

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	2005 SEP 1 PM 8 52 RECEIVED 070 FARMINGTON NM	5. Lease Number NMSF-079391 Unit Reporting Number NMNM-078409A-DK
1b. Type of Well GAS		6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON</b> RESOURCES Oil & Gas Company		7. Unit Agreement Name San Juan 27-5 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700		8. Farm or Lease Name 9. Well Number #163E
4. Location of Well Unit K (NESW), 2355' FSL, 2695' FWL  Latitude 36° 34.4106'N Longitude 107° 23.9939'W		10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 18, T27N, R5W API # 30-039- 30063
14. Distance in Miles from Nearest Town 72 miles to Bloomfield, NM		12. County Rio Arriba
15. Distance from Proposed Location to Nearest Property or Lease Line 2355'		13. State NM
16. Acres in Lease		17. Acres Assigned to Well <del>331.94</del> W2 321.08
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 650' - San Juan 27-5 Unit #47		
19. Proposed Depth 7759'		20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6570' GL		22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>[Signature]</u> Regulatory Analyst		Date <u>8-30-06</u>

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE AFM

DATE 11/30/06

Archaeological Report attached

Threatened and Endangered Species Report attached FA

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".

NMOC

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

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 30-039-30063	*Pool Code 71599	*Pool Name Basin DAKOTA
*Property Code 7454	*Property Name SAN JUAN 27-5	*Well Number 163 E
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES O&G CO LP	*Elevation 6570'

<sup>10</sup> Surface Location

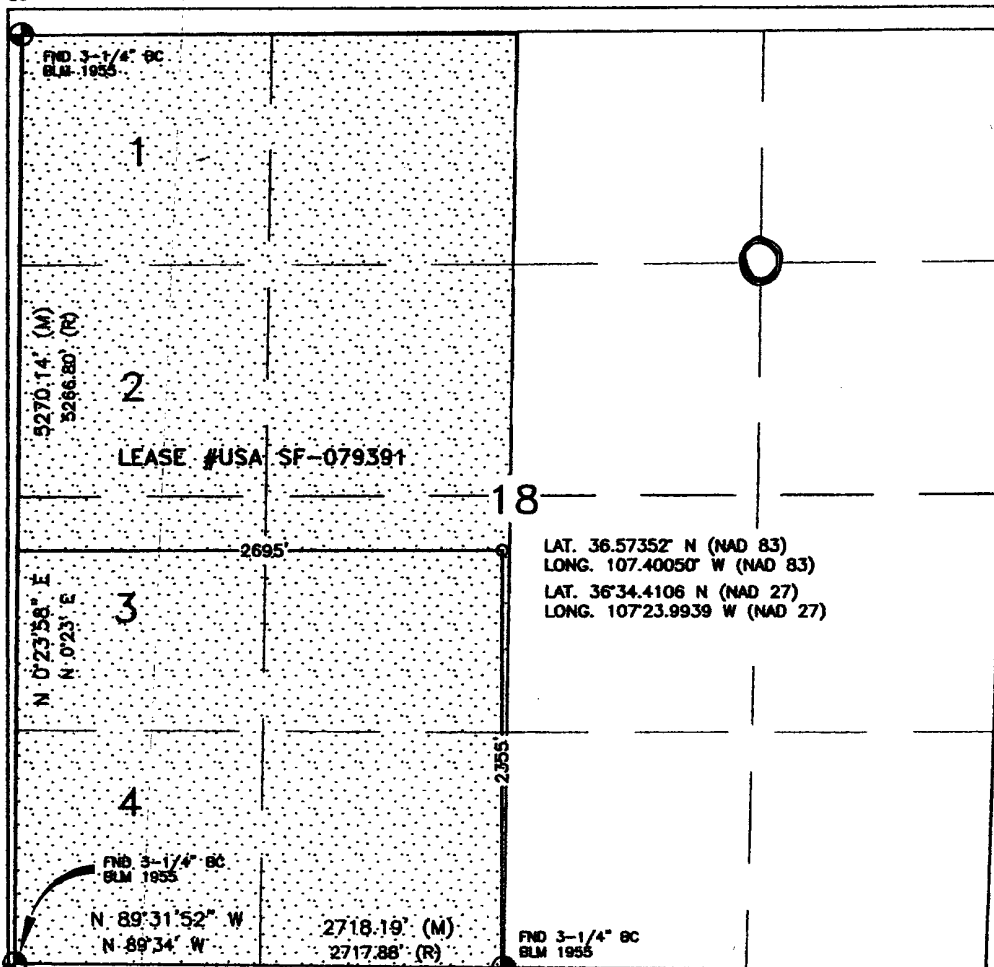
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	18	27N	5W		2355'	SOUTH	2695'	WEST	RIO ARRIBA

