Highlander Environmental Corp.

Midland, Texas

June 6, 2006

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

RE: Assessment and Closure Report for a Spill Located at the Pogo Producing Company, Federal 8 #1 Tank Battery, Unit Letter F, Section 8, Township 22 South, Range 32 East, Lea County, New Mexico

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to assess a spill, which occurred at the Pogo Federal 8 #1 Tank Battery (Site) located in Lea County, New Mexico. The Site is located in Unit Letter F, Section 8, Township 22 South, Range 32 East. The State of New Mexico Form C-141 (Initial) is included in Appendix C. The Site is shown on Figure 1.

Background

The leak was discovered on June 2, 2005 from a 1" nipple located on the bottom of a tank. All fluids were contained within the facility firewall. According to the Form C-141, approximately 147 barrels of oil and 14 barrels of water were released and approximately 110 barrels of oil and 5 barrels of water were recovered. The leak was repaired, the fluids removed with a vacuum truck and impacted soils were removed with a backhoe and hauled to Sundance Disposal. The spill area is shown on Figure 2.

Groundwater and Regulatory

According to published data, no water wells were located in Section 8. The closest water wells were located in Sections 14 and 19 with depths to water of 350' and 280', respectively. The closest well to the north has a reported depth to water of 630' and wells to the west reportedly have depths to water of approximately 450'. This groundwater data was obtained from the New Mexico State Engineer Office database, and the USGS NWIS Web database. Copies of the Well Reports are included in Appendix A.

Incident - nPAC0536320
application - pPAC0617336504
RP# 929

1910 N. Big Spring • Midland, Texas 79705 • (432) 682-4559 • Fax (432) 682-3946

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (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 recommended remedial action level (RRAL) for TPH is 5,000 mg/kg.

Previous Assessment

On June 9, 2005, Highlander personnel inspected the site and collected soil samples from the spill area. A total of four (4) auger holes were placed with a stainless steel bucket-type hand auger. Samples were collected to depths of 3.5' for evaluation of TPH by method EPA 8015 Modified, BTEX by method EPA 8021B and chloride by method EPA 300.0. The soil sample results are shown in Table 1. Auger hole locations are shown on Figure 2.

Referring to Table 1, the 0-1' samples collected from AH-1, AH-3 and AH-4 exceeded the RRAL for TPH. Additionally, vertical chloride impact was not defined in AH-2, AH-3 and AH-4.

On July 14, 2005, the site was re-inspected and the deeper auger hole samples were collected to attempt to define the TPH and chloride impact. The results are shown in Table 2. Referring to Table 2, TPH was confined to the surface shallow soils in AH-3 and AH-4, but was not delineated in AH-1. Additionally, BTEX was above the RRAL for the lower intervals of AH-1 and was not delineated. Chloride impact was not defined in AH-3 or AH-4.

On September 8, 2005, a hollow-stem auger rig was utilized to install three (3) soil borings to define the vertical extents of TPH, BTEX and chloride impact in the vicinity of AH-1, AH-3 and AH-4. The location of the soil borings is shown on Figure 2. Soil samples were collected at essentially 5' increments to a depth of 15' below ground surface. Selected soil samples were analyzed for TPH, BTEX and chloride. The results are summarized in Table 3.

Referring to Table 3, BTEX concentrations were below the RRAL in all samples analyzed. TPH concentrations appeared to decrease below the RRAL around 6'-7' below ground surface, and all chloride concentrations declined to levels of approximately 500 mg/kg or less with depth. The results were submitted to the NMOCD in an "Assessment and Work Plan..." dated November 2, 2005. The work plan was approved on November 21, 2005.

Remedial Activities and Results

On May 17, 2006, hydrocarbon and chloride impacted soils inside the facility dike were removed to depths of 1.0' to 2.0' bgs in the vicinity of AH-3, 1.0'bgs in the vicinity of AH-4, and 8.5' bgs in the vicinity of AH-1. Highlander personnel collected confirmatory soil samples of the

excavation bottom holes. The samples were submitted to Environmental Labs of Texas for analysis of TPH by method 8015M and BTEX by method 8021B. The excavation and sample locations are shown in Figure 3. The results of the sampling are shown in Table 4. The laboratory reports and the chain of custody documentation are enclosed in Appendix B.

Referring to Table 4, all confirmation samples (SP-1, SP-2 and SP-3) were well below the RRAL. Based on the data, the excavations were backfilled with clean fill material. In addition, the excavated soils were hauled offsite for proper disposal at Sundance Services.

Conclusions and Closure Request

All TPH and BTEX impacted soil above the RRAL have been excavated and hauled to disposal. The residual chloride impact has been vertically defined. The soil borings showed a distinct chloride concentration decline with depth at or below 500 mg/kg within the first 15' bgs. A search of available groundwater in the vicinity of this site revealed depths to groundwater in excess of 250'-350' below the surface. As such, the residual chloride impact does not appear to be an imminent threat to groundwater. Considering the limited areal extent and depth of impact, the depth to groundwater and the remediation performed at this facility, Pogo requests closure of this site. The State of New Mexico Form C-141 (Final) is included in Appendix C.

If you require any additional information or have any questions or comments concerning the assessment report, please call at (432) 682-4559.

Respectfully submitted,
Highlander Environmental Corp.

Timothy M. Reed, P.G.
Vice President

cc: Don Riggs – Pogo Producing Co.
Pat Ellis – Pogo Producing Co.

