UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 DEC 5 PM 4 13
RECEIVED
070 FARMINGTON NM

1a. Type of Work: DRILL

5. Lease Number: NMSF-077648
Unit Reporting Number

1b. Type of Well: GAS

6. If Indian, All. or Tribe

2. Operator: BURLINGTON RESOURCES Oil & Gas Company, LP

7. Unit Agreement Name

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

8. Farm or Lease Name: Davis

9. Well Number: #9F

4. Location of Well: Unit B (NWNE) 710' FNL & 1530' FEL
Latitude 36° 55.1015'N
Longitude 108° 02.7097'W
Lot 2 B

10. Field, Pool, Wildcat: Basin Dakota

11. Sec., Twn, Rge, Mer. (NMPM): Sec. 12, T31N, R12W

API # 30-045-34094

14. Distance in Miles from Nearest Town

12. County: San Juan

13. State: NM

15. Distance from Proposed Location to Nearest Property or Lease Line: 710'

16. Acres in Lease

17. Acres Assigned to Well: DK - 278.78 ac E/2

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease: 52' from Davis #6A

19. Proposed Depth: 7696'

20. Rotary or Cable Tools: Rotary

21. Elevations (DF, FT, GR, Etc.): 6461' GL

22. Approx. Date Work will Start

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

24. Authorized by: Patsy Clugston
Sr. Regulatory Specialist

Date: 12-4-06

PERMIT NO.

APPROVAL DATE

APPROVED BY: Matthew TITLE: AFM DATE: 12/13/06

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

12/22/06

NMOCD

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

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

DISTRICT II
1301 W. Grand Ave., Artesia, N.M. 88210

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

DISTRICT IV
1220 South 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

2006 DEC 5 PM 4 13
RECEIVED

RCVD DEC15'0
OIL CONS. DIV.
DIST. 3

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| [1] API Number | [2] Pool Code | [3] Pool Name |
|---|---|---|
| 30-045- 34094 | 71599 | Basin Dakota |

| [4] Property Code | [5] Property Name | [6] Well Number |
|---|---|---|
| 18509 | DAVIS | 9F |

| [7] OGRID No. | [8] Operator Name | [9] Elevation |
|---|---|---|
| 14538 | BURLINGTON RESOURCES OIL & GAS COMPANY LP | 6461 |

## [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 |
|---|---|---|---|---|---|---|---|---|---|
| B | 12 | 31-N | 12-W | | 710 | NORTH | 1530 | 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 |
|---|---|---|---|---|---|---|---|---|---|
| B | | | | | | | | | |

| [12] Dedicated Acres | [13] Joint or Infill | [14] Consolidation Code | [15] Order No. |
|---|---|---|---|
| 278.78 ac E/2 | | | |

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

| | | | |
|---|---|---|---|
| | FD. 3 1/4" BC. 1951 BLM | S 87°13'28" W 2236.43' (M) | FD. 3 1/4" BC. 1951 BLM |
| LOT 4 33.33 | LOT 3 33.32 | LOT 2 33.52 | 710' |
| LAT: 36.91836° N. (NAD 83) LONG: 108.04579° W. (NAD 83) LAT: 36°55.1015' N. (NAD 27) LONG: 108°02.7097' W. (NAD 27) | | | 1530' LOT 1 34.12 |
| LOT 5 34.16 | LOT 6 34.16 | LOT 7 34.29 | LOT 8 34.89 |
| | | N 00°04'23" E 2641.73' (M) | |
| | 12 | USA SF-077648 | |
| | | | FD. 3 1/4" BC. 1951 BLM |
| LOT 12 35.03 | LOT 11 35.09 | LOT 10 34.99 | LOT 9 35.05 |
| LOT 13 35.87 | LOT 14 35.93 | LOT 15 35.93 | LOT 16 35.99 |

## 17 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.

Signature Date

Patsy Clugston/Sr. Regulatory Specialist

Printed Name

## 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.

AUGUST 10, 2006

Date of Survey

Signature and Seal of Professional Surveyor:

ROY A. RUSH NEW MEXICO 8894 REGISTERED PROFESSIONAL LAND SURVEYOR

8-31-06

Certificate Number

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

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

Form C-103
May 27, 2004

WELL API NO. 30-045- 34094
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No. SF-077648

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.)

