

*Dennye E. Faust*  
DEPUTY OIL & GAS INSPECTOR

AUG 6 5 1999

*Approved*

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

Pit Remediation and Closure Report

*Handwritten: H-15 K-13, 1100 K*  
**RECEIVED**  
JUN 24 1999  
OIL CON. DIV.  
DIST. 3

Operator:	Taurus Exploration U.S.A., Inc		Telephone:	(505) 325-6800	
Address:	2198 Bloomfield Hwy, Farmington, NM 87401				
Facility or Well Name:	Jicarilla 94-2				
Location:	Unit or Qtr/QTR		Sec "M"	Sec 27, T 27 N, R 3 W County	Rio Arriba
Pit Type:	Separator:	Dehydrator:	Other: X - Production Tank Pit		
Land Type:	Range				
Pit Location:	Pit dimensions: length: 50 ft width: 50 ft depth: 10 ft				
(Attach Diagram)					
Reference:	wellhead: X other:				
Footage from reference:	65 feet				
Direction from reference:	15	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  
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P.O. Box 507  
Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started:	7/31/98	Date Completed	8/3/98
Remediation Method:	Excavation:	<u>X</u>	Approx. cubic yd: <u>855</u>
(Check all appropriate sections)	Landfarmed:	<u>X</u>	Insitu Bioremediation:
	Other:		
Remediation Location:	On-site:	<u>X</u>	Off-site:
(I.e. landfarmed on site, name and location of off site location)			
General Description of Remedial Action: <u>Soil was excavated and landfarmed on location.</u>			
Groundwater Encountered: No: <u>X</u> Yes: _____ Depth: _____			
Final Pit Closure Sampling:	Sample location: <u>Pit Bottom @ 10 feet below surface (Bedrock). Pit walls were analyzed for Headspace (see attachment).</u>		
(If multiple samples, attach sample results and diagram of sample locations and depths.)			
	Sample depth:	<u>10 feet (Bedrock)</u>	
	Sample date:	<u>8/3/98</u>	Sample time: <u>1143</u>
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	<u>ND</u>	Benzene (ppb)	
Total BTEX (ppm)	<u>ND</u>	Toluene (ppb)	
Field Headspace (ppm)	<u>267</u>	Ethylbenzene (ppb)	
TPH (ppm)	<u>&lt;11</u>	Total Xylenes (ppb)	
Groundwater Sample:	Yes: _____	No: <u>X</u>	
(If yes, attach sample results.)			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: <u>8/25/98</u>		Frank McDonald	
SIGNATURE: <u>Frank McDonald</u>		AND TITLE: <u>Env. Division Manager</u>	
AFTER REVIEW OF THE PIT CLOSURE INFORMATION PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: Yes: <u>X</u> No: _____ (Reason)			
SIGNED: <u>Ken C. Mc...</u>		DATE: <u>9-2-98</u>	

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

Date Started : July 31, 1998 Date Completed : August 3, 1998

Location : <u>Jicarilla 94 - 2</u>		Overview of Location and Sampling :																																								
Quad : <u>M</u>	Section : <u>27</u>																																									
Range : <u>3 W</u>	Township: <u>27 N</u>																																									
Pit : Production Tank Pit Reference : 65' N 15 E from wellhead Initial Size : 25' x 25' x 3' deep Final Size : 50' x 50' x 10' deep Yds. Excavated : 855 cy Depth to Groundwater: >100' Nearest Water Source: >1000' Nearest Surface Water: >1000' Nearest Ephemeral Stream: >1000' EPO Ranking Score: 0 TPH Closure Standard: 5000																																										
<table border="1"><thead><tr><th>Sample #</th><th>Location</th><th>QVM</th></tr></thead><tbody><tr><td>1</td><td>N. Wall @ 6'</td><td>128</td></tr><tr><td>2</td><td>S. Wall @ 10'</td><td>3.8</td></tr><tr><td>3</td><td>E. Wall @ 9'</td><td>48</td></tr><tr><td>4</td><td>W. Wall @ 9'</td><td>22</td></tr><tr><td>5</td><td>C. Btm @ 10'</td><td>267</td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr><tr><td>8</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td></tr><tr><td>11</td><td></td><td></td></tr><tr><td>12</td><td></td><td></td></tr></tbody></table>		Sample #	Location	QVM	1	N. Wall @ 6'	128	2	S. Wall @ 10'	3.8	3	E. Wall @ 9'	48	4	W. Wall @ 9'	22	5	C. Btm @ 10'	267	6			7			8			9			10			11			12			Comments : Top soil - (8' to 12') Soil is moist, dark brown, loam with light staining, and a strong hydrocarbon odor. 8' to 12' - Bedrock - Solid sandstone, gray w/odor. A sample from the center bottom at 10' was sent to IML for GRO/DRO and BTEX analysis.	
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12																																										
Pit Profile : North to South : North		Pit Profile : East to West : East																																								

