

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

Jami Bailey, Division Director  
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 2/23/13

Well information;

Operator Elm Ridge, Well Name and Number Bonanza 12

API# 30-043-21144, Section 1, Township 22 NS, Range 3 EW

Conditions of Approval:

(See the below checked and handwritten conditions)

- Notify Aztec OCD 24hrs prior to casing & cement.
- Hold C-104 for directional survey & "As Drilled" Plat
- Hold C-104 for NSL, NSP, DHC
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils

  
\_\_\_\_\_  
NMOCD Approved by Signature

10-25-2013 ca  
\_\_\_\_\_  
Date

RECEIVED

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FEB 27 2013

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.  
BIA 360

6. If Indian, Allottee or Tribe Name  
CARILLA APACHE NATION

|  |   |   |                 |
|--|---|---|-----------------|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER   |   | 7. If Unit or CA Agreement, Name and No.                                |                 |
| 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 |   | 8. Lease Name and Well No.<br>BONANZA 12                                |                 |
| 2. Name of Operator<br>ELM RIDGE EXPLORATION COMPANY, LLC  |   | 9. API Well No.<br>30-043- 21144  |                 |
| 3a. Address<br>P. O. BOX 156<br>BLOOMFIELD, NM 87413   | 3b. Phone No. (include area code)<br>505 632 3476   | 10. Field and Pool, or Exploratory<br>LINDRITH GALLUP-DAKOTA, WEST      |                 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.)*<br>At surface 1980' FNL & 1700' FWL 1-22n-3w<br>At proposed prod. zone   |   | 11. Sec., T. R. M. or Blk. and Survey or Area<br>SENW (F) 1-22N-3W NMPM |                 |
| 14. Distance in miles and direction from nearest town or post office*<br>16 AIR MILES NW OF CUBA, NM   |   | 12. County or Parish<br>SANDOVAL  | 13. State<br>NM |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)<br>1,980'  | 16. No. of acres in lease<br>2,541                  | 17. Spacing Unit dedicated to this well<br>Lots 3 & 4 and S2NW4 SEC. 1  |                 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.<br>1,199' (360 #1)  | 19. Proposed Depth<br>7,250'                        | 20. BLM/BIA Bond No. on file<br>BIA nationwide OKC 606114               |                 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>7,213' GRADED   | 22. Approximate date work will start*<br>04/01/2013 | 23. Estimated duration<br>5 WEEKS                                       |                 |

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

24. Attachments

RCVD OCT 22 '13

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

OIL CONS. DIV.  
DIST. 3

- 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 *B Wood* Name (Printed/Typed) BRIAN WOOD (505 466-8120) Date 02/23/2013

Title CONSULTANT (FAX 505 466-9682)

Approved by (Signature) *J Mankiewicz* Name (Printed/Typed) Office FRO Date 9/5/13

Title AFM

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)  
This action is subject to technical and procedural review pursuant to 43 CFR 3165.2 and appeal pursuant to 43 CFR 3165.4

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

CONFIDENTIAL

NMOCDV

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240  
Phone: (575) 393-8181 Fax: (575) 393-0720

DISTRICT II  
811 S. First St., Artesia, N.M. 88210  
Phone: (575) 748-1283 Fax: (575) 748-8720

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410  
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, N.M. 87505  
Phone: (505) 478-3460 Fax: (505) 478-3482

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate  
District Office

RECEIVED

FEB 27 2013

AMENDED REPORT

Farmington Field Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

|   |  |                                |
|---|--|--------------------------------|
| <sup>1</sup> API Number<br>30-043- <del>21144</del> 21144 | <sup>2</sup> Pool Code<br>39189                                  | LINDRITH GALLUP-DAKOTA, WEST   |
| <del>007744</del> 27875                                   | <sup>3</sup> Property Name<br>BONANZA                            | <sup>4</sup> Well Number<br>12 |
| <sup>5</sup> OGRD No.<br>149052                           | <sup>6</sup> Operator Name<br>ELM RIDGE EXPLORATION COMPANY, LLC | <sup>7</sup> Elevation<br>7213 |

