

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0136  
Expires: November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

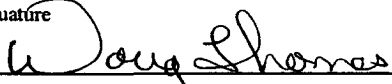
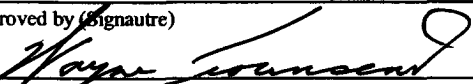
RECEIVED

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 29760
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 57
2. Name of Operator Energen Resources Corporation		7. Unit or CA Agreement Name and No.
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401	3b. Phone No. (include area code) (505) 325-6800	8. Lease Name and Well No. Carracas 23A 10
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 1350' FSL. 1975' FEL At proposed prod. zone		9. API Well No. 3003927549
14. Distance in miles and direction from nearest town or post office* 37 miles NE of Gobernador, NM		10. Field and Pool, or Exploratory Basin Fruitland Coal
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 1350'		11. Sec., T., R., M., or Blk. and Survey or Area J-Sec. 23-T32N-R05W NMPM
16. No. of Acres in lease 1440.81		12. County or Parish Rio Arriba
17. Spacing Unit dedicated to this well 5/2 S/1		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2300'		20. BLM/BIA Bond No. on file
19. Proposed Depth 3872'		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 7167'	22. Approximate date work will start* 06/04	23. Estimated duration 5 days

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) Doug Thomas	Date 11/21/03
Title Drilling & Completion Foreman		
Approved by (Signature) 	Name (Printed/Typed) Wayne Townsend	Date 12/17/04
Title Acting AFM	Office FFO	

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 Reverse)

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

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

NMOCD

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 <b>30-039-27549</b>		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code <b>34493</b>	*Property Name CARRACAS CANYON UNIT		*Well Number 23A-10
*GRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 7167'

<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
J	23	32N	5W		1350	SOUTH	1975	EAST	RIO ARriba

<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 - (S/2)	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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

<div>16</div> <div>5287.92'</div> <div>5280.00'</div> <div>RECEIVED</div> <div>700 PM 11 AM 10-57</div> <div>700 Fortington, NM</div> <div>23</div> <div>1350'</div> <div>1975'</div> <div>5288.58'</div>	<div></div>	<div><sup>17</sup> OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div></div> <div>Signature Don Graham</div> <div>Printed Name Production Superintendant</div> <div>Title 3-8-04</div> <div>Date</div>
		<div><sup>18</sup> SURVEYOR CERTIFICATION</div> <div>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.</div> <div>Date of Survey: MAY 19, 2003</div> <div>Signature and Seal of Professional Surveyor</div> <div></div> <div>JASON C. EDWARDS</div> <div>Certificate Number 15269</div>

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires January 31, 2004

RECEIVED

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM 29760
2. Name of Operator ENERGEN RESOURCES CORPORATION		6. If Indian, Allottee or Tribe Name
3a. Address 2198 Bloomfield Highway, Farmington, NM 87401	3b. Phone No. (include area code)	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1350 FSL, 1975 FEL, Sec. 23, T32N, R5W, N.M.P.M.		8. Well Name and No. Carracas 23A 10
		9. API Well No. 3008927599
		10. Field and Pool, or Exploratory Area Basin Fruitland Coal
		11. County or Parish, State Rio Arriba NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" 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 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	Dedicated Acres
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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 final site is ready for final inspection.)

After reviewing parent well status the dedicated acreage is South half instead of the East half as reported earlier. Attached is a new plat.



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) DOUG THOMAS	Title Drilling Superintendent
<i>Doug Thomas</i>	Date 3/9/04

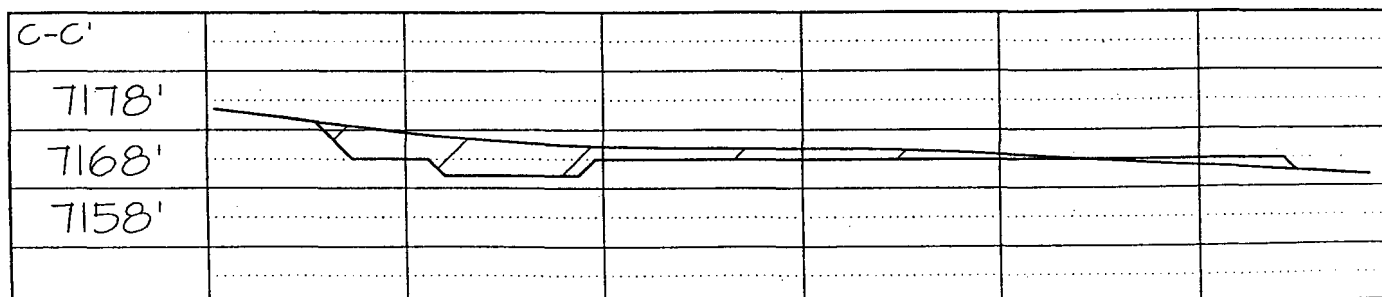
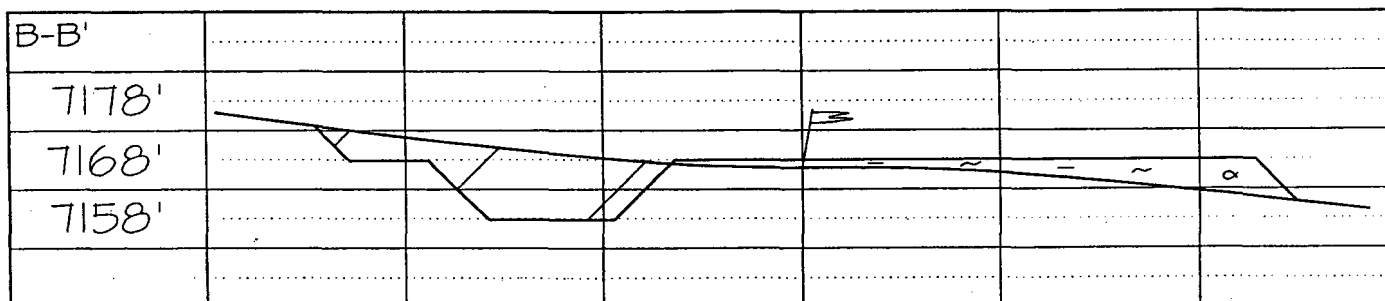
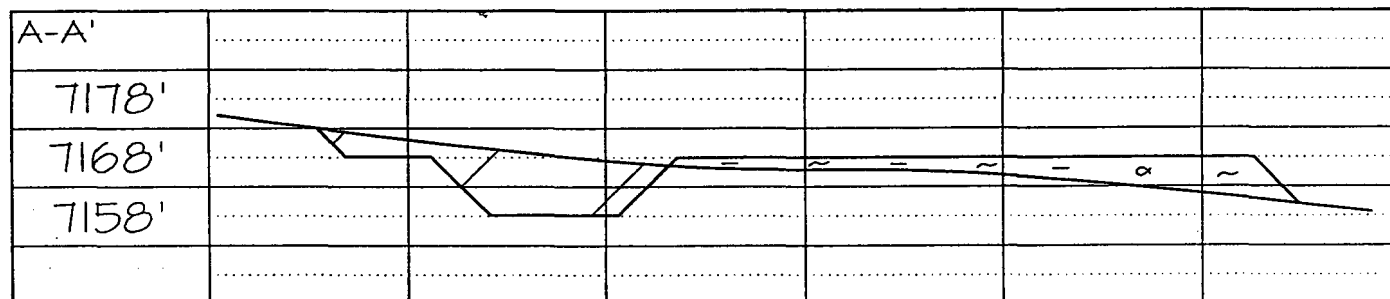
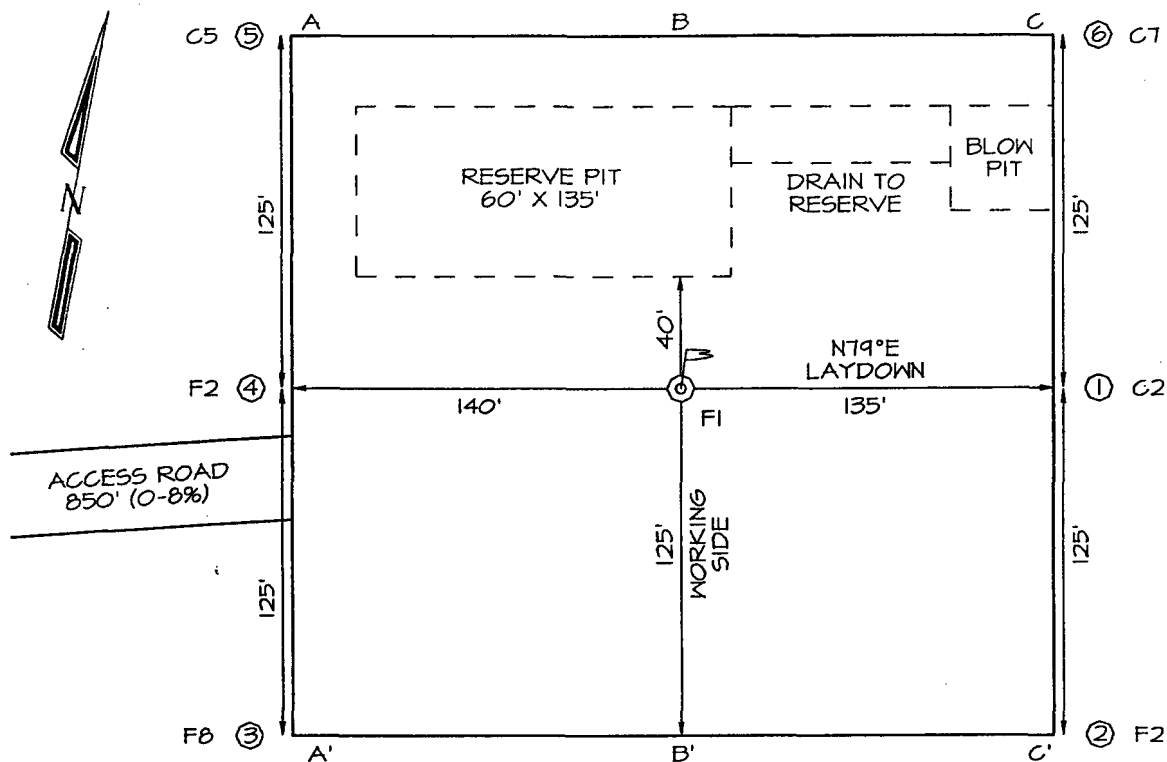
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by <i>Wayne Townsend</i>	Title Acting AFM	Date 12/18/07
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 FFO	

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes 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.

NMOC

**ENERGEN RESOURCES CORPORATION CARRACAS CANYON UNIT 23A #10**  
**1350' FSL & 1975' FEL, SECTION 23, T32N, R5W, NMPM**  
**RIO ARriba COUNTY, NEW MEXICO ELEVATION: 7167'**



## OPERATIONS PLAN

WELL NAME: Carracas 23A #10

LOCATION: 1350' FSL, 1975' FEL, Section 23, T32N, R5W, Rio Arriba County, NM

FIELD: Basin Fruitland Coal

ELEVATION: 7167' GL

### FORMATION TOPS:

Surface	San Jose
Nacimiento	1787
Ojo Alamo	3132
Kirtland	3257
Fruitland	3692

**Total Depth**                **3872**

### LOGGING PROGRAM:

#### Open Hole Logs:

Surface to intermediate- Yes

Inter TD to total depth: None

Mud Logs:                    Intermediate to total depth

Coring:                      None

Natural Gauges:            Every 500' from intermediate TD to total depth

MUD PROGRAM:    Fresh water low solids mud from surface to intermediate TD (9.0 PPG).

Air/mist from intermediate casing point to total depth.

### CASING PROGRAM:

<u>HOLE SIZE</u>	<u>DEPTH</u>	<u>CSG SIZE</u>	<u>WT.</u>	<u>GRADE</u>
12 1/4"	200'	9 5/8"	32.3#	H-40 – ST&C
8 3/4"	3742'	7"	23#	J-55 – LT&C
6 1/4"	3642'-3872'	5 1/2"	15.5#	J-55 – LT&C

### TUBING PROGRAM:

3800'	2 3/8"	4.7#	J-55
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WELLHEAD: 11" 3000 x 9 5/8" casing head. 11" 3000 x 7 1/16" 3000 xmas tree.

### BOP 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 the stack. A 2" nominal, 2000 psi minimum choke manifold will be used. An upper Kelly Cock valve with handle available and drill string valve to fit each drill string will be available on the rig floor during drilling operations.

**CEMENTING:**

9 5/8" surface casing - cement with 110 sks Class B Cement with 1/4" flocele/sk and 2% calcium chloride (130 cu. ft. of slurry, 100% excess to circulate to surface). WOC 12 hrs. Test casing to 600# for 30 minutes.

Texas Pattern Guide Shoe on bottom. 3 bow type centralizers spaced throughout the string.

7" intermediate casing – cement with 490 sks 65/35 Class B Poz with 6% gel, 2% calcium chloride, 10% gilsonite, and 1/4# flocele/sk. Tail with 100 sks Class B w/2% calcium chloride, 10% gilsonite and 1/4# flocele/sk. (1068 cu. ft. of slurry, 90% excess to circulate to surface). WOC 12 hrs. If cement does not circulate, run temperature survey in 8 hrs. to determine TOC. Test casing to 1200 psi for 30 minutes.

Cement nose guide shoe on bottom with a self-fill insert float valve on top of shoe joint. 10 bow spring centralizers spaced every 2nd joint off bottom. Two turbolating centralizers at the base of the Ojo Alamo.

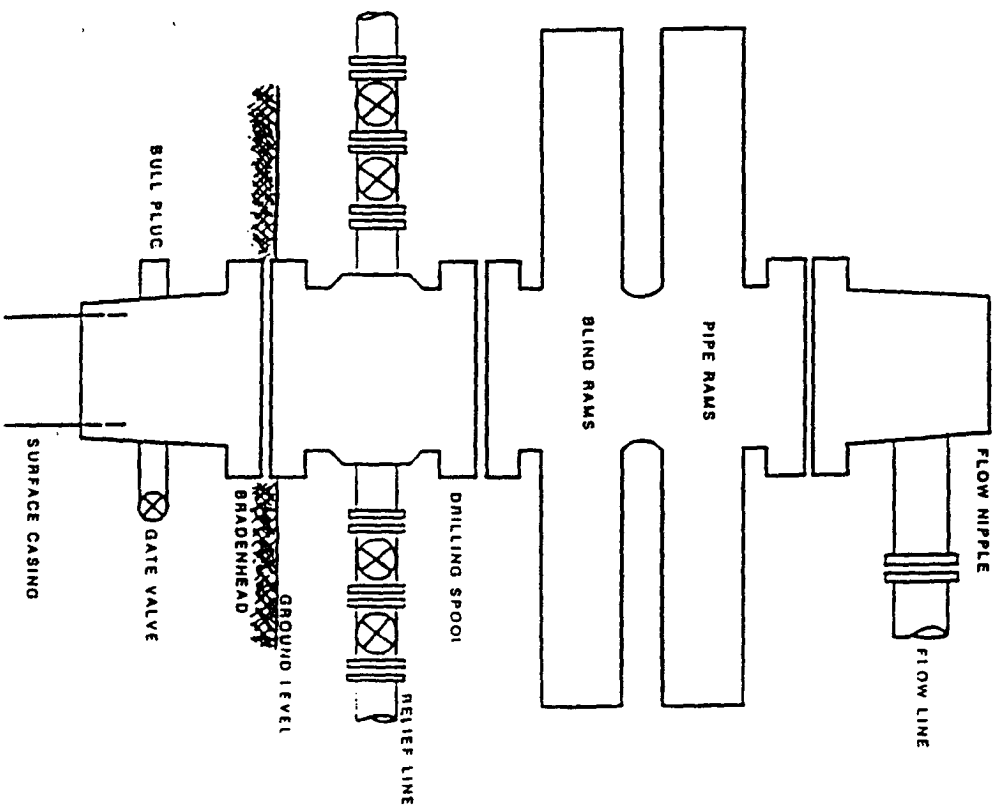
**5 1/2" liner – NO CEMENT**

**OTHER INFORMATION:**

- 1) The Basin Fruitland Coal will be completed.
- 2) No abnormal temperatures or pressures are anticipated.
- 3) If lost circulation is encountered sufficient LCM will be added to the mud system to maintain well control.
- 4) This gas is dedicated.
- 5) Anticipated pore pressure for the Fruitland is 700 psi.

# Figure #1

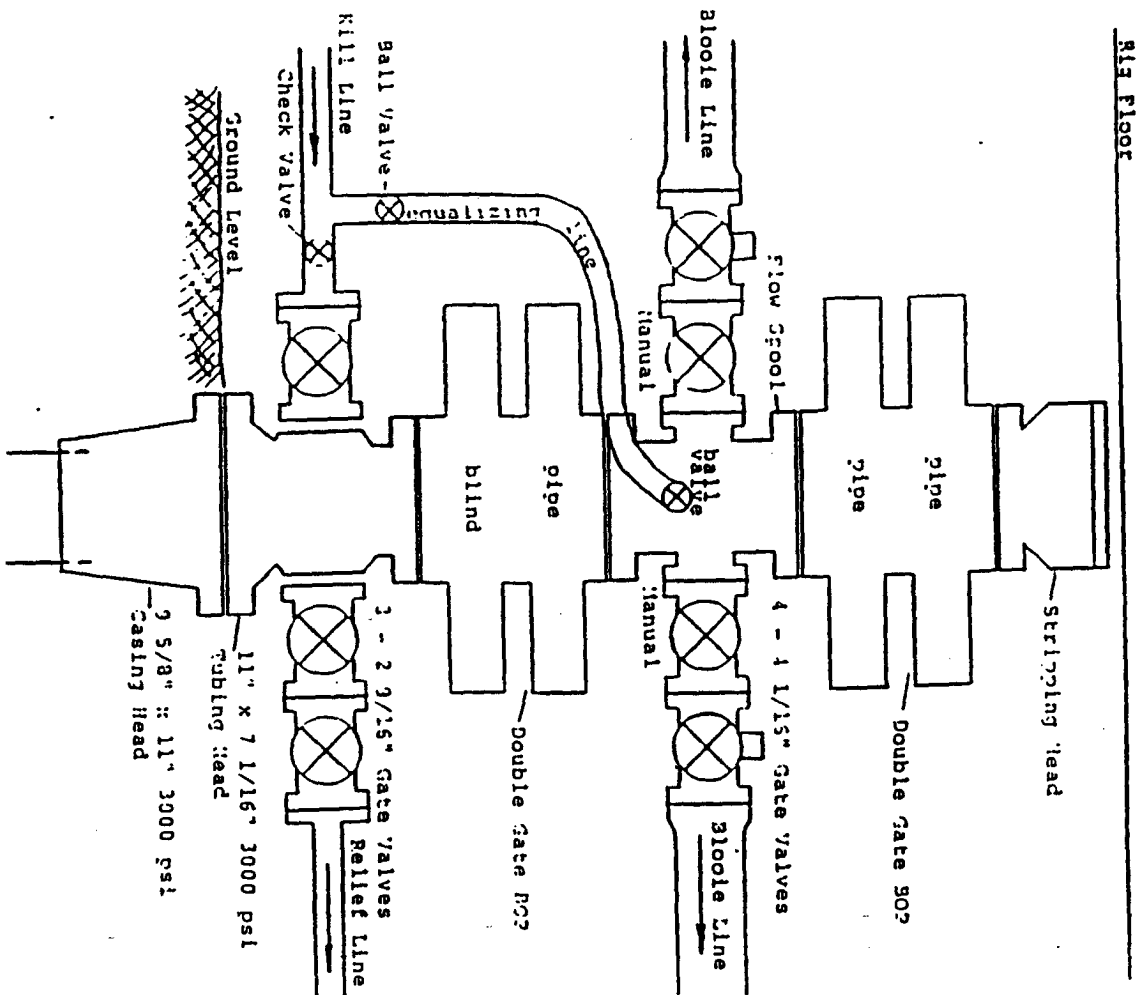
TYPICAL B.O.P.E. INSTALLATION  
FOR A FRUITLAND COAL WELL  
(to Intermediate TD)



Series 900 double gate BOP  
Rated at 3000 psi working pressure

# Figure #2

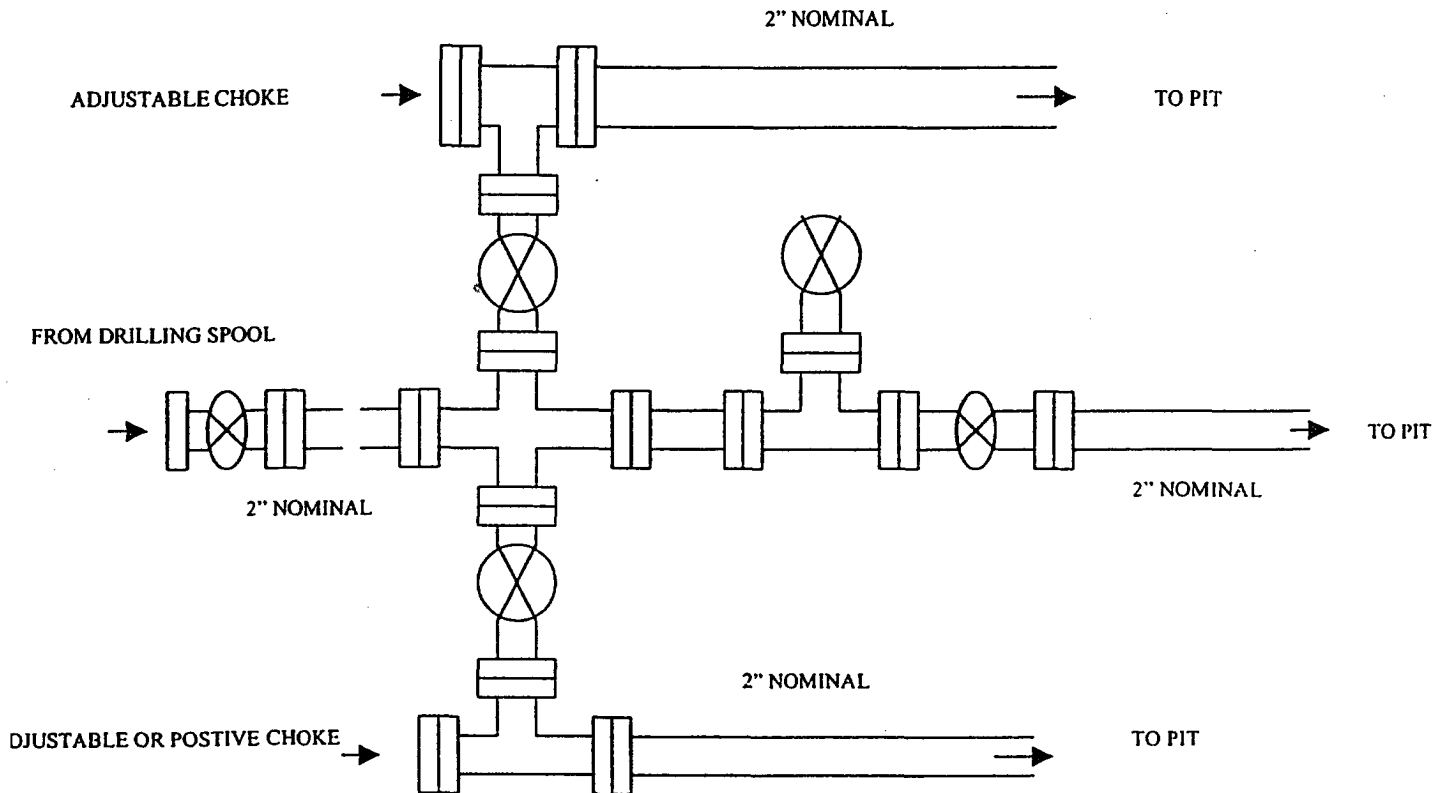
FRUITLAND COAL WELL  
TYPICAL BOP CONFIGURATION  
7 1/16" 3000 psi (minimum) BOP STACK  
(from Intermediate to total depth)



# 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.