

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
DRILL

1b. Type of Well  
GAS

2. Operator  
**BURLINGTON**  
RESOURCES Oil & Gas Company

3. Address & Phone No. of Operator  
PO Box 4289, Farmington, NM 87499  
(505) 326-9700

4. Location of Well  
1090' FSL, 900' FEL  
Latitude 36° 44.1797, Longitude 107° 55.1508

5. Lease Number  
NMSF078716A  
Unit Reporting Number

6. If Indian, All. or Tribe

7. Unit Agreement Name

8. Farm or Lease Name  
Hubbell Federal

9. Well Number  
1M

10. Field, Pool, Wildcat  
Blanco Mesaverde/  
Basin Dakota

11. Sec, Twn, Rge, Mer. (NMPM)  
Sec. 7, T-29-N, R-10-W  
API # 30-045- 32809

12. County  
San Juan

13. State  
NM

14. Distance in Miles from Nearest Town  
5 miles to int. Hwy 550 & Hwy 64

15. Distance from Proposed Location to Nearest Property or Lease Line  
900'

16. Acres in Lease

17. Acres Assigned to Well  
302.24 S/2

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease  
71'

19. Proposed Depth  
6828'

20. Rotary or Cable Tools  
Rotary

21. Elevations (DF, FT, GR, Etc.)  
5710' GR

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program  
See Operations Plan attached

24. Authorized by: Tammy Jones  
Regulatory Compliance Specialist

Date 1-4-05

PERMIT NO. \_\_\_\_\_

APPROVAL DATE \_\_\_\_\_

APPROVED BY [Signature]

TITLE Acting Field Manager DATE 3/9/05

Minerals

Archaeological Report attached

Threatened and Endangered Species Report attached

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Title 18 U.S.C. Section 1001, 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 presentations as to any matter within its jurisdiction.

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

NMOC

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

DISTRICT I  
1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 15, 2000

DISTRICT II  
811 South First, Artesia, N.M. 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV  
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045-	*Pool Code 72319/71599	*Pool Name Blanco Mesaverde/Basin Dakota
*Property Code 7135	*Property Name HUBBELL FEDERAL	*Well Number 1M
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	*Elevation 5710'

<sup>10</sup> Surface Location

UL or lot no. P	Section 7	Township 29-N	Range 10-W	Lot Idn	Feet from the 1090'	North/South line SOUTH	Feet from the 900'	East/West line EAST	County SAN JUAN
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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
*Dedicated Acres S/302.24		*Joint or Infill		*Consolidation Code		*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

LOT 8	LOT 7	LOT 6	LOT 5
LOT 9	LOT 10	LOT 11	LOT 12
LOT 16	LOT 15	LOT 14	LOT 13
LOT 17	LOT 18	LOT 19	LOT 20

NM SF-078716-A

LAT: 36°44.1797' N,  
LONG: 107°55.1508' W.  
NAD 1927

S 87-05-40 W  
2589.62'

900'

1090'

N 01-01-16 W  
2608.62'

<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

Tammy Jones  
Signature  
Tammy Jones  
Printed Name  
Regulatory Specialist  
Title  
1-4-05  
Date

<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.

Date of Survey 11-27-04  
Signature and Seal of Professional Surveyor:  
Carlan W Russell  
Certificate Number 15703

Office

Energy, Minerals and Natural Resources

May 27, 2004

District I

1625 N. French Dr., Hobbs, NM 88240

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

## OIL CONSERVATION DIVISION

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

WELL API NO.

30-045-

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

NMSF078716A

7. Lease Name or Unit Agreement Name

Hubbell Federal

8. Well Number

1M

9. OGRID Number

14538

10. Pool name or Wildcat

Blanco Mesaverde/Basin DK

**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

BURLINGTON RESOURCES OIL &amp; GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter P : 1090 feet from the South line and 900 feet from the East lineSection 7 Township 29N Range 10W NMPM County San Juan

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

5710' GR

Pit or Below-grade Tank Application

☒ or Closure ☐Pit type New Drill Depth to Groundwater >100' Distance from nearest fresh water well>1000' Distance from nearest surface water >1000'

Pit Liner Thickness:

na

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 ☐  
TEMPORARILY ABANDON ☐  
PULL OR ALTER CASING ☐

PLUG AND ABANDON ☐  
CHANGE PLANS ☐  
MULTIPLE COMPL ☐

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐  
COMMENCE DRILLING OPNS. ☐  
CASING/CEMENT JOB ☐

ALTERING CASING ☐  
P AND A ☐

OTHER:

New Drill Pit

☒

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.

