UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2005 MAY 19 PM 3 57

RECEIVED
070 FARMINGTON NM

1a. **Type of Work**
DRILL

5. **Lease Number**
NMNM-33055
Unit Reporting Number

1b. **Type of Well**
GAS

6. **If Indian, All. or Tribe**

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

7. **Unit Agreement Name**

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. **Farm or Lease Name**
Trail Canyon
9. **Well Number**
#103S

4. **Location of Well**
Unit F (SENW) 1960' FNL & 660' FWL

Latitude 36° 59.1464'N
Longitude 107° 43.1577'W

10. **Field, Pool, Wildcat**
Basin Fruitland Coal

11. **Sec., Twn, Rge, Mer. (NMPM)**
F Sec. 18, T32N, R8W

API # 30-045- 33097

14. **Distance in Miles from Nearest Town**
23.2 miles

12. **County**
San Juan

13. **State**
NM

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

16. **Acres in Lease**

17. **Acres Assigned to Well**
FC - 271.65 N/2

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
1961' SJ 32-8 Unit #260

19. **Proposed Depth**
3739'

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6747' GL

22. **Approx. Date Work will Start**

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

24. **Authorized by:** Tammy Jones
Sr. Regulatory Specialist

Date 5-19-05

PERMIT NO. _____ **APPROVAL DATE** _____

APPROVED BY _____ **TITLE** AFM **DATE** 6-8-05

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 well is NOT in the HPA area.

NMOCD

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 June 10, 2003

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045- 33097	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
18631	TRAIL CANYON	103S

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY LP	6747'

[10] Surface Location

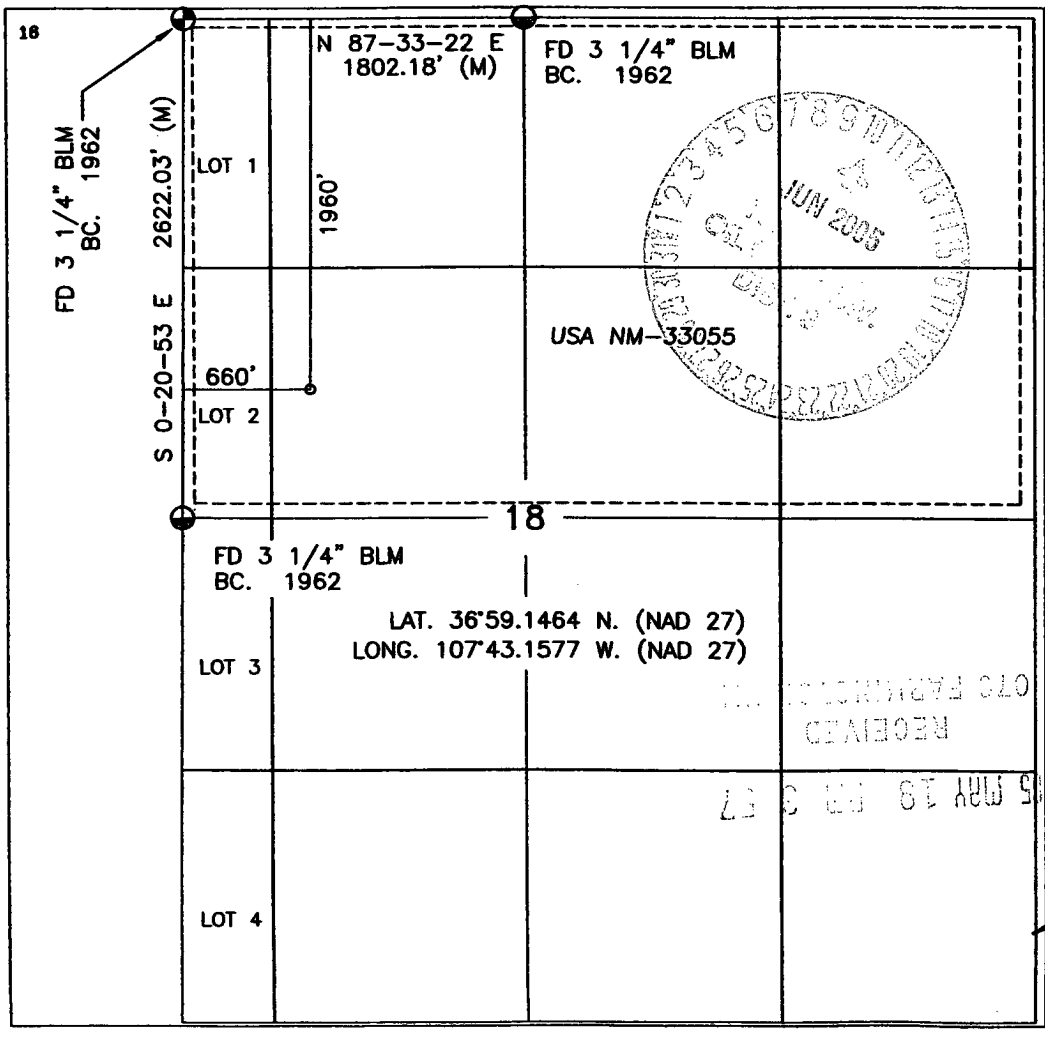
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	18	32-N	8-W		1960	NORTH	660	WEST	SAN JUAN

