equipment to be washed into bucket #1 and scrub with brush. Rinse the equipment with the contents (tap water and detergent) of bucket #1.
- 3.4 Remove the piece of equipment from bucket #1 and place in bucket #2 and scrub with brush. Rinse the equipment with the contents (tap water) of bucket #2.
- 3.5 Remove piece of equipment from bucket #2 and place in bucket #3 and scrub with the brush. Rinse the equipment with the contents (distilled water) of bucket #3.

- 3.6 Remove the piece of equipment from bucket #3 and place on clean or prepared surface to air dry.
- 3.7 Repeat Steps 3.3 through 3.6 for each piece of field equipment which requires decontamination.

Note: Periodically replace the contents of each bucket. The frequency at which the contents should be replaced is dependent on site-specific conditions.

Standard Operating Procedure

for

Soil Sampling Techniques

The following section describes field techniques that were performed by Pacific Environmental Group, Inc. PACIFIC personnel in the performance of the tasks involved with this project.

1.0 Locating Underground Utilities

Prior to the commencement of work on site, PACIFIC researched the location of all underground utilities with the assistance of Underground Service Alert (USA - Southern California toll free phone number 1-800-422-4133). USA contacted the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Prior to drilling, each boring was advanced manually using a hand auger and post-hole digger to a minimum depth of 5 feet to avoid contact with underground fuel distribution and/or vent lines and other unmarked utilities.

2.0 Soil Boring and Soil Sampling Protocol

Drilling and soil sampling was performed under the direction of a PACIFIC engineer or geologist. The soil borings were drilled using a truck-mounted drill rig equipped with hollow stem augers.

All down-hole drilling equipment was steam-cleaned prior to use and between each boring to reduce the chances of cross contamination. The split-barrel sampler was washed in soap solution and double rinsed with tap and purified between each sampling event to reduce the potential for cross contamination between samples. Hand augers were washed in soap solution and double rinsed with tap and purified water between each sampling event to reduce the potential for cross contamination between samples during hand auger sampling.

Soil sampling was performed in accordance with American Society for Testing and Materials Method 1586-84. Using this procedure a California-type sampler is driven into the soil every 5 vertical feet by a 140-pound weight falling 30 inches. Three 6-inch brass liners were placed in the sampler for sample collection. The number of blow counts required to advance the sampler 18 inches was recorded at each sample interval onto soil boring logs. The lower-most intact soil sample was retained for chemical analysis. The ends of the brass sleeve were covered with Teflon™ sheets and plastic caps. Each sample was then labeled, identified on the chain of custody, and stored in a chilled cooler for transport to the laboratory. Remaining soil in the sampler was used for later screening with a flame-ionization detector (FID). The soil was field screened by placing the soil in

resealable plastic bags and allowed to reach ambient temperature. Headspace vapors in the bags were field screened with a calibrated FID. The highest observed stable reading was then recorded onto the boring log. Another portion of the soil sample was used for lithologic classification and description by the United Soil Classification System.

2.1 Soil Sample Analytical Selection Procedure

At a minimum, two soil samples from each soil boring were submitted to the laboratory for chemical analysis including the deepest soil sample per boring and the sample with the highest field screening result. Any additional soil samples analyzed were selected based on field observations and were analyzed at the discretion of the regional project manager.

2.2 Soil Sample Analyses

Select soil samples were analyzed by the following Environmental Protection Agency (EPA) test methods:

<u>Sample Location</u> <u>Method(s)</u>	<u>Analytical Parameters</u>	<u>EPA</u>
Near waste-oil, diesel, septic tanks, or clarifiers	Total recoverable petroleum hydrocarbons (TRPH) Volatile Organic Compounds Title 22 Metals	418.1 624/8240 6010/7196/ 7471
	Total Petroleum Hydrocarbons as diesel (TPHd) Benzene, toluene, ethylbenzene, xylenes (BTEX)	Mod. 8015 8020
All other soil samples	Total petroleum hydrocarbons as gasoline (TPHg) Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MtBE)	Mod. 8015 8020 and 8020A