

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 | | 2006 DEC 7 AM 8 21 RECEIVED | |
| 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. | |
| 2. Name of Operator Energen Resources Corporation | | 8. Lease Name and Well No. Hancock Federal #6E | |
| 3a. Address 2198 Bloomfield Hwy Farmington, NM 87401 | | 9. API Well No. 30-045-34102 | |
| 3b. Phone No. (include area code) 505.325.6800 | | 10. Field and Pool, or Exploratory Basin Dakota | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 685' fnl, 935' fel At proposed prod. zone | | 11. Sec., T., R., M., or Blk. and Survey or Area (A) S25, T27N, R11W | |
| 14. Distance in miles and direction from nearest town or post office* Approximately 11 miles south southeast of Bloomfield | | 12. County or Parish San Juan | |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) 685' | | 13. State NM | |
| 16. No. of Acres in lease 2560 | | 17. Spacing Unit dedicated to this well 320 N/2 | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx 750' | | 20. BLM/BIA Bond No. on file NM 2707 | |
| 19. Proposed Depth 6549' | | 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6092' GL | |
| 22. Approximate date work will start* 2/10/07 | | 23. Estimated duration 15 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:

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

| | | |
|-------------------|--------------------------------------|------------------|
| 25. Signature | Name (Printed/Typed) Nathan Smith | Date 12/06/06 |
|-------------------|--------------------------------------|------------------|

Title

Drilling Engineer

| | | |
|------------------------------|------------------------------------|-----------------|
| Approved by (Signature) | Name (Printed/Typed) Jim Lovato | Date 3/21/07 |
| Title Acting AFM Minerals | Office | |

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. Min. BOPE Test Pressure: 750^{psi}

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)

RCVD MAR22'07
OIL CONS. DIV.

NOTIFY AZTEC OGD 24hrs, DIST. 3
IN TIME TO WITNESS 669 f/cementing

DRILLING OPERATIONS AUTHORIZED ARE
OF THE BUREAU OF LAND MANAGEMENT

3/27/07
NMOCB

Drilling operations authorized and
permitted by the Bureau of Land Management
Bureau of Land Management

1625 N. French Dr., Hobbs, NM 88240

1301 W. Grand Avenue, Artesia, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 30-045-34102 | ² Pool Code 71599 | ³ Pool Name Basin Dakota |
| ⁴ Property Code 21241 | ⁵ Property Name HANCOCK FEDERAL | ⁶ Well Number # 6E |
| ⁷ OGRID No. 162928 | ⁸ Operator Name ENERGEN RESOURCES CORPORATION | ⁹ Elevation 6092' |

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 | 25 | 27N | 11W | | 685 | NORTH | 935 | EAST | SAN JUAN |

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 |
| <div> <div> 12 Dedicated Acres N/2 320 </div> <div> 13 Joint or Infill </div> <div> 14 Consolidation Code </div> <div> 15 Order No. </div> </div> | | | | | | | | | RCUD MAR22'07 OIL CONS. DIV. |

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.

S89°55'00"W 2642.97' (R)

S89°55'00"W
N89°50'54"E

2642.97' (R)
2642.08' (M)

Section 25

OPERATOR CERTIFICATION
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Nathan Smith
 Signature
 12/6/06
 Date

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.

David A. Johnson
 Date of Survey
 Signature and Seal of Professional Surveyor

DAVID A. JOHNSON
 NEW MEXICO
 REGISTERED PROFESSIONAL SURVEYOR
 NM #14827
 Certificate Number

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

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

Form C-103
May 27, 2004

WELL API NO. 30-045-34102

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name:
Hancock Federal

8. Well Number
6E

9. OGRID Number
162928

10. Pool name or Wildcat
Basin Dakota

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 A : 685 feet from the North line and 935 feet from the East line
Section 25 Township 27N Range 11W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6092' 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 <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: 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 Vicki Donaghey TITLE Regulatory Analyst DATE 12/06/06
E-mail address: vdonaghe@energen.com

