

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2005 AUG 24 PM 1 07  
RECEIVED  
OTC FARMINGTON NM

1a. Type of Work  
DRILL

1b. Type of Well  
GAS

2. Operator  
**BURLINGTON** 14538  
RESOURCES Oil & Gas Company

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

4. Location of Well  
Unit D (NWNW), 660' FNL, 660' FWL  
  
Latitude 36° 36.5074'N  
Longitude 107° 28.6739'W

5. Lease Number  
NMSF-079051  
Unit Reporting Number

6. If Indian, All. or Tribe

7. Unit Agreement Name  
San Juan 28-6 Unit

8. Farm or Lease Name

9. Well Number  
#133E

10. Field, Pool, Wildcat  
Blanco Mesaverde/Basin Dakota 71599

11. Sec., Twn, Rge, Mer. (NMPM)  
Sec. 4, T27N, R06W  
API # 30-039-29634

12. County  
Rio Arriba

13. State  
NM

14. Distance in Miles from Nearest Town  
31.6 miles from Post Office in Blanco, NM

15. Distance from Proposed Location to Nearest Property or Lease Line  
660'

16. Acres in Lease

17. Acres Assigned to Well  
321 W2 MV 322.08 N2

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease  
1971'- San Juan 28-6 Unit #33

19. Proposed Depth  
7938'

20. Rotary or Cable Tools  
Rotary

21. Elevations (DF, FT, GR, Etc.)  
6484' GL  
6716

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program  
See Operations Plan attached

24. Authorized by: Amanda Sandaval  
Regulatory Compliance Assistant II  
Date 8-24-05

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

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 1004, 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 section is for technical and  
procedural review pursuant to 23 CFR 3165.3  
and appeal pursuant to 43 CFR 3165.4

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

NMOC

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

<sup>1</sup> API Number 30-039-29634	<sup>2</sup> Pool Code 72319/71599 ✓	<sup>3</sup> Pool Name Blanco Mesaverde/ Basin Dakota ✓
<sup>4</sup> Property Code 7462 ✓	<sup>5</sup> Property Name SAN JUAN 28-6 UNIT ✓	<sup>6</sup> Well Number 133E ✓
<sup>7</sup> OGRD No. 14538 ✓	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	<sup>9</sup> Elevation 6716' ✓

