

Denny E. Frost
DEPUTY OIL & GAS INSPECTOR

AUG 09 1999

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

OK
RECEIVED
JUN 24 1999

OIL CON. DIV.
DIST. 3

Pit Remediation and Closure Report

Approved

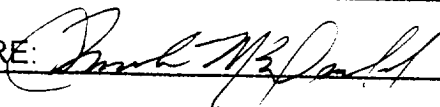
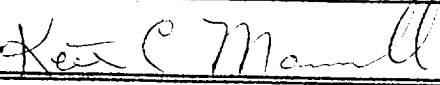
Operator:	Taurus Exploration U.S.A., Inc	Telephone:	(505) 325-6800
Address:	2198 Bloomfield Hwy, Farmington, NM 87401		
Facility or Well Name:	Jicarilla 67-20		
Location:	Unit or Qtr/QTR	Sec "E" Sec 30, T 25 N, R 5 W	County Rio Arriba
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator Pit
Land Type:	Range		

Pit Location:	Pit dimensions:	length: 25 ft	width: 25 ft	depth: 2 ft
(Attach Diagram)				
Reference:	wellhead: X	other:		
Footage from reference:	27 feet			
Direction from reference:	40	Degrees	X East	North X
			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

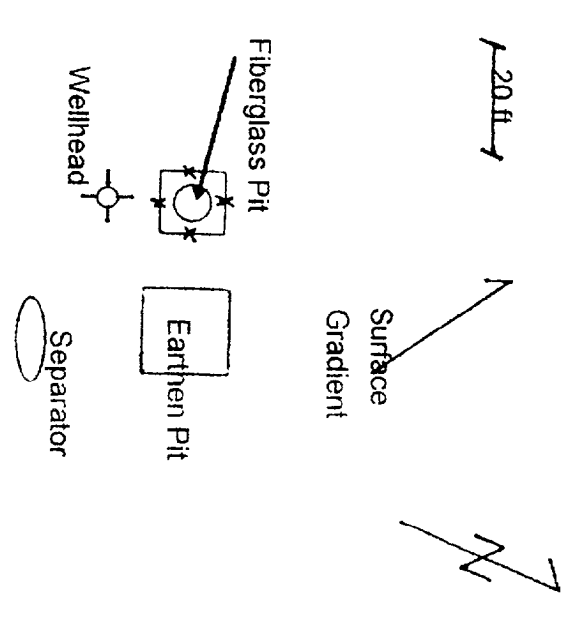
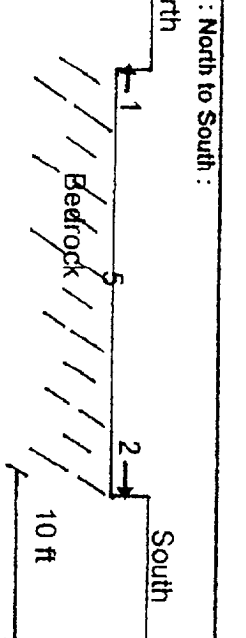
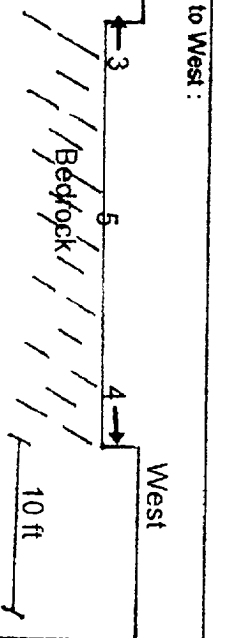
Jicarilla Apache Tribe
Environmental Protection Office
P.O. Box 507
Dulce, New Mexico 87528

Pit Remediation and Closure Report

Date Remediation Started: 8/11/98		Date Completed: 8/11/98	
Remediation Method: (Check all appropriate sections)	Excavation:	X	Approx. cubic yd: 40
	Landfarmed:	X	Insitu 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	Sample location: Pit Bottom @ 2 feet below surface (Bedrock). 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: 2 feet (Bedrock)		
	Sample date: 8/11/98	Sample time: 1215	
Sample Results:			
Soil:		Water:	
Benzene (ppm)	ND	Benzene (ppb)	
Total BTEX (ppm)	ND	Toluene (ppb)	
Field Headspace (ppm)	302	Ethylbenzene (ppb)	
TPH (ppm)	<10	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 : August 11, 1998 Date Completed : August 11, 1998

