Highlander Environmental Corp.

Midland, Texas

October 18, 2006

RP# 746

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

API# 3002508194 0000

RE: Closure Report for the Pogo Producing Company, Cotton Draw Unit #3 Injection Well, Spill Investigation, Located in the NE/4 of Section 16, Township 25 South, Range 32 East, Unit Letter H, Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to assess a spill on the Cotton Draw Unit #3 Injection Well, located in the NE/4 of Section 16, Township 25 South, Range 32 East, Lea County, New Mexico (Site). The site coordinates are N 32° 07' 53.7", W 103° 40' 23.8". The State of New Mexico C-141 (Initial) is included in Appendix C. The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 report, the spill occurred on December 11, 2005, from a leak of a steel injection pipeline. The injection line leak occurred approximately 200' southeast of the injection well #3 in a pasture. The spill released 23 barrels of produced water and none was recovered. In the pasture, the spill affected an area of approximately 90' x 15'. Some produced water migrated onto the lease road measuring 2' to 3' wide by 200' long.

Groundwater and Regulatory

Neither the New Mexico State Engineer Office's database nor USGS database show wells in Section 16, however, one well in Section 32 had reported a depth of 290' below ground surface. In the surrounding Townships and Ranges, most of the wells showed depths to groundwater greater than 200' below surface. The New Mexico State Engineer and USGS well reports are included in Appendix A. 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 upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Previous Assessment and Corrective Action

From January 10 -13, 2006, Highlander supervised the excavation of impacted soils. The impacted area (pasture) was excavated to a depth of approximated 3.0' below surface. The spill area and excavated area are shown on Figure 2. The excavated soils were transported to Sundance Services, Inc. for disposal. The spill on the lease road was scraped and back dragged with a backhoe. On January 13, 2006, Highlander collected soil samples from the excavated area using a backhoe. A total of four (4) trenches were installed to collected soil samples for analysis of TPH by EPA method 8015 modified, BTEX by EPA method 8021B and chloride by EPA method 300.0. The results of the sampling are shown in Table 1.

Referring to Table 1, the bottom hole samples (0-1') were below the RRAL for TPH and BTEX. The chloride concentrations ranged from 192 mg/kg (T-2) to 10,100 mg/kg (T-4). Deeper samples were collected using the backhoe in an attempt to define the vertical extents. With the exception of T-3, chloride impact was vertically defined at 3' to 4' below the bottom of the excavation. T-3, located at the source area, showed a chloride concentration of 2,790 mg/kg at 8.0' below the bottom of excavation. The area of T-3 will need to be assessed further to define the vertical extent.

The results of the assessment work were presented to the NMOCD in an Assessment Report and Work Plan dated February 17, 2006. The work plan called for installation of one soil boring in the vicinity of T-3.

Borehole Installation

On October 10, 2006, a borehole (BH-1) was installed in the vicinity of trench T-3 to define the vertical extent of chloride impact. The borehole was installed using a hollow-stem auger rig. Soil samples were collected at 5 foot intervals below the known impact depth during drilling operations. The soil samples were placed into laboratory supplied containers and delivered to the laboratory under chain-of-custody control for chloride analysis by EPA method 9253. Following completion of the drilling activities, the borehole was grouted to surface.

BH-1 was advanced to a total depth of 31' below ground surface. Chloride concentrations declined with depth to 142 mg/kg at 30'-31' below ground surface. The borehole location is shown on Figure 2. Laboratory reports and chain of custody documentation are included in Appendix B.

Conclusions

The impacted area was excavated to a depth of approximated 3.0' below surface. The hydrocarbon impact did not exceed the RRAL for TPH or BTEX in any of the samples analyzed. In the area of trench T-3, the chloride impact was defined and declines with depth to 142 mg/kg at 30'-31' below surface. Chloride impact was vertically defined in trenches T-1, T-2 and T-4 at depths of 1.0' to 4.0' below excavation bottom. Based on the depth to groundwater and the results

of the assessment, the residual chloride concentrations do not appear to be an imminent threat to groundwater.

Based upon the corrective action performed and the results of the assessment work performed at this site, Pogo requests closure of this site. A copy of the C-141 (Final) is included in Appendix C. If you require any additional information or have any questions or comments concerning the assessment/closure report, please call at (432) 682-4559.

Respectfully submitted,
HIGHLANDER ENVIRONMENTAL CORP.

Tim Reed

Timothy M. Reed, P.G.
Vice President

cc: Don Riggs – Pogo
Pat Ellis - Pogo

Table 1
Pogo Producng Company
Cottton Draw Unit #3, Injection Line Leak
Lea County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft) (BEB)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
T-1	1/13/2005	0-1	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	1550
T-1	1/13/2005	2	-	-	-	-	-	-	-	46.8
T-1	1/13/2005	3	-	-	-	-	-	-	-	299
T-2	1/13/2005	0-1	<10	<10	<10	<0.025	<0.025	<0.025	0.0282	192
T-2	1/13/2005	2	-	-	-	-	-	-	-	190
T-2	1/13/2005	3	-	-	-	-	-	-	-	270
T-3	1/13/2005	0-1	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	6640
T-3	1/13/2005	2	-	-	-	-	-	-	-	10,600
T-3	1/13/2005	3	-	-	-	-	-	-	-	10,900
T-3	1/13/2005	4.5	-	-	-	-	-	-	-	9,660
T-3	1/13/2005	6	-	-	-	-	-	-	-	6,380
T-3	1/13/2005	8	-	-	-	-	-	-	-	2,790
BH-1	10/10/2006	10-11	-	-	-	-	-	-	-	3,910
BH-1	10/10/2006	15-16	-	-	-	-	-	-	-	2,380
BH-1	10/10/2006	20-21	-	-	-	-	-	-	-	2,470
BH-1	10/10/2006	25-26	-	-	-	-	-	-	-	596
BH-1	10/10/2006	30-31	-	-	-	-	-	-	-	142
T-4	1/13/2005	0-1	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	10,100
T-4	1/13/2005	2	-	-	-	-	-	-	-	11,500
T-4	1/13/2005	3	-	-	-	-	-	-	-	2,470
T-4	1/13/2005	4	-	-	-	-	-	-	-	445

