



**CONESTOGA-ROVERS
& ASSOCIATES**

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
www.CRAworld.com

TRANSMITTAL

DATE: January 15, 2013 REFERENCE NO.: 240734
PROJECT NAME: 285 Hegenberger Road, Oakland

TO: Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RECEIVED

By Alameda County Environmental Health at 2:24 pm, Jan 22, 2013

Please find enclosed: Draft Final
 Originals Other
 Prints

Sent via: Mail Same Day Courier
 Overnight Courier Other GeoTracker and Alameda County FTP

QUANTITY	DESCRIPTION
1	Well Destruction Work Plan

As Requested For Review and Comment
 For Your Use _____

COMMENTS:

If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
Sam Anabi, CAR Enterprises (lessee), 1040 North Benson Avenue, Upland, CA 91786-2157
Larry Turner, CAR Enterprises (lessee) (electronic copy)
JT, Elizabeth G, WT, and Jeanette Watters Trust (fee title owners), Shell Oil, PO Box 4369,
Houston, Texas, 77210

Completed by: Peter Schaefer Signed: *Peter Schaefer*

Filing: Correspondence File



Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Denis L. Brown
Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Re: Shell-branded Service Station
285 Hegenberger Road
Oakland, California
SAP Code 135691
Incident No. 98995749
ACEH Case No. RO0000220

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

A handwritten signature in black ink, appearing to read "Denis L. Brown", is located below the "Sincerely," text.

Denis L. Brown
Senior Program Manager



WELL DESTRUCTION WORK PLAN

**SHELL-BRANDED SERVICE STATION
285 HEGENBERGER ROAD
OAKLAND, CALIFORNIA**

**SAP CODE 135691
INCIDENT NO. 98995749
AGENCY NO. RO0000220**

**JANUARY 15, 2013
REF. NO. 240734 (8)**

This report is printed on recycled paper.

**Prepared by:
Conestoga-Rovers
& Associates**

5900 Hollis Street, Suite A
Emeryville, California
U.S.A. 94608

Office: (510) 420-0700
Fax: (510) 420-9170

web: <http://www.CRAworld.com>

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
2.0 WORK TASKS	1
2.1 PERMITS.....	1
2.2 HEALTH AND SITE SAFETY PLAN (HASP)	1
2.3 UTILITY CLEARANCE.....	1
2.4 MONITORING WELL DESTRUCTION	1
2.5 REPORT PREPARATION	2
3.0 SCHEDULE.....	2

LIST OF FIGURES
(Following Text)

FIGURE 1 VICINITY MAP

FIGURE 2 SITE PLAN

LIST OF APPENDICES

APPENDIX A WELL LOGS

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell). The proposed well destructions are required for final case closure per Alameda County Environmental Health's (ACEH's) December 6, 2012 letter.

The subject site is a Shell-branded service station located on the northwest corner of Hegenberger Road and Leet Drive in a mixed commercial and industrial area of Oakland, California (Figure 1). The current site layout includes three underground storage tanks, two product dispenser islands, a station building, and a car wash (Figure 2).

2.0 WORK TASKS

2.1 PERMITS

CRA will obtain an appropriate permit from Alameda County Public Works Agency and an encroachment permit from the City of Oakland.

2.2 HEALTH AND SITE SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

2.3 UTILITY CLEARANCE

CRA will mark the well locations, and the locations will be cleared through Underground Service Alert and a private line locator prior to removing the well boxes.

2.4 MONITORING WELL DESTRUCTION

CRA proposes to properly destroy 11 monitoring wells (MW-1 through MW-4, MW-6, and MW-8 through MW-13), 7 vapor extraction wells (VEW-1 through VEW-7), and 3 air sparge wells (AS-1 through AS-3). The wells will be destroyed by backfilling with neat cement under pressure (pressure grouting). The well vaults will be removed, and the

surface pavement will be patched with concrete to match the surrounding grade. CRA includes the well logs in Appendix A. The proposed scope of work will be performed under the supervision of a professional geologist or engineer.

2.5 REPORT PREPARATION

Following completion of the well destructions, CRA will submit a brief report documenting the activities.

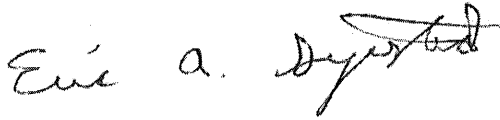
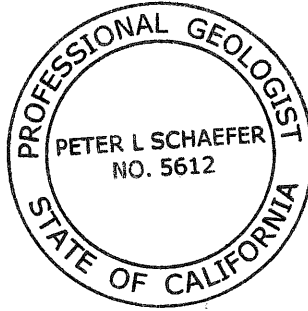
3.0 SCHEDULE

CRA will implement the well destructions upon receipt of the appropriate permits. Per ACEH's December 6, 2012 letter, we will provide a well destruction report to ACEH by March 8, 2013.

