



# Highlander Environmental Corp.

Midland, Texas

July 23, 2007

Mr. Larry Johnson  
Environmental Engineer Specialist  
Oil Conservation Division- District I  
1625 N. French Drive  
Hobbs, New Mexico 88240

**RE: Assessment and Site Closure for the Spill at the COG Operating Company LLC, Jalmat Yates Unit Well #12, Unit Letter A, Section 13, Township 25 South, Range 36 East, Lea County, New Mexico.**

RP 1070

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by COG Operating Company LLC (COG) to assess and to remediate the soil impact from a spill that occurred at the Jalmat Yates, Well #12, located in Unit Letter A, Section 13, Township 25 South, Range 36 East, Lea County, New Mexico. The site coordinates are N 32.13667°, W 103.21130°. The State of New Mexico C-141 (Initial) is included in Appendix A. The Site is shown on Figure 1.

## Background

On September 13, 2006, the spill was discovered from a leaking stuffing box leak. Approximately 3 barrels of oil and 10 barrels of water were spilled and no fluids were recovered. The spill occurred on the well pad and migrated off the pad to an area measuring approximately 200' x 2'. The impacted area off the pad was immediately excavated to a depth of 1.0' below surface. The excavated soil was hauled to the tank battery pad and stockpiled pending disposal at Sundance Services. The spill location is shown on Figure 2.

## Groundwater and Regulatory

The spill area is located in Section 13, Township 25 South, Range 36 East. The State of New Mexico Well Reports did not show any water wells in Section 13. However, there were water wells shown in Sections 19 and 20, Township 25 South, Range 37 East with an average groundwater depth of approximately 34' to 44' below surface.

Published data, from the Geology and Groundwater Conditions in Southern New Mexico, showed wells in Section 15 and 23, Township 25 South, Range 36 East with a reported depth of 120' and 53.7', respectively. In Sections 17, 19 and 20, Township 25 South, Range 37 East, water wells showed average groundwater depths of approximately 62' to 65' below surface. In addition, the USGS data base reported a depth to water at 51' in the southeast quarter of Section 18, Township 25 South, Range 37 East. A monitor well, located in the western edge of Section 18, reportedly had a water level of approximately 63.0' in 2004. Based on the relative elevation of the Site and surrounding wells, the groundwater appears to be greater than 50.0' below surface. The State of New Mexico Well Reports, USGS report and published reports are included in Appendix B.

A risk-based evaluation was performed for the Site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene and xylene). Based on the regional groundwater data, the proposed RRAL for TPH is 1,000 mg/kg.

#### **Assessment/Soil Sampling**

On September 18, 2006, Highlander personnel sampled the spill area. A total of five (5) auger holes were installed in the excavated area. The spill and sample locations are shown on Figure 3. Soil samples were analyzed for Total Petroleum Hydrocarbon (TPH) by method modified 8015 DRO/GRO and chloride by EPA method 300.0. Selected samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA method 8021B. All samples were collected and preserved in laboratory prepared sample containers, shipped under proper chain-of-custody control, and analyzed within the standard holding times. The sample results are presented in Table 1. The laboratory reports are included in Appendix C.

#### **Soil Sampling Results**

Referring to Table 1, all auger holes (AH-1, AH-2, AH-3, AH-4 and AH-5) were below the RRAL for TPH and BTEX at 0-1' below excavation bottom. However, the chloride concentrations were elevated in AH-2, AH-3 and AH-4 with levels of 1,620 mg/kg, 2,130 mg/kg and 2,660 mg/kg, respectively.

#### **Remediation**

On October 31, 2006, Highlander personnel were onsite to oversee the excavation and removal of two feet of soil in the vicinity of auger holes AH-2, AH-3, and AH-4. The excavated soils were transported to Sundance Services in Eunice, New Mexico for disposal. Upon completion of the excavation, Highlander personnel installed two additional hand augerholes (AH-6 and AH-7) in the vicinity of AH-2 through AH-4. The two auger holes were sampled and submitted to the laboratory for analysis of chlorides. The sample results are presented in Table 1, while the laboratory reports are included in Appendix C. The two



additional auger hole locations are shown on Figure 3. The State of New Mexico C-141 (final) is included in Appendix A.