FIGURES

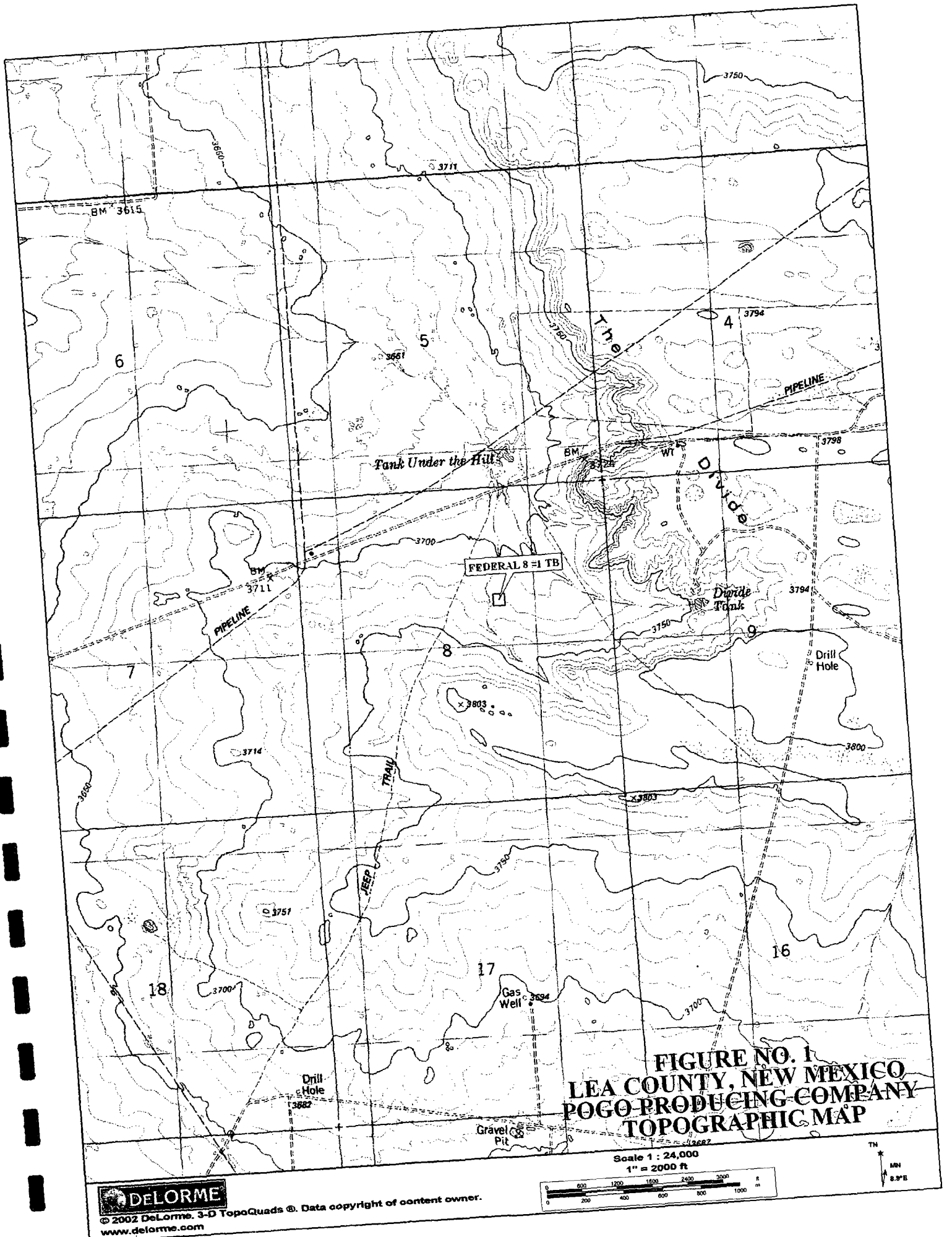
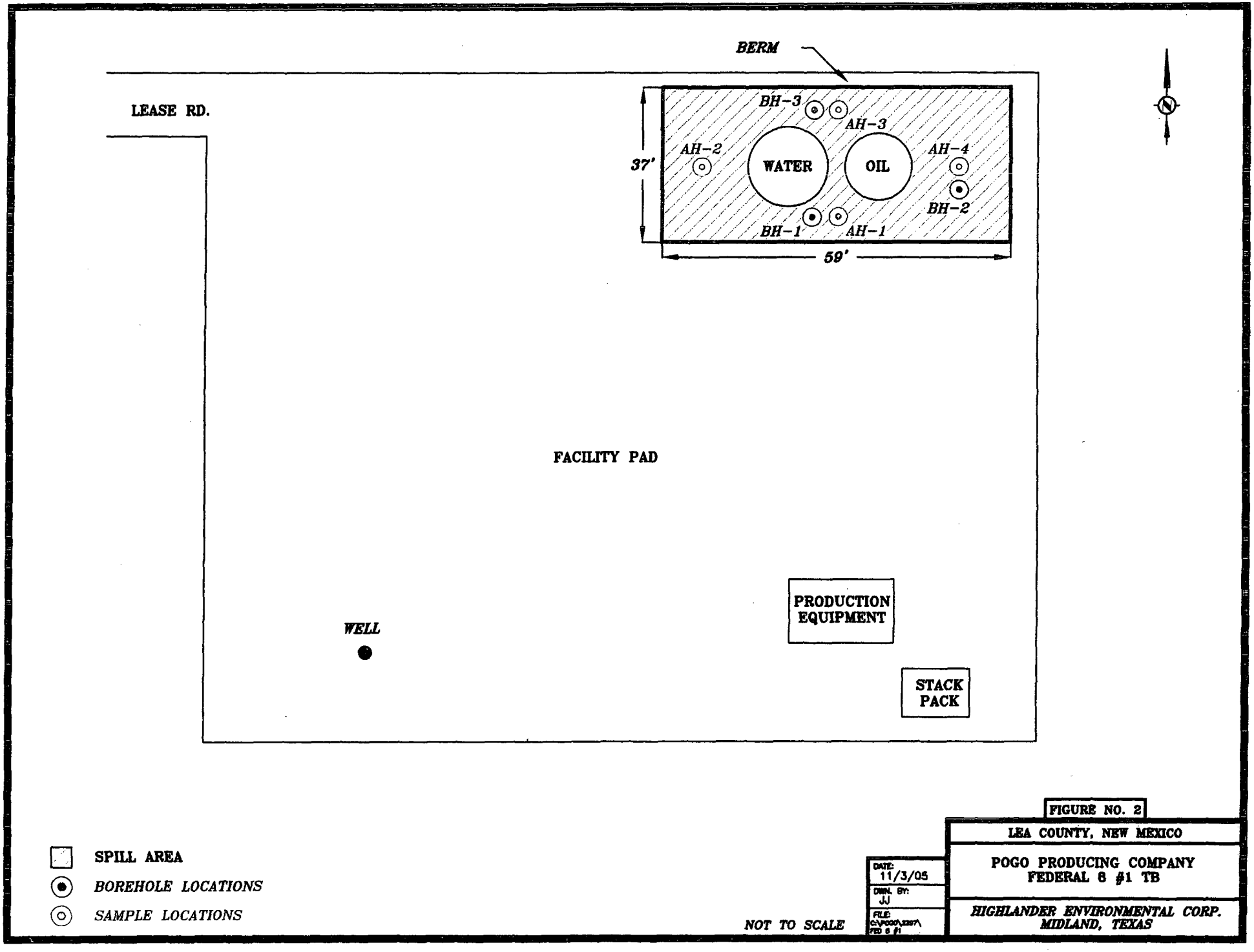