(-) Not Analyzed
Sample Depths (ft) - Below Bottom Excavation

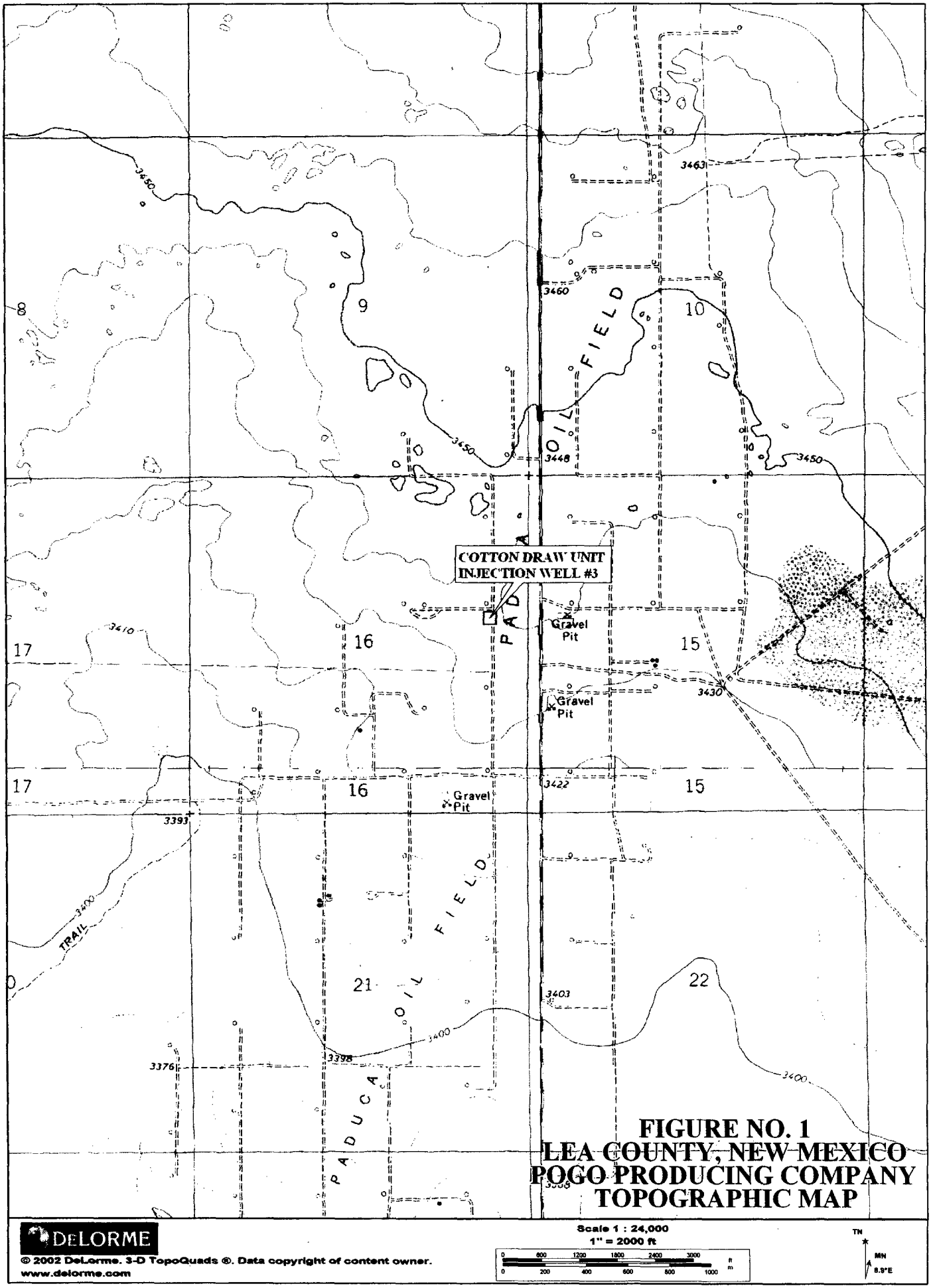

FIGURE NO. 1
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP

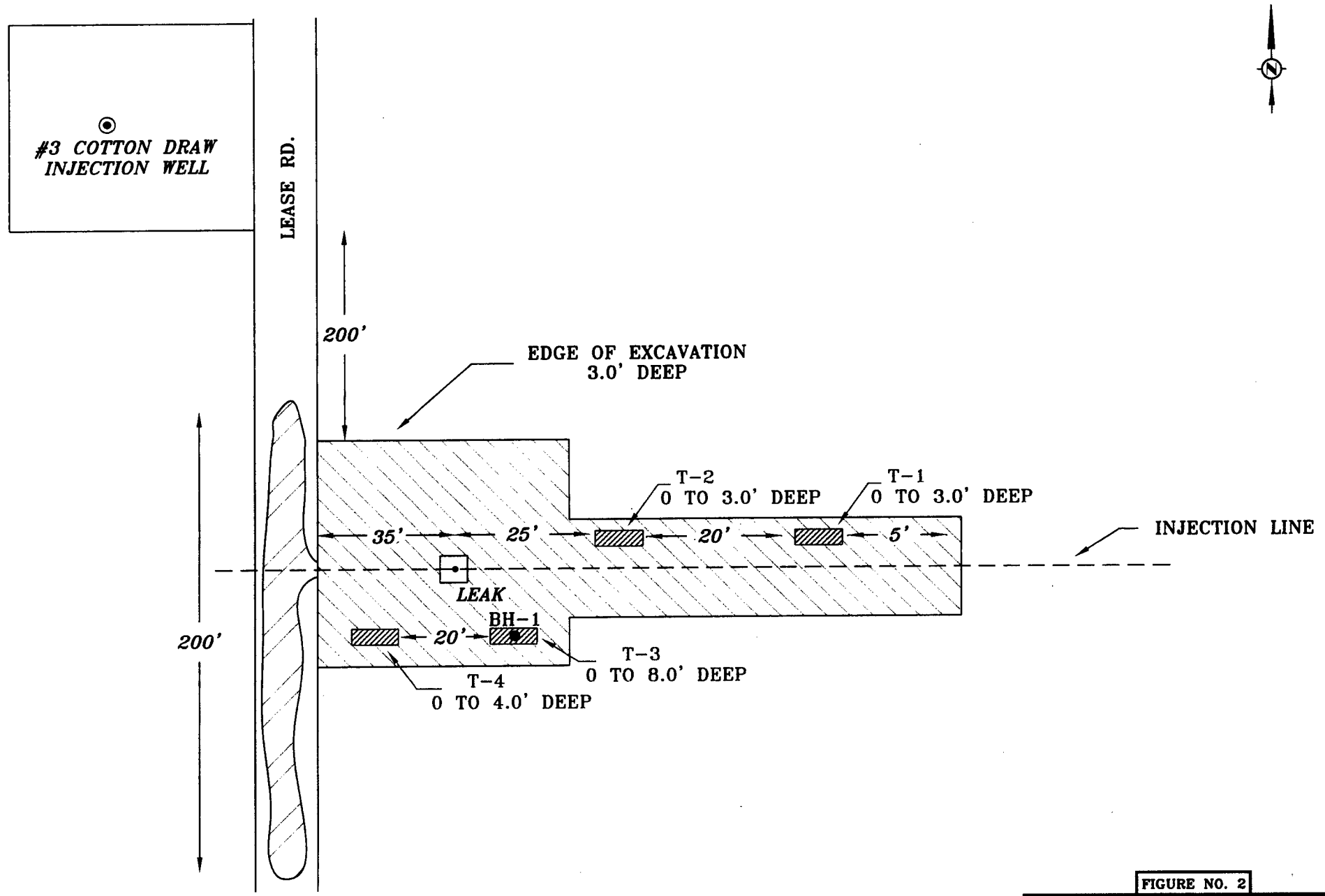

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

POGO PRODUCING COMPANY
COTTON DRAW INJECTION WELL #3

DATE: 2/20/06
DWN. BY: JJ
FILE: C:\P000\2537\COTTON DRAW

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

Water Well - Average Depth to Groundwater

Pogo - Cotton Draw Unit #3, Lea County, New Mexico

24 South 31 East

6	5	4	3	2 192	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

24 South 32 East

6	5	4	3	2	1
7	8	9	10 **31.1**	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33 **313**	34	35	36

24 South 33 East

6	5	4	3	2	1
7	8	9	10 **24.6**	11	12
18	17	16	15	14	13
19	20	21	22	23 **208**	24 **16.9**
30	29	28	27	26	25
31	32	33 **93.2**	34	35	36

25 South 31 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 390	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	**16** **SITE**	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32 290	33	34	35	36

25 South 33 East

6	5	4	3 172	2	1
7	8	9	10	11 140	12 200
18	17	16	15	14	13
19	20 **200**	21 120	22	23	24
30	29	28	27 125	26	25
31 **257**	32	33	34	35	36

26 South 31 East

6	5	4	3	2	1 335
7	8 295	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

26 South 32 East

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21 333	22	23	24
30	29	28	27	26	25
31 295	32	33	34	35	36

26 South 33 East

6	5	4	3 **180**	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 State Engineer Well Reports

56 Groundwater Depth (ft) - Geology and Groundwater Conditions in Southern Lea County, New Mexico (Report 6)

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 25S 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 12/09/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
L	25S	32E	32				1	290	290	290

Record Count: 1

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 25S 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 12/09/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	25S	31E	21				1	390	390	390

Record Count: 1

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 26S Range: 33E 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 12/09/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	26S	33E	03				7	160	180	172
C	26S	33E	11				2	135	145	140
C	26S	33E	12				1	200	200	200
C	26S	33E	21				1	120	120	120
C	26S	33E	27				1	125	125	125