<sup>10</sup> Surface Location

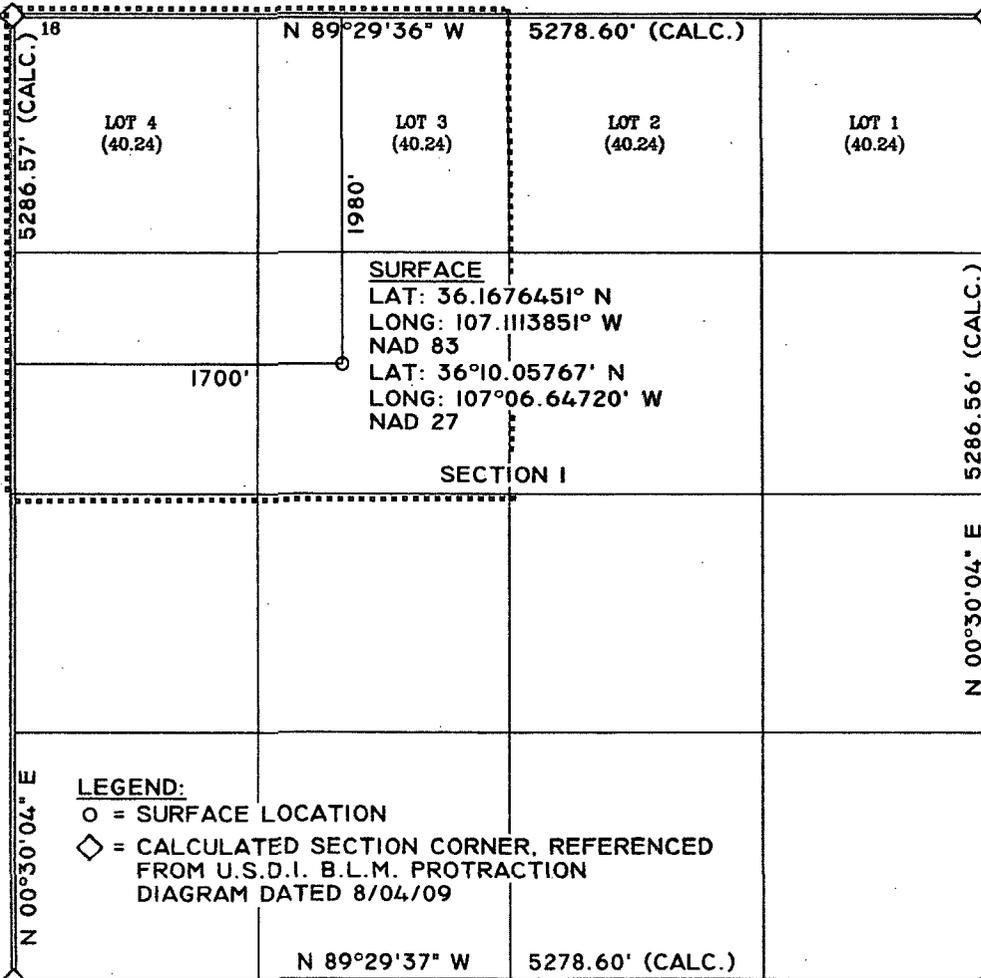
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County   |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|----------|
| F             | I       | 22 N     | 3 W   |         | 1980          | NORTH            | 1700          | WEST           | SANDOVAL |

<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<br>160.48 | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> 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



**17 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: 2-23-13  
 Signature: BRIAN WOOD  
 E-mail Address: brian@permitswest.com

**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: 09/25/12  
 Signature and Seal of Professional Surveyor: John A. Vukovich  
 Registered Professional Surveyor  
 Certificate Number: 14831  
26-2013

Elm Ridge Exploration Company, LLC  
 Bonanza 12  
 1980 FNL & 1700 FWL  
 Sec. 1, T. 22 N., R. 3 W.  
 Sandoval County, New Mexico