7. Lease Name or Unit Agreement Name: Davis

1. Type of Well: Oil Well ☐ Gas Well ☒ Other
8. Well Number: 9F

2. Name of Operator: BURLINGTON RESOURCES OIL & GAS COMPANY LP
9. OGRID Number: 14538

3. Address of Operator: 3401 E. 30TH STREET, FARMINGTON, NM 87402
10. Pool name or Wildcat: Dakota

4. Well Location
Unit Letter B : 710 feet from the North line and 1530 feet from the East line
Section 31 Township 32N Rng 12W NMPM County San Juan

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 6461'

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: N/A 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: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | ☐ |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | P AND A | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPL | ☐ | CASING/CEMENT JOB | ☐ | | |
| OTHER: | | New Drill | ☒ | 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.

**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 that the NMOCD office.**

grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Patsy Clugston TITLE Sr Regulatory Specialist DATE 10/6/2006

Type or print name Patsy Clugston E-mail address: pclugston@br-inc.com Telephone No. 505-326-9518

**For State Use Only**

APPPROVED BY _____ TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE DEC 22 2006

Conditions of Approval (if any):

# BURLINGTON RESOURCES OIL & GAS COMPANY LP

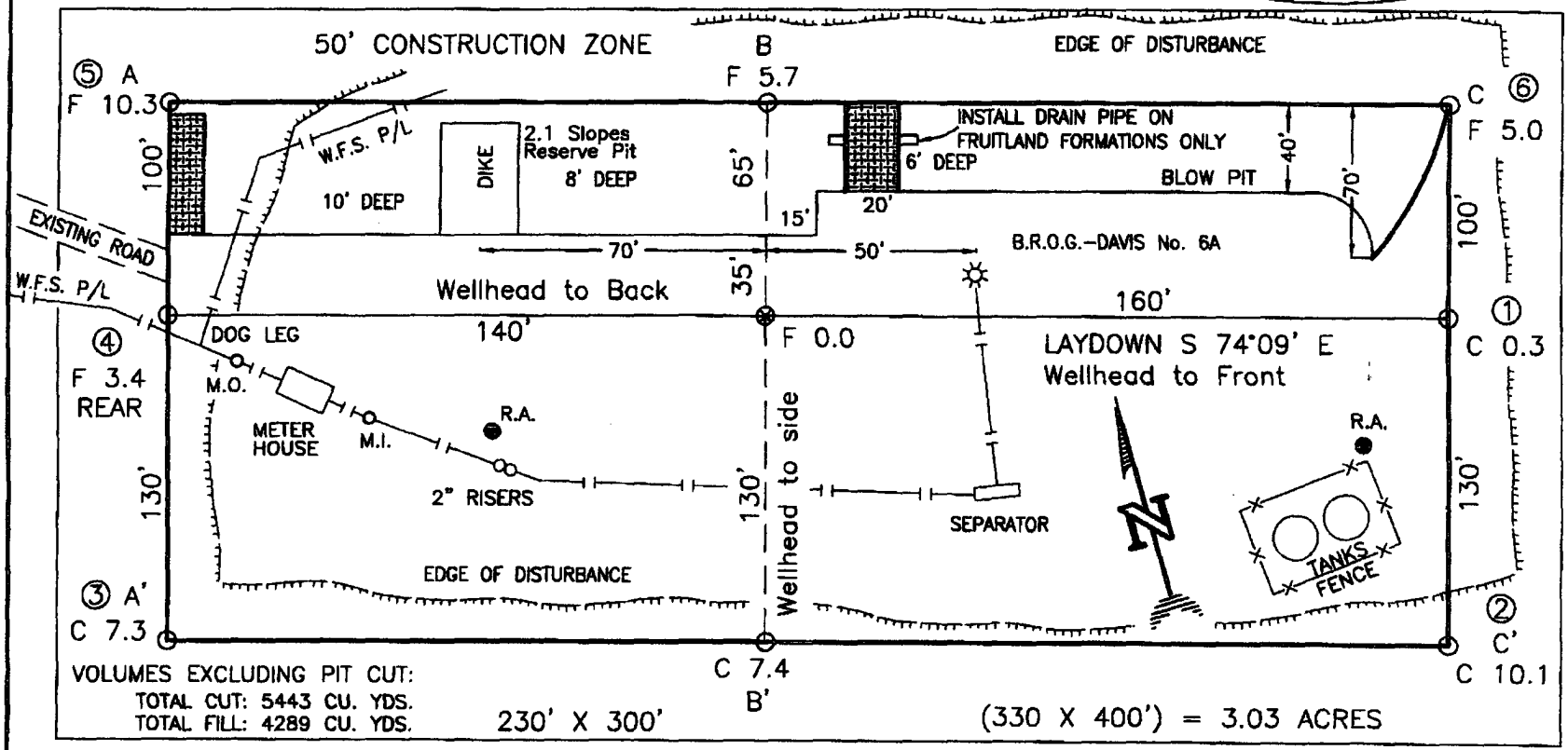
## DAVIS No. 9F, 710 FNL 1530 FEL

**SECTION 12, T-31-N, R-12-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO**

**GROUND ELEVATION: 6461, DATE: AUGUST 10, 2006**

NAD 83
LAT. = 36.91836° N.
LONG. = 108.04579° W.

NAD 27
LAT. = 36°55.1015' N.
LONG. = 108°02.7097' W.




VOLUMES EXCLUDING PIT CUT:
TOTAL CUT: 5443 CU. YDS.
TOTAL FILL: 4289 CU. YDS.

230' X 300'

(330 X 400') = 3.03 ACRES

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: DAGGETT ENTERPRISES, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. NEW MEXICO ONE CALL TO BE NOTIFIED 48 HOURS PRIOR TO EXCAVATION OR CONSTRUCTION.

NOTE: ESTIMATED VOLUMES CALCULATED BY AVERAGE END AREA AT CROSS-SECTION SHOWN

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.

| REVISION | DATE | REVISED BY: |
|---|---|---|
| LOCATION RESTAKE | 8/23/06 | G.V. |


Daggett Enterprises, Inc.
Surveying and Oil Field Services
P. O. Box 15068 • Farmington, NM 87401
Phone (505) 326-1772 • Fax (505) 326-6019
