

# EL PASO FIELD SERVICES PRODUCTION PIT CLOSURE

*Risk  
Assessment*

Ludwick Well No. A-1  
Meter/Line ID – 75388

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## SITE DETAILS

Legals - Twn: 30N	Rng: 10W	Sec: 19	Unit: M
NMOCD Hazard Ranking: 40		Land Type: BLM	
Operator: Amoco		Pit Closure Date: 09/13/94	

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## RATIONALE FOR RISK-BASED CLOSURE

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The pit noted above was assessed and ranked according to the criteria in the New Mexico Oil Conservation Division's (NMOCD) Unlined Surface Impoundment Closure Guidelines.

A Phase I excavation was conducted on September 13, 1994, to 3 feet below ground surface where bedrock was encountered and a soil sample was collected for field headspace analysis and laboratory analysis for benzene, total BTEX, and TPH. Groundwater was not encountered in the pit. Approximately 10 cubic yards of material was removed for landfarming and sent to an OCD approved centralized site. The pit was backfilled and graded in a manner to direct surface runoff away from the pit area. Headspace analysis indicated an organic vapor content of 650 ppm; laboratory analysis indicated a benzene concentration of 9.6 mg/kg, a total BTEX concentration of 683 mg/kg, and a TPH concentration of 6750 mg/kg. TPH and BTEX were above required remediation levels for the Hazard Ranking Score.

On July 31, 1995, a Phase II borehole was conducted to 16.5 feet below ground surface where bedrock was encountered. Groundwater was not encountered in the borehole. The borehole was grouted to the surface in a manner to direct surface runoff away from the pit area.

El Paso Field Services Company (EPFS) requests closure of the above mentioned production pit location for the following reasons:

- The primary source, discharge to the pit, has been removed for almost six years.
- The pit was backfilled and the former pit area graded to direct surface runoff away from the former pit.
- Groundwater was not encountered in the excavation or the borehole.
- Residual hydrocarbons in the soil will degrade naturally with minimal risk to the environment.
- Bedrock was encountered at 16.5 feet below ground surface; consequently, impact to groundwater is unlikely.
- Excavated material has been removed from the pit eliminating potential direct contact with livestock and the public.
- There are no water supply wells or other sources of fresh water extraction within 1,000 feet of site.

