AP - 085

GENERAL CORRESPONDENCE

2008 - 2007

Bill Richardson

Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



April 25, 2008

Mr. Dennis Newman OXY USA, Inc. P.O. Box 4294 Houston, TX 77210-4294

RE: REQUIREMENT TO SUBMIT ABATEMENT PLAN
OXY USA, INC. - TODD HOBBS R NO. 10 TANK BATTERY
SECTION 31, TOWNSHIP 7 SOUTH, RANGE 36 EAST
ROOSEVELT COUNTY, NEW MEXICO
OCD CASE NO. AP085

Dear Mr. Newman:

The Oil Conservation Division (OCD) has determined that OXY USA, Inc. (OXY) must submit a Stage 1 Abatement Plan in accordance with OCD's Rule 19 (19.15.1.19 NMAC) to investigate ground water contamination at its Todd Hobbs R No. 10 tank battery, located in Section 31, Township 7 South, Range 36 East, Roosevelt County, New Mexico. The Stage 1 Abatement Plan proposal must be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and must meet of all the requirements specified in OCD Rule 19 (19.15.1.19 NMAC), including, but not limited to, the public notice and participation requirements specified in Rule 19G. The Stage 1 Abatement Plan is due sixty (60) days from the receipt by OXY of this written notice.

OXY's Stage 1 Abatement Plan must specifically meet all of the requirements specified in OCD Rule 19E.3, including, but not limited to, a site investigation work plan and monitoring program that will enable it to characterize the release using an appropriate number of isoconcentration maps and cross sections and to provide the data necessary to select and design an effective abatement option. OXY's proposal must include the installation of at least one monitor well beneath the site of the tank battery screened below the water table to determine whether "plume diving" is occurring. OXY may, if it chooses, concurrently submit a Stage 2 Abatement Plan that proposes appropriate proactive abatement options.



Mr. Dennis Newman April 25, 2008 Page 2

OXY should submit one paper copy with and an electronic copy on CD of all future workplans and/or reports. Please refer to *OCD Case No. AP085* on all future correspondence. If you have any questions, please contact Glenn von Gonten of my staff at (505) 476-3488.

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Sincerely,

Wayne Price

Environmental Bureau Chief

WP/gvg

cc: Chris Williams

Larry Johnson



5 Greenway Plaza, Suite 110, Houston, Texas 77046-0521 P.O. Box 4294, Houston, Texas 77210-4294 Phone 713.215 7000 C L V E D www.oxy.com

2008 MAR 17 PM 2 00

VIA REGULAR MAIL AND EMAIL

March 11, 2008

Mr. Glenn von Gonten New Mexico Energy, Mineral and Natural Resources Department Oil Conservation Division 1220 South Saint Francis Drive Santa Fe, New Mexico 87505

RE: Submission of Form C-141 – Release Notification and Corrective Action and OXY USA Inc. Authorized Representative

Todd ATB#1.

State L-2 Tank Battery
E. M. Elliott Tank Battery
Todd Water Injection Station
Todd Hobbs R #10 Tank Battery
E. C. Hill "B" ATB at Well #24

E. C. Hill B-D Tank Battery

E. C. Hill Federal #7 Tank Battery

Dear Mr. von Gonton:

OXY USA Inc. ("Oxy") appreciates the time you and Wayne Price with the Oil Conservation Division ("OCD") spent meeting with Oxy representatives (Rick Passmore with Glenn Springs Holding, Inc., Tim Reed with Highlander Environmental, and myself) on February 27, 2008 to discuss Oxy's role as the new operator for the subject sites effective March 1, 2008.

Per your request, attached are Form C-141s for the eight (8) referenced sites. Note Rule 116 letter notifications for these sites were sent to the OCD on June 25, 2007 by Latigo Petroleum Inc. ("Latigo"). Pogo Producing ("Pogo") acquired Latigo in 2006 followed by Plains Exploration and Production ("PXP") acquiring Pogo in November 2007. Oxy has recently acquired majority interest in these sites from PXP and is the new operator.

OXY's remediation company, Glenn Springs Holding, Inc. ("GSH") will be responsible for managing the referenced sites; GSH is a subsidiary of Occidental Petroleum Corporation. OXY's authorized project manager for the referenced sites will be:

Mr. Rick Passmore Glenn Springs Holding, Inc. 5005 LBJ Freeway, Suite 1350 Dallas Texas 75244 Office: 972-687-7504 Mobile: 859-221-7616

Mobile: 859-221-7616 Rick passmore@oxy.com March 11, 2008 Page 2

If you or District I have any questions concerning the C-141s for the referenced sites, please contact Mr. Passmore. Again, we thank you for your time meeting with us.

Sincerely,

Dennis L. Newman, P.E.

cc: New Mexico Energy, Mineral and Natural Resources Department

Oil Conservation Division

District I

1625 N. French Dr.

Hobbs, New Mexico 88240

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 bmit 2 Copies to appropriate

