

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

RCVD JUN 9 11
OIL CONS. DIV.
DIST. 3

1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. BIA CONTRACT 13 A
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name JICARILLA APACHE
2. Name of Operator ELM RIDGE EXPLORATION COMPANY, LLC		7. If Unit or CA Agreement, Name and No. N/A
3a. Address P. O. BOX 156 BLOOMFIELD, NM 87413	3b. Phone No. (include area code) (505) 632-3476	8. Lease Name and Well No. JICARILLA APACHE C 2 E
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 660' FSL & 855' FEL At proposed prod. zone SAME		9. API Well No. 30-039-29829
14. Distance in miles and direction from nearest town or post office* 8 AIR MILES NE OF COUNSELOR, NM		10. Field and Pool, or Exploratory OTERO GALLUP BASIN DAKOT
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drng. unit line, if any) 1,785'	16. No. of acres in lease 1,920	11. Sec., T. R. M. or Blk and Survey or Area P 27-24N-5W NMPM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,003' (P 6 (PC))	19. Proposed Depth 7,100'	12. County or Parish RIO ARriba
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,666' GL	22. Approximate date work will start* 04/15/2006	13. State NM
17. Spacing Unit dedicated to this well SESE & E2		
20. BLM/BIA Bond No. on file BIA NATION WIDE 886441C w/ Jicarilla Office		
23. Estimated duration 4 WEEKS		

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) BRIAN WOOD	Date 02/28/2006
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Title **CONSULTANT** PHONE: (505) 466-8120 FAX: (505) 466-9682

Approved by (Signature) 	Name (Printed/Typed) M. M. Wood	Date 6/16/11
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Title **AFM** Office **PT-O**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

**NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT**

JUN 22 2011

NMOCD

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOCD FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOCD PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
811 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Ateco, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994

Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29829		*Pool Code 48450 & 71599		*Pool Name OTERO GALLUP & BASIN DAKOTA			
*Property Code 19027		*Property Name JICARILLA APACHE C				*Well Number 2 E	
*OGRID No. 149052		*Operator Name ELM RIDGE EXPLORATION				*Elevation 6666	

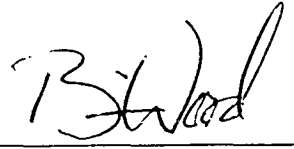
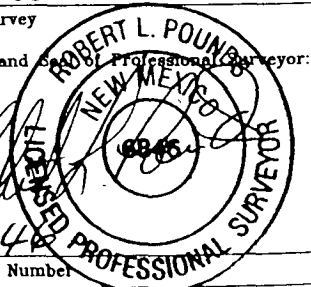
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	27	24 N	5 W		660	SOUTH	855	EAST	RIO ARRIBA

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
*Dedicated Acres 40 & 320		*Joint or Infill		*Consolidation Code		*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 S 87°34'57" E 5201.08'					5195.44'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature BRIAN WOOD Printed Name CONSULTANT Title FEB. 28, 2006 Date
						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. 11/23/05 Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number
SECTION 27 Dakota Gallup 855' 660' 5179.14'						
N 0°45'21" W						
N 86°58'32" W						

Elm Ridge Exploration Company, LLC
Jicarilla Apache C 2 E
660' FSL & 855' FEL
Sec. 27, T. 24 N., R. 5 W.
Rio Arriba County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
San Jose	000'	12'	+6,666'
Ojo Alamo	1,916'	1,928'	+4,750'
Kirtland	2,066'	2,078'	+4,600'
Fruitland	2,266'	2,278'	+4,400'
Pictured Cliffs	2,391'	2,403'	+4,275'
Lewis Shale	2,516'	2,528'	+4,150'
Mancos Shale	4,666'	4,678'	+2,000'
Gallup Sandstone	5,466'	5,478'	+1,200'
Greenhorn	6,466'	6,478'	+200'
Dakota	6,616'	6,628'	+50'
Burro Canyon	6,866'	6,878'	-200'
Total Depth (TD)	7,100'	7,112'	-434'

2. NOTABLE ZONES

<u>Oil & Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zone</u>
Pictured Cliffs	San Jose	Fruitland
Gallup	Ojo Alamo	
Dakota		

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to

be used is not yet known. A typical 3,000 psi model is on PAGE 3. A $\geq 3,000$ psi BOP and choke manifold system will be installed and tested to 2,000 psi before drilling surface casing plug. It will remain in use until the well is completed or abandoned. A safety valve and sub with a full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.

All BOP mechanical and pressure tests will be recorded on the driller's log. BOPs will be inspected and opened and closed at least daily to assure good mechanical working order. Inspections will be recorded on the daily drilling report. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>GL Setting Depth</u>
12-1/4"	8-5/8"	24	K-55	S T & C	New	350'
7-7/8"	5-1/2"	15.5	J-55	S T & C	New	7,100'

Surface casing will be cemented to the surface with ≈ 290 cubic feet (≈ 246 sacks) Class B with 1/4#/sk Flocele + 2% CaCl_2 . Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 100% excess. Centralizers will be installed on the middle of the shoe joint and every other centralizer thereafter. Thread lock the guide shoe and bottom of float collar only. Use API casing dope.

Production casing will be cemented to surface in 2 stages. Set stage tool @ $\approx 4,750'$. Volume $\geq 75\%$ excess, but caliper log will be used to determine actual volume needed. Centralizers will be installed on middle of the shoe joint and on every joint thereafter (total of ≈ 30 centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

First stage volume will be $\approx 1,060$ cubic feet. First stage will consist of ≈ 567 sacks Halliburton light with 65/35 poz mix + 1/4 pound per sack Flocele + 2% CaCl_2 (yield = 1.87 cubic feet per sack & weight = 12.7 pounds per gallon) followed by ≈ 630 sacks Class B + 2% CaCl_2 (yield = 1.18 cubic feet per sack & weight = 15.2 pounds per gallon).

Second stage volume will be $\approx 1,620$ cubic feet. Second stage will consist of ≈ 870 sacks of Halliburton light with 65/35 poz mix + 1/4 pound per sack Flocele + 2% CaCl_2 (yield = 1.87 cubic feet per sack & weight = 12.7 pounds per gallon) followed by ≈ 50 sacks Class B + 2% CaCl_2 (yield = 1.18 cubic feet per sack & weight = 15.2 pounds per gallon).

5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>pH</u>
0' - 350'	Fresh water gel	9.0	50	NC	9
350' - TD'	Fresh water gel	9.0	38-50	6.0	9

Sufficient material to maintain mud properties, control lost circulation, and contain a blowout will be available at the well site while drilling. Mud will be checked hourly by rig personnel. Material to soak up possible oil or fuel spills will be on site.

6. CORES, TESTS, & LOGS

No cores or drill stem tests are planned. DIL/GR logs will be run from TD to surface. CNL/FDC logs may be run over selected segments. Samples will be collected every 10' from $\approx 5,000'$ to TD. Samples will be collected every 30' elsewhere.

Elm Ridge Exploration Company, LLC
Jicarilla Apache C 2 E
660' FSL & 855' FEL
Sec. 27, T. 24 N., R. 5 W.
Rio Arriba County, New Mexico

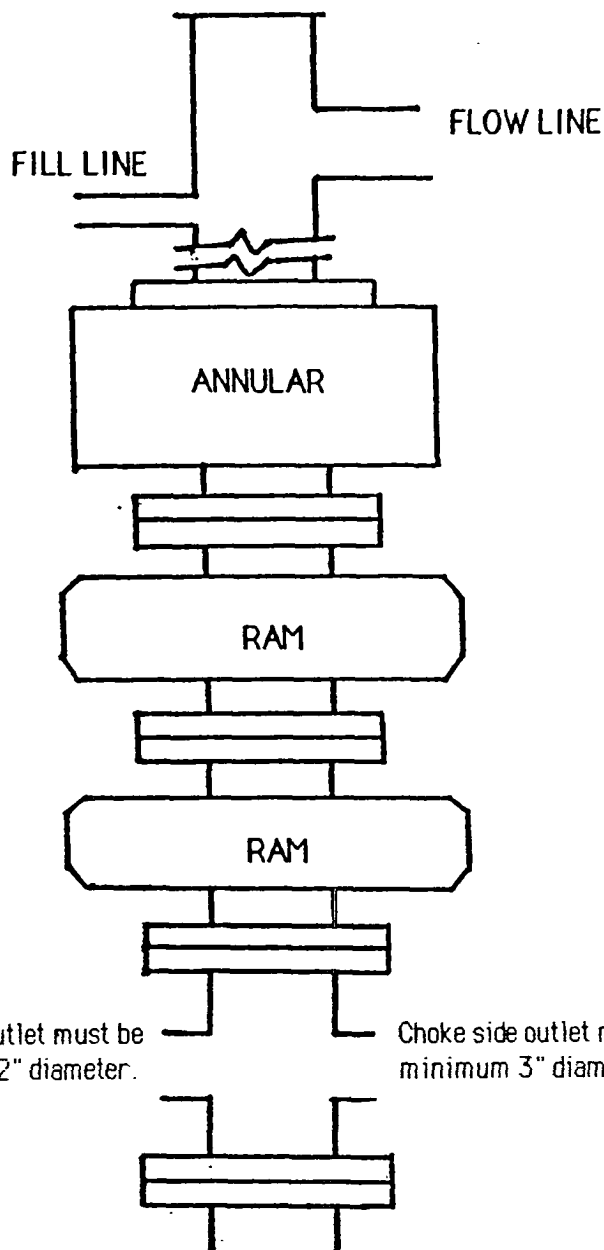
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7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, or hydrogen sulfide are expected. Maximum bottom hole pressure will be $\leq 2,840$ psi.

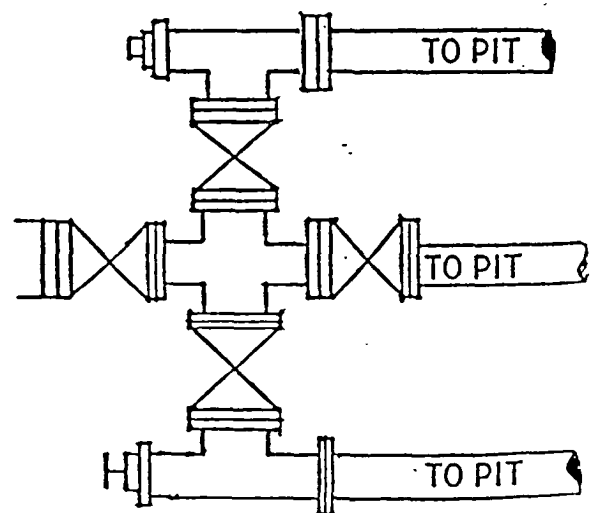
8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take ≈ 2 weeks to drill and ≈ 2 weeks to complete the well.



TYPICAL BOP STACK
& CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available
Safety valve and subs will fit all drill string connections in use
All BOPE connections subjected to well pressure will be flanged, welded, or clamped