Record Count: 12

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 24S 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 12/09/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	24S	31E	02				3	160	212	192

Record Count: 3

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 26S 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 12/09/2005

							(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	26S	31E	01				1	335	335	335
C	26S	31E	08				3	292	300	295

Record Count: 4

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 26S 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 12/09/2005

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
C	26S	32E	21				2	260	405	333
C	26S	32E	31				1	295	295	295

Record Count: 3

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Depth below land surface (feet)	Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
22.37.21.421	—	To(?)	—	3,360	62.0	9- -53	—	4½	N	N	—
22.331	Skelly Oil Co.	To(?)	115±	3,350	69.0	9-29-53	1949	—	Ti	In,D	Skelly Eunice Plant 1, well 12. EY 40 gpm.
23.233	Leo Sims	Qal	77M	3,345	55.0	10-14-53	—	14	N	N	Open and uncased.
23.441	O. I. Boyd	Qal	70±	3,335	55.3	10-12-53	—	—	Lw	S	Dug.
23.441a	do.	Qal	70±	3,335	55.2	10-12-53	—	7½	N	N	—
24.133a	G. Sims	Qal	127M	3,322	59.3	4-21-56	—	10	Li	N	—
24.133b	do.	Qal	80	—	—	—	—	—	Lw	N	Chemical analysis in table 8.
25.313	Marshal Drinkard	Qal	69M	3,300	50.1	10-14-53	1945	13½	N	N	—
27.334b	Skelly Oil Co.	Qal	127M	3,335	54.4	9- -53	—	8½	N	N	Skelly Eunice Plant 1, well 9.
27.410	do.	To?	182	—	—	—	—	7	Te	In,D	EY 25 gpm. Perforations 150-170 feet.
22.37.28.323	Clower Drilling Co.	Qal	—	3,353	66.1	9- -53	—	9¼	N	N	—
34.221	Humble Oil Co.	Qal and Tr	229	3,520	—	—	1938	—	—	In	WBZ 58-61 feet, 138-146 feet, 185-192 feet. EY 22 gpm.
36.141a	Tom Linebury	Qal	40	3,300	32.2	10-12-54	—	—	Lw	S	—
36.141b	do.	Qal	46	3,300	31.1	6- 3-55	—	6	N	N	—
22.38.18.234	The Texas Co.	Tr	386M	3,360	180	10- -53	1953	—	Li	In	WBZ gray sand, 325-380 feet. EY 20 gpm.
19.222	do.	Tr	—	3,365	146.0	10-14-53	—	7	N	N	—
23.32.4.222	C. H. and W. O. James	Tr	550	3,630	—	—	1931	8	Lw	S	EY 10 gpm.
21.222	Frank and Charles James	Tr	550	3,700	500	—	—	8	Li	S	—
23.33.12.322	San Simon Ranch	Tr	400	3,685	—	—	1953	—	Lw	S	WBZ 370-400 feet.
23.33.28.334	Brinninstool	Tr	575	3,675	500	—	—	—	Lw	D,S	EY 2.5 gpm.
23.34.1.444	San Simon Ranch	Qal	144±M	3,360	137.3	11-25-53	—	6	N	N	—
31.340	Continental Oil Co.	Tr	678	3,620	—	—	1953	8	Li	In	EY 47 gpm. Chemical analysis in table 8.