Environmental Specialist : VC


Cimarron Oilfield Services

**GASOLINE RANGE ORGANICS - GRO****Taurus Exploration U.S.A., Inc.**

Project ID:	Jicarilla 94-2 Prod. Tank Pit	Report Date:	08/12/98
Sample ID:	C Bottom @ 10'	Date Sampled:	08/03/98
Lab ID:	0398G04343	Date Received:	08/04/98
Sample Matrix:	Soil	Date Analyzed:	08/11/98
Condition:	Cool/Intact		

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:**  
\_\_\_\_\_  
Reported By:  
\_\_\_\_\_  
Reviewed By:

COPY

**DIESEL RANGE ORGANICS - DRO****Taurus Exploration U.S.A., Inc.**


Project ID:	Jicarilla 94-2 Prod. Tank Pit	Report Date:	08/10/98
Sample ID:	C Bottom @ 10'	Date Sampled:	08/03/98
Lab ID:	0398G04343	Date Received:	08/04/98
Sample Matrix:	Soil	Date Analyzed:	08/10/98
Condition:	Cool/Intact		

TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	6	5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:  
Reviewed By:

COPY

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

Project ID:	Jicarilla 94-2 Prod. Tank Pit	Report Date:	08/12/98
Sample ID:	C. Bottom @ 10'	Date Sampled:	08/03/98
Lab ID:	0398G04343	Time Sampled:	10:40am
Sample Matrix:	Soil	Date Received:	08/04/98
Condition:	Cool/Intact	Date Extracted:	NA
		Date Analyzed:	08/11/98


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

ND - Analyte not detected at the stated detection limit.

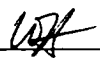
<b>Quality Control:</b>	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	90%	70%-130%

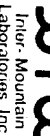
**Reference:** Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics; Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Revision 2, December , 1996.

**Comments:**

  
\_\_\_\_\_  
Analyst

COPY

  
\_\_\_\_\_  
Review



## CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location			ANALYSES / PARAMETERS		
Lucas Exploration USA Inc			Terra, Hg 94-2 Production Tank					
Sampler: (Signature)			Chain of Custody Tape No.					
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks		
See 94-2 C. Blue 10'	8/13/98	11:43		Soil	1	R015 K201/D20 R120 RTEX		
<div>COPY</div>						<div>cool - intact had delivered</div>		
Inquired by: (Signature)			Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)			Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)			Date	Time	Received by: (Signature)	Date	Time	

☐ 1633 Terra Avenue  
Sheridan, Wyoming 82801  
Telephone (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.

54545

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

**ON-SITE SOIL REMEDIATION REPORT**

Operator: Taurus Exploration USA Inc. Telephone: (505) 325 - 6800

Address: 2198 Bloomfield Hwy, Farmington N.M. 87401

Facility or Well Name: Jicarilla 94-2

Location: Unit or Qtr/Qtr Sec M Sec 27 T 27 N R 3 W County Rio Arriba

Land Type: Range

Date Remediation Started: July 31, 1998 Date Completed: November 5, 1998

Remediation Method: Landfarmed X Approx. cubic yards 855

Composed       

Other       

Depth to Groundwater: (pts) 0

Distance to an Ephemeral Stream (pts) 0

Distance to Nearest Lake, Playa, or Watering Pond (pts) 0

Wellhead Protection Area (pts) 0

Distance to Surface Water (pts) 0

**RANKING SCORE  
(TOTAL POINTS):** 0

**Final Closure Sampling:**

Sampling Date: 11/5/98 Time: 14:10

Sample Results:

Field Headspace (ppm) 1.2

TPH (ppm) <10 Method 8015

Other:       

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE: 12/7/98 PRINTED NAME FRANK MCDONALD

SIGNATURE  AND TITLE ENV. DIVISION MANAGER

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 X NO        (REASON) use as Backfill