All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

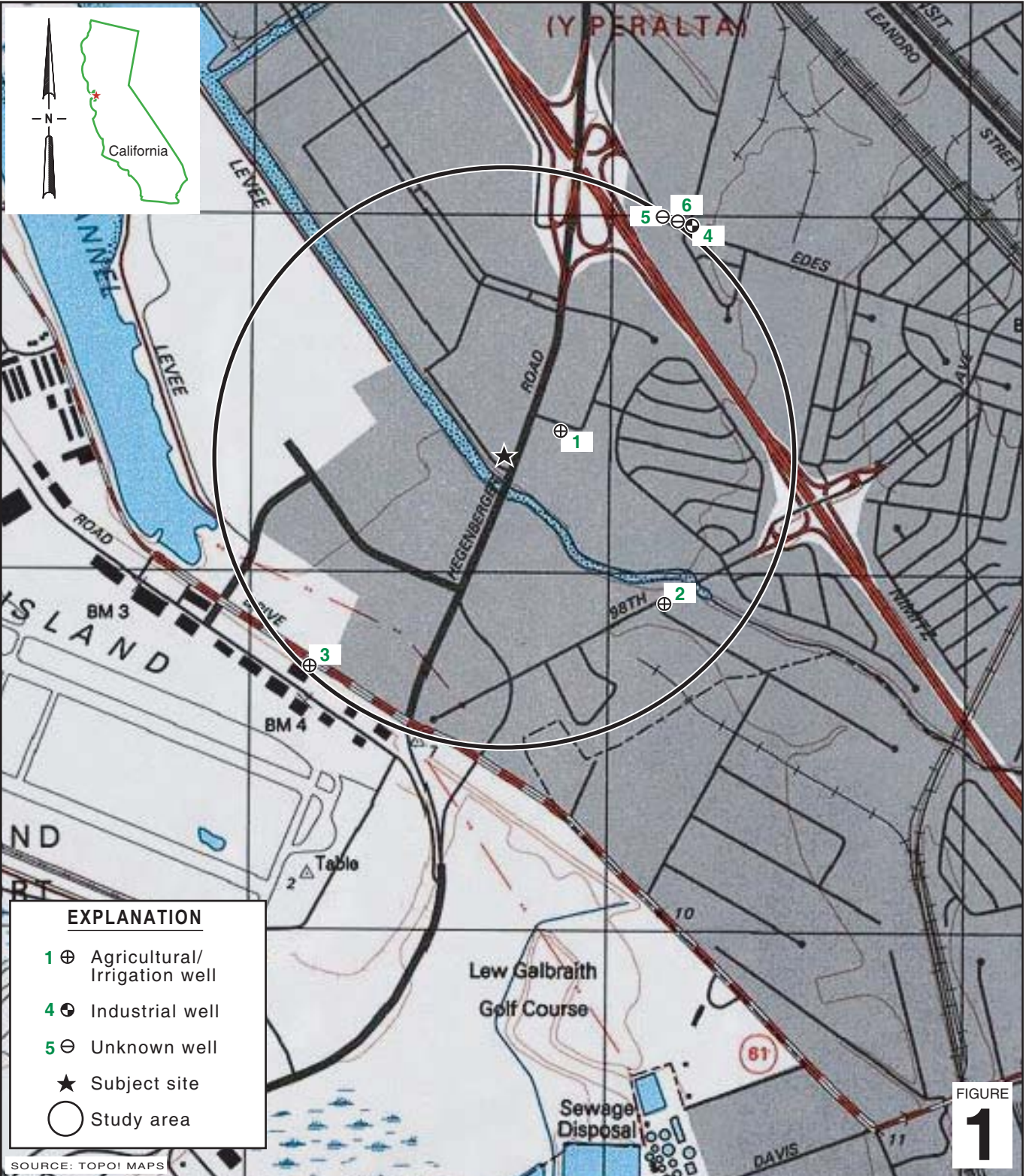


Peter Schaefer, CEG, CHG



Eric A. Syrstad, PG

FIGURES



I:\Shell\6-chars\2407--\240734-Oakland 285 Hegenberger\240734-FIGURES\240734 VICINITY.AI

EXPLANATION

- 1 ⊕ Agricultural/Irrigation well
- 4 ⊕ Industrial well
- 5 ⊖ Unknown well
- ★ Subject site
- Study area

