

*Denny S. Faust*  
DEPUTY OIL & GAS INSPECTOR

AUG 09 1999

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

Pit Remediation and Closure Report

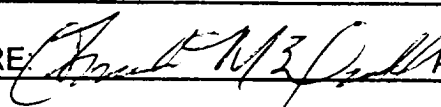
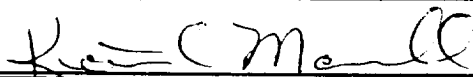
**RECEIVED**  
JUN 24 1999

**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 183-10						
Location:	Unit or Qtr/QTR			Sec "E"	Sec 27, T 23 N, R 3 W	County	Rio Arriba
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator Pit				
Land Type:	Range						
Pit Location:	Pit dimensions: length: 35 ft width: 20 ft depth: 18 ft						
(Attach Diagram)							
Reference:	wellhead: X other:						
Footage from reference:	50 feet						
Direction from reference:	90	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	

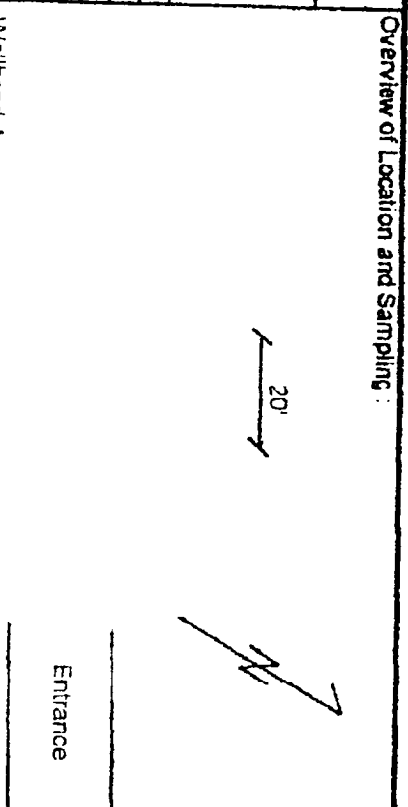
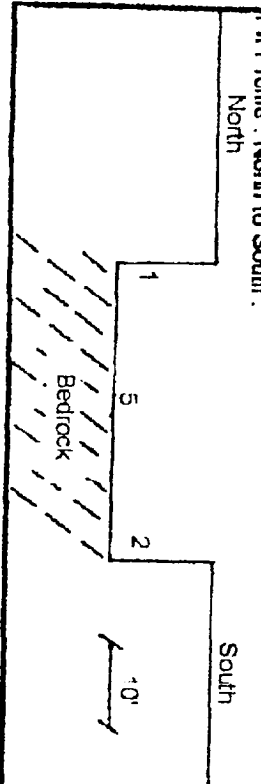
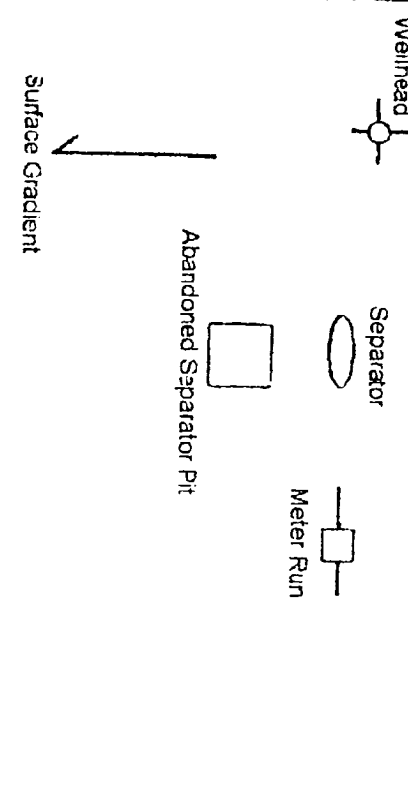
Jicarilla Apache Tribe  
Environmental Protection Office  
P.O. Box 507  
Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started: 8/17/98		Date Completed 8/18/98	
Remediation Method: (Check all appropriate sections)	Excavation:	<input checked="" type="checkbox"/>	Approx. cubic yards: 460
	Landfarmed:	<input checked="" type="checkbox"/>	Insitu Bioremediation:
	Other:		
Remediation Location: (i.e. landfarmed on site, name and location of off site location)	On-site:	<input checked="" type="checkbox"/>	Off-site:
General Description of Remedial Action: Soil was excavated and landfarmed on location.			
Groundwater Encountered: No: <input checked="" type="checkbox"/> Yes: <input type="checkbox"/> Depth:			
Final Pit	Sample location: Pit Bottom @ 18 feet below surface. Pit walls were analyzed for Headspace (see attachment).		
Closure Sampling: (If multiple samples, attach sample results and diagram of sample locations and depths.)	Sample depth:	18 feet	
	Sample date:	8/18/98	Sample time: 1310
Sample Results:			
<b>Soil:</b>		<b>Water:</b>	
Benzene (ppm)	0.128	Benzene (ppb)	
Total BTEX (ppm)	1.62	Toluene (ppb)	
Field Headspace (ppm)	356	Ethylbenzene (ppb)	
TPH (ppm)	<10	Total Xylenes (ppb)	
Groundwater Sample: (If yes, attach sample results.)	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE: 9/9/98		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: <input type="checkbox"/> (Reason)			
SIGNED: 		DATE: 10/27/98	

