

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

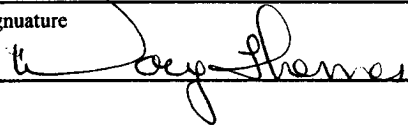
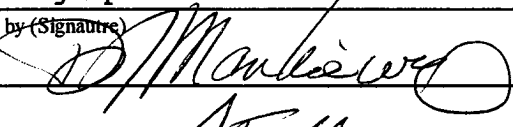
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>USA NM 59696</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 <b>07</b>
2. Name of Operator <b>Energex 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>Carracas 34A #7</b>
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface <b>1980' FNL, 2620' FEL</b> At proposed prod. zone		9. API Well No. <b>3003929342</b>
14. Distance in miles and direction from nearest town or post office* <b>38 miles NE 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>1980'</b>	16. No. of Acres in lease <b>1920.00</b>	11. Sec., T., R., M., or Blk. and Survey or Area <b>G-Sec. 34-T32N-R05W NMEM</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1750'</b>	19. Proposed Depth <b>3309'</b>	12. County or Parish <b>Rio Arriba</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>6472' GL</b>	22. Approximate date work will start* <b>June 2006</b>	13. State <b>NM</b>
23. Estimated duration <b>7 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>Doug Thomas</b>	Date <b>11/12/04</b>
Title <b>Drilling Superintendent</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>AFM</b>	Date <b>3/30/06</b>
Title <b>FFO</b>		

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)

NMOC

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

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  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer DD, 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  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-039-29342		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 35598	*Property Name CARRACAS 34A		*Well Number 34A-7
*OGRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 6472'