23.35.27.444	—	To	—	3,480	117.2	3- -53	—	7	N	N	—
23.36.15.414	J. E. Matkins	To(?)	230	3,390	148.4	12- 4-53	—	6	Lw	D,S	—
16.343	do.	Tr	1,100	3,465	150	1952	—	—	Lw	S	—
22.434	Texas Pacific Coal and Oil Co.	To	210±M	3,395	188.6	12- 1-53	—	8½	N	N	—
23.111	do.	To	—	3,370	143.6	12- 4-53	—	8	Li	In	—
31.233	J. Combass	To	—	—	—	—	—	—	Lw	S	Chemical analysis in table 8.
23.36.35.211	J. Combass	To	170	3,330	123.0	3- -53	—	6½	N	N	—
36.341	EPNG	To	250	3,330	124	—	—	10¾	Ti	In,D	Jal Plant 4, well 8.
36.342	EPNG	To	261	3,330	120	—	1952	—	Ti	In,D	Jal Plant 4, well 7.
23.37.2.133	—	To	—	3,304	62.8	10-16-53	—	—	N	N	—
2.422	—	Qal	—	3,295	64.1	6- 3-55	—	6	Lw	S	—
3.421	H. O. Sims	To	80	3,295	64.1	10-16-53	—	—	Lw	D,S	—
4.114	—	To	84—M	3,341	81.8	12- 3-53	—	5½	N	N	—
4.211	Skelly Oil Co.	Tr(?)	226	3,340	—	—	1947	10¾	Le	D	H. O. Sims Camp well 1. EY 10 gpm.
6.144	—	To	—	3,375	102.9	12- 3-53	—	6½	Lw	S	—
20.333	Bert Steeler	Qal(?)	177	3,300	117	—	1939	—	Lw	D,S	—
25.132	M. L. Goins	To(?)	—	3,215	28.3	10-15-53	—	7	Lw	S	—
27.441	—	Qal	—	3,270	78.3	3- 4-53	—	5½	Lw	S	—
23.37.31.442	EPNG	To(?)	173	3,300	118	1952	1952	12½	Te	In,D	Jal Plant 4, well 4.
32.122	—	To(?)	—	3,300	99.0	7-23-54	—	6	Lw	S	—
32.331	EPNG	To(?)	173	3,310	—	—	—	20	Te	In,D	Jal Plant 4, well 1. WBZ 115-171 feet. EY 40 gpm.
33.122	—	To(?)	120M	3,310	91.2	3- 4-53	—	9	N	N	—
23.38.5.233	Humble Oil Co.	Tr	400M	3,385	189.8	10-15-53	1943	7½	N	N	W. F. Scarbrough well 1. EY 14 gpm.
8.214	Tom Linebury	Tr	—	3,372	198.3	10-15-53	—	6½	Lw	D,S	—
24.32.3.322	Frank James	Tr	550	3,650	—	—	—	10	Lw	D,S	—
10.344	do.	Qal	60	3,588	31.1	6- 3-55	1910	6	Lw	S	Located in sink.
33.422	Richard Ritz	Tr	367M	3,510	313.4	2-18-58	—	12	Lw	S	EY 0.25 gpm.
24.33.10.113	Carl Johnson	Qal	36±M	3,595	24.6	11-27-53	—	6½	Lw	S	—
24.33.23.311	—	Tr	232M	3,565	208.6	11-27-53	—	9½	N	N	—
24.444	—	Qal	—	3,530	16.9	11-27-53	—	5½	Lw	S	—
33.231	Carl Johnson	Qal	—	3,460	93.2	3-17-54	—	6	Lw	D,S	—
24.34.4.111	—	To	—	3,570	51.3	6- 3-55	—	—	Lw	S	—
5.444	—	To	78(?)	3,590	66.6	4-21-55	—	—	Lw	N	—
10.112	Madera Ranch	To	83M	3,525	71.8	4-27-53	—	6	N	N	—
10.422	do.	To	94M	3,315	63.2	4-27-53	—	7½	N	N	—

TABLE 6. RECORDS OF WELLS IN SOUTHERN LEA COUNTY, N. MEX. (continued)