Referring to Table 1, the two auger holes (AH-6 and AH-7) had elevated chlorides which declined with depth. The chloride concentration ranged from 2,870 mg/kg in AH-6 at a depth of 2 to 3 feet to 447 mg/kg at a depth of 7 to 7.5 feet. The chloride concentration in AH-7 ranged from 1,440 mg/kg at 2 to 3 feet to 74.4 at 5 to 5.5 feet. Graphs depicting the decline with depth for the two auger holes are shown in Appendix D.

### **New Release**

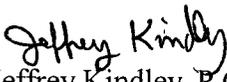
On March 18, 2007 a new release occurred at the facility from a flow line at the wellhead with an estimated release volume of 3 barrels of oil and 15 barrels of water. No barrels of oil or water were recovered. The new release area was reported under a separate C-141 and will be addressed in a separate report.

### **Conclusions**

The release area was impacted with soils that exceeded the chloride RRAL of 250 mg/kg to a maximum depth of 3 to 5 feet bgs. As a result, the first two feet of impacted soils were excavated leaving shallow chlorides in situ which decreased with depth. Since the chlorides decrease with depth and groundwater is 34 to 44 feet bgs, it is unlikely that the remaining chlorides in the soil will leach into the surrounding underlying groundwater.

Based upon the results of the assessment and the declining chloride concentration levels with depth, COG requests closure of this spill issue. If you require any additional information or have any questions or comments, please contact us at (432) 682-4559.

**Highlander Environmental Corp.**

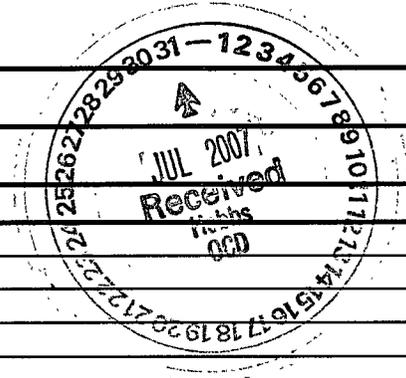
  
Jeffrey Kindley, P.G.  
Senior Environmental Geologist

cc: COG – Greg Wilkes



# SITE INFORMATION

**Report Type: CLOSURE REPORT**



**General Site Information:**

<b>Site:</b>	Jalmat Yates Unit #12
<b>Company:</b>	COG Operating LLC
<b>Well Location:</b>	Section 13, T25S, R36E
<b>Spill Location:</b>	Section 13, T25S, R36E
<b>Unit Letter:</b>	Unit A
<b>Lease Number:</b>	300-00705-00
<b>County:</b>	Lea
<b>Spill GPS:</b>	N32.13667° W103.21130°
<b>Surface Owner:</b>	Clay Osborne
<b>Mineral Owner:</b>	Unknown
<b>Directions:</b>	From Jal, New Mexico, intersection of Hwy 18 and Hwy 128, go 1.1 miles (west) on 128, turn right (north) into lease road, go north 0.8 miles and turn left (west) and go 0.2 mile and turn left (north) and go 0.2 miles to well location (spill ran east of well)