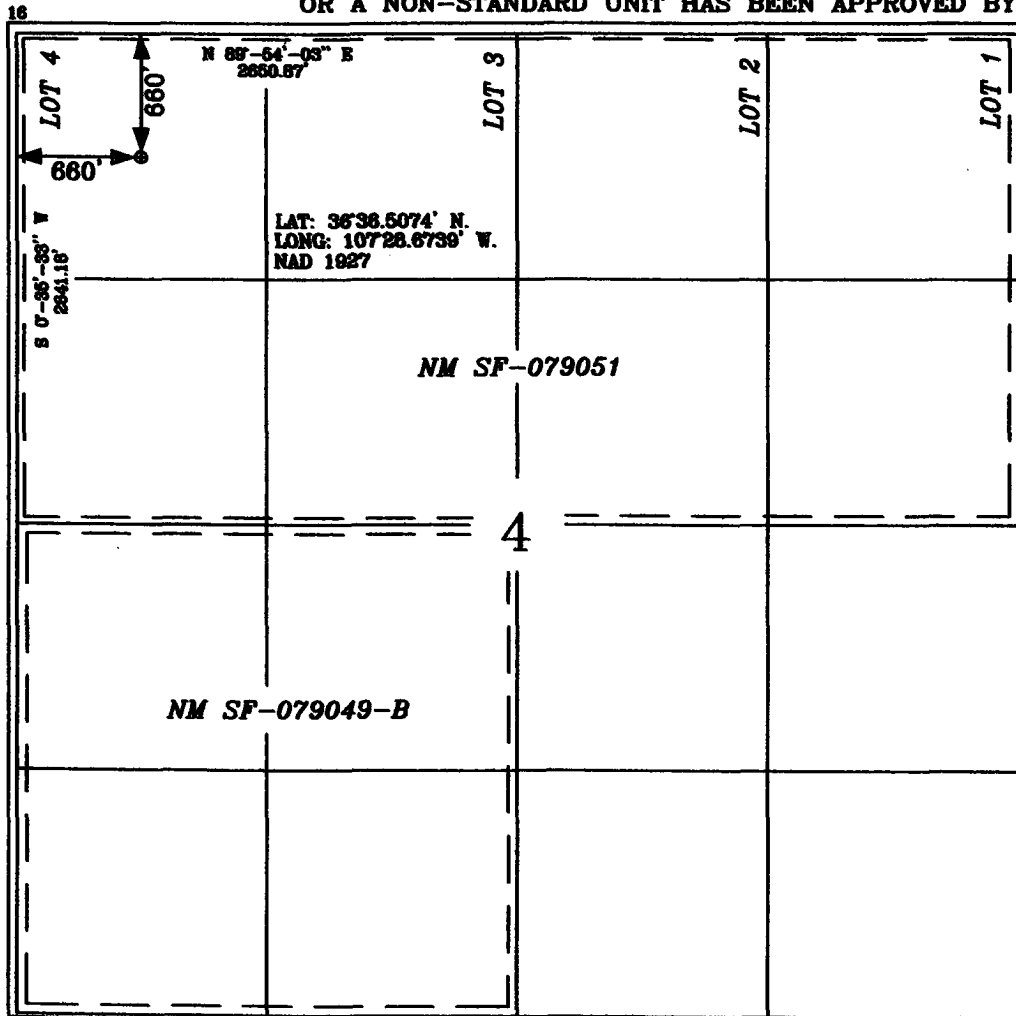
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	4	27-N	6-W		660'	NORTH	660'	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
<sup>12</sup> Dedicated Acres 321 W2 MV 322.08 N2 DK		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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



17 OPERATOR CERTIFICATION

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

Amanda Sandoval  
Signature  
Amanda Sandoval  
Printed Name  
6-8-05  
Title  
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.

Date of Survey 5-31-05  
Signature and Seal of Professional Surveyor  
  
Certificate Number 15703

## 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

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 D : 660 feet from the North line and 660 feet from the West line  
Section 4 Township 27N Range 6W NMPM County San Juan

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

6716' GR

## 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: 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 ☐TEMPORARILY ABANDON ☐PULL OR ALTER CASING ☐PLUG AND ABANDON ☐CHANGE PLANS ☐MULTIPLE COMPL ☐

## OTHER:

New Drill Pit ☒

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐COMMENCE DRILLING OPNS. ☐CASING/CEMENT JOB ☐ALTERING CASING ☐P AND A ☐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.