NEW MEXICO L.S. 8894


| | |
|---|---|
| DRAWN BY: A.G. | CADFILE: BR644_PLS |
| PROJ: BR644 | DATE: 06/27/06 |

# OPERATIONS PLAN

***Well Name:*** DAVIS 9F
***Location:*** 710' FNL & 1530' FEL, Section 12 T31N R12W
San Juan County, New Mexico

***Formation:*** Basin Dakota
***Elevation:*** 6461' GL

| ***Formation Tops:*** | ***Top*** | ***Bottom*** | ***Contents*** |
|---|---|---|---|
| Surface | San Jose | 1324' | |
| Ojo Alamo | 1324' | 1382' | aquifer |
| Kirtland | 1382' | 2664' | gas |
| Fruitland | 2664' | 3060' | gas |
| Pictured Cliffs | 3060' | 3224' | gas |
| Lewis | 3224' | 3726' | |
| Huerfanito Bentonite | 3726' | | |
| Chacra | 4129' | 4638' | gas |
| Massive Cliff House | 4638' | 4859' | gas |
| Menefee | 4859' | 5346' | gas |
| Massive Point Lookout | 5346' | 5734' | gas |
| Mancos Shale | 5734' | 6688' | |
| Upper Gallup | 6688' | 7401' | gas |
| Greenhorn | 7401' | 7457' | gas |
| Graneros | 7457' | 7516' | gas |
| Two Wells | 7516' | 7600' | gas |
| Paguate | 7600' | 7641' | gas |
| Cubero | 7641' | 7686' | gas |
| Encinal | 7686' | 7696' | gas |
| Total Depth: | 7696' | | 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:***

| Interval | Type | Weight | Vis. | Fluid Loss |
|---|---|---|---|---|
| 0 - 120' | Spud MUD/Air/Air Mist | 8.4 - 9.0 | 40 - 50 | no control |
| 120'- 3324' | LSND | 8.4 - 9.0 | 30 - 60 | no control |
| 3324' - 7696' | 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' - 120' | 9 5/8" | 32.3# | H-40 |
| 8 3/4" | 0' - 3324' | 7" | 20# | J-55 |
| 6 1/4" | 0' - 7696' | 4 1/2" | 10.5# | J-55 |

***Tubing Program:***

| Depth Interval | Csg.Size | Wt. | Grade |
|---|---|---|---|
| 0' - 7696' | 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 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 -

**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 291 sacks (619 cf) 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/43 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 sxs Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 247 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (743 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 @ 1382'. Two turbolating centralizers at the base of the Ojo Alamo @ 1382'. 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 286 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 (566 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:***