**Release Data:**

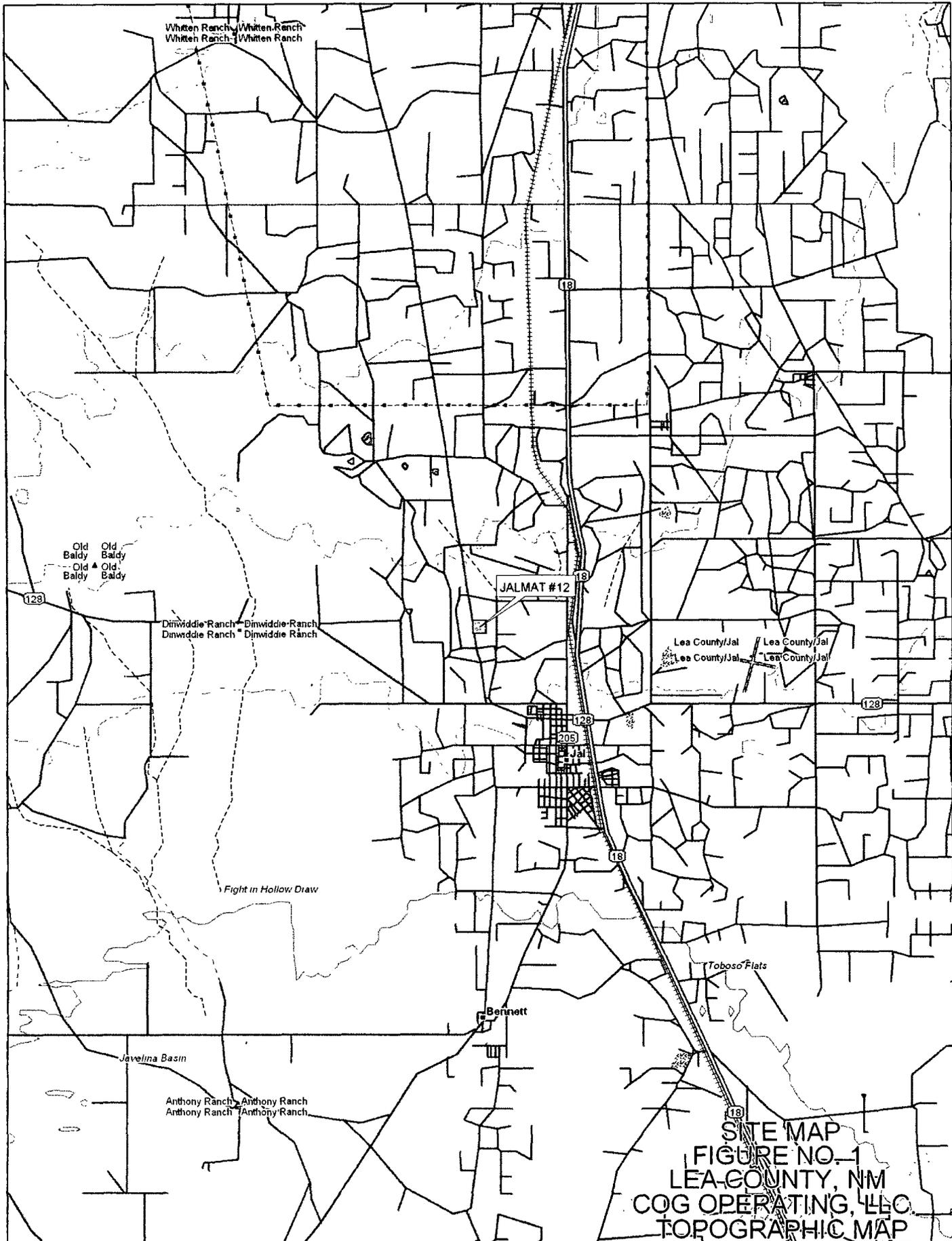
<b>Date Released:</b>	9/13/2006
<b>Type Release:</b>	Oil and water
<b>Source of Contamination:</b>	Flow line leak
<b>Fluid Released:</b>	3 Barrels of Oil and 10 Barrels of Water
<b>Fluids Recovered:</b>	None

**Official Communication:**

<b>Name:</b>	Diane Kuykendall	Ike Tavarez
<b>Company:</b>	COG Operating, LLC	Highlander Environmental Corp.
<b>Address:</b>	550 W. Texas, Ste 1300	1910 N. Big Spring
<b>P.O. Box</b>		
<b>City:</b>	Midland Texas, 79701-7340	Midland, Texas
<b>Phone number:</b>	(432) 685-7443	(432) 692- 4559
<b>Fax:</b>	(432) 683-7441	
<b>Email:</b>	dkuykendall@conchoresources.com	itavarez@hec-enviro.com

**Ranking Criteria**

<b>Depth to Groundwater:</b>	<b>Ranking Score</b>	<b>Site Data</b>
<50 ft	20	
50-99 ft	10	
>100 ft.	0	Average depth of 63 feet bgs.
<b>WellHead Protection:</b>		
	<b>Ranking Score</b>	<b>Site Data</b>
Water Source <1,000 ft., Private <200 ft.	20	None
Water Source >1,000 ft., Private >200 ft.	0	
<b>Surface Body of Water:</b>		
	<b>Ranking Score</b>	<b>Site Data</b>
<200 ft.	20	None
200 ft - 1,000 ft.	10	None
>1,000 ft.	0	
<b>Total Ranking Score:</b>		20
<b>Acceptable Soil RRAL (mg/kg)</b>		
<i>Benzene</i>	<i>Total BTEX</i>	<i>TPH</i>
10	50	1,000



