

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number SF-078103 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 Huerfano Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name 9. Well Number 135F	
4. Location of Well Unit B (NWNE), 660' FNL, 2285' FEL  Latitude 36° 28.7442 Longitude 107° 45.4222	10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 23, T26N, R9W B API # 30-045- 33785	
14. Distance in Miles from Nearest Town 29.7 mi. Bloomfield, NM	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 660'	17. Acres Assigned to Well 320.0 ac N2 DK	
16. Acres in Lease		
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 920' - Huerfano Unit #523		
19. Proposed Depth 6638'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6370'	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Amanda Sanchez</u> Regulatory Analyst	<u>6-6-06</u> Date	

PERMIT NO.

APPROVAL DATE

APPROVED BY D. Martinez

TITLE AFM

DATE 6/23/06

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.

NMOC

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED  
DATE 10-1-06 BY 60321/UC/LP/STP

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.3  
and, upon 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  
611 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- <u>33785</u>	'Pool Code 71599	Basin Dakota	'Pool Name
'Property Code 7139	'Property Name HUERFANO UNIT		'Well Number 135F
'OGRID No. 14538	'Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP		'Elevation 6370'

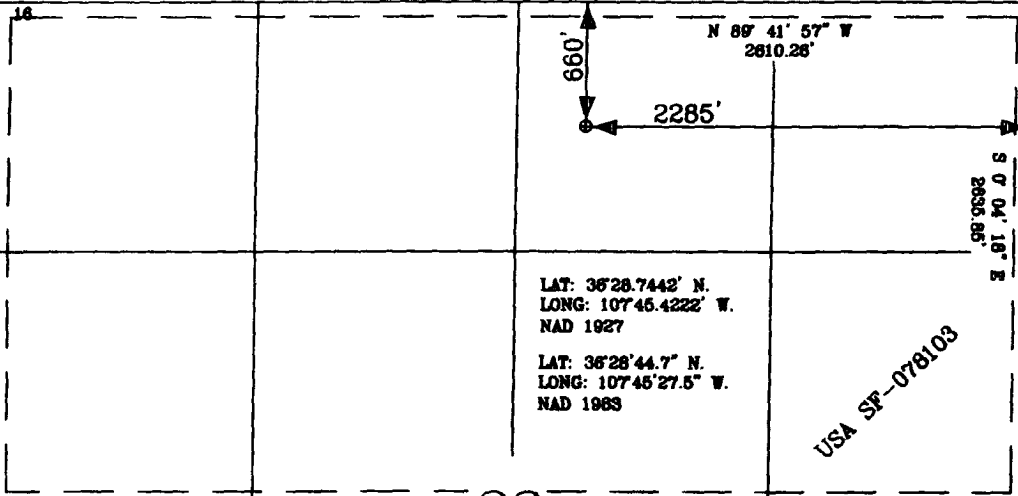
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	26-N	9-W		660'	NORTH	2285'	EAST	SAN JUAN

<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 N2 320 DK			'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

<div>16</div> 		<div>17 OPERATOR CERTIFICATION</div> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature <u>Amanda Sandoval</u></p> <p>Printed Name <u>Amanda Sandoval</u></p> <p>Regulatory Analyst _____</p> <p>Title <u>5-18-06</u></p> <p>Date _____</p>	
		<div>18 SURVEYOR CERTIFICATION</div> <p>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.</p> <p>Date of Survey <u>5-18-06</u></p> <p>Signature and Seal of Registered Surveyor: <u>Glen W. Russell</u></p> <p>Certificate Number <u>15703</u></p>	

## 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-

33785

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

SF-078103

7. Lease Name or Unit Agreement Name

Huerfano Unit

8. Well Number

135F

9. OGRID Number

14538

10. Pool name or Wildcat

Basin Dakota

SUNDRIY 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 B : 660' feet from the North line and 2285' feet from the East line  
Section 23 Township 26N Rng 9W NMPM County San Juan

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

6370'

Pit or Below-grade Tank Application

or Closure ☐

Pit type

New Drill

Depth to Groundwater

&gt;100'

Distance from nearest fresh water well

&gt;1000'

Distance from nearest surface water

&gt;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:

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.