[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
F									

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
271.65 acres N/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



[17] OPERATOR CERTIFICATION

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

Signature

Patsy Clugston

Printed Name

Sr. Regulatory Specialist

Title

3-30-05

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: 2005

Signature and Seal of Professional Surveyor:

JOHN A. VUKONICH
NEW MEXICO
14831
REGISTERED PROFESSIONAL SURVEYOR

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.

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
Federal Lease #NMNM-33055

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

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number **Trail Canyon #103S**

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 **Basin Fruitland Coal**

4. Well Location
Unit Letter **F** : **1960'** feet from the **North** line and **660'** feet from the **West** line
Section **18** Township **32N** Range **8W** NMPM County **San Juan**

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 **>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 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 that 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 Patsy Clugston TITLE **Sr. Regulatory Specialist** DATE **4/8/2005**

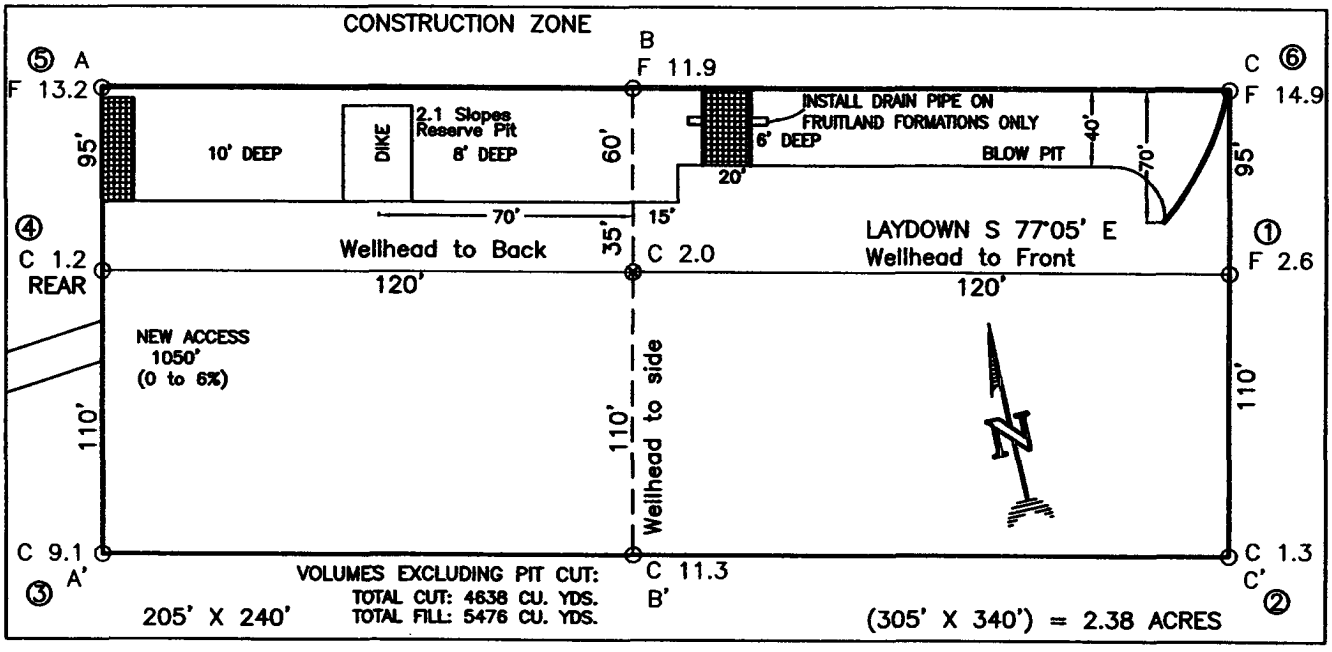
Type or print name **Patsy Clugston** E-mail address: pclugston@br-inc.com Telephone No. **505-326-9518**