White Ranch White Ranch  
White Ranch White Ranch

Old Baldy  
Old Baldy  
Old Baldy  
Old Baldy

Dinwiddie Ranch Dinwiddie Ranch  
Dinwiddie Ranch Dinwiddie Ranch

JALMAT #12

Lea County/Jal  
Lea County/Jal  
Lea County/Jal  
Lea County/Jal

Fight in Hollow Draw

Javelina Basin

Anthony Ranch Anthony Ranch  
Anthony Ranch Anthony Ranch

Bennett

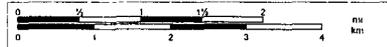
Toboso Flats

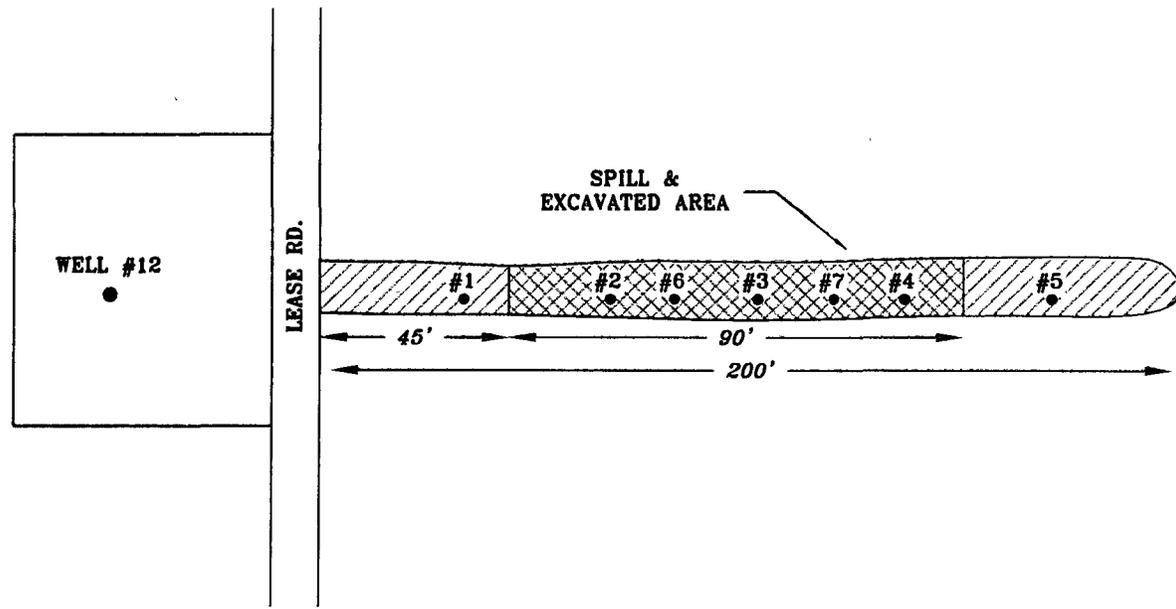
SITE MAP  
FIGURE NO. 1  
LEA COUNTY, NM  
COG OPERATING, LLC  
TOPOGRAPHIC MAP



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www.delorme.com

Scale 1 : 100,000  
1" = 1.58 mi





- ▨ SPILL AREA (AREA EXCAVATED 1.0')
- ▩ AREA EXCAVATED & SAMPLED ON 10/31/06 (AREA EXCAVATED 2.0')
- SAMPLE LOCATIONS
- SAMPLE LOCATIONS (#6 & #7 SAMPLED ON 10/31/06)

NOT TO SCALE

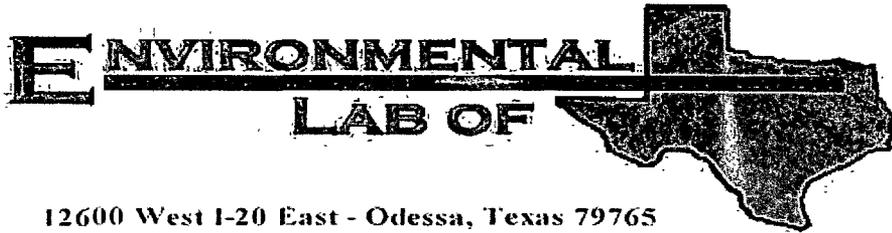
DATE:  
10/9/06  
DWN. BY  
JJ  
FILE:  
C:\COG\2738  
JALMAT #12

