

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER

SINGLE ZONE ☐

MULTIPLE ZONE ☒

2. NAME OF OPERATOR

Elm Ridge Resources, Inc.

(505) 632-3476

3. ADDRESS AND TELEPHONE NO.

P. O. Box 189, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)\*

At surface

687' FSL & 660' FEL

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

1 air mile NE of Lybrook

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

606.45

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

985'

19. PROPOSED DEPTH

6,650'

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

7,206' ungraded

22. APPROX. DATE WORK WILL START\*

Jan. 20, 2002

5. LEASE DESIGNATION AND SERIAL NO.

NMNM-100602

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME, WELL NO.

Campos 10 #2

9. API WELL NO.

30-039-26847

10. FIELD AND POOL OR WILDCAT

Ly. Gall. & B. Dak.

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

P 10-23n-7w NMPM

12. COUNTY OR PARISH

Rio Arriba

13. STATE

NM

17. NO. OF ACRES ASSIGNED TO THIS WELL

40 & 308.01

20. ROTARY OR CABLE TOOLS

Rotary

PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | GRADE SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT          |
|--------------|----------------------|-----------------|---------------|-----------------------------|
| 12-1/4"      | K-55 8-5/8"          | 24              | 350'          | ≈300 cu. ft. & to surface   |
| 7-7/8"       | J-55 4-1/2"          | 10.5            | 6,650'        | ≈3,111 cu. ft. & to surface |

APD/ROW process

On sited with Jeff Tafoya

Archaeology consultant: CASA



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

SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

cc: BLM, Elm (D&F), OCD (via BLM)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. Consultant (505) 466-8120 1-01-02

SIGNED

TITLE

DATE

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

3/1/02

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:

APPROVED BY

TITLE

DATE

*[Signature]*

AFM

3/1/02

\*See Instructions On Reverse Side

NMOCB

State of New Mexico  
Energy, Minerals & Mining Resources Department  
**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, NM 87505

Form C - 102

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

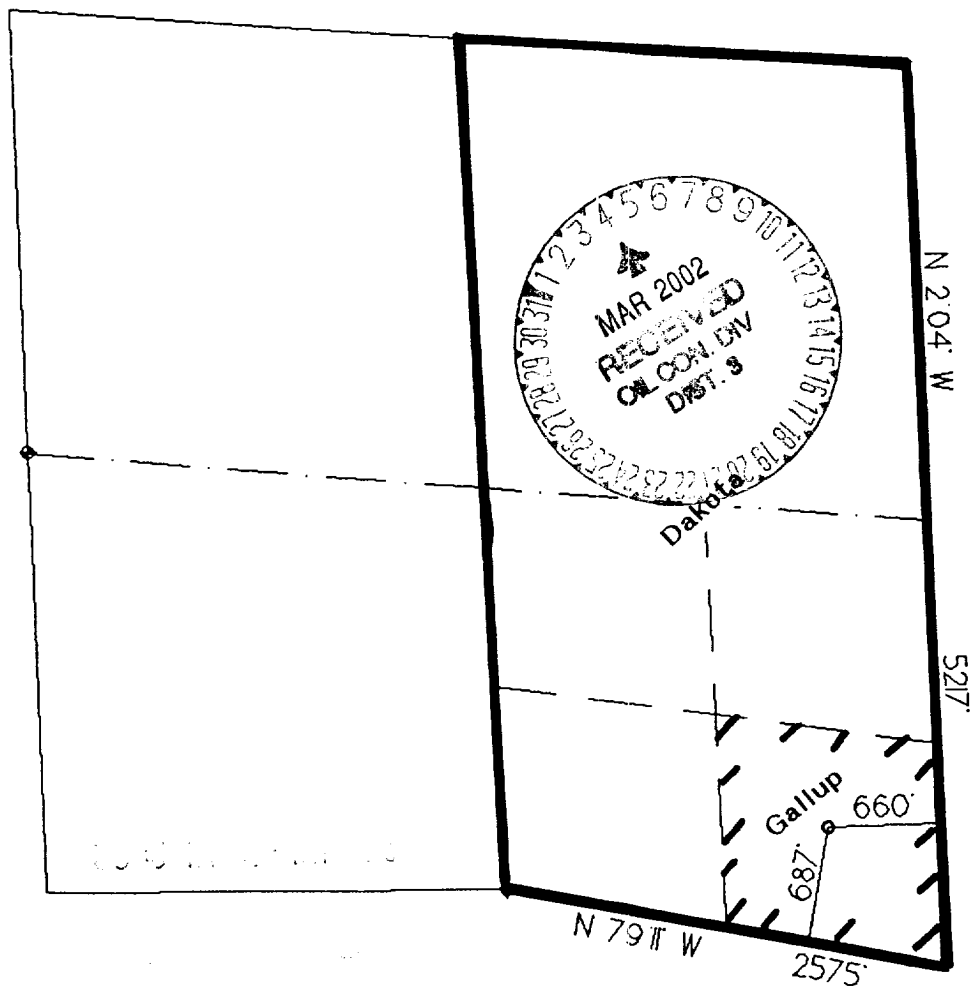
|                                   |  |                                      |  |   |  |                    |  |
|-----------------------------------|--|--------------------------------------|--|---|--|--------------------|--|
| APA Number<br><b>30-039-26936</b> |  | Pool Code<br>42289 & 71599           |  | Pool Name<br><b>LYBROOK GALLUP &amp; BASIN DAKOTA</b> |  |                    |  |
| Property Code<br><b>29636</b>     |  | Property Name<br>CAMPOS IO           |  |   |  | Well Number<br>2   |  |
| OGRID No.<br>149052               |  | Operator Name<br>ELM RIDGE RESOURCES |  |   |  | Elevation<br>7206' |  |