## ATTACHMENT

Field Pit Assessment Form

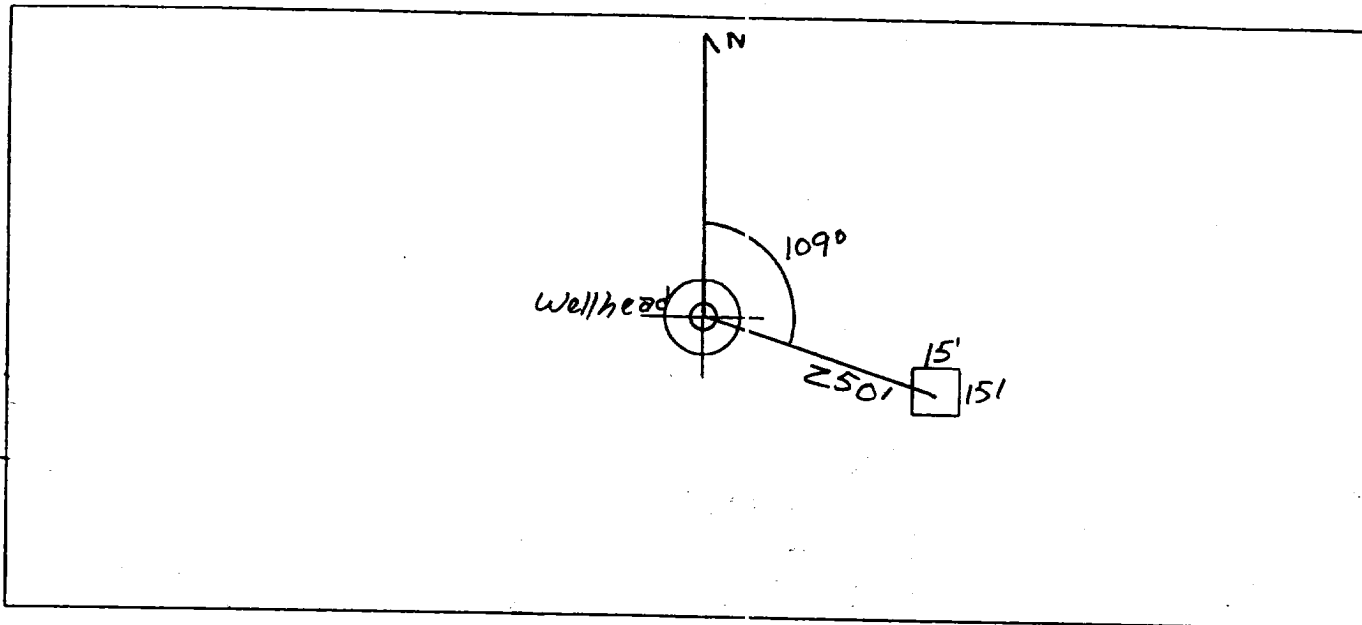
Phase II Geologic Log

# FIELD PIT SITE ASSESSMENT FORM

GENERAL	<p>Meter: <u>75-388</u> Location: <u>Ludwick Well No. A-1</u>          Operator #: <u>0203</u> Operator Name: <u>Amoco Production</u> P/L District: <u>Aztec</u>          Coordinates: Letter: <u>M</u> Section <u>19</u> Township: <u>30</u> Range: <u>10</u>          Or Latitude _____ Longitude _____          Pit Type: Dehydrator _____ Location Drip: <u>X</u> Line Drip: _____ Other: _____          Site Assessment Date: <u>8/15/94</u> Area: <u>04</u> Run: <u>21</u></p>
SITE ASSESSMENT	<p><b>NMOCD Zone:</b>          (From NMOCD Maps) Inside <input checked="" type="checkbox"/> (1) Outside <input type="checkbox"/> (2)</p> <p><b>Land Type:</b> BLM <input checked="" type="checkbox"/> (1) State <input type="checkbox"/> (2) Fee <input type="checkbox"/> (3) Indian _____</p> <p><b>Depth to Groundwater</b>          Less Than 50 Feet (20 points) <input checked="" type="checkbox"/> (1)          50 Ft to 99 Ft (10 points) <input type="checkbox"/> (2)          Greater Than 100 Ft (0 points) <input type="checkbox"/> (3)</p> <p><b>Wellhead Protection Area :</b>          Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? <input type="checkbox"/> (1) YES (20 points) <input checked="" type="checkbox"/> (2) NO (0 points)</p> <p><b>Horizontal Distance to Surface Water Body</b>          Less Than 200 Ft (20 points) <input checked="" type="checkbox"/> (1)          200 Ft to 1000 Ft (10 points) <input type="checkbox"/> (2)          Greater Than 1000 Ft (0 points) <input type="checkbox"/> (3)</p> <p>Name of Surface Water Body <u>East Fork Bloomfield Canyon</u>          (Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p>Distance to Nearest Ephemeral Stream <input type="checkbox"/> (1) &lt; 100' (Navajo Pits Only)  <input type="checkbox"/> (2) &gt; 100'</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>40</u> POINTS</p>
REMARKS	<p>Remarks : <u>Redline Book - Inside</u> <u>Vulnerable Zone - Inside</u>  <u>Six pits, location drip pit is dry, will close one pit.</u>  <u>DIG &amp; HAUL</u></p>

# ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 109° Footage from Wellhead 250'  
 b) Length : 15' Width : 15' Depth : 1'



## REMARKS :

Pictures @ 1240 (21-24, Roll 12)  
 Dump Truck (End Dump, maybe)  
 There are 2, 55 gallon drums next to the pit.