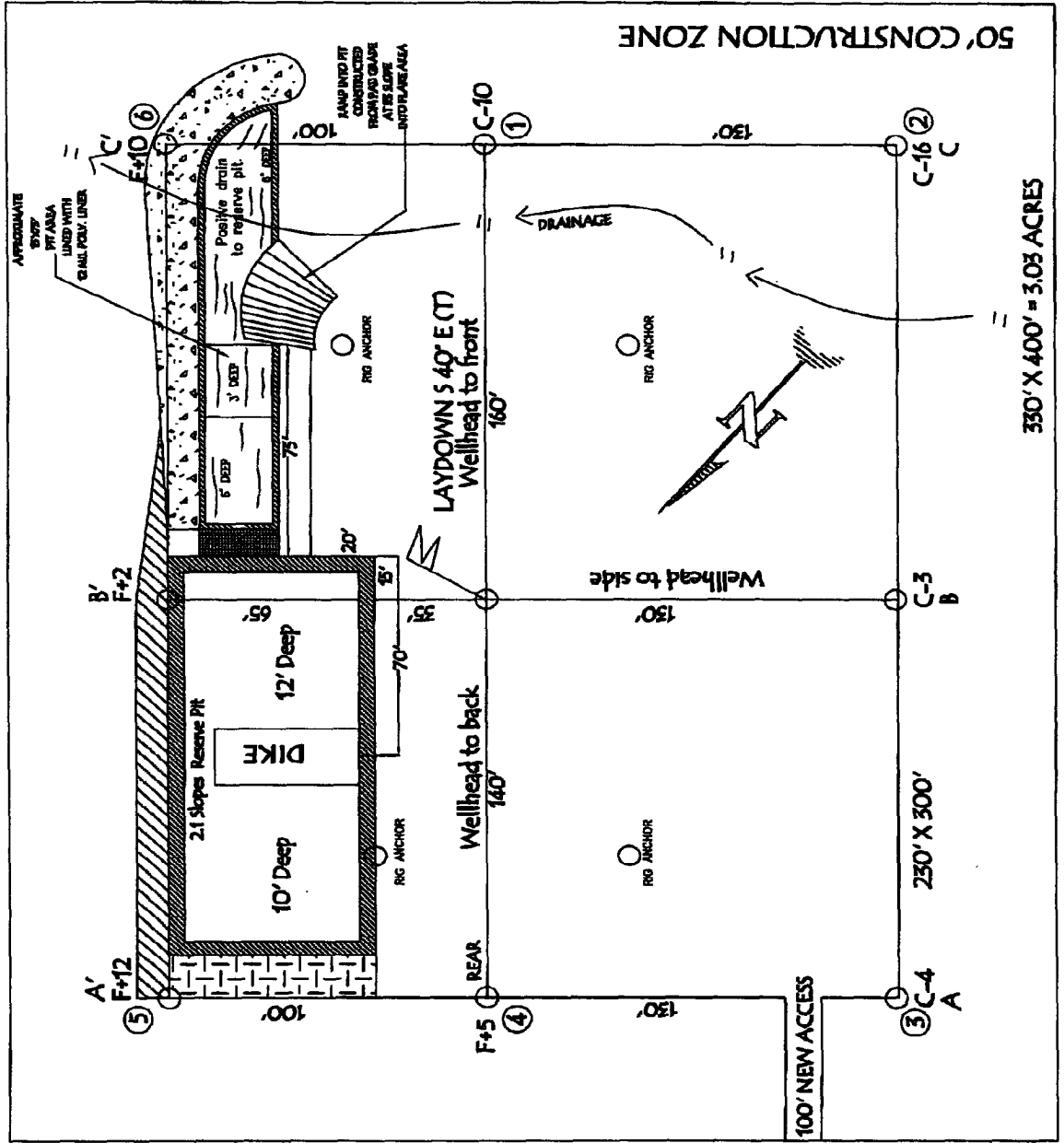
Burlington Resources proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit and vent/flare pit will be an unlined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / 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 Specialist DATE 6/13/2005Type or print name Amanda Sandoval E-mail address: asandoval@br-inc.com Telephone No. 505-326-9700  
For State Use OnlyAPPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTOR DIST. 3 DATE DEC 05 2005