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

TITLE

Regulatory Analyst

DATE

5/24/2006

Type or print name

Amanda Sandoval

E-mail address:

asandoval@br-inc.com

Telephone No.

505-326-9891

For State Use Only

APPROVED BY

TITLE

DEPUTY OIL &amp; GAS INSPECTOR, DIST. 4

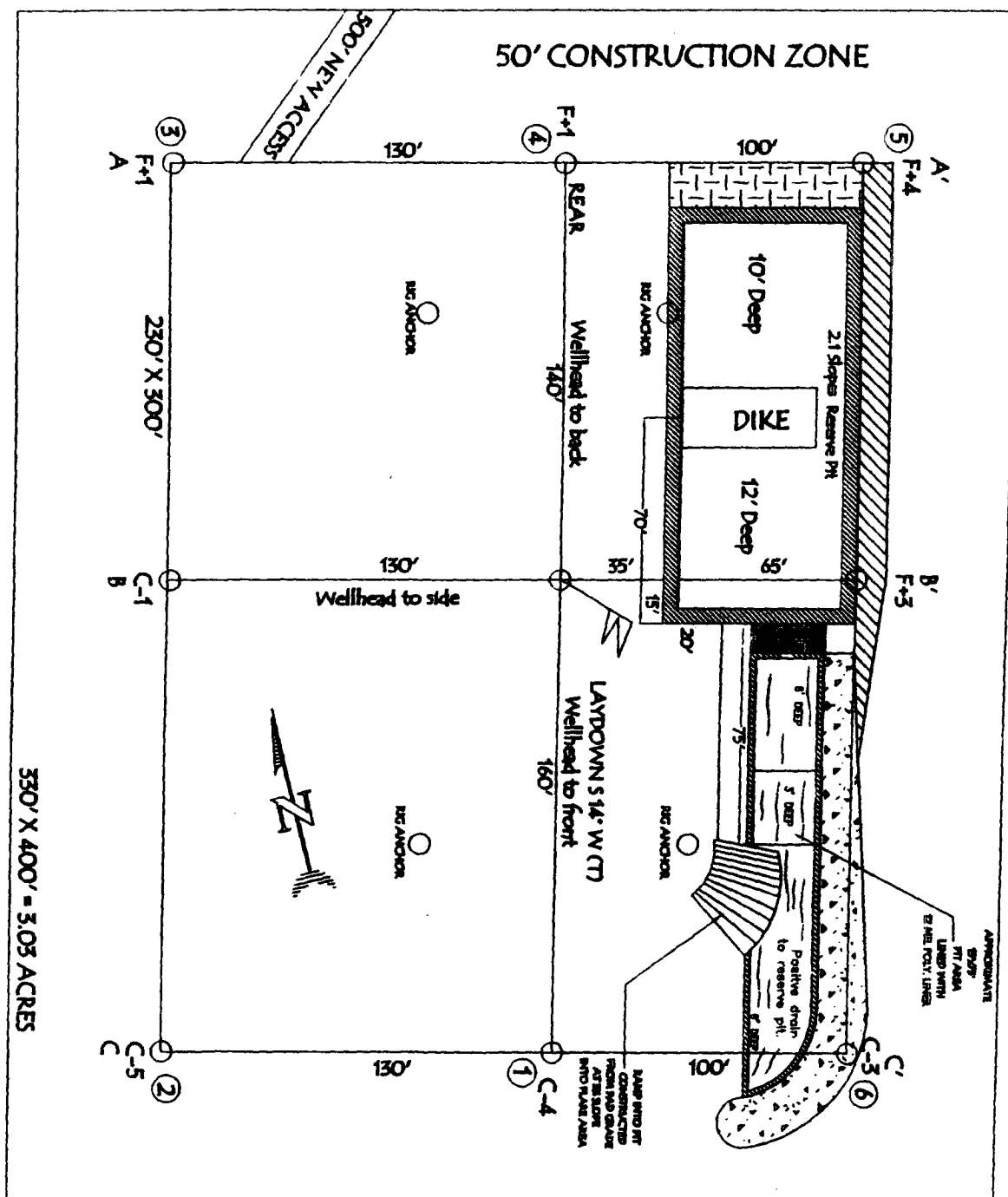
DATE

JUN 26 2006

Conditions of Approval (if any):