Completed By:

*Amish Nelly*  
 Signature

8/15/94  
 Date

# FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL	<p>Meter: <u>75388</u> Location: <u>Ludwick well # A-1</u></p> <p>Coordinates: Letter: <u>M</u> Section <u>19</u> Township: <u>30</u> Range: <u>10</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Date Started : <u>9/13/94</u> Run: <u>04</u> <u>21</u></p>
FIELD OBSERVATIONS	<p>Sample Number(s): <u>KD 254</u></p> <p>Sample Depth: <u>3'</u> Feet</p> <p>Final PID Reading <u>650 ppm</u> PID Reading Depth <u>3'</u> Feet</p> <p>Groundwater Encountered <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Approximate Depth _____ Feet</p>
CLOSURE	<p>Remediation Method :</p> <p>Excavation <input checked="" type="checkbox"/> Approx. Cubic Yards <u>10</u></p> <p>Onsite Bioremediation <input type="checkbox"/></p> <p>Backfill Pit Without Excavation <input type="checkbox"/></p> <p>Soil Disposition:</p> <p>Envirotech <input type="checkbox"/> <input checked="" type="checkbox"/> Tierra</p> <p>Other Facility <input type="checkbox"/> Name: _____</p> <p>Pit Closure Date: <u>9/13/94</u> Pit Closed By: <u>BEI</u></p>
REMARKS	<p>Remarks : <u>Excavated pit to 3', Hit Sandstone Layer, took</u>  <u>PID Sample, closed pit</u></p>
<p>Signature of Specialist: <u>[Signature]</u></p>	



**FIELD SERVICES LABORATORY  
ANALYTICAL REPORT**

**PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone**

**SAMPLE IDENTIFICATION**

	Field ID	Lab ID
SAMPLE NUMBER:	KD 254	946113
MTR CODE   SITE NAME:	75388	N/A
SAMPLE DATE   TIME (Hrs):	9-13-94	1045
SAMPLED BY:	N/A	
DATE OF TPH EXT.   ANAL.:	9-15-94	9-15-94
DATE OF BTEX EXT.   ANAL.:	9-19-94	9-19-94
TYPE   DESCRIPTION:	VC	Brown/Grey Sand & Clay

REMARKS:

**RESULTS**

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q	M(g)	V(ml)
BENZENE	9.6	MG/KG	20			
TOLUENE	23.0	MG/KG	20			
ETHYL BENZENE	33	MG/KG	20			
TOTAL XYLENES	41.0	MG/KG	20			
TOTAL BTEX	683.	MG/KG				
TPH (418.1)	6750	MG/KG			1.55	28
HEADSPACE PID	650	PPM				
PERCENT SOLIDS	90.2	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 1.3 % for this sample. All QA/QC was acceptable.  
Narrative:

ATL Results attached: D(50) = Diluted SCX, analyzed 9/21/94

DF -- Dilution Factor Used

Approved By: [Signature]

Date:

10/23/94

# GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)  
 CLIENT : EL PASO NATURAL GAS CO. ATI I.D.: 409367  
 PROJECT # : 24324  
 PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	946111	NON-AQ	09/13/94	09/19/94	09/19/94	10
05	946112	NON-AQ	09/13/94	09/19/94	09/19/94	20
06	946113	NON-AQ	09/13/94	09/19/94	09/19/94	20
PARAMETER			UNITS	04	05	06
BENZENE			MG/KG	<0.25	<0.5	9.6
TOLUENE			MG/KG	1.3	5.0	230 D(50)
ETHYLBENZENE			MG/KG	2.7	15	33
TOTAL XYLENES			MG/KG	55	280	410

## SURROGATE:

BROMOFLUOROBENZENE (%) 91 168\* 113

\*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

D(50)=DILUTED 50X, ANALYZED 09/21/94



Analytical **Technologies**, Inc.