Type or print name Vicki Donaghey

Telephone No. 505.325.6800

For State Use Only

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. 4 DATE MAR 27 2007

Conditions of Approval, if any:

ENERGEN RESOURCES CORPORATION

HANCOCK FEDERAL #6E

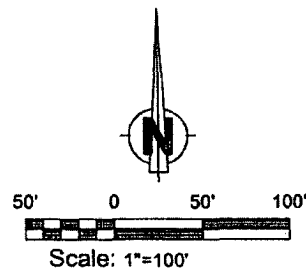
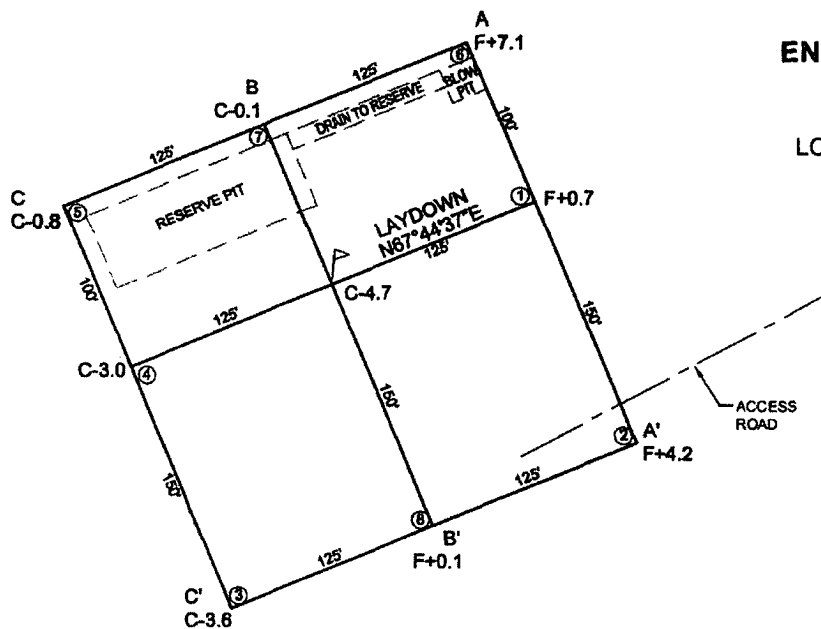
685' FNL & 935' FEL