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP


BERM
LEASE RD.
BH-3
AH-3
AH-2
AH-4
37'
WATER
OIL
BH-2
BH-1
AH-1
59'
FACILITY PAD
PRODUCTION EQUIPMENT
WELL
STACK PACK
SPILL AREA
BOREHOLE LOCATIONS
SAMPLE LOCATIONS
NOT TO SCALE
DATE: 11/3/05
DWN. BY: JJ
FILE: C:\POGO\2287\FED 8 #1
FIGURE NO. 2
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
FEDERAL 8 #1 TB
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

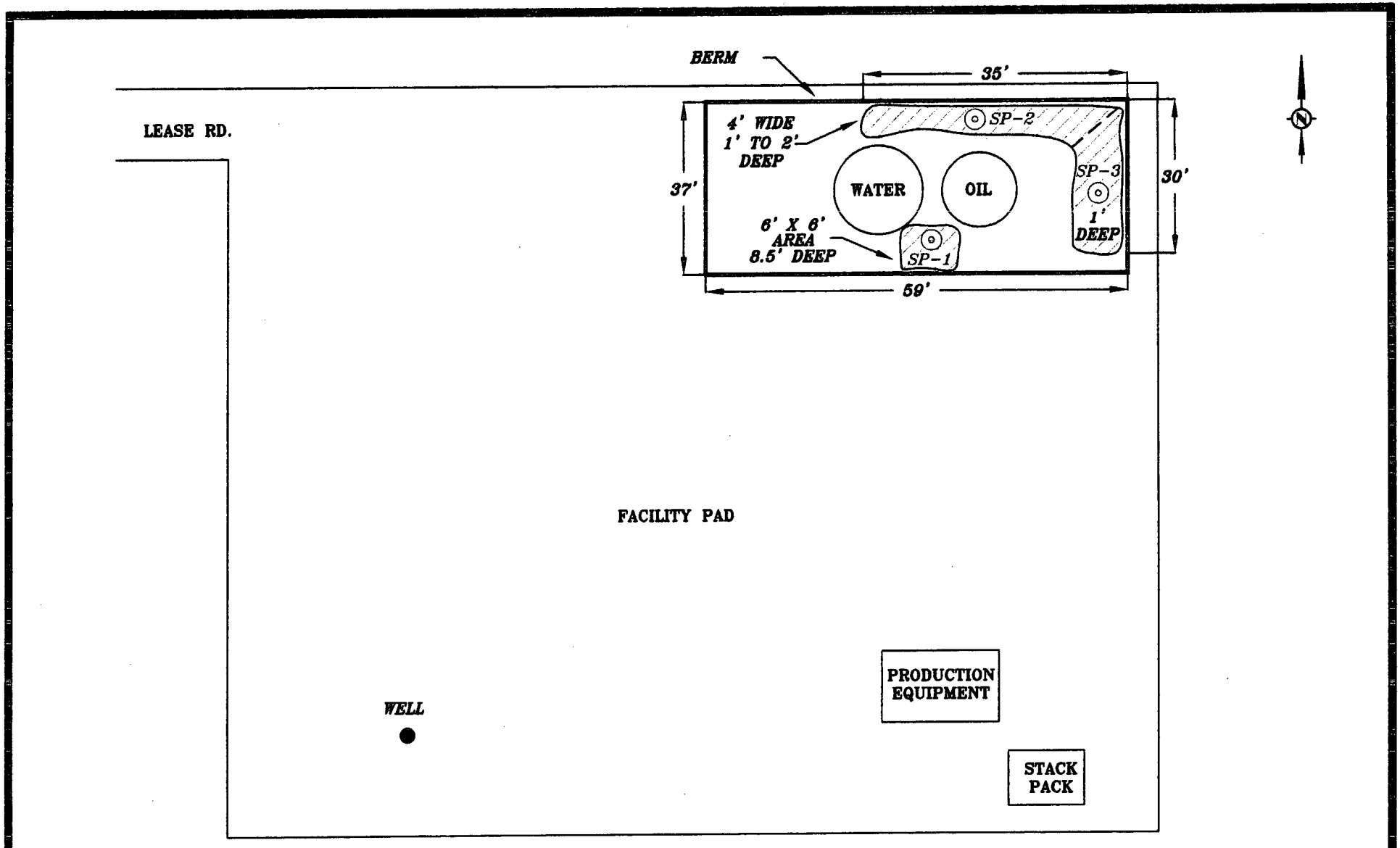


FIGURE NO. 3

LEA COUNTY, NEW MEXICO

POGO PRODUCING COMPANY
FEDERAL 8 #1 TB

DATE: 11/3/05
DWN. BY: JJ
FILE: C:\POGO\2307\FED 8 #1

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

TABLES

Table 1
Pogo Producing Company
Federal 8 #1 Tank Battery
Lea County, New Mexico

AUGER HOLE SAMPLE RESULTS

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	6/9/2005	0-1	2,870	2,260	5,130	0.147	1.90	0.353	16.4	2,400
	6/9/2005	1-1.5	-	-	-	-	-	-	-	948
	6/9/2005	2-2.5	-	-	-	-	-	-	-	511
	6/9/2005	3-3.5	-	-	-	-	-	-	-	573
AH-2	6/9/2005	0-1	2,620	1,690	4,310	0.0626	2.77	0.574	23.83	2,800
	6/9/2005	1-1.5	-	-	-	-	-	-	-	1,690
	6/9/2005	2-2.5	-	-	-	-	-	-	-	2,290
	6/9/2005	3-3.5	-	-	-	-	-	-	-	3,420
AH-3	6/9/2005	0-1	1,440	5,960	7,400	<0.025	0.403	0.230	1.358	4,760
	6/9/2005	1-1.5	-	-	-	-	-	-	-	3,470
	6/9/2005	2-2.5	-	-	-	-	-	-	-	2,920
	6/9/2005	3-3.5	-	-	-	-	-	-	-	3,900
AH-4	6/9/2005	0-1	2,660	3,670	6,330	0.0636	0.949	0.435	12.7	4,060
	6/9/2005	1-1.5	-	-	-	-	-	-	-	2,690
	6/9/2005	2-2.5	-	-	-	-	-	-	-	1,710
