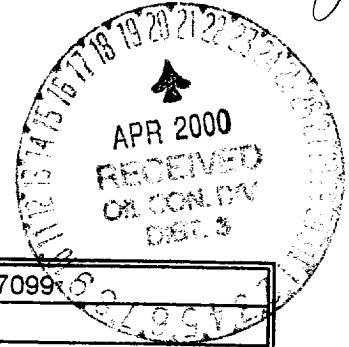


Jicarilla Apache Tribe
Environmental Protection Office
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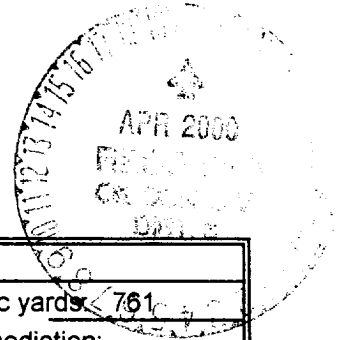
Pit Remediation and Closure Report



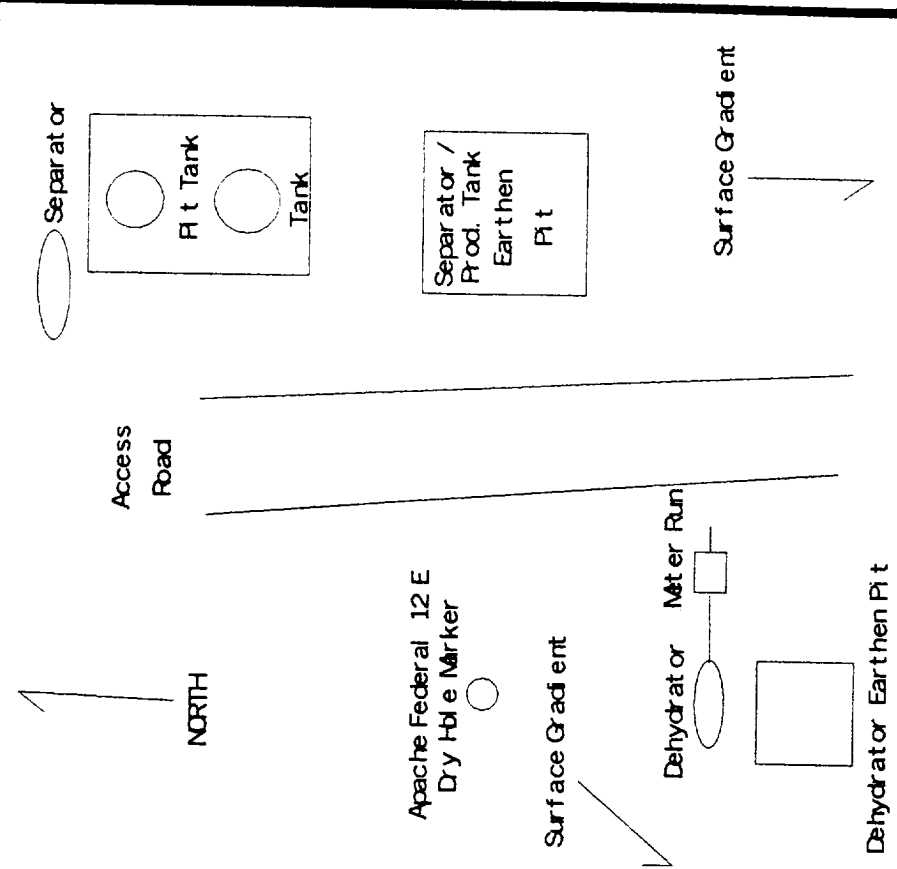
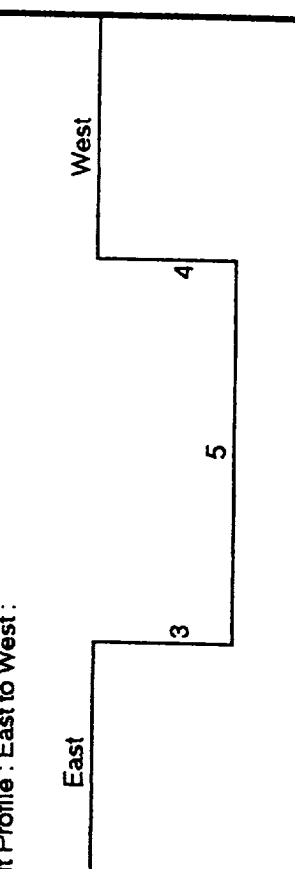
Operator:	Elm Ridge Resources	Telephone:	(505) 326-7099	
Address:	312 W. La Plata, Farmington, NM 87401			
Facility or Well Name:	Jicarilla Apache 12 - F			
Location:	Unit or Qtr/QTR Sec "L" Sec 17, T 24 N, R 5 W County		Rio Arriba	
Pit Type:	Separator:	Dehydrator:	Other: X - Abandoned Separator/Prod. Tank Pit	
Land Type:	Range			
Pit Location:	Pit dimensions: length: 40 ft width: 35 ft depth: 15 ft			
(Attach Diagram)				
Reference:	wellhead: other: X Apache 12 E Dry Hole Marker			
Footage from reference:	135 feet			
Direction from reference:	60	Degrees	X East	North X
				of
			West	South
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevations of groundwater)	Less than 50 feet	(20 points)		
	50 feet to 99 feet	(10 points)		
	Greater than 100 feet	(0 points)	0	
Distance to an Ephemeral Stream: (Downgradient dry wash greater than ten feet in width)	Less than 100 feet	(10 points)		
	Greater than 100 feet	(0 points)	0	
Distance to Nearest Lake, Playa, or Watering Pond: (Downgradient lakes, playas, and livestock or wildlife watering ponds)	Less than 100 feet	(10 points)		
	Greater Than 100 feet	(0 points)	0	
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources)	Yes	(20 points)		
	No	(0 points)	0	
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches.)	Less than 100 feet	(20 points)		
	100 feet to 1000 feet	(10 points)		
	Greater than 1000 feet	(0 points)	0	
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:	8/5/99	Date Completed	8/9/99