FIGURE 1

0 1/8 1/4 1/2 1
SCALE : 1" = 1/4 MILE

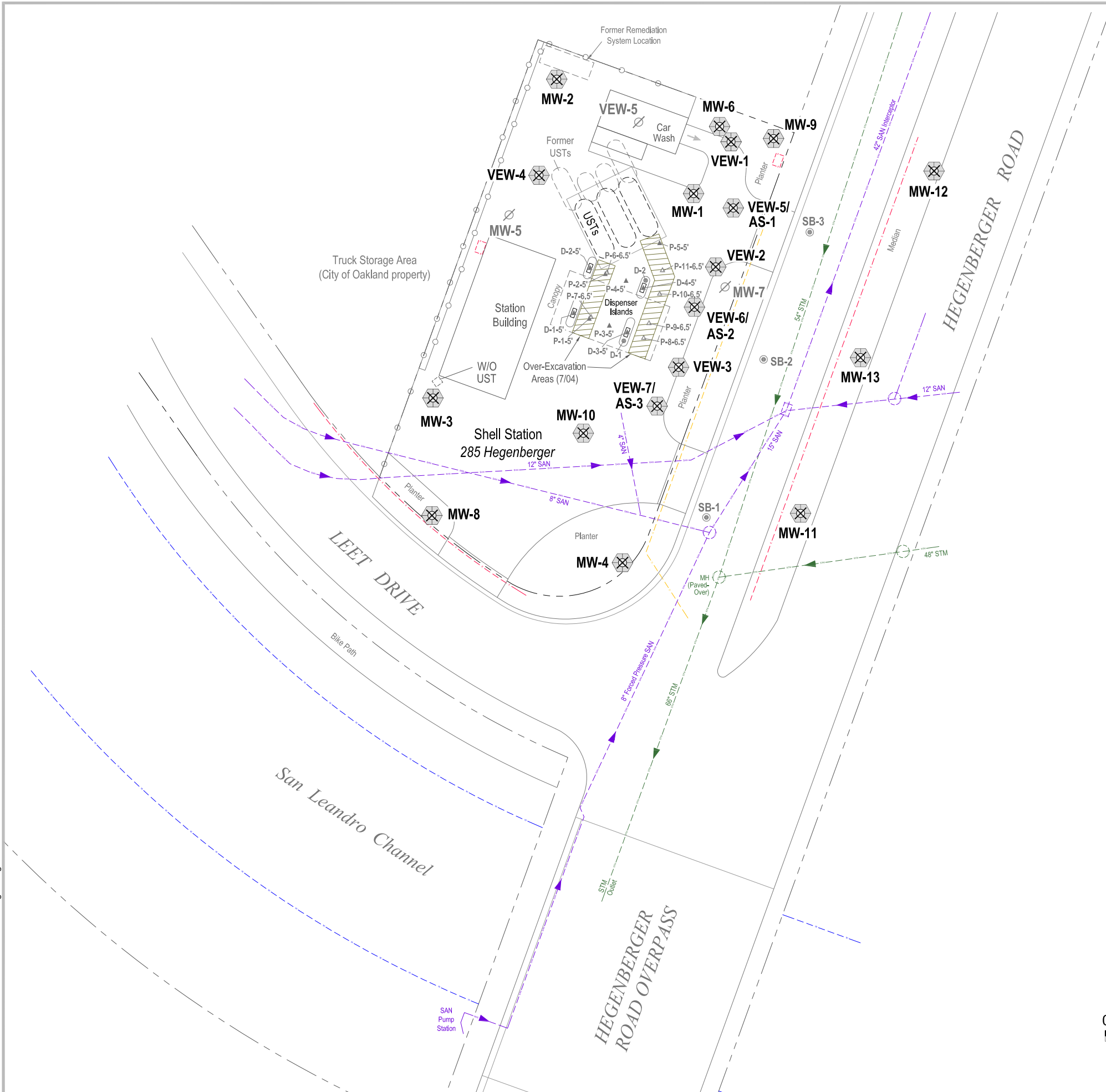
Shell-branded Service Station
285 Hegenberger Road
Oakland, California



CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

I:\Shell\6-chars\2407--\240734--Oakland 285 Hegenberger\240734-FIGURES\240734 SITE PLAN.DWG



EXPLANATION

- MW-1 Well location, proposed for destruction
- VEW-5 Abandoned well location
- SB-1 Soil boring location
- D-1 Soil sample location
- P-1-5' Soil sample location
- P-7-6.5' Over-excavation soil sample location
- Electrical line (E)
- Gas line (G)
- Storm drain line (STM)
- Sanitary sewer line (SAN)
- Manhole (MH)
- Utility vault

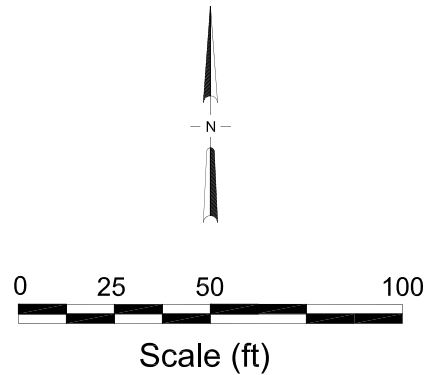


FIGURE 2

Site Plan



Shell-branded Service Station
 285 Hegenberger Road
 Oakland, California

APPENDIX A

WELL LOGS

Table 1. Existing Well Data, Shell-branded Service Station, Incident #98995749, 285 Hegenberger Road, Oakland, California

Name	Type/ Drilling Method	Date Installed	TOC ¹ (ft msl)	Total Boring Depth (fbg)	Soil Sample Interval (ft)	First Encountered GW Depth (fbg)	Elev (ft msl)	Screen Diam. (in)	Screen Depth (fbg) Top	Bottom	Comments
MW-1	Monitoring Well/HSA	14-Feb-89	9.37	16.5	5	6	3.37	4	5	10	
MW-2	Monitoring Well/HSA	15-Feb-89	10.07	16.5	5	6	4.07	4	5	10	
MW-3	Monitoring Well/HSA	14-Feb-89	10.58	16.5	5	6	4.58	4	5	10	
MW-4	Monitoring Well/HSA	28-Apr-89	9.83	14	5	7	2.83	4	5	10	
MW-6	Monitoring Well/HSA	28-Apr-89	9.14	12	5	5.5	3.64	4	5	10	
MW-8	Monitoring Well/HSA	28-Apr-89	-	12	5	9	-	4	5	10	
MW-9	Monitoring Well/HSA	13-Jul-89	10.04	10.5	5	6	4.04	4	5	10	
MW-10	Monitoring Well/HSA	16-Nov-89	9.78	13	5	6.5	3.28	4	5	10	
MW-11	Monitoring Well/HSA	8-Jun-93	10.06	15.5	5	8.5	1.56	4	4	14	
MW-12	Monitoring Well/HSA	8-Jun-93	9.09	15.5	5	8.5	0.59	4	5	15	
MW-13	Monitoring Well/HSA	10-Jun-93	9.62	15.5	5	8.5	1.12	4	5	15	
VEW-1	Vapor Ext. Well/HA	21-Nov-91	-	7	5	6	-	4	3.5	6.5	
VEW-2	Vapor Ext. Well/HSA	9-Jun-93	8.87	8.5	5	4.5	4.37	2	3.5	6.5	
VEW-2	Sparge Well/HSA	9-Jun-93	-	8.5	5	4.5	-	2	7.5	8.5	
VEW-3	Vapor Ext. Well/HSA	9-Jun-93	9.21	10	5	4.5	4.71	2	3.5	6.5	
VEW-3	Sparge Well/HSA	9-Jun-93	-	10	5	4.5	-	2	7.5	8.5	
VEW-4	Vapor Ext. Well/HSA	9-Jun-93	9.26	9.5	5	5	4.26	2	3.5	6.5	
VEW-4	Sparge Well/HSA	9-Jun-93	-	9.5	5	5	-	2	8	9	
VEW-5	Vapor Ext. Well/HSA	28-Jun-00	8.79	10	5	4	4.79	4	3	10	
AS-1	Sparge Well/HSA		-	15			-	2	13	15	
VEW-6	Vapor Ext. Well/HSA	28-Jun-00	9.22	10	5	4	5.22	4	3	10	
AS-2	Sparge Well/HSA		-	15			-	2	13	15	
VEW-7	Vapor Ext. Well/HSA	28-Jun-00	9.43	10	5	4	5.43	4	3	10	
AS-3	Sparge Well/HSA		-	15			-	2	13	15	