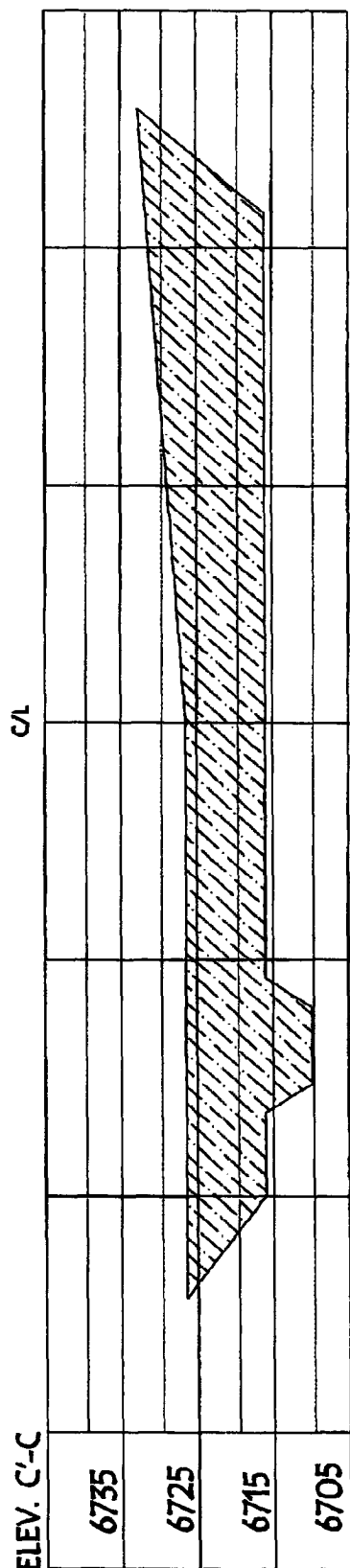
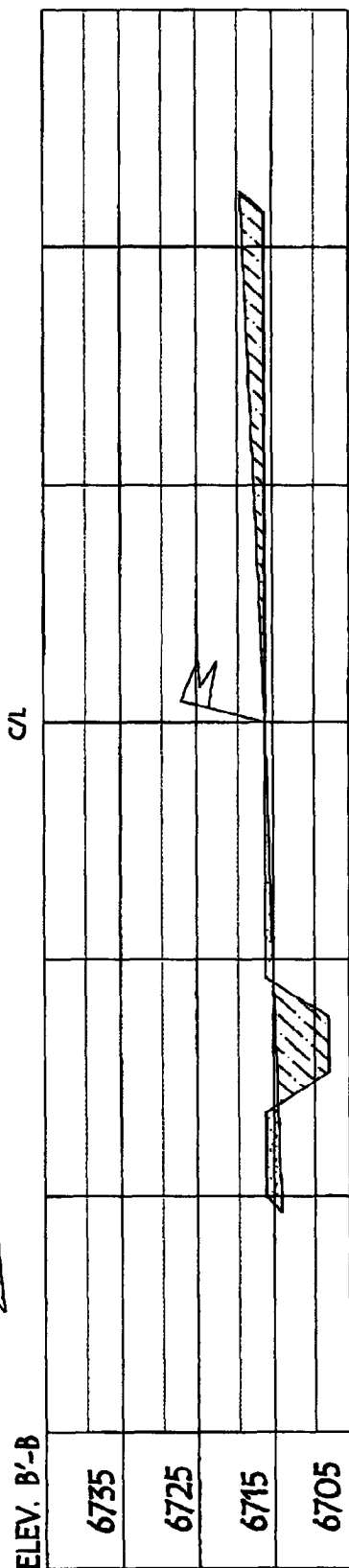
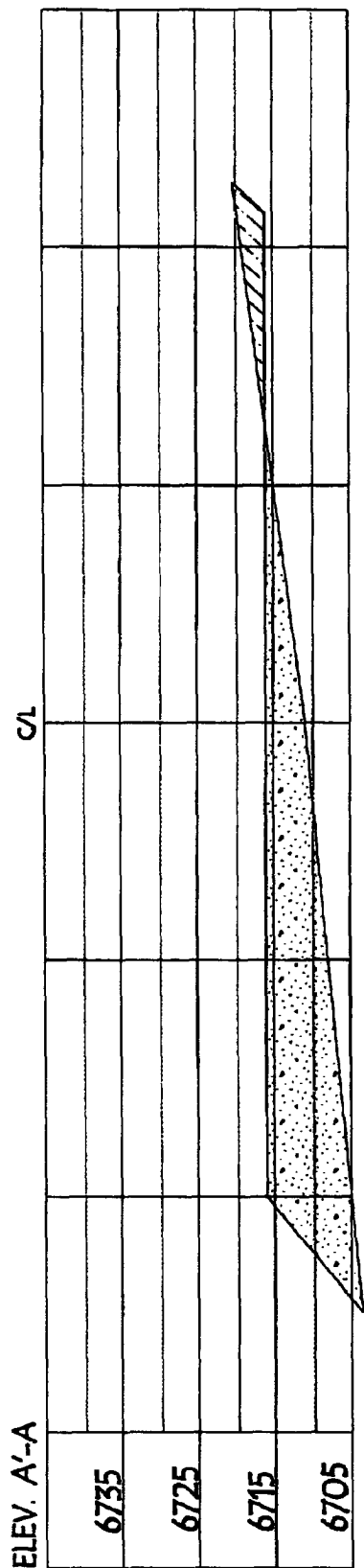
Conditions of Approval (if any):