FIGURE NO. 3	
LEA COUNTY, NEW MEXICO	
COG OPERATING, LLC JALMAT #12	
HIGHLANDER ENVIRONMENTAL CORP. MIDLAND, TEXAS	

**Table 1**  
**COG Operating**  
**Jalmat Well # 12 - Leak**  
**Lea County, New Mexico**

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	9/18/2006	0-1.0'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	42.5
AH-2	9/18/2006	0-1.0'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	1,620
AH-3	9/18/2006	0-1.0'	<10.0	83.5	83.5	<0.025	<0.025	<0.025	<0.025	2,130
AH-4	9/18/2006	0-1.0'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	2,660
AH-5	9/18/2006	0-1.0'	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	<20.0
AH-6 BEB (2.0')	10/31/2006	0-1.0'	-	-	-	-	-	-	-	2,870
AH-6 BEB (2.0')	10/31/2006	1'-1.5'	-	-	-	-	-	-	-	2,130
AH-6 BEB (2.0')	10/31/2006	2'-2.5'	-	-	-	-	-	-	-	1,910
AH-6 BEB (2.0')	10/31/2006	3'-3.5'	-	-	-	-	-	-	-	1,810
AH-6 BEB (2.0')	10/31/2006	4'-4.5'	-	-	-	-	-	-	-	893
AH-6 BEB (2.0')	10/31/2006	5'-5.5'	-	-	-	-	-	-	-	447
AH-7 BEB (2.0')	10/31/2006	0-1.0'	-	-	-	-	-	-	-	1,440
AH-7 BEB (2.0')	10/31/2006	1'-1.5'	-	-	-	-	-	-	-	319
AH-7 BEB (2.0')	10/31/2006	2'-2.5'	-	-	-	-	-	-	-	510
AH-7 BEB (2.0')	10/31/2006	3'-3.5'	-	-	-	-	-	-	-	74.4

Sample Depth (ft) - below excavation bottom



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Ike Tavaréz

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: COG/ Jalmat #12 Well Leak

Project Number: 2738

Location: Lea County, NM

Lab Order Number: 6K01014

Report Date: 11/08/06

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project COG/ Jalmat #12 Well Leak  
Project Number 2738  
Project Manager Ike Tavarez

Fax (432) 682-3946

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-6 0-1 0' BEB 2.0'	6K01014-01	Soil	10/31/06 00 00	11-01-2006 14 10
AH-6 1-1 5' BEB 2.0'	6K01014-02	Soil	10/31/06 00 00	11-01-2006 14 10
AH-6 2-2 5' BEB 2.0'	6K01014-03	Soil	10/31/06 00 00	11-01-2006 14 10
AH-6 3-3 5' BEB 2.0'	6K01014-04	Soil	10/31/06 00 00	11-01-2006 14 10
AH-6 4-4 5' BEB 2.0'	6K01014-05	Soil	10/31/06 00 00	11-01-2006 14 10
AH-6 5-5 5' BEB 2.0'	6K01014-06	Soil	10/31/06 00 00	11-01-2006 14 10
AH-7 0-1 0' BEB 2.0'	6K01014-07	Soil	10/31/06 00 00	11-01-2006 14 10
AH-7 1-1 5' BEB 2.0'	6K01014-08	Soil	10/31/06 00 00	11-01-2006 14 10
AH-7 2-2 5' BEB 2.0'	6K01014-09	Soil	10/31/06 00 00	11-01-2006 14 10
AH-7 3-3 5' BEB 2.0'	6K01014-10	Soil	10/31/06 00 00	11-01-2006 14 10

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

Project COG/ Jalmat #12 Well Leak  
Project Number 2738  
Project Manager Ike Tavarez