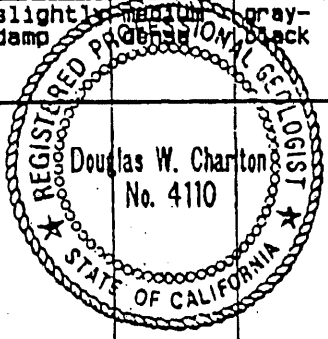
Abbreviations:

HSA = Hollow stem auger
 Ext. = Extraction
 HA = Hand auger
 TOC = Top of casing
 ft msl = Feet referenced to mean sea level
 fbg = Feet below grade
 ft = Feet
 in = Inches
 GW = Groundwater

LOG OF BORING NO. MW-1

DATE DRILLED: 2/14/89 ELEVATION: ML TAKEN: 2-14-89 EQUIPMENT: Hollow Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	TOTAL PETROLEUM HYDROCARBONS (mg/kg)	TESTS
			[Cross-hatched symbol]		hard		0-2" ASPHALT, 2"-12" BASE ROCK	[Cross-hatched well construction symbol]		
			[Horizontal lines symbol]	dry	firm	brown to black	SANDY SILT CLAYEY SAND and GRAVEL (F11)	[Horizontal lines well construction symbol]		
5	D	[Water level symbol]	[Dotted symbol]	wet	loose	gray-black	CLAYEY fine SAND (Bay Mud) Some gasoline odor	[Dotted well construction symbol]		
10	D		[Diagonal lines symbol]	moist	soft to medium	gray-black	CLAY (Bay Mud) No gasoline odor	[Diagonal lines well construction symbol]		
15	D		[Diagonal lines symbol]	slightly damp	medium	gray-black	SANDY CLAY Trace of gravel	[Diagonal lines well construction symbol]		
20							Bottom of Hole at 16.5 ft.			



SHELL OIL COMPANY
 258 Hegenberger Road
 Oakland, California

Project No.
 88-44-359-01



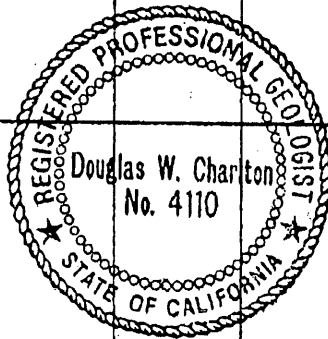
Converse Environmental Consultants California

Drawing No.
 A-3

LOG OF BORING NO. MW-2

DATE DRILLED: 2/15/89 ELEVATION: WL TAKEN: 2-15-89 EQUIPMENT: Hollow Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	TOTAL PETROLEUM HYDROCARBONS Mg/Kg	TESTS
			[Cross-hatched symbol]		hard		0-2" ASPHALT; 2-6" BASEROCK			
			[Vertical lines symbol]	dry	medium dense	brown	SILTY SAND and GRAVEL (F11)	SM/GM		
			[Diagonal lines symbol]	slightly damp	soft to medium	gray	SANDY CLAY (F11)	CL		
5	D	[Water level symbol]	[Dotted symbol]	wet	soft	dark gray	CLAYEY SAND (Bay Mud) Trace of gravel	SP/CL		
			[Diagonal lines symbol]				SANDY CLAY (Bay Mud)	CL		
10	D		[Diagonal lines symbol]	moist	soft, firmer with depth	gray	CLAY (Bay Mud)	CH		
15	D		[Diagonal lines symbol]				SANDY CLAY			
							Bottom of Hole at 16.5 ft.			
20										



SHELL OIL COMPANY
 258 Hegenberger Road
 Oakland, California

Project No.
 88-44-359-01


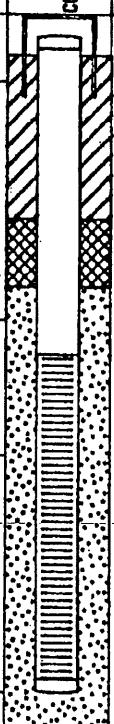
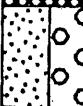


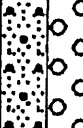
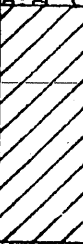
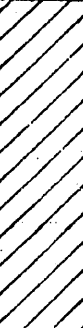
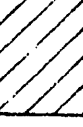