LOCATED IN THE NE/4 NE/4 OF SECTION 25,

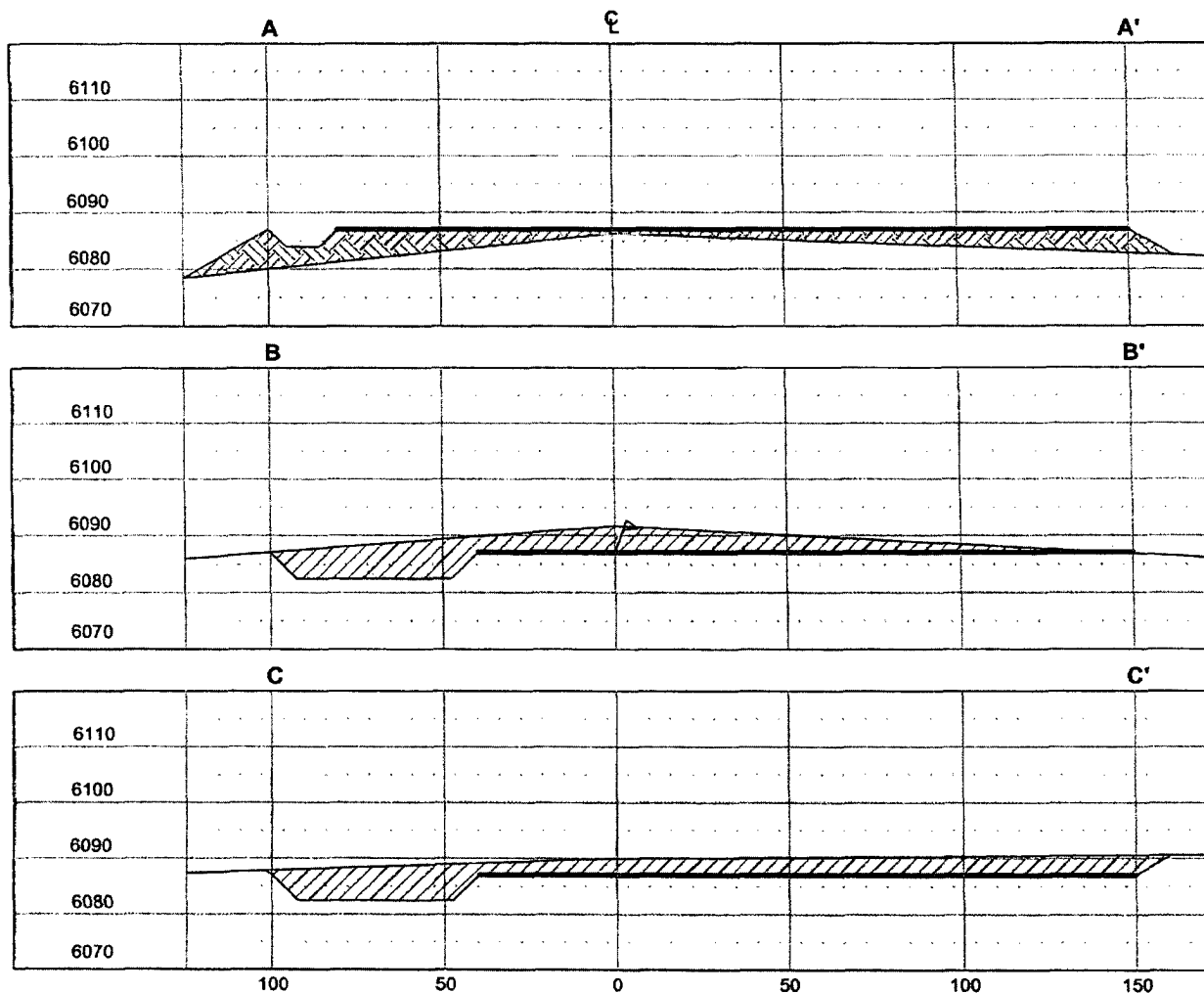
T27N, R11W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

ELEVATION: 6092', NAVD 88



LATITUDE: 36°33'06"N
LONGITUDE: 107°56'58"W
DATUM: NAD 83



HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=30'

Red Skies Surveying & Mapping, Inc.

A Native American Owned Company

101 Fauver Lane, Bloomfield, New Mexico 87413

Phone/Fax: (505) 632-8906 Cell No: (505) 793-5325

Operations Plan
November 9, 2006
Hancock Federal #6E

General Information

| | |
|---------------------|---|
| Location | 685' fnl, 935' fel nene S25, T27N, R11W San Juan County, New Mexico |
| Elevations | 6092' GL |
| Total Depth | 6549' (MD) |
| Formation Objective | Basin Dakota |

Formation Tops

| | | | |
|--------------------|---------|----------------------|--------------|
| Nacimiento | Surface | Menefee Fm | 3389' |
| Ojo Alamo Ss | 689' | Point Lookout Ss | 4114' |
| Kirtland Sh | 824' | Mancos Shale | 4409' |
| Fruitland Fm | 1459' | Graneros Shale | 6159' |
| Top Coal | 1564' | Dakota "Twowells" Ss | 6189' |
| Bottom Coal | 1739' | Dakota "Pagate" Ss | 6264' |
| Pictured Cliffs Ss | 1744' | Dakota "Main Body" | 6309' |
| Lewis Shale | 1964' | Burro Canyon Fm | 6484' |
| Cliffhouse Ss | 3369' | Morrison Fm | 6524' |
| | | Total Depth | 6549' |

Drilling

The 12 ¼" wellbore will be drilled with a fresh water mud system.

