UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
2004 FEB 24 PM 3:03
070 Farmington, NM

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. **Type of Work**
DRILL

5. **Lease Number**
SF-080674
Unit Reporting Number
MV-8910010510
DK-891001051B

1b. **Type of Well**
GAS

6. **If Indian, All. or Tribe**

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

7. **Unit Agreement Name**
San Juan 27-4 Unit

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

8. **Farm or Lease Name**
San Juan 27-4 Unit
9. **Well Number**
#99M

4. **Location of Well**
1660' FNL, 70' FWL
Latitude 36° 34.5515'N, Longitude 107° 15.8538'W

10. **Field, Pool, Wildcat**
Blanco Mesaverde/Basin Dakota
11. **Sec., Twn, Rge, Mer. (NMPM)**
E Sec. 16, T27N, R04W
API # 30-039- 27634

14. **Distance in Miles from Nearest Town**
18 miles to Gobernador

12. **County**
Rio Arriba

13. **State**
NM

15. **Distance from Proposed Location to Nearest Property or Lease Line**
70'

16. **Acres in Lease**

17. **Acres Assigned to Well**
MV-320 W/2
DK-320 W/2

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
900'

19. **Proposed Depth**
8269'

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6947' GR

22. **Approx. Date Work will Start**

23. **Proposed Casing and Cementing Program**
See Operations Plan attached

24. **Authorized by:** Joni Clark
Regulatory Specialist

2/2/04
Date

PERMIT NO. _____ **APPROVAL DATE** _____

APPROVED BY _____ **TITLE** AFM **DATE** 4-3-05

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".

NMOCD

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
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, 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

Form C-102
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

[1] API Number	[2] Pool Code	[3] Pool Name
30-039-27634	72319/71599	Blanco Mesaverde/Basin Dakota

[4] Property Code	[5] Property Name	[6] Well Number
7452	SAN JUAN 27-4 UNIT	99M

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	6947'

[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
E	16	27N	4W		1660	NORTH	70	WEST	RIO ARRIBA

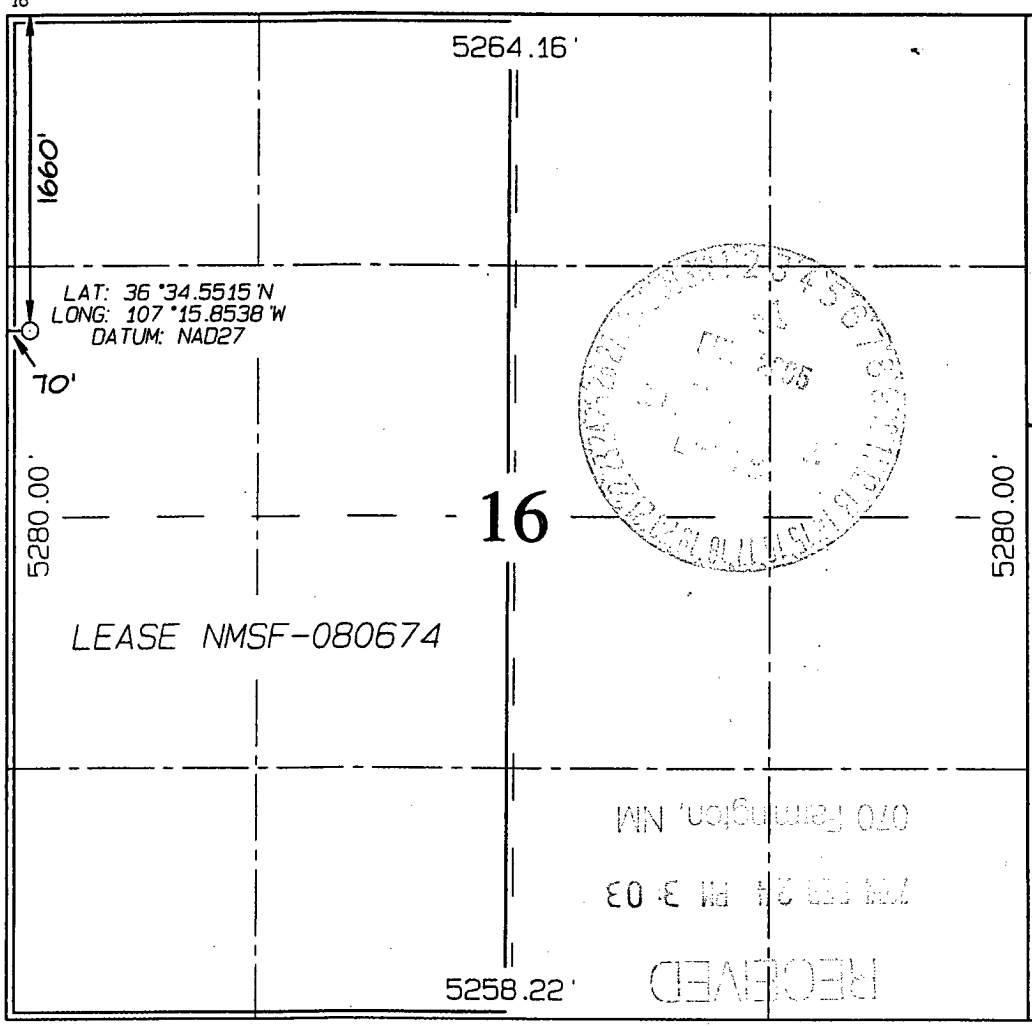
[11] Bottom Hole Location If Different From Surface

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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
MV-W/320 DK-W/320			

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

Signature: Joni Clark

Joni Clark
Printed Name

Regulatory Specialist
Title

2-2-04
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.

Survey Date: OCTOBER 13, 2003

Signature and Seal of Professional Surveyor

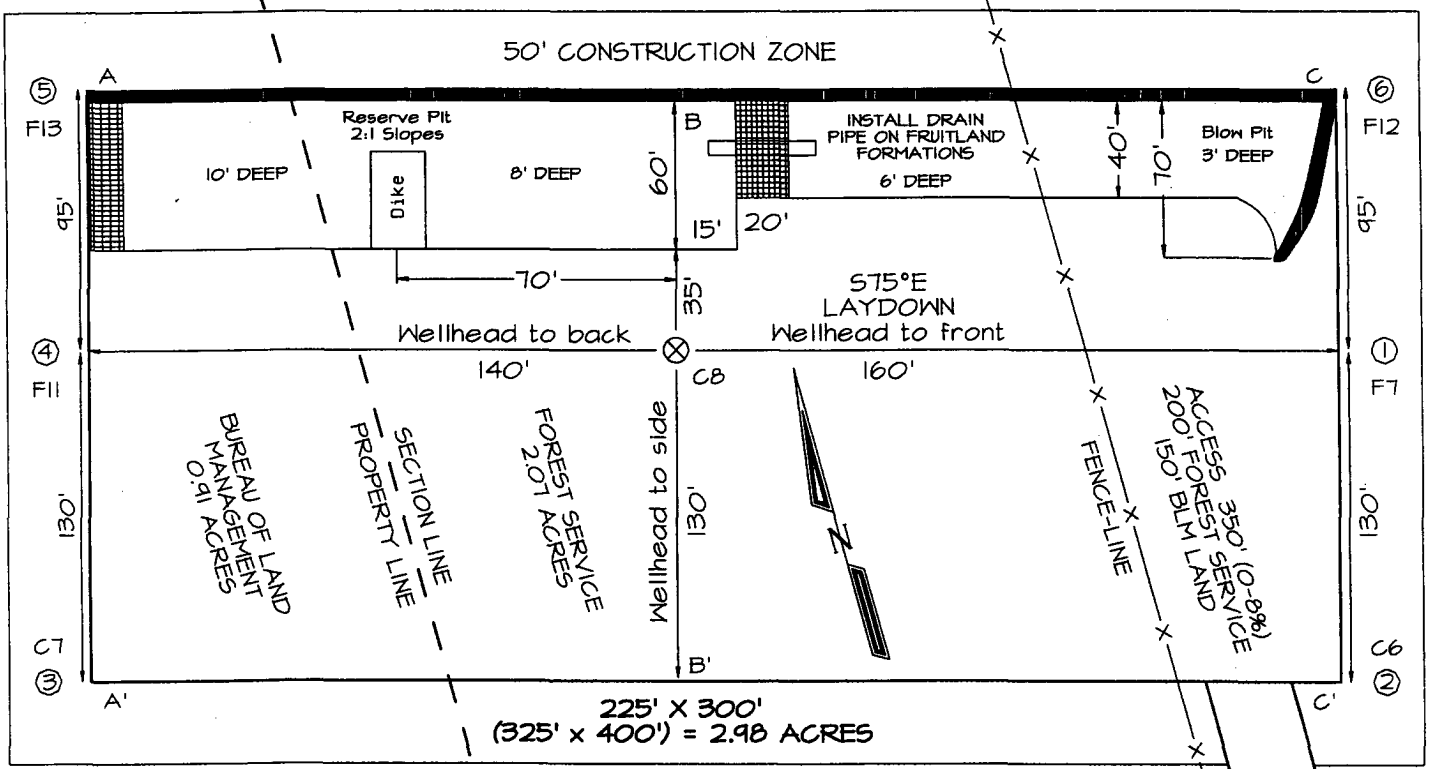
JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

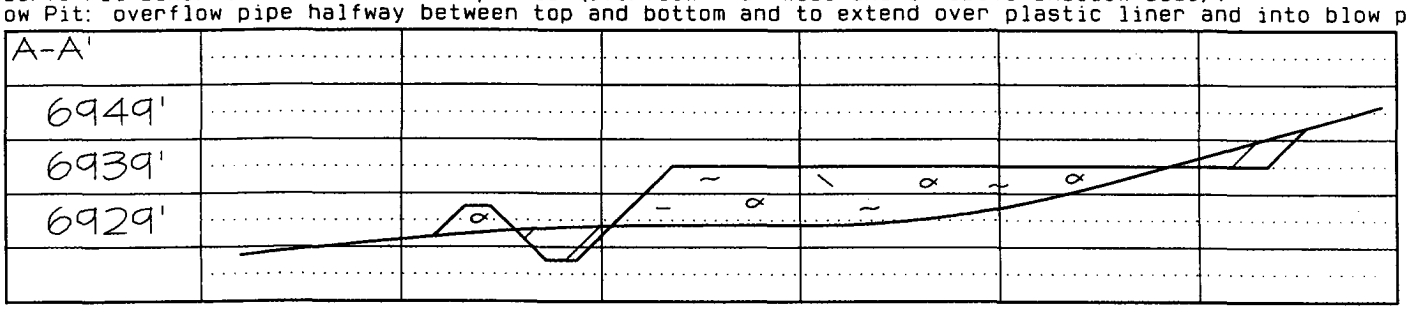
PLAT #

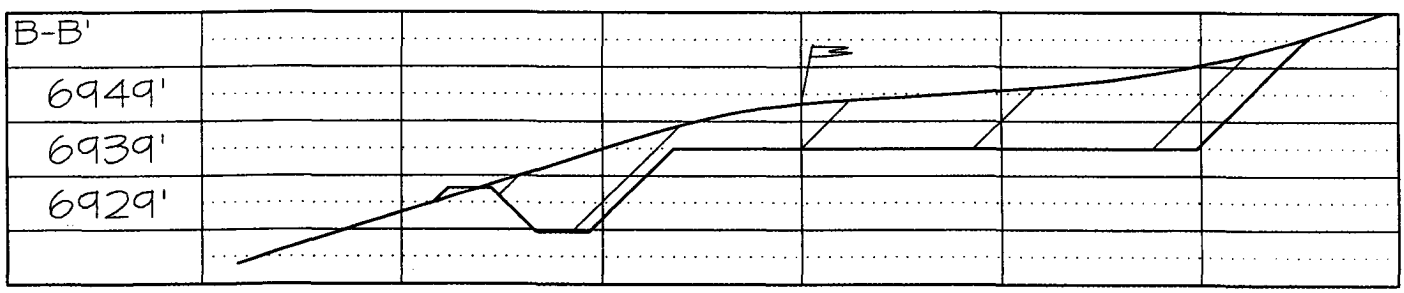
BURLINGTON RESOURCES OIL & GAS COMPANY, LP
SAN JUAN 27-4 UNIT #99M, 1660' FNL & 70' FWL
SECTION 16, T27N, R4W, NMPM, RIO ARRIBA COUNTY, NM
GROUND ELEVATION: 6947' DATE: OCTOBER 13, 2003

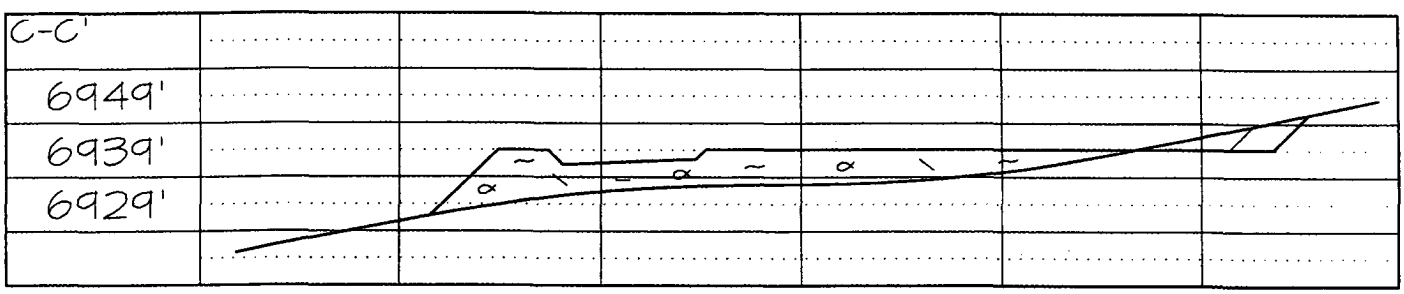
LATITUDE: 36°34'33"
LONGITUDE: 107°15'51"
DATUM: NAD1927



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: 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: San Juan 27-4 Unit #99M
Location: 1660'FNL, 70'FWL, Sec 16, T-27-N, R-4-W
Rio Arriba County, NM
Latitude 36° 34.5'N Longitude 107° 15.8'W

Formation: Blanco Mesaverde/Basin Dakota

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	3204'	
Ojo Alamo	3204'	3434'	aquifer
Kirtland	3434'	3649'	gas
Fruitland	3649'	3814'	
Pictured Cliffs	3814'	3909'	gas
Lewis	3909'	4327'	gas
Intermediate TD	**4009'**		
Huerfanito Bentonite	4327'	4791'	gas
Chacra	4791'	5404'	gas
Upper Cliff House	5404'	5514'	
Massive Cliff House	5514'	5649'	
Menefee	5649'	6001'	gas
Point Lookout	6001'	6519'	gas
Mancos	6519'	7157'	gas
Gallup	7157'	7941'	gas
Greenhorn	7941'	8008'	gas
Graneros	8008'	8046'	gas
Dakota	8046'	8162'	gas
Upper Cubero	8162'	8206'	gas
Lower Cubero	8206'	8254'	gas
Oak Canyon	8254'		
TD	**8269'**		

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:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud MUD/Air/Air Mist	8.4-9.0	40-50	no control
200- 4009'	LSND	8.4-9.0	30-60	no control
4009- 8269'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

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

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 4000'	7"	20.0#	J-55
8 3/4"	4000' - 4486'	7"	23.0#	N-80
6 1/4"	0' - 7800'	4 1/2"	10.5#	J-55
6 ¼"	7800' - 8269'	4 ½"	11.6#	N-80

Tubing Program: 0' - 8269' 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 ½" 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 conventionally drilled - Type III, per Sean Corrigan 3/3/04

Cement with 147 sacks ~~Premium Lite~~ cement with 0.25 pps Celloflake, 3% calcium chloride. (188 cu ft - 200% excess, bring cement to 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 361 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 (894 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/12 sacks Premium Lite cement w/ 3% calcium chloride, 0.25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% SMS. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 350 sacks with Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (894 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 @ 3204'. Two turbolating centralizers at the base of the Ojo Alamo 3204'. 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 -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Cement with 293 sacks Premium Lite HS w/ 0.25 pps Celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. (580 cu.ft. - 30% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

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.

- 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 formation 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	2500 psi

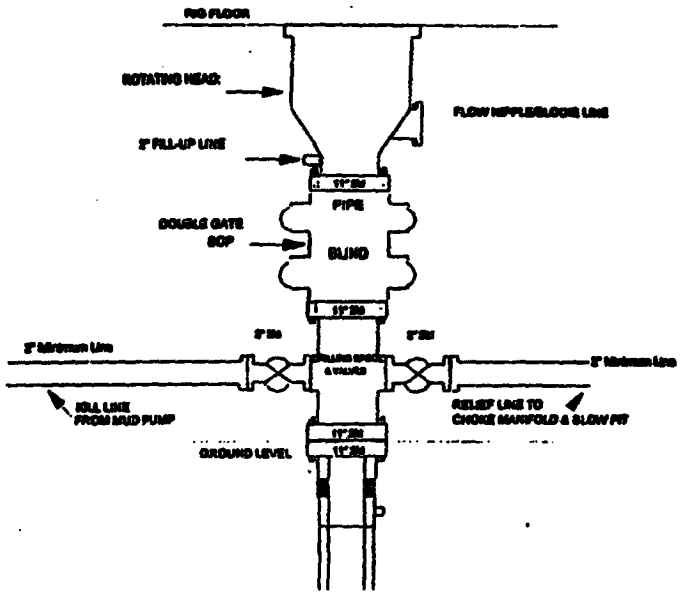
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The west half of Section 16 is dedicated to the Mesa Verde, and the west half of Section 16 is dedicated to Dakota.
- This gas is dedicated.

Sean Corrigan — Drilling Engineer

February 23, 2004 — Date

Burlington Resources

Drilling Rig
2000 psi System



BOP installation from Surface Casing Point to Total Depth. 11" Bore 10" Nominal, 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

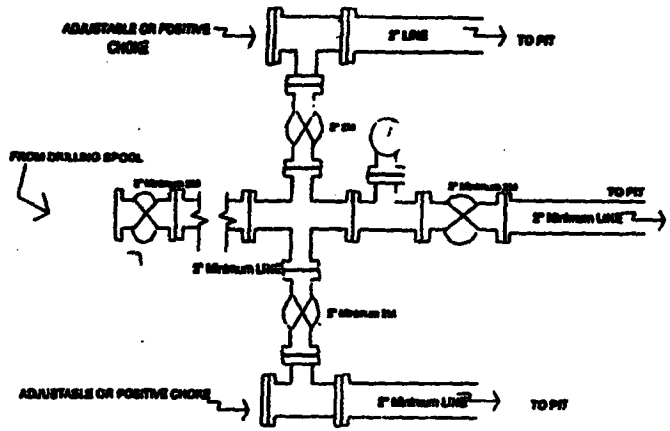
Figure #1

4-20-01

01

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System



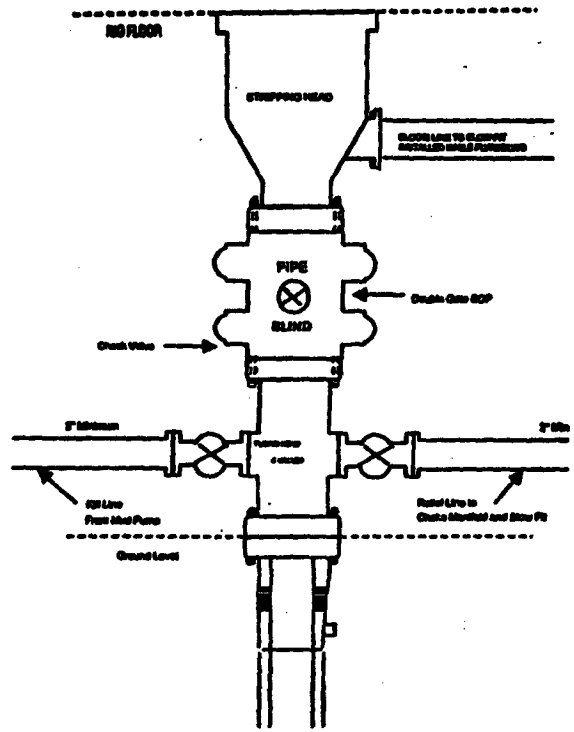
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

BURLINGTON RESOURCES

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