- This will be a Dakota only 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 |

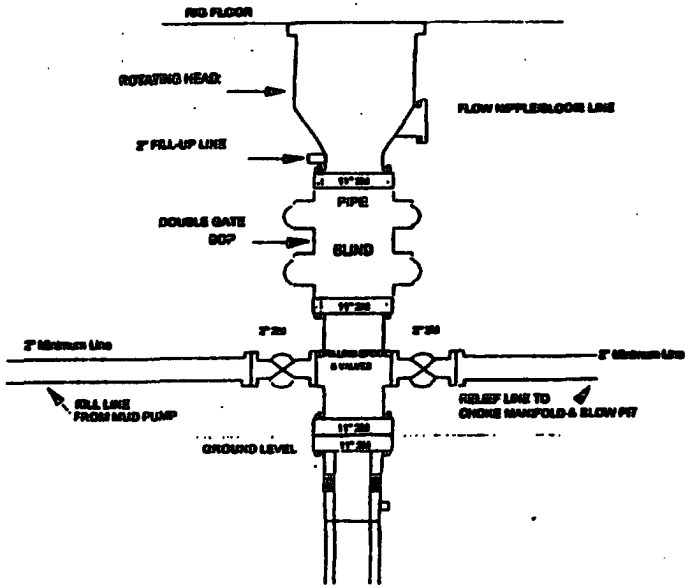
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The East half of Section 12 is dedicated to the Dakota formation.
- This gas is dedicated.

Drilling Engineer

10/9/06
Date

## Burlington Resources

### Drilling Rig
### 2000 psi System



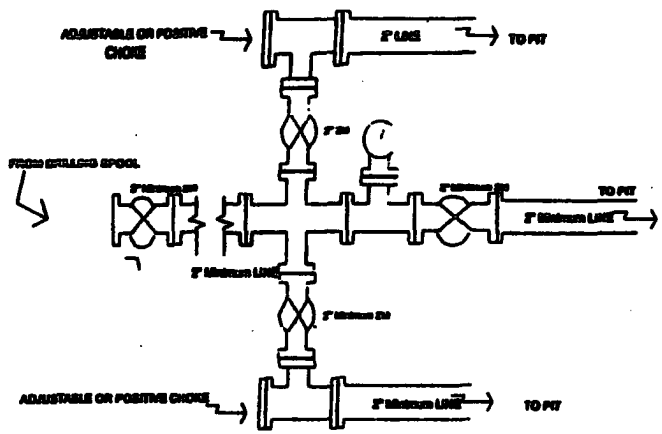

BOP installation from Surface Casing Point to Total Depth. 11" Bore 10" Nominal, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 500 psi rotating head on top of ram preventers. All BOP equipment is 2,000 psi working pressure

Figure #1

4-20-01

## BURLINGTON RESOURCES

### Drilling Rig
### Choke Manifold Configuration
### 2000 psi System

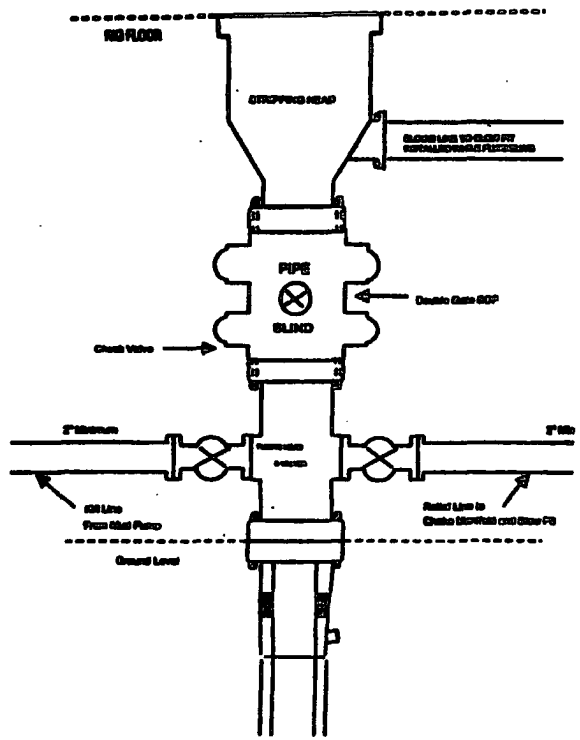



Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

## 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

4-20-01