**BLOW PIT: OVERFLOW PIPE 4' ABOVE BOTTOM OF BLOW PIT.**

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
HUFFERANO UNIT 135F, 660' FNL & 2285' FEL  
SECTION 23, T-26-N, R-9-W, NMPM, SAN JUAN COUNTY, NM  
GROUND ELEVATION: 6370', DATE: MAY 3, 2006



**NOTE: VECTOR SURVEYS IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.**

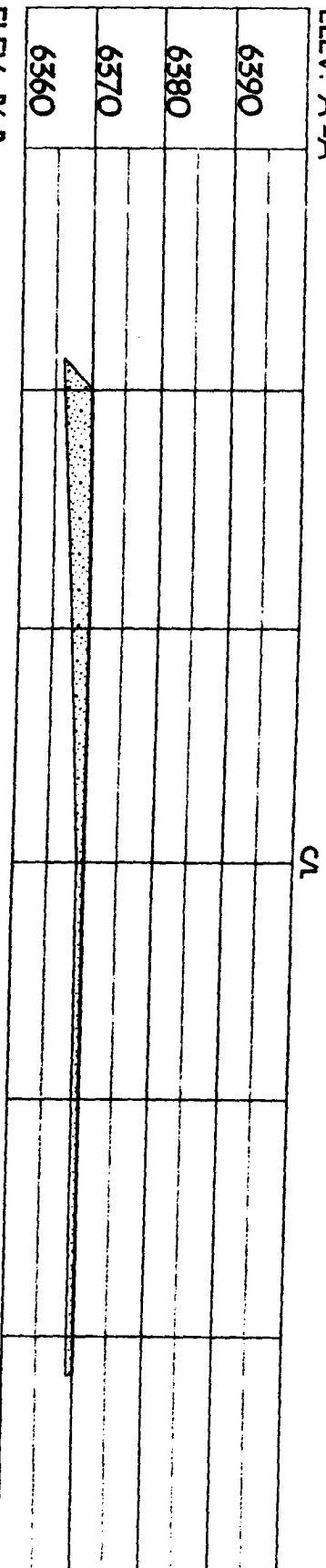
**CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED BURIED**

**PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.**

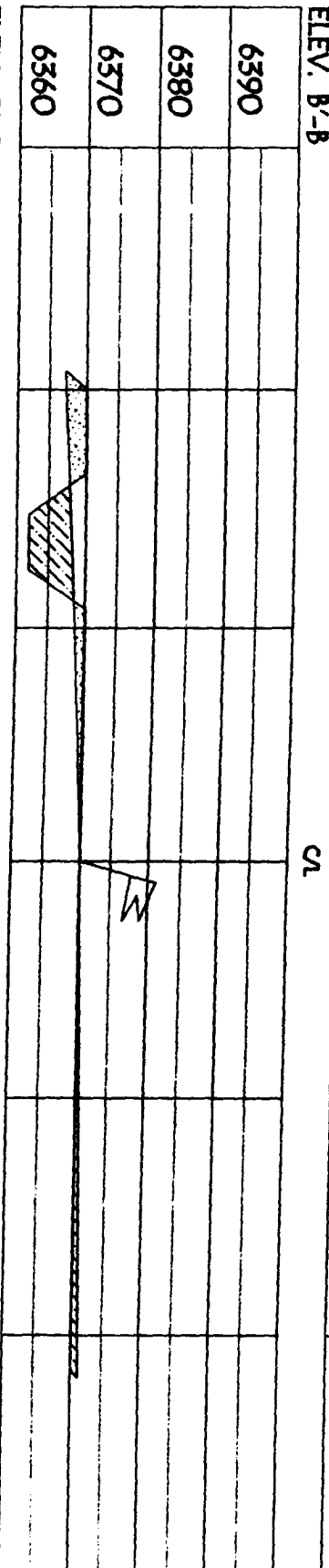
LATITUDE: 36.2287442N LONGITUDE: 107.454222W NAD27

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
 HUERFANO UNIT 135F, 660' FNL & 2285' FEL  
 SECTION 23, T-26-N, R-9-W, NMPM, SAN JUAN COUNTY, NM  
 GROUND ELEVATION: 6570', DATE: MAY 3, 2006

