

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 JUN 14 AM 3 42
RECEIVED
OTD FARMINGTON NM

1a. Type of Work DRILL	5. Lease Number SF-078885 Unit Reporting Number NMNM-078383D
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name Canyon Largo Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Canyon Largo Unit 9. Well Number #278E
4. Location of Well 1050' FNL, 860' FWL Latitude 36° 25.1072'N, Longitude 107° 26.5425'W	10. Field, Pool, Wildcat Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) D Sec. 11, T25N, R06W API # 30-045-039-29960
14. Distance in Miles from Nearest Town 50 miles to intersection Hwy 64 & 550	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 860'	
16. Acres in Lease	17. Acres Assigned to Well 320 W/2 DK
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 50''	
19. Proposed Depth 7345'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6779' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Joni Clark</u> Regulatory Analyst	<u>6-14-06</u> Date

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 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.

NO HPA NOTIFICATION NEEDED UNDER ORDER R-8768F.

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

NMOC

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

DISTRICT I
1825 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

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

DISTRICT IV
1220 S. 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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-29960	² Pool Code 71599	³ Pool Name Basin Dakota
⁴ Property Code 6886	⁵ Property Name CANYON LARGO UNIT	⁶ Well Number 278E
⁷ GRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL AND GAS COMPANY LP	⁹ Elevation 6779'

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
D	11	25-N	6-W		1050'	NORTH	860'	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 W/2 DK			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ 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

<p>N 88° 23' 46" E 2622.52'</p> <p>1050'</p> <p>860'</p> <p>S 0° 48' 51" E 2803.14'</p> <p>11</p> <p>LAT: 36°25'10.72" N. LONG: 107°26'54.25" W. NAD 1927</p> <p>LAT: 36°25'08.5" N. LONG: 107°26'54.7" W. NAD 1983</p> <p>USA SF-078885</p>
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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 a working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature
Joni Clark
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.

5-26-06
Date of Survey
Signature
GLEN W. RUSSELL
NEW MEXICO
15703
LICENSED PROFESSIONAL SURVEYOR
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.

30-039- 299600

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil & Gas Lease No.

SF-078885

7. Lease Name or Unit Agreement Name

Canyon Largo Unit

8. Well Number

278E

9. OGRID Number

14538

10. Pool name or Wildcat

Basin Dakota

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 & GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter D : 1050 feet from the North line and 860 feet from the West line
Section 11 Township 25N Rng 6W NMPM County Rio Arriba

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

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

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

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐P AND A ☐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 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 Joni Clark TITLE Regulatory Analyst DATE 6/5/2006Type or print name
For State Use Only

Joni Clark

E-mail address:

jclark@br-inc.com

Telephone No.

505-326-9701

APPROVED BY

TITLE

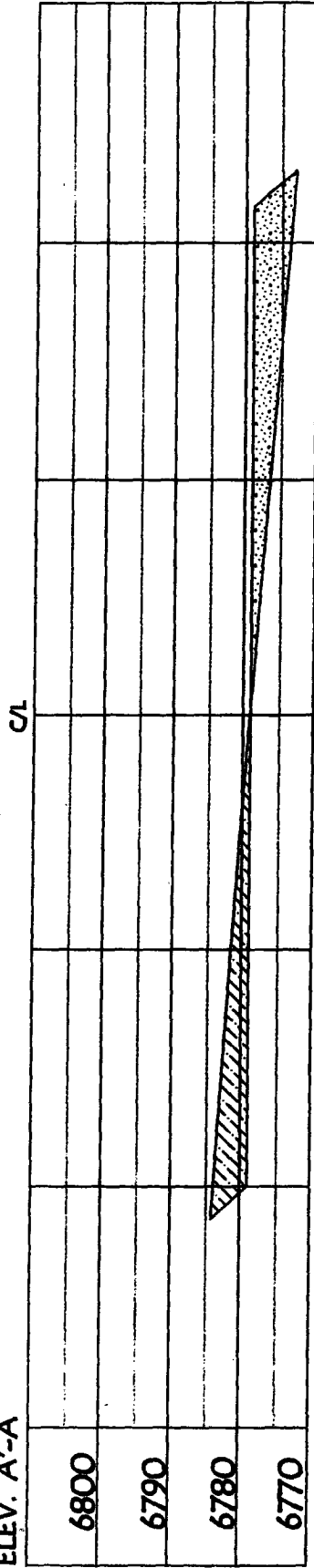
DEPUTY OIL & GAS INSPECTOR, DIST. 6, DATE JUL 03 2006

Conditions of Approval (if any):

