

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires March 31, 2007


APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>SF 078132</b>
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		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>Energen Resources Corporation</b>		7. Unit or CA Agreement Name and No.
3a. Address <b>2198 Bloomfield Highway Farmington, New Mexico 87401</b>	3b. Phone No. (include area code) <b>(505) 325-6800</b>	8. Lease Name and Well No. <b>Federal 29-9-15 #1S</b>
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface <b>40' ENL, 800' FWL</b>  At proposed prod. zone		9. API Well No. <b>30-049-33073</b>
14. Distance in miles and direction from nearest town or post office* <b>Approximately 3 miles east of Blanco, NM</b>		10. Field and Pool, or Exploratory <b>Basin Fruitland Coal</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) <b>40'</b>		11. Sec., T., R., M., or Blk. and Survey or Area <b>D-Sec. 15, T29N, R09W NMEM</b>
16. No. of Acres in lease <b>2372.88</b>		12. County or Parish <b>San Juan</b>
17. Spacing Unit dedicated to this well <b>306.99 N 1/2</b>		13. State <b>NM</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>750'</b>		20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5807' GL</b>		22. Approximate date work will start* <b>05/25/05</b>
		23. Estimated duration <b>15 days</b>

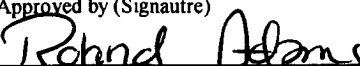
24. Attachments

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>4/28/05</b>
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Title <b>Drilling Engineer</b>		
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Approved by (Signautre) 	Name (Printed/Typed) <b>ROLAND ADAMS</b>	Date <b>08/04/04</b>
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Title <b>Acting AFM</b>	Office <b>FARMINGTON DISTRICT OFFICE</b>	
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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)

HOLD C104 FOR MSL

RECEIVED  
 APR 28 PM 4 42  
 FARMINGTON NM

NMOC

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised February 21, 1994

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

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

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

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code	*Property Name FEDERAL 29-9-15		*Well Number 1S
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 5807'

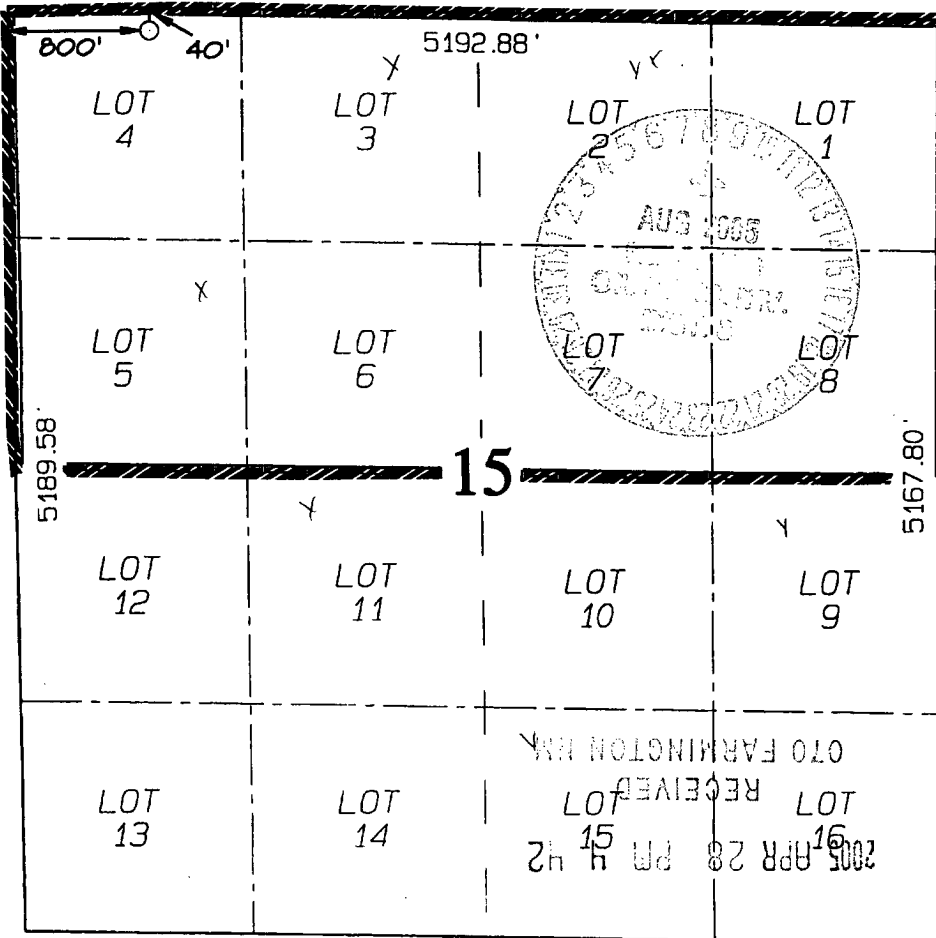
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	29N	9W		40	NORTH	800	WEST	SAN JUAN

<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 306.99 Acres - (N/2)	<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



<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

*Doug Thomas*  
Signature  
Doug Thomas  
Printed Name  
Drilling Superintendent  
Title  
Date: 1/11/05

<sup>18</sup> 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: OCTOBER 28, 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.
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name: Federal 29-9-15
8. Well Number 1S
9. OGRID Number 162928
10. Pool name or Wildcat Basin Fruitland Coal
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5807' GL
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/> Pit type <u>Drill</u> Depth to Groundwater <u>&gt;100'</u> Distance from nearest fresh water well <u>&gt;1000'</u> Distance from nearest surface water <u>&gt;200'</u> Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

**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 D ; 40 feet from the North line and 800 feet from the West line  
 Section 15 Township 29N Range 09W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
 5807' GL

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 >200'  
 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: Build 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 04/28/05  
 E-mail address: nsmith@energen.com  
 Type or print name Nathan Smith Telephone No. 505.325.6800

For State Use Only

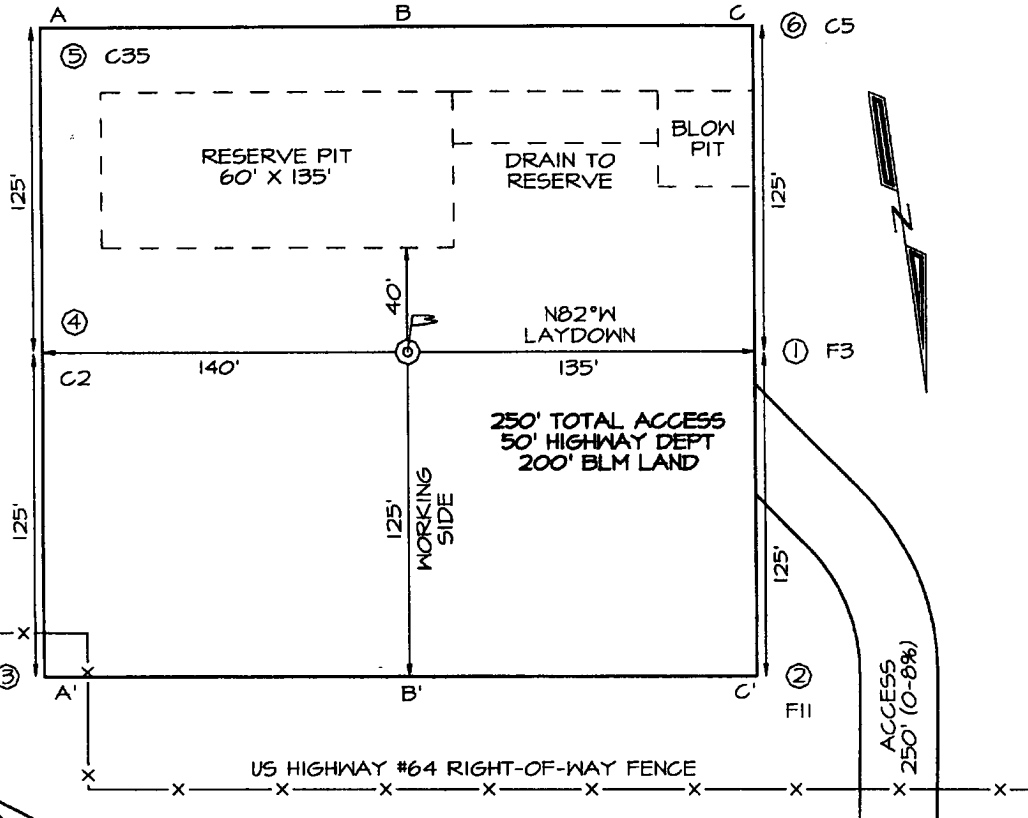
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 01 DATE AUG 08 2005  
 Conditions of Approval, if any:

**ENERGEN RESOURCES CORPORATION FEDERAL 29-9-15 #1S  
 40' FNL & 800' FWL, SECTION 15, T29N, R9W, NMPM  
 SAN JUAN COUNTY, NEW MEXICO ELEVATION: 5807'**

**LATITUDE: 36°43'56"  
 LONGITUDE: 107°46'18"  
 DATUM: NAD1927**

PLAT NOTE #5  
 ROUND CORNER #5  
 IF POSSIBLE TO AVOID  
 EXCESSIVE CUT SLOPE

PLAT NOTE #3  
 ROUND CORNER #3  
 IF POSSIBLE TO AVOID  
 HIGHWAY RIGHT-OF-WAY



A-A'						
5817'	[Profile Line]					
5807'	[Profile Line]					
5797'	[Profile Line]					

B-B'						
5817'	[Profile Line]					
5807'	[Profile Line]					
5797'	[Profile Line]					

C-C'						
5817'	[Profile Line]					
5807'	[Profile Line]					
5797'	[Profile Line]					

**Operations Plan**

December 27, 2004

**Federal 29-9-15 #1S**

**General Information**

Location	0040' fnl, 0800' fwl nwnw S15, T29N, R9W San Juan County, New Mexico
Elevations	5807' GL
Total Depth	2554' (MD)
Formation Objective	Basin Fruitland Coal

**Formation Tops**

Nacimiento	Surface
Ojo Alamo Ss	1164'
Kirtland Sh	1334'
Fruitland Fm	2014'
Top Coal	2159'
Bottom Coal	2354'
Pictured Cliffs Ss	2364'
<b>Total Depth</b>	<b>2554'</b>

*ABHP ~ 1100psi*

**Drilling**

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

The 7 7/8" 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.

**Blowout Control Specifications:**

A 2000 psi minimum double ram or annulus BOP stack (figure 1) will be used following nipple up of casing head. 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: Induction/Gamma Ray and Density Logs  
Coring: None  
Natural Gauges: None

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-300'	12 1/4"	8 5/8"	24.0 ppf	J-55 ST&C
Production	300'-2554'	7 7/8"	5 1/2"	15.5 ppf	J-55 LT&C
Tubing	0'-2500'		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.

Production 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 centralizers to optimize standoff. Two turbolating centralizers at the base of the Ojo Alamo are recommended.

## Wellhead

8 5/8" 2000 x 5 1/2" Larkin casing head. 5 1/2" 2000 x 2" tubing head.

## Cementing

Surface Casing: 225 sks Std (class B) with 2.0 % CaCl<sub>2</sub> and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk <sup>2100</sup>~~247~~ ft<sup>3</sup> of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

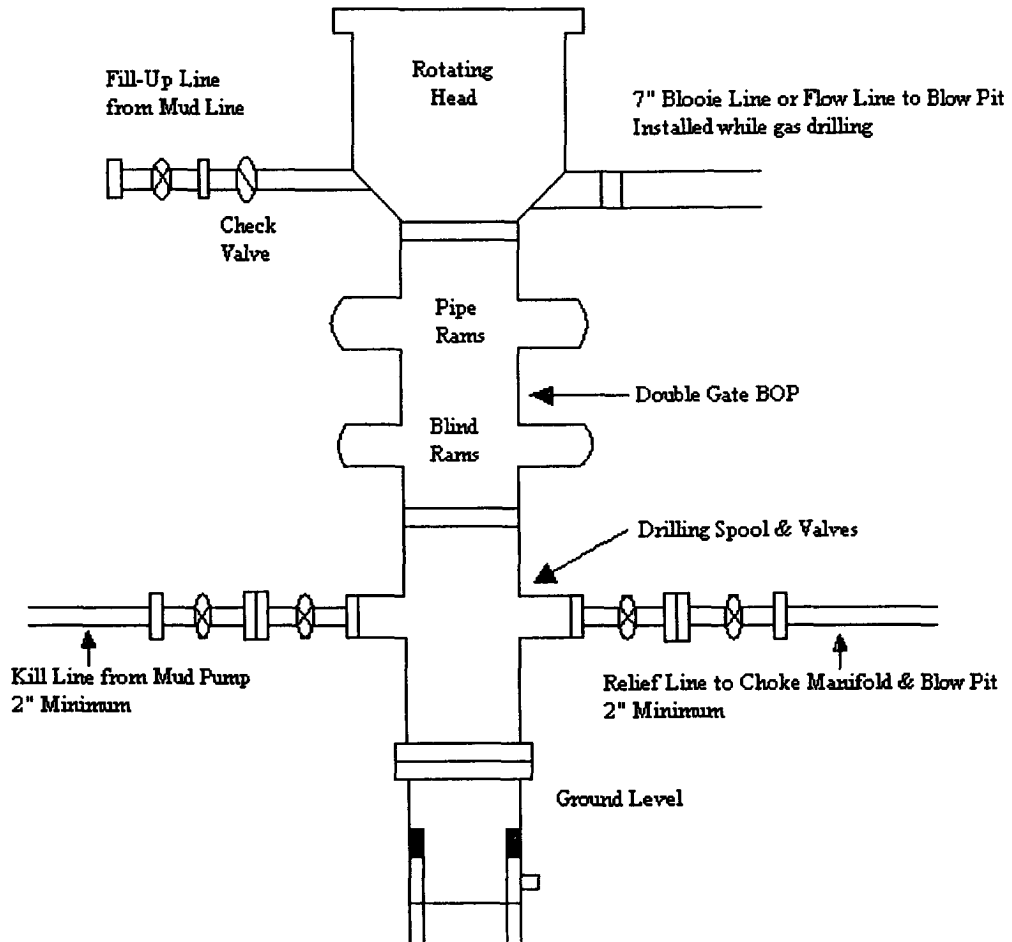
Production Casing: Before cementing, circulate hole at least 1 1/2 hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist of 370 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl<sub>2</sub>, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft<sup>3</sup>/sk) and a tail of 145 sks of Standard (Class B) cement with 5.0 #/sk Gilsonite, and 1/4 #/sk Flocele (15.2ppg, 1.24 ft<sup>3</sup>/sk). <sup>905</sup>~~885.2~~ ft<sup>3</sup> of slurry, 100 % excess to circulate to surface).

## Other Information

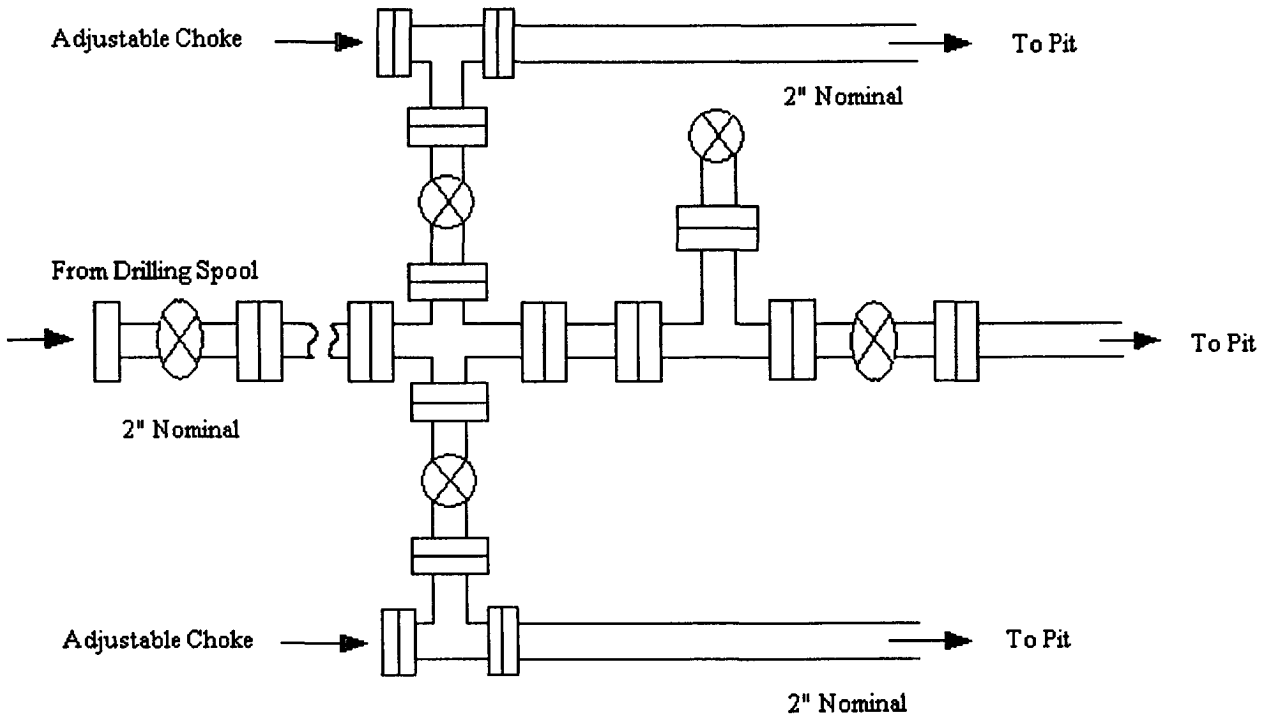
- 1) This well will be cased and the Basin Fruitland Coal fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed 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 or pressures are anticipated/
- 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