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

Release Notification and Corrective Action

						OPERA?	ΓOR	🔀 Ini	tial Report 🔲 Fina	l Report		
		XY USA, In				Contact Ric						
		94, Houston,					No. 972-687-75					
Facility Nat	ne Todd I	Hobbs R #10	Tank Ba	attery		Facility Typ	e Abandoned	Tank Battery				
Surface Ow	ner			Mineral Ov	wner	ner Lease No.						
				LOCA	TIO	N OF REI	LEASE					
Unit Letter	Section 31	Township 7 South	Range 36	Feet from the	North	/South Line	Feet from the	East/West Line	County Roosevelt			
	<u></u>		East		<u> </u>	T an -:4	L. 102 200(1			-/		
			Li	atitude_33.66906 N A T I		Longitud COF REL	_					
Type of Rele	ase Oil and	/or produced	water	INAII	UKE		Release Unknov	vn Volume	Recovered None			
Source of Re		701 produced	Water				Hour of Occurrence		d Hour of Discovery			
		d water spills				Unknown	_		,			
Was Immedia	ate Notice (Yes [] No ⊠ Not Rec	quired	If YES, To N/A	Whom?					
By Whom?		4				Date and F	lour N/A					
Was a Water	course Read	ched?				If YES, Vo	olume Impacting t	the Watercourse.				
			Yes 🗵	No		N/A						
If a Watercou	ırse was Im	pacted, Descr	ibe Fully.	*								
N1/A												
N/A												
						•						
Describe Cau	se of Probl	em and Reme	dial Actio	n Taken.*								
Historia assill	_											
Historic spill	S.											
Plains Explor	ation and F	Production (PX	(P) bough		n 200'	7, and finally (ught by Pogo Producing in ity interest in the PXP New			
Describe Are	a Affected	and Cleanup A	Action Tal	ken.*								
Site Investiga	ation and C	haracterization	is in pro	gress.								
regulations a public health should their cor the environ	I operators or the envi- operations hament. In a	are required to ronment. The lave failed to a	o report an acceptand adequately OCD accep	nd/or file certain reloce of a C-141 report investigate and res	lease i t by th media	notifications and ne NMOCD mate contamination	nd perform correct arked as "Final R on that pose a three the operator of	etive actions for r eport" does not r eat to ground wa responsibility for	resuant to NMOCD rules are eleases which may endanger elieve the operator of liabilitier, surface water, human he compliance with any other	er lity nealth		
Signature:	()_	\sim 1 \setminus	1				OIL CON	SERVATIO)	N DIVISION			
Printed Name	e: Dennis N	Newman				Approved by	District Supervise	or:				
Title: Senior	Environme	ental Consulta	nt			Approval Date:			Expiration Date:			
E-mail Addre	ess: dennis	newman@ox	y.com		Conditions of Approval:				Attached			
Date: March	7, 2008	Pho	ne: 713-3	66-5485								
		ets If Necess										



Highlander Environmental Corp.

Midland, Texas

February 18, 2008

Mr. Glenn von Gonten New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

RE: Latigo Petroleum, Inc. – Project Summary Todd UT Hobbs R #10 ATB Section 31, Township 7 South, Range 36 East Roosevelt County, New Mexico 33.66906° N, 103.30061° W

Mr. von Gonten:

On behalf of Latigo Petroleum, Inc. (Latigo), Highlander Environmental Corp. (Highlander) performed a limited subsurface investigation at the Latigo Todd UT Hobbs R #10 ATB, Section 31, Township 7 South, Range 36 East, Roosevelt County, New Mexico. The site location is shown on Figure 1. The soil investigation consisted of placement of hand auger holes and boreholes to assess the subsurface soils. Based on the soil assessment, a well was installed to assess the groundwater qualities at the Site.

Several impacted areas were investigated around the ATB. One borehole was installed north of the ATB in an area measuring 45' x 60'. Elevated chloride concentrations were found from the surface to a depth of 70 feet below surface. The hand auger and borehole locations are shown on Figure 2. The analytical results are shown in Table 1 and Table 2.

Based on the results, borehole (BH-1) was converted to a temporary 2-inch monitor well. Groundwater was encountered at approximately 72 feet below top of casing (TOC). On September 6, 2006 and May 15, 2007, Highlander purged and sampled the well per OCD guidelines for analyses of chlorides and BTEX. Chloride concentrations exceed New Mexico Water Quality Control Commission (NMWQCC) standards, while hydrocarbon constituents (BTEX) were detected at levels below the NMWQCC action levels. The analytical results are shown in Table 3.

A total of eight (8) monitor wells have been installed at this facility. The well locations are shown on the attached Figures 3 and 4. The wells have been gauged and sampled. The results are summarized in Table 3.

Should you have any questions or concerns regarding this site, please do not hesitate to contact me at (432) 682-4559.

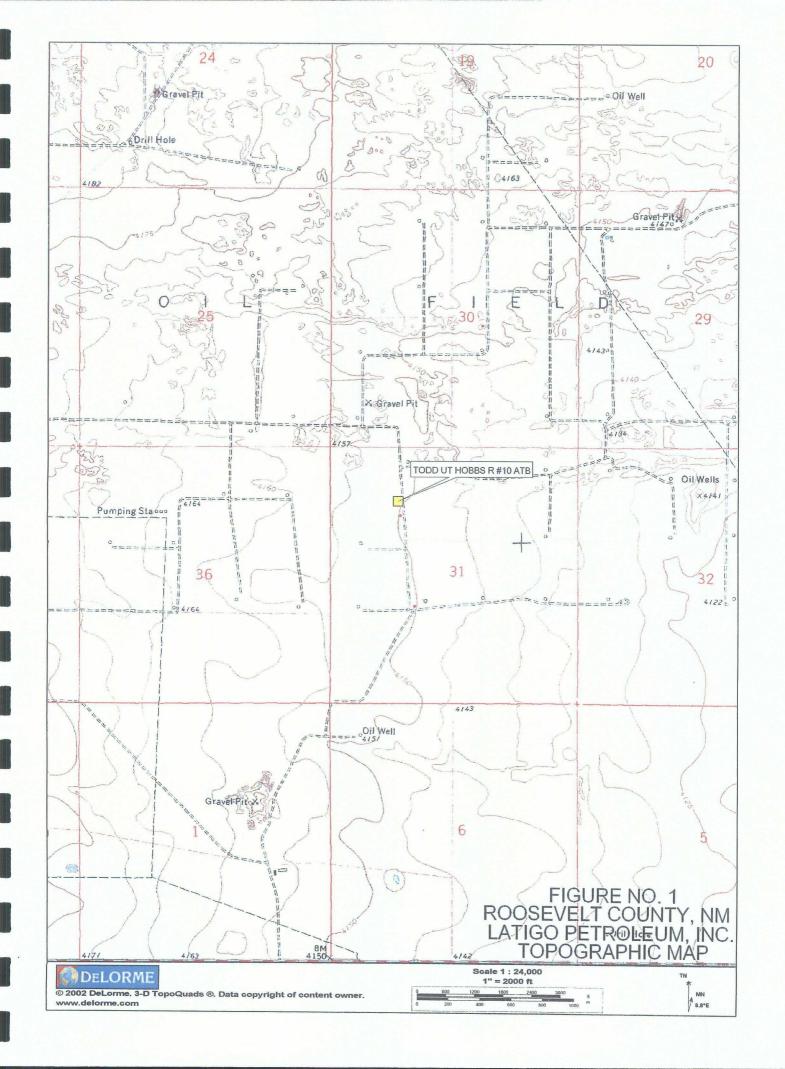
Highlander-Environmental Corp.