| Surface Location |            |               |              |          |                      |                      |                     |                   |                      |
|------------------|------------|---------------|--------------|----------|----------------------|----------------------|---------------------|-------------------|----------------------|
| UL or Lot<br>P   | Sec.<br>10 | Twp.<br>23.N. | Rge.<br>7.W. | Lot Idn. | Feet from ><br>.687' | North/South<br>SOUTH | Feet from ><br>660' | East/West<br>EAST | County<br>RIO ARriba |

| Bottom Hole Location If Different From Surface |      |      |      |          |             |             |             |           |        |
|--|------|------|------|----------|-------------|-------------|-------------|-----------|--------|
| UL or Lot                                      | Sec. | Twp. | Rge. | Lot Idn. | Feet from > | North/South | Feet from > | East/West | County |

|            |         |               |           |
|------------|---------|---------------|-----------|
| Dedication | Joint ? | Consolidation | Order No. |
|------------|---------|---------------|-----------|

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



|  |                        |
|--|------------------------|
| <b>OPERATOR CERTIFICATION</b><br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.<br>Signature <i>Brian Wood</i>  |                        |
| Printed Name   | BRIAN WOOD             |
| Title  | CONSULTANT             |
| Date   | JAN. 1, 2002           |
| <b>SURVEYOR CERTIFICATION</b><br>I hereby certify that the well location 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.<br>Date of Survey |                        |
| Signature and Seal of Professional Surveyor  | <i>[Signature]</i><br> |

Elm Ridge Resources, Inc.  
 Campos 10 #2  
 687' FSL & 660' FEL  
 Sec. 10, T. 23 N., R. 7 W.  
 Rio Arriba County, New Mexico

PAGE 1

## Drilling Program

### 1. ESTIMATED FORMATION TOPS

| <u>Formation Name</u> | <u>GL Depth</u> | <u>KB Depth</u> | <u>Subsea Elevation</u> |
|-----------------------|-----------------|-----------------|-------------------------|
| San Jose              | 000'            | 12'             | +7,206'                 |
| Ojo Alamo             | 1,556'          | 1,014'          | +5,650'                 |
| Kirtland Sh           | 1,651'          |                 | +5,555'                 |
| Fruitland Fm          | 1,801'          | 1,704'          | +5,405'                 |
| Pictured Cliffs Ss    | 2,161'          | 2,064'          | +5,045'                 |
| Chacra Ss             | 2,581'          |                 | +4,625'                 |
| Cliffhouse Ss         | 3,696'          |                 | +3,510'                 |
| Menefee Sh            | 3,736'          |                 | +3,470'                 |
| Pt. Lookout Ss        | 4,476'          | 4,374'          | +2,730'                 |
| Mancos Sh             | 4,626'          | 4,554'          | +2,580'                 |
| Gallup Ss             | 5,406'          | 5,434'          | +1,800'                 |
| Dakota Ss             | 6,471'          | 6,369'          | +735'                   |
| Total Depth           | 6,650'          | 6,662'          | +556'                   |

\* all elevations reflect the ungraded ground level of 7,206'