	6/9/2005	3-3.5	-	-	-	-	-	-	-	2,000

(-) Not Analyzed

Table 2
Pogo Producing Company
Federal 8 #1 Tank Battery
Lea County, New Mexico

AUGER HOLE SAMPLE RESULTS

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	7/14/2005	0-1	-	-	-	-	-	-	-	-
	7/14/2005	1-1.5	4,890	2,200	7,090	-	-	-	-	-
	7/14/2005	2-2.5	3,980	1,800	5,780	-	-	-	-	-
	7/14/2005	3-3.5	7,400	3,490	10,900	1.64	43.5	11.9	200.3	-
	7/14/2005	4-4.5	5,930	3,120	9,050	2.26	45.5	13.7	190.8	-
	7/14/2005	5-5.5	8,270	3,770	12,000	4.0	82.2	24.6	330.6	-
	7/14/2005	6-6.5	7,030	3,260	10,300	3.04	55.9	17.1	220.3	-
AH-2	7/14/2005	0-1	-	-	-	-	-	-	-	-
	7/14/2005	1-1.5	-	-	-	-	-	-	-	-
	7/14/2005	2-2.5	-	-	-	-	-	-	-	-
	7/14/2005	3-3.5	-	-	-	-	-	-	-	-
	7/14/2005	4-4.5	-	-	-	-	-	-	-	-
	7/14/2005	5-5.5	-	-	-	-	-	-	-	-
	7/14/2005	6-6.5	-	-	-	-	-	-	-	536
AH-3	7/14/2005	0-1	-	-	-	-	-	-		-
	7/14/2005	1-1.5	117	1,550	1,670	-	-	-	-	-
	7/14/2005	2-2.5	30.0	278	308	-	-	-	-	-
	7/14/2005	3-3.5	-	-	-	-	-	-	-	-
	7/14/2005	4-4.5	-	-	-	-	-	-	-	3,310
	7/14/2005	5-5.5	-	-	-	-	-	-	-	5,060
	7/14/2005	6-6.5	-	-	-	-	-	-	-	2,920

Table 2
Pogo Producing Company
Federal 8 #1 Tank Battery
Lea County, New Mexico

AUGER HOLE SAMPLE RESULTS

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-4	7/14/2005	0-1	-	-	-	-	-	-	-	-
	7/14/2005	1-1.5	467	887	1,350	-	-	-	-	-
	7/14/2005	2-2.5	14.3	41.6	55.9	-	-	-	-	-
	7/14/2005	3-3.5	-	-	-	-	-	-	-	-
	7/14/2005	4-4.5	-	-	-	-	-	-	-	1,320
	7/14/2005	5-5.5	-	-	-	-	-	-	-	2,570
	7/14/2005	6-6.5	-	-	-	-	-	-	-	3,080