The 6 ¼" wellbore will be drilled with a low solids non-dispersed fresh water mud system. Weighting materials will be drill cuttings. 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: From Surface to TD – Temp / HRI / CNT, LDT / GR

Surveys: Surface 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 |
| Production | 0'-6549' | 6 ¼" | 4 ½" | 11.6 ppf | J-55 LT&C |
| Tubing | 0'-6500' | | 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 on bottom with self fill insert float collar on top of shoe joint and casing centralization with standard bow spring centralizers to optimize standoff. If multistage cementing is required, DV tool(s) will be placed based on formation characteristics.

Cementing

Surface Casing: 125 sks Type V cement with 2.0 % CaCl_2 and $\frac{1}{4}$ #/sk Flocele (15.4 ppg, 1.23 ft³/sk 154 ft³ of slurry, 100% excess to circulate to surface). WOC 12 hours. Pressure test surface casing to 1000 psi for 30 min.

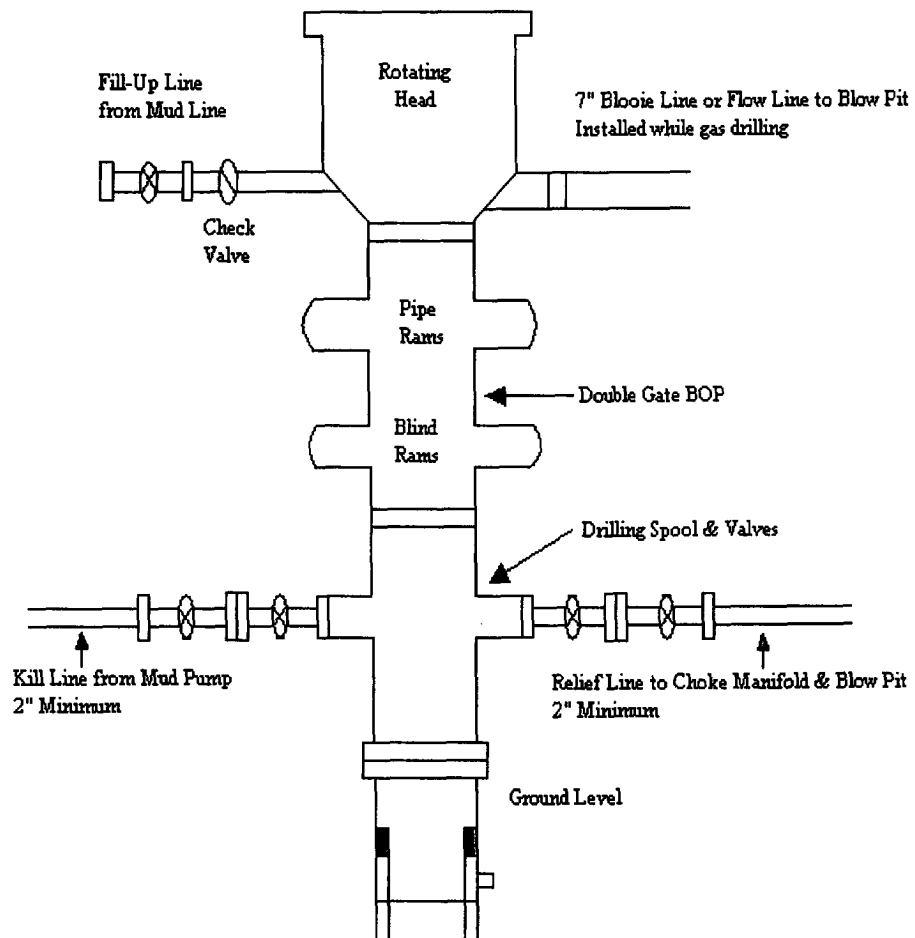
Production Casing: Before cementing, circulate hole at least 1 $\frac{1}{2}$ hole volumes of mud and reduce funnel viscosity to minimum to aide in hole cleanout. Depending on wellbore conditions, cement may consist a lead of 550 sks 65/35 Type V with 6.0 % Bentonite, 2.0 % CaCl_2 , 10 #/sk Gilsonite, and $\frac{1}{4}$ #/sk Flocele (12.3 ppg, 1.93 ft³/sk) followed by a tail of 225 sks 50/50 Type V with 2.0 % Bentonite, 0.80 % Halad-9, 0.10 % CFR-3, 5.0 #/sk Gilsonite, $\frac{1}{4}$ #/sk Flocele (13.5 ppg, 1.30 ft³/sk). (1354 ft³ of slurry, 100 % excess to circulate to surface).