2709-D Pan American Freeway, NE Albuquerque, NM 87107  
Phone (505) 344-3777 FAX (505) 344-4413

ATI I.D. 409367

September 22, 1994

El Paso Natural Gas Co.  
P.O. Box 4990  
Farmington, NM 87499

Project Name/Number: PIT CLOSURE 24324

Attention: John Lambdin

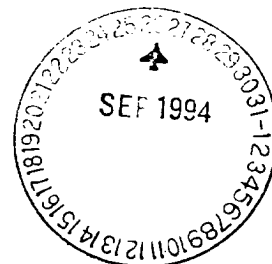
On 09/16/94, Analytical Technologies, Inc., (ADHS License No. AZ0015), received a request to analyze **non-aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505) 344-3777.

Letitia Krakowski, Ph.D.  
Project Manager

MR:jt

Enclosure





CHAIN OF CUSTODY RECORD

Page \_\_\_\_\_ of \_\_\_\_\_

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project		DATE: 9/13/94		CONTRACT LABORATORY P. O. NUMBER				
SAMPLES: (Signature)		DATE: 9/13/94		DATE: 9/13/94		REMARKS				
LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS			
							TPH EPA 418.1	BTEX EPA 8020	LAB PID	SEQUENCE #
946112	9/13/94	0913	soil	KD 253	1	VC	X	X		229
946113	9/13/94	1045	soil	KD 254	1	VC	X	X		230
946114	9/13/94	1350	soil	KD 255	1	VC	X	X		231
946115	9/13/94	1515	soil	KD 256	1	VC	X	X		232
[Large diagonal line across the table]										
RELINQUISHED BY: (Signature)		DATE/TIME 33		RECEIVED BY: (Signature)		DATE/TIME 28		RECEIVED BY: (Signature)		
[Signature]		9/13/94 1150		[Signature]		9/14/94 1010		[Signature]		
RELINQUISHED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		DATE/TIME		RECEIVED BY: (Signature)		
[Signature]				[Signature]				[Signature]		
REQUESTED TURNAROUND TIME: <input type="checkbox"/> ROUTINE <input type="checkbox"/> RUSH				SAMPLE RECEIPT REMARKS				RESULTS & INVOICES TO:		
CARRIER CO.								FIELD SERVICES LABORATORY		
								EL PASO NATURAL GAS COMPANY		
								P.O. BOX 4990		
								FARMINGTON, NEW MEXICO 87499		
BILL NO.:				CHARGE CODE				505-599-2144		
								FAX: 505-599-2261		



# RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.  
4000 Monroe Road  
Farmington, New Mexico 87401  
(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1  
Well # 1  
Page 1 of 1

Project Name EPNG Pits  
Project Number 14509 Phase 601-6000  
Project Location Ludwick Well 16.14-1, 75-388

Elevation \_\_\_\_\_  
Borehole Location T30, R10, S.19, M  
GWL Depth \_\_\_\_\_  
Logged By S.Kelly  
Drilled By K. Padilla  
Date/Time Started 7/31/95, 0850  
Date/Time Completed 7/31/95, 1020

Well Logged By S.Kelly  
Personnel On-Site K. Padilla, F. Rivera, D. Charley  
Contractors On-Site \_\_\_\_\_  
Client Personnel On-Site \_\_\_\_\_  
Drilling Method 4 1/4" ID HSA  
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH S/H/S			Drilling Conditions & Blow Counts
0				Backfill to 3'						
5										slow drilling, like rock.
10	1	10-12	.3' 2.0'	SAND, olive brown, fine to med. sand, dense, damp.			53 107			0930
15	2	15-16.5	.6' 1.5'				53 642			0945
20				BoH- 16.5'						
25										
30										
35										
40										

Comments:

No sample taken due to high headspace readings at refusal. Refusal at 16.5' of split spoon, 15.0' of augers BH grouted to surface.

Geologist Signature

Sarah Kelly