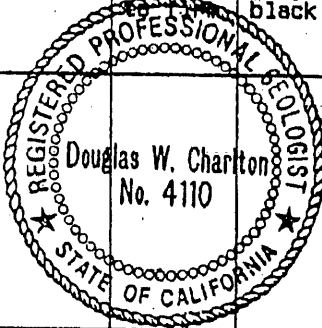
Converse Environmental Consultants California

Drawing No.
 A-4

LOG OF BORING NO. MW-3

DATE DRILLED: 2/14/89 ELEVATION: WL TAKEN: 2-14-89 EQUIPMENT: Hollow Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	TOTAL PETROLEUM HYDROCARBONS Mg/Kg	TESTS
					hard		0-2" ASPHALT; 2-12" BASE ROCK			
				moist	medium dense	brown to black	CLAYEY SAND and GRAVEL (Fill) SP/GP			
										
5	D			moist	soft	brown	SILTY SAND and GRAVEL (Fill) SN/GP			
				wet	soft	black	CLAYEY SAND (Fill) CL			
10	D			sat.	soft, firmer with depth		SILTY CLAY (Bay Mud) Some fine sand			
							CLAY (Bay Mud) CH			
15	D			moist	medium	gray-black				
							Bottom of Hole at 16.5 ft.			
20										



SHELL OIL COMPANY
258 Hegenberger Road
Oakland, California

Project No.
88-44-359-01

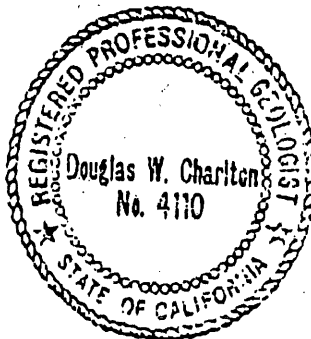


Converse Environmental Consultants California

Drawing No.
A-5

LOG OF BORING NO. MW-4

DATE DRILLED: 4/28/89		ELEVATION:		ML TAKEN: 4-28-89		EQUIPMENT: Hollow Stem Auger						
DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	BLOWS/FT.	T.P.H Kg/Kg	TESTS	
				moist	medium	brown	Import Top Soil					
				moist	medium	brown	CLAYEY SAND and rock fragment (Fill)	SC				
0				moist	medium	brown-gray	Mix SILTS and SANDS Trace dry Bay Mud	ML-SM	7			
5		very moist					Lenses and pockets silts, sand, clayey silt, trace organics		12			
10		wet			loose		Lenses and layers of silts, fine sands		3			
15		very moist										
					soft	light gray	BAY MUD	CH	1			
						medium	dark gray	Calcareous, trace vertical organics		8		
						stiff				20		
						gray	Calcareous SILTY CLAY	CL				
15							Bottom of Hole at 14 ft.					



SHELL OIL COMPANY
 285 Hegenberger Road
 Oakland, California

Project No.
 88-44-359-01



Converse Environmental Consultants California

Drawing No.
 A-1

LOG OF BORING NO. MW-6

DATE DRILLED: 4/28/89 ELEVATION: N/A ML TAKEN: 4-28-89 EQUIPMENT: Hollow Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	BLOWS/FT.	T.P.H Mg/Kg	TESTS
				moist	loose	brown	Import Top Soil				
				moist	loose	yellow-brown	CLAYEY SAND and rock fragments Trace cobble size fragments	SC			
							Sandy clay, trace rock fragments				
0				very moist	soft	gray	CLAYEY SILTS	ML	23		
0							Layer pea gravel possible floating product		8		
0							Fine to medium sand				
0							Layer coarse sand, pea gravel				
0							Fine to medium SAND	SP-ML			
0				wet			Clayey silt, trace fine sands		7		
0							Fine sandy silts		1		
0							Bay Mud, trace organics	CH	4		
0							Bottom of Hole at 12 ft.		10		
15											
20											



SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Project No.
88-44-359-01



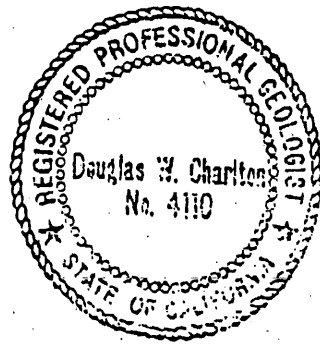
Converse Environmental Consultants California

Drawing No.
A-3

LOG OF BORING NO. MW-8

DATE DRILLED: 4/28/89 ELEVATION: WL TAKEN: 4-28-89 EQUIPMENT: Hollow Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	PLASTICITY	COLOR	DESCRIPTION	WELL CONSTRUCTION	BLOWS/FT.	T.P.H. Mg/Kg	TESTS
			[diagonal lines]	moist	medium	brown	Import Top Soil Silt and Clay with fine Sand	CL			
			[vertical lines]	moist	medium dense	yellow-brown	CLAYEY SAND With rock fragments (Fill)	SC			
			[vertical lines]			brown	SANDY CLAY With rock fragments (Fill)	[diagonal lines]			
5	D		[vertical lines]	moist	medium dense	gray	CLAYEY SILT Pockets and lenses of silts, fine sands, and clayey silts	ML	11		
			[vertical lines]	wet	loose	dk. gray	SILTY Fine SAND	SM			
10	D		[diagonal lines]	wet	soft	gray	BAY MUD Trace organics	CH	5		
			[diagonal lines]			dark gray		[cross-hatch]	5		
							Bottom of Hole at 12 ft.				
15											
20											



SHELL OIL COMPANY
258 Hegenberger Road
Oakland, California.