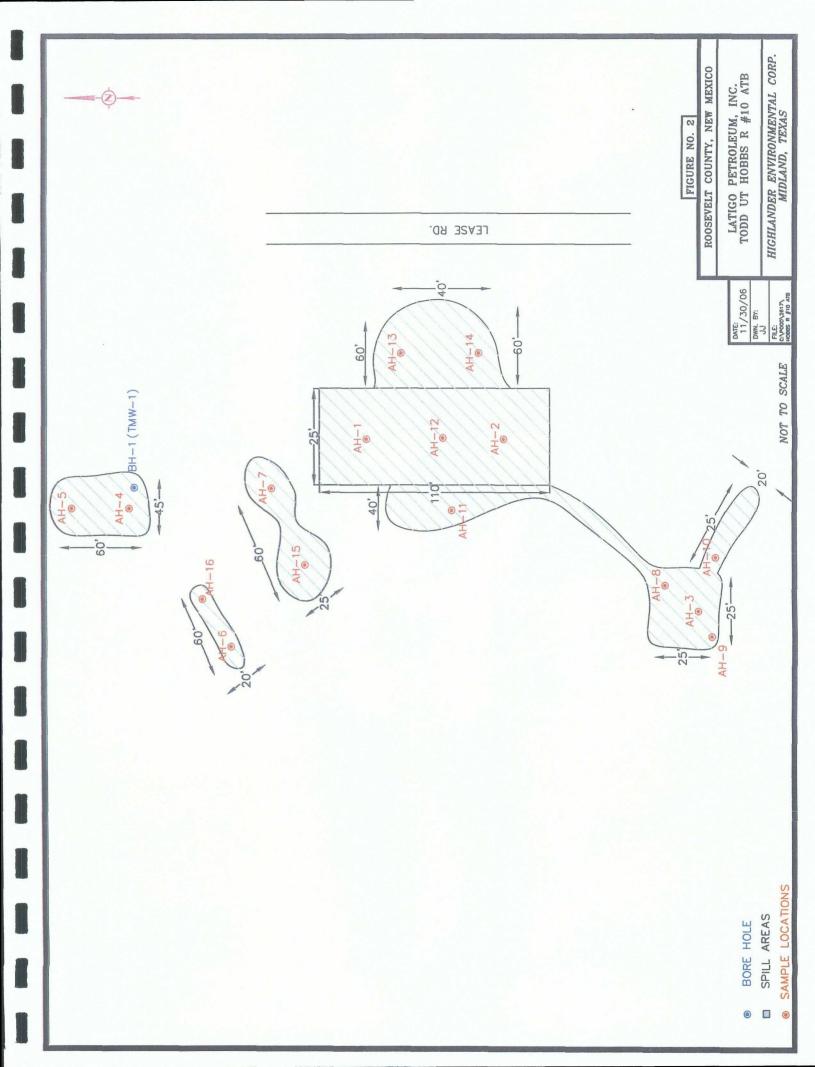
İke Tavarez, P.G.

