

*Denny E. Foust*  
DEPUTY OIL & GAS INSPECTOR

AUG 09 1999

Jicarilla Apache Tribe  
Environmental Protection Office  
P.O. Box 507  
Dulce, New Mexico 87528

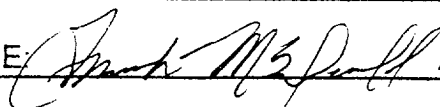

RECEIVED  
JUN 24 1999  
OIL CON. DIV.  
DIST. 3

Pit Remediation and Closure Report

Operator:	Taurus Exploration U.S.A., Inc			Telephone:	(505) 325-6800		
Address:	2198 Bloomfield Hwy, Farmington, NM 87401						
Facility or Well Name:	Jicarilla 120 C-21						
Location:	Unit or Qtr/QTR Sec "K" Sec 31, T 26 N, R 4 W County				Rio Arriba		
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator Pit				
Land Type:	Range						
Pit Location:	Pit dimensions: length: 30 ft width: 30 ft depth: 12 ft						
(Attach Diagram)							
Reference: wellhead: X other:							
Footage from reference: 10 feet							
Direction from reference: 40 Degrees X East North X							
of							
West South							
Depth To Groundwater:	Less than 50 feet		(20 points)				
(Vertical distance from	50 feet to 99 feet		(10 points)				
contaminants to seasonal	Greater than 100 feet		(0 points)		0		
high water elevations of							
groundwater)							
Distance to an Ephemeral Stream:	Less than 100 feet		(10 points)				
(Downgradient dry wash greater than	Greater than 100 feet		(0 points)		0		
ten feet in width)							
Distance to Nearest Lake, Playa, or Watering	Less than 100 feet		(10 points)				
Pond: (Downgradient lakes, playas, and	Greater Than 100 feet		(0 points)		0		
livestock or wildlife watering ponds)							
Wellhead Protection Area:	Yes		(20 points)				
(Less than 200 feet from a private	No		(0 points)		0		
domestic water source, or less than							
1000 feet from all other water sources)							
Distance To Surface Water:	Less than 100 feet		(20 points)				
(Horizontal distance to perennial	100 feet to 1000 feet		(10 points)				
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet		(0 points)		0		
irrigation canals and ditches.)							
RANKING SCORE (TOTAL SCORE):					0		

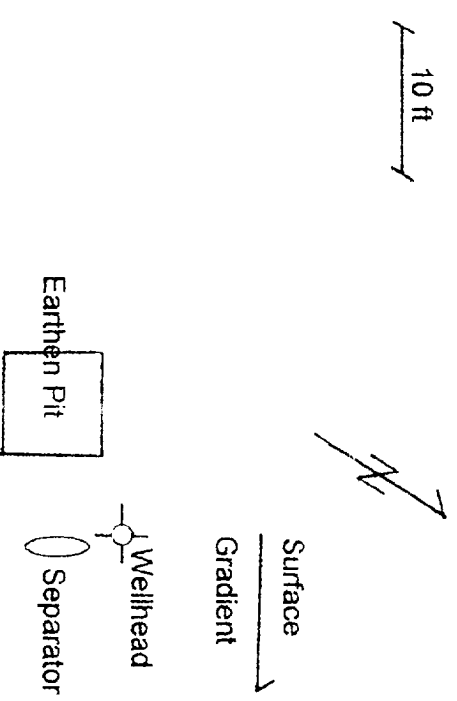
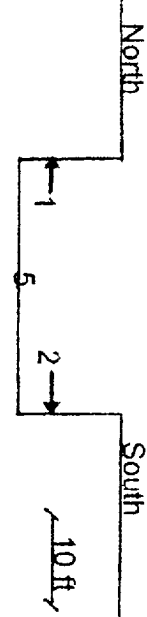
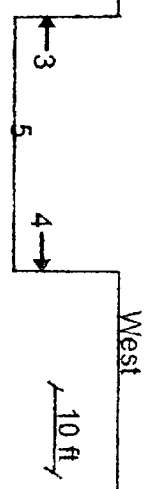
Jicarilla Apache Tribe  
Environmental Protection Office  
P.O. Box 507  
Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started: 7/14/98		Date Completed 7/16/98	
Remediation Method: (Check all appropriate sections)	Excavation:	X	Approx. cubic yd: 400
	Landfarmed:	X	In situ Bioremediation:
	Other:		
Remediation Location: (I.e. landfarmed on site, name and location of off site location)	On-site:	X	Off-site:
General Description of Remedial Action: Soil was excavated and landfarmed on location.			
Groundwater Encountered: No: X Yes: Depth:			
Final Pit Closure Sampling: (If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample location: Pit Bottom @ 12 feet below surface. Pit walls were analyzed for Headspace (see attachment).		
	Sample depth:	12 feet	
	Sample date:	7/16/98	Sample time: 925
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	ND	Benzene (ppb)	
Total BTEX (ppm)	0.03929	Toluene (ppb)	
Field Headspace (ppm)	151	Ethylbenzene (ppb)	
TPH (ppm)	508	Total Xylenes (ppb)	
Groundwater Sample: (If yes, attach sample results.)	Yes:	No: X	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: 8/25/98		Frank McDonald	
SIGNATURE: 		AND TITLE: Env. Division Manager	
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: Yes: X No: (Reason)			
SIGNED: 		DATE: 9-2-98	