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
24.34.35.122	do.	Tr	258M	3,410	223.9	3-29-53	—	6	Lw	S	—
24.35.30.341	do.	Tr	150±M	3,320	139.6	11-27-53	—	6	Lw	S	—
24.36.3.111	—	To	—	3,400	181.1	3-12-53	—	7½	N	N	—
3.333	Charles Whitten	To(?)	190±M	3,390	181.1	3-12-53	—	11½	N	N	—
9.133	do.	To	230	3,395	195.0	3- 6-53	1948	7	N	N	—
13.314	Humble Oil Co.	To	160	—	—	—	1941	—	—	—	WBZ sand, 138-158 feet. EY 10 gpm.
24.36.15.222	Canmex Oil Co.	To	200	3,370	181.3	3-12-53	1937	7	Lw	D	—
22.220	Continental Oil Co.	Tr	692	3,340	—	—	—	8¼	Li	D	A. H. Meyers "A" well 1. Intake set at about 475 feet. Maximum yield 6 gpm.
23.222	—	To	—	3,345	147.9	3- 6-53	—	6¼	Lw	I	Measurement made inside pipe column.
27.221	J. R. Wilson	To	—	3,320	122.9	3- 6-53	—	10	N	N	—
24.37.5.111	EPNG	To	173	3,275	111	9- 8-52	1952	10¾	Te	In,D	Jal Plant 4, well 6.
7.431	Fowler Hair	To	132M	3,300	119.9	3- 6-53	—	6¼	N	N	—
10.123	Trinity Production Co.	Tr	747	3,260	120	2- -53	1953	—	Li	In	EY 42 gpm. Chemical analysis in table 8.
14.211	Fowler Hair	To(?)	72M	3,205	64.5	3- 3-53	—	5	N	N	—
24.37.16.342	—	To	106M	3,235	67.7	3-11-53	—	9	N	N	—
16.423	Humble Oil Co.	To	150	3,240	—	—	1951	6⅝	Te	D	Fowler-Ellenburger Camp well 1. WBZ 90-150 feet.
17.422	Fowler Hair	To	92M	3,260	86.5	3- 4-53	—	7½	N	N	—
19.234	—	To	124M	3,290	117.4	3- 5-53	—	10	Lw	S	—
21.444	Dollarhide Water Co.	To	74M	3,210	69.6	3- 2-53	—	7½	N	N	—
25.322	Fowler Hair	To	—	3,136	76.1	3- 3-53	—	6½	Lw	D,S	—
34.320	Plains Production Co.	To	75±M	3,160	56.8	3- 2-53	—	12	N	N	—
25.33.20.443	—	Tr	—	3,395	200-250	8-18-58	—	6	Lw	D,S	—
31.244	Nick Ritz	Tr	320	3,400	257.5	7-26-54	—	8	Lw	S	—
25.34.1.132	Madera Ranch	Tr	300+	3,385	231.0	4-15-53	—	6	N	N	—

25.34.15.242	—	Tr	168	3,335	164.9	7-23-54	—	10	Lw	S	—
25.35.10.223	Georgia Bryant	To	83M	3,180	76.9	4- 2-53	—	9	Lw	S	—
21.122	—	Tr	—	3,230	173.3	4- 2-53	—	8½	N	N	—
25.36.10.313	W. D. Dinwiddie	Tr	512	3,130	300	—	—	—	Lw	S	—
15.111	do.	Tr(?)	140	3,125	120.2	3- -53	1951	—	N	N	—
23.234	—	Qal	65M	3,070	53.7	3-31-53	—	6½	Lw	S	—
24.112	Humble Oil Co.	Tr	455	3,115	292.4	4-15-53	—	—	N	N	—
25.37.1.340	Pure Oil Co.	To	217	3,108	60	—	—	20	Te	In,D	—
2.332	Richmond Drilling Co.	To	112M	3,140	98.8	3-29-53	—	7	Lw	D	—
9.333	Stanolind Oil Co.	Tr	502	3,140	—	—	1938	—	Lw	D	WBZ 470-502 feet.
10.412	EPNG	To	270	3,120	50	12-20-49	1949	12	Te	In,D	Jal Plant 3, well 2.
10.433	M. B. Owens	To	—	3,100	54.3	2-26-53	—	7½	Lw	S	MWP
13.312a	City of Jal	To	152	3,080	73	6- -54	1954	12	Te	P	New city well. EY 750 gpm. Chemical analysis in table 8.
25.37.15.221	J. M. Owens	To	—	3,100	59.2	2-26-53	—	—	Ti	In	EY 30 gpm. PR.
15.223	Sun Oil Co.	To	—	3,090	—	—	—	—	Lw	D	Chemical analysis in table 8.
15.411	—	Qal	85M	3,070	31.1	2-26-53	—	6½	N	N	—
17.114	—	Qal	—	3,105	62.8	3- 5-53	—	—	Lw	S	MWP
19.211	—	To	—	3,088	62.3	5-30-55	—	6	Je	D	—
19.221	City of Jal	Tr	500	3,110	284.0	11-11-54	1948	10	N	N	Chemical analysis in table 8.
19.240	do.	Tr	450	3,040	65	1942	—	—	—	—	Old public-supply well. WBZ 70-450 feet. EY (1942) 50 gpm. Chemical analysis in table 8.
20.310	do.	Qal	70	3,035	65	1-18-42	—	6×6 ft.	—	—	Dug. WBZ "clayey sand" 65-70 feet. EY 50 gpm. Chemical analysis in table 8.
25.37.20.413	EPNG	Tr	419	—	—	—	—	10¾	Je	In,D	Jal General Camp well 1.
21.411	G. B. Hadfield	To	46M	3,050	38.2	2-12-53	—	6	Lw	S	EY 1 gpm.
24.211	—	To	—	3,071	58.4	2-12-53	—	6	N	N	—
24.422	—	To	—	3,050	60.2	2-12-53	—	8	N	N	—
25.411	—	To	62M	3,055	56.4	2-12-53	—	6	N	N	—
33.114	Olsen Oil Co.	Qal	105	3,000	87.4	2-16-53	—	12	N	N	—
36.244	—	To	120	3,035	74.2	2-13-53	—	10	N	N	—
25.38.6.122	Fowler Hair	To	65M	3,100	60.5	3- 3-53	—	6½	Lw	S	—
6.134	—	To	—	3,095	53.1	2-25-53	—	3	N	N	Cased shothole.
9.343	—	To	—	3,130	95.7	2-25-53	—	6½	Lw	D,S	EY 30 gpm.