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

Date Started : August 17, 1998 Date Completed : August 18, 1998

Location : <u>Jicarilla 183 # 10</u>		Overview of Location and Sampling :	
Quad : <u>E</u>	Section : <u>27</u>		
Range : <u>3 W</u>	Township : <u>23 N</u>		
Pit : <u>Abandoned Separator Pit</u>		Entrance	
Reference : <u>50' East from wellhead</u>			
Initial Size : <u>10' x 10' x 1' deep</u>			
Final Size : <u>35' x 20' x 18' deep</u>			
Yds. Excavated : <u>440 cy 1/8"</u>			
Depth to Groundwater : <u>&gt;100'</u>			
Nearest Water Source : <u>&gt;1000'</u>			
Nearest Surface Water : <u>&gt;1000'</u>			
Nearest Ephemeral Stream : <u>&gt;1000'</u>			
EPO Ranking Score : <u>0</u>			
TPH Closure Standard : <u>5000</u>			
Comments : <u>Top soil - 10' Soil is moist, brown, sandy/loam with gray staining and a strong hydrocarbon odor, 10' - 18' Soil is moist, tightly packed shale with gray staining and a strong odor. 18' Bedrock Excavation limited on west wall due to separator. A sample from the center bottom @ 12' was sent to IML for GRO/DRO and BTEX analysis.</u>			
Pit Profile : <u>North to South :</u>		Pit Profile : <u>East to West :</u>	
			

Environmental Specialist : VC

Cimarron Oilfield Services

**Diesel Range Organic - DRO****Taurus Exploration U.S.A., Inc.**

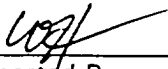
Project ID:	Jicarilla 183 #10 Sep Pit	Report Date:	08/31/98
Sample ID:	C. Bottom @ 18'	Date Sampled:	08/18/98
Lab ID:	0398G04580	Date Received:	08/19/98
Sample Matrix:	Soil	Date Analyzed:	08/28/98
Condition:	Cool/Intact		

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

Quality Control:	Surrogate	Percent Recovery	Acceptance Limits
	<u>O-Terphenyl</u>	<u>93%</u>	<u>70-130%</u>

Comments:

Reference: USEPA Manual SW-846, Methods, 3510,3550a, 8015Mod, Revision 2, 1996.  
Hydrocarbons in Soil - 8015AZ, Revision 0, 1998.