Client : Taurus Exploration U.S.A. Inc.

Date Started : July 14, 1998 Date Completed : July 16, 1998

Location : <u>Jicarilla 120 - C - 21</u>		Overview of Location and Sampling :  																																								
Quad : <u>K</u> Section : <u>31</u>																																										
Range : <u>4 W</u> Township: <u>28 N</u>																																										
Pit : <u>Abandoned Separator Pit</u> Reference : <u>10' N 40 E</u> Initial Size : <u>6' x 6' x 3' deep</u> Final Size : <u>30' x 30' x 12' deep</u> Yds. Excavated : <u>400 cy</u>																																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sample #</th> <th style="text-align: center;">Location</th> <th style="text-align: center;">OVM</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">N. Wall @ 9'</td> <td style="text-align: center;">9.3</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">S. Wall @ 9'</td> <td style="text-align: center;">1.1</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">E. Wall @ 9'</td> <td style="text-align: center;">0.6</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">W. Wall @ 9'</td> <td style="text-align: center;">2.3</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">Bottom @ 12'</td> <td style="text-align: center;">151</td> </tr> <tr> <td style="text-align: center;">6</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">7</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">8</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">9</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">10</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">11</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">12</td> <td></td> <td></td> </tr> </tbody> </table>		Sample #	Location	OVM	1	N. Wall @ 9'	9.3	2	S. Wall @ 9'	1.1	3	E. Wall @ 9'	0.6	4	W. Wall @ 9'	2.3	5	Bottom @ 12'	151	6			7			8			9			10			11			12			Comments : <u>Top soil - 10' Soil is moist, brown, sandy loam with some hydrocarbon staining and a moderate odor.</u> <u>10' - 12' Soil is moist brown, sandy/loam with no hydrocarbon staining and a very mild odor.</u> <u>12' Soil is brown, moist, sandy loam with no odor.</u> <u>A sample from the center bottom @ 12' was sent to IML for GRO/DRO and BTEX analysis.</u>	
Sample #	Location	OVM																																								
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12																																										
Pit Profile : <u>North to South :</u>																																										
																																										
Pit Profile : <u>East to West :</u>																																										
																																										

Environmental Specialist : VC

Cimarron Oilfield Services

## DIESEL RANGE ORGANICS - DRO

### Taurus Exploration U.S.A., Inc.


Project ID:	Jicarilla 120 C #21 Sep. Pit	Report Date:	07/29/98
Sample ID	C Bottom @12'	Date Sampled:	07/16/98
Lab ID:	0398G04027	Date Received:	07/17/98
Sample Matrix:	Soil	Date Analyzed:	07/23/98
Condition	Cool/Intact		

TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel- Range Petroleum Hydrocarbons	7.6	5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:

  
Reviewed By:

## GASOLINE RANGE ORGANICS - GRO

### Taurus Exploration U.S.A., Inc.


Project ID:	Jicarilla 120 C #21 Sep. Pit	Report Date:	07/29/98
Sample ID:	C Bottom @12'	Date Sampled:	07/16/98
Lab ID:	0398G04027	Date Received:	07/17/98
Sample Matrix:	Soil	Date Analyzed:	07/23/98
Condition:	Cool/Intact		

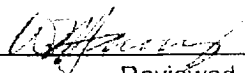
TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	500	5.0 mg/kg
Total Purgeable Hydrocarbons	630	5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:

  
Reviewed By:

**VOLATILE AROMATIC HYDROCARBONS****Taurus Exploration U.S.A., Inc.**

Project ID:	Jicarilla 120 C #21 Sep. Pit	Report Date:	07/29/98
Sample ID:	Btm @ 12'	Date Sampled:	07/16/98
Lab ID:	0398G04027	Time Sampled:	9:25am
Sample Matrix:	Soil	Date Received:	07/17/98
Condition:	Cool/Intact	Date Extracted:	NA
		Date Analyzed:	07/17/98

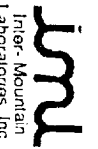
Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	10.0
Toluene	ND	50.0
Ethylbenzene	ND	50.0
m,p-Xylenes	13.26	50.0
o-Xylene	26.03	50.0

ND - Analyte not detected at the stated detection limit.

<b>Quality Control:</b>	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	79%	70%-130%

**Reference:** Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Revision 2, December 1996..

**Comments:**  
\_\_\_\_\_  
Analyst  
\_\_\_\_\_  
Review



# CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location		Analyses / Parameters		
Tanner Exploration USA Inc			Ticahua 120 C#21		Separation Pit		
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.				
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks	
71102012540612	7/14/98	03:25		Soil	1	3015 PRO/PRO 3020 BTEX	
"	7/14/98	03:25		Soil	1	"	
<div><div>Relinquished by: (Signature) <i>[Signature]</i></div><div>Relinquished by: (Signature) <i>[Signature]</i></div><div>Relinquished by: (Signature) <i>[Signature]</i></div></div>							
Relinquished by: (Signature) <i>[Signature]</i>			Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature) <i>[Signature]</i>			7/14/98	03:25	<i>[Signature]</i>	7/14/98	1300
Relinquished by: (Signature) <i>[Signature]</i>			7/14/98	8:21	<i>[Signature]</i>	7-17-98	0822

☐ 33 Terra Avenue  
Tanner, Wyoming 82801  
One (307) 672-8945

☐ 1701 Phillips Circle  
Gillette, Wyoming 82718  
Telephone (307) 682-8945

☐ 2506 West Main Street  
Farmington, NM 87401  
Telephone (505) 326-4737

☐ 1160 Research Drive  
Bozeman, Montana 59718  
Telephone (406) 586-8450

☐ 11183 State Hwy. 30  
College Station, TX 77845  
Telephone (409) 776-8945

Inter-Mountain Laboratories, Inc.

