

# RECEIVED

Form 3160-3  
(August 2007)

SEP 10 2012

FORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 2010

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Farmington Field Office  
Bureau of Land Management

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. **BIA-9 Jicarilla Contract 9**  
6. If Indian, Allottee or Tribe Name  
**JICARILLA APACHE NATION**

1a. Type of work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.  
**JICARILLA APACHE A 20**

2. Name of Operator **ELM RIDGE EXPLORATION COMPANY, LLC**

9. API Well No.  
**30-039- 31143**

3a. Address **P. O. BOX 156  
BLOOMFIELD, NM 87413**

3b. Phone No. (include area code)  
**505 632 3476**

10. Field and Pool, or Exploratory  
**LINDRITH GALLUP-DAKOTA, WEST**

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*

At surface **1970' FNL & 2021' FEL**

At proposed prod. zone **SAME**

11. Sec., T. R. M. or Bk. and Survey or Area  
**SWNE (G) 36-25N-5W NMPM**

14. Distance in miles and direction from nearest town or post office\*  
**13 AIR MILES NE OF COUNSELOR, NM**

12. County or Parish  
**RIO ARriba**

13. State  
**NM**

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
**670'**

16. No. of acres in lease  
**2,560**

17. Spacing Unit dedicated to this well  
**NE4 (= 160 acres)**  
**RCVD DEC 6 '12**  
**OIL CONS. DIV.**

18. Distance from proposed location\* to nearest well, drilling, completed, applied for, on this lease, ft.  
**2,603' (A 9)**

19. Proposed Depth  
**7,500'**

20. BLM/BIA Bond No. on file  
**BIA nationwide OKC 606114 DIST. 3**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)  
**6,915' GRADED**

22. Approximate date work will start\*  
**10/01/2012**

23. Estimated duration  
**5 WEEKS**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must 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 BLM.

25. Signature

*[Signature]*

Name (Printed/Typed)

**BRIAN WOOD (505 466-8120)**

Date

**09/01/2012**

Title

**CONSULTANT**

**(FAX 505 466-9682)**

Approved by: (Signature)

*[Signature]*  
**AFEN**

Name (Printed/Typed)

Office

**FFO**

Date

**12/4/12**

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.

(Continued on page 2)

\*(Instructions on page 2)

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOCD  
AV

**Hold C-104 For 5.9 compliance**

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.

DEC 17 2012 *ca*

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

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

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  
1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-6181 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, N.M. 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

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Form C-102

Revised August 1, 2011

OIL CONSERVATION DIVISION

SEP 10 2012

Submit one copy to appropriate

District Office

1220 South St. Francis Dr.

Santa Fe, N.M. 87505

Farmington Field Office  
Bureau of Land Management

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039- <b>31143</b>	<sup>2</sup> 39189	<sup>3</sup> Pool Name LINDRITH GALLUP / DAKOTA, WEST
<sup>4</sup> Property Code 19025	<sup>5</sup> Property Name JICARILLA APACHE A	<sup>6</sup> Well Number 20
<sup>7</sup> GRID No. 149052	<sup>8</sup> Operator Name ELM RIDGE EXPLORATION COMPANY, LLC	<sup>9</sup> Elevation 6915