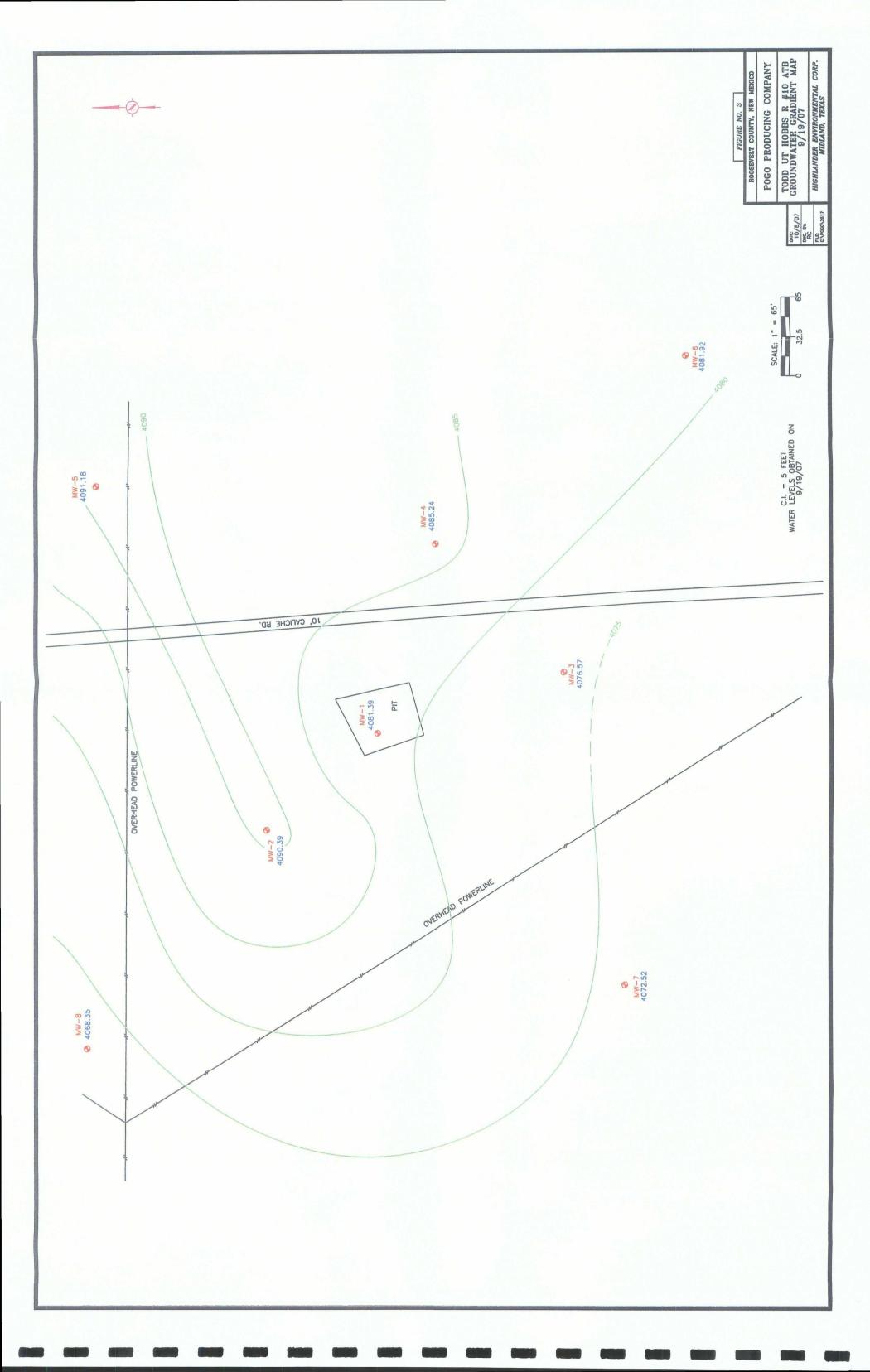
Sr. Geologist/Project Manager

FIGURES

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TABLES

Table 1
Pogo Producing Company
TODD UT HOBBS R #10 ATB
Roosevelt County, New Mexico

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Chloride (mg/kg):	51.8	20.3	39.6		79.5	222	429	316	17.6	67.5	<10.0		1820	2320	5290	4810	
Xylene (mg/kg)	<0.0200	•	ı		<0.0500	1		4	0.426	1	1	1.32	1	ı	ı	•	
Ethlybenzene (mg/kg)	<0.0200	1	t		<0.0500	•	1	-	0.110	-	-	0.501	-	-	-	ā	
Toluene (mg/kg)	<0.0200	1	1		<0.0500	-	1	•	<0.100	1	•	<0.100	•	ı	1	1	
Benzene (mg/kg)	<0.0200	•	-		<0.0500	-	-	•	<0.100		-	<0.100	-	•	1	-	
) (Total	324.3	<50.0	<50.0		1624.6	<50.0	<50.0	<50.0	3151	4081	7266	5929	1436	4129	81.40	<50.0	
TPH (mg/kg) C12=C35=	304	<50.0	<50.0		1610	<50.0	<50.0	<50.0	2880	3490	2230	5340	1200	3540	81.40	<50.0	
<u> C6-C12 </u>	20.3	<1.00	<1.00		14.6	<1.00	<1.00	<1.00	271	591	336	589	236	685	<1.00	<1.00	
Sample Depth (ft)	0-1	1-1.5	2-2.5	5 5	0-1	1-1.5	2-2.5	3-3.5	0-1	1-1.5	2-2.5	1-1.5	2-2.5	3-3.5	4-4.5	5-5.5	
Date Sampled	7/20/2006	7/20/2006	7/20/2006		7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	7/20/2006	
Sample ID	AH-1				AH-2				AH-3			AH-4	!	:			

Pogo Producing Company TODD UT HOBBS R #10 ATB Roosevelt County, New Mexico

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$egin{array}{c c c c c c c c c c c c c c c c c c c $	26.5	<0.0200 <0.0200 <0.0200 <10.0	254	187		<0.0200 <0.0200 <0.0200 110	- 48.9	<0.0500 <0.0500 <0.0500 <2.00	<2.00	-
Benzene (mg/kg)	-	<0.0200	-	•		<0.0200	•	<0.0500	-	1
) Total	315	1183.23	4323	<50.0		1050	907	1170	0.96	6905.4
TPH (mg/kg)	315	1180	4280	<50.0	٠	1050	206	1170	96.0	0289
	<1.00	3.23	43	<1.00		<2.00	<1.00	<5.00	<1.00	35.4
Sample Depth (ft)	0-1	1-1.5	2-2.5	3-3.5		0-1	1-1.5	0-1	1-1.5	0-5'
Date Sampled	7/20/2006	7/20/2006	7/20/2006	7/20/2006		7/20/2006	7/20/2006	7/20/2006	7/20/2006	8/25/2006
Sample ID	AH-5					AH-6		AH-7		Area AH-3

(-) not analyzed

Table 2
Pogo Producing Company
TODD UT HOBBS R:#10 ATB
Roosevelt County, New Mexico

700	Г											
· (Chloride . (mg/kg)		•	ŧ	0609	4580	4780	1380	1120	2260	4250	1120	
*Xylene *!(mg/kg)		-	-	•	•	<0.0100		ŧ	•	ŧ	<0.0100	
Ethlybenzene (mg/kg):		1	,	1	1	<0.0100	B	1	1	1	<0.0100	
Toluene (mg/kg)		-	-	_	_	<0.0100	-	•	-	_	<0.0100	
Benzene (mg/kg)		1	-	•	1	<0.0100	-	_	1	•	<0.0100	•
) Total		<50.0	<50.0	1		<50.0	-	-	-	1	<50.0	
TPH (mg/kg)		<50.0	<50.0	1	-	<50.0	1	1	-	•	<50.0	
ALC: 100 (20)		<2.00	<1.00	-	-	<1.00	-	_		•	<1.00	
Sample Depth (ft)		5-7'	10-12'	10-12'	15-17'	20-22'	30-32	40-42	50-52'	60-62	70-72	
Date Sampled		8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	8/31/2006	
Sample ID		BH-1		BH-2								

(-) not analyzed

Table 3
Pogo Producing Company
TODD UT HOBBS R #10 ATB
Roosevelt County, New Mexico