TABLE 6. RECORDS OF WELLS IN SOUTHERN LEA COUNTY, N. MEX. (continued)

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
25.38.19.342	Pure Oil Co.	To(?)	133	3,061	68	1952	—	—	—	In	Dollarhide Gasoline Plant well 2.
21.121	Tom Linebury	To	110	3,103	87.7	2-12-53	—	7	Lw	S	—
29.131	—	Qal	—	3,040	69.9	2-15-53	—	6	Lw	N	—
26.32.21.322	Battle Ax Ranch	Tr(?)	253	3,140	180	7-23-54	—	—	Li	D,S	—
26.33.3.444	W. D. Dinwiddie	Qal	180	3,315	102.8	7-23-54	—	6	N	N	—
3.444a	do.	Qal	—	3,315	—	—	—	6(?)	Lw	S	Chemical analysis in table 8. Located 50 feet west of 26.33.3.444.
9.443	—	Qal(?)	—	3,280	106.6	7-26-54	—	—	Lw	S	—
22.433	Battle Ax Ranch	Qal	200(?)	3,270	79.7	7-26-54	—	6	Lw	S	—
26.34.6.213	—	Tr	360	3,330	141.9	7-23-54	—	8	Lw	S	—
26.35.13.222	—	Qal	—	2,990	229.1	12-12-58	—	7	Lw	S	Chemical analysis in table 8.
26.36.9.440	Frank Antheys	Qal	184M	2,940	177.8	12-12-58	—	7	Lw	D,S	MWP
18.311	City of Jal	Qal	559	2,981	220.8	3-17-60	1960	24	Te(?)	P	Yield 453 gpm. Gravel packed. WBZ 275-300, 400-465, 500-530 feet.
19.233	do.	Qal	700	2,950	198.0	—	1960	24	Te(?)	P	Yield 408 gpm. Gravel packed. WBZ 270-280, 400-480, 550-600, 670-680 feet.
21.443	—	—	137(?)	2,900	Dry	12-11-58	—	11	N	N	—
26.37.2.133	Clyde Cooper	Qal(?)	119	3,000	103.4	2-16-53	1937	8	Lw	S	—
7.331	EPNG	Tr	476	2,960	—	—	1937	8⅝	Te	In,D	Jal Plant 1, well 1.
12.314	—	Qal	—	3,010	102.3	2-16-53	—	9½	N	N	—
12.331	—	Qal	103 ± M	3,000	99.9	2-17-53	—	3	N	N	Cased shothole.
12.441	Humble Oil Co.	Qal	175	—	—	—	1944	—	—	—	WBZ 125-150 feet. EY 68 gpm.
14.122	—	Qal	131M	2,985	100.6	2-17-53	—	3	N	N	Cased shothole.
26.38.7.244	Tom Linebury	Qal	73	3,000	57.1	2-24-53	—	8½	N	N	—
8.444	do.	Qal	66	3,000	64.5	2-24-53	—	6½	Lw	S	—
17.414	do.	Qal	—	2,975	39.4	2-24-53	—	5½	Lw	S	—
21.344	do.	Qal	—	2,955	29.0	2-13-53	—	3	N	N	Cased shothole.
32.141	do.	Tr(?)	—	2,950	142.4	2-13-53	—	26	N	N	—

TABLE 7. RECORDS OF SELECTED WELLS IN TEXAS ADJACENT TO SOUTHERN LEA COUNTY, N. MEX.
Explanations of symbols are included in the headnotes of Table 6.

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
					Gaines County Tex.						
A-12.25.341	—	To	50(?)	3,545	40.8	12- 9-53	—	6	Lw	N	—
A-28.3.413	Greenwood	—	—	3,485	35.1	12- 9-53	—	—	Lw	S	—
					Andrews County, Tex.						
A-29.17.320	H. O. Sims	To(?)	82	3,510	79.4	7-28-40	—	—	Lw	S	—
A-39.4.420	do.	To	81	3,478	72.4	10- 9-53	—	6½	Lw	S	—
A-39.14.111	Humble Oil Co.	—	215	3,410	Dry	—	—	—	—	—	—
A-40.16.330	M. L. Goins	To	80	3,305	74.1	10-15-53	—	—	Lw	D,S	—
					Winkler County, Tex.						
C-22.6	Tom Linebury	Qal	—	2,940	45.0	2-13-53	—	6	N	N	—

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/ Cotton Draw Unit IW #3

Project Number: 2527

Location: Lea County, NM

Lab Order Number: 6J11005

Report Date: 10/17/06

Highlander Environmental Corp.	Project: Pogo/ Cotton Draw Unit IW #3	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2527	
Midland TX, 79705	Project Manager: Ike Tavarez	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 10-11'	6J11005-01	Soil	10/10/06 00:00	10-11-2006 10:55
BH-1 15-16'	6J11005-02	Soil	10/10/06 00:00	10-11-2006 10:55
BH-1 20-21'	6J11005-03	Soil	10/10/06 00:00	10-11-2006 10:55
BH-1 25-26'	6J11005-04	Soil	10/10/06 00:00	10-11-2006 10:55
BH-1 30-31'	6J11005-05	Soil	10/10/06 00:00	10-11-2006 10:55

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

Tim Reed

From: Jeanne McMurrey [jeanne@elabtexas.com]
Sent: Tuesday, October 17, 2006 9:37 AM
To: Tim Reed; Ike Tavarez
Subject: Re: Report #6J11005 Pogo Cotton Draw #3

Jeanne McMurrey
Environmental Lab of Texas I, Ltd.
12600 West I-20 East
Odessa, Texas 79765
432-563-1800