<sup>10</sup> Surface Location

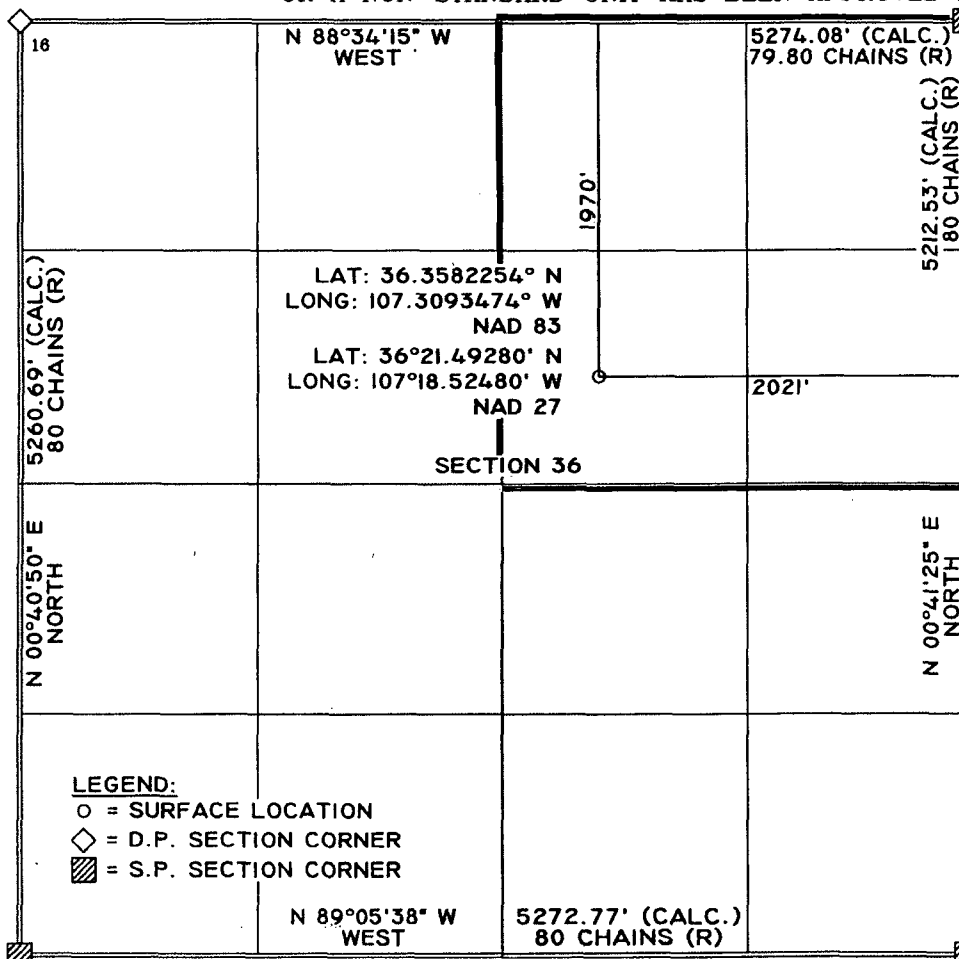
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	36	25 N	5 W		1970	NORTH	2021	EAST	RIO ARriba

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 160 <sup>12 1/4</sup>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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



<sup>17</sup> OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Brian Wood* Date: 9-1-12

brian@permitswest.co

E-mail Address

<sup>18</sup> SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes or actual surveying by me or under my supervision and that the same is true and correct to the best of my knowledge.

Date of Survey: 10/25/11

Signature and Seal of Professional Surveyor: *[Signature]*

14831

Certificate Number: 4-2-2012

LEGEND:

- = SURFACE LOCATION
- ◇ = D.P. SECTION CORNER
- ▨ = S.P. SECTION CORNER

Elm Ridge Exploration Company, LLC  
Jicarilla Apache A 20  
1970' FNL & 2021' FEL  
Sec. 36, T. 25 N., R. 5 W.  
Rio Arriba County, New Mexico

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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
San Jose	0'	10'	+6,915'
Ojo Alamo Ss	2,440'	2,450'	+4,475'
Kirtland	2,615'	2,625'	+4,300'
Fruitland	2,765'	2,775's	+4,150'
Pictured Cliffs Ss	2,985'	2,995'	+3,930'
Lewis Shale	3,115'	3,125'	+3,800'
Chacra Ss	3,815'	3,825'	+3,100'
Menefee	4,605'	4,615'	+2,310'
Point Lookout	5,265'	5,275'	+1,650'
Mancos Shale	5,410'	5,420'	+1,505'
Gallup Ss	6,400'	6,410'	+515'
Sanostee Ss	6,865'	6,875'	+50'
Greenhorn	7,110'	7,120'	-195'
Graneros	7,255'	7,265'	-340'
Dakota Ss	7,385'	7,395'	-470'
Total Depth (TD)*	7,500'	7,510'	-585'

2. NOTABLE ZONES

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

Water zones will be protected with casing, cement, and weighted mud. Fresh water will be recorded by depth, cased, and cemented. Oil and gas shows will be

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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. The  $\geq 3,000$ -psi BOP and choke manifold system will be installed and tested to 2,000-psi before drilling the 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 the 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 that 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	J-55	S T & C	New	360'
7-7/8"	5-1/2"	15.5	J-55	L T & C	New	7,500'
	<u>Drift</u> <u>inch</u>	<u>Torque</u> <u>feet-pounds</u>	<u>Burst</u> <u>psi</u>	<u>Collapse</u> <u>psi</u>	<u>Tension</u> <u>1000 psi</u>	<u>Pressure Test</u> <u>psi</u>
Surface	7.972	3070	2950	1370	381	1000
Production	4.653	2020	4810	4040	248	3500

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Surface casing will be cemented to the surface with  $\approx 310$  cubic feet ( $\approx 262$  sacks) Class B with 1/4 pound per sack cellophane + 2%  $\text{CaCl}_2$ . 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. Will test to  $\approx 800$  psi for  $\approx 30$  minutes.

Production casing will be cemented to the surface in two stages with  $\approx 75\%$  excess. A DV tool will be set at  $\approx 5,200'$  ( $\approx 200'$  above the Mancos). Will pressure test to  $\approx 2,000$ -psi for  $\approx 30$  minutes.

First stage volume will be  $\approx 1,457$  cubic feet. First stage will consist of 360 sacks (673 cubic feet) Halliburton light with 65/35 poz mix + 1/4 pound per sack Flocele + 2%  $\text{CaCl}_2$  mixed at a yield of 1.87 cubic feet per sack and a weight of 12.7 pounds per gallon. That will be followed by 665 sacks (784 cubic feet) Class B + 2%  $\text{CaCl}_2$  mixed at a yield of 1.18 cubic feet per sack and a weight of 15.2 pounds per gallon.

Second stage volume will be  $\approx 1,555$  cubic feet. Second stage will consist of  $\approx 800$  sacks (1,496 cubic feet) of Halliburton light with 65/35 poz mix + 1/4 pound per sack Flocele + 2%  $\text{CaCl}_2$  mixed at a yield of 1.87 cubic feet per sack and a weight of 12.7 pounds per gallon. That will be followed by  $\approx 50$  sacks (59 cubic feet) Class B + 2%  $\text{CaCl}_2$  mixed at a yield of 1.18 cubic feet per sack and a weight of 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' - 360'	Fresh water gel	9.0	50	NC	9
360' - TD'	Fresh water gel	9.0	38-50	6.0	9

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Sufficient material to maintain mud properties, control lost circulation, and contain a blowout will be available at the well site while drilling. Rig personnel will check the mud hourly. 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. Spectral density, high resolution induction, and cement bond logs will be run the base of the surface casing to TD. Samples will be collected every  $\approx 10'$  from  $\approx 200'$  above the Point Lookout to and through the Gallup and Dakota.

#### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, nor hydrogen sulfide are expected. Maximum bottom hole pressure will be  $\leq 3,225$  psi.

#### 8. OTHER INFORMATION

The anticipated spud date is upon approval. It is expected it will take  $\approx 2$  weeks to drill and  $\approx 3$  weeks to complete the well.

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Surface Use Plan

1. DIRECTIONS & EXISTING ROADS (See PAGES 10 - 13)

From the junction of US 550 and NM 537...

Go N 17.2 miles on NM 537

Then turn left and go Southwest 4.5 miles on dirt J-18

Then turn right and go Northwest  $\approx 700'$  on a jeep trail to a stock pond

Then turn left and go West  $\approx 1,222'$  cross country to the well site

Roads will be maintained to at least equal to their present condition.