For State Use Only

APPPROVED BY _____ TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #3 DATE JUN 10 2005

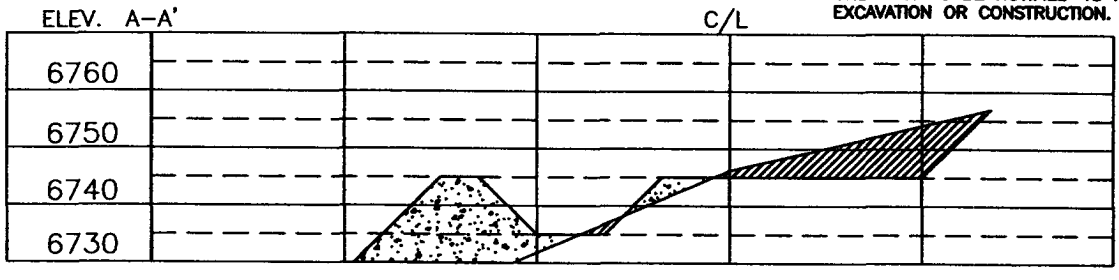
Conditions of Approval (if any):

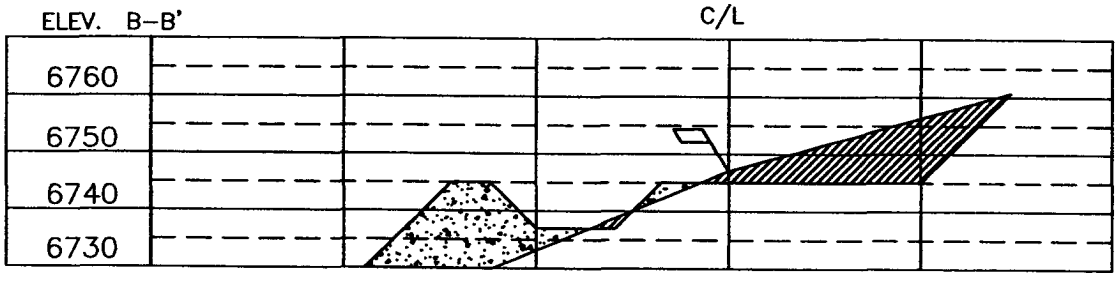
BURLINGTON RESOURCES OIL & GAS COMPANY LP
TRAIL CANYON No. 103S, 1960 FNL 660 FWL
SECTION 18, T-32-N, R-8-W, N.M.P.M., SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6747, DATE: OCTOBER 7, 2004