Other Information

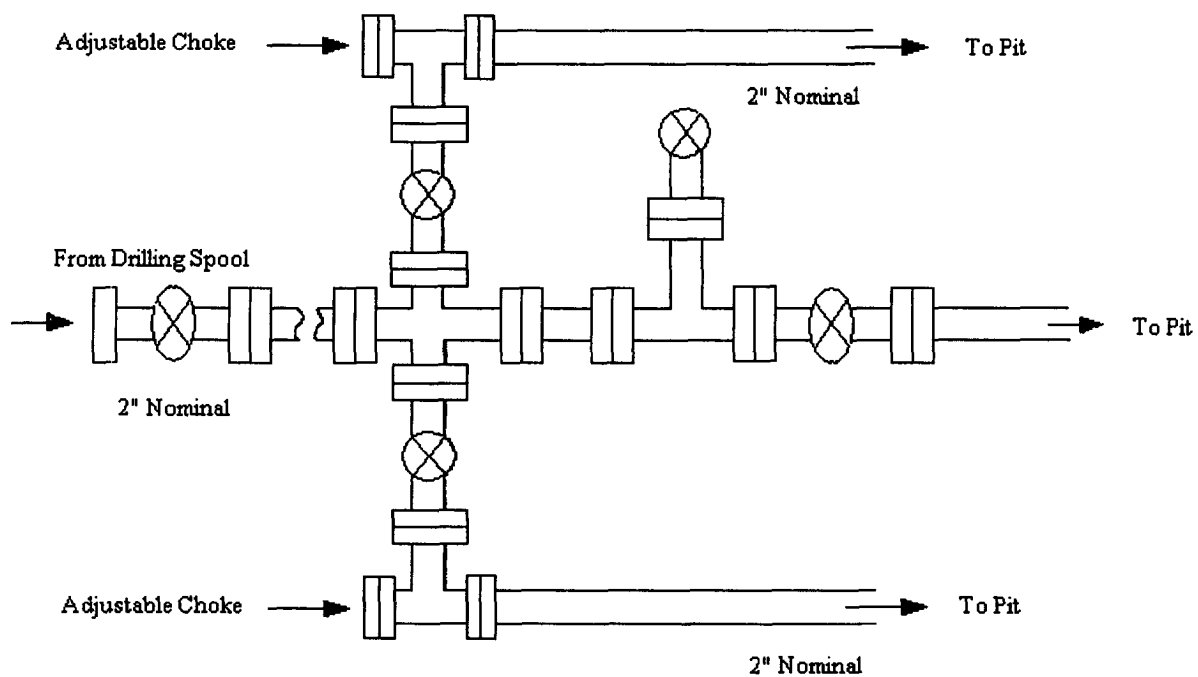
- 1) This well will be cased and the Basin Dakota fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The production string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) No abnormal temperatures or pressures are anticipated. Anticipated frac gradient is 0.70 psi/ft.
- 4) 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