

Denny S. Faust
DEPUTY OIL & GAS INSPECTOR

AUG 09 1999

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

*Special work
sample date*

OK

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 67-13				
Location:	Unit or Qtr/QTR Sec "J" Sec 20, T 25 N, R 5 W County Rio Arriba				
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator Pit		
Land Type:	Range				
Pit Location:	Pit dimensions: length: 40 ft width: 30 ft depth: 10 ft				
(Attach Diagram)	Reference: wellhead: X other:				
	Footage from reference: 15 feet				
	Direction from reference: 80 Degrees X East North				
	West South X				
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

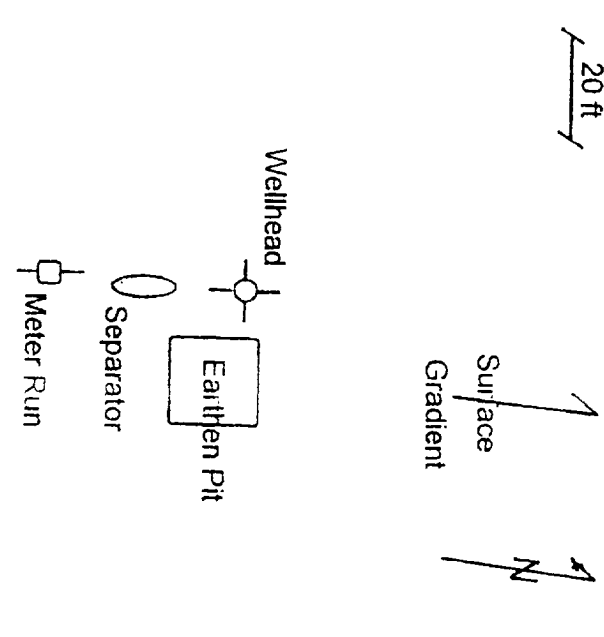
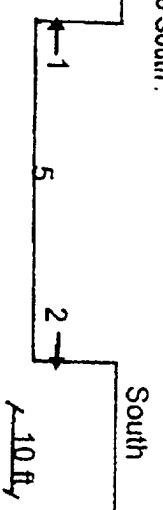
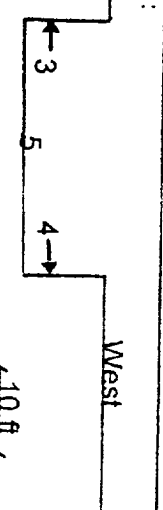
Pit Remediation and Closure Report

Date Remediation Started:	7/29/98	Date Completed	7/30/98 8/3/98
Remediation Method:	Excavation: <input checked="" type="checkbox"/>	Approx. cubic yd:	420
(Check all appropriate sections)	Landfarmed: <input checked="" type="checkbox"/>	Insitu Bioremediation:	
	Other: _____		
Remediation Location:	On-site: <input checked="" type="checkbox"/>	Off-site:	
(I.e. landfarmed on site, name and location of off site location)			
General Description of Remedial Action:	Soil was excavated and landfarmed on location.		
Groundwater Encountered:	No: <input checked="" type="checkbox"/>	Yes: _____	Depth: _____
Final Pit Closure Sampling:	Sample location: Pit Bottom @ 10 feet below surface . Pit walls were analyzed for Headspace (see attachment).		
(If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample depth: 10 feet	Sample date: 8/3/98	Sample time: 1040
Sample Results:			
<u>Soil:</u>		<u>Water:</u>	
Benzene (ppm)	_____	Benzene (ppb)	_____
Total BTEX (ppm)	_____	Toluene (ppb)	_____
Field Headspace (ppm)	8	Ethylbenzene (ppb)	_____
TPH (ppm)	<10	Total Xylenes (ppb)	_____
Groundwater Sample:	Yes: _____	No: <input checked="" type="checkbox"/>	
(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:	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: <input checked="" type="checkbox"/>	No: _____	(Reason)
SIGNED:	DATE: 9-2-98		

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

Date Started : July 29, 1998 Date Completed : August 3, 1998

VC.