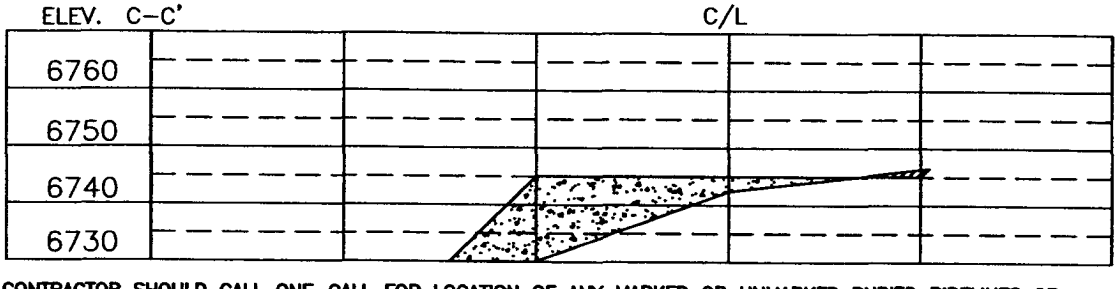


RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW – 3' WIDE AND 1' ABOVE SHALLOW SIDE).
BLOW PIT: OVERFLOW PIPE HALFWAY BETWEEN TOP AND BOTTOM AND TO EXTEND OVER PLASTIC LINER AND INTO BLOW PIT.

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: 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.

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. No. 14831

REVISION: RESTAKE CORRECT DIMENSIONS
DATED: 3/29/05 12/14/04
REVISED BY: A.G. B.L.
ORIGINAL BRS27578
DATED 11/02/04
DRAWN BY: B.L.
Rev#s BRS27

Operations Plan

Well Name: Trail Canyon #103S
Location: F (SENW), 1960' FNL & 660' FWL, Section 18, T-32-N, R-8W
San Juan County, NM
Latitude 36° 59.1464'N, Longitude 107° 107.43.1577'W

Formation: Basin Fruitland Coal

Estimated Total Depth: - 3739'

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose		
Ojo Alamo	2209'	2251'	aquifer
Kirtland	2251'	3389'	gas
Intermediate TD	**3339'**		
Fruitland	3389'	3654'	gas
Pictured Cliffs	3654'		gas

Logging Program:
Mudlog from intermediate to TD
Cores - none

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud Mud/Air/Air Mist	8.4-9.0	40-50	no control
120'-3339'	LSND/Clear Water	8.4-9.0	30-60	no control
3339' - 3739'	Starch-Polymer/Air/Mist			

Circulating media will be contractor dependent

Alternate Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud Mud/Air/Air Mist	8.4-9.0	40-50	no control
120' - 3339'	LSND/Clear Water	8.4-9.0	30-60	no control
3339' - 3739'	Air/Mist			

Circulating media will be contractor dependent.

Pit levels will be visually monitored to detect gain or loss of fluid control.

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' - 3339'	7"	20.0#/23#	J-55/N-80
6 1/4"	3319' - 3739'	5 1/2"	15.5#	J-55/N-80

BOP and tests:

Surface to intermediate TD - 11" 2000 psi (minimum) double gate BOP stack Reference Figure #1). Prior to drilling out surface casing, test BOPE to 600 psi for 30 min.

Intermediate TD to Total Depth - 7 1/6" 2000 psi (minimum) completion BOP stack Reference Figure #2). Prior to drilling out intermediate casing, test BOPE and casing to 1500 psi for 30 minutes.

From surface to 7" TD - a choke manifold will be installed in accordance with Onshore Order No. 2 (Reference Figure #3). When the cavitation completion rig drills the production hole, the completion rig configuration will be used (Reference Figure #4). No choke manifolds will be used on cavitation rig operations.

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 drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Wellhead Equipment: 9 5/8" x 7" x 2 3/8" x 11" 2000 psi xmas tree assembly.

Cementing:

<u>9 5/8" surface casing Pre-Set Drilled</u> -
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.

<u>9 5/8" surface casing Conventionally Drilled -</u>
Cement with - 88 sx (113 cf of slurry @ 1.28 yield) 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. 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.

<u>7" intermediate casing</u> - Cement with 295 sx (628 cu 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 90 sacks (124 cu ft of slurry @ 1.38 yield) Type III cmt with 1% calcium chloride, 1/4#/sack Celloflake and 0.2% FL-52. Total of 753 cf - 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 2251'. Two turbolating centralizers at the base of the Ojo Alamo @ 2251'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

5 1/2" liner - will not be cemented if run.

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.

Additional information:

- The Fruitland Coal formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressure for the Fruitland is less than 500 psi.
- This gas is dedicated.
- The north half of the section is dedicated to this well.

