

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2005 SEP 16 AM 9 28  
RECEIVED  
070 FARMINGTON NM

1a. Type of Work DRILL	5. Lease Number NMSF-078200-A Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON</b> RESOURCES Oil & Gas Company	7. Unit Agreement Name
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Grambling C 9. Well Number #3M
4. Location of Well Unit G (SWNE), <sup>1645</sup> <del>2605</del> ' FNL, <sup>1785</sup> <del>2950</del> ' FEL  Latitude 36° 49.7655'N Longitude 107° 50.0002'W	10. Field, Pool, Wildcat Blanco Mesaverde/ Basin Dakota  11. Sec., Twn, Rge, Mer. (NMPM) G Sec. 12, T30N, R10W  API # 30-045-33306
14. Distance in Miles from Nearest Town 15 miles to Aztec, NM	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1605'	
16. Acres in Lease	17. Acres Assigned to Well 296 E/2 MV/DK
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease	
19. Proposed Depth 7685'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) <del>6360</del> GL 6364	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Armando Sandoval</u> Regulatory Compliance Assistant II	<u>9/15/05</u> Date

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE AFM

DATE 10/12/05

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.

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

NMOC



Submit 3 Copies To Appropriate District Office

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

State of New Mexico

Energy, Minerals and Natural Resources

Form C-103

May 27, 2004

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-045- 33306

5. Indicate Type of Lease

STATE ☐

FEE ☐

6. State Oil & Gas Lease No.

NMSF-078200-A

7. Lease Name or Unit Agreement Name

Grambling C

8. Well Number

3M

9. OGRID Number

14538

10. Pool name or Wildcat

Blanco Mesaverde/ 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

BURLINGTON RESOURCES OIL & GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter G : 1645 feet from the North line and 1785 feet from the East line  
Section 12 Township 30N Range 10W NMPM County San Juan

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

6368'

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

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 ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPL ☐

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: Amanda Sandoval

TITLE

Regulatory Assistant II

DATE

9/29/2005

Type or print name

Amanda Sandoval

E-mail address:

asandoval@br-inc.com

Telephone No.

505-326-9700

For State Use Only

APPROVED BY: [Signature]

TITLE

DEPUTY OIL & GAS INSPECTOR, DIST. ☒

DATE

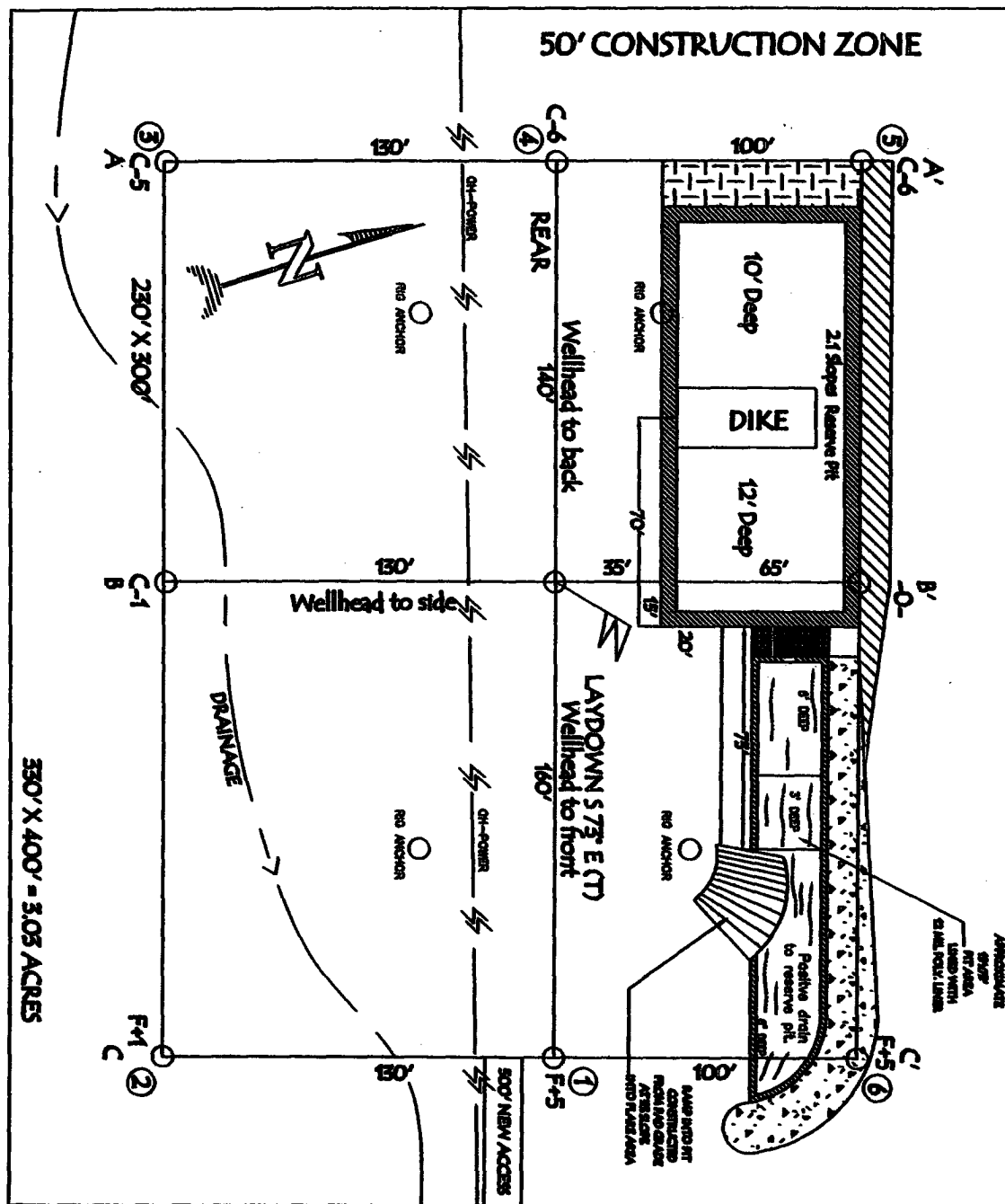
OCT 17 2005

Conditions of Approval (if any):

Set 200' surface CS of - per BLM C.O.A., to protect shallow ground water

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**GRAMBLING C #3M, 1645' FNL & 1785' FEL**  
**SECTION 12, T-30-N, R-10-W, NMPM, SAN JUAN COUNTY, NM**  
**GROUND ELEVATION: 6364', DATE: JULY 19, 2005**

RESERVE PIT DIKE TO BE 8" ABOVE DEEP SIDE (OVERFLOW - 3" WIDE AND 1" ABOVE SHALLOW SIDE).



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.

LATITUDE: 36° 49' 7590" N LONGITUDE: 107° 49' 9657" W NAD27

350' X 400' = 3.05 ACRES

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
GRAMBLING C #3M, 1645' FNL & 1785' FEL  
SECTION 12, T-30-N, R-10-W, NMPM, SAN JUAN COUNTY, NM  
GROUND ELEVATION: 6364', DATE: JULY 19, 2005


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**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.**

submitted in lieu of Form 3160-5

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

2005 SEP 30 AM 11 53

1. Type of Well  
GAS

RECEIVED  
070 FARMINGTON NM

5. Lease Number  
NMSF-078200-A  
6. If Indian, All. or  
Tribe Name  
7. Unit Agreement Name

2. Name of 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, Footage, Sec., T, R, M  
1645' FNL, 1785' FEL, Sec. 12, T30N, R10W, NMPM

8. Well Name & Number  
Grambling C #3M  
9. API Well No.  
30-045-33306  
10. Field and Pool  
Blanco Mesaverde/Basin Dakota  
11. County and State  
San Juan Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

Type of Action

<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Change of Footages or Location	

13. Describe Proposed or Completed Operations

It is intended to change the legal location of this well from 1605' FNL, 1905' FEL, as was submitted in the APD application to 1645' FNL, 1785' FEL. The T&E, pipeline and arch reports were submitted at new location with this APD package. Attached are the new C-102 plat, topo, and C-103 pit sundry and cut & fill diagram.

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

Signed Joni Clark Title Sr. Regulatory Specialist Date 9/29/05

(This space for Federal or State Office use)

APPROVED BY [Signature] Title EPS Date 10/7/05

CONDITION OF APPROVAL, if any:

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 representations as to any matter within its jurisdiction.

NMOCD



## OPERATIONS PLAN

Well Name: GRAMBLING C 3M  
Location: 1605' FNL & 1950' FEL, Section Sec 12 T30N R10W  
San Juan County, New Mexico  
Formation: Blanco Mesaverde/Basin Dakota  
Elevation: 6368' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1762'	
Ojo Alamo	1762'	1880'	aquifer
Kirtland	1880'	2850'	gas
Fruitland Coal	2850'	3075'	gas
Pictured Cliffs	3075'	3215'	gas
Lewis	3215'	3795'	
Huerfanito Bentonite	3795'		
Chacra	4085'	4790'	gas
Massive Cliff House	4790'	4895'	gas
Menefee	4895'	5300'	gas
Massive Point Lookout	5300'	5662'	gas
Mancos Shale	5662'	6585'	
Upper Gallup	6585'	7329'	gas
Greenhorn	7329'	7380'	gas
Graneros	7380'	7426'	gas
Two Wells	7426'	7528'	gas
Paguate	7528'	7568'	gas
Cubero	7568'	7685'	gas
Encinal	7685'	7685'	gas
Topset TD	7685'		gas
Total Depth:			gas

### Logging Program:

#### Mud Logs/Coring/DST

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

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0 - <del>120'</del> 200'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120 - 3315'	LSND	8.4 - 9.0	30 - 60	no control
3315 - 7685'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

C. HARRADEN/ September 22, 2005 *CEH*

This well is located within a 'vulnerable area'. In order to protect the integrity of the alluvium aquifer, a minimum surface csg. depth of 200' is stipulated as a condition of approval for this APD.

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

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - <del>120'</del> 200	9 5/8"	32.3#	H-40
8 3/4"	0' - 3315'	7"	20/23#	J-55
6 1/4"	0' - 7685'	4 1/2"	10.5#	J-55

Tubing Program:

<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 7685'	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. **BOP**

## 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. **BOP**

## 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 290 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 (124 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/23 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 267 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (569 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, to the base of the Ojo Alamo @ 1880'. Two turbolating centralizers at the base of the Ojo Alamo @ 1880'. 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 295 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 (595 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:

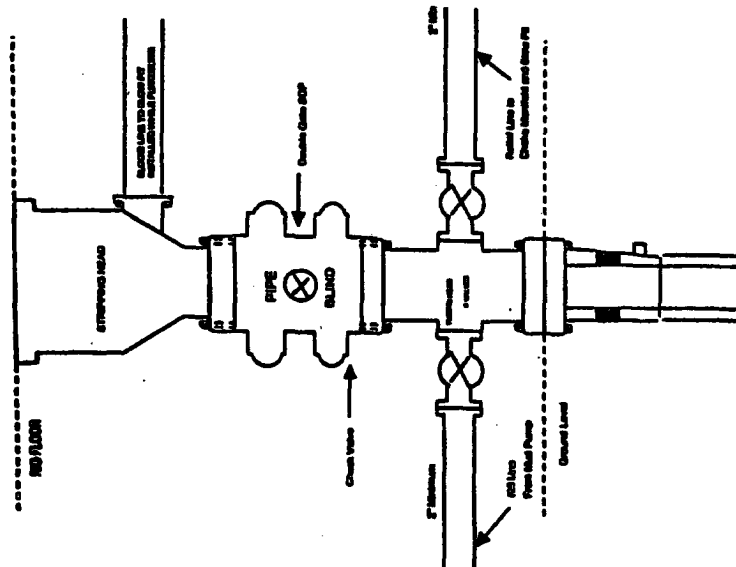
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2000 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The east half of Section 12 is dedicated to the Mesa Verde and Dakota.
- This gas is dedicated.

  
Drilling Engineer

6/23/05  
Date

# BURLINGTON RESOURCES

Completion/Workover Rig  
BOP Configuration  
2,000 psi System

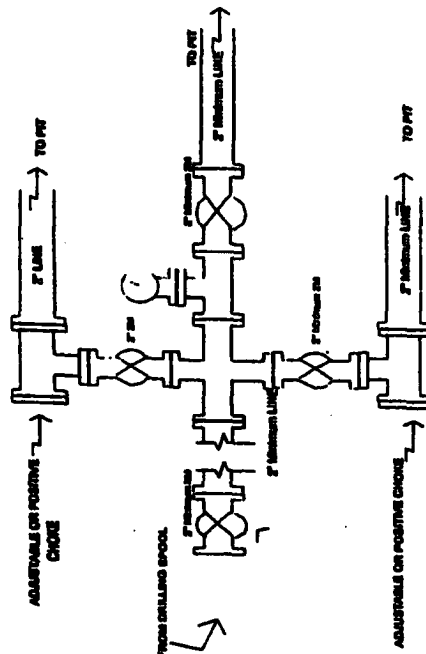


Minimum BOP installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 500 psi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

Figure #2

# BURLINGTON RESOURCES

Drilling Rig  
Choke Manifold Configuration  
2000 psi System

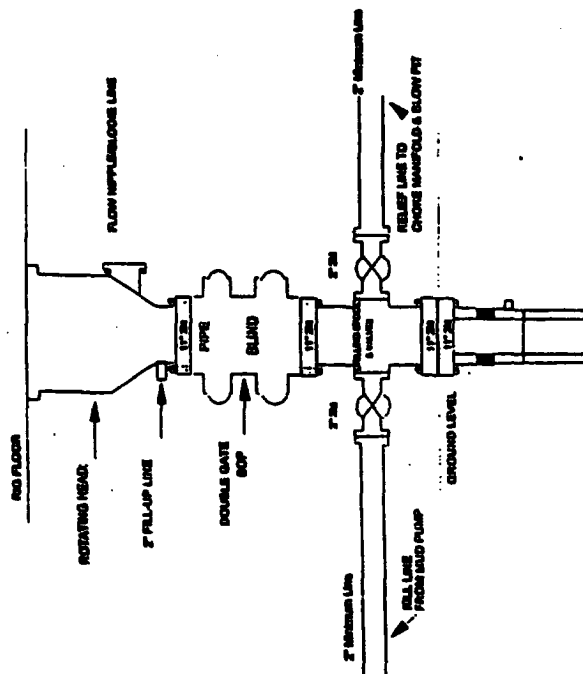


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

# Burlington Resources

Drilling Rig  
2000 psi System



BOP Installation from Surface Casing Point to Total Depth. 11" Bore 10" Minimum, 2000 psi working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on top of the BOP. All BOP equipment is 2,000 psi working pressure or greater.

Figure #1