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Chloride (mg/L)	40,800	120,000	92,700	16,200	164	3,330	601		121	127	365	
Xylene (mg/L)	<0.00100	<0.00100	0.28900	<0.00100	<0.00100	<0.00100	<0.00100		<0.00100	<0.00100	<0.00100	
Ethyl: benzene (<u>mg/L)</u>	0.00110	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	ĺ	<0.00100	<0.00100	<0.00100	
Toluene (mg/L)	0.00120	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100		<0.00100	<0.00100	<0.00100	
Benzene (mg/L)	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100		<0.00100	<0.00100	<0.00100	
Sample Number	102409	124622	137383	137384	137385	137386	137387		137388	137389	137390	
Corrected Groundwater Elevations (feet)	N.G.	N.G.	4,081.39	4,090.39	4,076.57	4,085.24	4,091.18		4,081.92	4,072.52	4,068.35	
Measured Groundwater Elevations (feet)	N.G.	N.G.	72.00	63.51	78.56	68.11	62.83		71.62	82.45	87.93	
Top of Casing Elevation (feet)	4,153.39			4,153.90	4,155.13	4,153.35	4,154.01		4,153.54	4,154.97	4,156.28	
Foral Depth (feet)	80.50			80.60	 88.20	87.90	87.87		88.80	88.00	87.93	
Date Gauged	N.G.	N.G.	09/19/07	09/19/07	09/19/07	09/19/07	09/19/07		09/19/07	20/61/60	10/61/60	
pate Sampled	90/90/60	05/15/07	09/21/07	09/21/07	09/21/07	09/21/07	09/21/07		09/21/07	09/21/07	09/21/07	
Sample: ID	TMW-1	(MW-1)		MW-2	MW-3	MW-4	MW-5		9-MM	MW-7	MW-8	

(-) not analyzed N.G. - Not gauged 1

TMW-1 converted to MW-1 on September 17, 2007

Boring/Well:

MW-1

Project Number:

2617

Client:

Pogo Production Inc.

Site Location: Location: Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Total Depth

80

Date Installed:

08/30/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Tan/brown medium grain sand
5-10		Buff sandy limestone
10-15		Hard tan/yellow sandy limestone
15-20		Hard tan/yellow sandy limestone
30-35		Tan calcareous sand
40-45		Tan calcareous sand
50-55		Tan/buff sandy limestone
60-65		Pea gravel and large sand with hydrocarbon odor (moist)
70-75		Tan/yellow clay with slight moisture
75-80		Tan/yellow clay with slight moisture

Total Depth is 80 feet

Groundwater encountered at 69 feet below ground surface.

Boring/Well: Project Number: 2617

MW-2

Client:

Pogo Production Inc.

Site Location:

Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Location: Total Depth

85

Date Installed:

08/30/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Gray/red fine grain well sorted sand
5-10		Tan/buff calcareous sand
10-15		Buff sandy limestone (hard)
15-20		Tan/buff calcareous sand
20-25		Tan/buff calcareous sand
25-30		Tan well sorted fine grain sand
30-35		Buff sandy limestone
35-40		Tan calcareous sand
40-45		Tan fine grain blow sand
45-50		Tan fine grain blow sand with sandstone
50-55		Tan fine grain blow sand with gravel intermixed
55-60		Tan/red sandy clay
60-65		Tan clay of high plasticity
65-70		Tan clay of high plasticity
70-75		Tan clay of high plasticity
75-80		Tan clay of high plasticity
80-85		Tan/yellow clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 69 feet below ground surface.

Boring/Well:

MW-3

Project Number: 2617

Client:

Pogo Production Inc.

Site Location: Location:

Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Total Depth

85

Date Installed:

08/30/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Gray/red fine to medium grain sand
5-10		Tan calcareous sand
10-15		Buff slightly sandy limestone with chert
15-20		Buff slightly sandy limestone
20-25		Tan/buff calcareous fine grain sand
25-30		Tan/buff calcareous fine grain sand
30-35		Tan calcareous well sorted fine grain sand
35-40		Tan well sorted fine grain sand (blow sand)
40-45		Tan well sorted fine grain sand (blow sand)
45-50		Tan well sorted fine grain sand (blow sand) with sandstone intermixed
50-55		Tan poorly sorted fine to medium grain sand with pebbles
55-60		Tan poorly sorted fine to medium grain sand with pebbles
60-65		Tan sandy clay of high plasticity
65-70		Dark tan slightly sandy clay of high plasticity
70-75		Dark tan slightly sandy clay of high plasticity
75-80		Dark tan slightly sandy clay of high plasticity
80-85		Dark tan slightly sandy clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 78 feet below ground surface.

Boring/Well:

MW-4

Project Number: 2617 Client: Pogo

Pogo Production Inc.

Site Location: Location: Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Total Depth

85

Date Installed: 08/30/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Grayish/red sand
5-10	~-	Buff/tan fine grain sandy limestone
10-15		Buff (slightly sandy) limestone
15-20		Buff (slightly sandy) limestone
20-25		Tan/buff calcareous sand
25-30	<u></u>	Buff/tan sandy limestone
30-35		Buff/tan sandy limestone
35-40		Tan/buff calcareous sand
40-45		Tan fine grain sand
45-50		Tan fine grain sand
50-55	~~	Tan fine to medium grain sand with pebbles intermixed
55-60		Dark tan fine to medium grain sand with pebbles
60-65		Dark tan/brown clay of high plasticity
65-70		Tan clay of high plasticity with some sand intermixed
70-75	'	Tan/yellow clay of high plasticity
75-80		Tan/yellow clay of high plasticity
80-85		Tan/yellow clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 68 feet below ground surface.

Boring/Well:

MW-5

Project Number: 2617

Client:

Pogo Production Inc.

Site Location: Location:

Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Total Depth

85

Date Installed:

09/13/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5	~-	Gray/brown medium grain sand
5-10		Tan medium grain calcareous sand
10-15		Buff fine grain sandy limestone
15-20		Buff fine grain sandy limestone
20-25		Tan fine grain calcareous sand
25-30		Tan fine grain calcareous sand
30-35		Tan fine grain calcareous sand
35-40		Tan fine grain calcareous sand
40-45		Tan fine grain sand
45-50		Tan fine grain sand
50-55		Tan medium grain sand with sandstone intermixed
55-60		Tan medium grain sand with sandstone intermixed
60-65		Brown medium to coarse grain sand with pebbles and sandstone intermixed
65-70		Tan/brown sandy clay (moist)
70-75	~~	Tan/brown sandy clay (moist)
75-80		Tan clay of high plasticity
80-85		Tan clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 68 feet below ground surface.

Boring/Well: Project Number:

MW-6 2617

Client:

Pogo Production Inc.