<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
Dedicated Acres XX 331.94 Acres - (W/2) 321.08 acres W/2			Joint or Infill		Consolidation Code		Order No. RCVD DEC 11 '06		

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

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Philana Thompson*  
Signature

Philana Thompson DIST. 2

Printed Name

Regulatory Analyst

Title

8/30/06

Date

18 SURVEYOR CERTIFICATION

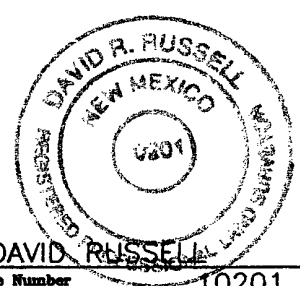
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 22, 2006

Date of Survey

Signature and Seal of Professional Surveyor:

*David R. Russell*



DAVID RUSSELL  
Certificate Number 10201

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.

30-039-

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

NMSF-079391

7. Lease Name or Unit Agreement Name

San Juan 27-5 Unit

8. Well Number

#163E

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 &amp; GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter K : 2355 feet from the South line and 2695 feet from the West line  
Section 18 Township 27N Range 5W NMPM County San Juan

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

6570'

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:

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 ☐

OTHER:

New Drill ☒REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☐CASING/CEMENT JOB ☐OTHER: ☐

## SUBSEQUENT REPORT OF:

ALTERING CASING ☐P AND A ☐

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.

New Drill, Unlined:

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 Sanchez TITLE Regulatory Analyst DATE 7/25/2006Type or print name Amanda Sanchez E-mail address: asanchez@br-inc.com Telephone No. 505-326-9891