Project No.
88-44-359-01

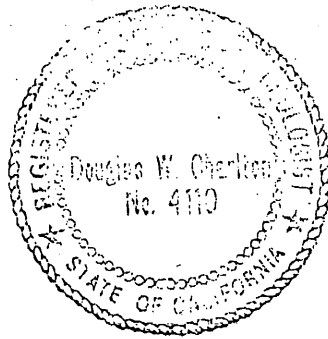


Converse Environmental Consultants California

Drawing No.
A-5

LOG OF BORING NO. MW-9

DATE DRILLED: 7-13-89		ELEVATION:		WL TAKEN: 7-13-89		EQUIPMENT: 6-1/4" x 10" Hollow Auger					
DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	CONSISTENCY	COLOR	DESCRIPTION	WELL CONSTRUCTION	BLOWS/FT.	O.V.H. (ppm)	T.P.H. (ppm)
			[Cross-hatched]				Crush ROCK 2" Plastic, (topsoil)	[Cross-hatched]			
			[Diagonal lines]	slightly moist to moist	medium	brown	Silty CLAY Clayey SILT ML/CL (topsoil)	[Diagonal lines]			
			[Diagonal lines]	moist	stiff	gray	Silty CLAY CL	[Diagonal lines]			
1			[Diagonal lines]	s. moist	medium	light gray	Clayey SILT ML	[Diagonal lines]	7	320	
5			[Diagonal lines]	moist			Strong odor	[Diagonal lines]	8	460	
2		[Water level symbol]	[Diagonal lines]	wet		gray	Fine Sandy SILT ML	[Diagonal lines]			
			[Diagonal lines]				Silty SAND	[Diagonal lines]			
3			[Diagonal lines]	wet				[Diagonal lines]			
			[Diagonal lines]			mottled gray	Bay Mud (tidial zone) CH/OH	[Diagonal lines]	6	112	
10			[Diagonal lines]				Trace calcareous with depth	[Diagonal lines]	5	40	
							Bottom of Hole at 10.5 ft.	[Diagonal lines]			
15								[Diagonal lines]			
20								[Diagonal lines]			



SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Project No.
88-44-359-01

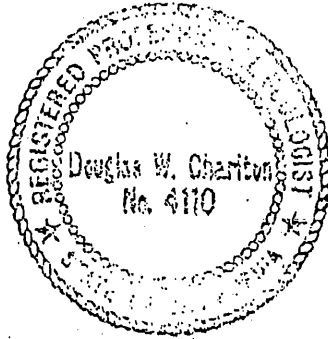


Converse Environmental Consultants California

Drawing No.
A-7

LOG OF BORING NO. MW-10

DATE DRILLED: 11-16-89 ELEVATION: WL TAKEN: n/a EQUIPMENT: 3 3/4" x 8" Hollow-Stem Auger

DEPTH (ft)	SAMPLE	WATER LEVEL	SYMBOL	MOISTURE	CONSISTENCY	COLOR	DESCRIPTION	WELL CONSTRUCTION	BLOWS/FT.	D.V.M. (ppm)	T.P.H. (ppm)			
5	1	K	[Symbol]	sl moist	m dense	gray	GRAVEL sub-base. (Fill)	GM	[Well Construction Diagram]	0	-	-		
			[Symbol]	moist		yellow brown	Silty SAND. (Fill)	ML						
			[Symbol]			medium	green	Sandy CLAY, trace Gravel.					SC	
			[Symbol]					black					Silty CLAY, trace Gravel. (Fill)	CL
			[Symbol]										Odor.	SM
			[Symbol]	very moist	medium dense	dark gray	Silty SAND, trace Clay.						6	35
			[Symbol]		medium	gray	Silty CLAY, wet Sandy SP lenses. Green staining. Odor.	CL					11	50
			[Symbol]	wet	soft		Silty CLAY, trace brown organics.						5	-
			[Symbol]		soft	black	Silty CLAY, trace organincs. Bay Mud.	CH					7	3
			[Symbol]			black mottled gray							4	0
[Symbol]						4	-							
[Symbol]						7	0							
15						Total Depth of Boring: 13 ft Below Ground Surface.								
20														

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

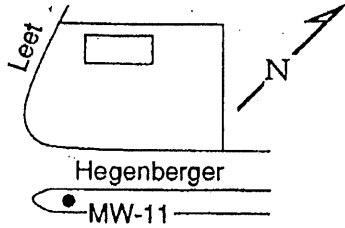
Project No.
88-44-359-01



Converse Environmental West

Drawing No.
A-4

LOCATION MAP



PACIFIC ENVIRONMENTAL GROL INC.

WELL NO. MW-11
PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

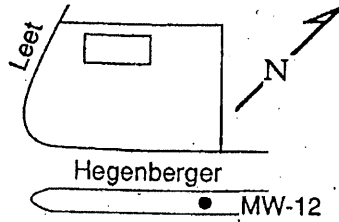
CLIENT: SHELL
 DATE DRILLED: 6-8-93
 LOCATION: 285 Hegenberger Rd.
 HOLE DIAMETER: 10"
 HOLE DEPTH: 15.5'
 WELL DIAMETER: 4"
 WELL DEPTH: 14'
 CASING STICKUP: NA

NORTHING EASTING ELEVATION
 847.72 998.93 10.56TOC

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS				
				1			SM	SILTY SAND				
				2			GM	SANDY GRAVEL - FILL: strong brown; angular large chunks of brick and rock; some rusted metal.				
				3								
				4	Mst 2	13				SM	SILTY SAND: dark brown; 25-30% silt; fine to medium sand; no product odor.	
				5		25				SC	CLAYEY SAND: dark brown; 20-25% clay; fine sand.	
				6						CH	CLAY: black; high plasticity; mottled with grey patches; very stiff; no product odor.	
				7								
				8								
				9								
				10	Sat 2	2	5					@10': grey to black; high plasticity; large 3-5 mm open rootholes and cracks filled with water; iron oxide stain along fractures; reeds and roots; firm; no product odor.
				11								
				12								
				13								
				14	Sat 0	0	3					@14': dark grey; high plasticity; water filled rootholes; roots; stiff; no product odor.
				15			11					
				16								
				17								
				18								
				19								
				20								
				21								
				22								

BOTTOM OF BORING AT 15.5'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROL, INC.