(-) Not Analyzed

Table 3
Pogo Producing Company
Federal 8 #1 Tank Battery
Lea County, New Mexico

BOREHOLE SAMPLES

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
BH-1	9/8/2005	0-1	1,110	1,220	2,330	0.11	1.28	0.45	7.88	-
(Area of AH-1)	9/8/2005	3-3.5	2,270	1,440	3,710	0.175	3.28	1.29	20.47	-
	9/8/2005	5-6	3,800	1,830	5,630	-	-	-	-	897
	9/8/2005	10-11	27.6	59	86.6	<0.025	0.028	0.036	0.2408	614
	9/8/2005	13.0	-	-	-	-	-	-	-	415
BH-2	9/8/2005	0-1	697	1,670	2,370	-	-	-	-	2,460
(Area of AH-4)	9/8/2005	5-6	-	-	-	-	-	-	-	1,390
	9/8/2005	10-11	-	-	-	-	-	-	-	1,140
	9/8/2005	15.0	-	-	-	-	-	-	-	538
									-	
BH-3	9/8/2005	0-1	1,520	5,720	7,240	-	-	-	-	3,480
(Area of AH-3)	9/8/2005	5-6	-	-	-	-	-	-	-	493
	9/8/2005	10-11	-	-	-	-	-	-	-	660
	9/8/2005	15.0	-	-	-	-	-	-	-	105

(-) Not Analyzed

Table 4
Pogo Producing Company
Federal 8 #1 Tank Battery
Lea County, New Mexico

Excavation Sample Results

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
SP-1	5/17/2006	8.5	<10.0	48.1	48.1	<0.025	<0.025	<0.025	<0.025	-
SP-2	5/17/2006	1.5	<10.0	<10.0	<10.0	<0.025	<0.025	<0.025	<0.025	-
									-	
SP-3	5/17/2006	1.0	1,780	1,620	3,400	<0.025	0.186	0.832	5.51	-
					-					

(-) Not Analyzed

APPENDIX A

Groundwater Levels and Well Reports

Water Well - Average Depth to Groundwater

21 South 30 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

21 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16 630	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16 448	15	14	13
19	20 47	21	22	23	24
30	29 413	28 444	27	26	25
31	32	33	34	35	36

22 South 32 East

6	5	4	3	2	1
7	8 Site	9	10	11	12
18	17	16	15	14 350	13
19 280	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

22 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

23 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

23 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 400	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

23 South 33 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

150 Average depth to groundwater (ft)
New Mexico Office of State Engineer Well Reports

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 322314103384301

Save file of selected sites to local disk for future upload

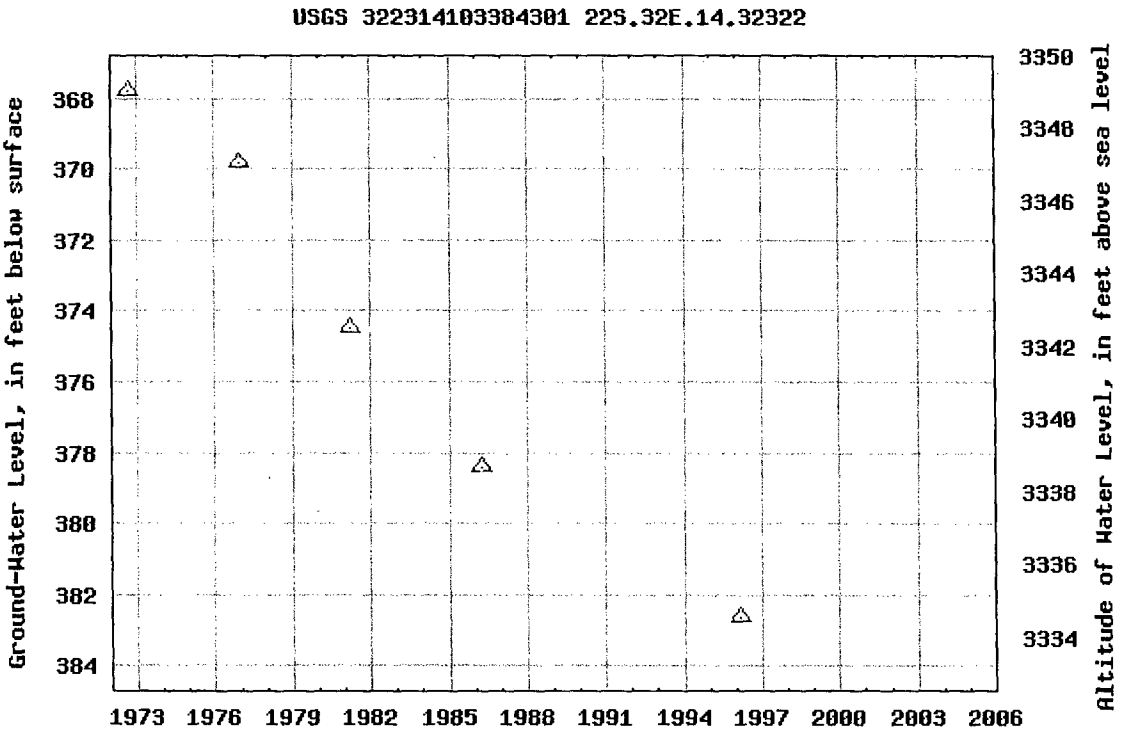
USGS 322314103384301 22S.32E.14.32322

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code
Latitude 32°23'14", Longitude 103°38'43" NAD27
Land-surface elevation 3,717.00 feet above sea level NGVD29
The depth of the well is 435 feet below land surface.
This well is completed in the SANTA ROSA SANDSTONE (231SNRS) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.
Download a presentation-quality graph