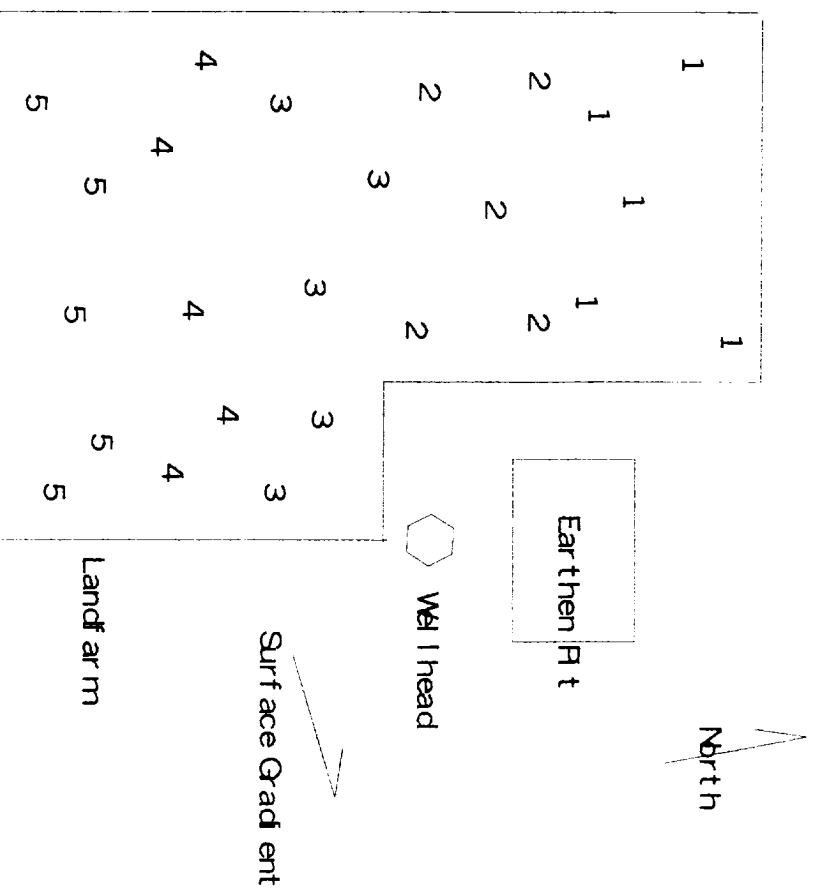
SIGNED:  DATE: 12-9-98



Client : Taurus Exploration USA Inc.

Date Started : 11/5/98

Date Completed : 11/5/98

Location : Jicarilla 94 - 2		Overview of Landfarm and Sampling :																																								
Quad : M	Section : 27																																									
Township: 27 N Range: 3 W																																										
Pit : Separator	<table border="1"><thead><tr><th>Sample #</th><th>Location</th><th>OVM</th></tr></thead><tbody><tr><td>1</td><td>Comp 1</td><td>0.4</td></tr><tr><td>2</td><td>Comp 2</td><td>1.2</td></tr><tr><td>3</td><td>Comp 3</td><td>0.4</td></tr><tr><td>4</td><td>Comp 4</td><td>0.8</td></tr><tr><td>5</td><td>Comp 5</td><td>1.2</td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr><tr><td>8</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td></tr><tr><td>11</td><td></td><td></td></tr><tr><td>12</td><td></td><td></td></tr></tbody></table>	Sample #	Location	OVM	1	Comp 1	0.4	2	Comp 2	1.2	3	Comp 3	0.4	4	Comp 4	0.8	5	Comp 5	1.2	6			7			8			9			10			11			12				
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10																																										
11																																										
12																																										
Reference: 70 ft N 45 W																																										
Size : 190' X 60' X 1'																																										
Yds : 855 cubic yards																																										
5 - 5 Point Composites																																										
Comments : Soil is light brown - Clay loam																																										
No staining or odor																																										
5 - 5 point composite samples analyzed by headspace. Sample # 2 sent to IML for 8015 analysis																																										
1																																										
Environmental Specialist : JE																																										

Ranking Score : 0 Closure Standard : 5000 ppm

Cimarron Oilfield Services

**GASOLINE RANGE ORGANICS - GRO****TAURUS EXPLORATION U.S.A., INC.**

Project ID: Jicarilla 94-2  
Sample ID: Land Farm  
Lab ID: 0398G06652  
Sample Matrix: Soil  
Condition: Cool/Intact

Report Date: 11/20/98  
Date Sampled: 11/10/98  
Date Received: 11/11/98  
Date Analyzed: 11/11/98

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

QUALITY CONTROL - SURROGATE RECOVERY	% Recovery	QC limits
Bromofluorobenzene	118%	70-130%

ND - Analyte not detected at the stated detection limit.

**Reference:****Comments:**

  
Reported By:

  
Reviewed By:

**DIESEL RANGE ORGANICS - DRO****TAURUS EXPLORATION U.S.A., INC.**

Project ID: Jicarilla 94-2  
Sample ID: Land Farm  
Lab ID: 0398G06652  
Sample Matrix: Soil  
Condition: Cool/Intact

Report Date: 11/20/98  
Date Sampled: 11/10/98  
Date Received: 11/11/98  
Date Analyzed: 11/18/98

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

QUALITY CONTROL - SURROGATE RECOVERY	%Recovery	QC Limits
o-Terphenyl	58%*	70-130%

ND - Analyte not detected at the stated detection limit.

**Reference:**

**Comments:** \*Surrogate recovery failed established QC limits due to matrix interferences.

  
Reported By:

  
Reviewed By:



## CHAIN OF CUSTODY RECORD

[illegible]