WELL NO. MW-12
PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

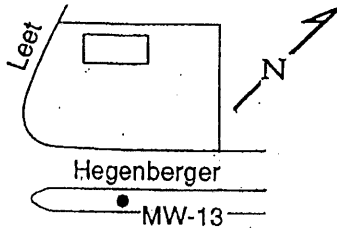
CLIENT: SHELL
 DATE DRILLED: 6-8-93
 LOCATION: 285 Hegenberger Rd.
 HOLE DIAMETER: 10"
 HOLE DEPTH: 15.5'
 WELL DIAMETER: 4"
 WELL DEPTH: 15'
 CASING STICKUP: NA

NORTHING 995.66 EASTING 1088.10 ELEVATION 9.56 TOC

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT SAND BENTONITE WATER TABLE (▼)	Dp			1			SM	SILTY SAND
				2			GM	SANDY GRAVEL - FILL: large angular chunks of iron oxide stained chert.
				3				
	Mst	3	P	4			ML	CLAYEY SILT: sandy; dark greyish brown; 20-25% clay; 15-20% very fine sand; iron oxide staining along tiny roots; no product odor.
				5				
				6				
				7				
				8				
	Sat	4	3	9			CH	CLAY: black; high plasticity; roots; rootholes; rootholes filled with water; soft; no product odor.
			2	10				
				11				
				12				
				13				
	Sat	0	9	14				@12.5': greenish grey; high plasticity; 0-5% silt; calcite nodules; roots and water filled rootholes; stiff; no product odor.
			10	15				
			16					
			17					
			18					
			19					
			20					
			21					
			22					

BOTTOM OF BORING AT 15.5'

LOCATION MAP



ACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-13

PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

CLIENT: SHELL
 DATE DRILLED: 6-10-93
 LOCATION: 285 Hegenberger Rd.
 HOLE DIAMETER: 10"
 HOLE DEPTH: 15.5'
 WELL DIAMETER: 4"
 WELL DEPTH: 15'
 CASING STICKUP: NA

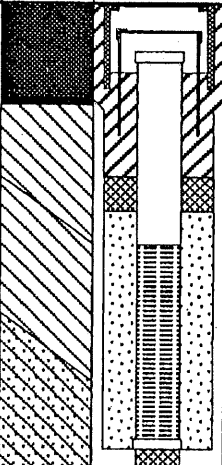

NORTHING	EASTING	ELEVATION
914.88	1039.19	10.10 TOC

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1			SM	SILTY SAND
				2			GW	SANDY GRAVEL - FILL: large angular chunks of iron oxide stained chert; no product odor.
				3				
				4			SC	CLAYEY SAND: silty; olive brown; 30-35% clay; 20-25% silt; very fine sand; roots; loose; no product odor.
		Mst	0	8				
				4				
				5				
				6				
				7				
				8				
				9			CL	CLAY: dark greyish brown; moderate plasticity; 10-15% silt; iron oxide stain along roots; no product odor.
		Mst	0	3				
				3			CH	CLAY: black; high plasticity; roots; odor of decaying organics; firm; no product odor.
				11				
				12				
				13				
				14				
		Mst	0	8				
				6				
				15				CLAY: dark greenish grey; high plasticity; calcite nodules and caliche; roots; stiff; no product odor.
				16				
				17				
			18					
			19					
			20					
			21					
			22					

BOTTOM OF BORING AT 15.5'

LOG OF BORING NO. VEW-1

Start: 11/21/91 Completion: 11/21/91 Water Measure: N/A	Geologist: P. A. Fuller Assistant Geol.: N/A Drilling Co.: Kvilhaug	Driller/Helper: Drilling Method: Hand Auger Auger/Bit Dia.:
---------------------------------------------------------------	---------------------------------------------------------------------------	-------------------------------------------------------------------

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION	MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
					Asphalt and Base					
					Silty Clay	CL	slightly moist	gray/black		
					Sandy Clay	CL	moist	gray/black		
5					Clayey pebbly Sand	SC	very moist	black		
10					Total Depth of Boring: 7 ft. Casing: Blank 4" ID Sch. 40 PVC Screen: Slotted 4" ID Sch. 40 PVC, 0.020" slots Filter Pack: 2/12 sand					
15										
20										

SHELL OIL COMPANY
 285 Hegenberger Road
 Oakland, California

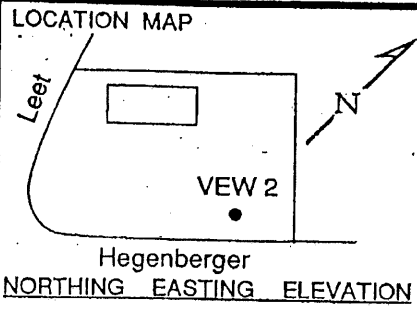
Project No.:
 88-44-359-20



Converse Environmental West

Drawing No.