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 22S Range: 32E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report | Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 07/08/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	22S	32E	14				2	340	360	350
C	22S	32E	19				1	280	280	280

Record Count: 3

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 22S Range: 31E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report | Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 07/08/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	22S	31E	16				1	448	448	448
C	22S	31E	20				3	45	48	47
C	22S	31E	28				8	401	450	444
C	22S	31E	29				1	413	413	413

Record Count: 13

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 23S Range: 32E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report
Water Column Report
Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 07/08/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	23S	32E	21				1	400	400	400

Record Count: 1

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 21S Range: 31E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic
◉ All

Well / Surface Data Report | Avg Depth to Water Report
Water Column Report
Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 07/08/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	21S	31E	16				1	630	630	630

Record Count: 1

APPENDIX B

Analytical Reports

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Pogo/ Federal 8 #1 TB

Project Number: 2397

Location: Lea County, NM

Lab Order Number: 6E22002

Report Date: 05/25/06

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1 8.5' Bottom	6E22002-01	Soil	05/17/06 00:00	05/19/06 16:55
SP-2 1.5' Bottom	6E22002-02	Soil	05/17/06 00:00	05/19/06 16:55
SP-3 1.0' Bottom	6E22002-03	Soil	05/17/06 00:00	05/19/06 16:55

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1 8.5' Bottom (6E22002-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE62308	05/24/06	05/24/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*106 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	**J [8.19]**	10.0	mg/kg dry	1	EE62225	05/22/06	05/23/06	EPA 8015M	J
Carbon Ranges C12-C28	**48.1**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	**48.1**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.0 %*	*70-130*		"	"	"	"	
SP-2 1.5' Bottom (6E22002-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE62308	05/24/06	05/24/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*107 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EE62225	05/22/06	05/23/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*93.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.4 %*	*70-130*		"	"	"	"	
SP-3 1.0' Bottom (6E22002-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EE62308	05/24/06	05/24/06	EPA 8021B	
Toluene	**0.186**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.832**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**2.14**	0.0250	"	"	"	"	"	"	
Xylene (o)	**3.37**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*126 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*380 %*	*80-120*		"	"	"	"	*S-04*
Carbon Ranges C6-C12	**1780**	10.0	mg/kg dry	1	EE62225	05/22/06	05/23/06	EPA 8015M	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-3 1.0' Bottom (6E22002-03) Soil									
Carbon Ranges C12-C28	**1620**	10.0	mg/kg dry	1	EE62225	05/22/06	05/23/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	**3400**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*121 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*94.0 %*	*70-130*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1 8.5' Bottom (6E22002-01) Soil									
% Moisture	**6.5**	0.1	%	1	EE62301	05/22/06	05/23/06	% calculation	
SP-2 1.5' Bottom (6E22002-02) Soil									
% Moisture	**7.3**	0.1	%	1	EE62301	05/22/06	05/23/06	% calculation	
SP-3 1.0' Bottom (6E22002-03) Soil									
% Moisture	**20.3**	0.1	%	1	EE62301	05/22/06	05/23/06	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62225 - Solvent Extraction (GC)										
Blank (EE62225-BLK1)				Prepared: 05/22/06 Analyzed: 05/23/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbon nC6-nC35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*64.6*		*mg/kg*	*50.0*		*129*	*70-130*			
Surrogate: 1-Chlorooctadecane	*64.8*		*"*	*50.0*		*130*	*70-130*			
LCS (EE62225-BS1)				Prepared: 05/22/06 Analyzed: 05/23/06						
Carbon Ranges C6-C12	449	10.0	mg/kg wet	500		89.8	75-125			
Carbon Ranges C12-C28	498	10.0	"	500		99.6	75-125			
Total Hydrocarbon nC6-nC35	947	10.0	"	1000		94.7	75-125			
Surrogate: 1-Chlorooctane	*51.2*		*mg/kg*	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*46.8*		*"*	*50.0*		*93.6*	*70-130*			
Calibration Check (EE62225-CCV1)				Prepared: 05/22/06 Analyzed: 05/23/06						
Carbon Ranges C6-C12	263		mg/kg	250		105	80-120			
Carbon Ranges C12-C28	279		"	250		112	80-120			
Total Hydrocarbon nC6-nC35	542		"	500		108	80-120			
Surrogate: 1-Chlorooctane	*51.3*		*"*	*50.0*		*103*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.9*		*"*	*50.0*		*104*	*70-130*			
Matrix Spike (EE62225-MS1)	**Source: 6E22002-01**			Prepared: 05/22/06 Analyzed: 05/23/06						
Carbon Ranges C6-C12	629	10.0	mg/kg dry	535	8.19	116	75-125			
Carbon Ranges C12-C28	627	10.0	"	535	48.1	108	75-125			
Total Hydrocarbon nC6-nC35	1260	10.0	"	1070	48.1	113	75-125			
Surrogate: 1-Chlorooctane	*57.3*		*mg/kg*	*50.0*		*115*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.6*		*"*	*50.0*		*101*	*70-130*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62225 - Solvent Extraction (GC)										
Matrix Spike Dup (EE62225-MSD1)	**Source: 6E22002-01**			Prepared: 05/22/06 Analyzed: 05/23/06						
Carbon Ranges C6-C12	633	10.0	mg/kg dry	535	8.19	117	75-125	0.634	20	
Carbon Ranges C12-C28	640	10.0	"	535	48.1	111	75-125	2.05	20	
Total Hydrocarbon nC6-nC35	1270	10.0	"	1070	48.1	114	75-125	0.791	20	
Surrogate: 1-Chlorooctane	*57.4*		*mg/kg*	*50.0*		*115*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.4*		*"*	*50.0*		*103*	*70-130*			
Batch EE62308 - EPA 5030C (GC)										
Blank (EE62308-BLK1)				Prepared & Analyzed: 05/23/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*42.7*		*ug/kg*	*40.0*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.8*		*"*	*40.0*		*112*	*80-120*			
LCS (EE62308-BS1)				Prepared & Analyzed: 05/23/06						
Benzene	1.08	0.0250	mg/kg wet	1.25		86.4	80-120			
Toluene	1.12	0.0250	"	1.25		89.6	80-120			
Ethylbenzene	1.28	0.0250	"	1.25		102	80-120			
Xylene (p/m)	2.73	0.0250	"	2.50		109	80-120			
Xylene (o)	1.38	0.0250	"	1.25		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	*46.3*		*ug/kg*	*40.0*		*116*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*45.4*		*"*	*40.0*		*114*	*80-120*			
Calibration Check (EE62308-CCV1)				Prepared: 05/23/06 Analyzed: 05/25/06						
Benzene	43.2		ug/kg	50.0		86.4	80-120			
Toluene	43.7		"	50.0		87.4	80-120			
Ethylbenzene	56.7		"	50.0		113	80-120			
Xylene (p/m)	101		"	100		101	80-120			
Xylene (o)	51.3		"	50.0		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.5*		*"*	*40.0*		*98.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.2*		*"*	*40.0*		*100*	*80-120*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EE62308 - EPA 5030C (GC)										
Matrix Spike (EE62308-MS1)	**Source: 6E22002-01**			Prepared: 05/23/06 Analyzed: 05/24/06						
Benzene	1.08	0.0250	mg/kg dry	1.34	ND	80.6	80-120			
Toluene	1.21	0.0250	"	1.34	ND	90.3	80-120			
Ethylbenzene	1.45	0.0250	"	1.34	ND	108	80-120			
Xylene (p/m)	2.98	0.0250	"	2.67	ND	112	80-120			
Xylene (o)	1.52	0.0250	"	1.34	ND	113	80-120			
Surrogate: a,a,a-Trifluorotoluene	*42.4*		*ug/kg*	*40.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.6*		*"*	*40.0*		*112*	*80-120*			
Matrix Spike Dup (EE62308-MSD1)	**Source: 6E22002-01**			Prepared: 05/23/06 Analyzed: 05/25/06						
Benzene	1.09	0.0250	mg/kg dry	1.34	ND	81.3	80-120	0.865	20	
Toluene	1.15	0.0250	"	1.34	ND	85.8	80-120	5.11	20	
Ethylbenzene	1.31	0.0250	"	1.34	ND	97.8	80-120	9.91	20	
Xylene (p/m)	2.87	0.0250	"	2.67	ND	107	80-120	4.57	20	
Xylene (o)	1.43	0.0250	"	1.34	ND	107	80-120	5.45	20	
Surrogate: a,a,a-Trifluorotoluene	*42.2*		*ug/kg*	*40.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*42.6*		*"*	*40.0*		*106*	*80-120*			