<sup>10</sup> Surface Location

UL or lot no. G	Section 34	Township 32N	Range 5W	Lot Idn	Feet from the 1980	North/South line NORTH	Feet from the 2620	East/West line EAST	County RIO ARriba
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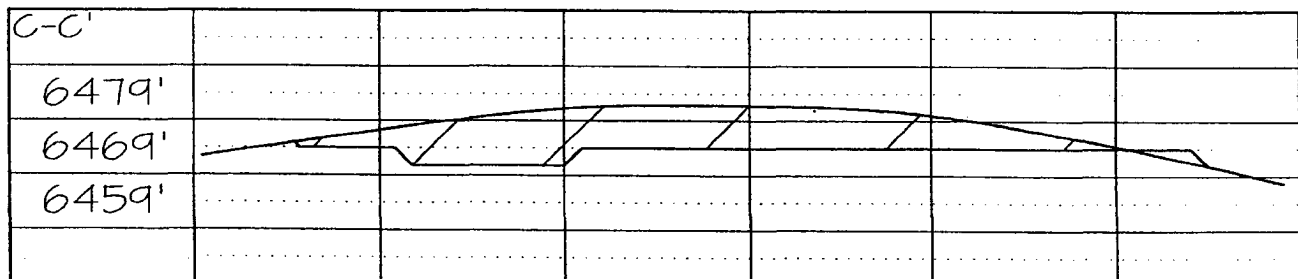
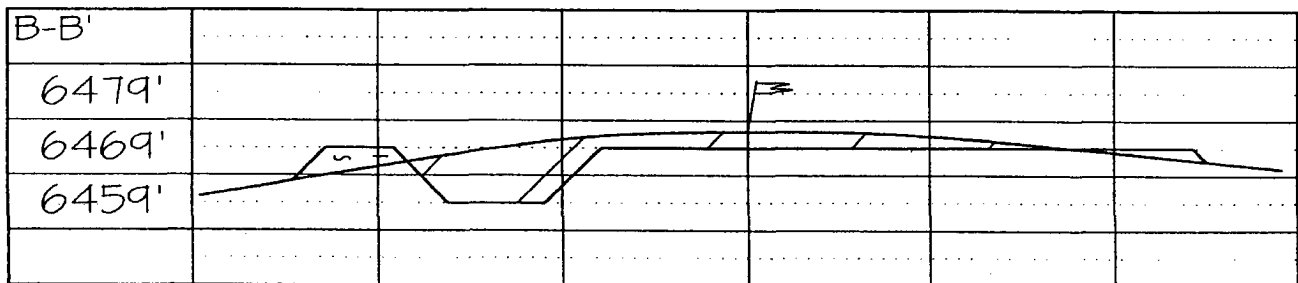
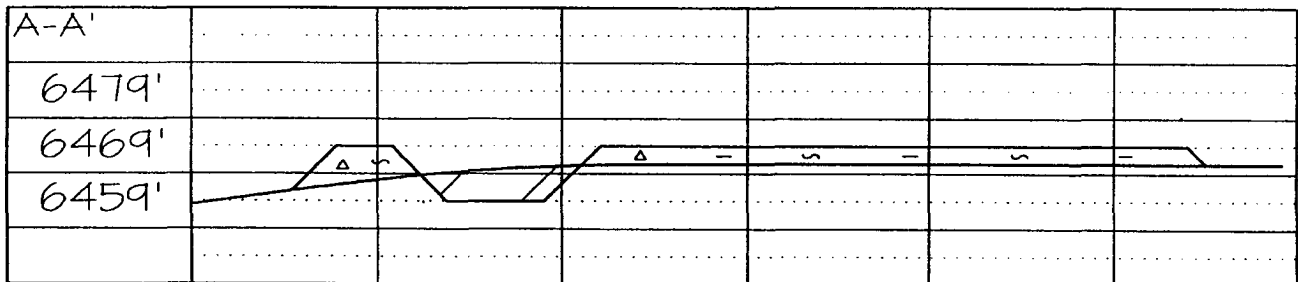
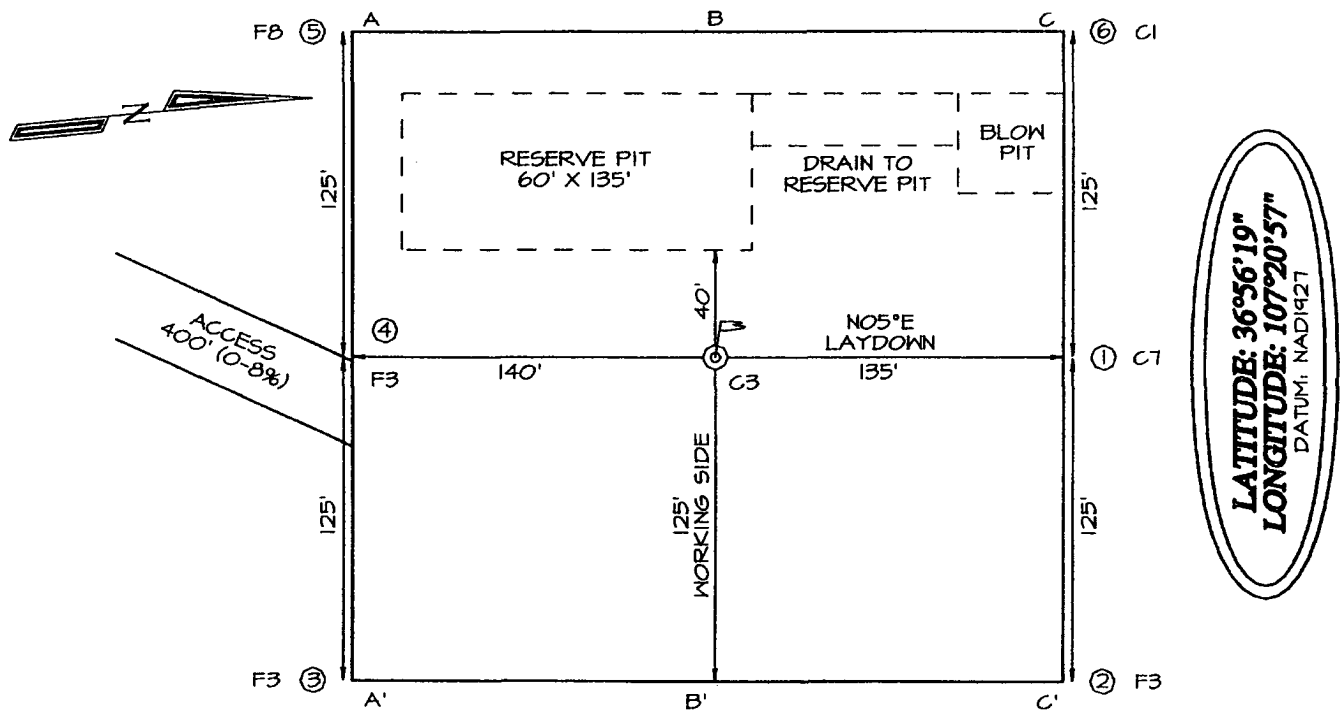
<sup>11</sup> Bottom Hole Location If Different From Surface

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 320.0 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

	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Doug Thomas</i></p> <p>Signature Doug Thomas</p> <p>Printed Name Drilling Superintendant</p> <p>Title 11-12-04</p> <p>Date</p>
	<p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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</p> <p>Survey Date: AUGUST 25, 2004</p> <p>Signature and Seal of Professional Surveyor</p> <p></p> <p><i>JASON C. EDWARDS</i></p> <p>Certificate Number 15269</p>

**ENERGEN RESOURCES CORPORATION CARRACAS 34A #7**  
**1980' FNL & 2620' FEL, SECTION 34, T32N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO GROUND ELEVATION: 6472'**



## Operations Plan

November 9, 2004

### **Carracas # 34A-7**

#### **General Information**

Location	1980' fnl, 2620' fel S34, T32N, R5W Rio Arriba County, New Mexico
Elevations	6472' GL
Total Depth	3309' (MD)
Formation Objective	Basin Fruitland Coal

#### **Formation Tops**

San Jose	Surface
Nacimiento	1299'
Ojo Alamo Ss	2574'
Kirtland Sh	2709'
Fruitland Fm	3079'
<b>Intermediate Casing</b>	<b>3149'</b>
Top Coal	3189'
Top Main Coal	3209'
Bottom Coal	3239'
Base Coal Interval	3249'
Pictured Cliffs Ss	3249'
<b>Total Depth</b>	<b>3309'</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 8.9 ppg to 9.5 ppg.

The 6 1/4" wellbore will be drilled with an air/mist air hammer system.

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

An 11" 2000 psi minimum double gate BOP stack (figure 1) 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 stack. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

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

Open hole logs: Check with Greg Jennings

Mud logs: Check with Greg Jennings

Coring: None

Natural Gauges: None

## Tubulars

### Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-300'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-3149'	8 3/4"	7"	23.0 ppf	J-55 LT&C
Production	3149'-3309'	6 1/4"	5 1/2"	15.5 ppf	J-55 LT&C
Tubing	0'-3300'		2 3/8"	4.6 ppf	J-55

### Casing Equipment:

Surface Casing: Texas Pattern Guide Shoe on bottom. 4 bow spring centralizers spaced every other joint from bottom.

Intermediate Casing: Cement nose guide shoe with self fill insert float collar on top of bottom joint. 10 bow spring centralizers spaced every 2<sup>nd</sup> joint off bottom. Two turbolating centralizers at the base of the Ojo Alamo.

Liner: Cement nose guide shoe with self fill insert float collar on bottom joint. No centralizers.

## Wellhead

9 5/8" 2000 x 5 1/2" Larkin casing head. 5 1/2" 2000 x 2" tubing head.

## Cementing

Surface Casing: 175 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 206 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.

Intermediate 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 435 sks 65/35 Std (class B) 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 100 sks Sks (class B) with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft<sup>3</sup>/sk). (970 ft<sup>3</sup> of slurry, 100 % excess to circulate to surface).

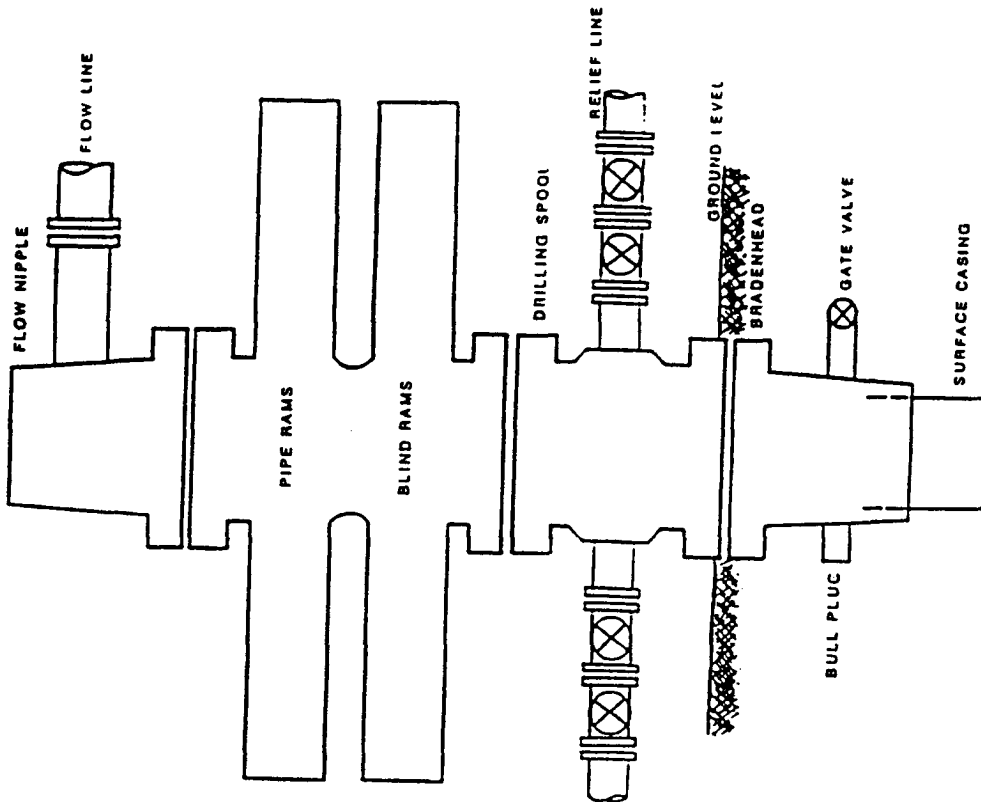
Liner: Open hole completion, no cement.

## Other Information

- 1) This well will be an open hole completion and the Basin Fruitland Coal 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 or pressures are anticipated/
- 5) This gas is dedicated.

# Figure #1

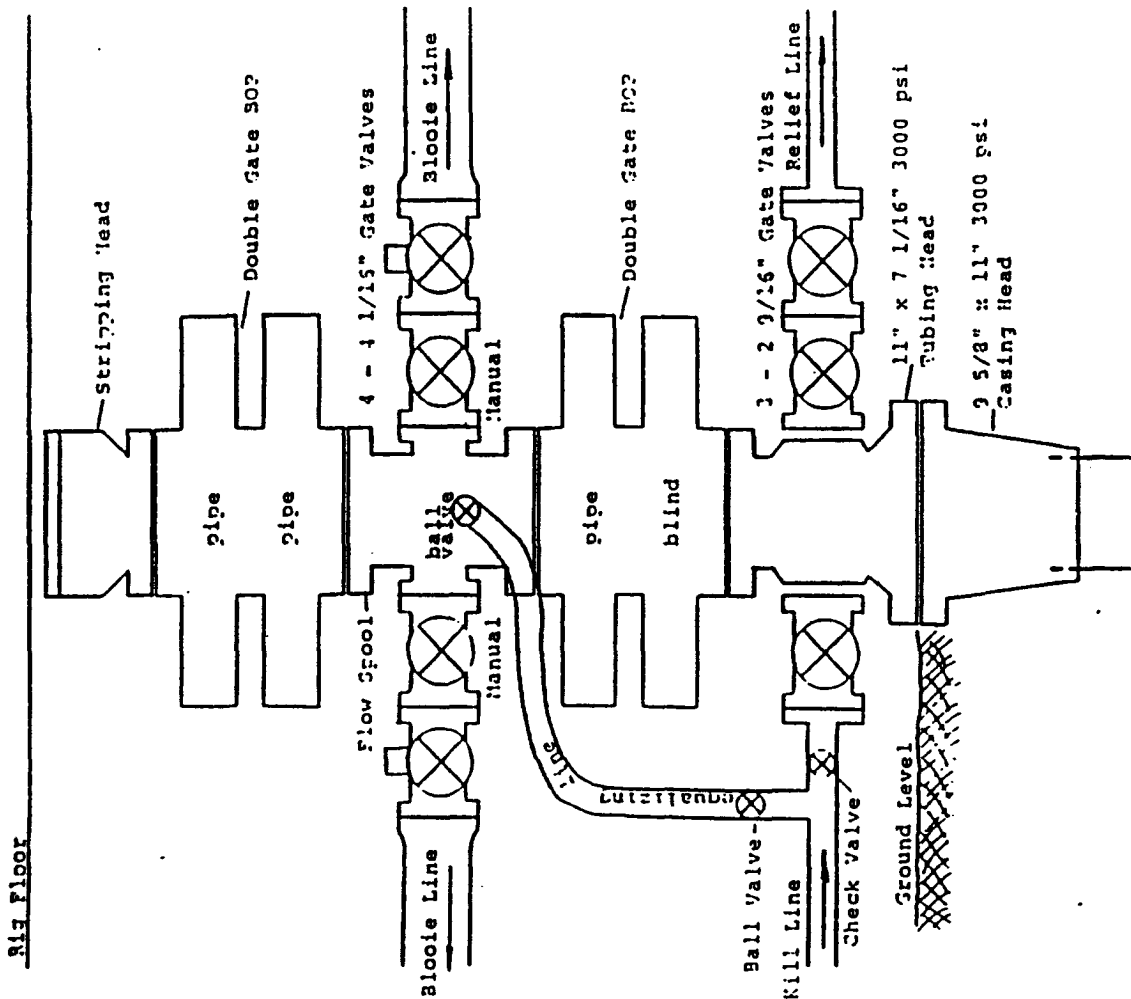
TYPICAL B.O.P.E. INSTALLATION  
FOR A FRUITLAND COAL WELL  
(to Intermediate TD)



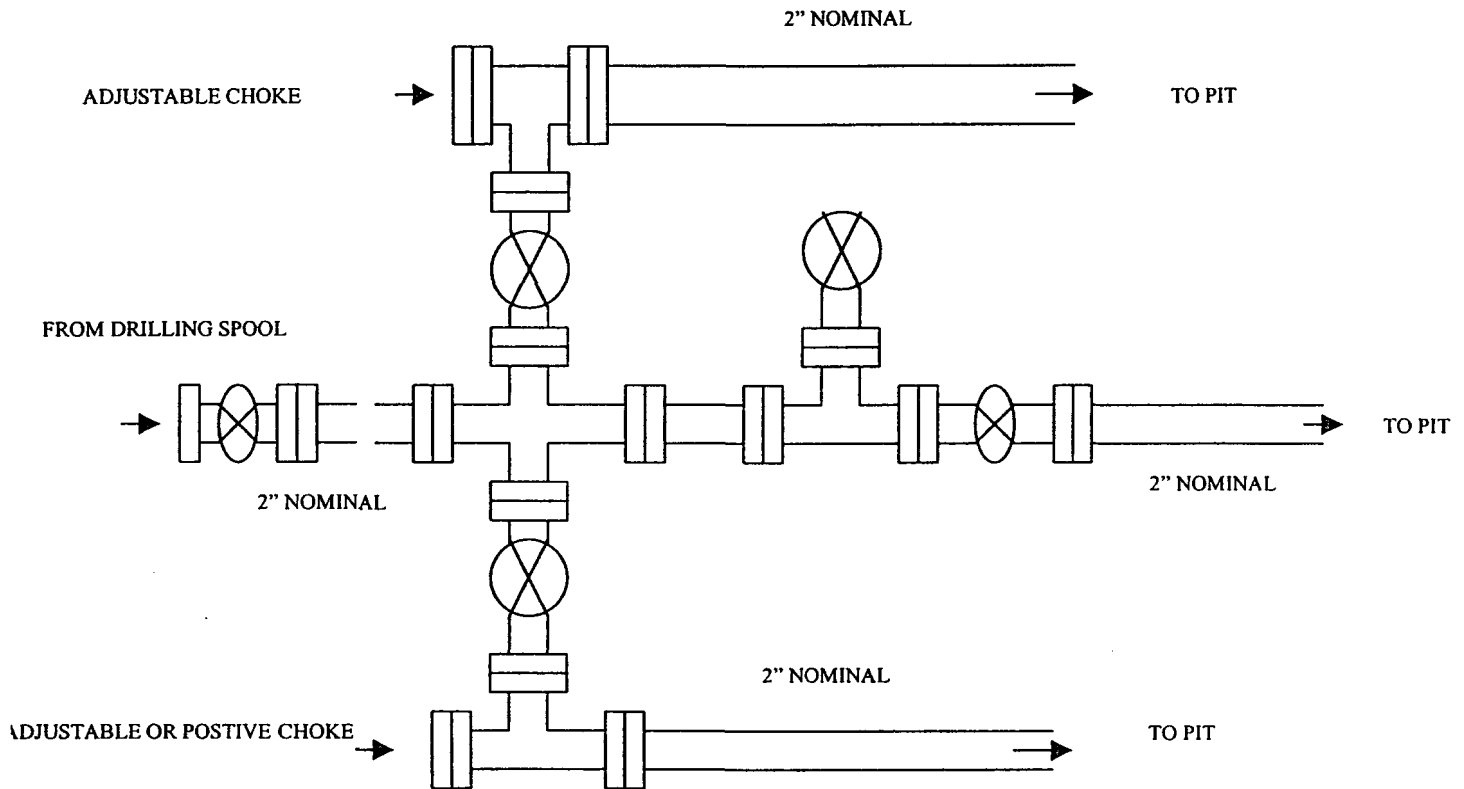
Series 900 double gate BOP  
Rated at 3000 psi working pressure

# Figure #2

FRUITLAND COAL WELL  
TYPICAL BOP CONFIGURATION  
7 1/16" 3000 psi (minimum) BOP STACK  
(from intermediate to total depth)



**ENERGEN RESOURCES CORPORATION**  
Choke Manifold Configuration  
2M psi System



Minimum choke manifold installation from surface to Total Depth.  
2" minimum, 2000 psi working pressure equipment with two chokes.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**

FORM APPROVED  
OMB NO. 1004-0135  
Expires: November 30, 2000

5. Lease Serial No.  
NMNM59696

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
CARRACAS 34A 7

9. API Well No.  
30-039-29342-00-X1

10. Field and Pool, or Exploratory  
BASIN FRUITLAND COAL

11. County or Parish, and State  
RIO ARRIBA COUNTY, NM

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator  
ENERGEN RESOURCES CORPORATION

Contact: VICKI DONAGHEY  
E-Mail: vdonaghe@energen.com

3a. Address  
2198 BLOOMFIELD HIGHWAY  
FARMINGTON, NM 87401

3b. Phone No. (include area code)  
Ph: 505.325.6800 Ext: 238  
Fx: 505.326.6112

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 34 T32N R5W SWNE 1980FNL 2620FEL

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Per your request, this is the logging program for this well.

8-3/4" - no logs on intermediate string  
6-1/4" - mud log on drill out



14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #51630 verified by the BLM Well Information System  
For ENERGEN RESOURCES CORPORATION, sent to the Farmington  
Committed to AFMSS for processing by ADRIENNE BRUMLEY on 12/17/2004 (05AXB0491SE)**

Name (Printed/Typed) NATHAN SMITH

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 12/07/2004

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**NMOC**