84535

JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>Taurus Exploration USA Inc.</u> Telephone: <u>(505) 325 - 6800</u>	
Address: <u>2198 Bloomfield Hwy, Farmington N.M. 87401</u>	
Facility or Well Name: <u>Jicarilla 120 C 21</u>	
Location: Unit or Qtr/Qtr Sec <u>K</u> Sec <u>31</u> T <u>26 N</u> R <u>4 W</u> County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>7/14/98</u> Date Completed: <u>12/1/98</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>400</u>	
Composted <u>      </u>	
Other <u>      </u>	
<p>Depth to Groundwater: (pts) <u>0</u></p> <p>Distance to an Ephemeral Stream (pts) <u>0</u></p> <p>Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u></p> <p>Wellhead Protection Area (pts) <u>0</u></p> <p>Distance to Surface Water (pts) <u>0</u></p> <p><b>RANKING SCORE</b> <b>(TOTAL POINTS):</b> <u>0</u></p>	<p style="text-align: center;"><b>Final Closure Sampling:</b></p> <p>Sampling Date: <u>12/1/98</u> Time: <u>11:41</u></p> <p>Sample Results:</p> <p>Field Headspace (ppm) <u>8.3</u></p> <p>TPH (ppm) <u>&lt;10</u> Method <u>8015</u></p> <p>Other: <u>      </u></p>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>1/8/99</u> PRINTED NAME <u>VIRGIL CHAVEZ</u>	
SIGNATURE <u>[Signature]</u> AND TITLE <u>ENV. SPECIALIST</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE SOIL REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO <u>      </u> (REASON) <u>use as Backfill</u>	
SIGNED: <u>[Signature]</u> DATE: <u>1-20-98</u>	



Client : Taurus Exploration USA Inc.

Date Started : July 14, 1998 Date Completed : December 1, 1998

Location : Jicarilla 120 C 21			Overview of Landfarm and Sampling :		
Quad : <u>K</u>	Section : <u>31</u>				
Township: <u>26 N</u>	Range: <u>4 W</u>				
Pit : <u>Separator Pit</u>					
	Sample #	Location	OVM		
	1	Comp 1	3.1		
	2	Comp 2	8.3		
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
Reference <u>120' N 40 E</u> from wellhead.					
Size: <u>100' x 40' x 3' deep</u>					
Yds : <u>400</u>					
<u>2</u> <u>5 - Point Composites</u>					
Comments : Soil is moist, brown, sandy/loam, with no visible staining and a slight hydrocarbon odor. A sample from composite # 2 was sent to IML for GRO/DRO analysis.			<p>The diagram shows a rectangular area labeled 'land farm'. To its left is an oval labeled 'seperator'. Further left is a small circle labeled 'well head'. A line labeled 'meter run' points to the right side of the land farm. A line labeled 'entrance' points to the top right corner. A line labeled 'surface gradient' points to the top left corner. A line labeled 'north' points to the top right corner. A line labeled 'pit' points to the bottom right corner.</p>		
Environmental Specialist : JE					



Phone (505) 326-4737 Fax (505) 325-4182

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

## GASOLINE RANGE ORGANICS - GRO

### ENERGEN RESOURCES

Project ID: Jicarilla 120 C21 Landfarm  
Sample ID: Composite #2  
Lab ID: 0398G06957  
Sample Matrix: Soil  
Condition: Cool/Intact

Report Date: 12/31/98  
Date Sampled: 12/02/98  
Date Received: 12/02/98  
Date Analyzed: 12/29/98\*

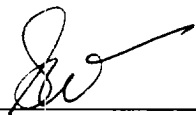
TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	<5.0	5.0 mg/Kg

ND - Analyte not detected at the stated detection limit.

#### Reference:

#### Comments:

\*Sample was analyzed within the holding times, however, due to instrument problems and QC failure, the sample had to be re-analyzed to verify results.

  
Reported By:

  
Reviewed By:



# DIESEL RANGE ORGANICS - DRO

## ENERGEN RESOURCES

Project ID: Jicarilla 120 C21 Landfarm  
Sample ID: Composite #2  
Lab ID: 0398G06957  
Sample Matrix: Soil  
Condition: Cool/Intact


Report Date: 12/22/98  
Date Sampled: 12/02/98  
Date Received: 12/02/98  
Date Analyzed: 12/16/98

TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	<5.0	5.0 mg/Kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:

  
Reviewed By: