

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

1a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 29340
1b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
7. Name of Operator Energen Resources Corporation		7. Unit or CA Agreement Name and No.
3a. Address 2198 Bloomfield Highway Farmington, New Mexico 87401		8. Lease Name and Well No. Carracas Canyon Unit 36 A 1R
3b. Phone No. (include area code) (505) 225-6800		9. API Well No. 30 039 27455
4. Location of Well (Report location clearly and in accordance with any State requirements) At surface 365' FNL, 740' FEL At proposed prod. zone		10. Field and Pool, or Exploratory Basin Fruitland Coal
14. Distance in miles and direction from nearest town or post office* 18 miles North of Gobernador, New Mexico		11. Sec., T., R., M., or Blk. and Survey or Area A Sec. 36, T32N, R5W, N.M.P.M.
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 365'	16. No. of Acres in lease 800	12. County or Parish Rio Arriba
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 50'	19. Proposed Depth 3810'	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6975' GL	22. Approximate date work will start* August 2003	17. Spacing Unit dedicated to this well 320 NE E/2
23. Estimated duration 5 Days		20. BLM/BIA Bond No. on file

24. Attachments

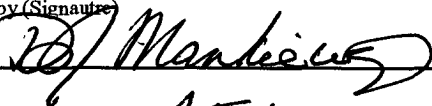
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|--|
| 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) Don Graham	Date 5/30/03
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Title

Production Superintendent

Approved by (Signature) 	Name (Printed/Typed) AFM	Date 6-8-04
Title 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".

HOLD C104 FOR NSL

NMOCD

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

District II
PO Box 100, 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

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 30039-27455		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 34068	*Property Name CARRACAS CANYON WELL		*Well Number 36A-1R
*GRID No. 162928	*Operator Name ENERGEN RESOURCES CORPORATION		*Elevation 6975'

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
A	36	32N	5W		365	NORTH	740	EAST	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 320.0 Acres - (E/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

<div><p>16</p><p>5280.00'</p><p>5280.00'</p><p>5280.00'</p><p>5280.00'</p><p>070 Farmington, NM</p><p>87-11-W 91 NAD 83</p><p>RECEIVED</p></div>	<div><p>¹⁷ 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>Don Graham</i></p><p>Signature Don Graham</p><p>Printed Name Production Superintendant</p><p>Title 6-12-03</p><p>Date</p></div> <div><p>¹⁸ 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: APRIL 17, 2003</p><p>Signature and Seal of Professional Surveyor</p><div><p>JASON C. EDWARDS</p><p>Certificate Number 15269</p></div></div>
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OPERATIONS PLAN

WELL NAME: Carracas Canyon Unit 36A #1R

LOCATION: 365' FNL, 740' FEL, Section 36, T32N, R5W, Rio Arriba County, NM

FIELD: Basin Fruitland Coal

ELEVATION: 6975' GL

FORMATION TOPS:

Surface	San Jose
Nacimiento	1975
Ojo Alamo	3100
Kirtland	3200
Fruitland	3485

Total Depth **3810**

LOGGING PROGRAM:

Open Hole Logs:

Surface to intermediate- None

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"	3640'	7"	23#	J-55 – LT&C
6 1/4"	3540'-3810'	5 1/2"	15.5#	J-55 – LT&C

TUBING PROGRAM:

3750'	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 420 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. (960 cu. ft. of slurry, 75% 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.

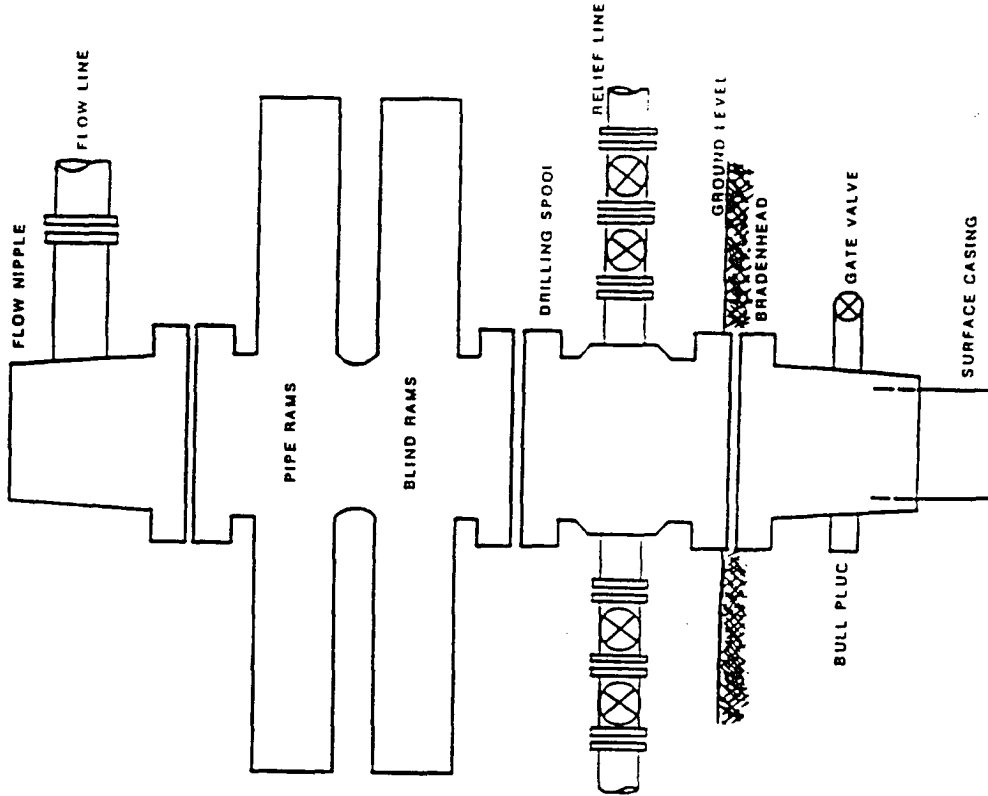
5 1/2" liner – NO CEMENT

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

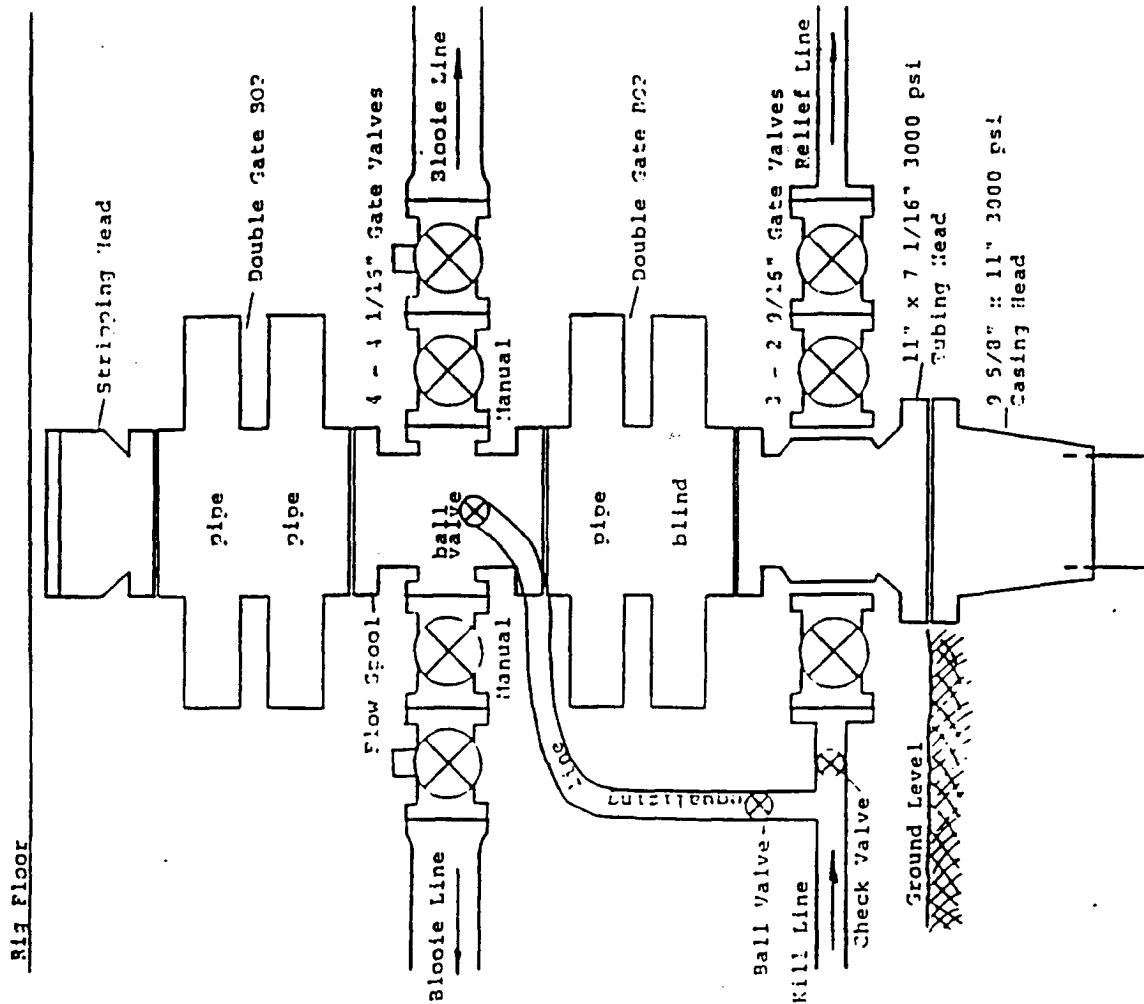
TYPICAL B.O.P.E. INSTALLATION
FOR A FRUITLAND COAL WELL
(to Intermediate TD)



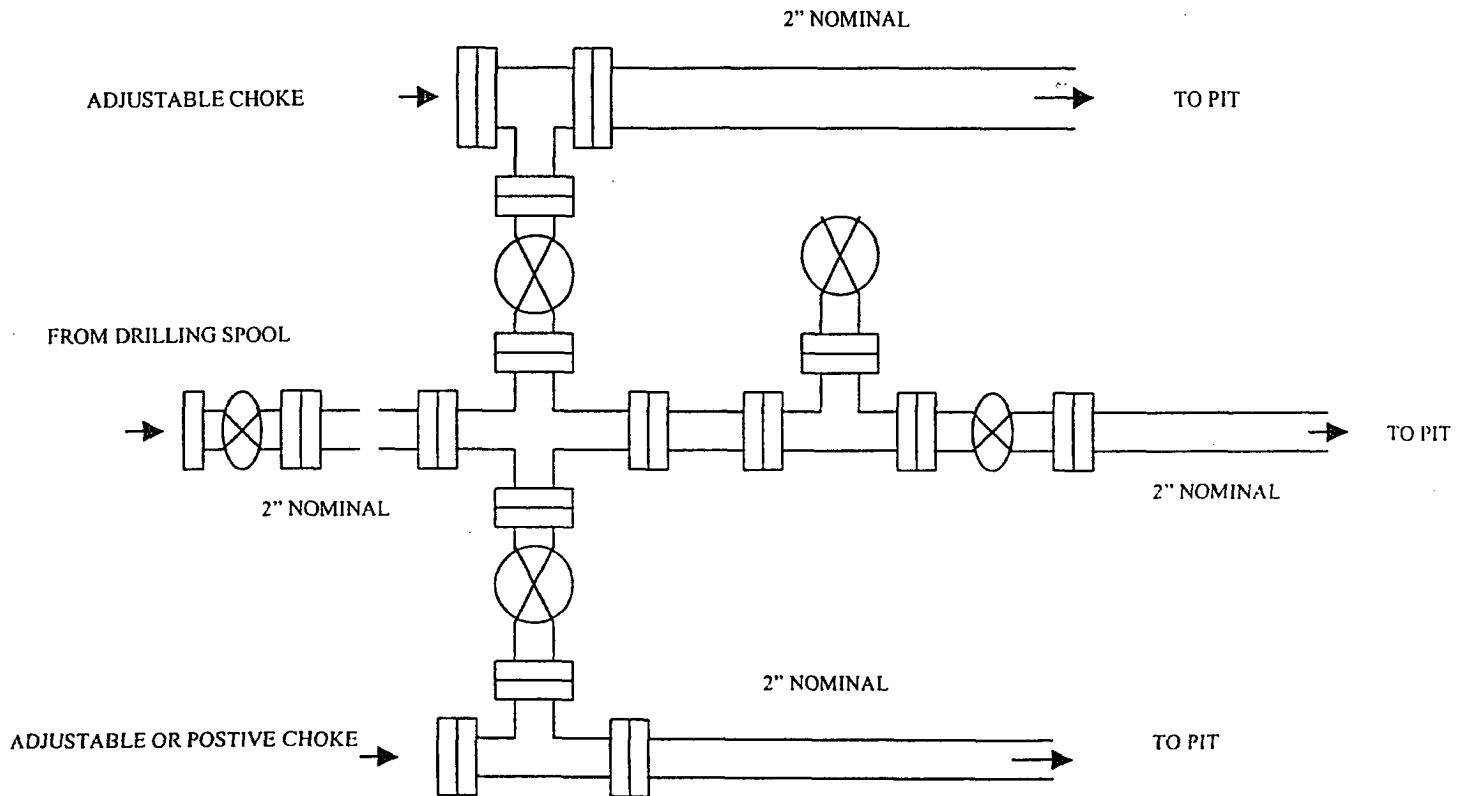
Series 900 double gate BOP
Rated at 3000 psi working pressure

Figure #2

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

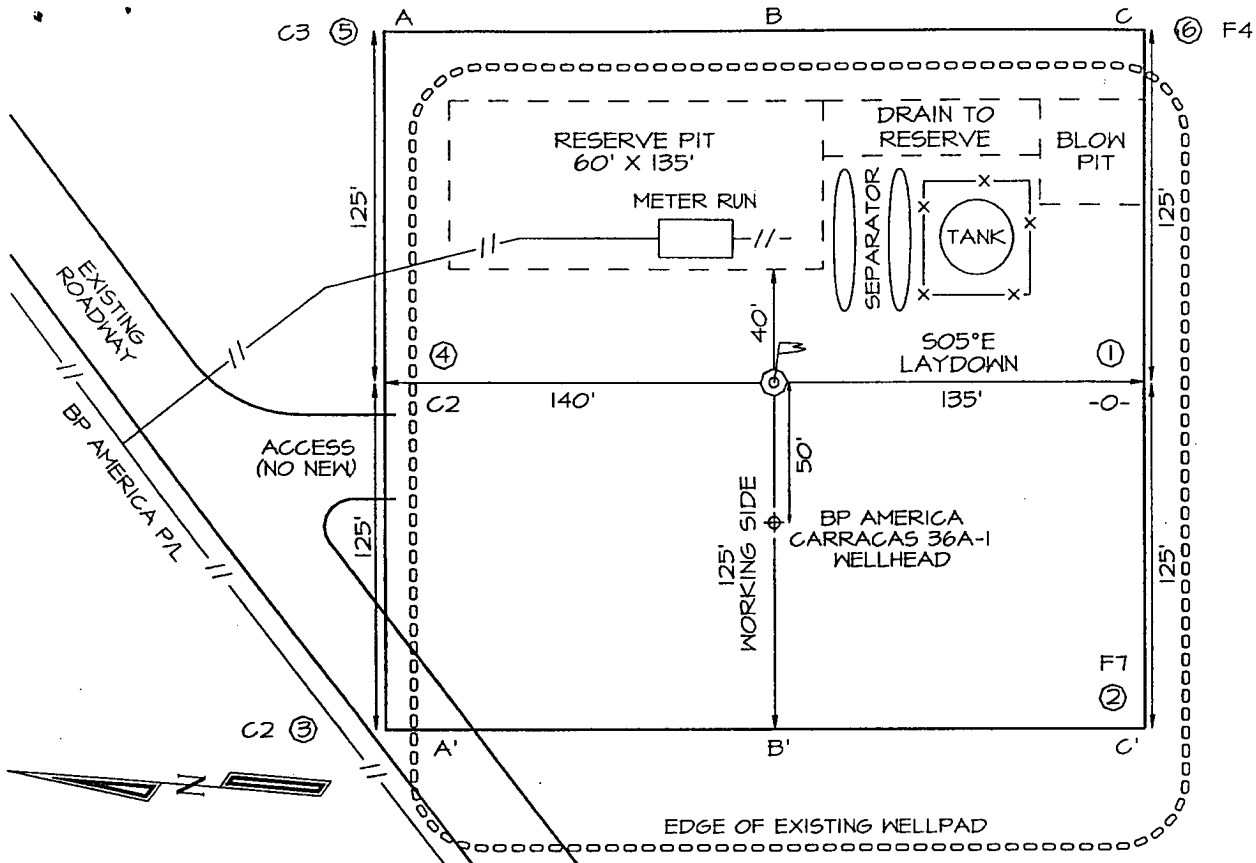


ENERGEN RESOURCES CORPORATION
Choke Manifold Configuration
2M psi System



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

**ENERGEN RESOURCES CORPORATION CARRACAS UNIT 30A #1K
365' FNL & 740' FEL, SECTION 36, T32N, R5W, NMPM
RIO ARriba COUNTY, NEW MEXICO
GROUND ELEVATION: 6975'**



**LATITUDE: 36°56'35"
LONGITUDE: 107°18'23"
DATUM: NAD1927**