Site Location:

Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Location: Total Depth

85

Date Installed:

09/14/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Tan/brown fine to medium grain sand
5-10		Buff/tan sandy limestone
10-15		Buff/tan sandy limestone
15-20		Tan fine grain calcareous sand
20-25		Tan fine grain calcareous sand
25-30		Tan/buff fine grain sand (blow sand)
30-35	~	Tan/buff fine grain calcareous sand
35-40		Tan/buff fine grain calcareous sand
40-45		Tan fine grain calcareous sand with limestone intermixed
45-50		Tan fine grain calcareous sand
50-55		Tan fine grain sand with some sandstone intermixed
55-60		Tan/brown medium grain sand with gravel intermixed
60-65		Tan/brown sandy clay of high plasticity
65-70		Tan/brown sandy clay of high plasticity
70-75		Yellow/brown clay of high plasticity
75-80		Yellow/brown clay of high plasticity
80-85		Yellow/brown clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 70 feet below ground surface.

Boring/Well: MW-7 Project Number: 2617

Client: Pogo Production Inc.

Site Location: Todd UT Hobbs R # 10 ATB
Location: Roosevelt County, New Mexico

Total Depth 85
Date Installed: 09/14/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Tan/brown medium grain sand
5-10		Tan/buff calcareous fine grain sand
10-15		Tan/buff calcareous fine grain sand
15-20		Buff fine grain sandy limestone
20-25		Buff fine grain sandy limestone
25-30		Tan/buff fine grain calcareous sand
30-35		Tan/buff fine grain calcareous sand
35-40		Tan fine grain sand
40-45		Tan fine grain sand (blow sand)
45-50		Tan fine grain sand (blow sand)
50-55		Tan fine grain sand with sandstone intermixed
55-60		Tan fine grain sand
60-65		Tan/brown sandy clay of high plasticity
65-70		Tan/brown clay of high plasticity
70-75		Tan/brown clay of high plasticity
75-80		Tan/brown clay of high plasticity
80-85		Tan/brown clay of high plasticity

Total Depth is 85 feet Groundwater encountered at 80 feet below ground surface.

Boring/Well: **Project Number: 2617**

MW-8

Client:

Pogo Production Inc.

Site Location: Location:

Todd UT Hobbs R # 10 ATB Roosevelt County, New Mexico

Total Depth

Date Installed:

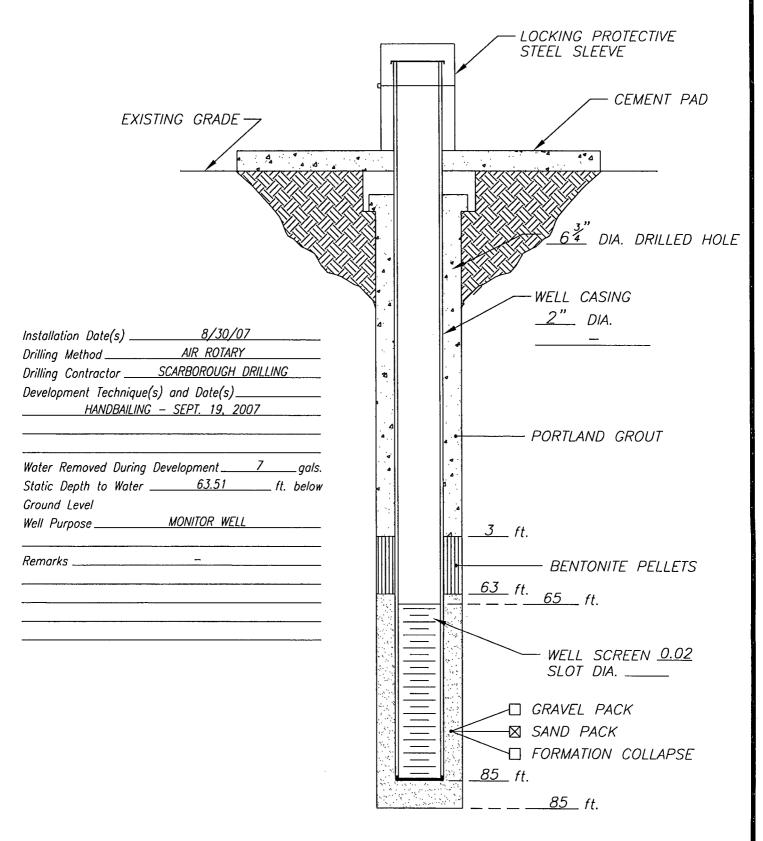
09/14/07

DEPTH (Ft)	OVM	SAMPLE DESCRIPTION
0-5		Tan/brown medium grain sand
5-10		Brown/tan fine to medium grain sand
10-15		Tan/buff calcareous sand with chert and limestone intermixed
15-20		Tan/buff calcareous sand with limestone intermixed
20-25		Tan/buff calcareous sand with limestone intermixed
25-30		Tan fine grain calcareous sand
30-35		Tan fine grain calcareous sand
35-40		Tan fine grain calcareous sand
40-45		Tan fine grain sand (blow sand)
45-50		Tan fine grain sand with sandstone intermixed
50-55		Tan fine grain sand with gravel intermixed
55-60		Tan/brown medium grain sand with some gravel
60-65		Tan/brown medium grain sand with sandstone intermixed
65-70		Tan/brown clay of high plasticity
70-75		Tan/brown clay of high plasticity
75-80		Tan/brown clay of high plasticity
80-85		Tan/brown clay of high plasticity

Total Depth is 85 feet

Groundwater encountered at 65 feet below ground surface.

WELL CONSTRUCTION LOG



DATE: 10/3/07

Highlander Environmental CLIENT: POGO PRODUCING INC

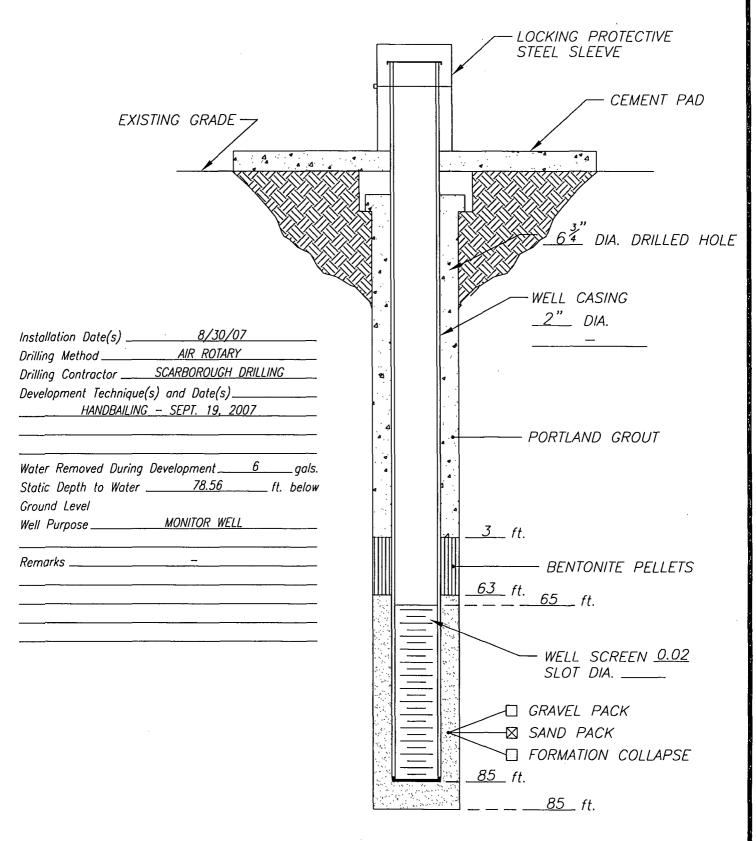
PROJECT: TODD UT HOBBS R # 10 ATB

LOCATION: ROOSEVELT CO, NM

WELL NO.

MW-2

WELL CONSTRUCTION LOG



DATE: 10/3/07

Highlander Environmental CLIENT: POGO PRODUCING INC

PROJECT: TODD UT HOBBS R # 10 ATB

LOCATION: ROOSEVELT CO, NM

WELL NO.

MW-3

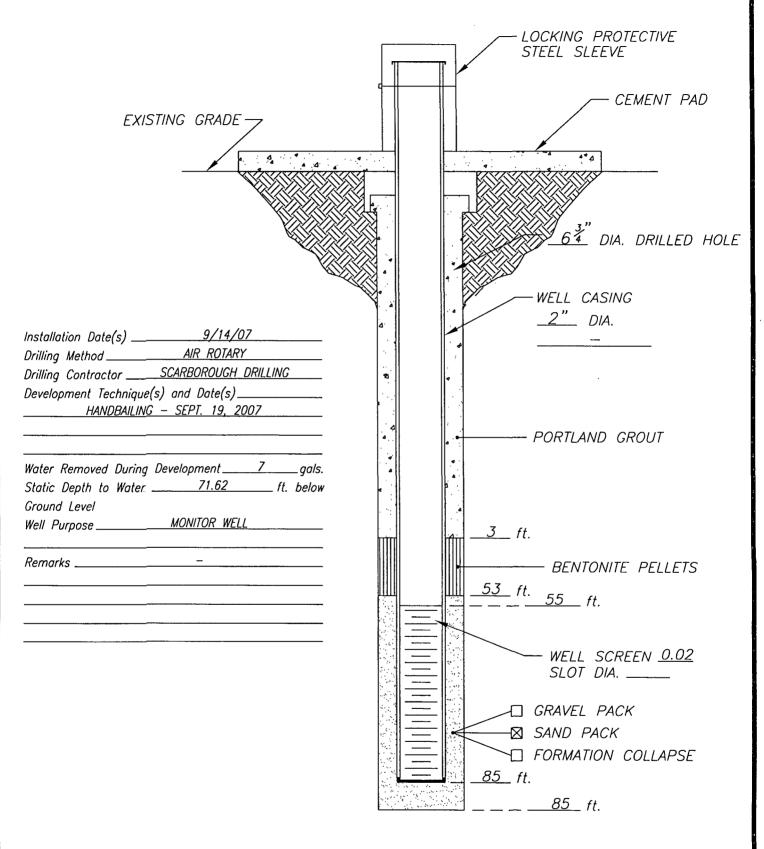
WELL CONSTRUCTION LOG LOCKING PROTECTIVE STEEL SLEEVE - CEMENT PAD EXISTING GRADE -<u>64</u> DIA. DRILLED HOLE WELL CASING _2" DIA. Installation Date(s) 8/30/07 Drilling Method ______AIR ROTARY Drilling Contractor <u>SCARBOROUGH DRILLING</u> Development Technique(s) and Date(s)_____ HANDBAILING – SEPT. 19, 2007 — PORTLAND GROUT Water Removed During Development _____7 gals. Static Depth to Water ______68.11 ft. below Ground Level Well Purpose <u>MONITOR WELL</u> 3_ ft. Remarks _____ --- BENTONITE PELLETS 63 ft. <u>65</u> ft. - WELL SCREEN <u>0.02</u> SLOT DIA. ____ ← GRAVEL PACK -⊠ SAND PACK ☐ FORMATION COLLAPSE 85 ft. _ <u>85</u>_ ft. 10/3/07 DATE: WELL NO. CLIENT: POGO PRODUCING INC Highlander Environmental PROJECT: TODD UT HOBBS R # 10 ATB MW-4LOCATION: ROOSEVELT CO, NM

WELL CONSTRUCTION LOG LOCKING PROTECTIVE STEEL SLEEVE CEMENT PAD EXISTING GRADE - $\frac{6^{\frac{3}{4}}}{2}$ DIA. DRILLED HOLE WELL CASING 2" DIA. Installation Date(s) ______9/13/07 Drilling Method _____AIR ROTARY Drilling Contractor <u>SCARBOROUGH DRILLING</u> Development Technique(s) and Date(s)_____ HANDBAILING — SEPT. 19, 2007 — PORTLAND GROUT Water Removed During Development ______8 ____ qals. Static Depth to Water ______ 62.83 ____ ft. below Ground Level Well Purpose MONITOR WELL 3__ ft. Remarks ______ - BENTONITE PELLETS 53 ft. 55 ft. - WELL SCREEN <u>0.02</u> SLOT DIA. _____ ☐ GRAVEL PACK -SAND PACK ☐ FORMATION COLLAPSE <u>85</u>_ ft. _ _ <u>85</u>_ ft. 10/3/07 DATE: WELL NO. CLIENT: POGO PRODUCING INC PROJECT: TODD UT HOBBS R # 10 ATB MW-5