Location : <u>Jicarilla 67 - 13</u>			Overview of Location and Sampling : 																																									
Quad : <u>J</u> Section : <u>20</u>																																												
Range : <u>5 W</u> Township: <u>25 N</u>																																												
Pit : Abandoned Separator Pit Reference : 15' S 80 E from wellhead Initial Size : 15' x 15' x 2' deep Final Size : 40' x 30' x 10' deep Yds. Excavated : 420 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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Sample #</th> <th style="width: 35%;">Location</th> <th style="width: 15%;">OVM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N. Wall @ 8'</td> <td>0.7</td> </tr> <tr> <td>2</td> <td>S. Wall @ 8'</td> <td>0.7</td> </tr> <tr> <td>3</td> <td>E. Wall @ 8'</td> <td>0.9</td> </tr> <tr> <td>4</td> <td>W. Wall @ 8'</td> <td>0.3</td> </tr> <tr> <td>5</td> <td>C. Btm. @ 10'</td> <td>8</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	N. Wall @ 8'	0.7	2	S. Wall @ 8'	0.7	3	E. Wall @ 8'	0.9	4	W. Wall @ 8'	0.3	5	C. Btm. @ 10'	8	6			7			8			9			10			11			12		
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Comments : Top soil - 4' Soil is moist, dark brown, sandy loam with gray/black staining, and a strong hydrocarbon odor. 4' - 10' Soil is light gray clay/shale with a moderate HC odor and no visible staining. 10' Solid shale with no apparent staining or HC odor. A sample from the center bottom at 10' was sent to IML for GRO/DRO analysis.																																												
Pit Profile : North to South : 			Pit Profile : East to West : 																																									

Environmental Specialist : VC

Cimarron Oilfield Services

Taurus Exploration U.S.A., Inc.

Case Narrative

On August 4, 1998, four soil samples were submitted to Inter-Mountain Laboratories - Farmington for analysis. The samples were received intact. Total Petroleum Hydrocarbons as Diesel Range Organics (DRO); Gasoline Range Organics (GRO); Benzene-Toluene-Ethylbenzene-Xylenes (BTEX) were performed on the samples as per the accompanying Chain of Custody forms.

DRO analysis on the samples were performed by Method DRO - USEPA Method for Determination of Diesel Range Organics, Revision 3, 05/08/92. WTPH - D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.


GRO analysis on the samples were performed by Method GRO-USEPA Method for Determination of Gasoline Range Organics, Rev.5, Feb. 1992. WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Dept. of Ecology, Rev. 6, 1991.

BTEX analysis on the samples were performed by EPA method 5030B, Purge and Trap, and EPA Method 8021B, Aromatic Volatile Hydrocarbons, using and OI Analytical 4560 Purge and Trap and a Hewlett Packard 5890 Gas Chromatograph, equipped with a photoionization detector.

It is the policy of this laboratory to employ, whenever possible, preparatory and analytical methods which have been approved by regulatory agencies. The methods used in the analyses of the samples reported herein are found in Test Methods for Evaluation of Solid Waste, SW-846, USEPA, 1986 and Methods for Chemical Analysis of Water and Waste, EPA-600/4 -79-020, USEPA, 1983.

Quality control reports appear at the end of the analytical package and may be identified by title. If there are any questions regarding the information presented in this package, please feel free to call at your convenience.

Sincerely,



Sharon Williams
Organic Analyst

GASOLINE RANGE ORGANICS - GRO

Taurus Exploration U.S.A., Inc.


Project ID:	Jicarilla 67-13 Sep. Pit	Report Date:	08/12/98
Sample ID:	C Bottom @ 10'	Date Sampled:	08/03/98
Lab ID:	0398G04342	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:

DIESEL RANGE ORGANICS - DRO

Taurus Exploration U.S.A., Inc.

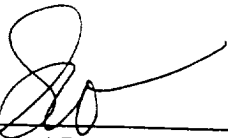
Project ID:	Jicarilla 67-13 Sep. Pit	Report Date:	08/10/98
Sample ID:	C Bottom @ 10'	Date Sampled:	08/03/98
Lab ID:	0398G04342	Date Received:	08/04/98
Sample Matrix:	Soil	Date Analyzed:	08/10/98
Condition:	Cool/Intact		

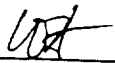
TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	<5.0	5.0 mg/kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:


Reported By:


Reviewed By:



Inter-Mountain
Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Client/Project Name			Project Location		ANALYSES / PARAMETERS	
Tanner Exploration High Line			Trevilla, 67-13		Separate pit	
Sampler: (Signature)			Chain of Custody Tape No.			
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks
See 67-13 C. Station	8/4/98	11:40		Soil	1	
<div style="text-align: center;">BG</div>						
Relinquished by: (Signature)						
8/4/98			7:50		Received by: (Signature)	
Date			Time		Janae Hudson	
Relinquished by: (Signature)			8/1/98		0836	
Date			Time		Received by laboratory: (Signature)	
Janae Hudson			8/1/98		0836	
Date			Time		Bilby Dyett	
Relinquished by: (Signature)			8-4-98		0836	
Date			Time		cool intact band delivered	

Inter-Mountain Laboratories, Inc.

☐ 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (97) 672-8945

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

☒ 2506 West Main Street
Farmington, NM 87401
Telephone (505) 326-4

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

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

54545

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 67 - 13</u>	
Location: Unit or Qtr/Qtr Sec <u>J</u> Sec <u>30</u> T <u>25 N</u> R <u>5 W</u> County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>7/29/98</u> Date Completed: <u>12/1/98</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>420</u>	
Composted <u> </u>	
Other <u> </u>	
Depth to Groundwater: (pts) <u>0</u>	Final Closure Sampling:
Distance to an Ephemeral Stream (pts) <u>0</u>	Sampling Date: <u>12/1/98</u> Time: <u>13:10</u>
Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u>	Sample Results:
Wellhead Protection Area (pts) <u>0</u>	Field Headspace (ppm) <u>8.3</u>
Distance to Surface Water (pts) <u>0</u>	TPH (ppm) <u><10</u> Method <u>8015</u>
RANKING SCORE (TOTAL POINTS): <u>0</u>	Other: <u> </u>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>1/6/99</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>we are Backfill</u>	
SIGNED: <u>[Signature]</u> DATE: <u>1-7-99</u>	

Client : Taurus Exploration USA Inc.

Date Started : July 29, 1998 Date Completed : December 1, 1998

Location : <u>Jicarilla 67-13</u>			Overview of Landfarm and Sampling :																																									
Quad : <u>J</u> Section : <u>20</u>																																												
Township: <u>25 N</u> Range: <u>5 W</u>																																												
Pit :	Separator Pit	<table border="1"><thead><tr><th>Sample #</th><th>Location</th><th>OVW</th></tr></thead><tbody><tr><td>1</td><td>Comp 1</td><td>8.3</td></tr><tr><td>2</td><td>Comp 2</td><td>2.3</td></tr><tr><td>3</td><td>Comp 3</td><td>1</td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></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	OVW	1	Comp 1	8.3	2	Comp 2	2.3	3	Comp 3	1	4			5			6			7			8			9			10			11			12					
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Reference <u>100' S 80 E</u> from wellhead.																																												
Size: <u>180' x 45' x 1.5'</u>																																												
Yds : <u>420</u>																																												
<u>3</u> <u>5 - Point Composites</u>																																												
<p>Comments : Soil is moist, light brown, clay/loam, with no visible staining or hydrocarbon odor.</p> <p>A sample from composite # 1 was sent to IML for GRO/DRO analysis.</p>			<p>1 1 1</p> <p>1 1 1</p> <p>2 2 2</p> <p>2 2 2</p> <p>3 3 3</p> <p>3 3 3</p>																																									
Environmental Specialist : <u>JE</u>																																												



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 67-13 Landfarm	Report Date:	12/31/98
Sample ID:	Composite #1	Date Sampled:	12/02/98
Lab ID:	0398G06959	Date Received:	12/02/98
Sample Matrix:	Soil	Date Analyzed:	12/29/98*
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: *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:



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

Inter-Mountain Laboratories, Inc.

2506 West Main Street, Farmington, NM 87401

DIESEL RANGE ORGANICS - DRO

ENERGEN RESOURCES


Project ID:	Jicarilla 67-13 Landfarm	Report Date:	12/22/98
Sample ID:	Composite #1	Date Sampled:	12/02/98
Lab ID:	0398G06959	Date Received:	12/02/98
Sample Matrix:	Soil	Date Analyzed:	12/16/98
Condition:	Cool/Intact		

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:



CHAIN OF CUSTODY RECORD

CONFIDENTIAL