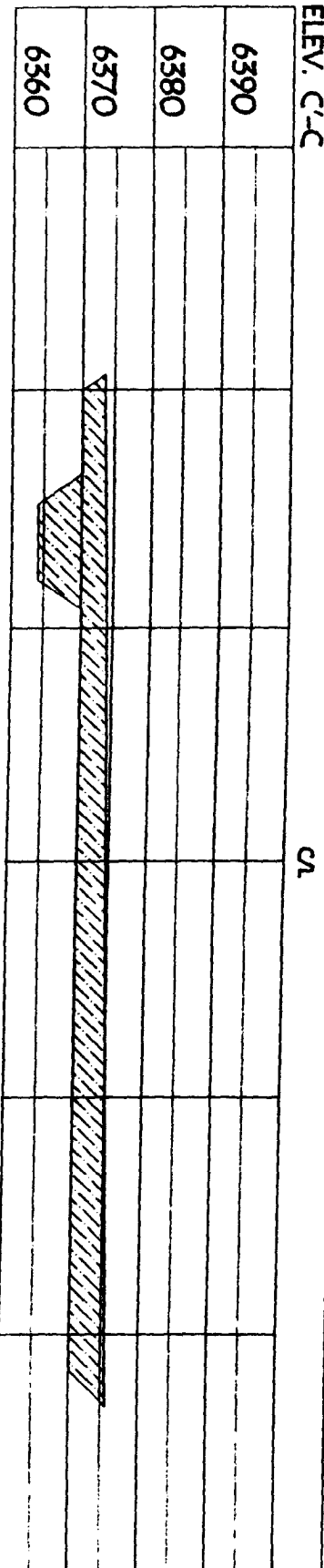
ELEV. A'-A



ELEV. B'-B



ELEV. C'-C



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:** Huerfano Unit #135F  
**Location:** 660' FNL, 2285' FEL, Section 23, T-26-N, R-9-W  
San Juan County, New Mexico  
Latitude 36° 28.7442', Longitude 107° 45.4222'  
**Formation:** Basin Dakota  
**Elevation:** 6370' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1279'	
Ojo Alamo	1279'	1347'	aquifer
Kirtland	1347'	1797'	gas
Fruitland	1797'	2022'	gas
Pictured Cliffs	2022'	2124'	gas
Lewis	2124'	2442'	
Huerfanito Bentonite	2442'		
Chacra	2902'	3594'	gas
Cliff House	3594'	3689'	gas
Menefee	3689'	4447'	gas
Point Lookout	4447'	4777'	gas
Mancos	4777'	5479'	
Gallup	5479'	6338'	gas
Greenhorn	6338'	6387'	gas
Graneros	6387'	6410'	gas
Two Wells	6410'	6515'	gas
Paguate	6515'	6581'	gas
Cubero	6581'	6647'	gas
Encinal	6647'	6638'	gas
TD	6638'		

### Logging Program:

Mud Logs/Coring/DST -  
Mud logs - none  
Coring - none  
DST - none  
Open hole - none  
Cased hole - Gamma Ray - surface to TD

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0 - 320'	Spud MUD/ <del>Air/Air-Mist</del>	8.4-9.0	40-50	no control
320' - 6638'	LSND	8.4-9.0	30-60	no control

### 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' - 320'	8 5/8"	24.0#	J-55
7 7/8"	0' - 6638'	4 1/2"	10.5#	J-55

**Tubing Program:** 0' - 6638' 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 -**

8 5/8" 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:**

8 5/8" surface casing conventionally drilled -

Cement with 321 sacks Type III cement with 0.25 pps Celloflake, 3% calcium chloride. (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.

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

4 1/2" Production Casing Two Stage -

Stage collar set @ 4297'. First Stage: Lead with w/258 sacks Premium Lite HS FM cmt w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. Second Stage: 464 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2238 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every fourth joint off bottom, to the base of the Ojo Alamo @ 1347'. Two turbolating centralizers at the base of the Ojo Alamo 1347'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

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

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.

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

- 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 Dakota formation will be completed.
- 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 north half of Section 23 is dedicated to the Dakota formation.
- This gas is dedicated.

  
Drilling Engineer

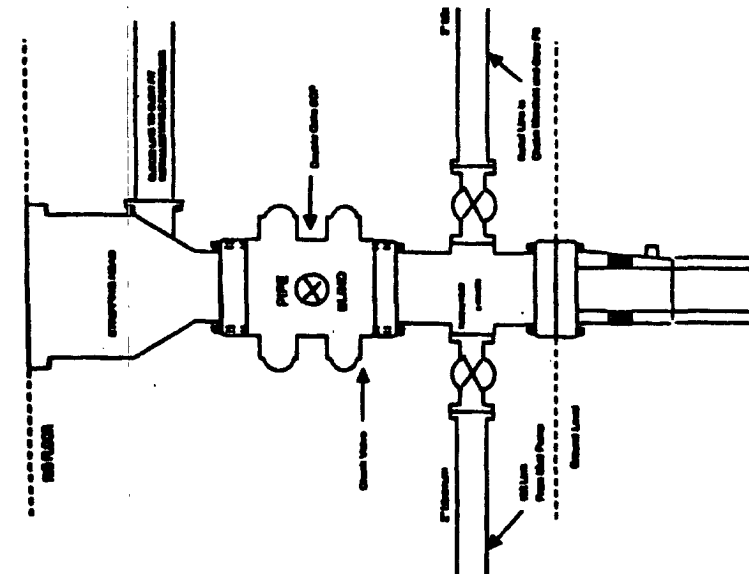
Date

5/30/06



# BURLINGTON RESOURCES

Completion/Workover Rig  
BOP Configuration  
2,000 psi System



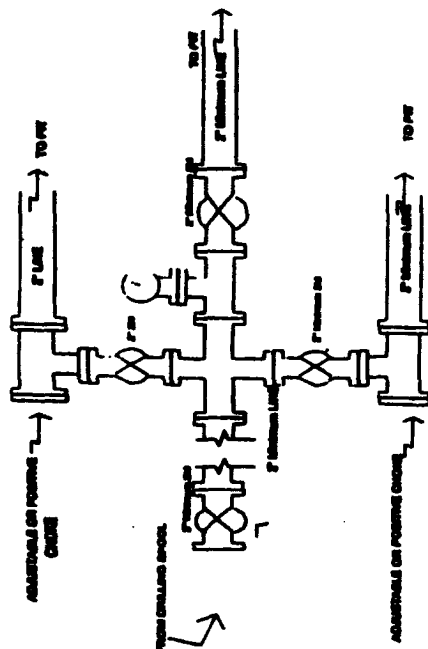
Minimum BOP Installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind end pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 800 psi stripping head.

Figure #2

4-20-01

# BURLINGTON RESOURCES

Drilling Rig  
Choke Manifold Configuration  
2000 psi System



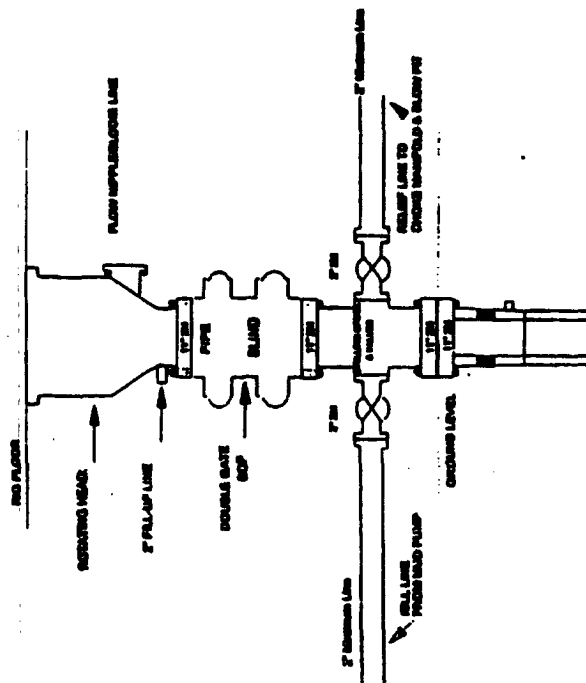
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

# Burlington Resources

Drilling Rig  
2000 psi System



BOP Installation from Surface Casing Point to Total Depth. 11" Bore 10" Mandrel, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 1000 psi stripping head on top of ram prevention. All BOP equipment is 2,000 psi working pressure.

Figure #1