Drilling Program

1. ESTIMATED FORMATION TOPS

| <u>Formation Name</u> | <u>TVD</u> | <u>KB Depth</u> | <u>Elevation</u> |
|-----------------------|------------|-----------------|------------------|
| San Jose              | 0'         | 10'             | +7,213'          |
| Ojo Alamo             | 2,323'     | 2,333'          | +4,890'          |
| Kirtland              | 2,448'     | 2,458'          | +4,765'          |
| Fruitland Coal        | 2,563'     | 2,573'          | +4,650'          |
| Pictured Cliffs Ss    | 2,688'     | 2,698'          | +4,525'          |
| Lewis Shale           | 2,758'     | 2,768'          | +4,455'          |
| Cliff House Ss        | 4,183'     | 4,193'          | +3,030'          |
| Menefee               | 4,248'     | 4,258'          | +2,965'          |
| Point Lookout Ss      | 4,733'     | 4,743'          | +2,480'          |
| Mancos Shale          | 4,908'     | 4,918'          | +2,305'          |
| Gallup Ss             | 5,708'     | 5,718'          | +1,505'          |
| Greenhorn             | 6,803'     | 6,813'          | +410'            |
| Graneros              | 6,883'     | 6,893'          | +330'            |
| Dakota B              | 6,993'     | 7,003'          | +220'            |
| Total Depth           | 7,250'     | 7,210'          | -37'             |

2. NOTABLE ZONES

Oil & Gas Zones

Ojo Alamo  
 Pictured Cliffs  
 Chacra  
 Gallup  
 Graneros  
 Dakota

Water Zones

San Jose  
 Ojo Alamo  
 Fruitland

Coal Zone

Fruitland

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 Sandoval County, New Mexico

All water zones will be protected with casing, cement, and weighted mud. Fresh water will be recorded by depth. 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. 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

| Hole Size | O.D.   | Weight (lb/ft) | Grade | Type    | Age | Setting Depth |
|-----------|--------|----------------|-------|---------|-----|---------------|
| 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 | 7,250'        |

|            | Drift<br>inch | Torque<br>feet-pounds | Burst<br>psi | Collapse<br>psi | Tension<br>1000 psi | Pressure Test<br>psi |
|------------|---------------|-----------------------|--------------|-----------------|---------------------|----------------------|
| Surface    | 7.972         | 3070                  | 2950         | 1370            | 381                 | 1000                 |
| Production | 4.653         | 2020                  | 4810         | 4040            | 248                 | 3500                 |

Elm Ridge Exploration Company, LLC  
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1980 FNL & 1700 FWL  
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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  $\geq 75\%$  excess. A stage tool will be set at  $\approx 4,700'$  ( $\approx 200'$  above the Mancos). Will pressure test to 2,000-psi for 30-minutes.

First stage volume will be 1,472 cubic feet. First stage will consist of 365 sacks ( $\approx 682$  cubic feet) Halliburton light with 65/35 poz mix + 1/4 pound per sack cello flake + 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 670 sacks (790 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 1,555 cubic feet. Second stage will consist of 800 sacks (1,496 cubic feet) of Halliburton light with 65/35 poz mix + 1/4 pound per sack cello flake + 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 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         |

Elm Ridge Exploration Company, LLC  
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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 core or drill stem test is 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  $\leq 3,118$  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.

Elm Ridge Exploration Company, LLC  
Bonanza 12  
1980 FNL & 1700 FWL  
Sec. 1, T. 22 N., R. 3 W.  
Sandoval County, New Mexico

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### Surface Use Plan

#### 1. DIRECTIONS & EXISTING ROADS (See PAGES 10 & 11)

From the equivalent of Mile Post 80.5 on US 550...  
Go Northeast 2.9 miles on gravel J-37  
Then turn right and go ESE 1.3 miles on dirt J-38 to just past a cattle guard  
Turn left and go Northeast 1.5 miles to a 3-way junction  
Then bear left and go North and Northeast 1.0 mile on a dirt road  
Then turn right and go Southeast  $\approx 985'$  on a pipeline road  
Then turn right and go cross country  $\approx 69'$  to the Bonanza 12 pad

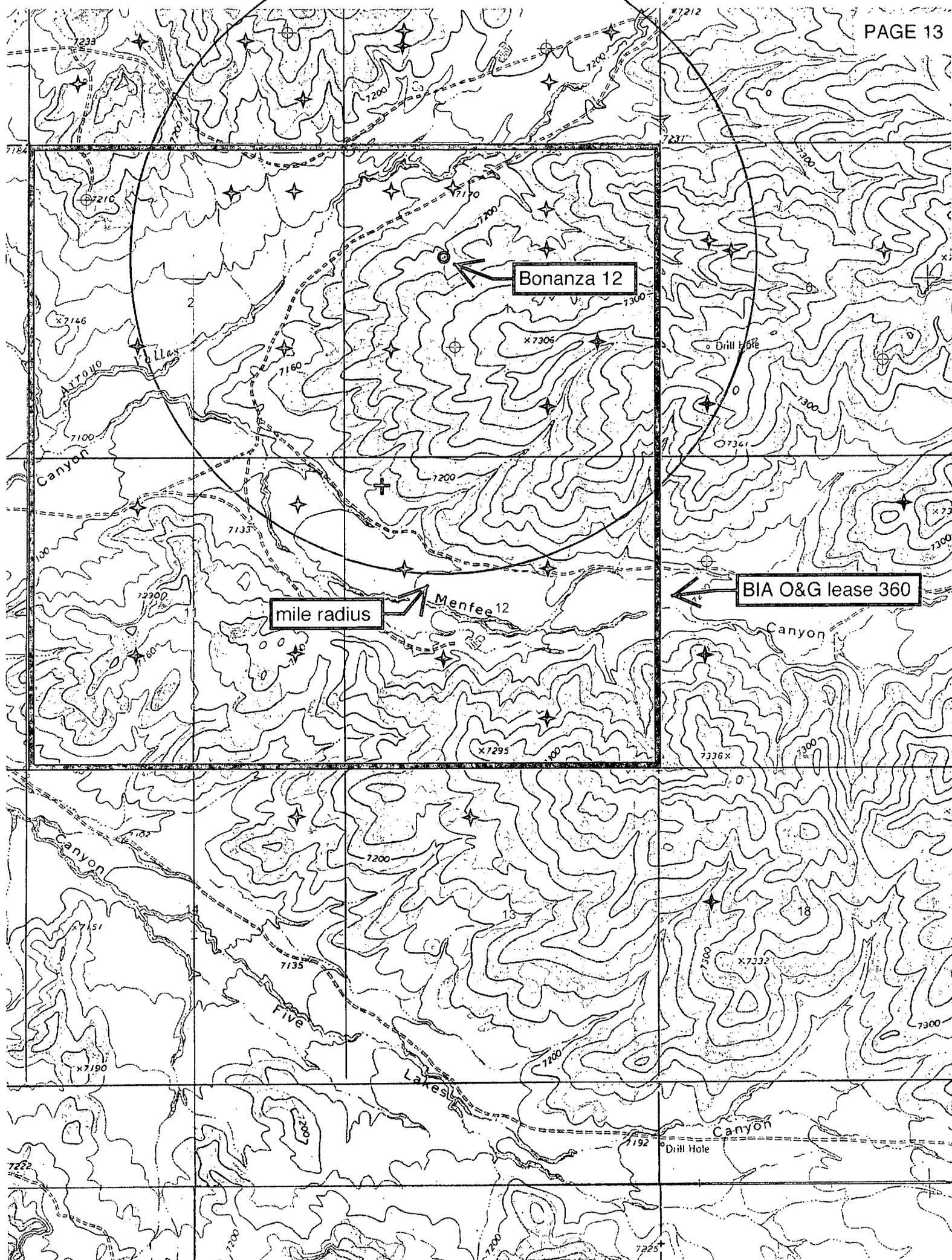
Roads will be maintained to at least equal to their present condition.

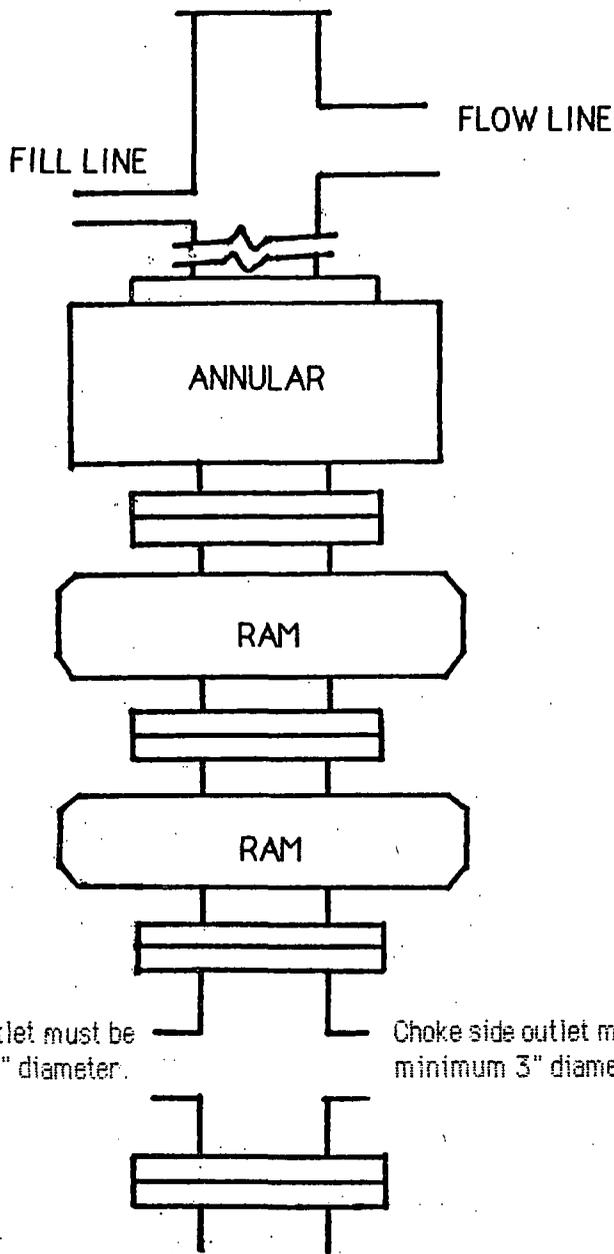
#### 2. ROAD TO BE BUILT OR UPGRADED (PAGES 11 & 12)

Upgrades will consist of repairing potholes. The final  $\approx 1,054'$  of 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 where needed. At least 3 broad water bars will be built across the road. Water bars will be built at least half in cut. Turnouts will be feathered out. Maximum disturbed width will be 30' (all within 40' pipeline corridor). Maximum cut or fill = 2'. Maximum grade = 5%. No culvert or cattle guard is needed.

#### 3. EXISTING WELLS (See PAGE 13)

Twenty-four gas or oil wells, six plugged and abandoned wells, and one water well are within a mile radius. There are no injection wells within a mile.





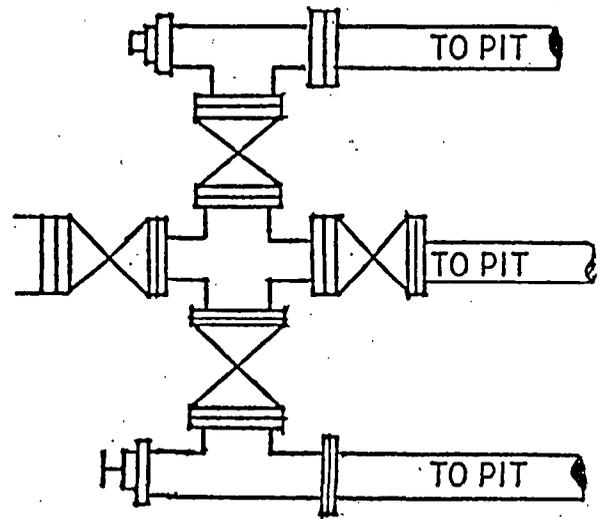
TYPICAL BOP STACK & CHOKE MANIFOLD

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 side outlet must be minimum 2" diameter.

Choke side outlet must be minimum 3" diameter.

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.