2. ROAD TO BE BUILT OR UPGRADED (See PAGES 12 & 13)

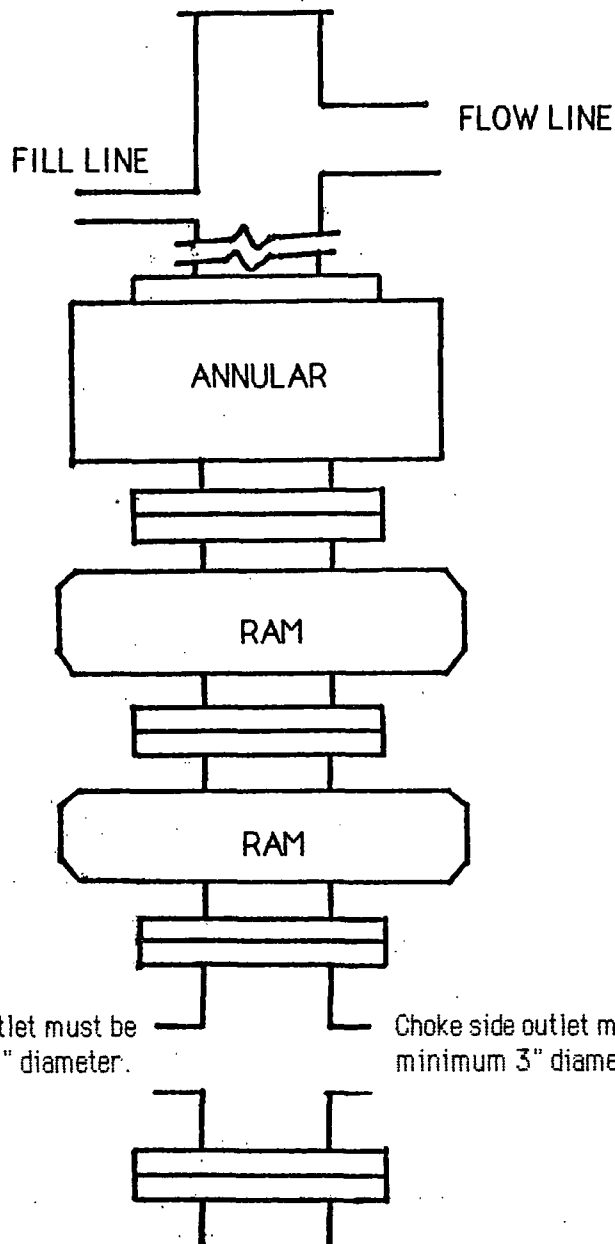
The  $\approx 700'$  of jeep trail will be upgraded to BLM Gold Book standards. The  $\approx 1,222'$  of new road will be built to BLM Gold Book standards. Road will be crowned and ditched, have a  $\approx 14'$  wide running surface, and will be rocked as needed, especially below the stock pond. Maximum disturbed width will be 20'. Maximum cut or fill = 3'. Maximum grade = 7%. No culvert, turn out, or cattle guard is needed.

3. EXISTING WELLS (See PAGE 14)

Oil Conservation Division and State Engineer records show 11 gas or oil wells and 2 plugged and abandoned wells within a mile radius. There are no injection or water wells within a mile.

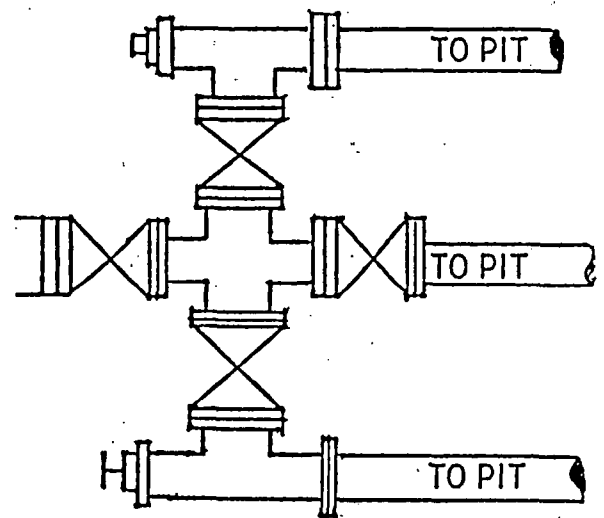
4. PROPOSED PRODUCTION FACILITIES (See PAGES 12 & 13)

Production facilities will include a separator, dehydrator, meter run, and two  $\approx 300$  bbl tanks. All of the equipment will be painted a flat juniper green. A 3,125.68'



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.