Burlington Resources proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and vent/flare pit will be an unlined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids, and that portion will be unlined, as per the risk ranking criteria. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office.

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 Tammy Jones TITLE Regulatory Specialist DATE 12/20/2004Type or print name  
For State Use Only

Tammy Jones

E-mail address:

tjones3@br-inc.com

Telephone No.

505-326-9700

APPROVED BY

TITLE

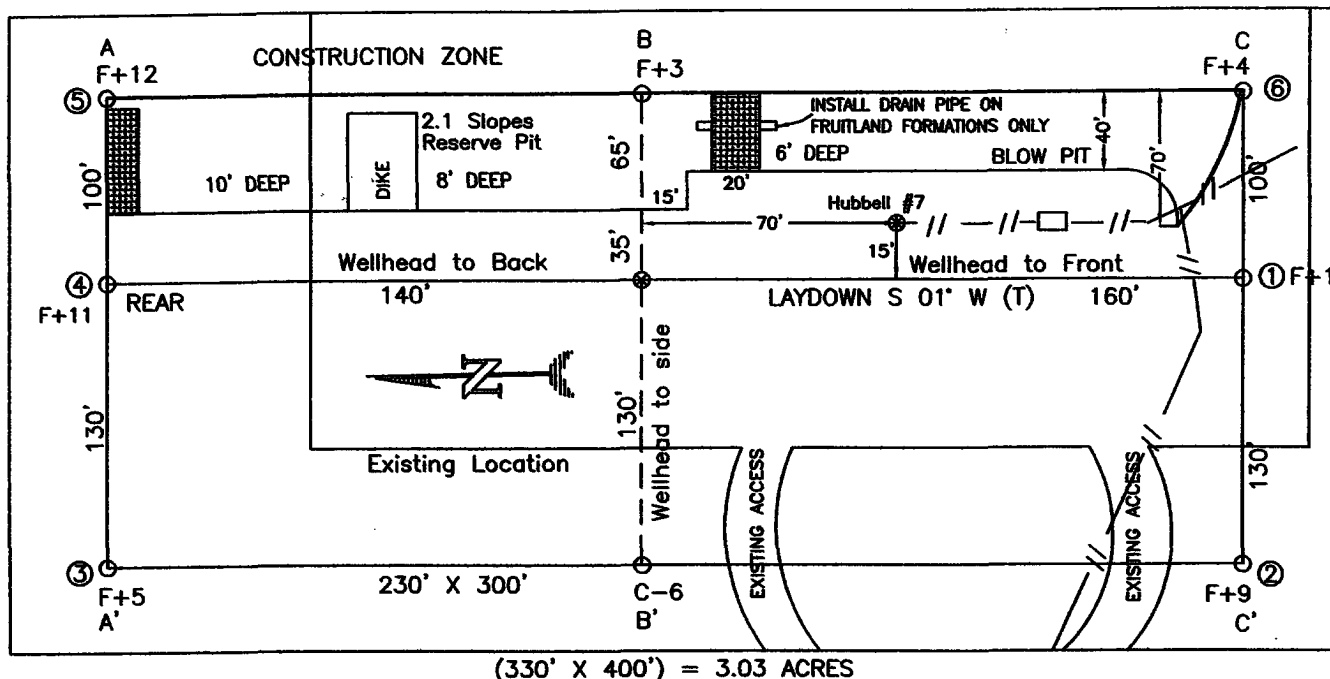
DEPUTY OIL &amp; GAS INSPECTOR, DIST. IV