Remediation Method:	Excavation:	X	Approx. cubic yards: 761
(Check all appropriate sections)	Landfarmed:	X	Insitu Bioremediation:
	Other:		
Remediation Location:	On-site:	X	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: X	Yes:	Depth:
Final Pit Closure Sampling:	Sample location: Pit Bottom @ 15 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:	15 feet	
	Sample date:	8/9/99	Sample time: 15:00
Sample Results:			
Soil:		Water:	
Benzene (ppm)	ND	Benzene (ppb)	
Total BTEX (ppm)	ND	Toluene (ppb)	
Field Headspace (ppm)	28	Ethylbenzene (ppb)	
TPH (ppm)	ND	Total Xylenes (ppb)	
Groundwater Sample:	Yes:	No: X	
(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:	August 16, 1999	Virgil Chavez	
SIGNATURE:	Virgil Chavez	AND TITLE: Environmental Specialist	
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: Kent M. Manell		DATE: 8-17-99	

Location: <u>Jicarilla Apache 12 - F</u>		Overview of Location and Sampling: 	
Quad: <u>L</u>	Section: <u>17</u>	Access Road NORTH Apache Federal 12 E Dry Hble Marker Surface Gradient Separator / Prod. Tank Earthen Pit Separator or Pit Tank Dehydrator Meter Run Dehydrator Earthen Pit Surface Gradient	
Range: <u>5 W</u>	Township: <u>24 N</u>		
Pit: Separator/Prod-Tank Pit Reference: 135' N 60' E from Apache 12 E marker. Initial Size: 15' x 15' x 2' deep Final Size: 40' x 35' x 15' deep Yds. Excavated: 761 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 - 15' Soil is moist, tan colored, sandy/clay/loam with dark brown staining, and a strong hydrocarbon odor. 15' Soil is moist, brown, tightly pack shale with no staining and no detectable hydrocarbon odor. A sample from the center bottom at 15' was sent to "On Site Technologies" for 8015 GRO/DRO and 8021 BTEX analysis.		Pit Profile: East to West: 	
Pit Profile: North to South:		Pit Profile: East to West:	