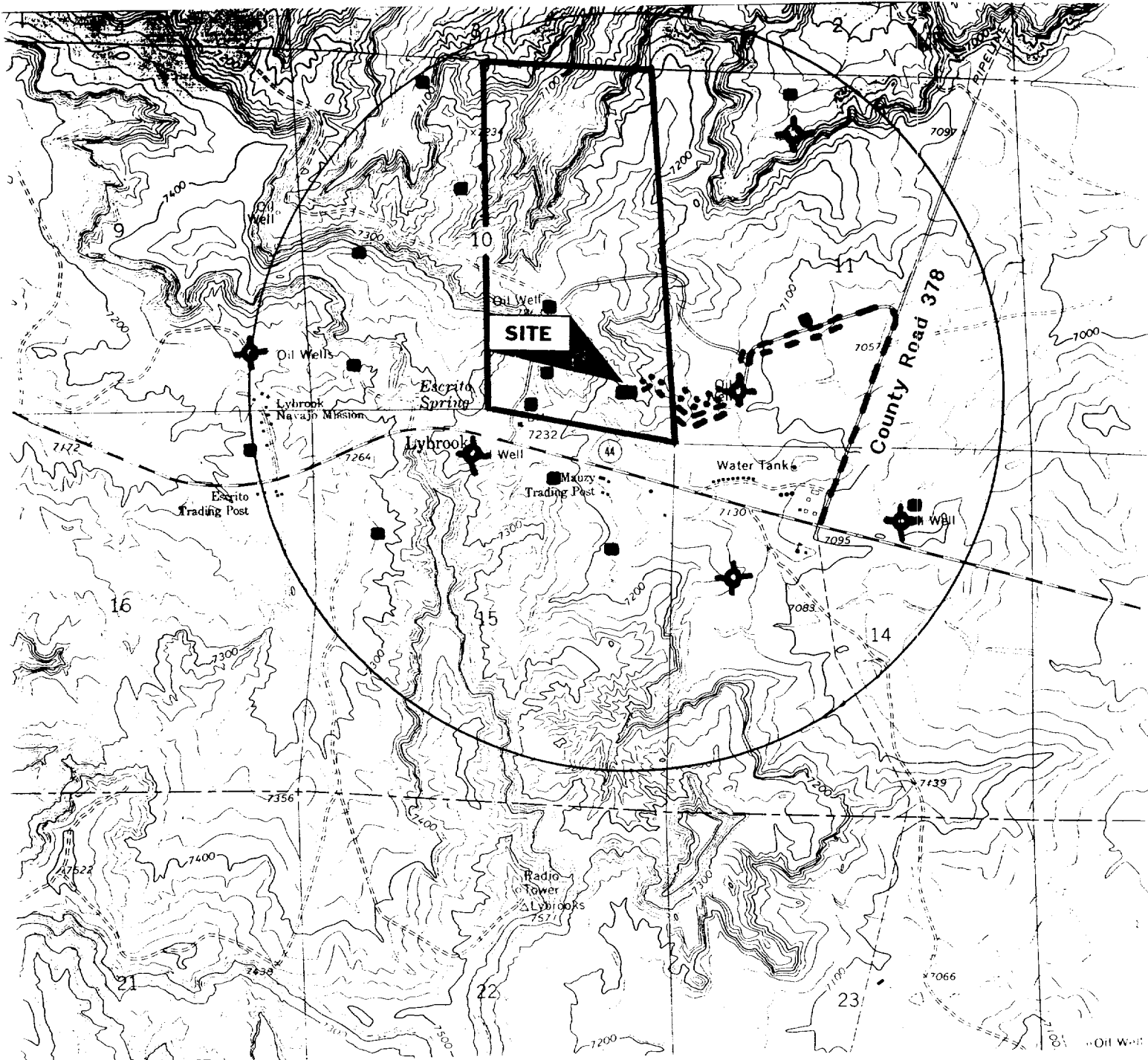
### 2. NOTABLE ZONES

| <u>Oil &amp;/or Gas Zones</u> | <u>Water Zones</u> | <u>Coal Zone</u> |
|-------------------------------|--------------------|------------------|
| Fruitland                     | San Jose           | Fruitland        |
| Pictured Cliffs               | Fruitland          |                  |
| Gallup                        | Pictured Cliffs    |                  |
| 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.

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PAGE 12



- PROPOSED WELL: ■ ACCESSROAD: - - - - -  
 (double line = right-of-way) = =  
 EXISTING WELL: ■ GAS LINE: ....  
 (double line = right-of-way) :::  
 P & A WELL: ⊕ LEASE: \_\_\_\_\_

**PERMITS WEST** INC.  
 PROVIDING PERMITS FOR LAND USERS

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PAGE 2

### 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         | ST&C        | New        | 350'                    |
| 7-7/8"           | 4-1/2"      | 10.5                  | J-55         | LT&C        | New        | 6,650'                  |

Surface casing will be cemented to the surface with  $\approx 300$  cubic feet ( $\approx 254$  sx) Class B with 1/4#/sk Flocele + 2% CaCl<sub>2</sub>. Yield = 1.18 cubic feet per sack. Weight = 15.2 pounds per gallon. Volume = 105% 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 the surface in 2 stages with a stage tool set @  $\approx 4,350'$ . Centralizers will be installed on the middle of the shoe joint and on every joint thereafter (total  $\approx 28$  centralizers). Thread lock the guide shoe, bottom of float collar, and bottom of stage tool only. Use API casing dope.

