

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

This action is subject to technical and procedural review pursuant to 43 CFR 216.53

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 87506

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 30-045-33568	Pool Code 71629/71280	Pool Name Basin Fruitland Coal/ Aztec Pictured Cliffs
Property Code 18628	Property Name THOMPSON	Well Number 104S
GRID No. 14538	Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	Elevation 5900'

10 Surface Location

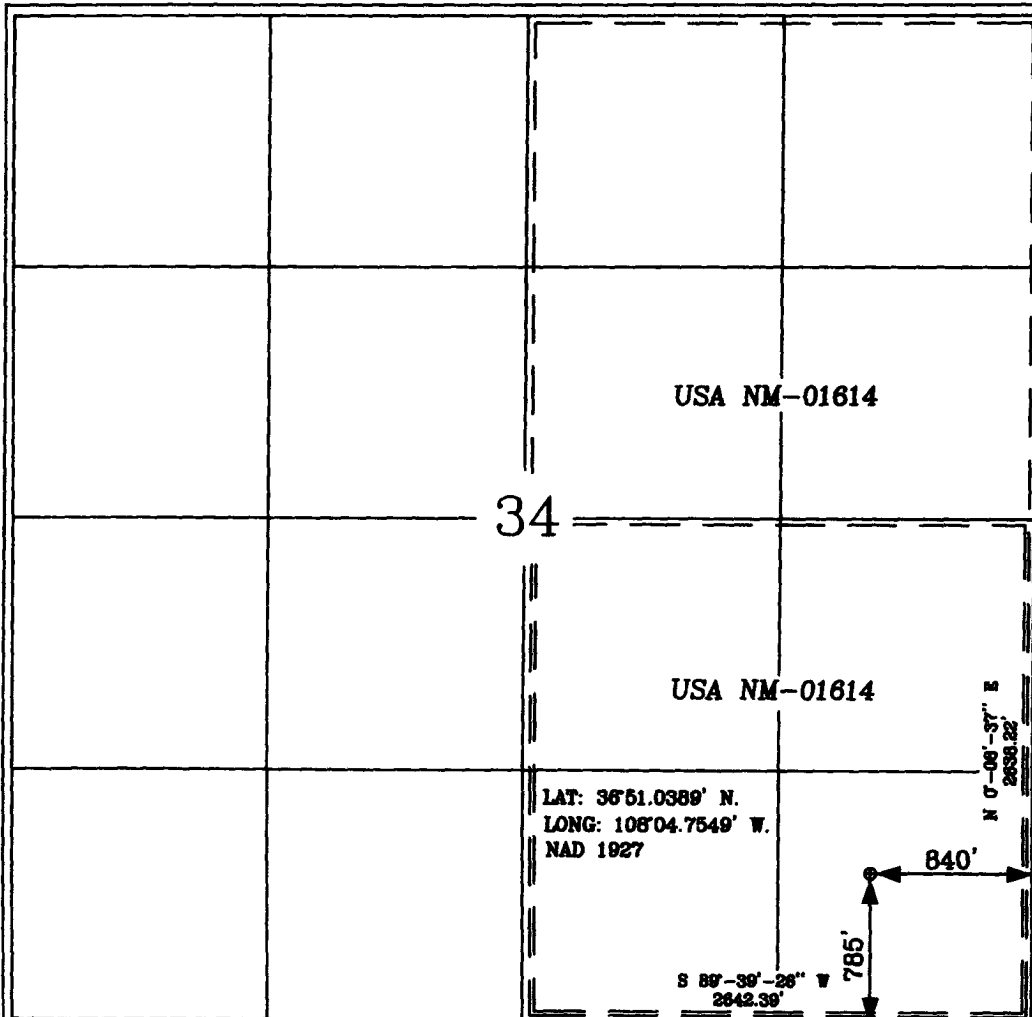
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	34	31-N	12-W		785'	SOUTH	840'	EAST	SAN JUAN

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
Dedicated Acres 320 E2 PC 160 SE4 PC				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

16



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

Regulatory Assistant II  
Title

1-12-06  
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.

Date of Survey 1-6-06

Signature and Seal of Professional Surveyor

*William W. Russell*  
Certificate Number 15703

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.