Location : <u>Jicarilla 67# 20</u>		Overview of Location and Sampling : 	
Quad : <u>E</u> Section : <u>30</u>			
Range : <u>5 W</u> Township : <u>25 N</u>			
Pit : Abandoned Separator Pit Reference : 27' N 40' E Initial Size : 18' x 18' x 5' deep Final Size : 25' x 25' x 2' deep Yds. Excavated : 40 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			
Comments : Top soil - 2' Soil is moist, dark brown, sandy/loam with no staining but a strong hydrocarbon odor. 2' Bedrock. A sample from the center bottom at 2' was sent to IML for GRO/DRO and BTEX analysis.			
Pit Profile : North to South : 		Pit Profile : East to West : 	

Environmental Specialist : VC

Cimarron Oilfield Services

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

Project ID:	Jicarilla 67 #20 Sep. Pit	Report Date:	08/24/98
Sample ID:	C-Bottom @ 2'	Date Sampled:	08/11/98
Lab ID:	0398G04484	Date Received:	08/12/98
Sample Matrix:	Soil	Date Analyzed:	08/20/98
Condition:	Cool/Intact		

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

Gasoline-Range Petroleum Hydrocarbons

<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.

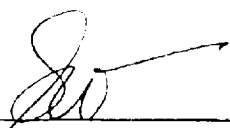
Project ID:	Jicarilla 67 #20 Sep. Pit	Report Date:	08/18/98
Sample ID:	C-Bottom @ 2'	Date Sampled:	08/11/98
Lab ID:	0398GC4484	Date Received:	08/12/98
Sample Matrix:	Soil	Date Analyzed:	08/18/98
Condition:	Cool/Intact		

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: _____

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

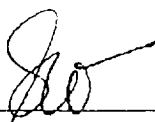
Project ID:	Jicarilla 67 #20 Sep. Pit	Report Date:	08/24/98
Sample ID:	C. Bottom @ 2'	Date Sampled:	08/11/98
Lab ID:	0398G04484	Time Sampled:	12:15
Sample Matrix:	Soil	Date Received:	08/12/98
Condition:	Cool/Intact	Date Extracted:	NA
		Date Analyzed:	08/20/98


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.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	102%	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

QUALITY CONTROL / QUALITY ASSURANCE

**QUALITY CONTROL/QUALITY ASSURANCE
VOLATILE AROMATIC HYDROCARBONS****DUPLICATE ANALYSIS**

Lab ID: G04563
Sample Matrix: Soil
Condition: Cool/Intact

Report Date: 08/24/98
Date Analyzed: 08/20/98


Target Analyte	Duplicate Concentration (ppb)	Original Concentration (ppb)	% Difference
Benzene	ND	ND	NA
Toluene	ND	ND	NA
Ethylbenzene	ND	ND	NA
m,p-Xylenes	ND	ND	NA
o-Xylene	ND	ND	NA

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	96%	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

**QUALITY CONTROL/QUALITY ASSURANCE
VOLATILE AROMATIC HYDROCARBONS****BLANK SPIKE ANALYSIS**

Lab ID: Method Blank
Sample Matrix: Water
Condition: Cool/Intact

Report Date: 08/24/98
Date Analyzed: 08/20/98

Target Analyte	Blank Spike Concentration (ng)	Method Blank Concentration (ng)	Spike Added (ng)	% Recovery	Acceptance Limits (%)
Benzene	16.03	0.00	20.0	80%	70-130
Toluene	15.67	0.00	20.0	78%	70-130
Ethylbenzene	16.81	0.00	20.0	84%	70-130
m,p-Xylenes	31.00	0.00	40.0	78%	70-130
o-Xylene	15.37	0.00	20.0	77%	70-130


ND - Analyte not detected at the stated detection limit.

NA - Not applicable or not calculated.

