


5. Lease Serial No. USAM-76832 NM NM-059704


1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		6. If Indian, Allottee or Tribe Name	
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. Unit or CA Agreement Name and No. NM NM 078384G	
2. Name of Operator Energen Resources Corporation		8. Lease Name and Well No. Carracas Canyon	
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401		9. API Well No. 30-039-29885	
3b. Phone No. (include area code) (505) 325-6800		10. Field and Pool, or Exploratory Basin Fruitland Coal	
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 1885' fsl, 1580' fwl  At proposed prod. zone		11. Sec., T., R., M., or Blk. and Survey or Area K S11, T32N, R05W	
14. Distance in miles and direction from nearest town or post office* Approximately 4.3 miles south & east of Arboles, CO		12. County or Parish Rio Arriba	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 1580'		13. State NM	
16. No. of Acres in lease 471.76		17. Spacing Unit dedicated to this well 320 8 1/2	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1000'		19. Proposed Depth 4230'	
20. BLM/BIA Bond No. on file NM 2707		21. Estimated duration 30 days	
22. Elevations (Show whether DF, KDB, RT, GL, etc.) GL 7540'		23. Approximate date work will start* 08/01/06	

## 24. Attachments

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

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan  | 5. Operator certification.   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

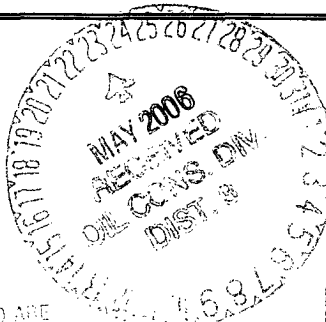
25. Signature 	Name (Printed/Typed) <b>Nathan Smith</b>	Date <b>4/13/05</b>
--	---	------------------------

Title		
Drilling Engineer		
Approved by (Signature)	Name (Printed/Typed)	Date
		5/22/06
Title	Office	
AFM	FEO	

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)*



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

ALL AGENTS ARE AUTHORIZED ARE  
SUBJECT TO LOCAL PLANS WITH ATTACHED  
"SPECIAL REQUIREMENTS".

NR00CD

3-4-05

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO 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  
Free Lease - 3 Copies

RECEIVED ☐ AMENDED REPORT  
070 FARMINGTON NM

## WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29885		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 32932	*Property Name CARRACAS Canyon unit FR		*Well Number 11
*GRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7540'

## 10 Surface Location

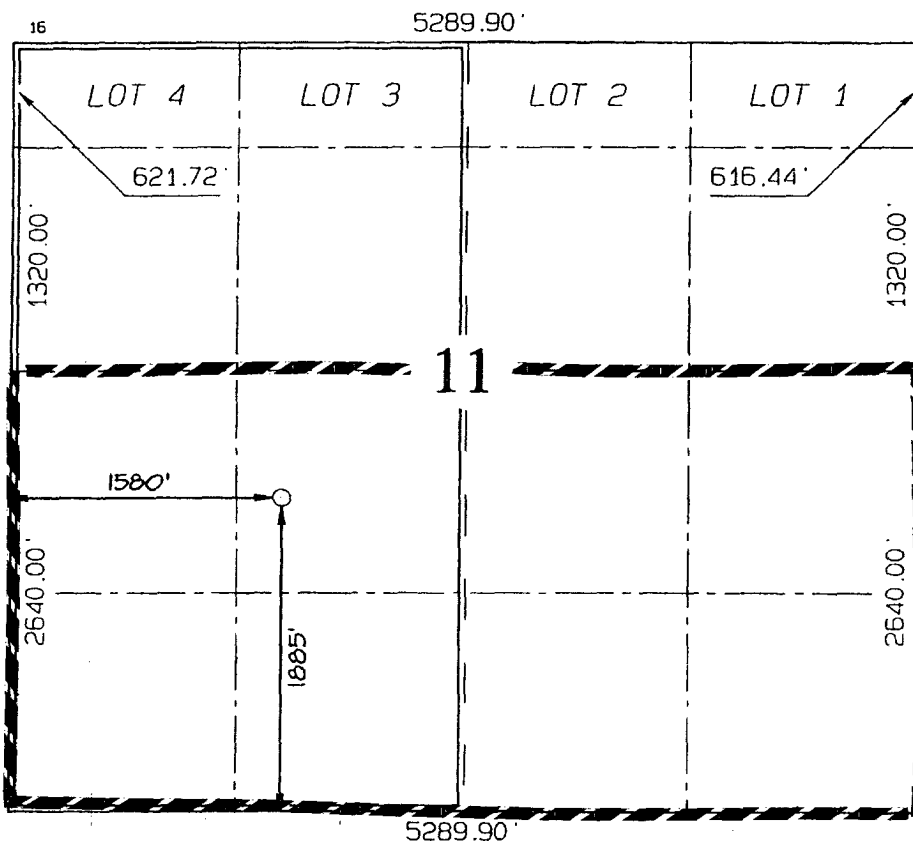
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	11	32N	5W		1885	SOUTH	1580	WEST	RIO ARriba

## 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

12 Dedicated Acres 320	277.60 Acres - (5/2)	13 Joint or Infill	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



## 17 OPERATOR CERTIFICATION

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

*Nathan Smith*  
Signature

Nathan Smith  
Printed Name

Drilling Engineer  
Title

4/20/06  
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

Survey Date: NOVEMBER 3, 2004

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269

Submit 3 Copies To Appropriate District  
Office  
District I  
1625 N. French Dr., Hobbs, NM 87240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103

May 27, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-039-29885

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name:  
Carracas 11A

8. Well Number

11

9. OGRID Number

162928

10. Pool name or Wildcat

Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Energen Resources Corporation

3. Address of Operator

2198 Bloomfield Highway Farmington, NM 87401

4. Well Location

Unit Letter K : 1885 feet from the North line and 1580 feet from the West line

Section 11 Township 32N Range 5W NMPM County Rio Arriba

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

GL 7540'

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type Drill Depth to Groundwater >100' Distance from nearest fresh water well >1000' Distance from nearest surface water >250'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: To build a drilling pit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Energen Resources plans to build a lined pit according to 'OCD Pit and Below Grade Tank Guidelines' as issued on November 1, 2004. Energen anticipates the submittal of a C-144 for closure of this pit in accordance with BLM and 'OCD Pit and Below Grade Tank Guidelines'.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ , a general permit ☐ or an (attached) alternative OCD-approved plan ☐

SIGNATURE Nathan Smith TITLE Drilling Engineer DATE 4/13/06

E-mail address:

Type or print name Nathan Smith

Telephone No. 505.325.6800

For State Use Only

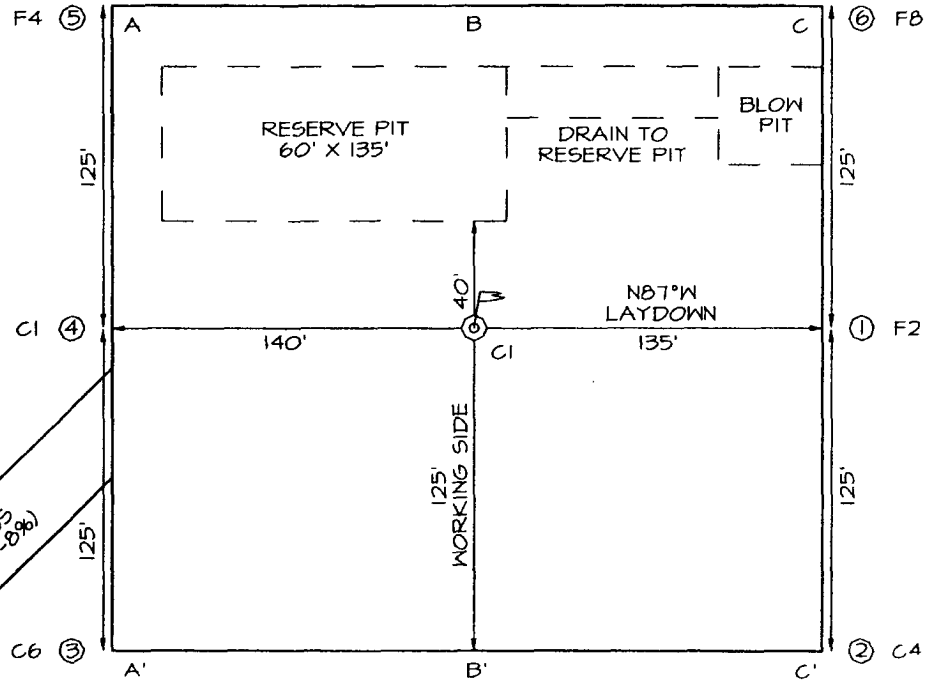
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 60 DATE MAY 23 2006

Conditions of Approval, if any:

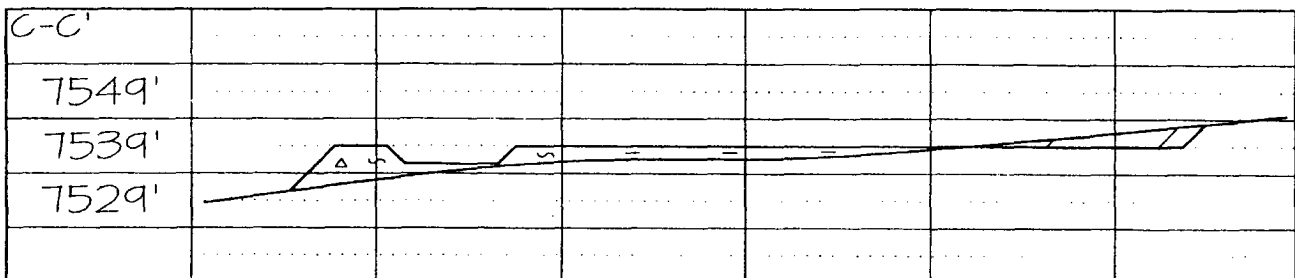
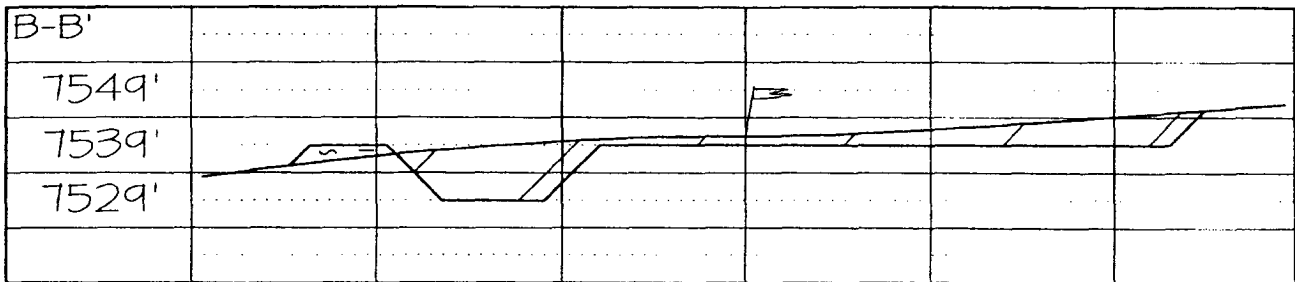
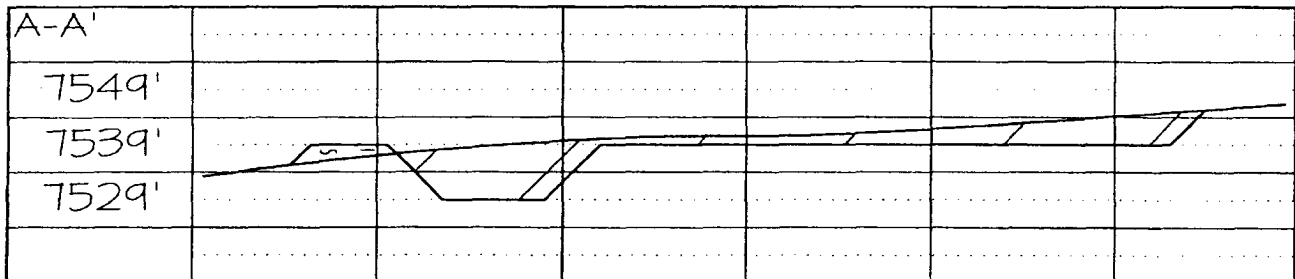
**ENERGEN RESOURCES CORPORATION CARRACAS 11A #11**  
**1885' FSL & 1580' FWL, SECTION 11, T32N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO GROUND ELEVATION: 7540**

LATITUDE: 36°59'34"  
 LONGITUDE: 107°20'05"  
 DATUM: NAD1927

N 36.99277°  
 W 107.33472°



EXISTING ROADWAY



## Operations Plan

April 13, 2006

### **Carracas 11A #11**

#### **General Information**

Location	1885' fsl, 1580' fwl nesw S11, T32N, R05W Rio Arriba County, New Mexico
Elevations	7540' GL
Total Depth	4230' (MD)
Formation Objective	Basin Fruitland Coal

#### **Formation Tops**

San Jose	Surface
Ojo Alamo Ss	3488'
Kirtland Sh	3576'
Fruitland Fm	3913'
<b>Intermediate Casing</b>	<b>4130'</b>
Top Coal	4135'
Bottom Coal	4165'
Pictured Cliffs Ss	4170'
<b>Total Depth</b>	<b>4230'</b>

#### **Drilling**

The 12 1/4" wellbore will be drilled with a fresh water mud system.

The 8 3/4" wellbore will be drilled with a low solids fresh water/polymer mud system. Weighting materials will be drill cuttings and if needed barite. Mud density is expected to range from 8.3 ppg to 8.9 ppg.

The 6 1/4" wellbore will be drilled with air / mist from intermediate casing point to total depth.

##### **Blowout Control Specifications:**

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations.

##### **Logging Program:**

Open hole logs: None

Mud Logs: From Intermediate TD to total depth.

Coring: None

Surveys: Surface casing point and/or every 500' to TD.

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-200'	12 ¼"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	200'-4130'	8 ¾"	7"	23.0 ppf	J-55 LT&C
Production	4100'-4230'	6 ¼"	5 ½"	15.5 ppf	J-55 LT&C
Tubing	0'-4175'		2 3/8"	4.7 ppf	J-55

### Casing Equipment:

Surface Casing: Depending on wellbore conditions, a Texas Pattern Guide Shoe on bottom. Casing centralization with standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Depending on wellbore conditions, a Cement nose guide shoe with self fill insert float collar on top of bottom joint and casing centralization with standard bow spring and rigid centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

## Wellhead

9 5/8" x 7" x 2 3/8" 3000 psi Flanged Wellhead.

## Cementing

Surface Casing: 125 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and ¼ #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk 147 ft<sup>3</sup> of slurry, 100 + % excess to circulate to surface). WOC 8 hours. Pressure test surface casing to 600 psi for 30 min.

Intermediate Casing: Before cementing, circulate hole at least 1 ½ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 550 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and ½ #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 125 sks of Standard (Class B) cement with 5 #/sk Gilsonite, and ¼ #/sk Flocele (15.2 ppg, 1.24 ft<sup>3</sup>/sk). (1233 ft<sup>3</sup> of slurry, 100 % excess to circulate to surface). WOC 12 hrs prior to drill out.

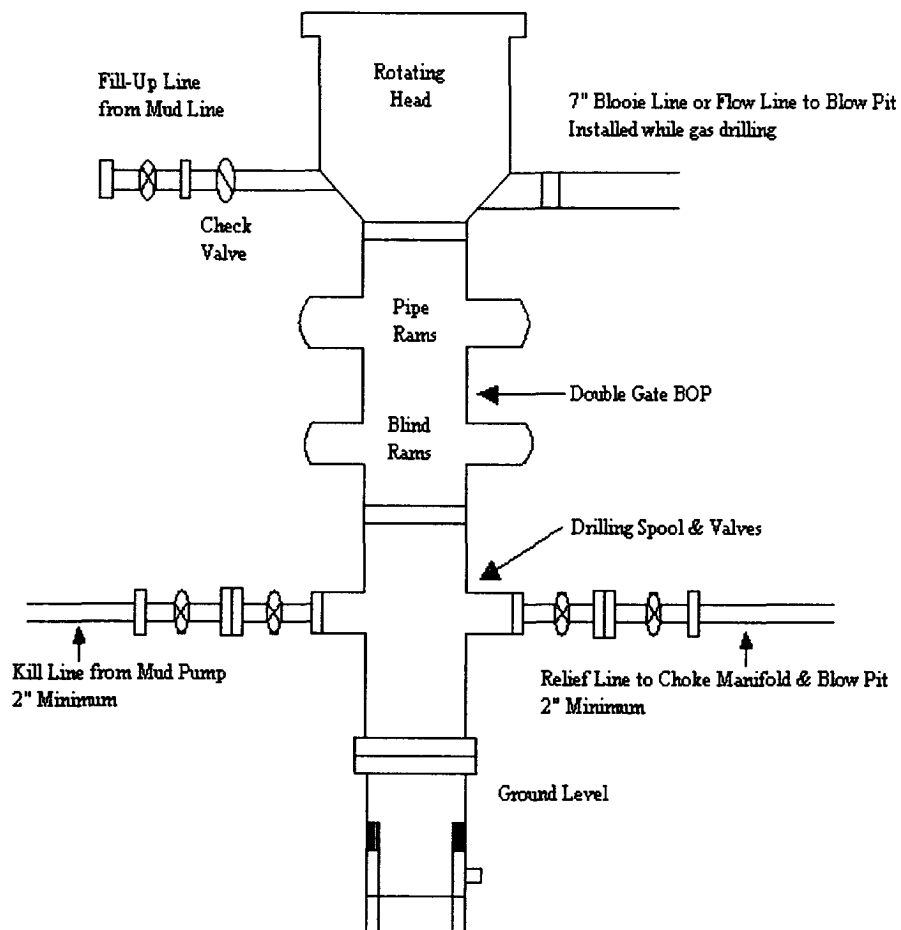
Liner: NO CEMENT

## Other Information

- 1) This well will be an open hole completion. The Fruitland Coal will be cavitated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures are anticipated, however reservoir pressures may be 1200 psi.
- 5) This gas is dedicated.

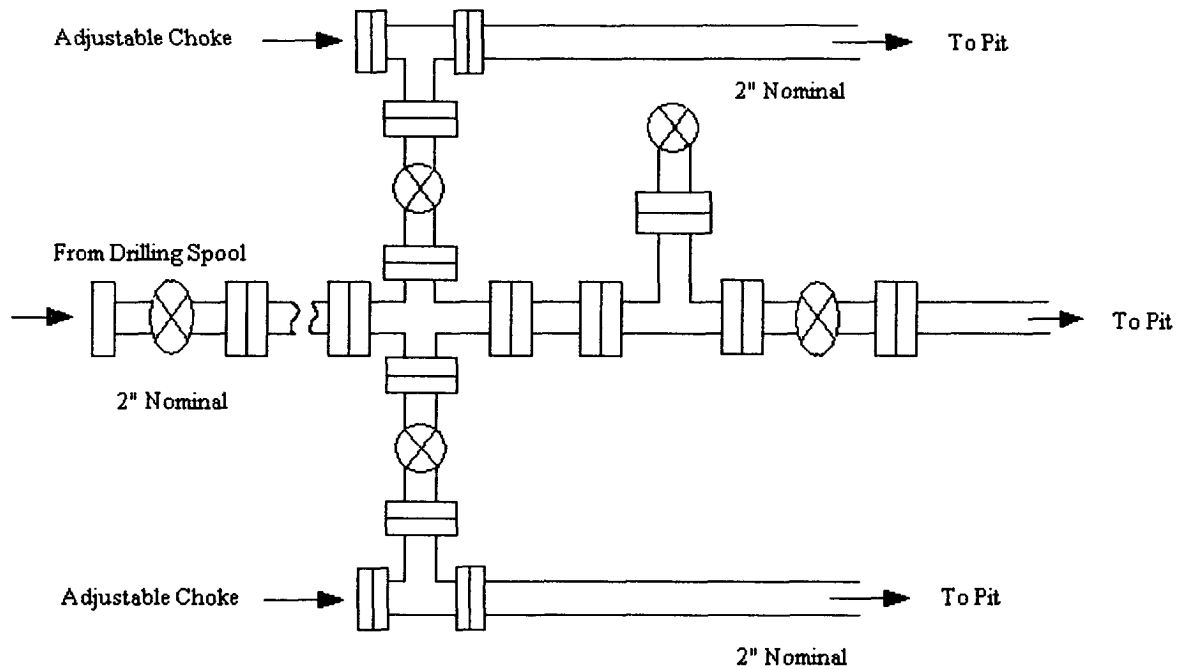
## Energen Resources Corporation

### Typical BOP Configuration for Gas Drilling



## Energen Resources Corporation

### Typical 2000 psi Choke Manifold Configuration



Choke manifold installed from surface to TD