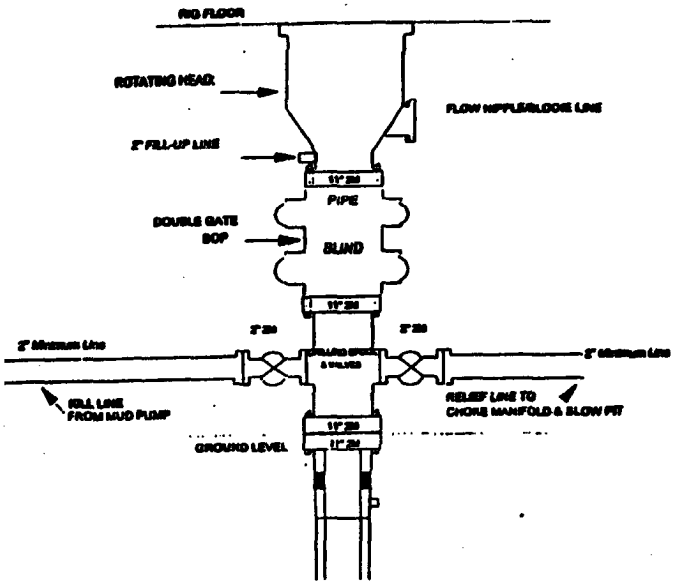
Jennifer McCarthy
Drilling Engineer

4-13-05
Date

Burlington Resources

Drilling Rig

2000 psi System



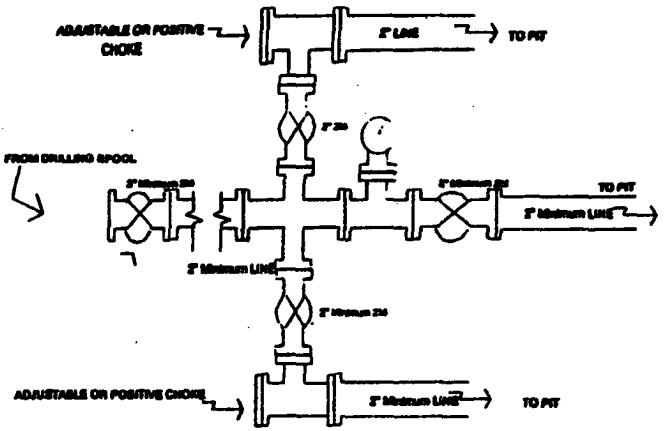
BOP installation from Surface Casing Point to Total Depth. 11" Bore 10" Nominal, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 500 psi rotating head on top of ram preventers. All BOP equipment is 2,000 psi working pressure

4-20-01

Figure #1

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System



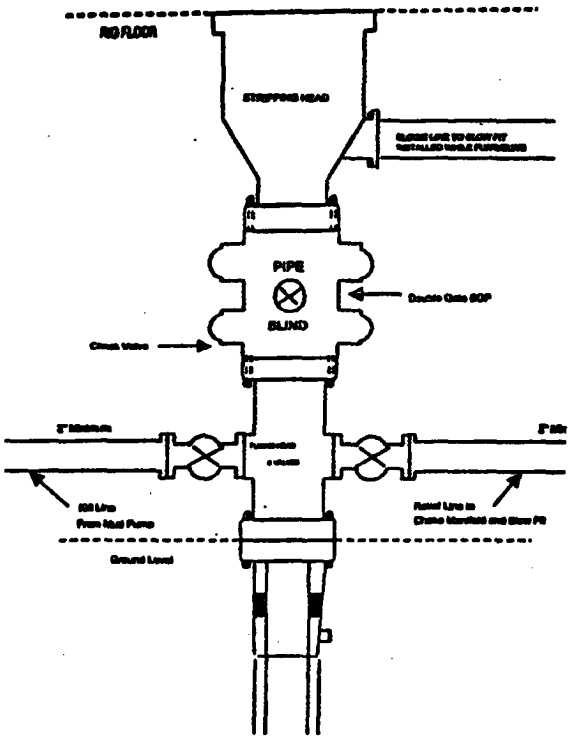
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

BURLINGTON RESOURCES

Completion/Workover Rig
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