For State Use Only

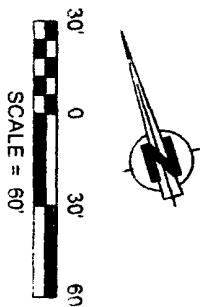
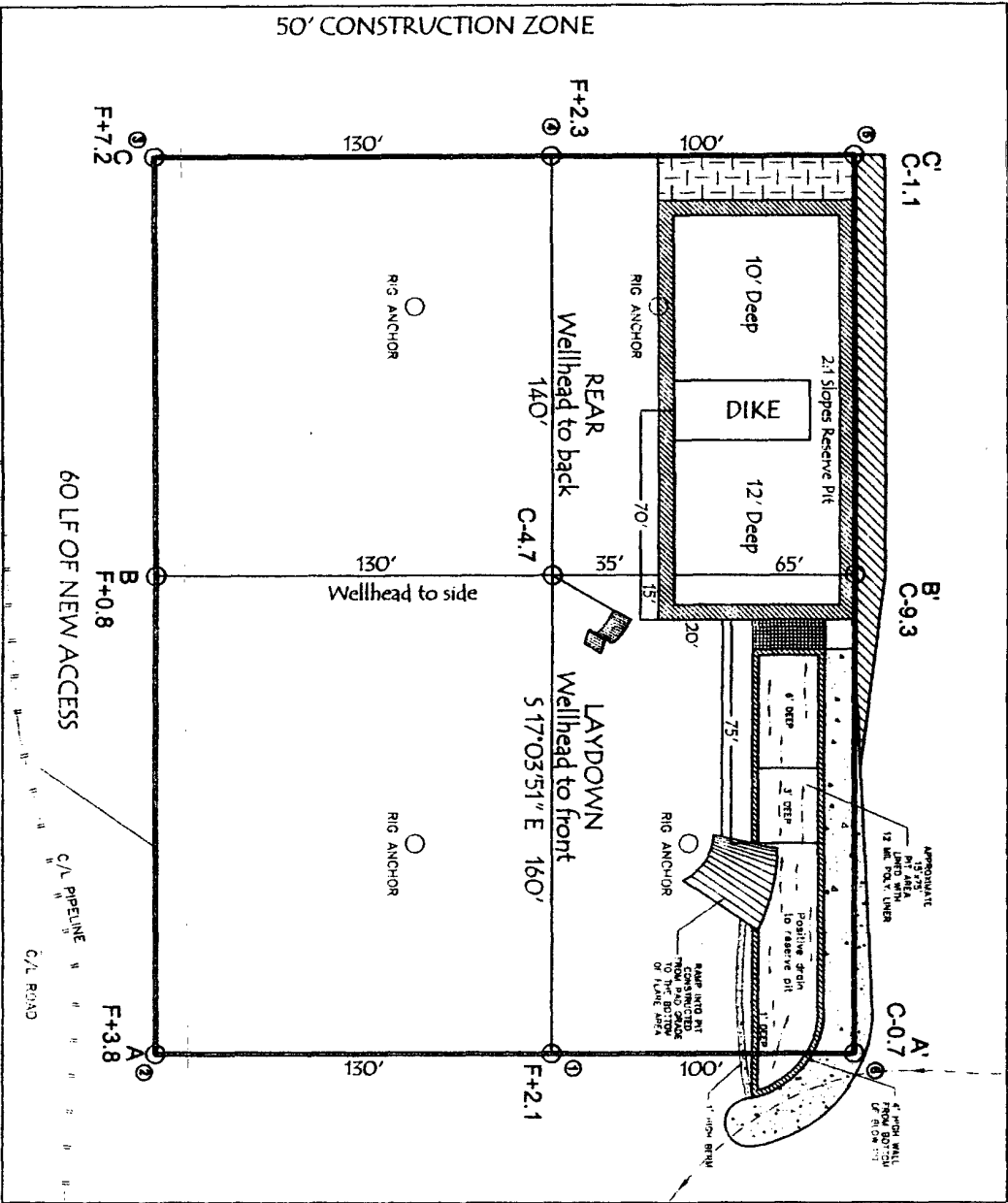
APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. IV DATE DEC 12 2006

Conditions of Approval (if any):

LATITUDE: 36.57352°N  
 LONGITUDE: 107.40050°W  
 DATUM: NAD 83

# **BURLINGTON RESOURCES O&G CO LP**

SAN JUAN 27-5 UNIT NO. 163E  
 2355' FSL & 2695' FWL  
 LOCATED IN THE NE/4 SW/4 OF  
 SECTION 18, T27N, R5W, N.M.P.M.,  
 RIO ARriba COUNTY, NEW MEXICO  
 GROUND ELEVATION: 6570', NAVD 88  
 FINISHED PAD ELEVATION: 6565.8', NAVD 88

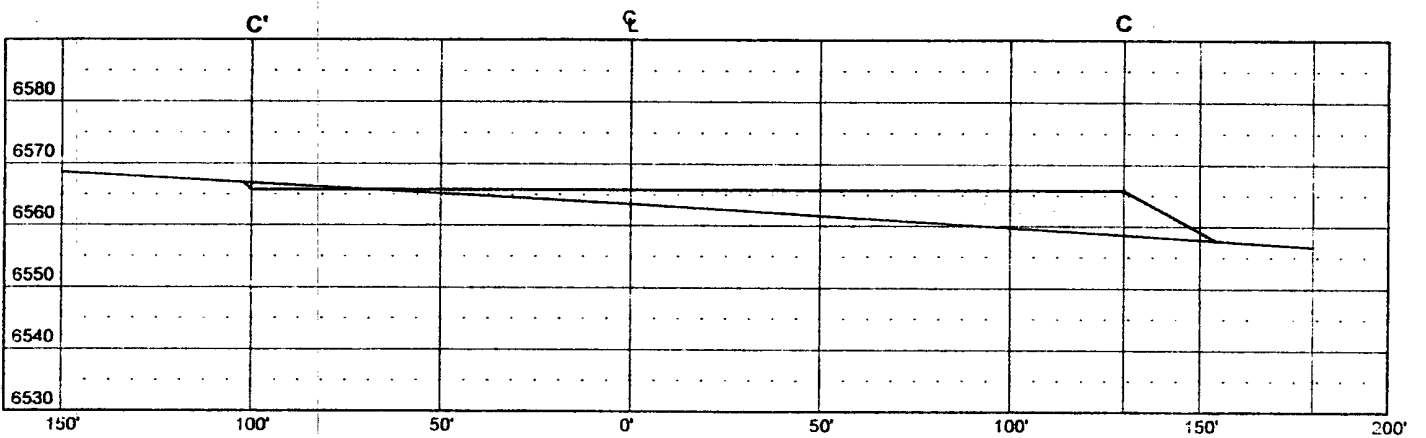


330' X 400' = 3.03 ACRES OF DISTURBANCE  
 SCALE: 1" = 60'  
 JOB NO.: COPC011  
 DATE: 06/27/06

NOTE:  
 RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW - 3' WIDE AND 1' ABOVE SHALLOW SIDE).  
 RUSSELL SURVEYING, INC. 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, IN CONSTRUCTION ZONE AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR  
 TO CONSTRUCTION.

**Russell Surveying**  
 1409 W. Aztec Blvd. #5  
 Aztec, New Mexico 87410  
 (505) 334-8637

GROUND ELEVATION: 6570', NAVD 88  
FINISHED PAD ELEVATION: 6565.8', NAVD 88



**Russell Surveying**  
1409 W. Aztec Blvd. #5  
Aztec, New Mexico 87410  
(505) 334-8637

## OPERATIONS PLAN

Well Name: SAN JUAN 27-5 UNIT 163E  
Location: 2355' FSL & 2695' FWL, Section Sec 18 T27N R05W  
Rio Arriba County, New Mexico  
Formation: Dakota  
Elevation: 6570' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2724'	
Ojo Alamo	2724'	2827'	aquifer
Kirtland	2827'	3132'	gas
Fruitland Coal	3132'	3322'	gas
Pictured Cliffs	3322'	3442'	gas
Lewis	3442'	3825'	
Huerfanito Bentonite	3825'		
Chacra	4269'	4969'	gas
Massive Cliff House	4969'	5090'	gas
Menefee	5090'	5482'	gas
Massive Point Lookout	5482'	5965'	gas
Mancos Shale	5965'	6662'	
Upper Gallup	6662'	7418'	gas
Greenhorn	7418'	7484'	gas
Graneros	7484'	7510'	gas
Two Wells	7510'	7637'	gas
Upper Cubero	7637'	7679'	gas
Lower Cubero	7679'	7759'	gas
Encinal	7759'	7759'	gas
Total Depth:	7759'		gas

### Logging Program:

#### Mud Logs/Coring/DST

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

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120' - 3542'	LSND	8.4 - 9.0	30 - 60	no control
3542' - 7759'	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>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 120'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3542'	7"	20#	J-55
6 1/4"	0' - 7759'	4 1/2"	10.5#/11.6#	J-55

**Tubing Program:**

<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 7759'	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, BOPE 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, BOPE 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: 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:**

- This will be a Mesaverde and Dakota producing well.
- 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 West half of Section 18 is dedicated to the Mesaverde and Dakota formation.
- This gas is dedicated.

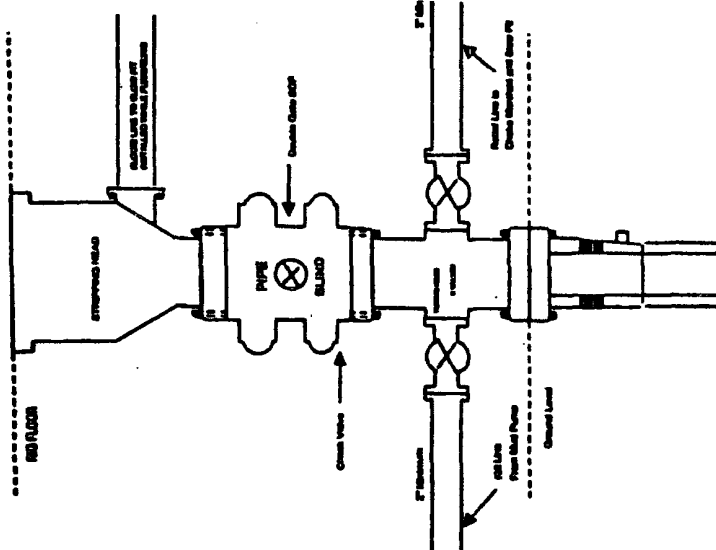
  
Drilling Engineer

  
Date



# BURLINGTON RESOURCES

## Completion/Workover Rig BOP Configuration 2,000 psi System



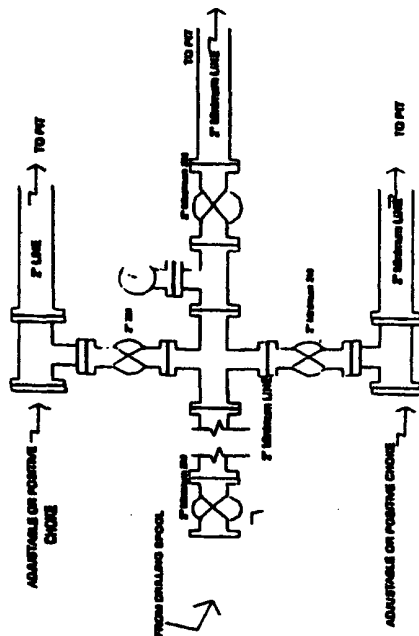
Minimum BOP Installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 600 psi stripping head.

Figure #2

4-20-01

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System



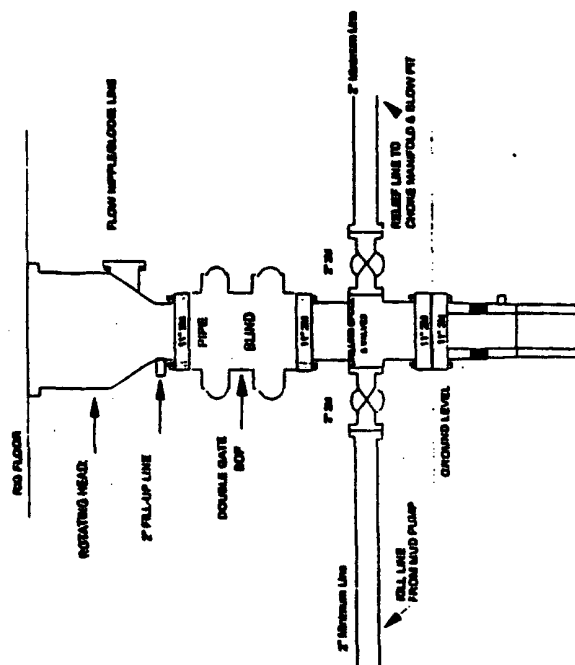
Choke manifold Installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

# Burlington Resources

## Drilling Rig 2000 psi System



BOP Installation from Surface Casing Point to Total Depth. 11" Bore 10" Horizontal, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 600 psi rotating head on top of ram preventers. All BOP equipment is 2,000 psi working pressure.

Figure #1