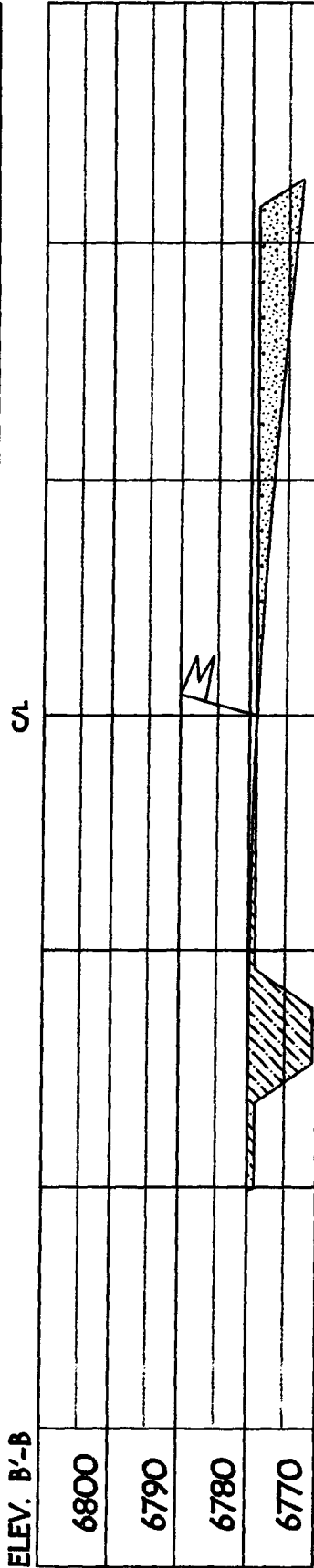
BURLINGTON RESOURCES OIL & GAS COMPANY LP

CANYON LARGO UNIT 278E, 1050' FNL & 860' FWL
SECTION 11, T-25-N, R-6-W, NMPM, RIO ARriba COUNTY, NM
GROUND ELEVATION: 6779', DATE: MAY 15, 2006

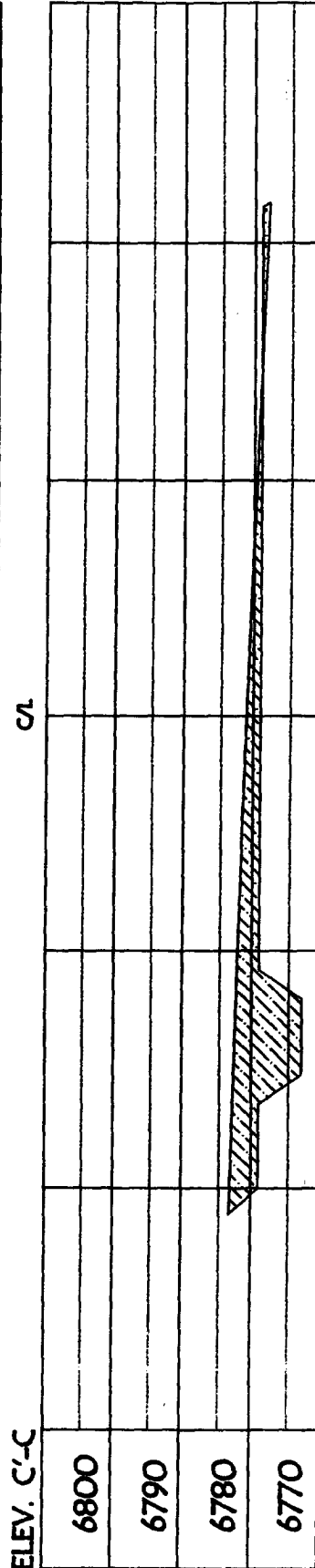
ELEV. A'-A



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: Canyon Largo Unit #278E
Location: 1050' FNL, 860' FWL, Section 11, T-25-N, R-06-W
Rio Arriba, New Mexico
Latitude 36° 25.1072', Longitude 107° 26.5425'
Formation: Basin Dakota
Elevation: 6779' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2244'	
Ojo Alamo	2244'	2384'	aquifer
Kirtland	2384'	2732'	gas
Fruitland	2732'	2870'	
Pictured Cliffs	2870'	2928'	gas
Lewis	2928'	3269'	gas
Huerfanito Bentonite	3269'	3728'	gas
Chacra	3728'	4494'	gas
Cliff House	4494'	4530'	
Menefee	4530'	5077'	gas
Point Lookout	5077'	5335'	gas
Mancos	5335'	6125'	gas
Gallup	6125'	7035'	gas
Greenhorn	7035'	7089'	gas
Graneros	7089'	7145'	gas
Two Wells	7145'	7228'	
Upper Cubero	7228'	7259'	
Lower Cubero	7259'	7297'	
Oak Canyon	7297'	7339'	
Encinal	7339'	7345'	gas
TD	7345'		

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/ Air/Air Mist	8.4-9.0	40-50	no control
320' - 7345'	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' - 7345'	4 1/2"	10.5#	J-55

Tubing Program: 0' - 7345' 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 @ 4927'. First Stage: Lead with w/266 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: 533 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2479 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

Stage 1: 2.28 R/s, 12.0 ppg; Stage 2: 2.13 R/s, 12.5 ppg

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 @ 2384'. Two turbolating centralizers at the base of the Ojo Alamo 2384'. 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 west half of Section 11 is dedicated to the Dakota formation.
- This gas is dedicated.