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

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
Batch EE62301 - General Preparation (Prep)										
Blank (EE62301-BLK1)				Prepared: 05/22/06 Analyzed: 05/23/06						
% Solids	100		%							
Duplicate (EE62301-DUP1)		**Source: 6E19007-01**		Prepared: 05/22/06 Analyzed: 05/23/06						
% Solids	99.2		%		99.2			0.00	20	
Duplicate (EE62301-DUP2)		**Source: 6E22003-01**		Prepared: 05/22/06 Analyzed: 05/23/06						
% Solids	93.9		%		93.4			0.534	20	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ Federal 8 #1 TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2397	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	05/25/06 11:30

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
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: Raland K Tuttle Date: 5/25/2006

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.

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

PAGE: 1 OF: 1

CLIENT NAME: POGO

SITE MANAGER: Ike Tavarez

PROJECT NO.: 2397

PROJECT NAME: POGO / Federal 8 #1 TB
Lea County, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8260/8021	8015 MOD. TPH	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GCMS Vol. 8240/8260/624	GCMS Semi Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
01	5-17-06		S		1	Sp-1 8.5', bottom	1				1		X		X														
02	5-17-06		S		1	Sp-2 1.5, bottom.	1				1		X		X														
03	5-17-06		S		1	Sp-3 1.0, bottom.	1				1		X		X														
04	5-17-06		S		1	Sp-3 1-1.5 BEB	1				1																		
05	5-17-06		S		1	Sp-3 2-2.5 BEB	1				1																		

RELINQUISHED BY: (Signature) — Date: 5-19-06 Time: 1455 — RECEIVED BY: (Signature) — Date: — Time:

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

RELINQUISHED BY: (Signature) — Date: — Time: — RECEIVED BY: (Signature) — Date: — Time:

SAMPLED BY: (Print & Sign) Ike Tavarez — Date: — Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: ELT
ADDRESS:
CITY: Odessa STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: 05-19-06 TIME: 1655