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-Aug-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Jicarilla Apache 12-F Prod/Sep Pit
Work Order:	9908022	Client Sample ID:	Jic Apache 12-F C. Bottom@15ft.
Lab ID:	9908022-01A	Matrix:	SOIL
Project:	Jicarilla Apache 12-F Prod/Sep Pit	Collection Date:	08/09/1999 3:00:00 PM
		COC Record:	10239

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				Analyst: DC
T/R Hydrocarbons: C10-C28	ND	25		mg/Kg	1	08/10/1999
GASOLINE RANGE ORGANICS		SW8015B				Analyst: DM
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	08/10/1999
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DC
Benzene	ND	1		µg/Kg	1	08/11/1999
Toluene	ND	2		µg/Kg	1	08/11/1999
Ethy benzene	ND	1		µg/Kg	1	08/11/1999
m,p-Xylene	ND	2		µg/Kg	1	08/11/1999
o-Xylene	ND	1		µg/Kg	1	08/11/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

CLIENT: Cimarron Oilfield Service
Work Order: 9908022
Project: Jicarilla Apache 12-F Prod/Sep Pit
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
9908022-C1A	98.2	89.2	97.7					
9908022-01AMS	95.8	81.5	95.2					
9908022-01AMSD	95.4	81.5	94.9					
CCV1 BTEX_99061	96.3	88.1	95.5					
CCV2 BTEX_99061	96.2	89.6	95.6					
LCS SOIL	95.4	82.5	95.1					
MB1	98.8	90.8	98.6					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	76-122
4BCBZ	= 4-Bromochlorobenzene	55-146
FLBZ	= Fluorobenzene	86-113

* Surrogate recovery outside acceptance limits

CHAIN OF CUSTODY RECORD

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LAB: (505) 325-5667 • FAX: (505) 327-1496

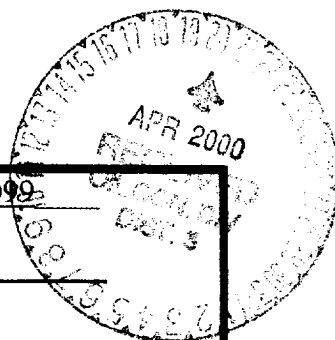
Date:

Page:

Purchase Order No.:		Project No.		Name <u>Victor Chavez</u>		Title <u>Analyst</u>	
SEND INVOICE TO		Name <u>Falcon Ridge Resources</u>		Company <u>Chavez Environmental</u>			
		Company		Mailing Address <u>P.O. Box 1234</u>			
		Address		City, State, Zip <u>12345</u>			
		City, State, Zip		Telephone No. <u>303-456-789</u>		Telefax No.	
PROJECT LOCATION: <u>12-4 Road/Exp Pit</u>				ANALYSIS REQUESTED			
SAMPLER'S SIGNATURE: <u>[Signature]</u>				LAB ID			
SAMPLE IDENTIFICATION				RESULTS TO			
DATE		TIME		MATRIX		PRES.	
<u>12/14/04</u>		<u>12:00</u>		<u>Soil</u>		<u>Coal</u>	
				Number of Containers			
				2			
Relinquished by: <u>[Signature]</u>				Date/Time <u>12/14/04</u>		Received by: <u>[Signature]</u>	
Relinquished by: <u>[Signature]</u>				Date/Time <u>12/14/04</u>		Received by: <u>[Signature]</u>	
Relinquished by: <u>[Signature]</u>				Date/Time <u>12/14/04</u>		Received by: <u>[Signature]</u>	
Method of Shipment: <u>[Signature]</u>				Rush		24-48 Hours	
Authorized by: <u>[Signature]</u>				10 Working Days		By Date	
Date <u>12/14/04</u>				Special Instructions / Remarks:			

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

ON-SITE SOIL REMEDIATION REPORT



Operator: Elm Ridge Resources Telephone: (505) 326-7099

Address: 312 W. La Plata, Farmington, NM 87401

Facility or Well Name: Jicarilla Apache 12-F

Location: Unit or Qtr/Qtr Sec L Sec 17 T 24N R 5W County Rio Arriba

Land Type: Range

Date Remediation Started: August 5, 1999 Date Completed: September 15, 1999

Remediation Method: Landfarmed X Approx. cubic yards 1,969

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: 9/15/99 Time: 11:40

Sample Results:

Field Headspace (ppm) 321.2

TPH (ppm) 350.93 Method 8015

Other: BTEX Method 8021 = 0.0112 ppm

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

DATE: 29 Sep 99 PRINTED NAME Frank McDonald

SIGNATURE [Signature] AND TITLE Environmental 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 NO (REASON)

SIGNED: DATE:

Location : Jicarilla Apache 12 - F			
Quad :	L	Section :	17
Township:	24 N	Range:	5 W
Pit : Separator / Prod. Tank and Dehydrator			
Reference : Landfarm # 1 See below Landfarm # 2 See below			
Size: Landfarm # 1 = 270' x 110' x 8" Landfarm # 2 = 170' x 105' x 8" Cubic yardage: 1969			
Sample #	Location	OVM	
1	Comp 1	20.2	
2	Comp 2	55.0	
3	Comp 3	28.6	
4	Comp 4	24.9	
5	Comp 5	321.2	
6	Comp 6	22.5	
7	Comp 7	84.0	
8	Comp 8	14.1	
9	Comp 9	26.8	
10			
11			
12			
9 5 - Point Composites			
Comments :			
References: Landfarm # 1 surrounds the Apache Federal 12 E dry hole marker. See drawing. Landfarm # 2 is 120' N 35' W from Jicarilla Apache 12 - F wellhead, approximately 1000' North of Landfarm # 1.			
Soil is moist, pale brown, clay/loam, with no visible staining or detectable hydrocarbon odor.			
A sample from composite # 5 was sent to "On-Site Technologies" laboratory for GRO/DRO and BTEX analysis.			
Environmental Specialist : VEC			

Overview of Landfarm and Sampling :

The diagram illustrates the spatial arrangement of two landfarms, Landfarm # 1 and Landfarm # 2, relative to the Apache 12 - F Wellhead and other site features. Landfarm # 1 is a large rectangular area containing 12 sampling points (1-12) and the Apache Federal 12 E 2 Dry Hole Marker. Landfarm # 2 is a smaller rectangular area, also containing 12 sampling points (1-12). The wellhead is located to the left of Landfarm # 1. An access road runs along the right side of the landfarms. A separator or pit tank and a dehydrator or after burner are located to the right of the landfarms. The surface gradient is indicated by an arrow pointing towards the right.



ANALYTICAL REPORT

Date: 28-Sep-99

Client:	Cimarron Oilfield Service	Client Sample Info:	Jicarilla Apache 12-F LF
Work Order:	9909058	Client Sample ID:	Landfarm Comp. #5
Lab ID:	9909058-01A	Matrix:	SOIL
Project:	Jicarilla Apache 12-F LF	Collection Date:	09/15/1999 11:40:00 AM
		COC Record:	5733

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015B				
T/R Hydrocarbons: C10-C28	350	25		mg/Kg	1	Analyst: DC 09/24/1999
GASOLINE RANGE ORGANICS		SW8015B				
T/R Hydrocarbons: C6-C10	0.93	0.18		mg/Kg	1	Analyst: DM 09/16/1999
AROMATIC VOLATILES BY GC/PID		SW8021B				
Benzene	ND	1		µg/Kg	1	Analyst: DM 09/24/1999
Toluene	ND	2		µg/Kg	1	09/24/1999
Ethylbenzene	1.9	1		µg/Kg	1	09/24/1999
m,p-Xylene	7.6	2		µg/Kg	1	09/24/1999
o-Xylene	1.7	1		µg/Kg	1	09/24/1999

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

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Page / of

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