Fax (432) 682-3946

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>AH-6 0-1.0' BEB 2.0' (6K01014-01) Soil</b>									
Chloride	2870	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-6 1-1.5' BEB 2.0' (6K01014-02) Soil</b>									
Chloride	2130	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-6 2-2.5' BEB 2.0' (6K01014-03) Soil</b>									
Chloride	1910	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-6 3-3.5' BEB 2.0' (6K01014-04) Soil</b>									
Chloride	1810	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-6 4-4.5' BEB 2.0' (6K01014-05) Soil</b>									
Chloride	893	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-6 5-5.5' BEB 2.0' (6K01014-06) Soil</b>									
Chloride	447	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-7 0-1.0' BEB 2.0' (6K01014-07) Soil</b>									
Chloride	1440	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-7 1-1.5' BEB 2.0' (6K01014-08) Soil</b>									
Chloride	319	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-7 2-2.5' BEB 2.0' (6K01014-09) Soil</b>									
Chloride	510	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	
<b>AH-7 3-3.5' BEB 2.0' (6K01014-10) Soil</b>									
Chloride	74.4	20 0	mg/kg Wet	2	EK60604	11/06/06	11/06/06	SW 846 9253	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Page 2 of 4

Highlander Environmental Corp  
 1910 N Big Spring St  
 Midland TX, 79705

Project COG/ Jalmat #12 Well Leak  
 Project Number 2738  
 Project Manager Ike Tavarez

Fax (432) 682-3946

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EK60604 - Water Extraction</b>										
<b>Blank (EK60604-BLK1)</b>				Prepared & Analyzed 11/06/06						
Chloride	ND	100	mg/kg Wet							
<b>LCS (EK60604-BS1)</b>				Prepared & Analyzed 11/06/06						
Chloride	112	500	mg/kg Wet	100		112	80-120			
<b>Matrix Spike (EK60604-MS1)</b>				Source: 6K01014-01		Prepared & Analyzed 11/06/06				
Chloride	5000	400	mg/kg Wet	2000	2870	106	80-120			
<b>Matrix Spike Dup (EK60604-MSD1)</b>				Source: 6K01014-01		Prepared & Analyzed 11/06/06				
Chloride	4890	400	mg/kg Wet	2000	2870	101	80-120	2.22	20	
<b>Reference (EK60604-SRM1)</b>				Prepared 11/06/06 Analyzed 11/07/06						
Chloride	553		mg/kg	500		111	80-120			

Highlander Environmental Corp  
1910 N Big Spring St  
Midland TX, 79705

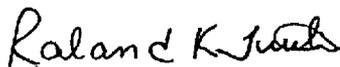
Project COG/ Jalmat #12 Well Leak  
Project Number 2738  
Project Manager Ike Tavaréz

Fax (432) 682-3946

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date: 11/8/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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# Analysis Request and Chain of Custody Record

## HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.  
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

CLIENT NAME: **COG** SITE MANAGER: **Ike Tavaraz**

PROJECT NO.: **2738** PROJECT NAME: **COG/Jalmat #12 Well Lealc**

LAB I.D. NUMBER: **01014** DATE: **10/31/06** TIME: **11:00** MATRIX: **S** COMP: **GRAB** SAMPLE IDENTIFICATION: **Lea County, NM**