Highlander Environmental

LOCATION: ROOSEVELT CO, NM

WELL CONSTRUCTION LOG



DATE: 10/3/07

Highlander Environmental CLIENT: POGO PRODUCING INC

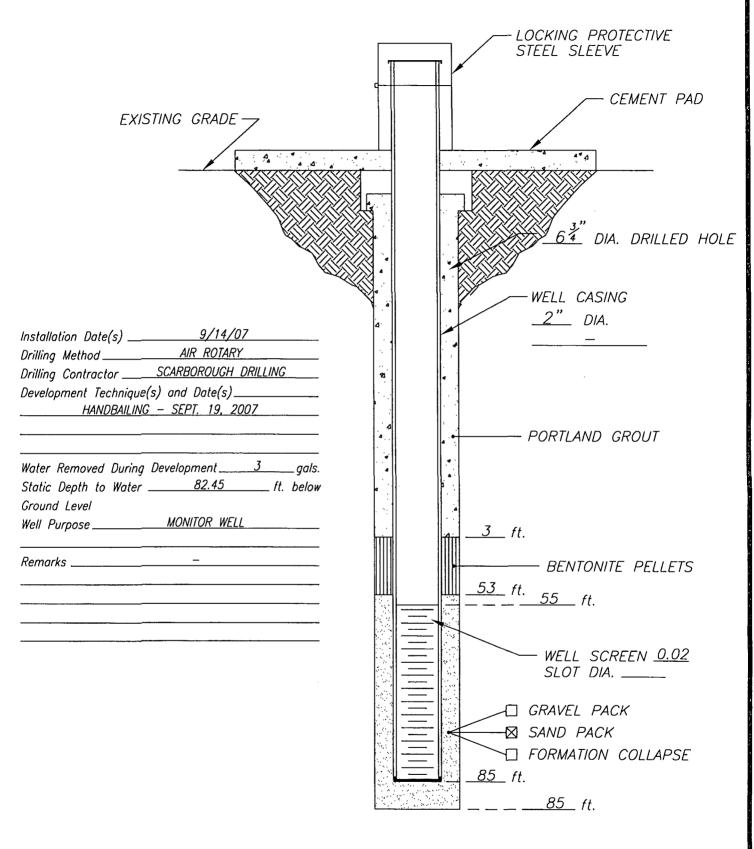
PROJECT: TODD UT HOBBS R # 10 ATB

LOCATION: ROOSEVELT CO, NM

WELL NO.

MW-6

WELL CONSTRUCTION LOG



DATE: 10/3/07

Highlander Environmental CLIENT: POGO PRODUCING INC

PROJECT: TODD UT HOBBS R # 10 ATB

LOCATION: ROOSEVELT CO, NM

WELL NO.

MW-7

WELL CONSTRUCTION LOG LOCKING PROTECTIVE STEEL SLEEVE - CEMENT PAD EXISTING GRADE -64 DIA. DRILLED HOLE WELL CASING <u>2"</u> DIA. Installation Date(s) 9/14/07 Drilling Method _____ AIR ROTARY Drilling Contractor <u>SCARBOROUGH DRILLING</u> Development Technique(s) and Date(s) HANDBAILING — SEPT. 19, 2007 — PORTLAND GROUT Water Removed During Development ______8 ____qals. Static Depth to Water ______ft. below Ground Level Well Purpose MONITOR WELL <u>3</u> ft. Remarks _____ — BENTONITE PELLETS <u>53</u> ft. <u>55</u> ft. - WELL SCREEN <u>0.02</u> SLOT DIA. ____ ☐ GRAVEL PACK -⊠ SAND PACK ☐ FORMATION COLLAPSE <u>85</u> ft. __ <u>___ 85__</u> ft. 10/3/07 DATE: WELL NO. CLIENT: POGO PRODUCING INC Highlander Environmental MW-8 PROJECT: TODD UT HOBBS R # 10 ATB LOCATION: ROOSEVELT CO, NM



Highlander Environmental Corp.

Midland, Texas

CERTIFIED MAIL RETURN RECIEPT NO. 7005 1160 0005 3780 6047

June 25, 2007

Mr. Wayne Price New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

RE: NOTIFICATION OF GROUNDWATER IMPACT

TODD UT HOBBS R #10 ATB

SEC. 31, T7S, R36E

ROOSEVELT COUNTY, TEXAS

Mr. Price:

On behalf of Latigo Petroleum, Inc. (Latigo), Highlander Environmental Corp. (Highlander) notifies the Director of the New Mexico Oil Conservation Division (OCD), Environmental Bureau of groundwater impact at the above-referenced site in accordance with NM Rule 116.

Highlander of Midland, Texas was engaged to investigate this site. Highlander installed one soil boring at the site. Highlander installed two soil borings at the site along with seven auger holes. One of the soil borings was found to be impacted from the surface to the vadose zone with chlorides, while several of the auger holes were impacted with TPH to a maximum depth of 5 feet bgs. Both the chlorides and the TPH exceed state regulated levels for soils. Based on the results of the field sampling, the soil boring impacted to the vadose zone with chlorides was converted to a temporary 2-inch monitor well. Groundwater was encountered at approximately 72 feet below ground surface (bgs). After appropriate development, the well was sampled pursuant to OCD guidelines by Highlander and submitted to Environmental Lab of Texas for analysis of chlorides and BTEX. Chloride concentrations exceed New Mexico Water Quality Control Commission (NMWQCC) standards. Hydrocarbon constituents (BTEX) were detected but at levels below the NMWQCC action levels. Highlander will present a remedy for this site in the submission of a Corrective Action Plan.

Please accept this notification for the above-referenced site. Should you have any questions or concerns regarding this site, please do not hesitate to contact me at (432) 682-4559.

Highlander Environmental Corp.

Timothy M. Reed, P.G.

Vice President

GEOIr On Wood von Courten – NMOCD, Santa Fe

Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946