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PAGE 4

First stage volume will be  $\approx 1,300$  cu. ft. consisting of  $\approx 320$  sx Halliburton Lite with 65/35 poz mix + 1/4 #/sk Flocele + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) followed by  $\approx 595$  sx Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon). Second stage volume will be  $\approx 1,811$  cu. ft. consisting of  $\approx 940$  sx of Halliburton Lite with 65/35 poz mix + 1/4 #/sk Flocele + 2%  $\text{CaCl}_2$  (yield = 1.87 cubic feet per sack, weight = 12.7 pounds per gallon) 2%  $\text{CaCl}_2$  followed by  $\approx 45$  sx Class B with 2%  $\text{CaCl}_2$  (yield = 1.18 cubic feet per sack, weight = 15.2 pounds per gallon) to cover the Mesa Verde, Pictured Cliffs, and Ojo Alamo. Volumes equal  $\approx 100\%$  excess, but caliper logs will be used to determine actual volume needed.

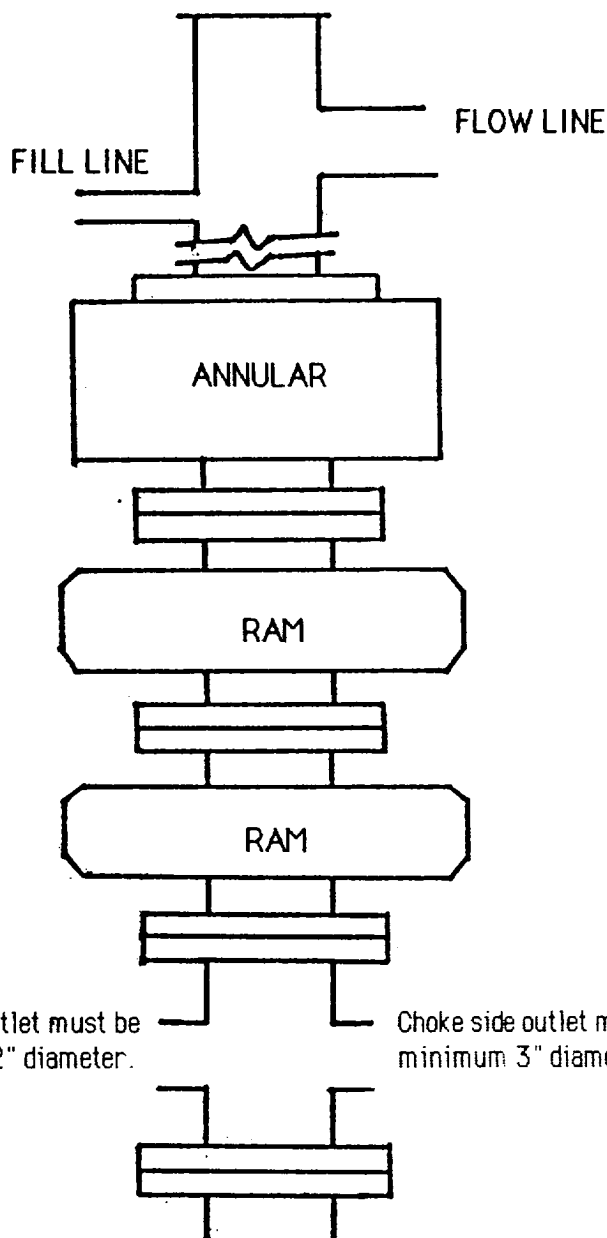
#### 5. MUD PROGRAM

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

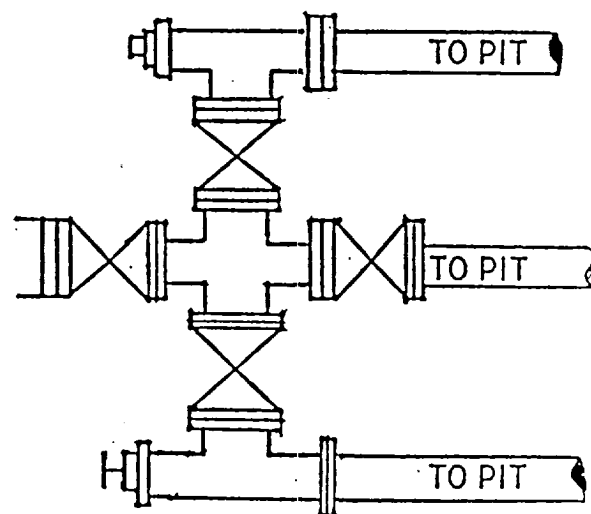
#### 6. CORING, TESTING, & LOGGING

No cores or DSTs 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 200' above the Pt. Lookout to the base of the Pt. Lookout and through the Gallup and Dakota. Samples will be collected every 30' elsewhere.



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.