NUMBER OF CONTAINERS: **1** PRESERVATIVE METHOD: **NONE**

PLUMED (Y/N): **X** HCL: **X** HNO3: **X** ICE: **X**

BTX 0020/002 **X** MTBE 0020/002 **X** TPH 4181 0016 MOD. 131006 **X** PAH 8870 **X**

PCRA Metals Ag As Ba Cd Cr Pb Hg Se **X**

TCLP Volatiles **X**

TCLP Metals Ag As Ba Cd Cr Pb Hg Se **X**

TCLP Semi Volatiles **X**

HCI **X**

GCMS Vol. B240/B250/254 **X**

GCMS Semi. Vol. 0270/255 **X**

PCB's 0080/008 **X**

Post. B08/008 **X**

BOD, TSS, pH, TDS, Chloride **X**

Gamma Spec. **X**

Alpha Beta (Air) **X**

PLM (Asbestos) **X**

DATE: **11/01/06** TIME: **2:00** RECEIVED BY: (Signature) **Ike Tavaraz**

DATE: **11/01/06** TIME: **2:10** RECEIVED BY: (Signature) **Ike Tavaraz**

DATE: **11/01/06** TIME: **2:10** RECEIVED BY: (Signature) **Ike Tavaraz**

RECEIVING LABORATORY: **ELI** STATE: **TX** ZIP: **79705**

ADDRESS: **1910 N. Big Spring St.** CITY: **Midland** PHONE: **(432) 682-4559**

CONTACT: **Ike Tavaraz** DATE: **11/01/06** TIME: **2:10**

SAMPLE CONDITION WHEN RECEIVED: **20** REMARKS: **Address w/labels**

MATRIX: **S-Solid** F-Water **0-Other** A-Liq **0-Other** SD-Solid **0-Other**

LABORATORY RECEIVED: **ELI** DATE: **11/01/06** TIME: **2:10**

### ANALYSIS REQUEST

(Circle or Specify Method No.)

BTX 0020/002	<input checked="" type="checkbox"/>
MTBE 0020/002	<input checked="" type="checkbox"/>
TPH 4181 0016 MOD. 131006	<input checked="" type="checkbox"/>
PAH 8870	<input checked="" type="checkbox"/>
PCRA Metals Ag As Ba Cd Cr Pb Hg Se	<input checked="" type="checkbox"/>
TCLP Volatiles	<input checked="" type="checkbox"/>
TCLP Semi Volatiles	<input checked="" type="checkbox"/>
HCI	<input checked="" type="checkbox"/>
GCMS Vol. B240/B250/254	<input checked="" type="checkbox"/>
GCMS Semi. Vol. 0270/255	<input checked="" type="checkbox"/>
PCB's 0080/008	<input checked="" type="checkbox"/>
Post. B08/008	<input checked="" type="checkbox"/>
BOD, TSS, pH, TDS, Chloride	<input checked="" type="checkbox"/>
Gamma Spec.	<input checked="" type="checkbox"/>
Alpha Beta (Air)	<input checked="" type="checkbox"/>
PLM (Asbestos)	<input checked="" type="checkbox"/>

SAMPLED BY: (Print & Sign) **Ike Tavaraz** Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 SAMPLE SHIPPED BY: (Circle) **ROS** AIRBILL # \_\_\_\_\_  
 FEDERAL **UPS** OTHER: \_\_\_\_\_  
 (CAND DELIVERED) \_\_\_\_\_  
 HIGHLANDER CONTACT PERSON: **Ike Tavaraz**  
 Results by: \_\_\_\_\_  
 RUSH CHARGES AUTHORIZED: **Yes** No \_\_\_\_\_

RECEIVED BY: (Signature) **Ike Tavaraz** Date: **11/01/06** Time: **2:10**  
 RECEIVED BY: (Signature) **Ike Tavaraz** Date: **11/01/06** Time: **2:10**  
 RECEIVED BY: (Signature) **Ike Tavaraz** Date: **11/01/06** Time: **2:10**

RECEIVING LABORATORY: **ELI** STATE: **TX** ZIP: **79705**  
 ADDRESS: **1910 N. Big Spring St.** CITY: **Midland** PHONE: **(432) 682-4559**  
 CONTACT: **Ike Tavaraz** DATE: **11/01/06** TIME: **2:10**

SAMPLE CONDITION WHEN RECEIVED: **20** REMARKS: **Address w/labels**

MATRIX: **S-Solid** F-Water **0-Other** A-Liq **0-Other** SD-Solid **0-Other**

LABORATORY RECEIVED: **ELI** DATE: **11/01/06** TIME: **2:10**

Please fill out all copies - Laboratory retains yellow copy & Return original copy to Highlander Environmental Corp. - Project Manager/retains pink copy - Accounting receives Gold copy.

# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: Highlander  
 Date/ Time: 11/01/00 2:10  
 Lab ID #: 6K01017  
 Initials: ck

### Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	Yes	No	2.0 °C	
#2 Shipping container in good condition?	<del>Yes</del>	No		
#3 Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5 Chain of Custody present?	<del>Yes</del>	No		
#6 Sample instructions complete of Chain of Custody?	<del>Yes</del>	No		
#7 Chain of Custody signed when relinquished/ received?	<del>Yes</del>	No		
#8 Chain of Custody agrees with sample label(s)?	<del>Yes</del>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<del>Yes</del>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<del>Yes</del>	No		
#11 Containers supplied by ELOT?	<del>Yes</del>	No		
#12 Samples in proper container/ bottle?	<del>Yes</del>	No	See Below	
#13 Samples properly preserved?	<del>Yes</del>	No	See Below	
#14 Sample bottles intact?	<del>Yes</del>	No		
#15 Preservations documented on Chain of Custody?	<del>Yes</del>	No		
#16 Containers documented on Chain of Custody?	<del>Yes</del>	No		
#17 Sufficient sample amount for indicated test(s)?	<del>Yes</del>	No	See Below	
#18 All samples received within sufficient hold time?	<del>Yes</del>	No	See Below	
#19 VOC samples have zero headspace?	Yes	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- See attached e-mail/ fax
  - Client understands and would like to proceed with analysis
  - Cooling process had begun shortly after sampling event

1625 N. French Dr., Hobbs, NM 88240  
 District II  
 1301 W Grand Avenue, Artesia, NM 88210  
 District III  
 1000 Rio Brazos Road, Aztec, NM 87410  
 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources

Form C-141  
 Revised October 10, 2003

Oil Conservation Division  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

Submit 2 Copies to appropriate  
 District Office in accordance  
 with Rule 116 on back  
 side of form

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	COG Operating LLC	Contact	Phyllis Edwards
Address	550 W. Texas Ave, Ste 1300 Midland, TX 79701	Telephone No.	432-683-4340
Facility Name	Jalmat Yates Unit #12	Facility Type	Oil Well

Surface Owner	Mineral Owner	Lease No.	301048
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	25S	36E	330	North	330	East	Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release	produced oil & water leak	Volume of Release	3 BO & 10 BW	Volume Recovered	0 BO & 0 BW
Source of Release	wellhead leak - stuffing box	Date and Hour of Occurrence	9/13/06 time unknown	Date and Hour of Discovery	9/13/06 approx 2:00 PM NM time
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Gary Wink			
By Whom?	COG employee Boyd Chesser	Date and Hour	3:00 PM NM time		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
 Wellhead leak. Replace stuffing box.

Describe Area Affected and Cleanup Action Taken.\*  
 Leak on location and off location to the east (200' x 2'). Replaced stuffing box. Raked up oily dirt & piled up to be picked up & hauled off. Highlander Environmental will assess the leak area and will begin clean-up work the week of 9-18 to 9-22.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Phyllis A. Edwards</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Phyllis A. Edwards		Approved by District Supervisor: <i>ENGERS ENCE Johnson</i>	
Title: Regulatory Analyst	Approval Date: 9.11.07	Expiration Date: _____	
E-mail Address: pedwards@conchoresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 9/13/06	Phone: 432-685-4340		

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised June 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company: COG Operating LLC	Contact: Phyllis Edwards
Address: 550 W. Texas Ave., Suite 1300, Midland, Tx 79701	Telephone No. (432) 683-4340
Facility Name: Jalmat Yates Unit #12	Facility Type: Oil Well

Surface Owner Clay Osborn	Mineral Owner	Lease No. 301048
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**LOCATION OF RELEASE**

Unit Letter	Section\	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	25S	36E	330'	North	330'	East	Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release Produced Oil/Water	Volume of Release 3BO & 10BW	Volume Recovered 0 bbls
Source of Release Wellhead Leak - Stuffing Box	Date and Hour of Occurrence 09/13/06 time unknown	Date and Hour of Discovery 09-13-06 @ 2:00 PM NM Time
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Gary Wink	
By Whom? COG employee Boyd Chesser	Date and Hour 3:00 PM NM time	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
Wellhead leak. Replace stuffing box.

Describe Area Affected and Cleanup Action Taken.\*  
Leak on location and off location to the east (200' x 2'). Replaced stuffing box. Raked up oily dirt & piled up to be picked up & hauled off. Highlander assessed area and one to 2 feet of soil was scrapped and removed from impacted surface.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Phyllis A. Edwards</i>		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Phyllis A. Edwards		Approved by District Supervisor: <i>Phyllis A. Edwards</i>	
Title: Regulatory Analyst		Approval Date: 9.11.07	Expiration Date: _____
E-mail Address: pedwards@conchoresources.com		Conditions of Approval:	
Date: 3/15/07 Phone: (432) 685-4340		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary