



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ADMINISTRATIVE ORDER DHC-2148

Elm Ridge Resources, Inc.
312 W. La Plata St.
Farmington, NM 87401

Attention: Ms. Dana Delventhal

Jicarilla Apache C Well No. 2
API No. 30-039-21461
Unit B, Section 27, Township 24 North, Range 5 West, NMPM,
Rio Arriba County, New Mexico.
Otero-Gallup (Oil - 48450) and
Basin-Dakota (Prorated Gas - 71599) Pools

Dear Ms. Delventhal:

Reference is made to your recent application for an exception to Rule 303.A. of the Division Rules and Regulations to permit the above described well to commingle production from the subject pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303.C., and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the zones is hereby placed in abeyance.

The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

Assignment of allowable to the well and allocation of production from the well shall be on the following basis:

Otero-Gallup Pool	Oil 100%	Gas 42.9%
Basin-Dakota Pool	Oil 0%	Gas 57.1%

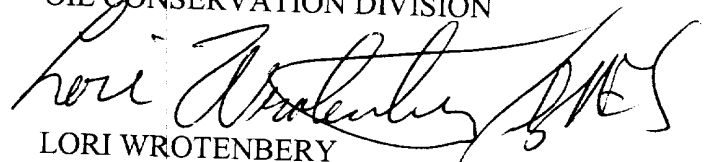
Administrative Order DHC-2148
Elm ridge Resources, Inc.
December 21, 1998
Page 2

REMARKS: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303.H., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 21st day of December, 1998.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


LORI WROTENBERY
Director

S E A L

LW/MWA/kv

cc: Oil Conservation Division - Aztec /
Bureau of Land Management-Farmington



LTR



Job separation sheet

DISTRICT II
811 South First St., Artesia, NM 88210-2835

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410-1693

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

Elm Ridge Resources, Inc.	312 W. La Plata St.	Farmington, NM 87401
Operator	Address	
Jicarilla Apache C	2	B Sec. 27, T24N, R5W Rio Arriba
Lease	Well No.	Unit Ltr. - Sec - Twp - Rge County
Spacing Unit Lease Types: (check 1 or more)		
OGRID NO. 149052	Property Code	API NO. 30-039-21461 Federal ☒ State (and/or) Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Otero Gallup 48450		Basin Dakota 71599
2. Top and Bottom of Pay Section (Perforations)	5620'-5650'		6692'-6727'
3. Type of Production (Oil or Gas)	Oil		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 650 psi b. (Original) 1100 (est.)	RECEIVED NOV 19 1998 OIL CON. DIV. DIST. 3	a. 800 psi b. 1700 (est.)
6. Oil Gravity (° API) or Gas BTU Content	40°, 1200 (est.)		1200 (est.)
7. Producing or Shut-In?	SI-pending approval		SI-pending approval
Production Marginal? (yes or no)	Yes		Yes
• If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: 11/17/98 Rates: 10 BOPD 30 MCFD	Date: Rates:	Date: 11/16/98 Rates: 0 BOPD 40 MCFD
• If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 100 % Gas: 42.9 %	Oil: % Gas: %	Oil: 0 % Gas: 57.1 %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☒ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No
11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). _____

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of all offset operators.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dana L. Delventhal TITLE Agent DATE 11/17/98

TYPE OR PRINT NAME Dana L. Delventhal TELEPHONE NO. (505) 326-4125

District I
P. O. Box 1980, Hobbs, NM 88241-1980
District II
P.O. Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos RD., Aztec, NM 87410
District IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office

State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-039-21461	2 Pool Code 48450 / 71599	3 Pool Name Otero Gallup / Basin Dakota
4 Property Code	5 Property Name Jicarilla Apache C	6 Well Number 2
7 OGRID No. 149052	8 Operator Name Elm Ridge Resources, Inc.	9 Elevation 6663' GLE

10 Surface Location

UL or lot no. B	Section 27	Township 24N	Range 5W	Lot Idn	Feet from the 890'	North/South line North	Feet from the 1750'	East/West line East	County Rio Arriba
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 40 / 320	13 Joint or Infill N	14 Consolidation Code	15 Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature <i>Dana L. Delventhal</i> Printed Name Dana L. Delventhal Title Agent Date 17-Nov-98
	Lease No: 09-000013 BASIN DAKOTA	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Signature and Seal Professional Surveyor: Certificate Number

Submit 2 copies to Appropriate

District Office.

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator		Elm Ridge Resources, Inc.		Pool		Otero Gallup / Basin Fruitland Coal		County		Rio Arriba		
Address		312 W. La Plata St. Farmington, NM 87401		TYPE OF TEST - (X)		Schedule		Completion		Special		
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG PRESS	DAILY ALLOW-ABLE	Length of TEST HOURS	PROD. DURING TEST		GAS-OIL RATIO CU. FT/BBL
		U	S	T						R	GRAV. OIL	
Jicarilla Apache C	2	B	27	24N	5W							
Otero Gallup						115		24	0	10	30	
Basin Dakota						115		24	0	0	40	

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Signature

Dana L. Delventhal

Printed name and title

Dana L. Delventhal, Agent

Date

11/17/98

Telephone No.

(505) 326-4125

OFFSET OPERATORS

Conoco, Inc.
10 Desta Drive, Suite 100W
Midland, TX 79705-4500

Dugan Production Corp.
P. O. Box 420
Farmington, NM 87499-0420



LTR



Job separation sheet



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ADMINISTRATIVE ORDER DHC-2148

Elm Ridge Resources, Inc.
312 W. La Plata St.
Farmington, NM 87401

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Administrative Order DHC-2148

Elm ridge Resources, Inc.

December 21, 1998

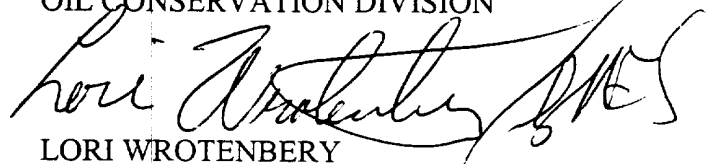
Page 2

REMARKS: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303.H., the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 21st day of December, 1998.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Lori Wrotenbery", is written over the printed name and title.

LORI WROTENBERY
Director

S E A L

LW/MWA/kv

cc: Oil Conservation Division - Aztec
Bureau of Land Management-Farmington



LTR



Job separation sheet

Date Remediation Started: 11/14/97 Date Completed: 4/21/98

Remediation Method: Excavation ☒

Approx. cubic yards 267

(Check all appropriate sections)

Landfilled ☒

In situ Bioremediation _____

Other _____

Remediation Location: Onsite ☒ Offsite _____
(i.e. landfilled onsite, name and location of offsite facility)

General Description of Remedial Action: REMOVED CONTAMINATED SOIL, SPREAD ON LOCATION IN SOIL FARM

Groundwater Encountered: No ☒ Yes _____ Depth _____

Final Pit Closure Sampling: Sample location BOTTOM CENTER 4 BANKS N, S, E, W
(if multiple samples, attach sample results and diagram of sample locations and depths) Sample depth 8' GAS ND (PPM)
Sample date 11/12/97 Sample time 12:20 DIE 60 (PPM)
Sample Results METHOD: 8015M
PID 22.3 PPM

Soil Benzene (ppm) ND Water: Benzene (ppb) N/A

Total BTEX (ppm) 0.138 Toluene (ppb) N/A

Field Headspace (ppm) 500 Ethylbenzene (ppb) N/A

TPH 418.1 (ppm) 164 Total Xylenes (ppb) N/A

Groundwater Sample: Yes _____ No ☒ (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 6/3/98 PRINTED NAME SHAWN ADAMS

SIGNATURE [Signature] AND TITLE ENV. CONSULTANT

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES ☒ NO _____ (REASON) _____

SIGNED: Kate C. Mammill DATE: Closed

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 3376**
City, State: **Farmington, NM 87499**

Date: **20-Nov-97**
COC No.: **4321**
Sample No.: **16881**
Job No.: **2-1000**

Project Name: **Jicarilla Apache C-2**
Project Location: **JAC2-101; Bottom 8' Cent.**
Sampled by: **SA**
Analyzed by: **HR**
Sample Matrix: **Soil**

Date: **12-Nov-97** Time: **12:20**
Date: **20-Nov-97**

Laboratory Analysis

Parameter	Results as Received	Limit of Quantitation	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	163	25	mg/kg	EPA Method 418.1

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	ND	ND	mg/kg
Laboratory Fortified Spike Soil - QCSS1	862	800-1200	mg/kg

Duplication

Laboratory Identification	RPD	Limit RPD
16877-6581	9.6	15.0

Approved by: 
Date: **11/20/97**

P.O. BOX 2606 • FARMINGTON, NM 87499

For more information, please call (505) 325-5667 or (505) 325-1556

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 3376*
City, State: *Farmington, NM 87499*

Date: *24-Nov-97*
COC No.: *4321*
Sample No.: *16881*
Job No.: *2-1000*

Project Name: *Jicarilla Apache C-2*
Project Location: *JAC2-101; Bottom 8' Cent.*
Sampled by: *SA* Date: *12-Nov-97* Time: *12:20*
Analyzed by: *DC* Date: *17-Nov-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	2	ug/kg
<i>Toluene</i>	13	ug/kg	2	ug/kg
<i>Ethylbenzene</i>	9	ug/kg	2	ug/kg
<i>m,p-Xylene</i>	79	ug/kg	2	ug/kg
<i>o-Xylene</i>	36	ug/kg	2	ug/kg
<i>TOTAL</i>	138	ug/kg		

ND - Not Detected at Limit of Quantitation

Method - SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
Date: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

For Primary Reference, Please Contact: (505) 325-5667

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-May-98

Client: Contract Environmental Services, Inc.
Work Order: 9805005
Lab ID: 9805005-09A
Project: Jicarilla Apache

Client Sample Info: Jic. Apache "C" Well 2
Client Sample ID: JAC2-110; Wall
Collection Date: 4/21/98 1:17:00 PM
COC Record: 6931

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C10-C28	60	50		mg/Kg	1	Analyst: HR 5/6/98
GASOLINE RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	Analyst: DC 5/5/98

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

F - Value above quantitation range

Sur: - Surrogate

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

SUBMIT COPY TO
NATURAL RESOURCE DEPT
AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

APPROVED

Operator: ELM RIDGE RESOURCES Telephone: (505) 326-7099

Address: 312 W. LA PLATA STREET, FARMINGTON, NM 87401

Facility or Well Name: JICARILLA APACHE C #2

Location: Unit or Qtr/Qtr Sec B Sec 27 T24N R5W County Rio ARriba

Land Type: _____

Date Remediation Started: 11/14/97 Date Completed: 4/21/98

Remediation Method: Landfarmed X Approx. cubic yards 267

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: 4/21/98 Time: 1:32 P

Sample Results:

Field Headspace (ppm) 2.7

TPH 8015M (ppm) GAS ND (ppm) Method 8015M

Other DIE ND (ppm)

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

DATE 6/3/98 PRINTED NAME STAWN ADAMS

SIGNATURE [Signature] AND TITLE ENV. CONSULTANT

AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO _____ (REASON) use as Backfill

SIGNED: [Signature] DATE: 6-9-98

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-May-98

Client: Contract Environmental Services, Inc.
Work Order: 9805005
Lab ID: 9805005-10A **Matrix:** SOIL
Project: Jicarilla Apache

Client Sample Info: Jic. Apache "C" Well 2
Client Sample ID: JAC2-112; Landfarm
Collection Date: 4/21/98 1:32:00 PM
COC Record: 6931

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS T/R Hydrocarbons: C10-C28	ND	SW8015 50		mg/Kg	1	Analyst: HR 5/6/98
GASOLINE RANGE ORGANICS T/R Hydrocarbons: C6-C10	ND	SW8015 0.18		mg/Kg	1	Analyst: DC 5/5/98

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

6231

TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 4/21/95

Page 1 of 1

Purchase Order No.:		Job No.							
Name	Company	Address	City, State, Zip						
Shawn Adams	Contract Fertil.	PO Box 3776	Farmington, N.M. 87401						
Sampling Location: Jicarilla Apache "F" well 11									
Jicarilla Apache "F" well 6 DH									
Jicarilla Apache "F" well 6 com.									
J. Apache "F" well 2									
Sampler: James K. Kirby									
SAMPLE IDENTIFICATION		DATE		TIME		MATRIX		PRES.	
JE11 100	Well	4/24/98	10:52	Soil	WPA	1	X	X	697.0
JE11 101	Floor	4/24/98	10:57	Soil	WPA	1	X	X	122.0
JE11 102	Land Farm	4/24/98	10:44	Soil	WPA	1	X	X	26.2
JE11 103	Water	4/24/98	11:43	Soil	WPA	1	X	X	4.1
JE11 104	Floor	4/24/98	11:43	Soil	WPA	1	X	X	17.3
JE11 105	Land Farm	4/24/98	11:47	Soil	WPA	1	X	X	9.6
JE11 107	Well	4/24/98	12:12	Soil	WPA	1	X	X	150.0
JE11 108	Floor	4/24/98	12:20	Soil	WPA	1	X	X	83.0
JE11 109	Land Farm	4/24/98	12:22	Soil	WPA	1	X	X	45.6
JE11 110	Well	4/24/98	13:17	Soil	WPA	1	X	X	22.3
JE11 111	Floor	4/24/98	13:24	Soil	WPA	1	X	X	15.3
JE11 112	Land Farm	4/24/98	13:52	Soil	WPA	1	X	X	2.7
Relinquished by:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	
Relinquished by:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	
Relinquished by:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	
Method of Shipment:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	
Authorized by:		Date		4/24/98		Received by:		Date/Time	
(Client Signature)		Date		4/24/98		Received by:		Date/Time	
Special Instructions:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	
Special Instructions:		Date/Time		4/24/98 10:30 AM		Received by:		Date/Time	

CONTRACT ENVIRONMENTAL

DATE 4/21/98 TIME STARTED 13:05 TIME FINISHED 13:41

SITE NAME J. Apache "C" well

PIT SIZE AT START x x PIT SIZE WHEN FINISHED 13 x x

P.I.D READINGS

NORTH WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

SOUTH WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

EAST WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

WEST WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

WALL COMPOSITE #1 22.3 #2 _____ #3 _____ FINALE TIME 13:17

FLOOR #1 15.2 #2 _____ #3 _____ FINALE TIME 13:24

LAND FARM 2.7 SAMPLE TIME 13:32

SPOIL PILE _____ SAMPLE TIME _____

REMARKS: Rock at 6'

14/10/14

Soil
Spade
Area



SEP

WHEED
(C)

Galv.
AST

30'

Excavation

8'00"

30'

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
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SUBMIT COPY TO
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AND OIL & GAS ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

APPROVED

Operator: <u>ELM RIDGE RESOURCES</u>		Telephone: <u>(505) 326-7099</u>	
Address: <u>312 W. LA PLATA STREET, FARMINGTON, NM 87401</u>			
Facility or Well Name: <u>JICARILLA APACHE C #2</u>			
Location: Unit or Qtr/Qtr Sec <u>B</u> Sec <u>27</u> T24N R5W County <u>Rio ARriba</u>			
Land Type: _____			
Date Remediation Started: <u>11/14/97</u>		Date Completed: <u>4/21/98</u>	
Remediation Method: Landfarmed <u>X</u>		Approx. cubic yards <u>267</u>	
Composted _____			
Other _____			
Depth To Groundwater: (pts.) <u>0</u>		Final Closure Sampling:	
Distance to an Ephemeral Stream (pts.) <u>0</u>		Sampling Date: <u>4/21/98</u> Time: <u>1:32 P</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>2.7</u>	
Distance To Surface Water: (pts.) <u>0</u>		TPH <u>8015M</u> (ppm) <u>ND</u> (ppm) Method <u>8015M</u>	
RANKING SCORE (TOTAL POINTS): <u>0</u>		Other <u>DIE ND (ppm)</u>	
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE <u>6/3/98</u>		PRINTED NAME <u>SHAWN ADAMS</u>	
SIGNATURE <u>[Signature]</u>		AND TITLE <u>ENV. CONSULTANT</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.			
APPROVED: YES <u>X</u> NO _____ (REASON) <u>use as Backfill</u>			
SIGNED: <u>[Signature]</u>		DATE: <u>6-9-98</u>	

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 3376*
City, State: *Farmington, NM 87499*

Date: *20-Nov-97*
COC No.: *4321*
Sample No.: *16881*
Job No.: *2-1000*

Project Name: *Jicarilla Apache C-2*
Project Location: *JAC2-101; Bottom 8' Cent.*
Sampled by: *SA* Date: *12-Nov-97* Time: *12:20*
Analyzed by: *HR* Date: *20-Nov-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Limit of Quantitation	Unit of Measure	Method
<i>Total Petroleum Hydrocarbons, TPH</i>	<i>163</i>	<i>25</i>	<i>mg/kg</i>	<i>EPA Method 418.1</i>

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
<i>Laboratory Fortified Blank Soil - QCBS2</i>	<i>ND</i>	<i>ND</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>862</i>	<i>800-1200</i>	<i>mg/kg</i>

Duplication

Laboratory Identification	RPD	Limit RPD
<i>16877-6581</i>	<i>9.6</i>	<i>15.0</i>

Approved by: *[Signature]*
Date: *11/20/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

TECHNOLOGIES, LTD. ANALYTICAL SERVICES

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 3376*
City, State: *Farmington, NM 87499*

Date: *24-Nov-97*
COC No.: *4321*
Sample No.: *16881*
Job No.: *2-1000*

Project Name: *Jicarilla Apache C-2*
Project Location: *JAC2-101; Bottom 8' Cent.*
Sampled by: *SA* Date: *12-Nov-97* Time: *12:20*
Analyzed by: *DC* Date: *17-Nov-97*
Sample Matrix: *Soil*

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Benzene</i>	ND	ug/kg	2	ug/kg
<i>Toluene</i>	13	ug/kg	2	ug/kg
<i>Ethylbenzene</i>	9	ug/kg	2	ug/kg
<i>m,p-Xylene</i>	79	ug/kg	2	ug/kg
<i>o-Xylene</i>	36	ug/kg	2	ug/kg
<i>TOTAL</i>	138	ug/kg		

ND - Not Detected at Limit of Quantitation

Method - SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
Date: *11/24/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-May-98

Client: Contract Environmental Services, Inc.
Work Order: 9805005
Lab ID: 9805005-09A **Matrix:** SOIL
Project: Jicarilla Apache

Client Sample Info: Jic. Apache "C" Well 2
Client Sample ID: JAC2-110; Wall
Collection Date: 4/21/98 1:17:00 PM
COC Record: 6931

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C10-C28	60	50		mg/Kg	1	Analyst: HR 5/6/98
GASOLINE RANGE ORGANICS		SW8015				
T/R Hydrocarbons: C6-C10	ND	0.18		mg/Kg	1	Analyst: DC 5/5/98

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

Sum: - Surrogate

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LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 11-May-98

Client: Contract Environmental Services, Inc.
Work Order: 9805005
Lab ID: 9805005-10A **Matrix:** SOIL
Project: Jicarilla Apache

Client Sample Info: Jic. Apache "C" Well 2
Client Sample ID: JAC2-112; Landfarm
Collection Date: 4/21/98 1:32:00 PM
COC Record: 6931

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS T/R Hydrocarbons: C10-C28	ND	SW8015 50		mg/Kg	1	Analyst: HR 5/6/98
GASOLINE RANGE ORGANICS T/R Hydrocarbons: C6-C10	ND	SW8015 0.18		mg/Kg	1	Analyst: DC 5/5/98

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

ON SITE

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 4/21/98

of _____

Purchase Order No.:		Job No.	
Name		Shawn Adams	
Company		Contract Envtl.	
Address		PO Box 3776	
City, State, Zip		Farmington, N.J. 07419	
Sampling Location:		J. Archa Arche "F" well 11	
J. Archa Arche "F" well 6 DH			
J. Archa Arche "F" well 6 com.			
J. Archa Arche "F" well 2			
Sampler:		James K. Kirby	
SEND INVOICE TO			
Name		Title	
Company			
Mailing Address			
City, State, Zip			
Telephone No.		325-1198	
Telefax No.			
ANALYSIS REQUESTED			
RESULTS TO		REPORT	
Name		Company	
Mailing Address			
City, State, Zip			
Telephone No.		325-1198	
Telefax No.			
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Telephone No.		325-1198	
Telefax No.			
ANALYSIS REQUESTED			
RESULTS TO		REPORT	
Name		Company	
Mailing Address			
City, State, Zip			

CHAIN OF CUSTODY RECORD

ON SITE

TECHNOLOGIES, LTD.

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LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: _____

Page _____ of _____

Purchase Order No.:		Job No.	
Name		Title	
Company		Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
Sampling Location:		Telephone No.	
C-2		Telefax No.	
REPORT TO RESULTS TO		ANALYSIS REQUESTED	
Number of Containers			
Sampler:			
SAMPLE IDENTIFICATION		LAB ID	
JAC2-100	DATE	TIME	29 PPM
JAC2-101	DATE	TIME	Bottom 8' cent 500 PPM
JAC2-102	DATE	TIME	South Ext. 4-6' 1470 PPM
JAC2-200	DATE	TIME	TP-1, TP-2 Combo 7-10' DEEP 0.0 PPM
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Relinquished by:		Date/Time	
Method of Shipment:		Date/Time	
Authorized by:		Date	
(Client Signature Must Appear)		Date	
Rush		10 Working Days	
24-48 Hours		Special Instructions:	

CONTRACT ENVIRONMENTAL

DATE 4/21/98

TIME STARTED 13:05

TIME FINISHED 13:41

SITE NAME J. Apache "C" well 2

PIT SIZE AT START x x PIT SIZE WHEN FINISHED 13 x x

P.I.D. READINGS

NORTH WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

SOUTH WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

EAST WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

WEST WALL #1 _____ #2 _____ #3 _____ FINALE TIME _____

WALL COMPOSITE #1 22.3 #2 _____ #3 _____ FINALE TIME 13:17

FLOOR #1 15.2 #2 _____ #3 _____ FINALE TIME 13:24

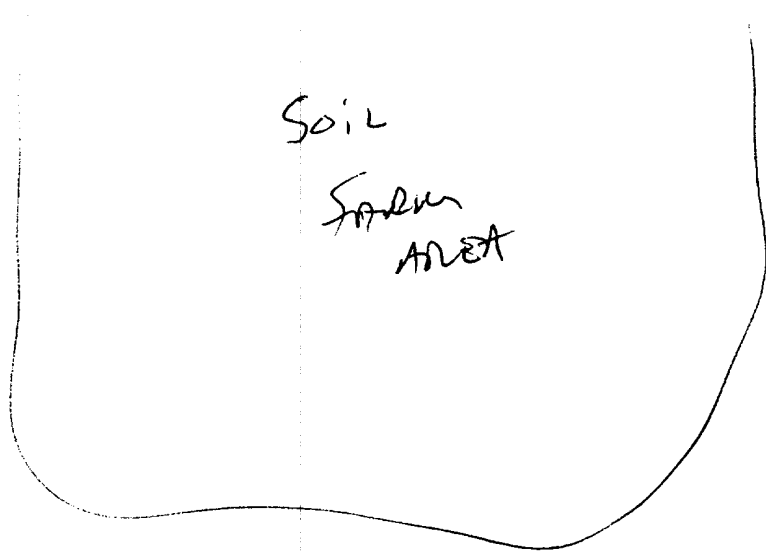
LAND FARM 2.7 SAMPLE TIME 13:32

SPOIL PILE _____ SAMPLE TIME _____

REMARKS: Rock at 6'

10/10/10

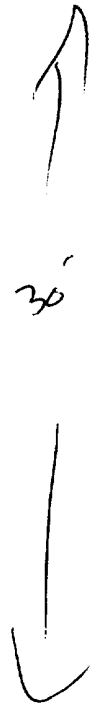
Soil
Spill
Area



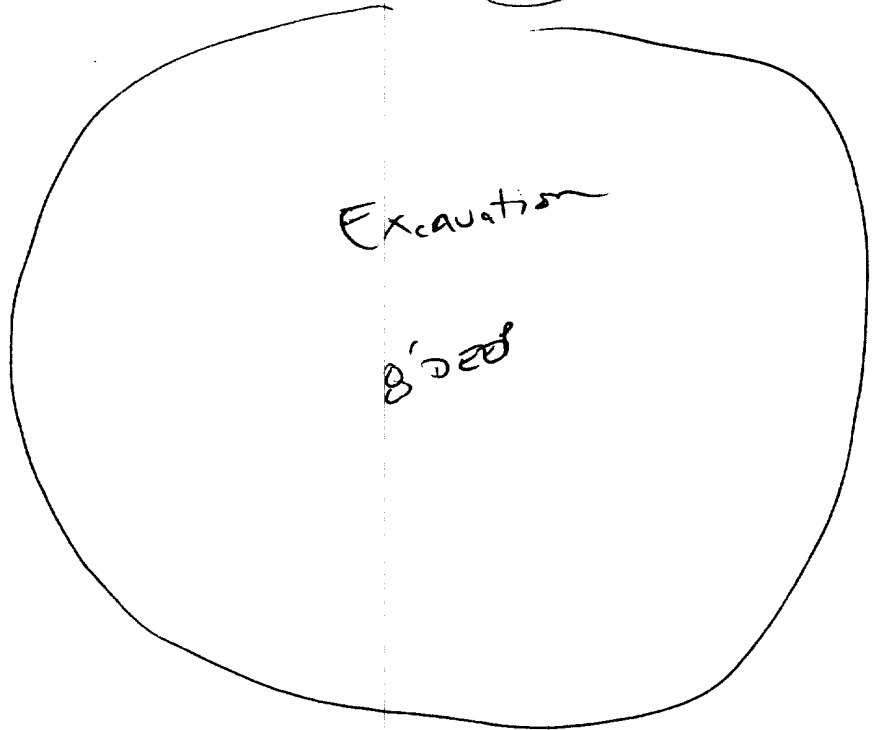
SEP

WHERE
(C)

Calu.
AST

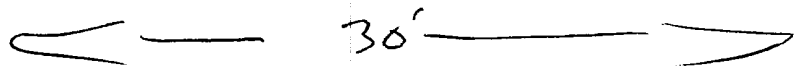


30'



Excavation

8'000



30'