DATE

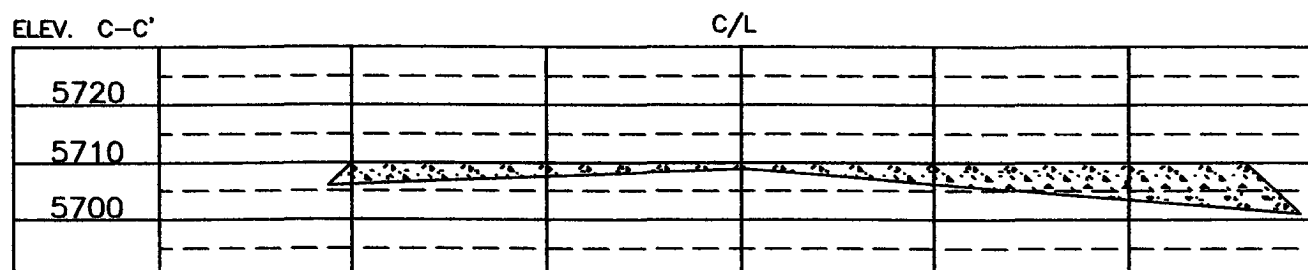
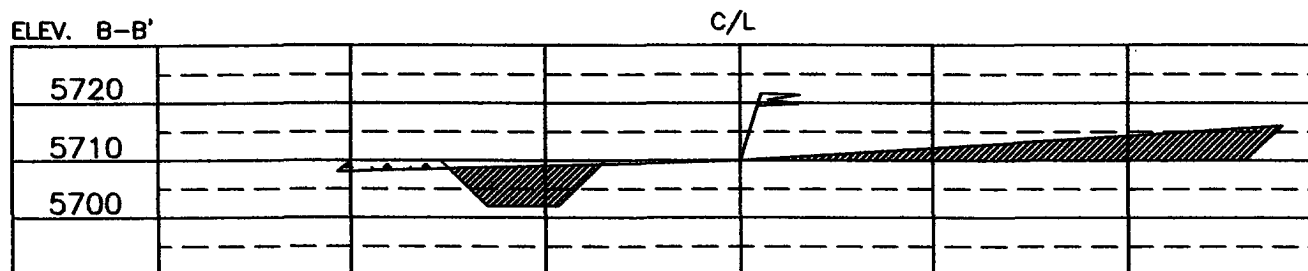
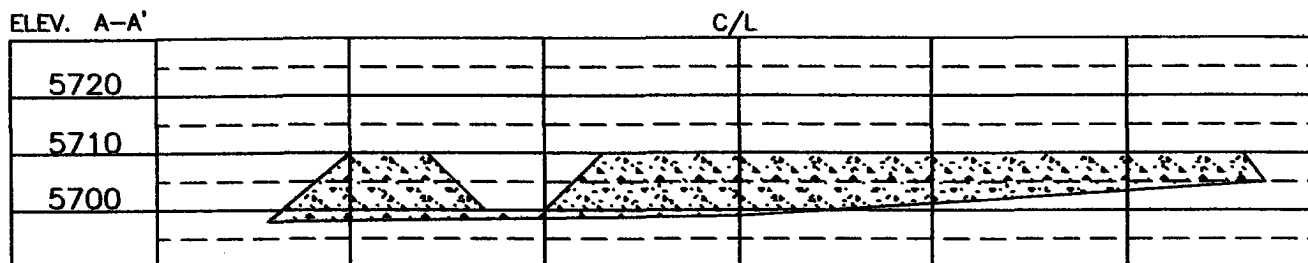
Conditions of Approval (if any):

MAR 11 2005

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**HUBBELL FEDERAL 1M, 1090' FSL & 900' FEL**  
**SECTION 17, T-29-N, R-10-W, NMPM, SAN JUAN COUNTY, NM**  
**GROUND ELEVATION: 5710', DATE: NOVEMBER 3, 2004**



RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).  
 BLOW PIT: OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT.



NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.  
 CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED PIPELINES OR CABLES  
 ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

## OPERATIONS PLAN

**Well Name:** HUBBELL FEDERAL 1M  
**Location:** 1090' FSL & 900' FEL, Section 07 T29N R10W  
San Juan County, New Mexico  
**Formation:** Blanco Mesaverde/Basin Dakota  
**Elevation:** 5710' GL

<b><u>Formation Tops:</u></b>	<b><u>Top</u></b>	<b><u>Bottom</u></b>	<b><u>Contents</u></b>
Surface	San Jose	795'	
Ojo Alamo	795'	929'	aquifer
Kirtland	929'	1827'	gas
Fruitland Coal	1827'	2042'	gas
Pictured Cliffs	2042'	2144'	gas
Lewis	2144'	2669'	
Huerfanito Bentonite	2669'	3049'	
Chacra	3049'	3692'	gas
Massive Cliff House	3692'	3732'	gas
Menefee	3732'	4337'	gas
Intermediate TD	3882'		
Massive Point Lookout	4337'	4724'	gas
Mancos Shale	4724'	5589'	
Upper Gallup	5589'	6335'	gas
Greenhorn	6335'	6392'	gas
Graneros	6392'	6456'	gas
Two Wells	6456'	6508'	gas
Paguate	6508'	6569'	gas
Cubero	6569'	6625'	gas
Encinal	6625'	6693'	gas
Burro Canyon	6693'	6808'	gas
Morrison	6808'	6673'	gas
Topset TD:	6673'	6828'	gas
Total Depth:	6828'		gas

### **Logging Program:**

#### **Mud Logs/Coring/DST**

Mud logs - From 6135' to 6828'  
Coring - none  
DST - none  
Open hole - none  
Cased hole - Gamma Ray, CCL, CBL - surface to TD

### **Mud Program:**

<b><u>Interval</u></b>	<b><u>Type</u></b>	<b><u>Weight</u></b>	<b><u>Vis. "</u></b>	<b><u>Fluid Loss</u></b>
0 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120' - 3882'	LSND	8.4 - 9.0	30 - 60	no control
3882' - 6828'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

**Casing Program (as listed, the equivalent, or better):**

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csq.Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 120'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3882'	7"	20/23#	J-55
6 1/4"	0' - 6673'	4 1/2"	10.5#	J-55
3 7/8"	6673' - 6828'	open hole		

**Tubing Program:**

<u>Depth Interval</u>	<u>Csq.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 6828'	2 3/8"	4.7#	J-55

**BOP Specifications, Wellhead and Tests:**

Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

**Completion Operations -**

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

**Wellhead -**

9 5/8" x 7" x 4 1/2" x 2 3/8" x 2000 psi tree assembly.

**General -**

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drill crew.
- All BOP tests & drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

**Cementing:**

9 5/8" surface casing -

**Pre-Set Drilled** - Cement with 23 sx Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (38 cu ft of slurry, bring cement to surface) Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

**Conventionally Drilled** - Cement with 88 sx Type III cement with 0.25 pps Celloflake, 2% CaCl. (113 cu ft of slurry, 200% excess, bring cement to surface) Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface. Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees F. prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -

Lead with 352 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (875 cu ft 50% excess to circulate to surface). WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL or a temperature survey will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage -

Stage collar set 300' above the top of the Fruitland. First stage: Lead w/190 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 162 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (875 cu ft - 50% excess to circulate to surface).

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom for 6 centralizers, then centralizers will be spaced every 3rd joint to the base of the Ojo Alamo @ 929'. Two turbolating centralizers at the base of the Ojo Alamo 929'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Pump 194 sxs Premium Lite HS FM w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% fluid loss, 6% gel, 7 pps CSE (384 cu.ft., 30% excess to achieve 100' overlap in 4-1/2" x 7" annulus). WOC a minimum of 18 hrs prior to completing.

**Cementing: Continued**

Cement float collar stacked on top of float shoe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.

**Special Drilling Operations (Air/Mist Drilling):**

The following equipment will be operational while air/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

**Additional Information:**

- The Mesa Verde and Dakota formations will be completed and commingled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

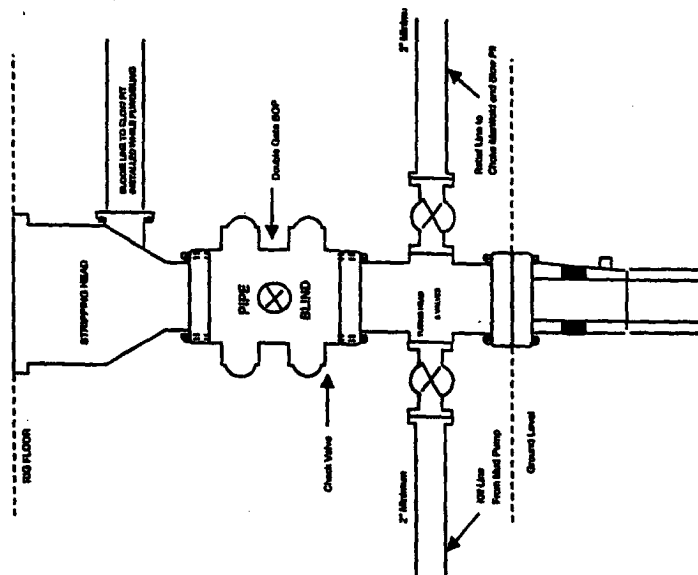
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2000 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The south half of Section 7 is dedicated to the Mesa Verde and Dakota.
- This gas is dedicated.

  
Drilling Engineer

1-5-05  
Date



Completion/Workover Rig  
BOP Configuration  
2,000 psi System

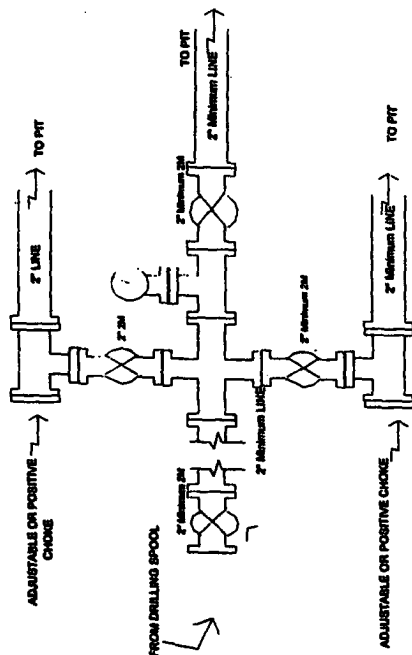


Minimum BOP installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 500 psi stripping head.

Figure #2

4-20-01

Drilling Rig  
Choke Manifold Configuration  
2000 psi System

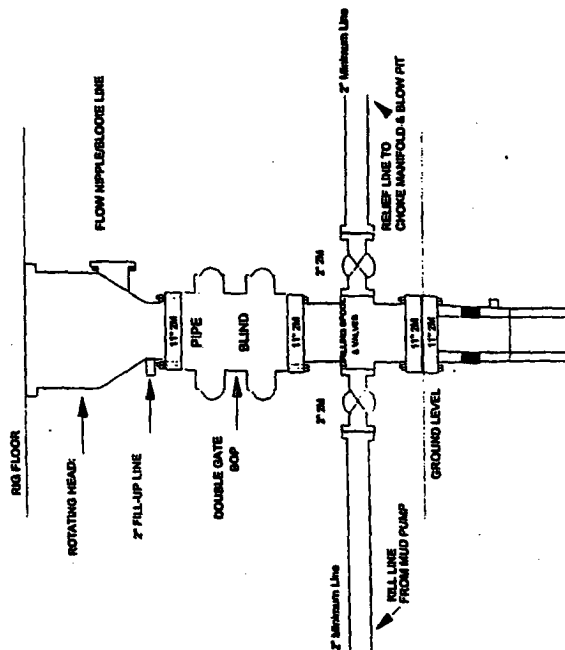


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

Drilling Rig  
2000 psi System



BOP installation from Surface Casing Point to Total Depth. 11" Bore 20" Minimum. 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 500 psi rotating head on top of ram preventers. All BOP equipment is 2,000 psi working pressure

Figure #1