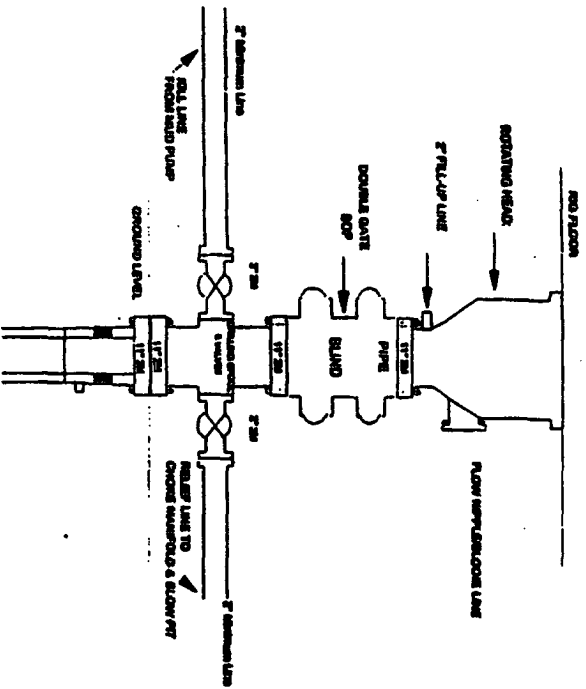

Drilling Engineer

Date

6/6/06

Burlington Resources

Drilling Rig 2000 psi System



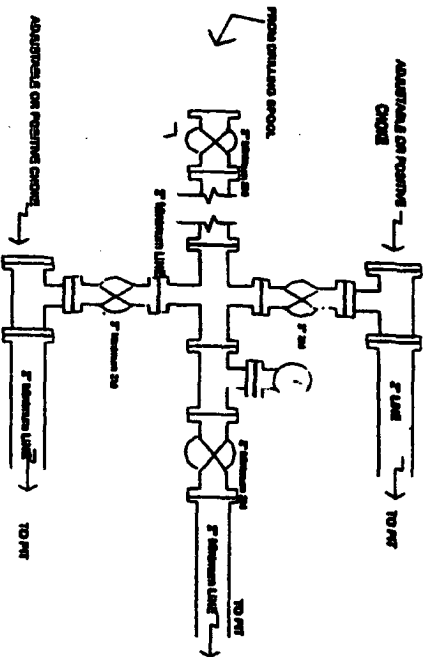
BCP installation from Surface Casing Point to Total Depth, 11" Bore 10" Internal, 2000 psi working pressure double gate BCP to be equipped with blind rams and pipe rams. A 600 psi rating based on top of ram prevention. All BCP equipment is 2,000 psi working pressure

Figure #1

4-28-01

BURLINGTON RESOURCES

Drilling Rig Choke Manifold Configuration 2000 psi System



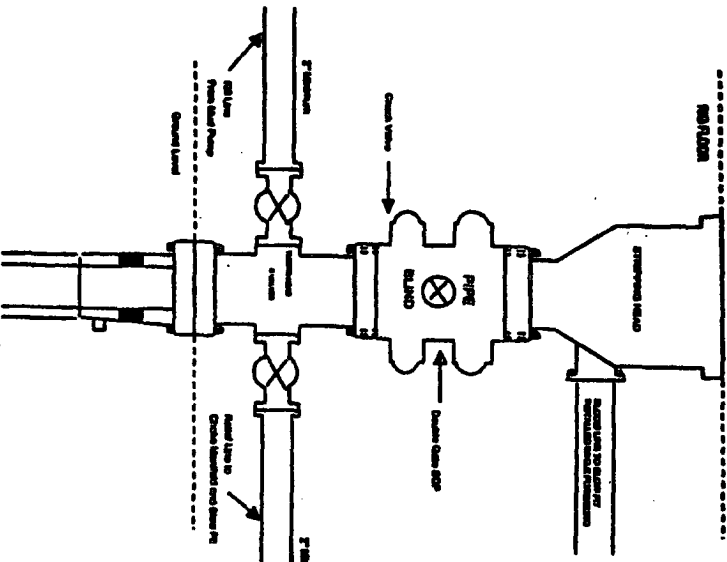
Choke manifold installation from Surface Casing Point to Total Depth, 2,000psi working pressure equipment with two chokes.

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" bore, 2000 psi minimum working pressure double gate BCP to be equipped with blind and pipe rams. A strapping head to be installed on the top of the BCP. All BCP equipment is 2000 psi working pressure or greater excluding 600 psi strapping head.

Figure #2