# BURLINGTON RESOURCES OIL & GAS COMPANY LP SAN JUAN 28-6 UNIT #133E, 660' FNL & 660' FWL SECTION 4, T-27-N, R-6-W, NMPM, RIO ARriba COUNTY, NM GROUND ELEVATION: 6716', DATE: MAY 04, 2005



LATITUDE: 36° 36.5074' LONGITUDE: 107° 28.6759' NAD27

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**SAN JUAN 28-6 UNIT #133E, 660' FNL & 660' FWL**  
**SECTION 4, T-27- N, R-6-W, NMMP, RIO ARriba COUNTY, NM**  
**GROUND ELEVATION: 6716', DATE: MAY 04, 2005**



**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: SAN JUAN 28-6 UNIT 133E  
Location: 660' FNL & 660' FWL, Section Sec 04 T27N R06W  
Rio Arriba County, New Mexico  
Formation: Blanco Mesaverde/Basin Dakota  
Elevation: 6716' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2685'	
Ojo Alamo	2685'	2833'	aquifer
Kirtland	2833'	3275'	gas
Fruitland Coal	3275'	3451'	gas
Pictured Cliffs	3451'	3568'	gas
Lewis	3568'	4008'	
Huerfanito Bentonite	4008'		
Chacra	4395'	5083'	gas
Massive Cliff House	5083'	5215'	gas
Menefee	5215'	5628'	gas
Massive Point Lookout	5628'	6103'	gas
Mancos Shale	6103'	6831'	
Upper Gallup	6831'	7586'	gas
Greenhorn	7586'	7651'	gas
Graneros	7651'	7685'	gas
Two Wells	7685'	7793'	gas
Upper Cubero	7793'	7829'	gas
Lower Cubero	7829'	7933'	gas
Oak Canyon	7933'	7938'	gas
Encinal	7938'	7938'	gas
Total Depth:	7938'		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 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120 - 3668'	LSND	8.4 - 9.0	30 - 60	no control
3668 - 7938'	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' - 3668'	7"	20/23#	J-55
6 1/4"	0' - 7938'	4 1/2"	10.5#	J-55

Tubing Program:

<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
0' - 7938'	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 327 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. (697cuft-50%excess to circulate to surface). 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/15 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss. Tail w/90 Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss. Second stage: 312 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (665 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 @ 2833'. Two turbolating centralizers at the base of the Ojo Alamo @ 2833'. 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 ~~288~~ <sup>293</sup> sacks 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 (581 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):

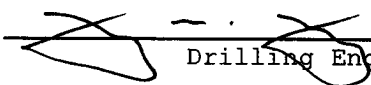
The following equipment will be operational while air/mist drilling:

- 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:

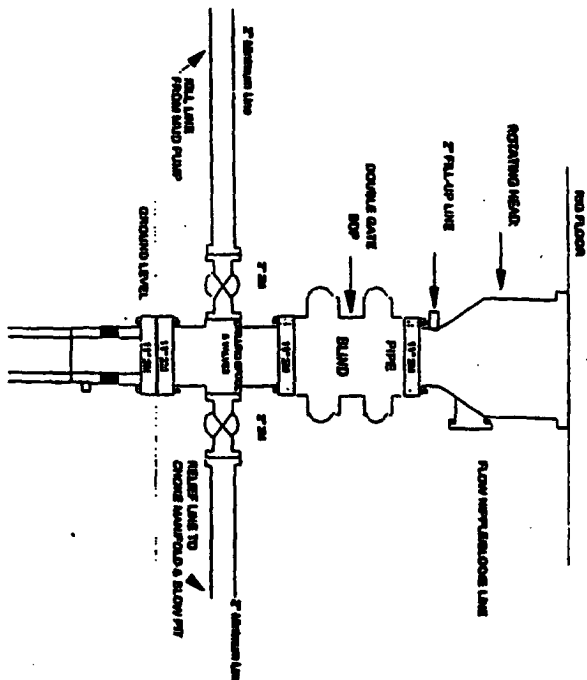
Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2000 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The west half of Section 4 is dedicated to the Mesa Verde formation and the north half of Section 4 is dedicated to Dakota formation.
- This gas is dedicated.

  
Drilling Engineer

6/23/05  
Date

# Burlington Resources

## Drilling Rig 2000 psi System



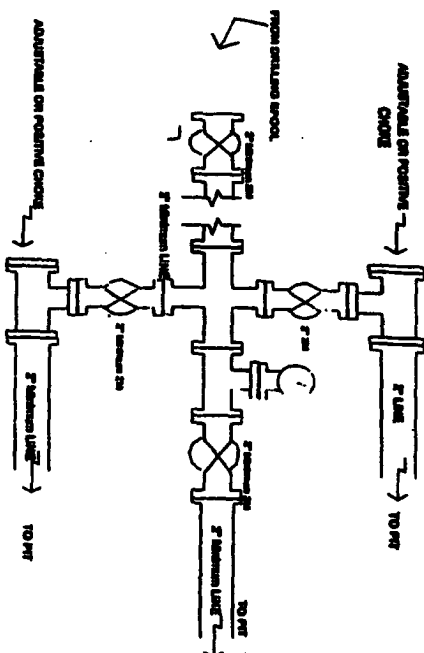
BCP installation from Surface Casing Point to Total Depth, 1 1/2\"/>

Figure #1

4-20-01

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System



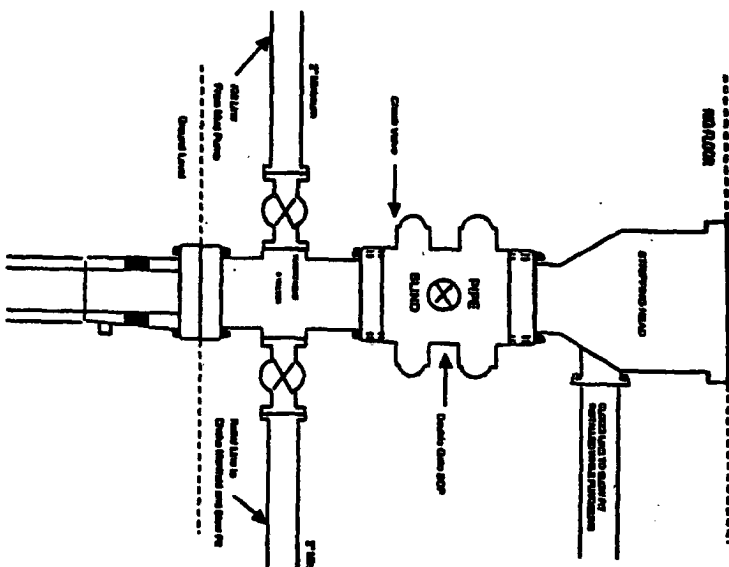
Choke manifold installation from Surface Casing Point to Total Depth, 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

# BURLINGTON RESOURCES

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



Minimum BCP installation for all Completion/Workover Operations, 7-1/16\"/>

Figure #2