A-2



CIFIC ENVIRONMENTAL GROU NC.

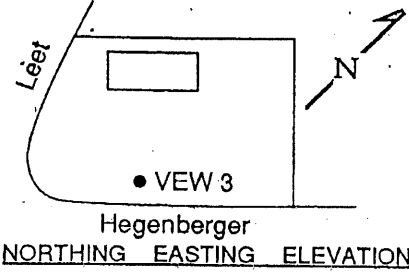
WELL NO. VEW 2
PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

CLIENT: SHELL
 DATE DRILLED: 6-9-93
 LOCATION: 285 Hegenberger Rd
 HOLE DIAMETER: 10"
 HOLE DEPTH: 8.5'
 WELL DIAMETER: 2"
 WELL DEPTH: 8.5' and 6.5'
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS	
	Dp			1		[Hatched pattern]	SC	ASPHALT 2" CLAYEY SAND - FILL: gravelly; strong brown; 20-25% clay; fine to coarse sand; 15-20% angular gravel.	
	Mst			2		[Diagonal lines]	CL	CLAY: dark greenish grey to black; moderate plasticity; moderate product odor becoming strong product odor at 3 feet; roots.	
	Wet	100	5	3		[Dotted pattern]	SM	SILTY SAND: dark grey; 30-35% silt; very fine sand; roots; loose; strong product odor.	
	Mst		4	4		[Dotted pattern]	SM		
	Mst			5		[Dotted pattern]	SM		
	Mst			6		[Diagonal lines]	CH	CLAY: black; high plasticity; roots; strong product odor.	
	Sat	80	1	7		[Horizontal lines]	ML	CLAYEY SILT: with sand lenses; dark grey to black; moderate plasticity; horizontal laminae; roots; sand lenses of fine to medium sand up to 2 inches thick; soft; strong product odor.	
				4	8		[Horizontal lines]	ML	
					9		[Hatched pattern]	CL	CLAY: dark grey; moderate plasticity; moderate product odor.
					10				
					11				
				12					
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					
								BOTTOM OF BORING AT 8.5'	

LOCATION MAP



ACIFIC ENVIRONMENTAL GRO, INC.

WELL NO. VEW 3

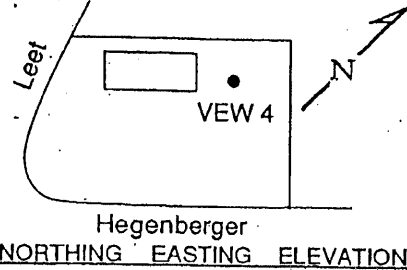
PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

CLIENT: SHELL
 DATE DRILLED: 6-10-93
 LOCATION: 285 Hegenberger Road
 HOLE DIAMETER: 10"
 HOLE DEPTH: 10'
 WELL DIAMETER: 2"
 WELL DEPTH: 8.5' and 6'
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
	Mst			1		GW	ASPHALT 2"	SANDY GRAVEL - FILL: strong brown. SILTY CLAY: black; moderate plasticity; 20-25% silt; roots; no product odor. CH CLAY: black; high plasticity; roots; stiff; strong product odor. SM SILTY SAND: dark blue grey; 5-10% clay; 15-20% silt; very fine sand; roots; separate phase hydrocarbon sheen along roots; soft; strong product odor. CH CLAY: dark greenish grey to black; high plasticity; abundant roots; at 9.5'; 3-4" thick peat horizon; soft; moderate product odor. BOTTOM OF BORING AT 10'
				2		CL		
				3				
				4		CH		
	Mst	120	8	5				
			6	6				
				7				
	Sat	80	2	8		SM		
			2	9		CH		
	Mst	15	3	10				
			11					
			12					
			13					
			14					
			15					
			16					
			17					
			18					
			19					
			20					
			21					
			22					

LOCATION MAP



CIFIC ENVIRONMENTAL GROL INC.

WELL NO. VEW 4
PAGE 1 OF 1

PROJECT NO. 305-79.01
 LOGGED BY: CM
 DRILLER: GREGG
 DRILLING METHOD: HSA
 SAMPLING METHOD: CAL MOD
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: 2X12

CLIENT: SHELL
 DATE DRILLED: 6-9-93
 LOCATION: 285 Hegenberger Rd.
 HOLE DIAMETER: 10"
 HOLE DEPTH: 9.5'
 WELL DIAMETER: 2"
 WELL DEPTH: 9' and 6.5'
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
	Wet Sat Sat	14 7 0	12 12 7 4 8 4	1			SC	ASPHALT 2" CLAYEY SAND - FILL: gravelly; strong brown; 25-30% clay; fine to medium sand; 15-20% gravel; no product odor.
				2			CL	CLAY: dark grey to black; moderate plasticity; faint product odor.
				3			CL/SW	SILTY SAND with CLAY: (interbedded); silty sand: dark grey; 15-20% silt; fine to medium sand; faint product odor; clay: dark grey; moderate plasticity; some rootlets; very stiff; faint product odor.
				4			CL/SW	
				5			CL/SW	
				6			CL/SW	
				7			CL/SW	@7.5': firm; faint product odor.
				8			CL/SW	
				9			SM ML	SILTY SAND: dark grey; 15-20% silt; very fine sand; faint to no product odor. CLAYEY SILT: dark grey; 25-30% clay; 10-15% very fine sand; firm; faint to no product odor.
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				

BOTTOM OF BORING AT 9.5'