  
Reported By:  
Reviewed By:

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

Project ID:	Jicarilla 183 #10 Sep. Pit	Report Date:	08/24/98
Sample ID:	C.Bottom @ 18'	Date Sampled:	08/18/98
Lab ID:	0398G04580	Date Received:	08/19/98
Sample Matrix:	Soil	Date Analyzed:	08/20/98
Condition:	Cool/Intact		

**TPH GAS-RANGE (MOD EPA 8015)****RESULT****DETECTION LIMIT**

Gasoline-Range Petroleum Hydrocarbons

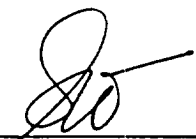
&lt;5.0

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 183 #10 Sep. Pit	Report Date:	08/24/98
Sample ID:	C. Bottom @ 18'	Date Sampled:	08/18/98
Lab ID:	0398G04580	Time Sampled:	13:10
Sample Matrix:	Soil	Date Received:	08/19/98
Condition:	Cool/Intact	Date Extracted:	NA
		Date Analyzed:	08/20/98



Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	128	10.0
Toluene	121	50.0
Ethylbenzene	451	50.0
m,p-Xylenes	70	50.0
o-Xylene	218	50.0

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	98%	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  
\_\_\_\_\_  
Reviewer

## CHAIN OF CUSTODY RECORD

[illegible]

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 183 - 10

Location: Unit or Qtr/Qtr Sec E Sec 27 T 23 N R 3 W County Sandoval

Land Type: Range

Date Remediation Started: 8/17/98 Date Completed: 12/1/98

Remediation Method: Landfarmed X Approx. cubic yards 460

Composted       

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: 12/1/98 Time: 07:35

Sample Results:

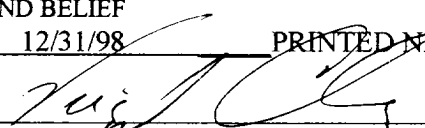
Field Headspace (ppm) 4.1

TPH (ppm) <16 Method 8015

Other:       

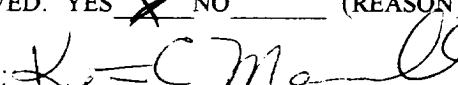
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE: 12/31/98 PRINTED NAME VIRGIL CHAVEZ

SIGNATURE  AND TITLE ENV. SPECIALIST

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) was a Backfill

SIGNED:  DATE: 1-4-99



Client : Taurus Exploration USA Inc.

Date Started : August 17, 1998 Date Completed : December 1, 1998

<p>Location : <u>Jicarilla 183-10</u></p> <p>Quad : <u>E</u> Section : <u>27</u></p> <p>Township: <u>23 N</u> Range: <u>3 W</u></p> <p>Pit : <u>Separator Pit</u></p> <p>Reference <u>50' S 85 W</u> from wellhead.</p> <p>Size: <u>75' x 80' x 2' deep</u></p> <p>Yds : <u>460</u></p> <p><u>3</u> <u>5 - Point Composites</u></p>		<p>Overview of Landfarm and Sampling :</p> <div style="text-align: center;"> <p>surface gradient      north</p> </div>	
<p>Comments : <u>Soil is moist, dark brown, clay/loam, with no visible staining or detectable hydrocarbon odor.</u></p> <p><u>A sample from composite # 1 was sent to JML for GRO/DRO analysis.</u></p>		<p>Environmental Specialist : <u>JE</u></p>	



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 183-10 Landfarm  
Sample ID: Composite #1  
Lab ID: 0398G06952  
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:



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 183-10 Landfarm	Report Date:	12/22/98
Sample ID:	Composite #1	Date Sampled:	12/02/98
Lab ID:	0398G06952	Date Received:	12/01/98
Sample Matrix:	Soil	Date Analyzed:	12/16/98
Condition:	Cool/Intact		

TPH DIESEL-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Diesel-Range Petroleum Hydrocarbons	11	5.0 mg/Kg

ND - Analyte not detected at the stated detection limit.

Reference:

Comments:

  
Reported By:

  
Reviewed By:



# CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSES / PARAMETERS							
Sampler: (Signature)		Chain of Custody Tape No.		Remarks							
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers						
<div>Inter-Mountain Laboratories, Inc.</div>											
Relinquished by: (Signature)											
Relinquished by: (Signature)											
Relinquished by: (Signature)											
Received by: (Signature)											
Received by: (Signature)											
Received by laboratory: (Signature)											
Date											
Time											

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