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass w/labels no seals

MATRIX: W-Water A-Air SD-Solid (S-Soil) SL-Sludge O-Other

REMARKS:

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: 5/19/06 16:55

Order #: 6E12002

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

APPENDIX C

State of New Mexico
Form C - 141

PAT Ellis

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

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: Pogo Producing Co.	Contact: Pat Ellis
Address: P.O. Box 10340 Midland TX 79702.	Telephone No.: 432-685-8100
Facility Name: Federal 8 #1	Facility Type: Tank Battery

Surface Owner	Mineral Owner	Lease No.
BLM	BLM	NM 90586

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	8	22S	32E	1980	FNL	1980	FEL	LEA

NATURE OF RELEASE

Type of Release: Oil & Water	Volume of Release: 147 Bo / 14 Bw — Volume Recovered: 110 Bo / 5 Bw
Source of Release: 1" Nipple in Tank	Date and Hour of Occurrence: 9:30 AM 6/2/05 — Date and Hour of Discovery: 6/2/05 9:30 AM
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	If YES, To Whom? Buddy Hill
By Whom? Clay Osborn	Date and Hour: 10:30 AM 6/2/05
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.

If a Watercourse was Impacted, Describe Fully: (Attach Additional Sheets If Necessary)

N/A

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

1" Nipple Leaked on Bottom of Tank. All Fluids were IN Side of Fire Wall

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary) VAC Truck Picked up Fluids Tank was Repaired and Fluids Put Back into Tank. Backhoe Picking contaminated Soil and Haul To Sundance Land Farm

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: Clay Osborn

Printed Name: Clay Osborn

Title: Field Foreman

Date: 6/2/05 Phone: 432-631-6124

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Approval Date: Expiration Date:

Conditions of Approval: Attached ☐

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: Pogo Producing Company	Contact: Pat Ellis
Address: 300 North Marienfeld, Suite 600, Midland TX 79701	Telephone No. (432) 685-8100
Facility Name: Federal 8 #1	Facility Type: Tank Battery

Surface Owner BLM	Mineral Owner BLM	Lease No.

LOCATION OF RELEASE

Unit Letter	Section\	Township	Range	Feet from the	North Line	Feet from the	East Line	County
F	8	22S	32E	1980'		1980'		Lea

NATURE OF RELEASE

Type of Release Oil and produced water	Volume of Release 147 bbl oil, 14 bbl water	Volume Recovered 110 BO, 5 BW
Source of Release 1" nipple in tank.	Date and Hour of Occurrence 9:30 am, 6/2/05	Date and Hour of Discovery 9:30 am, 6/02/05
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Buddy Hill	
By Whom? Clay Osborn	Date and Hour 10:30 am, 6/2/05	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
A 1" nipple leaked on the bottom of a tank. All fluids were contained within the facility firewall.

Describe Area Affected and Cleanup Action Taken.*
A vacumm truck picked up the fluids, the tank was repaired and fluids were placed back into the tank. The site was assessed by Highlander Environmental Corp. A backhoe was used to remove impacted soils. Excavated soils were hauled to Sundance Services for disposal. Grab-type confirmation samples were collected.

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: Patrick L. Ellis	OIL CONSERVATION DIVISION
Printed Name: Pat Ellis	Approved by District ~~Supervisor~~: ENVIRO ENGR
Title: Division Environmental Safety & Health Supervisor	Approval Date: 6.21.06 / Expiration Date: —
E-mail Address: EllisP@pogoproducing.com	Conditions of Approval: — / Attached ☐
Date: 6/06/06 Phone: (432) 685-8100	

Attach Additional Sheets If Necessary

SITE INFORMATION

CLOSURE REPORT

General Site Information:	
Site:	**Federal 8 #1 Tank Battery**
Company:	**Pogo Producing Company**
Section, Township and Range	**Section 8, Township 22S, Range 32E**
Unit Letter:	**F**
Lease Number:	**NM90586**
County:	**Lea**
GPS:	**32-24-29.5 N / 103-41-40.1 W**
Surface Owner:	**BLM**
Mineral Owner:	**BLM**
Directions:	From Jal, New Mexico at the intersection of 18 & 128 take 128 West for 36 miles
	past mile marker 18. Take right on red road and travel 8.7 miles, road will merge
	with CR 29, travel 1.7 mile. Take right on to lease road and travel 1.2 miles. Road
	will T, take left at T and travel 7.0 mile to tank battery.

Release Data:	
Date Released:	6/2/2005
Type Release:	Oil & Water
Source of Contamination:	1" nipple in tank
Fluid Released:	147 barrels oil / 14 barrels water
Fluids Recovered:	110 barrels oil / 5 barrels water

Official Communication:			
Name:	Pat Ellis	Don Riggs	Ike Tavarez
Company:	Pogo Producing Company	Pogo Producing Company	Highlander Environmental Corp.
Address:	300 N. Marienfeld St.	5 Greenway Plaza, Suite 2700	1910 N. Big Spring
P.O. Box	Box 10340		
City:	Midland Texas, 79701-7340	Houston, Texas 77046	Midland, Texas
Phone number:	(432) 685-8100	(713) 297-5045	(432) 682- 4559
Email:	EllisP@pogoproducing.com	riggsd@pogoproducing.com	itavarez@hec-enviro.com

Ranking Criteria		
Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	**0**	*0*
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	
Water Source >1,000 ft., Private >200 ft.	***0***	*0*
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	
200 ft - 1,000 ft.	10	
>1,000 ft.	**0**	0
Total Ranking Score:	**0**	

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	50	5,000