30-045- 33568

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

NMNM-01614

7. Lease Name or Unit Agreement Name

Thompson

8. Well Number

#104S

9. OGRID Number

14538

10. Pool name or Wildcat

Basin Fruitland Coal/ Aztec Pictured Cliffs

**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 P : 785 feet from the South line and 840 feet from the East line  
 Section 34 Township 31N Rng 12W NMPM County San Juan

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

5900'

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

200

Pit Liner Thickness:

12

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 ☒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, Lined:

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 will be a lined 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 lined 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 Assistant II

DATE

1/17/2006

Type or print name

Amanda Sandoval

E-mail address:

asandoval@br-inc.com

Telephone No.

505-326-9891

**For State Use Only**

APPROVED BY

[Signature]

TITLE

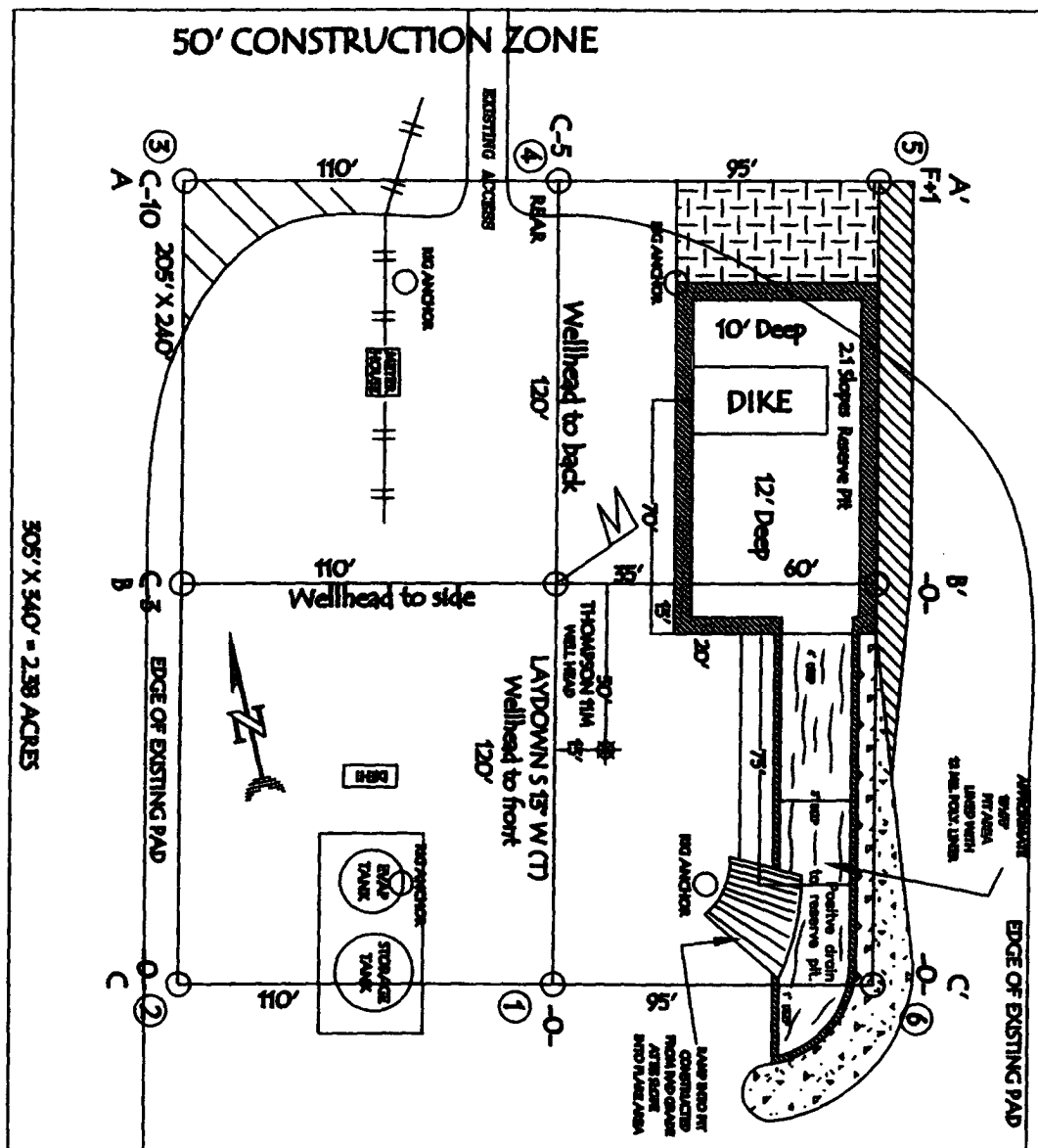
DEPUTY OIL &amp; GAS INSPECTOR, DIST. 4

DATE

FEB 23 2006

Conditions of Approval (if any):

BURLINGTON RESOURCES OIL & GAS COMPANY LP  
THOMPSON 1045, 785' FSL & 840' FEL  
SECTION 34, T-31-N, R-12-W, NMPM, SAN JUAN COUNTY, NM  
GROUND ELEVATION: 5900', DATE: NOVEMBER 28, 2005

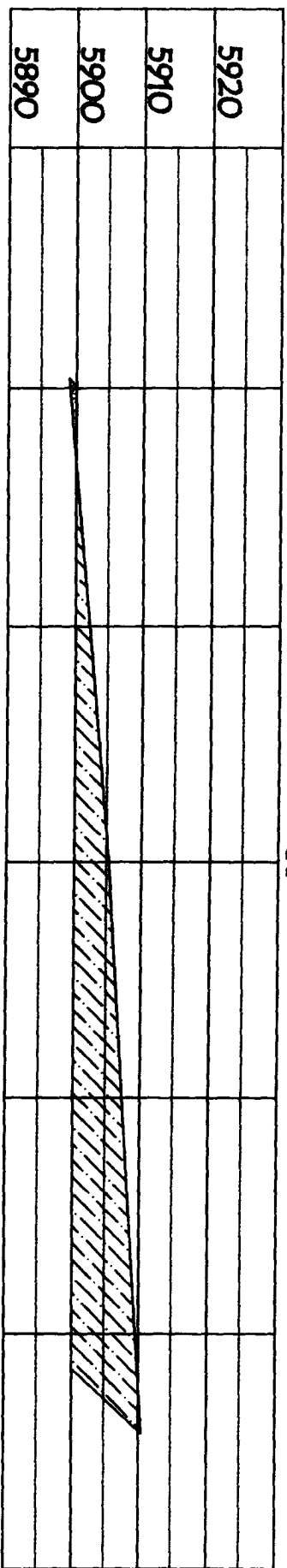


LATITUDE: 36° 51.0389' N LONGITUDE: 108° 04.7549' W NAD27

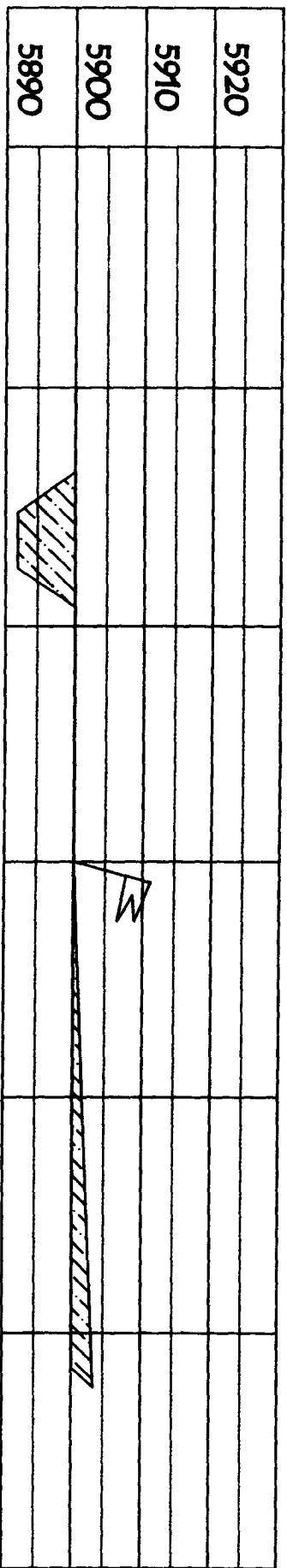
**PIPELINES OR CABLES ON WELL PAD AND OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.**

**BURLINGTON RESOURCES OIL & GAS COMPANY LP**  
**THOMPSON 1045, 785' FSL & 840' FEL**  
**SECTION 34, T-31-N, R-12-W, NMPM, SAN JUAN COUNTY, NM**  
**GROUND ELEVATION: 5900', DATE: NOVEMBER 28, 2005**

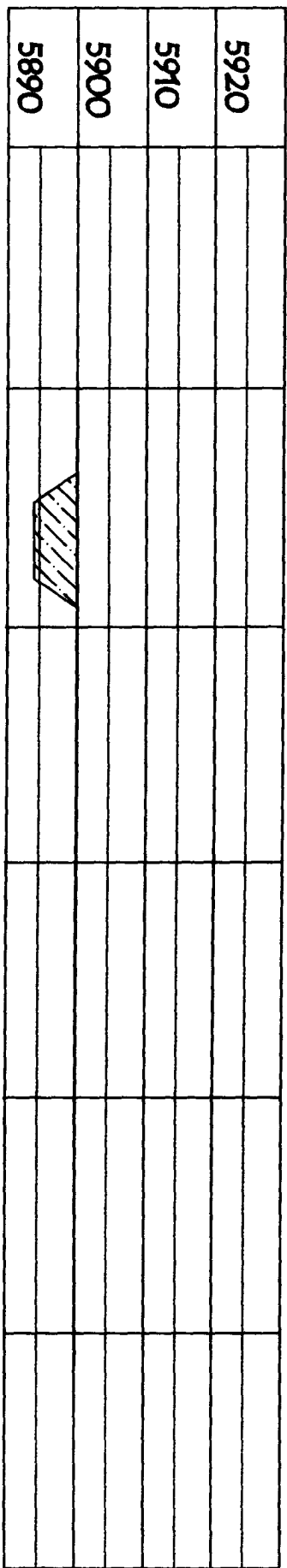
ELEV. A'-A



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:** Thompson #104S  
**Location:** Unit P (SESE) 785' FSL & 840' FEL, Section 34, T31N, R12W  
 San Juan County, New Mexico  
 Latitude 36° 51.0389'N; Longitude 108° 04.7549'W  
**Formation:** Basin Fruitland Coal/ Aztec Pictured Cliffs  
**Elevation:** 5900' GR

Formation:	Top	Bottom	Contents
Surface	San Jose		
Ojo Alamo	516'		
Kirtland	638'	2010'	gas
T/Fruitland	2010'		gas
B/Fruitland	2257'		gas
Pictured Cliffs	2260'		
<b>Total Depth</b>	<b>2460'</b>		

**Note:** The Total Depth for this well is into the Pictured Cliffs interval, but currently only have plans to complete the Fruitland Coal interval. We could in the near future perforate/stimulate the Pictured Cliffs interval, but only would once Regulatory approval was asked for and received.

**Logging Program:** None

**Mud Program:**

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis. Fluid Loss</u>
0- 120'	Spud/Air/Air Mist	8.4-8.9	40-50 no control
120-2460'	Non-dispersed	8.4-9.5	30-60 no control

**Casing Program:**

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg.Size</u>	<u>Wt.</u>	<u>Grade</u>
8 $\frac{3}{4}$ "	0 - 120'	7"	20.0#	J-55
6 $\frac{1}{4}$ "	0 - 2460'	4 1/2"	10.5#	J/K-55

**Tubing Program:**

0 - 2460'	2 3/8"	4.7#	J-55
-----------	--------	------	------

**Float Equipment:** 7" surface casing - guide shoe. Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - float shoe and float collar on bottom. Centralizers run every third joint above shoe to the base of the Ojo Alamo @ 638'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 638'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

**Wellhead Equipment:** 7" x 4 1/2" x 2 3/8" x 11" 2000 psi xmas tree assembly.

January 18, 2006

**Cementing:**

7" surface casing Pre-Set Drilled - Cement with Type I, II cement with 20% flyash mixed at 14.5 ppg, 1.61 cu ft per sack yield. (Bring cement to surface). Wait on cement for 24 hours for pre-set holes before pressure testing or drilling out from under surface.

7" surface casing - Cement with 42 sx Type III cement with 0.25 pps Celloflake, 3% CaCl. (54cu ft of slurry @ 1.28 yield). 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. **WOC until cement establishes 250 psi compressive strength prior to NU of BOPE.**

4 1/2" production casing - Cement with 119sx (254cu ft of slurry @ 2.13 yield) Premium Lite with 3% calcium chloride, 5 pps LCM-1, and 1/4#/sack celloflake, 0.4% FL-52, & 0.4% SMS. Tail with 90sx (124cu ft of slurry @ 1.38 yield) Type III cmt with 1% calcium chloride, 1/4#/sack Celloflake and 0.2% FL-52. Total of 378 cf - 50% excess to circulate to surface.

**BOP and tests:**

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1 and #2). Prior to drilling out surface casing, test ~~rams~~ <sup>BOPE</sup> to 600 psi/30 min.

Completion - 6" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams and casing to 1500 psi/30 min.

From surface to TD - choke manifold (Reference Figure #3).