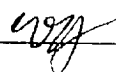
Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	85%	70 -130%

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

QUALITY CONTROL/QUALITY ASSURANCE

VOLATILE AROMATIC HYDROCARBONS

KNOWN ANALYSIS

Client: Taurus Exploration U.S.A., Inc.
Project: Organics

Date Reported: 08/24/98
Date Analyzed: 08/20/98

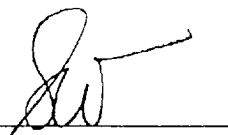
Parameter	Found Result (ppb)	Known Result (ppb)	Percent Recovery	Acceptance Limits
Benzene	22.3	20.0	112%	70 - 130%
Toluene	21.5	20.0	108%	70 - 130%
Ethylbenzene	22.1	20.0	111%	70 - 130%
m+p - Xylene	42.5	40.0	106%	70 - 130%
o - Xylene	21.5	20.0	108%	70 - 130%

Quality Control:	Surrogate	Percent Recovery	Acceptance Limits
	<u>Bromofluorobenzene</u>	<u>98%</u>	<u>75-125%</u>

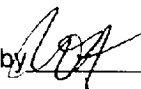
Reference: Method 5030, Purge and Trap; Method 8021B, Aromatic Volatile Organics;
Test Methods for Evaluating Waste and Solid Wastes, USEPA,
Revision 2, December, 1996.

Comments:

Analyst



Reviewed by



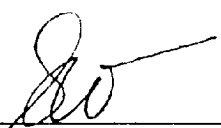
**QUALITY CONTROL/QUALITY ASSURANCE
QUALITY CONTROL REPORT****METHOD BLANK ANALYSIS**Sample Matrix: Soil
Lab ID: Method BlankReport Date: 08/24/98
Date Analyzed: 08/20/98

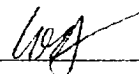
Target Analyte	Concentration (ppb)	Detection Limit (ppb)
Benzene	ND	10.0
Toluene	ND	50.0
Ethylbenzene	ND	50.0
m,p-Xylenes	ND	50.0
o-Xylene	ND	50.0

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Bromofluorobenzene	85%	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 Taurus Exploration 115th Inc				Project Location Ticarra 69#20 Separator		ANALYSES / PARAMETERS			
Sampler: (Signature) <i>[Signature]</i>				Chain of Custody Tape No.					
Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	Remarks			
69#20 C Base	8/11/98	12:15		Soil	1	8015 801 DRO 8020 BTEX			
<i>[Large diagonal line across the table]</i>									
Relinquished by: (Signature) <i>[Signature]</i>				Date	Time	Received by: (Signature) <i>[Signature]</i>		Date	Time
Relinquished by: (Signature) <i>[Signature]</i>				8/12/98	7:15	Received by: (Signature) <i>[Signature]</i>		8/12/98	7:16
Relinquished by: (Signature) <i>[Signature]</i>				8/12/98	15:30	Received by: (Signature) <i>[Signature]</i>		8/12/98	15:30

Inter-Mountain Laboratories, Inc.

☐ 1633 Terra Avenue
Sheridan, Wyoming 82801
Telephone (307) 672-8945

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

☐ 2506 West Main Street
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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

84021

**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 67 - 20

Location: Unit or Qtr/Qtr Sec E Sec 30 T 25 N R 5 W County Rio Arriba

Land Type: Range

Date Remediation Started: 8/11/98 Date Completed: 12/1/98

Remediation Method: Landfarmed X Approx. cubic yards 40

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: 10:11

Sample Results:

Field Headspace (ppm) 8.3

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: 1/6/99 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 an Backfill

SIGNED:  DATE: 1-7-99



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 67-20 Landfarm	Report Date:	12/31/98
Sample ID:	Composite #1	Date Sampled:	12/01/98
Lab ID:	0398G06955	Date Received:	12/02/98
Sample Matrix:	Soil	Date Analyzed:	12/29/98*
Condition:	Cool/Intact		

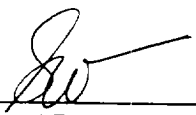
TPH GAS-RANGE (MOD EPA 8015)	RESULT	DETECTION LIMIT
Gasoline-Range Petroleum Hydrocarbons	<5.0	5.0 mg/Kg

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 67-20 Landfarm	Report Date:	12/22/98
Sample ID:	Composite #1	Date Sampled:	12/01/98
Lab ID:	0398G06955	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

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	Remarks						
<div>BS</div> <div>Intact, hand delivered</div>												
Relinquished by: (Signature)				Date	Time	Received by: (Signature)	Date	Time				
Relinquished by: (Signature)				12/2/98	14:00	Inter-Mountain Laboratories	12/2/98	14:00				
Relinquished by: (Signature)				12/2/98	14:40	Received by laboratory: (Signature)	12/2/98	14:40				

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College Station, TX 77845
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Inter-Mountain Laboratories, Inc.

58214