Highlander Environmental Corp.	Project: Pogo/ Cotton Draw Unit IW #3	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2527	
Midland TX, 79705	Project Manager: Ike Tavarez	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 10-11' (6J11005-01) Soil									
Chloride	**3910**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	
BH-1 15-16' (6J11005-02) Soil									
Chloride	**2380**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	
BH-1 20-21' (6J11005-03) Soil									
Chloride	**2470**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	
BH-1 25-26' (6J11005-04) Soil									
Chloride	**596**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	
BH-1 30-31' (6J11005-05) Soil									
Chloride	**142**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	

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

Highlander Environmental Corp.	Project: Pogo/ Cotton Draw Unit IW #3	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2527	
Midland TX, 79705	Project Manager: Ike Tavarez	

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 EJ61408 - Water Extraction										
Blank (EJ61408-BLK1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	ND	20.0	mg/kg Wet							
LCS (EJ61408-BS1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	91.5	5.00	mg/kg Wet	100		91.5	80-120			
Matrix Spike (EJ61408-MS1)		Source: 6J10013-01		Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	510	20.0	mg/kg Wet	500	0.00	102	80-120			
Matrix Spike Dup (EJ61408-MSD1)		Source: 6J10013-01		Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	500	20.0	mg/kg Wet	500	0.00	100	80-120	1.98	20	
Reference (EJ61408-SRM1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	51.0		mg/kg	50.0		102	80-120			

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

Highlander Environmental Corp.	Project: Pogo/ Cotton Draw Unit IW #3	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2527	
Midland TX, 79705	Project Manager: Ike Tavarez	

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: Celey D. Keene Date: 10/17/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
La Tasha 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.: 2527 | PROJECT NAME: Pogo / Cotton Draw Well #3 Lea County, NM Injection Line Leak

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
05111005 01	10/10/06		S		X	BH-1 10'-11'	1				X	
02	"		S		X	BH-1 15'-16'	1				X	
03	"		S		X	BH-1 20'-21'	1				X	
04	"		S		X	BH-1 25'-26'	1				X	
05	"		S		X	BH-1 30'-31'	1				X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602	MTBE 8020/602	TPH 8015 Mod. TX1005	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	RTI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	8OD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
													X			
													X			
													X			
													X			
													X			

RELINQUISHED BY: (Signature) Pogo Employee Date: 10/11/06 Time: [illegible]
RECEIVED BY: (Signature) [signature] Date: 10/11/06 Time: 10:30
SAMPLED BY: (Print & Sign) Matt Taylor Date: Time:

RELINQUISHED BY: (Signature) [signature] Date: 10/11/06 Time: 10:55
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # HAND DELIVERED UPS OTHER:

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

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

RECEIVED BY: (Signature) [signature]
DATE: 10-11-06 TIME: 1055

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0°C 4oz glass on ice 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: 10/11/06 10:55

Lab ID # : 1e J11005

Initials: CK

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	4.0 °C	
#2	Shipping container in good condition?	~~Yes~~	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?	~~Yes~~	No		
#6	Sample instructions complete of Chain of Custody?	~~Yes~~	No		
#7	Chain of Custody signed when relinquished/ received?	~~Yes~~	No		
#8	Chain of Custody agrees with sample label(s)?	~~Yes~~	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	~~Yes~~	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	~~Yes~~	No		
#11	Containers supplied by ELOT?	~~Yes~~	No		
#12	Samples in proper container/ bottle?	~~Yes~~	No	See Below	
#13	Samples properly preserved?	~~Yes~~	No	See Below	
#14	Sample bottles intact?	~~Yes~~	No		
#15	Preservations documented on Chain of Custody?	~~Yes~~	No		
#16	Containers documented on Chain of Custody?	~~Yes~~	No		
#17	Sufficient sample amount for indicated test(s)?	~~Yes~~	No	See Below	
#18	All samples received within sufficient hold time?	~~Yes~~	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

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/ Sterling Silver 3 Federal TB

Project Number: 2544 Federal #6

Location: Eddy County, NM

Lab Order Number: 6J11006

Report Date: 10/17/06

Highlander Environmental Corp.	Project: Pogo/ Sterling Silver 3 Federal TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2544 Federal #6	
Midland TX, 79705	Project Manager: Ike Tavarez	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1 15-16'	6J11006-01	Soil	10/10/06 00:00	10-11-2006 10:55
BH-1 20-21'	6J11006-02	Soil	10/10/06 00:00	10-11-2006 10:55

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

Highlander Environmental Corp.	Project: Pogo/ Sterling Silver 3 Federal TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2544 Federal #6	
Midland TX, 79705	Project Manager: Ike Tavarez	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BH-1 15-16' (6J11006-01) Soil									
Chloride	**596**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	
BH-1 20-21' (6J11006-02) Soil									
Chloride	**53.2**	20.0	mg/kg Wet	2	EJ61408	10/14/06	10/15/06	SW 846 9253	

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

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

Project: Pogo/ Sterling Silver 3 Federal TB
Project Number: 2544 Federal #6
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
Batch EJ61408 - Water Extraction										
Blank (EJ61408-BLK1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	ND	20.0	mg/kg Wet							
LCS (EJ61408-BS1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	91.5	5.00	mg/kg Wet	100		91.5	80-120			
Matrix Spike (EJ61408-MS1)		Source: 6J10013-01		Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	510	20.0	mg/kg Wet	500	0.00	102	80-120			
Matrix Spike Dup (EJ61408-MSD1)		Source: 6J10013-01		Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	500	20.0	mg/kg Wet	500	0.00	100	80-120	1.98	20	
Reference (EJ61408-SRM1)				Prepared: 10/14/06 Analyzed: 10/15/06						
Chloride	51.0		mg/kg	50.0		102	80-120			

Highlander Environmental Corp.	Project: Pogo/ Sterling Silver 3 Federal TB	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2544 Federal #6	
Midland TX, 79705	Project Manager: Ike Tavarez	

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: Celey D. Keene Date: 10/17/2006

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

Jeanne Mc Murrey, Inorg. Tech Director
La Tasha 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: OF:

CLIENT NAME: Po 60 SITE MANAGER: Ike Tavarez

PROJECT NO.: 2544 PROJECT NAME: Po 60 / Sterling Silver 3 Federal #6 TB

Eddy 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 8020/602	TPH 418.1 8015 MOD. TX1005	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	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chlorides	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
68711001	10/10/06		S		X	BH-1 15'-16'	1				X															X			
02	10/10/06		S		X	BH-1 20'-21'	1				X															X			

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: 10/11/06 Time: 10:30

SAMPLED BY: (Print & Sign) Date: Time:

RELINQUISHED BY: (Signature) Date: 10/11/06 Time: 10:55

RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

RECEIVED BY: (Signature) DATE: 10-11-06 TIME: 1055

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4.0 °C 4oz glass only 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: 10/11/06 10:55

Lab ID # : 1e1011006

Initials: CK

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	4.0 °C	
#2	Shipping container in good condition?	~~Yes~~	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?	~~Yes~~	No		
#6	Sample instructions complete of Chain of Custody?	~~Yes~~	No		
#7	Chain of Custody signed when relinquished/ received?	~~Yes~~	No		
#8	Chain of Custody agrees with sample label(s)?	~~Yes~~	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	~~Yes~~	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	~~Yes~~	No		
#11	Containers supplied by ELOT?	~~Yes~~	No		
#12	Samples in proper container/ bottle?	~~Yes~~	No	See Below	
#13	Samples properly preserved?	~~Yes~~	No	See Below	
#14	Sample bottles intact?	~~Yes~~	No		
#15	Preservations documented on Chain of Custody?	~~Yes~~	No		
#16	Containers documented on Chain of Custody?	~~Yes~~	No		
#17	Sufficient sample amount for indicated test(s)?	~~Yes~~	No	See Below	
#18	All samples received within sufficient hold time?	~~Yes~~	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

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 October 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	Contact PAT Ellis
Address P.O. Box 10340 Midland, Tx 79702	Telephone No. 432 685-8148
Facility Name Cotton Draw Unit # 3 INJ	Facility Type Injection line

Surface Owner	Mineral Owner New Mexico	Lease No. E-5009

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	16	25-S	32E	1980	N	660	E	LEA

Latitude 32-07-53.7 Longitude 103-40-23.8

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 2.3 BBLS	Volume Recovered 0
Source of Release Injection line leak	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	If YES, To Whom? 12-11-05 Larry Johnson	12-12-05
By Whom? PAT Ellis	Date and Hour 12-12-05	2:00 pm
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Injection line leak near well. Line will be replaced and/or repaired.

Describe Area Affected and Cleanup Action Taken.* Spill affected pasture and lease road. Area about 12' x 200'. Contacted Highlander Environmental to assess and take samples. Will send in remediation plan for approval.

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: PATRICK L. ELLIS	Approved by District Supervisor:
Title: E H&S Supervisor	Approval Date: / Expiration Date:
E-mail Address: ellisp@pogoproducing.com	Conditions of Approval: / Attached ☐
Date: 12-15-05 Phone: (432) 685-8148	

* 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: Pogo Producing Company	Contact: Pat Ellis
Address: 300 North Marienfeld, Suite 600, Midland TX 79701	Telephone No. (432) 685-8100
Facility Name: Cotton Draw Unit #3 Injection	Facility Type: Injection Line

Surface Owner State of NM	Mineral Owner State	Lease No. ~~E-5009~~ RPF-746

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	16	25S	32E	1980'	N	660'	E	Lea

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 23 barrels	Volume Recovered 0 barrels
Source of Release Injection line leak	Date and Hour of Occurrence 12/11/05	Date and Hour of Discovery 12/12/05
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson	
By Whom? Pat Ellis	Date and Hour 12/12/05 2:00pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Injection line leak near well. Line was replaced/repaired.

Describe Area Affected and Cleanup Action Taken.*
The spill affected pasture and lease road. The lease road was scraped and backdragged. The spill are in the pasture was excavated to a depth of 3.0'. Highlander performed an assessment on the spill area, by placing trenches and one borehole in the excavated area. The surface samples (0-1') were all below the RRAL for TPH and BTEX. The vertical extent of chloride impact was defined. Based on the results and depth to groundwater, Pogo requested closure for the Site. An Assessment and Closure Report has been submitted to the NMOCD for review.

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: Patrick L. Ellis	Approved by District Supervisor: ENVIRO ENGR	
Title: Division ES&H Supervisor	Approval Date: 11-8-06	Expiration Date:
E-mail Address: EllisP@pogoproducing.com	Conditions of Approval:	Attached ☐
Date: 10/26/06 Phone: (432) 685-8100		

* Attach Additional Sheets If Necessary

SITE INFORMATION

Report Type: CLOSURE REQUEST

Site:	**Cotton Draw Unit, Injection Well #3**
Company:	**Pogo Producing Company**
Section, Township and Range	**Section 16, T25S, R32 E**
Unit Letter:	H
Lease Number:	E-5009
County:	Lea
GPS:	32° 07' 53.7", 103° 40' 23.8"
Surface Owner:	State land
Mineral Owner:	State land
Directions:	From Jal NM intersection of 18 and 128, go west 29.5 miles, turn left on CR 1, go south
	5.2 miles and turn right (west) into lease road, go 0.1 miles road will turn to south,
	at Y, go 0.3 miles south to Cotton Draw Injection Well #3 on right side of road. Spill is
	located 200' southeast of well.

Date Released:	12/11/2005
Type Release:	Produced water
Source of Contamination:	Line leak
Fluid Released:	23
Fluids Recovered:	0 barrels

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**

Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	10	
>100 ft.	**0**	*Average Depth >100 BS*
WellHead Protection:	***Ranking Score***	***Site Data***
Water Source <1,000 ft., Private <200 ft.	*20*	*None*
Water Source >1,000 ft., Private >200 ft.	***0***	
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	*None*
200 ft - 1,000 ft.	10	*None*
>1,000 ft.	0	
Total Ranking Score:	**0**	

Benzene	*Total BTEX*	*TPH*
10	**50**	**5,000**

1234567

Received
Hobbs
OCD