Pipe rams will be actuated at least once each day and blind rams actuated once each trip to test proper functioning. An upper kelly cock valve with handle and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

**Additional information:**

- \* The Fruitland Coal formation will be completed.
- \* Anticipated pore pressure for the Fruitland is between 600 - 700 psi.
- \* This gas is dedicated.
- \* The east half of section 34 is dedicated to Fruitland Coal and southeast quarter is dedicated to Pictured Cliffs.
- \* New casing will be utilized.
- \* Pipe movement (either rotation or reciprocation) will be done if hole conditions permit.

\_\_\_\_\_  
Drilling Engineer

\_\_\_\_\_  
Date 1/19/06

# Burlington Resources

## Drilling Rig 2000 psi System

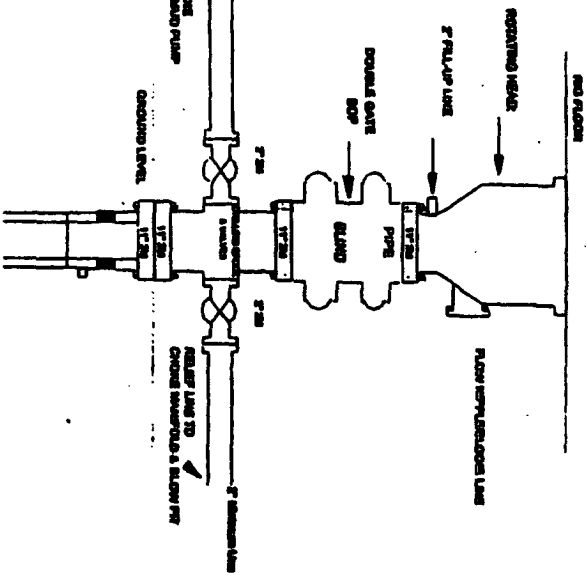


Figure #71

BCP Installation from Surface Casing Point to Total Depth. 17\"/>

4-20-01

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System

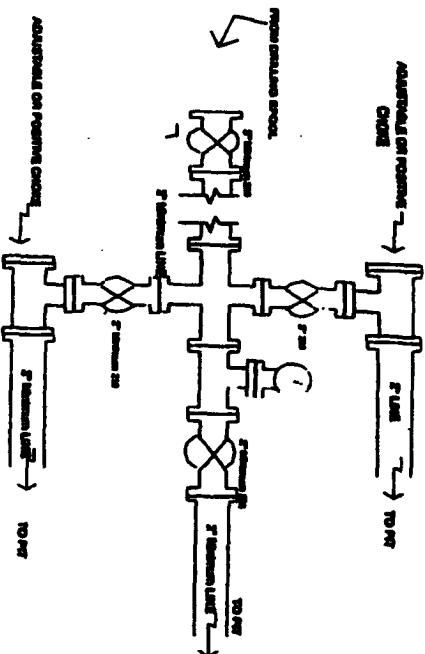


Figure #73

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

4-20-01

# BURLINGTON RESOURCES

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

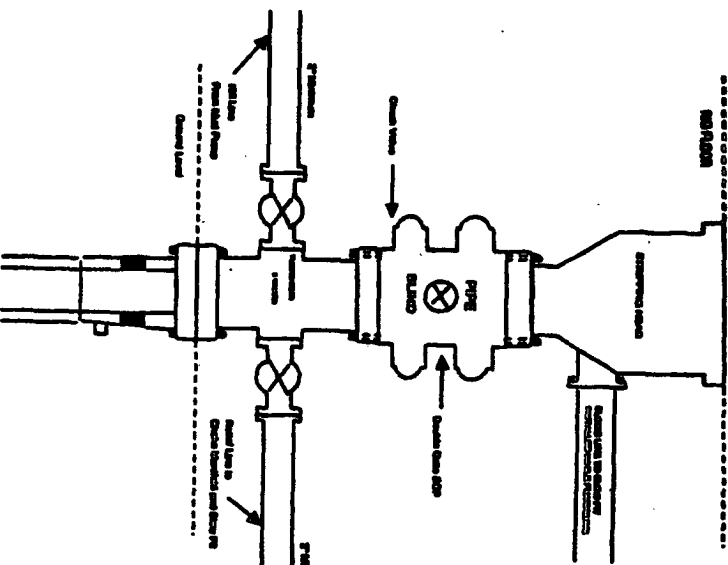


Figure #72

Minimum BCP Installation for all Completion/Workover Operations. 7-1/4\"/>